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जल की गुणवत्ता डेटा/WATER QUALITY YEAR BOOK

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हैदराबाद / HYDERABAD

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प्रस्तावना

भारत में सभी महत्वपूर्ण नदी घाटियों में नदी के पानी की गुणवत्ता की निगरानी जल विज्ञानीय अवलोकन कार्यक्रम के एक भाग के रूप में की जाती है जो केंद्रीय जल आयोग के मुख्य कार्यों में से एक है। नदी जल के नमूने आयोग द्वारा रखे गए नियमित जल विज्ञान स्टेशनों से एकत्र किए जाते हैं और प्रभागीय मुख्यालय में स्थापित प्रयोगशालाओं में विश्लेषण किया जाता है। जल गुणवत्ता डेटा हर साल जल गुणवत्ता वार्षिक पुस्तक के रूप में प्रकाशित किया जाता है।

कृष्णा नदी क्षेत्र में, जल गुणवत्ता की निगरानी 43 जल विज्ञानीय अवलोकन स्टेशनों (ऊपरी कृष्णा मण्डल-13, निचली कृष्णा मण्डल-17, कावेरी मण्डल-13) में की जाती है। निचली कृष्णा मण्डल के तहत जल विज्ञानीय स्टेशनों से एकत्र किए गए पानी के नमूनों का विश्लेषण हैदराबाद में पानी की गुणवत्ता स्तर-III प्रयोगशाला में किया जाता है। ऊपरी कृष्णा मण्डल के तहत जल विज्ञानीय स्टेशनों से एकत्र किए गए पानी के नमूनों का विश्लेषण पुणे में जल गुणवत्ता स्तर-II प्रयोगशाला में किया जाता है और कावेरी मण्डल का बेंगलुरु में जल गुणवत्ता प्रयोगशाला स्तर-II पर विश्लेषण किया जाता है। ये सभी प्रयोगशालाएं वर्ष 2020-21 के दौरान एन.ए.बी.एल. से मान्यता प्राप्त हैं।

संबंधित प्रयोगशालाओं में सीधे प्राप्त पानी के नमूनों का विश्लेषण कर भौतिक, रासायनिक, जैविक और विषाक्त तत्व आदि मापदंडों को ज्ञात किया जाता है। उपरोक्त मापदंडों के अलावा, तीन रासायनिक सूचकांक, गणितीय रूप से अवलोकित आंकड़ों के आधार पर निकाले जाते हैं। फिर पानी को यूएस सालिनिटी डायग्राम की मदद से वर्गीकृत किया जाता है।

जल गुणवत्ता वार्षिक बुक 2020-21 कृष्णा नदी क्षेत्र में सभी जल संसाधन योजनाकारों, प्रबंधकों और जल उपयोगकर्ताओं के लिए उपयोगी है। इसकी उपयोगिता में और सुधार होगा, विशेष रूप से पेयजल आपूर्ति, सिंचाई, औद्योगिक और सीवेज निपटान की योजनाओं के लिए।

PREFACE

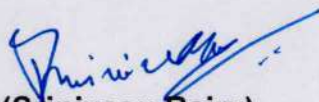
Monitoring of river water quality in all the important river basins of India is carried out as a part of hydrological observation programme which is one of the main functions of the Central Water Commission. River Water Samples are collected from the regular hydrological stations maintained by the Commission 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 43 hydrological observation stations (Upper Krishna Division-13, Lower Krishna Division-17, Cauvery Division-13). 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. All these laboratories are NABL accredited during the year 2020-21.

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 2020-21 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
March 2022


(Srinivasu Bairy)
Superintending Engineer

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कृष्णा नदी क्षेत्र
जल की गुणवत्ता डेटा (खंड - III)
(जून 2020 - मई 2021)

1.0 पानी की गुणवत्ता की निगरानी

केंद्रीय जल आयोग द्वारा 1972 से कृष्णा बेसिन में नदी जल की गुणवत्ता की निगरानी की जा रही है। इस खंड III में, पानी की गुणवत्ता के बारे में आंकड़े हैं, जो कि जल वर्ष 2020-21 के दौरान कृष्णा बेसिन में 43 जल विज्ञानीय अवलोकन स्टेशनों से लिए गए हैं। इन 43 जल गुणवत्ता स्टेशनों में से 13 स्टेशनों की निगरानी ऊपरी कृष्णा मण्डल, पुणे द्वारा की जाती है, 17 स्टेशनों की निगरानी निचली कृष्णा मण्डल, हैदराबाद द्वारा की जाती है और शेष 13 स्टेशनों की निगरानी कावेरी मण्डल, बेंगलुरु द्वारा की जाती है। इन स्टेशनों के स्थानों को दिखाने वाला कृष्णा नदी क्षेत्र का मानचित्र संलग्न है।

हैदराबाद में स्थित एक स्तर -III प्रयोगशाला और पुणे और बेंगलोर में स्थित दो स्तर -II प्रयोगशालाएं पानी की गुणवत्ता के मापदंडों के विश्लेषण में लगी हुई हैं। ये सभी प्रयोगशालाएं वर्ष 2020-21 के दौरान एन.ए.बी.एल. से मान्यता प्राप्त हैं।

1.1 जल गुणवत्ता स्टेशनों का वर्गीकरण

जल गुणवत्ता स्टेशन में मानव गतिविधि के आधार पर, उन्हें बेस लाइन स्टेशनों, फ्लक्स स्टेशनों और ट्रेंड स्टेशनों के रूप में वर्गीकृत किया जाता है।

- (i) **बेस लाइन स्टेशन:** ये वह जल गुणवत्ता स्टेशन हैं, जहां पानी की गुणवत्ता पर मानव गतिविधियों का कोई प्रभाव नहीं है। इन स्टेशनों पर बारहमासी नदियों के लिए वर्ष में छह बार और मौसमी नदियों के लिए तीन से चार बार पानी की गुणवत्ता की निगरानी की जाती है।
- (ii) **फ्लक्स स्टेशन:** इन स्टेशनों को प्रभाव स्टेशनों के रूप में भी जाना जाता है। ये स्टेशन किसी भी समय मानव हस्तक्षेप या भूवैज्ञानिक विशेषता के कारण प्रदूषण की सीमा को मापने के लिए मुख्य नदी की धारा पर विशेष प्रदूषक के द्रव्यमान को मापने के लिए हैं और अपनाए गए प्रदूषण नियंत्रण उपायों के प्रभाव को मापने के लिए आवश्यक हैं। इन स्टेशनों पर पानी के उपयोग की प्रदूषण क्षमता या महत्व के आधार पर एक वर्ष में बारह से चौबीस बार निगरानी की जाती है।
- (iii) **ट्रेंड स्टेशन:** इन स्टेशनों को पानी की गुणवत्ता की निगरानी के लिए डिज़ाइन किया गया है, यह दिखाने के लिए कि मानव गतिविधियों के प्रभाव के कारण जलधारा पर एक विशेष बिंदु, समय के साथ कैसे बदलता है। इन स्टेशनों पर साल में बारह बार निगरानी की जाती है।

2.0 अवलोकन / नमूना तकनीकें:

प्रत्येक स्टेशन पर जल धारा से डिस्चार्ज मापन खंड पर पानी की सतह के 30 सेमी नीचे, निर्धारित तिथियों पर एक सामान्य नमूना एकत्र किया जाता है।

दो पानी के नमूने एक 1 लीटर क्षमता की पॉलिथीन की बोतल में और एक 250 मिलीलीटर विसंक्रामित कांच की बोतल में हर महीने नमूना संग्रह की तारीख पर एकत्र किए जाते हैं। पॉलिथीन की बोतलों में एकत्रित पानी के नमूनों का उपयोग भौतिक रासायनिक मापदंडों के विश्लेषण के लिए किया जाता है और विसंक्रामित कांच की बोतल में एकत्रित पानी के नमूने का उपयोग बैक्टीरिया के मानकों के विश्लेषण के लिए किया जाता है। वर्ष में एक बार अप्रैल के महीने में पानी के नमूने को एक नई पॉलिथीन की बोतलों में निशानी वाले और जहरीले तत्वों के विश्लेषण के लिए एकत्र किया जाता है और कीटनाशकों के विश्लेषण के लिए भूरे पीले रंग की

कांच की बोतल में भी पानी के नमूने एकत्र किए जाते हैं।

नमूने को संबंधित प्रयोगशालाओं में बर्फ के साथ ठंडे पैक में ले जाया जाता है , ताकि न्यूनतम 24 घंटे के संग्रह के बाद वे प्रयोगशालाओं में पहुंच सकें। प्रयोगशाला में नमूनों की प्राप्ति के तुरंत बाद pH, विद्युत प्रवाहकत्व, भंग ऑक्सीजन, क्षारीयता, कठोरता और अमोनिया जैसे मापदंडों का विश्लेषण किया जाता है। बाद में उन्हें निर्धारित समय सीमा के भीतर अन्य मापदंडों के विश्लेषण के लिए 4°C पर संरक्षित किया जाता है।

2.1 जल गुणवत्ता स्टेशनों का प्रकार:

स. क्र.	साइट का नाम	मण्डल का नाम	प्रकार	स. क्र.	साइट का नाम	मण्डल का नाम	प्रकार
1	विजयवाड़ा	नि.कृ.म.	फलक्स	23	लक्कवल्ली	का.म.	ट्रेंड
2	कीसरा	नि.कृ.म.	बेसलाइन	24	यादगीर	नि.कृ.म.	ट्रेंड
3	मधिरा	नि.कृ.म.	ट्रेंड	25	मलखेड़	नि.कृ.म.	बेसलाइन
4	मुनुगोडु	नि.कृ.म.	ट्रेंड	26	देवगांव पुल	नि.कृ.म.	ट्रेंड
5	पलेरु बांध	नि.कृ.म.	ट्रेंड	27	वडकबाल	ऊ.कृ.म.	ट्रेंड
6	वादेनापल्ली	नि.कृ.म.	ट्रेंड	28	टाकली	ऊ.कृ.म.	ट्रेंड
7	वलीगोंडा	नि.कृ.म.	ट्रेंड	29	सराटी	ऊ.कृ.म.	बेसलाइन
8	दामेरचेरला	नि.कृ.म.	ट्रेंड	30	फुलगाँव	ऊ.कृ.म.	बेसलाइन
9	हालिया	नि.कृ.म.	ट्रेंड	31	मीरावाड़ी	ऊ.कृ.म.	ट्रेंड
10	बावापुरम	नि.कृ.म.	ट्रेंड	32	पारगाव	ऊ.कृ.म.	ट्रेंड
11	मंत्रालयम	नि.कृ.म.	ट्रेंड	33	धोंड	ऊ.कृ.म.	ट्रेंड
12	टी. रामपुरम	नि.कृ.म.	ट्रेंड	34	हुविनहेदगी	नि.कृ.म.	ट्रेंड
13	केल्लोडु	का.म.	ट्रेंड	35	देवसुगर	नि.कृ.म.	ट्रेंड
14	हूविनहोले	का.म.	ट्रेंड	36	चोलचगुड्डा	का.म.	ट्रेंड
15	मारोल	का.म.	ट्रेंड	37	गोकक फॉल्स	का.म.	ट्रेंड
16	हरलाहल्ली	का.म.	ट्रेंड	38	तेरवाड़	ऊ.कृ.म.	ट्रेंड
17	ब्यालड़ाहल्ली	का.म.	ट्रेंड	39	कुरुंदवाड़	ऊ.कृ.म.	ट्रेंड
18	कुप्पेलूर	का.म.	ट्रेंड	40	अर्जुनवाड़	ऊ.कृ.म.	ट्रेंड
19	होन्नाली	का.म.	बेसलाइन	41	समडोली	ऊ.कृ.म.	ट्रेंड
20	हरिहरपुरा	का.म.	ट्रेंड	42	कराड़	ऊ.कृ.म.	ट्रेंड
21	शिमोगा	का.म.	बेसलाइन	43	वारंजी	ऊ.कृ.म.	बेसलाइन
22	होलेहोन्नूरु	का.म.	ट्रेंड				

2.2 विश्लेषण तकनीक और तरीके:

विभिन्न जल गुणवत्ता निगरानी स्टेशनों से प्राप्त पानी के नमूनों का विश्लेषण विभिन्न मापदंडों के लिए "पानी और अपशिष्ट जल की जांच के मानक तरीकों" - APHA, AWWA और WPCF, 22 वां संस्करण के अनुसार किया जाता है।

2.3 आयतनिक विश्लेषण विधि:

इस विधि का उपयोग कुल कठोरता, कैल्शियम, कार्बोनेट, बाइकार्बोनेट, क्लोराइड, घुलनशील ऑक्सीजन, जैव रासायनिक ऑक्सीजन की मांग और रासायनिक ऑक्सीजन की मांग को निर्धारित करने के लिए किया जाता है। इस प्रक्रिया में, सटीक रूप से ज्ञात संकेंद्रण की मात्रा का

पता लगाने के लिए विश्लेषण किया जाता है, जो नमूना की ज्ञात मात्रा के साथ प्रतिक्रिया करता है जिससे पैरामीटर की संकेंद्रता का मूल्यांकन किया जाता है।

2.4 उपकरण विधि:

उपकरण विधि में, विश्लेषण किए गए प्रासंगिक मापदंडों और उपयोग किए गए उपकरणों का विवरण यहां दिया गया है:

स. क्र.	विधि	विश्लेषित किए गए मापदंड	उपकरण का नाम
1	पोटेशियोमेट्रिक विधि	pH	डिजिटल pH मीटर
2	कंडोमेट्रिक विधि	विद्युत चालकता	डिजिटल चालकता मीटर
3	नेफेलोमेट्रिक विधि	सल्फेट और टर्बिडिटी	नेफेलो-टर्बिडिटी मीटर
4	लौ उत्सर्जन फोटोमेट्री विधि	सोडियम & पोटेशियम	लौ फोटोमीटर
5	वर्णमिति विधि	अमोनियाकल नाइट्रोजन, नाइट्राइट-नाइट्रोजन, फॉस्फेट-फॉस्फोरस, सिलिकॉन, बोरान	यूवी-विज़ स्पेक्ट्रोफोटोमीटर
6	ग्रेविमेट्रिक विधि	पूर्णत घुले हुए ठोस पदार्थ	180°C पर पूर्ण सूखापन के लिए गर्म वायु ओवन
7	क्रोमेटोग्राफिक विधि	एल्ट्रिन, बीएचसी, डीडीटी, डाइड्रिन और एंडोसुल्फान	गैस क्रोमोग्राफ
8	परमाणु अवशोषण विधि	आर्सेनिक, कैडमियम, क्रोमियम, मरकरी, आयरन, निकल, लेड, जिंक और कॉपर	परमाणु अवशोषण स्पेक्ट्रोमीटर
9	ऑक्सीडेटिव दहन इन्फ्रारेड विश्लेषण विधि	कुल ऑर्गेनिक कार्बन	कुल ऑर्गेनिक कार्बन विश्लेषक
10	आयन चयनात्मक इलेक्ट्रोड विधि / स्पेक्ट्रोफोटोमेट्रिक विधि	नाइट्रेट-नाइट्रोजन और फ्लोराइड	आयन मीटर / स्पेक्ट्रोफोटोमीटर

2.5 के.ज.आ. प्रयोगशालाओं में विश्लेषण किए गए जल गुणवत्ता पैरामीटर्स की सूची

भौतिक - रासायनिक पैरामीटर: 1. PH 2. विद्युत चाल कता 3. सोडियम 4. पोटेशियम 5. कैल्शियम 6. मैग्नीशियम 7. लोहा 8. अमोनिया 9. कार्बोनेट 10. द्वि-कार्बोनेट 11. क्लोराइड 12. फ्लोराइड 13. सल्फेट 14. नाइट्रेट 15. नाइट्राइट 16. ऑर्थो-फॉस्फेट, 17. सिलिकेट, 18. टोटल हार्डनेस 19. टर्बिडिटी 20. बोरोन और 21. टोटल डिऑल्व्ड सॉलिड्स।

जैविक / जीवाणुतत्व-संबंधी पैरामीटर: 1. घुलित ऑक्सीजन 2. जैव-रासायनिक ऑक्सीजन की माँग 3. रासायनिक ऑक्सीजन की माँग 4. टोटल ऑर्गेनिक कार्बन 5. फेकल कोलीफॉर्म

कीटनाशक: 1. एल्ट्रिन 2. बीएचसी 3. डीडीटी 4. डीड्रिन 5. एंडोसुल्फान

ट्रेस और विषाक्त तत्व: 1. आर्सेनिक 2. पारा 3. निकल 4. जस्ता 5. क्रोमियम 6. लीड 7. कैडमियम 8. तांबा

2.6 परिकलित पैरामीटर:

छह मापदंडों की गणना अन्य मापदंडों के परिणामों के आधार पर की जाती है। जिसके लिए सूत्र नीचे दिए गए हैं।

(i) **कार्बोनेट और बाइकार्बोनेट** : पानी के नमूने में फेनोल्फथेलिन क्षारीयता (P) और कुल क्षारीयता (T) के मापित मूल्यों का उपयोग करके , कार्बोनेट क्षारीयता और बाइकार्बोनेट क्षारीयता की गणना निम्नलिखित सूत्रों का उपयोग करके करते हैं।

अवस्था	OH ⁻ क्षारीय CaCO ₃ mg / L के रूप में	CO ₃ ⁻ CaCO ₃ क्षारीयता mg / L के रूप में	HCO ₃ ⁻ CaCO ₃ क्षारीयता mg / L के रूप में
P=0	0	0	T
P<1/2T	0	2P	T-2P
P=1/2T	0	2P	0
P>1/2T	2P-T	2(T-P)	0
P=1/2T	T	0	0

CO₃⁻ mg / L = CO₃⁻ CaCO₃ mg / L x 0.60 के रूप में क्षारीयता

HCO₃⁻ mg / L = HCO₃⁻ CaCO₃ mg / L x 1.22 के रूप में क्षारीयता

(ii) **कैल्शियम**: Ca⁺⁺ mg/L = 0.4 x Ca-Hardness as CaCO₃⁻ mg/L

(iii) **मैग्नीशियम**: Mg⁺⁺ mg/L = 0.243 x [Total Hardness as CaCO₃⁻ mg/L - Ca-Hardness as CaCO₃⁻ mg/L]

(iv) **सोडियम प्रतिशत (% Na)**: $SP = \frac{Na^+ \times 100}{\sqrt{Ca^{++} + Mg^{++} + Na^+ + K^+}}$
(Ionic सांद्रता meq / L में हैं)

(v) **सोडियम अवशोषण अनुपात (SAR)**: $SAR = \frac{Na^+}{\sqrt{(Ca^{++} + Mg^{++})/2}}$
(Ionic सांद्रता meq / L में हैं)

(vi) **अवशिष्ट सोडियम कार्बोनेट (RSC)**: $RSC = (CO_3^{--} + HCO_3^-) - (Ca^{++} + Mg^{++})$
(Ionic सांद्रता meq / L में हैं)

2.7 प्रस्तुति का तरीका:

इस खंड में प्रस्तुत स्टेशन वार जल गुणवत्ता डेटा में इतिहास पत्रक , वर्तमान वर्ष के लिए जल गुणवत्ता डेटा पत्रक और पानी की गुणवत्ता सारांश और 1993 से पानी की गुणवत्ता मौसमी औसत सारांश शामिल हैं। इस खंड- III में प्रस्तुत डेटा SWDES के माध्यम से उत्पन्न होते हैं। पानी की गुणवत्ता वाली साइटों का क्रम समुद्र से ऊपर की ओर बहने वाली नदी या किसी अन्य नदी / अंतरराष्ट्रीय सीमा के साथ संगम से तय किया जाता है , तथा स्रोत की ओर , मध्यवर्ती उपनदी पर स्थित साइटों को प्राथमिकता दी जाती है। विभिन्न नामित उपयोगों के लिए पानी की गुणवत्ता के मापदंडों की सहिष्णुता सीमाएं भारतीय मानक ब्यूरो IS : 2296-1982 के अनुसार होती हैं

2.8 जल गुणवत्ता परिदृश्य :

43 जल गुणवत्ता वाले स्टेशनों में से 23 स्टेशनों के जल गुणवत्ता परिदृश्य को कृष्णा , तुंगभद्रा और भीमा नदियों पर गिरने वाली पुस्तक में शामिल किया गया है । शेष 20 स्टेशन कृष्णा की विभिन्न सहायक नदियों पर एकल बिंदु स्रोत हैं, जिनके लिए कोई पानी की गुणवत्ता परिदृश्य उपलब्ध नहीं है ।

**KRISHNA BASIN
WATER QUALITY DATA (Vol. III)
(JUNE 2020 - MAY 2021)**

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 43 hydrological observation stations, in Krishna Basin during the water year 2020-21. Out of these 43 Water Quality stations, 13 stations are monitored by the Upper Krishna Division, Pune, 17 stations are monitored by Lower Krishna Division, Hyderabad and remaining 13 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. All these laboratories are NABL accredited during the year 2020-21.

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 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	23	Lakkavalli	CD	Trend
2	Keesara	LKD	Baseline	24	Yadgir	LKD	Trend
3	Madhira	LKD	Trend	25	Malkhed	LKD	Baseline
4	Munugodu			26	Deogaon Bridge	LKD	Trend
5	Paleru Bridge	LKD	Trend	27	Wadakbal	UKD	Trend
6	Wadenapally	LKD	Trend	28	Takli	UKD	Trend
7	Valigonda			29	Sarati	UKD	Baseline
8	Dameracherla	LKD	Trend	30	Phulgaon	UKD	Baseline
9	Halia	LKD	Trend	31	Mirawadi	UKD	Trend
10	Bawapuram	LKD	Trend	32	Paragaon	UKD	Trend
11	Mantralayam	LKD	Trend	33	Dhond	UKD	Trend
12	T. Rampuram	LKD	Trend	34	Huvinhedgi	LKD	Trend
13	Kellodu	CD	Trend	35	Deosugar	LKD	Trend
14	Hoovinahole	CD	Trend	36	Cholachagudda	CD	Trend
15	Marol	CD	Trend	37	Gokakfalls	CD	Trend
16	Harlahalli	CD	Trend	38	Terwad	UKD	Trend
17	Byaladahalli	CD	Trend	39	Kurundwad	UKD	Trend
18	Kuppelur	CD	Trend	40	Arjunwad	UKD	Trend
19	Honnali	CD	Baseline	41	Samdoli	UKD	Trend
20	Hariharapura	CD	Trend	42	Karad	UKD	Baseline
21	Shimoga	CD	Baseline	43	Warunji	UKD	Trend
22	Holehonnur	CD	Trend				

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. Faecal 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.

2.8 Water Quality Scenario

Out of 43 water quality stations, the water quality scenario of 23 stations is included in the book which are falling on rivers Krishna ,Tungabhadra and Bhima. The remaining 20 stations are single point sources on different tributaries of Krishna for which no water quality scenario is available.

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.

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Vijayawada	Code	: AK000B9
State	: Andhra Pradesh	District	Krishna
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	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 : 2020-2021

Station Name : Vijayawada (AK000B9)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Analysis

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	14-09-2020	05-10-2020	02-11-2020	01-12-2020	11-12-2020	21-12-2020
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	4493	673.6	408.2	300.3	0.000	0.000
2	Colour_Cod (-)	Light Brown	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	548	582	535	533	570	564
4	EC_GEN (µmho/cm)	614	516	529	722	648	771
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.8	8.0	7.2	7.2	7.4	7.4
7	pH_GEN (pH units)	7.4	8.0	8.1	7.0	8.1	8.1
8	TDS (mg/L)	331	389	391	456	456	449
9	Temp (deg C)	25.0	25.0	24.0	18.0	16.0	17.0
10	Turb (NTU)	12.00	23.00	22.00	5.00	4.00	21.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	140	160	176	230	195	98
3	B (mg/L)	0.54	0.23	0.38	0.73	0.32	0.23
4	Ca (mg/L)	38	34	37	25	48	29
5	Cl (mg/L)	73.5	60.5	58.0	80.2	83.1	106.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.12	0.33	0.36	0.56	0.51	0.49
8	Fe (mg/L)	0.0	0.0	0.0	0.5	0.2	0.0
9	HCO3 (mg/L)	171	195	215	281	238	120
10	K (mg/L)	0.4	0.3	0.7	0.8	0.5	0.5
11	Mg (mg/L)	18.1	17.0	20.0	39.9	19.0	26.4
12	Na (mg/L)	64.4	44.9	56.7	67.2	77.1	76.3
13	NH3-N (mg N/L)	0.08	0.01	0.00	0.31	0.15	0.09
14	NO2+NO3 (mg N/L)						
15	NO2-N (mgN/L)	0.02	0.06	0.04	0.04	0.44	0.22
16	NO3-N (mgN/L)						
17	o-PO4-P (mg P/L)	0.260	0.090	0.080	0.010	0.520	0.050
18	SiO2 (mg/L)	10.8	15.2	14.0	18.1	22.4	80.9
19	SO4 (mg/L)	53.7	43.4	36.3	63.2	75.9	93.2
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)		1.6	4.5	1.3	79.0	1.2
2	COD (mg/L)	20.8	11.8	34.5	64.7	17.6	18.2
3	DO (mg/L)		4.4	6.0	7.5	4.0	5.2
4	DO_SAT% (%)		53	71	79	41	54
5	FCol-MPN (MPN/100mL)	2200	1400	2200	1100	1300	2800
6	Tcol-MPN (MPN/100mL)	9000	16000	16000	3500	16000	16000
	TRACE & TOXIC						
1	As (µg/L)				0.83	1.08	0.00
2	Cd (µg/L)				3.60	3.90	3.70
3	Cr (µg/L)				3.20	2.20	2.90
4	Cu (µg/L)	0.00	0.00	0.00	4.60	3.90	1.90
5	Hg (µg/L)				0.31	0.72	0.40
6	Ni (µg/L)				11.40	2.60	6.20
7	Pb (µg/L)				56.00	49.00	37.00
8	Zn (µg/L)	0.00	0.00	0.00	8.05	23.07	5.96
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	95	84	92	64	120	72
2	HAR_Total (mgCaCO3/L)	170	155	175	230	199	182
3	Na% (%)	45	39	41	39	46	48
4	RSC (-)	0.0	0.1	0.0	0.0	0.0	0.0
5	SAR (-)	2.2	1.6	1.9	1.9	2.4	2.5
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

Station Name : Vijayawada (AK000B9)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Analysis

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	01-01-2021	01-02-2021	01-03-2021	05-04-2021	03-05-2021	21-05-2021
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	0.000	0.000	0.000	0.000	0.000	0.000
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	524		526	568		
4	EC_GEN (µmho/cm)	666	343	1003	1171	1277	841
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.1		7.1	7.3		7.4
7	pH_GEN (pH units)	8.3	8.3	8.3	8.2	8.5	8.2
8	TDS (mg/L)	444	222	686	718	800	494
9	Temp (deg C)	16.0	16.0	29.0	21.0	23.0	22.0
10	Turb (NTU)	7.00	2.00	0.00	16.00	15.00	14.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	17.1	0.0	22.6	0.0
2	ALK-TOT (mgCaCO3/L)	180	165	190	198	209	242
3	B (mg/L)	0.30	0.12	0.40			
4	Ca (mg/L)	32	32	51	48	61	52
5	Cl (mg/L)	105.4	130.4	165.0	192.0	213.0	122.6
6	CO3 (mg/L)	0.0	0.0	20.6	0.0	27.2	0.0
7	F (mg/L)	0.70	0.49	0.47	0.48	0.57	0.48
8	Fe (mg/L)	0.7	0.6	0.1	1.6		0.1
9	HCO3 (mg/L)	219	201	191	241	200	295
10	K (mg/L)	0.3	0.4	0.6	7.2	10.6	7.2
11	Mg (mg/L)	29.0	26.2	19.8	34.1	24.8	29.7
12	Na (mg/L)	88.0	106.8	158.9	155.3	176.5	111.5
13	NH3-N (mg N/L)	0.01	0.01	0.10			
14	NO2+NO3 (mg N/L)	2.30	1.80	3.69			
15	NO2-N (mgN/L)	0.10	0.00	0.09			
16	NO3-N (mgN/L)	2.20	1.80	3.60	7.70	4.60	8.25
17	o-PO4-P (mg P/L)	0.168	0.024	0.111			
18	SiO2 (mg/L)	19.9	15.2	19.4			
19	SO4 (mg/L)	68.0	94.2	90.0	135.5	95.2	9.9
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.5	1.3	3.6	1.6	1.2	
2	COD (mg/L)	15.1	19.7	20.7	32.2	30.3	
3	DO (mg/L)	7.0	5.9	5.3	3.7	5.4	
4	DO_SAT% (%)	71	60	69	42	63	
5	FCol-MPN (MPN/100mL)	1400	260	1300	270	170	
6	Tcol-MPN (MPN/100mL)	16000	700	3000	330	210	
	TRACE & TOXIC						
1	As (µg/L)	4.74			3.19		2.10
2	Cd (µg/L)	0.00			2.43		1.40
3	Cr (µg/L)	11.50			0.90		0.00
4	Cu (µg/L)	1.90	4.00	19.00	7.80		2.60
5	Hg (µg/L)	0.48			0.55		0.69
6	Ni (µg/L)	5.60			30.30		3.20
7	Pb (µg/L)	13.00			63.00		15.00
8	Zn (µg/L)	4.37	3.30	0.02	22.26		9.05
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	80	79	126	120	153	130
2	HAR_Total (mgCaCO3/L)	201	188	209	262	256	254
3	Na% (%)	49	55	62	56	59	48
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	2.7	3.4	4.8	4.2	4.8	3.1
	PESTICIDES						

Water Quality Summary for the period : 2020-2021

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)	366	20408	0.000	1173
2	EC_FLD (µmho/cm)	9	582	524	550
3	EC_GEN (µmho/cm)	12	1277	343	758
4	pH_FLD (pH units)	10	8.0	7.1	7.4
5	pH_GEN (pH units)	12	8.5	7.0	8
6	TDS (mg/L)	12	800	222	486
7	Temp (deg C)	12	29.0	16.0	21
8	Turb (NTU)	12	23.00	0.00	11.75
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	22.6	0.0	3.3
2	ALK-TOT (mgCaCO3/L)	12	242	98	182
3	B (mg/L)	9	0.73	0.12	0.36
4	Ca (mg/L)	12	61	25	40
5	Cl (mg/L)	12	213.0	58.0	115.8
6	CO3 (mg/L)	12	27.2	0.0	4
7	F (mg/L)	12	0.70	0.12	0.46
8	Fe (mg/L)	11	1.6	0.0	0.4
9	HCO3 (mg/L)	12	295	120	214
10	K (mg/L)	12	10.6	0.3	2.5
11	Mg (mg/L)	12	39.9	17.0	25.3
12	Na (mg/L)	12	176.5	44.9	98.6
13	NH3-N (mg N/L)	9	0.31	0.00	0.08
14	NO2+NO3 (mg N/L)	3	3.69	1.80	2.6
15	NO2-N (mgN/L)	9	0.44	0.00	0.11
16	NO3-N (mgN/L)	6	8.25	1.80	4.69
17	o-PO4-P (mg P/L)	9	0.520	0.010	0.146
18	SiO2 (mg/L)	9	80.9	10.8	24
19	SO4 (mg/L)	12	135.5	9.9	71.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	79.0	1.2	9.7
2	COD (mg/L)	11	64.7	11.8	26
3	DO (mg/L)	5	7.5	4.0	5.4
4	DO_SAT% (%)	5	79	41	60
5	FCol-MPN (MPN/100mL)	11	2800	170	1309
6	Tcol-MPN (MPN/100mL)	11	16000	210	8795
	TRACE & TOXIC				
1	As (µg/L)	4	4.74	0.00	1.66
2	Cd (µg/L)	6	3.90	0.00	2.51
3	Cr (µg/L)	6	11.50	0.00	3.45
4	Cu (µg/L)	11	19.00	0.00	4.15
5	Hg (µg/L)	4	0.72	0.31	0.48
6	Ni (µg/L)	6	30.30	2.60	9.88
7	Pb (µg/L)	6	63.00	13.00	38.83
8	Zn (µg/L)	11	23.07	0.00	6.92
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	153	64	101
2	HAR_Total (mgCaCO3/L)	12	262	155	207
3	Na% (%)	12	62	39	49
4	RSC (-)	12	0.1	0.0	0
5	SAR (-)	12	4.8	1.6	2.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	270.5	3578	100.1	354.0	629.0
2	EC_FLD (µmho/cm)					537
3	EC_GEN (µmho/cm)	509	519	597	576	572
4	pH_FLD (pH units)					7.6
5	pH_GEN (pH units)	8.3	8.0	8.3	8.2	8.2
6	TDS (mg/L)					
7	Temp (deg C)	28.2	26.5	26.3	26.0	30.6
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	3.3	0.0	4.0	0.0	1.6
2	ALK-TOT (mgCaCO3/L)	154	149	182	150	163
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	36	34	42	31	37
5	Cl (mg/L)	43.1	33.5	51.1	52.8	56.9
6	CO3 (mg/L)	4.0	0.0	4.8	0.0	1.9
7	F (mg/L)	0.67	0.66	0.65	0.56	0.65
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	180	182	212	183	195
10	K (mg/L)	2.9	3.5	3.1	3.2	3.5
11	Mg (mg/L)	11.8	13.5	11.2	15.5	14.9
12	Na (mg/L)	60.4	44.0	53.8	52.8	55.3
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	1.50	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	1.50	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.162
19	SiO2 (mg/L)	16.3	12.9	16.4	14.1	13.5
20	SO4 (mg/L)	41.8	30.0	46.2	61.6	51.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.1	1.2	1.5	1.2
2	COD (mg/L)		11.8	17.9	29.5	39.3
3	DO (mg/L)	7.2	6.7	6.5	6.1	7.1
4	DO_SAT% (%)	93	84	80	84	94
5	FCOI-MPN (MPN/100mL)				16000	13800
6	TcoI-MPN (MPN/100mL)				16000	14600
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)	90	84	106	78	91
2	HAR_Total (mgCaCO3/L)	139	140	152	143	153
3	Na% (%)	46	40	43	44	43
4	RSC (-)	0.3	0.2	0.6	0.2	0.2
5	SAR (-)	2.2	1.6	1.9	1.9	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: 2006-2021

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				
		2011	2013	2014	2016	2017
	PHYSICAL					
1	Q (cumec)	165.6	454.2	125.8	365.2	134.0
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	622	507	497	512	520
4	pH_FLD (pH units)					6.5
5	pH_GEN (pH units)	8.1	8.4	8.6	8.3	7.6
6	TDS (mg/L)	421	272		461	302
7	Temp (deg C)	28.0	31.0	32.0	22.5	23.0
8	Turb (NTU)	1.00	1.44	13.00	4.00	37.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	1.3	2.2	4.2	1.0	4.0
2	ALK-TOT (mgCaCO3/L)	171	130	141	138	158
3	B (mg/L)	0.00	0.05	0.19		
4	Ca (mg/L)	34	27	27	29	35
5	Cl (mg/L)	60.6	39.8	67.2	39.9	72.8
6	CO3 (mg/L)	1.6	2.6	5.0	1.2	4.8
7	F (mg/L)	1.15	0.61	0.47	0.38	0.45
8	Fe (mg/L)	0.0	0.1	0.1	0.1	1.7
9	HCO3 (mg/L)	206	153	162	165	183
10	K (mg/L)	3.3	2.6	3.2	3.1	0.4
11	Mg (mg/L)	20.6	15.6	15.1	15.9	23.0
12	Na (mg/L)	57.6	44.8	50.8	42.7	53.9
13	NH3-N (mg N/L)	0.00	0.09	0.00	0.00	0.10
14	NO2+NO3 (mg N/L)	0.38	0.60	1.22	0.79	14.03
15	NO2-N (mgN/L)	0.00	0.00	0.03	0.00	0.03
16	NO3-N (mgN/L)	0.38	0.60	1.19	0.79	14.01
17	o-PO4-P (mg P/L)	0.267	0.115	0.110	0.073	0.160
18	P-Tot (mgP/L)	0.371				
19	SiO2 (mg/L)	13.0	12.2	12.8	9.7	0.0
20	SO4 (mg/L)	55.3	40.3	48.7	24.5	28.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	1.3	1.6	0.9	0.6
2	COD (mg/L)	11.2	6.6	3.5	7.0	3.3
3	DO (mg/L)	6.5	6.7	6.7	6.4	6.0
4	DO_SAT% (%)	84	90	92	74	70
5	FCOI-MPN (MPN/100mL)	13667	401	16000	12500	16000
6	Tcol-MPN (MPN/100mL)	16000	1201	16000	12500	16000
7	TOC (mg/L)	3.5				
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					4.00
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)					
8	Zn (µg/L)					79.60
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	86	68	68	73	88
2	HAR_Total (mgCaCO3/L)	172	133	131	139	184
3	Na% (%)	42	42	45	40	39
4	RSC (-)	0.2	0.0	0.2	0.0	0.0
5	SAR (-)	1.9	1.7	1.9	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: 2006-2021

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		
		2018	2019	2020
	PHYSICAL			
1	Q (cumec)	157.6	252.5	2583
2	EC_FLD (µmho/cm)	840		565
3	EC_GEN (µmho/cm)	525	408	565
4	pH_FLD (pH units)	7.3		7.9
5	pH_GEN (pH units)	8.1	7.9	7.7
6	TDS (mg/L)	292	237	360
7	Temp (deg C)	23.6	23.4	25.0
8	Turb (NTU)	20.40	17.60	17.50
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	105	147	150
3	B (mg/L)	0.06	0.20	0.39
4	Ca (mg/L)	30	38	36
5	Cl (mg/L)	55.5	57.1	67.0
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.44	0.45	0.23
8	Fe (mg/L)	0.6	3.5	0.0
9	HCO3 (mg/L)	128	180	183
10	K (mg/L)	0.4	0.7	0.3
11	Mg (mg/L)	15.6	16.8	17.6
12	Na (mg/L)	44.4	58.4	54.7
13	NH3-N (mg N/L)	0.08	0.04	0.04
14	NO2+NO3 (mg N/L)	1.15	1.66	
15	NO2-N (mgN/L)	0.15	0.10	0.04
16	NO3-N (mgN/L)	1.00	1.56	
17	o-PO4-P (mg P/L)	0.156	0.140	0.175
18	P-Tot (mgP/L)			
19	SiO2 (mg/L)	21.8	17.9	13.0
20	SO4 (mg/L)	47.7	52.4	48.6
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.9	1.0	1.6
2	COD (mg/L)	19.1	17.6	16.3
3	DO (mg/L)	5.4	6.1	4.4
4	DO_SAT% (%)	64	71	53
5	FCol-MPN (MPN/100mL)	188	1530	1800
6	Tcol-MPN (MPN/100mL)	8800	4720	12500
7	TOC (mg/L)			
	TRACE & TOXIC			
1	As (µg/L)		1.36	
2	Cd (µg/L)		0.10	
3	Cr (µg/L)		7.91	
4	Cu (µg/L)	10.00	7.80	0.00
5	Hg (µg/L)			
6	Ni (µg/L)		2.01	
7	Pb (µg/L)		0.47	
8	Zn (µg/L)	32.91	39.48	0.00
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	75	94	89
2	HAR_Total (mgCaCO3/L)	140	164	163
3	Na% (%)	40	38	42
4	RSC (-)	0.0	0.0	0.1
5	SAR (-)	1.6	1.9	1.9
	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 flood season 2012 and 2015 due to drybed / no flow condition.

Water Quality Seasonal Average for the period: 2006-2021

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				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	139.8	96.83	198.1	176.2	230.9
2	EC_FLD (µmho/cm)					675
3	EC_GEN (µmho/cm)	508	566	666	650	724
4	pH_FLD (pH units)					7.4
5	pH_GEN (pH units)	8.4	8.5	8.5	8.2	8.3
6	TDS (mg/L)					
7	Temp (deg C)	27.0	25.8	24.8	25.0	26.0
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	10.0	13.9	8.0	0.0	5.3
2	ALK-TOT (mgCaCO3/L)	186	189	195	196	197
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	40	40	53	38	40
5	Cl (mg/L)	40.5	48.8	55.0	58.1	70.8
6	CO3 (mg/L)	12.0	16.7	9.6	0.0	6.4
7	F (mg/L)	0.48	0.82	0.76	0.55	0.77
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	203	196	218	239	228
10	K (mg/L)	2.3	2.9	3.1	3.1	3.7
11	Mg (mg/L)	14.5	17.0	9.7	19.4	22.2
12	Na (mg/L)	57.5	65.5	63.3	64.8	71.1
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	1.64	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	1.64	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.153
19	SiO2 (mg/L)	18.3	15.0	16.3	16.5	15.6
20	SO4 (mg/L)	40.8	42.3	49.0	53.0	57.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.2	1.1	1.6	0.7
2	COD (mg/L)		31.3	9.4	15.3	19.4
3	DO (mg/L)	7.7	7.5	7.1	7.2	7.2
4	DO_SAT% (%)	96	91	86	87	89
5	FCOI-MPN (MPN/100mL)				16000	16000
6	TcoI-MPN (MPN/100mL)				16000	16000
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)	101	100	133	94	99
2	HAR_Total (mgCaCO3/L)	161	171	174	175	191
3	Na% (%)	43	45	44	44	44
4	RSC (-)	0.5	0.4	0.4	0.8	0.2
5	SAR (-)	2.0	2.2	2.1	2.2	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: 2006-2021

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				
		2011-2012	2013-2014	2018-2019	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	146.3	189.7	0.000	182.5	118.1
2	EC_FLD (µmho/cm)			614		545
3	EC_GEN (µmho/cm)	524	562	747	578	613
4	pH_FLD (pH units)			7.8		7.2
5	pH_GEN (pH units)	8.5	8.3	7.9	8.1	8.0
6	TDS (mg/L)	328	485	438	368	403
7	Temp (deg C)	28.0	27.5	18.8	20.5	17.8
8	Turb (NTU)	1.00	4.00	0.67	37.25	10.17
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	12.2	2.1	1.2	2.8	0.0
2	ALK-TOT (mgCaCO3/L)	155	160	178	159	174
3	B (mg/L)	0.17	0.02	0.04	0.32	0.35
4	Ca (mg/L)	28	33	39	36	34
5	Cl (mg/L)	50.5	44.5	51.0	76.3	93.8
6	CO3 (mg/L)	14.7	2.5	1.5	3.3	0.0
7	F (mg/L)	0.57	0.55	0.42	0.33	0.52
8	Fe (mg/L)	0.0	0.0	0.1	0.5	0.3
9	HCO3 (mg/L)	159	191	214	187	212
10	K (mg/L)	2.5	3.2	0.4	0.5	0.5
11	Mg (mg/L)	16.0	19.1	23.7	20.5	26.8
12	Na (mg/L)	52.4	50.6	52.9	63.5	78.7
13	NH3-N (mg N/L)	0.00	0.00	0.16	0.02	0.10
14	NO2+NO3 (mg N/L)	2.75	1.13	1.37	3.23	2.05
15	NO2-N (mgN/L)	0.00	0.00	0.12	0.02	0.14
16	NO3-N (mgN/L)	2.75	1.13	1.25	3.20	2.00
17	o-PO4-P (mg P/L)	0.230	0.175	0.221	0.105	0.142
18	P-Tot (mgP/L)	0.230				
19	SiO2 (mg/L)	15.1	12.6	11.1	18.0	28.4
20	SO4 (mg/L)	49.8	17.3	67.1	59.0	71.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.3	1.1	1.4	1.7	14.8
2	COD (mg/L)	4.3	3.7	9.2	38.8	28.3
3	DO (mg/L)	6.2	6.8	6.4	6.0	5.7
4	DO_SAT% (%)	79	86	68	67	61
5	FCol-MPN (MPN/100mL)	16000	515	595	4750	1510
6	Tcol-MPN (MPN/100mL)	16000	1450	1725	12400	11367
7	TOC (mg/L)	2.4				
	TRACE & TOXIC					
1	As (µg/L)				4.34	1.66
2	Cd (µg/L)				0.08	2.80
3	Cr (µg/L)				6.89	4.95
4	Cu (µg/L)			6.75	2.75	2.72
5	Hg (µg/L)					0.48
6	Ni (µg/L)				19.40	6.45
7	Pb (µg/L)				1.33	38.75
8	Zn (µg/L)			21.68	46.00	7.46
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	70	83	97	89	84
2	HAR_Total (mgCaCO3/L)	137	163	196	174	196
3	Na% (%)	45	40	37	42	46
4	RSC (-)	0.4	0.0	0.0	0.2	0.0
5	SAR (-)	2.0	1.7	1.7	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)					

Samples not collected during winter season 2012-13 and 2014-15 to 2017-18 due to drybed / no flow condition.

Water Quality Seasonal Average for the period: 2006-2021

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	2019	2020	2021
	PHYSICAL						
1	Q (cumec)	0.000	7.232	30.76	0.000	0.000	0.000
2	EC_FLD (µmho/cm)				639		547
3	EC_GEN (µmho/cm)	500	644	620	719	740	1073
4	pH_FLD (pH units)				8.1		7.3
5	pH_GEN (pH units)	8.3	8.4	8.5	7.6	8.6	8.3
6	TDS (mg/L)				432	563	675
7	Temp (deg C)	27.0	26.3	28.0	20.0	18.0	23.8
8	Turb (NTU)				1.33	16.00	11.25
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	24.1	5.5	8.0	0.0	1.7	9.9
2	ALK-TOT (mgCaCO3/L)	180	194	176	198	134	210
3	B (mg/L)	0.00	0.00	0.00	0.05	0.11	0.40
4	Ca (mg/L)	42	42	47	37	32	53
5	Cl (mg/L)	42.4	59.7	53.9	94.6	117.0	173.2
6	CO3 (mg/L)	29.0	6.7	9.6	0.0	2.0	12.0
7	F (mg/L)	0.88	0.79	0.72	0.63	0.48	0.50
8	Fe (mg/L)	0.0	0.0	0.0	0.3	0.1	0.6
9	HCO3 (mg/L)	161	223	195	241	159	232
10	K (mg/L)	3.1	3.3	3.2	0.6	0.6	6.4
11	Mg (mg/L)	15.0	15.3	7.8	25.7	26.0	27.1
12	Na (mg/L)	47.0	66.7	60.6	87.3	59.4	150.5
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.31	0.00	0.10
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	1.19	2.76	3.69
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.04	0.06	0.09
16	NO3-N (mgN/L)	0.00	0.01	0.01	1.15	2.70	6.04
17	o-PO4-P (mg P/L)	0.000			0.457	0.120	0.111
18	P-Tot (mgP/L)	0.001	0.001	0.001			
19	SiO2 (mg/L)	11.8	15.3	11.8	15.1	21.3	19.4
20	SO4 (mg/L)	47.0	40.0	50.0	99.2	93.0	82.6
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.2	0.9	1.1	1.5	3.0	2.1
2	COD (mg/L)		9.3	12.0	21.2	17.0	27.7
3	DO (mg/L)	6.8	6.4	7.3	7.8	7.4	
4	DO_SAT% (%)	85	79	93	86	78	
5	FCOI-MPN (MPN/100mL)				693	220	580
6	Tcol-MPN (MPN/100mL)				1890	2800	1180
7	TOC (mg/L)		3.3				
	TRACE & TOXIC						
1	As (µg/L)				2.43		
2	Cd (µg/L)		0.70		1.30		1.92
3	Cr (µg/L)		2.00		2.00		0.45
4	Cu (µg/L)				9.00	0.00	9.80
5	Hg (µg/L)		0.00		0.04		
6	Ni (µg/L)		8.40		5.30		16.75
7	Pb (µg/L)		11.78		17.00		39.00
8	Zn (µg/L)		16.31		16.63	19.00	10.44
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	105	105	116	93	80	132
2	HAR_Total (mgCaCO3/L)	168	169	149	200	188	245
3	Na% (%)	37	46	46	49	41	56
4	RSC (-)	0.3	0.5	0.6	0.2	0.0	0.0
5	SAR (-)	1.6	2.2	2.2	2.7	1.9	4.2
	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				

Samples not collected during Summer season 2010 to2018 due to drybed / no flow condition.

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Keesara	Code	: AKA00B4
State	: Andhra Pradesh	District	Krishna
Basin	: Krishna	Independent River	: Krishna
Tributary	: Munneru	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	: 01-06-1965		
Sediment	: 02-07-1965		
Water Quality	: 01-01-1972		

Water Quality Datasheet for the period : 2020-2021

Station Name : Keesara (AKA00B4)

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

River Water Analysis

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	14-09-2020	05-10-2020	02-11-2020	01-12-2020	11-12-2020	21-12-2020
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	1478	107.8	45.62	30.42	18.71	11.81
2	Colour_Cod (-)	Light Brown	Light Brown	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	152	157	152	154	150	146
4	EC_GEN (μmho/cm)	438	593	769	854	811	859
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.1	7.3	7.2	7.2	7.2	6.9
7	pH_GEN (pH units)	7.5	7.9	8.1	8.2	8.2	8.2
8	TDS (mg/L)	242	390	466	513	533	552
9	Temp (deg C)	24.0	28.0	26.0	25.0	22.0	22.0
10	Turb (NTU)	12.00	74.00	54.00	24.00	26.00	16.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	11.2	0.0
2	ALK-TOT (mgCaCO3/L)	166	213	292	302	312	188
3	B (mg/L)	0.20	0.23	0.25	0.11	0.74	0.18
4	Ca (mg/L)	36	25	27	10	48	27
5	Cl (mg/L)	42.2	54.0	81.2	104.8	104.0	102.7
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	13.5	0.0
7	F (mg/L)	0.11	0.05	0.64	0.80	0.91	0.92
8	Fe (mg/L)	0.0	0.9	0.0	0.9	0.3	0.1
9	HCO3 (mg/L)	203	260	357	369	353	229
10	K (mg/L)	0.3	0.4	0.7	0.9	0.5	0.5
11	Mg (mg/L)	10.3	34.6	39.7	50.0	30.6	30.5
12	Na (mg/L)	44.4	47.3	92.5	100.2	107.7	83.6
13	NH3-N (mg N/L)	0.06	0.02	0.05	0.26	0.09	0.23
14	NO2+NO3 (mg N/L)						
15	NO2-N (mgN/L)	0.06	0.04	0.04	0.12	0.07	0.12
16	NO3-N (mgN/L)						
17	o-PO4-P (mg P/L)	0.020	0.060	1.720	0.210	0.660	0.530
18	SiO2 (mg/L)	23.5	11.9	11.9	17.4	23.4	18.4
19	SO4 (mg/L)	22.1	30.4	22.6	96.0	80.7	110.7
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)		0.9	2.8	1.3	0.9	0.8
2	COD (mg/L)	15.7	12.6	23.3	7.8	17.2	19.9
3	DO (mg/L)		3.4	6.0	4.6	4.9	6.6
4	DO_SAT% (%)		43	74	56	56	75
5	FCol-MPN (MPN/100mL)	1400	1100	2200	1400	1400	2800
6	Tcol-MPN (MPN/100mL)	16000	3500	9000	3500	2800	16000
	TRACE & TOXIC						
1	As (μg/L)				0.64	0.63	0.16
2	Cd (μg/L)				2.20	4.50	4.30
3	Cr (μg/L)				2.70	2.70	1.90
4	Cu (μg/L)	0.00	0.02	0.00	4.70	2.20	1.40
5	Hg (μg/L)				0.20	1.25	0.73
6	Ni (μg/L)				11.10	6.30	2.60
7	Pb (μg/L)				62.00	52.00	58.00
8	Zn (μg/L)	0.00	0.00	0.04	13.90	23.16	3.20
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	89	62	67	24	119	68
2	HAR_Total (mgCaCO3/L)	132	206	232	232	246	195
3	Na% (%)	42	34	47	49	49	48
4	RSC (-)	0.7	0.2	1.3	1.5	1.3	0.0
5	SAR (-)	1.7	1.4	2.7	2.9	3.0	2.6
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

Station Name : Keesara (AKA00B4)

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

River Water Analysis

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	01-01-2021	01-02-2021	01-03-2021	05-04-2021	03-05-2021	21-05-2021
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	18.92	24.33	4.814	19.20	7.624	6.723
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μ mho/cm)	154	150	155	146		1048
4	EC_GEN (μ mho/cm)	598	387	1022	911	1015	1024
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.2	7.2	7.2	6.9		7.3
7	pH_GEN (pH units)	8.1	7.6	8.0	8.2	8.2	8.2
8	TDS (mg/L)	390	230	640	576	602	692
9	Temp (deg C)	22.5	23.0	23.0	23.0	25.0	27.0
10	Turb (NTU)	11.00	1.00	2.00	40.00	33.00	5.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	161	269	286	211	266	267
3	B (mg/L)	0.31	0.24	0.87			
4	Ca (mg/L)	45	49	38	29	39	34
5	Cl (mg/L)	98.7	106.4	129.0	119.0	135.0	108.1
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.59	1.03	1.31	1.27	1.23	1.08
8	Fe (mg/L)	0.5	0.9	0.1	1.0		0.2
9	HCO3 (mg/L)	197	329	349	258	325	325
10	K (mg/L)	0.5	0.5	0.7	3.8	6.6	6.4
11	Mg (mg/L)	21.6	23.4	28.6	24.7	29.0	19.8
12	Na (mg/L)	98.9	119.6	140.2	122.0	149.9	100.5
13	NH3-N (mg N/L)	0.02	0.03	0.12			
14	NO2+NO3 (mg N/L)	3.23	1.50	2.82			
15	NO2-N (mgN/L)	0.33	0.00	0.52			
16	NO3-N (mgN/L)	2.90	1.50	2.30	6.10	4.40	5.96
17	o-PO4-P (mg P/L)	0.141	0.029	0.638			
18	SiO2 (mg/L)	13.6	27.5	31.8			
19	SO4 (mg/L)	115.3	102.2	53.7	102.5	78.7	12.1
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.5	1.6	10.0	0.8	6.9	
2	COD (mg/L)	30.1	11.7	9.1	17.8	19.0	
3	DO (mg/L)	5.9	4.1	3.3	4.7	3.8	
4	DO_SAT% (%)	68	48	38	55	46	
5	FCol-MPN (MPN/100mL)	1100	140	2800	120	1700	
6	Tcol-MPN (MPN/100mL)	3500	260	9000	130	2800	
	TRACE & TOXIC						
1	As (μ g/L)	4.12			3.57		1.07
2	Cd (μ g/L)	0.00			1.00		1.90
3	Cr (μ g/L)	7.50			0.00		2.60
4	Cu (μ g/L)	3.50	4.00	19.00	7.60		1.30
5	Hg (μ g/L)	0.50			0.57		0.66
6	Ni (μ g/L)	0.00			21.30		4.80
7	Pb (μ g/L)	0.00			42.00		19.00
8	Zn (μ g/L)	13.43	5.20	0.01	15.63		25.00
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	112	123	95	73	98	86
2	HAR_Total (mgCaCO3/L)	202	221	214	176	218	168
3	Na% (%)	52	54	59	60	59	56
4	RSC (-)	0.0	1.0	1.5	0.7	1.0	2.0
5	SAR (-)	3.0	3.5	4.2	4.0	4.4	3.4
	PESTICIDES						

Water Quality Summary for the period : 2020-2021

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	4052	0.000	193.7
2	EC_FLD (µmho/cm)	11	1048	146	233
3	EC_GEN (µmho/cm)	12	1024	387	773
4	pH_FLD (pH units)	11	7.3	6.9	7.2
5	pH_GEN (pH units)	12	8.2	7.5	8
6	TDS (mg/L)	12	692	230	486
7	Temp (deg C)	12	28.0	22.0	24.2
8	Turb (NTU)	12	74.00	1.00	24.83
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	11.2	0.0	0.9
2	ALK-TOT (mgCaCO3/L)	12	312	161	245
3	B (mg/L)	9	0.87	0.11	0.35
4	Ca (mg/L)	12	49	10	34
5	Cl (mg/L)	12	135.0	42.2	98.8
6	CO3 (mg/L)	12	13.5	0.0	1.1
7	F (mg/L)	12	1.31	0.05	0.83
8	Fe (mg/L)	11	1.0	0.0	0.4
9	HCO3 (mg/L)	12	369	197	296
10	K (mg/L)	12	6.6	0.3	1.8
11	Mg (mg/L)	12	50.0	10.3	28.6
12	Na (mg/L)	12	149.9	44.4	100.6
13	NH3-N (mg N/L)	9	0.26	0.02	0.1
14	NO2+NO3 (mg N/L)	3	3.23	1.50	2.52
15	NO2-N (mgN/L)	9	0.52	0.00	0.14
16	NO3-N (mgN/L)	6	6.10	1.50	3.86
17	o-PO4-P (mg P/L)	9	1.720	0.020	0.445
18	SiO2 (mg/L)	9	31.8	11.9	19.9
19	SO4 (mg/L)	12	115.3	12.1	68.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	10.0	0.8	2.8
2	COD (mg/L)	11	30.1	7.8	16.7
3	DO (mg/L)	5	6.6	3.4	5.1
4	DO_SAT% (%)	5	75	43	61
5	FCol-MPN (MPN/100mL)	11	2800	120	1469
6	Tcol-MPN (MPN/100mL)	11	16000	130	6045
	TRACE & TOXIC				
1	As (µg/L)	4	4.12	0.16	1.39
2	Cd (µg/L)	6	4.50	0.00	2.32
3	Cr (µg/L)	6	7.50	0.00	2.9
4	Cu (µg/L)	11	19.00	0.00	3.97
5	Hg (µg/L)	4	1.25	0.20	0.67
6	Ni (µg/L)	6	21.30	0.00	7.68
7	Pb (µg/L)	6	62.00	0.00	38.83
8	Zn (µg/L)	11	25.00	0.00	9.05
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	123	24	85
2	HAR_Total (mgCaCO3/L)	12	246	132	204
3	Na% (%)	12	60	34	51
4	RSC (-)	12	2.0	0.0	0.9
5	SAR (-)	12	4.4	1.4	3.1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	29.74	137.6	72.83	56.37	147.2
2	EC_FLD (µmho/cm)					890
3	EC_GEN (µmho/cm)	710	689	649	641	613
4	pH_FLD (pH units)					8.2
5	pH_GEN (pH units)	8.4	8.6	8.2	8.4	8.4
6	TDS (mg/L)					
7	Temp (deg C)	28.7	29.8	27.7	28.8	29.7
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	6.6	14.4	2.7	4.0	2.7
2	ALK-TOT (mgCaCO3/L)	223	230	189	176	183
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	36	30	44	27	31
5	Cl (mg/L)	63.3	91.6	52.6	74.0	52.4
6	CO3 (mg/L)	8.0	17.3	3.2	4.8	3.2
7	F (mg/L)	0.96	1.33	0.79	0.95	1.11
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	255	245	225	205	216
10	K (mg/L)	4.8	4.8	3.4	5.0	3.4
11	Mg (mg/L)	17.0	17.3	6.8	10.2	73.0
12	Na (mg/L)	110.3	103.3	60.7	76.6	59.5
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.60	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	0.60	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.150
19	SiO2 (mg/L)	14.1	14.3	10.4	13.2	12.4
20	SO4 (mg/L)	56.3	38.7	37.7	45.8	40.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	1.1	0.9	2.0	1.0
2	COD (mg/L)		18.2	17.9	17.5	13.1
3	DO (mg/L)	6.9	7.2	5.7	5.0	6.6
4	DO_SAT% (%)	89	93	72	65	87
5	FCol-MPN (MPN/100mL)				16000	7433
6	Tcol-MPN (MPN/100mL)				16000	8900
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)	90	76	109	68	79
2	HAR_Total (mgCaCO3/L)	161	148	138	111	383
3	Na% (%)	59	55	48	56	30
4	RSC (-)	1.3	1.7	1.1	1.3	0.3
5	SAR (-)	3.8	3.7	2.3	3.0	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: 2006-2021

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				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	36.29	63.22	201.0	16.87	67.46
2	EC_FLD (μmho/cm)			1000		
3	EC_GEN (μmho/cm)	805	631	657	923	611
4	pH_FLD (pH units)			7.0		
5	pH_GEN (pH units)	8.2	8.3	8.2	8.1	8.0
6	TDS (mg/L)	454	476	478	522	388
7	Temp (deg C)	29.0	30.0	29.1	29.0	25.8
8	Turb (NTU)	1.00	0.55	2.60	8.33	65.75
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	1.3	2.0	2.2	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	229	200	252	208	190
3	B (mg/L)	0.00	0.19	0.72	0.32	0.18
4	Ca (mg/L)	31	36	59	33	31
5	Cl (mg/L)	89.9	77.0	49.5	93.4	60.4
6	CO3 (mg/L)	1.6	2.4	2.6	0.0	0.0
7	F (mg/L)	1.39	0.78	0.74	0.93	0.83
8	Fe (mg/L)	0.0	0.0	0.2	0.1	0.1
9	HCO3 (mg/L)	276	239	303	254	232
10	K (mg/L)	4.2	4.1	2.3	5.1	4.0
11	Mg (mg/L)	16.4	20.7	11.0	19.1	17.6
12	Na (mg/L)	100.8	89.7	63.9	110.4	79.9
13	NH3-N (mg N/L)	0.00	0.00	0.02	0.00	0.03
14	NO2+NO3 (mg N/L)	0.42	0.93	0.67	1.04	1.02
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.02	0.01
16	NO3-N (mgN/L)	0.42	0.93	0.67	1.02	1.00
17	o-PO4-P (mg P/L)	0.257	0.124	0.125	0.146	0.215
18	P-Tot (mgP/L)	0.257			0.166	
19	SiO2 (mg/L)	14.4	11.6	11.3	15.0	10.6
20	SO4 (mg/L)	46.6	47.0	32.7	58.4	33.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.2	1.2	0.6	1.0	2.1
2	COD (mg/L)	15.1	21.1	10.1	6.9	14.0
3	DO (mg/L)	5.1	6.4	6.5	5.9	5.2
4	DO_SAT% (%)	75	84	85	77	64
5	FCOI-MPN (MPN/100mL)	12333	8150	8800	6210	7475
6	Tcol-MPN (MPN/100mL)	13667	8400	16000	8000	12700
7	TOC (mg/L)	3.1	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	Cu (μg/L)					
5	Hg (μg/L)			0.60		
6	Ni (μg/L)		5.44	18.42		
7	Pb (μg/L)		3.46	2.36		
8	Zn (μg/L)		62.51	0.01		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	78	90	148	84	78
2	HAR_Total (mgCaCO3/L)	146	176	194	163	151
3	Na% (%)	58	52	42	58	52
4	RSC (-)	1.7	0.5	1.2	0.9	0.8
5	SAR (-)	3.6	3.0	2.0	3.7	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: 2006-2021

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				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	101.4	50.20	20.47	225.9	792.8
2	EC_FLD (µmho/cm)	1730	1758	938		155
3	EC_GEN (µmho/cm)	449	707	942	612	516
4	pH_FLD (pH units)	7.8	7.7	7.7		7.2
5	pH_GEN (pH units)	8.1	8.2	8.3	7.9	7.7
6	TDS (mg/L)	314	446	593	332	316
7	Temp (deg C)	25.0	24.0	21.6	15.3	26.0
8	Turb (NTU)	325.80	27.75	7.60	52.33	43.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.4	8.0	4.8	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	147	200	174	215	190
3	B (mg/L)		0.12	0.08	0.18	0.22
4	Ca (mg/L)	23	40	30	51	30
5	Cl (mg/L)	41.5	91.9	113.3	112.0	48.1
6	CO3 (mg/L)	0.5	9.6	5.8	0.0	0.0
7	F (mg/L)	0.68	0.78	0.78	0.84	0.08
8	Fe (mg/L)	0.1	0.7	0.3	0.4	0.4
9	HCO3 (mg/L)	178	225	200	262	232
10	K (mg/L)	3.5	0.6	0.5	1.2	0.3
11	Mg (mg/L)	12.5	27.9	29.1	18.3	22.4
12	Na (mg/L)	57.8	87.9	80.3	84.9	45.9
13	NH3-N (mg N/L)	0.00	0.08	0.07	0.03	0.04
14	NO2+NO3 (mg N/L)	0.92	7.29	0.63	2.01	
15	NO2-N (mgN/L)	0.00	0.14	0.08	0.06	0.05
16	NO3-N (mgN/L)	0.92	7.15	0.56	1.94	
17	o-PO4-P (mg P/L)	0.250	0.325	0.126	0.090	0.040
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	10.8	13.0	18.8	11.2	17.7
20	SO4 (mg/L)	20.8	68.2	49.5	39.5	26.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.6	1.3	1.6	2.6	0.9
2	COD (mg/L)	14.0	13.1	26.0	29.5	14.2
3	DO (mg/L)	5.5	5.9	5.0	5.1	3.4
4	DO_SAT% (%)	67	70	57	51	43
5	FCOI-MPN (MPN/100mL)	10720	8780	214	623	1250
6	Tcol-MPN (MPN/100mL)	13360	8780	714	11133	9750
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				0.68	
2	Cd (µg/L)				5.18	
3	Cr (µg/L)				8.58	
4	Cu (µg/L)		1.20	8.40	8.33	0.01
5	Hg (µg/L)					
6	Ni (µg/L)				33.84	
7	Pb (µg/L)				1.87	
8	Zn (µg/L)		54.66	14.25	13.00	0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	56	100	74	128	75
2	HAR_Total (mgCaCO3/L)	108	216	195	205	169
3	Na% (%)	52	47	44	47	38
4	RSC (-)	0.8	0.1	0.2	0.5	0.4
5	SAR (-)	2.4	2.6	2.5	2.6	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: 2006-2021

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				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	19.97	20.00	47.12	18.98	38.91
2	EC_FLD (µmho/cm)					780
3	EC_GEN (µmho/cm)	700	772	782	874	770
4	pH_FLD (pH units)					8.1
5	pH_GEN (pH units)	8.2	8.3	8.3	8.3	8.3
6	TDS (mg/L)					
7	Temp (deg C)	24.0	25.0	22.0	25.5	25.0
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	4.1	8.0	4.0	8.0
2	ALK-TOT (mgCaCO3/L)	254	253	276	188	233
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	41	36	46	32	36
5	Cl (mg/L)	59.6	69.7	75.9	81.2	67.7
6	CO3 (mg/L)	0.0	5.0	9.6	4.8	9.6
7	F (mg/L)	1.10	1.00	0.85	1.44	0.78
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	310	298	318	219	265
10	K (mg/L)	2.7	3.3	4.0	2.8	3.6
11	Mg (mg/L)	22.0	20.5	11.7	17.9	20.4
12	Na (mg/L)	109.0	116.0	104.2	109.4	83.3
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.18	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	0.18	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.060
19	SiO2 (mg/L)	16.7	16.5	12.2	10.4	15.2
20	SO4 (mg/L)	47.0	37.0	47.4	69.2	45.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	1.2	1.0	0.7	1.1
2	COD (mg/L)		27.5	12.5	13.0	19.8
3	DO (mg/L)	6.8	6.7	7.1	6.0	6.8
4	DO_SAT% (%)	82	81	81	73	82
5	FCol-MPN (MPN/100mL)				12500	10500
6	Tcol-MPN (MPN/100mL)				16000	12500
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)	103	90	116	80	90
2	HAR_Total (mgCaCO3/L)	194	175	165	155	175
3	Na% (%)	54	58	57	61	50
4	RSC (-)	1.2	1.6	2.2	1.0	1.2
5	SAR (-)	3.4	3.8	3.6	3.9	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: 2006-2021

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				
		2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL					
1	Q (cumec)	14.17	10.83	23.46	15.50	0.810
2	EC_FLD (μmho/cm)					
3	EC_GEN (μmho/cm)	873	812	840	779	1262
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.0	7.8	8.2	8.3	8.0
6	TDS (mg/L)	555	483	535	553	476
7	Temp (deg C)	25.5	27.0	26.0	25.1	25.0
8	Turb (NTU)	1.00	1.50	2.50	0.10	2.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	2.1	0.0
2	ALK-TOT (mgCaCO3/L)	251	252	245	259	260
3	B (mg/L)	0.18	0.28	0.78	0.24	0.01
4	Ca (mg/L)	41	39	45	44	39
5	Cl (mg/L)	97.3	72.0	74.8	91.0	112.5
6	CO3 (mg/L)	0.0	0.0	0.0	2.5	0.0
7	F (mg/L)	0.96	1.03	0.83	0.89	0.81
8	Fe (mg/L)	0.1	0.0	0.0	0.1	0.0
9	HCO3 (mg/L)	306	307	300	311	317
10	K (mg/L)	3.4	4.9	3.3	2.6	4.5
11	Mg (mg/L)	23.6	22.3	26.0	24.4	22.1
12	Na (mg/L)	110.2	90.9	96.6	86.9	121.8
13	NH3-N (mg N/L)	0.02	0.04	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.81	0.82	1.07	0.51	0.66
15	NO2-N (mgN/L)	0.01	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.80	0.82	1.07	0.50	0.66
17	o-PO4-P (mg P/L)	0.134	0.053	0.100	0.100	0.092
18	P-Tot (mgP/L)	0.134				
19	SiO2 (mg/L)	17.2	16.6	13.7	11.2	5.2
20	SO4 (mg/L)	63.8	37.0	44.5	57.0	38.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	1.5	1.4	0.3	1.0
2	COD (mg/L)	23.8	17.8	6.1	8.1	11.5
3	DO (mg/L)	6.9	5.0	6.8	6.3	4.5
4	DO_SAT% (%)	84	64	83	77	54
5	FCOI-MPN (MPN/100mL)	515	180	180	1315	1650
6	Tcol-MPN (MPN/100mL)	1450	850	365	8250	12500
7	TOC (mg/L)	3.3	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	Cu (μg/L)					
5	Hg (μg/L)					
6	Ni (μg/L)				12.08	
7	Pb (μg/L)				19.79	
8	Zn (μg/L)				8.50	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	102	97	111	109	97
2	HAR_Total (mgCaCO3/L)	200	190	220	211	189
3	Na% (%)	54	50	49	47	58
4	RSC (-)	1.0	1.3	0.5	1.0	1.4
5	SAR (-)	3.4	2.9	2.8	2.6	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: 2006-2021

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				
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	27.53	6.494	16.97	38.17	24.97
2	EC_FLD (µmho/cm)	1738	1793	504		151
3	EC_GEN (µmho/cm)	677	827	1345	825	713
4	pH_FLD (pH units)	7.7	7.7	7.7		7.2
5	pH_GEN (pH units)	8.4	7.8	8.1	8.1	8.1
6	TDS (mg/L)	496	479	708	555	447
7	Temp (deg C)	22.3	21.0	21.5	25.5	23.4
8	Turb (NTU)	0.33	12.50	6.67	15.50	22.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	5.0	0.0	1.2	0.0	1.9
2	ALK-TOT (mgCaCO3/L)	200	245	227	288	254
3	B (mg/L)		0.03	0.17	0.49	0.31
4	Ca (mg/L)	42	45	37	35	34
5	Cl (mg/L)	66.3	99.8	154.5	98.5	99.6
6	CO3 (mg/L)	6.1	0.0	1.5	0.0	2.3
7	F (mg/L)	0.71	0.91	0.47	0.82	0.81
8	Fe (mg/L)	0.1	0.3	0.4	1.0	0.5
9	HCO3 (mg/L)	231	299	274	351	306
10	K (mg/L)	4.1	0.4	0.5	0.4	0.6
11	Mg (mg/L)	22.8	30.5	30.6	36.3	32.6
12	Na (mg/L)	72.0	87.5	107.0	113.3	100.4
13	NH3-N (mg N/L)	0.13	1.45	0.05	0.02	0.11
14	NO2+NO3 (mg N/L)	0.22	5.97	1.56	4.21	2.37
15	NO2-N (mgN/L)	0.01	0.02	0.05	0.18	0.11
16	NO3-N (mgN/L)	0.21	5.94	1.51	4.03	2.20
17	o-PO4-P (mg P/L)	0.078	0.425	0.217	0.180	0.548
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	13.7	8.6	13.7	12.7	18.7
20	SO4 (mg/L)	83.5	55.4	68.3	64.4	87.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	0.4	0.8	1.9	1.5
2	COD (mg/L)	8.0	16.0	12.5	43.2	18.3
3	DO (mg/L)	5.9	5.5	6.8	4.8	5.5
4	DO_SAT% (%)	68	62	76	58	65
5	FCOI-MPN (MPN/100mL)	6370	1450	150	248	1507
6	Tcol-MPN (MPN/100mL)	8600	10500	703	2675	5843
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					1.39
2	Cd (µg/L)					2.75
3	Cr (µg/L)					3.70
4	Cu (µg/L)	0.00	3.00	11.25	3.75	2.63
5	Hg (µg/L)					0.67
6	Ni (µg/L)					5.00
7	Pb (µg/L)					43.00
8	Zn (µg/L)	0.00	56.50	46.80	67.25	9.82
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	104	111	92	88	85
2	HAR_Total (mgCaCO3/L)	199	238	220	239	221
3	Na% (%)	43	45	52	51	50
4	RSC (-)	0.1	0.2	0.5	1.0	0.8
5	SAR (-)	2.2	2.5	3.2	3.2	2.9
	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: 2006-2021

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				
		2007	2008	2009	2010	2015
	PHYSICAL					
1	Q (cumec)	2.246	40.40	0.446	0.798	0.131
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	769	805	805	846	1048
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.6	8.1	8.4	8.4	8.1
6	TDS (mg/L)					615
7	Temp (deg C)	23.0	26.0	28.0	28.5	25.5
8	Turb (NTU)					4.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	24.1	0.0	8.0	8.0	1.7
2	ALK-TOT (mgCaCO3/L)	304	240	216	196	247
3	B (mg/L)	0.00	0.00	0.00	0.00	0.26
4	Ca (mg/L)	35	35	30	35	39
5	Cl (mg/L)	69.6	63.4	209.7	187.4	123.4
6	CO3 (mg/L)	29.0	0.0	9.6	9.6	2.1
7	F (mg/L)	1.98	1.02	1.07	2.36	0.97
8	Fe (mg/L)	0.0		0.0	0.0	0.0
9	HCO3 (mg/L)	312	293	244	220	298
10	K (mg/L)	4.3	3.4	4.6	5.2	5.8
11	Mg (mg/L)	17.0	20.0	13.0	19.4	21.5
12	Na (mg/L)	98.0	101.0	94.3	113.0	138.8
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.01
14	NO2+NO3 (mg N/L)	0.00		0.01	0.00	0.52
15	NO2-N (mgN/L)	0.00		0.00	0.00	0.28
16	NO3-N (mgN/L)	0.00		0.01	0.00	0.24
17	o-PO4-P (mg P/L)					0.120
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	
19	SiO2 (mg/L)	21.0	20.1	16.9	13.9	16.4
20	SO4 (mg/L)	50.0	42.0	48.0	39.2	85.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	0.4	0.3	0.7	1.7
2	COD (mg/L)		7.4	8.1	31.0	16.6
3	DO (mg/L)	5.9	6.1	5.0	6.6	4.5
4	DO_SAT% (%)	69	76	64	84	55
5	FCol-MPN (MPN/100mL)				1300	11
6	Tcol-MPN (MPN/100mL)				1700	8115
7	TOC (mg/L)		3.0			34.6
	TRACE & TOXIC					
1	As (µg/L)				4.66	
2	Cd (µg/L)	8.00	0.80	2.21	0.00	
3	Cr (µg/L)	31.00	2.00	2.00	0.00	
4	Cu (µg/L)					
5	Hg (µg/L)	2.03	0.00			
6	Ni (µg/L)	1.00	9.80	1.00	0.90	
7	Pb (µg/L)	78.00	16.06	24.44	0.00	
8	Zn (µg/L)	106.00	2.24	17.76	111.24	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	88	88	76	88	97
2	HAR_Total (mgCaCO3/L)	158	171	130	169	186
3	Na% (%)	57	56	60	59	61
4	RSC (-)	2.9	1.4	1.7	0.6	1.3
5	SAR (-)	3.4	3.4	3.6	3.8	4.5
	PESTICIDES					
1	Aldrin (µg/L)	0.010	0.010	0.010	0.002	
2	BHC (µg/L)	0.100	0.100	0.100	0.058	
3	DDT (µg/L)	0.100	0.100	0.100	0.004	
4	Dieldrin (µg/L)	0.020	0.010	0.010	0.002	
5	Endos (µg/L)	0.100	0.100	0.100	0.018	

Water Quality Seasonal Average for the period: 2006-2021

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		
		2018	2020	2021
	PHYSICAL			
1	Q (cumec)	8.305	8.300	9.591
2	EC_FLD (µmho/cm)	1710		450
3	EC_GEN (µmho/cm)	1427	809	993
4	pH_FLD (pH units)	7.6		7.1
5	pH_GEN (pH units)	8.1	8.2	8.1
6	TDS (mg/L)	703	579	628
7	Temp (deg C)	21.0	25.0	24.5
8	Turb (NTU)	34.50	21.00	20.00
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	339	309	257
3	B (mg/L)	0.53	0.55	0.87
4	Ca (mg/L)	49	29	35
5	Cl (mg/L)	138.6	164.0	122.8
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.76	1.12	1.22
8	Fe (mg/L)	0.1	0.7	0.4
9	HCO3 (mg/L)	413	377	314
10	K (mg/L)	0.8	0.4	4.3
11	Mg (mg/L)	35.3	37.0	25.5
12	Na (mg/L)	145.0	160.0	128.1
13	NH3-N (mg N/L)	0.01	0.00	0.12
14	NO2+NO3 (mg N/L)	6.88	4.69	2.82
15	NO2-N (mgN/L)	0.02	0.09	0.52
16	NO3-N (mgN/L)	6.86	4.60	4.69
17	o-PO4-P (mg P/L)	0.800	0.130	0.638
18	P-Tot (mgP/L)			
19	SiO2 (mg/L)	9.2	14.5	31.8
20	SO4 (mg/L)	86.7	168.0	61.7
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	2.2	0.6	5.9
2	COD (mg/L)	23.1	18.6	15.3
3	DO (mg/L)	5.1	4.7	
4	DO_SAT% (%)	57	57	
5	FCol-MPN (MPN/100mL)	1510	170	1540
6	Tcol-MPN (MPN/100mL)	1565	1700	3977
7	TOC (mg/L)			
	TRACE & TOXIC			
1	As (µg/L)	2.50		
2	Cd (µg/L)	2.60		1.45
3	Cr (µg/L)	0.00		1.30
4	Cu (µg/L)	6.05	2.00	9.30
5	Hg (µg/L)	0.28		
6	Ni (µg/L)	10.50		13.05
7	Pb (µg/L)	29.00		30.50
8	Zn (µg/L)	43.11	11.00	13.55
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	123	73	88
2	HAR_Total (mgCaCO3/L)	270	227	194
3	Na% (%)	54	61	58
4	RSC (-)	1.4	1.7	1.3
5	SAR (-)	3.9	4.6	4.0
	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 Summer season 2011 to 2014 and 2016 to 2019 due to Drybed / No flow condition.

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Madhira	Code	: AKA10D2
State	: Telangana	District	Khammam
Basin	: Krishna	Independent River	: Krishna
Tributary	: Munneru	Sub Tributary	: Wyra
		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		

Note: Water Quality observations Suspended 01/06/2006 and Restarted 01-03-2014.

Water Quality Datasheet for the period : 2020-2021

Station Name : Madhira (AKA10D2)

Division : Lower Krishna Divn., Hyderabad

Local River : Wyra

River Water Analysis

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	14-09-2020	05-10-2020	02-11-2020	01-12-2020	11-12-2020	21-12-2020
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	447.0	12.73	20.27	8.181	4.802	1.989
2	Colour_Cod (-)	Light Brown	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	145	146	148	146	148	146
4	EC_GEN (μmho/cm)	421	681	768	930	951	929
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.7	7.7	7.7	7.7	7.7	7.7
7	pH_GEN (pH units)	7.4	8.1	8.0	8.0	7.8	8.1
8	TDS (mg/L)	262	546	423	557	557	654
9	Temp (deg C)	25.0	24.0	23.0	22.0	21.0	23.0
10	Turb (NTU)	8.00	28.00	55.00	49.00	44.00	15.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	193	290	310	320	339	250
3	B (mg/L)	0.40	0.24	0.38	0.75	0.78	0.18
4	Ca (mg/L)	28	25	27	18	61	19
5	Cl (mg/L)	39.4	67.0	78.5	109.1	118.8	107.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.11	0.71	0.73	0.90	1.00	0.99
8	Fe (mg/L)	0.5	0.1	0.0	0.6	0.0	0.1
9	HCO3 (mg/L)	235	353	379	390	413	305
10	K (mg/L)	0.3	0.3	0.7	1.0	0.7	0.5
11	Mg (mg/L)	15.2	34.4	42.3	46.2	26.5	22.3
12	Na (mg/L)	43.3	65.0	95.0	105.1	118.0	95.4
13	NH3-N (mg N/L)	0.12	0.01	0.02	0.78	0.10	0.34
14	NO2+NO3 (mg N/L)						
15	NO2-N (mgN/L)	0.03	0.08	0.37	0.33	1.43	0.10
16	NO3-N (mgN/L)						
17	o-PO4-P (mg P/L)	0.030	0.140	0.390	0.230	0.580	0.470
18	SiO2 (mg/L)	15.4	14.6	15.8	20.8	19.5	11.0
19	SO4 (mg/L)	19.0	34.8	25.5	92.3	107.5	29.7
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)		1.4	1.0	1.5	22.4	1.5
2	COD (mg/L)	20.8	19.0	19.0	8.7	5.9	18.7
3	DO (mg/L)		4.9	4.2	2.5	1.1	2.8
4	DO_SAT% (%)		58	49	29	12	33
5	FCol-MPN (MPN/100mL)	700	1100	1700	1400	2200	260
6	Tcol-MPN (MPN/100mL)	16000	9000	9000	16000	16000	1700
	TRACE & TOXIC						
1	As (μg/L)				0.77	0.51	0.07
2	Cd (μg/L)				3.00	0.80	4.60
3	Cr (μg/L)				3.10	2.70	3.70
4	Cu (μg/L)	0.00	0.01	0.00	5.30	4.80	2.20
5	Hg (μg/L)				0.45	0.00	0.00
6	Ni (μg/L)				10.90	0.40	0.00
7	Pb (μg/L)				67.00	43.00	66.00
8	Zn (μg/L)	0.00	0.03	0.00	6.73	8.50	7.39
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	71	62	67	45	151	49
2	HAR_Total (mgCaCO3/L)	134	205	243	237	262	141
3	Na% (%)	41	41	46	49	50	60
4	RSC (-)	1.2	1.7	1.4	1.7	1.6	2.2
5	SAR (-)	1.6	2.0	2.7	3.0	3.2	3.5
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

Station Name : Madhira (AKA10D2)

Division : Lower Krishna Divn., Hyderabad

Local River : Wyra

River Water Analysis

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	01-01-2021	01-02-2021	01-03-2021	05-04-2021	03-05-2021	21-05-2021
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	6.221	15.82	10.76	6.916	4.924	4.953
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	148	146	149	147		1046
4	EC_GEN (μmho/cm)	652	358	1002	958	1141	891
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.6	7.6	7.6	7.6		7.7
7	pH_GEN (pH units)	8.1	7.9	7.9	8.2	8.1	8.2
8	TDS (mg/L)	442	292	640	616	665	546
9	Temp (deg C)	22.0	21.0	23.0	23.0	25.0	26.0
10	Turb (NTU)	6.00	2.00	1.00	47.00	25.00	3.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	174	271	313	292	320	375
3	B (mg/L)	0.46	0.28	0.81			
4	Ca (mg/L)	46	49	55	51	47	50
5	Cl (mg/L)	92.2	102.0	123.0	116.0	131.0	107.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.71	1.02	0.91	0.87	1.28	0.81
8	Fe (mg/L)	0.4	1.9	0.1	0.6		0.2
9	HCO3 (mg/L)	213	330	382	356	390	458
10	K (mg/L)	0.5	0.7	0.6	3.6	7.0	7.2
11	Mg (mg/L)	24.8	25.0	21.2	19.8	31.1	24.3
12	Na (mg/L)	92.1	116.1	152.9	124.7	164.7	112.8
13	NH3-N (mg N/L)	0.02	0.03	0.50			
14	NO2+NO3 (mg N/L)	3.12	1.80	4.31			
15	NO2-N (mgN/L)	0.22	0.00	0.81			
16	NO3-N (mgN/L)	2.90	1.80	3.50	6.10	7.30	6.48
17	o-PO4-P (mg P/L)	0.165	0.004	0.984			
18	SiO2 (mg/L)	13.1	27.5	30.5			
19	SO4 (mg/L)	117.9	78.0	58.9	98.9	40.3	10.6
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.7	2.9	2.0	9.9	7.9	
2	COD (mg/L)	13.0	25.5	24.4	10.3	11.3	
3	DO (mg/L)	5.8	4.5	4.5	0.0	0.0	
4	DO_SAT% (%)	66	50	52	0	0	
5	FCol-MPN (MPN/100mL)	5000	270	220	170	5000	
6	Tcol-MPN (MPN/100mL)	16000	1700	300	330	9000	
	TRACE & TOXIC						
1	As (μg/L)	3.68			2.33		2.25
2	Cd (μg/L)	0.40			1.30		1.20
3	Cr (μg/L)	8.20			0.10		0.00
4	Cu (μg/L)	4.80	4.00	18.00	6.00		2.90
5	Hg (μg/L)	0.25			1.03		1.25
6	Ni (μg/L)	4.60			22.10		1.20
7	Pb (μg/L)	16.00			42.00		14.00
8	Zn (μg/L)	4.07	16.40	0.00	22.55		12.31
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	115	123	136	127	117	126
2	HAR_Total (mgCaCO3/L)	218	227	225	209	247	227
3	Na% (%)	48	53	60	56	59	51
4	RSC (-)	0.0	0.9	1.8	1.7	1.5	3.0
5	SAR (-)	2.7	3.4	4.5	3.8	4.6	3.3
	PESTICIDES						

Water Quality Summary for the period : 2020-2021

Station Name : Madhira (AKA10D2)

Division : Lower Krishna Divn., Hyderabad

Local River : Wyra

Sub-Division : Lower Krishna SD2, Vijayawada

River Water Summary

S.No	Parameters	Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	374	1062	0.000	32.49
2	EC_FLD (µmho/cm)	11	1046	145	229
3	EC_GEN (µmho/cm)	12	1141	358	807
4	pH_FLD (pH units)	11	7.7	7.6	7.7
5	pH_GEN (pH units)	12	8.2	7.4	8
6	TDS (mg/L)	12	665	262	517
7	Temp (deg C)	12	26.0	21.0	23.2
8	Turb (NTU)	12	55.00	1.00	23.58
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	12	375	174	287
3	B (mg/L)	9	0.81	0.18	0.48
4	Ca (mg/L)	12	61	18	40
5	Cl (mg/L)	12	131.0	39.4	99.3
6	CO3 (mg/L)	12	0.0	0.0	0
7	F (mg/L)	12	1.28	0.11	0.84
8	Fe (mg/L)	11	1.9	0.0	0.4
9	HCO3 (mg/L)	12	458	213	350
10	K (mg/L)	12	7.2	0.3	1.9
11	Mg (mg/L)	12	46.2	15.2	27.8
12	Na (mg/L)	12	164.7	43.3	107.1
13	NH3-N (mg N/L)	9	0.78	0.01	0.21
14	NO2+NO3 (mg N/L)	3	4.31	1.80	3.08
15	NO2-N (mgN/L)	9	1.43	0.00	0.37
16	NO3-N (mgN/L)	6	7.30	1.80	4.68
17	o-PO4-P (mg P/L)	9	0.984	0.004	0.333
18	SiO2 (mg/L)	9	30.5	11.0	18.7
19	SO4 (mg/L)	12	117.9	10.6	59.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	22.4	1.0	5.2
2	COD (mg/L)	11	25.5	5.9	16
3	DO (mg/L)	5	4.9	1.1	3.1
4	DO_SAT% (%)	5	58	12	36
5	FCol-MPN (MPN/100mL)	11	5000	170	1638
6	Tcol-MPN (MPN/100mL)	11	16000	300	8639
	TRACE & TOXIC				
1	As (µg/L)	4	3.68	0.07	1.26
2	Cd (µg/L)	6	4.60	0.40	1.88
3	Cr (µg/L)	6	8.20	0.00	2.97
4	Cu (µg/L)	11	18.00	0.00	4.36
5	Hg (µg/L)	4	0.45	0.00	0.17
6	Ni (µg/L)	6	22.10	0.00	6.53
7	Pb (µg/L)	6	67.00	14.00	41.33
8	Zn (µg/L)	11	22.55	0.00	7.09
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	151	45	99
2	HAR_Total (mgCaCO3/L)	12	262	134	215
3	Na% (%)	12	60	41	51
4	RSC (-)	12	3.0	0.0	1.6
5	SAR (-)	12	4.6	1.6	3.2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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			
		2014	2015	2016	2017
	PHYSICAL				
1	Q (cumec)	11.90	13.28	19.49	13.92
2	EC_FLD (µmho/cm)			824	825
3	EC_GEN (µmho/cm)	838	648	504	871
4	pH_FLD (pH units)			7.6	7.4
5	pH_GEN (pH units)	8.2	7.9	8.1	8.1
6	TDS (mg/L)	505	425	379	542
7	Temp (deg C)	27.3	30.2	28.3	28.8
8	Turb (NTU)	5.33	129.53	166.33	39.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	1.4	0.0	0.0	10.4
2	ALK-TOT (mgCaCO3/L)	233	232	203	224
3	B (mg/L)	0.46	0.18		0.03
4	Ca (mg/L)	39	37	30	38
5	Cl (mg/L)	79.2	63.9	48.5	103.8
6	CO3 (mg/L)	1.7	0.0	0.0	12.5
7	F (mg/L)	0.88	0.87	0.65	0.75
8	Fe (mg/L)	0.1	0.0	0.1	1.4
9	HCO3 (mg/L)	280	283	248	248
10	K (mg/L)	4.2	3.5	3.7	0.5
11	Mg (mg/L)	21.5	21.2	16.2	26.8
12	Na (mg/L)	99.4	89.9	75.5	109.8
13	NH3-N (mg N/L)	0.00	0.02	0.00	0.32
14	NO2+NO3 (mg N/L)	1.87	0.97	1.62	5.63
15	NO2-N (mgN/L)	0.00	0.01	0.00	0.10
16	NO3-N (mgN/L)	1.86	0.96	1.62	5.53
17	o-PO4-P (mg P/L)	0.174	0.297	0.188	0.523
18	P-Tot (mgP/L)	0.149			
19	SiO2 (mg/L)	15.1	15.1	12.0	14.4
20	SO4 (mg/L)	64.7	52.6	38.7	62.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.4	1.3	1.0	1.3
2	COD (mg/L)	17.3	13.6	20.2	13.1
3	DO (mg/L)	5.4	4.8	5.0	6.2
4	DO_SAT% (%)	69	64	65	80
5	FCol-MPN (MPN/100mL)	16000	5143	16000	13240
6	Tcol-MPN (MPN/100mL)	16000	12875	16000	13240
7	TOC (mg/L)		28.2		
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)				
3	Cr (µg/L)				
4	Cu (µg/L)				4.40
5	Hg (µg/L)				
6	Ni (µg/L)				
7	Pb (µg/L)				
8	Zn (µg/L)				56.98
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	97	94	74	96
2	HAR_Total (mgCaCO3/L)	186	182	141	208
3	Na% (%)	53	51	53	53
4	RSC (-)	0.9	1.0	1.3	0.4
5	SAR (-)	3.2	2.9	2.7	3.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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		
		2018	2019	2020
	PHYSICAL			
1	Q (cumec)	3.782	49.66	229.9
2	EC_FLD (µmho/cm)	232		146
3	EC_GEN (µmho/cm)	871	694	551
4	pH_FLD (pH units)	7.3		7.7
5	pH_GEN (pH units)	8.1	7.8	7.8
6	TDS (mg/L)	705	410	404
7	Temp (deg C)	25.2	27.0	24.5
8	Turb (NTU)	7.40	67.00	18.00
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	1.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	182	214	241
3	B (mg/L)	0.05	0.20	0.32
4	Ca (mg/L)	35	45	27
5	Cl (mg/L)	117.6	132.7	53.2
6	CO3 (mg/L)	1.2	0.0	0.0
7	F (mg/L)	0.82	0.82	0.41
8	Fe (mg/L)	0.3	2.5	0.3
9	HCO3 (mg/L)	220	262	294
10	K (mg/L)	0.5	0.4	0.3
11	Mg (mg/L)	35.0	27.0	24.8
12	Na (mg/L)	85.1	104.4	54.1
13	NH3-N (mg N/L)	0.12	0.07	0.06
14	NO2+NO3 (mg N/L)	1.26	2.27	
15	NO2-N (mgN/L)	0.10	0.13	0.05
16	NO3-N (mgN/L)	1.16	2.14	
17	o-PO4-P (mg P/L)	0.144	0.223	0.085
18	P-Tot (mgP/L)			
19	SiO2 (mg/L)	31.9	11.3	15.0
20	SO4 (mg/L)	66.7	59.0	26.9
	BIOLOGICAL/BACTERIOLOGIC			
1	BOD3-27 (mg/L)	1.4	1.2	1.4
2	COD (mg/L)	19.0	16.9	19.9
3	DO (mg/L)	4.6	5.3	4.9
4	DO_SAT% (%)	56	67	58
5	FCol-MPN (MPN/100mL)	80	820	900
6	Tcol-MPN (MPN/100mL)	634	4300	12500
7	TOC (mg/L)			
	TRACE & TOXIC			
1	As (µg/L)		1.08	
2	Cd (µg/L)		0.26	
3	Cr (µg/L)		7.10	
4	Cu (µg/L)	7.00	13.33	0.01
5	Hg (µg/L)			
6	Ni (µg/L)		71.73	
7	Pb (µg/L)		0.93	
8	Zn (µg/L)	17.65	643.00	0.01
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	88	113	66
2	HAR_Total (mgCaCO3/L)	234	226	170
3	Na% (%)	42	49	41
4	RSC (-)	0.3	0.5	1.5
5	SAR (-)	2.5	3.0	1.8
	PESTICIDES			

Samples not collected during flood season 2006 to 2013 due to Downgradation w.e.f 01/06/2006. WQ Upgradation w.e.f 2014.

Water Quality Seasonal Average for the period: 2006-2021

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			
		2014-2015	2015-2016	2016-2017	2017-2018
	PHYSICAL				
1	Q (cumec)	11.74	3.403	2.726	2.644
2	EC_FLD (µmho/cm)			827	830
3	EC_GEN (µmho/cm)	744	1184	946	1232
4	pH_FLD (pH units)			7.2	7.3
5	pH_GEN (pH units)	8.2	8.0	8.0	8.0
6	TDS (mg/L)	505	494	562	691
7	Temp (deg C)	23.8	28.0	25.5	26.0
8	Turb (NTU)	1.58	2.50	0.00	8.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	1.0	0.0	3.2	0.0
2	ALK-TOT (mgCaCO3/L)	280	263	245	336
3	B (mg/L)	0.24	0.08		0.02
4	Ca (mg/L)	43	42	51	53
5	Cl (mg/L)	79.1	81.0	94.3	113.1
6	CO3 (mg/L)	1.3	0.0	3.9	0.0
7	F (mg/L)	0.96	0.89	0.89	1.05
8	Fe (mg/L)	0.1	0.0	0.0	0.0
9	HCO3 (mg/L)	339	321	291	410
10	K (mg/L)	3.0	3.2	12.8	0.6
11	Mg (mg/L)	24.6	23.7	27.8	35.5
12	Na (mg/L)	103.0	120.5	91.1	153.9
13	NH3-N (mg N/L)	0.04	0.03	0.01	0.01
14	NO2+NO3 (mg N/L)	0.82	1.09	0.98	7.36
15	NO2-N (mgN/L)	0.05	0.04	0.47	0.02
16	NO3-N (mgN/L)	0.77	1.06	0.50	7.34
17	o-PO4-P (mg P/L)	0.110	0.104	0.073	1.332
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)	12.9	8.2	10.8	20.1
20	SO4 (mg/L)	43.3	55.0	116.9	82.1
	BIOLOGICAL/BACTERIOLOGIC				
1	BOD3-27 (mg/L)	0.8	0.5	2.0	0.4
2	COD (mg/L)	9.1	6.3	17.0	2.6
3	DO (mg/L)	7.2	5.5	5.8	6.2
4	DO_SAT% (%)	85	70	71	77
5	FCol-MPN (MPN/100mL)	5220	7000	6000	285
6	Tcol-MPN (MPN/100mL)	6558	12500	6000	790
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	5.00
5	Hg (µg/L)				
6	Ni (µg/L)	1.78			
7	Pb (µg/L)	10.94			
8	Zn (µg/L)	4.50		0.00	35.10
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	109	106	127	133
2	HAR_Total (mgCaCO3/L)	211	205	243	281
3	Na% (%)	51	56	43	55
4	RSC (-)	1.4	1.2	0.2	1.2
5	SAR (-)	3.1	3.7	2.5	4.1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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		
		2018-2019	2019-2020	2020-2021
	PHYSICAL			
1	Q (cumec)	4.073	5.623	9.548
2	EC_FLD (µmho/cm)	447		147
3	EC_GEN (µmho/cm)	1213	840	765
4	pH_FLD (pH units)	7.3		7.7
5	pH_GEN (pH units)	8.1	7.9	8.0
6	TDS (mg/L)	697	570	488
7	Temp (deg C)	26.0	25.3	22.0
8	Turb (NTU)	1.00	22.50	28.50
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	1.6	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	275	305	277
3	B (mg/L)	0.04	0.30	0.47
4	Ca (mg/L)	32	36	37
5	Cl (mg/L)	123.3	100.3	101.3
6	CO3 (mg/L)	2.0	0.0	0.0
7	F (mg/L)	0.37	0.91	0.89
8	Fe (mg/L)	0.1	0.6	0.5
9	HCO3 (mg/L)	331	372	338
10	K (mg/L)	0.4	0.4	0.7
11	Mg (mg/L)	32.7	35.3	31.2
12	Na (mg/L)	108.4	111.1	103.6
13	NH3-N (mg N/L)	0.24	0.03	0.21
14	NO2+NO3 (mg N/L)	1.01	5.46	2.46
15	NO2-N (mgN/L)	0.04	0.23	0.41
16	NO3-N (mgN/L)	0.97	5.23	2.35
17	o-PO4-P (mg P/L)	0.372	0.210	0.306
18	P-Tot (mgP/L)			
19	SiO2 (mg/L)	16.8	14.6	17.9
20	SO4 (mg/L)	66.2	59.1	75.2
	BIOLOGICAL/BACTERIOLOGIC			
1	BOD3-27 (mg/L)	0.9	0.8	5.2
2	COD (mg/L)	9.7	53.4	15.1
3	DO (mg/L)	5.4	4.4	2.6
4	DO_SAT% (%)	66	53	31
5	FCol-MPN (MPN/100mL)	157	2253	1805
6	Tcol-MPN (MPN/100mL)	940	7675	10067
7	TOC (mg/L)			
	TRACE & TOXIC			
1	As (µg/L)		6.53	1.26
2	Cd (µg/L)		0.02	2.20
3	Cr (µg/L)		2.69	4.42
4	Cu (µg/L)	8.33	3.75	3.52
5	Hg (µg/L)			0.17
6	Ni (µg/L)		6.74	3.97
7	Pb (µg/L)		0.48	48.00
8	Zn (µg/L)	19.17	59.50	7.18
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	81	90	91
2	HAR_Total (mgCaCO3/L)	217	237	221
3	Na% (%)	52	51	51
4	RSC (-)	1.2	1.4	1.3
5	SAR (-)	3.2	3.2	3.1
	PESTICIDES			

Samples not collected during winter season 2006 to 2013 due to Downgradation w.e.f 01/06/2006. WQ Upgradation w.e.f 2014.

Water Quality Seasonal Average for the period: 2006-2021

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			
		2015	2018	2020	2021
	PHYSICAL				
1	Q (cumec)	1.067	11.72	5.404	6.888
2	EC_FLD (µmho/cm)				447
3	EC_GEN (µmho/cm)	994	1404	830	998
4	pH_FLD (pH units)				7.6
5	pH_GEN (pH units)	8.3	8.2	7.9	8.1
6	TDS (mg/L)	642	834	601	617
7	Temp (deg C)	27.0	28.0	26.0	24.3
8	Turb (NTU)	3.03	27.00	45.00	19.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	1.2	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	258	302	340	325
3	B (mg/L)	0.31	0.04	0.95	0.81
4	Ca (mg/L)	41	48	29	51
5	Cl (mg/L)	109.7	119.1	149.0	119.3
6	CO3 (mg/L)	1.4	0.0	0.0	0.0
7	F (mg/L)	0.91	0.69	1.07	0.97
8	Fe (mg/L)	0.0	0.1	0.2	0.3
9	HCO3 (mg/L)	311	368	415	396
10	K (mg/L)	4.3	0.7	0.6	4.6
11	Mg (mg/L)	23.7	39.1	46.0	24.1
12	Na (mg/L)	138.7	40.4	154.5	138.8
13	NH3-N (mg N/L)	0.09	0.07	0.00	0.50
14	NO2+NO3 (mg N/L)	1.03	5.54	4.95	4.31
15	NO2-N (mgN/L)	0.02	0.02	0.05	0.81
16	NO3-N (mgN/L)	1.01	5.51	4.90	5.85
17	o-PO4-P (mg P/L)	0.133	0.605	0.160	0.984
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)	15.2	13.0	13.5	30.5
20	SO4 (mg/L)	81.1	78.2	122.0	52.2
	BIOLOGICAL/BACTERIOLOGIC				
1	BOD3-27 (mg/L)	0.4	1.3	0.6	6.6
2	COD (mg/L)	9.3	19.0	38.7	15.3
3	DO (mg/L)	4.9	5.4	4.7	
4	DO_SAT% (%)	62	69	58	
5	FCol-MPN (MPN/100mL)	2	750	500	1797
6	Tcol-MPN (MPN/100mL)	517	1200	2800	3210
7	TOC (mg/L)	42.8			
	TRACE & TOXIC				
1	As (µg/L)	2.97	0.28		
2	Cd (µg/L)	3.00	0.30		1.25
3	Cr (µg/L)	0.00	0.00		0.05
4	Cu (µg/L)		4.25	1.00	8.97
5	Hg (µg/L)	0.23	0.13		
6	Ni (µg/L)	9.14	2.20		11.65
7	Pb (µg/L)	18.00	0.00		28.00
8	Zn (µg/L)	11.00	36.20	20.00	11.62
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	101	119	73	127
2	HAR_Total (mgCaCO3/L)	200	282	264	227
3	Na% (%)	60	24	56	56
4	RSC (-)	1.2	0.4	1.6	2.0
5	SAR (-)	4.3	1.1	4.2	4.0
	PESTICIDES				

Samples not collected during Summer season 2006 to 2013 due to Downgradation w.e.f 01/06/2006. WQ Upgradation w.e.f 2014 and Samples not collected 2016 & 2017, 2019 due to Dry bed / no flow condition.

