

**GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION**



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



**KRISHNA & CO-ORDINATION CIRCLE
HYDERABAD
February 2018**

P R E F A C E

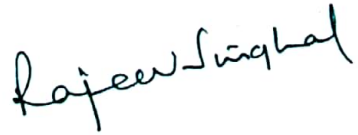
Monitoring of river water quality in all the important river basins in India is carried out as a part of hydrological observation programme which is one of the main functions of the Central Water Commission. River Water Samples are collected from the regular hydrological stations maintained by the Commission and analysed in the laboratories set up at Divisional headquarters. The water quality data is published every year in the form of Water Quality Year Book.

In Krishna basin, the Water Quality is monitored at 32 hydrological observation stations (Upper Krishna Division-10, Lower Krishna Division-13, Cauvery Division-9). The water samples collected from the hydrological stations under Lower Krishna Division are being analysed at Water Quality Level-III Laboratory at Hyderabad. The water samples collected from the hydrological stations under Upper Krishna Division are being analysed at Water Quality Level-II Laboratory at Pune and of Cauvery Division are being analysed at Water Quality Laboratory Level II at Bengaluru.

The water samples received directly in the respective laboratories are analysed for parameters which include physical, chemical, biological & toxic elements. In addition to above parameters three chemical indices are derived mathematically based on the observed data. Then the waters are classified with the help of US Salinity Diagram.

The Water Quality Year Book 2016-17 is useful to all the water resources planners, managers and water users in Krishna basin. Its usefulness will further improve, particularly for planning drinking water supply, irrigation, and industrial and sewage disposal schemes.

Hyderabad
February , 2018


(Rajeev Singhal)
Superintending Engineer

CONTENTS

	DESCRIPTION	PAGE NO
1.0	Water Quality Monitoring	1
1.1	Classification of water Quality stations	1
2.0	Observation/Sampling Techniques	1
2.1	Details of Samples	2
2.1.1	Type of Water Quality Stations	2
2.2	Analysis techniques and Methods	3
2.3	Volumetric analysis Method	3
2.4	Instrumental methods	3
2.5	List of Water quality Parameters analyzed in the CWC Laboratories	3
2.6	Calculated parameters	4
2.7	Method of presentation	5
	Tolerance limits as per BIS: 2296-1982	6
3	Basin map	7
4	Site wise Water Quality Data	
4.1	Krishna at Vijayawada	8
4.2	Munneru at Keesara	18
4.3	Wyra at Madhira	30
4.4	Paleru at Paleru Bridge	36
4.5	Krishna at Wadenapally	48
4.6	Musi at Dameracherla	62
4.7	Halia at Halia	75
4.8	Tungabhadra at Bawapuram	89
4.9	Tungabhadra at Mantralayam	101
4.10	Hagari at T. Rampuram	111
4.11	Vedavati at Kellodu	121
4.12	Swarnamukhi at Hoovinahole	127
4.13	Varada at Marol	131
4.14	Tungabhadra at Harlahalli	139
4.15	Haridra at Byaladahalli	151
4.16	Kumudavathi at Kuppelur	161
4.17	Tungabhadra at Honnali	171
4.18	Tunga at Shimoga	183
4.19	Bhadra at Holehonnur	194
4.20	Bhima at Yadgir	210
4.21	Kagna at Malkhed	220
4.22	Bhima at Takli	234
4.23	Nira at Sarati	240
4.24	Bhima at Phulgaon	244
4.25	Krishna at Huvinhedgi	250
4.26	Malaprabha at Chalachagudda	261
4.27	Ghataprabha at Gokakfalls (Seasonal)	272
4.28	Krishna at Kurundwad	276
4.29	Krishna at Arujunwad(Seasonal)	283
4.30	Varna at Samdoli(Seasonal)	287
4.31	Krishna at Karad	291
4.32	Koyna at Warunji	300

**KRISHNA BASIN
WATER QUALITY DATA (Vol.III)
(JUNE 2016-MAY 2017)**

1.0 WATER QUALITY MONITORING

River water quality monitoring is being carried out by the Central Water Commission in the Krishna basin since 1972. This volume III, contains data on water quality, monitored at 32 hydrological observation stations, in Krishna Basin during the water year 2016-17. Out of these 32 Water Quality stations, 10 stations are monitored by the Upper Krishna Division, Pune, 13 stations are monitored by Lower Krishna Division, Hyderabad and remaining 9 stations are monitored by the Cauvery Division, Bengaluru. Krishna Basin map showing the locations of these stations is appended.

One Level III laboratory located in Hyderabad and two Level II laboratories located in Pune and Bangalore are engaged in the analysis of water quality parameters.

1.1 Classification of Water Quality Stations

Based on the human activity at water quality station, they are classified as base line stations, flux stations and trend stations. Collection of samples depends upon the classification of particular station.

(i) Base line Stations: These are the water quality stations, where there is no influence of human activities on water quality. At these stations, water quality is monitored six times a year for perennial rivers and three to four 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 twelve to twenty-four times in a year, depending up on the pollution potential or importance of water use.

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

2.0 OBSERVATION/SAMPLING TECHNIQUES

A single grab sample at each station is collected on the scheduled dates at 30 cm below the water surface at the discharge measuring section from the stream.

The water samples are collected in two polythene bottles of one liter capacity and in one 250ml sterilized glass bottle every month on the sample collection date. The water samples collected in polythene bottles are used for the analysis of physico chemical parameters and the water sample collected in the sterilized glass bottle is used for the analysis of Bacteriological parameters. Once in year in the month of April water sample are collected for the analysis of Trace and Toxic elements in a new

polythene bottles and also water samples are collected in amber colored glass bottles for the analysis of Pesticides

The samples are transported in cool packs with ice to the respective laboratories with a minimum loss of time to ensure that they reach the laboratories within 24 hours after collection. The parameters like pH, electrical conductance, dissolved oxygen, alkalinity, hardness and ammonia are analyzed immediately soon after the receipt of samples in laboratory. Afterwards they are preserved at 4°C for analysis of other parameters within the prescribed time limits.

2.1 Details of Samples:

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

Divisional Laboratory	No. of Sites	No of samples		No. of parameters analysed
		Collected	Analysed	
Upper Krishna Division(Level- II)	10	27	27	594
Lower Krishna Division (Level- III)	13	104	104	3128
Cauvery Division(Level- II)	9	50	50	1000
Total	32			

2.1.1 Type of Water Quality Stations:

Sl. No	Name of Site	Name of Division	Type	Sl. No	Name of Site	Name of Division	Type
1	Vijayawada	LKD	Flux	17	Honnali	CD	Baseline
2	Keesara	LKD	Baseline	18	Shimoga	CD	Baseline
3	Madhira	LKD	Trend	19	Holehonnur	CD	Trend
4	Paleru Bridge	LKD	Trend	20	Yadgir	LKD	Trend
5	Wadenapally	LKD	Trend	21	Malkhed	LKD	Baseline
6	Dameracherla	LKD	Trend	22	Takli	UKD	Trend
7	Halia	LKD	Trend	23	Sarati	UKD	Baseline
8	Bawapuram	LKD	Trend	24	Phulgaon	UKD	Baseline
9	Mantralayam	LKD	Trend	25	Huvinhedgi	LKD	Trend
10	T. Rampuram	LKD	Trend	26	Cholachagudda	UKD	Trend
11	Kellodu	CD	Trend	27	Gokakfalls	UKD	Trend
12	Hoovinahole	CD	Trend	28	Kurundwad	UKD	Trend
13	Marol	CD	Trend	29	Arujunwad	UKD	Trend
14	Harlahalli	CD	Trend	30	Samdoli	UKD	Trend
15	Byaladahalli	CD	Trend	31	Karad	UKD	Trend
16	Kuppelur	CD	Trend	32	Koyna at Warunji	UKD	Baseline

2.2 Analysis Techniques and Methods

The water samples, received from different water quality monitoring stations are analyzed for different parameters following the “Standard methods for the examination of water and waste water” – APHA, AWWA & WPCF, 22nd edition.

2.3 Volumetric analysis Method

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

2.4. 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/Spectrophotometric method	Nitrate-Nitrogen & Fluoride	Ion meter/Spectrophotometer

2.5 List of Water Quality Parameters analyzed in the CWC Laboratories

Physico – Chemical Parameters: 1. pH 2. Electrical Conductance 3. Sodium 4. Potassium 5. Calcium 6. Magnesium 7. Iron 8. Ammonia 9. Carbonate 10. Bicarbonate 11. Chloride 12. Fluoride 13. Sulphate 14. Nitrate 15. Nitrite 16. Ortho-Phosphate, 17. Silicate, 18. Total Hardness and 19. Turbidity. 20. Boron, 21. Total Dissolved Solids.

Biological / Bacteriological Parameters: 1. Dissolved Oxygen 2. Bio-chemical Oxygen Demand 3. Chemical Oxygen Demand. 4.Total Organic Carbon .5.Total Coliforms 6.Feacal Coliforms

Pesticides : 1.Aldrin 2.BHC 3.DDT 4.Dieldrin 5.Endo sulfan.

Trace & Toxic Elements : 1..Arsenic 2.Mercury 3.Nickel 4.Zinc 5. Chromium 6.Lead 7.Cadmium 8.Copper.

2.6 Calculated parameters

Six parameters are calculated on the measured results of other parameters. The formulae are given below.

(i) **Carbonate and bicarbonate:** By using the measured values of Phenolphthalein Alkalinity (P) and Total Alkalinity (T), Carbonate alkalinity and bicarbonate alkalinity are calculated in water sample using following formulae.

Condition	OH ⁻ alkalinity as CaCO ₃ mg/L	CO ₃ ⁻ alkalinity as CaCO ₃ mg/L	HCO ₃ ⁻ alkalinity as CaCO ₃ mg/L
P=0	0	0	T
P<½T	0	2P	T-2P
P=½T	0	2P	0
P>½T	2P-T	2(T-P)	0
P=½T	T	0	0

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

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

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

(iii) **Magnesium:** $\text{Mg}^{++} \text{ mg/L} = 0.243 \times [\text{Total Hardness as CaCO}_3^{--} \text{ mg/L} - \text{Ca-Hardness as CaCO}_3^{--} \text{ mg/L}]$

(iv) **Sodium Percentage (%Na) :**
$$\text{SP} = \frac{\text{Na}^+ \times 100}{\sqrt{[\text{Ca}^{++} + \text{Mg}^{++} + \text{Na}^+ + \text{K}^+]}}$$

(Ionic concentrations are in meq /L)

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

(Ionic concentrations are in meq /L)

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

(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 summary for the current year and water quality seasonal average summary from 1993. The data presented in this volume-III are generated through SWDES. The serial order of water quality sites is arranged along the river moving upstream from the sea or confluence with another river / international boundary, towards its source, giving priority to sites on intermediate tributary. Tolerance limits of water quality parameters for different designated uses are according to Bureau of Indian Standard code BIS : 2296-1982.

Table 1 - Tolerance limit relating to selected pollution parameters for inland surface waters required for different uses as prescribed by the Bureau of Indian Standards (BIS: 2296-1982)

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

A Drinking water source without conventional treatment but after disinfections

B Outdoor bathing-organised

C Drinking water source with conventional treatment followed by disinfections

D Propagation of wildlife, fisheries

E Irrigation, industrial cooling and controlled waste disposal

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

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HISTORY SHEET

		Water Year : 2016-2017	
Site	: Vijayawada	Code	: AK000B9
State	: Andhra Pradesh	District	Krishna
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Krishna
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Krishna SD2, Vijayawada
Drainage Area	: 251360 Sq. Km.	Bank	: Left
Latitude	: 16°30'04"	Longitude	: 80°37'30"
	Opening Date	Closing Date	
Gauge	: 21/03/1964		
Discharge	: 24/03/1964		
Sediment	: 01/02/1965		
Water Quality	: 01/01/1972		

Water Quality Datasheet for the period : 2016-2017

Station Name : Vijayawada (AK000B9)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Analysis Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	01/09/2016 A	01/10/2016 A
	PHYSICAL		
1	Q (cumec)	233.0	497.5
2	Colour_Cod (-)	Light Brown	Light Brown
3	EC_GEN (µmho/cm)	495	529
4	Odour_Code (-)	odour free	odour free
5	pH_GEN (pH units)	8.4	8.2
6	TDS (mg/L)	444	478
7	Temp (deg C)	24.0	21.0
8	Turb (NTU)	8.00	0.00
	CHEMICAL		
1	Alk-Phen (mgCaCO3/L)	2.0	0.0
2	ALK-TOT (mgCaCO3/L)	134	141
3	Ca (mg/L)	28	30
4	Cl (mg/L)	35.7	44.2
5	CO3 (mg/L)	2.4	0.0
6	F (mg/L)	0.38	0.38
7	Fe (mg/L)	0.1	0.1
8	HCO3 (mg/L)	159	172
9	K (mg/L)	2.7	3.5
10	Mg (mg/L)	15.2	16.6
11	Na (mg/L)	42.8	42.6
12	NH3-N (mg N/L)		0.00
13	NO2+NO3 (mg N/L)	0.97	0.60
14	NO2-N (mgN/L)	0.00	0.00
15	NO3-N (mgN/L)	0.97	0.60
16	o-PO4-P (mg P/L)	0.087	0.059
17	SiO2 (mg/L)	8.2	11.1
18	SO4 (mg/L)	25.5	23.5
	BIOLOGICAL/BACTERIOLOGICAL		
1	BOD3-27 (mg/L)	0.9	0.9
2	COD (mg/L)	7.4	6.5
3	DO (mg/L)	6.3	6.5
4	DO_SAT% (%)	75	73
5	FCol-MPN (MPN/100mL)	9000	16000
6	Tcol-MPN (MPN/100mL)	9000	16000
	TRACE & TOXIC		
	CHEMICAL INDICES		
1	HAR_Ca (mgCaCO3/L)	70	76
2	HAR_Total (mgCaCO3/L)	133	145
3	Na% (%)	41	38
4	RSC (-)	0.0	0.0
5	SAR (-)	1.6	1.5
	PESTICIDES	Anlaysis not done due to mal function of instrument.	

Samples not collected during June to August and from November to May months due to Drybed/No flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Vijayawada (AK000B9)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

Sub-Division : Lower Krishna SD2, Vijayawada

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	364	3596	0.000	45.77
2	EC_GEN (μmho/cm)	2	529	495	512
3	pH_GEN (pH units)	2	8.4	8.2	8.3
4	TDS (mg/L)	2	478	444	461
5	Temp (deg C)	2	24.0	21.0	22.5
6	Turb (NTU)	2	8.00	0.00	4
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2	2.0	0.0	1
2	ALK-TOT (mgCaCO3/L)	2	141	134	138
3	Ca (mg/L)	2	30	28	29
4	Cl (mg/L)	2	44.2	35.7	39.9
5	CO3 (mg/L)	2	2.4	0.0	1.2
6	F (mg/L)	2	0.38	0.38	0.38
7	Fe (mg/L)	2	0.1	0.1	0.1
8	HCO3 (mg/L)	2	172	159	165
9	K (mg/L)	2	3.5	2.7	3.1
10	Mg (mg/L)	2	16.6	15.2	15.9
11	Na (mg/L)	2	42.8	42.6	42.7
12	NH3-N (mg N/L)	1	0.00	0.00	0
13	NO2+NO3 (mg N/L)	2	0.97	0.60	0.79
14	NO2-N (mgN/L)	2	0.00	0.00	0
15	NO3-N (mgN/L)	2	0.97	0.60	0.79
16	o-PO4-P (mg P/L)	2	0.087	0.059	0.073
17	SiO2 (mg/L)	2	11.1	8.2	9.7
18	SO4 (mg/L)	2	25.5	23.5	24.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2	0.9	0.9	0.9
2	COD (mg/L)	2	7.4	6.5	7
3	DO (mg/L)	2	6.5	6.3	6.4
4	DO_SAT% (%)	2	75	73	74
5	FCol-MPN (MPN/100mL)	2	16000	9000	12500
6	Tcol-MPN (MPN/100mL)	2	16000	9000	12500
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	2	76	70	73
2	HAR_Total (mgCaCO3/L)	2	145	133	139
3	Na% (%)	2	41	38	40
4	RSC (-)	2	0.0	0.0	0
5	SAR (-)	2	1.6	1.5	1.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Vijayawada (AK000B9)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood				
		Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	24.62	3.942	4.827	429.0	270.5
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	579	681	611	502	509
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.2	7.9	7.8	7.9	8.3
6	TDS (mg/L)					
7	Temp (deg C)	29.1	29.4	27.8	27.8	28.2
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	4.1	1.9	1.5	0.0	3.3
2	ALK-TOT (mgCaCO3/L)	92	181	227	173	154
3	B (mg/L)	0.01	0.03	0.00	0.00	0.00
4	Ca (mg/L)	22	35	39	35	36
5	Cl (mg/L)	56.1	54.2	50.2	41.0	43.1
6	CO3 (mg/L)	4.9	2.2	1.8	0.0	4.0
7	F (mg/L)	0.59	0.75	0.95	0.49	0.67
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	102	216	274	211	180
10	K (mg/L)	2.7	5.2	3.4	2.6	2.9
11	Mg (mg/L)	15.0	13.9	15.9	14.6	11.8
12	Na (mg/L)	25.9	58.8	60.5	39.4	60.4
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.09	0.01	0.01	0.01	0.00
15	NO2-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mg N/L)	0.09	0.01	0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.032	0.037	0.001	0.001	0.001
19	SiO2 (mg/L)	4.5	14.1	17.6	23.2	16.3
20	SO4 (mg/L)	55.9	101.1	46.5	36.4	41.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.5	1.7	1.2	1.1
2	COD (mg/L)					
3	DO (mg/L)	5.2	5.9	5.0	5.7	7.2
4	DO_SAT% (%)	68	78	64	73	93
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)	56	87	96	87	90
2	HAR_Total (mgCaCO3/L)	119	145	162	147	139
3	Na% (%)	31	41	44	35	46
4	RSC (-)	0.0	0.7	1.4	0.7	0.3
5	SAR (-)	1.0	2.2	2.1	1.4	2.2
	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 : Vijayawada (AK000B9)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	3578	100.1	354.0	629.0	165.6
2	EC_FLD (µmho/cm)				537	
3	EC_GEN (µmho/cm)	519	597	576	572	622
4	pH_FLD (pH units)				7.6	
5	pH_GEN (pH units)	8.0	8.3	8.2	8.2	8.1
6	TDS (mg/L)					421
7	Temp (deg C)	26.5	26.3	26.0	30.6	28.0
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	4.0	0.0	1.6	1.3
2	ALK-TOT (mgCaCO3/L)	149	182	150	163	171
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	34	42	31	37	34
5	Cl (mg/L)	33.5	51.1	52.8	56.9	60.6
6	CO3 (mg/L)	0.0	4.8	0.0	1.9	1.6
7	F (mg/L)	0.66	0.65	0.56	0.65	1.15
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	182	212	183	195	206
10	K (mg/L)	3.5	3.1	3.2	3.5	3.3
11	Mg (mg/L)	13.5	11.2	15.5	14.9	20.6
12	Na (mg/L)	44.0	53.8	52.8	55.3	57.6
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	1.50	0.00	0.38
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	1.50	0.00	0.38
17	o-PO4-P (mg P/L)					0.267
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.162	0.371
19	SiO2 (mg/L)	12.9	16.4	14.1	13.5	13.0
20	SO4 (mg/L)	30.0	46.2	61.6	51.8	55.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.2	1.5	1.2	0.9
2	COD (mg/L)	11.8	17.9	29.5	39.3	11.2
3	DO (mg/L)	6.7	6.5	6.1	7.1	6.5
4	DO_SAT% (%)	84	80	84	94	84
5	FCol-MPN (MPN/100mL)			16000	13800	13667
6	Tcol-MPN (MPN/100mL)			16000	14600	16000
7	TOC (mg/L)					3.5
	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)	84	106	78	91	86
2	HAR_Total (mgCaCO3/L)	140	152	143	153	172
3	Na% (%)	40	43	44	43	42
4	RSC (-)	0.2	0.6	0.2	0.2	0.2
5	SAR (-)	1.6	1.9	1.9	2.0	1.9
	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 : Vijayawada (AK000B9)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood				
		Jun - Oct				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)		454.2	125.8		365.2
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)		507	497		512
4	pH_FLD (pH units)					
5	pH_GEN (pH units)		8.4	8.6		8.3
6	TDS (mg/L)		272			461
7	Temp (deg C)		31.0	32.0		22.5
8	Turb (NTU)		1.44	13.00		4.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		2.2	4.2		1.0
2	ALK-TOT (mgCaCO3/L)		130	141		138
3	B (mg/L)		0.05	0.19		
4	Ca (mg/L)		27	27		29
5	Cl (mg/L)		39.8	67.2		39.9
6	CO3 (mg/L)		2.6	5.0		1.2
7	F (mg/L)		0.61	0.47		0.38
8	Fe (mg/L)		0.1	0.1		0.1
9	HCO3 (mg/L)		153	162		165
10	K (mg/L)		2.6	3.2		3.1
11	Mg (mg/L)		15.6	15.1		15.9
12	Na (mg/L)		44.8	50.8		42.7
13	NH3-N (mg N/L)		0.09	0.00		0.00
14	NO2+NO3 (mg N/L)		0.60	1.22		0.79
15	NO2-N (mgN/L)		0.00	0.03		0.00
16	NO3-N (mgN/L)		0.60	1.19		0.79
17	o-PO4-P (mg P/L)		0.115	0.110		0.073
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)		12.2	12.8		9.7
20	SO4 (mg/L)		40.3	48.7		24.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		1.3	1.6		0.9
2	COD (mg/L)		6.6	3.5		7.0
3	DO (mg/L)		6.7	6.7		6.4
4	DO_SAT% (%)		90	92		74
5	FCol-MPN (MPN/100mL)		401	16000		12500
6	Tcol-MPN (MPN/100mL)		1201	16000		12500
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)		68	68		73
2	HAR_Total (mgCaCO3/L)		133	131		139
3	Na% (%)		42	45		40
4	RSC (-)		0.0	0.2		0.0
5	SAR (-)		1.7	1.9		1.6
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Vijayawada (AK000B9)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter					
		Nov - Feb					
		2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
	PHYSICAL						
1	Q (cumec)	6.100	1.626	2.428	971.2	139.8	96.83
2	EC_FLD (µmho/cm)						
3	EC_GEN (µmho/cm)	563	587	584	520	508	566
4	pH_FLD (pH units)						
5	pH_GEN (pH units)	7.9	8.1	7.9	8.1	8.4	8.5
6	TDS (mg/L)						
7	Temp (deg C)	26.2	26.4	26.1	24.8	27.0	25.8
8	Turb (NTU)						
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	2.4	0.0	1.2	3.9	10.0	13.9
2	ALK-TOT (mgCaCO3/L)	110	202	183	172	186	189
3	B (mg/L)	0.01	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	33	34	42	37	40	40
5	Cl (mg/L)	58.1	53.8	52.3	39.8	40.5	48.8
6	CO3 (mg/L)	2.8	0.0	1.5	4.8	12.0	16.7
7	F (mg/L)	0.36	0.76	0.56	0.63	0.48	0.82
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	128	246	220	201	203	196
10	K (mg/L)	2.4	3.2	2.9		2.3	2.9
11	Mg (mg/L)	21.1	14.4	17.9	14.5	14.5	17.0
12	Na (mg/L)	26.0	38.5	42.0		57.5	65.5
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00	0.05
14	NO2+NO3 (mg N/L)	0.06	0.01	0.01	0.01	0.00	0.01
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.06	0.01	0.01	0.01	0.00	0.01
17	o-PO4-P (mg P/L)						
18	P-Tot (mgP/L)	0.028	0.001	0.001	0.001	0.001	0.001
19	SiO2 (mg/L)	5.8	15.0	14.1	13.7	18.3	15.0
20	SO4 (mg/L)	66.3	51.7	59.8	47.8	40.8	42.3
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.0	1.4	1.0	1.2	1.2	1.2
2	COD (mg/L)						31.3
3	DO (mg/L)	6.7	6.2	6.4	6.6	7.7	7.5
4	DO_SAT% (%)	83	77	79	80	96	91
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)	83	85	105	92	101	100
2	HAR_Total (mgCaCO3/L)	171	145	180	152	161	171
3	Na% (%)	23	36	33		43	45
4	RSC (-)	0.0	1.1	0.3	0.4	0.5	0.4
5	SAR (-)	0.9	1.4	1.4		2.0	2.2
	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 : Vijayawada (AK000B9)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter				
		Nov - Feb				
		2008-2009	2009-2010	2010-2011	2011-2012	2013-2014
	PHYSICAL					
1	Q (cumec)	198.1	176.2	230.9	146.3	189.7
2	EC_FLD (µmho/cm)			675		
3	EC_GEN (µmho/cm)	666	650	724	524	562
4	pH_FLD (pH units)			7.4		
5	pH_GEN (pH units)	8.5	8.2	8.3	8.5	8.3
6	TDS (mg/L)				328	485
7	Temp (deg C)	24.8	25.0	26.0	28.0	27.5
8	Turb (NTU)				1.00	4.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	8.0	0.0	5.3	12.2	2.1
2	ALK-TOT (mgCaCO3/L)	195	196	197	155	160
3	B (mg/L)	0.00	0.00	0.00	0.17	0.02
4	Ca (mg/L)	53	38	40	28	33
5	Cl (mg/L)	55.0	58.1	70.8	50.5	44.5
6	CO3 (mg/L)	9.6	0.0	6.4	14.7	2.5
7	F (mg/L)	0.76	0.55	0.77	0.57	0.55
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	218	239	228	159	191
10	K (mg/L)	3.1	3.1	3.7	2.5	3.2
11	Mg (mg/L)	9.7	19.4	22.2	16.0	19.1
12	Na (mg/L)	63.3	64.8	71.1	52.4	50.6
13	NH3-N (mg N/L)	0.05	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	1.64	0.00	2.75	1.13
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	1.64	0.00	2.75	1.13
17	o-PO4-P (mg P/L)				0.230	0.175
18	P-Tot (mgP/L)	0.001	0.000	0.153	0.230	
19	SiO2 (mg/L)	16.3	16.5	15.6	15.1	12.6
20	SO4 (mg/L)	49.0	53.0	57.7	49.8	17.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.6	0.7	0.3	1.1
2	COD (mg/L)	9.4	15.3	19.4	4.3	3.7
3	DO (mg/L)	7.1	7.2	7.2	6.2	6.8
4	DO_SAT% (%)	86	87	89	79	86
5	FCol-MPN (MPN/100mL)		16000	16000	16000	515
6	Tcol-MPN (MPN/100mL)		16000	16000	16000	1450
7	TOC (mg/L)				2.4	
	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)	133	94	99	70	83
2	HAR_Total (mgCaCO3/L)	174	175	191	137	163
3	Na% (%)	44	44	44	45	40
4	RSC (-)	0.4	0.8	0.2	0.4	0.0
5	SAR (-)	2.1	2.2	2.3	2.0	1.7
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Samples not collected during Winter Season from 2012-2013, and from 2014-2015 to 2016-2017.

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Vijayawada (AK000B9)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Summer			
		Mar - May			
		2003	2004	2005	2006
	PHYSICAL				
1	Q (cumec)	3.914	1.273	3.561	49.77
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)	644	583	611	767
4	pH_FLD (pH units)				
5	pH_GEN (pH units)	7.9	7.8	7.7	8.3
6	TDS (mg/L)				
7	Temp (deg C)	32.3	30.9	27.8	28.5
8	Turb (NTU)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	11.6
2	ALK-TOT (mgCaCO3/L)	99	182	158	200
3	B (mg/L)	0.00	0.00	0.00	0.00
4	Ca (mg/L)	29	31	40	45
5	Cl (mg/L)	55.4	52.8	60.8	54.0
6	CO3 (mg/L)	0.0	0.0	0.0	14.0
7	F (mg/L)	0.68	0.69	0.69	0.82
8	Fe (mg/L)	0.0	0.1	0.0	0.0
9	HCO3 (mg/L)	106	222	192	215
10	K (mg/L)	2.6	2.5	3.7	4.1
11	Mg (mg/L)	16.2	14.3	18.3	17.0
12	Na (mg/L)	55.7	36.7	53.6	75.0
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.05	0.01	0.01	0.01
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.05	0.01	0.01	0.01
17	o-PO4-P (mg P/L)				
18	P-Tot (mgP/L)	0.027	0.001	0.001	0.001
19	SiO2 (mg/L)	6.0	16.9	16.8	16.3
20	SO4 (mg/L)	75.9	51.6	59.8	45.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.2	1.5	0.9	2.0
2	COD (mg/L)				
3	DO (mg/L)	5.0	6.5	5.3	5.7
4	DO_SAT% (%)	69	88	67	73
5	FCol-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
7	TOC (mg/L)				
	TRACE & TOXIC				
1	Cd (µg/L)				0.01
2	Cr (µg/L)				2.00
3	Hg (µg/L)				
4	Ni (µg/L)				1.00
5	Pb (µg/L)				68.00
6	Zn (µg/L)				12.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	73	78	99	113
2	HAR_Total (mgCaCO3/L)	140	137	175	183
3	Na% (%)	37	35	39	47
4	RSC (-)	0.0	0.9	0.3	0.3
5	SAR (-)	2.1	1.4	1.8	2.4
	PESTICIDES				
1	Aldrin (µg/L)				0.010
2	BHC (µg/L)				0.100
3	DDT (µg/L)				0.100
4	Dieldrin (µg/L)				0.037
5	Endos (µg/L)				0.110

Samples not collected as discharges estimated for the year 201 and 2011 in Summer.

Samples not collected due to No flow/Dry bed condition from 2012 to 2017.

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Vijayawada (AK000B9)

Division : Lower Krishna Divn., Hyderabad

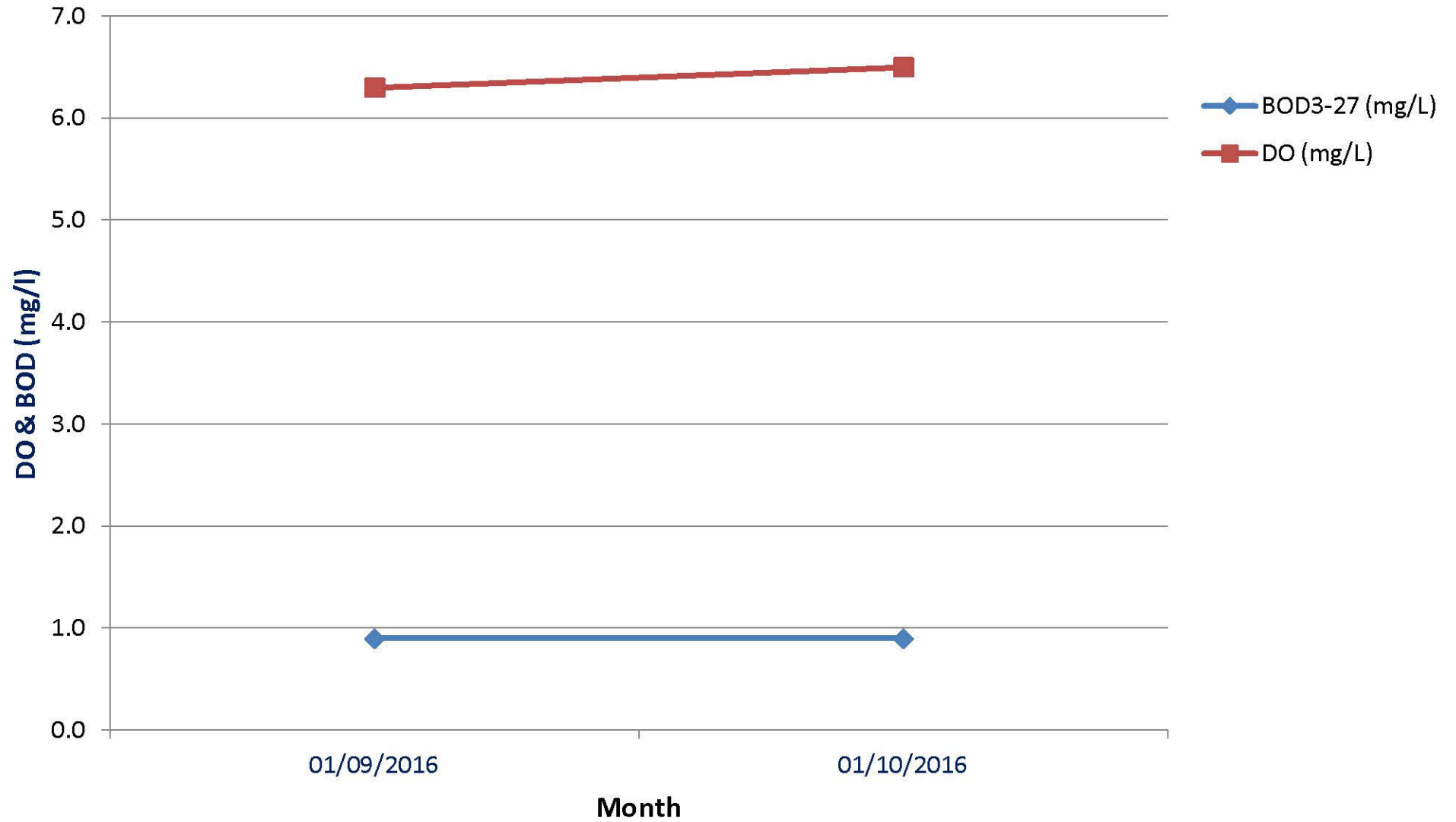
Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Summer		
		Mar - May		
		2007	2008	2009
	PHYSICAL			
1	Q (cumec)	0.000	7.232	30.76
2	EC_FLD (µmho/cm)			
3	EC_GEN (µmho/cm)	500	644	620
4	pH_FLD (pH units)			
5	pH_GEN (pH units)	8.3	8.4	8.5
6	TDS (mg/L)			
7	Temp (deg C)	27.0	26.3	28.0
8	Turb (NTU)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	24.1	5.5	8.0
2	ALK-TOT (mgCaCO3/L)	180	194	176
3	B (mg/L)	0.00	0.00	0.00
4	Ca (mg/L)	42	42	47
5	Cl (mg/L)	42.4	59.7	53.9
6	CO3 (mg/L)	29.0	6.7	9.6
7	F (mg/L)	0.88	0.79	0.72
8	Fe (mg/L)	0.0	0.0	0.0
9	HCO3 (mg/L)	161	223	195
10	K (mg/L)	3.1	3.3	3.2
11	Mg (mg/L)	15.0	15.3	7.8
12	Na (mg/L)	47.0	66.7	60.6
13	NH3-N (mg N/L)	0.00	0.05	0.05
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01
15	NO2-N (mgN/L)	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01
17	o-PO4-P (mg P/L)	0.000		
18	P-Tot (mgP/L)	0.001	0.001	0.001
19	SiO2 (mg/L)	11.8	15.3	11.8
20	SO4 (mg/L)	47.0	40.0	50.0
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.2	0.9	1.1
2	COD (mg/L)		9.3	12.0
3	DO (mg/L)	6.8	6.4	7.3
4	DO_SAT% (%)	85	79	93
5	FCol-MPN (MPN/100mL)			
6	Tcol-MPN (MPN/100mL)			
7	TOC (mg/L)		3.3	
	TRACE & TOXIC			
1	Cd (µg/L)		0.70	
2	Cr (µg/L)		2.00	
3	Hg (µg/L)		0.00	
4	Ni (µg/L)		8.40	
5	Pb (µg/L)		11.78	
6	Zn (µg/L)		16.31	
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	105	105	116
2	HAR_Total (mgCaCO3/L)	168	169	149
3	Na% (%)	37	46	46
4	RSC (-)	0.3	0.5	0.6
5	SAR (-)	1.6	2.2	2.2
	PESTICIDES			
1	Aldrin (µg/L)		0.010	
2	BHC (µg/L)		0.480	
3	DDT (µg/L)		0.100	
4	Dieldrin (µg/L)		0.010	
5	Endos (µg/L)		0.100	

Vijayawada



HISTORY SHEET

		Water Year : 2016-2017	
Site	: Keesara	Code	: AKA00B4
State	: Andhra Pradesh	District	Krishna
Basin	: Krishna	Independent River	: Krishna
Tributary	: Munneru	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Munneru
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Krishna SD2, Vijayawada
Drainage Area	: 9854 Sq. Km.	Bank	: Left
Latitude	: 16°42'53"	Longitude	: 80°19'13"
	Opening Date	Closing Date	
Gauge	: 23/09/1963		
Discharge	: 26/06/1964		
Sediment	: 02/07/1965		
Water Quality	: 01/01/1972		

Water Quality Datasheet for the period : 2016-2017

Station Name : Keesara (AKA00B4)

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

River Water Analysis Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	27/06/2016 A	01/07/2016 A	01/08/2016 A	01/09/2016 A
	PHYSICAL				
1	Q (cumec)	20.29	109.2	50.21	66.83
2	Colour_Cod (-)	Brown	Light Brown	Light Brown	Light Brown
3	EC_FLD (μmho/cm)				
4	EC_GEN (μmho/cm)	255	400	277	690
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)				
7	pH_GEN (pH units)	7.5	8.2	8.2	8.2
8	TDS (mg/L)	226	342	242	384
9	Temp (deg C)	25.0	25.0	25.0	25.0
10	Turb (NTU)	938.00	594.00	95.00	1.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	115	107	119	183
3	Ca (mg/L)	16	18	17	26
4	Cl (mg/L)	19.6	31.1	19.9	82.0
5	CO3 (mg/L)	0.0	0.0	0.0	0.0
6	F (mg/L)	0.69	0.60	0.43	0.88
7	Fe (mg/L)	0.0	0.1	0.1	0.0
8	HCO3 (mg/L)	141	130	145	223
9	K (mg/L)	3.2	3.4	3.2	4.1
10	Mg (mg/L)	8.5	10.6	9.7	14.3
11	Na (mg/L)	36.8	44.7	43.2	88.4
12	NH3-N (mg N/L)	0.00	0.01	0.00	
13	NO2+NO3 (mg N/L)	0.10	0.79	1.72	0.56
14	NO2-N (mgN/L)	0.00	0.00	0.00	0.00
15	NO3-N (mgN/L)	0.10	0.79	1.72	0.56
16	o-PO4-P (mg P/L)	0.227	0.143	0.166	0.502
17	SiO2 (mg/L)	11.6	11.0	9.0	9.7
18	SO4 (mg/L)	19.8	11.5	1.0	24.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.7	1.4	1.8	1.5
2	COD (mg/L)	17.1	11.8	13.8	17.1
3	DO (mg/L)	5.0	5.8	5.7	5.7
4	DO_SAT% (%)	61	70	69	69
5	FCOI-MPN (MPN/100mL)	16000	2800	16000	16000
6	TcoI-MPN (MPN/100mL)	16000	16000	16000	16000
	TRACE & TOXIC				
1	Cu (μg/L)				
2	Zn (μg/L)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	40	46	42	66
2	HAR_Total (mgCaCO3/L)	75	90	83	125
3	Na% (%)	50	51	52	60
4	RSC (-)	0.8	0.3	0.7	1.2
5	SAR (-)	1.8	2.1	2.1	3.4
	PESTICIDES	Anlysis not done due to mal function of instrument.			

Water Quality Datasheet for the period : 2016-2017

Station Name : Keesara (AKA00B4)

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

River Water Analysis Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	01/10/2016 A	01/11/2016 A	01/12/2016 A	02/01/2017 A
	PHYSICAL				
1	Q (cumec)	260.3	76.95	3.231	2.413
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown	Light Brown
3	EC_FLD (µmho/cm)	1730	1710	1750	1755
4	EC_GEN (µmho/cm)	622	567	741	724
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.8	7.7	7.7	7.8
7	pH_GEN (pH units)	8.5	8.5	8.5	8.3
8	TDS (mg/L)	375	402	406	680
9	Temp (deg C)	25.0	24.0	22.0	21.0
10	Turb (NTU)	1.00	1.00	0.00	0.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2.0	6.6	3.5	5.0
2	ALK-TOT (mgCaCO3/L)	210	177	202	220
3	Ca (mg/L)	35	38	41	46
4	Cl (mg/L)	55.1	40.7	79.1	79.3
5	CO3 (mg/L)	2.4	8.0	4.2	6.0
6	F (mg/L)	0.79	0.67	0.72	0.75
7	Fe (mg/L)	0.1	0.1	0.0	0.1
8	HCO3 (mg/L)	251	200	238	257
9	K (mg/L)	3.6	2.9	4.9	4.7
10	Mg (mg/L)	19.3	20.8	22.2	25.3
11	Na (mg/L)	76.0	48.9	90.0	77.0
12	NH3-N (mg N/L)	0.01	0.00		0.26
13	NO2+NO3 (mg N/L)	1.44	0.29	0.10	0.26
14	NO2-N (mgN/L)	0.00	0.00	0.02	0.01
15	NO3-N (mgN/L)	1.44	0.29	0.08	0.25
16	o-PO4-P (mg P/L)	0.211	0.110	0.063	0.060
17	SiO2 (mg/L)	12.6	11.9	21.3	7.8
18	SO4 (mg/L)	47.3	11.3	126.0	113.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.8	1.5	2.1	1.5
2	COD (mg/L)	10.0	5.1	8.8	10.1
3	DO (mg/L)	5.4	6.2	4.2	7.5
4	DO_SAT% (%)	65	73	48	84
5	FCoI-MPN (MPN/100mL)	2800	16000	110	3000
6	TcoI-MPN (MPN/100mL)	2800	16000	800	9000
	TRACE & TOXIC				
1	Cu (µg/L)			0.00	0.00
2	Zn (µg/L)			0.00	0.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	89	95	102	116
2	HAR_Total (mgCaCO3/L)	169	182	194	221
3	Na% (%)	49	37	50	43
4	RSC (-)	0.8	0.0	0.2	0.0
5	SAR (-)	2.6	1.6	2.8	2.3
	PESTICIDES				

Samples not collected from January to May months due to Dry bed/ No flow condition..

Water Quality Summary for the period : 2016-2017

Station Name : Keesara (AKA00B4)

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

Sub-Division : Lower Krishna SD2, Vijayawada

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	1769	0.000	31.99
2	EC_FLD (μmho/cm)	4	1755	1710	1736
3	EC_GEN (μmho/cm)	8	741	255	535
4	pH_FLD (pH units)	4	7.8	7.7	7.7
5	pH_GEN (pH units)	8	8.5	7.5	8.2
6	TDS (mg/L)	8	680	226	382
7	Temp (deg C)	8	25.0	21.0	24
8	Turb (NTU)	8	938.00	0.00	203.75
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	8	6.6	0.0	2.1
2	ALK-TOT (mgCaCO3/L)	8	220	107	167
3	Ca (mg/L)	8	46	16	30
4	Cl (mg/L)	8	82.0	19.6	50.8
5	CO3 (mg/L)	8	8.0	0.0	2.6
6	F (mg/L)	8	0.88	0.43	0.69
7	Fe (mg/L)	8	0.1	0.0	0.1
8	HCO3 (mg/L)	8	257	130	198
9	K (mg/L)	8	4.9	2.9	3.7
10	Mg (mg/L)	8	25.3	8.5	16.3
11	Na (mg/L)	8	90.0	36.8	63.1
12	NH3-N (mg N/L)	6	0.26	0.00	0.05
13	NO2+NO3 (mg N/L)	8	1.72	0.10	0.66
14	NO2-N (mgN/L)	8	0.02	0.00	0
15	NO3-N (mgN/L)	8	1.72	0.08	0.65
16	o-PO4-P (mg P/L)	8	0.502	0.060	0.185
17	SiO2 (mg/L)	8	21.3	7.8	11.9
18	SO4 (mg/L)	8	126.0	1.0	44.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	8	2.1	1.4	1.7
2	COD (mg/L)	8	17.1	5.1	11.7
3	DO (mg/L)	8	7.5	4.2	5.7
4	DO_SAT% (%)	8	84	48	67
5	FCol-MPN (MPN/100mL)	8	16000	110	9089
6	Tcol-MPN (MPN/100mL)	8	16000	800	11575
	TRACE & TOXIC				
1	Cu (μg/L)	2	0.00	0.00	0
2	Zn (μg/L)	2	0.00	0.00	0
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	8	116	40	74
2	HAR_Total (mgCaCO3/L)	8	221	75	142
3	Na% (%)	8	60	37	49
4	RSC (-)	8	1.2	0.0	0.5
5	SAR (-)	8	3.4	1.6	2.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Keesara (AKA00B4)

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood				
		Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	7.178	45.01	65.86	65.67	29.74
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	677	903	582	545	710
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.6	8.1	8.3	8.3	8.4
6	TDS (mg/L)					
7	Temp (deg C)	30.5	29.0	27.0	29.5	28.7
8	Turb (NTU)					
	CHEMICAL					
1	ALK-Phen (mgCaCO3/L)	0.0	7.0	7.5	4.6	6.6
2	ALK-TOT (mgCaCO3/L)	78	222	250	168	223
3	B (mg/L)	0.01	0.00	0.00	0.01	0.00
4	Ca (mg/L)	20	37	31	29	36
5	Cl (mg/L)	64.0	44.0	42.1	39.0	63.3
6	CO3 (mg/L)	0.0	8.4	9.0	5.5	8.0
7	F (mg/L)	0.97	0.97	1.03	1.11	0.96
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	95	254	287	194	255
10	K (mg/L)	4.7	4.3	2.2	2.3	4.8
11	Mg (mg/L)	24.3	11.7	17.0	14.5	17.0
12	Na (mg/L)	39.0	51.0	69.0	56.5	110.3
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.05	0.01	0.01	0.01	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.05	0.01	0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.107	0.136	0.001	0.005	0.001
19	SiO2 (mg/L)	3.5	10.9	13.0	13.7	14.1
20	SO4 (mg/L)	60.5	40.5	35.0	36.0	56.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.4	1.9	1.3	1.0	1.4
2	COD (mg/L)					
3	DO (mg/L)	4.5	5.4	6.0	5.8	6.9
4	DO_SAT% (%)	60	70	75	69	89
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	Hg (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	51	94	76	73	90
2	HAR_Total (mgCaCO3/L)	152	142	147	133	161
3	Na% (%)	32	42	49	44	59
4	RSC (-)	0.0	1.6	2.1	0.7	1.3
5	SAR (-)	1.4	1.8	2.4	2.1	3.8
	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 : Keesara (AKA00B4)

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood				
		Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	137.6	72.83	56.37	147.2	36.29
2	EC_FLD (µmho/cm)				890	
3	EC_GEN (µmho/cm)	689	649	641	613	805
4	pH_FLD (pH units)				8.2	
5	pH_GEN (pH units)	8.6	8.2	8.4	8.4	8.2
6	TDS (mg/L)					454
7	Temp (deg C)	29.8	27.7	28.8	29.7	29.0
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	14.4	2.7	4.0	2.7	1.3
2	ALK-TOT (mgCaCO3/L)	230	189	176	183	229
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	30	44	27	31	31
5	Cl (mg/L)	91.6	52.6	74.0	52.4	89.9
6	CO3 (mg/L)	17.3	3.2	4.8	3.2	1.6
7	F (mg/L)	1.33	0.79	0.95	1.11	1.39
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	245	225	205	216	276
10	K (mg/L)	4.8	3.4	5.0	3.4	4.2
11	Mg (mg/L)	17.3	6.8	10.2	73.0	16.4
12	Na (mg/L)	103.3	60.7	76.6	59.5	100.8
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	0.60	0.00	0.42
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	0.60	0.00	0.42
17	o-PO4-P (mg P/L)					0.257
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.150	0.257
19	SiO2 (mg/L)	14.3	10.4	13.2	12.4	14.4
20	SO4 (mg/L)	38.7	37.7	45.8	40.9	46.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	0.9	2.0	1.0	0.2
2	COD (mg/L)	18.2	17.9	17.5	13.1	15.1
3	DO (mg/L)	7.2	5.7	5.0	6.6	5.1
4	DO_SAT% (%)	93	72	65	87	75
5	FCol-MPN (MPN/100mL)			16000	7433	12333
6	Tcol-MPN (MPN/100mL)			16000	8900	13667
7	TOC (mg/L)					3.1
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Hg (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	76	109	68	79	78
2	HAR_Total (mgCaCO3/L)	148	138	111	383	146
3	Na% (%)	55	48	56	30	58
4	RSC (-)	1.7	1.1	1.3	0.3	1.7
5	SAR (-)	3.7	2.3	3.0	1.4	3.6
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Keesara (AKA00B4)

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood				
		Jun - Oct				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	63.22	201.0	16.87	67.46	101.4
2	EC_FLD (µmho/cm)		1000			1730
3	EC_GEN (µmho/cm)	631	657	923	611	449
4	pH_FLD (pH units)		7.0			7.8
5	pH_GEN (pH units)	8.3	8.2	8.1	8.0	8.1
6	TDS (mg/L)	476	478	522	388	314
7	Temp (deg C)	30.0	29.1	29.0	25.8	25.0
8	Turb (NTU)	0.55	2.60	8.33	65.75	325.80
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.0	2.2	0.0	0.0	0.4
2	ALK-TOT (mgCaCO3/L)	200	252	208	190	147
3	B (mg/L)	0.19	0.72	0.32	0.18	
4	Ca (mg/L)	36	59	33	31	23
5	Cl (mg/L)	77.0	49.5	93.4	60.4	41.5
6	CO3 (mg/L)	2.4	2.6	0.0	0.0	0.5
7	F (mg/L)	0.78	0.74	0.93	0.83	0.68
8	Fe (mg/L)	0.0	0.2	0.1	0.1	0.1
9	HCO3 (mg/L)	239	303	254	232	178
10	K (mg/L)	4.1	2.3	5.1	4.0	3.5
11	Mg (mg/L)	20.7	11.0	19.1	17.6	12.5
12	Na (mg/L)	89.7	63.9	110.4	79.9	57.8
13	NH3-N (mg N/L)	0.00	0.02	0.00	0.03	0.00
14	NO2+NO3 (mg N/L)	0.93	0.67	1.04	1.02	0.92
15	NO2-N (mgN/L)	0.00	0.00	0.02	0.01	0.00
16	NO3-N (mgN/L)	0.93	0.67	1.02	1.00	0.92
17	o-PO4-P (mg P/L)	0.124	0.125	0.146	0.215	0.250
18	P-Tot (mgP/L)			0.166		
19	SiO2 (mg/L)	11.6	11.3	15.0	10.6	10.8
20	SO4 (mg/L)	47.0	32.7	58.4	33.1	20.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	0.6	1.0	2.1	1.6
2	COD (mg/L)	21.1	10.1	6.9	14.0	14.0
3	DO (mg/L)	6.4	6.5	5.9	5.2	5.5
4	DO_SAT% (%)	84	85	77	64	67
5	FCol-MPN (MPN/100mL)	8150	8800	6210	7475	10720
6	Tcol-MPN (MPN/100mL)	8400	16000	8000	12700	13360
7	TOC (mg/L)	3.6	0.8		23.9	
	TRACE & TOXIC					
1	As (µg/L)	8.30	4.39			
2	Cd (µg/L)	0.85	2.23			
3	Cr (µg/L)	15.27	0.69			
4	Hg (µg/L)		0.60			
5	Ni (µg/L)	5.44	18.42			
6	Pb (µg/L)	3.46	2.36			
7	Zn (µg/L)	62.51	0.01			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	90	148	84	78	56
2	HAR_Total (mgCaCO3/L)	176	194	163	151	108
3	Na% (%)	52	42	58	52	52
4	RSC (-)	0.5	1.2	0.9	0.8	0.8
5	SAR (-)	3.0	2.0	3.7	2.8	2.4
	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 : Keesara (AKA00B4)

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter				
		Nov - Feb				
		2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)		3.990	6.410	23.52	19.97
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)		805	919	789	700
4	pH_FLD (pH units)					
5	pH_GEN (pH units)		8.6	8.3	8.0	8.2
6	TDS (mg/L)					
7	Temp (deg C)		26.0	27.0	25.5	24.0
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		20.4	7.5	0.0	0.0
2	ALK-TOT (mgCaCO3/L)		298	312	267	254
3	B (mg/L)		0.00	0.00	0.01	0.00
4	Ca (mg/L)		37	39	42	41
5	Cl (mg/L)		69.8	85.5	63.7	59.6
6	CO3 (mg/L)		24.6	9.0	0.0	0.0
7	F (mg/L)		0.88	0.83	1.04	1.10
8	Fe (mg/L)		0.0	0.0	0.0	0.0
9	HCO3 (mg/L)		313	362	326	310
10	K (mg/L)		3.8	2.9		2.7
11	Mg (mg/L)		17.5	21.5	21.0	22.0
12	Na (mg/L)		59.5	98.0		109.0
13	NH3-N (mg N/L)		0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)		0.01	0.01	0.01	0.00
15	NO2-N (mgN/L)		0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)		0.01	0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)		0.001	0.001	0.010	0.001
19	SiO2 (mg/L)		15.9	13.6	11.1	16.7
20	SO4 (mg/L)		44.0	62.0	54.5	47.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		1.8	0.7	0.9	0.8
2	COD (mg/L)					
3	DO (mg/L)		6.8	5.8	5.8	6.8
4	DO_SAT% (%)		83	72	72	82
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	Hg (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		93	96	105	103
2	HAR_Total (mgCaCO3/L)		166	186	193	194
3	Na% (%)		43	53		54
4	RSC (-)		2.7	2.5	1.5	1.2
5	SAR (-)		2.0	3.1		3.4
	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 : Keesara (AKA00B4)

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter				
		Nov - Feb				
		2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	20.00	47.12	18.98	38.91	14.17
2	EC_FLD (µmho/cm)				780	
3	EC_GEN (µmho/cm)	772	782	874	770	873
4	pH_FLD (pH units)				8.1	
5	pH_GEN (pH units)	8.3	8.3	8.3	8.3	8.0
6	TDS (mg/L)					555
7	Temp (deg C)	25.0	22.0	25.5	25.0	25.5
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	4.1	8.0	4.0	8.0	0.0
2	ALK-TOT (mgCaCO3/L)	253	276	188	233	251
3	B (mg/L)	0.00	0.00	0.00	0.00	0.18
4	Ca (mg/L)	36	46	32	36	41
5	Cl (mg/L)	69.7	75.9	81.2	67.7	97.3
6	CO3 (mg/L)	5.0	9.6	4.8	9.6	0.0
7	F (mg/L)	1.00	0.85	1.44	0.78	0.96
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1
9	HCO3 (mg/L)	298	318	219	265	306
10	K (mg/L)	3.3	4.0	2.8	3.6	3.4
11	Mg (mg/L)	20.5	11.7	17.9	20.4	23.6
12	Na (mg/L)	116.0	104.2	109.4	83.3	110.2
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.02
14	NO2+NO3 (mg N/L)	0.01	0.01	0.18	0.00	0.81
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.01
16	NO3-N (mgN/L)	0.01	0.01	0.18	0.00	0.80
17	o-PO4-P (mg P/L)					0.134
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.060	0.134
19	SiO2 (mg/L)	16.5	12.2	10.4	15.2	17.2
20	SO4 (mg/L)	37.0	47.4	69.2	45.5	63.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.0	0.7	1.1	1.3
2	COD (mg/L)	27.5	12.5	13.0	19.8	23.8
3	DO (mg/L)	6.7	7.1	6.0	6.8	6.9
4	DO_SAT% (%)	81	81	73	82	84
5	FCol-MPN (MPN/100mL)			12500	10500	515
6	Tcol-MPN (MPN/100mL)			16000	12500	1450
7	TOC (mg/L)					3.3
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Hg (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	90	116	80	90	102
2	HAR_Total (mgCaCO3/L)	175	165	155	175	200
3	Na% (%)	58	57	61	50	54
4	RSC (-)	1.6	2.2	1.0	1.2	1.0
5	SAR (-)	3.8	3.6	3.9	2.7	3.4
	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 : Keesara (AKA00B4)

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter				
		Nov - Feb				
		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)	10.83	23.46	15.50	0.810	27.53
2	EC_FLD (µmho/cm)					1738
3	EC_GEN (µmho/cm)	812	840	779	1262	677
4	pH_FLD (pH units)					7.7
5	pH_GEN (pH units)	7.8	8.2	8.3	8.0	8.4
6	TDS (mg/L)	483	535	553	476	496
7	Temp (deg C)	27.0	26.0	25.1	25.0	22.3
8	Turb (NTU)	1.50	2.50	0.10	2.00	0.33
	CHEMICAL					
1	ALK-Phen (mgCaCO3/L)	0.0	0.0	2.1	0.0	5.0
2	ALK-TOT (mgCaCO3/L)	252	245	259	260	200
3	B (mg/L)	0.28	0.78	0.24	0.01	
4	Ca (mg/L)	39	45	44	39	42
5	Cl (mg/L)	72.0	74.8	91.0	112.5	66.3
6	CO3 (mg/L)	0.0	0.0	2.5	0.0	6.1
7	F (mg/L)	1.03	0.83	0.89	0.81	0.71
8	Fe (mg/L)	0.0	0.0	0.1	0.0	0.1
9	HCO3 (mg/L)	307	300	311	317	231
10	K (mg/L)	4.9	3.3	2.6	4.5	4.1
11	Mg (mg/L)	22.3	26.0	24.4	22.1	22.8
12	Na (mg/L)	90.9	96.6	86.9	121.8	72.0
13	NH3-N (mg N/L)	0.04	0.05	0.00	0.00	0.13
14	NO2+NO3 (mg N/L)	0.82	1.07	0.51	0.66	0.22
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.01
16	NO3-N (mgN/L)	0.82	1.07	0.50	0.66	0.21
17	o-PO4-P (mg P/L)	0.053	0.100	0.100	0.092	0.078
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	16.6	13.7	11.2	5.2	13.7
20	SO4 (mg/L)	37.0	44.5	57.0	38.9	83.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	1.4	0.3	1.0	1.7
2	COD (mg/L)	17.8	6.1	8.1	11.5	8.0
3	DO (mg/L)	5.0	6.8	6.3	4.5	5.9
4	DO_SAT% (%)	64	83	77	54	68
5	FCol-MPN (MPN/100mL)	180	180	1315	1650	6370
6	Tcol-MPN (MPN/100mL)	850	365	8250	12500	8600
7	TOC (mg/L)	2.4		39.4	28.1	
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)			2.90		
3	Cr (µg/L)			0.19		
4	Hg (µg/L)					
5	Ni (µg/L)			12.08		
6	Pb (µg/L)			19.79		
7	Zn (µg/L)			8.50		0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	97	111	109	97	104
2	HAR_Total (mgCaCO3/L)	190	220	211	189	199
3	Na% (%)	50	49	47	58	43
4	RSC (-)	1.3	0.5	1.0	1.4	0.1
5	SAR (-)	2.9	2.8	2.6	3.9	2.2
	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 : Keesara (AKA00B4)

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Summer			
		Mar-May			
		2006	2007	2008	2009
	PHYSICAL				
1	Q (cumec)	14.06	2.246	40.40	0.446
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)	788	769	805	805
4	pH_FLD (pH units)				
5	pH_GEN (pH units)	8.6	8.6	8.1	8.4
6	TDS (mg/L)				
7	Temp (deg C)	29.5	29.0	26.0	28.0
8	Turb (NTU)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	15.8	24.1	0.0	8.0
2	ALK-TOT (mgCaCO3/L)	259	304	240	216
3	B (mg/L)	0.01	0.00	0.00	0.00
4	Ca (mg/L)	38	35	35	30
5	Cl (mg/L)	71.3	69.6	63.4	209.7
6	CO3 (mg/L)	19.0	29.0	0.0	9.6
7	F (mg/L)	1.01	1.98	1.02	1.07
8	Fe (mg/L)	0.0	0.0		0.0
9	HCO3 (mg/L)	277	312	293	244
10	K (mg/L)	2.8	4.3	3.4	4.6
11	Mg (mg/L)	17.0	17.0	20.0	13.0
12	Na (mg/L)	82.0	98.0	101.0	94.3
13	NH3-N (mg N/L)	0.00	0.00	0.05	0.05
14	NO2+NO3 (mg N/L)	0.01	0.00		0.01
15	NO2-N (mg N/L)	0.00	0.00		0.00
16	NO3-N (mg N/L)	0.01	0.00		0.01
17	o-PO4-P (mg P/L)				
18	P-Tot (mgP/L)	0.010	0.001	0.001	0.001
19	SiO2 (mg/L)	11.1	21.0	20.1	16.9
20	SO4 (mg/L)	41.0	50.0	42.0	48.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.8	1.7	0.4	0.3
2	COD (mg/L)			7.4	8.1
3	DO (mg/L)	5.4	5.9	6.1	5.0
4	DO_SAT% (%)	71	69	76	64
5	FCol-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
7	TOC (mg/L)			3.0	
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)		8.00	0.80	2.21
3	Cr (µg/L)		31.00	2.00	2.00
4	Hg (µg/L)		2.03	0.00	
5	Ni (µg/L)		1.00	9.80	1.00
6	Pb (µg/L)		78.00	16.06	24.44
7	Zn (µg/L)		106.00	2.24	17.76
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	95	88	88	76
2	HAR_Total (mgCaCO3/L)	166	158	171	130
3	Na% (%)	51	57	56	60
4	RSC (-)	1.9	2.9	1.4	1.7
5	SAR (-)	2.8	3.4	3.4	3.6
	PESTICIDES				
1	Aldrin (µg/L)		0.010	0.010	0.010
2	BHC (µg/L)		0.100	0.100	0.100
3	DDT (µg/L)		0.100	0.100	0.100
4	Dieldrin (µg/L)		0.020	0.010	0.010
5	Endos (µg/L)		0.100	0.100	0.100

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Keesara (AKA00B4)

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

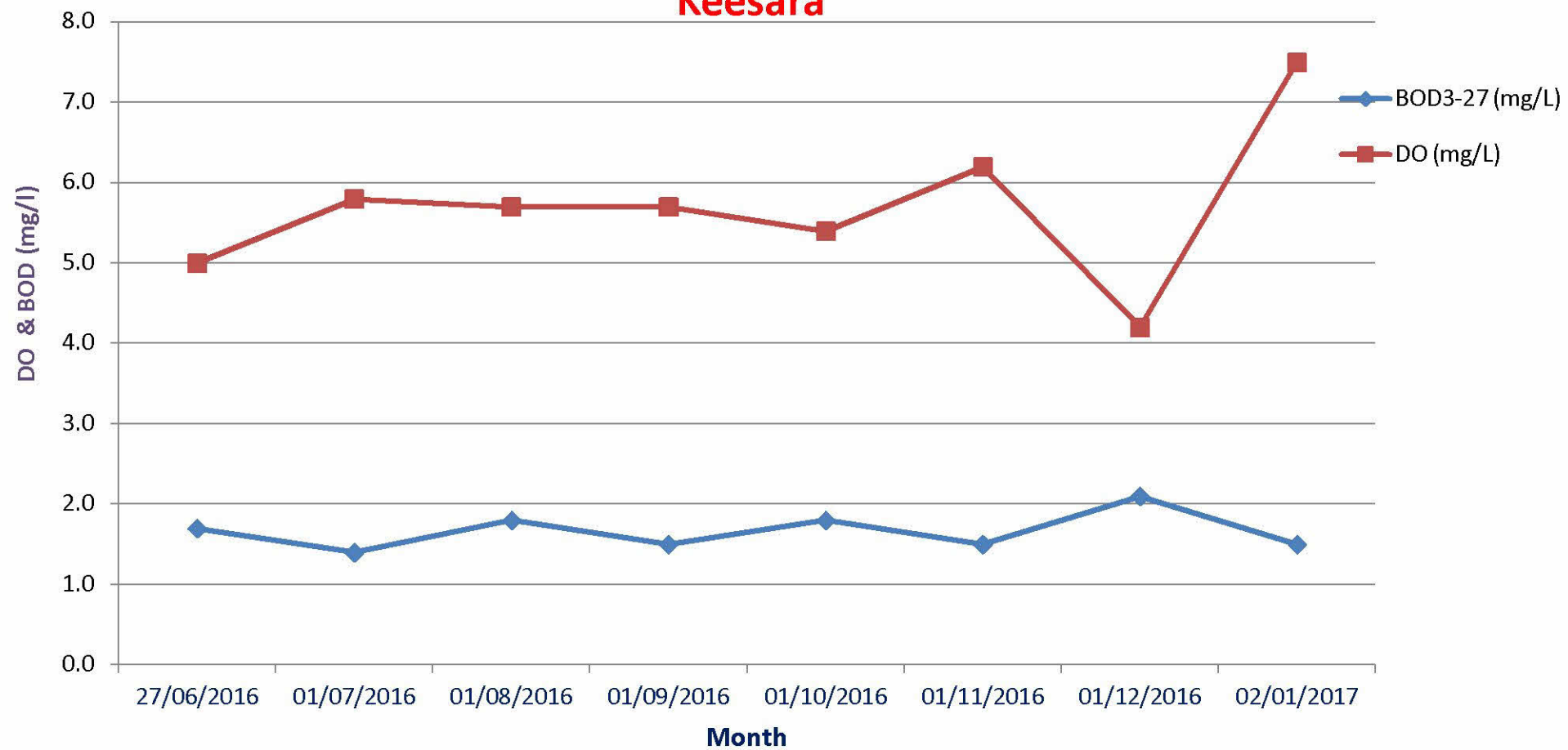
River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Summer	
		2010	Mar-May 2015
	PHYSICAL		
1	Q (cumec)	0.798	0.131
2	EC_FLD (µmho/cm)		
3	EC_GEN (µmho/cm)	846	1048
4	pH_FLD (pH units)		
5	pH_GEN (pH units)	8.4	8.1
6	TDS (mg/L)		615
7	Temp (deg C)	28.5	25.5
8	Turb (NTU)		4.00
	CHEMICAL		
1	Alk-Phen (mgCaCO3/L)	8.0	1.7
2	ALK-TOT (mgCaCO3/L)	196	247
3	B (mg/L)	0.00	0.26
4	Ca (mg/L)	35	39
5	Cl (mg/L)	187.4	123.4
6	CO3 (mg/L)	9.6	2.1
7	F (mg/L)	2.36	0.97
8	Fe (mg/L)	0.0	0.0
9	HCO3 (mg/L)	220	298
10	K (mg/L)	5.2	5.8
11	Mg (mg/L)	19.4	21.5
12	Na (mg/L)	113.0	138.8
13	NH3-N (mg N/L)	0.00	0.01
14	NO2+NO3 (mg N/L)	0.00	0.52
15	NO2-N (mgN/L)	0.00	0.28
16	NO3-N (mgN/L)	0.00	0.24
17	o-P04-P (mg P/L)		0.120
18	P-Tot (mgP/L)	0.000	
19	SiO2 (mg/L)	13.9	16.4
20	SO4 (mg/L)	39.2	85.4
	BIOLOGICAL/BACTERIOLOGICAL		
1	BOD3-27 (mg/L)	0.7	1.7
2	COD (mg/L)	31.0	16.6
3	DO (mg/L)	6.6	4.5
4	DO_SAT% (%)	84	55
5	FCol-MPN (MPN/100mL)	1300	11
6	Tcol-MPN (MPN/100mL)	1700	8115
7	TOC (mg/L)		34.6
	TRACE & TOXIC		
1	As (µg/L)	4.66	
2	Cd (µg/L)	0.00	
3	Cr (µg/L)	0.00	
4	Hg (µg/L)		
5	Ni (µg/L)	0.90	
6	Pb (µg/L)	0.00	
7	Zn (µg/L)	111.24	
	CHEMICAL INDICES		
1	HAR_Ca (mgCaCO3/L)	88	97
2	HAR_Total (mgCaCO3/L)	169	186
3	Na% (%)	59	61
4	RSC (-)	0.6	1.3
5	SAR (-)	3.8	4.5
	PESTICIDES		
1	Aldrin (µg/L)	0.002	
2	BHC (µg/L)	0.058	
3	DDT (µg/L)	0.004	
4	Dieldrin (µg/L)	0.002	
5	Endos (µg/L)	0.018	

Samples not collected during summer season from 2003 to 2005, 2011 to 2014 and from 2016, 2017 due to dyed/no flow condition.

Keesara



HISTORY SHEET

		Water Year : 2016-2017	
Site	: Madhira	Code	: AKA10D2
State	: Telangana	District	: Khammam
Basin	: Krishna	Independent River	: Krishna
Tributary	: Munneru	Sub Tributary	: Wyra
Sub-Sub Tributary	: -	Local River	: Wyra
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Krishna SD2, Vijayawada
Drainage Area	: 1850 Sq. Km.	Bank	: Left
Latitude	: 16°55'05"	Longitude	: 80°21'32"
	Opening Date	Closing Date	
Gauge	: 23/02/1984		
Discharge	: 07/06/1984		
Sediment	: 01/03/2014		
Water Quality	: 01/06/1992		

WQ observations suspended on 31-05-2006 and restarted w.e.f. 01-03-2014.

Water Quality Datasheet for the period : 2016-2017

Station Name : Madhira (AKA10D2)

Division : Lower Krishna Divn., Hyderabad

Local River : Wyra

River Water Analysis Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	01/07/2016 A	03/09/2016 A	01/10/2016 A	16/12/2016 A	02/01/2017 A
	PHYSICAL					
1	Q (cumec)	35.20	9.817	13.45	2.440	3.012
2	Colour_Cod (-)	Brown	Brown	Clear	Clear	Clear
3	EC_FLD (μmho/cm)			824	825	828
4	EC_GEN (μmho/cm)	418	458	636	930	962
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)			7.6	7.2	7.2
7	pH_GEN (pH units)	8.0	8.1	8.2	7.6	8.4
8	TDS (mg/L)	355	401	380		562
9	Temp (deg C)	27.0	29.0	29.0	26.0	25.0
10	Turb (NTU)	354.00	145.00	0.00	0.00	0.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	3.0	3.5
2	ALK-TOT (mgCaCO3/L)	113	252	245	237	254
3	Ca (mg/L)	21	37	31	45	57
4	Cl (mg/L)	35.8	67.2	42.4	89.1	99.5
5	CO3 (mg/L)	0.0	0.0	0.0	3.6	4.2
6	F (mg/L)	0.94	0.82	0.18	0.87	0.92
7	Fe (mg/L)	0.0	0.1	0.3	0.1	0.0
8	HCO3 (mg/L)	138	307	299	281	301
9	K (mg/L)	3.5	4.4	3.3	21.5	4.2
10	Mg (mg/L)	11.5	20.0	17.0	24.5	31.1
11	Na (mg/L)	51.9	97.0	77.4	70.5	111.7
12	NH3-N (mg N/L)	0.00	0.01	0.00	0.01	0.00
13	NO2+NO3 (mg N/L)	2.13	1.24	1.51	0.85	1.11
14	NO2-N (mgN/L)	0.00	0.00	0.00	0.42	0.52
15	NO3-N (mgN/L)	2.13	1.24	1.51	0.42	0.58
16	o-PO4-P (mg P/L)	0.163	0.165	0.237	0.047	0.100
17	SiO2 (mg/L)	9.4	14.3	12.4	10.6	10.9
18	SO4 (mg/L)	28.0	55.0	33.0	69.0	164.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.5	0.7	1.9	2.4	1.6
2	COD (mg/L)	11.8	37.5	11.3	18.5	15.6
3	DO (mg/L)	4.7	4.9	5.5	5.7	5.9
4	DO_SAT% (%)	59	63	72	70	71
5	Fcol-MPN (MPN/100mL)	16000	16000	16000	9000	3000
6	Tcol-MPN (MPN/100mL)	16000	16000	16000	9000	3000
	TRACE & TOXIC					
1	Cu (μg/L)				0.00	0.00
2	Zn (μg/L)				0.00	0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	52	92	78	112	142
2	HAR_Total (mgCaCO3/L)	100	175	149	214	272
3	Na% (%)	52	54	53	39	47
4	RSC (-)	0.3	1.6	2.0	0.5	0.0
5	SAR (-)	2.3	3.2	2.8	2.1	3.0
	PESTICIDES	Analysis not done due to mal function of instrument.				

Samples not collected in June, August, November and from February to May months due to Dry bed/No flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Madhira (AKA10D2)

Division : Lower Krishna Divn., Hyderabad

Local River : Wyra

Sub-Division : Lower Krishna SD2, Vijayawada

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
PHYSICAL					
1	Q (cumec)	365	76.88	0.000	2.392
2	EC_FLD (μmho/cm)	3	828	824	826
3	EC_GEN (μmho/cm)	5	962	418	681
4	pH_FLD (pH units)	3	7.6	7.2	7.3
5	pH_GEN (pH units)	5	8.4	7.6	8.1
6	TDS (mg/L)	4	562	355	425
7	Temp (deg C)	5	29.0	25.0	27.2
8	Turb (NTU)	5	354.00	0.00	99.8
CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	5	3.5	0.0	1.3
2	ALK-TOT (mgCaCO3/L)	5	254	113	220
3	Ca (mg/L)	5	57	21	38
4	Cl (mg/L)	5	99.5	35.8	66.8
5	CO3 (mg/L)	5	4.2	0.0	1.6
6	F (mg/L)	5	0.94	0.18	0.74
7	Fe (mg/L)	5	0.3	0.0	0.1
8	HCO3 (mg/L)	5	307	138	265
9	K (mg/L)	5	21.5	3.3	7.4
10	Mg (mg/L)	5	31.1	11.5	20.8
11	Na (mg/L)	5	111.7	51.9	81.7
12	NH3-N (mg N/L)	5	0.01	0.00	0
13	NO2+NO3 (mg N/L)	5	2.13	0.85	1.36
14	NO2-N (mgN/L)	5	0.52	0.00	0.19
15	NO3-N (mgN/L)	5	2.13	0.42	1.18
16	o-PO4-P (mg P/L)	5	0.237	0.047	0.142
17	SiO2 (mg/L)	5	14.3	9.4	11.5
18	SO4 (mg/L)	5	164.9	28.0	70
BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	5	2.4	0.5	1.4
2	COD (mg/L)	5	37.5	11.3	18.9
3	DO (mg/L)	5	5.9	4.7	5.3
4	DO_SAT% (%)	5	72	59	67
5	FCol-MPN (MPN/100mL)	5	16000	3000	12000
6	Tcol-MPN (MPN/100mL)	5	16000	3000	12000
TRACE & TOXIC					
1	Cu (μg/L)	2	0.00	0.00	0
2	Zn (μg/L)	2	0.00	0.00	0
CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	5	142	52	95
2	HAR_Total (mgCaCO3/L)	5	272	100	182
3	Na% (%)	5	54	39	49
4	RSC (-)	5	2.0	0.0	0.9
5	SAR (-)	5	3.2	2.1	2.7
PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Madhira (AKA10D2)

Division : Lower Krishna Divn., Hyderabad

Local River : Wyra

River Water Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood						
		Jun - Oct						
		2002	2003	2004	2005	2014	2015	2016
	PHYSICAL							
1	Q (cumec)	5.220	3.811	26.38	14.01	11.90	13.28	19.49
2	EC_FLD (µmho/cm)							824
3	EC_GEN (µmho/cm)	581	880	588	720	838	648	504
4	pH_FLD (pH units)							7.6
5	pH_GEN (pH units)	7.9	8.2	8.1	8.3	8.2	7.9	8.1
6	TDS (mg/L)					505	425	379
7	Temp (deg C)	31.0	29.3	27.8	31.2	27.3	30.2	28.3
8	Turb (NTU)					5.33	129.53	166.33
	CHEMICAL							
1	Alk-Phen (mgCaCO3/L)	10.4	7.0	0.0	3.9	1.4	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	174	341	224	248	233	232	203
3	B (mg/L)	0.01	0.00	0.00	0.01	0.46	0.18	
4	Ca (mg/L)	28	39	31	39	39	37	30
5	Cl (mg/L)	92.5	69.9	43.8	57.6	79.2	63.9	48.5
6	CO3 (mg/L)	12.5	8.4	0.0	4.7	1.7	0.0	0.0
7	F (mg/L)	0.94	1.54	0.85	0.88	0.88	0.87	0.65
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1	0.0	0.1
9	HCO3 (mg/L)	187	399	273	293	280	283	248
10	K (mg/L)	3.8	5.7	3.1	3.1	4.2	3.5	3.7
11	Mg (mg/L)	26.0	23.7	17.3	10.3	21.5	21.2	16.2
12	Na (mg/L)	84.5	140.0	61.0	94.7	99.4	89.9	75.5
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00	0.02	0.00
14	NO2+NO3 (mg N/L)	0.16	0.01	0.01	0.01	1.87	0.97	1.62
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00	0.01	0.00
16	NO3-N (mgN/L)	0.16	0.01	0.01	0.01	1.86	0.96	1.62
17	o-PO4-P (mg P/L)					0.174	0.297	0.188
18	P-Tot (mgP/L)	0.038	0.224	0.001	0.010	0.149		
19	SiO2 (mg/L)	6.2	12.3	13.5	17.1	15.1	15.1	12.0
20	SO4 (mg/L)	66.5	89.3	37.0	43.0	64.7	52.6	38.7
	BIOLOGICAL/BACTERIOLOGICAL							
1	BOD3-27 (mg/L)					1.4	1.3	1.0
2	COD (mg/L)					17.3	13.6	20.2
3	DO (mg/L)					5.4	4.8	5.0
4	DO_SAT% (%)					69	64	65
5	FCoI-MPN (MPN/100mL)					16000	5143	16000
6	TcoI-MPN (MPN/100mL)					16000	12875	16000
7	TOC (mg/L)						28.2	
	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)	70	97	78	97	97	94	74
2	HAR_Total (mgCaCO3/L)	178	196	151	140	186	182	141
3	Na% (%)	50	56	46	55	53	51	53
4	RSC (-)	0.4	2.9	1.5	2.2	0.9	1.0	1.3
5	SAR (-)	2.8	4.3	2.2	3.5	3.2	2.9	2.7
	PESTICIDES	WQ observations suspended on 31-05-2006 and restarted w.e.f. 01-03-2014.						

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Madhira (AKA10D2)

Division : Lower Krishna Divn., Hyderabad

Local River : Wyra

River Water Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter						
		Nov - Feb						
		2002-2003	2003-2004	2004-2005	2005-2006	2014-2015	2015-2016	2016-2017
	PHYSICAL							
1	Q (cumec)	1.406	3.086	4.963	27.00	11.74	3.403	2.726
2	EC_FLD (µmho/cm)							827
3	EC_GEN (µmho/cm)	940	993	890	676	744	1184	946
4	pH_FLD (pH units)							7.2
5	pH_GEN (pH units)	8.4	8.3	8.1	8.0	8.2	8.0	8.0
6	TDS (mg/L)					505	494	562
7	Temp (deg C)	27.0	27.7	23.3	26.0	23.8	28.0	25.5
8	Turb (NTU)					1.58	2.50	0.00
	CHEMICAL							
1	Alk-Phen (mgCaCO3/L)	28.2	15.3	0.0	0.0	1.0	0.0	3.2
2	ALK-TOT (mgCaCO3/L)	182	394	313	238	280	263	245
3	B (mg/L)	0.00	0.00	0.00	0.01	0.24	0.08	
4	Ca (mg/L)	16	56	42	40	43	42	51
5	Cl (mg/L)	88.1	73.5	74.5	49.2	79.1	81.0	94.3
6	CO3 (mg/L)	34.0	18.4	0.0	0.0	1.3	0.0	3.9
7	F (mg/L)	0.91	2.57	0.98	0.92	0.96	0.89	0.89
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1	0.0	0.0
9	HCO3 (mg/L)	153	443	382	291	339	321	291
10	K (mg/L)	2.9	3.1	3.0		3.0	3.2	12.8
11	Mg (mg/L)	36.2	21.9	21.5	16.8	24.6	23.7	27.8
12	Na (mg/L)	74.0	98.3	94.8		103.0	120.5	91.1
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.04	0.03	0.01
14	NO2+NO3 (mg N/L)	0.09	0.01	0.01	0.01	0.82	1.09	0.98
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.05	0.04	0.47
16	NO3-N (mgN/L)	0.09	0.01	0.01	0.01	0.77	1.06	0.50
17	o-PO4-P (mg P/L)					0.110	0.104	0.073
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.010			
19	SiO2 (mg/L)	6.2	20.8	16.0	12.0	12.9	8.2	10.8
20	SO4 (mg/L)	80.0	51.7	56.0	43.0	43.3	55.0	116.9
	BIOLOGICAL/BACTERIOLOGICAL							
1	BOD3-27 (mg/L)					0.8	0.5	2.0
2	COD (mg/L)					9.1	6.3	17.0
3	DO (mg/L)					7.2	5.5	5.8
4	DO_SAT% (%)					85	70	71
5	FCol-MPN (MPN/100mL)					5220	7000	6000
6	Tcol-MPN (MPN/100mL)					6558	12500	6000
7	TOC (mg/L)					41.0	40.6	
	TRACE & TOXIC							
1	As (µg/L)							
2	Cd (µg/L)					1.42		
3	Cr (µg/L)					11.54		
4	Cu (µg/L)					2.89		0.00
5	Hg (µg/L)							
6	Ni (µg/L)					1.78		
7	Pb (µg/L)					10.94		
8	Zn (µg/L)					4.50		0.00
	CHEMICAL INDICES							
1	HAR_Ca (mgCaCO3/L)	40	140	104	100	109	106	127
2	HAR_Total (mgCaCO3/L)	191	231	194	170	211	205	243
3	Na% (%)	46	48	51		51	56	43
4	RSC (-)	0.0	3.3	2.4	1.4	1.4	1.2	0.2
5	SAR (-)	2.3	2.8	3.0		3.1	3.7	2.5
	PESTICIDES							

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Madhira (AKA10D2)

Division : Lower Krishna Divn., Hyderabad

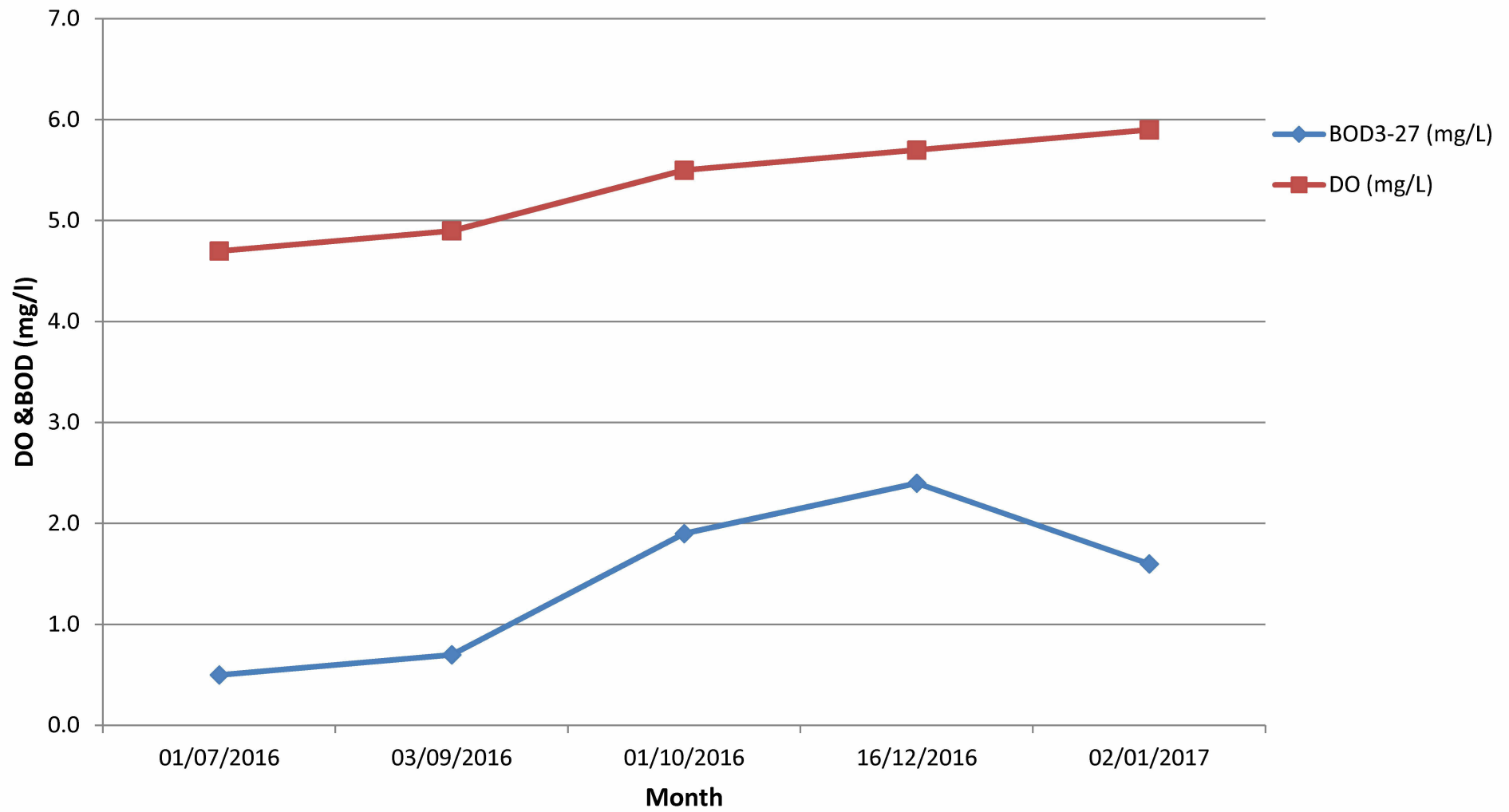
Local River : Wyra

River Water Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Summer Mar-May			
		2005	2006	2015	2017
	PHYSICAL				
1	Q (cumec)	0.043	6.470	1.067	
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)	1120	837	994	
4	pH_FLD (pH units)				
5	pH_GEN (pH units)	8.0	8.1	8.3	
6	TDS (mg/L)			642	
7	Temp (deg C)	22.0	25.5	27.0	
8	Turb (NTU)			3.03	
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	1.2	
2	ALK-TOT (mgCaCO3/L)	311	295	258	
3	B (mg/L)	0.00	0.01	0.31	
4	Ca (mg/L)	37	38	41	
5	Cl (mg/L)	108.8	70.8	109.7	
6	CO3 (mg/L)	0.0	0.0	1.4	
7	F (mg/L)	1.11	1.11	0.91	
8	Fe (mg/L)	0.0	0.0	0.0	
9	HCO3 (mg/L)	379	360	311	
10	K (mg/L)	0.8	3.3	4.3	
11	Mg (mg/L)	21.0	21.0	23.7	
12	Na (mg/L)	131.0	91.0	138.7	
13	NH3-N (mg N/L)	0.00	0.00	0.09	
14	NO2+NO3 (mg N/L)	0.01	0.01	1.03	
15	NO2-N (mgN/L)	0.00	0.00	0.02	
16	NO3-N (mgN/L)	0.01	0.01	1.01	
17	o-PO4-P (mg P/L)			0.133	
18	P-Tot (mgP/L)	0.001	0.010		
19	SiO2 (mg/L)	16.9	12.0	15.2	
20	SO4 (mg/L)	69.0	50.0	81.1	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)			0.4	
2	COD (mg/L)			9.3	
3	DO (mg/L)			4.9	
4	DO_SAT% (%)			62	
5	FCol-MPN (MPN/100mL)			2	
6	Tcol-MPN (MPN/100mL)			517	
7	TOC (mg/L)			42.8	
	TRACE & TOXIC				
1	As (µg/L)			2.97	
2	Cd (µg/L)			3.00	
3	Cr (µg/L)			0.00	
4	Cu (µg/L)				
5	Hg (µg/L)			0.23	
6	Ni (µg/L)			9.14	
7	Pb (µg/L)			18.00	
8	Zn (µg/L)			11.00	
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	93	95	101	
2	HAR_Total (mgCaCO3/L)	180	183	200	
3	Na% (%)	61	52	60	
4	RSC (-)	2.6	2.3	1.2	
5	SAR (-)	4.3	2.9	4.3	
	PESTICIDES				

Samples not collected during Summer Season 2003,2004, 2016 and 2017 due to Dry bed/No flow condition.

Madhira



HISTORY SHEET

		Water Year : 2016-2017	
Site	: Paleru Bridge	Code	: AKC00D3
State	: Andhra Pradesh	District	: Krishna
Basin	: Krishna	Independent River	: Krishna
Tributary	: Paleru	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Paleru
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Krishna SD2, Vijayawada
Drainage Area	: 2928 Sq. Km.	Bank	: Right
Latitude	: 16°56'56"	Longitude	: 80°02'57"
	Opening Date	Closing Date	
Gauge	: 18/05/1964		
Discharge	: 01/07/1964		
Sediment	: 01/03/2014		
Water Quality	: 01/06/1992		
Discharge observations suspended from 01-05-2007.			
Upgraded GD to GDSQ w.e.f.01-03-2014.			

Water Quality Datasheet for the period : 2016-2017

Station Name : Paleru Bridge (AKC00D3)

Division : Lower Krishna Divn., Hyderabad

Local River : Paleru

River Water Analysis Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	01/09/2016	01/10/2016	01/11/2016	01/12/2016	02/01/2017
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	0.619	4.465	0.394	1.407	0.539
2	Colour_Cod (-)	Brown	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)				1720	
4	EC_GEN (μmho/cm)	1186	889	2433	1420	1458
5	Odour_Code (-)	odour free	odour free	odour free	odour free	alcoholic
6	pH_FLD (pH units)		7.6	7.4	7.6	
7	pH_GEN (pH units)	7.6	8.2	7.5	7.8	7.3
8	TDS (mg/L)	1038	754	2025	930	601
9	Temp (deg C)	26.5	27.0	27.5	25.0	23.0
10	Turb (NTU)	0.00	0.00	0.00	0.00	0.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	127	264	365	276	239
3	Ca (mg/L)	69	66	139	54	90
4	Cl (mg/L)	235.9	94.5	292.5	210.1	257.2
5	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
6	F (mg/L)	0.98	0.44	1.05	1.13	1.28
7	Fe (mg/L)	0.0	0.2	0.2	0.1	0.1
8	HCO3 (mg/L)	155	322	445	337	292
9	K (mg/L)	5.9	3.2	4.3	5.9	4.0
10	Mg (mg/L)	37.7	35.9	76.0	29.2	49.0
11	Na (mg/L)	93.9	70.3	263.4	151.2	140.5
12	NH3-N (mg N/L)	0.01	0.00	0.32	0.01	0.00
13	NO2+NO3 (mg N/L)	1.83	1.71	0.00	0.05	0.56
14	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.36
15	NO3-N (mgN/L)	1.83	1.71	0.00	0.05	0.20
16	o-PO4-P (mg P/L)	0.294	0.120	0.086	0.176	0.140
17	SiO2 (mg/L)	11.5	18.1	35.8	21.5	15.0
18	SO4 (mg/L)	76.0	81.8	262.0	125.0	284.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.6	1.2	8.0	10.0	15.0
2	COD (mg/L)	21.7	10.7	68.1	23.8	19.8
3	DO (mg/L)	5.9	4.9	3.9	0.8	0.0
4	DO_SAT% (%)	72	61	48	10	0
5	FCol-MPN (MPN/100mL)	5000	230	16000	3000	5000
6	Tcol-MPN (MPN/100mL)	5000	1300	16000	3000	5000
	TRACE & TOXIC					
1	Cu (μg/L)				0.00	0.00
2	Zn (μg/L)				0.00	0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	172	165	348	134	225
2	HAR_Total (mgCaCO3/L)	329	314	665	255	429
3	Na% (%)	38	33	46	56	41
4	RSC (-)	0.0	0.0	0.0	0.4	0.0
5	SAR (-)	2.3	1.7	4.5	4.1	3.0
	PESTICIDES	Analysis not done due to mal function of instrument.				

