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Vol-II, WATER QUALITY DATA

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पूरब प्रवाही नदियाँ बेसिन
EAST FLOWING RIVERS BASIN



कावेरी एवं दक्षिणी नदियाँ परिमण्डल, बंगलुरु
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प्रस्तावना

जल लगभग सीमित मात्रा में उपलब्धता के साथ एक कीमती प्राकृतिक संसाधन है। स्वच्छ जल पूरी दुनिया में दिन-व-दिन एक दुर्लभ वस्तु बन गया है। यह योजना है कि जल संसाधनों का श्रेष्ठतम उपयोग के लिए एक अच्छी तरह से विकसित डाटा बैंक हो और नियमित रूप से डाटा बैंक का अद्यतन किया जाना चाहिए। जल संसाधन बढ़ाने के अलावा, पानी की गुणवत्ता की निगरानी का काम भी किया जाना आवश्यक है। जल संसाधन, नदी विकास और गंगा संरक्षण मंत्रालय के अंतर्गत, केन्द्रीय जल आयोग, जल संसाधन क्षेत्र के शीर्ष मंत्रालय का निकाय होने के अतिरिक्त, भारत के विभिन्न नदी घाटियों का जल विज्ञानीय आकड़ा संग्रह का एक विशाल नेटवर्क प्रणाली बनाये रखा है।

आकड़ा के कम्प्यूटरीकरण के आगमन से जल वर्ष पुस्तक के प्रकाशन प्रारूप में बहुत परिवर्तन आया है। संसोधित प्रारूप के अनुसार, पूरब प्रवाही नदियाँ बेसिन 2015-16 का जल वर्ष पुस्तक दो खण्डों में किया गया। प्रथम खण्ड में नदी धारा प्रवाह एवं निलम्बित तलछट आकड़े तथा द्वितीय खण्ड में जल गुणवत्ता आकड़े एवं प्रमुख नदियों के जल गुणवत्ता प्रचलन / परिदृश्य दिये गये हैं। पूरब प्रवाही नदियाँ बेसिन के अन्तर्गत जल गुणवत्ता की निगरानी, 26 जल विज्ञानीय प्रेक्षण स्थलों पर किया जाता है। जिसमें दक्षिणी नदियाँ मण्डल-कोयम्बतूर 8 स्थलों, जल विज्ञानीय मण्डल-चेन्नई 17 स्थलों एवं निचली कृष्णा मण्डल-हैदराबाद 01 स्थल की निगरानी उक्त मण्डलों के अधीन किया जाता है।

जल नमूना सीधे स्थलों से सम्बन्धित प्रयोगशालाओं में विश्लेषण हेतु भेजा जाता है। भौतिक, रासायनिक, जैविक तथा विषाक्त (पैरामीटर) प्राचल का विश्लेषण किया जाता है। तीन रासायनिक सूचकांकों (Indices) का आकड़ा, गणितीय विधि से निकाला जाता है। सिंचाई की उपयुक्तता के लिये सैलिनिटी रेखाचित्र (विलकाक्स डायग्राम) के द्वारा जल का वर्गीकरण किया जाता है।

इस प्रकाशन में प्रस्तुत किये गये आकड़े, जल संसाधन के योजनाकारों, प्रबन्धकों और जल के उपयोग कर्ताओं के लिये बहुत उपयोगी हैं। अनुसंधान एवं विकास संस्थानों, योजनाओं, पीने के जल की पूर्ति, सिंचाई, औद्योगिक एवं मल निपटान योजनाओं के लिये विशेष रूप से उपयोगी हैं।

इस परिमण्डल के अन्तर्गत दक्षिणी नदियाँ मण्डल, कोयम्बतूर, जल विज्ञानीय मण्डल, चेन्नई तथा कृष्णा एवं गोदावरी बेसिन संगठन के अन्तर्गत निचली कृष्णा मण्डल, हैदराबाद के प्रयासों से इस पुस्तक का प्रकाशन हुआ। सभी प्रशंसा के पात्र हैं।

बेंगलुरु
मार्च, 2017

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PREFACE

Water is a precious natural resource with almost fixed quantum of availability. Fresh water has been becoming a scarce commodity day by day in whole world. It's planning and optimal utilization calls for a well developed Data Bank and maintenance of the Data Bank by regular updating is equally important. Besides quantifying the Water Resources, the work of monitoring the Quality of Water is also required to be done. Central Water Commission under the Union Ministry of Water Resources, River Development and Ganga Rejuvenation, besides being an apex body on Water Resources Sector, has been maintaining a vast system of Hydrological Network in different River Basins of India.

With the advent of computerization of the data, the format of publishing the Water Year Book has also undergone lot of changes. As per the revised format, the Water Year Book for East Flowing Rivers Basin for 2015-16 is published in Two Volumes, Volume-I containing the Stream Flow and Suspended Sediment Data and the Volume-II containing the Water Quality Data and trend/scenario of water quality of major rivers. The Water Quality under this East Flowing Rivers Basin is being monitored at 26 Hydrological Observation Stations – 08 stations on East Flowing Rivers (EFR) under SRD, Coimbatore, 17 stations on EFR under HD, Chennai, 01 station on EFR under LKD, Hyderabad. The Water samples collected at these Stations are being analysed at Divisional laboratories situated at Coimbatore, Chennai and Hyderabad.

The water samples received directly in the respective laboratories are analysed for parameters which include Physical, Chemical, Biological & Toxic elements. In addition to these parameters, three Chemical Indices are derived mathematically from the observed data.

The Data presented in this publication is useful to the Water Resources Planners, Managers and Water Users in Catchment of East Flowing River Basin. The data may be especially useful for R&D institutions, planning, drinking water supply, irrigation, industrial and sewage disposal schemes. Soft copies of the publications will also be available to the user agencies.

The efforts made by the Southern Rivers Division – Coimbatore, Hydrology Division – Chennai under this Region & Lower Krishna Division – Hyderabad under Krishna & Godavari Basin Organization in bringing out this Book deserves appreciation.

Bengaluru,
March, 2017.


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1. INTRODUCTION

1.1 Scope

Water quality data of 26 stations in the East Flowing Rivers are presented in this volume, for the year 2015-2016. The parameters covered in the data are as under:

1.1.1 Physical

River Discharge, Colour, Odour, Temperature, pH, Electrical Conductivity and T.D.S.

1.1.2 Chemical

Potassium, Sodium, Calcium, Magnesium, Iron, Ammonium, Carbonate, Bi-carbonate, Chloride, Fluoride, Sulphate, Nitrate, Nitrite, Phosphate, Silicate, Total Alkalinity, Phenolphthalein Alkalinity and Boron.

1.1.3 Biological/Bacteriological

D.O., B.O.D and C.O.D.; Total Coliform and Fecal Coliform.

1.1.4 Trace & Toxic

Arsenic, Cadmium, Chromium, Copper, Mercury, Nickel, Lead and Zinc.

1.1.5 Chemical Indices

Hardness Number, Sodium Percentage, Sodium Adsorption Ratio, Residual Sodium Carbonate and USSL Classification.

1.2 Observation Technique

1.2.1 River water samples:

At each station one litre of river water sample is collected at a point of maximum flow and depth in the cross section at a depth of 10 - 20 cm below the water surface in a polythene bottle with double screw cap.

The polythene bottles are labeled with the requisite details of the sampled water and sent through a special messenger to the respective water quality research laboratory for detailed analysis.

1.3 Sources of information

The water quality stations for which data presented in this volume include 08 stations on East Flowing Rivers (EFR) under SRD, Coimbatore, 17 stations on EFR under HD, Chennai and 01 station on EFR under LKD, Hyderabad. The details of the above mentioned stations are as follows:

East Flowing River Basin

S.No.	Station Name	Station Code	Type of Site
1.	<i>Gundlakamma at Marella</i>	<i>AU000E5</i>	<i>GDSQ</i>
2.	<i>Pennar at Nellore</i>	<i>AP000A6</i>	<i>GDSQ</i>
3.	<i>Sagileru at Nandipalli</i>	<i>APC00G7</i>	<i>GDSQ</i>
4.	<i>Pennar at Chennur</i>	<i>AP000I1</i>	<i>GDSQ</i>
5.	<i>Papagni at Kamalapuram</i>	<i>APE00C5</i>	<i>GDQ</i>
6.	<i>Kunderu at Alladupalli</i>	<i>APF00B8</i>	<i>GDSQ</i>
7.	<i>Pennar at Tadipatri</i>	<i>AP000L8</i>	<i>GDQ</i>
8.	<i>Pennar at Nagalamadike</i>	<i>AP000V5</i>	<i>GDQ</i>
9.	<i>Chitravathi at Singavaram</i>	<i>APG00E4</i>	<i>GDQ</i>
10.	<i>Swarnamukhi at Naidupeta</i>	<i>AC000G4</i>	<i>GDSQ</i>
11.	<i>Kalingi at Sulpurpet</i>	<i>AB000N5</i>	<i>GDSQ</i>
12.	<i>Palar at Chengalpet</i>	<i>CQ000C1</i>	<i>GDQ</i>
13.	<i>Cheyar at Magaral</i>	<i>CQB00B4</i>	<i>GDQ</i>
14.	<i>Palar at Arcot</i>	<i>CQ000I7</i>	<i>GDQ</i>
15.	<i>Palar at Avarankuppam</i>	<i>CQ000S4</i>	<i>GDQ</i>
16.	<i>Varahanadi at Kumarapalayam</i>	<i>CCR00F3</i>	<i>GDQ</i>
17.	<i>Ponnaiyar at Villupuram</i>	<i>CP000C6</i>	<i>GDQ</i>
18.	<i>Ponnaiyar at Vazhavachanur</i>	<i>CP000H2</i>	<i>GDSQ</i>
19.	<i>Ponnaiyar at Gummanur</i>	<i>CP000R5</i>	<i>GDSQ</i>
20.	<i>Vellar at Kudalaiyathur</i>	<i>CE000F6</i>	<i>GDQ</i>
21.	<i>Vaigai at Paramakudi</i>	<i>CV000F3</i>	<i>GDSQ</i>
22.	<i>Suruliar at Theni</i>	<i>CVA00D4</i>	<i>GDSQ</i>
23.	<i>Vaigai at Ambasamudram</i>	<i>CV000U2</i>	<i>GDSQ</i>
24.	<i>Vaippar at Irrukkankudi</i>	<i>CY000K7</i>	<i>GDQ</i>
25.	<i>Thambraparani at Murappanadu</i>	<i>CT000H9</i>	<i>GDSQ</i>
26.	<i>Chittar at A.P.Puram</i>	<i>CTA00J1</i>	<i>GDQ</i>

2. WATER QUALITY DATA

2.1 Explanatory Note

The explanatory note described here below is designed to assist in the interpretation of various parameters contained in the data presented subsequently.

- i) The water samples are collected at a regular frequency of once in a month from Trend / Flux stations and once in two months from Base line stations, usually on the first working day, from the main flowing portion of the stream. The Trace and Toxic elements are analysed once in a year in the month of April.
- ii) The collected water samples are neatly labeled and sent to the respective Divisional Laboratory for analysis.
- iii) Chemical indices namely Hardness number, Sodium Percentage, Sodium Adsorption Ratio and Residual Sodium Carbonates are computed as follows:
 - a) Hardness number is by adding the total Calcium and Magnesium in the sample expressed as equivalent parts of Calcium Carbonate (CaCO_3)
 - b) Sodium percentage (S.P) is given by

$$\text{S.P} = \frac{\text{Na}^+ \times 100}{[\text{Ca}^{2+} + \text{Mg}^{2+} + \text{Na}^+ + \text{K}^+]}$$

Ionic concentrations are in meq/L.

- c) Sodium Adsorption Ratio (SAR) is given by:

$$\text{S.A.R} = \frac{\text{Na}^+}{\sqrt{\frac{(\text{Ca}^{2+} + \text{Mg}^{2+})}{2}}}$$

Ionic concentrations are in meq/L.

- d) Residual Sodium Carbonate (RSC) is given by

$$\text{RSC} = (\text{CO}_3^{2-} + \text{HCO}_3^-) - (\text{Ca}^{2+} + \text{Mg}^{2+})$$

Ionic concentrations are in meq/L.

- iv) Based on Electrical Conductivity (E.C) and Sodium Adsorption Ratio (S.A.R), the water samples have been classified as per U.S. Salinity Laboratory standards using Wilcox diagram (Annexure – II)
- v) Water year is from 1st June of one calendar year to 31st May of the next calendar year.
- vi) Measuring authority refers to the field division responsible for the collection of water sample. The name of the division is abbreviated by taking first alphabet of each word followed by alphabets ‘D’ for division. For example “SOUTHERN RIVERS DIVISION” by “SRD” and “HYDROLOGY DIVISION” by “HD”.
- vii) The station code number is a unique seven column alphanumeric reference number which facilitates storage and retrieval of water quality data in data banks. The first column is the identifier of either an integral river basin or for convenience, a region having several continuous river catchment areas. This is followed by a column which identifies an independent river system which either have one or more outlets to the sea or crosses international border to enter into another country. The third, fourth and fifth column space denote first, second and third order tributaries respectively from the mouth upstream. The sixth and seventh column spaces indicate the location of the gauging station in one of the 225 slots earmarked on the river. The blank column spaces are filled by zero.

2.2. METHOD OF PRESENTATION

In the succeeding pages station wise water quality data is presented comprising History sheet, Water Quality data sheet for 2015-16, Water Quality Summary for 2015-16 and Water Quality Seasonal Average for 2005-2016 (Decadal change). The serial of the water quality observation stations is arranged from the mouth of the river upstream, giving intense priority to an intermediate tributary station in similar fashion.

History sheet gives concise description of the water quality observation stations. Tables on the water quality analysis give the ionic concentrations of various parameters in mg/L. The samples are collected for water quality analysis once a month as already mentioned in para 2.1 above. Owing to shortage of infrastructure facilities all the parameters are not necessarily analyzed.

2.3. WATER QUALITY STATUS

2.3.1 RIVER WATER:

The East Flowing Rivers (South of river Krishna excluding Cauvery Basin) cover large areas in the states of Andhra Pradesh, Tamilnadu and some parts of Karnataka and Union territory of Puducherry. General assessment of the results of water samples collected from East Flowing Rivers shows that the waters are alkaline. pH is one of the most important operational water quality parameters. Compared to West Flowing Rivers, East Flowing Rivers shows remarkably high conductivity. Electrical Conductivity of water is due to the conductivity of dissolved ions. The presence of excess of dissolved salts in the water has an effect on the soil quality as well as crop yield. The alkalinity of the river waters are mainly due to the presence of Bi-carbonate and Carbonate ions in the samples. Multivalent cations, particularly Magnesium and Calcium are often present at a significant concentration in natural waters. These ions are easily precipitated and in particular react with soap to make it difficult to remove scum. Total hardness is normally expressed as the total concentration of Calcium (Ca^{2+}) and Magnesium (Mg^{2+}) in mg/L, equivalent CaCO_3 . Ca^{2+} and Mg^{2+} are the important parameters for total hardness. Among the cations, Sodium recorded the highest concentration, followed by Calcium, Magnesium and Potassium especially on the basins in Tamilnadu. In some samples, Calcium recorded highest concentration followed by Sodium, Magnesium and Potassium. Among the anions, Bicarbonate recorded the highest concentration, followed by Chloride and Sulphate. In some samples Chloride recorded the highest concentration, followed by Bi-carbonate and Sulphate. Appreciable quantity of Fluoride and Nitrate are found in some sites, sometime it does went beyond the desirable limit. The presence of carbonate is

noted in some samples only. The chemical indices such as Sodium Adsorption Ratio (SAR), Sodium Percentage (SP) and Residual Sodium Carbonate (RSC) are found to be within the tolerance limit and the waters are classified as good to moderate quality for irrigation purpose.

Biological/Bacteriological parameters like D.O, B.O.D and C.O.D. Total Coliform & Fecal Coliform are analysed in water sample of some sites.

Water quality status of East Flowing Rivers, basin-wise is discussed in detail below:

2.3.1.1 GUNDLAKAMMA RIVER BASIN

Gundlakamma River originates in the Kurnool district of Andhra Pradesh. The river has a total length of 220 Kms. from its origin to its out fall into the Bay of Bengal. This perennial river drains an area of 8494 Sq.Kms. The water quality station on this river is located presently at **Marella** and has been shifted from the earlier station 'Thammavaram' and the hydrological observations started at the present site with effect from 28/06/2007.

The river water of this basin is generally alkaline in nature and the pH is varied from 7.7 and 8.2. The Electrical Conductivity is on the higher side. The minimum observed value is 1249 micro (μ) mhos/cm and the maximum is 1387 μ mhos/cm. Among the cationic constituents Sodium is the major cation followed by Calcium, Magnesium and Potassium; their maximum values are 249.0 mg/L, 38.0 mg/L, 21.6 mg/L, 16.7 mg/L and their minimum values are 221.7 mg/L, 38.0 mg/L, 21.4 mg/L, 9.0 mg/L respectively. The predominant anionic constituent is Bicarbonate followed by Chloride, Sulphate and Silicate and their maximum values are 394.0 mg/L, 182.3 mg/L, 126.0 mg/L, 20.6 mg/L and their minimum values are 383.0 mg/L, 148.7 mg/L, 106.0 mg/L, 15.1 mg/L respectively. The concentration of Fluoride is high through out the year with the maximum value 1.92 mg/L which is beyond permissible limit. Small quantities of Nitrate and Phosphate are found within the limit in the water samples. Regarding the biological parameters the COD values seemed to be very higher even though the BOD values are

comparatively less. Fecal and Total Coliforms are also found in the water samples. The river water is classified as C₃S₁ category.

2.3.1.2 PENNAR RIVER BASIN

The Pennar River is one of the major East flowing rivers in Southern India. It rises in the Chennakesava hill of the Nandidurg range in Karnataka. The Pennar drains an area of 55,213 Sq.Kms in the states of Karnataka and Andhra Pradesh as below. The total length of Pennar River is 597 Km of which 61 Km runs in Karnataka and the rest in Andhra Pradesh. This river has six major tributaries viz., the Jayamangali, the Kunderu and the Sagileru joining from the left, the Chitravathi, the Papagni and the Cheyyeru joining on the right. There are eight water quality stations on Pennar river Basin i.e. the sites at **Nagalamadike, Tadipatri, Chennur** and **Nellore** in the main river, rest on the tributaries viz., Chitravathi at **Singavaram**, Kunderu at **Alladupalli**, Papagni at **Kamalapuram** and Sagileru at **Nandipalli**.

The rivers at the site Nagalamadike, Tadipatri and Singavaram are completely dry throughout the year; hence water quality analysis at these sites was not done. The water of this basin are generally alkaline in nature and the pH varied from 7.2 (Nellore) to 8.3 (Kamalapuram). Electrical Conductivity is used as an indicator of the abundance of dissolved inorganic salts or total concentration of ions. Electrical Conductivity values shows variety of results in Pennar River Basin. The lowest value is 179 µmhos/cm (Nellore), whereas the highest value is 1697 µmhos/cm (Alladupalli). Sodium toxicity is not as easily diagnosed as Chloride toxicity, but clear cases of the former have been recorded as a result of relatively high sodium concentrations in the water (high Na or SAR). In the Pennar River Basin predominant cation is Sodium with the concentration ranging from 21.0 mg/L (Nellore) to 254.0 mg/L (Alladupalli). The Calcium, Magnesium and Potassium are the other dominant cations ranging from 11.0 mg/L (Nellore) to 71.0 mg/L (Alladupalli), 4.9 mg/L (Nellore) to 39.7 mg/L (Alladupalli) and 1.7 mg/L (Kamalapuram) to 9.0 mg/L (Alladupalli) respectively. Among the anions Bicarbonate is the dominant anion with the concentration ranging from 56.0 mg/L

(Nellore) to 293.0 mg/L (Alladupalli) followed by Chloride and Sulphate ranging from 27.5 mg/L (Nellore) to 337.5 mg/L (Alladupalli) and 8.1 mg/L (Kamalapuram) to 212.5 mg/L (Alladupalli) respectively. Small quantity of Carbonate is found in water sample of Kamalapuram. Small quantities of Ammonia, Fluoride, Nitrate and Phosphate are also found within the limit in the water samples. Biological parameter B.O.D is within the tolerance limit for all the sites of this river basin. Among the Trace and Toxic elements considerable quantities of Arsenic, Cadmium, Chromium, Copper, Lead, Nickel and Zinc are also found in the water sample. The river water of this basin is classified as C₃S₁ (Alladupalli, Chennur) and C₂S₁ (Kamalapuram, Nandipalli, Nellore) category.

2.3.1.3 SWARNAMUKHI RIVER BASIN

The Swarnamukhi is an East Flowing river basin having a small catchment area of 3,225 Sq.Km. It raises at an elevation of 300 m. in the Eastern Ghat ranges near Pakala village in Chittur district of Andhra Pradesh. Its total length is 130 Km. This is an independent river and has no major tributaries and therefore its flow depends only on rainfall in its upper catchment.

The only site of this basin at **Naidupeta** and water is generally alkaline in nature and the pH varying in the range of 7.4 to 8.0. The Electrical Conductivity varied from 200 µmhos/cm to 709 µmhos/cm. Predominant cation is Sodium with the concentration ranging from 19.1 mg/L to 64.0 mg/L. The Calcium, Magnesium and Potassium are the other dominant cations ranging from 13.0 mg/L to 52.0 mg/L, 4.9 mg/L to 21.1 mg/L and 2.2 mg/L to 3.4 mg/L respectively. Bicarbonate is the dominant anion with the concentration ranging from 73.0 mg/L to 253.0 mg/L followed by Chloride and Sulphate ranging from 27.5 mg/L to 93.6 mg/L and 8.7 mg/L to 30.5 mg/L respectively. Fluoride and Nitrate are also found within the tolerance limit in the water samples. Biological parameter B.O.D is within the tolerance limit throughout the year. The river water is classified as C₂S₁.

2.3.1.4 KALINGI RIVER BASIN

The river Kalingi is one of the East flowing rivers in Andhra Pradesh. It originates near Kalahasti in Andhra Pradesh and drains completely in Andhra Pradesh and joins Pulicat Lake after Sullurpet. The catchment area of Kalingi river is 5,927 Sq.Km and the length is 76 Km. The important tributary is Kalleru river which joins Kalingi river after Sullurpet town.

The only site of this basin at **Sullurpet** and water is generally alkaline in nature and the pH varying in the range of 7.6 to 8.1. The Electrical Conductivity varied from 200 $\mu\text{mhos/cm}$ to 204 $\mu\text{mhos/cm}$. Predominant cation is Sodium with the concentration ranging from 18.1 mg/L to 20.9 mg/L. The Calcium, Magnesium and Potassium are the other dominant cations and their maximum values are 17.0 mg/L, 4.9 mg/L and 2.0 mg/L respectively. Bicarbonate is the dominant anion with the concentration ranging from 67.0 mg/L to 73.0 mg/L followed by Chloride and Sulphate and their maximum values are 27.5 mg/L and 12.9 mg/L respectively. Small quantity of Fluoride and Nitrate are also found within the tolerance limit in the water samples. Biological parameter B.O.D is within the tolerance limit throughout the year. The river water is classified as C₁S₁.

2.3.1.5 PALAR RIVER BASIN

River Palar raises in the Kolar district of Karnataka State. It has two tributaries viz., Ponni and Cheyar. The total length of the river is 348 km. Three out of four stations in Palar basin are on the main river. They are **Chengalpet**, **Arcot** and **Avarankuppam**. The fourth station i.e. **Magaral** is on the tributary Cheyar.

The water of this basin are generally alkaline in nature and the pH varied from 7.4 to 8.5 both at Chengalpet. Electrical Conductivity values shows variety of results in Pennar River Basin. The lowest value is 84 $\mu\text{mhos/cm}$ (Magaral), whereas the highest value is 1345 $\mu\text{mhos/cm}$ (Arcot). In the Palar River Basin predominant

cation is Sodium with the concentration ranging from 4.5 mg/L (Magral) to 170.0 mg/L (Arcot). The Calcium, Magnesium and Potassium are the other dominant cations ranging from 8.0 mg/L (Magral) to 65.0 mg/L (Arcot), 3.2 mg/L (Magral) to 22.7 mg/L (Arcot) and 2.1 mg/L (Magral) to 12.5 mg/L (Arcot) respectively. Among the anions Bicarbonate is the dominant anion with the concentration ranging from 34.0 mg/L (Magral) to 258.0 mg/L (Arcot) followed by Chloride and Sulphate ranging from 8.3 mg/L (Magral) to 278.3 mg/L (Arcot) and 3.4 mg/L (Magral) to 69.6 mg/L (Arcot) respectively. Small quantities of Ammonia, Carbonate, Fluoride and Nitrate are also found in the water sample. Biological parameter B.O.D and Chemical indices S.A.R are within the tolerance limit of this river basin. The river water is classified as C₂S₁ (Chengalpet, Avarankuppam, Magral) and C₃S₁ (Arcot) category.

2.3.1.6 VARAHANADHI RIVER BASIN

The main river Varahanadhi originates from the Northern part of Pakkammalai hills at an elevation of 566 m above m.s.l. The total drainage area of the basin is 2564 Sq.Kms. The river runs in Easterly direction up to Kodukkur and South-Easterly direction alternately in Tami Nadu and Puduchery states. The total length of Varahanadhi up to its outfall into Bay of Bengal, a little South of Union territory Puduchery, is about 78.50 kms.

The only site of this basin at **Kumarapalayam** and water is slightly alkaline in nature and the pH varying in the range of 7.5 to 7.9. The Electrical Conductivity varied from 270 µmhos/cm to 297 µmhos/cm. Predominant cation is Sodium with the concentration ranging from 17.2 mg/L to 30.1 mg/L. The Calcium, Magnesium and Potassium are the other dominant cations and their maximum values are 23.0 mg/L, 11.4 mg/L and 3.1 mg/L respectively. Bicarbonate is the dominant anion with the concentration ranging from 101.0 mg/L to 112.0 mg/L followed by Chloride and Sulphate and their maximum values are 46.8 mg/L and 13.6 mg/L respectively. Small quantity of Fluoride and Nitrate are also found within the tolerance limit in the water samples. Biological parameter B.O.D is within the tolerance limit throughout the year. The river water is classified as C₂S₁.

2.3.1.7 PONNAIYAR RIVER BASIN

The Ponnaiyar or the Dakshina Pinakini River rises near Hongashenhalli village at an elevation of about 900 m. above m.s.l. in the Kolar district of Karnataka. From its origin, the river Ponnaiyar generally flows in the Southern direction for a length of 79 Km. through Kolar and Bangalore districts of Karnataka before entering the Krishnagiri district of Tamil Nadu. The total length of the river is 396 km. The Ponnaiyar drains an area of 16,019 Sq. Kms. There are three water quality stations on this river at **Villupuram, Vazhavachanur and Gummanur.**

The Ponnaiyar River water is alkaline in nature and the pH ranging from 7.2 (Vazhavachanur) to 8.5 (Gummanur). The Electrical Conductivity varied from 394 μ mhos/cm (Villupuram) to 1317 μ mhos/cm (Gummanur). In the Ponnaiyar River Basin predominant cation is Sodium with the concentration ranging from 31.7 mg/L (Villupuram) to 163.0 mg/L (Vazhavachanur). The Calcium, Magnesium and Potassium are the other dominant cations ranging from 27.0 mg/L (Villupuram) to 118.0 mg/L (Gummanur), 13.8 mg/L (Villupuram) to 53.9 mg/L (Gummanur) and 2.7 mg/L (Vazhavachanur) to 24.2 mg/L (Gummanur) respectively. Bicarbonate is the dominant anion with the concentration ranging from 109.0 mg/L (Vazhavachanur) to 360.0 mg/L (Gummanur) followed by Chloride ranging from 52.3 mg/L (Villupuram) to 226.9 mg/L (Vazhavachanur). The other major anion Sulphate and Nitrate are ranging from 17.8 mg/L (Villupuram) to 55.7 mg/L (Vazhavachanur) and 0.36 mg/L (Vazhavachanur) to 31.0 mg/L (Gummanur) respectively. The anion Carbonate is also found in water samples of this river basin with the maximum value 40.4 mg/L at Gummanur. Small quantities of Fluoride, Iron, Silicate and Phosphate are also found in the water sample of this basin. The concentration of Nitrate is very high at Gummanur throughout the year and maximum time the Nitrate concentration had crossed the permissible limit i.e. 22.5 mg/L. Biological parameter B.O.D and Chemical indices S.A.R are within the tolerance limit for all the sites except Gummanur site where B.O.D is high. The river water is classified as C₃S₁ (Gummanur, Vazhavachanur) and C₂S₁ (Villupuram) category.

2.3.1.8 VELLAR RIVER BASIN

The basin is located between Ponnaiyar and Cauvery basins. The Vellar River rises at an elevation of 900 m near the village of Tumba in the Chittori hills, of the Eastern Ghats in the Salem district of Tamil Nadu. It flows generally in an Easterly direction for a total length of 210 Km in the Salem and Cuddalore districts in Tamil Nadu and finally out falls in to the Bay of Bengal near Porto Nova in Cuddalore district. The Gomukinadhi and Manimukthanadhi are the important left tributaries and Swetanadhi and Chinnar are the right tributaries of the Vellar. The Vellar drains an area of 8,922 Sq.Km.

The only site of this basin at **Kudalaiyathur** with the flow of only two month shows water is generally alkaline in nature and the mean pH value is 7.8. The Electrical Conductivity varied from 263 $\mu\text{mhos/cm}$ to 377 $\mu\text{mhos/cm}$. Predominant cation is Sodium with the concentration ranging from 25.0 mg/L to 32.0 mg/L. The Calcium, Magnesium and Potassium are the other dominant cations and their maximum values are 27.0 mg/L, 10.5 mg/L and 3.1 mg/L respectively. Bicarbonate is the dominant anion with the concentration ranging from 95.0 mg/L to 140.0 mg/L followed by Chloride and Sulphate and their maximum values are 44.1 mg/L and 21.9 mg/L respectively. Small quantities of Fluoride and Nitrate are also found in the water samples. Biological parameter B.O.D, Chemical indices S.A.R and all parameters are within the tolerance limit. The river water is classified as C₂S₁ category.

2.3.1.9 VAIGAI RIVER BASIN

River Vaigai originates in Theni district of Tamilnadu and traverses through the state draining in its course a total area of 7741 Sq.Kms. There are three water quality stations on Vaigai basin. Two are on the main river at **Paramakudi** and **Ambasamudram** and the third is on its tributary Suruliyar at **Theni**. The river Vaigai remained practically dry throughout the year and had flow only during the North East monsoon. The tributary Suruliar had flow throughout the year.

The water of Vaigai River basin is generally alkaline in nature with the pH varied from 7.3 (Theni) to 9.5 (Ambasamudram). The Electrical Conductivity varied from 63 μ mhos/cm to 500 μ mhos/cm both at Theni. In this river Basin predominant cation is Calcium with the concentration ranging from 6.0 mg/L (Theni) to 30.0 mg/L (Paramakudi). The Sodium, Magnesium and Potassium are the other dominant cations ranging from 4.4 mg/L (Theni) to 34.8 mg/L (Theni), 1.9 mg/L (Ambasamudram) to 41.4 mg/L (Theni) and 1.4 mg/L (Theni) to 6.9 mg/L (Paramakudi) respectively. Bicarbonate is the dominant anion with the concentration ranging from 19.0 mg/L (Theni) to 237.0 mg/L (Theni) followed by Chloride and Sulphate ranging from 8.1 mg/L (Theni) to 46.8 mg/L (Theni) and 4.2 mg/L (Theni) to 16.3 mg/L (Theni) respectively. Small quantities of Boron, Ammonia, Fluoride, Nitrate, Silicate and Phosphate are also found in water samples of this basin. Biological parameter B.O.D, Chemical indices S.A.R and all parameters are within the tolerance limit for all the sites. The river water in this basin is classified as C₂S₁ (Theni, Paramakudi) category and C₁S₁ (Ambasamudram).

2.3.1.10 VAIPPAR RIVER BASIN

Vaippar River originates from the Western Ghats near Sivagiri in Thirunelveli District in Tamilnadu. It drains an area of 5069 Sq.Kms and lies entirely in Tamilnadu. The river covers a distance of 125 Kms from its origin to its out-falling into the Gulf of Mannar near Kalattur.

The water quality station on this river is located at **Irrukkankudi** and water is generally alkaline in nature and the pH varying in the range of 7.5 to 8.3. The Electrical Conductivity varied from 301 μ mhos/cm to 461 μ mhos/cm. Predominant cation is Calcium with the concentration ranging from 25.0 mg/L to 41.0 mg/L. The Sodium, Magnesium and Potassium are the other dominant cations and their maximum values are 37.6 mg/L, 21.9 mg/L and 10.1 mg/L respectively. Bicarbonate is the dominant anion with the concentration ranging from 103.0 mg/L to 210.0 mg/L followed by Chloride and Sulphate and their maximum values are 36.4 mg/L and 20.0 mg/L respectively. Small quantities of

Fluoride, Nitrate, Silicate and Phosphate are also found in the water samples. Biological parameter B.O.D, Chemical indices S.A.R and all parameters are within the tolerance limit. The river water is classified as C₂S₁ category.

2.3.1.11 THAMBRAPARANI RIVER BASIN

The Thambraparani River originating in the Thirunelveli district of Tamilnadu, traverses through the state and joins the Gulf of Manner, covering a total length of 130 Km. and draining an area of 5482 Sq.Kms. Its two important tributaries are Chittar and Manimuthar. There are two water quality stations in this basin, one on the main river at **Murappanadu** and another on its tributary Chittar at **A.P.Puram**.

The water at site Murappanadu on the main river is slightly alkaline in nature and the mean pH value is 7.4. The Electrical Conductivity varied from 107 µmhos/cm to 387 µmhos/cm. Predominant cation is Calcium with the concentration ranging from 9.0 mg/L to 33.0 mg/L. The Sodium, Magnesium and Potassium are the other dominant cations ranging from 9.5 mg/L to 32.5 mg/L, 2.9 mg/L to 15.5 mg/L and 1.7 mg/L to 8.6 mg/L respectively. Bicarbonate is the dominant anion with the concentration ranging from 27.0 mg/L to 126.0 mg/L followed by Chloride and Sulphate ranging from 12.7 mg/L to 55.8 mg/L and 5.6 mg/L to 18.5 mg/L respectively. Small quantities of Boron Iron, Fluoride and Nitrate are also found within the limit in water samples. The river water is classified as C₂S₁ category.

The water at site A.P.Puram on the tributary Chittar is generally polluted. At A.P.Puram water is slightly alkaline in nature and the pH ranging from 7.5 to 8.2. The Electrical Conductivity varied from 637 µmhos/cm to 3488 µmhos/cm. The predominant cation is Sodium with the concentration ranging from 58.1 mg/L to 454.0 mg/L. The Calcium, Magnesium and Potassium are the other dominant cations ranging from 39.0 mg/L to 178.0 mg/L, 17.2 mg/L to 132.8 mg/L and 5.4 mg/L to 11.9 mg/L respectively. Chloride is the dominant anion with the concentration ranging from 109.6 mg/L to 866.0 mg/L. The most common toxicity is from Chloride in the irrigation water. Chloride is not adsorbed or held

back by soils and therefore it moves readily in the soil water system and absorbed by the crop, moves in the transpiration stream, and accumulates in the leaves. If the Chloride concentration in the leaves exceeds the tolerance limit of the plant, injury symptoms develop such as leaf burn or drying of leaf tissue. Normally, plant injury occurs first at the leaf tips (which is common for Chloride toxicity), and progresses from the tip back along the edges as severity increases. Excessive necrosis (dead tissue) is often accompanied by early leaf drop or defoliation. The other major anions Bicarbonate and Sulphate ranging from 149.0 mg/L to 418.0 mg/L and 30.5 mg/L to 244.2 mg/L respectively. Boron, Ammonia, Fluoride, Nitrate, Silicate and Phosphate are also found in water samples. The river water is classified as C₄S₁ category.

HISTORY SHEET

		Water Year	: 2015-2016
Site	: MARELLA	Code	: AU000E5
State	: Andhra Pradesh	District	Prakasam
Basin	: EFR B Krishna-Pennar	Independent River	: Gundlakamma
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Gundlakamma
Division	: LK Division, Hyderabad	Sub-Division	: Lower Krishna SD 1, N.S.Dam
Drainage Area	: 7681 Sq. Km.	Bank	: Right
Latitude	: 15°52'55"	Longitude	: 79°54'36"
Zero of Gauge (m)	: 95.000 (m.s.l) Arb 28.000 (m.s.l)	21/06/2007 01/06/2012	- 31/05/2012
	Opening Date	Closing Date	
Gauge	: 21/06/2007		
Discharge	: 28/06/2007		
Sediment	: 01/08/2007		
Water Quality	: 01/09/2007		

Water Quality Datasheet for the period : 2015-2016

Station Name : MARELLA (AU000E5)

Division : Lower Krishna Divn., Hyderabad

Local River : Gundlakamma

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

River Water Analysis

S.No	Parameters	01/07/2015	01/09/2015
		A	A
	PHYSICAL		
1	Q (cumec)	3.293	0.032
2	Colour_Cod (-)	Clear	Clear
3	EC_GEN (µmho/cm)	1249	1387
4	Odour_Code (-)	odour free	odour free
5	pH_GEN (pH units)	8.2	7.7
6	TDS (mg/L)	732	894
7	Temp (deg C)	28.5	26.0
8	Turb (NTU)	14.00	14.00
	CHEMICAL		
1	Alk-Phen (mgCaCO3/L)	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	323	314
3	Ca (mg/L)	38	38
4	Cl (mg/L)	148.7	182.3
5	CO3 (mg/L)	0.0	0.0
6	F (mg/L)	1.92	1.34
7	Fe (mg/L)	0.0	0.0
8	HCO3 (mg/L)	394	383
9	K (mg/L)	9.0	16.7
10	Mg (mg/L)	21.4	21.8
11	Na (mg/L)	221.7	249.3
12	NH3-N (mg N/L)	0.08	0.00
13	NO2+NO3 (mg N/L)	0.79	1.21
14	NO2-N (mgN/L)	0.01	0.00
15	NO3-N (mgN/L)	0.79	1.21
16	o-PO4-P (mg P/L)	0.270	0.172
17	SiO2 (mg/L)	15.1	20.6
18	SO4 (mg/L)	106.0	126.0
	BIOLOGICAL/BACTERIOLOGICAL		
1	BOD3-27 (mg/L)	1.4	1.3
2	COD (mg/L)	31.3	18.8
3	DO (mg/L)	3.6	5.8
4	DO_SAT% (%)	46	71
5	FCol-MPN (MPN/100mL)	260	800
6	Tcol-MPN (MPN/100mL)	16000	2800
7	TOC (mg/L)	59.7	49.2
	TRACE & TOXIC		
	CHEMICAL INDICES		
1	HAR_Ca (mgCaCO3/L)	96	96
2	HAR_Total (mgCaCO3/L)	185	187
3	Na% (%)	71	72
4	RSC (-)	2.8	2.6
5	SAR (-)	7.1	8.0
	PESTICIDES	Anlaysia not done due to mall function of instrument.	

Samples not collected due to dry bed / no flow condition during June, August and from October to May months.

Water Quality Summary for the period : 2015-2016

Station Name : MARELLA (AU000E5)

Division : Lower Krishna Divn., Hyderabad

Local River : Gundlakamma

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)	366	18.8	0.000	0.387
2	EC_GEN (µmho/cm)	2	1387	1249	1318
3	pH_GEN (pH units)	2	8.2	7.7	8
4	TDS (mg/L)	2	894	732	813
5	Temp (deg C)	2	28.5	26.0	27.3
6	Turb (NTU)	2	14.00	14.00	14
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	2	323	314	318
3	Ca (mg/L)	2	38	38	38
4	Cl (mg/L)	2	182.3	148.7	165.5
5	CO3 (mg/L)	2	0.0	0.0	0
6	F (mg/L)	2	1.92	1.34	1.63
7	Fe (mg/L)	2	0.0	0.0	0
8	HCO3 (mg/L)	2	394	383	388
9	K (mg/L)	2	16.7	9.0	12.8
10	Mg (mg/L)	2	21.8	21.4	21.6
11	Na (mg/L)	2	249.3	221.7	235.5
12	NH3-N (mg N/L)	2	0.08	0.00	0.04
13	NO2+NO3 (mg N/L)	2	1.21	0.79	1
14	NO2-N (mgN/L)	2	0.01	0.00	0
15	NO3-N (mgN/L)	2	1.21	0.79	1
16	o-PO4-P (mg P/L)	2	0.270	0.172	0.221
17	SiO2 (mg/L)	2	20.6	15.1	17.8
18	SO4 (mg/L)	2	126.0	106.0	116
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2	1.4	1.3	1.3
2	COD (mg/L)	2	31.3	18.8	25
3	DO (mg/L)	2	5.8	3.6	4.7
4	DO_SAT% (%)	2	71	46	59
5	FCOI-MPN (MPN/100mL)	2	800	260	530
6	Tcol-MPN (MPN/100mL)	2	16000	2800	9400
7	TOC (mg/L)	2	59.7	49.2	54.5
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	2	96	96	96
2	HAR_Total (mgCaCO3/L)	2	187	185	186
3	Na% (%)	2	72	71	72
4	RSC (-)	2	2.8	2.6	2.7
5	SAR (-)	2	8.0	7.1	7.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2007-2016

Station Name : MARELLA (AU000E5)

Division : Lower Krishna Divn., Hyderabad

Local River : Gundlakamma

River Water

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

S.No	Parameters	Flood			
		Jun - Oct			
		2007	2008	2009	2010
	PHYSICAL				
1	Q (cumec)	53.5	2.002	19.54	37.26
2	EC_GEN (µmho/cm)	503	1334	949	997
3	pH_GEN (pH units)	8.0	8.0	7.6	7.7
4	TDS (mg/L)				
5	Temp (deg C)	26.5	27.8	27.5	29.1
6	Turb (NTU)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	1.6	2.0	1.6
2	ALK-TOT (mgCaCO3/L)	258	338	264	304
3	B (mg/L)	0.00	0.00	0.00	0.00
4	Ca (mg/L)	38	39	34	38
5	Cl (mg/L)	58.6	175.3	111.5	97.3
6	CO3 (mg/L)	0.0	1.9	2.4	1.9
7	F (mg/L)	1.17	1.13	1.55	1.29
8	Fe (mg/L)	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	315	409	317	367
10	K (mg/L)	5.7	6.1	6.8	6.5
11	Mg (mg/L)	16.5	16.9	14.8	20.8
12	Na (mg/L)	135.0	224.2	123.8	143.0
13	NH3-N (mg N/L)	0.05	0.05	0.00	0.00
14	NO2+NO3 (mg N/L)	0.01	0.01	1.30	0.00
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.01	0.01	1.30	0.00
17	o-PO4-P (mg P/L)				
18	P-Tot (mgP/L)	0.001	0.001	0.000	0.169
19	SiO2 (mg/L)	19.8	24.9	24.8	19.9
20	SO4 (mg/L)	49.0	111.3	107.0	95.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.4	1.6	0.9	1.1
2	Chlf-a (µg/L)				
3	COD (mg/L)	13.3	40.4	28.9	39.7
4	DO (mg/L)	5.8	5.1	5.7	6.1
5	DO_SAT% (%)	72	64	72	80
6	FCol-MPN (MPN/100mL)			16000	9948
7	Tcol-MPN (MPN/100mL)			16000	12808
8	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)	94	97	84	96
2	HAR_Total (mgCaCO3/L)	163	167	146	183
3	Na% (%)	63	73	63	61
4	RSC (-)	1.9	3.4	2.4	2.5
5	SAR (-)	4.6	7.6	4.5	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: 2007-2016

Station Name : MARELLA (AU000E5)

Division : Lower Krishna Divn., Hyderabad

Local River : Gundlakamma

River Water

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

S.No	Parameters	Flood			
		June-Oct			
		2011	2012	2013	2014
	PHYSICAL				
1	Q (cumec)	5.006	1.66	10.87	6.158
2	EC_GEN (µmho/cm)	1158	930	1124	1008
3	pH_GEN (pH units)	7.9	8.1	8.0	8.4
4	TDS (mg/L)	638	671	654	615
5	Temp (deg C)	29.4	26.3	28.7	28.5
6	Turb (NTU)		0.10	1.96	8.00
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	1.3	1.4	2.1
2	ALK-TOT (mgCaCO3/L)	298	216	232	157
3	B (mg/L)	0.00	0.26	0.13	0.14
4	Ca (mg/L)	39	22	37	37
5	Cl (mg/L)	133.5	114.6	126.2	107.2
6	CO3 (mg/L)	0.0	1.6	1.7	2.5
7	F (mg/L)	2.00	0.82	1.41	1.05
8	Fe (mg/L)	0.0	0.2	0.1	0.1
9	HCO3 (mg/L)	364	261	279	187
10	K (mg/L)	6.4	8.0	7.5	7.8
11	Mg (mg/L)	22.4	14.8	20.9	20.9
12	Na (mg/L)	152.9	144.9	168.2	153.8
13	NH3-N (mg N/L)	0.00	0.02	0.09	0.00
14	NO2+NO3 (mg N/L)	0.42	1.17	1.04	0.99
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.42	1.17	1.04	0.99
17	o-PO4-P (mg P/L)	0.494		0.143	0.214
18	P-Tot (mgP/L)	0.494	0.189	0.347	0.269
19	SiO2 (mg/L)	19.3	18.5	17.0	17.3
20	SO4 (mg/L)	111.1	72.3	111.3	189.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.2	1.4	1.5	0.7
2	Chlf-a (µg/L)				
3	COD (mg/L)	25.3	29.4	8.4	25.9
4	DO (mg/L)	5.4	6.5	5.8	5.6
5	DO_SAT% (%)	71	81	75	72
6	FCol-MPN (MPN/100mL)	12846	5810	837	8115
7	Tcol-MPN (MPN/100mL)	12846	6210	1137	9200
8	TOC (mg/L)	4.6	5.5		
	TRACE & TOXIC				
1	As (µg/L)		0.01	5.41	
2	Cd (µg/L)		0.00	0.78	
3	Cr (µg/L)		0.00	0.48	
4	Cu (µg/L)		0.02	6.51	
5	Hg (µg/L)			0.12	
6	Ni (µg/L)		0.01	14.60	
7	Pb (µg/L)		0.01	5.64	
8	Zn (µg/L)		0.06	0.03	
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	98	55	91	92
2	HAR_Total (mgCaCO3/L)	191	117	178	179
3	Na% (%)	63	70	65	64
4	RSC (-)	2.2	2.0	1.1	0.7
5	SAR (-)	4.9	5.8	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: 2007-2016

Station Name : MARELLA (AU000E5)