HISTORY SHEET

		Water Year	: 2020-2021
Site	: MUNUGODU	Code	: 033-LKDHYD
State	: Andhra Pradesh	District	Guntur
Basin	: Krishna	Independent River	: Krishna
Tributary	: Lower Krishna	Sub Tributary	:
		Local River	: EDDUVAGU
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Krishna SD2, Vijayawada
Drainage Area	: 647.8 Sq. Km.	Bank	: Left
Latitude	: 16°33'17"	Longitude	: 80°12'23"
	Opening Date	Closing Date	
Gauge	: 24-10-2016		
Discharge	: 24-10-2017		
Water Quality	: 01-06-2019		

Water Quality Datasheet for the period : 2020-2021

Station Name : MUNUGODU (033-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River :

River Water Analysis

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	14-09-2020	05-10-2020	02-11-2020	01-12-2020	11-12-2020	21-12-2020
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	35.49	14.77	12.70	14.31	13.04	14.31
2	Colour_Cod (-)	Light Brown	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	786	670	866	920	836	814
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.7	7.5	7.9	8.2	8.0	8.6
6	TDS (mg/L)	579	489	487	569	569	648
7	Temp (deg C)	28.0	27.0	26.0	26.0	23.0	24.0
8	Turb (NTU)	28.00	65.00	38.00	84.00	78.00	22.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	20.3
2	ALK-TOT (mgCaCO3/L)	270	267	292	284	271	220
3	B (mg/L)	1.56	0.15	0.17	0.21	0.66	0.40
4	Ca (mg/L)	44	40	27	34	58	73
5	Cl (mg/L)	93.3	98.5	81.2	97.9	98.5	89.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	24.5
7	F (mg/L)	0.14	0.79	0.79	0.79	0.78	0.76
8	Fe (mg/L)	0.0	1.4	0.0	0.9	0.3	0.0
9	HCO3 (mg/L)	330	326	357	346	330	219
10	K (mg/L)	0.6	0.5	1.2	1.1	0.7	0.5
11	Mg (mg/L)	14.8	27.4	39.7	36.7	28.7	9.4
12	Na (mg/L)	111.0	19.5	109.3	104.8	102.7	82.9
13	NH3-N (mg N/L)	0.03	0.07	0.03	0.18	1.13	0.03
14	NO2+NO3 (mg N/L)						
15	NO2-N (mgN/L)	0.03	0.18	0.02	0.17	0.09	0.04
16	NO3-N (mgN/L)						
17	o-PO4-P (mg P/L)	0.170	0.320	0.490	0.330	0.580	0.520
18	SiO2 (mg/L)	18.2	16.8	15.2	19.5	22.5	15.6
19	SO4 (mg/L)	75.8	82.5	40.0	81.4	82.2	48.6
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)		0.5	2.1	2.5	0.7	1.0
2	COD (mg/L)	28.8	13.9	27.6	16.1	11.3	19.9
3	DO (mg/L)		3.8	5.1	5.4	5.1	6.4
4	DO_SAT% (%)		48	63	67	59	76
5	Fcol-MPN (MPN/100mL)	3500	1700	2800	5000	2800	110
6	Tcol-MPN (MPN/100mL)	16000	16000	16000	16000	16000	9000
	TRACE & TOXIC						
1	As (μg/L)				1.13	1.60	0.83
2	Cd (μg/L)				2.70	3.10	0.20
3	Cr (μg/L)				3.40	2.60	3.90
4	Cu (μg/L)	0.00	0.01	0.01	5.30	2.80	3.10
5	Hg (μg/L)				1.03	0.71	0.83
6	Ni (μg/L)				8.20	4.40	0.70
7	Pb (μg/L)				51.00	53.00	30.00
8	Zn (μg/L)	0.00	0.00	0.00	11.04	6.70	11.14
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	110	99	67	85	144	182
2	HAR_Total (mgCaCO3/L)	171	213	232	238	263	221
3	Na% (%)	59	17	51	49	46	45
4	RSC (-)	2.0	1.1	1.3	0.9	0.2	0.0
5	SAR (-)	3.7	0.6	3.1	3.0	2.8	2.4
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

Station Name : MUNUGODU (033-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River :

River Water Analysis

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	01-01-2021	01-02-2021	01-03-2021	05-04-2021	03-05-2021	21-05-2021
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	12.07	11.16	7.147	5.512	3.221	2.227
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	560	388	976	1153	1146	1400
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.0	8.0	7.9	8.2	8.1	8.2
6	TDS (mg/L)	389	319	779	660	632	843
7	Temp (deg C)	23.0	23.0	23.0	28.0	28.0	29.0
8	Turb (NTU)	7.00	1.00	1.00	34.00	33.00	7.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	185	241	281	303	264	382
3	B (mg/L)	0.66	0.04	0.73			
4	Ca (mg/L)	50	55	53	64	52	64
5	Cl (mg/L)	84.0	94.7	97.0	113.0	125.0	175.3
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.95	0.91	1.54	1.33	1.14	1.21
8	Fe (mg/L)	1.0	0.6	0.3	1.2		0.2
9	HCO3 (mg/L)	226	294	343	370	322	466
10	K (mg/L)	0.5	0.6	0.8	5.3	10.0	15.8
11	Mg (mg/L)	19.0	22.1	23.0	25.9	23.2	24.0
12	Na (mg/L)	92.0	110.2	135.7	119.6	145.9	189.0
13	NH3-N (mg N/L)	0.11	0.06	0.25			
14	NO2+NO3 (mg N/L)	4.36	4.10	6.86			
15	NO2-N (mgN/L)	0.16	0.00	0.36			
16	NO3-N (mgN/L)	4.20	4.10	6.50	8.80	7.00	9.11
17	o-PO4-P (mg P/L)	0.224	0.053	0.435			
18	SiO2 (mg/L)	19.1	23.8	29.0			
19	SO4 (mg/L)	102.0	83.4	26.0	97.0	89.7	12.6
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.4	1.2	1.0	0.8	1.1	
2	COD (mg/L)	16.7	27.6	24.0	8.3	13.9	
3	DO (mg/L)	6.6	5.3	5.5	4.3	4.6	
4	DO_SAT% (%)	77	62	64	55	59	
5	Fcol-MPN (MPN/100mL)	2200	140	220	140	140	
6	Tcol-MPN (MPN/100mL)	16000	230	500	170	170	
	TRACE & TOXIC						
1	As (μg/L)	1.94			4.13		11.85
2	Cd (μg/L)	0.00			1.60		0.90
3	Cr (μg/L)	7.80			1.60		0.20
4	Cu (μg/L)	1.00	1.00	25.00	7.60		1.20
5	Hg (μg/L)	0.39			0.64		0.35
6	Ni (μg/L)	1.70			28.00		1.70
7	Pb (μg/L)	20.00			75.00		15.00
8	Zn (μg/L)	4.56	22.20	0.03	16.77		8.99
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	125	137	133	160	130	160
2	HAR_Total (mgCaCO3/L)	204	229	229	268	226	260
3	Na% (%)	50	51	56	49	57	60
4	RSC (-)	0.0	0.3	1.1	0.7	0.8	2.5
5	SAR (-)	2.8	3.2	3.9	3.2	4.2	5.1
	PESTICIDES						

Water Quality Summary for the period : 2020-2021

Station Name : MUNUGODU (033-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River : YEDDUVAGU

Sub-Division : Lower Krishna SD2, Vijayawada

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	676.6	0.000	18.66
2	EC_GEN (µmho/cm)	12	1400	388	876
3	pH_GEN (pH units)	12	8.6	7.5	8
4	TDS (mg/L)	12	843	319	580
5	Temp (deg C)	12	29.0	23.0	25.7
6	Turb (NTU)	12	84.00	1.00	33.17
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	20.3	0.0	1.7
2	ALK-TOT (mgCaCO3/L)	12	382	185	272
3	B (mg/L)	9	1.56	0.04	0.51
4	Ca (mg/L)	12	73	27	51
5	Cl (mg/L)	12	175.3	81.2	104
6	CO3 (mg/L)	12	24.5	0.0	2
7	F (mg/L)	12	1.54	0.14	0.93
8	Fe (mg/L)	11	1.4	0.0	0.5
9	HCO3 (mg/L)	12	466	219	327
10	K (mg/L)	12	15.8	0.5	3.1
11	Mg (mg/L)	12	39.7	9.4	24.5
12	Na (mg/L)	12	189.0	19.5	110.2
13	NH3-N (mg N/L)	9	1.13	0.03	0.21
14	NO2+NO3 (mg N/L)	3	6.86	4.10	5.11
15	NO2-N (mgN/L)	9	0.36	0.00	0.12
16	NO3-N (mgN/L)	6	9.11	4.10	6.62
17	o-PO4-P (mg P/L)	9	0.580	0.053	0.347
18	SiO2 (mg/L)	9	29.0	15.2	20
19	SO4 (mg/L)	12	102.0	12.6	68.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	2.5	0.5	1.2
2	COD (mg/L)	11	28.8	8.3	18.9
3	DO (mg/L)	5	6.4	3.8	5.2
4	DO_SAT% (%)	5	76	48	63
5	FCol-MPN (MPN/100mL)	11	5000	110	1705
6	Tcol-MPN (MPN/100mL)	11	16000	170	9643
	TRACE & TOXIC				
1	As (µg/L)	4	1.94	0.83	1.38
2	Cd (µg/L)	6	3.10	0.00	1.42
3	Cr (µg/L)	6	7.80	0.20	3.25
4	Cu (µg/L)	11	25.00	0.00	4.27
5	Hg (µg/L)	4	1.03	0.39	0.74
6	Ni (µg/L)	6	28.00	0.70	7.45
7	Pb (µg/L)	6	75.00	15.00	40.67
8	Zn (µg/L)	11	22.20	0.00	7.4
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	182	67	128
2	HAR_Total (mgCaCO3/L)	12	268	171	230
3	Na% (%)	12	60	17	49
4	RSC (-)	12	2.5	0.0	0.9
5	SAR (-)	12	5.1	0.6	3.2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2019-2021

Station Name : MUNUGODU (033-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River : YEDDUVAGU

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2019	2020	2019-2020	2020-2021	2020	2021
	PHYSICAL						
1	Q (cumec)	3.363	25.13	14.74	12.93	1.972	4.527
2	EC_GEN (µmho/cm)	1003	728	775	731	725	1169
3	pH_GEN (pH units)	7.8	7.6	7.9	8.1	8.1	8.1
4	TDS (mg/L)	622	534	677	497	1369	729
5	Temp (deg C)	26.6	27.5	24.3	24.2	23.0	27.0
6	Turb (NTU)	85.60	46.50	21.00	38.33	10.00	18.75
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	3.4	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	292	269	228	249	301	307
3	B (mg/L)	0.23	0.85	0.97	0.36	0.94	0.73
4	Ca (mg/L)	67	42	44	49	20	58
5	Cl (mg/L)	147.8	95.9	77.0	90.9	118.0	127.6
6	CO3 (mg/L)	0.0	0.0	0.0	4.1	0.0	0.0
7	F (mg/L)	0.97	0.46	0.57	0.83	1.04	1.31
8	Fe (mg/L)	1.5	0.7	2.7	0.5	0.4	0.6
9	HCO3 (mg/L)	356	328	278	295	367	375
10	K (mg/L)	4.1	0.6	0.7	0.7	1.4	8.0
11	Mg (mg/L)	23.2	21.1	25.0	25.9	48.0	24.0
12	Na (mg/L)	155.4	65.2	89.9	100.3	131.5	147.5
13	NH3-N (mg N/L)	0.07	0.05	0.02	0.26	0.00	0.25
14	NO2+NO3 (mg N/L)	3.37		8.37	4.23	8.15	6.86
15	NO2-N (mgN/L)	0.06	0.11	0.08	0.08	0.05	0.36
16	NO3-N (mgN/L)	3.31		8.28	4.15	8.10	7.85
17	o-PO4-P (mg P/L)	0.286	0.245	0.328	0.366	0.740	0.435
18	SiO2 (mg/L)	20.5	17.5	16.2	19.3	19.8	29.0
19	SO4 (mg/L)	47.9	79.2	116.8	72.9	393.0	56.3
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.5	0.5	1.2	1.5	2.3	1.0
2	COD (mg/L)	19.3	21.4	26.6	19.9	28.5	15.4
3	DO (mg/L)	4.3	3.8	5.5	5.5	6.0	
4	DO_SAT% (%)	54	48	66	66	70	
5	FCol-MPN (MPN/100mL)	1136	2600	1133	2175	330	167
6	Tcol-MPN (MPN/100mL)	7094	16000	3650	12205	5000	280
	TRACE & TOXIC						
1	As (µg/L)	0.69		6.14	1.38		
2	Cd (µg/L)	0.12		0.02	1.50		1.25
3	Cr (µg/L)	5.41		0.92	4.43		0.90
4	Cu (µg/L)	15.20	0.01	7.25	2.20	3.00	11.27
5	Hg (µg/L)				0.74		
6	Ni (µg/L)	6.18		8.98	3.75		14.85
7	Pb (µg/L)	0.17		0.36	38.50		45.00
8	Zn (µg/L)	23.70	0.00	54.00	9.27	18.00	8.60
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	169	104	110	123	50	146
2	HAR_Total (mgCaCO3/L)	265	192	214	231	250	246
3	Na% (%)	54	38	48	49	53	55
4	RSC (-)	1.3	1.6	0.4	0.4	1.1	1.3
5	SAR (-)	4.2	2.1	2.7	2.9	3.6	4.1
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2020-2021
Site	: paleru Bridge	Code	: AKC00D3
State	: Andhra Pradesh	District	: Krishna
Basin	: Krishna	Independent River	: Krishna
Tributary	: Paleru	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		

Water Quality Datasheet for the period : 2020-2021

Station Name : paleru Bridge (AKC00D3)

Division : Lower Krishna Divn., Hyderabad

Local River : Paleru

River Water Analysis

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	14-09-2020	05-10-2020	02-11-2020	01-12-2020	11-12-2020	21-12-2020
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	58.36	22.97	5.738	12.29	7.558	2.669
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	680	70	725	720	725	720
4	EC_GEN (μmho/cm)	636	654	806	582	854	954
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.0	6.8	6.9	6.8	6.9	7.0
7	pH_GEN (pH units)	7.4	8.0	7.8	8.1	8.0	8.0
8	TDS (mg/L)	390	427	458	352	482	604
9	Temp (deg C)	22.5	22.5	20.5	21.5	29.0	20.5
10	Turb (NTU)	20.00	7.00	30.00	4.00	5.00	20.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	193	227	321	184	277	184
3	B (mg/L)	0.32	0.15	0.40	0.77	0.32	0.18
4	Ca (mg/L)	33	34	30	37	62	31
5	Cl (mg/L)	72.5	69.3	85.6	67.0	115.4	121.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.15	0.69	1.06	0.44	0.98	0.97
8	Fe (mg/L)	0.1	0.0	0.0	0.6	0.3	0.1
9	HCO3 (mg/L)	235	278	392	225	338	225
10	K (mg/L)	0.4	0.4	0.5	0.6	0.4	0.9
11	Mg (mg/L)	28.3	75.8	53.5	21.0	32.5	29.1
12	Na (mg/L)	55.4	48.8	83.3	49.4	85.2	170.4
13	NH3-N (mg N/L)	0.09	0.02	0.04	0.21	0.33	0.29
14	NO2+NO3 (mg N/L)						
15	NO2-N (mgN/L)	0.03	0.10	0.05	0.06	0.11	0.25
16	NO3-N (mgN/L)						
17	o-PO4-P (mg P/L)	0.040	0.120	0.610	0.140	0.510	0.380
18	SiO2 (mg/L)	15.6	17.0	27.4	16.9	33.5	22.8
19	SO4 (mg/L)	34.8	86.0	27.6	46.7	107.5	183.6
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)		1.1	0.9	4.0	59.6	1.2
2	COD (mg/L)	16.5	14.7	23.3	8.7	17.6	19.9
3	DO (mg/L)		5.6	3.3	5.1	3.3	5.2
4	DO_SAT% (%)		64	36	57	43	57
5	FCol-MPN (MPN/100mL)	1100	700	9000	9000	1100	110
6	Tcol-MPN (MPN/100mL)	16000	2800	16000	16000	9000	2800
	TRACE & TOXIC						
1	As (μg/L)				0.58	0.84	0.34
2	Cd (μg/L)				2.00	4.00	1.70
3	Cr (μg/L)				3.80	5.90	3.70
4	Cu (μg/L)	0.00	0.00	0.00	3.50	1.90	1.60
5	Hg (μg/L)				0.18	0.45	0.37
6	Ni (μg/L)				11.30	8.80	4.10
7	Pb (μg/L)				62.00	52.00	57.00
8	Zn (μg/L)	0.01	0.00	0.00	13.37	19.24	5.75
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	82	85	75	93	154	76
2	HAR_Total (mgCaCO3/L)	199	401	298	180	289	198
3	Na% (%)	38	21	38	37	39	65
4	RSC (-)	0.0	0.0	0.5	0.1	0.0	0.0
5	SAR (-)	1.7	1.1	2.1	1.6	2.2	5.3
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

Station Name : paleru Bridge (AKC00D3)

Division : Lower Krishna Divn., Hyderabad

Local River : Paleru

River Water Analysis

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	01-01-2021	01-02-2021	01-03-2021	05-04-2021	03-05-2021	21-05-2021
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	1.714	6.527	4.078	10.76	5.826	3.985
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	725	725	720	725	725	720
4	EC_GEN (μmho/cm)	695	389	1063	827	895	1204
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	6.9	6.9	6.9	6.9	6.9	7.0
7	pH_GEN (pH units)	7.6	7.4	7.7	8.2	8.0	8.2
8	TDS (mg/L)	561	241	638	480	588	812
9	Temp (deg C)	20.5	19.5	19.5	20.5	20.5	20.5
10	Turb (NTU)	5.00	3.00	1.00	27.00	18.00	8.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	247	291	300	178	269	215
3	B (mg/L)	0.22	0.38	0.61			
4	Ca (mg/L)	73	62	57	36	57	43
5	Cl (mg/L)	127.4	105.4	136.0	106.0	116.0	174.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.44	1.01	1.47	1.32	1.26	1.17
8	Fe (mg/L)	0.6	0.6	0.1	1.8		0.2
9	HCO3 (mg/L)	301	355	366	217	328	262
10	K (mg/L)	0.6	0.3	0.6	4.4	5.1	10.2
11	Mg (mg/L)	31.9	32.2	37.4	28.6	33.5	26.2
12	Na (mg/L)	98.9	89.7	117.8	87.7	106.4	111.2
13	NH3-N (mg N/L)	0.02	0.02	0.16			
14	NO2+NO3 (mg N/L)	6.15	5.20	3.86			
15	NO2-N (mgN/L)	0.85	0.00	0.36			
16	NO3-N (mgN/L)	5.30	5.20	3.50	4.20	4.40	4.36
17	o-PO4-P (mg P/L)	0.150	0.039	0.434			
18	SiO2 (mg/L)	20.7	18.5	17.7			
19	SO4 (mg/L)	86.5	61.9	88.0	67.7	40.6	12.3
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	0.7	0.5	1.9	4.2	0.5	
2	COD (mg/L)	13.4	19.7	10.7	16.7	22.1	
3	DO (mg/L)	5.3	5.1	4.9	6.1	6.0	7.0
4	DO_SAT% (%)	58	55	53	67	66	77
5	FCol-MPN (MPN/100mL)	1400	170	340	330	170	
6	Tcol-MPN (MPN/100mL)	3500	700	1100	1400	260	
	TRACE & TOXIC						
1	As (μg/L)	4.26			4.70		2.87
2	Cd (μg/L)	0.00			1.70		1.70
3	Cr (μg/L)	7.50			0.20		14.80
4	Cu (μg/L)	0.20	3.00	12.00	6.30		3.30
5	Hg (μg/L)	0.62			0.58		5.03
6	Ni (μg/L)	0.00			18.20		3.70
7	Pb (μg/L)	0.00			36.00		21.00
8	Zn (μg/L)	15.96	5.10	0.02	17.24		7.88
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	181	155	143	90	143	108
2	HAR_Total (mgCaCO3/L)	314	289	299	209	283	217
3	Na% (%)	41	40	46	47	45	51
4	RSC (-)	0.0	0.1	0.1	0.0	0.0	0.0
5	SAR (-)	2.4	2.3	3.0	2.6	2.8	3.3
	PESTICIDES						

Water Quality Summary for the period : 2020-2021

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)	369	584.3	0.000	27.07
2	EC_FLD (µmho/cm)	12	725	70	665
3	EC_GEN (µmho/cm)	12	1204	389	797
4	pH_FLD (pH units)	12	7.0	6.8	6.9
5	pH_GEN (pH units)	12	8.2	7.4	7.9
6	TDS (mg/L)	12	812	241	503
7	Temp (deg C)	12	29.0	19.5	21.5
8	Turb (NTU)	12	30.00	1.00	12.33
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	12	321	178	240
3	B (mg/L)	9	0.77	0.15	0.37
4	Ca (mg/L)	12	73	30	46
5	Cl (mg/L)	12	174.4	67.0	108
6	CO3 (mg/L)	12	0.0	0.0	0
7	F (mg/L)	12	1.47	0.15	0.91
8	Fe (mg/L)	11	1.8	0.0	0.4
9	HCO3 (mg/L)	12	392	217	293
10	K (mg/L)	12	10.2	0.3	2
11	Mg (mg/L)	12	75.8	21.0	35.8
12	Na (mg/L)	12	170.4	48.8	92
13	NH3-N (mg N/L)	9	0.33	0.02	0.13
14	NO2+NO3 (mg N/L)	3	6.15	3.86	5.07
15	NO2-N (mgN/L)	9	0.85	0.00	0.2
16	NO3-N (mgN/L)	6	5.30	3.50	4.49
17	o-PO4-P (mg P/L)	9	0.610	0.039	0.269
18	SiO2 (mg/L)	9	33.5	15.6	21.1
19	SO4 (mg/L)	12	183.6	12.3	70.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	59.6	0.5	7.5
2	COD (mg/L)	11	23.3	8.7	16.7
3	DO (mg/L)	6	7.0	3.3	4.9
4	DO_SAT% (%)	6	77	36	56
5	FCol-MPN (MPN/100mL)	11	9000	110	2129
6	Tcol-MPN (MPN/100mL)	11	16000	260	6324
	TRACE & TOXIC				
1	As (µg/L)	4	4.26	0.34	1.51
2	Cd (µg/L)	6	4.00	0.00	1.85
3	Cr (µg/L)	6	14.80	0.20	5.98
4	Cu (µg/L)	11	12.00	0.00	2.89
5	Hg (µg/L)	4	0.62	0.18	0.41
6	Ni (µg/L)	6	18.20	0.00	7.68
7	Pb (µg/L)	6	62.00	0.00	38
8	Zn (µg/L)	11	19.24	0.00	7.69
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	181	75	115
2	HAR_Total (mgCaCO3/L)	12	401	180	265
3	Na% (%)	12	65	21	42
4	RSC (-)	12	0.5	0.0	0.1
5	SAR (-)	12	5.3	1.1	2.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	6.869				
2	EC_FLD (µmho/cm)					958
3	EC_GEN (µmho/cm)	734	671	775	821	793
4	pH_FLD (pH units)					7.7
5	pH_GEN (pH units)	7.9	7.7	7.8	7.5	7.8
6	TDS (mg/L)					
7	Temp (deg C)	26.6	28.5	27.2	27.7	31.5
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	1.6
2	ALK-TOT (mgCaCO3/L)	284	238	255	250	241
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	52	52	60	54	54
5	Cl (mg/L)	59.6	58.1	65.8	71.2	72.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	1.9
7	F (mg/L)	1.09	1.17	1.03	1.79	1.12
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	347	290	312	306	290
10	K (mg/L)	4.3	4.1	3.5	4.5	3.7
11	Mg (mg/L)	27.4	25.8	22.3	25.3	29.7
12	Na (mg/L)	77.2	66.4	62.7	68.5	64.3
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.87	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	0.87	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.353
19	SiO2 (mg/L)	23.9	27.1	32.9	35.0	22.4
20	SO4 (mg/L)	60.8	49.0	45.4	65.9	62.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.3	1.1	1.6	1.4
2	COD (mg/L)		16.2	22.9	30.0	31.2
3	DO (mg/L)	5.3	5.6	5.0	3.7	4.7
4	DO_SAT% (%)	67	72	63	37	46
5	FCol-MPN (MPN/100mL)				11467	11660
6	Tcol-MPN (MPN/100mL)				13667	13140
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)	131	130	151	134	135
2	HAR_Total (mgCaCO3/L)	245	237	244	239	259
3	Na% (%)	40	37	36	38	35
4	RSC (-)	0.9	0.3	0.3	0.5	0.1
5	SAR (-)	2.2	1.9	1.8	1.9	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: 2006-2021

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				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)				4.926	3.011
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	750	969	797	910	880
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.7	7.6	7.9	8.0	7.8
6	TDS (mg/L)	493	643	438	565	566
7	Temp (deg C)	28.5	29.7	30.0	27.3	29.3
8	Turb (NTU)	1.00	0.84	1.41	3.25	1.40
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	1.0	0.0
2	ALK-TOT (mgCaCO3/L)	224	254	234	254	236
3	B (mg/L)	0.00	0.21	0.41	0.21	0.27
4	Ca (mg/L)	45	53	53	51	51
5	Cl (mg/L)	72.6	106.8	72.1	85.8	100.6
6	CO3 (mg/L)	0.0	0.0	0.0	1.3	0.0
7	F (mg/L)	1.41	1.22	0.92	1.12	1.09
8	Fe (mg/L)		0.1	0.0	0.1	0.0
9	HCO3 (mg/L)	273	310	286	307	288
10	K (mg/L)	3.2	4.7	3.2	4.8	4.4
11	Mg (mg/L)	25.3	30.3	30.6	29.5	29.7
12	Na (mg/L)	64.0	82.6	69.0	88.9	93.0
13	NH3-N (mg N/L)	0.00	0.01	0.09	0.00	0.00
14	NO2+NO3 (mg N/L)	0.33	0.82	1.20	1.15	0.84
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.01	0.00
16	NO3-N (mgN/L)	0.33	0.82	1.20	1.14	0.84
17	o-PO4-P (mg P/L)	0.411	0.099	0.210	0.164	0.102
18	P-Tot (mgP/L)	0.411			0.155	
19	SiO2 (mg/L)	19.3	28.3	13.1	24.4	24.5
20	SO4 (mg/L)	53.9	61.1	59.5	84.5	81.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.1	1.6	0.9	0.6
2	COD (mg/L)	26.0	14.3	6.2	18.1	12.6
3	DO (mg/L)	4.5	4.4	5.4	4.4	2.7
4	DO_SAT% (%)	54	58	72	55	36
5	Fcol-MPN (MPN/100mL)	10646	3552	2150	4658	591
6	Tcol-MPN (MPN/100mL)	11446	4020	9500	6335	6340
7	TOC (mg/L)	3.2	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)	112	131	131	127	129
2	HAR_Total (mgCaCO3/L)	217	258	259	250	253
3	Na% (%)	39	41	36	43	44
4	RSC (-)	0.4	0.8	0.0	0.3	0.1
5	SAR (-)	1.9	2.4	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: 2006-2021

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				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	2.542	4.205	4.111	9.604	40.67
2	EC_FLD (µmho/cm)		1755	748		375
3	EC_GEN (µmho/cm)	1038	1023	1420	986	645
4	pH_FLD (pH units)	7.6	7.3	7.4		6.9
5	pH_GEN (pH units)	7.9	7.9	7.7	7.5	7.7
6	TDS (mg/L)	896	694	798	676	409
7	Temp (deg C)	26.8	24.1	24.4	22.9	22.5
8	Turb (NTU)	0.00	8.75	5.00	20.80	13.50
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	8.8	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	196	238	259	258	210
3	B (mg/L)		0.00	0.06	0.15	0.23
4	Ca (mg/L)	67	62	61	70	33
5	Cl (mg/L)	165.2	140.8	181.3	135.1	70.9
6	CO3 (mg/L)	0.0	10.6	0.0	0.0	0.0
7	F (mg/L)	0.71	1.06	1.02	1.16	0.42
8	Fe (mg/L)	0.1	0.4	0.1	0.5	0.0
9	HCO3 (mg/L)	239	269	316	315	256
10	K (mg/L)	4.6	0.5	0.5	0.9	0.4
11	Mg (mg/L)	36.8	45.4	49.9	42.7	52.1
12	Na (mg/L)	82.1	99.6	106.8	88.7	52.1
13	NH3-N (mg N/L)	0.00	0.06	0.43	0.13	0.06
14	NO2+NO3 (mg N/L)	1.77	6.29	1.26	3.18	
15	NO2-N (mgN/L)	0.00	0.07	0.07	0.27	0.07
16	NO3-N (mgN/L)	1.77	6.22	1.19	2.91	
17	o-PO4-P (mg P/L)	0.207	0.770	0.562	0.390	0.080
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	14.8	18.8	37.0	29.0	16.3
20	SO4 (mg/L)	78.9	95.4	78.4	97.3	60.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	1.0	1.2	1.4	1.1
2	COD (mg/L)	16.2	17.9	24.4	16.8	15.6
3	DO (mg/L)	5.4	5.2	4.5	4.9	5.6
4	DO_SAT% (%)	67	62	54	52	64
5	FCol-MPN (MPN/100mL)	2615	6860	350	956	900
6	Tcol-MPN (MPN/100mL)	3150	6804	4028	7232	9400
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				2.25	
2	Cd (µg/L)				0.37	
3	Cr (µg/L)				4.08	
4	Cu (µg/L)		0.40	7.60	8.80	0.00
5	Hg (µg/L)					
6	Ni (µg/L)				4.57	
7	Pb (µg/L)				0.41	
8	Zn (µg/L)		55.06	12.59	32.18	0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	168	155	152	174	83
2	HAR_Total (mgCaCO3/L)	322	345	360	352	300
3	Na% (%)	35	39	34	34	29
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	2.0	2.3	2.4	2.1	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: 2006-2021

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				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	16.45				
2	EC_FLD (µmho/cm)					904
3	EC_GEN (µmho/cm)	586	644	920	771	751
4	pH_FLD (pH units)					7.9
5	pH_GEN (pH units)	8.1	7.9	7.8	7.8	7.9
6	TDS (mg/L)					
7	Temp (deg C)	24.3	27.8	24.8	27.0	26.5
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	6.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	231	228	283	237	227
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	47	47	80	57	49
5	Cl (mg/L)	42.6	47.7	80.7	66.2	62.0
6	CO3 (mg/L)	7.3	0.0	0.0	0.0	0.0
7	F (mg/L)	0.84	1.75	0.96	1.18	0.84
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	268	278	345	289	278
10	K (mg/L)	3.3	2.8	3.2	2.8	3.0
11	Mg (mg/L)	20.5	22.8	24.6	27.4	27.9
12	Na (mg/L)	53.0	55.3	81.7	68.1	62.4
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	1.02	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	1.02	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.128
19	SiO2 (mg/L)	20.7	20.1	18.2	29.6	19.8
20	SO4 (mg/L)	42.5	46.3	101.7	63.9	59.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.8	1.2	0.9	1.2	0.8
2	COD (mg/L)		13.9	12.6	20.4	21.3
3	DO (mg/L)	7.4	7.0	6.0	5.3	6.5
4	DO_SAT% (%)	89	90	72	67	81
5	FCol-MPN (MPN/100mL)				7825	3815
6	Tcol-MPN (MPN/100mL)				10675	10333
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)	116	118	200	142	122
2	HAR_Total (mgCaCO3/L)	202	213	302	257	239
3	Na% (%)	36	36	36	37	36
4	RSC (-)	0.6	0.3	0.2	0.1	0.0
5	SAR (-)	1.6	1.7	2.0	1.9	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: 2006-2021

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				
		2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL					
1	Q (cumec)				6.613	Dry bed
2	EC_FLD (µmho/cm)					No flow
3	EC_GEN (µmho/cm)	749	979	752	590	
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.7	7.5	7.9	8.0	
6	TDS (mg/L)	473	557	434	442	
7	Temp (deg C)	29.4	25.1	26.0	25.8	
8	Turb (NTU)	1.00	1.03	3.00	1.08	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	253	283	237	231	
3	B (mg/L)	0.19	0.19	0.12	0.22	
4	Ca (mg/L)	53	63	54	51	
5	Cl (mg/L)	71.0	105.0	68.7	59.8	
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	
7	F (mg/L)	1.10	1.38	0.92	0.81	
8	Fe (mg/L)	0.2	0.0	0.1	0.1	
9	HCO3 (mg/L)	308	345	289	282	
10	K (mg/L)	2.6	2.4	3.0	2.5	
11	Mg (mg/L)	30.6	36.8	31.2	31.3	
12	Na (mg/L)	65.3	90.8	61.4	62.5	
13	NH3-N (mg N/L)	0.02	0.17	0.03	0.04	
14	NO2+NO3 (mg N/L)	0.92	1.39	1.21	0.76	
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.02	
16	NO3-N (mgN/L)	0.92	1.39	1.21	0.74	
17	o-PO4-P (mg P/L)	0.211	0.159	0.143	0.119	
18	P-Tot (mgP/L)	0.211				
19	SiO2 (mg/L)	30.9	26.3	16.6	19.2	
20	SO4 (mg/L)	64.1	54.4	47.0	59.7	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	0.9	1.7	0.8	
2	COD (mg/L)	9.7	15.2	6.6	7.9	
3	DO (mg/L)	5.1	3.5	5.6	6.0	
4	DO_SAT% (%)	67	42	68	74	
5	FCol-MPN (MPN/100mL)	5000	403	840	713	
6	Tcol-MPN (MPN/100mL)	6050	4283	3000	1510	
7	TOC (mg/L)	2.5	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	
5	Hg (µg/L)					
6	Ni (µg/L)				3.69	
7	Pb (µg/L)				6.93	
8	Zn (µg/L)				4.75	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	133	157	134	126	
2	HAR_Total (mgCaCO3/L)	260	310	264	257	
3	Na% (%)	35	39	33	34	
4	RSC (-)	0.2	0.0	0.0	0.1	
5	SAR (-)	1.8	2.2	1.7	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: 2006-2021

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				
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	0.780	1.316	2.342	6.751	6.083
2	EC_FLD (µmho/cm)	1720	1363	668		723
3	EC_GEN (µmho/cm)	1770	1051	1470	1020	713
4	pH_FLD (pH units)	7.5	7.3	7.3		6.9
5	pH_GEN (pH units)	7.5	7.6	7.8	7.5	7.8
6	TDS (mg/L)	1185	645	813	677	450
7	Temp (deg C)	25.2	24.9	23.5	22.3	21.9
8	Turb (NTU)	0.00	3.00	0.67	36.50	11.17
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	293	254	294	314	251
3	B (mg/L)		0.05	0.09	0.69	0.38
4	Ca (mg/L)	94	62	56	51	49
5	Cl (mg/L)	253.3	140.7	166.3	130.8	103.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	1.15	1.13	0.66	1.02	0.82
8	Fe (mg/L)	0.1	0.1	0.1	0.4	0.4
9	HCO3 (mg/L)	358	310	359	383	306
10	K (mg/L)	4.7	0.5	0.4	0.3	0.5
11	Mg (mg/L)	51.4	32.0	49.4	58.8	33.4
12	Na (mg/L)	185.0	100.7	117.6	98.2	96.1
13	NH3-N (mg N/L)	0.11	1.14	0.20	0.02	0.15
14	NO2+NO3 (mg N/L)	0.21	4.31	1.51	6.51	5.67
15	NO2-N (mgN/L)	0.12	0.02	0.07	0.04	0.22
16	NO3-N (mgN/L)	0.08	4.29	1.44	6.47	5.25
17	o-PO4-P (mg P/L)	0.134	0.375	0.295	0.133	0.305
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	24.1	26.2	17.8	29.1	23.3
20	SO4 (mg/L)	223.9	101.2	130.1	73.2	85.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	11.0	1.1	1.5	1.1	11.1
2	COD (mg/L)	37.2	11.1	12.6	29.5	17.1
3	DO (mg/L)	1.6	5.6	5.6	4.1	4.2
4	DO_SAT% (%)	19	67	66	47	48
5	FCol-MPN (MPN/100mL)	8000	6918	1280	1500	3463
6	Tcol-MPN (MPN/100mL)	8000	6900	8123	4875	8000
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				7.16	1.51
2	Cd (µg/L)				0.08	1.93
3	Cr (µg/L)				6.89	5.23
4	Cu (µg/L)	0.00	3.50	7.50	4.25	1.70
5	Hg (µg/L)					0.41
6	Ni (µg/L)				19.40	6.05
7	Pb (µg/L)				1.33	42.75
8	Zn (µg/L)	0.00	52.45	24.63	117.50	9.90
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	235	154	139	128	122
2	HAR_Total (mgCaCO3/L)	450	287	345	372	261
3	Na% (%)	48	43	42	36	44
4	RSC (-)	0.1	0.1	0.0	0.0	0.1
5	SAR (-)	3.9	2.6	2.8	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: 2006-2021

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				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	8.885				
2	EC_FLD (µmho/cm)				937	
3	EC_GEN (µmho/cm)	678	672	901	757	787
4	pH_FLD (pH units)				7.6	
5	pH_GEN (pH units)	8.0	7.8	7.4	7.9	7.7
6	TDS (mg/L)					
7	Temp (deg C)	26.7	26.7	26.3	24.0	
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	248	231	296	267	232
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	49	49	64	50	47
5	Cl (mg/L)	48.6	63.4	66.2	62.7	71.1
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	1.42	0.85	0.83	1.98	1.05
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	302	281	361	325	283
10	K (mg/L)	2.5	2.8	2.4	2.5	2.1
11	Mg (mg/L)	21.7	19.3	21.4	25.9	26.5
12	Na (mg/L)	69.3	65.7	71.5	64.6	71.1
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.00	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	0.00	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.178
19	SiO2 (mg/L)	20.5	18.5	30.2	23.0	17.2
20	SO4 (mg/L)	45.0	40.7	54.9	54.1	53.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.8	0.7	2.1	0.8
2	COD (mg/L)		14.7	8.0	17.5	24.3
3	DO (mg/L)	6.1	5.8	3.0	5.9	5.2
4	DO_SAT% (%)	75	73	37	63	
5	FCol-MPN (MPN/100mL)				11467	12500
6	Tcol-MPN (MPN/100mL)				11467	16000
7	TOC (mg/L)		2.8			
	TRACE & TOXIC					
1	As (µg/L)				1.70	
2	Cd (µg/L)	7.00	0.90	2.11	0.00	0.98
3	Cr (µg/L)	46.00	2.00	2.10	0.00	0.00
4	Cu (µg/L)					
5	Hg (µg/L)	5.82	0.00			
6	Ni (µg/L)	1.00	9.10	1.23	0.00	4.37
7	Pb (µg/L)	117.00	16.78	29.00	0.00	34.66
8	Zn (µg/L)	100.00	4.97	34.38	7.99	49.01
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	122	123	159	124	116
2	HAR_Total (mgCaCO3/L)	212	203	248	232	227
3	Na% (%)	41	41	39	38	41
4	RSC (-)	0.7	0.6	1.0	0.8	0.3
5	SAR (-)	2.1	2.0	2.0	1.9	2.1
	PESTICIDES					
1	Aldrin (µg/L)	0.010	0.010	0.010	0.000	0.000
2	BHC (µg/L)	0.100	0.270	0.100	0.306	0.000
3	DDT (µg/L)	0.100	0.100	0.100	0.013	0.000
4	Dieldrin (µg/L)	0.030	0.010	0.010	0.002	0.000
5	Endos (µg/L)	0.100	0.100	0.100	0.147	0.000

Water Quality Seasonal Average for the period: 2006-2021

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				
		2012	2013	2014	2015	2018
	PHYSICAL					
1	Q (cumec)			2.626	3.652	2.418
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	925	1140	811	760	1026
4	pH_FLD (pH units)					7.8
5	pH_GEN (pH units)	7.4	7.8	7.7	7.9	7.7
6	TDS (mg/L)	588	638	557	475	726
7	Temp (deg C)	29.5	26.0	28.3	25.7	23.7
8	Turb (NTU)	1.00	0.47	3.67	1.67	6.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	272	293	248	208	317
3	B (mg/L)	0.05	0.32	0.17	0.16	0.06
4	Ca (mg/L)	44	78	47	43	72
5	Cl (mg/L)	70.3	149.5	70.3	63.7	136.5
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.87	0.82	0.96	0.85	1.25
8	Fe (mg/L)	0.1	0.2	0.8	0.0	0.1
9	HCO3 (mg/L)	331	357	302	254	387
10	K (mg/L)	4.8	1.4	2.7	2.8	0.6
11	Mg (mg/L)	25.3	45.7	27.4	24.7	45.9
12	Na (mg/L)	75.0	102.8	65.5	69.5	132.6
13	NH3-N (mg N/L)	0.04	0.00	0.03	0.00	0.14
14	NO2+NO3 (mg N/L)	1.12	1.18	2.25	0.57	4.86
15	NO2-N (mgN/L)	0.01	0.00	0.00	0.03	0.02
16	NO3-N (mgN/L)	1.11	1.18	2.25	0.54	4.84
17	o-PO4-P (mg P/L)	0.192	0.158	0.053	0.100	0.464
18	P-Tot (mgP/L)	0.192				
19	SiO2 (mg/L)	33.2	22.0	19.7	30.0	10.8
20	SO4 (mg/L)	69.2	48.0	60.7	67.8	100.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	1.0	0.9	0.7	1.2
2	COD (mg/L)	7.2	13.0	6.1	7.7	23.0
3	DO (mg/L)	4.7	4.9	4.6	3.6	5.0
4	DO_SAT% (%)	62	60	60	45	59
5	FCol-MPN (MPN/100mL)	1940	800	270	21	223
6	Tcol-MPN (MPN/100mL)	6140	1700	503	953	697
7	TOC (mg/L)	2.6	3.3		26.5	
	TRACE & TOXIC					
1	As (µg/L)	0.88	6.35	0.61	0.00	
2	Cd (µg/L)	0.20	0.12	0.02	2.00	
3	Cr (µg/L)	0.00	1.44	0.06	0.00	
4	Cu (µg/L)					1.00
5	Hg (µg/L)	0.60	2.35	0.24	0.08	
6	Ni (µg/L)	3.24	7.23	1.18	9.88	
7	Pb (µg/L)	14.13	0.36	0.13	15.00	
8	Zn (µg/L)	22.80	0.30	40.00	11.00	10.13
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	110	194	118	107	181
2	HAR_Total (mgCaCO3/L)	215	385	232	210	372
3	Na% (%)	43	37	38	42	43
4	RSC (-)	1.2	0.0	0.4	0.1	0.0
5	SAR (-)	2.3	2.3	1.9	2.1	3.0
	PESTICIDES					
1	Aldrin (µg/L)	0.007				
2	BHC (µg/L)	0.020				
3	DDT (µg/L)	0.001				
4	Dieldrin (µg/L)	0.000				
5	Endos (µg/L)	0.098				

Water Quality Seasonal Average for the period: 2006-2021

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		
		2019	2020	2021
	PHYSICAL			
1	Q (cumec)	1.216	5.059	6.163
2	EC_FLD (µmho/cm)	732		723
3	EC_GEN (µmho/cm)	996	1226	997
4	pH_FLD (pH units)	7.4		6.9
5	pH_GEN (pH units)	7.5	7.6	8.0
6	TDS (mg/L)	544	714	630
7	Temp (deg C)	23.5	21.0	20.3
8	Turb (NTU)	1.00	14.00	13.50
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	294	339	240
3	B (mg/L)	0.06	0.57	0.61
4	Ca (mg/L)	45	35	48
5	Cl (mg/L)	95.1	157.0	133.1
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.96	1.34	1.31
8	Fe (mg/L)	0.1	0.1	0.7
9	HCO3 (mg/L)	359	413	293
10	K (mg/L)	0.4	0.2	5.1
11	Mg (mg/L)	44.9	71.0	31.4
12	Na (mg/L)	103.4	119.5	105.8
13	NH3-N (mg N/L)	0.17	0.00	0.16
14	NO2+NO3 (mg N/L)	0.86	5.05	3.86
15	NO2-N (mgN/L)	0.03	0.05	0.36
16	NO3-N (mgN/L)	0.83	5.00	4.12
17	o-PO4-P (mg P/L)	0.203	0.150	0.434
18	P-Tot (mgP/L)			
19	SiO2 (mg/L)	28.0	33.9	17.7
20	SO4 (mg/L)	105.8	151.0	52.1
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.3	3.0	2.2
2	COD (mg/L)	8.1	18.2	16.5
3	DO (mg/L)	6.7	8.1	7.0
4	DO_SAT% (%)	78	91	77
5	FCol-MPN (MPN/100mL)	1377	260	280
6	Tcol-MPN (MPN/100mL)	5910	3500	920
7	TOC (mg/L)			
	TRACE & TOXIC			
1	As (µg/L)	2.29		
2	Cd (µg/L)	2.30		1.70
3	Cr (µg/L)	2.40		7.50
4	Cu (µg/L)	13.67	0.00	7.20
5	Hg (µg/L)	0.28		
6	Ni (µg/L)	11.40		10.95
7	Pb (µg/L)	32.00		28.50
8	Zn (µg/L)	18.90	12.00	8.38
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	112	88	121
2	HAR_Total (mgCaCO3/L)	300	383	252
3	Na% (%)	43	41	47
4	RSC (-)	0.3	0.0	0.0
5	SAR (-)	2.6	2.7	2.9
	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 summer season 2016 and 2017 due to Drybed / no flow condition.

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Wadenapally	Code	: AK000D5
State	: Telangana	District	Nalgonda
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	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	: 10-12-1964		
Sediment	: 01-12-1966		
Water Quality	: 01-01-1972		

Water Quality Datasheet for the period : 2020-2021

Station Name : Wadenapally (AK000D5)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Analysis

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	14-09-2020	05-10-2020	02-11-2020	01-12-2020	11-12-2020	21-12-2020
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	5772	1145	978.6	57.48	58.88	96.15
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	1001	1002	1003	1003	1004	1005
4	EC_GEN (μmho/cm)	553	514	515	904	1070	262
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	6.7	6.6	6.5	6.5	6.8	6.7
7	pH_GEN (pH units)	7.5	8.2	8.1	8.2	8.1	8.1
8	TDS (mg/L)	270	346	375	452	702	236
9	Temp (deg C)	25.0	24.0	25.0	24.8	23.0	24.0
10	Turb (NTU)	20.00	19.00	41.00	15.00	18.00	7.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	9.8	0.0	9.8
2	ALK-TOT (mgCaCO3/L)	150	163	178	288	350	124
3	B (mg/L)	0.17	0.27	0.35	0.04	0.33	0.33
4	Ca (mg/L)	35	34	42	14	59	42
5	Cl (mg/L)	69.3	53.8	56.3	97.3	136.5	62.7
6	CO3 (mg/L)	0.0	0.0	0.0	11.8	0.0	11.8
7	F (mg/L)	0.13	0.32	0.32	1.01	1.40	1.35
8	Fe (mg/L)	0.0	0.0	0.0	1.1	0.5	0.0
9	HCO3 (mg/L)	183	199	217	327	427	127
10	K (mg/L)	0.3	0.3	0.6	0.8	0.6	0.3
11	Mg (mg/L)	18.1	19.2	13.5	60.4	25.8	8.6
12	Na (mg/L)	58.3	43.5	48.7	78.5	176.0	47.9
13	NH3-N (mg N/L)	0.09	0.02	0.02	0.10	0.03	0.68
14	NO2+NO3 (mg N/L)						
15	NO2-N (mgN/L)	0.04	0.04	0.04	0.11	0.06	0.06
16	NO3-N (mgN/L)						
17	o-PO4-P (mg P/L)	0.150	0.130	0.230	0.080	0.500	1.420
18	SiO2 (mg/L)	13.6	15.2	14.7	25.7	30.5	17.2
19	SO4 (mg/L)	82.2	47.8	31.3	82.6	129.7	40.5
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)		2.2	2.0	0.8	12.3	1.1
2	COD (mg/L)	15.3	11.0	15.5	9.6	10.1	24.2
3	DO (mg/L)		7.3	6.8	6.0	19.3	6.1
4	DO_SAT% (%)		87	82	71	225	72
5	FCol-MPN (MPN/100mL)	2800	220	2800	2200	1400	330
6	Tcol-MPN (MPN/100mL)	16000	1400	16000	16000	3500	3500
	TRACE & TOXIC						
1	As (μg/L)				1.08	1.35	0.47
2	Cd (μg/L)				2.00	5.10	5.20
3	Cr (μg/L)				2.60	3.90	1.80
4	Cu (μg/L)	0.00	0.00	0.00	4.60	2.30	0.80
5	Hg (μg/L)				0.19	1.61	0.34
6	Ni (μg/L)				8.50	7.40	7.30
7	Pb (μg/L)				38.00	84.00	29.00
8	Zn (μg/L)	0.09	0.00	0.00	13.64	22.95	8.57
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	88	86	104	35	148	105
2	HAR_Total (mgCaCO3/L)	163	166	160	286	255	141
3	Na% (%)	44	36	40	38	60	43
4	RSC (-)	0.0	0.0	0.4	0.1	1.9	0.0
5	SAR (-)	2.0	1.5	1.7	2.0	4.8	1.8
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

Station Name : Wadenapally (AK000D5)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Analysis

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	01-01-2021	01-02-2021	01-03-2021	05-04-2021	03-05-2021	21-05-2021
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	141.7	100.7	141.4	115.7	56.91	17.19
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	1004	1004		1002	1003	1003
4	EC_GEN (μmho/cm)	631	288	827	907	850	825
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	6.8	6.8		6.8	6.8	6.7
7	pH_GEN (pH units)	8.0	7.8	7.8	8.2	7.0	8.1
8	TDS (mg/L)	420	213	454	583	521	494
9	Temp (deg C)	23.0	23.0	28.0	25.0	24.0	24.0
10	Turb (NTU)	11.00	1.00	1.00	18.00	31.00	4.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	111	160	201	292	192	357
3	B (mg/L)	0.14	0.16	0.71			
4	Ca (mg/L)	42	36	43	63	48	57
5	Cl (mg/L)	70.0	77.0	84.0	116.0	114.0	104.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.87	0.51	0.49	0.50	0.96	0.49
8	Fe (mg/L)	0.2	0.6	0.1	2.1		0.4
9	HCO3 (mg/L)	135	195	245	356	234	436
10	K (mg/L)	0.4	0.4	0.5	3.4	4.9	5.9
11	Mg (mg/L)	17.2	14.8	19.6	28.2	18.6	30.2
12	Na (mg/L)	65.2	69.0	88.8	92.9	132.3	110.3
13	NH3-N (mg N/L)	0.11	0.11	0.17			
14	NO2+NO3 (mg N/L)	3.02	1.72	2.55			
15	NO2-N (mgN/L)	0.22	0.12	0.55			
16	NO3-N (mgN/L)	2.80	1.60	2.00	6.20	3.50	6.39
17	o-PO4-P (mg P/L)	0.200	0.028	0.668			
18	SiO2 (mg/L)	18.6	10.5	20.0			
19	SO4 (mg/L)	125.8	53.8	64.0	86.1	47.6	9.0
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.3	2.5	2.3	0.7	4.3	
2	COD (mg/L)	15.9	20.1	16.5	19.0	22.1	
3	DO (mg/L)	6.1	5.0	4.6	4.2	5.0	
4	DO_SAT% (%)	71	58	59	51	59	
5	FCol-MPN (MPN/100mL)	9000	340	220	130	1400	
6	Tcol-MPN (MPN/100mL)	16000	2200	330	500	1700	
	TRACE & TOXIC						
1	As (μg/L)	0.34			1.57		0.80
2	Cd (μg/L)	0.80			1.70		1.00
3	Cr (μg/L)	6.00			0.20		0.40
4	Cu (μg/L)	4.60	2.00	10.00	5.90		2.40
5	Hg (μg/L)	0.14			0.49		0.60
6	Ni (μg/L)	6.70			17.80		2.70
7	Pb (μg/L)	6.02			57.00		16.00
8	Zn (μg/L)	4.85	11.00	0.00	14.64		10.20
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	106	90	108	158	119	143
2	HAR_Total (mgCaCO3/L)	177	151	189	276	197	268
3	Na% (%)	45	50	51	42	59	47
4	RSC (-)	0.0	0.2	0.3	0.4	0.0	1.8
5	SAR (-)	2.1	2.4	2.8	2.4	4.1	2.9
	PESTICIDES						

Water Quality Summary for the period : 2020-2021

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	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	367	16790	0.000	1025
2	EC_FLD (µmho/cm)	11	1005	1001	1003
3	EC_GEN (µmho/cm)	12	1070	262	679
4	pH_FLD (pH units)	11	6.8	6.5	6.7
5	pH_GEN (pH units)	12	8.2	7.0	7.9
6	TDS (mg/L)	12	702	213	422
7	Temp (deg C)	11	25.0	23.0	24.1
8	Turb (NTU)	12	41.00	1.00	15.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	9.8	0.0	1.6
2	ALK-TOT (mgCaCO3/L)	12	357	111	214
3	B (mg/L)	9	0.71	0.04	0.28
4	Ca (mg/L)	12	63	14	43
5	Cl (mg/L)	12	136.5	53.8	86.8
6	CO3 (mg/L)	12	11.8	0.0	2
7	F (mg/L)	12	1.40	0.13	0.7
8	Fe (mg/L)	11	2.1	0.0	0.5
9	HCO3 (mg/L)	12	436	127	257
10	K (mg/L)	12	5.9	0.3	1.5
11	Mg (mg/L)	12	60.4	8.6	22.8
12	Na (mg/L)	12	176.0	43.5	84.3
13	NH3-N (mg N/L)	9	0.68	0.02	0.15
14	NO2+NO3 (mg N/L)	3	3.02	1.72	2.43
15	NO2-N (mgN/L)	9	0.55	0.04	0.14
16	NO3-N (mgN/L)	6	6.39	1.60	3.75
17	o-PO4-P (mg P/L)	9	1.420	0.028	0.378
18	SiO2 (mg/L)	9	30.5	10.5	18.4
19	SO4 (mg/L)	12	129.7	9.0	66.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	12.3	0.7	3
2	COD (mg/L)	11	24.2	9.6	16.3
3	DO (mg/L)	5	19.3	6.0	9.1
4	DO_SAT% (%)	5	225	71	108
5	Fcol-MPN (MPN/100mL)	11	9000	130	1895
6	Tcol-MPN (MPN/100mL)	11	16000	330	7012
	TRACE & TOXIC				
1	As (µg/L)	4	1.35	0.34	0.81
2	Cd (µg/L)	6	5.20	0.80	2.63
3	Cr (µg/L)	6	6.00	0.20	2.48
4	Cu (µg/L)	11	10.00	0.00	2.96
5	Hg (µg/L)	4	1.61	0.14	0.57
6	Ni (µg/L)	6	17.80	2.70	8.4
7	Pb (µg/L)	6	84.00	6.02	38.34
8	Zn (µg/L)	11	22.95	0.00	7.81
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	158	35	107
2	HAR_Total (mgCaCO3/L)	12	286	141	203
3	Na% (%)	12	60	36	46
4	RSC (-)	12	1.9	0.0	0.4
5	SAR (-)	12	4.8	1.5	2.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

Station Name : Wadenapally (AK000D5)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood				
		Jun - Oct				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	548.5	2406	301.8	413.0	526.4
2	EC_FLD (µmho/cm)					664
3	EC_GEN (µmho/cm)	563	529	647	625	757
4	pH_FLD (pH units)					8.3
5	pH_GEN (pH units)	8.2	7.5	8.0	7.5	8.0
6	TDS (mg/L)					
7	Temp (deg C)	27.6	28.1	28.0	27.1	28.4
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	4.0	0.0	1.6	1.6	1.6
2	ALK-TOT (mgCaCO3/L)	140	140	162	167	179
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	32	32	42	37	43
5	Cl (mg/L)	34.8	50.3	61.7	58.0	75.5
6	CO3 (mg/L)	4.8	0.0	1.9	1.9	1.9
7	F (mg/L)	0.62	0.81	0.31	0.78	0.83
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	161	171	193	200	214
10	K (mg/L)	2.3	3.4	3.2	2.9	4.0
11	Mg (mg/L)	11.6	15.6	13.0	15.3	21.0
12	Na (mg/L)	50.4	55.8	58.7	59.4	73.5
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.56	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	0.56	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.135
19	SiO2 (mg/L)	19.2	15.3	17.0	17.0	17.7
20	SO4 (mg/L)	40.2	47.4	53.4	62.6	101.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	1.5	1.0	0.9	0.7
2	COD (mg/L)		13.9	26.7	18.6	34.3
3	DO (mg/L)	7.2	6.8	5.9	6.5	6.9
4	DO_SAT% (%)	91	87	76	82	89
5	FCol-MPN (MPN/100mL)				6000	9712
6	Tcol-MPN (MPN/100mL)				10500	12940
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)	81	80	106	92	108
2	HAR_Total (mgCaCO3/L)	129	145	160	156	196
3	Na% (%)	43	44	44	45	45
4	RSC (-)	0.2	0.1	0.1	0.4	0.0
5	SAR (-)	1.9	2.0	2.0	2.1	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: 2006-2021

Station Name : Wadenapally (AK000D5)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood				
		Jun - Oct				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	250.9	30.10	227.0	135.4	25.19
2	EC_FLD (µmho/cm)			542		
3	EC_GEN (µmho/cm)	703	633	611	649	746
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.0	7.9	8.1	8.3	8.0
6	TDS (mg/L)	473	429	381	416	479
7	Temp (deg C)	26.8	27.7	27.0	26.8	25.8
8	Turb (NTU)	1.00	0.84	1.00	5.00	2.20
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	1.2	0.0	0.0	0.8	0.0
2	ALK-TOT (mgCaCO3/L)	172	132	116	145	164
3	B (mg/L)	0.00	0.20	0.13	0.20	0.21
4	Ca (mg/L)	34	31	29	36	41
5	Cl (mg/L)	73.0	60.0	60.6	63.8	84.5
6	CO3 (mg/L)	1.4	0.0	0.0	1.0	0.0
7	F (mg/L)	1.04	0.61	0.65	0.66	0.81
8	Fe (mg/L)	0.0	0.1	0.1	0.0	0.0
9	HCO3 (mg/L)	207	161	141	175	200
10	K (mg/L)	3.5	3.5	2.9	3.8	4.0
11	Mg (mg/L)	19.2	17.6	15.8	21.1	23.3
12	Na (mg/L)	69.3	64.4	66.5	71.4	87.0
13	NH3-N (mg N/L)	0.00	0.02	0.07	0.00	0.05
14	NO2+NO3 (mg N/L)	0.32	0.95	0.66	1.27	0.72
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.01	0.02
16	NO3-N (mgN/L)	0.32	0.95	0.66	1.26	0.70
17	o-PO4-P (mg P/L)	0.375	0.059	0.085	0.125	0.151
18	P-Tot (mgP/L)	0.376			0.131	
19	SiO2 (mg/L)	15.7	13.6	12.4	15.2	18.0
20	SO4 (mg/L)	63.9	56.0	67.1	93.2	94.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	0.5	0.9	0.8	0.7
2	COD (mg/L)	32.9	8.5	8.7	10.0	8.8
3	DO (mg/L)	6.0	5.5	6.1	6.1	5.6
4	DO_SAT% (%)	75	70	76	77	69
5	FCol-MPN (MPN/100mL)	14600	1146	131	6492	2440
6	Tcol-MPN (MPN/100mL)	16000	3540	2340	6984	7424
7	TOC (mg/L)	3.3	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)	85	76	72	91	102
2	HAR_Total (mgCaCO3/L)	165	150	138	179	199
3	Na% (%)	47	49	50	46	48
4	RSC (-)	0.2	0.2	0.0	0.0	0.0
5	SAR (-)	2.4	2.4	2.5	2.3	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: 2006-2021

Station Name : Wadenapally (AK000D5)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Flood				
		Jun - Oct				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	155.7	23.81	107.8	329.8	3459
2	EC_FLD (µmho/cm)	28	120	822		1002
3	EC_GEN (µmho/cm)	608	645	804	446	534
4	pH_FLD (pH units)			6.7		6.6
5	pH_GEN (pH units)	8.5	8.1	8.0	7.8	7.9
6	TDS (mg/L)	394	408	479	421	308
7	Temp (deg C)	26.5	28.0	28.0	27.2	24.5
8	Turb (NTU)	2.50	6.25	3.80	16.40	19.50
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	1.3	4.7	3.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	140	150	148	154	157
3	B (mg/L)		0.00	0.04	0.30	0.22
4	Ca (mg/L)	34	35	34	41	35
5	Cl (mg/L)	67.4	87.6	111.1	69.5	61.6
6	CO3 (mg/L)	1.6	5.7	3.7	0.0	0.0
7	F (mg/L)	0.64	0.57	0.62	0.46	0.23
8	Fe (mg/L)	0.1	0.2	0.1	0.6	0.0
9	HCO3 (mg/L)	167	171	173	188	191
10	K (mg/L)	3.4	0.4	0.5	0.8	0.3
11	Mg (mg/L)	19.4	28.8	26.0	18.4	18.7
12	Na (mg/L)	65.5	77.9	69.4	69.0	50.9
13	NH3-N (mg N/L)	0.04	0.09	0.10	0.02	0.05
14	NO2+NO3 (mg N/L)	1.14	5.21	0.70	1.65	
15	NO2-N (mgN/L)	0.05	0.04	0.07	0.04	0.04
16	NO3-N (mgN/L)	1.09	5.18	0.64	1.61	
17	o-PO4-P (mg P/L)	0.123	0.180	0.160	0.166	0.140
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	14.1	14.0	37.4	18.0	14.4
20	SO4 (mg/L)	58.2	75.4	77.8	68.8	65.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.4	2.0	0.5	2.2
2	COD (mg/L)	14.9	13.9	13.8	9.9	13.1
3	DO (mg/L)	6.1	6.7	5.2	6.4	7.3
4	DO_SAT% (%)	76	85	67	80	87
5	FCol-MPN (MPN/100mL)	6260	598	120	1054	1510
6	Tcol-MPN (MPN/100mL)	8045	1196	594	4992	8700
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				2.05	
2	Cd (µg/L)				0.15	
3	Cr (µg/L)				1.13	
4	Cu (µg/L)		2.60	7.80	9.80	0.00
5	Hg (µg/L)					
6	Ni (µg/L)				55.32	
7	Pb (µg/L)				0.28	
8	Zn (µg/L)		40.08	19.65	28.22	0.05
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	86	88	85	102	87
2	HAR_Total (mgCaCO3/L)	167	208	193	178	165
3	Na% (%)	46	45	42	43	40
4	RSC (-)	0.1	0.0	0.0	0.1	0.0
5	SAR (-)	2.3	2.4	2.2	2.2	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: 2006-2021

Station Name : Wadenapally (AK000D5)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter				
		Nov - Feb				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	244.2	324.1	409.8	366.8	269.9
2	EC_FLD (µmho/cm)					646
3	EC_GEN (µmho/cm)	484	549	586	591	715
4	pH_FLD (pH units)					8.2
5	pH_GEN (pH units)	8.2	8.0	8.1	8.3	8.1
6	TDS (mg/L)					
7	Temp (deg C)	28.5	24.8	27.0	24.9	26.5
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	9.8	3.9	2.0	2.0	2.0
2	ALK-TOT (mgCaCO3/L)	167	182	177	181	207
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	37	48	48	46	43
5	Cl (mg/L)	31.9	44.0	49.9	46.2	71.4
6	CO3 (mg/L)	11.8	4.8	2.4	2.4	2.4
7	F (mg/L)	0.62	0.75	0.32	0.84	0.78
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	179	212	211	216	248
10	K (mg/L)	2.0	2.7	3.1	2.5	3.5
11	Mg (mg/L)	14.8	17.5	10.1	14.6	24.6
12	Na (mg/L)	43.5	56.8	57.3	57.5	72.1
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	1.34	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	1.34	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.162
19	SiO2 (mg/L)	18.2	15.8	16.0	16.8	17.6
20	SO4 (mg/L)	37.3	45.3	51.6	58.2	77.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.0	0.8	1.1	0.6
2	COD (mg/L)		29.1	12.6	17.1	25.5
3	DO (mg/L)	7.9	7.5	6.9	7.0	7.1
4	DO_SAT% (%)	102	91	87	85	88
5	FCol-MPN (MPN/100mL)				14250	5315
6	Tcol-MPN (MPN/100mL)				16000	12225
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)	92	119	121	116	108
2	HAR_Total (mgCaCO3/L)	153	192	163	177	210
3	Na% (%)	38	39	43	41	43
4	RSC (-)	0.3	0.2	0.3	0.1	0.2
5	SAR (-)	1.5	1.8	2.0	1.9	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: 2006-2021

Station Name : Wadenapally (AK000D5)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter				
		Nov - Feb				
		2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL					
1	Q (cumec)	227.4	219.0	211.4	167.0	9.261
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	611	558	583	474	969
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.3	8.0	8.1	8.1	8.0
6	TDS (mg/L)	423	360	336	366	337
7	Temp (deg C)	26.0	25.3	25.3	26.8	25.5
8	Turb (NTU)	1.00	0.80	3.50	2.80	2.75
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	3.0	35.7	0.0	0.0	1.3
2	ALK-TOT (mgCaCO3/L)	186	212	155	159	158
3	B (mg/L)	0.20	0.16	0.03	0.16	0.00
4	Ca (mg/L)	37	30	35	37	33
5	Cl (mg/L)	63.3	52.4	47.3	48.6	64.3
6	CO3 (mg/L)	3.7	43.0	0.0	0.0	1.6
7	F (mg/L)	0.67	0.85	0.47	0.59	0.52
8	Fe (mg/L)	0.0	0.0	0.1	0.1	0.0
9	HCO3 (mg/L)	220	172	189	194	189
10	K (mg/L)	2.8	1.8	2.7	2.9	3.4
11	Mg (mg/L)	20.7	17.0	19.7	19.7	18.7
12	Na (mg/L)	60.5	58.0	51.0	56.5	71.8
13	NH3-N (mg N/L)	0.10	0.03	0.01	0.04	0.01
14	NO2+NO3 (mg N/L)	0.89	0.61	1.22	1.01	1.15
15	NO2-N (mgN/L)	0.01	0.00	0.00	0.06	0.06
16	NO3-N (mgN/L)	0.89	0.61	1.22	0.95	1.09
17	o-PO4-P (mg P/L)	0.243	0.048	0.160	0.156	0.141
18	P-Tot (mgP/L)	0.243				
19	SiO2 (mg/L)	15.3	15.7	15.2	14.1	8.7
20	SO4 (mg/L)	65.8	51.2	54.4	53.5	81.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.1	1.0	1.1	1.3
2	COD (mg/L)	60.8	16.3	4.1	10.6	11.4
3	DO (mg/L)	6.5	6.8	7.0	7.3	5.7
4	DO_SAT% (%)	80	82	85	92	70
5	FCol-MPN (MPN/100mL)	5400	946	858	1458	6313
6	Tcol-MPN (MPN/100mL)	9200	4808	2930	6800	10950
7	TOC (mg/L)	2.6	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	
5	Hg (µg/L)					
6	Ni (µg/L)				4.05	
7	Pb (µg/L)				5.70	
8	Zn (µg/L)				5.00	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	93	75	87	91	83
2	HAR_Total (mgCaCO3/L)	179	145	169	174	161
3	Na% (%)	42	46	39	41	48
4	RSC (-)	0.3	1.5	0.0	0.0	0.0
5	SAR (-)	2.0	2.1	1.7	1.9	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: 2006-2021

Station Name : Wadenapally (AK000D5)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Winter				
		Nov - Feb				
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	139.2	83.82	84.97	567.7	238.9
2	EC_FLD (µmho/cm)	28	40	1003		1004
3	EC_GEN (µmho/cm)	702	812	1016	401	612
4	pH_FLD (pH units)			6.7		6.7
5	pH_GEN (pH units)	8.3	8.0	8.0	7.9	8.0
6	TDS (mg/L)	386	522	579	259	400
7	Temp (deg C)	27.0	27.3	26.3	26.0	23.8
8	Turb (NTU)	2.75	4.67	0.67	24.75	15.50
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	1.5	0.0	0.0	0.0	3.3
2	ALK-TOT (mgCaCO3/L)	154	224	212	136	202
3	B (mg/L)		0.05	0.03	0.23	0.23
4	Ca (mg/L)	43	60	42	37	39
5	Cl (mg/L)	76.0	127.3	101.3	43.8	83.3
6	CO3 (mg/L)	1.8	0.0	0.0	0.0	3.9
7	F (mg/L)	0.80	0.73	0.64	0.23	0.91
8	Fe (mg/L)	0.1	0.1	0.2	0.9	0.4
9	HCO3 (mg/L)	185	274	258	166	238
10	K (mg/L)	5.9	0.5	0.4	0.3	0.5
11	Mg (mg/L)	21.2	35.0	29.8	13.9	23.4
12	Na (mg/L)	79.0	96.4	79.7	40.9	80.9
13	NH3-N (mg N/L)	0.09	0.85	0.16	0.07	0.18
14	NO2+NO3 (mg N/L)	0.45	4.86	0.78	3.80	2.37
15	NO2-N (mgN/L)	0.02	0.03	0.26	0.07	0.10
16	NO3-N (mgN/L)	0.43	4.83	0.52	3.59	2.20
17	o-PO4-P (mg P/L)	0.124	0.848	0.386	0.133	0.410
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	8.6	26.7	25.0	17.6	19.5
20	SO4 (mg/L)	117.7	113.9	70.0	49.9	77.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.7	1.2	2.1	1.7	3.3
2	COD (mg/L)	10.9	19.9	10.5	47.7	15.9
3	DO (mg/L)	6.6	6.6	6.8	6.2	9.5
4	DO_SAT% (%)	82	84	85	77	113
5	FCol-MPN (MPN/100mL)	2295	105	370	1533	2678
6	Tcol-MPN (MPN/100mL)	4585	185	1575	7550	9533
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				3.21	0.81
2	Cd (µg/L)				0.00	3.27
3	Cr (µg/L)				4.59	3.57
4	Cu (µg/L)	0.00	0.75	8.00	6.50	2.38
5	Hg (µg/L)					0.57
6	Ni (µg/L)				16.31	7.48
7	Pb (µg/L)				0.43	39.25
8	Zn (µg/L)	0.00	29.35	25.70	66.75	10.17
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	108	149	106	91	98
2	HAR_Total (mgCaCO3/L)	196	295	230	149	195
3	Na% (%)	43	42	43	37	46
4	RSC (-)	0.1	0.0	0.1	0.0	0.4
5	SAR (-)	2.6	2.5	2.3	1.5	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: 2006-2021

Station Name : Wadenapally (AK000D5)

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	2010	2011
	PHYSICAL					
1	Q (cumec)	171.7	147.2	171.5	211.5	173.6
2	EC_FLD (µmho/cm)				638	
3	EC_GEN (µmho/cm)	591	697	682	625	858
4	pH_FLD (pH units)				8.4	
5	pH_GEN (pH units)	8.1	8.3	8.1	8.5	7.6
6	TDS (mg/L)					
7	Temp (deg C)	27.0	26.7	27.0	27.5	25.5
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	5.3	2.8	2.7	8.0	0.0
2	ALK-TOT (mgCaCO3/L)	213	219	228	175	208
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	40	51	50	45	45
5	Cl (mg/L)	44.2	62.9	59.0	51.8	83.9
6	CO3 (mg/L)	6.3	3.3	3.2	9.6	0.0
7	F (mg/L)	1.08	0.75	0.79	1.00	1.06
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	247	260	272	194	254
10	K (mg/L)	2.4	2.5	2.2	2.6	3.6
11	Mg (mg/L)	19.0	17.7	13.6	16.5	25.8
12	Na (mg/L)	62.0	73.0	61.7	58.6	83.3
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.00	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	0.00	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.272
19	SiO2 (mg/L)	17.2	17.3	17.1	13.9	16.0
20	SO4 (mg/L)	45.7	44.7	52.5	48.8	83.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.6	0.5	0.7	0.3	0.3
2	COD (mg/L)		7.9	6.7	21.6	26.2
3	DO (mg/L)	6.3	6.1	6.0	6.4	6.3
4	DO_SAT% (%)	78	76	76	81	76
5	FCol-MPN (MPN/100mL)				10833	9000
6	Tcol-MPN (MPN/100mL)				10900	16000
7	TOC (mg/L)		3.3			
	TRACE & TOXIC					
1	As (µg/L)				2.79	
2	Cd (µg/L)	7.00	0.90	2.56	0.00	
3	Cr (µg/L)	9.00	2.00	2.00	0.00	
4	Cu (µg/L)					
5	Hg (µg/L)	1.36	0.00			
6	Ni (µg/L)	1.00	9.90	3.25	0.00	
7	Pb (µg/L)	19.00	21.25	36.00	0.00	
8	Zn (µg/L)	69.00	2.89	6.63	4.24	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	100	127	124	112	112
2	HAR_Total (mgCaCO3/L)	179	200	181	181	220
3	Na% (%)	42	44	42	41	45
4	RSC (-)	0.7	0.4	1.0	0.0	0.0
5	SAR (-)	2.0	2.3	2.0	1.9	2.5
	PESTICIDES					
1	Aldrin (µg/L)	0.040	0.010	0.014	0.000	
2	BHC (µg/L)	0.140	0.200	0.100	0.027	
3	DDT (µg/L)	0.100	0.100	0.100	0.010	
4	Dieldrin (µg/L)	0.140	0.010	0.010	0.002	
5	Endos (µg/L)	0.190	0.100	0.100	0.055	

Water Quality Seasonal Average for the period: 2006-2021

Station Name : Wadenapally (AK000D5)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Summer				
		Mar - May				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	76.14	24.02	150.9	70.53	6.178
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	900	723	627	740	741
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.2	8.2	8.3	8.3	8.4
6	TDS (mg/L)	375	404	381	427	368
7	Temp (deg C)	26.3	27.3	28.0	26.0	26.0
8	Turb (NTU)	1.00	0.88	4.33	3.00	8.67
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	1.4	0.0	1.4	1.7	3.3
2	ALK-TOT (mgCaCO3/L)	159	155	163	197	120
3	B (mg/L)	0.08	0.28	0.15	0.12	
4	Ca (mg/L)	29	37	36	45	28
5	Cl (mg/L)	59.7	80.5	52.5	63.1	63.8
6	CO3 (mg/L)	1.7	0.0	1.7	2.1	4.0
7	F (mg/L)	0.45	0.85	0.60	0.91	0.37
8	Fe (mg/L)	0.2	0.2	0.7	0.0	0.0
9	HCO3 (mg/L)	191	189	195	236	139
10	K (mg/L)	2.7	2.4	2.4	2.7	3.1
11	Mg (mg/L)	16.7	21.6	20.0	25.9	15.2
12	Na (mg/L)	58.0	75.6	58.0	74.1	73.3
13	NH3-N (mg N/L)	0.12	0.01	0.03	0.00	0.02
14	NO2+NO3 (mg N/L)	0.68	0.94	1.30	0.78	1.05
15	NO2-N (mgN/L)	0.01	0.00	0.00	0.00	0.07
16	NO3-N (mgN/L)	0.67	0.94	1.30	0.78	0.98
17	o-PO4-P (mg P/L)	0.093	0.080	0.097	0.195	0.119
18	P-Tot (mgP/L)	0.093				
19	SiO2 (mg/L)	16.2	10.8	16.3	18.4	11.0
20	SO4 (mg/L)	57.5	32.2	57.8	120.6	65.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	0.6	1.2	0.8	1.0
2	COD (mg/L)	10.1	8.6	6.6	7.4	9.4
3	DO (mg/L)	6.3	6.1	6.6	5.3	6.3
4	DO_SAT% (%)	78	78	85	65	77
5	FCol-MPN (MPN/100mL)	5607	801	34	45	4100
6	Tcol-MPN (MPN/100mL)	6140	3734	77	8085	16000
7	TOC (mg/L)	2.9	2.9		32.6	
	TRACE & TOXIC					
1	As (µg/L)	1.53	4.26	1.62	3.44	0.00
2	Cd (µg/L)	0.00	1.20	0.01	2.00	0.00
3	Cr (µg/L)	0.00	2.95	0.03	0.00	0.00
4	Cu (µg/L)					
5	Hg (µg/L)	1.22	0.28	0.28	0.14	0.00
6	Ni (µg/L)	1.57	2.89	1.72	7.45	0.00
7	Pb (µg/L)	18.98	5.05	0.72	14.00	0.00
8	Zn (µg/L)	18.21	10.85	2.00	15.00	0.04
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	73	94	89	112	69
2	HAR_Total (mgCaCO3/L)	143	184	173	220	132
3	Na% (%)	47	47	41	42	54
4	RSC (-)	0.3	0.0	0.1	0.0	0.0
5	SAR (-)	2.1	2.4	1.9	2.2	2.8
	PESTICIDES					
1	Aldrin (µg/L)	0.000				
2	BHC (µg/L)	0.011				
3	DDT (µg/L)	0.001				
4	Dieldrin (µg/L)	0.000				
5	Endos (µg/L)	0.009				

Water Quality Seasonal Average for the period: 2006-2021

Station Name : Wadenapally (AK000D5)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Lower Krishna SD2, Vijayawada

S.No	Parameters	Summer				
		Mar - May				
		2017	2018	2019	2020	2021
	PHYSICAL					
1	Q (cumec)	26.62	109.2	21.50	80.66	82.78
2	EC_FLD (µmho/cm)	179	1009	1003		1003
3	EC_GEN (µmho/cm)	776	1139	513	445	852
4	pH_FLD (pH units)		6.6	6.6		6.8
5	pH_GEN (pH units)	8.0	7.9	7.6	8.2	7.8
6	TDS (mg/L)	467	607	341	364	513
7	Temp (deg C)	26.7	27.3	27.3	26.0	24.3
8	Turb (NTU)	30.33	4.33	1.00	4.00	13.50
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.8	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	171	211	183	177	261
3	B (mg/L)		0.01	0.03	0.49	0.71
4	Ca (mg/L)	54	55	40	28	53
5	Cl (mg/L)	93.1	108.7	78.6	85.0	104.7
6	CO3 (mg/L)	3.4	0.0	0.0	0.0	0.0
7	F (mg/L)	0.60	0.78	0.51	0.48	0.61
8	Fe (mg/L)	0.0	0.0	0.2	0.3	0.9
9	HCO3 (mg/L)	201	258	223	216	318
10	K (mg/L)	3.7	0.5	0.4	0.4	3.7
11	Mg (mg/L)	26.6	27.9	21.0	31.0	24.1
12	Na (mg/L)	89.7	98.6	76.7	61.5	106.1
13	NH3-N (mg N/L)	1.10	0.18	0.16	0.00	0.17
14	NO2+NO3 (mg N/L)	1.68	4.41	0.57	2.31	2.55
15	NO2-N (mgN/L)	0.10	0.27	0.03	0.01	0.55
16	NO3-N (mgN/L)	1.58	4.14	0.55	2.30	4.52
17	o-PO4-P (mg P/L)	0.173	0.509	0.177	0.120	0.668
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	18.0	13.2	15.0	18.2	20.0
20	SO4 (mg/L)	146.4	98.7	98.8	93.0	51.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.9	0.4	0.7	2.3	2.4
2	COD (mg/L)	13.4	20.3	10.4	11.1	19.2
3	DO (mg/L)	6.2	5.0	7.1	6.3	
4	DO_SAT% (%)	77	63	90	78	
5	FCol-MPN (MPN/100mL)	850	123	340	3500	583
6	Tcol-MPN (MPN/100mL)	1100	623	1810	16000	843
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)	3.72	2.58	4.50		
2	Cd (µg/L)	1.30	2.00	1.70		1.35
3	Cr (µg/L)	0.00	0.00	1.30		0.30
4	Cu (µg/L)	0.00	2.73	12.67	0.00	6.10
5	Hg (µg/L)	0.49	0.32	0.33		
6	Ni (µg/L)	1.30	8.40	7.20		10.25
7	Pb (µg/L)	0.00	24.00	19.00		36.50
8	Zn (µg/L)	0.00	94.85	26.43	19.00	8.28
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	135	138	101	70	132
2	HAR_Total (mgCaCO3/L)	246	254	188	199	232
3	Na% (%)	44	46	47	40	50
4	RSC (-)	0.0	0.1	0.1	0.0	0.6
5	SAR (-)	2.5	2.7	2.4	1.9	3.1
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

HISTORY SHEET

		Water Year	: 2020-2021
Site	: VALIGONDA	Code	: 040-LKDHYD
State	: Telangana	District	Nalgonda
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	Sub Tributary	: -
		Local River	: Musi
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Krishna SD 1, N.S.Dam
Drainage Area	: 5830 Sq. Km.	Bank	:
Latitude	: 17°21'56"	Longitude	: 79°01'56"
		Opening Date	Closing Date
Gauge	: 01-06-2019		
Discharge	: 01-06-2019		
Water Quality	: 01-06-2019		

Water Quality Datasheet for the period : 2020-2021

Station Name : VALIGONDA (040-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water Analysis

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

S.No	Parameters	01-06-2020	01-07-2020	04-08-2020	01-09-2020	05-10-2020
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	1.495	0.941	17.51	2.877	43.71
2	Colour_Cod (-)	Dark Green	Clear	Clear	Clear	Brown
3	EC_GEN (µmho/cm)	1393	1485	1247	1391	1181
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.5	7.8	7.8	7.6	7.2
6	TDS (mg/L)	933	1054	971	873	1003
7	Temp (deg C)	25.0	28.0	27.0	27.5	28.0
8	Turb (NTU)	25.00	4.00	21.00	35.00	21.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	291	315	275	343	355
3	B (mg/L)	0.19	0.28	0.14	0.15	0.07
4	Ca (mg/L)	43	63	67	72	70
5	Cl (mg/L)	234.0	217.4	172.0	221.0	141.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.96	0.61	0.86	0.79	0.94
8	Fe (mg/L)	0.8	3.3	0.0	0.0	0.3
9	HCO3 (mg/L)	355	384	336	419	433
10	K (mg/L)	2.2	1.4	1.3	1.2	1.2
11	Mg (mg/L)	63.8	47.0	33.4	43.4	42.1
12	Na (mg/L)	198.4	155.0	133.8	157.2	112.0
13	NH3-N (mg N/L)	0.38	0.01	0.01	0.01	0.03
14	NO2+NO3 (mg N/L)	3.22	8.22			
15	NO2-N (mgN/L)	0.01	1.82	2.47	0.01	0.08
16	NO3-N (mgN/L)	3.21	6.40			
17	o-PO4-P (mg P/L)	1.209	0.961	0.480	0.190	0.690
18	P-Tot (mgP/L)			0.480	0.190	
19	SiO2 (mg/L)	35.9	20.9	41.5	23.1	28.3
20	SO4 (mg/L)	212.0	68.6	39.4	110.6	99.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	1.8	0.7	3.7	3.2
2	COD (mg/L)	26.6	24.3	54.5	29.3	47.2
3	DO (mg/L)	9.7	4.7	3.7	7.2	3.5
4	DO_SAT% (%)	117	60	46	90	45
5	FCol-MPN (MPN/100mL)	2200	3500	5000	1100	2800
6	Tcol-MPN (MPN/100mL)	16000	16000	16000	16000	16000
	TRACE & TOXIC					
1	As (µg/L)			2.86		
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)	0.01	0.02	0.00	0.00	0.01
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)					
8	Zn (µg/L)	0.05	0.04	0.00	0.00	0.02
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	107	158	168	181	176
2	HAR_Total (mgCaCO3/L)	372	354	307	361	351
3	Na% (%)	54	49	49	49	41
4	RSC (-)	0.0	0.0	0.0	0.0	0.1
5	SAR (-)	4.5	3.6	3.3	3.6	2.6
	PESTICIDES					

Water Quality Datasheet for the period : 2020-2021

Station Name : VALIGONDA (040-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water Analysis

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

S.No	Parameters	02-11-2020	01-12-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	50.84	21.41	18.37	5.587	1.608
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown	Clear	Clear
3	EC_GEN (µmho/cm)	957	1303	1367	1523	1470
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.7	7.8	7.4	7.9	7.6
6	TDS (mg/L)	666	780	800	1253	880
7	Temp (deg C)	25.0	25.0	24.5	24.0	25.0
8	Turb (NTU)	52.00	22.00	18.00	17.00	12.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	318	311	390	200	248
3	B (mg/L)	0.18	0.14	0.36	0.64	1.05
4	Ca (mg/L)	85	49	94	27	91
5	Cl (mg/L)	151.1	167.1	187.2	211.1	260.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.84	1.27	1.15	1.21	1.03
8	Fe (mg/L)	0.0	0.9	0.1	0.1	0.1
9	HCO3 (mg/L)	388	379	476	244	302
10	K (mg/L)	1.2	2.4	1.6	0.7	0.4
11	Mg (mg/L)	29.8	56.5	32.1	79.5	41.0
12	Na (mg/L)	105.0	115.3	152.8	70.2	196.0
13	NH3-N (mg N/L)	0.00	0.17	2.14	0.01	0.07
14	NO2+NO3 (mg N/L)					11.87
15	NO2-N (mgN/L)	1.57	3.50	2.65	0.02	0.27
16	NO3-N (mgN/L)					11.60
17	o-PO4-P (mg P/L)	1.130	0.040	0.110	0.640	0.630
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	24.3	30.1	31.7	25.2	27.3
20	SO4 (mg/L)	113.7	143.4	151.8	78.3	193.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.2	2.0	50.1	1.0	3.0
2	COD (mg/L)	27.6	22.6	37.4	17.8	31.8
3	DO (mg/L)	7.5	7.5	3.2	6.4	5.2
4	DO_SAT% (%)	91	91	38	76	63
5	FCol-MPN (MPN/100mL)	2800	3500	2800	330	3500
6	Tcol-MPN (MPN/100mL)	16000	16000	16000	3500	16000
	TRACE & TOXIC					
1	As (µg/L)		0.74	0.22	0.63	2.74
2	Cd (µg/L)		5.90	3.00	1.90	0.30
3	Cr (µg/L)		3.50	2.50	4.60	4.50
4	Cu (µg/L)	0.00	5.20	2.40	3.80	1.00
5	Hg (µg/L)		1.60	0.40	0.83	0.68
6	Ni (µg/L)		10.40	27.40	3.00	0.00
7	Pb (µg/L)		72.00	83.00	62.00	9.00
8	Zn (µg/L)	0.00	15.34	19.91	0.00	38.33
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	212	121	236	66	227
2	HAR_Total (mgCaCO3/L)	336	357	370	398	397
3	Na% (%)	40	41	47	28	52
4	RSC (-)	0.0	0.0	0.4	0.0	0.0
5	SAR (-)	2.5	2.7	3.5	1.5	4.3
	PESTICIDES					

Water Quality Datasheet for the period : 2020-2021

Station Name : VALIGONDA (040-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water Analysis

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

S.No	Parameters	01-02-2021	01-03-2021	05-04-2021	03-05-2021	21-05-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	1.126	1.166	1.494	5.357	18.43
2	Colour_Cod (-)	Light Brown	Light Brown	Clear	Light Brown	Light Brown
3	EC_GEN (µmho/cm)	1568	1771	1812	1336	1264
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.9	7.7	8.3	7.8	7.4
6	TDS (mg/L)	968	1016	1150	875	681
7	Temp (deg C)	25.0	26.0	27.0	28.0	28.5
8	Turb (NTU)	3.00	3.00	32.00	52.00	13.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.8	27.8	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	389	400	439	415	406
3	B (mg/L)	0.41	0.11			
4	Ca (mg/L)	78	76	85	85	86
5	Cl (mg/L)	290.6	278.0	313.0	215.0	173.4
6	CO3 (mg/L)	0.0	1.0	33.5	0.0	0.0
7	F (mg/L)	1.12	0.29	0.30	1.30	0.28
8	Fe (mg/L)	1.0	0.2	0.0	0.0	0.4
9	HCO3 (mg/L)	475	486	467	506	495
10	K (mg/L)	1.8	1.6	1.5	19.0	16.8
11	Mg (mg/L)	41.5	44.0	50.1	34.9	40.5
12	Na (mg/L)	279.6	261.4	237.2	179.2	176.5
13	NH3-N (mg N/L)	0.24	0.21			
14	NO2+NO3 (mg N/L)	6.12	11.53			
15	NO2-N (mgN/L)	0.02	0.33			
16	NO3-N (mgN/L)	6.10	11.20	15.70	16.30	13.58
17	o-PO4-P (mg P/L)	0.030	0.400			
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	22.6	28.2			
20	SO4 (mg/L)	113.0	162.7	194.1	69.6	33.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	4.1	3.4	3.1	6.9	
2	COD (mg/L)	48.1	29.7	35.1	30.8	
3	DO (mg/L)	5.4	3.0	3.6	1.9	
4	DO_SAT% (%)	65	37	45	24	
5	FCol-MPN (MPN/100mL)	800	340	330	1700	
6	Tcol-MPN (MPN/100mL)	2800	1300	1700	3000	
	TRACE & TOXIC					
1	As (µg/L)			1.78	0.01	2.88
2	Cd (µg/L)			1.60	1.00	2.80
3	Cr (µg/L)			1.10	1.40	1.90
4	Cu (µg/L)	5.00	21.00	6.60	4.70	2.80
5	Hg (µg/L)			0.00	0.00	0.47
6	Ni (µg/L)			25.90	8.90	5.70
7	Pb (µg/L)			66.00	23.00	7.00
8	Zn (µg/L)	17.60	0.00	3.99	2.49	8.68
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	195	191	213	211	215
2	HAR_Total (mgCaCO3/L)	368	374	422	357	383
3	Na% (%)	62	60	55	51	49
4	RSC (-)	0.5	0.6	0.4	1.2	0.5
5	SAR (-)	6.4	5.9	5.0	4.1	3.9
	PESTICIDES					

Water Quality Summary for the period : 2020-2021

Station Name : VALIGONDA (040-LKDHYD)

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	2706	0.000	43.66
2	EC_GEN (µmho/cm)	15	1812	957	1405
3	pH_GEN (pH units)	15	8.3	7.2	7.7
4	TDS (mg/L)	15	1253	666	927
5	Temp (deg C)	13	28.5	24.5	26.5
6	Turb (NTU)	15	52.00	3.00	22
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	15	27.8	0.0	1.9
2	ALK-TOT (mgCaCO3/L)	15	439	200	340
3	B (mg/L)	12	1.05	0.07	0.31
4	Ca (mg/L)	15	94	27	71
5	Cl (mg/L)	15	313.0	141.2	215.5
6	CO3 (mg/L)	15	33.5	0.0	2.3
7	F (mg/L)	15	1.30	0.28	0.86
8	Fe (mg/L)	15	3.3	0.0	0.5
9	HCO3 (mg/L)	15	506	244	410
10	K (mg/L)	15	19.0	0.4	3.6
11	Mg (mg/L)	15	79.5	29.8	45.3
12	Na (mg/L)	15	279.6	70.2	168.6
13	NH3-N (mg N/L)	12	2.14	0.00	0.27
14	NO2+NO3 (mg N/L)	5	11.87	3.22	8.19
15	NO2-N (mgN/L)	12	3.50	0.01	1.06
16	NO3-N (mgN/L)	8	16.30	3.21	10.51
17	o-PO4-P (mg P/L)	12	1.209	0.030	0.542
18	P-Tot (mgP/L)	2	0.480	0.190	0.335
19	SiO2 (mg/L)	12	41.5	20.9	28.2
20	SO4 (mg/L)	15	212.0	33.0	118.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	14	50.1	0.7	6.2
2	COD (mg/L)	14	54.5	17.8	33
3	DO (mg/L)	9	9.7	3.2	5.9
4	DO_SAT% (%)	7	91	38	66
5	FCol-MPN (MPN/100mL)	14	5000	330	2193
6	Tcol-MPN (MPN/100mL)	14	16000	1300	11164
	TRACE & TOXIC				
1	As (µg/L)	4	2.74	0.22	1.08
2	Cd (µg/L)	7	5.90	0.30	2.36
3	Cr (µg/L)	7	4.60	1.10	2.79
4	Cu (µg/L)	15	21.00	0.00	3.5
5	Hg (µg/L)	4	1.60	0.40	0.88
6	Ni (µg/L)	7	27.40	0.00	11.61
7	Pb (µg/L)	7	83.00	7.00	46
8	Zn (µg/L)	15	38.33	0.00	7.1
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	15	236	66	178
2	HAR_Total (mgCaCO3/L)	15	422	307	367
3	Na% (%)	15	62	28	48
4	RSC (-)	15	1.2	0.0	0.2
5	SAR (-)	15	6.4	1.5	3.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2019-2021

Station Name : VALIGONDA (040-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

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

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2019	2020	2019-2020	2020-2021	2020	2021
	PHYSICAL						
1	Q (cumec)	28.86	13.31	12.05	16.49	2.166	6.612
2	EC_GEN (µmho/cm)	1690	1339	1824	1365	1759	1546
3	pH_GEN (pH units)	7.7	7.6	7.8	7.7	7.8	7.8
4	TDS (mg/L)	950	967	1057	891	791	931
5	Temp (deg C)	27.5	27.6	25.0	24.9	23.5	27.4
6	Turb (NTU)	56.00	21.20	21.75	20.67	31.33	25.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	7.2
2	ALK-TOT (mgCaCO3/L)	374	316	384	309	411	415
3	B (mg/L)	0.29	0.17	0.63	0.46	0.34	0.11
4	Ca (mg/L)	88	63	70	70	41	83
5	Cl (mg/L)	299.3	197.1	293.3	211.3	309.3	244.8
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	8.6
7	F (mg/L)	1.33	0.83	0.94	1.10	1.10	0.54
8	Fe (mg/L)	0.9	0.9	0.9	0.4	0.4	0.2
9	HCO3 (mg/L)	457	385	468	377	501	489
10	K (mg/L)	3.8	1.5	1.8	1.3	1.9	9.7
11	Mg (mg/L)	51.5	45.9	65.5	46.7	75.7	42.4
12	Na (mg/L)	234.4	151.3	221.5	153.2	236.6	213.6
13	NH3-N (mg N/L)	0.72	0.09	1.44	0.44	0.01	0.21
14	NO2+NO3 (mg N/L)	6.57	5.72	14.53	9.00	4.88	11.53
15	NO2-N (mgN/L)	0.77	0.88	1.12	1.34	0.04	0.33
16	NO3-N (mgN/L)	5.80	4.81	13.40	8.85	4.84	14.19
17	o-PO4-P (mg P/L)	0.753	0.706	0.800	0.430	0.993	0.400
18	P-Tot (mgP/L)		0.335				
19	SiO2 (mg/L)	18.5	29.9	21.5	26.9	29.5	28.2
20	SO4 (mg/L)	111.9	106.1	144.4	132.2	153.3	114.9
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	0.9	2.2	1.0	10.4	1.5	4.5
2	COD (mg/L)	31.5	36.4	48.4	30.9	27.9	31.9
3	DO (mg/L)	4.2	5.8	5.2	6.2	4.6	
4	DO_SAT% (%)	53	60	63	73	54	
5	FCol-MPN (MPN/100mL)	2225	2920	1010	2288	90	790
6	Tcol-MPN (MPN/100mL)	6875	16000	7350	11717	340	2000
	TRACE & TOXIC						
1	As (µg/L)	6.25		9.77	1.08		
2	Cd (µg/L)	0.26		0.09	2.78	6.53	1.80
3	Cr (µg/L)	6.50		23.23	3.77	48.73	1.47
4	Cu (µg/L)	13.25	0.01	14.75	2.90	9.84	8.77
5	Hg (µg/L)				0.88		
6	Ni (µg/L)	9.25		8.86	10.20	3.72	13.50
7	Pb (µg/L)	0.92		0.09	56.50	6.53	32.00
8	Zn (µg/L)	41.25	0.02	62.75	15.20	10.51	3.79
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	220	158	176	176	104	207
2	HAR_Total (mgCaCO3/L)	435	349	449	371	419	384
3	Na% (%)	52	48	51	45	53	54
4	RSC (-)	0.2	0.0	0.4	0.2	0.1	0.7
5	SAR (-)	4.9	3.5	4.6	3.5	4.9	4.8
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2020-2021
Site	: DAMERCHERLA	Code	: AKF00A7
State	: Telangana	District	Nalgonda
Basin	: Krishna	Independent River	: Krishna
Tributary	: Musi	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	: 21-07-1968		
Discharge	: 27-07-1968		
Sediment	: 01-09-2013		
Water Quality	: 01-01-1980		

Water Quality Datasheet for the period : 2020-2021

Station Name : DAMERCHERLA (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water Analysis

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

S.No	Parameters	01-06-2020	01-07-2020	04-08-2020	01-09-2020	05-10-2020
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	1.951	38.59	6.611	106.2	62.13
2	Colour_Cod (-)	Clear	Other	Clear	Clear	Clear
3	EC_FLD (µmho/cm)		589		348	344
4	EC_GEN (µmho/cm)	1376	2262	1303	961	889
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)					8.2
7	pH_GEN (pH units)	7.9	8.2	7.9	8.0	8.1
8	TDS (mg/L)	762	1538	967	590	680
9	Temp (deg C)	30.0	30.0	28.0	28.0	28.5
10	Turb (NTU)	15.00	14.00	7.00	19.00	12.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	284	252	327	233	260
3	B (mg/L)	0.15	0.21	0.29	0.17	0.16
4	Ca (mg/L)	36	33	62	51	50
5	Cl (mg/L)	173.0	501.5	162.2	162.2	115.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.95	0.70	1.08	0.71	0.85
8	Fe (mg/L)	0.1	0.2	0.0	0.0	0.0
9	HCO3 (mg/L)	347	308	399	285	317
10	K (mg/L)	1.0	1.1	1.5	0.7	0.5
11	Mg (mg/L)	57.5	98.0	38.2	30.0	35.1
12	Na (mg/L)	153.0	262.0	145.4	113.6	78.7
13	NH3-N (mg N/L)	0.01	0.01	0.00	0.02	0.03
14	NO2+NO3 (mg N/L)	2.95	5.25			
15	NO2-N (mgN/L)	0.01	0.05	0.08	0.02	0.01
16	NO3-N (mgN/L)	2.94	5.20			
17	o-PO4-P (mg P/L)	0.041	0.090	0.070	0.150	0.210
18	SiO2 (mg/L)	16.6	25.4	35.1	11.5	19.2
19	SO4 (mg/L)	174.7	72.2	60.9	56.9	39.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	3.0	1.5	2.2	1.8	1.6
2	COD (mg/L)	9.0	17.0	19.2	28.0	13.9
3	DO (mg/L)	5.5	4.1	6.3	4.0	6.7
4	DO_SAT% (%)	73	54	80	51	86
5	FCol-MPN (MPN/100mL)	500	1700	900	2200	700
6	Tcol-MPN (MPN/100mL)	3000	9000	3500	9000	2800
	TRACE & TOXIC					
1	As (µg/L)			1.85		
2	Cd (µg/L)			7.60		
3	Cr (µg/L)			3.70		
4	Cu (µg/L)	0.01	0.01	0.00	0.02	0.01
5	Hg (µg/L)			0.90		
6	Ni (µg/L)			26.70		
7	Pb (µg/L)			28.00		
8	Zn (µg/L)	0.02	0.02	0.00	0.00	0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	89	83	154	128	126
2	HAR_Total (mgCaCO3/L)	329	492	313	253	272
3	Na% (%)	50	54	50	50	39
4	RSC (-)	0.0	0.0	0.3	0.0	0.0
5	SAR (-)	3.7	5.2	3.6	3.1	2.1
	PESTICIDES					

Water Quality Datasheet for the period : 2020-2021

Station Name : DAMERCHERLA (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water Analysis

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

S.No	Parameters	02-11-2020	01-12-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	156.6	21.53	19.33	10.53	26.57
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	426	382	624	318	542
4	EC_GEN (µmho/cm)	784	1035	1038	1033	790
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	8.2	8.2	8.5	8.2	8.1
7	pH_GEN (pH units)	8.1	8.2	8.4	8.3	7.9
8	TDS (mg/L)	483	619	589	663	614
9	Temp (deg C)	27.0	26.0	24.5	25.0	24.0
10	Turb (NTU)	35.00	27.00	21.00	14.00	3.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	20.3	16.2	6.4	0.0
2	ALK-TOT (mgCaCO3/L)	261	358	342	208	191
3	B (mg/L)	0.07	0.10	0.69	0.40	0.30
4	Ca (mg/L)	50	30	69	35	50
5	Cl (mg/L)	103.3	152.3	182.2	132.9	115.3
6	CO3 (mg/L)	0.0	24.5	19.5	7.7	0.0
7	F (mg/L)	0.75	0.99	1.16	1.18	0.74
8	Fe (mg/L)	0.0	0.6	0.2	0.1	0.4
9	HCO3 (mg/L)	318	387	378	239	234
10	K (mg/L)	0.7	1.2	1.0	0.5	0.4
11	Mg (mg/L)	31.9	58.8	39.8	59.2	32.2
12	Na (mg/L)	85.8	100.6	133.0	84.8	89.2
13	NH3-N (mg N/L)	0.02	0.18	0.04	0.08	0.04
14	NO2+NO3 (mg N/L)					2.70
15	NO2-N (mgN/L)	0.04	0.06	0.04	1.49	0.30
16	NO3-N (mgN/L)					2.40
17	o-PO4-P (mg P/L)	0.120	0.240	0.510	0.530	0.126
18	SiO2 (mg/L)	17.3	27.5	22.6	29.7	25.7
19	SO4 (mg/L)	41.8	40.9	132.8	207.9	120.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	4.8	3.2	1.2	1.0	1.2
2	COD (mg/L)	13.4	26.5	28.6	26.7	8.4
3	DO (mg/L)	7.8	5.0	6.7	7.2	7.3
4	DO_SAT% (%)	98	62	80	87	87
5	FCol-MPN (MPN/100mL)	1400	1400	3500	330	1400
6	Tcol-MPN (MPN/100mL)	16000	16000	16000	3500	16000
	TRACE & TOXIC					
1	As (µg/L)		1.07	1.45	0.64	1.38
2	Cd (µg/L)		1.50	5.30	8.50	2.40
3	Cr (µg/L)		3.10	4.00	3.10	11.30
4	Cu (µg/L)	0.00	3.90	2.90	0.30	0.70
5	Hg (µg/L)		1.98	0.56	0.94	0.60
6	Ni (µg/L)		10.00	7.70	6.80	7.90
7	Pb (µg/L)		58.00	77.00	58.00	10.00
8	Zn (µg/L)	0.00	12.01	8.16	4.35	5.91
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	125	75	172	88	124
2	HAR_Total (mgCaCO3/L)	258	320	338	334	258
3	Na% (%)	42	41	46	36	43
4	RSC (-)	0.1	0.8	0.1	0.0	0.0
5	SAR (-)	2.3	2.5	3.2	2.0	2.4
	PESTICIDES					

Water Quality Datasheet for the period : 2020-2021

Station Name : DAMERCHERLA (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water Analysis

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

S.No	Parameters	01-02-2021	01-03-2021	05-04-2021	03-05-2021	21-05-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	20.45	33.62	14.51	4.621	5.480
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	364	422	388	512	
4	EC_GEN (μmho/cm)	425	1171	1102	1237	1627
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	8.1	8.1	8.2	8.1	
7	pH_GEN (pH units)	8.1	8.0	8.2	8.2	8.2
8	TDS (mg/L)	305	650	712	791	959
9	Temp (deg C)	26.0	25.5	29.0	29.5	22.0
10	Turb (NTU)	2.00	1.00	19.00	23.00	12.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	243	296	198	292	204
3	B (mg/L)	0.41	1.13			
4	Ca (mg/L)	68	54	45	63	50
5	Cl (mg/L)	143.1	153.0	169.0	198.0	299.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	1.21	0.99	1.00	1.48	0.99
8	Fe (mg/L)	0.7	0.1	2.4	0.0	0.2
9	HCO3 (mg/L)	296	361	241	356	249
10	K (mg/L)	0.4	0.4	5.6	6.8	6.4
11	Mg (mg/L)	27.7	37.0	33.7	39.0	31.4
12	Na (mg/L)	114.3	141.1	119.8	168.0	171.3
13	NH3-N (mg N/L)	0.04	0.09			
14	NO2+NO3 (mg N/L)	1.90	2.87			
15	NO2-N (mgN/L)	0.00	0.37			
16	NO3-N (mgN/L)	1.90	2.50	6.00	4.30	6.23
17	o-PO4-P (mg P/L)	0.028	0.446			
18	SiO2 (mg/L)	24.9	32.9			
19	SO4 (mg/L)	110.3	64.0	104.4	82.4	18.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	0.5	5.3	3.7	
2	COD (mg/L)	31.8	21.5	18.6	24.1	
3	DO (mg/L)	5.1	4.8	9.2	9.3	
4	DO_SAT% (%)	63	58	120	121	
5	Fcol-MPN (MPN/100mL)	110	500	2800	1100	
6	Tcol-MPN (MPN/100mL)	140	1100	3500	1400	
	TRACE & TOXIC					
1	As (μg/L)			2.86	0.01	9.81
2	Cd (μg/L)			1.40	0.60	2.00
3	Cr (μg/L)			0.80	1.40	2.90
4	Cu (μg/L)	3.00	18.00	5.30	4.20	3.30
5	Hg (μg/L)			1.12	0.00	1.21
6	Ni (μg/L)			17.80	7.30	7.40
7	Pb (μg/L)			50.00	19.00	20.00
8	Zn (μg/L)	24.00	0.02	27.83	2.60	15.57
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	169	134	113	158	124
2	HAR_Total (mgCaCO3/L)	284	288	253	320	255
3	Na% (%)	47	52	50	53	59
4	RSC (-)	0.0	0.2	0.0	0.0	0.0
5	SAR (-)	3.0	3.6	3.3	4.1	4.7
	PESTICIDES					

Water Quality Summary for the period : 2020-2021

Station Name : DAMERCHERLA (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	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	3223	0.000	92.57
2	EC_FLD (µmho/cm)	12	624	318	438
3	EC_GEN (µmho/cm)	15	2262	425	1136
4	pH_FLD (pH units)	10	8.5	8.1	8.2
5	pH_GEN (pH units)	15	8.4	7.9	8.1
6	TDS (mg/L)	15	1538	305	728
7	Temp (deg C)	14	30.0	24.0	27.2
8	Turb (NTU)	15	35.00	1.00	14.93
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	15	20.3	0.0	2.9
2	ALK-TOT (mgCaCO3/L)	15	358	191	263
3	B (mg/L)	12	1.13	0.07	0.34
4	Ca (mg/L)	15	69	30	50
5	Cl (mg/L)	15	501.5	103.3	184.2
6	CO3 (mg/L)	15	24.5	0.0	3.4
7	F (mg/L)	15	1.48	0.70	0.98
8	Fe (mg/L)	15	2.4	0.0	0.3
9	HCO3 (mg/L)	15	399	234	314
10	K (mg/L)	15	6.8	0.4	1.9
11	Mg (mg/L)	15	98.0	27.7	43.3
12	Na (mg/L)	15	262.0	78.7	130.7
13	NH3-N (mg N/L)	12	0.18	0.00	0.05
14	NO2+NO3 (mg N/L)	5	5.25	1.90	3.13
15	NO2-N (mgN/L)	12	1.49	0.00	0.21
16	NO3-N (mgN/L)	8	6.23	1.90	3.93
17	o-PO4-P (mg P/L)	12	0.530	0.028	0.213
18	SiO2 (mg/L)	12	35.1	11.5	24
19	SO4 (mg/L)	15	207.9	18.5	88.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	14	5.3	0.5	2.3
2	COD (mg/L)	14	31.8	8.4	20.5
3	DO (mg/L)	9	7.8	4.0	5.9
4	DO_SAT% (%)	9	98	51	75
5	FCol-MPN (MPN/100mL)	14	3500	110	1324
6	Tcol-MPN (MPN/100mL)	14	16000	140	7210
	TRACE & TOXIC				
1	As (µg/L)	4	1.45	0.64	1.14
2	Cd (µg/L)	7	8.50	0.60	3.1
3	Cr (µg/L)	7	11.30	0.80	3.8
4	Cu (µg/L)	15	18.00	0.00	2.78
5	Hg (µg/L)	4	1.98	0.56	1.02
6	Ni (µg/L)	7	17.80	6.80	9.27
7	Pb (µg/L)	7	77.00	10.00	41.71
8	Zn (µg/L)	15	27.83	0.00	6.7
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	15	172	75	124
2	HAR_Total (mgCaCO3/L)	15	492	253	304
3	Na% (%)	15	59	36	47
4	RSC (-)	15	0.8	0.0	0.1
5	SAR (-)	15	5.2	2.0	3.2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

Station Name : DAMERCHERLA (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

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

S.No	Parameters	Flood				
		Jun - Oct				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	26.08	105.2	37.62	34.04	41.65
2	EC_FLD (µmho/cm)					874
3	EC_GEN (µmho/cm)	830	892	1185	1062	1150
4	pH_FLD (pH units)					6.9
5	pH_GEN (pH units)	8.1	8.2	8.1	8.4	8.0
6	TDS (mg/L)					
7	Temp (deg C)	28.3	27.6	24.6	27.3	28.6
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	2.1	3.2	5.3	0.0
2	ALK-TOT (mgCaCO3/L)	243	235	280	228	293
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	60	54	62	46	51
5	Cl (mg/L)	75.3	89.7	157.2	128.2	125.0
6	CO3 (mg/L)	0.0	2.5	3.8	6.4	0.0
7	F (mg/L)	1.18	1.43	1.16	1.14	1.33
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	297	281	334	265	357
10	K (mg/L)	4.0	3.1	5.3	6.1	4.3
11	Mg (mg/L)	21.7	26.5	26.3	23.0	28.8
12	Na (mg/L)	94.7	109.3	123.7	114.0	129.6
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.42	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	0.42	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.343
19	SiO2 (mg/L)	25.9	25.1	26.7	31.9	24.2
20	SO4 (mg/L)	81.7	83.5	65.3	91.9	93.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	1.5	1.3	1.2	0.7
2	COD (mg/L)		15.5	40.0	18.7	24.3
3	DO (mg/L)	6.2	6.2	5.1	6.2	5.1
4	DO_SAT% (%)	79	78	61	78	65
5	FCol-MPN (MPN/100mL)					6160
6	Tcol-MPN (MPN/100mL)					7460
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)	151	135	155	116	127
2	HAR_Total (mgCaCO3/L)	241	245	264	212	247
3	Na% (%)	45	48	49	50	53
4	RSC (-)	0.2	0.1	0.5	0.7	1.1
5	SAR (-)	2.7	3.0	3.3	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: 2006-2021

Station Name : DAMERCHERLA (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

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

S.No	Parameters	Flood				
		Jun - Oct				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	30.52	3.476	50.47	9.006	9.376
2	EC_FLD (µmho/cm)			1730		
3	EC_GEN (µmho/cm)	1140	1112	1258	1263	1120
4	pH_FLD (pH units)			7.4		
5	pH_GEN (pH units)	8.0	7.9	7.9	8.2	8.0
6	TDS (mg/L)	898	638	762	760	701
7	Temp (deg C)	27.1	27.0	27.6	27.9	28.0
8	Turb (NTU)	1.00	0.55	1.17	4.40	3.03
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.8	1.2
2	ALK-TOT (mgCaCO3/L)	251	185	190	241	251
3	B (mg/L)	0.00	0.24	0.53	0.31	0.51
4	Ca (mg/L)	52	60	48	55	54
5	Cl (mg/L)	149.8	132.3	183.9	182.6	139.1
6	CO3 (mg/L)	0.0	0.0	0.0	1.0	1.4
7	F (mg/L)	2.29	1.18	1.31	1.26	1.26
8	Fe (mg/L)	0.0	0.1	0.1	0.1	0.0
9	HCO3 (mg/L)	307	226	232	292	304
10	K (mg/L)	4.3	3.4	4.2	7.6	5.9
11	Mg (mg/L)	30.4	35.0	28.1	32.1	31.2
12	Na (mg/L)	109.7	101.1	139.6	149.8	135.9
13	NH3-N (mg N/L)	0.00	0.01	0.27	0.00	0.08
14	NO2+NO3 (mg N/L)	0.31	0.98	3.00	1.06	1.08
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.01	0.03
16	NO3-N (mgN/L)	0.31	0.98	3.00	1.04	1.04
17	o-PO4-P (mg P/L)	0.400	0.086	0.158	0.176	0.128
18	P-Tot (mgP/L)	0.400			0.167	
19	SiO2 (mg/L)	28.6	23.6	15.8	25.8	32.6
20	SO4 (mg/L)	77.0	108.0	96.8	102.1	108.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	1.1	1.3	1.1	2.0
2	COD (mg/L)	23.1	29.3	10.1	27.0	14.1
3	DO (mg/L)	5.6	5.8	5.5	6.0	6.3
4	DO_SAT% (%)	70	72	70	77	80
5	FCol-MPN (MPN/100mL)	12846	8115	123	3293	5360
6	Tcol-MPN (MPN/100mL)	12846	8150	195	4164	6800
7	TOC (mg/L)	4.1	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)	130	149	120	137	136
2	HAR_Total (mgCaCO3/L)	257	295	237	271	266
3	Na% (%)	48	43	57	52	52
4	RSC (-)	0.3	0.0	0.0	0.1	0.1
5	SAR (-)	3.0	2.6	4.8	3.9	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: 2006-2021

Station Name : DAMERCHERLA (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

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

S.No	Parameters	Flood				
		Jun - Oct				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	83.27	100.0	18.21	66.43	43.10
2	EC_FLD (µmho/cm)	1740	1633	498		427
3	EC_GEN (µmho/cm)	554	1007	1510	910	1358
4	pH_FLD (pH units)	7.4	7.5	7.6		8.2
5	pH_GEN (pH units)	8.3	8.0	8.0	7.8	8.0
6	TDS (mg/L)	354	569	940	645	907
7	Temp (deg C)	26.5	27.5	27.6	27.2	28.9
8	Turb (NTU)	58.33	14.00	2.00	62.33	13.40
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	1.5	6.1	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	117	197	180	247	271
3	B (mg/L)		0.07	0.04	0.22	0.20
4	Ca (mg/L)	31	56	64	72	46
5	Cl (mg/L)	51.5	174.1	213.0	181.7	222.8
6	CO3 (mg/L)	1.8	7.3	0.0	0.0	0.0
7	F (mg/L)	0.28	0.92	1.11	0.91	0.86
8	Fe (mg/L)	0.1	0.4	0.1	0.5	0.0
9	HCO3 (mg/L)	139	225	220	301	331
10	K (mg/L)	3.3	0.5	0.6	2.0	1.0
11	Mg (mg/L)	17.4	40.8	47.1	43.7	51.8
12	Na (mg/L)	62.5	94.5	116.3	122.6	150.5
13	NH3-N (mg N/L)	0.00	0.14	0.17	0.02	0.01
14	NO2+NO3 (mg N/L)	1.57	7.62	1.33	2.42	4.10
15	NO2-N (mgN/L)	0.13	0.08	0.55	0.04	0.03
16	NO3-N (mgN/L)	1.44	7.53	0.78	2.38	4.07
17	o-PO4-P (mg P/L)	0.181	0.519	0.163	0.167	0.112
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	10.7	9.3	30.3	22.6	21.6
20	SO4 (mg/L)	66.8	68.3	114.2	111.5	80.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	0.8	1.5	0.7	2.0
2	COD (mg/L)	9.7	14.6	33.7	32.0	17.4
3	DO (mg/L)	6.6	6.7	5.7	4.9	5.3
4	DO_SAT% (%)	82	84	72	62	69
5	FCol-MPN (MPN/100mL)	10673	2950	95	503	1200
6	Tcol-MPN (MPN/100mL)	16000	2950	1028	2157	5460
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				0.26	
2	Cd (µg/L)				0.32	
3	Cr (µg/L)				2.30	
4	Cu (µg/L)		5.50	7.50	8.00	0.01
5	Hg (µg/L)					
6	Ni (µg/L)				0.69	
7	Pb (µg/L)				0.58	
8	Zn (µg/L)		64.10	17.85	39.00	0.01
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	78	139	159	180	116
2	HAR_Total (mgCaCO3/L)	151	309	355	362	332
3	Na% (%)	39	39	38	42	49
4	RSC (-)	0.0	0.0	0.0	0.0	0.1
5	SAR (-)	2.0	2.3	2.7	2.8	3.5
	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: 2006-2021

Station Name : DAMERCHERLA (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

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

S.No	Parameters	Winter				
		Nov - Feb				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	82.92	70.84	51.70	35.73	65.53
2	EC_FLD (µmho/cm)					1496
3	EC_GEN (µmho/cm)	690	790	807	802	968
4	pH_FLD (pH units)					7.2
5	pH_GEN (pH units)	8.1	7.9	8.2	8.1	8.2
6	TDS (mg/L)					
7	Temp (deg C)	25.0	21.0	21.5	25.8	24.9
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	3.9	0.0	4.0	2.0	0.0
2	ALK-TOT (mgCaCO3/L)	244	246	230	227	250
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	51	54	64	55	50
5	Cl (mg/L)	54.2	62.2	72.6	66.5	107.6
6	CO3 (mg/L)	4.8	0.0	4.8	2.4	0.0
7	F (mg/L)	0.73	1.18	0.90	1.48	1.03
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	288	300	271	272	305
10	K (mg/L)	1.8	2.7	2.7	2.1	4.2
11	Mg (mg/L)	22.5	25.8	13.4	22.9	28.9
12	Na (mg/L)	82.8	105.0	71.0	69.5	95.3
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.74	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	0.74	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.102
19	SiO2 (mg/L)	23.9	20.6	17.6	21.6	22.9
20	SO4 (mg/L)	57.5	46.0	51.6	82.9	220.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.7	1.0	1.1	1.3
2	COD (mg/L)		27.3	11.6	22.4	19.2
3	DO (mg/L)	7.0	7.1	7.0	6.7	6.3
4	DO_SAT% (%)	86	76	79	83	76
5	FCol-MPN (MPN/100mL)				10575	9675
6	Tcol-MPN (MPN/100mL)				12600	12700
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)	129	134	160	136	126
2	HAR_Total (mgCaCO3/L)	222	241	216	231	246
3	Na% (%)	44	47	42	39	45
4	RSC (-)	0.6	0.1	0.5	0.2	0.3
5	SAR (-)	2.4	3.0	2.1	2.0	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: 2006-2021

Station Name : DAMERCHERLA (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

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

S.No	Parameters	Winter				
		Nov - Feb				
		2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL					
1	Q (cumec)	25.31	4.074	65.53	27.70	3.912
2	EC_FLD (µmho/cm)			1735		
3	EC_GEN (µmho/cm)	926	1273	891	781	1296
4	pH_FLD (pH units)			7.5		
5	pH_GEN (pH units)	7.9	7.8	8.2	8.2	8.1
6	TDS (mg/L)	589	745	513	503	487
7	Temp (deg C)	25.9	24.3	25.3	25.9	26.0
8	Turb (NTU)	1.00	0.70	7.00	2.58	1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	1.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	260	267	222	229	222
3	B (mg/L)	0.26	0.18	0.51	0.21	0.00
4	Ca (mg/L)	50	63	50	53	51
5	Cl (mg/L)	106.8	184.6	94.7	80.7	105.9
6	CO3 (mg/L)	0.0	0.0	1.3	0.0	0.0
7	F (mg/L)	1.12	1.75	0.91	0.89	0.93
8	Fe (mg/L)	0.1	0.0	0.1	0.1	0.0
9	HCO3 (mg/L)	317	326	268	279	271
10	K (mg/L)	3.1	1.8	4.1	2.1	2.7
11	Mg (mg/L)	29.6	36.8	28.8	29.8	29.0
12	Na (mg/L)	93.8	126.3	85.2	80.0	99.0
13	NH3-N (mg N/L)	0.01	0.02	0.00	0.07	0.00
14	NO2+NO3 (mg N/L)	0.83	0.77	1.09	0.83	0.64
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.05	0.00
16	NO3-N (mgN/L)	0.83	0.77	1.09	0.78	0.63
17	o-PO4-P (mg P/L)	0.119	0.058	0.245	0.075	0.094
18	P-Tot (mgP/L)	0.119				
19	SiO2 (mg/L)	25.2	29.4	13.9	21.1	9.9
20	SO4 (mg/L)	80.0	98.0	79.1	66.3	151.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	0.8	1.4	1.7	0.8
2	COD (mg/L)	12.9	18.3	5.3	13.9	18.0
3	DO (mg/L)	5.8	5.4	6.6	7.4	6.4
4	DO_SAT% (%)	71	65	78	90	79
5	FCol-MPN (MPN/100mL)	4725	801	4098	4945	170
6	Tcol-MPN (MPN/100mL)	5800	5647	4190	8113	1750
7	TOC (mg/L)	3.4	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	
5	Hg (µg/L)					
6	Ni (µg/L)				5.40	
7	Pb (µg/L)				10.41	
8	Zn (µg/L)				4.75	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	126	158	124	132	127
2	HAR_Total (mgCaCO3/L)	250	311	244	256	248
3	Na% (%)	45	47	42	41	46
4	RSC (-)	0.4	0.0	0.0	0.1	0.0
5	SAR (-)	2.6	3.1	2.4	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: 2006-2021

Station Name : DAMERCHERLA (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

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

S.No	Parameters	Winter				
		Nov - Feb				
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	8.418	26.55	17.96	33.85	42.51
2	EC_FLD (µmho/cm)	1640	1620	660		443
3	EC_GEN (µmho/cm)	906	1310	1628	1063	851
4	pH_FLD (pH units)	7.6	7.5			8.2
5	pH_GEN (pH units)	8.4	8.0	8.0	7.9	8.2
6	TDS (mg/L)	575	761	819	704	546
7	Temp (deg C)	22.4	24.3	22.5	26.1	25.4
8	Turb (NTU)	0.50	3.33	0.67	20.75	17.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	3.4	0.0	11.2	0.0	7.2
2	ALK-TOT (mgCaCO3/L)	177	275	238	276	267
3	B (mg/L)		0.05	0.02	0.38	0.33
4	Ca (mg/L)	54	72	47	49	50
5	Cl (mg/L)	115.0	211.9	197.3	159.3	138.2
6	CO3 (mg/L)	4.0	0.0	13.6	0.0	8.6
7	F (mg/L)	0.99	1.08	0.84	0.90	1.01
8	Fe (mg/L)	0.0	0.1	0.1	0.3	0.3
9	HCO3 (mg/L)	208	336	262	337	309
10	K (mg/L)	4.7	1.0	0.5	0.5	0.7
11	Mg (mg/L)	25.4	35.5	39.3	48.0	41.6
12	Na (mg/L)	122.4	139.4	141.2	118.2	101.3
13	NH3-N (mg N/L)	0.24	1.34	0.29	0.02	0.07
14	NO2+NO3 (mg N/L)	0.54	5.27	1.80	5.04	2.30
15	NO2-N (mgN/L)	0.03	0.03	0.11	0.05	0.32
16	NO3-N (mgN/L)	0.51	5.24	1.69	4.99	2.15
17	o-PO4-P (mg P/L)	0.108	1.270	0.197	0.168	0.259
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	12.9	14.8	15.7	25.0	24.6
20	SO4 (mg/L)	152.8	129.9	164.6	114.6	109.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.4	1.1	1.7	1.7	2.0
2	COD (mg/L)	11.2	21.7	9.8	71.4	22.5
3	DO (mg/L)	6.6	7.4	5.2	5.8	6.7
4	DO_SAT% (%)	76	89	60	72	82
5	FCol-MPN (MPN/100mL)	478	947	798	1035	1357
6	Tcol-MPN (MPN/100mL)	1100	5377	4465	5550	11273
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				8.79	1.14
2	Cd (µg/L)				0.02	4.43
3	Cr (µg/L)				3.69	5.38
4	Cu (µg/L)	0.00	4.33	6.75	3.75	1.80
5	Hg (µg/L)					1.02
6	Ni (µg/L)				9.81	8.10
7	Pb (µg/L)				0.69	50.75
8	Zn (µg/L)	0.00	42.07	31.37	97.50	9.07
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	136	181	119	122	125
2	HAR_Total (mgCaCO3/L)	242	329	283	322	299
3	Na% (%)	49	48	52	44	42
4	RSC (-)	0.0	0.5	0.4	0.0	0.2
5	SAR (-)	3.4	3.4	3.7	2.9	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: 2006-2021

Station Name : DAMERCHERLA (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				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	33.62	44.00	39.87	29.13	49.80
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	765	903	944	847	926
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.1	7.9	8.2	8.4	7.9
6	TDS (mg/L)					
7	Temp (deg C)	24.0	25.3	23.0	28.0	25.0
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	2.7	5.3	0.0
2	ALK-TOT (mgCaCO3/L)	258	248	229	232	240
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	52	51	54	39	52
5	Cl (mg/L)	69.5	109.6	96.0	80.5	107.8
6	CO3 (mg/L)	0.0	0.0	3.2	6.4	0.0
7	F (mg/L)	1.50	0.94	0.94	2.01	0.93
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	315	303	273	270	293
10	K (mg/L)	2.4	3.2	2.4	3.0	2.3
11	Mg (mg/L)	23.0	22.7	12.3	23.0	30.2
12	Na (mg/L)	79.3	104.0	81.9	74.6	93.3
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.00	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	0.00	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.070
19	SiO2 (mg/L)	22.8	20.3	22.9	22.8	18.4
20	SO4 (mg/L)	56.7	42.0	51.4	55.0	99.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.9	0.7	1.0	0.6	0.3
2	COD (mg/L)		13.7	12.1	26.6	19.9
3	DO (mg/L)	6.4	5.4	7.3	6.5	5.8
4	DO_SAT% (%)	76	65	85	83	70
5	FCol-MPN (MPN/100mL)				11467	10500
6	Tcol-MPN (MPN/100mL)				11667	16000
7	TOC (mg/L)		3.5			
	TRACE & TOXIC					
1	As (µg/L)				2.27	
2	Cd (µg/L)	8.00	1.10	2.38	0.00	1.12
3	Cr (µg/L)	2.00	2.00	2.00	0.00	0.36
4	Cu (µg/L)					
5	Hg (µg/L)	1.70	0.00			
6	Ni (µg/L)	1.00	11.60	1.96	0.03	7.64
7	Pb (µg/L)	93.00	22.53	36.26	0.00	31.01
8	Zn (µg/L)	50.00	2.85	22.11	5.81	38.10
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	130	128	136	97	130
2	HAR_Total (mgCaCO3/L)	226	223	188	193	256
3	Na% (%)	43	50	49	45	44
4	RSC (-)	0.7	0.5	0.9	0.8	0.0
5	SAR (-)	2.3	3.0	2.8	2.4	2.5
	PESTICIDES					
1	Aldrin (µg/L)	0.020	0.010	0.010	0.000	0.000
2	BHC (µg/L)	0.100	0.190	0.243	0.129	0.000
3	DDT (µg/L)	0.100	0.100	0.100	0.019	0.000
4	Dieldrin (µg/L)	0.030	0.010	0.010	0.002	0.000
5	Endos (µg/L)	0.190	0.100	0.100	0.075	0.000

Water Quality Seasonal Average for the period: 2006-2021

Station Name : DAMERCHERLA (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				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	6.854	3.697	14.52	22.37	Drybed
2	EC_FLD (µmho/cm)					No Flow
3	EC_GEN (µmho/cm)	1273	1580	975	953	
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.9	7.8	8.1	8.2	
6	TDS (mg/L)	839	871	632	584	
7	Temp (deg C)	27.8	25.8	30.3	27.3	
8	Turb (NTU)	1.00	0.51	3.33	2.03	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	1.2	
2	ALK-TOT (mgCaCO3/L)	315	311	250	210	
3	B (mg/L)	0.07	0.38	0.50	0.23	
4	Ca (mg/L)	44	77	48	45	
5	Cl (mg/L)	114.8	253.4	113.7	92.1	
6	CO3 (mg/L)	0.0	0.0	0.0	1.4	
7	F (mg/L)	1.35	1.24	1.02	0.84	
8	Fe (mg/L)	0.1	0.2	0.5	0.0	
9	HCO3 (mg/L)	385	379	305	253	
10	K (mg/L)	1.5	1.8	4.1	3.0	
11	Mg (mg/L)	26.1	40.8	28.2	25.9	
12	Na (mg/L)	121.1	150.3	116.2	87.6	
13	NH3-N (mg N/L)	0.05	0.00	0.03	0.06	
14	NO2+NO3 (mg N/L)	0.76	1.29	0.74	0.42	
15	NO2-N (mgN/L)	0.01	0.00	0.00	0.03	
16	NO3-N (mgN/L)	0.74	1.29	0.74	0.39	
17	o-PO4-P (mg P/L)	0.118	0.087	0.060	0.213	
18	P-Tot (mgP/L)	0.118				
19	SiO2 (mg/L)	28.4	23.8	17.5	33.6	
20	SO4 (mg/L)	74.8	109.5	58.0	92.1	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	0.6	1.1	0.5	
2	COD (mg/L)	10.0	10.9	6.6	9.6	
3	DO (mg/L)	5.1	6.4	5.9	5.9	
4	DO_SAT% (%)	65	78	79	74	
5	FCol-MPN (MPN/100mL)	1867	175	70	3	
6	Tcol-MPN (MPN/100mL)	5233	1650	133	5523	
7	TOC (mg/L)	2.7	3.4		36.6	
	TRACE & TOXIC					
1	As (µg/L)	2.44	4.85	1.02	3.55	
2	Cd (µg/L)	0.78	2.14	0.01	3.00	
3	Cr (µg/L)	0.00	2.57	0.08	0.00	
4	Cu (µg/L)					
5	Hg (µg/L)	0.68	1.69	0.00	0.10	
6	Ni (µg/L)	4.41	8.78	1.34	9.04	
7	Pb (µg/L)	32.49	1.71	0.33	20.00	
8	Zn (µg/L)	21.89	0.15	3.00	11.00	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	111	192	120	112	
2	HAR_Total (mgCaCO3/L)	220	362	237	220	
3	Na% (%)	55	47	50	46	
4	RSC (-)	1.9	0.0	0.5	0.0	
5	SAR (-)	3.6	3.5	3.3	2.6	
	PESTICIDES					
1	Aldrin (µg/L)	0.001				
2	BHC (µg/L)	0.022				
3	DDT (µg/L)	0.002				
4	Dieldrin (µg/L)	0.000				
5	Endos (µg/L)	0.034				

Water Quality Seasonal Average for the period: 2006-2021

Station Name : DAMERCHERLA (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				
		2017	2018	2019	2020	2021
	PHYSICAL					
1	Q (cumec)	11.83	12.49	8.816	8.874	14.56
2	EC_FLD (µmho/cm)	1630	1339	426		441
3	EC_GEN (µmho/cm)	1058	1516	1053	1307	1284
4	pH_FLD (pH units)	7.4	7.7			8.1
5	pH_GEN (pH units)	8.2	7.9	7.8	7.8	8.2
6	TDS (mg/L)	647	905	577	743	778
7	Temp (deg C)	26.0	26.2	26.3	27.5	28.0
8	Turb (NTU)	2.50	2.33	0.67	17.00	13.75
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	1.9	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	213	288	297	285	247
3	B (mg/L)		0.04	0.04	0.27	1.13
4	Ca (mg/L)	74	87	51	28	53
5	Cl (mg/L)	158.0	242.8	152.2	171.7	205.0
6	CO3 (mg/L)	2.3	0.0	0.0	0.0	0.0
7	F (mg/L)	0.61	0.95	0.97	1.05	1.11
8	Fe (mg/L)	0.0	0.0	0.1	0.1	0.7
9	HCO3 (mg/L)	255	352	363	347	302
10	K (mg/L)	9.8	0.7	0.4	0.5	4.8
11	Mg (mg/L)	37.0	42.2	43.9	63.9	35.3
12	Na (mg/L)	136.7	198.5	129.7	123.5	150.1
13	NH3-N (mg N/L)	0.09	0.11	0.06	0.01	0.09
14	NO2+NO3 (mg N/L)	1.85	6.38	0.67	2.53	2.87
15	NO2-N (mgN/L)	0.00	0.02	0.01	0.02	0.37
16	NO3-N (mgN/L)	1.84	6.36	0.66	2.51	4.76
17	o-PO4-P (mg P/L)	0.720	0.583	0.133	0.103	0.446
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	18.8	13.7	22.0	31.8	32.9
20	SO4 (mg/L)	200.9	127.5	116.1	137.3	67.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	0.8	0.6	2.9	3.2
2	COD (mg/L)	9.7	13.6	10.7	22.8	21.4
3	DO (mg/L)	6.3	6.3	5.1	6.5	
4	DO_SAT% (%)	78	78	64	79	
5	FCol-MPN (MPN/100mL)	20	1347	393	210	1467
6	Tcol-MPN (MPN/100mL)	20	1847	1423	3500	2000
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)	4.91	2.24	2.76		
2	Cd (µg/L)	2.00	2.20	1.70	0.02	1.33
3	Cr (µg/L)	0.00	0.00	3.40	29.40	1.70
4	Cu (µg/L)	0.00	2.47	11.33	1.78	7.70
5	Hg (µg/L)	0.37	0.30	0.22		
6	Ni (µg/L)	5.10	7.50	11.20	24.06	10.83
7	Pb (µg/L)	1.00	26.00	27.00	2.79	29.67
8	Zn (µg/L)	0.00	26.93	26.73	11.01	11.50
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	184	218	128	70	132
2	HAR_Total (mgCaCO3/L)	338	394	310	337	279
3	Na% (%)	45	53	48	44	53
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	3.2	4.4	3.2	2.9	3.9
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

HISTORY SHEET

		Water Year	: 2020-2021
Site	: HALIA	Code	: AKH00G2
State	: Telangana	District	Nalgonda
Basin	: Krishna	Independent River	: Krishna
Tributary	: Halia	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°46'00"	Longitude	: 79°21'00"
	Opening Date	Closing Date	
Gauge	: 01-06-1984		
Discharge	: 11-07-1984		
Water Quality	: 01-06-1992		