Samples not collected during June to August and from February to May months due to Drybed/No flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Paleru Bridge (AKC00D3)

Division : Lower Krishna Divn., Hyderabad

Local River : Paleru

Sub-Division : Lower Krishna SD2, Vijayawada

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	22.99	0.000	0.662
2	EC_FLD (μmho/cm)	1	1720	1720	1720
3	EC_GEN (μmho/cm)	5	2433	889	1477
4	pH_FLD (pH units)	3	7.6	7.4	7.5
5	pH_GEN (pH units)	5	8.2	7.3	7.7
6	TDS (mg/L)	5	2025	601	1070
7	Temp (deg C)	5	27.5	23.0	25.8
8	Turb (NTU)	5	0.00	0.00	0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	5	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	5	365	127	254
3	Ca (mg/L)	5	139	54	83
4	Cl (mg/L)	5	292.5	94.5	218
5	CO3 (mg/L)	5	0.0	0.0	0
6	F (mg/L)	5	1.28	0.44	0.97
7	Fe (mg/L)	5	0.2	0.0	0.1
8	HCO3 (mg/L)	5	445	155	310
9	K (mg/L)	5	5.9	3.2	4.6
10	Mg (mg/L)	5	76.0	29.2	45.6
11	Na (mg/L)	5	263.4	70.3	143.8
12	NH3-N (mg N/L)	5	0.32	0.00	0.07
13	NO2+NO3 (mg N/L)	5	1.83	0.00	0.83
14	NO2-N (mgN/L)	5	0.36	0.00	0.07
15	NO3-N (mgN/L)	5	1.83	0.00	0.76
16	o-PO4-P (mg P/L)	5	0.294	0.086	0.163
17	SiO2 (mg/L)	5	35.8	11.5	20.4
18	SO4 (mg/L)	5	284.6	76.0	165.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	5	15.0	1.2	7.2
2	COD (mg/L)	5	68.1	10.7	28.8
3	DO (mg/L)	5	5.9	0.0	3.1
4	DO_SAT% (%)	5	72	0	38
5	FCol-MPN (MPN/100mL)	5	16000	230	5846
6	Tcol-MPN (MPN/100mL)	5	16000	1300	6060
	TRACE & TOXIC				
1	Cu (μg/L)	2	0.00	0.00	0
2	Zn (μg/L)	2	0.00	0.00	0
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	5	348	134	209
2	HAR_Total (mgCaCO3/L)	5	665	255	398
3	Na% (%)	5	56	33	43
4	RSC (-)	5	0.4	0.0	0.1
5	SAR (-)	5	4.5	1.7	3.1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Paleru Bridge (AKC00D3)

Division : Lower Krishna Divn., Hyderabad

Local River : Paleru

River Water Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood				
		Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	1.870	0.355	4.400	9.140	6.869
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	1085	1363	941	1010	734
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.4	7.7	7.8	7.7	7.9
6	TDS (mg/L)					
7	Temp (deg C)	30.5	29.3	26.5	27.3	26.6
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	167	405	297	301	284
3	B (mg/L)	0.01	0.08	0.00	0.00	0.00
4	Ca (mg/L)	17	96	50	72	52
5	Cl (mg/L)	92.5	131.0	98.0	104.9	59.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.94	0.83	1.40	1.34	1.09
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	203	494	362	367	347
10	K (mg/L)	7.2	22.9	3.1	4.6	4.3
11	Mg (mg/L)	65.5	42.2	59.0	39.2	27.4
12	Na (mg/L)	35.0	126.3	23.0	67.2	77.2
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.31	0.01	0.01	0.01	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.30	0.01	0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.940	0.114	0.001	0.001	0.001
19	SiO2 (mg/L)	7.6	28.2	15.0	34.4	23.9
20	SO4 (mg/L)	65.0	289.0	82.0	67.0	60.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					1.2
2	COD (mg/L)					
3	DO (mg/L)					5.3
4	DO_SAT% (%)					67
5	FCoI-MPN (MPN/100mL)					
6	TcoI-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)	42	240	125	180	131
2	HAR_Total (mgCaCO3/L)	315	416	371	343	245
3	Na% (%)	19	36	12	29	40
4	RSC (-)	0.0	0.3	0.0	0.0	0.9
5	SAR (-)	0.9	2.6	0.5	1.6	2.2
	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 : Paleru Bridge (AKC00D3)

Division : Lower Krishna Divn., Hyderabad

Local River : Paleru

River Water Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood				
		Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)					
2	EC_FLD (µmho/cm)				958	
3	EC_GEN (µmho/cm)	671	775	821	793	750
4	pH_FLD (pH units)				7.7	
5	pH_GEN (pH units)	7.7	7.8	7.5	7.8	7.7
6	TDS (mg/L)					493
7	Temp (deg C)	28.5	27.2	27.7	31.5	28.5
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	1.6	0.0
2	ALK-TOT (mgCaCO3/L)	238	255	250	241	224
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	52	60	54	54	45
5	Cl (mg/L)	58.1	65.8	71.2	72.6	72.6
6	CO3 (mg/L)	0.0	0.0	0.0	1.9	0.0
7	F (mg/L)	1.17	1.03	1.79	1.12	1.41
8	Fe (mg/L)	0.0	0.0	0.0	0.0	
9	HCO3 (mg/L)	290	312	306	290	273
10	K (mg/L)	4.1	3.5	4.5	3.7	3.2
11	Mg (mg/L)	25.8	22.3	25.3	29.7	25.3
12	Na (mg/L)	66.4	62.7	68.5	64.3	64.0
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	0.87	0.00	0.33
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	0.87	0.00	0.33
17	o-PO4-P (mg P/L)					0.411
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.353	0.411
19	SiO2 (mg/L)	27.1	32.9	35.0	22.4	19.3
20	SO4 (mg/L)	49.0	45.4	65.9	62.7	53.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	1.1	1.6	1.4	1.0
2	COD (mg/L)	16.2	22.9	30.0	31.2	26.0
3	DO (mg/L)	5.6	5.0	3.7	4.7	4.5
4	DO_SAT% (%)	72	63	37	46	54
5	FCoI-MPN (MPN/100mL)			11467	11660	10646
6	TcoI-MPN (MPN/100mL)			13667	13140	11446
7	TOC (mg/L)					3.2
	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)	130	151	134	135	112
2	HAR_Total (mgCaCO3/L)	237	244	239	259	217
3	Na% (%)	37	36	38	35	39
4	RSC (-)	0.3	0.3	0.5	0.1	0.4
5	SAR (-)	1.9	1.8	1.9	1.7	1.9
	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 : Paleru Bridge (AKC00D3)

Division : Lower Krishna Divn., Hyderabad

Local River : Paleru

River Water Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood				
		Jun - Oct				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)			4.926	3.011	2.542
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	969	797	910	880	1038
4	pH_FLD (pH units)					7.6
5	pH_GEN (pH units)	7.6	7.9	8.0	7.8	7.9
6	TDS (mg/L)	643	438	565	566	896
7	Temp (deg C)	29.7	30.0	27.3	29.3	26.8
8	Turb (NTU)	0.84	1.41	3.25	1.40	0.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	1.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	254	234	254	236	196
3	B (mg/L)	0.21	0.41	0.21	0.27	
4	Ca (mg/L)	53	53	51	51	67
5	Cl (mg/L)	106.8	72.1	85.8	100.6	165.2
6	CO3 (mg/L)	0.0	0.0	1.3	0.0	0.0
7	F (mg/L)	1.22	0.92	1.12	1.09	0.71
8	Fe (mg/L)	0.1	0.0	0.1	0.0	0.1
9	HCO3 (mg/L)	310	286	307	288	239
10	K (mg/L)	4.7	3.2	4.8	4.4	4.6
11	Mg (mg/L)	30.3	30.6	29.5	29.7	36.8
12	Na (mg/L)	82.6	69.0	88.9	93.0	82.1
13	NH3-N (mg N/L)	0.01	0.09	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.82	1.20	1.15	0.84	1.77
15	NO2-N (mgN/L)	0.00	0.00	0.01	0.00	0.00
16	NO3-N (mgN/L)	0.82	1.20	1.14	0.84	1.77
17	o-PO4-P (mg P/L)	0.099	0.210	0.164	0.102	0.207
18	P-Tot (mgP/L)			0.155		
19	SiO2 (mg/L)	28.3	13.1	24.4	24.5	14.8
20	SO4 (mg/L)	61.1	59.5	84.5	81.3	78.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.6	0.9	0.6	1.4
2	COD (mg/L)	14.3	6.2	18.1	12.6	16.2
3	DO (mg/L)	4.4	5.4	4.4	2.7	5.4
4	DO_SAT% (%)	58	72	55	36	67
5	FCol-MPN (MPN/100mL)	3552	2150	4658	591	2615
6	Tcol-MPN (MPN/100mL)	4020	9500	6335	6340	3150
7	TOC (mg/L)	3.3			32.3	
	TRACE & TOXIC					
1	As (µg/L)	8.25				
2	Cd (µg/L)	0.93				
3	Cr (µg/L)	59.19				
4	Cu (µg/L)					
5	Hg (µg/L)					
6	Ni (µg/L)	9.48				
7	Pb (µg/L)	5.79				
8	Zn (µg/L)	12.41				
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	131	131	127	129	168
2	HAR_Total (mgCaCO3/L)	258	259	250	253	322
3	Na% (%)	41	36	43	44	35
4	RSC (-)	0.8	0.0	0.3	0.1	0.0
5	SAR (-)	2.4	1.9	2.5	2.6	2.0
	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 : Paleru Bridge (AKC00D3)

Division : Lower Krishna Divn., Hyderabad

Local River : Paleru

River Water Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter				
		Nov - Feb				
		2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	0.076	0.420	8.513	23.94	16.45
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	877	1095	844	619	586
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.1	7.8	7.9	7.9	8.1
6	TDS (mg/L)					
7	Temp (deg C)	26.5	27.5	25.5	24.1	24.3
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	6.0
2	ALK-TOT (mgCaCO3/L)	136	522	268	214	231
3	B (mg/L)	0.01	0.07	0.00	0.25	0.00
4	Ca (mg/L)	64	97	52	49	47
5	Cl (mg/L)	125.8	134.8	73.8	44.9	42.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	7.3
7	F (mg/L)	1.09	3.90	0.97	0.89	0.84
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	166	637	328	261	268
10	K (mg/L)	8.0	18.0	2.4		3.3
11	Mg (mg/L)	49.2	48.0	29.0	23.0	20.5
12	Na (mg/L)	58.0	44.5	62.0		53.0
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.26	0.01	0.01	0.01	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.26	0.01	0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.038	0.001	0.001	0.000	0.001
19	SiO2 (mg/L)	5.5	23.0	17.9	15.9	20.7
20	SO4 (mg/L)	98.0	92.5	67.5	47.5	42.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					1.8
2	COD (mg/L)					
3	DO (mg/L)					7.4
4	DO_SAT% (%)					89
5	FCoI-MPN (MPN/100mL)					
6	TcoI-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)	161	243	131	123	116
2	HAR_Total (mgCaCO3/L)	366	442	251	218	202
3	Na% (%)	27	18	34		36
4	RSC (-)	0.0	1.7	0.8	0.0	0.6
5	SAR (-)	1.4	1.0	1.7		1.6
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Paleru Bridge (AKC00D3)

Division : Lower Krishna Divn., Hyderabad

Local River : Paleru

River Water Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter				
		Nov - Feb				
		2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)					
2	EC_FLD (µmho/cm)				904	
3	EC_GEN (µmho/cm)	644	920	771	751	749
4	pH_FLD (pH units)				7.9	
5	pH_GEN (pH units)	7.9	7.8	7.8	7.9	7.7
6	TDS (mg/L)					473
7	Temp (deg C)	27.8	24.8	27.0	26.5	29.4
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	228	283	237	227	253
3	B (mg/L)	0.00	0.00	0.00	0.00	0.19
4	Ca (mg/L)	47	80	57	49	53
5	Cl (mg/L)	47.7	80.7	66.2	62.0	71.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	1.75	0.96	1.18	0.84	1.10
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.2
9	HCO3 (mg/L)	278	345	289	278	308
10	K (mg/L)	2.8	3.2	2.8	3.0	2.6
11	Mg (mg/L)	22.8	24.6	27.4	27.9	30.6
12	Na (mg/L)	55.3	81.7	68.1	62.4	65.3
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.02
14	NO2+NO3 (mg N/L)	0.01	0.01	1.02	0.00	0.92
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	1.02	0.00	0.92
17	o-PO4-P (mg P/L)					0.211
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.128	0.211
19	SiO2 (mg/L)	20.1	18.2	29.6	19.8	30.9
20	SO4 (mg/L)	46.3	101.7	63.9	59.3	64.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	0.9	1.2	0.8	0.8
2	COD (mg/L)	13.9	12.6	20.4	21.3	9.7
3	DO (mg/L)	7.0	6.0	5.3	6.5	5.1
4	DO_SAT% (%)	90	72	67	81	67
5	FCoI-MPN (MPN/100mL)			7825	3815	5000
6	TcoI-MPN (MPN/100mL)			10675	10333	6050
7	TOC (mg/L)					2.5
	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)	118	200	142	122	133
2	HAR_Total (mgCaCO3/L)	213	302	257	239	260
3	Na% (%)	36	36	37	36	35
4	RSC (-)	0.3	0.2	0.1	0.0	0.2
5	SAR (-)	1.7	2.0	1.9	1.8	1.8
	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 : Paleru Bridge (AKC00D3)

Division : Lower Krishna Divn., Hyderabad

Local River : Paleru

River Water Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter				
		Nov - Feb				
		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)			6.613		0.780
2	EC_FLD (μmho/cm)				Drybed	1720
3	EC_GEN (μmho/cm)	979	752	590	Noflow	1770
4	pH_FLD (pH units)					7.5
5	pH_GEN (pH units)	7.5	7.9	8.0		7.5
6	TDS (mg/L)	557	434	442		1185
7	Temp (deg C)	25.1	26.0	25.8		25.2
8	Turb (NTU)	1.03	3.00	1.08		0.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0		0.0
2	ALK-TOT (mgCaCO3/L)	283	237	231		293
3	B (mg/L)	0.19	0.12	0.22		
4	Ca (mg/L)	63	54	51		94
5	Cl (mg/L)	105.0	68.7	59.8		253.3
6	CO3 (mg/L)	0.0	0.0	0.0		0.0
7	F (mg/L)	1.38	0.92	0.81		1.15
8	Fe (mg/L)	0.0	0.1	0.1		0.1
9	HCO3 (mg/L)	345	289	282		358
10	K (mg/L)	2.4	3.0	2.5		4.7
11	Mg (mg/L)	36.8	31.2	31.3		51.4
12	Na (mg/L)	90.8	61.4	62.5		185.0
13	NH3-N (mg N/L)	0.17	0.03	0.04		0.11
14	NO2+NO3 (mg N/L)	1.39	1.21	0.76		0.21
15	NO2-N (mgN/L)	0.00	0.00	0.02		0.12
16	NO3-N (mgN/L)	1.39	1.21	0.74		0.08
17	o-PO4-P (mg P/L)	0.159	0.143	0.119		0.134
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	26.3	16.6	19.2		24.1
20	SO4 (mg/L)	54.4	47.0	59.7		223.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	1.7	0.8		11.0
2	COD (mg/L)	15.2	6.6	7.9		37.2
3	DO (mg/L)	3.5	5.6	6.0		1.6
4	DO_SAT% (%)	42	68	74		19
5	FCoI-MPN (MPN/100mL)	403	840	713		8000
6	TcoI-MPN (MPN/100mL)	4283	3000	1510		8000
7	TOC (mg/L)	2.7		35.5		
	TRACE & TOXIC					
1	As (μg/L)					
2	Cd (μg/L)			1.34		
3	Cr (μg/L)			1.42		
4	Cu (μg/L)			1.56		0.00
5	Hg (μg/L)					
6	Ni (μg/L)			3.69		
7	Pb (μg/L)			6.93		
8	Zn (μg/L)			4.75		0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	157	134	126		235
2	HAR_Total (mgCaCO3/L)	310	264	257		450
3	Na% (%)	39	33	34		48
4	RSC (-)	0.0	0.0	0.1		0.1
5	SAR (-)	2.2	1.7	1.7		3.9
	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 : Paleru Bridge (AKC00D3)

Division : Lower Krishna Divn., Hyderabad

Local River : Paleru

River Water Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Summer				
		Mar - May				
		2003	2004	2005	2006	2007
	PHYSICAL					
1	Q (cumec)	Drybed/Noflow		0.387	7.587	8.885
2	EC_FLD (μmho/cm)					
3	EC_GEN (μmho/cm)			1057	728	678
4	pH_FLD (pH units)					
5	pH_GEN (pH units)			7.4	8.3	8.0
6	TDS (mg/L)					
7	Temp (deg C)			26.7	26.3	26.7
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)			0.0	9.1	0.0
2	ALK-TOT (mgCaCO3/L)			310	254	248
3	B (mg/L)			0.00	0.00	0.00
4	Ca (mg/L)			73	48	49
5	Cl (mg/L)			112.4	49.3	48.6
6	CO3 (mg/L)			0.0	11.0	0.0
7	F (mg/L)			0.99	1.01	1.42
8	Fe (mg/L)			0.0	0.0	0.0
9	HCO3 (mg/L)			379	287	302
10	K (mg/L)			9.0	2.5	2.5
11	Mg (mg/L)			46.3	25.3	21.7
12	Na (mg/L)			64.7	61.3	69.3
13	NH3-N (mg N/L)			0.00	0.00	0.00
14	NO2+NO3 (mg N/L)			0.01	0.01	0.00
15	NO2-N (mgN/L)			0.00	0.00	0.00
16	NO3-N (mgN/L)			0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)			0.001	0.000	0.001
19	SiO2 (mg/L)			28.0	16.9	20.5
20	SO4 (mg/L)			38.0	44.7	45.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					1.1
2	COD (mg/L)					
3	DO (mg/L)					6.1
4	DO_SAT% (%)					75
5	FCoI-MPN (MPN/100mL)					
6	TcoI-MPN (MPN/100mL)					
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (μg/L)					
2	Cd (μg/L)				0.01	7.00
3	Cr (μg/L)				2.00	46.00
4	Cu (μg/L)					
5	Hg (μg/L)					5.82
6	Ni (μg/L)				1.00	1.00
7	Pb (μg/L)				65.00	117.00
8	Zn (μg/L)				26.00	100.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)			183	119	122
2	HAR_Total (mgCaCO3/L)			376	225	212
3	Na% (%)			27	37	41
4	RSC (-)			0.4	0.6	0.7
5	SAR (-)			1.4	1.8	2.1
	PESTICIDES					
1	Aldrin (μg/L)				0.010	0.010
2	BHC (μg/L)				0.100	0.100
3	DDT (μg/L)				0.100	0.100
4	Dieldrin (μg/L)				0.010	0.030
5	Endos (μg/L)				0.100	0.100

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Paleru Bridge (AKC00D3)

Division : Lower Krishna Divn., Hyderabad

Local River : Paleru

River Water Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Summer				
		Mar - May				
		2008	2009	2010	2011	2012
	PHYSICAL					
1	Q (cumec)					
2	EC_FLD ($\mu\text{mho/cm}$)			937		
3	EC_GEN ($\mu\text{mho/cm}$)	672	901	757	787	925
4	pH_FLD (pH units)			7.6		
5	pH_GEN (pH units)	7.8	7.4	7.9	7.7	7.4
6	TDS (mg/L)					588
7	Temp (deg C)	26.7	26.3	24.0		29.5
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO ₃ /L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO ₃ /L)	231	296	267	232	272
3	B (mg/L)	0.00	0.00	0.00	0.00	0.05
4	Ca (mg/L)	49	64	50	47	44
5	Cl (mg/L)	63.4	66.2	62.7	71.1	70.3
6	CO ₃ (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.85	0.83	1.98	1.05	0.87
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1
9	HCO ₃ (mg/L)	281	361	325	283	331
10	K (mg/L)	2.8	2.4	2.5	2.1	4.8
11	Mg (mg/L)	19.3	21.4	25.9	26.5	25.3
12	Na (mg/L)	65.7	71.5	64.6	71.1	75.0
13	NH ₃ -N (mg N/L)	0.05	0.05	0.00	0.00	0.04
14	NO ₂ +NO ₃ (mg N/L)	0.01	0.01	0.00	0.00	1.12
15	NO ₂ -N (mgN/L)	0.00	0.00	0.00	0.00	0.01
16	NO ₃ -N (mgN/L)	0.01	0.01	0.00	0.00	1.11
17	o-PO ₄ -P (mg P/L)					0.192
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.178	0.192
19	SiO ₂ (mg/L)	18.5	30.2	23.0	17.2	33.2
20	SO ₄ (mg/L)	40.7	54.9	54.1	53.8	69.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃ -27 (mg/L)	1.8	0.7	2.1	0.8	0.7
2	COD (mg/L)	14.7	8.0	17.5	24.3	7.2
3	DO (mg/L)	5.8	3.0	5.9	5.2	4.7
4	DO_SAT% (%)	73	37	63		62
5	FCoI-MPN (MPN/100mL)			11467	12500	1940
6	TcoI-MPN (MPN/100mL)			11467	16000	6140
7	TOC (mg/L)	2.8				2.6
	TRACE & TOXIC					
1	As ($\mu\text{g/L}$)			1.70		0.88
2	Cd ($\mu\text{g/L}$)	0.90	2.11	0.00	0.98	0.20
3	Cr ($\mu\text{g/L}$)	2.00	2.10	0.00	0.00	0.00
4	Cu ($\mu\text{g/L}$)					
5	Hg ($\mu\text{g/L}$)	0.00				0.60
6	Ni ($\mu\text{g/L}$)	9.10	1.23	0.00	4.37	3.24
7	Pb ($\mu\text{g/L}$)	16.78	29.00	0.00	34.66	14.13
8	Zn ($\mu\text{g/L}$)	4.97	34.38	7.99	49.01	22.80
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO ₃ /L)	123	159	124	116	110
2	HAR_Total (mgCaCO ₃ /L)	203	248	232	227	215
3	Na% (%)	41	39	38	41	43
4	RSC (-)	0.6	1.0	0.8	0.3	1.2
5	SAR (-)	2.0	2.0	1.9	2.1	2.3
	PESTICIDES					
1	Aldrin ($\mu\text{g/L}$)	0.010	0.010	0.000	0.000	0.007
2	BHC ($\mu\text{g/L}$)	0.270	0.100	0.306	0.000	0.020
3	DDT ($\mu\text{g/L}$)	0.100	0.100	0.013	0.000	0.001
4	Dieldrin ($\mu\text{g/L}$)	0.010	0.010	0.002	0.000	0.000
5	Endos ($\mu\text{g/L}$)	0.100	0.100	0.147	0.000	0.098

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Paleru Bridge (AKC00D3)

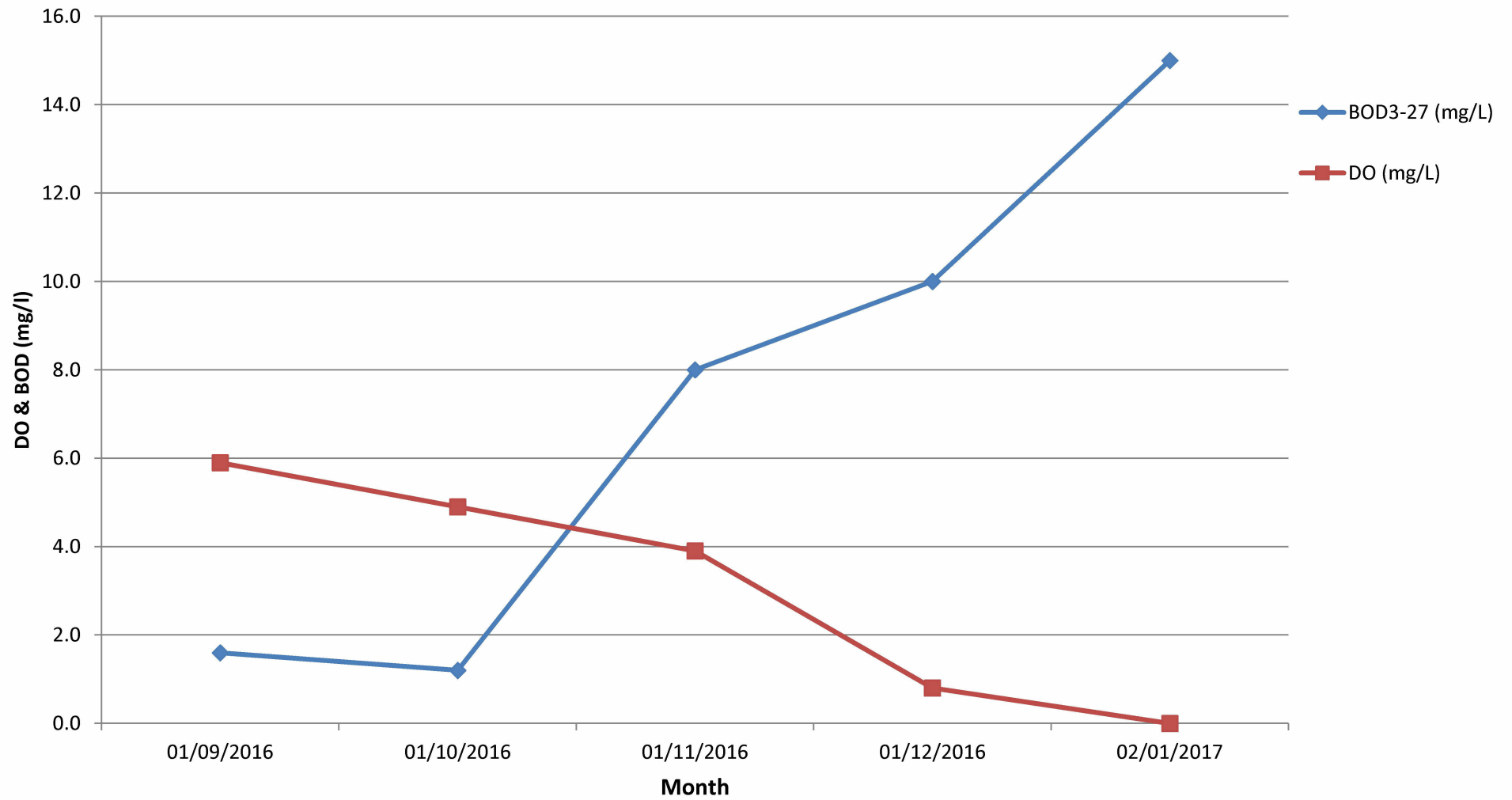
Division : Lower Krishna Divn., Hyderabad

Local River : Paleru

River Water Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Summer				
		Mar - May				
		2013	2014	2015	2016	2017
	PHYSICAL					
1	Q (cumec)		2.626	3.652	Drybed/Noflow	
2	EC_FLD (μmho/cm)					
3	EC_GEN (μmho/cm)	1140	811	760		
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.8	7.7	7.9		
6	TDS (mg/L)	638	557	475		
7	Temp (deg C)	26.0	28.3	25.7		
8	Turb (NTU)	0.47	3.67	1.67		
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0		
2	ALK-TOT (mgCaCO3/L)	293	248	208		
3	B (mg/L)	0.32	0.17	0.16		
4	Ca (mg/L)	78	47	43		
5	Cl (mg/L)	149.5	70.3	63.7		
6	CO3 (mg/L)	0.0	0.0	0.0		
7	F (mg/L)	0.82	0.96	0.85		
8	Fe (mg/L)	0.2	0.8	0.0		
9	HCO3 (mg/L)	357	302	254		
10	K (mg/L)	1.4	2.7	2.8		
11	Mg (mg/L)	45.7	27.4	24.7		
12	Na (mg/L)	102.8	65.5	69.5		
13	NH3-N (mg N/L)	0.00	0.03	0.00		
14	NO2+NO3 (mg N/L)	1.18	2.25	0.57		
15	NO2-N (mgN/L)	0.00	0.00	0.03		
16	NO3-N (mgN/L)	1.18	2.25	0.54		
17	o-PO4-P (mg P/L)	0.158	0.053	0.100		
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	22.0	19.7	30.0		
20	SO4 (mg/L)	48.0	60.7	67.8		
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	0.9	0.7		
2	COD (mg/L)	13.0	6.1	7.7		
3	DO (mg/L)	4.9	4.6	3.6		
4	DO_SAT% (%)	60	60	45		
5	FCoI-MPN (MPN/100mL)	800	270	21		
6	TcoI-MPN (MPN/100mL)	1700	503	953		
7	TOC (mg/L)	3.3		26.5		
	TRACE & TOXIC					
1	As (μg/L)	6.35	0.61	0.00		
2	Cd (μg/L)	0.12	0.02	2.00		
3	Cr (μg/L)	1.44	0.06	0.00		
4	Cu (μg/L)					
5	Hg (μg/L)	2.35	0.24	0.08		
6	Ni (μg/L)	7.23	1.18	9.88		
7	Pb (μg/L)	0.36	0.13	15.00		
8	Zn (μg/L)	0.30	40.00	11.00		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	194	118	107		
2	HAR_Total (mgCaCO3/L)	385	232	210		
3	Na% (%)	37	38	42		
4	RSC (-)	0.0	0.4	0.1		
5	SAR (-)	2.3	1.9	2.1		
	PESTICIDES					
1	Aldrin (μg/L)					
2	BHC (μg/L)					
3	DDT (μg/L)					
4	Dieldrin (μg/L)					
5	Endos (μg/L)					

Paleru Bridge



HISTORY SHEET

		Water Year	: 2016-2017
Site	: Wadenapally	Code	: AK000D5
State	: Telangana	District	Suryapet
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Krishna
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Krishna SD2, Vijayawada
Drainage Area	: 235544 Sq. Km.	Bank	: Left
Latitude	: 16°47'39"	Longitude	: 80°04'23"
	Opening Date	Closing Date	
Gauge	: 27/05/1964		
Discharge	: 10/12/1965		
Sediment	: 01/12/1966		
Water Quality	: 01/01/1972		

Water Quality Datasheet for the period : 2016-2017

Station Name : Wadenapally (AK000D5)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Analysis Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	01/06/2016	07/08/2016	01/09/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	18.60	85.26	11.03
2	Colour_Cod (-)	Clear	Clear	Light Brown
3	EC_FLD (μmho/cm)			
4	EC_GEN (μmho/cm)	618	680	615
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_GEN (pH units)	8.5	8.6	8.5
7	TDS (mg/L)	366	383	539
8	Temp (deg C)	26.0	25.0	28.0
9	Turb (NTU)	8.00	0.00	2.00
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	1.0	0.2	4.0
2	ALK-TOT (mgCaCO3/L)	132	144	147
3	Ca (mg/L)	30	27	35
4	Cl (mg/L)	65.6	81.1	60.2
5	CO3 (mg/L)	1.2	0.2	4.8
6	F (mg/L)	0.56	0.37	0.51
7	Fe (mg/L)	0.2	0.0	0.0
8	HCO3 (mg/L)	158	175	169
9	K (mg/L)	3.6	3.3	2.8
10	Mg (mg/L)	17.5	15.8	19.0
11	Na (mg/L)	76.3	72.2	63.0
12	NH3-N (mg N/L)	0.05	0.07	
13	NO2+NO3 (mg N/L)	0.53	0.87	1.23
14	NO2-N (mgN/L)	0.00	0.19	0.01
15	NO3-N (mgN/L)	0.53	0.69	1.23
16	o-PO4-P (mg P/L)	0.080	0.118	0.068
17	SiO2 (mg/L)	19.3	14.9	10.7
18	SO4 (mg/L)	60.0	46.5	55.8
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.0	1.2	0.8
2	COD (mg/L)	13.8	7.8	28.7
3	DO (mg/L)	5.6	6.0	6.3
4	DO_SAT% (%)	69	73	81
5	FCoI-MPN (MPN/100mL)	20	9000	20
6	TcoI-MPN (MPN/100mL)	90	16000	90
	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)	74	68	87
2	HAR_Total (mgCaCO3/L)	147	134	166
3	Na% (%)	52	53	45
4	RSC (-)	0.0	0.2	0.0
5	SAR (-)	2.7	2.7	2.1
	PESTICIDES	Analysis not done due to mal function of instrument.		

Samples not collected during July month due to Drieded/No flow condition.

Water Quality Datasheet for the period : 2016-2017

Station Name : Wadenapally (AK000D5)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Analysis Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	01/10/2016 A	01/11/2016 A	01/12/2016 A	02/01/2017 A
	PHYSICAL				
1	Q (cumec)	507.9	296.4	86.29	122.4
2	Colour_Cod (-)	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	28	28	29	
4	EC_GEN (μmho/cm)	518	557	617	894
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_GEN (pH units)	8.2	8.5	8.2	8.0
7	TDS (mg/L)	289	322	345	435
8	Temp (deg C)	27.0	28.0	27.0	25.0
9	Turb (NTU)	0.00	0.00	0.00	0.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	4.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	136	123	168	141
3	Ca (mg/L)	46	35	39	58
4	Cl (mg/L)	62.6	55.1	67.7	100.5
5	CO3 (mg/L)	0.0	4.8	0.0	0.0
6	F (mg/L)	1.10	0.04	0.47	0.94
7	Fe (mg/L)	0.2	0.1	0.1	0.1
8	HCO3 (mg/L)	166	140	205	172
9	K (mg/L)	3.9	4.5	4.7	4.6
10	Mg (mg/L)	25.2	18.9	21.3	31.5
11	Na (mg/L)	50.3	62.6	66.5	28.7
12	NH3-N (mg N/L)	0.00	0.01		0.00
13	NO2+NO3 (mg N/L)	1.92	0.28	0.03	0.17
14	NO2-N (mgN/L)	0.00	0.00	0.00	0.00
15	NO3-N (mgN/L)	1.92	0.28	0.03	0.17
16	o-PO4-P (mg P/L)	0.224	0.188	0.120	0.120
17	SiO2 (mg/L)	11.6	7.7	5.3	9.5
18	SO4 (mg/L)	70.7	49.0	77.5	126.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.8	2.5	1.6	2.7
2	COD (mg/L)	9.4	8.2	11.7	14.7
3	DO (mg/L)	6.6	6.1	6.2	7.0
4	DO_SAT% (%)	83	77	78	84
5	FCoI-MPN (MPN/100mL)	16000	9000	140	20
6	TcoI-MPN (MPN/100mL)	16000	9000	9000	300
	TRACE & TOXIC				
1	As (μg/L)				
2	Cd (μg/L)				
3	Cr (μg/L)				
4	Cu (μg/L)			0.00	0.00
5	Hg (μg/L)				
6	Ni (μg/L)				
7	Pb (μg/L)				
8	Zn (μg/L)			0.00	0.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	116	86	98	145
2	HAR_Total (mgCaCO3/L)	221	165	186	276
3	Na% (%)	33	45	43	18
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	1.5	2.1	2.1	0.8
	PESTICIDES				

Water Quality Datasheet for the period : 2016-2017

Station Name : Wadenapally (AK000D5)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Analysis Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	01/02/2017 A	01/03/2017 A	01/04/2017 A	01/05/2017 A
	PHYSICAL				
1	Q (cumec)	51.65	39.37	36.99	3.496
2	Colour_Cod (-)	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	28		28	330
4	EC_GEN (µmho/cm)	739	734	756	838
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_GEN (pH units)	8.4	8.0	8.3	7.8
7	TDS (mg/L)	441	459	433	508
8	Temp (deg C)	28.0	24.0	28.0	28.0
9	Turb (NTU)	11.00	19.00	29.00	43.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2.0	0.0	8.5	0.0
2	ALK-TOT (mgCaCO3/L)	185	156	183	172
3	Ca (mg/L)	41	53	62	47
4	Cl (mg/L)	80.8	91.1	84.0	104.3
5	CO3 (mg/L)	2.4	0.0	10.3	0.0
6	F (mg/L)	1.74	0.79	0.16	0.85
7	Fe (mg/L)	0.2	0.0	0.0	0.0
8	HCO3 (mg/L)	221	190	203	210
9	K (mg/L)	9.7	3.7	3.5	3.9
10	Mg (mg/L)	13.0	22.2	23.1	34.5
11	Na (mg/L)	158.0	87.6	88.2	93.4
12	NH3-N (mg N/L)	0.27	0.00	0.00	3.29
13	NO2+NO3 (mg N/L)	1.33	1.77	2.61	0.66
14	NO2-N (mgN/L)	0.08	0.17	0.09	0.03
15	NO3-N (mgN/L)	1.25	1.60	2.52	0.63
16	o-PO4-P (mg P/L)	0.070	0.400	0.110	0.010
17	SiO2 (mg/L)	11.9	13.0	18.4	22.4
18	SO4 (mg/L)	218.4	78.0	236.8	124.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3.9	3.0	1.6	1.1
2	COD (mg/L)	8.9	16.0	13.5	10.9
3	DO (mg/L)	7.0	6.6	6.3	5.6
4	DO_SAT% (%)	89	78	80	72
5	FCoI-MPN (MPN/100mL)	20	2400	20	130
6	TcoI-MPN (MPN/100mL)	40	3000	170	130
	TRACE & TOXIC				
1	As (µg/L)			3.72	
2	Cd (µg/L)			1.30	
3	Cr (µg/L)			0.00	
4	Cu (µg/L)	0.00	0.00	0.00	0.01
5	Hg (µg/L)			0.49	
6	Ni (µg/L)			1.30	
7	Pb (µg/L)			0.00	
8	Zn (µg/L)	0.00	0.00	0.00	0.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	103	132	156	118
2	HAR_Total (mgCaCO3/L)	157	225	252	262
3	Na% (%)	67	46	43	43
4	RSC (-)	0.6	0.0	0.0	0.0
5	SAR (-)	5.5	2.5	2.4	2.5
	PESTICIDES				

Water Quality Summary for the period : 2016-2017

Station Name : Wadenapally (AK000D5)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

Sub-Division : Lower Krishna SD2, Vijayawada

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	4919	0.000	115.2
2	EC_FLD ($\mu\text{mho/cm}$)	6	330	28	79
3	EC_GEN ($\mu\text{mho/cm}$)	11	894	518	688
4	pH_GEN (pH units)	11	8.6	7.8	8.3
5	TDS (mg/L)	11	539	289	411
6	Temp (deg C)	11	28.0	24.0	26.7
7	Turb (NTU)	11	43.00	0.00	10.18
	CHEMICAL				
1	Alk-Phen (mgCaCO ₃ /L)	11	8.5	0.0	1.8
2	ALK-TOT (mgCaCO ₃ /L)	11	185	123	153
3	Ca (mg/L)	11	62	27	43
4	Cl (mg/L)	11	104.3	55.1	77.6
5	CO ₃ (mg/L)	11	10.3	0.0	2.2
6	F (mg/L)	11	1.74	0.04	0.69
7	Fe (mg/L)	11	0.2	0.0	0.1
8	HCO ₃ (mg/L)	11	221	140	183
9	K (mg/L)	11	9.7	2.8	4.4
10	Mg (mg/L)	11	34.5	13.0	22
11	Na (mg/L)	11	158.0	28.7	77
12	NH ₃ -N (mg N/L)	9	3.29	0.00	0.41
13	NO ₂ +NO ₃ (mg N/L)	11	2.61	0.03	1.04
14	NO ₂ -N (mgN/L)	11	0.19	0.00	0.05
15	NO ₃ -N (mgN/L)	11	2.52	0.03	0.98
16	o-PO ₄ -P (mg P/L)	11	0.400	0.010	0.137
17	SiO ₂ (mg/L)	11	22.4	5.3	13.1
18	SO ₄ (mg/L)	11	236.8	46.5	103.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD ₃ -27 (mg/L)	11	3.9	0.8	1.9
2	COD (mg/L)	11	28.7	7.8	13
3	DO (mg/L)	11	7.0	5.6	6.3
4	DO_SAT% (%)	11	89	69	79
5	Fcol-MPN (MPN/100mL)	11	16000	20	3343
6	Tcol-MPN (MPN/100mL)	11	16000	40	4893
	TRACE & TOXIC				
1	As ($\mu\text{g/L}$)	1	3.72	3.72	3.72
2	Cd ($\mu\text{g/L}$)	1	1.30	1.30	1.3
3	Cr ($\mu\text{g/L}$)	1	0.00	0.00	0
4	Cu ($\mu\text{g/L}$)	6	0.01	0.00	0
5	Hg ($\mu\text{g/L}$)	1	0.49	0.49	0.49
6	Ni ($\mu\text{g/L}$)	1	1.30	1.30	1.3
7	Pb ($\mu\text{g/L}$)	1	0.00	0.00	0
8	Zn ($\mu\text{g/L}$)	6	0.00	0.00	0
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO ₃ /L)	11	156	68	107
2	HAR_Total (mgCaCO ₃ /L)	11	276	134	199
3	Na% (%)	11	67	18	44
4	RSC (-)	11	0.6	0.0	0.1
5	SAR (-)	11	5.5	0.8	2.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Wadenapally (AK000D5)

Local River : Krishna

River Water

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	178.7	49.25	146.8	581.9	548.5
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	594	701	611	512	563
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.3	8.2	8.2	8.0	8.2
6	TDS (mg/L)					
7	Temp (deg C)	30.5	30.8	26.9	29.0	27.6
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	10.6	2.8	4.2	1.7	4.0
2	ALK-TOT (mgCaCO3/L)	101	161	182	144	140
3	B (mg/L)	0.01	0.00	0.00	0.00	0.00
4	Ca (mg/L)	23	31	29	37	32
5	Cl (mg/L)	56.5	47.3	66.1	45.5	34.8
6	CO3 (mg/L)	12.8	3.4	5.0	2.0	4.8
7	F (mg/L)	0.54	0.68	1.01	0.64	0.62
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	97	190	212	172	161
10	K (mg/L)	2.5	3.1	3.4	4.8	2.3
11	Mg (mg/L)	14.0	17.5	18.8	14.8	11.6
12	Na (mg/L)	27.8	45.6	63.4	49.2	50.4
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.14	0.01	0.01	0.01	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.13	0.01	0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.107	0.001	0.001	0.001	0.001
19	SiO2 (mg/L)	5.2	11.3	14.6	15.9	19.2
20	SO4 (mg/L)	57.8	235.8	60.2	54.2	40.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	2.0	1.3	1.0	0.8
2	COD (mg/L)					
3	DO (mg/L)	5.8	6.5	5.4	5.6	7.2
4	DO_SAT% (%)	77	87	67	73	91
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)	57	78	73	93	81
2	HAR_Total (mgCaCO3/L)	116	151	151	155	129
3	Na% (%)	34	38	47	37	43
4	RSC (-)	0.1	0.3	0.7	0.1	0.2
5	SAR (-)	1.1	1.6	2.3	1.6	1.9
	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 : Wadenapally (AK000D5)

Local River : Krishna

River Water

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	2406	301.8	413.0	526.4	250.9
2	EC_FLD (µmho/cm)				664	
3	EC_GEN (µmho/cm)	529	647	625	757	703
4	pH_FLD (pH units)				8.3	
5	pH_GEN (pH units)	7.5	8.0	7.5	8.0	8.0
6	TDS (mg/L)					473
7	Temp (deg C)	28.1	28.0	27.1	28.4	26.8
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	1.6	1.6	1.6	1.2
2	ALK-TOT (mgCaCO3/L)	140	162	167	179	172
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	32	42	37	43	34
5	Cl (mg/L)	50.3	61.7	58.0	75.5	73.0
6	CO3 (mg/L)	0.0	1.9	1.9	1.9	1.4
7	F (mg/L)	0.81	0.31	0.78	0.83	1.04
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	171	193	200	214	207
10	K (mg/L)	3.4	3.2	2.9	4.0	3.5
11	Mg (mg/L)	15.6	13.0	15.3	21.0	19.2
12	Na (mg/L)	55.8	58.7	59.4	73.5	69.3
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	0.56	0.00	0.32
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	0.56	0.00	0.32
17	o-PO4-P (mg P/L)					0.375
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.135	0.376
19	SiO2 (mg/L)	15.3	17.0	17.0	17.7	15.7
20	SO4 (mg/L)	47.4	53.4	62.6	101.6	63.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	1.0	0.9	0.7	0.8
2	COD (mg/L)	13.9	26.7	18.6	34.3	32.9
3	DO (mg/L)	6.8	5.9	6.5	6.9	6.0
4	DO_SAT% (%)	87	76	82	89	75
5	FCol-MPN (MPN/100mL)			6000	9712	14600
6	Tcol-MPN (MPN/100mL)			10500	12940	16000
7	TOC (mg/L)					3.3
	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)	80	106	92	108	85
2	HAR_Total (mgCaCO3/L)	145	160	156	196	165
3	Na% (%)	44	44	45	45	47
4	RSC (-)	0.1	0.1	0.4	0.0	0.2
5	SAR (-)	2.0	2.0	2.1	2.3	2.4
	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 : Wadenapally (AK000D5)

Local River : Krishna

River Water

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	30.10	227.0	135.4	25.19	155.7
2	EC_FLD (µmho/cm)		542			28
3	EC_GEN (µmho/cm)	633	611	649	746	608
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.9	8.1	8.3	8.0	8.5
6	TDS (mg/L)	429	381	416	479	394
7	Temp (deg C)	27.7	27.0	26.8	25.8	26.5
8	Turb (NTU)	0.84	1.00	5.00	2.20	2.50
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.8	0.0	1.3
2	ALK-TOT (mgCaCO3/L)	132	116	145	164	140
3	B (mg/L)	0.20	0.13	0.20	0.21	
4	Ca (mg/L)	31	29	36	41	34
5	Cl (mg/L)	60.0	60.6	63.8	84.5	67.4
6	CO3 (mg/L)	0.0	0.0	1.0	0.0	1.6
7	F (mg/L)	0.61	0.65	0.66	0.81	0.64
8	Fe (mg/L)	0.1	0.1	0.0	0.0	0.1
9	HCO3 (mg/L)	161	141	175	200	167
10	K (mg/L)	3.5	2.9	3.8	4.0	3.4
11	Mg (mg/L)	17.6	15.8	21.1	23.3	19.4
12	Na (mg/L)	64.4	66.5	71.4	87.0	65.5
13	NH3-N (mg N/L)	0.02	0.07	0.00	0.05	0.04
14	NO2+NO3 (mg N/L)	0.95	0.66	1.27	0.72	1.14
15	NO2-N (mgN/L)	0.00	0.00	0.01	0.02	0.05
16	NO3-N (mgN/L)	0.95	0.66	1.26	0.70	1.09
17	o-PO4-P (mg P/L)	0.059	0.085	0.125	0.151	0.123
18	P-Tot (mgP/L)			0.131		
19	SiO2 (mg/L)	13.6	12.4	15.2	18.0	14.1
20	SO4 (mg/L)	56.0	67.1	93.2	94.4	58.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.5	0.9	0.8	0.7	1.2
2	COD (mg/L)	8.5	8.7	10.0	8.8	14.9
3	DO (mg/L)	5.5	6.1	6.1	5.6	6.1
4	DO_SAT% (%)	70	76	77	69	76
5	FCol-MPN (MPN/100mL)	1146	131	6492	2440	6260
6	Tcol-MPN (MPN/100mL)	3540	2340	6984	7424	8045
7	TOC (mg/L)	2.7	0.4		14.2	
	TRACE & TOXIC					
1	As (µg/L)	0.01	6.09			
2	Cd (µg/L)	0.00	2.53			
3	Cr (µg/L)	0.00	1.29			
4	Cu (µg/L)					
5	Hg (µg/L)		0.66			
6	Ni (µg/L)	3.34	13.53			
7	Pb (µg/L)	2.23	0.28			
8	Zn (µg/L)	24.24	0.00			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	76	72	91	102	86
2	HAR_Total (mgCaCO3/L)	150	138	179	199	167
3	Na% (%)	49	50	46	48	46
4	RSC (-)	0.2	0.0	0.0	0.0	0.1
5	SAR (-)	2.4	2.5	2.3	2.7	2.3
	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 : Wadenapally (AK000D5)

Local River : Krishna

River Water

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter				
		2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	107.1	96.38	189.8	907.4	244.2
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	550	600	663	538	484
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.5	8.4	8.2	8.1	8.2
6	TDS (mg/L)					
7	Temp (deg C)	26.5	26.8	25.5	24.9	28.5
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	15.8	10.0	2.1	0.0	9.8
2	ALK-TOT (mgCaCO3/L)	105	186	173	175	167
3	B (mg/L)	0.01	0.00	0.00	0.00	0.00
4	Ca (mg/L)	24	30	40	38	37
5	Cl (mg/L)	56.6	54.8	52.0	37.4	31.9
6	CO3 (mg/L)	19.0	12.0	2.5	0.0	11.8
7	F (mg/L)	0.36	0.72	0.68	0.67	0.62
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	90	202	206	214	179
10	K (mg/L)	2.1	2.6	1.9		2.0
11	Mg (mg/L)	26.8	11.4	20.3	14.3	14.8
12	Na (mg/L)	26.8	38.8	39.0		43.5
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.09	0.01	0.01	0.01	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.08	0.01	0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.045	0.001	0.001	0.001	0.001
19	SiO2 (mg/L)	6.3	16.4	16.4	15.0	18.2
20	SO4 (mg/L)	67.3	59.8	61.5	41.5	37.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	1.6	0.6	0.8	1.0
2	COD (mg/L)					
3	DO (mg/L)	7.0	6.8	6.2	6.6	7.9
4	DO_SAT% (%)	88	85	76	79	102
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)	59	76	101	96	92
2	HAR_Total (mgCaCO3/L)	171	123	185	155	153
3	Na% (%)	24	40	31		38
4	RSC (-)	0.0	1.3	0.1	0.4	0.3
5	SAR (-)	1.0	1.5	1.3		1.5
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Wadenapally (AK000D5)

Local River : Krishna

River Water

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter				
		2007-2008	2008-2009	Nov - Feb 2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	324.1	409.8	366.8	269.9	227.4
2	EC_FLD (µmho/cm)				646	
3	EC_GEN (µmho/cm)	549	586	591	715	611
4	pH_FLD (pH units)				8.2	
5	pH_GEN (pH units)	8.0	8.1	8.3	8.1	8.3
6	TDS (mg/L)					423
7	Temp (deg C)	24.8	27.0	24.9	26.5	26.0
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	3.9	2.0	2.0	2.0	3.0
2	ALK-TOT (mgCaCO3/L)	182	177	181	207	186
3	B (mg/L)	0.00	0.00	0.00	0.00	0.20
4	Ca (mg/L)	48	48	46	43	37
5	Cl (mg/L)	44.0	49.9	46.2	71.4	63.3
6	CO3 (mg/L)	4.8	2.4	2.4	2.4	3.7
7	F (mg/L)	0.75	0.32	0.84	0.78	0.67
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	212	211	216	248	220
10	K (mg/L)	2.7	3.1	2.5	3.5	2.8
11	Mg (mg/L)	17.5	10.1	14.6	24.6	20.7
12	Na (mg/L)	56.8	57.3	57.5	72.1	60.5
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.10
14	NO2+NO3 (mg N/L)	0.01	0.01	1.34	0.00	0.89
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.01
16	NO3-N (mgN/L)	0.01	0.01	1.34	0.00	0.89
17	o-PO4-P (mg P/L)					0.243
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.162	0.243
19	SiO2 (mg/L)	15.8	16.0	16.8	17.6	15.3
20	SO4 (mg/L)	45.3	51.6	58.2	77.3	65.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	0.8	1.1	0.6	1.0
2	COD (mg/L)	29.1	12.6	17.1	25.5	60.8
3	DO (mg/L)	7.5	6.9	7.0	7.1	6.5
4	DO_SAT% (%)	91	87	85	88	80
5	FCol-MPN (MPN/100mL)			14250	5315	5400
6	Tcol-MPN (MPN/100mL)			16000	12225	9200
7	TOC (mg/L)					2.6
	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)	119	121	116	108	93
2	HAR_Total (mgCaCO3/L)	192	163	177	210	179
3	Na% (%)	39	43	41	43	42
4	RSC (-)	0.2	0.3	0.1	0.2	0.3
5	SAR (-)	1.8	2.0	1.9	2.2	2.0
	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 : Wadenapally (AK000D5)

Local River : Krishna

River Water

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter				
		2012-2013	2013-2014	Nov - Feb 2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)	219.0	211.4	167.0	9.261	139.2
2	EC_FLD (µmho/cm)					28
3	EC_GEN (µmho/cm)	558	583	474	969	702
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.0	8.1	8.1	8.0	8.3
6	TDS (mg/L)	360	336	366	337	386
7	Temp (deg C)	25.3	25.3	26.8	25.5	27.0
8	Turb (NTU)	0.80	3.50	2.80	2.75	2.75
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	35.7	0.0	0.0	1.3	1.5
2	ALK-TOT (mgCaCO3/L)	212	155	159	158	154
3	B (mg/L)	0.16	0.03	0.16	0.00	
4	Ca (mg/L)	30	35	37	33	43
5	Cl (mg/L)	52.4	47.3	48.6	64.3	76.0
6	CO3 (mg/L)	43.0	0.0	0.0	1.6	1.8
7	F (mg/L)	0.85	0.47	0.59	0.52	0.80
8	Fe (mg/L)	0.0	0.1	0.1	0.0	0.1
9	HCO3 (mg/L)	172	189	194	189	185
10	K (mg/L)	1.8	2.7	2.9	3.4	5.9
11	Mg (mg/L)	17.0	19.7	19.7	18.7	21.2
12	Na (mg/L)	58.0	51.0	56.5	71.8	79.0
13	NH3-N (mg N/L)	0.03	0.01	0.04	0.01	0.09
14	NO2+NO3 (mg N/L)	0.61	1.22	1.01	1.15	0.45
15	NO2-N (mgN/L)	0.00	0.00	0.06	0.06	0.02
16	NO3-N (mgN/L)	0.61	1.22	0.95	1.09	0.43
17	o-PO4-P (mg P/L)	0.048	0.160	0.156	0.141	0.124
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	15.7	15.2	14.1	8.7	8.6
20	SO4 (mg/L)	51.2	54.4	53.5	81.4	117.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.0	1.1	1.3	2.7
2	COD (mg/L)	16.3	4.1	10.6	11.4	10.9
3	DO (mg/L)	6.8	7.0	7.3	5.7	6.6
4	DO_SAT% (%)	82	85	92	70	82
5	FCol-MPN (MPN/100mL)	946	858	1458	6313	2295
6	Tcol-MPN (MPN/100mL)	4808	2930	6800	10950	4585
7	TOC (mg/L)	2.1		20.8	11.7	
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)			1.16		
3	Cr (µg/L)			7.07		
4	Cu (µg/L)			1.50		0.00
5	Hg (µg/L)					
6	Ni (µg/L)			4.05		
7	Pb (µg/L)			5.70		
8	Zn (µg/L)			5.00		0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	75	87	91	83	108
2	HAR_Total (mgCaCO3/L)	145	169	174	161	196
3	Na% (%)	46	39	41	48	43
4	RSC (-)	1.5	0.0	0.0	0.0	0.1
5	SAR (-)	2.1	1.7	1.9	2.5	2.6
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Wadenapally (AK000D5)

Local River : Krishna

River Water

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Summer				
		2003	2004	2005	2006	2007
	PHYSICAL					
1	Q (cumec)	58.02	32.66	51.28	159.8	171.7
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	632	555	585	660	591
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.3	8.4	8.1	8.5	8.1
6	TDS (mg/L)					
7	Temp (deg C)	33.3	29.0	27.7	27.5	27.0
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	9.4	7.0	0.0	10.5	5.3
2	ALK-TOT (mgCaCO3/L)	89	178	160	210	213
3	B (mg/L)	0.01	0.00	0.00	0.00	0.00
4	Ca (mg/L)	21	27	38	41	40
5	Cl (mg/L)	52.0	49.3	52.3	47.0	44.2
6	CO3 (mg/L)	11.3	8.4	0.0	12.7	6.3
7	F (mg/L)	0.65	0.62	0.68	0.83	1.08
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	86	200	195	231	247
10	K (mg/L)	2.4	2.4	1.4	2.8	2.4
11	Mg (mg/L)	17.6	14.7	22.0	17.3	19.0
12	Na (mg/L)	25.7	38.0	46.3	63.7	62.0
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.13	0.01	0.01	0.01	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.12	0.01	0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.057	0.001	0.001	0.001	0.001
19	SiO2 (mg/L)	2.6	13.1	24.2	17.2	17.2
20	SO4 (mg/L)	74.3	62.7	60.7	46.7	45.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	0.4	1.0	0.6	0.6
2	COD (mg/L)					
3	DO (mg/L)	5.5	5.5	5.4	5.6	6.3
4	DO_SAT% (%)	77	72	68	71	78
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)				0.01	7.00
3	Cr (µg/L)				9.00	9.00
4	Cu (µg/L)					
5	Hg (µg/L)					1.36
6	Ni (µg/L)				1.00	1.00
7	Pb (µg/L)				65.00	19.00
8	Zn (µg/L)				10.00	69.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	53	67	94	103	100
2	HAR_Total (mgCaCO3/L)	127	128	186	175	179
3	Na% (%)	30	39	35	43	42
4	RSC (-)	0.0	1.0	0.2	0.7	0.7
5	SAR (-)	1.0	1.5	1.5	2.1	2.0
	PESTICIDES					
1	Aldrin (µg/L)				0.010	0.040
2	BHC (µg/L)				0.100	0.140
3	DDT (µg/L)				0.100	0.100
4	Dieldrin (µg/L)				0.010	0.140
5	Endos (µg/L)				0.100	0.190

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Wadenapally (AK000D5)

Local River : Krishna

River Water

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Summer				
		2008	2009	2010	2011	2012
	PHYSICAL					
1	Q (cumec)	147.2	171.5	211.5	173.6	76.14
2	EC_FLD (µmho/cm)			638		
3	EC_GEN (µmho/cm)	697	682	625	858	900
4	pH_FLD (pH units)			8.4		
5	pH_GEN (pH units)	8.3	8.1	8.5	7.6	8.2
6	TDS (mg/L)					375
7	Temp (deg C)	26.7	27.0	27.5	25.5	26.3
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.8	2.7	8.0	0.0	1.4
2	ALK-TOT (mgCaCO3/L)	219	228	175	208	159
3	B (mg/L)	0.00	0.00	0.00	0.00	0.08
4	Ca (mg/L)	51	50	45	45	29
5	Cl (mg/L)	62.9	59.0	51.8	83.9	59.7
6	CO3 (mg/L)	3.3	3.2	9.6	0.0	1.7
7	F (mg/L)	0.75	0.79	1.00	1.06	0.45
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.2
9	HCO3 (mg/L)	260	272	194	254	191
10	K (mg/L)	2.5	2.2	2.6	3.6	2.7
11	Mg (mg/L)	17.7	13.6	16.5	25.8	16.7
12	Na (mg/L)	73.0	61.7	58.6	83.3	58.0
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.12
14	NO2+NO3 (mg N/L)	0.01	0.01	0.00	0.00	0.68
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.01
16	NO3-N (mgN/L)	0.01	0.01	0.00	0.00	0.67
17	o-PO4-P (mg P/L)					0.093
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.272	0.093
19	SiO2 (mg/L)	17.3	17.1	13.9	16.0	16.2
20	SO4 (mg/L)	44.7	52.5	48.8	83.6	57.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.5	0.7	0.3	0.3	0.9
2	COD (mg/L)	7.9	6.7	21.6	26.2	10.1
3	DO (mg/L)	6.1	6.0	6.4	6.3	6.3
4	DO_SAT% (%)	76	76	81	76	78
5	FCol-MPN (MPN/100mL)			10833	9000	5607
6	Tcol-MPN (MPN/100mL)			10900	16000	6140
7	TOC (mg/L)	3.3				2.9
	TRACE & TOXIC					
1	As (µg/L)			2.79		1.53
2	Cd (µg/L)	0.90	2.56	0.00		0.00
3	Cr (µg/L)	2.00	2.00	0.00		0.00
4	Cu (µg/L)					
5	Hg (µg/L)	0.00				1.22
6	Ni (µg/L)	9.90	3.25	0.00		1.57
7	Pb (µg/L)	21.25	36.00	0.00		18.98
8	Zn (µg/L)	2.89	6.63	4.24		18.21
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	127	124	112	112	73
2	HAR_Total (mgCaCO3/L)	200	181	181	220	143
3	Na% (%)	44	42	41	45	47
4	RSC (-)	0.4	1.0	0.0	0.0	0.3
5	SAR (-)	2.3	2.0	1.9	2.5	2.1
	PESTICIDES					
1	Aldrin (µg/L)	0.010	0.014	0.000		0.000
2	BHC (µg/L)	0.200	0.100	0.027		0.011
3	DDT (µg/L)	0.100	0.100	0.010		0.001
4	Dieldrin (µg/L)	0.010	0.010	0.002		0.000
5	Endos (µg/L)	0.100	0.100	0.055		0.009

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Wadenapally (AK000D5)

Local River : Krishna

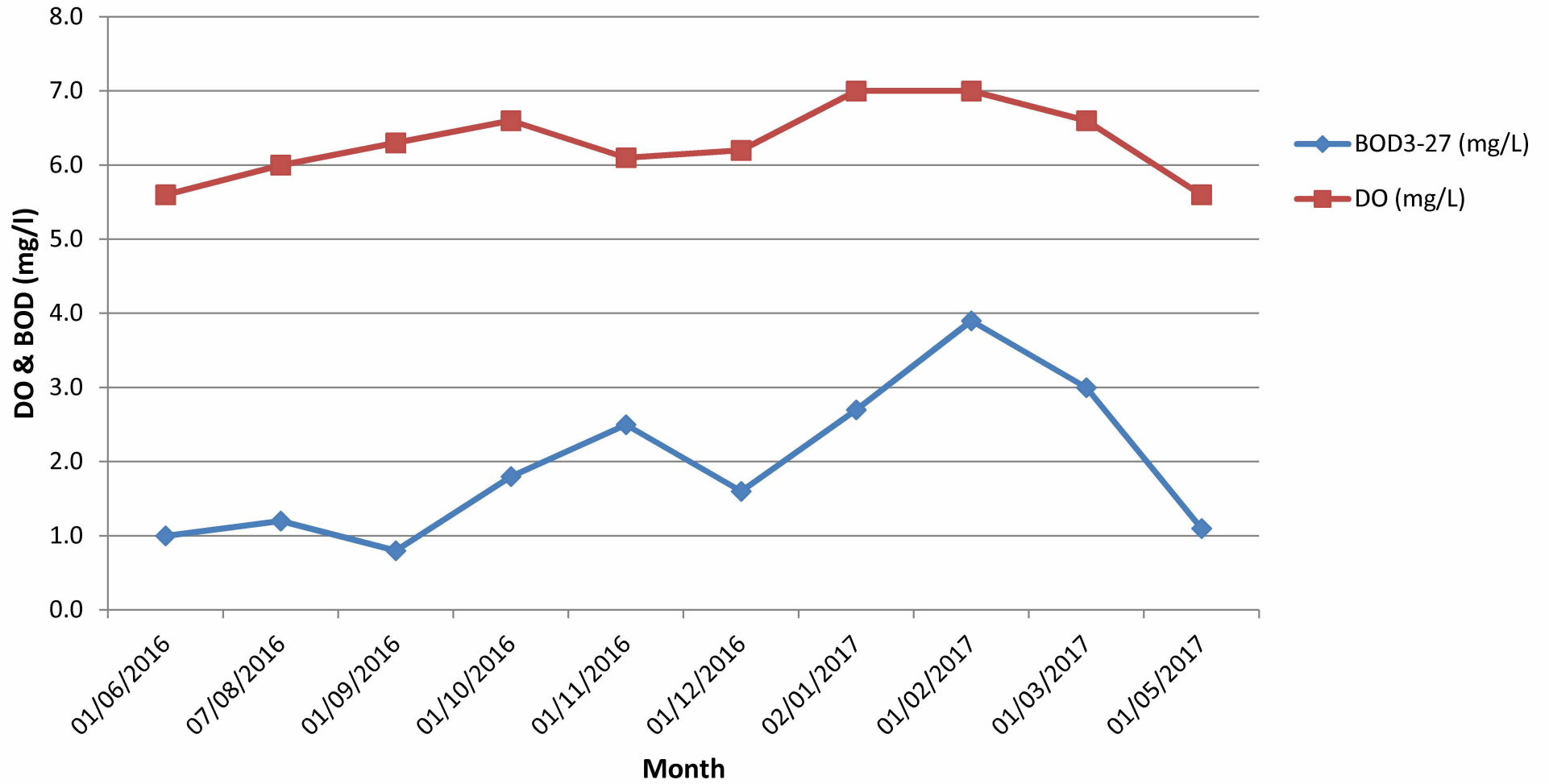
River Water

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Summer				
		2013	2014	2015	2016	2017
	PHYSICAL					
1	Q (cumec)	24.02	150.9	70.53	6.178	26.62
2	EC_FLD (µmho/cm)					179
3	EC_GEN (µmho/cm)	723	627	740	741	776
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.2	8.3	8.3	8.4	8.0
6	TDS (mg/L)	404	381	427	368	467
7	Temp (deg C)	27.3	28.0	26.0	26.0	26.7
8	Turb (NTU)	0.88	4.33	3.00	8.67	30.33
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	1.4	1.7	3.3	2.8
2	ALK-TOT (mgCaCO3/L)	155	163	197	120	171
3	B (mg/L)	0.28	0.15	0.12		
4	Ca (mg/L)	37	36	45	28	54
5	Cl (mg/L)	80.5	52.5	63.1	63.8	93.1
6	CO3 (mg/L)	0.0	1.7	2.1	4.0	3.4
7	F (mg/L)	0.85	0.60	0.91	0.37	0.60
8	Fe (mg/L)	0.2	0.7	0.0	0.0	0.0
9	HCO3 (mg/L)	189	195	236	139	201
10	K (mg/L)	2.4	2.4	2.7	3.1	3.7
11	Mg (mg/L)	21.6	20.0	25.9	15.2	26.6
12	Na (mg/L)	75.6	58.0	74.1	73.3	89.7
13	NH3-N (mg N/L)	0.01	0.03	0.00	0.02	1.10
14	NO2+NO3 (mg N/L)	0.94	1.30	0.78	1.05	1.68
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.07	0.10
16	NO3-N (mgN/L)	0.94	1.30	0.78	0.98	1.58
17	o-PO4-P (mg P/L)	0.080	0.097	0.195	0.119	0.173
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	10.8	16.3	18.4	11.0	18.0
20	SO4 (mg/L)	32.2	57.8	120.6	65.9	146.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.6	1.2	0.8	1.0	1.9
2	COD (mg/L)	8.6	6.6	7.4	9.4	13.4
3	DO (mg/L)	6.1	6.6	5.3	6.3	6.2
4	DO_SAT% (%)	78	85	65	77	77
5	FCol-MPN (MPN/100mL)	801	34	45	4100	850
6	Tcol-MPN (MPN/100mL)	3734	77	8085	16000	1100
7	TOC (mg/L)	2.9		32.6		
	TRACE & TOXIC					
1	As (µg/L)	4.26	1.62	3.44	0.00	3.72
2	Cd (µg/L)	1.20	0.01	2.00	0.00	1.30
3	Cr (µg/L)	2.95	0.03	0.00	0.00	0.00
4	Cu (µg/L)					0.00
5	Hg (µg/L)	0.28	0.28	0.14	0.00	0.49
6	Ni (µg/L)	2.89	1.72	7.45	0.00	1.30
7	Pb (µg/L)	5.05	0.72	14.00	0.00	0.00
8	Zn (µg/L)	10.85	2.00	15.00	0.04	0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	94	89	112	69	135
2	HAR_Total (mgCaCO3/L)	184	173	220	132	246
3	Na% (%)	47	41	42	54	44
4	RSC (-)	0.0	0.1	0.0	0.0	0.0
5	SAR (-)	2.4	1.9	2.2	2.8	2.5
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Wadenapally



HISTORY SHEET

		Water Year	: 2016-2017
Site	: Dameracherla	Code	: AKF00A7
State	: Telangana	District	Nalgonda
Basin	: Krishna	Independent River	: Krishna
Tributary	: Musi	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Musi
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Krishna SD 1, N.S.Dam
Drainage Area	: 11501 Sq. Km.	Bank	: Right
Latitude	: 16°44'21"	Longitude	: 79°40'11"
	Opening Date	Closing Date	
Gauge	: 01/12/1967		
Discharge	: 27/07/1968		
Sediment	: 02/09/2013		
Water Quality	: 01/01/1980		

Water Quality Datasheet for the period : 2016-2017

Station Name : Dameracherla (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water Analysis Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	29/08/2016	01/09/2016	01/10/2016	01/11/2016	01/12/2016
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	45.80	101.6	102.4	16.82	6.862
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown	Clear	Clear
3	EC_FLD (μmho/cm)			1740	1620	1660
4	EC_GEN (μmho/cm)	371	480	811	734	1012
5	Odour_Code (-)	odour free	fishy	odour free	odour free	odour free
6	pH_FLD (pH units)			7.4	7.6	7.8
7	pH_GEN (pH units)	7.7	8.5	8.6	8.6	8.5
8	TDS (mg/L)	321	271	471	415	615
9	Temp (deg C)	27.0	27.0	25.5	23.5	22.0
10	Turb (NTU)	133.00	42.00	0.00	0.00	0.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	2.5	2.0	8.5	5.0
2	ALK-TOT (mgCaCO3/L)	71	104	177	139	220
3	Ca (mg/L)	25	27	43	46	51
4	Cl (mg/L)	32.4	26.3	95.7	87.6	127.6
5	CO3 (mg/L)	0.0	3.0	2.4	10.2	6.0
6	F (mg/L)	0.13	0.16	0.56	0.50	0.95
7	Fe (mg/L)	0.2	0.1	0.1	0.1	0.0
8	HCO3 (mg/L)	86	121	211	149	257
9	K (mg/L)	2.1	2.4	5.3	4.6	2.6
10	Mg (mg/L)	14.3	14.5	23.3	24.9	28.1
11	Na (mg/L)	20.9	27.0	139.5	68.0	108.0
12	NH3-N (mg N/L)	0.00	0.01	0.00	0.01	0.02
13	NO2+NO3 (mg N/L)	0.33	2.22	2.16	0.34	0.14
14	NO2-N (mgN/L)	0.02	0.36	0.00	0.00	0.06
15	NO3-N (mgN/L)	0.31	1.86	2.16	0.33	0.08
16	o-PO4-P (mg P/L)	0.166	0.170	0.208	0.242	0.032
17	SiO2 (mg/L)	5.8	8.7	17.6	12.0	8.7
18	SO4 (mg/L)	16.5	22.0	162.0	45.5	163.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	1.3	2.0	2.9	2.2
2	COD (mg/L)	8.3	8.8	11.9	7.7	11.7
3	DO (mg/L)	6.7	6.2	6.9	6.4	7.0
4	DO_SAT% (%)	84	78	84	74	80
5	FCol-MPN (MPN/100mL)	20	16000	16000	20	170
6	Tcol-MPN (MPN/100mL)	16000	16000	16000	40	260
	TRACE & TOXIC					
1	As (μg/L)					
2	Cd (μg/L)					
3	Cr (μg/L)					
4	Cu (μg/L)					0.00
5	Hg (μg/L)					
6	Ni (μg/L)					
7	Pb (μg/L)					
8	Zn (μg/L)					0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	62	67	107	114	129
2	HAR_Total (mgCaCO3/L)	122	127	204	218	246
3	Na% (%)	27	31	59	40	49
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.8	1.0	4.3	2.0	3.0
	PESTICIDES	Analysis not done due to mal function of instrument.				

Samples not collected during June and July months due to Drybed/No Flow condition.

Water Quality Datasheet for the period : 2016-2017

Station Name : Dameracherla (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water Analysis Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	02/01/2017	01/02/2017	01/03/2017	01/04/2017
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	6.639	3.347	13.90	9.750
2	Colour_Cod (-)	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	1640	1640	1640	1620
4	EC_GEN (µmho/cm)	950	928	949	1166
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.6	7.6	7.3	7.4
7	pH_GEN (pH units)	8.2	8.2	8.3	8.1
8	TDS (mg/L)	656	613	604	690
9	Temp (deg C)	22.0	22.0	23.0	29.0
10	Turb (NTU)	0.00	2.00	2.00	3.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	3.8	0.0
2	ALK-TOT (mgCaCO3/L)	175	174	213	214
3	Ca (mg/L)	46	74	66	81
4	Cl (mg/L)	115.2	129.7	125.2	190.9
5	CO3 (mg/L)	0.0	0.0	4.6	0.0
6	F (mg/L)	0.91	1.62	0.50	0.72
7	Fe (mg/L)	0.0	0.0	0.0	0.0
8	HCO3 (mg/L)	213	212	250	261
9	K (mg/L)	4.0	7.4	2.4	17.2
10	Mg (mg/L)	25.3	23.3	32.2	41.8
11	Na (mg/L)	89.5	224.1	102.1	171.4
12	NH3-N (mg N/L)	0.04	0.91	0.00	0.18
13	NO2+NO3 (mg N/L)	0.33	1.35	1.49	2.20
14	NO2-N (mgN/L)	0.04	0.01	0.00	0.00
15	NO3-N (mgN/L)	0.29	1.34	1.48	2.20
16	o-PO4-P (mg P/L)	0.080	0.080	1.340	0.100
17	SiO2 (mg/L)	13.2	17.8	11.6	25.9
18	SO4 (mg/L)	97.0	305.8	97.5	304.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2.1	2.3	1.5	1.4
2	COD (mg/L)	14.3	11.3	5.0	14.3
3	DO (mg/L)	6.3	6.8	6.0	6.6
4	DO_SAT% (%)	72	78	70	86
5	FCol-MPN (MPN/100mL)	20	1700	20	20
6	Tcol-MPN (MPN/100mL)	2400	1700	20	20
	TRACE & TOXIC				
1	As (µg/L)				4.91
2	Cd (µg/L)				2.00
3	Cr (µg/L)				0.00
4	Cu (µg/L)	0.00	0.00	0.00	0.00
5	Hg (µg/L)				0.37
6	Ni (µg/L)				5.10
7	Pb (µg/L)				1.00
8	Zn (µg/L)	0.00	0.00	0.00	0.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	116	185	165	203
2	HAR_Total (mgCaCO3/L)	221	282	299	377
3	Na% (%)	46	63	43	48
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	2.6	5.8	2.6	3.9
	PESTICIDES				

Samples not received in the month of May from site to the Laboratory.

Water Quality Summary for the period : 2016-2017

Station Name : Dameracherla (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

Sub-Division : Lower Krishna SD 1, N.S.Dam

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	1963	0.000	34.65
2	EC_FLD ($\mu\text{mho/cm}$)	7	1740	1620	1651
3	EC_GEN ($\mu\text{mho/cm}$)	9	1166	371	822
4	pH_FLD (pH units)	7	7.8	7.3	7.5
5	pH_GEN (pH units)	9	8.6	7.7	8.3
6	TDS (mg/L)	9	690	271	517
7	Temp (deg C)	9	29.0	22.0	24.6
8	Turb (NTU)	9	133.00	0.00	20.22
	CHEMICAL				
1	Alk-Phen (mgCaCO ₃ /L)	9	8.5	0.0	2.4
2	ALK-TOT (mgCaCO ₃ /L)	9	220	71	165
3	Ca (mg/L)	9	81	25	51
4	Cl (mg/L)	9	190.9	26.3	103.4
5	CO ₃ (mg/L)	9	10.2	0.0	2.9
6	F (mg/L)	9	1.62	0.13	0.67
7	Fe (mg/L)	9	0.2	0.0	0.1
8	HCO ₃ (mg/L)	9	261	86	195
9	K (mg/L)	9	17.2	2.1	5.3
10	Mg (mg/L)	9	41.8	14.3	25.3
11	Na (mg/L)	9	224.1	20.9	105.6
12	NH ₃ -N (mg N/L)	9	0.91	0.00	0.13
13	NO ₂ +NO ₃ (mg N/L)	9	2.22	0.14	1.17
14	NO ₂ -N (mgN/L)	9	0.36	0.00	0.06
15	NO ₃ -N (mgN/L)	9	2.20	0.08	1.12
16	o-PO ₄ -P (mg P/L)	9	1.340	0.032	0.269
17	SiO ₂ (mg/L)	9	25.9	5.8	13.5
18	SO ₄ (mg/L)	9	305.8	16.5	134.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD ₃₋₂₇ (mg/L)	9	2.9	1.3	1.9
2	COD (mg/L)	9	14.3	5.0	10.4
3	DO (mg/L)	9	7.0	6.0	6.5
4	DO_SAT% (%)	9	86	70	78
5	FCol-MPN (MPN/100mL)	9	16000	20	3774
6	Tcol-MPN (MPN/100mL)	9	16000	20	5827
	TRACE & TOXIC				
1	As ($\mu\text{g/L}$)	1	4.91	4.91	4.91
2	Cd ($\mu\text{g/L}$)	1	2.00	2.00	2
3	Cr ($\mu\text{g/L}$)	1	0.00	0.00	0
4	Cu ($\mu\text{g/L}$)	5	0.00	0.00	0
5	Hg ($\mu\text{g/L}$)	1	0.37	0.37	0.37
6	Ni ($\mu\text{g/L}$)	1	5.10	5.10	5.1
7	Pb ($\mu\text{g/L}$)	1	1.00	1.00	1
8	Zn ($\mu\text{g/L}$)	5	0.00	0.00	0
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO ₃ /L)	9	203	62	127
2	HAR_Total (mgCaCO ₃ /L)	9	377	122	233
3	Na% (%)	9	63	27	45
4	RSC (-)	9	0.0	0.0	0
5	SAR (-)	9	5.8	0.8	2.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Dameracherla (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Flood				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	0.868	9.180	21.09	32.95	26.08
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	1195	930	828	947	830
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.1	7.8	7.8	8.1	8.1
6	TDS (mg/L)					
7	Temp (deg C)	30.5	30.0	27.0	26.7	28.3
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	14.1	0.0	0.0	6.6	0.0
2	ALK-TOT (mgCaCO3/L)	139	313	249	255	243
3	B (mg/L)	0.01	0.00	0.00	0.01	0.00
4	Ca (mg/L)	18	52	54	63	60
5	Cl (mg/L)	159.7	127.8	90.2	90.7	75.3
6	CO3 (mg/L)	17.0	0.0	0.0	8.0	0.0
7	F (mg/L)	1.19		1.19	1.12	1.18
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	136	382	304	295	297
10	K (mg/L)	4.9		2.7	2.4	4.0
11	Mg (mg/L)	42.4	5.0	31.0	32.7	21.7
12	Na (mg/L)	100.5	74.0	61.0	88.7	94.7
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	0.01	0.01	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.033	0.001	0.001	0.001	0.001
19	SiO2 (mg/L)	3.9	18.4	18.8	23.1	25.9
20	SO4 (mg/L)	90.5	103.2	86.0	149.0	81.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.4	1.4	1.2	0.8	0.9
2	COD (mg/L)					
3	DO (mg/L)	6.5	6.6	4.3	5.7	6.2
4	DO_SAT% (%)	85	87	54	71	79
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)	46	130	135	157	151
2	HAR_Total (mgCaCO3/L)	223	151	264	293	241
3	Na% (%)	49		33	38	45
4	RSC (-)	0.0	3.3	0.0	0.0	0.2
5	SAR (-)	3.0	2.6	1.6	2.2	2.7
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Dameracherla (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Flood				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	105.2	37.62	34.04	41.65	30.52
2	EC_FLD (µmho/cm)				874	
3	EC_GEN (µmho/cm)	892	1185	1062	1150	1140
4	pH_FLD (pH units)				6.9	
5	pH_GEN (pH units)	8.2	8.1	8.4	8.0	8.0
6	TDS (mg/L)					898
7	Temp (deg C)	27.6	24.6	27.3	28.6	27.1
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.1	3.2	5.3	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	235	280	228	293	251
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	54	62	46	51	52
5	Cl (mg/L)	89.7	157.2	128.2	125.0	149.8
6	CO3 (mg/L)	2.5	3.8	6.4	0.0	0.0
7	F (mg/L)	1.43	1.16	1.14	1.33	2.29
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	281	334	265	357	307
10	K (mg/L)	3.1	5.3	6.1	4.3	4.3
11	Mg (mg/L)	26.5	26.3	23.0	28.8	30.4
12	Na (mg/L)	109.3	123.7	114.0	129.6	109.7
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	0.42	0.00	0.31
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	0.42	0.00	0.31
17	o-PO4-P (mg P/L)					0.400
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.343	0.400
19	SiO2 (mg/L)	25.1	26.7	31.9	24.2	28.6
20	SO4 (mg/L)	83.5	65.3	91.9	93.2	77.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	1.3	1.2	0.7	0.8
2	COD (mg/L)	15.5	40.0	18.7	24.3	23.1
3	DO (mg/L)	6.2	5.1	6.2	5.1	5.6
4	DO_SAT% (%)	78	61	78	65	70
5	FCol-MPN (MPN/100mL)				6160	12846
6	Tcol-MPN (MPN/100mL)				7460	12846
7	TOC (mg/L)					4.1
	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)	135	155	116	127	130
2	HAR_Total (mgCaCO3/L)	245	264	212	247	257
3	Na% (%)	48	49	50	53	48
4	RSC (-)	0.1	0.5	0.7	1.1	0.3
5	SAR (-)	3.0	3.3	3.5	3.7	3.0
	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 : Dameracherla (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Flood				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	3.476	50.47	9.006	9.376	83.27
2	EC_FLD (µmho/cm)		1730			1740
3	EC_GEN (µmho/cm)	1112	1258	1263	1120	554
4	pH_FLD (pH units)		7.4			7.4
5	pH_GEN (pH units)	7.9	7.9	8.2	8.0	8.3
6	TDS (mg/L)	638	762	760	701	354
7	Temp (deg C)	27.0	27.6	27.9	28.0	26.5
8	Turb (NTU)	0.55	1.17	4.40	3.03	58.33
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.8	1.2	1.5
2	ALK-TOT (mgCaCO3/L)	185	190	241	251	117
3	B (mg/L)	0.24	0.53	0.31	0.51	
4	Ca (mg/L)	60	48	55	54	31
5	Cl (mg/L)	132.3	183.9	182.6	139.1	51.5
6	CO3 (mg/L)	0.0	0.0	1.0	1.4	1.8
7	F (mg/L)	1.18	1.31	1.26	1.26	0.28
8	Fe (mg/L)	0.1	0.1	0.1	0.0	0.1
9	HCO3 (mg/L)	226	232	292	304	139
10	K (mg/L)	3.4	4.2	7.6	5.9	3.3
11	Mg (mg/L)	35.0	28.1	32.1	31.2	17.4
12	Na (mg/L)	101.1	139.6	149.8	135.9	62.5
13	NH3-N (mg N/L)	0.01	0.27	0.00	0.08	0.00
14	NO2+NO3 (mg N/L)	0.98	3.00	1.06	1.08	1.57
15	NO2-N (mgN/L)	0.00	0.00	0.01	0.03	0.13
16	NO3-N (mgN/L)	0.98	3.00	1.04	1.04	1.44
17	o-PO4-P (mg P/L)	0.086	0.158	0.176	0.128	0.181
18	P-Tot (mgP/L)			0.167		
19	SiO2 (mg/L)	23.6	15.8	25.8	32.6	10.7
20	SO4 (mg/L)	108.0	96.8	102.1	108.0	66.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.3	1.1	2.0	1.7
2	COD (mg/L)	29.3	10.1	27.0	14.1	9.7
3	DO (mg/L)	5.8	5.5	6.0	6.3	6.6
4	DO_SAT% (%)	72	70	77	80	82
5	FCol-MPN (MPN/100mL)	8115	123	3293	5360	10673
6	Tcol-MPN (MPN/100mL)	8150	195	4164	6800	16000
7	TOC (mg/L)	3.4	0.4		21.9	
	TRACE & TOXIC					
1	As (µg/L)	7.88	0.57			
2	Cd (µg/L)	0.01	0.42			
3	Cr (µg/L)	52.25	5.47			
4	Cu (µg/L)					
5	Hg (µg/L)		0.58			
6	Ni (µg/L)	5.80	12.25			
7	Pb (µg/L)	5.48	0.94			
8	Zn (µg/L)	56.20	0.10			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	149	120	137	136	78
2	HAR_Total (mgCaCO3/L)	295	237	271	266	151
3	Na% (%)	43	57	52	52	39
4	RSC (-)	0.0	0.0	0.1	0.1	0.0
5	SAR (-)	2.6	4.8	3.9	3.6	2.0
	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 : Dameracherla (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Winter				
		2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	4.138	2.762	33.14	102.3	82.92
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	1027	1240	910	727	690
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.1	8.2	8.1	7.8	8.1
6	TDS (mg/L)					
7	Temp (deg C)	27.0	30.0	27.5	20.6	25.0
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	2.9	0.0	3.9
2	ALK-TOT (mgCaCO3/L)	253	290	256	215	244
3	B (mg/L)	0.01	0.00	0.00	0.01	0.00
4	Ca (mg/L)	41	68	53	47	51
5	Cl (mg/L)	128.4	141.6	84.9	51.5	54.2
6	CO3 (mg/L)	0.0	0.0	3.5	0.0	4.8
7	F (mg/L)	0.96		0.98	1.07	0.73
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	309	353	306	262	288
10	K (mg/L)	1.9		1.8		1.8
11	Mg (mg/L)	53.6	38.0	30.5	22.3	22.5
12	Na (mg/L)	72.0	72.0	65.3		82.8
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.08	0.01	0.01	0.01	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.08	0.01	0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.015	0.001	0.001	0.003	0.001
19	SiO2 (mg/L)	10.4	45.7	22.2	14.4	23.9
20	SO4 (mg/L)	123.0	124.8	96.5	53.8	57.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.4		0.9	1.0	1.2
2	COD (mg/L)					
3	DO (mg/L)	7.6		6.3	6.2	7.0
4	DO_SAT% (%)	95		80	69	86
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)	102	170	133	118	129
2	HAR_Total (mgCaCO3/L)	326	328	260	210	222
3	Na% (%)	33		35		44
4	RSC (-)	0.0	0.0	0.2	0.1	0.6
5	SAR (-)	1.7	1.7	1.8		2.4
	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 : Dameracherla (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Winter				
		2007-2008	2008-2009	Nov - Feb 2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	70.84	51.70	35.73	65.53	25.31
2	EC_FLD (µmho/cm)				1496	
3	EC_GEN (µmho/cm)	790	807	802	968	926
4	pH_FLD (pH units)				7.2	
5	pH_GEN (pH units)	7.9	8.2	8.1	8.2	7.9
6	TDS (mg/L)					589
7	Temp (deg C)	21.0	21.5	25.8	24.9	25.9
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	4.0	2.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	246	230	227	250	260
3	B (mg/L)	0.00	0.00	0.00	0.00	0.26
4	Ca (mg/L)	54	64	55	50	50
5	Cl (mg/L)	62.2	72.6	66.5	107.6	106.8
6	CO3 (mg/L)	0.0	4.8	2.4	0.0	0.0
7	F (mg/L)	1.18	0.90	1.48	1.03	1.12
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1
9	HCO3 (mg/L)	300	271	272	305	317
10	K (mg/L)	2.7	2.7	2.1	4.2	3.1
11	Mg (mg/L)	25.8	13.4	22.9	28.9	29.6
12	Na (mg/L)	105.0	71.0	69.5	95.3	93.8
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.01
14	NO2+NO3 (mg N/L)	0.01	0.01	0.74	0.00	0.83
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	0.74	0.00	0.83
17	o-PO4-P (mg P/L)					0.119
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.102	0.119
19	SiO2 (mg/L)	20.6	17.6	21.6	22.9	25.2
20	SO4 (mg/L)	46.0	51.6	82.9	220.9	80.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	1.0	1.1	1.3	0.7
2	COD (mg/L)	27.3	11.6	22.4	19.2	12.9
3	DO (mg/L)	7.1	7.0	6.7	6.3	5.8
4	DO_SAT% (%)	76	79	83	76	71
5	FCol-MPN (MPN/100mL)			10575	9675	4725
6	Tcol-MPN (MPN/100mL)			12600	12700	5800
7	TOC (mg/L)					3.4
	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)	134	160	136	126	126
2	HAR_Total (mgCaCO3/L)	241	216	231	246	250
3	Na% (%)	47	42	39	45	45
4	RSC (-)	0.1	0.5	0.2	0.3	0.4
5	SAR (-)	3.0	2.1	2.0	2.7	2.6
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Dameracherla (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Winter				
		2012-2013	2013-2014	Nov - Feb 2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)	4.074	65.53	27.70	3.912	8.418
2	EC_FLD (µmho/cm)		1735			1640
3	EC_GEN (µmho/cm)	1273	891	781	1296	906
4	pH_FLD (pH units)		7.5			7.6
5	pH_GEN (pH units)	7.8	8.2	8.2	8.1	8.4
6	TDS (mg/L)	745	513	503	487	575
7	Temp (deg C)	24.3	25.3	25.9	26.0	22.4
8	Turb (NTU)	0.70	7.00	2.58	1.00	0.50
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	1.0	0.0	0.0	3.4
2	ALK-TOT (mgCaCO3/L)	267	222	229	222	177
3	B (mg/L)	0.18	0.51	0.21	0.00	
4	Ca (mg/L)	63	50	53	51	54
5	Cl (mg/L)	184.6	94.7	80.7	105.9	115.0
6	CO3 (mg/L)	0.0	1.3	0.0	0.0	4.0
7	F (mg/L)	1.75	0.91	0.89	0.93	0.99
8	Fe (mg/L)	0.0	0.1	0.1	0.0	0.0
9	HCO3 (mg/L)	326	268	279	271	208
10	K (mg/L)	1.8	4.1	2.1	2.7	4.7
11	Mg (mg/L)	36.8	28.8	29.8	29.0	25.4
12	Na (mg/L)	126.3	85.2	80.0	99.0	122.4
13	NH3-N (mg N/L)	0.02	0.00	0.07	0.00	0.24
14	NO2+NO3 (mg N/L)	0.77	1.09	0.83	0.64	0.54
15	NO2-N (mgN/L)	0.00	0.00	0.05	0.00	0.03
16	NO3-N (mgN/L)	0.77	1.09	0.78	0.63	0.51
17	o-PO4-P (mg P/L)	0.058	0.245	0.075	0.094	0.108
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	29.4	13.9	21.1	9.9	12.9
20	SO4 (mg/L)	98.0	79.1	66.3	151.9	152.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	1.4	1.7	0.8	2.4
2	COD (mg/L)	18.3	5.3	13.9	18.0	11.2
3	DO (mg/L)	5.4	6.6	7.4	6.4	6.6
4	DO_SAT% (%)	65	78	90	79	76
5	FCol-MPN (MPN/100mL)	801	4098	4945	170	478
6	Tcol-MPN (MPN/100mL)	5647	4190	8113	1750	1100
7	TOC (mg/L)	3.7		31.5	20.7	
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)			1.96		
3	Cr (µg/L)			2.41		
4	Cu (µg/L)			1.84		0.00
5	Hg (µg/L)					
6	Ni (µg/L)			5.40		
7	Pb (µg/L)			10.41		
8	Zn (µg/L)			4.75		0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	158	124	132	127	136
2	HAR_Total (mgCaCO3/L)	311	244	256	248	242
3	Na% (%)	47	42	41	46	49
4	RSC (-)	0.0	0.0	0.1	0.0	0.0
5	SAR (-)	3.1	2.4	2.2	2.7	3.4
	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 : Dameracherla (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Summer				
		Mar - May				
		2003	2004	2005	2006	2007
	PHYSICAL					
1	Q (cumec)	Drybed/Noflow		4.505	18.51	33.62
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)			954	851	765
4	pH_FLD (pH units)					
5	pH_GEN (pH units)			7.9	8.1	8.1
6	TDS (mg/L)					
7	Temp (deg C)			30.7	22.3	24.0
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)			0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)			250	241	258
3	B (mg/L)			0.00	0.01	0.00
4	Ca (mg/L)			64	43	52
5	Cl (mg/L)			98.7	59.9	69.5
6	CO3 (mg/L)			0.0	0.0	0.0
7	F (mg/L)			1.19	1.03	1.50
8	Fe (mg/L)			0.0	0.0	0.0
9	HCO3 (mg/L)			305	294	315
10	K (mg/L)			1.7	1.6	2.4
11	Mg (mg/L)			37.3	25.7	23.0
12	Na (mg/L)			78.3	60.3	79.3
13	NH3-N (mg N/L)			0.00	0.00	0.00
14	NO2+NO3 (mg N/L)			0.01	0.01	0.00
15	NO2-N (mgN/L)			0.00	0.00	0.00
16	NO3-N (mgN/L)			0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)			0.001	0.004	0.001
19	SiO2 (mg/L)			34.5	21.2	22.8
20	SO4 (mg/L)			50.0	40.7	56.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)			1.1	0.9	2.9
2	COD (mg/L)					
3	DO (mg/L)			5.3	5.4	6.4
4	DO_SAT% (%)			71	63	76
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)				0.01	8.00
3	Cr (µg/L)				2.00	2.00
4	Cu (µg/L)					
5	Hg (µg/L)					1.70
6	Ni (µg/L)				1.00	1.00
7	Pb (µg/L)				80.00	93.00
8	Zn (µg/L)				7.00	50.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)			159	108	130
2	HAR_Total (mgCaCO3/L)			315	214	226
3	Na% (%)			35	38	43
4	RSC (-)			0.2	0.6	0.7
5	SAR (-)			1.9	1.8	2.3
	PESTICIDES					
1	Aldrin (µg/L)				0.010	0.020
2	BHC (µg/L)				0.100	0.100
3	DDT (µg/L)				0.100	0.100
4	Dieldrin (µg/L)				0.027	0.030
5	Endos (µg/L)				0.182	0.190

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Dameracherla (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Summer				
		2008	2009	2010	2011	2012
	PHYSICAL					
1	Q (cumec)	44.00	39.87	29.13	49.80	6.854
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	903	944	847	926	1273
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.9	8.2	8.4	7.9	7.9
6	TDS (mg/L)					839
7	Temp (deg C)	25.3	23.0	28.0	25.0	27.8
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	2.7	5.3	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	248	229	232	240	315
3	B (mg/L)	0.00	0.00	0.00	0.00	0.07
4	Ca (mg/L)	51	54	39	52	44
5	Cl (mg/L)	109.6	96.0	80.5	107.8	114.8
6	CO3 (mg/L)	0.0	3.2	6.4	0.0	0.0
7	F (mg/L)	0.94	0.94	2.01	0.93	1.35
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1
9	HCO3 (mg/L)	303	273	270	293	385
10	K (mg/L)	3.2	2.4	3.0	2.3	1.5
11	Mg (mg/L)	22.7	12.3	23.0	30.2	26.1
12	Na (mg/L)	104.0	81.9	74.6	93.3	121.1
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.05
14	NO2+NO3 (mg N/L)	0.01	0.01	0.00	0.00	0.76
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.01
16	NO3-N (mgN/L)	0.01	0.01	0.00	0.00	0.74
17	o-PO4-P (mg P/L)					0.118
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.070	0.118
19	SiO2 (mg/L)	20.3	22.9	22.8	18.4	28.4
20	SO4 (mg/L)	42.0	51.4	55.0	99.8	74.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	1.0	0.6	0.3	1.2
2	COD (mg/L)	13.7	12.1	26.6	19.9	10.0
3	DO (mg/L)	5.4	7.3	6.5	5.8	5.1
4	DO_SAT% (%)	65	85	83	70	65
5	FCol-MPN (MPN/100mL)			11467	10500	1867
6	Tcol-MPN (MPN/100mL)			11667	16000	5233
7	TOC (mg/L)	3.5				2.7
	TRACE & TOXIC					
1	As (µg/L)			2.27		2.44
2	Cd (µg/L)	1.10	2.38	0.00	1.12	0.78
3	Cr (µg/L)	2.00	2.00	0.00	0.36	0.00
4	Cu (µg/L)					
5	Hg (µg/L)	0.00				0.68
6	Ni (µg/L)	11.60	1.96	0.03	7.64	4.41
7	Pb (µg/L)	22.53	36.26	0.00	31.01	32.49
8	Zn (µg/L)	2.85	22.11	5.81	38.10	21.89
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	128	136	97	130	111
2	HAR_Total (mgCaCO3/L)	223	188	193	256	220
3	Na% (%)	50	49	45	44	55
4	RSC (-)	0.5	0.9	0.8	0.0	1.9
5	SAR (-)	3.0	2.8	2.4	2.5	3.6
	PESTICIDES					
1	Aldrin (µg/L)	0.010	0.010	0.000	0.000	0.001
2	BHC (µg/L)	0.190	0.243	0.129	0.000	0.022
3	DDT (µg/L)	0.100	0.100	0.019	0.000	0.002
4	Dieldrin (µg/L)	0.010	0.010	0.002	0.000	0.000
5	Endos (µg/L)	0.100	0.100	0.075	0.000	0.034

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Dameracherla (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

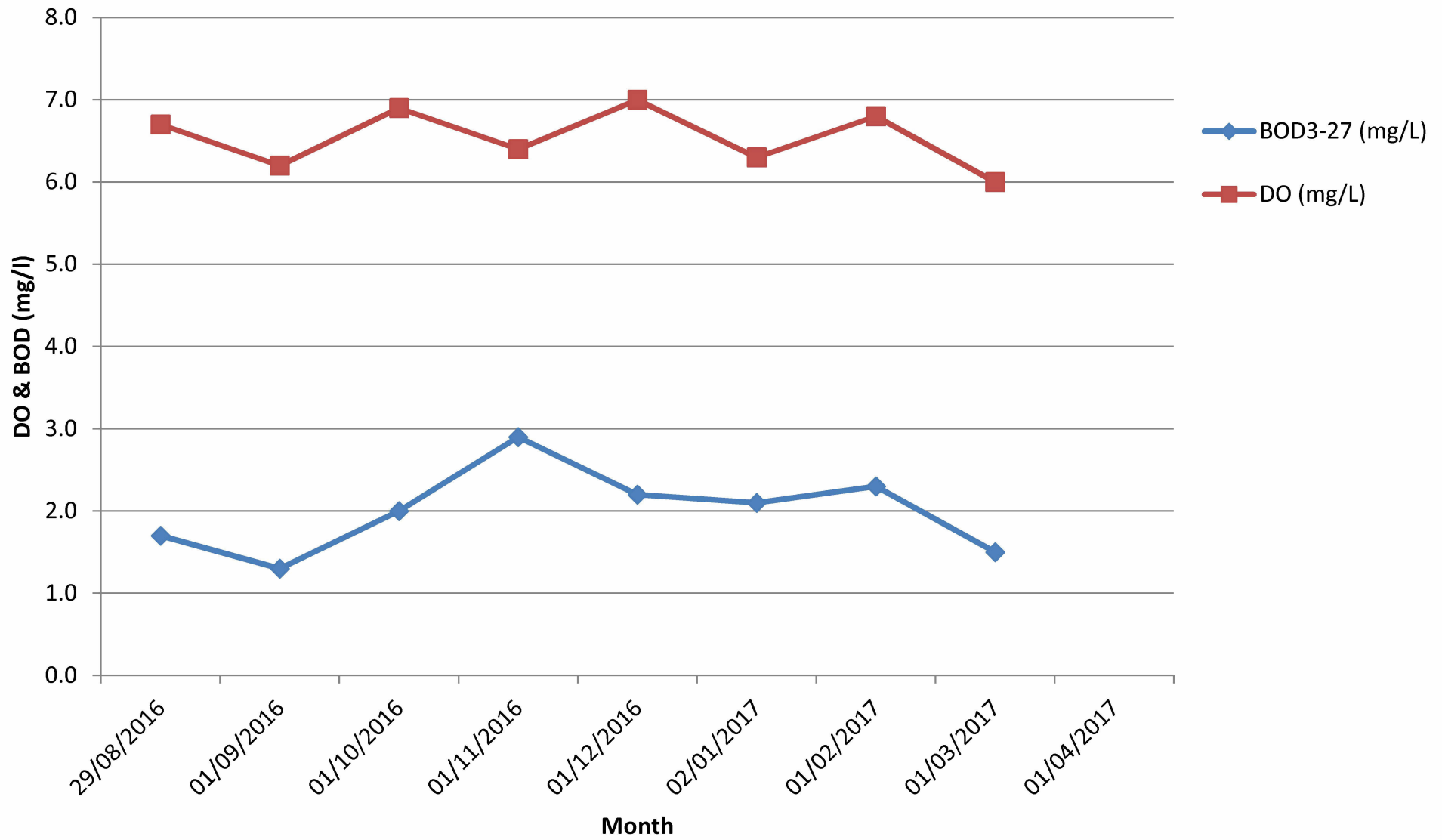
Local River : Musi

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Summer				
		2013	2014	2015	2016	2017
	PHYSICAL					
1	Q (cumec)	3.697	14.52	22.37	Drybed	11.83
2	EC_FLD (µmho/cm)				No flow	1630
3	EC_GEN (µmho/cm)	1580	975	953		1058
4	pH_FLD (pH units)					7.4
5	pH_GEN (pH units)	7.8	8.1	8.2		8.2
6	TDS (mg/L)	871	632	584		647
7	Temp (deg C)	25.8	30.3	27.3		26.0
8	Turb (NTU)	0.51	3.33	2.03		2.50
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	1.2		1.9
2	ALK-TOT (mgCaCO3/L)	311	250	210		213
3	B (mg/L)	0.38	0.50	0.23		
4	Ca (mg/L)	77	48	45		74
5	Cl (mg/L)	253.4	113.7	92.1		158.0
6	CO3 (mg/L)	0.0	0.0	1.4		2.3
7	F (mg/L)	1.24	1.02	0.84		0.61
8	Fe (mg/L)	0.2	0.5	0.0		0.0
9	HCO3 (mg/L)	379	305	253		255
10	K (mg/L)	1.8	4.1	3.0		9.8
11	Mg (mg/L)	40.8	28.2	25.9		37.0
12	Na (mg/L)	150.3	116.2	87.6		136.7
13	NH3-N (mg N/L)	0.00	0.03	0.06		0.09
14	NO2+NO3 (mg N/L)	1.29	0.74	0.42		1.85
15	NO2-N (mgN/L)	0.00	0.00	0.03		0.00
16	NO3-N (mgN/L)	1.29	0.74	0.39		1.84
17	o-PO4-P (mg P/L)	0.087	0.060	0.213		0.720
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	23.8	17.5	33.6		18.8
20	SO4 (mg/L)	109.5	58.0	92.1		200.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.6	1.1	0.5		1.4
2	COD (mg/L)	10.9	6.6	9.6		9.7
3	DO (mg/L)	6.4	5.9	5.9		6.3
4	DO_SAT% (%)	78	79	74		78
5	FCol-MPN (MPN/100mL)	175	70	3		20
6	Tcol-MPN (MPN/100mL)	1650	133	5523		20
7	TOC (mg/L)	3.4		36.6		
	TRACE & TOXIC					
1	As (µg/L)	4.85	1.02	3.55		4.91
2	Cd (µg/L)	2.14	0.01	3.00		2.00
3	Cr (µg/L)	2.57	0.08	0.00		0.00
4	Cu (µg/L)					0.00
5	Hg (µg/L)	1.69	0.00	0.10		0.37
6	Ni (µg/L)	8.78	1.34	9.04		5.10
7	Pb (µg/L)	1.71	0.33	20.00		1.00
8	Zn (µg/L)	0.15	3.00	11.00		0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	192	120	112		184
2	HAR_Total (mgCaCO3/L)	362	237	220		338
3	Na% (%)	47	50	46		45
4	RSC (-)	0.0	0.5	0.0		0.0
5	SAR (-)	3.5	3.3	2.6		3.2
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Damercherla



HISTORY SHEET

		Water Year : 2016-2017	
Site	: Halia	Code	: AKH00G2
State	: Telangana	District	Nalgonda
Basin	: Krishna	Independent River	: Krishna
Tributary	: Halia	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Halia
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Krishna SD 1, N.S.Dam
Drainage Area	: 3100 Sq. Km.	Bank	: Left
Latitude	: 16°47'25"	Longitude	: 79°20'19"
	Opening Date	Closing Date	
Gauge	: 15/02/1984		
Discharge	: 11/07/1984		
Sediment	:		
Water Quality	: 01/06/1992		

Water Quality Datasheet for the period : 2016-2017

Station Name : Halia (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

River Water Analysis Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	01/06/2016	01/07/2016	29/08/2016	01/09/2016
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	0.607	1.052	8.303	104.7
2	Colour_Cod (-)	Light Brown	Light Brown	Clear	Brown
3	EC_GEN (µmho/cm)	992	837	775	608
4	Odour_Code (-)	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.6	8.5	8.3	8.3
6	TDS (mg/L)	596	558	655	340
7	Temp (deg C)	28.0	25.5	24.0	24.0
8	Turb (NTU)	7.00	11.00	0.00	19.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	7.0	4.0	0.2	0.3
2	ALK-TOT (mgCaCO3/L)	252	272	215	168
3	Ca (mg/L)	42	46	46	26
4	Cl (mg/L)	106.6	105.5	116.5	51.9
5	CO3 (mg/L)	8.4	4.8	0.2	0.4
6	F (mg/L)	1.13	1.83	0.70	0.48
7	Fe (mg/L)	0.0	0.0	0.1	0.1
8	HCO3 (mg/L)	290	323	262	205
9	K (mg/L)	6.3	4.9	5.0	3.6
10	Mg (mg/L)	24.3	26.2	28.7	14.2
11	Na (mg/L)	139.3	140.0	91.8	69.2
12	NH3-N (mg N/L)	0.00	0.00	0.00	0.05
13	NO2+NO3 (mg N/L)	0.37	0.92	1.74	0.91
14	NO2-N (mgN/L)	0.00	0.00	0.00	0.00
15	NO3-N (mgN/L)	0.37	0.92	1.73	0.91
16	o-PO4-P (mg P/L)	0.310	0.044	0.122	0.191
17	SiO2 (mg/L)	32.6	23.4	15.6	12.1
18	SO4 (mg/L)	62.5	59.5	83.3	46.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.9	0.8	1.2	1.2
2	COD (mg/L)	12.9	12.3	19.9	14.8
3	DO (mg/L)	5.9	6.8	5.6	5.8
4	DO_SAT% (%)	75	82	67	69
5	FCol-MPN (MPN/100mL)	20	20	20	16000
6	Tcol-MPN (MPN/100mL)	3000	16000	16000	16000
	TRACE & TOXIC				
1	Cu (µg/L)				
2	Zn (µg/L)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	104	116	114	65
2	HAR_Total (mgCaCO3/L)	205	225	234	124
3	Na% (%)	59	57	46	54
4	RSC (-)	1.0	1.0	0.0	0.9
5	SAR (-)	4.2	4.1	2.6	2.7
	PESTICIDES	Analysis not done due to mal function of instrument.			