Division : Lower Krishna Divn., Hyderabad

Local River : Gundlakamma

River Water

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

S.No	Parameters	Flood	Winter		
		Jun - Oct	Nov - Feb		
		2015	2007-2008	2008-2009	2009-2010
	PHYSICAL				
1	Q (cumec)	1.663	79.38	136.4	32.68
2	EC_GEN (µmho/cm)	1318	761	638	756
3	pH_GEN (pH units)	8.0	7.5	7.7	8.2
4	TDS (mg/L)	813			
5	Temp (deg C)	27.3	26.5	26.5	26.8
6	Turb (NTU)	14.00			
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	2.0	2.0
2	ALK-TOT (mgCaCO3/L)	318	267	196	280
3	B (mg/L)		0.00	0.00	0.00
4	Ca (mg/L)	38	38	44	45
5	Cl (mg/L)	165.5	60.4	43.9	72.6
6	CO3 (mg/L)	0.0	0.0	2.4	2.4
7	F (mg/L)	1.63	1.38	0.72	1.72
8	Fe (mg/L)	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	388	326	234	337
10	K (mg/L)	12.8	5.1	3.2	4.1
11	Mg (mg/L)	21.6	15.8	9.5	20.6
12	Na (mg/L)	235.5	113.0	65.8	119.5
13	NH3-N (mg N/L)	0.04	0.05	0.05	0.00
14	NO2+NO3 (mg N/L)	1.00	0.01	0.01	0.61
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	1.00	0.01	0.01	0.61
17	o-PO4-P (mg P/L)	0.221			
18	P-Tot (mgP/L)		0.001	0.001	0.000
19	SiO2 (mg/L)	17.8	20.6	13.2	16.8
20	SO4 (mg/L)	116.0	48.5	46.1	73.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.3	1.1	1.0	1.1
2	Chlf-a (µg/L)				
3	COD (mg/L)	25.0	16.5	15.7	25.8
4	DO (mg/L)	4.7	6.9	6.7	7.3
5	DO_SAT% (%)	59	86	83	91
6	FCol-MPN (MPN/100mL)	530			16000
7	Tcol-MPN (MPN/100mL)	9400			16000
8	TOC (mg/L)	54.5			
	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)	96	94	109	112
2	HAR_Total (mgCaCO3/L)	186	160	148	198
3	Na% (%)	72	59	46	56
4	RSC (-)	2.7	2.2	1.0	1.7
5	SAR (-)	7.5	3.9	2.3	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: 2007-2016

Station Name : MARELLA (AU000E5)

Division : Lower Krishna Divn., Hyderabad

Local River : Gundlakamma

River Water

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

S.No	Parameters	Winter			
		Nov-Feb			
		2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL				
1	Q (cumec)	63.1	34.44	5.024	38.61
2	EC_GEN (µmho/cm)	888	948	800	810
3	pH_GEN (pH units)	7.6	8.1	8.0	8.2
4	TDS (mg/L)		587	514	467
5	Temp (deg C)	27.3	27.5	26.0	26.8
6	Turb (NTU)		0.25	0.10	16.25
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2.0	3.0	0.0	1.0
2	ALK-TOT (mgCaCO3/L)	272	283	211	258
3	B (mg/L)	0.00	0.30	0.19	0.15
4	Ca (mg/L)	40	43	26	40
5	Cl (mg/L)	78.2	87.1	88.5	70.5
6	CO3 (mg/L)	2.4	3.7	0.0	1.3
7	F (mg/L)	1.09	1.51	0.76	0.91
8	Fe (mg/L)	0.0	0.0	0.1	0.0
9	HCO3 (mg/L)	327	338	257	312
10	K (mg/L)	4.4	4.4	1.1	4.5
11	Mg (mg/L)	22.6	23.8	14.6	22.8
12	Na (mg/L)	110.4	132.6	113.5	102.5
13	NH3-N (mg N/L)	0.00	0.02	0.05	0.00
14	NO2+NO3 (mg N/L)	0.00	0.88	0.65	0.90
15	NO2-N (mgN/L)	0.00	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.00	0.88	0.65	0.90
17	o-PO4-P (mg P/L)		0.325		0.407
18	P-Tot (mgP/L)	0.306	0.327	0.241	0.195
19	SiO2 (mg/L)	16.5	19.1	19.6	12.7
20	SO4 (mg/L)	71.1	76.1	79.0	51.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.7	0.5	1.2	1.2
2	Chlf-a (µg/L)		9000.0		
3	COD (mg/L)	20.0	10.7	15.4	6.5
4	DO (mg/L)	6.9	6.1	6.5	6.6
5	DO_SAT% (%)	87	77	80	83
6	FCol-MPN (MPN/100mL)	12075	8220	2400	4355
7	Tcol-MPN (MPN/100mL)	16000	6210	5000	4473
8	TOC (mg/L)		5.3	4.6	
	TRACE & TOXIC				
1	As (µg/L)		0.83		
2	Cd (µg/L)		0.04		
3	Cr (µg/L)		1.77		
4	Cu (µg/L)		22.03		
5	Hg (µg/L)				
6	Ni (µg/L)		2.32		
7	Pb (µg/L)		1.18		
8	Zn (µg/L)		15.90		
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	99	109	66	100
2	HAR_Total (mgCaCO3/L)	193	208	127	195
3	Na% (%)	55	57	66	52
4	RSC (-)	1.6	1.5	1.7	1.3
5	SAR (-)	3.5	4.0	4.4	3.2
	PESTICIDES				
1	Aldrin (µg/L)				
2	BHC (µg/L)				
3	DDT (µg/L)				
4	Dieldrin (µg/L)				
5	Endos (µg/L)				

Water Quality Seasonal Average for the period: 2007-2016

Station Name : MARELLA (AU000E5)

Division : Lower Krishna Divn., Hyderabad

Local River : Gundlakamma

River Water

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

S.No	Parameters	Winter		Summer	
		Nov - Feb		Mar - May	
		2014-2015	2015-2016	2008	2009
	PHYSICAL				
1	Q (cumec)	24.17		20.14	9.859
2	EC_GEN (µmho/cm)	660		886	955
3	pH_GEN (pH units)	8.2		8.0	7.1
4	TDS (mg/L)	519			
5	Temp (deg C)	25.4		27.3	26.7
6	Turb (NTU)	6.25			
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0		0.0	0.0
2	ALK-TOT (mgCaCO3/L)	275		286	301
3	B (mg/L)	0.19		0.00	0.00
4	Ca (mg/L)	41		39	53
5	Cl (mg/L)	80.1		57.9	54.6
6	CO3 (mg/L)	0.0		0.0	0.0
7	F (mg/L)	1.26		1.42	1.17
8	Fe (mg/L)	0.1		0.0	0.0
9	HCO3 (mg/L)	335		349	367
10	K (mg/L)	6.4		4.4	4.0
11	Mg (mg/L)	22.9		18.3	15.7
12	Na (mg/L)	117.0		110.7	108.7
13	NH3-N (mg N/L)	0.05		0.05	0.05
14	NO2+NO3 (mg N/L)	1.08		0.01	0.01
15	NO2-N (mgN/L)	0.03		0.00	0.00
16	NO3-N (mgN/L)	1.05		0.01	0.01
17	o-PO4-P (mg P/L)	0.260			
18	P-Tot (mgP/L)			0.001	0.001
19	SiO2 (mg/L)	15.8		21.2	22.7
20	SO4 (mg/L)	105.4		52.0	74.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.4		2.0	0.9
2	Chlf-a (µg/L)				
3	COD (mg/L)	17.3		39.9	5.4
4	DO (mg/L)	7.0		6.1	6.5
5	DO_SAT% (%)	86		77	80
6	FCol-MPN (MPN/100mL)	1850			
7	Tcol-MPN (MPN/100mL)	6125			
8	TOC (mg/L)	50.0		4.3	
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)	1.24		0.90	2.48
3	Cr (µg/L)	5.63		2.00	2.00
4	Cu (µg/L)	2.19			
5	Hg (µg/L)			0.00	
6	Ni (µg/L)	0.92		10.10	4.18
7	Pb (µg/L)	5.07		16.64	35.00
8	Zn (µg/L)	3.00		5.02	20.67
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	102		97	132
2	HAR_Total (mgCaCO3/L)	197		173	198
3	Na% (%)	55		58	53
4	RSC (-)	1.6		2.3	2.1
5	SAR (-)	3.6		3.7	3.4
	PESTICIDES				
1	Aldrin (µg/L)			0.010	0.058
2	BHC (µg/L)			0.160	0.100
3	DDT (µg/L)			0.100	0.100
4	Dieldrin (µg/L)			0.010	0.010
5	Endos (µg/L)			0.100	0.100

Water Quality Seasonal Average for the period: 2007-2016

Station Name : MARELLA (AU000E5)

Division : Lower Krishna Divn., Hyderabad

Local River : Gundlakamma

River Water

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

S.No	Parameters	Summer			
		Mar - May			
		2010	2011	2012	2013
	PHYSICAL				
1	Q (cumec)	13.21	16.34	6.237	
2	EC_GEN (µmho/cm)	1083	933	1183	
3	pH_GEN (pH units)	8.0	7.1	8.2	
4	TDS (mg/L)			712	
5	Temp (deg C)	29.3	29.7	30.0	
6	Turb (NTU)			0.00	
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2.7	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	308	257	286	
3	B (mg/L)	0.00	0.00	0.00	
4	Ca (mg/L)	38	42	34	
5	Cl (mg/L)	105.3	89.0	114.0	
6	CO3 (mg/L)	3.2	0.0	0.0	
7	F (mg/L)	2.23	1.35	1.02	
8	Fe (mg/L)	0.0	0.0	0.1	
9	HCO3 (mg/L)	369	313	349	
10	K (mg/L)	8.4	4.7	5.8	
11	Mg (mg/L)	16.5	24.1	19.7	
12	Na (mg/L)	168.6	123.8	159.3	
13	NH3-N (mg N/L)	0.00	0.00	0.02	
14	NO2+NO3 (mg N/L)	0.00	0.00	1.04	
15	NO2-N (mgN/L)	0.00	0.00	0.00	
16	NO3-N (mgN/L)	0.00	0.00	1.04	
17	o-PO4-P (mg P/L)			0.200	
18	P-Tot (mgP/L)	0.000	0.137	0.199	
19	SiO2 (mg/L)	23.0	19.7	17.6	
20	SO4 (mg/L)	89.1	74.0	92.1	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.2	0.5	1.0	
2	Chlf-a (µg/L)				
3	COD (mg/L)	24.3	25.5	8.7	
4	DO (mg/L)	6.1	6.0	6.0	
5	DO_SAT% (%)	80	79	79	
6	FCol-MPN (MPN/100mL)	11467	11400	8010	
7	Tcol-MPN (MPN/100mL)	11467	11667	8020	
8	TOC (mg/L)			3.7	
	TRACE & TOXIC				
1	As (µg/L)	3.38		4.16	
2	Cd (µg/L)	0.00	1.02	0.57	
3	Cr (µg/L)	0.00	0.00	0.00	
4	Cu (µg/L)				
5	Hg (µg/L)			2.03	
6	Ni (µg/L)	0.35	2.74	4.81	
7	Pb (µg/L)	0.00	0.00	27.13	
8	Zn (µg/L)	12.76	3.13	17.51	
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	96	104	85	
2	HAR_Total (mgCaCO3/L)	165	205	167	
3	Na% (%)	67	56	66	
4	RSC (-)	2.9	1.1	2.4	
5	SAR (-)	5.8	3.8	5.4	
	PESTICIDES				
1	Aldrin (µg/L)	0.003	0.040	0.003	
2	BHC (µg/L)	0.070	0.076	0.112	
3	DDT (µg/L)	0.007	0.000	0.006	
4	Dieldrin (µg/L)	0.002	0.038	0.002	
5	Endos (µg/L)	0.125	0.055	0.016	

Water Quality Seasonal Average for the period: 2007-2016

Station Name : MARELLA (AU000E5)

Division : Lower Krishna Divn., Hyderabad

Local River : Gundlakamma

River Water

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

S.No	Parameters	Summer		
		Mar - May		
		2014	2015	2016
	PHYSICAL			
1	Q (cumec)	4.425	6.37	
2	EC_GEN (µmho/cm)	1166	984	
3	pH_GEN (pH units)	8.1	8.1	
4	TDS (mg/L)	755	628	
5	Temp (deg C)	27.7	25.0	
6	Turb (NTU)	5.33	2.00	
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	333	270	
3	B (mg/L)	0.19	0.31	
4	Ca (mg/L)	38	42	
5	Cl (mg/L)	114.9	97.9	
6	CO3 (mg/L)	0.0	0.0	
7	F (mg/L)	1.14	1.30	
8	Fe (mg/L)	0.3	0.0	
9	HCO3 (mg/L)	406	329	
10	K (mg/L)	17.0	4.4	
11	Mg (mg/L)	21.7	23.8	
12	Na (mg/L)	169.7	143.4	
13	NH3-N (mg N/L)	0.00	0.00	
14	NO2+NO3 (mg N/L)	0.76	0.22	
15	NO2-N (mgN/L)	0.00	0.00	
16	NO3-N (mgN/L)	0.76	0.22	
17	o-PO4-P (mg P/L)	0.067	0.190	
18	P-Tot (mgP/L)	0.200		
19	SiO2 (mg/L)	19.9	10.1	
20	SO4 (mg/L)	98.0	100.5	
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	0.8	1.0	
2	Chlf-a (µg/L)			
3	COD (mg/L)	4.9	14.1	
4	DO (mg/L)	5.5	5.9	
5	DO_SAT% (%)	69	71	
6	FCol-MPN (MPN/100mL)	814	2	
7	Tcol-MPN (MPN/100mL)	5377	1700	
8	TOC (mg/L)		42.8	
	TRACE & TOXIC			
1	As (µg/L)	1.70		
2	Cd (µg/L)	0.00		
3	Cr (µg/L)	0.00		
4	Cu (µg/L)			
5	Hg (µg/L)	0.22		
6	Ni (µg/L)	0.00		
7	Pb (µg/L)	0.00		
8	Zn (µg/L)	107.40		
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	96	104	
2	HAR_Total (mgCaCO3/L)	186	203	
3	Na% (%)	60	60	
4	RSC (-)	3.0	1.4	
5	SAR (-)	5.5	4.4	
	PESTICIDES			
1	Aldrin (µg/L)			
2	BHC (µg/L)			
3	DDT (µg/L)			
4	Dieldrin (µg/L)			
5	Endos (µg/L)			

HISTORY SHEET

		Water Year	: 2015-2016
Site	: NELLORE	Code	: AP000A6
State	: Andhra Pradesh	District	Nellore
Basin	: Pennar	Independent River	: Pennar
Tributary	:	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Pennar
Division	: Hydrology Division, Chennai	Sub-Division	: PSD, Kadapa
Drainage Area	: 50800 Sq. Km.	Bank	: Right
Latitude	: 14°28'13"	Longitude	: 79°59'20"
Zero of Gauge (m)	: 43.500 (m.s.l)	14/08/1987	- 31/05/2003
	: 7.230 (m.s.l)	01/06/2003	-
	Opening Date	Closing Date	
Gauge	: 14/08/1987		
Discharge	: 28/08/1987		
Sediment	: 21/06/2014		
Water Quality	: 01/09/1988		

Water Quality Datasheet for the period : 2015-2016

Station Name : Nellore (AP000A6)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	0.263	0.247	0.194
2	Colour_Cod (-)			
3	EC_FLD (µmho/cm)			
4	EC_GEN (µmho/cm)			
5	Odour_Code (-)			
6	pH_FLD (pH units)			
7	pH_GEN (pH units)			
8	TDS (mg/L)			
9	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	Fe (mg/L)			
8	HCO3 (mg/L)			
9	K (mg/L)			
10	Mg (mg/L)			
11	Na (mg/L)			
12	NH3-N (mg N/L)			
13	NO2+NO3 (mg N/L)			
14	NO2-N (mgN/L)			
15	NO3-N (mgN/L)			
16	o-PO4-P (mg P/L)			
17	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
2	DO (mg/L)			
3	DO_SAT% (%)			
	TRACE & TOXIC			
1	As (µg/L)			
2	Cd (µg/L)			
3	Cr (µg/L)			
4	Cu (µg/L)			
5	Hg (µg/L)			
6	Ni (µg/L)			
7	Pb (µg/L)			
8	Zn (µg/L)			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Nellore (AP000A6)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	12/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	0.167	0.093	836.3
2	Colour_Cod (-)			Brown
3	EC_FLD (µmho/cm)			532
4	EC_GEN (µmho/cm)			179
5	Odour_Code (-)			odour free
6	pH_FLD (pH units)			7.2
7	pH_GEN (pH units)			7.6
8	TDS (mg/L)			105
9	Temp (deg C)			24.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			0.0
2	ALK-TOT (mgCaCO3/L)			46
3	Ca (mg/L)			11
4	Cl (mg/L)			27.5
5	CO3 (mg/L)			0.0
6	F (mg/L)			0.25
7	Fe (mg/L)			
8	HCO3 (mg/L)			56
9	K (mg/L)			2.2
10	Mg (mg/L)			4.9
11	Na (mg/L)			21.0
12	NH3-N (mg N/L)			0.04
13	NO2+NO3 (mg N/L)			0.22
14	NO2-N (mgN/L)			0.00
15	NO3-N (mgN/L)			0.22
16	o-PO4-P (mg P/L)			0.009
17	SO4 (mg/L)			14.2
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			2.4
2	DO (mg/L)			4.9
3	DO_SAT% (%)			58
	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)			27
2	HAR_Total (mgCaCO3/L)			47
3	Na% (%)			48
4	RSC (-)			0.0
5	SAR (-)			1.3
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Nellore (AP000A6)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	405	8.508	4.672
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	560	605	600
4	EC_GEN (µmho/cm)	544	483	374
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.2	7.2	7.2
7	pH_GEN (pH units)	7.7	7.5	7.3
8	TDS (mg/L)	319	286	199
9	Temp (deg C)	24.0	25.0	25.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	124	113	85
3	Ca (mg/L)	31	28	19
4	Cl (mg/L)	88.1	74.9	56.2
5	CO3 (mg/L)	0.0	0.0	0.0
6	F (mg/L)	0.39	0.36	0.38
7	Fe (mg/L)			
8	HCO3 (mg/L)	151	138	103
9	K (mg/L)	3.7	3.2	2.9
10	Mg (mg/L)	11.4	11.4	9.7
11	Na (mg/L)	66.6	53.4	42.4
12	NH3-N (mg N/L)	0.04	0.07	0.05
13	NO2+NO3 (mg N/L)	0.25	0.22	0.23
14	NO2-N (mgN/L)	0.00	0.00	0.00
15	NO3-N (mgN/L)	0.25	0.22	0.23
16	o-PO4-P (mg P/L)	0.009	0.000	0.000
17	SO4 (mg/L)	45.9	30.7	23.5
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.5	1.1	1.1
2	DO (mg/L)	5.9	5.9	6.0
3	DO_SAT% (%)	70	71	73
	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)	77	70	48
2	HAR_Total (mgCaCO3/L)	124	117	89
3	Na% (%)	53	49	50
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	2.6	2.2	2.0
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Nellore (AP000A6)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	5.968	7.642	Dry Bed
2	Colour_Cod (-)	Clear	Clear	
3	EC_FLD (µmho/cm)	604	623	
4	EC_GEN (µmho/cm)	348	407	
5	Odour_Code (-)	odour free	odour free	
6	pH_FLD (pH units)	7.0	7.1	
7	pH_GEN (pH units)	7.2	8.0	
8	TDS (mg/L)	195	216	
9	Temp (deg C)	25.0	27.0	
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	75	94	
3	Ca (mg/L)	19	22	
4	Cl (mg/L)	56.2	61.5	
5	CO3 (mg/L)	0.0	0.0	
6	F (mg/L)	0.33	0.35	
7	Fe (mg/L)		0.0	
8	HCO3 (mg/L)	92	115	
9	K (mg/L)	2.6	2.8	
10	Mg (mg/L)	9.7	10.7	
11	Na (mg/L)	42.0	44.6	
12	NH3-N (mg N/L)	0.04	0.03	
13	NO2+NO3 (mg N/L)	0.20	0.19	
14	NO2-N (mgN/L)	0.00	0.00	
15	NO3-N (mgN/L)	0.20	0.19	
16	o-PO4-P (mg P/L)	0.000	0.000	
17	SO4 (mg/L)	25.1	24.6	
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	2.0	0.6	
2	DO (mg/L)	6.5	4.9	
3	DO_SAT% (%)	78	61	
	TRACE & TOXIC			
1	As (µg/L)		1.70	
2	Cd (µg/L)		0.28	
3	Cr (µg/L)		1.01	
4	Cu (µg/L)		3.39	
5	Hg (µg/L)		0.00	
6	Ni (µg/L)		2.16	
7	Pb (µg/L)		0.46	
8	Zn (µg/L)		6.50	
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	48	56	
2	HAR_Total (mgCaCO3/L)	89	101	
3	Na% (%)	50	48	
4	RSC (-)	0.0	0.0	
5	SAR (-)	1.9	1.9	
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : Nellore (AP000A6)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	1388	0.000	53.23
2	EC_FLD (µmho/cm)	6	623	532	587
3	EC_GEN (µmho/cm)	6	544	179	389
4	pH_FLD (pH units)	6	7.2	7.0	7.1
5	pH_GEN (pH units)	6	8.0	7.2	7.5
6	TDS (mg/L)	6	319	105	220
7	Temp (deg C)	6	27.0	24.0	25
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	6	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	6	124	46	90
3	Ca (mg/L)	6	31	11	22
4	Cl (mg/L)	6	88.1	27.5	60.7
5	CO3 (mg/L)	6	0.0	0.0	0
6	F (mg/L)	6	0.39	0.25	0.34
7	Fe (mg/L)	1	0.0	0.0	0
8	HCO3 (mg/L)	6	151	56	109
9	K (mg/L)	6	3.7	2.2	2.9
10	Mg (mg/L)	6	11.4	4.9	9.6
11	Na (mg/L)	6	66.6	21.0	45
12	NH3-N (mg N/L)	6	0.07	0.03	0.05
13	NO2+NO3 (mg N/L)	6	0.25	0.19	0.22
14	NO2-N (mgN/L)	6	0.00	0.00	0
15	NO3-N (mgN/L)	6	0.25	0.19	0.22
16	o-PO4-P (mg P/L)	6	0.009	0.000	0.003
17	SO4 (mg/L)	6	45.9	14.2	27.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	6	2.4	0.6	1.4
2	DO (mg/L)	6	6.5	4.9	5.7
3	DO_SAT% (%)	6	78	58	69
	TRACE & TOXIC				
1	As (µg/L)	1	1.70	1.70	1.7
2	Cd (µg/L)	1	0.28	0.28	0.28
3	Cr (µg/L)	1	1.01	1.01	1.01
4	Cu (µg/L)	1	3.39	3.39	3.39
5	Hg (µg/L)	1	0.00	0.00	0
6	Ni (µg/L)	1	2.16	2.16	2.16
7	Pb (µg/L)	1	0.46	0.46	0.46
8	Zn (µg/L)	1	6.50	6.50	6.5
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	6	77	27	54
2	HAR_Total (mgCaCO3/L)	6	124	47	94
3	Na% (%)	6	53	48	50
4	RSC (-)	6	0.0	0.0	0
5	SAR (-)	6	2.6	1.3	2
	PESTICIDES				

Station Name : Nellore (AP000A6)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	32.95	Dry Bed	Dry Bed	1.19	1.478
2	EC_FLD ($\mu\text{mho/cm}$)					
3	EC_GEN ($\mu\text{mho/cm}$)	495			469	657
4	pH_FLD (pH units)				7.0	7.0
5	pH_GEN (pH units)	7.9			7.5	8.0
6	TDS (mg/L)					
7	Temp (deg C)	25.0			24.0	25.8
	CHEMICAL					
1	Alk-Phen (mgCaCO ₃ /L)	0.0			0.0	0.0
2	ALK-TOT (mgCaCO ₃ /L)	129			150	237
3	Ca (mg/L)	22			33	30
4	Cl (mg/L)	88.8			71.5	99.1
5	CO ₃ (mg/L)	0.0			0.0	0.0
6	F (mg/L)	0.53				2.60
7	Fe (mg/L)					
8	HCO ₃ (mg/L)	157			183	290
9	K (mg/L)					9.8
10	Mg (mg/L)	15.6			10.7	18.5
11	Na (mg/L)	32.4				107.8
12	NH ₃ -N (mg N/L)					
13	NO ₂ +NO ₃ (mg N/L)					
14	NO ₂ -N (mgN/L)					
15	NO ₃ -N (mgN/L)					
16	o-PO ₄ -P (mg P/L)	0.000				
17	SO ₄ (mg/L)	24.5				57.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃₋₂₇ (mg/L)					4.0
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As ($\mu\text{g/L}$)					
2	Cd ($\mu\text{g/L}$)					
3	Cr ($\mu\text{g/L}$)					
4	Cu ($\mu\text{g/L}$)					
5	Hg ($\mu\text{g/L}$)					
6	Ni ($\mu\text{g/L}$)					
7	Pb ($\mu\text{g/L}$)					
8	Zn ($\mu\text{g/L}$)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO ₃ /L)	56			82	75
2	HAR_Total (mgCaCO ₃ /L)	121			127	152
3	Na% (%)					57
4	RSC (-)	0.2			0.5	1.7
5	SAR (-)	1.3				3.8
	PESTICIDES					

Station Name : Nellore (AP000A6)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	11.93	3.466	2.715	1.191	0.405
2	EC_FLD ($\mu\text{mho/cm}$)					706
3	EC_GEN ($\mu\text{mho/cm}$)	672	689	731	779	694
4	pH_FLD (pH units)	7.0	6.0	6.2	7.3	7.9
5	pH_GEN (pH units)	8.0	8.4	7.8	7.7	9.3
6	TDS (mg/L)			389	414	382
7	Temp (deg C)	29.0	28.4	28.8	26.9	27.0
	CHEMICAL					
1	Alk-Phen (mgCaCO ₃ /L)	7.3	14.3	0.0	1.6	10.0
2	ALK-TOT (mgCaCO ₃ /L)	232	170	191	149	125
3	Ca (mg/L)	33	30	32	35	29
4	Cl (mg/L)	98.8	88.7	119.8	149.7	141.8
5	CO ₃ (mg/L)	8.8	17.3	0.0	1.9	12.0
6	F (mg/L)	0.49	0.61	0.87	0.80	0.46
7	Fe (mg/L)			0.0	0.0	
8	HCO ₃ (mg/L)	266	173	233	177	128
9	K (mg/L)	5.4	5.5	4.8	4.7	6.6
10	Mg (mg/L)	20.1	19.8	20.9	15.7	14.3
11	Na (mg/L)	94.6	98.9	103.5	117.3	106.5
12	NH ₃ -N (mg N/L)					
13	NO ₂ +NO ₃ (mg N/L)					
14	NO ₂ -N (mgN/L)					
15	NO ₃ -N (mgN/L)	0.59	2.28	1.58	3.42	1.54
16	o-PO ₄ -P (mg P/L)					
17	SO ₄ (mg/L)	41.0	62.8	49.3	73.5	71.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃₋₂₇ (mg/L)	1.3	1.8	1.6	1.6	2.0
2	DO (mg/L)					7.9
3	DO_SAT% (%)					99
	TRACE & TOXIC					
1	As ($\mu\text{g/L}$)			3.09	3.10	
2	Cd ($\mu\text{g/L}$)			0.07	2.40	
3	Cr ($\mu\text{g/L}$)			1.68	0.97	
4	Cu ($\mu\text{g/L}$)			34.51	0.98	
5	Hg ($\mu\text{g/L}$)				0.36	
6	Ni ($\mu\text{g/L}$)			2.80	2.83	
7	Pb ($\mu\text{g/L}$)			2.72	4.86	
8	Zn ($\mu\text{g/L}$)			1.14	4.00	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO ₃ /L)	82	75	80	87	72
2	HAR_Total (mgCaCO ₃ /L)	166	158	167	152	131
3	Na% (%)	55	57	57	62	62
4	RSC (-)	1.4	0.3	0.6	0.0	0.0
5	SAR (-)	3.2	3.5	3.5	4.2	4.1
	PESTICIDES					

Station Name : Nellore (AP000A6)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	0.193	540.1	35.6	72.1	15.42
2	EC_FLD ($\mu\text{mho/cm}$)					
3	EC_GEN ($\mu\text{mho/cm}$)		394	357	486	325
4	pH_FLD (pH units)			7.0	7.0	7.0
5	pH_GEN (pH units)		7.7	8.4	8.2	7.3
6	TDS (mg/L)					
7	Temp (deg C)		27.0		26.0	25.5
	CHEMICAL					
1	Alk-Phen (mgCaCO ₃ /L)		0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO ₃ /L)		121	92	158	117
3	Ca (mg/L)		25	19	26	23
4	Cl (mg/L)		54.0	38.1	51.5	53.4
5	CO ₃ (mg/L)		0.0	0.0	0.0	0.0
6	F (mg/L)					
7	Fe (mg/L)					
8	HCO ₃ (mg/L)		147	112	193	142
9	K (mg/L)					
10	Mg (mg/L)		12.0	8.3	13.6	10.7
11	Na (mg/L)		29.7	78.2		
12	NH ₃ -N (mg N/L)					
13	NO ₂ +NO ₃ (mg N/L)					
14	NO ₂ -N (mgN/L)					
15	NO ₃ -N (mgN/L)					
16	o-PO ₄ -P (mg P/L)					
17	SO ₄ (mg/L)			12.3	26.4	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃₋₂₇ (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As ($\mu\text{g/L}$)					
2	Cd ($\mu\text{g/L}$)					
3	Cr ($\mu\text{g/L}$)					
4	Cu ($\mu\text{g/L}$)					
5	Hg ($\mu\text{g/L}$)					
6	Ni ($\mu\text{g/L}$)					
7	Pb ($\mu\text{g/L}$)					
8	Zn ($\mu\text{g/L}$)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO ₃ /L)		63	48	64	58
2	HAR_Total (mgCaCO ₃ /L)		113	82	121	103
3	Na% (%)					
4	RSC (-)		0.2	0.2	0.8	0.3
5	SAR (-)		1.2	3.8		
	PESTICIDES					

Station Name : Nellore (AP000A6)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	5.041	122.6	52.08	1.362	2.342
2	EC_FLD ($\mu\text{mho/cm}$)					
3	EC_GEN ($\mu\text{mho/cm}$)	590	563	564	768	679
4	pH_FLD (pH units)	7.0	7.0	6.5	7.0	6.7
5	pH_GEN (pH units)	8.1	8.1	7.9	7.9	7.7
6	TDS (mg/L)				410	361
7	Temp (deg C)	26.7	24.8	27.3	25.3	25.9
	CHEMICAL					
1	Alk-Phen (mgCaCO ₃ /L)	0.0	10.4	0.0	0.0	0.0
2	ALK-TOT (mgCaCO ₃ /L)	230	160	134	151	127
3	Ca (mg/L)	28	28	26	35	27
4	Cl (mg/L)	68.3	83.2	74.7	130.2	107.0
5	CO ₃ (mg/L)	0.0	12.5	0.0	0.0	0.0
6	F (mg/L)	0.51	0.49	0.45	1.09	0.57
7	Fe (mg/L)					
8	HCO ₃ (mg/L)	281	169	163	184	155
9	K (mg/L)	8.1	4.2	7.2	4.9	3.7
10	Mg (mg/L)	16.2	13.2	11.9	15.7	16.8
11	Na (mg/L)	88.3	75.5	70.1	109.8	88.6
12	NH ₃ -N (mg N/L)					
13	NO ₂ +NO ₃ (mg N/L)					
14	NO ₂ -N (mgN/L)					
15	NO ₃ -N (mgN/L)		0.47	0.57	0.79	5.03
16	o-PO ₄ -P (mg P/L)					
17	SO ₄ (mg/L)	42.8	31.3	43.3	64.0	54.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃₋₂₇ (mg/L)	1.6	1.9	2.2	1.2	2.1
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As ($\mu\text{g/L}$)			1.75		
2	Cd ($\mu\text{g/L}$)			0.03		
3	Cr ($\mu\text{g/L}$)			0.73		
4	Cu ($\mu\text{g/L}$)			4.33		
5	Hg ($\mu\text{g/L}$)					
6	Ni ($\mu\text{g/L}$)			6.08		
7	Pb ($\mu\text{g/L}$)			1.81		
8	Zn ($\mu\text{g/L}$)			57.10		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO ₃ /L)	71	69	64	88	66
2	HAR_Total (mgCaCO ₃ /L)	138	124	114	154	137
3	Na% (%)	56	56	56	60	58
4	RSC (-)	1.9	0.7	0.4	0.1	0.1
5	SAR (-)	3.3	2.9	2.9	3.9	3.3
	PESTICIDES					

Station Name : Nellore (AP000A6)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	0.297	313.6	Dry Bed	Dry Bed	1.333
2	EC_FLD ($\mu\text{mho/cm}$)	665	574			
3	EC_GEN ($\mu\text{mho/cm}$)	680	395			514
4	pH_FLD (pH units)	7.3	7.2			7.0
5	pH_GEN (pH units)	7.8	7.5			7.6
6	TDS (mg/L)	368	227			
7	Temp (deg C)	24.0	24.5			27.5
	CHEMICAL					
1	Alk-Phen (mgCaCO ₃ /L)	0.0	0.0			0.0
2	ALK-TOT (mgCaCO ₃ /L)	140	92			185
3	Ca (mg/L)	35	22			32
4	Cl (mg/L)	119.6	61.7			57.2
5	CO ₃ (mg/L)	0.0	0.0			0.0
6	F (mg/L)	0.42	0.35			
7	Fe (mg/L)					
8	HCO ₃ (mg/L)	171	112			226
9	K (mg/L)	4.9	3.0			
10	Mg (mg/L)	18.9	9.3			14.6
11	Na (mg/L)	86.7	45.9			
12	NH ₃ -N (mg N/L)		0.05			
13	NO ₂ +NO ₃ (mg N/L)		0.23			
14	NO ₂ -N (mgN/L)		0.00			
15	NO ₃ -N (mgN/L)	1.99	0.23			
16	o-PO ₄ -P (mg P/L)		0.004			
17	SO ₄ (mg/L)	59.7	28.6			29.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD ₃₋₂₇ (mg/L)	1.6	1.5			
2	DO (mg/L)	5.7	5.7			
3	DO_SAT% (%)	68	68			
	TRACE & TOXIC					
1	As ($\mu\text{g/L}$)					
2	Cd ($\mu\text{g/L}$)					
3	Cr ($\mu\text{g/L}$)					
4	Cu ($\mu\text{g/L}$)					
5	Hg ($\mu\text{g/L}$)					
6	Ni ($\mu\text{g/L}$)					
7	Pb ($\mu\text{g/L}$)					
8	Zn ($\mu\text{g/L}$)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO ₃ /L)	86	55			80
2	HAR_Total (mgCaCO ₃ /L)	165	94			141
3	Na% (%)	52	50			
4	RSC (-)	0.0	0.0			0.9
5	SAR (-)	2.9	2.0			
	PESTICIDES					

Station Name : Nellore (AP000A6)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	0.505	4.002	9.317	2.488
2	EC_FLD ($\mu\text{mho/cm}$)				
3	EC_GEN ($\mu\text{mho/cm}$)	583	503	640	682
4	pH_FLD (pH units)	7.0	7.0	7.0	6.3
5	pH_GEN (pH units)	7.8	8.3	8.3	7.6
6	TDS (mg/L)				
7	Temp (deg C)	26.5	26.5	27.2	29.0
	CHEMICAL				
1	Alk-Phen (mgCaCO ₃ /L)	0.0	20.7	29.8	0.0
2	ALK-TOT (mgCaCO ₃ /L)	237	148	196	173
3	Ca (mg/L)	37	23	27	27
4	Cl (mg/L)	57.1	80.0	112.7	97.6
5	CO ₃ (mg/L)	0.0	25.0	35.9	0.0
6	F (mg/L)		0.50	0.60	0.55
7	Fe (mg/L)				0.0
8	HCO ₃ (mg/L)	290	129	166	211
9	K (mg/L)	3.0	4.3	4.7	8.3
10	Mg (mg/L)	10.7	8.7	19.8	21.1
11	Na (mg/L)	79.4	83.4	91.0	87.0
12	NH ₃ -N (mg N/L)				
13	NO ₂ +NO ₃ (mg N/L)				
14	NO ₂ -N (mgN/L)				
15	NO ₃ -N (mgN/L)		0.19	1.07	3.07
16	o-PO ₄ -P (mg P/L)				
17	SO ₄ (mg/L)	27.5	47.8	43.5	47.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD ₃₋₂₇ (mg/L)		1.6	0.6	2.1
2	DO (mg/L)				
3	DO_SAT% (%)				
	TRACE & TOXIC				
1	As ($\mu\text{g/L}$)			1.83	1.15
2	Cd ($\mu\text{g/L}$)				0.10
3	Cr ($\mu\text{g/L}$)			0.81	12.51
4	Cu ($\mu\text{g/L}$)			5.28	21.50
5	Hg ($\mu\text{g/L}$)				
6	Ni ($\mu\text{g/L}$)				3.40
7	Pb ($\mu\text{g/L}$)			0.37	6.71
8	Zn ($\mu\text{g/L}$)			9.59	7.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO ₃ /L)	92	58	68	67
2	HAR_Total (mgCaCO ₃ /L)	137	94	150	155
3	Na% (%)	55	65	56	54
4	RSC (-)	2.0	1.1	0.9	0.4
5	SAR (-)	3.0	3.8	3.2	3.1
	PESTICIDES				

Station Name : Nellore (AP000A6)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	1.077	0.176	0.758	4.537
2	EC_FLD ($\mu\text{mho/cm}$)			760	614
3	EC_GEN ($\mu\text{mho/cm}$)	797	695	741	378
4	pH_FLD (pH units)	7.5	7.0	7.5	7.0
5	pH_GEN (pH units)	7.8	7.7	7.9	7.6
6	TDS (mg/L)	423	368	403	206
7	Temp (deg C)	26.5	26.0	27.0	26.0
	CHEMICAL				
1	Alk-Phen (mgCaCO ₃ /L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO ₃ /L)	163	133	163	85
3	Ca (mg/L)	34	29	34	21
4	Cl (mg/L)	136.0	114.9	121.9	58.9
5	CO ₃ (mg/L)	0.0	0.0	0.0	0.0
6	F (mg/L)	1.13	0.62	0.57	0.34
7	Fe (mg/L)	0.1			0.0
8	HCO ₃ (mg/L)	199	162	199	103
9	K (mg/L)	3.9	4.2	3.2	2.7
10	Mg (mg/L)	15.2	16.9	17.3	10.2
11	Na (mg/L)	107.5	88.2	94.1	43.3
12	NH ₃ -N (mg N/L)			0.09	0.03
13	NO ₂ +NO ₃ (mg N/L)			0.83	0.20
14	NO ₂ -N (mgN/L)			0.00	0.00
15	NO ₃ -N (mgN/L)	0.72	6.13	0.83	0.19
16	o-PO ₄ -P (mg P/L)			0.008	0.000
17	SO ₄ (mg/L)	45.6	53.9	56.9	24.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD ₃₋₂₇ (mg/L)	1.3	2.4	0.9	1.3
2	DO (mg/L)			5.1	5.7
3	DO_SAT% (%)			64	70
	TRACE & TOXIC				
1	As ($\mu\text{g/L}$)	3.18			1.70
2	Cd ($\mu\text{g/L}$)	0.02			0.28
3	Cr ($\mu\text{g/L}$)	0.20			1.01
4	Cu ($\mu\text{g/L}$)	2.40			3.39
5	Hg ($\mu\text{g/L}$)	1.18			0.00
6	Ni ($\mu\text{g/L}$)	21.57			2.16
7	Pb ($\mu\text{g/L}$)	0.24			0.46
8	Zn ($\mu\text{g/L}$)	5.10			6.50
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO ₃ /L)	84	72	85	52
2	HAR_Total (mgCaCO ₃ /L)	148	142	157	95
3	Na% (%)	60	57	56	49
4	RSC (-)	0.3	0.0	0.1	0.0
5	SAR (-)	3.9	3.2	3.3	1.9
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: NANDIPALLI	Code	: APC00G7
State	: Andhra Pradesh	District	Kadapa
Basin	: Pennar	Independent River	: Pennar
Tributary	: Sagileru	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Sagileru
Division	: Hydrology Division, Chennai	Sub-Division	: PSD, Kadapa
Drainage Area	: 2486 Sq. Km.	Bank	: Right
Latitude	: 14°43'16"	Longitude	: 79°01'08"
Zero of Gauge (m)	: 95.000 (m.s.l)	10/11/1989	
	Opening Date	Closing Date	
Gauge	: 10/11/1989		
Discharge	: 18/06/1990		
Sediment	: 12/06/2013		
Water Quality	: 01/06/1994		

Water Quality Datasheet for the period : 2015-2016

Station Name : Nandipalli (APC00G7)

Division : Hydrology Division, Chennai

Local River : Sagileru

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	21/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	8.161
2	Colour_Cod (-)			Brown
3	EC_FLD (µmho/cm)			890
4	EC_GEN (µmho/cm)			232
5	Odour_Code (-)			odour free
6	pH_FLD (pH units)			7.0
7	pH_GEN (pH units)			7.8
8	TDS (mg/L)			122
9	Temp (deg C)			25.5
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			0.0
2	ALK-TOT (mgCaCO3/L)			61
3	Ca (mg/L)			12
4	Cl (mg/L)			33.0
5	CO3 (mg/L)			0.0
6	F (mg/L)			0.48
7	HCO3 (mg/L)			75
8	K (mg/L)			2.4
9	Mg (mg/L)			7.3
10	Na (mg/L)			25.5
11	NH3-N (mg N/L)			0.02
12	NO2+NO3 (mg N/L)			2.10
13	NO2-N (mgN/L)			0.00
14	NO3-N (mgN/L)			2.10
15	o-PO4-P (mg P/L)			0.019
16	SO4 (mg/L)			10.1
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			2.4
2	DO (mg/L)			6.9
3	DO_SAT% (%)			84
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			30
2	HAR_Total (mgCaCO3/L)			60
3	Na% (%)			47
4	RSC (-)			0.0
5	SAR (-)			1.4
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Nandipalli (APC00G7)

Division : Hydrology Division, Chennai

Local River : Sagileru

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	12/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	No Flow	No Flow	1.043
2	Colour_Cod (-)			Light Brown
3	EC_FLD (µmho/cm)			950
4	EC_GEN (µmho/cm)			469
5	Odour_Code (-)			odour free
6	pH_FLD (pH units)			7.1
7	pH_GEN (pH units)			7.6
8	TDS (mg/L)			277
9	Temp (deg C)			26.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			0.0
2	ALK-TOT (mgCaCO3/L)			129
3	Ca (mg/L)			24
4	Cl (mg/L)			66.1
5	CO3 (mg/L)			0.0
6	F (mg/L)			0.49
7	HCO3 (mg/L)			157
8	K (mg/L)			3.4
9	Mg (mg/L)			15.4
10	Na (mg/L)			55.9
11	NH3-N (mg N/L)			0.04
12	NO2+NO3 (mg N/L)			0.33
13	NO2-N (mgN/L)			0.00
14	NO3-N (mgN/L)			0.33
15	o-PO4-P (mg P/L)			0.007
16	SO4 (mg/L)			45.3
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			1.8
2	DO (mg/L)			5.6
3	DO_SAT% (%)			69
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			60
2	HAR_Total (mgCaCO3/L)			124
3	Na% (%)			49
4	RSC (-)			0.1
5	SAR (-)			2.2
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Nandipalli (APC00G7)

Division : Hydrology Division, Chennai

Local River : Sagileru

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	1.041	No Flow	Dry Bed
2	Colour_Cod (-)			
3	EC_FLD (µmho/cm)			
4	EC_GEN (µmho/cm)			
5	Odour_Code (-)			
6	pH_FLD (pH units)			
7	pH_GEN (pH units)			
8	TDS (mg/L)			
9	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
2	DO (mg/L)			
3	DO_SAT% (%)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Nandipalli (APC00G7)

Division : Hydrology Division, Chennai

Local River : Sagileru

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_FLD (µmho/cm)			
4	EC_GEN (µmho/cm)			
5	Odour_Code (-)			
6	pH_FLD (pH units)			
7	pH_GEN (pH units)			
8	TDS (mg/L)			
9	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
2	DO (mg/L)			
3	DO_SAT% (%)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : Nandipalli (APC00G7)

Division : Hydrology Division, Chennai

Local River : Sagileru

Sub-Division : PSD, Kadapa

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	136.3	0.000	0.553
2	EC_FLD (µmho/cm)	2	950	890	920
3	EC_GEN (µmho/cm)	2	469	232	351
4	pH_FLD (pH units)	2	7.1	7.0	7
5	pH_GEN (pH units)	2	7.8	7.6	7.7
6	TDS (mg/L)	2	277	122	200
7	Temp (deg C)	2	26.0	25.5	25.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	2	129	61	95
3	Ca (mg/L)	2	24	12	18
4	Cl (mg/L)	2	66.1	33.0	49.6
5	CO3 (mg/L)	2	0.0	0.0	0
6	F (mg/L)	2	0.49	0.48	0.49
7	HCO3 (mg/L)	2	157	75	116
8	K (mg/L)	2	3.4	2.4	2.9
9	Mg (mg/L)	2	15.4	7.3	11.3
10	Na (mg/L)	2	55.9	25.5	40.7
11	NH3-N (mg N/L)	2	0.04	0.02	0.03
12	NO2+NO3 (mg N/L)	2	2.10	0.33	1.21
13	NO2-N (mgN/L)	2	0.00	0.00	0
14	NO3-N (mgN/L)	2	2.10	0.33	1.21
15	o-PO4-P (mg P/L)	2	0.019	0.007	0.013
16	SO4 (mg/L)	2	45.3	10.1	27.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2	2.4	1.8	2.1
2	DO (mg/L)	2	6.9	5.6	6.3
3	DO_SAT% (%)	2	84	69	76
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	2	60	30	45
2	HAR_Total (mgCaCO3/L)	2	124	60	92
3	Na% (%)	2	49	47	48
4	RSC (-)	2	0.1	0.0	0.1
5	SAR (-)	2	2.2	1.4	1.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Nandipalli (APC00G7)

Division : Hydrology Division, Chennai

Local River : Sagileru

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	3.092	Dry Bed	12.39	1.932	3.602
2	EC_FLD (µmho/cm)		WQ Observation not done	WQ Observation not done		
3	EC_GEN (µmho/cm)	188			700	657
4	pH_FLD (pH units)				6.8	7.0
5	pH_GEN (pH units)	7.4			8.2	8.1
6	TDS (mg/L)					
7	Temp (deg C)	28.5			29.9	28.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0			19.2	0.0
2	ALK-TOT (mgCaCO3/L)	36			234	281
3	Ca (mg/L)	8			20	21
4	Cl (mg/L)	20.6			106.3	95.3
5	CO3 (mg/L)	0.0			23.1	0.0
6	F (mg/L)					0.84
7	Fe (mg/L)					
8	HCO3 (mg/L)	44			239	343
9	K (mg/L)					9.7
10	Mg (mg/L)	2.4			16.4	22.0
11	Na (mg/L)	12.0				108.4
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)					
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)	2.2			56.0	16.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					0.4
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)					
8	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	20			49	53
2	HAR_Total (mgCaCO3/L)	30			117	145
3	Na% (%)					55
4	RSC (-)	0.1			2.4	2.8
5	SAR (-)	1.0				3.9
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Nandipalli (APC00G7)