Water Quality Datasheet for the period : 2020-2021

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	01-06-2020	01-07-2020	04-08-2020	01-09-2020	05-10-2020
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	3.437	5.443	5.965	24.32	18.76
2	Colour_Cod (-)	Clear	Light Brown	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	1222	835	1182	1006	952
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.7	8.2	8.1	7.8	8.1
6	TDS (mg/L)	698	501	908	637	658
7	Temp (deg C)	30.0	27.5	29.5	31.0	29.3
8	Turb (NTU)	38.00	16.00	12.00	28.00	17.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	175	295	348	309	327
3	B (mg/L)	0.00	0.19	0.57	0.12	0.19
4	Ca (mg/L)	28	17	42	37	25
5	Cl (mg/L)	122.6	121.4	130.0	139.0	113.3
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	1.06	0.55	1.31	0.92	1.13
8	Fe (mg/L)	0.5	1.4	0.0	0.0	0.1
9	HCO3 (mg/L)	213	360	424	377	399
10	K (mg/L)	0.6	0.6	0.5	0.4	0.5
11	Mg (mg/L)	36.5	46.0	23.1	32.5	41.2
12	Na (mg/L)	153.0	133.0	173.2	130.0	125.4
13	NH3-N (mg N/L)	0.01	0.01	0.06	0.02	0.04
14	NO2+NO3 (mg N/L)	3.74	4.96			
15	NO2-N (mgN/L)	0.01	0.06	0.03	0.01	0.09
16	NO3-N (mgN/L)	3.73	4.90			
17	o-PO4-P (mg P/L)	0.034	0.044	0.020	0.900	0.200
18	SiO2 (mg/L)	41.6	23.8	24.3	25.1	23.2
19	SO4 (mg/L)	148.6	27.3	43.0	82.2	52.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	3.7	2.3	0.7	1.1	0.9
2	COD (mg/L)	6.4	23.4	18.7	16.5	14.7
3	DO (mg/L)	10.8	4.9	4.6	3.9	6.4
4	DO_SAT% (%)	143	62	60	52	83
5	FCol-MPN (MPN/100mL)	1300	2800	500	3500	260
6	Tcol-MPN (MPN/100mL)	9000	16000	2800	16000	1700
	TRACE & TOXIC					
1	As (μg/L)			1.17		
2	Cd (μg/L)			6.70		
3	Cr (μg/L)			7.50		
4	Cu (μg/L)	0.00	0.01	0.00	0.00	0.01
5	Hg (μg/L)			0.52		
6	Ni (μg/L)			20.30		
7	Pb (μg/L)			24.00		
8	Zn (μg/L)	0.02	0.02	0.00	0.00	0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	71	42	106	92	61
2	HAR_Total (mgCaCO3/L)	223	233	202	227	233
3	Na% (%)	60	56	65	56	54
4	RSC (-)	0.0	1.3	2.9	1.7	1.9
5	SAR (-)	4.5	3.8	5.3	3.8	3.6
	PESTICIDES					

Water Quality Datasheet for the period : 2020-2021

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	02-11-2020	01-12-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	19.66	0.000	0.000	0.000	0.000
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	806	1044	748	1062	873
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.1	8.2	7.8	8.2	7.9
6	TDS (mg/L)	465	637	507	727	601
7	Temp (deg C)	28.3	26.0	29.0	24.0	23.5
8	Turb (NTU)	42.00	15.00	14.00	5.00	17.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	295	282	264	207	215
3	B (mg/L)	0.09	0.11	0.08	0.23	0.12
4	Ca (mg/L)	27	9	44	39	39
5	Cl (mg/L)	97.5	134.4	76.6	132.3	116.7
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.92	1.23	0.52	0.49	1.11
8	Fe (mg/L)	0.0	0.3	0.2	0.1	0.1
9	HCO3 (mg/L)	360	344	322	253	262
10	K (mg/L)	0.5	0.9	0.3	0.5	0.4
11	Mg (mg/L)	41.1	53.8	40.7	38.1	32.6
12	Na (mg/L)	112.8	119.3	80.1	113.4	109.2
13	NH3-N (mg N/L)	0.01	0.22	0.09	0.11	0.01
14	NO2+NO3 (mg N/L)					3.30
15	NO2-N (mgN/L)	0.09	0.07	0.29	0.10	0.20
16	NO3-N (mgN/L)					3.10
17	o-PO4-P (mg P/L)	0.180	0.080	0.880	0.430	0.089
18	SiO2 (mg/L)	20.8	27.3	30.2	29.8	28.7
19	SO4 (mg/L)	34.2	94.8	50.6	153.9	102.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	4.4	4.2	86.8	2.0	1.9
2	COD (mg/L)	16.0	19.5	25.6	26.7	18.4
3	DO (mg/L)	7.7	7.3	4.4	7.0	7.7
4	DO_SAT% (%)	98	90	57	83	90
5	FCol-MPN (MPN/100mL)	330	3000	1700	1400	3000
6	Tcol-MPN (MPN/100mL)	9000	16000	2800	3500	16000
	TRACE & TOXIC					
1	As (μg/L)		1.28	0.60	0.92	4.57
2	Cd (μg/L)		3.20	2.40	3.70	0.50
3	Cr (μg/L)		2.70	3.40	3.10	8.40
4	Cu (μg/L)	0.00	4.80	3.40	2.70	3.50
5	Hg (μg/L)		0.25	0.54	1.03	0.05
6	Ni (μg/L)		4.80	10.40	0.50	3.80
7	Pb (μg/L)		60.00	54.00	65.00	1.00
8	Zn (μg/L)	0.00	11.33	0.00	0.00	0.72
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	67	23	109	98	98
2	HAR_Total (mgCaCO3/L)	238	247	279	257	234
3	Na% (%)	51	51	39	49	51
4	RSC (-)	1.2	0.8	0.0	0.0	0.0
5	SAR (-)	3.2	3.3	2.1	3.1	3.1
	PESTICIDES					

Water Quality Datasheet for the period : 2020-2021

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	01-02-2021	01-03-2021	05-04-2021	03-05-2021	21-05-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	0.000	0.000	0.000	0.000	0.000
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	430	1147	956	1229	1236
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.0	7.9	8.1	8.3	8.4
6	TDS (mg/L)	314	636	683	773	798
7	Temp (deg C)	24.5	25.5	26.0	28.5	24.0
8	Turb (NTU)	2.00	1.00	32.00	48.00	9.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	24.5	27.9
2	ALK-TOT (mgCaCO3/L)	198	329	219	332	366
3	B (mg/L)	0.41	0.71			
4	Ca (mg/L)	46	46	31	43	37
5	Cl (mg/L)	130.2	137.0	143.0	157.0	150.1
6	CO3 (mg/L)	0.0	0.0	0.0	29.5	33.6
7	F (mg/L)	1.29	0.77	0.75	1.91	0.74
8	Fe (mg/L)	0.7	0.2	0.9	0.0	0.2
9	HCO3 (mg/L)	242	402	267	346	379
10	K (mg/L)	0.7	0.6	4.0	7.1	7.0
11	Mg (mg/L)	26.2	25.8	26.3	33.3	22.6
12	Na (mg/L)	114.3	175.0	258.6	192.7	171.0
13	NH3-N (mg N/L)	0.04	0.14			
14	NO2+NO3 (mg N/L)	2.30	4.97			
15	NO2-N (mgN/L)	0.00	0.87			
16	NO3-N (mgN/L)	2.30	4.10	7.60	6.10	7.99
17	o-PO4-P (mg P/L)	0.026	1.060			
18	SiO2 (mg/L)	21.0	25.7			
19	SO4 (mg/L)	64.6	65.8	119.0	86.0	13.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	8.0	2.4	2.9	
2	COD (mg/L)	4.2	18.6	8.3	27.7	
3	DO (mg/L)	6.4	2.0	6.1	6.9	
4	DO_SAT% (%)	76	24	75	88	
5	FCol-MPN (MPN/100mL)	140	1400	270	270	
6	Tcol-MPN (MPN/100mL)	340	5000	330	330	
	TRACE & TOXIC					
1	As (μg/L)			4.98	0.02	2.29
2	Cd (μg/L)			1.00	0.60	1.20
3	Cr (μg/L)			2.10	1.00	0.00
4	Cu (μg/L)	3.00	15.00	5.60	4.40	2.90
5	Hg (μg/L)			0.81	0.00	0.83
6	Ni (μg/L)			22.50	7.60	1.20
7	Pb (μg/L)			49.00	24.00	14.00
8	Zn (μg/L)	0.00	0.01	16.82	2.37	12.31
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	114	116	77	108	92
2	HAR_Total (mgCaCO3/L)	223	223	187	247	186
3	Na% (%)	53	63	75	62	66
4	RSC (-)	0.0	2.2	0.7	1.8	3.6
5	SAR (-)	3.3	5.1	8.3	5.4	5.5
	PESTICIDES					

Water Quality Summary for the period : 2020-2021

Station Name : HALIA (AKH00G2)

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	522.1	0.000	14.49
2	EC_GEN (µmho/cm)	15	1236	430	982
3	pH_GEN (pH units)	15	8.4	7.7	8
4	TDS (mg/L)	15	908	314	636
5	Temp (deg C)	14	31.0	23.5	27.3
6	Turb (NTU)	15	48.00	1.00	19.73
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	15	27.9	0.0	3.5
2	ALK-TOT (mgCaCO3/L)	15	366	175	277
3	B (mg/L)	12	0.71	0.00	0.24
4	Ca (mg/L)	15	46	9	34
5	Cl (mg/L)	15	157.0	76.6	126.7
6	CO3 (mg/L)	15	33.6	0.0	4.2
7	F (mg/L)	15	1.91	0.49	0.98
8	Fe (mg/L)	15	1.4	0.0	0.3
9	HCO3 (mg/L)	15	424	213	330
10	K (mg/L)	15	7.1	0.3	1.6
11	Mg (mg/L)	15	53.8	22.6	34.7
12	Na (mg/L)	15	258.6	80.1	144.1
13	NH3-N (mg N/L)	12	0.22	0.01	0.06
14	NO2+NO3 (mg N/L)	5	4.97	2.30	3.85
15	NO2-N (mgN/L)	12	0.87	0.00	0.15
16	NO3-N (mgN/L)	8	7.99	2.30	4.98
17	o-PO4-P (mg P/L)	12	1.060	0.020	0.329
18	SiO2 (mg/L)	12	41.6	20.8	26.8
19	SO4 (mg/L)	15	153.9	13.2	75.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	14	86.8	0.7	8.8
2	COD (mg/L)	14	27.7	4.2	17.5
3	DO (mg/L)	9	10.8	3.9	6.3
4	DO_SAT% (%)	9	143	52	81
5	FCol-MPN (MPN/100mL)	14	3500	140	1419
6	Tcol-MPN (MPN/100mL)	14	16000	330	7057
	TRACE & TOXIC				
1	As (µg/L)	4	4.57	0.60	1.84
2	Cd (µg/L)	7	3.70	0.50	1.8
3	Cr (µg/L)	7	8.40	0.00	2.96
4	Cu (µg/L)	15	15.00	0.00	3.02
5	Hg (µg/L)	4	1.03	0.05	0.47
6	Ni (µg/L)	7	22.50	0.50	7.26
7	Pb (µg/L)	7	65.00	1.00	38.14
8	Zn (µg/L)	15	16.82	0.00	2.91
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	15	116	23	85
2	HAR_Total (mgCaCO3/L)	15	279	186	229
3	Na% (%)	15	75	39	57
4	RSC (-)	15	3.6	0.0	1.2
5	SAR (-)	15	8.3	2.1	4.2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HALIA (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

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

S.No	Parameters	Flood				
		Jun - Oct				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	8.710	18.40	9.945	102.6	7.412
2	EC_GEN (µmho/cm)	789	739	846	661	968
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	8.4	8.4	8.2	8.0	8.3
5	TDS (mg/L)					
6	Temp (deg C)	27.0	27.3	25.0	26.5	26.7
7	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	5.5	8.6	2.7	0.0	3.2
2	ALK-TOT (mgCaCO3/L)	287	250	264	212	279
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	33	34	43	40	38
5	Cl (mg/L)	56.9	62.3	56.0	54.7	81.1
6	CO3 (mg/L)	6.7	10.4	3.2	0.0	3.8
7	F (mg/L)	1.07	1.60	0.99	1.00	1.37
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	336	284	316	259	333
10	K (mg/L)	4.0	11.9	3.5	3.4	3.3
11	Mg (mg/L)	16.0	18.2	13.6	17.0	21.2
12	Na (mg/L)	126.7	125.2	116.9	66.3	130.5
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.80	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	0.80	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.159
19	SiO2 (mg/L)	20.8	25.0	34.3	18.9	22.4
20	SO4 (mg/L)	38.0	40.6	47.9	60.8	63.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.4	1.0	0.7	1.2	0.6
2	COD (mg/L)		6.6	24.1	15.3	25.9
3	DO (mg/L)	7.3	7.1	5.6	5.7	5.7
4	DO_SAT% (%)	91	90	68	69	71
5	FCol-MPN (MPN/100mL)					6560
6	Tcol-MPN (MPN/100mL)					9400
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)	83	86	107	100	94
2	HAR_Total (mgCaCO3/L)	150	161	163	171	183
3	Na% (%)	62	60	60	43	60
4	RSC (-)	2.7	1.8	2.0	1.0	2.0
5	SAR (-)	4.6	4.3	4.0	2.2	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: 2006-2021

Station Name : HALIA (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

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

S.No	Parameters	Flood				
		Jun - Oct				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	6.507	1.422	8.529	5.689	5.939
2	EC_GEN (µmho/cm)	958	893	992	981	908
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	8.1	8.1	8.0	8.3	8.1
5	TDS (mg/L)	572	600	584	660	577
6	Temp (deg C)	26.2	23.5	26.0	26.3	27.7
7	Turb (NTU)	1.00	2.05	0.80	10.00	4.40
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	1.4	0.0
2	ALK-TOT (mgCaCO3/L)	311	285	270	251	256
3	B (mg/L)	0.00	0.23	0.08	0.19	0.09
4	Ca (mg/L)	36	45	45	40	39
5	Cl (mg/L)	96.0	125.0	90.8	99.6	96.9
6	CO3 (mg/L)	0.0	0.0	0.0	1.7	0.0
7	F (mg/L)	2.22	1.28	1.00	1.07	1.45
8	Fe (mg/L)	0.0	0.1	0.1	0.1	0.0
9	HCO3 (mg/L)	380	348	330	303	313
10	K (mg/L)	4.6	7.5	4.2	4.4	5.1
11	Mg (mg/L)	20.5	26.0	26.0	22.7	22.0
12	Na (mg/L)	120.6	148.0	130.1	123.1	139.2
13	NH3-N (mg N/L)	0.00	0.00	0.06	0.00	0.05
14	NO2+NO3 (mg N/L)	0.28	1.18	1.92	0.92	0.84
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.04
16	NO3-N (mgN/L)	0.28	1.18	1.92	0.92	0.80
17	o-PO4-P (mg P/L)	0.248	0.093	0.078	0.169	0.128
18	P-Tot (mgP/L)	0.248			0.170	
19	SiO2 (mg/L)	22.0	28.3	16.2	27.8	22.8
20	SO4 (mg/L)	62.7	71.3	71.5	83.0	77.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.4	1.3	0.7	0.9	1.2
2	COD (mg/L)	14.5	10.5	5.8	21.5	12.7
3	DO (mg/L)	5.8	5.0	5.4	6.5	5.7
4	DO_SAT% (%)	72	59	67	80	73
5	FCol-MPN (MPN/100mL)	10308	8250	83	6147	10900
6	Tcol-MPN (MPN/100mL)	12058	8650	863	8410	16000
7	TOC (mg/L)	4.0	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)	90	112	112	99	97
2	HAR_Total (mgCaCO3/L)	175	221	221	194	188
3	Na% (%)	59	58	55	56	61
4	RSC (-)	2.7	1.3	1.0	1.2	1.4
5	SAR (-)	4.0	4.4	3.8	3.9	4.4
	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: 2006-2021

Station Name : HALIA (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

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

S.No	Parameters	Flood				
		Jun - Oct				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	28.80	7.231	3.983	6.747	11.58
2	EC_GEN (µmho/cm)	781	862	936	1016	1039
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	8.4	8.1	7.9	8.0	8.0
5	TDS (mg/L)	512	543	510	674	680
6	Temp (deg C)	26.0	25.3	27.5	26.9	29.5
7	Turb (NTU)	7.40	65.25	14.00	41.40	22.20
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.3	14.5	0.0	1.5	0.0
2	ALK-TOT (mgCaCO3/L)	219	224	222	305	291
3	B (mg/L)		0.09	0.07	0.30	0.21
4	Ca (mg/L)	40	39	49	47	30
5	Cl (mg/L)	89.1	120.9	114.1	137.4	125.3
6	CO3 (mg/L)	2.8	17.5	0.0	1.8	0.0
7	F (mg/L)	0.99	0.87	0.92	1.19	1.00
8	Fe (mg/L)	0.1	2.4	0.0	0.4	0.4
9	HCO3 (mg/L)	262	237	271	369	354
10	K (mg/L)	4.7	0.7	0.5	1.5	0.5
11	Mg (mg/L)	23.0	30.4	20.9	37.4	35.9
12	Na (mg/L)	102.4	115.1	103.7	129.9	142.9
13	NH3-N (mg N/L)	0.01	0.09	0.12	0.07	0.03
14	NO2+NO3 (mg N/L)	1.00	6.98	1.53	1.99	4.35
15	NO2-N (mgN/L)	0.00	0.08	0.21	0.05	0.04
16	NO3-N (mgN/L)	1.00	6.90	1.32	1.94	4.32
17	o-PO4-P (mg P/L)	0.156	0.538	0.140	0.150	0.240
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	20.7	15.2	29.3	33.0	27.6
20	SO4 (mg/L)	56.0	81.1	37.1	72.4	70.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.4	1.0	1.2	1.7
2	COD (mg/L)	14.4	15.4	17.3	19.1	16.0
3	DO (mg/L)	6.1	6.3	6.4	4.8	6.1
4	DO_SAT% (%)	74	77	81	61	80
5	FCol-MPN (MPN/100mL)	3812	4054	57	798	1672
6	Tcol-MPN (MPN/100mL)	10800	4600	1050	2340	9100
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				0.37	
2	Cd (µg/L)				0.65	
3	Cr (µg/L)				4.78	
4	Cu (µg/L)		4.20	7.33	15.80	0.01
5	Hg (µg/L)					
6	Ni (µg/L)				7.10	
7	Pb (µg/L)				1.17	
8	Zn (µg/L)		54.54	10.20	28.52	0.01
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	100	98	122	118	74
2	HAR_Total (mgCaCO3/L)	196	224	209	274	224
3	Na% (%)	52	53	52	50	58
4	RSC (-)	0.6	0.2	0.3	0.9	1.6
5	SAR (-)	3.2	3.4	3.1	3.4	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: 2006-2021

Station Name : HALIA (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

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

S.No	Parameters	Winter				
		Nov - Feb				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	15.96	12.07	20.43	6.468	20.64
2	EC_GEN (µmho/cm)	672	786	773	759	858
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	8.5	8.3	8.2	8.1	8.2
5	TDS (mg/L)					
6	Temp (deg C)	27.5	19.0	23.3	23.1	21.5
7	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	14.9	5.0	4.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	287	278	262	232	258
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	36	41	50	39	37
5	Cl (mg/L)	49.3	61.9	61.7	59.0	73.6
6	CO3 (mg/L)	18.0	6.0	4.8	0.0	0.0
7	F (mg/L)	1.05	2.00	1.05	1.47	1.19
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	314	327	310	283	315
10	K (mg/L)	2.9	3.8	3.6	2.9	3.6
11	Mg (mg/L)	18.8	19.5	10.9	19.9	20.2
12	Na (mg/L)	109.3	139.3	97.6	93.3	105.7
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.13	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	0.13	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.111
19	SiO2 (mg/L)	22.5	19.1	18.3	15.8	21.2
20	SO4 (mg/L)	41.0	43.0	167.9	55.6	55.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	1.5	0.7	0.6	0.5
2	COD (mg/L)		17.5	9.5	13.9	16.0
3	DO (mg/L)	7.8	8.4	6.4	6.3	6.6
4	DO_SAT% (%)	99	96	75	73	74
5	FCol-MPN (MPN/100mL)				14250	14250
6	Tcol-MPN (MPN/100mL)				16000	16000
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)	89	101	124	97	92
2	HAR_Total (mgCaCO3/L)	167	183	170	180	176
3	Na% (%)	57	62	55	53	56
4	RSC (-)	2.4	1.9	1.9	1.1	1.7
5	SAR (-)	3.7	4.5	3.3	3.1	3.5
	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: 2006-2021

Station Name : HALIA (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

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

S.No	Parameters	Winter				
		Nov - Feb				
		2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL					
1	Q (cumec)	6.871	1.708	9.322	7.423	1.933
2	EC_GEN (µmho/cm)	909	1200	825	736	2028
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	8.0	8.1	8.2	8.1	8.2
5	TDS (mg/L)	575	661	502	495	720
6	Temp (deg C)	21.3	20.0	22.3	21.3	26.0
7	Turb (NTU)	1.00	1.00	6.00	2.33	1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	1.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	291	345	208	244	315
3	B (mg/L)	0.25	0.27	0.03	0.26	0.00
4	Ca (mg/L)	40	49	41	42	44
5	Cl (mg/L)	92.4	118.8	72.6	76.7	115.8
6	CO3 (mg/L)	0.0	0.0	1.3	0.0	0.0
7	F (mg/L)	1.47	1.50	0.96	1.13	1.16
8	Fe (mg/L)	0.0	0.5	0.0	0.1	0.0
9	HCO3 (mg/L)	354	422	252	297	385
10	K (mg/L)	4.3	4.8	3.7	3.5	5.7
11	Mg (mg/L)	23.3	28.7	22.8	23.9	25.6
12	Na (mg/L)	117.8	157.5	76.8	99.9	155.5
13	NH3-N (mg N/L)	0.02	0.00	0.00	0.04	0.00
14	NO2+NO3 (mg N/L)	0.78	1.01	0.96	0.82	0.55
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.02	0.00
16	NO3-N (mgN/L)	0.78	1.01	0.96	0.80	0.55
17	o-PO4-P (mg P/L)	0.099	0.056	0.148	0.121	0.042
18	P-Tot (mgP/L)	0.099				
19	SiO2 (mg/L)	24.7	27.8	17.2	22.8	11.1
20	SO4 (mg/L)	74.0	90.5	38.7	67.7	76.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	1.0	0.9	0.5	0.8
2	COD (mg/L)	18.3	19.5	6.3	10.9	8.1
3	DO (mg/L)	5.8	6.6	6.7	6.9	6.3
4	DO_SAT% (%)	65	73	76	78	78
5	FCol-MPN (MPN/100mL)	4708	125	740	4583	300
6	Tcol-MPN (MPN/100mL)	5325	700	2600	5625	16000
7	TOC (mg/L)	3.2	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	
5	Hg (µg/L)					
6	Ni (µg/L)				4.88	
7	Pb (µg/L)				8.04	
8	Zn (µg/L)				4.80	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	100	121	102	105	110
2	HAR_Total (mgCaCO3/L)	197	241	197	205	217
3	Na% (%)	56	58	44	51	60
4	RSC (-)	1.9	2.1	0.6	0.9	2.0
5	SAR (-)	3.7	4.4	2.4	3.1	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: 2006-2021

Station Name : HALIA (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

River Water

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

S.No	Parameters	Winter				
		Nov - Feb				
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	2.769	1.521	2.678	11.16	3.276
2	EC_GEN (µmho/cm)	1132	1257	1380	862	827
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	8.4	8.1	8.0	7.9	8.0
5	TDS (mg/L)	662	757	730	591	542
6	Temp (deg C)	25.9	23.8	23.6	26.4	25.9
7	Turb (NTU)	2.00	6.25	0.67	22.75	15.83
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	4.5	5.6	1.2	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	223	316	256	279	244
3	B (mg/L)		0.04	0.04	0.27	0.17
4	Ca (mg/L)	53	49	44	37	34
5	Cl (mg/L)	150.2	152.4	137.3	104.0	114.6
6	CO3 (mg/L)	5.4	6.7	1.5	0.0	0.0
7	F (mg/L)	0.87	1.36	0.67	1.01	0.93
8	Fe (mg/L)	0.1	0.1	0.1	0.5	0.2
9	HCO3 (mg/L)	261	371	309	340	297
10	K (mg/L)	6.9	0.8	0.5	0.4	0.5
11	Mg (mg/L)	25.8	32.0	32.8	31.3	38.7
12	Na (mg/L)	184.3	166.0	113.5	122.9	108.2
13	NH3-N (mg N/L)	0.00	0.88	0.10	0.02	0.08
14	NO2+NO3 (mg N/L)	0.47	6.76	1.13	5.11	2.80
15	NO2-N (mgN/L)	0.09	0.06	0.08	0.04	0.13
16	NO3-N (mgN/L)	0.38	6.69	1.06	5.07	2.70
17	o-PO4-P (mg P/L)	0.139	0.550	0.096	0.147	0.281
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	19.5	25.8	17.7	25.0	26.3
20	SO4 (mg/L)	153.0	132.9	113.3	82.7	83.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	0.9	1.0	2.3	16.8
2	COD (mg/L)	9.2	13.8	9.7	33.1	18.4
3	DO (mg/L)	6.9	6.7	6.0	6.5	6.6
4	DO_SAT% (%)	85	79	71	80	82
5	FCol-MPN (MPN/100mL)	1153	420	118	733	1595
6	Tcol-MPN (MPN/100mL)	1925	650	593	3225	7940
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				8.43	1.84
2	Cd (µg/L)				0.01	2.45
3	Cr (µg/L)				3.25	4.40
4	Cu (µg/L)	0.00	3.50	10.50	2.50	2.90
5	Hg (µg/L)					0.47
6	Ni (µg/L)				8.00	4.87
7	Pb (µg/L)				4.38	45.00
8	Zn (µg/L)	0.00	41.00	26.60	71.75	2.01
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	134	122	110	91	85
2	HAR_Total (mgCaCO3/L)	241	255	247	221	246
3	Na% (%)	59	59	49	55	49
4	RSC (-)	0.2	1.2	0.6	1.2	0.3
5	SAR (-)	5.2	4.6	3.1	3.6	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: 2006-2021

Station Name : HALIA (AKH00G2)

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				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	1.446	4.355	5.438	11.22	7.981
2	EC_GEN (µmho/cm)	773	881	814	886	880
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	8.7	8.2	8.2	8.4	8.0
5	TDS (mg/L)					
6	Temp (deg C)	29.0	23.7	24.3	26.7	24.0
7	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	27.9	2.8	2.7	5.3	0.0
2	ALK-TOT (mgCaCO3/L)	333	291	281	292	264
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	33	38	42	35	41
5	Cl (mg/L)	48.9	72.2	69.2	76.9	80.6
6	CO3 (mg/L)	33.7	3.3	3.2	6.4	0.0
7	F (mg/L)	2.14	2.07	1.21	2.17	1.23
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	338	348	337	343	322
10	K (mg/L)	4.0	18.4	3.9	4.0	3.5
11	Mg (mg/L)	20.0	16.7	13.3	15.2	23.6
12	Na (mg/L)	120.3	106.0	96.5	116.6	114.6
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.00	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	0.00	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.123
19	SiO2 (mg/L)	23.5	21.3	22.2	21.2	20.7
20	SO4 (mg/L)	44.3	35.3	47.9	53.7	55.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	0.7	1.4	0.7	0.2
2	COD (mg/L)		12.5	10.8	31.3	13.3
3	DO (mg/L)	7.9	6.7	6.3	5.7	6.1
4	DO_SAT% (%)	103	79	74	71	73
5	FCol-MPN (MPN/100mL)				9133	7000
6	Tcol-MPN (MPN/100mL)				12333	12000
7	TOC (mg/L)		4.1			
	TRACE & TOXIC					
1	As (µg/L)				4.12	
2	Cd (µg/L)	8.00	1.00	2.26	0.00	1.25
3	Cr (µg/L)	69.00	2.00	2.00	0.00	0.00
4	Cu (µg/L)					
5	Hg (µg/L)	1.38	0.00			
6	Ni (µg/L)	1.00	10.60	1.49	0.25	5.87
7	Pb (µg/L)	103.00	17.23	31.87	0.00	22.42
8	Zn (µg/L)	0.10	3.53	4.03	4.02	21.71
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	82	94	104	88	102
2	HAR_Total (mgCaCO3/L)	165	164	160	151	200
3	Na% (%)	59	56	56	62	55
4	RSC (-)	3.4	2.6	2.5	2.8	1.3
5	SAR (-)	4.1	3.6	3.3	4.2	3.6
	PESTICIDES					
1	Aldrin (µg/L)	0.010	0.010	0.010	0.004	0.000
2	BHC (µg/L)	0.100	0.130	0.100	0.183	0.000
3	DDT (µg/L)	0.100	0.100	0.100	0.002	0.000
4	Dieldrin (µg/L)	0.040	0.010	0.010	0.003	0.000
5	Endos (µg/L)	0.100	0.100	0.100	0.039	0.000

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HALIA (AKH00G2)

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				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	2.535	0.378	2.973	2.158	2.716
2	EC_GEN (µmho/cm)	1026	1250	900	905	1473
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.8	8.2	8.2	8.2	8.1
5	TDS (mg/L)	582	690	569	587	666
6	Temp (deg C)	24.4	23.5	25.7	23.7	25.8
7	Turb (NTU)	1.00	0.90	9.67	3.00	424.50
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	1.4	1.2	3.8
2	ALK-TOT (mgCaCO3/L)	295	378	271	244	227
3	B (mg/L)	0.06	0.36	0.03	0.19	
4	Ca (mg/L)	38	53	40	38	36
5	Cl (mg/L)	94.1	141.6	74.5	83.2	105.0
6	CO3 (mg/L)	0.0	0.0	1.7	1.4	4.6
7	F (mg/L)	1.22	1.03	0.81	1.09	0.71
8	Fe (mg/L)	0.2	0.2	0.8	0.0	0.1
9	HCO3 (mg/L)	360	461	327	294	268
10	K (mg/L)	4.1	3.5	3.9	4.2	9.2
11	Mg (mg/L)	19.6	31.1	23.0	21.5	19.9
12	Na (mg/L)	118.2	175.3	99.4	115.4	137.2
13	NH3-N (mg N/L)	0.03	0.04	0.03	0.01	0.01
14	NO2+NO3 (mg N/L)	0.69	1.25	0.79	0.68	1.72
15	NO2-N (mgN/L)	0.01	0.00	0.00	0.11	0.10
16	NO3-N (mgN/L)	0.67	1.25	0.79	0.57	1.62
17	o-PO4-P (mg P/L)	0.110	0.074	0.040	0.147	0.211
18	P-Tot (mgP/L)	0.110				
19	SiO2 (mg/L)	32.6	14.8	22.5	27.7	12.6
20	SO4 (mg/L)	68.0	85.0	59.3	85.5	116.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	0.7	0.7	1.0	1.5
2	COD (mg/L)	13.0	8.1	7.4	12.6	22.9
3	DO (mg/L)	6.5	5.1	6.3	5.7	4.7
4	DO_SAT% (%)	78	60	78	68	58
5	FCol-MPN (MPN/100mL)	887	116	417	8	5350
6	Tcol-MPN (MPN/100mL)	1817	402	843	5417	9100
7	TOC (mg/L)	3.9	6.9		38.2	
	TRACE & TOXIC					
1	As (µg/L)	2.22	3.27	2.13	0.10	0.00
2	Cd (µg/L)	0.16	0.06	0.01	3.00	0.00
3	Cr (µg/L)	0.00	0.52	0.13	0.00	0.00
4	Cu (µg/L)					
5	Hg (µg/L)	1.70	0.39	0.22	0.13	0.00
6	Ni (µg/L)	2.58	13.22	1.50	8.16	0.00
7	Pb (µg/L)	25.56	1.33	9.39	17.00	0.00
8	Zn (µg/L)	24.06	0.10	10.15	5.00	0.03
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	95	134	99	95	89
2	HAR_Total (mgCaCO3/L)	177	263	195	184	172
3	Na% (%)	58	59	51	57	62
4	RSC (-)	2.4	2.3	1.5	1.2	1.1
5	SAR (-)	3.9	4.7	3.2	3.7	4.5
	PESTICIDES					
1	Aldrin (µg/L)	0.000				
2	BHC (µg/L)	0.004				
3	DDT (µg/L)	0.000				
4	Dieldrin (µg/L)	0.000				
5	Endos (µg/L)	0.020				

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HALIA (AKH00G2)

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				
		2017	2018	2019	2020	2021
	PHYSICAL					
1	Q (cumec)	0.692	0.836	1.033	4.371	0.000
2	EC_GEN (µmho/cm)	794	1095	1194	996	1142
3	pH_FLD (pH units)		7.9			
4	pH_GEN (pH units)	8.0	7.9	7.9	8.1	8.2
5	TDS (mg/L)	577	648	615	664	723
6	Temp (deg C)	26.5	25.3	27.0	26.7	26.7
7	Turb (NTU)	7.00	4.00	1.33	36.33	22.50
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	13.1
2	ALK-TOT (mgCaCO3/L)	238	315	358	235	312
3	B (mg/L)		0.05	0.05	0.34	0.71
4	Ca (mg/L)	63	63	38	31	39
5	Cl (mg/L)	96.1	124.1	131.8	136.0	146.8
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	15.8
7	F (mg/L)	0.50	1.35	1.17	1.17	1.04
8	Fe (mg/L)	0.0	0.1	0.2	0.2	0.3
9	HCO3 (mg/L)	290	384	437	287	348
10	K (mg/L)	2.9	0.6	0.6	0.7	4.7
11	Mg (mg/L)	26.9	29.9	34.6	41.4	27.0
12	Na (mg/L)	108.1	150.8	185.6	152.2	199.3
13	NH3-N (mg N/L)	0.18	0.10	0.17	0.01	0.14
14	NO2+NO3 (mg N/L)	1.91	5.67	0.77	3.75	4.97
15	NO2-N (mgN/L)	0.12	0.03	0.05	0.03	0.87
16	NO3-N (mgN/L)	1.79	5.64	0.72	3.71	6.45
17	o-PO4-P (mg P/L)	0.540	0.670	0.171	0.260	1.060
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	16.9	21.0	25.2	21.1	25.7
20	SO4 (mg/L)	78.9	108.6	113.3	127.0	71.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	1.0	2.3	2.5	4.4
2	COD (mg/L)	7.1	10.6	11.1	30.8	18.2
3	DO (mg/L)	6.6	5.3	7.8	6.6	
4	DO_SAT% (%)	81	64	103	81	
5	FCol-MPN (MPN/100mL)	800	510	1013	220	647
6	Tcol-MPN (MPN/100mL)	2800	3967	5507	9000	1887
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)		0.49	5.91		
2	Cd (µg/L)		1.40	1.70	0.01	0.93
3	Cr (µg/L)		0.00	3.00	5.64	1.03
4	Cu (µg/L)	0.00	2.87	15.00	6.05	6.98
5	Hg (µg/L)		0.19	2.30		
6	Ni (µg/L)		6.60	11.50	12.87	10.43
7	Pb (µg/L)		24.00	27.00	3.23	29.00
8	Zn (µg/L)	0.00	18.34	19.27	6.51	7.88
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	156	158	96	78	98
2	HAR_Total (mgCaCO3/L)	268	283	240	251	211
3	Na% (%)	47	53	61	57	66
4	RSC (-)	0.0	0.7	2.4	0.8	2.1
5	SAR (-)	2.9	3.9	5.3	4.2	6.1
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Bawapuram	Code	: AKL00B8
State	: Andhra Pradesh	District	Kurnool
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	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 : 2020-2021

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Analysis

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	01-06-2020	01-07-2020	04-08-2020	01-09-2020	09-10-2020
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	0.000	148.4	117.5	8.333	206.0
2	Colour_Cod (-)	Clear	Clear	Light Brown	Clear	Clear
3	EC_FLD (µmho/cm)	1940	640	1010	610	
4	EC_GEN (µmho/cm)	1527	1401	875	571	540
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	8.8	8.4	8.3	9.1	
7	pH_GEN (pH units)	8.1	8.3	7.5	8.0	7.9
8	TDS (mg/L)	1370	897	539	326	396
9	Temp (deg C)	19.0	20.5	25.0	25.0	28.5
10	Turb (NTU)	32.00	26.00	1.00	12.00	22.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	221	174	163	120	142
3	B (mg/L)	0.12	0.29	1.67	0.06	0.17
4	Ca (mg/L)	30	37	36	28	34
5	Cl (mg/L)	312.0	169.0	107.0	62.6	55.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.62	0.51	0.52	0.24	0.49
8	Fe (mg/L)	1.9	0.4	0.0	0.0	2.1
9	HCO3 (mg/L)	270	212	199	146	173
10	K (mg/L)	1.1	0.6	0.4	0.3	0.4
11	Mg (mg/L)	52.6	31.0	17.2	14.5	13.7
12	Na (mg/L)	388.0	188.0	107.0	62.9	53.6
13	NH3-N (mg N/L)	0.04	0.01	0.02	0.07	0.02
14	NO2+NO3 (mg N/L)	5.07	13.54			
15	NO2-N (mgN/L)	0.06	0.04	0.08	0.05	0.04
16	NO3-N (mgN/L)	5.01	13.50			
17	o-PO4-P (mg P/L)	0.145	0.014	0.150	0.120	0.480
18	SiO2 (mg/L)	21.0	9.7	10.1	46.4	24.5
19	SO4 (mg/L)	337.8	103.2	87.7	60.0	78.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	3.1	1.3			
2	COD (mg/L)	27.9	26.8		17.8	5.9
3	DO (mg/L)	13.1	5.9			
4	DO_SAT% (%)	141	65			
5	FCol-MPN (MPN/100mL)	5000	1100			
6	Tcol-MPN (MPN/100mL)	16000	3500			
	TRACE & TOXIC					
1	As (µg/L)			1.34		
2	Cd (µg/L)			3.90		
3	Cr (µg/L)			4.80		
4	Cu (µg/L)	0.01	0.01	0.00	0.00	0.01
5	Hg (µg/L)			0.89		
6	Ni (µg/L)			14.10		
7	Pb (µg/L)			22.00		
8	Zn (µg/L)	0.05	0.02	0.00	0.00	0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	74	92	91	71	85
2	HAR_Total (mgCaCO3/L)	293	221	162	131	142
3	Na% (%)	74	65	59	51	45
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	9.9	5.5	3.7	2.4	2.0
	PESTICIDES					

Water Quality Datasheet for the period : 2020-2021

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Analysis

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	02-11-2020	01-12-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	230.1	248.4	8.623	5.641	5.779
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	760	790	770	1230	1360
4	EC_GEN (µmho/cm)	668	790	991	1416	1394
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	9.0	8.3	7.9	8.5	8.3
7	pH_GEN (pH units)	8.3	8.3	8.2	8.2	8.0
8	TDS (mg/L)	394	466	566	831	915
9	Temp (deg C)	29.5	26.4	24.0	24.0	27.3
10	Turb (NTU)	65.00	28.00	24.00	11.00	4.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	6.4	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	162	208	205	230	184
3	B (mg/L)	0.19	0.65	0.32	0.47	0.43
4	Ca (mg/L)	38	28	50	32	53
5	Cl (mg/L)	74.1	88.5	141.4	179.8	194.0
6	CO3 (mg/L)	0.0	7.7	0.0	0.0	0.0
7	F (mg/L)	0.40	0.48	0.61	0.60	0.51
8	Fe (mg/L)	0.0	0.7	0.2	0.1	0.4
9	HCO3 (mg/L)	197	239	250	281	224
10	K (mg/L)	0.6	0.7	0.5	0.5	0.5
11	Mg (mg/L)	15.4	24.0	24.2	25.4	26.2
12	Na (mg/L)	87.5	94.1	154.6	163.8	173.6
13	NH3-N (mg N/L)	0.00	0.18	0.02	0.02	0.04
14	NO2+NO3 (mg N/L)					2.70
15	NO2-N (mgN/L)	0.02	0.05	0.19	0.13	0.10
16	NO3-N (mgN/L)					2.60
17	o-PO4-P (mg P/L)	0.080	0.130	0.550	0.320	0.123
18	SiO2 (mg/L)	8.7	11.2	15.9	16.1	32.2
19	SO4 (mg/L)	41.2	57.3	120.2	113.4	225.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	3.9	3.1	1.8	0.8	0.7
2	COD (mg/L)	26.7	17.4	15.5	18.2	15.9
3	DO (mg/L)	5.8	6.3	4.9	6.1	6.2
4	DO_SAT% (%)	75	78	58	72	78
5	FCol-MPN (MPN/100mL)	1400	2200	700	9000	5000
6	Tcol-MPN (MPN/100mL)	3500	16000	16000	16000	16000
	TRACE & TOXIC					
1	As (µg/L)		1.28	1.57	0.64	3.25
2	Cd (µg/L)		2.70	4.20	7.50	2.30
3	Cr (µg/L)		3.00	1.80	3.30	12.50
4	Cu (µg/L)	0.00	6.30	3.60	6.90	2.00
5	Hg (µg/L)		0.64	11.85	0.00	0.65
6	Ni (µg/L)		0.00	0.00	7.50	0.00
7	Pb (µg/L)		34.00	57.00	65.00	31.00
8	Zn (µg/L)	0.45	8.85	70.60	6.83	5.47
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	96	71	125	81	133
2	HAR_Total (mgCaCO3/L)	160	171	226	186	242
3	Na% (%)	54	55	60	66	61
4	RSC (-)	0.1	0.8	0.0	0.9	0.0
5	SAR (-)	3.0	3.1	4.5	5.2	4.9
	PESTICIDES					

Water Quality Datasheet for the period : 2020-2021

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Analysis

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	01-02-2021	01-03-2021	05-04-2021	03-05-2021	21-05-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	3.628	1.753	1.766	0.000	9.163
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	1570	1840	860	1340	
4	EC_GEN (μmho/cm)	1511	1910	1708	1395	1053
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	8.0	8.4	8.4	8.2	
7	pH_GEN (pH units)	8.0	8.1	8.2	8.6	8.2
8	TDS (mg/L)	1062	1225	1141	891	626
9	Temp (deg C)	27.0	29.5	27.0	21.0	23.0
10	Turb (NTU)	2.00	1.00	15.00	38.00	8.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	20.7	0.0
2	ALK-TOT (mgCaCO3/L)	185	214	219	171	267
3	B (mg/L)	0.21	0.73			
4	Ca (mg/L)	54	50	49	29	49
5	Cl (mg/L)	225.0	290.0	255.0	221.0	146.9
6	CO3 (mg/L)	0.0	0.0	0.0	24.9	0.0
7	F (mg/L)	0.85	0.77	0.78	1.15	0.76
8	Fe (mg/L)	1.1	0.2	1.2	0.2	0.2
9	HCO3 (mg/L)	226	262	267	158	325
10	K (mg/L)	0.8	0.9	6.0	7.9	6.0
11	Mg (mg/L)	30.8	36.1	29.1	30.5	30.2
12	Na (mg/L)	271.6	300.9	274.7	129.1	140.0
13	NH3-N (mg N/L)	0.11	0.12			
14	NO2+NO3 (mg N/L)	1.60	3.34			
15	NO2-N (mgN/L)	0.00	0.24			
16	NO3-N (mgN/L)	1.60	3.10	5.90	4.40	6.53
17	o-PO4-P (mg P/L)	0.006	0.291			
18	SiO2 (mg/L)	16.6	19.1			
19	SO4 (mg/L)	217.9	406.8	221.6	33.0	15.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	0.7	5.0	0.8	
2	COD (mg/L)	27.6	27.3	41.3	45.1	
3	DO (mg/L)	5.6	5.1	8.6	5.8	
4	DO_SAT% (%)	70	66	108	65	
5	FCol-MPN (MPN/100mL)	220	340	2800	140	
6	Tcol-MPN (MPN/100mL)	270	1300	9000	170	
	TRACE & TOXIC					
1	As (μg/L)			0.56	0.00	4.83
2	Cd (μg/L)			2.50	0.70	1.10
3	Cr (μg/L)			1.00	1.80	0.00
4	Cu (μg/L)	6.00	16.00	10.10	6.30	2.10
5	Hg (μg/L)			0.76	0.00	0.66
6	Ni (μg/L)			40.70	8.90	3.60
7	Pb (μg/L)			64.00	24.00	16.00
8	Zn (μg/L)	10.20	0.02	18.52	13.75	15.97
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	134	126	122	73	124
2	HAR_Total (mgCaCO3/L)	263	276	243	200	249
3	Na% (%)	69	70	71	57	54
4	RSC (-)	0.0	0.0	0.0	0.0	0.4
5	SAR (-)	7.3	7.9	7.7	4.0	3.9
	PESTICIDES					

Water Quality Summary for the period : 2020-2021

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	2667	0.000	209.2
2	EC_FLD (µmho/cm)	13	1940	610	1132
3	EC_GEN (µmho/cm)	15	1910	540	1183
4	pH_FLD (pH units)	13	9.1	7.9	8.4
5	pH_GEN (pH units)	15	8.6	7.5	8.1
6	TDS (mg/L)	15	1370	326	776
7	Temp (deg C)	13	29.5	19.0	25.4
8	Turb (NTU)	15	65.00	1.00	19.27
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	15	20.7	0.0	1.8
2	ALK-TOT (mgCaCO3/L)	15	267	120	191
3	B (mg/L)	12	1.67	0.06	0.44
4	Ca (mg/L)	15	54	28	40
5	Cl (mg/L)	15	312.0	55.2	168.1
6	CO3 (mg/L)	15	24.9	0.0	2.2
7	F (mg/L)	15	1.15	0.24	0.62
8	Fe (mg/L)	15	2.1	0.0	0.6
9	HCO3 (mg/L)	15	325	146	228
10	K (mg/L)	15	7.9	0.3	1.8
11	Mg (mg/L)	15	52.6	13.7	26.7
12	Na (mg/L)	15	388.0	53.6	172.6
13	NH3-N (mg N/L)	12	0.18	0.00	0.05
14	NO2+NO3 (mg N/L)	5	13.54	1.60	5.25
15	NO2-N (mgN/L)	12	0.24	0.00	0.08
16	NO3-N (mgN/L)	8	13.50	1.60	5.33
17	o-PO4-P (mg P/L)	12	0.550	0.006	0.201
18	SiO2 (mg/L)	12	46.4	8.7	19.3
19	SO4 (mg/L)	15	406.8	15.4	141.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	11	5.0	0.7	2.1
2	COD (mg/L)	13	45.1	5.9	24.1
3	DO (mg/L)	6	13.1	4.9	7
4	DO_SAT% (%)	5	141	58	84
5	FCol-MPN (MPN/100mL)	11	9000	140	2536
6	Tcol-MPN (MPN/100mL)	11	16000	170	8885
	TRACE & TOXIC				
1	As (µg/L)	4	3.25	0.64	1.69
2	Cd (µg/L)	7	7.50	0.70	3
3	Cr (µg/L)	7	12.50	0.00	3.34
4	Cu (µg/L)	15	16.00	0.00	3.96
5	Hg (µg/L)	4	11.85	0.00	3.29
6	Ni (µg/L)	7	40.70	0.00	8.67
7	Pb (µg/L)	7	65.00	16.00	41.57
8	Zn (µg/L)	15	70.60	0.00	10.05
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	15	134	71	100
2	HAR_Total (mgCaCO3/L)	15	293	131	211
3	Na% (%)	15	74	45	61
4	RSC (-)	15	0.9	0.0	0.1
5	SAR (-)	15	9.9	2.0	5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	61.43	335.5	89.00	228.5	107.9
2	EC_FLD (µmho/cm)				511	
3	EC_GEN (µmho/cm)	974	916	906	772	905
4	pH_FLD (pH units)				7.6	
5	pH_GEN (pH units)	8.3	8.1	8.4	8.2	8.4
6	TDS (mg/L)					
7	Temp (deg C)	27.2	22.8	23.4	23.6	22.4
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	3.3	2.3	4.8	2.0	3.2
2	ALK-TOT (mgCaCO3/L)	181	180	174	128	152
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	38	49	43	36	41
5	Cl (mg/L)	114.5	91.8	101.6	66.8	102.3
6	CO3 (mg/L)	4.0	2.8	5.8	2.4	3.8
7	F (mg/L)	0.82	1.11	0.67	0.58	0.87
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	213	214	200	151	178
10	K (mg/L)	4.3	4.4	4.0	2.6	3.8
11	Mg (mg/L)	16.6	14.0	13.2	11.9	50.2
12	Na (mg/L)	140.6	122.8	138.9	70.7	537.9
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.26	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	0.26	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.207
19	SiO2 (mg/L)	14.7	15.4	14.8	13.2	11.8
20	SO4 (mg/L)	140.4	126.0	102.5	102.9	182.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	2.1	1.8	3.2	1.6
2	COD (mg/L)		22.7	19.5	28.4	25.7
3	DO (mg/L)	6.0	5.9	6.2	6.5	6.8
4	DO_SAT% (%)	75	68	73	76	78
5	FCol-MPN (MPN/100mL)				16000	5360
6	Tcol-MPN (MPN/100mL)				16000	9080
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)	95	122	108	91	102
2	HAR_Total (mgCaCO3/L)	164	180	163	141	311
3	Na% (%)	62	57	64	47	66
4	RSC (-)	0.8	0.2	0.3	0.1	0.1
5	SAR (-)	4.6	4.0	4.7	2.5	14.6
	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: 2006-2021

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				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	126.5	30.63	1175	1158	2.780
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	1020	1094	336	801	1467
4	pH_FLD (pH units)			8.1		
5	pH_GEN (pH units)	8.3	8.3	8.5	8.2	8.2
6	TDS (mg/L)	410	702	219	493	950
7	Temp (deg C)	21.6	25.2	27.7	25.3	26.7
8	Turb (NTU)	1.00	5.62	1.40	46.50	7.20
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	1.2	0.8	2.9	1.0	1.4
2	ALK-TOT (mgCaCO3/L)	172	158	82	120	180
3	B (mg/L)	0.00	0.21	0.16	0.32	0.40
4	Ca (mg/L)	40	32	19	33	45
5	Cl (mg/L)	126.2	135.8	27.7	88.6	195.6
6	CO3 (mg/L)	1.4	1.0	3.5	1.3	1.7
7	F (mg/L)	1.22	0.99	0.35	0.68	1.08
8	Fe (mg/L)	0.0	0.1	0.1	0.1	0.0
9	HCO3 (mg/L)	207	191	93	143	216
10	K (mg/L)	5.1	4.3	2.0	3.7	7.3
11	Mg (mg/L)	22.7	18.3	10.2	18.7	25.8
12	Na (mg/L)	133.8	160.6	34.2	109.3	231.5
13	NH3-N (mg N/L)	0.00	0.01	0.11	0.00	0.01
14	NO2+NO3 (mg N/L)	0.24	1.04	1.14	1.17	1.10
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.01	0.04
16	NO3-N (mgN/L)	0.24	1.04	1.14	1.16	1.05
17	o-PO4-P (mg P/L)	0.474	0.116	0.257	0.283	0.209
18	P-Tot (mgP/L)	0.474			0.226	
19	SiO2 (mg/L)	11.5	12.3	6.2	9.7	10.5
20	SO4 (mg/L)	163.9	110.4	24.7	96.5	264.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	1.3	1.2	0.8	2.1
2	COD (mg/L)	26.5	30.9	12.9	11.9	19.7
3	DO (mg/L)	6.2	5.8	6.4	5.1	4.2
4	DO_SAT% (%)	70	70	81	62	52
5	FCol-MPN (MPN/100mL)	10046	4680	113	4858	542
6	Tcol-MPN (MPN/100mL)	12846	7960	277	7600	5994
7	TOC (mg/L)	2.9	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)	99	79	47	83	112
2	HAR_Total (mgCaCO3/L)	194	155	89	161	220
3	Na% (%)	57	67	43	54	69
4	RSC (-)	0.2	0.4	0.0	0.0	0.0
5	SAR (-)	4.1	5.7	1.5	3.5	6.8
	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: 2006-2021

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				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	8.398	206.2	127.2	1539	96.06
2	EC_FLD (µmho/cm)	1030	1210	330		1050
3	EC_GEN (µmho/cm)	952	884	623	498	983
4	pH_FLD (pH units)	8.6	8.6	8.4		8.7
5	pH_GEN (pH units)	8.6	7.9	8.1	7.9	7.9
6	TDS (mg/L)	503	609	349	248	706
7	Temp (deg C)	27.9	28.8	23.8	24.6	23.6
8	Turb (NTU)	31.80	86.67	20.20	141.33	18.60
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.3	0.0	3.2	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	175	139	101	129	164
3	B (mg/L)		0.10	0.07	0.13	0.46
4	Ca (mg/L)	40	46	29	52	33
5	Cl (mg/L)	118.4	129.3	69.0	63.3	141.2
6	CO3 (mg/L)	2.8	0.0	3.9	0.0	0.0
7	F (mg/L)	0.79	0.75	0.45	0.39	0.48
8	Fe (mg/L)	0.1	3.4	2.1	1.8	0.9
9	HCO3 (mg/L)	208	169	115	157	200
10	K (mg/L)	4.3	0.8	0.3	0.4	0.5
11	Mg (mg/L)	21.8	20.6	11.4	7.7	25.8
12	Na (mg/L)	132.6	158.7	69.5	55.2	159.9
13	NH3-N (mg N/L)	0.02	0.08	0.10	0.04	0.03
14	NO2+NO3 (mg N/L)	1.44	9.08	2.38	2.77	9.31
15	NO2-N (mgN/L)	0.00	0.09	0.29	0.20	0.05
16	NO3-N (mgN/L)	1.44	8.98	2.09	2.57	9.26
17	o-PO4-P (mg P/L)	0.301	0.910	0.144	0.310	0.182
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	9.2	8.9	23.7	9.9	22.3
20	SO4 (mg/L)	70.6	161.0	87.8	78.6	133.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.2	1.5	0.9	2.2
2	COD (mg/L)	12.3	27.9	24.1	16.6	19.6
3	DO (mg/L)	5.4	6.1	6.2	5.7	9.5
4	DO_SAT% (%)	68	78	72	69	103
5	FCol-MPN (MPN/100mL)	12100	1967	70	1740	3050
6	Tcol-MPN (MPN/100mL)	12100	1967	1152	9267	9750
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				0.69	
2	Cd (µg/L)				1.26	
3	Cr (µg/L)				2.25	
4	Cu (µg/L)		10.67	11.20	11.33	0.01
5	Hg (µg/L)					
6	Ni (µg/L)				2.18	
7	Pb (µg/L)				0.28	
8	Zn (µg/L)		80.67	21.84	32.67	0.01
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	99	114	73	130	83
2	HAR_Total (mgCaCO3/L)	190	200	120	162	190
3	Na% (%)	60	61	41	43	59
4	RSC (-)	0.2	0.0	0.0	0.1	0.0
5	SAR (-)	4.2	4.7	2.4	1.9	4.7
	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: 2006-2021

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Winter				
		Nov - Feb				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	45.80	87.29	64.31	108.1	73.31
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	1097	835	1022	1133	1024
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.5	8.4	8.5	8.7	8.5
6	TDS (mg/L)					
7	Temp (deg C)	25.5	22.0	22.5	21.9	21.4
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	9.1	8.1	8.0	8.0	7.5
2	ALK-TOT (mgCaCO3/L)	227	175	209	200	193
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	49	37	56	54	40
5	Cl (mg/L)	114.1	93.2	114.9	132.9	118.7
6	CO3 (mg/L)	11.0	9.7	9.6	9.6	9.0
7	F (mg/L)	0.82	0.77	0.77	1.22	2.62
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	255	194	236	224	217
10	K (mg/L)	3.7	3.4	4.9	4.0	4.0
11	Mg (mg/L)	21.5	14.3	11.6	19.9	23.0
12	Na (mg/L)	203.8	112.3	203.8	159.1	137.9
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.73	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	0.73	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.153
19	SiO2 (mg/L)	12.7	13.0	15.8	13.0	16.3
20	SO4 (mg/L)	195.3	57.5	124.0	218.8	184.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.7	1.7	1.7	1.2
2	COD (mg/L)		34.7	17.9	23.4	21.1
3	DO (mg/L)	6.9	6.9	6.8	6.9	7.4
4	DO_SAT% (%)	84	79	79	78	84
5	FCol-MPN (MPN/100mL)				6500	7750
6	Tcol-MPN (MPN/100mL)				12500	10750
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)	123	92	139	134	101
2	HAR_Total (mgCaCO3/L)	212	151	188	217	197
3	Na% (%)	67	59	65	61	59
4	RSC (-)	0.3	0.5	0.5	0.2	0.2
5	SAR (-)	6.1	4.0	6.4	4.7	4.3
	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: 2006-2021

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Winter				
		Nov - Feb				
		2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL					
1	Q (cumec)	128.3	3.556	1.925	15.07	1.328
2	EC_FLD (µmho/cm)			400		
3	EC_GEN (µmho/cm)	1046	1238	1156	1130	2800
4	pH_FLD (pH units)			8.2		
5	pH_GEN (pH units)	8.4	8.3	8.4	8.4	8.5
6	TDS (mg/L)	712	712	745	715	677
7	Temp (deg C)	23.0	24.3	27.6	26.6	25.6
8	Turb (NTU)	1.00	1.28	3.75	4.83	10.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	6.2	3.2	4.2	2.9	4.0
2	ALK-TOT (mgCaCO3/L)	198	205	189	211	215
3	B (mg/L)	0.29	0.26	0.03	0.23	0.05
4	Ca (mg/L)	39	45	44	48	43
5	Cl (mg/L)	117.3	124.8	129.2	125.3	133.6
6	CO3 (mg/L)	7.4	3.8	5.0	3.5	4.8
7	F (mg/L)	0.91	1.22	0.74	0.82	0.56
8	Fe (mg/L)	0.1	0.0	0.0	0.1	0.0
9	HCO3 (mg/L)	226	242	220	250	252
10	K (mg/L)	4.2	3.3	3.9	3.7	4.4
11	Mg (mg/L)	22.1	26.3	25.0	26.4	24.4
12	Na (mg/L)	153.9	174.3	142.3	149.1	167.4
13	NH3-N (mg N/L)	0.01	0.04	0.01	0.04	0.01
14	NO2+NO3 (mg N/L)	0.77	0.98	0.80	1.24	0.61
15	NO2-N (mgN/L)	0.02	0.00	0.00	0.09	0.01
16	NO3-N (mgN/L)	0.75	0.98	0.80	1.15	0.60
17	o-PO4-P (mg P/L)	0.536	0.181	0.197	0.260	0.138
18	P-Tot (mgP/L)	0.536				
19	SiO2 (mg/L)	12.1	15.7	10.5	12.2	7.3
20	SO4 (mg/L)	196.8	197.0	87.9	202.6	196.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	1.1	1.2	1.3	1.8
2	COD (mg/L)	11.8	12.0	3.5	17.3	12.2
3	DO (mg/L)	6.7	7.0	6.4	6.8	6.3
4	DO_SAT% (%)	78	84	78	84	76
5	FCol-MPN (MPN/100mL)	4665	801	4290	4393	4478
6	Tcol-MPN (MPN/100mL)	6365	4621	4858	5098	12001
7	TOC (mg/L)	3.6	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)	97	113	109	121	108
2	HAR_Total (mgCaCO3/L)	189	222	213	231	209
3	Na% (%)	63	63	59	57	63
4	RSC (-)	0.3	0.1	0.0	0.1	0.1
5	SAR (-)	4.9	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: 2006-2021

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Winter				
		Nov - Feb				
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	Dry bed	2.267	1.145	109.6	83.70
2	EC_FLD (µmho/cm)	No flow	1317	1053		1080
3	EC_GEN (µmho/cm)		1426	1535	949	1128
4	pH_FLD (pH units)		8.4	8.2		8.3
5	pH_GEN (pH units)		8.3	8.4	8.1	8.2
6	TDS (mg/L)		903	933	632	706
7	Temp (deg C)		25.2	23.5	27.4	26.8
8	Turb (NTU)		9.00	0.67	40.75	22.33
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		8.0	12.3	0.0	1.1
2	ALK-TOT (mgCaCO3/L)		202	191	157	196
3	B (mg/L)		0.08	0.03	0.42	0.38
4	Ca (mg/L)		64	40	37	43
5	Cl (mg/L)		182.1	153.5	119.3	150.5
6	CO3 (mg/L)		9.6	14.9	0.0	1.3
7	F (mg/L)		0.77	0.72	0.56	0.57
8	Fe (mg/L)		0.1	0.1	1.5	0.4
9	HCO3 (mg/L)		226	203	191	236
10	K (mg/L)		0.9	0.5	0.4	0.6
11	Mg (mg/L)		21.5	29.7	25.3	24.3
12	Na (mg/L)		205.4	133.1	151.9	157.5
13	NH3-N (mg N/L)		0.77	0.05	0.03	0.06
14	NO2+NO3 (mg N/L)		5.80	1.10	3.40	2.15
15	NO2-N (mgN/L)		0.01	0.03	0.03	0.08
16	NO3-N (mgN/L)		5.79	1.06	3.38	2.10
17	o-PO4-P (mg P/L)		0.843	0.204	0.158	0.202
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)		11.3	7.3	10.1	16.8
20	SO4 (mg/L)		276.7	142.3	155.5	129.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		2.0	2.0	1.0	1.9
2	COD (mg/L)		21.8	7.6	42.3	20.2
3	DO (mg/L)		7.1	7.8	6.0	5.8
4	DO_SAT% (%)		85	91	76	70
5	FCol-MPN (MPN/100mL)		63	158	295	3087
6	Tcol-MPN (MPN/100mL)		157	2393	2400	11295
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				2.67	1.69
2	Cd (µg/L)				0.03	4.17
3	Cr (µg/L)				4.59	5.15
4	Cu (µg/L)		4.33	12.00	5.75	4.13
5	Hg (µg/L)					3.29
6	Ni (µg/L)				9.28	1.88
7	Pb (µg/L)				0.87	46.75
8	Zn (µg/L)		27.10	34.32	59.25	17.07
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		159	100	92	106
2	HAR_Total (mgCaCO3/L)		249	223	197	208
3	Na% (%)		64	55	59	61
4	RSC (-)		0.0	0.0	0.0	0.3
5	SAR (-)		5.7	3.9	4.6	4.7
	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: 2006-2021

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Summer					
		Mar - May					
		2007	2008	2009	2010	2011	2012
	PHYSICAL						
1	Q (cumec)	1.644	58.74	1.440	10.15	5.109	0.718
2	EC_FLD (µmho/cm)						
3	EC_GEN (µmho/cm)	1060	984	1553	1247	1370	1349
4	pH_FLD (pH units)						
5	pH_GEN (pH units)	8.2	8.5	8.4	8.9	8.2	8.3
6	TDS (mg/L)						788
7	Temp (deg C)	27.0	23.3	24.3	23.5	22.0	25.7
8	Turb (NTU)						1.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	12.0	5.5	8.0	9.3	0.0	1.4
2	ALK-TOT (mgCaCO3/L)	242	199	208	199	186	183
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00	0.08
4	Ca (mg/L)	50	54	45	42	43	32
5	Cl (mg/L)	149.3	137.3	209.1	159.7	169.3	174.9
6	CO3 (mg/L)	14.5	6.7	9.6	11.2	0.0	1.7
7	F (mg/L)	1.57	0.88	1.19	1.19	1.03	1.15
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0	0.2
9	HCO3 (mg/L)	266	229	234	220	227	220
10	K (mg/L)	6.0	5.2	7.6	5.2	5.9	4.9
11	Mg (mg/L)	26.5	14.7	17.8	23.0	25.3	18.5
12	Na (mg/L)	210.0	123.0	102.2	183.5	194.0	202.5
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00	0.04
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	0.00	0.00	0.81
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00	0.01
16	NO3-N (mgN/L)	0.00	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	0.001	0.000	0.068	0.161
19	SiO2 (mg/L)	13.3	18.0	13.6	15.6	11.2	18.0
20	SO4 (mg/L)	202.5	156.7	132.1	292.0	255.0	223.0
	BIOLOGICAL/BACTERIOLOGIC						
1	BOD3-27 (mg/L)	1.3	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)	6.0	5.6	5.5	5.9	6.5	5.6
4	DO_SAT% (%)	76	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)	125	136	114	104	108	79
2	HAR_Total (mgCaCO3/L)	235	197	188	200	214	156
3	Na% (%)	66	57	41	66	66	73
4	RSC (-)	0.2	0.1	0.4	0.1	0.0	0.6
5	SAR (-)	6.0	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: 2006-2021

Station Name : Bawapuram (AKL00B8)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Summer				
		Mar - May				
		2013	2014	2015	2020	2021
	PHYSICAL					
1	Q (cumec)	0.486	9.365	0.938	0.898	3.170
2	EC_FLD (µmho/cm)					1347
3	EC_GEN (µmho/cm)	1260	1410	1468	1707	1517
4	pH_FLD (pH units)					8.3
5	pH_GEN (pH units)	8.3	8.2	8.4	8.3	8.3
6	TDS (mg/L)	691	828	923	1148	971
7	Temp (deg C)	23.5	28.0	27.3	26.0	25.8
8	Turb (NTU)	1.13	1.00	3.00	21.67	15.50
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.1	0.0	3.5	1.1	5.2
2	ALK-TOT (mgCaCO3/L)	167	231	208	193	218
3	B (mg/L)	0.38	0.03	0.47	0.11	0.73
4	Ca (mg/L)	36	45	49	29	44
5	Cl (mg/L)	150.8	155.1	178.3	240.7	228.2
6	CO3 (mg/L)	2.5	0.0	4.2	1.3	6.2
7	F (mg/L)	0.74	0.75	0.86	0.68	0.87
8	Fe (mg/L)	0.2	0.0	0.1	0.3	0.4
9	HCO3 (mg/L)	199	282	245	233	253
10	K (mg/L)	4.6	6.0	5.9	0.9	5.2
11	Mg (mg/L)	20.6	25.8	28.5	30.5	31.5
12	Na (mg/L)	195.3	132.0	208.1	262.3	211.2
13	NH3-N (mg N/L)	0.00	0.01	0.01	0.01	0.12
14	NO2+NO3 (mg N/L)	1.19	0.89	0.97	2.52	3.34
15	NO2-N (mgN/L)	0.00	0.00	0.15	0.02	0.24
16	NO3-N (mgN/L)	1.19	0.89	0.82	2.50	4.98
17	o-PO4-P (mg P/L)	0.125	0.110	0.233	0.120	0.291
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	13.2	10.6	14.7	20.5	19.1
20	SO4 (mg/L)	184.0	155.0	272.0	244.0	169.2
	BIOLOGICAL/BACTERIOLOGIC					
1	BOD3-27 (mg/L)	0.7	1.1	1.0	2.7	2.2
2	COD (mg/L)	8.9	4.1	15.2	19.0	37.9
3	DO (mg/L)	5.5	6.9	5.3	7.5	
4	DO_SAT% (%)	65	88	67	92	
5	FCol-MPN (MPN/100mL)	66	230	21	330	1093
6	Tcol-MPN (MPN/100mL)	260	2400	667	3500	3490
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	0.02	1.43
3	Cr (µg/L)	0.68		0.00	6.41	0.93
4	Cu (µg/L)				1.07	8.63
5	Hg (µg/L)	0.37		0.09		
6	Ni (µg/L)	8.99		13.63	24.78	17.73
7	Pb (µg/L)	6.46		19.00	1.04	34.67
8	Zn (µg/L)	7.84		9.00	6.54	12.07
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	89	112	124	72	111
2	HAR_Total (mgCaCO3/L)	175	220	243	199	242
3	Na% (%)	70	56	65	74	63
4	RSC (-)	0.0	0.3	0.0	0.6	0.1
5	SAR (-)	6.5	3.9	5.9	8.7	5.9
	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 summer season 2016 to 2019 due to Dry bed / No flow condition.

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Mantralayam	Code	: AKL00F2
State	: Andhra Pradesh	District	Kurnool
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	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		

Note:-WQ Observation Suspended 31-05-2006 and restarted from 07-10-2013

Water Quality Datasheet for the period : 2020-2021

Station Name : Mantralayam (AKL00F2)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Analysis

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	01-06-2020	01-07-2020	04-08-2020	01-09-2020	05-10-2020
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	51.94	69.91	73.50	76.16	288.7
2	Colour_Cod (-)	Clear	Clear	Brown	Clear	Brown
3	EC_FLD (μmho/cm)	1015	692		821	741
4	EC_GEN (μmho/cm)	1162	527	1058	646	459
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)				7.2	7.1
7	pH_GEN (pH units)	7.6	8.1	8.0	8.0	7.3
8	TDS (mg/L)	686	342	609	358	364
9	Temp (deg C)	27.0	31.1	27.0	25.0	25.0
10	Turb (NTU)	44.00	5.00	1.00	23.00	4.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	157	97	234	140	170
3	B (mg/L)	0.19	0.22	0.31	0.32	0.72
4	Ca (mg/L)	33	30	66	33	42
5	Cl (mg/L)	133.0	70.8	113.6	74.6	70.3
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.50	0.50	0.53	0.25	0.50
8	Fe (mg/L)	3.1	3.4	0.0	0.2	6.3
9	HCO3 (mg/L)	192	118	285	171	208
10	K (mg/L)	0.6	0.4	0.4	0.3	0.3
11	Mg (mg/L)	25.5	15.0	7.0	14.2	12.7
12	Na (mg/L)	184.4	87.7	133.8	77.1	68.2
13	NH3-N (mg N/L)	0.02	0.03	0.01	0.02	0.12
14	NO2+NO3 (mg N/L)	5.93	6.11			
15	NO2-N (mgN/L)	0.01	0.11	0.04	0.03	0.10
16	NO3-N (mgN/L)	5.92	6.00			
17	o-PO4-P (mg P/L)	0.018	0.053	0.020	0.180	0.400
18	SiO2 (mg/L)	25.8	9.5	13.0	17.9	24.8
19	SO4 (mg/L)	156.3	51.6	127.0	88.5	1.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	4.6	3.4			
2	COD (mg/L)	16.3	17.9		15.3	12.6
3	DO (mg/L)	7.0	5.8			
4	DO_SAT% (%)	88	78			
5	FCol-MPN (MPN/100mL)	1100	5000			
6	Tcol-MPN (MPN/100mL)	5000	16000			
	TRACE & TOXIC					
1	As (μg/L)			1.76		
2	Cd (μg/L)			4.30		
3	Cr (μg/L)			3.60		
4	Cu (μg/L)	0.01	0.14	0.00	0.00	0.02
5	Hg (μg/L)			0.58		
6	Ni (μg/L)			13.10		
7	Pb (μg/L)			23.00		
8	Zn (μg/L)	0.03	0.02	0.00	0.00	0.87
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	82	75	164	82	105
2	HAR_Total (mgCaCO3/L)	188	138	193	141	158
3	Na% (%)	68	58	60	54	48
4	RSC (-)	0.0	0.0	0.8	0.0	0.3
5	SAR (-)	5.9	3.3	4.2	2.8	2.4
	PESTICIDES					

Water Quality Datasheet for the period : 2020-2021

Station Name : Mantralayam (AKL00F2)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Analysis

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	02-11-2020	01-12-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	151.5	195.5	31.68	31.69	0.000
2	Colour_Cod (-)	Other	Clear	Clear	Other	Clear
3	EC_FLD (μmho/cm)	1534	1413	120	1414	1431
4	EC_GEN (μmho/cm)	710	762	1223	1502	1315
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	6.9	7.1		6.9	7.1
7	pH_GEN (pH units)	8.2	8.0	8.3	8.5	8.1
8	TDS (mg/L)	429	458	758	995	1027
9	Temp (deg C)	25.0	25.0	25.0	25.0	24.0
10	Turb (NTU)	62.00	71.00	61.00	14.00	2.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	15.2	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	181	188	259	131	206
3	B (mg/L)	0.39	0.02	0.32	0.40	0.80
4	Ca (mg/L)	38	32	56	2	54
5	Cl (mg/L)	76.6	97.9	167.3	203.5	178.6
6	CO3 (mg/L)	0.0	0.0	18.3	0.0	0.0
7	F (mg/L)	0.41	0.44	0.69	0.71	0.89
8	Fe (mg/L)	0.0	0.3	0.3	0.1	0.3
9	HCO3 (mg/L)	221	229	279	159	252
10	K (mg/L)	0.6	0.7	0.6	0.5	0.5
11	Mg (mg/L)	15.4	20.1	30.2	42.0	24.0
12	Na (mg/L)	91.3	95.6	200.8	189.2	185.7
13	NH3-N (mg N/L)	0.02	0.22	0.08	0.09	0.04
14	NO2+NO3 (mg N/L)					3.54
15	NO2-N (mgN/L)	0.04	0.06	0.16	0.04	0.34
16	NO3-N (mgN/L)					3.20
17	o-PO4-P (mg P/L)	0.420	0.130	0.600	0.380	0.129
18	SiO2 (mg/L)	9.9	13.3	21.4	15.0	27.1
19	SO4 (mg/L)	57.4	70.5	136.0	189.0	227.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.9	1.9	2.1	2.5	3.1
2	COD (mg/L)	28.5	8.7	14.3	16.5	26.8
3	DO (mg/L)	7.2	6.2	5.6	7.3	6.3
4	DO_SAT% (%)	87	75	68	88	75
5	FCol-MPN (MPN/100mL)	1700	2800	1400	2800	2800
6	Tcol-MPN (MPN/100mL)	9000	16000	3500	16000	16000
	TRACE & TOXIC					
1	As (μg/L)		1.09	1.68	0.94	2.08
2	Cd (μg/L)		2.90	3.20	1.20	0.10
3	Cr (μg/L)		2.30	2.40	3.10	8.20
4	Cu (μg/L)	0.00	4.90	3.50	3.80	1.40
5	Hg (μg/L)		0.53	0.66	0.23	0.65
6	Ni (μg/L)		100.70	6.60	0.00	1.50
7	Pb (μg/L)		70.00	66.00	86.00	18.00
8	Zn (μg/L)	0.30	10.68	81.20	6.31	7.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	96	81	141	4	134
2	HAR_Total (mgCaCO3/L)	160	164	267	179	234
3	Na% (%)	55	56	62	70	63
4	RSC (-)	0.4	0.5	0.0	0.0	0.0
5	SAR (-)	3.2	3.3	5.4	6.2	5.3
	PESTICIDES					

Water Quality Datasheet for the period : 2020-2021

Station Name : Mantralayam (AKL00F2)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water Analysis Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	01-02-2021	01-03-2021	05-04-2021	03-05-2021
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	59.64	41.38	41.38	0.000
2	Colour_Cod (-)	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	1545	1535	1463	1432
4	EC_GEN (μmho/cm)	1590	1333	849	1578
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.3	7.0	7.7	7.1
7	pH_GEN (pH units)	8.3	8.3	8.1	8.3
8	TDS (mg/L)	1167	817	525	1329
9	Temp (deg C)	25.0	25.0	26.0	27.0
10	Turb (NTU)	3.00	1.00	31.00	20.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	26.6	0.0	25.6
2	ALK-TOT (mgCaCO3/L)	229	240	173	239
3	B (mg/L)	0.71	0.74		
4	Ca (mg/L)	76	60	44	57
5	Cl (mg/L)	224.5	171.0	85.0	284.0
6	CO3 (mg/L)	0.0	32.1	0.0	30.9
7	F (mg/L)	1.06	0.98	0.98	1.27
8	Fe (mg/L)	0.8	0.2	2.0	0.3
9	HCO3 (mg/L)	279	228	211	229
10	K (mg/L)	0.8	0.8	3.3	8.8
11	Mg (mg/L)	24.7	22.3	15.4	35.8
12	Na (mg/L)	313.9	213.0	87.7	151.1
13	NH3-N (mg N/L)	0.02	0.13		
14	NO2+NO3 (mg N/L)	2.63	3.53		
15	NO2-N (mgN/L)	0.03	0.33		
16	NO3-N (mgN/L)	2.60	3.20	4.10	5.80
17	o-PO4-P (mg P/L)	0.191	0.398		
18	SiO2 (mg/L)	9.2	13.1		
19	SO4 (mg/L)	247.5	166.2	80.6	53.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	5.2	2.2	1.8	4.4
2	COD (mg/L)	25.9	21.1	9.5	12.8
3	DO (mg/L)	7.9	5.9	5.3	
4	DO_SAT% (%)	96	71	65	
5	FCol-MPN (MPN/100mL)	2200	1100	170	1100
6	Tcol-MPN (MPN/100mL)	3500	1700	330	1700
	TRACE & TOXIC				
1	As (μg/L)			3.23	1.07
2	Cd (μg/L)			1.00	1.40
3	Cr (μg/L)			0.00	2.00
4	Cu (μg/L)	4.00	20.00	4.10	8.70
5	Hg (μg/L)			1.25	0.00
6	Ni (μg/L)			12.90	14.00
7	Pb (μg/L)			30.00	28.00
8	Zn (μg/L)	7.50	0.03	17.51	14.95
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	189	149	111	141
2	HAR_Total (mgCaCO3/L)	292	242	175	290
3	Na% (%)	70	66	52	52
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	8.0	6.0	2.9	3.9
	PESTICIDES				

Water Quality Summary for the period : 2020-2021

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	2930	0.000	197.7
2	EC_FLD (µmho/cm)	13	1545	120	1166
3	EC_GEN (µmho/cm)	14	1590	459	1051
4	pH_FLD (pH units)	10	7.7	6.9	7.1
5	pH_GEN (pH units)	14	8.5	7.3	8.1
6	TDS (mg/L)	14	1329	342	705
7	Temp (deg C)	13	31.1	24.0	25.8
8	Turb (NTU)	14	71.00	1.00	24.43
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	14	26.6	0.0	4.8
2	ALK-TOT (mgCaCO3/L)	14	259	97	189
3	B (mg/L)	12	0.80	0.02	0.43
4	Ca (mg/L)	14	76	2	44
5	Cl (mg/L)	14	284.0	70.3	139.3
6	CO3 (mg/L)	14	32.1	0.0	5.8
7	F (mg/L)	14	1.27	0.25	0.69
8	Fe (mg/L)	14	6.3	0.0	1.2
9	HCO3 (mg/L)	14	285	118	219
10	K (mg/L)	14	8.8	0.3	1.3
11	Mg (mg/L)	14	42.0	7.0	21.7
12	Na (mg/L)	14	313.9	68.2	148.5
13	NH3-N (mg N/L)	12	0.22	0.01	0.07
14	NO2+NO3 (mg N/L)	5	6.11	2.63	4.35
15	NO2-N (mgN/L)	12	0.34	0.01	0.11
16	NO3-N (mgN/L)	7	6.00	2.60	4.4
17	o-PO4-P (mg P/L)	12	0.600	0.018	0.243
18	SiO2 (mg/L)	12	27.1	9.2	16.7
19	SO4 (mg/L)	14	247.5	1.4	118.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	11	5.2	1.8	3.1
2	COD (mg/L)	13	28.5	8.7	17.4
3	DO (mg/L)	6	7.3	5.6	6.5
4	DO_SAT% (%)	6	88	68	81
5	FCol-MPN (MPN/100mL)	11	5000	170	2015
6	Tcol-MPN (MPN/100mL)	11	16000	330	8066
	TRACE & TOXIC				
1	As (µg/L)	4	2.08	0.94	1.45
2	Cd (µg/L)	6	3.20	0.10	1.63
3	Cr (µg/L)	6	8.20	0.00	3
4	Cu (µg/L)	14	20.00	0.00	3.61
5	Hg (µg/L)	4	0.66	0.23	0.52
6	Ni (µg/L)	6	100.70	0.00	22.62
7	Pb (µg/L)	6	86.00	18.00	49.67
8	Zn (µg/L)	14	81.20	0.00	10.46
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	14	189	4	111
2	HAR_Total (mgCaCO3/L)	14	292	138	201
3	Na% (%)	14	70	48	60
4	RSC (-)	14	0.8	0.0	0.1
5	SAR (-)	14	8.0	2.4	4.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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	2017
	PHYSICAL					
1	Q (cumec)	903.5	1116	34.03	47.24	164.9
2	EC_FLD (µmho/cm)				1534	1020
3	EC_GEN (µmho/cm)	512	893	1126	995	755
4	pH_FLD (pH units)				6.0	6.7
5	pH_GEN (pH units)	8.5	7.9	8.1	8.8	8.2
6	TDS (mg/L)	364	538	774	662	520
7	Temp (deg C)	27.3	25.4	31.5	27.2	28.8
8	Turb (NTU)	1.36	37.00	9.03	52.40	162.67
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	3.2	0.0	0.9	4.8	8.0
2	ALK-TOT (mgCaCO3/L)	137	135	181	164	96
3	B (mg/L)	0.24	0.21	0.29		0.08
4	Ca (mg/L)	29	34	41	41	33
5	Cl (mg/L)	53.5	91.2	124.0	117.0	93.3
6	CO3 (mg/L)	3.9	0.0	1.0	5.8	9.6
7	F (mg/L)	0.56	0.72	0.86	0.73	0.68
8	Fe (mg/L)	0.1	0.1	0.0	0.1	1.4
9	HCO3 (mg/L)	159	165	219	189	98
10	K (mg/L)	2.7	3.9	6.6	5.3	0.4
11	Mg (mg/L)	16.2	18.6	23.6	23.3	20.0
12	Na (mg/L)	64.7	121.2	161.2	149.4	108.6
13	NH3-N (mg N/L)	0.13	0.04	0.01	0.01	0.22
14	NO2+NO3 (mg N/L)	1.27	1.60	1.36	1.34	7.90
15	NO2-N (mgN/L)	0.00	0.04	0.06	0.00	0.07
16	NO3-N (mgN/L)	1.27	1.56	1.30	1.34	7.83
17	o-PO4-P (mg P/L)	0.154	0.277	0.251	0.227	0.893
18	P-Tot (mgP/L)		0.244			
19	SiO2 (mg/L)	9.1	10.4	10.6	10.9	10.4
20	SO4 (mg/L)	55.8	124.4	172.5	149.2	129.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	0.8	2.0	1.9	1.8
2	COD (mg/L)	10.3	9.2	22.5	13.4	19.0
3	DO (mg/L)	6.1	5.5	4.5	5.9	5.9
4	DO_SAT% (%)	77	68	60	74	77
5	FCol-MPN (MPN/100mL)	2271	6492	5330	11400	975
6	Tcol-MPN (MPN/100mL)	4059	7040	8260	16000	4970
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)					3.75
5	Hg (µg/L)	0.51				
6	Ni (µg/L)	3.93				
7	Pb (µg/L)	7.11				
8	Zn (µg/L)	0.01				45.20
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	73	84	103	104	82
2	HAR_Total (mgCaCO3/L)	140	161	202	201	166
3	Na% (%)	45	56	62	61	59
4	RSC (-)	0.1	0.0	0.2	0.2	0.0
5	SAR (-)	2.4	3.9	4.9	4.6	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: 2006-2021

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		
		2018	2019	2020
	PHYSICAL			
1	Q (cumec)	398.9	1092	112.0
2	EC_FLD (µmho/cm)	610		817
3	EC_GEN (µmho/cm)	693	480	770
4	pH_FLD (pH units)	6.9		7.1
5	pH_GEN (pH units)	8.1	8.1	7.8
6	TDS (mg/L)	392	271	472
7	Temp (deg C)	27.6	26.4	27.0
8	Turb (NTU)	92.20	59.60	15.40
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	4.2	1.3	0.0
2	ALK-TOT (mgCaCO3/L)	119	108	160
3	B (mg/L)	0.06	0.12	0.35
4	Ca (mg/L)	29	39	41
5	Cl (mg/L)	69.2	59.2	92.5
6	CO3 (mg/L)	5.1	1.5	0.0
7	F (mg/L)	0.46	0.46	0.46
8	Fe (mg/L)	2.6	2.5	2.6
9	HCO3 (mg/L)	134	129	195
10	K (mg/L)	0.4	0.4	0.4
11	Mg (mg/L)	14.8	6.6	14.9
12	Na (mg/L)	63.9	56.7	110.2
13	NH3-N (mg N/L)	0.19	0.06	0.04
14	NO2+NO3 (mg N/L)	1.95	2.40	6.02
15	NO2-N (mgN/L)	0.03	0.20	0.06
16	NO3-N (mgN/L)	1.92	2.20	5.96
17	o-PO4-P (mg P/L)	0.246	0.212	0.134
18	P-Tot (mgP/L)			
19	SiO2 (mg/L)	16.4	12.6	18.2
20	SO4 (mg/L)	71.3	53.2	85.0
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.8	3.1	4.0
2	COD (mg/L)	27.7	21.7	15.5
3	DO (mg/L)	5.7	7.2	6.4
4	DO_SAT% (%)	72	89	83
5	FCol-MPN (MPN/100mL)	124	1168	3050
6	Tcol-MPN (MPN/100mL)	954	4346	10500
7	TOC (mg/L)			
	TRACE & TOXIC			
1	As (µg/L)		0.37	
2	Cd (µg/L)		1.37	
3	Cr (µg/L)		5.26	
4	Cu (µg/L)	19.00	11.40	0.03
5	Hg (µg/L)			
6	Ni (µg/L)		10.69	
7	Pb (µg/L)		0.83	
8	Zn (µg/L)	29.53	25.92	0.18
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	72	98	102
2	HAR_Total (mgCaCO3/L)	134	125	163
3	Na% (%)	39	47	58
4	RSC (-)	0.0	0.1	0.2
5	SAR (-)	2.2	2.2	3.7
	PESTICIDES			
1	Aldrin (µg/L)			
2	BHC (µg/L)			
3	DDT (µg/L)			
4	Dieldrin (µg/L)			
5	Endos (µg/L)			

WQ Observation Suspended 31-05-2006 and restarted from 07-10-2013

Water Quality Seasonal Average for the period: 2006-2021

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	2017-2018
	PHYSICAL					
1	Q (cumec)	70.11	75.50	22.38	19.29	40.92
2	EC_FLD (µmho/cm)				1665	1022
3	EC_GEN (µmho/cm)	1023	1070	1781	1568	1493
4	pH_FLD (pH units)				6.3	7.8
5	pH_GEN (pH units)	8.4	8.3	8.5	8.5	8.2
6	TDS (mg/L)	576	729	682	946	957
7	Temp (deg C)	24.5	22.3	27.5	27.0	27.8
8	Turb (NTU)	8.67	4.08	42.50	18.50	41.75
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.8	2.9	3.4	9.3	10.7
2	ALK-TOT (mgCaCO3/L)	206	212	219	205	226
3	B (mg/L)	0.36	0.30	0.13		0.12
4	Ca (mg/L)	44	49	46	56	65
5	Cl (mg/L)	107.9	124.0	127.3	182.9	180.9
6	CO3 (mg/L)	3.3	3.5	4.0	11.2	12.9
7	F (mg/L)	0.76	0.83	0.78	0.94	0.77
8	Fe (mg/L)	0.0	0.1	0.1	0.0	1.1
9	HCO3 (mg/L)	244	251	259	227	249
10	K (mg/L)	4.5	5.1	4.5	5.0	0.6
11	Mg (mg/L)	25.2	27.9	26.2	30.5	37.2
12	Na (mg/L)	127.5	161.5	164.4	212.2	206.9
13	NH3-N (mg N/L)	0.01	0.04	0.00	0.12	1.14
14	NO2+NO3 (mg N/L)	1.29	0.98	0.76	0.13	5.33
15	NO2-N (mgN/L)	0.00	0.04	0.01	0.00	0.05
16	NO3-N (mgN/L)	1.29	0.94	0.74	0.13	5.28
17	o-PO4-P (mg P/L)	0.323	0.227	0.231	0.183	0.810
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	10.9	11.8	6.8	9.5	12.7
20	SO4 (mg/L)	95.3	191.9	212.8	288.5	285.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	1.0	1.0	0.9	1.3
2	COD (mg/L)	2.7	17.2	12.0	14.9	23.0
3	DO (mg/L)	6.6	6.6	6.5	6.1	6.6
4	DO_SAT% (%)	78	76	82	76	83
5	FCol-MPN (MPN/100mL)	5543	4158	575	8065	640
6	Tcol-MPN (MPN/100mL)	6767	4430	8250	8065	998
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	6.75
5	Hg (µg/L)					
6	Ni (µg/L)		16.18			
7	Pb (µg/L)		18.57			
8	Zn (µg/L)		5.40		0.00	33.40
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	110	123	115	140	162
2	HAR_Total (mgCaCO3/L)	214	239	224	267	317
3	Na% (%)	56	59	61	63	58
4	RSC (-)	0.0	0.1	0.1	0.0	0.0
5	SAR (-)	3.8	4.5	4.8	5.7	5.1
	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: 2006-2021

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		
		2018-2019	2019-2020	2020-2021
	PHYSICAL			
1	Q (cumec)	26.15	132.2	78.33
2	EC_FLD (µmho/cm)	852		1243
3	EC_GEN (µmho/cm)	1076	986	1184
4	pH_FLD (pH units)			7.1
5	pH_GEN (pH units)	8.3	8.1	8.2
6	TDS (mg/L)	433	643	806
7	Temp (deg C)	26.2	24.8	24.8
8	Turb (NTU)	1.00	47.75	35.50
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	8.3	3.7	2.5
2	ALK-TOT (mgCaCO3/L)	202	189	199
3	B (mg/L)	0.05	0.28	0.44
4	Ca (mg/L)	36	43	43
5	Cl (mg/L)	99.5	128.8	158.1
6	CO3 (mg/L)	10.0	4.4	3.0
7	F (mg/L)	0.61	0.60	0.70
8	Fe (mg/L)	0.1	2.6	0.3
9	HCO3 (mg/L)	226	222	236
10	K (mg/L)	0.2	0.4	0.6
11	Mg (mg/L)	24.7	25.3	26.1
12	Na (mg/L)	99.0	148.6	179.4
13	NH3-N (mg N/L)	0.07	0.03	0.08
14	NO2+NO3 (mg N/L)	1.10	3.83	3.08
15	NO2-N (mgN/L)	0.02	0.05	0.11
16	NO3-N (mgN/L)	1.08	3.78	2.90
17	o-PO4-P (mg P/L)	0.251	0.182	0.308
18	P-Tot (mgP/L)			
19	SiO2 (mg/L)	12.7	11.8	16.0
20	SO4 (mg/L)	73.7	138.7	154.7
	BIOLOGICAL/BACTERIOLOGIC			
1	BOD3-27 (mg/L)	1.0	2.0	2.9
2	COD (mg/L)	6.6	42.4	20.1
3	DO (mg/L)	6.5	7.2	6.6
4	DO_SAT% (%)	79	87	80
5	FCol-MPN (MPN/100mL)	188	275	2283
6	Tcol-MPN (MPN/100mL)	1750	2375	10667
7	TOC (mg/L)			
	TRACE & TOXIC			
1	As (µg/L)		3.01	1.45
2	Cd (µg/L)		0.13	1.85
3	Cr (µg/L)		7.59	4.00
4	Cu (µg/L)	8.00	8.25	2.93
5	Hg (µg/L)			0.52
6	Ni (µg/L)		10.54	27.20
7	Pb (µg/L)		0.82	60.00
8	Zn (µg/L)	23.90	72.25	18.83
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	91	108	107
2	HAR_Total (mgCaCO3/L)	194	213	216
3	Na% (%)	46	58	63
4	RSC (-)	0.5	0.0	0.2
5	SAR (-)	2.9	4.4	5.2
	PESTICIDES			
1	Aldrin (µg/L)			
2	BHC (µg/L)			
3	DDT (µg/L)			
4	Dieldrin (µg/L)			
5	Endos (µg/L)			

WQ Observation Suspended 31-05-2006 and restarted from 07-10-2013

Water Quality Seasonal Average for the period: 2006-2021

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	2018
	PHYSICAL					
1	Q (cumec)	8.403	19.40	79.21	Dry bed	12.02
2	EC_FLD (µmho/cm)				No Flow	685
3	EC_GEN (µmho/cm)	1575	834	395		999
4	pH_FLD (pH units)					6.0
5	pH_GEN (pH units)	8.4	8.4	7.2		8.2
6	TDS (mg/L)	858	540			679
7	Temp (deg C)	24.5	25.7	25.0		24.0
8	Turb (NTU)	12.55	4.00	134.00		34.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.1	3.5	0.0		0.0
2	ALK-TOT (mgCaCO3/L)	241	237	78		219
3	B (mg/L)	0.27	0.37			0.05
4	Ca (mg/L)	52	49	52		59
5	Cl (mg/L)	198.7	128.3	22.3		136.7
6	CO3 (mg/L)	2.5	4.2	0.0		0.0
7	F (mg/L)	1.09	0.92	0.56		0.69
8	Fe (mg/L)	1.1	0.1	0.6		1.3
9	HCO3 (mg/L)	289	281	95		267
10	K (mg/L)	4.0	5.7	3.9		0.6
11	Mg (mg/L)	30.1	28.1	30.1		38.1
12	Na (mg/L)	280.0	160.3	36.0		160.1
13	NH3-N (mg N/L)	0.03	0.02	0.04		0.08
14	NO2+NO3 (mg N/L)	1.02	0.69	1.53		3.29
15	NO2-N (mgN/L)	0.00	0.25	0.01		0.01
16	NO3-N (mgN/L)	1.02	0.44	1.52		3.28
17	o-PO4-P (mg P/L)	0.045	0.343	0.222		0.980
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	16.6	17.0	9.4		4.8
20	SO4 (mg/L)	191.0	191.3	26.8		165.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	0.8	0.8		0.9
2	COD (mg/L)	5.7	11.4			49.8
3	DO (mg/L)	4.8	4.9	6.2		4.3
4	DO_SAT% (%)	58	59	75		51
5	FCol-MPN (MPN/100mL)	60	21	9000		110
6	Tcol-MPN (MPN/100mL)	130	650	9000		210
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)					4.00
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			19.50
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	129	122	130		147
2	HAR_Total (mgCaCO3/L)	255	239	256		306
3	Na% (%)	70	59	23		53
4	RSC (-)	0.0	0.1	0.0		0.0
5	SAR (-)	7.7	4.5	1.0		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: 2006-2021

Station Name : Mantralayam (AKL00F2)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters			
		2019	2020	2021
	PHYSICAL			
1	Q (cumec)	Dry bed	4.775	27.59
2	EC_FLD (µmho/cm)	No Flow		1477
3	EC_GEN (µmho/cm)		1151	1253
4	pH_FLD (pH units)			7.3
5	pH_GEN (pH units)		8.1	8.2
6	TDS (mg/L)		639	890
7	Temp (deg C)		29.4	26.0
8	Turb (NTU)		12.67	17.33
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)		0.6	17.4
2	ALK-TOT (mgCaCO3/L)		201	218
3	B (mg/L)		0.28	0.74
4	Ca (mg/L)		30	53
5	Cl (mg/L)		158.0	180.0
6	CO3 (mg/L)		0.7	21.0
7	F (mg/L)		0.63	1.08
8	Fe (mg/L)		0.2	0.8
9	HCO3 (mg/L)		244	223
10	K (mg/L)		0.6	4.3
11	Mg (mg/L)		34.4	24.5
12	Na (mg/L)		178.3	150.6
13	NH3-N (mg N/L)		0.01	0.13
14	NO2+NO3 (mg N/L)		2.60	3.53
15	NO2-N (mgN/L)		0.02	0.33
16	NO3-N (mgN/L)		2.58	4.37
17	o-PO4-P (mg P/L)		0.193	0.398
18	P-Tot (mgP/L)			
19	SiO2 (mg/L)		21.8	13.1
20	SO4 (mg/L)		164.7	100.0
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)		2.3	2.8
2	COD (mg/L)		25.6	14.5
3	DO (mg/L)		7.7	
4	DO_SAT% (%)		90	
5	FCol-MPN (MPN/100mL)		140	790
6	Tcol-MPN (MPN/100mL)		340	1243
7	TOC (mg/L)			
	TRACE & TOXIC			
1	As (µg/L)			
2	Cd (µg/L)		0.00	1.20
3	Cr (µg/L)		2.19	1.00
4	Cu (µg/L)		0.46	10.93
5	Hg (µg/L)			
6	Ni (µg/L)		16.85	13.45
7	Pb (µg/L)		1.90	29.00
8	Zn (µg/L)		11.01	10.83
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)		75	134
2	HAR_Total (mgCaCO3/L)		218	236
3	Na% (%)		64	57
4	RSC (-)		0.0	0.0
5	SAR (-)		5.3	4.2
	PESTICIDES			
1	Aldrin (µg/L)			
2	BHC (µg/L)			
3	DDT (µg/L)			
4	Dieldrin (µg/L)			
5	Endos (µg/L)			

WQ Observation Suspended 31-05-2006 and restarted from 07-10-2013

HISTORY SHEET

		Water Year	: 2020-2021
Site	: T Ramapuram (Seasonal)	Code	: AKL50A6
State	: Karnataka	District	Bellary
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	: Hagari
		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		
Water Quality	: 01-01-1980		

Water Quality Datasheet for the period : 2020-2021

Station Name : T Ramapuram (Seasonal) (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water Analysis Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	03-06-2020	01-07-2020	04-08-2020	01-09-2020	02-11-2020	01-12-2020
		B	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	4.899	6.777	30.21	10.29	24.95	73.50
2	Colour_Cod (-)	Clear	Clear	Brown	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	2316	1678	1657	1725	1436	981
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.6	8.2	7.8	8.1	8.1	8.1
6	TDS (mg/L)	1876	1594	1277	1121	948	596
7	Temp (deg C)	27.0	26.0	24.0	25.5	25.0	25.0
8	Turb (NTU)	22.00	23.00	1.00	23.00	25.00	169.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	8.1	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	253	209	237	242	290	207
3	B (mg/L)	0.31	0.01	1.61	0.09	0.40	0.28
4	Ca (mg/L)	35	37	30	21	25	26
5	Cl (mg/L)	341.2	203.7	232.4	215.4	178.0	127.9
6	CO3 (mg/L)	0.0	9.8	0.0	0.0	0.0	0.0
7	F (mg/L)	0.58	0.43	0.66	0.57	0.69	0.49
8	Fe (mg/L)	3.3	0.5	0.0	0.0	0.0	2.1
9	HCO3 (mg/L)	309	235	289	296	354	253
10	K (mg/L)	0.9	0.7	0.5	0.6	0.7	0.8
11	Mg (mg/L)	69.0	57.0	54.5	59.3	57.2	35.5
12	Na (mg/L)	352.5	207.5	229.0	256.0	205.4	117.0
13	NH3-N (mg N/L)	0.01	0.01	0.02	0.09	0.04	0.19
14	NO2+NO3 (mg N/L)	18.81	18.63				
15	NO2-N (mgN/L)	0.01	0.13	0.04	0.04	0.02	0.05
16	NO3-N (mgN/L)	18.80	18.50				
17	o-PO4-P (mg P/L)	0.116	0.117	0.010	0.130	1.070	0.100
18	SiO2 (mg/L)	20.3	15.6	16.2	19.5	14.9	13.2
19	SO4 (mg/L)	139.3	120.4	132.5	252.8	95.7	114.2
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)		1.1			2.7	1.2
2	COD (mg/L)	30.7	38.8		15.3	21.6	7.8
3	DO (mg/L)		5.1			6.4	4.7
4	DO_SAT% (%)		63			77	57
5	FCol-MPN (MPN/100mL)	2200	3500			1400	5000
6	Tcol-MPN (MPN/100mL)	9000	16000			16000	16000
	TRACE & TOXIC						
1	As (μg/L)						1.58
2	Cd (μg/L)						2.70
3	Cr (μg/L)						4.70
4	Cu (μg/L)	0.02	0.02	0.00	0.01	0.00	4.40
5	Hg (μg/L)						1.23
6	Ni (μg/L)						1.50
7	Pb (μg/L)						73.00
8	Zn (μg/L)	0.04	0.02	0.00	0.01	0.00	12.28
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	88	92	76	51	63	66
2	HAR_Total (mgCaCO3/L)	375	329	303	298	301	213
3	Na% (%)	67	58	62	65	60	55
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	8.0	5.0	5.8	6.5	5.2	3.5
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

Station Name : T Ramapuram (Seasonal) (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water Analysis

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	11-12-2020	21-12-2020	01-01-2021	01-02-2021	01-03-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	22.85	24.24	14.22	17.85	26.15
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	1649	1417	1506	1266	1987
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.2	8.2	7.9	8.2	8.0
6	TDS (mg/L)	996	831	1058	723	1311
7	Temp (deg C)	29.0	22.0	21.0	21.0	23.0
8	Turb (NTU)	142.00	11.00	4.00	2.00	1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	270	230	249	198	313
3	B (mg/L)	0.70	0.18	0.93	0.34	0.81
4	Ca (mg/L)	46	26	60	62	90
5	Cl (mg/L)	223.0	168.1	207.1	143.1	271.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.77	0.75	0.97	0.75	1.13
8	Fe (mg/L)	0.3	0.1	0.7	0.8	0.9
9	HCO3 (mg/L)	329	281	304	242	382
10	K (mg/L)	0.7	0.4	0.5	0.7	0.7
11	Mg (mg/L)	54.9	22.7	18.2	19.2	28.6
12	Na (mg/L)	260.0	155.2	207.7	198.5	321.6
13	NH3-N (mg N/L)	0.00	0.20	0.03	0.04	0.13
14	NO2+NO3 (mg N/L)			5.67	3.80	7.71
15	NO2-N (mgN/L)	0.05	0.21	0.17	0.00	0.41
16	NO3-N (mgN/L)			5.50	3.80	7.30
17	o-PO4-P (mg P/L)	0.490	0.380	0.098	0.011	0.499
18	SiO2 (mg/L)	21.1	17.5	30.9	22.0	27.7
19	SO4 (mg/L)	158.2	109.4	188.6	134.5	347.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	86.5	0.9	0.9	2.7	3.3
2	COD (mg/L)	26.9	27.6	7.5	21.3	19.8
3	DO (mg/L)	4.5	6.9	6.7	7.3	7.5
4	DO_SAT% (%)	59	79	75	82	87
5	FCol-MPN (MPN/100mL)	2200	5000	2200	270	1400
6	Tcol-MPN (MPN/100mL)	9000	16000	9000	1100	1700
	TRACE & TOXIC					
1	As (µg/L)	1.58	0.85	1.77		
2	Cd (µg/L)	3.40	6.70	4.10		
3	Cr (µg/L)	3.80	4.10	9.80		
4	Cu (µg/L)	4.10	4.20	3.00	6.00	40.00
5	Hg (µg/L)	1.50	0.67	0.54		
6	Ni (µg/L)	7.40	2.30	7.20		
7	Pb (µg/L)	93.00	70.00	3.00		
8	Zn (µg/L)	7.19	4.88	6.60	2.83	0.05
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	114	64	150	154	224
2	HAR_Total (mgCaCO3/L)	343	159	226	234	343
3	Na% (%)	62	68	67	65	67
4	RSC (-)	0.0	1.5	0.5	0.0	0.0
5	SAR (-)	6.1	5.4	6.0	5.7	7.6
	PESTICIDES					

Water Quality Summary for the period : 2020-2021

Station Name : T Ramapuram (Seasonal) (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

Sub-Division : Lower Tungabhadra SD, Kurnool

River Water Summary

S.No	Parameters	Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	516.3	0.000	36.08
2	EC_GEN (µmho/cm)	11	2316	981	1602
3	pH_GEN (pH units)	11	8.2	7.6	8
4	TDS (mg/L)	11	1876	596	1121
5	Temp (deg C)	11	29.0	21.0	24.4
6	Turb (NTU)	11	169.00	1.00	38.45
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	11	8.1	0.0	0.7
2	ALK-TOT (mgCaCO3/L)	11	313	198	245
3	B (mg/L)	11	1.61	0.01	0.51
4	Ca (mg/L)	11	90	21	41
5	Cl (mg/L)	11	341.2	127.9	210.1
6	CO3 (mg/L)	11	9.8	0.0	0.9
7	F (mg/L)	11	1.13	0.43	0.71
8	Fe (mg/L)	11	3.3	0.0	0.8
9	HCO3 (mg/L)	11	382	235	298
10	K (mg/L)	11	0.9	0.4	0.6
11	Mg (mg/L)	11	69.0	18.2	43.3
12	Na (mg/L)	11	352.5	117.0	228.2
13	NH3-N (mg N/L)	11	0.20	0.00	0.07
14	NO2+NO3 (mg N/L)	5	18.81	3.80	10.92
15	NO2-N (mgN/L)	11	0.41	0.00	0.1
16	NO3-N (mgN/L)	5	18.80	3.80	10.78
17	o-PO4-P (mg P/L)	10	1.070	0.011	0.301
18	SiO2 (mg/L)	11	30.9	13.2	19.9
19	SO4 (mg/L)	11	347.0	95.7	163
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	8	86.5	0.9	12.4
2	COD (mg/L)	10	38.8	7.5	21.7
3	DO (mg/L)	5	6.9	4.5	5.5
4	DO_SAT% (%)	5	79	57	67
5	FCol-MPN (MPN/100mL)	9	5000	270	2574
6	Tcol-MPN (MPN/100mL)	9	16000	1100	10422
	TRACE & TOXIC				
1	As (µg/L)	4	1.77	0.85	1.45
2	Cd (µg/L)	4	6.70	2.70	4.22
3	Cr (µg/L)	4	9.80	3.80	5.6
4	Cu (µg/L)	11	40.00	0.00	5.61
5	Hg (µg/L)	4	1.50	0.54	0.99
6	Ni (µg/L)	4	7.40	1.50	4.6
7	Pb (µg/L)	4	93.00	3.00	59.75
8	Zn (µg/L)	11	12.28	0.00	3.08
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	11	224	51	104
2	HAR_Total (mgCaCO3/L)	11	375	159	284
3	Na% (%)	11	68	55	63
4	RSC (-)	11	1.5	0.0	0.2
5	SAR (-)	11	8.0	3.5	5.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

Station Name : T Ramapuram (Seasonal) (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Flood				
		Jun - Oct				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	25.67	21.96	56.06	225.5	45.64
2	EC_GEN (µmho/cm)	1971	1445	1176	1432	1695
3	pH_GEN (pH units)	8.2	8.1	8.1	8.1	8.2
4	TDS (mg/L)					
5	Temp (deg C)	26.0	26.6	26.5	26.3	25.8
6	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	4.0	3.0	2.7	2.0
2	ALK-TOT (mgCaCO3/L)	243	238	188	185	213
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	73	70	60	47	53
5	Cl (mg/L)	247.0	185.4	167.0	179.1	193.8
6	CO3 (mg/L)	0.0	4.8	3.6	3.2	2.4
7	F (mg/L)	1.10	1.39	0.79	0.84	0.95
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	297	280	222	220	255
10	K (mg/L)	6.7	5.4	4.1	4.4	5.2
11	Mg (mg/L)	39.3	28.2	18.0	23.0	30.6
12	Na (mg/L)	325.0	239.0	181.5	170.5	237.9
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.35	0.01	1.54	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.35	0.01	1.54	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.317
19	SiO2 (mg/L)	18.3	17.4	16.3	14.6	15.1
20	SO4 (mg/L)	411.0	235.6	239.0	294.5	397.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.6	0.6	0.9	1.2
2	COD (mg/L)		23.3	28.2	49.5	22.7
3	DO (mg/L)	6.5	6.0	5.6	6.2	6.0
4	DO_SAT% (%)	81	75	69	77	74
5	Fcol-MPN (MPN/100mL)				16000	5590
6	Tcol-MPN (MPN/100mL)				16000	6690
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)	182	175	149	118	132
2	HAR_Total (mgCaCO3/L)	346	293	224	213	260
3	Na% (%)	66	63	62	60	65
4	RSC (-)	0.0	0.0	0.1	0.0	0.3
5	SAR (-)	7.5	6.0	5.1	4.9	6.4
	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: 2006-2021

Station Name : T Ramapuram (Seasonal) (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Flood				
		Jun - Oct				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	7.341	61.02	18.68	10.65	48.85
2	EC_GEN (µmho/cm)	1794	1088	1740	1213	979
3	pH_GEN (pH units)	8.2	8.0	8.2	8.0	7.7
4	TDS (mg/L)	895	696	1164	690	627
5	Temp (deg C)	26.2	25.0	25.0	24.2	27.5
6	Turb (NTU)	1.00	40.00	0.10	214.80	64.75
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.8	0.0	0.0	0.8	0.0
2	ALK-TOT (mgCaCO3/L)	233	157	241	159	151
3	B (mg/L)	0.00	0.17	0.42	0.32	0.45
4	Ca (mg/L)	58	41	44	39	38
5	Cl (mg/L)	247.1	117.4	231.8	129.7	95.1
6	CO3 (mg/L)	1.0	0.0	0.0	1.0	0.0
7	F (mg/L)	1.93	0.85	0.80	1.02	0.91
8	Fe (mg/L)	0.0	0.1	0.1	0.1	0.1
9	HCO3 (mg/L)	282	192	294	192	184
10	K (mg/L)	5.6	4.4	5.5	4.7	4.0
11	Mg (mg/L)	33.9	24.1	25.3	22.5	21.6
12	Na (mg/L)	254.3	98.1	258.0	176.1	138.7
13	NH3-N (mg N/L)	0.00	0.01	0.01	0.02	0.01
14	NO2+NO3 (mg N/L)	0.48	1.70	0.78	1.79	1.76
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.01	0.00
16	NO3-N (mgN/L)	0.48	1.70	0.78	1.78	1.76
17	o-PO4-P (mg P/L)	0.612	0.361	0.440	0.291	0.304
18	P-Tot (mgP/L)	0.612			0.304	
19	SiO2 (mg/L)	15.8	7.8	13.3	13.4	14.2
20	SO4 (mg/L)	352.0	100.5	172.0	214.0	159.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.3	1.1	1.2	1.0	1.7
2	COD (mg/L)	31.7	27.6	2.4	22.8	18.0
3	DO (mg/L)	5.8	5.2	6.2	5.6	5.4
4	DO_SAT% (%)	71	63	75	67	69
5	Fcol-MPN (MPN/100mL)	12058	8250	16000	772	5251
6	Tcol-MPN (MPN/100mL)	12058	8050	16000	2260	12085
7	TOC (mg/L)	4.0	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	Hg (µg/L)					
6	Ni (µg/L)		8.51			
7	Pb (µg/L)		3.31			
8	Zn (µg/L)		28.13			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	146	102	110	98	94
2	HAR_Total (mgCaCO3/L)	287	202	216	192	184
3	Na% (%)	65	51	72	66	61
4	RSC (-)	0.3	0.0	0.5	0.0	0.0
5	SAR (-)	6.6	3.1	7.7	5.6	4.4
	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: 2006-2021

Station Name : T Ramapuram (Seasonal) (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Flood				
		Jun - Oct				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	6.067	49.59	13.94	31.74	13.04
2	EC_GEN (µmho/cm)	1622	530	1107	1004	1844
3	pH_GEN (pH units)	8.4	7.9	8.0	7.6	7.9
4	TDS (mg/L)	1094	397	777	818	1467
5	Temp (deg C)	25.8	26.8	26.9	24.5	25.6
6	Turb (NTU)	98.80	251.00	86.75	31.00	17.25
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	5.2	2.0	8.3	0.0	2.0
2	ALK-TOT (mgCaCO3/L)	191	123	158	144	235
3	B (mg/L)		0.07	0.05	0.36	0.51
4	Ca (mg/L)	58	34	44	53	31
5	Cl (mg/L)	210.9	60.1	97.0	182.8	248.2
6	CO3 (mg/L)	6.3	2.4	10.0	0.0	2.5
7	F (mg/L)	0.79	0.62	0.68	0.62	0.56
8	Fe (mg/L)	0.1	7.1	0.5	15.2	0.9
9	HCO3 (mg/L)	220	145	173	175	282
10	K (mg/L)	5.9	0.4	0.5	0.4	0.7
11	Mg (mg/L)	33.0	17.9	19.3	18.0	59.9
12	Na (mg/L)	243.9	72.2	84.3	212.8	261.3
13	NH3-N (mg N/L)	0.01	0.06	0.13	0.05	0.03
14	NO2+NO3 (mg N/L)	2.09	5.58	2.47	3.71	18.72
15	NO2-N (mgN/L)	0.00	0.27	0.28	0.12	0.05
16	NO3-N (mgN/L)	2.08	5.31	2.19	3.59	18.65
17	o-PO4-P (mg P/L)	0.272	1.287	0.273	0.120	0.121
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	14.1	14.3	25.6	15.8	17.9
20	SO4 (mg/L)	271.8	102.7	93.0	318.4	161.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	0.8	2.0	2.5	1.1
2	COD (mg/L)	13.1	12.9	31.6	22.0	28.3
3	DO (mg/L)	5.6	5.8	5.2	6.6	5.1
4	DO_SAT% (%)	69	72	65	78	63
5	FCol-MPN (MPN/100mL)	6412	3055	73	1410	2850
6	Tcol-MPN (MPN/100mL)	13400	3103	285	9500	12500
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)		9.75	19.75	38.67	0.01
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)					
8	Zn (µg/L)		27.88	34.46	68.67	0.02
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	145	85	110	133	77
2	HAR_Total (mgCaCO3/L)	283	160	190	207	326
3	Na% (%)	64	46	45	65	63
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	6.2	2.4	2.7	6.0	6.3
	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: 2006-2021

Station Name : T Ramapuram (Seasonal) (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Winter				
		Nov - Feb				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	64.11	59.03	40.96	31.96	79.42
2	EC_GEN (µmho/cm)	933	1150	1170	1380	1040
3	pH_GEN (pH units)	8.4	8.2	8.3	8.5	8.1
4	TDS (mg/L)					
5	Temp (deg C)	26.0	25.0	25.0	27.0	25.0
6	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	15.8	0.0	8.0	8.0	0.0
2	ALK-TOT (mgCaCO3/L)	240	220	216	220	200
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	42	69	61	79	45
5	Cl (mg/L)	92.0	137.1	131.4	164.1	122.5
6	CO3 (mg/L)	19.0	0.0	9.6	9.6	0.0
7	F (mg/L)	0.78	0.80	0.97	1.08	0.69
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	254	268	244	249	244
10	K (mg/L)	3.4	3.9	3.2	3.8	4.1
11	Mg (mg/L)	22.0	16.0	16.5	22.4	24.3
12	Na (mg/L)	155.0	185.0	149.0	173.2	134.0
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.00	0.01	0.01	1.70	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.01	0.01	1.70	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.580
19	SiO2 (mg/L)	10.5	11.6	12.2	13.1	9.2
20	SO4 (mg/L)	148.0	110.0	161.5	271.0	160.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	1.0	0.5	0.9	0.5
2	COD (mg/L)		31.0	25.2	21.7	13.8
3	DO (mg/L)	6.7	6.6	6.5	6.9	6.6
4	DO_SAT% (%)	82	80	79	87	80
5	Fcol-MPN (MPN/100mL)				2800	16000
6	Tcol-MPN (MPN/100mL)				3500	16000
7	TOC (mg/L)					
	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	Hg (µg/L)					
6	Ni (µg/L)				2.66	
7	Pb (µg/L)				0.00	
8	Zn (µg/L)				4.29	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	104	173	153	196	112
2	HAR_Total (mgCaCO3/L)	196	239	221	290	214
3	Na% (%)	63	62	59	56	57
4	RSC (-)	0.9	0.0	0.0	0.0	0.0
5	SAR (-)	4.8	5.2	4.4	4.4	4.0
	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: 2006-2021

Station Name : T Ramapuram (Seasonal) (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Winter				
		Nov - Feb				
		2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL					
1	Q (cumec)	81.42	18.70	44.38	19.02	12.17
2	EC_GEN (µmho/cm)	1010	1360	1240	1465	3509
3	pH_GEN (pH units)	8.2	8.1	8.2	8.2	8.3
4	TDS (mg/L)	570	796	724	927	874
5	Temp (deg C)	27.0	25.0	26.0	22.8	24.4
6	Turb (NTU)	1.00	0.10	35.00	5.33	27.75
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	2.8
2	ALK-TOT (mgCaCO3/L)	224	237	220	227	230
3	B (mg/L)	0.00	0.37	0.38	0.25	0.01
4	Ca (mg/L)	33	53	54	51	50
5	Cl (mg/L)	123.0	151.7	136.2	171.7	178.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	3.3
7	F (mg/L)	0.82	0.79	0.74	0.88	0.76
8	Fe (mg/L)	0.0	0.0	0.0	0.1	0.1
9	HCO3 (mg/L)	273	289	268	277	274
10	K (mg/L)	3.5	1.5	4.2	3.8	4.8
11	Mg (mg/L)	19.9	31.1	21.4	29.0	28.4
12	Na (mg/L)	145.5	192.4	179.0	156.9	209.3
13	NH3-N (mg N/L)	0.00	0.05	0.00	0.04	0.00
14	NO2+NO3 (mg N/L)	0.70	0.43	1.48	2.10	1.96
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.06	0.02
16	NO3-N (mgN/L)	0.70	0.43	1.48	2.04	1.94
17	o-PO4-P (mg P/L)	0.858	0.356	0.360	0.259	0.206
18	P-Tot (mgP/L)	0.858				
19	SiO2 (mg/L)	11.7	14.0	12.4	11.1	9.5
20	SO4 (mg/L)	182.0	115.0	184.0	175.5	276.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.3	0.9	1.2	0.6	1.2
2	COD (mg/L)	13.0	7.7	6.5	14.0	9.9
3	DO (mg/L)	5.9	6.8	6.8	7.0	7.1
4	DO_SAT% (%)	74	82	84	81	84
5	Fcol-MPN (MPN/100mL)	16000	2400	16000	1858	2750
6	Tcol-MPN (MPN/100mL)	16000	5000	16000	9100	16000
7	TOC (mg/L)	3.7	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	Hg (µg/L)					
6	Ni (µg/L)				21.12	
7	Pb (µg/L)				26.13	
8	Zn (µg/L)				6.35	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	83	132	134	126	125
2	HAR_Total (mgCaCO3/L)	165	262	223	247	243
3	Na% (%)	65	62	63	56	65
4	RSC (-)	1.2	0.0	0.0	0.2	0.2
5	SAR (-)	4.9	5.2	5.2	4.4	5.9
	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: 2006-2021

Station Name : T Ramapuram (Seasonal) (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Winter				
		Nov - Feb				
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	8.994	13.22	11.17	38.12	29.60
2	EC_GEN (µmho/cm)	1310	1596	1635	1301	1376
3	pH_GEN (pH units)	8.3	8.0	8.3	7.9	8.1
4	TDS (mg/L)	789	1046	947	903	859
5	Temp (deg C)	25.0	24.3	20.3	23.7	23.8
6	Turb (NTU)	5.00	78.25	10.00	15.00	58.83
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	6.5	0.0	10.4	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	218	198	224	238	241
3	B (mg/L)		0.08	0.04	0.23	0.47
4	Ca (mg/L)	56	66	35	35	41
5	Cl (mg/L)	136.1	198.5	157.7	170.5	174.5
6	CO3 (mg/L)	7.8	0.0	12.5	0.0	0.0
7	F (mg/L)	0.87	0.68	0.93	0.59	0.74
8	Fe (mg/L)	0.0	1.9	0.2	6.6	0.7
9	HCO3 (mg/L)	251	242	248	290	294
10	K (mg/L)	2.8	0.6	0.4	0.6	0.6
11	Mg (mg/L)	30.6	40.6	43.6	44.8	34.6
12	Na (mg/L)	171.2	214.4	124.2	180.6	190.6
13	NH3-N (mg N/L)	0.03	0.72	0.07	0.09	0.08
14	NO2+NO3 (mg N/L)	0.26	6.53	1.44	5.89	4.74
15	NO2-N (mgN/L)	0.00	0.03	0.09	0.12	0.08
16	NO3-N (mgN/L)	0.26	6.50	1.35	5.78	4.65
17	o-PO4-P (mg P/L)	0.358	0.778	0.327	0.320	0.358
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	11.1	12.6	6.6	9.4	19.9
20	SO4 (mg/L)	167.0	366.1	141.5	158.4	133.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.8	1.2	0.9	0.8	15.8
2	COD (mg/L)	9.2	12.7	6.6	102.2	18.8
3	DO (mg/L)	6.5	6.7	6.8	5.2	5.6
4	DO_SAT% (%)	79	80	75	56	68
5	FCol-MPN (MPN/100mL)	900	208	753	925	2678
6	Tcol-MPN (MPN/100mL)	900	350	3477	3000	11183
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				3.88	1.45
2	Cd (µg/L)				0.04	4.22
3	Cr (µg/L)				6.59	5.60
4	Cu (µg/L)		6.75	12.33	12.00	3.62
5	Hg (µg/L)					0.99
6	Ni (µg/L)				12.45	4.60
7	Pb (µg/L)				0.92	59.75
8	Zn (µg/L)		54.65	16.00	58.50	5.63
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	140	164	88	88	102
2	HAR_Total (mgCaCO3/L)	268	333	269	274	246
3	Na% (%)	58	58	49	59	63
4	RSC (-)	0.0	0.0	0.0	0.0	0.3
5	SAR (-)	4.6	5.2	3.3	4.8	5.3
	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: 2006-2021

Station Name : T Ramapuram (Seasonal) (AKL50A6)

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Summer				
		Mar - May				
		2015	2016	2018	2020	2021
	PHYSICAL					
1	Q (cumec)	10.39	47.89	1.420	3.780	26.15
2	EC_GEN (µmho/cm)	1875	201	4500	1849	1987
3	pH_GEN (pH units)	7.8	7.2	7.5	8.0	8.0
4	TDS (mg/L)	1303		3531	1274	1311
5	Temp (deg C)	27.0	26.0	22.0	23.0	23.0
6	Turb (NTU)	12.33	94.00	2.00	23.00	1.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	247	120	360	303	313
3	B (mg/L)	0.40		0.06	0.45	0.81
4	Ca (mg/L)	53	38	230	25	90
5	Cl (mg/L)	251.6	35.1	687.3	288.0	271.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	1.00	0.74	1.00	1.18	1.13
8	Fe (mg/L)	0.1	0.0	0.1	0.4	0.9
9	HCO3 (mg/L)	302	146	439	370	382
10	K (mg/L)	6.6	3.3	2.6	1.0	0.6
11	Mg (mg/L)	30.8	20.6	87.6	72.0	28.6
12	Na (mg/L)	281.5	81.4	811.1	364.0	321.6
13	NH3-N (mg N/L)	0.02	0.02	0.12	0.02	0.13
14	NO2+NO3 (mg N/L)	1.13	1.78	7.71	5.90	7.71
15	NO2-N (mgN/L)	0.07	0.00	0.41	0.20	0.41
16	NO3-N (mgN/L)	1.07	1.78	7.30	5.70	7.30
17	o-PO4-P (mg P/L)	0.187	0.111	0.750	0.360	0.499
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	10.6	12.0	25.5	15.9	27.6
20	SO4 (mg/L)	388.0	1.0	907.2	262.0	347.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	1.3	1.3	0.8	3.3
2	COD (mg/L)	21.8		17.5	32.4	19.8
3	DO (mg/L)	5.0	4.0	5.2	3.6	
4	DO_SAT% (%)	63	49	59	42	
5	FCol-MPN (MPN/100mL)	5335	20	170	500	1400
6	Tcol-MPN (MPN/100mL)	5427	2200	9000	16000	1700
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)			13.00	0.00	40.00
5	Hg (µg/L)	0.00				
6	Ni (µg/L)	20.72				
7	Pb (µg/L)	29.07				
8	Zn (µg/L)	16.28		45.10	22.00	0.05
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	133	95	576	63	224
2	HAR_Total (mgCaCO3/L)	261	181	941	363	343
3	Na% (%)	69	49	65	69	67
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	7.6	2.6	11.5	8.4	7.6
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

2007 to 2014 and 2017 & 2019 not observed due to Dry bed / No flow condition.