Water Quality Datasheet for the period : 2016-2017

Station Name : Halia (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

River Water Analysis Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	01/10/2016	01/11/2016	01/12/2016	02/01/2017
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	29.35	4.403	5.175	0.788
2	Colour_Cod (-)	Brown	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	693	1048	981	1091
4	Odour_Code (-)	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.2	8.5	8.4	8.3
6	TDS (mg/L)	409	892	603	427
7	Temp (deg C)	28.5	29.0	24.5	25.5
8	Turb (NTU)	0.00	0.00	0.00	0.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	8.5	6.0	3.5
2	ALK-TOT (mgCaCO3/L)	189	263	259	202
3	Ca (mg/L)	40	50	53	53
4	Cl (mg/L)	64.8	108.1	110.0	125.0
5	CO3 (mg/L)	0.0	10.2	7.2	4.2
6	F (mg/L)	0.80	0.75	1.01	1.10
7	Fe (mg/L)	0.1	0.1	0.0	0.0
8	HCO3 (mg/L)	230	300	301	238
9	K (mg/L)	3.8	4.3	4.7	4.5
10	Mg (mg/L)	21.7	27.5	28.7	28.8
11	Na (mg/L)	71.8	142.4	131.2	131.7
12	NH3-N (mg N/L)	0.00	0.00	0.01	0.00
13	NO2+NO3 (mg N/L)	1.05	0.24	0.05	0.13
14	NO2-N (mgN/L)	0.00	0.00	0.01	0.00
15	NO3-N (mgN/L)	1.05	0.24	0.05	0.13
16	o-PO4-P (mg P/L)	0.111	0.053	0.044	0.040
17	SiO2 (mg/L)	19.9	20.0	20.7	14.2
18	SO4 (mg/L)	28.5	56.0	177.0	129.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.1	1.7	1.0	1.8
2	COD (mg/L)	12.0	10.4	12.5	12.6
3	DO (mg/L)	6.2	6.3	7.5	7.5
4	DO_SAT% (%)	79	81	89	91
5	FCol-MPN (MPN/100mL)	3000	1300	3000	270
6	Tcol-MPN (MPN/100mL)	3000	1700	3000	1300
	TRACE & TOXIC				
1	Cu (μg/L)			0.00	0.00
2	Zn (μg/L)			0.00	0.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	100	126	132	132
2	HAR_Total (mgCaCO3/L)	190	241	251	252
3	Na% (%)	45	56	53	53
4	RSC (-)	0.0	0.5	0.2	0.0
5	SAR (-)	2.3	4.0	3.6	3.6
	PESTICIDES				

Water Quality Datasheet for the period : 2016-2017

Station Name : Halia (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

River Water Analysis Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	01/02/2017 A	01/03/2017 A
	PHYSICAL		
1	Q (cumec)	0.708	0.692
2	Colour_Cod (-)	Clear	Clear
3	EC_GEN (μmho/cm)	1406	794
4	Odour_Code (-)	odour free	odour free
5	pH_GEN (pH units)	8.2	8.0
6	TDS (mg/L)	725	577
7	Temp (deg C)	24.5	26.5
8	Turb (NTU)	8.00	7.00
	CHEMICAL		
1	Alk-Phen (mgCaCO3/L)	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	167	238
3	Ca (mg/L)	58	63
4	Cl (mg/L)	257.8	96.1
5	CO3 (mg/L)	0.0	0.0
6	F (mg/L)	0.60	0.50
7	Fe (mg/L)	0.3	0.0
8	HCO3 (mg/L)	204	290
9	K (mg/L)	14.2	2.9
10	Mg (mg/L)	18.3	26.9
11	Na (mg/L)	331.9	108.1
12	NH3-N (mg N/L)	0.00	0.18
13	NO2+NO3 (mg N/L)	1.45	1.91
14	NO2-N (mgN/L)	0.34	0.12
15	NO3-N (mgN/L)	1.12	1.79
16	o-PO4-P (mg P/L)	0.420	0.540
17	SiO2 (mg/L)	23.1	16.9
18	SO4 (mg/L)	249.6	78.9
	BIOLOGICAL/BACTERIOLOGICAL		
1	BOD3-27 (mg/L)	0.9	1.5
2	COD (mg/L)	1.2	7.1
3	DO (mg/L)	6.5	6.6
4	DO_SAT% (%)	77	81
5	FCoI-MPN (MPN/100mL)	40	800
6	TcoI-MPN (MPN/100mL)	1700	2800
	TRACE & TOXIC		
1	Cu (μg/L)	0.00	0.00
2	Zn (μg/L)	0.00	0.00
	CHEMICAL INDICES		
1	HAR_Ca (mgCaCO3/L)	145	156
2	HAR_Total (mgCaCO3/L)	221	268
3	Na% (%)	75	47
4	RSC (-)	0.0	0.0
5	SAR (-)	9.7	2.9
	PESTICIDES		

Samples not collected during April and May months due to Drybed/No flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Halia (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

Sub-Division : Lower Krishna SD 1, N.S.Dam

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	291.2	0.000	5.712
2	EC_GEN (µmho/cm)	10	1406	608	923
3	pH_GEN (pH units)	10	8.6	8.0	8.3
4	TDS (mg/L)	10	892	340	578
5	Temp (deg C)	10	29.0	24.0	26
6	Turb (NTU)	10	19.00	0.00	5.2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	10	8.5	0.0	2.9
2	ALK-TOT (mgCaCO3/L)	10	272	167	222
3	Ca (mg/L)	10	63	26	48
4	Cl (mg/L)	10	257.8	51.9	114.2
5	CO3 (mg/L)	10	10.2	0.0	3.5
6	F (mg/L)	10	1.83	0.48	0.89
7	Fe (mg/L)	10	0.3	0.0	0.1
8	HCO3 (mg/L)	10	323	204	264
9	K (mg/L)	10	14.2	2.9	5.4
10	Mg (mg/L)	10	28.8	14.2	24.5
11	Na (mg/L)	10	331.9	69.2	135.7
12	NH3-N (mg N/L)	10	0.18	0.00	0.02
13	NO2+NO3 (mg N/L)	10	1.91	0.05	0.88
14	NO2-N (mgN/L)	10	0.34	0.00	0.05
15	NO3-N (mgN/L)	10	1.79	0.05	0.83
16	o-PO4-P (mg P/L)	10	0.540	0.040	0.188
17	SiO2 (mg/L)	10	32.6	12.1	19.8
18	SO4 (mg/L)	10	249.6	28.5	97.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	1.9	0.8	1.3
2	COD (mg/L)	10	19.9	1.2	11.6
3	DO (mg/L)	10	7.5	5.6	6.5
4	DO_SAT% (%)	10	91	67	79
5	FCol-MPN (MPN/100mL)	10	16000	20	2447
6	Tcol-MPN (MPN/100mL)	10	16000	1300	6450
	TRACE & TOXIC				
1	Cu (µg/L)	4	0.00	0.00	0
2	Zn (µg/L)	4	0.00	0.00	0
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	10	156	65	119
2	HAR_Total (mgCaCO3/L)	10	268	124	221
3	Na% (%)	10	75	45	54
4	RSC (-)	10	1.0	0.0	0.4
5	SAR (-)	10	9.7	2.3	4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Halia (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Flood Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	Negligible Flow		118.1	17.56	8.710
2	EC_GEN (µmho/cm)			400	740	789
3	pH_GEN (pH units)			8.0	8.1	8.4
4	TDS (mg/L)					
5	Temp (deg C)			22.0	28.5	27.0
6	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)			0.0	0.0	5.5
2	ALK-TOT (mgCaCO3/L)			165	218	287
3	B (mg/L)			0.00	0.01	0.00
4	Ca (mg/L)			26	33	33
5	Cl (mg/L)			26.5	57.8	56.9
6	CO3 (mg/L)			0.0	0.0	6.7
7	F (mg/L)			0.90	0.91	1.07
8	Fe (mg/L)			0.0	0.0	0.0
9	HCO3 (mg/L)			201	266	336
10	K (mg/L)			2.0	3.2	4.0
11	Mg (mg/L)			12.0	17.0	16.0
12	Na (mg/L)			41.0	74.0	126.7
13	NH3-N (mg N/L)			0.00	0.00	0.00
14	NO2+NO3 (mg N/L)			0.01	0.01	0.00
15	NO2-N (mgN/L)			0.00	0.00	0.00
16	NO3-N (mgN/L)			0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)			0.001	0.005	0.001
19	SiO2 (mg/L)			13.5	19.3	20.8
20	SO4 (mg/L)			36.0	55.0	38.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					2.4
2	COD (mg/L)					
3	DO (mg/L)					7.3
4	DO_SAT% (%)					91
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)			65	81	83
2	HAR_Total (mgCaCO3/L)			115	152	150
3	Na% (%)			43	51	62
4	RSC (-)			1.0	1.3	2.7
5	SAR (-)			1.7	2.6	4.6
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Halia (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Flood Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	18.40	9.945	102.6	7.412	6.507
2	EC_GEN (µmho/cm)	739	846	661	968	958
3	pH_GEN (pH units)	8.4	8.2	8.0	8.3	8.1
4	TDS (mg/L)					572
5	Temp (deg C)	27.3	25.0	26.5	26.7	26.2
6	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	8.6	2.7	0.0	3.2	0.0
2	ALK-TOT (mgCaCO3/L)	250	264	212	279	311
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	34	43	40	38	36
5	Cl (mg/L)	62.3	56.0	54.7	81.1	96.0
6	CO3 (mg/L)	10.4	3.2	0.0	3.8	0.0
7	F (mg/L)	1.60	0.99	1.00	1.37	2.22
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	284	316	259	333	380
10	K (mg/L)	11.9	3.5	3.4	3.3	4.6
11	Mg (mg/L)	18.2	13.6	17.0	21.2	20.5
12	Na (mg/L)	125.2	116.9	66.3	130.5	120.6
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	0.80	0.00	0.28
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	0.80	0.00	0.28
17	o-PO4-P (mg P/L)					0.248
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.159	0.248
19	SiO2 (mg/L)	25.0	34.3	18.9	22.4	22.0
20	SO4 (mg/L)	40.6	47.9	60.8	63.6	62.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	0.7	1.2	0.6	0.4
2	COD (mg/L)	6.6	24.1	15.3	25.9	14.5
3	DO (mg/L)	7.1	5.6	5.7	5.7	5.8
4	DO_SAT% (%)	90	68	69	71	72
5	FCol-MPN (MPN/100mL)				6560	10308
6	Tcol-MPN (MPN/100mL)				9400	12058
7	TOC (mg/L)					4.0
	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)	86	107	100	94	90
2	HAR_Total (mgCaCO3/L)	161	163	171	183	175
3	Na% (%)	60	60	43	60	59
4	RSC (-)	1.8	2.0	1.0	2.0	2.7
5	SAR (-)	4.3	4.0	2.2	4.2	4.0
	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 : Halia (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Flood				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	1.422	8.529	5.689	5.939	28.80
2	EC_GEN (µmho/cm)	893	992	981	908	781
3	pH_GEN (pH units)	8.1	8.0	8.3	8.1	8.4
4	TDS (mg/L)	600	584	660	577	512
5	Temp (deg C)	23.5	26.0	26.3	27.7	26.0
6	Turb (NTU)	2.05	0.80	10.00	4.40	7.40
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	1.4	0.0	2.3
2	ALK-TOT (mgCaCO3/L)	285	270	251	256	219
3	B (mg/L)	0.23	0.08	0.19	0.09	
4	Ca (mg/L)	45	45	40	39	40
5	Cl (mg/L)	125.0	90.8	99.6	96.9	89.1
6	CO3 (mg/L)	0.0	0.0	1.7	0.0	2.8
7	F (mg/L)	1.28	1.00	1.07	1.45	0.99
8	Fe (mg/L)	0.1	0.1	0.1	0.0	0.1
9	HCO3 (mg/L)	348	330	303	313	262
10	K (mg/L)	7.5	4.2	4.4	5.1	4.7
11	Mg (mg/L)	26.0	26.0	22.7	22.0	23.0
12	Na (mg/L)	148.0	130.1	123.1	139.2	102.4
13	NH3-N (mg N/L)	0.00	0.06	0.00	0.05	0.01
14	NO2+NO3 (mg N/L)	1.18	1.92	0.92	0.84	1.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.04	0.00
16	NO3-N (mgN/L)	1.18	1.92	0.92	0.80	1.00
17	o-PO4-P (mg P/L)	0.093	0.078	0.169	0.128	0.156
18	P-Tot (mgP/L)			0.170		
19	SiO2 (mg/L)	28.3	16.2	27.8	22.8	20.7
20	SO4 (mg/L)	71.3	71.5	83.0	77.3	56.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	0.7	0.9	1.2	1.2
2	COD (mg/L)	10.5	5.8	21.5	12.7	14.4
3	DO (mg/L)	5.0	5.4	6.5	5.7	6.1
4	DO_SAT% (%)	59	67	80	73	74
5	FCol-MPN (MPN/100mL)	8250	83	6147	10900	3812
6	Tcol-MPN (MPN/100mL)	8650	863	8410	16000	10800
7	TOC (mg/L)	4.6	0.5		39.1	
	TRACE & TOXIC					
1	As (µg/L)	10.50				
2	Cd (µg/L)	0.06				
3	Cr (µg/L)	34.37				
4	Cu (µg/L)					
5	Hg (µg/L)					
6	Ni (µg/L)	15.11				
7	Pb (µg/L)	9.33				
8	Zn (µg/L)	32.84				
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	112	112	99	97	100
2	HAR_Total (mgCaCO3/L)	221	221	194	188	196
3	Na% (%)	58	55	56	61	52
4	RSC (-)	1.3	1.0	1.2	1.4	0.6
5	SAR (-)	4.4	3.8	3.9	4.4	3.2
	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 : Halia (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Winter				
		2002-2003	2003-2004	Nov - Feb 2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	0.183	Drybed	1.843	33.68	15.96
2	EC_GEN (µmho/cm)	873	No Flow	815	719	672
3	pH_GEN (pH units)	8.1		8.2	8.2	8.5
4	TDS (mg/L)					
5	Temp (deg C)	27.0		21.5	21.0	27.5
6	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0		7.9	7.1	14.9
2	ALK-TOT (mgCaCO3/L)	101		203	274	287
3	B (mg/L)	0.00		0.00	0.01	0.00
4	Ca (mg/L)	32		34	34	36
5	Cl (mg/L)	78.0		65.1	51.5	49.3
6	CO3 (mg/L)	0.0		9.5	8.5	18.0
7	F (mg/L)	0.87		1.00	1.69	1.05
8	Fe (mg/L)	0.0		0.0	0.0	0.0
9	HCO3 (mg/L)	123		228	317	314
10	K (mg/L)	2.1		10.5		2.9
11	Mg (mg/L)	38.2		20.3	17.0	18.8
12	Na (mg/L)	63.0		89.3		109.3
13	NH3-N (mg N/L)	0.00		0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01		0.01	0.01	0.00
15	NO2-N (mgN/L)	0.00		0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01		0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.015		0.001	0.008	0.001
19	SiO2 (mg/L)	6.5		19.1	15.3	22.5
20	SO4 (mg/L)	105.0		58.8	43.5	41.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					1.3
2	COD (mg/L)					
3	DO (mg/L)					7.8
4	DO_SAT% (%)					99
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)	80		86	85	89
2	HAR_Total (mgCaCO3/L)	239		170	156	167
3	Na% (%)	36		51		57
4	RSC (-)	0.0		0.7	2.4	2.4
5	SAR (-)	1.8		3.1		3.7
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Halia (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Winter				
		2007-2008	2008-2009	Nov - Feb 2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	12.07	20.43	6.468	20.64	6.871
2	EC_GEN (µmho/cm)	786	773	759	858	909
3	pH_GEN (pH units)	8.3	8.2	8.1	8.2	8.0
4	TDS (mg/L)					575
5	Temp (deg C)	19.0	23.3	23.1	21.5	21.3
6	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	5.0	4.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	278	262	232	258	291
3	B (mg/L)	0.00	0.00	0.00	0.00	0.25
4	Ca (mg/L)	41	50	39	37	40
5	Cl (mg/L)	61.9	61.7	59.0	73.6	92.4
6	CO3 (mg/L)	6.0	4.8	0.0	0.0	0.0
7	F (mg/L)	2.00	1.05	1.47	1.19	1.47
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	327	310	283	315	354
10	K (mg/L)	3.8	3.6	2.9	3.6	4.3
11	Mg (mg/L)	19.5	10.9	19.9	20.2	23.3
12	Na (mg/L)	139.3	97.6	93.3	105.7	117.8
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.02
14	NO2+NO3 (mg N/L)	0.01	0.01	0.13	0.00	0.78
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	0.13	0.00	0.78
17	o-PO4-P (mg P/L)					0.099
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.111	0.099
19	SiO2 (mg/L)	19.1	18.3	15.8	21.2	24.7
20	SO4 (mg/L)	43.0	167.9	55.6	55.9	74.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	0.7	0.6	0.5	0.8
2	COD (mg/L)	17.5	9.5	13.9	16.0	18.3
3	DO (mg/L)	8.4	6.4	6.3	6.6	5.8
4	DO_SAT% (%)	96	75	73	74	65
5	FCol-MPN (MPN/100mL)			14250	14250	4708
6	Tcol-MPN (MPN/100mL)			16000	16000	5325
7	TOC (mg/L)					3.2
	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)	101	124	97	92	100
2	HAR_Total (mgCaCO3/L)	183	170	180	176	197
3	Na% (%)	62	55	53	56	56
4	RSC (-)	1.9	1.9	1.1	1.7	1.9
5	SAR (-)	4.5	3.3	3.1	3.5	3.7
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Halia (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Winter				
		2012-2013	2013-2014	Nov - Feb 2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)	1.708	9.322	7.423	1.933	2.769
2	EC_GEN (µmho/cm)	1200	825	736	2028	1132
3	pH_GEN (pH units)	8.1	8.2	8.1	8.2	8.4
4	TDS (mg/L)	661	502	495	720	662
5	Temp (deg C)	20.0	22.3	21.3	26.0	25.9
6	Turb (NTU)	1.00	6.00	2.33	1.00	2.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	1.0	0.0	0.0	4.5
2	ALK-TOT (mgCaCO3/L)	345	208	244	315	223
3	B (mg/L)	0.27	0.03	0.26	0.00	
4	Ca (mg/L)	49	41	42	44	53
5	Cl (mg/L)	118.8	72.6	76.7	115.8	150.2
6	CO3 (mg/L)	0.0	1.3	0.0	0.0	5.4
7	F (mg/L)	1.50	0.96	1.13	1.16	0.87
8	Fe (mg/L)	0.5	0.0	0.1	0.0	0.1
9	HCO3 (mg/L)	422	252	297	385	261
10	K (mg/L)	4.8	3.7	3.5	5.7	6.9
11	Mg (mg/L)	28.7	22.8	23.9	25.6	25.8
12	Na (mg/L)	157.5	76.8	99.9	155.5	184.3
13	NH3-N (mg N/L)	0.00	0.00	0.04	0.00	0.00
14	NO2+NO3 (mg N/L)	1.01	0.96	0.82	0.55	0.47
15	NO2-N (mgN/L)	0.00	0.00	0.02	0.00	0.09
16	NO3-N (mgN/L)	1.01	0.96	0.80	0.55	0.38
17	o-PO4-P (mg P/L)	0.056	0.148	0.121	0.042	0.139
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	27.8	17.2	22.8	11.1	19.5
20	SO4 (mg/L)	90.5	38.7	67.7	76.3	153.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	0.9	0.5	0.8	1.3
2	COD (mg/L)	19.5	6.3	10.9	8.1	9.2
3	DO (mg/L)	6.6	6.7	6.9	6.3	6.9
4	DO_SAT% (%)	73	76	78	78	85
5	FCol-MPN (MPN/100mL)	125	740	4583	300	1153
6	Tcol-MPN (MPN/100mL)	700	2600	5625	16000	1925
7	TOC (mg/L)	4.0		33.3	40.2	
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)			1.73		
3	Cr (µg/L)			1.86		
4	Cu (µg/L)			1.76		0.00
5	Hg (µg/L)					
6	Ni (µg/L)			4.88		
7	Pb (µg/L)			8.04		
8	Zn (µg/L)			4.80		0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	121	102	105	110	134
2	HAR_Total (mgCaCO3/L)	241	197	205	217	241
3	Na% (%)	58	44	51	60	59
4	RSC (-)	2.1	0.6	0.9	2.0	0.2
5	SAR (-)	4.4	2.4	3.1	4.6	5.2
	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 : Halia (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Summer				
		Mar - May				
		2003	2004	2005	2006	2007
	PHYSICAL					
1	Q (cumec)	Drybed/No flow		0.130	2.623	1.446
2	EC_GEN (µmho/cm)			816	884	773
3	pH_GEN (pH units)			8.0	8.3	8.7
4	TDS (mg/L)					
5	Temp (deg C)			24.3	25.2	29.0
6	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)			0.0	10.5	27.9
2	ALK-TOT (mgCaCO3/L)			284	294	333
3	B (mg/L)			0.00	0.01	0.00
4	Ca (mg/L)			47	43	33
5	Cl (mg/L)			55.9	63.3	48.9
6	CO3 (mg/L)			0.0	12.7	33.7
7	F (mg/L)			1.00	1.36	2.14
8	Fe (mg/L)			0.0	0.0	0.0
9	HCO3 (mg/L)			346	332	338
10	K (mg/L)			5.3	3.5	4.0
11	Mg (mg/L)			27.0	13.7	20.0
12	Na (mg/L)			63.0	108.3	120.3
13	NH3-N (mg N/L)			0.00	0.00	0.00
14	NO2+NO3 (mg N/L)			0.01	0.01	0.00
15	NO2-N (mgN/L)			0.00	0.00	0.00
16	NO3-N (mgN/L)			0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)			0.001	0.010	0.001
19	SiO2 (mg/L)			26.3	16.4	23.5
20	SO4 (mg/L)			53.5	41.3	44.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					1.0
2	COD (mg/L)					
3	DO (mg/L)					7.9
4	DO_SAT% (%)					103
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)				0.01	8.00
3	Cr (µg/L)				2.00	69.00
4	Cu (µg/L)					
5	Hg (µg/L)					1.38
6	Ni (µg/L)				1.00	1.00
7	Pb (µg/L)				86.00	103.00
8	Zn (µg/L)				2.00	0.10
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)			116	108	82
2	HAR_Total (mgCaCO3/L)			229	165	165
3	Na% (%)			37	57	59
4	RSC (-)			1.1	2.6	3.4
5	SAR (-)			1.8	3.7	4.1
	PESTICIDES					
1	Aldrin (µg/L)				0.039	0.010
2	BHC (µg/L)				0.100	0.100
3	DDT (µg/L)				0.100	0.100
4	Dieldrin (µg/L)				0.010	0.040
5	Endos (µg/L)				0.100	0.100

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Halia (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Summer				
		2008	2009	Mar - May 2010	2011	2012
	PHYSICAL					
1	Q (cumec)	4.355	5.438	11.22	7.981	2.535
2	EC_GEN (µmho/cm)	881	814	886	880	1026
3	pH_GEN (pH units)	8.2	8.2	8.4	8.0	7.8
4	TDS (mg/L)					582
5	Temp (deg C)	23.7	24.3	26.7	24.0	24.4
6	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.8	2.7	5.3	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	291	281	292	264	295
3	B (mg/L)	0.00	0.00	0.00	0.00	0.06
4	Ca (mg/L)	38	42	35	41	38
5	Cl (mg/L)	72.2	69.2	76.9	80.6	94.1
6	CO3 (mg/L)	3.3	3.2	6.4	0.0	0.0
7	F (mg/L)	2.07	1.21	2.17	1.23	1.22
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.2
9	HCO3 (mg/L)	348	337	343	322	360
10	K (mg/L)	18.4	3.9	4.0	3.5	4.1
11	Mg (mg/L)	16.7	13.3	15.2	23.6	19.6
12	Na (mg/L)	106.0	96.5	116.6	114.6	118.2
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.03
14	NO2+NO3 (mg N/L)	0.01	0.01	0.00	0.00	0.69
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.01
16	NO3-N (mgN/L)	0.01	0.01	0.00	0.00	0.67
17	o-PO4-P (mg P/L)					0.110
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.123	0.110
19	SiO2 (mg/L)	21.3	22.2	21.2	20.7	32.6
20	SO4 (mg/L)	35.3	47.9	53.7	55.6	68.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	1.4	0.7	0.2	1.7
2	COD (mg/L)	12.5	10.8	31.3	13.3	13.0
3	DO (mg/L)	6.7	6.3	5.7	6.1	6.5
4	DO_SAT% (%)	79	74	71	73	78
5	FCol-MPN (MPN/100mL)			9133	7000	887
6	Tcol-MPN (MPN/100mL)			12333	12000	1817
7	TOC (mg/L)	4.1				3.9
	TRACE & TOXIC					
1	As (µg/L)			4.12		2.22
2	Cd (µg/L)	1.00	2.26	0.00	1.25	0.16
3	Cr (µg/L)	2.00	2.00	0.00	0.00	0.00
4	Cu (µg/L)					
5	Hg (µg/L)	0.00				1.70
6	Ni (µg/L)	10.60	1.49	0.25	5.87	2.58
7	Pb (µg/L)	17.23	31.87	0.00	22.42	25.56
8	Zn (µg/L)	3.53	4.03	4.02	21.71	24.06
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	94	104	88	102	95
2	HAR_Total (mgCaCO3/L)	164	160	151	200	177
3	Na% (%)	56	56	62	55	58
4	RSC (-)	2.6	2.5	2.8	1.3	2.4
5	SAR (-)	3.6	3.3	4.2	3.6	3.9
	PESTICIDES					
1	Aldrin (µg/L)	0.010	0.010	0.004	0.000	0.000
2	BHC (µg/L)	0.130	0.100	0.183	0.000	0.004
3	DDT (µg/L)	0.100	0.100	0.002	0.000	0.000
4	Dieldrin (µg/L)	0.010	0.010	0.003	0.000	0.000
5	Endos (µg/L)	0.100	0.100	0.039	0.000	0.020

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Halia (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

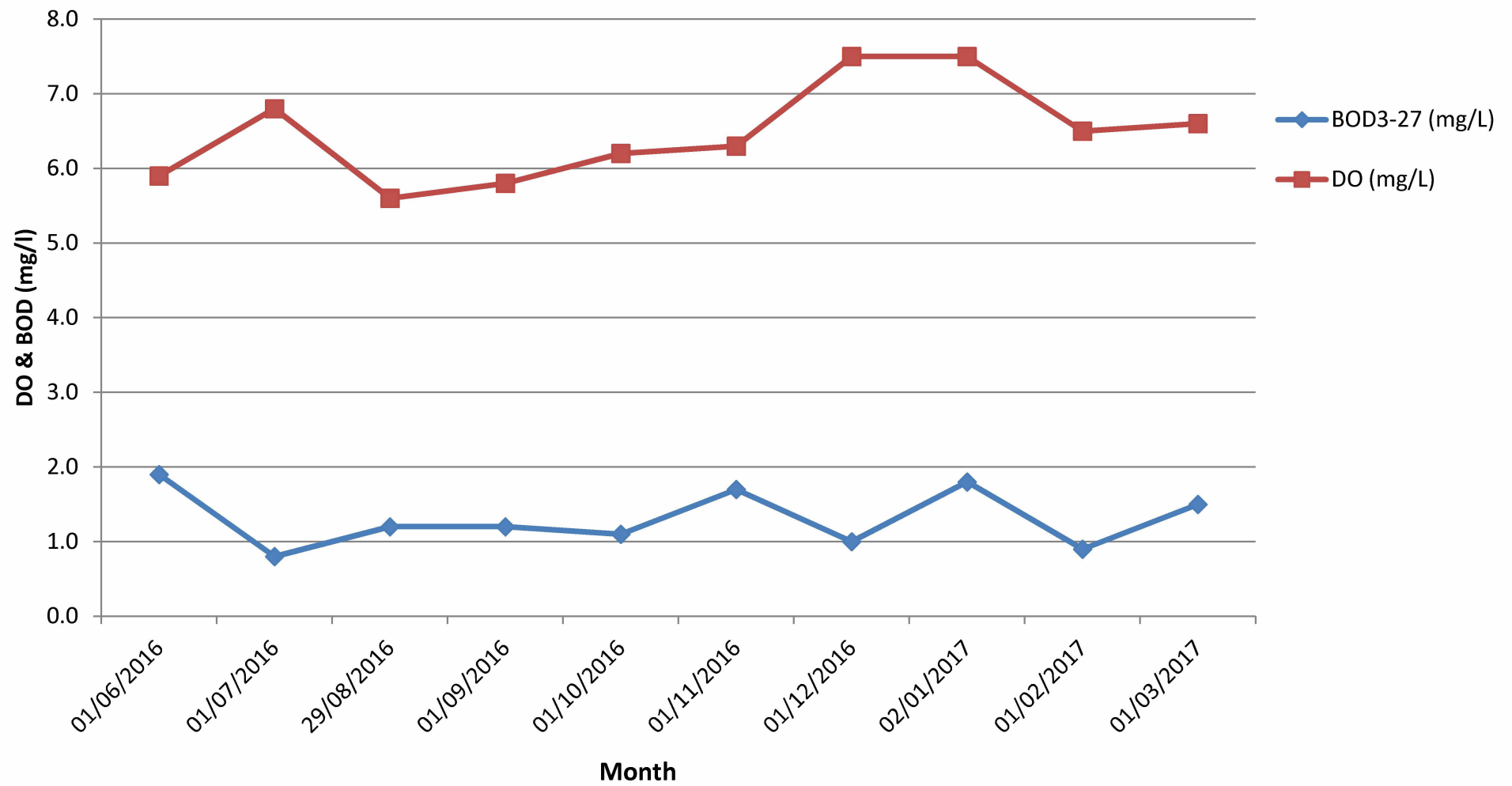
Local River : Halia

River Water

Sub-Division : Lower Krishna SD 1, N.S.Dam

S.No	Parameters	Summer				
		2013	2014	Mar - May 2015	2016	2017
	PHYSICAL					
1	Q (cumec)	0.378	2.973	2.158	2.716	0.692
2	EC_GEN (µmho/cm)	1250	900	905	1473	794
3	pH_GEN (pH units)	8.2	8.2	8.2	8.1	8.0
4	TDS (mg/L)	690	569	587	666	577
5	Temp (deg C)	23.5	25.7	23.7	25.8	26.5
6	Turb (NTU)	0.90	9.67	3.00	424.50	7.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	1.4	1.2	3.8	0.0
2	ALK-TOT (mgCaCO3/L)	378	271	244	227	238
3	B (mg/L)	0.36	0.03	0.19		
4	Ca (mg/L)	53	40	38	36	63
5	Cl (mg/L)	141.6	74.5	83.2	105.0	96.1
6	CO3 (mg/L)	0.0	1.7	1.4	4.6	0.0
7	F (mg/L)	1.03	0.81	1.09	0.71	0.50
8	Fe (mg/L)	0.2	0.8	0.0	0.1	0.0
9	HCO3 (mg/L)	461	327	294	268	290
10	K (mg/L)	3.5	3.9	4.2	9.2	2.9
11	Mg (mg/L)	31.1	23.0	21.5	19.9	26.9
12	Na (mg/L)	175.3	99.4	115.4	137.2	108.1
13	NH3-N (mg N/L)	0.04	0.03	0.01	0.01	0.18
14	NO2+NO3 (mg N/L)	1.25	0.79	0.68	1.72	1.91
15	NO2-N (mgN/L)	0.00	0.00	0.11	0.10	0.12
16	NO3-N (mgN/L)	1.25	0.79	0.57	1.62	1.79
17	o-PO4-P (mg P/L)	0.074	0.040	0.147	0.211	0.540
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	14.8	22.5	27.7	12.6	16.9
20	SO4 (mg/L)	85.0	59.3	85.5	116.0	78.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	0.7	1.0	1.5	1.5
2	COD (mg/L)	8.1	7.4	12.6	22.9	7.1
3	DO (mg/L)	5.1	6.3	5.7	4.7	6.6
4	DO_SAT% (%)	60	78	68	58	81
5	FCol-MPN (MPN/100mL)	116	417	8	5350	800
6	Tcol-MPN (MPN/100mL)	402	843	5417	9100	2800
7	TOC (mg/L)	6.9		38.2		
	TRACE & TOXIC					
1	As (µg/L)	3.27	2.13	0.10	0.00	
2	Cd (µg/L)	0.06	0.01	3.00	0.00	
3	Cr (µg/L)	0.52	0.13	0.00	0.00	
4	Cu (µg/L)					0.00
5	Hg (µg/L)	0.39	0.22	0.13	0.00	
6	Ni (µg/L)	13.22	1.50	8.16	0.00	
7	Pb (µg/L)	1.33	9.39	17.00	0.00	
8	Zn (µg/L)	0.10	10.15	5.00	0.03	0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	134	99	95	89	156
2	HAR_Total (mgCaCO3/L)	263	195	184	172	268
3	Na% (%)	59	51	57	62	47
4	RSC (-)	2.3	1.5	1.2	1.1	0.0
5	SAR (-)	4.7	3.2	3.7	4.5	2.9
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Halia



HISTORY SHEET

		Water Year : 2016-2017	
Site	: Bawapuram	Code	: AKL00B8
State	: Andhra Pradesh	District	Kurnool
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Tungabhadra
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Tungabhadra SD, Kurnool
Drainage Area	: 67180 Sq. Km.	Bank	: Right
Latitude	: 15°52'57"	Longitude	: 77°57'26"
	Opening Date	Closing Date	
Gauge	: 14/03/1964		
Discharge	: 01/04/1964		
Sediment	: 01/06/1965		
Water Quality	: 01/01/1972		

Water Quality Datasheet for the period : 2016-2017

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Analysis Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	07/06/2016	01/07/2016	01/08/2016	01/09/2016	01/10/2016
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	3.922	2.806	12.72	4.213	18.33
2	Colour_Cod (-)	Light Brown	Clear	Brown	Light Brown	Light Brown
3	EC_FLD (μmho/cm)					1030
4	EC_GEN (μmho/cm)	1342	703	416	1130	1169
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)					8.6
7	pH_GEN (pH units)	8.6	8.7	8.2	8.5	8.8
8	TDS (mg/L)	298	497	370	631	719
9	Temp (deg C)	30.5	25.6	28.3	27.4	27.9
10	Turb (NTU)	25.00	77.00	56.00	1.00	0.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	4.3	4.8	0.0	2.0	0.3
2	ALK-TOT (mgCaCO3/L)	253	138	160	159	165
3	Ca (mg/L)	56	30	22	42	49
4	Cl (mg/L)	182.8	99.2	67.2	120.3	122.6
5	CO3 (mg/L)	5.2	5.8	0.0	2.4	0.4
6	F (mg/L)	1.06	1.08	0.07	1.30	0.46
7	Fe (mg/L)	0.1	0.0	0.2	0.0	0.2
8	HCO3 (mg/L)	298	157	195	189	201
9	K (mg/L)	6.4	4.3	4.2	3.5	3.3
10	Mg (mg/L)	29.2	17.0	13.1	23.0	26.5
11	Na (mg/L)	211.0	103.9	97.8	141.5	109.1
12	NH3-N (mg N/L)	0.04	0.00	0.00	0.06	0.00
13	NO2+NO3 (mg N/L)	1.16	1.94	1.49	0.94	1.69
14	NO2-N (mgN/L)	0.00	0.01	0.00	0.00	0.00
15	NO3-N (mgN/L)	1.16	1.93	1.49	0.94	1.69
16	o-PO4-P (mg P/L)	0.328	0.305	0.160	0.086	0.628
17	SiO2 (mg/L)	12.6	8.0	8.6	7.4	9.4
18	SO4 (mg/L)	106.0	28.0	20.0	147.0	52.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	1.3	1.2	1.4	1.2
2	COD (mg/L)	16.3	12.7	6.0	15.2	11.2
3	DO (mg/L)	5.2	5.9	5.7	5.2	5.0
4	DO_SAT% (%)	69	71	73	66	63
5	FCol-MPN (MPN/100mL)	16000	9000	16000	16000	3500
6	Tcol-MPN (MPN/100mL)	16000	9000	16000	16000	3500
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	140	74	56	105	121
2	HAR_Total (mgCaCO3/L)	262	145	111	201	232
3	Na% (%)	63	60	65	60	50
4	RSC (-)	0.0	0.0	1.0	0.0	0.0
5	SAR (-)	5.7	3.8	4.1	4.4	3.1
	PESTICIDES	Analysis not done due to mal function of instrument.				

Samples not collected during November to May months due to Dried/No flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

Sub-Division : Lower Tungabhadra SD, Kurnool

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
PHYSICAL					
1	Q (cumec)	365	1234	0.000	11.30
2	EC_FLD (μmho/cm)	1	1030	1030	1030
3	EC_GEN (μmho/cm)	5	1342	416	952
4	pH_FLD (pH units)	1	8.6	8.6	8.6
5	pH_GEN (pH units)	5	8.8	8.2	8.6
6	TDS (mg/L)	5	719	298	503
7	Temp (deg C)	5	30.5	25.6	27.9
8	Turb (NTU)	5	77.00	0.00	31.8
CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	5	4.8	0.0	2.3
2	ALK-TOT (mgCaCO3/L)	5	253	138	175
3	Ca (mg/L)	5	56	22	40
4	Cl (mg/L)	5	182.8	67.2	118.4
5	CO3 (mg/L)	5	5.8	0.0	2.8
6	F (mg/L)	5	1.30	0.07	0.79
7	Fe (mg/L)	5	0.2	0.0	0.1
8	HCO3 (mg/L)	5	298	157	208
9	K (mg/L)	5	6.4	3.3	4.3
10	Mg (mg/L)	5	29.2	13.1	21.8
11	Na (mg/L)	5	211.0	97.8	132.6
12	NH3-N (mg N/L)	5	0.06	0.00	0.02
13	NO2+NO3 (mg N/L)	5	1.94	0.94	1.44
14	NO2-N (mgN/L)	5	0.01	0.00	0
15	NO3-N (mgN/L)	5	1.93	0.94	1.44
16	o-PO4-P (mg P/L)	5	0.628	0.086	0.301
17	SiO2 (mg/L)	5	12.6	7.4	9.2
18	SO4 (mg/L)	5	147.0	20.0	70.6
BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	5	1.4	0.7	1.2
2	COD (mg/L)	5	16.3	6.0	12.3
3	DO (mg/L)	5	5.9	5.0	5.4
4	DO_SAT% (%)	5	73	63	68
5	FCol-MPN (MPN/100mL)	5	16000	3500	12100
6	Tcol-MPN (MPN/100mL)	5	16000	3500	12100
TRACE & TOXIC					
CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	5	140	56	99
2	HAR_Total (mgCaCO3/L)	5	262	111	190
3	Na% (%)	5	65	50	60
4	RSC (-)	5	1.0	0.0	0.2
5	SAR (-)	5	5.7	3.1	4.2
PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Flood Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	2.943	21.05	20.86	166.1	61.43
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	1370	1153	819	558	974
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.6	8.5	8.4	8.4	8.3
6	TDS (mg/L)					
7	Temp (deg C)	29.0	29.3	26.4	26.9	27.2
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	28.2	10.0	11.0	6.6	3.3
2	ALK-TOT (mgCaCO3/L)	147	163	188	141	181
3	B (mg/L)	0.01	0.00	0.00	0.01	0.00
4	Ca (mg/L)	19	49	30	31	38
5	Cl (mg/L)	147.4	105.0	80.7	47.3	114.5
6	CO3 (mg/L)	34.0	12.0	13.2	8.0	4.0
7	F (mg/L)	0.88	1.15	1.11	0.61	0.82
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	110	174	203	156	213
10	K (mg/L)	3.1	5.8	3.1	2.6	4.3
11	Mg (mg/L)	35.6	17.6	19.6	5.3	16.6
12	Na (mg/L)	110.0	176.0	87.6	89.3	140.6
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.21	0.01	0.01	0.01	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.21	0.01	0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.025	0.214	0.001	0.000	0.001
19	SiO2 (mg/L)	4.3	12.6	12.5	10.3	14.7
20	SO4 (mg/L)	320.0	138.7	114.6	88.3	140.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.8	1.7	1.9	1.3	1.4
2	COD (mg/L)					
3	DO (mg/L)	5.7	4.5	6.1	6.3	6.0
4	DO_SAT% (%)	74	59	76	78	75
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)	47	123	76	77	95
2	HAR_Total (mgCaCO3/L)	196	196	157	99	164
3	Na% (%)	55	62	52	65	62
4	RSC (-)	0.0	0.0	0.6	0.9	0.8
5	SAR (-)	3.4	5.7	3.0	3.9	4.6
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Flood Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	335.5	89.00	228.5	107.9	126.5
2	EC_FLD (µmho/cm)			511		
3	EC_GEN (µmho/cm)	916	906	772	905	1020
4	pH_FLD (pH units)			7.6		
5	pH_GEN (pH units)	8.1	8.4	8.2	8.4	8.3
6	TDS (mg/L)					410
7	Temp (deg C)	22.8	23.4	23.6	22.4	21.6
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.3	4.8	2.0	3.2	1.2
2	ALK-TOT (mgCaCO3/L)	180	174	128	152	172
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	49	43	36	41	40
5	Cl (mg/L)	91.8	101.6	66.8	102.3	126.2
6	CO3 (mg/L)	2.8	5.8	2.4	3.8	1.4
7	F (mg/L)	1.11	0.67	0.58	0.87	1.22
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	214	200	151	178	207
10	K (mg/L)	4.4	4.0	2.6	3.8	5.1
11	Mg (mg/L)	14.0	13.2	11.9	50.2	22.7
12	Na (mg/L)	122.8	138.9	70.7	537.9	133.8
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	0.26	0.00	0.24
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	0.26	0.00	0.24
17	o-PO4-P (mg P/L)					0.474
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.207	0.474
19	SiO2 (mg/L)	15.4	14.8	13.2	11.8	11.5
20	SO4 (mg/L)	126.0	102.5	102.9	182.8	163.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.1	1.8	3.2	1.6	1.4
2	COD (mg/L)	22.7	19.5	28.4	25.7	26.5
3	DO (mg/L)	5.9	6.2	6.5	6.8	6.2
4	DO_SAT% (%)	68	73	76	78	70
5	FCol-MPN (MPN/100mL)			16000	5360	10046
6	Tcol-MPN (MPN/100mL)			16000	9080	12846
7	TOC (mg/L)					2.9
	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)	122	108	91	102	99
2	HAR_Total (mgCaCO3/L)	180	163	141	311	194
3	Na% (%)	57	64	47	66	57
4	RSC (-)	0.2	0.3	0.1	0.1	0.2
5	SAR (-)	4.0	4.7	2.5	14.6	4.1
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Flood				
		Jun - Oct				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	30.63	1175	1158	2.780	8.398
2	EC_FLD (µmho/cm)					1030
3	EC_GEN (µmho/cm)	1094	336	801	1467	952
4	pH_FLD (pH units)		8.1			8.6
5	pH_GEN (pH units)	8.3	8.5	8.2	8.2	8.6
6	TDS (mg/L)	702	219	493	950	503
7	Temp (deg C)	25.2	27.7	25.3	26.7	27.9
8	Turb (NTU)	5.62	1.40	46.50	7.20	31.80
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.8	2.9	1.0	1.4	2.3
2	ALK-TOT (mgCaCO3/L)	158	82	120	180	175
3	B (mg/L)	0.21	0.16	0.32	0.40	
4	Ca (mg/L)	32	19	33	45	40
5	Cl (mg/L)	135.8	27.7	88.6	195.6	118.4
6	CO3 (mg/L)	1.0	3.5	1.3	1.7	2.8
7	F (mg/L)	0.99	0.35	0.68	1.08	0.79
8	Fe (mg/L)	0.1	0.1	0.1	0.0	0.1
9	HCO3 (mg/L)	191	93	143	216	208
10	K (mg/L)	4.3	2.0	3.7	7.3	4.3
11	Mg (mg/L)	18.3	10.2	18.7	25.8	21.8
12	Na (mg/L)	160.6	34.2	109.3	231.5	132.6
13	NH3-N (mg N/L)	0.01	0.11	0.00	0.01	0.02
14	NO2+NO3 (mg N/L)	1.04	1.14	1.17	1.10	1.44
15	NO2-N (mgN/L)	0.00	0.00	0.01	0.04	0.00
16	NO3-N (mgN/L)	1.04	1.14	1.16	1.05	1.44
17	o-PO4-P (mg P/L)	0.116	0.257	0.283	0.209	0.301
18	P-Tot (mgP/L)			0.226		
19	SiO2 (mg/L)	12.3	6.2	9.7	10.5	9.2
20	SO4 (mg/L)	110.4	24.7	96.5	264.6	70.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	1.2	0.8	2.1	1.2
2	COD (mg/L)	30.9	12.9	11.9	19.7	12.3
3	DO (mg/L)	5.8	6.4	5.1	4.2	5.4
4	DO_SAT% (%)	70	81	62	52	68
5	FCol-MPN (MPN/100mL)	4680	113	4858	542	12100
6	Tcol-MPN (MPN/100mL)	7960	277	7600	5994	12100
7	TOC (mg/L)	4.5	0.2		19.2	
	TRACE & TOXIC					
1	As (µg/L)	9.97	8.19			
2	Cd (µg/L)	0.41	0.38			
3	Cr (µg/L)	7.13	1.07			
4	Cu (µg/L)					
5	Hg (µg/L)		0.00			
6	Ni (µg/L)	6.51	13.77			
7	Pb (µg/L)	1.05	5.39			
8	Zn (µg/L)	328.00	0.02			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	79	47	83	112	99
2	HAR_Total (mgCaCO3/L)	155	89	161	220	190
3	Na% (%)	67	43	54	69	60
4	RSC (-)	0.4	0.0	0.0	0.0	0.2
5	SAR (-)	5.7	1.5	3.5	6.8	4.2
	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 : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Winter				
		2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	6.476	24.03	22.31	118.2	45.80
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	1286	988	1080	1036	1097
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.6	8.6	8.3	8.3	8.5
6	TDS (mg/L)					
7	Temp (deg C)	26.5	26.8	24.7	26.9	25.5
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	26.1	18.4	2.8	6.0	9.1
2	ALK-TOT (mgCaCO3/L)	138	215	248	185	227
3	B (mg/L)	0.01	0.00	0.00	0.01	0.00
4	Ca (mg/L)	24	43	53	51	49
5	Cl (mg/L)	130.3	95.7	109.3	93.6	114.1
6	CO3 (mg/L)	31.5	22.2	3.3	7.3	11.0
7	F (mg/L)	0.69	0.89	0.79	0.91	0.82
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	104	217	296	211	255
10	K (mg/L)	2.7	3.1	2.6		3.7
11	Mg (mg/L)	28.1	16.7	27.0	19.0	21.5
12	Na (mg/L)	100.8	91.0	119.7		203.8
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.12	0.01	0.01	0.01	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.12	0.01	0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.036	0.001	0.001	0.001	0.001
19	SiO2 (mg/L)	5.1	9.5	11.1	9.2	12.7
20	SO4 (mg/L)	161.3	119.5	270.0	205.8	195.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	2.1	1.4	0.6	1.2
2	COD (mg/L)					
3	DO (mg/L)	5.3	5.9	6.1	6.4	6.9
4	DO_SAT% (%)	66	74	73	79	84
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)	61	108	132	127	123
2	HAR_Total (mgCaCO3/L)	178	178	244	206	212
3	Na% (%)	52	52	51		67
4	RSC (-)	0.0	0.8	0.6	0.1	0.3
5	SAR (-)	3.3	3.0	3.4		6.1
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Winter				
		2007-2008	2008-2009	Nov - Feb 2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	87.29	64.31	108.1	73.31	128.3
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	835	1022	1133	1024	1046
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.4	8.5	8.7	8.5	8.4
6	TDS (mg/L)					712
7	Temp (deg C)	22.0	22.5	21.9	21.4	23.0
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	8.1	8.0	8.0	7.5	6.2
2	ALK-TOT (mgCaCO3/L)	175	209	200	193	198
3	B (mg/L)	0.00	0.00	0.00	0.00	0.29
4	Ca (mg/L)	37	56	54	40	39
5	Cl (mg/L)	93.2	114.9	132.9	118.7	117.3
6	CO3 (mg/L)	9.7	9.6	9.6	9.0	7.4
7	F (mg/L)	0.77	0.77	1.22	2.62	0.91
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1
9	HCO3 (mg/L)	194	236	224	217	226
10	K (mg/L)	3.4	4.9	4.0	4.0	4.2
11	Mg (mg/L)	14.3	11.6	19.9	23.0	22.1
12	Na (mg/L)	112.3	203.8	159.1	137.9	153.9
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.01
14	NO2+NO3 (mg N/L)	0.01	0.01	0.73	0.00	0.77
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.02
16	NO3-N (mgN/L)	0.01	0.01	0.73	0.00	0.75
17	o-PO4-P (mg P/L)					0.536
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.153	0.536
19	SiO2 (mg/L)	13.0	15.8	13.0	16.3	12.1
20	SO4 (mg/L)	57.5	124.0	218.8	184.0	196.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	1.7	1.7	1.2	0.9
2	COD (mg/L)	34.7	17.9	23.4	21.1	11.8
3	DO (mg/L)	6.9	6.8	6.9	7.4	6.7
4	DO_SAT% (%)	79	79	78	84	78
5	FCol-MPN (MPN/100mL)			6500	7750	4665
6	Tcol-MPN (MPN/100mL)			12500	10750	6365
7	TOC (mg/L)					3.6
	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)	92	139	134	101	97
2	HAR_Total (mgCaCO3/L)	151	188	217	197	189
3	Na% (%)	59	65	61	59	63
4	RSC (-)	0.5	0.5	0.2	0.2	0.3
5	SAR (-)	4.0	6.4	4.7	4.3	4.9
	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 : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Winter				
		2012-2013	2013-2014	Nov - Feb 2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)	3.556	1.925	15.07	1.328	Drybed
2	EC_FLD (µmho/cm)		400			No Flow
3	EC_GEN (µmho/cm)	1238	1156	1130	2800	
4	pH_FLD (pH units)		8.2			
5	pH_GEN (pH units)	8.3	8.4	8.4	8.5	
6	TDS (mg/L)	712	745	715	677	
7	Temp (deg C)	24.3	27.6	26.6	25.6	
8	Turb (NTU)	1.28	3.75	4.83	10.00	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	3.2	4.2	2.9	4.0	
2	ALK-TOT (mgCaCO3/L)	205	189	211	215	
3	B (mg/L)	0.26	0.03	0.23	0.05	
4	Ca (mg/L)	45	44	48	43	
5	Cl (mg/L)	124.8	129.2	125.3	133.6	
6	CO3 (mg/L)	3.8	5.0	3.5	4.8	
7	F (mg/L)	1.22	0.74	0.82	0.56	
8	Fe (mg/L)	0.0	0.0	0.1	0.0	
9	HCO3 (mg/L)	242	220	250	252	
10	K (mg/L)	3.3	3.9	3.7	4.4	
11	Mg (mg/L)	26.3	25.0	26.4	24.4	
12	Na (mg/L)	174.3	142.3	149.1	167.4	
13	NH3-N (mg N/L)	0.04	0.01	0.04	0.01	
14	NO2+NO3 (mg N/L)	0.98	0.80	1.24	0.61	
15	NO2-N (mgN/L)	0.00	0.00	0.09	0.01	
16	NO3-N (mgN/L)	0.98	0.80	1.15	0.60	
17	o-PO4-P (mg P/L)	0.181	0.197	0.260	0.138	
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	15.7	10.5	12.2	7.3	
20	SO4 (mg/L)	197.0	87.9	202.6	196.5	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.2	1.3	1.8	
2	COD (mg/L)	12.0	3.5	17.3	12.2	
3	DO (mg/L)	7.0	6.4	6.8	6.3	
4	DO_SAT% (%)	84	78	84	76	
5	FCol-MPN (MPN/100mL)	801	4290	4393	4478	
6	Tcol-MPN (MPN/100mL)	4621	4858	5098	12001	
7	TOC (mg/L)	3.3		33.0	14.9	
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)			3.44		
3	Cr (µg/L)			2.42		
4	Cu (µg/L)			1.90		
5	Hg (µg/L)					
6	Ni (µg/L)			16.87		
7	Pb (µg/L)			17.98		
8	Zn (µg/L)			6.50		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	113	109	121	108	
2	HAR_Total (mgCaCO3/L)	222	213	231	209	
3	Na% (%)	63	59	57	63	
4	RSC (-)	0.1	0.0	0.1	0.1	
5	SAR (-)	5.1	4.2	4.2	5.0	
	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 : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Summer				
		2003	2004	Mar - May 2005	2006	2007
	PHYSICAL					
1	Q (cumec)	Drybed/No Flow		0.376	2.221	1.644
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)			1250	1357	1060
4	pH_FLD (pH units)					
5	pH_GEN (pH units)			8.2	8.5	8.2
6	TDS (mg/L)					
7	Temp (deg C)			22.0	30.7	27.0
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)			0.0	10.5	12.0
2	ALK-TOT (mgCaCO3/L)			186	222	242
3	B (mg/L)			0.00	0.01	0.00
4	Ca (mg/L)			38	44	50
5	Cl (mg/L)			134.3	143.3	149.3
6	CO3 (mg/L)			0.0	12.7	14.5
7	F (mg/L)			0.96	1.07	1.57
8	Fe (mg/L)			0.0	0.0	0.0
9	HCO3 (mg/L)			227	245	266
10	K (mg/L)			4.1	4.1	6.0
11	Mg (mg/L)			18.0	19.3	26.5
12	Na (mg/L)			147.0	181.7	210.0
13	NH3-N (mg N/L)			0.00	0.00	0.00
14	NO2+NO3 (mg N/L)			0.01	0.01	0.00
15	NO2-N (mgN/L)			0.00	0.00	0.00
16	NO3-N (mgN/L)			0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)			0.001	0.001	0.001
19	SiO2 (mg/L)			8.6	13.7	13.3
20	SO4 (mg/L)			300.0	215.0	202.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)			1.5	1.5	1.3
2	COD (mg/L)					
3	DO (mg/L)			5.4	5.1	6.0
4	DO_SAT% (%)			62	68	76
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)				0.10	
3	Cr (µg/L)				2.00	
4	Cu (µg/L)					
5	Hg (µg/L)					
6	Ni (µg/L)				1.00	
7	Pb (µg/L)				114.00	
8	Zn (µg/L)				14.00	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)			95	109	125
2	HAR_Total (mgCaCO3/L)			170	190	235
3	Na% (%)			65	67	66
4	RSC (-)			0.3	0.7	0.2
5	SAR (-)			4.9	5.9	6.0
	PESTICIDES					
1	Aldrin (µg/L)				0.010	
2	BHC (µg/L)				0.100	
3	DDT (µg/L)				0.100	
4	Dieldrin (µg/L)				0.026	
5	Endos (µg/L)				0.100	

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Summer				
		2008	2009	2010	2011	2012
	PHYSICAL					
1	Q (cumec)	58.74	1.440	10.15	5.109	0.718
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	984	1553	1247	1370	1349
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.5	8.4	8.9	8.2	8.3
6	TDS (mg/L)					788
7	Temp (deg C)	23.3	24.3	23.5	22.0	25.7
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	5.5	8.0	9.3	0.0	1.4
2	ALK-TOT (mgCaCO3/L)	199	208	199	186	183
3	B (mg/L)	0.00	0.00	0.00	0.00	0.08
4	Ca (mg/L)	54	45	42	43	32
5	Cl (mg/L)	137.3	209.1	159.7	169.3	174.9
6	CO3 (mg/L)	6.7	9.6	11.2	0.0	1.7
7	F (mg/L)	0.88	1.19	1.19	1.03	1.15
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.2
9	HCO3 (mg/L)	229	234	220	227	220
10	K (mg/L)	5.2	7.6	5.2	5.9	4.9
11	Mg (mg/L)	14.7	17.8	23.0	25.3	18.5
12	Na (mg/L)	123.0	102.2	183.5	194.0	202.5
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.04
14	NO2+NO3 (mg N/L)	0.01	0.01	0.00	0.00	0.81
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.01
16	NO3-N (mgN/L)	0.01	0.01	0.00	0.00	0.80
17	o-PO4-P (mg P/L)					0.161
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.068	0.161
19	SiO2 (mg/L)	18.0	13.6	15.6	11.2	18.0
20	SO4 (mg/L)	156.7	132.1	292.0	255.0	223.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	1.2	2.4	1.1	2.4
2	COD (mg/L)	23.1	9.4	27.6	34.9	17.2
3	DO (mg/L)	5.6	5.5	5.9	6.5	5.6
4	DO_SAT% (%)	65	65	70	74	69
5	FCol-MPN (MPN/100mL)			11467	16000	1277
6	Tcol-MPN (MPN/100mL)			11467	16000	2077
7	TOC (mg/L)	4.2				5.8
	TRACE & TOXIC					
1	As (µg/L)			10.42		6.81
2	Cd (µg/L)	1.20	2.73	0.01		0.67
3	Cr (µg/L)	2.00	2.00	0.00		0.00
4	Cu (µg/L)					
5	Hg (µg/L)	0.00				1.01
6	Ni (µg/L)	13.50	9.62	3.82		6.77
7	Pb (µg/L)	21.47	44.00	0.00		36.03
8	Zn (µg/L)	5.73	6.93	6.35		17.41
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	136	114	104	108	79
2	HAR_Total (mgCaCO3/L)	197	188	200	214	156
3	Na% (%)	57	41	66	66	73
4	RSC (-)	0.1	0.4	0.1	0.0	0.6
5	SAR (-)	3.8	3.2	5.7	5.8	7.1
	PESTICIDES					
1	Aldrin (µg/L)	0.010	0.010	0.000		0.002
2	BHC (µg/L)	0.160	0.100	0.007		0.026
3	DDT (µg/L)	0.100	0.100	0.071		0.002
4	Dieldrin (µg/L)	0.010	0.010	0.002		0.000
5	Endos (µg/L)	0.100	0.100	0.101		0.068

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

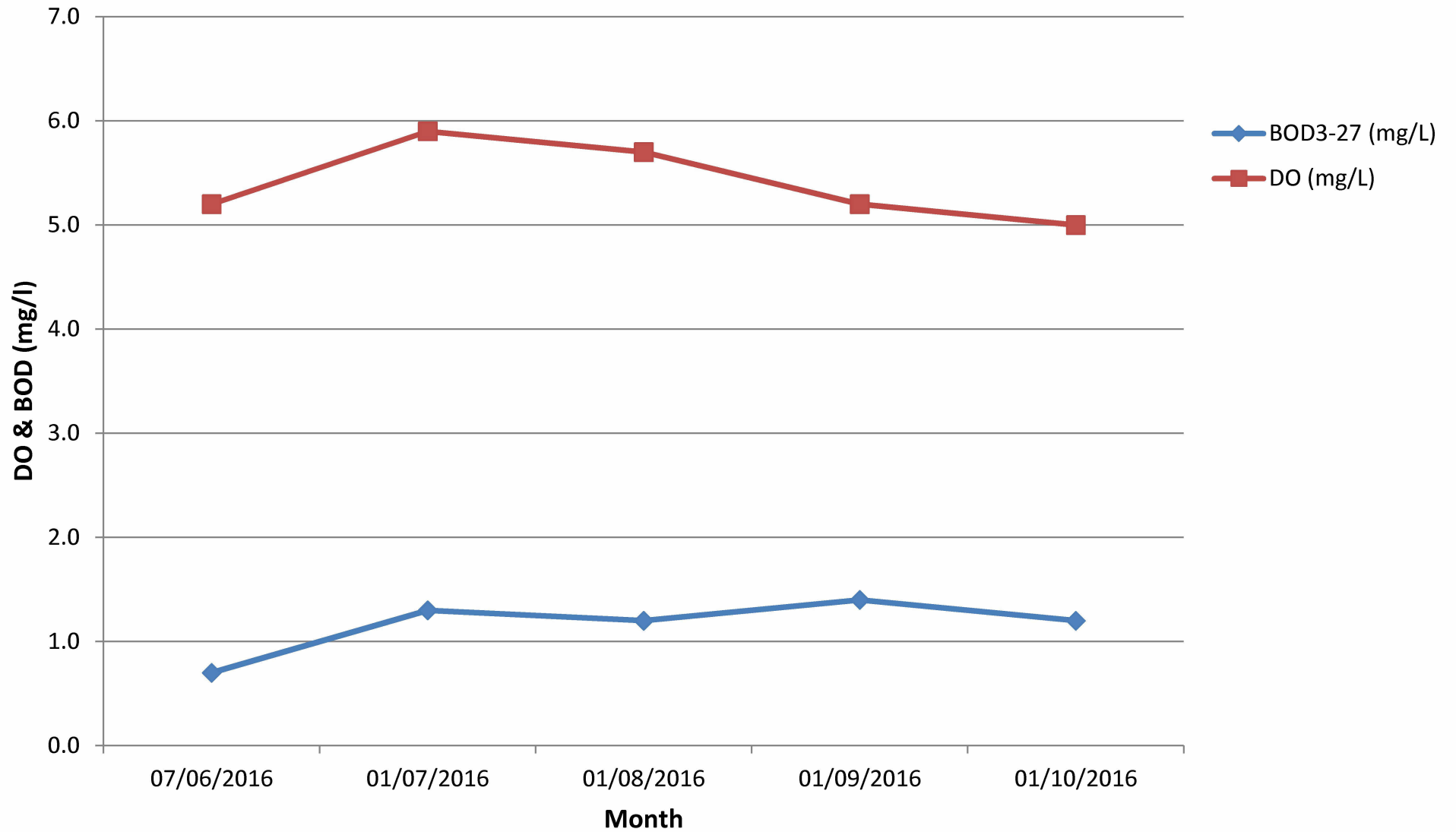
Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Summer				
		2013	2014	Mar - May 2015	2016	2017
	PHYSICAL					
1	Q (cumec)	0.486	9.365	0.938	Drybed/No Flow	
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	1260	1410	1468		
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.3	8.2	8.4		
6	TDS (mg/L)	691	828	923		
7	Temp (deg C)	23.5	28.0	27.3		
8	Turb (NTU)	1.13	1.00	3.00		
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.1	0.0	3.5		
2	ALK-TOT (mgCaCO3/L)	167	231	208		
3	B (mg/L)	0.38	0.03	0.47		
4	Ca (mg/L)	36	45	49		
5	Cl (mg/L)	150.8	155.1	178.3		
6	CO3 (mg/L)	2.5	0.0	4.2		
7	F (mg/L)	0.74	0.75	0.86		
8	Fe (mg/L)	0.2	0.0	0.1		
9	HCO3 (mg/L)	199	282	245		
10	K (mg/L)	4.6	6.0	5.9		
11	Mg (mg/L)	20.6	25.8	28.5		
12	Na (mg/L)	195.3	132.0	208.1		
13	NH3-N (mg N/L)	0.00	0.01	0.01		
14	NO2+NO3 (mg N/L)	1.19	0.89	0.97		
15	NO2-N (mgN/L)	0.00	0.00	0.15		
16	NO3-N (mgN/L)	1.19	0.89	0.82		
17	o-PO4-P (mg P/L)	0.125	0.110	0.233		
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	13.2	10.6	14.7		
20	SO4 (mg/L)	184.0	155.0	272.0		
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	1.1	1.0		
2	COD (mg/L)	8.9	4.1	15.2		
3	DO (mg/L)	5.5	6.9	5.3		
4	DO_SAT% (%)	65	88	67		
5	FCol-MPN (MPN/100mL)	66	230	21		
6	Tcol-MPN (MPN/100mL)	260	2400	667		
7	TOC (mg/L)	4.1		31.1		
	TRACE & TOXIC					
1	As (µg/L)	4.84		11.79		
2	Cd (µg/L)	1.59		4.00		
3	Cr (µg/L)	0.68		0.00		
4	Cu (µg/L)					
5	Hg (µg/L)	0.37		0.09		
6	Ni (µg/L)	8.99		13.63		
7	Pb (µg/L)	6.46		19.00		
8	Zn (µg/L)	7.84		9.00		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	89	112	124		
2	HAR_Total (mgCaCO3/L)	175	220	243		
3	Na% (%)	70	56	65		
4	RSC (-)	0.0	0.3	0.0		
5	SAR (-)	6.5	3.9	5.9		
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Bawapuram



HISTORY SHEET

		Water Year : 2016-2017	
Site	: Mantralayam	Code	: AKL00F2
State	: Andhra Pradesh	District	Kurnool
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Tungabhadra
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Tungabhadra SD, Kurnool
Drainage Area	: 60630 Sq. Km.	Bank	: Right
Latitude	: 15°56'43"	Longitude	: 77°25'38"
	Opening Date	Closing Date	
Gauge	: 10/03/1972		
Discharge	: 01/06/1972		
Sediment	: 26/07/1977		
Water Quality	: 01/08/1977		
Sediment and WQ observations suspended from 31-05-2006.			
Upgraded from GD to GDSQ w.e.f 07-10-2013.			

Water Quality Datasheet for the period : 2016-2017

Station Name : Mantralayam (AKL00F2)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Analysis Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	06/06/2016	01/07/2016	01/08/2016	01/09/2016
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	75.10	13.82	76.35	38.47
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown	Brown
3	EC_FLD (μmho/cm)				
4	EC_GEN (μmho/cm)	1082	1135	372	1022
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)				
7	pH_GEN (pH units)	8.6	9.0	8.2	8.7
8	TDS (mg/L)	620	744	312	803
9	Temp (deg C)	29.0	31.0	23.0	28.0
10	Turb (NTU)	54.00	127.00	62.00	19.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	13.9	4.0	0.0	4.0
2	ALK-TOT (mgCaCO3/L)	130	138	103	149
3	Ca (mg/L)	50	40	22	42
4	Cl (mg/L)	123.6	130.3	53.6	115.6
5	CO3 (mg/L)	16.8	4.8	0.0	4.8
6	F (mg/L)	0.90	1.29	0.12	0.34
7	Fe (mg/L)	0.1	0.0	0.1	0.1
8	HCO3 (mg/L)	124	158	126	172
9	K (mg/L)	5.9	5.8	5.0	4.5
10	Mg (mg/L)	28.2	23.8	12.1	22.8
11	Na (mg/L)	157.0	177.6	90.4	125.9
12	NH3-N (mg N/L)	0.02	0.00	0.00	0.01
13	NO2+NO3 (mg N/L)	1.90	0.66	1.74	1.22
14	NO2-N (mgN/L)	0.00	0.00	0.00	0.00
15	NO3-N (mgN/L)	1.90	0.66	1.74	1.22
16	o-PO4-P (mg P/L)	0.189	0.143	0.261	0.189
17	SiO2 (mg/L)	12.7	11.4	10.3	10.9
18	SO4 (mg/L)	142.0	165.0	180.0	150.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.6	2.8	1.1	1.5
2	COD (mg/L)	14.2	16.7	8.2	13.0
3	DO (mg/L)	4.7	6.6	6.3	5.7
4	DO_SAT% (%)	61	89	73	73
5	FCol-MPN (MPN/100mL)	9000	16000	16000	2
6	Tcol-MPN (MPN/100mL)	16000	16000	16000	16000
	TRACE & TOXIC				
1	Cu (μg/L)				
2	Zn (μg/L)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	124	100	54	104
2	HAR_Total (mgCaCO3/L)	242	199	105	199
3	Na% (%)	58	65	64	57
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	4.4	5.5	3.9	3.9
	PESTICIDES	Analysis not done due to mal function of instrument.			

Water Quality Datasheet for the period : 2016-2017

Station Name : Mantralayam (AKL00F2)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Analysis Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	01/10/2016	05/11/2016	01/12/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	32.45	33.24	5.333
2	Colour_Cod (-)	Light Green	Clear	Clear
3	EC_FLD (μmho/cm)	1534	2105	1225
4	EC_GEN (μmho/cm)	1363	1930	1205
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	6.0	6.7	6.0
7	pH_GEN (pH units)	9.3	8.4	8.6
8	TDS (mg/L)	830	1178	713
9	Temp (deg C)	25.0	28.0	26.0
10	Turb (NTU)	0.00	24.00	13.00
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	2.0	7.5	11.1
2	ALK-TOT (mgCaCO3/L)	303	213	197
3	Ca (mg/L)	54	71	41
4	Cl (mg/L)	162.1	235.9	129.9
5	CO3 (mg/L)	2.4	9.0	13.3
6	F (mg/L)	1.01	1.08	0.80
7	Fe (mg/L)	0.3	0.0	0.0
8	HCO3 (mg/L)	365	241	213
9	K (mg/L)	5.5	6.5	3.6
10	Mg (mg/L)	29.7	38.7	22.3
11	Na (mg/L)	196.0	257.7	166.7
12	NH3-N (mg N/L)	0.01	0.17	0.07
13	NO2+NO3 (mg N/L)	1.18	0.25	0.02
14	NO2-N (mgN/L)	0.00	0.00	0.00
15	NO3-N (mgN/L)	1.18	0.25	0.02
16	o-PO4-P (mg P/L)	0.352	0.233	0.134
17	SiO2 (mg/L)	9.3	8.8	10.3
18	SO4 (mg/L)	109.0	351.0	226.0
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	3.3	0.4	1.5
2	COD (mg/L)	15.2	20.6	9.2
3	DO (mg/L)	6.2	5.8	6.4
4	DO_SAT% (%)	75	73	79
5	FCol-MPN (MPN/100mL)	16000	16000	130
6	Tcol-MPN (MPN/100mL)	16000	16000	130
	TRACE & TOXIC			
1	Cu (μg/L)			0.00
2	Zn (μg/L)			0.00
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	136	177	102
2	HAR_Total (mgCaCO3/L)	260	338	195
3	Na% (%)	62	62	65
4	RSC (-)	0.9	0.0	0.1
5	SAR (-)	5.3	6.1	5.2
	PESTICIDES			

Samples not collected during January to May months due to Dry bed/No flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Mantralayam (AKL00F2)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

Sub-Division : Lower Tungabhadra SD, Kurnool

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	614.1	0.000	16.45
2	EC_FLD (μmho/cm)	3	2105	1225	1621
3	EC_GEN (μmho/cm)	7	1930	372	1158
4	pH_FLD (pH units)	3	6.7	6.0	6.2
5	pH_GEN (pH units)	7	9.3	8.2	8.7
6	TDS (mg/L)	7	1178	312	743
7	Temp (deg C)	7	31.0	23.0	27.1
8	Turb (NTU)	7	127.00	0.00	42.71
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	7	13.9	0.0	6.1
2	ALK-TOT (mgCaCO3/L)	7	303	103	176
3	Ca (mg/L)	7	71	22	46
4	Cl (mg/L)	7	235.9	53.6	135.9
5	CO3 (mg/L)	7	16.8	0.0	7.3
6	F (mg/L)	7	1.29	0.12	0.79
7	Fe (mg/L)	7	0.3	0.0	0.1
8	HCO3 (mg/L)	7	365	124	200
9	K (mg/L)	7	6.5	3.6	5.2
10	Mg (mg/L)	7	38.7	12.1	25.4
11	Na (mg/L)	7	257.7	90.4	167.3
12	NH3-N (mg N/L)	7	0.17	0.00	0.04
13	NO2+NO3 (mg N/L)	7	1.90	0.02	0.99
14	NO2-N (mgN/L)	7	0.00	0.00	0
15	NO3-N (mgN/L)	7	1.90	0.02	0.99
16	o-PO4-P (mg P/L)	7	0.352	0.134	0.214
17	SiO2 (mg/L)	7	12.7	8.8	10.5
18	SO4 (mg/L)	7	351.0	109.0	189
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	7	3.3	0.4	1.6
2	COD (mg/L)	7	20.6	8.2	13.8
3	DO (mg/L)	7	6.6	4.7	6
4	DO_SAT% (%)	7	89	61	75
5	FCol-MPN (MPN/100mL)	7	16000	2	10447
6	Tcol-MPN (MPN/100mL)	7	16000	130	13733
	TRACE & TOXIC				
1	Cu (μg/L)	1	0.00	0.00	0
2	Zn (μg/L)	1	0.00	0.00	0
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	7	177	54	114
2	HAR_Total (mgCaCO3/L)	7	338	105	220
3	Na% (%)	7	65	57	62
4	RSC (-)	7	0.9	0.0	0.1
5	SAR (-)	7	6.1	3.9	4.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Mantralayam (AKL00F2)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Flood			
		Jun - Oct			
		2002	2003	2004	2005
	PHYSICAL				
1	Q (cumec)	14.49	119.8	109.2	229.3
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)	1120	901	807	705
4	pH_FLD (pH units)				
5	pH_GEN (pH units)	8.4	8.4	8.3	8.3
6	TDS (mg/L)				
7	Temp (deg C)	30.5	29.5	24.6	22.7
8	Turb (NTU)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	17.4	11.0	13.3	2.8
2	ALK-TOT (mgCaCO3/L)	134	176	176	149
3	B (mg/L)	0.01	0.00	0.00	0.01
4	Ca (mg/L)	12	37	31	36
5	Cl (mg/L)	118.7	65.9	67.9	70.0
6	CO3 (mg/L)	21.0	13.3	16.0	3.3
7	F (mg/L)	0.92	0.80	1.08	0.66
8	Fe (mg/L)	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	121	188	182	175
10	K (mg/L)	2.7	4.7	4.5	3.3
11	Mg (mg/L)	37.0	12.2	16.6	14.0
12	Na (mg/L)	87.0	108.3	88.4	109.7
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.34	0.01	0.01	0.01
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.34	0.01	0.01	0.01
17	o-PO4-P (mg P/L)				
18	P-Tot (mgP/L)	0.128	0.188	0.001	0.001
19	SiO2 (mg/L)	5.4	10.3	12.6	9.5
20	SO4 (mg/L)	98.0	169.5	106.8	145.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)		2.8	0.1	2.0
2	COD (mg/L)				
3	DO (mg/L)	5.3	4.6	4.1	6.1
4	DO_SAT% (%)	71	61	49	70
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)	31	94	78	90
2	HAR_Total (mgCaCO3/L)	185	144	147	148
3	Na% (%)	49	59	54	54
4	RSC (-)	0.0	0.7	0.6	0.3
5	SAR (-)	2.8	3.9	3.1	3.7
	PESTICIDES				
1	Aldrin (µg/L)				
2	BHC (µg/L)				
3	DDT (µg/L)				
4	Dieldrin (µg/L)				
5	Endos (µg/L)				

WQ observations restarted from 07-10-2013.

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Mantralayam (AKL00F2)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Flood			
		Jun - Oct			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	903.5	1116	34.03	47.24
2	EC_FLD (µmho/cm)				1534
3	EC_GEN (µmho/cm)	512	893	1126	995
4	pH_FLD (pH units)				6.0
5	pH_GEN (pH units)	8.5	7.9	8.1	8.8
6	TDS (mg/L)	364	538	774	662
7	Temp (deg C)	27.3	25.4	31.5	27.2
8	Turb (NTU)	1.36	37.00	9.03	52.40
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	3.2	0.0	0.9	4.8
2	ALK-TOT (mgCaCO3/L)	137	135	181	164
3	B (mg/L)	0.24	0.21	0.29	
4	Ca (mg/L)	29	34	41	41
5	Cl (mg/L)	53.5	91.2	124.0	117.0
6	CO3 (mg/L)	3.9	0.0	1.0	5.8
7	F (mg/L)	0.56	0.72	0.86	0.73
8	Fe (mg/L)	0.1	0.1	0.0	0.1
9	HCO3 (mg/L)	159	165	219	189
10	K (mg/L)	2.7	3.9	6.6	5.3
11	Mg (mg/L)	16.2	18.6	23.6	23.3
12	Na (mg/L)	64.7	121.2	161.2	149.4
13	NH3-N (mg N/L)	0.13	0.04	0.01	0.01
14	NO2+NO3 (mg N/L)	1.27	1.60	1.36	1.34
15	NO2-N (mgN/L)	0.00	0.04	0.06	0.00
16	NO3-N (mgN/L)	1.27	1.56	1.30	1.34
17	o-PO4-P (mg P/L)	0.154	0.277	0.251	0.227
18	P-Tot (mgP/L)		0.244		
19	SiO2 (mg/L)	9.1	10.4	10.6	10.9
20	SO4 (mg/L)	55.8	124.4	172.5	149.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.8	0.8	2.0	1.9
2	COD (mg/L)	10.3	9.2	22.5	13.4
3	DO (mg/L)	6.1	5.5	4.5	5.9
4	DO_SAT% (%)	77	68	60	74
5	FCol-MPN (MPN/100mL)	2271	6492	5330	11400
6	Tcol-MPN (MPN/100mL)	4059	7040	8260	16000
7	TOC (mg/L)	0.2		14.0	
	TRACE & TOXIC				
1	As (µg/L)	8.10			
2	Cd (µg/L)	0.29			
3	Cr (µg/L)	0.50			
4	Cu (µg/L)				
5	Hg (µg/L)	0.51			
6	Ni (µg/L)	3.93			
7	Pb (µg/L)	7.11			
8	Zn (µg/L)	0.01			
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	73	84	103	104
2	HAR_Total (mgCaCO3/L)	140	161	202	201
3	Na% (%)	45	56	62	61
4	RSC (-)	0.1	0.0	0.2	0.2
5	SAR (-)	2.4	3.9	4.9	4.6
	PESTICIDES				
1	Aldrin (µg/L)				
2	BHC (µg/L)				
3	DDT (µg/L)				
4	Dieldrin (µg/L)				
5	Endos (µg/L)				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Mantralayam (AKL00F2)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Winter Nov - Feb			
		2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL				
1	Q (cumec)	46.31	68.55	60.58	203.6
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)	1329	1015	907	903
4	pH_FLD (pH units)				
5	pH_GEN (pH units)	8.5	8.5	8.3	8.1
6	TDS (mg/L)				
7	Temp (deg C)	26.3	26.8	28.0	18.8
8	Turb (NTU)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	16.3	18.7	2.5	0.0
2	ALK-TOT (mgCaCO3/L)	120	226	206	196
3	B (mg/L)	0.01	0.00	0.00	0.01
4	Ca (mg/L)	23	41	45	49
5	Cl (mg/L)	103.2	95.1	91.7	78.4
6	CO3 (mg/L)	19.7	22.5	3.0	0.0
7	F (mg/L)	0.57	0.82	0.78	0.85
8	Fe (mg/L)	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	106	231	245	239
10	K (mg/L)	2.9	3.1	3.8	
11	Mg (mg/L)	30.9	19.0	19.3	16.8
12	Na (mg/L)	77.3	92.8	117.3	
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.07	0.01	0.01	0.01
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.07	0.01	0.01	0.01
17	o-PO4-P (mg P/L)				
18	P-Tot (mgP/L)	0.033	0.001	0.001	0.001
19	SiO2 (mg/L)	5.4	11.4	8.9	11.0
20	SO4 (mg/L)	138.7	118.3	171.3	153.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)		2.0	1.6	0.9
2	COD (mg/L)				
3	DO (mg/L)	6.3	5.2	6.1	6.1
4	DO_SAT% (%)	78	66	78	65
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)	57	103	112	121
2	HAR_Total (mgCaCO3/L)	186	182	192	191
3	Na% (%)	42	52	56	
4	RSC (-)	0.0	0.9	0.9	0.3
5	SAR (-)	2.3	3.0	4.1	
	PESTICIDES				
1	Aldrin (µg/L)				
2	BHC (µg/L)				
3	DDT (µg/L)				
4	Dieldrin (µg/L)				
5	Endos (µg/L)				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Mantralayam (AKL00F2)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Winter Nov - Feb			
		2013-2014	2014-2015	2015-2016	2016-2017
	PHYSICAL				
1	Q (cumec)	70.11	75.50	22.38	19.29
2	EC_FLD (µmho/cm)				1665
3	EC_GEN (µmho/cm)	1023	1070	1781	1568
4	pH_FLD (pH units)				6.3
5	pH_GEN (pH units)	8.4	8.3	8.5	8.5
6	TDS (mg/L)	576	729	682	946
7	Temp (deg C)	24.5	22.3	27.5	27.0
8	Turb (NTU)	8.67	4.08	42.50	18.50
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2.8	2.9	3.4	9.3
2	ALK-TOT (mgCaCO3/L)	206	212	219	205
3	B (mg/L)	0.36	0.30	0.13	
4	Ca (mg/L)	44	49	46	56
5	Cl (mg/L)	107.9	124.0	127.3	182.9
6	CO3 (mg/L)	3.3	3.5	4.0	11.2
7	F (mg/L)	0.76	0.83	0.78	0.94
8	Fe (mg/L)	0.0	0.1	0.1	0.0
9	HCO3 (mg/L)	244	251	259	227
10	K (mg/L)	4.5	5.1	4.5	5.0
11	Mg (mg/L)	25.2	27.9	26.2	30.5
12	Na (mg/L)	127.5	161.5	164.4	212.2
13	NH3-N (mg N/L)	0.01	0.04	0.00	0.12
14	NO2+NO3 (mg N/L)	1.29	0.98	0.76	0.13
15	NO2-N (mgN/L)	0.00	0.04	0.01	0.00
16	NO3-N (mgN/L)	1.29	0.94	0.74	0.13
17	o-PO4-P (mg P/L)	0.323	0.227	0.231	0.183
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)	10.9	11.8	6.8	9.5
20	SO4 (mg/L)	95.3	191.9	212.8	288.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.5	1.0	1.0	0.9
2	COD (mg/L)	2.7	17.2	12.0	14.9
3	DO (mg/L)	6.6	6.6	6.5	6.1
4	DO_SAT% (%)	78	76	82	76
5	FCol-MPN (MPN/100mL)	5543	4158	575	8065
6	Tcol-MPN (MPN/100mL)	6767	4430	8250	8065
7	TOC (mg/L)		32.8	17.6	
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)		3.27		
3	Cr (µg/L)		4.52		
4	Cu (µg/L)		1.55		0.00
5	Hg (µg/L)				
6	Ni (µg/L)		16.18		
7	Pb (µg/L)		18.57		
8	Zn (µg/L)		5.40		0.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	110	123	115	140
2	HAR_Total (mgCaCO3/L)	214	239	224	267
3	Na% (%)	56	59	61	63
4	RSC (-)	0.0	0.1	0.1	0.0
5	SAR (-)	3.8	4.5	4.8	5.7
	PESTICIDES				
1	Aldrin (µg/L)				
2	BHC (µg/L)				
3	DDT (µg/L)				
4	Dieldrin (µg/L)				
5	Endos (µg/L)				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Mantralayam (AKL00F2)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Summer			
		Mar - May			
		2003	2004	2005	2006
	PHYSICAL				
1	Q (cumec)	Drybed/No Flow		6.311	9.053
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)			1310	1475
4	pH_FLD (pH units)				
5	pH_GEN (pH units)			8.2	8.7
6	TDS (mg/L)				
7	Temp (deg C)			21.0	24.3
8	Turb (NTU)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)			0.0	17.2
2	ALK-TOT (mgCaCO3/L)			215	228
3	B (mg/L)			0.00	0.01
4	Ca (mg/L)			36	50
5	Cl (mg/L)			149.0	162.7
6	CO3 (mg/L)			0.0	20.7
7	F (mg/L)			0.96	1.03
8	Fe (mg/L)			0.0	0.0
9	HCO3 (mg/L)			262	236
10	K (mg/L)			8.2	5.5
11	Mg (mg/L)			30.0	23.0
12	Na (mg/L)			153.0	220.0
13	NH3-N (mg N/L)			0.00	0.00
14	NO2+NO3 (mg N/L)			0.01	0.01
15	NO2-N (mgN/L)			0.00	0.00
16	NO3-N (mgN/L)			0.01	0.01
17	o-PO4-P (mg P/L)				
18	P-Tot (mgP/L)			0.001	0.000
19	SiO2 (mg/L)			13.5	12.1
20	SO4 (mg/L)			460.0	256.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)			1.5	0.8
2	COD (mg/L)				
3	DO (mg/L)			5.4	4.5
4	DO_SAT% (%)			61	54
5	FCol-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
7	TOC (mg/L)				
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)				2.00
3	Cr (µg/L)				2.00
4	Cu (µg/L)				
5	Hg (µg/L)				
6	Ni (µg/L)				1.00
7	Pb (µg/L)				144.00
8	Zn (µg/L)				10.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)			90	124
2	HAR_Total (mgCaCO3/L)			215	220
3	Na% (%)			60	67
4	RSC (-)			0.0	0.2
5	SAR (-)			4.6	6.6
	PESTICIDES				
1	Aldrin (µg/L)				0.010
2	BHC (µg/L)				0.100
3	DDT (µg/L)				0.100
4	Dieldrin (µg/L)				0.040
5	Endos (µg/L)				0.142

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Mantralayam (AKL00F2)

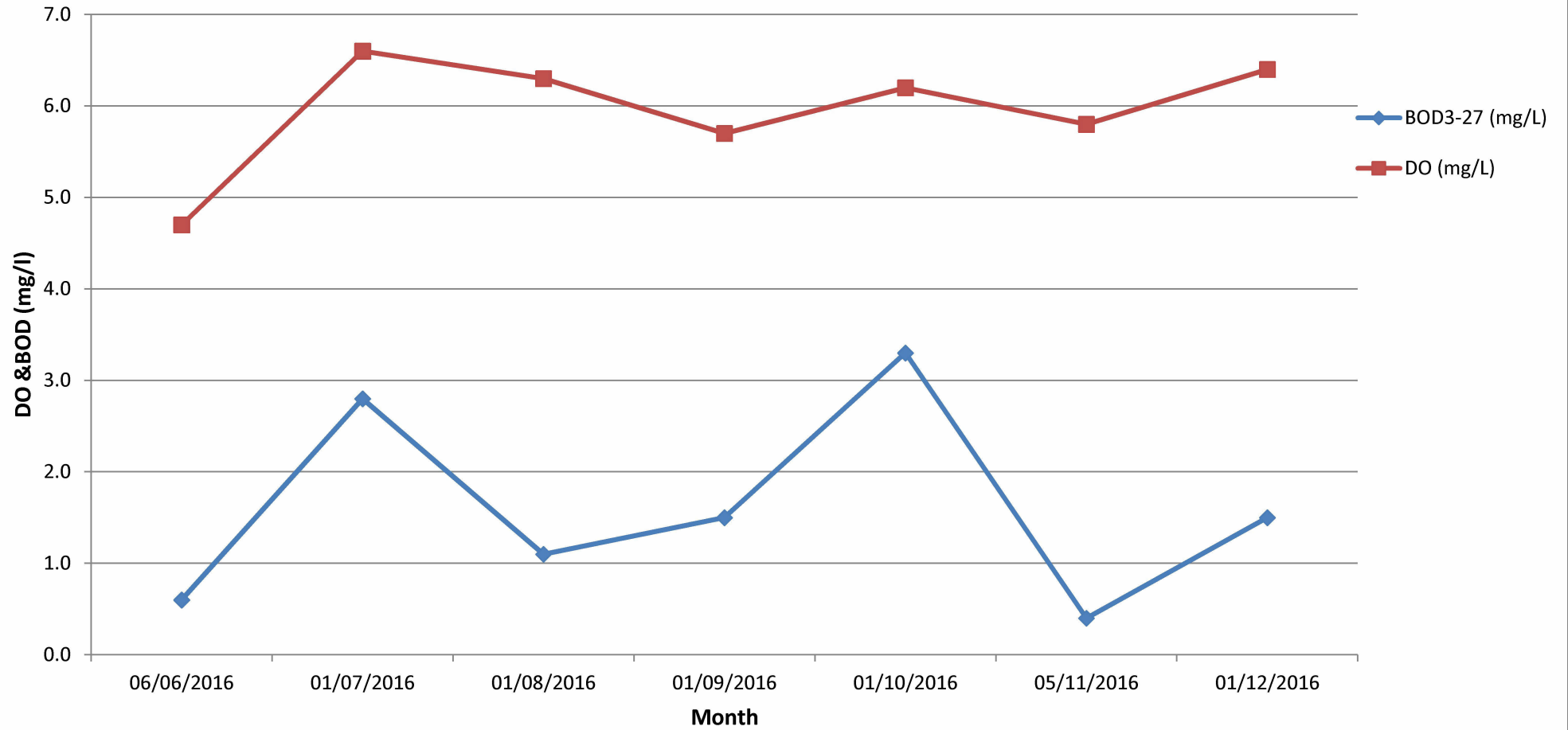
Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Summer			
		Mar - May			
		2014	2015	2016	2017
	PHYSICAL				
1	Q (cumec)	8.403	19.40	79.21	Drybed
2	EC_FLD (µmho/cm)				No Flow
3	EC_GEN (µmho/cm)	1575	834	395	
4	pH_FLD (pH units)				
5	pH_GEN (pH units)	8.4	8.4	7.2	
6	TDS (mg/L)	858	540		
7	Temp (deg C)	24.5	25.7	25.0	
8	Turb (NTU)	12.55	4.00	134.00	
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2.1	3.5	0.0	
2	ALK-TOT (mgCaCO3/L)	241	237	78	
3	B (mg/L)	0.27	0.37		
4	Ca (mg/L)	52	49	52	
5	Cl (mg/L)	198.7	128.3	22.3	
6	CO3 (mg/L)	2.5	4.2	0.0	
7	F (mg/L)	1.09	0.92	0.56	
8	Fe (mg/L)	1.1	0.1	0.6	
9	HCO3 (mg/L)	289	281	95	
10	K (mg/L)	4.0	5.7	3.9	
11	Mg (mg/L)	30.1	28.1	30.1	
12	Na (mg/L)	280.0	160.3	36.0	
13	NH3-N (mg N/L)	0.03	0.02	0.04	
14	NO2+NO3 (mg N/L)	1.02	0.69	1.53	
15	NO2-N (mgN/L)	0.00	0.25	0.01	
16	NO3-N (mgN/L)	1.02	0.44	1.52	
17	o-PO4-P (mg P/L)	0.045	0.343	0.222	
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)	16.6	17.0	9.4	
20	SO4 (mg/L)	191.0	191.3	26.8	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.8	0.8	0.8	
2	COD (mg/L)	5.7	11.4		
3	DO (mg/L)	4.8	4.9	6.2	
4	DO_SAT% (%)	58	59	75	
5	FCol-MPN (MPN/100mL)	60	21	9000	
6	Tcol-MPN (MPN/100mL)	130	650	9000	
7	TOC (mg/L)		31.7		
	TRACE & TOXIC				
1	As (µg/L)	2.02	8.32		
2	Cd (µg/L)	0.05	3.00		
3	Cr (µg/L)	0.26	0.00		
4	Cu (µg/L)				
5	Hg (µg/L)	0.14	0.09		
6	Ni (µg/L)	0.31	12.45		
7	Pb (µg/L)	36.01	19.00		
8	Zn (µg/L)	15.40	7.00		
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	129	122	130	
2	HAR_Total (mgCaCO3/L)	255	239	256	
3	Na% (%)	70	59	23	
4	RSC (-)	0.0	0.1	0.0	
5	SAR (-)	7.7	4.5	1.0	
	PESTICIDES				
1	Aldrin (µg/L)				
2	BHC (µg/L)				
3	DDT (µg/L)				
4	Dieldrin (µg/L)				
5	Endos (µg/L)				

Mantralayam



HISTORY SHEET

		Water Year : 2016-2017	
Site	: T Ramapuram	Code	: AKL50A6
State	: Karnataka	District	Bellary
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	: Hagari
Sub-Sub Tributary	: -	Local River	: Hagari
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Tungabhadra SD, Kurnool
Drainage Area	: 23500 Sq. Km.	Bank	: Right
Latitude	: 15°39'40"	Longitude	: 76°57'56"
	Opening Date	Closing Date	
Gauge	: 13/07/1963		
Discharge	: 23/08/1964		
Sediment	:		
Water Quality	: 01/01/1980		

Water Quality Datasheet for the period : 2016-2017

Station Name : T Ramapuram (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water Analysis Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	01/06/2016 A	01/07/2016 A	01/08/2016 A	01/09/2016 A	01/10/2016 A	04/11/2016 A
	PHYSICAL						
1	Q (cumec)	8.823	2.186	10.19	7.218	1.919	8.994
2	Colour_Cod (-)	Clear	Clear	Brown	Brown	Clear	Clear
3	EC_GEN (µmho/cm)	1051	2271	889	1425	2476	1310
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.4	8.5	8.5	8.3	8.4	8.3
6	TDS (mg/L)	620	1587	659	841	1762	789
7	Temp (deg C)	27.0	26.0	25.0	25.0	26.0	25.0
8	Turb (NTU)	458.00	3.00	22.00	11.00	0.00	5.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	2.0	6.0	3.1	1.0	14.1	6.5
2	ALK-TOT (mgCaCO3/L)	154	247	192	165	197	218
3	Ca (mg/L)	38	68	38	55	91	56
4	Cl (mg/L)	110.6	341.3	116.5	150.9	335.4	136.2
5	CO3 (mg/L)	2.4	7.2	3.7	1.2	17.0	7.8
6	F (mg/L)	0.95	0.46	0.58	0.80	1.14	0.87
7	Fe (mg/L)	0.0	0.0	0.0	0.2	0.1	0.0
8	HCO3 (mg/L)	183	287	227	199	206	251
9	K (mg/L)	4.8	7.9	5.6	3.8	7.3	2.8
10	Mg (mg/L)	21.9	40.8	22.9	29.9	49.5	30.6
11	Na (mg/L)	159.9	367.4	152.1	175.9	364.1	171.2
12	NH3-N (mg N/L)	0.02	0.00	0.00		0.01	0.03
13	NO2+NO3 (mg N/L)	2.94	0.88	2.18	1.93	2.49	0.26
14	NO2-N (mgN/L)	0.00	0.02	0.00	0.00	0.00	0.00
15	NO3-N (mgN/L)	2.94	0.86	2.18	1.93	2.49	0.26
16	o-PO4-P (mg P/L)	0.148	0.114	0.155	0.547	0.395	0.358
17	SiO2 (mg/L)	14.1	16.2	12.8	12.4	14.9	11.1
18	SO4 (mg/L)	92.0	395.0	88.0	258.0	526.0	167.0
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	0.2	3.0	0.6	1.3	1.8	1.8
2	COD (mg/L)	13.8	9.7	10.3	16.7	15.0	9.2
3	DO (mg/L)	5.0	5.8	6.5	5.4	5.5	6.5
4	DO_SAT% (%)	63	71	79	65	68	79
5	FCoI-MPN (MPN/100mL)	20	20	16000	20	16000	900
6	TcoI-MPN (MPN/100mL)	3000	16000	16000	16000	16000	900
	TRACE & TOXIC						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	96	170	96	137	227	140
2	HAR_Total (mgCaCO3/L)	187	340	191	262	433	268
3	Na% (%)	64	70	63	59	64	58
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	5.1	8.7	4.8	4.7	7.6	4.6
	PESTICIDES	Analysis not done due to mal function of instrument.					