Division : Hydrology Division, Chennai

Local River : Sagileru

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	2.866	2.367	1.245	0.75	0
2	EC_FLD (µmho/cm)				926	920
3	EC_GEN (µmho/cm)	662	859	911	976	716
4	pH_FLD (pH units)	7.0	7.0	7.0	7.7	7.0
5	pH_GEN (pH units)	8.0	8.2	8.0	7.8	8.1
6	TDS (mg/L)			485	521	380
7	Temp (deg C)	29.8	26.1	27.2	27.3	27.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	13.5	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	242	256	296	249	140
3	Ca (mg/L)	21	29	26	27	34
4	Cl (mg/L)	107.7	121.2	117.3	177.5	119.1
5	CO3 (mg/L)	0.0	16.3	0.0	0.0	0.0
6	F (mg/L)	0.85	1.10	1.21	1.53	0.65
7	Fe (mg/L)				0.1	
8	HCO3 (mg/L)	295	279	361	304	171
9	K (mg/L)	5.1	5.5	4.7	4.4	5.0
10	Mg (mg/L)	15.7	25.5	24.0	17.2	15.4
11	Na (mg/L)	124.1	138.5	141.1	180.3	91.4
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)	0.59	4.31	1.98	3.84	1.26
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)	37.2	24.7	26.2	37.5	71.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	1.6	1.6	2.0	2.4
2	DO (mg/L)				4.8	5.0
3	DO_SAT% (%)				61	63
	TRACE & TOXIC					
1	As (µg/L)				3.02	
2	Cd (µg/L)				2.18	
3	Cr (µg/L)				1.02	
4	Cu (µg/L)				1.57	
5	Hg (µg/L)				0.26	
6	Ni (µg/L)				18.57	
7	Pb (µg/L)				6.19	
8	Zn (µg/L)				5.00	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	51	72	65	68	84
2	HAR_Total (mgCaCO3/L)	117	178	165	140	148
3	Na% (%)	69	62	64	73	56
4	RSC (-)	2.5	1.6	2.7	2.2	0.0
5	SAR (-)	5.0	4.6	4.8	6.7	3.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Nandipalli (APC00G7)

Division : Hydrology Division, Chennai

Local River : Sagileru

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	1.632	24.33	1.635	12.02	89.97
2	EC_FLD (µmho/cm)	890		WQ Observation not done	WQ Observation not done	
3	EC_GEN (µmho/cm)	232	292			700
4	pH_FLD (pH units)	7.0				7.0
5	pH_GEN (pH units)	7.8	7.6			7.8
6	TDS (mg/L)	122				
7	Temp (deg C)	25.5	25.3			26.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0			0.0
2	ALK-TOT (mgCaCO3/L)	61	111			273
3	Ca (mg/L)	12	17			27
4	Cl (mg/L)	33.0	40.1			94.9
5	CO3 (mg/L)	0.0	0.0			0.0
6	F (mg/L)	0.48				
7	Fe (mg/L)					
8	HCO3 (mg/L)	75	135			333
9	K (mg/L)	2.4				
10	Mg (mg/L)	7.3	10.5			17.1
11	Na (mg/L)	25.5	14.0			
12	NH3-N (mg N/L)	0.02				
13	NO2+NO3 (mg N/L)	2.10				
14	NO2-N (mgN/L)	0.00				
15	NO3-N (mgN/L)	2.10				
16	o-PO4-P (mg P/L)	0.019				
17	SO4 (mg/L)	10.1				
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.4				
2	DO (mg/L)	6.9				
3	DO_SAT% (%)	84				
	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)	30	43			69
2	HAR_Total (mgCaCO3/L)	60	87			140
3	Na% (%)	47				
4	RSC (-)	0.0	0.5			2.7
5	SAR (-)	1.4	0.7			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Nandipalli (APC00G7)

Division : Hydrology Division, Chennai

Local River : Sagileru

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	4.241	7.866	10.34	2.534	2.164
2	EC_FLD (µmho/cm)					895
3	EC_GEN (µmho/cm)	984	860	737	964	1049
4	pH_FLD (pH units)	7.0	7.0	7.0	7.0	7.3
5	pH_GEN (pH units)	8.2	8.2	7.8	8.0	8.0
6	TDS (mg/L)				515	559
7	Temp (deg C)	27.4	24.4	24.9	24.6	26.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	11.4	27.0	0.0	0.0	3.5
2	ALK-TOT (mgCaCO3/L)	469	342	268	290	187
3	Ca (mg/L)	24	29	18	29	13
4	Cl (mg/L)	149.8	113.2	96.2	154.8	251.1
5	CO3 (mg/L)	13.7	32.5	0.0	0.0	4.2
6	F (mg/L)	1.12	1.04	0.92	2.10	1.20
7	Fe (mg/L)			0.0		
8	HCO3 (mg/L)	544	351	327	354	220
9	K (mg/L)	8.7	4.3	8.0	3.8	3.8
10	Mg (mg/L)	22.8	24.3	24.3	22.6	21.8
11	Na (mg/L)	231.7	137.5	110.8	169.6	189.6
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)		0.77	1.34	0.70	4.77
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)	24.7	23.2	21.8	28.6	27.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	1.2	2.2	1.4	2.2
2	DO (mg/L)					5.7
3	DO_SAT% (%)					70
	TRACE & TOXIC					
1	As (µg/L)			1.08		
2	Cd (µg/L)			0.09		
3	Cr (µg/L)			1.73		
4	Cu (µg/L)			9.77		
5	Hg (µg/L)					
6	Ni (µg/L)			12.13		
7	Pb (µg/L)			1.71		
8	Zn (µg/L)			25.50		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	59	72	45	74	32
2	HAR_Total (mgCaCO3/L)	154	173	146	168	124
3	Na% (%)	75	63	61	68	76
4	RSC (-)	6.3	3.4	2.5	2.5	1.3
5	SAR (-)	8.2	4.6	4.0	5.7	7.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Nandipalli (APC00G7)

Division : Hydrology Division, Chennai

Local River : Sagileru

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	0.126	0.521	Dry Bed	Dry Bed	Dry Bed
2	EC_FLD (µmho/cm)	760	950			
3	EC_GEN (µmho/cm)	749	469			
4	pH_FLD (pH units)	7.2	7.1			
5	pH_GEN (pH units)	8.2	7.6			
6	TDS (mg/L)	396	277			
7	Temp (deg C)	28.0	26.0			
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0			
2	ALK-TOT (mgCaCO3/L)	140	129			
3	Ca (mg/L)	30	24			
4	Cl (mg/L)	119.6	66.1			
5	CO3 (mg/L)	0.0	0.0			
6	F (mg/L)	0.75	0.49			
7	Fe (mg/L)	0.0				
8	HCO3 (mg/L)	171	157			
9	K (mg/L)	5.0	3.4			
10	Mg (mg/L)	17.4	15.4			
11	Na (mg/L)	90.5	55.9			
12	NH3-N (mg N/L)		0.04			
13	NO2+NO3 (mg N/L)		0.33			
14	NO2-N (mgN/L)		0.00			
15	NO3-N (mgN/L)	2.22	0.32			
16	o-PO4-P (mg P/L)		0.007			
17	SO4 (mg/L)	63.3	45.3			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.2	1.8			
2	DO (mg/L)	6.4	5.6			
3	DO_SAT% (%)	82	69			
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)	0.41				
3	Cr (µg/L)	0.59				
4	Cu (µg/L)	3.79				
5	Hg (µg/L)					
6	Ni (µg/L)	0.18				
7	Pb (µg/L)	2.15				
8	Zn (µg/L)	4.00				
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	76	60			
2	HAR_Total (mgCaCO3/L)	148	124			
3	Na% (%)	56	49			
4	RSC (-)	0.0	0.1			
5	SAR (-)	3.2	2.2			
	PESTICIDES					

WQ Observation not done

WQ Observation not done

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Nandipalli (APC00G7)

Division : Hydrology Division, Chennai

Local River : Sagileru

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	1.191	0.383	1.669	0.544
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)	876	1190	903	1148
4	pH_FLD (pH units)	7.0	7.0	7.0	7.0
5	pH_GEN (pH units)	8.1	8.2	8.1	7.7
6	TDS (mg/L)				
7	Temp (deg C)	28.0	30.0	28.8	26.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	25.3	0.0	15.4	0.0
2	ALK-TOT (mgCaCO3/L)	327	521	327	372
3	Ca (mg/L)	25	28	30	22
4	Cl (mg/L)	90.5	173.0	128.7	154.6
5	CO3 (mg/L)	30.5	0.0	18.6	0.0
6	F (mg/L)		1.29	1.18	1.39
7	Fe (mg/L)				0.0
8	HCO3 (mg/L)	337	636	361	454
9	K (mg/L)	2.3	6.4	4.6	9.9
10	Mg (mg/L)	20.7	28.2	24.0	40.2
11	Na (mg/L)	139.9	243.6	147.9	185.8
12	NH3-N (mg N/L)				
13	NO2+NO3 (mg N/L)				
14	NO2-N (mgN/L)				
15	NO3-N (mgN/L)		2.42	6.19	8.58
16	o-PO4-P (mg P/L)				
17	SO4 (mg/L)	20.9	22.5	29.4	25.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)		1.0	0.5	2.0
2	DO (mg/L)				
3	DO_SAT% (%)				
	TRACE & TOXIC				
1	As (µg/L)			1.86	1.77
2	Cd (µg/L)			0.08	0.11
3	Cr (µg/L)			0.87	11.15
4	Cu (µg/L)			5.18	21.40
5	Hg (µg/L)				
6	Ni (µg/L)				8.20
7	Pb (µg/L)			0.78	14.77
8	Zn (µg/L)			4.72	31.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	64	69	75	55
2	HAR_Total (mgCaCO3/L)	150	187	175	222
3	Na% (%)	70	73	64	63
4	RSC (-)	3.6	6.7	3.1	3.0
5	SAR (-)	5.4	7.8	4.9	5.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Nandipalli (APC00G7)

Division : Hydrology Division, Chennai

Local River : Sagileru

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	0.086	0.094	Dry Bed	Dry Bed
2	EC_FLD (µmho/cm)		930		
3	EC_GEN (µmho/cm)	1236	1188		
4	pH_FLD (pH units)	6.0	8.4		
5	pH_GEN (pH units)	8.0	8.2		
6	TDS (mg/L)	659	635		
7	Temp (deg C)	23.0	27.0		
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0		
2	ALK-TOT (mgCaCO3/L)	355	237		
3	Ca (mg/L)	35	15		
4	Cl (mg/L)	188.1	300.6		
5	CO3 (mg/L)	0.0	0.0		
6	F (mg/L)	2.78	1.37		
7	Fe (mg/L)	0.1			
8	HCO3 (mg/L)	433	289		
9	K (mg/L)	3.5	4.5		
10	Mg (mg/L)	28.6	26.6		
11	Na (mg/L)	195.5	231.5		
12	NH3-N (mg N/L)				
13	NO2+NO3 (mg N/L)				
14	NO2-N (mgN/L)				
15	NO3-N (mgN/L)	0.85	6.26		
16	o-PO4-P (mg P/L)				
17	SO4 (mg/L)	28.8	35.3		
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.2	2.4		
2	DO (mg/L)		4.0		
3	DO_SAT% (%)		50		
	TRACE & TOXIC				
1	As (µg/L)	4.17			
2	Cd (µg/L)	0.01			
3	Cr (µg/L)	0.65			
4	Cu (µg/L)	1.76			
5	Hg (µg/L)	0.14			
6	Ni (µg/L)	21.46			
7	Pb (µg/L)	1.46			
8	Zn (µg/L)	5.40			
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	86	38		
2	HAR_Total (mgCaCO3/L)	205	149		
3	Na% (%)	67	77		
4	RSC (-)	3.0	1.8		
5	SAR (-)	6.0	8.3		
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Chennur	Code	: AP00011
State	: Andhra Pradesh	District	Kadapa
Basin	: Pennar	Independent River	: Pennar
Tributary	: -	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Pennar
Division	: Hydrology Division, Chennai	Sub-Division	: PSD, Kadapa
Drainage Area	: 37981 Sq. Km.	Bank	: Right
Latitude	: 14°34'20"	Longitude	: 78°48'00"
Zero of Gauge (m)	: 111.000 (m.s.l) 115.805 (m.s.l)	13/07/1989 01/06/1992	- 31/05/1992
	Opening Date	Closing Date	
Gauge	: 13/07/1989		
Discharge	: 13/07/1989		
Sediment	: 08/08/1989		
Water Quality	: 01/09/1989		

Water Quality Datasheet for the period : 2015-2016

Station Name : Chennur (AP00011)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	15/06/2015	01/07/2015	21/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	3.915	No Flow	82.56
2	Colour_Cod (-)	Clear		Brown
3	EC_FLD (µmho/cm)	1022		701
4	EC_GEN (µmho/cm)	1540		251
5	Odour_Code (-)	odour free		odour free
6	pH_FLD (pH units)	8.1		8.1
7	pH_GEN (pH units)	7.3		7.8
8	TDS (mg/L)	820		166
9	Temp (deg C)	28.0		27.5
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0		0.0
2	ALK-TOT (mgCaCO3/L)	169		80
3	Ca (mg/L)	32		20
4	Cl (mg/L)	331.8		30.3
5	CO3 (mg/L)	0.0		0.0
6	F (mg/L)	0.75		0.58
7	Fe (mg/L)			
8	HCO3 (mg/L)	207		98
9	K (mg/L)	6.8		2.4
10	Mg (mg/L)	24.3		8.1
11	Na (mg/L)	240.0		23.2
12	NH3-N (mg N/L)	0.09		0.09
13	NO2+NO3 (mg N/L)	0.55		1.62
14	NO2-N (mgN/L)	0.00		0.00
15	NO3-N (mgN/L)	0.54		1.62
16	o-PO4-P (mg P/L)	0.006		0.020
17	SO4 (mg/L)	130.1		9.8
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	2.9		2.6
2	DO (mg/L)	6.8		6.7
3	DO_SAT% (%)	87		84
	TRACE & TOXIC			
1	As (µg/L)			
2	Cd (µg/L)			
3	Cr (µg/L)			
4	Cu (µg/L)			
5	Hg (µg/L)			
6	Ni (µg/L)			
7	Pb (µg/L)			
8	Zn (µg/L)			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	80		50
2	HAR_Total (mgCaCO3/L)	181		84
3	Na% (%)	73		37
4	RSC (-)	0.0		0.0
5	SAR (-)	7.8		1.1
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Chennur (AP000I1)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	10/09/2015	01/10/2015	28/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	15.05	41.22	34.84
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown
3	EC_FLD (µmho/cm)	435	816	726
4	EC_GEN (µmho/cm)	734	860	718
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.0	7.6	7.9
7	pH_GEN (pH units)	7.8	8.0	7.8
8	TDS (mg/L)	491	497	391
9	Temp (deg C)	27.5	26.5	24.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	132	146	120
3	Ca (mg/L)	32	43	32
4	Cl (mg/L)	121.2	148.7	118.4
5	CO3 (mg/L)	0.0	0.0	0.0
6	F (mg/L)	0.59	0.76	0.68
7	Fe (mg/L)			
8	HCO3 (mg/L)	161	178	146
9	K (mg/L)	4.2	3.6	3.7
10	Mg (mg/L)	20.3	25.1	17.8
11	Na (mg/L)	92.9	115.0	89.8
12	NH3-N (mg N/L)	0.07	0.11	0.05
13	NO2+NO3 (mg N/L)	0.97	1.80	0.25
14	NO2-N (mgN/L)	0.00	0.00	0.00
15	NO3-N (mgN/L)	0.97	1.80	0.25
16	o-PO4-P (mg P/L)	0.008	0.061	0.012
17	SO4 (mg/L)	93.8	107.9	76.9
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	2.2	1.8	1.5
2	DO (mg/L)	6.3	6.5	6.3
3	DO_SAT% (%)	79	80	75
	TRACE & TOXIC			
1	As (µg/L)			
2	Cd (µg/L)			
3	Cr (µg/L)			
4	Cu (µg/L)			
5	Hg (µg/L)			
6	Ni (µg/L)			
7	Pb (µg/L)			
8	Zn (µg/L)			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	80	107	80
2	HAR_Total (mgCaCO3/L)	165	212	154
3	Na% (%)	54	54	55
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	3.2	3.5	3.2
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Chennur (AP000I1)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	11/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	9.341	2.482	No Flow
2	Colour_Cod (-)	Clear	Clear	
3	EC_FLD (µmho/cm)	818	1046	
4	EC_GEN (µmho/cm)	1001	1265	
5	Odour_Code (-)	odour free	odour free	
6	pH_FLD (pH units)	8.0	8.0	
7	pH_GEN (pH units)	8.1	7.4	
8	TDS (mg/L)	581	741	
9	Temp (deg C)	24.0	23.0	
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	170	212	
3	Ca (mg/L)	41	52	
4	Cl (mg/L)	176.2	211.4	
5	CO3 (mg/L)	0.0	0.0	
6	F (mg/L)	0.71	0.60	
7	Fe (mg/L)			
8	HCO3 (mg/L)	208	258	
9	K (mg/L)	4.3	4.7	
10	Mg (mg/L)	24.3	30.8	
11	Na (mg/L)	135.0	163.0	
12	NH3-N (mg N/L)	0.04	0.08	
13	NO2+NO3 (mg N/L)	0.84	0.27	
14	NO2-N (mgN/L)	0.00	0.00	
15	NO3-N (mgN/L)	0.84	0.27	
16	o-PO4-P (mg P/L)	0.012	0.000	
17	SO4 (mg/L)	120.2	148.7	
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.6	1.3	
2	DO (mg/L)	6.4	5.9	
3	DO_SAT% (%)	76	69	
	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	130	
2	HAR_Total (mgCaCO3/L)	205	259	
3	Na% (%)	58	57	
4	RSC (-)	0.0	0.0	
5	SAR (-)	4.1	4.4	
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Chennur (AP00011)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/03/2016	05/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	1.493	Dry Bed
2	Colour_Cod (-)		Clear	
3	EC_FLD (µmho/cm)		1384	
4	EC_GEN (µmho/cm)		1474	
5	Odour_Code (-)		odour free	
6	pH_FLD (pH units)		8.2	
7	pH_GEN (pH units)		8.1	
8	TDS (mg/L)		883	
9	Temp (deg C)		28.0	
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)		0.0	
2	ALK-TOT (mgCaCO3/L)		202	
3	Ca (mg/L)		61	
4	Cl (mg/L)		251.5	
5	CO3 (mg/L)		0.0	
6	F (mg/L)		0.82	
7	Fe (mg/L)		0.0	
8	HCO3 (mg/L)		247	
9	K (mg/L)		6.2	
10	Mg (mg/L)		35.0	
11	Na (mg/L)		192.5	
12	NH3-N (mg N/L)		0.03	
13	NO2+NO3 (mg N/L)		0.45	
14	NO2-N (mgN/L)		0.00	
15	NO3-N (mgN/L)		0.45	
16	o-PO4-P (mg P/L)		0.000	
17	SO4 (mg/L)		208.2	
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)		0.7	
2	DO (mg/L)		7.1	
3	DO_SAT% (%)		91	
	TRACE & TOXIC			
1	As (µg/L)		1.67	
2	Cd (µg/L)		0.68	
3	Cr (µg/L)		0.43	
4	Cu (µg/L)		2.44	
5	Hg (µg/L)		0.00	
6	Ni (µg/L)		5.87	
7	Pb (µg/L)		1.46	
8	Zn (µg/L)		4.80	
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)		152	
2	HAR_Total (mgCaCO3/L)		298	
3	Na% (%)		58	
4	RSC (-)		0.0	
5	SAR (-)		4.9	
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : Chennur (AP00011)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	487.8	0.000	15.67
2	EC_FLD (µmho/cm)	8	1384	435	869
3	EC_GEN (µmho/cm)	8	1540	251	980
4	pH_FLD (pH units)	8	8.2	7.0	7.9
5	pH_GEN (pH units)	8	8.1	7.3	7.8
6	TDS (mg/L)	8	883	166	571
7	Temp (deg C)	8	28.0	23.0	26.1
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	8	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	8	212	80	154
3	Ca (mg/L)	8	61	20	39
4	Cl (mg/L)	8	331.8	30.3	173.7
5	CO3 (mg/L)	8	0.0	0.0	0
6	F (mg/L)	8	0.82	0.58	0.69
7	Fe (mg/L)	1	0.0	0.0	0
8	HCO3 (mg/L)	8	258	98	188
9	K (mg/L)	8	6.8	2.4	4.5
10	Mg (mg/L)	8	35.0	8.1	23.2
11	Na (mg/L)	8	240.0	23.2	131.4
12	NH3-N (mg N/L)	8	0.11	0.03	0.07
13	NO2+NO3 (mg N/L)	8	1.80	0.25	0.84
14	NO2-N (mgN/L)	8	0.00	0.00	0
15	NO3-N (mgN/L)	8	1.80	0.25	0.84
16	o-PO4-P (mg P/L)	8	0.061	0.000	0.015
17	SO4 (mg/L)	8	208.2	9.8	111.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	8	2.9	0.7	1.8
2	DO (mg/L)	8	7.1	5.9	6.5
3	DO_SAT% (%)	8	91	69	80
	TRACE & TOXIC				
1	As (µg/L)	1	1.67	1.67	1.67
2	Cd (µg/L)	1	0.68	0.68	0.68
3	Cr (µg/L)	1	0.43	0.43	0.43
4	Cu (µg/L)	1	2.44	2.44	2.44
5	Hg (µg/L)	1	0.00	0.00	0
6	Ni (µg/L)	1	5.87	5.87	5.87
7	Pb (µg/L)	1	1.46	1.46	1.46
8	Zn (µg/L)	1	4.80	4.80	4.8
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	8	152	50	98
2	HAR_Total (mgCaCO3/L)	8	298	84	195
3	Na% (%)	8	73	37	56
4	RSC (-)	8	0.0	0.0	0
5	SAR (-)	8	7.8	1.1	4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Chennur (AP000I1)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	147.1	79.93	494.5	78.57	215.8
2	EC_FLD (µmho/cm)	322	432		730	724
3	EC_GEN (µmho/cm)	467	1036	537	871	730
4	pH_FLD (pH units)	7.0	8.2	8.2	7.5	7.0
5	pH_GEN (pH units)	7.9	7.9	7.5	8.2	8.0
6	TDS (mg/L)					
7	Temp (deg C)	26.5	25.7	24.6	26.1	26.2
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	19.9	5.8
2	ALK-TOT (mgCaCO3/L)	121	135	130	174	213
3	Ca (mg/L)	30	29	32	34	33
4	Cl (mg/L)	41.4	78.8	64.8	132.1	96.8
5	CO3 (mg/L)	0.0	0.0	0.0	24.0	7.0
6	F (mg/L)	0.44				0.64
7	Fe (mg/L)					
8	HCO3 (mg/L)	147	165	158	163	245
9	K (mg/L)					5.9
10	Mg (mg/L)	8.3	13.3	13.1	18.9	14.6
11	Na (mg/L)	42.3	95.6	50.5		114.0
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)					
16	o-PO4-P (mg P/L)	13.021				
17	SO4 (mg/L)	34.5	132.3	63.9	86.0	86.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.5		1.7	0.6	2.0
2	DO (mg/L)	5.2	5.5	6.2	6.0	5.9
3	DO_SAT% (%)	64	68	74	74	73
	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)	76	73	81	86	83
2	HAR_Total (mgCaCO3/L)	110	129	135	164	144
3	Na% (%)					61
4	RSC (-)	0.2	0.2	0.0	0.3	1.4
5	SAR (-)	1.8	3.7	1.9		4.1
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Chennur (AP000I1)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	100.5	82.51	14.22	104.5	154.8
2	EC_FLD (µmho/cm)	804	871	912	888	712
3	EC_GEN (µmho/cm)	776	952	1081	913	791
4	pH_FLD (pH units)	8.0	8.0	7.9	7.9	8.0
5	pH_GEN (pH units)	8.0	8.2	7.9	7.7	7.8
6	TDS (mg/L)			576	485	452
7	Temp (deg C)	28.1	25.7	27.8	25.0	26.4
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	12.5	14.3	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	234	166	195	114	132
3	Ca (mg/L)	36	40	26	34	30
4	Cl (mg/L)	130.2	128.4	138.7	176.8	157.7
5	CO3 (mg/L)	15.0	17.3	0.0	0.0	0.0
6	F (mg/L)	0.60	0.68	0.92	1.01	0.77
7	Fe (mg/L)			0.0	0.0	
8	HCO3 (mg/L)	256	167	238	140	161
9	K (mg/L)	5.4	6.3	5.3	4.9	4.5
10	Mg (mg/L)	22.6	27.2	28.3	16.4	19.9
11	Na (mg/L)	125.1	137.3	150.6	136.0	120.3
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)	0.64	3.78	3.12	2.47	1.02
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)	86.3	121.7	114.7	117.4	97.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	1.9	1.5	1.9	2.0
2	DO (mg/L)	6.5	7.0	7.2	7.4	6.7
3	DO_SAT% (%)	83	85	91	89	83
	TRACE & TOXIC					
1	As (µg/L)			4.85	2.64	
2	Cd (µg/L)			0.74	3.13	
3	Cr (µg/L)			3.04	0.56	
4	Cu (µg/L)			20.11	2.32	
5	Hg (µg/L)				0.22	
6	Ni (µg/L)			3.48	4.25	
7	Pb (µg/L)			4.37	1.99	
8	Zn (µg/L)			1.84	7.00	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	89	99	66	86	75
2	HAR_Total (mgCaCO3/L)	183	213	184	154	158
3	Na% (%)	57	55	58	60	59
4	RSC (-)	1.1	0.0	0.5	0.0	0.0
5	SAR (-)	4.1	4.1	4.7	4.6	4.1
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Chennur (AP000I1)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	28.55	215.1	57.24	171.6	146.1
2	EC_FLD (µmho/cm)	744	522		587	607
3	EC_GEN (µmho/cm)	846	637	658	653	762
4	pH_FLD (pH units)	7.7	7.7	8.3	8.2	7.9
5	pH_GEN (pH units)	7.7	7.9	8.0	8.0	7.9
6	TDS (mg/L)	494				
7	Temp (deg C)	27.4	24.3	23.8	22.8	23.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	6.2	0.0	2.6	5.2
2	ALK-TOT (mgCaCO3/L)	132	154	169	164	178
3	Ca (mg/L)	32	30	32	34	30
4	Cl (mg/L)	158.0	73.4	86.8	67.4	106.8
5	CO3 (mg/L)	0.0	7.5	0.0	3.1	6.2
6	F (mg/L)	0.67				
7	Fe (mg/L)					
8	HCO3 (mg/L)	161	173	207	193	204
9	K (mg/L)	4.3				
10	Mg (mg/L)	19.5	21.2	22.0	17.1	30.0
11	Na (mg/L)	117.8	71.2	74.5	49.6	
12	NH3-N (mg N/L)	0.09				
13	NO2+NO3 (mg N/L)	1.24				
14	NO2-N (mgN/L)	0.00				
15	NO3-N (mgN/L)	1.23				
16	o-PO4-P (mg P/L)	0.024				
17	SO4 (mg/L)	85.4	70.6	86.7	65.9	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.4	2.7		1.1	1.6
2	DO (mg/L)	6.6	5.7	5.7	5.4	5.8
3	DO_SAT% (%)	83	68	67	63	67
	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)	79	75	80	86	75
2	HAR_Total (mgCaCO3/L)	160	163	171	157	200
3	Na% (%)	55				
4	RSC (-)	0.0	0.3	0.2	0.2	0.0
5	SAR (-)	3.9	2.5	2.5	1.8	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Chennur (AP000I1)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	58.88	143.0	99.41	23.81	130.1
2	EC_FLD (µmho/cm)	807	739	726	723	805
3	EC_GEN (µmho/cm)	805	758	754	939	690
4	pH_FLD (pH units)	7.0	8.1	7.9	7.9	8.0
5	pH_GEN (pH units)	8.3	7.7	8.0	7.8	7.9
6	TDS (mg/L)				500	368
7	Temp (deg C)	24.0	25.9	24.6	23.6	24.4
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	14.5	0.0	5.7	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	313	208	161	181	92
3	Ca (mg/L)	38	41	28	46	21
4	Cl (mg/L)	111.7	106.7	103.1	163.5	119.0
5	CO3 (mg/L)	17.5	0.0	6.9	0.0	0.0
6	F (mg/L)	0.58	0.56	0.46	1.28	0.53
7	Fe (mg/L)			0.1		
8	HCO3 (mg/L)	347	254	183	220	113
9	K (mg/L)	7.2	4.5	7.3	4.0	3.6
10	Mg (mg/L)	21.4	21.0	29.9	19.0	16.0
11	Na (mg/L)	150.2	97.7	89.9	143.9	86.7
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)		0.79	0.69	0.85	4.46
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)	80.4	85.9	83.1	101.6	64.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.6	1.8	1.2	2.8
2	DO (mg/L)	6.4	7.0	7.1	7.2	7.4
3	DO_SAT% (%)	76	86	85	84	88
	TRACE & TOXIC					
1	As (µg/L)			1.98		
2	Cd (µg/L)			0.05		
3	Cr (µg/L)			4.96		
4	Cu (µg/L)			56.93		
5	Hg (µg/L)					
6	Ni (µg/L)			6.54		
7	Pb (µg/L)			1.28		
8	Zn (µg/L)			32.60		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	96	102	71	115	53
2	HAR_Total (mgCaCO3/L)	185	190	196	194	119
3	Na% (%)	63	52	49	61	61
4	RSC (-)	2.6	0.5	0.0	0.0	0.0
5	SAR (-)	4.8	3.1	2.8	4.5	3.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Chennur (AP000I1)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	46.67	11.67	6.956	1.974	13.12
2	EC_FLD (µmho/cm)	950	863			662
3	EC_GEN (µmho/cm)	1049	995	616	812	900
4	pH_FLD (pH units)	8.0	8.0	7.9	8.3	8.3
5	pH_GEN (pH units)	8.0	7.7	8.1	8.5	8.0
6	TDS (mg/L)	564	571			
7	Temp (deg C)	24.3	23.7	26.3	25.3	25.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	3.7	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	186	167	209	137	186
3	Ca (mg/L)	53	42	34	24	40
4	Cl (mg/L)	180.6	168.7	135.4	117.3	116.7
5	CO3 (mg/L)	4.5	0.0	0.0	0.0	0.0
6	F (mg/L)	0.60	0.66			
7	Fe (mg/L)	0.1				
8	HCO3 (mg/L)	218	204	254	167	227
9	K (mg/L)	4.0	4.2			
10	Mg (mg/L)	25.1	24.3	19.7	11.9	21.2
11	Na (mg/L)	130.3	129.3	143.6	59.9	
12	NH3-N (mg N/L)	0.07	0.06			
13	NO2+NO3 (mg N/L)	3.19	0.46			
14	NO2-N (mgN/L)	0.00	0.00			
15	NO3-N (mgN/L)	2.80	0.45			
16	o-PO4-P (mg P/L)	0.025	0.008			
17	SO4 (mg/L)	114.6	115.3	277.0	118.6	108.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.5			0.9
2	DO (mg/L)	6.9	6.2	5.2	5.0	6.2
3	DO_SAT% (%)	82	73	64	60	75
	TRACE & TOXIC					
1	As (µg/L)				7.21	2.57
2	Cd (µg/L)	0.01			3.00	1.00
3	Cr (µg/L)	2.76			0.60	0.77
4	Cu (µg/L)	7.48			12.35	14.38
5	Hg (µg/L)					
6	Ni (µg/L)	19.54				
7	Pb (µg/L)	12.64			2.02	2.09
8	Zn (µg/L)	11.20			20.00	21.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	132	105	85	61	99
2	HAR_Total (mgCaCO3/L)	236	206	167	111	188
3	Na% (%)	54	57			
4	RSC (-)	0.0	0.0	0.9	0.6	0.1
5	SAR (-)	3.7	3.9	4.9	2.4	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Chennur (AP00011)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	6.859	20.31	34.80	3.822
2	EC_FLD (µmho/cm)	1083	1070	866	1077
3	EC_GEN (µmho/cm)	1025	1061	956	1213
4	pH_FLD (pH units)	7.0	7.0	8.0	8.0
5	pH_GEN (pH units)	8.1	8.3	8.1	7.8
6	TDS (mg/L)				
7	Temp (deg C)	25.3	26.5	26.2	26.2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	11.3	27.7	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	253	310	206	217
3	Ca (mg/L)	35	40	43	32
4	Cl (mg/L)	135.2	148.8	149.7	184.4
5	CO3 (mg/L)	13.6	33.3	0.0	0.0
6	F (mg/L)		0.70	0.68	0.69
7	Fe (mg/L)				0.0
8	HCO3 (mg/L)	281	310	251	265
9	K (mg/L)	3.7	5.9	5.3	10.8
10	Mg (mg/L)	24.6	31.8	26.2	36.9
11	Na (mg/L)	189.5	175.4	136.0	193.8
12	NH3-N (mg N/L)				
13	NO2+NO3 (mg N/L)				
14	NO2-N (mgN/L)				
15	NO3-N (mgN/L)		1.29	1.65	8.93
16	o-PO4-P (mg P/L)				
17	SO4 (mg/L)	160.9	144.3	115.2	177.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.7	0.4	1.2	2.1
2	DO (mg/L)	6.2	6.7	7.1	7.3
3	DO_SAT% (%)	76	84	88	90
	TRACE & TOXIC				
1	As (µg/L)	55.31		1.86	1.73
2	Cd (µg/L)			0.01	0.12
3	Cr (µg/L)	1.87		0.36	22.53
4	Cu (µg/L)	8.41		4.79	20.40
5	Hg (µg/L)				
6	Ni (µg/L)	21.60			7.10
7	Pb (µg/L)	1.08		0.39	10.94
8	Zn (µg/L)			4.83	39.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	88	99	107	79
2	HAR_Total (mgCaCO3/L)	191	232	216	233
3	Na% (%)	68	61	57	62
4	RSC (-)	1.5	1.6	0.1	0.1
5	SAR (-)	6.1	5.0	4.0	5.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Chennur (AP00011)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	1.958	23.35	1.782	0.498
2	EC_FLD (µmho/cm)	940	813	1360	1384
3	EC_GEN (µmho/cm)	1201	934	1511	1474
4	pH_FLD (pH units)	7.9	8.0	8.1	8.2
5	pH_GEN (pH units)	8.0	8.4	7.8	8.1
6	TDS (mg/L)	638	496	913	883
7	Temp (deg C)	25.8	25.0	25.8	28.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	6.2	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	163	135	174	202
3	Ca (mg/L)	35	34	48	61
4	Cl (mg/L)	218.7	159.8	310.9	251.5
5	CO3 (mg/L)	0.0	7.4	0.0	0.0
6	F (mg/L)	1.38	0.69	0.78	0.82
7	Fe (mg/L)	0.1	0.0		0.0
8	HCO3 (mg/L)	198	149	213	247
9	K (mg/L)	4.9	3.8	6.0	6.2
10	Mg (mg/L)	23.5	23.9	29.8	35.0
11	Na (mg/L)	173.7	120.9	240.2	192.5
12	NH3-N (mg N/L)			0.13	0.03
13	NO2+NO3 (mg N/L)			1.15	0.45
14	NO2-N (mgN/L)			0.01	0.00
15	NO3-N (mgN/L)	1.63	6.29	1.14	0.45
16	o-PO4-P (mg P/L)			0.011	0.000
17	SO4 (mg/L)	124.6	105.7	212.9	208.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.9	2.5	1.5	0.7
2	DO (mg/L)	7.1	7.0	7.2	7.1
3	DO_SAT% (%)	87	84	87	91
	TRACE & TOXIC				
1	As (µg/L)	2.97	4.54		1.67
2	Cd (µg/L)	0.37	0.07		0.68
3	Cr (µg/L)	0.94	0.23		0.43
4	Cu (µg/L)	3.52	3.04		2.44
5	Hg (µg/L)	0.38			0.00
6	Ni (µg/L)	170.88	4.11		5.87
7	Pb (µg/L)	11.77	1.72		1.46
8	Zn (µg/L)	19.60	9.00		4.80
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	87	86	120	152
2	HAR_Total (mgCaCO3/L)	185	185	244	298
3	Na% (%)	66	58	68	58
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	5.6	3.9	6.7	4.9
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: KAMALAPURAM	Code	: APE00C5
State	: Andhra Pradesh	District	Kadapa
Basin	: Pennar	Independent River	: Pennar
Tributary	: Papagni	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Papagni
Division	: Hydrology Division, Chennai	Sub-Division	: PSD, Kadapa
Drainage Area	: 7187 Sq. Km.	Bank	: Left
Latitude	: 14°35'30"	Longitude	: 78°41'00"
Zero of Gauge (m)	: 135.650 (m.s.l) 132.650 (m.s.l)	06/11/1989 01/06/2008	- 31/05/2008
	Opening Date	Closing Date	
Gauge	: 06/11/1989		
Discharge	: 16/06/1990		
Sediment	:		
Water Quality	: 01/06/1994		

Water Quality Datasheet for the period : 2015-2016

Station Name : Kamalapuram (APE00C5)

Division : Hydrology Division, Chennai

Local River : Papagni

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	21/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	7.164
2	Colour_Cod (-)			Brown
3	EC_GEN (µmho/cm)			203
4	Odour_Code (-)			odour free
5	pH_FLD (pH units)			7.0
6	pH_GEN (pH units)			7.9
7	TDS (mg/L)			106
8	Temp (deg C)			28.5
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			0.0
2	ALK-TOT (mgCaCO3/L)			56
3	Ca (mg/L)			11
4	Cl (mg/L)			30.3
5	CO3 (mg/L)			0.0
6	F (mg/L)			0.68
7	HCO3 (mg/L)			69
8	K (mg/L)			1.7
9	Mg (mg/L)			5.7
10	Na (mg/L)			22.9
11	NH3-N (mg N/L)			0.02
12	NO2+NO3 (mg N/L)			0.40
13	NO2-N (mgN/L)			0.00
14	NO3-N (mgN/L)			0.40
15	o-PO4-P (mg P/L)			0.017
16	SO4 (mg/L)			9.3
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			2.7
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			27
2	HAR_Total (mgCaCO3/L)			50
3	Na% (%)			49
4	RSC (-)			0.1
5	SAR (-)			1.4
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Kamalapuram (APE00C5)

Division : Hydrology Division, Chennai

Local River : Papagni

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/09/2015	05/10/2015	28/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	2.416	29.29
2	Colour_Cod (-)	Brown	Clear	Light Brown
3	EC_GEN (µmho/cm)	205	192	371
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_FLD (pH units)	7.0	7.0	7.0
6	pH_GEN (pH units)	8.0	7.8	8.2
7	TDS (mg/L)	128	110	227
8	Temp (deg C)	28.5	25.0	27.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	56	56	115
3	Ca (mg/L)	12	11	23
4	Cl (mg/L)	33.0	30.3	55.1
5	CO3 (mg/L)	0.0	0.0	0.0
6	F (mg/L)	0.60	0.44	0.79
7	HCO3 (mg/L)	69	69	140
8	K (mg/L)	1.8	1.8	2.7
9	Mg (mg/L)	6.5	7.3	13.0
10	Na (mg/L)	25.3	23.0	41.4
11	NH3-N (mg N/L)	0.03	0.05	0.04
12	NO2+NO3 (mg N/L)	0.59	0.30	0.29
13	NO2-N (mgN/L)	0.00	0.00	0.01
14	NO3-N (mgN/L)	0.59	0.30	0.29
15	o-PO4-P (mg P/L)	0.014	0.014	0.021
16	SO4 (mg/L)	15.9	8.1	18.9
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	2.2	2.4	2.2
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	30	27	57
2	HAR_Total (mgCaCO3/L)	57	57	111
3	Na% (%)	48	46	44
4	RSC (-)	0.0	0.0	0.1
5	SAR (-)	1.5	1.3	1.7
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Kamalapuram (APE00C5)

Division : Hydrology Division, Chennai

Local River : Papagni

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	11/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	4.768	Dry Bed	Dry Bed
2	Colour_Cod (-)	Light Brown		
3	EC_GEN (µmho/cm)	447		
4	Odour_Code (-)	odour free		
5	pH_FLD (pH units)	7.0		
6	pH_GEN (pH units)	8.3		
7	TDS (mg/L)	267		
8	Temp (deg C)	22.5		
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	9.2		
2	ALK-TOT (mgCaCO3/L)	147		
3	Ca (mg/L)	28		
4	Cl (mg/L)	66.1		
5	CO3 (mg/L)	11.0		
6	F (mg/L)	0.88		
7	HCO3 (mg/L)	157		
8	K (mg/L)	3.0		
9	Mg (mg/L)	16.2		
10	Na (mg/L)	49.4		
11	NH3-N (mg N/L)	0.04		
12	NO2+NO3 (mg N/L)	0.28		
13	NO2-N (mgN/L)	0.00		
14	NO3-N (mgN/L)	0.28		
15	o-PO4-P (mg P/L)	0.012		
16	SO4 (mg/L)	22.5		
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	2.2		
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	70		
2	HAR_Total (mgCaCO3/L)	138		
3	Na% (%)	43		
4	RSC (-)	0.2		
5	SAR (-)	1.8		
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Kamalapuram (APE00C5)

Division : Hydrology Division, Chennai

Local River : Papagni

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_GEN (µmho/cm)			
4	Odour_Code (-)			
5	pH_FLD (pH units)			
6	pH_GEN (pH units)			
7	TDS (mg/L)			
8	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : Kamalapuram (APE00C5)

Division : Hydrology Division, Chennai

Local River : Papagni

Sub-Division : PSD, Kadapa

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	60.32	0.000	2.121
2	EC_GEN (µmho/cm)	5	447	192	284
3	pH_FLD (pH units)	5	7.0	7.0	7
4	pH_GEN (pH units)	5	8.3	7.8	8
5	TDS (mg/L)	5	267	106	168
6	Temp (deg C)	5	28.5	22.5	26.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	5	9.2	0.0	1.8
2	ALK-TOT (mgCaCO3/L)	5	147	56	86
3	Ca (mg/L)	5	28	11	17
4	Cl (mg/L)	5	66.1	30.3	43
5	CO3 (mg/L)	5	11.0	0.0	2.2
6	F (mg/L)	5	0.88	0.44	0.68
7	HCO3 (mg/L)	5	157	69	101
8	K (mg/L)	5	3.0	1.7	2.2
9	Mg (mg/L)	5	16.2	5.7	9.7
10	Na (mg/L)	5	49.4	22.9	32.4
11	NH3-N (mg N/L)	5	0.05	0.02	0.04
12	NO2+NO3 (mg N/L)	5	0.59	0.28	0.37
13	NO2-N (mgN/L)	5	0.01	0.00	0
14	NO3-N (mgN/L)	5	0.59	0.28	0.37
15	o-PO4-P (mg P/L)	5	0.021	0.012	0.016
16	SO4 (mg/L)	5	22.5	8.1	14.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	5	2.7	2.2	2.3
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	5	70	27	42
2	HAR_Total (mgCaCO3/L)	5	138	50	83
3	Na% (%)	5	49	43	46
4	RSC (-)	5	0.2	0.0	0.1
5	SAR (-)	5	1.8	1.3	1.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kamalapuram (APE00C5)

Division : Hydrology Division, Chennai

Local River : Papagni

Sub-Division : PSD, Kadapa

S.No	Parameters	River Water	Flood			
			Jun - Oct			
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	6.839	0.657
2	EC_GEN (µmho/cm)		WQ Observation not done	WQ Observation not done	190	238
3	pH_FLD (pH units)				7.0	7.0
4	pH_GEN (pH units)				7.7	8.1
5	TDS (mg/L)					
6	Temp (deg C)				26.5	23.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)				0.0	0.0
2	ALK-TOT (mgCaCO3/L)				79	102
3	Ca (mg/L)				14	16
4	Cl (mg/L)				34.3	36.2
5	CO3 (mg/L)				0.0	0.0
6	F (mg/L)					3.34
7	HCO3 (mg/L)				97	124
8	K (mg/L)					3.4
9	Mg (mg/L)				9.7	4.9
10	Na (mg/L)					40.5
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)					
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)					8.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					0.2
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)				34	41
2	HAR_Total (mgCaCO3/L)				75	61
3	Na% (%)					58
4	RSC (-)				0.1	0.8
5	SAR (-)					2.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kamalapuram (APE00C5)

Division : Hydrology Division, Chennai

Local River : Papagni

Sub-Division : PSD, Kadapa

S.No	Parameters	River Water		Flood		
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	0.488	0.956	Dry Bed	35.33	Dry Bed
2	EC_GEN (µmho/cm)	208	179		184	
3	pH_FLD (pH units)	7.0	7.0		7.0	
4	pH_GEN (pH units)	8.3	8.3		7.8	
5	TDS (mg/L)				97	
6	Temp (deg C)	24.5	28.0		26.8	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	20.8	10.0		0.0	
2	ALK-TOT (mgCaCO3/L)	59	78		55	
3	Ca (mg/L)	15	12		13	
4	Cl (mg/L)	31.5	26.5		25.5	
5	CO3 (mg/L)	25.0	12.0		0.0	
6	F (mg/L)	0.37	0.44		0.30	
7	HCO3 (mg/L)	21	71		67	
8	K (mg/L)	2.4	2.3		2.3	
9	Mg (mg/L)	8.8	12.6		6.6	
10	Na (mg/L)	24.3	19.1		21.1	
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)	0.35	0.26		2.25	
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)	18.0	6.0		22.7	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.8	1.9		1.0	
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	37	30		33	
2	HAR_Total (mgCaCO3/L)	73	83		61	
3	Na% (%)	41	33		42	
4	RSC (-)	0.0	0.0		0.0	
5	SAR (-)	1.2	0.9		1.2	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kamalapuram (APE00C5)

Division : Hydrology Division, Chennai

Local River : Papagni

Sub-Division : PSD, Kadapa

S.No	Parameters	River Water				
		Monsoon		Winter		
		Jun - Oct		Nov - Feb		
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	1.916	12.77	Dry Bed	1.281	2.031
2	EC_GEN (µmho/cm)	200	536	WQ Observation not done	WQ Observation not done	426
3	pH_FLD (pH units)	7.0				7.0
4	pH_GEN (pH units)	7.9	7.9			8.4
5	TDS (mg/L)	115				
6	Temp (deg C)	27.3	21.5			25.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	1.4			20.7
2	ALK-TOT (mgCaCO3/L)	56	223			203
3	Ca (mg/L)	11	23			26
4	Cl (mg/L)	31.2	44.3			47.7
5	CO3 (mg/L)	0.0	1.7			25.0
6	F (mg/L)	0.57				
7	HCO3 (mg/L)	69	268			197
8	K (mg/L)	1.8				
9	Mg (mg/L)	6.5	18.4			15.1
10	Na (mg/L)	23.7	56.4			
11	NH3-N (mg N/L)	0.03				
12	NO2+NO3 (mg N/L)	0.43				
13	NO2-N (mgN/L)	0.00				
14	NO3-N (mgN/L)	0.43				
15	o-PO4-P (mg P/L)	0.015				
16	SO4 (mg/L)	11.1				
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.4				
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	28	58			64
2	HAR_Total (mgCaCO3/L)	55	135			127
3	Na% (%)	48				
4	RSC (-)	0.0	1.8			1.5
5	SAR (-)	1.4	2.1			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kamalapuram (APE00C5)