HISTORY SHEET

		Water Year	: 2020-2021
Site	: KELLODU	Code	: AKL50T9
State	: Karnataka	District	Chitradurga
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	:
		Local River	: Vedavathi
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tunga Subdn, Devangere
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		
Water Quality	: 01-07-1994		

Water Quality Datasheet for the period : 2020-2021

Station Name : KELLODU (AKL50T9)

Division : Cauvery Division, Bangalore

Local River : Vedavathi

River Water Analysis

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters		11-Sep-20	5-Oct-20		
			A	A		
	PHYSICAL					
1	Q (cumec)		13.15	23.89		
2	Colour_Cod (-)		Light Brown	Light Brown		
3	EC_GEN (µmho/cm)		320	170		
4	Odour_Code (-)		odour free	odour free		
5	pH_GEN (pH units)		7.9	7.7		
6	TDS (mg/L)		194	132		
7	Temp (deg C)		26.5	26.0		
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0	0.0		
2	ALK-TOT (mgCaCO3/L)		86	56		
3	B (mg/L)		0.21	0.01		
4	Ca (mg/L)		18	14		
5	Cl (mg/L)		30.5	15.3		
6	CO3 (mg/L)		0.0	0.0		
7	F (mg/L)		0.38	NA		
8	Fe (mg/L)		0.1	NA		
9	HCO3 (mg/L)		104	68		
10	K (mg/L)		4.0	2.1		
11	Mg (mg/L)		8.1	8.5		
12	Na (mg/L)		37.5	9.4		
13	NO2+NO3 (mg N/L)		0.50	0.22		
14	NO2-N (mgN/L)		0.03	0.00		
15	NO3-N (mgN/L)		0.48	0.22		
16	o-PO4-P (mg P/L)		0.083	0.000		
17	SiO2 (mg/L)		10.7	12.3		
18	SO4 (mg/L)		38.2	13.3		
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD (mg/L)		2.8	0.6		
2	DO (mg/L)		7.7	7.6		
3	DO_SAT% (%)		95	94		
4	FCol-MPN (MPN/100mL)		17000	1700		
5	Tcol-MPN (MPN/100mL)		160000	11000		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		44	35		
2	HAR_Total (mgCaCO3/L)		78	70		
3	Na% (%)		50	22		
4	RSC (-)		0.2	0.0		
5	SAR (-)		1.9	0.5		

June 2020-August 2020 sample not Submitted due to dry bed

Nov 2020-Jan 2021 sample not Submitted due to shortage of staff

Feb 2021-May 2021 sample not Submitted due to No Flow

Water Quality Summary for the period : 2020-2021

Station Name : KELLODU (AKL50T9)

Division : Cauvery Division, Bangalore

Local River : Vedavathi

Sub-Division : Upper Tunga Subdn, Devangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	84.28	0.000	9.255
2	EC_GEN (µmho/cm)	2	320	170	245
3	pH_GEN (pH units)	2	7.9	7.7	7.8
4	TDS (mg/L)	2	194	132	163
5	Temp (deg C)	2	26.5	26.0	26.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	2	86	56	71
3	B (mg/L)	2	0.21	0.01	0.11
4	Ca (mg/L)	2	18	14	16
5	Cl (mg/L)	2	30.5	15.3	22.9
6	CO3 (mg/L)	2	0.0	0.0	0
7	F (mg/L)	1	0.38	0.38	0.38
8	Fe (mg/L)	1	0.1	0.1	0.1
9	HCO3 (mg/L)	2	104	68	86
10	K (mg/L)	2	4.0	2.1	3
11	Mg (mg/L)	2	8.5	8.1	8.3
12	Na (mg/L)	2	37.5	9.4	23.5
13	NO2+NO3 (mg N/L)	2	0.50	0.22	0.36
14	NO2-N (mgN/L)	2	0.03	0.00	0.01
15	NO3-N (mgN/L)	2	0.48	0.22	0.35
16	o-PO4-P (mg P/L)	2	0.083	0.000	0.041
17	SiO2 (mg/L)	2	12.3	10.7	11.5
18	SO4 (mg/L)	2	38.2	13.3	25.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD (mg/L)	2	2.8	0.6	1.7
2	DO (mg/L)	2	7.7	7.6	7.6
3	DO_SAT% (%)	2	95	94	94
4	FCol-MPN (MPN/100mL)	2	17000	1700	9350
5	Tcol-MPN (MPN/100mL)	2	160000	11000	85500
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	2	44	35	40
2	HAR_Total (mgCaCO3/L)	2	78	70	74
3	Na% (%)	2	50	22	36
4	RSC (-)	2	0.2	0.0	0.1
5	SAR (-)	2	1.9	0.5	1.2

Water Quality Seasonal Average for the period: 2008-2021

Station Name : KELLODU (AKL50T9)

Division : Cauvery Division, Bangalore

Local River : Vedavathi

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Flood				
		Jun - Oct				
		2009	2010	2012	2014	2015
	PHYSICAL					
1	Q (cumec)	4.681	34.86	0.682	14.17	36.25
2	EC_GEN (µmho/cm)	631	606	249	378	428
3	pH_GEN (pH units)	8.1	8.0	7.9	7.7	7.9
4	TDS (mg/L)					
5	Temp (deg C)	22.9	23.5	26.0	27.0	27.5
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	237	208	81	136	122
2	B (mg/L)	0.11			0.30	0.44
3	Ca (mg/L)	37	22	10	26	18
4	Cl (mg/L)	55.8	60.1	22.7	32.0	51.1
5	F (mg/L)	0.41	0.42	0.25	0.19	0.55
6	Fe (mg/L)	0.1	0.1		0.1	0.4
7	HCO3 (mg/L)	289	254	98	166	149
8	K (mg/L)	5.4	4.6	4.2	10.5	4.7
9	Mg (mg/L)	21.4	13.0	3.9	10.7	12.2
10	Na (mg/L)	73.5	96.4	35.5	37.2	57.4
11	NO2+NO3 (mg N/L)	0.87	0.95	1.68	1.06	0.92
12	NO2-N (mgN/L)	0.00	0.03	0.01	0.01	0.03
13	NO3-N (mgN/L)	0.87	0.92	1.67	1.05	0.89
14	o-PO4-P (mg P/L)	0.000	0.007		0.031	0.377
15	SiO2 (mg/L)	19.4	13.2		7.3	12.3
16	SO4 (mg/L)	14.1	15.8	14.5	17.9	24.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)					
3	DO (mg/L)					
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
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		
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	92	55	24	64	44
2	HAR_Total (mgCaCO3/L)	181	109	40	109	95
3	Na% (%)	46	64	63	40	51
4	RSC (-)	1.1	2.0	0.8	0.6	0.6
5	SAR (-)	2.4	4.0	2.4	1.6	2.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2008-2021

Station Name : KELLODU (AKL50T9)

Division : Cauvery Division, Bangalore

Local River : Vedavathi

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Flood			Winter		
		Jun - Oct			Nov - Feb		
		2019	2020	Sample are not collected during Flood season 2008, 2011,2013 and 2016 to 2018 due to Dry bed / No flow condition.	2009-2010	2010-2011	2011-2012
	PHYSICAL						
1	Q (cumec)	6.349	18.52		3.822	11.04	1.822
2	EC_GEN (µmho/cm)	314	245		802	847	613
3	pH_GEN (pH units)	8.0	7.8		8.1	8.2	7.6
4	TDS (mg/L)	216	163				
5	Temp (deg C)	26.3	26.3		23.5	23.5	23.0
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)	113	71		280	297	206
2	B (mg/L)	0.13	0.11		0.17	0.11	
3	Ca (mg/L)	24	16		37	38	22
4	Cl (mg/L)	24.0	22.9		82.0	84.7	68.2
5	F (mg/L)	0.18	0.38		0.53	0.61	
6	Fe (mg/L)	0.2	0.1		0.0	0.0	0.0
7	HCO3 (mg/L)	138	86		342	362	251
8	K (mg/L)	3.5	3.0		4.7	5.7	2.5
9	Mg (mg/L)	7.5	8.3		24.6	28.5	10.7
10	Na (mg/L)	32.1	23.5		103.8	110.5	101.2
11	NO2+NO3 (mg N/L)	1.04	0.36		0.84	1.03	1.08
12	NO2-N (mgN/L)	0.08	0.01		0.03	0.00	0.00
13	NO3-N (mgN/L)	0.95	0.35		0.81	1.03	1.08
14	o-PO4-P (mg P/L)	0.062	0.041		0.007	0.003	0.000
15	SiO2 (mg/L)	9.0	11.5		22.6	18.2	14.1
16	SO4 (mg/L)	18.7	25.8		15.8	25.9	21.2
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.5	1.7				
2	COD (mg/L)	28.5					
3	DO (mg/L)	7.0	7.6				
4	DO_SAT% (%)	86	94				
5	FCol-MPN (MPN/100mL)	1345	9350				
6	Tcol-MPN (MPN/100mL)	11700	85500				
	TRACE & TOXIC						
1	As (µg/L)	1.5					
2	Cd (µg/L)	0.1					
3	Cr (µg/L)	4.1					
4	Cu (µg/L)	3.1					
5	Ni (µg/L)	0.6					
6	Pb (µg/L)	0.2					
7	Zn (µg/L)	15.2					
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	60	40		93	96	56
2	HAR_Total (mgCaCO3/L)	91	74		196	215	101
3	Na% (%)	42	36		53	51	68
4	RSC (-)	0.4	0.1		1.7	1.7	2.1
5	SAR (-)	1.4	1.2		3.2	3.2	4.4
	PESTICIDES						

Water Quality Seasonal Average for the period: 2008-2021

Station Name : KELLODU (AKL50T9)

Division : Cauvery Division, Bangalore

Local River : Vedavathi

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Winter			Summer
		Nov - Feb			Mar - May
		2014-2015	2015-2016	2019-2020	Sample are not collected during winter season 2008-2009 , 2012-2013 to 2013-2014 , 2016-2017 to 2018-2019 and 2020-2021 due to Dry bed / No flow condition. Sample are not collected during Summer season 2008 to 2021 due to Dry bed / No flow condition.
	PHYSICAL				
1	Q (cumec)	2.103	1.935	64.78	
2	EC_GEN (μmho/cm)	493	761	268	
3	pH_GEN (pH units)	8.4	8.2	8.0	
4	TDS (mg/L)			207	
5	Temp (deg C)	28.0	27.8	26.2	
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)	181	258	88	
2	B (mg/L)	0.31	0.31	0.13	
3	Ca (mg/L)	40	35	19	
4	Cl (mg/L)	49.3	95.3	17.0	
5	F (mg/L)	0.36	0.51	0.15	
6	Fe (mg/L)	0.0	0.4	1.0	
7	HCO3 (mg/L)	221	314	107	
8	K (mg/L)	12.3	4.3	3.0	
9	Mg (mg/L)	15.6	22.4	10.0	
10	Na (mg/L)	37.5	101.1	20.4	
11	NO2+NO3 (mg N/L)	1.22	1.03	1.16	
12	NO2-N (mgN/L)	0.00	0.01	0.02	
13	NO3-N (mgN/L)	1.22	1.02	1.14	
14	o-PO4-P (mg P/L)	0.000	0.450	0.028	
15	SiO2 (mg/L)	5.6	20.0	11.8	
16	SO4 (mg/L)	6.8	20.0	19.9	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)			1.5	
2	COD (mg/L)			19.0	
3	DO (mg/L)			7.0	
4	DO_SAT% (%)			86	
5	Fcol-MPN (MPN/100mL)			2073	
6	Tcol-MPN (MPN/100mL)			6567	
	TRACE & TOXIC				
1	As (μg/L)			2.1	
2	Cd (μg/L)			0.0	
3	Cr (μg/L)			5.2	
4	Cu (μg/L)			4.0	
5	Ni (μg/L)			5.0	
6	Pb (μg/L)			0.0	
7	Zn (μg/L)			9.1	
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	100	88	48	
2	HAR_Total (mgCaCO3/L)	165	181	90	
3	Na% (%)	31	54	32	
4	RSC (-)	0.4	1.6	0.1	
5	SAR (-)	1.3	3.3	0.9	
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2020-2021
Site	: HOOVINAHOLE	Code	: HOOVINAHOLE
State	: Karnataka	District	Chitradurga
Basin	: Krishna	Independent River	: Krishna
Tributary	:	Sub Tributary	:
		Local River	: Suvarnamukhi
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tunga SD, Devangere
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		
Water Quality	: 01-06-2008		

Water Quality Datasheet for the period : 2020-2021

Station Name : HOOVINAHOLE (HOOVINAHOLE)

Division : Cauvery Division, Bangalore

Local River : Suvarnamukhi

River Water Analysis

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	No samples submitted for analysis during June 2020 to May 2021, due to DRY BED
	PHYSICAL	
1	Q (cumec)	
	CHEMICAL	
	BIOLOGICAL/BACTERIOLOGICAL	
	TRACE & TOXIC	
	CHEMICAL INDICES	
	PESTICIDES	

Water Quality Seasonal Average for the period: 2008-2021

Station Name : HOOVINAHOLE (HOOVINAHOLE)

Division : Cauvery Division, Bangalore

Local River : Suvarnamukhi

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Flood	
		Jun - Oct	
		2009	2010
	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		

Sample are not collected during Flood season 2008 and 2011 to 2021 due to Dry bed / No flow condition.

Water Quality Seasonal Average for the period: 2008-2021

Station Name : HOOVINAHOLE (HOOVINAHOLE)

Division : Cauvery Division, Bangalore

Local River : Suvarnamukhi

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Winter				Summer
		Nov - Feb				Mar - May
		2008-2009	2009-2010	2010-2011	2015-2016	Sample are not collected during winter season 2011-2012 to 2016-2017 and 2017-2018 to 2020-2021 due to Dry bed / No flow condition. Sample are not collected during Summer season 2008 to 2021 due to Dry bed / No flow condition.
	PHYSICAL					
1	Q (cumec)	3.745	0.952	1.406	6.473	
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/BACTERIOLOGIC					
	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	: 2020-2021
Site	: MAROL	Code	: AKLA0C4
State	: Karnataka	District	Haveri
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	:
		Local River	: Varada
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tunga Subdn, Devangere
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 : 2020-2021

Station Name : MAROL (AKLA0C4)

Division : Cauvery Division, Bangalore

Local River : Varada

River Water Analysis

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	3-Aug-20	1-Sep-20	5-Oct-20	2-Nov-20
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	56.42	78.05	41.96	19.17
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown	Light Brown
3	EC_GEN (μmho/cm)	178	140	184	365
4	Odour_Code (-)	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.8	7.3	7.7	7.8
6	TDS (mg/L)	110	80	140	240
7	Temp (deg C)	23.0	23.5	24.5	24.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	44	39	50	108
3	B (mg/L)	0.03	0.08	0.00	NA
4	Ca (mg/L)	13	13	13	26
5	Cl (mg/L)	21.3	9.6	24.5	49.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.11	0.06	NA	NA
8	Fe (mg/L)	0.4	0.5	NA	NA
9	HCO3 (mg/L)	54	47	61	132
10	K (mg/L)	1.3	1.2	1.8	2.7
11	Mg (mg/L)	7.7	5.8	10.3	12.6
12	Na (mg/L)	12.6	7.3	10.4	34.8
13	NO2+NO3 (mg N/L)	0.41	0.92	0.57	2.52
14	NO2-N (mgN/L)	0.01	0.01	0.00	0.00
15	NO3-N (mgN/L)	0.39	0.91	0.57	2.52
16	o-PO4-P (mg P/L)	0.041	0.010	0.000	0.010
17	SiO2 (mg/L)	9.6	10.4	10.5	9.7
18	SO4 (mg/L)	17.0	14.4	11.3	13.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD (mg/L)	0.4	0.4	0.6	0.8
2	COD (mg/L)	17.0	NA	NA	NA
3	DO (mg/L)	8.0	6.5	7.2	6.8
4	DO_SAT% (%)	93	76	86	81
5	FCol-MPN (MPN/100mL)	170	490	1700	NA
6	Tcol-MPN (MPN/100mL)	490	1300	2400	NA
	TRACE & TOXIC				
1	As (μg/L)	0.2			
2	Cd (μg/L)	0.1			
3	Cr (μg/L)	2.9			
4	Cu (μg/L)	1.5			
5	Ni (μg/L)	0.4			
6	Pb (μg/L)	0.3			
7	Zn (μg/L)	9.5			
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	32	32	32	64
2	HAR_Total (mgCaCO3/L)	63	56	75	117
3	Na% (%)	30	22	23	39
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	0.7	0.4	0.5	1.4

June 2020-July 2020 Sample not submitted due to dry bed

December 2020-May 2021 Sample not submitted due to pooling water/No Flow

Water Quality Summary for the period : 2020-2021

Station Name : MAROL (AKLA0C4)

Division : Cauvery Division, Bangalore

Local River : Varada

Sub-Division : Upper Tunga Subdn, Devangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	716.0	0.000	54.55
2	EC_GEN (µmho/cm)	4	365	140	217
3	pH_GEN (pH units)	4	7.8	7.3	7.6
4	TDS (mg/L)	4	240	80	143
5	Temp (deg C)	4	24.5	23.0	23.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	4	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	4	108	39	60
3	B (mg/L)	3	0.08	0.00	0.04
4	Ca (mg/L)	4	26	13	16
5	Cl (mg/L)	4	49.0	9.6	26.1
6	CO3 (mg/L)	4	0.0	0.0	0
7	F (mg/L)	2	0.11	0.06	0.09
8	Fe (mg/L)	2	0.5	0.4	0.5
9	HCO3 (mg/L)	4	132	47	73
10	K (mg/L)	4	2.7	1.2	1.7
11	Mg (mg/L)	4	12.6	5.8	9.1
12	Na (mg/L)	4	34.8	7.3	16.3
13	NO2+NO3 (mg N/L)	4	2.52	0.41	1.11
14	NO2-N (mgN/L)	4	0.01	0.00	0.01
15	NO3-N (mgN/L)	4	2.52	0.39	1.1
16	o-PO4-P (mg P/L)	4	0.041	0.000	0.016
17	SiO2 (mg/L)	4	10.5	9.6	10
18	SO4 (mg/L)	4	17.0	11.3	13.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD (mg/L)	4	0.8	0.4	0.6
2	COD (mg/L)	1	17.0	17.0	17
3	DO (mg/L)	4	8.0	6.5	7.1
4	DO_SAT% (%)	4	93	76	84
5	FCol-MPN (MPN/100mL)	3	1700	170	787
6	Tcol-MPN (MPN/100mL)	3	2400	490	1397
	TRACE & TOXIC				
1	As (µg/L)	1	0.2	0.2	0.2
2	Cd (µg/L)	1	0.1	0.1	0.1
3	Cr (µg/L)	1	2.9	2.9	2.9
4	Cu (µg/L)	1	1.5	1.5	1.5
5	Ni (µg/L)	1	0.4	0.4	0.4
6	Pb (µg/L)	1	0.3	0.3	0.3
7	Zn (µg/L)	1	9.5	9.5	9.5
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	4	64	32	40
2	HAR_Total (mgCaCO3/L)	4	117	56	78
3	Na% (%)	4	39	22	28
4	RSC (-)	4	0.0	0.0	0
5	SAR (-)	4	1.4	0.4	0.8

Water Quality Seasonal Average for the period: 2006-2021

Station Name : MAROL (AKLA0C4)

Division : Cauvery Division, Bangalore

Local River : Varada

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Flood				
		Jun - Oct				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	189.5	267.3	160.3	269.1	290.1
2	EC_GEN (µmho/cm)	267	247	383	233	111
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.6	7.8	7.9	7.6	7.5
5	TDS (mg/L)					
6	Temp (deg C)	26.3	25.6	25.5	23.9	24.4
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	79	65	79	69	34
2	B (mg/L)	0.00	0.10	0.39	0.05	
3	Ca (mg/L)	12	17	23	17	9
4	Cl (mg/L)	28.5	30.1	30.4	24.4	12.0
5	F (mg/L)	0.00	0.13	0.19	0.17	0.15
6	Fe (mg/L)	0.0	0.2	0.1	0.3	0.4
7	HCO3 (mg/L)	96	79	96	84	41
8	K (mg/L)	31.0	1.5	1.9	1.9	1.2
9	Mg (mg/L)	5.2	6.6	7.0	6.6	4.1
10	Na (mg/L)	23.1	24.1	21.7	23.2	8.0
11	NO2+NO3 (mg N/L)	3.45	0.87	1.02	1.08	0.75
12	NO2-N (mgN/L)	0.00	0.04	0.04	0.05	0.01
13	NO3-N (mgN/L)	3.45	0.82	0.98	1.03	0.73
14	o-PO4-P (mg P/L)	0.000	0.000	0.000	0.010	0.008
15	SiO2 (mg/L)	1.3	13.7	12.0	8.7	8.3
16	SO4 (mg/L)	1.3	8.8	13.2	11.8	5.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)					
3	DO (mg/L)					
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
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	42	58	43	23
2	HAR_Total (mgCaCO3/L)	53	70	87	70	40
3	Na% (%)	36	35	32	33	29
4	RSC (-)	0.5	0.0	0.0	0.0	0.0
5	SAR (-)	1.7	1.1	0.9	1.0	0.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : MAROL (AKLA0C4)

Division : Cauvery Division, Bangalore

Local River : Varada

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Flood				
		Jun - Oct				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	217.4	163.9	213.1	401.0	64.26
2	EC_GEN (µmho/cm)	129	101	195	150	121
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.1	7.3	7.3	7.2	7.3
5	TDS (mg/L)					
6	Temp (deg C)	24.8	26.5	26.5	26.0	26.8
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	40	29	65	42	32
2	B (mg/L)			0.01	0.10	0.60
3	Ca (mg/L)	10	7	15	12	10
4	Cl (mg/L)	14.1	12.0	17.9	16.1	15.4
5	F (mg/L)	0.07	0.07	0.21	0.11	0.11
6	Fe (mg/L)	0.5		0.4	0.5	0.4
7	HCO3 (mg/L)	48	33	79	51	39
8	K (mg/L)	1.1	1.0	1.5	1.4	1.2
9	Mg (mg/L)	4.6	3.2	4.1	5.2	4.6
10	Na (mg/L)	9.4	7.8	20.9	10.2	6.8
11	NO2+NO3 (mg N/L)	0.90	1.08	1.78	1.95	0.71
12	NO2-N (mgN/L)	0.01	0.01	0.02	0.03	0.01
13	NO3-N (mgN/L)	0.89	1.06	1.76	1.91	0.69
14	o-PO4-P (mg P/L)	0.000		0.090	0.038	0.191
15	SiO2 (mg/L)	7.6		8.4	8.3	12.3
16	SO4 (mg/L)	6.3	5.4	9.1	7.8	8.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)					
3	DO (mg/L)					
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
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)	26	19	38	31	25
2	HAR_Total (mgCaCO3/L)	45	32	55	52	44
3	Na% (%)	30	32	37	27	24
4	RSC (-)	0.0	0.0	0.3	0.0	0.0
5	SAR (-)	0.6	0.6	1.0	0.6	0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : MAROL (AKLA0C4)

Division : Cauvery Division, Bangalore

Local River : Varada

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Flood				
		Jun - Oct				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	13.71	75.23	59.33	153.8	58.81
2	EC_GEN (µmho/cm)	110	217	104	120	167
3	pH_FLD (pH units)				7.0	
4	pH_GEN (pH units)	7.2	7.4	7.5	7.5	7.6
5	TDS (mg/L)	66	143	70	85	110
6	Temp (deg C)	26.0	26.0	25.3	24.8	23.7
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	30	52	32	31	44
2	B (mg/L)	0.07	0.45	0.03	0.07	0.04
3	Ca (mg/L)	9	12	10	11	13
4	Cl (mg/L)	15.6	36.8	12.2	14.7	18.5
5	F (mg/L)		0.49	0.05	0.07	0.09
6	Fe (mg/L)	0.4	0.1	0.5	0.5	0.5
7	HCO3 (mg/L)	36	63	39	38	54
8	K (mg/L)	1.1	1.4	1.2	1.5	1.4
9	Mg (mg/L)	5.8	6.1	3.4	4.0	7.9
10	Na (mg/L)	4.2	27.5	6.8	7.4	10.1
11	NO2+NO3 (mg N/L)	1.00	1.41	0.56	0.87	0.64
12	NO2-N (mgN/L)	0.01	0.02	0.00	0.15	0.01
13	NO3-N (mgN/L)	0.99	1.40	0.56	0.71	0.63
14	o-PO4-P (mg P/L)	0.057	0.110	0.024	0.057	0.017
15	SiO2 (mg/L)	19.7	9.2	7.1	8.8	10.1
16	SO4 (mg/L)	3.8	8.5	4.9	10.3	14.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		2.1	2.1	4.4	0.5
2	COD (mg/L)			10.0	24.3	17.0
3	DO (mg/L)		5.4	6.0	6.7	7.2
4	DO_SAT% (%)		66	73	81	85
5	FCol-MPN (MPN/100mL)			20467	1978	787
6	Tcol-MPN (MPN/100mL)			36333	21543	1397
	TRACE & TOXIC					
1	As (µg/L)		3.0	1.9	1.7	0.2
2	Cd (µg/L)		0.0	0.3	0.1	0.1
3	Cr (µg/L)		12.0	14.9	3.6	2.9
4	Cu (µg/L)		3.0	0.6	1.1	1.5
5	Ni (µg/L)			3.9	5.1	0.4
6	Pb (µg/L)		2.0	1.1	0.1	0.3
7	Zn (µg/L)		6.0	8.4	15.4	9.5
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	24	29	25	28	32
2	HAR_Total (mgCaCO3/L)	48	55	39	45	65
3	Na% (%)	17	42	27	26	25
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.3	1.5	0.5	0.5	0.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : MAROL (AKLA0C4)

Division : Cauvery Division, Bangalore

Local River : Varada

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Winter				
		Nov - Feb				
		2006-2007	2007-2008	2010-2011	2011-2012	2012-2013
	PHYSICAL					
1	Q (cumec)	174.1	85.82	23.03	72.23	11.05
2	EC_GEN (µmho/cm)	272	155	283	241	215
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	8.2	7.6	7.8	7.2	7.6
5	TDS (mg/L)					
6	Temp (deg C)	26.0	25.5	25.0	25.0	26.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	21	24	76	77	69
2	B (mg/L)	0.00	0.02	0.03		
3	Ca (mg/L)	16	6	20	18	14
4	Cl (mg/L)	24.1	31.2	34.6	27.5	22.0
5	F (mg/L)	0.00	0.00	0.10		
6	Fe (mg/L)	0.0	0.0	0.1	0.0	
7	HCO3 (mg/L)	26	29	93	94	84
8	K (mg/L)	31.5	0.4	1.4	1.3	1.0
9	Mg (mg/L)	6.6	3.4	9.2	6.8	5.8
10	Na (mg/L)	19.8	22.1	23.0	19.5	19.5
11	NO2+NO3 (mg N/L)	0.31	0.13	1.07	1.16	1.13
12	NO2-N (mgN/L)	0.00	0.00	0.01	0.01	0.03
13	NO3-N (mgN/L)	0.31	0.13	1.06	1.15	1.11
14	o-PO4-P (mg P/L)	0.000	0.000	0.000	0.047	
15	SiO2 (mg/L)	0.6	16.2	10.5	10.2	
16	SO4 (mg/L)	81.6	1.9	14.2	9.1	5.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)					
3	DO (mg/L)					
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
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)	39	15	50	46	36
2	HAR_Total (mgCaCO3/L)	66	29	88	74	60
3	Na% (%)	29	62	36	36	41
4	RSC (-)	0.0	0.0	0.0	0.1	0.2
5	SAR (-)	1.1	1.8	1.1	1.0	1.1
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : MAROL (AKLA0C4)

Division : Cauvery Division, Bangalore

Local River : Varada

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Winter				Summer
		Nov - Feb				Mar - May
		2013-2014	2014-2015	2019-2020	2020-2021	
	PHYSICAL					Sample are not collected during winter season 2008-2009 to 2009 to 2010-2011 and 2015-2016 to 2018-2019 due to Dry bed / No flow condition.
1	Q (cumec)	95.09	184.3	118.4	19.17	
2	EC_GEN (µmho/cm)	276	259	185	365	
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.6	8.0	7.9	7.8	
5	TDS (mg/L)			142	240	
6	Temp (deg C)	27.5	26.5	25.0	24.0	
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	85	77	59	108	
2	B (mg/L)	0.01	0.21	0.09		
3	Ca (mg/L)	24	22	12	26	
4	Cl (mg/L)	32.7	37.3	20.9	49.0	
5	F (mg/L)	0.17	0.17	0.17		
6	Fe (mg/L)	0.1	0.0	0.2		
7	HCO3 (mg/L)	103	93	71	132	
8	K (mg/L)	1.5	5.0	1.8	2.7	
9	Mg (mg/L)	5.8	8.7	11.2	12.6	
10	Na (mg/L)	25.7	16.0	8.6	34.8	
11	NO2+NO3 (mg N/L)	1.53	1.57	0.88	2.52	
12	NO2-N (mgN/L)	0.11	0.01	0.01	0.00	
13	NO3-N (mgN/L)	1.42	1.56	0.87	2.52	
14	o-PO4-P (mg P/L)	0.021	0.000	0.000	0.010	
15	SiO2 (mg/L)	9.2	8.3	8.7	9.6	
16	SO4 (mg/L)	5.1	4.4	7.6	13.0	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)			1.0	0.8	
2	COD (mg/L)			28.0		
3	DO (mg/L)			6.5	6.8	
4	DO_SAT% (%)			79	81	
5	FCol-MPN (MPN/100mL)			0		
6	Tcol-MPN (MPN/100mL)			45		
	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)	60	56	30	64	
2	HAR_Total (mgCaCO3/L)	84	92	76	117	
3	Na% (%)	39	26	19	39	
4	RSC (-)	0.0	0.0	0.0	0.0	
5	SAR (-)	1.2	0.7	0.4	1.4	
	PESTICIDES					

HISTORY SHEET

		Water Year	: 2020-2021
Site	: HARALAHALLI	Code	: AKL00S8
State	: Karnataka	District	Haveri
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	:
		Local River	: Tungabhadra
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tunga Subdn, Devangere
Drainage Area	: 14582 Sq. Km.	Bank	: Left
Latitude	: 14°49'50"	Longitude	: 75°40'28"
	Opening Date	Closing Date	
Gauge	: 11-08-1965		
Discharge	: 13-12-1966		
Sediment	: 01-11-1972		
Water Quality	: 01-11-1972		

Water Quality Datasheet for the period : 2020-2021

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Analysis

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Jun-20	1-Jul-20	3-Aug-20	1-Sep-20	5-Oct-20	1-Nov-20	1-Dec-20	
			A	A	A	A		A	
	PHYSICAL								
1	Q (cumec)		54.86	72.61	161.7	123.6		39.20	
2	Colour_Cod (-)		Clear	Light Brown	Light Brown	Light Brown		Light Brown	
3	EC_GEN (µmho/cm)		274	415	193	264		492	
4	Odour_Code (-)		odour free	odour free	odour free	odour free		odour free	
5	pH_GEN (pH units)		7.2	7.5	7.4	7.2		7.7	
6	TDS (mg/L)		160	241	112	196		302	
7	Temp (deg C)		25.0	25.0	25.0	25.0		25.0	
	CHEMICAL								
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0	0.0		0.0	
2	ALK-TOT (mgCaCO3/L)		67	98	47	71		133	
3	B (mg/L)		0.06	0.07	0.09	0.02		NA	
4	Ca (mg/L)		16	25	13	16		12	
5	Cl (mg/L)		32.3	48.3	23.1	28.4		60.4	
6	CO3 (mg/L)		0.0	0.0	0.0	0.0		0.0	
7	F (mg/L)		0.13	0.38	0.11	NA		0.17	
8	Fe (mg/L)		0.1	0.2	0.4	NA		0.3	
9	HCO3 (mg/L)		82	119	58	87		162	
10	K (mg/L)		1.4	2.2	1.5	2.3		4.1	
11	Mg (mg/L)		7.7	11.5	7.8	11.3		8.5	
12	Na (mg/L)		29.0	43.9	15.3	19.6		50.9	
13	NO2+NO3 (mg N/L)		0.67	0.78	0.50	0.53		0.24	
14	NO2-N (mgN/L)		0.01	0.01	0.01	0.00		0.01	
15	NO3-N (mgN/L)		0.66	0.77	0.49	0.53		0.22	
16	o-PO4-P (mg P/L)		0.010	0.052	0.041	0.103		0.010	
17	SiO2 (mg/L)		12.6	11.4	9.1	11.8		2.2	
18	SO4 (mg/L)		16.7	38.6	18.1	20.5		26.6	
	BIOLOGICAL/BACTERIOLOGICAL								
1	BOD (mg/L)		0.2	0.8	0.4	0.4		0.7	
2	COD (mg/L)		13.0	5.0	NA	NA		NA	
3	DO (mg/L)		7.3	7.4	7.4	7.4		6.8	
4	DO_SAT% (%)		89	90	89	90		82	
5	FCol-MPN (MPN/100mL)		2200	1100	490	1300		NA	
6	Tcol-MPN (MPN/100mL)		16000	16000	1700	3300		NA	
	TRACE & TOXIC								
1	As (µg/L)			0.7				5.6	
2	Cd (µg/L)			0.7				0.1	
3	Cr (µg/L)			3.5				5.8	
4	Cu (µg/L)			0.6				1.4	
5	Ni (µg/L)			0.1				21.0	
6	Pb (µg/L)			0.3				0.4	
7	Zn (µg/L)			0.9				2.7	
	CHEMICAL INDICES								
1	HAR_Ca (mgCaCO3/L)		39	64	32	39		30	
2	HAR_Total (mgCaCO3/L)		71	112	64	86		65	
3	Na% (%)		47	46	34	33		61	
4	RSC (-)		0.0	0.0	0.0	0.0		1.4	
5	SAR (-)		1.5	1.8	0.8	0.9		2.8	

Sample not submitted due to No Flow

sample not received due to shortage of staff

january 2021 to May 2021 Sample not submitted due to No Flow

Water Quality Summary for the period : 2020-2021

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

Sub-Division : Upper Tunga Subdn, Devangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	2771	0.000	153.1
2	EC_GEN (µmho/cm)	5	492	193	328
3	pH_GEN (pH units)	5	7.7	7.2	7.4
4	TDS (mg/L)	5	302	112	202
5	Temp (deg C)	5	25.0	25.0	25
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	5	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	5	133	47	83
3	B (mg/L)	4	0.09	0.02	0.06
4	Ca (mg/L)	5	25	12	16
5	Cl (mg/L)	5	60.4	23.1	38.5
6	CO3 (mg/L)	5	0.0	0.0	0
7	F (mg/L)	4	0.38	0.11	0.2
8	Fe (mg/L)	4	0.4	0.1	0.2
9	HCO3 (mg/L)	5	162	58	102
10	K (mg/L)	5	4.1	1.4	2.3
11	Mg (mg/L)	5	11.5	7.7	9.4
12	Na (mg/L)	5	50.9	15.3	31.7
13	NO2+NO3 (mg N/L)	5	0.78	0.24	0.55
14	NO2-N (mgN/L)	5	0.01	0.00	0.01
15	NO3-N (mgN/L)	5	0.77	0.22	0.54
16	o-PO4-P (mg P/L)	5	0.103	0.010	0.043
17	SiO2 (mg/L)	5	12.6	2.2	9.4
18	SO4 (mg/L)	5	38.6	16.7	24.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD (mg/L)	5	0.8	0.2	0.5
2	COD (mg/L)	2	13.0	5.0	9
3	DO (mg/L)	5	7.4	6.8	7.3
4	DO_SAT% (%)	5	90	82	88
5	FCol-MPN (MPN/100mL)	4	2200	490	1273
6	Tcol-MPN (MPN/100mL)	4	16000	1700	9250
	TRACE & TOXIC				
1	As (µg/L)	2	5.6	0.7	3.1
2	Cd (µg/L)	2	0.7	0.1	0.4
3	Cr (µg/L)	2	5.8	3.5	4.6
4	Cu (µg/L)	2	1.4	0.6	1
5	Ni (µg/L)	2	21.0	0.1	10.5
6	Pb (µg/L)	2	0.4	0.3	0.3
7	Zn (µg/L)	2	2.7	0.9	1.8
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	5	64	30	41
2	HAR_Total (mgCaCO3/L)	5	112	64	80
3	Na% (%)	5	61	33	44
4	RSC (-)	5	1.4	0.0	0.3
5	SAR (-)	5	2.8	0.8	1.6

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Flood				
		Jun - Oct				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	440.6	725.0		199.6	692.3
2	EC_GEN (µmho/cm)	377	251	233	253	136
3	pH_GEN (pH units)	7.3	7.4	7.9	7.8	7.3
4	TDS (mg/L)					
5	Temp (deg C)	25.5	25.2	26.0	25.5	26.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	128	63	58	71	41
3	B (mg/L)	0.00	0.02		0.02	
4	Ca (mg/L)	20	17	17	17	10
5	Cl (mg/L)	43.2	32.9	30.4	26.3	14.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.00	0.27	0.12	0.19	0.14
8	Fe (mg/L)	0.0	0.3		0.1	0.1
9	HCO3 (mg/L)	156	77	70	87	50
10	K (mg/L)	34.6	1.7	2.6	2.6	1.5
11	Mg (mg/L)	11.4	7.2	4.4	7.3	4.9
12	Na (mg/L)	31.4	24.7	20.7	27.1	12.1
13	NO2+NO3 (mg N/L)	0.17	0.59	1.06	1.03	0.95
14	NO2-N (mgN/L)	0.00	0.02	0.01	0.01	0.01
15	NO3-N (mgN/L)	0.17	0.57	1.05	1.02	0.93
16	o-PO4-P (mg P/L)	0.000	0.023		0.021	0.021
17	SiO2 (mg/L)	1.4	11.4		11.8	12.4
18	SO4 (mg/L)	10.0	9.7	12.4	12.6	7.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)					
3	DO (mg/L)					
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
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)	49	42	42	42	24
2	HAR_Total (mgCaCO3/L)	97	72	60	72	44
3	Na% (%)	33	41	40	43	36
4	RSC (-)	0.6	0.0	0.0	0.0	0.0
5	SAR (-)	1.5	1.2	1.1	1.3	0.8
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Flood				
		Jun - Oct				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	770.9	393.0	1097	478.3	170.1
2	EC_GEN (µmho/cm)	95	109	138	189	332
3	pH_GEN (pH units)	6.6	7.3	7.2	7.5	7.3
4	TDS (mg/L)					
5	Temp (deg C)	26.0	25.8	25.3	25.0	25.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	28	31	38	52	75
3	B (mg/L)			0.02	0.14	0.99
4	Ca (mg/L)	6	8	10	13	21
5	Cl (mg/L)	9.9	13.0	16.9	24.7	42.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.06	0.08	0.06	0.15	0.26
8	Fe (mg/L)	0.2		0.1	0.1	0.3
9	HCO3 (mg/L)	34	37	46	63	92
10	K (mg/L)	1.2	1.3	1.5	1.7	4.6
11	Mg (mg/L)	3.4	3.2	4.9	6.3	8.3
12	Na (mg/L)	7.5	9.4	10.5	17.3	32.5
13	NO2+NO3 (mg N/L)	0.76	1.15	1.00	0.98	0.98
14	NO2-N (mgN/L)	0.01	0.01	0.01	0.03	0.01
15	NO3-N (mgN/L)	0.74	1.14	0.99	0.95	0.97
16	o-PO4-P (mg P/L)	0.000		0.067	0.031	0.129
17	SiO2 (mg/L)	8.1		10.1	6.5	13.1
18	SO4 (mg/L)	6.5	5.5	8.4	5.8	25.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		0.7	0.4	1.1	0.4
2	COD (mg/L)					
3	DO (mg/L)		6.0	5.9	5.4	4.9
4	DO_SAT% (%)		73	71	65	59
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	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	Ni (µg/L)		5.4	9.0		
6	Pb (µg/L)			0.0		
7	Zn (µg/L)			0.0		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	16	20	26	32	52
2	HAR_Total (mgCaCO3/L)	30	33	46	58	86
3	Na% (%)	34	35	31	37	43
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.6	0.7	0.7	1.0	1.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Flood				
		Jun - Oct				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	447.5	168.6	362.8	236.3	103.2
2	EC_GEN (µmho/cm)	186	116	151	227	287
3	pH_GEN (pH units)	6.5	7.2	7.4	7.6	7.3
4	TDS (mg/L)	108	77	81	138	177
5	Temp (deg C)	24.5	24.3	25.0	25.4	25.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	4.3	0.0
2	ALK-TOT (mgCaCO3/L)	47	34	44	64	71
3	B (mg/L)	0.16	0.11	0.00	0.09	0.06
4	Ca (mg/L)	17	11	14	15	17
5	Cl (mg/L)	24.1	11.9	18.3	23.0	33.0
6	CO3 (mg/L)	0.0	0.0	0.0	5.2	0.0
7	F (mg/L)		0.08	0.10	0.18	0.21
8	Fe (mg/L)	0.3	0.2	0.2	0.4	0.2
9	HCO3 (mg/L)	58	41	54	68	86
10	K (mg/L)	2.2	1.6	2.0	2.3	1.9
11	Mg (mg/L)	8.3	3.8	4.9	8.7	9.6
12	Na (mg/L)	7.3	7.3	9.2	18.7	27.0
13	NO2+NO3 (mg N/L)	1.58	0.80	0.73	0.52	0.62
14	NO2-N (mgN/L)	0.02	0.01	0.01	0.14	0.01
15	NO3-N (mgN/L)	1.56	0.78	0.72	0.38	0.61
16	o-PO4-P (mg P/L)	0.000	0.000	0.016	0.018	0.052
17	SiO2 (mg/L)	14.7	5.3	7.8	8.8	11.2
18	SO4 (mg/L)	9.4	6.0	10.0	14.6	23.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.6	0.9	1.1	1.6	0.5
2	COD (mg/L)			17.5	25.3	9.0
3	DO (mg/L)	7.5	5.6	6.9	6.8	7.4
4	DO_SAT% (%)	89	67	84	83	89
5	FCol-MPN (MPN/100mL)			7050	995	1273
6	Tcol-MPN (MPN/100mL)			19300	4448	9250
	TRACE & TOXIC					
1	As (µg/L)		1.0	0.3	1.0	0.7
2	Cd (µg/L)		0.0	0.2	0.0	0.7
3	Cr (µg/L)		21.0	26.7	1.9	3.5
4	Cu (µg/L)		2.0	1.1	0.6	0.6
5	Ni (µg/L)			1.3	4.9	0.1
6	Pb (µg/L)		2.0	0.3	0.1	0.3
7	Zn (µg/L)		36.0	9.8	14.6	0.9
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	43	27	36	37	43
2	HAR_Total (mgCaCO3/L)	77	42	56	73	83
3	Na% (%)	20	27	25	32	40
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.4	0.5	0.5	0.9	1.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Winter				
		Nov - Feb				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	51.64	126.5		88.34	101.0
2	EC_GEN (μmho/cm)	342	383	338	407	301
3	pH_GEN (pH units)	7.9	8.0	8.1	7.6	7.7
4	TDS (mg/L)					
5	Temp (deg C)	24.3	25.5	25.0	25.3	25.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	100	48	91	98	84
3	B (mg/L)	0.00	0.11	0.11	0.08	0.06
4	Ca (mg/L)	13	25	21	25	19
5	Cl (mg/L)	45.6	57.0	37.8	48.6	25.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.00	0.19	0.21	0.24	0.16
8	Fe (mg/L)	0.0	0.1	0.1	0.1	0.0
9	HCO3 (mg/L)	122	59	111	119	103
10	K (mg/L)	46.7	1.2	1.8	3.4	1.7
11	Mg (mg/L)	6.7	9.9	9.2	10.2	9.2
12	Na (mg/L)	32.8	42.6	39.8	47.1	27.5
13	NO2+NO3 (mg N/L)	1.08	4.50	1.19	1.04	1.13
14	NO2-N (mgN/L)	0.00	0.02	0.01	0.03	0.03
15	NO3-N (mgN/L)	1.08	4.48	1.18	1.00	1.10
16	o-PO4-P (mg P/L)	0.000	0.063	0.052	0.041	0.026
17	SiO2 (mg/L)	1.9	15.6	11.8	14.1	10.8
18	SO4 (mg/L)	15.6	37.9	31.2	38.0	21.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)					
3	DO (mg/L)					
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
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	61	52	62	48
2	HAR_Total (mgCaCO3/L)	59	103	90	105	86
3	Na% (%)	38	47	48	47	41
4	RSC (-)	0.8	0.0	0.1	0.0	0.0
5	SAR (-)	2.7	1.8	1.8	2.0	1.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Winter				
		Nov - Feb				
		2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL					
1	Q (cumec)	46.51	135.0	51.28	48.43	46.99
2	EC_GEN (µmho/cm)	384	385	363	479	539
3	pH_GEN (pH units)	7.6	7.6	7.5	7.8	7.5
4	TDS (mg/L)					
5	Temp (deg C)	25.5	24.0	26.5	25.0	25.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	101	112	101	135	142
3	B (mg/L)	0.00		0.01	0.32	0.27
4	Ca (mg/L)	22	26	22	32	30
5	Cl (mg/L)	46.1	37.6	37.3	64.4	73.8
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)			0.32	0.30	0.59
8	Fe (mg/L)	0.0		0.1	0.0	0.3
9	HCO3 (mg/L)	124	137	123	165	173
10	K (mg/L)	2.1	1.7	2.4	9.2	5.7
11	Mg (mg/L)	10.2	9.7	5.8	12.6	14.6
12	Na (mg/L)	40.8	36.3	48.3	49.5	58.0
13	NO2+NO3 (mg N/L)	1.24	1.26	1.64	1.18	2.05
14	NO2-N (mgN/L)	0.01	0.00	0.01	0.03	0.00
15	NO3-N (mgN/L)	1.23	1.26	1.63	1.16	2.05
16	o-PO4-P (mg P/L)	0.041		0.062	0.036	0.258
17	SiO2 (mg/L)	10.5		10.0	7.7	26.2
18	SO4 (mg/L)	25.2	12.0	13.6	16.8	17.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	1.2	0.6	0.8	0.4
2	COD (mg/L)					
3	DO (mg/L)	6.0	5.3	6.3	6.0	5.6
4	DO_SAT% (%)	72	64	78	72	68
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
1	As (µg/L)	0.2				
2	Cd (µg/L)	0.2			0.1	
3	Cr (µg/L)	1.2			6.6	
4	Cu (µg/L)				2.5	
5	Ni (µg/L)	5.5			0.2	
6	Pb (µg/L)				1.7	
7	Zn (µg/L)				10.0	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	56	64	56	80	76
2	HAR_Total (mgCaCO3/L)	99	105	80	133	137
3	Na% (%)	46	43	56	42	47
4	RSC (-)	0.1	0.2	0.4	0.1	0.1
5	SAR (-)	1.8	1.5	2.4	1.8	2.2
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Winter				
		Nov - Feb				
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	10.45	22.79	13.89	193.6	39.20
2	EC_GEN (µmho/cm)	507	426	490	256	492
3	pH_GEN (pH units)	7.5	8.1	7.7	7.7	7.7
4	TDS (mg/L)	348	250	268	249	302
5	Temp (deg C)	25.5	25.0	24.5	25.5	25.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	158	112	146	78	133
3	B (mg/L)	0.05	0.10	0.24	0.07	
4	Ca (mg/L)	24	22	27	20	12
5	Cl (mg/L)	44.0	48.3	58.2	29.5	60.3
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)		0.32	0.36	0.15	0.17
8	Fe (mg/L)	0.1	0.1	0.0	0.1	0.3
9	HCO3 (mg/L)	193	137	179	95	162
10	K (mg/L)	5.1	2.4	3.3	2.3	4.1
11	Mg (mg/L)	14.7	16.0	20.4	11.7	8.5
12	Na (mg/L)	56.8	40.0	58.3	11.7	50.9
13	NO2+NO3 (mg N/L)	1.60	0.41	0.43	1.00	0.24
14	NO2-N (mgN/L)	0.00	0.00	0.00	0.01	0.01
15	NO3-N (mgN/L)	1.60	0.41	0.43	0.99	0.22
16	o-PO4-P (mg P/L)	0.000	0.000	0.000	0.005	0.010
17	SiO2 (mg/L)	11.7	11.0	9.7	18.7	2.2
18	SO4 (mg/L)	32.1	27.6	27.7	14.0	26.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.8	0.4	1.0	1.5	0.7
2	COD (mg/L)			27.0	28.5	
3	DO (mg/L)	7.3	6.3	7.8	6.6	6.8
4	DO_SAT% (%)	89	76	93	80	82
5	FCol-MPN (MPN/100mL)			90	640	
6	Tcol-MPN (MPN/100mL)			156	2400	
	TRACE & TOXIC					
1	As (µg/L)		3.6	0.5	3.2	5.6
2	Cd (µg/L)		0.0	0.0	0.0	0.1
3	Cr (µg/L)		12.1	92.7	1.5	5.8
4	Cu (µg/L)		4.1	0.3	4.8	1.4
5	Ni (µg/L)		3.6	6.8	5.4	21.0
6	Pb (µg/L)		0.6	0.8	0.1	0.3
7	Zn (µg/L)		17.8	4.4	8.7	2.7
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	61	56	68	49	30
2	HAR_Total (mgCaCO3/L)	122	122	153	98	65
3	Na% (%)	49	41	45	20	61
4	RSC (-)	0.7	0.0	0.0	0.0	1.4
5	SAR (-)	2.2	1.6	2.1	0.5	2.8
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Summer				
		Mar - May				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	11.79	45.83		30.50	52.18
2	EC_GEN (µmho/cm)	401	224	230	468	501
3	pH_GEN (pH units)	8.2	8.2	8.1	8.0	7.6
4	TDS (mg/L)					
5	Temp (deg C)	29.0	26.3	26.0	26.0	26.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	125	48	70	123	124
3	B (mg/L)	0.00	0.07	0.10	0.10	0.16
4	Ca (mg/L)	19	15	16	26	26
5	Cl (mg/L)	48.0	30.0	24.9	51.0	54.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.00	0.10	0.08	0.21	0.49
8	Fe (mg/L)	0.0	0.1	0.1	0.1	0.2
9	HCO3 (mg/L)	152	58	85	150	151
10	K (mg/L)	41.8	1.6	2.0	3.4	4.1
11	Mg (mg/L)	10.4	6.7	6.8	12.1	12.6
12	Na (mg/L)	36.5	21.5	22.1	55.8	50.4
13	NO2+NO3 (mg N/L)	4.48	0.97	1.02	0.88	1.02
14	NO2-N (mgN/L)	0.00	0.01	0.00	0.01	0.00
15	NO3-N (mgN/L)	4.48	0.96	1.02	0.86	1.02
16	o-PO4-P (mg P/L)	0.000	0.326	0.021	0.026	0.031
17	SiO2 (mg/L)	3.0	13.5	10.6	14.3	16.6
18	SO4 (mg/L)	2.2	15.0	15.8	33.2	39.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)					
3	DO (mg/L)					
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
1	As (µg/L)	6.4	2.2			1.6
2	Cd (µg/L)	4.0	0.9			0.0
3	Cr (µg/L)					1.3
4	Cu (µg/L)	3.0	3.7			
5	Ni (µg/L)					
6	Pb (µg/L)	1.7	1.6			
7	Zn (µg/L)	22.0	29.0			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	47	39	40	64	64
2	HAR_Total (mgCaCO3/L)	91	66	68	115	117
3	Na% (%)	36	41	41	51	48
4	RSC (-)	0.7	0.0	0.0	0.2	0.2
5	SAR (-)	1.7	1.2	1.2	2.3	2.0
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Summer			
		Mar - May			
		2012	2013	2014	2015
	PHYSICAL				
1	Q (cumec)	125.2	32.01	32.62	18.71
2	EC_GEN (µmho/cm)	270	398	480	421
3	pH_GEN (pH units)	7.3	8.4	7.1	7.3
4	TDS (mg/L)				
5	Temp (deg C)	26.0	26.5	25.5	25.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	81	101	160	119
3	B (mg/L)		0.00	0.21	0.33
4	Ca (mg/L)	18	32	29	29
5	Cl (mg/L)	26.8	44.7	43.3	54.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.30		0.47	0.47
8	Fe (mg/L)		0.1	0.1	0.1
9	HCO3 (mg/L)	98	123	195	145
10	K (mg/L)	2.1	2.2	2.7	12.5
11	Mg (mg/L)	7.3	6.8	9.7	9.7
12	Na (mg/L)	24.3	40.4	55.5	43.6
13	NO2+NO3 (mg N/L)	1.75	2.27	1.25	1.30
14	NO2-N (mgN/L)	0.12	0.01	0.10	0.23
15	NO3-N (mgN/L)	1.63	2.26	1.15	1.06
16	o-PO4-P (mg P/L)		0.031	0.062	0.010
17	SiO2 (mg/L)		9.9	11.7	4.7
18	SO4 (mg/L)	14.4	22.1	26.3	18.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.9	1.0	1.2	
2	COD (mg/L)				
3	DO (mg/L)	5.2	5.4	4.3	5.2
4	DO_SAT% (%)	64	66	52	63
5	FCol-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
	TRACE & TOXIC				
1	As (µg/L)	1.6	7.0		
2	Cd (µg/L)	0.3	0.1		
3	Cr (µg/L)	2.4	0.7		
4	Cu (µg/L)	2.0	6.2		
5	Ni (µg/L)	7.7	4.7		
6	Pb (µg/L)	3.8	5.5		
7	Zn (µg/L)	44.0	410.9		
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	46	80	72	72
2	HAR_Total (mgCaCO3/L)	76	108	113	113
3	Na% (%)	40	44	51	43
4	RSC (-)	0.1	0.0	1.0	0.1
5	SAR (-)	1.2	1.7	2.3	1.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HARALAHALLI (AKL00S8)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Summer		
		Mar - May		
		2018	2019	2020
	PHYSICAL			
1	Q (cumec)	8.087	13.05	35.31
2	EC_GEN (µmho/cm)			376
3	pH_GEN (pH units)			8.4
4	TDS (mg/L)			208
5	Temp (deg C)			26.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			9.5
2	ALK-TOT (mgCaCO3/L)			106
3	B (mg/L)			0.04
4	Ca (mg/L)			17
5	Cl (mg/L)			38.0
6	CO3 (mg/L)			11.4
7	F (mg/L)			0.27
8	Fe (mg/L)			0.1
9	HCO3 (mg/L)			106
10	K (mg/L)			2.3
11	Mg (mg/L)			15.8
12	Na (mg/L)			42.2
13	NO2+NO3 (mg N/L)			0.15
14	NO2-N (mgN/L)			0.00
15	NO3-N (mgN/L)			0.15
16	o-PO4-P (mg P/L)			0.827
17	SiO2 (mg/L)			19.3
18	SO4 (mg/L)			22.3
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			0.4
2	COD (mg/L)			10.0
3	DO (mg/L)			8.9
4	DO_SAT% (%)			110
5	FCol-MPN (MPN/100mL)			40
6	Tcol-MPN (MPN/100mL)			230
	TRACE & TOXIC			
1	As (µg/L)	0.8	2.0	
2	Cd (µg/L)	0.4	0.0	
3	Cr (µg/L)	0.3	0.6	
4	Cu (µg/L)	2.8	0.3	
5	Ni (µg/L)	0.6	4.3	
6	Pb (µg/L)	0.7	2.8	
7	Zn (µg/L)	2.9	5.4	
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			42
2	HAR_Total (mgCaCO3/L)			108
3	Na% (%)			46
4	RSC (-)			0.0
5	SAR (-)			1.8
	PESTICIDES			

Sample are not collected during Summer season 2016 to 2017 and 2021 due to Dry bed / No flow condition.

HISTORY SHEET

		Water Year	: 2020-2021
Site	: BYLADAHALLI	Code	: AKLB0D3
State	: Karnataka	District	Davanagere
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	:
		Local River	: Haridra
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tunga SD, Devangere
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 : 2020-2021

Station Name : BYLADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water Analysis

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Jun-20	1-Jul-20	3-Aug-20	1-Sep-20	5-Oct-20	2-Nov-20
			A	A	A	A	A
	PHYSICAL						
1	Q (cumec)		2.273	2.493	14.98	18.69	21.83
2	Colour_Cod (-)		Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)		968	810	562	495	491
4	Odour_Code (-)		odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)		7.8	8.0	7.9	7.9	7.9
6	TDS (mg/L)		592	446	336	354	348
7	Temp (deg C)		25.8	25.8	26.3	26.3	25.7
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)		276	196	171	158	160
3	B (mg/L)		0.10	0.11	0.17	0.00	NA
4	Ca (mg/L)		17	40	27	33	32
5	Cl (mg/L)		99.0	115.7	45.8	51.1	43.3
6	CO3 (mg/L)		0.0	0.0	0.0	0.0	0.0
7	F (mg/L)		0.86	0.86	0.89	NA	NA
8	Fe (mg/L)		0.2	0.2	0.1	NA	NA
9	HCO3 (mg/L)		336	239	209	193	195
10	K (mg/L)		2.9	3.7	3.1	3.2	2.8
11	Mg (mg/L)		35.2	27.0	18.5	16.0	15.6
12	Na (mg/L)		150.3	94.2	68.8	54.5	56.1
13	NO2+NO3 (mg N/L)		0.71	0.85	1.55	0.59	0.08
14	NO2-N (mgN/L)		0.01	0.04	0.08	0.03	0.01
15	NO3-N (mgN/L)		0.70	0.81	1.47	0.56	0.07
16	o-PO4-P (mg P/L)		0.124	0.145	0.186	0.196	0.145
17	SiO2 (mg/L)		17.8	11.1	10.3	10.1	6.4
18	SO4 (mg/L)		63.7	74.7	38.8	10.4	27.7
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD (mg/L)		0.6	1.7	1.8	1.6	2.8
2	COD (mg/L)		20.0	12.0	NA	NA	NA
3	DO (mg/L)		5.3	4.9	6.1	6.4	7.4
4	DO_SAT% (%)		64	59	75	79	90
5	FCol-MPN (MPN/100mL)		1300	1700	790	2200	NA
6	Tcol-MPN (MPN/100mL)		3500	5400	3500	11000	NA
	TRACE & TOXIC						
1	As (μg/L)			0.6			
2	Cd (μg/L)			0.0			
3	Cr (μg/L)			23.7			
4	Cu (μg/L)			2.7			
5	Ni (μg/L)			3.0			
6	Pb (μg/L)			0.2			
7	Zn (μg/L)			9.2			
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)		43	101	68	82	80
2	HAR_Total (mgCaCO3/L)		190	213	145	149	145
3	Na% (%)		63	49	50	44	45
4	RSC (-)		1.8	0.0	0.5	0.2	0.3
5	SAR (-)		4.8	2.8	2.5	2.0	2.0

Sample not submitted due to no flow

NA- Not analysed

Water Quality Datasheet for the period : 2020-2021

Station Name : BYLADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water Analysis

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	1-Dec-20	21-Jan	Feb-21 to May 21
		A		
	PHYSICAL			
1	Q (cumec)	14.73	Sample not submitted due to Insufficient staff	Sample not submitted due to No Flow
2	Colour_Cod (-)	Clear		
3	EC_GEN (µmho/cm)	768		
4	Odour_Code (-)	odour free		
5	pH_GEN (pH units)	7.3		
6	TDS (mg/L)	548		
7	Temp (deg C)	25.8		
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0		
2	ALK-TOT (mgCaCO3/L)	239		
3	B (mg/L)	NA		
4	Ca (mg/L)	47		
5	Cl (mg/L)	75.6		
6	CO3 (mg/L)	0.0		
7	F (mg/L)	0.55		
8	Fe (mg/L)	0.1		
9	HCO3 (mg/L)	291		
10	K (mg/L)	2.7		
11	Mg (mg/L)	27.6		
12	Na (mg/L)	84.5		
13	NO2+NO3 (mg N/L)	0.28		
14	NO2-N (mgN/L)	0.00		
15	NO3-N (mgN/L)	0.28		
16	o-PO4-P (mg P/L)	0.010		
17	SiO2 (mg/L)	4.1		
18	SO4 (mg/L)	53.9		
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD (mg/L)	1.5		
2	COD (mg/L)	NA		
3	DO (mg/L)	7.6		
4	DO_SAT% (%)	92		
5	FCol-MPN (MPN/100mL)	NA		
6	Tcol-MPN (MPN/100mL)	NA		
	TRACE & TOXIC			
1	As (µg/L)	1.2		
2	Cd (µg/L)	0.1		
3	Cr (µg/L)	4.5		
4	Cu (µg/L)	0.4		
5	Ni (µg/L)	106.3		
6	Pb (µg/L)	1.8		
7	Zn (µg/L)	7.4		
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	118		
2	HAR_Total (mgCaCO3/L)	232		
3	Na% (%)	44		
4	RSC (-)	0.2		
5	SAR (-)	2.4		

NA- Not analysed

Water Quality Summary for the period : 2020-2021

Station Name : BYLADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

Sub-Division : Upper Tunga SD, Devangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	372	170.4	0.000	10.49
2	EC_GEN (μmho/cm)	6	968	491	682
3	pH_GEN (pH units)	6	8.0	7.3	7.8
4	TDS (mg/L)	6	592	336	437
5	Temp (deg C)	6	26.3	25.7	25.9
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	6	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	6	276	158	200
3	B (mg/L)	4	0.17	0.00	0.1
4	Ca (mg/L)	6	47	17	33
5	Cl (mg/L)	6	115.7	43.3	71.8
6	CO3 (mg/L)	6	0.0	0.0	0
7	F (mg/L)	4	0.89	0.55	0.79
8	Fe (mg/L)	4	0.2	0.1	0.1
9	HCO3 (mg/L)	6	336	193	244
10	K (mg/L)	6	3.7	2.7	3
11	Mg (mg/L)	6	35.2	15.6	23.3
12	Na (mg/L)	6	150.3	54.5	84.7
13	NO2+NO3 (mg N/L)	6	1.55	0.08	0.68
14	NO2-N (mgN/L)	6	0.08	0.00	0.03
15	NO3-N (mgN/L)	6	1.47	0.07	0.65
16	o-PO4-P (mg P/L)	6	0.196	0.010	0.134
17	SiO2 (mg/L)	6	17.8	4.1	9.9
18	SO4 (mg/L)	6	74.7	10.4	44.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3 (mg/L)	6	2.8	0.6	1.7
2	COD (mg/L)	2	20.0	12.0	16
3	DO (mg/L)	6	7.6	4.9	6.3
4	DO_SAT% (%)	6	92	59	77
5	FCol-MPN (MPN/100mL)	4	2200	790	1498
6	Tcol-MPN (MPN/100mL)	4	11000	3500	5850
	TRACE & TOXIC				
1	As (μg/L)	2	1.2	0.6	0.9
2	Cd (μg/L)	2	0.1	0.0	0
3	Cr (μg/L)	2	23.7	4.5	14.1
4	Cu (μg/L)	2	2.7	0.4	1.5
5	Ni (μg/L)	2	106.3	3.0	54.6
6	Pb (μg/L)	2	1.8	0.2	1
7	Zn (μg/L)	2	9.2	7.4	8.3
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	6	118	43	82
2	HAR_Total (mgCaCO3/L)	6	232	145	179
3	Na% (%)	6	63	44	49
4	RSC (-)	6	1.8	0.0	0.5
5	SAR (-)	6	4.8	2.0	2.7

Water Quality Seasonal Average for the period: 2006-2021

Station Name : BYLADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Flood			
		Jun - Oct			
		2008	2009	2010	2011
	PHYSICAL				
1	Q (cumec)	16.37	24.01	31.75	21.61
2	EC_GEN (µmho/cm)	543	548	565	599
3	pH_FLD (pH units)				
4	pH_GEN (pH units)	8.0	7.9	7.8	7.7
5	TDS (mg/L)				
6	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				
1	BOD3-27 (mg/L)				
2	COD (mg/L)				
3	DO (mg/L)				
4	DO_SAT% (%)				
5	FCol-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
	TRACE & TOXIC				
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: 2006-2021

Station Name : BYLADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Flood			
		Jun - Oct			
		2012	2013	2014	2015
	PHYSICAL				
1	Q (cumec)	20.33	27.79	21.97	27.48
2	EC_GEN (µmho/cm)	572	516	654	633
3	pH_FLD (pH units)				
4	pH_GEN (pH units)	7.7	7.9	7.9	7.7
5	TDS (mg/L)				
6	Temp (deg C)	27.0	26.1	24.9	25.5
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)	186	143	216	183
2	B (mg/L)		0.04	0.23	0.71
3	Ca (mg/L)	36	32	39	43
4	Cl (mg/L)	55.6	52.8	67.7	66.6
5	F (mg/L)	0.92	0.29	0.29	0.88
6	Fe (mg/L)		0.1	0.1	0.1
7	HCO3 (mg/L)	227	203	263	223
8	K (mg/L)	3.0	3.8	5.6	4.6
9	Mg (mg/L)	13.6	13.4	18.5	16.0
10	Na (mg/L)	65.0	58.3	68.7	67.9
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)	2.85	2.36	2.30	1.35
13	NO2-N (mgN/L)	0.02	0.01	0.05	0.09
14	NO3-N (mgN/L)	2.83	2.34	2.25	1.26
15	o-PO4-P (mg P/L)		0.065	0.235	0.289
16	SiO2 (mg/L)		16.4	7.2	13.3
17	SO4 (mg/L)	20.0	19.6	18.2	53.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
2	COD (mg/L)				
3	DO (mg/L)				
4	DO_SAT% (%)				
5	FCol-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
	TRACE & TOXIC				
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
2	HAR_Total (mgCaCO3/L)	146	137	174	174
3	Na% (%)	48	44	44	45
4	RSC (-)	0.8	0.7	0.9	0.2
5	SAR (-)	2.3	2.0	2.2	2.2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

Station Name : BYLADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Flood				
		Jun - Oct				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	22.14	Dry bed	6.468	3.622	9.609
2	EC_GEN (µmho/cm)	734	No Flow	655	660	709
3	pH_FLD (pH units)				7.0	
4	pH_GEN (pH units)	8.1		8.1	7.9	7.9
5	TDS (mg/L)	455		419	424	432
6	Temp (deg C)	24.0		25.1	25.9	26.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	196		193	179	200
2	B (mg/L)	0.20		0.16	0.19	0.10
3	Ca (mg/L)	35		38	35	29
4	Cl (mg/L)	83.1		65.4	69.6	77.9
5	F (mg/L)			0.76	0.65	0.87
6	Fe (mg/L)	0.0		0.2	0.5	0.2
7	HCO3 (mg/L)	239		236	218	244
8	K (mg/L)	3.9		2.4	4.1	3.2
9	Mg (mg/L)	23.3		25.9	19.0	24.2
10	Na (mg/L)	98.0		62.2	80.0	92.0
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)	3.61		0.28	1.02	0.93
13	NO2-N (mgN/L)	0.01		0.01	0.19	0.04
14	NO3-N (mgN/L)	3.60		0.27	0.83	0.89
15	o-PO4-P (mg P/L)	0.413		0.145	0.231	0.163
16	SiO2 (mg/L)	10.1		6.6	11.5	12.3
17	SO4 (mg/L)	44.1		45.6	55.6	46.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)			1.9	2.1	1.4
2	COD (mg/L)			28.3	13.0	16.0
3	DO (mg/L)			5.8	6.4	5.7
4	DO_SAT% (%)			69	78	69
5	FCol-MPN (MPN/100mL)			3733	1077	1498
6	Tcol-MPN (MPN/100mL)			14400	15033	5850
	TRACE & TOXIC					
1	As (µg/L)			0.2	0.8	0.6
2	Cd (µg/L)			0.4	0.7	0.0
3	Cr (µg/L)			0.3	0.7	23.7
4	Cu (µg/L)			2.3	1.8	2.7
5	Ni (µg/L)			3.7	12.6	3.0
6	Pb (µg/L)			1.1	0.0	0.2
7	Zn (µg/L)			7.8	14.9	9.2
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	88		96	86	74
2	HAR_Total (mgCaCO3/L)	185		204	165	174
3	Na% (%)	53		41	51	51
4	RSC (-)	0.2		0.3	0.4	0.6
5	SAR (-)	3.1		1.9	2.7	3.0
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : BYLADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Winter			
		Nov - Feb			
		2008-2009	2009-2010	2010-2011	2011-2012
	PHYSICAL				
1	Q (cumec)	23.58	8.290	19.36	6.850
2	EC_GEN (µmho/cm)	554	572	604	708
3	pH_FLD (pH units)				
4	pH_GEN (pH units)	8.1	7.9	7.9	7.3
5	TDS (mg/L)				
6	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				
1	BOD3-27 (mg/L)				
2	COD (mg/L)				
3	DO (mg/L)				
4	DO_SAT% (%)				
5	FCol-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
	TRACE & TOXIC				
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: 2006-2021

Station Name : BYLADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Winter			
		Nov - Feb			
		2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL				
1	Q (cumec)	170.4	4.156	12.45	9.518
2	EC_GEN (µmho/cm)	683	610	649	577
3	pH_FLD (pH units)				
4	pH_GEN (pH units)	7.6	7.7	7.9	7.9
5	TDS (mg/L)				
6	Temp (deg C)	23.5	25.5	24.7	25.0
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)	232	218	220	192
2	B (mg/L)		0.02	0.33	0.35
3	Ca (mg/L)	42	37	43	33
4	Cl (mg/L)	64.8	55.2	70.1	60.3
5	F (mg/L)	0.65	0.70	0.60	0.70
6	Fe (mg/L)		0.0	0.0	0.1
7	HCO3 (mg/L)	284	266	268	234
8	K (mg/L)	4.1	2.4	12.1	2.2
9	Mg (mg/L)	17.5	15.6	17.8	18.5
10	Na (mg/L)	70.8	80.1	67.0	66.9
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)	1.69	1.90	2.18	1.62
13	NO2-N (mgN/L)	0.03	0.07	0.02	0.04
14	NO3-N (mgN/L)	1.66	1.83	2.16	1.58
15	o-PO4-P (mg P/L)		0.098	0.093	0.434
16	SiO2 (mg/L)		14.2	9.3	14.8
17	SO4 (mg/L)	16.3	20.6	23.9	30.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
2	COD (mg/L)				
3	DO (mg/L)				
4	DO_SAT% (%)				
5	FCol-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)			0.2	
3	Cr (µg/L)			0.0	
4	Cu (µg/L)			4.5	
5	Ni (µg/L)			0.0	
6	Pb (µg/L)			1.3	
7	Zn (µg/L)			9.0	
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	106	92	107	82
2	HAR_Total (mgCaCO3/L)	179	157	181	159
3	Na% (%)	46	52	41	48
4	RSC (-)	1.1	1.2	0.8	0.7
5	SAR (-)	2.3	2.8	2.1	2.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

Station Name : BYLADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Winter				
		Nov - Feb				
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	6.206	Dry bed	7.090	10.59	18.28
2	EC_GEN (µmho/cm)	870	No Flow	832	602	630
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.9		7.9	8.1	7.6
5	TDS (mg/L)	562		470	455	448
6	Temp (deg C)	24.5		25.6	25.9	25.7
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	300		244	203	199
2	B (mg/L)	0.01		0.18	0.20	
3	Ca (mg/L)	44		43	25	40
4	Cl (mg/L)	91.4		91.7	54.2	59.5
5	F (mg/L)			0.79	0.53	0.55
6	Fe (mg/L)	0.0		0.0	0.0	0.1
7	HCO3 (mg/L)	366		297	247	243
8	K (mg/L)	2.8		4.3	3.6	2.7
9	Mg (mg/L)	23.4		24.5	19.2	21.6
10	Na (mg/L)	106.1		98.0	76.5	70.3
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)	1.64		2.56	1.06	0.18
13	NO2-N (mgN/L)	0.02		0.00	0.05	0.01
14	NO3-N (mgN/L)	1.62		2.56	1.02	0.18
15	o-PO4-P (mg P/L)	0.460		4.003	0.086	0.078
16	SiO2 (mg/L)	24.7		11.2	16.7	5.2
17	SO4 (mg/L)	47.0		55.2	24.8	40.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)			1.1	1.7	2.1
2	COD (mg/L)			15.0	15.3	
3	DO (mg/L)			6.5	6.7	7.5
4	DO_SAT% (%)			79	82	91
5	FCol-MPN (MPN/100mL)			6417	860	
6	Tcol-MPN (MPN/100mL)			16233	4167	
	TRACE & TOXIC					
1	As (µg/L)	0.9		0.1	1.5	1.2
2	Cd (µg/L)	0.1		0.0	0.0	0.1
3	Cr (µg/L)	0.2		35.9	4.2	4.5
4	Cu (µg/L)	1.0		2.0	4.0	0.4
5	Ni (µg/L)	1.0		5.8	0.3	106.3
6	Pb (µg/L)	0.0		1.0	0.3	1.8
7	Zn (µg/L)	2.0		11.0	8.0	7.4
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	109		108	64	99
2	HAR_Total (mgCaCO3/L)	206		210	144	189
3	Na% (%)	53		49	50	45
4	RSC (-)	1.9		0.7	1.2	0.2
5	SAR (-)	3.2		2.9	2.8	2.2
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : BYLADAHALLI (AKLB0D3)

Division : Cauvery Division, Bangalore

Local River : Haridra

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Summer	
		Mar - May	
		2008	2012
	PHYSICAL		
1	Q (cumec)	3.059	40.28
2	EC_GEN (µmho/cm)	653	531
3	pH_FLD (pH units)		
4	pH_GEN (pH units)	7.8	7.5
5	TDS (mg/L)		
6	Temp (deg C)	27.0	29.5
	CHEMICAL		
1	ALK-TOT (mgCaCO3/L)	199	181
2	B (mg/L)	0.12	
3	Ca (mg/L)	44	32
4	Cl (mg/L)	71.6	47.9
5	F (mg/L)	0.30	0.84
6	Fe (mg/L)	0.1	
7	HCO3 (mg/L)	243	220
8	K (mg/L)	7.0	4.2
9	Mg (mg/L)	24.5	19.4
10	Na (mg/L)	52.0	54.0
11	NH3-N (mg N/L)		
12	NO2+NO3 (mg N/L)	1.23	2.60
13	NO2-N (mgN/L)	0.00	0.08
14	NO3-N (mgN/L)	1.23	2.52
15	o-PO4-P (mg P/L)	0.052	
16	SiO2 (mg/L)	38.6	
17	SO4 (mg/L)	13.7	19.1
	BIOLOGICAL/BACTERIOLOGICAL		
1	BOD3-27 (mg/L)		
2	COD (mg/L)		
3	DO (mg/L)		
4	DO_SAT% (%)		
5	FCol-MPN (MPN/100mL)		
6	Tcol-MPN (MPN/100mL)		
	TRACE & TOXIC		
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)	111	80
2	HAR_Total (mgCaCO3/L)	213	161
3	Na% (%)	34	42
4	RSC (-)	0.0	0.4
5	SAR (-)	1.6	1.9
	PESTICIDES		

Samples are not taken in Summer season 2009 to 2011 and 2013 to 2021 due to Drybed / No flow Condition.

HISTORY SHEET

		Water Year	: 2020-2021
Site	: KUPPELUR	Code	: AKLC0B8
State	: Karnataka	District	Haveri
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	:
		Local River	: Kumudavathi
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tunga SD, Devangere
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	: 23-07-2014		
Water Quality	: 01-07-1994		

Water Quality Datasheet for the period : 2020-2021

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

River Water Analysis

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters		3-Aug-20	1-Sep-20	5-Oct-20	Nov-20	
			A	A	A		
	PHYSICAL						
1	Q (cumec)		4.267	38.05	33.99		
2	Colour_Cod (-)		Clear	Clear	Clear		
3	EC_GEN (µmho/cm)		465	281	363		
4	Odour_Code (-)		odour free	odour free	odour free		
5	pH_GEN (pH units)		8.1	7.7	7.8		
6	TDS (mg/L)		266	222	220		
7	Temp (deg C)		25.5	26.0	25.5		
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0		
2	ALK-TOT (mgCaCO3/L)		130	86	105		
3	B (mg/L)		0.07	0.13	0.02		
4	Ca (mg/L)		39	24	28		
5	Cl (mg/L)		54.0	28.8	41.5		
6	CO3 (mg/L)		0.0	0.0	0.0		
7	F (mg/L)		0.44	0.19	NA		
8	Fe (mg/L)		0.0	0.3	NA		
9	HCO3 (mg/L)		130	104	128		
10	K (mg/L)		3.0	2.2	2.6		
11	Mg (mg/L)		23.1	11.7	16.9		
12	Na (mg/L)		27.8	14.1	20.1		
13	NO2+NO3 (mg N/L)		0.32	1.15	0.94		
14	NO2-N (mgN/L)		0.00	0.01	0.00		
15	NO3-N (mgN/L)		0.32	1.13	0.94		
16	o-PO4-P (mg P/L)		0.021	0.031	0.021		
17	SiO2 (mg/L)		12.6	10.0	12.5		
18	SO4 (mg/L)		13.0	11.5	11.2		
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD (mg/L)		1.5	0.4	0.2		
2	COD (mg/L)		25.0	NA	NA		
3	DO (mg/L)		7.3	7.7	7.2		
4	DO_SAT% (%)		88	94	87		
5	FCol-MPN (MPN/100mL)		1300	490	1100		
6	Tcol-MPN (MPN/100mL)		9200	1100	2200		
	TRACE & TOXIC						
1	As (µg/L)		0.1				
2	Cd (µg/L)		0.1				
3	Cr (µg/L)		7.7				
4	Cu (µg/L)		0.6				
5	Ni (µg/L)		0.1				
6	Pb (µg/L)		0.2				
7	Zn (µg/L)		0.9				
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)		97	60	71		
2	HAR_Total (mgCaCO3/L)		193	109	141		
3	Na% (%)		24	22	23		
4	RSC (-)		0.0	0.0	0.0		
5	SAR (-)		0.9	0.6	0.7		

June 2020-July 2020 sample not submitted due to dry bed

Sample not submitted due to insufficient staff

Dec-2020 to May-2021 Sample not submitted due to No Flow

Water Quality Summary for the period : 2020-2021

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

Sub-Division : Upper Tunga SD, Devangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	371	211.4	0.000	16.21
2	EC_GEN (µmho/cm)	3	465	281	370
3	pH_GEN (pH units)	3	8.1	7.7	7.9
4	TDS (mg/L)	3	266	220	236
5	Temp (deg C)	3	26.0	25.5	25.7
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	3	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	2	105	86	95
3	B (mg/L)	3	0.13	0.02	0.07
4	Ca (mg/L)	3	39	24	30
5	Cl (mg/L)	3	54.0	28.8	41.4
6	CO3 (mg/L)	3	0.0	0.0	0
7	F (mg/L)	2	0.44	0.19	0.31
8	Fe (mg/L)	2	0.3	0.0	0.2
9	HCO3 (mg/L)	3	130	104	121
10	K (mg/L)	3	3.0	2.2	2.6
11	Mg (mg/L)	3	23.1	11.7	17.2
12	Na (mg/L)	3	27.8	14.1	20.7
13	NO2+NO3 (mg N/L)	3	1.15	0.32	0.8
14	NO2-N (mgN/L)	3	0.01	0.00	0
15	NO3-N (mgN/L)	3	1.13	0.32	0.8
16	o-PO4-P (mg P/L)	3	0.031	0.021	0.024
17	SiO2 (mg/L)	3	12.6	10.0	11.7
18	SO4 (mg/L)	3	19.0	11.2	13.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD (mg/L)	3	1.5	0.2	0.7
2	COD (mg/L)	1	25.0	25.0	25
3	DO (mg/L)	3	7.7	7.2	7.4
4	DO_SAT% (%)	3	94	87	90
5	FCol-MPN (MPN/100mL)	3	1300	490	963
6	Tcol-MPN (MPN/100mL)	3	9200	1100	4167
	TRACE & TOXIC				
1	As (µg/L)	1	0.1	0.1	0.1
2	Cd (µg/L)	1	0.1	0.1	0.1
3	Cr (µg/L)	1	7.7	7.7	7.7
4	Cu (µg/L)	1	0.6	0.6	0.6
5	Ni (µg/L)	1	0.1	0.1	0.1
6	Pb (µg/L)	1	0.2	0.2	0.2
7	Zn (µg/L)	1	0.9	0.9	0.9
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	3	97	60	76
2	HAR_Total (mgCaCO3/L)	3	193	109	148
3	Na% (%)	3	24	22	23
4	RSC (-)	3	0.0	0.0	0
5	SAR (-)	3	0.9	0.6	0.7

Water Quality Seasonal Average for the period: 2008-2021

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Flood				
		Jun - Oct				
		2008	2009	2010	2011	2012
	PHYSICAL					
1	Q (cumec)	22.59	56.14	118.8	31.66	16.87
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	298	292	343	343	334
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.0	7.9	7.8	7.4	7.4
6	TDS (mg/L)					
7	Temp (deg C)	25.1	25.8	26.2	26.2	25.8
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	88	85	106	100	119
2	B (mg/L)	0.33	0.04			
3	Ca (mg/L)	29	24	27	27	31
4	Cl (mg/L)	28.8	34.0	42.3	39.5	34.4
5	F (mg/L)	0.19	0.26	0.22	0.29	0.32
6	Fe (mg/L)	0.1	0.2	0.5	0.1	
7	HCO3 (mg/L)	108	104	129	122	133
8	K (mg/L)	3.1	3.4	2.5	2.6	3.0
9	Mg (mg/L)	8.7	9.0	13.1	11.0	8.3
10	Na (mg/L)	17.3	22.0	25.1	23.9	21.3
11	NO2+NO3 (mg N/L)	1.36	1.20	1.70	1.69	2.37
12	NO2-N (mgN/L)	0.02	0.03	0.01	0.01	0.01
13	NO3-N (mgN/L)	1.34	1.17	1.69	1.68	2.35
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	10.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)					
3	DO (mg/L)					
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
1	As (µg/L)					1.6
2	Cd (µg/L)					0.7
3	Cr (µg/L)					3.4
4	Cu (µg/L)					11.6
5	Ni (µg/L)					3.5
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	72	60	68	68	78
2	HAR_Total (mgCaCO3/L)	108	97	123	114	112
3	Na% (%)	25	30	29	31	29
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.7	1.0	0.9	1.0	0.9
	PESTICIDES					

Water Quality Seasonal Average for the period: 2008-2021

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Flood			
		Jun - Oct			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	132.2	148.5	12.94	3.026
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)	307	247	311	569
4	pH_FLD (pH units)				
5	pH_GEN (pH units)	7.5	7.4	7.5	7.5
6	TDS (mg/L)				350
7	Temp (deg C)	26.5	26.0	27.5	26.8
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)	92	69	89	135
2	B (mg/L)	0.01	0.11	0.67	0.16
3	Ca (mg/L)	29	20	25	34
4	Cl (mg/L)	33.8	28.2	38.9	83.2
5	F (mg/L)	0.30	0.16	0.34	
6	Fe (mg/L)	0.3	0.6	0.2	0.2
7	HCO3 (mg/L)	112	85	108	165
8	K (mg/L)	2.8	3.9	3.4	4.2
9	Mg (mg/L)	7.1	9.1	10.2	28.0
10	Na (mg/L)	27.2	16.2	20.9	42.7
11	NO2+NO3 (mg N/L)	3.25	2.90	1.06	2.48
12	NO2-N (mgN/L)	0.01	0.05	0.01	0.01
13	NO3-N (mgN/L)	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)	13.7	12.2	12.3	34.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)		1.4	1.3	2.2
2	COD (mg/L)				
3	DO (mg/L)		6.0	4.8	6.4
4	DO_SAT% (%)		74	61	80
5	FCol-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
	TRACE & TOXIC				
1	As (µg/L)	6.0			
2	Cd (µg/L)	0.3			
3	Cr (µg/L)	1.0			
4	Cu (µg/L)	1.9			
5	Ni (µg/L)	11.9			
6	Pb (µg/L)	12.8			
7	Zn (µg/L)	0.0			
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	73	51	63	84
2	HAR_Total (mgCaCO3/L)	103	88	106	201
3	Na% (%)	34	29	29	28
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	1.1	0.8	0.9	1.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2008-2021

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Flood			
		Jun - Oct			
		2017	2018	2019	2020
	PHYSICAL				
1	Q (cumec)	Dry bed	8.376	34.26	25.43
2	EC_FLD (µmho/cm)	No flow		294	
3	EC_GEN (µmho/cm)		253	314	370
4	pH_FLD (pH units)			7.6	
5	pH_GEN (pH units)		7.7	7.6	7.9
6	TDS (mg/L)		151	223	236
7	Temp (deg C)		25.8	25.0	25.7
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)		80	85	95
2	B (mg/L)		0.08	0.16	0.07
3	Ca (mg/L)		27	18	30
4	Cl (mg/L)		25.0	37.0	41.4
5	F (mg/L)		0.15	0.18	0.31
6	Fe (mg/L)		0.3	0.3	0.2
7	HCO3 (mg/L)		98	104	121
8	K (mg/L)		2.0	3.8	2.6
9	Mg (mg/L)		8.7	13.6	17.2
10	Na (mg/L)		28.8	21.4	20.7
11	NO2+NO3 (mg N/L)		0.24	1.36	0.80
12	NO2-N (mgN/L)		0.01	0.06	0.00
13	NO3-N (mgN/L)		0.23	1.30	0.80
14	o-PO4-P (mg P/L)		0.007	0.034	0.024
15	SiO2 (mg/L)		7.1	12.6	11.7
16	SO4 (mg/L)		11.6	22.3	13.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)		3.3	1.4	0.7
2	COD (mg/L)		15.7	10.3	25.0
3	DO (mg/L)		6.7	6.6	7.4
4	DO_SAT% (%)		82	80	90
5	Fcol-MPN (MPN/100mL)		3790	1833	963
6	Tcol-MPN (MPN/100mL)		14900	20733	4167
	TRACE & TOXIC				
1	As (µg/L)		9.9	1.7	0.1
2	Cd (µg/L)		0.3	0.1	0.1
3	Cr (µg/L)		7.4	4.3	7.7
4	Cu (µg/L)		2.0	2.2	0.6
5	Ni (µg/L)		6.7	9.0	0.1
6	Pb (µg/L)		0.6	0.0	0.2
7	Zn (µg/L)		7.5	18.7	0.9
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)		67	44	76
2	HAR_Total (mgCaCO3/L)		103	100	148
3	Na% (%)		34	30	23
4	RSC (-)		0.0	0.1	0.0
5	SAR (-)		1.3	0.9	0.7
	PESTICIDES				

Water Quality Seasonal Average for the period: 2008-2021

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Winter				
		Nov - Feb				
		2008-2009	2009-2010	2010-2011	2011-2012	2013-2014
	PHYSICAL					
1	Q (cumec)	5.039	10.37	10.84	17.05	4.564
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	382	456	602	460	526
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.9	7.8	7.9	7.3	7.6
6	TDS (mg/L)					
7	Temp (deg C)	24.8	24.5	25.2	26.5	26.5
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	133	149	161	137	153
2	B (mg/L)	0.19	0.15	0.13		0.02
3	Ca (mg/L)	34	42	44	38	43
4	Cl (mg/L)	40.6	48.6	79.4	58.0	67.1
5	F (mg/L)	0.28	0.30	0.32		0.40
6	Fe (mg/L)	0.1	0.1	0.0	0.0	0.1
7	HCO3 (mg/L)	162	182	197	168	187
8	K (mg/L)	2.7	2.1	3.7	2.1	2.3
9	Mg (mg/L)	13.1	16.5	21.1	14.1	18.5
10	Na (mg/L)	24.1	32.2	45.3	32.2	40.5
11	NO2+NO3 (mg N/L)	0.88	1.58	2.65	2.12	2.05
12	NO2-N (mgN/L)	0.01	0.04	0.01	0.01	0.01
13	NO3-N (mgN/L)	0.86	1.54	2.64	2.11	2.03
14	o-PO4-P (mg P/L)	0.031	0.000	0.000	0.000	0.021
15	SiO2 (mg/L)	11.5	13.2	12.4	12.1	13.3
16	SO4 (mg/L)	6.1	12.2	22.9	12.3	9.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)					
3	DO (mg/L)					
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
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	108
2	HAR_Total (mgCaCO3/L)	141	173	197	153	185
3	Na% (%)	27	29	32	31	32
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.9	1.1	1.4	1.1	1.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2008-2021

Station Name : KUPPELUR (AKLC0B8)

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Winter			Summer
		Nov - Feb			Mar - May
		2014-2015	2018-2019	2019-2020	Sample are not collected during Winter season 2009 to 2021 due to Dry bed / No flow condition.
	PHYSICAL				
1	Q (cumec)	13.91	1.078	27.87	
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)	633	575	574	
4	pH_FLD (pH units)				
5	pH_GEN (pH units)	8.3	7.9	8.0	
6	TDS (mg/L)		296	450	
7	Temp (deg C)	25.0	25.5	24.8	
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)	177	182	209	
2	B (mg/L)	0.44	0.05	0.15	
3	Ca (mg/L)	50	50	27	
4	Cl (mg/L)	96.6	80.2	74.7	
5	F (mg/L)	0.38	0.34	0.23	
6	Fe (mg/L)	0.0	0.0	1.3	
7	HCO3 (mg/L)	216	222	255	
8	K (mg/L)	8.7	3.0	3.4	
9	Mg (mg/L)	22.4	14.6	31.8	
10	Na (mg/L)	40.5	53.0	39.8	
11	NO2+NO3 (mg N/L)	2.44	0.91	2.11	
12	NO2-N (mgN/L)	0.01	0.00	0.01	
13	NO3-N (mgN/L)	2.42	0.91	2.09	
14	o-PO4-P (mg P/L)	0.010	0.000	0.000	
15	SiO2 (mg/L)	7.7	8.8	12.1	
16	SO4 (mg/L)	12.0	23.0	13.9	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.3	1.0	4.3	
2	COD (mg/L)		8.0	10.5	
3	DO (mg/L)	6.7	6.8	3.6	
4	DO_SAT% (%)	81	82	44	
5	FCol-MPN (MPN/100mL)		650	873	
6	Tcol-MPN (MPN/100mL)		1150	2815	
	TRACE & TOXIC				
1	As (µg/L)			1.9	
2	Cd (µg/L)			0.0	
3	Cr (µg/L)			6.2	
4	Cu (µg/L)			2.9	
5	Ni (µg/L)			8.0	
6	Pb (µg/L)			0.2	
7	Zn (µg/L)			9.8	
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	124	124	67	
2	HAR_Total (mgCaCO3/L)	217	185	200	
3	Na% (%)	28	38	26	
4	RSC (-)	0.0	0.0	0.4	
5	SAR (-)	1.2	1.7	1.1	
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2020-2021
Site	: HONNALI	Code	: AKL00X6
State	: Karnataka	District	Davanagere
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	:
		Local River	: Tungabhadra
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tunga Subdn, Devangere
Drainage Area	: 7075 Sq. Km.	Bank	: Left
Latitude	: 14°14'14"	Longitude	: 75°39'45"
	Opening Date	Closing Date	
Gauge	: 01-06-1980		
Discharge	: 21-06-1980		
Sediment	: 15-09-1995		
Water Quality	: 02-06-1986		

Water Quality Datasheet for the period : 2020-2021

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water Analysis

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	1-Jun-20	1-Jul-20	3-Aug-20	1-Sep-20	5-Oct-20	1-Dec-20
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	18.95	78.74	135.1	266.6	242.1	55.25
2	Colour_Cod (-)	Clear	Light Brown	Light Brown	Light Brown	Clear	Clear
3	EC_GEN (µmho/cm)	233	100	156	116	182	150
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.1	7.4	7.4	7.3	7.5	7.7
6	TDS (mg/L)	152	56	94	66	108	106
7	Temp (deg C)	27.0	26.0	24.0	24.0	26.0	25.0
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	85	26	44	26	59	54
3	B (mg/L)	0.11	0.01	0.01	0.06	0.02	
4	Ca (mg/L)	17	8	13	10	13	12
5	Cl (mg/L)	21.3	13.5	17.4	13.5	20.9	13.5
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.13	0.04	0.17	0.06	NA	0.10
8	Fe (mg/L)	0.3	0.2	0.7	0.4	NA	0.1
9	HCO3 (mg/L)	104	32	54	31	71	66
10	K (mg/L)	2.5	0.9	1.6	1.2	2.1	1.5
11	Mg (mg/L)	13.0	3.8	5.7	5.8	4.7	7.2
12	Na (mg/L)	11.8	7.3	9.6	5.7	16.9	7.7
13	NO2+NO3 (mg N/L)	0.13	0.25	0.36	0.36	0.35	0.11
14	NO2-N (mgN/L)	0.00	0.00	0.01	0.00	0.00	0.00
15	NO3-N (mgN/L)	0.13	0.25	0.35	0.36	0.35	0.11
16	o-PO4-P (mg P/L)	0.021	0.000	0.041	0.021	0.000	0.000
17	SiO2 (mg/L)	18.8	8.5	10.5	9.1	13.3	2.4
18	SO4 (mg/L)	9.2	9.3	13.9	12.6	11.3	7.1
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD (mg/L)	0.7	0.6	1.9	1.6	1.2	0.9
2	COD (mg/L)	20.9	10.0	18.0	NA	NA	NA
3	DO (mg/L)	7.6	7.5	7.5	7.5	8.2	7.8
4	DO_SAT% (%)	96	93	89	89	101	94
5	FCol-MPN (MPN/100mL)	3500	1300	2800	1100	1700	NA
6	Tcol-MPN (MPN/100mL)	5400	9200	16000	5400	1700	NA
	TRACE & TOXIC						
1	As (µg/L)	0.4		0.9			1.4
2	Cd (µg/L)	BDL		0.3			0.1
3	Cr (µg/L)	3.3		31.9			12.0
4	Cu (µg/L)	8.6		1.8			18.2
5	Ni (µg/L)	28.1		1.3			73.7
6	Pb (µg/L)	BDL		0.1			2.7
7	Zn (µg/L)	26.8		10.4			2.1
8	Hg (µg/L)	1.1		NA			NA
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	42	20	32	24	32	30
2	HAR_Total (mgCaCO3/L)	96	35	55	48	51	59
3	Na% (%)	21	30	27	20	41	21
4	RSC (-)	0.0	0.0	0.0	0.0	0.2	0.0
5	SAR (-)	0.5	0.5	0.6	0.4	1.0	0.4

November 2020 and January 2021 sample not submitted due to shortage of staff

Water Quality Summary for the period : 2020-2021

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

Sub-Division : Upper Tunga Subdn, Devangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	370	3444	13.76	214.0
2	EC_GEN (µmho/cm)	6	233	100	156
3	pH_GEN (pH units)	6	8.1	7.3	7.6
4	TDS (mg/L)	6	152	56	97
5	Temp (deg C)	6	27.0	24.0	25.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	6	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	6	85	26	49
3	B (mg/L)	5	0.11	0.01	0.04
4	Ca (mg/L)	6	17	8	12
5	Cl (mg/L)	6	21.3	13.5	16.7
6	CO3 (mg/L)	6	0.0	0.0	0
7	F (mg/L)	5	0.17	0.04	0.1
8	Fe (mg/L)	5	0.7	0.1	0.3
9	HCO3 (mg/L)	6	104	31	60
10	K (mg/L)	6	2.5	0.9	1.6
11	Mg (mg/L)	6	13.0	3.8	6.7
12	Na (mg/L)	6	16.9	5.7	9.8
13	NO2+NO3 (mg N/L)	6	0.36	0.11	0.26
14	NO2-N (mgN/L)	6	0.01	0.00	0
15	NO3-N (mgN/L)	6	0.36	0.11	0.26
16	o-PO4-P (mg P/L)	6	0.041	0.000	0.014
17	SiO2 (mg/L)	6	18.8	2.4	10.4
18	SO4 (mg/L)	6	13.9	7.1	10.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD (mg/L)	6	1.9	0.6	1.2
2	COD (mg/L)	3	20.9	10.0	16.3
3	DO (mg/L)	6	8.2	7.5	7.7
4	DO_SAT% (%)	6	101	89	94
5	FCol-MPN (MPN/100mL)	5	3500	1100	2080
6	Tcol-MPN (MPN/100mL)	5	16000	1700	7540
	TRACE & TOXIC				
1	As (µg/L)	3	1.4	0.4	0.9
2	Cd (µg/L)	2	0.3	0.1	0.2
3	Cr (µg/L)	3	31.9	3.3	15.7
4	Cu (µg/L)	3	18.2	1.8	9.5
5	Ni (µg/L)	3	73.7	1.3	34.4
6	Pb (µg/L)	2	2.7	0.1	1.4
7	Zn (µg/L)	3	26.8	2.1	13.1
8	Hg (µg/L)	1	1.1	1.1	1.1
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	6	42	20	30
2	HAR_Total (mgCaCO3/L)	6	96	35	58
3	Na% (%)	6	41	20	27
4	RSC (-)	6	0.2	0.0	0
5	SAR (-)	6	1.0	0.4	0.6

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Flood				
		Jun - Oct				
		2008	2009	2010	2011	2012
	PHYSICAL					
1	Q (cumec)	533.8	308.8	776.5	1445	361.9
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	137	121	88	56	63
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.9	7.7	7.2	6.4	7.1
6	TDS (mg/L)					
7	Temp (deg C)	27.0	26.8	25.6	26.9	25.8
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	40	38	27	16	19
2	B (mg/L)		0.01			
3	Ca (mg/L)	10	10	7	4	4
4	Cl (mg/L)	17.6	12.6	9.6	6.0	6.6
5	F (mg/L)	0.03	0.07	0.12	0.06	0.05
6	Fe (mg/L)		0.2	0.3	0.1	
7	HCO3 (mg/L)	49	47	33	20	23
8	K (mg/L)	2.5	1.6	1.2	1.0	1.1
9	Mg (mg/L)	2.9	4.4	3.9	1.5	2.7
10	Na (mg/L)	10.8	8.4	5.2	3.5	3.8
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)	0.45	0.65	0.69	0.53	0.71
13	NO2-N (mgN/L)	0.00	0.00	0.33	0.00	0.01
14	NO3-N (mgN/L)	0.45	0.65	0.36	0.53	0.71
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	3.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)				0.4	0.5
2	COD (mg/L)					
3	DO (mg/L)			5.3	6.1	6.4
4	DO_SAT% (%)			65	76	78
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
1	As (µg/L)					0.6
2	Cd (µg/L)					0.2
3	Cr (µg/L)					7.3
4	Cu (µg/L)					5.4
5	Ni (µg/L)					2.3
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	26	24	18	10	11
2	HAR_Total (mgCaCO3/L)	38	42	34	16	22
3	Na% (%)	35	28	24	31	26
4	RSC (-)	0.1	0.0	0.0	0.0	0.0
5	SAR (-)	0.8	0.5	0.4	0.4	0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

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

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Flood			
		Jun - Oct			
		2017	2018	2019	2020
	PHYSICAL				
1	Q (cumec)	248.1	447.3	302.6	148.3
2	EC_FLD (µmho/cm)			271	
3	EC_GEN (µmho/cm)	60	97	137	157
4	pH_FLD (pH units)			7.4	
5	pH_GEN (pH units)	7.1	7.3	7.5	7.5
6	TDS (mg/L)	46	66	103	95
7	Temp (deg C)	24.3	25.5	25.4	25.4
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)	17	22	46	48
2	B (mg/L)	0.03	0.24	0.09	0.04
3	Ca (mg/L)	7	5	10	12
4	Cl (mg/L)	5.9	10.6	14.6	17.3
5	F (mg/L)	0.05	0.09	0.28	0.10
6	Fe (mg/L)	0.2	0.4	0.2	0.4
7	HCO3 (mg/L)	21	27	56	58
8	K (mg/L)	1.1	1.2	1.9	1.7
9	Mg (mg/L)	1.6	2.4	6.1	6.6
10	Na (mg/L)	3.3	6.0	7.2	10.3
11	NH3-N (mg N/L)	3.27			
12	NO2+NO3 (mg N/L)	0.89	0.43	0.43	0.29
13	NO2-N (mgN/L)	0.01	0.03	0.14	0.00
14	NO3-N (mgN/L)	0.88	0.40	0.30	0.29
15	o-PO4-P (mg P/L)	0.661	0.021	0.037	0.017
16	SiO2 (mg/L)	4.7	6.8	9.9	12.0
17	SO4 (mg/L)	4.0	10.6	3.2	11.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.5	1.1	6.1	1.2
2	COD (mg/L)		14.5	30.6	16.3
3	DO (mg/L)	5.7	6.9	6.4	7.7
4	DO_SAT% (%)	68	84	78	94
5	FCol-MPN (MPN/100mL)		3985	2128	2080
6	Tcol-MPN (MPN/100mL)		17650	38400	7540
	TRACE & TOXIC				
1	As (µg/L)	3.0	0.2	9.6	0.6
2	Cd (µg/L)	0.0	0.2	0.2	0.3
3	Cr (µg/L)	11.0	6.4	2.3	17.6
4	Cu (µg/L)	2.0	1.2	1.2	5.2
5	Ni (µg/L)		4.6	7.9	14.7
6	Pb (µg/L)	2.0	1.3	0.2	0.1
7	Zn (µg/L)	7.0	4.9	15.6	18.6
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	17	13	26	30
2	HAR_Total (mgCaCO3/L)	24	24	52	57
3	Na% (%)	22	47	23	28
4	RSC (-)	0.0	0.1	0.0	0.0
5	SAR (-)	0.3	0.8	0.4	0.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Winter				
		Nov - Feb				
		2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
	PHYSICAL					
1	Q (cumec)	29.73	145.7	80.10	52.15	90.40
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	177	152	154	177	235
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.7	7.5	7.7	7.2	7.5
6	TDS (mg/L)					
7	Temp (deg C)	25.8	25.8	26.4	28.0	25.3
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	58	45	50	59	78
2	B (mg/L)	0.08	0.06	0.05		
3	Ca (mg/L)	14	12	11	13	22
4	Cl (mg/L)	20.4	17.5	19.0	20.1	26.6
5	F (mg/L)	0.13	0.06	0.05		0.19
6	Fe (mg/L)	0.1	0.1	0.0	0.0	
7	HCO3 (mg/L)	70	55	61	72	95
8	K (mg/L)	1.6	2.4	1.2	1.5	1.6
9	Mg (mg/L)	6.3	5.8	7.3	6.8	6.3
10	Na (mg/L)	15.1	9.0	8.2	12.6	15.1
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)	0.46	0.97	0.86	1.00	0.83
13	NO2-N (mgN/L)	0.01	0.02	0.01	0.44	0.01
14	NO3-N (mgN/L)	0.45	0.95	0.85	0.56	0.83
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	4.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)			1.8	0.6	0.9
2	COD (mg/L)					
3	DO (mg/L)			6.4	6.2	5.4
4	DO_SAT% (%)			79	79	66
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
1	As (µg/L)				0.2	3.6
2	Cd (µg/L)				0.2	
3	Cr (µg/L)				3.2	0.2
4	Cu (µg/L)					0.4
5	Ni (µg/L)				5.6	8.9
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	34	30	27	32	56
2	HAR_Total (mgCaCO3/L)	60	54	57	60	82
3	Na% (%)	35	26	23	29	26
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.8	0.5	0.5	0.7	0.7
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Winter			
		Nov - Feb			
		2013-2014	2014-2015	2015-2016	2016-2017
	PHYSICAL				
1	Q (cumec)	134.8	48.62	65.37	33.12
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)	211	222	178	174
4	pH_FLD (pH units)				
5	pH_GEN (pH units)	7.4	7.9	7.3	8.0
6	TDS (mg/L)				96
7	Temp (deg C)	25.5	25.2	25.0	24.3
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)	68	54	59	47
2	B (mg/L)	0.00	0.21	0.18	0.20
3	Ca (mg/L)	15	15	17	13
4	Cl (mg/L)	21.3	22.0	19.3	23.1
5	F (mg/L)	0.29	0.15	0.17	3.42
6	Fe (mg/L)	0.1	0.0	0.1	0.0
7	HCO3 (mg/L)	83	66	72	57
8	K (mg/L)	1.7	4.1	1.7	1.6
9	Mg (mg/L)	6.8	7.3	6.3	7.9
10	Na (mg/L)	17.5	8.6	9.1	9.9
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)	1.25	1.68	0.81	1.07
13	NO2-N (mgN/L)	0.00	0.39	0.00	0.01
14	NO3-N (mgN/L)	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)	3.8	4.4	3.9	9.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3.0	1.3	1.5	1.1
2	COD (mg/L)				
3	DO (mg/L)	5.2	5.4	7.3	7.2
4	DO_SAT% (%)	64	65	88	85
5	FCol-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
	TRACE & TOXIC				
1	As (µg/L)				1.0
2	Cd (µg/L)		0.0		0.0
3	Cr (µg/L)		1.2		0.2
4	Cu (µg/L)		5.7		1.3
5	Ni (µg/L)		1.6		3.9
6	Pb (µg/L)		0.9		1.0
7	Zn (µg/L)		9.7		0.7
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	38	38	42	31
2	HAR_Total (mgCaCO3/L)	66	68	68	64
3	Na% (%)	36	20	22	25
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	0.9	0.5	0.5	0.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Winter			
		Nov - Feb			
		2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL				
1	Q (cumec)	37.25	43.17	171.9	55.25
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)	155	135	179	150
4	pH_FLD (pH units)				
5	pH_GEN (pH units)	7.8	7.9	7.6	7.7
6	TDS (mg/L)	99	85	125	106
7	Temp (deg C)	25.0	24.8	24.1	25.0
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)	54	68	61	54
2	B (mg/L)	0.06	0.09	0.10	
3	Ca (mg/L)	11	14	16	12
4	Cl (mg/L)	15.8	14.7	15.6	13.5
5	F (mg/L)	0.14	0.10	0.12	0.09
6	Fe (mg/L)	0.0	0.2	0.4	0.1
7	HCO3 (mg/L)	66	83	74	66
8	K (mg/L)	1.4	1.6	2.2	1.5
9	Mg (mg/L)	7.2	7.3	6.8	7.2
10	Na (mg/L)	9.0	10.2	9.8	7.7
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)	0.36	6.26	0.97	0.11
13	NO2-N (mgN/L)	0.01	0.07	0.01	0.00
14	NO3-N (mgN/L)	0.36	6.19	0.96	0.11
15	o-PO4-P (mg P/L)	0.000	1.240	0.031	0.000
16	SiO2 (mg/L)	9.6	10.0	14.3	2.4
17	SO4 (mg/L)	7.1	4.0	9.5	7.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.2	1.1	2.8	0.9
2	COD (mg/L)		16.0	22.0	
3	DO (mg/L)	7.5	6.6	6.8	7.8
4	DO_SAT% (%)	90	79	81	94
5	FCol-MPN (MPN/100mL)		3380	653	
6	Tcol-MPN (MPN/100mL)		27830	4233	
	TRACE & TOXIC				
1	As (µg/L)	2.3	0.4	4.3	1.4
2	Cd (µg/L)	0.1	0.0	0.0	0.1
3	Cr (µg/L)	7.6	1.0	7.1	12.0
4	Cu (µg/L)	2.2	0.3	6.6	18.2
5	Ni (µg/L)	1.7	8.7	4.4	73.7
6	Pb (µg/L)	0.5	0.1	0.1	2.7
7	Zn (µg/L)	16.4	1.5	7.9	2.1
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	28	36	41	30
2	HAR_Total (mgCaCO3/L)	58	66	69	59
3	Na% (%)	25	25	23	21
4	RSC (-)	0.0	0.1	0.0	0.0
5	SAR (-)	0.5	0.5	0.5	0.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

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_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	205	149	228	258	157
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.0	7.4	7.8	7.4	7.1
6	TDS (mg/L)					
7	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	COD (mg/L)					
3	DO (mg/L)				5.8	5.3
4	DO_SAT% (%)				77	67
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	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	Ni (µg/L)		11.7			9.2
6	Pb (µg/L)	1.2				3.7
7	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: 2006-2021

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

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_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	186	239	230	144	164
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.2	7.5	7.4	6.8	7.9
6	TDS (mg/L)				68	94
7	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	COD (mg/L)					
3	DO (mg/L)	5.0	5.8	5.2	5.2	6.1
4	DO_SAT% (%)	65	75	67	68	75
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	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	Ni (µg/L)	3.3	7.9		3.3	
6	Pb (µg/L)	2.5	2.9			
7	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					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HONNALI (AKL00X6)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Summer			
		Mar - May			
		2018	2019	2020	2021
	PHYSICAL				
1	Q (cumec)	25.17	38.86	35.79	Dry bed
2	EC_FLD (µmho/cm)				No flow
3	EC_GEN (µmho/cm)	247	223	222	
4	pH_FLD (pH units)		7.6		
5	pH_GEN (pH units)	7.8	7.1	7.7	
6	TDS (mg/L)	152	163	145	
7	Temp (deg C)	27.0	27.5	23.5	
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)	101	79	76	
2	B (mg/L)	0.05	0.10	0.04	
3	Ca (mg/L)	22	17	17	
4	Cl (mg/L)	11.7	20.2	20.2	
5	F (mg/L)	0.21	0.19	0.15	
6	Fe (mg/L)	0.0	0.1	0.0	
7	HCO3 (mg/L)	123	96	93	
8	K (mg/L)	2.1	2.8	3.2	
9	Mg (mg/L)	13.9	9.5	11.1	
10	Na (mg/L)	7.0	11.8	6.5	
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)	0.84	1.42	0.18	
13	NO2-N (mgN/L)	0.00	0.01	0.01	
14	NO3-N (mgN/L)	0.84	1.41	0.17	
15	o-PO4-P (mg P/L)	0.041	0.000	0.439	
16	SiO2 (mg/L)	9.4	11.9	14.4	
17	SO4 (mg/L)	10.8	8.6	7.0	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.9	3.6	1.3	
2	COD (mg/L)	12.0	45.5	21.5	
3	DO (mg/L)	5.5	7.6	6.5	
4	DO_SAT% (%)	68	96	78	
5	FCol-MPN (MPN/100mL)	280	580	20	
6	Tcol-MPN (MPN/100mL)	560	1265	790	
	TRACE & TOXIC				
1	As (µg/L)	0.6	1.3		
2	Cd (µg/L)	0.0	0.0		
3	Cr (µg/L)	0.3	0.0		
4	Cu (µg/L)	2.3	2.5		
5	Ni (µg/L)	0.2	2.9		
6	Pb (µg/L)	0.9	2.4		
7	Zn (µg/L)	0.7	4.9		
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	56	43	42	
2	HAR_Total (mgCaCO3/L)	113	83	88	
3	Na% (%)	12	23	11	
4	RSC (-)	0.0	0.1	0.0	
5	SAR (-)	0.3	0.6	0.3	
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2020-2021
Site	: HARIHARAPURA	Code	: HARIHARAPURA
State	: Karnataka	District	Chikmagalur
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	:
		Local River	: Tunga
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tunga SD, Devangere
Drainage Area	: 663 Sq. Km.	Bank	: Left
Latitude	: 13°31'20"	Longitude	: 75°18'12"
	Opening Date	Closing Date	
Gauge	: 29-10-2014		
Discharge	: 14-12-2018		
Water Quality	: 01-05-2019		

Water Quality Datasheet for the period : 2020-2021

Station Name : HARIHARAPURA (HARIHARAPURA)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water Analysis

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	3-Jun-20	1-Jul-20	3-Aug-20	1-Sep-20	5-Oct-20	2-Nov-20
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	26.18	53.81	85.13	68.74	65.09	58.18
2	Colour_Cod (-)	Light Brown	Clear	Clear	Clear	Light Brown	Light Brown
3	EC_GEN (µmho/cm)	62	57	75	66	56	60
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.1	6.6	7.1	7.6	7.6	7.3
6	TDS (mg/L)	46	43	46	44	36	36
7	Temp (deg C)	26.0	26.0	25.0	25.0	25.0	26.0
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	19	15	15	13	9	15
3	B (mg/L)	0.06	0.02	0.02	0.07	0.03	NA
4	Ca (mg/L)	6	3	5	6	3	6
5	Cl (mg/L)	7.8	5.7	7.8	5.7	5.7	8.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.04	0.00	0.04	0.06	0.02	NA
8	Fe (mg/L)	0.2	0.4	0.2	0.1	NA	NA
9	HCO3 (mg/L)	23	18	18	16	10	18
10	K (mg/L)	1.2	0.4	0.4	0.7	1.3	1.1
11	Mg (mg/L)	1.8	3.8	3.9	2.9	2.8	1.5
12	Na (mg/L)	3.1	2.5	4.9	3.0	3.2	3.7
13	NO2+NO3 (mg N/L)	0.11	0.13	0.35	0.46	0.04	0.03
14	NO2-N (mgN/L)	0.01	0.00	0.00	0.01	0.00	0.00
15	NO3-N (mgN/L)	0.10	0.13	0.35	0.45	0.04	0.03
16	o-PO4-P (mg P/L)	0.021	0.000	0.021	0.010	0.000	0.010
17	SiO2 (mg/L)	19.7	7.1	11.0	9.0	11.3	8.3
18	SO4 (mg/L)	1.6	7.5	10.1	12.3	10.3	3.4
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD (mg/L)	0.3	0.4	0.8	0.9	0.8	1.1
2	COD (mg/L)	5.0	13.0	5.0	NA	NA	NA
3	DO (mg/L)	7.3	8.8	8.1	8.9	7.4	6.2
4	DO_SAT% (%)	90	109	98	108	90	76
5	FCoI-MPN (MPN/100mL)	1100	790	330	220	780	NA
6	TcoI-MPN (MPN/100mL)	5400	3500	490	1300	1100	NA
	TRACE & TOXIC						
1	As (µg/L)	BDL		0.3			
2	Cd (µg/L)	BDL		0.0			
3	Cr (µg/L)	4.0		11.7			
4	Cu (µg/L)	10.8		0.3			
5	Ni (µg/L)	30.3		1.2			
6	Pb (µg/L)	BDL		0.0			
7	Zn (µg/L)	17.2		4.1			
8	Hg (µg/L)	0.8		NA			
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	15	8	12	16	8	16
2	HAR_Total (mgCaCO3/L)	23	24	28	28	20	22
3	Na% (%)	22	18	27	18	25	26
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.3	0.2	0.4	0.2	0.3	0.3

Water Quality Datasheet for the period : 2020-2021

Station Name : HARIHARAPURA (HARIHARAPURA)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water Analysis