Samples not collected during December to May months due to Drybed/No flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : T Ramapuram (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

Sub-Division : Lower Tungabhadra SD, Kurnool

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	243.3	0.000	3.239
2	EC_GEN (µmho/cm)	6	2476	889	1570
3	pH_GEN (pH units)	6	8.5	8.3	8.4
4	TDS (mg/L)	6	1762	620	1043
5	Temp (deg C)	6	27.0	25.0	25.7
6	Turb (NTU)	6	458.00	0.00	83.17
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	6	14.1	1.0	5.4
2	ALK-TOT (mgCaCO3/L)	6	247	154	196
3	Ca (mg/L)	6	91	38	58
4	Cl (mg/L)	6	341.3	110.6	198.5
5	CO3 (mg/L)	6	17.0	1.2	6.6
6	F (mg/L)	6	1.14	0.46	0.8
7	Fe (mg/L)	6	0.2	0.0	0.1
8	HCO3 (mg/L)	6	287	183	225
9	K (mg/L)	6	7.9	2.8	5.3
10	Mg (mg/L)	6	49.5	21.9	32.6
11	Na (mg/L)	6	367.4	152.1	231.7
12	NH3-N (mg N/L)	5	0.03	0.00	0.01
13	NO2+NO3 (mg N/L)	6	2.94	0.26	1.78
14	NO2-N (mgN/L)	6	0.02	0.00	0
15	NO3-N (mgN/L)	6	2.94	0.26	1.78
16	o-PO4-P (mg P/L)	6	0.547	0.114	0.286
17	SiO2 (mg/L)	6	16.2	11.1	13.6
18	SO4 (mg/L)	6	526.0	88.0	254.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	6	3.0	0.2	1.4
2	COD (mg/L)	6	16.7	9.2	12.4
3	DO (mg/L)	6	6.5	5.0	5.8
4	DO_SAT% (%)	6	79	63	71
5	Fcol-MPN (MPN/100mL)	6	16000	20	5493
6	Tcol-MPN (MPN/100mL)	6	16000	900	11317
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	6	227	96	144
2	HAR_Total (mgCaCO3/L)	6	433	187	280
3	Na% (%)	6	70	58	63
4	RSC (-)	6	0.0	0.0	0
5	SAR (-)	6	8.7	4.6	5.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : T Ramapuram (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Flood				
		Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	2.406	83.69	56.50	47.57	25.67
2	EC_GEN (µmho/cm)	2550	930	563	1157	1971
3	pH_GEN (pH units)	7.9	7.9	8.1	8.1	8.2
4	TDS (mg/L)					
5	Temp (deg C)	29.0	30.0	27.5	27.0	26.0
6	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	28.2	0.0	0.0	3.9	0.0
2	ALK-TOT (mgCaCO3/L)	185	164	151	189	243
3	B (mg/L)	0.02	0.00	0.00	0.00	0.00
4	Ca (mg/L)	11	36	25	53	73
5	Cl (mg/L)	284.9	80.0	48.0	142.2	247.0
6	CO3 (mg/L)	34.0	0.0	0.0	4.7	0.0
7	F (mg/L)	0.91	0.65	0.99	0.78	1.10
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	157	200	185	221	297
10	K (mg/L)	4.9	3.9	1.6	3.0	6.7
11	Mg (mg/L)	66.5	59.5	12.0	20.3	39.3
12	Na (mg/L)	239.0	81.0	69.0	120.7	325.0
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.63	0.01	0.01	0.01	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.63	0.01	0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.025	0.500	0.001	0.001	0.001
19	SiO2 (mg/L)	7.1	14.1	15.1	13.4	18.3
20	SO4 (mg/L)	295.0	125.0	77.0	160.0	411.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.2	3.4	0.8	1.8	1.1
2	COD (mg/L)					
3	DO (mg/L)	5.7	4.4	4.7	5.7	6.5
4	DO_SAT% (%)	74	58	59	72	81
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	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	27	90	63	132	182
2	HAR_Total (mgCaCO3/L)	304	338	113	216	346
3	Na% (%)	63	34	56	55	66
4	RSC (-)	0.0	0.0	0.8	0.2	0.0
5	SAR (-)	6.0	1.9	2.8	3.6	7.5
	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 : T Ramapuram (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Flood				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	21.96	56.06	225.5	45.64	7.341
2	EC_GEN (µmho/cm)	1445	1176	1432	1695	1794
3	pH_GEN (pH units)	8.1	8.1	8.1	8.2	8.2
4	TDS (mg/L)					895
5	Temp (deg C)	26.6	26.5	26.3	25.8	26.2
6	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	4.0	3.0	2.7	2.0	0.8
2	ALK-TOT (mgCaCO3/L)	238	188	185	213	233
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	70	60	47	53	58
5	Cl (mg/L)	185.4	167.0	179.1	193.8	247.1
6	CO3 (mg/L)	4.8	3.6	3.2	2.4	1.0
7	F (mg/L)	1.39	0.79	0.84	0.95	1.93
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	280	222	220	255	282
10	K (mg/L)	5.4	4.1	4.4	5.2	5.6
11	Mg (mg/L)	28.2	18.0	23.0	30.6	33.9
12	Na (mg/L)	239.0	181.5	170.5	237.9	254.3
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.35	0.01	1.54	0.00	0.48
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.35	0.01	1.54	0.00	0.48
17	o-PO4-P (mg P/L)					0.612
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.317	0.612
19	SiO2 (mg/L)	17.4	16.3	14.6	15.1	15.8
20	SO4 (mg/L)	235.6	239.0	294.5	397.5	352.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.6	0.6	0.9	1.2	0.3
2	COD (mg/L)	23.3	28.2	49.5	22.7	31.7
3	DO (mg/L)	6.0	5.6	6.2	6.0	5.8
4	DO_SAT% (%)	75	69	77	74	71
5	FCol-MPN (MPN/100mL)			16000	5590	12058
6	Tcol-MPN (MPN/100mL)			16000	6690	12058
7	TOC (mg/L)					4.0
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	175	149	118	132	146
2	HAR_Total (mgCaCO3/L)	293	224	213	260	287
3	Na% (%)	63	62	60	65	65
4	RSC (-)	0.0	0.1	0.0	0.3	0.3
5	SAR (-)	6.0	5.1	4.9	6.4	6.6
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : T Ramapuram (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Flood				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	61.02	18.68	10.65	48.85	6.067
2	EC_GEN (µmho/cm)	1088	1740	1213	979	1622
3	pH_GEN (pH units)	8.0	8.2	8.0	7.7	8.4
4	TDS (mg/L)	696	1164	690	627	1094
5	Temp (deg C)	25.0	25.0	24.2	27.5	25.8
6	Turb (NTU)	40.00	0.10	214.80	64.75	98.80
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.8	0.0	5.2
2	ALK-TOT (mgCaCO3/L)	157	241	159	151	191
3	B (mg/L)	0.17	0.42	0.32	0.45	
4	Ca (mg/L)	41	44	39	38	58
5	Cl (mg/L)	117.4	231.8	129.7	95.1	210.9
6	CO3 (mg/L)	0.0	0.0	1.0	0.0	6.3
7	F (mg/L)	0.85	0.80	1.02	0.91	0.79
8	Fe (mg/L)	0.1	0.1	0.1	0.1	0.1
9	HCO3 (mg/L)	192	294	192	184	220
10	K (mg/L)	4.4	5.5	4.7	4.0	5.9
11	Mg (mg/L)	24.1	25.3	22.5	21.6	33.0
12	Na (mg/L)	98.1	258.0	176.1	138.7	243.9
13	NH3-N (mg N/L)	0.01	0.01	0.02	0.01	0.01
14	NO2+NO3 (mg N/L)	1.70	0.78	1.79	1.76	2.09
15	NO2-N (mgN/L)	0.00	0.00	0.01	0.00	0.00
16	NO3-N (mgN/L)	1.70	0.78	1.78	1.76	2.08
17	o-PO4-P (mg P/L)	0.361	0.440	0.291	0.304	0.272
18	P-Tot (mgP/L)			0.304		
19	SiO2 (mg/L)	7.8	13.3	13.4	14.2	14.1
20	SO4 (mg/L)	100.5	172.0	214.0	159.0	271.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.2	1.0	1.7	1.4
2	COD (mg/L)	27.6	2.4	22.8	18.0	13.1
3	DO (mg/L)	5.2	6.2	5.6	5.4	5.6
4	DO_SAT% (%)	63	75	67	69	69
5	FCol-MPN (MPN/100mL)	8250	16000	772	5251	6412
6	Tcol-MPN (MPN/100mL)	8050	16000	2260	12085	13400
7	TOC (mg/L)	3.6			20.5	
	TRACE & TOXIC					
1	As (µg/L)	7.38				
2	Cd (µg/L)	2.49				
3	Cr (µg/L)	23.65				
4	Cu (µg/L)					
5	Ni (µg/L)	8.51				
6	Pb (µg/L)	3.31				
7	Zn (µg/L)	28.13				
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	102	110	98	94	145
2	HAR_Total (mgCaCO3/L)	202	216	192	184	283
3	Na% (%)	51	72	66	61	64
4	RSC (-)	0.0	0.5	0.0	0.0	0.0
5	SAR (-)	3.1	7.7	5.6	4.4	6.2
	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 : T Ramapuram (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Winter				
		Nov - Feb				
		2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	16.61	9.045	14.05	41.12	64.11
2	EC_GEN (µmho/cm)	1308	1500	1233	1210	933
3	pH_GEN (pH units)	8.4	8.3	8.1	8.0	8.4
4	TDS (mg/L)					
5	Temp (deg C)	26.7	27.0	27.5	23.0	26.0
6	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	23.2	17.9	0.0	0.0	15.8
2	ALK-TOT (mgCaCO3/L)	169	316	214	210	240
3	B (mg/L)	0.02	0.00	0.00	0.01	0.00
4	Ca (mg/L)	20	61	48	60	42
5	Cl (mg/L)	201.3	119.9	134.7	141.5	92.0
6	CO3 (mg/L)	28.0	21.6	0.0	0.0	19.0
7	F (mg/L)	0.74	0.91	0.89	0.85	0.78
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	150	342	262	256	254
10	K (mg/L)	3.8	3.5	3.4		3.4
11	Mg (mg/L)	37.1	25.9	28.0	19.0	22.0
12	Na (mg/L)	144.3	157.7	143.8		155.0
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.40	0.01	0.01	0.01	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.40	0.01	0.01	0.01	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.117	0.001	0.001	0.001	0.001
19	SiO2 (mg/L)	5.3	15.0	13.2	9.1	10.5
20	SO4 (mg/L)	198.0	166.0	253.8	193.8	148.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.5	1.6	1.1	0.3	0.7
2	COD (mg/L)					
3	DO (mg/L)	6.0	6.6	6.3	5.1	6.7
4	DO_SAT% (%)	75	83	80	59	82
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	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	51	152	119	150	104
2	HAR_Total (mgCaCO3/L)	205	260	236	229	196
3	Na% (%)	61	56	57		63
4	RSC (-)	0.0	1.2	0.1	0.0	0.9
5	SAR (-)	4.5	4.3	4.1		4.8
	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 : T Ramapuram (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Winter				
		Nov - Feb				
		2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	59.03	40.96	31.96	79.42	81.42
2	EC_GEN (µmho/cm)	1150	1170	1380	1040	1010
3	pH_GEN (pH units)	8.2	8.3	8.5	8.1	8.2
4	TDS (mg/L)					570
5	Temp (deg C)	25.0	25.0	27.0	25.0	27.0
6	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	8.0	8.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	220	216	220	200	224
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	69	61	79	45	33
5	Cl (mg/L)	137.1	131.4	164.1	122.5	123.0
6	CO3 (mg/L)	0.0	9.6	9.6	0.0	0.0
7	F (mg/L)	0.80	0.97	1.08	0.69	0.82
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	268	244	249	244	273
10	K (mg/L)	3.9	3.2	3.8	4.1	3.5
11	Mg (mg/L)	16.0	16.5	22.4	24.3	19.9
12	Na (mg/L)	185.0	149.0	173.2	134.0	145.5
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	1.70	0.00	0.70
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	1.70	0.00	0.70
17	o-PO4-P (mg P/L)					0.858
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.580	0.858
19	SiO2 (mg/L)	11.6	12.2	13.1	9.2	11.7
20	SO4 (mg/L)	110.0	161.5	271.0	160.0	182.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	0.5	0.9	0.5	0.3
2	COD (mg/L)	31.0	25.2	21.7	13.8	13.0
3	DO (mg/L)	6.6	6.5	6.9	6.6	5.9
4	DO_SAT% (%)	80	79	87	80	74
5	FCol-MPN (MPN/100mL)			2800	16000	16000
6	Tcol-MPN (MPN/100mL)			3500	16000	16000
7	TOC (mg/L)					3.7
	TRACE & TOXIC					
1	As (µg/L)			2.78		
2	Cd (µg/L)			0.00		
3	Cr (µg/L)			0.00		
4	Cu (µg/L)					
5	Ni (µg/L)			2.66		
6	Pb (µg/L)			0.00		
7	Zn (µg/L)			4.29		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	173	153	196	112	83
2	HAR_Total (mgCaCO3/L)	239	221	290	214	165
3	Na% (%)	62	59	56	57	65
4	RSC (-)	0.0	0.0	0.0	0.0	1.2
5	SAR (-)	5.2	4.4	4.4	4.0	4.9
	PESTICIDES					
1	Aldrin (µg/L)			0.000		
2	BHC (µg/L)			0.199		
3	DDT (µg/L)			0.015		
4	Dieldrin (µg/L)			0.002		
5	Endos (µg/L)			0.052		

Water Quality Seasonal Average for the period: 2002-2017

Station Name : T Ramapuram (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Winter				
		Nov - Feb				
		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)	18.70	44.38	19.02	12.17	8.994
2	EC_GEN (µmho/cm)	1360	1240	1465	3509	1310
3	pH_GEN (pH units)	8.1	8.2	8.2	8.3	8.3
4	TDS (mg/L)	796	724	927	874	789
5	Temp (deg C)	25.0	26.0	22.8	24.4	25.0
6	Turb (NTU)	0.10	35.00	5.33	27.75	5.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	2.8	6.5
2	ALK-TOT (mgCaCO3/L)	237	220	227	230	218
3	B (mg/L)	0.37	0.38	0.25	0.01	
4	Ca (mg/L)	53	54	51	50	56
5	Cl (mg/L)	151.7	136.2	171.7	178.2	136.1
6	CO3 (mg/L)	0.0	0.0	0.0	3.3	7.8
7	F (mg/L)	0.79	0.74	0.88	0.76	0.87
8	Fe (mg/L)	0.0	0.0	0.1	0.1	0.0
9	HCO3 (mg/L)	289	268	277	274	251
10	K (mg/L)	1.5	4.2	3.8	4.8	2.8
11	Mg (mg/L)	31.1	21.4	29.0	28.4	30.6
12	Na (mg/L)	192.4	179.0	156.9	209.3	171.2
13	NH3-N (mg N/L)	0.05	0.00	0.04	0.00	0.03
14	NO2+NO3 (mg N/L)	0.43	1.48	2.10	1.96	0.26
15	NO2-N (mgN/L)	0.00	0.00	0.06	0.02	0.00
16	NO3-N (mgN/L)	0.43	1.48	2.04	1.94	0.26
17	o-PO4-P (mg P/L)	0.356	0.360	0.259	0.206	0.358
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	14.0	12.4	11.1	9.5	11.1
20	SO4 (mg/L)	115.0	184.0	175.5	276.5	167.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	1.2	0.6	1.2	1.8
2	COD (mg/L)	7.7	6.5	14.0	9.9	9.2
3	DO (mg/L)	6.8	6.8	7.0	7.1	6.5
4	DO_SAT% (%)	82	84	81	84	79
5	FCol-MPN (MPN/100mL)	2400	16000	1858	2750	900
6	Tcol-MPN (MPN/100mL)	5000	16000	9100	16000	900
7	TOC (mg/L)	2.7		26.8	16.7	
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)			5.06		
3	Cr (µg/L)			3.46		
4	Cu (µg/L)			1.70		
5	Ni (µg/L)			21.12		
6	Pb (µg/L)			26.13		
7	Zn (µg/L)			6.35		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	132	134	126	125	140
2	HAR_Total (mgCaCO3/L)	262	223	247	243	268
3	Na% (%)	62	63	56	65	58
4	RSC (-)	0.0	0.0	0.2	0.2	0.0
5	SAR (-)	5.2	5.2	4.4	5.9	4.6
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : T Ramapuram (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

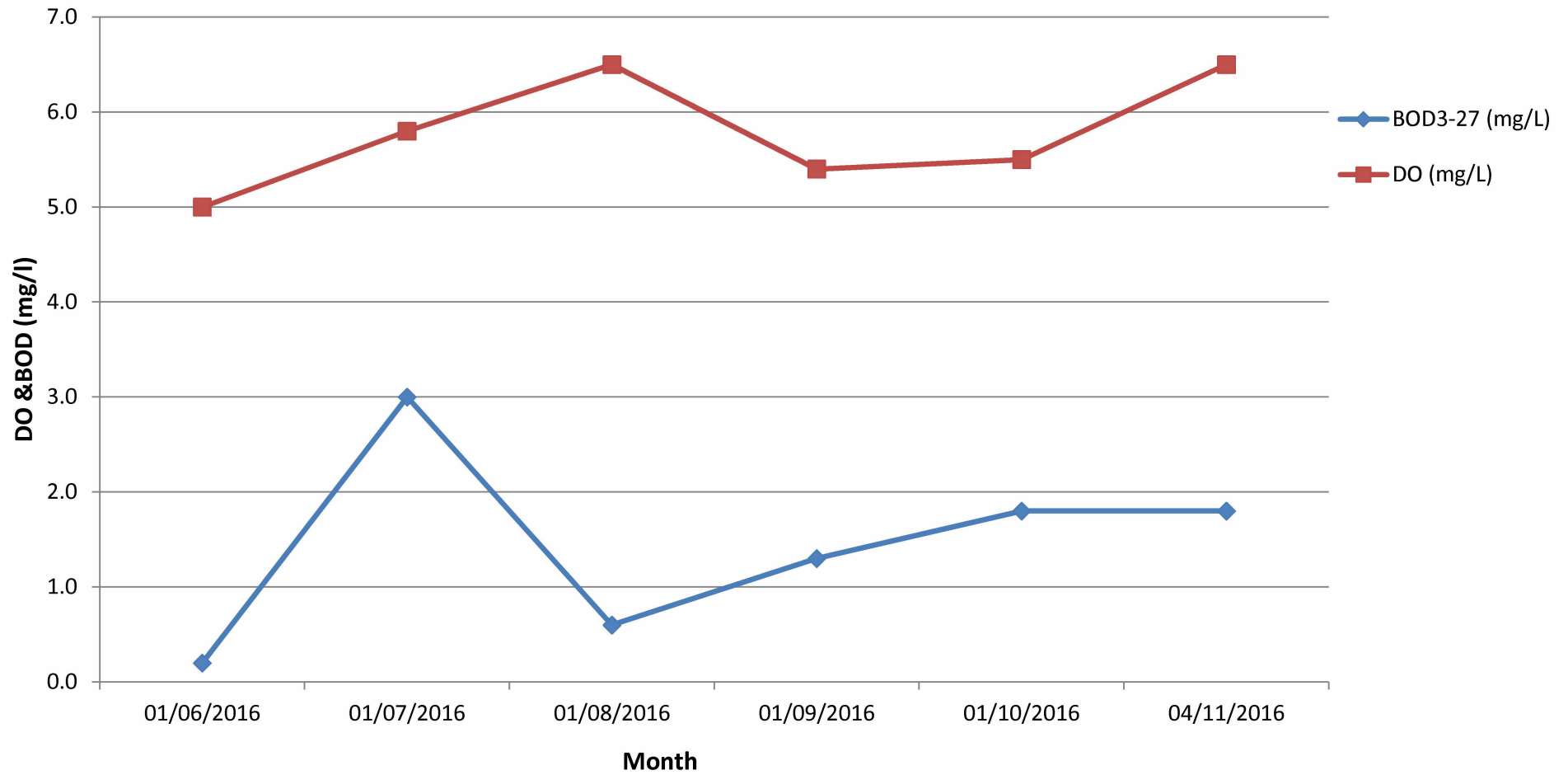
River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Summer				
		2004	2006	2015	2016	2017
	PHYSICAL					
1	Q (cumec)	0.176	0.351	10.39	47.89	
2	EC_GEN (µmho/cm)	1810	2805	1875	201	
3	pH_GEN (pH units)	8.4	8.0	7.8	7.2	
4	TDS (mg/L)			1303		
5	Temp (deg C)	27.0	26.0	27.0	26.0	
6	Turb (NTU)			12.33	94.00	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	9.0	0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	172	243	247	120	
3	B (mg/L)	0.00	0.01	0.40		
4	Ca (mg/L)	57	92	53	38	
5	Cl (mg/L)	248.4	39.0	251.6	35.1	
6	CO3 (mg/L)	10.8	0.0	0.0	0.0	
7	F (mg/L)	0.38	1.29	1.00	0.74	
8	Fe (mg/L)	0.0	0.0	0.1	0.0	
9	HCO3 (mg/L)	188	296	302	146	
10	K (mg/L)	5.5	6.6	6.6	3.3	
11	Mg (mg/L)	33.5	50.0	30.8	20.6	
12	Na (mg/L)	198.0	195.0	281.5	81.4	
13	NH3-N (mg N/L)	0.00	0.00	0.02	0.02	
14	NO2+NO3 (mg N/L)	0.01	0.01	1.13	1.78	
15	NO2-N (mgN/L)	0.00	0.00	0.07	0.00	
16	NO3-N (mgN/L)	0.01	0.01	1.07	1.78	
17	o-PO4-P (mg P/L)			0.187	0.111	
18	P-Tot (mgP/L)	0.001	0.001			
19	SiO2 (mg/L)	19.5	17.5	10.6	12.0	
20	SO4 (mg/L)	185.0	355.0	388.0	1.0	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	0.6	1.3	1.3	
2	COD (mg/L)		85.0	21.8		
3	DO (mg/L)	7.5	5.4	5.0	4.0	
4	DO_SAT% (%)	94	67	63	49	
5	FCol-MPN (MPN/100mL)			5335	20	
6	Tcol-MPN (MPN/100mL)			5427	2200	
7	TOC (mg/L)			43.6		
	TRACE & TOXIC					
1	As (µg/L)			13.81		
2	Cd (µg/L)			3.49		
3	Cr (µg/L)			6.51		
4	Cu (µg/L)					
5	Ni (µg/L)			20.72		
6	Pb (µg/L)			29.07		
7	Zn (µg/L)			16.28		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	142	230	133	95	
2	HAR_Total (mgCaCO3/L)	282	438	261	181	
3	Na% (%)	60	49	69	49	
4	RSC (-)	0.0	0.0	0.0	0.0	
5	SAR (-)	5.1	4.1	7.6	2.6	
	PESTICIDES					
1	Aldrin (µg/L)		0.010			
2	BHC (µg/L)		0.100			
3	DDT (µg/L)		0.100			
4	Dieldrin (µg/L)		0.072			
5	Endos (µg/L)		0.100			

Samples not collected during Summer season 2003, 2005 and 2017 due to Drybed/No flow condition.

T-Ramapuram



HISTORY SHEET

		Water Year	: 2016-2017
Site	: KELLODU	Code	: AKL50T9
State	: Karnataka	District	Chitradurga
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	: Vedavathi
Sub-Sub Tributary	:	Local River	: Vedavathi
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tungabhadra SD Davangere
Drainage Area	: 4320 Sq. Km.	Bank	: Left
Latitude	: 13°45'15"	Longitude	: 76°19'11"
	Opening Date	Closing Date	
Gauge	: 01/06/1990		
Discharge	: 11/07/1990		
Sediment	:		
Water Quality	: 01/07/1994		

Water Quality Datasheet for the period : 2016-2017

Station Name : KELLODU (AKL50T9)

Division : Cauvery Division, Bangalore

Local River : Vedavathi

River Water Analysis Division : Upper Tungabhadra SD Davangere

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

Samples not collected due to Drybed/No flow
condition from 1-6-2016 to 31-5-2017.

Water Quality Seasonal Average for the period: 2002-2017

Station Name : KELLODU (AKL50T9)

Division : Cauvery Division, Bangalore

Local River : Vedavathi

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood			
		Jun - Oct			
		2002	2003	2009	2010
	PHYSICAL				
1	Q (cumec)	1.043	0.000	4.681	34.86
2	EC_GEN (µmho/cm)	200	272	631	606
3	pH_GEN (pH units)	8.1	7.4	8.1	8.0
4	Temp (deg C)	24.5	26.0	22.9	23.5
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)	2	22	237	208
2	B (mg/L)			0.11	
3	Ca (mg/L)	6	24	37	22
4	Cl (mg/L)	46.5	17.0	55.8	60.1
5	F (mg/L)	0.53	0.30	0.41	0.42
6	Fe (mg/L)	0.4	1.4	0.1	0.1
7	HCO3 (mg/L)	2	27	289	254
8	K (mg/L)	2.3	3.1	5.4	4.6
9	Mg (mg/L)	4.4	12.5	21.4	13.0
10	Na (mg/L)	26.7	14.0	73.5	96.4
11	NO2+NO3 (mg N/L)	0.98	25.22	0.87	0.95
12	NO2-N (mgN/L)	0.00	0.00	0.00	0.03
13	NO3-N (mgN/L)	0.98	25.22	0.87	0.92
14	o-PO4-P (mg P/L)	0.021	0.031	0.000	0.007
15	SiO2 (mg/L)	40.5	0.9	19.4	13.2
16	SO4 (mg/L)	22.1	10.1	14.1	15.8
	BIOLOGICAL/BACTERIOLOGICAL				
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)				
3	Cr (µg/L)				
4	Cu (µg/L)				
5	Ni (µg/L)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	15	61	92	55
2	HAR_Total (mgCaCO3/L)	33	113	181	109
3	Na% (%)	62	21	46	64
4	RSC (-)	0.0	0.0	1.1	2.0
5	SAR (-)	2.0	0.6	2.4	4.0
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : KELLODU (AKL50T9)

Division : Cauvery Division, Bangalore

Local River : Vedavathi

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood			
		Jun - Oct			
		2012	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	0.682	14.17	36.25	
2	EC_GEN (µmho/cm)	249	378	428	
3	pH_GEN (pH units)	7.9	7.7	7.9	
4	Temp (deg C)	26.0	27.0	27.5	
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)	81	136	122	
2	B (mg/L)		0.30	0.44	
3	Ca (mg/L)	10	26	18	
4	Cl (mg/L)	22.7	32.0	51.1	
5	F (mg/L)	0.25	0.19	0.55	
6	Fe (mg/L)		0.1	0.4	
7	HCO3 (mg/L)	98	166	149	
8	K (mg/L)	4.2	10.5	4.7	
9	Mg (mg/L)	3.9	10.7	12.2	
10	Na (mg/L)	35.5	37.2	57.4	
11	NO2+NO3 (mg N/L)	1.68	1.06	0.92	
12	NO2-N (mgN/L)	0.01	0.01	0.03	
13	NO3-N (mgN/L)	1.67	1.05	0.89	
14	o-PO4-P (mg P/L)		0.031	0.377	
15	SiO2 (mg/L)		7.3	12.3	
16	SO4 (mg/L)	14.5	17.9	24.2	
	BIOLOGICAL/BACTERIOLOGICAL				
	TRACE & TOXIC				
1	As (µg/L)	2.1			
2	Cd (µg/L)	0.0			
3	Cr (µg/L)	10.0			
4	Cu (µg/L)	14.4			
5	Ni (µg/L)	4.5			
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	24	64	44	
2	HAR_Total (mgCaCO3/L)	40	109	95	
3	Na% (%)	63	40	51	
4	RSC (-)	0.8	0.6	0.6	
5	SAR (-)	2.4	1.6	2.4	
	PESTICIDES				

Samples not collected during Flood season 2004 to 2008, 2011, 2013 and 2016 due to Drybed/No flow condition.

Water Quality Seasonal Average for the period: 2002-2017

Station Name : KELLODU (AKL50T9)

Division : Cauvery Division, Bangalore

Local River : Vedavathi

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2002-2003	2005-2006	2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	6.673	3.440	3.822	11.04	1.822
2	EC_GEN (µmho/cm)	221	594	802	847	613
3	pH_GEN (pH units)	7.7	8.1	8.1	8.2	7.6
4	Temp (deg C)	24.5	25.0	23.5	23.5	23.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	59	10	280	297	206
2	B (mg/L)			0.17	0.11	
3	Ca (mg/L)	6	14	37	38	22
4	Cl (mg/L)	32.0	77.3	82.0	84.7	68.2
5	F (mg/L)	0.47	0.38	0.53	0.61	
6	Fe (mg/L)	0.0	1.9	0.0	0.0	0.0
7	HCO3 (mg/L)	36	12	342	362	251
8	K (mg/L)	3.1	5.2	4.7	5.7	2.5
9	Mg (mg/L)	4.4	10.8	24.6	28.5	10.7
10	Na (mg/L)	25.5	59.0	103.8	110.5	101.2
11	NO2+NO3 (mg N/L)	0.14	18.91	0.84	1.03	1.08
12	NO2-N (mgN/L)	0.00	9.38	0.03	0.00	0.00
13	NO3-N (mgN/L)	0.14	9.53	0.81	1.03	1.08
14	o-PO4-P (mg P/L)	0.021	0.052	0.007	0.003	0.000
15	SiO2 (mg/L)	30.0	1.8	22.6	18.2	14.1
16	SO4 (mg/L)	7.7	11.4	15.8	25.9	21.2
	BIOLOGICAL/BACTERIOLOGICAL					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	15	34	93	96	56
2	HAR_Total (mgCaCO3/L)	33	79	196	215	101
3	Na% (%)	60	60	53	51	68
4	RSC (-)	0.0	0.0	1.7	1.7	2.1
5	SAR (-)	1.9	2.9	3.2	3.2	4.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : KELLODU (AKL50T9)

Division : Cauvery Division, Bangalore

Local River : Vedavathi

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter			Summer	
		Nov-Feb			Mar-May	
		2014-2015	2015-2016	2016-2017	2008	2017
	PHYSICAL					
1	Q (cumec)	2.103	1.935	Samples not collected during winter season 2003-2004,2004-2005,2006-2007 to 2008-2009,2012-2013,2013-2014 and 2016-2017 due to Drybed/No flow condition.	0.402	Samples not collected during summer season 2003 to 2007 and from 2009 to 2017 due to Drybed/No flow condition.
2	EC_GEN (µmho/cm)	493	761		175	
3	pH_GEN (pH units)	8.4	8.2		8.2	
4	Temp (deg C)	28.0	27.8		24.5	
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	181	258		29	
2	B (mg/L)	0.31	0.31		0.00	
3	Ca (mg/L)	40	35		6	
4	Cl (mg/L)	49.3	95.3		33.4	
5	F (mg/L)	0.36	0.51		0.11	
6	Fe (mg/L)	0.0	0.4		0.4	
7	HCO3 (mg/L)	221	314		35	
8	K (mg/L)	12.3	4.3		3.1	
9	Mg (mg/L)	15.6	22.4		3.9	
10	Na (mg/L)	37.5	101.1		25.8	
11	NO2+NO3 (mg N/L)	1.22	1.03		0.78	
12	NO2-N (mgN/L)	0.00	0.01		0.00	
13	NO3-N (mgN/L)	1.22	1.02		0.78	
14	o-PO4-P (mg P/L)	0.000	0.450		0.010	
15	SiO2 (mg/L)	5.6	20.0		12.6	
16	SO4 (mg/L)	6.8	20.0		12.5	
	BIOLOGICAL/BACTERIOLOGICAL					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	100	88		14	
2	HAR_Total (mgCaCO3/L)	165	181		30	
3	Na% (%)	31	54		62	
4	RSC (-)	0.4	1.6		0.0	
5	SAR (-)	1.3	3.3		2.0	
	PESTICIDES					

HISTORY SHEET

		Water Year : 2016-2017	
Site	: HOOVINAHOLE	Code	: HOOVINAHOLE
State	: Karnataka	District	Chitradurga
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	: Swarnamukhi
Sub-Sub Tributary	:	Local River	: Swarnamukhi
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tungabhadra SD Davangere
Drainage Area	: 2585 Sq. Km.	Bank	: Right
Latitude	: 13°58'57"	Longitude	: 76°44'57"
	Opening Date	Closing Date	
Gauge	: 28/11/1997		
Discharge	: 02/10/2001		
Sediment	:		
Water Quality	: 01/06/2008		

Water Quality Datasheet for the period : 2016-2017

Station Name : HOOVINAHOLE (HOOVINAHOLE)

Division : Cauvery Division, Bangalore

Local River : Swarnamukhi

River Water Analysis Division : Upper Tungabhadra SD Davangere

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

Samples not collected due to Drybed/No flow
condition from 1-6-2016 to 31-5-2017.

Water Quality Seasonal Average for the period: 2008-2017

Station Name : HOOVINAHOLE (HOOVINAHOLE)

Division : Cauvery Division, Bangalore

Local River : Swarnamukhi

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood		
		June-oct		
		2009	2010	2016
	PHYSICAL			
1	Q (cumec)	0.620	1.110	
2	EC_GEN (µmho/cm)	851	1176	
3	pH_GEN (pH units)	8.0	8.3	
4	Temp (deg C)	28.0	24.5	
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	262	375	
3	B (mg/L)	0.11		
4	Ca (mg/L)	29	34	
5	Cl (mg/L)	88.6	141.1	
6	CO3 (mg/L)	0.0	0.0	
7	F (mg/L)	0.76	0.57	
8	Fe (mg/L)	0.0	0.1	
9	HCO3 (mg/L)	319	457	
10	K (mg/L)	2.8	3.4	
11	Mg (mg/L)	17.5	26.2	
12	Na (mg/L)	140.5	198.1	
13	NO2+NO3 (mg N/L)	1.88	1.43	
14	NO2-N (mgN/L)	0.00	0.01	
15	NO3-N (mgN/L)	1.88	1.42	
16	o-PO4-P (mg P/L)	0.000	0.010	
17	SiO2 (mg/L)	26.6	0.0	
18	SO4 (mg/L)	35.2	37.7	
	BIOLOGICAL/BACTERIOLOGICAL			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	72	84	
2	HAR_Total (mgCaCO3/L)	145	193	
3	Na% (%)	67	69	
4	RSC (-)	2.4	3.7	
5	SAR (-)	5.1	6.2	
	PESTICIDES			

Samples not collected during Flood season 2008 and from 2011 to 2016 due to Dry bed/No flow condition.

Water Quality Seasonal Average for the period: 2008-2017

Station Name : HOOVINAHOLE (HOOVINAHOLE)

Division : Cauvery Division, Bangalore

Local River : Swarnamukhi

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter Nov - Feb					
		2008-2009	2009-2010	2010-2011	2014-2015	2015-2016	2016-2017
	PHYSICAL						
1	Q (cumec)	3.745	0.952	1.406	Samples not collected during Winter season 2011-2012 to 2014-2015 and 2016-2017 due to Drybed/No flow condition.	6.473	Samples not collected during Summer season 2009 to 2016-17 due to Drybed/No flow condition.
2	EC_GEN (µmho/cm)	682	1610	1453		441	
3	pH_GEN (pH units)	8.2	8.1	8.8		8.1	
4	Temp (deg C)	28.0	23.5	23.0		17.0	
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	69.0		0.0	
2	ALK-TOT (mgCaCO3/L)	244	471	438		166	
3	B (mg/L)	0.13	0.30	0.32		0.15	
4	Ca (mg/L)	34	34	16		26	
5	Cl (mg/L)	66.4	252.8	226.5		43.0	
6	CO3 (mg/L)	0.0	0.0	83.1		0.0	
7	F (mg/L)	0.47	1.42	1.46		0.17	
8	Fe (mg/L)	0.1	0.0	0.0		0.2	
9	HCO3 (mg/L)	297	574	366		202	
10	K (mg/L)	3.5	1.7	1.6		1.7	
11	Mg (mg/L)	17.5	28.2	27.2		12.6	
12	Na (mg/L)	95.0	322.0	278.1		48.5	
13	NO2+NO3 (mg N/L)		2.21	1.50		1.02	
14	NO2-N (mgN/L)	0.01	0.03	0.00		0.01	
15	NO3-N (mgN/L)		2.19	1.50		1.01	
16	o-PO4-P (mg P/L)	0.052	0.000	0.010		0.279	
17	SiO2 (mg/L)	17.4	30.0	23.0		8.9	
18	SO4 (mg/L)	24.6	19.1	17.1		8.6	
	BIOLOGICAL/BACTERIOLOGICAL						
	TRACE & TOXIC						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	84	84	40		64	
2	HAR_Total (mgCaCO3/L)	157	201	153		117	
3	Na% (%)	56	78	80		47	
4	RSC (-)	1.8	5.4	5.7		1.0	
5	SAR (-)	3.3	9.9	9.8		2.0	
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2016-2017
Site	: MAROL	Code	: AKLA0C4
State	: Karnataka	District	Haveri
Basin	: Krishna	Independent River	: Krishna
Tributary	:	Sub Tributary	: Varada
Sub-Sub Tributary	:	Local River	: Varada
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tungabhadra SD Davangere
Drainage Area	: 4901 Sq. Km.	Bank	: Right
Latitude	: 14°56'20"	Longitude	: 75°37'05"
	Opening Date	Closing Date	
Gauge	: 05/02/1965		
Discharge	: 01/02/1966		
Sediment	: 16/09/1972		
Water Quality	: 01/02/1973		

Water Quality Datasheet for the period : 2016-2017

Station Name : MAROL (AKLA0C4)

Division : Cauvery Division, Bangalore

Local River : Varada

River Water Analysis Division : Upper Tungabhadra SD Davangere

S.No	Parameters	01/08/2016 A	01/09/2016 A
	PHYSICAL		
1	Q (cumec)	10.51	16.92
2	Colour_Cod (-)	Clear	Clear
3	EC_GEN (µmho/cm)	98	122
4	Odour_Code (-)	odour free	odour free
5	pH_GEN (pH units)	7.3	7.2
6	TDS (mg/L)	58	74
7	Temp (deg C)	26.0	26.0
	CHEMICAL		
1	Alk-Phen (mgCaCO3/L)	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	34	26
3	B (mg/L)	0.06	0.08
4	Ca (mg/L)	7	12
5	Cl (mg/L)	11.0	20.2
6	CO3 (mg/L)	0.0	0.0
7	Fe (mg/L)	0.6	0.1
8	HCO3 (mg/L)	41	31
9	K (mg/L)	1.1	1.1
10	Mg (mg/L)	4.4	7.2
11	Na (mg/L)	6.1	2.3
12	NO2+NO3 (mg N/L)	0.56	1.44
13	NO2-N (mgN/L)	0.01	0.00
14	NO3-N (mgN/L)	0.55	1.44
15	o-PO4-P (mg P/L)	0.031	0.083
16	SiO2 (mg/L)	6.8	32.6
17	SO4 (mg/L)	2.4	5.2
	BIOLOGICAL/BACTERIOLOGICAL		
	TRACE & TOXIC		
	CHEMICAL INDICES		
1	HAR_Ca (mgCaCO3/L)	18	30
2	HAR_Total (mgCaCO3/L)	36	59
3	Na% (%)	26	8
4	RSC (-)	0.0	0.0
5	SAR (-)	0.4	0.1
	PESTICIDES		

Samples not collected during June, July and from October to May months due to Dry bed/No flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : MAROL (AKLA0C4)

Division : Cauvery Division, Bangalore

Local River : Varada

Sub-Division : Upper Tungabhadra SD Davangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	357	241.8	0.000	11.67
2	EC_GEN (μmho/cm)	2	122	98	110
3	pH_GEN (pH units)	2	7.3	7.2	7.2
4	TDS (mg/L)	2	74	58	66
5	Temp (deg C)	2	26.0	26.0	26
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	2	34	26	30
3	B (mg/L)	2	0.08	0.06	0.07
4	Ca (mg/L)	2	12	7	9
5	Cl (mg/L)	2	20.2	11.0	15.6
6	CO3 (mg/L)	2	0.0	0.0	0
7	Fe (mg/L)	2	0.6	0.1	0.4
8	HCO3 (mg/L)	2	41	31	36
9	K (mg/L)	2	1.1	1.1	1.1
10	Mg (mg/L)	2	7.2	4.4	5.8
11	Na (mg/L)	2	6.1	2.3	4.2
12	NO2+NO3 (mg N/L)	2	1.44	0.56	1
13	NO2-N (mgN/L)	2	0.01	0.00	0.01
14	NO3-N (mgN/L)	2	1.44	0.55	0.99
15	o-PO4-P (mg P/L)	2	0.083	0.031	0.057
16	SiO2 (mg/L)	2	32.6	6.8	19.7
17	SO4 (mg/L)	2	5.2	2.4	3.8
	BIOLOGICAL/BACTERIOLOGICAL				
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	2	30	18	24
2	HAR_Total (mgCaCO3/L)	2	59	36	48
3	Na% (%)	2	26	8	17
4	RSC (-)	2	0.0	0.0	0
5	SAR (-)	2	0.4	0.1	0.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : MAROL (AKLA0C4)

Division : Cauvery Division, Bangalore

Local River : Varada

River WaterSub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	52.36	68.42	93.45	129.9	189.5
2	EC_GEN (µmho/cm)	149	131	141	101	267
3	pH_GEN (pH units)	7.8	7.7	7.6	7.5	7.6
4	TDS (mg/L)					
5	Temp (deg C)	25.5	28.4	26.1	26.0	26.3
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	28	29	50	79	79
2	B (mg/L)		0.00		0.28	0.00
3	Ca (mg/L)	5	7	10	18	12
4	Cl (mg/L)	30.2	18.1	18.1	84.8	28.5
5	F (mg/L)	0.03	0.15	0.22	0.12	0.00
6	Fe (mg/L)	0.0	1.0		0.1	0.0
7	HCO3 (mg/L)	34	35	46	96	96
8	K (mg/L)	1.4	1.9	1.3	2.4	31.0
9	Mg (mg/L)	3.5	4.1	6.1	8.9	5.2
10	Na (mg/L)	22.7	11.2	13.1	59.9	23.1
11	NO2+NO3 (mg N/L)	0.14	0.13	3.31		3.45
12	NO2-N (mgN/L)	0.00	0.00	1.85		0.00
13	NO3-N (mgN/L)	0.14	0.13	1.46	0.10	3.45
14	o-PO4-P (mg P/L)	0.008	0.005	0.000	0.017	0.000
15	SiO2 (mg/L)	20.8	12.6	6.1	9.0	1.3
16	SO4 (mg/L)	2.0	4.2	1.4	1.6	1.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	13	18	24	46	31
2	HAR_Total (mgCaCO3/L)	28	35	49	83	53
3	Na% (%)	61	40	37	63	36
4	RSC (-)	0.0	0.0	0.0	0.2	0.5
5	SAR (-)	1.9	0.9	0.8	4.6	1.7
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : MAROL (AKLA0C4)

Division : Cauvery Division, Bangalore

Local River : Varada

River WaterSub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	267.3	160.3	269.1	290.1	217.4
2	EC_GEN (µmho/cm)	247	383	233	111	129
3	pH_GEN (pH units)	7.8	7.9	7.6	7.5	7.1
4	TDS (mg/L)					
5	Temp (deg C)	25.6	25.5	23.9	24.4	24.8
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	65	79	69	34	40
2	B (mg/L)	0.10	0.39	0.05		
3	Ca (mg/L)	17	23	17	9	10
4	Cl (mg/L)	30.1	30.4	24.4	12.0	14.1
5	F (mg/L)	0.13	0.19	0.17	0.15	0.07
6	Fe (mg/L)	0.2	0.1	0.3	0.4	0.5
7	HCO3 (mg/L)	79	96	84	41	48
8	K (mg/L)	1.5	1.9	1.9	1.2	1.1
9	Mg (mg/L)	6.6	7.0	6.6	4.1	4.6
10	Na (mg/L)	24.1	21.7	23.2	8.0	9.4
11	NO2+NO3 (mg N/L)	0.87	1.02	1.08	0.75	0.90
12	NO2-N (mgN/L)	0.04	0.04	0.05	0.01	0.01
13	NO3-N (mgN/L)	0.82	0.98	1.03	0.73	0.89
14	o-PO4-P (mg P/L)	0.000	0.000	0.010	0.008	0.000
15	SiO2 (mg/L)	13.7	12.0	8.7	8.3	7.6
16	SO4 (mg/L)	8.8	13.2	11.8	5.5	6.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	42	58	43	23	26
2	HAR_Total (mgCaCO3/L)	70	87	70	40	45
3	Na% (%)	35	32	33	29	30
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	1.1	0.9	1.0	0.5	0.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : MAROL (AKLA0C4)

Division : Cauvery Division, Bangalore

Local River : Varada

River WaterSub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood Jun - Oct				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	163.9	213.1	401.0	64.26	13.71
2	EC_GEN (µmho/cm)	101	195	150	121	110
3	pH_GEN (pH units)	7.3	7.3	7.2	7.3	7.2
4	TDS (mg/L)					66
5	Temp (deg C)	26.5	26.5	26.0	26.8	26.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	29	65	42	32	30
2	B (mg/L)		0.01	0.10	0.60	0.07
3	Ca (mg/L)	7	15	12	10	9
4	Cl (mg/L)	12.0	17.9	16.1	15.4	15.6
5	F (mg/L)	0.07	0.21	0.11	0.11	
6	Fe (mg/L)		0.4	0.5	0.4	0.4
7	HCO3 (mg/L)	33	79	51	39	36
8	K (mg/L)	1.0	1.5	1.4	1.2	1.1
9	Mg (mg/L)	3.2	4.1	5.2	4.6	5.8
10	Na (mg/L)	7.8	20.9	10.2	6.8	4.2
11	NO2+NO3 (mg N/L)	1.08	1.78	1.95	0.71	1.00
12	NO2-N (mgN/L)	0.01	0.02	0.03	0.01	0.01
13	NO3-N (mgN/L)	1.06	1.76	1.91	0.69	0.99
14	o-PO4-P (mg P/L)		0.090	0.038	0.191	0.057
15	SiO2 (mg/L)		8.4	8.3	12.3	19.7
16	SO4 (mg/L)	5.4	9.1	7.8	8.0	3.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As (µg/L)	5.1	8.6			
2	Cd (µg/L)	0.0	0.1			
3	Cr (µg/L)	2.0	1.0			
4	Cu (µg/L)	11.2	0.8			
5	Ni (µg/L)	1.1	10.5			
6	Pb (µg/L)		0.5			
7	Zn (µg/L)		0.0			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	19	38	31	25	24
2	HAR_Total (mgCaCO3/L)	32	55	52	44	48
3	Na% (%)	32	37	27	24	17
4	RSC (-)	0.0	0.3	0.0	0.0	0.0
5	SAR (-)	0.6	1.0	0.6	0.4	0.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : MAROL (AKLA0C4)

Division : Cauvery Division, Bangalore

Local River : Varada

River WaterSub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov-Feb				
		2003-2004	2005-2006	2006-2007	2007-2008	2010-2011
	PHYSICAL					
1	Q (cumec)	10.87	33.83	174.1	85.82	23.03
2	EC_GEN (µmho/cm)	280	160	272	155	283
3	pH_GEN (pH units)	8.2	7.7	8.2	7.6	7.8
4	TDS (mg/L)					
5	Temp (deg C)	29.5	25.5	26.0	25.5	25.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	33	79	21	24	76
2	B (mg/L)		0.29	0.00	0.02	0.03
3	Ca (mg/L)	25	14	16	6	20
4	Cl (mg/L)	18.1	79.0	24.1	31.2	34.6
5	F (mg/L)	0.09	0.15	0.00	0.00	0.10
6	Fe (mg/L)	0.0	0.1	0.0	0.0	0.1
7	HCO3 (mg/L)	40	96	26	29	93
8	K (mg/L)	2.0	1.6	31.5	0.4	1.4
9	Mg (mg/L)	14.0	7.6	6.6	3.4	9.2
10	Na (mg/L)	12.2	60.7	19.8	22.1	23.0
11	NO2+NO3 (mg N/L)	0.29		0.31	0.13	1.07
12	NO2-N (mgN/L)	0.00		0.00	0.00	0.01
13	NO3-N (mgN/L)	0.29		0.31	0.13	1.06
14	o-PO4-P (mg P/L)	0.000	0.017	0.000	0.000	0.000
15	SiO2 (mg/L)	6.3	2.6	0.6	16.2	10.5
16	SO4 (mg/L)	80.9	1.9	81.6	1.9	14.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	62	35	39	15	50
2	HAR_Total (mgCaCO3/L)	120	67	66	29	88
3	Na% (%)	18	66	29	62	36
4	RSC (-)	0.0	0.2	0.0	0.0	0.0
5	SAR (-)	0.5	3.2	1.1	1.8	1.1
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : MAROL (AKLA0C4)

Division : Cauvery Division, Bangalore

Local River : Varada

River WaterSub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter Nov-Feb					
		2011-2012	2012-2013	2013-2014	2014-2015		
	PHYSICAL						
1	Q (cumec)	72.23	11.05	95.09	184.3	Samples not collected during Winter season 2002-2003,2004-2005,2008-2009,2009-2010,2015-2016 and 2016-2017 due to Dry bed/No flow	During Summer season Samples not collected due to Dry bed/No flow condition.
2	EC_GEN (µmho/cm)	241	215	276	259		
3	pH_GEN (pH units)	7.2	7.6	7.6	8.0		
4	TDS (mg/L)						
5	Temp (deg C)	25.0	26.0	27.5	26.5		
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)	77	69	85	77		
2	B (mg/L)			0.01	0.21		
3	Ca (mg/L)	18	14	24	22		
4	Cl (mg/L)	27.5	22.0	32.7	37.3		
5	F (mg/L)			0.17	0.17		
6	Fe (mg/L)	0.0		0.1	0.0		
7	HCO3 (mg/L)	94	84	103	93		
8	K (mg/L)	1.3	1.0	1.5	5.0		
9	Mg (mg/L)	6.8	5.8	5.8	8.7		
10	Na (mg/L)	19.5	19.5	25.7	16.0		
11	NO2+NO3 (mg N/L)	1.16	1.13	1.53	1.57		
12	NO2-N (mgN/L)	0.01	0.03	0.11	0.01		
13	NO3-N (mgN/L)	1.15	1.11	1.42	1.56		
14	o-PO4-P (mg P/L)	0.047		0.021	0.000		
15	SiO2 (mg/L)	10.2		9.2	8.3		
16	SO4 (mg/L)	9.1	5.5	5.1	4.4		
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)						
2	DO (mg/L)						
3	DO_SAT% (%)						
	TRACE & TOXIC						
1	As (µg/L)						
2	Cd (µg/L)				0.0		
3	Cr (µg/L)				2.6		
4	Cu (µg/L)				4.8		
5	Ni (µg/L)				0.0		
6	Pb (µg/L)				1.2		
7	Zn (µg/L)				10.0		
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	46	36	60	56		
2	HAR_Total (mgCaCO3/L)	74	60	84	92		
3	Na% (%)	36	41	39	26		
4	RSC (-)	0.1	0.2	0.0	0.0		
5	SAR (-)	1.0	1.1	1.2	0.7		
	PESTICIDES						

Samples not collected during Winter season 2002-2003,2004-2005,2008-2009,2009-2010,2015-2016 and 2016-2017 due to Dry bed/No flow

During Summer season Samples not collected due to Dry bed/No flow condition.

HISTORY SHEET

		Water Year	: 2016-2017
Site	: HARALAHALLI	Code	: AKL00S8
State	: Karnataka	District	Haveri
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	: -
Sub-Sub Tributary	:	Local River	: Tungabhadra
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tungabhadra SD Davangere
Drainage Area	: 14582 Sq. Km.	Bank	: Left
Latitude	: 14°49'50"	Longitude	: 75°40'08"
	Opening Date	Closing Date	
Gauge	: 11/08/1965		
Discharge	: 01/12/1966		
Sediment	: 01/11/1972		
Water Quality	: 01/11/1972		

Water Quality Datasheet for the period : 2016-2017

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Analysis Division : Upper Tungabhadra SD Davangere

S.No	Parameters	01/07/2016 A	01/09/2016 A	01/11/2016 A
	PHYSICAL			
1	Q (cumec)	760.9	134.2	10.45
2	Colour_Cod (-)	Light Brown	Clear	Clear
3	EC_GEN (µmho/cm)	92	280	507
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_GEN (pH units)	6.1	6.9	7.5
6	TDS (mg/L)	43	173	348
7	Temp (deg C)	24.0	25.0	25.5
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	26	68	158
3	B (mg/L)	0.13	0.18	0.05
4	Ca (mg/L)	5	30	24
5	Cl (mg/L)	9.2	39.1	44.0
6	CO3 (mg/L)	0.0	0.0	0.0
7	Fe (mg/L)	0.4	0.1	0.1
8	HCO3 (mg/L)	32	83	193
9	K (mg/L)	1.3	3.0	5.1
10	Mg (mg/L)	5.1	11.4	14.7
11	Na (mg/L)	5.6	9.0	56.8
12	NO2+NO3 (mg N/L)	0.50	2.65	1.60
13	NO2-N (mgN/L)	0.03	0.01	0.00
14	NO3-N (mgN/L)	0.48	2.63	1.60
15	o-PO4-P (mg P/L)	0.000	0.000	0.000
16	SiO2 (mg/L)	15.1	14.4	11.7
17	SO4 (mg/L)	4.4	14.5	32.1
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	0.9	0.3	1.8
2	DO (mg/L)	7.5	7.4	7.3
3	DO_SAT% (%)	89	89	89
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	12	74	61
2	HAR_Total (mgCaCO3/L)	33	122	122
3	Na% (%)	26	14	49
4	RSC (-)	0.0	0.0	0.7
5	SAR (-)	0.4	0.4	2.2
	PESTICIDES			

Samples not collected during June, August, October and from December to May due to Drybed/No flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

Sub-Division : Upper Tungabhadra SD Davangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	364	911.6	0.000	70.37
2	EC_GEN (μmho/cm)	3	507	92	293
3	pH_GEN (pH units)	3	7.5	6.1	6.8
4	TDS (mg/L)	3	348	43	188
5	Temp (deg C)	3	25.5	24.0	24.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	3	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	3	158	26	84
3	B (mg/L)	3	0.18	0.05	0.12
4	Ca (mg/L)	3	30	5	20
5	Cl (mg/L)	3	44.0	9.2	30.8
6	CO3 (mg/L)	3	0.0	0.0	0
7	Fe (mg/L)	3	0.4	0.1	0.2
8	HCO3 (mg/L)	3	193	32	103
9	K (mg/L)	3	5.1	1.3	3.1
10	Mg (mg/L)	3	14.7	5.1	10.4
11	Na (mg/L)	3	56.8	5.6	23.8
12	NO2+NO3 (mg N/L)	3	2.65	0.50	1.58
13	NO2-N (mgN/L)	3	0.03	0.00	0.01
14	NO3-N (mgN/L)	3	2.63	0.48	1.57
15	o-PO4-P (mg P/L)	3	0.000	0.000	0
16	SiO2 (mg/L)	3	15.1	11.7	13.7
17	SO4 (mg/L)	3	32.1	4.4	17
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3	1.8	0.3	1
2	DO (mg/L)	3	7.5	7.3	7.4
3	DO_SAT% (%)	3	89	89	89
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	3	74	12	49
2	HAR_Total (mgCaCO3/L)	3	122	33	92
3	Na% (%)	3	49	14	30
4	RSC (-)	3	0.7	0.0	0.2
5	SAR (-)	3	2.2	0.4	1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	176.9	189.7	201.8	544.1	440.6
2	EC_GEN (µmho/cm)	197	165	143	101	377
3	pH_GEN (pH units)	7.9	8.2	7.3	7.3	7.3
4	TDS (mg/L)					
5	Temp (deg C)	28.8	28.3	27.0	27.3	25.5
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	50	57	26	41	128
2	B (mg/L)	0.22	0.00		0.20	0.00
3	Ca (mg/L)	17	8	17	5	20
4	Cl (mg/L)	25.5	24.0	22.9	65.7	43.2
5	F (mg/L)	0.47	0.52	0.05	0.50	0.00
6	Fe (mg/L)	0.1		0.0	0.4	0.0
7	HCO3 (mg/L)	61	54	31	50	156
8	K (mg/L)	1.9	1.8	1.8	24.4	34.6
9	Mg (mg/L)	7.4	9.0	12.8	2.4	11.4
10	Na (mg/L)	16.3	15.8	14.9	49.0	31.4
11	NO2+NO3 (mg N/L)	0.32	0.21	14.50	0.13	0.17
12	NO2-N (mgN/L)	0.00	0.00	1.50	0.06	0.00
13	NO3-N (mgN/L)	0.32	0.21	8.39	0.06	0.17
14	o-PO4-P (mg P/L)	0.016	0.012	0.006	0.014	0.000
15	SiO2 (mg/L)	27.8	1.8	20.0	14.6	1.4
16	SO4 (mg/L)	12.6	8.9	26.8	13.4	10.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)				1.0	
2	DO (mg/L)	10.0			6.8	
3	DO_SAT% (%)	129			85	
	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)	41	19	43	14	49
2	HAR_Total (mgCaCO3/L)	72	57	96	24	97
3	Na% (%)	35	37	25	59	33
4	RSC (-)	0.0	0.0	0.0	0.3	0.6
5	SAR (-)	0.9	0.9	0.7	5.7	1.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	725.0	420.2	199.6	692.3	770.9
2	EC_GEN (µmho/cm)	251	233	253	136	95
3	pH_GEN (pH units)	7.4	7.9	7.8	7.3	6.6
4	TDS (mg/L)					
5	Temp (deg C)	25.2	26.0	25.5	26.0	26.0
	CHEMICAL					
1	ALK-TOT (mgCaCO ₃ /L)	63	58	71	41	28
2	B (mg/L)	0.02		0.02		
3	Ca (mg/L)	17	17	17	10	6
4	Cl (mg/L)	32.9	30.4	26.3	14.4	9.9
5	F (mg/L)	0.27	0.12	0.19	0.14	0.06
6	Fe (mg/L)	0.3		0.1	0.1	0.2
7	HCO ₃ (mg/L)	77	70	87	50	34
8	K (mg/L)	1.7	2.6	2.6	1.5	1.2
9	Mg (mg/L)	7.2	4.4	7.3	4.9	3.4
10	Na (mg/L)	24.7	20.7	27.1	12.1	7.5
11	NO ₂ +NO ₃ (mg N/L)	0.59	1.06	1.03	0.95	0.76
12	NO ₂ -N (mgN/L)	0.02	0.01	0.01	0.01	0.01
13	NO ₃ -N (mgN/L)	0.57	1.05	1.02	0.93	0.74
14	o-PO ₄ -P (mg P/L)	0.023		0.021	0.021	0.000
15	SiO ₂ (mg/L)	11.4		11.8	12.4	8.1
16	SO ₄ (mg/L)	9.7	12.4	12.6	7.9	6.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃₋₂₇ (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	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 (mgCaCO ₃ /L)	42	42	42	24	16
2	HAR_Total (mgCaCO ₃ /L)	72	60	72	44	30
3	Na% (%)	41	40	43	36	34
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	1.2	1.1	1.3	0.8	0.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood Jun - Oct				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	393.0	1097	478.3	170.1	447.5
2	EC_GEN (μmho/cm)	109	138	189	332	186
3	pH_GEN (pH units)	7.3	7.2	7.5	7.3	6.5
4	TDS (mg/L)					108
5	Temp (deg C)	25.8	25.3	25.0	25.0	24.5
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	31	38	52	75	47
2	B (mg/L)		0.02	0.14	0.99	0.16
3	Ca (mg/L)	8	10	13	21	17
4	Cl (mg/L)	13.0	16.9	24.7	42.2	24.1
5	F (mg/L)	0.08	0.06	0.15	0.26	
6	Fe (mg/L)		0.1	0.1	0.3	0.3
7	HCO3 (mg/L)	37	46	63	92	58
8	K (mg/L)	1.3	1.5	1.7	4.6	2.2
9	Mg (mg/L)	3.2	4.9	6.3	8.3	8.3
10	Na (mg/L)	9.4	10.5	17.3	32.5	7.3
11	NO2+NO3 (mg N/L)	1.15	1.00	0.98	0.98	1.58
12	NO2-N (mgN/L)	0.01	0.01	0.03	0.01	0.02
13	NO3-N (mgN/L)	1.14	0.99	0.95	0.97	1.56
14	o-PO4-P (mg P/L)		0.067	0.031	0.129	0.000
15	SiO2 (mg/L)		10.1	6.5	13.1	14.7
16	SO4 (mg/L)	5.5	8.4	5.8	25.8	9.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	0.4	1.1	0.4	0.6
2	DO (mg/L)	6.0	5.9	5.4	4.9	7.5
3	DO_SAT% (%)	73	71	65	59	89
	TRACE & TOXIC					
1	As (μg/L)	4.4	1.0			
2	Cd (μg/L)	0.2	0.0			
3	Cr (μg/L)	7.3	1.7			
4	Cu (μg/L)	29.4	0.4			
5	Hg (μg/L)					
6	Ni (μg/L)	5.4	9.0			
7	Pb (μg/L)		0.0			
8	Zn (μg/L)		0.0			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	20	26	32	52	43
2	HAR_Total (mgCaCO3/L)	33	46	58	86	77
3	Na% (%)	35	31	37	43	20
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.7	0.7	1.0	1.5	0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	150.0	63.58	58.16	92.31	51.64
2	EC_GEN (μmho/cm)	327	193	274	241	342
3	pH_GEN (pH units)	7.9	7.5	8.0	7.8	7.9
4	TDS (mg/L)					
5	Temp (deg C)	26.8	29.0	28.5	25.8	24.3
	CHEMICAL					
1	ALK-TOT (mgCaCO ₃ /L)	101	38	74	156	100
2	B (mg/L)				0.21	0.00
3	Ca (mg/L)	26	10	16	21	13
4	Cl (mg/L)	36.6	28.0	26.3	83.7	45.6
5	F (mg/L)	0.73	0.23	0.06	0.31	0.00
6	Fe (mg/L)	0.2	0.1	0.0	0.4	0.0
7	HCO ₃ (mg/L)	123	46	90	190	122
8	K (mg/L)	1.8	1.6	33.6	52.4	46.7
9	Mg (mg/L)	14.8	9.6	7.7	13.5	6.7
10	Na (mg/L)	24.7	17.9	17.7	60.5	32.8
11	NO ₂ +NO ₃ (mg N/L)	0.14	0.28		0.20	1.08
12	NO ₂ -N (mgN/L)	0.00	0.00		0.10	0.00
13	NO ₃ -N (mgN/L)	0.14	0.28	2.80	0.10	1.08
14	o-PO ₄ -P (mg P/L)	0.013	0.015	0.000	0.014	0.000
15	SiO ₂ (mg/L)	9.0		13.2	23.1	1.9
16	SO ₄ (mg/L)	13.2	21.1	17.8	14.4	15.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃₋₂₇ (mg/L)					
2	DO (mg/L)	10.1				
3	DO_SAT% (%)	126				
	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 (mgCaCO ₃ /L)	65	26	39	54	31
2	HAR_Total (mgCaCO ₃ /L)	127	65	71	110	59
3	Na% (%)	29	37	25	42	38
4	RSC (-)	0.0	0.0	0.1	0.9	0.8
5	SAR (-)	1.0	1.0	0.9	2.5	2.7
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	126.5	42.53	88.34	101.0	46.51
2	EC_GEN (μmho/cm)	383	338	407	301	384
3	pH_GEN (pH units)	8.0	8.1	7.6	7.7	7.6
4	TDS (mg/L)					
5	Temp (deg C)	25.5	25.0	25.3	25.5	25.5
	CHEMICAL					
1	ALK-TOT (mgCaCO ₃ /L)	48	91	98	84	101
2	B (mg/L)	0.11	0.11	0.08	0.06	0.00
3	Ca (mg/L)	25	21	25	19	22
4	Cl (mg/L)	57.0	37.8	48.6	25.9	46.1
5	F (mg/L)	0.19	0.21	0.24	0.16	
6	Fe (mg/L)	0.1	0.1	0.1	0.0	0.0
7	HCO ₃ (mg/L)	59	111	119	103	124
8	K (mg/L)	1.2	1.8	3.4	1.7	2.1
9	Mg (mg/L)	9.9	9.2	10.2	9.2	10.2
10	Na (mg/L)	42.6	39.8	47.1	27.5	40.8
11	NO ₂ +NO ₃ (mg N/L)	4.50	1.19	1.04	1.13	1.24
12	NO ₂ -N (mgN/L)	0.02	0.01	0.03	0.03	0.01
13	NO ₃ -N (mgN/L)	4.48	1.18	1.00	1.10	1.23
14	o-PO ₄ -P (mg P/L)	0.063	0.052	0.041	0.026	0.041
15	SiO ₂ (mg/L)	15.6	11.8	14.1	10.8	10.5
16	SO ₄ (mg/L)	37.9	31.2	38.0	21.9	25.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃₋₂₇ (mg/L)					1.7
2	DO (mg/L)					6.0
3	DO_SAT% (%)					72
	TRACE & TOXIC					
1	As (μg/L)					0.2
2	Cd (μg/L)					0.2
3	Cr (μg/L)					1.2
4	Cu (μg/L)					
5	Hg (μg/L)					
6	Ni (μg/L)					5.5
7	Pb (μg/L)					
8	Zn (μg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO ₃ /L)	61	52	62	48	56
2	HAR_Total (mgCaCO ₃ /L)	103	90	105	86	99
3	Na% (%)	47	48	47	41	46
4	RSC (-)	0.0	0.1	0.0	0.0	0.1
5	SAR (-)	1.8	1.8	2.0	1.3	1.8
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)	135.0	51.28	48.43	46.99	10.45
2	EC_GEN (μmho/cm)	385	363	479	539	507
3	pH_GEN (pH units)	7.6	7.5	7.8	7.5	7.5
4	TDS (mg/L)					348
5	Temp (deg C)	24.0	26.5	25.0	25.5	25.5
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	112	101	135	142	158
2	B (mg/L)		0.01	0.32	0.27	0.05
3	Ca (mg/L)	26	22	32	30	24
4	Cl (mg/L)	37.6	37.3	64.4	73.8	44.0
5	F (mg/L)		0.32	0.30	0.59	
6	Fe (mg/L)		0.1	0.0	0.3	0.1
7	HCO3 (mg/L)	137	123	165	173	193
8	K (mg/L)	1.7	2.4	9.2	5.7	5.1
9	Mg (mg/L)	9.7	5.8	12.6	14.6	14.7
10	Na (mg/L)	36.3	48.3	49.5	58.0	56.8
11	NO2+NO3 (mg N/L)	1.26	1.64	1.18	2.05	1.60
12	NO2-N (mgN/L)	0.00	0.01	0.03	0.00	0.00
13	NO3-N (mgN/L)	1.26	1.63	1.16	2.05	1.60
14	o-PO4-P (mg P/L)		0.062	0.036	0.258	0.000
15	SiO2 (mg/L)		10.0	7.7	26.2	11.7
16	SO4 (mg/L)	12.0	13.6	16.8	17.1	32.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	0.6	0.8	0.4	1.8
2	DO (mg/L)	5.3	6.3	6.0	5.6	7.3
3	DO_SAT% (%)	64	78	72	68	89
	TRACE & TOXIC					
1	As (μg/L)					
2	Cd (μg/L)			0.1		
3	Cr (μg/L)			6.6		
4	Cu (μg/L)			2.5		
5	Hg (μg/L)					
6	Ni (μg/L)			0.2		
7	Pb (μg/L)			1.7		
8	Zn (μg/L)			10.0		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	64	56	80	76	61
2	HAR_Total (mgCaCO3/L)	105	80	133	137	122
3	Na% (%)	43	56	42	47	49
4	RSC (-)	0.2	0.4	0.1	0.1	0.7
5	SAR (-)	1.5	2.4	1.8	2.2	2.2
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Summer				
		Mar - May				
		2003	2004	2005	2006	2007
	PHYSICAL					
1	Q (cumec)	Drybed/No flow		40.00	32.26	11.79
2	EC_GEN (μmho/cm)			293		401
3	pH_GEN (pH units)			8.1		8.2
4	TDS (mg/L)					
5	Temp (deg C)			27.0	28.5	29.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)			131		125
2	B (mg/L)					0.00
3	Ca (mg/L)			14		19
4	Cl (mg/L)			21.2		48.0
5	F (mg/L)			0.65		0.00
6	Fe (mg/L)			0.0		0.0
7	HCO3 (mg/L)			80		152
8	K (mg/L)			24.9		41.8
9	Mg (mg/L)			5.3		10.4
10	Na (mg/L)			15.2		36.5
11	NO2+NO3 (mg N/L)			4.85		4.48
12	NO2-N (mgN/L)			2.10		0.00
13	NO3-N (mgN/L)			2.75		4.48
14	o-PO4-P (mg P/L)			0.012		0.000
15	SiO2 (mg/L)					3.0
16	SO4 (mg/L)			2.0		2.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As (μg/L)				16.8	6.4
2	Cd (μg/L)				0.0	4.0
3	Cr (μg/L)				7.5	
4	Cu (μg/L)				3.1	3.0
5	Hg (μg/L)			0.2		
6	Ni (μg/L)			2.1	1.8	
7	Pb (μg/L)				2.1	1.7
8	Zn (μg/L)					22.0
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)			36		47
2	HAR_Total (mgCaCO3/L)			58		91
3	Na% (%)			27		36
4	RSC (-)			0.2		0.7
5	SAR (-)			0.9		1.7
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Summer				
		Mar - May				
		2008	2009	2010	2011	2012
	PHYSICAL					
1	Q (cumec)	45.83	72.96	30.50	52.18	125.2
2	EC_GEN (µmho/cm)	224	230	468	501	270
3	pH_GEN (pH units)	8.2	8.1	8.0	7.6	7.3
4	TDS (mg/L)					
5	Temp (deg C)	26.3	26.0	26.0	26.0	26.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	48	70	123	124	81
2	B (mg/L)	0.07	0.10	0.10	0.16	
3	Ca (mg/L)	15	16	26	26	18
4	Cl (mg/L)	30.0	24.9	51.0	54.0	26.8
5	F (mg/L)	0.10	0.08	0.21	0.49	0.30
6	Fe (mg/L)	0.1	0.1	0.1	0.2	
7	HCO3 (mg/L)	58	85	150	151	98
8	K (mg/L)	1.6	2.0	3.4	4.1	2.1
9	Mg (mg/L)	6.7	6.8	12.1	12.6	7.3
10	Na (mg/L)	21.5	22.1	55.8	50.4	24.3
11	NO2+NO3 (mg N/L)	0.97	1.02	0.88	1.02	1.75
12	NO2-N (mgN/L)	0.01	0.00	0.01	0.00	0.12
13	NO3-N (mgN/L)	0.96	1.02	0.86	1.02	1.63
14	o-PO4-P (mg P/L)	0.326	0.021	0.026	0.031	
15	SiO2 (mg/L)	13.5	10.6	14.3	16.6	
16	SO4 (mg/L)	15.0	15.8	33.2	39.8	14.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					1.9
2	DO (mg/L)					5.2
3	DO_SAT% (%)					64
	TRACE & TOXIC					
1	As (µg/L)	2.2			1.6	1.6
2	Cd (µg/L)	0.9			0.0	0.3
3	Cr (µg/L)				1.3	2.4
4	Cu (µg/L)	3.7				2.0
5	Hg (µg/L)					
6	Ni (µg/L)					7.7
7	Pb (µg/L)	1.6				3.8
8	Zn (µg/L)	29.0				44.0
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	39	40	64	64	46
2	HAR_Total (mgCaCO3/L)	66	68	115	117	76
3	Na% (%)	41	41	51	48	40
4	RSC (-)	0.0	0.0	0.2	0.2	0.1
5	SAR (-)	1.2	1.2	2.3	2.0	1.2
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HARALAHALLI (AKL00S8)

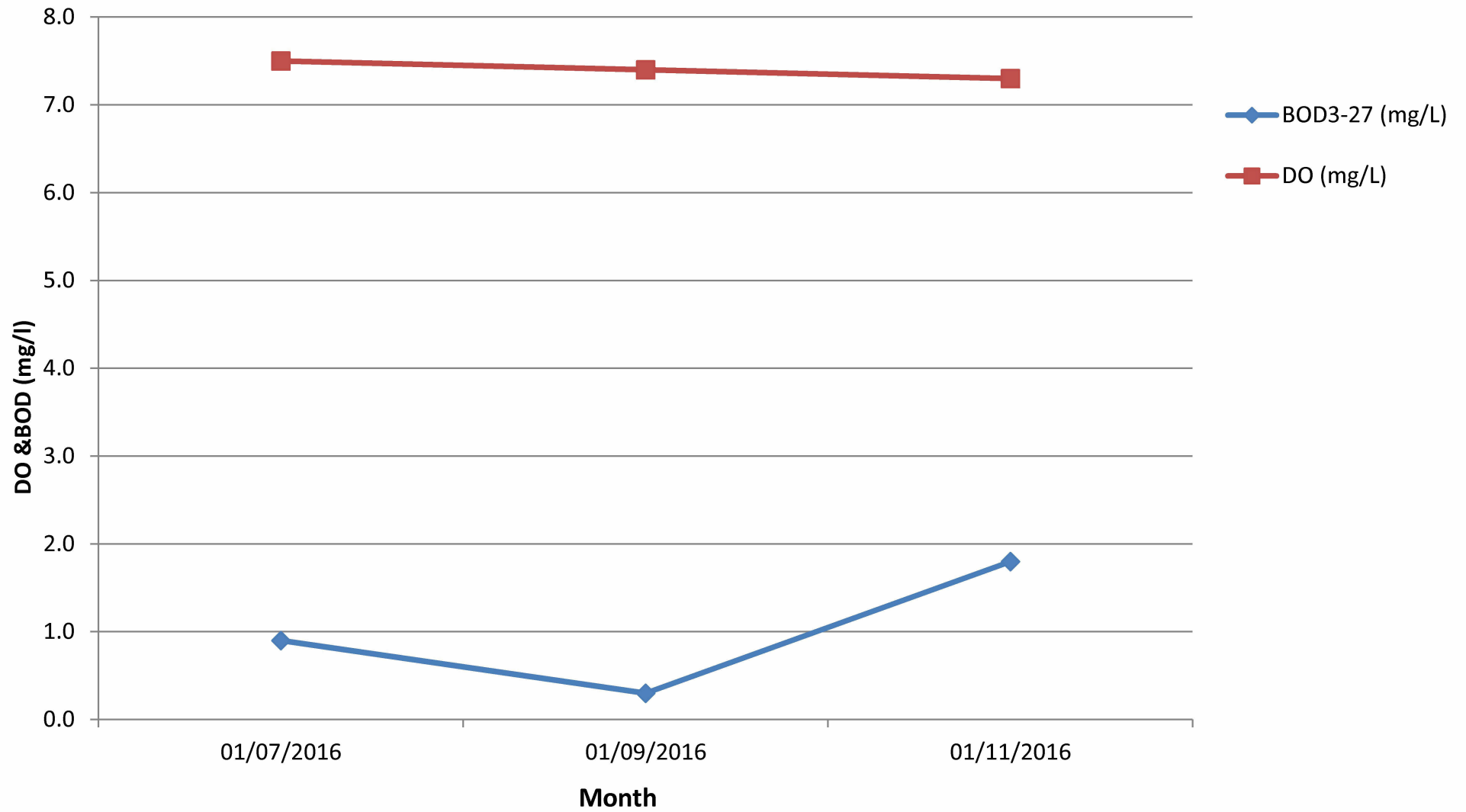
Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Summer				
		Mar - May				
		2013	2014	2015	2016	2017
	PHYSICAL					
1	Q (cumec)	32.01	32.62	18.71	Drybed/No flow	
2	EC_GEN (µmho/cm)	398	480	421		
3	pH_GEN (pH units)	8.4	7.1	7.3		
4	TDS (mg/L)					
5	Temp (deg C)	26.5	25.5	25.0		
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	101	160	119		
2	B (mg/L)	0.00	0.21	0.33		
3	Ca (mg/L)	32	29	29		
4	Cl (mg/L)	44.7	43.3	54.0		
5	F (mg/L)		0.47	0.47		
6	Fe (mg/L)	0.1	0.1	0.1		
7	HCO3 (mg/L)	123	195	145		
8	K (mg/L)	2.2	2.7	12.5		
9	Mg (mg/L)	6.8	9.7	9.7		
10	Na (mg/L)	40.4	55.5	43.6		
11	NO2+NO3 (mg N/L)	2.27	1.25	1.30		
12	NO2-N (mgN/L)	0.01	0.10	0.23		
13	NO3-N (mgN/L)	2.26	1.15	1.06		
14	o-PO4-P (mg P/L)	0.031	0.062	0.010		
15	SiO2 (mg/L)	9.9	11.7	4.7		
16	SO4 (mg/L)	22.1	26.3	18.5		
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.2			
2	DO (mg/L)	5.4	4.3	5.2		
3	DO_SAT% (%)	66	52	63		
	TRACE & TOXIC					
1	As (µg/L)	7.0				
2	Cd (µg/L)	0.1				
3	Cr (µg/L)	0.7				
4	Cu (µg/L)	6.2				
5	Hg (µg/L)					
6	Ni (µg/L)	4.7				
7	Pb (µg/L)	5.5				
8	Zn (µg/L)	410.9				
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	80	72	72		
2	HAR_Total (mgCaCO3/L)	108	113	113		
3	Na% (%)	44	51	43		
4	RSC (-)	0.0	1.0	0.1		
5	SAR (-)	1.7	2.3	1.8		
	PESTICIDES					

Harlahalli



HISTORY SHEET

		Water Year	: 2016-2017
Site	: BYALADAHALLI	Code	: AKLB0D3
State	: Karnataka	District	Davanagere
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	: Haridra
Sub-Sub Tributary	:	Local River	: Haridra
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tungabhadra SD Davangere
Drainage Area	: 2300 Sq. Km.	Bank	: Right
Latitude	: 14°26'02"	Longitude	: 75°46'47"
	Opening Date	Closing Date	
Gauge	: 21/03/1985		
Discharge	: 11/06/1985		
Sediment	: 10/12/1997		
Water Quality	: 02/06/1986		

Water Quality Datasheet for the period : 2016-2017

Station Name : BYALADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water Analysis Division : Upper Tungabhadra SD Davangere

S.No	Parameters	03/10/2016 A	01/11/2016 A	01/12/2016 A
	PHYSICAL			
1	Q (cumec)	22.14	10.35	2.063
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	734	848	892
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_GEN (pH units)	8.1	7.9	7.8
6	TDS (mg/L)	455		562
7	Temp (deg C)	24.0	25.0	24.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	196	303	297
3	B (mg/L)	0.20	0.02	0.01
4	Ca (mg/L)	35	42	45
5	Cl (mg/L)	83.1	84.5	98.3
6	CO3 (mg/L)	0.0	0.0	0.0
7	Fe (mg/L)	0.0	0.0	0.1
8	HCO3 (mg/L)	239	370	363
9	K (mg/L)	3.9	3.0	2.6
10	Mg (mg/L)	23.3	21.7	25.0
11	Na (mg/L)	98.0	102.1	110.1
12	NO2+NO3 (mg N/L)	3.61	1.98	1.30
13	NO2-N (mgN/L)	0.01	0.01	0.03
14	NO3-N (mgN/L)	3.60	1.96	1.28
15	o-PO4-P (mg P/L)	0.413	0.744	0.176
16	SiO2 (mg/L)	10.1	35.2	14.3
17	SO4 (mg/L)	44.1	42.1	51.8
	BIOLOGICAL/BACTERIOLOGICAL			
	TRACE & TOXIC			
1	As (µg/L)			0.9
2	Cd (µg/L)			0.1
3	Cr (µg/L)			0.2
4	Cu (µg/L)			1.0
5	Ni (µg/L)			1.0
6	Pb (µg/L)			0.0
7	Zn (µg/L)			2.0
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	88	105	113
2	HAR_Total (mgCaCO3/L)	185	196	217
3	Na% (%)	53	53	52
4	RSC (-)	0.2	2.2	1.6
5	SAR (-)	3.1	3.2	3.3
	PESTICIDES			

Samples not collected during June to September and from January to May months due to Drybed/No flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : BYALADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

Sub-Division : Upper Tungabhadra SD Davangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	23.65	0.000	2.052
2	EC_GEN (μmho/cm)	3	892	734	825
3	pH_GEN (pH units)	3	8.1	7.8	7.9
4	TDS (mg/L)	2	562	455	509
5	Temp (deg C)	3	25.0	24.0	24.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	3	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	3	303	196	265
3	B (mg/L)	3	0.20	0.01	0.08
4	Ca (mg/L)	3	45	35	41
5	Cl (mg/L)	3	98.3	83.1	88.6
6	CO3 (mg/L)	3	0.0	0.0	0
7	Fe (mg/L)	3	0.1	0.0	0
8	HCO3 (mg/L)	3	370	239	324
9	K (mg/L)	3	3.9	2.6	3.2
10	Mg (mg/L)	3	25.0	21.7	23.4
11	Na (mg/L)	3	110.1	98.0	103.4
12	NO2+NO3 (mg N/L)	3	3.61	1.30	2.3
13	NO2-N (mgN/L)	3	0.03	0.01	0.02
14	NO3-N (mgN/L)	3	3.60	1.28	2.28
15	o-PO4-P (mg P/L)	3	0.744	0.176	0.444
16	SiO2 (mg/L)	3	35.2	10.1	19.8
17	SO4 (mg/L)	3	51.8	42.1	46
	BIOLOGICAL/BACTERIOLOGICAL				
	TRACE & TOXIC				
1	As (μg/L)	1	0.9	0.9	0.9
2	Cd (μg/L)	1	0.1	0.1	0.1
3	Cr (μg/L)	1	0.2	0.2	0.2
4	Cu (μg/L)	1	1.0	1.0	1
5	Ni (μg/L)	1	1.0	1.0	1
6	Pb (μg/L)	1	0.0	0.0	0
7	Zn (μg/L)	1	2.0	2.0	2
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	3	113	88	102
2	HAR_Total (mgCaCO3/L)	3	217	185	199
3	Na% (%)	3	53	52	53
4	RSC (-)	3	2.2	0.2	1.4
5	SAR (-)	3	3.3	3.1	3.2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : BYALADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water

Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	1.580	0.000	5.450	22.30	Drybed/No flow
2	EC_GEN (µmho/cm)	562	390	589	402	
3	pH_GEN (pH units)	7.9	6.6	8.1	7.8	
4	TDS (mg/L)					
5	Temp (deg C)	25.8	26.0	26.0	24.3	
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	157	77	163	78	
2	B (mg/L)	0.28		0.13	0.22	
3	Ca (mg/L)	36	29	38	18	
4	Cl (mg/L)	78.6	44.0	88.0	64.3	
5	F (mg/L)	0.86	0.36	0.74	0.44	
6	Fe (mg/L)	0.1	0.2	0.7	0.2	
7	HCO3 (mg/L)	161	93	199	95	
8	K (mg/L)	2.6	3.5	25.8	17.4	
9	Mg (mg/L)	22.4	15.8	21.0	9.6	
10	Na (mg/L)	57.6	24.1	51.2	47.5	
11	NH3-N (mg N/L)	0.00	0.00		0.00	
12	NO2+NO3 (mg N/L)	0.60	0.28	4.35	4.90	
13	NO2-N (mgN/L)	0.00	0.00	1.80	0.00	
14	NO3-N (mgN/L)	0.60	0.28	2.55	1.90	
15	o-PO4-P (mg P/L)	0.008	0.083	0.000	0.265	
16	SiO2 (mg/L)	47.5	22.5	4.8	3.4	
17	SO4 (mg/L)	39.7	36.5	20.0	26.8	
	BIOLOGICAL/BACTERIOLOGICAL					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	91	73	94	46	
2	HAR_Total (mgCaCO3/L)	184	138	182	86	
3	Na% (%)	40	27	34	50	
4	RSC (-)	0.0	0.0	0.0	0.1	
5	SAR (-)	1.9	0.9	1.7	2.3	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : BYALADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water

Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	Drybed/No flow	16.37	24.01	31.75	21.61
2	EC_GEN (µmho/cm)		543	548	565	599
3	pH_GEN (pH units)		8.0	7.9	7.8	7.7
4	TDS (mg/L)					
5	Temp (deg C)		25.6	24.3	25.9	28.5
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)		152	177	178	192
2	B (mg/L)		0.36	0.11	0.09	0.05
3	Ca (mg/L)		34	33	33	35
4	Cl (mg/L)		62.3	49.5	54.3	59.6
5	F (mg/L)		0.56	0.69	0.56	0.75
6	Fe (mg/L)		0.1	0.1	0.0	0.0
7	HCO3 (mg/L)		185	216	217	234
8	K (mg/L)		4.7	5.2	4.0	4.6
9	Mg (mg/L)		13.1	15.1	17.7	15.9
10	Na (mg/L)		58.9	62.7	60.3	69.2
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)		1.13	1.22	1.24	1.32
13	NO2-N (mgN/L)		0.04	0.04	0.06	0.02
14	NO3-N (mgN/L)		1.08	1.18	1.15	1.29
15	o-PO4-P (mg P/L)		0.186	0.220	0.129	0.096
16	SiO2 (mg/L)		9.1	11.8	9.8	10.6
17	SO4 (mg/L)		32.0	30.2	28.1	31.9
	BIOLOGICAL/BACTERIOLOGICAL					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		86	83	83	88
2	HAR_Total (mgCaCO3/L)		141	146	157	154
3	Na% (%)		47	46	44	48
4	RSC (-)		0.4	0.6	0.5	0.8
5	SAR (-)		2.2	2.2	2.1	2.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : BYALADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water

Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	20.33	27.79	21.97	27.48	22.14
2	EC_GEN (µmho/cm)	572	516	654	633	734
3	pH_GEN (pH units)	7.7	7.9	7.9	7.7	8.1
4	TDS (mg/L)					455
5	Temp (deg C)	27.0	26.1	24.9	25.5	24.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	186	143	216	183	196
2	B (mg/L)		0.04	0.23	0.71	0.20
3	Ca (mg/L)	36	32	39	43	35
4	Cl (mg/L)	55.6	52.8	67.7	66.6	83.1
5	F (mg/L)	0.92	0.29	0.29	0.88	
6	Fe (mg/L)		0.1	0.1	0.1	0.0
7	HCO3 (mg/L)	227	203	263	223	239
8	K (mg/L)	3.0	3.8	5.6	4.6	3.9
9	Mg (mg/L)	13.6	13.4	18.5	16.0	23.3
10	Na (mg/L)	65.0	58.3	68.7	67.9	98.0
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)	2.85	2.36	2.30	1.35	3.61
13	NO2-N (mgN/L)	0.02	0.01	0.05	0.09	0.01
14	NO3-N (mgN/L)	2.83	2.34	2.25	1.26	3.60
15	o-PO4-P (mg P/L)		0.065	0.235	0.289	0.413
16	SiO2 (mg/L)		16.4	7.2	13.3	10.1
17	SO4 (mg/L)	20.0	19.6	18.2	53.3	44.1
	BIOLOGICAL/BACTERIOLOGICAL					
	TRACE & TOXIC					
1	As (µg/L)	0.8	9.1			
2	Cd (µg/L)	0.2	0.9			
3	Cr (µg/L)	2.0	1.8			
4	Cu (µg/L)	31.4	1.6			
5	Ni (µg/L)	1.1	15.1			
6	Pb (µg/L)		3.8			
7	Zn (µg/L)		0.0			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	89	81	97	107	88
2	HAR_Total (mgCaCO3/L)	146	137	174	174	185
3	Na% (%)	48	44	44	45	53
4	RSC (-)	0.8	0.7	0.9	0.2	0.2
5	SAR (-)	2.3	2.0	2.2	2.2	3.1
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : BYALADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water

Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		2002-2003	2003-2004	Nov - Feb 2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	24.77		4.350	15.10	Drybed/No flow
2	EC_GEN (µmho/cm)	436		549	756	
3	pH_GEN (pH units)	8.0		8.0	7.8	
4	TDS (mg/L)					
5	Temp (deg C)	23.2		25.0	23.5	
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	120		156	110	
2	B (mg/L)				0.16	
3	Ca (mg/L)	35		25	30	
4	Cl (mg/L)	56.0		78.3	134.5	
5	F (mg/L)	1.22		0.54	0.32	
6	Fe (mg/L)	0.0		0.5	0.3	
7	HCO3 (mg/L)	147		190	134	
8	K (mg/L)	2.7		51.6	26.2	
9	Mg (mg/L)	18.0		13.4	14.6	
10	Na (mg/L)	35.6		55.2	86.2	
11	NH3-N (mg N/L)	0.00				
12	NO2+NO3 (mg N/L)	0.56		4.20	0.56	
13	NO2-N (mgN/L)	0.00		1.10	0.28	
14	NO3-N (mgN/L)	0.56		3.10	0.29	
15	o-PO4-P (mg P/L)	0.007		0.000	0.082	
16	SiO2 (mg/L)	33.6		12.6	2.5	
17	SO4 (mg/L)	23.7		21.0	24.4	
	BIOLOGICAL/BACTERIOLOGICAL					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	86		63	75	
2	HAR_Total (mgCaCO3/L)	161		118	136	
3	Na% (%)	30		40	52	
4	RSC (-)	0.0		0.8	0.0	
5	SAR (-)	1.3		2.2	3.3	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : BYALADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water

Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		2007-2008	2008-2009	Nov - Feb 2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	Drybed/No flow	23.58	8.290	19.36	6.850
2	EC_GEN (µmho/cm)		554	572	604	708
3	pH_GEN (pH units)		8.1	7.9	7.9	7.3
4	TDS (mg/L)					
5	Temp (deg C)		24.6	25.2	28.7	28.5
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)		191	197	190	294
2	B (mg/L)		0.16	0.12	0.14	
3	Ca (mg/L)		35	34	38	41
4	Cl (mg/L)		51.5	55.5	66.1	57.7
5	F (mg/L)		0.55	0.55	0.49	
6	Fe (mg/L)		0.1	0.0	0.0	0.0
7	HCO3 (mg/L)		232	241	232	297
8	K (mg/L)		2.7	4.0	4.8	3.0
9	Mg (mg/L)		16.5	16.5	16.8	15.1
10	Na (mg/L)		58.2	67.2	64.7	92.3
11	NH3-N (mg N/L)			0.00		
12	NO2+NO3 (mg N/L)		0.48	0.94	1.01	1.46
13	NO2-N (mgN/L)		0.03	0.05	0.04	0.03
14	NO3-N (mgN/L)		0.46	0.90	0.98	1.43
15	o-PO4-P (mg P/L)		0.150	0.124	0.065	0.078
16	SiO2 (mg/L)		10.9	10.6	10.3	11.4
17	SO4 (mg/L)		20.0	25.0	27.5	31.5
	BIOLOGICAL/BACTERIOLOGICAL					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		88	84	94	102
2	HAR_Total (mgCaCO3/L)		157	153	165	165
3	Na% (%)		44	48	44	54
4	RSC (-)		0.7	0.9	0.5	1.6
5	SAR (-)		2.0	2.4	2.2	3.1
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : BYALADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water

Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)	170.4	4.156	12.45	9.518	6.206
2	EC_GEN (µmho/cm)	683	610	649	577	870
3	pH_GEN (pH units)	7.6	7.7	7.9	7.9	7.9
4	TDS (mg/L)					562
5	Temp (deg C)	23.5	25.5	24.7	25.0	24.5
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	232	218	220	192	300
2	B (mg/L)		0.02	0.33	0.35	0.01
3	Ca (mg/L)	42	37	43	33	44
4	Cl (mg/L)	64.8	55.2	70.1	60.3	91.4
5	F (mg/L)	0.65	0.70	0.60	0.70	
6	Fe (mg/L)		0.0	0.0	0.1	0.0
7	HCO3 (mg/L)	284	266	268	234	366
8	K (mg/L)	4.1	2.4	12.1	2.2	2.8
9	Mg (mg/L)	17.5	15.6	17.8	18.5	23.4
10	Na (mg/L)	70.8	80.1	67.0	66.9	106.1
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)	1.69	1.90	2.18	1.62	1.64
13	NO2-N (mgN/L)	0.03	0.07	0.02	0.04	0.02
14	NO3-N (mgN/L)	1.66	1.83	2.16	1.58	1.62
15	o-PO4-P (mg P/L)		0.098	0.093	0.434	0.460
16	SiO2 (mg/L)		14.2	9.3	14.8	24.7
17	SO4 (mg/L)	16.3	20.6	23.9	30.4	47.0
	BIOLOGICAL/BACTERIOLOGICAL					
	TRACE & TOXIC					
1	As (µg/L)					0.9
2	Cd (µg/L)			0.2		0.1
3	Cr (µg/L)			0.0		0.2
4	Cu (µg/L)			4.5		1.0
5	Ni (µg/L)			0.0		1.0
6	Pb (µg/L)			1.3		0.0
7	Zn (µg/L)			9.0		2.0
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	106	92	107	82	109
2	HAR_Total (mgCaCO3/L)	179	157	181	159	206
3	Na% (%)	46	52	41	48	53
4	RSC (-)	1.1	1.2	0.8	0.7	1.9
5	SAR (-)	2.3	2.8	2.1	2.3	3.2
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : BYALADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water

Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Summer			
		Mar-May			
		2006	2008	2012	2017
	PHYSICAL				
1	Q (cumec)	1.270	3.059	40.28	
2	EC_GEN (µmho/cm)	273	653	531	
3	pH_GEN (pH units)	7.4	7.8	7.5	
4	TDS (mg/L)				
5	Temp (deg C)	28.5	27.0	29.5	
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)	152	199	181	
2	B (mg/L)	0.12	0.12		
3	Ca (mg/L)	36	44	32	
4	Cl (mg/L)	123.4	71.6	47.9	
5	F (mg/L)	0.30	0.30	0.84	
6	Fe (mg/L)	0.2	0.1		
7	HCO3 (mg/L)	186	243	220	
8	K (mg/L)	14.1	7.0	4.2	
9	Mg (mg/L)	22.3	24.5	19.4	
10	Na (mg/L)	85.7	52.0	54.0	
11	NH3-N (mg N/L)	1.00			
12	NO2+NO3 (mg N/L)		1.23	2.60	
13	NO2-N (mgN/L)		0.00	0.08	
14	NO3-N (mgN/L)	0.28	1.23	2.52	
15	o-PO4-P (mg P/L)	0.073	0.052		
16	SiO2 (mg/L)	1.0	38.6		
17	SO4 (mg/L)	43.9	13.7	19.1	
	BIOLOGICAL/BACTERIOLOGICAL				
	TRACE & TOXIC				
1	As (µg/L)		4.2	0.6	
2	Cd (µg/L)		1.0	0.2	
3	Cr (µg/L)			2.7	
4	Cu (µg/L)		6.5	3.0	
5	Ni (µg/L)			5.1	
6	Pb (µg/L)		2.3	3.8	
7	Zn (µg/L)		58.0	55.0	
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	90	111	80	
2	HAR_Total (mgCaCO3/L)	182	213	161	
3	Na% (%)	48	34	42	
4	RSC (-)	0.0	0.0	0.4	
5	SAR (-)	2.8	1.6	1.9	
	PESTICIDES				

Samples not collected during Summer season 2003 to 2005, 2007, 2009 to 2011 and from 2013 to 2017 due to Drybed/No flow.