Division : Hydrology Division, Chennai

Local River : Papagni

Sub-Division : PSD, Kadapa

S.No	Parameters	River Water	Winter			
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	Dry Bed	1.257	Dry Bed	Dry Bed	3.732
2	EC_GEN (µmho/cm)		258			443
3	pH_FLD (pH units)		7.0			7.0
4	pH_GEN (pH units)		8.5			8.4
5	TDS (mg/L)					236
6	Temp (deg C)		28.0			25.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		19.1			9.6
2	ALK-TOT (mgCaCO3/L)		78			68
3	Ca (mg/L)		16			6
4	Cl (mg/L)		33.7			73.0
5	CO3 (mg/L)		23.0			11.6
6	F (mg/L)		0.40			0.43
7	HCO3 (mg/L)		49			59
8	K (mg/L)		2.9			3.5
9	Mg (mg/L)		7.8			8.8
10	Na (mg/L)		25.7			55.0
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)		0.85			2.30
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)		19.2			13.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		1.2			1.5
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		41			16
2	HAR_Total (mgCaCO3/L)		73			53
3	Na% (%)		42			68
4	RSC (-)		0.1			0.3
5	SAR (-)		1.3			3.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kamalapuram (APE00C5)

Division : Hydrology Division, Chennai

Local River : Papagni

Sub-Division : PSD, Kadapa

S.No	Parameters	River Water		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	Dry Bed	8.515	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)		409		WQ Observation not done	WQ Observation not done
3	pH_FLD (pH units)		7.0			
4	pH_GEN (pH units)		8.3			
5	TDS (mg/L)		247			
6	Temp (deg C)		24.8			
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		4.6			
2	ALK-TOT (mgCaCO3/L)		131			
3	Ca (mg/L)		25			
4	Cl (mg/L)		60.6			
5	CO3 (mg/L)		5.5			
6	F (mg/L)		0.84			
7	HCO3 (mg/L)		149			
8	K (mg/L)		2.9			
9	Mg (mg/L)		14.6			
10	Na (mg/L)		45.4			
11	NH3-N (mg N/L)		0.04			
12	NO2+NO3 (mg N/L)		0.29			
13	NO2-N (mgN/L)		0.00			
14	NO3-N (mgN/L)		0.28			
15	o-PO4-P (mg P/L)		0.016			
16	SO4 (mg/L)		20.7			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		2.2			
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		63			
2	HAR_Total (mgCaCO3/L)		124			
3	Na% (%)		44			
4	RSC (-)		0.2			
5	SAR (-)		1.8			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kamalapuram (APE00C5)

Division : Hydrology Division, Chennai

Local River : Papagni

Sub-Division : PSD, Kadapa

S.No	Parameters	River Water			
		Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				
3	pH_FLD (pH units)				
4	pH_GEN (pH units)				
5	TDS (mg/L)				
6	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	Ca (mg/L)				
4	Cl (mg/L)				
5	CO3 (mg/L)				
6	F (mg/L)				
7	HCO3 (mg/L)				
8	K (mg/L)				
9	Mg (mg/L)				
10	Na (mg/L)				
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)				
13	NO2-N (mgN/L)				
14	NO3-N (mgN/L)				
15	o-PO4-P (mg P/L)				
16	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kamalapuram (APE00C5)

Division : Hydrology Division, Chennai

Local River : Papagni

Sub-Division : PSD, Kadapa

S.No	Parameters	River Water			
		Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				
3	pH_FLD (pH units)				
4	pH_GEN (pH units)				
5	TDS (mg/L)				
6	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	Ca (mg/L)				
4	Cl (mg/L)				
5	CO3 (mg/L)				
6	F (mg/L)				
7	HCO3 (mg/L)				
8	K (mg/L)				
9	Mg (mg/L)				
10	Na (mg/L)				
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)				
13	NO2-N (mgN/L)				
14	NO3-N (mgN/L)				
15	o-PO4-P (mg P/L)				
16	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: ALLADUPALLI	Code	: APF00B8
State	: Andhra Pradesh	District	Kadapa
Basin	: Pennar	Independent River	: Pennar
Tributary	: Kunderu	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Kunderu
Division	: Hydrology Division, Chennai	Sub-Division	: PSD, Kadapa
Drainage Area	: 8758 Sq. Km.	Bank	: Left
Latitude	: 14°43'02"	Longitude	: 78°40'07"
Zero of Gauge (m)	: 94.000 (m.s.l) 132.955 (m.s.l)	18/07/1985 01/06/2003	- 31/05/2003
	Opening Date	Closing Date	
Gauge	: 18/07/1985		
Discharge	: 21/08/1985		
Sediment	: 11/07/1996		
Water Quality	: 01/07/1987		

Water Quality Datasheet for the period : 2015-2016

Station Name : Alladupalli (APF00B8)

Division : Hydrology Division, Chennai

Local River : Kunderu

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	15/06/2015	01/07/2015	21/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	4.016	2.355	0.641
2	Colour_Cod (-)	Clear	Clear	Light Brown
3	EC_FLD (µmho/cm)	964	998	820
4	EC_GEN (µmho/cm)	1450	1545	723
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.6	7.6	7.6
7	pH_GEN (pH units)	7.3	7.4	7.3
8	TDS (mg/L)	796	893	483
9	Temp (deg C)	29.0	32.0	27.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	169	146	89
3	Ca (mg/L)	31	33	24
4	Cl (mg/L)	306.3	337.5	154.2
5	CO3 (mg/L)	0.0	0.0	0.0
6	F (mg/L)	0.80	0.75	0.73
7	Fe (mg/L)			
8	HCO3 (mg/L)	207	178	109
9	K (mg/L)	7.6	9.0	4.4
10	Mg (mg/L)	23.5	27.6	11.4
11	Na (mg/L)	231.5	254.0	119.0
12	NH3-N (mg N/L)	0.10	0.12	0.02
13	NO2+NO3 (mg N/L)	0.67	1.08	2.68
14	NO2-N (mgN/L)	0.01	0.00	0.00
15	NO3-N (mgN/L)	0.66	1.08	2.68
16	o-PO4-P (mg P/L)	0.022	0.018	0.085
17	SO4 (mg/L)	131.1	188.4	85.6
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	0.9	0.9	2.4
2	DO (mg/L)	6.7	5.6	7.3
3	DO_SAT% (%)	87	76	91
	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)	77	84	60
2	HAR_Total (mgCaCO3/L)	175	198	107
3	Na% (%)	73	73	70
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	7.6	7.9	5.0
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Alladupalli (APF00B8)

Division : Hydrology Division, Chennai

Local River : Kunderu

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	10/09/2015	01/10/2015	28/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	3.43	24.77	4.197
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown
3	EC_FLD (µmho/cm)	942	848	946
4	EC_GEN (µmho/cm)	743	975	1408
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.5	7.5	7.5
7	pH_GEN (pH units)	7.5	8.0	7.7
8	TDS (mg/L)	494	598	852
9	Temp (deg C)	28.0	27.5	26.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	99	160	216
3	Ca (mg/L)	28	48	67
4	Cl (mg/L)	162.5	168.0	231.3
5	CO3 (mg/L)	0.0	0.0	0.0
6	F (mg/L)	0.72	0.82	0.72
7	Fe (mg/L)			
8	HCO3 (mg/L)	121	195	264
9	K (mg/L)	3.6	4.1	4.5
10	Mg (mg/L)	13.8	25.1	32.4
11	Na (mg/L)	125.0	131.0	175.0
12	NH3-N (mg N/L)	0.06	0.09	0.05
13	NO2+NO3 (mg N/L)	1.55	2.06	1.41
14	NO2-N (mgN/L)	0.00	0.00	0.06
15	NO3-N (mgN/L)	1.54	2.06	1.35
16	o-PO4-P (mg P/L)	0.093	0.113	0.010
17	SO4 (mg/L)	95.1	145.5	193.2
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	2.6	2.0	2.4
2	DO (mg/L)	6.2	7.0	6.5
3	DO_SAT% (%)	80	88	80
	TRACE & TOXIC			
1	As (µg/L)			
2	Cd (µg/L)			
3	Cr (µg/L)			
4	Cu (µg/L)			
5	Hg (µg/L)			
6	Ni (µg/L)			
7	Pb (µg/L)			
8	Zn (µg/L)			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	70	120	167
2	HAR_Total (mgCaCO3/L)	128	225	302
3	Na% (%)	67	55	55
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	4.8	3.8	4.4
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Alladupalli (APF00B8)

Division : Hydrology Division, Chennai

Local River : Kunderu

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	11/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	6.153	0.656	No Flow
2	Colour_Cod (-)	Clear	Clear	
3	EC_FLD (µmho/cm)	996	1012	
4	EC_GEN (µmho/cm)	1400	1697	
5	Odour_Code (-)	odour free	odour free	
6	pH_FLD (pH units)	7.5	7.5	
7	pH_GEN (pH units)	8.0	7.3	
8	TDS (mg/L)	843	960	
9	Temp (deg C)	27.0	26.0	
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	211	240	
3	Ca (mg/L)	64	71	
4	Cl (mg/L)	231.3	283.6	
5	CO3 (mg/L)	0.0	0.0	
6	F (mg/L)	0.73	0.62	
7	Fe (mg/L)			
8	HCO3 (mg/L)	258	293	
9	K (mg/L)	4.8	6.7	
10	Mg (mg/L)	34.1	39.7	
11	Na (mg/L)	175.0	210.0	
12	NH3-N (mg N/L)	0.04	0.09	
13	NO2+NO3 (mg N/L)	1.20	0.26	
14	NO2-N (mgN/L)	0.01	0.00	
15	NO3-N (mgN/L)	1.19	0.26	
16	o-PO4-P (mg P/L)	0.012	0.000	
17	SO4 (mg/L)	197.1	212.5	
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.5	1.8	
2	DO (mg/L)	5.9	5.1	
3	DO_SAT% (%)	74	62	
	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)	160	177	
2	HAR_Total (mgCaCO3/L)	302	343	
3	Na% (%)	55	57	
4	RSC (-)	0.0	0.0	
5	SAR (-)	4.4	5.0	
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Alladupalli (APF00B8)

Division : Hydrology Division, Chennai

Local River : Kunderu

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	19/03/2016	05/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	3.157	1.147	No Flow
2	Colour_Cod (-)	Clear	Clear	
3	EC_FLD (µmho/cm)		986	
4	EC_GEN (µmho/cm)	1401	1402	
5	Odour_Code (-)	odour free	odour free	
6	pH_FLD (pH units)		7.5	
7	pH_GEN (pH units)	8.0	7.9	
8	TDS (mg/L)	764	783	
9	Temp (deg C)	32.0	33.0	
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	169	174	
3	Ca (mg/L)	51	51	
4	Cl (mg/L)	230.1	230.1	
5	CO3 (mg/L)	0.0	0.0	
6	F (mg/L)	0.88	0.83	
7	Fe (mg/L)		0.0	
8	HCO3 (mg/L)	207	212	
9	K (mg/L)	6.3	5.8	
10	Mg (mg/L)	31.1	30.2	
11	Na (mg/L)	175.0	175.5	
12	NH3-N (mg N/L)	0.04	0.04	
13	NO2+NO3 (mg N/L)	0.69	0.53	
14	NO2-N (mgN/L)	0.00	0.00	
15	NO3-N (mgN/L)	0.69	0.53	
16	o-PO4-P (mg P/L)	0.000	0.000	
17	SO4 (mg/L)	178.4	178.0	
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.5	1.1	
2	DO (mg/L)	6.1	5.5	
3	DO_SAT% (%)	83	76	
	TRACE & TOXIC			
1	As (µg/L)		1.17	
2	Cd (µg/L)		0.52	
3	Cr (µg/L)		0.33	
4	Cu (µg/L)		3.07	
5	Hg (µg/L)		0.00	
6	Ni (µg/L)		6.45	
7	Pb (µg/L)		0.46	
8	Zn (µg/L)		4.40	
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	128	128	
2	HAR_Total (mgCaCO3/L)	258	254	
3	Na% (%)	59	60	
4	RSC (-)	0.0	0.0	
5	SAR (-)	4.8	4.8	
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : Alladupalli (APF00B8)

Division : Hydrology Division, Chennai

Local River : Kunderu

Sub-Division : PSD, Kadapa

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	257.9	0.000	8.816
2	EC_FLD (µmho/cm)	9	1012	820	946
3	EC_GEN (µmho/cm)	10	1697	723	1274
4	pH_FLD (pH units)	9	7.6	7.5	7.5
5	pH_GEN (pH units)	10	8.0	7.3	7.6
6	TDS (mg/L)	10	960	483	747
7	Temp (deg C)	10	33.0	26.0	28.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	10	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	10	240	89	167
3	Ca (mg/L)	10	71	24	47
4	Cl (mg/L)	10	337.5	154.2	233.5
5	CO3 (mg/L)	10	0.0	0.0	0
6	F (mg/L)	10	0.88	0.62	0.76
7	Fe (mg/L)	1	0.0	0.0	0
8	HCO3 (mg/L)	10	293	109	204
9	K (mg/L)	10	9.0	3.6	5.7
10	Mg (mg/L)	10	39.7	11.4	26.9
11	Na (mg/L)	10	254.0	119.0	177.1
12	NH3-N (mg N/L)	10	0.12	0.02	0.07
13	NO2+NO3 (mg N/L)	10	2.68	0.26	1.21
14	NO2-N (mgN/L)	10	0.06	0.00	0.01
15	NO3-N (mgN/L)	10	2.68	0.26	1.2
16	o-PO4-P (mg P/L)	10	0.113	0.000	0.035
17	SO4 (mg/L)	10	212.5	85.6	160.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	2.6	0.9	1.7
2	DO (mg/L)	10	7.3	5.1	6.2
3	DO_SAT% (%)	10	91	62	80
	TRACE & TOXIC				
1	As (µg/L)	1	1.17	1.17	1.17
2	Cd (µg/L)	1	0.52	0.52	0.52
3	Cr (µg/L)	1	0.33	0.33	0.33
4	Cu (µg/L)	1	3.07	3.07	3.07
5	Hg (µg/L)	1	0.00	0.00	0
6	Ni (µg/L)	1	6.45	6.45	6.45
7	Pb (µg/L)	1	0.46	0.46	0.46
8	Zn (µg/L)	1	4.40	4.40	4.4
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	10	177	60	117
2	HAR_Total (mgCaCO3/L)	10	343	107	229
3	Na% (%)	10	73	55	62
4	RSC (-)	10	0.0	0.0	0
5	SAR (-)	10	7.9	3.8	5.2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Alladupalli (APF00B8)

Division : Hydrology Division, Chennai

Local River : Kunderu

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	137.7	69.86	279.9	26.94	138.5
2	EC_FLD (µmho/cm)	348	423	443	438	606
3	EC_GEN (µmho/cm)	470	1039	423	733	676
4	pH_FLD (pH units)	6.5	7.2	7.2	7.0	7.0
5	pH_GEN (pH units)	7.5	7.8	7.5	8.0	7.6
6	TDS (mg/L)					
7	Temp (deg C)	24.5	27.1	26.2	26.8	26.7
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	10.0	0.0
2	ALK-TOT (mgCaCO3/L)	96	136	132	177	183
3	Ca (mg/L)	33	30	35	38	36
4	Cl (mg/L)	43.3	80.3	58.4	118.0	82.3
5	CO3 (mg/L)	0.0	0.0	0.0	12.0	0.0
6	F (mg/L)	0.36	0.00			0.66
7	Fe (mg/L)					
8	HCO3 (mg/L)	117	166	161	191	223
9	K (mg/L)					7.1
10	Mg (mg/L)	9.5	17.2	12.9	17.1	17.7
11	Na (mg/L)	44.3	95.5	48.9		82.8
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)					
16	o-PO4-P (mg P/L)	0.021				
17	P-Tot (mgP/L)	0.002				
18	SO4 (mg/L)	25.4	121.4	52.6	83.7	86.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	3.9		1.8	1.2	2.1
2	DO (mg/L)	5.8	5.7	5.9	5.8	6.0
3	DO_SAT% (%)	69	72	73	73	75
	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)	82	74	87	95	91
2	HAR_Total (mgCaCO3/L)	121	146	141	166	164
3	Na% (%)					50
4	RSC (-)	0.1	0.0	0.0	0.2	0.5
5	SAR (-)	1.8	3.4	1.8		2.9
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Alladupalli (APF00B8)

Division : Hydrology Division, Chennai

Local River : Kunderu

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	74.62	81.92	21.73	77.51	128.2
2	EC_FLD (µmho/cm)	818	810	924	948	952
3	EC_GEN (µmho/cm)	886	927	1138	942	870
4	pH_FLD (pH units)	7.5	7.6	7.5	7.5	7.6
5	pH_GEN (pH units)	8.0	8.1	7.7	7.3	7.8
6	TDS (mg/L)			607	501	505
7	Temp (deg C)	29.8	28.7	28.9	27.5	29.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	10.3	8.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	280	162	235	141	134
3	Ca (mg/L)	39	38	40	42	32
4	Cl (mg/L)	128.8	126.4	173.7	178.4	183.2
5	CO3 (mg/L)	12.4	9.6	0.0	0.0	0.0
6	F (mg/L)	0.66	0.67	1.07	1.06	0.80
7	Fe (mg/L)			0.0	0.0	
8	HCO3 (mg/L)	317	178	287	172	163
9	K (mg/L)	6.0	6.4	6.5	4.7	5.1
10	Mg (mg/L)	28.5	26.3	27.8	17.7	20.2
11	Na (mg/L)	136.4	139.1	181.8	137.6	141.4
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)	0.89	3.71	3.33	2.63	1.12
16	o-PO4-P (mg P/L)					
17	P-Tot (mgP/L)					
18	SO4 (mg/L)	101.1	126.7	127.9	119.1	113.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	1.8	1.4	2.1	1.8
2	DO (mg/L)	5.0	4.9	5.1	6.3	6.0
3	DO_SAT% (%)	66	64	67	80	79
	TRACE & TOXIC					
1	As (µg/L)			1.29	0.07	
2	Cd (µg/L)			0.14	0.44	
3	Cr (µg/L)			1.66	5.97	
4	Cu (µg/L)			23.81	1.84	
5	Hg (µg/L)				0.49	
6	Ni (µg/L)			4.71	4.87	
7	Pb (µg/L)			3.33	5.22	
8	Zn (µg/L)			2.71	9.00	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	97	94	99	106	80
2	HAR_Total (mgCaCO3/L)	216	203	215	180	164
3	Na% (%)	56	55	61	59	61
4	RSC (-)	1.3	0.0	0.7	0.0	0.0
5	SAR (-)	4.1	4.2	5.3	4.4	4.7
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Alladupalli (APF00B8)

Division : Hydrology Division, Chennai

Local River : Kunderu

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	7.043	203.3	50.39	51.57	43.05
2	EC_FLD (µmho/cm)	914	456	398	426	436
3	EC_GEN (µmho/cm)	1087	679	655	673	798
4	pH_FLD (pH units)	7.6	7.0	7.0	7.0	7.0
5	pH_GEN (pH units)	7.5	7.6	7.9	8.0	7.8
6	TDS (mg/L)	653				
7	Temp (deg C)	28.7	20.6	24.5	21.8	20.9
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	3.6	4.2
2	ALK-TOT (mgCaCO3/L)	133	153	167	159	196
3	Ca (mg/L)	33	27	32	32	31
4	Cl (mg/L)	225.7	69.4	91.1	71.0	101.5
5	CO3 (mg/L)	0.0	0.0	0.0	4.4	5.0
6	F (mg/L)	0.76				
7	Fe (mg/L)					
8	HCO3 (mg/L)	162	187	204	185	229
9	K (mg/L)	5.7				
10	Mg (mg/L)	20.3	21.5	19.1	22.6	33.4
11	Na (mg/L)	172.1	56.1	75.4	46.2	
12	NH3-N (mg N/L)	0.08				
13	NO2+NO3 (mg N/L)	1.61				
14	NO2-N (mgN/L)	0.00				
15	NO3-N (mgN/L)	1.61				
16	o-PO4-P (mg P/L)	0.066				
17	P-Tot (mgP/L)					
18	SO4 (mg/L)	129.2	79.8	90.6	71.5	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	2.6		1.6	0.6
2	DO (mg/L)	6.6	5.6	5.8	5.7	5.5
3	DO_SAT% (%)	84	62	70	65	62
	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)	82	69	80	79	78
2	HAR_Total (mgCaCO3/L)	167	158	159	173	217
3	Na% (%)	68				
4	RSC (-)	0.0	0.0	0.2	0.1	0.1
5	SAR (-)	5.8	1.9	2.6	1.5	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Alladupalli (APF00B8)

Division : Hydrology Division, Chennai

Local River : Kunderu

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	59.52	91.04	69.1	28.41	144
2	EC_FLD (µmho/cm)	584	882	884	932	971
3	EC_GEN (µmho/cm)	900	733	766	944	765
4	pH_FLD (pH units)	7.0	7.5	7.5	7.5	7.6
5	pH_GEN (pH units)	7.8	7.9	7.7	7.6	7.5
6	TDS (mg/L)				504	407
7	Temp (deg C)	22.8	25.1	26.3	25.8	25.9
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	356	219	156	190	109
3	Ca (mg/L)	42	39	29	57	26
4	Cl (mg/L)	122.1	96.3	97.1	159.2	131.5
5	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
6	F (mg/L)	0.65	0.56	0.51	1.33	0.61
7	Fe (mg/L)					
8	HCO3 (mg/L)	434	267	190	232	133
9	K (mg/L)	8.3	4.7	6.9	3.8	3.9
10	Mg (mg/L)	29.6	23.5	23.6	16.9	17.8
11	Na (mg/L)	150.9	93.9	88.4	137.1	97.4
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)		1.01	0.60	0.86	4.94
16	o-PO4-P (mg P/L)					
17	P-Tot (mgP/L)					
18	SO4 (mg/L)	89.4	88.1	84.2	105.0	76.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	1.3	1.7	1.3	2.6
2	DO (mg/L)	6.1	5.6	4.7	5.8	6.0
3	DO_SAT% (%)	71	68	58	71	74
	TRACE & TOXIC					
1	As (µg/L)			1.21		
2	Cd (µg/L)			0.08		
3	Cr (µg/L)			1.61		
4	Cu (µg/L)			5.07		
5	Hg (µg/L)					
6	Ni (µg/L)			6.37		
7	Pb (µg/L)			1.78		
8	Zn (µg/L)			20.70		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	104	98	73	141	66
2	HAR_Total (mgCaCO3/L)	228	196	171	212	140
3	Na% (%)	58	50	52	58	60
4	RSC (-)	2.6	0.6	0.0	0.0	0.0
5	SAR (-)	4.4	2.9	2.9	4.1	3.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Alladupalli (APF00B8)

Division : Hydrology Division, Chennai

Local River : Kunderu

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	65.72	2.752	5.736	1.61	8.218
2	EC_FLD (µmho/cm)	907	985	464	412	465
3	EC_GEN (µmho/cm)	1132	1502	1531	817	857
4	pH_FLD (pH units)	7.5	7.5	7.0	7.0	7.0
5	pH_GEN (pH units)	7.9	7.6	8.0	8.1	7.8
6	TDS (mg/L)	606	885			
7	Temp (deg C)	25.0	26.3	26.0	27.5	26.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	3.6	0.0
2	ALK-TOT (mgCaCO3/L)	213	223	210	193	197
3	Ca (mg/L)	58	67	35	34	39
4	Cl (mg/L)	182.0	248.7	156.9	100.1	109.6
5	CO3 (mg/L)	0.0	0.0	0.0	4.4	0.0
6	F (mg/L)	0.63	0.69			
7	Fe (mg/L)	0.0				
8	HCO3 (mg/L)	259	271	256	226	240
9	K (mg/L)	4.3	5.3			
10	Mg (mg/L)	26.6	35.4	21.9	9.5	23.2
11	Na (mg/L)	137.6	186.7	135.2	59.7	
12	NH3-N (mg N/L)	0.07	0.06			
13	NO2+NO3 (mg N/L)	4.49	0.96			
14	NO2-N (mgN/L)	0.00	0.02			
15	NO3-N (mgN/L)	3.39	0.93			
16	o-PO4-P (mg P/L)	0.009	0.007			
17	P-Tot (mgP/L)					
18	SO4 (mg/L)	120.9	200.9	166.4	102.2	98.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	1.9	1.5		1.1
2	DO (mg/L)	5.9	5.8	5.6	5.8	5.7
3	DO_SAT% (%)	72	72	69	73	71
	TRACE & TOXIC					
1	As (µg/L)			27.72	10.33	8.53
2	Cd (µg/L)	2.48			4.00	1.09
3	Cr (µg/L)	0.08		1.18	0.55	0.84
4	Cu (µg/L)	9.79		22.72	9.06	3.33
5	Hg (µg/L)					
6	Ni (µg/L)	11.59		15.67		
7	Pb (µg/L)	14.49		6.47	2.38	2.23
8	Zn (µg/L)	179.45			24.00	19.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	146	168	87	85	98
2	HAR_Total (mgCaCO3/L)	256	316	178	124	195
3	Na% (%)	53	56			
4	RSC (-)	0.0	0.0	0.7	1.4	0.1
5	SAR (-)	3.7	4.6	4.5	2.3	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Alladupalli (APF00B8)

Division : Hydrology Division, Chennai

Local River : Kunderu

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	9.64	19.14	30.83	5.557
2	EC_FLD (µmho/cm)	897	1020	1044	1131
3	EC_GEN (µmho/cm)	1029	1079	950	1235
4	pH_FLD (pH units)	7.0	7.0	7.6	7.5
5	pH_GEN (pH units)	8.0	8.1	8.1	7.3
6	TDS (mg/L)				
7	Temp (deg C)	27.0	25.8	27.7	28.7
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12.7	24.9	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	262	326	222	236
3	Ca (mg/L)	40	47	45	34
4	Cl (mg/L)	126.3	152.5	130.6	177.5
5	CO3 (mg/L)	15.3	30.0	0.0	0.0
6	F (mg/L)		0.73	0.69	0.72
7	Fe (mg/L)				0.0
8	HCO3 (mg/L)	288	336	270	288
9	K (mg/L)	4.0	5.7	5.4	11.0
10	Mg (mg/L)	22.7	34.3	23.0	32.4
11	Na (mg/L)	188.4	169.7	134.7	193.6
12	NH3-N (mg N/L)				
13	NO2+NO3 (mg N/L)				
14	NO2-N (mgN/L)				
15	NO3-N (mgN/L)		0.48	1.78	9.06
16	o-PO4-P (mg P/L)				
17	P-Tot (mgP/L)				
18	SO4 (mg/L)	152.3	144.6	116.4	167.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.9	1.1	1.0	2.1
2	DO (mg/L)	6.2	6.6	5.1	3.1
3	DO_SAT% (%)	77	81	64	40
	TRACE & TOXIC				
1	As (µg/L)	49.88		1.93	1.31
2	Cd (µg/L)				0.11
3	Cr (µg/L)	1.55		0.80	14.64
4	Cu (µg/L)	6.85		6.61	19.80
5	Hg (µg/L)				
6	Ni (µg/L)	7.99			4.30
7	Pb (µg/L)	0.88		0.39	13.32
8	Zn (µg/L)			5.05	6.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	100	117	112	84
2	HAR_Total (mgCaCO3/L)	195	260	208	219
3	Na% (%)	70	58	58	64
4	RSC (-)	1.7	1.3	0.4	0.4
5	SAR (-)	6.3	4.6	4.1	5.7
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Alladupalli (APF00B8)

Division : Hydrology Division, Chennai

Local River : Kunderu

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	3.172	30.75	4.142	1.435
2	EC_FLD (µmho/cm)	1085	1007	972	986
3	EC_GEN (µmho/cm)	1200	913	1459	1402
4	pH_FLD (pH units)	7.5	7.5	7.7	7.5
5	pH_GEN (pH units)	7.5	7.9	8.0	8.0
6	TDS (mg/L)	640	489	884	774
7	Temp (deg C)	29.7	28.0	28.3	32.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	192	135	184	172
3	Ca (mg/L)	48	33	52	51
4	Cl (mg/L)	228.6	165.4	294.8	230.1
5	CO3 (mg/L)	0.0	0.0	0.0	0.0
6	F (mg/L)	1.42	0.73	0.77	0.85
7	Fe (mg/L)	0.1	0.1		0.0
8	HCO3 (mg/L)	234	165	224	210
9	K (mg/L)	6.3	3.7	5.6	6.1
10	Mg (mg/L)	22.2	21.5	37.1	30.6
11	Na (mg/L)	177.8	126.8	219.8	175.3
12	NH3-N (mg N/L)			0.11	0.04
13	NO2+NO3 (mg N/L)			1.27	0.61
14	NO2-N (mgN/L)			0.09	0.00
15	NO3-N (mgN/L)	1.58	6.21	1.18	0.61
16	o-PO4-P (mg P/L)			0.021	0.000
17	P-Tot (mgP/L)				
18	SO4 (mg/L)	123.0	101.5	206.1	178.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.9	2.1	1.2	1.3
2	DO (mg/L)	4.2	4.6	5.9	5.8
3	DO_SAT% (%)	56	59	76	80
	TRACE & TOXIC				
1	As (µg/L)	2.32	3.83		1.17
2	Cd (µg/L)	0.36	0.05		0.52
3	Cr (µg/L)	0.95	1.21		0.33
4	Cu (µg/L)	1.98	6.11		3.07
5	Hg (µg/L)	1.04			0.00
6	Ni (µg/L)	20.34	2.83		6.45
7	Pb (µg/L)	10.60	8.15		0.46
8	Zn (µg/L)	4.33	12.00		4.40
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	121	82	131	128
2	HAR_Total (mgCaCO3/L)	214	171	285	256
3	Na% (%)	63	61	62	59
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	5.4	4.2	5.7	4.8
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: TADIPATRI	Code	: AP000L8
State	: Andhra Pradesh	District	Anantapur
Basin	: Pennar	Independent River	: Pennar
Tributary	: -	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Pennar
Division	: Hydrology Division, Chennai	Sub-Division	: PSD, Kadapa
Drainage Area	: 12482 Sq. Km.	Bank	: Left
Latitude	: 14°55'19"	Longitude	: 78°00'59"
Zero of Gauge (m)	: 227.500 (m.s.l) 224.000 (m.s.l) 223.650 (m.s.l)	21/08/1971	- 22/12/1975
		23/12/1975	- 20/08/1979
		21/08/1979	
	Opening Date	Closing Date	
Gauge	: 21/08/1971		
Discharge	: 12/12/1971		
Sediment	:		
Water Quality	: 01/09/1979		

Water Quality Datasheet for the period : 2015-2016

Station Name : Tadipatri (AP000L8)

Division : Hydrology Division, Chennai

Local River : Pennar

River Water Analysis

Sub-Division : PSD, Kadapa

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
	CHEMICAL			
	BIOLOGICAL/BACTERIOLOGICAL			
	TRACE & TOXIC			
	CHEMICAL INDICES			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Tadipatri (AP000L8)

Division : Hydrology Division, Chennai

Local River : Pennar

River Water Analysis

Sub-Division : PSD, Kadapa

S.No	Parameters	01/09/2015	01/10/2015	01/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
	CHEMICAL			
	BIOLOGICAL/BACTERIOLOGICAL			
	TRACE & TOXIC			
	CHEMICAL INDICES			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Tadipatri (AP000L8)

Division : Hydrology Division, Chennai

Local River : Pennar

River Water Analysis

Sub-Division : PSD, Kadapa

S.No	Parameters	01/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
	CHEMICAL			
	BIOLOGICAL/BACTERIOLOGICAL			
	TRACE & TOXIC			
	CHEMICAL INDICES			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Tadipatri (AP000L8)

Division : Hydrology Division, Chennai

Local River : Pennar

River Water Analysis

Sub-Division : PSD, Kadapa

S.No	Parameters	01/03/2016	01/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
	CHEMICAL			
	BIOLOGICAL/BACTERIOLOGICAL			
	TRACE & TOXIC			
	CHEMICAL INDICES			
	PESTICIDES			

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Tadipatri (AP000L8)

Division : Hydrology Division, Chennai

Local River :

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	1.712	5.915	3.735
2	EC_GEN (µmho/cm)		WQ Observation not done	WQ Observation not done	598	528
3	pH_FLD (pH units)				7.0	7.0
4	pH_GEN (pH units)				7.9	8.3
5	TDS (mg/L)					
6	Temp (deg C)				27.5	29.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)				0.0	0.0
2	ALK-TOT (mgCaCO3/L)				221	229
3	Ca (mg/L)				28	26
4	Cl (mg/L)				73.7	74.3
5	CO3 (mg/L)				0.0	0.0
6	F (mg/L)					0.65
7	HCO3 (mg/L)				269	279
8	K (mg/L)					6.5
9	Mg (mg/L)				10.4	13.6
10	Na (mg/L)					92.5
11	NO3-N (mgN/L)					
12	SO4 (mg/L)				45.1	17.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					1.9
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)				71	65
2	HAR_Total (mgCaCO3/L)				114	122
3	Na% (%)					61
4	RSC (-)				2.2	2.2
5	SAR (-)					3.7
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Tadipatri (AP000L8)

Division : Hydrology Division, Chennai

Local River :

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	0.977	10.68	3.96	1.296	Dry Bed
2	EC_GEN (µmho/cm)	250	173	207	168	
3	pH_FLD (pH units)	8.0	7.0	7.0	7.0	
4	pH_GEN (pH units)	7.9	9.5	8.3	8.2	
5	TDS (mg/L)			108	89	
6	Temp (deg C)	26.0	28.0	27.0	27.0	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	39.8	8.1	0.0	
2	ALK-TOT (mgCaCO3/L)	88	92	73	63	
3	Ca (mg/L)	13	13	19	12	
4	Cl (mg/L)	36.0	33.1	51.9	19.9	
5	CO3 (mg/L)	0.0	48.0	9.8	0.0	
6	F (mg/L)	0.73	0.67	1.30	0.29	
7	HCO3 (mg/L)	108	15	70	77	
8	K (mg/L)	3.2	2.6	0.9	1.6	
9	Mg (mg/L)	6.1	11.7	8.6	4.1	
10	Na (mg/L)	36.4	20.7	32.6	20.6	
11	NO3-N (mgN/L)	0.39	0.08	0.13	0.94	
12	SO4 (mg/L)	15.4	6.0	20.5	7.5	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	2.1	2.5	1.4	
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	32	32	47	29	
2	HAR_Total (mgCaCO3/L)	58	81	83	46	
3	Na% (%)	56	35	46	48	
4	RSC (-)	0.6	0.2	0.0	0.3	
5	SAR (-)	2.1	1.0	1.6	1.3	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Tadipatri (AP000L8)

Division : Hydrology Division, Chennai

Local River :

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	7.925	Dry Bed	12.7	4.74
2	EC_GEN (µmho/cm)		714	WQ Observation not done	WQ Observation not done	725
3	pH_FLD (pH units)					7.0
4	pH_GEN (pH units)		7.9			8.2
5	TDS (mg/L)					
6	Temp (deg C)		27.5			24.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0			27.7
2	ALK-TOT (mgCaCO3/L)		179			274
3	Ca (mg/L)		24			22
4	Cl (mg/L)		68.5			81.4
5	CO3 (mg/L)		0.0			33.3
6	F (mg/L)					
7	HCO3 (mg/L)		218			266
8	K (mg/L)					
9	Mg (mg/L)		21.6			24.6
10	Na (mg/L)		95.4			
11	NO3-N (mgN/L)					
12	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		60			55
2	HAR_Total (mgCaCO3/L)		150			157
3	Na% (%)					
4	RSC (-)		0.6			2.4
5	SAR (-)		3.4			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Tadipatri (AP000L8)

Division : Hydrology Division, Chennai

Local River :

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	1.069	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)	860				
3	pH_FLD (pH units)	7.0				
4	pH_GEN (pH units)	8.3				
5	TDS (mg/L)					
6	Temp (deg C)	24.2				
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	30.4				
2	ALK-TOT (mgCaCO3/L)	378				
3	Ca (mg/L)	22				
4	Cl (mg/L)	124.5				
5	CO3 (mg/L)	36.7				
6	F (mg/L)	1.19				
7	HCO3 (mg/L)	386				
8	K (mg/L)	8.3				
9	Mg (mg/L)	19.1				
10	Na (mg/L)	182.6				
11	NO3-N (mgN/L)					
12	SO4 (mg/L)	35.4				
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2				
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	54				
2	HAR_Total (mgCaCO3/L)	134				
3	Na% (%)	73				
4	RSC (-)	4.9				
5	SAR (-)	7.0				
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Tadipatri (AP000L8)

Division : Hydrology Division, Chennai

Local River :

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				WQ Observation not done	WQ Observation not done
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	TDS (mg/L)					
6	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					
2	ALK-TOT (mgCaCO3/L)					
3	Ca (mg/L)					
4	Cl (mg/L)					
5	CO3 (mg/L)					
6	F (mg/L)					
7	HCO3 (mg/L)					
8	K (mg/L)					
9	Mg (mg/L)					
10	Na (mg/L)					
11	NO3-N (mgN/L)					
12	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Tadipatri (AP000L8)

Division : Hydrology Division, Chennai

Local River :

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	0.164	Dry Bed
2	EC_GEN (µmho/cm)			605	
3	pH_FLD (pH units)			7.0	
4	pH_GEN (pH units)			8.4	
5	TDS (mg/L)				
6	Temp (deg C)			25.0	
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)			71.2	
2	ALK-TOT (mgCaCO3/L)			259	
3	Ca (mg/L)			27	
4	Cl (mg/L)			84.6	
5	CO3 (mg/L)			85.8	
6	F (mg/L)			0.48	
7	HCO3 (mg/L)			142	
8	K (mg/L)			4.5	
9	Mg (mg/L)			21.4	
10	Na (mg/L)			88.1	
11	NO3-N (mgN/L)			1.03	
12	SO4 (mg/L)			10.5	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)			0.4	
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)			68	
2	HAR_Total (mgCaCO3/L)			157	
3	Na% (%)			54	
4	RSC (-)			2.1	
5	SAR (-)			3.1	
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Tadipatri (AP000L8)

Division : Hydrology Division, Chennai

Local River :

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				
3	pH_FLD (pH units)				
4	pH_GEN (pH units)				
5	TDS (mg/L)				
6	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	Ca (mg/L)				
4	Cl (mg/L)				
5	CO3 (mg/L)				
6	F (mg/L)				
7	HCO3 (mg/L)				
8	K (mg/L)				
9	Mg (mg/L)				
10	Na (mg/L)				
11	NO3-N (mgN/L)				
12	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Nagalamadike	Code	: AP000V5
State	: Karnataka	District	Tumkur
Basin	: Pennar	Independent River	: Pennar
Tributary	:	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Pennar
Division	: Hydrology Division, Chennai	Sub-Division	: PSD, Kadapa
Drainage Area	: 5050 Sq. Km.	Bank	: Left
Latitude	: 14°11'20"	Longitude	: 77°22'20"
Zero of Gauge (m)	: 544.550 (m.s.l)	07/02/1978	
	Opening Date	Closing Date	
Gauge	: 07/02/1978		
Discharge	: 17/07/1978		
Sediment	:		
Water Quality	: 01/06/1980		

Water Quality Datasheet for the period : 2015-2016

Station Name : Nagalamadike (AP000V5)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
	CHEMICAL			
	BIOLOGICAL/BACTERIOLOGICAL			
	TRACE & TOXIC			
	CHEMICAL INDICES			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016**Station Name : Nagalamadike (AP000V5)****Division : Hydrology Division, Chennai****Local River : Pennar****Sub-Division : PSD, Kadapa****River Water Analysis**

S.No	Parameters	01/09/2015	01/10/2015	01/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
	CHEMICAL			
	BIOLOGICAL/BACTERIOLOGICAL			
	TRACE & TOXIC			
	CHEMICAL INDICES			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Nagalamadike (AP000V5)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
	CHEMICAL			
	BIOLOGICAL/BACTERIOLOGICAL			
	TRACE & TOXIC			
	CHEMICAL INDICES			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Nagalamadike (AP000V5)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
	CHEMICAL			
	BIOLOGICAL/BACTERIOLOGICAL			
	TRACE & TOXIC			
	CHEMICAL INDICES			
	PESTICIDES			

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Nagalamadike (AP000V5)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	9.717	Dry Bed
2	EC_GEN (µmho/cm)		WQ Observation not done	WQ Observation not done	184	
3	pH_FLD (pH units)				7.0	
4	pH_GEN (pH units)				7.1	
5	TDS (mg/L)					
6	Temp (deg C)				29.0	
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)				100	
2	Ca (mg/L)				18	
3	Cl (mg/L)				43.8	
4	F (mg/L)					
5	HCO3 (mg/L)				122	
6	K (mg/L)					
7	Mg (mg/L)				6.8	
8	Na (mg/L)					
9	NO3-N (mgN/L)					
10	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)				46	
2	HAR_Total (mgCaCO3/L)				74	
3	Na% (%)					
4	RSC (-)				0.5	
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Nagalamadike (AP000V5)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	2.514	Dry Bed
2	EC_GEN (µmho/cm)				122	
3	pH_FLD (pH units)				7.0	
4	pH_GEN (pH units)				7.9	
5	TDS (mg/L)				66	
6	Temp (deg C)				26.5	
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)				46	
2	Ca (mg/L)				10	
3	Cl (mg/L)				15.6	
4	F (mg/L)				0.17	
5	HCO3 (mg/L)				57	
6	K (mg/L)				3.0	
7	Mg (mg/L)				3.0	
8	Na (mg/L)				13.3	
9	NO3-N (mgN/L)				0.91	
10	SO4 (mg/L)				5.4	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)				0.7	
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)				25	
2	HAR_Total (mgCaCO3/L)				38	
3	Na% (%)				41	
4	RSC (-)				0.2	
5	SAR (-)				0.9	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Nagalamadike (AP000V5)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)			WQ Observation not done	WQ Observation not done	
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	TDS (mg/L)					
6	Temp (deg C)					
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)					
2	Ca (mg/L)					
3	Cl (mg/L)					
4	F (mg/L)					
5	HCO3 (mg/L)					
6	K (mg/L)					
7	Mg (mg/L)					
8	Na (mg/L)					
9	NO3-N (mgN/L)					
10	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Nagalamadike (AP000V5)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)					
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	TDS (mg/L)					
6	Temp (deg C)					
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)					
2	Ca (mg/L)					
3	Cl (mg/L)					
4	F (mg/L)					
5	HCO3 (mg/L)					
6	K (mg/L)					
7	Mg (mg/L)					
8	Na (mg/L)					
9	NO3-N (mgN/L)					
10	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Nagalamadike (AP000V5)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				WQ Observation not done	WQ Observation not done
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	TDS (mg/L)					
6	Temp (deg C)					
	CHEMICAL					
1	ALK-TOT (mgCaCO3/L)					
2	Ca (mg/L)					
3	Cl (mg/L)					
4	F (mg/L)					
5	HCO3 (mg/L)					
6	K (mg/L)					
7	Mg (mg/L)					
8	Na (mg/L)					
9	NO3-N (mgN/L)					
10	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Nagalamadike (AP000V5)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				
3	pH_FLD (pH units)				
4	pH_GEN (pH units)				
5	TDS (mg/L)				
6	Temp (deg C)				
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)				
2	Ca (mg/L)				
3	Cl (mg/L)				
4	F (mg/L)				
5	HCO3 (mg/L)				
6	K (mg/L)				
7	Mg (mg/L)				
8	Na (mg/L)				
9	NO3-N (mgN/L)				
10	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Nagalamadike (AP000V5)

Division : Hydrology Division, Chennai

Local River : Pennar

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				
3	pH_FLD (pH units)				
4	pH_GEN (pH units)				
5	TDS (mg/L)				
6	Temp (deg C)				
	CHEMICAL				
1	ALK-TOT (mgCaCO3/L)				
2	Ca (mg/L)				
3	Cl (mg/L)				
4	F (mg/L)				
5	HCO3 (mg/L)				
6	K (mg/L)				
7	Mg (mg/L)				
8	Na (mg/L)				
9	NO3-N (mgN/L)				
10	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: SINGAVARAM	Code	: APG00E4
State	: Andhra Pradesh	District	Anantapur
Basin	: Pennar	Independent River	: Pennar
Tributary	: Chitravathi	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Chitravathi
Division	: Hydrology Division, Chennai	Sub-Division	: PSD, Kadapa
Drainage Area	: 6262 Sq. Km.	Bank	: Right
Latitude	: 14°35'52"	Longitude	: 78°00'48"
Zero of Gauge (m)	: 256.000 (m.s.l) 256.465 (m.s.l)	24/09/1979 01/06/1981	- 31/05/1981
	Opening Date	Closing Date	
Gauge	: 24/09/1979		
Discharge	: 25/09/1979		
Sediment	:		
Water Quality	: 15/09/1981		

Water Quality Datasheet for the period : 2015-2016

Station Name : Singavaram (APG00E4)

Division : Hydrology Division, Chennai

Local River : Chitravathi

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
	CHEMICAL			
	BIOLOGICAL/BACTERIOLOGICAL			
	TRACE & TOXIC			
	CHEMICAL INDICES			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Singavaram (APG00E4)

Division : Hydrology Division, Chennai

Local River : Chitravathi

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	01/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
	CHEMICAL			
	BIOLOGICAL/BACTERIOLOGICAL			
	TRACE & TOXIC			
	CHEMICAL INDICES			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Singavaram (APG00E4)

Division : Hydrology Division, Chennai

Local River : Chitravathi

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
	CHEMICAL			
	BIOLOGICAL/BACTERIOLOGICAL			
	TRACE & TOXIC			
	CHEMICAL INDICES			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Singavaram (APG00E4)

Division : Hydrology Division, Chennai

Local River : Chitravathi

Sub-Division : PSD, Kadapa

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
	CHEMICAL			
	BIOLOGICAL/BACTERIOLOGICAL			
	TRACE & TOXIC			
	CHEMICAL INDICES			
	PESTICIDES			

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Singavaram (APG00E4)

Division : Hydrology Division, Chennai

Local River : Chitravathi

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)		WQ Observation not done	WQ Observation not done		
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					
2	ALK-TOT (mgCaCO3/L)					
3	Ca (mg/L)					
4	Cl (mg/L)					
5	CO3 (mg/L)					
6	F (mg/L)					
7	HCO3 (mg/L)					
8	K (mg/L)					
9	Mg (mg/L)					
10	Na (mg/L)					
11	NO3-N (mgN/L)					
12	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Singavaram (APG00E4)