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	1-Dec-20	1-Jan-21	1-Feb-21	1-Mar-21	1-Apr-21	1-May-21
		A	A	A	A	A	
	PHYSICAL						
1	Q (cumec)	31.41	28.65	19.78	13.45	10.49	Sample not submitted due to covid-19 lockdown
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	
3	EC_GEN (µmho/cm)	69	62	68	61	61	
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	
5	pH_GEN (pH units)	7.2	7.4	7.7	7.5	7.2	
6	TDS (mg/L)	46	37	42	40	42	
7	Temp (deg C)	22.0	24.0	25.0	28.0	30.0	
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	21	22	8	19	13	
3	B (mg/L)	NA	NA	0.00	0.11	0.16	
4	Ca (mg/L)	10	4	5	6	7	
5	Cl (mg/L)	9.6	7.5	5.7	7.8	9.6	
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	
7	F (mg/L)	0.04	0.04	0.04	0.04	0.04	
8	Fe (mg/L)	0.2	0.2	0.2	0.2	0.0	
9	HCO3 (mg/L)	25	26	10	23	15	
10	K (mg/L)	0.7	1.4	1.4	1.2	1.0	
11	Mg (mg/L)	1.0	3.2	3.6	1.8	0.9	
12	Na (mg/L)	3.2	3.4	3.3	3.8	3.7	
13	NO2+NO3 (mg N/L)	0.15	0.10	0.29	0.01	0.04	
14	NO2-N (mgN/L)	0.00	0.00	0.01	0.00	0.01	
15	NO3-N (mgN/L)	0.15	0.10	0.28	0.01	0.03	
16	o-PO4-P (mg P/L)	0.000	0.000	0.000	0.000	0.000	
17	SiO2 (mg/L)	2.8	12.9	12.7	15.4	10.9	
18	SO4 (mg/L)	0.9	1.9	0.8	0.6	6.2	
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD (mg/L)	0.7	0.3	0.2	0.5	0.4	
2	COD (mg/L)	NA	NA	7.0	4.5	9.0	
3	DO (mg/L)	7.6	7.8	7.3	6.4	6.5	
4	DO_SAT% (%)	87	93	88	81	86	
5	FCol-MPN (MPN/100mL)	NA	NA	NA	780	450	
6	Tcol-MPN (MPN/100mL)	NA	NA	NA	2200	1100	
	TRACE & TOXIC						
1	As (µg/L)	0.4				0.9	
2	Cd (µg/L)	0.1				0.0	
3	Cr (µg/L)	4.0				0.0	
4	Cu (µg/L)	1.8				1.0	
5	Ni (µg/L)	44.4				0.0	
6	Pb (µg/L)	1.1				27.0	
7	Zn (µg/L)	1.7				33.0	
8	Hg (µg/L)	NA				0.0	
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	25	9	13	16	19	
2	HAR_Total (mgCaCO3/L)	29	22	28	23	22	
3	Na% (%)	19	24	20	25	25	
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	
5	SAR (-)	0.3	0.3	0.3	0.3	0.3	

Water Quality Summary for the period : 2020-2021

Station Name : HARIHARAPURA (HARIHARAPURA)

Division : Cauvery Division, Bangalore

Local River : Tunga

Sub-Division : Upper Tunga SD, Devangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	375	934.2	7.794	64.43
2	EC_GEN (µmho/cm)	11	75	56	63
3	pH_GEN (pH units)	11	7.7	6.6	7.3
4	TDS (mg/L)	11	46	36	42
5	Temp (deg C)	11	30.0	22.0	25.6
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	11	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	11	22	8	15
3	B (mg/L)	8	0.16	0.00	0.06
4	Ca (mg/L)	11	10	3	6
5	Cl (mg/L)	11	9.6	5.7	7.4
6	CO3 (mg/L)	11	0.0	0.0	0
7	F (mg/L)	10	0.06	0.00	0.03
8	Fe (mg/L)	9	0.4	0.0	0.2
9	HCO3 (mg/L)	11	26	10	19
10	K (mg/L)	11	1.4	0.4	1
11	Mg (mg/L)	11	3.9	0.9	2.5
12	Na (mg/L)	11	4.9	2.5	3.4
13	NO2+NO3 (mg N/L)	11	0.46	0.01	0.16
14	NO2-N (mgN/L)	11	0.01	0.00	0.01
15	NO3-N (mgN/L)	11	0.45	0.01	0.15
16	o-PO4-P (mg P/L)	11	0.021	0.000	0.006
17	SiO2 (mg/L)	11	19.7	2.8	11
18	SO4 (mg/L)	11	12.3	0.6	5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD (mg/L)	11	1.1	0.2	0.6
2	COD (mg/L)	6	13.0	4.5	7.3
3	DO (mg/L)	11	8.9	6.2	7.5
4	DO_SAT% (%)	11	109	76	91
5	FCol-MPN (MPN/100mL)	7	1100	220	636
6	Tcol-MPN (MPN/100mL)	7	5400	490	2156
	TRACE & TOXIC				
1	As (µg/L)	3	0.9	0.3	0.5
2	Cd (µg/L)	3	0.1	0.0	0
3	Cr (µg/L)	3	11.7	0.0	5.3
4	Cu (µg/L)	3	1.8	0.3	1.1
5	Ni (µg/L)	3	44.4	0.0	15.2
6	Pb (µg/L)	3	27.0	0.0	9.4
7	Zn (µg/L)	3	33.0	1.7	12.9
8	Hg (µg/L)	2	0.8	0.0	0.4
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	11	25	8	14
2	HAR_Total (mgCaCO3/L)	11	29	20	24
3	Na% (%)	11	27	18	23
4	RSC (-)	11	0.0	0.0	0
5	SAR (-)	11	0.4	0.2	0.3

Water Quality Seasonal Average for the period: 2019-2021

Station Name : HARIHARAPURA (HARIHARAPURA)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2019	2020	2019-2020	2020-2021	2020	2021
	PHYSICAL						
1	Q (cumec)	66.78	59.79	35.76	34.50	15.56	11.97
2	EC_GEN (µmho/cm)	54	63	56	65	63	61
3	pH_GEN (pH units)	7.3	7.2	7.3	7.4	7.4	7.3
4	TDS (mg/L)	35	43	39	40	45	41
5	Temp (deg C)	26.0	25.4	25.5	24.3	26.0	29.0
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)	16	14	15	16	20	16
2	B (mg/L)	0.06	0.04	0.13	0.00	0.05	0.13
3	Ca (mg/L)	5	5	8	6	5	7
4	Cl (mg/L)	7.2	6.5	6.7	7.9	6.7	8.7
5	F (mg/L)	0.03	0.03	0.05	0.04	0.27	0.04
6	Fe (mg/L)	0.2	0.2	0.4	0.2	0.4	0.1
7	HCO3 (mg/L)	18	17	18	20	24	19
8	K (mg/L)	0.9	0.8	1.2	1.2	1.7	1.1
9	Mg (mg/L)	2.1	3.0	2.1	2.3	2.3	1.3
10	Na (mg/L)	3.0	3.3	3.9	3.4	4.2	3.7
11	NO2+NO3 (mg N/L)	0.65	0.22	0.34	0.14	0.07	0.03
12	NO2-N (mgN/L)	0.10	0.01	0.01	0.00	0.01	0.01
13	NO3-N (mgN/L)	0.55	0.21	0.33	0.14	0.06	0.02
14	o-PO4-P (mg P/L)	0.041	0.010	0.028	0.003	0.413	0.000
15	SiO2 (mg/L)	11.0	11.6	13.9	9.2	14.2	13.1
16	SO4 (mg/L)	2.8	8.3	3.1	1.8	3.7	3.4
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.1	0.6	1.0	0.6	0.7	0.4
2	COD (mg/L)	8.8	7.7	8.3	7.0	10.5	6.8
3	DO (mg/L)	7.2	8.1	6.5	7.2	7.0	6.4
4	DO_SAT% (%)	89	99	79	86	86	84
5	FCol-MPN (MPN/100mL)	386	644	878		0	615
6	Tcol-MPN (MPN/100mL)	7984	2358	3025		170	1650
	TRACE & TOXIC						
1	As (µg/L)	0.9	0.3	2.2	0.4		0.9
2	Cd (µg/L)	0.1	0.0	0.1	0.1		0.0
3	Cr (µg/L)	1.0	11.7	9.1	4.0		0.0
4	Cu (µg/L)	0.2	0.3	1.1	1.8		1.0
5	Ni (µg/L)	5.5	1.1	19.0	44.4		0.0
6	Pb (µg/L)	0.1	0.0	0.2	1.1		27.0
7	Zn (µg/L)	14.8	4.1	10.2	1.7		33.0
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	13	12	19	16	14	17
2	HAR_Total (mgCaCO3/L)	21	24	27	25	23	23
3	Na% (%)	24	22	24	22	26	25
4	SAR (-)	0.3	0.3	0.3	0.3	0.4	0.3
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2020-2021
Site	: SHIMOGA	Code	: AKLD0C6
State	: Karnataka	District	Shimoga
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	:
		Local River	: Tunga
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tunga Subdn, Devangere
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 : 2020-2021

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water Analysis

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	1-Jul-20	3-Aug-20	1-Sep-20	5-Oct-20	1-Dec-20		
		A	A	A	A	A		
	PHYSICAL						Nov 2020,jan 2021 and march 2021 Sample not submitted due to insufficient staff	june 2020,feb 2021,april 2021 and may 2021 Sample not submitted due to No Flow
1	Q (cumec)	149.9	180.3	250.0	181.3	42.60		
2	Colour_Cod (-)	Light Brown	Light Brown	Clear	Clear	Clear		
3	EC_GEN (µmho/cm)	62	86	80	58	74		
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free		
5	pH_GEN (pH units)	7.0	7.0	6.8	7.1	7.8		
6	TDS (mg/L)	46	54	56	46	50		
7	Temp (deg C)	27.0	26.5	25.5	26.0	21.5		
	CHEMICAL							
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0		
2	ALK-TOT (mgCaCO3/L)	15	22	17	13	19		
3	B (mg/L)	0.00	0.00	0.04	0.00	NA		
4	Ca (mg/L)	8	6	5	5	7		
5	Cl (mg/L)	5.7	7.8	7.8	5.7	13.1		
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0		
7	F (mg/L)	0.00	0.08	0.04	NA	0.06		
8	Fe (mg/L)	0.0	0.3	0.4	NA	0.2		
9	HCO3 (mg/L)	18	27	21	16	23		
10	K (mg/L)	0.6	0.8	0.8	1.3	1.1		
11	Mg (mg/L)	0.0	3.9	4.9	1.8	3.0		
12	Na (mg/L)	4.1	5.7	3.5	3.9	4.5		
13	NO2+NO3 (mg N/L)	0.17	0.11	0.21	0.04	0.06		
14	NO2-N (mgN/L)	0.01	0.00	0.00	0.00	0.00		
15	NO3-N (mgN/L)	0.15	0.11	0.21	0.04	0.06		
16	o-PO4-P (mg P/L)	0.031	0.010	0.010	0.000	0.000		
17	SiO2 (mg/L)	8.2	9.0	10.5	11.6	3.2		
18	SO4 (mg/L)	8.7	10.5	10.8	8.1	1.6		
	BIOLOGICAL/BACTERIOLOGICAL							
1	BOD (mg/L)	0.2	0.6	0.4	0.4	1.3		
2	COD (mg/L)	18.0	7.0	NA	NA	NA		
3	DO (mg/L)	6.1	5.6	6.8	6.6	7.4		
4	DO_SAT% (%)	76	69	83	81	83		
5	FCol-MPN (MPN/100mL)	1700	1100	1100	1300	NA		
6	Tcol-MPN (MPN/100mL)	2200	2200	2200	2600	NA		
	TRACE & TOXIC							
1	As (µg/L)		0.3			3.8		
2	Cd (µg/L)		0.0			0.1		
3	Cr (µg/L)		0.5			4.8		
4	Cu (µg/L)		0.6			0.1		
5	Ni (µg/L)		0.8			53.2		
6	Pb (µg/L)		0.2			0.4		
7	Zn (µg/L)		4.2			1.3		
	CHEMICAL INDICES							
1	HAR_Ca (mgCaCO3/L)	20	16	12	12	17		
2	HAR_Total (mgCaCO3/L)	20	32	32	19	30		
3	Na% (%)	31	27	19	29	24		
4	RSC (-)	0.0	0.0	0.0	0.0	0.0		
5	SAR (-)	0.4	0.4	0.3	0.4	0.4		

Water Quality Summary for the period : 2020-2021

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

Sub-Division : Upper Tunga Subdn, Devangere

River Water Summary					
S.No	Parameters	Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	2551	0.000	192.9
2	EC_GEN (µmho/cm)	5	86	58	72
3	pH_GEN (pH units)	5	7.8	6.8	7.1
4	TDS (mg/L)	5	56	46	50
5	Temp (deg C)	5	27.0	21.5	25.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	5	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	5	22	13	17
3	B (mg/L)	4	0.04	0.00	0.01
4	Ca (mg/L)	5	8	5	6
5	Cl (mg/L)	5	13.1	5.7	8
6	CO3 (mg/L)	5	0.0	0.0	0
7	F (mg/L)	4	0.08	0.00	0.04
8	Fe (mg/L)	4	0.4	0.0	0.2
9	HCO3 (mg/L)	5	27	16	21
10	K (mg/L)	5	1.3	0.6	0.9
11	Mg (mg/L)	5	4.9	0.0	2.7
12	Na (mg/L)	5	5.7	3.5	4.3
13	NO2+NO3 (mg N/L)	5	0.21	0.04	0.12
14	NO2-N (mgN/L)	5	0.01	0.00	0
15	NO3-N (mgN/L)	5	0.21	0.04	0.11
16	o-PO4-P (mg P/L)	5	0.031	0.000	0.01
17	SiO2 (mg/L)	5	11.6	3.2	8.5
18	SO4 (mg/L)	5	10.8	1.6	8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD (mg/L)	5	1.3	0.2	0.6
2	COD (mg/L)	2	18.0	7.0	12.5
3	DO (mg/L)	5	7.4	5.6	6.5
4	DO_SAT% (%)	5	83	69	78
5	FCol-MPN (MPN/100mL)	4	1700	1100	1300
6	Tcol-MPN (MPN/100mL)	4	2600	2200	2300
	TRACE & TOXIC				
1	As (µg/L)	2	3.8	0.3	2
2	Cd (µg/L)	2	0.1	0.0	0.1
3	Cr (µg/L)	2	4.8	0.5	2.6
4	Cu (µg/L)	2	0.6	0.1	0.4
5	Ni (µg/L)	2	53.2	0.8	27
6	Pb (µg/L)	2	0.4	0.2	0.3
7	Zn (µg/L)	2	4.2	1.3	2.7
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	5	20	12	15
2	HAR_Total (mgCaCO3/L)	5	32	19	27
3	Na% (%)	5	31	19	26
4	RSC (-)	5	0.0	0.0	0
5	SAR (-)	5	0.4	0.3	0.4

Water Quality Seasonal Average for the period: 2006-2021

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Flood				
		Jun - Oct				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	590.6	525.0	444.6	470.7	815.9
2	EC_FLD (μmho/cm)					
3	EC_GEN (μmho/cm)	248	178	64	52	43
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.6	8.0	7.5	7.3	7.1
6	TDS (mg/L)					
7	Temp (deg C)	24.5	26.4	27.0	24.5	25.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	88	57	15	15	12
2	B (mg/L)	0.00	0.11		0.00	
3	Ca (mg/L)	12	12	4	3	3
4	Cl (mg/L)	25.2	17.9	6.7	5.8	5.7
5	F (mg/L)	0.00	0.38	0.02	0.06	0.02
6	Fe (mg/L)	0.0	0.0		0.2	0.3
7	HCO3 (mg/L)	107	69	19	19	14
8	K (mg/L)	35.8	2.3	0.8	0.7	1.0
9	Mg (mg/L)	5.9	8.4	2.9	2.9	1.9
10	Na (mg/L)	15.1	11.5	3.9	3.2	2.8
11	NO2+NO3 (mg N/L)	0.15	0.24	0.59	0.49	0.43
12	NO2-N (mgN/L)	0.00	0.00	0.01	0.01	0.01
13	NO3-N (mgN/L)	0.15	0.24	0.57	0.48	0.42
14	o-PO4-P (mg P/L)	0.000	0.045		0.000	0.000
15	SiO2 (mg/L)	1.6	0.9		9.5	8.4
16	SO4 (mg/L)	5.5	3.3	3.6	3.2	2.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.0	1.1	1.2	0.6	
2	COD (mg/L)					
3	DO (mg/L)	8.2	6.0	7.8	6.8	7.2
4	DO_SAT% (%)	97	74	98	80	87
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	Ni (μg/L)					
6	Pb (μg/L)					
7	Zn (μg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	31	29	10	8	8
2	HAR_Total (mgCaCO3/L)	55	64	22	20	16
3	Na% (%)	27	28	27	25	26
4	RSC (-)	0.7	0.0	0.0	0.0	0.0
5	SAR (-)	0.9	0.6	0.4	0.3	0.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Flood				
		Jun - Oct				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	236.1	387.3	886.7	17.51	296.9
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	41	45	57	61	60
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	6.2	7.0	6.9	7.1	7.1
6	TDS (mg/L)					
7	Temp (deg C)	24.5	24.0	25.3	25.0	24.5
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	12	12	13	19	16
2	B (mg/L)	0.00		0.00	0.11	0.08
3	Ca (mg/L)	3	3	4	6	5
4	Cl (mg/L)	3.9	5.0	6.9	7.1	6.9
5	F (mg/L)	0.00	0.04	0.03	0.08	0.12
6	Fe (mg/L)	0.1		0.2	0.1	0.3
7	HCO3 (mg/L)	14	14	16	23	19
8	K (mg/L)	2.6	0.9	0.9	1.3	1.0
9	Mg (mg/L)	1.0	1.9	2.4	1.9	1.7
10	Na (mg/L)	3.0	2.9	3.7	3.1	4.2
11	NO2+NO3 (mg N/L)	0.38	0.63	0.66	0.31	0.48
12	NO2-N (mgN/L)	0.00	0.01	0.09	0.01	0.01
13	NO3-N (mgN/L)	0.38	0.62	0.57	0.29	0.46
14	o-PO4-P (mg P/L)	0.000		0.036	0.001	0.207
15	SiO2 (mg/L)	7.3		10.1	5.2	11.4
16	SO4 (mg/L)	3.0	3.0	3.9	3.5	3.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.6	0.4	0.2	0.6	0.4
2	COD (mg/L)					
3	DO (mg/L)	6.9	6.8	6.7	5.3	4.8
4	DO_SAT% (%)	83	81	81	65	57
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	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	8	10	16	13
2	HAR_Total (mgCaCO3/L)	12	16	20	24	20
3	Na% (%)	30	27	28	21	30
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.4	0.3	0.4	0.3	0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Flood				
		Jun - Oct				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	550.2	287.7	324.0	580.6	190.4
2	EC_FLD (µmho/cm)				308	
3	EC_GEN (µmho/cm)	54	56	60	68	72
4	pH_FLD (pH units)				6.7	
5	pH_GEN (pH units)	6.3	6.9	7.1	7.5	7.0
6	TDS (mg/L)	30	40	48	44	55
7	Temp (deg C)	24.0	24.3	23.8	24.1	26.3
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	13	16	14	15	17
2	B (mg/L)	0.11	0.31	0.00	0.07	0.01
3	Ca (mg/L)	5	7	9	7	6
4	Cl (mg/L)	7.5	5.3	4.8	5.7	6.7
5	F (mg/L)		0.05	0.05	0.05	0.04
6	Fe (mg/L)	0.3	0.3	0.4	0.5	0.2
7	HCO3 (mg/L)	16	19	18	19	20
8	K (mg/L)	0.9	0.9	1.4	4.0	0.9
9	Mg (mg/L)	1.5	0.7	0.5	0.9	2.6
10	Na (mg/L)	3.8	3.3	3.0	3.4	4.3
11	NO2+NO3 (mg N/L)	0.60	0.78	0.67	0.33	0.13
12	NO2-N (mgN/L)	0.01	0.01	0.01	0.02	0.00
13	NO3-N (mgN/L)	0.58	0.77	0.67	0.31	0.13
14	o-PO4-P (mg P/L)	0.000	0.010	0.021	0.140	0.013
15	SiO2 (mg/L)	13.5	5.0	4.7	8.8	9.8
16	SO4 (mg/L)	2.9	3.2	6.9	4.6	9.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	1.4	1.3	1.7	0.4
2	COD (mg/L)			15.5	9.5	12.5
3	DO (mg/L)	5.3	5.5	5.1	6.2	6.3
4	DO_SAT% (%)	63	66	59	73	77
5	FCol-MPN (MPN/100mL)			2990	1160	1300
6	Tcol-MPN (MPN/100mL)			17100	15400	2300
	TRACE & TOXIC					
1	As (µg/L)		1.0	1.2	5.7	0.3
2	Cd (µg/L)		0.0	0.2	0.2	0.0
3	Cr (µg/L)		15.0	19.2	1.1	0.5
4	Cu (µg/L)		3.0	1.5	0.8	0.6
5	Ni (µg/L)			3.6	4.6	0.8
6	Pb (µg/L)		2.0	1.2	0.0	0.2
7	Zn (µg/L)		7.0	10.0	15.0	4.2
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	12	17	22	17	15
2	HAR_Total (mgCaCO3/L)	18	20	24	21	26
3	Na% (%)	30	25	20	23	26
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.4	0.3	0.3	0.3	0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Winter				
		Nov - Feb				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	31.91	55.47	7.848	103.8	51.94
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	319	132	111	75	66
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.6	7.7	7.6	7.8	7.4
6	TDS (mg/L)					
7	Temp (deg C)	25.3	24.4	25.8	25.3	25.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	118	40	52	27	
2	B (mg/L)	0.00	0.05	0.09	0.04	0.08
3	Ca (mg/L)	20	11	8	6	4
4	Cl (mg/L)	30.5	13.2	11.7	7.8	6.0
5	F (mg/L)	0.00	0.14	0.08	0.03	0.06
6	Fe (mg/L)	0.0	0.1	0.1	0.1	0.2
7	HCO3 (mg/L)	144	49	63	33	28
8	K (mg/L)	29.0	2.8	2.5	0.9	0.9
9	Mg (mg/L)	9.3	4.0	3.4	2.9	3.2
10	Na (mg/L)	21.6	8.6	8.0	4.0	3.5
11	NO2+NO3 (mg N/L)	0.18	0.32	0.53	0.41	0.46
12	NO2-N (mgN/L)	0.00	0.10	0.09	0.01	0.01
13	NO3-N (mgN/L)	0.18	0.22	0.44	0.41	0.45
14	o-PO4-P (mg P/L)	0.000	0.121	0.124	0.005	0.000
15	SiO2 (mg/L)	1.4	14.3	12.4	10.2	11.1
16	SO4 (mg/L)	1.2	2.9	1.2	0.9	2.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.2	1.8	0.9	
2	COD (mg/L)					
3	DO (mg/L)	7.8	8.4	6.8	7.4	6.6
4	DO_SAT% (%)	95	101	82	90	80
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	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	49	29	20	16	11
2	HAR_Total (mgCaCO3/L)	87	45	34	28	22
3	Na% (%)	31	28	31	23	23
4	RSC (-)	0.6	0.0	0.4	0.0	0.0
5	SAR (-)	1.3	0.6	0.6	0.3	0.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Winter				
		Nov - Feb				
		2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL					
1	Q (cumec)	35.90	102.7	46.92	11.01	26.11
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	78	87	75	76	74
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	6.9	7.0	7.1	7.4	7.1
6	TDS (mg/L)					37
7	Temp (deg C)	24.3	23.8	23.5	24.0	24.3
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	23	29	23	24	21
2	B (mg/L)			0.00	0.15	0.24
3	Ca (mg/L)	6	7	6	7	7
4	Cl (mg/L)	9.4	9.1	8.9	8.5	9.2
5	F (mg/L)		0.09	0.06	0.07	0.08
6	Fe (mg/L)	0.1		0.1	0.0	0.2
7	HCO3 (mg/L)	28	35	29	29	26
8	K (mg/L)	1.0	1.3	1.0	2.3	1.1
9	Mg (mg/L)	3.4	3.4	2.9	3.2	2.4
10	Na (mg/L)	4.6	5.1	4.6	3.5	3.9
11	NO2+NO3 (mg N/L)	0.61	0.71	0.70	0.90	0.56
12	NO2-N (mgN/L)	0.01	0.01	0.01	0.06	0.00
13	NO3-N (mgN/L)	0.60	0.70	0.69	0.84	0.56
14	o-PO4-P (mg P/L)	0.000		0.036	0.005	0.320
15	SiO2 (mg/L)	11.0		8.0	5.5	17.1
16	SO4 (mg/L)	2.2	2.4	1.6	3.0	2.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	1.2	0.8	0.7	0.5
2	COD (mg/L)					
3	DO (mg/L)	5.9	5.9	6.6	5.8	6.1
4	DO_SAT% (%)	70	69	78	69	72
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
1	As (µg/L)	0.3				
2	Cd (µg/L)	0.2			0.1	
3	Cr (µg/L)	1.1			0.8	
4	Cu (µg/L)				4.3	
5	Ni (µg/L)	5.2			1.8	
6	Pb (µg/L)				1.5	
7	Zn (µg/L)				8.3	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	14	17	16	17	18
2	HAR_Total (mgCaCO3/L)	28	31	28	30	28
3	Na% (%)	26	26	26	19	23
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.4	0.4	0.4	0.3	0.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Winter				
		Nov - Feb				
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	21.18	35.47	28.26	164.2	42.60
2	EC_FLD (µmho/cm)			69		
3	EC_GEN (µmho/cm)	74	68	79	85	74
4	pH_FLD (pH units)			7.0		
5	pH_GEN (pH units)	7.3	7.1	7.5	7.4	7.8
6	TDS (mg/L)	39	40	47	63	50
7	Temp (deg C)	22.8	22.5	22.8	23.3	21.5
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	19	23	23	24	19
2	B (mg/L)	0.02	0.02	0.11	0.08	
3	Ca (mg/L)	5	9	6	7	7
4	Cl (mg/L)	9.2	6.6	10.8	11.1	13.1
5	F (mg/L)		0.07	0.33	0.06	0.06
6	Fe (mg/L)	0.0	0.2	0.1	0.2	0.2
7	HCO3 (mg/L)	23	28	28	30	23
8	K (mg/L)	1.1	1.1	1.2	1.4	1.1
9	Mg (mg/L)	4.0	0.9	3.4	1.5	3.0
10	Na (mg/L)	3.9	3.5	4.8	8.8	4.5
11	NO2+NO3 (mg N/L)	1.16	0.60	9.42	0.19	0.06
12	NO2-N (mgN/L)	0.01	0.01	0.07	0.00	0.00
13	NO3-N (mgN/L)	1.15	0.59	9.35	0.18	0.06
14	o-PO4-P (mg P/L)	0.000	0.000	1.137	0.024	0.000
15	SiO2 (mg/L)	7.4	7.7	9.9	15.7	3.2
16	SO4 (mg/L)	2.1	1.8	1.1	3.9	1.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	0.7	1.1	1.0	1.3
2	COD (mg/L)			16.5	15.0	
3	DO (mg/L)	6.2	5.9	5.5	5.1	7.4
4	DO_SAT% (%)	72	68	63	60	83
5	FCol-MPN (MPN/100mL)			8500	501	
6	Tcol-MPN (MPN/100mL)			36500	3077	
	TRACE & TOXIC					
1	As (µg/L)	1.4	3.5	0.6	2.0	3.8
2	Cd (µg/L)	0.0	0.0	0.0	0.0	0.1
3	Cr (µg/L)	0.1	5.2	5.9	6.1	4.8
4	Cu (µg/L)	1.1	0.8	1.8	2.2	0.1
5	Ni (µg/L)	0.6	1.2	1.9	11.2	53.2
6	Pb (µg/L)	0.0	0.6	0.0	0.1	0.4
7	Zn (µg/L)	4.1	17.4	3.0	9.5	1.3
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	14	22	16	17	17
2	HAR_Total (mgCaCO3/L)	30	26	30	23	30
3	Na% (%)	21	22	25	42	24
4	RSC (-)	0.0	0.0	0.0	0.1	0.0
5	SAR (-)	0.3	0.3	0.4	0.9	0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Summer				
		Mar - May				
		2007	2008	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	3.786	8.390	4.179	0.378	3.504
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	339	234	141	148	130
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.7	7.9	6.9	7.5	7.2
6	TDS (mg/L)					
7	Temp (deg C)	28.3	29.3	24.8	27.5	26.8
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	118	86	46	45	43
2	B (mg/L)	0.00	0.01		0.00	0.10
3	Ca (mg/L)	21	16	10	11	10
4	Cl (mg/L)	35.3	15.4	14.2	14.2	11.0
5	F (mg/L)	0.00	0.07	0.14		0.10
6	Fe (mg/L)	0.0	0.0		0.1	0.1
7	HCO3 (mg/L)	144	105	56	54	52
8	K (mg/L)	34.0	6.3	3.1	4.1	3.9
9	Mg (mg/L)	8.5	11.4	5.3	4.9	4.4
10	Na (mg/L)	26.1	11.3	7.0	8.7	9.0
11	NO2+NO3 (mg N/L)	0.34	0.22	1.50	2.89	2.09
12	NO2-N (mgN/L)	0.00	0.00	0.12	0.01	0.01
13	NO3-N (mgN/L)	0.34	0.22	1.38	2.87	2.07
14	o-PO4-P (mg P/L)	0.000	0.000		0.155	0.078
15	SiO2 (mg/L)	16.2	12.1		10.1	7.5
16	SO4 (mg/L)	10.6	1.5	2.2	2.9	3.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.8	1.6	1.5	0.2	1.0
2	COD (mg/L)					
3	DO (mg/L)	5.5	4.8	4.7	4.0	4.3
4	DO_SAT% (%)	70	67	56	50	53
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
1	As (µg/L)	5.4	5.8		2.2	1.2
2	Cd (µg/L)	2.0	1.0		0.1	0.0
3	Cr (µg/L)				0.1	0.5
4	Cu (µg/L)	3.3	3.5		2.8	1.4
5	Ni (µg/L)				14.1	11.4
6	Pb (µg/L)	2.4	1.5		1.5	2.0
7	Zn (µg/L)	55.0	29.0		14.1	14.0
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	52	41	26	28	24
2	HAR_Total (mgCaCO3/L)	88	88	48	48	42
3	Na% (%)	30	21	23	26	29
4	RSC (-)	0.6	0.0	0.0	0.0	0.0
5	SAR (-)	1.2	0.5	0.4	0.5	0.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : SHIMOGA (AKLD0C6)

Division : Cauvery Division, Bangalore

Local River : Tunga

River Water

Sub-Division : Upper Tunga Subdn, Devangere

S.No	Parameters	Summer		
		Mar - May		
		2015	2016	2019
	PHYSICAL			
1	Q (cumec)	2.901	2.268	0.000
2	EC_FLD (µmho/cm)			
3	EC_GEN (µmho/cm)	135	154	157
4	pH_FLD (pH units)			7.0
5	pH_GEN (pH units)	7.4	6.5	7.0
6	TDS (mg/L)		72	123
7	Temp (deg C)	27.0	27.3	24.0
	CHEMICAL			
1	ALK-TOT (mgCaCO3/L)	44	47	56
2	B (mg/L)	0.37	0.20	0.12
3	Ca (mg/L)	11	11	14
4	Cl (mg/L)	15.6	17.6	15.3
5	F (mg/L)	0.13		0.09
6	Fe (mg/L)	0.1	0.0	0.1
7	HCO3 (mg/L)	53	58	69
8	K (mg/L)	3.4	3.1	3.2
9	Mg (mg/L)	5.3	6.6	4.8
10	Na (mg/L)	7.2	8.6	8.0
11	NO2+NO3 (mg N/L)	0.90	0.75	2.20
12	NO2-N (mgN/L)	0.08	0.10	0.14
13	NO3-N (mgN/L)	0.81	0.65	2.06
14	o-PO4-P (mg P/L)	0.010	0.067	0.052
15	SiO2 (mg/L)	4.8	15.3	13.1
16	SO4 (mg/L)	2.5	4.6	2.5
	BIOLOGICAL/BACTERIOLOGIC			
1	BOD3-27 (mg/L)	0.7	11.1	6.6
2	COD (mg/L)			45.0
3	DO (mg/L)	4.0	1.0	2.0
4	DO_SAT% (%)	50	12	24
5	FCol-MPN (MPN/100mL)			250
6	Tcol-MPN (MPN/100mL)			945
	TRACE & TOXIC			
1	As (µg/L)		3.1	
2	Cd (µg/L)			
3	Cr (µg/L)		2.0	
4	Cu (µg/L)		0.3	
5	Ni (µg/L)		0.1	
6	Pb (µg/L)			
7	Zn (µg/L)		0.7	
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	28	27	35
2	HAR_Total (mgCaCO3/L)	50	54	55
3	Na% (%)	22	24	23
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	0.4	0.5	0.5
	PESTICIDES			

Sample are not collected during Summer season 2009 to 2011, 2017 to 2018 and 2020 to 2021 due to Dry bed / No flow condition.

HISTORY SHEET

		Water Year	: 2020-2021
Site	: HOLEHONNUR	Code	: AKLE0A4
State	: Karnataka	District	Shimoga
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	: Bhadra
		Local River	: Bhadra
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tunga Subdn, Davanagere
Drainage Area	: 2990 Sq. Km.	Bank	: Right
Latitude	: 13°58'34"	Longitude	: 75°41'07"
	Opening Date	Closing Date	
Gauge	: 26-11-1997		
Discharge	: 01-07-2003		
Water Quality	: 01-07-2003		

Water Quality Datasheet for the period : 2020-2021

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Analysis Sub-Division : Upper Tunga Subdn, Davanagere

S.No	Parameters	1-Jun-20	11-Jun-20	23-Jun-20	1-Jul-20	14-Jul-20
		A	A	A	A	
	PHYSICAL					
1	Q (cumec)	19.19	29.68	23.33	23.92	14-07-2020 and 21-07-2020 Sample not submitted due to improper transport facility
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	
3	EC_GEN (μmho/cm)	172	192	195	174	
4	Odour_Code (-)	odour free	odour free	odour free	odour free	
5	pH_GEN (pH units)	7.8	7.6	7.4	7.6	
6	TDS (mg/L)	136	128	136	90	
7	Temp (deg C)	24.5	24.0	23.0	23.0	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	65	68	71	56	
3	B (mg/L)	0.08	0.09	0.07	0.02	
4	Ca (mg/L)	15	15	15	14	
5	Cl (mg/L)	15.3	18.8	15.3	15.3	
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	
7	F (mg/L)	0.08	0.11	0.11	0.06	
8	Fe (mg/L)	0.2	0.3	0.3	0.2	
9	HCO3 (mg/L)	79	83	86	68	
10	K (mg/L)	1.9	2.3	2.2	1.1	
11	Mg (mg/L)	8.4	11.2	10.2	7.7	
12	Na (mg/L)	8.0	8.4	7.6	10.5	
13	NO2+NO3 (mg N/L)	0.55	0.31	0.97	0.38	
14	NO2-N (mgN/L)	0.01	0.01	0.00	0.01	
15	NO3-N (mgN/L)	0.53	0.29	0.97	0.36	
16	o-PO4-P (mg P/L)	0.031	0.052	0.031	0.000	
17	SiO2 (mg/L)	5.6	21.8	14.4	11.7	
18	SO4 (mg/L)	23.5	2.5	3.8	14.6	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD (mg/L)	0.7	2.2	1.4	0.6	
2	COD (mg/L)	4.0	25.3	52.0	10.0	
3	DO (mg/L)	6.6	6.6	6.8	7.2	
4	DO_SAT% (%)	78	79	79	84	
5	FCol-MPN (MPN/100mL)	170	1100	490	400	
6	Tcol-MPN (MPN/100mL)	490	3500	3500	9200	
	TRACE & TOXIC					
1	As (μg/L)	0.0				
2	Cd (μg/L)	4.9				
3	Cr (μg/L)	3.2				
4	Cu (μg/L)	12.9				
5	Ni (μg/L)	50.0				
6	Pb (μg/L)	0.0				
7	Zn (μg/L)	23.3				
8	Hg(μg/L)	1.8				
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	38	38	38	36	
2	HAR_Total (mgCaCO3/L)	73	84	80	67	
3	Na% (%)	19	18	17	25	
4	RSC (-)	0.0	0.0	0.0	0.0	
5	SAR (-)	0.4	0.4	0.4	0.6	

Water Quality Datasheet for the period : 2020-2021

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Analysis Sub-Division : Upper Tunga Subdn, Davanagere

S.No	Parameters	3-Aug-20	11-Aug-20	21-Aug-20	1-Sep-20	11-Sep-20
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	32.03	92.99	77.01	31.92	129.9
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown	Clear	Light Brown
3	EC_GEN (μmho/cm)	213	261	265	196	230
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.7	7.5	7.5	7.5	7.5
6	TDS (mg/L)	122	158	184	120	142
7	Temp (deg C)	24.0	23.0	24.0	24.5	24.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	66	77	85	65	68
3	B (mg/L)	0.02	0.02	0.02	0.09	0.09
4	Ca (mg/L)	16	21	20	14	35
5	Cl (mg/L)	17.4	25.2	21.3	19.2	24.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.25	0.29	0.30	0.11	0.19
8	Fe (mg/L)	0.4	0.0	0.1	0.3	1.5
9	HCO3 (mg/L)	81	93	104	79	83
10	K (mg/L)	2.3	3.9	3.6	1.6	4.1
11	Mg (mg/L)	11.5	14.6	11.4	10.7	29.6
12	Na (mg/L)	11.9	15.7	16.4	9.0	10.1
13	NO2+NO3 (mg N/L)	0.32	1.02	1.02	0.46	0.87
14	NO2-N (mgN/L)	0.01	0.06	0.06	0.00	0.04
15	NO3-N (mgN/L)	0.31	0.97	0.97	0.46	0.83
16	o-PO4-P (mg P/L)	0.041	0.083	0.072	0.031	0.052
17	SiO2 (mg/L)	12.1	11.5	12.3	9.1	18.8
18	SO4 (mg/L)	18.7	25.8	25.8	10.6	17.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD (mg/L)	0.8	0.8	1.7	1.2	0.9
2	COD (mg/L)	6.0	12.0	8.0	NA	NA
3	DO (mg/L)	6.0	7.2	6.8	6.3	7.1
4	DO_SAT% (%)	71	84	81	75	84
5	FCol-MPN (MPN/100mL)	470	270	270	490	3300
6	Tcol-MPN (MPN/100mL)	9200	2200	2200	1700	17000
	TRACE & TOXIC					
1	As (μg/L)	0.9				
2	Cd (μg/L)	0.2				
3	Cr (μg/L)	195.6				
4	Cu (μg/L)	1.3				
5	Ni (μg/L)	1.2				
6	Pb (μg/L)	0.1				
7	Zn (μg/L)	2.1				
8	Hg(μg/L)	NA				
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	40	52	51	36	88
2	HAR_Total (mgCaCO3/L)	88	113	99	81	212
3	Na% (%)	22	23	26	19	9
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.6	0.6	0.7	0.4	0.3

Water Quality Datasheet for the period : 2020-2021

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Analysis Sub-Division : Upper Tunga Subdn, Davanagere

S.No	Parameters	21-Sep-20	5-Oct-20	12-Oct-20	21-Oct-20
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	743.6	44.50	93.87	32.96
2	Colour_Cod (-)	Light Brown	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	104	195	210	166
4	Odour_Code (-)	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	6.9	7.6	7.9	7.8
6	TDS (mg/L)	62	130	140	126
7	Temp (deg C)	25.0	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)	26	63	66	56
3	B (mg/L)	0.08	0.01	0.01	0.02
4	Ca (mg/L)	8	16	17	15
5	Cl (mg/L)	9.6	17.0	23.1	11.7
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.10	NA	NA	NA
8	Fe (mg/L)	0.8	NA	NA	NA
9	HCO3 (mg/L)	31	77	80	69
10	K (mg/L)	1.6	2.3	5.1	3.0
11	Mg (mg/L)	4.7	10.3	9.4	7.4
12	Na (mg/L)	5.5	9.4	8.9	7.6
13	NO2+NO3 (mg N/L)	1.11	0.32	0.07	0.15
14	NO2-N (mgN/L)	0.03	0.00	0.04	0.14
15	NO3-N (mgN/L)	1.08	0.32	0.03	0.01
16	o-PO4-P (mg P/L)	0.010	0.000	0.041	0.000
17	SiO2 (mg/L)	10.6	16.4	11.6	13.2
18	SO4 (mg/L)	11.9	8.8	16.0	8.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD (mg/L)	2.6	0.6	1.3	1.2
2	COD (mg/L)	NA	NA	NA	NA
3	DO (mg/L)	7.2	7.0	6.5	7.0
4	DO_SAT% (%)	87	83	77	83
5	Fcol-MPN (MPN/100mL)	11000	1100	3400	4500
6	Tcol-MPN (MPN/100mL)	92000	2200	17000	7800
	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)				
8	Hg(μg/L)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	20	39	43	39
2	HAR_Total (mgCaCO3/L)	40	82	81	69
3	Na% (%)	22	20	18	19
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	0.4	0.5	0.4	0.4

Nov 2020-May 2021 Sample not submitted due to shortage of staff

Water Quality Summary for the period : 2020-2021

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

Sub-Division : Upper Tunga Subdn, Davanagere

River Water Summary					
S.No	Parameters	Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	335	743.6	9.891	63.46
2	EC_GEN (µmho/cm)	13	265	104	198
3	pH_GEN (pH units)	13	7.9	6.9	7.6
4	TDS (mg/L)	13	184	62	129
5	Temp (deg C)	13	25.0	23.0	24
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	13	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	13	85	26	64
3	B (mg/L)	13	0.09	0.01	0.05
4	Ca (mg/L)	13	35	8	17
5	Cl (mg/L)	13	25.2	9.6	18
6	CO3 (mg/L)	13	0.0	0.0	0
7	F (mg/L)	10	0.30	0.06	0.16
8	Fe (mg/L)	10	1.5	0.0	0.4
9	HCO3 (mg/L)	13	104	31	78
10	K (mg/L)	13	5.1	1.1	2.7
11	Mg (mg/L)	13	29.6	4.7	11.3
12	Na (mg/L)	13	16.4	5.5	9.9
13	NO2+NO3 (mg N/L)	13	1.11	0.07	0.58
14	NO2-N (mgN/L)	13	0.14	0.00	0.03
15	NO3-N (mgN/L)	13	1.08	0.01	0.55
16	o-PO4-P (mg P/L)	13	0.083	0.000	0.034
17	SiO2 (mg/L)	13	21.8	5.6	13
18	SO4 (mg/L)	13	25.8	2.5	14.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD (mg/L)	13	2.6	0.6	1.2
2	COD (mg/L)	7	52.0	4.0	16.8
3	DO (mg/L)	13	7.2	6.0	6.8
4	DO_SAT% (%)	13	87	71	80
5	FCol-MPN (MPN/100mL)	13	11000	170	2074
6	Tcol-MPN (MPN/100mL)	13	92000	490	12922
	TRACE & TOXIC				
1	As (µg/L)	2	0.9	0.0	0.4
2	Cd (µg/L)	1	0.2	0.2	0.2
3	Cr (µg/L)	2	195.6	3.2	99.4
4	Cu (µg/L)	2	12.9	1.3	7.1
5	Ni (µg/L)	2	50.0	1.2	25.6
6	Pb (µg/L)	2	0.1	0.0	0.1
7	Zn (µg/L)	2	23.3	2.1	12.7
8	Hg (µg/L)	1	1.8	1.8	1.8
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	13	88	20	43
2	HAR_Total (mgCaCO3/L)	13	212	40	90
3	Na% (%)	13	26	9	20
4	RSC (-)	13	0.0	0.0	0
5	SAR (-)	13	0.7	0.3	0.5

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water

Sub-Division : Upper Tunga Subdn, Davanagere

S.No	Parameters	Flood				
		Jun - Oct				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	44.18	173.7	84.44	Dry bed	197.1
2	EC_GEN (µmho/cm)	332	181	215	No flow	227
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.2	7.6	7.7		7.7
5	TDS (mg/L)					
6	Temp (deg C)	28.1	25.2	24.7		24.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0		0.0
2	ALK-TOT (mgCaCO3/L)	93	47	64		72
3	B (mg/L)	0.00	0.14	0.29		0.02
4	Ca (mg/L)	13	13	16		19
5	Cl (mg/L)	41.7	22.2	24.8		24.6
6	CO3 (mg/L)	0.0	0.0	0.0		0.0
7	F (mg/L)	0.00	0.08	0.10		0.15
8	Fe (mg/L)	0.0	0.3	0.3		0.3
9	HCO3 (mg/L)	113	57	78		88
10	K (mg/L)	40.5	1.8	2.4		2.6
11	Mg (mg/L)	6.8	5.5	8.0		7.8
12	Na (mg/L)	28.1	14.4	15.5		13.9
13	NO2+NO3 (mg N/L)	0.66	0.68	0.90		0.97
14	NO2-N (mgN/L)	0.00	0.01	0.01		0.00
15	NO3-N (mgN/L)	0.66	0.67	0.89		0.97
16	o-PO4-P (mg P/L)	0.000	0.002	0.000		0.021
17	SiO2 (mg/L)	11.2	12.7	10.6		14.3
18	SO4 (mg/L)	15.3	4.3	5.2		4.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.2	0.9		
2	COD (mg/L)					
3	DO (mg/L)	6.9	4.4	4.7		5.4
4	DO_SAT% (%)	88	53	57		65
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 (mgCaCO3/L)	32	33	39		48
2	HAR_Total (mgCaCO3/L)	61	56	72		80
3	Na% (%)	34	34	31		26
4	RSC (-)	0.7	0.0	0.0		0.0
5	SAR (-)	1.6	0.8	0.8		0.7
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water

Sub-Division : Upper Tunga Subdn, Davanagere

S.No	Parameters	Flood				
		Jun - Oct				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	230.5	39.26	286.3	170.7	62.38
2	EC_GEN (µmho/cm)	182	284	199	205	217
3	pH_FLD (pH units)				7.4	
4	pH_GEN (pH units)	7.1	7.3	7.3	7.3	7.3
5	TDS (mg/L)					
6	Temp (deg C)	25.0	25.4	25.9	25.3	24.1
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	55	68	60	60	48
3	B (mg/L)			0.03	0.31	0.25
4	Ca (mg/L)	15	20	15	16	21
5	Cl (mg/L)	20.8	40.7	22.8	24.4	28.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.23	0.19	0.11	0.11	0.19
8	Fe (mg/L)	0.2		0.1	0.3	0.9
9	HCO3 (mg/L)	67	83	73	73	72
10	K (mg/L)	2.0	2.5	2.3	2.4	3.5
11	Mg (mg/L)	5.8	6.8	5.1	6.4	7.3
12	Na (mg/L)	12.7	26.8	19.3	15.3	12.3
13	NO2+NO3 (mg N/L)	1.07	1.89	1.72	1.94	0.91
14	NO2-N (mgN/L)	0.00	0.01	0.02	0.04	0.02
15	NO3-N (mgN/L)	1.06	1.87	1.71	1.90	0.89
16	o-PO4-P (mg P/L)	0.008		0.044	0.068	0.203
17	SiO2 (mg/L)	12.2		12.1	7.9	11.5
18	SO4 (mg/L)	6.4	6.6	7.3	6.9	9.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	0.7	0.8	1.7	0.5
2	COD (mg/L)					
3	DO (mg/L)	5.9	5.6	6.0	6.0	4.7
4	DO_SAT% (%)	72	68	73	73	55
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	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 (mgCaCO3/L)	37	51	37	41	52
2	HAR_Total (mgCaCO3/L)	61	80	58	68	82
3	Na% (%)	29	40	36	31	24
4	RSC (-)	0.0	0.0	0.2	0.0	0.0
5	SAR (-)	0.7	1.3	1.1	0.8	0.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water

Sub-Division : Upper Tunga Subdn, Davanagere

S.No	Parameters	Flood				
		Jun - Oct				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	31.78	19.49	123.5	117.0	105.8
2	EC_GEN (µmho/cm)	205	236	211	162	198
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.0	7.4	7.5	7.7	7.6
5	TDS (mg/L)	123	155	135	107	129
6	Temp (deg C)	22.8	23.2	23.4	23.1	24.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	60	83	73	55	64
3	B (mg/L)	0.16	0.24	0.08	0.09	0.05
4	Ca (mg/L)	16	21	21	15	17
5	Cl (mg/L)	23.6	19.9	18.1	15.8	18.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)		0.14	0.18	0.09	0.16
8	Fe (mg/L)	0.2	0.2	0.5	0.4	0.4
9	HCO3 (mg/L)	73	101	89	68	78
10	K (mg/L)	3.1	3.6	3.6	2.3	2.7
11	Mg (mg/L)	7.1	9.2	7.5	6.1	11.3
12	Na (mg/L)	15.7	13.5	10.4	7.1	9.9
13	NO2+NO3 (mg N/L)	1.76	1.18	1.02	0.80	0.58
14	NO2-N (mgN/L)	0.02	0.01	0.02	0.06	0.03
15	NO3-N (mgN/L)	1.74	1.16	1.00	0.75	0.55
16	o-PO4-P (mg P/L)	0.066	0.282	0.043	0.112	0.034
17	SiO2 (mg/L)	15.0	10.6	9.4	14.2	13.0
18	SO4 (mg/L)	8.0	11.3	11.8	5.7	14.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	0.8	2.5	1.0	1.2
2	COD (mg/L)			15.7	11.0	16.8
3	DO (mg/L)	5.3	5.0	6.3	6.3	6.8
4	DO_SAT% (%)	62	59	73	74	80
5	FCol-MPN (MPN/100mL)			1883	1082	2074
6	Tcol-MPN (MPN/100mL)			5533	15866	12922
	TRACE & TOXIC					
1	As (µg/L)		2.0	4.2	4.2	0.4
2	Cd (µg/L)		0.0	0.1	0.1	0.2
3	Cr (µg/L)		45.0	1.1	1.4	99.4
4	Cu (µg/L)		4.0	3.8	0.8	7.1
5	Hg (µg/L)					
6	Ni (µg/L)			3.1	2.8	25.6
7	Pb (µg/L)		515.0	0.8	0.1	0.1
8	Zn (µg/L)		11.0	4.8	17.3	12.7
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	40	53	52	39	43
2	HAR_Total (mgCaCO3/L)	69	91	84	64	90
3	Na% (%)	31	23	20	19	20
4	RSC (-)	0.2	0.0	0.0	0.0	0.0
5	SAR (-)	1.0	0.6	0.5	0.4	0.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water

Sub-Division : Upper Tunga Subdn, Davanagere

S.No	Parameters	Winter				
		Nov - Feb				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	34.01	48.06	33.79	Dry bed	63.83
2	EC_GEN (µmho/cm)	307	231	240	No flow	194
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.6	7.8	7.6		7.5
5	TDS (mg/L)					
6	Temp (deg C)	26.4	23.6	23.5		24.4
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0		0.0
2	ALK-TOT (mgCaCO3/L)	68	49	64		56
3	B (mg/L)	0.00	0.12	0.14		0.06
4	Ca (mg/L)	11	17	17		16
5	Cl (mg/L)	41.8	30.7	33.2		20.3
6	CO3 (mg/L)	0.0	0.0	0.0		0.0
7	F (mg/L)	0.14	0.14	0.14		0.14
8	Fe (mg/L)	0.0	0.2	0.2		0.0
9	HCO3 (mg/L)	84	60	78		68
10	K (mg/L)	39.1	3.1	2.3		1.8
11	Mg (mg/L)	5.0	5.5	5.6		6.1
12	Na (mg/L)	26.8	22.5	23.0		13.0
13	NO2+NO3 (mg N/L)	1.15	0.45	0.54		0.99
14	NO2-N (mgN/L)	0.00	0.03	0.02		0.05
15	NO3-N (mgN/L)	1.15	0.42	0.52		0.94
16	o-PO4-P (mg P/L)	0.000	0.057	0.049		0.018
17	SiO2 (mg/L)	14.9	11.4	12.5		12.4
18	SO4 (mg/L)	22.4	15.9	5.9		9.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	0.9	1.5		0.2
2	COD (mg/L)					
3	DO (mg/L)	7.0	4.6	5.4		6.2
4	DO_SAT% (%)	86	54	63		74
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 (mgCaCO3/L)	26	42	42		39
2	HAR_Total (mgCaCO3/L)	47	65	65		64
3	Na% (%)	38	39	40		29
4	RSC (-)	0.4	0.0	0.0		0.0
5	SAR (-)	1.8	1.2	1.2		0.7
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water

Sub-Division : Upper Tunga Subdn, Davanagere

S.No	Parameters	Winter				
		Nov - Feb				
		2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL					
1	Q (cumec)	37.17	52.24	34.55	28.57	27.24
2	EC_GEN (µmho/cm)	279	250	265	191	206
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.0	7.1	7.3	7.6	7.5
5	TDS (mg/L)					99
6	Temp (deg C)	24.3	23.1	24.5	22.8	22.4
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	71	58	73	59	67
3	B (mg/L)			0.02	0.20	0.33
4	Ca (mg/L)	21	21	19	19	19
5	Cl (mg/L)	44.1	40.1	36.8	23.7	21.8
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)		0.14	0.19	0.11	0.17
8	Fe (mg/L)	0.0		0.2	0.1	0.3
9	HCO3 (mg/L)	86	71	87	72	84
10	K (mg/L)	2.5	2.2	2.4	5.6	1.7
11	Mg (mg/L)	5.3	4.6	6.6	6.8	8.0
12	Na (mg/L)	26.6	23.9	27.8	8.7	10.1
13	NO2+NO3 (mg N/L)	1.51	1.59	1.64	1.12	1.00
14	NO2-N (mgN/L)	0.02	0.02	0.02	0.02	0.01
15	NO3-N (mgN/L)	1.48	1.57	1.62	1.10	0.99
16	o-PO4-P (mg P/L)	0.000		0.075	0.039	0.351
17	SiO2 (mg/L)	12.5		12.7	10.4	16.9
18	SO4 (mg/L)	6.9	5.2	6.7	6.5	8.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.0	1.2	1.0	1.5
2	COD (mg/L)					
3	DO (mg/L)	5.3	6.1	6.2	6.4	6.6
4	DO_SAT% (%)	63	71	73	73	75
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
1	As (µg/L)	0.3	0.5			0.7
2	Cd (µg/L)	0.2	0.1		0.0	0.0
3	Cr (µg/L)	1.1	0.5		0.2	0.1
4	Cu (µg/L)		3.1		7.3	0.1
5	Hg (µg/L)					
6	Ni (µg/L)	5.0	11.6		1.6	0.7
7	Pb (µg/L)				1.0	0.1
8	Zn (µg/L)				9.8	3.1
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	53	52	47	47	48
2	HAR_Total (mgCaCO3/L)	75	71	74	75	81
3	Na% (%)	41	41	44	19	21
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	1.3	1.2	1.4	0.4	0.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water

Sub-Division : Upper Tunga Subdn, Davanagere

S.No	Parameters	Winter				
		Nov - Feb				
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	30.65	21.64	32.01	77.55	Dry bed
2	EC_GEN (µmho/cm)	177	179	223	203	No flow
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.4	7.2	7.7	7.9	
5	TDS (mg/L)	106	117	140	147	
6	Temp (deg C)	22.8	22.8	22.6	22.9	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.6	0.0	
2	ALK-TOT (mgCaCO3/L)	53	62	81	77	
3	B (mg/L)	0.32	0.03	0.17	0.09	
4	Ca (mg/L)	16	15	18	17	
5	Cl (mg/L)	18.4	14.6	18.3	17.1	
6	CO3 (mg/L)	0.0	0.0	0.7	0.0	
7	F (mg/L)		0.21	0.16	0.11	
8	Fe (mg/L)	0.1	0.1	0.2	0.3	
9	HCO3 (mg/L)	65	76	97	94	
10	K (mg/L)	2.0	1.9	2.4	2.3	
11	Mg (mg/L)	6.8	8.2	11.3	7.9	
12	Na (mg/L)	10.6	8.5	10.9	9.6	
13	NO2+NO3 (mg N/L)	1.51	0.67	1.55	1.78	
14	NO2-N (mgN/L)	0.03	0.01	0.01	0.01	
15	NO3-N (mgN/L)	1.48	0.67	1.54	1.76	
16	o-PO4-P (mg P/L)	0.028	0.019	0.100	0.041	
17	SiO2 (mg/L)	19.3	9.8	15.5	13.9	
18	SO4 (mg/L)	9.0	9.0	7.5	11.8	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	0.6	2.0	1.2	
2	COD (mg/L)			16.3	16.3	
3	DO (mg/L)	6.2	5.5	6.4	6.4	
4	DO_SAT% (%)	71	63	74	75	
5	FCOI-MPN (MPN/100mL)			3146	1079	
6	Tcol-MPN (MPN/100mL)			9208	5115	
	TRACE & TOXIC					
1	As (µg/L)	0.7	2.1	0.2	1.7	
2	Cd (µg/L)	0.0	0.0	0.0	0.0	
3	Cr (µg/L)	0.1	9.8	1.4	1.0	
4	Cu (µg/L)	4.1	5.2	1.6	3.6	
5	Hg (µg/L)					
6	Ni (µg/L)	0.5	1.5	2.9	2.6	
7	Pb (µg/L)	0.1	1.0	1.6	0.2	
8	Zn (µg/L)	0.6	15.4	1.1	9.9	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	40	37	44	44	
2	HAR_Total (mgCaCO3/L)	68	71	91	76	
3	Na% (%)	24	21	20	21	
4	RSC (-)	0.0	0.0	0.0	0.3	
5	SAR (-)	0.6	0.4	0.5	0.5	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water

Sub-Division : Upper Tunga Subdn, Davanagere

S.No	Parameters	Summer				
		Mar - May				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	61.69	53.24	67.84	Dry bed	66.63
2	EC_GEN (µmho/cm)	318	174	164	No flow	177
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.6	7.5	7.4		7.1
5	TDS (mg/L)					
6	Temp (deg C)	28.8	26.5	25.2		22.8
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0		0.0
2	ALK-TOT (mgCaCO3/L)	79	48	51		53
3	B (mg/L)	0.00	0.07	0.07		0.03
4	Ca (mg/L)	15	13	13		15
5	Cl (mg/L)	38.1	20.4	18.5		19.3
6	CO3 (mg/L)	0.0	0.0	0.0		0.0
7	F (mg/L)	0.00	0.08	0.06		0.25
8	Fe (mg/L)	0.0	0.3	0.2		0.0
9	HCO3 (mg/L)	97	58	63		65
10	K (mg/L)	27.6	2.3	1.4		1.7
11	Mg (mg/L)	8.5	4.6	4.5		6.2
12	Na (mg/L)	26.9	14.2	12.7		9.8
13	NO2+NO3 (mg N/L)	0.24	0.49	0.51		0.92
14	NO2-N (mgN/L)	0.00	0.01	0.02		0.01
15	NO3-N (mgN/L)	0.24	0.47	0.49		0.91
16	o-PO4-P (mg P/L)	0.000	0.386	0.010		0.026
17	SiO2 (mg/L)	9.8	12.9	11.5		16.3
18	SO4 (mg/L)	25.2	3.4	3.0		5.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	1.5	1.3		
2	COD (mg/L)					
3	DO (mg/L)	6.2	4.2	5.5		5.6
4	DO_SAT% (%)	79	52	66		65
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
1	As (µg/L)	6.9	6.8			1.6
2	Cd (µg/L)	4.0	1.0			
3	Cr (µg/L)					1.8
4	Cu (µg/L)	4.7	3.6	3.4		4.3
5	Hg (µg/L)					
6	Ni (µg/L)			11.3		
7	Pb (µg/L)	3.4	1.4			
8	Zn (µg/L)	40.0	41.0			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	37	34	33		37
2	HAR_Total (mgCaCO3/L)	73	53	52		63
3	Na% (%)	35	36	34		24
4	RSC (-)	0.3	0.0	0.0		0.0
5	SAR (-)	1.4	0.9	0.8		0.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water

Sub-Division : Upper Tunga Subdn, Davanagere

S.No	Parameters	Summer				
		Mar - May				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	82.77	71.71	88.10	28.15	31.39
2	EC_GEN (µmho/cm)	169	159	160	188	141
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.0	6.9	7.0	7.3	6.9
5	TDS (mg/L)					66
6	Temp (deg C)	24.5	25.0	24.8	24.0	25.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	48	41	51	61	39
3	B (mg/L)		0.00	0.04	0.48	0.18
4	Ca (mg/L)	13	13	13	14	12
5	Cl (mg/L)	20.9	20.5	17.7	22.1	16.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.15		0.22	0.19	0.23
8	Fe (mg/L)		0.1	0.1	0.1	0.1
9	HCO3 (mg/L)	58	50	63	74	51
10	K (mg/L)	2.3	1.3	3.7	6.0	1.4
11	Mg (mg/L)	5.5	5.7	4.9	5.2	5.5
12	Na (mg/L)	12.3	8.9	11.9	15.3	6.9
13	NO2+NO3 (mg N/L)	1.58	1.65	1.26	0.52	1.17
14	NO2-N (mgN/L)	0.02	0.01	0.01	0.04	0.01
15	NO3-N (mgN/L)	1.56	1.64	1.24	0.48	1.15
16	o-PO4-P (mg P/L)		0.041	0.048	0.021	0.517
17	SiO2 (mg/L)		13.1	17.2	4.7	13.5
18	SO4 (mg/L)	5.3	6.4	4.5	4.0	4.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.6	0.4	1.6	3.3	0.6
2	COD (mg/L)					
3	DO (mg/L)	5.4	4.9	6.2	5.3	5.6
4	DO_SAT% (%)	65	59	74	62	68
5	FCol-MPN (MPN/100mL)					
6	Tcol-MPN (MPN/100mL)					
	TRACE & TOXIC					
1	As (µg/L)	0.5	7.1	0.7		3.7
2	Cd (µg/L)	0.4	0.1	0.1		
3	Cr (µg/L)	1.9	0.3	0.5		1.0
4	Cu (µg/L)	1.1	2.9	0.3		1.0
5	Hg (µg/L)					
6	Ni (µg/L)	4.3	1.2	9.1		1.3
7	Pb (µg/L)	3.6	1.6	0.4		
8	Zn (µg/L)	40.0	77.9	18.0		20.8
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	32	33	33	36	31
2	HAR_Total (mgCaCO3/L)	55	56	54	58	54
3	Na% (%)	31	25	31	33	22
4	RSC (-)	0.0	0.0	0.0	0.1	0.0
5	SAR (-)	0.7	0.5	0.7	0.9	0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : HOLEHONNUR (AKLE0A4)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water

Sub-Division : Upper Tunga Subdn, Davanagere

S.No	Parameters	Summer				
		Mar - May				
		2017	2018	2019	2020	2021
	PHYSICAL					
1	Q (cumec)	38.84	43.06	41.79	31.44	Dry bed
2	EC_GEN (µmho/cm)	141	188	172	172	No flow
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.5	7.2	7.5	7.7	
5	TDS (mg/L)	94	118	121	116	
6	Temp (deg C)	24.3	24.1	24.3	24.4	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	53	71	56	56	
3	B (mg/L)	0.15	0.06	0.13	0.03	
4	Ca (mg/L)	12	18	16	17	
5	Cl (mg/L)	8.5	12.7	16.7	16.2	
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	
7	F (mg/L)	0.14	0.19	0.23	0.48	
8	Fe (mg/L)	0.1	0.1	0.1	0.1	
9	HCO3 (mg/L)	64	86	69	68	
10	K (mg/L)	1.7	2.6	1.9	2.3	
11	Mg (mg/L)	6.2	7.6	6.3	6.2	
12	Na (mg/L)	6.8	7.7	7.1	8.9	
13	NO2+NO3 (mg N/L)	0.63	0.50	0.38	1.03	
14	NO2-N (mgN/L)	0.01	0.02	0.12	0.01	
15	NO3-N (mgN/L)	0.62	0.48	0.25	1.02	
16	o-PO4-P (mg P/L)	0.048	0.076	0.049	0.258	
17	SiO2 (mg/L)	11.0	12.4	12.7	13.6	
18	SO4 (mg/L)	7.8	5.8	1.2	3.7	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	1.5	1.3	0.5	
2	COD (mg/L)		13.0	22.1	9.5	
3	DO (mg/L)	5.5	4.9	6.2	5.8	
4	DO_SAT% (%)	65	58	74	69	
5	FCol-MPN (MPN/100mL)			1758	542	
6	Tcol-MPN (MPN/100mL)			4259	3740	
	TRACE & TOXIC					
1	As (µg/L)		0.5	0.3		
2	Cd (µg/L)		0.0	0.0		
3	Cr (µg/L)		0.3	0.1		
4	Cu (µg/L)		1.0	0.4		
5	Hg (µg/L)					
6	Ni (µg/L)		2.1	2.1		
7	Pb (µg/L)		1.2	2.6		
8	Zn (µg/L)		1.6	6.7		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	31	46	41	42	
2	HAR_Total (mgCaCO3/L)	57	77	67	68	
3	Na% (%)	20	18	18	22	
4	RSC (-)	0.0	0.0	0.0	0.0	
5	SAR (-)	0.4	0.4	0.4	0.5	
	PESTICIDES					

HISTORY SHEET

		Water Year	: 2020-2021
Site	: LAKKAVALLI	Code	: LAKKAVALLI
State	: Karnataka	District	Shimoga
Basin	: Krishna	Independent River	: Krishna
Tributary	: Tungabhadra	Sub Tributary	:
		Local River	: Bhadra
Division	: Cauvery Division, Bangalore	Sub-Division	: Upper Tunga SD, Devangere
Drainage Area	: 1975 Sq. Km.	Bank	: Right
Latitude	: 13°42'22"	Longitude	: 75°38'42"
	Opening Date	Closing Date	
Gauge	: 11-07-2016		
Discharge	: 13-12-2018		
Water Quality	: 01-05-2019		

Water Quality Datasheet for the period : 2020-2021

Station Name : LAKKAVALLI (LAKKAVALLI)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Analysis

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	3-Jun-20	1-Jul-20	3-Aug-20	1-Sep-20	5-Oct-20	2-Nov-20
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	4.318	5.219	5.453	5.447	5.460	5.480
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	87	89	98	78	57	68
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.0	7.1	7.2	7.3	7.2	7.3
6	TDS (mg/L)	56	68	62	52	32	42
7	Temp (deg C)	24.0	24.0	24.0	25.0	25.0	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)	34	26	22	13	8	24
3	B (mg/L)	0.05	0.07	0.08	0.12	0.03	NA
4	Ca (mg/L)	6	8	6	6	3	5
5	Cl (mg/L)	6.0	9.6	9.6	5.7	7.5	7.8
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.05	0.02	0.08	0.08	0.04	NA
8	Fe (mg/L)	0.5	0.9	1.5	0.5	NA	NA
9	HCO3 (mg/L)	41	32	27	16	10	29
10	K (mg/L)	1.4	0.7	0.9	1.1	1.6	1.1
11	Mg (mg/L)	4.6	3.8	6.7	4.4	3.3	3.4
12	Na (mg/L)	3.9	4.1	3.2	2.3	3.0	3.5
13	NO2+NO3 (mg N/L)	0.13	0.06	0.13	0.80	0.42	0.08
14	NO2-N (mgN/L)	0.01	0.00	0.01	0.01	0.00	0.00
15	NO3-N (mgN/L)	0.11	0.06	0.11	0.78	0.42	0.08
16	o-PO4-P (mg P/L)	0.010	0.010	0.010	0.021	0.052	0.010
17	SiO2 (mg/L)	17.9	11.8	9.8	8.3	10.7	9.8
18	SO4 (mg/L)	3.9	7.1	12.3	14.0	9.8	1.3
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD (mg/L)	0.6	1.2	0.4	0.3	2.2	0.2
2	COD (mg/L)	6.0	5.0	7.0	NA	NA	NA
3	DO (mg/L)	8.3	7.8	7.0	6.8	8.0	7.2
4	DO_SAT% (%)	99	93	83	82	97	86
5	FCol-MPN (MPN/100mL)	490	270	220	270	680	NA
6	Tcol-MPN (MPN/100mL)	1100	1700	1100	1700	11000	NA
	TRACE & TOXIC						
1	As (µg/L)	0.3		0.3			
2	Cd (µg/L)	BDL		0.1			
3	Cr (µg/L)	4.3		19.4			
4	Cu (µg/L)	10.8		13.0			
5	Ni (µg/L)	30.3		0.5			
6	Pb (µg/L)	BDL		0.2			
7	Zn (µg/L)	17.2		2.6			
8	Hg (µg/L)	0.9		NA			
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	15	20	16	16	8	12
2	HAR_Total (mgCaCO3/L)	34	35	44	34	22	26
3	Na% (%)	19	20	13	12	22	22
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.3	0.3	0.2	0.2	0.3	0.3

Water Quality Datasheet for the period : 2020-2021

Station Name : LAKKAVALLI (LAKKAVALLI)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water Analysis

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	1-Dec-20	1-Jan-21	1-Feb-21	1-Mar-21	1-Apr-21	1-May-21
		A	A	A	A	A	
	PHYSICAL						
1	Q (cumec)	5.476	7.565	8.381	35.50	8.386	
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	
3	EC_GEN (μmho/cm)	82	63	75	78	76	
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	
5	pH_GEN (pH units)	7.4	7.2	8.0	7.1	7.1	
6	TDS (mg/L)	52	39	44	44	48	
7	Temp (deg C)	24.0	24.0	25.0	24.5	25.0	
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	27	22	25	21	21	
3	B (mg/L)	NA	0.00	0.01	0.08	0.19	
4	Ca (mg/L)	7	7	8	8	4	
5	Cl (mg/L)	9.6	6.7	5.7	7.8	11.7	
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	
7	F (mg/L)	0.04	0.04	0.04	0.04	0.06	
8	Fe (mg/L)	0.3	0.1	0.2	0.1	0.2	
9	HCO3 (mg/L)	33	26	31	26	26	
10	K (mg/L)	1.0	1.6	1.7	1.3	1.1	
11	Mg (mg/L)	4.1	2.2	3.2	2.8	4.5	
12	Na (mg/L)	2.9	2.6	3.1	3.3	3.5	
13	NO2+NO3 (mg N/L)	0.20	0.20	0.42	0.42	0.07	
14	NO2-N (mgN/L)	0.00	0.00	0.01	0.01	0.01	
15	NO3-N (mgN/L)	0.20	0.20	0.41	0.41	0.06	
16	o-PO4-P (mg P/L)	0.000	0.010	0.000	0.000	0.000	
17	SiO2 (mg/L)	3.4	9.5	10.0	13.9	11.4	
18	SO4 (mg/L)	1.2	0.9	2.9	7.2	1.4	
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD (mg/L)	1.1	0.5	0.6	0.9	0.1	
2	COD (mg/L)	NA	NA	4.0	3.5	4.0	
3	DO (mg/L)	8.2	7.6	7.5	7.0	7.8	
4	DO_SAT% (%)	97	91	91	83	94	
5	FCol-MPN (MPN/100mL)	NA	NA	NA	1100	680	
6	Tcol-MPN (MPN/100mL)	NA	NA	NA	1700	11000	
	TRACE & TOXIC						
1	As (μg/L)	6.0				0.9	
2	Cd (μg/L)	0.1				1.7	
3	Cr (μg/L)	3.7				0.0	
4	Cu (μg/L)	2.3				4.7	
5	Ni (μg/L)	11.9				17.5	
6	Pb (μg/L)	5.5				26.0	
7	Zn (μg/L)	0.5				2.3	
8	Hg (μg/L)	NA				0.0	
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	17	18	20	20	11	
2	HAR_Total (mgCaCO3/L)	34	27	33	31	30	
3	Na% (%)	15	17	16	18	20	
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	
5	SAR (-)	0.2	0.2	0.2	0.3	0.3	

Sample notsubmitted due to Covid-19 lockdown

Water Quality Summary for the period : 2020-2021

Station Name : LAKKAVALLI (LAKKAVALLI)

Division : Cauvery Division, Bangalore

Local River : Bhadra

Sub-Division : Upper Tunga SD, Devangere

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	372	699.4	0.000	13.30
2	EC_GEN (μmho/cm)	11	98	57	77
3	pH_GEN (pH units)	11	8.0	7.0	7.2
4	TDS (mg/L)	11	68	32	49
5	Temp (deg C)	11	25.0	24.0	24.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	11	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	11	34	8	22
3	B (mg/L)	9	0.19	0.00	0.07
4	Ca (mg/L)	11	8	3	6
5	Cl (mg/L)	11	11.7	5.7	8
6	CO3 (mg/L)	11	0.0	0.0	0
7	F (mg/L)	10	0.08	0.02	0.05
8	Fe (mg/L)	9	1.5	0.1	0.5
9	HCO3 (mg/L)	11	41	10	27
10	K (mg/L)	11	1.7	0.7	1.2
11	Mg (mg/L)	11	6.7	2.2	3.9
12	Na (mg/L)	11	4.1	2.3	3.2
13	NO2+NO3 (mg N/L)	11	0.80	0.06	0.26
14	NO2-N (mgN/L)	11	0.01	0.00	0.01
15	NO3-N (mgN/L)	11	0.78	0.06	0.26
16	o-PO4-P (mg P/L)	11	0.052	0.000	0.011
17	SiO2 (mg/L)	11	17.9	3.4	10.6
18	SO4 (mg/L)	11	14.0	0.9	5.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD (mg/L)	11	2.2	0.1	0.7
2	COD (mg/L)	6	7.0	3.5	4.9
3	DO (mg/L)	11	8.3	6.8	7.6
4	DO_SAT% (%)	11	99	82	90
5	FCol-MPN (MPN/100mL)	7	1100	220	530
6	Tcol-MPN (MPN/100mL)	7	11000	1100	4186
	TRACE & TOXIC				
1	As (μg/L)	3	6.0	0.3	2.4
2	Cd (μg/L)	3	1.7	0.1	0.6
3	Cr (μg/L)	4	19.4	0.0	6.8
4	Cu (μg/L)	4	13.0	2.3	7.7
5	Ni (μg/L)	4	30.3	0.5	15
6	Pb (μg/L)	3	26.0	0.2	10.6
7	Zn (μg/L)	4	17.2	0.5	5.6
8	Hg (μg/L)	2	0.9	0.0	0.45
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	11	20	8	16
2	HAR_Total (mgCaCO3/L)	11	44	22	32
3	Na% (%)	11	22	12	18
4	RSC (-)	11	0.0	0.0	0
5	SAR (-)	11	0.3	0.2	0.3

Water Quality Seasonal Average for the period: 2019-2021

Station Name : LAKKAVALLI (LAKKAVALLI)

Division : Cauvery Division, Bangalore

Local River : Bhadra

River Water

Sub-Division : Upper Tunga SD, Devangere

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2019	2020	2019-2020	2020-2021	2020	2021
	PHYSICAL						
1	Q (cumec)	30.11	5.179	28.29	6.725	4.296	17.42
2	EC_GEN (µmho/cm)	75	82	75	72	83	77
3	pH_GEN (pH units)	7.5	7.1	7.4	7.4	7.5	7.1
4	TDS (mg/L)	47	54	56	44	61	46
5	Temp (deg C)	25.0	24.4	22.4	24.4	23.0	24.8
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)	23	21	19	24	32	21
2	B (mg/L)	0.07	0.07	0.13	0.00	0.04	0.13
3	Ca (mg/L)	7	6	6	7	8	6
4	Cl (mg/L)	8.4	7.7	9.1	7.5	7.6	9.8
5	F (mg/L)	0.03	0.22	0.26	0.04	0.29	0.05
6	Fe (mg/L)	0.3	0.8	0.4	0.2	0.5	0.1
7	HCO3 (mg/L)	28	25	24	30	39	26
8	K (mg/L)	1.2	1.2	1.7	1.4	1.6	1.2
9	Mg (mg/L)	2.6	4.5	1.4	3.2	3.2	3.6
10	Na (mg/L)	3.6	3.3	6.6	3.0	4.4	3.4
11	NO2+NO3 (mg N/L)	0.40	0.31	0.64	0.22	0.09	0.24
12	NO2-N (mgN/L)	0.01	0.01	0.02	0.00	0.01	0.01
13	NO3-N (mgN/L)	0.39	0.30	0.62	0.22	0.08	0.23
14	o-PO4-P (mg P/L)	0.050	0.021	0.026	0.005	0.367	0.000
15	SiO2 (mg/L)	11.2	11.7	17.9	8.1	17.2	12.6
16	SO4 (mg/L)	3.6	9.4	4.1	1.6	2.3	4.3
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.2	0.9	1.0	0.6	0.2	0.5
2	COD (mg/L)	12.2	6.0	10.3	4.0	10.5	3.8
3	DO (mg/L)	7.3	7.6	4.8	7.6	4.3	7.4
4	DO_SAT% (%)	88	91	56	91	51	89
5	FCol-MPN (MPN/100mL)	336	386	940		40	890
6	Tcol-MPN (MPN/100mL)	2804	3320	3358		1700	6350
	TRACE & TOXIC						
1	As (µg/L)	0.5	0.3	4.3	6.0		0.9
2	Cd (µg/L)	0.1	0.1	0.1	0.1		1.7
3	Cr (µg/L)	1.0	11.8	11.3	3.7		0.0
4	Cu (µg/L)	0.1	11.9	2.4	2.3		4.7
5	Ni (µg/L)	2.6	15.4	13.0	11.9		17.5
6	Pb (µg/L)	0.1	0.2	0.5	5.5		26.0
7	Zn (µg/L)	14.2	9.9	9.5	0.5		2.3
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	18	15	16	17	19	15
2	HAR_Total (mgCaCO3/L)	29	34	22	30	32	30
3	Na% (%)	20	17	36	17	22	19
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.3	0.3	0.9	0.2	0.3	0.3
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Yadgir	Code	: AKP00B6
State	: Karnataka	District	Gulbarga
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	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 : 2020-2021

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	01-06-2020	11-06-2020	21-06-2020	01-07-2020	04-08-2020	01-09-2020
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	0.000	0.000	0.000	0.000	609.0	549.2
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Light Brown	Light Brown
3	EC_FLD (μmho/cm)						
4	EC_GEN (μmho/cm)	1016	1077	1075	728	821	678
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)						
7	pH_GEN (pH units)	7.8	7.7	7.8	7.7	7.6	8.0
8	TDS (mg/L)	678	1023	667	510	619	400
9	Temp (deg C)	26.0	26.0	28.0	22.0	27.0	23.0
10	Turb (NTU)	14.00	23.00	45.00	27.00	1.00	18.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	175	175	170	136	185	193
3	B (mg/L)	0.15	0.15	0.29	0.01	1.82	0.04
4	Ca (mg/L)	30	33	32	30	41	29
5	Cl (mg/L)	146.1	147.6	155.4	87.4	111.9	62.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.27	0.27	0.26	0.30	0.33	0.20
8	Fe (mg/L)	2.8	1.3	2.3	0.2	0.0	0.0
9	HCO3 (mg/L)	214	214	208	167	226	235
10	K (mg/L)	0.6	0.7	0.7	0.5	40.0	0.3
11	Mg (mg/L)	7.0	34.0	35.0	35.0	30.9	32.4
12	Na (mg/L)	142.9	143.0	156.0	81.1	78.4	55.9
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.01	0.01	0.05
14	NO2+NO3 (mg N/L)				5.98		
15	NO2-N (mgN/L)	0.01	0.01	0.00	0.58	0.04	0.05
16	NO3-N (mgN/L)				5.40		
17	o-PO4-P (mg P/L)	0.087	0.156	0.083	0.051	0.300	0.090
18	SiO2 (mg/L)	11.6	15.3	13.3	14.8	18.4	46.3
19	SO4 (mg/L)	135.1	137.0	152.5	48.2	66.2	63.2
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)				2.2		
2	COD (mg/L)	20.8	16.3	24.4	4.3		26.7
3	DO (mg/L)	7.2			3.0		
4	DO_SAT% (%)	89			34		
5	FCol-MPN (MPN/100mL)				700		
6	Tcol-MPN (MPN/100mL)				5000		
	TRACE & TOXIC						
1	As (μg/L)					0.46	
2	Cd (μg/L)					5.00	
3	Cr (μg/L)					12.60	
4	Cu (μg/L)	0.03	0.02	0.02	0.01	0.00	0.00
5	Hg (μg/L)					0.49	
6	Ni (μg/L)					15.10	
7	Pb (μg/L)					24.00	
8	Zn (μg/L)	0.02	0.02	0.02	0.01	0.00	0.00
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	75	83	79	75	102	71
2	HAR_Total (mgCaCO3/L)	104	225	225	221	231	206
3	Na% (%)	75	58	60	45	38	37
4	RSC (-)	1.4	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	6.1	4.2	4.5	2.4	2.3	1.7
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

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	05-10-2020	02-11-2020	01-12-2020	15-12-2020	21-12-2020	05-01-2021
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	884.4	1033	0.000	0.000	0.000	1.656
2	Colour_Cod (-)	Light Brown	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	168	166				
4	EC_GEN (μmho/cm)	769	781	980	763	798	698
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	9.5	9.5				
7	pH_GEN (pH units)	7.7	8.0	8.1	8.1	8.3	7.6
8	TDS (mg/L)	502	481	631	531	564	629
9	Temp (deg C)	25.0	21.0	26.0	26.0	26.0	26.0
10	Turb (NTU)	3.00	35.00	11.00	14.00	28.00	22.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	221	243	253	231	257	216
3	B (mg/L)	0.77	0.22	0.10	0.48	0.40	0.19
4	Ca (mg/L)	52	33	22	47	29	47
5	Cl (mg/L)	82.1	89.9	115.6	108.0	87.4	194.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.32	0.28	0.37	0.56	0.06	0.59
8	Fe (mg/L)	3.0	0.0	0.6	3.8	0.1	0.2
9	HCO3 (mg/L)	270	296	309	282	313	264
10	K (mg/L)	0.3	0.5	0.8	0.7	0.5	1.5
11	Mg (mg/L)	32.2	43.8	61.7	38.8	26.2	29.7
12	Na (mg/L)	63.8	86.3	96.8	104.5	72.2	229.7
13	NH3-N (mg N/L)	0.06	0.03	0.12	0.08	0.05	0.06
14	NO2+NO3 (mg N/L)						15.20
15	NO2-N (mgN/L)	0.03	0.28	0.37	0.31	0.10	0.30
16	NO3-N (mgN/L)						14.90
17	o-PO4-P (mg P/L)	0.950	0.510	0.020	0.460	0.530	0.240
18	SiO2 (mg/L)	24.1	26.1	23.6	30.4	26.6	29.0
19	SO4 (mg/L)	2.2	48.7	106.9	85.4	24.3	154.6
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)		3.1	3.6	2.0	9.9	2.9
2	COD (mg/L)	5.1	9.1	13.0	14.3	11.0	35.1
3	DO (mg/L)		4.1	6.7	4.6	10.4	7.8
4	DO_SAT% (%)		46	83	57	128	96
5	FCol-MPN (MPN/100mL)		1100	5000	3500	330	300
6	Tcol-MPN (MPN/100mL)		9000	16000	16000	2200	3500
	TRACE & TOXIC						
1	As (μg/L)			0.60	0.45	0.14	0.48
2	Cd (μg/L)			3.00	1.90	3.40	0.30
3	Cr (μg/L)			3.30	4.30	4.80	8.60
4	Cu (μg/L)	0.01	0.00	6.00	7.70	8.30	2.30
5	Hg (μg/L)			1.36	1.70	0.51	0.42
6	Ni (μg/L)			3.30	4.00	8.10	5.70
7	Pb (μg/L)			55.00	54.00	46.00	1.00
8	Zn (μg/L)	0.02	0.00	4.63	11.13	191.00	1.42
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	129	83	56	117	72	118
2	HAR_Total (mgCaCO3/L)	263	266	313	278	181	242
3	Na% (%)	35	42	40	45	47	67
4	RSC (-)	0.0	0.0	0.0	0.0	1.5	0.0
5	SAR (-)	1.7	2.3	2.4	2.7	2.3	6.4
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

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	01-02-2021	01-03-2021	05-04-2021	03-05-2021	21-05-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	0.000	0.000	0.000	0.000	0.000
2	Colour_Cod (-)	Clear	Green	Clear	Clear	Light Green
3	EC_FLD (µmho/cm)					
4	EC_GEN (µmho/cm)	1238	1151	1185	1023	1113
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)					
7	pH_GEN (pH units)	8.1	7.9	8.3	8.1	8.2
8	TDS (mg/L)	791	665	800	690	696
9	Temp (deg C)	25.0	24.0	22.0	27.0	25.0
10	Turb (NTU)	5.00	4.00	45.00	14.00	6.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	12.9	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	195	202	185	222	228
3	B (mg/L)	0.20	0.69			
4	Ca (mg/L)	51	43	68	63	70
5	Cl (mg/L)	137.8	163.0	171.0	150.8	182.8
6	CO3 (mg/L)	0.0	0.0	15.6	0.0	0.0
7	F (mg/L)	0.64	0.59	0.57	0.58	0.53
8	Fe (mg/L)	1.8	0.1	3.3	0.2	0.5
9	HCO3 (mg/L)	238	247	194	271	279
10	K (mg/L)	0.8	0.7	5.7	5.7	8.8
11	Mg (mg/L)	29.5	29.6	28.0	29.3	27.3
12	Na (mg/L)	155.2	156.1	163.1	105.9	157.0
13	NH3-N (mg N/L)	0.02	0.15			
14	NO2+NO3 (mg N/L)	2.60	2.52			
15	NO2-N (mgN/L)	0.30	0.72			
16	NO3-N (mgN/L)	2.30	1.80	5.00	5.13	6.13
17	o-PO4-P (mg P/L)	0.038	0.878			
18	SiO2 (mg/L)	10.1	16.3			
19	SO4 (mg/L)	113.0	185.2	150.1	153.8	20.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	5.2	4.6	3.7		
2	COD (mg/L)	27.6	17.3	26.9		
3	DO (mg/L)	7.4	5.2	4.1		
4	DO_SAT% (%)	90	62	47		
5	FCol-MPN (MPN/100mL)	1700	1400	1400		
6	Tcol-MPN (MPN/100mL)	9000	2800	1700		
	TRACE & TOXIC					
1	As (µg/L)			2.95	2.45	4.56
2	Cd (µg/L)			1.50	0.70	1.60
3	Cr (µg/L)			2.50	6.50	0.90
4	Cu (µg/L)	10.00	12.00	8.00	1.50	2.00
5	Hg (µg/L)			0.27	0.00	0.53
6	Ni (µg/L)			20.00	2.90	3.80
7	Pb (µg/L)			30.00	12.00	13.00
8	Zn (µg/L)	8.60	0.05	24.97	86.50	17.52
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	127	106	171	158	176
2	HAR_Total (mgCaCO3/L)	249	230	288	280	289
3	Na% (%)	58	60	55	45	53
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	4.3	4.5	4.2	2.8	4.0
	PESTICIDES					

Water Quality Summary for the period : 2020-2021

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	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	12353	0.000	606.2
2	EC_FLD (µmho/cm)	2	168	166	167
3	EC_GEN (µmho/cm)	17	1238	678	935
4	pH_FLD (pH units)	2	9.5	9.5	9.5
5	pH_GEN (pH units)	17	8.3	7.6	7.9
6	TDS (mg/L)	17	1023	400	640
7	Temp (deg C)	15	27.0	21.0	24.7
8	Turb (NTU)	17	45.00	1.00	18.53
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	17	12.9	0.0	0.8
2	ALK-TOT (mgCaCO3/L)	17	257	136	205
3	B (mg/L)	14	1.82	0.01	0.39
4	Ca (mg/L)	17	70	22	42
5	Cl (mg/L)	17	194.2	62.4	129
6	CO3 (mg/L)	17	15.6	0.0	0.9
7	F (mg/L)	17	0.64	0.06	0.39
8	Fe (mg/L)	17	3.8	0.0	1.2
9	HCO3 (mg/L)	17	313	167	249
10	K (mg/L)	17	40.0	0.3	4
11	Mg (mg/L)	17	61.7	7.0	32.4
12	Na (mg/L)	17	229.7	55.9	120.5
13	NH3-N (mg N/L)	14	0.15	0.00	0.05
14	NO2+NO3 (mg N/L)	4	15.20	2.52	6.57
15	NO2-N (mgN/L)	14	0.72	0.00	0.22
16	NO3-N (mgN/L)	7	14.90	1.80	5.81
17	o-PO4-P (mg P/L)	14	0.950	0.020	0.314
18	SiO2 (mg/L)	14	46.3	10.1	21.8
19	SO4 (mg/L)	17	185.2	2.2	96.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	9	9.9	2.0	4.1
2	COD (mg/L)	14	35.1	4.3	18
3	DO (mg/L)	6	10.4	3.0	6
4	DO_SAT% (%)	6	128	34	73
5	FCol-MPN (MPN/100mL)	9	5000	300	1714
6	Tcol-MPN (MPN/100mL)	9	16000	1700	7244
	TRACE & TOXIC				
1	As (µg/L)	4	0.60	0.14	0.42
2	Cd (µg/L)	7	3.40	0.30	1.77
3	Cr (µg/L)	7	8.60	0.90	4.41
4	Cu (µg/L)	17	12.00	0.00	3.41
5	Hg (µg/L)	4	1.70	0.42	1
6	Ni (µg/L)	7	20.00	2.90	6.83
7	Pb (µg/L)	7	55.00	1.00	30.14
8	Zn (µg/L)	17	191.00	0.00	20.35
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	17	176	56	106
2	HAR_Total (mgCaCO3/L)	17	313	104	241
3	Na% (%)	17	75	35	51
4	RSC (-)	17	1.5	0.0	0.2
5	SAR (-)	17	6.4	1.7	3.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	315.5	735.3	422.8	2333	724.3
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	584	708	527	522	852
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.3	8.2	8.0	8.1	8.1
6	TDS (mg/L)					
7	Temp (deg C)	25.5	25.0	26.5	23.5	27.8
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	7.1	2.9	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	163	166	162	132	179
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	36	45	44	34	51
5	Cl (mg/L)	48.4	67.8	38.9	39.5	89.3
6	CO3 (mg/L)	8.5	3.5	0.0	0.0	0.0
7	F (mg/L)	0.66	0.69	0.56	0.32	0.63
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	182	195	198	161	219
10	K (mg/L)	3.4	16.8	2.4	2.9	3.3
11	Mg (mg/L)	15.3	19.8	8.8	16.1	28.9
12	Na (mg/L)	71.0	92.3	42.6	54.3	65.4
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	0.01	1.04	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	1.04	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.084
19	SiO2 (mg/L)	17.5	20.1	20.6	17.6	19.9
20	SO4 (mg/L)	64.3	88.3	52.2	62.2	130.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	0.7	1.1	1.0	1.2
2	COD (mg/L)		7.7	13.2	40.7	29.1
3	DO (mg/L)	6.6	6.3	5.9	6.1	6.5
4	DO_SAT% (%)	81	76	73	72	82
5	FCol-MPN (MPN/100mL)				16000	11500
6	Tcol-MPN (MPN/100mL)				16000	16000
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)	89	112	110	84	127
2	HAR_Total (mgCaCO3/L)	153	194	146	151	248
3	Na% (%)	48	48	39	42	36
4	RSC (-)	0.5	0.0	0.4	0.0	0.0
5	SAR (-)	2.5	2.9	1.6	1.9	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: 2006-2021

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				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	588.8	75.96	149.7	495.8	47.45
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	619	575	621	720	666
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.1	8.1	8.2	7.9	7.7
6	TDS (mg/L)	447	385	378	423	424
7	Temp (deg C)	25.7	25.3	26.3	25.3	25.7
8	Turb (NTU)	1.00	3.37	1.17	24.50	5.67
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	137	183	160	161	175
3	B (mg/L)	0.00	0.16	0.17	0.19	0.20
4	Ca (mg/L)	31	33	40	35	37
5	Cl (mg/L)	61.9	37.1	61.3	64.8	61.7
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.96	0.65	0.59	0.66	0.73
8	Fe (mg/L)	0.0	0.1	0.1	0.1	0.0
9	HCO3 (mg/L)	167	223	195	197	213
10	K (mg/L)	3.5	3.3	3.7	5.0	4.5
11	Mg (mg/L)	18.3	18.6	22.4	19.7	21.2
12	Na (mg/L)	54.5	58.6	50.9	88.3	74.4
13	NH3-N (mg N/L)	0.00	0.01	0.13	0.05	0.00
14	NO2+NO3 (mg N/L)	0.56	1.29	1.21	1.06	1.10
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.02	0.04
16	NO3-N (mgN/L)	0.56	1.29	1.21	1.04	1.06
17	o-PO4-P (mg P/L)	0.205	0.149	0.117	0.154	0.130
18	P-Tot (mgP/L)	0.205			0.155	
19	SiO2 (mg/L)	16.9	15.3	14.9	16.3	13.6
20	SO4 (mg/L)	85.8	47.0	70.0	97.7	62.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.6	1.1	1.7	2.1	2.5
2	COD (mg/L)	15.1	21.1	9.0	16.5	18.2
3	DO (mg/L)	6.0	5.2	6.4	6.7	4.8
4	DO_SAT% (%)	74	63	79	81	58
5	FCol-MPN (MPN/100mL)	13667	6210	610	12058	130
6	Tcol-MPN (MPN/100mL)	16000	10767	1867	12200	10767
7	TOC (mg/L)	2.4	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	Cu (µg/L)					
5	Hg (µg/L)			0.06		
6	Ni (µg/L)		12.18	18.85		
7	Pb (µg/L)		7.90	0.81		
8	Zn (µg/L)		8.96	0.02		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	78	82	99	87	93
2	HAR_Total (mgCaCO3/L)	155	160	193	169	181
3	Na% (%)	42	44	36	51	47
4	RSC (-)	0.0	0.5	0.0	0.1	0.1
5	SAR (-)	1.9	2.0	1.6	3.0	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: 2006-2021

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				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	443.9	358.3	191.8	808.9	291.8
2	EC_FLD (µmho/cm)					168
3	EC_GEN (µmho/cm)	395	573	589	426	881
4	pH_FLD (pH units)					9.5
5	pH_GEN (pH units)	8.3	8.1	8.0	7.9	7.8
6	TDS (mg/L)	316	371	411	300	628
7	Temp (deg C)	24.5	25.1	23.7	23.2	24.6
8	Turb (NTU)	166.75	50.00	13.00	59.00	18.71
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.0	4.2	0.0	2.4	0.0
2	ALK-TOT (mgCaCO3/L)	151	152	96	144	179
3	B (mg/L)		0.00	0.07	0.24	0.46
4	Ca (mg/L)	33	38	30	43	35
5	Cl (mg/L)	27.4	60.2	57.5	69.7	113.3
6	CO3 (mg/L)	2.4	5.0	0.0	2.9	0.0
7	F (mg/L)	0.23	0.49	0.40	0.29	0.28
8	Fe (mg/L)	0.1	1.0	0.3	0.7	1.4
9	HCO3 (mg/L)	179	175	117	170	219
10	K (mg/L)	3.2	0.5	0.4	0.5	6.2
11	Mg (mg/L)	19.0	22.8	21.5	18.0	29.5
12	Na (mg/L)	32.7	66.2	58.5	56.6	103.0
13	NH3-N (mg N/L)	0.00	0.17	0.12	0.05	0.02
14	NO2+NO3 (mg N/L)	1.24	8.29	0.50	2.40	5.98
15	NO2-N (mgN/L)	0.01	0.07	0.23	0.25	0.10
16	NO3-N (mgN/L)	1.23	8.22	0.26	2.15	5.40
17	o-PO4-P (mg P/L)	0.082	0.666	0.267	0.327	0.245
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	14.3	12.1	12.0	17.4	20.5
20	SO4 (mg/L)	42.0	88.3	95.8	64.0	86.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	1.8	1.4	2.1	2.2
2	COD (mg/L)	6.5	9.1	12.9	9.7	16.3
3	DO (mg/L)	6.6	6.4	5.9	6.1	5.1
4	DO_SAT% (%)	79	77	70	71	62
5	FCol-MPN (MPN/100mL)	10255	6710	127	1130	700
6	Tcol-MPN (MPN/100mL)	14250	10340	3623	6633	5000
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				0.98	
2	Cd (µg/L)				0.06	
3	Cr (µg/L)				3.04	
4	Cu (µg/L)		5.60	10.67	11.33	0.01
5	Hg (µg/L)					
6	Ni (µg/L)				3.48	
7	Pb (µg/L)				0.29	
8	Zn (µg/L)		56.68	26.17	40.00	0.01
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	83	95	74	108	88
2	HAR_Total (mgCaCO3/L)	162	190	164	183	211
3	Na% (%)	31	43	44	39	50
4	RSC (-)	0.3	0.1	0.0	0.0	0.2
5	SAR (-)	1.2	2.1	2.0	1.8	3.3
	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: 2006-2021

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				
		Nov - Feb				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	48.38	86.08	77.90	158.8	310.4
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	730	700	666	836	843
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.7	8.4	8.5	8.5	8.2
6	TDS (mg/L)					
7	Temp (deg C)	24.0	25.0	27.0	25.5	25.5
8	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	8.3	11.6	8.0	6.0	4.0
2	ALK-TOT (mgCaCO3/L)	181	191	164	192	202
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	45	42	48	49	44
5	Cl (mg/L)	66.3	62.8	63.3	85.2	82.3
6	CO3 (mg/L)	10.0	14.0	9.6	7.2	4.8
7	F (mg/L)	0.64	0.86	0.87	0.55	0.45
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	200	205	181	220	237
10	K (mg/L)	3.4	4.2	3.2	3.1	3.5
11	Mg (mg/L)	25.0	21.0	8.7	24.3	24.8
12	Na (mg/L)	84.0	120.0	67.1	90.3	80.6
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	0.01	2.17	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	2.17	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.085
19	SiO2 (mg/L)	17.5	15.8	19.0	16.1	17.7
20	SO4 (mg/L)	76.0	95.0	68.8	117.4	113.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.6	1.6	3.1	2.4	1.6
2	COD (mg/L)		17.2	21.0	19.8	19.9
3	DO (mg/L)	6.4	6.7	6.4	7.3	7.0
4	DO_SAT% (%)	76	81	80	89	85
5	FCol-MPN (MPN/100mL)				12500	5350
6	Tcol-MPN (MPN/100mL)				16000	9750
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)	112	105	120	122	110
2	HAR_Total (mgCaCO3/L)	216	193	156	224	213
3	Na% (%)	45	57	48	47	45
4	RSC (-)	0.0	0.0	0.2	0.0	0.2
5	SAR (-)	2.5	3.8	2.3	2.6	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: 2006-2021

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				
		Nov - Feb				
		2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL					
1	Q (cumec)	88.46	46.53	74.94	Dry bed	68.95
2	EC_FLD (µmho/cm)		650		No Flow	
3	EC_GEN (µmho/cm)	645	646	571		674
4	pH_FLD (pH units)		8.2			
5	pH_GEN (pH units)	8.5	8.2	8.3		8.0
6	TDS (mg/L)	449	427	420		239
7	Temp (deg C)	23.5	25.5	25.3		26.0
8	Turb (NTU)	1.00	2.05	8.00		2.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	10.1	0.0	2.2		0.0
2	ALK-TOT (mgCaCO3/L)	183	171	172		165
3	B (mg/L)	0.28	0.09	0.15		0.00
4	Ca (mg/L)	32	34	40		34
5	Cl (mg/L)	56.1	54.0	29.0		67.3
6	CO3 (mg/L)	12.2	0.0	2.6		0.0
7	F (mg/L)	0.74	0.67	0.61		0.65
8	Fe (mg/L)	0.0	0.0	0.0		0.0
9	HCO3 (mg/L)	198	209	204		201
10	K (mg/L)	3.3	2.1	4.0		3.6
11	Mg (mg/L)	18.2	18.8	22.8		18.7
12	Na (mg/L)	65.6	67.8	61.7		85.6
13	NH3-N (mg N/L)	0.00	0.01	0.00		0.00
14	NO2+NO3 (mg N/L)	0.67	0.80	1.08		1.11
15	NO2-N (mgN/L)	0.00	0.00	0.00		0.00
16	NO3-N (mgN/L)	0.67	0.80	1.08		1.10
17	o-PO4-P (mg P/L)	0.186	0.106	0.125		0.251
18	P-Tot (mgP/L)	0.186				
19	SiO2 (mg/L)	18.6	18.9	19.9		7.5
20	SO4 (mg/L)	80.9	71.5	73.2		112.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.3	1.6		1.8
2	COD (mg/L)	19.5	16.4	9.4		8.9
3	DO (mg/L)	6.4	6.0	6.9		4.9
4	DO_SAT% (%)	75	74	83		60
5	FCol-MPN (MPN/100mL)	9200	1850	160		3000
6	Tcol-MPN (MPN/100mL)	12500	9000	440		16000
7	TOC (mg/L)	2.0	2.1			4.5
	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)	81	84	99		84
2	HAR_Total (mgCaCO3/L)	157	162	194		162
3	Na% (%)	47	47	40		53
4	RSC (-)	0.5	0.2	0.1		0.1
5	SAR (-)	2.3	2.3	1.9		2.9
	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: 2006-2021

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				
		Nov - Feb				
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	8.876	183.5	54.45	741.3	172.4
2	EC_FLD (µmho/cm)					166
3	EC_GEN (µmho/cm)	738	665	624	349	876
4	pH_FLD (pH units)					9.5
5	pH_GEN (pH units)	8.6	7.9	8.1	7.9	8.0
6	TDS (mg/L)	413	442	599	244	605
7	Temp (deg C)	23.0	25.5	24.0	23.0	25.0
8	Turb (NTU)	0.00	22.00	2.00	54.00	19.17
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	6.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	151	194	192	165	233
3	B (mg/L)		0.15	0.07	0.01	0.26
4	Ca (mg/L)	38	52	31	37	38
5	Cl (mg/L)	61.5	83.6	79.0	58.0	122.2
6	CO3 (mg/L)	7.2	0.0	0.0	0.0	0.0
7	F (mg/L)	0.38	0.30	0.41	0.24	0.41
8	Fe (mg/L)	0.1	0.6	0.0	5.6	1.1
9	HCO3 (mg/L)	170	237	234	201	284
10	K (mg/L)	3.9	0.4	0.4	0.3	0.8
11	Mg (mg/L)	20.5	28.1	31.4	29.0	38.3
12	Na (mg/L)	66.4	71.8	65.9	46.9	124.1
13	NH3-N (mg N/L)	0.00	2.76	0.14	0.03	0.06
14	NO2+NO3 (mg N/L)	0.48	5.72	1.80	9.61	8.90
15	NO2-N (mgN/L)	0.00	0.03	0.10	0.14	0.28
16	NO3-N (mgN/L)	0.48	5.69	1.70	9.47	8.60
17	o-PO4-P (mg P/L)	0.071	0.560	0.100	0.190	0.300
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	17.8	15.5	12.7	21.9	24.3
20	SO4 (mg/L)	54.0	144.2	120.3	46.0	88.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.3	1.6	0.6	1.6	4.4
2	COD (mg/L)	5.0	34.4	8.8	74.8	18.3
3	DO (mg/L)	7.0	6.9	4.6	7.3	6.4
4	DO_SAT% (%)	82	84	55	85	78
5	FCol-MPN (MPN/100mL)	16000	3000	40	1100	1988
6	Tcol-MPN (MPN/100mL)	16000	16000	170	3500	9283
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					0.42
2	Cd (µg/L)					2.15
3	Cr (µg/L)					5.25
4	Cu (µg/L)		2.00	8.00	20.00	5.72
5	Hg (µg/L)					1.00
6	Ni (µg/L)					5.28
7	Pb (µg/L)					39.00
8	Zn (µg/L)		35.00	13.70	60.00	36.13
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	94	129	77	93	95
2	HAR_Total (mgCaCO3/L)	180	246	208	213	255
3	Na% (%)	44	39	41	32	50
4	RSC (-)	0.0	0.0	0.0	0.0	0.3
5	SAR (-)	2.2	2.0	2.0	1.4	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: 2006-2021

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		
		2007	2020	2021
	PHYSICAL			
1	Q (cumec)	0.000	0.000	0.000
2	EC_FLD (µmho/cm)			
3	EC_GEN (µmho/cm)	737	1049	1118
4	pH_FLD (pH units)			
5	pH_GEN (pH units)	8.4	7.9	8.1
6	TDS (mg/L)		759	713
7	Temp (deg C)	27.0		24.5
8	Turb (NTU)		22.20	17.25
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	19.9	0.0	3.2
2	ALK-TOT (mgCaCO3/L)	232	178	209
3	B (mg/L)	0.00	0.21	0.69
4	Ca (mg/L)	48	37	61
5	Cl (mg/L)	67.9	164.2	166.9
6	CO3 (mg/L)	24.0	0.0	3.9
7	F (mg/L)	0.99	0.23	0.57
8	Fe (mg/L)	0.0	0.2	1.0
9	HCO3 (mg/L)	234	218	248
10	K (mg/L)	3.2	0.8	5.2
11	Mg (mg/L)	19.0	34.6	28.5
12	Na (mg/L)	86.0	106.2	145.5
13	NH3-N (mg N/L)	0.00	0.04	0.15
14	NO2+NO3 (mg N/L)	0.01		2.52
15	NO2-N (mgN/L)	0.00	0.02	0.72
16	NO3-N (mgN/L)	0.01		4.52
17	o-PO4-P (mg P/L)		0.454	0.878
18	P-Tot (mgP/L)	0.001		
19	SiO2 (mg/L)	21.0	21.6	16.3
20	SO4 (mg/L)	65.0	102.0	127.3
	BIOLOGICAL/BACTERIOLOGIC			
1	BOD3-27 (mg/L)	0.9		4.1
2	COD (mg/L)		22.0	22.1
3	DO (mg/L)	5.6		
4	DO_SAT% (%)	70		
5	FCol-MPN (MPN/100mL)			1400
6	Tcol-MPN (MPN/100mL)			2250
7	TOC (mg/L)			
	TRACE & TOXIC			
1	As (µg/L)			
2	Cd (µg/L)	7.00	0.01	1.27
3	Cr (µg/L)	18.00	1.38	3.30
4	Cu (µg/L)		3.78	5.88
5	Hg (µg/L)	1.85		
6	Ni (µg/L)	1.00	12.27	8.90
7	Pb (µg/L)	46.00	3.12	18.33
8	Zn (µg/L)	45.00	0.03	32.26
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	120	93	153
2	HAR_Total (mgCaCO3/L)	199	238	272
3	Na% (%)	48	49	53
4	RSC (-)	0.7	0.0	0.0
5	SAR (-)	2.7	3.0	3.9
	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		

2008 to 2019 not observed due to Drybed / No Flow condition.