HISTORY SHEET

		Water Year : 2016-2017	
Site	: KUPPELUR	Code	: AKLC0B8
State	: Karnataka	District	Haveri
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	: Kumudavathi
Sub-Sub Tributary	:	Local River	: Kumudavathi
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tungabhadra SD Davangere
Drainage Area	: 1850 Sq. Km.	Bank	: Left
Latitude	: 14°30'00"	Longitude	: 75°38'02"
	Opening Date	Closing Date	
Gauge	: 01/06/1990		
Discharge	: 24/07/1990		
Sediment	:		
Water Quality	: 01/07/1994		

Water Quality Datasheet for the period : 2016-2017

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

River Water Analysis Division : Upper Tungabhadra SD Davangere

S.No	Parameters	01/08/2016 A	01/09/2016 A	03/10/2016 A
	PHYSICAL			
1	Q (cumec)	4.597	3.496	0.984
2	Colour_Cod (-)	Light Brown	Clear	Clear
3	EC_GEN (µmho/cm)	390	491	825
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_GEN (pH units)	7.4	7.3	7.8
6	TDS (mg/L)	250	297	502
7	Temp (deg C)	27.0	26.5	27.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	119	123	164
3	B (mg/L)	0.05	0.17	0.25
4	Ca (mg/L)	33	32	36
5	Cl (mg/L)	57.5	61.1	131.0
6	CO3 (mg/L)	0.0	0.0	0.0
7	Fe (mg/L)	0.3	0.1	0.0
8	HCO3 (mg/L)	145	150	200
9	K (mg/L)	5.8	2.9	4.0
10	Mg (mg/L)	10.8	41.2	32.1
11	Na (mg/L)	27.5	7.5	93.0
12	NO2+NO3 (mg N/L)	1.04	2.68	3.74
13	NO2-N (mgN/L)	0.01	0.00	0.01
14	NO3-N (mgN/L)	1.02	2.68	3.73
15	o-PO4-P (mg P/L)	0.021	0.021	0.052
16	SiO2 (mg/L)	9.4	17.3	13.8
17	SO4 (mg/L)	10.7	30.7	62.1
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	2.2	0.7	3.7
2	DO (mg/L)	7.9	5.5	5.7
3	DO_SAT% (%)	99	68	72
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	83	80	91
2	HAR_Total (mgCaCO3/L)	128	252	224
3	Na% (%)	31	6	47
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	1.1	0.2	2.7
	PESTICIDES			

Samples not collected during June, July and from November to May months due to Drybed/No flow.

Water Quality Summary for the period : 2016-2017

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

Sub-Division : Upper Tungabhadra SD Davangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	8.782	0.000	0.721
2	EC_GEN (μmho/cm)	3	825	390	569
3	pH_GEN (pH units)	3	7.8	7.3	7.5
4	TDS (mg/L)	3	502	250	350
5	Temp (deg C)	3	27.0	26.5	26.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	3	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	3	164	119	135
3	B (mg/L)	3	0.25	0.05	0.16
4	Ca (mg/L)	3	36	32	34
5	Cl (mg/L)	3	131.0	57.5	83.2
6	CO3 (mg/L)	3	0.0	0.0	0
7	Fe (mg/L)	3	0.3	0.0	0.2
8	HCO3 (mg/L)	3	200	145	165
9	K (mg/L)	3	5.8	2.9	4.2
10	Mg (mg/L)	3	41.2	10.8	28
11	Na (mg/L)	3	93.0	7.5	42.7
12	NO2+NO3 (mg N/L)	3	3.74	1.04	2.48
13	NO2-N (mgN/L)	3	0.01	0.00	0.01
14	NO3-N (mgN/L)	3	3.73	1.02	2.48
15	o-PO4-P (mg P/L)	3	0.052	0.021	0.031
16	SiO2 (mg/L)	3	17.3	9.4	13.5
17	SO4 (mg/L)	3	62.1	10.7	34.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3	3.7	0.7	2.2
2	DO (mg/L)	3	7.9	5.5	6.4
3	DO_SAT% (%)	3	99	68	80
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	3	91	80	84
2	HAR_Total (mgCaCO3/L)	3	252	128	201
3	Na% (%)	3	47	6	28
4	RSC (-)	3	0.0	0.0	0
5	SAR (-)	3	2.7	0.2	1.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	2.039	55.64	9.945	44.17	Drybed/No flow
2	EC_GEN (µmho/cm)	334	355	436	192	
3	pH_GEN (pH units)	8.1	6.6	8.1	7.6	
4	TDS (mg/L)					
5	Temp (deg C)	25.5	29.0	26.0	24.6	
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	102	118	248	46	
2	B (mg/L)			0.11	0.22	
3	Ca (mg/L)	27	31	22	9	
4	Cl (mg/L)	40.1	35.5	67.1	50.6	
5	F (mg/L)	0.06	0.21	0.32		
6	Fe (mg/L)	0.0	0.4			
7	HCO3 (mg/L)	124	144	151	56	
8	K (mg/L)	4.7	2.3	6.2	4.5	
9	Mg (mg/L)	10.9	16.5	18.2	4.3	
10	Na (mg/L)	30.0	21.4	49.8	38.2	
11	NO2+NO3 (mg N/L)	0.00	0.28		0.07	
12	NO2-N (mgN/L)	0.00	0.00		0.00	
13	NO3-N (mgN/L)	0.00	0.28	1.45	0.07	
14	o-PO4-P (mg P/L)	0.000	0.010		0.043	
15	SiO2 (mg/L)		9.9	6.2	5.2	
16	SO4 (mg/L)	11.0	9.1	4.5	1.9	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	67	79	54	22	
2	HAR_Total (mgCaCO3/L)	113	147	130	40	
3	Na% (%)	36	24	44	62	
4	RSC (-)	0.0	0.0	0.0	0.1	
5	SAR (-)	1.2	0.8	1.9	2.7	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	Drybed/No flow	22.59	56.14	118.8	31.66
2	EC_GEN (μmho/cm)		298	292	343	343
3	pH_GEN (pH units)		8.0	7.9	7.8	7.4
4	TDS (mg/L)					
5	Temp (deg C)		25.1	25.8	26.2	26.2
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)		88	85	106	100
2	B (mg/L)		0.33	0.04		
3	Ca (mg/L)		29	24	27	27
4	Cl (mg/L)		28.8	34.0	42.3	39.5
5	F (mg/L)		0.19	0.26	0.22	0.29
6	Fe (mg/L)		0.1	0.2	0.5	0.1
7	HCO3 (mg/L)		108	104	129	122
8	K (mg/L)		3.1	3.4	2.5	2.6
9	Mg (mg/L)		8.7	9.0	13.1	11.0
10	Na (mg/L)		17.3	22.0	25.1	23.9
11	NO2+NO3 (mg N/L)		1.36	1.20	1.70	1.69
12	NO2-N (mgN/L)		0.02	0.03	0.01	0.01
13	NO3-N (mgN/L)		1.34	1.17	1.69	1.68
14	o-PO4-P (mg P/L)		0.000	0.023	0.028	0.000
15	SiO2 (mg/L)		10.0	10.7	9.6	10.2
16	SO4 (mg/L)		12.5	15.6	11.1	7.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As (μg/L)					
2	Cd (μg/L)					
3	Cr (μg/L)					
4	Cu (μg/L)					
5	Ni (μg/L)					
6	Pb (μg/L)					
7	Zn (μg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		72	60	68	68
2	HAR_Total (mgCaCO3/L)		108	97	123	114
3	Na% (%)		25	30	29	31
4	RSC (-)		0.0	0.0	0.0	0.0
5	SAR (-)		0.7	1.0	0.9	1.0
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	16.87	132.2	148.5	12.94	3.026
2	EC_GEN (μmho/cm)	334	307	247	311	569
3	pH_GEN (pH units)	7.4	7.5	7.4	7.5	7.5
4	TDS (mg/L)					350
5	Temp (deg C)	25.8	26.5	26.0	27.5	26.8
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	119	92	69	89	135
2	B (mg/L)		0.01	0.11	0.67	0.16
3	Ca (mg/L)	31	29	20	25	34
4	Cl (mg/L)	34.4	33.8	28.2	38.9	83.2
5	F (mg/L)	0.32	0.30	0.16	0.34	
6	Fe (mg/L)		0.3	0.6	0.2	0.2
7	HCO3 (mg/L)	133	112	85	108	165
8	K (mg/L)	3.0	2.8	3.9	3.4	4.2
9	Mg (mg/L)	8.3	7.1	9.1	10.2	28.0
10	Na (mg/L)	21.3	27.2	16.2	20.9	42.7
11	NO2+NO3 (mg N/L)	2.37	3.25	2.90	1.06	2.48
12	NO2-N (mgN/L)	0.01	0.01	0.05	0.01	0.01
13	NO3-N (mgN/L)	2.35	3.23	2.85	1.04	2.48
14	o-PO4-P (mg P/L)		0.090	0.062	0.256	0.031
15	SiO2 (mg/L)		7.9	6.4	14.6	13.5
16	SO4 (mg/L)	10.2	13.7	12.2	12.3	34.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)			1.4	1.3	2.2
2	DO (mg/L)			6.0	4.8	6.4
3	DO_SAT% (%)			74	61	80
	TRACE & TOXIC					
1	As (μg/L)	1.6	6.0			
2	Cd (μg/L)	0.7	0.3			
3	Cr (μg/L)	3.4	1.0			
4	Cu (μg/L)	11.6	1.9			
5	Ni (μg/L)	3.5	11.9			
6	Pb (μg/L)		12.8			
7	Zn (μg/L)		0.0			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	78	73	51	63	84
2	HAR_Total (mgCaCO3/L)	112	103	88	106	201
3	Na% (%)	29	34	29	29	28
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.9	1.1	0.8	0.9	1.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	23.06	1.601	2.480	15.87	Drybed/No flow
2	EC_GEN (μmho/cm)	375	353	545	270	
3	pH_GEN (pH units)	8.0	8.2	7.9	7.7	
4	TDS (mg/L)					
5	Temp (deg C)	25.5	30.0	25.0	24.0	
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	136	133	272	105	
2	B (mg/L)				0.28	
3	Ca (mg/L)	33	34	28	28	
4	Cl (mg/L)	33.4	34.1	88.6	91.7	
5	F (mg/L)	0.76	0.21	0.25		
6	Fe (mg/L)	0.0	0.5			
7	HCO3 (mg/L)	166	162	166	128	
8	K (mg/L)	2.0	2.7	4.6	3.3	
9	Mg (mg/L)	18.1	15.3	20.0	14.3	
10	Na (mg/L)	21.9	21.6	66.2	58.7	
11	NO2+NO3 (mg N/L)	0.00	0.28			
12	NO2-N (mgN/L)	0.00	0.00			
13	NO3-N (mgN/L)	0.00	0.28	1.90		
14	o-PO4-P (mg P/L)	0.000	0.000		0.016	
15	SiO2 (mg/L)			18.0	1.2	
16	SO4 (mg/L)	4.3	10.1	2.6	2.2	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As (μg/L)					
2	Cd (μg/L)					
3	Cr (μg/L)					
4	Cu (μg/L)					
5	Ni (μg/L)					
6	Pb (μg/L)					
7	Zn (μg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	83	84	71	71	
2	HAR_Total (mgCaCO3/L)	158	148	154	130	
3	Na% (%)	23	24	48	49	
4	RSC (-)	0.0	0.0	0.0	0.0	
5	SAR (-)	0.8	0.8	2.3	2.2	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	Drybed/No flow	5.039	10.37	10.84	17.05
2	EC_GEN (μmho/cm)		382	456	602	460
3	pH_GEN (pH units)		7.9	7.8	7.9	7.3
4	TDS (mg/L)					
5	Temp (deg C)		24.8	24.5	25.2	26.5
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)		133	149	161	137
2	B (mg/L)		0.19	0.15	0.13	
3	Ca (mg/L)		34	42	44	38
4	Cl (mg/L)		40.6	48.6	79.4	58.0
5	F (mg/L)		0.28	0.30	0.32	
6	Fe (mg/L)		0.1	0.1	0.0	0.0
7	HCO3 (mg/L)		162	182	197	168
8	K (mg/L)		2.7	2.1	3.7	2.1
9	Mg (mg/L)		13.1	16.5	21.1	14.1
10	Na (mg/L)		24.1	32.2	45.3	32.2
11	NO2+NO3 (mg N/L)		0.88	1.58	2.65	2.12
12	NO2-N (mgN/L)		0.01	0.04	0.01	0.01
13	NO3-N (mgN/L)		0.86	1.54	2.64	2.11
14	o-PO4-P (mg P/L)		0.031	0.000	0.000	0.000
15	SiO2 (mg/L)		11.5	13.2	12.4	12.1
16	SO4 (mg/L)		6.1	12.2	22.9	12.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As (μg/L)					
2	Cd (μg/L)					
3	Cr (μg/L)					
4	Cu (μg/L)					
5	Ni (μg/L)					
6	Pb (μg/L)					
7	Zn (μg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		86	104	110	94
2	HAR_Total (mgCaCO3/L)		141	173	197	153
3	Na% (%)		27	29	32	31
4	RSC (-)		0.0	0.0	0.0	0.0
5	SAR (-)		0.9	1.1	1.4	1.1
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)		4.564	13.91	Drybed/No flow	
2	EC_GEN (µmho/cm)		526	633		
3	pH_GEN (pH units)		7.6	8.3		
4	TDS (mg/L)					
5	Temp (deg C)		26.5	25.0		
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)		153	177		
2	B (mg/L)		0.02	0.44		
3	Ca (mg/L)		43	50		
4	Cl (mg/L)		67.1	96.6		
5	F (mg/L)		0.40	0.38		
6	Fe (mg/L)		0.1	0.0		
7	HCO3 (mg/L)		187	216		
8	K (mg/L)		2.3	8.7		
9	Mg (mg/L)		18.5	22.4		
10	Na (mg/L)		40.5	40.5		
11	NO2+NO3 (mg N/L)		2.05	2.44		
12	NO2-N (mgN/L)		0.01	0.01		
13	NO3-N (mgN/L)		2.03	2.42		
14	o-PO4-P (mg P/L)		0.021	0.010		
15	SiO2 (mg/L)		13.3	7.7		
16	SO4 (mg/L)		9.8	12.0		
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)			1.3		
2	DO (mg/L)			6.7		
3	DO_SAT% (%)			81		
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		108	124		
2	HAR_Total (mgCaCO3/L)		185	217		
3	Na% (%)		32	28		
4	RSC (-)		0.0	0.0		
5	SAR (-)		1.3	1.2		
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

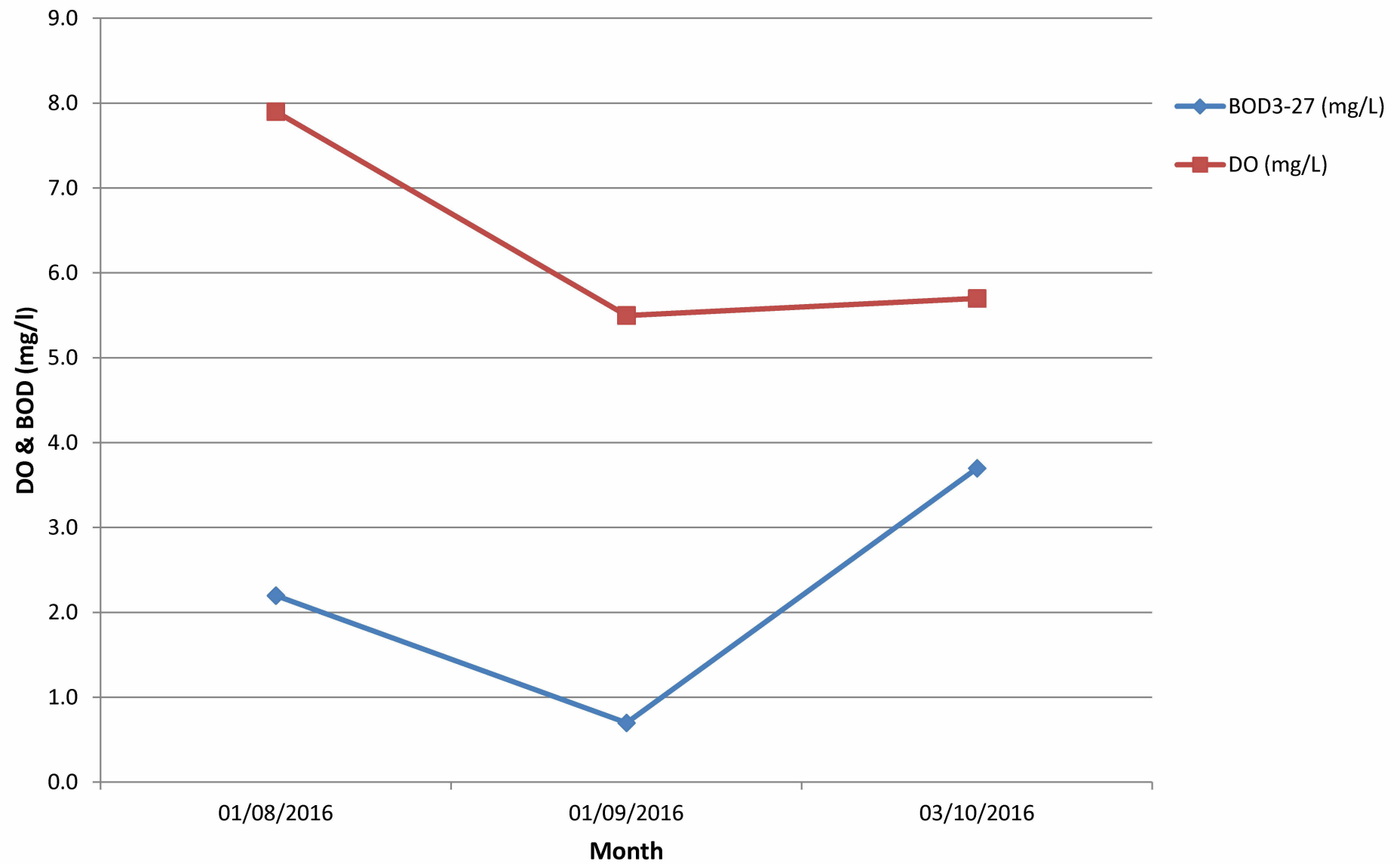
Local River : Kumudavathi

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Summer Mar-May	
		2008	2017
	PHYSICAL		
1	Q (cumec)	1.275	
2	EC_GEN (µmho/cm)	411	
3	pH_GEN (pH units)	8.2	
4	TDS (mg/L)		
5	Temp (deg C)	27.0	
	CHEMICAL		
1	ALK-TOT (mgCaCO3/L)	70	
2	B (mg/L)	0.11	
3	Ca (mg/L)	28	
4	Cl (mg/L)	57.5	
5	F (mg/L)	0.61	
6	Fe (mg/L)	0.0	
7	HCO3 (mg/L)	85	
8	K (mg/L)	4.7	
9	Mg (mg/L)	10.9	
10	Na (mg/L)	42.5	
11	NO2+NO3 (mg N/L)	1.12	
12	NO2-N (mgN/L)	0.11	
13	NO3-N (mgN/L)	1.01	
14	o-PO4-P (mg P/L)	0.052	
15	SiO2 (mg/L)	14.0	
16	SO4 (mg/L)	40.1	
	BIOLOGICAL/BACTERIOLOGICAL		
1	BOD3-27 (mg/L)		
2	DO (mg/L)		
3	DO_SAT% (%)		
	TRACE & TOXIC		
1	As (µg/L)		
2	Cd (µg/L)		
3	Cr (µg/L)		
4	Cu (µg/L)		
5	Ni (µg/L)		
6	Pb (µg/L)		
7	Zn (µg/L)		
	CHEMICAL INDICES		
1	HAR_Ca (mgCaCO3/L)	71	
2	HAR_Total (mgCaCO3/L)	117	
3	Na% (%)	43	
4	RSC (-)	0.0	
5	SAR (-)	1.7	
	PESTICIDES		

Samples not collected during Summer season 2003 to 2007 and from 2009 to 2017.

Kuppelur



HISTORY SHEET

		Water Year	: 2016-2017
Site	: HONNALI	Code	: AKL00X6
State	: Karnataka	District	Davanagere
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Tungabhadra
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tungabhadra SD Davangere
Drainage Area	: 7075 Sq. Km.	Bank	: Left
Latitude	: 14°14'14"	Longitude	: 75°39'45"
	Opening Date	Closing Date	
Gauge	: 21/06/1978		
Discharge	: 01/06/1980		
Sediment	: 15/09/1995		
Water Quality	: 02/06/1986		

Water Quality Datasheet for the period : 2016-2017

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Analysis Division : Upper Tungabhadra SD Davangere

S.No	Parameters	01/07/2016 A	01/09/2016 A	01/11/2016 A	01/12/2016 A	02/01/2017 A	01/03/2017 A	01/05/2017 A
	PHYSICAL							
1	Q (cumec)	395.9	256.0	52.60	28.14	18.62	19.13	5.874
2	Colour_Cod (-)	Light Brown	Brown	Clear		Clear	Clear	Clear
3	EC_GEN (µmho/cm)	78	92	195		152	125	203
4	Odour_Code (-)	odour free	odour free	odour free		odour free	odour free	odour free
5	pH_GEN (pH units)	6.0	6.8	8.0		8.0	7.7	8.1
6	TDS (mg/L)	36	53	120		72	70	118
7	Temp (deg C)	25.0	24.5	26.0	25.0	22.0	26.0	26.5
	CHEMICAL							
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0		0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	26	21	56		38	54	64
3	B (mg/L)	0.16	0.06	0.15		0.26	0.23	0.15
4	Ca (mg/L)	6	4	15		10	11	8
5	Cl (mg/L)	5.7	11.0	23.8		22.4	7.1	23.4
6	CO3 (mg/L)	0.0	0.0	0.0		0.0	0.0	0.0
7	F (mg/L)			3.42			0.12	0.25
8	Fe (mg/L)	0.3	0.4	0.0		0.1	0.0	0.0
9	HCO3 (mg/L)	32	26	68		47	66	79
10	K (mg/L)	1.4	1.1	1.6		1.7	1.3	2.2
11	Mg (mg/L)	3.6	0.7	9.1		6.7	6.4	10.9
12	Na (mg/L)	4.5	16.2	9.7		10.0	6.4	19.0
13	NO2+NO3 (mg N/L)	0.49	1.29	1.70		0.45	0.53	0.71
14	NO2-N (mgN/L)	0.04	0.01	0.00		0.01	0.06	0.00
15	NO3-N (mgN/L)	0.45	1.28	1.70		0.43	0.48	0.71
16	o-PO4-P (mg P/L)	0.000	0.031	0.000		0.000	0.052	0.031
17	SiO2 (mg/L)	14.3	50.4	11.9		8.4	7.4	8.4
18	SO4 (mg/L)	4.4	5.0	8.6		10.4	3.5	12.0
	BIOLOGICAL/BACTERIOLOGICAL							
1	BOD3-27 (mg/L)	0.8	0.1	1.0		1.1	0.8	0.6
2	DO (mg/L)	7.2	7.3	7.2		7.1	7.2	5.0
3	DO_SAT% (%)	87	87	89		81	89	62
	TRACE & TOXIC							
1	As (µg/L)				1.0			
2	Cd (µg/L)				0.0			
3	Cr (µg/L)				0.2			
4	Cu (µg/L)				1.3			
5	Ni (µg/L)				3.9			
6	Pb (µg/L)				1.0			
7	Zn (µg/L)				0.7			
	CHEMICAL INDICES							
1	HAR_Ca (mgCaCO3/L)	15	9	38		25	27	20
2	HAR_Total (mgCaCO3/L)	30	12	76		52	53	65
3	Na% (%)	24	72	21		29	20	38
4	RSC (-)	0.0	0.2	0.0		0.0	0.0	0.0
5	SAR (-)	0.4	2.0	0.5		0.6	0.4	1.0
	PESTICIDES							

Water Quality Summary for the period : 2016-2017

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

Sub-Division : Upper Tungabhadra SD Davangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	1261	5.295	123.7
2	EC_GEN (µmho/cm)	6	203	78	141
3	pH_GEN (pH units)	6	8.1	6.0	7.4
4	TDS (mg/L)	6	120	36	78
5	Temp (deg C)	7	26.5	22.0	25
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	6	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	6	64	21	43
3	B (mg/L)	6	0.26	0.06	0.17
4	Ca (mg/L)	6	15	4	9
5	Cl (mg/L)	6	23.8	5.7	15.6
6	CO3 (mg/L)	6	0.0	0.0	0
7	F (mg/L)	3	3.42	0.12	1.26
8	Fe (mg/L)	6	0.4	0.0	0.2
9	HCO3 (mg/L)	6	79	26	53
10	K (mg/L)	6	2.2	1.1	1.5
11	Mg (mg/L)	6	10.9	0.7	6.3
12	Na (mg/L)	6	19.0	4.5	11
13	NO2+NO3 (mg N/L)	6	1.70	0.45	0.86
14	NO2-N (mgN/L)	6	0.06	0.00	0.02
15	NO3-N (mgN/L)	6	1.70	0.43	0.84
16	o-PO4-P (mg P/L)	6	0.052	0.000	0.019
17	SiO2 (mg/L)	6	50.4	7.4	16.8
18	SO4 (mg/L)	6	12.0	3.5	7.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	6	1.1	0.1	0.7
2	DO (mg/L)	6	7.3	5.0	6.8
3	DO_SAT% (%)	6	89	62	83
	TRACE & TOXIC				
1	As (µg/L)	1	1.0	1.0	1
2	Cd (µg/L)	1	0.0	0.0	0
3	Cr (µg/L)	1	0.2	0.2	0.2
4	Cu (µg/L)	1	1.3	1.3	1.3
5	Ni (µg/L)	1	3.9	3.9	3.9
6	Pb (µg/L)	1	1.0	1.0	1
7	Zn (µg/L)	1	0.7	0.7	0.7
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	6	38	9	22
2	HAR_Total (mgCaCO3/L)	6	76	12	48
3	Na% (%)	6	72	20	34
4	RSC (-)	6	0.2	0.0	0
5	SAR (-)	6	2.0	0.4	0.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	137.8	209.2	545.4	140.4	Drybed/No flow
2	EC_GEN (µmho/cm)	188	116	141	60	
3	pH_GEN (pH units)	8.1	8.1	7.2	7.0	
4	TDS (mg/L)					
5	Temp (deg C)	22.9	27.8	28.3	28.3	
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	130	39	76	55	
2	B (mg/L)	0.13	0.00		0.18	
3	Ca (mg/L)	19	6	11	11	
4	Cl (mg/L)	19.0	18.0	27.5	44.0	
5	F (mg/L)	0.24	0.31	0.26	0.35	
6	Fe (mg/L)	0.0	0.0		1.1	
7	HCO3 (mg/L)	79	34	49	67	
8	K (mg/L)	1.6	1.5	1.4	9.5	
9	Mg (mg/L)	7.6	2.8	5.2	5.7	
10	Na (mg/L)	11.0	13.2	17.8	28.4	
11	NH3-N (mg N/L)			0.00		
12	NO2+NO3 (mg N/L)	0.11		2.75	0.14	
13	NO2-N (mgN/L)	0.00		1.35	0.07	
14	NO3-N (mgN/L)	0.11	0.26	1.40	0.07	
15	o-PO4-P (mg P/L)	0.009	0.019	0.014	0.017	
16	SiO2 (mg/L)	27.6	7.5	4.4	0.2	
17	SO4 (mg/L)	4.4	2.4	1.0	1.9	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		1.0	0.9	0.9	
2	DO (mg/L)	8.7	7.6	7.1	6.4	
3	DO_SAT% (%)	101	95	91	82	
	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)	47	16	28	28	
2	HAR_Total (mgCaCO3/L)	78	27	50	51	
3	Na% (%)	26	50	41	50	
4	RSC (-)	0.0	0.0	0.0	0.3	
5	SAR (-)	0.6	1.2	1.1	2.0	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	Drybed/No flow	533.8	308.8	776.5	1445
2	EC_GEN (µmho/cm)		137	121	88	56
3	pH_GEN (pH units)		7.9	7.7	7.2	6.4
4	TDS (mg/L)					
5	Temp (deg C)		27.0	26.8	25.6	26.9
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)		40	38	27	16
2	B (mg/L)			0.01		
3	Ca (mg/L)		10	10	7	4
4	Cl (mg/L)		17.6	12.6	9.6	6.0
5	F (mg/L)		0.03	0.07	0.12	0.06
6	Fe (mg/L)			0.2	0.3	0.1
7	HCO3 (mg/L)		49	47	33	20
8	K (mg/L)		2.5	1.6	1.2	1.0
9	Mg (mg/L)		2.9	4.4	3.9	1.5
10	Na (mg/L)		10.8	8.4	5.2	3.5
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)		0.45	0.65	0.69	0.53
13	NO2-N (mgN/L)		0.00	0.00	0.33	0.00
14	NO3-N (mgN/L)		0.45	0.65	0.36	0.53
15	o-PO4-P (mg P/L)			0.140	0.010	0.005
16	SiO2 (mg/L)			10.2	9.0	5.8
17	SO4 (mg/L)		2.7	3.5	4.2	3.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					0.4
2	DO (mg/L)				5.3	6.1
3	DO_SAT% (%)				65	76
	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)		26	24	18	10
2	HAR_Total (mgCaCO3/L)		38	42	34	16
3	Na% (%)		35	28	24	31
4	RSC (-)		0.1	0.0	0.0	0.0
5	SAR (-)		0.8	0.5	0.4	0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood Jun - Oct				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	361.9	1657	449.3	297.8	325.9
2	EC_GEN (µmho/cm)	63	80	100	107	85
3	pH_GEN (pH units)	7.1	7.0	7.4	7.2	6.4
4	TDS (mg/L)					45
5	Temp (deg C)	25.8	25.8	26.5	27.0	24.8
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	19	22	30	32	24
2	B (mg/L)		0.01	0.11	0.82	0.11
3	Ca (mg/L)	4	6	8	9	5
4	Cl (mg/L)	6.6	9.9	11.9	11.4	8.3
5	F (mg/L)	0.05	0.05	0.10	0.13	
6	Fe (mg/L)		0.2	0.1	0.2	0.4
7	HCO3 (mg/L)	23	27	36	40	29
8	K (mg/L)	1.1	1.1	1.4	1.3	1.3
9	Mg (mg/L)	2.7	2.4	4.1	3.9	2.2
10	Na (mg/L)	3.8	5.5	6.7	5.9	10.4
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)	0.71	0.73	0.77	0.66	0.89
13	NO2-N (mgN/L)	0.01	0.03	0.03	0.05	0.03
14	NO3-N (mgN/L)	0.71	0.69	0.74	0.61	0.86
15	o-PO4-P (mg P/L)		0.031	0.021	0.134	0.016
16	SiO2 (mg/L)		8.7	4.9	17.4	32.3
17	SO4 (mg/L)	3.2	3.7	4.1	4.1	4.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.5	0.4	0.5	0.4	0.4
2	DO (mg/L)	6.4	6.3	5.7	5.5	7.3
3	DO_SAT% (%)	78	77	71	69	87
	TRACE & TOXIC					
1	As (µg/L)	0.6	4.7			
2	Cd (µg/L)	0.2	0.0			
3	Cr (µg/L)	7.3	1.3			
4	Cu (µg/L)	5.4	0.7			
5	Hg (µg/L)					
6	Ni (µg/L)	2.3	7.6			
7	Pb (µg/L)		5.4			
8	Zn (µg/L)		0.0			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	11	16	19	23	12
2	HAR_Total (mgCaCO3/L)	22	26	36	39	21
3	Na% (%)	26	30	28	24	48
4	RSC (-)	0.0	0.0	0.0	0.0	0.1
5	SAR (-)	0.4	0.5	0.5	0.4	1.2
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	105.4	39.33	57.11	76.34	Drybed/No flow
2	EC_GEN (µmho/cm)	175	243	228	139	
3	pH_GEN (pH units)	8.2	8.0	7.7	7.8	
4	TDS (mg/L)					
5	Temp (deg C)	24.3	27.8	28.0	26.3	
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	109	86	145	65	
2	B (mg/L)				0.21	
3	Ca (mg/L)	13	19	11	15	
4	Cl (mg/L)	23.1	24.7	23.8	48.1	
5	F (mg/L)	0.18	0.30	0.01	0.29	
6	Fe (mg/L)	0.0	0.2	0.1	2.0	
7	HCO3 (mg/L)	66	104	80	80	
8	K (mg/L)	1.6	1.6	33.2	2.3	
9	Mg (mg/L)	7.5	12.2	6.1	8.3	
10	Na (mg/L)	14.5	15.8	14.6	36.2	
11	NH3-N (mg N/L)			0.00		
12	NO2+NO3 (mg N/L)	0.00		3.22	0.87	
13	NO2-N (mgN/L)	0.00		1.73	0.43	
14	NO3-N (mgN/L)	0.00	0.11	1.49	0.44	
15	o-PO4-P (mg P/L)	0.000	0.008	0.015	0.016	
16	SiO2 (mg/L)		11.4	12.6	0.9	
17	SO4 (mg/L)	2.6	4.6	5.3	4.8	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		2.0	0.8	0.7	
2	DO (mg/L)		5.5	7.0	6.3	
3	DO_SAT% (%)		69	89	78	
	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)	33	48	27	38	
2	HAR_Total (mgCaCO3/L)	64	98	53	73	
3	Na% (%)	32	28	25	51	
4	RSC (-)	0.0	0.0	0.3	0.0	
5	SAR (-)	0.8	0.7	0.9	1.8	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	Drybed/No flow	29.73	145.7	80.10	52.15
2	EC_GEN (µmho/cm)		177	152	154	177
3	pH_GEN (pH units)		7.7	7.5	7.7	7.2
4	TDS (mg/L)					
5	Temp (deg C)		25.8	25.8	26.4	28.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)		58	45	50	59
2	B (mg/L)		0.08	0.06	0.05	
3	Ca (mg/L)		14	12	11	13
4	Cl (mg/L)		20.4	17.5	19.0	20.1
5	F (mg/L)		0.13	0.06	0.05	
6	Fe (mg/L)		0.1	0.1	0.0	0.0
7	HCO3 (mg/L)		70	55	61	72
8	K (mg/L)		1.6	2.4	1.2	1.5
9	Mg (mg/L)		6.3	5.8	7.3	6.8
10	Na (mg/L)		15.1	9.0	8.2	12.6
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)		0.46	0.97	0.86	1.00
13	NO2-N (mgN/L)		0.01	0.02	0.01	0.44
14	NO3-N (mgN/L)		0.45	0.95	0.85	0.56
15	o-PO4-P (mg P/L)		0.041	0.021	0.016	0.000
16	SiO2 (mg/L)		11.6	13.4	11.1	
17	SO4 (mg/L)		2.8	2.7	4.3	5.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)				1.8	0.6
2	DO (mg/L)				6.4	6.2
3	DO_SAT% (%)				79	79
	TRACE & TOXIC					
1	As (µg/L)					0.2
2	Cd (µg/L)					0.2
3	Cr (µg/L)					3.2
4	Cu (µg/L)					
5	Hg (µg/L)					
6	Ni (µg/L)					5.6
7	Pb (µg/L)					
8	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		34	30	27	32
2	HAR_Total (mgCaCO3/L)		60	54	57	60
3	Na% (%)		35	26	23	29
4	RSC (-)		0.0	0.0	0.0	0.0
5	SAR (-)		0.8	0.5	0.5	0.7
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)	90.40	134.8	48.62	65.37	33.12
2	EC_GEN (µmho/cm)	235	211	222	178	174
3	pH_GEN (pH units)	7.5	7.4	7.9	7.3	8.0
4	TDS (mg/L)					96
5	Temp (deg C)	25.3	25.5	25.2	25.0	24.3
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	78	68	54	59	47
2	B (mg/L)		0.00	0.21	0.18	0.20
3	Ca (mg/L)	22	15	15	17	13
4	Cl (mg/L)	26.6	21.3	22.0	19.3	23.1
5	F (mg/L)	0.19	0.29	0.15	0.17	3.42
6	Fe (mg/L)		0.1	0.0	0.1	0.0
7	HCO3 (mg/L)	95	83	66	72	57
8	K (mg/L)	1.6	1.7	4.1	1.7	1.6
9	Mg (mg/L)	6.3	6.8	7.3	6.3	7.9
10	Na (mg/L)	15.1	17.5	8.6	9.1	9.9
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)	0.83	1.25	1.68	0.81	1.07
13	NO2-N (mgN/L)	0.01	0.00	0.39	0.00	0.01
14	NO3-N (mgN/L)	0.83	1.25	1.29	0.81	1.06
15	o-PO4-P (mg P/L)		0.021	0.021	0.181	0.000
16	SiO2 (mg/L)		9.6	4.9	16.0	10.1
17	SO4 (mg/L)	4.1	3.8	4.4	3.9	9.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	3.0	1.3	1.5	1.1
2	DO (mg/L)	5.4	5.2	5.4	7.3	7.2
3	DO_SAT% (%)	66	64	65	88	85
	TRACE & TOXIC					
1	As (µg/L)	3.6				1.0
2	Cd (µg/L)			0.0		0.0
3	Cr (µg/L)	0.2		1.2		0.2
4	Cu (µg/L)	0.4		5.7		1.3
5	Hg (µg/L)					
6	Ni (µg/L)	8.9		1.6		3.9
7	Pb (µg/L)			0.9		1.0
8	Zn (µg/L)			9.7		0.7
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	56	38	38	42	31
2	HAR_Total (mgCaCO3/L)	82	66	68	68	64
3	Na% (%)	26	36	20	22	25
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.7	0.9	0.5	0.5	0.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Summer				
		Mar - May				
		2003	2004	2005	2006	2007
	PHYSICAL					
1	Q (cumec)	30.59	3.193	35.77	56.40	Drybed/No Flow
2	EC_GEN (µmho/cm)	309	258	308	185	
3	pH_GEN (pH units)	7.9	7.7	7.7	7.5	
4	TDS (mg/L)					
5	Temp (deg C)	26.5	27.8	30.3	29.0	
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	205	88		61	
2	B (mg/L)		0.05			
3	Ca (mg/L)	21	23	11	15	
4	Cl (mg/L)	37.1	23.6	34.3	21.3	
5	F (mg/L)	0.24	0.25	0.28	0.65	
6	Fe (mg/L)	0.0			1.5	
7	HCO3 (mg/L)	125	107	109	74	
8	K (mg/L)	4.3	1.4	41.4	9.3	
9	Mg (mg/L)	14.6	12.8	8.3	7.6	
10	Na (mg/L)	24.5	14.3	26.1	14.6	
11	NH3-N (mg N/L)			0.00		
12	NO2+NO3 (mg N/L)	0.28		5.37	0.49	
13	NO2-N (mgN/L)	0.00		4.76	0.24	
14	NO3-N (mgN/L)	0.28	0.15	0.61	0.25	
15	o-PO4-P (mg P/L)	0.010	0.014	0.014	0.014	
16	SiO2 (mg/L)	16.1	9.0		10.2	
17	SO4 (mg/L)	7.9	8.6	7.2	10.1	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		0.6	1.0	1.0	
2	DO (mg/L)	2.2	7.9	5.6	6.6	
3	DO_SAT% (%)	27	99	74	85	
	TRACE & TOXIC					
1	As (µg/L)			1.8	13.7	
2	Cd (µg/L)				0.0	
3	Cr (µg/L)			7.5	7.5	
4	Cu (µg/L)				8.9	
5	Hg (µg/L)			0.1		
6	Ni (µg/L)			5.2		
7	Pb (µg/L)				4.5	
8	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	53	58	27	37	
2	HAR_Total (mgCaCO3/L)	114	111	61	69	
3	Na% (%)	31	22	33	30	
4	RSC (-)	0.0	0.0	0.6	0.0	
5	SAR (-)	1.0	0.6	1.5	0.8	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Summer				
		Mar - May				
		2008	2009	2010	2011	2012
	PHYSICAL					
1	Q (cumec)	38.27	61.46	38.27	46.91	88.92
2	EC_GEN (µmho/cm)	205	149	228	258	157
3	pH_GEN (pH units)	7.0	7.4	7.8	7.4	7.1
4	TDS (mg/L)					
5	Temp (deg C)	32.0	29.3	26.9	30.4	28.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	63	48	76	78	48
2	B (mg/L)	0.07	0.07	0.06	0.29	
3	Ca (mg/L)	17	12	18	19	13
4	Cl (mg/L)	21.9	17.2	22.2	22.9	17.0
5	F (mg/L)	0.15	0.08	0.18	0.39	0.16
6	Fe (mg/L)	0.0	0.2	0.1	0.1	
7	HCO3 (mg/L)	77	59	93	96	58
8	K (mg/L)	2.3	1.4	2.2	2.2	2.0
9	Mg (mg/L)	6.2	4.4	7.8	8.7	5.1
10	Na (mg/L)	15.6	11.3	16.4	17.0	9.1
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)	0.34	0.49	0.95	0.99	1.74
13	NO2-N (mgN/L)	0.00	0.01	0.04	0.01	0.07
14	NO3-N (mgN/L)	0.34	0.48	0.90	0.98	1.67
15	o-PO4-P (mg P/L)	0.000	0.016	0.010	0.016	
16	SiO2 (mg/L)	12.1	11.0	13.3	15.8	
17	SO4 (mg/L)	3.8	2.6	3.9	4.8	4.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					1.0
2	DO (mg/L)				5.8	5.3
3	DO_SAT% (%)				77	67
	TRACE & TOXIC					
1	As (µg/L)	6.7			1.6	1.1
2	Cd (µg/L)	0.9			0.0	0.2
3	Cr (µg/L)				1.1	2.3
4	Cu (µg/L)	3.7	1.7			2.0
5	Hg (µg/L)					
6	Ni (µg/L)		11.7			9.2
7	Pb (µg/L)	1.2				3.7
8	Zn (µg/L)	40.0				10.0
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	43	30	46	48	33
2	HAR_Total (mgCaCO3/L)	69	48	78	84	54
3	Na% (%)	32	33	31	30	26
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.8	0.7	0.8	0.8	0.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HONNALI (AKL00X6)

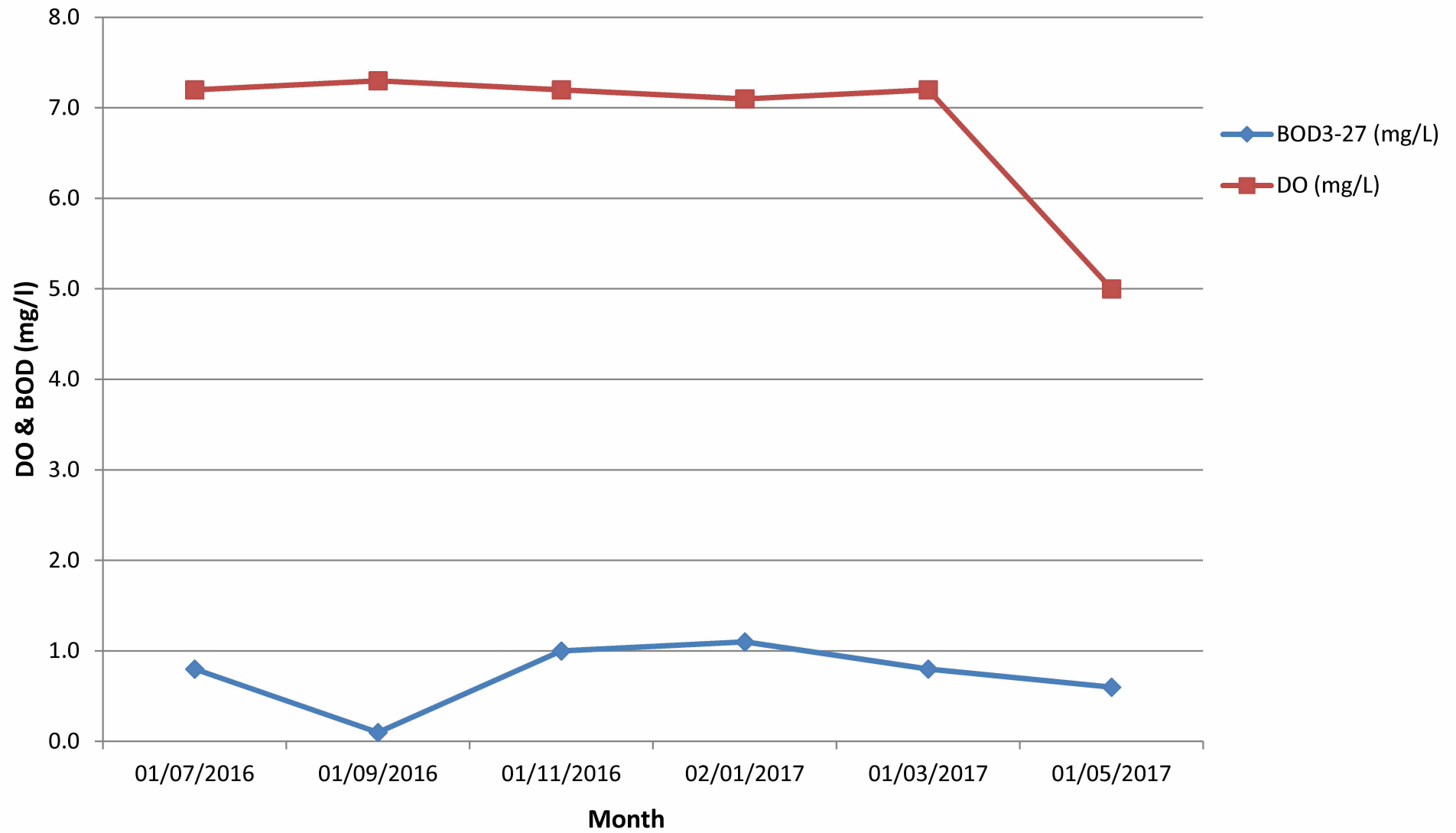
Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Summer				
		Mar - May				
		2013	2014	2015	2016	2017
	PHYSICAL					
1	Q (cumec)	33.34	118.8	35.17	34.31	12.50
2	EC_GEN (µmho/cm)	186	239	230	144	164
3	pH_GEN (pH units)	7.2	7.5	7.4	6.8	7.9
4	TDS (mg/L)				68	94
5	Temp (deg C)	28.5	28.0	28.3	30.0	26.3
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	58	77	83	39	59
2	B (mg/L)	0.00	0.11	0.40	0.22	0.19
3	Ca (mg/L)	15	18	17	13	9
4	Cl (mg/L)	18.6	23.3	22.7	20.2	15.3
5	F (mg/L)		0.27	0.27		0.18
6	Fe (mg/L)	0.1	0.1	0.1	0.2	0.0
7	HCO3 (mg/L)	71	94	101	47	72
8	K (mg/L)	1.6	1.8	5.0	1.4	1.7
9	Mg (mg/L)	6.8	8.7	9.2	5.8	8.7
10	Na (mg/L)	11.5	17.2	15.3	6.3	12.7
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)	1.90	2.24	1.45	0.88	0.62
13	NO2-N (mgN/L)	0.01	0.01	0.05	0.01	0.03
14	NO3-N (mgN/L)	1.88	2.23	1.40	0.87	0.60
15	o-PO4-P (mg P/L)	0.031	0.052	0.021	0.000	0.041
16	SiO2 (mg/L)	13.1	10.3	6.0	14.3	7.9
17	SO4 (mg/L)	6.0	5.1	5.2	6.1	7.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	2.8	2.3	0.5	0.7
2	DO (mg/L)	5.0	5.8	5.2	5.2	6.1
3	DO_SAT% (%)	65	75	67	68	75
	TRACE & TOXIC					
1	As (µg/L)	6.8	5.7		3.0	
2	Cd (µg/L)	0.1	0.5			
3	Cr (µg/L)	0.4	0.5		3.0	
4	Cu (µg/L)	3.8	1.0		0.5	
5	Hg (µg/L)					
6	Ni (µg/L)	3.3	7.9		3.3	
7	Pb (µg/L)	2.5	2.9			
8	Zn (µg/L)	123.6	16.0		9.8	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	38	44	42	32	23
2	HAR_Total (mgCaCO3/L)	66	80	80	56	59
3	Na% (%)	27	31	28	20	29
4	RSC (-)	0.0	0.0	0.1	0.0	0.0
5	SAR (-)	0.6	0.8	0.7	0.4	0.7
	PESTICIDES					

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HISTORY SHEET

		Water Year	: 2016-2017
Site	: SHIMOGA	Code	: AKLD0C6
State	: Karnataka	District	Shimoga
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	: Tunga
Sub-Sub Tributary	:	Local River	: Tunga
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tungabhadra SD Davangere
Drainage Area	: 2831 Sq. Km.	Bank	: Right
Latitude	: 13°55'37"	Longitude	: 75°35'06"
	Opening Date	Closing Date	
Gauge	: 21/06/1971		
Discharge	: 22/01/1972		
Sediment	: 14/09/1972		
Water Quality	: 01/01/1973		

Water Quality Datasheet for the period : 2016-2017

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water Analysis Division : Upper Tungabhadra SD Davangere

S.No	Parameters	01/07/2016	01/09/2016	01/11/2016	01/12/2016	02/01/2017
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	909.7	190.7	21.39	22.43	19.71
2	Colour_Cod (-)	Light Brown	Clear	Clear		Light Brown
3	EC_GEN (µmho/cm)	48	59	74		73
4	Odour_Code (-)	odour free	odour free	odour free		odour free
5	pH_GEN (pH units)	5.8	6.9	7.3		7.4
6	TDS (mg/L)	22	38	44		34
7	Temp (deg C)	24.0	24.0	24.0	22.0	22.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0		0.0
2	ALK-TOT (mgCaCO3/L)	13	13	13		26
3	B (mg/L)	0.12	0.09	0.03		0.00
4	Ca (mg/L)	4	6	5		6
5	Cl (mg/L)	5.7	9.2	12.8		5.7
6	CO3 (mg/L)	0.0	0.0	0.0		0.0
7	Fe (mg/L)	0.4	0.1	0.1		0.0
8	HCO3 (mg/L)	16	16	16		31
9	K (mg/L)	1.1	0.8	1.1		1.1
10	Mg (mg/L)	1.8	1.1	4.3		3.8
11	Na (mg/L)	3.0	4.7	4.1		3.8
12	NO2+NO3 (mg N/L)	0.38	0.81	1.84		0.48
13	NO2-N (mgN/L)	0.03	0.00	0.00		0.01
14	NO3-N (mgN/L)	0.35	0.81	1.84		0.46
15	o-PO4-P (mg P/L)	0.000	0.000	0.000		0.000
16	SiO2 (mg/L)	12.9	14.2	3.5		11.3
17	SO4 (mg/L)	3.7	2.0	0.2		4.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	0.3	2.2		0.3
2	DO (mg/L)	6.2	4.4	6.2		6.2
3	DO_SAT% (%)	74	28	73		71
	TRACE & TOXIC					
1	As (µg/L)				1.4	
2	Cd (µg/L)				0.0	
3	Cr (µg/L)				0.1	
4	Cu (µg/L)				1.1	
5	Ni (µg/L)				0.6	
6	Pb (µg/L)				0.0	
7	Zn (µg/L)				4.1	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	9	15	12		16
2	HAR_Total (mgCaCO3/L)	17	20	29		31
3	Na% (%)	27	33	23		20
4	RSC (-)	0.0	0.0	0.0		0.0
5	SAR (-)	0.3	0.5	0.3		0.3
	PESTICIDES					

Water Quality Summary for the period : 2016-2017

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

Sub-Division : Upper Tungabhadra SD Davangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	1394	0.000	112.0
2	EC_GEN (µmho/cm)	4	74	48	64
3	pH_GEN (pH units)	4	7.4	5.8	6.8
4	TDS (mg/L)	4	44	22	35
5	Temp (deg C)	5	24.0	22.0	23.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	4	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	4	26	13	16
3	B (mg/L)	4	0.12	0.00	0.06
4	Ca (mg/L)	4	6	4	5
5	Cl (mg/L)	4	12.8	5.7	8.3
6	CO3 (mg/L)	4	0.0	0.0	0
7	Fe (mg/L)	4	0.4	0.0	0.2
8	HCO3 (mg/L)	4	31	16	20
9	K (mg/L)	4	1.1	0.8	1
10	Mg (mg/L)	4	4.3	1.1	2.7
11	Na (mg/L)	4	4.7	3.0	3.9
12	NO2+NO3 (mg N/L)	4	1.84	0.38	0.88
13	NO2-N (mgN/L)	4	0.03	0.00	0.01
14	NO3-N (mgN/L)	4	1.84	0.35	0.87
15	o-PO4-P (mg P/L)	4	0.000	0.000	0
16	SiO2 (mg/L)	4	14.2	3.5	10.5
17	SO4 (mg/L)	4	4.0	0.2	2.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	4	2.2	0.3	1
2	DO (mg/L)	4	6.2	2.4	5.2
3	DO_SAT% (%)	4	74	28	61
	TRACE & TOXIC				
1	As (µg/L)	1	1.4	1.4	1.4
2	Cd (µg/L)	1	0.0	0.0	0
3	Cr (µg/L)	1	0.1	0.1	0.1
4	Cu (µg/L)	1	1.1	1.1	1.1
5	Ni (µg/L)	1	0.6	0.6	0.6
6	Pb (µg/L)	1	0.0	0.0	0
7	Zn (µg/L)	1	4.1	4.1	4.1
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	4	16	9	13
2	HAR_Total (mgCaCO3/L)	4	31	17	24
3	Na% (%)	4	33	20	26
4	RSC (-)	4	0.0	0.0	0
5	SAR (-)	4	0.5	0.3	0.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	137.2	222.2	181.8	514.2	590.6
2	EC_GEN (µmho/cm)	180	123	269	42	248
3	pH_GEN (pH units)	7.9	7.6	7.2	7.1	7.6
4	TDS (mg/L)					
5	Temp (deg C)	27.4	25.0	25.0	24.0	24.5
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	70	32	70	41	88
2	B (mg/L)	0.25	0.00		0.17	0.00
3	Ca (mg/L)	13	10	15	7	12
4	Cl (mg/L)	22.5	20.1	42.2	68.6	25.2
5	F (mg/L)	0.38	0.00	0.09	0.19	0.00
6	Fe (mg/L)	0.0	0.0	0.0	0.1	0.0
7	HCO3 (mg/L)	69	39	86	50	107
8	K (mg/L)	2.6	1.2	8.1	7.0	35.8
9	Mg (mg/L)	8.3	4.1	12.6	3.3	5.9
10	Na (mg/L)	14.1	12.0	22.0	48.5	15.1
11	NO2+NO3 (mg N/L)	0.32	0.07	2.09		0.15
12	NO2-N (mgN/L)	0.00	0.00	1.13		0.00
13	NO3-N (mgN/L)	0.32	0.07	0.96	0.48	0.15
14	o-PO4-P (mg P/L)	0.062	0.000	0.000	0.048	0.000
15	SiO2 (mg/L)	22.2	3.9	10.0	2.8	1.6
16	SO4 (mg/L)	3.8	2.4	3.0	3.1	5.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.0	0.7	1.0	0.9	2.0
2	DO (mg/L)	7.0	8.0	8.2	7.3	8.2
3	DO_SAT% (%)	88	97	99	86	97
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	31	24	39	17	31
2	HAR_Total (mgCaCO3/L)	66	41	91	31	55
3	Na% (%)	31	39	32	71	27
4	RSC (-)	0.0	0.0	0.0	0.2	0.7
5	SAR (-)	0.8	0.8	1.0	5.0	0.9
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	525.0	444.6	470.7	815.9	236.1
2	EC_GEN (µmho/cm)	178	64	52	43	41
3	pH_GEN (pH units)	8.0	7.5	7.3	7.1	6.2
4	TDS (mg/L)					
5	Temp (deg C)	26.4	27.0	24.5	25.0	24.5
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	57	15	15	12	12
2	B (mg/L)	0.11		0.00		0.00
3	Ca (mg/L)	12	4	3	3	3
4	Cl (mg/L)	17.9	6.7	5.8	5.7	3.9
5	F (mg/L)	0.38	0.02	0.06	0.02	0.00
6	Fe (mg/L)	0.0		0.2	0.3	0.1
7	HCO3 (mg/L)	69	19	19	14	14
8	K (mg/L)	2.3	0.8	0.7	1.0	2.6
9	Mg (mg/L)	8.4	2.9	2.9	1.9	1.0
10	Na (mg/L)	11.5	3.9	3.2	2.8	3.0
11	NO2+NO3 (mg N/L)	0.24	0.59	0.49	0.43	0.38
12	NO2-N (mgN/L)	0.00	0.01	0.01	0.01	0.00
13	NO3-N (mgN/L)	0.24	0.57	0.48	0.42	0.38
14	o-PO4-P (mg P/L)	0.045		0.000	0.000	0.000
15	SiO2 (mg/L)	0.9		9.5	8.4	7.3
16	SO4 (mg/L)	3.3	3.6	3.2	2.3	3.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.2	0.6		2.6
2	DO (mg/L)	6.0	7.8	6.8	7.2	6.9
3	DO_SAT% (%)	74	98	80	87	83
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	29	10	8	8	8
2	HAR_Total (mgCaCO3/L)	64	22	20	16	12
3	Na% (%)	28	27	25	26	30
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.6	0.4	0.3	0.3	0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	387.3	886.7	17.51	296.9	550.2
2	EC_GEN (µmho/cm)	45	57	61	60	54
3	pH_GEN (pH units)	7.0	6.9	7.1	7.1	6.3
4	TDS (mg/L)					30
5	Temp (deg C)	24.0	25.3	25.0	24.5	24.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	12	13	19	16	13
2	B (mg/L)		0.00	0.11	0.08	0.11
3	Ca (mg/L)	3	4	6	5	5
4	Cl (mg/L)	5.0	6.9	7.1	6.9	7.5
5	F (mg/L)	0.04	0.03	0.08	0.12	
6	Fe (mg/L)		0.2	0.1	0.3	0.3
7	HCO3 (mg/L)	14	16	23	19	16
8	K (mg/L)	0.9	0.9	1.3	1.0	0.9
9	Mg (mg/L)	1.9	2.4	1.9	1.7	1.5
10	Na (mg/L)	2.9	3.7	3.1	4.2	3.8
11	NO2+NO3 (mg N/L)	0.63	0.66	0.31	0.48	0.60
12	NO2-N (mgN/L)	0.01	0.09	0.01	0.01	0.01
13	NO3-N (mgN/L)	0.62	0.57	0.29	0.46	0.58
14	o-PO4-P (mg P/L)		0.036	0.001	0.207	0.000
15	SiO2 (mg/L)		10.1	5.2	11.4	13.5
16	SO4 (mg/L)	3.0	3.9	3.5	3.1	2.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.4	0.2	0.6	0.4	0.8
2	DO (mg/L)	6.8	6.7	5.3	4.8	4.3
3	DO_SAT% (%)	81	81	65	57	51
	TRACE & TOXIC					
1	As (µg/L)	0.1	0.6			
2	Cd (µg/L)	0.6	0.0			
3	Cr (µg/L)	4.9	8.0			
4	Cu (µg/L)	3.3	0.5			
5	Ni (µg/L)	1.5	10.2			
6	Pb (µg/L)		0.5			
7	Zn (µg/L)		0.0			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	8	10	16	13	12
2	HAR_Total (mgCaCO3/L)	16	20	24	20	18
3	Na% (%)	27	28	21	30	30
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.3	0.4	0.3	0.4	0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	48.42	25.89	26.11	50.59	31.91
2	EC_GEN (µmho/cm)	148	102	352	75	319
3	pH_GEN (pH units)	8.2	8.0	7.8	7.8	7.6
4	TDS (mg/L)					
5	Temp (deg C)	27.0	26.5	23.0	22.3	25.3
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	60	27	72	40	118
2	B (mg/L)				0.22	0.00
3	Ca (mg/L)	15	6	6	8	20
4	Cl (mg/L)	10.5	18.6	75.8	67.3	30.5
5	F (mg/L)	0.22	0.02	0.09		0.00
6	Fe (mg/L)	0.1	0.0	0.2		0.0
7	HCO3 (mg/L)	73	32	88	49	144
8	K (mg/L)	1.0	0.8	13.6	1.7	29.0
9	Mg (mg/L)	7.4	2.9	8.1	5.3	9.3
10	Na (mg/L)	6.1	13.6	59.0	48.3	21.6
11	NO2+NO3 (mg N/L)	0.07	0.21	2.99		0.18
12	NO2-N (mgN/L)	0.00	0.00	1.52		0.00
13	NO3-N (mgN/L)	0.07	0.21	1.47		0.18
14	o-PO4-P (mg P/L)	0.010	0.000	0.000	0.041	0.000
15	SiO2 (mg/L)	33.6	10.5	1.2	1.9	1.4
16	SO4 (mg/L)	4.6	1.0	5.0	1.9	1.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.5	0.5	1.0	1.2
2	DO (mg/L)	7.0	6.1	7.9	7.4	7.8
3	DO_SAT% (%)	88	75	92	85	95
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	37	16	16	20	49
2	HAR_Total (mgCaCO3/L)	68	28	50	42	87
3	Na% (%)	16	52	66	72	31
4	RSC (-)	0.0	0.0	0.5	0.1	0.6
5	SAR (-)	0.3	1.2	3.6	3.8	1.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	55.47	7.848	103.8	51.94	35.90
2	EC_GEN (µmho/cm)	132	111	75	66	78
3	pH_GEN (pH units)	7.7	7.6	7.8	7.4	6.9
4	TDS (mg/L)					
5	Temp (deg C)	24.4	25.8	25.3	25.0	24.3
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	40	52	27		23
2	B (mg/L)	0.05	0.09	0.04	0.08	
3	Ca (mg/L)	11	8	6	4	6
4	Cl (mg/L)	13.2	11.7	7.8	6.0	9.4
5	F (mg/L)	0.14	0.08	0.03	0.06	
6	Fe (mg/L)	0.1	0.1	0.1	0.2	0.1
7	HCO3 (mg/L)	49	63	33	28	28
8	K (mg/L)	2.8	2.5	0.9	0.9	1.0
9	Mg (mg/L)	4.0	3.4	2.9	3.2	3.4
10	Na (mg/L)	8.6	8.0	4.0	3.5	4.6
11	NO2+NO3 (mg N/L)	0.32	0.53	0.41	0.46	0.61
12	NO2-N (mgN/L)	0.10	0.09	0.01	0.01	0.01
13	NO3-N (mgN/L)	0.22	0.44	0.41	0.45	0.60
14	o-PO4-P (mg P/L)	0.121	0.124	0.005	0.000	0.000
15	SiO2 (mg/L)	14.3	12.4	10.2	11.1	11.0
16	SO4 (mg/L)	2.9	1.2	0.9	2.1	2.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.8	0.9		0.9
2	DO (mg/L)	8.4	6.8	7.4	6.6	5.9
3	DO_SAT% (%)	101	82	90	80	70
	TRACE & TOXIC					
1	As (µg/L)					0.3
2	Cd (µg/L)					0.2
3	Cr (µg/L)					1.1
4	Cu (µg/L)					
5	Ni (µg/L)					5.2
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	29	20	16	11	14
2	HAR_Total (mgCaCO3/L)	45	34	28	22	28
3	Na% (%)	28	31	23	23	26
4	RSC (-)	0.0	0.4	0.0	0.0	0.0
5	SAR (-)	0.6	0.6	0.3	0.3	0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)	102.7	46.92	11.01	26.11	21.18
2	EC_GEN (µmho/cm)	87	75	76	74	74
3	pH_GEN (pH units)	7.0	7.1	7.4	7.1	7.3
4	TDS (mg/L)				37	39
5	Temp (deg C)	23.8	23.5	24.0	24.3	22.8
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	29	23	24	21	19
2	B (mg/L)		0.00	0.15	0.24	0.02
3	Ca (mg/L)	7	6	7	7	5
4	Cl (mg/L)	9.1	8.9	8.5	9.2	9.2
5	F (mg/L)	0.09	0.06	0.07	0.08	
6	Fe (mg/L)		0.1	0.0	0.2	0.0
7	HCO3 (mg/L)	35	29	29	26	23
8	K (mg/L)	1.3	1.0	2.3	1.1	1.1
9	Mg (mg/L)	3.4	2.9	3.2	2.4	4.0
10	Na (mg/L)	5.1	4.6	3.5	3.9	3.9
11	NO2+NO3 (mg N/L)	0.71	0.70	0.90	0.56	1.16
12	NO2-N (mgN/L)	0.01	0.01	0.06	0.00	0.01
13	NO3-N (mgN/L)	0.70	0.69	0.84	0.56	1.15
14	o-PO4-P (mg P/L)		0.036	0.005	0.320	0.000
15	SiO2 (mg/L)		8.0	5.5	17.1	7.4
16	SO4 (mg/L)	2.4	1.6	3.0	2.0	2.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	0.8	0.7	0.5	1.3
2	DO (mg/L)	5.9	6.6	5.8	6.1	6.2
3	DO_SAT% (%)	69	78	69	72	72
	TRACE & TOXIC					
1	As (µg/L)					1.4
2	Cd (µg/L)			0.1		0.0
3	Cr (µg/L)			0.8		0.1
4	Cu (µg/L)			4.3		1.1
5	Ni (µg/L)			1.8		0.6
6	Pb (µg/L)			1.5		0.0
7	Zn (µg/L)			8.3		4.1
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	17	16	17	18	14
2	HAR_Total (mgCaCO3/L)	31	28	30	28	30
3	Na% (%)	26	26	19	23	21
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.4	0.4	0.3	0.3	0.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Summer				
		Mar - May				
		2003	2006	2007	2008	2012
	PHYSICAL					
1	Q (cumec)	1.028	0.910	3.786	8.390	4.179
2	EC_GEN (µmho/cm)	208	153	339	234	141
3	pH_GEN (pH units)	7.5	7.5	7.7	7.9	6.9
4	TDS (mg/L)					
5	Temp (deg C)	29.6	25.3	28.3	29.3	24.8
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	85	75	118	86	46
2	B (mg/L)			0.00	0.01	
3	Ca (mg/L)	16	18	21	16	10
4	Cl (mg/L)	14.9	89.0	35.3	15.4	14.2
5	F (mg/L)	0.06		0.00	0.07	0.14
6	Fe (mg/L)	0.0		0.0	0.0	
7	HCO3 (mg/L)	103	92	144	105	56
8	K (mg/L)	5.7	1.8	34.0	6.3	3.1
9	Mg (mg/L)	11.3	5.7	8.5	11.4	5.3
10	Na (mg/L)	10.2	68.2	26.1	11.3	7.0
11	NO2+NO3 (mg N/L)	0.21		0.34	0.22	1.50
12	NO2-N (mgN/L)	0.00		0.00	0.00	0.12
13	NO3-N (mgN/L)	0.21		0.34	0.22	1.38
14	o-PO4-P (mg P/L)	0.000	0.052	0.000	0.000	
15	SiO2 (mg/L)	6.9	1.2	16.2	12.1	
16	SO4 (mg/L)	1.0	2.0	10.6	1.5	2.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.8	1.8	1.8	1.6	1.5
2	DO (mg/L)	6.8	6.7	5.5	4.8	4.7
3	DO_SAT% (%)	89	80	70	67	56
	TRACE & TOXIC					
1	As (µg/L)		12.8	5.4	5.8	
2	Cd (µg/L)			2.0	1.0	
3	Cr (µg/L)		4.0			
4	Cu (µg/L)		3.8	3.3	3.5	
5	Ni (µg/L)		1.0			
6	Pb (µg/L)			2.4	1.5	
7	Zn (µg/L)			55.0	29.0	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	40	45	52	41	26
2	HAR_Total (mgCaCO3/L)	87	69	88	88	48
3	Na% (%)	19	68	30	21	23
4	RSC (-)	0.0	0.1	0.6	0.0	0.0
5	SAR (-)	0.5	3.6	1.2	0.5	0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

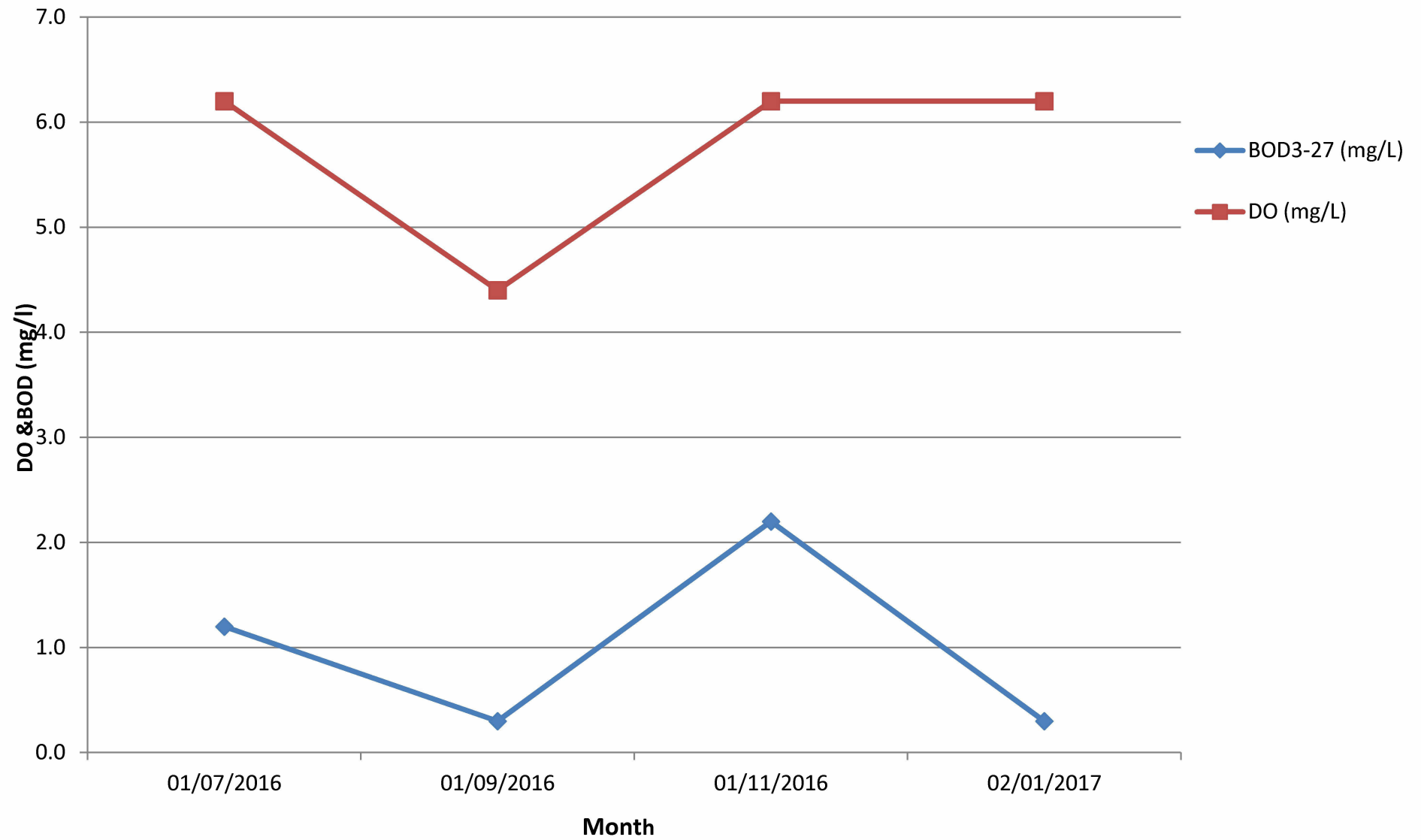
Local River : Tunga

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Summer				
		Mar - May				
		2013	2014	2015	2016	2017
	PHYSICAL					
1	Q (cumec)	0.378	3.504	2.901	2.268	
2	EC_GEN (µmho/cm)	148	130	135	154	
3	pH_GEN (pH units)	7.5	7.2	7.4	6.5	
4	TDS (mg/L)				72	
5	Temp (deg C)	27.5	26.8	27.0	27.3	
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	45	43	44	47	
2	B (mg/L)	0.00	0.10	0.37	0.20	
3	Ca (mg/L)	11	10	11	11	
4	Cl (mg/L)	14.2	11.0	15.6	17.6	
5	F (mg/L)		0.10	0.13		
6	Fe (mg/L)	0.1	0.1	0.1	0.0	
7	HCO3 (mg/L)	54	52	53	58	
8	K (mg/L)	4.1	3.9	3.4	3.1	
9	Mg (mg/L)	4.9	4.4	5.3	6.6	
10	Na (mg/L)	8.7	9.0	7.2	8.6	
11	NO2+NO3 (mg N/L)	2.89	2.09	0.90	0.75	
12	NO2-N (mgN/L)	0.01	0.01	0.08	0.10	
13	NO3-N (mgN/L)	2.87	2.07	0.81	0.65	
14	o-PO4-P (mg P/L)	0.155	0.078	0.010	0.067	
15	SiO2 (mg/L)	10.1	7.5	4.8	15.3	
16	SO4 (mg/L)	2.9	3.7	2.5	4.6	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.2	1.0	0.7	11.1	
2	DO (mg/L)	4.0	4.3	4.0	1.0	
3	DO_SAT% (%)	50	53	50	12	
	TRACE & TOXIC					
1	As (µg/L)	2.2	1.2		3.1	
2	Cd (µg/L)	0.1	0.0			
3	Cr (µg/L)	0.1	0.5		2.0	
4	Cu (µg/L)	2.8	1.4		0.3	
5	Ni (µg/L)	14.1	11.4		0.1	
6	Pb (µg/L)	1.5	2.0			
7	Zn (µg/L)	14.1	14.0		0.7	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	28	24	28	27	
2	HAR_Total (mgCaCO3/L)	48	42	50	54	
3	Na% (%)	26	29	22	24	
4	RSC (-)	0.0	0.0	0.0	0.0	
5	SAR (-)	0.5	0.6	0.4	0.5	
	PESTICIDES					

Samples not collected during Summer season 2004,2005,2009 to 2011 and 2017 due to Drybed/No flow.