Division : Hydrology Division, Chennai

Local River : Chitravathi

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)					
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					
2	ALK-TOT (mgCaCO3/L)					
3	Ca (mg/L)					
4	Cl (mg/L)					
5	CO3 (mg/L)					
6	F (mg/L)					
7	HCO3 (mg/L)					
8	K (mg/L)					
9	Mg (mg/L)					
10	Na (mg/L)					
11	NO3-N (mgN/L)					
12	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Singavaram (APG00E4)

Division : Hydrology Division, Chennai

Local River : Chitravathi

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	2.742	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)		463	WQ Observation not done	WQ Observation not done	
3	pH_FLD (pH units)					
4	pH_GEN (pH units)		7.8			
5	Temp (deg C)		26.5			
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0			
2	ALK-TOT (mgCaCO3/L)		198			
3	Ca (mg/L)		24			
4	Cl (mg/L)		5.7			
5	CO3 (mg/L)		0.0			
6	F (mg/L)					
7	HCO3 (mg/L)		242			
8	K (mg/L)					
9	Mg (mg/L)		16.5			
10	Na (mg/L)		28.1			
11	NO3-N (mgN/L)					
12	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		60			
2	HAR_Total (mgCaCO3/L)		129			
3	Na% (%)					
4	RSC (-)		1.4			
5	SAR (-)		1.1			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Singavaram (APG00E4)

Division : Hydrology Division, Chennai

Local River : Chitravathi

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	Dry Bed	3.159	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)		663			
3	pH_FLD (pH units)		7.0			
4	pH_GEN (pH units)		8.3			
5	Temp (deg C)		23.0			
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		26.9			
2	ALK-TOT (mgCaCO3/L)		251			
3	Ca (mg/L)		20			
4	Cl (mg/L)		86.3			
5	CO3 (mg/L)		32.4			
6	F (mg/L)		1.34			
7	HCO3 (mg/L)		241			
8	K (mg/L)		6.1			
9	Mg (mg/L)		23.1			
10	Na (mg/L)		94.5			
11	NO3-N (mgN/L)		1.76			
12	SO4 (mg/L)		19.3			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		1.2			
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		49			
2	HAR_Total (mgCaCO3/L)		145			
3	Na% (%)		58			
4	RSC (-)		2.1			
5	SAR (-)		3.4			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Singavaram (APG00E4)

Division : Hydrology Division, Chennai

Local River : Chitravathi

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				WQ Observation not done	WQ Observation not done
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					
2	ALK-TOT (mgCaCO3/L)					
3	Ca (mg/L)					
4	Cl (mg/L)					
5	CO3 (mg/L)					
6	F (mg/L)					
7	HCO3 (mg/L)					
8	K (mg/L)					
9	Mg (mg/L)					
10	Na (mg/L)					
11	NO3-N (mgN/L)					
12	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Singavaram (APG00E4)

Division : Hydrology Division, Chennai

Local River : Chitravathi

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				
3	pH_FLD (pH units)				
4	pH_GEN (pH units)				
5	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	Ca (mg/L)				
4	Cl (mg/L)				
5	CO3 (mg/L)				
6	F (mg/L)				
7	HCO3 (mg/L)				
8	K (mg/L)				
9	Mg (mg/L)				
10	Na (mg/L)				
11	NO3-N (mgN/L)				
12	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Singavaram (APG00E4)

Division : Hydrology Division, Chennai

Local River : Chitravathi

Sub-Division : PSD, Kadapa

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				
3	pH_FLD (pH units)				
4	pH_GEN (pH units)				
5	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	Ca (mg/L)				
4	Cl (mg/L)				
5	CO3 (mg/L)				
6	F (mg/L)				
7	HCO3 (mg/L)				
8	K (mg/L)				
9	Mg (mg/L)				
10	Na (mg/L)				
11	NO3-N (mgN/L)				
12	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: NAIDUPETA	Code	: AC000G4
State	: Andhra Pradesh	District	Nellore
Basin	: EFR B Pennar-Cauvery	Independent River	: Swarnamukhi
Tributary	: -	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Swarnamukhi
Division	: Hydrology Division, Chennai	Sub-Division	: PPSD, Chennai
Drainage Area	: 2650 Sq. Km.	Bank	: Left
Latitude	: 13°56'54"	Longitude	: 79°53'46"
Zero of Gauge (m)	: 42.000 (m.s.l) 20.130 (m.s.l)	14/10/1977	- 31/05/1980
	Opening Date	01/06/1980	Closing Date
Gauge	: 14/10/1977		
Discharge	: 01/12/1978		
Sediment	: 22/10/2013		
Water Quality	: 01/12/1980		

Water Quality Datasheet for the period : 2015-2016

Station Name : Naidupeta (AC000G4)

Division : Hydrology Division, Chennai

Local River : Swarnamukhi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_FLD (µmho/cm)			
4	EC_GEN (µmho/cm)			
5	Odour_Code (-)			
6	pH_FLD (pH units)			
7	pH_GEN (pH units)			
8	TDS (mg/L)			
9	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
2	DO (mg/L)			
3	DO_SAT% (%)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Naidupeta (AC000G4)

Division : Hydrology Division, Chennai

Local River : Swarnamukhi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	11/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	224.7
2	Colour_Cod (-)			Brown
3	EC_FLD (µmho/cm)			760
4	EC_GEN (µmho/cm)			200
5	Odour_Code (-)			odour free
6	pH_FLD (pH units)			7.5
7	pH_GEN (pH units)			7.4
8	TDS (mg/L)			126
9	Temp (deg C)			24.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			0.0
2	ALK-TOT (mgCaCO3/L)			60
3	Ca (mg/L)			13
4	Cl (mg/L)			27.5
5	CO3 (mg/L)			0.0
6	F (mg/L)			0.21
7	HCO3 (mg/L)			73
8	K (mg/L)			3.4
9	Mg (mg/L)			7.3
10	Na (mg/L)			20.3
11	NH3-N (mg N/L)			0.05
12	NO2+NO3 (mg N/L)			0.58
13	NO2-N (mgN/L)			0.00
14	NO3-N (mgN/L)			0.57
15	o-PO4-P (mg P/L)			0.069
16	SO4 (mg/L)			11.4
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			1.8
2	DO (mg/L)			7.9
3	DO_SAT% (%)			93
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			33
2	HAR_Total (mgCaCO3/L)			64
3	Na% (%)			39
4	RSC (-)			0.0
5	SAR (-)			1.1
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Naidupeta (AC000G4)

Division : Hydrology Division, Chennai

Local River : Swarnamukhi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/12/2015	02/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	447.9	0.693	3.851
2	Colour_Cod (-)	Brown	Clear	Clear
3	EC_FLD (µmho/cm)	230	132	512
4	EC_GEN (µmho/cm)	207	709	432
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.5	7.8	7.8
7	pH_GEN (pH units)	7.8	8.0	7.8
8	TDS (mg/L)	110	382	229
9	Temp (deg C)	24.0	26.5	27.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	60	207	85
3	Ca (mg/L)	15	52	22
4	Cl (mg/L)	27.5	93.6	72.2
5	CO3 (mg/L)	0.0	0.0	0.0
6	F (mg/L)	0.27	0.33	0.35
7	HCO3 (mg/L)	73	253	103
8	K (mg/L)	2.2	2.6	2.8
9	Mg (mg/L)	4.9	21.1	11.7
10	Na (mg/L)	19.1	64.0	48.7
11	NH3-N (mg N/L)	0.04	0.08	0.04
12	NO2+NO3 (mg N/L)	0.22	0.19	0.18
13	NO2-N (mgN/L)	0.01	0.00	0.00
14	NO3-N (mgN/L)	0.22	0.19	0.18
15	o-PO4-P (mg P/L)	0.010	0.000	0.000
16	SO4 (mg/L)	8.7	30.5	28.2
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.6	1.6	1.3
2	DO (mg/L)	6.2	7.2	7.3
3	DO_SAT% (%)	74	89	91
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	37	130	56
2	HAR_Total (mgCaCO3/L)	57	218	105
3	Na% (%)	41	39	50
4	RSC (-)	0.1	0.0	0.0
5	SAR (-)	1.1	1.9	2.1
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Naidupeta (AC000G4)

Division : Hydrology Division, Chennai

Local River : Swarnamukhi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_FLD (µmho/cm)			
4	EC_GEN (µmho/cm)			
5	Odour_Code (-)			
6	pH_FLD (pH units)			
7	pH_GEN (pH units)			
8	TDS (mg/L)			
9	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
2	DO (mg/L)			
3	DO_SAT% (%)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : Naidupeta (AC000G4)

Division : Hydrology Division, Chennai

Local River : Swarnamukhi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	1100	0.000	27.01
2	EC_FLD (µmho/cm)	4	760	132	409
3	EC_GEN (µmho/cm)	4	709	200	387
4	pH_FLD (pH units)	4	7.8	7.5	7.7
5	pH_GEN (pH units)	4	8.0	7.4	7.7
6	TDS (mg/L)	4	382	110	212
7	Temp (deg C)	4	27.0	24.0	25.4
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	4	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	4	207	60	103
3	Ca (mg/L)	4	52	13	26
4	Cl (mg/L)	4	93.6	27.5	55.2
5	CO3 (mg/L)	4	0.0	0.0	0
6	F (mg/L)	4	0.35	0.21	0.29
7	HCO3 (mg/L)	4	253	73	125
8	K (mg/L)	4	3.4	2.2	2.8
9	Mg (mg/L)	4	21.1	4.9	11.2
10	Na (mg/L)	4	64.0	19.1	38
11	NH3-N (mg N/L)	4	0.08	0.04	0.05
12	NO2+NO3 (mg N/L)	4	0.58	0.18	0.29
13	NO2-N (mgN/L)	4	0.01	0.00	0
14	NO3-N (mgN/L)	4	0.57	0.18	0.29
15	o-PO4-P (mg P/L)	4	0.069	0.000	0.02
16	SO4 (mg/L)	4	30.5	8.7	19.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	4	1.8	1.3	1.6
2	DO (mg/L)	4	7.9	6.2	7.1
3	DO_SAT% (%)	4	93	74	87
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	4	130	33	64
2	HAR_Total (mgCaCO3/L)	4	218	57	111
3	Na% (%)	4	50	39	42
4	RSC (-)	4	0.1	0.0	0
5	SAR (-)	4	2.1	1.1	1.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Naidupeta (AC000G4)

Division : Hydrology Division, Chennai

Local River : Swarnamukhi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	1.668	6.565	Dry Bed
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)			299	345	
4	pH_FLD (pH units)				6.0	
5	pH_GEN (pH units)			8.9	7.3	
6	TDS (mg/L)					
7	Temp (deg C)			27.0	23.0	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)			15.6	0.0	
2	ALK-TOT (mgCaCO3/L)			110	98	
3	Ca (mg/L)			18	25	
4	Cl (mg/L)			33.4	51.5	
5	CO3 (mg/L)			18.8	0.0	
6	F (mg/L)					
7	Fe (mg/L)					
8	HCO3 (mg/L)			97	119	
9	K (mg/L)					
10	Mg (mg/L)			5.8	8.7	
11	Na (mg/L)			28.5		
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)					
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)			11.6		
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)					
8	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)			44	62	
2	HAR_Total (mgCaCO3/L)			68	98	
3	Na% (%)					
4	RSC (-)			0.8	0.0	
5	SAR (-)			1.5		
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Naidupeta (AC000G4)

Division : Hydrology Division, Chennai

Local River : Swarnamukhi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	1.968	Dry Bed	0.385	0.523	Dry Bed
2	EC_FLD (µmho/cm)				426	
3	EC_GEN (µmho/cm)	574		769	410	
4	pH_FLD (pH units)	6.7		6.0	7.2	
5	pH_GEN (pH units)	8.4		8.2	7.6	
6	TDS (mg/L)			404	223	
7	Temp (deg C)	27.2		21.0	27.8	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	45.7		0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	210		147	93	
3	Ca (mg/L)	26		31	18	
4	Cl (mg/L)	96.9		34.0	77.1	
5	CO3 (mg/L)	55.0		0.0	0.0	
6	F (mg/L)	0.36		0.78	0.35	
7	Fe (mg/L)					
8	HCO3 (mg/L)	145		179	113	
9	K (mg/L)	4.5		3.2	3.9	
10	Mg (mg/L)	18.5		18.1	6.5	
11	Na (mg/L)	90.4		26.1	61.1	
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)	0.67		0.11	3.19	
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)	19.1		35.0	15.3	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7		1.2	1.4	
2	DO (mg/L)				6.0	
3	DO_SAT% (%)				76	
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)					
8	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	64		79	45	
2	HAR_Total (mgCaCO3/L)	141		154	72	
3	Na% (%)	57		27	63	
4	RSC (-)	1.4		0.0	0.4	
5	SAR (-)	3.3		0.9	3.1	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Naidupeta (AC000G4)

Division : Hydrology Division, Chennai

Local River : Swarnamukhi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	32.13	1.869	15.85	52.77
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)		339	505	443	350
4	pH_FLD (pH units)					6.5
5	pH_GEN (pH units)		7.4	8.1	8.0	7.6
6	TDS (mg/L)					
7	Temp (deg C)		24.3	23.0	25.6	24.9
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	3.9	0.0
2	ALK-TOT (mgCaCO3/L)		89	145	152	122
3	Ca (mg/L)		20	25	23	22
4	Cl (mg/L)		45.1	53.4	45.8	64.8
5	CO3 (mg/L)		0.0	0.0	4.7	0.0
6	F (mg/L)					
7	Fe (mg/L)					
8	HCO3 (mg/L)		108	177	176	149
9	K (mg/L)					
10	Mg (mg/L)		10.7	11.5	14.7	10.2
11	Na (mg/L)		28.5	77.4	25.3	
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)					
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)			21.5	12.2	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)					
8	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		51	63	58	54
2	HAR_Total (mgCaCO3/L)		95	111	119	97
3	Na% (%)					
4	RSC (-)		0.2	0.7	0.7	0.5
5	SAR (-)		1.3	3.2	1.1	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Naidupeta (AC000G4)

Division : Hydrology Division, Chennai

Local River : Swarnamukhi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	11.26	18.84	18.51	23.87	4.396
2	EC_FLD (µmho/cm)					712
3	EC_GEN (µmho/cm)	421	572	535	555	670
4	pH_FLD (pH units)	7.0	6.5	6.5	6.0	7.9
5	pH_GEN (pH units)	7.9	8.2	8.1	7.8	7.8
6	TDS (mg/L)				295	357
7	Temp (deg C)	25.9	22.8	22.3	24.0	27.6
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	5.2	10.4	7.2	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	186	190	131	151	134
3	Ca (mg/L)	22	29	15	32	23
4	Cl (mg/L)	58.4	93.2	81.6	95.9	123.7
5	CO3 (mg/L)	6.2	12.5	8.6	0.0	0.0
6	F (mg/L)	0.38	0.35	0.36	0.75	0.57
7	Fe (mg/L)			0.1		
8	HCO3 (mg/L)	214	207	142	184	163
9	K (mg/L)	8.0	4.7	7.2	3.6	4.1
10	Mg (mg/L)	16.5	16.9	16.8	10.5	16.4
11	Na (mg/L)	64.6	73.5	64.5	77.5	93.3
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)		0.60	0.59	0.70	4.89
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)	25.1	17.0	19.3	18.5	37.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	1.1	1.8	1.4	1.8
2	DO (mg/L)					7.3
3	DO_SAT% (%)					93
	TRACE & TOXIC					
1	As (µg/L)			0.35		
2	Cd (µg/L)			0.01		
3	Cr (µg/L)			0.59		
4	Cu (µg/L)			13.37		
5	Hg (µg/L)					
6	Ni (µg/L)			2.62		
7	Pb (µg/L)			1.94		
8	Zn (µg/L)			36.30		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	55	72	37	79	58
2	HAR_Total (mgCaCO3/L)	124	142	107	123	127
3	Na% (%)	51	52	55	56	61
4	RSC (-)	1.3	1.0	0.5	0.6	0.2
5	SAR (-)	2.5	2.7	2.8	3.0	3.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Naidupeta (AC000G4)

Division : Hydrology Division, Chennai

Local River : Swarnamukhi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	5.731	169.3	Dry Bed	Dry Bed	Dry Bed
2	EC_FLD (µmho/cm)	586	409			
3	EC_GEN (µmho/cm)	594	387			
4	pH_FLD (pH units)	7.1	7.7			
5	pH_GEN (pH units)	7.8	7.7			
6	TDS (mg/L)	316	212			
7	Temp (deg C)	26.4	25.4			
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0			
2	ALK-TOT (mgCaCO3/L)	140	103			
3	Ca (mg/L)	30	26			
4	Cl (mg/L)	97.2	55.2			
5	CO3 (mg/L)	0.0	0.0			
6	F (mg/L)	0.57	0.29			
7	Fe (mg/L)	0.0				
8	HCO3 (mg/L)	171	125			
9	K (mg/L)	3.5	2.8			
10	Mg (mg/L)	17.4	11.2			
11	Na (mg/L)	67.8	38.0			
12	NH3-N (mg N/L)	0.08	0.05			
13	NO2+NO3 (mg N/L)	2.98	0.29			
14	NO2-N (mgN/L)	0.00	0.00			
15	NO3-N (mgN/L)	2.38	0.29			
16	o-PO4-P (mg P/L)	0.004	0.020			
17	SO4 (mg/L)	31.1	19.7			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	1.6			
2	DO (mg/L)	6.0	7.1			
3	DO_SAT% (%)	74	87			
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)	2.23				
3	Cr (µg/L)	0.16				
4	Cu (µg/L)	7.62				
5	Hg (µg/L)					
6	Ni (µg/L)	38.86				
7	Pb (µg/L)	0.05				
8	Zn (µg/L)	11.40				
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	74	64			
2	HAR_Total (mgCaCO3/L)	146	111			
3	Na% (%)	50	42			
4	RSC (-)	0.0	0.0			
5	SAR (-)	2.5	1.5			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Naidupeta (AC000G4)

Division : Hydrology Division, Chennai

Local River : Swarnamukhi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	Dry Bed	0.978	1.781	0.645
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)		532	657	735
4	pH_FLD (pH units)		7.0	7.0	6.0
5	pH_GEN (pH units)		8.2	8.1	7.8
6	TDS (mg/L)				
7	Temp (deg C)		26.5	22.0	23.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)		0.0	26.7	0.0
2	ALK-TOT (mgCaCO3/L)		208	213	196
3	Ca (mg/L)		28	30	18
4	Cl (mg/L)		74.4	103.1	110.0
5	CO3 (mg/L)		0.0	32.2	0.0
6	F (mg/L)		0.48	0.46	0.49
7	Fe (mg/L)				
8	HCO3 (mg/L)		253	194	239
9	K (mg/L)		4.3	5.2	11.1
10	Mg (mg/L)		14.6	20.4	30.6
11	Na (mg/L)		91.0	90.9	84.5
12	NH3-N (mg N/L)				
13	NO2+NO3 (mg N/L)				
14	NO2-N (mgN/L)				
15	NO3-N (mgN/L)		0.39	1.14	1.94
16	o-PO4-P (mg P/L)				
17	SO4 (mg/L)		49.7	23.5	32.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)		2.4	0.6	2.1
2	DO (mg/L)				
3	DO_SAT% (%)				
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)				
3	Cr (µg/L)				
4	Cu (µg/L)				
5	Hg (µg/L)				
6	Ni (µg/L)				
7	Pb (µg/L)				
8	Zn (µg/L)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)		69	76	44
2	HAR_Total (mgCaCO3/L)		130	161	172
3	Na% (%)		60	54	50
4	RSC (-)		1.6	1.1	0.5
5	SAR (-)		3.5	3.1	2.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Naidupeta (AC000G4)

Division : Hydrology Division, Chennai

Local River : Swarnamukhi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	0.797	0.244	1.462	Dry Bed
2	EC_FLD (µmho/cm)		752	610	
3	EC_GEN (µmho/cm)	752	728	664	
4	pH_FLD (pH units)	6.0	7.8	7.6	
5	pH_GEN (pH units)	8.1	8.1	8.2	
6	TDS (mg/L)	399	387	352	
7	Temp (deg C)	23.0	29.0	28.0	
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	194	167	126	
3	Ca (mg/L)	37	34	27	
4	Cl (mg/L)	134.6	133.3	107.8	
5	CO3 (mg/L)	0.0	0.0	0.0	
6	F (mg/L)	0.80	0.53	0.55	
7	Fe (mg/L)	0.1			
8	HCO3 (mg/L)	237	204	153	
9	K (mg/L)	3.0	3.8	3.1	
10	Mg (mg/L)	20.9	19.4	15.1	
11	Na (mg/L)	102.2	101.0	81.8	
12	NH3-N (mg N/L)			0.10	
13	NO2+NO3 (mg N/L)			1.01	
14	NO2-N (mgN/L)			0.00	
15	NO3-N (mgN/L)	0.76	6.29	1.01	
16	o-PO4-P (mg P/L)			0.011	
17	SO4 (mg/L)	25.1	39.3	53.2	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.2	2.7	1.5	
2	DO (mg/L)		6.2	6.6	
3	DO_SAT% (%)		81	85	
	TRACE & TOXIC				
1	As (µg/L)	0.72			
2	Cd (µg/L)	0.00			
3	Cr (µg/L)	0.33			
4	Cu (µg/L)	1.73			
5	Hg (µg/L)	0.58			
6	Ni (µg/L)	31.52			
7	Pb (µg/L)	0.13			
8	Zn (µg/L)	5.80			
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	92	84	67	
2	HAR_Total (mgCaCO3/L)	180	165	130	
3	Na% (%)	55	57	57	
4	RSC (-)	0.3	0.1	0.0	
5	SAR (-)	3.3	3.4	3.1	
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: SULURPET	Code	: AB000N5
State	: Andhra Pradesh	District	Nellore
Basin	: EFR B Pennar-Cauvery	Independent River	: Kalingi
Tributary	: -	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Kalingi
Division	: Hydrology Division, Chennai	Sub-Division	: PPSD, Chennai
Drainage Area	: 5927 Sq. Km.	Bank	: Left
Latitude	: 13°42'28"	Longitude	: 80°00'36"
Zero of Gauge (m)	: 13.000 (m.s.l) -2.000 (m.s.l)	01/10/1988 01/05/2003	- 30/04/2003
	Opening Date	Closing Date	
Gauge	: 01/10/1988		
Discharge	: 05/10/1988		
Sediment	: 23/10/2013		
Water Quality	: 01/12/1988		

Water Quality Datasheet for the period : 2015-2016

Station Name : Sularpet (AB000N5)

Division : Hydrology Division, Chennai

Local River : Kalingi

Sub-Division : PPSD, Chennai

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_FLD (µmho/cm)			
4	EC_GEN (µmho/cm)			
5	Odour_Code (-)			
6	pH_FLD (pH units)			
7	pH_GEN (pH units)			
8	TDS (mg/L)			
9	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
2	DO (mg/L)			
3	DO_SAT% (%)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Sularpet (AB000N5)

Division : Hydrology Division, Chennai

Local River : Kalingi

Sub-Division : PPSD, Chennai

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	11/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	53.72
2	Colour_Cod (-)			Brown
3	EC_FLD (µmho/cm)			680
4	EC_GEN (µmho/cm)			204
5	Odour_Code (-)			odour free
6	pH_FLD (pH units)			7.0
7	pH_GEN (pH units)			7.6
8	TDS (mg/L)			118
9	Temp (deg C)			27.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			0.0
2	ALK-TOT (mgCaCO3/L)			55
3	Ca (mg/L)			17
4	Cl (mg/L)			27.5
5	CO3 (mg/L)			0.0
6	F (mg/L)			0.29
7	HCO3 (mg/L)			67
8	K (mg/L)			2.0
9	Mg (mg/L)			4.9
10	Na (mg/L)			20.9
11	NH3-N (mg N/L)			0.05
12	NO2+NO3 (mg N/L)			0.24
13	NO2-N (mgN/L)			0.00
14	NO3-N (mgN/L)			0.24
15	o-PO4-P (mg P/L)			0.003
16	SO4 (mg/L)			12.9
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			1.3
2	DO (mg/L)			6.6
3	DO_SAT% (%)			83
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			43
2	HAR_Total (mgCaCO3/L)			64
3	Na% (%)			41
4	RSC (-)			0.0
5	SAR (-)			1.1
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Sularpet (AB000N5)

Division : Hydrology Division, Chennai

Local River : Kalingi

Sub-Division : PPSP, Chennai

River Water Analysis

S.No	Parameters	01/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	513.6	No Flow	No Flow
2	Colour_Cod (-)	Brown		
3	EC_FLD (µmho/cm)	220		
4	EC_GEN (µmho/cm)	200		
5	Odour_Code (-)	odour free		
6	pH_FLD (pH units)	8.1		
7	pH_GEN (pH units)	8.1		
8	TDS (mg/L)	108		
9	Temp (deg C)	25.5		
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0		
2	ALK-TOT (mgCaCO3/L)	60		
3	Ca (mg/L)	16		
4	Cl (mg/L)	24.8		
5	CO3 (mg/L)	0.0		
6	F (mg/L)	0.30		
7	HCO3 (mg/L)	73		
8	K (mg/L)	1.8		
9	Mg (mg/L)	4.9		
10	Na (mg/L)	18.1		
11	NH3-N (mg N/L)	0.04		
12	NO2+NO3 (mg N/L)	0.19		
13	NO2-N (mgN/L)	0.00		
14	NO3-N (mgN/L)	0.19		
15	o-PO4-P (mg P/L)	0.007		
16	SO4 (mg/L)	9.1		
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	2.0		
2	DO (mg/L)	5.7		
3	DO_SAT% (%)	68		
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	40		
2	HAR_Total (mgCaCO3/L)	60		
3	Na% (%)	39		
4	RSC (-)	0.0		
5	SAR (-)	1.0		
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Sulturpet (AB000N5)

Division : Hydrology Division, Chennai

Local River : Kalingi

Sub-Division : PPSP, Chennai

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_FLD (µmho/cm)			
4	EC_GEN (µmho/cm)			
5	Odour_Code (-)			
6	pH_FLD (pH units)			
7	pH_GEN (pH units)			
8	TDS (mg/L)			
9	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
2	DO (mg/L)			
3	DO_SAT% (%)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : Sularpet (AB000N5)

Division : Hydrology Division, Chennai

Local River : Kalingi

Sub-Division : PPSD, Chennai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	874.5	0.000	17.41
2	EC_FLD (µmho/cm)	2	680	220	450
3	EC_GEN (µmho/cm)	2	204	200	202
4	pH_FLD (pH units)	2	8.1	7.0	7.6
5	pH_GEN (pH units)	2	8.1	7.6	7.8
6	TDS (mg/L)	2	118	108	113
7	Temp (deg C)	2	27.0	25.5	26.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	2	60	55	57
3	Ca (mg/L)	2	17	16	17
4	Cl (mg/L)	2	27.5	24.8	26.2
5	CO3 (mg/L)	2	0.0	0.0	0
6	F (mg/L)	2	0.30	0.29	0.3
7	HCO3 (mg/L)	2	73	67	70
8	K (mg/L)	2	2.0	1.8	1.9
9	Mg (mg/L)	2	4.9	4.9	4.9
10	Na (mg/L)	2	20.9	18.1	19.5
11	NH3-N (mg N/L)	2	0.05	0.04	0.04
12	NO2+NO3 (mg N/L)	2	0.24	0.19	0.21
13	NO2-N (mgN/L)	2	0.00	0.00	0
14	NO3-N (mgN/L)	2	0.24	0.19	0.21
15	o-PO4-P (mg P/L)	2	0.007	0.003	0.005
16	SO4 (mg/L)	2	12.9	9.1	11
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2	2.0	1.3	1.6
2	DO (mg/L)	2	6.6	5.7	6.1
3	DO_SAT% (%)	2	83	68	75
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	2	43	40	42
2	HAR_Total (mgCaCO3/L)	2	64	60	62
3	Na% (%)	2	41	39	40
4	RSC (-)	2	0.0	0.0	0
5	SAR (-)	2	1.1	1.0	1.1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Sularpet (AB000N5)

Division : Hydrology Division, Chennai

Local River : Kalingi

Sub-Division : PPSP, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	1.472	5.494	Dry Bed
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)				249	
4	pH_FLD (pH units)				7.0	
5	pH_GEN (pH units)				7.1	
6	TDS (mg/L)					
7	Temp (deg C)				27.0	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)				0.0	
2	ALK-TOT (mgCaCO3/L)				98	
3	Ca (mg/L)				18	
4	Cl (mg/L)				51.5	
5	CO3 (mg/L)				0.0	
6	F (mg/L)					
7	Fe (mg/L)					
8	HCO3 (mg/L)				119	
9	K (mg/L)					
10	Mg (mg/L)				7.3	
11	Na (mg/L)					
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)					
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)				44	
2	HAR_Total (mgCaCO3/L)				74	
3	Na% (%)					
4	RSC (-)				0.5	
5	SAR (-)					
	PESTICIDES					

WQ Observation not done

WQ Observation not done

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Sularpet (AB000N5)

Division : Hydrology Division, Chennai

Local River : Kalingi

Sub-Division : PPSP, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	0.897	4.377	0.35	1.697	Dry Bed
2	EC_FLD (µmho/cm)				381	
3	EC_GEN (µmho/cm)	396	430	614	375	
4	pH_FLD (pH units)	7.0	7.0	7.0	7.5	
5	pH_GEN (pH units)	7.4	8.4	7.8	7.4	
6	TDS (mg/L)			329	201	
7	Temp (deg C)	26.0	29.0	30.0	28.5	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	25.9	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	130	114	131	78	
3	Ca (mg/L)	20	26	22	16	
4	Cl (mg/L)	69.1	81.0	121.8	71.3	
5	CO3 (mg/L)	0.0	31.2	0.0	0.0	
6	F (mg/L)	0.37	0.41	1.21	0.43	
7	Fe (mg/L)			0.0		
8	HCO3 (mg/L)	159	76	159	96	
9	K (mg/L)	3.2	4.1	3.9	3.3	
10	Mg (mg/L)	11.7	19.9	14.3	7.9	
11	Na (mg/L)	53.4	53.5	87.1	55.3	
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)	0.34	0.24	0.21	3.24	
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)	11.6	17.6	29.7	22.6	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.9	1.5	2.9	1.2	
2	DO (mg/L)				5.9	
3	DO_SAT% (%)				76	
	TRACE & TOXIC					
1	As (µg/L)			3.35		
2	Cd (µg/L)			1.02		
3	Cr (µg/L)			1.30		
4	Cu (µg/L)			22.89		
5	Ni (µg/L)			3.09		
6	Pb (µg/L)			2.05		
7	Zn (µg/L)			2.97		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	49	64	55	39	
2	HAR_Total (mgCaCO3/L)	98	147	114	72	
3	Na% (%)	53	44	62	61	
4	RSC (-)	0.7	0.0	0.3	0.2	
5	SAR (-)	2.4	1.9	3.6	2.8	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Sularpet (AB000N5)

Division : Hydrology Division, Chennai

Local River : Kalingi

Sub-Division : PPSD, Chennai

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	13.14	1.842	4.25	41.92
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)		420			288
4	pH_FLD (pH units)					7.0
5	pH_GEN (pH units)		7.5			7.3
6	TDS (mg/L)					
7	Temp (deg C)		26.3			26.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0			0.0
2	ALK-TOT (mgCaCO3/L)		125			115
3	Ca (mg/L)		25			23
4	Cl (mg/L)		44.6			51.5
5	CO3 (mg/L)		0.0			0.0
6	F (mg/L)					
7	Fe (mg/L)					
8	HCO3 (mg/L)		153			140
9	K (mg/L)					
10	Mg (mg/L)		19.8			10.2
11	Na (mg/L)		28.6			
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)					
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	DO (mg/L)					
3	DO_SAT% (%)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		63			57
2	HAR_Total (mgCaCO3/L)		146			100
3	Na% (%)					
4	RSC (-)		0.1			0.3
5	SAR (-)		1.1			
	PESTICIDES					

WQ Observation not done

WQ Observation not done

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Sulerpet (AB000N5)

Division : Hydrology Division, Chennai

Local River : Kalingi

Sub-Division : PPSP, Chennai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	8.747	6.83	19.23	52.33	2.715
2	EC_FLD (µmho/cm)					425
3	EC_GEN (µmho/cm)	364	417	446	391	466
4	pH_FLD (pH units)	7.0	7.0	7.0	7.0	8.1
5	pH_GEN (pH units)	7.9	7.7	8.1	7.8	7.6
6	TDS (mg/L)				208	250
7	Temp (deg C)	27.0	26.5	27.8	27.3	28.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	3.8	2.0	0.0
2	ALK-TOT (mgCaCO3/L)	172	151	108	107	101
3	Ca (mg/L)	21	26	22	21	13
4	Cl (mg/L)	55.6	66.3	68.7	65.1	94.5
5	CO3 (mg/L)	0.0	0.0	4.6	2.5	0.0
6	F (mg/L)	2.05	0.39	0.36	0.73	0.72
7	Fe (mg/L)					
8	HCO3 (mg/L)	209	184	122	126	124
9	K (mg/L)	5.9	3.4	4.0	3.0	3.7
10	Mg (mg/L)	8.3	14.1	15.9	11.4	12.7
11	Na (mg/L)	74.5	50.0	43.4	47.8	69.9
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)		0.48	0.38	0.70	3.19
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)	19.0	14.9	11.4	13.2	23.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.0	1.2	2.0	1.6	1.1
2	DO (mg/L)					5.6
3	DO_SAT% (%)					72
	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)	53	65	55	52	32
2	HAR_Total (mgCaCO3/L)	87	124	121	100	85
3	Na% (%)	63	46	43	49	63
4	RSC (-)	1.7	0.6	0.0	0.2	0.3
5	SAR (-)	3.6	2.0	1.7	2.1	3.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Sularpet (AB000N5)

Division : Hydrology Division, Chennai

Local River : Kalingi

Sub-Division : PPSP, Chennai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	34.45	141.8	Dry Bed	Dry Bed	Dry Bed
2	EC_FLD (µmho/cm)	499	450			
3	EC_GEN (µmho/cm)	508	202			
4	pH_FLD (pH units)	7.8	7.6			
5	pH_GEN (pH units)	7.9	7.8			
6	TDS (mg/L)	274	113			
7	Temp (deg C)	28.0	26.3			
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0			
2	ALK-TOT (mgCaCO3/L)	125	57			
3	Ca (mg/L)	26	17			
4	Cl (mg/L)	83.4	26.2			
5	CO3 (mg/L)	0.0	0.0			
6	F (mg/L)	0.55	0.30			
7	Fe (mg/L)					
8	HCO3 (mg/L)	153	70			
9	K (mg/L)	2.9	1.9			
10	Mg (mg/L)	12.3	4.9			
11	Na (mg/L)	63.4	19.5			
12	NH3-N (mg N/L)		0.04			
13	NO2+NO3 (mg N/L)		0.21			
14	NO2-N (mgN/L)		0.00			
15	NO3-N (mgN/L)	3.96	0.21			
16	o-PO4-P (mg P/L)		0.005			
17	SO4 (mg/L)	21.6	11.0			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.3	1.6			
2	DO (mg/L)	6.2	6.1			
3	DO_SAT% (%)	79	75			
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	65	42			
2	HAR_Total (mgCaCO3/L)	117	62			
3	Na% (%)	54	40			
4	RSC (-)	0.2	0.0			
5	SAR (-)	2.6	1.1			
	PESTICIDES					

WQ Observation not done

WQ Observation not done

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Sularpet (AB000N5)

Division : Hydrology Division, Chennai

Local River : Kalingi

Sub-Division : PPSD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)				
4	pH_FLD (pH units)				
5	pH_GEN (pH units)				
6	TDS (mg/L)				
7	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	Ca (mg/L)				
4	Cl (mg/L)				
5	CO3 (mg/L)				
6	F (mg/L)				
7	Fe (mg/L)				
8	HCO3 (mg/L)				
9	K (mg/L)				
10	Mg (mg/L)				
11	Na (mg/L)				
12	NH3-N (mg N/L)				
13	NO2+NO3 (mg N/L)				
14	NO2-N (mgN/L)				
15	NO3-N (mgN/L)				
16	o-PO4-P (mg P/L)				
17	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
2	DO (mg/L)				
3	DO_SAT% (%)				
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)				
3	Cr (µg/L)				
4	Cu (µg/L)				
5	Ni (µg/L)				
6	Pb (µg/L)				
7	Zn (µg/L)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Sularpet (AB000N5)

Division : Hydrology Division, Chennai

Local River : Kalingi

Sub-Division : PPSD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	1.348	Dry Bed	Dry Bed	Dry Bed
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)	757			
4	pH_FLD (pH units)	7.0			
5	pH_GEN (pH units)	7.8			
6	TDS (mg/L)	401			
7	Temp (deg C)	28.0			
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0			
2	ALK-TOT (mgCaCO3/L)	192			
3	Ca (mg/L)	42			
4	Cl (mg/L)	124.4			
5	CO3 (mg/L)	0.0			
6	F (mg/L)	0.84			
7	Fe (mg/L)				
8	HCO3 (mg/L)	234			
9	K (mg/L)	3.3			
10	Mg (mg/L)	13.3			
11	Na (mg/L)	91.2			
12	NH3-N (mg N/L)				
13	NO2+NO3 (mg N/L)				
14	NO2-N (mgN/L)				
15	NO3-N (mgN/L)	0.65			
16	o-PO4-P (mg P/L)				
17	SO4 (mg/L)	24.6			
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.3			
2	DO (mg/L)				
3	DO_SAT% (%)				
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)				
3	Cr (µg/L)				
4	Cu (µg/L)				
5	Ni (µg/L)				
6	Pb (µg/L)				
7	Zn (µg/L)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	106			
2	HAR_Total (mgCaCO3/L)	162			
3	Na% (%)	55			
4	RSC (-)	0.6			
5	SAR (-)	3.1			
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: CHENGALPET	Code	: CQ000C1
State	: Tamil Nadu	District	Kancheepuram
Basin	: EFR B Pennar-Cauvery	Independent River	: Palar
Tributary	: -	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Palar
Division	: Hydrology Division, Chennai	Sub-Division	: PPSD, Chennai
Drainage Area	: 16230 Sq. Km.	Bank	: Right
Latitude	: 12°39'00"	Longitude	: 79°56'50"
Zero of Gauge (m)	: 26.000 (m.s.l) 24.000 (m.s.l)	01/09/1977	- 31/05/2006
	Opening Date	Closing Date	
Gauge	: 01/09/1977		
Discharge	: 01/10/1978		
Sediment	:		
Water Quality	: 01/06/1979		

Water Quality Datasheet for the period : 2015-2016

Station Name : Chengalpet (CQ000C1)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_GEN (µmho/cm)			
4	Odour_Code (-)			
5	pH_FLD (pH units)			
6	pH_GEN (pH units)			
7	TDS (mg/L)			
8	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Chengalpet (CQ000C1)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	11/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	6.282
2	Colour_Cod (-)			Brown
3	EC_GEN (µmho/cm)			172
4	Odour_Code (-)			odour free
5	pH_FLD (pH units)			7.0
6	pH_GEN (pH units)			7.6
7	TDS (mg/L)			99
8	Temp (deg C)			26.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			0.0
2	ALK-TOT (mgCaCO3/L)			46
3	Ca (mg/L)			11
4	Cl (mg/L)			24.8
5	CO3 (mg/L)			0.0
6	F (mg/L)			0.21
7	HCO3 (mg/L)			56
8	K (mg/L)			3.4
9	Mg (mg/L)			5.7
10	Na (mg/L)			16.9
11	NH3-N (mg N/L)			0.05
12	NO2+NO3 (mg N/L)			0.45
13	NO2-N (mgN/L)			0.00
14	NO3-N (mgN/L)			0.45
15	o-PO4-P (mg P/L)			0.012
16	SO4 (mg/L)			12.5
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			0.7
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			27
2	HAR_Total (mgCaCO3/L)			50
3	Na% (%)			40
4	RSC (-)			0.0
5	SAR (-)			1.0
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Chengalpet (CQ000C1)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	08/12/2015	02/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	682.9	17.3	0.88
2	Colour_Cod (-)	Brown	Brown	Brown
3	EC_GEN (µmho/cm)	252	674	515
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_FLD (pH units)	7.0	7.0	7.0
6	pH_GEN (pH units)	8.2	8.5	7.9
7	TDS (mg/L)	137	368	278
8	Temp (deg C)	24.0		
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	9.4	0.0
2	ALK-TOT (mgCaCO3/L)	78	151	104
3	Ca (mg/L)	19	43	26
4	Cl (mg/L)	33.0	115.1	91.0
5	CO3 (mg/L)	0.0	11.3	0.0
6	F (mg/L)	0.25	0.30	0.35
7	HCO3 (mg/L)	95	161	126
8	K (mg/L)	3.0	5.5	4.7
9	Mg (mg/L)	9.7	22.7	16.5
10	Na (mg/L)	19.0	72.4	56.0
11	NH3-N (mg N/L)	0.04	0.07	0.04
12	NO2+NO3 (mg N/L)	0.23	0.28	0.38
13	NO2-N (mgN/L)	0.00	0.00	0.00
14	NO3-N (mgN/L)	0.23	0.28	0.38
15	o-PO4-P (mg P/L)	0.010	0.000	0.000
16	SO4 (mg/L)	9.0	32.8	23.4
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	2.0	1.8	1.5
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	47	107	64
2	HAR_Total (mgCaCO3/L)	87	201	133
3	Na% (%)	31	43	47
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	0.9	2.2	2.1
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Chengalpet (CQ000C1)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	24/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	No Flow	No Flow	0.552
2	Colour_Cod (-)			Brown
3	EC_GEN (µmho/cm)			420
4	Odour_Code (-)			odour free
5	pH_FLD (pH units)			7.0
6	pH_GEN (pH units)			7.4
7	TDS (mg/L)			228
8	Temp (deg C)			28.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			0.0
2	ALK-TOT (mgCaCO3/L)			96
3	Ca (mg/L)			26
4	Cl (mg/L)			69.6
5	CO3 (mg/L)			0.0
6	F (mg/L)			0.36
7	HCO3 (mg/L)			117
8	K (mg/L)			6.3
9	Mg (mg/L)			13.6
10	Na (mg/L)			40.9
11	NH3-N (mg N/L)			0.06
12	NO2+NO3 (mg N/L)			0.75
13	NO2-N (mgN/L)			0.00
14	NO3-N (mgN/L)			0.75
15	o-PO4-P (mg P/L)			0.043
16	SO4 (mg/L)			24.0
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			2.4
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			64
2	HAR_Total (mgCaCO3/L)			121
3	Na% (%)			41
4	RSC (-)			0.0
5	SAR (-)			1.6
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : Chengalpet (CQ000C1)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	2657	0.000	61.51
2	EC_GEN (µmho/cm)	5	674	172	407
3	pH_FLD (pH units)	5	7.0	7.0	7
4	pH_GEN (pH units)	5	8.5	7.4	7.9
5	TDS (mg/L)	5	368	99	222
6	Temp (deg C)	3	28.0	24.0	26
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	5	9.4	0.0	1.9
2	ALK-TOT (mgCaCO3/L)	5	151	46	95
3	Ca (mg/L)	5	43	11	25
4	Cl (mg/L)	5	115.1	24.8	66.7
5	CO3 (mg/L)	5	11.3	0.0	2.3
6	F (mg/L)	5	0.36	0.21	0.29
7	HCO3 (mg/L)	5	161	56	111
8	K (mg/L)	5	6.3	3.0	4.6
9	Mg (mg/L)	5	22.7	5.7	13.7
10	Na (mg/L)	5	72.4	16.9	41
11	NH3-N (mg N/L)	5	0.07	0.04	0.05
12	NO2+NO3 (mg N/L)	5	0.75	0.23	0.42
13	NO2-N (mgN/L)	5	0.00	0.00	0
14	NO3-N (mgN/L)	5	0.75	0.23	0.42
15	o-PO4-P (mg P/L)	5	0.043	0.000	0.013
16	SO4 (mg/L)	5	32.8	9.0	20.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	5	2.4	0.7	1.7
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	5	107	27	62
2	HAR_Total (mgCaCO3/L)	5	201	50	119
3	Na% (%)	5	47	31	41
4	RSC (-)	5	0.0	0.0	0
5	SAR (-)	5	2.2	0.9	1.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Chengalpet (CQ000C1)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	5.272	3.128	5.22	0.241	Dry Bed
2	EC_GEN (µmho/cm)	387	177	223	468	
3	pH_FLD (pH units)				7.0	
4	pH_GEN (pH units)	7.9	7.0	7.4	7.2	
5	TDS (mg/L)					
6	Temp (deg C)	29.5	21.5	25.3	26.0	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	54	54	85	167	
3	Ca (mg/L)	21	11	18	29	
4	Cl (mg/L)	78.1	24.9	23.8	99.2	
5	CO3 (mg/L)	0.0	0.0	0.0	0.0	
6	F (mg/L)					
7	Fe (mg/L)					
8	HCO3 (mg/L)	66	65	104	203	
9	K (mg/L)					
10	Mg (mg/L)	9.7	5.3	10.2	18.0	
11	Na (mg/L)	45.1	80.5	21.0		
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)					
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)	24.5	11.1	7.2		
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	52	28	44	72	
2	HAR_Total (mgCaCO3/L)	93	50	87	147	
3	Na% (%)					
4	RSC (-)	0.0	0.1	0.0	0.4	
5	SAR (-)	2.0	5.0	1.0		
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Chengalpet (CQ000C1)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	0.786	0.157	0.876	1.048	Dry Bed
2	EC_GEN (µmho/cm)	511	572	519	464	
3	pH_FLD (pH units)	7.0	7.0	7.0	7.0	
4	pH_GEN (pH units)	7.7	7.6	8.1	7.7	
5	TDS (mg/L)			274	248	
6	Temp (deg C)	27.0	25.8	30.0	28.0	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	186	194	143	120	
3	Ca (mg/L)	28	40	31	31	
4	Cl (mg/L)	73.6	79.4	91.9	82.2	
5	CO3 (mg/L)	0.0	0.0	0.0	0.0	
6	F (mg/L)	0.38	0.46	1.01	0.27	
7	Fe (mg/L)					
8	HCO3 (mg/L)	227	237	174	146	
9	K (mg/L)	6.1	6.3	4.1	4.1	
10	Mg (mg/L)	19.8	23.8	12.4	11.6	
11	Na (mg/L)	53.8	58.6	78.5	52.6	
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)	0.65	0.32	0.12	3.28	
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)	13.0	6.3	25.7	19.7	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	0.9	2.0	0.9	
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	71	100	78	77	
2	HAR_Total (mgCaCO3/L)	153	199	129	126	
3	Na% (%)	42	38	56	47	
4	RSC (-)	0.7	0.0	0.3	0.0	
5	SAR (-)	1.9	1.8	3.0	2.0	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Chengalpet (CQ000C1)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	13.75	2.065	5.35	31.51
2	EC_GEN (µmho/cm)		411	446	410	463
3	pH_FLD (pH units)					7.0
4	pH_GEN (pH units)		7.5	7.6	7.8	7.3
5	TDS (mg/L)					
6	Temp (deg C)		19.9	21.8	23.3	24.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)		118	132	156	165
3	Ca (mg/L)		25	25	29	32
4	Cl (mg/L)		68.2	49.5	42.9	69.6
5	CO3 (mg/L)		0.0	0.0	0.0	0.0
6	F (mg/L)					
7	Fe (mg/L)					
8	HCO3 (mg/L)		144	161	190	201
9	K (mg/L)					
10	Mg (mg/L)		14.6	14.7	17.0	18.0
11	Na (mg/L)		35.3	74.3	24.9	
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)					
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)		15.3	12.8	10.8	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		64	61	73	80
2	HAR_Total (mgCaCO3/L)		124	123	144	154
3	Na% (%)					
4	RSC (-)		0.2	0.2	0.3	0.2
5	SAR (-)		1.4	3.0	0.9	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Chengalpet (CQ000C1)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	10.74	12.94	16.32	1.418	0.413
2	EC_GEN (µmho/cm)	467	529	476	571	618
3	pH_FLD (pH units)	7.0	7.0	7.0	7.0	7.0
4	pH_GEN (pH units)	7.6	7.8	7.9	7.8	7.7
5	TDS (mg/L)				304	330
6	Temp (deg C)	24.8	24.5	21.0	23.8	27.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	2.9	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	213	193	140	141	134
3	Ca (mg/L)	28	29	21	31	27
4	Cl (mg/L)	60.3	81.5	69.6	95.5	114.0
5	CO3 (mg/L)	0.0	0.0	3.5	0.0	0.0
6	F (mg/L)	0.31	0.36	0.34	0.71	0.39
7	Fe (mg/L)					
8	HCO3 (mg/L)	260	235	163	172	164
9	K (mg/L)	7.5	6.3	7.4	5.6	4.9
10	Mg (mg/L)	19.2	20.4	19.7	15.2	16.5
11	Na (mg/L)	64.6	58.8	46.2	58.9	68.3
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)		0.60	0.59	0.71	4.38
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)	14.0	10.0	14.7	12.6	8.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.5	0.4	1.9	0.8	1.1
	TRACE & TOXIC					
1	As (µg/L)			0.58		
2	Cd (µg/L)			0.03		
3	Cr (µg/L)			0.29		
4	Cu (µg/L)			11.37		
5	Ni (µg/L)			3.51		
6	Pb (µg/L)			1.26		
7	Zn (µg/L)			22.20		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	69	74	53	79	69
2	HAR_Total (mgCaCO3/L)	149	159	135	142	138
3	Na% (%)	44	43	41	46	51
4	RSC (-)	1.4	0.7	0.2	0.1	0.1
5	SAR (-)	2.3	2.0	1.7	2.2	2.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Chengalpet (CQ000C1)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	0.423	176.8	0.127	Dry Bed	0.563
2	EC_GEN (µmho/cm)	471	403			520
3	pH_FLD (pH units)	7.0	7.0			
4	pH_GEN (pH units)	7.9	8.0			7.7
5	TDS (mg/L)	252	221			
6	Temp (deg C)	25.0	25.0			24.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	2.3			0.0
2	ALK-TOT (mgCaCO3/L)	85	95			162
3	Ca (mg/L)	19	24			36
4	Cl (mg/L)	80.6	66.0			65.3
5	CO3 (mg/L)	0.0	2.8			0.0
6	F (mg/L)	0.25	0.28			
7	Fe (mg/L)	0.0				
8	HCO3 (mg/L)	104	110			198
9	K (mg/L)	7.8	4.1			
10	Mg (mg/L)	12.3	13.7			18.2
11	Na (mg/L)	57.5	41.1			
12	NH3-N (mg N/L)		0.05			
13	NO2+NO3 (mg N/L)		0.34			
14	NO2-N (mgN/L)		0.00			
15	NO3-N (mgN/L)	1.43	0.34			
16	o-PO4-P (mg P/L)		0.005			
17	SO4 (mg/L)	37.3	19.4			8.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	1.5			
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)	0.09				
3	Cr (µg/L)	1.46				
4	Cu (µg/L)	3.34				
5	Ni (µg/L)	0.42				
6	Pb (µg/L)	0.47				
7	Zn (µg/L)	4.00				
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	46	61			90
2	HAR_Total (mgCaCO3/L)	98	118			166
3	Na% (%)	54	40			
4	RSC (-)	0.0	0.0			0.1
5	SAR (-)	2.5	1.6			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Chengalpet (CQ000C1)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	0.532	Dry Bed
2	EC_GEN (µmho/cm)			553	
3	pH_FLD (pH units)			7.0	
4	pH_GEN (pH units)			7.8	
5	TDS (mg/L)				
6	Temp (deg C)			24.0	
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)			0.0	
2	ALK-TOT (mgCaCO3/L)			203	
3	Ca (mg/L)			19	
4	Cl (mg/L)			80.3	
5	CO3 (mg/L)			0.0	
6	F (mg/L)			0.47	
7	Fe (mg/L)				
8	HCO3 (mg/L)			247	
9	K (mg/L)			6.3	
10	Mg (mg/L)			29.2	
11	Na (mg/L)			60.1	
12	NH3-N (mg N/L)				
13	NO2+NO3 (mg N/L)				
14	NO2-N (mgN/L)				
15	NO3-N (mgN/L)			0.84	
16	o-PO4-P (mg P/L)				
17	SO4 (mg/L)			21.3	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)			0.3	
	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)			48	
2	HAR_Total (mgCaCO3/L)			170	
3	Na% (%)			43	
4	RSC (-)			0.7	
5	SAR (-)			2.0	
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Chengalpet (CQ000C1)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	0.184
2	EC_GEN (µmho/cm)				420
3	pH_FLD (pH units)				7.0
4	pH_GEN (pH units)				7.4
5	TDS (mg/L)				228
6	Temp (deg C)				28.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				0.0
2	ALK-TOT (mgCaCO3/L)				96
3	Ca (mg/L)				26
4	Cl (mg/L)				69.6
5	CO3 (mg/L)				0.0
6	F (mg/L)				0.36
7	Fe (mg/L)				
8	HCO3 (mg/L)				117
9	K (mg/L)				6.3
10	Mg (mg/L)				13.6
11	Na (mg/L)				40.9
12	NH3-N (mg N/L)				0.06
13	NO2+NO3 (mg N/L)				0.75
14	NO2-N (mgN/L)				0.00
15	NO3-N (mgN/L)				0.75
16	o-PO4-P (mg P/L)				0.043
17	SO4 (mg/L)				24.0
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				2.4
	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)				64
2	HAR_Total (mgCaCO3/L)				121
3	Na% (%)				41
4	RSC (-)				0.0
5	SAR (-)				1.6
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: MAGARAL	Code	: CQB00B4
State	: Tamil Nadu	District	Kancheepuram
Basin	: EFR B Pennar-Cauvery	Independent River	: Palar
Tributary	: Cheyyar	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Cheyyar
Division	: Hydrology Division, Chennai	Sub-Division	: PPSD, Chennai
Drainage Area	: 1803 Sq. Km.	Bank	: Left
Latitude	: 12°42'34"	Longitude	: 79°44'57"
Zero of Gauge (m)	: 58.000 (m.s.l)	25/11/1971	
	Opening Date	Closing Date	
Gauge	: 25/11/1971		
Discharge	: 25/11/1971		
Sediment	:		
Water Quality	: 01/11/1983		