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Malkhed	Code	: AKP10E1
State	: Karnataka	District	Gulbarga
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	Sub Tributary	: Kagna
		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	: 30-09-1989		
Discharge	: 15-08-1990		
Sediment	: 08-09-1992		
Water Quality	: 01-06-1992		

Water Quality Datasheet for the period : 2020-2021

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	01-06-2020	11-06-2020	20-06-2020	01-07-2020	04-08-2020	01-09-2020
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	0.000	0.000	0.000	0.000	63.52	72.06
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Brown	Brown
3	EC_GEN (µmho/cm)	577	583	582	435	441	424
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.0	8.0	8.0	7.8	7.5	7.7
6	TDS (mg/L)	427	548	576	326	278	236
7	Temp (deg C)	28.0	25.0	28.0	24.0	28.0	26.0
8	Turb (NTU)	33.00	29.00	22.00	21.00	0.02	31.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	205	170	176	157	181	249
3	B (mg/L)	0.07	0.08	0.09	0.04	1.20	0.17
4	Ca (mg/L)	80	33	32	15	46	21
5	Cl (mg/L)	47.9	46.3	21.6	22.2	32.3	31.7
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.24	0.23	0.24	0.24	0.33	0.31
8	Fe (mg/L)	1.0	1.8	2.7	1.9	0.0	0.1
9	HCO3 (mg/L)	251	207	215	191	220	304
10	K (mg/L)	0.6	0.6	0.7	0.5	0.3	0.4
11	Mg (mg/L)	10.1	26.0	18.0	34.0	14.2	39.3
12	Na (mg/L)	46.4	47.5	49.5	28.9	23.8	30.3
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.01	0.01	0.01
14	NO2+NO3 (mg N/L)				4.05		
15	NO2-N (mgN/L)	0.01	0.01	0.01	0.05	0.02	0.05
16	NO3-N (mgN/L)				4.00		
17	o-PO4-P (mg P/L)	1.937	1.961	2.144	0.053	0.200	0.250
18	SiO2 (mg/L)	9.0	10.7	10.6	19.4	20.3	26.7
19	SO4 (mg/L)	43.4	46.3	48.3	8.6	8.6	6.3
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)				1.7		
2	COD (mg/L)	15.5	17.5	19.1	11.9		5.5
3	DO (mg/L)	7.2	7.3		5.8		
4	DO_SAT% (%)	92	88		69		
5	FCol-MPN (MPN/100mL)				5000		
6	Tcol-MPN (MPN/100mL)				16000		
	TRACE & TOXIC						
1	As (µg/L)					0.04	
2	Cd (µg/L)					2.00	
3	Cr (µg/L)					4.00	
4	Cu (µg/L)	0.02	0.02	0.02	0.02	0.00	0.00
5	Hg (µg/L)					0.74	
6	Ni (µg/L)					2.90	
7	Pb (µg/L)					20.00	
8	Zn (µg/L)	0.02	0.02	0.03	0.02	0.00	0.00
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	200	83	79	38	115	53
2	HAR_Total (mgCaCO3/L)	242	192	154	179	174	217
3	Na% (%)	29	35	41	26	23	23
4	RSC (-)	0.0	0.0	0.5	0.0	0.2	0.7
5	SAR (-)	1.3	1.5	1.7	0.9	0.8	0.9
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

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	09-10-2020	02-11-2020	01-12-2020	15-12-2020	21-12-2020	01-01-2021
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	56.73	33.69	4.295	0.000	0.000	0.000
2	Colour_Cod (-)	Clear	Brown	Light Brown	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	566	402	626	648	277	451
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.9	8.0	8.2	8.1	8.2	8.0
6	TDS (mg/L)	410	313	383	383	168	328
7	Temp (deg C)	26.0	26.5	24.0	23.5	23.5	26.0
8	Turb (NTU)	35.00	85.00	24.00	26.00	13.00	11.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	270	195	257	310	253	174
3	B (mg/L)	0.18	0.16	0.55	0.43	0.18	0.10
4	Ca (mg/L)	18	28	17	35	40	45
5	Cl (mg/L)	39.0	30.1	35.5	46.9	42.7	126.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.55	0.35	0.62	0.72	0.70	0.61
8	Fe (mg/L)	1.4	0.0	0.6	0.6	0.0	0.2
9	HCO3 (mg/L)	330	238	313	378	309	213
10	K (mg/L)	0.4	0.3	0.8	0.5	0.5	1.1
11	Mg (mg/L)	48.0	29.3	46.5	39.3	36.7	21.5
12	Na (mg/L)	40.4	26.7	45.1	51.6	40.2	117.1
13	NH3-N (mg N/L)	0.03	0.03	0.22	0.09	0.07	0.24
14	NO2+NO3 (mg N/L)						6.79
15	NO2-N (mgN/L)	0.02	0.05	0.09	0.08	0.11	0.19
16	NO3-N (mgN/L)						6.60
17	o-PO4-P (mg P/L)	0.620	0.120	0.070	0.800	0.550	0.081
18	SiO2 (mg/L)	8.8	22.9	27.2	22.5	31.3	28.2
19	SO4 (mg/L)	17.4	7.5	26.2	44.9	35.1	83.8
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)		1.1	2.5	2.0	2.0	1.2
2	COD (mg/L)	3.0	15.1	12.2	16.4	22.5	9.2
3	DO (mg/L)		7.5	7.1	6.8	6.8	
4	DO_SAT% (%)		93	84	79	79	
5	FCol-MPN (MPN/100mL)		800	900	1400	330	2800
6	Tcol-MPN (MPN/100mL)		5000	3500	16000	3500	16000
	TRACE & TOXIC						
1	As (µg/L)			0.44	0.41	0.00	0.47
2	Cd (µg/L)			5.00	1.90	1.80	0.00
3	Cr (µg/L)			2.60	2.20	0.80	9.90
4	Cu (µg/L)	0.02	0.00	3.80	3.70	0.80	5.30
5	Hg (µg/L)			0.91	1.20	0.61	0.41
6	Ni (µg/L)			2.30	2.30	10.70	2.70
7	Pb (µg/L)			58.00	38.00	20.00	0.00
8	Zn (µg/L)	0.00	0.04	12.10	0.00	0.00	2.36
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	44	71	42	87	99	112
2	HAR_Total (mgCaCO3/L)	244	193	236	250	252	202
3	Na% (%)	27	23	30	31	26	56
4	RSC (-)	0.6	0.1	0.5	1.2	0.1	0.0
5	SAR (-)	1.1	0.8	1.3	1.4	1.1	3.6
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

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	01-02-2021	01-03-2021	05-04-2021	03-05-2021	21-05-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	0.000	0.000	0.000	0.000	0.000
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	282	666	659	634	483
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.1	8.0	8.2	8.1	8.2
6	TDS (mg/L)	197	458	387	410	352
7	Temp (deg C)	24.0	26.0	24.0	24.0	24.0
8	Turb (NTU)	1.00	2.00	32.00	11.00	9.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	252	156	173	193	215
3	B (mg/L)	0.35	0.89			
4	Ca (mg/L)	43	38	30	32	31
5	Cl (mg/L)	35.5	40.0	46.0	41.5	40.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.74	1.09	1.04	0.95	1.01
8	Fe (mg/L)	0.6	0.2	1.0	0.5	0.2
9	HCO3 (mg/L)	308	191	211	236	262
10	K (mg/L)	0.5	0.7	5.4	5.1	6.1
11	Mg (mg/L)	25.0	23.3	25.3	22.7	23.7
12	Na (mg/L)	55.3	47.4	65.9	79.6	63.5
13	NH3-N (mg N/L)	0.01	0.17			
14	NO2+NO3 (mg N/L)	4.51	6.68			
15	NO2-N (mgN/L)	0.01	0.38			
16	NO3-N (mgN/L)	4.50	6.30	9.00	9.76	9.56
17	o-PO4-P (mg P/L)	0.038	0.460			
18	SiO2 (mg/L)	25.3	28.7			
19	SO4 (mg/L)	32.3	11.3	56.8	98.9	15.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	1.7	2.8		
2	COD (mg/L)	7.9	7.0	4.1		
3	DO (mg/L)	6.3	6.9	7.2		
4	DO_SAT% (%)	75	85	86		
5	FCol-MPN (MPN/100mL)	270	220	270		
6	Tcol-MPN (MPN/100mL)	1100	330	140		
	TRACE & TOXIC					
1	As (µg/L)			2.09	2.05	2.43
2	Cd (µg/L)			0.70	0.50	1.00
3	Cr (µg/L)			0.00	12.06	0.00
4	Cu (µg/L)	3.00	22.00	4.00	2.30	1.50
5	Hg (µg/L)			0.00	0.08	0.46
6	Ni (µg/L)			9.30	2.20	1.60
7	Pb (µg/L)			31.00	9.00	11.00
8	Zn (µg/L)	17.50	0.01	24.85	10.83	36.89
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	106	96	74	80	77
2	HAR_Total (mgCaCO3/L)	210	193	180	175	176
3	Na% (%)	36	35	44	49	43
4	RSC (-)	0.9	0.0	0.0	0.4	0.8
5	SAR (-)	1.7	1.5	2.1	2.6	2.1
	PESTICIDES					

Water Quality Summary for the period : 2020-2021

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	4228	0.000	91.18
2	EC_GEN (μmho/cm)	17	666	277	514
3	pH_GEN (pH units)	17	8.2	7.5	8
4	TDS (mg/L)	17	576	168	364
5	Temp (deg C)	15	28.0	23.5	25.1
6	Turb (NTU)	17	85.00	0.02	22.65
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	17	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	17	310	156	211
3	B (mg/L)	14	1.20	0.04	0.32
4	Ca (mg/L)	17	80	15	34
5	Cl (mg/L)	17	126.0	21.6	42.7
6	CO3 (mg/L)	17	0.0	0.0	0
7	F (mg/L)	17	1.09	0.23	0.58
8	Fe (mg/L)	17	2.7	0.0	0.8
9	HCO3 (mg/L)	17	378	191	257
10	K (mg/L)	17	6.1	0.3	1.4
11	Mg (mg/L)	17	48.0	10.1	28.4
12	Na (mg/L)	17	117.1	23.8	50.5
13	NH3-N (mg N/L)	14	0.24	0.00	0.06
14	NO2+NO3 (mg N/L)	4	6.79	4.05	5.51
15	NO2-N (mgN/L)	14	0.38	0.01	0.08
16	NO3-N (mgN/L)	7	9.76	4.00	7.1
17	o-PO4-P (mg P/L)	14	2.144	0.038	0.663
18	SiO2 (mg/L)	14	31.3	8.8	20.8
19	SO4 (mg/L)	17	98.9	6.3	34.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	9	2.8	1.1	1.8
2	COD (mg/L)	14	22.5	3.0	11.9
3	DO (mg/L)	7	7.5	5.8	6.9
4	DO_SAT% (%)	7	93	69	84
5	FCol-MPN (MPN/100mL)	9	5000	220	1332
6	Tcol-MPN (MPN/100mL)	9	16000	140	6841
	TRACE & TOXIC				
1	As (μg/L)	4	0.47	0.00	0.33
2	Cd (μg/L)	7	5.00	0.00	1.56
3	Cr (μg/L)	7	12.06	0.00	3.94
4	Cu (μg/L)	17	22.00	0.00	2.73
5	Hg (μg/L)	4	1.20	0.41	0.78
6	Ni (μg/L)	7	10.70	1.60	4.44
7	Pb (μg/L)	7	58.00	0.00	23.86
8	Zn (μg/L)	17	36.89	0.00	6.16
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	17	200	38	86
2	HAR_Total (mgCaCO3/L)	17	252	154	204
3	Na% (%)	17	56	23	34
4	RSC (-)	17	1.2	0.0	0.3
5	SAR (-)	17	3.6	0.8	1.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	3.990	31.40	16.54	383.7	86.12
2	EC_GEN (µmho/cm)	501	433	484	486	549
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.9	8.0	8.0	8.0	8.2
5	TDS (mg/L)					
6	Temp (deg C)	25.3	28.3	28.0	25.8	27.3
7	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	2.7
2	ALK-TOT (mgCaCO3/L)	215	257	216	205	216
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	37	54	44	36	36
5	Cl (mg/L)	19.2	16.7	19.7	20.7	41.1
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	3.2
7	F (mg/L)	0.85	0.78	0.63	0.59	0.79
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	262	314	264	251	257
10	K (mg/L)	3.8	3.9	3.1	3.5	3.5
11	Mg (mg/L)	18.3	17.5	14.1	16.8	20.1
12	Na (mg/L)	42.3	32.5	46.5	36.1	40.6
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	0.01	1.19	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	1.19	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.076
19	SiO2 (mg/L)	20.4	19.1	22.4	20.3	24.3
20	SO4 (mg/L)	22.3	19.0	24.9	23.0	21.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	1.4	0.9	1.1	0.8
2	COD (mg/L)		5.1	19.9	5.8	36.8
3	DO (mg/L)	6.0	6.2	5.3	5.5	5.6
4	DO_SAT% (%)	74	79	67	68	70
5	FCol-MPN (MPN/100mL)				12500	9133
6	Tcol-MPN (MPN/100mL)				16000	11667
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)	93	135	110	89	91
2	HAR_Total (mgCaCO3/L)	169	208	169	159	174
3	Na% (%)	35	26	36	32	33
4	RSC (-)	0.9	1.0	1.0	0.9	0.9
5	SAR (-)	1.4	1.0	1.5	1.2	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: 2006-2021

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				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	123.8	7.217	27.32	16.99	2.139
2	EC_GEN (µmho/cm)	457	772	580	605	476
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	8.1	8.1	8.2	8.1	8.0
5	TDS (mg/L)	270	519	344	372	303
6	Temp (deg C)	27.7	26.3	26.3	26.7	27.6
7	Turb (NTU)	1.00	3.03	3.05	10.33	15.02
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	1.4	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	151	213	238	226	193
3	B (mg/L)	0.00	0.15	0.21	0.17	0.16
4	Ca (mg/L)	29	32	37	34	34
5	Cl (mg/L)	21.4	25.9	23.3	26.7	21.7
6	CO3 (mg/L)	0.0	0.0	1.7	0.0	0.0
7	F (mg/L)	0.77	0.64	0.75	0.66	0.59
8	Fe (mg/L)	0.0	0.1	0.1	0.1	0.1
9	HCO3 (mg/L)	184	260	287	275	236
10	K (mg/L)	3.5	3.8	3.6	4.1	4.4
11	Mg (mg/L)	15.9	18.5	21.2	19.3	18.8
12	Na (mg/L)	35.8	43.9	42.5	47.5	39.8
13	NH3-N (mg N/L)	0.00	0.02	0.04	0.00	0.02
14	NO2+NO3 (mg N/L)	0.85	1.14	0.91	2.22	1.63
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.02	0.04
16	NO3-N (mgN/L)	0.85	1.14	0.91	2.20	1.59
17	o-PO4-P (mg P/L)	0.102	0.080	0.041	0.093	0.112
18	P-Tot (mgP/L)	0.102			0.087	
19	SiO2 (mg/L)	19.2	26.8	17.7	25.1	17.1
20	SO4 (mg/L)	16.1	19.1	17.5	23.3	17.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.3	0.9	0.7	0.6	0.7
2	COD (mg/L)	8.3	14.1	8.3	5.1	6.2
3	DO (mg/L)	5.4	6.2	5.7	5.8	5.5
4	DO_SAT% (%)	69	77	70	73	70
5	FCol-MPN (MPN/100mL)	11667	10933	1333	6210	3852
6	Tcol-MPN (MPN/100mL)	12333	11667	4600	7133	7820
7	TOC (mg/L)	3.9	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)	72	79	91	85	86
2	HAR_Total (mgCaCO3/L)	138	156	180	165	164
3	Na% (%)	34	37	33	38	34
4	RSC (-)	0.4	1.2	1.2	1.2	0.6
5	SAR (-)	1.3	1.6	1.4	1.6	1.4
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2006-2021

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				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	188.8	41.36	2.085	24.07	27.47
2	EC_GEN (µmho/cm)	346	406	529	413	515
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	8.2	8.1	8.2	7.8	7.8
5	TDS (mg/L)	208	291	387	268	400
6	Temp (deg C)	26.6	27.7	26.3	28.0	26.2
7	Turb (NTU)	78.60	191.33	28.60	32.50	24.43
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.6	7.2	1.2	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	140	192	217	213	201
3	B (mg/L)		0.05	0.07	0.19	0.26
4	Ca (mg/L)	26	40	32	33	35
5	Cl (mg/L)	13.0	30.2	41.5	44.3	34.4
6	CO3 (mg/L)	0.7	8.6	1.5	0.0	0.0
7	F (mg/L)	0.33	0.50	0.64	0.45	0.30
8	Fe (mg/L)	0.1	2.1	1.2	1.1	1.3
9	HCO3 (mg/L)	170	216	261	260	245
10	K (mg/L)	3.2	0.5	0.6	1.1	0.5
11	Mg (mg/L)	14.8	22.7	26.7	30.3	27.1
12	Na (mg/L)	23.0	41.8	47.3	39.3	38.1
13	NH3-N (mg N/L)	0.00	0.05	0.11	0.08	0.01
14	NO2+NO3 (mg N/L)	1.52	7.57	2.52	2.54	4.05
15	NO2-N (mgN/L)	0.00	0.08	0.18	0.03	0.02
16	NO3-N (mgN/L)	1.52	7.49	2.34	2.51	4.00
17	o-PO4-P (mg P/L)	0.054	0.300	0.308	0.422	1.024
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	13.2	18.3	37.4	22.2	15.1
20	SO4 (mg/L)	9.1	19.2	30.0	11.5	25.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.3	1.4	1.6	1.7
2	COD (mg/L)	8.0	11.1	14.6	12.0	12.1
3	DO (mg/L)	5.0	6.1	5.7	5.9	6.8
4	DO_SAT% (%)	63	78	72	76	83
5	FCol-MPN (MPN/100mL)	3258	8500	184	740	5000
6	Tcol-MPN (MPN/100mL)	10634	9360	4292	3233	16000
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				2.15	
2	Cd (µg/L)				0.05	
3	Cr (µg/L)				1.51	
4	Cu (µg/L)		5.40	10.60	10.00	0.01
5	Hg (µg/L)					
6	Ni (µg/L)				14.58	
7	Pb (µg/L)				0.41	
8	Zn (µg/L)		49.60	18.59	41.53	0.01
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	66	99	81	81	87
2	HAR_Total (mgCaCO3/L)	127	194	192	207	200
3	Na% (%)	26	31	34	30	29
4	RSC (-)	0.3	0.1	0.5	0.5	0.3
5	SAR (-)	0.9	1.3	1.5	1.2	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: 2006-2021

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				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	2.586	7.964	10.79	12.44	12.99
2	EC_GEN (µmho/cm)	529	599	572	585	606
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	7.8	8.2	8.2	8.2	8.2
5	TDS (mg/L)					
6	Temp (deg C)	23.5	22.0	26.0	22.5	24.8
7	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	2.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	220	232	236	226	228
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	36	38	51	34	42
5	Cl (mg/L)	23.4	26.1	21.5	21.3	23.3
6	CO3 (mg/L)	0.0	0.0	2.4	0.0	0.0
7	F (mg/L)	0.85	0.75	0.69	1.12	0.68
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	269	283	283	276	279
10	K (mg/L)	3.4	3.9	3.7	3.4	3.5
11	Mg (mg/L)	20.5	21.5	14.6	16.5	24.3
12	Na (mg/L)	45.0	45.0	44.0	46.2	38.7
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	0.01	1.89	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	1.89	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.077
19	SiO2 (mg/L)	21.7	20.4	23.6	20.2	27.6
20	SO4 (mg/L)	17.5	15.5	16.7	22.8	19.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.4	2.9	0.7	0.7	0.5
2	COD (mg/L)		31.9	8.3	10.8	21.9
3	DO (mg/L)	6.0	7.0	6.5	6.8	6.9
4	DO_SAT% (%)	71	80	80	79	83
5	FCol-MPN (MPN/100mL)				16000	16000
6	Tcol-MPN (MPN/100mL)				16000	16000
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)	90	94	128	84	106
2	HAR_Total (mgCaCO3/L)	175	183	189	153	207
3	Na% (%)	35	34	33	39	28
4	RSC (-)	0.9	1.0	1.0	1.5	0.4
5	SAR (-)	1.5	1.5	1.4	1.6	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: 2006-2021

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				
		2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL					
1	Q (cumec)	2.910	4.633	12.81	2.990	3.382
2	EC_GEN (µmho/cm)	597	576	669	454	1280
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	8.1	8.1	8.2	8.3	8.3
5	TDS (mg/L)	347	336	460	314	311
6	Temp (deg C)	24.5	23.0	24.0	23.5	24.5
7	Turb (NTU)	1.00	3.00	4.50	0.10	19.78
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	2.1	2.4
2	ALK-TOT (mgCaCO3/L)	238	234	213	194	233
3	B (mg/L)	0.21	0.27	0.17	0.21	0.00
4	Ca (mg/L)	40	37	40	42	36
5	Cl (mg/L)	27.3	23.2	40.6	21.2	24.7
6	CO3 (mg/L)	0.0	0.0	0.0	2.5	2.8
7	F (mg/L)	0.84	0.95	0.63	0.59	0.61
8	Fe (mg/L)	0.1	0.4	0.0	0.2	0.0
9	HCO3 (mg/L)	290	286	260	231	278
10	K (mg/L)	3.4	2.3	3.1	3.2	4.3
11	Mg (mg/L)	22.8	21.4	22.8	21.0	20.5
12	Na (mg/L)	47.4	42.2	39.4	41.6	49.5
13	NH3-N (mg N/L)	0.00	0.00	0.01	0.00	0.01
14	NO2+NO3 (mg N/L)	2.03	1.86	1.77	1.19	1.43
15	NO2-N (mgN/L)	0.01	0.00	0.00	0.02	0.01
16	NO3-N (mgN/L)	2.02	1.86	1.77	1.17	1.42
17	o-PO4-P (mg P/L)	0.017	0.054	0.085	0.095	0.078
18	P-Tot (mgP/L)	0.017				
19	SiO2 (mg/L)	34.4	31.3	24.9	21.0	9.4
20	SO4 (mg/L)	15.1	21.4	17.2	21.0	19.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	0.8	1.2	0.5	0.8
2	COD (mg/L)	15.2	13.0	2.5	5.7	3.6
3	DO (mg/L)	6.3	6.5	6.9	7.2	6.0
4	DO_SAT% (%)	76	76	80	85	72
5	FCol-MPN (MPN/100mL)	2400	515	465	1450	8575
6	Tcol-MPN (MPN/100mL)	7000	3150	800	9200	16000
7	TOC (mg/L)	2.7	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)					
5	Hg (µg/L)					
6	Ni (µg/L)				5.69	
7	Pb (µg/L)				6.48	
8	Zn (µg/L)				9.20	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	100	92	100	104	91
2	HAR_Total (mgCaCO3/L)	195	181	195	192	176
3	Na% (%)	34	33	30	32	37
4	RSC (-)	0.9	1.1	0.4	0.1	1.2
5	SAR (-)	1.5	1.4	1.2	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: 2006-2021

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				
		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	18.63	13.18	0.572	2.114	6.330
2	EC_GEN (µmho/cm)	568	567	628	516	448
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	8.4	8.0	8.0	8.0	8.1
5	TDS (mg/L)	390	365	275	351	295
6	Temp (deg C)	24.0	21.5	22.3	25.9	24.6
7	Turb (NTU)	5.50	24.75	3.67	28.75	26.67
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	4.9	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	232	250	186	235	240
3	B (mg/L)		0.03	0.03	0.06	0.30
4	Ca (mg/L)	51	48	28	36	34
5	Cl (mg/L)	33.3	36.8	40.0	37.8	52.8
6	CO3 (mg/L)	5.9	0.0	0.0	0.0	0.0
7	F (mg/L)	0.85	0.64	0.56	0.54	0.62
8	Fe (mg/L)	0.0	0.6	0.2	1.2	0.3
9	HCO3 (mg/L)	272	305	227	287	293
10	K (mg/L)	4.9	0.5	0.5	0.5	0.6
11	Mg (mg/L)	24.7	27.6	28.8	28.5	33.0
12	Na (mg/L)	57.8	45.5	38.6	41.8	56.0
13	NH3-N (mg N/L)	0.79	1.04	0.33	0.02	0.11
14	NO2+NO3 (mg N/L)	0.61	6.82	1.54	6.35	5.65
15	NO2-N (mgN/L)	0.01	0.03	0.08	0.03	0.09
16	NO3-N (mgN/L)	0.60	6.79	1.47	6.31	5.55
17	o-PO4-P (mg P/L)	0.066	0.590	0.213	0.118	0.277
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	19.0	24.7	25.6	28.1	26.2
20	SO4 (mg/L)	53.6	31.0	54.2	32.4	38.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	0.8	1.5	1.8	1.7
2	COD (mg/L)	3.7	8.6	6.3	32.2	13.9
3	DO (mg/L)	6.5	6.9	6.6	5.8	7.1
4	DO_SAT% (%)	77	78	76	71	84
5	FCol-MPN (MPN/100mL)	4585	1020	173	628	1083
6	Tcol-MPN (MPN/100mL)	9100	1378	765	2900	7517
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				5.88	0.33
2	Cd (µg/L)				0.01	2.17
3	Cr (µg/L)				8.15	3.87
4	Cu (µg/L)	0.00	3.25	10.00	3.50	2.77
5	Hg (µg/L)					0.78
6	Ni (µg/L)				7.21	4.50
7	Pb (µg/L)				0.64	29.00
8	Zn (µg/L)	0.00	51.27	31.10	48.75	5.33
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	127	121	70	91	86
2	HAR_Total (mgCaCO3/L)	230	236	190	209	224
3	Na% (%)	35	30	30	31	34
4	RSC (-)	0.3	0.6	0.3	0.5	0.5
5	SAR (-)	1.7	1.3	1.2	1.3	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: 2006-2021

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				
		2007	2008	2009	2010	2011
	PHYSICAL					
1	Q (cumec)	0.000	33.35	2.870	6.171	2.922
2	EC_GEN (µmho/cm)	577	602	573	603	520
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	8.0	8.2	8.1	8.4	8.1
5	TDS (mg/L)					
6	Temp (deg C)	26.0	25.0	25.0	26.5	25.0
7	Turb (NTU)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	8.0	0.0
2	ALK-TOT (mgCaCO3/L)	280	200	244	180	216
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	40	34	37	29	32
5	Cl (mg/L)	21.5	60.5	23.7	22.5	24.1
6	CO3 (mg/L)	0.0	0.0	0.0	9.6	0.0
7	F (mg/L)	1.27	0.73	0.81	0.93	0.63
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	342	244	298	200	264
10	K (mg/L)	4.6	3.2	4.0	4.0	1.9
11	Mg (mg/L)	23.0	18.0	20.4	16.5	18.5
12	Na (mg/L)	64.0	43.0	40.6	45.9	24.3
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	0.01	0.00	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	0.00	0.00
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.001	0.001	0.001	0.000	0.065
19	SiO2 (mg/L)	26.3	17.5	29.4	23.1	25.2
20	SO4 (mg/L)	14.0	28.0	14.1	19.6	16.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	0.3	0.4	1.3	0.2
2	COD (mg/L)		7.4	4.0	17.7	9.1
3	DO (mg/L)	3.9	5.8	5.5	6.0	5.9
4	DO_SAT% (%)	48	71	67	74	71
5	FCol-MPN (MPN/100mL)				2400	16000
6	Tcol-MPN (MPN/100mL)				3000	16000
7	TOC (mg/L)		3.0			
	TRACE & TOXIC					
1	As (µg/L)				1.17	
2	Cd (µg/L)	8.00	0.60	2.06	0.00	0.00
3	Cr (µg/L)	51.00	2.00	2.00	0.00	0.00
4	Cu (µg/L)					
5	Hg (µg/L)	1.97	0.00			
6	Ni (µg/L)	1.00	7.50	1.00	2.20	2.10
7	Pb (µg/L)	111.00	10.80	18.09	0.00	5.49
8	Zn (µg/L)	133.00	7.36	4.02	8.52	17.46
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	100	85	92	72	80
2	HAR_Total (mgCaCO3/L)	196	160	177	141	157
3	Na% (%)	41	36	33	41	25
4	RSC (-)	1.7	0.8	1.4	0.8	1.2
5	SAR (-)	2.0	1.5	1.3	1.7	0.8
	PESTICIDES					
1	Aldrin (µg/L)	0.010	0.010	0.010	0.000	0.000
2	BHC (µg/L)	0.100	0.100	0.100	0.016	0.569
3	DDT (µg/L)	0.100	0.100	0.100	0.004	0.000
4	Dieldrin (µg/L)	0.110	0.010	0.010	0.000	0.033
5	Endos (µg/L)	0.100	0.100	0.100	0.073	0.012

Water Quality Seasonal Average for the period: 2006-2021

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				
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	1.127	1.683	3.086	2.201	2.524
2	EC_GEN (µmho/cm)	720	739	560	492	700
3	pH_FLD (pH units)					
4	pH_GEN (pH units)	8.1	7.9	8.1	8.2	8.3
5	TDS (mg/L)	426	468	416	323	313
6	Temp (deg C)	27.0	30.0	28.0	27.0	28.3
7	Turb (NTU)	1.00	2.63	8.00	6.33	24.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	1.2	2.5
2	ALK-TOT (mgCaCO3/L)	275	241	231	182	224
3	B (mg/L)	0.00	0.23	0.15	0.16	
4	Ca (mg/L)	38	29	34	32	34
5	Cl (mg/L)	29.8	25.2	25.0	22.9	27.9
6	CO3 (mg/L)	0.0	0.0	0.0	1.4	3.0
7	F (mg/L)	0.42	0.89	0.73	0.60	0.60
8	Fe (mg/L)	0.1	0.1	0.1	0.0	0.0
9	HCO3 (mg/L)	335	294	282	219	267
10	K (mg/L)	4.6	4.1	4.0	4.4	4.9
11	Mg (mg/L)	21.9	16.5	19.4	20.4	18.9
12	Na (mg/L)	59.6	50.1	40.8	40.4	52.7
13	NH3-N (mg N/L)	0.06	0.00	0.01	0.01	0.00
14	NO2+NO3 (mg N/L)	2.33	1.44	0.64	0.72	1.13
15	NO2-N (mgN/L)	0.01	0.00	0.00	0.15	0.05
16	NO3-N (mgN/L)	2.32	1.44	0.64	0.58	1.08
17	o-PO4-P (mg P/L)	0.318	0.093	0.000	0.080	0.079
18	P-Tot (mgP/L)	0.318				
19	SiO2 (mg/L)	15.5	19.0	28.8	23.9	10.2
20	SO4 (mg/L)	21.5	12.3	18.2	19.6	18.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.2	0.7	0.9	0.7	1.5
2	COD (mg/L)	21.7	3.2		4.5	7.2
3	DO (mg/L)	6.2	5.4	5.4	5.1	4.5
4	DO_SAT% (%)	78	71	69	64	58
5	FCol-MPN (MPN/100mL)	2400	230	230	15	6800
6	Tcol-MPN (MPN/100mL)	9000	2800	2400	880	11233
7	TOC (mg/L)	2.8	2.1		21.6	
	TRACE & TOXIC					
1	As (µg/L)	0.71	1.24	0.31	1.57	0.00
2	Cd (µg/L)	0.00	2.49	0.00	2.00	0.00
3	Cr (µg/L)	0.00	3.12	0.00	0.00	0.00
4	Cu (µg/L)					
5	Hg (µg/L)	0.74	0.47	0.20	0.31	0.00
6	Ni (µg/L)	3.65	4.12	0.00	6.24	0.00
7	Pb (µg/L)	24.71	7.00	0.00	14.00	0.00
8	Zn (µg/L)	88.90	25.27	21.80	3.00	0.09
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	94	72	86	81	86
2	HAR_Total (mgCaCO3/L)	185	141	167	166	165
3	Na% (%)	41	43	34	34	40
4	RSC (-)	1.8	2.0	1.3	0.4	1.2
5	SAR (-)	1.9	1.8	1.4	1.4	1.8
	PESTICIDES					
1	Aldrin (µg/L)	0.001				
2	BHC (µg/L)	0.018				
3	DDT (µg/L)	0.005				
4	Dieldrin (µg/L)	0.001				
5	Endos (µg/L)	0.022				

Water Quality Seasonal Average for the period: 2006-2021

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				
		2017	2018	2019	2020	2021
	PHYSICAL					
1	Q (cumec)	1.355	0.743	3.681	0.000	0.000
2	EC_GEN (µmho/cm)	529	503	522	718	611
3	pH_FLD (pH units)		8.0			
4	pH_GEN (pH units)	8.3	8.2	8.2	8.2	8.1
5	TDS (mg/L)	307	351	374	520	402
6	Temp (deg C)	28.3	24.7	29.0		24.5
7	Turb (NTU)	29.00	10.67	2.00	25.40	13.50
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	6.2	0.0	0.0	0.7	0.0
2	ALK-TOT (mgCaCO3/L)	207	287	172	221	184
3	B (mg/L)		0.08	0.12	0.24	0.89
4	Ca (mg/L)	41	41	26	32	33
5	Cl (mg/L)	24.7	40.9	41.5	50.0	41.9
6	CO3 (mg/L)	7.5	0.0	0.0	0.8	0.0
7	F (mg/L)	0.76	0.55	0.93	0.22	1.02
8	Fe (mg/L)	0.0	0.2	1.3	0.2	0.5
9	HCO3 (mg/L)	238	351	210	269	225
10	K (mg/L)	4.8	0.6	0.5	0.6	4.3
11	Mg (mg/L)	27.0	25.5	22.9	27.8	23.7
12	Na (mg/L)	44.8	52.4	39.6	75.2	64.1
13	NH3-N (mg N/L)	0.35	0.08	0.11	0.02	0.17
14	NO2+NO3 (mg N/L)	2.76	4.86	0.42		6.68
15	NO2-N (mgN/L)	0.03	0.05	0.01	0.09	0.38
16	NO3-N (mgN/L)	2.73	4.81	0.41		8.66
17	o-PO4-P (mg P/L)	0.090	0.603	0.167	0.402	0.460
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	27.1	24.8	22.6	24.4	28.7
20	SO4 (mg/L)	43.7	22.4	18.2	72.1	45.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.6	1.7	0.8		2.3
2	COD (mg/L)	12.6	9.0	70.9	21.0	5.5
3	DO (mg/L)	6.2	6.6	9.4		
4	DO_SAT% (%)	80	80	122		
5	FCol-MPN (MPN/100mL)	1233	893	2400		245
6	Tcol-MPN (MPN/100mL)	2633	937	3000		235
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)	0.93	1.39			
2	Cd (µg/L)	0.00	1.90		0.05	0.73
3	Cr (µg/L)	0.00	0.00		1.80	4.02
4	Cu (µg/L)	0.00	1.97	8.00	5.30	7.45
5	Hg (µg/L)	0.32	0.00			
6	Ni (µg/L)	0.80	9.10		15.86	4.37
7	Pb (µg/L)	0.00	23.00		1.14	17.00
8	Zn (µg/L)	0.00	11.27	18.00	0.02	18.14
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	102	102	64	80	82
2	HAR_Total (mgCaCO3/L)	214	209	159	196	181
3	Na% (%)	31	35	35	45	43
4	RSC (-)	0.2	1.6	0.3	0.5	0.3
5	SAR (-)	1.3	1.6	1.4	2.4	2.1
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

HISTORY SHEET

		Water Year	: 2020-2021
Site	: DEONGAON BRIDGE	Code	: DEONGAON
State	: Karnataka	District	Gulbarga
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	Sub Tributary	:
		Local River	: Bhima
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Tungabhadra SD, Kurnool
Drainage Area	: 50483 Sq. Km.	Bank	:
Latitude	: 17°10'00"	Longitude	: 76°19'42"
	Opening Date	Closing Date	
Gauge	: 18-06-1984		
Water Quality	: 01-06-2019		

Water Quality Datasheet for the period : 2020-2021

Station Name : DEONGAON BRIDGE (DEONGAON)

Division : Lower Krishna Divn., Hyderabad

Local River : Bhima

River Water Analysis

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	01-06-2020	11-06-2020	20-06-2020	01-07-2020	04-08-2020
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)					
2	Colour_Cod (-)	Light Brown			Light Brown	Light Brown
3	EC_GEN (µmho/cm)	981	998	996	1488	1424
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.9	7.9	7.9	7.5	7.7
6	TDS (mg/L)	687	898	796	1414	1113
7	Temp (deg C)	28.0				
8	Turb (NTU)	40.00	55.00	48.00	40.00	0.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	189	114	174	170	227
3	B (mg/L)	0.13	0.04	0.04	0.03	2.81
4	Ca (mg/L)	50	42	42	37	31
5	Cl (mg/L)	203.5	127.2	170.4	209.6	171.3
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.11	0.10	0.11	0.16	0.27
8	Fe (mg/L)	0.4	2.1	0.6	0.6	0.0
9	HCO3 (mg/L)	231	139	213	208	277
10	K (mg/L)	0.4	0.4	0.5	0.5	0.5
11	Mg (mg/L)	63.0	27.0	57.0	77.0	72.5
12	Na (mg/L)	108.5	110.0	115.1	165.5	150.6
13	NH3-N (mg N/L)	0.00	0.00	0.00	0.01	0.00
14	NO2+NO3 (mg N/L)				9.85	
15	NO2-N (mgN/L)	0.68	0.99	0.75	0.05	0.04
16	NO3-N (mgN/L)				9.80	
17	o-PO4-P (mg P/L)	2.523	3.388	1.177	0.057	0.150
18	SiO2 (mg/L)	6.6	8.1	7.9	21.4	23.4
19	SO4 (mg/L)	106.2	105.2	107.0	89.4	137.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)				3.8	
2	COD (mg/L)	12.6	8.5	15.1	4.7	
3	DO (mg/L)				4.9	
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)				800	
6	Tcol-MPN (MPN/100mL)				3500	
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)	0.02	0.02	0.02	0.01	0.00
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)					
8	Zn (µg/L)	0.31	0.02	0.02	0.03	0.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	125	104	104	92	78
2	HAR_Total (mgCaCO3/L)	388	217	342	413	380
3	Na% (%)	38	53	42	47	47
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	2.4	3.3	2.7	3.6	3.4
	PESTICIDES					

Water Quality Datasheet for the period : 2020-2021

Station Name : DEONGAON BRIDGE (DEONGAON)

Division : Lower Krishna Divn., Hyderabad

Local River : Bhima

River Water Analysis

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	05-10-2020	02-11-2020	01-12-2020	15-12-2020	01-01-2021
		A	A	A	B	A
	PHYSICAL					
1	Q (cumec)					
2	Colour_Cod (-)	Light Brown	Light Brown		Light Brown	Clear
3	EC_GEN (µmho/cm)	900	854	3743	1361	849
4	Odour_Code (-)	odour free	odour free		odour free	odour free
5	pH_GEN (pH units)	7.6	8.1	7.9	8.1	8.0
6	TDS (mg/L)	592	538	2718	857	670
7	Temp (deg C)				23.0	27.0
8	Turb (NTU)	2.00	22.00	74.00	16.00	14.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	12.5	0.0
2	ALK-TOT (mgCaCO3/L)	215	211	354	264	240
3	B (mg/L)	0.66	0.22	0.26	0.35	0.19
4	Ca (mg/L)	55	80	67	58	33
5	Cl (mg/L)	105.8	96.8	439.5	162.2	144.8
6	CO3 (mg/L)	0.0	0.0	0.0	15.1	0.0
7	F (mg/L)	0.26	0.25	0.56	0.42	0.37
8	Fe (mg/L)	0.9	0.0	0.3	0.0	0.1
9	HCO3 (mg/L)	262	258	432	292	292
10	K (mg/L)	0.3	0.4	1.2	0.4	0.8
11	Mg (mg/L)	34.8	19.9	48.2	41.0	45.7
12	Na (mg/L)	81.6	91.9	553.5	112.0	219.6
13	NH3-N (mg N/L)	0.03	0.00	0.07	0.07	0.00
14	NO2+NO3 (mg N/L)					5.56
15	NO2-N (mgN/L)	0.05	0.17	0.16	0.18	0.16
16	NO3-N (mgN/L)					5.40
17	o-PO4-P (mg P/L)	0.150	1.600	0.030	0.610	0.083
18	SiO2 (mg/L)	28.8	25.1	32.4	18.1	30.8
19	SO4 (mg/L)	43.4	51.1	303.8	89.1	314.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		0.9	3.4		1.4
2	COD (mg/L)	11.7	8.2	14.3	10.2	24.2
3	DO (mg/L)		3.3	4.8	8.4	
4	DO_SAT% (%)				98	
5	FCol-MPN (MPN/100mL)		2200	2800	2200	9000
6	Tcol-MPN (MPN/100mL)		16000	16000	16000	16000
	TRACE & TOXIC					
1	As (µg/L)			0.38	0.00	0.29
2	Cd (µg/L)			2.60	0.00	0.00
3	Cr (µg/L)			7.40	3.50	9.20
4	Cu (µg/L)	0.01	0.03	9.60	3.10	1.90
5	Hg (µg/L)			0.57	0.00	0.01
6	Ni (µg/L)			3.50	9.90	4.80
7	Pb (µg/L)			160.00	40.00	9.00
8	Zn (µg/L)	0.00	0.01	7.50	6.47	0.38
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	138	200	168	145	84
2	HAR_Total (mgCaCO3/L)	283	283	369	316	274
3	Na% (%)	39	42	77	44	64
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	2.1	2.4	12.6	2.8	5.8
	PESTICIDES					

Water Quality Datasheet for the period : 2020-2021

Station Name : DEONGAON BRIDGE (DEONGAON)

Division : Lower Krishna Divn., Hyderabad

Local River : Bhima

River Water Analysis

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	01-02-2021	01-03-2021	05-04-2021
		A	A	A
	PHYSICAL			
1	Q (cumec)			
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown
3	EC_GEN (µmho/cm)	1217	1058	1747
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_GEN (pH units)	8.1	8.0	8.2
6	TDS (mg/L)	866	648	1255
7	Temp (deg C)	27.0	24.0	27.0
8	Turb (NTU)	2.00	4.00	19.00
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	180	207	198
3	B (mg/L)	0.37	1.05	
4	Ca (mg/L)	59	61	71
5	Cl (mg/L)	175.2	211.0	267.0
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.34	0.70	0.73
8	Fe (mg/L)	0.8	0.1	0.4
9	HCO3 (mg/L)	219	253	242
10	K (mg/L)	0.7	0.6	4.6
11	Mg (mg/L)	43.7	50.9	60.5
12	Na (mg/L)	159.7	186.9	214.1
13	NH3-N (mg N/L)	0.00	0.44	
14	NO2+NO3 (mg N/L)	3.26	4.92	
15	NO2-N (mgN/L)	0.66	0.12	
16	NO3-N (mgN/L)	2.60	4.80	6.70
17	o-PO4-P (mg P/L)	0.046	0.144	
18	SiO2 (mg/L)	24.8	30.9	
19	SO4 (mg/L)	110.3	300.0	175.8
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.5	1.3	1.9
2	COD (mg/L)	30.9	35.9	2.5
3	DO (mg/L)			
4	DO_SAT% (%)			
5	FCol-MPN (MPN/100mL)	330	260	170
6	Tcol-MPN (MPN/100mL)	1100	500	330
	TRACE & TOXIC			
1	As (µg/L)			
2	Cd (µg/L)			1.90
3	Cr (µg/L)			2.60
4	Cu (µg/L)	4.00	20.00	8.00
5	Hg (µg/L)			
6	Ni (µg/L)			30.60
7	Pb (µg/L)			61.00
8	Zn (µg/L)	14.40	0.01	13.75
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	147	153	178
2	HAR_Total (mgCaCO3/L)	329	365	430
3	Na% (%)	51	53	52
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	3.8	4.3	4.5
	PESTICIDES			

Water Quality Summary for the period : 2020-2021

Station Name : DEONGAON BRIDGE (DEONGAON)

Division : Lower Krishna Divn., Hyderabad

Local River : Bhima

Sub-Division : Lower Tungabhadra SD, Kurnool

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (µmho/cm)	13	3743	849	1355
3	pH_GEN (pH units)	13	8.2	7.5	7.9
4	TDS (mg/L)	13	2718	538	1004
5	Temp (deg C)	6	28.0	23.0	26
6	Turb (NTU)	13	74.00	0.00	25.85
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	13	12.5	0.0	1
2	ALK-TOT (mgCaCO3/L)	13	354	114	211
3	B (mg/L)	12	2.81	0.03	0.51
4	Ca (mg/L)	13	80	31	53
5	Cl (mg/L)	13	439.5	96.8	191.1
6	CO3 (mg/L)	13	15.1	0.0	1.2
7	F (mg/L)	13	0.73	0.10	0.34
8	Fe (mg/L)	13	2.1	0.0	0.5
9	HCO3 (mg/L)	13	432	139	255
10	K (mg/L)	13	4.6	0.3	0.8
11	Mg (mg/L)	13	77.0	19.9	49.3
12	Na (mg/L)	13	553.5	81.6	174.5
13	NH3-N (mg N/L)	12	0.44	0.00	0.05
14	NO2+NO3 (mg N/L)	4	9.85	3.26	5.9
15	NO2-N (mgN/L)	12	0.99	0.04	0.33
16	NO3-N (mgN/L)	5	9.80	2.60	5.86
17	o-PO4-P (mg P/L)	12	3.388	0.030	0.83
18	SiO2 (mg/L)	12	32.4	6.6	21.5
19	SO4 (mg/L)	13	314.4	43.4	148.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	7	3.8	0.9	2
2	COD (mg/L)	12	35.9	2.5	14.9
3	DO (mg/L)	4	8.4	3.3	5.3
4	DO_SAT% (%)	1	98	98	98
5	FCol-MPN (MPN/100mL)	8	9000	170	2220
6	Tcol-MPN (MPN/100mL)	8	16000	330	8679
	TRACE & TOXIC				
1	As (µg/L)	3	0.38	0.00	0.22
2	Cd (µg/L)	4	2.60	0.00	1.12
3	Cr (µg/L)	4	9.20	2.60	5.67
4	Cu (µg/L)	13	20.00	0.00	3.59
5	Hg (µg/L)	3	0.57	0.00	0.19
6	Ni (µg/L)	4	30.60	3.50	12.2
7	Pb (µg/L)	4	160.00	9.00	67.5
8	Zn (µg/L)	13	14.40	0.00	3.3
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	13	200	78	132
2	HAR_Total (mgCaCO3/L)	13	430	217	337
3	Na% (%)	13	77	38	50
4	RSC (-)	13	0.0	0.0	0
5	SAR (-)	13	12.6	2.1	4.1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2020-2021

Station Name : DEONGAON BRIDGE (DEONGAON)

Division : Lower Krishna Divn., Hyderabad

Local River : Bhima

River Water

Sub-Division : Lower Tungabhadra SD, Kurnool

S.No	Parameters	Flood	Winter	Summer
		Jun - Oct	Nov - Feb	Mar - May
		2020	2020-2021	2021
	PHYSICAL			
1	Q (cumec)			
2	EC_GEN (µmho/cm)	1131	1605	1403
3	pH_GEN (pH units)	7.7	8.1	8.1
4	TDS (mg/L)	917	1130	952
5	Temp (deg C)	28.0	25.7	25.5
6	Turb (NTU)	30.83	25.60	11.50
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	2.5	0.0
2	ALK-TOT (mgCaCO3/L)	182	250	203
3	B (mg/L)	0.62	0.28	1.05
4	Ca (mg/L)	43	59	66
5	Cl (mg/L)	164.6	203.7	239.0
6	CO3 (mg/L)	0.0	3.0	0.0
7	F (mg/L)	0.17	0.39	0.71
8	Fe (mg/L)	0.8	0.2	0.3
9	HCO3 (mg/L)	221	298	247
10	K (mg/L)	0.4	0.7	2.6
11	Mg (mg/L)	55.2	39.7	55.7
12	Na (mg/L)	121.9	227.3	200.5
13	NH3-N (mg N/L)	0.01	0.03	0.44
14	NO2+NO3 (mg N/L)	9.85	4.41	4.92
15	NO2-N (mgN/L)	0.43	0.27	0.12
16	NO3-N (mgN/L)	9.80	4.00	5.75
17	o-PO4-P (mg P/L)	1.241	0.474	0.144
18	SiO2 (mg/L)	16.0	26.2	30.9
19	SO4 (mg/L)	98.2	173.7	237.9
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	3.8	1.8	1.6
2	COD (mg/L)	10.5	17.6	19.2
3	DO (mg/L)	4.9	5.5	
4	DO_SAT% (%)		98	
5	FCol-MPN (MPN/100mL)	800	3306	215
6	Tcol-MPN (MPN/100mL)	3500	13020	415
	TRACE & TOXIC			
1	As (µg/L)		0.22	
2	Cd (µg/L)		0.87	1.90
3	Cr (µg/L)		6.70	2.60
4	Cu (µg/L)	0.01	3.73	14.00
5	Hg (µg/L)		0.19	
6	Ni (µg/L)		6.07	30.60
7	Pb (µg/L)		69.67	61.00
8	Zn (µg/L)	0.06	5.75	6.88
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	107	149	166
2	HAR_Total (mgCaCO3/L)	337	314	398
3	Na% (%)	44	55	52
4	SAR (-)	2.9	5.5	4.4
	PESTICIDES			

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Wadakbal	Code	: AKP60C4
State	: Maharashtra	District	Sholapur
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	Sub Tributary	: Sina
		Local River	: Sina
Division	: Upper Krishna Divn, Pune	Sub-Division	: Bhima SD, Sholapur
Drainage Area	: 12092 Sq. Km.	Bank	: Right
Latitude	: 17°32'03"	Longitude	: 75°53'06"
	Opening Date	Closing Date	
Gauge	: 19-07-1963		
Discharge	: 06-08-1964		
Sediment	: 01-06-1965	31-05-2006	
Water Quality	: 01-09-1972		

Note: Water Quality observations suspended 01/11/2005 and Restarted 01/06/2019.

Water Quality Datasheet for the period : 2020-2021

Station Name : Wadakbal (AKP60C4)

Division : Upper Krishna Divn, Pune

Local River : Sina

River Water Analysis

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	03-08-2020	01-09-2020	05-10-2020	03-11-2020
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	13.65	4.045	13.82	65.42
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown	Clear
3	EC_GEN (µmho/cm)	1239	2152	1340	959
4	Odour_Code (-)	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.0	8.2	8.2	8.2
6	TDS (mg/L)	694	1205	750	537
7	Temp (deg C)	26.5	27.0	27.0	26.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	240	324	204	214
3	B (mg/L)	0.34	0.40	0.29	0.27
4	Ca (mg/L)	74	132	77	67
5	Cl (mg/L)	218.0	473.8	221.6	184.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.28	0.32	0.28	0.25
8	Fe (mg/L)	0.1	0.1	0.6	0.0
9	HCO3 (mg/L)	293	395	249	261
10	K (mg/L)	3.2	27.5	2.6	12.2
11	Mg (mg/L)	48.5	82.8	46.3	40.4
12	Na (mg/L)	128.1	364.8	142.6	140.2
13	NO2+NO3 (mg N/L)	3.64	4.30	3.65	2.51
14	NO2-N (mgN/L)	0.02	0.05	0.03	0.03
15	NO3-N (mgN/L)	3.61	4.25	3.61	2.49
16	P-Tot (mgP/L)	0.275	0.899	0.172	0.031
17	SiO2 (mg/L)	23.0	30.4	27.2	29.1
18	SO4 (mg/L)	153.0	338.0	172.4	122.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3.3	0.5	4.2	4.3
2	COD (mg/L)	29.0	3.0	38.0	41.0
3	DO (mg/L)	3.7	1.0	5.0	5.9
4	DO_SAT% (%)	46	13	63	73
5	FCol-MPN (MPN/100mL)	200	200	8000	90000
6	Tcol-MPN (MPN/100mL)	2300	400	50000	160000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	184	331	194	166
2	HAR_Total (mgCaCO3/L)	386	676	387	335
3	Na% (%)	42	53	44	47
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	2.8	6.1	3.2	3.3
	PESTICIDES				

Water Quality Datasheet for the period : 2020-2021

Station Name : Wadakbal (AKP60C4)

Division : Upper Krishna Divn, Pune

Local River : Sina

River Water Analysis

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	11-12-2020	21-12-2020	01-01-2021
		A	A	A
	PHYSICAL			
1	Q (cumec)	0.000	0.000	0.000
2	Colour_Cod (-)	Light Green	Light Green	Light Green
3	EC_GEN (µmho/cm)	1777	1986	2355
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_GEN (pH units)	7.7	8.2	8.2
6	TDS (mg/L)	995	1112	1319
7	Temp (deg C)	24.5	24.0	24.5
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	220	269	286
3	B (mg/L)	0.50	0.47	0.52
4	Ca (mg/L)	77	106	71
5	Cl (mg/L)	350.9		429.0
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.25	0.26	0.28
8	Fe (mg/L)	0.0	0.1	0.1
9	HCO3 (mg/L)	268	328	349
10	K (mg/L)	20.6	21.5	22.5
11	Mg (mg/L)	80.6	75.3	120.5
12	Na (mg/L)	263.1	265.5	293.3
13	NO2+NO3 (mg N/L)	3.21	3.21	3.66
14	NO2-N (mgN/L)	0.05	0.05	0.05
15	NO3-N (mgN/L)	3.16	3.16	3.61
16	P-Tot (mgP/L)	0.336	0.504	0.700
17	SiO2 (mg/L)	30.9	12.8	12.5
18	SO4 (mg/L)	278.0	324.4	348.0
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	5.5	4.3	5.4
2	COD (mg/L)	44.7	37.9	42.8
3	DO (mg/L)	6.6	6.1	6.1
4	DO_SAT% (%)	78	72	73
5	FCol-MPN (MPN/100mL)	900	200	200
6	Tcol-MPN (MPN/100mL)	50000	5000	4000
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	193	266	178
2	HAR_Total (mgCaCO3/L)	529	580	680
3	Na% (%)	51	49	48
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	5.0	4.8	4.9
	PESTICIDES			

Water Quality Summary for the period : 2020-2021

Station Name : Wadakbal (AKP60C4)

Division : Upper Krishna Divn, Pune

Local River : Sina

Sub-Division : Bhima SD, Sholapur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	2367	0.000	31.87
2	EC_GEN (μmho/cm)	7	2355	959	1687
3	pH_GEN (pH units)	7	8.2	7.7	8.1
4	TDS (mg/L)	7	1319	537	945
5	Temp (deg C)	7	27.0	24.0	25.6
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	7	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	7	324	204	251
3	B (mg/L)	7	0.52	0.27	0.4
4	Ca (mg/L)	7	132	67	86
5	Cl (mg/L)	6	473.8	184.9	313
6	CO3 (mg/L)	7	0.0	0.0	0
7	F (mg/L)	7	0.32	0.25	0.27
8	Fe (mg/L)	7	0.6	0.0	0.1
9	HCO3 (mg/L)	7	395	249	306
10	K (mg/L)	7	27.5	2.6	15.7
11	Mg (mg/L)	7	120.5	40.4	70.6
12	Na (mg/L)	7	364.8	128.1	228.2
13	NO2+NO3 (mg N/L)	7	4.30	2.51	3.45
14	NO2-N (mgN/L)	7	0.05	0.02	0.04
15	NO3-N (mgN/L)	7	4.25	2.49	3.41
16	P-Tot (mgP/L)	7	0.899	0.031	0.417
17	SiO2 (mg/L)	7	30.9	12.5	23.7
18	SO4 (mg/L)	7	348.0	122.8	248.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	7	5.5	0.5	3.9
2	COD (mg/L)	7	44.7	3.0	33.8
3	DO (mg/L)	7	6.6	1.0	4.9
4	DO_SAT% (%)	7	78	13	60
5	FCol-MPN (MPN/100mL)	7	90000	200	14243
6	Tcol-MPN (MPN/100mL)	7	160000	400	38814
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	7	331	166	216
2	HAR_Total (mgCaCO3/L)	7	680	335	510
3	Na% (%)	7	53	42	48
4	RSC (-)	7	0.0	0.0	0
5	SAR (-)	7	6.1	2.8	4.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2019-2021

Station Name : Wadakbal (AKP60C4)

Division : Upper Krishna Divn, Pune

Local River : Sina

River Water

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Flood		Winter		Water Quality observations suspended from 01/06/2006 and restarted on 01/06/2019	Summer
		Jun - Oct		Nov - Feb			Mar - May
		2019	2020	2019-2020	2020-2021		2021
	PHYSICAL						Samples not collected during summer season of 2020 and 2021 due to dry bed / no flow condition.
1	Q (cumec)	26.53	10.50	31.28	16.35		
2	EC_GEN (µmho/cm)	563	1577	825	1769		
3	pH_GEN (pH units)	7.9	8.1	7.8	8.1		
4	TDS (mg/L)		883		991		
5	Temp (deg C)	27.3	26.8	27.0	24.8		
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)	135	256	158	247		
2	B (mg/L)	0.20	0.34	0.30	0.44		
3	Ca (mg/L)	35	95	58	80		
4	Cl (mg/L)	36.1	304.5	95.9	321.6		
5	F (mg/L)	0.14	0.29	0.22	0.26		
6	Fe (mg/L)	0.3	0.3	0.7	0.1		
7	HCO3 (mg/L)	164	312	193	302		
8	K (mg/L)	0.9	11.1	2.1	19.2		
9	Mg (mg/L)	18.8	59.2	26.8	79.2		
10	Na (mg/L)	22.8	211.8	63.8	240.5		
11	NO2+NO3 (mg N/L)	2.43	3.86	3.13	3.15		
12	NO2-N (mgN/L)	0.03	0.04	0.05	0.04		
13	NO3-N (mgN/L)	2.40	3.83	3.08	3.11		
14	P-Tot (mgP/L)	0.929	0.449	0.627	0.393		
15	SiO2 (mg/L)	2.7	26.8	7.0	21.3		
16	SO4 (mg/L)	49.3	221.1	83.6	268.3		
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	2.4	2.7	1.7	4.9		
2	COD (mg/L)	21.0	23.3	14.0	41.6		
3	DO (mg/L)		3.2		6.2		
4	DO_SAT% (%)		40		74		
5	FCol-MPN (MPN/100mL)	12000	2800	2300	22825		
6	Tcol-MPN (MPN/100mL)	52000	17567	11000	54750		
	TRACE & TOXIC						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	88	236	144	201		
2	HAR_Total (mgCaCO3/L)	167	483	255	531		
3	Na% (%)	22	46	35	49		
4	SAR (-)	0.8	4.0	1.7	4.5		
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Takli	Code	: AKP00K4
State	: Maharashtra	District	Sholapur
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	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	: 14-07-1965		
Discharge	: 10-08-1965		
Sediment	: 01-12-1966		
Water Quality	: 01-09-1972		

Water Quality Datasheet for the period : 2020-2021

Station Name : Takli (AKP00K4)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water Analysis

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	01-07-2020	04-08-2020	01-09-2020	05-10-2020
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	333.8	0.000	413.2	216.7
2	Colour_Cod (-)	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	705	129	846	715
4	EC_GEN (µmho/cm)	841	1423	635	930
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	8.1	8.2	8.1	8.2
7	pH_GEN (pH units)	8.2	8.2	8.2	8.2
8	TDS (mg/L)	471	770	356	521
9	Temp (deg C)	28.0	30.0	29.0	30.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	148	272	133	188
3	B (mg/L)	0.25	0.50	0.13	0.31
4	Ca (mg/L)	35	69	36	53
5	Cl (mg/L)	123.8	247.2	109.5	152.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.21	0.36	0.16	0.27
8	Fe (mg/L)	0.1	0.1	0.1	0.2
9	HCO3 (mg/L)	180	332	163	230
10	K (mg/L)	8.5	2.6	5.5	7.7
11	Mg (mg/L)	27.6	52.6	20.3	33.1
12	Na (mg/L)	95.8	188.6	79.6	117.2
13	NO2+NO3 (mg N/L)	0.55	4.55	2.16	4.12
14	NO2-N (mgN/L)	0.00	0.03	0.04	0.06
15	NO3-N (mgN/L)	0.54	4.52	2.12	4.07
16	P-Tot (mgP/L)	0.014	0.018	0.016	0.021
17	SiO2 (mg/L)	24.7	28.3	23.0	26.4
18	SO4 (mg/L)	121.2	215.0	67.2	103.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2.6	1.6	1.0	1.9
2	COD (mg/L)	24.0	12.0	8.0	16.0
3	DO (mg/L)	8.2	8.4	8.6	8.5
4	DO_SAT% (%)	105	111	112	112
5	FCol-MPN (MPN/100mL)	200	200	600	400
6	Tcol-MPN (MPN/100mL)	600	700	900	700
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	88	173	89	133
2	HAR_Total (mgCaCO3/L)	202	393	174	271
3	Na% (%)	50	51	49	48
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	2.9	4.2	2.6	3.1
	PESTICIDES				

Water Quality Datasheet for the period : 2020-2021

Station Name : Takli (AKP00K4)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water Analysis

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	03-11-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	287.2	0.000	0.000	0.000
2	Colour_Cod (-)	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	717	1077	1093	1107
4	EC_GEN (μmho/cm)	955	1356	1380	1459
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	8.2	8.6	8.6	8.7
7	pH_GEN (pH units)	8.2	8.2	8.2	8.2
8	TDS (mg/L)	535	759	773	817
9	Temp (deg C)	30.0	25.0	25.0	26.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	226	259	216	212
3	B (mg/L)	0.25	0.44	0.37	0.01
4	Ca (mg/L)	61	53	58	50
5	Cl (mg/L)	203.5	241.3	303.2	235.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.26	0.24	0.20	0.23
8	Fe (mg/L)	0.0	0.1	0.1	0.0
9	HCO3 (mg/L)	276	316	263	259
10	K (mg/L)	7.8	9.9	9.2	9.2
11	Mg (mg/L)	32.8	55.4	50.5	62.0
12	Na (mg/L)	156.6	184.0	228.0	178.6
13	NO2+NO3 (mg N/L)	4.11	4.10	1.96	3.43
14	NO2-N (mgN/L)	0.04	0.04	0.04	0.04
15	NO3-N (mgN/L)	4.07	4.07	1.92	3.39
16	P-Tot (mgP/L)	0.023	0.004	0.010	0.002
17	SiO2 (mg/L)	30.1	34.1	13.1	9.4
18	SO4 (mg/L)	116.8	190.0	264.0	211.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3.6	1.6	3.0	1.8
2	COD (mg/L)	29.0	14.6	26.2	13.6
3	DO (mg/L)	8.4	8.6	8.7	8.8
4	DO_SAT% (%)	111	104	105	108
5	FCol-MPN (MPN/100mL)	200	200	200	200
6	Tcol-MPN (MPN/100mL)	400	2200	200	400
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	151	133	144	126
2	HAR_Total (mgCaCO3/L)	288	364	354	384
3	Na% (%)	54	52	58	50
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	4.0	4.2	5.3	4.0
	PESTICIDES				

Water Quality Summary for the period : 2020-2021

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	10220	0.000	236.2
2	EC_FLD (µmho/cm)	8	1107	129	799
3	EC_GEN (µmho/cm)	8	1459	635	1122
4	pH_FLD (pH units)	8	8.7	8.1	8.3
5	pH_GEN (pH units)	8	8.2	8.2	8.2
6	TDS (mg/L)	8	817	356	625
7	Temp (deg C)	8	30.0	25.0	27.9
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	8	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	8	272	133	207
3	B (mg/L)	8	0.50	0.01	0.28
4	Ca (mg/L)	8	69	35	52
5	Cl (mg/L)	8	303.2	109.5	202
6	CO3 (mg/L)	8	0.0	0.0	0
7	F (mg/L)	8	0.36	0.16	0.24
8	Fe (mg/L)	8	0.2	0.0	0.1
9	HCO3 (mg/L)	8	332	163	252
10	K (mg/L)	8	9.9	2.6	7.5
11	Mg (mg/L)	8	62.0	20.3	41.8
12	Na (mg/L)	8	228.0	79.6	153.6
13	NO2+NO3 (mg N/L)	8	4.55	0.55	3.12
14	NO2-N (mgN/L)	8	0.06	0.00	0.03
15	NO3-N (mgN/L)	8	4.52	0.54	3.09
16	P-Tot (mgP/L)	8	0.023	0.002	0.014
17	SiO2 (mg/L)	8	34.1	9.4	23.6
18	SO4 (mg/L)	8	264.0	67.2	161.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	8	3.6	1.0	2.1
2	COD (mg/L)	8	29.0	8.0	17.9
3	DO (mg/L)	8	8.8	8.2	8.5
4	DO_SAT% (%)	8	112	104	109
5	FCol-MPN (MPN/100mL)	8	600	200	275
6	Tcol-MPN (MPN/100mL)	8	2200	200	763
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	8	173	88	130
2	HAR_Total (mgCaCO3/L)	8	393	174	304
3	Na% (%)	8	58	48	51
4	RSC (-)	8	0.0	0.0	0
5	SAR (-)	8	5.3	2.6	3.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

Station Name : Takli (AKP00K4)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Flood				
		Jun - Oct				
		2006	2007	2008	2009	2010
	PHYSICAL			Samples not collected during flood season due to dry bed / no flow condition		
1	Q (cumec)	1555	333.3		865.2	159.8
2	EC_FLD (µmho/cm)		150			
3	EC_GEN (µmho/cm)	605	669		1242	921
4	pH_FLD (pH units)		7.4			
5	pH_GEN (pH units)	8.3	8.3		7.9	8.3
6	TDS (mg/L)					
7	Temp (deg C)		26.8		26.5	26.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.5		0.0	0.7
2	ALK-TOT (mgCaCO3/L)	316	83		103	183
3	B (mg/L)	0.30	0.15		0.21	0.39
4	Ca (mg/L)	54	15		36	52
5	Cl (mg/L)	66.4	76.6		97.5	96.4
6	CO3 (mg/L)	0.0	0.6		0.0	0.8
7	F (mg/L)	0.30	0.27		0.37	0.48
8	Fe (mg/L)	0.1	0.2		0.5	0.1
9	HCO3 (mg/L)	198	100		126	221
10	K (mg/L)	26.0	0.8		0.6	2.7
11	Mg (mg/L)	19.1	32.6		12.9	20.1
12	Na (mg/L)	52.1	46.6		69.3	63.3
13	NO2+NO3 (mg N/L)	0.60	0.62		1.00	0.15
14	NO2-N (mgN/L)	0.00	0.01		0.01	0.01
15	NO3-N (mgN/L)	0.60	0.61		0.99	0.14
16	P-Tot (mgP/L)	0.367	0.083		0.009	0.013
17	SiO2 (mg/L)	6.2	10.3		8.6	7.3
18	SO4 (mg/L)	102.6	84.3		50.2	31.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	1.2		0.8	0.9
2	COD (mg/L)	4.7	8.9		5.3	7.2
3	DO (mg/L)		3.9			
4	DO_SAT% (%)		49			
5	FCol-MPN (MPN/100mL)				55367	8933
6	Tcol-MPN (MPN/100mL)				56713	12667
	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)	135	38		89	131
2	HAR_Total (mgCaCO3/L)	214	174		143	215
3	Na% (%)	34	35		52	34
4	RSC (-)	0.0	0.0		0.0	0.0
5	SAR (-)	1.8	1.5		2.7	1.8
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : Takli (AKP00K4)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Flood				
		Jun - Oct				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	903.1		412.6	768.9	
2	EC_FLD (µmho/cm)			356	350	
3	EC_GEN (µmho/cm)	579		721	984	
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.0		7.6	7.9	
6	TDS (mg/L)					
7	Temp (deg C)	27.0		25.8	25.0	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0		0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	89		78	102	
3	B (mg/L)	0.10		0.10	0.07	
4	Ca (mg/L)	32		34	48	
5	Cl (mg/L)	116.6		28.3	47.9	
6	CO3 (mg/L)	0.0		0.0	0.0	
7	F (mg/L)	0.37		0.37	0.37	
8	Fe (mg/L)	0.9		0.4	2.0	
9	HCO3 (mg/L)	108		96	125	
10	K (mg/L)	0.7		1.1	2.8	
11	Mg (mg/L)	12.6		12.6	17.5	
12	Na (mg/L)	81.6		19.8	37.0	
13	NO2+NO3 (mg N/L)	1.51		0.70	2.14	
14	NO2-N (mgN/L)	0.00		0.00	0.05	
15	NO3-N (mgN/L)	1.51		0.70	2.09	
16	P-Tot (mgP/L)	0.045		0.017	0.023	
17	SiO2 (mg/L)	5.6		20.9	40.8	
18	SO4 (mg/L)	69.2		56.2	86.3	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0		1.0	0.9	
2	COD (mg/L)	5.0		7.8	8.0	
3	DO (mg/L)					
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)	130000		1785	35000	
6	Tcol-MPN (MPN/100mL)	240000		2615	54000	
	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)	80		84	120	
2	HAR_Total (mgCaCO3/L)	133		137	193	
3	Na% (%)	57		26	29	
4	RSC (-)	0.0		0.0	0.0	
5	SAR (-)	3.1		0.8	1.2	
	PESTICIDES					

Samples not collected during flood season due to dry bed / no flow condition

Samples not collected during flood season due to dry bed / no flow condition

Water Quality Seasonal Average for the period: 2006-2021

Station Name : Takli (AKP00K4)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Flood				
		Jun - Oct				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	128.7	118.3	196.6	441.2	240.9
2	EC_FLD (µmho/cm)	163	417	430	367	599
3	EC_GEN (µmho/cm)	930	649	464	388	957
4	pH_FLD (pH units)	6.9	6.9	7.8	8.1	8.1
5	pH_GEN (pH units)	8.2	8.1	8.2	8.2	8.2
6	TDS (mg/L)					529
7	Temp (deg C)	25.5	28.5	28.0	27.5	29.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	171	116	118	110	185
3	B (mg/L)	0.07	0.27	0.26	0.16	0.30
4	Ca (mg/L)	43	38	28	29	48
5	Cl (mg/L)	118.4	65.3	62.2	29.2	158.1
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.42	0.55	0.17	0.14	0.25
8	Fe (mg/L)	3.0	1.5	0.2	0.1	0.1
9	HCO3 (mg/L)	209	142	144	134	226
10	K (mg/L)	1.9	2.1	1.3	0.8	6.1
11	Mg (mg/L)	33.0	21.4	17.4	14.2	33.4
12	Na (mg/L)	91.5	50.1	47.3	19.7	120.3
13	NO2+NO3 (mg N/L)	3.06	1.48	0.78	1.58	2.84
14	NO2-N (mgN/L)	0.00	0.02	0.04	0.02	0.03
15	NO3-N (mgN/L)	3.06	1.46	0.75	1.56	2.81
16	P-Tot (mgP/L)	0.009	0.005	0.004	0.128	0.017
17	SiO2 (mg/L)	5.9	7.4	2.7	5.7	25.6
18	SO4 (mg/L)	153.6	81.5	66.5	41.7	126.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	2.8	0.9	2.2	1.8
2	COD (mg/L)	16.0	21.5	7.0	18.5	15.0
3	DO (mg/L)	5.2	8.9	4.5	6.8	8.4
4	DO_SAT% (%)	63	114	57	86	110
5	FCol-MPN (MPN/100mL)	90	20	340	16500	350
6	Tcol-MPN (MPN/100mL)	220	370	2800	50500	725
	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)	108	94	71	74	121
2	HAR_Total (mgCaCO3/L)	246	183	143	133	260
3	Na% (%)	45	37	42	24	49
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	2.5	1.6	1.7	0.7	3.2
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : Takli (AKP00K4)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Winter		Summer	
		Nov - Feb		Mar - May	
		2019-2020	2020-2021	2020	2021
	PHYSICAL				
1	Q (cumec)	491.7	71.81	0.000	
2	EC_FLD (µmho/cm)	526	999	1112	
3	EC_GEN (µmho/cm)	693	1288	931	
4	pH_FLD (pH units)	8.2	8.5	8.1	
5	pH_GEN (pH units)	8.1	8.2	7.6	
6	TDS (mg/L)		721		
7	Temp (deg C)	29.0	26.5	29.0	
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	164	228	183	
3	B (mg/L)	0.32	0.27	0.21	
4	Ca (mg/L)	45	55	38	
5	Cl (mg/L)	65.0	246.0	105.7	
6	CO3 (mg/L)	0.0	0.0	0.0	
7	F (mg/L)	0.19	0.23	0.28	
8	Fe (mg/L)	0.5	0.1	0.1	
9	HCO3 (mg/L)	200	278	223	
10	K (mg/L)	1.3	9.0	15.2	
11	Mg (mg/L)	24.0	50.2	32.3	
12	Na (mg/L)	39.7	186.8	71.2	
13	NO2+NO3 (mg N/L)	2.78	3.40	1.22	
14	NO2-N (mgN/L)	0.04	0.04	0.04	
15	NO3-N (mgN/L)	2.74	3.36	1.18	
16	P-Tot (mgP/L)	0.134	0.010	0.107	
17	SiO2 (mg/L)	8.3	21.7	24.1	
18	SO4 (mg/L)	78.4	195.5	124.0	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.5	2.5		
2	COD (mg/L)	4.0	20.9		
3	DO (mg/L)	7.9	8.6	7.8	
4	DO_SAT% (%)	103	107	101	
5	FCol-MPN (MPN/100mL)	800	200		
6	Tcol-MPN (MPN/100mL)	5000	800		
	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)	112	139	96	
2	HAR_Total (mgCaCO3/L)	212	348	230	
3	Na% (%)	29	53	39	
4	RSC (-)	0.0	0.0	0.0	
5	SAR (-)	1.2	4.4	2.1	
	PESTICIDES				

Samples not collected during summer season due to dry bed / no flow condition

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Sarati	Code	: AKPA0C2
State	: Maharashtra	District	Pune
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	Sub Tributary	: Nira
		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	: 25-08-1963		
Discharge	: 16-08-1965		
Sediment	: 01-06-1966		
Water Quality	: 01-09-1972		

Water Quality Datasheet for the period : 2020-2021

Station Name : Sarati (AKPA0C2)

Division : Upper Krishna Divn, Pune

Local River : Nira

River Water Analysis

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	06-07-2020	04-08-2020	01-09-2020	05-10-2020
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	57.98	17.37	262.0	81.55
2	Colour_Cod (-)	Light Brown	Light Green	Light Green	Light Green
3	EC_FLD (µmho/cm)	206	339	156	219
4	EC_GEN (µmho/cm)	1373	1296	298	1284
5	Odour_Code (-)	odour free	fishy	odour free	odour free
6	pH_FLD (pH units)	6.5	7.5	8.1	6.9
7	pH_GEN (pH units)	8.2	8.2	8.2	8.2
8	TDS (mg/L)	769	726	167	719
9	Temp (deg C)	33.3	32.0	30.2	31.2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	263	320	95	242
3	B (mg/L)	0.57	0.50	0.05	0.43
4	Ca (mg/L)	41	50	24	57
5	Cl (mg/L)	154.5	200.0	32.3	195.3
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.37	0.41	0.10	0.33
8	Fe (mg/L)	0.0	0.3	0.0	0.3
9	HCO3 (mg/L)	321	391	116	296
10	K (mg/L)	14.5	2.8	4.6	9.7
11	Mg (mg/L)	30.3	40.0	11.1	39.1
12	Na (mg/L)	118.3	148.9	24.6	150.3
13	NO2+NO3 (mg N/L)	3.87	4.10	1.21	7.52
14	NO2-N (mgN/L)	0.03	0.03	0.01	0.06
15	NO3-N (mgN/L)	3.84	4.07	1.20	7.46
16	P-Tot (mgP/L)	0.038	0.011	0.009	0.027
17	SiO2 (mg/L)	23.5	30.6	20.1	6.6
18	SO4 (mg/L)	108.0	129.9	22.7	182.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2.5	2.0	1.0	0.9
2	COD (mg/L)	23.0	17.0	7.0	8.0
3	DO (mg/L)	7.7	6.5	7.6	8.4
4	DO_SAT% (%)	107	89	101	113
5	FCol-MPN (MPN/100mL)	200	200	200	200
6	Tcol-MPN (MPN/100mL)	1400	400	400	400
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	104	125	60	142
2	HAR_Total (mgCaCO3/L)	230	292	106	305
3	Na% (%)	51	52	32	51
4	RSC (-)	0.7	0.6	0.0	0.0
5	SAR (-)	3.4	3.8	1.0	3.8
	PESTICIDES				

Water Quality Datasheet for the period : 2020-2021

Station Name : Sarati (AKPA0C2)

Division : Upper Krishna Divn, Pune

Local River : Nira

River Water Analysis

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	03-11-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	97.42	0.000	0.000	0.000
2	Colour_Cod (-)	Light Green	Light Green	Light Green	Light Green
3	EC_FLD (μmho/cm)	1439	388	390	418
4	EC_GEN (μmho/cm)	1162	1457	1508	1648
5	Odour_Code (-)	odour free	fishy	fishy	fishy
6	pH_FLD (pH units)	8.2	8.1	7.9	8.0
7	pH_GEN (pH units)	8.2	8.2	8.2	8.2
8	TDS (mg/L)	651	816	845	923
9	Temp (deg C)	30.8	30.5	14.0	21.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	285	286	235	214
3	B (mg/L)	0.38	0.43	0.47	0.53
4	Ca (mg/L)	57	61	57	58
5	Cl (mg/L)	240.6	245.2	278.7	270.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.31	0.29	0.25	0.03
8	Fe (mg/L)	0.1	0.0	0.0	0.0
9	HCO3 (mg/L)	348	349	287	261
10	K (mg/L)	8.5	13.7	15.7	16.9
11	Mg (mg/L)	45.1	50.5	54.1	54.4
12	Na (mg/L)	179.4	188.6	212.6	204.2
13	NO2+NO3 (mg N/L)	7.74	9.95	11.08	9.95
14	NO2-N (mgN/L)	0.06	0.01	0.01	0.01
15	NO3-N (mgN/L)	7.68	9.94	11.07	9.94
16	P-Tot (mgP/L)	0.003	0.004	0.016	0.004
17	SiO2 (mg/L)	36.0	34.5	12.3	14.3
18	SO4 (mg/L)	150.8	195.6	202.4	234.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.8	2.3	4.0	2.9
2	COD (mg/L)	6.0	16.5	28.2	20.4
3	DO (mg/L)	6.7	8.6	8.7	9.5
4	DO_SAT% (%)	89	114	84	107
5	FCol-MPN (MPN/100mL)	200	400	200	200
6	Tcol-MPN (MPN/100mL)	600	2600	3000	3000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	141	153	143	145
2	HAR_Total (mgCaCO3/L)	329	364	368	372
3	Na% (%)	54	52	55	53
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	4.3	4.3	4.8	4.6
	PESTICIDES				

Water Quality Summary for the period : 2020-2021

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	2951	0.000	83.47
2	EC_FLD (μmho/cm)	8	1439	156	444
3	EC_GEN (μmho/cm)	8	1648	298	1253
4	pH_FLD (pH units)	8	8.2	6.5	7.7
5	pH_GEN (pH units)	8	8.2	8.2	8.2
6	TDS (mg/L)	8	923	167	702
7	Temp (deg C)	8	33.3	14.0	27.9
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	8	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	8	320	95	243
3	B (mg/L)	8	0.57	0.05	0.42
4	Ca (mg/L)	8	61	24	51
5	Cl (mg/L)	8	278.7	32.3	202.1
6	CO3 (mg/L)	8	0.0	0.0	0
7	F (mg/L)	8	0.41	0.03	0.26
8	Fe (mg/L)	8	0.3	0.0	0.1
9	HCO3 (mg/L)	8	391	116	296
10	K (mg/L)	8	16.9	2.8	10.8
11	Mg (mg/L)	8	54.4	11.1	40.6
12	Na (mg/L)	8	212.6	24.6	153.4
13	NO2+NO3 (mg N/L)	8	11.08	1.21	6.93
14	NO2-N (mgN/L)	8	0.06	0.01	0.03
15	NO3-N (mgN/L)	8	11.07	1.20	6.9
16	P-Tot (mgP/L)	8	0.038	0.003	0.014
17	SiO2 (mg/L)	8	36.0	6.6	22.2
18	SO4 (mg/L)	8	234.0	22.7	153.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	8	4.0	0.8	2
2	COD (mg/L)	8	28.2	6.0	15.8
3	DO (mg/L)	8	9.5	6.5	8
4	DO_SAT% (%)	8	114	84	100
5	FCol-MPN (MPN/100mL)	8	400	200	225
6	Tcol-MPN (MPN/100mL)	8	3000	400	1475
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	8	153	60	127
2	HAR_Total (mgCaCO3/L)	8	372	106	296
3	Na% (%)	8	55	32	50
4	RSC (-)	8	0.7	0.0	0.2
5	SAR (-)	8	4.8	1.0	3.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2013-2021

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				
		2013	2014	2015	2016	2017
	PHYSICAL			Samples not collected during flood season from 2006 to 2012 due to downgradation. WQ upgradation w.e.f. 2013. During 2015 samples not collected due to dry bed / no flow condition		
1	Q (cumec)	87.00	64.70		133.9	41.29
2	EC_FLD (µmho/cm)				1177	900
3	EC_GEN (µmho/cm)	920	869		972	927
4	pH_FLD (pH units)				8.5	8.1
5	pH_GEN (pH units)	7.7	7.9		8.2	8.2
6	TDS (mg/L)					
7	Temp (deg C)	26.3	26.0		25.0	29.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	86	154		158	102
2	B (mg/L)	0.08	0.01		0.46	0.35
3	Ca (mg/L)	33	59		42	39
4	Cl (mg/L)	32.1	67.5		115.2	56.0
5	F (mg/L)	0.34	0.36		0.43	0.56
6	Fe (mg/L)	1.2	3.0		6.3	4.6
7	HCO3 (mg/L)	105	188		192	125
8	K (mg/L)	1.4	3.7		2.4	1.7
9	Mg (mg/L)	19.4	24.3		33.0	26.2
10	Na (mg/L)	22.1	49.3		88.2	42.3
11	NO2+NO3 (mg N/L)	0.88	2.81		4.96	3.79
12	NO2-N (mgN/L)	0.02	0.00		0.01	0.00
13	NO3-N (mgN/L)	0.86	2.80		4.95	3.78
14	P-Tot (mgP/L)	0.028	0.028		0.026	0.008
15	SiO2 (mg/L)	16.7	33.1		6.8	5.5
16	SO4 (mg/L)	66.4	98.6		150.8	88.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	2.3		0.6	2.0
2	COD (mg/L)	4.8	16.0		5.0	14.0
3	DO (mg/L)				5.2	6.4
4	DO_SAT% (%)				63	83
5	FCol-MPN (MPN/100mL)	23500	4900		20	40
6	Tcol-MPN (MPN/100mL)	62500	7900		500	2200
	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)	82	148		104	96
2	HAR_Total (mgCaCO3/L)	163	250		242	205
3	Na% (%)	24	30		44	31
4	RSC (-)	0.0	0.0		0.0	0.0
5	SAR (-)	0.8	1.4		2.5	1.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2013-2021

Station Name : Sarati (AKPA0C2)

Division : Upper Krishna Divn, Pune

Local River : Nira

River Water

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Flood			Winter		Summer
		Jun - Oct			Nov - Feb		Mar - May
		2018	2019	2020	2019-2020	2020-2021	2021
	PHYSICAL						Samples not collected during summer season due to dry bed / no flow condition.
1	Q (cumec)	241.4	874.0	104.7	237.2	24.36	
2	EC_FLD (µmho/cm)	443	511	230	996	659	
3	EC_GEN (µmho/cm)	360	585	1063	1012	1444	
4	pH_FLD (pH units)	6.5	8.2	7.3	5.8	8.1	
5	pH_GEN (pH units)	8.2	8.2	8.2	8.2	8.2	
6	TDS (mg/L)			595		809	
7	Temp (deg C)	26.3	28.5	31.7	28.0	24.1	
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)	108	156	230	244	255	
2	B (mg/L)	0.17	0.26	0.39	0.44	0.45	
3	Ca (mg/L)	17	34	43	58	58	
4	Cl (mg/L)	56.3	45.6	145.5	96.3	258.7	
5	F (mg/L)	0.13	0.16	0.30	0.25	0.22	
6	Fe (mg/L)	0.5	0.5	0.2	0.0	0.0	
7	HCO3 (mg/L)	132	190	281	298	311	
8	K (mg/L)	0.5	1.3	7.9	2.1	13.7	
9	Mg (mg/L)	11.1	19.3	30.1	32.7	51.0	
10	Na (mg/L)	43.9	26.3	110.5	67.9	196.2	
11	NO2+NO3 (mg N/L)	1.05	2.51	4.17	5.02	9.68	
12	NO2-N (mgN/L)	0.04	0.03	0.03	0.07	0.03	
13	NO3-N (mgN/L)	1.01	2.48	4.14	4.95	9.66	
14	P-Tot (mgP/L)	0.006	0.463	0.021	0.139	0.007	
15	SiO2 (mg/L)	5.3	8.3	20.2	10.7	24.3	
16	SO4 (mg/L)	33.3	33.0	110.7	114.7	195.7	
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.4	0.7	1.6	1.3	2.5	
2	COD (mg/L)	9.0	5.5	13.8	11.0	17.8	
3	DO (mg/L)	9.3	8.3	7.5	8.3	8.4	
4	DO_SAT% (%)	115	107	102	106	98	
5	FCol-MPN (MPN/100mL)	340	5000	200	5000	250	
6	Tcol-MPN (MPN/100mL)	1700	17500	650	17000	2300	
	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)						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	44	85	108	144	146	
2	HAR_Total (mgCaCO3/L)	90	166	233	281	358	
3	Na% (%)	52	22	47	34	53	
4	RSC (-)	0.4	0.0	0.3	0.0	0.0	
5	SAR (-)	2.0	0.8	3.0	1.8	4.5	
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Phulgaon (Seasonal)	Code	: AKP00X5
State	: Maharashtra	District	Pune
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	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	: 05-07-1986		
Discharge	: 21-07-1992		
Water Quality	: 02-08-1993		

Water Quality Datasheet for the period : 2020-2021

Station Name : Phulgaon (Seasonal) (AKP00X5)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water Analysis

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	04-08-2020	01-09-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	9.115	123.5	0.000	0.000	0.000
2	Colour_Cod (-)	Clear	Light Brown	Light Green	Light Brown	Light Green
3	EC_FLD (μmho/cm)	1692	686	710		
4	EC_GEN (μmho/cm)	526	223	1825	840	291
5	Odour_Code (-)	fishy	odour free	odour free	odour free	fishy
6	pH_FLD (pH units)	7.3	6.9	7.6		
7	pH_GEN (pH units)	8.2	8.2	8.2	8.0	8.1
8	TDS (mg/L)	295	125	1022	471	163
9	Temp (deg C)	23.5	24.5	25.5	17.0	22.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	180	85	349	269	108
3	B (mg/L)	0.11	0.05	1.07	0.27	0.11
4	Ca (mg/L)	51	21	59	75	27
5	Cl (mg/L)	103.6	22.4	233.6	292.4	29.1
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.23	0.09	0.73	0.21	0.09
8	Fe (mg/L)	0.0	0.9	0.2	0.0	0.0
9	HCO3 (mg/L)	220	104	426	328	132
10	K (mg/L)	1.8	3.4	11.5	16.0	4.5
11	Mg (mg/L)	20.9	8.2	58.6	32.0	11.5
12	Na (mg/L)	78.0	15.8	180.3	159.1	21.6
13	NO2+NO3 (mg N/L)	3.42	1.10	5.67	4.08	1.22
14	NO2-N (mgN/L)	0.03	0.02	0.02	0.02	0.02
15	NO3-N (mgN/L)	3.39	1.08	5.65	4.07	1.20
16	P-Tot (mgP/L)	0.189	0.050	0.010	0.596	0.072
17	SiO2 (mg/L)	24.3	17.7	35.5	15.0	8.1
18	SO4 (mg/L)	26.6	9.0	258.4	72.0	7.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	0.5	0.8	3.4	1.6
2	COD (mg/L)	13.0	4.0	4.9	29.2	10.7
3	DO (mg/L)	5.7	5.4	6.7	4.7	5.5
4	DO_SAT% (%)	67	64	81	49	63
5	FCoI-MPN (MPN/100mL)	400	400	200	200	200
6	TcoI-MPN (MPN/100mL)	13000	5000	200	1400	400
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	127	53	148	187	67
2	HAR_Total (mgCaCO3/L)	214	87	392	320	115
3	Na% (%)	44	27	49	51	28
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	2.3	0.7	4.0	3.9	0.9
	PESTICIDES					

Water Quality Summary for the period : 2020-2021

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)	330	414.0	0.000	22.01
2	EC_FLD (µmho/cm)	3	1692	686	1029
3	EC_GEN (µmho/cm)	5	1825	223	741
4	pH_FLD (pH units)	3	7.6	6.9	7.3
5	pH_GEN (pH units)	5	8.2	8.0	8.1
6	TDS (mg/L)	5	1022	125	415
7	Temp (deg C)	5	25.5	17.0	22.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	5	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	5	349	85	198
3	B (mg/L)	5	1.07	0.05	0.32
4	Ca (mg/L)	5	75	21	47
5	Cl (mg/L)	5	292.4	22.4	136.2
6	CO3 (mg/L)	5	0.0	0.0	0
7	F (mg/L)	5	0.73	0.09	0.27
8	Fe (mg/L)	5	0.9	0.0	0.2
9	HCO3 (mg/L)	5	426	104	242
10	K (mg/L)	5	16.0	1.8	7.4
11	Mg (mg/L)	5	58.6	8.2	26.2
12	Na (mg/L)	5	180.3	15.8	91
13	NO2+NO3 (mg N/L)	5	5.67	1.10	3.1
14	NO2-N (mgN/L)	5	0.03	0.02	0.02
15	NO3-N (mgN/L)	5	5.65	1.08	3.08
16	P-Tot (mgP/L)	5	0.596	0.010	0.183
17	SiO2 (mg/L)	5	35.5	8.1	20.1
18	SO4 (mg/L)	5	258.4	7.8	74.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	5	3.4	0.5	1.6
2	COD (mg/L)	5	29.2	4.0	12.4
3	DO (mg/L)	5	6.7	4.7	5.6
4	DO_SAT% (%)	5	81	49	65
5	FCol-MPN (MPN/100mL)	5	400	200	280
6	Tcol-MPN (MPN/100mL)	5	13000	200	4000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	5	187	53	116
2	HAR_Total (mgCaCO3/L)	5	392	87	226
3	Na% (%)	5	51	27	40
4	RSC (-)	5	0.0	0.0	0
5	SAR (-)	5	4.0	0.7	2.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	279.4	212.4	126.8	133.2	150.9
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	200	194	197	708	268
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.5	7.8	7.7	7.7	7.8
6	TDS (mg/L)					
7	Temp (deg C)	24.4	23.5	23.2	22.8	23.7
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	122	49	68	63	66
2	B (mg/L)	0.10	0.06	0.07	0.07	0.30
3	Ca (mg/L)	20	16	20	24	24
4	Cl (mg/L)	17.1	15.6	11.5	13.0	14.1
5	F (mg/L)	0.12	0.16	0.07	0.33	0.24
6	Fe (mg/L)	0.3	0.1	0.2	0.4	0.2
7	HCO3 (mg/L)	83	60	83	77	80
8	K (mg/L)	12.8	2.8	1.2	0.1	1.2
9	Mg (mg/L)	4.4	5.1	7.6	6.5	6.2
10	Na (mg/L)	12.5	8.9	7.9	8.1	8.4
11	NO2+NO3 (mg N/L)	0.65	1.05	1.16	0.63	0.19
12	NO2-N (mgN/L)	0.00	0.01	0.01	0.01	0.01
13	NO3-N (mgN/L)	0.65	1.04	1.16	0.62	0.18
14	P-Tot (mgP/L)	0.258	0.171	0.014	0.005	0.007
15	SiO2 (mg/L)	4.3	11.4	4.8	9.7	8.0
16	SO4 (mg/L)	21.2	15.8	10.2	24.9	18.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.5	1.0	1.2	1.0	1.0
2	COD (mg/L)	3.4	6.5	6.3	6.4	7.3
3	DO (mg/L)					
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)				8550	3900
6	Tcol-MPN (MPN/100mL)				8700	6350
	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)	50	40	49	60	60
2	HAR_Total (mgCaCO3/L)	68	61	80	87	86
3	Na% (%)	24	23	17	17	18
4	RSC (-)	0.3	0.0	0.0	0.0	0.0
5	SAR (-)	0.7	0.5	0.4	0.4	0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

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				
		2011	2012	2013	2014	2015
	PHYSICAL		Samples not collected due to dry bed/no flow condition			
1	Q (cumec)	126.0		899.6	323.1	42.49
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	243		81	232	269
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.9		7.3	7.8	8.0
6	TDS (mg/L)					
7	Temp (deg C)	22.0		26.5	22.8	23.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	71		64	115	96
2	B (mg/L)	0.06		0.11	0.05	0.11
3	Ca (mg/L)	28		26	42	29
4	Cl (mg/L)	15.5		8.5	31.5	19.2
5	F (mg/L)	0.26		0.33	0.25	0.71
6	Fe (mg/L)	1.0		0.1	1.5	2.8
7	HCO3 (mg/L)	87		78	140	117
8	K (mg/L)	0.6		0.6	0.8	1.0
9	Mg (mg/L)	5.8		3.9	5.3	5.8
10	Na (mg/L)	10.5		5.0	23.8	10.2
11	NO2+NO3 (mg N/L)	1.23		0.32	0.99	1.84
12	NO2-N (mgN/L)	0.01		0.00	0.02	0.01
13	NO3-N (mgN/L)	1.22		0.31	0.97	1.84
14	P-Tot (mgP/L)	0.080		0.038	0.015	0.054
15	SiO2 (mg/L)	10.9		13.5	20.5	12.2
16	SO4 (mg/L)	18.4		14.2	12.6	14.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8		1.9	2.6	1.1
2	COD (mg/L)	5.0		13.0	16.5	10.0
3	DO (mg/L)					
4	DO_SAT% (%)					
5	FCol-MPN (MPN/100mL)	4900		24000	46000	
6	Tcol-MPN (MPN/100mL)	7000		54000	82500	
	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)	70		64	106	72
2	HAR_Total (mgCaCO3/L)	94		80	128	96
3	Na% (%)	19		12	32	19
4	RSC (-)	0.0		0.0	0.0	0.0
5	SAR (-)	0.5		0.2	1.0	0.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

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				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	144.0	85.65	72.73	316.8	66.32
2	EC_FLD (µmho/cm)	315	353	223	631	1189
3	EC_GEN (µmho/cm)	327	359	217	300	375
4	pH_FLD (pH units)	7.7	7.8	8.0	7.0	7.1
5	pH_GEN (pH units)	8.0	7.9	7.9	7.9	8.2
6	TDS (mg/L)					210
7	Temp (deg C)	25.3	24.8	24.0	24.9	24.0
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	122	105	91	100	133
2	B (mg/L)	0.06	0.11	0.05	0.09	0.08
3	Ca (mg/L)	38	38	26	27	36
4	Cl (mg/L)	26.1	24.5	14.2	20.0	63.0
5	F (mg/L)	0.33	0.50	0.32	0.10	0.16
6	Fe (mg/L)	2.6	3.2	0.3	0.5	0.5
7	HCO3 (mg/L)	149	128	111	122	162
8	K (mg/L)	1.4	1.3	1.0	0.6	2.6
9	Mg (mg/L)	8.3	10.7	8.8	14.3	14.6
10	Na (mg/L)	14.4	15.8	7.7	12.2	46.9
11	NO2+NO3 (mg N/L)	2.48	2.46	1.43	2.46	2.26
12	NO2-N (mgN/L)	0.00	0.01	0.01	0.03	0.02
13	NO3-N (mgN/L)	2.48	2.46	1.42	2.43	2.24
14	P-Tot (mgP/L)	0.041	0.049	0.031	0.190	0.119
15	SiO2 (mg/L)	6.7	8.1	22.5	5.2	21.0
16	SO4 (mg/L)	21.4	33.1	10.0	17.9	17.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.6	1.3	1.5	1.1	1.1
2	COD (mg/L)	5.0	8.8	9.0	7.0	8.5
3	DO (mg/L)	6.1	6.5	6.9	6.7	5.5
4	DO_SAT% (%)	75	78	81	80	65
5	FCol-MPN (MPN/100mL)	9200	2585	1485	10500	400
6	Tcol-MPN (MPN/100mL)	10500	9025	2600	69250	9000
	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)	94	95	64	68	90
2	HAR_Total (mgCaCO3/L)	129	140	101	128	151
3	Na% (%)	18	20	14	17	36
4	RSC (-)	0.0	0.0	0.1	0.0	0.0
5	SAR (-)	0.5	0.6	0.3	0.5	1.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

Station Name : Phulgaon (Seasonal) (AKP00X5)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Winter	Summer	
		Nov - Feb	Mar - May	
		2020-2021	2020	2021
	PHYSICAL			
1	Q (cumec)	0.000		
2	EC_FLD (μmho/cm)	710	1479	
3	EC_GEN (μmho/cm)	985	450	
4	pH_FLD (pH units)	7.6	8.1	
5	pH_GEN (pH units)	8.1	7.8	
6	TDS (mg/L)	552		
7	Temp (deg C)	21.5	26.8	
	CHEMICAL			
1	ALK-TOT (mgCaCO3/L)	242	145	
2	B (mg/L)	0.48	0.08	
3	Ca (mg/L)	54	37	
4	Cl (mg/L)	185.0	40.7	
5	F (mg/L)	0.34	0.26	
6	Fe (mg/L)	0.1	0.0	
7	HCO3 (mg/L)	295	176	
8	K (mg/L)	10.7	6.8	
9	Mg (mg/L)	34.0	17.1	
10	Na (mg/L)	120.3	29.7	
11	NO2+NO3 (mg N/L)	3.66	2.40	
12	NO2-N (mgN/L)	0.02	0.03	
13	NO3-N (mgN/L)	3.64	2.36	
14	P-Tot (mgP/L)	0.226	0.430	
15	SiO2 (mg/L)	19.5	4.2	
16	SO4 (mg/L)	112.7	24.4	
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.9		
2	COD (mg/L)	14.9		
3	DO (mg/L)	5.6	7.4	
4	DO_SAT% (%)	64	93	
5	FCol-MPN (MPN/100mL)	200		
6	Tcol-MPN (MPN/100mL)	667		
	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)	134	92	
2	HAR_Total (mgCaCO3/L)	276	163	
3	Na% (%)	43	27	
4	RSC (-)	0.0	0.0	
5	SAR (-)	2.9	1.0	
	PESTICIDES			

Samples not collected during summer season due to dry bed

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Mirawadi	Code	: MIRAWADI
State	: Maharashtra	District	Pune
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	Sub Tributary	:
		Local River	: MulaMutta
Division	: Upper Krishna Divn, Pune	Sub-Division	: Upper Krishna SD 3, Managaon
Drainage Area	: 2640 Sq. Km.	Bank	: Left
Latitude	: 18°32'02"	Longitude	: 74°10'32"
	Opening Date	Closing Date	
Gauge	: 16-06-2018		
Discharge	: 16-06-2018		
Water Quality	: 03-07-2019		

Water Quality Datasheet for the period : 2020-2021

Station Name : Mirawadi (MIRAWADI)

Division : Upper Krishna Divn, Pune

Local River : MulaMutta

River Water Analysis

Sub-Division : Upper Krishna SD 3, Managaon

S.No	Parameters	04-08-2020	02-09-2020	06-10-2020	02-11-2020
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	42.95	209.8	65.03	70.49
2	Colour_Cod (-)	Light Green	Light Brown	Light Brown	Light Green
3	EC_FLD (µmho/cm)			875	830
4	EC_GEN (µmho/cm)	825	281	779	689
5	Odour_Code (-)	other-agreeable	odour free	fishy	other-agreeable
6	pH_FLD (pH units)			8.2	8.1
7	pH_GEN (pH units)	8.2	8.2	8.2	7.8
8	TDS (mg/L)	462	158	437	386
9	Temp (deg C)	24.0	26.0	25.5	25.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	214	97	204	238
3	B (mg/L)	0.24	0.06	0.18	0.17
4	Ca (mg/L)	59	26	62	60
5	Cl (mg/L)	143.2	28.6	122.0	125.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.32	0.10	0.37	0.33
8	Fe (mg/L)	0.2	0.2	0.3	0.5
9	HCO3 (mg/L)	261	118	249	290
10	K (mg/L)	2.5	4.2	12.2	9.4
11	Mg (mg/L)	28.6	8.0	25.7	26.1
12	Na (mg/L)	101.2	21.5	94.7	91.8
13	NO2+NO3 (mg N/L)	6.36	2.30	4.57	5.02
14	NO2-N (mgN/L)	0.03	0.04	0.05	0.05
15	NO3-N (mgN/L)	6.33	2.26	4.52	4.97
16	P-Tot (mgP/L)	0.807	0.170	0.826	0.529
17	SiO2 (mg/L)	26.1	21.3	27.0	23.0
18	SO4 (mg/L)	77.6	11.7	43.6	40.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	4.1	0.7	2.9	3.6
2	COD (mg/L)	33.0	6.0	25.0	32.0
3	DO (mg/L)	4.5	5.5	5.3	4.9
4	DO_SAT% (%)	53	68	64	59
5	FCol-MPN (MPN/100mL)	200	8000	600	900
6	Tcol-MPN (MPN/100mL)	2700	24000	900	5000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	148	65	154	150
2	HAR_Total (mgCaCO3/L)	267	99	261	259
3	Na% (%)	45	31	43	43
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	2.7	0.9	2.6	2.5
	PESTICIDES				

Water Quality Datasheet for the period : 2020-2021

Station Name : Mirawadi (MIRAWADI)

Division : Upper Krishna Divn, Pune

Local River : MulaMutta

River Water Analysis

Sub-Division : Upper Krishna SD 3, Managaon

S.No	Parameters	11-12-2020	21-12-2020	01-01-2021
		A	A	A
	PHYSICAL			
1	Q (cumec)	0.000	0.000	0.000
2	Colour_Cod (-)	Light Green	Light Green	Dark Green
3	EC_FLD (µmho/cm)	790	810	715
4	EC_GEN (µmho/cm)	773	753	754
5	Odour_Code (-)	odour free	odour free	fishy
6	pH_FLD (pH units)	7.6	7.4	6.3
7	pH_GEN (pH units)	7.5	7.5	7.5
8	TDS (mg/L)	433	422	422
9	Temp (deg C)	23.5	23.5	25.5
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	247	231	188
3	B (mg/L)	0.23	0.14	0.22
4	Ca (mg/L)	55	53	53
5	Cl (mg/L)	130.2	142.2	109.9
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.39	0.27	0.32
8	Fe (mg/L)	0.0	0.1	0.0
9	HCO3 (mg/L)	302	282	230
10	K (mg/L)	14.6	15.0	14.5
11	Mg (mg/L)	25.3	25.7	20.2
12	Na (mg/L)	100.3	110.2	84.6
13	NO2+NO3 (mg N/L)	8.85	9.53	10.88
14	NO2-N (mgN/L)	0.04	0.04	0.04
15	NO3-N (mgN/L)	8.81	9.49	10.84
16	P-Tot (mgP/L)	1.322	1.460	1.300
17	SiO2 (mg/L)	29.0	8.5	9.5
18	SO4 (mg/L)	36.4	37.6	40.0
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	4.9	4.7	3.3
2	COD (mg/L)	33.0	41.8	27.2
3	DO (mg/L)	4.1	4.6	7.5
4	DO_SAT% (%)	48	54	91
5	FCol-MPN (MPN/100mL)	200	200	800
6	Tcol-MPN (MPN/100mL)	1400	7000	160000
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	137	132	132
2	HAR_Total (mgCaCO3/L)	242	239	217
3	Na% (%)	46	48	44
4	RSC (-)	0.1	0.0	0.0
5	SAR (-)	2.8	3.1	2.5
	PESTICIDES			

Water Quality Summary for the period : 2020-2021

Station Name : Mirawadi (MIRAWADI)

Division : Upper Krishna Divn, Pune

Local River : MulaMutta

Sub-Division : Upper Krishna SD 3, Managaon

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	1156	0.000	63.45
2	EC_FLD (μmho/cm)	5	875	715	804
3	EC_GEN (μmho/cm)	7	825	281	694
4	pH_FLD (pH units)	5	8.2	6.3	7.5
5	pH_GEN (pH units)	7	8.2	7.5	7.8
6	TDS (mg/L)	7	462	158	388
7	Temp (deg C)	7	26.0	23.5	24.7
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	7	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	7	247	97	203
3	B (mg/L)	7	0.24	0.06	0.18
4	Ca (mg/L)	7	62	26	52
5	Cl (mg/L)	7	143.2	28.6	114.4
6	CO3 (mg/L)	7	0.0	0.0	0
7	F (mg/L)	7	0.39	0.10	0.3
8	Fe (mg/L)	7	0.5	0.0	0.2
9	HCO3 (mg/L)	7	302	118	248
10	K (mg/L)	7	15.0	2.5	10.3
11	Mg (mg/L)	7	28.6	8.0	22.8
12	Na (mg/L)	7	110.2	21.5	86.3
13	NO2+NO3 (mg N/L)	7	10.88	2.30	6.78
14	NO2-N (mgN/L)	7	0.05	0.03	0.04
15	NO3-N (mgN/L)	7	10.84	2.26	6.74
16	P-Tot (mgP/L)	7	1.460	0.170	0.916
17	SiO2 (mg/L)	7	29.0	8.5	20.6
18	SO4 (mg/L)	7	77.6	11.7	41.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	7	4.9	0.7	3.4
2	COD (mg/L)	7	41.8	6.0	28.3
3	DO (mg/L)	7	7.5	4.1	5.2
4	DO_SAT% (%)	7	91	48	62
5	FCol-MPN (MPN/100mL)	7	8000	200	1557
6	Tcol-MPN (MPN/100mL)	7	160000	900	28714
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	7	154	65	131
2	HAR_Total (mgCaCO3/L)	7	267	99	226
3	Na% (%)	7	48	31	43
4	RSC (-)	7	0.1	0.0	0
5	SAR (-)	7	3.1	0.9	2.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2019-2021

Station Name : Mirawadi (MIRAWADI)

Division : Upper Krishna Divn, Pune

Local River : MulaMutta

River Water

Sub-Division : Upper Krishna SD 3, Managaon

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2019	2020	2019-2020	2020-2021	2020	2021
	PHYSICAL						
1	Q (cumec)	665.2	105.9	129.2	17.62	0.000	
2	EC_FLD (µmho/cm)	216	875		786		
3	EC_GEN (µmho/cm)	440	629	679	742	626	
4	pH_FLD (pH units)	7.2	8.2		7.4		
5	pH_GEN (pH units)	7.6	8.2	7.8	7.6	7.5	
6	TDS (mg/L)		352		416		
7	Temp (deg C)	26.3	25.2		24.4	26.0	
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)	141	172	196	226	171	
2	B (mg/L)	0.12	0.16	0.12	0.19	0.06	
3	Ca (mg/L)	36	49	62	55	47	
4	Cl (mg/L)	34.6	97.9	49.4	126.8	50.8	
5	F (mg/L)	0.23	0.26	0.33	0.33	0.28	
6	Fe (mg/L)	0.6	0.2	0.2	0.2	0.1	
7	HCO3 (mg/L)	172	210	239	276	208	
8	K (mg/L)	3.7	6.3	0.8	13.4	15.7	
9	Mg (mg/L)	15.7	20.8	24.4	24.3	18.2	
10	Na (mg/L)	22.8	72.5	28.5	96.7	35.5	
11	NO2+NO3 (mg N/L)	3.00	4.41	6.17	8.57	7.87	
12	NO2-N (mgN/L)	0.03	0.04	0.09	0.04	0.03	
13	NO3-N (mgN/L)	2.97	4.37	6.08	8.53	7.84	
14	P-Tot (mgP/L)	1.021	0.601	1.484	1.153	1.059	
15	SiO2 (mg/L)	7.1	24.8	11.6	17.5	4.0	
16	SO4 (mg/L)	29.1	44.3	43.8	38.7	60.7	
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.9	2.6	2.9	4.1		
2	COD (mg/L)	17.0	21.3	21.0	33.5		
3	DO (mg/L)	4.3	5.1		5.3		
4	DO_SAT% (%)	54	62		63		
5	FCol-MPN (MPN/100mL)	11250	2933	2300	525		
6	Tcol-MPN (MPN/100mL)	36000	9200	17000	43350		
	TRACE & TOXIC						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	89	123	155	138	118	
2	HAR_Total (mgCaCO3/L)	154	209	257	239	194	
3	Na% (%)	21	40	19	45	27	
4	RSC (-)	0.2	0.0	0.0	0.0	0.0	
5	SAR (-)	0.7	2.1	0.8	2.7	1.1	
	PESTICIDES						

samples not collected during summer season due to stagnant water

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Paragaon	Code	: AKP00V9
State	: Maharashtra	District	Pune
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	Sub Tributary	:
		Local River	: Bhima
Division	: Upper Krishna Divn, Pune	Sub-Division	: Bhima SD, Sholapur
Drainage Area	: 6307 Sq. Km.	Bank	: Right
Latitude	: 18°32'00"	Longitude	: 74°22'00"
	Opening Date	Closing Date	
Gauge	: 26-06-1986		
Discharge	: 02-09-2015		
Water Quality	: 01-06-2019		

Water Quality Datasheet for the period : 2020-2021

Station Name : Paragaon (AKP00V9)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water Analysis

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	02-07-2020	04-08-2020	02-09-2020	06-10-2020
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	107.2	48.06	350.0	44.91
2	Colour_Cod (-)	Light Brown	Clear	Light Brown	Clear
3	EC_GEN (µmho/cm)	940	927	281	829
4	Odour_Code (-)	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.8	8.2	8.2	8.2
6	TDS (mg/L)	527	519	157	464
7	Temp (deg C)	28.5	27.0	25.0	26.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	190	224	95	236
3	B (mg/L)	0.31	0.24	0.09	0.28
4	Ca (mg/L)	48	62	23	64
5	Cl (mg/L)	114.0	148.0	29.4	120.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.31	0.36	0.13	0.50
8	Fe (mg/L)	1.3	0.2	1.5	0.3
9	HCO3 (mg/L)	232	274	116	288
10	K (mg/L)	12.0	2.6	3.5	11.5
11	Mg (mg/L)	25.0	33.3	12.3	27.9
12	Na (mg/L)	69.6	99.8	21.7	93.5
13	NO2+NO3 (mg N/L)	5.23	5.68	2.11	6.84
14	NO2-N (mgN/L)	0.03	0.03	0.03	0.06
15	NO3-N (mgN/L)	5.20	5.65	2.08	6.78
16	P-Tot (mgP/L)	0.358	0.634	0.182	0.640
17	SiO2 (mg/L)	27.6	24.4	22.8	32.5
18	SO4 (mg/L)	101.6	94.4	12.8	57.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2.1	5.3	0.9	5.4
2	COD (mg/L)	18.0	43.0	8.0	43.0
3	DO (mg/L)	4.2	6.6	4.9	6.0
4	DO_SAT% (%)	53	83	59	74
5	FCol-MPN (MPN/100mL)	700	200	8000	1700
6	Tcol-MPN (MPN/100mL)	2200	1300	13000	3300
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	120	156	57	161
2	HAR_Total (mgCaCO3/L)	224	294	109	277
3	Na% (%)	39	42	30	41
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	2.0	2.5	0.9	2.5
	PESTICIDES				

Water Quality Datasheet for the period : 2020-2021

Station Name : Paragaon (AKP00V9)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water Analysis

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	02-11-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	79.06	0.000	0.000	0.000
2	Colour_Cod (-)	Clear	Light Green	Light Green	Light Green
3	EC_GEN (µmho/cm)	779	849	849	849
4	Odour_Code (-)	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.2	7.5	7.6	7.5
6	TDS (mg/L)	436	475	475	475
7	Temp (deg C)	25.5	24.0	22.5	23.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	254	243	237	204
3	B (mg/L)	0.23	0.24	0.20	0.28
4	Ca (mg/L)	60	63	56	55
5	Cl (mg/L)	118.6	136.2	140.0	125.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.31	0.34	0.30	0.29
8	Fe (mg/L)	0.5	0.0	0.1	0.0
9	HCO3 (mg/L)	310	297	290	249
10	K (mg/L)	9.0	14.0	15.2	14.9
11	Mg (mg/L)	29.2	23.4	26.1	26.5
12	Na (mg/L)	88.4	101.0	108.0	94.1
13	NO2+NO3 (mg N/L)	5.46	7.49	8.39	9.07
14	NO2-N (mgN/L)	0.03	0.03	0.03	0.03
15	NO3-N (mgN/L)	5.42	7.46	8.36	9.04
16	P-Tot (mgP/L)	0.340	1.220	1.320	1.349
17	SiO2 (mg/L)	27.4	27.2	20.6	15.2
18	SO4 (mg/L)	70.4	62.8	53.6	60.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2.5	5.6	2.5	2.8
2	COD (mg/L)	21.0	38.9	21.4	21.4
3	DO (mg/L)	8.0	6.1	4.1	4.1
4	DO_SAT% (%)	97	72	47	48
5	FCol-MPN (MPN/100mL)	200	200	400	200
6	Tcol-MPN (MPN/100mL)	7000	2300	9000	1700
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	150	157	141	136
2	HAR_Total (mgCaCO3/L)	271	255	250	247
3	Na% (%)	41	45	47	44
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	2.3	2.8	3.0	2.6
	PESTICIDES				

Water Quality Summary for the period : 2020-2021

Station Name : Paragaon (AKP00V9)

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	903.9	0.000	82.99
2	EC_GEN (µmho/cm)	8	940	281	788
3	pH_GEN (pH units)	8	8.2	7.5	7.9
4	TDS (mg/L)	8	527	157	441
5	Temp (deg C)	8	28.5	22.5	25.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	8	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	8	254	95	210
3	B (mg/L)	8	0.31	0.09	0.23
4	Ca (mg/L)	8	64	23	54
5	Cl (mg/L)	8	148.0	29.4	116.6
6	CO3 (mg/L)	8	0.0	0.0	0
7	F (mg/L)	8	0.50	0.13	0.32
8	Fe (mg/L)	8	1.5	0.0	0.5
9	HCO3 (mg/L)	8	310	116	257
10	K (mg/L)	8	15.2	2.6	10.3
11	Mg (mg/L)	8	33.3	12.3	25.5
12	Na (mg/L)	8	108.0	21.7	84.5
13	NO2+NO3 (mg N/L)	8	9.07	2.11	6.28
14	NO2-N (mgN/L)	8	0.06	0.03	0.04
15	NO3-N (mgN/L)	8	9.04	2.08	6.25
16	P-Tot (mgP/L)	8	1.349	0.182	0.755
17	SiO2 (mg/L)	8	32.5	15.2	24.7
18	SO4 (mg/L)	8	101.6	12.8	64.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	8	5.6	0.9	3.4
2	COD (mg/L)	8	43.0	8.0	26.8
3	DO (mg/L)	8	8.0	4.1	5.5
4	DO_SAT% (%)	8	97	47	67
5	FCol-MPN (MPN/100mL)	8	8000	200	1450
6	Tcol-MPN (MPN/100mL)	8	13000	1300	4975
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	8	161	57	135
2	HAR_Total (mgCaCO3/L)	8	294	109	241
3	Na% (%)	8	47	30	41
4	RSC (-)	8	0.0	0.0	0
5	SAR (-)	8	3.0	0.9	2.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2020-2021

Station Name : Paragaon (AKP00V9)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Flood Jun - Oct 2020	Winter Nov - Feb 2020-2021	Summer Mar - May 2021
	PHYSICAL			
1	Q (cumec)	137.5	19.76	Samples not collected during summer season due to stagnant water
2	EC_GEN (µmho/cm)	744	831	
3	pH_GEN (pH units)	8.1	7.7	
4	TDS (mg/L)	417	466	
5	Temp (deg C)	26.8	23.8	
	CHEMICAL			
1	ALK-TOT (mgCaCO3/L)	186	235	
2	B (mg/L)	0.23	0.24	
3	Ca (mg/L)	49	58	
4	Cl (mg/L)	103.1	130.0	
5	F (mg/L)	0.32	0.31	
6	Fe (mg/L)	0.8	0.2	
7	HCO3 (mg/L)	227	286	
8	K (mg/L)	7.4	13.3	
9	Mg (mg/L)	24.6	26.3	
10	Na (mg/L)	71.2	97.9	
11	NO2+NO3 (mg N/L)	4.96	7.60	
12	NO2-N (mgN/L)	0.04	0.03	
13	NO3-N (mgN/L)	4.92	7.57	
14	P-Tot (mgP/L)	0.453	1.057	
15	SiO2 (mg/L)	26.8	22.6	
16	SO4 (mg/L)	66.5	61.7	
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	3.4	3.3	
2	COD (mg/L)	28.0	25.7	
3	DO (mg/L)	5.4	5.6	
4	DO_SAT% (%)	67	66	
5	FCol-MPN (MPN/100mL)	2650	250	
6	Tcol-MPN (MPN/100mL)	4950	5000	
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	123	146	
2	HAR_Total (mgCaCO3/L)	226	256	
3	Na% (%)	38	44	
4	SAR (-)	2.0	2.7	
	PESTICIDES			

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Dhond	Code	: AKP00V8
State	: Maharashtra	District	Pune
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	Sub Tributary	: -
		Local River	: Bhima
Division	: Upper Krishna Divn, Pune	Sub-Division	: Bhima SD, Sholapur
Drainage Area	: 11660 Sq. Km.	Bank	: Right
Latitude	: 18°28'26"	Longitude	: 74°34'35"
	Opening Date	Closing Date	
Gauge	: 22-05-1967		
Discharge	: 24-11-1967	31-05-2006	
Water Quality	: 01-06-2019		

Water Quality Datasheet for the period : 2020-2021

Station Name : Dhond (AKP00V8)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water Analysis

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	06-07-2020	04-08-2020	02-09-2020	06-10-2020
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	No Discharge Due to GQ Site			
2	Colour_Cod (-)	Light Brown	Clear	Clear	Clear
3	EC_GEN ($\mu\text{mho/cm}$)	1021	1323	294	1151
4	Odour_Code (-)	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.6	8.0	8.2	8.2
6	TDS (mg/L)	572	741	165	645
7	Temp (deg C)	24.5	24.5	23.5	22.0
	CHEMICAL				
1	Alk-Phen (mgCaCO ₃ /L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO ₃ /L)	190	316	99	246
3	B (mg/L)	0.34	0.54	0.09	0.38
4	Ca (mg/L)	49	71	25	67
5	Cl (mg/L)	139.8	200.8	31.2	159.4
6	CO ₃ (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.33	0.42	0.11	0.34
8	Fe (mg/L)	0.5	0.0	0.6	0.1
9	HCO ₃ (mg/L)	232	386	121	300
10	K (mg/L)	13.5	2.4	3.8	9.8
11	Mg (mg/L)	27.2	47.1	10.3	37.5
12	Na (mg/L)	104.6	140.7	23.6	106.3
13	NO ₂ +NO ₃ (mg N/L)	5.46	3.64	1.90	1.11
14	NO ₂ -N (mgN/L)	0.04	0.02	0.03	0.03
15	NO ₃ -N (mgN/L)	5.42	3.61	1.88	1.08
16	P-Tot (mgP/L)	0.350	0.331	0.102	0.383
17	SiO ₂ (mg/L)	27.4	32.4	21.7	29.6
18	SO ₄ (mg/L)	133.2	178.5	17.0	177.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD ₃₋₂₇ (mg/L)	3.8	1.8	1.4	1.8
2	COD (mg/L)	35.0	14.0	12.0	15.0
3	DO (mg/L)	5.1	6.4	4.8	6.9
4	DO_SAT% (%)	61	76	56	79
5	FCol-MPN (MPN/100mL)	1700	200	5000	200
6	Tcol-MPN (MPN/100mL)	2700	400	13000	200
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO ₃ /L)	123	177	63	168
2	HAR_Total (mgCaCO ₃ /L)	236	373	106	325
3	Na% (%)	48	45	32	41
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	3.0	3.2	1.0	2.6
	PESTICIDES				

Water Quality Datasheet for the period : 2020-2021

Station Name : Dhond (AKP00V8)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water Analysis

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	04-11-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	No Discharge Due to GQ Site			
2	Colour_Cod (-)	Clear	Light Green	Clear	Clear
3	EC_GEN (µmho/cm)	975	1313	1843	1177
4	Odour_Code (-)	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.2	7.7	7.8	8.1
6	TDS (mg/L)	546	735	1032	659
7	Temp (deg C)	22.0	16.5	16.0	21.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	266	294	334	263
3	B (mg/L)	0.35	0.48	0.61	0.43
4	Ca (mg/L)	69	78	85	68
5	Cl (mg/L)	201.9	194.4	259.2	154.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.33	0.37	0.34	0.37
8	Fe (mg/L)	0.1	0.0	0.5	0.0
9	HCO3 (mg/L)	324	359	407	321
10	K (mg/L)	9.3	17.1	19.3	14.2
11	Mg (mg/L)	33.5	35.1	52.7	32.5
12	Na (mg/L)	155.1	147.9	197.7	118.9
13	NO2+NO3 (mg N/L)	5.46	5.71	4.55	4.77
14	NO2-N (mgN/L)	0.04	0.29	0.03	0.03
15	NO3-N (mgN/L)	5.42	5.42	4.52	4.74
16	P-Tot (mgP/L)	0.190	1.091	1.208	0.925
17	SiO2 (mg/L)	38.3	31.0	28.9	11.2
18	SO4 (mg/L)	103.2	209.6	261.6	148.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2.0	0.7	1.2	1.5
2	COD (mg/L)	17.0	4.9	10.7	11.7
3	DO (mg/L)	8.2	1.2	1.8	3.8
4	DO_SAT% (%)	94	12	18	43
5	Fcol-MPN (MPN/100mL)	5000	200	7000	28000
6	Tcol-MPN (MPN/100mL)	160000	8000	11000	35000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	174	196	213	170
2	HAR_Total (mgCaCO3/L)	313	342	433	306
3	Na% (%)	51	47	49	45
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	3.8	3.5	4.1	3.0
	PESTICIDES				

Water Quality Summary for the period : 2020-2021

Station Name : Dhond (AKP00V8)

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)	No Discharge Due to GQ Site			
2	EC_GEN (µmho/cm)	8	1843	294	1137
3	pH_GEN (pH units)	8	8.2	7.6	8
4	TDS (mg/L)	8	1032	165	637
5	Temp (deg C)	8	24.5	16.0	21.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	8	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	8	334	99	251
3	B (mg/L)	8	0.61	0.09	0.4
4	Ca (mg/L)	8	85	25	64
5	Cl (mg/L)	8	259.2	31.2	167.7
6	CO3 (mg/L)	8	0.0	0.0	0
7	F (mg/L)	8	0.42	0.11	0.33
8	Fe (mg/L)	8	0.6	0.0	0.2
9	HCO3 (mg/L)	8	407	121	306
10	K (mg/L)	8	19.3	2.4	11.2
11	Mg (mg/L)	8	52.7	10.3	34.5
12	Na (mg/L)	8	197.7	23.6	124.3
13	NO2+NO3 (mg N/L)	8	5.71	1.11	4.07
14	NO2-N (mgN/L)	8	0.29	0.02	0.06
15	NO3-N (mgN/L)	8	5.42	1.08	4.01
16	P-Tot (mgP/L)	8	1.208	0.102	0.572
17	SiO2 (mg/L)	8	38.3	11.2	27.6
18	SO4 (mg/L)	8	261.6	17.0	153.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	8	3.8	0.7	1.8
2	COD (mg/L)	8	35.0	4.9	15
3	DO (mg/L)	8	8.2	1.2	4.8
4	DO_SAT% (%)	8	94	12	55
5	FCol-MPN (MPN/100mL)	8	28000	200	5913
6	Tcol-MPN (MPN/100mL)	8	160000	200	28788
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	8	213	63	160
2	HAR_Total (mgCaCO3/L)	8	433	106	304
3	Na% (%)	8	51	32	45
4	RSC (-)	8	0.0	0.0	0
5	SAR (-)	8	4.1	1.0	3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2019-2021

Station Name : Dhond (AKP00V8)

Division : Upper Krishna Divn, Pune

Local River : Bhima

River Water

Sub-Division : Bhima SD, Sholapur

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2019	2020	2019-2020	2020-2021	2020	2021
	PHYSICAL						
1	Q (cumec)	No Discharge due to GQ Site					
2	EC_GEN (µmho/cm)	561	947	1061	1327	1207	Samples not Collected During 2021 Summer Season Due to Dry bed/ No flow Condition.
3	pH_GEN (pH units)	8.1	8.0	8.2	8.0	7.9	
4	TDS (mg/L)		530		743		
5	Temp (deg C)	22.3	23.6	19.0	18.9	22.4	
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)	160	213	292	289	257	
2	B (mg/L)	0.19	0.34	0.45	0.47	0.38	
3	Ca (mg/L)	47	53	70	75	53	
4	Cl (mg/L)	44.6	132.8	133.1	202.6	132.4	
5	F (mg/L)	0.15	0.30	0.41	0.35	0.44	
6	Fe (mg/L)	0.6	0.3	0.3	0.1	0.2	
7	HCO3 (mg/L)	196	260	357	353	314	
8	K (mg/L)	4.5	7.4	2.5	15.0	36.5	
9	Mg (mg/L)	19.2	30.5	41.4	38.4	32.1	
10	Na (mg/L)	31.2	93.8	82.6	154.9	95.6	
11	NO2+NO3 (mg N/L)	4.35	3.03	11.14	5.12	2.37	
12	NO2-N (mgN/L)	0.04	0.03	0.10	0.10	0.04	
13	NO3-N (mgN/L)	4.31	3.00	11.04	5.03	2.33	
14	P-Tot (mgP/L)	0.695	0.291	0.514	0.853	0.812	
15	SiO2 (mg/L)	5.8	27.8	14.4	27.3	17.9	
16	SO4 (mg/L)	56.1	126.5	112.7	180.6	164.7	
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.7	2.2	2.0	1.3		
2	COD (mg/L)	12.5	19.0	17.0	11.1		
3	DO (mg/L)		5.8		3.7		
4	DO_SAT% (%)		68		42		
5	FCol-MPN (MPN/100mL)	4625	1775	4000	10050		
6	Tcol-MPN (MPN/100mL)	15400	4075	14000	53500		
	TRACE & TOXIC						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	117	133	174	188	132	
2	HAR_Total (mgCaCO3/L)	197	260	347	348	266	
3	Na% (%)	23	41	34	48	39	
4	RSC (-)	0.0	0.0	0.0	0.0	0.1	
5	SAR (-)	0.9	2.4	1.9	3.6	2.5	
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Huvinhedigi	Code	: AK000N2
State	: Karnataka	District	Raichur
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	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		

Note:-Note:-WQ Observation Suspended 31-05-2006 and restarted from 07-10-2013

Water Quality Datasheet for the period : 2020-2021

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	01-06-2020	11-06-2020	22-06-2020	01-07-2020	04-08-2020	01-09-2020
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	1.950	1.985	5.432	121.5	43.69	789.3
2	Colour_Cod (-)	Clear	Clear	Clear	Light Brown	Brown	Light Green
3	EC_GEN (µmho/cm)	1689	1701	1711	1009	818	335
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_FLD (pH units)						
6	pH_GEN (pH units)	8.3	8.3	8.2	7.7	7.6	8.0
7	TDS (mg/L)	1267	1616	1317	777	530	211
8	Temp (deg C)	30.0	25.0	27.0	27.0	27.0	27.0
9	Turb (NTU)	20.00	19.00	33.00	45.00	0.00	12.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	258	253	199	175	172	115
3	B (mg/L)	0.27	0.26	0.24	0.13	2.28	0.09
4	Ca (mg/L)	23	33	37	22	23	27
5	Cl (mg/L)	210.4	232.8	175.4	126.5	92.7	43.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.39	0.40	0.40	0.42	0.60	0.14
8	Fe (mg/L)	0.4	0.7	1.4	1.2	0.7	0.0
9	HCO3 (mg/L)	315	308	243	213	210	141
10	K (mg/L)	0.5	0.6	0.6	0.5	0.3	0.2
11	Mg (mg/L)	57.0	56.0	5.4	53.0	31.7	11.6
12	Na (mg/L)	220.8	222.5	246.3	119.2	97.3	24.5
13	NH3-N (mg N/L)	0.01	0.00	0.01	0.01	0.00	0.02
14	NO2+NO3 (mg N/L)				4.20		
15	NO2-N (mgN/L)	0.02	0.03	0.03	0.50	0.25	0.04
16	NO3-N (mgN/L)				3.70		
17	o-PO4-P (mg P/L)	0.087	0.119	0.094	0.050	0.300	0.020
18	SiO2 (mg/L)	14.9	18.6	18.2	20.5	17.2	15.5
19	SO4 (mg/L)	212.3	216.2	231.7	82.6	55.5	19.0
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)				1.4		
2	COD (mg/L)		16.3	12.6	20.4		9.3
3	DO (mg/L)				3.0		
4	DO_SAT% (%)				38		
5	FCol-MPN (MPN/100mL)				1100		
6	Tcol-MPN (MPN/100mL)				9000		
	TRACE & TOXIC						
1	As (µg/L)					0.07	
2	Cd (µg/L)					4.60	
3	Cr (µg/L)					2.30	
4	Cu (µg/L)	0.02	0.02	0.02	0.02	0.00	0.00
5	Hg (µg/L)					0.44	
6	Ni (µg/L)					14.00	
7	Pb (µg/L)					25.00	
8	Zn (µg/L)	0.02	0.01	0.04	0.04	0.00	0.00
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	58	83	92	54	56	67
2	HAR_Total (mgCaCO3/L)	296	317	114	275	188	115
3	Na% (%)	62	61	82	49	53	32
4	RSC (-)	0.0	0.0	1.7	0.0	0.0	0.0
5	SAR (-)	5.6	5.5	10.0	3.1	3.1	1.0
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

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	08-10-2020	02-11-2020	01-12-2020	15-12-2020	21-12-2020	01-01-2021
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	243.5	264.4	33.98	29.07	0.000	30.67
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	437	718	1260	1375	1481	1276
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_FLD (pH units)				5.6		
6	pH_GEN (pH units)	7.9	8.1	8.3	8.2	8.3	8.0
7	TDS (mg/L)	255	574	837	877	1197	815
8	Temp (deg C)	25.0	25.5	25.5	26.0	26.0	25.0
9	Turb (NTU)	49.00	25.00	21.00	74.00	24.00	19.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	14.8	0.0	14.8	0.0
2	ALK-TOT (mgCaCO3/L)	145	192	312	305	312	283
3	B (mg/L)	0.16	0.18	0.40	0.58	0.32	0.19
4	Ca (mg/L)	34	48	9	53	31	52
5	Cl (mg/L)	52.8	86.0	147.6	97.9	190.7	163.0
6	CO3 (mg/L)	0.0	0.0	17.8	0.0	17.8	0.0
7	F (mg/L)	0.38	0.36	0.84	0.92	0.96	0.93
8	Fe (mg/L)	0.7	0.2	0.3	0.5	0.1	0.4
9	HCO3 (mg/L)	177	234	344	372	344	345
10	K (mg/L)	0.2	0.3	0.9	0.5	0.5	0.5
11	Mg (mg/L)	17.2	24.9	64.1	51.6	40.7	45.1
12	Na (mg/L)	42.4	81.3	159.8	182.8	144.0	167.2
13	NH3-N (mg N/L)	0.02	0.00	0.18	0.07	0.03	0.03
14	NO2+NO3 (mg N/L)						3.57
15	NO2-N (mgN/L)	0.19	0.07	0.08	0.04	0.07	0.17
16	NO3-N (mgN/L)						3.40
17	o-PO4-P (mg P/L)	0.080	0.190	0.030	0.420	0.780	0.153
18	SiO2 (mg/L)	14.3	20.0	26.7	31.2	31.8	30.5
19	SO4 (mg/L)	13.0	44.1	136.1	148.7	40.5	214.8
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)		1.4	4.4	36.7	1.1	2.7
2	COD (mg/L)	7.2	1.9	22.6	18.5	18.2	15.5
3	DO (mg/L)		6.8	7.3	7.1	4.2	5.0
4	DO_SAT% (%)		82	88	88	52	61
5	FCol-MPN (MPN/100mL)		700	2200	2200	1400	2200
6	Tcol-MPN (MPN/100mL)		16000	16000	16000	16000	16000
	TRACE & TOXIC						
1	As (μg/L)			1.45	1.65	0.83	1.47
2	Cd (μg/L)			3.30	3.10	6.70	0.00
3	Cr (μg/L)			2.20	2.90	3.70	10.70
4	Cu (μg/L)	0.01	0.00	4.20	4.60	3.10	0.90
5	Hg (μg/L)			0.23	1.48	0.99	0.35
6	Ni (μg/L)			3.00	6.30	1.40	8.90
7	Pb (μg/L)			80.00	60.00	55.00	7.00
8	Zn (μg/L)	0.00	0.00	11.40	21.75	5.83	2.87
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	84	121	24	132	78	131
2	HAR_Total (mgCaCO3/L)	156	225	291	347	248	318
3	Na% (%)	37	44	55	54	56	53
4	RSC (-)	0.0	0.0	0.5	0.0	1.3	0.0
5	SAR (-)	1.5	2.4	4.1	4.3	4.0	4.1
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