Shimoga



HISTORY SHEET

		Water Year	: 2016-2017
Site	: HOLEHONNUR	Code	: AKLE0A4
State	: Karnataka	District	Shimoga
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	: Bhadra
Sub-Sub Tributary	: -	Local River	: Bhadra
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tungabhadra SD Davangere
Drainage Area	: 2990 Sq. Km.	Bank	: Right
Latitude	: 13°58'34"	Longitude	: 75°41'07"
	Opening Date	Closing Date	
Gauge	: 28/11/1997		
Discharge	: 01/07/2003		
Sediment	:		
Water Quality	: 01/07/2003		

Water Quality Datasheet for the period : 2016-2017

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Analysis Division : Upper Tungabhadra SD Davangere

S.No	Parameters	01/06/2016 A	01/07/2016 A	01/08/2016 A	01/09/2016 A	21/09/2016 A
	PHYSICAL					
1	Q (cumec)	27.85	32.68	32.58	32.67	32.90
2	Colour_Cod (-)	Clear	Light Brown	Light Brown	Clear	Clear
3	EC_GEN (μmho/cm)	124	278	250	192	191
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	6.3	6.4	7.2	6.8	7.3
6	TDS (mg/L)	58	132	152	122	122
7	Temp (deg C)	25.0	22.5	22.0	22.0	22.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	26	116	85	47	42
3	B (mg/L)	0.60	0.07	0.09	0.12	0.12
4	Ca (mg/L)	11	18	28	4	16
5	Cl (mg/L)	21.3	14.9	29.8	24.1	25.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)					
8	Fe (mg/L)	0.3	0.2	0.7	0.3	0.0
9	HCO3 (mg/L)	32	141	103	57	51
10	K (mg/L)	1.3	5.9	5.4	3.9	1.6
11	Mg (mg/L)	6.0	10.2	2.9	2.2	7.0
12	Na (mg/L)	7.0	19.9	20.4	38.0	10.5
14	NO2+NO3 (mg N/L)	1.13	1.16	1.33	2.44	1.58
15	NO2-N (mgN/L)	0.00	0.06	0.06	0.00	0.01
16	NO3-N (mgN/L)	1.13	1.11	1.28	2.44	1.57
17	o-PO4-P (mg P/L)		0.052	0.000	0.000	0.155
18	SiO2 (mg/L)	12.3	27.9	10.0	14.3	11.0
19	SO4 (mg/L)	4.3	5.3	5.7	14.6	15.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.6	1.9	1.4	0.7	2.9
2	DO (mg/L)	4.4	4.4	4.5	6.7	5.7
3	DO_SAT% (%)	53	50	51	76	65
	TRACE & TOXIC					
1	As (μg/L)					
2	Cd (μg/L)					
3	Cr (μg/L)					
4	Cu (μg/L)					
5	Ni (μg/L)					
6	Pb (μg/L)					
7	Zn (μg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	27	45	71	9	41
2	HAR_Total (mgCaCO3/L)	51	87	83	18	70
3	Na% (%)	22	32	33	78	24
4	RSC (-)	0.0	0.6	0.0	0.6	0.0
5	SAR (-)	0.4	0.9	1.0	3.9	0.5
	PESTICIDES					

Water Quality Datasheet for the period : 2016-2017

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Analysis Division : Upper Tungabhadra SD Davangere

S.No	Parameters	03/10/2016	13/10/2016	21/10/2016	01/11/2016	11/11/2016	21/11/2016
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	30.93	32.45	32.14	32.84	31.77	31.88
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	262	180	164	167	166	172
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.6	7.0	7.4	7.4	7.3	7.0
6	TDS (mg/L)	183	104	112	112	110	99
7	Temp (deg C)	23.0	23.0	22.5	23.0	23.0	23.0
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	72	48	44	51	51	56
3	B (mg/L)	0.09	0.19	0.00	0.10	0.15	0.65
4	Ca (mg/L)	19	20	13	13	13	14
5	Cl (mg/L)	31.2	20.9	20.9	22.0	12.8	16.7
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)						
8	Fe (mg/L)	0.0	0.2	0.0	0.0	0.0	0.1
9	HCO3 (mg/L)	88	59	54	63	63	68
10	K (mg/L)	3.2	2.1	1.6	1.7	1.7	1.8
11	Mg (mg/L)	12.6	4.9	10.7	8.4	8.4	9.7
12	Na (mg/L)	14.3	10.2	5.0	7.2	7.5	6.0
14	NO2+NO3 (mg N/L)	2.21	2.10	2.12	0.84	1.98	2.03
15	NO2-N (mgN/L)	0.00	0.01	0.01	0.00	0.00	0.03
16	NO3-N (mgN/L)	2.21	2.09	2.10	0.84	1.98	2.00
17	o-PO4-P (mg P/L)	0.083	0.083	0.093	0.041	0.010	0.031
18	SiO2 (mg/L)	12.9	13.4	18.7	17.1	28.2	31.0
19	SO4 (mg/L)	6.2	5.5	7.3	2.4	6.0	0.4
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.1	0.4	0.1	0.7	1.7	0.1
2	DO (mg/L)	6.0	5.4	5.6	5.6	5.6	6.4
3	DO_SAT% (%)	70	62	64	65	65	75
	TRACE & TOXIC						
1	As (µg/L)						
2	Cd (µg/L)						
3	Cr (µg/L)						
4	Cu (µg/L)						
5	Ni (µg/L)						
6	Pb (µg/L)						
7	Zn (µg/L)						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	47	50	32	32	32	36
2	HAR_Total (mgCaCO3/L)	99	70	77	67	67	77
3	Na% (%)	23	24	12	19	19	14
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.6	0.5	0.2	0.4	0.4	0.3
	PESTICIDES						

Water Quality Datasheet for the period : 2016-2017

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Analysis Division : Upper Tungabhadra SD Davangere

S.No	Parameters	01/12/2016	13/12/2016	21/12/2016	02/01/2017	11/01/2017	23/01/2017
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	20.19	14.76	20.35	12.99	25.43	25.72
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	236	237	219	174	211	183
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.6	7.5	7.6	7.7	7.3	7.4
6	TDS (mg/L)	160	160	123	82	100	86
7	Temp (deg C)	22.5	22.0	22.5	22.5	22.5	23.0
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	78	60	59	56	68	33
3	B (mg/L)	0.35	0.69	0.09	0.27	0.28	0.31
4	Ca (mg/L)	19	17	33	14	17	18
5	Cl (mg/L)	25.6	36.6	27.7	20.2	24.5	17.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)						
8	Fe (mg/L)	0.1	0.2	0.5	0.0	0.1	0.0
9	HCO3 (mg/L)	95	73	72	68	82	41
10	K (mg/L)	2.3	2.4	2.2	1.8	3.0	2.9
11	Mg (mg/L)	6.4	9.7	0.9	7.4	9.0	4.5
12	Na (mg/L)	20.0	18.0	17.0	10.0	12.0	13.0
14	NO2+NO3 (mg N/L)	1.16	1.35	1.57	0.53	0.57	5.97
15	NO2-N (mgN/L)	0.01	0.00	0.26	0.01	0.00	0.01
16	NO3-N (mgN/L)	1.15	1.35	1.30	0.52	0.57	5.96
17	o-PO4-P (mg P/L)	0.000	0.000	0.000	0.010	0.000	0.072
18	SiO2 (mg/L)	14.2	51.3	10.5	14.4	20.7	7.0
19	SO4 (mg/L)	12.5	11.5	11.5	8.6	8.2	13.5
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	2.4	0.6	1.1	1.3	1.0	1.5
2	DO (mg/L)	7.8	6.8	7.3	5.5	5.5	5.1
3	DO_SAT% (%)	89	77	83	63	63	60
	TRACE & TOXIC						
1	As (μg/L)	0.7					
2	Cd (μg/L)	0.0					
3	Cr (μg/L)	0.1					
4	Cu (μg/L)	4.1					
5	Ni (μg/L)	0.5					
6	Pb (μg/L)	0.1					
7	Zn (μg/L)	0.6					
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	48	42	84	34	43	46
2	HAR_Total (mgCaCO3/L)	75	83	87	65	80	65
3	Na% (%)	36	32	29	25	24	29
4	RSC (-)	0.1	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	1.0	0.9	0.8	0.5	0.6	0.7
	PESTICIDES						

Water Quality Datasheet for the period : 2016-2017

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Analysis Division : Upper Tungabhadra SD Davangere

S.No	Parameters	01/02/2017	13/02/2017	21/02/2017	01/03/2017	13/03/2017	21/03/2017
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	20.89	103.1	27.92	28.20	21.31	24.91
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	195	74	93	170	143	116
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.4	7.3	7.6	7.6	7.5	7.4
6	TDS (mg/L)	134	64	42	104	94	66
7	Temp (deg C)	23.5	23.0	23.0	23.0	23.5	24.0
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	71	21	33	63	59	46
3	B (mg/L)	0.28	0.18	0.51	0.36	0.23	0.22
4	Ca (mg/L)	16	7	9	16	15	15
5	Cl (mg/L)	12.4	3.6	1.8	10.3	8.9	7.1
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)				0.15	0.16	0.10
8	Fe (mg/L)	0.1	0.0	0.0	0.0	0.0	0.1
9	HCO3 (mg/L)	86	26	41	77	72	56
10	K (mg/L)	1.7	1.2	1.3	2.1	1.6	1.6
11	Mg (mg/L)	9.7	3.9	3.9	6.4	6.4	3.2
12	Na (mg/L)	8.9	3.4	4.7	7.8	6.8	6.2
14	NO2+NO3 (mg N/L)	0.69	0.74	0.66	0.46	0.60	0.70
15	NO2-N (mgN/L)	0.01	0.01	0.01	0.00	0.01	0.00
16	NO3-N (mgN/L)	0.67	0.73	0.64	0.46	0.59	0.70
17	o-PO4-P (mg P/L)	0.031	0.072	0.072	0.052	0.062	0.052
18	SiO2 (mg/L)	13.2	11.9	11.8	14.1	12.0	13.1
19	SO4 (mg/L)	13.0	10.1	10.6	6.0	4.6	5.0
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.7	0.6	0.4	0.8	0.4	0.7
2	DO (mg/L)	5.7	6.1	6.6	6.0	5.1	5.8
3	DO_SAT% (%)	67	71	76	69	60	68
	TRACE & TOXIC						
1	As (μg/L)						
2	Cd (μg/L)						
3	Cr (μg/L)						
4	Cu (μg/L)						
5	Ni (μg/L)						
6	Pb (μg/L)						
7	Zn (μg/L)						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	40	17	24	40	37	37
2	HAR_Total (mgCaCO3/L)	81	33	40	66	63	50
3	Na% (%)	19	18	20	20	19	21
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.4	0.3	0.3	0.4	0.4	0.4
	PESTICIDES						

Water Quality Datasheet for the period : 2016-2017

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Analysis Division : Upper Tungabhadra SD Davangere

S.No	Parameters	03/04/2017	11/04/2017	21/04/2017	01/05/2017	11/05/2017	22/05/2017
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	82.59	32.27	19.09	13.50	96.90	30.83
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	105	208	182	145	91	106
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.4	7.6	7.7	7.2	7.5	7.2
6	TDS (mg/L)	74	154	116	92	68	78
7	Temp (deg C)	24.0	24.5	25.0	25.5	24.5	24.5
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	37	75	70	56	32	36
3	B (mg/L)	0.03	0.05	0.00	0.20	0.24	0.00
4	Ca (mg/L)	9	16	14	10	8	10
5	Cl (mg/L)	5.3	11.0	8.9	8.9	7.1	8.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.11	0.29	0.23	0.13	0.06	0.08
8	Fe (mg/L)	0.0	0.0	0.1	0.1	0.0	0.1
9	HCO3 (mg/L)	45	91	86	68	39	43
10	K (mg/L)	1.3	2.8	1.7	1.8	1.2	1.3
11	Mg (mg/L)	6.1	9.0	9.0	7.5	4.7	3.8
12	Na (mg/L)	5.0	11.0	8.0	7.0	4.0	5.0
14	NO2+NO3 (mg N/L)	0.22	1.42	0.97	0.56	0.01	0.74
15	NO2-N (mgN/L)	0.00	0.01	0.01	0.00	0.01	0.01
16	NO3-N (mgN/L)	0.22	1.40	0.95	0.56	0.00	0.73
17	o-PO4-P (mg P/L)	0.052	0.052	0.052	0.041	0.041	0.031
18	SiO2 (mg/L)	9.8	10.6	11.8	10.2	8.3	9.2
19	SO4 (mg/L)	11.0	14.0	11.0	6.0	6.0	7.0
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	0.7	1.2	1.2	1.2	1.2	0.4
2	DO (mg/L)	5.6	4.9	5.6	5.2	5.8	5.5
3	DO_SAT% (%)	66	58	67	63	69	66
	TRACE & TOXIC						
1	As (μg/L)						
2	Cd (μg/L)						
3	Cr (μg/L)						
4	Cu (μg/L)						
5	Ni (μg/L)						
6	Pb (μg/L)						
7	Zn (μg/L)						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	22	40	34	26	20	25
2	HAR_Total (mgCaCO3/L)	47	77	71	57	39	41
3	Na% (%)	18	23	19	20	18	20
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.3	0.5	0.4	0.4	0.3	0.3
	PESTICIDES						

Water Quality Summary for the period : 2016-2017

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

Sub-Division : Upper Tungabhadra SD Davangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	105.7	10.98	31.17
2	EC_GEN (μmho/cm)	29	278	74	174
3	pH_GEN (pH units)	29	7.7	6.3	7.3
4	TDS (mg/L)	29	183	42	107
5	Temp (deg C)	29	25.5	22.0	23.2
	CHEMICAL				
1	Alk-Phen (mgCaCO ₃ /L)	29	0.0	0.0	0
2	ALK-TOT (mgCaCO ₃ /L)	29	116	21	55
3	B (mg/L)	29	0.69	0.00	0.22
4	Ca (mg/L)	29	33	4	15
5	Cl (mg/L)	29	36.6	1.8	16.8
6	CO ₃ (mg/L)	29	0.0	0.0	0
7	F (mg/L)	9	0.29	0.06	0.14
8	Fe (mg/L)	29	0.7	0.0	0.1
9	HCO ₃ (mg/L)	29	141	26	67
10	K (mg/L)	29	5.9	1.2	2.2
11	Mg (mg/L)	29	12.6	0.9	6.7
12	Na (mg/L)	29	38.0	3.4	10.8
14	NO ₂ +NO ₃ (mg N/L)	29	5.97	0.01	1.31
15	NO ₂ -N (mgN/L)	29	0.26	0.00	0.02
16	NO ₃ -N (mgN/L)	29	5.96	0.00	1.28
17	o-PO ₄ -P (mg P/L)	28	0.155	0.000	0.044
18	SiO ₂ (mg/L)	29	51.3	7.0	15.5
19	SO ₄ (mg/L)	29	15.2	0.4	8.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD ₃₋₂₇ (mg/L)	29	2.9	0.1	1
2	DO (mg/L)	29	7.8	4.4	5.7
3	DO_SAT% (%)	29	89	50	67
	TRACE & TOXIC				
1	As (μg/L)	1	0.7	0.7	0.7
2	Cd (μg/L)	1	0.0	0.0	0
3	Cr (μg/L)	1	0.1	0.1	0.1
4	Cu (μg/L)	1	4.1	4.1	4.1
5	Ni (μg/L)	1	0.5	0.5	0.5
6	Pb (μg/L)	1	0.1	0.1	0.1
7	Zn (μg/L)	1	0.6	0.6	0.6
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO ₃ /L)	29	84	9	37
2	HAR_Total (mgCaCO ₃ /L)	29	99	18	65
3	Na% (%)	29	78	12	24
4	RSC (-)	29	0.6	0.0	0
5	SAR (-)	29	3.9	0.2	0.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2003-2017

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2003	2004	2005	2006	2007
	PHYSICAL					
1	Q (cumec)	7.331	8.851	65.85	44.18	173.7
2	EC_GEN (µmho/cm)	485	554	219	332	181
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.2	7.3	7.5	7.2	7.6
5	TDS (mg/L)					
6	Temp (deg C)	29.8	28.5	30.3	28.1	25.2
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	166	104	80	93	47
2	B (mg/L)	0.09	0.16	0.21	0.00	0.14
3	Ca (mg/L)	37	27	20	13	13
4	Cl (mg/L)	68.5	91.3	48.9	41.7	22.2
5	F (mg/L)	0.28	0.12	0.25	0.00	0.08
6	Fe (mg/L)	1.7		1.7	0.0	0.3
7	HCO3 (mg/L)	160	127	97	113	57
8	K (mg/L)	6.9	6.0	4.7	40.5	1.8
9	Mg (mg/L)	20.0	20.4	14.0	6.8	5.5
10	Na (mg/L)	39.0	62.9	34.7	28.1	14.4
11	NO2+NO3 (mg N/L)		1.38	0.63	0.66	0.68
12	NO2-N (mgN/L)		1.05	0.00	0.00	0.01
13	NO3-N (mgN/L)	0.69	0.34	0.63	0.66	0.67
14	o-PO4-P (mg P/L)	0.007	0.000	0.155	0.000	0.002
15	SiO2 (mg/L)	3.4	33.5	2.9	11.2	12.7
16	SO4 (mg/L)	19.4	45.5	27.0	15.3	4.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.6	1.0	1.2	1.2
2	DO (mg/L)	6.1	4.9	5.2	6.9	4.4
3	DO_SAT% (%)	80	63	69	88	53
	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)	92	67	49	32	33
2	HAR_Total (mgCaCO3/L)	175	151	107	61	56
3	Na% (%)	32	46	40	34	34
4	RSC (-)	0.0	0.0	0.0	0.7	0.0
5	SAR (-)	1.3	2.2	1.5	1.6	0.8
	PESTICIDES					

Water Quality Seasonal Average for the period: 2003-2017

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood				
		Jun - Oct				
		2008	2009	2010	2011	2012
	PHYSICAL					
1	Q (cumec)	84.44		197.1	230.5	39.26
2	EC_GEN (µmho/cm)	215		227	182	284
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.7		7.7	7.1	7.3
5	TDS (mg/L)					
6	Temp (deg C)	24.7		24.5	25.0	25.4
	CHEMICAL					
1	ALK-TOT (mgCaCO ₃ /L)	64		72	55	68
2	B (mg/L)	0.29		0.02		
3	Ca (mg/L)	16		19	15	20
4	Cl (mg/L)	24.8		24.6	20.8	40.7
5	F (mg/L)	0.10		0.15	0.23	0.19
6	Fe (mg/L)	0.3		0.3	0.2	
7	HCO ₃ (mg/L)	78		88	67	83
8	K (mg/L)	2.4		2.6	2.0	2.5
9	Mg (mg/L)	8.0		7.8	5.8	6.8
10	Na (mg/L)	15.5		13.9	12.7	26.8
11	NO ₂ +NO ₃ (mg N/L)	0.90		0.97	1.07	1.89
12	NO ₂ -N (mgN/L)	0.01		0.00	0.00	0.01
13	NO ₃ -N (mgN/L)	0.89		0.97	1.06	1.87
14	o-PO ₄ -P (mg P/L)	0.000		0.021	0.008	
15	SiO ₂ (mg/L)	10.6		14.3	12.2	
16	SO ₄ (mg/L)	5.2		4.8	6.4	6.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃₋₂₇ (mg/L)	0.9			0.7	0.7
2	DO (mg/L)	4.7		5.4	5.9	5.6
3	DO_SAT% (%)	57		65	72	68
	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 (mgCaCO ₃ /L)	39		48	37	51
2	HAR_Total (mgCaCO ₃ /L)	72		80	61	80
3	Na% (%)	31		26	29	40
4	RSC (-)	0.0		0.0	0.0	0.0
5	SAR (-)	0.8		0.7	0.7	1.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2003-2017

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Flood			
		June-Oct			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	286.3	170.7	62.38	31.78
2	EC_GEN (µmho/cm)	199	205	217	205
3	pH_FLD (pH units)		7.4		
4	pH_GEN (pH units)	7.3	7.3	7.3	7.0
5	TDS (mg/L)				123
6	Temp (deg C)	25.9	25.3	24.1	22.8
	CHEMICAL				
1	ALK-TOT (mgCaCO ₃ /L)	60	60	48	60
2	B (mg/L)	0.03	0.31	0.25	0.16
3	Ca (mg/L)	15	16	21	16
4	Cl (mg/L)	22.8	24.4	28.9	23.6
5	F (mg/L)	0.11	0.11	0.19	
6	Fe (mg/L)	0.1	0.3	0.9	0.2
7	HCO ₃ (mg/L)	73	73	72	73
8	K (mg/L)	2.3	2.4	3.5	3.1
9	Mg (mg/L)	5.1	6.4	7.3	7.1
10	Na (mg/L)	19.3	15.3	12.3	15.7
11	NO ₂ +NO ₃ (mg N/L)	1.72	1.94	0.91	1.76
12	NO ₂ -N (mgN/L)	0.02	0.04	0.02	0.02
13	NO ₃ -N (mgN/L)	1.71	1.90	0.89	1.74
14	o-PO ₄ -P (mg P/L)	0.044	0.068	0.203	0.066
15	SiO ₂ (mg/L)	12.1	7.9	11.5	15.0
16	SO ₄ (mg/L)	7.3	6.9	9.5	8.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD ₃₋₂₇ (mg/L)	0.8	1.7	0.5	1.1
2	DO (mg/L)	6.0	6.0	4.7	5.3
3	DO SAT% (%)	73	73	55	62
	TRACE & TOXIC				
1	As (µg/L)	2.1			
2	Cd (µg/L)	0.1			
3	Cr (µg/L)	1.3			
4	Cu (µg/L)	1.0			
5	Hg (µg/L)				
6	Ni (µg/L)	9.5			
7	Pb (µg/L)	5.7			
8	Zn (µg/L)	0.0			
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO ₃ /L)	37	41	52	40
2	HAR_Total (mgCaCO ₃ /L)	58	68	82	69
3	Na% (%)	36	31	24	31
4	RSC (-)	0.2	0.0	0.0	0.2
5	SAR (-)	1.1	0.8	0.6	1.0
	PESTICIDES				

Water Quality Seasonal Average for the period: 2003-2017

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
	PHYSICAL					
1	Q (cumec)	2.709	14.00	19.02	34.01	48.06
2	EC_GEN (µmho/cm)	454	214	207	307	231
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.5	7.3	7.7	7.6	7.8
5	TDS (mg/L)					
6	Temp (deg C)	30.4	28.8	26.8	26.4	23.6
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	96	258	70	68	49
2	B (mg/L)	0.15		0.22	0.00	0.12
3	Ca (mg/L)	28	23	23	11	17
4	Cl (mg/L)	62.3	64.5	82.2	41.8	30.7
5	F (mg/L)	0.16	0.24	0.29	0.14	0.14
6	Fe (mg/L)	0.3		1.5	0.0	0.2
7	HCO3 (mg/L)	101	157	85	84	60
8	K (mg/L)	2.2	42.0	5.9	39.1	3.1
9	Mg (mg/L)	15.5	12.9	12.2	5.0	5.5
10	Na (mg/L)	40.9	47.1	58.4	26.8	22.5
11	NO2+NO3 (mg N/L)		6.79	0.56	1.15	0.45
12	NO2-N (mgN/L)		3.43	0.00	0.00	0.03
13	NO3-N (mgN/L)	1.37	3.36	0.56	1.15	0.42
14	o-PO4-P (mg P/L)	0.053		0.035	0.000	0.057
15	SiO2 (mg/L)	14.8	20.4	7.8	14.9	11.4
16	SO4 (mg/L)	33.5	14.2	39.4	22.4	15.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	1.2	1.7	1.4	0.9
2	DO (mg/L)	4.8	5.8	6.4	7.0	4.6
3	DO_SAT% (%)	64	74	80	86	54
	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)	69	58	58	26	42
2	HAR_Total (mgCaCO3/L)	134	111	108	47	65
3	Na% (%)	31	39	51	38	39
4	RSC (-)	0.0	0.4	0.0	0.4	0.0
5	SAR (-)	1.4	2.0	2.5	1.8	1.2
	PESTICIDES					

Water Quality Seasonal Average for the period: 2003-2017

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter				
		Nov - Feb				
		2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
	PHYSICAL					
1	Q (cumec)	33.79		63.83	37.17	52.24
2	EC_GEN (µmho/cm)	240		194	279	250
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.6		7.5	7.0	7.1
5	TDS (mg/L)					
6	Temp (deg C)	23.5		24.4	24.3	23.1
	CHEMICAL					
1	ALK-TOT (mgCaCO ₃ /L)	64		56	71	58
2	B (mg/L)	0.14		0.06		
3	Ca (mg/L)	17		16	21	21
4	Cl (mg/L)	33.2		20.3	44.1	40.1
5	F (mg/L)	0.14		0.14		0.14
6	Fe (mg/L)	0.2		0.0	0.0	
7	HCO ₃ (mg/L)	78		68	86	71
8	K (mg/L)	2.3		1.8	2.5	2.2
9	Mg (mg/L)	5.6		6.1	5.3	4.6
10	Na (mg/L)	23.0		13.0	26.6	23.9
11	NO ₂ +NO ₃ (mg N/L)	0.54		0.99	1.51	1.59
12	NO ₂ -N (mgN/L)	0.02		0.05	0.02	0.02
13	NO ₃ -N (mgN/L)	0.52		0.94	1.48	1.57
14	o-PO ₄ -P (mg P/L)	0.049		0.018	0.000	
15	SiO ₂ (mg/L)	12.5		12.4	12.5	
16	SO ₄ (mg/L)	5.9		9.0	6.9	5.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃₋₂₇ (mg/L)	1.5		0.2	1.0	1.0
2	DO (mg/L)	5.4		6.2	5.3	6.1
3	DO_SAT% (%)	63		74	63	71
	TRACE & TOXIC					
1	As (µg/L)				0.3	0.5
2	Cd (µg/L)				0.2	0.1
3	Cr (µg/L)				1.1	0.5
4	Cu (µg/L)					3.1
5	Hg (µg/L)					
6	Ni (µg/L)				5.0	11.6
7	Pb (µg/L)					
8	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO ₃ /L)	42		39	53	52
2	HAR_Total (mgCaCO ₃ /L)	65		64	75	71
3	Na% (%)	40		29	41	41
4	RSC (-)	0.0		0.0	0.0	0.0
5	SAR (-)	1.2		0.7	1.3	1.2
	PESTICIDES					

Water Quality Seasonal Average for the period: 2003-2017

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Winter Nov-Feb			
		2013-2014	2014-2015	2015-2016	2016-2017
	PHYSICAL				
1	Q (cumec)	34.55	28.57	27.24	30.65
2	EC_GEN (µmho/cm)	265	191	206	177
3	pH_FLD (pH units)				
4	pH_GEN (pH units)	7.3	7.6	7.5	7.4
5	TDS (mg/L)			99	106
6	Temp (deg C)	24.5	22.8	22.4	22.8
	CHEMICAL				
1	ALK-TOT (mgCaCO ₃ /L)	73	59	67	53
2	B (mg/L)	0.02	0.20	0.33	0.32
3	Ca (mg/L)	19	19	19	16
4	Cl (mg/L)	36.8	23.7	21.8	18.4
5	F (mg/L)	0.19	0.11	0.17	
6	Fe (mg/L)	0.2	0.1	0.3	0.1
7	HCO ₃ (mg/L)	87	72	84	65
8	K (mg/L)	2.4	5.6	1.7	2.0
9	Mg (mg/L)	6.6	6.8	8.0	6.8
10	Na (mg/L)	27.8	8.7	10.1	10.6
11	NO ₂ +NO ₃ (mg N/L)	1.64	1.12	1.00	1.51
12	NO ₂ -N (mgN/L)	0.02	0.02	0.01	0.03
13	NO ₃ -N (mgN/L)	1.62	1.10	0.99	1.48
14	o-PO ₄ -P (mg P/L)	0.075	0.039	0.351	0.028
15	SiO ₂ (mg/L)	12.7	10.4	16.9	19.3
16	SO ₄ (mg/L)	6.7	6.5	8.1	9.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD ₃₋₂₇ (mg/L)	1.2	1.0	1.5	1.1
2	DO (mg/L)	6.2	6.4	6.6	6.2
3	DO SAT% (%)	73	73	75	71
	TRACE & TOXIC				
1	As (µg/L)			0.7	0.7
2	Cd (µg/L)		0.0	0.0	0.0
3	Cr (µg/L)		0.2	0.1	0.1
4	Cu (µg/L)		7.3	0.1	4.1
5	Hg (µg/L)				
6	Ni (µg/L)		1.6	0.7	0.5
7	Pb (µg/L)		1.0	0.1	0.1
8	Zn (µg/L)		9.8	3.1	0.6
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO ₃ /L)	47	47	48	40
2	HAR_Total (mgCaCO ₃ /L)	74	75	81	68
3	Na% (%)	44	19	21	24
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	1.4	0.4	0.5	0.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2003-2017

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Summer				
		Mar - May				
		2004	2005	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	9.774		40.77	61.69	53.24
2	EC_GEN (µmho/cm)	407		237	318	174
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.6		7.6	7.6	7.5
5	TDS (mg/L)					
6	Temp (deg C)	33.0		29.5	28.8	26.5
	CHEMICAL					
1	ALK-TOT (mgCaCO ₃ /L)	95		57	79	48
2	B (mg/L)	0.06		0.23	0.00	0.07
3	Ca (mg/L)	25		30	15	13
4	Cl (mg/L)	36.3		42.9	38.1	20.4
5	F (mg/L)	0.26		0.29	0.00	0.08
6	Fe (mg/L)			1.4	0.0	0.3
7	HCO ₃ (mg/L)	116		69	97	58
8	K (mg/L)	2.5		3.9	27.6	2.3
9	Mg (mg/L)	14.8		10.7	8.5	4.6
10	Na (mg/L)	24.2		24.3	26.9	14.2
11	NO ₂ +NO ₃ (mg N/L)			0.69	0.24	0.49
12	NO ₂ -N (mgN/L)			0.00	0.00	0.01
13	NO ₃ -N (mgN/L)	1.69		0.69	0.24	0.47
14	o-PO ₄ -P (mg P/L)			0.389	0.000	0.386
15	SiO ₂ (mg/L)	10.8		3.9	9.8	12.9
16	SO ₄ (mg/L)	18.2		41.3	25.2	3.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃₋₂₇ (mg/L)	3.1		1.3	1.5	1.5
2	DO (mg/L)	7.3		7.0	6.2	4.2
3	DO_SAT% (%)	101		92	79	52
	TRACE & TOXIC					
1	As (µg/L)			13.9	6.9	6.8
2	Cd (µg/L)			0.0	4.0	1.0
3	Cr (µg/L)			4.8		
4	Cu (µg/L)			11.5	4.7	3.6
5	Hg (µg/L)			0.0		
6	Ni (µg/L)					
7	Pb (µg/L)			1.1	3.4	1.4
8	Zn (µg/L)				40.0	41.0
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO ₃ /L)	63		74	37	34
2	HAR_Total (mgCaCO ₃ /L)	125		119	73	53
3	Na% (%)	30		30	35	36
4	RSC (-)	0.0		0.0	0.3	0.0
5	SAR (-)	1.0		1.0	1.4	0.9
	PESTICIDES					

Water Quality Seasonal Average for the period: 2003-2017

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Summer				
		Mar - May				
		2009	2010	2011	2012	2013
	PHYSICAL					
1	Q (cumec)	67.84		66.63	82.77	71.71
2	EC_GEN (μmho/cm)	164		177	169	159
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.4		7.1	7.0	6.9
5	TDS (mg/L)					
6	Temp (deg C)	25.2		22.8	24.5	25.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	51		53	48	41
2	B (mg/L)	0.07		0.03		0.00
3	Ca (mg/L)	13		15	13	13
4	Cl (mg/L)	18.5		19.3	20.9	20.5
5	F (mg/L)	0.06		0.25	0.15	
6	Fe (mg/L)	0.2		0.0		0.1
7	HCO3 (mg/L)	63		65	58	50
8	K (mg/L)	1.4		1.7	2.3	1.3
9	Mg (mg/L)	4.5		6.2	5.5	5.7
10	Na (mg/L)	12.7		9.8	12.3	8.9
11	NO2+NO3 (mg N/L)	0.51		0.92	1.58	1.65
12	NO2-N (mgN/L)	0.02		0.01	0.02	0.01
13	NO3-N (mgN/L)	0.49		0.91	1.56	1.64
14	o-PO4-P (mg P/L)	0.010		0.026		0.041
15	SiO2 (mg/L)	11.5		16.3		13.1
16	SO4 (mg/L)	3.0		5.1	5.3	6.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3			0.6	0.4
2	DO (mg/L)	5.5		5.6	5.4	4.9
3	DO_SAT% (%)	66		65	65	59
	TRACE & TOXIC					
1	As (μg/L)			1.6	0.5	7.1
2	Cd (μg/L)				0.4	0.1
3	Cr (μg/L)			1.8	1.9	0.3
4	Cu (μg/L)	3.4		4.3	1.1	2.9
5	Hg (μg/L)					
6	Ni (μg/L)	11.3			4.3	1.2
7	Pb (μg/L)				3.6	1.6
8	Zn (μg/L)				40.0	77.9
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	33		37	32	33
2	HAR_Total (mgCaCO3/L)	52		63	55	56
3	Na% (%)	34		24	31	25
4	RSC (-)	0.0		0.0	0.0	0.0
5	SAR (-)	0.8		0.5	0.7	0.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2003-2017

Station Name : HOLEHONNUR (AKLE0A4)

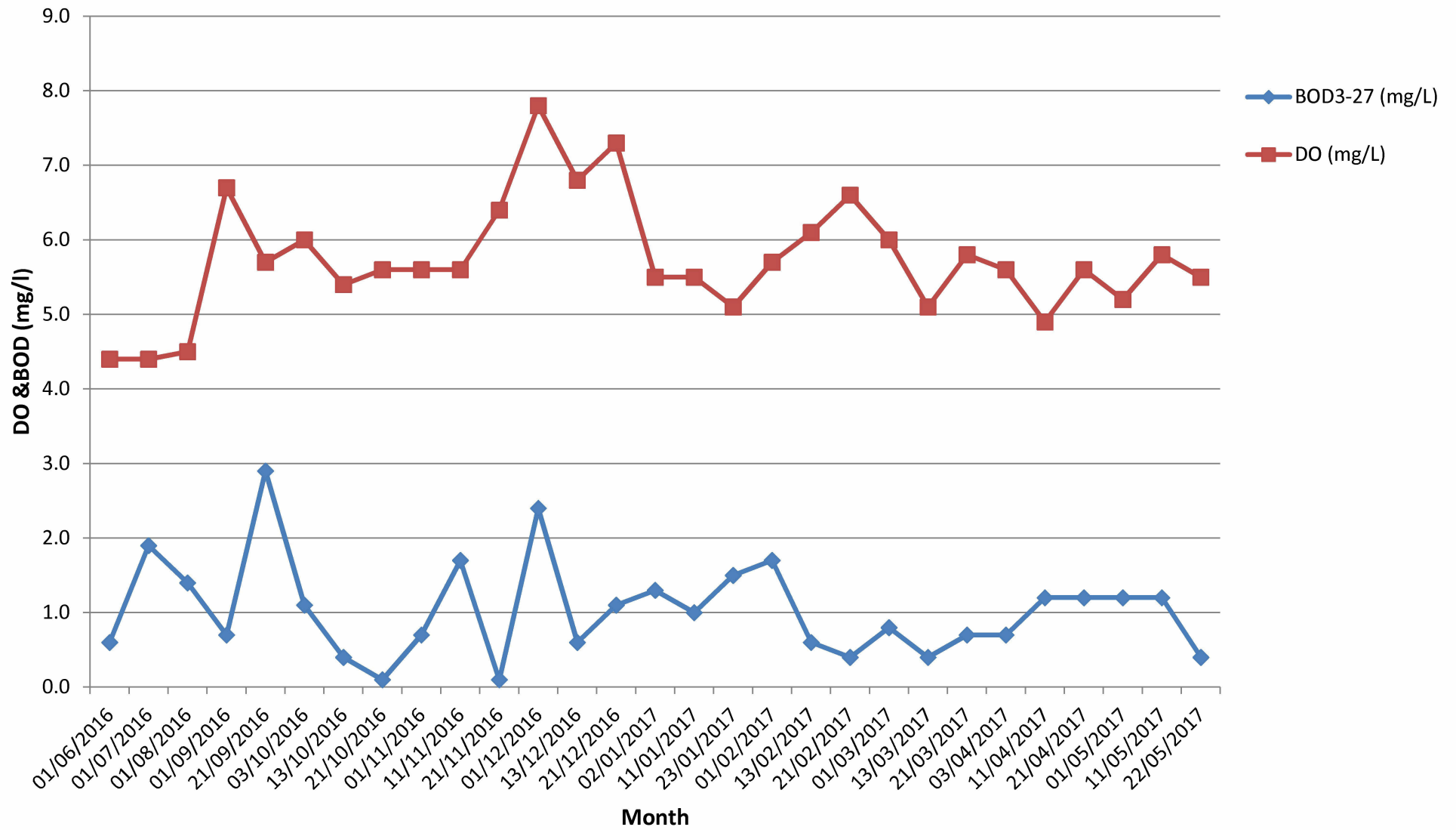
Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Sub-Division : Upper Tungabhadra SD Davangere

S.No	Parameters	Summer			
		Mar-May			
		2014	2015	2016	2017
	PHYSICAL				
1	Q (cumec)	88.10	28.15	31.39	38.84
2	EC_GEN (µmho/cm)	160	188	141	141
3	pH_FLD (pH units)				
4	pH_GEN (pH units)	7.0	7.3	6.9	7.5
5	TDS (mg/L)			66	94
6	Temp (deg C)	24.8	24.0	25.3	24.3
	CHEMICAL				
1	ALK-TOT (mgCaCO ₃ /L)	51	61	39	53
2	B (mg/L)	0.04	0.48	0.18	0.15
3	Ca (mg/L)	13	14	12	12
4	Cl (mg/L)	17.7	22.1	16.9	8.5
5	F (mg/L)	0.22	0.19	0.23	0.14
6	Fe (mg/L)	0.1	0.1	0.1	0.1
7	HCO ₃ (mg/L)	63	74	51	64
8	K (mg/L)	3.7	6.0	1.4	1.7
9	Mg (mg/L)	4.9	5.2	5.5	6.2
10	Na (mg/L)	11.9	15.3	6.9	6.8
11	NO ₂ +NO ₃ (mg N/L)	1.26	0.52	1.17	0.63
12	NO ₂ -N (mgN/L)	0.01	0.04	0.01	0.01
13	NO ₃ -N (mgN/L)	1.24	0.48	1.15	0.62
14	o-PO ₄ -P (mg P/L)	0.048	0.021	0.517	0.048
15	SiO ₂ (mg/L)	17.2	4.7	13.5	11.0
16	SO ₄ (mg/L)	4.5	4.0	4.9	7.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD ₃₋₂₇ (mg/L)	1.6	3.3	0.6	0.9
2	DO (mg/L)	6.2	5.3	5.6	5.5
3	DO SAT% (%)	74	62	68	65
	TRACE & TOXIC				
1	As (µg/L)	0.7		3.7	
2	Cd (µg/L)	0.1			
3	Cr (µg/L)	0.5		1.0	
4	Cu (µg/L)	0.3		1.0	
5	Hg (µg/L)				
6	Ni (µg/L)	9.1		1.3	
7	Pb (µg/L)	0.4			
8	Zn (µg/L)	18.0		20.8	
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO ₃ /L)	33	36	31	31
2	HAR_Total (mgCaCO ₃ /L)	54	58	54	57
3	Na% (%)	31	33	22	20
4	RSC (-)	0.0	0.1	0.0	0.0
5	SAR (-)	0.7	0.9	0.4	0.4
	PESTICIDES				

Holehonnur



HISTORY SHEET

		Water Year : 2016-2017	
Site	: Yadgir	Code	: AKP00B6
State	: Karnataka	District	: Yadgir
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Bhima
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Middle Krishna SD 2 , Kurnool
Drainage Area	: 69863 Sq. Km.	Bank	: Left
Latitude	: 16°44'15"	Longitude	: 77°07'31"
	Opening Date	Closing Date	
Gauge	: 05/09/1963		
Discharge	: 11/11/1964		
Sediment	: 01/06/1965		
Water Quality	: 01/01/1972		

Water Quality Datasheet for the period : 2016-2017

Station Name : Yadgir (AKP00B6)

Division : Lower Krishna Divn., Hyderabad

Local River : Bhima

River Water Analysis Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	22/07/2016 A	01/08/2016 A	01/09/2016 A	01/10/2016 A	01/11/2016 A
	PHYSICAL					
1	Q (cumec)	403.0	839.9	45.80	486.9	8.876
2	Colour_Cod (-)	Brown	Brown	Clear	Brown	Clear
3	EC_GEN (μmho/cm)	395	236	488	462	738
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.9	8.2	8.8	8.4	8.6
6	TDS (mg/L)	229	197	377	462	413
7	Temp (deg C)	26.0	24.0	25.0	23.0	23.0
8	Turb (NTU)	498.00	168.00	0.00	1.00	0.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	6.0	2.0	6.0
2	ALK-TOT (mgCaCO3/L)	114	152	127	211	151
3	Ca (mg/L)	23	46	31	32	38
4	Cl (mg/L)	24.6	19.2	32.4	33.6	61.5
5	CO3 (mg/L)	0.0	0.0	7.2	2.4	7.2
6	F (mg/L)	0.46	0.06	0.27	0.12	0.38
7	Fe (mg/L)	0.1	0.2	0.0	0.3	0.1
8	HCO3 (mg/L)	139	185	140	253	170
9	K (mg/L)	3.9	2.7	3.2	3.1	3.9
10	Mg (mg/L)	13.1	28.1	17.1	17.6	20.6
11	Na (mg/L)	26.1	23.8	41.0	40.0	66.4
12	NH3-N (mg N/L)		0.00		0.00	0.00
13	NO2+NO3 (mg N/L)	0.86	1.51	0.95	1.64	0.48
14	NO2-N (mgN/L)	0.03	0.00	0.00	0.00	0.00
15	NO3-N (mgN/L)	0.84	1.51	0.95	1.64	0.48
16	o-PO4-P (mg P/L)	0.051	0.058	0.126	0.094	0.071
17	SiO2 (mg/L)	12.2	10.9	17.5	16.8	17.8
18	SO4 (mg/L)	45.0	65.0	25.5	32.5	54.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	0.9	2.2	0.9	0.3
2	COD (mg/L)	14.2	4.7	3.2	3.7	5.0
3	DO (mg/L)	6.0	6.9	6.5	6.9	7.0
4	DO_SAT% (%)	74	82	79	80	82
5	Fcol-MPN (MPN/100mL)	16000	16000	20	9000	16000
6	Tcol-MPN (MPN/100mL)	16000	16000	16000	9000	16000
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	58	116	78	81	94
2	HAR_Total (mgCaCO3/L)	113	233	149	154	180
3	Na% (%)	33	18	37	36	44
4	RSC (-)	0.0	0.0	0.0	1.2	0.0
5	SAR (-)	1.1	0.7	1.5	1.4	2.2
	PESTICIDES	Analysis not done due to mal function of instrument.				

Samples not collected during June and from December to May months due to Drybed/No flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Yadgir (AKP00B6)

Division : Lower Krishna Divn., Hyderabad

Local River : Bhima

Sub-Division : Middle Krishna SD 2 , Kurnool

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	2640	0.000	131.4
2	EC_GEN (μmho/cm)	5	738	236	464
3	pH_GEN (pH units)	5	8.8	7.9	8.4
4	TDS (mg/L)	5	462	197	336
5	Temp (deg C)	5	26.0	23.0	24.2
6	Turb (NTU)	5	498.00	0.00	133.4
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	5	6.0	0.0	2.8
2	ALK-TOT (mgCaCO3/L)	5	211	114	151
3	Ca (mg/L)	5	46	23	34
4	Cl (mg/L)	5	61.5	19.2	34.3
5	CO3 (mg/L)	5	7.2	0.0	3.4
6	F (mg/L)	5	0.46	0.06	0.26
7	Fe (mg/L)	5	0.3	0.0	0.1
8	HCO3 (mg/L)	5	253	139	177
9	K (mg/L)	5	3.9	2.7	3.3
10	Mg (mg/L)	5	28.1	13.1	19.3
11	Na (mg/L)	5	66.4	23.8	39.4
12	NH3-N (mg N/L)	3	0.00	0.00	0
13	NO2+NO3 (mg N/L)	5	1.64	0.48	1.09
14	NO2-N (mgN/L)	5	0.03	0.00	0.01
15	NO3-N (mgN/L)	5	1.64	0.48	1.08
16	o-PO4-P (mg P/L)	5	0.126	0.051	0.08
17	SiO2 (mg/L)	5	17.8	10.9	15
18	SO4 (mg/L)	5	65.0	25.5	44.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	5	2.2	0.3	1.2
2	COD (mg/L)	5	14.2	3.2	6.2
3	DO (mg/L)	5	7.0	6.0	6.7
4	DO_SAT% (%)	5	82	74	79
5	FCol-MPN (MPN/100mL)	5	16000	20	11404
6	Tcol-MPN (MPN/100mL)	5	16000	9000	14600
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	5	116	58	85
2	HAR_Total (mgCaCO3/L)	5	233	113	166
3	Na% (%)	5	44	18	33
4	RSC (-)	5	1.2	0.0	0.2
5	SAR (-)	5	2.2	0.7	1.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Yadgir (AKP00B6)

Division : Lower Krishna Divn., Hyderabad

Local River : Bhima

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Flood				
		Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	38.99	90.21	232.3	1553	315.5
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	599	681	472	408	584
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.4	8.4	8.1	8.0	8.3
6	TDS (mg/L)					
7	Temp (deg C)	29.7	29.3	25.2	27.0	25.5
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	23.2	12.3	3.0	0.0	7.1
2	ALK-TOT (mgCaCO3/L)	131	195	143	147	163
3	B (mg/L)	0.01	0.00	0.00	0.01	0.00
4	Ca (mg/L)	13	29	26	31	36
5	Cl (mg/L)	54.2	41.7	42.7	26.4	48.4
6	CO3 (mg/L)	28.0	14.8	3.6	0.0	8.5
7	F (mg/L)	0.82	0.44	0.89	0.31	0.66
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	103	208	167	179	182
10	K (mg/L)	3.5	5.2	2.4	2.4	3.4
11	Mg (mg/L)	24.4	15.5	12.8	15.7	15.3
12	Na (mg/L)	51.7	94.3	44.4	28.7	71.0
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.19	0.01	0.01	0.01	0.01
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.19	0.01	0.01	0.01	0.01
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.042	0.001	0.001	0.001	0.001
19	SiO2 (mg/L)	5.9	14.1	16.2	15.3	17.5
20	SO4 (mg/L)	61.0	330.7	46.6	36.7	64.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	1.0	0.6	1.1	0.9
2	COD (mg/L)					
3	DO (mg/L)	6.3	6.3	5.9	5.7	6.6
4	DO_SAT% (%)	82	82	72	71	81
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	Hg (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	33	72	65	78	89
2	HAR_Total (mgCaCO3/L)	135	137	118	143	153
3	Na% (%)	43	55	43	30	48
4	RSC (-)	0.2	1.2	0.5	0.2	0.5
5	SAR (-)	1.9	3.5	1.8	1.0	2.5
	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 : Yadgir (AKP00B6)

Division : Lower Krishna Divn., Hyderabad

Local River : Bhima

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Flood				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	735.3	422.8	2333	724.3	588.8
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	708	527	522	852	619
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.2	8.0	8.1	8.1	8.1
6	TDS (mg/L)					447
7	Temp (deg C)	25.0	26.5	23.5	27.8	25.7
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.9	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	166	162	132	179	137
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	45	44	34	51	31
5	Cl (mg/L)	67.8	38.9	39.5	89.3	61.9
6	CO3 (mg/L)	3.5	0.0	0.0	0.0	0.0
7	F (mg/L)	0.69	0.56	0.32	0.63	0.96
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	195	198	161	219	167
10	K (mg/L)	16.8	2.4	2.9	3.3	3.5
11	Mg (mg/L)	19.8	8.8	16.1	28.9	18.3
12	Na (mg/L)	92.3	42.6	54.3	65.4	54.5
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	1.04	0.00	0.56
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	1.04	0.00	0.56
17	o-PO4-P (mg P/L)					0.205
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.084	0.205
19	SiO2 (mg/L)	20.1	20.6	17.6	19.9	16.9
20	SO4 (mg/L)	88.3	52.2	62.2	130.5	85.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	1.1	1.0	1.2	0.6
2	COD (mg/L)	7.7	13.2	40.7	29.1	15.1
3	DO (mg/L)	6.3	5.9	6.1	6.5	6.0
4	DO_SAT% (%)	76	73	72	82	74
5	FCol-MPN (MPN/100mL)			16000	11500	13667
6	Tcol-MPN (MPN/100mL)			16000	16000	16000
7	TOC (mg/L)					2.4
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Hg (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	112	110	84	127	78
2	HAR_Total (mgCaCO3/L)	194	146	151	248	155
3	Na% (%)	48	39	42	36	42
4	RSC (-)	0.0	0.4	0.0	0.0	0.0
5	SAR (-)	2.9	1.6	1.9	1.8	1.9
	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 : Yadgir (AKP00B6)

Division : Lower Krishna Divn., Hyderabad

Local River : Bhima

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Flood				
		Jun - Oct				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	75.96	149.7	495.8	47.45	443.9
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	575	621	720	666	395
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.1	8.2	7.9	7.7	8.3
6	TDS (mg/L)	385	378	423	424	316
7	Temp (deg C)	25.3	26.3	25.3	25.7	24.5
8	Turb (NTU)	3.37	1.17	24.50	5.67	166.75
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	2.0
2	ALK-TOT (mgCaCO3/L)	183	160	161	175	151
3	B (mg/L)	0.16	0.17	0.19	0.20	
4	Ca (mg/L)	33	40	35	37	33
5	Cl (mg/L)	37.1	61.3	64.8	61.7	27.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	2.4
7	F (mg/L)	0.65	0.59	0.66	0.73	0.23
8	Fe (mg/L)	0.1	0.1	0.1	0.0	0.1
9	HCO3 (mg/L)	223	195	197	213	179
10	K (mg/L)	3.3	3.7	5.0	4.5	3.2
11	Mg (mg/L)	18.6	22.4	19.7	21.2	19.0
12	Na (mg/L)	58.6	50.9	88.3	74.4	32.7
13	NH3-N (mg N/L)	0.01	0.13	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	1.29	1.21	1.06	1.10	1.24
15	NO2-N (mgN/L)	0.00	0.00	0.02	0.04	0.01
16	NO3-N (mgN/L)	1.29	1.21	1.04	1.06	1.23
17	o-PO4-P (mg P/L)	0.149	0.117	0.154	0.130	0.082
18	P-Tot (mgP/L)			0.155		
19	SiO2 (mg/L)	15.3	14.9	16.3	13.6	14.3
20	SO4 (mg/L)	47.0	70.0	97.7	62.7	42.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.7	2.1	2.5	1.4
2	COD (mg/L)	21.1	9.0	16.5	18.2	6.5
3	DO (mg/L)	5.2	6.4	6.7	4.8	6.6
4	DO_SAT% (%)	63	79	81	58	79
5	FCol-MPN (MPN/100mL)	6210	610	12058	130	10255
6	Tcol-MPN (MPN/100mL)	10767	1867	12200	10767	14250
7	TOC (mg/L)	2.7	0.3		12.1	
	TRACE & TOXIC					
1	As (µg/L)	9.20	5.98			
2	Cd (µg/L)	0.51	1.11			
3	Cr (µg/L)	22.31	0.64			
4	Hg (µg/L)		0.06			
5	Ni (µg/L)	12.18	18.85			
6	Pb (µg/L)	7.90	0.81			
7	Zn (µg/L)	8.96	0.02			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	82	99	87	93	83
2	HAR_Total (mgCaCO3/L)	160	193	169	181	162
3	Na% (%)	44	36	51	47	31
4	RSC (-)	0.5	0.0	0.1	0.1	0.3
5	SAR (-)	2.0	1.6	3.0	2.4	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 : Yadgir (AKP00B6)

Division : Lower Krishna Divn., Hyderabad

Local River : Bhima

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Winter				
		2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	20.70	28.50	25.38	192.0	48.38
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	633	543	526	593	730
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.6	8.6	8.3	8.2	8.7
6	TDS (mg/L)					
7	Temp (deg C)	26.7	26.8	26.8	29.0	24.0
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	30.2	22.2	9.1	4.2	8.3
2	ALK-TOT (mgCaCO3/L)	132	200	201	192	181
3	B (mg/L)	0.01	0.00	0.00	0.01	0.00
4	Ca (mg/L)	25	29	23	41	45
5	Cl (mg/L)	50.3	37.3	41.7	41.3	66.3
6	CO3 (mg/L)	36.3	26.7	11.0	5.0	10.0
7	F (mg/L)	0.46	0.74	0.70	0.44	0.64
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	88	189	223	225	200
10	K (mg/L)	2.4	2.4	2.3		3.4
11	Mg (mg/L)	27.0	13.4	27.0	18.0	25.0
12	Na (mg/L)	37.0	31.5	49.0		84.0
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.11	0.01	0.01	0.01	0.01
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.11	0.01	0.01	0.01	0.01
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.022	0.001	0.001	0.000	0.001
19	SiO2 (mg/L)	6.0	15.4	14.4	16.9	17.5
20	SO4 (mg/L)	76.0	52.0	64.0	87.0	76.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.1	0.7	3.8	1.6
2	COD (mg/L)					
3	DO (mg/L)	7.3	6.9	6.6	6.4	6.4
4	DO_SAT% (%)	92	86	83	83	76
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	Hg (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	62	72	56	101	112
2	HAR_Total (mgCaCO3/L)	175	128	169	176	216
3	Na% (%)	29	34	41		45
4	RSC (-)	0.0	1.5	1.0	0.3	0.0
5	SAR (-)	1.3	1.2	2.1		2.5
	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 : Yadgir (AKP00B6)

Division : Lower Krishna Divn., Hyderabad

Local River : Bhima

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Winter				
		2007-2008	2008-2009	Nov - Feb 2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	86.08	77.90	158.8	310.4	88.46
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	700	666	836	843	645
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.4	8.5	8.5	8.2	8.5
6	TDS (mg/L)					449
7	Temp (deg C)	25.0	27.0	25.5	25.5	23.5
8	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	11.6	8.0	6.0	4.0	10.1
2	ALK-TOT (mgCaCO3/L)	191	164	192	202	183
3	B (mg/L)	0.00	0.00	0.00	0.00	0.28
4	Ca (mg/L)	42	48	49	44	32
5	Cl (mg/L)	62.8	63.3	85.2	82.3	56.1
6	CO3 (mg/L)	14.0	9.6	7.2	4.8	12.2
7	F (mg/L)	0.86	0.87	0.55	0.45	0.74
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	205	181	220	237	198
10	K (mg/L)	4.2	3.2	3.1	3.5	3.3
11	Mg (mg/L)	21.0	8.7	24.3	24.8	18.2
12	Na (mg/L)	120.0	67.1	90.3	80.6	65.6
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	2.17	0.00	0.67
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	2.17	0.00	0.67
17	o-PO4-P (mg P/L)					0.186
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.085	0.186
19	SiO2 (mg/L)	15.8	19.0	16.1	17.7	18.6
20	SO4 (mg/L)	95.0	68.8	117.4	113.5	80.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.6	3.1	2.4	1.6	1.0
2	COD (mg/L)	17.2	21.0	19.8	19.9	19.5
3	DO (mg/L)	6.7	6.4	7.3	7.0	6.4
4	DO_SAT% (%)	81	80	89	85	75
5	FCol-MPN (MPN/100mL)			12500	5350	9200
6	Tcol-MPN (MPN/100mL)			16000	9750	12500
7	TOC (mg/L)					2.0
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Hg (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	105	120	122	110	81
2	HAR_Total (mgCaCO3/L)	193	156	224	213	157
3	Na% (%)	57	48	47	45	47
4	RSC (-)	0.0	0.2	0.0	0.2	0.5
5	SAR (-)	3.8	2.3	2.6	2.4	2.3
	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 : Yadgir (AKP00B6)

Division : Lower Krishna Divn., Hyderabad

Local River : Bhima

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Winter				
		2012-2013	2013-2014	Nov - Feb 2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)	46.53	74.94	Drybed/No Flow	68.95	8.876
2	EC_FLD (µmho/cm)	650				
3	EC_GEN (µmho/cm)	646	571		674	738
4	pH_FLD (pH units)	8.2				
5	pH_GEN (pH units)	8.2	8.3		8.0	8.6
6	TDS (mg/L)	427	420		239	413
7	Temp (deg C)	25.5	25.3		26.0	23.0
8	Turb (NTU)	2.05	8.00		2.00	0.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	2.2		0.0	6.0
2	ALK-TOT (mgCaCO3/L)	171	172		165	151
3	B (mg/L)	0.09	0.15		0.00	
4	Ca (mg/L)	34	40		34	38
5	Cl (mg/L)	54.0	29.0		67.3	61.5
6	CO3 (mg/L)	0.0	2.6		0.0	7.2
7	F (mg/L)	0.67	0.61		0.65	0.38
8	Fe (mg/L)	0.0	0.0		0.0	0.1
9	HCO3 (mg/L)	209	204		201	170
10	K (mg/L)	2.1	4.0		3.6	3.9
11	Mg (mg/L)	18.8	22.8		18.7	20.5
12	Na (mg/L)	67.8	61.7		85.6	66.4
13	NH3-N (mg N/L)	0.01	0.00		0.00	0.00
14	NO2+NO3 (mg N/L)	0.80	1.08		1.11	0.48
15	NO2-N (mgN/L)	0.00	0.00		0.00	0.00
16	NO3-N (mgN/L)	0.80	1.08		1.10	0.48
17	o-PO4-P (mg P/L)	0.106	0.125		0.251	0.071
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	18.9	19.9		7.5	17.8
20	SO4 (mg/L)	71.5	73.2		112.0	54.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	1.6		1.8	0.3
2	COD (mg/L)	16.4	9.4		8.9	5.0
3	DO (mg/L)	6.0	6.9		4.9	7.0
4	DO_SAT% (%)	74	83		60	82
5	FCol-MPN (MPN/100mL)	1850	160		3000	16000
6	Tcol-MPN (MPN/100mL)	9000	440		16000	16000
7	TOC (mg/L)	2.1			4.5	
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Hg (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	84	99		84	94
2	HAR_Total (mgCaCO3/L)	162	194		162	180
3	Na% (%)	47	40		53	44
4	RSC (-)	0.2	0.1		0.1	0.0
5	SAR (-)	2.3	1.9		2.9	2.2
	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 : Yadgir (AKP00B6)

Division : Lower Krishna Divn., Hyderabad

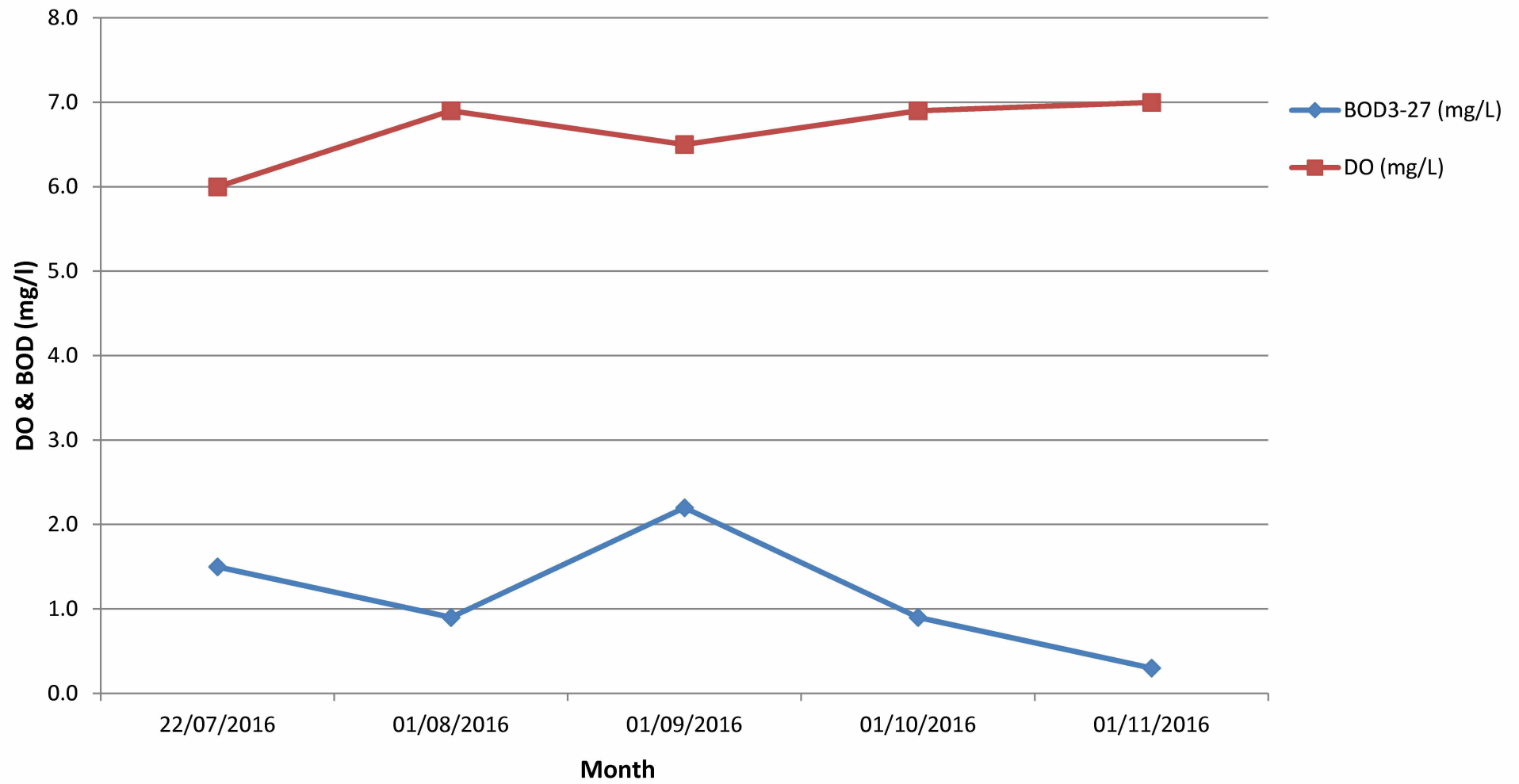
Local River : Bhima

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Summer				
		Mar - May				
		2003	2004	2005	2006	2007
	PHYSICAL					
1	Q (cumec)	Drybed/No Flow	19.43			0.000
2	EC_FLD (µmho/cm)			Dry bed/No flow 2003,2005, 2006		
3	EC_GEN (µmho/cm)		564	and from 2008 to 2017.		737
4	pH_FLD (pH units)					
5	pH_GEN (pH units)		8.7			8.4
6	TDS (mg/L)					
7	Temp (deg C)		30.0			27.0
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		14.9			19.9
2	ALK-TOT (mgCaCO3/L)		203			232
3	B (mg/L)		0.00			0.00
4	Ca (mg/L)		27			48
5	Cl (mg/L)		42.8			67.9
6	CO3 (mg/L)		18.0			24.0
7	F (mg/L)		0.74			0.99
8	Fe (mg/L)		0.0			0.0
9	HCO3 (mg/L)		211			234
10	K (mg/L)		2.1			3.2
11	Mg (mg/L)		19.4			19.0
12	Na (mg/L)		35.0			86.0
13	NH3-N (mg N/L)		0.00			0.00
14	NO2+NO3 (mg N/L)		0.01			0.01
15	NO2-N (mgN/L)		0.00			0.00
16	NO3-N (mgN/L)		0.01			0.01
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)		0.001			0.001
19	SiO2 (mg/L)		11.3			21.0
20	SO4 (mg/L)		64.0			65.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		1.4			0.9
2	COD (mg/L)					
3	DO (mg/L)		6.2			5.6
4	DO_SAT% (%)		82			70
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					7.00
3	Cr (µg/L)					18.00
4	Hg (µg/L)					1.85
5	Ni (µg/L)					1.00
6	Pb (µg/L)					46.00
7	Zn (µg/L)					45.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		68			120
2	HAR_Total (mgCaCO3/L)		149			199
3	Na% (%)		34			48
4	RSC (-)		1.1			0.7
5	SAR (-)		1.3			2.7
	PESTICIDES					
1	Aldrin (µg/L)					0.010
2	BHC (µg/L)					0.100
3	DDT (µg/L)					0.100
4	Dieldrin (µg/L)					0.020
5	Endos (µg/L)					0.100

Yadgir



HISTORY SHEET

		Water Year : 2016-2017	
Site	: Malkhed	Code	: AKP10E1
State	: Karnataka	District	Gulbarga
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	Sub Tributary	: Kagna
Sub-Sub Tributary	: -	Local River	: Kagna
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Middle Krishna SD 2 , Kurnool
Drainage Area	: 7650 Sq. Km.	Bank	: Left
Latitude	: 17°12'12"	Longitude	: 77°09'23"
	Opening Date	Closing Date	
Gauge	: 29/09/1989		
Discharge	: 15/08/1990		
Sediment	: 08/09/1992		
Water Quality	: 01/06/1992		

Water Quality Datasheet for the period : 2016-2017

Station Name : Malkhed (AKP10E1)

Division : Lower Krishna Divn., Hyderabad

Local River : Kagna

River Water Analysis Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	01/06/2016 A	01/07/2016 A	01/08/2016 A	01/09/2016 A
	PHYSICAL				
1	Q (cumec)	0.435	6.244	265.4	458.8
2	Colour_Cod (-)	Clear	Brown	Brown	Brown
3	EC_GEN (µmho/cm)	529	321	228	302
4	Odour_Code (-)	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.5	8.2	8.1	8.3
6	TDS (mg/L)	309	187	177	172
7	Temp (deg C)	30.0	25.0	24.0	28.0
8	Turb (NTU)	24.00	147.00	94.00	126.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	3.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	194	132	105	110
3	Ca (mg/L)	34	25	22	21
4	Cl (mg/L)	27.1	11.6	5.2	10.1
5	CO3 (mg/L)	3.6	0.0	0.0	0.0
6	F (mg/L)	0.63	0.64	0.01	0.39
7	Fe (mg/L)	0.0	0.0	0.1	0.1
8	HCO3 (mg/L)	229	161	128	134
9	K (mg/L)	4.5	3.3	2.5	2.6
10	Mg (mg/L)	19.4	14.2	12.1	11.6
11	Na (mg/L)	49.0	17.7	14.9	15.4
12	NH3-N (mg N/L)	0.00	0.00	0.00	0.01
13	NO2+NO3 (mg N/L)	0.45	2.38	1.49	1.45
14	NO2-N (mgN/L)	0.00	0.01	0.00	0.00
15	NO3-N (mgN/L)	0.45	2.37	1.49	1.45
16	o-PO4-P (mg P/L)	0.032	0.036	0.064	0.061
17	SiO2 (mg/L)	8.7	12.2	15.3	9.9
18	SO4 (mg/L)	13.4	11.3	6.6	8.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.0	0.7	1.7	1.4
2	COD (mg/L)	15.8	7.0	4.3	9.2
3	DO (mg/L)	5.0	5.8	5.5	4.6
4	DO_SAT% (%)	66	70	65	59
5	FCol-MPN (MPN/100mL)	20	20	230	20
6	Tcol-MPN (MPN/100mL)	5000	16000	16000	170
	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)	84	62	54	53
2	HAR_Total (mgCaCO3/L)	165	121	105	101
3	Na% (%)	39	24	23	24
4	RSC (-)	0.6	0.2	0.0	0.2
5	SAR (-)	1.7	0.7	0.6	0.7
	PESTICIDES	Anlalysis not done due to mal function of instrument.			

Water Quality Datasheet for the period : 2016-2017

Station Name : Malkhed (AKP10E1)

Division : Lower Krishna Divn., Hyderabad

Local River : Kagna

River Water Analysis Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	01/10/2016 A	01/11/2016 A	01/12/2016 A	02/01/2017 A
	PHYSICAL				
1	Q (cumec)	213.1	62.44	3.682	4.917
2	Colour_Cod (-)	Brown	Brown	Clear	Clear
3	EC_GEN (µmho/cm)	350	601	616	529
4	Odour_Code (-)	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.1	8.4	8.5	8.3
6	TDS (mg/L)	197	332	544	383
7	Temp (deg C)	26.0	27.0	22.0	23.0
8	Turb (NTU)	2.00	0.00	0.00	0.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	10.0	3.5	6.0
2	ALK-TOT (mgCaCO3/L)	161	202	254	259
3	Ca (mg/L)	30	46	47	59
4	Cl (mg/L)	11.2	27.9	22.2	24.4
5	CO3 (mg/L)	0.0	12.0	4.2	7.2
6	F (mg/L)	0.00	0.47	0.60	0.74
7	Fe (mg/L)	0.2	0.0	0.0	0.0
8	HCO3 (mg/L)	197	222	301	301
9	K (mg/L)	3.0	3.8	4.0	4.1
10	Mg (mg/L)	16.5	24.9	25.5	32.2
11	Na (mg/L)	18.3	43.5	45.6	64.0
12	NH3-N (mg N/L)	0.00	0.00	0.09	2.98
13	NO2+NO3 (mg N/L)	1.83	0.48	0.19	0.35
14	NO2-N (mgN/L)	0.00	0.00	0.00	0.00
15	NO3-N (mgN/L)	1.83	0.48	0.19	0.35
16	o-PO4-P (mg P/L)	0.078	0.039	0.093	0.070
17	SiO2 (mg/L)	19.8	24.0	23.3	6.2
18	SO4 (mg/L)	5.5	22.1	80.5	93.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.2	0.4	0.8	1.1
2	COD (mg/L)	3.7	1.7	4.6	5.5
3	DO (mg/L)	4.2	5.0	7.0	7.3
4	DO_SAT% (%)	52	63	80	85
5	FCol-MPN (MPN/100mL)	16000	16000	1400	140
6	Tcol-MPN (MPN/100mL)	16000	16000	1400	16000
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)				
3	Cr (µg/L)				
4	Cu (µg/L)			0.00	0.00
5	Hg (µg/L)				
6	Ni (µg/L)				
7	Pb (µg/L)				
8	Zn (µg/L)			0.00	0.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	75	114	117	148
2	HAR_Total (mgCaCO3/L)	144	218	223	282
3	Na% (%)	21	30	30	33
4	RSC (-)	0.4	0.0	0.6	0.0
5	SAR (-)	0.7	1.3	1.3	1.7
	PESTICIDES				

Water Quality Datasheet for the period : 2016-2017

Station Name : Malkhed (AKP10E1)

Division : Lower Krishna Divn., Hyderabad

Local River : Kagna

River Water Analysis Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	01/02/2017 A	01/03/2017 A	01/04/2017 A	01/05/2017 A
	PHYSICAL				
1	Q (cumec)	3.499	2.114	1.314	0.636
2	Colour_Cod (-)	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	525	530	538	519
4	Odour_Code (-)	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.3	8.4	8.4	8.1
6	TDS (mg/L)	299	328	287	307
7	Temp (deg C)	24.0	29.0	28.0	28.0
8	Turb (NTU)	22.00	19.00	28.00	40.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.2	7.6	11.0	0.0
2	ALK-TOT (mgCaCO3/L)	215	180	213	229
3	Ca (mg/L)	52	42	47	34
4	Cl (mg/L)	58.6	24.5	25.3	24.4
5	CO3 (mg/L)	0.2	9.1	13.3	0.0
6	F (mg/L)	1.60	0.69	0.92	0.68
7	Fe (mg/L)	0.0	0.0	0.0	0.0
8	HCO3 (mg/L)	262	202	233	279
9	K (mg/L)	7.9	4.4	4.7	5.3
10	Mg (mg/L)	16.2	24.8	27.5	28.6
11	Na (mg/L)	78.2	45.7	44.2	44.6
12	NH3-N (mg N/L)	0.10	0.00	0.00	1.05
13	NO2+NO3 (mg N/L)	1.43	1.37	4.15	
14	NO2-N (mgN/L)	0.03	0.03	0.02	
15	NO3-N (mgN/L)	1.40	1.34	4.13	
16	o-PO4-P (mg P/L)	0.060	0.220	0.030	0.020
17	SiO2 (mg/L)	22.7	20.4	29.4	31.4
18	SO4 (mg/L)	18.1	49.2	55.7	26.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.4	1.5	1.3	2.0
2	COD (mg/L)	3.2	4.6	12.6	20.6
3	DO (mg/L)	6.9	6.9	5.9	5.8
4	DO_SAT% (%)	82	90	75	74
5	FCol-MPN (MPN/100mL)	800	800	2400	500
6	Tcol-MPN (MPN/100mL)	3000	5000	2400	500
	TRACE & TOXIC				
1	As (µg/L)			0.93	
2	Cd (µg/L)			0.00	
3	Cr (µg/L)			0.00	
4	Cu (µg/L)	0.00	0.00	0.00	0.01
5	Hg (µg/L)			0.32	
6	Ni (µg/L)			0.80	
7	Pb (µg/L)			0.00	
8	Zn (µg/L)	0.00	0.00	0.00	0.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	129	105	117	84
2	HAR_Total (mgCaCO3/L)	196	208	232	203
3	Na% (%)	45	32	29	32
4	RSC (-)	0.4	0.0	0.0	0.6
5	SAR (-)	2.4	1.4	1.3	1.4
	PESTICIDES				

Water Quality Summary for the period : 2016-2017

Station Name : Malkhed (AKP10E1)

Division : Lower Krishna Divn., Hyderabad

Local River : Kagna

Sub-Division : Middle Krishna SD 2 , Kurnool

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	2611	0.373	75.65
2	EC_GEN (µmho/cm)	12	616	228	466
3	pH_GEN (pH units)	12	8.5	8.1	8.3
4	TDS (mg/L)	12	544	172	294
5	Temp (deg C)	12	30.0	22.0	26.2
6	Turb (NTU)	12	147.00	0.00	41.83
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	11.0	0.0	3.4
2	ALK-TOT (mgCaCO3/L)	12	259	105	188
3	Ca (mg/L)	12	59	21	38
4	Cl (mg/L)	12	58.6	5.2	22.7
5	CO3 (mg/L)	12	13.3	0.0	4.1
6	F (mg/L)	12	1.60	0.00	0.61
7	Fe (mg/L)	12	0.2	0.0	0
8	HCO3 (mg/L)	12	301	128	221
9	K (mg/L)	12	7.9	2.5	4.2
10	Mg (mg/L)	12	32.2	11.6	21.1
11	Na (mg/L)	12	78.2	14.9	40.1
12	NH3-N (mg N/L)	12	2.98	0.00	0.35
13	NO2+NO3 (mg N/L)	11	4.15	0.19	1.41
14	NO2-N (mgN/L)	11	0.03	0.00	0.01
15	NO3-N (mgN/L)	11	4.13	0.19	1.41
16	o-PO4-P (mg P/L)	12	0.220	0.020	0.067
17	SiO2 (mg/L)	12	31.4	6.2	18.6
18	SO4 (mg/L)	12	93.8	5.5	32.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	2.0	0.4	1.2
2	COD (mg/L)	12	20.6	1.7	7.7
3	DO (mg/L)	12	7.3	4.2	5.8
4	DO_SAT% (%)	12	90	52	72
5	FCol-MPN (MPN/100mL)	12	16000	20	3194
6	Tcol-MPN (MPN/100mL)	12	16000	170	8123
	TRACE & TOXIC				
1	As (µg/L)	1	0.93	0.93	0.93
2	Cd (µg/L)	1	0.00	0.00	0
3	Cr (µg/L)	1	0.00	0.00	0
4	Cu (µg/L)	6	0.01	0.00	0
5	Hg (µg/L)	1	0.32	0.32	0.32
6	Ni (µg/L)	1	0.80	0.80	0.8
7	Pb (µg/L)	1	0.00	0.00	0
8	Zn (µg/L)	6	0.00	0.00	0
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	148	53	95
2	HAR_Total (mgCaCO3/L)	12	282	101	183
3	Na% (%)	12	45	21	30
4	RSC (-)	12	0.6	0.0	0.3
5	SAR (-)	12	2.4	0.6	1.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Malkhed (AKP10E1)

Division : Lower Krishna Divn., Hyderabad

Local River : Kagna

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Flood				
		Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	3.601	5.273	31.70		3.990
2	EC_GEN (µmho/cm)	565	741	375		501
3	pH_GEN (pH units)	7.9	8.1	8.0		7.9
4	TDS (mg/L)					
5	Temp (deg C)	31.0	31.3	24.5		25.3
6	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	2.3	0.0		0.0
2	ALK-TOT (mgCaCO3/L)	113	256	198		215
3	B (mg/L)	0.01	0.00	0.00		0.00
4	Ca (mg/L)	16	30	24		37
5	Cl (mg/L)	26.4	14.3	14.8		19.2
6	CO3 (mg/L)	0.0	2.8	0.0		0.0
7	F (mg/L)	0.73	0.89	0.88		0.85
8	Fe (mg/L)	0.0	0.0	0.0		0.0
9	HCO3 (mg/L)	138	306	241		262
10	K (mg/L)	3.4	4.3	3.4		3.8
11	Mg (mg/L)	28.0	23.7	11.3		18.3
12	Na (mg/L)	22.3	29.0	56.0		42.3
13	NH3-N (mg N/L)	0.00	0.00	0.00		0.00
14	NO2+NO3 (mg N/L)	0.26	0.01	0.01		0.01
15	NO2-N (mgN/L)	0.00	0.00	0.00		0.00
16	NO3-N (mgN/L)	0.26	0.01	0.01		0.01
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.033	0.004	0.001		0.001
19	SiO2 (mg/L)	5.1	14.5	17.3		20.4
20	SO4 (mg/L)	17.3	28.3	8.3		22.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					0.9
2	COD (mg/L)					
3	DO (mg/L)					6.0
4	DO_SAT% (%)					74
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)	39	74	61		93
2	HAR_Total (mgCaCO3/L)	156	173	108		169
3	Na% (%)	23	26	49		35
4	RSC (-)	0.0	1.7	1.8		0.9
5	SAR (-)	0.8	1.0	2.4		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 : Malkhed (AKP10E1)

Division : Lower Krishna Divn., Hyderabad

Local River : Kagna

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Flood				
		Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	31.40	16.54	383.7	86.12	123.8
2	EC_GEN (µmho/cm)	433	484	486	549	457
3	pH_GEN (pH units)	8.0	8.0	8.0	8.2	8.1
4	TDS (mg/L)					270
5	Temp (deg C)	28.3	28.0	25.8	27.3	27.7
6	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	2.7	0.0
2	ALK-TOT (mgCaCO3/L)	257	216	205	216	151
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	54	44	36	36	29
5	Cl (mg/L)	16.7	19.7	20.7	41.1	21.4
6	CO3 (mg/L)	0.0	0.0	0.0	3.2	0.0
7	F (mg/L)	0.78	0.63	0.59	0.79	0.77
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	314	264	251	257	184
10	K (mg/L)	3.9	3.1	3.5	3.5	3.5
11	Mg (mg/L)	17.5	14.1	16.8	20.1	15.9
12	Na (mg/L)	32.5	46.5	36.1	40.6	35.8
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	1.19	0.00	0.85
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	1.19	0.00	0.85
17	o-PO4-P (mg P/L)					0.102
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.076	0.102
19	SiO2 (mg/L)	19.1	22.4	20.3	24.3	19.2
20	SO4 (mg/L)	19.0	24.9	23.0	21.2	16.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	0.9	1.1	0.8	0.3
2	COD (mg/L)	5.1	19.9	5.8	36.8	8.3
3	DO (mg/L)	6.2	5.3	5.5	5.6	5.4
4	DO_SAT% (%)	79	67	68	70	69
5	FCol-MPN (MPN/100mL)			12500	9133	11667
6	Tcol-MPN (MPN/100mL)			16000	11667	12333
7	TOC (mg/L)					3.9
	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)	135	110	89	91	72
2	HAR_Total (mgCaCO3/L)	208	169	159	174	138
3	Na% (%)	26	36	32	33	34
4	RSC (-)	1.0	1.0	0.9	0.9	0.4
5	SAR (-)	1.0	1.5	1.2	1.4	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 : Malkhed (AKP10E1)

Division : Lower Krishna Divn., Hyderabad

Local River : Kagna

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Flood				
		Jun - Oct				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	7.217	27.32	16.99	2.139	188.8
2	EC_GEN (µmho/cm)	772	580	605	476	346
3	pH_GEN (pH units)	8.1	8.2	8.1	8.0	8.2
4	TDS (mg/L)	519	344	372	303	208
5	Temp (deg C)	26.3	26.3	26.7	27.6	26.6
6	Turb (NTU)	3.03	3.05	10.33	15.02	78.60
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	1.4	0.0	0.0	0.6
2	ALK-TOT (mgCaCO3/L)	213	238	226	193	140
3	B (mg/L)	0.15	0.21	0.17	0.16	
4	Ca (mg/L)	32	37	34	34	26
5	Cl (mg/L)	25.9	29.3	26.7	21.7	13.0
6	CO3 (mg/L)	0.0	1.7	0.0	0.0	0.7
7	F (mg/L)	0.64	0.75	0.66	0.59	0.33
8	Fe (mg/L)	0.1	0.1	0.1	0.1	0.1
9	HCO3 (mg/L)	260	287	275	236	170
10	K (mg/L)	3.8	3.6	4.1	4.4	3.2
11	Mg (mg/L)	18.5	21.2	19.3	18.8	14.8
12	Na (mg/L)	43.9	42.5	47.5	39.8	23.0
13	NH3-N (mg N/L)	0.02	0.04	0.00	0.02	0.00
14	NO2+NO3 (mg N/L)	1.14	0.91	2.22	1.63	1.52
15	NO2-N (mgN/L)	0.00	0.00	0.02	0.04	0.00
16	NO3-N (mgN/L)	1.14	0.91	2.20	1.59	1.52
17	o-PO4-P (mg P/L)	0.080	0.041	0.093	0.112	0.054
18	P-Tot (mgP/L)			0.087		
19	SiO2 (mg/L)	26.8	17.7	25.1	17.1	13.2
20	SO4 (mg/L)	19.1	17.5	23.3	17.0	9.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	0.7	0.6	0.7	1.2
2	COD (mg/L)	14.1	8.3	5.1	6.2	8.0
3	DO (mg/L)	6.2	5.7	5.8	5.5	5.0
4	DO_SAT% (%)	77	70	73	70	63
5	FCol-MPN (MPN/100mL)	10933	1333	6210	3852	3258
6	Tcol-MPN (MPN/100mL)	11667	4600	7133	7820	10634
7	TOC (mg/L)	2.0	0.3		14.7	
	TRACE & TOXIC					
1	As (µg/L)	8.07	9.08			
2	Cd (µg/L)	0.12	0.61			
3	Cr (µg/L)	1.67	0.83			
4	Cu (µg/L)					
5	Hg (µg/L)		0.39			
6	Ni (µg/L)	1.89	2.47			
7	Pb (µg/L)	1.01	3.18			
8	Zn (µg/L)	23.14	0.00			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	79	91	85	86	66
2	HAR_Total (mgCaCO3/L)	156	180	165	164	127
3	Na% (%)	37	33	38	34	26
4	RSC (-)	1.2	1.2	1.2	0.6	0.3
5	SAR (-)	1.6	1.4	1.6	1.4	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 : Malkhed (AKP10E1)

Division : Lower Krishna Divn., Hyderabad

Local River : Kagna

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Winter				
		Nov - Feb				
		2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	2.211	1.593	0.815	4.462	2.586
2	EC_GEN (µmho/cm)	573	589	431	545	529
3	pH_GEN (pH units)	8.2	8.3	8.0	7.7	7.8
4	TDS (mg/L)					
5	Temp (deg C)	26.5	26.0	20.0	24.0	23.5
6	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	15.9	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	113	299	117	257	220
3	B (mg/L)	0.01	0.00	0.00	0.01	0.00
4	Ca (mg/L)	24	34	16	43	36
5	Cl (mg/L)	26.4	23.7	18.5	21.0	23.4
6	CO3 (mg/L)	0.0	19.2	0.0	0.0	0.0
7	F (mg/L)	0.56	0.94	0.50	0.82	0.85
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	138	325	143	314	269
10	K (mg/L)	3.2	4.5	2.7		3.4
11	Mg (mg/L)	39.6	20.7	8.0	22.0	20.5
12	Na (mg/L)	21.5	26.0	30.0		45.0
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.28	0.01	0.01	0.01	0.01
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.27	0.01	0.01	0.01	0.01
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.040	0.001	0.001	0.001	0.001
19	SiO2 (mg/L)	7.3	15.6	20.1	24.4	21.7
20	SO4 (mg/L)	17.0	20.0	20.0	28.0	17.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					0.4
2	COD (mg/L)					
3	DO (mg/L)					6.0
4	DO_SAT% (%)					71
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)	60	85	40	106	90
2	HAR_Total (mgCaCO3/L)	225	171	73	198	175
3	Na% (%)	15	24	46		35
4	RSC (-)	0.0	2.6	0.9	1.2	0.9
5	SAR (-)	0.6	0.9	1.5		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 : Malkhed (AKP10E1)

Division : Lower Krishna Divn., Hyderabad

Local River : Kagna

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Winter				
		Nov - Feb				
		2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	7.964	10.79	12.44	12.99	2.910
2	EC_GEN (µmho/cm)	599	572	585	606	597
3	pH_GEN (pH units)	8.2	8.2	8.2	8.2	8.1
4	TDS (mg/L)					347
5	Temp (deg C)	22.0	26.0	22.5	24.8	24.5
6	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	2.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	232	236	226	228	238
3	B (mg/L)	0.00	0.00	0.00	0.00	0.21
4	Ca (mg/L)	38	51	34	42	40
5	Cl (mg/L)	26.1	21.5	21.3	23.3	27.3
6	CO3 (mg/L)	0.0	2.4	0.0	0.0	0.0
7	F (mg/L)	0.75	0.69	1.12	0.68	0.84
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1
9	HCO3 (mg/L)	283	283	276	279	290
10	K (mg/L)	3.9	3.7	3.4	3.5	3.4
11	Mg (mg/L)	21.5	14.6	16.5	24.3	22.8
12	Na (mg/L)	45.0	44.0	46.2	38.7	47.4
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	1.89	0.00	2.03
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.01
16	NO3-N (mgN/L)	0.01	0.01	1.89	0.00	2.02
17	o-PO4-P (mg P/L)					0.017
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.077	0.017
19	SiO2 (mg/L)	20.4	23.6	20.2	27.6	34.4
20	SO4 (mg/L)	15.5	16.7	22.8	19.3	15.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.9	0.7	0.7	0.5	1.0
2	COD (mg/L)	31.9	8.3	10.8	21.9	15.2
3	DO (mg/L)	7.0	6.5	6.8	6.9	6.3
4	DO_SAT% (%)	80	80	79	83	76
5	FCol-MPN (MPN/100mL)			16000	16000	2400
6	Tcol-MPN (MPN/100mL)			16000	16000	7000
7	TOC (mg/L)					2.7
	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)	94	128	84	106	100
2	HAR_Total (mgCaCO3/L)	183	189	153	207	195
3	Na% (%)	34	33	39	28	34
4	RSC (-)	1.0	1.0	1.5	0.4	0.9
5	SAR (-)	1.5	1.4	1.6	1.2	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 : Malkhed (AKP10E1)

Division : Lower Krishna Divn., Hyderabad

Local River : Kagna

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Winter				
		Nov - Feb				
		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)	4.633	12.81	2.990	3.382	18.63
2	EC_GEN (µmho/cm)	576	669	454	1280	568
3	pH_GEN (pH units)	8.1	8.2	8.3	8.3	8.4
4	TDS (mg/L)	336	460	314	311	390
5	Temp (deg C)	23.0	24.0	23.5	24.5	24.0
6	Turb (NTU)	3.00	4.50	0.10	19.78	5.50
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	2.1	2.4	4.9
2	ALK-TOT (mgCaCO3/L)	234	213	194	233	232
3	B (mg/L)	0.27	0.17	0.21	0.00	
4	Ca (mg/L)	37	40	42	36	51
5	Cl (mg/L)	23.2	40.6	21.2	24.7	33.3
6	CO3 (mg/L)	0.0	0.0	2.5	2.8	5.9
7	F (mg/L)	0.95	0.63	0.59	0.61	0.85
8	Fe (mg/L)	0.4	0.0	0.2	0.0	0.0
9	HCO3 (mg/L)	286	260	231	278	272
10	K (mg/L)	2.3	3.1	3.2	4.3	4.9
11	Mg (mg/L)	21.4	22.8	21.0	20.5	24.7
12	Na (mg/L)	42.2	39.4	41.6	49.5	57.8
13	NH3-N (mg N/L)	0.00	0.01	0.00	0.01	0.79
14	NO2+NO3 (mg N/L)	1.86	1.77	1.19	1.43	0.61
15	NO2-N (mgN/L)	0.00	0.00	0.02	0.01	0.01
16	NO3-N (mgN/L)	1.86	1.77	1.17	1.42	0.60
17	o-PO4-P (mg P/L)	0.054	0.085	0.095	0.078	0.066
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	31.3	24.9	21.0	9.4	19.0
20	SO4 (mg/L)	21.4	17.2	21.0	19.4	53.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	1.2	0.5	0.8	0.9
2	COD (mg/L)	13.0	2.5	5.7	3.6	3.7
3	DO (mg/L)	6.5	6.9	7.2	6.0	6.5
4	DO_SAT% (%)	76	80	85	72	77
5	FCol-MPN (MPN/100mL)	515	465	1450	8575	4585
6	Tcol-MPN (MPN/100mL)	3150	800	9200	16000	9100
7	TOC (mg/L)	1.7		27.4	22.0	
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)			0.57		
3	Cr (µg/L)			0.57		
4	Cu (µg/L)					0.00
5	Hg (µg/L)					
6	Ni (µg/L)			5.69		
7	Pb (µg/L)			6.48		
8	Zn (µg/L)			9.20		0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	92	100	104	91	127
2	HAR_Total (mgCaCO3/L)	181	195	192	176	230
3	Na% (%)	33	30	32	37	35
4	RSC (-)	1.1	0.4	0.1	1.2	0.3
5	SAR (-)	1.4	1.2	1.3	1.6	1.7
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Malkhed (AKP10E1)

Division : Lower Krishna Divn., Hyderabad

Local River : Kagna

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Summer				
		Mar - May				
		2003	2004	2005	2006	2007
	PHYSICAL					
1	Q (cumec)	0.273	10.74		0.810	0.000
2	EC_GEN (µmho/cm)		476		590	577
3	pH_GEN (pH units)	7.9	8.1		8.1	8.0
4	TDS (mg/L)					
5	Temp (deg C)	32.0	30.0		27.0	26.0
6	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0		0.0	0.0
2	ALK-TOT (mgCaCO3/L)	129	237		227	280
3	B (mg/L)	0.01	0.00		0.01	0.00
4	Ca (mg/L)	22	25		40	40
5	Cl (mg/L)	20.1	21.9		24.1	21.5
6	CO3 (mg/L)	0.0	0.0		0.0	0.0
7	F (mg/L)	1.00	0.89		0.88	1.27
8	Fe (mg/L)	0.0	0.0		0.0	0.0
9	HCO3 (mg/L)	157	289		277	342
10	K (mg/L)	4.0	3.9		4.9	4.6
11	Mg (mg/L)	35.0	16.5		21.0	23.0
12	Na (mg/L)	17.0	35.0		66.0	64.0
13	NH3-N (mg N/L)	0.00	0.00		0.00	0.00
14	NO2+NO3 (mg N/L)	0.24	0.01		0.01	0.01
15	NO2-N (mgN/L)	0.00	0.00		0.00	0.00
16	NO3-N (mgN/L)	0.24	0.01		0.01	0.01
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.025	0.001		0.001	0.001
19	SiO2 (mg/L)	9.0	11.6		12.8	26.3
20	SO4 (mg/L)	108.0	10.0		17.0	14.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					0.8
2	COD (mg/L)					
3	DO (mg/L)					3.9
4	DO_SAT% (%)					48
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					8.00
3	Cr (µg/L)					51.00
4	Cu (µg/L)					
5	Hg (µg/L)					1.97
6	Ni (µg/L)					1.00
7	Pb (µg/L)					111.00
8	Zn (µg/L)					133.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	55	62		100	100
2	HAR_Total (mgCaCO3/L)	201	131		188	196
3	Na% (%)	15	36		43	41
4	RSC (-)	0.0	2.1		0.8	1.7
5	SAR (-)	0.5	1.3		2.1	2.0
	PESTICIDES					
1	Aldrin (µg/L)					0.010
2	BHC (µg/L)					0.100
3	DDT (µg/L)					0.100
4	Dieldrin (µg/L)					0.110
5	Endos (µg/L)					0.100

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Malkhed (AKP10E1)

Division : Lower Krishna Divn., Hyderabad

Local River : Kagna

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Summer				
		Mar - May				
		2008	2009	2010	2011	2012
	PHYSICAL					
1	Q (cumec)	33.35	2.870	6.171	2.922	1.127
2	EC_GEN (µmho/cm)	602	573	603	520	720
3	pH_GEN (pH units)	8.2	8.1	8.4	8.1	8.1
4	TDS (mg/L)					426
5	Temp (deg C)	25.0	25.0	26.5	25.0	27.0
6	Turb (NTU)					1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	8.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	200	244	180	216	275
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	34	37	29	32	38
5	Cl (mg/L)	60.5	23.7	22.5	24.1	29.8
6	CO3 (mg/L)	0.0	0.0	9.6	0.0	0.0
7	F (mg/L)	0.73	0.81	0.93	0.63	0.42
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1
9	HCO3 (mg/L)	244	298	200	264	335
10	K (mg/L)	3.2	4.0	4.0	1.9	4.6
11	Mg (mg/L)	18.0	20.4	16.5	18.5	21.9
12	Na (mg/L)	43.0	40.6	45.9	24.3	59.6
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00	0.06
14	NO2+NO3 (mg N/L)	0.01	0.01	0.00	0.00	2.33
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.01
16	NO3-N (mgN/L)	0.01	0.01	0.00	0.00	2.32
17	o-PO4-P (mg P/L)					0.318
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.065	0.318
19	SiO2 (mg/L)	17.5	29.4	23.1	25.2	15.5
20	SO4 (mg/L)	28.0	14.1	19.6	16.0	21.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.3	0.4	1.3	0.2	2.2
2	COD (mg/L)	7.4	4.0	17.7	9.1	21.7
3	DO (mg/L)	5.8	5.5	6.0	5.9	6.2
4	DO_SAT% (%)	71	67	74	71	78
5	FCol-MPN (MPN/100mL)			2400	16000	2400
6	Tcol-MPN (MPN/100mL)			3000	16000	9000
7	TOC (mg/L)	3.0				2.8
	TRACE & TOXIC					
1	As (µg/L)			1.17		0.71
2	Cd (µg/L)	0.60	2.06	0.00	0.00	0.00
3	Cr (µg/L)	2.00	2.00	0.00	0.00	0.00
4	Cu (µg/L)					
5	Hg (µg/L)	0.00				0.74
6	Ni (µg/L)	7.50	1.00	2.20	2.10	3.65
7	Pb (µg/L)	10.80	18.09	0.00	5.49	24.71
8	Zn (µg/L)	7.36	4.02	8.52	17.46	88.90
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	85	92	72	80	94
2	HAR_Total (mgCaCO3/L)	160	177	141	157	185
3	Na% (%)	36	33	41	25	41
4	RSC (-)	0.8	1.4	0.8	1.2	1.8
5	SAR (-)	1.5	1.3	1.7	0.8	1.9
	PESTICIDES					
1	Aldrin (µg/L)	0.010	0.010	0.000	0.000	0.001
2	BHC (µg/L)	0.100	0.100	0.016	0.569	0.018
3	DDT (µg/L)	0.100	0.100	0.004	0.000	0.005
4	Dieldrin (µg/L)	0.010	0.010	0.000	0.033	0.001
5	Endos (µg/L)	0.100	0.100	0.073	0.012	0.022

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Malkhed (AKP10E1)

Division : Lower Krishna Divn., Hyderabad

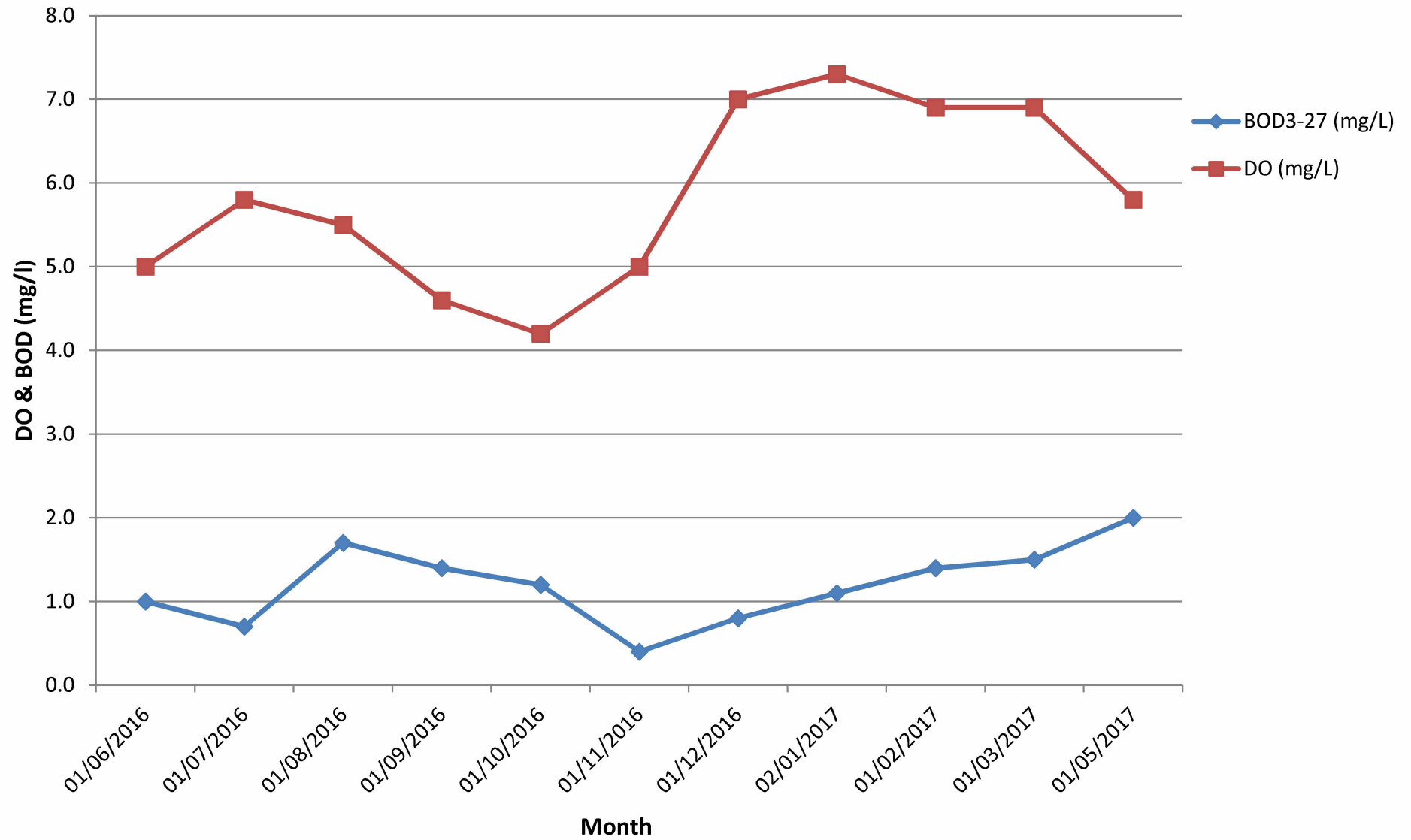
Local River : Kagna

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Summer				
		Mar - May				
		2013	2014	2015	2016	2017
	PHYSICAL					
1	Q (cumec)	1.683	3.086	2.201	2.524	1.355
2	EC_GEN (µmho/cm)	739	560	492	700	529
3	pH_GEN (pH units)	7.9	8.1	8.2	8.3	8.3
4	TDS (mg/L)	468	416	323	313	307
5	Temp (deg C)	30.0	28.0	27.0	28.3	28.3
6	Turb (NTU)	2.63	8.00	6.33	24.00	29.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	1.2	2.5	6.2
2	ALK-TOT (mgCaCO3/L)	241	231	182	224	207
3	B (mg/L)	0.23	0.15	0.16		
4	Ca (mg/L)	29	34	32	34	41
5	Cl (mg/L)	25.2	25.0	22.9	27.9	24.7
6	CO3 (mg/L)	0.0	0.0	1.4	3.0	7.5
7	F (mg/L)	0.89	0.73	0.60	0.60	0.76
8	Fe (mg/L)	0.1	0.1	0.0	0.0	0.0
9	HCO3 (mg/L)	294	282	219	267	238
10	K (mg/L)	4.1	4.0	4.4	4.9	4.8
11	Mg (mg/L)	16.5	19.4	20.4	18.9	27.0
12	Na (mg/L)	50.1	40.8	40.4	52.7	44.8
13	NH3-N (mg N/L)	0.00	0.01	0.01	0.00	0.35
14	NO2+NO3 (mg N/L)	1.44	0.64	0.72	1.13	2.76
15	NO2-N (mgN/L)	0.00	0.00	0.15	0.05	0.03
16	NO3-N (mgN/L)	1.44	0.64	0.58	1.08	2.73
17	o-PO4-P (mg P/L)	0.093	0.000	0.080	0.079	0.090
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	19.0	28.8	23.9	10.2	27.1
20	SO4 (mg/L)	12.3	18.2	19.6	18.8	43.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	0.9	0.7	1.5	1.6
2	COD (mg/L)	3.2		4.5	7.2	12.6
3	DO (mg/L)	5.4	5.4	5.1	4.5	6.2
4	DO_SAT% (%)	71	69	64	58	80
5	FCol-MPN (MPN/100mL)	230	230	15	6800	1233
6	Tcol-MPN (MPN/100mL)	2800	2400	880	11233	2633
7	TOC (mg/L)	2.1		21.6		
	TRACE & TOXIC					
1	As (µg/L)	1.24	0.31	1.57	0.00	0.93
2	Cd (µg/L)	2.49	0.00	2.00	0.00	0.00
3	Cr (µg/L)	3.12	0.00	0.00	0.00	0.00
4	Cu (µg/L)					0.00
5	Hg (µg/L)	0.47	0.20	0.31	0.00	0.32
6	Ni (µg/L)	4.12	0.00	6.24	0.00	0.80
7	Pb (µg/L)	7.00	0.00	14.00	0.00	0.00
8	Zn (µg/L)	25.27	21.80	3.00	0.09	0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	72	86	81	86	102
2	HAR_Total (mgCaCO3/L)	141	167	166	165	214
3	Na% (%)	43	34	34	40	31
4	RSC (-)	2.0	1.3	0.4	1.2	0.2
5	SAR (-)	1.8	1.4	1.4	1.8	1.3
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Malkhed



HISTORY SHEET

		Water Year	: 2016-2017
Site	: Takli	Code	: AKP00K4
State	: Maharashtra	District	: Sholapur
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Bhima
Division	: Upper Krishna Divn, Pune	Sub-Division	: Bhima SD, Sholapur
Drainage Area	: 33916 Sq. Km.	Bank	: Left
Latitude	: 17°24'51"	Longitude	: 75°50'52"
	Opening Date	Closing Date	
Gauge	: 01/06/1965		
Discharge	: 01/06/1965		
Sediment	: 01/12/1966		
Water Quality	: 01/09/1972		

Water Quality Datasheet for the period : 2016-2017

Station Name : Takli (AKP00K4)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water Analysis

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	03/10/2016
		A
	PHYSICAL	
1	Q (cumec)	128.7
2	Colour_Cod (-)	Clear
3	EC_FLD (µmho/cm)	163
4	EC_GEN (µmho/cm)	930
5	Odour_Code (-)	odour free
6	pH_FLD (pH units)	6.9
7	pH_GEN (pH units)	8.2
8	Temp (deg C)	25.5
	CHEMICAL	
1	Alk-Phen (mgCaCO3/L)	0.0
2	ALK-TOT (mgCaCO3/L)	171
3	B (mg/L)	0.07
4	Ca (mg/L)	43
5	Cl (mg/L)	118.4
6	CO3 (mg/L)	0.0
7	F (mg/L)	0.42
8	Fe (mg/L)	3.0
9	HCO3 (mg/L)	209
10	K (mg/L)	1.9
11	Mg (mg/L)	33.0
12	Na (mg/L)	91.5
13	NO2+NO3 (mg N/L)	3.06
14	NO2-N (mgN/L)	0.01
15	NO3-N (mgN/L)	3.06
16	P-Tot (mgP/L)	0.009
17	SiO2 (mg/L)	5.9
18	SO4 (mg/L)	153.6
	BIOLOGICAL/BACTERIOLOGICAL	
1	BOD3-27 (mg/L)	1.7
2	COD (mg/L)	16.0
3	DO (mg/L)	5.2
4	DO_SAT% (%)	63
5	Fcol-MPN (MPN/100mL)	90
6	Tcol-MPN (MPN/100mL)	220
	TRACE & TOXIC	
	CHEMICAL INDICES	
1	HAR_Ca (mgCaCO3/L)	108
2	HAR_Total (mgCaCO3/L)	246
3	Na% (%)	45
4	RSC (-)	0.0
5	SAR (-)	2.5
	PESTICIDES	Analysis not done due to mal function of instrument.