Water Quality Datasheet for the period : 2015-2016

Station Name : MAGARAL (CQB00B4)

Division : HD, CWC, Chennai

Local River : Cheyyar

Sub-Division : PPSD, CWC, Chennai

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_GEN (µmho/cm)			
4	Odour_Code (-)			
5	pH_FLD (pH units)			
6	pH_GEN (pH units)			
7	TDS (mg/L)			
8	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : MAGARAL (CQB00B4)

Division : HD, CWC, Chennai

Local River : Cheyyar

Sub-Division : PPSD, CWC, Chennai

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	14/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	186
2	Colour_Cod (-)			Light Brown
3	EC_GEN (µmho/cm)			84
4	Odour_Code (-)			odour free
5	pH_FLD (pH units)			7.0
6	pH_GEN (pH units)			7.7
7	TDS (mg/L)			45
8	Temp (deg C)			28.5
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			0.0
2	ALK-TOT (mgCaCO3/L)			28
3	Ca (mg/L)			8
4	Cl (mg/L)			8.3
5	CO3 (mg/L)			0.0
6	F (mg/L)			0.14
7	HCO3 (mg/L)			34
8	K (mg/L)			2.1
9	Mg (mg/L)			3.2
10	Na (mg/L)			4.5
11	NH3-N (mg N/L)			0.04
12	NO2+NO3 (mg N/L)			0.21
13	NO2-N (mgN/L)			0.00
14	NO3-N (mgN/L)			0.20
15	o-PO4-P (mg P/L)			0.009
16	SO4 (mg/L)			3.4
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			2.0
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			20
2	HAR_Total (mgCaCO3/L)			34
3	Na% (%)			21
4	RSC (-)			0.0
5	SAR (-)			0.3
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : MAGARAL (CQB00B4)

Division : HD, CWC, Chennai

Local River : Cheyyar

Sub-Division : PPSD, CWC, Chennai

River Water Analysis

S.No	Parameters	23/12/2015	02/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	24.62	0.936	Dry Bed
2	Colour_Cod (-)	Light Brown	Clear	
3	EC_GEN (µmho/cm)	435	457	
4	Odour_Code (-)	odour free	odour free	
5	pH_FLD (pH units)	7.0	7.0	
6	pH_GEN (pH units)	7.8	8.4	
7	TDS (mg/L)	234	242	
8	Temp (deg C)	28.5	23.0	
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	14.1	
2	ALK-TOT (mgCaCO3/L)	129	141	
3	Ca (mg/L)	32	33	
4	Cl (mg/L)	55.1	58.9	
5	CO3 (mg/L)	0.0	16.9	
6	F (mg/L)	0.38	0.25	
7	HCO3 (mg/L)	157	138	
8	K (mg/L)	3.6	2.8	
9	Mg (mg/L)	17.8	18.7	
10	Na (mg/L)	33.3	33.8	
11	NH3-N (mg N/L)	0.04	0.07	
12	NO2+NO3 (mg N/L)	0.26	0.21	
13	NO2-N (mgN/L)	0.00	0.00	
14	NO3-N (mgN/L)	0.26	0.21	
15	o-PO4-P (mg P/L)	0.023	0.000	
16	SO4 (mg/L)	20.4	18.7	
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.8	0.9	
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	80	84	
2	HAR_Total (mgCaCO3/L)	154	161	
3	Na% (%)	31	31	
4	RSC (-)	0.0	0.0	
5	SAR (-)	1.2	1.2	
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : MAGARAL (CQB00B4)

Division : HD, CWC, Chennai

Local River : Cheyyar

Sub-Division : PPSD, CWC, Chennai

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_GEN (µmho/cm)			
4	Odour_Code (-)			
5	pH_FLD (pH units)			
6	pH_GEN (pH units)			
7	TDS (mg/L)			
8	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : MAGARAL (CQB00B4)

Division : HD, CWC, Chennai

Local River : Cheyyar

Sub-Division : PPSD, CWC, Chennai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	1037	0.000	15.73
2	EC_GEN (µmho/cm)	3	457	84	325
3	pH_FLD (pH units)	3	7.0	7.0	7
4	pH_GEN (pH units)	3	8.4	7.7	8
5	TDS (mg/L)	3	242	45	174
6	Temp (deg C)	3	28.5	23.0	26.7
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	3	14.1	0.0	4.7
2	ALK-TOT (mgCaCO3/L)	3	141	28	99
3	Ca (mg/L)	3	33	8	24
4	Cl (mg/L)	3	58.9	8.3	40.7
5	CO3 (mg/L)	3	16.9	0.0	5.6
6	F (mg/L)	3	0.38	0.14	0.25
7	HCO3 (mg/L)	3	157	34	110
8	K (mg/L)	3	3.6	2.1	2.8
9	Mg (mg/L)	3	18.7	3.2	13.2
10	Na (mg/L)	3	33.8	4.5	23.9
11	NH3-N (mg N/L)	3	0.07	0.04	0.05
12	NO2+NO3 (mg N/L)	3	0.26	0.21	0.22
13	NO2-N (mgN/L)	3	0.00	0.00	0
14	NO3-N (mgN/L)	3	0.26	0.20	0.22
15	o-PO4-P (mg P/L)	3	0.023	0.000	0.011
16	SO4 (mg/L)	3	20.4	3.4	14.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3	2.0	0.9	1.6
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	3	84	20	61
2	HAR_Total (mgCaCO3/L)	3	161	34	116
3	Na% (%)	3	31	21	28
4	RSC (-)	3	0.0	0.0	0
5	SAR (-)	3	1.2	0.3	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : MAGARAL (CQB00B4)

Division : HD, CWC, Chennai

Local River : Cheyyar

Sub-Division : PPSD, CWC, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)					
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	TDS (mg/L)					
6	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					
2	ALK-TOT (mgCaCO3/L)					
3	Ca (mg/L)					
4	Cl (mg/L)					
5	CO3 (mg/L)					
6	F (mg/L)					
7	HCO3 (mg/L)					
8	K (mg/L)					
9	Mg (mg/L)					
10	Na (mg/L)					
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)					
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : MAGARAL (CQB00B4)

Division : HD, CWC, Chennai

Local River : Cheyyar

Sub-Division : PPSD, CWC, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)					
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	TDS (mg/L)					
6	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					
2	ALK-TOT (mgCaCO3/L)					
3	Ca (mg/L)					
4	Cl (mg/L)					
5	CO3 (mg/L)					
6	F (mg/L)					
7	HCO3 (mg/L)					
8	K (mg/L)					
9	Mg (mg/L)					
10	Na (mg/L)					
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)					
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : MAGARAL (CQB00B4)

Division : HD, CWC, Chennai

Local River : Cheyyar

Sub-Division : PPSD, CWC, Chennai

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	17.73	Dry Bed	54.61	27.42
2	EC_GEN (µmho/cm)		466		202	321
3	pH_FLD (pH units)					7.0
4	pH_GEN (pH units)		7.9		7.7	7.8
5	TDS (mg/L)					
6	Temp (deg C)		24.6		23.5	33.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0		0.0	0.0
2	ALK-TOT (mgCaCO3/L)		150		100	131
3	Ca (mg/L)		29		22	27
4	Cl (mg/L)		46.8		24.8	43.8
5	CO3 (mg/L)		0.0		0.0	0.0
6	F (mg/L)					
7	HCO3 (mg/L)		183		122	160
8	K (mg/L)					
9	Mg (mg/L)		18.5		7.8	17.5
10	Na (mg/L)		32.6		29.7	
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)					
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)		21.7		5.8	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		72		54	68
2	HAR_Total (mgCaCO3/L)		149		86	141
3	Na% (%)					
4	RSC (-)		0.1		0.3	0.0
5	SAR (-)		1.2		1.4	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : MAGARAL (CQB00B4)

Division : HD, CWC, Chennai

Local River : Cheyyar

Sub-Division : PPSD, CWC, Chennai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	Dry Bed	12.84	6.902	5.012	Dry Bed
2	EC_GEN (µmho/cm)		481	499	321	
3	pH_FLD (pH units)		7.0	7.0	7.0	
4	pH_GEN (pH units)		7.7	7.6	7.8	
5	TDS (mg/L)				171	
6	Temp (deg C)		26.8	26.8	24.0	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)		212	134	88	
3	Ca (mg/L)		33	28	19	
4	Cl (mg/L)		49.5	69.9	44.9	
5	CO3 (mg/L)		0.0	0.0	0.0	
6	F (mg/L)		0.29	0.27	0.47	
7	HCO3 (mg/L)		258	164	107	
8	K (mg/L)		6.4	5.2	3.2	
9	Mg (mg/L)		22.4	16.2	11.4	
10	Na (mg/L)		37.3	45.1	26.6	
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)		0.52	0.59	0.26	
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)		8.2	13.7	11.3	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		0.4	2.0	1.3	
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		82	71	47	
2	HAR_Total (mgCaCO3/L)		175	138	95	
3	Na% (%)		30	41	37	
4	RSC (-)		0.8	0.1	0.0	
5	SAR (-)		1.2	1.7	1.2	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : MAGARAL (CQB00B4)

Division : HD, CWC, Chennai

Local River : Cheyyar

Sub-Division : PPSD, CWC, Chennai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	Dry Bed	52.89	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)		325			
3	pH_FLD (pH units)		7.0			
4	pH_GEN (pH units)		8.0			
5	TDS (mg/L)		174			
6	Temp (deg C)		26.7			
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		4.7			
2	ALK-TOT (mgCaCO3/L)		99			
3	Ca (mg/L)		24			
4	Cl (mg/L)		40.7			
5	CO3 (mg/L)		5.6			
6	F (mg/L)		0.25			
7	HCO3 (mg/L)		110			
8	K (mg/L)		2.8			
9	Mg (mg/L)		13.2			
10	Na (mg/L)		23.9			
11	NH3-N (mg N/L)		0.05			
12	NO2+NO3 (mg N/L)		0.22			
13	NO2-N (mgN/L)		0.00			
14	NO3-N (mgN/L)		0.22			
15	o-PO4-P (mg P/L)		0.011			
16	SO4 (mg/L)		14.2			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		1.6			
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		61			
2	HAR_Total (mgCaCO3/L)		116			
3	Na% (%)		28			
4	RSC (-)		0.0			
5	SAR (-)		0.9			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : MAGARAL (CQB00B4)

Division : HD, CWC, Chennai

Local River : Cheyyar

Sub-Division : PPSD, CWC, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				
3	pH_FLD (pH units)				
4	pH_GEN (pH units)				
5	TDS (mg/L)				
6	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	Ca (mg/L)				
4	Cl (mg/L)				
5	CO3 (mg/L)				
6	F (mg/L)				
7	HCO3 (mg/L)				
8	K (mg/L)				
9	Mg (mg/L)				
10	Na (mg/L)				
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)				
13	NO2-N (mgN/L)				
14	NO3-N (mgN/L)				
15	o-PO4-P (mg P/L)				
16	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : MAGARAL (CQB00B4)

Division : HD, CWC, Chennai

Local River : Cheyyar

Sub-Division : PPSD, CWC, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				
3	pH_FLD (pH units)				
4	pH_GEN (pH units)				
5	TDS (mg/L)				
6	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	Ca (mg/L)				
4	Cl (mg/L)				
5	CO3 (mg/L)				
6	F (mg/L)				
7	HCO3 (mg/L)				
8	K (mg/L)				
9	Mg (mg/L)				
10	Na (mg/L)				
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)				
13	NO2-N (mgN/L)				
14	NO3-N (mgN/L)				
15	o-PO4-P (mg P/L)				
16	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: ARCOT	Code	: CQ000I7
State	: Tamil Nadu	District	Vellore
Basin	: EFR B Pennar-Cauvery	Independent River	: Palar
Tributary	: -	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Palar
Division	: Hydrology Division, Chennai	Sub-Division	: PPSD, Chennai
Drainage Area	: 10174 Sq. Km.	Bank	: Right
Latitude	: 12°54'50"	Longitude	: 79°20'00"
Zero of Gauge (m)	: 159.000 (m.s.l) 156.810 (m.s.l)	20/09/1979 01/06/2008	- 31/05/2008
		Opening Date	Closing Date
Gauge	: 20/09/1979		
Discharge	: 20/09/1979		
Sediment	:		
Water Quality	: 01/06/1988		

Water Quality Datasheet for the period : 2015-2016

Station Name : Arcot (CQ00017)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)			
3	Odour_Code (-)			
4	pH_FLD (pH units)			
5	pH_GEN (pH units)			
6	TDS (mg/L)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Arcot (CQ00017)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	19/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	31.25
2	EC_GEN (µmho/cm)			758
3	Odour_Code (-)			odour free
4	pH_FLD (pH units)			7.0
5	pH_GEN (pH units)			7.7
6	TDS (mg/L)			402
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			0.0
2	ALK-TOT (mgCaCO3/L)			156
3	Ca (mg/L)			39
4	Cl (mg/L)			115.6
5	CO3 (mg/L)			0.0
6	F (mg/L)			0.42
7	HCO3 (mg/L)			191
8	K (mg/L)			6.9
9	Mg (mg/L)			17.8
10	Na (mg/L)			88.9
11	NH3-N (mg N/L)			0.04
12	NO2+NO3 (mg N/L)			0.44
13	NO2-N (mgN/L)			0.00
14	NO3-N (mgN/L)			0.43
15	o-PO4-P (mg P/L)			0.012
16	SO4 (mg/L)			69.6
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			1.1
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			97
2	HAR_Total (mgCaCO3/L)			171
3	Na% (%)			52
4	RSC (-)			0.0
5	SAR (-)			3.0
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Arcot (CQ00017)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/12/2015	02/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	78.71	3.939	0.345
2	EC_GEN (µmho/cm)	913	1345	
3	Odour_Code (-)	odour free	odour free	
4	pH_FLD (pH units)	7.0	7.0	
5	pH_GEN (pH units)	7.6	8.1	
6	TDS (mg/L)	487	721	
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	184	212	
3	Ca (mg/L)	45	65	
4	Cl (mg/L)	151.4	278.3	
5	CO3 (mg/L)	0.0	0.0	
6	F (mg/L)	0.40	0.35	
7	HCO3 (mg/L)	224	258	
8	K (mg/L)	12.5	9.1	
9	Mg (mg/L)	15.4	22.7	
10	Na (mg/L)	111.5	170.0	
11	NH3-N (mg N/L)	0.04	0.06	
12	NO2+NO3 (mg N/L)	1.15	0.39	
13	NO2-N (mgN/L)	0.01	0.00	
14	NO3-N (mgN/L)	1.14	0.39	
15	o-PO4-P (mg P/L)	0.014	0.000	
16	SO4 (mg/L)	60.7	64.8	
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	2.0	2.4	
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	114	164	
2	HAR_Total (mgCaCO3/L)	178	258	
3	Na% (%)	56	58	
4	RSC (-)	0.1	0.0	
5	SAR (-)	3.6	4.6	
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Arcot (CQ00017)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)			
3	Odour_Code (-)			
4	pH_FLD (pH units)			
5	pH_GEN (pH units)			
6	TDS (mg/L)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : Arcot (CQ00017)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	219.1	0.000	5.309
2	EC_GEN (µmho/cm)	3	1345	758	1005
3	pH_FLD (pH units)	3	7.0	7.0	7
4	pH_GEN (pH units)	3	8.1	7.6	7.8
5	TDS (mg/L)	3	721	402	537
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	3	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	3	212	156	184
3	Ca (mg/L)	3	65	39	50
4	Cl (mg/L)	3	278.3	115.6	181.8
5	CO3 (mg/L)	3	0.0	0.0	0
6	F (mg/L)	3	0.42	0.35	0.39
7	HCO3 (mg/L)	3	258	191	224
8	K (mg/L)	3	12.5	6.9	9.5
9	Mg (mg/L)	3	22.7	15.4	18.6
10	Na (mg/L)	3	170.0	88.9	123.5
11	NH3-N (mg N/L)	3	0.06	0.04	0.05
12	NO2+NO3 (mg N/L)	3	1.15	0.39	0.66
13	NO2-N (mgN/L)	3	0.01	0.00	0.01
14	NO3-N (mgN/L)	3	1.14	0.39	0.65
15	o-PO4-P (mg P/L)	3	0.014	0.000	0.009
16	SO4 (mg/L)	3	69.6	60.7	65
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3	2.4	1.1	1.8
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	3	164	97	125
2	HAR_Total (mgCaCO3/L)	3	258	171	202
3	Na% (%)	3	58	52	55
4	RSC (-)	3	0.1	0.0	0
5	SAR (-)	3	4.6	3.0	3.7
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Arcot (CQ00017)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)					
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	TDS (mg/L)					
6	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					
2	ALK-TOT (mgCaCO3/L)					
3	Ca (mg/L)					
4	Cl (mg/L)					
5	CO3 (mg/L)					
6	F (mg/L)					
7	HCO3 (mg/L)					
8	K (mg/L)					
9	Mg (mg/L)					
10	Na (mg/L)					
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)					
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Arcot (CQ00017)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)					
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	TDS (mg/L)					
6	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					
2	ALK-TOT (mgCaCO3/L)					
3	Ca (mg/L)					
4	Cl (mg/L)					
5	CO3 (mg/L)					
6	F (mg/L)					
7	HCO3 (mg/L)					
8	K (mg/L)					
9	Mg (mg/L)					
10	Na (mg/L)					
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)					
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Arcot (CQ00017)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	15.68	Dry Bed	1.477	0.061
2	EC_GEN (µmho/cm)		809		1555	1160
3	pH_FLD (pH units)					7.0
4	pH_GEN (pH units)		7.7		8.2	7.1
5	TDS (mg/L)					
6	Temp (deg C)		24.8		23.5	27.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0		5.2	0.0
2	ALK-TOT (mgCaCO3/L)		181		109	179
3	Ca (mg/L)		33		27	55
4	Cl (mg/L)		93.4		307.9	209.7
5	CO3 (mg/L)		0.0		6.3	0.0
6	F (mg/L)					
7	HCO3 (mg/L)		221		121	219
8	K (mg/L)					
9	Mg (mg/L)		27.9		30.4	26.7
10	Na (mg/L)		63.9		43.8	
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)					
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)				132.2	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		82		68	138
2	HAR_Total (mgCaCO3/L)		198		195	249
3	Na% (%)					
4	RSC (-)		0.0		0.0	0.0
5	SAR (-)		2.0		1.6	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Arcot (CQ00017)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	Dry Bed	1.283	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)		1993			
3	pH_FLD (pH units)		7.0			
4	pH_GEN (pH units)		7.6			
5	TDS (mg/L)					
6	Temp (deg C)		26.5			
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0			
2	ALK-TOT (mgCaCO3/L)		492			
3	Ca (mg/L)		75			
4	Cl (mg/L)		366.9			
5	CO3 (mg/L)		0.0			
6	F (mg/L)		1.07			
7	HCO3 (mg/L)		600			
8	K (mg/L)		14.6			
9	Mg (mg/L)		45.4			
10	Na (mg/L)		337.3			
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)		4.73			
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)		196.3			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		1.1			
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		187			
2	HAR_Total (mgCaCO3/L)		376			
3	Na% (%)		65			
4	RSC (-)		2.4			
5	SAR (-)		7.6			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Arcot (CQ00017)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	Dry Bed	28.56	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)		1005			
3	pH_FLD (pH units)		7.0			
4	pH_GEN (pH units)		7.8			
5	TDS (mg/L)		537			
6	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0			
2	ALK-TOT (mgCaCO3/L)		184			
3	Ca (mg/L)		50			
4	Cl (mg/L)		181.8			
5	CO3 (mg/L)		0.0			
6	F (mg/L)		0.39			
7	HCO3 (mg/L)		224			
8	K (mg/L)		9.5			
9	Mg (mg/L)		18.6			
10	Na (mg/L)		123.5			
11	NH3-N (mg N/L)		0.05			
12	NO2+NO3 (mg N/L)		0.66			
13	NO2-N (mgN/L)		0.01			
14	NO3-N (mgN/L)		0.65			
15	o-PO4-P (mg P/L)		0.009			
16	SO4 (mg/L)		65.0			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		1.8			
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		125			
2	HAR_Total (mgCaCO3/L)		202			
3	Na% (%)		55			
4	RSC (-)		0.0			
5	SAR (-)		3.7			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Arcot (CQ00017)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				
3	pH_FLD (pH units)				
4	pH_GEN (pH units)				
5	TDS (mg/L)				
6	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	Ca (mg/L)				
4	Cl (mg/L)				
5	CO3 (mg/L)				
6	F (mg/L)				
7	HCO3 (mg/L)				
8	K (mg/L)				
9	Mg (mg/L)				
10	Na (mg/L)				
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)				
13	NO2-N (mgN/L)				
14	NO3-N (mgN/L)				
15	o-PO4-P (mg P/L)				
16	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Arcot (CQ00017)

Division : Hydrology Division, Chennai

Local River : Palar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				
3	pH_FLD (pH units)				
4	pH_GEN (pH units)				
5	TDS (mg/L)				
6	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	Ca (mg/L)				
4	Cl (mg/L)				
5	CO3 (mg/L)				
6	F (mg/L)				
7	HCO3 (mg/L)				
8	K (mg/L)				
9	Mg (mg/L)				
10	Na (mg/L)				
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)				
13	NO2-N (mgN/L)				
14	NO3-N (mgN/L)				
15	o-PO4-P (mg P/L)				
16	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: AVARANKUPPAM	Code	: CQ000S4
State	: Tamil Nadu	District	: Vellore
Basin	: EFR B Pennar-Cauvery	Independent River	: Palar
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Palar
Division	: SR Division, Coimbatore	Sub-Division	: Lower Cauvery SD, Trichy
Drainage Area	: 3300 Sq. Km.	Bank	: Right
Latitude	: 12°41'03"	Longitude	: 78°32'22"
Zero of Gauge (m)	: 365.275 (m.s.l)	07/06/1978	
	Opening Date	Closing Date	
Gauge	: 07/06/1978		
Discharge	: 07/06/1978		
Sediment	:		
Water Quality	: 01/08/1979		

Water Quality Datasheet for the period : 2015-2016

Station Name : AVARANKUPPAM (CQ000S4)

Division : SR Division, Coimbatore

Local River : Palar

Sub-Division : Lower Cauvery SD, Trichy

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	B	A
	PHYSICAL			
1	Q (cumec)	0.000	0.000	0.000
2	Colour_Cod (-)			
3	EC_GEN (µmho/cm)			
4	Odour_Code (-)			
5	pH_GEN (pH units)			
6	TDS (mg/L)			
7	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	B (mg/L)			
4	Ca (mg/L)			
5	Cl (mg/L)			
6	CO3 (mg/L)			
7	F (mg/L)			
8	Fe (mg/L)			
9	HCO3 (mg/L)			
10	K (mg/L)			
11	Mg (mg/L)			
12	Na (mg/L)			
13	NH3-N (mg N/L)			
14	NO2+NO3 (mg N/L)			
15	NO2-N (mgN/L)			
16	NO3-N (mgN/L)			
17	o-PO4-P (mg P/L)			
18	SiO2 (mg/L)			
19	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : AVARANKUPPAM (CQ000S4)

Division : SR Division, Coimbatore

Local River : Palar

Sub-Division : Lower Cauvery SD, Trichy

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	02/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	0.000	0.000	0.000
2	Colour_Cod (-)			
3	EC_GEN (µmho/cm)		:	
4	Odour_Code (-)			
5	pH_GEN (pH units)			
6	TDS (mg/L)			
7	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	B (mg/L)			
4	Ca (mg/L)			
5	Cl (mg/L)			
6	CO3 (mg/L)			
7	F (mg/L)			
8	Fe (mg/L)			
9	HCO3 (mg/L)			
10	K (mg/L)			
11	Mg (mg/L)			
12	Na (mg/L)			
13	NH3-N (mg N/L)			
14	NO2+NO3 (mg N/L)			
15	NO2-N (mgN/L)			
16	NO3-N (mgN/L)			
17	o-PO4-P (mg P/L)			
18	SiO2 (mg/L)			
19	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : AVARANKUPPAM (CQ000S4)

Division : SR Division, Coimbatore

Local River : Palar

Sub-Division : Lower Cauvery SD, Trichy

River Water Analysis

S.No	Parameters	04/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	1.862	0.224	0.000
2	Colour_Cod (-)	Light Brown	Clear	
3	EC_GEN (µmho/cm)	402	664	
4	Odour_Code (-)	odour free	odour free	
5	pH_GEN (pH units)	7.8	8.3	
6	TDS (mg/L)	234	377	
7	Temp (deg C)	25.0	22.0	
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	30.5	
2	ALK-TOT (mgCaCO3/L)	149	260	
3	B (mg/L)	0.03	0.05	
4	Ca (mg/L)	30	41	
5	Cl (mg/L)	28.9	43.4	
6	CO3 (mg/L)	0.0	36.8	
7	F (mg/L)	0.60	0.86	
8	Fe (mg/L)	0.050	0.000	
9	HCO3 (mg/L)	182	243	
10	K (mg/L)	2.8	2.8	
11	Mg (mg/L)	9.6	22.0	
12	Na (mg/L)	50.7	80.9	
13	NH3-N (mg N/L)	0.07	0.61	
14	NO2+NO3 (mg N/L)	3.53	2.63	
15	NO2-N (mgN/L)	0.01	0.00	
16	NO3-N (mgN/L)	3.52	2.63	
17	o-PO4-P (mg P/L)	0.100	0.030	
18	SiO2 (mg/L)	21.2	35.6	
19	SO4 (mg/L)	24.8	42.5	
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)	23.4	7.1	
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	75	103	
2	HAR_Total (mgCaCO3/L)	115	194	
3	Na% (%)	48	47	
4	RSC (-)	0.7	1.3	
5	SAR (-)	2.1	2.5	
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : AVARANKUPPAM (CQ000S4)

Division : SR Division, Coimbatore

Local River : Palar

Sub-Division : Lower Cauvery SD, Trichy

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	02/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	0.000	0.000	0.000
2	Colour_Cod (-)			
3	EC_GEN (µmho/cm)			
4	Odour_Code (-)			
5	pH_GEN (pH units)			
6	TDS (mg/L)			
7	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	B (mg/L)			
4	Ca (mg/L)			
5	Cl (mg/L)			
6	CO3 (mg/L)			
7	F (mg/L)			
8	Fe (mg/L)			
9	HCO3 (mg/L)			
10	K (mg/L)			
11	Mg (mg/L)			
12	Na (mg/L)			
13	NH3-N (mg N/L)			
14	NO2+NO3 (mg N/L)			
15	NO2-N (mgN/L)			
16	NO3-N (mgN/L)			
17	o-PO4-P (mg P/L)			
18	SiO2 (mg/L)			
19	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : AVARANKUPPAM (CQ000S4)

Division : SR Division, Coimbatore

Local River : Palar

Sub-Division : Lower Cauvery SD, Trichy

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	12.04	0.000	0.210
2	EC_GEN (µmho/cm)	2	664	402	533
3	pH_GEN (pH units)	2	8.3	7.8	8.1
4	TDS (mg/L)	2	377	234	306
5	Temp (deg C)	2	25.0	22.0	23.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2	30.5	0.0	15.3
2	ALK-TOT (mgCaCO3/L)	2	260	149	205
3	B (mg/L)	2	0.05	0.03	0.04
4	Ca (mg/L)	2	41	30	36
5	Cl (mg/L)	2	43.4	28.9	36.1
6	CO3 (mg/L)	2	36.8	0.0	18.4
7	F (mg/L)	2	0.86	0.60	0.73
8	Fe (mg/L)	2	0.050	0.000	0.025
9	HCO3 (mg/L)	2	243	182	212
10	K (mg/L)	2	2.8	2.8	2.8
11	Mg (mg/L)	2	22.0	9.6	15.8
12	Na (mg/L)	2	80.9	50.7	65.8
13	NH3-N (mg N/L)	2	0.61	0.07	0.34
14	NO2+NO3 (mg N/L)	2	3.53	2.63	3.08
15	NO2-N (mgN/L)	2	0.01	0.00	0
16	NO3-N (mgN/L)	2	3.52	2.63	3.08
17	o-PO4-P (mg P/L)	2	0.100	0.030	0.065
18	SiO2 (mg/L)	2	35.6	21.2	28.3
19	SO4 (mg/L)	2	42.5	24.8	33.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	COD (mg/L)	2	23.4	7.1	15.2
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	2	103	75	89
2	HAR_Total (mgCaCO3/L)	2	194	115	155
3	Na% (%)	2	48	47	48
4	RSC (-)	2	1.3	0.7	1
5	SAR (-)	2	2.5	2.1	2.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : AVARANKUPPAM (CQ000S4)

Division : SR Division, Coimbatore

Local River : Palar

Sub-Division : Lower Cauvery SD, Trichy

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	1.458	0.318	0.077	0.000	0.400
2	EC_GEN (µmho/cm)	287	848	760		565
3	pH_GEN (pH units)	7.6	8.5	8.5		8.2
4	TDS (mg/L)					
5	Temp (deg C)	22.5	23.5	22.5		22.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	21.4	24.0		0.0
2	ALK-TOT (mgCaCO3/L)	89	307	305		271
3	B (mg/L)	0.26	0.36	0.31		0.09
4	Ca (mg/L)	17	28	30		29
5	Cl (mg/L)	20.8	53.2	43.3		36.1
6	CO3 (mg/L)	0.0	25.8	28.9		0.0
7	F (mg/L)		1.13	1.26		0.85
8	Fe (mg/L)	0.070	0.065	0.065		0.080
9	HCO3 (mg/L)	109	322	313		331
10	K (mg/L)	2.3	2.5	3.0		1.9
11	Mg (mg/L)	7.1	24.3	17.5		15.5
12	Na (mg/L)	33.8	118.9	114.4		93.8
13	NH3-N (mg N/L)		0.06	0.06		0.12
14	NO2+NO3 (mg N/L)	1.90	4.30	5.06		
15	NO2-N (mgN/L)	0.02	0.01	0.06		
16	NO3-N (mgN/L)	1.88	4.29	5.00		1.38
17	o-PO4-P (mg P/L)					0.080
18	P-Tot (mgP/L)	0.019	0.021	0.017		
19	SiO2 (mg/L)	20.2	33.3	32.1		26.3
20	SO4 (mg/L)	12.6	38.0	28.4		33.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	COD (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cu (µg/L)					
4	Ni (µg/L)					
5	Pb (µg/L)					
6	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	44	69	74		72
2	HAR_Total (mgCaCO3/L)	73	171	147		137
3	Na% (%)	49	60	62		60
4	RSC (-)	0.3	2.8	3.2		2.7
5	SAR (-)	1.7	4.0	4.1		3.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : AVARANKUPPAM (CQ000S4)

Division : SR Division, Coimbatore

Local River : Palar

Sub-Division : Lower Cauvery SD, Trichy

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	0.006	0.137	0.000	0.000	0.000
2	EC_GEN (µmho/cm)		604			
3	pH_GEN (pH units)		7.7			
4	TDS (mg/L)					
5	Temp (deg C)		25.0			
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0			
2	ALK-TOT (mgCaCO3/L)		280			
3	B (mg/L)					
4	Ca (mg/L)		30			
5	Cl (mg/L)		59.8			
6	CO3 (mg/L)		0.0			
7	F (mg/L)		0.98			
8	Fe (mg/L)					
9	HCO3 (mg/L)		342			
10	K (mg/L)		2.6			
11	Mg (mg/L)		19.4			
12	Na (mg/L)		98.0			
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)		2.90			
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)					
20	SO4 (mg/L)		19.8			
	BIOLOGICAL/BACTERIOLOGICAL					
1	COD (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cu (µg/L)					
4	Ni (µg/L)					
5	Pb (µg/L)					
6	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		76			
2	HAR_Total (mgCaCO3/L)		157			
3	Na% (%)		57			
4	RSC (-)		2.5			
5	SAR (-)		3.4			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : AVARANKUPPAM (CQ000S4)

Division : SR Division, Coimbatore

Local River : Palar

Sub-Division : Lower Cauvery SD, Trichy

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	0.000	16.820	0.653	0.239	1.941
2	EC_GEN (µmho/cm)		626	860	838	688
3	pH_GEN (pH units)		8.1	8.3	8.4	8.3
4	TDS (mg/L)					
5	Temp (deg C)		22.5	22.8	21.8	22.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		10.8	13.6	19.1	10.2
2	ALK-TOT (mgCaCO3/L)		218	345	354	287
3	B (mg/L)		0.27	0.31	0.34	0.12
4	Ca (mg/L)		28	36	35	36
5	Cl (mg/L)		43.8	54.5	50.2	55.1
6	CO3 (mg/L)		13.1	16.4	23.0	12.3
7	F (mg/L)		0.96	1.67	1.38	1.20
8	Fe (mg/L)		0.076	0.051	0.057	0.111
9	HCO3 (mg/L)		240	388	385	325
10	K (mg/L)		1.9	2.4	2.5	1.7
11	Mg (mg/L)		16.5	24.3	19.9	20.6
12	Na (mg/L)		86.6	128.2	132.8	101.6
13	NH3-N (mg N/L)		0.06		0.06	
14	NO2+NO3 (mg N/L)		2.73	5.95	3.04	
15	NO2-N (mgN/L)		0.02	0.01	0.02	
16	NO3-N (mgN/L)		2.71	5.94	3.02	0.69
17	o-PO4-P (mg P/L)					0.100
18	P-Tot (mgP/L)		0.023	0.003	0.034	
19	SiO2 (mg/L)		27.5	35.9	30.8	3.2
20	SO4 (mg/L)		27.8	30.4	17.3	47.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	COD (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cu (µg/L)					
4	Ni (µg/L)					
5	Pb (µg/L)					
6	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		70	91	88	91
2	HAR_Total (mgCaCO3/L)		139	192	171	177
3	Na% (%)		56	59	63	55
4	RSC (-)		1.6	3.1	3.7	2.2
5	SAR (-)		3.1	4.0	4.4	3.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : AVARANKUPPAM (CQ000S4)

Division : SR Division, Coimbatore

Local River : Palar

Sub-Division : Lower Cauvery SD, Trichy

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	0.118	0.392	0.265	1.121	0.000
2	EC_GEN (µmho/cm)	931	799	558	626	
3	pH_GEN (pH units)	8.3	8.1	8.0	7.9	
4	TDS (mg/L)					
5	Temp (deg C)	23.4	21.7	22.5	22.0	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	8.0	0.0	13.1	0.0	
2	ALK-TOT (mgCaCO3/L)	419	391	251	255	
3	B (mg/L)	0.26	0.13			
4	Ca (mg/L)	46	47	24	30	
5	Cl (mg/L)	75.7	87.0	58.8	58.0	
6	CO3 (mg/L)	9.6	0.0	15.8	0.0	
7	F (mg/L)	1.05	1.21	1.12	0.48	
8	Fe (mg/L)	0.133	0.032			
9	HCO3 (mg/L)	492	477	274	311	
10	K (mg/L)	2.9	2.9	1.9	3.6	
11	Mg (mg/L)	24.0	25.3	14.6	16.0	
12	Na (mg/L)	162.7	141.7	106.3	95.3	
13	NH3-N (mg N/L)	0.07	0.06			
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)	2.52	2.97	2.75	0.34	
17	o-PO4-P (mg P/L)	0.025	0.009			
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	37.6	36.2			
20	SO4 (mg/L)	73.8	32.7	17.8	28.6	
	BIOLOGICAL/BACTERIOLOGICAL					
1	COD (mg/L)				14.7	
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cu (µg/L)					
4	Ni (µg/L)					
5	Pb (µg/L)					
6	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	114	118	60	76	
2	HAR_Total (mgCaCO3/L)	214	223	121	143	
3	Na% (%)	62	58	65	59	
4	RSC (-)	4.1	3.4	2.6	2.3	
5	SAR (-)	4.9	4.1	4.2	3.4	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : AVARANKUPPAM (CQ000S4)

Division : SR Division, Coimbatore

Local River : Palar

Sub-Division : Lower Cauvery SD, Trichy

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	0.000	0.522	0.161	0.000	0.000
2	EC_GEN (µmho/cm)		533	853		
3	pH_GEN (pH units)		8.1	8.3		
4	TDS (mg/L)		306			
5	Temp (deg C)		23.5	23.0		
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		15.3	13.1		
2	ALK-TOT (mgCaCO3/L)		205	326		
3	B (mg/L)		0.04	0.30		
4	Ca (mg/L)		36	30		
5	Cl (mg/L)		36.1	53.2		
6	CO3 (mg/L)		18.4	15.8		
7	F (mg/L)		0.73	1.40		
8	Fe (mg/L)		0.025	0.084		
9	HCO3 (mg/L)		212	366		
10	K (mg/L)		2.8	3.1		
11	Mg (mg/L)		15.8	25.6		
12	Na (mg/L)		65.8	119.8		
13	NH3-N (mg N/L)		0.34	0.23		
14	NO2+NO3 (mg N/L)		3.08	1.46		
15	NO2-N (mgN/L)		0.00	0.01		
16	NO3-N (mgN/L)		3.08	1.45		
17	o-PO4-P (mg P/L)		0.065			
18	P-Tot (mgP/L)			0.022		
19	SiO2 (mg/L)		28.3	31.6		
20	SO4 (mg/L)		33.6	39.5		
	BIOLOGICAL/BACTERIOLOGICAL					
1	COD (mg/L)		15.2			
	TRACE & TOXIC					
1	As (µg/L)			19.79		
2	Cd (µg/L)			8.00		
3	Cu (µg/L)			1.74		
4	Ni (µg/L)			8.42		
5	Pb (µg/L)			5.01		
6	Zn (µg/L)			6.00		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		89	76		
2	HAR_Total (mgCaCO3/L)		155	183		
3	Na% (%)		48	58		
4	RSC (-)		1.0	2.9		
5	SAR (-)		2.3	3.9		
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : AVARANKUPPAM (CQ000S4)

Division : SR Division, Coimbatore

Local River : Palar

Sub-Division : Lower Cauvery SD, Trichy

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	0.000	0.000	0.003	0.357
2	EC_GEN (µmho/cm)				312
3	pH_GEN (pH units)				7.7
4	TDS (mg/L)				
5	Temp (deg C)				27.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				0.0
2	ALK-TOT (mgCaCO3/L)				127
3	B (mg/L)				
4	Ca (mg/L)				13
5	Cl (mg/L)				31.5
6	CO3 (mg/L)				0.0
7	F (mg/L)				0.38
8	Fe (mg/L)				
9	HCO3 (mg/L)				155
10	K (mg/L)				3.4
11	Mg (mg/L)				8.8
12	Na (mg/L)				56.0
13	NH3-N (mg N/L)				
14	NO2+NO3 (mg N/L)				
15	NO2-N (mgN/L)				
16	NO3-N (mgN/L)				0.78
17	o-PO4-P (mg P/L)				
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)				
20	SO4 (mg/L)				26.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	COD (mg/L)				
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)				
3	Cu (µg/L)				
4	Ni (µg/L)				
5	Pb (µg/L)				
6	Zn (µg/L)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				32
2	HAR_Total (mgCaCO3/L)				69
3	Na% (%)				63
4	RSC (-)				1.2
5	SAR (-)				3.0
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : AVARANKUPPAM (CQ000S4)