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	01-02-2021	01-03-2021	05-04-2021	03-05-2021	21-05-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	3.833	0.000	17.61	2.059	0.000
2	Colour_Cod (-)	Clear	Brown	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	1274	1430	1184	1121	1192
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
5	pH_FLD (pH units)					
6	pH_GEN (pH units)	8.2	8.2	8.2	8.1	8.1
7	TDS (mg/L)	816	791	780	790	976
8	Temp (deg C)	26.0	26.0	25.5	26.0	24.0
9	Turb (NTU)	2.00	1.00	50.00	11.00	11.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	221	292	276	322	348
3	B (mg/L)	0.35	0.64			
4	Ca (mg/L)	67	71	72	69	69
5	Cl (mg/L)	162.4	183.0	164.0	227.2	225.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	1.05	1.02	1.00	0.83	0.97
8	Fe (mg/L)	1.1	0.2	2.6	0.6	0.6
9	HCO3 (mg/L)	269	356	337	393	424
10	K (mg/L)	0.6	0.6	4.4	7.5	4.7
11	Mg (mg/L)	29.6	36.7	38.8	38.5	34.8
12	Na (mg/L)	186.6	181.9	143.8	183.9	143.8
13	NH3-N (mg N/L)	1.12	0.15			
14	NO2+NO3 (mg N/L)	2.71	2.32			
15	NO2-N (mgN/L)	0.31	0.32			
16	NO3-N (mgN/L)	2.40	2.00	6.80	6.08	7.36
17	o-PO4-P (mg P/L)	0.132	0.393			
18	SiO2 (mg/L)	13.9	21.8			
19	SO4 (mg/L)	126.4	242.3	131.8	113.5	22.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	3.1	1.9	2.6		
2	COD (mg/L)	18.4	12.0	26.4		
3	DO (mg/L)	7.0	6.4	6.6		
4	DO_SAT% (%)	86	79	80		
5	FCol-MPN (MPN/100mL)	330	330	330		
6	Tcol-MPN (MPN/100mL)	1700	1700	1700		
	TRACE & TOXIC					
1	As (µg/L)			6.23	15.23	11.54
2	Cd (µg/L)			2.20	2.00	3.00
3	Cr (µg/L)			2.90	4.50	4.20
4	Cu (µg/L)	6.00	15.00	7.00	3.90	3.10
5	Hg (µg/L)			0.11	0.66	0.53
6	Ni (µg/L)			24.90	8.80	7.70
7	Pb (µg/L)			46.00	19.00	24.00
8	Zn (µg/L)	29.00	0.03	16.85	10.57	8.39
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	167	177	180	171	171
2	HAR_Total (mgCaCO3/L)	290	329	342	332	317
3	Na% (%)	58	55	48	54	49
4	RSC (-)	0.0	0.0	0.0	0.0	0.7
5	SAR (-)	4.8	4.4	3.4	4.4	3.5
	PESTICIDES					

Water Quality Summary for the period : 2020-2021

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	8461	0.000	656.7
2	EC_GEN (μmho/cm)	17	1711	335	1177
3	pH_FLD (pH units)	1	5.6	5.6	5.6
4	pH_GEN (pH units)	17	8.3	7.6	8.1
5	TDS (mg/L)	17	1616	211	849
6	Temp (deg C)	10	27.0	25.0	26.1
7	Turb (NTU)	17	74.0	0.0	24.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	17	14.8	0.0	1.7
2	ALK-TOT (mgCaCO3/L)	17	348	115	246
3	B (mg/L)	14	2.28	0.09	0.43
4	Ca (mg/L)	17	72	9	43
5	Cl (mg/L)	17	232.8	43.4	151.9
6	CO3 (mg/L)	17	17.8	0.0	2.1
7	F (mg/L)	17	1.05	0.14	0.68
8	Fe (mg/L)	16	2.6	0.0	0.7
9	HCO3 (mg/L)	17	424	141	296
10	K (mg/L)	17	7.5	0.2	1.4
11	Mg (mg/L)	17	64.1	5.4	37.5
12	Na (mg/L)	17	246.3	24.5	149.9
13	NH3-N (mg N/L)	14	1.12	0.00	0.12
14	NO2+NO3 (mg N/L)	4	4.20	2.32	3.2
15	NO2-N (mgN/L)	14	0.50	0.02	0.15
16	NO3-N (mgN/L)	7	7.36	2.00	4.53
17	o-PO4-P (mg P/L)	14	0.780	0.020	0.203
18	SiO2 (mg/L)	14	31.8	13.9	21.1
19	SO4 (mg/L)	17	242.3	13.0	120.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	9	36.7	1.1	6.1
2	COD (mg/L)	13	26.4	1.9	15.3
3	DO (mg/L)	5	7.3	3.0	5.7
4	DO_SAT% (%)	4	88	38	66
5	FCol-MPN (MPN/100mL)	9	2200	330	1199
6	Tcol-MPN (MPN/100mL)	9	16000	1700	10456
	TRACE & TOXIC				
1	As (μg/L)	4	1.65	0.83	1.35
2	Cd (μg/L)	6	6.70	0.00	3.05
3	Cr (μg/L)	6	10.70	2.20	4.43
4	Cu (μg/L)	16	15.00	0.00	2.75
5	Hg (μg/L)	4	1.48	0.23	0.76
6	Ni (μg/L)	6	24.90	1.40	8.7
7	Pb (μg/L)	6	80.00	7.00	45.33
8	Zn (μg/L)	16	29.00	0.00	6.01
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	17	180	24	109
2	HAR_Total (mgCaCO3/L)	17	347	114	265
3	Na% (%)	17	82	32	53
4	RSC (-)	17	1.7	0.0	0.2
5	SAR (-)	17	10.0	1.0	4.1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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_FLD (pH units)				
4	pH_GEN (pH units)	8.3	8.2	8.1	8.5
5	TDS (mg/L)	317	477	767	536
6	Temp (deg C)	26.3	25.2	26.7	25.4
7	Turb (NTU)	2.8	38.0	28.4	45.0
	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/BACTERIOLOGIC				
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				

Samples not Collected during Flood Season from 2006 to 2012 due to downgradation wef 01/06/2006. WQ upgradation wef 2013

Water Quality Seasonal Average for the period: 2006-2021

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			
		2017	2018	2019	2020
	PHYSICAL				
1	Q (cumec)	345.8	1173	1409	172.5
2	EC_GEN (µmho/cm)	623	524	565	1100
3	pH_FLD (pH units)				
4	pH_GEN (pH units)	8.1	8.2	8.1	8.0
5	TDS (mg/L)	411	330	353	853
6	Temp (deg C)	26.8	26.0	27.2	27.0
7	Turb (NTU)	68.3	65.6	106.4	25.4
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	7.0	7.7	0.3	0.0
2	ALK-TOT (mgCaCO3/L)	142	125	140	188
3	B (mg/L)	0.04	0.06	0.18	0.49
4	Ca (mg/L)	42	30	41	28
5	Cl (mg/L)	68.3	53.9	64.6	133.4
6	CO3 (mg/L)	8.4	9.3	0.4	0.0
7	F (mg/L)	0.57	0.45	0.42	0.39
8	Fe (mg/L)	1.5	1.1	6.7	0.7
9	HCO3 (mg/L)	156	133	170	230
10	K (mg/L)	0.4	0.2	0.3	0.4
11	Mg (mg/L)	23.4	15.5	14.4	33.1
12	Na (mg/L)	67.0	48.8	57.1	139.0
13	NH3-N (mg N/L)	0.45	0.18	0.09	0.01
14	NO2+NO3 (mg N/L)	4.91	1.92	2.10	4.20
15	NO2-N (mgN/L)	0.12	0.06	0.04	0.15
16	NO3-N (mgN/L)	4.79	1.86	2.06	3.70
17	o-PO4-P (mg P/L)	0.633	0.270	0.332	0.107
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)	17.3	33.1	21.9	17.0
20	SO4 (mg/L)	86.7	34.5	62.6	118.6
	BIOLOGICAL/BACTERIOLOGIC				
1	BOD3-27 (mg/L)	1.2	1.9	0.6	1.4
2	COD (mg/L)	18.0	10.5	11.5	13.2
3	DO (mg/L)	6.1	6.0	5.4	3.0
4	DO_SAT% (%)	76	73	68	38
5	FCol-MPN (MPN/100mL)	1868	92	548	1100
6	Tcol-MPN (MPN/100mL)	2343	642	1952	9000
7	TOC (mg/L)				
	TRACE & TOXIC				
1	As (µg/L)			1.36	
2	Cd (µg/L)			0.03	
3	Cr (µg/L)			5.12	
4	Cu (µg/L)	11.50	15.40	19.00	0.01
5	Hg (µg/L)				
6	Ni (µg/L)			5.69	
7	Pb (µg/L)			0.98	
8	Zn (µg/L)	113.90	23.99	44.76	0.01
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	106	76	102	71
2	HAR_Total (mgCaCO3/L)	203	141	161	209
3	Na% (%)	41	38	41	54
4	RSC (-)	0.0	0.0	0.0	0.2
5	SAR (-)	2.0	1.7	1.9	4.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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_FLD (pH units)				
4	pH_GEN (pH units)	8.2	8.2	8.3	8.5
5	TDS (mg/L)	516	594	556	575
6	Temp (deg C)	26.0	24.6	25.5	24.5
7	Turb (NTU)	9.5	2.1	42.3	7.3
	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/BACTERIOLOGIC				
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				

Samples not Collected during Winter Season from 2006 to 2012 due to downgradation wef 01/06/2006. WQ upgradation wef 2013

Water Quality Seasonal Average for the period: 2006-2021

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			
		2017-2018	2018-2019	2019-2020	2020-2021
	PHYSICAL				
1	Q (cumec)	41.16	44.51	219.7	60.33
2	EC_GEN (µmho/cm)	857	893	883	1231
3	pH_FLD (pH units)				5.6
4	pH_GEN (pH units)	8.1	8.2	8.3	8.2
5	TDS (mg/L)	550	536	597	853
6	Temp (deg C)	24.5	24.5	24.5	25.7
7	Turb (NTU)	25.3	3.0	24.5	27.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	5.8	4.9
2	ALK-TOT (mgCaCO3/L)	244	205	213	271
3	B (mg/L)	0.07	0.03	0.18	0.34
4	Ca (mg/L)	62	40	42	43
5	Cl (mg/L)	89.1	87.0	113.5	141.3
6	CO3 (mg/L)	0.0	0.0	7.0	5.9
7	F (mg/L)	0.93	0.46	0.66	0.84
8	Fe (mg/L)	0.4	0.6	0.6	0.4
9	HCO3 (mg/L)	298	251	245	318
10	K (mg/L)	0.4	0.2	0.3	0.5
11	Mg (mg/L)	32.2	28.5	34.3	42.7
12	Na (mg/L)	108.9	74.3	111.9	153.6
13	NH3-N (mg N/L)	0.34	0.09	0.06	0.24
14	NO2+NO3 (mg N/L)	6.79	1.06	4.78	3.14
15	NO2-N (mgN/L)	0.04	0.08	0.05	0.12
16	NO3-N (mgN/L)	6.75	0.98	4.73	2.90
17	o-PO4-P (mg P/L)	0.955	0.241	0.155	0.284
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)	18.7	19.2	24.7	25.7
20	SO4 (mg/L)	125.7	91.2	95.5	118.4
	BIOLOGICAL/BACTERIOLOGIC				
1	BOD3-27 (mg/L)	0.5	1.2	1.2	8.2
2	COD (mg/L)	11.9	4.6	49.1	15.8
3	DO (mg/L)	7.0	6.5	6.2	6.4
4	DO_SAT% (%)	84	79	75	76
5	FCol-MPN (MPN/100mL)	2325	115	795	1505
6	Tcol-MPN (MPN/100mL)	4493	373	2625	13617
7	TOC (mg/L)				
	TRACE & TOXIC				
1	As (µg/L)			3.38	1.35
2	Cd (µg/L)			0.05	3.27
3	Cr (µg/L)			2.57	4.88
4	Cu (µg/L)	5.00	8.00	4.50	3.13
5	Hg (µg/L)				0.76
6	Ni (µg/L)			7.74	4.90
7	Pb (µg/L)			1.08	50.50
8	Zn (µg/L)	59.17	34.88	52.50	11.81
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	154	99	106	108
2	HAR_Total (mgCaCO3/L)	288	218	248	286
3	Na% (%)	45	41	48	53
4	RSC (-)	0.1	0.3	0.1	0.3
5	SAR (-)	2.8	2.2	3.1	3.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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_FLD (pH units)				
4	pH_GEN (pH units)	8.2	8.3	7.8	7.8
5	TDS (mg/L)	650	539	484	601
6	Temp (deg C)	26.0	25.7	29.3	28.0
7	Turb (NTU)	13.7	13.7	140.5	43.0
	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/BACTERIOLOGIC				
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				

Samples not Collected during Summer Season from 2006 to 2012 due to downgradation wef 01/06/2006. WQ upgradation wef 2013

Water Quality Seasonal Average for the period: 2006-2021

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			
		2018	2019	2020	2021
	PHYSICAL				
1	Q (cumec)	Drybed	131.3	4.290	4.918
2	EC_GEN (µmho/cm)	No flow	568	1364	1232
3	pH_FLD (pH units)				
4	pH_GEN (pH units)		8.1	8.3	8.2
5	TDS (mg/L)		374	1074	834
6	Temp (deg C)		25.0	25.0	25.8
7	Turb (NTU)		2.0	30.8	18.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)		1.6	3.5	0.0
2	ALK-TOT (mgCaCO3/L)		145	281	309
3	B (mg/L)		0.06	0.10	0.64
4	Ca (mg/L)		36	33	70
5	Cl (mg/L)		62.2	207.4	200.0
6	CO3 (mg/L)		2.0	4.2	0.0
7	F (mg/L)		0.33	0.51	0.96
8	Fe (mg/L)		4.0	0.4	1.1
9	HCO3 (mg/L)		172	335	377
10	K (mg/L)		0.3	1.5	4.3
11	Mg (mg/L)		19.4	53.4	37.2
12	Na (mg/L)		49.0	177.2	163.3
13	NH3-N (mg N/L)		0.11	0.01	0.15
14	NO2+NO3 (mg N/L)		0.61	2.27	2.32
15	NO2-N (mgN/L)		0.01	0.04	0.32
16	NO3-N (mgN/L)		0.60	2.20	5.56
17	o-PO4-P (mg P/L)		0.444	0.344	0.393
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)		11.9	29.1	21.8
20	SO4 (mg/L)		83.1	175.2	127.5
	BIOLOGICAL/BACTERIOLOGIC				
1	BOD3-27 (mg/L)		1.1	3.0	2.2
2	COD (mg/L)		6.2	31.1	19.2
3	DO (mg/L)		8.4	7.5	
4	DO_SAT% (%)		111	91	
5	FCol-MPN (MPN/100mL)		203	2200	330
6	Tcol-MPN (MPN/100mL)		3933	16000	1700
7	TOC (mg/L)				
	TRACE & TOXIC				
1	As (µg/L)		3.31		
2	Cd (µg/L)		1.10	0.02	2.60
3	Cr (µg/L)		2.70	1.47	3.55
4	Cu (µg/L)		15.00	4.20	8.37
5	Hg (µg/L)		0.27		
6	Ni (µg/L)		7.70	16.45	16.30
7	Pb (µg/L)		23.00	3.69	35.00
8	Zn (µg/L)		16.07	8.51	8.42
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)		91	82	175
2	HAR_Total (mgCaCO3/L)		172	304	330
3	Na% (%)		37	56	51
4	RSC (-)		0.0	0.1	0.2
5	SAR (-)		1.6	4.5	3.9
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Deosugur	Code	: AK000L7
State	: Karnataka	District	Raichur
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	Sub Tributary	: -
		Local River	: Krishna
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Middle Krishna SD 2 , Kurnool
Drainage Area	: 129500 Sq. Km.	Bank	: Right
Latitude	: 16°24'52"	Longitude	: 77°21'26"
	Opening Date	Closing Date	
Gauge	: 30-07-1963		
Discharge	: 10-08-1964	01-11-1974	
Sediment	: 01-06-1965	01-11-1974	
Water Quality	: 01-06-2019		

Water Quality Datasheet for the period : 2020-2021

Station Name : Deosugur (AK000L7)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Analysis

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	01-06-2020	10-06-2020	20-06-2020	01-07-2020	04-08-2020	01-09-2020
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)						
2	Colour_Cod (-)	Clear	Light Brown	Clear	Clear	Light Brown	Light Brown
3	EC_FLD (μmho/cm)	411			589		
4	EC_GEN (μmho/cm)	1357	1381	1396	1248	884	430
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_GEN (pH units)	8.1	8.1	8.1	7.3	7.5	8.0
7	TDS (mg/L)	950	1022	1201	774	641	261
8	Temp (deg C)	30.0	28.0	27.0	27.0	28.0	26.5
9	Turb (NTU)	30.00	26.00	25.00	14.00	0.00	26.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	205	190	198	180	171	118
3	B (mg/L)	0.12	0.11	0.05	0.06	1.29	0.08
4	Ca (mg/L)	43	33	26	33	33	33
5	Cl (mg/L)	186.1	185.3	241.8	170.0	110.4	59.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.38	0.40	0.40	0.50	0.41	0.16
8	Fe (mg/L)	0.1	4.8	2.1	0.8	0.0	0.4
9	HCO3 (mg/L)	251	232	242	220	209	144
10	K (mg/L)	0.5	0.5	0.6	0.5	0.7	0.3
11	Mg (mg/L)	37.0	41.0	52.2	43.0	33.7	9.1
12	Na (mg/L)	162.5	164.5	177.3	179.0	80.6	39.4
13	NH3-N (mg N/L)	0.00	0.01	0.01	0.01	0.01	0.06
14	NO2+NO3 (mg N/L)				12.42		
15	NO2-N (mgN/L)	0.40	0.55	0.35	0.02	0.21	0.05
16	NO3-N (mgN/L)				12.40		
17	o-PO4-P (mg P/L)	3.268	1.350	2.369	0.200	0.200	0.180
18	P-Tot (mgP/L)					0.620	
19	SiO2 (mg/L)	9.9	14.6	12.4	15.6	17.2	14.6
20	SO4 (mg/L)	150.5	144.8	158.3	84.3	59.1	44.2
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)						
2	COD (mg/L)	11.0	17.5	16.7	21.3		1.7
3	DO (mg/L)				7.1		
4	DO_SAT% (%)				89		
5	FCol-MPN (MPN/100mL)						
6	Tcol-MPN (MPN/100mL)						
	TRACE & TOXIC						
1	As (μg/L)					0.49	
2	Cd (μg/L)					7.10	
3	Cr (μg/L)					3.10	
4	Cu (μg/L)	0.02	0.03	0.02	0.01	0.00	0.00
5	Hg (μg/L)					0.91	
6	Ni (μg/L)					27.40	
7	Pb (μg/L)					28.00	
8	Zn (μg/L)	0.01	0.34	0.02	0.02	0.00	0.00
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	108	83	66	83	83	83
2	HAR_Total (mgCaCO3/L)	262	254	283	262	223	121
3	Na% (%)	58	59	58	60	44	41
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	4.4	4.5	4.6	4.8	2.4	1.6
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

Station Name : Deosugur (AK000L7)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Analysis

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	05-10-2020	02-11-2020	01-12-2020	15-12-2020	15-12-2020	01-01-2021
		A	A	A	B	C	A
	PHYSICAL						
1	Q (cumec)						
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Light Brown	Clear
3	EC_FLD (μmho/cm)						
4	EC_GEN (μmho/cm)	553	739	1051	1038	1357	1302
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_GEN (pH units)	7.9	8.1	8.2	8.4	8.3	8.0
7	TDS (mg/L)	464	504	718	718	710	825
8	Temp (deg C)	27.5	25.5	26.5	26.5	26.5	26.0
9	Turb (NTU)	37.00	45.00	17.00	22.00	13.00	13.00
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	12.5	10.4	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	149	194	264	275	253	254
3	B (mg/L)	0.22	0.19	0.41	0.75	0.09	0.27
4	Ca (mg/L)	31	50	15	46	48	43
5	Cl (mg/L)	55.4	86.0	140.7	166.5	159.8	173.9
6	CO3 (mg/L)	0.0	0.0	15.1	12.5	0.0	0.0
7	F (mg/L)	0.40	0.29	0.62	0.88	0.88	0.91
8	Fe (mg/L)	2.8	0.0	0.4	0.6	0.1	0.5
9	HCO3 (mg/L)	181	237	292	310	309	309
10	K (mg/L)	0.3	0.3	0.6	0.5	0.4	1.0
11	Mg (mg/L)	21.1	21.9	59.6	44.4	34.8	39.8
12	Na (mg/L)	50.9	78.2	119.9	152.0	125.6	320.5
13	NH3-N (mg N/L)	0.03	0.00	0.10	0.18	0.04	0.20
14	NO2+NO3 (mg N/L)						3.00
15	NO2-N (mgN/L)	0.04	0.09	0.09	0.04	0.08	0.20
16	NO3-N (mgN/L)						2.80
17	o-PO4-P (mg P/L)	0.210	1.430	0.020	0.880	0.780	0.185
18	P-Tot (mgP/L)						
19	SiO2 (mg/L)	8.7	17.1	22.0	33.4	22.3	27.6
20	SO4 (mg/L)	43.4	55.4	115.4	107.5	113.4	377.3
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)		3.6	3.8	1.5	54.0	3.3
2	COD (mg/L)	5.1	10.8	10.0	24.4	15.7	15.9
3	DO (mg/L)		6.6	6.1	5.6	7.3	5.7
4	DO_SAT% (%)		80	75	69	90	70
5	FCol-MPN (MPN/100mL)		1100	9000	2200	2200	5000
6	Tcol-MPN (MPN/100mL)		9000	16000	9000	16000	16000
	TRACE & TOXIC						
1	As (μg/L)			1.05	1.15	0.49	1.02
2	Cd (μg/L)			13.90	5.60	2.90	0.00
3	Cr (μg/L)			2.90	2.20	3.60	19.40
4	Cu (μg/L)	0.01	0.00	5.70	26.00	5.20	2.70
5	Hg (μg/L)			0.40	1.03	0.29	0.52
6	Ni (μg/L)			6.70	0.00	5.00	0.90
7	Pb (μg/L)			75.00	61.00	46.00	8.00
8	Zn (μg/L)	0.01	0.00	4.81	6.28	13.90	3.25
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	78	125	37	115	120	109
2	HAR_Total (mgCaCO3/L)	166	216	285	300	265	274
3	Na% (%)	40	44	48	53	51	72
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	1.7	2.3	3.1	3.8	3.4	8.5
	PESTICIDES						

Water Quality Datasheet for the period : 2020-2021

Station Name : Deosugur (AK000L7)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water Analysis

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	01-02-2021	01-03-2021	05-04-2021	03-05-2021	21-05-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)					
2	Colour_ Cod (-)	Light Brown	Light Brown	Light Brown	Clear	Clear
3	EC_FLD (µmho/cm)					
4	EC_GEN (µmho/cm)	1258	1393	1545	1386	1579
5	Odour_ Code (-)	odour free	odour free	odour free	odour free	odour free
6	pH_GEN (pH units)	8.2	8.0	8.3	8.1	8.0
7	TDS (mg/L)	1003	817	1010	905	959
8	Temp (deg C)	26.5	27.0	27.0	25.0	23.0
9	Turb (NTU)	3.00	0.04	17.00	16.00	8.00
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	23.9	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	185	218	259	121	330
3	B (mg/L)	0.44	0.19			
4	Ca (mg/L)	44	45	73	67	33
5	Cl (mg/L)	168.4	181.0	220.0	156.0	229.2
6	CO3 (mg/L)	0.0	0.0	28.8	0.0	0.0
7	F (mg/L)	0.96	0.85	0.83	0.80	0.78
8	Fe (mg/L)	2.2	0.1	0.5	0.6	0.6
9	HCO3 (mg/L)	226	266	258	148	403
10	K (mg/L)	0.6	0.7	4.5	4.4	6.6
11	Mg (mg/L)	32.2	35.5	39.0	40.1	21.0
12	Na (mg/L)	184.3	199.1	204.0	88.8	222.6
13	NH3-N (mg N/L)	0.20	0.22			
14	NO2+NO3 (mg N/L)	1.00	2.98			
15	NO2-N (mgN/L)	0.00	0.38			
16	NO3-N (mgN/L)	1.00	2.60	7.50	8.61	8.40
17	o-PO4-P (mg P/L)	0.030	0.464			
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	22.4	26.8			
20	SO4 (mg/L)	126.4	237.1	172.1	137.3	16.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	3.7	10.0	1.4		
2	COD (mg/L)	37.2	37.6	12.0		
3	DO (mg/L)	6.3	4.2	4.4		
4	DO_SAT% (%)	78	53	55		
5	FCol-MPN (MPN/100mL)	1700	2800	220		
6	Tcol-MPN (MPN/100mL)	2200	9000	270		
	TRACE & TOXIC					
1	As (µg/L)			1.03	25.78	13.01
2	Cd (µg/L)			1.40	2.40	2.20
3	Cr (µg/L)			2.10	13.06	2.00
4	Cu (µg/L)	3.00	19.00	7.00	5.30	2.60
5	Hg (µg/L)			0.39	0.50	0.51
6	Ni (µg/L)			30.00	8.50	6.30
7	Pb (µg/L)			64.00	47.00	16.00
8	Zn (µg/L)	11.60	0.04	20.48	29.95	66.90
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	110	112	183	168	82
2	HAR_Total (mgCaCO3/L)	244	260	346	335	169
3	Na% (%)	62	63	56	36	73
4	RSC (-)	0.0	0.0	0.0	0.0	3.2
5	SAR (-)	5.2	5.4	4.8	2.1	7.5
	PESTICIDES					

Water Quality Summary for the period : 2020-2021

Station Name : Deosugur (AK000L7)

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)				
2	EC_FLD (µmho/cm)	2	589	411	500
3	EC_GEN (µmho/cm)	17	1579	430	1170
4	pH_GEN (pH units)	17	8.4	7.3	8
5	TDS (mg/L)	17	1201	261	793
6	Temp (deg C)	12	30.0	25.5	26.9
7	Turb (NTU)	16	45.0	0.0	18.4
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	17	23.9	0.0	2.8
2	ALK-TOT (mgCaCO3/L)	17	330	118	210
3	B (mg/L)	14	1.29	0.05	0.3
4	Ca (mg/L)	17	73	15	41
5	Cl (mg/L)	17	241.8	55.4	158.2
6	CO3 (mg/L)	17	28.8	0.0	3.3
7	F (mg/L)	17	0.96	0.16	0.61
8	Fe (mg/L)	17	4.8	0.0	1
9	HCO3 (mg/L)	17	403	144	249
10	K (mg/L)	17	6.6	0.3	1.4
11	Mg (mg/L)	17	59.6	9.1	35.6
12	Na (mg/L)	17	320.5	39.4	150
13	NH3-N (mg N/L)	14	0.22	0.00	0.08
14	NO2+NO3 (mg N/L)	4	12.42	1.00	4.85
15	NO2-N (mgN/L)	14	0.55	0.00	0.18
16	NO3-N (mgN/L)	7	12.40	1.00	6.19
17	o-PO4-P (mg P/L)	14	3.268	0.020	0.826
18	P-Tot (mgP/L)	1	0.620	0.620	0.62
19	SiO2 (mg/L)	14	33.4	8.7	18.9
20	SO4 (mg/L)	17	377.3	16.1	126
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	8	54.0	1.4	10.2
2	COD (mg/L)	14	37.6	1.7	16.9
3	DO (mg/L)	5	7.3	5.6	6.5
4	DO_SAT% (%)	5	90	69	81
5	FCol-MPN (MPN/100mL)	8	9000	220	3028
6	Tcol-MPN (MPN/100mL)	8	16000	270	9684
	TRACE & TOXIC				
1	As (µg/L)	4	1.15	0.49	0.93
2	Cd (µg/L)	7	13.90	0.00	4.06
3	Cr (µg/L)	7	19.40	2.00	6.47
4	Cu (µg/L)	17	26.00	0.00	4.51
5	Hg (µg/L)	4	1.03	0.29	0.56
6	Ni (µg/L)	7	30.00	0.00	8.2
7	Pb (µg/L)	7	75.00	8.00	45.29
8	Zn (µg/L)	17	66.90	0.00	9.27
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	17	183	37	103
2	HAR_Total (mgCaCO3/L)	17	346	121	251
3	Na% (%)	17	73	36	54
4	RSC (-)	17	3.2	0.0	0.2
5	SAR (-)	17	8.5	1.6	4.1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2019-2021

Station Name : Deosugur (AK000L7)

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

River Water

Sub-Division : Middle Krishna SD 2 , Kurnool

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2019	2020	2019-2020	2020-2021	2020	2021
	PHYSICAL						
1	Q (cumec)						
2	EC_FLD (µmho/cm)		500				
3	EC_GEN (µmho/cm)	484	1036	862	1124	1360	1476
4	pH_GEN (pH units)	8.0	7.9	8.1	8.2	8.1	8.1
5	TDS (mg/L)	258	759	547	746	1055	923
6	Temp (deg C)	25.0	27.8	26.0	26.3	24.0	27.0
7	Turb (NTU)	72.3	22.6	17.8	18.8	31.8	8.0
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	3.8	0.8	6.0
2	ALK-TOT (mgCaCO3/L)	140	173	198	238	207	232
3	B (mg/L)	0.22	0.28	0.31	0.36	0.29	0.19
4	Ca (mg/L)	53	33	38	41	38	55
5	Cl (mg/L)	67.7	144.0	113.3	149.2	237.7	196.5
6	CO3 (mg/L)	0.0	0.0	0.0	4.6	1.0	7.2
7	F (mg/L)	0.27	0.38	0.58	0.76	0.53	0.81
8	Fe (mg/L)	3.1	1.6	1.9	0.6	0.4	0.4
9	HCO3 (mg/L)	171	211	242	281	251	268
10	K (mg/L)	1.0	0.5	0.4	0.6	0.8	4.0
11	Mg (mg/L)	14.3	33.9	35.8	38.8	50.0	33.9
12	Na (mg/L)	46.1	122.0	107.1	163.4	207.1	178.6
13	NH3-N (mg N/L)	0.08	0.02	0.85	0.12	0.03	0.22
14	NO2+NO3 (mg N/L)	2.38	12.42	5.89	2.00	4.22	2.98
15	NO2-N (mgN/L)	0.03	0.23	0.90	0.08	0.15	0.38
16	NO3-N (mgN/L)	2.35	12.40	4.99	1.90	4.10	6.78
17	o-PO4-P (mg P/L)	0.227	1.111	0.455	0.554	1.188	0.464
18	P-Tot (mgP/L)		0.620				
19	SiO2 (mg/L)	16.8	13.3	19.7	24.1	20.9	26.8
20	SO4 (mg/L)	73.8	97.8	94.2	149.2	194.3	140.7
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	0.9		2.2	11.6	0.6	5.7
2	COD (mg/L)	15.3	12.2	48.9	19.0	24.2	24.8
3	DO (mg/L)	5.4	7.1	5.5	6.4	3.1	
4	DO_SAT% (%)	62	89	56	79	37	
5	FCoI-MPN (MPN/100mL)	3157		2000	3533	500	1510
6	TcoI-MPN (MPN/100mL)	6557		9450	11367	9000	4635
	TRACE & TOXIC						
1	As (µg/L)	0.66		2.85	0.93		
2	Cd (µg/L)	0.27		0.04	5.60	0.02	2.00
3	Cr (µg/L)	19.86		12.25	7.02	1.29	5.72
4	Cu (µg/L)	15.33	0.01	5.25	7.10	2.18	8.48
5	Hg (µg/L)				0.56		
6	Ni (µg/L)	3.52		6.95	3.15	22.41	14.93
7	Pb (µg/L)	0.62		0.39	47.50	3.34	42.33
8	Zn (µg/L)	46.67	0.06	51.50	6.64	12.52	29.34
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	133	84	96	102	95	136
2	HAR_Total (mgCaCO3/L)	192	225	245	264	303	277
3	Na% (%)	33	51	48	55	60	57
4	RSC (-)	0.2	0.0	0.0	0.0	0.0	0.8
5	SAR (-)	1.4	3.4	3.0	4.4	5.2	4.9
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Chalachguda (Seasonal)	Code	: AKS00H1
State	: Karnataka	District	Bagalkot
Basin	: Krishna	Independent River	: Krishna
Tributary	: Malaprabha	Sub Tributary	: -
		Local River	: Malaprabha
Division	: CAUVERY DIVISION	Sub-Division	: MKSD BAGALKOTE
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 : 2020-2021

Station Name : Cholachguda (Seasonal) (AKS00H1)

Division : CAUVERY DIVISION

Local River : Malaprabha

River Water Analysis

Sub-Division : MKSD BAGALKOTE

S.No	Parameters		01-09-2020	05-10-2020	03-11-2020		May-21
			A	A	A		
	PHYSICAL						
1	Q (cumec)		24.02	83.07	12.13		
2	Colour_Cod (-)		Light Brown	Light Brown	Light Brown		
3	EC_GEN (µmho/cm)		779	896	784		
4	Odour_Code (-)		odour free	odour free	odour free		
5	pH_GEN (pH units)		8.0	7.8	8.0		
6	TDS (mg/L)		528	658	548		
7	Temp (deg C)		22	22	23		
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0		
2	ALK-TOT (mgCaCO3/L)		133	209	133		
3	B (mg/L)		0.22	0.04	NA		
4	Ca (mg/L)		38	55	42		
5	Cl (mg/L)		127.8	139.9	153.4		
6	CO3 (mg/L)		0.0	0.0	0.0		
7	F (mg/L)		0.17	0.21	NA		
8	Fe (mg/L)		0.3	NA	NA		
9	HCO3 (mg/L)		162	255	162		
10	K (mg/L)		3.4	5.2	3.4		
11	Mg (mg/L)		28.2	28.2	28.2		
12	Na (mg/L)		82.1	100.6	82.1		
13	NO2+NO3 (mg N/L)		2.09	2.77	1.95		
14	NO2-N (mgN/L)		0.01	0.01	0.01		
15	NO3-N (mgN/L)		2.07	2.76	1.93		
16	o-PO4-P (mg P/L)		0.010	0.031	0.010		
17	SiO2 (mg/L)		13.2	13.5	13.2		
18	SO4 (mg/L)		59.0	28.3	59.0		
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)		0.8	0.2	0.8		
2	COD (mg/L)		NA	NA	NA		
3	DO (mg/L)		6.6	6.4	6.6		
4	DO_SAT% (%)		75	73	77		
5	FCol-MPN (MPN/100mL)		490	1300	NA		
6	Tcol-MPN (MPN/100mL)		1100	7900	NA		
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)		96	137	104		
2	HAR_Total (mgCaCO3/L)		213	254	221		
3	Na% (%)		45	46	44		
4	RSC (-)		0.0	0.0	0.0		
5	SAR (-)		2.5	2.8	2.4		

Sample not submitted for analysis from June-2020 to August -2020 due to No Flow

Sample not submitted for analysis from December-2020 to April -2021 due to Shortage of staff

No Flow

Water Quality Summary for the period : 2020-2021

Station Name : Cholachguda (Seasonal) (AKS00H1)

Division : CAUVERY DIVISION

Local River : Malaprabha

Sub-Division : MKSD BAGALKOTE

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	1077	0.000	68.26
2	EC_GEN (µmho/cm)	3	896	779	820
3	pH_GEN (pH units)	3	8.0	7.8	7.9
4	TDS (mg/L)	3	658	528	578
5	Temp (deg C)	3	23.0	22.0	22.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	3	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	3	209	133	158
3	B (mg/L)	2	0.22	0.04	0.13
4	Ca (mg/L)	3	55	38	45
5	Cl (mg/L)	3	153.4	127.8	140.3
6	CO3 (mg/L)	3	0.0	0.0	0
7	F (mg/L)	2	0.21	0.17	0.19
8	Fe (mg/L)	1	0.3	0.3	0.3
9	HCO3 (mg/L)	3	255	162	193
10	K (mg/L)	3	5.2	3.4	4
11	Mg (mg/L)	3	28.2	28.2	28.2
12	Na (mg/L)	3	100.6	82.1	88.3
13	NO2+NO3 (mg N/L)	3	2.77	1.95	2.27
14	NO2-N (mgN/L)	3	0.01	0.01	0.01
15	NO3-N (mgN/L)	3	2.76	1.93	2.26
16	o-PO4-P (mg P/L)	3	0.031	0.010	0.017
17	SiO2 (mg/L)	3	13.5	13.2	13.2
18	SO4 (mg/L)	3	59.0	28.3	48.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3	0.8	0.2	0.6
2	DO (mg/L)	3	6.6	6.4	6.5
3	DO_SAT% (%)	3	77	73	75
4	FCol-MPN (MPN/100mL)	2	1300	490	895
5	Tcol-MPN (MPN/100mL)	2	7900	1100	4500
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	3	137	96	112
2	HAR_Total (mgCaCO3/L)	3	254	213	230
3	Na% (%)	3	46	44	45
4	RSC (-)	3	0.0	0.0	0
5	SAR (-)	3	2.8	2.4	2.5

Water Quality Seasonal Average for the period: 2006-2021

Station Name : Cholachguda (Seasonal) (AKS00H1)

Division : CAUVERY DIVISION

Local River : Malaprabha

River Water

Sub-Division : MKSD BAGALKOTE

S.No	Parameters	Flood				
		Jun - Oct				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	14.88	67.44	33.96	292.9	13.19
2	EC_FLD (µmho/cm)	246	243	259	263	266
3	EC_GEN (µmho/cm)	547	434	1022	1645	966
4	pH_FLD (pH units)	7.4	7.6	7.3	7.4	7.3
5	pH_GEN (pH units)	8.2	8.0	7.8	7.8	8.2
6	TDS (mg/L)					
7	Temp (deg C)	22.5	23.0	22.5	22.5	23.7
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.4	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	244	101	84	153	157
3	B (mg/L)	0.41	0.13	0.20	0.26	0.39
4	Ca (mg/L)	36	29	36	53	60
5	Cl (mg/L)	78.7	58.5	72.4	153.5	167.4
6	CO3 (mg/L)	0.0	0.5	0.0	0.0	0.0
7	F (mg/L)	0.19	0.46	0.73	0.69	0.54
8	Fe (mg/L)	0.1	0.4	0.2	0.6	0.3
9	HCO3 (mg/L)	173	122	103	186	192
10	K (mg/L)	41.4	8.7	3.9	0.9	4.9
11	Mg (mg/L)	18.7	6.6	10.2	17.9	20.1
12	Na (mg/L)	46.2	54.8	48.2	89.8	100.0
13	NO2+NO3 (mg N/L)	0.87	4.55	1.52	1.26	0.45
14	NO2-N (mgN/L)	0.01	0.03	0.01	0.01	0.01
15	NO3-N (mgN/L)	0.86	4.52	1.51	1.25	0.44
16	o-PO4-P (mg P/L)					
17	P-Tot (mgP/L)	0.248	0.154	0.041	0.016	0.013
18	SiO2 (mg/L)	8.9	9.0	9.3	6.8	5.9
19	SO4 (mg/L)	30.6	40.8	48.9	60.0	26.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.4	1.0	2.1	0.9	0.5
2	COD (mg/L)	2.5	8.9	3.8	5.9	4.4
3	DO (mg/L)	7.0	7.1	7.1	7.1	7.1
4	DO_SAT% (%)	80	82	81	82	83
5	FCol-MPN (MPN/100mL)				35000	9600
6	Tcol-MPN (MPN/100mL)				54000	13667
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)	91	73	89	132	150
2	HAR_Total (mgCaCO3/L)	169	100	131	207	233
3	Na% (%)	32	46	37	49	48
4	RSC (-)	0.1	0.5	0.0	0.0	0.0
5	SAR (-)	1.6	2.5	1.7	2.8	2.9
	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: 2006-2021

Station Name : Cholachguda (Seasonal) (AKS00H1)

Division : CAUVERY DIVISION

Local River : Malaprabha

River Water

Sub-Division : MKSD BAGALKOTE

S.No	Parameters	Flood				
		Jun - Oct				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	22.72	2.660	36.55	13.14	133.4
2	EC_FLD (µmho/cm)	270	270	275	584	548
3	EC_GEN (µmho/cm)	798	541	440	589	314
4	pH_FLD (pH units)	7.3	7.1	7.2	7.1	7.2
5	pH_GEN (pH units)	7.9	7.3	7.6	7.8	7.9
6	TDS (mg/L)					
7	Temp (deg C)	22.5	21.0	25.8	25.5	23.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	139	97	95	117	97
3	B (mg/L)	0.11	0.15	0.13	0.05	0.08
4	Ca (mg/L)	54	37	29	38	34
5	Cl (mg/L)	60.4	77.1	63.1	73.3	51.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.38	0.40	0.58	0.48	0.56
8	Fe (mg/L)	0.1	0.0	0.9	2.1	2.0
9	HCO3 (mg/L)	169	118	115	143	118
10	K (mg/L)	2.1	2.0	2.2	2.2	1.3
11	Mg (mg/L)	7.8	11.7	9.1	12.6	3.9
12	Na (mg/L)	42.0	54.1	45.5	48.5	38.0
13	NO2+NO3 (mg N/L)	1.09	1.13	1.24	1.66	1.57
14	NO2-N (mgN/L)	0.00	0.24	0.00	0.01	0.01
15	NO3-N (mgN/L)	1.09	0.89	1.24	1.65	1.56
16	o-PO4-P (mg P/L)					
17	P-Tot (mgP/L)	0.016	0.049	0.014	0.012	0.008
18	SiO2 (mg/L)	8.3	0.0	0.6	11.1	2.3
19	SO4 (mg/L)	28.4	46.6	29.0	37.0	20.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.8	1.2	1.9	1.6
2	COD (mg/L)	4.3	10.6	10.1	16.7	15.0
3	DO (mg/L)	7.2	7.1	7.6	7.7	7.8
4	DO_SAT% (%)	82	80	93	94	91
5	FCol-MPN (MPN/100mL)	64000	33000	26933	15100	
6	Tcol-MPN (MPN/100mL)	90000	49000	65667	23267	
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)		14.56	1.69		
2	Cd (µg/L)		0.11	1.62		
3	Cr (µg/L)		1.42	4.94		
4	Cu (µg/L)		6.54	4.23		
5	Hg (µg/L)			0.48		
6	Ni (µg/L)		13.34	18.23		
7	Pb (µg/L)		0.92	-0.50		
8	Zn (µg/L)		4.31	-0.05		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	134	92	72	96	84
2	HAR_Total (mgCaCO3/L)	167	141	110	149	100
3	Na% (%)	36	45	45	41	45
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	1.5	2.0	1.8	1.8	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: 2006-2021

Station Name : Cholachguda (Seasonal) (AKS00H1)

Division : CAUVERY DIVISION

Local River : Malaprabha

River Water

Sub-Division : MKSD BAGALKOTE

S.No	Parameters	Flood				
		Jun - Oct				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	10.62	186.9	Dry Bed	80.35	53.55
2	EC_FLD (µmho/cm)	550	580	No Flow		
3	EC_GEN (µmho/cm)	559	224		459	838
4	pH_FLD (pH units)	7.1	7.2			
5	pH_GEN (pH units)	8.2	8.0		7.7	7.9
6	TDS (mg/L)				313	593
7	Temp (deg C)	23.3	23.5		22.7	22.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0		0.0	0.0
2	ALK-TOT (mgCaCO3/L)	102	57		94	171
3	B (mg/L)	0.07	0.14		0.12	0.13
4	Ca (mg/L)	22	16		33	47
5	Cl (mg/L)	89.4	13.6		66.7	133.8
6	CO3 (mg/L)	0.0	0.0		0.0	0.0
7	F (mg/L)	0.70	0.62		0.15	0.19
8	Fe (mg/L)	2.1	2.4		0.2	0.3
9	HCO3 (mg/L)	125	70		115	208
10	K (mg/L)	1.7	1.1		2.1	4.3
11	Mg (mg/L)	10.7	5.8		13.3	28.2
12	Na (mg/L)	63.0	9.3		45.7	91.4
13	NO2+NO3 (mg N/L)	2.55	1.56		2.08	2.43
14	NO2-N (mgN/L)	0.03	0.00		0.05	0.01
15	NO3-N (mgN/L)	2.52	1.56		2.03	2.42
16	o-PO4-P (mg P/L)				0.017	0.021
17	P-Tot (mgP/L)	0.023	0.008			
18	SiO2 (mg/L)	3.1	2.7		18.5	13.3
19	SO4 (mg/L)	32.0	16.7		38.7	43.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	2.7		1.0	0.5
2	COD (mg/L)	5.8	20.0		15.0	
3	DO (mg/L)	7.8	7.7		7.6	6.5
4	DO_SAT% (%)	90	90		88	74
5	Fcol-MPN (MPN/100mL)	9500	5000		2367	895
6	Tcol-MPN (MPN/100mL)	9500	16000		60300	4500
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				0.98	
2	Cd (µg/L)				0.68	
3	Cr (µg/L)				5.53	
4	Cu (µg/L)				1.82	
5	Hg (µg/L)					
6	Ni (µg/L)				12.65	
7	Pb (µg/L)				0.04	
8	Zn (µg/L)				14.90	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	54	40		81	117
2	HAR_Total (mgCaCO3/L)	99	64		137	234
3	Na% (%)	58	24		43	46
4	RSC (-)	0.3	0.0		0.1	0.0
5	SAR (-)	2.8	0.5		1.8	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: 2006-2021

Station Name : Chalachguda (Seasonal) (AKS00H1)

Division : CAUVERY DIVISION

Local River : Malaprabha

River Water

Sub-Division : MKSD BAGALKOTE

S.No	Parameters	Winter				
		Nov - Feb				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	70.53	19.94	32.14	14.51	15.59
2	EC_FLD (µmho/cm)	246	255	265	873	270
3	EC_GEN (µmho/cm)	363	653	394	2381	999
4	pH_FLD (pH units)	7.4	7.5	7.6	7.3	7.2
5	pH_GEN (pH units)	8.0	8.1	8.1	8.0	7.9
6	TDS (mg/L)					
7	Temp (deg C)	22.5	22.4	23.3	17.8	19.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.5	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	168	120	96	126	154
3	B (mg/L)	0.34	0.17	0.17	0.48	0.26
4	Ca (mg/L)	25	28	29	49	63
5	Cl (mg/L)	43.3	93.4	49.1	154.1	172.6
6	CO3 (mg/L)	0.0	0.0	0.6	0.0	0.0
7	F (mg/L)	0.13	0.45	0.60	0.17	1.02
8	Fe (mg/L)	0.1	0.4	0.2	0.5	0.2
9	HCO3 (mg/L)	103	146	115	154	188
10	K (mg/L)	30.9	1.8	1.4	9.8	3.4
11	Mg (mg/L)	11.3	25.1	10.2	17.7	20.4
12	Na (mg/L)	30.6	62.6	32.6	85.5	110.0
13	NO2+NO3 (mg N/L)	0.68	0.48	1.38	2.73	0.85
14	NO2-N (mgN/L)	0.01	0.07	0.16	0.01	0.01
15	NO3-N (mgN/L)	0.67	0.41	1.23	2.72	0.84
16	o-PO4-P (mg P/L)					
17	P-Tot (mgP/L)	0.332	0.249	0.038	0.006	0.054
18	SiO2 (mg/L)	3.2	7.2	5.8	8.8	6.8
19	SO4 (mg/L)	40.4	54.1	23.9	38.2	44.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.5	0.6	0.6	0.5	1.0
2	COD (mg/L)	11.9	9.9	4.0	4.2	7.6
3	DO (mg/L)	6.9	7.0	7.3	7.2	7.1
4	DO_SAT% (%)	79	80	85	76	77
5	Fcol-MPN (MPN/100mL)				51350	11000
6	Tcol-MPN (MPN/100mL)				88300	14000
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	70	72	123	156
2	HAR_Total (mgCaCO3/L)	108	174	114	197	241
3	Na% (%)	31	43	39	46	49
4	RSC (-)	0.0	0.0	0.1	0.0	0.0
5	SAR (-)	1.3	2.1	1.3	2.7	3.1
	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: 2006-2021

Station Name : Cholachguda (Seasonal) (AKS00H1)

Division : CAUVERY DIVISION

Local River : Malaprabha

River Water

Sub-Division : MKSD BAGALKOTE

S.No	Parameters					
		2011-2012	2013-2014	2014-2015	2019-2020	2020-2021
	PHYSICAL					
1	Q (cumec)	31.03	6.313	10.15	43.90	12.13
2	EC_FLD (µmho/cm)	273	240	610		
3	EC_GEN (µmho/cm)	520	1820	953	673	784
4	pH_FLD (pH units)	7.2	7.1	7.2		
5	pH_GEN (pH units)	7.9	6.9	8.3	7.8	8.0
6	TDS (mg/L)				445	548
7	Temp (deg C)	19.4	20.0	23.0	22.9	23.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	117	140	148	130	133
3	B (mg/L)	0.12	0.09	0.08	0.25	
4	Ca (mg/L)	43	58	66	40	42
5	Cl (mg/L)	71.4	158.5	184.0	114.8	153.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.35	0.40	0.29	0.14	
8	Fe (mg/L)	0.2	2.8	0.0	0.2	
9	HCO3 (mg/L)	143	171	181	158	162
10	K (mg/L)	2.0	3.1	2.9	2.7	3.4
11	Mg (mg/L)	8.7	15.6	21.4	25.4	28.2
12	Na (mg/L)	45.2	103.5	95.5	65.5	82.1
13	NO2+NO3 (mg N/L)	1.12	1.66	2.18	1.75	1.95
14	NO2-N (mgN/L)	0.01	0.00	0.01	0.02	0.01
15	NO3-N (mgN/L)	1.12	1.66	2.17	1.73	1.93
16	o-PO4-P (mg P/L)				0.031	0.010
17	P-Tot (mgP/L)	0.026	0.012	0.009		
18	SiO2 (mg/L)	7.4	2.8	89.6	16.6	13.1
19	SO4 (mg/L)	33.4	60.0	50.7	37.4	59.0
	BIOLOGICAL/BACTERIOLOGIC					
1	BOD3-27 (mg/L)	0.7	0.3	1.1	1.2	0.8
2	COD (mg/L)	3.9	2.3	10.6	19.8	
3	DO (mg/L)	7.1	7.8	7.8	7.5	6.6
4	DO_SAT% (%)	77	86	91	88	77
5	FCol-MPN (MPN/100mL)	90500	240000	7800	1000	
6	Tcol-MPN (MPN/100mL)	134750	920000	13000	2050	
7	TOC (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)				3.05	
2	Cd (µg/L)			0.26	0.04	
3	Cr (µg/L)			35.31	1.57	
4	Cu (µg/L)			15.98	3.16	
5	Hg (µg/L)					
6	Ni (µg/L)			-0.50	9.30	
7	Pb (µg/L)			1.59	0.45	
8	Zn (µg/L)			10.00	8.80	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	107	144	164	99	104
2	HAR_Total (mgCaCO3/L)	144	209	253	205	221
3	Na% (%)	39	52	45	39	44
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	1.6	3.1	2.6	2.0	2.4
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Sample are not collected during winter season 2013-2014 and 2015-2016 to 2018-2019 due to Dry bed / No flow condition.

Water Quality Seasonal Average for the period: 2006-2021

Station Name : Cholachguda (Seasonal) (AKS00H1)

Division : CAUVERY DIVISION

Local River : Malaprabha

River Water

Sub-Division : MKSD BAGALKOTE

S.No	Parameters	Summer				
		Mar - May				
		2007	2008	2009	2010	2020
	PHYSICAL					
1	Q (cumec)	0.000	13.83	19.50		19.92
2	EC_FLD (µmho/cm)	243	257	280	270	
3	EC_GEN (µmho/cm)	571	1002	884	547	571
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	7.9
6	TDS (mg/L)					328
7	Temp (deg C)	23.5	23.0	23.0	18.5	22.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	116	100	84	128	130
3	B (mg/L)	0.14	0.18	0.00	0.60	0.12
4	Ca (mg/L)	27	30	33	41	31
5	Cl (mg/L)	97.9	90.7	115.5	68.7	93.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.26	0.26	1.05	0.20	0.15
8	Fe (mg/L)	0.7	0.5	0.0	0.4	0.3
9	HCO3 (mg/L)	99	122	103	156	159
10	K (mg/L)	30.0	1.0	1.1	15.7	3.2
11	Mg (mg/L)	23.2	13.1	33.5	24.5	20.5
12	Na (mg/L)	45.6	60.5	27.1	40.0	55.4
13	NO2+NO3 (mg N/L)	0.99	0.83	0.85	1.90	1.33
14	NO2-N (mgN/L)	0.08	0.17	0.20	0.01	0.01
15	NO3-N (mgN/L)	0.91	0.66	0.65	1.89	1.32
16	o-PO4-P (mg P/L)					0.010
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	12.6
19	SO4 (mg/L)	79.9	45.4	23.7	40.9	24.5
	BIOLOGICAL/BACTERIOLOGIC					
1	BOD3-27 (mg/L)	1.9	0.4	1.1	1.1	1.4
2	COD (mg/L)	9.1	10.6	4.6	6.8	16.0
3	DO (mg/L)	6.9	6.9	7.2	7.2	7.5
4	DO_SAT% (%)	81	81	84	76	86
5	FCol-MPN (MPN/100mL)				35000	
6	Tcol-MPN (MPN/100mL)				54000	
7	TOC (mg/L)		1.6			
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)	8.00	1.70			
3	Cr (µg/L)	45.00	2.00			
4	Cu (µg/L)					
5	Hg (µg/L)	0.80	0.00			
6	Ni (µg/L)	7.00	17.40			
7	Pb (µg/L)	74.00	33.91			
8	Zn (µg/L)	26.00	4.75			
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	67	74	82	103	77
2	HAR_Total (mgCaCO3/L)	164	129	222	205	163
3	Na% (%)	33	47	21	28	42
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	1.5	2.3	0.8	1.2	1.9
	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			

Sample are not collected during winter season 2011 to 2019 and 2021 due to Dry bed / No flow condition.

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Gokakfalls	Code	: AKT00P9
State	: Karnataka	District	Belgaum
Basin	: Krishna	Independent River	: Krishna
Tributary	: Ghataprabha	Sub Tributary	: -
		Local River	: Ghataprabha
Division	: CAUVERY DIVISION	Sub-Division	: MKSD BAGALKOTE
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 : 2020-2021

Station Name : Gokak Falls (Seasonal) (AKT00P9)

Division : CAUVERY DIVISION

Local River : Ghataprabha

River Water Analysis

Sub-Division : MKSD BAGALKOTE

S.No	Parameters	Jun-20	09-07-2020	03-08-2020	01-09-2020	05-10-2020		
			A	A	A	A		
	PHYSICAL							
1	Q (cumec)		344.2	9.470	233.4	62.00		
2	Colour_Cod (-)		Light Brown	Light Brown	Light Brown	Clear		
3	EC_GEN (μmho/cm)		380	373	120	294		
4	Odour_Code (-)		odour free	odour free	odour free	odour free		
5	pH_GEN (pH units)		7.6	7.7	7.8	7.9		
6	TDS (mg/L)		245	214	84	220		
7	Temp (deg C)		24	21	24	22		
	CHEMICAL							
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0	0.0		
2	ALK-TOT (mgCaCO3/L)		148	85	26	84		
3	B (mg/L)		0.03	0.02	0.05	0.03		
4	Ca (mg/L)		11	21	10	22		
5	Cl (mg/L)		24.5	57.9	13.5	30.2		
6	CO3 (mg/L)		0.0	0.0	0.0	0.0		
7	F (mg/L)		0.04	0.19	0.04	NA		
8	Fe (mg/L)		0.6	0.2	0.6	NA		
9	HCO3 (mg/L)		180	104	32	102		
10	K (mg/L)		5.6	1.6	0.7	2.1		
11	Mg (mg/L)		4.6	13.5	6.8	12.3		
12	Na (mg/L)		68.9	34.7	4.1	18.2		
13	NO2+NO3 (mg N/L)		0.21	1.06	0.64	2.66		
14	NO2-N (mgN/L)		0.06	0.01	0.01	0.01		
15	NO3-N (mgN/L)		0.15	1.05	0.63	2.65		
16	o-PO4-P (mg P/L)		0.052	0.021	0.031	0.010		
17	SiO2 (mg/L)		10.3	10.6	10.8	17.1		
18	SO4 (mg/L)		13.2	30.4	13.0	23.2		
	BIOLOGICAL/BACTERIOLOGICAL							
1	BOD3-27 (mg/L)		0.5	0.8	0.6	1.2		
2	COD (mg/L)		5.0	13.0	NA	NA		
3	DO (mg/L)		6.4	5.2	7.2	7.4		
4	DO_SAT% (%)		76	58	86	85		
5	FCol-MPN (MPN/100mL)		220	490	270	780		
6	Tcol-MPN (MPN/100mL)		1100	1700	1300	2300		
	TRACE & TOXIC							
1	As (μg/L)			0.59				
2	Cd (μg/L)			0.09				
3	Cr (μg/L)			13.46				
4	Cu (μg/L)			0.90				
5	Ni (μg/L)			0.57				
6	Pb (μg/L)			0.27				
7	Zn (μg/L)			1.30				
	CHEMICAL INDICES							
1	HAR_Ca (mgCaCO3/L)		27	52	24	55		
2	HAR_Total (mgCaCO3/L)		46	108	52	106		
3	Na% (%)		74	41	14	27		
4	RSC (-)		2.0	0.0	0.0	0.0		
5	SAR (-)		4.4	1.5	0.2	0.8		

Sample not submitted due to No Flow Observation

Sample not submitted for analysis from November 2020 to April-2021 , due to Shortage of staff

Sample not submitted for analysis for the month of May 2021 , due to No Flow

Water Quality Summary for the period : 2020-2021

Station Name : Gokak Falls (Seasonal) (AKT00P9)

Division : CAUVERY DIVISION

Local River : Ghataprabha

Sub-Division : MKSD BAGALKOTE

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	1687	0.000	79.34
2	EC_GEN (µmho/cm)	4	380	120	292
3	pH_GEN (pH units)	4	7.9	7.6	7.8
4	TDS (mg/L)	4	245	84	191
5	Temp (deg C)	4	24	21	23
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	4	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	4	148	26	86
3	B (mg/L)	4	0.05	0.02	0.03
4	Ca (mg/L)	4	22	10	16
5	Cl (mg/L)	4	57.9	13.5	31.5
6	CO3 (mg/L)	4	0.0	0.0	0
7	F (mg/L)	3	0.19	0.04	0.09
8	Fe (mg/L)	3	0.6	0.2	0.5
9	HCO3 (mg/L)	4	180	32	104
10	K (mg/L)	4	5.6	0.7	2.5
11	Mg (mg/L)	4	13.5	4.6	9.3
12	Na (mg/L)	4	68.9	4.1	31.5
13	NO2+NO3 (mg N/L)	4	2.66	0.21	1.15
14	NO2-N (mgN/L)	4	0.06	0.01	0.02
15	NO3-N (mgN/L)	4	2.65	0.15	1.12
16	o-PO4-P (mg P/L)	4	0.052	0.010	0.028
17	SiO2 (mg/L)	4	17.1	10.3	12.2
18	SO4 (mg/L)	4	30.4	13.0	19.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	4	1.2	0.5	0.8
2	COD (mg/L)	2	13.0	5.0	9
3	DO (mg/L)	4	7.4	5.2	6.5
4	DO_SAT% (%)	4	86	58	76
5	FCol-MPN (MPN/100mL)	4	780	220	440
6	Tcol-MPN (MPN/100mL)	4	2300	1100	1600
	TRACE & TOXIC				
1	As (µg/L)	1	0.59	0.59	0.59
2	Cd (µg/L)	1	0.09	0.09	0.09
3	Cr (µg/L)	1	13.46	13.46	13.46
4	Cu (µg/L)	1	0.90	0.90	0.9
5	Ni (µg/L)	1	0.57	0.57	0.57
6	Pb (µg/L)	1	0.27	0.27	0.27
7	Zn (µg/L)	1	1.30	1.30	1.3
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	4	55	24	39
2	HAR_Total (mgCaCO3/L)	4	108	46	78
3	Na% (%)	4	74	14	39
4	RSC (-)	4	2.0	0.0	0.5
5	SAR (-)	4	4.4	0.2	1.7

Water Quality Seasonal Average for the period: 2014-2021

Station Name : Gokak Falls (Seasonal) (AKT00P9)

Division : CAUVERY DIVISION

Local River : Ghataprabha

River Water

Sub-Division : MKSD BAGALKOTE

S.No	Parameters	Flood				
		Jun - Oct				
		2014	2015	2016	2017	2018
	PHYSICAL					
1	Q (cumec)	75.15	108.6	9.979	27.54	38.95
2	EC_FLD (µmho/cm)		348	400	219	
3	EC_GEN (µmho/cm)	235	218	290	238	211
4	pH_FLD (pH units)		6.7	6.3	6.4	
5	pH_GEN (pH units)	7.6	7.7	7.6	7.5	7.6
6	TDS (mg/L)					138
7	Temp (deg C)	23.0	21.3	24.3	25.8	24.5
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	96	50	76	56	66
2	B (mg/L)	0.04	0.07	0.07	0.11	0.13
3	Ca (mg/L)	35	21	22	24	22
4	Cl (mg/L)	51.8	19.8	43.0	26.4	21.7
5	F (mg/L)	0.24	0.48	0.37	0.47	0.09
6	Fe (mg/L)	2.7	2.0	3.4	2.5	0.5
7	HCO3 (mg/L)	117	61	93	69	80
8	K (mg/L)	0.7	0.8	3.0	1.4	1.9
9	Mg (mg/L)	12.6	5.8	8.0	5.8	4.7
10	Na (mg/L)	33.0	11.7	23.0	19.2	13.4
11	NO2+NO3 (mg N/L)	1.70	1.43	3.06	1.94	4.42
12	NO2-N (mgN/L)	0.01	0.00	0.00	0.00	0.82
13	NO3-N (mgN/L)	1.69	1.42	3.05	1.94	3.60
14	o-PO4-P (mg P/L)					0.258
15	P-Tot (mgP/L)	0.007	0.016	0.035	0.026	
16	SiO2 (mg/L)	24.8	11.2	7.1	6.3	8.3
17	SO4 (mg/L)	40.4	17.0	18.4	20.4	10.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.8	1.2	0.9	1.2	1.7
2	COD (mg/L)	14.0	9.7	6.5	8.8	24.3
3	DO (mg/L)		6.8	5.8	6.3	6.4
4	DO_SAT% (%)		76	69	76	77
5	FCol-MPN (MPN/100mL)	58000	900	6280	4043	4518
6	Tcol-MPN (MPN/100mL)	97500	1383	8447	9350	8625
	TRACE & TOXIC					
1	As (µg/L)					4.72
2	Cd (µg/L)					0.24
3	Cr (µg/L)					4.17
4	Cu (µg/L)					1.00
5	Ni (µg/L)					3.94
6	Pb (µg/L)					1.00
7	Zn (µg/L)					5.70
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	88	53	55	60	55
2	HAR_Total (mgCaCO3/L)	141	78	89	84	75
3	Na% (%)	34	25	34	31	26
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	1.2	0.6	1.0	0.8	0.7
	PESTICIDES					

Water Quality Seasonal Average for the period: 2014-2021

Station Name : Gokak Falls (Seasonal) (AKT00P9)

Division : CAUVERY DIVISION

Local River : Ghataprabha

River Water

Sub-Division : MKSD BAGALKOTE

S.No	Parameters	Flood		Winter	
		Jun - Oct		Nov - Feb	
		2019	2020	2014-2015	2017-2018
	PHYSICAL				
1	Q (cumec)	152.1	162.3	10.16	2.244
2	EC_FLD (µmho/cm)				550
3	EC_GEN (µmho/cm)	197	292	377	650
4	pH_FLD (pH units)				5.2
5	pH_GEN (pH units)	7.6	7.8	8.0	7.9
6	TDS (mg/L)	130	191		
7	Temp (deg C)	23.1	22.8	20.8	23.5
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)	60	86	112	142
2	B (mg/L)	0.09	0.03	0.05	0.20
3	Ca (mg/L)	17	16	42	51
4	Cl (mg/L)	19.9	31.5	43.5	80.1
5	F (mg/L)	0.08	0.09	0.35	0.54
6	Fe (mg/L)	0.5	0.5	1.4	5.2
7	HCO3 (mg/L)	73	104	137	173
8	K (mg/L)	1.6	2.5	0.2	5.8
9	Mg (mg/L)	8.5	9.3	10.2	11.7
10	Na (mg/L)	16.6	31.5	28.3	60.1
11	NO2+NO3 (mg N/L)	1.91	1.15	2.10	0.76
12	NO2-N (mgN/L)	0.08	0.02	0.01	0.00
13	NO3-N (mgN/L)	1.84	1.12	2.09	0.76
14	o-PO4-P (mg P/L)	0.090	0.028		
15	P-Tot (mgP/L)			0.008	0.002
16	SiO2 (mg/L)	9.6	12.2	10.9	7.0
17	SO4 (mg/L)	12.1	19.9	34.2	41.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.1	0.8	1.6	1.2
2	COD (mg/L)	24.3	9.0	14.4	11.4
3	DO (mg/L)	6.1	6.5		5.8
4	DO_SAT% (%)	72	76		68
5	FCol-MPN (MPN/100mL)	820	440	13000	900
6	Tcol-MPN (MPN/100mL)	9770	1600	19500	16000
	TRACE & TOXIC				
1	As (µg/L)	0.71	0.59		
2	Cd (µg/L)	0.07	0.09	1.29	
3	Cr (µg/L)	1.17	13.46	7.43	
4	Cu (µg/L)	1.27	0.90	5.21	
5	Ni (µg/L)	4.63	0.57	-0.50	
6	Pb (µg/L)	0.20	0.27	1.52	
7	Zn (µg/L)	14.40	1.30	10.00	
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	42	39	104	128
2	HAR_Total (mgCaCO3/L)	78	78	147	177
3	Na% (%)	25	39	28	42
4	RSC (-)	0.0	0.5	0.0	0.0
5	SAR (-)	0.7	1.7	1.0	2.0
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2021

Station Name : Gokak Falls (Seasonal) (AKT00P9)

Division : CAUVERY DIVISION

Local River : Ghataprabha

River Water

Sub-Division : MKSD BAGALKOTE

S.No	Parameters	Winter		Summer
		Nov - Feb		Mar - May
		2018-2019	2019-2020	
	PHYSICAL			
1	Q (cumec)		0.000	
2	EC_FLD (µmho/cm)			
3	EC_GEN (µmho/cm)	484	481	
4	pH_FLD (pH units)			
5	pH_GEN (pH units)	7.6	7.9	
6	TDS (mg/L)	291	368	
7	Temp (deg C)	20.0	24.3	
	CHEMICAL			
1	ALK-TOT (mgCaCO3/L)	142	134	
2	B (mg/L)	0.13	0.14	
3	Ca (mg/L)	29	57	
4	Cl (mg/L)	50.1	51.1	
5	F (mg/L)	0.21	0.18	
6	Fe (mg/L)	0.0	0.0	
7	HCO3 (mg/L)	173	163	
8	K (mg/L)	4.3	4.2	
9	Mg (mg/L)	16.0	3.2	
10	Na (mg/L)	42.9	42.9	
11	NO2+NO3 (mg N/L)	1.38	6.16	
12	NO2-N (mgN/L)	0.01	0.23	
13	NO3-N (mgN/L)	1.37	5.93	
14	o-PO4-P (mg P/L)	0.072	0.460	
15	P-Tot (mgP/L)			
16	SiO2 (mg/L)	15.0	19.5	
17	SO4 (mg/L)	17.6	18.2	
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	5.8	1.0	
2	COD (mg/L)	42.0	23.0	
3	DO (mg/L)	5.0	6.1	
4	DO_SAT% (%)	54	72	
5	FCol-MPN (MPN/100mL)	3175	745	
6	Tcol-MPN (MPN/100mL)	7475	8850	
	TRACE & TOXIC			
1	As (µg/L)	1.00	2.13	
2	Cd (µg/L)	0.02	0.04	
3	Cr (µg/L)	11.32	0.78	
4	Cu (µg/L)	1.25	4.43	
5	Ni (µg/L)	1.59	1.88	
6	Pb (µg/L)	1.00	0.16	
7	Zn (µg/L)	3.20	10.00	
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	72	142	
2	HAR_Total (mgCaCO3/L)	139	155	
3	Na% (%)	39	36	
4	RSC (-)	0.1	0.0	
5	SAR (-)	1.6	1.5	
	PESTICIDES			

Sample are not collected during winter season 2015-2016 to 2016-2017 and 2020-2021 due to Dry bed / No flow condition.

Sample are not collected during Summer season 2015 to 2021 due to Dry bed / No flow condition.

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Terwad (Seasonal)	Code	: AKW00A7
State	: Maharashtra	District	Kolhapur
Basin	: Krishna	Independent River	: Krishna
Tributary	: Panchganga	Sub Tributary	: -
		Local River	: Panchganga
Division	: Upper Krishna Divn, Pune	Sub-Division	: Upper Krishna SD 2, Miraj
Drainage Area	: 2425 Sq. Km.	Bank	: Right
Latitude	: 16°40'27"	Longitude	: 74°34'29"
	Opening Date	Closing Date	
Gauge	: 01-03-1979		
Discharge	: 22-08-1979		
Water Quality	: 01-06-2019		

Water Quality Datasheet for the period : 2020-2021

Station Name : Terwad (Seasonal) (AKW00A7)

Division : Upper Krishna Divn, Pune

Local River : Panchganga

River Water Analysis

Sub-Division : Upper Krishna SD 2, Miraj

S.No	Parameters	01-07-2020	03-08-2020	01-09-2020	05-10-2020
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	92.70	67.44	363.2	73.45
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown	Light Brown
3	EC_FLD (μmho/cm)	178	183	131	286
4	EC_GEN (μmho/cm)	211	189	128	285
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.3	7.4	7.5	7.5
7	pH_GEN (pH units)	7.4	8.0	7.9	8.1
8	TDS (mg/L)	118	106	72	160
9	Temp (deg C)	26.0	25.5	25.8	25.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	55	54	38	80
3	B (mg/L)	0.04	0.05	0.04	0.11
4	Ca (mg/L)	13	14	11	20
5	Cl (mg/L)	23.9	26.6	22.6	33.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.06	0.06	0.05	0.08
8	Fe (mg/L)	0.2	0.2	0.6	0.2
9	HCO3 (mg/L)	67	66	47	98
10	K (mg/L)	2.9	2.5	1.7	5.1
11	Mg (mg/L)	7.5	9.0	4.8	11.2
12	Na (mg/L)	15.2	20.3	16.6	26.1
13	NO2+NO3 (mg N/L)	1.71	1.53	1.70	1.77
14	NO2-N (mgN/L)	0.02	0.02	0.02	0.03
15	NO3-N (mgN/L)	1.69	1.51	1.67	1.74
16	P-Tot (mgP/L)	0.035	0.033	0.059	0.060
17	SiO2 (mg/L)	15.6	16.5	13.7	16.6
18	SO4 (mg/L)	13.5	10.1	5.5	20.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.4	0.8	0.7	2.1
2	COD (mg/L)	11.0	5.0	5.0	18.0
3	DO (mg/L)	6.4	7.2	6.8	6.8
4	DO_SAT% (%)	79	87	82	82
5	Fcol-MPN (MPN/100mL)	90000	2300	2200	800
6	Tcol-MPN (MPN/100mL)	160000	3000	8000	1300
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	31	36	28	50
2	HAR_Total (mgCaCO3/L)	63	74	48	96
3	Na% (%)	33	37	42	36
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	0.8	1.0	1.0	1.2
	PESTICIDES				

Water Quality Datasheet for the period : 2020-2021

Station Name : Terwad (Seasonal) (AKW00A7)

Division : Upper Krishna Divn, Pune

Local River : Panchganga

River Water Analysis

Sub-Division : Upper Krishna SD 2, Miraj

S.No	Parameters	03-11-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	58.64			
2	Colour_Cod (-)	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	504	1438	547	482
4	EC_GEN (µmho/cm)	386	671	693	754
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.7	7.7	7.2	7.5
7	pH_GEN (pH units)	7.9	7.6	7.6	8.0
8	TDS (mg/L)	216	376	388	422
9	Temp (deg C)	24.5	24.5	24.0	23.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	123	184	184	180
3	B (mg/L)	0.10	0.13	0.13	0.18
4	Ca (mg/L)	30	49	46	45
5	Cl (mg/L)	37.6	137.5	217.2	131.7
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.81	0.09	0.07	0.10
8	Fe (mg/L)	0.0	0.4	0.1	0.1
9	HCO3 (mg/L)	150	225	225	220
10	K (mg/L)	7.3	12.1	11.6	9.4
11	Mg (mg/L)	17.1	25.0	18.2	22.0
12	Na (mg/L)	49.2	103.4	138.8	99.7
13	NO2+NO3 (mg N/L)	2.09	1.85	1.63	2.28
14	NO2-N (mgN/L)	0.03	0.02	0.02	0.02
15	NO3-N (mgN/L)	2.06	1.83	1.60	2.26
16	P-Tot (mgP/L)	0.070	0.176	0.160	0.121
17	SiO2 (mg/L)	28.6	19.3	14.1	4.2
18	SO4 (mg/L)	27.0	48.0	49.6	64.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.9	1.9	2.5	0.6
2	COD (mg/L)	7.0	13.6	21.4	3.9
3	DO (mg/L)	5.7	7.2	6.5	6.1
4	DO_SAT% (%)	68	86	77	71
5	FCol-MPN (MPN/100mL)	24000	200	200	200
6	Tcol-MPN (MPN/100mL)	160000	1300	700	35000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	76	123	116	112
2	HAR_Total (mgCaCO3/L)	147	227	191	204
3	Na% (%)	41	48	60	50
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	1.8	3.0	4.4	3.0
	PESTICIDES				

Water Quality Summary for the period : 2020-2021

Station Name : Terwad (Seasonal) (AKW00A7)

Division : Upper Krishna Divn, Pune

Local River : Panchganga

Sub-Division : Upper Krishna SD 2, Miraj

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	183	2008	0.000	320.5
2	EC_FLD (μmho/cm)	8	1438	131	469
3	EC_GEN (μmho/cm)	8	754	128	415
4	pH_FLD (pH units)	8	7.7	7.2	7.5
5	pH_GEN (pH units)	8	8.1	7.4	7.8
6	TDS (mg/L)	8	422	72	232
7	Temp (deg C)	8	26.0	23.0	24.9
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	8	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	8	184	38	112
3	B (mg/L)	8	0.18	0.04	0.1
4	Ca (mg/L)	8	49	11	29
5	Cl (mg/L)	8	217.2	22.6	78.8
6	CO3 (mg/L)	8	0.0	0.0	0
7	F (mg/L)	8	0.81	0.05	0.16
8	Fe (mg/L)	8	0.6	0.0	0.2
9	HCO3 (mg/L)	8	225	47	137
10	K (mg/L)	8	12.1	1.7	6.6
11	Mg (mg/L)	8	25.0	4.8	14.3
12	Na (mg/L)	8	138.8	15.2	58.7
13	NO2+NO3 (mg N/L)	8	2.28	1.53	1.82
14	NO2-N (mgN/L)	8	0.03	0.02	0.02
15	NO3-N (mgN/L)	8	2.26	1.51	1.8
16	P-Tot (mgP/L)	8	0.176	0.033	0.089
17	SiO2 (mg/L)	8	28.6	4.2	16.1
18	SO4 (mg/L)	8	64.8	5.5	29.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	8	2.5	0.6	1.3
2	COD (mg/L)	8	21.4	3.9	10.6
3	DO (mg/L)	8	7.2	5.7	6.6
4	DO_SAT% (%)	8	87	68	79
5	FCol-MPN (MPN/100mL)	8	90000	200	14988
6	Tcol-MPN (MPN/100mL)	8	160000	700	46163
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	8	123	28	71
2	HAR_Total (mgCaCO3/L)	8	227	48	131
3	Na% (%)	8	60	33	43
4	RSC (-)	8	0.0	0.0	0
5	SAR (-)	8	4.4	0.8	2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2019-2021

Station Name : Terwad (Seasonal) (AKW00A7)

Division : Upper Krishna Divn, Pune

Local River : Panchganga

River Water

Sub-Division : Upper Krishna SD 2, Miraj

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2019	2020	2019-2020	2020-2021	2020	2021
	PHYSICAL						
1	Q (cumec)	319.0	149.2	70.11	58.64		
2	EC_FLD (µmho/cm)	278	195	616	743	291	
3	EC_GEN (µmho/cm)	246	203	344	626	286	
4	pH_FLD (pH units)	7.9	7.4	8.3	7.5	7.5	
5	pH_GEN (pH units)	7.5	7.8	7.7	7.8	7.2	
6	TDS (mg/L)		114		350		
7	Temp (deg C)	26.1	25.8	26.5	24.0	26.6	
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)	66	57	100	168	79	
2	B (mg/L)	0.06	0.06	0.10	0.13	0.08	
3	Ca (mg/L)	18	14	29	43	21	
4	Cl (mg/L)	22.9	26.7	29.0	131.0	29.1	
5	F (mg/L)	0.07	0.06	0.09	0.27	0.08	
6	Fe (mg/L)	0.8	0.3	0.0	0.1	0.1	
7	HCO3 (mg/L)	80	69	122	205	96	
8	K (mg/L)	2.6	3.1	0.8	10.1	8.4	
9	Mg (mg/L)	8.6	8.1	15.0	20.5	9.6	
10	Na (mg/L)	15.0	19.5	21.1	97.8	19.9	
11	NO2+NO3 (mg N/L)	1.87	1.68	1.84	1.96	1.42	
12	NO2-N (mgN/L)	0.02	0.02	0.03	0.02	0.02	
13	NO3-N (mgN/L)	1.86	1.65	1.81	1.94	1.40	
14	P-Tot (mgP/L)	0.068	0.047	0.155	0.132	0.095	
15	SiO2 (mg/L)	4.2	15.6	8.1	16.5	9.2	
16	SO4 (mg/L)	17.2	12.3	18.2	47.4	18.5	
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	0.9	1.2	0.6	1.5		
2	COD (mg/L)	7.6	9.8	4.0	11.5		
3	DO (mg/L)	5.3	6.8	5.5	6.4	6.0	
4	DO_SAT% (%)	64	83	68	75	74	
5	FCol-MPN (MPN/100mL)	4660	23825	400	6150		
6	Tcol-MPN (MPN/100mL)	30400	43075	1700	49250		
	TRACE & TOXIC						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	45	36	73	107	53	
2	HAR_Total (mgCaCO3/L)	81	70	135	192	93	
3	Na% (%)	27	37	25	50	29	
4	SAR (-)	0.7	1.0	0.8	3.0	0.9	
	PESTICIDES						

Samples not collected during summer season due to stagnant water

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Kurundwad	Code	: AK000V1
State	: Maharashtra	District	Kolhapur
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	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°40'57"	Longitude	: 74°36'14"
		Opening Date	Closing Date
Gauge	: 21-05-1972		
Discharge	: 26-05-1972		
Sediment	: 06-08-2003		
Water Quality	: 01-07-2003		

Water Quality Datasheet for the period : 2020-2021

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	01-07-2020	03-08-2020	01-09-2020	05-10-2020
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	242.6	77.52	961.7	456.7
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown	Light Brown
3	EC_FLD (μ mho/cm)	368	295	138	402
4	EC_GEN (μ mho/cm)	331	249	134	386
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.4	7.5	7.6	7.8
7	pH_GEN (pH units)	7.9	8.1	7.9	8.2
8	TDS (mg/L)	185	139	75	216
9	Temp (deg C)	30.5	26.0	25.5	26.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	95	70	47	98
3	B (mg/L)	0.08	0.05	0.05	0.15
4	Ca (mg/L)	20	19	13	25
5	Cl (mg/L)	26.7	30.1	22.5	43.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.09	0.07	0.05	0.10
8	Fe (mg/L)	0.1	0.2	2.3	0.7
9	HCO3 (mg/L)	116	86	58	120
10	K (mg/L)	3.1	2.8	1.4	6.1
11	Mg (mg/L)	13.4	13.7	6.6	12.2
12	Na (mg/L)	20.5	22.2	16.5	34.0
13	NO2+NO3 (mg N/L)	1.46	1.67	0.98	2.53
14	NO2-N (mgN/L)	0.01	0.02	0.01	0.04
15	NO3-N (mgN/L)	1.45	1.65	0.97	2.49
16	P-Tot (mgP/L)	0.016	0.046	0.029	0.077
17	SiO2 (mg/L)	19.5	17.1	14.0	19.7
18	SO4 (mg/L)	23.9	16.6	6.7	31.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.2	0.6	0.9	2.2
2	COD (mg/L)	10.0	4.0	8.0	20.0
3	DO (mg/L)	7.6	6.9	5.8	7.4
4	DO_SAT% (%)	101	85	70	91
5	FCol-MPN (MPN/100mL)	400	400	1700	400
6	Tcol-MPN (MPN/100mL)	800	17000	5000	5000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	51	47	32	63
2	HAR_Total (mgCaCO3/L)	107	104	60	114
3	Na% (%)	29	31	37	38
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	0.9	0.9	0.9	1.4
	PESTICIDES				

Water Quality Datasheet for the period : 2020-2021

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	03-11-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	373.3	0.000	0.000	0.000
2	Colour_Cod (-)	Light Brown	Clear	Clear	Clear
3	EC_FLD (μ mho/cm)	695	1423	382	330
4	EC_GEN (μ mho/cm)	520	619	584	816
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	8.1	7.4	7.3	7.2
7	pH_GEN (pH units)	8.1	7.9	8.0	8.2
8	TDS (mg/L)	291	364	327	457
9	Temp (deg C)	26.0	28.5	25.0	23.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	166	180	157	208
3	B (mg/L)	0.14	0.17	0.14	0.40
4	Ca (mg/L)	45	38	44	46
5	Cl (mg/L)	113.1	255.2	74.6	130.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.13	0.10	0.08	0.12
8	Fe (mg/L)	0.2	0.0	0.0	0.1
9	HCO3 (mg/L)	203	220	192	254
10	K (mg/L)	6.7	6.2	6.0	9.3
11	Mg (mg/L)	18.3	27.0	20.0	28.5
12	Na (mg/L)	81.1	136.4	57.2	95.6
13	NO2+NO3 (mg N/L)	2.97	2.50	3.85	2.95
14	NO2-N (mgN/L)	0.03	0.01	0.01	0.01
15	NO3-N (mgN/L)	2.94	2.49	3.84	2.94
16	P-Tot (mgP/L)	0.070	0.012	0.010	0.070
17	SiO2 (mg/L)	34.5	21.7	12.9	7.1
18	SO4 (mg/L)	40.3	38.0	71.1	82.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.8	1.1	1.4	0.6
2	COD (mg/L)	6.0	9.7	10.7	3.9
3	DO (mg/L)	7.5	6.9	6.2	6.8
4	DO_SAT% (%)	92	88	75	79
5	FCol-MPN (MPN/100mL)	700	700	400	200
6	Tcol-MPN (MPN/100mL)	3000	1700	2300	400
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	114	94	109	116
2	HAR_Total (mgCaCO3/L)	190	207	192	234
3	Na% (%)	47	58	38	46
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	2.6	4.1	1.8	2.7
	PESTICIDES				

Water Quality Summary for the period : 2020-2021

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	4304	0.000	394.1
2	EC_FLD (µmho/cm)	8	1423	138	504
3	EC_GEN (µmho/cm)	8	816	134	455
4	pH_FLD (pH units)	8	8.1	7.2	7.5
5	pH_GEN (pH units)	8	8.2	7.9	8.1
6	TDS (mg/L)	8	457	75	257
7	Temp (deg C)	8	30.5	23.0	26.4
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	8	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	8	208	47	128
3	B (mg/L)	8	0.40	0.05	0.15
4	Ca (mg/L)	8	46	13	31
5	Cl (mg/L)	8	255.2	22.5	87
6	CO3 (mg/L)	8	0.0	0.0	0
7	F (mg/L)	8	0.13	0.05	0.09
8	Fe (mg/L)	8	2.3	0.0	0.5
9	HCO3 (mg/L)	8	254	58	156
10	K (mg/L)	8	9.3	1.4	5.2
11	Mg (mg/L)	8	28.5	6.6	17.5
12	Na (mg/L)	8	136.4	16.5	57.9
13	NO2+NO3 (mg N/L)	8	3.85	0.98	2.36
14	NO2-N (mgN/L)	8	0.04	0.01	0.02
15	NO3-N (mgN/L)	8	3.84	0.97	2.34
16	P-Tot (mgP/L)	8	0.077	0.010	0.041
17	SiO2 (mg/L)	8	34.5	7.1	18.3
18	SO4 (mg/L)	8	82.0	6.7	38.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	8	2.2	0.6	1.1
2	COD (mg/L)	8	20.0	3.9	9
3	DO (mg/L)	8	7.6	5.8	6.9
4	DO_SAT% (%)	8	101	70	85
5	FCol-MPN (MPN/100mL)	8	1700	200	613
6	Tcol-MPN (MPN/100mL)	8	17000	400	4400
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	8	116	32	78
2	HAR_Total (mgCaCO3/L)	8	234	60	151
3	Na% (%)	8	58	29	41
4	RSC (-)	8	0.0	0.0	0
5	SAR (-)	8	4.1	0.9	1.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	956.3	871.7	876.2	843.0	1394
2	EC_FLD (µmho/cm)	822			294	
3	EC_GEN (µmho/cm)	295	226	230	459	273
4	pH_FLD (pH units)	6.9			7.0	
5	pH_GEN (pH units)	7.7	7.7	7.7	7.6	7.9
6	TDS (mg/L)					
7	Temp (deg C)	26.0	23.5	25.0	25.0	26.2
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	220	54	50	85	62
2	B (mg/L)	0.09	0.04	0.07	0.05	0.11
3	Ca (mg/L)	37	24	18	28	24
4	Cl (mg/L)	36.4	26.5	14.4	19.5	23.2
5	F (mg/L)	0.09	0.46	0.10	0.22	0.20
6	Fe (mg/L)	0.1	0.2	0.2	0.2	0.1
7	HCO3 (mg/L)	141	66	60	104	75
8	K (mg/L)	15.7	2.7	1.1	0.2	1.3
9	Mg (mg/L)	7.5	4.5	7.3	7.9	5.6
10	Na (mg/L)	16.5	13.8	9.1	11.6	15.3
11	NO2+NO3 (mg N/L)	2.48	0.56	0.57	0.66	0.18
12	NO2-N (mgN/L)	0.01	0.01	0.01	0.00	0.01
13	NO3-N (mgN/L)	2.47	0.55	0.57	0.66	0.17
14	P-Tot (mgP/L)	0.157	0.233	0.008	0.005	0.009
15	SiO2 (mg/L)	5.0	11.5	5.2	9.5	8.8
16	SO4 (mg/L)	24.3	23.6	23.9	22.6	18.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.6	0.3	0.4	0.8	1.4
2	COD (mg/L)	2.5	9.0	1.7	4.9	10.0
3	DO (mg/L)	6.9	4.7		6.8	
4	DO_SAT% (%)	85	55		82	
5	FCol-MPN (MPN/100mL)				28667	12100
6	Tcol-MPN (MPN/100mL)				41333	17600
	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)	91	61	46	71	59
2	HAR_Total (mgCaCO3/L)	123	79	76	104	82
3	Na% (%)	22	26	19	20	28
4	RSC (-)	0.3	0.0	0.0	0.0	0.0
5	SAR (-)	0.7	0.7	0.4	0.5	0.7
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

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				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	1141	952.5	1352	1884	361.6
2	EC_FLD (µmho/cm)	389	312	373	460	181
3	EC_GEN (µmho/cm)	192	165	288	255	228
4	pH_FLD (pH units)	7.6	7.6	7.5	7.5	7.6
5	pH_GEN (pH units)	7.5	7.8	7.2	7.7	7.6
6	TDS (mg/L)					
7	Temp (deg C)	25.0	25.4	24.2	24.5	25.9
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	46	51	55	76	70
2	B (mg/L)	0.04	0.04	0.13	0.04	0.20
3	Ca (mg/L)	18	20	24	33	27
4	Cl (mg/L)	19.1	18.7	14.1	39.6	25.5
5	F (mg/L)	0.27	0.24	0.31	0.26	0.40
6	Fe (mg/L)	0.3	0.7	0.5	1.7	2.1
7	HCO3 (mg/L)	56	62	67	93	85
8	K (mg/L)	0.7	1.5	0.5	0.9	0.9
9	Mg (mg/L)	3.9	2.7	5.8	8.1	6.6
10	Na (mg/L)	13.6	12.2	8.6	23.8	14.3
11	NO2+NO3 (mg N/L)	0.96	0.85	0.90	1.63	1.34
12	NO2-N (mgN/L)	0.00	0.05	0.00	0.00	0.00
13	NO3-N (mgN/L)	0.95	0.80	0.89	1.63	1.34
14	P-Tot (mgP/L)	0.015	0.018	0.027	0.027	0.011
15	SiO2 (mg/L)	10.4	4.4	22.1	19.1	6.5
16	SO4 (mg/L)	15.4	8.9	23.8	24.3	20.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	0.6	0.5	1.9	1.0
2	COD (mg/L)	4.1	4.6	3.6	15.0	8.5
3	DO (mg/L)	7.7	7.5	7.6	7.6	6.4
4	DO_SAT% (%)	94	92	90	90	79
5	FCol-MPN (MPN/100mL)	174250	279750	6900	64333	13800
6	Tcol-MPN (MPN/100mL)	289250	472250	10275	112000	18950
	TRACE & TOXIC					
1	As (µg/L)		12.00	2.34		
2	Cd (µg/L)		0.17	0.50		
3	Cr (µg/L)		0.27	4.10		
4	Cu (µg/L)		3.52	1.73		
5	Hg (µg/L)			0.32		
6	Ni (µg/L)		7.64	6.63		
7	Pb (µg/L)		1.15	-0.50		
8	Zn (µg/L)		3.11	-0.05		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	46	49	59	83	68
2	HAR_Total (mgCaCO3/L)	62	60	83	117	96
3	Na% (%)	30	26	18	31	24
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.7	0.6	0.4	1.0	0.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

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				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	302.8	832.0	1041	956.2	434.6
2	EC_FLD (µmho/cm)	431	321	179	417	301
3	EC_GEN (µmho/cm)	308	242	157	239	275
4	pH_FLD (pH units)	7.4	7.2	6.7	7.8	7.6
5	pH_GEN (pH units)	7.8	7.6	7.7	7.7	8.1
6	TDS (mg/L)					154
7	Temp (deg C)	26.5	27.1	25.2	26.3	27.1
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	84	67	57	63	78
2	B (mg/L)	0.06	0.09	0.06	0.11	0.08
3	Ca (mg/L)	25	24	17	18	19
4	Cl (mg/L)	34.3	17.5	11.8	20.3	30.7
5	F (mg/L)	0.32	0.47	0.34	0.07	0.08
6	Fe (mg/L)	2.2	2.0	1.1	0.5	0.8
7	HCO3 (mg/L)	103	82	70	77	95
8	K (mg/L)	0.8	1.0	0.6	0.7	3.3
9	Mg (mg/L)	9.7	6.8	3.2	10.7	11.5
10	Na (mg/L)	20.7	11.9	8.0	12.1	23.3
11	NO2+NO3 (mg N/L)	1.95	1.75	1.37	2.17	1.66
12	NO2-N (mgN/L)	0.01	0.02	0.02	0.02	0.02
13	NO3-N (mgN/L)	1.95	1.73	1.35	2.15	1.64
14	P-Tot (mgP/L)	0.018	0.028	0.025	0.066	0.042
15	SiO2 (mg/L)	5.6	6.4	1.8	4.5	17.6
16	SO4 (mg/L)	26.4	20.1	9.5	18.8	19.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	0.9	0.9	0.7	1.2
2	COD (mg/L)	7.0	6.8	6.0	5.7	10.5
3	DO (mg/L)	6.2	6.6	6.1	6.5	6.9
4	DO_SAT% (%)	77	82	74	80	87
5	FCol-MPN (MPN/100mL)	43758	513	3043	9075	725
6	Tcol-MPN (MPN/100mL)	57750	5175	6300	17500	6950
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)			0.19		
3	Cr (µg/L)					
4	Cu (µg/L)			1.96		
5	Hg (µg/L)					
6	Ni (µg/L)			15.80		
7	Pb (µg/L)			4.06		
8	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	62	59	42	45	48
2	HAR_Total (mgCaCO3/L)	103	87	56	89	96
3	Na% (%)	30	24	23	23	34
4	RSC (-)	0.0	0.0	0.1	0.0	0.0
5	SAR (-)	0.9	0.5	0.5	0.6	1.0
	PESTICIDES					

Water Quality Seasonal Average for the period: 2006-2021

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			Summer		
		Nov - Feb			Mar - May		
		2010-2011	2019-2020	2020-2021	Remarks	2020	Remarks
	PHYSICAL				Samples not collected during winter season from 2005 - 2009, 2011 - 2012 and 2018-19 due to dry bed / no flow condition.		Samples not collected during summer season from 2004 to 2019 and 2021 due to dry bed / no flow condition.
1	Q (cumec)	100.2	659.9	93.31		0.000	
2	EC_FLD (µmho/cm)		415	708		406	
3	EC_GEN (µmho/cm)	680	555	635		369	
4	pH_FLD (pH units)		8.2	7.5		7.6	
5	pH_GEN (pH units)	6.1	8.1	8.0		7.6	
6	TDS (mg/L)			360			
7	Temp (deg C)	25.3	27.0	25.6		27.0	
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)	108	170	178		96	
2	B (mg/L)	0.14	0.14	0.21		0.08	
3	Ca (mg/L)	43	46	43		24	
4	Cl (mg/L)	39.5	43.4	143.3		34.7	
5	F (mg/L)	0.48	0.14	0.11		0.09	
6	Fe (mg/L)	0.2	0.0	0.1		0.1	
7	HCO3 (mg/L)	132	208	217		117	
8	K (mg/L)	1.3	1.1	7.0		7.3	
9	Mg (mg/L)	14.6	22.0	23.4		11.5	
10	Na (mg/L)	25.7	27.1	92.6		24.4	
11	NO2+NO3 (mg N/L)	0.43	3.02	3.07		1.26	
12	NO2-N (mgN/L)	0.01	0.04	0.02		0.01	
13	NO3-N (mgN/L)	0.43	2.98	3.05		1.25	
14	P-Tot (mgP/L)	0.013	0.129	0.041		0.075	
15	SiO2 (mg/L)	10.2	11.5	19.0		9.4	
16	SO4 (mg/L)	49.3	40.0	57.8		38.0	
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	0.9	0.9	1.0			
2	COD (mg/L)	6.1	7.0	7.6			
3	DO (mg/L)		6.5	6.9		6.0	
4	DO_SAT% (%)		82	84		76	
5	FCol-MPN (MPN/100mL)	54000	800	500			
6	Tcol-MPN (MPN/100mL)	92000	3400	1850			
	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)	108	116	108		59	
2	HAR_Total (mgCaCO3/L)	169	208	206		107	
3	Na% (%)	25	22	47		32	
4	RSC (-)	0.0	0.0	0.0		0.0	
5	SAR (-)	0.9	0.8	2.8		1.0	
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Arjunwad (Seasonal)	Code	: AK000V4
State	: Maharashtra	District	Kolhapur
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	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°46'33"	Longitude	: 74°38'18"
	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 : 2020-2021

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	01-07-2020	03-08-2020	01-09-2020	05-10-2020
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	197.2	108.3	413.8	202.0
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown	Brown
3	EC_FLD (µmho/cm)	748	650	687	1331
4	EC_GEN (µmho/cm)	336	540	314	657
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.4	7.9	7.7	8.1
7	pH_GEN (pH units)	7.8	8.2	8.2	8.2
8	TDS (mg/L)	188	302	176	368
9	Temp (deg C)	24.5	25.5	25.5	25.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	101	146	109	180
3	B (mg/L)	0.15	0.15	0.06	0.23
4	Ca (mg/L)	22	37	28	43
5	Cl (mg/L)	30.0	82.2	46.9	126.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.09	0.14	0.10	0.19
8	Fe (mg/L)	0.0	0.1		0.0
9	HCO3 (mg/L)	123	178	133	220
10	K (mg/L)	3.3	1.2	5.5	5.7
11	Mg (mg/L)	11.9	21.1	14.2	24.5
12	Na (mg/L)	22.6	62.8	36.2	99.0
13	NO2+NO3 (mg N/L)	1.27	2.73		3.66
14	NO2-N (mgN/L)	0.01	0.02		0.04
15	NO3-N (mgN/L)	1.27	2.71		3.61
16	P-Tot (mgP/L)	0.021	0.053	0.023	0.052
17	SiO2 (mg/L)	20.3	23.1	21.8	28.4
18	SO4 (mg/L)	25.3	43.2	16.3	45.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.4	1.8	0.8	1.9
2	COD (mg/L)	11.0	15.0	7.0	17.0
3	DO (mg/L)	7.2	7.1	7.3	8.5
4	DO_SAT% (%)	86	86	88	103
5	FCol-MPN (MPN/100mL)	1300	400	17000	1400
6	Tcol-MPN (MPN/100mL)	7000	160000	35000	2600
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	56	93	70	108
2	HAR_Total (mgCaCO3/L)	106	181	129	210
3	Na% (%)	31	43	37	50
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	1.0	2.0	1.4	3.0
	PESTICIDES				

Water Quality Datasheet for the period : 2020-2021

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	03-11-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	221.4			
2	Colour_Cod (-)	Brown	Light Brown	Light Brown	Light Brown
3	EC_FLD (μ mho/cm)	1559	1410	136	1350
4	EC_GEN (μ mho/cm)	678	449	490	610
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	8.1	8.0	7.8	7.9
7	pH_GEN (pH units)	8.2	7.7	7.8	8.1
8	TDS (mg/L)	380	251	274	342
9	Temp (deg C)	24.0	21.0	19.0	20.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	238	130	124	173
3	B (mg/L)	0.18	0.15	0.13	0.19
4	Ca (mg/L)	58	30	38	36
5	Cl (mg/L)	141.5	48.7	72.0	105.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.19	0.07	0.05	0.11
8	Fe (mg/L)	0.0	0.0	0.1	0.1
9	HCO3 (mg/L)	290	158	151	211
10	K (mg/L)	7.4	4.7	4.3	6.2
11	Mg (mg/L)	27.5	21.8	13.3	25.6
12	Na (mg/L)	103.0	37.9	55.6	78.9
13	NO2+NO3 (mg N/L)	4.11	1.65	1.83	2.28
14	NO2-N (mgN/L)	0.04	0.02	0.02	0.02
15	NO3-N (mgN/L)	4.07	1.63	1.81	2.26
16	P-Tot (mgP/L)	0.115	0.014	0.043	0.059
17	SiO2 (mg/L)	44.5	17.6	6.9	8.6
18	SO4 (mg/L)	43.2	39.6	44.5	49.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2.0	2.3	2.8	3.1
2	COD (mg/L)	16.0	17.5	21.4	25.3
3	DO (mg/L)	7.5	7.1	7.3	7.4
4	DO_SAT% (%)	89	80	79	81
5	FCol-MPN (MPN/100mL)	3000	200	200	200
6	Tcol-MPN (MPN/100mL)	13000	17000	700	160000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	145	76	94	89
2	HAR_Total (mgCaCO3/L)	260	167	150	196
3	Na% (%)	46	32	44	46
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	2.8	1.3	2.0	2.5
	PESTICIDES				

Water Quality Summary for the period : 2020-2021

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)	183	2476	0.000	369.7
2	EC_FLD (μmho/cm)	8	1559	136	984
3	EC_GEN (μmho/cm)	8	678	314	509
4	pH_FLD (pH units)	8	8.1	7.4	7.8
5	pH_GEN (pH units)	8	8.2	7.7	8
6	TDS (mg/L)	8	380	176	285
7	Temp (deg C)	8	25.5	19.0	23.1
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	8	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	8	238	101	150
3	B (mg/L)	8	0.23	0.06	0.16
4	Ca (mg/L)	8	58	22	37
5	Cl (mg/L)	8	141.5	30.0	81.7
6	CO3 (mg/L)	8	0.0	0.0	0
7	F (mg/L)	8	0.19	0.05	0.12
8	Fe (mg/L)	7	0.1	0.0	0.1
9	HCO3 (mg/L)	8	290	123	183
10	K (mg/L)	8	7.4	1.2	4.8
11	Mg (mg/L)	8	27.5	11.9	20
12	Na (mg/L)	8	103.0	22.6	62
13	NO2+NO3 (mg N/L)	7	4.11	1.27	2.5
14	NO2-N (mgN/L)	7	0.04	0.01	0.03
15	NO3-N (mgN/L)	7	4.07	1.27	2.48
16	P-Tot (mgP/L)	8	0.115	0.014	0.048
17	SiO2 (mg/L)	8	44.5	6.9	21.4
18	SO4 (mg/L)	8	49.2	16.3	38.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	8	3.1	0.8	2
2	COD (mg/L)	8	25.3	7.0	16.3
3	DO (mg/L)	8	8.5	7.1	7.4
4	DO_SAT% (%)	8	103	79	86
5	FCol-MPN (MPN/100mL)	8	17000	200	2963
6	Tcol-MPN (MPN/100mL)	8	160000	700	49413
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	8	145	56	91
2	HAR_Total (mgCaCO3/L)	8	260	106	175
3	Na% (%)	8	50	31	41
4	RSC (-)	8	0.0	0.0	0
5	SAR (-)	8	3.0	1.0	2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2021

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						
		Jun - Oct						
		2014	2015	2016	2017	2018	2019	2020
	PHYSICAL							
1	Q (cumec)	505.4	159.4	148.4	341.2	449.0	624.2	230.3
2	EC_FLD (µmho/cm)		359	512	479	465	789	854
3	EC_GEN (µmho/cm)	530	329	538	254	341	370	462
4	pH_FLD (pH units)		7.4	6.0	5.8	7.6	7.8	7.7
5	pH_GEN (pH units)	8.1	7.8	8.0	7.6	8.0	7.9	8.1
6	TDS (mg/L)							259
7	Temp (deg C)	25.3	25.0	24.9	25.5	25.3	24.8	25.3
	CHEMICAL							
1	ALK-TOT (mgCaCO3/L)	153	82	127	63	92	111	134
2	B (mg/L)	0.05	0.08	0.06	0.26	0.10	0.11	0.15
3	Ca (mg/L)	63	29	37	23	27	34	33
4	Cl (mg/L)	45.5	38.8	34.5	21.5	27.4	28.3	71.4
5	F (mg/L)	0.31	0.45	0.33	0.57	0.31	0.09	0.13
6	Fe (mg/L)	3.2	2.5	2.3	1.8	0.6	0.4	0.0
7	HCO3 (mg/L)	186	100	155	77	112	136	164
8	K (mg/L)	0.7	0.9	1.1	0.8	1.0	1.1	3.9
9	Mg (mg/L)	12.6	7.5	12.4	7.3	8.3	12.7	17.9
10	Na (mg/L)	32.1	24.6	24.7	15.0	20.4	19.1	55.2
11	NO2+NO3 (mg N/L)	2.32	1.66	2.22	1.45	1.68	2.41	2.55
12	NO2-N (mgN/L)	0.00	0.00	0.00	0.01	0.01	0.03	0.02
13	NO3-N (mgN/L)	2.32	1.66	2.21	1.44	1.67	2.39	2.53
14	P-Tot (mgP/L)	0.014	0.016	0.017	0.024	0.030	0.062	0.037
15	SiO2 (mg/L)	19.2	10.8	6.9	7.2	3.2	4.3	23.4
16	SO4 (mg/L)	38.8	29.3	38.7	25.8	30.0	19.2	32.5
	BIOLOGICAL/BACTERIOLOGICAL							
1	BOD3-27 (mg/L)	1.5	1.3	1.2	1.0	0.9	0.9	1.5
2	COD (mg/L)	11.0	11.3	9.5	7.5	7.0	7.0	12.5
3	DO (mg/L)		6.3	5.7	6.6	6.5	7.1	7.5
4	DO_SAT% (%)		76	68	80	79	85	91
5	FCol-MPN (MPN/100mL)	8150	6875	11820	1023	3603	26125	5025
6	Tcol-MPN (MPN/100mL)	10800	12750	15325	5550	11500	67000	51150
	TRACE & TOXIC							
	CHEMICAL INDICES							
1	HAR_Ca (mgCaCO3/L)	158	73	93	58	68	84	82
2	HAR_Total (mgCaCO3/L)	211	105	145	88	102	137	156
3	Na% (%)	25	32	26	27	27	23	40
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	1.0	1.0	0.9	0.7	0.8	0.7	1.8
	PESTICIDES							

Water Quality Seasonal Average for the period: 2014-2021

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	Winter			Summer	
		Nov - Feb			Mar - May	
		2019-2020	2020-2021	Samples not Collected During Winter Season from 2014-2015 to 2018-2019 Due to Dry bed/ No flow Condition.	2020	Samples not Collected During Summer Season from 2015 to 2019 & 2021 Due to Dry bed/ No flow Condition.
	PHYSICAL					
1	Q (cumec)	433.1	221.4			
2	EC_FLD (µmho/cm)	810	1114		291	
3	EC_GEN (µmho/cm)	690	557		279	
4	pH_FLD (pH units)	7.4	7.9		7.9	
5	pH_GEN (pH units)	8.1	7.9		7.2	
6	TDS (mg/L)		312			
7	Temp (deg C)	23.0	21.0		24.5	
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	220	166		72	
2	B (mg/L)	0.18	0.16		0.12	
3	Ca (mg/L)	57	40		16	
4	Cl (mg/L)	51.7	92.0		25.1	
5	F (mg/L)	0.20	0.11		0.08	
6	Fe (mg/L)	0.7	0.1		0.1	
7	HCO3 (mg/L)	269	202		87	
8	K (mg/L)	1.1	5.6		4.3	
9	Mg (mg/L)	29.7	22.0		9.4	
10	Na (mg/L)	39.6	68.9		18.1	
11	NO2+NO3 (mg N/L)	3.95	2.47		0.78	
12	NO2-N (mgN/L)	0.06	0.03		0.03	
13	NO3-N (mgN/L)	3.89	2.44		0.74	
14	P-Tot (mgP/L)	0.080	0.058		0.079	
15	SiO2 (mg/L)	14.0	19.4		11.2	
16	SO4 (mg/L)	51.6	44.1		27.6	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	2.5			
2	COD (mg/L)	6.0	20.0			
3	DO (mg/L)	6.7	7.3		8.6	
4	DO_SAT% (%)	78	82		102	
5	FCol-MPN (MPN/100mL)	400	900			
6	Tcol-MPN (MPN/100mL)	30000	47675			
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	142	101		40	
2	HAR_Total (mgCaCO3/L)	266	193		79	
3	Na% (%)	25	42		32	
4	RSC (-)	0.0	0.0		0.0	
5	SAR (-)	1.1	2.1		0.9	
	PESTICIDES					

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Samdoli (Seasonal)	Code	: AKX00A7
State	: Maharashtra	District	Sangli
Basin	: Krishna	Independent River	: Krishna
Tributary	: Varna	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°51'00"	Longitude	: 74°30'00"
	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 : 2020-2021

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	01-07-2020	03-08-2020	01-09-2020	05-10-2020
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	49.66	1.100	390.5	46.98
2	Colour_Cod (-)	Light Brown	Light Brown	Brown	Light Brown
3	EC_FLD (µmho/cm)	167	261	82	245
4	EC_GEN (µmho/cm)	269	418	143	490
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.6	7.9	7.3	7.6
7	pH_GEN (pH units)	7.8	8.2	8.0	8.2
8	TDS (mg/L)	151	234	80	275
9	Temp (deg C)	26.0	26.0	25.5	26.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	75	112	46	134
3	B (mg/L)	0.09	0.14	0.08	0.22
4	Ca (mg/L)	16	31	13	31
5	Cl (mg/L)	24.8	80.4	22.4	43.7
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.07	0.12	0.05	0.14
8	Fe (mg/L)	0.0	0.0	0.3	0.1
9	HCO3 (mg/L)	91	137	57	164
10	K (mg/L)	2.7	0.8	1.6	5.1
11	Mg (mg/L)	11.1	15.7	6.2	20.3
12	Na (mg/L)	17.2	59.6	15.9	33.7
13	NO2+NO3 (mg N/L)	1.27	2.28	0.94	2.97
14	NO2-N (mgN/L)	0.01	0.02	0.02	0.04
15	NO3-N (mgN/L)	1.27	2.26	0.93	2.94
16	P-Tot (mgP/L)	0.021	0.033	0.021	0.053
17	SiO2 (mg/L)	18.0	20.8	12.6	23.1
18	SO4 (mg/L)	22.0	41.6	8.4	39.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.8	0.9	1.0	1.3
2	COD (mg/L)	7.0	7.0	9.0	11.0
3	DO (mg/L)	6.1	6.3	6.5	6.2
4	DO_SAT% (%)	75	78	79	76
5	FCol-MPN (MPN/100mL)	7000	700	200	2200
6	Tcol-MPN (MPN/100mL)	11000	5000	2300	22000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	39	79	32	78
2	HAR_Total (mgCaCO3/L)	85	144	58	162
3	Na% (%)	30	47	37	30
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	0.8	2.2	0.9	1.2
	PESTICIDES				

Water Quality Datasheet for the period : 2020-2021

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	03-11-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	30.55			
2	Colour_Cod (-)	Light Brown	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	392	230	306	390
4	EC_GEN (μmho/cm)	444	207	283	302
5	Odour_Code (-)	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.7	7.3	7.5	7.5
7	pH_GEN (pH units)	8.2	7.5	7.8	7.7
8	TDS (mg/L)	249	116	158	169
9	Temp (deg C)	25.0	24.0	24.0	20.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	160	39	47	78
3	B (mg/L)	0.13	0.09	0.08	0.09
4	Ca (mg/L)	41	14	21	18
5	Cl (mg/L)	61.7	27.2	51.3	31.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.12	0.04	0.04	0.06
8	Fe (mg/L)	0.2	0.0	0.1	0.1
9	HCO3 (mg/L)	196	48	57	96
10	K (mg/L)	4.6	2.2	2.6	3.4
11	Mg (mg/L)	16.1	10.9	10.9	13.2
12	Na (mg/L)	42.8	20.7	39.1	23.9
13	NO2+NO3 (mg N/L)	2.97	0.92	1.26	1.26
14	NO2-N (mgN/L)	0.03	0.02	0.02	0.02
15	NO3-N (mgN/L)	2.94	0.90	1.24	1.24
16	P-Tot (mgP/L)	0.052	0.002	0.023	0.020
17	SiO2 (mg/L)	35.5	10.7	4.4	4.5
18	SO4 (mg/L)	35.1	25.6	29.5	30.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.2	1.0	0.6	0.8
2	COD (mg/L)	9.0	6.8	4.9	4.9
3	DO (mg/L)	6.3	6.9	7.0	7.0
4	DO_SAT% (%)	76	82	83	77
5	FCol-MPN (MPN/100mL)	200	800	800	400
6	Tcol-MPN (MPN/100mL)	5000	3000	50000	8000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	103	36	53	46
2	HAR_Total (mgCaCO3/L)	170	82	99	101
3	Na% (%)	35	35	46	33
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	1.4	1.0	1.7	1.0
	PESTICIDES				

Water Quality Summary for the period : 2020-2021

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	1569	0.000	212.5
2	EC_FLD (µmho/cm)	8	392	82	259
3	EC_GEN (µmho/cm)	8	490	143	319
4	pH_FLD (pH units)	8	7.9	7.3	7.5
5	pH_GEN (pH units)	8	8.2	7.5	7.9
6	TDS (mg/L)	8	275	80	179
7	Temp (deg C)	8	26.0	20.0	24.6
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	8	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	8	160	39	87
3	B (mg/L)	8	0.22	0.08	0.12
4	Ca (mg/L)	8	41	13	23
5	Cl (mg/L)	8	80.4	22.4	42.8
6	CO3 (mg/L)	8	0.0	0.0	0
7	F (mg/L)	8	0.14	0.04	0.08
8	Fe (mg/L)	8	0.3	0.0	0.1
9	HCO3 (mg/L)	8	196	48	106
10	K (mg/L)	8	5.1	0.8	2.9
11	Mg (mg/L)	8	20.3	6.2	13.1
12	Na (mg/L)	8	59.6	15.9	31.6
13	NO2+NO3 (mg N/L)	8	2.97	0.92	1.73
14	NO2-N (mgN/L)	8	0.04	0.01	0.02
15	NO3-N (mgN/L)	8	2.94	0.90	1.71
16	P-Tot (mgP/L)	8	0.053	0.002	0.028
17	SiO2 (mg/L)	8	35.5	4.4	16.2
18	SO4 (mg/L)	8	41.6	8.4	29
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	8	1.3	0.6	0.9
2	COD (mg/L)	8	11.0	4.9	7.5
3	DO (mg/L)	8	7.0	6.1	6.5
4	DO_SAT% (%)	8	83	75	78
5	FCol-MPN (MPN/100mL)	8	7000	200	1538
6	Tcol-MPN (MPN/100mL)	8	50000	2300	13288
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	8	103	32	58
2	HAR_Total (mgCaCO3/L)	8	170	58	113
3	Na% (%)	8	47	30	37
4	RSC (-)	8	0.0	0.0	0
5	SAR (-)	8	2.2	0.8	1.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2021

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						
		Jun - Oct						
		2014	2015	2016	2017	2018	2019	2020
	PHYSICAL							
1	Q (cumec)	296.8	68.43	65.65	152.3	153.6	271.2	122.1
2	EC_FLD (μmho/cm)		324	319	284	295	247	189
3	EC_GEN (μmho/cm)	342	190	238	197	262	250	330
4	pH_FLD (pH units)		7.1	7.4	8.0	7.8	7.6	7.6
5	pH_GEN (pH units)	7.8	7.6	7.8	7.5	7.9	7.8	8.0
6	TDS (mg/L)							185
7	Temp (deg C)	21.3	25.6	25.0	27.2	22.9	23.4	25.9
	CHEMICAL							
1	ALK-TOT (mgCaCO3/L)	142	57	69	51	81	66	92
2	B (mg/L)	0.04	0.06	0.06	0.08	0.04	0.08	0.13
3	Ca (mg/L)	48	20	23	18	24	18	23
4	Cl (mg/L)	44.7	29.3	25.9	19.6	22.4	20.0	42.8
5	F (mg/L)	0.29	0.41	0.33	0.45	0.32	0.08	0.10
6	Fe (mg/L)	2.0	2.3	1.9	1.9	0.5	0.4	0.1
7	HCO3 (mg/L)	173	70	84	62	98	80	112
8	K (mg/L)	0.5	0.7	0.7	0.7	1.4	1.0	2.5
9	Mg (mg/L)	10.7	6.8	6.8	6.4	8.6	10.3	13.3
10	Na (mg/L)	32.1	16.1	14.7	13.1	15.1	12.5	31.6
11	NO2+NO3 (mg N/L)	1.88	1.43	1.94	1.44	1.84	2.27	1.87
12	NO2-N (mgN/L)	0.00	0.00	0.01	0.01	0.01	0.02	0.02
13	NO3-N (mgN/L)	1.88	1.43	1.93	1.43	1.84	2.25	1.85
14	P-Tot (mgP/L)	0.018	0.014	0.023	0.029	0.021	0.048	0.032
15	SiO2 (mg/L)	12.8	10.1	8.4	9.2	3.0	4.4	18.6
16	SO4 (mg/L)	40.8	21.2	24.8	20.7	21.9	22.7	27.9
	BIOLOGICAL/BACTERIOLOGICAL							
1	BOD3-27 (mg/L)	2.6	0.8	1.5	1.1	1.2	0.6	1.0
2	COD (mg/L)	22.5	5.3	10.5	8.3	7.8	5.2	8.5
3	DO (mg/L)		5.3	7.0	6.6	5.1	6.3	6.3
4	DO_SAT% (%)		65	85	82	59	74	77
5	FCol-MPN (MPN/100mL)	28000	6150	2203	180	1450	6875	2525
6	Tcol-MPN (MPN/100mL)	41000	8225	3650	6226	6403	14775	10075
	TRACE & TOXIC							
	CHEMICAL INDICES							
1	HAR_Ca (mgCaCO3/L)	120	49	58	45	60	44	57
2	HAR_Total (mgCaCO3/L)	165	77	86	72	96	87	112
3	Na% (%)	30	29	28	28	21	25	36
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	1.1	0.8	0.7	0.7	0.6	0.6	1.3
	PESTICIDES							