Samples not collected during June to September and from November to May months due to Dry bed/No flow

Water Quality Summary for the period : 2016-2017

Station Name : Takli (AKP00K4)

Division : Upper Krishna Divn, Pune

Local River : Bhima

Sub-Division : Bhima SD, Sholapur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	927.6	0.000	25.82
2	EC_FLD (μmho/cm)	1	163	163	163
3	EC_GEN (μmho/cm)	1	930	930	930
4	pH_FLD (pH units)	1	6.9	6.9	6.9
5	pH_GEN (pH units)	1	8.2	8.2	8.2
6	Temp (deg C)	1	25.5	25.5	25.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	1	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	1	171	171	171
3	B (mg/L)	1	0.07	0.07	0.07
4	Ca (mg/L)	1	43	43	43
5	Cl (mg/L)	1	118.4	118.4	118.4
6	CO3 (mg/L)	1	0.0	0.0	0
7	F (mg/L)	1	0.42	0.42	0.42
8	Fe (mg/L)	1	3.0	3.0	3
9	HCO3 (mg/L)	1	209	209	209
10	K (mg/L)	1	1.9	1.9	1.9
11	Mg (mg/L)	1	33.0	33.0	33
12	Na (mg/L)	1	91.5	91.5	91.5
13	NO2+NO3 (mg N/L)	1	3.06	3.06	3.06
14	NO2-N (mgN/L)	1	0.01	0.01	0
15	NO3-N (mgN/L)	1	3.06	3.06	3.06
16	P-Tot (mgP/L)	1	0.009	0.009	0.009
17	SiO2 (mg/L)	1	5.9	5.9	5.9
18	SO4 (mg/L)	1	153.6	153.6	153.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1	1.7	1.7	1.7
2	COD (mg/L)	1	16.0	16.0	16
3	DO (mg/L)	1	5.2	5.2	5.2
4	DO_SAT% (%)	1	63	63	63
5	FCol-MPN (MPN/100mL)	1	90	90	90
6	Tcol-MPN (MPN/100mL)	1	220	220	220
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	1	108	108	108
2	HAR_Total (mgCaCO3/L)	1	246	246	246
3	Na% (%)	1	45	45	45
4	RSC (-)	1	0.0	0.0	0
5	SAR (-)	1	2.5	2.5	2.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2003-2017

Station Name : Takli (AKP00K4)

Local River : Bhima

River Water

Division : Upper Krishna Divn, Pune

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Flood				
		Jun - Oct				
		2003	2004	2005	2006	2007
	PHYSICAL					
1	Q (cumec)	3.774	106.6	1095	1555	333.3
2	EC_FLD (µmho/cm)					150
3	EC_GEN (µmho/cm)	973	448	461	605	669
4	pH_FLD (pH units)					7.4
5	pH_GEN (pH units)	8.3	8.3	8.2	8.3	8.3
6	Temp (deg C)		24.0	26.2		26.8
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		4.3	0.7	0.0	0.5
2	ALK-TOT (mgCaCO3/L)		97	89	316	83
3	B (mg/L)			0.18	0.30	0.15
4	Ca (mg/L)			22	54	15
5	Cl (mg/L)			54.8	66.4	76.6
6	CO3 (mg/L)		5.2	0.8	0.0	0.6
7	F (mg/L)			0.21	0.30	0.27
8	Fe (mg/L)			0.5	0.1	0.2
9	HCO3 (mg/L)		108	107	198	100
10	K (mg/L)			25.5	26.0	0.8
11	Mg (mg/L)			17.9	19.1	32.6
12	Na (mg/L)			36.0	52.1	46.6
13	NO2+NO3 (mgN/L)			1.38	0.60	0.62
14	NO2-N (mgN/L)			0.05	0.00	0.01
15	NO3-N (mgN/L)			1.33	0.60	0.61
16	P-Tot (mgP/L)			0.113	0.367	0.083
17	SiO2 (mg/L)			8.3	6.2	10.3
18	SO4 (mg/L)	167.3		45.3	102.6	84.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	2.0	1.6	0.8	1.2
2	COD (mg/L)	7.6	8.7	12.2	4.7	8.9
3	DO (mg/L)		6.1	5.7		3.9
4	DO_SAT% (%)		72	74		49
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
1	Cd (µg/L)					
2	Cr (µg/L)					
3	Cu (µg/L)					
4	Hg (µg/L)					
5	Ni (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)			55	135	38
2	HAR_Total (mgCaCO3/L)			130	214	174
3	Na% (%)			32	34	35
4	RSC (-)			0.0	0.0	0.0
5	SAR (-)			1.4	1.8	1.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2003-2017

Station Name : Takli (AKP00K4)

Local River : Bhima

River Water

Division : Upper Krishna Divn, Pune

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Flood				
		2008	2009	2010	2011	2012
	PHYSICAL					
1	Q (cumec)	Drybed/	865.2	159.8	903.1	Drybed/
2	EC_FLD (µmho/cm)	No flow				No flow
3	EC_GEN (µmho/cm)		1242	921	579	
4	pH_FLD (pH units)					
5	pH_GEN (pH units)		7.9	8.3	7.0	
6	Temp (deg C)		26.5	26.5	27.0	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0	0.7	0.0	
2	ALK-TOT (mgCaCO3/L)		103	183	89	
3	B (mg/L)		0.21	0.39	0.10	
4	Ca (mg/L)		36	52	32	
5	Cl (mg/L)		97.5	96.4	116.6	
6	CO3 (mg/L)		0.0	0.8	0.0	
7	F (mg/L)		0.37	0.48	0.37	
8	Fe (mg/L)		0.5	0.1	0.9	
9	HCO3 (mg/L)		126	221	108	
10	K (mg/L)		0.6	2.7	0.7	
11	Mg (mg/L)		12.9	20.1	12.6	
12	Na (mg/L)		69.3	63.3	81.6	
13	NO2+NO3 (mg N/L)		1.00	0.15	1.51	
14	NO2-N (mgN/L)		0.01	0.01	0.00	
15	NO3-N (mgN/L)		0.99	0.14	1.51	
16	P-Tot (mgP/L)		0.009	0.013	0.045	
17	SiO2 (mg/L)		8.6	7.3	5.6	
18	SO4 (mg/L)		50.2	31.2	69.2	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		0.8	0.9	1.0	
2	COD (mg/L)		5.3	7.2	5.0	
3	DO (mg/L)					
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)		55367	8933	130000	
6	Tcol-MPN (MPN/100mL)		56713	12667	240000	
	TRACE & TOXIC					
1	Cd (µg/L)					
2	Cr (µg/L)					
3	Cu (µg/L)					
4	Hg (µg/L)					
5	Ni (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		89	131	80	
2	HAR_Total (mgCaCO3/L)		143	215	133	
3	Na% (%)		52	34	57	
4	RSC (-)		0.0	0.0	0.0	
5	SAR (-)		2.7	1.8	3.1	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2003-2017

Station Name : Takli (AKP00K4)

Local River : Bhima

River Water

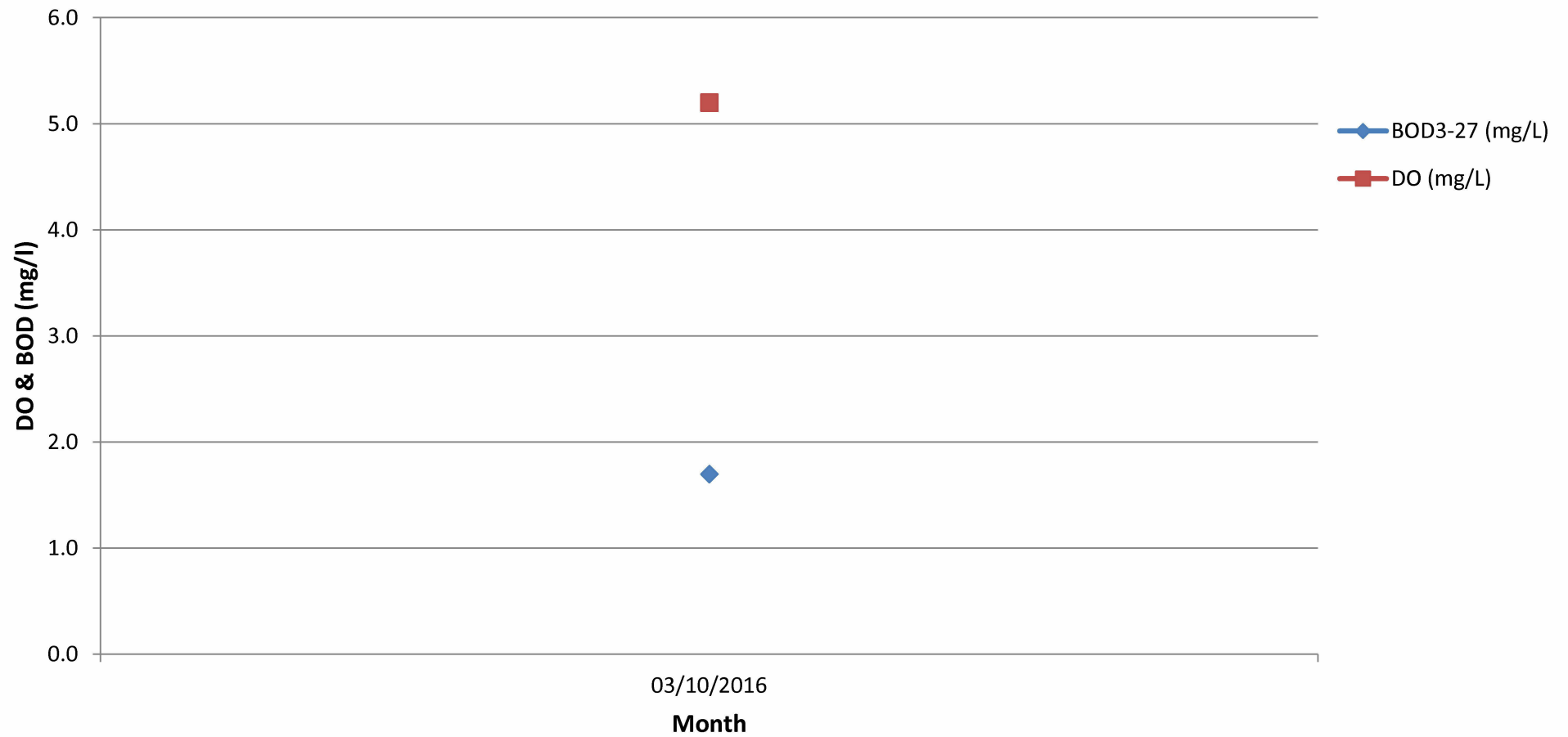
Division : Upper Krishna Divn, Pune

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Flood June-Oct			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	412.6	768.9	Drybed/	128.7
2	EC_FLD (µmho/cm)	356	350	No flow	163
3	EC_GEN (µmho/cm)	721	984		930
4	pH_FLD (pH units)				6.9
5	pH_GEN (pH units)	7.6	7.9		8.2
6	Temp (deg C)	25.8	25.0		25.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0		0.0
2	ALK-TOT (mgCaCO3/L)	78	102		171
3	B (mg/L)	0.10	0.07		0.07
4	Ca (mg/L)	34	48		43
5	Cl (mg/L)	28.3	47.9		118.4
6	CO3 (mg/L)	0.0	0.0		0.0
7	F (mg/L)	0.37	0.37		0.42
8	Fe (mg/L)	0.4	2.0		3.0
9	HCO3 (mg/L)	96	125		209
10	K (mg/L)	1.1	2.8		1.9
11	Mg (mg/L)	12.6	17.5		33.0
12	Na (mg/L)	19.8	37.0		91.5
13	NO2+NO3 (mg N/L)	0.70	2.14		3.06
14	NO2-N (mgN/L)	0.00	0.05		0.00
15	NO3-N (mgN/L)	0.70	2.09		3.06
16	P-Tot (mgP/L)	0.017	0.023		0.009
17	SiO2 (mg/L)	20.9	40.8		5.9
18	SO4 (mg/L)	56.2	86.3		153.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.0	0.9		1.7
2	COD (mg/L)	7.8	8.0		16.0
3	DO (mg/L)				5.2
4	DO_SAT% (%)				63
5	FCol-MPN (MPN/100mL)	1785	35000		90
6	Tcol-MPN (MPN/100mL)	2615	54000		220
	TRACE & TOXIC				
1	Cd (µg/L)	0.46			
2	Cr (µg/L)	2.98			
3	Cu (µg/L)	2.02			
4	Hg (µg/L)	0.49			
5	Ni (µg/L)	9.90			
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	84	120		108
2	HAR_Total (mgCaCO3/L)	137	193		246
3	Na% (%)	26	29		45
4	RSC (-)	0.0	0.0		0.0
5	SAR (-)	0.8	1.2		2.5
	PESTICIDES				

Samples not collected during Winter and Summer seasons.

Takli



HISTORY SHEET

		Water Year	: 2016-2017
Site	: Sarati	Code	: AKPA0C2
State	: Maharashtra	District	: Pune
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	Sub Tributary	: Nira
Sub-Sub Tributary	: -	Local River	: Nira
Division	: Upper Krishna Divn, Pune	Sub-Division	: Bhima SD, Sholapur
Drainage Area	: 7200 Sq. Km.	Bank	: Left
Latitude	: 17°54'43"	Longitude	: 75°00'27"
	Opening Date	Closing Date	
Gauge	: 01/06/1965		
Discharge	: 01/06/1965		
Sediment	: 01/06/1966		
Water Quality	: 01/09/1972		

Water Quality Datasheet for the period : 2016-2017

Station Name : Sarati (AKPA0C2)

Division : Upper Krishna Divn, Pune

Local River : Nira

River Water Analysis

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	03/10/2016
		A
	PHYSICAL	
1	Q (cumec)	133.9
2	Colour_Cod (-)	Green
3	EC_FLD (μmho/cm)	1177
4	EC_GEN (μmho/cm)	972
5	Odour_Code (-)	odour free
6	pH_FLD (pH units)	8.5
7	pH_GEN (pH units)	8.2
8	Temp (deg C)	25.0
	CHEMICAL	
1	Alk-Phen (mgCaCO3/L)	0.0
2	ALK-TOT (mgCaCO3/L)	158
3	B (mg/L)	0.46
4	Ca (mg/L)	42
5	Cl (mg/L)	115.2
6	CO3 (mg/L)	0.0
7	F (mg/L)	0.43
8	Fe (mg/L)	6.3
9	HCO3 (mg/L)	192
10	K (mg/L)	2.4
11	Mg (mg/L)	33.0
12	Na (mg/L)	88.2
13	NO2+NO3 (mg N/L)	4.96
14	NO2-N (mgN/L)	0.01
15	NO3-N (mgN/L)	4.95
16	P-Tot (mgP/L)	0.026
17	SiO2 (mg/L)	6.8
18	SO4 (mg/L)	150.8
	BIOLOGICAL/BACTERIOLOGICAL	
1	BOD3-27 (mg/L)	0.6
2	COD (mg/L)	5.0
3	DO (mg/L)	5.2
4	DO_SAT% (%)	63
5	Fcol-MPN (MPN/100mL)	20
6	Tcol-MPN (MPN/100mL)	500
	TRACE & TOXIC	
	CHEMICAL INDICES	
1	HAR_Ca (mgCaCO3/L)	104
2	HAR_Total (mgCaCO3/L)	242
3	Na% (%)	44
4	RSC (-)	0.0
5	SAR (-)	2.5
	PESTICIDES	Analysis not done due to mal function of instrument.

Samples not collected during June to August and from November to May months due to Drybed/No flow During September month Samples not collected.

Water Quality Summary for the period : 2016-2017

Station Name : Sarati (AKPA0C2)

Division : Upper Krishna Divn, Pune

Local River : Nira

Sub-Division : Bhima SD, Sholapur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	1143	0.000	20.42
2	EC_FLD (μmho/cm)	1	1177	1177	1177
3	EC_GEN (μmho/cm)	1	972	972	972
4	pH_FLD (pH units)	1	8.5	8.5	8.5
5	pH_GEN (pH units)	1	8.2	8.2	8.2
6	Temp (deg C)	1	25.0	25.0	25
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	1	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	1	158	158	158
3	B (mg/L)	1	0.46	0.46	0.46
4	Ca (mg/L)	1	42	42	42
5	Cl (mg/L)	1	115.2	115.2	115.2
6	CO3 (mg/L)	1	0.0	0.0	0
7	F (mg/L)	1	0.43	0.43	0.43
8	Fe (mg/L)	1	6.3	6.3	6.3
9	HCO3 (mg/L)	1	192	192	192
10	K (mg/L)	1	2.4	2.4	2.4
11	Mg (mg/L)	1	33.0	33.0	33
12	Na (mg/L)	1	88.2	88.2	88.2
13	NO2+NO3 (mg N/L)	1	4.96	4.96	4.96
14	NO2-N (mgN/L)	1	0.01	0.01	0.01
15	NO3-N (mgN/L)	1	4.95	4.95	4.95
16	P-Tot (mgP/L)	1	0.026	0.026	0.026
17	SiO2 (mg/L)	1	6.8	6.8	6.8
18	SO4 (mg/L)	1	150.8	150.8	150.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1	0.6	0.6	0.6
2	COD (mg/L)	1	5.0	5.0	5
3	DO (mg/L)	1	5.2	5.2	5.2
4	DO_SAT% (%)	1	63	63	63
5	FCoI-MPN (MPN/100mL)	1	20	20	20
6	TcoI-MPN (MPN/100mL)	1	500	500	500
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	1	104	104	104
2	HAR_Total (mgCaCO3/L)	1	242	242	242
3	Na% (%)	1	44	44	44
4	RSC (-)	1	0.0	0.0	0
5	SAR (-)	1	2.5	2.5	2.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2004-2017

Station Name : Sarati (AKPA0C2)

Division : Upper Krishna Divn, Pune

Local River : Nira

River Water

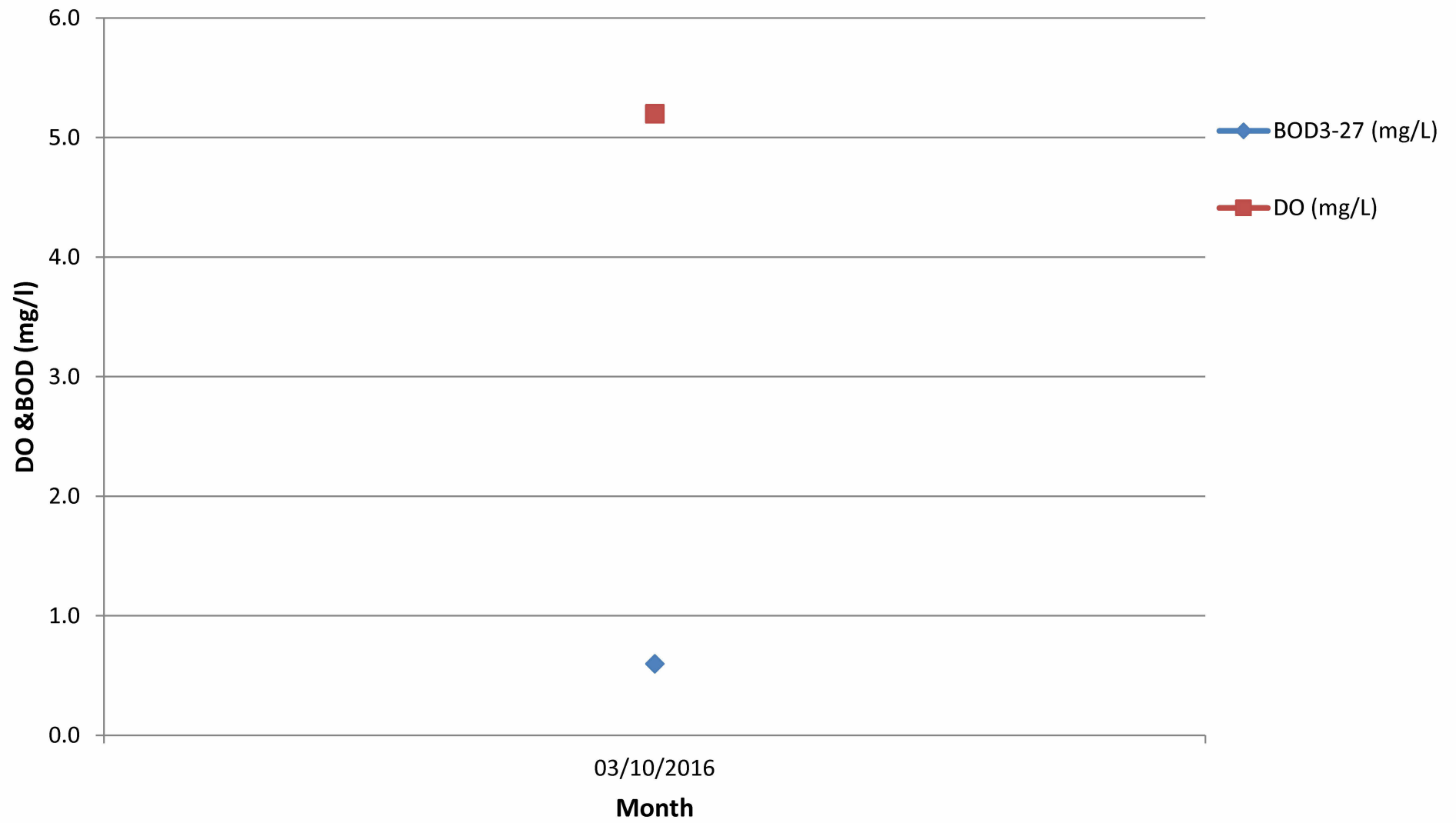
Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Flood					
		Jun - Oct					
		2004	2005	2013	2014	2015	2016
	PHYSICAL						
1	Q (cumec)	26.32	347.7	87.00	64.70	Drybed/	133.9
2	EC_FLD (µmho/cm)					No flow	1177
3	EC_GEN (µmho/cm)	347	233	920	869		972
4	pH_FLD (pH units)						8.5
5	pH_GEN (pH units)	8.3	7.7	7.7	7.9		8.2
6	Temp (deg C)	27.0	24.8	26.3	26.0		25.0
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)	112	76	86	154		158
2	B (mg/L)		0.14	0.08	0.01		0.46
3	Ca (mg/L)		16	33	59		42
4	Cl (mg/L)		32.0	32.1	67.5		115.2
5	F (mg/L)		0.13	0.34	0.36		0.43
6	Fe (mg/L)		0.8	1.2	3.0		6.3
7	HCO3 (mg/L)	136	93	105	188		192
8	K (mg/L)		28.2	1.4	3.7		2.4
9	Mg (mg/L)		7.1	19.4	24.3		33.0
10	Na (mg/L)		29.4	22.1	49.3		88.2
11	NO2+NO3 (mg N/L)		1.46	0.88	2.81		4.96
12	NO2-N (mgN/L)		0.30	0.02	0.00		0.01
13	NO3-N (mgN/L)		1.16	0.86	2.80		4.95
14	P-Tot (mgP/L)		0.204	0.028	0.028		0.026
15	SiO2 (mg/L)		5.9	16.7	33.1		6.8
16	SO4 (mg/L)		28.9	66.4	98.6		150.8
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	2.9	1.1	0.8	2.3		0.6
2	COD (mg/L)	5.6	11.5	4.8	16.0		5.0
3	DO (mg/L)	6.0					5.2
4	DO_SAT% (%)	74					63
5	FCol-MPN (MPN/100mL)			23500	4900		20
6	Tcol-MPN (MPN/100mL)			62500	7900		500
	TRACE & TOXIC						
1	As (µg/L)			2.19			
2	Cd (µg/L)			0.41			
3	Cr (µg/L)			2.01			
4	Cu (µg/L)			4.17			
5	Hg (µg/L)			0.08			
6	Ni (µg/L)			10.55			
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)		41	82	148		104
2	HAR_Total (mgCaCO3/L)		71	163	250		242
3	Na% (%)		38	24	30		44
4	RSC (-)		0.1	0.0	0.0		0.0
5	SAR (-)		1.5	0.8	1.4		2.5
	PESTICIDES						

During Flood season 2006 to 2012 Drybed/No flow condition.

During Winter and Summer seasons Drybed/No flow condition.

Sarati



HISTORY SHEET

		Water Year	: 2016-2017
Site	: Phulgaon (Seasonal)	Code	: AKP00X5
State	: Maharashtra	District	: Pune
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Bhima
Division	: Upper Krishna Divn, Pune	Sub-Division	: Bhima SD, Sholapur
Drainage Area	: 2205 Sq. Km.	Bank	: Right
Latitude	: 18°40'01"	Longitude	: 74°00'08"
	Opening Date	Closing Date	
Gauge	: 06/06/1986		
Discharge	: 20/06/1992		
Sediment	:		
Water Quality	: 02/08/1993		

Water Quality Datasheet for the period : 2016-2017

Station Name : Phulgaon (Seasonal) (AKP00X5)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water Analysis

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	02/08/2016	04/10/2016
		A	A
	PHYSICAL		
1	Q (cumec)	221.7	66.23
2	Colour_Cod (-)	Light Brown	Clear
3	EC_FLD (μmho/cm)	190	440
4	EC_GEN (μmho/cm)	196	458
5	Odour_Code (-)	odour free	odour free
6	pH_FLD (pH units)	7.5	7.9
7	pH_GEN (pH units)	7.9	8.0
8	Temp (deg C)	22.5	28.0
	CHEMICAL		
1	Alk-Phen (mgCaCO3/L)	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	86	158
3	B (mg/L)	0.04	0.08
4	Ca (mg/L)	24	51
5	Cl (mg/L)	10.9	41.3
6	CO3 (mg/L)	0.0	0.0
7	F (mg/L)	0.32	0.34
8	Fe (mg/L)	1.9	3.3
9	HCO3 (mg/L)	105	192
10	K (mg/L)	0.9	1.9
11	Mg (mg/L)	6.8	9.7
12	Na (mg/L)	6.6	22.3
13	NO2+NO3 (mg N/L)	1.74	3.22
14	NO2-N (mgN/L)	0.01	0.00
15	NO3-N (mgN/L)	1.73	3.22
16	P-Tot (mgP/L)	0.028	0.053
17	SiO2 (mg/L)	7.0	6.5
18	SO4 (mg/L)	17.9	24.9
	BIOLOGICAL/BACTERIOLOGICAL		
1	BOD3-27 (mg/L)	0.5	0.6
2	COD (mg/L)	5.0	5.0
3	DO (mg/L)	6.1	6.2
4	DO_SAT% (%)	70	79
5	FCoI-MPN (MPN/100mL)	16000	2400
6	TcoI-MPN (MPN/100mL)	16000	5000
	TRACE & TOXIC		
	CHEMICAL INDICES		
1	HAR_Ca (mgCaCO3/L)	60	128
2	HAR_Total (mgCaCO3/L)	88	169
3	Na% (%)	14	22
4	RSC (-)	0.0	0.0
5	SAR (-)	0.3	0.7
	PESTICIDES	Anlaysis not done due to mal function of instrument.	

Samples not collected during June month due to Drybed/No flow. Samples not collected during July and September months.

Water Quality Summary for the period : 2016-2017

Station Name : Phulgaon (Seasonal) (AKP00X5)

Division : Upper Krishna Divn, Pune

Local River : Bhima

Sub-Division : Bhima SD, Sholapur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	183	763.8	0.000	65.87
2	EC_FLD (µmho/cm)	2	440	190	315
3	EC_GEN (µmho/cm)	2	458	196	327
4	pH_FLD (pH units)	2	7.9	7.5	7.7
5	pH_GEN (pH units)	2	8.0	7.9	8
6	Temp (deg C)	2	28.0	22.5	25.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	2	158	86	122
3	B (mg/L)	2	0.08	0.04	0.06
4	Ca (mg/L)	2	51	24	38
5	Cl (mg/L)	2	41.3	10.9	26.1
6	CO3 (mg/L)	2	0.0	0.0	0
7	F (mg/L)	2	0.34	0.32	0.33
8	Fe (mg/L)	2	3.3	1.9	2.6
9	HCO3 (mg/L)	2	192	105	149
10	K (mg/L)	2	1.9	0.9	1.4
11	Mg (mg/L)	2	9.7	6.8	8.3
12	Na (mg/L)	2	22.3	6.6	14.4
13	NO2+NO3 (mg N/L)	2	3.22	1.74	2.48
14	NO2-N (mgN/L)	2	0.01	0.00	0
15	NO3-N (mgN/L)	2	3.22	1.73	2.48
16	P-Tot (mgP/L)	2	0.053	0.028	0.041
17	SiO2 (mg/L)	2	7.0	6.5	6.7
18	SO4 (mg/L)	2	24.9	17.9	21.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2	0.6	0.5	0.6
2	COD (mg/L)	2	5.0	5.0	5
3	DO (mg/L)	2	6.2	6.1	6.1
4	DO_SAT% (%)	2	79	70	75
5	FCol-MPN (MPN/100mL)	2	16000	2400	9200
6	Tcol-MPN (MPN/100mL)	2	16000	5000	10500
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	2	128	60	94
2	HAR_Total (mgCaCO3/L)	2	169	88	129
3	Na% (%)	2	22	14	18
4	RSC (-)	2	0.0	0.0	0
5	SAR (-)	2	0.7	0.3	0.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Phulgaon (Seasonal) (AKP00X5)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Flood				
		Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	79.08	79.29	117.2	506.4	279.4
2	EC_FLD (µmho/cm)	200				
3	EC_GEN (µmho/cm)	200	200	284	230	200
4	pH_FLD (pH units)	8.0				
5	pH_GEN (pH units)	8.0	8.1	7.9	8.0	7.5
6	TDS (mg/L)	157				
7	Temp (deg C)	23.5	23.5	23.7	23.0	24.4
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	1.0		0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	103		71	62	122
3	B (mg/L)	1.20			0.11	0.10
4	Ca (mg/L)	26			16	20
5	Cl (mg/L)	21.2			14.7	17.1
6	CO3 (mg/L)	1.2		0.0	0.0	0.0
7	F (mg/L)	0.36			0.14	0.12
8	Fe (mg/L)				0.6	0.3
9	HCO3 (mg/L)	123		87	75	83
10	K (mg/L)	0.7			11.3	12.8
11	Mg (mg/L)	10.1			8.8	4.4
12	Na (mg/L)	8.1			8.0	12.5
13	NH3-N (mg N/L)	0.03				
14	NO2+NO3 (mg N/L)				2.00	0.65
15	NO2-N (mgN/L)				0.04	0.00
16	NO3-N (mgN/L)				1.96	0.65
17	P-Tot (mgP/L)	0.202			0.094	0.258
18	SiO2 (mg/L)	19.4			5.4	4.3
19	SO4 (mg/L)	17.5	7.5		14.0	21.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	0.4	2.1	0.3	0.5
2	COD (mg/L)		2.7	5.4	17.3	3.4
3	DO (mg/L)	6.7		6.2		
4	DO_SAT% (%)	84		73		
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
1	Cd (µg/L)					
2	Cr (µg/L)					
3	Cu (µg/L)					
4	Hg (µg/L)					
5	Ni (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	64			40	50
2	HAR_Total (mgCaCO3/L)	106			77	68
3	Na% (%)	14			13	24
4	RSC (-)	0.1			0.0	0.3
5	SAR (-)	0.3			0.4	0.7
	PESTICIDES	Seasonal site from 2006-07 onwards.				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Phulgaon (Seasonal) (AKP00X5)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Flood				
		Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	212.4	126.8	133.2	150.9	126.0
2	EC_FLD (μmho/cm)					
3	EC_GEN (μmho/cm)	194	197	708	268	243
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.8	7.7	7.7	7.8	7.9
6	TDS (mg/L)					
7	Temp (deg C)	23.5	23.2	22.8	23.7	22.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	49	68	63	66	71
3	B (mg/L)	0.06	0.07	0.07	0.30	0.06
4	Ca (mg/L)	16	20	24	24	28
5	Cl (mg/L)	15.6	11.5	13.0	14.1	15.5
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.16	0.07	0.33	0.24	0.26
8	Fe (mg/L)	0.1	0.2	0.4	0.2	1.0
9	HCO3 (mg/L)	60	83	77	80	87
10	K (mg/L)	2.8	1.2	0.1	1.2	0.6
11	Mg (mg/L)	5.1	7.6	6.5	6.2	5.8
12	Na (mg/L)	8.9	7.9	8.1	8.4	10.5
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)	1.05	1.16	0.63	0.19	1.23
15	NO2-N (mgN/L)	0.01	0.01	0.01	0.01	0.01
16	NO3-N (mgN/L)	1.04	1.16	0.62	0.18	1.22
17	P-Tot (mgP/L)	0.171	0.014	0.005	0.007	0.080
18	SiO2 (mg/L)	11.4	4.8	9.7	8.0	10.9
19	SO4 (mg/L)	15.8	10.2	24.9	18.8	18.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.2	1.0	1.0	0.8
2	COD (mg/L)	6.5	6.3	6.4	7.3	5.0
3	DO (mg/L)					
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)			8550	3900	4900
6	Tcol-MPN (MPN/100mL)			8700	6350	7000
	TRACE & TOXIC					
1	Cd (μg/L)					
2	Cr (μg/L)					
3	Cu (μg/L)					
4	Hg (μg/L)					
5	Ni (μg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	40	49	60	60	70
2	HAR_Total (mgCaCO3/L)	61	80	87	86	94
3	Na% (%)	23	17	17	18	19
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.5	0.4	0.4	0.4	0.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Phulgaon (Seasonal) (AKP00X5)

Division : Upper Krishna Divn, Pune

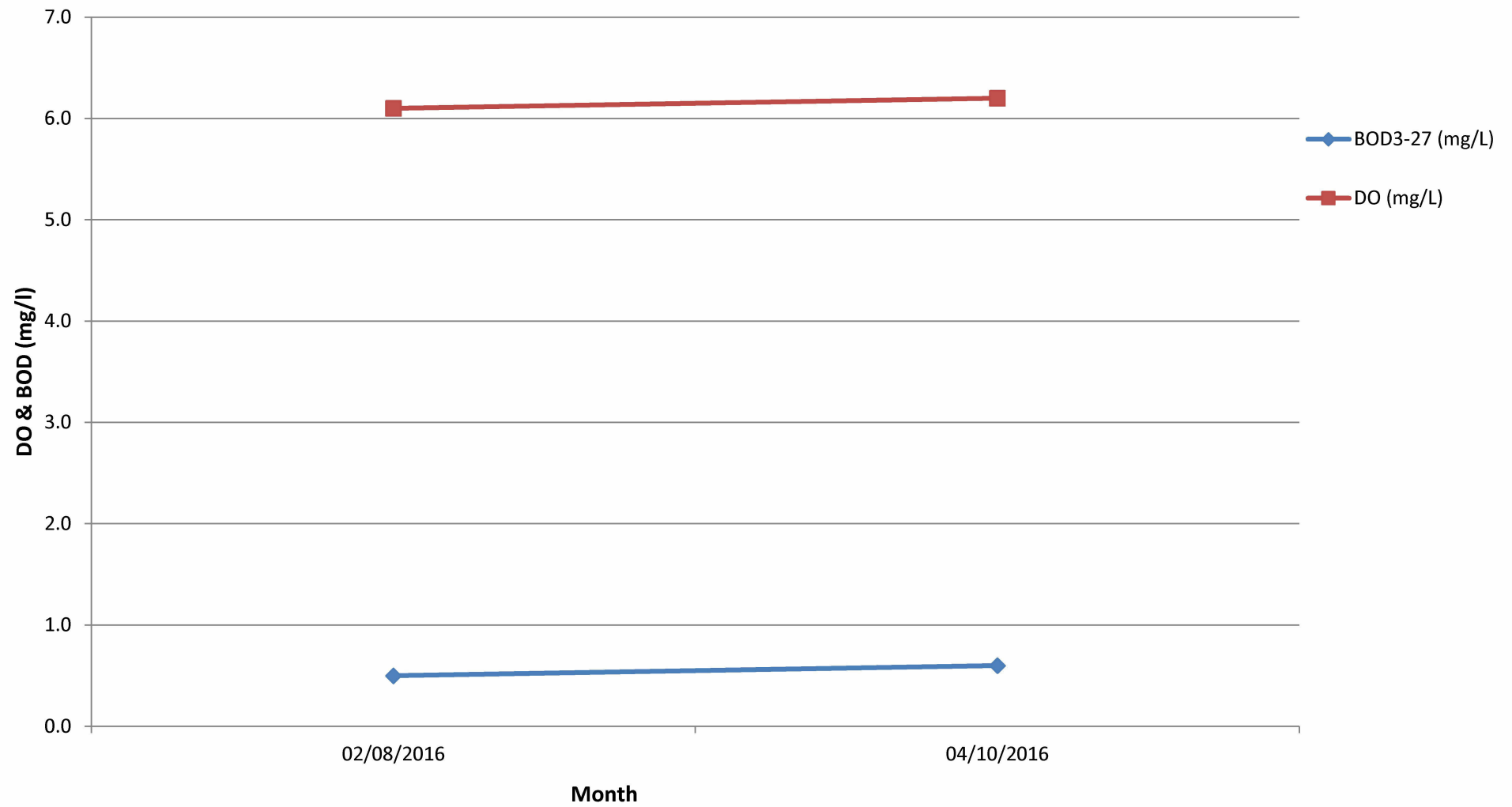
Local River : Bhima

River Water

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Flood				
		Jun - Oct				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	Drybed/No Flow	899.6	323.1	42.49	144.0
2	EC_FLD (µmho/cm)					315
3	EC_GEN (µmho/cm)		81	232	269	327
4	pH_FLD (pH units)					7.7
5	pH_GEN (pH units)		7.3	7.8	8.0	8.0
6	TDS (mg/L)					
7	Temp (deg C)		26.5	22.8	23.0	25.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)		64	115	96	122
3	B (mg/L)		0.11	0.05	0.11	0.06
4	Ca (mg/L)		26	42	29	38
5	Cl (mg/L)		8.5	31.5	19.2	26.1
6	CO3 (mg/L)		0.0	0.0	0.0	0.0
7	F (mg/L)		0.33	0.25	0.71	0.33
8	Fe (mg/L)		0.1	1.5	2.8	2.6
9	HCO3 (mg/L)		78	140	117	149
10	K (mg/L)		0.6	0.8	1.0	1.4
11	Mg (mg/L)		3.9	5.3	5.8	8.3
12	Na (mg/L)		5.0	23.8	10.2	14.4
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)		0.32	0.99	1.84	2.48
15	NO2-N (mgN/L)		0.00	0.02	0.01	0.00
16	NO3-N (mgN/L)		0.31	0.97	1.84	2.48
17	P-Tot (mgP/L)		0.038	0.015	0.054	0.041
18	SiO2 (mg/L)		13.5	20.5	12.2	6.7
19	SO4 (mg/L)		14.2	12.6	14.6	21.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		1.9	2.6	1.1	0.6
2	COD (mg/L)		13.0	16.5	10.0	5.0
3	DO (mg/L)					6.1
4	DO_SAT% (%)					75
5	FCol-MPN (MPN/100mL)		24000	46000		9200
6	Tcol-MPN (MPN/100mL)		54000	82500		10500
	TRACE & TOXIC					
1	Cd (µg/L)		0.31			
2	Cr (µg/L)		2.67			
3	Cu (µg/L)		2.98			
4	Hg (µg/L)		0.56			
5	Ni (µg/L)		8.05			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		64	106	72	94
2	HAR_Total (mgCaCO3/L)		80	128	96	129
3	Na% (%)		12	32	19	18
4	RSC (-)		0.0	0.0	0.0	0.0
5	SAR (-)		0.2	1.0	0.5	0.5
	PESTICIDES					

Phulgaon(Seasonal)



HISTORY SHEET

		Water Year : 2016-2017	
Site	: Huvinhedigi	Code	: AK000N2
State	: Karnataka	District	Raichur
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Krishna
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Middle Krishna SD 2, Kurnool
Drainage Area	: 55150 Sq. Km.	Bank	: Right
Latitude	: 16°29'25"	Longitude	: 76°55'23"
	Opening Date		Closing Date
Gauge	: 01/02/1976		
Discharge	: 01/02/1976		
Sediment	: 01/06/1976		
Water Quality	: 01/02/1976		

Sediment WQ observations suspended on 31-05-2006
and site has been upgraded from GD to GDSQ from 12-06-2013.

Water Quality Datasheet for the period : 2016-2017

Station Name : Huvinhedigi (AK000N2)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Analysis Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	15/06/2016 A	01/07/2016 A	01/08/2016 A	01/09/2016 A
	PHYSICAL				
1	Q (cumec)	0.694	1.502	319.8	316.7
2	Colour_Cod (-)	Clear	Clear	Light Brown	Light Brown
3	EC_GEN (µmho/cm)	1208	986	275	466
4	Odour_Code (-)	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.5	8.6	8.2	8.4
6	TDS (mg/L)	990	835	247	372
7	Temp (deg C)	26.0	25.0	26.0	25.0
8	Turb (NTU)	124.00	74.00	27.00	0.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	9.4	10.8	0.0	2.0
2	ALK-TOT (mgCaCO3/L)	193	174	222	129
3	Ca (mg/L)	62	47	68	29
4	Cl (mg/L)	138.8	127.6	36.2	32.4
5	CO3 (mg/L)	11.3	13.0	0.0	2.4
6	F (mg/L)	1.32	1.41	0.34	0.10
7	Fe (mg/L)	0.0	0.0	0.1	0.0
8	HCO3 (mg/L)	213	186	271	153
9	K (mg/L)	2.3	3.8	3.1	1.9
10	Mg (mg/L)	37.4	26.6	40.8	16.0
11	Na (mg/L)	141.7	139.2	36.5	36.0
12	NH3-N (mg N/L)	0.04	0.28	0.00	0.06
13	NO2+NO3 (mg N/L)	0.29	1.00	2.56	1.15
14	NO2-N (mgN/L)	0.01	0.00	0.00	0.01
15	NO3-N (mgN/L)	0.28	1.00	2.56	1.15
16	o-PO4-P (mg P/L)	0.120	0.014	0.035	0.198
17	SiO2 (mg/L)	9.1	17.2	15.8	15.9
18	SO4 (mg/L)	115.0	111.0	187.5	16.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2.4	2.4	0.7	0.8
2	COD (mg/L)	12.3	20.6	5.6	5.6
3	DO (mg/L)	6.0	5.5	6.8	5.9
4	DO_SAT% (%)	74	67	84	71
5	FCoI-MPN (MPN/100mL)	500	20	230	1100
6	TcoI-MPN (MPN/100mL)	1300	9000	9000	3000
	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)	156	118	170	73
2	HAR_Total (mgCaCO3/L)	312	229	340	140
3	Na% (%)	50	57	19	36
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	3.5	4.0	0.9	1.3
	PESTICIDES	Anlaysia not done due to mal function of instrument.			

Water Quality Datasheet for the period : 2016-2017

Station Name : Huvinhedigi (AK000N2)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Analysis Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	01/10/2016 A	01/11/2016 A	01/12/2016 A	02/01/2017 A
	PHYSICAL				
1	Q (cumec)	239.8	25.61	24.11	30.07
2	Colour_Cod (-)	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	425	844	970	744
4	Odour_Code (-)	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.8	8.6	8.7	8.4
6	TDS (mg/L)	237	491	583	603
7	Temp (deg C)	25.0	24.0	25.0	25.0
8	Turb (NTU)	0.00	0.00	0.00	0.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	3.5	7.0	7.7	7.6
2	ALK-TOT (mgCaCO3/L)	121	206	203	203
3	Ca (mg/L)	29	54	47	51
4	Cl (mg/L)	36.6	79.1	98.4	71.0
5	CO3 (mg/L)	4.2	8.4	9.2	9.2
6	F (mg/L)	0.87	0.55	0.94	0.90
7	Fe (mg/L)	0.3	0.3	0.2	0.0
8	HCO3 (mg/L)	139	234	229	229
9	K (mg/L)	1.7	1.9	2.3	3.7
10	Mg (mg/L)	15.8	29.4	25.5	27.6
11	Na (mg/L)	36.4	92.6	128.5	76.7
12	NH3-N (mg N/L)	0.00	0.01	0.08	0.00
13	NO2+NO3 (mg N/L)	1.08	0.13	0.05	0.43
14	NO2-N (mgN/L)	0.00	0.01	0.04	0.00
15	NO3-N (mgN/L)	1.08	0.13	0.01	0.43
16	o-PO4-P (mg P/L)	0.116	0.132	0.087	0.040
17	SiO2 (mg/L)	19.7	18.6	15.1	12.8
18	SO4 (mg/L)	86.0	93.0	186.0	110.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.0	2.0	0.9	0.4
2	COD (mg/L)	3.3	8.7	10.0	13.5
3	DO (mg/L)	7.0	5.4	8.8	6.5
4	DO_SAT% (%)	85	64	106	79
5	FCoI-MPN (MPN/100mL)	3000	1400	2400	20
6	TcoI-MPN (MPN/100mL)	3000	5000	2400	1100
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)				
3	Cr (µg/L)				
4	Cu (µg/L)			0.00	0.00
5	Hg (µg/L)				
6	Ni (µg/L)				
7	Pb (µg/L)				
8	Zn (µg/L)			0.00	0.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	72	135	117	127
2	HAR_Total (mgCaCO3/L)	138	257	223	242
3	Na% (%)	36	44	55	41
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	1.4	2.5	3.8	2.2
	PESTICIDES				

Water Quality Datasheet for the period : 2016-2017

Station Name : Huvinhedigi (AK000N2)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Analysis Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	01/02/2017 A	10/03/2017 A	01/04/2017 A
	PHYSICAL			
1	Q (cumec)	8.010	11.91	10.86
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	458	1043	975
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_GEN (pH units)	8.4	7.5	8.0
6	TDS (mg/L)	621	550	651
7	Temp (deg C)	24.0	27.0	29.0
8	Turb (NTU)	29.00	22.00	64.00
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	2.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	142	138	262
3	Ca (mg/L)	54	41	87
4	Cl (mg/L)	189.7	37.4	117.7
5	CO3 (mg/L)	2.4	0.0	0.0
6	F (mg/L)	1.43	0.58	0.60
7	Fe (mg/L)	0.1	0.0	0.0
8	HCO3 (mg/L)	169	169	320
9	K (mg/L)	8.1	2.9	4.2
10	Mg (mg/L)	16.9	12.7	33.1
11	Na (mg/L)	281.4	103.8	149.2
12	NH3-N (mg N/L)	0.00	0.00	0.02
13	NO2+NO3 (mg N/L)	2.17	1.71	2.70
14	NO2-N (mgN/L)	0.33	0.16	0.08
15	NO3-N (mgN/L)	1.84	1.55	2.62
16	o-PO4-P (mg P/L)	0.220	1.260	0.080
17	SiO2 (mg/L)	16.4	26.5	44.5
18	SO4 (mg/L)	255.8	123.1	90.6
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	0.6	0.9	1.2
2	COD (mg/L)	3.2	2.5	18.5
3	DO (mg/L)	5.7	4.3	4.8
4	DO_SAT% (%)	68	53	62
5	FCoI-MPN (MPN/100mL)	20	70	800
6	TcoI-MPN (MPN/100mL)	800	2200	800
	TRACE & TOXIC			
1	As (µg/L)			2.04
2	Cd (µg/L)			1.70
3	Cr (µg/L)			0.00
4	Cu (µg/L)	0.00	0.00	0.00
5	Hg (µg/L)			0.66
6	Ni (µg/L)			6.30
7	Pb (µg/L)			1.00
8	Zn (µg/L)	0.00	0.00	0.00
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	134	104	219
2	HAR_Total (mgCaCO3/L)	204	156	356
3	Na% (%)	74	59	47
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	8.6	3.6	3.4
	PESTICIDES			

Samples not collected during May month due to Dried/No Flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Huvinhedigi (AK000N2)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

Sub-Division : Middle Krishna SD 2 , Kurnool

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	7054	0.000	258.2
2	EC_GEN (µmho/cm)	11	1208	275	763
3	pH_GEN (pH units)	11	8.8	7.5	8.4
4	TDS (mg/L)	11	990	237	562
5	Temp (deg C)	11	29.0	24.0	25.5
6	Turb (NTU)	11	124.00	0.00	30.91
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	11	10.8	0.0	4.5
2	ALK-TOT (mgCaCO3/L)	11	262	121	181
3	Ca (mg/L)	11	87	29	52
4	Cl (mg/L)	11	189.7	32.4	87.7
5	CO3 (mg/L)	11	13.0	0.0	5.5
6	F (mg/L)	11	1.43	0.10	0.82
7	Fe (mg/L)	11	0.3	0.0	0.1
8	HCO3 (mg/L)	11	320	139	210
9	K (mg/L)	11	8.1	1.7	3.3
10	Mg (mg/L)	11	40.8	12.7	25.6
11	Na (mg/L)	11	281.4	36.0	111.1
12	NH3-N (mg N/L)	11	0.28	0.00	0.04
13	NO2+NO3 (mg N/L)	11	2.70	0.05	1.21
14	NO2-N (mgN/L)	11	0.33	0.00	0.06
15	NO3-N (mgN/L)	11	2.62	0.01	1.15
16	o-PO4-P (mg P/L)	11	1.260	0.014	0.209
17	SiO2 (mg/L)	11	44.5	9.1	19.2
18	SO4 (mg/L)	11	255.8	16.0	124.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	11	2.4	0.4	1.2
2	COD (mg/L)	11	20.6	2.5	9.4
3	DO (mg/L)	11	8.8	4.3	6.1
4	DO_SAT% (%)	11	106	53	74
5	FCol-MPN (MPN/100mL)	11	3000	20	869
6	Tcol-MPN (MPN/100mL)	11	9000	800	3418
	TRACE & TOXIC				
1	As (µg/L)	1	2.04	2.04	2.04
2	Cd (µg/L)	1	1.70	1.70	1.7
3	Cr (µg/L)	1	0.00	0.00	0
4	Cu (µg/L)	5	0.00	0.00	0
5	Hg (µg/L)	1	0.66	0.66	0.66
6	Ni (µg/L)	1	6.30	6.30	6.3
7	Pb (µg/L)	1	1.00	1.00	1
8	Zn (µg/L)	5	0.00	0.00	0
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	11	219	72	129
2	HAR_Total (mgCaCO3/L)	11	356	138	236
3	Na% (%)	11	74	19	47
4	RSC (-)	11	0.0	0.0	0
5	SAR (-)	11	8.6	0.9	3.2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Huvinhedigi (AK000N2)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Flood			
		Jun - Oct			
		2002	2003	2004	2005
	PHYSICAL				
1	Q (cumec)	28.38	59.19	241.9	612.4
2	EC_GEN (µmho/cm)	889	835	624	498
3	pH_GEN (pH units)	8.2	8.2	8.2	7.8
4	TDS (mg/L)				
5	Temp (deg C)	31.0	31.3	29.3	32.9
6	Turb (NTU)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	18.5	4.6	3.9	0.0
2	ALK-TOT (mgCaCO3/L)	132	181	187	125
3	B (mg/L)	0.01	0.08	0.00	0.01
4	Ca (mg/L)	21	38	30	35
5	Cl (mg/L)	90.8	62.1	54.4	40.6
6	CO3 (mg/L)	22.3	5.6	4.7	0.0
7	F (mg/L)	0.67	0.75	1.10	0.70
8	Fe (mg/L)	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	116	209	219	152
10	K (mg/L)	3.1	3.5	2.2	1.9
11	Mg (mg/L)	33.1	19.9	14.3	14.0
12	Na (mg/L)	50.3	57.7	72.7	38.0
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.10	0.01	0.01	0.01
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.10	0.01	0.01	0.01
17	o-PO4-P (mg P/L)				
18	P-Tot (mgP/L)	0.040	0.031	0.001	0.001
19	SiO2 (mg/L)	6.4	16.6	16.3	27.4
20	SO4 (mg/L)	94.7	141.7	67.3	31.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.3	1.3	2.0	0.7
2	COD (mg/L)				
3	DO (mg/L)	5.0	6.5	6.5	6.6
4	DO_SAT% (%)	68	88	85	91
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)	52	94	76	88
2	HAR_Total (mgCaCO3/L)	190	177	136	146
3	Na% (%)	34	30	53	35
4	RSC (-)	0.0	0.6	1.1	0.0
5	SAR (-)	1.5	1.7	2.7	1.3
	PESTICIDES				

Sediment &WQ observations suspended on 31-05-2006.

and site has been upgraded from GD to GDSQ from 12-06-2013.

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Huvinhedigi (AK000N2)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Flood			
		Jun - Oct			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	900.0	1413	27.03	175.7
2	EC_GEN (µmho/cm)	545	774	1076	672
3	pH_GEN (pH units)	8.3	8.2	8.1	8.5
4	TDS (mg/L)	317	477	767	536
5	Temp (deg C)	26.3	25.2	26.7	25.4
6	Turb (NTU)	2.82	38.00	28.40	45.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2.2	1.7	0.7	5.1
2	ALK-TOT (mgCaCO3/L)	183	145	183	168
3	B (mg/L)	0.28	0.24	0.20	
4	Ca (mg/L)	52	31	49	47
5	Cl (mg/L)	39.2	82.8	135.9	74.3
6	CO3 (mg/L)	2.6	2.0	0.8	6.2
7	F (mg/L)	0.65	0.70	0.92	0.81
8	Fe (mg/L)	0.1	0.1	0.0	0.1
9	HCO3 (mg/L)	218	173	221	192
10	K (mg/L)	1.8	3.0	3.7	2.6
11	Mg (mg/L)	20.2	17.7	27.9	27.3
12	Na (mg/L)	53.0	94.4	146.1	78.0
13	NH3-N (mg N/L)	0.11	0.00	0.06	0.08
14	NO2+NO3 (mg N/L)	0.67	1.11	1.06	1.22
15	NO2-N (mgN/L)	0.00	0.01	0.05	0.00
16	NO3-N (mgN/L)	0.67	1.10	1.01	1.21
17	o-PO4-P (mg P/L)	0.284	0.115	0.211	0.097
18	P-Tot (mgP/L)		0.095		
19	SiO2 (mg/L)	15.6	18.4	23.2	15.6
20	SO4 (mg/L)	71.0	98.3	194.0	103.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.1	1.1	1.1	1.5
2	COD (mg/L)	7.0	7.0	10.4	9.5
3	DO (mg/L)	6.3	6.2	5.4	6.2
4	DO_SAT% (%)	79	75	67	76
5	FCol-MPN (MPN/100mL)	590	9692	506	970
6	Tcol-MPN (MPN/100mL)	4575	10240	12854	5060
7	TOC (mg/L)	0.2		17.9	
	TRACE & TOXIC				
1	As (µg/L)	2.99			
2	Cd (µg/L)	0.34			
3	Cr (µg/L)	0.46			
4	Cu (µg/L)				
5	Hg (µg/L)	0.70			
6	Ni (µg/L)	33.09			
7	Pb (µg/L)	1.18			
8	Zn (µg/L)	0.01			
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	130	79	122	118
2	HAR_Total (mgCaCO3/L)	214	152	239	232
3	Na% (%)	37	51	56	39
4	RSC (-)	0.0	0.4	0.0	0.0
5	SAR (-)	1.8	3.3	4.1	2.2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Huvinhedigi (AK000N2)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Winter			
		Nov - Feb			
		2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL				
1	Q (cumec)	61.85	92.30	98.14	70.86
2	EC_GEN ($\mu\text{mho/cm}$)	666	568	595	658
3	pH_GEN (pH units)	8.1	8.2	8.2	8.1
4	TDS (mg/L)				
5	Temp (deg C)	26.5	26.0	23.5	27.0
6	Turb (NTU)				
	CHEMICAL				
1	Alk-Phen (mgCaCO ₃ /L)	0.0	11.5	4.6	0.0
2	ALK-TOT (mgCaCO ₃ /L)	104	231	229	204
3	B (mg/L)	0.01	0.00	0.00	0.01
4	Ca (mg/L)	43	32	27	39
5	Cl (mg/L)	60.4	40.3	49.0	50.5
6	CO ₃ (mg/L)	0.0	13.8	5.5	0.0
7	F (mg/L)	0.66	0.89	0.83	1.09
8	Fe (mg/L)	0.0	0.0	0.0	0.0
9	HCO ₃ (mg/L)	127	253	268	249
10	K (mg/L)	1.7	1.9	1.8	
11	Mg (mg/L)	16.1	15.8	15.0	15.5
12	Na (mg/L)	33.5	26.5	73.5	
13	NH ₃ -N (mg N/L)	0.00	0.00	0.00	0.00
14	NO ₂ +NO ₃ (mg N/L)	0.11	0.01	0.01	0.01
15	NO ₂ -N (mgN/L)	0.00	0.00	0.00	0.00
16	NO ₃ -N (mgN/L)	0.11	0.01	0.01	0.01
17	o-PO ₄ -P (mg P/L)				
18	P-Tot (mgP/L)	0.045	0.001	0.001	0.001
19	SiO ₂ (mg/L)	5.8	23.3	22.8	18.6
20	SO ₄ (mg/L)	84.0	86.5	58.0	59.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD ₃₋₂₇ (mg/L)	0.3	2.1	0.5	0.9
2	COD (mg/L)				
3	DO (mg/L)	6.2	6.3	6.3	6.2
4	DO_SAT% (%)	77	77	74	78
5	FCol-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
7	TOC (mg/L)				
	TRACE & TOXIC				
1	As ($\mu\text{g/L}$)				
2	Cd ($\mu\text{g/L}$)				
3	Cr ($\mu\text{g/L}$)				
4	Cu ($\mu\text{g/L}$)				
5	Hg ($\mu\text{g/L}$)				
6	Ni ($\mu\text{g/L}$)				
7	Pb ($\mu\text{g/L}$)				
8	Zn ($\mu\text{g/L}$)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO ₃ /L)	107	79	68	96
2	HAR_Total (mgCaCO ₃ /L)	174	145	130	161
3	Na% (%)	28	27	55	
4	RSC (-)	0.0	1.7	2.0	0.9
5	SAR (-)	1.1	1.0	3.0	
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Huvinhedigi (AK000N2)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Winter			
		Nov - Feb			
		2013-2014	2014-2015	2015-2016	2016-2017
	PHYSICAL				
1	Q (cumec)	58.35	53.24	39.59	21.95
2	EC_GEN (µmho/cm)	813	775	1160	754
3	pH_GEN (pH units)	8.2	8.2	8.3	8.5
4	TDS (mg/L)	516	594	556	575
5	Temp (deg C)	26.0	24.6	25.5	24.5
6	Turb (NTU)	9.50	2.05	42.25	7.25
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	1.1	1.0	0.9	6.1
2	ALK-TOT (mgCaCO3/L)	207	220	213	189
3	B (mg/L)	0.62	0.20	0.08	
4	Ca (mg/L)	45	50	48	51
5	Cl (mg/L)	71.7	88.6	103.1	109.5
6	CO3 (mg/L)	1.3	1.3	1.0	7.3
7	F (mg/L)	0.84	0.89	0.55	0.96
8	Fe (mg/L)	0.0	0.1	0.1	0.1
9	HCO3 (mg/L)	250	266	258	215
10	K (mg/L)	2.4	2.7	2.5	4.0
11	Mg (mg/L)	26.0	27.6	27.8	24.8
12	Na (mg/L)	79.1	104.7	108.9	144.8
13	NH3-N (mg N/L)	0.00	0.03	0.01	0.02
14	NO2+NO3 (mg N/L)	0.90	0.92	1.14	0.70
15	NO2-N (mgN/L)	0.00	0.03	0.02	0.09
16	NO3-N (mgN/L)	0.90	0.89	1.12	0.60
17	o-PO4-P (mg P/L)	0.140	0.135	0.146	0.120
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)	22.7	27.8	11.7	15.7
20	SO4 (mg/L)	83.5	70.0	142.0	161.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.9	0.8	1.3	1.0
2	COD (mg/L)	6.3	11.1	6.8	8.8
3	DO (mg/L)	6.9	7.1	6.5	6.6
4	DO_SAT% (%)	86	85	79	79
5	FCol-MPN (MPN/100mL)	4165	878	1483	960
6	Tcol-MPN (MPN/100mL)	4383	3008	12055	2325
7	TOC (mg/L)		32.1	13.6	
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)		1.99		
3	Cr (µg/L)		1.36		
4	Cu (µg/L)		1.53		0.00
5	Hg (µg/L)				
6	Ni (µg/L)		7.55		
7	Pb (µg/L)		14.51		
8	Zn (µg/L)		5.20		0.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	113	124	121	128
2	HAR_Total (mgCaCO3/L)	221	239	237	231
3	Na% (%)	44	49	49	53
4	RSC (-)	0.0	0.1	0.0	0.0
5	SAR (-)	2.3	3.0	3.1	4.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Huvinhedigi (AK000N2)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Summer			
		Mar - May			
		2003	2004	2005	2006
	PHYSICAL				
1	Q (cumec)	57.31	86.23	57.91	57.93
2	EC_GEN (µmho/cm)	770	616	649	704
3	pH_GEN (pH units)	8.2	8.9	8.2	8.1
4	TDS (mg/L)				
5	Temp (deg C)	32.0	30.0	27.0	26.0
6	Turb (NTU)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	9.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	111	280	218	218
3	B (mg/L)	0.01	0.00	0.00	0.01
4	Ca (mg/L)	22	37	83	50
5	Cl (mg/L)	52.9	43.8	51.0	57.1
6	CO3 (mg/L)	0.0	10.8	0.0	0.0
7	F (mg/L)	0.87	0.95	0.96	0.92
8	Fe (mg/L)	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	135	320	266	266
10	K (mg/L)	1.9	1.8	1.0	1.9
11	Mg (mg/L)	26.3	17.5	7.0	14.0
12	Na (mg/L)	34.0	30.0	41.0	68.0
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.00
14	NO2+NO3 (mg N/L)	0.12	0.01	0.01	0.01
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.12	0.01	0.01	0.01
17	o-PO4-P (mg P/L)				
18	P-Tot (mgP/L)	0.075	0.001	0.001	0.001
19	SiO2 (mg/L)	7.1	22.7	22.5	17.3
20	SO4 (mg/L)	80.0	56.0	54.0	45.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.4	2.1	0.9	0.3
2	COD (mg/L)				
3	DO (mg/L)	3.1	5.2	5.9	
4	DO_SAT% (%)	42	69	74	
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)	55	92	208	125
2	HAR_Total (mgCaCO3/L)	164	165	237	183
3	Na% (%)	31	28	27	44
4	RSC (-)	0.0	2.3	0.0	0.7
5	SAR (-)	1.2	1.0	1.2	2.2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Huvinhedigi (AK000N2)

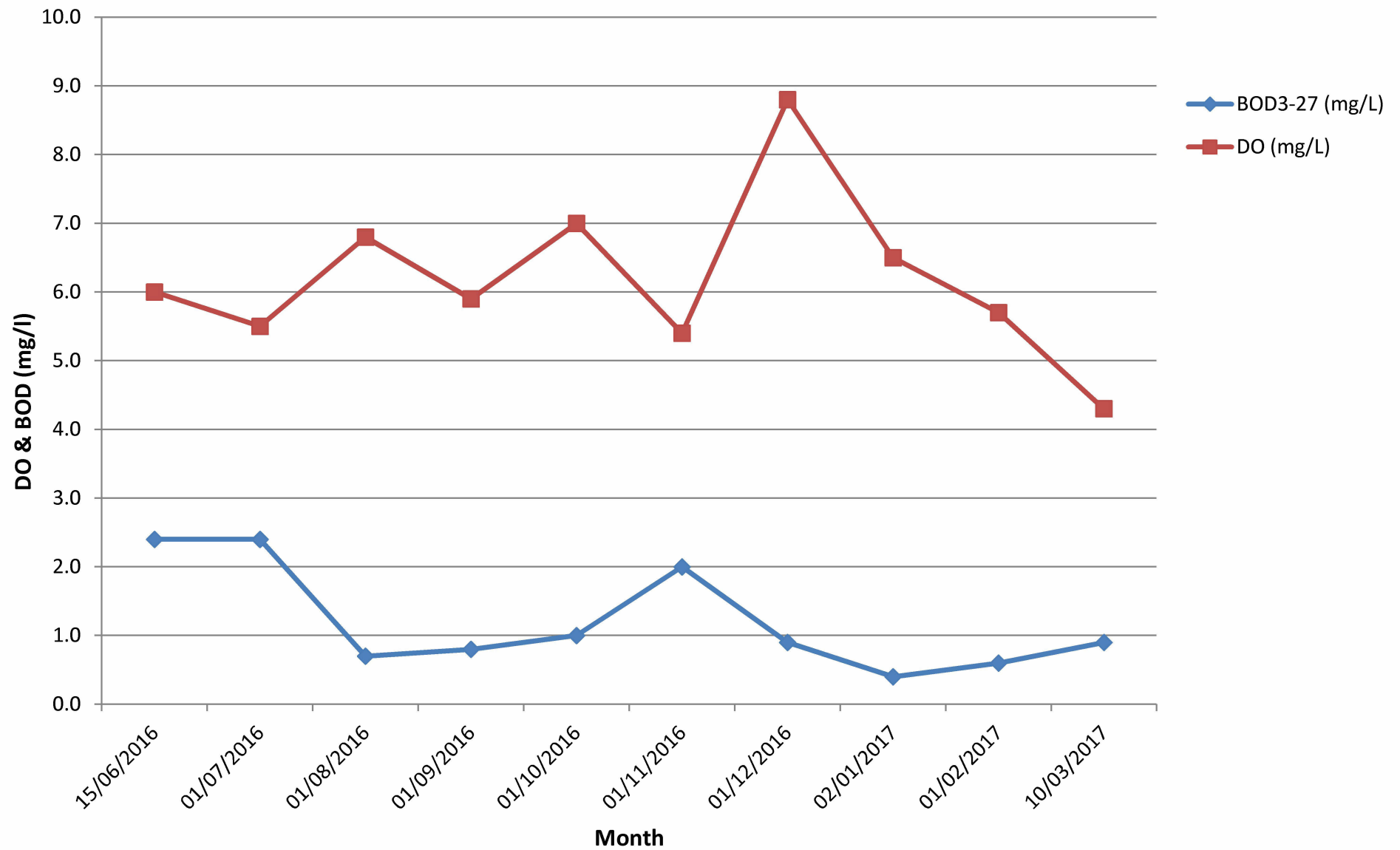
Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Summer			
		Mar - May			
		2014	2015	2016	2017
	PHYSICAL				
1	Q (cumec)	23.55	24.31	63.07	11.38
2	EC_GEN (µmho/cm)	978	785	654	1009
3	pH_GEN (pH units)	8.2	8.3	7.8	7.8
4	TDS (mg/L)	650	539	484	601
5	Temp (deg C)	26.0	25.7	29.3	28.0
6	Turb (NTU)	13.67	13.67	140.50	43.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.7	2.3	2.2	0.0
2	ALK-TOT (mgCaCO3/L)	219	171	118	200
3	B (mg/L)	0.54	0.36		
4	Ca (mg/L)	46	50	39	64
5	Cl (mg/L)	97.3	145.0	63.2	77.5
6	CO3 (mg/L)	0.8	2.8	2.7	0.0
7	F (mg/L)	0.95	1.13	0.11	0.59
8	Fe (mg/L)	0.5	0.0	0.0	0.0
9	HCO3 (mg/L)	265	203	138	244
10	K (mg/L)	3.1	3.0	1.3	3.5
11	Mg (mg/L)	26.7	28.7	29.5	22.9
12	Na (mg/L)	108.4	139.1	75.5	126.5
13	NH3-N (mg N/L)	0.02	0.01	0.00	0.01
14	NO2+NO3 (mg N/L)	1.19	0.59	0.58	2.20
15	NO2-N (mgN/L)	0.00	0.05	0.06	0.12
16	NO3-N (mgN/L)	1.19	0.54	0.52	2.08
17	o-PO4-P (mg P/L)	0.137	0.217	0.122	0.670
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)	26.3	30.7	10.6	35.5
20	SO4 (mg/L)	135.8	159.3	134.0	106.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.3	0.7	2.2	1.0
2	COD (mg/L)	6.6	9.2	16.1	10.5
3	DO (mg/L)	5.7	5.2	5.3	4.5
4	DO_SAT% (%)	70	64	69	58
5	FCol-MPN (MPN/100mL)	920	2	8010	435
6	Tcol-MPN (MPN/100mL)	5673	5500	8085	1500
7	TOC (mg/L)		33.2		
	TRACE & TOXIC				
1	As (µg/L)	2.05	3.24		2.04
2	Cd (µg/L)	0.00	3.00		1.70
3	Cr (µg/L)	0.35	0.00		0.00
4	Cu (µg/L)				0.00
5	Hg (µg/L)	1.78	0.08		0.66
6	Ni (µg/L)	5.06	14.01		6.30
7	Pb (µg/L)	13.35	22.00		1.00
8	Zn (µg/L)	4.00	12.00		0.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	114	124	98	161
2	HAR_Total (mgCaCO3/L)	226	244	221	256
3	Na% (%)	50	54	43	53
4	RSC (-)	0.1	0.0	0.0	0.0
5	SAR (-)	3.2	3.9	2.3	3.5
	PESTICIDES				

Huvinhedgi



HISTORY SHEET

		Water Year	: 2016-2017
Site	: Chalachguda (Seasonal)	Code	: AKS00H1
State	: Karnataka	District	: Bijapur
Basin	: Krishna	Independent River	: Krishna
Tributary	: Malaprabha	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Malaprabha
Division	: Upper Krishna Divn, Pune	Sub-Division	: Middle Krishna SD 1, Bagalkot
Drainage Area	: 9373 Sq. Km.	Bank	: Left
Latitude	: 15°52'43"	Longitude	: 75°43'16"
	Opening Date	Closing Date	
Gauge	: 01/06/1982		
Discharge	: 01/06/1982		
Sediment	: 01/06/1982		
Water Quality	: 01/06/1982		

Water Quality Datasheet for the period : 2016-2017

Station Name : Chalachguda (Seasonal) (AKS00H1)

Division : Upper Krishna Divn, Pune

Local River : Malaprabha

River Water Analysis Sub-Division : Middle Krishna SD 1, Bagalkot

S.No	Parameters	02/06/2016 A	02/09/2016 A
	PHYSICAL		
1	Q (cumec)	17.12	4.119
2	Colour_Cod (-)	Brown	Light Brown
3	EC_FLD (μmho/cm)	550	550
4	EC_GEN (μmho/cm)	526	592
5	Odour_Code (-)	odour free	odour free
6	pH_FLD (pH units)	7.2	7.1
7	pH_GEN (pH units)	8.2	8.1
8	Temp (deg C)	23.5	23.0
	CHEMICAL		
1	Alk-Phen (mgCaCO3/L)	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	106	99
3	B (mg/L)	0.07	0.08
4	Ca (mg/L)	16	27
5	Cl (mg/L)	73.5	105.4
6	CO3 (mg/L)	0.0	0.0
7	F (mg/L)	0.80	0.59
8	Fe (mg/L)	1.9	2.2
9	HCO3 (mg/L)	129	120
10	K (mg/L)	1.5	1.9
11	Mg (mg/L)	9.7	11.7
12	Na (mg/L)	56.1	70.0
13	NO2+NO3 (mg N/L)	2.26	2.83
14	NO2-N (mgN/L)	0.00	0.05
15	NO3-N (mgN/L)	2.26	2.78
16	P-Tot (mgP/L)	0.028	0.017
17	SiO2 (mg/L)	3.5	2.6
18	SO4 (mg/L)	29.6	34.4
	BIOLOGICAL/BACTERIOLOGICAL		
1	BOD3-27 (mg/L)	0.5	1.0
2	COD (mg/L)	4.6	7.0
3	DO (mg/L)	7.8	7.7
4	DO_SAT% (%)	91	90
5	Fcol-MPN (MPN/100mL)	3000	16000
6	Tcol-MPN (MPN/100mL)	3000	16000
	TRACE & TOXIC		
	CHEMICAL INDICES		
1	HAR_Ca (mgCaCO3/L)	40	68
2	HAR_Total (mgCaCO3/L)	81	117
3	Na% (%)	60	56
4	RSC (-)	0.5	0.0
5	SAR (-)	2.7	2.8
	PESTICIDES	Anlaysis not done due to mal function of instrument.	

Samples not collected during July, August, October and November months due to Drybed/No Flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Chalachguda (Seasonal) (AKS00H1)

Division : Upper Krishna Divn, Pune

Local River : Malaprabha

Sub-Division : Middle Krishna SD 1, Bagalkot

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	183	77.52	0.000	3.474
2	EC_FLD (μmho/cm)	2	550	550	550
3	EC_GEN (μmho/cm)	2	592	526	559
4	pH_FLD (pH units)	2	7.2	7.1	7.1
5	pH_GEN (pH units)	2	8.2	8.1	8.2
6	Temp (deg C)	2	23.5	23.0	23.3
	CHEMICAL				
1	Alk-Phen (mgCaCO ₃ /L)	2	0.0	0.0	0
2	ALK-TOT (mgCaCO ₃ /L)	2	106	99	102
3	B (mg/L)	2	0.08	0.07	0.07
4	Ca (mg/L)	2	27	16	22
5	Cl (mg/L)	2	105.4	73.5	89.4
6	CO ₃ (mg/L)	2	0.0	0.0	0
7	F (mg/L)	2	0.80	0.59	0.7
8	Fe (mg/L)	2	2.2	1.9	2.1
9	HCO ₃ (mg/L)	2	129	120	125
10	K (mg/L)	2	1.9	1.5	1.7
11	Mg (mg/L)	2	11.7	9.7	10.7
12	Na (mg/L)	2	70.0	56.1	63
13	NO ₂ +NO ₃ (mg N/L)	2	2.83	2.26	2.55
14	NO ₂ -N (mgN/L)	2	0.05	0.00	0.03
15	NO ₃ -N (mgN/L)	2	2.78	2.26	2.52
16	P-Tot (mgP/L)	2	0.028	0.017	0.023
17	SiO ₂ (mg/L)	2	3.5	2.6	3.1
18	SO ₄ (mg/L)	2	34.4	29.6	32
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD ₃₋₂₇ (mg/L)	2	1.0	0.5	0.8
2	COD (mg/L)	2	7.0	4.6	5.8
3	DO (mg/L)	2	7.8	7.7	7.8
4	DO_SAT% (%)	2	91	90	90
5	FCol-MPN (MPN/100mL)	2	16000	3000	9500
6	Tcol-MPN (MPN/100mL)	2	16000	3000	9500
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO ₃ /L)	2	68	40	54
2	HAR_Total (mgCaCO ₃ /L)	2	117	81	99
3	Na% (%)	2	60	56	58
4	RSC (-)	2	0.5	0.0	0.3
5	SAR (-)	2	2.8	2.7	2.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Chalachguda (Seasonal) (AKS00H1)

Division : Upper Krishna Divn, Pune

Local River : Malaprabha

River Water

Sub-Division : Middle Krishna SD 1, Bagalkot

S.No	Parameters	Flood				
		Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	3.108	224.0	50.73	101.7	13.82
2	EC_FLD (µmho/cm)	97	97	651	240	246
3	EC_GEN (µmho/cm)	469	243	230	284	547
4	pH_FLD (pH units)	7.5	7.4	7.5	7.7	7.4
5	pH_GEN (pH units)	8.0	8.1	8.2	8.0	8.2
6	TDS (mg/L)	292				
7	Temp (deg C)	23.5	23.0	23.0	23.0	22.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.9		0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	103		79	84	273
3	B (mg/L)	0.39			0.19	0.41
4	Ca (mg/L)	25			16	36
5	Cl (mg/L)	31.1			27.9	78.7
6	CO3 (mg/L)	1.1		0.0	0.0	0.0
7	F (mg/L)	0.44			0.16	0.19
8	Fe (mg/L)				1.5	0.1
9	HCO3 (mg/L)	123		97	103	173
10	K (mg/L)	1.8			41.1	41.4
11	Mg (mg/L)	17.9			5.8	18.7
12	Na (mg/L)	57.5			22.6	46.2
13	NH3-N (mg N/L)	0.00				
14	NO2+NO3 (mg N/L)				1.13	0.87
15	NO2-N (mgN/L)				0.15	0.01
16	NO3-N (mgN/L)				0.99	0.86
17	P-Tot (mgP/L)	0.163			0.083	0.248
18	SiO2 (mg/L)	22.5			3.7	8.9
19	SO4 (mg/L)	63.0			28.3	30.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.4	2.1	2.9	0.9	0.4
2	COD (mg/L)	8.0	6.8	9.3	5.3	2.5
3	DO (mg/L)	6.6	7.2	5.6	6.0	7.0
4	DO_SAT% (%)	78	84	65	69	80
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
7	TOC (mg/L)					
	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)	62			41	91
2	HAR_Total (mgCaCO3/L)	137			65	169
3	Na% (%)	41			30	32
4	RSC (-)	0.0			0.5	0.1
5	SAR (-)	2.1			1.3	1.6
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Cholachguda (Seasonal) (AKS00H1)

Division : Upper Krishna Divn, Pune

Local River : Malaprabha

River Water

Sub-Division : Middle Krishna SD 1, Bagalkot

S.No	Parameters	Flood				
		Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	67.44	33.96	292.9	13.19	22.72
2	EC_FLD (µmho/cm)	243	259	263	266	270
3	EC_GEN (µmho/cm)	434	1022	1645	966	798
4	pH_FLD (pH units)	7.6	7.3	7.4	7.3	7.3
5	pH_GEN (pH units)	8.0	7.8	7.8	8.2	7.9
6	TDS (mg/L)					
7	Temp (deg C)	23.0	22.5	22.5	23.7	22.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.4	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	101	84	153	157	139
3	B (mg/L)	0.13	0.20	0.26	0.39	0.11
4	Ca (mg/L)	29	36	53	60	54
5	Cl (mg/L)	58.5	72.4	153.5	167.4	60.4
6	CO3 (mg/L)	0.5	0.0	0.0	0.0	0.0
7	F (mg/L)	0.46	0.73	0.69	0.54	0.38
8	Fe (mg/L)	0.4	0.2	0.6	0.3	0.1
9	HCO3 (mg/L)	122	103	186	192	169
10	K (mg/L)	8.7	3.9	0.9	4.9	2.1
11	Mg (mg/L)	6.6	10.2	17.9	20.1	7.8
12	Na (mg/L)	54.8	48.2	89.8	100.0	42.0
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)	4.55	1.52	1.26	0.45	1.09
15	NO2-N (mgN/L)	0.03	0.01	0.01	0.01	0.00
16	NO3-N (mgN/L)	4.52	1.51	1.25	0.44	1.09
17	P-Tot (mgP/L)	0.154	0.041	0.016	0.013	0.016
18	SiO2 (mg/L)	9.0	9.3	6.8	5.9	8.3
19	SO4 (mg/L)	40.8	48.9	60.0	26.5	28.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	2.1	0.9	0.5	1.0
2	COD (mg/L)	8.9	3.8	5.9	4.4	4.3
3	DO (mg/L)	7.1	7.1	7.1	7.1	7.2
4	DO_SAT% (%)	82	81	82	83	82
5	FCol-MPN (MPN/100mL)			35000	9600	64000
6	Tcol-MPN (MPN/100mL)			54000	13667	90000
7	TOC (mg/L)					
	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)	73	89	132	150	134
2	HAR_Total (mgCaCO3/L)	100	131	207	233	167
3	Na% (%)	46	37	49	48	36
4	RSC (-)	0.5	0.0	0.0	0.0	0.0
5	SAR (-)	2.5	1.7	2.8	2.9	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 : Chalachguda (Seasonal) (AKS00H1)

Division : Upper Krishna Divn, Pune

Local River : Malaprabha

River Water

Sub-Division : Middle Krishna SD 1, Bagalkot

S.No	Parameters	Flood				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	2.660	36.55	13.14	133.4	10.62
2	EC_FLD (µmho/cm)	270	275	584	548	550
3	EC_GEN (µmho/cm)	541	440	589	314	559
4	pH_FLD (pH units)	7.1	7.2	7.1	7.2	7.1
5	pH_GEN (pH units)	7.3	7.6	7.8	7.9	8.2
6	TDS (mg/L)					
7	Temp (deg C)	21.0	25.8	25.5	23.0	23.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	97	95	117	97	102
3	B (mg/L)	0.15	0.13	0.05	0.08	0.07
4	Ca (mg/L)	37	29	38	34	22
5	Cl (mg/L)	77.1	63.1	73.3	51.6	89.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.40	0.58	0.48	0.56	0.70
8	Fe (mg/L)	0.0	0.9	2.1	2.0	2.1
9	HCO3 (mg/L)	118	115	143	118	125
10	K (mg/L)	2.0	2.2	2.2	1.3	1.7
11	Mg (mg/L)	11.7	9.1	12.6	3.9	10.7
12	Na (mg/L)	54.1	45.5	48.5	38.0	63.0
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)	1.13	1.24	1.66	1.57	2.55
15	NO2-N (mgN/L)	0.24	0.00	0.01	0.01	0.03
16	NO3-N (mgN/L)	0.89	1.24	1.65	1.56	2.52
17	P-Tot (mgP/L)	0.049	0.014	0.012	0.008	0.023
18	SiO2 (mg/L)	0.0	0.6	11.1	2.3	3.1
19	SO4 (mg/L)	46.6	29.0	37.0	20.3	32.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.8	1.2	1.9	1.6	0.8
2	COD (mg/L)	10.6	10.1	16.7	15.0	5.8
3	DO (mg/L)	7.1	7.6	7.7	7.8	7.8
4	DO_SAT% (%)	80	93	94	91	90
5	FCol-MPN (MPN/100mL)	33000	26933	15100		9500
6	Tcol-MPN (MPN/100mL)	49000	65667	23267		9500
7	TOC (mg/L)					
	TRACE & TOXIC					
1	Al (mg/L)					
2	As (µg/L)	14.56	1.69			
3	Cd (µg/L)	0.11	1.62			
4	Cr (µg/L)	1.42	4.94			
5	Cu (µg/L)	6.54	4.23			
6	Hg (µg/L)		0.48			
7	Ni (µg/L)	13.34	18.23			
8	Pb (µg/L)	0.92	-0.50			
9	Zn (µg/L)	4.31	-0.05			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	92	72	96	84	54
2	HAR_Total (mgCaCO3/L)	141	110	149	100	99
3	Na% (%)	45	45	41	45	58
4	RSC (-)	0.0	0.0	0.0	0.0	0.3
5	SAR (-)	2.0	1.8	1.8	1.7	2.8
	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 : Chalachguda (Seasonal) (AKS00H1)

Division : Upper Krishna Divn, Pune

Local River : Malaprabha

River Water

Sub-Division : Middle Krishna SD 1, Bagalkot

S.No	Parameters	Winter				
		2002-2003	2003-2004	Nov - Feb 2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	4.474	Drybed/	7.368	21.96	70.53
2	EC_FLD (µmho/cm)	377	No Flow	940	247	246
3	EC_GEN (µmho/cm)	749		429	375	363
4	pH_FLD (pH units)	7.5		7.5	7.4	7.4
5	pH_GEN (pH units)	8.1		8.4	8.0	8.0
6	TDS (mg/L)	839				
7	Temp (deg C)	22.7		23.0	22.2	22.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	14.9			0.0	0.0
2	ALK-TOT (mgCaCO3/L)	163			84	168
3	B (mg/L)	0.94			0.15	0.34
4	Ca (mg/L)	38			15	25
5	Cl (mg/L)				37.4	43.3
6	CO3 (mg/L)	17.9			0.0	0.0
7	F (mg/L)	0.47			0.34	0.13
8	Fe (mg/L)				1.3	0.1
9	HCO3 (mg/L)	163			103	103
10	K (mg/L)	3.4			34.4	30.9
11	Mg (mg/L)	18.9			11.6	11.3
12	Na (mg/L)	87.1			22.5	30.6
13	NH3-N (mg N/L)	0.02				
14	NO2+NO3 (mg N/L)				1.57	0.68
15	NO2-N (mgN/L)				0.17	0.01
16	NO3-N (mgN/L)				1.40	0.67
17	P-Tot (mgP/L)				0.096	0.332
18	SiO2 (mg/L)				4.5	3.2
19	SO4 (mg/L)	44.9			24.7	40.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.8		1.5	1.1	0.5
2	COD (mg/L)	12.1		5.3	45.2	11.9
3	DO (mg/L)	7.3		6.5	6.4	6.9
4	DO_SAT% (%)	84		76	73	79
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
7	TOC (mg/L)					
	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)	94			39	61
2	HAR_Total (mgCaCO3/L)	173			87	108
3	Na% (%)	49			27	31
4	RSC (-)	0.2			0.2	0.0
5	SAR (-)	2.7			1.1	1.3
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Chalachguda (Seasonal) (AKS00H1)

Division : Upper Krishna Divn, Pune

Local River : Malaprabha

River Water

Sub-Division : Middle Krishna SD 1, Bagalkot

S.No	Parameters	Winter				
		2007-2008	2008-2009	Nov - Feb 2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	26.76	20.56	14.51	15.59	31.03
2	EC_FLD (µmho/cm)	255	265	1077	270	271
3	EC_GEN (µmho/cm)	653	394	2651	999	721
4	pH_FLD (pH units)	7.5	7.6	7.3	7.2	7.3
5	pH_GEN (pH units)	8.1	8.1	8.0	7.9	8.0
6	TDS (mg/L)					
7	Temp (deg C)	22.4	23.3	17.7	19.0	21.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.5	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	120	96	123	154	134
3	B (mg/L)	0.17	0.17	0.32	0.26	0.08
4	Ca (mg/L)	28	29	46	63	50
5	Cl (mg/L)	93.4	49.1	111.5	172.6	113.1
6	CO3 (mg/L)	0.0	0.6	0.0	0.0	0.0
7	F (mg/L)	0.45	0.60	0.16	1.02	0.39
8	Fe (mg/L)	0.4	0.2	0.5	0.2	0.1
9	HCO3 (mg/L)	146	115	150	188	163
10	K (mg/L)	1.8	1.4	11.5	3.4	2.6
11	Mg (mg/L)	25.1	10.2	14.3	20.4	13.6
12	Na (mg/L)	62.6	32.6	64.3	110.0	70.6
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)	0.48	1.38	2.57	0.85	0.84
15	NO2-N (mgN/L)	0.07	0.16	0.01	0.01	0.01
16	NO3-N (mgN/L)	0.41	1.23	2.56	0.84	0.83
17	P-Tot (mgP/L)	0.249	0.038	0.007	0.054	0.031
18	SiO2 (mg/L)	7.2	5.8	8.7	6.8	11.4
19	SO4 (mg/L)	54.1	23.9	42.4	44.1	52.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.6	0.6	0.5	1.0	0.6
2	COD (mg/L)	9.9	4.0	4.0	7.6	2.3
3	DO (mg/L)	7.0	7.3	7.3	7.1	7.1
4	DO_SAT% (%)	80	85	76	77	80
5	FCol-MPN (MPN/100mL)			50467	11000	220000
6	Tcol-MPN (MPN/100mL)			87067	14000	280000
7	TOC (mg/L)					
	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)	70	72	116	156	124
2	HAR_Total (mgCaCO3/L)	174	114	176	241	181
3	Na% (%)	43	39	43	49	46
4	RSC (-)	0.0	0.1	0.0	0.0	0.0
5	SAR (-)	2.1	1.3	2.2	3.1	2.3
	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 : Chalachguda (Seasonal) (AKS00H1)

Division : Upper Krishna Divn, Pune

Local River : Malaprabha

River Water

Sub-Division : Middle Krishna SD 1, Bagalkot

S.No	Parameters	Winter				
		2012-2013	2013-2014	Nov - Feb 2014-2015	2015-2016	2016-2017
	PHYSICAL					
1	Q (cumec)	Drybed/	6.313	10.15	Drybed/No Flow	
2	EC_FLD (µmho/cm)	No Flow	240	610		
3	EC_GEN (µmho/cm)		1820	953		
4	pH_FLD (pH units)		7.1	7.2		
5	pH_GEN (pH units)		6.9	8.3		
6	TDS (mg/L)					
7	Temp (deg C)		20.0	23.0		
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0	0.0		
2	ALK-TOT (mgCaCO3/L)		140	148		
3	B (mg/L)		0.09	0.08		
4	Ca (mg/L)		58	66		
5	Cl (mg/L)		158.5	184.0		
6	CO3 (mg/L)		0.0	0.0		
7	F (mg/L)		0.40	0.29		
8	Fe (mg/L)		2.8	0.0		
9	HCO3 (mg/L)		171	181		
10	K (mg/L)		3.1	2.9		
11	Mg (mg/L)		15.6	21.4		
12	Na (mg/L)		103.5	95.5		
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)		1.66	2.18		
15	NO2-N (mgN/L)		0.00	0.01		
16	NO3-N (mgN/L)		1.66	2.17		
17	P-Tot (mgP/L)		0.012	0.009		
18	SiO2 (mg/L)		2.8	89.6		
19	SO4 (mg/L)		60.0	50.7		
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		0.3	1.1		
2	COD (mg/L)		2.3	10.6		
3	DO (mg/L)		7.8	7.8		
4	DO_SAT% (%)		86	91		
5	FCol-MPN (MPN/100mL)		240000	7800		
6	Tcol-MPN (MPN/100mL)		920000	13000		
7	TOC (mg/L)					
	TRACE & TOXIC					
1	Al (mg/L)					
2	As (µg/L)					
3	Cd (µg/L)			0.26		
4	Cr (µg/L)			35.31		
5	Cu (µg/L)			15.98		
6	Hg (µg/L)					
7	Ni (µg/L)			-0.50		
8	Pb (µg/L)			1.59		
9	Zn (µg/L)			10.00		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		144	164		
2	HAR_Total (mgCaCO3/L)		209	253		
3	Na% (%)		52	45		
4	RSC (-)		0.0	0.0		
5	SAR (-)		3.1	2.6		
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Chalachguda (Seasonal) (AKS00H1)

Division : Upper Krishna Divn, Pune

Local River : Malaprabha

River Water

Sub-Division : Middle Krishna SD 1, Bagalkot

S.No	Parameters	Summer			
		Mar - May			
		2003	2004	2005	2006
	PHYSICAL				
1	Q (cumec)	1.881	Drybed/No Flow		21.00
2	EC_FLD (µmho/cm)	94			260
3	EC_GEN (µmho/cm)	596			355
4	pH_FLD (pH units)	7.5			7.4
5	pH_GEN (pH units)	8.2			7.8
6	TDS (mg/L)				
7	Temp (deg C)	23.5			23.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0			0.0
2	ALK-TOT (mgCaCO3/L)	131			98
3	B (mg/L)	1.00			0.15
4	Ca (mg/L)	30			27
5	Cl (mg/L)				32.8
6	CO3 (mg/L)	0.0			0.0
7	F (mg/L)	0.30			0.41
8	Fe (mg/L)				0.9
9	HCO3 (mg/L)	160			120
10	K (mg/L)	4.7			38.6
11	Mg (mg/L)	17.3			5.5
12	Na (mg/L)	89.0			33.6
13	NH3-N (mg N/L)				
14	NO2+NO3 (mg N/L)				1.96
15	NO2-N (mgN/L)				0.16
16	NO3-N (mgN/L)				1.80
17	P-Tot (mgP/L)				0.112
18	SiO2 (mg/L)				4.6
19	SO4 (mg/L)				45.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				0.9
2	COD (mg/L)				38.0
3	DO (mg/L)	7.0			6.8
4	DO_SAT% (%)	82			79
5	FCol-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
7	TOC (mg/L)				
	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)	76			68
2	HAR_Total (mgCaCO3/L)	148			91
3	Na% (%)	56			34
4	RSC (-)	0.0			0.2
5	SAR (-)	3.2			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 : Chalachguda (Seasonal) (AKS00H1)

Division : Upper Krishna Divn, Pune

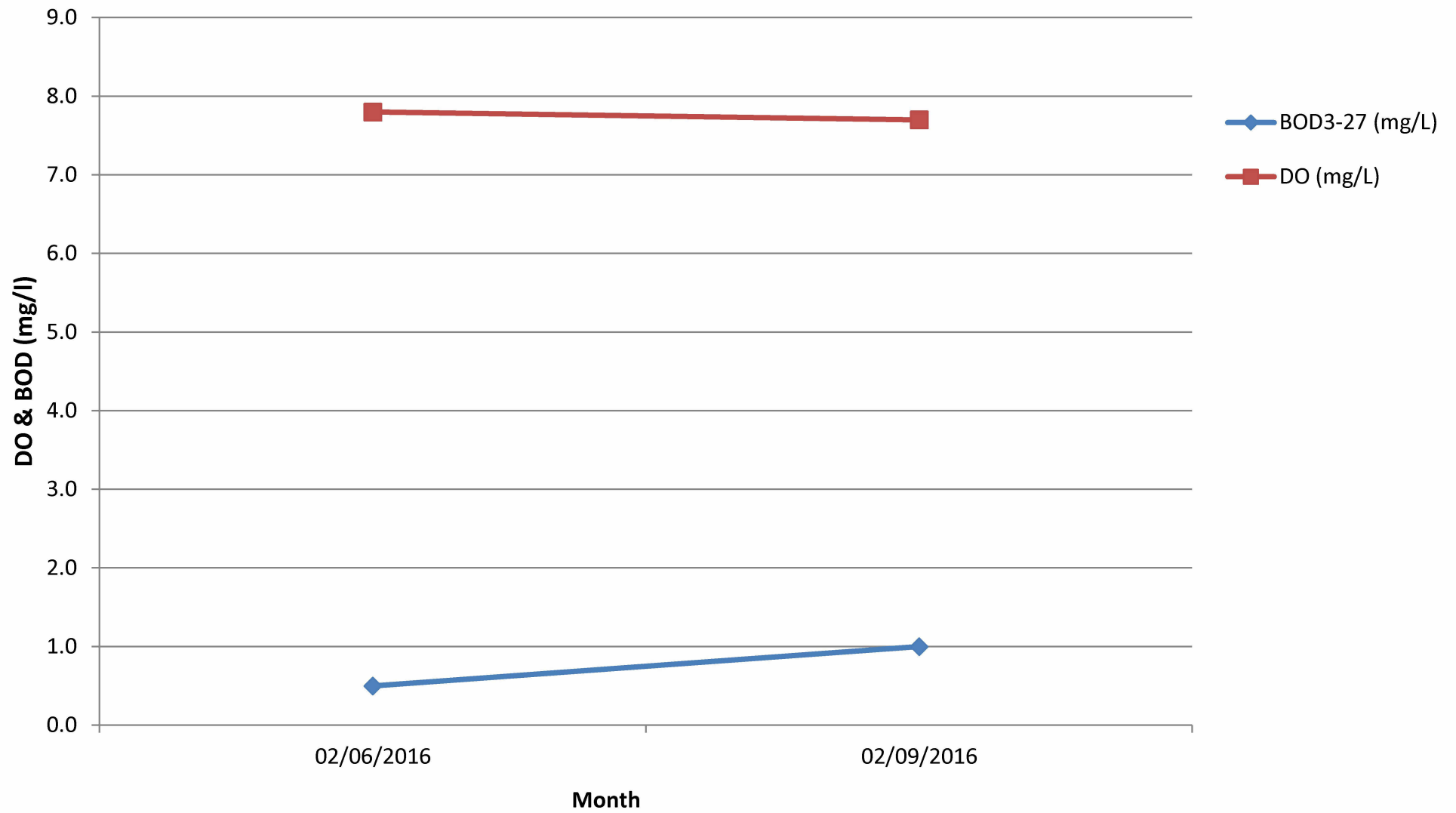
Local River : Malaprabha

River Water

Sub-Division : Middle Krishna SD 1, Bagalkot

S.No	Parameters	Summer			
		Mar - May			
		2007	2008	2009	2010
	PHYSICAL				
1	Q (cumec)				
2	EC_FLD (µmho/cm)	243	257	280	270
3	EC_GEN (µmho/cm)	571	1002	884	547
4	pH_FLD (pH units)	7.5	7.5	7.6	7.2
5	pH_GEN (pH units)	8.0	8.1	8.0	8.1
6	TDS (mg/L)				
7	Temp (deg C)	23.5	23.0	23.0	18.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	116	100	84	128
3	B (mg/L)	0.14	0.18	0.00	0.60
4	Ca (mg/L)	27	30	33	41
5	Cl (mg/L)	97.9	90.7	115.5	68.7
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.26	0.26	1.05	0.20
8	Fe (mg/L)	0.7	0.5	0.0	0.4
9	HCO3 (mg/L)	99	122	103	156
10	K (mg/L)	30.0	1.0	1.1	15.7
11	Mg (mg/L)	23.2	13.1	33.5	24.5
12	Na (mg/L)	45.6	60.5	27.1	40.0
13	NH3-N (mg N/L)				
14	NO2+NO3 (mg N/L)	0.99	0.83	0.85	1.90
15	NO2-N (mgN/L)	0.08	0.17	0.20	0.01
16	NO3-N (mgN/L)	0.91	0.66	0.65	1.89
17	P-Tot (mgP/L)	0.155	0.289	0.010	0.015
18	SiO2 (mg/L)	4.6	0.7	6.4	4.6
19	SO4 (mg/L)	79.9	45.4	23.7	40.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.9	0.4	1.1	1.1
2	COD (mg/L)	9.1	10.6	4.6	6.8
3	DO (mg/L)	6.9	6.9	7.2	7.2
4	DO_SAT% (%)	81	81	84	76
5	FCol-MPN (MPN/100mL)				35000
6	Tcol-MPN (MPN/100mL)				54000
7	TOC (mg/L)		1.6		
	TRACE & TOXIC				
1	Al (mg/L)				
2	As (µg/L)				
3	Cd (µg/L)	8.00	1.70		
4	Cr (µg/L)	45.00	2.00		
5	Cu (µg/L)				
6	Hg (µg/L)	0.80	0.00		
7	Ni (µg/L)	7.00	17.40		
8	Pb (µg/L)	74.00	33.91		
9	Zn (µg/L)	26.00	4.75		
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	67	74	82	103
2	HAR_Total (mgCaCO3/L)	164	129	222	205
3	Na% (%)	33	47	21	28
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	1.5	2.3	0.8	1.2
	PESTICIDES				
1	Aldrin (µg/L)	0.010	0.010		
2	BHC (µg/L)	0.100	0.100		
3	DDT (µg/L)	0.100	0.100		
4	Dieldrin (µg/L)	0.040	0.010		
5	Endos (µg/L)	0.100	0.100		

Cholachagudda



HISTORY SHEET

		Water Year	: 2016-2017
Site	: Gokak Falls (Seasonal)	Code	: AKT00P9
State	: Karnataka	District	Belgaum
Basin	: Krishna	Independent River	: Krishna
Tributary	: Ghataprabha	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Ghataprabha
Division	: Upper Krishna Divn, Pune	Sub-Division	: Middle Krishna SD 1, Bagalkot
Drainage Area	: 2770 Sq. Km.	Bank	: Right
Latitude	: 16°11'24"	Longitude	: 74°47'29"
	Opening Date	Closing Date	
Gauge	: 21/03/1971		
Discharge	: 14/07/1971		
Sediment	: 27/12/2014		
Water Quality	: 01/09/2014		

Water Quality Datasheet for the period : 2016-2017

Station Name : Gokak Falls (Seasonal) (AKT00P9)

Division : Upper Krishna Divn, Pune

Local River : Ghataprabha

River Water Analysis Sub-Division : Middle Krishna SD 1, Bagalkot

S.No	Parameters	01/07/2016	01/08/2016	02/09/2016	03/10/2016
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	0.000	9.615	18.32	11.98
2	Colour_Cod (-)	Light Brown	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	210	216	594	580
4	EC_GEN (µmho/cm)	85	372	247	456
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	6.5	6.5	6.0	6.1
7	pH_GEN (pH units)	6.8	7.7	7.8	7.9
8	Temp (deg C)	24.5	24.0	24.5	24.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	22	108	77	99
3	B (mg/L)	0.03	0.06	0.09	0.11
4	Ca (mg/L)	11	30	21	26
5	Cl (mg/L)	16.0	52.2	32.6	71.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.34	0.35	0.33	0.44
8	Fe (mg/L)	2.3	2.3	1.9	7.2
9	HCO3 (mg/L)	27	132	94	120
10	K (mg/L)	1.5	3.9	1.5	5.0
11	Mg (mg/L)	2.9	8.8	6.8	13.6
12	Na (mg/L)	8.6	28.0	18.4	37.0
13	NO2+NO3 (mg N/L)	2.23	2.59	2.03	5.38
14	NO2-N (mgN/L)	0.01	0.01	0.00	0.00
15	NO3-N (mgN/L)	2.22	2.59	2.03	5.38
16	P-Tot (mgP/L)	0.002	0.001	0.027	0.108
17	SiO2 (mg/L)	6.2	10.6	3.9	7.7
18	SO4 (mg/L)	17.5	21.6	15.5	19.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.5	1.8	0.6	0.8
2	COD (mg/L)	4.0	11.0	5.0	6.0
3	DO (mg/L)	6.1	5.8	5.9	5.5
4	DO_SAT% (%)	73	69	70	65
5	FCol-MPN (MPN/100mL)		16000	2800	40
6	Tcol-MPN (MPN/100mL)		16000	9000	340
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	28	76	52	64
2	HAR_Total (mgCaCO3/L)	40	113	80	121
3	Na% (%)	31	34	33	39
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	0.6	1.2	0.9	1.5
	PESTICIDES	Analysis not done due to mal function of instrument.			