Division : SR Division, Coimbatore

Local River : Palar

Sub-Division : Lower Cauvery SD, Trichy

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	0.000	0.000	0.000	0.000
2	EC_GEN (µmho/cm)				
3	pH_GEN (pH units)				
4	TDS (mg/L)				
5	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	B (mg/L)				
4	Ca (mg/L)				
5	Cl (mg/L)				
6	CO3 (mg/L)				
7	F (mg/L)				
8	Fe (mg/L)				
9	HCO3 (mg/L)				
10	K (mg/L)				
11	Mg (mg/L)				
12	Na (mg/L)				
13	NH3-N (mg N/L)				
14	NO2+NO3 (mg N/L)				
15	NO2-N (mgN/L)				
16	NO3-N (mgN/L)				
17	o-PO4-P (mg P/L)				
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)				
20	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	COD (mg/L)				
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)				
3	Cu (µg/L)				
4	Ni (µg/L)				
5	Pb (µg/L)				
6	Zn (µg/L)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: KUMARAPALAYAM	Code	: CCR00F3
State	: Pondicherry	District	Pondicherry
Basin	: EFR B Pennar-Cauvery	Independent River	: Varahanadi
Tributary	:	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Varahanadi
Division	: Hydrology Division, Chennai	Sub-Division	: PPSD, Chennai
Drainage Area	: 2208 Sq. Km.	Bank	: Left
Latitude	: 11°59'00"	Longitude	: 79°40'50"
Zero of Gauge (m)	: 8.500 (m.s.l) 8.825 (m.s.l)	01/02/1998	- 31/05/2009
		01/06/2009	
	Opening Date	Closing Date	
Gauge	: 01/02/1998		
Discharge	: 02/11/2004		
Sediment	:		
Water Quality	: 12/12/2005		

Water Quality Datasheet for the period : 2015-2016

Station Name : Kumarapalayam (CCR00F3)

Division : Hydrology Division, Chennai

Local River : Varahanadi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_GEN (µmho/cm)			
4	Odour_Code (-)			
5	pH_FLD (pH units)			
6	pH_GEN (pH units)			
7	TDS (mg/L)			
8	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Kumarapalayam (CCR00F3)

Division : Hydrology Division, Chennai

Local River : Varahanadi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	11/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	1.715
2	Colour_Cod (-)			Light Brown
3	EC_GEN (µmho/cm)			297
4	Odour_Code (-)			odour free
5	pH_FLD (pH units)			7.0
6	pH_GEN (pH units)			7.5
7	TDS (mg/L)			167
8	Temp (deg C)			23.5
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			0.0
2	ALK-TOT (mgCaCO3/L)			83
3	Ca (mg/L)			17
4	Cl (mg/L)			46.8
5	CO3 (mg/L)			0.0
6	F (mg/L)			0.27
7	HCO3 (mg/L)			101
8	K (mg/L)			2.5
9	Mg (mg/L)			11.4
10	Na (mg/L)			30.1
11	NH3-N (mg N/L)			0.05
12	NO2+NO3 (mg N/L)			1.04
13	NO2-N (mgN/L)			0.00
14	NO3-N (mgN/L)			1.04
15	o-PO4-P (mg P/L)			0.087
16	SO4 (mg/L)			13.6
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			1.5
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			43
2	HAR_Total (mgCaCO3/L)			91
3	Na% (%)			41
4	RSC (-)			0.0
5	SAR (-)			1.4
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Kumarapalayam (CCR00F3)

Division : Hydrology Division, Chennai

Local River : Varahanadi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	09/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	105.4	Dry Bed	Dry Bed
2	Colour_Cod (-)	Clear		
3	EC_GEN (µmho/cm)	270		
4	Odour_Code (-)	odour free		
5	pH_FLD (pH units)	7.0		
6	pH_GEN (pH units)	7.9		
7	TDS (mg/L)	148		
8	Temp (deg C)	27.0		
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0		
2	ALK-TOT (mgCaCO3/L)	92		
3	Ca (mg/L)	23		
4	Cl (mg/L)	33.0		
5	CO3 (mg/L)	0.0		
6	F (mg/L)	0.26		
7	HCO3 (mg/L)	112		
8	K (mg/L)	3.1		
9	Mg (mg/L)	10.5		
10	Na (mg/L)	17.2		
11	NH3-N (mg N/L)	0.04		
12	NO2+NO3 (mg N/L)	0.36		
13	NO2-N (mgN/L)	0.00		
14	NO3-N (mgN/L)	0.36		
15	o-PO4-P (mg P/L)	0.047		
16	SO4 (mg/L)	9.2		
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.5		
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	57		
2	HAR_Total (mgCaCO3/L)	101		
3	Na% (%)	26		
4	RSC (-)	0.0		
5	SAR (-)	0.7		
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Kumarapalayam (CCR00F3)

Division : Hydrology Division, Chennai

Local River : Varahanadi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_GEN (μmho/cm)			
4	Odour_Code (-)			
5	pH_FLD (pH units)			
6	pH_GEN (pH units)			
7	TDS (mg/L)			
8	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : Kumarapalayam (CCR00F3)

Division : Hydrology Division, Chennai

Local River : Varahanadi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	785.5	0.000	11.94
2	EC_GEN (µmho/cm)	2	297	270	284
3	pH_FLD (pH units)	2	7.0	7.0	7
4	pH_GEN (pH units)	2	7.9	7.5	7.7
5	TDS (mg/L)	2	167	148	158
6	Temp (deg C)	2	27.0	23.5	25.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	2	92	83	87
3	Ca (mg/L)	2	23	17	20
4	Cl (mg/L)	2	46.8	33.0	39.9
5	CO3 (mg/L)	2	0.0	0.0	0
6	F (mg/L)	2	0.27	0.26	0.26
7	HCO3 (mg/L)	2	112	101	107
8	K (mg/L)	2	3.1	2.5	2.8
9	Mg (mg/L)	2	11.4	10.5	10.9
10	Na (mg/L)	2	30.1	17.2	23.7
11	NH3-N (mg N/L)	2	0.05	0.04	0.05
12	NO2+NO3 (mg N/L)	2	1.04	0.36	0.7
13	NO2-N (mgN/L)	2	0.00	0.00	0
14	NO3-N (mgN/L)	2	1.04	0.36	0.7
15	o-PO4-P (mg P/L)	2	0.087	0.047	0.067
16	SO4 (mg/L)	2	13.6	9.2	11.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2	1.5	1.5	1.5
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	2	57	43	50
2	HAR_Total (mgCaCO3/L)	2	101	91	96
3	Na% (%)	2	41	26	34
4	RSC (-)	2	0.0	0.0	0
5	SAR (-)	2	1.4	0.7	1.1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kumarapalayam (CCR00F3)

Division : Hydrology Division, Chennai

Local River : Varahanadi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)					
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	TDS (mg/L)					
6	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					
2	ALK-TOT (mgCaCO3/L)					
3	Ca (mg/L)					
4	Cl (mg/L)					
5	CO3 (mg/L)					
6	F (mg/L)					
7	HCO3 (mg/L)					
8	K (mg/L)					
9	Mg (mg/L)					
10	Na (mg/L)					
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)					
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

WQ Observation not done

WQ Observation not done

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kumarapalayam (CCR00F3)

Division : Hydrology Division, Chennai

Local River : Varahanadi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)					
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	TDS (mg/L)					
6	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					
2	ALK-TOT (mgCaCO3/L)					
3	Ca (mg/L)					
4	Cl (mg/L)					
5	CO3 (mg/L)					
6	F (mg/L)					
7	HCO3 (mg/L)					
8	K (mg/L)					
9	Mg (mg/L)					
10	Na (mg/L)					
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)					
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kumarapalayam (CCR00F3)

Division : Hydrology Division, Chennai

Local River : Varahanadi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	0.092	Dry Bed	Dry Bed	18.49
2	EC_GEN (µmho/cm)		647	WQ Observation not done	WQ Observation not done	215
3	pH_FLD (pH units)					7.0
4	pH_GEN (pH units)		8.1			7.0
5	TDS (mg/L)					
6	Temp (deg C)		25.5			28.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0			0.0
2	ALK-TOT (mgCaCO3/L)		142			106
3	Ca (mg/L)		16			22
4	Cl (mg/L)		38.0			51.5
5	CO3 (mg/L)		0.0			0.0
6	F (mg/L)					
7	HCO3 (mg/L)		173			130
8	K (mg/L)					
9	Mg (mg/L)		10.7			11.2
10	Na (mg/L)		28.8			
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)					
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		40			56
2	HAR_Total (mgCaCO3/L)		85			103
3	Na% (%)					
4	RSC (-)		1.2			0.1
5	SAR (-)		1.4			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kumarapalayam (CCR00F3)

Division : Hydrology Division, Chennai

Local River : Varahanadi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	5.594	15.1	39.91	24.45	Dry Bed
2	EC_GEN (µmho/cm)	215	392	466	247	
3	pH_FLD (pH units)	7.0	7.1	7.0	7.0	
4	pH_GEN (pH units)	7.9	7.9	7.9	7.4	
5	TDS (mg/L)				132	
6	Temp (deg C)	26.1	26.2	26.0	23.5	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	7.9	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	108	148	131	78	
3	Ca (mg/L)	16	27	18	17	
4	Cl (mg/L)	36.6	49.1	72.2	31.8	
5	CO3 (mg/L)	0.0	9.5	0.0	0.0	
6	F (mg/L)	0.20	0.27	0.28	0.40	
7	HCO3 (mg/L)	132	161	159	95	
8	K (mg/L)	4.0	5.0	4.6	3.6	
9	Mg (mg/L)	11.2	15.6	20.1	6.7	
10	Na (mg/L)	36.1	32.4	50.1	20.4	
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)		0.36	0.35	0.53	
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)	10.6	10.3	6.8	5.8	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.5	1.5	2.2	2.5	
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	39	68	44	43	
2	HAR_Total (mgCaCO3/L)	85	133	128	71	
3	Na% (%)	45	34	45	37	
4	RSC (-)	0.5	0.3	0.1	0.1	
5	SAR (-)	1.7	1.2	1.9	1.1	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kumarapalayam (CCR00F3)

Division : Hydrology Division, Chennai

Local River : Varahanadi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	Dry Bed	26.78	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)		284		WQ Observation not done	WQ Observation not done
3	pH_FLD (pH units)		7.0			
4	pH_GEN (pH units)		7.7			
5	TDS (mg/L)		158			
6	Temp (deg C)		25.3			
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0			
2	ALK-TOT (mgCaCO3/L)		87			
3	Ca (mg/L)		20			
4	Cl (mg/L)		39.9			
5	CO3 (mg/L)		0.0			
6	F (mg/L)		0.26			
7	HCO3 (mg/L)		107			
8	K (mg/L)		2.8			
9	Mg (mg/L)		10.9			
10	Na (mg/L)		23.7			
11	NH3-N (mg N/L)		0.05			
12	NO2+NO3 (mg N/L)		0.70			
13	NO2-N (mgN/L)		0.00			
14	NO3-N (mgN/L)		0.70			
15	o-PO4-P (mg P/L)		0.067			
16	SO4 (mg/L)		11.4			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		1.5			
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		50			
2	HAR_Total (mgCaCO3/L)		96			
3	Na% (%)		34			
4	RSC (-)		0.0			
5	SAR (-)		1.1			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kumarapalayam (CCR00F3)

Division : Hydrology Division, Chennai

Local River : Varahanadi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				
3	pH_FLD (pH units)				
4	pH_GEN (pH units)				
5	TDS (mg/L)				
6	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	Ca (mg/L)				
4	Cl (mg/L)				
5	CO3 (mg/L)				
6	F (mg/L)				
7	HCO3 (mg/L)				
8	K (mg/L)				
9	Mg (mg/L)				
10	Na (mg/L)				
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)				
13	NO2-N (mgN/L)				
14	NO3-N (mgN/L)				
15	o-PO4-P (mg P/L)				
16	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kumarapalayam (CCR00F3)

Division : Hydrology Division, Chennai

Local River : Varahanadi

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				
3	pH_FLD (pH units)				
4	pH_GEN (pH units)				
5	TDS (mg/L)				
6	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	Ca (mg/L)				
4	Cl (mg/L)				
5	CO3 (mg/L)				
6	F (mg/L)				
7	HCO3 (mg/L)				
8	K (mg/L)				
9	Mg (mg/L)				
10	Na (mg/L)				
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)				
13	NO2-N (mgN/L)				
14	NO3-N (mgN/L)				
15	o-PO4-P (mg P/L)				
16	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: VILLUPURAM	Code	: CP000C6
State	: Tamil Nadu	District	Villupuram
Basin	: EFR B Pennar-Cauvery	Independent River	: Ponnaiyar
Tributary	: -	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Ponnaiyar
Division	: Hydrology Division, Chennai	Sub-Division	: PPSD, Chennai
Drainage Area	: 12900 Sq. Km.	Bank	: Right
Latitude	: 11°52'14"	Longitude	: 79°27'34"
Zero of Gauge (m)	: 43.000 (m.s.l) 42.000 (m.s.l)	14/03/1971	- 31/05/1975
	Opening Date	01/06/1975	Closing Date
Gauge	: 14/03/1971		
Discharge	: 09/10/1972		
Sediment	:		
Water Quality	: 01/01/1987		

Water Quality Datasheet for the period : 2015-2016

Station Name : VILLUPURAM (CP000C6)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_GEN (μmho/cm)			
4	Odour_Code (-)			
5	pH_FLD (pH units)			
6	pH_GEN (pH units)			
7	TDS (mg/L)			
8	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : VILLUPURAM (CP000C6)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	19/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	13.04
2	Colour_Cod (-)			Clear
3	EC_GEN (µmho/cm)			394
4	Odour_Code (-)			odour free
5	pH_FLD (pH units)			7.0
6	pH_GEN (pH units)			7.8
7	TDS (mg/L)			209
8	Temp (deg C)			27.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			0.0
2	ALK-TOT (mgCaCO3/L)			115
3	Ca (mg/L)			27
4	Cl (mg/L)			52.3
5	CO3 (mg/L)			0.0
6	F (mg/L)			0.30
7	HCO3 (mg/L)			140
8	K (mg/L)			4.0
9	Mg (mg/L)			13.8
10	Na (mg/L)			31.7
11	NH3-N (mg N/L)			0.08
12	NO2+NO3 (mg N/L)			0.38
13	NO2-N (mgN/L)			0.00
14	NO3-N (mgN/L)			0.38
15	o-PO4-P (mg P/L)			0.017
16	SO4 (mg/L)			17.8
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			2.7
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			67
2	HAR_Total (mgCaCO3/L)			124
3	Na% (%)			35
4	RSC (-)			0.0
5	SAR (-)			1.2
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : VILLUPURAM (CP000C6)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	09/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	438.4	Dry Bed	Dry Bed
2	Colour_Cod (-)	Brown		
3	EC_GEN (µmho/cm)	617		
4	Odour_Code (-)	odour free		
5	pH_FLD (pH units)	7.0		
6	pH_GEN (pH units)	7.9		
7	TDS (mg/L)	332		
8	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0		
2	ALK-TOT (mgCaCO3/L)	166		
3	Ca (mg/L)	39		
4	Cl (mg/L)	96.4		
5	CO3 (mg/L)	0.0		
6	F (mg/L)	0.39		
7	HCO3 (mg/L)	202		
8	K (mg/L)	5.4		
9	Mg (mg/L)	17.8		
10	Na (mg/L)	56.7		
11	NH3-N (mg N/L)	0.04		
12	NO2+NO3 (mg N/L)	0.43		
13	NO2-N (mgN/L)	0.00		
14	NO3-N (mgN/L)	0.43		
15	o-PO4-P (mg P/L)	0.017		
16	SO4 (mg/L)	24.4		
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.8		
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	97		
2	HAR_Total (mgCaCO3/L)	171		
3	Na% (%)	41		
4	RSC (-)	0.0		
5	SAR (-)	1.9		
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : VILLUPURAM (CP000C6)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_GEN (µmho/cm)			
4	Odour_Code (-)			
5	pH_FLD (pH units)			
6	pH_GEN (pH units)			
7	TDS (mg/L)			
8	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : VILLUPURAM (CP000C6)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	527.1	0.000	17.89
2	EC_GEN (µmho/cm)	2	617	394	506
3	pH_FLD (pH units)	2	7.0	7.0	7
4	pH_GEN (pH units)	2	7.9	7.8	7.8
5	TDS (mg/L)	2	332	209	271
6	Temp (deg C)	1	27.0	27.0	27
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	2	166	115	140
3	Ca (mg/L)	2	39	27	33
4	Cl (mg/L)	2	96.4	52.3	74.3
5	CO3 (mg/L)	2	0.0	0.0	0
6	F (mg/L)	2	0.39	0.30	0.35
7	HCO3 (mg/L)	2	202	140	171
8	K (mg/L)	2	5.4	4.0	4.7
9	Mg (mg/L)	2	17.8	13.8	15.8
10	Na (mg/L)	2	56.7	31.7	44.2
11	NH3-N (mg N/L)	2	0.08	0.04	0.06
12	NO2+NO3 (mg N/L)	2	0.43	0.38	0.41
13	NO2-N (mgN/L)	2	0.00	0.00	0
14	NO3-N (mgN/L)	2	0.43	0.38	0.4
15	o-PO4-P (mg P/L)	2	0.017	0.017	0.017
16	SO4 (mg/L)	2	24.4	17.8	21.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2	2.7	1.8	2.3
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	2	97	67	82
2	HAR_Total (mgCaCO3/L)	2	171	124	148
3	Na% (%)	2	41	35	38
4	RSC (-)	2	0.0	0.0	0
5	SAR (-)	2	1.9	1.2	1.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : VILLUPURAM (CP000C6)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)					
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	TDS (mg/L)					
6	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					
2	ALK-TOT (mgCaCO3/L)					
3	Ca (mg/L)					
4	Cl (mg/L)					
5	CO3 (mg/L)					
6	F (mg/L)					
7	HCO3 (mg/L)					
8	K (mg/L)					
9	Mg (mg/L)					
10	Na (mg/L)					
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)					
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
1	Cr (µg/L)					
2	Cu (µg/L)					
3	Pb (µg/L)					
4	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

WQ Observation not done

WQ Observation not done

Water Quality Seasonal Average for the period: 2005-2016

Station Name : VILLUPURAM (CP000C6)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	Dry Bed	0.379	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)		701			
3	pH_FLD (pH units)		7.0			
4	pH_GEN (pH units)		8.7			
5	TDS (mg/L)					
6	Temp (deg C)		23.0			
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		35.9			
2	ALK-TOT (mgCaCO3/L)		168			
3	Ca (mg/L)		32			
4	Cl (mg/L)		129.0			
5	CO3 (mg/L)		43.2			
6	F (mg/L)		0.47			
7	HCO3 (mg/L)		117			
8	K (mg/L)		6.1			
9	Mg (mg/L)		34.0			
10	Na (mg/L)		77.7			
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)		0.45			
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)		24.0			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		2.0			
	TRACE & TOXIC					
1	Cr (µg/L)					
2	Cu (µg/L)					
3	Pb (µg/L)					
4	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		80			
2	HAR_Total (mgCaCO3/L)		222			
3	Na% (%)		43			
4	RSC (-)		0.0			
5	SAR (-)		2.3			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : VILLUPURAM (CP000C6)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	127	Dry Bed	2.84	65.41
2	EC_GEN (µmho/cm)		626	WQ Observation not done	WQ Observation not done	485
3	pH_FLD (pH units)					7.0
4	pH_GEN (pH units)		7.8			7.8
5	TDS (mg/L)					
6	Temp (deg C)		24.6			25.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0			0.0
2	ALK-TOT (mgCaCO3/L)		179			175
3	Ca (mg/L)		35			32
4	Cl (mg/L)		75.2			76.3
5	CO3 (mg/L)		0.0			0.0
6	F (mg/L)					
7	HCO3 (mg/L)		219			213
8	K (mg/L)					
9	Mg (mg/L)		20.5			18.5
10	Na (mg/L)		55.1			
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)					
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)		24.2			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
1	Cr (µg/L)					
2	Cu (µg/L)					
3	Pb (µg/L)					
4	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		88			80
2	HAR_Total (mgCaCO3/L)		173			157
3	Na% (%)					
4	RSC (-)		0.3			0.4
5	SAR (-)		1.9			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : VILLUPURAM (CP000C6)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	0.292	50.18	32.56	15.38	Dry Bed
2	EC_GEN (µmho/cm)	595	660	680	386	
3	pH_FLD (pH units)	7.0	7.1	7.0	7.0	
4	pH_GEN (pH units)	8.6	8.2	8.2	7.7	
5	TDS (mg/L)				206	
6	Temp (deg C)	26.5	25.9	25.3	24.0	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	33.2	19.0	9.6	0.0	
2	ALK-TOT (mgCaCO3/L)	279	223	132	102	
3	Ca (mg/L)	18	36	18	20	
4	Cl (mg/L)	85.6	95.1	104.2	63.7	
5	CO3 (mg/L)	40.0	22.8	11.5	0.0	
6	F (mg/L)	0.39	0.42	0.35	0.51	
7	HCO3 (mg/L)	259	226	138	124	
8	K (mg/L)	7.0	5.8	5.1	3.4	
9	Mg (mg/L)	43.7	26.0	25.9	11.4	
10	Na (mg/L)	70.1	64.1	66.6	38.5	
11	NH3-N (mg N/L)					
12	NO2+NO3 (mg N/L)					
13	NO2-N (mgN/L)					
14	NO3-N (mgN/L)		0.65	0.51	0.44	
15	o-PO4-P (mg P/L)					
16	SO4 (mg/L)	26.4	22.2	21.0	10.9	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	0.6	1.8	0.7	
	TRACE & TOXIC					
1	Cr (µg/L)					
2	Cu (µg/L)					
3	Pb (µg/L)					
4	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	45	91	44	51	
2	HAR_Total (mgCaCO3/L)	227	199	152	99	
3	Na% (%)	39	40	48	45	
4	RSC (-)	1.1	0.5	0.0	0.1	
5	SAR (-)	2.0	2.0	2.4	1.7	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : VILLUPURAM (CP000C6)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	Dry Bed	112.9	Dry Bed	Dry Bed	5.797
2	EC_GEN (µmho/cm)		506		WQ Observation not done	WQ Observation not done
3	pH_FLD (pH units)		7.0			
4	pH_GEN (pH units)		7.8			
5	TDS (mg/L)		271			
6	Temp (deg C)		27.0			
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0			
2	ALK-TOT (mgCaCO3/L)		140			
3	Ca (mg/L)		33			
4	Cl (mg/L)		74.3			
5	CO3 (mg/L)		0.0			
6	F (mg/L)		0.35			
7	HCO3 (mg/L)		171			
8	K (mg/L)		4.7			
9	Mg (mg/L)		15.8			
10	Na (mg/L)		44.2			
11	NH3-N (mg N/L)		0.06			
12	NO2+NO3 (mg N/L)		0.41			
13	NO2-N (mgN/L)		0.00			
14	NO3-N (mgN/L)		0.40			
15	o-PO4-P (mg P/L)		0.017			
16	SO4 (mg/L)		21.1			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)		2.3			
	TRACE & TOXIC					
1	Cr (µg/L)					
2	Cu (µg/L)					
3	Pb (µg/L)					
4	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		82			
2	HAR_Total (mgCaCO3/L)		148			
3	Na% (%)		38			
4	RSC (-)		0.0			
5	SAR (-)		1.6			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : VILLUPURAM (CP000C6)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	0.000	Dry Bed
2	EC_GEN (µmho/cm)			799	
3	pH_FLD (pH units)			7.0	
4	pH_GEN (pH units)			8.3	
5	TDS (mg/L)				
6	Temp (deg C)			29.5	
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)			35.9	
2	ALK-TOT (mgCaCO3/L)			224	
3	Ca (mg/L)			27	
4	Cl (mg/L)			152.2	
5	CO3 (mg/L)			43.2	
6	F (mg/L)			0.55	
7	HCO3 (mg/L)			185	
8	K (mg/L)			6.6	
9	Mg (mg/L)			34.0	
10	Na (mg/L)			93.9	
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)				
13	NO2-N (mgN/L)				
14	NO3-N (mgN/L)			2.03	
15	o-PO4-P (mg P/L)				
16	SO4 (mg/L)			20.9	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)			1.2	
	TRACE & TOXIC				
1	Cr (µg/L)			1.21	
2	Cu (µg/L)			4.88	
3	Pb (µg/L)			1.45	
4	Zn (µg/L)			14.26	
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)			68	
2	HAR_Total (mgCaCO3/L)			210	
3	Na% (%)			49	
4	RSC (-)			0.3	
5	SAR (-)			2.8	
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : VILLUPURAM (CP000C6)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)				
3	pH_FLD (pH units)				
4	pH_GEN (pH units)				
5	TDS (mg/L)				
6	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	Ca (mg/L)				
4	Cl (mg/L)				
5	CO3 (mg/L)				
6	F (mg/L)				
7	HCO3 (mg/L)				
8	K (mg/L)				
9	Mg (mg/L)				
10	Na (mg/L)				
11	NH3-N (mg N/L)				
12	NO2+NO3 (mg N/L)				
13	NO2-N (mgN/L)				
14	NO3-N (mgN/L)				
15	o-PO4-P (mg P/L)				
16	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
	TRACE & TOXIC				
1	Cr (µg/L)				
2	Cu (µg/L)				
3	Pb (µg/L)				
4	Zn (µg/L)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: VAZHAVACHANUR	Code	: CP000H2
State	: Tamil Nadu	District	Thiruvannamalai
Basin	: EFR B Pennar-Cauvery	Independent River	: Ponnaiyar
Tributary	: -	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Ponnaiyar
Division	: Hydrology Division, Chennai	Sub-Division	: PPSD, Chennai
Drainage Area	: 10780 Sq. Km.	Bank	: Left
Latitude	: 12°03'57"	Longitude	: 78°58'41"
Zero of Gauge (m)	: 131.000 (m.s.l) 133.000 (m.s.l)	01/06/1978	- 31/05/1985
	Opening Date	Closing Date	
Gauge	: 01/06/1978		
Discharge	: 21/07/1978		
Sediment	: 19/10/2001		
Water Quality	: 01/08/1978		

Water Quality Datasheet for the period : 2015-2016

Station Name : VAZHAVACHANUR (CP000H2)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	05/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	0.484	0.000	0.239
2	Colour_Cod (-)	Clear		
3	EC_FLD (µmho/cm)	960		
4	EC_GEN (µmho/cm)	1010		
5	Odour_Code (-)	odour free		
6	pH_FLD (pH units)	7.7		
7	pH_GEN (pH units)	7.2		
8	TDS (mg/L)	569		
9	Temp (deg C)	32.0		
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0		
2	ALK-TOT (mgCaCO3/L)	198		
3	Ca (mg/L)	28		
4	Cl (mg/L)	226.9		
5	CO3 (mg/L)	0.0		
6	F (mg/L)	0.60		
7	HCO3 (mg/L)	241		
8	K (mg/L)	6.3		
9	Mg (mg/L)	24.3		
10	Na (mg/L)	163.0		
11	NH3-N (mg N/L)	0.12		
12	NO2+NO3 (mg N/L)	0.58		
13	NO2-N (mgN/L)	0.00		
14	NO3-N (mgN/L)	0.58		
15	o-PO4-P (mg P/L)	0.012		
16	SO4 (mg/L)	27.7		
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.6		
2	DO (mg/L)	5.0		
3	DO_SAT% (%)	69		
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	70		
2	HAR_Total (mgCaCO3/L)	171		
3	Na% (%)	67		
4	RSC (-)	0.6		
5	SAR (-)	5.4		
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : VAZHAVACHANUR (CP000H2)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	29/09/2015	01/10/2015	10/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	0.633	0.637	56.63
2	Colour_Cod (-)	Clear	Clear	Light Brown
3	EC_FLD (µmho/cm)	1023	791	272
4	EC_GEN (µmho/cm)	1019	800	456
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.9	7.8	7.7
7	pH_GEN (pH units)	7.7	7.8	7.5
8	TDS (mg/L)	641	496	262
9	Temp (deg C)	30.0	31.0	25.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	193	151	97
3	Ca (mg/L)	43	44	31
4	Cl (mg/L)	225.8	173.5	88.1
5	CO3 (mg/L)	0.0	0.0	0.0
6	F (mg/L)	0.55	0.50	0.30
7	HCO3 (mg/L)	235	184	118
8	K (mg/L)	6.4	5.6	2.7
9	Mg (mg/L)	25.9	21.1	10.5
10	Na (mg/L)	155.5	120.0	56.6
11	NH3-N (mg N/L)	0.03	0.09	0.05
12	NO2+NO3 (mg N/L)	0.93	0.51	0.62
13	NO2-N (mgN/L)	0.00	0.00	0.00
14	NO3-N (mgN/L)	0.93	0.51	0.61
15	o-PO4-P (mg P/L)	0.047	0.017	0.016
16	SO4 (mg/L)	49.2	55.7	24.9
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.3	1.3	0.9
2	DO (mg/L)	4.4	4.3	6.9
3	DO_SAT% (%)	59	58	84
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	107	110	77
2	HAR_Total (mgCaCO3/L)	215	198	121
3	Na% (%)	60	56	50
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	4.6	3.7	2.2
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : VAZHAVACHANUR (CP000H2)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	08/12/2015	02/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	103	7.196	2.667
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	710	741	728
4	EC_GEN (µmho/cm)	723	829	623
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	8.0	8.3	8.0
7	pH_GEN (pH units)	7.9	7.9	8.4
8	TDS (mg/L)	395	440	330
9	Temp (deg C)	26.0	26.5	26.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	14.1
2	ALK-TOT (mgCaCO3/L)	166	184	118
3	Ca (mg/L)	39	44	30
4	Cl (mg/L)	137.7	155.2	120.4
5	CO3 (mg/L)	0.0	0.0	16.9
6	F (mg/L)	0.48	0.47	0.41
7	HCO3 (mg/L)	202	224	109
8	K (mg/L)	5.9	5.9	5.0
9	Mg (mg/L)	21.9	24.3	15.6
10	Na (mg/L)	74.9	87.4	80.0
11	NH3-N (mg N/L)	0.04	0.07	0.04
12	NO2+NO3 (mg N/L)	0.36	0.37	0.41
13	NO2-N (mgN/L)	0.00	0.00	0.00
14	NO3-N (mgN/L)	0.36	0.37	0.41
15	o-PO4-P (mg P/L)	0.014	0.000	0.000
16	SO4 (mg/L)	27.0	25.9	18.6
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.3	2.2	2.4
2	DO (mg/L)	7.0	6.5	6.9
3	DO_SAT% (%)	86	80	86
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	97	110	76
2	HAR_Total (mgCaCO3/L)	188	212	141
3	Na% (%)	46	47	54
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	2.4	2.6	2.9
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : VAZHAVACHANUR (CP000H2)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	03/03/2016	18/04/2016	03/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	30.68	3.211	3.254
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	791	786	800
4	EC_GEN (µmho/cm)	888	959	967
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.8	8.2	7.7
7	pH_GEN (pH units)	8.2	7.6	7.6
8	TDS (mg/L)	470	519	524
9	Temp (deg C)	27.5	31.0	30.5
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	198	216	252
3	Ca (mg/L)	50	55	53
4	Cl (mg/L)	160.5	176.6	171.2
5	CO3 (mg/L)	0.0	0.0	0.0
6	F (mg/L)	0.56	0.61	0.67
7	HCO3 (mg/L)	241	264	308
8	K (mg/L)	6.3	6.7	4.5
9	Mg (mg/L)	26.3	28.2	33.1
10	Na (mg/L)	90.8	100.5	98.5
11	NH3-N (mg N/L)	0.04	0.04	0.06
12	NO2+NO3 (mg N/L)	0.40	1.14	0.38
13	NO2-N (mgN/L)	0.00	0.00	0.00
14	NO3-N (mgN/L)	0.40	1.14	0.38
15	o-PO4-P (mg P/L)	0.066	0.099	0.018
16	SO4 (mg/L)	32.8	34.7	27.1
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	0.6	2.4	1.8
2	DO (mg/L)	7.6	7.3	7.2
3	DO_SAT% (%)	96	99	95
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	124	136	132
2	HAR_Total (mgCaCO3/L)	234	254	270
3	Na% (%)	45	46	44
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	2.6	2.8	2.6
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : VAZHAVACHANUR (CP000H2)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	184.2	0.000	8.618
2	EC_FLD (µmho/cm)	10	1023	272	760
3	EC_GEN (µmho/cm)	10	1019	456	827
4	pH_FLD (pH units)	10	8.3	7.7	7.9
5	pH_GEN (pH units)	10	8.4	7.2	7.8
6	TDS (mg/L)	10	641	262	465
7	Temp (deg C)	10	32.0	25.0	28.6
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	10	14.1	0.0	1.4
2	ALK-TOT (mgCaCO3/L)	10	252	97	177
3	Ca (mg/L)	10	55	28	42
4	Cl (mg/L)	10	226.9	88.1	163.6
5	CO3 (mg/L)	10	16.9	0.0	1.7
6	F (mg/L)	10	0.67	0.30	0.51
7	HCO3 (mg/L)	10	308	109	213
8	K (mg/L)	10	6.7	2.7	5.5
9	Mg (mg/L)	10	33.1	10.5	23.1
10	Na (mg/L)	10	163.0	56.6	102.7
11	NH3-N (mg N/L)	10	0.12	0.03	0.06
12	NO2+NO3 (mg N/L)	10	1.14	0.36	0.57
13	NO2-N (mgN/L)	10	0.00	0.00	0
14	NO3-N (mgN/L)	10	1.14	0.36	0.57
15	o-PO4-P (mg P/L)	10	0.099	0.000	0.029
16	SO4 (mg/L)	10	55.7	18.6	32.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	2.4	0.6	1.6
2	DO (mg/L)	10	7.6	4.3	6.3
3	DO_SAT% (%)	10	99	58	81
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	10	136	70	104
2	HAR_Total (mgCaCO3/L)	10	270	121	200
3	Na% (%)	10	67	44	51
4	RSC (-)	10	0.6	0.0	0.1
5	SAR (-)	10	5.4	2.2	3.2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : VAZHAVACHANUR (CP000H2)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	31.18	Dry Bed	Dry Bed	Dry Bed	0.612
2	EC_FLD (µmho/cm)		WQ Observation not done	WQ Observation not done		978
3	EC_GEN (µmho/cm)	841				870
4	pH_FLD (pH units)					8.0
5	pH_GEN (pH units)	8.3				7.7
6	TDS (mg/L)					
7	Temp (deg C)	26.5				30.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0				0.0
2	ALK-TOT (mgCaCO3/L)	206				390
3	B (mg/L)					
4	Ca (mg/L)	36				42
5	Cl (mg/L)	102.1				150.5
6	CO3 (mg/L)	0.0				0.0
7	F (mg/L)	0.53				0.56
8	Fe (mg/L)					
9	HCO3 (mg/L)	251				476
10	K (mg/L)					11.6
11	Mg (mg/L)	27.0				33.4
12	Na (mg/L)	84.5				158.9
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)					
17	o-PO4-P (mg P/L)	0.010				
18	SiO2 (mg/L)					
19	SO4 (mg/L)	17.6				25.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					1.5
2	DO (mg/L)					6.8
3	DO_SAT% (%)					90
	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)	89				105
2	HAR_Total (mgCaCO3/L)	201				244
3	Na% (%)					56
4	RSC (-)	0.1				3.0
5	SAR (-)	2.6				4.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : VAZHAVACHANUR (CP000H2)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	3.778	0.762	3.149	0.338	0.171
2	EC_FLD (µmho/cm)	850	948	686	986	982
3	EC_GEN (µmho/cm)	1008	955	797	924	878
4	pH_FLD (pH units)	7.8	7.9	7.5	7.8	8.4
5	pH_GEN (pH units)	7.7	7.9	8.4	7.7	7.9
6	TDS (mg/L)			426	492	471
7	Temp (deg C)	30.3	29.1	28.2	28.5	31.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	4.6	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	427	239	174	122	120
3	B (mg/L)					
4	Ca (mg/L)	58	51	42	64	30
5	Cl (mg/L)	149.9	153.8	145.5	150.5	190.0
6	CO3 (mg/L)	0.0	0.0	5.6	0.0	0.0
7	F (mg/L)	0.49	0.62	0.85	0.38	0.47
8	Fe (mg/L)			0.0		
9	HCO3 (mg/L)	521	292	200	149	146
10	K (mg/L)	6.4	7.1	5.3	7.3	6.9
11	Mg (mg/L)	45.6	33.5	26.8	29.9	19.5
12	Na (mg/L)	125.5	109.2	79.9	92.5	146.0
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)	2.73	2.87	0.26	5.11	1.65
17	o-PO4-P (mg P/L)					
18	SiO2 (mg/L)					
19	SO4 (mg/L)	26.5	26.9	28.8	146.4	99.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.5	1.6	1.5	1.3	2.7
2	DO (mg/L)	5.2	6.1	6.2	6.0	7.3
3	DO_SAT% (%)	69	79	80	77	99
	TRACE & TOXIC					
1	As (µg/L)			2.75		
2	Cd (µg/L)			0.06		
3	Cr (µg/L)			1.43		
4	Cu (µg/L)			28.10		
5	Ni (µg/L)			2.56		
6	Pb (µg/L)			3.74		
7	Zn (µg/L)			1.16		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	145	127	105	161	76
2	HAR_Total (mgCaCO3/L)	335	267	217	286	157
3	Na% (%)	45	46	44	41	66
4	RSC (-)	1.9	0.0	0.0	0.0	0.0
5	SAR (-)	3.0	2.9	2.4	2.5	5.1
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : VAZHAVACHANUR (CP000H2)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	River Water				
		Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	0.399	116.3	0.721	Dry Bed	36.13
2	EC_FLD (µmho/cm)	925				748
3	EC_GEN (µmho/cm)	943	609			714
4	pH_FLD (pH units)	7.8				7.8
5	pH_GEN (pH units)	7.6	7.8			7.8
6	TDS (mg/L)	569				
7	Temp (deg C)	31.0	25.4			25.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0			0.0
2	ALK-TOT (mgCaCO3/L)	180	194			251
3	B (mg/L)					
4	Ca (mg/L)	38	39			32
5	Cl (mg/L)	208.7	64.8			100.7
6	CO3 (mg/L)	0.0	0.0			0.0
7	F (mg/L)	0.55				
8	Fe (mg/L)					
9	HCO3 (mg/L)	220	236			307
10	K (mg/L)	6.1				
11	Mg (mg/L)	23.8	21.7			31.4
12	Na (mg/L)	146.2	53.6			
13	NH3-N (mg N/L)	0.08				
14	NO2+NO3 (mg N/L)	0.67				
15	NO2-N (mgN/L)	0.00				
16	NO3-N (mgN/L)	0.67				
17	o-PO4-P (mg P/L)	0.025				
18	SiO2 (mg/L)					
19	SO4 (mg/L)	44.2	23.3			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4				1.0
2	DO (mg/L)	4.6				6.3
3	DO_SAT% (%)	62				76
	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)	96	97			80
2	HAR_Total (mgCaCO3/L)	195	187			211
3	Na% (%)	61				
4	RSC (-)	0.2	0.4			0.9
5	SAR (-)	4.6	1.7			
	PESTICIDES					

WQ Observation not done

WQ Observation not done

Water Quality Seasonal Average for the period: 2005-2016

Station Name : VAZHAVACHANUR (CP000H2)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	4.509	34.25	19.18	1.672	6.361
2	EC_FLD (µmho/cm)	937	768	639	874	761
3	EC_GEN (µmho/cm)	853	757	730	902	795
4	pH_FLD (pH units)	8.4	8.1	7.8	7.6	7.4
5	pH_GEN (pH units)	7.9	8.0	7.9	7.7	8.1
6	TDS (mg/L)				483	425
7	Temp (deg C)	27.6	28.0	26.4	26.7	27.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	1.6
2	ALK-TOT (mgCaCO3/L)	413	286	180	241	144
3	B (mg/L)					
4	Ca (mg/L)	33	28	26	66	28
5	Cl (mg/L)	126.1	107.3	106.5	152.9	120.8
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	1.9
7	F (mg/L)	0.49	0.52	0.43	0.93	0.56
8	Fe (mg/L)			0.0		
9	HCO3 (mg/L)	504	348	220	294	171
10	K (mg/L)	8.2	5.8	7.6	4.1	5.3
11	Mg (mg/L)	37.2	42.5	25.5	27.3	27.0
12	Na (mg/L)	160.3	75.3	73.7	86.2	81.9
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)		1.12	0.82	0.73	7.58
17	o-PO4-P (mg P/L)					
18	SiO2 (mg/L)					
19	SO4 (mg/L)	29.2	20.8	17.3	31.1	56.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	0.7	1.6	1.3	1.8
2	DO (mg/L)	8.4	5.3	4.8	6.3	6.2
3	DO_SAT% (%)	107	67	59	78	78
	TRACE & TOXIC					
1	As (µg/L)			0.93		
2	Cd (µg/L)					
3	Cr (µg/L)			1.63		
4	Cu (µg/L)			11.54		
5	Ni (µg/L)			3.76		
6	Pb (µg/L)			0.89		
7	Zn (µg/L)			6.70		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	84	69	66	165	70
2	HAR_Total (mgCaCO3/L)	239	247	172	279	182
3	Na% (%)	58	39	46	40	47
4	RSC (-)	3.5	0.8	0.3	0.0	0.0
5	SAR (-)	4.6	2.1	2.4	2.2	2.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : VAZHAVACHANUR (CP000H2)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	0.382	42.37	0.924	Dry Bed	2.733
2	EC_FLD (µmho/cm)	970	613		WQ Observation not done	WQ Observation not done
3	EC_GEN (µmho/cm)	1099	658	941		
4	pH_FLD (pH units)	8.1	8.0			
5	pH_GEN (pH units)	7.8	7.9	7.9		
6	TDS (mg/L)	588	357			
7	Temp (deg C)	27.6	25.9	27.0		
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	3.5	0.0		
2	ALK-TOT (mgCaCO3/L)	220	141	209		
3	B (mg/L)					
4	Ca (mg/L)	59	36	43		
5	Cl (mg/L)	202.1	125.3	85.9		
6	CO3 (mg/L)	0.0	4.2	0.0		
7	F (mg/L)	0.48	0.42			
8	Fe (mg/L)	0.0				
9	HCO3 (mg/L)	268	163	254		
10	K (mg/L)	5.1	4.9			
11	Mg (mg/L)	34.8	18.1	36.9		
12	Na (mg/L)	132.0	74.7	95.4		
13	NH3-N (mg N/L)	0.07	0.05			
14	NO2+NO3 (mg N/L)	5.32	0.44			
15	NO2-N (mgN/L)	0.00	0.00			
16	NO3-N (mgN/L)	4.04	0.44			
17	o-PO4-P (mg P/L)	0.010	0.008			
18	SiO2 (mg/L)					
19	SO4 (mg/L)	66.6	24.1	33.8		
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.7			
2	DO (mg/L)	6.4	6.8			
3	DO_SAT% (%)	81	84			
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)	2.57				
3	Cr (µg/L)	0.06				
4	Cu (µg/L)	4.44				
5	Ni (µg/L)	2.30				
6	Pb (µg/L)	0.33				
7	Zn (µg/L)	7.40				
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	147	90	108		
2	HAR_Total (mgCaCO3/L)	292	165	262		
3	Na% (%)	49	49			
4	RSC (-)	0.0	0.0	0.0		
5	SAR (-)	3.3	2.5	2.6		
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : VAZHAVACHANUR (CP000H2)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	8.886	2.93	9.623	2.331
2	EC_FLD (µmho/cm)	886	990	852	797
3	EC_GEN (µmho/cm)	900	979	883	948
4	pH_FLD (pH units)	8.0	8.0	8.2	7.8
5	pH_GEN (pH units)	7.8	8.1	8.0	7.5
6	TDS (mg/L)				
7	Temp (deg C)	29.5	29.8	29.2	29.2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	15.2	21.8	0.0
2	ALK-TOT (mgCaCO3/L)	305	374	307	276
3	B (mg/L)				
4	Ca (mg/L)	53	60	50	44
5	Cl (mg/L)	115.5	143.9	135.1	148.9
6	CO3 (mg/L)	0.0	18.3	26.2	0.0
7	F (mg/L)		0.56	0.62	0.63
8	Fe (mg/L)				0.0
9	HCO3 (mg/L)	373	419	321	337
10	K (mg/L)	2.5	7.6	5.6	8.2
11	Mg (mg/L)	26.1	30.1	40.2	37.6
12	Na (mg/L)	106.5	126.9	93.1	109.5
13	NH3-N (mg N/L)				
14	NO2+NO3 (mg N/L)				
15	NO2-N (mgN/L)				
16	NO3-N (mgN/L)		3.74	1.59	6.62
17	o-PO4-P (mg P/L)				
18	SiO2 (mg/L)				
19	SO4 (mg/L)	33.2	36.5	22.3	19.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2.9	1.2	0.7	2.0
2	DO (mg/L)	5.7	3.8	3.0	4.5
3	DO_SAT% (%)	74	50	39	58
	TRACE & TOXIC				
1	As (µg/L)	30.74		1.65	1.20
2	Cd (µg/L)				0.07
3	Cr (µg/L)	1.03		0.98	9.71
4	Cu (µg/L)	9.80		6.91	22.60
5	Ni (µg/L)	8.98			1.00
6	Pb (µg/L)	0.57		0.94	8.43
7	Zn (µg/L)			13.11	4.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	133	150	126	110
2	HAR_Total (mgCaCO3/L)	242	276	293	266
3	Na% (%)	48	50	41	46
4	RSC (-)	1.4	2.0	0.5	0.3
5	SAR (-)	2.9	3.4	2.4	2.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : VAZHAVACHANUR (CP000H2)

Division : Hydrology Division, Chennai

Local River : Ponnaiyar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	Dry Bed	0.082	4.705	12.38
2	EC_FLD (µmho/cm)		979	983	792
3	EC_GEN (µmho/cm)		987	991	938
4	pH_FLD (pH units)		7.6	8.1	7.9
5	pH_GEN (pH units)		7.8	8.1	7.8
6	TDS (mg/L)		524	572	504
7	Temp (deg C)		28.0	31.0	29.7
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)		0.0	3.1	0.0
2	ALK-TOT (mgCaCO3/L)		195	182	222
3	B (mg/L)				
4	Ca (mg/L)		37	45	52
5	Cl (mg/L)		181.5	227.1	169.4
6	CO3 (mg/L)		0.0	3.7	0.0
7	F (mg/L)		0.66	0.64	0.61
8	Fe (mg/L)				
9	HCO3 (mg/L)		238	215	271
10	K (mg/L)		5.6	7.8	5.8
11	Mg (mg/L)		36.8	29.1	29.2
12	Na (mg/L)		111.0	118.7	96.6
13	NH3-N (mg N/L)			0.09	0.05
14	NO2+NO3 (mg N/L)			1.16	0.64
15	NO2-N (mgN/L)			0.00	0.00
16	NO3-N (mgN/L)		8.48	1.16	0.64
17	o-PO4-P (mg P/L)			0.025	0.061
18	SiO2 (mg/L)				
19	SO4 (mg/L)		55.0	31.3	31.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)		2.5	1.9	1.6
2	DO (mg/L)		6.7	5.1	7.4
3	DO_SAT% (%)		86	69	97
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)				
3	Cr (µg/L)				
4	Cu (µg/L)				
5	Ni (µg/L)				
6	Pb (µg/L)				
7	Zn (µg/L)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)		93	114	131
2	HAR_Total (mgCaCO3/L)		246	235	253
3	Na% (%)		49	52	45
4	RSC (-)		0.0	0.0	0.0
5	SAR (-)		3.1	3.4	2.7
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: GUMMANUR	Code	: CP000R5
State	: Tamil Nadu	District	Dharmapuri
Basin	: EFR B Pennar-Cauvery	Independent River	: Ponnaiyar
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Ponnaiyar
Division	: SR Division, Coimbatore	Sub-Division	: Lower Cauvery SD, Trichy
Drainage Area	: 4620 Sq. Km.	Bank	: Left
Latitude	: 12°33'18"	Longitude	: 78°08'18"
Zero of Gauge (m)	: 490 (m.s.l)	01/09/1978	
	Opening Date	Closing Date	
Gauge	: 01/09/1978		
Discharge	: 20/09/1978		
Sediment	: 26/08/1981		
Water Quality	: 20/09/1978		