Water Quality Seasonal Average for the period: 2014-2021

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	Winter			Summer		
		Nov - Feb			Mar - May		
		Remarks	2019-2020	2020-2021	2017	2020	Remarks
	PHYSICAL	Samples not collected during winter season from 2014-2015 to 2018-2019 due to dry bed / no flow condition.					Samples not collected during summer season from 2014 to 2016 and 2018 to 2019 due to dry bed / no flow condition.
1	Q (cumec)		56.56	30.55			
2	EC_FLD (µmho/cm)		443	330	615	96	
3	EC_GEN (µmho/cm)		510	309	137	130	
4	pH_FLD (pH units)		7.9	7.5	8.3	6.9	
5	pH_GEN (pH units)		8.0	7.8	7.6	7.0	
6	TDS (mg/L)			173			
7	Temp (deg C)		19.5	23.3	28.0	24.4	
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)		154	81	42	35	
2	B (mg/L)		0.14	0.10	0.21	0.05	
3	Ca (mg/L)		41	24	18	8	
4	Cl (mg/L)		38.8	42.8	23.2	15.4	
5	F (mg/L)		0.12	0.06	0.39	0.05	
6	Fe (mg/L)		0.4	0.1	0.9	0.1	
7	HCO3 (mg/L)		188	99	51	42	
8	K (mg/L)		0.9	3.2	0.7	2.3	
9	Mg (mg/L)		19.3	12.8	5.8	4.8	
10	Na (mg/L)		29.2	31.6	9.9	11.6	
11	NO2+NO3 (mg N/L)		2.55	1.60	3.51	0.47	
12	NO2-N (mgN/L)		0.04	0.02	0.01	0.04	
13	NO3-N (mgN/L)		2.51	1.58	3.50	0.43	
14	P-Tot (mgP/L)		0.155	0.024	0.200	0.074	
15	SiO2 (mg/L)		10.8	13.8	49.2	8.6	
16	SO4 (mg/L)		38.8	30.0	14.2	11.6	
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)		0.7	0.9	0.6		
2	COD (mg/L)		5.0	6.4	5.3		
3	DO (mg/L)		6.4	6.8	5.6	7.0	
4	DO_SAT% (%)		69	80	72	83	
5	FCol-MPN (MPN/100mL)		2700	550	20		
6	Tcol-MPN (MPN/100mL)		24000	16500	340		
	TRACE & TOXIC						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)		102	59	44	20	
2	HAR_Total (mgCaCO3/L)		182	113	68	40	
3	Na% (%)		26	37	24	37	
4	RSC (-)		0.0	0.0	0.0	0.0	
5	SAR (-)		0.9	1.3	0.5	0.8	
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Karad	Code	: AK000X6
State	: Maharashtra	District	Satara
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	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°17'30"	Longitude	: 74°11'42"
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 : 2020-2021

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	01-07-2020	01-09-2020	03-11-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)	105.8	726.6	86.98	0.000	0.000	0.000
2	Colour_Cod (-)	Light Green	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	403	209	843	343	342	340
4	EC_GEN (μmho/cm)	241	239	512	532	260	297
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	8.2	7.8	6.7	6.9	6.8	6.6
7	pH_GEN (pH units)	8.0	8.2	8.2	8.2	8.0	8.1
8	TDS (mg/L)	135	134	287	298	146	167
9	Temp (deg C)	26.5	24.5	25.5	21.0	20.0	19.0
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	93	95	218	218	108	122
3	B (mg/L)	0.08	0.05	0.15	0.15	0.06	0.06
4	Ca (mg/L)	18	23	49	53	24	25
5	Cl (mg/L)	17.9	23.2	79.4	38.3	29.3	26.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.10	0.09	0.18	0.15	0.06	0.08
8	Fe (mg/L)	0.1	0.1	0.6	0.2	0.1	0.0
9	HCO3 (mg/L)	113	116	266	266	132	148
10	K (mg/L)	2.2	2.2	4.0	5.4	2.5	3.1
11	Mg (mg/L)	9.4	11.6	27.1	22.3	14.5	13.4
12	Na (mg/L)	13.8	17.6	58.2	29.6	22.4	20.2
13	NO2+NO3 (mg N/L)	0.96	1.67	4.17	3.18	1.24	1.58
14	NO2-N (mgN/L)	0.01	0.02	0.33	0.02	0.02	0.02
15	NO3-N (mgN/L)	0.95	1.65	3.84	3.16	1.22	1.56
16	P-Tot (mgP/L)	0.026	0.024	0.038	0.010	0.002	0.006
17	SiO2 (mg/L)	20.3	22.3	45.2	32.6	7.7	10.0
18	SO4 (mg/L)	5.9	4.9	16.2	17.1	5.1	6.5
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	0.7	0.9	1.1	1.5	1.0	1.3
2	COD (mg/L)	6.0	8.0	9.0	11.7	6.8	9.7
3	DO (mg/L)	7.9	8.2	7.2	7.3	7.4	7.6
4	DO_SAT% (%)	97	98	87	82	81	82
5	FCol-MPN (MPN/100mL)	200	1300	1700	400	200	5000
6	Tcol-MPN (MPN/100mL)	400	2300	22000	8000	2700	90000
	TRACE & TOXIC						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	46	58	122	132	60	64
2	HAR_Total (mgCaCO3/L)	85	106	234	224	120	119
3	Na% (%)	26	26	35	22	28	26
4	RSC (-)	0.2	0.0	0.0	0.0	0.0	0.1
5	SAR (-)	0.7	0.7	1.7	0.9	0.9	0.8
	PESTICIDES						

Water Quality Summary for the period : 2020-2021

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)	365	2212	0.000	98.98
2	EC_FLD (µmho/cm)	6	843	209	413
3	EC_GEN (µmho/cm)	6	532	239	347
4	pH_FLD (pH units)	6	8.2	6.6	7.2
5	pH_GEN (pH units)	6	8.2	8.0	8.1
6	TDS (mg/L)	6	298	134	194
7	Temp (deg C)	6	26.5	19.0	22.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	6	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	6	218	93	142
3	B (mg/L)	6	0.15	0.05	0.09
4	Ca (mg/L)	6	53	18	32
5	Cl (mg/L)	6	79.4	17.9	35.7
6	CO3 (mg/L)	6	0.0	0.0	0
7	F (mg/L)	6	0.18	0.06	0.11
8	Fe (mg/L)	6	0.6	0.0	0.2
9	HCO3 (mg/L)	6	266	113	173
10	K (mg/L)	6	5.4	2.2	3.2
11	Mg (mg/L)	6	27.1	9.4	16.4
12	Na (mg/L)	6	58.2	13.8	27
13	NO2+NO3 (mg N/L)	6	4.17	0.96	2.13
14	NO2-N (mgN/L)	6	0.33	0.01	0.07
15	NO3-N (mgN/L)	6	3.84	0.95	2.06
16	P-Tot (mgP/L)	6	0.038	0.002	0.018
17	SiO2 (mg/L)	6	45.2	7.7	23
18	SO4 (mg/L)	6	17.1	4.9	9.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	6	1.5	0.7	1.1
2	COD (mg/L)	6	11.7	6.0	8.5
3	DO (mg/L)	6	8.2	7.2	7.6
4	DO_SAT% (%)	6	98	81	88
5	FCol-MPN (MPN/100mL)	6	5000	200	1467
6	Tcol-MPN (MPN/100mL)	6	90000	400	20900
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	6	132	46	80
2	HAR_Total (mgCaCO3/L)	6	234	85	148
3	Na% (%)	6	35	22	27
4	RSC (-)	6	0.2	0.0	0
5	SAR (-)	6	1.7	0.7	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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				
		2006	2007	2008	2009	2010
	PHYSICAL					
1	Q (cumec)	1223	1140	179.0	142.5	280.5
2	EC_FLD (μmho/cm)	270	281	278	266	314
3	EC_GEN (μmho/cm)	183	116	189	204	265
4	pH_FLD (pH units)	7.7	7.8	7.7	7.6	7.8
5	pH_GEN (pH units)	7.7	7.7	7.6	7.6	8.1
6	TDS (mg/L)					
7	Temp (deg C)	24.0	22.3	21.8	23.0	23.8
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.5	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	155	33	54	69	75
3	B (mg/L)	0.12	0.06	0.05	0.10	0.12
4	Ca (mg/L)	26	10	15	21	26
5	Cl (mg/L)	13.3	12.3	11.0	9.2	14.0
6	CO3 (mg/L)	0.0	0.6	0.0	0.0	0.0
7	F (mg/L)	0.10	0.30	0.11	0.30	0.18
8	Fe (mg/L)	0.0	0.6	0.2	0.1	0.8
9	HCO3 (mg/L)	95	39	66	84	92
10	K (mg/L)	10.3	0.3	1.6	0.8	1.1
11	Mg (mg/L)	2.2	2.3	4.0	5.6	6.1
12	Na (mg/L)	12.3	7.4	7.7	6.7	8.6
13	NO2+NO3 (mg N/L)	0.56	0.43	0.30	0.38	0.18
14	NO2-N (mgN/L)	0.01	0.01	0.01	0.00	0.01
15	NO3-N (mgN/L)	0.55	0.42	0.30	0.38	0.17
16	P-Tot (mgP/L)	0.314	0.213	0.099	0.044	0.016
17	SiO2 (mg/L)	9.7	5.5	6.2	6.8	14.1
18	SO4 (mg/L)	12.4	3.9	4.8	18.3	18.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.0	1.9	1.9	1.1
2	COD (mg/L)	10.7	8.8	7.9	8.4	7.9
3	DO (mg/L)	6.2	6.2	6.2	6.2	6.2
4	DO_SAT% (%)	73	71	70	72	73
5	FCol-MPN (MPN/100mL)				58723	46600
6	Tcol-MPN (MPN/100mL)				58777	78800
	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	26	38	52	66
2	HAR_Total (mgCaCO3/L)	74	35	55	75	91
3	Na% (%)	25	34	27	17	18
4	RSC (-)	0.1	0.0	0.0	0.0	0.0
5	SAR (-)	0.6	0.6	0.5	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: 2006-2021

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				
		2011	2012	2013	2014	2015
	PHYSICAL					
1	Q (cumec)	247.3	382.1	1141	560.9	269.4
2	EC_FLD (µmho/cm)	294	292	289	289	370
3	EC_GEN (µmho/cm)	175	104	96	175	112
4	pH_FLD (pH units)	7.7	7.6	7.6	7.8	7.7
5	pH_GEN (pH units)	7.6	7.4	7.2	7.6	7.7
6	TDS (mg/L)					
7	Temp (deg C)	22.7	24.0	24.3	23.8	23.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	49	34	41	77	62
3	B (mg/L)	0.05	0.07	0.09	0.06	0.06
4	Ca (mg/L)	18	10	11	30	29
5	Cl (mg/L)	9.7	5.9	8.2	32.0	8.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.32	0.31	0.31	0.28	0.43
8	Fe (mg/L)	0.5	0.1	0.3	0.9	2.4
9	HCO3 (mg/L)	59	41	50	94	76
10	K (mg/L)	1.0	0.6	0.7	0.9	0.4
11	Mg (mg/L)	4.1	1.5	8.7	3.4	5.8
12	Na (mg/L)	6.9	4.0	4.7	23.9	4.7
13	NO2+NO3 (mg N/L)	0.72	0.49	0.56	0.94	1.28
14	NO2-N (mgN/L)	0.00	0.00	0.00	0.02	0.00
15	NO3-N (mgN/L)	0.71	0.48	0.55	0.93	1.28
16	P-Tot (mgP/L)	0.009	0.015	0.058	0.022	0.001
17	SiO2 (mg/L)	11.1	8.0	19.8	25.1	6.7
18	SO4 (mg/L)	11.3	3.5	11.9	11.8	17.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.8	1.5	1.8	2.3	0.8
2	COD (mg/L)	4.2	6.0	16.5	12.5	6.0
3	DO (mg/L)	6.2	6.2	6.3	6.2	6.2
4	DO_SAT% (%)	72	73	75	73	72
5	FCol-MPN (MPN/100mL)	246250	580000	471500	920000	1700
6	Tcol-MPN (MPN/100mL)	386000	975000	824500	1600000	2200
	TRACE & TOXIC					
1	As (µg/L)			2.31		
2	Cd (µg/L)			0.28		
3	Cr (µg/L)			27.30		
4	Cu (µg/L)			22.11		
5	Hg (µg/L)			0.11		
6	Ni (µg/L)			9.86		
7	Pb (µg/L)			-0.50		
8	Zn (µg/L)			-0.05		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	45	26	28	74	72
2	HAR_Total (mgCaCO3/L)	62	32	64	88	96
3	Na% (%)	19	21	14	37	10
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.4	0.3	0.3	1.1	0.2
	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: 2006-2021

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				
		2016	2017	2018	2019	2020
	PHYSICAL					
1	Q (cumec)	217.7	223.9	215.2	2228	416.2
2	EC_FLD (µmho/cm)	353	355	272	342	306
3	EC_GEN (µmho/cm)	90	84	110	135	240
4	pH_FLD (pH units)	7.7	7.7	7.8	7.1	8.0
5	pH_GEN (pH units)	7.5	7.6	7.6	7.7	8.1
6	TDS (mg/L)					134
7	Temp (deg C)	22.0	24.8	23.5	24.3	25.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	36	36	44	49	94
3	B (mg/L)	0.04	0.04	0.07	0.07	0.06
4	Ca (mg/L)	10	13	13	9	21
5	Cl (mg/L)	9.5	10.8	7.1	9.0	20.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.31	0.45	0.35	0.07	0.09
8	Fe (mg/L)	2.1	0.9	0.3	0.4	0.1
9	HCO3 (mg/L)	44	44	54	60	115
10	K (mg/L)	1.0	0.3	0.5	0.7	2.2
11	Mg (mg/L)	5.3	1.9	2.4	8.1	10.5
12	Na (mg/L)	5.4	5.8	4.9	5.2	15.7
13	NO2+NO3 (mg N/L)	1.62	0.64	0.94	1.42	1.31
14	NO2-N (mgN/L)	0.00	0.01	0.02	0.01	0.01
15	NO3-N (mgN/L)	1.62	0.63	0.92	1.41	1.30
16	P-Tot (mgP/L)	0.011	0.034	0.012	0.166	0.025
17	SiO2 (mg/L)	14.9	3.7	0.9	3.5	21.3
18	SO4 (mg/L)	15.0	7.6	3.5	7.1	5.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	1.6	0.6	0.9	0.8
2	COD (mg/L)	5.0	10.5	5.0	6.9	7.0
3	DO (mg/L)	6.2	6.1	8.9	7.3	8.0
4	DO_SAT% (%)	71	73	104	88	97
5	FCol-MPN (MPN/100mL)	468000	9000	2457	18200	750
6	Tcol-MPN (MPN/100mL)	808000	16000	13667	37333	1350
	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	32	31	23	52
2	HAR_Total (mgCaCO3/L)	48	40	41	57	95
3	Na% (%)	20	23	20	16	26
4	RSC (-)	0.0	0.0	0.1	0.0	0.1
5	SAR (-)	0.3	0.4	0.3	0.3	0.7
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

Water Quality Seasonal Average for the period: 2006-2021

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				
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
	PHYSICAL					
1	Q (cumec)	58.69	43.54	50.82	102.8	47.06
2	EC_FLD (μmho/cm)	299	312	267	345	305
3	EC_GEN (μmho/cm)	285	174	202	340	766
4	pH_FLD (pH units)	7.9	7.7	7.6	7.7	7.6
5	pH_GEN (pH units)	8.1	7.8	8.0	8.0	8.4
6	TDS (mg/L)					
7	Temp (deg C)	19.8	20.7	22.6	24.3	23.8
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.5	0.0	0.0	0.0	1.0
2	ALK-TOT (mgCaCO3/L)	192	56	84	146	144
3	B (mg/L)	0.18	0.07	0.16	0.20	0.12
4	Ca (mg/L)	25	14	20	38	56
5	Cl (mg/L)	21.5	8.6	14.7	19.3	17.6
6	CO3 (mg/L)	0.6	0.0	0.0	0.0	1.2
7	F (mg/L)	0.25	0.27	0.26	1.06	0.56
8	Fe (mg/L)	0.4	0.1	0.3	0.0	0.2
9	HCO3 (mg/L)	117	68	103	178	173
10	K (mg/L)	6.1	0.5	0.9	1.1	1.2
11	Mg (mg/L)	14.6	3.8	7.4	19.7	9.2
12	Na (mg/L)	8.8	10.5	9.9	14.6	11.2
13	NO2+NO3 (mg N/L)	0.43	0.53	0.45	1.85	0.48
14	NO2-N (mgN/L)	0.02	0.01	0.01	0.01	0.01
15	NO3-N (mgN/L)	0.41	0.52	0.44	1.85	0.47
16	P-Tot (mgP/L)	0.329	0.293	0.003	0.058	0.039
17	SiO2 (mg/L)	5.2	5.1	5.1	12.1	13.5
18	SO4 (mg/L)	30.4	7.6	7.6	10.7	20.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	1.4	0.7	1.7	1.0
2	COD (mg/L)	8.4	9.6	3.1	4.0	7.3
3	DO (mg/L)	6.2	6.1	5.6	6.1	6.1
4	DO_SAT% (%)	68	68	64	73	72
5	FCol-MPN (MPN/100mL)				50600	39000
6	Tcol-MPN (MPN/100mL)				88000	63500
	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)	62	35	51	96	140
2	HAR_Total (mgCaCO3/L)	123	51	82	178	179
3	Na% (%)	18	31	25	15	12
4	RSC (-)	0.1	0.1	0.1	0.0	0.0
5	SAR (-)	0.4	0.6	0.5	0.5	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: 2006-2021

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		
		2011-2012	2019-2020	2020-2021
	PHYSICAL			
1	Q (cumec)	34.63	204.6	21.74
2	EC_FLD (µmho/cm)	307	872	467
3	EC_GEN (µmho/cm)	426	504	400
4	pH_FLD (pH units)	7.5	8.1	6.8
5	pH_GEN (pH units)	7.7	8.2	8.1
6	TDS (mg/L)			224
7	Temp (deg C)	24.0	25.0	21.4
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	114	212	166
3	B (mg/L)	0.04	0.22	0.11
4	Ca (mg/L)	42	51	38
5	Cl (mg/L)	17.9	22.7	43.3
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.32	0.20	0.12
8	Fe (mg/L)	0.2	1.3	0.2
9	HCO3 (mg/L)	139	259	203
10	K (mg/L)	1.3	0.7	3.8
11	Mg (mg/L)	13.6	25.1	19.3
12	Na (mg/L)	11.9	13.8	32.6
13	NO2+NO3 (mg N/L)	1.11	3.99	2.54
14	NO2-N (mgN/L)	0.00	0.05	0.10
15	NO3-N (mgN/L)	1.11	3.94	2.45
16	P-Tot (mgP/L)	0.030	0.171	0.014
17	SiO2 (mg/L)	28.2	14.2	23.9
18	SO4 (mg/L)	12.4	14.6	11.2
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	2.1	0.6	1.2
2	COD (mg/L)	7.6	4.0	9.3
3	DO (mg/L)	6.2	5.5	7.4
4	DO_SAT% (%)	74	67	83
5	FCol-MPN (MPN/100mL)	350000	7000	1825
6	Tcol-MPN (MPN/100mL)	540000	17000	30675
	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)	104	126	94
2	HAR_Total (mgCaCO3/L)	161	231	175
3	Na% (%)	14	12	28
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	0.4	0.4	1.1
	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 2012-13 to 2018-19 due to dry bed / no flow condition.

Water Quality Seasonal Average for the period: 2006-2021

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			
		2007	2008	2009	2020
	PHYSICAL				
1	Q (cumec)	0.000	18.51	58.79	0.000
2	EC_FLD (µmho/cm)	322	316	296	183
3	EC_GEN (µmho/cm)	210	139	90	111
4	pH_FLD (pH units)	7.8	7.7	7.8	7.9
5	pH_GEN (pH units)	7.8	7.9	7.5	7.3
6	TDS (mg/L)				
7	Temp (deg C)	23.0	24.0	23.3	21.6
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	184	56	26	43
3	B (mg/L)	0.14	0.06	0.02	0.07
4	Ca (mg/L)	22	11	6	9
5	Cl (mg/L)	11.7	8.1	11.1	12.7
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.15	0.14	0.77	0.07
8	Fe (mg/L)	0.5	0.0	0.2	0.2
9	HCO3 (mg/L)	112	68	32	53
10	K (mg/L)	7.8	1.0	0.5	2.2
11	Mg (mg/L)	2.4	4.9	2.8	5.1
12	Na (mg/L)	11.1	7.8	8.5	9.2
13	NO2+NO3 (mg N/L)	0.45	0.52	0.19	0.37
14	NO2-N (mgN/L)	0.04	0.03	0.11	0.02
15	NO3-N (mgN/L)	0.42	0.49	0.07	0.35
16	P-Tot (mgP/L)	0.141	0.291	0.010	0.059
17	SiO2 (mg/L)	3.0	0.5	8.1	11.2
18	SO4 (mg/L)	2.2	3.8	7.5	3.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.4	0.1	0.7	
2	COD (mg/L)	9.9	12.2	3.1	
3	DO (mg/L)	6.0	6.0	6.1	8.5
4	DO_SAT% (%)	70	71	72	96
5	FCol-MPN (MPN/100mL)				
6	Tcol-MPN (MPN/100mL)				
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)			1.49	
3	Cr (µg/L)			2.00	
4	Cu (µg/L)				
5	Hg (µg/L)				
6	Ni (µg/L)			1.00	
7	Pb (µg/L)			11.00	
8	Zn (µg/L)			8.66	
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	55	27	16	22
2	HAR_Total (mgCaCO3/L)	65	47	28	44
3	Na% (%)	24	26	39	30
4	RSC (-)	0.5	0.2	0.0	0.1
5	SAR (-)	0.6	0.5	0.7	0.6
	PESTICIDES				
1	Aldrin (µg/L)			0.010	
2	BHC (µg/L)			0.100	
3	DDT (µg/L)			0.100	
4	Dieldrin (µg/L)			0.010	
5	Endos (µg/L)			0.100	

Samples not collected during summer season from 2010 to 2019 due to dry bed / no flow condition.

HISTORY SHEET

		Water Year	: 2020-2021
Site	: Warunji	Code	: AKZ00A7
State	: Maharashtra	District	Satara
Basin	: Krishna	Independent River	: Krishna
Tributary	: Koyna	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°16'37"	Longitude	: 74°10'15"
	Opening Date	Closing Date	
Gauge	: 20-08-1963		
Discharge	: 28-12-1966		
Sediment	: 01-06-1974		
Water Quality	: 01-06-1974		

Water Quality Datasheet for the period : 2020-2021

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	01-07-2020	01-09-2020	11-12-2020	21-12-2020	01-01-2021
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	106.6	322.7	0.000		0.000
2	Colour_Cod (-)	Light Brown	Light Green	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	218				
4	EC_GEN (μmho/cm)	104	116	298	98	112
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.0	7.2	7.0	7.3	7.2
7	pH_GEN (pH units)	7.5	8.0	8.1	7.4	7.7
8	TDS (mg/L)	58	65	167	55	63
9	Temp (deg C)	26.0	24.0	20.0	20.0	20.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	38	45	128	41	49
3	B (mg/L)	0.04	0.03	0.10	0.04	0.03
4	Ca (mg/L)	7	12	35	11	13
5	Cl (mg/L)	12.5	18.9	27.2	23.1	19.1
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.05	0.05	0.07	0.02	0.04
8	Fe (mg/L)	0.1	0.1	0.1	0.9	0.0
9	HCO3 (mg/L)	47	54	156	50	60
10	K (mg/L)	1.5	1.6	2.4	1.1	1.0
11	Mg (mg/L)	4.7	5.5	10.9	6.7	3.3
12	Na (mg/L)	9.1	12.4	20.9	12.2	13.2
13	NO2+NO3 (mg N/L)	0.37	0.73	1.43	0.69	0.62
14	NO2-N (mgN/L)	0.00	0.01	0.01	0.01	0.01
15	NO3-N (mgN/L)	0.36	0.72	1.42	0.68	0.61
16	P-Tot (mgP/L)	0.012	0.005	0.002	0.016	0.010
17	SiO2 (mg/L)	15.3	16.3	24.4	4.1	4.2
18	SO4 (mg/L)	3.0	2.5	5.6	4.7	7.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	0.8	2.2	2.8	0.6
2	COD (mg/L)	8.0	6.0	19.4	23.3	2.9
3	DO (mg/L)	8.1	8.2	8.9	9.0	8.8
4	DO_SAT% (%)	100	97	98	99	97
5	FCol-MPN (MPN/100mL)	5000	1700	200	1100	200
6	Tcol-MPN (MPN/100mL)	11000	5000	800	160000	400
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	17	30	87	28	32
2	HAR_Total (mgCaCO3/L)	36	53	132	56	46
3	Na% (%)	34	33	25	32	38
4	RSC (-)	0.0	0.0	0.0	0.0	0.1
5	SAR (-)	0.7	0.7	0.8	0.7	0.8
	PESTICIDES					

Water Quality Summary for the period : 2020-2021

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)	333	1990	0.000	78.48
2	EC_FLD (µmho/cm)	1	218	218	218
3	EC_GEN (µmho/cm)	5	298	98	146
4	pH_FLD (pH units)	5	7.3	7.0	7.1
5	pH_GEN (pH units)	5	8.1	7.4	7.7
6	TDS (mg/L)	5	167	55	82
7	Temp (deg C)	5	26.0	20.0	22
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	5	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	5	128	38	60
3	B (mg/L)	5	0.10	0.03	0.05
4	Ca (mg/L)	5	35	7	16
5	Cl (mg/L)	5	27.2	12.5	20.2
6	CO3 (mg/L)	5	0.0	0.0	0
7	F (mg/L)	5	0.07	0.02	0.05
8	Fe (mg/L)	5	0.9	0.0	0.2
9	HCO3 (mg/L)	5	156	47	73
10	K (mg/L)	5	2.4	1.0	1.5
11	Mg (mg/L)	5	10.9	3.3	6.2
12	Na (mg/L)	5	20.9	9.1	13.6
13	NO2+NO3 (mg N/L)	5	1.43	0.37	0.77
14	NO2-N (mgN/L)	5	0.01	0.00	0.01
15	NO3-N (mgN/L)	5	1.42	0.36	0.76
16	P-Tot (mgP/L)	5	0.016	0.002	0.009
17	SiO2 (mg/L)	5	24.4	4.1	12.9
18	SO4 (mg/L)	5	7.4	2.5	4.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	5	2.8	0.6	1.4
2	COD (mg/L)	5	23.3	2.9	11.9
3	DO (mg/L)	5	9.0	8.1	8.6
4	DO_SAT% (%)	5	100	97	98
5	FCol-MPN (MPN/100mL)	5	5000	200	1640
6	Tcol-MPN (MPN/100mL)	5	160000	400	35440
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	5	87	17	39
2	HAR_Total (mgCaCO3/L)	5	132	36	65
3	Na% (%)	5	38	25	32
4	RSC (-)	5	0.1	0.0	0
5	SAR (-)	5	0.8	0.7	0.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2021

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				
		Remark	2013	2014	2015	2016
	PHYSICAL	Samples not collected during flood season from 2006 to 2012 due to downgradation w.e.f 01/06/2006. WQ upgradation w.e.f. 2013				
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-TOT (mgCaCO3/L)		30	59	50	36
2	B (mg/L)		0.11	0.07	0.14	0.02
3	Ca (mg/L)		10	30	19	12
4	Cl (mg/L)		5.2	31.5	9.9	8.0
5	F (mg/L)		0.29	0.25	0.50	0.28
6	Fe (mg/L)		0.5	1.0	1.4	1.1
7	HCO3 (mg/L)		37	71	61	44
8	K (mg/L)		0.4	0.2	0.2	0.4
9	Mg (mg/L)		4.9	6.3	5.8	2.4
10	Na (mg/L)		3.3	23.6	6.4	5.2
11	NO2+NO3 (mg N/L)		0.41	1.18	0.79	1.17
12	NO2-N (mgN/L)		0.01	0.00	0.00	0.00
13	NO3-N (mgN/L)		0.41	1.18	0.79	1.17
14	P-Tot (mgP/L)		0.023	0.011	0.019	0.025
15	SiO2 (mg/L)		32.0	22.7	17.0	6.7
16	SO4 (mg/L)		17.0	22.6	15.6	8.2
	BIOLOGICAL/BACTERIOLOGIC					
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	Cd (µg/L)		0.22			
2	Cr (µg/L)		2.84			
3	Cu (µg/L)		2.75			
4	Hg (µg/L)		0.02			
5	Ni (µg/L)		7.15			
6	Pb (µg/L)		-0.50			
7	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: 2006-2021

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			
		2017	2018	2019	2020
	PHYSICAL				
1	Q (cumec)	222.2	153.4	1988	214.7
2	EC_FLD (µmho/cm)	381	232	260	218
3	EC_GEN (µmho/cm)	78	93	98	110
4	pH_FLD (pH units)	7.9	6.9	7.0	7.1
5	pH_GEN (pH units)	7.5	7.7	7.5	7.7
6	TDS (mg/L)				61
7	Temp (deg C)	25.5	18.8	21.8	25.0
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)	30	33	42	41
2	B (mg/L)	0.03	0.06	0.04	0.04
3	Ca (mg/L)	13	11	11	9
4	Cl (mg/L)	12.9	5.9	9.1	15.7
5	F (mg/L)	0.44	0.35	0.05	0.05
6	Fe (mg/L)	0.9	0.3	0.4	0.1
7	HCO3 (mg/L)	37	40	52	51
8	K (mg/L)	0.2	0.3	0.4	1.6
9	Mg (mg/L)	3.4	2.2	6.4	5.1
10	Na (mg/L)	7.7	3.3	5.7	10.8
11	NO2+NO3 (mg N/L)	0.66	0.66	1.00	0.55
12	NO2-N (mgN/L)	0.00	0.00	0.01	0.01
13	NO3-N (mgN/L)	0.65	0.66	0.99	0.54
14	P-Tot (mgP/L)	0.033	0.009	0.089	0.008
15	SiO2 (mg/L)	5.9	1.6	4.5	15.8
16	SO4 (mg/L)	10.1	3.1	3.2	2.8
	BIOLOGICAL/BACTERIOLOGIC				
1	BOD3-27 (mg/L)	1.2	0.9	0.9	0.8
2	COD (mg/L)	9.0	6.3	6.0	7.0
3	DO (mg/L)	6.5	9.1	8.7	8.2
4	DO_SAT% (%)	80	98	99	99
5	FCol-MPN (MPN/100mL)	3000	2633	11067	3350
6	Tcol-MPN (MPN/100mL)	16000	4733	27000	8000
	TRACE & TOXIC				
1	Cd (µg/L)				
2	Cr (µg/L)				
3	Cu (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)	32	28	26	23
2	HAR_Total (mgCaCO3/L)	46	37	53	44
3	Na% (%)	26	17	19	34
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	0.5	0.2	0.3	0.7
	PESTICIDES				
1	Aldrin (µg/L)				
2	BHC (µg/L)				
3	DDT (µg/L)				
4	Dieldrin (µg/L)				
5	Endos (µg/L)				

Water Quality Seasonal Average for the period: 2006-2021

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			Summer	
		Nov - Feb			Mar - May	
		2019-2020	2020-2021	Remark	2020	Remark
	PHYSICAL			Samples not collected during winter season from 2006 to 2012 due to downgradation w.e.f. 01/06/2006. WQ upgradation w.e.f. 2013. Samples not collected during summer season from 2006 to 2012 due to downgradation w.e.f. 01/06/2006. WQ upgradation w.e.f. 2013.		
1	Q (cumec)	183.6	0.000		0.000	
2	EC_FLD (µmho/cm)	236			233	
3	EC_GEN (µmho/cm)	264	170		71	
4	pH_FLD (pH units)	6.9	7.2		6.9	
5	pH_GEN (pH units)	8.0	7.7		7.2	
6	TDS (mg/L)		95			
7	Temp (deg C)	21.0	20.0		20.9	
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)	116	73		27	
2	B (mg/L)	0.13	0.06		0.04	
3	Ca (mg/L)	26	20		6	
4	Cl (mg/L)	12.3	23.1		11.3	
5	F (mg/L)	0.12	0.04		0.01	
6	Fe (mg/L)	0.1	0.3		0.1	
7	HCO3 (mg/L)	142	89		34	
8	K (mg/L)	0.5	1.5		1.2	
9	Mg (mg/L)	17.1	7.0		3.9	
10	Na (mg/L)	8.7	15.4		8.4	
11	NO2+NO3 (mg N/L)	1.42	0.91		0.28	
12	NO2-N (mgN/L)	0.03	0.01		0.02	
13	NO3-N (mgN/L)	1.39	0.90		0.26	
14	P-Tot (mgP/L)	0.021	0.009		0.031	
15	SiO2 (mg/L)	10.9	10.9		11.0	
16	SO4 (mg/L)	5.7	5.9		1.9	
	BIOLOGICAL/BACTERIOLOGIC					
1	BOD3-27 (mg/L)	0.7	1.8			
2	COD (mg/L)	5.0	15.2			
3	DO (mg/L)	9.1	8.9		9.2	
4	DO_SAT% (%)	102	98		102	
5	FCol-MPN (MPN/100mL)	5000	500			
6	Tcol-MPN (MPN/100mL)	30000	53733			
	TRACE & TOXIC					
1	Cd (µg/L)					
2	Cr (µg/L)					
3	Cu (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)	65	49		15	
2	HAR_Total (mgCaCO3/L)	136	78		31	
3	Na% (%)	12	32		36	
4	RSC (-)	0.0	0.0		0.0	
5	SAR (-)	0.3	0.8		0.7	
	PESTICIDES					
1	Aldrin (µg/L)					
2	BHC (µg/L)					
3	DDT (µg/L)					
4	Dieldrin (µg/L)					
5	Endos (µg/L)					

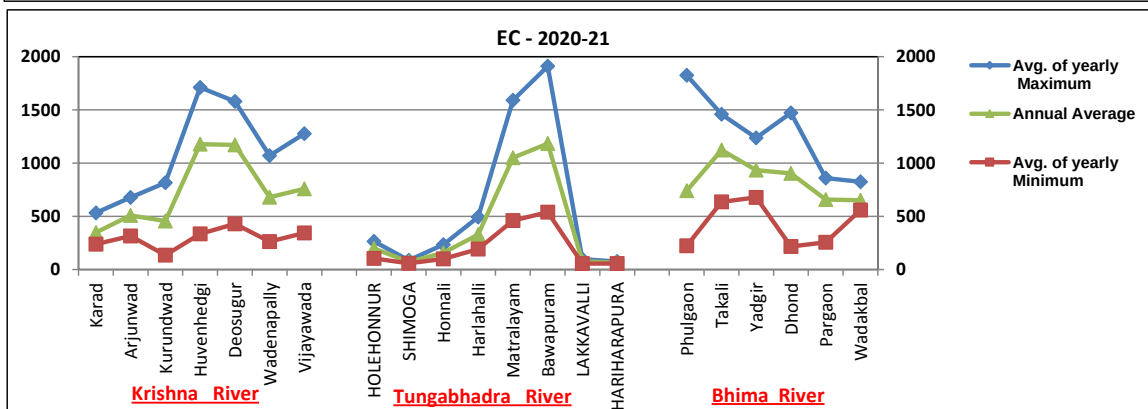
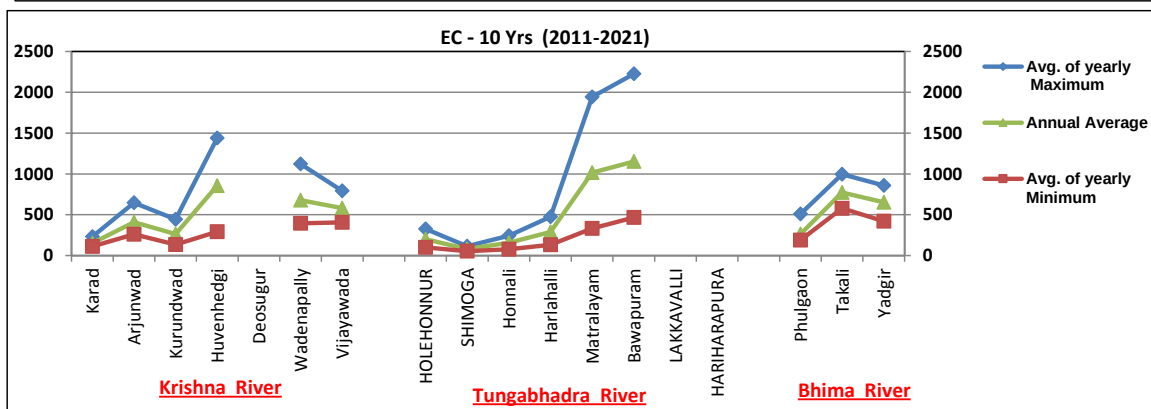
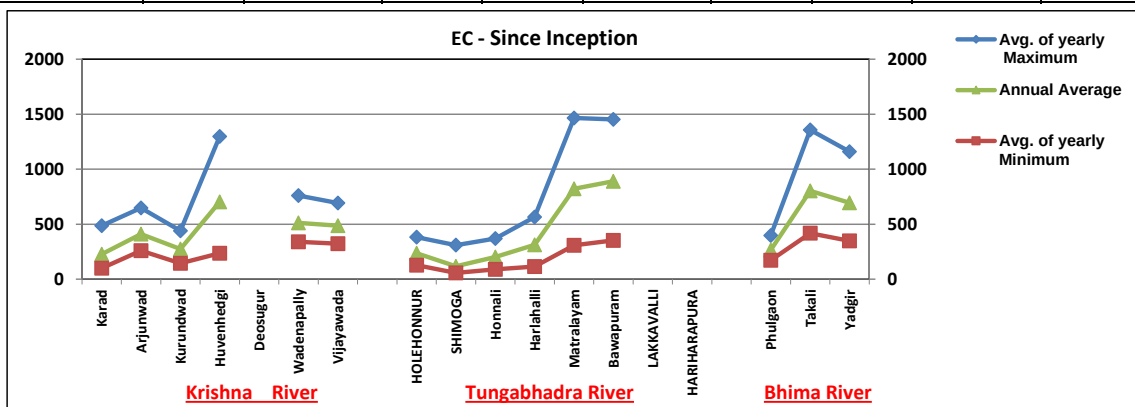
WATER QUALITY NET WORK IN KRISHNA BASIN

Water Quality Trend Analysis done for the following Sites in Level II Laboratory of Upper Krishna Division, CWC, Pune, Level II Laboratory of Cauvery Division, CWC, Bengaluru and Lower Krishna Division, CWC, Hyderabad in Level III Laboratory of Upper Godavari Division, CWC, Hyderabad.

S.NO.	WATER QUALITY STATIONS	TRIBUTARY / STREAM	RIVER BASIN
1	Karad	Krishna	Krishna
2	Arjunwad	Krishna	Krishna
3	Kurundwad	Krishna	Krishna
4	Huvinhedgi	Krishna	Krishna
5	Wadenapally	Krishna	Krishna
6	Vijayawada	Krishna	Krishna
7	Deosugur	Krishna	Krishna
8	Holehonnur	Bhadra	Krishna
9	Shimoga	Tunga	Krishna
10	Honnali	Tungabhadra	Krishna
11	Harlahalli	Tungabhadra	Krishna
12	Mantralayam	Tungabhadra	Krishna
13	Bawapuram	Tungabhadra	Krishna
14	Hariharapura	Tungabhadra	Krishna
15	Lakkavalli	Tungabhadra	Krishna
16	Phulgaon	Bhima	Krishna
17	Takli	Bhima	Krishna
18	Yadgir	Bhima	Krishna
19	Deongaon Bridge	Bhima	Krishna
20	Paragaon	Bhima	Krishna
21	Dhond	Bhima	Krishna
22	Wadakbal	Bhima	Krishna

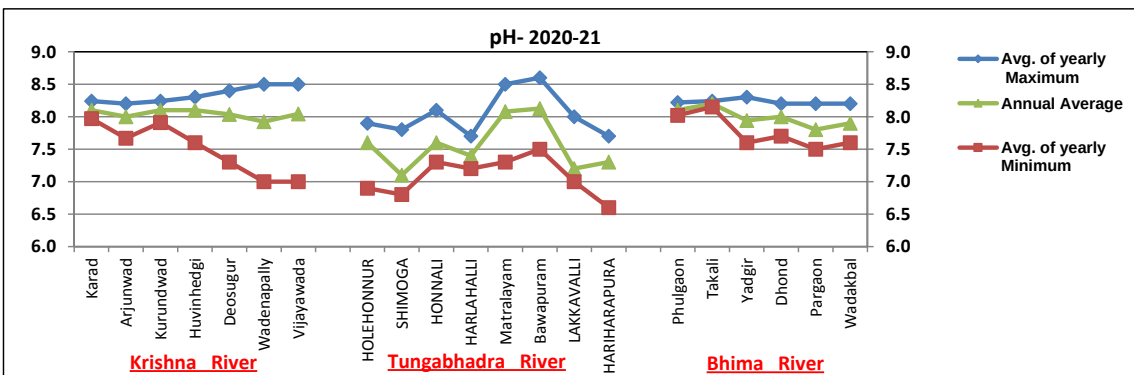
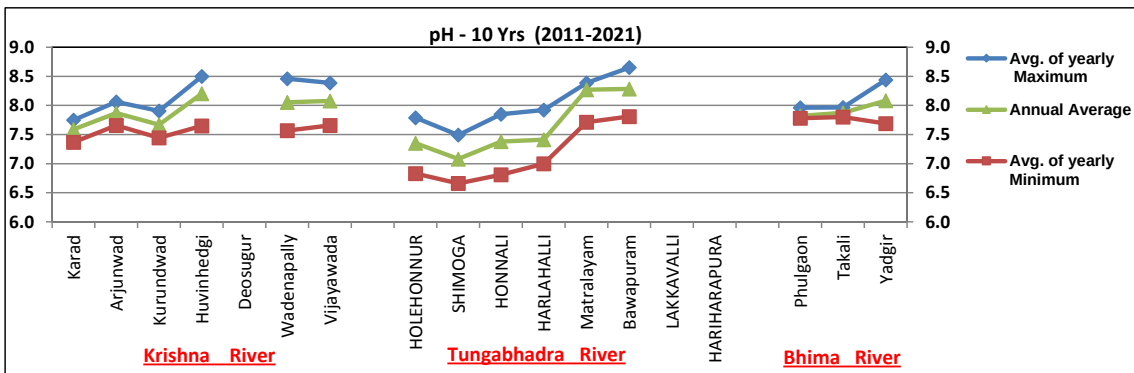
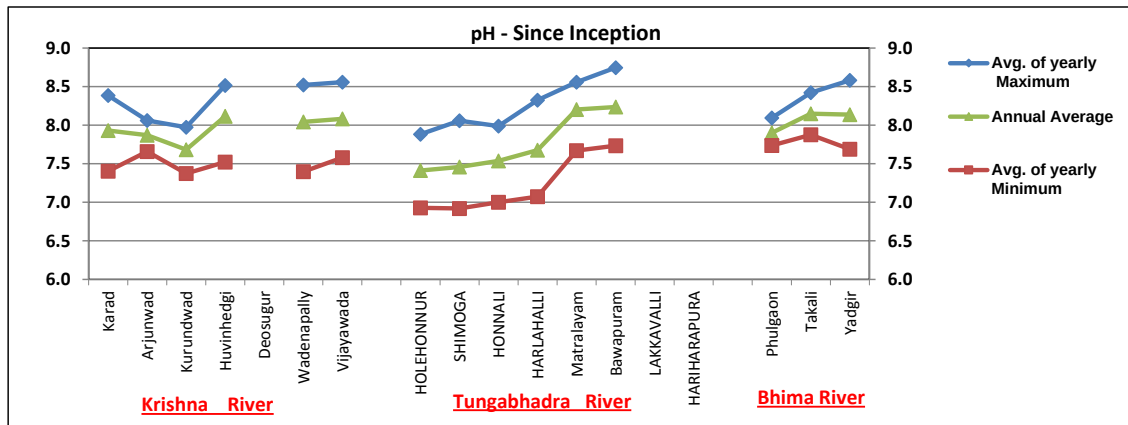
1. Electric conductivity(EC)

Site Name (From U/s to D/s)	Avg. of yearly Maximum			Avg. of yearly Minimum			Annual Average		
	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21
Karad	486.162	232.0	532	98.776	110.8	239	227.083	151.2	347
Arjunwad	647.6	647.6	678	259.7	259.7	314	409.4	409.4	509
Kurundwad	439.7	444.8	816	145.1	135.4	134	273.7	262.2	455
Huvenhedgi	1297.1	1440.5	1711.0	236.5	293.1	335.0	703.4	855.8	1177.1
Deosugur			1579.0			430.0			1170.4
Wadenapally	759.6	1120.7	1070.0	338.9	394.3	262.0	510.9	677.1	678.8
Vijayawada	691.4	791.6	1277.0	322.0	407.1	343.0	485.4	581.7	758.4
HOLEHONNUR	382	325	265	127	101	104	235	201	198
SHIMOGA	309	114	86	57	53	58	117	80	72
Honnali	370	243	233	89	76	100	201	157	156
Harlahalli	566	476	492	114	132	193	311	289	328
Matralayam	1465.7	1943.9	1590.0	308.4	333.3	459.0	821.6	1015.1	1051.0
Bawapuram	1453.7	2225.6	1910.0	352.3	467.2	540.0	890.4	1152.0	1183.3
LAKKAVALLI			98			57			77
HARIHARAPURA			75			56			63
Phulgaon	396.074	509.2	1825	170.926	189.0	223	265.852	263.4	741
Takali	1356.711	996.0	1459	417.609	578.7	635	801.911	773.9	1122
Yadgir	1159	860	1238	348	419	678	695	653	935
Dhond			1472			216			904
Pargaon			860			255			657
Wadakbal			825			559			650



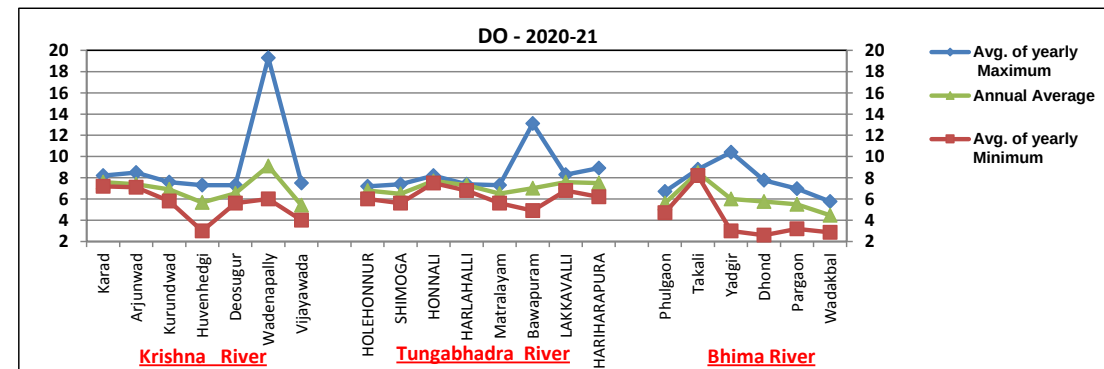
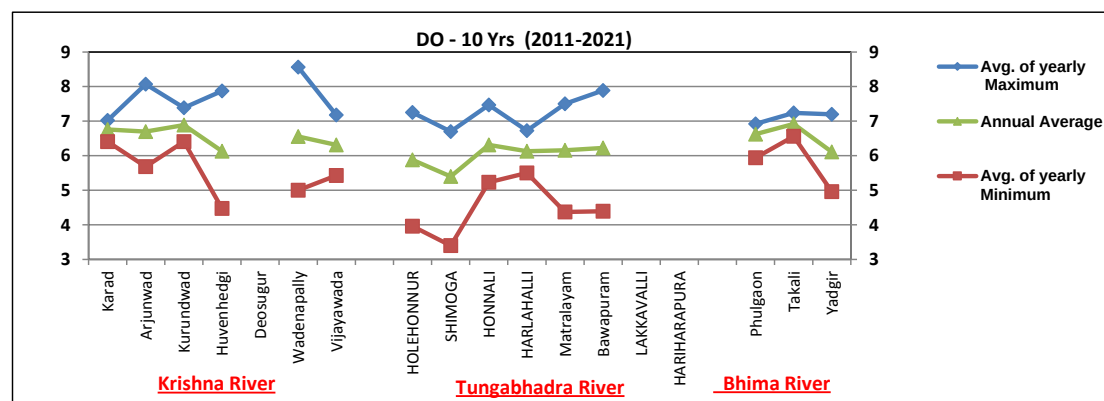
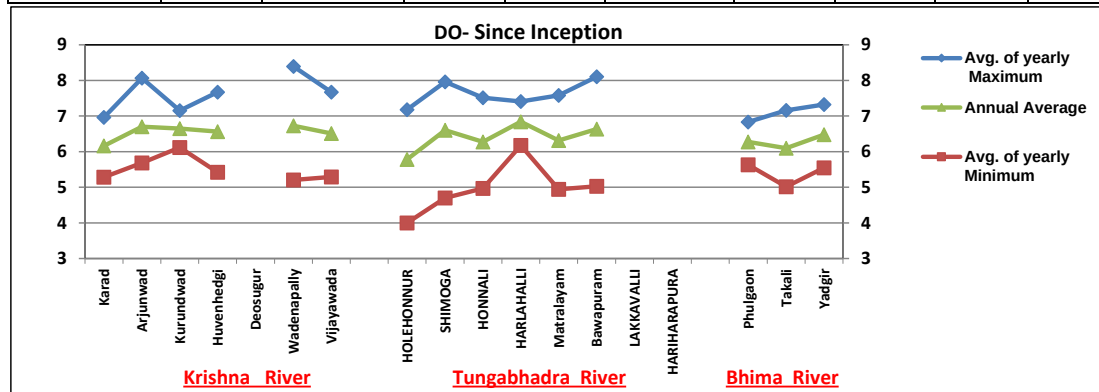
2. pH

Site Name (From U/s to D/s)	Avg. of yearly Maximum			Avg. of yearly Minimum			Annual Average		
	Since inception	10 years (2011- 2021)	2020-21	Since inception	10 years (2011- 2021)	2020-21	Since inception	10 years (2011- 2021)	2020-21
Karad	8.4	7.7	8.2	7.4	7.4	8.0	7.9	7.6	8.1
Arjunwad	8.1	8.1	8.2	7.7	7.7	7.7	7.9	7.9	8.0
Kurundwad	8.0	7.9	8.2	7.4	7.4	7.9	7.7	7.7	8.1
Huvinhedgi	8.5	8.5	8.3	7.5	7.7	7.6	8.1	8.2	8.1
Deosugur			8.4			7.3			8.0
Wadenapally	8.5	8.5	8.5	7.4	7.6	7.0	8.0	8.1	7.9
Vijayawada	8.6	8.4	8.5	7.6	7.7	7.0	8.1	8.1	8.0
HOLEHONNUR	7.9	7.8	7.9	6.9	6.8	6.9	7.4	7.4	7.6
SHIMOGA	8.1	7.5	7.8	6.9	6.7	6.8	7.5	7.1	7.1
HONNALI	8.0	7.9	8.1	7.0	6.8	7.3	7.5	7.4	7.6
HARLAHALLI	8.3	7.9	7.7	7.1	7.0	7.2	7.7	7.4	7.4
Matralayam	8.6	8.4	8.5	7.7	7.7	7.3	8.2	8.3	8.1
Bawapuram	8.7	8.7	8.6	7.7	7.8	7.5	8.2	8.3	8.1
LAKKAVALLI			8.0			7.0			7.2
HARIHARAPURA			7.7			6.6			7.3
Phulgaon	8.1	8.0	8.2	7.7	7.8	8.0	7.9	7.8	8.1
Takali	8.4	8.0	8.2	7.9	7.8	8.2	8.1	7.9	8.2
Yadgir	8.6	8.4	8.3	7.7	7.7	7.6	8.1	8.08	7.9
Dhond			8.2			7.7			8.0
Pargaon			8.2			7.5			7.8
Wadakbal			8.2			7.6			7.9



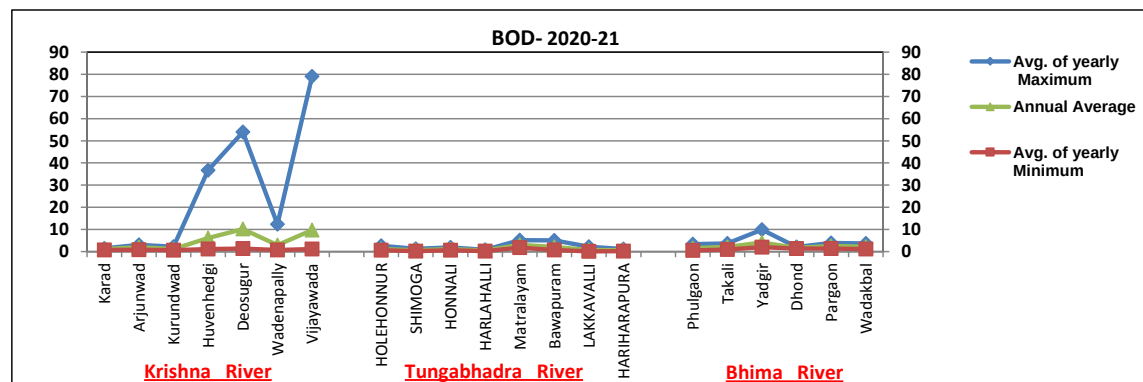
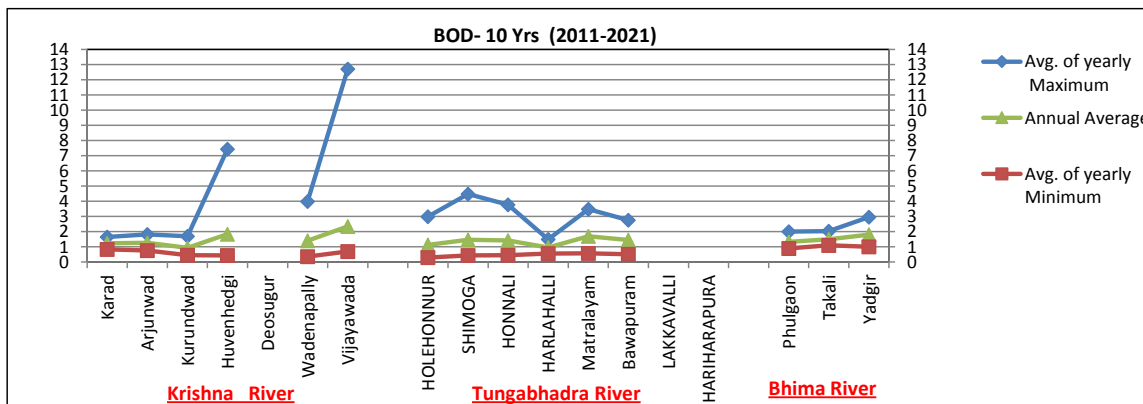
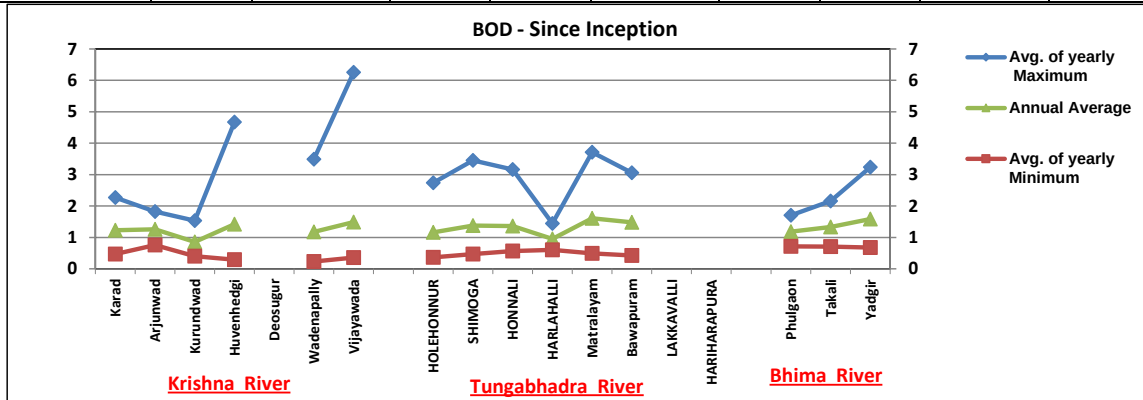
3. Dissolved Oxygen

Site Name (From U/s to D/s)	Avg. of yearly Maximum			Avg. of yearly Minimum			Annual Average		
	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 -2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21
Karad	6.966	7.0	8.2	5.285	6.4	7.2	6.166	6.8	7.6
Arjunwad	8.1	8.1	8.5	5.7	5.7	7.1	6.7	6.7	7.4
Kurundwad	7.2	7.4	7.6	6.1	6.4	5.8	6.7	6.9	6.9
Huvenhedgi	7.7	7.9	7.3	5.4	4.5	3.0	6.6	6.1	5.7
Deosugur			7.3			5.6			6.5
Wadenapally	8.4	8.6	19.3	5.2	5.0	6.0	6.7	6.6	9.1
Vijayawada	7.7	7.2	7.5	5.3	5.4	4.0	6.5	6.3	5.4
HOLEHONNUR	7.2	7.3	7.2	4.0	4.0	6.0	5.8	5.9	6.8
SHIMOGA	8.0	6.7	7.4	4.7	3.4	5.6	6.6	5.4	6.5
HONNALI	7.5	7.5	8.2	5.0	5.2	7.5	6.3	6.3	7.7
HARLAHALLI	7.4	6.7	7.4	6.2	5.5	6.8	6.8	6.1	7.3
Matralayam	7.58	7.5	7.3	4.9	4.4	5.6	6.3	6.2	6.5
Bawapuram	8.1	7.9	13.1	5.0	4.4	4.9	6.6	6.2	7.0
LAKKAVALLI			8.3			6.8			7.6
HARIHARAPURA			8.9			6.2			7.5
Phulgaon	6.833	6.9	6.7	5.633	5.9	4.7	6.273	6.6	5.6
Takali	7.162	7.2	8.8	5.014	6.6	8.2	6.1	6.9	8.5
Yadgir	7.3	7.2	10.4	5.6	5.0	3.0	6.5	6.11	6.0
Dhond			7.76			2.59			5.76
Pargaon			6.97			3.18			5.50
Wadakbal			5.77			2.87			4.47



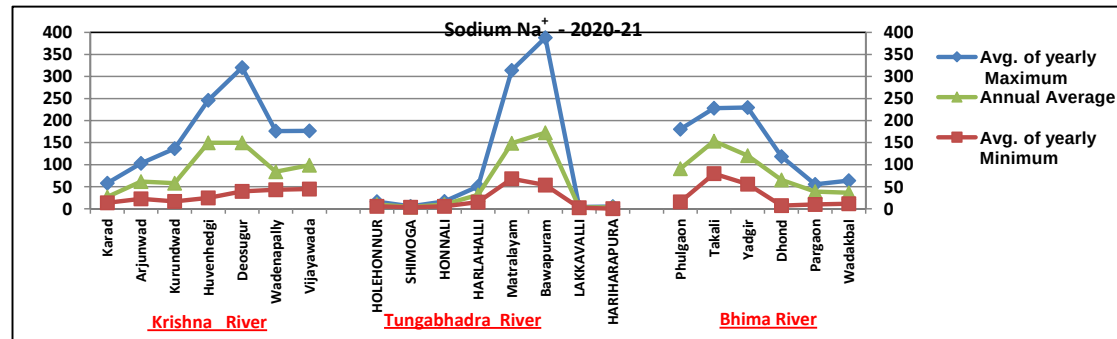
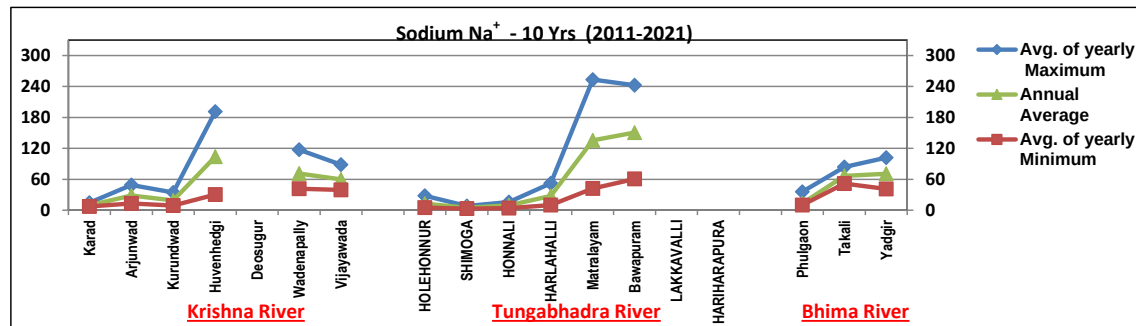
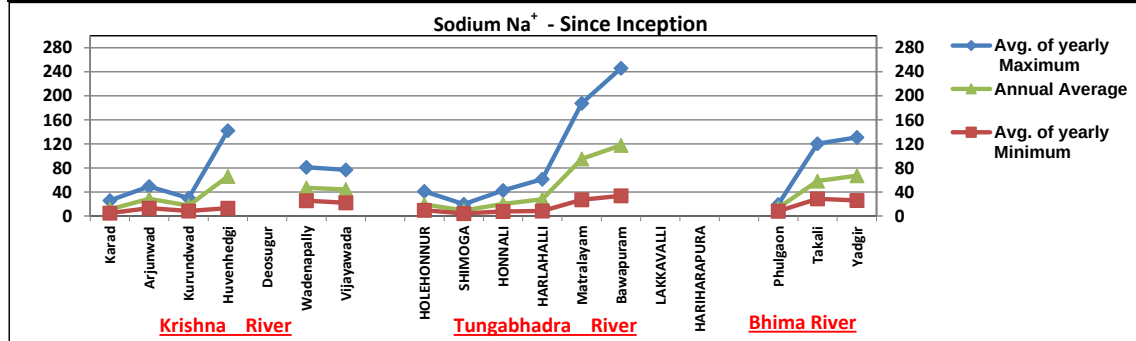
4. Bio-Chemical Oxygen Demand

Site Name (From U/s to D/s)	Avg. of yearly Maximum			Avg. of yearly Minimum			Annual Average		
	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21
Karad	2.3	1.649	1.5	0.5	0.829	0.7	1.2	1.23	1.1
Arjunwad	1.8	1.823	3.06	0.8	0.756	0.79	1.3	1.257	2
Kurundwad	1.5	1.698	2.2	0.4	0.448	0.6	0.9	0.93	1.1
Huvenhedgi	4.7	7.4	36.7	0.3	0.4	1.1	1.4	1.8	6.1
Deosugur			54.0			1.4			10.2
Wadenapally	3.5	4.0	12.3	0.2	0.4	0.7	1.2	1.4	3.0
Vijayawada	6.3	12.7	79.0	0.4	0.7	1.2	1.5	2.3	9.7
HOLEHONNUR	2.7	3.0	2.6	0.4	0.3	0.6	1.2	1.1	1.2
SHIMOGA	3.5	4.5	1.3	0.5	0.4	0.2	1.4	1.5	0.6
HONNALI	3.2	3.8	1.9	0.6	0.4	0.6	1.4	1.4	1.2
HARLAHALLI	1.4	1.5	0.8	0.6	0.6	0.2	1.0	1.0	0.5
Matralayam	3.7	3.5	5.2	0.5	0.6	1.8	1.6	1.7	3.1
Bawapuram	3.1	2.8	5.0	0.4	0.5	0.7	1.5	1.4	2.1
LAKKAVALLI			2.2			0.1			0.7
HARIHARAPURA			1.1			0.2			0.6
Phulgaon	1.7	2.008	3.4	0.7	0.889	0.5	1.2	1.322	1.6
Takali	2.2	2.029	3.6	0.7	1.099	1.0	1.3	1.5	2.1
Yadgir	3.2	3.0	9.9	0.7	1.0	2.0	1.6	1.8	4.1
Dhond			2.10			1.40			1.70
Pargaon			3.90			1.40			2.50
Wadakkal			3.70			1.20			2.20



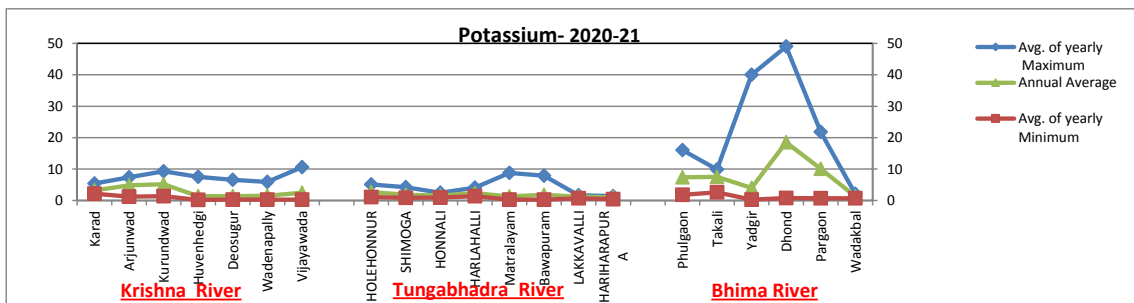
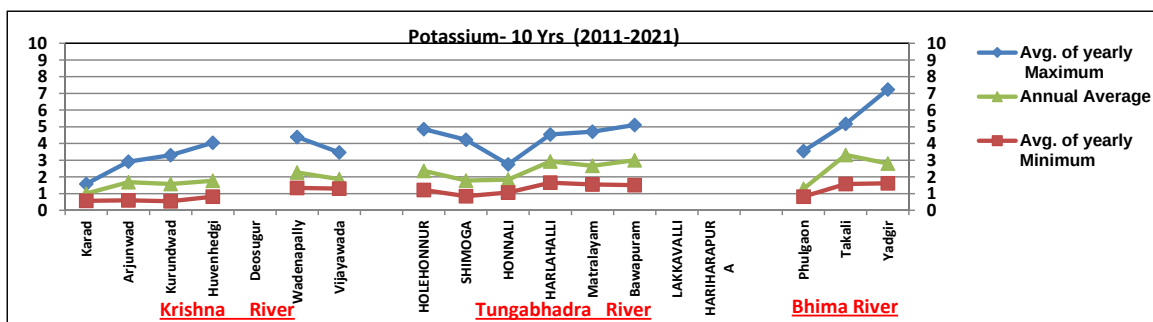
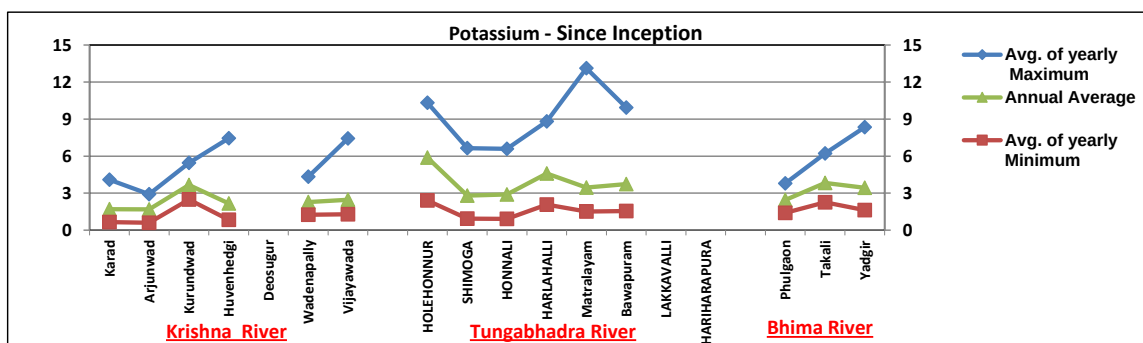
5.Sodium

Site Name (From U/s to D/s)	Avg. of yearly Maximum			Avg. of yearly Minimum			Annual Average		
	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 -2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21
Karad	25.682	14.3	58.2	4.947	7.2	13.8	10.991	9.7	27
Arjunwad	49.1	49.1	103	13.1	13.1	22.6	28.5	28.5	62
Kurundwad	29.7	34.6	136.4	8.5	9.3	16.5	17.4	19.0	57.9
Huvenhedgi	142.0	191.2	246.3	13.2	30.6	24.5	65.9	103.5	149.9
Deosugur			320.5			39.4			150.0
Wadenapally	81.1	117.3	176.0	25.4	41.9	43.5	46.9	71.3	84.3
Vijayawada	76.7	88.4	176.5	22.2	39.2	44.9	44.0	59.8	98.6
HOLEHONNUR	41	28	16	9	5	6	19	12	10
SHIMOGA	19	8	6	4	3	4	9	5	4
HONNALI	43	16	17	8	4	6	20	9	10
HARLAHALLI	61	52	51	8	10	15	28	28	32
Matralayam	187.69	253.4	313.9	27.0	42.0	68.2	95.3	135.3	148.5
Bawapuram	246.1	242.2	388.0	33.6	60.5	53.6	117.6	150.6	172.6
LAKKAVALLI			4			2			3
HARIHARAPURA			4.9			0.3			3.2
Phulgaon	19.384	35.7	180.3	7.952	10.0	15.8	13.584	13.0	91
Takali	120.5	84.0	228.0	28.4	51.7	79.6		66.6	153.6
Yadgir	130.9	101.7	229.7	25.9	41.0	55.9	66.9	70.56	120.5
Dhond			118.60			7.10			65.60
Pargaon			55.30			10.10			39.20
Wadakbal			63.80			11.70			36.50



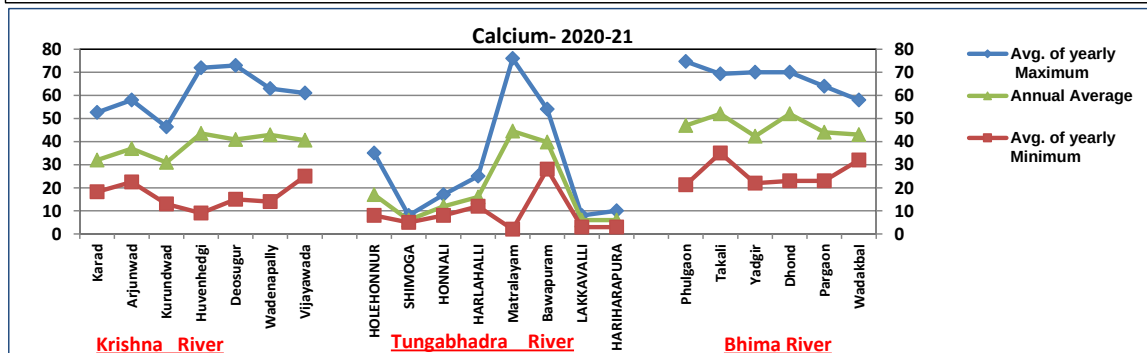
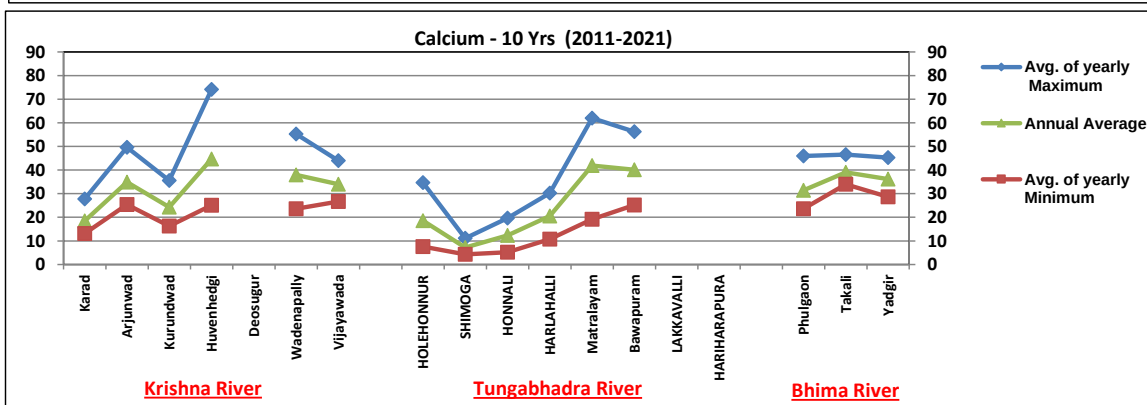
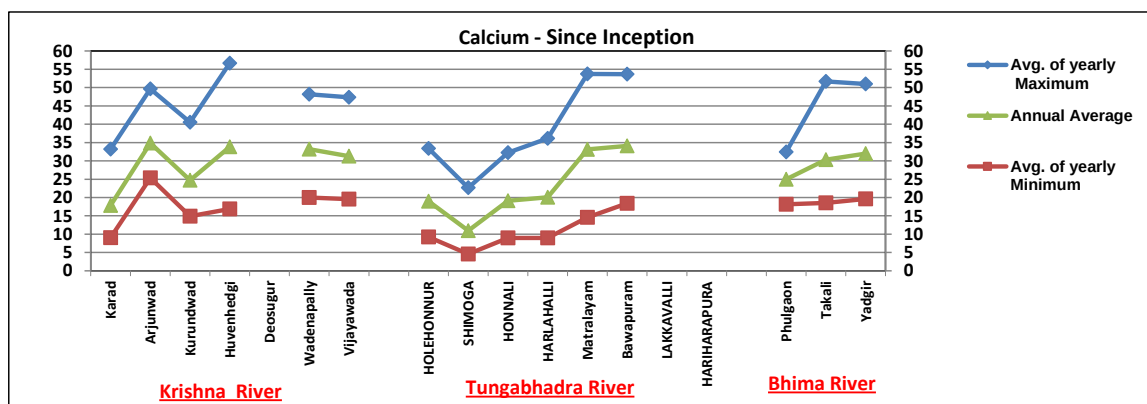
6.Potassium

Site Name (From U/s to D/s)	Avg. of yearly Maximum			Avg. of yearly Minimum			Annual Average		
	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21
Karad	4.088	1.6	5.4	0.656	0.6	2.2	1.706	1.0	3.2
Arjunwad	2.9	2.9	7.4	0.6	0.6	1.2	1.7	1.7	4.8
Kurundwad	5.5	3.3	9.3	2.5	0.5	1.4	3.7	1.6	5.2
Huvenhedgi	7.4	4.0	7.5	0.8	0.8	0.2	2.2	1.8	1.4
Deosugur			6.6			0.3			1.4
Wadenapally	4.3	4.4	5.9	1.3	1.3	0.3	2.3	2.3	1.5
Vijayawada	7.4	3.5	10.6	1.3	1.3	0.3	2.5	1.9	2.5
HOLEHONNUR	10.3	4.9	5.1	2.4	1.2	1.1	5.9	2.4	2.7
SHIMOGA	6.6	4.2	4.2	0.9	0.8	0.8	2.8	1.8	1.8
HONNALI	6.6	2.8	2.5	0.9	1.1	0.9	2.9	1.8	1.6
HARLAHALI	8.8	4.5	4.1	2.1	1.7	1.4	4.6	2.9	2.3
Matralayam	13.1	4.7	8.8	1.5	1.6	0.3	3.5	2.7	1.3
Bawapuram	9.9	5.1	7.9	1.5	1.5	0.3	3.7	3.0	1.8
LAKKAVALLI			1.7			0.7			1.2
HARIHARAPURA			1.4			0.4			1.0
Phulgaon	3.78	3.5	16.0	1.396	0.8	1.8	2.44	1.3	7.4
Takali	6.2	5.2	9.9	2.3	1.6	2.6	3.8	3.3	7.5
Yadgir	8.3	7.2	40.0	1.6	1.6	0.3	3.4	2.8	4.0
Dhond			49.00			0.80			18.50
Pargaon			21.80			0.70			10.10
Wadakbal			2.10			0.70			1.30



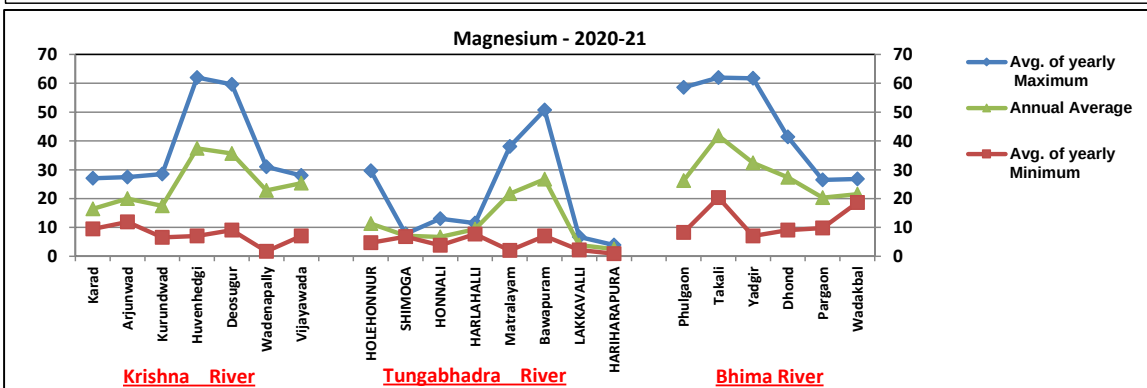
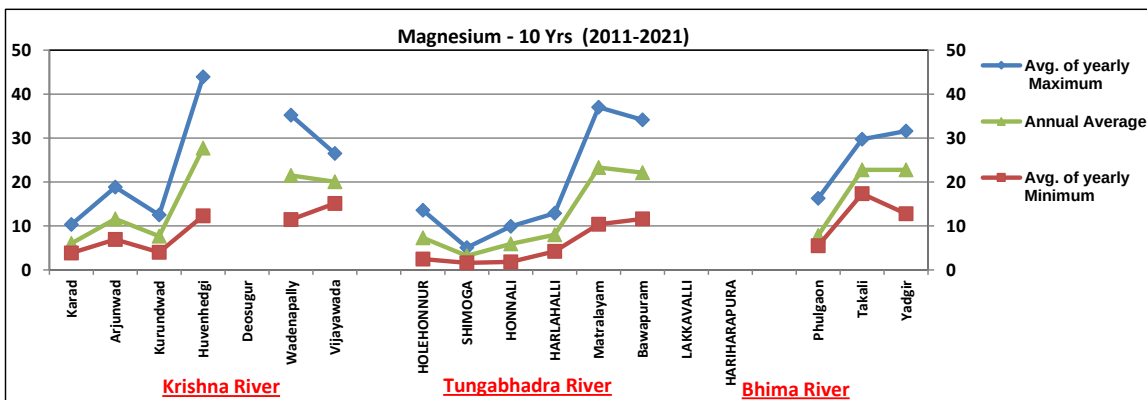
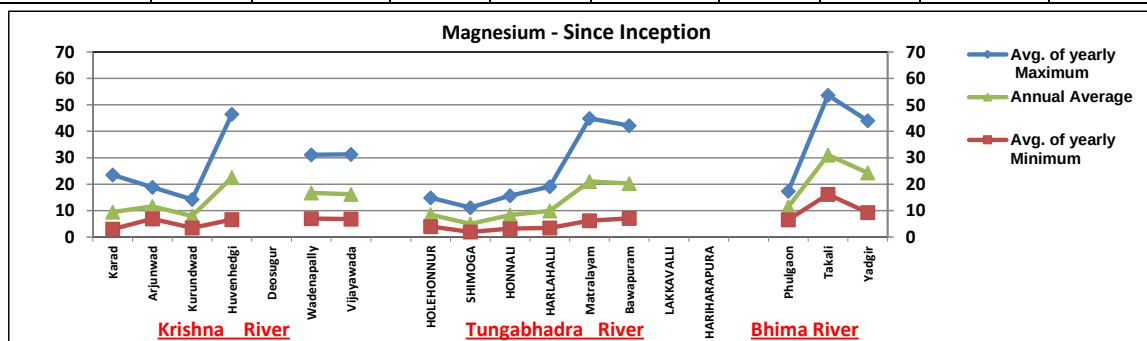
7. Calcium

Site Name (From U/s to D/s)	Avg. of yearly Maximum			Avg. of yearly Minimum			Annual Average		
	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21
Karad	33.208	27.8	52.6	9.035	13.1	18.2	17.848	18.5	32
Arjunwad	49.6	49.6	58.01	25.4	25.4	22.47	34.9	34.9	37
Kurundwad	40.5	35.5	46.3	14.9	16.3	12.9	24.8	24.3	31
Huvenhedgi	56.7	74.1	72.0	16.9	25.1	9.0	33.8	44.7	43.5
Deosugur			73.0			15.0			40.9
Wadenapally	48.2	55.3	63.0	20.0	23.6	14.0	33.2	38.0	42.9
Vijayawada	47.4	44.0	61.0	19.5	26.7	25.0	31.3	34.0	40.6
HOLEHONNUR	33.4	34.7	35.0	9.2	7.6	8.0	19.0	18.5	17.0
SHIMOGA	22.7	11.1	8.0	4.6	4.3	5.0	11.0	7.2	6.0
HONNALI	32.3	19.6	17.0	9.0	5.2	8.0	19.1	12.3	12.0
HARLAHALLI	36.1	30.3	25.0	9.0	10.8	12.0	20.0	20.5	16.0
Matralayam	53.74	61.9	76.0	14.6	19.2	2.0	33.1	41.9	44.5
Bawapuram	53.7	56.2	54.0	18.4	25.1	28.0	34.1	40.1	39.8
LAKKAVALLI			8.0			3.0			6.0
HARIHARAPURA			10.0			3.0			6.0
Phulgaon	32.429	46.0	74.7	18.146	23.6	21.3	24.96	31.4	47
Takali	51.7	46.6	69.4	18.5	34.0	35.0	30.4	39.0	52
Yadgir	51.0	45.3	70.0	19.6	28.6	22.0	32.0	36.20	42.4
Dhond			70.0			23.0			52.0
Pargaon			64.0			23.0			44.0
Wadakbal			58.0			32.0			43.0



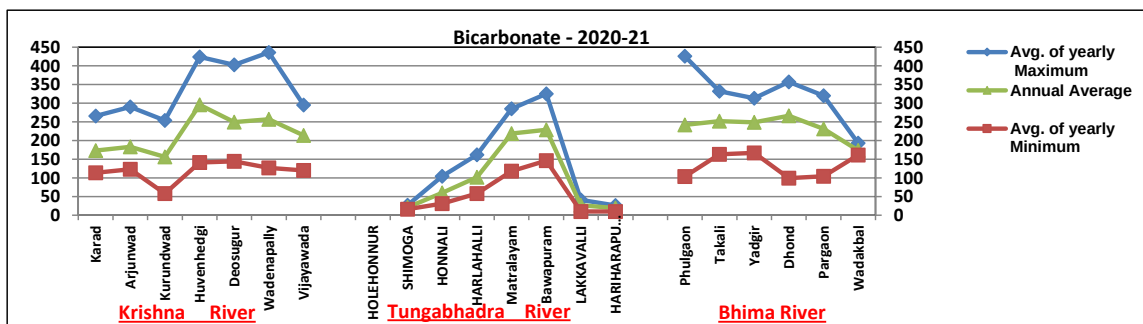
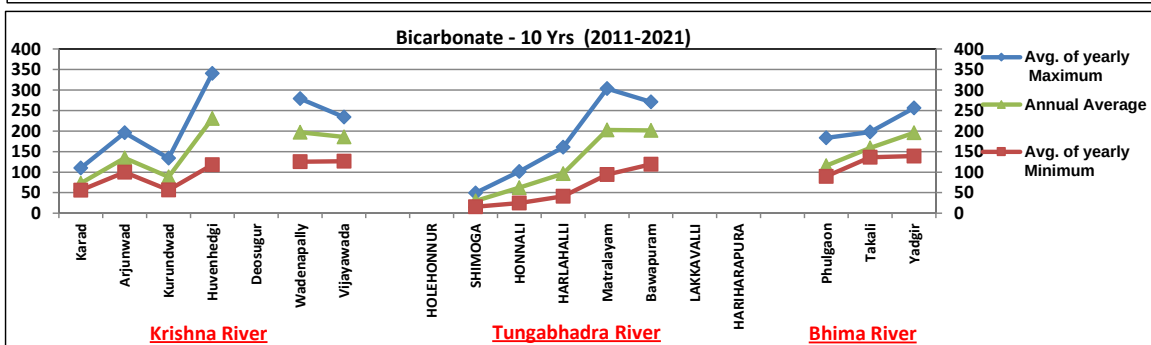
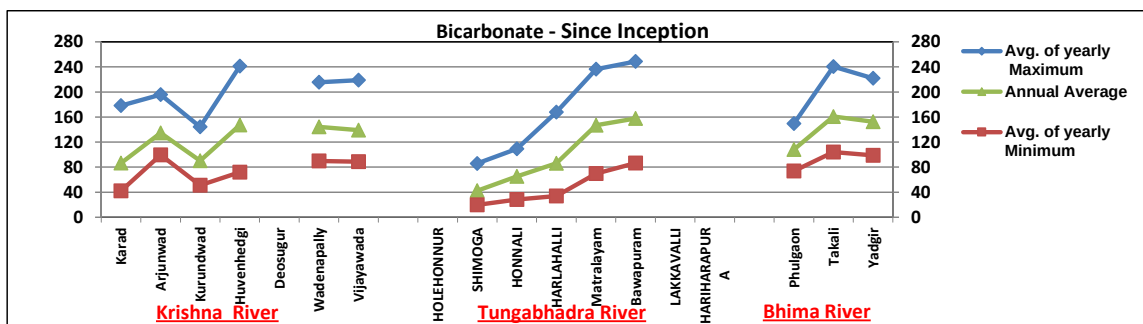
8. Magnesium

Site Name (From U/s to D/s)	Avg. of yearly Maximum			Avg. of yearly Minimum			Annual Average		
	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21
Karad	23.514	10.309	27.1	3.039	3.828	9.4	9.452	6.010	16.4
Arjunwad	18.8	18.831	27.48	6.9	6.949	11.92	11.6	11.600	20
Kurundwad	14.3	12.536	28.5	3.5	4.030	6.6	8.0	7.660	17.5
Huvenhedgi	46.5	43.9	62.0	6.6	12.3	7.0	22.6	27.7	37.5
Deosugur			59.6			9.1			35.6
Wadenapally	31.1	35.2	31.0	7.0	11.4	1.7	16.7	21.5	22.9
Vijayawada	31.3	26.5	28.0	6.8	15.1	7.0	16.2	20.1	25.3
HOLEHONNUR	14.9	13.6	29.6	4.0	2.5	4.7	8.5	7.3	11.3
SHIMOGA	11.2	5.1	7.8	1.9	1.6	6.8	5.0	3.2	7.1
HONNALI	15.7	9.9	13.0	3.2	1.8	3.8	8.3	5.9	6.7
HARLAHALLI	19.1	12.9	11.5	3.5	4.2	7.7	9.9	8.0	9.4
Matralayam	44.9	37.0	38.1	6.2	10.4	2.0	21.1	23.3	21.7
Bawapuram	42.2	34.1	50.7	7.1	11.6	7.0	20.3	22.1	26.7
LAKKAVALLI			6.7			2.2			3.9
HARIHARAPURA			3.9			0.9			2.5
Phulgaon	17.351	16.283	58.6	6.581	5.478	8.2	11.4	7.833	26.2
Takali	53.7	29.723	62.0	16.2	17.332	20.3	31.0	22.775	41.8
Yadgir	44.1	31.6	61.7	9.3	12.8	7.0	24.3	22.8	32.4
Dhond			41.40			9.10			27.40
Pargaon			26.50			9.80			20.30
Wadakbal			26.80			18.60			21.50



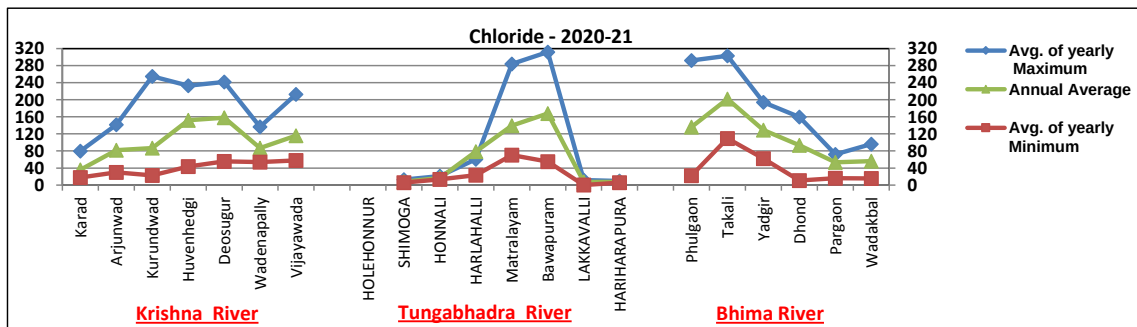
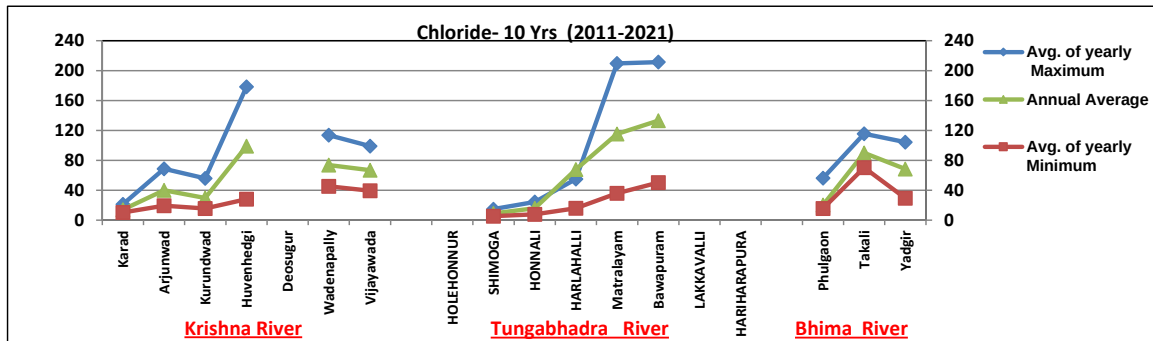
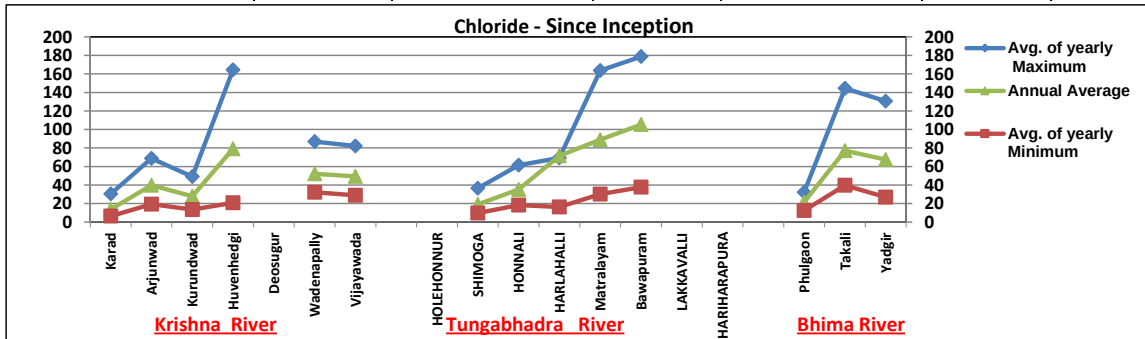
9. Bi-Carbonate

Site Name (From U/s to D/s)	Avg. of yearly Maximum			Avg. of yearly Minimum			Annual Average		
	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21
Karad	178.14	109.820	266	42.176	55.797	113	86.394	73.200	173
Arjunwad	195.9	195.888	290.113	99.5	99.504	123.33	134.6	134.571	183
Kurundwad	144.4	133.658	254	51.2	56.372	58	90.2	88.300	156
Huvenhedgi	241.1	340.6	424.0	71.9	117.7	141.0	147.1	230.6	295.6
Deosugur			403.0			144.0			249.2
Wadenapally	215.3	279.2	436.0	89.9	125.2	127.0	144.2	197.3	256.8
Vijayawada	218.9	234.2	295.0	88.7	126.6	120.0	139.0	185.4	213.9
HOLEHONNUR									
SHIMOGA	85.90	49.40	27.00	19.73	15.70	16.00	42.32	29.80	21.00
HONNALI	109.1	101.2	104.0	28.5	24.5	31.0	65.1	62.3	60.0
HARLAHALLI	167.7	160.7	162.0	34.0	41.2	58.0	86.1	96.5	102.0
Matralayam	236.47	303.6	285.0	69.8	94.3	118.0	146.9	203.0	218.6
Bawapuram	248.6	271.0	325.0	86	119	146	157.7	201.6	228.6
LAKKAVALLI			41			10			27
HARIHARAPURA			26			10			19
Phulgaon	149.569	183.258	426	73.69	89.534	104	108.269	115.444	242
Takali	240.6	197.626	332	104.1	136.264	163	160.9	158.750	252
Yadgir	221.9	256.0	313.0	98.8	139.2	167.0	152.3	196.0	248.6
Dhond			357.0			99.0			266.0
Pargaon			320.0			104.0			231.0
Wadakbal			193.0			161.0			174.0



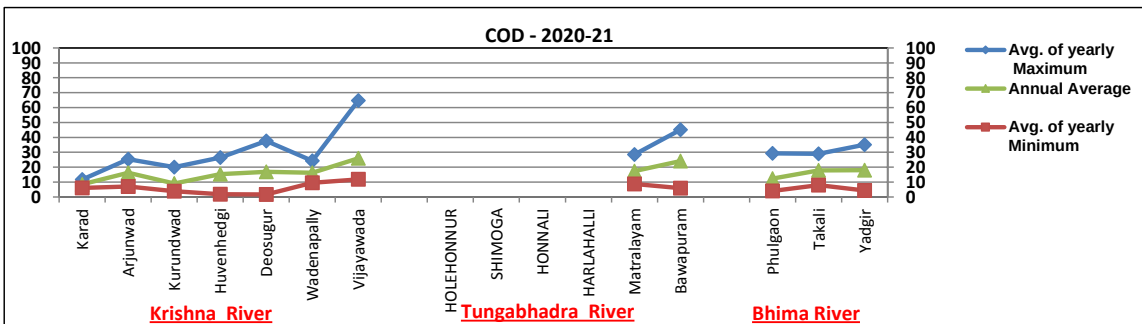
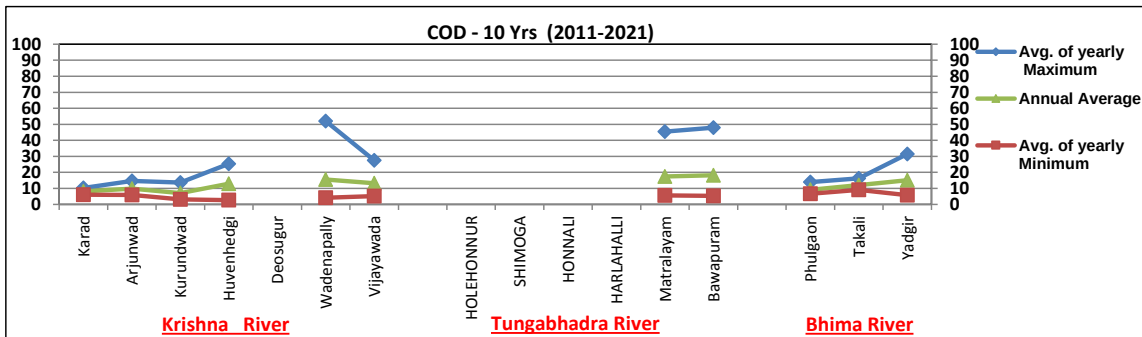
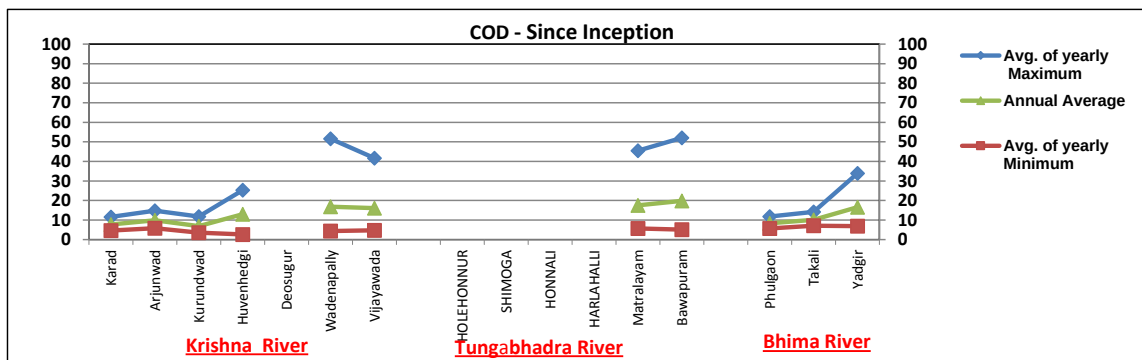
10. Chloride

Site Name (From U/s to D/s)	Avg. of yearly Maximum			Avg. of yearly Minimum			Annual Average		
	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21
Karad	30.3	21.13	79.4	6.3	10.40	17.9	13.7	14.13	35.7
Arjunwad	68.8	68.77	141.53	19.4	19.40	30.04	39.8	39.84	81.7
Kurundwad	49.0	55.85	255.2	13.6	15.50	22.5	28.0	29.69	87
Huvenhedgi	164.4	178.4	232.8	20.9	28.1	43.4	79.0	99.1	151.9
Deosugur			241.8			55.4			158.2
Wadenapally	87.0	113.6	136.5	32.3	45.3	53.8	52.1	73.8	86.8
Vijayawada	82.1	99.1	213.0	29.0	39.2	58.0	49.3	66.9	115.8
HOLEHONNUR									
SHIMOGA	36.5	14.8	13.1	9.8	5.4	5.7	18.9	9.0	8.0
HONNALI	61.6	24.4	21.3	18.4	7.9	13.5	35.2	16.0	16.7
HARLAHALLI	69.4	55.0	60.4	16.3	15.9	23.1	71.5	67.9	78.6
Matralayam	163.7	209.6	284.0	30.3	36.0	70.3	89.0	115.1	139.3
Bawapuram	178.7	211.4	312.0	37.7	50.4	55.2	105.3	133.2	168.1
LAKKAVALLI			11.7			0.1			7.4
HARIHARAPURA			9.6			5.7			7.4
Phulgaon	32.168	56.27	292.4	12.63	15.61	22.4	21.492	20.43	136.2
Takali	144.4	115.72	303.2	39.7	70.30	109.5	77.2	89.84	202
Yadgir	130.7	104.3	194.2	27.0	29.4	62.4	67.4	68.5	129.0
Dhond			159.40			10.90			93.40
Pargaon			72.10			16.40			53.20
Wadakbal			95.90			15.70			56.00



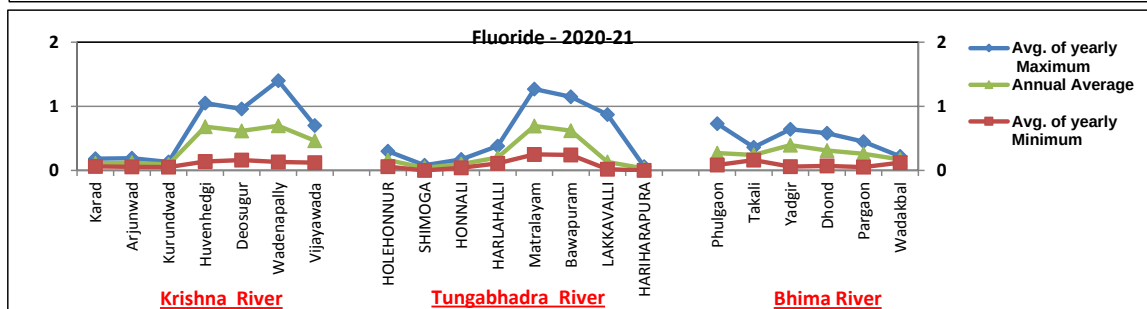
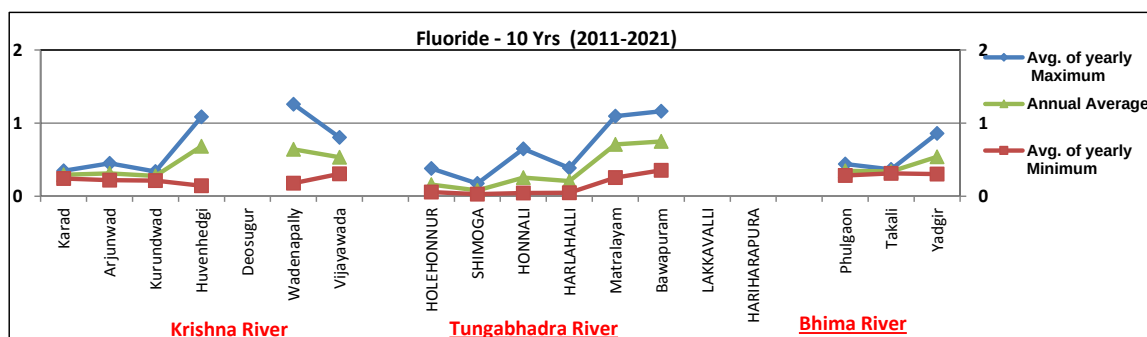
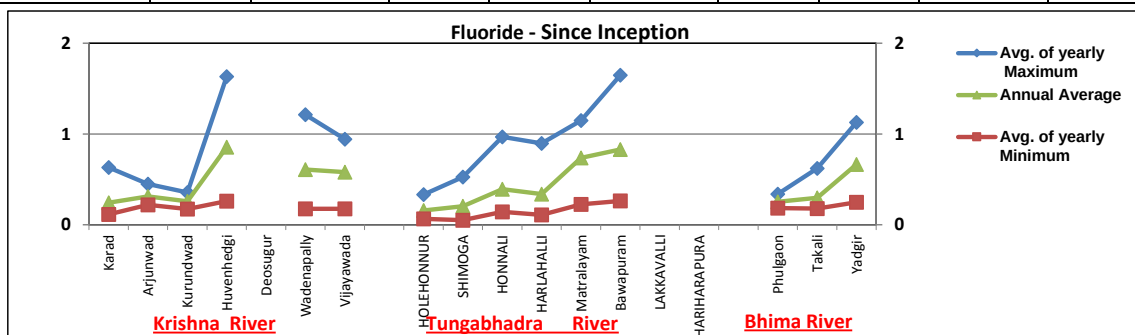
11. Chemical Oxygen Demand

Site Name (From U/s to D/s)	Avg. of yearly Maximum			Avg. of yearly Minimum			Annual Average		
	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21	Since inception	10 years (2011 - 2021)	2020-21
Karad	11.6	10.3	11.7	4.6	6.1	6.0	7.7	8.1	8.5
Arjunwad	14.7	14.7	25.3	5.9	5.9	7	9.9	9.9	16.3
Kurundwad	11.8	13.6	20.0	3.6	3.1	3.9	6.9	7.1	9
Huvenhedgi	25.3	25.3	26.4	2.7	2.7	1.9	12.9	12.9	15.3
Deosugur			37.6			1.7			16.9
Wadenapally	51.6	52.0	24.2	4.4	4.2	9.6	16.8	15.6	16.3
Vijayawada	41.7	27.4	64.7	4.8	5.2	11.8	16.1	13.3	26.0
HOLEHONNUR									
SHIMOGA									
HONNALI									
HARLAHALLI									
Matralayam	45.5	45.5	28.5	5.7	5.7	8.7	17.5	17.5	17.4
Bawapuram	52.0	47.9	45.1	5.2	5.3	5.9	19.8	18.2	24.1
Phulgaon	11.795	13.9	29.2	5.753	6.7	4.0	8.353	9.1	12.4
Takali	14.2	16.3	29.0	7.1	9.1	8.0	10.1	12.1	17.9
Yadgir	33.9	31.4	35.1	6.9	5.8	4.3	16.6	15.1	18.0



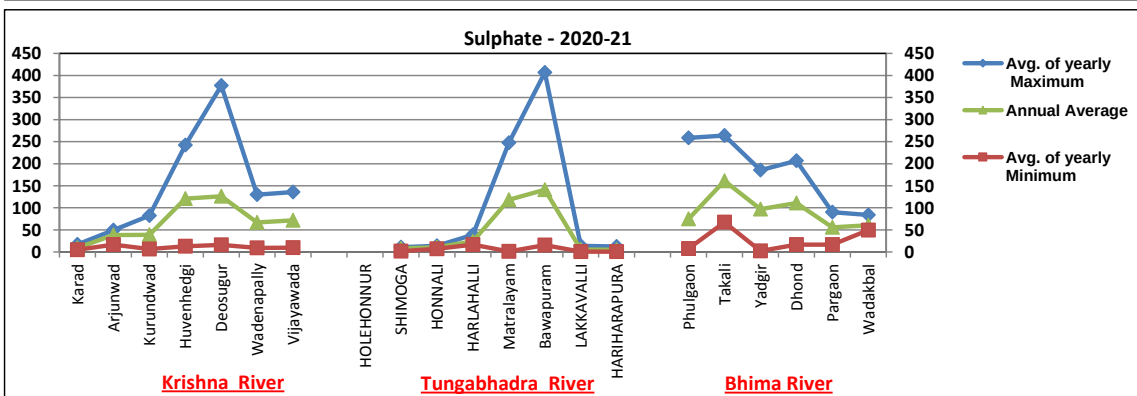
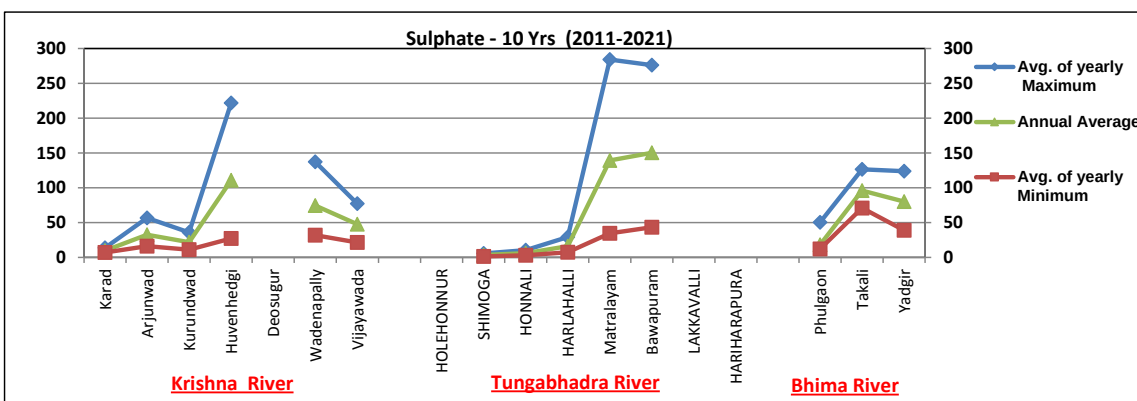
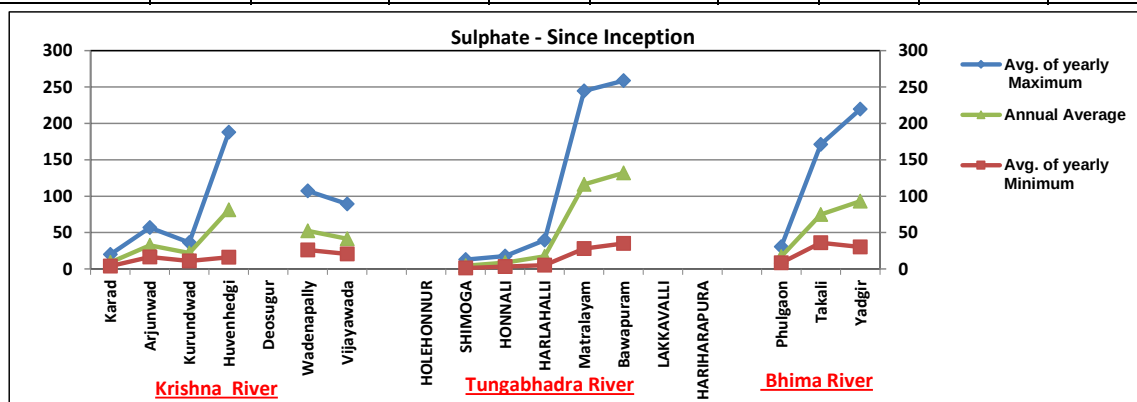
12. Fluoride

Site Name (From U/s to D/s)	Avg. of yearly Maximum			Avg. of yearly Minimum			Annual Average		
	Since inception	10 years (2011- 2021)	2020-21	Since inception	10 years (2011- 2021)	2020-21	Since inception	10 years (2011- 2021)	2020-21
Karad	0.630	0.35	0.18	0.114	0.24	0.06	0.242	0.30	0.11
Arjunwad	0.449	0.45	0.191	0.219	0.22	0.054	0.313	0.31	0.12
Kurundwad	0.356	0.34	0.13	0.174	0.21	0.05	0.257	0.28	0.09
Huvenhedgi	1.632	1.086	1.050	0.260	0.144	0.140	0.855	0.683	0.683
Deosugur			1.0			0.2			0.6
Wadenapally	1.213	1.259	1.400	0.176	0.179	0.130	0.607	0.643	0.696
Vijayawada	0.942	0.804	0.700	0.175	0.306	0.120	0.580	0.534	0.463
HOLEHONNUR	0.332	0.379	0.300	0.065	0.056	0.060	0.157	0.160	0.160
SHIMOGA	0.525	0.174	0.080	0.050	0.029	0.000	0.204	0.080	0.040
HONNALI	0.968	0.647	0.170	0.141	0.044	0.040	0.391	0.254	0.100
HARLAHALLI	0.898	0.386	0.380	0.109	0.048	0.110	0.338	0.208	0.200
Matralayam	1.148	1.096	1.270	0.225	0.256	0.250	0.736	0.708	0.694
Bawapuram	1.647	1.162	1.150	0.262	0.355	0.240	0.831	0.749	0.619
LAKKAVALLI			0.870			0.020			0.130
HARIHARAPURA			0.060			0.000			0.030
Phulgaon	0.339	0.44	0.73	0.184	0.28	0.09	0.253	0.35	0.27
Takali	0.622	0.37	0.36	0.177	0.31	0.16	0.296	0.34	0.24
Yadgir	1.1	0.9	0.6	0.2	0.3	0.1	0.7	0.5	0.4
Dhond			0.58			0.07			0.31
Pargaon			0.45			0.05			0.26
Wadakbal			0.22			0.12			0.17



13. Sulphate

Site Name (From U/s to D/s)	Avg. of yearly Maximum			Avg. of yearly Minimum			Annual Average		
	Since inception	10 years (2011- 2021)	2020-21	Since inception	10 years (2011- 2021)	2020-21	Since inception	10 years (2011- 2021)	2020-21
Karad	19.976	13.7	17.1	3.838	7.1	4.9	9.148	9.8	9.3
Arjunwad	56.8	56.8	49.2	16.3	16.3	16.3	32.5	32.5	38.3
Kurundwad	36.4	36.0	82.0	10.9	11.2	6.7	21.9	21.8	38.8
Huvenhedgi	187.6	221.6	242.3	15.9	27.3	13.0	81.2	110.6	120.6
Deosugur			377.3			16.1			126.0
Wadenapally	107.1	137.3	129.7	26.1	31.8	9.0	52.2	74.5	66.7
Vijayawada	89.4	77.3	135.5	20.4	21.4	9.9	41.4	47.5	71.5
HOLEHONNUR									
SHIMOGA	12.8	5.7	10.8	1.1	1.4	1.6	4.4	3.5	8.0
HONNALI	17.6	10.3	13.9	3.3	3.1	7.1	8.6	6.1	10.5
HARLAHALLI	39.4	29.1	38.6	5.1	7.3	16.7	17.2	16.2	24.1
Matralayam	245	284	248	28	35	1	116	139	118
Bawapuram	259	276	407	35	43	15	132	150	141
LAKKAVALLI			14.0			0.9			5.6
HARIHARAPURA			12.3			0.6			5
Phulgaon	30.581	50.2	258.4	8.245	12.0	7.8	17	18.3	74.8
Takali	171.0	126.5	264.0	35.9	71.0	67.2	75.0	96.1	161.1
Yadgir	219.5	124.0	185.2	30.1	38.9	2.2	93.2	80.2	96.9
Dhond			206.8			16.5			110.7
Pargaon			89.9			16.5			56.0
Wadakbal			83.6			49.2			60.7





**National Accreditation Board for
Testing and Calibration Laboratories**

(A Constituent Board of Quality Council of India)



CERTIFICATE OF ACCREDITATION

**KRISHNA & GODAVARI RIVER WATER QUALITY
LABORATORY, CENTRAL WATER COMMISSION,
MINISTRY OF WATER RESOURCES, RD & GR**

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

KRISHNA GODAVARI BHAVAN, 3RD FLOOR, 11-4-648 AC GUARDS, HYDERABAD, TELANGANA, INDIA

in the field of

TESTING

Certificate Number: TC-6055

Issue Date: 23/08/2019

Valid Until: 22/08/2021

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL



**N. Venkateswaran
Chief Executive Officer**



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name KRISHNA & GODAVARI RIVER WATER QUALITY LABORATORY, CENTRAL WATER COMMISSION, MINISTRY OF WATER RESOURCES, RD & GR, KRISHNA GODAVARI BHAVAN, 3RD FLOOR, 11-4-648 AC GUARDS, HYDERABAD, TELANGANA , INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-6055 Page No. : 1 / 2

Validity 23/08/2019 to 22/08/2021 Last Amended on -

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed
Permanent Facility				
1	CHEMICAL- WATER	River Water	Biological Oxygen Demand	APHA 23rd Edition : 2017
2	CHEMICAL- WATER	River Water	Calcium as Ca	APHA 23rd Edition : 2017
3	CHEMICAL- WATER	River Water	Chloride	APHA 23rd Edition : 2017
4	CHEMICAL- WATER	River Water	Conductivity	APHA 23rd Edition : 2017
5	CHEMICAL- WATER	River water	Copper	APHA 23rd Edition : 2017
6	CHEMICAL- WATER	River Water	Dissolved Oxygen	APHA 23rd Edition : 2017
7	CHEMICAL- WATER	river water	fluoride	APHA 23rd Edition : 2017
8	CHEMICAL- WATER	river water	iron	APHA 23rd Edition : 2017
9	CHEMICAL- WATER	River Water	Magnesium as Mg	APHA 23rd Edition : 2017
10	CHEMICAL- WATER	River Water	Nitrate	APHA 23rd Edition : 2017
11	CHEMICAL- WATER	river water	Nitrite	APHA 23rd Edition : 2017
12	CHEMICAL- WATER	river water	ortho phosphate	APHA 23rd Edition : 2017
13	CHEMICAL- WATER	River Water	pH	APHA 23rd Edition : 2017



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SCOPE OF ACCREDITATION

Laboratory Name KRISHNA & GODAVARI RIVER WATER QUALITY LABORATORY, CENTRAL WATER COMMISSION, MINISTRY OF WATER RESOURCES, RD & GR, KRISHNA GODAVARI BHAVAN, 3RD FLOOR, 11-4-648 AC GUARDS, HYDERABAD, TELANGANA , INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-6055 Page No. : 2 / 2

Validity 23/08/2019 to 22/08/2021 Last Amended on -

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed
14	CHEMICAL- WATER	river water	potassium	APHA 23rd Edition : 2017
15	CHEMICAL- WATER	river water	sodium	APHA 23rd Edition : 2017
16	CHEMICAL- WATER	river water	sulphate	APHA 23rd Edition : 2017
17	CHEMICAL- WATER	River Water	Total Alkalinity as CaCO ₃	APHA 23rd Edition : 2017
18	CHEMICAL- WATER	River Water	Total Dissolved Solids	APHA 23rd Edition : 2017
19	CHEMICAL- WATER	River Water	Total Hardness as CaCO ₃	APHA 23rd Edition : 2017
20	CHEMICAL- WATER	river water	zinc	APHA 23rd Edition : 2017



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CERTIFICATE OF ACCREDITATION

UPPER CAUVERY WATER QUALITY LABORATORY, CENTRAL WATER COMMISSION

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

Cauvery Division, Jalasouda, Jalahalli, Bengaluru, Karnataka

in the field of

TESTING

Certificate Number TC-7793

Issue Date 30/08/2018

Valid Until 29/08/2020

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL



89076970100030001894

Anil Relia

Anil Relia
Chief Executive Officer



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Upper Cauvery Water Quality Laboratory, Central Water Commission, Cauvery Division, Jalasouda, Jalahalli, Bengaluru, Karnataka

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7793 **Page 1 of 2**

Validity 30.08.2018 to 29.08.2020 **Last Amended on** --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection

CHEMICAL TESTING

I.	WATER			
1.	Surface Water (River Water)	pH	APHA23 rd Edn.2017 -- 4500H ⁺ B (Electrometric Method)	2 to 12
		Conductivity	APHA23 rd Edn.2017 -- 2510 B (Laboratory Method)	1 μ S/cm to 5000 μ S/cm
		Total Hardness as CaCO ₃	APHA23 rd Edn.2017 -- 2340 C (EDTA Titrimetric Method)	5 mg/L to 1500 mg/L
		Calcium as Ca ⁺²	APHA23 rd Edn.2017 -- 3500Ca - B (EDTA Titrimetric Method)	2 mg/L to 500 mg/L
		Magnesium as Mg ⁺²	APHA23 rd Edn.2017 -- 3500Mg - B (Calculation Method)	2 mg/L to 500 mg/L
		Total alkalinity as CaCO ₃	APHA23 rd Edn.2017 -- 2320 B (Titration Method)	10 mg/L to 1000 mg/L
		Chloride as Cl ⁻	APHA23 rd Edn.2017 -- 4500Cl ⁻ B (Argentometric Method)	5 mg/L to 2000 mg/L
		Biological Oxygen Demand	APHA23 rd Edn.2017 -- 5210 B (@20°C; 5 day BOD Test Method)	1 mg/L to 500 mg/L
		Dissolved Oxygen	APHA23 rd Edn.2017 -- 4500, O-C (Azide Modification Method)	1 mg/L to 10 mg/L
		Nitrate as NO ₃ ⁻	APHA23 rd Edn.2017 -- 4500 NO ₃ ⁻ D (Nitrate Electrode Method)	0.5 mg/L to 250 mg/L

Amit Kumar

Amit Kumar
Convenor

Anuja Anand

Anuja Anand
Program Manager



National Accreditation Board for Testing and Calibration Laboratories

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SCOPE OF ACCREDITATION

Laboratory Upper Cauvery Water Quality Laboratory, Central Water Commission, Cauvery Division, Jalasouda, Jalahalli, Bengaluru, Karnataka

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7793

Page 2 of 2

Validity 30.08.2018 to 29.08.2020

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Fluoride as F^-	APHA23 rd Edn.2017 -- 4500 F^-C (ISE method)	0.1 mg/L to 20 mg/L
		Sodium as Na^+	APHA23 rd Edn.2017 -- 3500 Na-B (Flame Emission Photometric Method)	5 mg/L to 500 mg/L
		Potassium as K^+	APHA23 rd Edn.2017 -- 3500 K-B (Flame Emission Photometric Method)	1 mg/L to 200 mg/L
		Chemical Oxygen Demand	APHA23 rd Edn.2017 -- 5220 -D (Closed Reflux Colorimetric Method)	2 mg/L to 300 mg/L

Amit Kumar

Amit Kumar
Convenor

Anuja Anand

Anuja Anand
Program Manager



**National Accreditation Board for
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CERTIFICATE OF ACCREDITATION

UPPER KRISHNA DIVISION WATER QUALITY LABORATORY, CENTRAL WATER COMMISSION

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

2nd Floor, National Water Academy Complex, Khadakwasla,
R. S. Pune, Maharashtra

in the field of

TESTING

Certificate Number TC-8138

Issue Date 26/11/2018

Valid Until 25/11/2020

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL



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Anil Relia
Chief Executive Officer

Publication Reg.No. CWC/2022/41



कृष्णा एवं समन्वय परिमंडल / KRISHNA & CO-ORDINATION CIRCLE
हैदराबाद / HYDERABAD

मार्च-2022
March-2022