Samples not collected during June and November month due to Dry bed/No Flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Gokak Falls (Seasonal) (AKT00P9)

Division : Upper Krishna Divn, Pune

Local River : Ghataprabha

Sub-Division : Middle Krishna SD 1, Bagalkot

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	183	515.0	0.000	53.14
2	EC_FLD (μmho/cm)	4	594	210	400
3	EC_GEN (μmho/cm)	4	456	85	290
4	pH_FLD (pH units)	4	6.5	6.0	6.3
5	pH_GEN (pH units)	4	7.9	6.8	7.6
6	Temp (deg C)	4	24.5	24.0	24.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	4	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	4	108	22	76
3	B (mg/L)	4	0.11	0.03	0.07
4	Ca (mg/L)	4	30	11	22
5	Cl (mg/L)	4	71.2	16.0	43
6	CO3 (mg/L)	4	0.0	0.0	0
7	F (mg/L)	4	0.44	0.33	0.37
8	Fe (mg/L)	4	7.2	1.9	3.4
9	HCO3 (mg/L)	4	132	27	93
10	K (mg/L)	4	5.0	1.5	3
11	Mg (mg/L)	4	13.6	2.9	8
12	Na (mg/L)	4	37.0	8.6	23
13	NO2+NO3 (mg N/L)	4	5.38	2.03	3.06
14	NO2-N (mgN/L)	4	0.01	0.00	0
15	NO3-N (mgN/L)	4	5.38	2.03	3.05
16	P-Tot (mgP/L)	4	0.108	0.001	0.035
17	SiO2 (mg/L)	4	10.6	3.9	7.1
18	SO4 (mg/L)	4	21.6	15.5	18.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	4	1.8	0.5	0.9
2	COD (mg/L)	4	11.0	4.0	6.5
3	DO (mg/L)	4	6.1	5.5	5.8
4	DO_SAT% (%)	4	73	65	69
5	FCol-MPN (MPN/100mL)	3	16000	40	6280
6	Tcol-MPN (MPN/100mL)	3	16000	340	8447
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	4	76	28	55
2	HAR_Total (mgCaCO3/L)	4	121	40	89
3	Na% (%)	4	39	31	34
4	RSC (-)	4	0.0	0.0	0
5	SAR (-)	4	1.5	0.6	1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2017

Station Name : Gokak Falls (Seasonal) (AKT00P9)

Division : Upper Krishna Divn, Pune

Local River : Ghataprabha

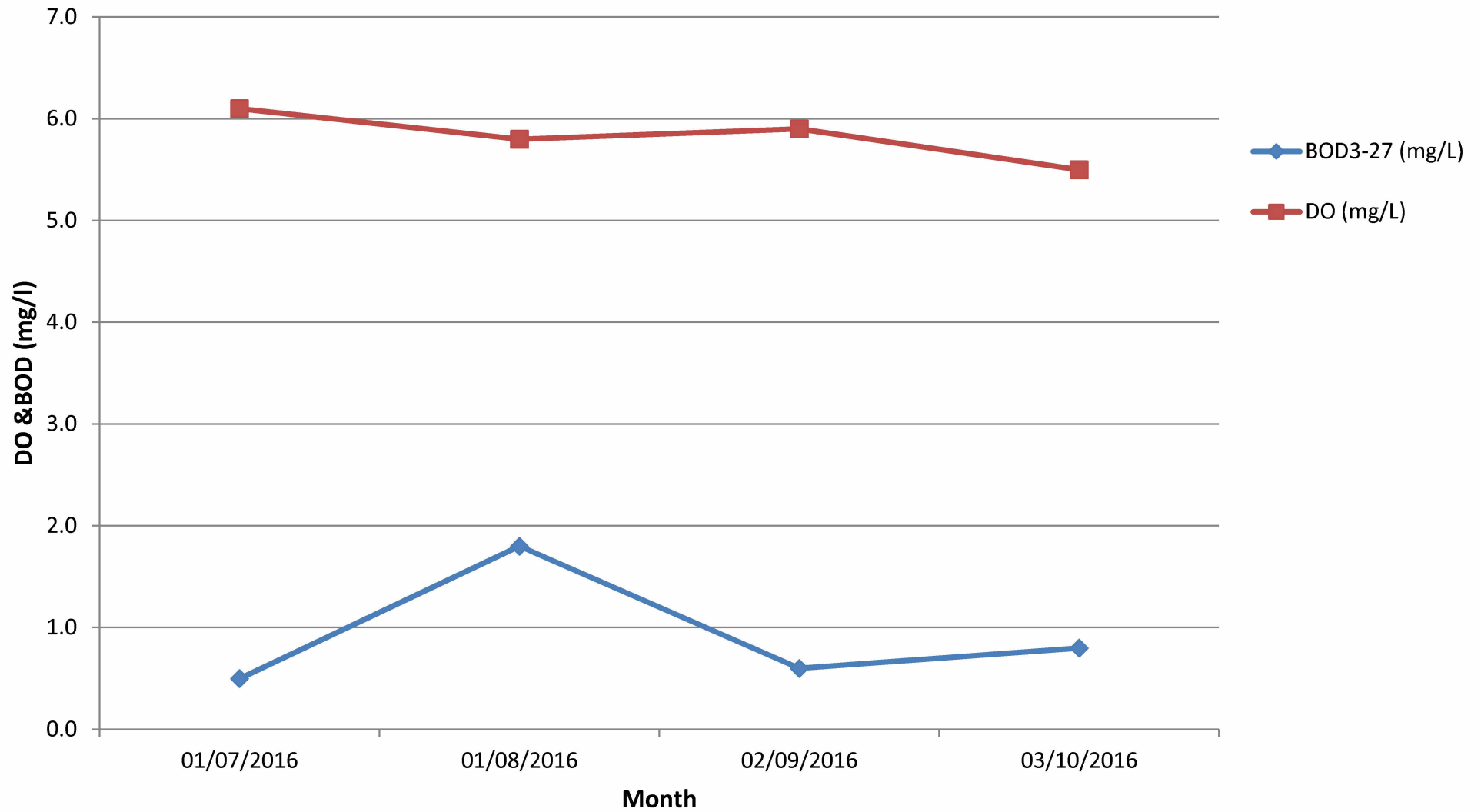
River Water Sub-Division : Middle Krishna SD 1, Bagalkot

S.No	Parameters	Flood			Winter	
		Jun - Oct			Nov - Feb	
		2014	2015	2016	2014-2015	
	PHYSICAL					
1	Q (cumec)	75.15	108.6	9.979	10.16	
2	EC_FLD (μ mho/cm)		348	400		
3	EC_GEN (μ mho/cm)	235	218	290	377	
4	pH_FLD (pH units)		6.7	6.3		
5	pH_GEN (pH units)	7.6	7.7	7.6	8.0	
6	Temp (deg C)	23.0	21.3	24.3	20.8	
	CHEMICAL					
1	ALK-TOT (mgCaCO ₃ /L)	96	50	76	112	
2	B (mg/L)	0.04	0.07	0.07	0.05	
3	Ca (mg/L)	35	21	22	42	
4	Cl (mg/L)	51.8	19.8	43.0	43.5	
5	F (mg/L)	0.24	0.48	0.37	0.35	
6	Fe (mg/L)	2.7	2.0	3.4	1.4	
7	HCO ₃ (mg/L)	117	61	93	137	
8	K (mg/L)	0.7	0.8	3.0	0.2	
9	Mg (mg/L)	12.6	5.8	8.0	10.2	
10	Na (mg/L)	33.0	11.7	23.0	28.3	
11	NO ₂ +NO ₃ (mg N/L)	1.70	1.43	3.06	2.10	
12	NO ₂ -N (mgN/L)	0.01	0.00	0.00	0.01	
13	NO ₃ -N (mgN/L)	1.69	1.42	3.05	2.09	
14	P-Tot (mgP/L)	0.007	0.016	0.035	0.008	
15	SiO ₂ (mg/L)	24.8	11.2	7.1	10.9	
16	SO ₄ (mg/L)	40.4	17.0	18.4	34.2	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃₋₂₇ (mg/L)	1.8	1.2	0.9	1.6	
2	COD (mg/L)	14.0	9.7	6.5	14.4	
3	DO (mg/L)		6.8	5.8		
4	DO_SAT% (%)		76	69		
5	FCoI-MPN (MPN/100mL)	58000	900	6280	13000	
6	TcoI-MPN (MPN/100mL)	97500	1383	8447	19500	
	TRACE & TOXIC					
1	Cd (μ g/L)				1.29	
2	Cr (μ g/L)				7.43	
3	Cu (μ g/L)				5.21	
4	Pb (μ g/L)				1.52	
5	Zn (μ g/L)				10.00	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO ₃ /L)	88	53	55	104	
2	HAR_Total (mgCaCO ₃ /L)	141	78	89	147	
3	Na% (%)	34	25	34	28	
4	SAR (-)	1.2	0.6	1.0	1.0	
	PESTICIDES					

Water Quality observations from 01-09-2014.

Converted as Seasonal site from June 2006.

Gokakfalls(Seasonal)



HISTORY SHEET

		Water Year : 2016-2017	
Site	: Kurundwad	Code	: AK000V1
State	: Maharashtra	District	Kolhapur
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Krishna
Division	: Upper Krishna Divn, Pune	Sub-Division	: Upper Krishna SD 2, Miraj
Drainage Area	: 15190 Sq. Km.	Bank	: Right
Latitude	: 16°41'01"	Longitude	: 74°36'11"
	Opening Date	Closing Date	
Gauge	: 21/05/1972		
Discharge	: 26/06/1972		
Sediment	: 06/08/2003		
Water Quality	: 01/07/2003		

Water Quality Datasheet for the period : 2016-2017

Station Name : Kurundwad (AK000V1)

Division : Upper Krishna Divn, Pune

Local River : Krishna

River Water Analysis Sub-Division : Upper Krishna SD 2, Miraj

S.No	Parameters	01/07/2016	01/08/2016	02/09/2016	03/10/2016
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	221.7	527.9	239.9	221.9
2	Colour_Cod (-)	Brown	Brown	Brown	Brown
3	EC_FLD (µmho/cm)	469	493	401	361
4	EC_GEN (µmho/cm)	232	394	321	286
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.1	7.0	7.0	8.3
7	pH_GEN (pH units)	7.6	7.9	7.8	7.7
8	Temp (deg C)	25.0	27.0	27.0	27.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	54	130	89	65
3	B (mg/L)	0.04	0.01	0.08	0.10
4	Ca (mg/L)	18	37	27	18
5	Cl (mg/L)	27.8	40.8	34.2	34.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.33	0.33	0.32	0.29
8	Fe (mg/L)	2.3	2.0	2.7	2.0
9	HCO3 (mg/L)	66	159	108	79
10	K (mg/L)	0.4	1.0	0.8	1.0
11	Mg (mg/L)	7.8	9.7	9.7	11.7
12	Na (mg/L)	15.0	26.6	19.6	21.6
13	NO2+NO3 (mg N/L)	1.67	2.29	2.03	1.82
14	NO2-N (mgN/L)	0.00	0.00	0.01	0.00
15	NO3-N (mgN/L)	1.67	2.29	2.02	1.82
16	P-Tot (mgP/L)	0.007	0.025	0.002	0.039
17	SiO2 (mg/L)	4.4	9.6	3.8	4.8
18	SO4 (mg/L)	25.8	24.9	24.1	31.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.5	1.3	0.5	1.3
2	COD (mg/L)	3.0	12.0	3.0	10.0
3	DO (mg/L)	6.9	6.3	6.1	5.6
4	DO_SAT% (%)	84	79	77	70
5	Fcol-MPN (MPN/100mL)	170000	3000	1700	330
6	Tcol-MPN (MPN/100mL)	220000	5000	3000	3000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	44	92	68	44
2	HAR_Total (mgCaCO3/L)	77	133	109	93
3	Na% (%)	30	30	28	34
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	0.7	1.0	0.8	1.0
	PESTICIDES	Anlaysis not done due to mal function of instrument.			

Samples not collected during June and from November to May months due to Dry bed/No Flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Kurundwad (AK000V1)

Division : Upper Krishna Divn, Pune

Local River : Krishna

Sub-Division : Upper Krishna SD 2, Miraj

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	5411	0.000	346.8
2	EC_FLD (μmho/cm)	4	493	361	431
3	EC_GEN (μmho/cm)	4	394	232	308
4	pH_FLD (pH units)	4	8.3	7.0	7.4
5	pH_GEN (pH units)	4	7.9	7.6	7.8
6	Temp (deg C)	4	27.0	25.0	26.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	4	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	4	130	54	84
3	B (mg/L)	4	0.10	0.01	0.06
4	Ca (mg/L)	4	37	18	25
5	Cl (mg/L)	4	40.8	27.8	34.3
6	CO3 (mg/L)	4	0.0	0.0	0
7	F (mg/L)	4	0.33	0.29	0.32
8	Fe (mg/L)	4	2.7	2.0	2.2
9	HCO3 (mg/L)	4	159	66	103
10	K (mg/L)	4	1.0	0.4	0.8
11	Mg (mg/L)	4	11.7	7.8	9.7
12	Na (mg/L)	4	26.6	15.0	20.7
13	NO2+NO3 (mg N/L)	4	2.29	1.67	1.95
14	NO2-N (mgN/L)	4	0.01	0.00	0.01
15	NO3-N (mgN/L)	4	2.29	1.67	1.95
16	P-Tot (mgP/L)	4	0.039	0.002	0.018
17	SiO2 (mg/L)	4	9.6	3.8	5.6
18	SO4 (mg/L)	4	31.0	24.1	26.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	4	1.3	0.5	0.9
2	COD (mg/L)	4	12.0	3.0	7
3	DO (mg/L)	4	6.9	5.6	6.2
4	DO_SAT% (%)	4	84	70	77
5	FCol-MPN (MPN/100mL)	4	170000	330	43758
6	Tcol-MPN (MPN/100mL)	4	220000	3000	57750
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	4	92	44	62
2	HAR_Total (mgCaCO3/L)	4	133	77	103
3	Na% (%)	4	34	28	30
4	RSC (-)	4	0.0	0.0	0
5	SAR (-)	4	1.0	0.7	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2003-2017

Station Name : Kurundwad (AK000V1)

Division : Upper Krishna Divn, Pune

Local River : Krishna

River Water

Sub-Division : Upper Krishna SD 2, Miraj

S.No	Parameters	Flood Jun - Oct				
		2003	2004	2005	2006	2007
	PHYSICAL					
1	Q (cumec)	698.9	703.8	1584	956.3	871.7
2	EC_FLD (µmho/cm)	936	945	572	822	
3	EC_GEN (µmho/cm)	173	247	319	295	226
4	pH_FLD (pH units)	7.8	7.4	7.5	6.9	
5	pH_GEN (pH units)	7.9	7.8	7.7	7.7	7.7
6	Temp (deg C)		21.4	25.0	26.0	23.5
	CHEMICAL					
1	ALK-TOT (mgCaCO ₃ /L)		58	101	220	54
2	B (mg/L)			0.13	0.09	0.04
3	Ca (mg/L)			18	37	24
4	Cl (mg/L)			27.2	36.4	26.5
5	F (mg/L)			0.20	0.09	0.46
6	Fe (mg/L)			0.3	0.1	0.2
7	HCO ₃ (mg/L)		70	123	141	66
8	K (mg/L)			21.7	15.7	2.7
9	Mg (mg/L)			16.4	7.5	4.5
10	Na (mg/L)			19.4	16.5	13.8
11	NO ₂ +NO ₃ (mg N/L)			2.46	2.48	0.56
12	NO ₂ -N (mgN/L)			0.04	0.01	0.01
13	NO ₃ -N (mgN/L)			2.41	2.47	0.55
14	P-Tot (mgP/L)			0.094	0.157	0.233
15	SiO ₂ (mg/L)			9.1	5.0	11.5
16	SO ₄ (mg/L)	8.5		26.2	24.3	23.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃₋₂₇ (mg/L)	0.9	1.5	0.3	0.6	0.3
2	COD (mg/L)	5.2	5.8	15.1	2.5	9.0
3	DO (mg/L)	6.3	6.2	6.6	6.9	4.7
4	DO SAT% (%)		70	80	85	55
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	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 (mgCaCO ₃ /L)			44	91	61
2	HAR_Total (mgCaCO ₃ /L)			112	123	79
3	Na% (%)			24	22	26
4	RSC (-)			0.0	0.3	0.0
5	SAR (-)			0.8	0.7	0.7
	PESTICIDES					

Water Quality Seasonal Average for the period: 2003-2017

Station Name : Kurundwad (AK000V1)

Division : Upper Krishna Divn, Pune

Local River : Krishna

River Water

Sub-Division : Upper Krishna SD 2, Miraj

S.No	Parameters	Flood				
		Jun - Oct				
		2008	2009	2010	2011	2012
	PHYSICAL					
1	Q (cumec)	876.2	843.0	1394	1141	952.5
2	EC_FLD (µmho/cm)		294		389	312
3	EC_GEN (µmho/cm)	230	459	273	192	165
4	pH_FLD (pH units)		7.0		7.6	7.6
5	pH_GEN (pH units)	7.7	7.6	7.9	7.5	7.8
6	Temp (deg C)	25.0	25.0	26.2	25.0	25.4
	CHEMICAL					
1	ALK-TOT (mgCaCO ₃ /L)	50	85	62	46	51
2	B (mg/L)	0.07	0.05	0.11	0.04	0.04
3	Ca (mg/L)	18	28	24	18	20
4	Cl (mg/L)	14.4	19.5	23.2	19.1	18.7
5	F (mg/L)	0.10	0.22	0.20	0.27	0.24
6	Fe (mg/L)	0.2	0.2	0.1	0.3	0.7
7	HCO ₃ (mg/L)	60	104	75	56	62
8	K (mg/L)	1.1	0.2	1.3	0.7	1.5
9	Mg (mg/L)	7.3	7.9	5.6	3.9	2.7
10	Na (mg/L)	9.1	11.6	15.3	13.6	12.2
11	NO ₂ +NO ₃ (mg N/L)	0.57	0.66	0.18	0.96	0.85
12	NO ₂ -N (mgN/L)	0.01	0.00	0.01	0.00	0.05
13	NO ₃ -N (mgN/L)	0.57	0.66	0.17	0.95	0.80
14	P-Tot (mgP/L)	0.008	0.005	0.009	0.015	0.018
15	SiO ₂ (mg/L)	5.2	9.5	8.8	10.4	4.4
16	SO ₄ (mg/L)	23.9	22.6	18.7	15.4	8.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃₋₂₇ (mg/L)	0.4	0.8	1.4	0.7	0.6
2	COD (mg/L)	1.7	4.9	10.0	4.1	4.6
3	DO (mg/L)		6.8		7.7	7.5
4	DO SAT% (%)		82		94	92
5	FCol-MPN (MPN/100mL)		28667	12100	174250	279750
6	Tcol-MPN (MPN/100mL)		41333	17600	289250	472250
	TRACE & TOXIC					
1	As (µg/L)					12.00
2	Cd (µg/L)					0.17
3	Cr (µg/L)					0.27
4	Cu (µg/L)					3.52
5	Hg (µg/L)					
6	Ni (µg/L)					7.64
7	Pb (µg/L)					1.15
8	Zn (µg/L)					3.11
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO ₃ /L)	46	71	59	46	49
2	HAR_Total (mgCaCO ₃ /L)	76	104	82	62	60
3	Na% (%)	19	20	28	30	26
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.4	0.5	0.7	0.7	0.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2003-2017

Station Name : Kurundwad (AK000V1)

Division : Upper Krishna Divn, Pune

Local River : Krishna

River Water

Sub-Division : Upper Krishna SD 2, Miraj

S.No	Parameters	Flood June-Oct			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	1352	1884	361.6	302.8
2	EC_FLD (µmho/cm)	373	460	181	431
3	EC_GEN (µmho/cm)	288	255	228	308
4	pH_FLD (pH units)	7.5	7.5	7.6	7.4
5	pH_GEN (pH units)	7.2	7.7	7.6	7.8
6	Temp (deg C)	24.2	24.5	25.9	26.5
	CHEMICAL				
1	ALK-TOT (mgCaCO ₃ /L)	55	76	70	84
2	B (mg/L)	0.13	0.04	0.20	0.06
3	Ca (mg/L)	24	33	27	25
4	Cl (mg/L)	14.1	39.6	25.5	34.3
5	F (mg/L)	0.31	0.26	0.40	0.32
6	Fe (mg/L)	0.5	1.7	2.1	2.2
7	HCO ₃ (mg/L)	67	93	85	103
8	K (mg/L)	0.5	0.9	0.9	0.8
9	Mg (mg/L)	5.8	8.1	6.6	9.7
10	Na (mg/L)	8.6	23.8	14.3	20.7
11	NO ₂ +NO ₃ (mg N/L)	0.90	1.63	1.34	1.95
12	NO ₂ -N (mgN/L)	0.00	0.00	0.00	0.01
13	NO ₃ -N (mgN/L)	0.89	1.63	1.34	1.95
14	P-Tot (mgP/L)	0.027	0.027	0.011	0.018
15	SiO ₂ (mg/L)	22.1	19.1	6.5	5.6
16	SO ₄ (mg/L)	23.8	24.3	20.7	26.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD ₃₋₂₇ (mg/L)	0.5	1.9	1.0	0.9
2	COD (mg/L)	3.6	15.0	8.5	7.0
3	DO (mg/L)	7.6	7.6	6.4	6.2
4	DO_SAT% (%)	90	90	79	77
5	FCol-MPN (MPN/100mL)	6900	64333	13800	43758
6	Tcol-MPN (MPN/100mL)	10275	112000	18950	57750
	TRACE & TOXIC				
1	As (µg/L)	2.34			
2	Cd (µg/L)	0.50			
3	Cr (µg/L)	4.10			
4	Cu (µg/L)	1.73			
5	Hg (µg/L)	0.32			
6	Ni (µg/L)	6.63			
7	Pb (µg/L)	-0.50			
8	Zn (µg/L)	-0.05			
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO ₃ /L)	59	83	68	62
2	HAR_Total (mgCaCO ₃ /L)	83	117	96	103
3	Na% (%)	18	31	24	30
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	0.4	1.0	0.6	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2003-2017

Station Name : Kurundwad (AK000V1)

Division : Upper Krishna Divn, Pune

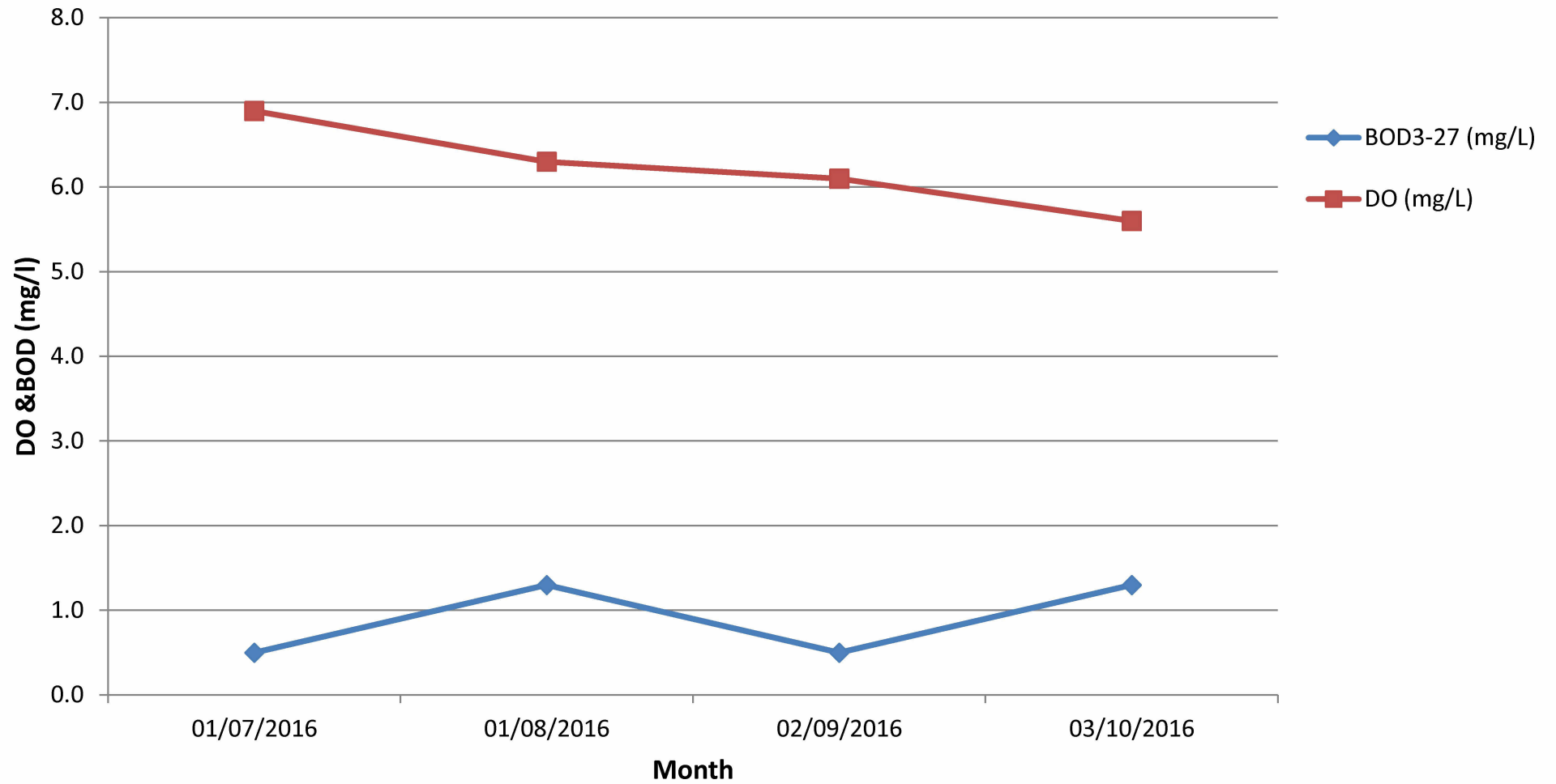
Local River : Krishna

River Water

Sub-Division : Upper Krishna SD 2, Miraj

S.No	Parameters	Winter		
		Nov-Feb		
		2010-2011	2015-2016	2016-2017
	PHYSICAL			
1	Q (cumec)	100.2	Samples not collected due to Dry bed/No Flow condition in Winter season from 2003-2004 to 2009-2010 and from 2011-2012 to 2016-2017.	Samples not collected due to Drybed/No Flow condition during Summer season from 2004 to 2017.
2	EC_FLD (µmho/cm)			
3	EC_GEN (µmho/cm)	680		
4	pH_FLD (pH units)			
5	pH_GEN (pH units)	6.1		
6	Temp (deg C)	25.3		
	CHEMICAL			
1	ALK-TOT (mgCaCO ₃ /L)	108		
2	B (mg/L)	0.14		
3	Ca (mg/L)	43		
4	Cl (mg/L)	39.5		
5	F (mg/L)	0.48		
6	Fe (mg/L)	0.2		
7	HCO ₃ (mg/L)	132		
8	K (mg/L)	1.3		
9	Mg (mg/L)	14.6		
10	Na (mg/L)	25.7		
11	NO ₂ +NO ₃ (mg N/L)	0.43		
12	NO ₂ -N (mgN/L)	0.01		
13	NO ₃ -N (mgN/L)	0.43		
14	P-Tot (mgP/L)	0.013		
15	SiO ₂ (mg/L)	10.2		
16	SO ₄ (mg/L)	49.3		
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD ₃₋₂₇ (mg/L)	0.9		
2	COD (mg/L)	6.1		
3	DO (mg/L)			
4	DO_SAT% (%)			
5	FCol-MPN (MPN/100mL)	54000		
6	Tcol-MPN (MPN/100mL)	92000		
	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 (mgCaCO ₃ /L)	108		
2	HAR_Total (mgCaCO ₃ /L)	169		
3	Na% (%)	25		
4	RSC (-)	0.0		
5	SAR (-)	0.9		
	PESTICIDES			

Kurundwad



HISTORY SHEET

		Water Year	: 2016-2017
Site	: Arjunwad (Seasonal)	Code	: AK000V4
State	: Maharashtra	District	Kolhapur
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Krishna
Division	: Upper Krishna Divn, Pune	Sub-Division	: Upper Krishna SD 2, Miraj
Drainage Area	: 12660 Sq. Km.	Bank	: Right
Latitude	: 16°46'51"	Longitude	: 74°37'59"
	Opening Date	Closing Date	
Gauge	: 12/01/1969		
Discharge	: 12/01/1969		
Sediment	: 26/12/2014		
Water Quality	: 01/09/2014		

Water Quality Datasheet for the period : 2016-2017

Station Name : Arjunwad (Seasonal) (AK000V4)

Division : Upper Krishna Divn, Pune

Local River : Krishna

River Water Analysis Sub-Division : Upper Krishna SD 2, Miraj

S.No	Parameters	01/07/2016	01/08/2016	02/09/2016	03/10/2016
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	131.5	250.2	82.62	129.5
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown	Brown
3	EC_FLD (μmho/cm)	455	576	496	520
4	EC_GEN (μmho/cm)	812	439	394	508
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.2	6.4	5.2	5.4
7	pH_GEN (pH units)	8.1	8.0	8.0	8.0
8	Temp (deg C)	25.0	25.0	25.0	24.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	144	142	97	126
3	B (mg/L)	0.01	0.03	0.11	0.11
4	Ca (mg/L)	43	40	30	35
5	Cl (mg/L)	7.7	44.6	28.3	57.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.29	0.34	0.33	0.34
8	Fe (mg/L)	2.5	1.9	1.9	2.9
9	HCO3 (mg/L)	176	173	118	154
10	K (mg/L)	0.8	1.1	0.9	1.5
11	Mg (mg/L)	11.7	10.7	11.7	15.6
12	Na (mg/L)	5.4	29.2	21.3	42.8
13	NO2+NO3 (mg N/L)	1.88	2.37	1.66	2.96
14	NO2-N (mgN/L)	0.00	0.00	0.01	0.00
15	NO3-N (mgN/L)	1.88	2.37	1.65	2.96
16	P-Tot (mgP/L)	0.011	0.023	0.017	0.015
17	SiO2 (mg/L)	2.7	13.0	4.8	7.2
18	SO4 (mg/L)	36.6	24.6	33.8	59.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.0	1.2	1.4	1.1
2	COD (mg/L)	8.0	12.0	9.0	9.0
3	DO (mg/L)	6.5	5.5	5.2	5.5
4	DO_SAT% (%)	79	67	63	65
5	FCol-MPN (MPN/100mL)	40000	5000	2200	80
6	Tcol-MPN (MPN/100mL)	47000	9000	5000	300
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	108	100	76	88
2	HAR_Total (mgCaCO3/L)	157	145	125	153
3	Na% (%)	7	30	27	38
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	0.2	1.1	0.8	1.5
	PESTICIDES	Analysis not done due to mal function of instrument.			

Samples not collected during June and November month due to Dried/No Flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Arjunwad (Seasonal) (AK000V4)

Division : Upper Krishna Divn, Pune

Local River : Krishna

Sub-Division : Upper Krishna SD 2, Miraj

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	184	4322	0.000	455.9
2	EC_FLD (µmho/cm)	4	576	455	512
3	EC_GEN (µmho/cm)	4	812	394	538
4	pH_FLD (pH units)	4	7.2	5.2	6
5	pH_GEN (pH units)	4	8.1	8.0	8
6	Temp (deg C)	4	25.0	24.5	24.9
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	4	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	4	144	97	127
3	B (mg/L)	4	0.11	0.01	0.06
4	Ca (mg/L)	4	43	30	37
5	Cl (mg/L)	4	57.6	7.7	34.5
6	CO3 (mg/L)	4	0.0	0.0	0
7	F (mg/L)	4	0.34	0.29	0.33
8	Fe (mg/L)	4	2.9	1.9	2.3
9	HCO3 (mg/L)	4	176	118	155
10	K (mg/L)	4	1.5	0.8	1.1
11	Mg (mg/L)	4	15.6	10.7	12.4
12	Na (mg/L)	4	42.8	5.4	24.7
13	NO2+NO3 (mg N/L)	4	2.96	1.66	2.22
14	NO2-N (mgN/L)	4	0.01	0.00	0
15	NO3-N (mgN/L)	4	2.96	1.65	2.21
16	P-Tot (mgP/L)	4	0.023	0.011	0.017
17	SiO2 (mg/L)	4	13.0	2.7	6.9
18	SO4 (mg/L)	4	59.8	24.6	38.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	4	1.4	1.0	1.2
2	COD (mg/L)	4	12.0	8.0	9.5
3	DO (mg/L)	4	6.5	5.2	5.7
4	DO_SAT% (%)	4	79	63	68
5	FCoI-MPN (MPN/100mL)	4	40000	80	11820
6	TcoI-MPN (MPN/100mL)	4	47000	300	15325
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	4	108	76	93
2	HAR_Total (mgCaCO3/L)	4	157	125	145
3	Na% (%)	4	38	7	26
4	RSC (-)	4	0.0	0.0	0
5	SAR (-)	4	1.5	0.2	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2017

Station Name : Arjunwad (Seasonal) (AK000V4)

Division : Upper Krishna Divn, Pune

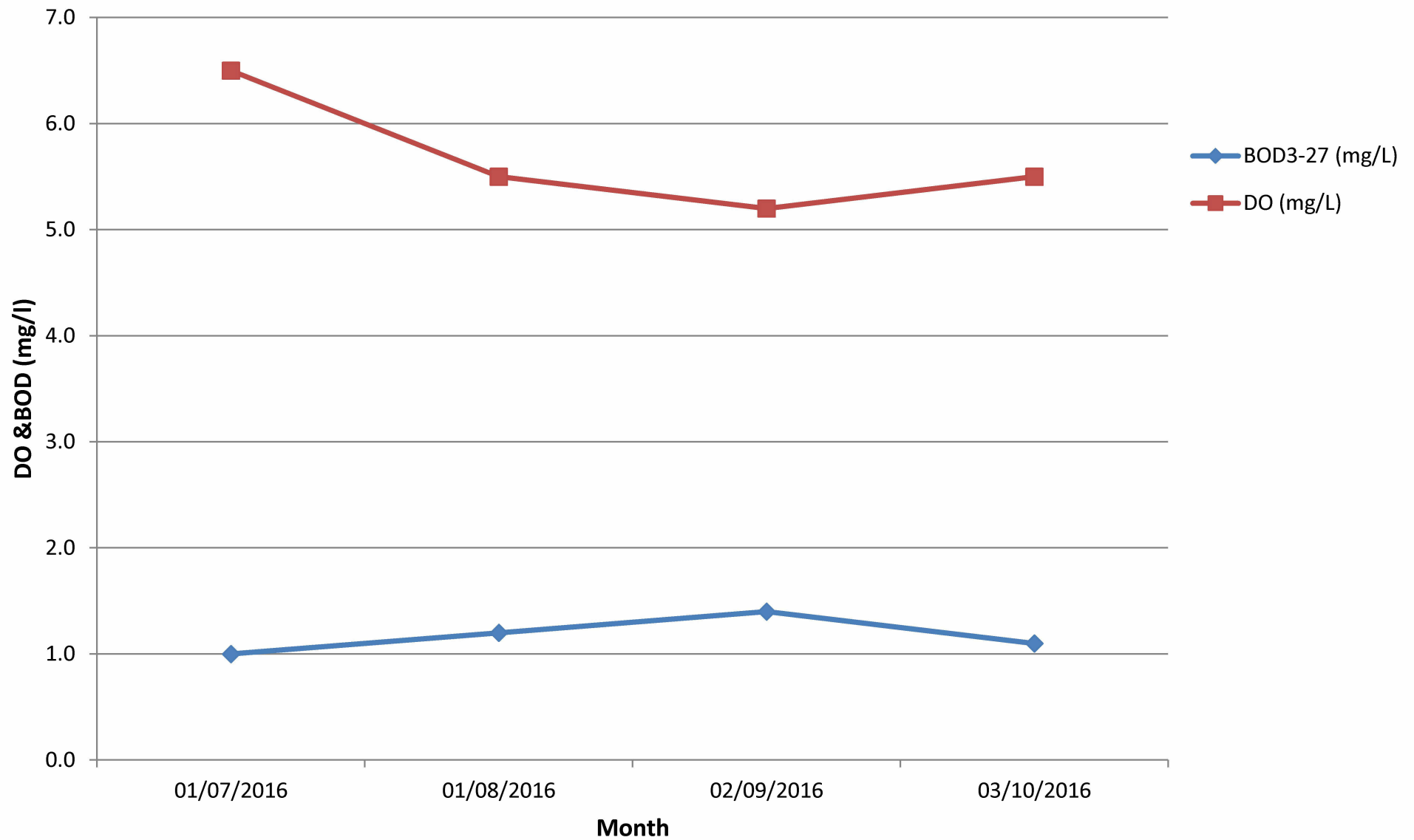
Local River : Krishna

River Water

Sub-Division : Upper Krishna SD 2, Miraj

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				Water Quality observations started from 01-09-2014.					
1	Q (cumec)	505.4	159.4	148.4						
2	EC_FLD (μmho/cm)		359	512						
3	EC_GEN (μmho/cm)	530	329	538						
4	pH_FLD (pH units)		7.4	6.0						
5	pH_GEN (pH units)	8.1	7.8	8.0						
6	Temp (deg C)	25.3	25.0	24.9						
	CHEMICAL									
1	ALK-TOT (mgCaCO3/L)	153	82	127						
2	B (mg/L)	0.05	0.08	0.06						
3	Ca (mg/L)	63	29	37						
4	Cl (mg/L)	45.5	38.8	34.5						
5	F (mg/L)	0.31	0.45	0.33						
6	Fe (mg/L)	3.2	2.5	2.3						
7	HCO3 (mg/L)	186	100	155						
8	K (mg/L)	0.7	0.9	1.1						
9	Mg (mg/L)	12.6	7.5	12.4						
10	Na (mg/L)	32.1	24.6	24.7						
11	NO2+NO3 (mg N/L)	2.32	1.66	2.22						
12	NO2-N (mgN/L)	0.00	0.00	0.00						
13	NO3-N (mgN/L)	2.32	1.66	2.21						
14	P-Tot (mgP/L)	0.014	0.016	0.017						
15	SiO2 (mg/L)	19.2	10.8	6.9						
16	SO4 (mg/L)	38.8	29.3	38.7						
	BIOLOGICAL/BACTERIOLOGICAL									
1	BOD3-27 (mg/L)	1.5	1.3	1.2						
2	COD (mg/L)	11.0	11.3	9.5						
3	DO (mg/L)		6.3	5.7						
4	DO_SAT% (%)		76	68						
5	FCol-MPN (MPN/100mL)	8150	6875	11820						
6	Tcol-MPN (MPN/100mL)	10800	12750	15325						
	TRACE & TOXIC									
	CHEMICAL INDICES									
1	HAR_Ca (mgCaCO3/L)	158	73	93						
2	HAR_Total (mgCaCO3/L)	211	105	145						
3	Na% (%)	25	32	26						
4	SAR (-)	1.0	1.0	0.9						
	PESTICIDES	Converted as Seasonal site from June 2006.								

Arjunwad(Seasonal)



HISTORY SHEET

		Water Year	: 2016-2017
Site	: Samdoli (Seasonal)	Code	: AKX00A7
State	: Maharashtra	District	: Sangli
Basin	: Krishna	Independent River	: Krishna
Tributary	: Varna	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Varna
Division	: Upper Krishna Divn, Pune	Sub-Division	: Upper Krishna SD 2, Miraj
Drainage Area	: 1948 Sq. Km.	Bank	: Left
Latitude	: 16°51'18"	Longitude	: 74°29'50"
	Opening Date	Closing Date	
Gauge	: 23/08/1963		
Discharge	: 01/12/1964		
Sediment	: 26/12/2014		
Water Quality	: 01/09/2014		

Water Quality Datasheet for the period : 2016-2017

Station Name : Samdoli (Seasonal) (AKX00A7)

Division : Upper Krishna Divn, Pune

Local River : Varna

River Water Analysis Sub-Division : Upper Krishna SD 2, Miraj

S.No	Parameters	01/07/2016	01/08/2016	02/09/2016	03/10/2016
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	0.000	111.7	78.60	72.30
2	Colour_Cod (-)	Brown	Brown	Brown	Clear
3	EC_FLD (μmho/cm)	216	505	274	280
4	EC_GEN (μmho/cm)	175	305	217	255
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.2	7.1	7.6	7.9
7	pH_GEN (pH units)	7.6	7.8	7.8	7.9
8	Temp (deg C)	25.0	25.0	25.0	25.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	52	92	77	55
3	B (mg/L)	0.08	0.02	0.05	0.11
4	Ca (mg/L)	16	32	22	22
5	Cl (mg/L)	23.7	30.4	26.1	23.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.38	0.32	0.32	0.32
8	Fe (mg/L)	2.5	2.3	1.2	1.6
9	HCO3 (mg/L)	63	112	94	67
10	K (mg/L)	0.9	1.0	0.5	0.5
11	Mg (mg/L)	4.9	12.6	3.9	5.8
12	Na (mg/L)	13.5	17.3	15.3	12.8
13	NO2+NO3 (mg N/L)	2.53	2.29	1.37	1.56
14	NO2-N (mgN/L)	0.00	0.00	0.01	0.01
15	NO3-N (mgN/L)	2.53	2.29	1.36	1.55
16	P-Tot (mgP/L)	0.012	0.009	0.006	0.064
17	SiO2 (mg/L)	6.4	14.5	3.5	9.0
18	SO4 (mg/L)	14.2	52.8	10.1	22.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.5	4.1	0.7	0.9
2	COD (mg/L)	4.0	24.0	6.0	8.0
3	DO (mg/L)	6.4	7.0	7.8	6.9
4	DO_SAT% (%)	77	85	94	84
5	Fcol-MPN (MPN/100mL)	7800	800	170	40
6	Tcol-MPN (MPN/100mL)	11000	1700	1100	800
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	40	80	56	56
2	HAR_Total (mgCaCO3/L)	60	133	72	80
3	Na% (%)	32	22	31	26
4	RSC (-)	0.0	0.0	0.1	0.0
5	SAR (-)	0.8	0.7	0.8	0.6
	PESTICIDES	Analysis not done due to mal function of instrument.			

Samples not collected during June and November months due to Drybed/No Flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Samdoli (Seasonal) (AKX00A7)

Division : Upper Krishna Divn, Pune

Local River : Varna

Sub-Division : Upper Krishna SD 2, Miraj

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	183	1660	0.000	173.5
2	EC_FLD (μmho/cm)	5	615	216	378
3	EC_GEN (μmho/cm)	5	305	137	218
4	pH_FLD (pH units)	5	8.3	7.1	7.6
5	pH_GEN (pH units)	5	7.9	7.6	7.7
6	Temp (deg C)	5	28.0	25.0	25.6
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	5	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	5	92	42	64
3	B (mg/L)	5	0.21	0.02	0.09
4	Ca (mg/L)	5	32	16	22
5	Cl (mg/L)	5	30.4	23.2	25.4
6	CO3 (mg/L)	5	0.0	0.0	0
7	F (mg/L)	5	0.39	0.32	0.35
8	Fe (mg/L)	5	2.5	0.9	1.7
9	HCO3 (mg/L)	5	112	51	78
10	K (mg/L)	5	1.0	0.5	0.7
11	Mg (mg/L)	5	12.6	3.9	6.6
12	Na (mg/L)	5	17.3	9.9	13.8
13	NO2+NO3 (mg N/L)	5	3.51	1.37	2.25
14	NO2-N (mgN/L)	5	0.01	0.00	0.01
15	NO3-N (mgN/L)	5	3.50	1.36	2.25
16	P-Tot (mgP/L)	5	0.200	0.006	0.058
17	SiO2 (mg/L)	5	49.2	3.5	16.5
18	SO4 (mg/L)	5	52.8	10.1	22.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	5	4.1	0.5	1.4
2	COD (mg/L)	5	24.0	4.0	9.5
3	DO (mg/L)	5	7.8	5.6	6.7
4	DO_SAT% (%)	5	94	72	82
5	FCol-MPN (MPN/100mL)	5	7800	20	1766
6	Tcol-MPN (MPN/100mL)	5	11000	340	2988
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	5	80	40	55
2	HAR_Total (mgCaCO3/L)	5	133	60	83
3	Na% (%)	5	32	22	27
4	RSC (-)	5	0.1	0.0	0
5	SAR (-)	5	0.8	0.5	0.7
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2017

Station Name : Samdoli (Seasonal) (AKX00A7)

Division : Upper Krishna Divn, Pune

Local River : Varna

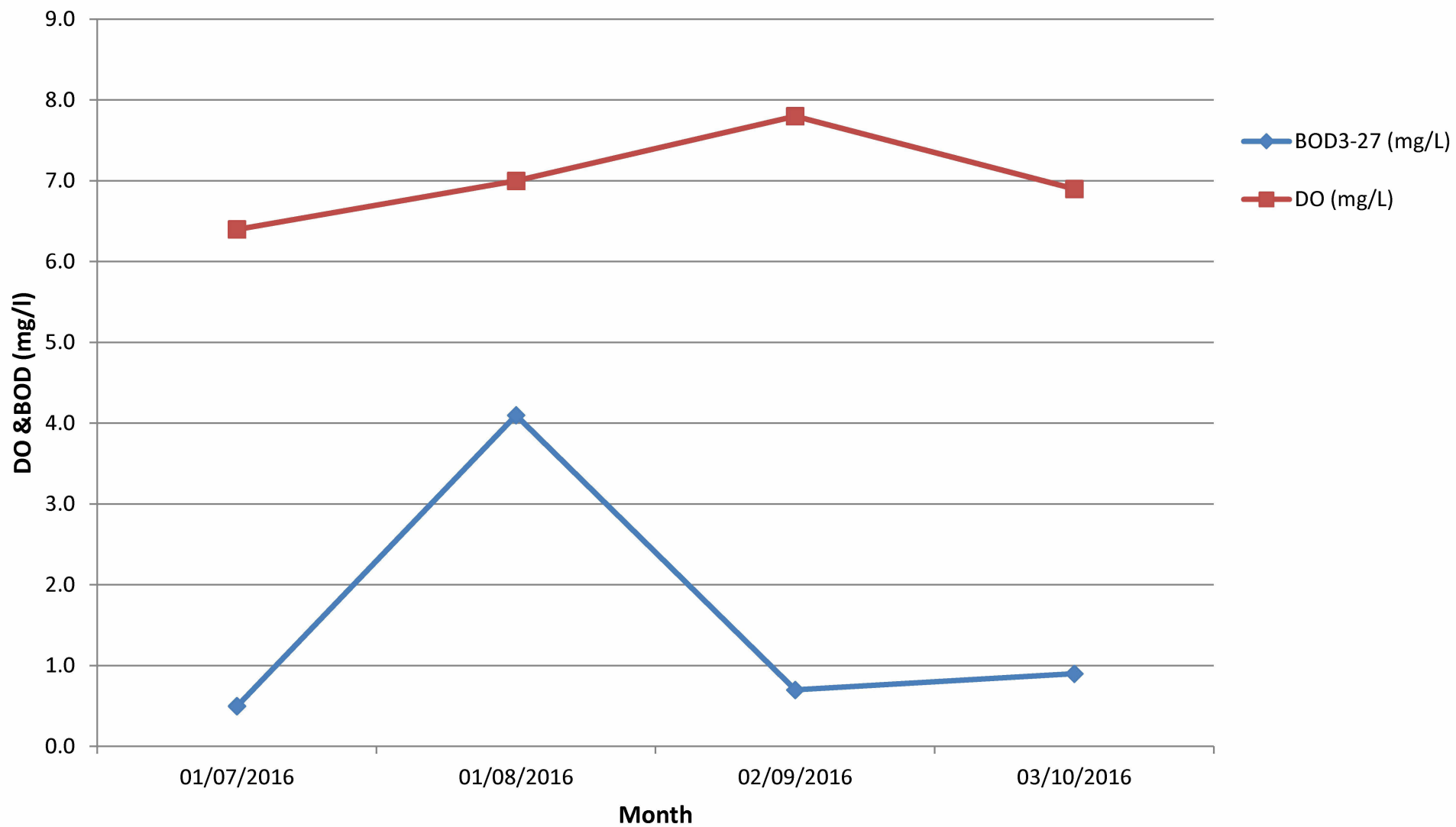
River Water

Sub-Division : Upper Krishna SD 2, Miraj

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)	296.8	68.43	65.65						
2	EC_FLD (µmho/cm)		324	319						
3	EC_GEN (µmho/cm)	342	190	238						
4	pH_FLD (pH units)		7.1	7.4						
5	pH_GEN (pH units)	7.8	7.6	7.8						
6	Temp (deg C)	21.3	25.6	25.0						
	CHEMICAL									
1	ALK-TOT (mgCaCO3/L)	142	57	69						
2	B (mg/L)	0.04	0.06	0.06						
3	Ca (mg/L)	48	20	23						
4	Cl (mg/L)	44.7	29.3	25.9						
5	F (mg/L)	0.29	0.41	0.33						
6	Fe (mg/L)	2.0	2.3	1.9						
7	HCO3 (mg/L)	173	70	84						
8	K (mg/L)	0.5	0.7	0.7						
9	Mg (mg/L)	10.7	6.8	6.8						
10	Na (mg/L)	32.1	16.1	14.7						
11	NO2+NO3 (mg N/L)	1.88	1.43	1.94						
12	NO2-N (mgN/L)	0.00	0.00	0.01						
13	NO3-N (mgN/L)	1.88	1.43	1.93						
14	P-Tot (mgP/L)	0.018	0.014	0.023						
15	SiO2 (mg/L)	12.8	10.1	8.4						
16	SO4 (mg/L)	40.8	21.2	24.8						
	BIOLOGICAL/BACTERIOLOGICAL									
1	BOD3-27 (mg/L)	2.6	0.8	1.5						
2	COD (mg/L)	22.5	5.3	10.5						
3	DO (mg/L)		5.3	7.0						
4	DO_SAT% (%)		65	85						
5	FCol-MPN (MPN/100mL)	28000	6150	2203						
6	Tcol-MPN (MPN/100mL)	41000	8225	3650						
	TRACE & TOXIC									
	CHEMICAL INDICES									
1	HAR_Ca (mgCaCO3/L)	120	49	58						
2	HAR_Total (mgCaCO3/L)	165	77	86						
3	Na% (%)	30	29	28						
4	RSC (-)	0.0	0.0	0.0						
5	SAR (-)	1.1	0.8	0.7						
	PESTICIDES									

Water Quality observations started from 01-09-2014.

Samdoli(Seasonal)



HISTORY SHEET

		Water Year : 2016-2017	
Site	: Karad	Code	: AK000X6
State	: Maharashtra	District	Satara
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Krishna
Division	: Upper Krishna Divn, Pune	Sub-Division	: Upper Krishna SD 1, Kolhapur
Drainage Area	: 5462 Sq. Km.	Bank	: Right
Latitude	: 17°17'40"	Longitude	: 74°11'25"
	Opening Date	Closing Date	
Gauge	: 25/12/1964		
Discharge	: 21/06/1965		
Sediment	: 22/06/1965		
Water Quality	: 01/09/1972		

Water Quality Datasheet for the period : 2016-2017

Station Name : Karad (AK000X6)

Division : Upper Krishna Divn, Pune

Local River : Krishna

River Water Analysis Sub-Division : Upper Krishna SD 1, Kolhapur

S.No	Parameters	02/07/2016 A	02/08/2016 A
	PHYSICAL		
1	Q (cumec)	0.000	435.3
2	Colour_Cod (-)	Light Brown	Light Brown
3	EC_FLD (µmho/cm)	345	360
4	EC_GEN (µmho/cm)	89	90
5	Odour_Code (-)	odour free	odour free
6	pH_FLD (pH units)	7.5	7.8
7	pH_GEN (pH units)	7.3	7.6
8	Temp (deg C)	22.0	22.0
	CHEMICAL		
1	Alk-Phen (mgCaCO3/L)	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	26	46
3	B (mg/L)	0.02	0.05
4	Ca (mg/L)	8	13
5	Cl (mg/L)	9.3	9.8
6	CO3 (mg/L)	0.0	0.0
7	F (mg/L)	0.33	0.28
8	Fe (mg/L)	1.6	2.6
9	HCO3 (mg/L)	32	56
10	K (mg/L)	1.7	0.3
11	Mg (mg/L)	4.9	5.8
12	Na (mg/L)	5.6	5.2
13	NO2+NO3 (mg N/L)	1.84	1.39
14	NO2-N (mgN/L)	0.00	0.00
15	NO3-N (mgN/L)	1.84	1.39
16	P-Tot (mgP/L)	0.013	0.009
17	SiO2 (mg/L)	3.0	26.8
18	SO4 (mg/L)	14.8	15.1
	BIOLOGICAL/BACTERIOLOGICAL		
1	BOD3-27 (mg/L)	0.5	0.9
2	COD (mg/L)	4.0	6.0
3	DO (mg/L)	6.2	6.2
4	DO_SAT% (%)	71	71
5	FCol-MPN (MPN/100mL)	920000	16000
6	Tcol-MPN (MPN/100mL)	1600000	16000
	TRACE & TOXIC		
	CHEMICAL INDICES		
1	HAR_Ca (mgCaCO3/L)	20	32
2	HAR_Total (mgCaCO3/L)	40	56
3	Na% (%)	22	17
4	RSC (-)	0.0	0.0
5	SAR (-)	0.4	0.3
	PESTICIDES	Anlysis not done due to mal function of instrument.	

Samples not collected during June and from September to May due to Drybed/No Flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Karad (AK000X6)

Division : Upper Krishna Divn, Pune

Local River : Krishna

Sub-Division : Upper Krishna SD 1, Kolhapur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	367	1262	0.000	73.76
2	EC_FLD (μmho/cm)	2	360	345	353
3	EC_GEN (μmho/cm)	2	90	89	90
4	pH_FLD (pH units)	2	7.8	7.5	7.7
5	pH_GEN (pH units)	2	7.6	7.3	7.5
6	Temp (deg C)	2	22.0	22.0	22
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	2	46	26	36
3	B (mg/L)	2	0.05	0.02	0.04
4	Ca (mg/L)	2	13	8	10
5	Cl (mg/L)	2	9.8	9.3	9.5
6	CO3 (mg/L)	2	0.0	0.0	0
7	F (mg/L)	2	0.33	0.28	0.31
8	Fe (mg/L)	2	2.6	1.6	2.1
9	HCO3 (mg/L)	2	56	32	44
10	K (mg/L)	2	1.7	0.3	1
11	Mg (mg/L)	2	5.8	4.9	5.3
12	Na (mg/L)	2	5.6	5.2	5.4
13	NO2+NO3 (mg N/L)	2	1.84	1.39	1.62
14	NO2-N (mgN/L)	2	0.00	0.00	0
15	NO3-N (mgN/L)	2	1.84	1.39	1.62
16	P-Tot (mgP/L)	2	0.013	0.009	0.011
17	SiO2 (mg/L)	2	26.8	3.0	14.9
18	SO4 (mg/L)	2	15.1	14.8	15
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2	0.9	0.5	0.7
2	COD (mg/L)	2	6.0	4.0	5
3	DO (mg/L)	2	6.2	6.2	6.2
4	DO_SAT% (%)	2	71	71	71
5	FCol-MPN (MPN/100mL)	2	920000	16000	468000
6	Tcol-MPN (MPN/100mL)	2	1600000	16000	808000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	2	32	20	26
2	HAR_Total (mgCaCO3/L)	2	56	40	48
3	Na% (%)	2	22	17	20
4	RSC (-)	2	0.0	0.0	0
5	SAR (-)	2	0.4	0.3	0.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Karad (AK000X6)

Division : Upper Krishna Divn, Pune

Local River : Krishna

River Water

Sub-Division : Upper Krishna SD 1, Kolhapur

S.No	Parameters	Flood				
		Jun - Oct				
		2002	2003	2004	2005	2006
	PHYSICAL					
1	Q (cumec)	78.89	166.2	215.4	1470	1223
2	EC_FLD (µmho/cm)		102	167	151	270
3	EC_GEN (µmho/cm)		126	174	162	183
4	pH_FLD (pH units)		8.1	7.9	8.0	7.7
5	pH_GEN (pH units)		7.5	7.7	7.7	7.7
6	TDS (mg/L)					
7	Temp (deg C)		24.7	22.8	23.4	24.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.6	7.5	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	116	60	53	65	155
3	B (mg/L)	0.21			0.23	0.12
4	Ca (mg/L)	19	9		14	26
5	Cl (mg/L)	19.7	7.0		10.1	13.3
6	CO3 (mg/L)	0.8	9.0	0.0	0.0	0.0
7	F (mg/L)	0.32			0.14	0.10
8	Fe (mg/L)				0.2	0.0
9	HCO3 (mg/L)	140	54	65	79	95
10	K (mg/L)	0.6			13.2	10.3
11	Mg (mg/L)	9.3	2.4		5.6	2.2
12	Na (mg/L)	11.8			12.9	12.3
13	NH3-N (mg N/L)	0.03				
14	NO2+NO3 (mg N/L)				1.15	0.56
15	NO2-N (mgN/L)				0.03	0.01
16	NO3-N (mgN/L)				1.12	0.55
17	P-Tot (mgP/L)	0.039			0.089	0.314
18	SiO2 (mg/L)	18.2			8.4	9.7
19	SO4 (mg/L)	8.6	3.4		15.6	12.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.0	2.1	0.7	1.2
2	COD (mg/L)	4.0	3.4	6.1	13.4	10.7
3	DO (mg/L)		6.2	6.7	6.1	6.2
4	DO_SAT% (%)		74	78	72	73
5	FCoI-MPN (MPN/100mL)					
6	TcoI-MPN (MPN/100mL)					
	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)	48	24		36	65
2	HAR_Total (mgCaCO3/L)	87	34		59	74
3	Na% (%)	20			31	25
4	RSC (-)	0.6	0.5		0.1	0.1
5	SAR (-)	0.5			0.9	0.6
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Karad (AK000X6)

Division : Upper Krishna Divn, Pune

Local River : Krishna

River Water

Sub-Division : Upper Krishna SD 1, Kolhapur

S.No	Parameters	Flood				
		Jun - Oct				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	1140	179.0	142.5	280.5	247.3
2	EC_FLD (µmho/cm)	281	278	266	314	294
3	EC_GEN (µmho/cm)	116	189	204	265	175
4	pH_FLD (pH units)	7.8	7.7	7.6	7.8	7.7
5	pH_GEN (pH units)	7.7	7.6	7.6	8.1	7.6
6	TDS (mg/L)					
7	Temp (deg C)	22.3	21.8	23.0	23.8	22.7
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.5	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	33	54	69	75	49
3	B (mg/L)	0.06	0.05	0.10	0.12	0.05
4	Ca (mg/L)	10	15	21	26	18
5	Cl (mg/L)	12.3	11.0	9.2	14.0	9.7
6	CO3 (mg/L)	0.6	0.0	0.0	0.0	0.0
7	F (mg/L)	0.30	0.11	0.30	0.18	0.32
8	Fe (mg/L)	0.6	0.2	0.1	0.8	0.5
9	HCO3 (mg/L)	39	66	84	92	59
10	K (mg/L)	0.3	1.6	0.8	1.1	1.0
11	Mg (mg/L)	2.3	4.0	5.6	6.1	4.1
12	Na (mg/L)	7.4	7.7	6.7	8.6	6.9
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)	0.43	0.30	0.38	0.18	0.72
15	NO2-N (mgN/L)	0.01	0.01	0.00	0.01	0.00
16	NO3-N (mgN/L)	0.42	0.30	0.38	0.17	0.71
17	P-Tot (mgP/L)	0.213	0.099	0.044	0.016	0.009
18	SiO2 (mg/L)	5.5	6.2	6.8	14.1	11.1
19	SO4 (mg/L)	3.9	4.8	18.3	18.1	11.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.9	1.9	1.1	0.8
2	COD (mg/L)	8.8	7.9	8.4	7.9	4.2
3	DO (mg/L)	6.2	6.2	6.2	6.2	6.2
4	DO_SAT% (%)	71	70	72	73	72
5	FCoI-MPN (MPN/100mL)			58723	46600	246250
6	Tcol-MPN (MPN/100mL)			58777	78800	386000
	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)	26	38	52	66	45
2	HAR_Total (mgCaCO3/L)	35	55	75	91	62
3	Na% (%)	34	27	17	18	19
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.6	0.5	0.3	0.4	0.4
	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 : Karad (AK000X6)

Division : Upper Krishna Divn, Pune

Local River : Krishna

River Water

Sub-Division : Upper Krishna SD 1, Kolhapur

S.No	Parameters	Flood				
		Jun - Oct				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	382.1	1141	560.9	269.4	217.7
2	EC_FLD (µmho/cm)	292	289	289	370	353
3	EC_GEN (µmho/cm)	104	96	175	112	90
4	pH_FLD (pH units)	7.6	7.6	7.8	7.7	7.7
5	pH_GEN (pH units)	7.4	7.2	7.6	7.7	7.5
6	TDS (mg/L)					
7	Temp (deg C)	24.0	24.3	23.8	23.5	22.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	34	41	77	62	36
3	B (mg/L)	0.07	0.09	0.06	0.06	0.04
4	Ca (mg/L)	10	11	30	29	10
5	Cl (mg/L)	5.9	8.2	32.0	8.2	9.5
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.31	0.31	0.28	0.43	0.31
8	Fe (mg/L)	0.1	0.3	0.9	2.4	2.1
9	HCO3 (mg/L)	41	50	94	76	44
10	K (mg/L)	0.6	0.7	0.9	0.4	1.0
11	Mg (mg/L)	1.5	8.7	3.4	5.8	5.3
12	Na (mg/L)	4.0	4.7	23.9	4.7	5.4
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)	0.49	0.56	0.94	1.28	1.62
15	NO2-N (mgN/L)	0.00	0.00	0.02	0.00	0.00
16	NO3-N (mgN/L)	0.48	0.55	0.93	1.28	1.62
17	P-Tot (mgP/L)	0.015	0.058	0.022	0.001	0.011
18	SiO2 (mg/L)	8.0	19.8	25.1	6.7	14.9
19	SO4 (mg/L)	3.5	11.9	11.8	17.5	15.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	1.8	2.3	0.8	0.7
2	COD (mg/L)	6.0	16.5	12.5	6.0	5.0
3	DO (mg/L)	6.2	6.3	6.2	6.2	6.2
4	DO_SAT% (%)	73	75	73	72	71
5	FCol-MPN (MPN/100mL)	580000	471500	920000	1700	468000
6	Tcol-MPN (MPN/100mL)	975000	824500	1600000	2200	808000
	TRACE & TOXIC					
1	Al (mg/L)					
2	As (µg/L)		2.31			
3	Cd (µg/L)		0.28			
4	Cr (µg/L)		27.30			
5	Cu (µg/L)		22.11			
6	Hg (µg/L)		0.11			
7	Ni (µg/L)		9.86			
8	Pb (µg/L)		-0.50			
9	Zn (µg/L)		-0.05			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	26	28	74	72	26
2	HAR_Total (mgCaCO3/L)	32	64	88	96	48
3	Na% (%)	21	14	37	10	20
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.3	0.3	1.1	0.2	0.3
	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 : Karad (AK000X6)

Division : Upper Krishna Divn, Pune

Local River : Krishna

River Water

Sub-Division : Upper Krishna SD 1, Kolhapur

S.No	Parameters	Winter				
		Nov - Feb				
		2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL					
1	Q (cumec)	46.73	20.76	11.97	44.21	58.69
2	EC_FLD (µmho/cm)		121	522	91	299
3	EC_GEN (µmho/cm)		128	528	239	285
4	pH_FLD (pH units)		7.9	8.4	8.2	7.9
5	pH_GEN (pH units)		7.4	8.6	7.5	8.1
6	TDS (mg/L)					
7	Temp (deg C)		23.5	23.0	22.0	19.8
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	1.9			0.0	0.5
2	ALK-TOT (mgCaCO3/L)	41			78	192
3	B (mg/L)	0.68			0.16	0.18
4	Ca (mg/L)	9			30	25
5	Cl (mg/L)	10.8			13.7	21.5
6	CO3 (mg/L)	2.3			0.0	0.6
7	F (mg/L)	0.17			0.29	0.25
8	Fe (mg/L)				0.2	0.4
9	HCO3 (mg/L)	45			95	117
10	K (mg/L)	0.3			4.6	6.1
11	Mg (mg/L)	4.2			5.0	14.6
12	Na (mg/L)	4.6			7.6	8.8
13	NH3-N (mg N/L)	0.07				
14	NO2+NO3 (mg N/L)				0.86	0.43
15	NO2-N (mgN/L)				0.03	0.02
16	NO3-N (mgN/L)				0.83	0.41
17	P-Tot (mgP/L)				0.089	0.329
18	SiO2 (mg/L)				5.4	5.2
19	SO4 (mg/L)	3.6			21.5	30.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	1.0	2.9	0.9	0.9
2	COD (mg/L)	5.7	2.8	6.2	13.3	8.4
3	DO (mg/L)		6.2	7.1	6.1	6.2
4	DO_SAT% (%)		73	83	70	68
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	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)	23			76	62
2	HAR_Total (mgCaCO3/L)	41			97	123
3	Na% (%)	19			17	18
4	RSC (-)	0.1			0.0	0.1
5	SAR (-)	0.3			0.4	0.4
	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 : Karad (AK000X6)

Division : Upper Krishna Divn, Pune

Local River : Krishna

River Water

Sub-Division : Upper Krishna SD 1, Kolhapur

S.No	Parameters	Winter				
		Nov-Feb				
		2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
	PHYSICAL					
1	Q (cumec)	43.54	50.82	102.8	47.06	34.63
2	EC_FLD (µmho/cm)	312	267	345	305	307
3	EC_GEN (µmho/cm)	174	202	340	766	426
4	pH_FLD (pH units)	7.7	7.6	7.7	7.6	7.5
5	pH_GEN (pH units)	7.8	8.0	8.0	8.4	7.7
6	TDS (mg/L)					
7	Temp (deg C)	20.7	22.6	24.3	23.8	24.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	1.0	0.0
2	ALK-TOT (mgCaCO3/L)	56	84	146	144	114
3	B (mg/L)	0.07	0.16	0.20	0.12	0.04
4	Ca (mg/L)	14	20	38	56	42
5	Cl (mg/L)	8.6	14.7	19.3	17.6	17.9
6	CO3 (mg/L)	0.0	0.0	0.0	1.2	0.0
7	F (mg/L)	0.27	0.26	1.06	0.56	0.32
8	Fe (mg/L)	0.1	0.3	0.0	0.2	0.2
9	HCO3 (mg/L)	68	103	178	173	139
10	K (mg/L)	0.5	0.9	1.1	1.2	1.3
11	Mg (mg/L)	3.8	7.4	19.7	9.2	13.6
12	Na (mg/L)	10.5	9.9	14.6	11.2	11.9
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)	0.53	0.45	1.85	0.48	1.11
15	NO2-N (mgN/L)	0.01	0.01	0.01	0.01	0.00
16	NO3-N (mgN/L)	0.52	0.44	1.85	0.47	1.11
17	P-Tot (mgP/L)	0.293	0.003	0.058	0.039	0.030
18	SiO2 (mg/L)	5.1	5.1	12.1	13.5	28.2
19	SO4 (mg/L)	7.6	7.6	10.7	20.5	12.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	0.7	1.7	1.0	2.1
2	COD (mg/L)	9.6	3.1	4.0	7.3	7.6
3	DO (mg/L)	6.1	5.6	6.1	6.1	6.2
4	DO_SAT% (%)	68	64	73	72	74
5	Fcol-MPN (MPN/100mL)			50600	39000	350000
6	Tcol-MPN (MPN/100mL)			88000	63500	540000
	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)	35	51	96	140	104
2	HAR_Total (mgCaCO3/L)	51	82	178	179	161
3	Na% (%)	31	25	15	12	14
4	RSC (-)	0.1	0.1	0.0	0.0	0.0
5	SAR (-)	0.6	0.5	0.5	0.4	0.4
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Samples not collected during Winter season 2012-2013 to 2016-2017.

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Karad (AK000X6)

Division : Upper Krishna Divn, Pune

Local River : Krishna

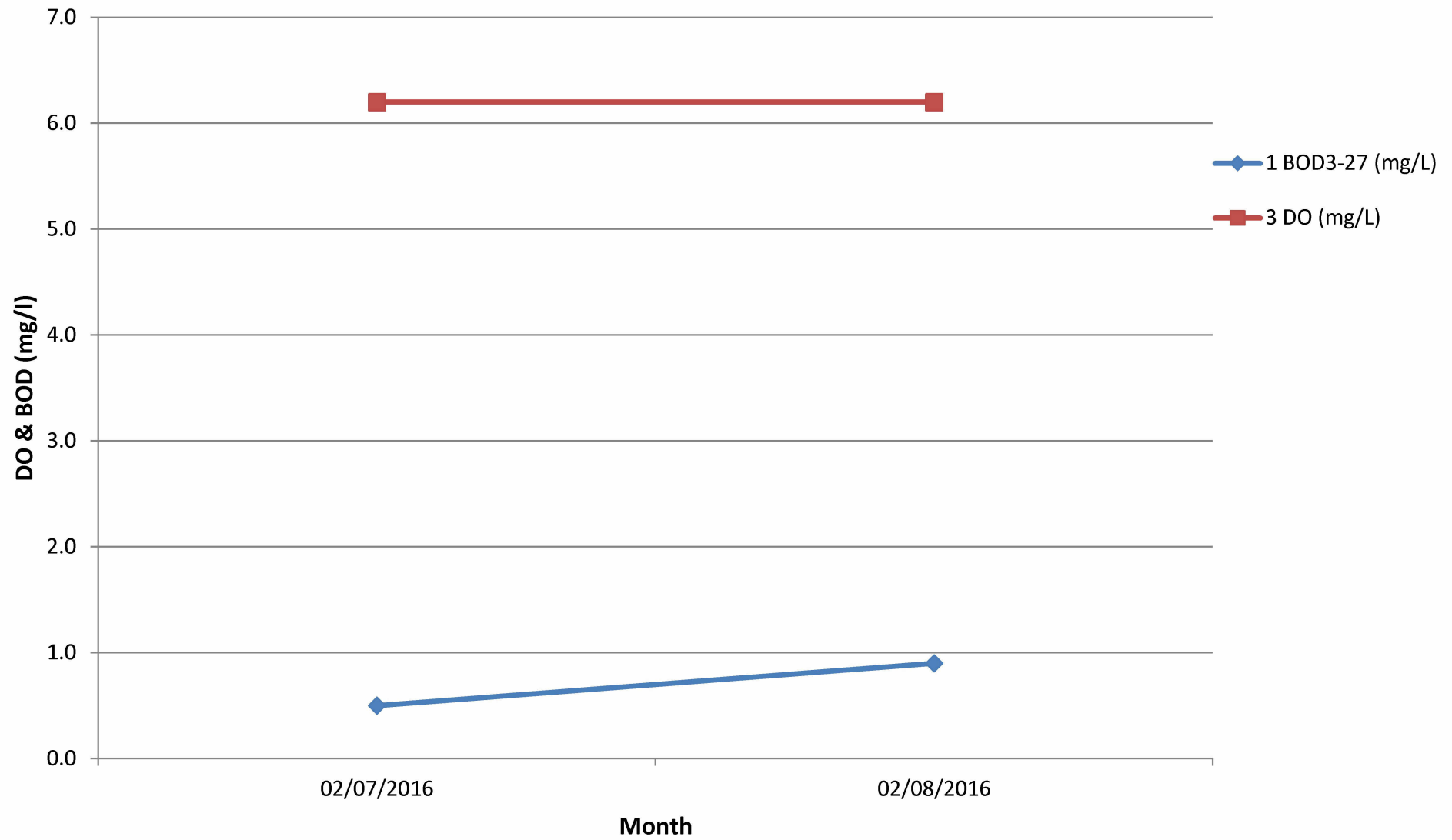
River Water

Sub-Division : Upper Krishna SD 1, Kolhapur

S.No	Parameters	Summer					
		Mar - May					
		2003	2004	2006	2007	2008	2009
	PHYSICAL						
1	Q (cumec)	57.61	61.59	66.85	0.000	18.51	58.79
2	EC_FLD (µmho/cm)		76	82	322	316	296
3	EC_GEN (µmho/cm)		76	103	210	139	90
4	pH_FLD (pH units)		7.8	7.8	7.8	7.7	7.8
5	pH_GEN (pH units)		7.3	7.5	7.8	7.9	7.5
6	TDS (mg/L)						
7	Temp (deg C)		23.3	24.7	23.0	24.0	23.3
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.1		0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	35		37	184	56	26
3	B (mg/L)			0.15	0.14	0.06	0.02
4	Ca (mg/L)	8		8	22	11	6
5	Cl (mg/L)	8.4		7.2	11.7	8.1	11.1
6	CO3 (mg/L)	0.2		0.0	0.0	0.0	0.0
7	F (mg/L)	0.11		0.23	0.15	0.14	0.77
8	Fe (mg/L)			0.2	0.5	0.0	0.2
9	HCO3 (mg/L)	43		46	112	68	32
10	K (mg/L)			4.0	7.8	1.0	0.5
11	Mg (mg/L)	2.9		1.3	2.4	4.9	2.8
12	Na (mg/L)			9.5	11.1	7.8	8.5
13	NH3-N (mg N/L)	0.00					
14	NO2+NO3 (mg N/L)			0.57	0.45	0.52	0.19
15	NO2-N (mgN/L)			0.03	0.04	0.03	0.11
16	NO3-N (mgN/L)			0.54	0.42	0.49	0.07
17	P-Tot (mgP/L)			0.110	0.141	0.291	0.010
18	SiO2 (mg/L)			4.7	3.0	0.5	8.1
19	SO4 (mg/L)			6.2	2.2	3.8	7.5
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)			0.7	0.4	0.1	0.7
2	COD (mg/L)		2.9	12.4	9.9	12.2	3.1
3	DO (mg/L)		6.1	6.2	6.0	6.0	6.1
4	DO_SAT% (%)		72	74	70	71	72
5	FCol-MPN (MPN/100mL)						
6	Tcol-MPN (MPN/100mL)						
	TRACE & TOXIC						
1	Al (mg/L)						
2	As (µg/L)						
3	Cd (µg/L)			0.01			1.49
4	Cr (µg/L)			2.00			2.00
5	Cu (µg/L)						
6	Hg (µg/L)						
7	Ni (µg/L)			1.00			1.00
8	Pb (µg/L)			29.00			11.00
9	Zn (µg/L)			0.10			8.66
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	21		20	55	27	16
2	HAR_Total (mgCaCO3/L)	33		25	65	47	28
3	Na% (%)			47	24	26	39
4	RSC (-)	0.1		0.2	0.5	0.2	0.0
5	SAR (-)			1.0	0.6	0.5	0.7
	PESTICIDES						
1	Aldrin (µg/L)			0.010			0.010
2	BHC (µg/L)			0.100			0.100
3	DDT (µg/L)			0.100			0.100
4	Dieldrin (µg/L)			0.053			0.010
5	Endos (µg/L)			0.100			0.100

Samples not collected during Summer season 2005 and from 2010 to 2017 due to Drybed/No Flow condition.

Karad



HISTORY SHEET

		Water Year : 2016-2017	
Site	: Warunji	Code	: AKZ00A7
State	: Maharashtra	District	Satara
Basin	: Krishna	Independent River	: Krishna
Tributary	: Koyna	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Koyna
Division	: Upper Krishna Divn, Pune	Sub-Division	: Upper Krishna SD 1, Kolhapur
Drainage Area	: 1890 Sq. Km.	Bank	: Left
Latitude	: 17°16'20"	Longitude	: 74°09'54"
	Opening Date	Closing Date	
Gauge	: 20/08/1963		
Discharge	: 01/01/1966		
Sediment	: 01/06/1974		
Water Quality	: 01/06/1974		
Sediment WQ observations suspended on 31-05-2006 and restarted Sediment on 18-6-2013 and WQ on 02-07-2013.			

Water Quality Datasheet for the period : 2016-2017

Station Name : Warunji (AKZ00A7)

Division : Upper Krishna Divn, Pune

Local River : Koyna

River Water Analysis Sub-Division : Upper Krishna SD 1, Kolhapur

S.No	Parameters	02/07/2016 A	02/08/2016 A
	PHYSICAL		
1	Q (cumec)	0.000	458.7
2	Colour_Cod (-)	Light Brown	Light Brown
3	EC_FLD (μmho/cm)	425	465
4	EC_GEN (μmho/cm)	79	78
5	Odour_Code (-)	odour free	odour free
6	pH_FLD (pH units)	7.9	7.6
7	pH_GEN (pH units)	6.9	7.5
8	Temp (deg C)	19.0	20.5
	CHEMICAL		
1	Alk-Phen (mgCaCO3/L)	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	32	40
3	B (mg/L)	0.01	0.04
4	Ca (mg/L)	10	14
5	Cl (mg/L)	6.2	9.8
6	CO3 (mg/L)	0.0	0.0
7	F (mg/L)	0.28	0.27
8	Fe (mg/L)	1.0	1.2
9	HCO3 (mg/L)	39	49
10	K (mg/L)	0.5	0.2
11	Mg (mg/L)	2.9	1.9
12	Na (mg/L)	4.2	6.2
13	NO2+NO3 (mg N/L)	1.07	1.26
14	NO2-N (mgN/L)	0.00	0.00
15	NO3-N (mgN/L)	1.07	1.26
16	P-Tot (mgP/L)	0.013	0.037
17	SiO2 (mg/L)	3.6	9.8
18	SO4 (mg/L)	7.0	9.4
	BIOLOGICAL/BACTERIOLOGICAL		
1	BOD3-27 (mg/L)	3.1	1.8
2	COD (mg/L)	24.0	6.0
3	DO (mg/L)	6.4	6.3
4	DO_SAT% (%)	69	69
5	FCoI-MPN (MPN/100mL)	1600000	5000
6	TcoI-MPN (MPN/100mL)	1600000	5000
	TRACE & TOXIC		
	CHEMICAL INDICES		
1	HAR_Ca (mgCaCO3/L)	24	36
2	HAR_Total (mgCaCO3/L)	36	44
3	Na% (%)	20	23
4	RSC (-)	0.0	0.0
5	SAR (-)	0.3	0.4
	PESTICIDES	Analysis not done due to mal function of instrument.	

Samples not collected during June and from September to May due to Drybed/No Flow condition.

Water Quality Summary for the period : 2016-2017

Station Name : Warunji (AKZ00A7)

Division : Upper Krishna Divn, Pune

Local River : Koyna

Sub-Division : Upper Krishna SD 1, Kolhapur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	367	1533	0.000	73.85
2	EC_FLD (μmho/cm)	2	465	425	445
3	EC_GEN (μmho/cm)	2	79	78	79
4	pH_FLD (pH units)	2	7.9	7.6	7.8
5	pH_GEN (pH units)	2	7.5	6.9	7.2
6	Temp (deg C)	2	20.5	19.0	19.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	2	40	32	36
3	B (mg/L)	2	0.04	0.01	0.02
4	Ca (mg/L)	2	14	10	12
5	Cl (mg/L)	2	9.8	6.2	8
6	CO3 (mg/L)	2	0.0	0.0	0
7	F (mg/L)	2	0.28	0.27	0.28
8	Fe (mg/L)	2	1.2	1.0	1.1
9	HCO3 (mg/L)	2	49	39	44
10	K (mg/L)	2	0.5	0.2	0.4
11	Mg (mg/L)	2	2.9	1.9	2.4
12	Na (mg/L)	2	6.2	4.2	5.2
13	NO2+NO3 (mg N/L)	2	1.26	1.07	1.17
14	NO2-N (mgN/L)	2	0.00	0.00	0
15	NO3-N (mgN/L)	2	1.26	1.07	1.17
16	P-Tot (mgP/L)	2	0.037	0.013	0.025
17	SiO2 (mg/L)	2	9.8	3.6	6.7
18	SO4 (mg/L)	2	9.4	7.0	8.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2	3.1	1.8	2.4
2	COD (mg/L)	2	24.0	6.0	15
3	DO (mg/L)	2	6.4	6.3	6.4
4	DO_SAT% (%)	2	69	69	69
5	FCol-MPN (MPN/100mL)	2	1600000	5000	802500
6	Tcol-MPN (MPN/100mL)	2	1600000	5000	802500
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	2	36	24	30
2	HAR_Total (mgCaCO3/L)	2	44	36	40
3	Na% (%)	2	23	20	22
4	RSC (-)	2	0.0	0.0	0
5	SAR (-)	2	0.4	0.3	0.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Warunji (AKZ00A7)

Division : Upper Krishna Divn, Pune

Local River : Koyna

River Water Sub-Division : Upper Krishna SD 1, Kolhapur

S.No	Parameters	Flood Jun - Oct			
		2002	2003	2004	2005
	PHYSICAL				
1	Q (cumec)	70.11	185.8	483.1	1169
2	EC_FLD (µmho/cm)	134	83	86	83
3	EC_GEN (µmho/cm)	136	105	107	94
4	pH_FLD (pH units)	7.8	7.6	7.4	7.7
5	pH_GEN (pH units)	7.7	7.6	7.6	7.4
6	TDS (mg/L)	110			
7	Temp (deg C)	25.2	24.8	24.0	23.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.7		0.0	0.0
2	ALK-TOT (mgCaCO3/L)	82		39	38
3	B (mg/L)	0.08			0.20
4	Ca (mg/L)	14			7
5	Cl (mg/L)	14.0			4.5
6	CO3 (mg/L)	0.9		0.0	0.0
7	F (mg/L)	0.18			0.11
8	Fe (mg/L)				0.2
9	HCO3 (mg/L)	98		47	46
10	K (mg/L)	0.4			7.7
11	Mg (mg/L)	7.9			3.3
12	Na (mg/L)	6.6			7.4
13	NH3-N (mg N/L)	0.00			
14	NO2+NO3 (mg N/L)				0.34
15	NO2-N (mgN/L)				0.03
16	NO3-N (mgN/L)				0.31
17	P-Tot (mgP/L)	0.035			0.075
18	SiO2 (mg/L)	10.0			3.9
19	SO4 (mg/L)	4.3	4.3		12.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.7	0.8	1.1	0.4
2	COD (mg/L)	4.0	2.8	12.0	10.1
3	DO (mg/L)	6.3	6.1	7.3	6.2
4	DO_SAT% (%)	76	74	87	72
5	FCol-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
	TRACE & TOXIC				
1	Al (mg/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)	36			17
2	HAR_Total (mgCaCO3/L)	68			31
3	Na% (%)	17			30
4	RSC (-)	0.3			0.1
5	SAR (-)	0.3			0.6
	PESTICIDES				
1	Aldrin (µg/L)				
2	BHC (µg/L)				
3	DDT (µg/L)				
4	Dieldrin (µg/L)				
5	Endos (µg/L)				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Warunji (AKZ00A7)

Division : Upper Krishna Divn, Pune

Local River : Koyna

River Water Sub-Division : Upper Krishna SD 1, Kolhapur

S.No	Parameters	Flood Jun - Oct			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	661.6	386.6	113.2	229.3
2	EC_FLD (μmho/cm)	985	353	785	445
3	EC_GEN (μmho/cm)	101	111	101	79
4	pH_FLD (pH units)	8.7	8.7	8.4	7.8
5	pH_GEN (pH units)	6.9	7.5	7.7	7.2
6	TDS (mg/L)				
7	Temp (deg C)	24.1	21.5	20.0	19.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	30	59	50	36
3	B (mg/L)	0.11	0.07	0.14	0.02
4	Ca (mg/L)	10	30	19	12
5	Cl (mg/L)	5.2	31.5	9.9	8.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.29	0.25	0.50	0.28
8	Fe (mg/L)	0.5	1.0	1.4	1.1
9	HCO3 (mg/L)	37	71	61	44
10	K (mg/L)	0.4	0.2	0.2	0.4
11	Mg (mg/L)	4.9	6.3	5.8	2.4
12	Na (mg/L)	3.3	23.6	6.4	5.2
13	NH3-N (mg N/L)				
14	NO2+NO3 (mg N/L)	0.41	1.18	0.79	1.17
15	NO2-N (mgN/L)	0.01	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.41	1.18	0.79	1.17
17	P-Tot (mgP/L)	0.023	0.011	0.019	0.025
18	SiO2 (mg/L)	32.0	22.7	17.0	6.7
19	SO4 (mg/L)	17.0	22.6	15.6	8.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.8	3.1	1.0	2.4
2	COD (mg/L)	6.0	19.0	6.0	15.0
3	DO (mg/L)	5.7	6.8	5.9	6.4
4	DO_SAT% (%)	68	77	65	69
5	FCol-MPN (MPN/100mL)	123900	18500	7900	802500
6	Tcol-MPN (MPN/100mL)	275500	26000	11000	802500
	TRACE & TOXIC				
1	Al (mg/L)				
2	Cd (μg/L)	0.22			
3	Cr (μg/L)	2.84			
4	Cu (μg/L)	2.75			
5	Hg (μg/L)	0.02			
6	Ni (μg/L)	7.15			
7	Pb (μg/L)	-0.50			
8	Zn (μg/L)	-0.05			
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	24	74	48	30
2	HAR_Total (mgCaCO3/L)	44	100	72	40
3	Na% (%)	14	34	16	22
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	0.2	1.0	0.3	0.4
	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 : Warunji (AKZ00A7)

Division : Upper Krishna Divn, Pune

Local River : Koyna

River Water Sub-Division : Upper Krishna SD 1, Kolhapur

S.No	Parameters	Winter			
		Nov - Feb			
		2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL				
1	Q (cumec)	62.94	19.82	Drybed/	60.25
2	EC_FLD (μmho/cm)	64	121	No Flow	61
3	EC_GEN (μmho/cm)	70	128		66
4	pH_FLD (pH units)	7.8	7.8		7.8
5	pH_GEN (pH units)	7.5	7.7		7.4
6	TDS (mg/L)	54			
7	Temp (deg C)	23.0	23.0		22.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.1			0.0
2	ALK-TOT (mgCaCO3/L)	30			27
3	B (mg/L)	0.19			0.18
4	Ca (mg/L)	8			9
5	Cl (mg/L)				9.4
6	CO3 (mg/L)	0.1			0.0
7	F (mg/L)	0.17			0.22
8	Fe (mg/L)				0.2
9	HCO3 (mg/L)	36			33
10	K (mg/L)	0.4			6.2
11	Mg (mg/L)	2.5			3.7
12	Na (mg/L)	4.6			5.0
13	NH3-N (mg N/L)	0.02			
14	NO2+NO3 (mg N/L)				0.75
15	NO2-N (mgN/L)				0.03
16	NO3-N (mgN/L)				0.72
17	P-Tot (mgP/L)				0.084
18	SiO2 (mg/L)				3.6
19	SO4 (mg/L)	3.1			15.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.4	0.6		0.9
2	COD (mg/L)	5.7	1.9		13.1
3	DO (mg/L)	6.7	6.1		6.1
4	DO_SAT% (%)	77	71		70
5	FCoI-MPN (MPN/100mL)				
6	TcoI-MPN (MPN/100mL)				
	TRACE & TOXIC				
1	Al (mg/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)	19			22
2	HAR_Total (mgCaCO3/L)	29			37
3	Na% (%)	26			21
4	RSC (-)	0.1			0.1
5	SAR (-)	0.4			0.4
	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 : Warunji (AKZ00A7)

Division : Upper Krishna Divn, Pune

Local River : Koyna

River Water Sub-Division : Upper Krishna SD 1, Kolhapur

S.No	Parameters	Summer			
		Mar - May			
		2003	2004	2005	2006
	PHYSICAL				
1	Q (cumec)	65.44	42.08	Drybed/	61.19
2	EC_FLD (μmho/cm)	64	64	No Flow	118
3	EC_GEN (μmho/cm)	67	80		111
4	pH_FLD (pH units)	7.8	7.7		8.1
5	pH_GEN (pH units)	7.7	7.4		8.0
6	TDS (mg/L)				
7	Temp (deg C)	25.6	25.0		25.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				0.0
2	ALK-TOT (mgCaCO3/L)				38
3	B (mg/L)	0.21			0.17
4	Ca (mg/L)	11			12
5	Cl (mg/L)				6.8
6	CO3 (mg/L)				0.0
7	F (mg/L)	0.13			0.25
8	Fe (mg/L)				0.2
9	HCO3 (mg/L)				46
10	K (mg/L)	0.7			1.6
11	Mg (mg/L)	0.9			2.0
12	Na (mg/L)	5.2			7.6
13	NH3-N (mg N/L)	0.00			
14	NO2+NO3 (mg N/L)				0.41
15	NO2-N (mgN/L)				0.03
16	NO3-N (mgN/L)				0.38
17	P-Tot (mgP/L)				0.096
18	SiO2 (mg/L)				4.6
19	SO4 (mg/L)				7.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				1.0
2	COD (mg/L)		1.0		11.4
3	DO (mg/L)	6.1	6.2		6.2
4	DO_SAT% (%)	75	75		75
5	FCOI-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
	TRACE & TOXIC				
1	Al (mg/L)				
2	Cd (μg/L)				0.01
3	Cr (μg/L)				2.00
4	Cu (μg/L)				
5	Hg (μg/L)				
6	Ni (μg/L)				1.00
7	Pb (μg/L)				23.00
8	Zn (μg/L)				0.10
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	28			29
2	HAR_Total (mgCaCO3/L)	32			37
3	Na% (%)	26			30
4	RSC (-)				0.0
5	SAR (-)	0.4			0.5
	PESTICIDES				
1	Aldrin (μg/L)				0.010
2	BHC (μg/L)				0.100
3	DDT (μg/L)				0.100
4	Dieldrin (μg/L)				0.033
5	Endos (μg/L)				0.100

Warunji