Water Quality Datasheet for the period : 2015-2016

Station Name : GUMMANUR (CP000R5)

Division : SR Division, Coimbatore

Local River : Ponnaiyar

Sub-Division : Lower Cauvery SD, Trichy

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	24.12	4.596	6.706
2	Colour_Cod (-)	Light Brown	Clear	Light Brown
3	EC_FLD (µmho/cm)	1080	1083	1171
4	EC_GEN (µmho/cm)	1046	1083	1171
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	8.2	8.3	8.1
7	pH_GEN (pH units)	8.2	8.3	8.1
8	TDS (mg/L)	607	629	669
9	Temp (deg C)	27.0	27.0	25.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	19.0	0.0
2	ALK-TOT (mgCaCO3/L)	255	251	259
3	B (mg/L)	0.18	0.13	
4	Ca (mg/L)	37	79	100
5	Cl (mg/L)	162.7	170.9	175.9
6	CO3 (mg/L)	0.0	22.9	0.0
7	F (mg/L)	0.51	0.47	
8	Fe (mg/L)	0.020	0.000	0.070
9	HCO3 (mg/L)	311	260	316
10	K (mg/L)	20.8	22.6	22.2
11	Mg (mg/L)	53.9	29.8	23.1
12	Na (mg/L)	119.5	129.0	94.5
13	NH3-N (mg N/L)	0.02	0.04	0.41
14	NO2+NO3 (mg N/L)	20.06	21.20	25.30
15	NO2-N (mgN/L)	0.06	0.00	0.00
16	NO3-N (mgN/L)	20.00	21.20	25.30
17	o-PO4-P (mg P/L)	2.200	1.650	2.550
18	SiO2 (mg/L)	29.1	27.0	28.6
19	SO4 (mg/L)	22.0	26.2	27.6
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	5.5	4.5	3.5
2	COD (mg/L)	24.2	27.4	24.7
3	DO (mg/L)	6.7	7.1	8.7
4	DO_SAT% (%)	84	89	105
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	91	198	250
2	HAR_Total (mgCaCO3/L)	316	323	346
3	Na% (%)	43	45	36
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	2.9	3.1	2.2
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : GUMMANUR (CP000R5)

Division : SR Division, Coimbatore

Local River : Ponnaiyar

Sub-Division : Lower Cauvery SD, Trichy

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	02/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	10.26	42.92	27.96
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown
3	EC_FLD (μmho/cm)	991	977	926
4	EC_GEN (μmho/cm)	991	977	1020
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.4	7.1	7.6
7	pH_GEN (pH units)	7.7	7.6	7.8
8	TDS (mg/L)	565	570	597
9	Temp (deg C)	26.0	26.0	26.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	216	218	230
3	B (mg/L)		0.13	0.13
4	Ca (mg/L)	75	76	87
5	Cl (mg/L)	162.4	161.6	157.7
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)			
8	Fe (mg/L)	0.010	0.020	0.040
9	HCO3 (mg/L)	264	266	280
10	K (mg/L)	20.5	20.2	20.9
11	Mg (mg/L)	24.1	21.1	19.2
12	Na (mg/L)	119.5	114.0	116.5
13	NH3-N (mg N/L)	0.20	0.18	0.19
14	NO2+NO3 (mg N/L)	21.82	24.23	26.10
15	NO2-N (mgN/L)	0.02	0.03	0.00
16	NO3-N (mgN/L)	21.80	24.20	26.10
17	o-PO4-P (mg P/L)	2.050	2.150	2.200
18	SiO2 (mg/L)	22.1	23.1	23.7
19	SO4 (mg/L)	24.9	25.0	28.4
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.6	3.5	2.5
2	COD (mg/L)	15.6	26.3	21.8
3	DO (mg/L)	8.1	9.3	8.7
4	DO_SAT% (%)	100	115	107
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	187	190	217
2	HAR_Total (mgCaCO3/L)	287	277	297
3	Na% (%)	45	45	44
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	3.1	3.0	2.9
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : GUMMANUR (CP000R5)

Division : SR Division, Coimbatore

Local River : Ponnaiyar

Sub-Division : Lower Cauvery SD, Trichy

River Water Analysis

S.No	Parameters	01/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	25.74	10.97	10.83
2	Colour_Cod (-)	Light Brown	Light Brown	Clear
3	EC_FLD (µmho/cm)	1060	505	1259
4	EC_GEN (µmho/cm)	978	1010	1259
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.2	7.0	7.6
7	pH_GEN (pH units)	7.7	7.6	7.6
8	TDS (mg/L)	570	578	694
9	Temp (deg C)	24.0	22.0	21.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	222	256	283
3	B (mg/L)	0.09	0.11	0.17
4	Ca (mg/L)	68	98	68
5	Cl (mg/L)	144.3	164.8	173.5
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.55	0.51	0.54
8	Fe (mg/L)	0.020	0.000	0.000
9	HCO3 (mg/L)	271	313	346
10	K (mg/L)	16.7	19.6	22.1
11	Mg (mg/L)	29.7	20.1	47.9
12	Na (mg/L)	106.0	104.0	126.0
13	NH3-N (mg N/L)	0.07	0.55	0.25
14	NO2+NO3 (mg N/L)	24.70	21.25	20.57
15	NO2-N (mgN/L)	0.00	0.15	0.07
16	NO3-N (mgN/L)	24.70	21.10	20.50
17	o-PO4-P (mg P/L)	1.600	2.050	1.550
18	SiO2 (mg/L)	24.2	45.4	57.4
19	SO4 (mg/L)	34.6	26.3	28.2
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	4.6	3.4	4.8
2	COD (mg/L)	38.3	18.2	16.2
3	DO (mg/L)	7.9	7.7	9.3
4	DO_SAT% (%)	94	88	104
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	170	245	170
2	HAR_Total (mgCaCO3/L)	294	329	369
3	Na% (%)	42	39	41
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	2.7	2.5	2.9
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : GUMMANUR (CP000R5)

Division : SR Division, Coimbatore

Local River : Ponnaiyar

Sub-Division : Lower Cauvery SD, Trichy

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	02/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	5.032	11.33	3.342
2	Colour_Cod (-)	Light Brown	Dark Brown	Clear
3	EC_FLD (µmho/cm)	1224	1278	1317
4	EC_GEN (µmho/cm)	1224	1278	1317
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	8.3	7.7	8.5
7	pH_GEN (pH units)	8.2	7.7	8.5
8	TDS (mg/L)	702	731	746
9	Temp (deg C)	24.0	26.0	29.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	33.5	0.0	11.2
2	ALK-TOT (mgCaCO3/L)	303	295	295
3	B (mg/L)	0.23	0.24	0.21
4	Ca (mg/L)	113	118	82
5	Cl (mg/L)	192.9	183.8	212.9
6	CO3 (mg/L)	40.4	0.0	13.5
7	F (mg/L)	0.61	0.44	0.57
8	Fe (mg/L)	0.000	0.010	0.010
9	HCO3 (mg/L)	287	360	333
10	K (mg/L)	19.8	24.2	22.2
11	Mg (mg/L)	21.9	15.3	40.0
12	Na (mg/L)	140.5	138.5	156.0
13	NH3-N (mg N/L)	0.03	0.15	0.01
14	NO2+NO3 (mg N/L)	28.90	31.00	30.10
15	NO2-N (mgN/L)	0.00	0.00	0.00
16	NO3-N (mgN/L)	28.90	31.00	30.10
17	o-PO4-P (mg P/L)	1.400	1.500	1.200
18	SiO2 (mg/L)	28.8	25.7	33.4
19	SO4 (mg/L)	31.7	24.0	33.4
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	4.5	2.4	3.8
2	COD (mg/L)	40.1	21.4	21.3
3	DO (mg/L)	8.7	9.3	7.7
4	DO_SAT% (%)	103	115	100
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	283	295	204
2	HAR_Total (mgCaCO3/L)	374	358	371
3	Na% (%)	43	44	46
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	3.2	3.2	3.5
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : GUMMANUR (CP000R5)

Division : SR Division, Coimbatore

Local River : Ponnaiyar

Sub-Division : Lower Cauvery SD, Trichy

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	125.4	0.000	15.5
2	EC_FLD (µmho/cm)	12	1317	505	1073
3	EC_GEN (µmho/cm)	12	1317	977	1113
4	pH_FLD (pH units)	12	8.5	7.0	7.8
5	pH_GEN (pH units)	12	8.5	7.6	7.9
6	TDS (mg/L)	12	746	565	638
7	Temp (deg C)	12	29.0	21.0	25.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	33.5	0.0	5.3
2	ALK-TOT (mgCaCO3/L)	12	303	216	257
3	B (mg/L)	10	0.24	0.09	0.16
4	Ca (mg/L)	12	118	37	83
5	Cl (mg/L)	12	212.9	144.3	171.9
6	CO3 (mg/L)	12	40.4	0.0	6.4
7	F (mg/L)	8	0.61	0.44	0.52
8	Fe (mg/L)	12	0.070	0.000	0.017
9	HCO3 (mg/L)	12	360	260	301
10	K (mg/L)	12	24.2	16.7	21
11	Mg (mg/L)	12	53.9	15.3	28.8
12	Na (mg/L)	12	156.0	94.5	122
13	NH3-N (mg N/L)	12	0.55	0.01	0.18
14	NO2+NO3 (mg N/L)	12	31.00	20.06	24.6
15	NO2-N (mgN/L)	12	0.15	0.00	0.03
16	NO3-N (mgN/L)	12	31.00	20.00	24.58
17	o-PO4-P (mg P/L)	12	2.550	1.200	1.842
18	SiO2 (mg/L)	12	57.4	22.1	30.7
19	SO4 (mg/L)	12	34.6	22.0	27.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	5.5	1.6	3.7
2	COD (mg/L)	12	40.1	15.6	24.6
3	DO (mg/L)	12	9.3	6.7	8.3
4	DO_SAT% (%)	12	115	84	100
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	295	91	208
2	HAR_Total (mgCaCO3/L)	12	374	277	328
3	Na% (%)	12	46	36	43
4	RSC (-)	12	0.0	0.0	0
5	SAR (-)	12	3.5	2.2	2.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : GUMMANUR (CP000R5)

Division : SR Division, Coimbatore

Local River : Ponnaiyar

Sub-Division : Lower Cauvery SD, Trichy

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	11.11	2.843	6.876	19.61	3.864
2	EC_FLD (µmho/cm)	884	1070		783	932
3	EC_GEN (µmho/cm)	936	1070	973	909	942
4	pH_FLD (pH units)	8.3	8.6		8.4	7.6
5	pH_GEN (pH units)	8.1	8.5	8.5	8.4	8.4
6	TDS (mg/L)					
7	Temp (deg C)	24.5	23.5	23.3	24.1	25.6
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	1.9	24.4	19.2	19.3	12.0
2	ALK-TOT (mgCaCO3/L)	206	274	247	235	255
3	B (mg/L)	0.36	0.41	0.41	0.47	0.18
4	Ca (mg/L)	59	69	65	63	72
5	Cl (mg/L)	131.7	139.7	134.4	129.9	138.1
6	CO3 (mg/L)	2.2	29.4	23.1	23.3	14.4
7	F (mg/L)	0.95	1.30	0.94	0.72	0.58
8	Fe (mg/L)	0.088	0.079	0.090	0.078	0.090
9	HCO3 (mg/L)	247	275	254	239	281
10	K (mg/L)	17.3	16.3	18.0	14.2	16.6
11	Mg (mg/L)	25.2	24.8	20.0	19.6	19.2
12	Na (mg/L)	99.2	112.7	108.3	93.0	100.3
13	NH3-N (mg N/L)	0.06	0.10	0.07	0.13	0.20
14	NO2+NO3 (mg N/L)	10.70	10.35	11.92	10.89	
15	NO2-N (mgN/L)	0.10	0.03	0.14	0.03	
16	NO3-N (mgN/L)	10.60	10.32	11.78	10.86	9.08
17	o-PO4-P (mg P/L)				1.488	1.138
18	P-Tot (mgP/L)	0.479	0.810	0.721		
19	SiO2 (mg/L)	27.9	38.2	27.6	32.3	24.1
20	SO4 (mg/L)	25.8	18.2	24.5	29.3	52.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	3.7	2.6	2.4	2.1	2.9
2	COD (mg/L)					
3	DO (mg/L)	6.8	6.1		5.9	5.7
4	DO_SAT% (%)	80	71		70	70
	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)	148	171	163	156	180
2	HAR_Total (mgCaCO3/L)	253	275	246	238	260
3	Na% (%)	44	45	47	44	44
4	RSC (-)	0.0	0.1	0.2	0.1	0.1
5	SAR (-)	2.7	3.0	3.0	2.6	2.7
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : GUMMANUR (CP000R5)

Division : SR Division, Coimbatore

Local River : Ponnaiyar

Sub-Division : Lower Cauvery SD, Trichy

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	6.998	7.194	3.258	8.114	12.25
2	EC_FLD (µmho/cm)	850	811	920	1010	1143
3	EC_GEN (µmho/cm)	873	811	920	996	1127
4	pH_FLD (pH units)	7.0	7.6	8.3	8.0	8.1
5	pH_GEN (pH units)	8.1	7.8	8.2	8.1	8.2
6	TDS (mg/L)					609
7	Temp (deg C)	25.5	25.3	22.8	26.4	27.4
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	12.0	1.7	30.9	4.0	18.3
2	ALK-TOT (mgCaCO3/L)	246	237	285	235	255
3	B (mg/L)	0.26				
4	Ca (mg/L)	76	65	90	68	80
5	Cl (mg/L)	160.6	156.1	166.5	169.5	183.5
6	CO3 (mg/L)	14.4	2.1	37.3	4.8	22.1
7	F (mg/L)	0.71	0.60	0.31	0.48	0.50
8	Fe (mg/L)	0.061			0.140	
9	HCO3 (mg/L)	270	285	272	277	266
10	K (mg/L)	17.9	16.3	15.5	15.1	20.7
11	Mg (mg/L)	23.9	21.8	17.2	26.0	23.6
12	Na (mg/L)	93.8	99.5	114.2	106.7	139.9
13	NH3-N (mg N/L)	0.10			0.31	0.20
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)	25.70	7.54	5.25	5.19	14.49
17	o-PO4-P (mg P/L)	1.625				
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	36.4				
20	SO4 (mg/L)	21.3	20.9	25.9	24.8	26.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	3.9	3.6	2.6	3.1	4.4
2	COD (mg/L)				27.1	22.6
3	DO (mg/L)	6.3	6.9	7.2	7.9	8.0
4	DO_SAT% (%)	77	84	83	98	101
	TRACE & TOXIC					
1	As (µg/L)			7.35	0.56	
2	Cd (µg/L)			0.23	0.34	
3	Cr (µg/L)			4.14	9.28	
4	Cu (µg/L)				2.58	
5	Hg (µg/L)				0.08	
6	Ni (µg/L)			6.93	13.09	
7	Pb (µg/L)			8.31	4.24	
8	Zn (µg/L)			2.49	16.00	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	191	162	226	171	200
2	HAR_Total (mgCaCO3/L)	290	253	297	279	298
3	Na% (%)	40	44	44	44	49
4	RSC (-)	0.0	0.0	0.2	0.0	0.0
5	SAR (-)	2.4	2.7	2.9	2.8	3.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : GUMMANUR (CP000R5)

Division : SR Division, Coimbatore

Local River : Ponnaiyar

Sub-Division : Lower Cauvery SD, Trichy

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	17.72	90.59	1.189	8.347	11.04
2	EC_FLD (µmho/cm)	1060	657	1083		855
3	EC_GEN (µmho/cm)	1054	701	1083	1046	902
4	pH_FLD (pH units)	7.8	8.3	8.3		7.8
5	pH_GEN (pH units)	8.0	8.3	8.3	8.4	8.3
6	TDS (mg/L)	608				
7	Temp (deg C)	26.2	25.4	20.9	22.5	21.1
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	3.8	13.2	20.4	12.1	10.0
2	ALK-TOT (mgCaCO3/L)	240	215	296	252	262
3	B (mg/L)	0.15	0.37	0.43	0.46	0.12
4	Ca (mg/L)	73	47	72	74	68
5	Cl (mg/L)	166.7	69.4	153.7	144.8	127.7
6	CO3 (mg/L)	4.6	15.9	24.6	14.5	12.0
7	F (mg/L)	0.49	1.04	0.89	0.97	0.73
8	Fe (mg/L)	0.024	0.091	0.061	0.093	0.085
9	HCO3 (mg/L)	284	230	311	278	295
10	K (mg/L)	21.3	7.8	14.1	16.1	9.5
11	Mg (mg/L)	30.4	21.6	24.5	19.9	27.0
12	Na (mg/L)	115.3	73.6	118.8	109.4	97.8
13	NH3-N (mg N/L)	0.17	0.08	0.10	0.11	
14	NO2+NO3 (mg N/L)	22.52	5.63	6.78	13.09	1.03
15	NO2-N (mgN/L)	0.02	0.04	0.03	0.08	0.52
16	NO3-N (mgN/L)	22.50	5.60	6.76	13.00	6.35
17	o-PO4-P (mg P/L)	2.120				1.138
18	P-Tot (mgP/L)		0.524	0.916	1.375	
19	SiO2 (mg/L)	26.0	24.1	24.9	28.3	3.4
20	SO4 (mg/L)	25.1	25.0	19.3	26.0	48.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	3.7	1.6	2.1	3.8	3.6
2	COD (mg/L)	23.6				
3	DO (mg/L)	8.0	6.9	6.8		6.3
4	DO_SAT% (%)	99	84	76		70
	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)	183	117	179	184	171
2	HAR_Total (mgCaCO3/L)	310	207	282	267	283
3	Na% (%)	43	42	46	45	42
4	RSC (-)	0.0	0.2	0.3	0.0	0.2
5	SAR (-)	2.9	2.2	3.1	2.9	2.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : GUMMANUR (CP000R5)

Division : SR Division, Coimbatore

Local River : Ponnaiyar

Sub-Division : Lower Cauvery SD, Trichy

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	3.783	5.724	7.464	6.463	12.43
2	EC_FLD (µmho/cm)	982	891	536	1140	1070
3	EC_GEN (µmho/cm)	1005	903	764	1132	1076
4	pH_FLD (pH units)	7.6	7.8	8.2	8.3	7.7
5	pH_GEN (pH units)	8.4	8.4	8.3	8.3	7.9
6	TDS (mg/L)					
7	Temp (deg C)	23.4	22.2	24.5	21.9	22.6
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	23.9	17.9	19.6	16.8	0.0
2	ALK-TOT (mgCaCO3/L)	288	264	251	290	262
3	B (mg/L)	0.25	0.19			
4	Ca (mg/L)	76	85	63	104	84
5	Cl (mg/L)	157.5	170.2	136.9	205.2	159.6
6	CO3 (mg/L)	28.8	21.6	23.7	20.3	0.0
7	F (mg/L)	0.67	0.75	0.46	0.34	0.47
8	Fe (mg/L)	0.277	0.000	0.090		
9	HCO3 (mg/L)	293	278	258	312	320
10	K (mg/L)	14.4	13.8	11.0	12.8	14.5
11	Mg (mg/L)	26.2	21.6	24.1	23.8	26.5
12	Na (mg/L)	115.6	102.3	93.4	116.8	101.9
13	NH3-N (mg N/L)	0.12	0.13		0.04	0.15
14	NO2+NO3 (mg N/L)					16.41
15	NO2-N (mgN/L)					0.01
16	NO3-N (mgN/L)	11.00	16.38	5.22	4.57	15.52
17	o-PO4-P (mg P/L)	1.415	0.852			
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	34.7	34.3			
20	SO4 (mg/L)	51.9	20.7	22.0	25.3	28.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	1.9	2.5	3.0	3.7
2	COD (mg/L)				16.5	18.4
3	DO (mg/L)	6.6	6.4	6.7	6.6	7.6
4	DO_SAT% (%)	77	73	80	76	87
	TRACE & TOXIC					
1	As (µg/L)			0.71		
2	Cd (µg/L)					
3	Cr (µg/L)			3.77		
4	Cu (µg/L)			15.71		
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)			3.79		
8	Zn (µg/L)			23.00		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	190	211	158	260	211
2	HAR_Total (mgCaCO3/L)	299	302	259	359	321
3	Na% (%)	44	41	43	40	40
4	RSC (-)	0.0	0.0	0.1	0.0	0.0
5	SAR (-)	2.9	2.6	2.5	2.7	2.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : GUMMANUR (CP000R5)

Division : SR Division, Coimbatore

Local River : Ponnaiyar

Sub-Division : Lower Cauvery SD, Trichy

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	11.24	18.88	2.327	0.077	8.659
2	EC_FLD (µmho/cm)	1009	938	1011	1230	
3	EC_GEN (µmho/cm)	1032	1067	1077	1245	1120
4	pH_FLD (pH units)	7.7	7.4	8.5	8.1	
5	pH_GEN (pH units)	7.7	7.7	8.5	7.9	8.6
6	TDS (mg/L)	588	610			
7	Temp (deg C)	23.1	23.3	25.0	22.5	22.8
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	4.8	0.0	15.7	0.0	30.4
2	ALK-TOT (mgCaCO3/L)	237	248	324	319	307
3	B (mg/L)	0.00	0.13	0.35	0.38	0.43
4	Ca (mg/L)	72	80	68	72	76
5	Cl (mg/L)	166.6	160.1	131.6	186.8	163.7
6	CO3 (mg/L)	5.8	0.0	18.9	0.0	36.6
7	F (mg/L)	0.35	0.53	1.10	1.09	0.81
8	Fe (mg/L)	0.043	0.015	0.100	0.081	0.087
9	HCO3 (mg/L)	277	302	356	389	300
10	K (mg/L)	18.6	19.8	12.2	10.2	16.0
11	Mg (mg/L)	29.8	29.2	28.5	31.1	25.3
12	Na (mg/L)	118.9	113.1	115.5	133.1	120.0
13	NH3-N (mg N/L)	0.20	0.27	0.49	0.07	0.06
14	NO2+NO3 (mg N/L)	22.57	23.16	3.12	5.63	7.62
15	NO2-N (mgN/L)	0.02	0.06	0.02	0.06	0.05
16	NO3-N (mgN/L)	21.22	23.10	3.09	5.57	7.57
17	o-PO4-P (mg P/L)	1.570	1.850			
18	P-Tot (mgP/L)			0.888	0.780	1.319
19	SiO2 (mg/L)	30.2	37.7	27.5	30.9	28.6
20	SO4 (mg/L)	25.5	29.4	20.1	15.3	27.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	4.8	3.8	6.6	1.3	5.5
2	COD (mg/L)	24.0	23.6			
3	DO (mg/L)	7.5	8.4	7.0	5.5	
4	DO_SAT% (%)	87	98	86	62	
	TRACE & TOXIC					
1	As (µg/L)			26.97	18.81	10.72
2	Cd (µg/L)	0.61		6.00	6.00	0.84
3	Cr (µg/L)	25.51		3.12		2.56
4	Cu (µg/L)	4.55			3.65	2.22
5	Hg (µg/L)			0.43		
6	Ni (µg/L)	7.10		13.65	7.61	
7	Pb (µg/L)	1.84		5.50	9.97	
8	Zn (µg/L)	2.25		8.00	19.00	10.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	180	200	171	180	190
2	HAR_Total (mgCaCO3/L)	304	322	290	310	295
3	Na% (%)	44	42	45	47	45
4	RSC (-)	0.0	0.0	0.7	0.2	0.3
5	SAR (-)	3.0	2.8	3.0	3.3	3.1
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : GUMMANUR (CP000R5)

Division : SR Division, Coimbatore

Local River : Ponnaiyar

Sub-Division : Lower Cauvery SD, Trichy

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	4.408	2.774	3.48	4.195
2	EC_FLD (µmho/cm)	1062	1091	1012	887
3	EC_GEN (µmho/cm)	976	1027	1048	879
4	pH_FLD (pH units)	8.1	7.3	7.3	8.5
5	pH_GEN (pH units)	8.7	8.7	8.3	8.5
6	TDS (mg/L)				
7	Temp (deg C)	25.0	25.3	24.7	25.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	27.8	29.2	15.9	33.5
2	ALK-TOT (mgCaCO3/L)	318	316	324	294
3	B (mg/L)	0.19	0.05	0.26	
4	Ca (mg/L)	74	79	93	68
5	Cl (mg/L)	169.0	191.0	197.9	167.9
6	CO3 (mg/L)	33.5	35.2	19.2	40.3
7	F (mg/L)	0.65	0.81	0.63	0.47
8	Fe (mg/L)	0.050	0.144	0.000	0.030
9	HCO3 (mg/L)	320	314	356	277
10	K (mg/L)	17.7	13.6	13.2	14.9
11	Mg (mg/L)	25.8	30.5	22.0	28.8
12	Na (mg/L)	129.2	126.8	124.8	120.7
13	NH3-N (mg N/L)	0.05		0.04	
14	NO2+NO3 (mg N/L)				
15	NO2-N (mgN/L)				
16	NO3-N (mgN/L)	8.41	5.59	11.10	2.31
17	o-PO4-P (mg P/L)	1.343	1.097	1.552	
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)	27.1	34.9	28.6	
20	SO4 (mg/L)	32.1	48.0	25.5	18.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3.9	3.7	2.9	3.4
2	COD (mg/L)				
3	DO (mg/L)	5.6	6.7	6.1	6.6
4	DO_SAT% (%)	68	81	74	81
	TRACE & TOXIC				
1	As (µg/L)	31.30		1.80	1.78
2	Cd (µg/L)			0.02	0.04
3	Cr (µg/L)	4.05		3.02	3.68
4	Cu (µg/L)	3.87		3.62	1.87
5	Hg (µg/L)				
6	Ni (µg/L)	4.87			0.46
7	Pb (µg/L)	3.45		0.00	5.44
8	Zn (µg/L)			13.56	20.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	186	196	232	170
2	HAR_Total (mgCaCO3/L)	293	323	324	290
3	Na% (%)	47	45	44	46
4	RSC (-)	0.5	0.2	0.1	0.3
5	SAR (-)	3.3	3.1	3.0	3.1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : GUMMANUR (CP000R5)

Division : SR Division, Coimbatore

Local River : Ponnaiyar

Sub-Division : Lower Cauvery SD, Trichy

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	3.621	0.64	6.992	6.566
2	EC_FLD (µmho/cm)	1210	1284	1144	1273
3	EC_GEN (µmho/cm)	1215	1302	1144	1273
4	pH_FLD (pH units)	8.4	8.1	7.9	8.2
5	pH_GEN (pH units)	8.4	8.1	8.0	8.1
6	TDS (mg/L)		691	658	726
7	Temp (deg C)	24.5	22.8	27.0	26.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	37.7	0.0	12.8	14.9
2	ALK-TOT (mgCaCO3/L)	334	351	281	298
3	B (mg/L)			0.15	0.23
4	Ca (mg/L)	91	93	72	104
5	Cl (mg/L)	210.5	217.2	176.6	196.5
6	CO3 (mg/L)	45.4	0.0	15.4	17.9
7	F (mg/L)	0.80	0.63	0.55	0.54
8	Fe (mg/L)	0.030	0.056	0.023	0.007
9	HCO3 (mg/L)	316	429	311	327
10	K (mg/L)	15.4	15.1	17.6	22.1
11	Mg (mg/L)	32.6	38.9	34.5	25.7
12	Na (mg/L)	136.5	150.2	129.8	145.0
13	NH3-N (mg N/L)	0.28	0.17	0.11	0.06
14	NO2+NO3 (mg N/L)			14.04	30.00
15	NO2-N (mgN/L)			0.00	0.00
16	NO3-N (mgN/L)	1.79	8.11	14.04	30.00
17	o-PO4-P (mg P/L)			1.677	1.367
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)			29.1	29.3
20	SO4 (mg/L)	24.7	29.6	26.1	29.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2.9	3.5	3.2	3.5
2	COD (mg/L)	23.1	20.6	27.0	27.6
3	DO (mg/L)	6.9	7.3	7.6	8.6
4	DO_SAT% (%)	82	85	95	106
	TRACE & TOXIC				
1	As (µg/L)	0.46	4.31		
2	Cd (µg/L)	0.38	0.08		
3	Cr (µg/L)	0.75	1.11		
4	Cu (µg/L)	3.03	2.20		
5	Hg (µg/L)	0.23			
6	Ni (µg/L)	11.43	10.05		
7	Pb (µg/L)	7.55	1.59		
8	Zn (µg/L)	0.36	8.00		
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	228	233	180	261
2	HAR_Total (mgCaCO3/L)	364	395	324	368
3	Na% (%)	44	44	45	44
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	3.1	3.3	3.2	3.3
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: KUDALAIYATHUR	Code	: CE000F6
State	: Tamil Nadu	District	Cuddalore
Basin	: EFR B Pennar-Cauvery	Independent River	: Vellar
Tributary	: -	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Vellar
Division	: Hydrology Division, Chennai	Sub-Division	: PPSD, Chennai
Drainage Area	: 7890 Sq. Km.	Bank	: Right
Latitude	: 11°25'20"	Longitude	: 79°28'15"
Zero of Gauge (m)	: 41.000 (m.s.l) 11.000 (m.s.l)	14/11/1989	- 31/05/2005
	Opening Date	Closing Date	
Gauge	: 14/11/1989		
Discharge	: 15/11/1989		
Sediment	:		
Water Quality	: 01/06/1993		

Water Quality Datasheet for the period : 2015-2016

Station Name : Kudalaiyathur (CE000F6)

Division : Hydrology Division, Chennai

Local River : Vellar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_GEN (µmho/cm)			
4	Odour_Code (-)			
5	pH_FLD (pH units)			
6	pH_GEN (pH units)			
7	TDS (mg/L)			
8	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Kudalaiyathur (CE000F6)

Division : Hydrology Division, Chennai

Local River : Vellar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	12/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	63.72
2	Colour_Cod (-)			Light Brown
3	EC_GEN (µmho/cm)			263
4	Odour_Code (-)			odour free
5	pH_FLD (pH units)			7.0
6	pH_GEN (pH units)			7.7
7	TDS (mg/L)			145
8	Temp (deg C)			24.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			0.0
2	ALK-TOT (mgCaCO3/L)			78
3	Ca (mg/L)			16
4	Cl (mg/L)			33.0
5	CO3 (mg/L)			0.0
6	F (mg/L)			0.33
7	HCO3 (mg/L)			95
8	K (mg/L)			2.6
9	Mg (mg/L)			7.3
10	Na (mg/L)			25.0
11	NH3-N (mg N/L)			0.04
12	NO2+NO3 (mg N/L)			0.27
13	NO2-N (mgN/L)			0.00
14	NO3-N (mgN/L)			0.27
15	o-PO4-P (mg P/L)			0.009
16	SO4 (mg/L)			13.8
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			2.2
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			40
2	HAR_Total (mgCaCO3/L)			70
3	Na% (%)			43
4	RSC (-)			0.2
5	SAR (-)			1.3
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Kudalaiyathur (CE000F6)

Division : Hydrology Division, Chennai

Local River : Vellar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	10/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	155.4	Dry Bed	Dry Bed
2	Colour_Cod (-)	Light Brown		
3	EC_GEN (µmho/cm)	377		
4	Odour_Code (-)	odour free		
5	pH_FLD (pH units)	7.0		
6	pH_GEN (pH units)	8.0		
7	TDS (mg/L)	200		
8	Temp (deg C)	24.0		
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0		
2	ALK-TOT (mgCaCO3/L)	115		
3	Ca (mg/L)	27		
4	Cl (mg/L)	44.1		
5	CO3 (mg/L)	0.0		
6	F (mg/L)	0.29		
7	HCO3 (mg/L)	140		
8	K (mg/L)	3.1		
9	Mg (mg/L)	10.5		
10	Na (mg/L)	32.0		
11	NH3-N (mg N/L)	0.04		
12	NO2+NO3 (mg N/L)	0.24		
13	NO2-N (mgN/L)	0.00		
14	NO3-N (mgN/L)	0.24		
15	o-PO4-P (mg P/L)	0.017		
16	SO4 (mg/L)	21.9		
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.3		
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	67		
2	HAR_Total (mgCaCO3/L)	111		
3	Na% (%)	38		
4	RSC (-)	0.1		
5	SAR (-)	1.3		
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : Kudalaiyathur (CE000F6)

Division : Hydrology Division, Chennai

Local River : Vellar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	01/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_GEN (µmho/cm)			
4	Odour_Code (-)			
5	pH_FLD (pH units)			
6	pH_GEN (pH units)			
7	TDS (mg/L)			
8	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	Ca (mg/L)			
4	Cl (mg/L)			
5	CO3 (mg/L)			
6	F (mg/L)			
7	HCO3 (mg/L)			
8	K (mg/L)			
9	Mg (mg/L)			
10	Na (mg/L)			
11	NH3-N (mg N/L)			
12	NO2+NO3 (mg N/L)			
13	NO2-N (mgN/L)			
14	NO3-N (mgN/L)			
15	o-PO4-P (mg P/L)			
16	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : Kudalaiyathur (CE000F6)

Division : Hydrology Division, Chennai

Local River : Vellar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	997.3	0.000	16.42
2	EC_GEN (µmho/cm)	2	377	263	320
3	pH_FLD (pH units)	2	7.0	7.0	7
4	pH_GEN (pH units)	2	8.0	7.7	7.8
5	TDS (mg/L)	2	200	145	173
6	Temp (deg C)	2	24.0	24.0	24
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	2	115	78	97
3	Ca (mg/L)	2	27	16	21
4	Cl (mg/L)	2	44.1	33.0	38.5
5	CO3 (mg/L)	2	0.0	0.0	0
6	F (mg/L)	2	0.33	0.29	0.31
7	HCO3 (mg/L)	2	140	95	118
8	K (mg/L)	2	3.1	2.6	2.8
9	Mg (mg/L)	2	10.5	7.3	8.9
10	Na (mg/L)	2	32.0	25.0	28.5
11	NH3-N (mg N/L)	2	0.04	0.04	0.04
12	NO2+NO3 (mg N/L)	2	0.27	0.24	0.26
13	NO2-N (mgN/L)	2	0.00	0.00	0
14	NO3-N (mgN/L)	2	0.27	0.24	0.26
15	o-PO4-P (mg P/L)	2	0.017	0.009	0.013
16	SO4 (mg/L)	2	21.9	13.8	17.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2	2.2	1.3	1.7
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	2	67	40	53
2	HAR_Total (mgCaCO3/L)	2	111	70	91
3	Na% (%)	2	43	38	40
4	RSC (-)	2	0.2	0.1	0.1
5	SAR (-)	2	1.3	1.3	1.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kudalaiyathur (CE000F6)

Division : Hydrology Division, Chennai

Local River : Vellar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)					
3	pH_FLD (pH units)					
4	pH_GEN (pH units)					
5	TDS (mg/L)					
6	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					
2	ALK-TOT (mgCaCO3/L)					
3	Ca (mg/L)					
4	Cl (mg/L)					
5	CO3 (mg/L)					
6	F (mg/L)					
7	Fe (mg/L)					
8	HCO3 (mg/L)					
9	K (mg/L)					
10	Mg (mg/L)					
11	Na (mg/L)					
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)					
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

WQ Observation not done

WQ Observation not done

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kudalaiyathur (CE000F6)

Division : Hydrology Division, Chennai

Local River : Vellar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	Dry Bed	Dry Bed	4.93	0.000	Dry Bed
2	EC_GEN (µmho/cm)			231	242	
3	pH_FLD (pH units)			7.0	7.0	
4	pH_GEN (pH units)			7.9	8.7	
5	TDS (mg/L)			122	128	
6	Temp (deg C)			26.0	28.5	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)			0.0	8.1	
2	ALK-TOT (mgCaCO3/L)			78	49	
3	Ca (mg/L)			20	17	
4	Cl (mg/L)			103.8	39.7	
5	CO3 (mg/L)			0.0	9.8	
6	F (mg/L)			0.72	0.23	
7	Fe (mg/L)					
8	HCO3 (mg/L)			95	40	
9	K (mg/L)			7.6	2.1	
10	Mg (mg/L)			10.5	7.1	
11	Na (mg/L)			61.0	29.1	
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)			0.11	2.11	
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)			30.8	21.9	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)			2.6	1.5	
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)			51	42	
2	HAR_Total (mgCaCO3/L)			95	71	
3	Na% (%)			56	46	
4	RSC (-)			0.0	0.0	
5	SAR (-)			2.7	1.5	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kudalaiyathur (CE000F6)

Division : Hydrology Division, Chennai

Local River : Vellar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	River Water				
		Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	Dry Bed	43.49	16.22	2.033	153.8
2	EC_GEN (µmho/cm)		637	WQ Observation not done	WQ Observation not done	486
3	pH_FLD (pH units)					7.0
4	pH_GEN (pH units)		7.7			7.8
5	TDS (mg/L)					
6	Temp (deg C)		26.3			24.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0			10.4
2	ALK-TOT (mgCaCO3/L)		199			165
3	Ca (mg/L)		33			32
4	Cl (mg/L)		66.7			62.9
5	CO3 (mg/L)		0.0			12.5
6	F (mg/L)					
7	Fe (mg/L)					
8	HCO3 (mg/L)		243			175
9	K (mg/L)					
10	Mg (mg/L)		19.2			15.8
11	Na (mg/L)		48.2			
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)					
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)		42.7			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Ni (µg/L)					
6	Pb (µg/L)					
7	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		83			80
2	HAR_Total (mgCaCO3/L)		162			146
3	Na% (%)					
4	RSC (-)		0.8			0.4
5	SAR (-)		1.8			
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kudalaiyathur (CE000F6)

Division : Hydrology Division, Chennai

Local River : Vellar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	14.12	47.94	78.35	7.339	Dry Bed
2	EC_GEN (µmho/cm)	573	533	537	304	
3	pH_FLD (pH units)	7.0	7.0	7.0	7.0	
4	pH_GEN (pH units)	8.1	8.3	8.0	7.3	
5	TDS (mg/L)				162	
6	Temp (deg C)	28.5	27.2	25.7	24.0	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	17.2	1.9	0.0	
2	ALK-TOT (mgCaCO3/L)	267	179	138	78	
3	Ca (mg/L)	34	28	19	20	
4	Cl (mg/L)	68.8	70.5	75.6	36.2	
5	CO3 (mg/L)	0.0	20.7	2.3	0.0	
6	F (mg/L)	0.38	0.37	0.33	0.64	
7	Fe (mg/L)					
8	HCO3 (mg/L)	326	176	164	95	
9	K (mg/L)	7.8	4.9	5.2	3.4	
10	Mg (mg/L)	17.5	21.7	24.3	7.6	
11	Na (mg/L)	94.5	54.5	55.0	23.5	
12	NH3-N (mg N/L)					
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)		1.25	0.52	0.52	
16	o-PO4-P (mg P/L)					
17	SO4 (mg/L)	36.9	33.6	45.1	16.9	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.6	1.3	1.6	2.9	
	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	69	48	51	
2	HAR_Total (mgCaCO3/L)	159	160	149	83	
3	Na% (%)	55	40	44	37	
4	RSC (-)	2.2	0.4	0.0	0.0	
5	SAR (-)	3.3	1.8	2.0	1.1	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kudalaiyathur (CE000F6)

Division : Hydrology Division, Chennai

Local River : Vellar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	2.155	54.78	Dry Bed	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)	406	320			
3	pH_FLD (pH units)	7.0	7.0			
4	pH_GEN (pH units)	7.8	7.8			
5	TDS (mg/L)	216	173			
6	Temp (deg C)		24.0			
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0			
2	ALK-TOT (mgCaCO3/L)	105	97			
3	Ca (mg/L)	22	21			
4	Cl (mg/L)	72.3	38.5			
5	CO3 (mg/L)	0.0	0.0			
6	F (mg/L)	0.44	0.31			
7	Fe (mg/L)					
8	HCO3 (mg/L)	128	118			
9	K (mg/L)	2.9	2.8			
10	Mg (mg/L)	12.3	8.9			
11	Na (mg/L)	50.2	28.5			
12	NH3-N (mg N/L)		0.04			
13	NO2+NO3 (mg N/L)		0.26			
14	NO2-N (mgN/L)		0.00			
15	NO3-N (mgN/L)	1.50	0.26			
16	o-PO4-P (mg P/L)		0.013			
17	SO4 (mg/L)	15.5	17.9			
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.8	1.7			
	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)	55	53			
2	HAR_Total (mgCaCO3/L)	106	91			
3	Na% (%)	50	40			
4	RSC (-)	0.0	0.1			
5	SAR (-)	2.1	1.3			
	PESTICIDES					

WQ Observation not done

WQ Observation not done

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kudalaiyathur (CE000F6)

Division : Hydrology Division, Chennai

Local River : Vellar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	Dry Bed	Dry Bed	0.000	Dry Bed
2	EC_GEN (µmho/cm)			499	
3	pH_FLD (pH units)			7.0	
4	pH_GEN (pH units)			8.0	
5	TDS (mg/L)				
6	Temp (deg C)			27.0	
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)			0.0	
2	ALK-TOT (mgCaCO3/L)			88	
3	Ca (mg/L)			16	
4	Cl (mg/L)			115.8	
5	CO3 (mg/L)			0.0	
6	F (mg/L)			0.40	
7	Fe (mg/L)				
8	HCO3 (mg/L)			107	
9	K (mg/L)			6.5	
10	Mg (mg/L)			21.4	
11	Na (mg/L)			61.9	
12	NH3-N (mg N/L)				
13	NO2+NO3 (mg N/L)				
14	NO2-N (mgN/L)				
15	NO3-N (mgN/L)			1.30	
16	o-PO4-P (mg P/L)				
17	SO4 (mg/L)			41.3	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)			2.7	
	TRACE & TOXIC				
1	As (µg/L)				
2	Cd (µg/L)				
3	Cr (µg/L)				
4	Cu (µg/L)				
5	Ni (µg/L)				
6	Pb (µg/L)				
7	Zn (µg/L)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)			40	
2	HAR_Total (mgCaCO3/L)			129	
3	Na% (%)			50	
4	RSC (-)			0.0	
5	SAR (-)			2.4	
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : Kudalaiyathur (CE000F6)

Division : Hydrology Division, Chennai

Local River : Vellar

Sub-Division : Palar Ponnaiyar SD, Chennai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	Dry Bed	0.000	Dry Bed	Dry Bed
2	EC_GEN (µmho/cm)		694		
3	pH_FLD (pH units)		7.0		
4	pH_GEN (pH units)		7.6		
5	TDS (mg/L)		369		
6	Temp (deg C)		28.0		
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)		0.0		
2	ALK-TOT (mgCaCO3/L)		107		
3	Ca (mg/L)		41		
4	Cl (mg/L)		113.4		
5	CO3 (mg/L)		0.0		
6	F (mg/L)		0.61		
7	Fe (mg/L)		0.0		
8	HCO3 (mg/L)		131		
9	K (mg/L)		4.2		
10	Mg (mg/L)		16.4		
11	Na (mg/L)		68.3		
12	NH3-N (mg N/L)				
13	NO2+NO3 (mg N/L)				
14	NO2-N (mgN/L)				
15	NO3-N (mgN/L)		6.85		
16	o-PO4-P (mg P/L)				
17	SO4 (mg/L)		58.2		
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)		2.9		
	TRACE & TOXIC				
1	As (µg/L)		3.61		
2	Cd (µg/L)		0.05		
3	Cr (µg/L)		0.21		
4	Cu (µg/L)		5.58		
5	Ni (µg/L)		5.75		
6	Pb (µg/L)		3.09		
7	Zn (µg/L)		11.00		
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)		101		
2	HAR_Total (mgCaCO3/L)		169		
3	Na% (%)		46		
4	RSC (-)		0.0		
5	SAR (-)		2.3		
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: PARAMAKUDI	Code	: CV000F3
State	: Tamil Nadu	District	: Ramanathapuram
Basin	: EFR South of Cauvery	Independent River	: Vaigai
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Vaigai
Division	: SR Division, Coimbatore	Sub-Division	: Vaigai SD, Madurai
Drainage Area	: 6796 Sq. Km.	Bank	: Right
Latitude	: 09°33'12"	Longitude	: 78°35'11"
Zero of Gauge (m)	: 38 (m.s.l)	25/10/1971	
	Opening Date	Closing Date	
Gauge	: 25/10/1971		
Discharge	: 03/11/1971		
Sediment	: 01/03/2013		
Water Quality	: 05/11/1989		

Water Quality Datasheet for the period : 2015-2016

Station Name : PARAMAKUDI (CV000F3)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	0.000	0.000	0.000
2	Colour_Cod (-)			
3	EC_FLD (µmho/cm)			
4	EC_GEN (µmho/cm)			
5	Odour_Code (-)			
6	pH_FLD (pH units)			
7	pH_GEN (pH units)			
8	TDS (mg/L)			
9	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	B (mg/L)			
4	Ca (mg/L)			
5	Cl (mg/L)			
6	CO3 (mg/L)			
7	F (mg/L)			
8	Fe (mg/L)			
9	HCO3 (mg/L)			
10	K (mg/L)			
11	Mg (mg/L)			
12	Na (mg/L)			
13	NH3-N (mg N/L)			
14	NO2+NO3 (mg N/L)			
15	NO2-N (mgN/L)			
16	NO3-N (mgN/L)			
17	o-PO4-P (mg P/L)			
18	SiO2 (mg/L)			
19	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : PARAMAKUDI (CV000F3)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	02/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	0.000	0.000	0.000
2	Colour_Cod (-)			
3	EC_FLD (µmho/cm)		:	
4	EC_GEN (µmho/cm)			
5	Odour_Code (-)			
6	pH_FLD (pH units)			
7	pH_GEN (pH units)			
8	TDS (mg/L)			
9	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	B (mg/L)			
4	Ca (mg/L)			
5	Cl (mg/L)			
6	CO3 (mg/L)			
7	F (mg/L)			
8	Fe (mg/L)			
9	HCO3 (mg/L)			
10	K (mg/L)			
11	Mg (mg/L)			
12	Na (mg/L)			
13	NH3-N (mg N/L)			
14	NO2+NO3 (mg N/L)			
15	NO2-N (mgN/L)			
16	NO3-N (mgN/L)			
17	o-PO4-P (mg P/L)			
18	SiO2 (mg/L)			
19	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : PARAMAKUDI (CV000F3)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	03/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	36.21	0.000	0.000
2	Colour_Cod (-)	Clear		
3	EC_FLD (µmho/cm)	346		
4	EC_GEN (µmho/cm)	346		
5	Odour_Code (-)	odour free		
6	pH_FLD (pH units)	7.9		
7	pH_GEN (pH units)	7.9		
8	TDS (mg/L)	202		
9	Temp (deg C)	25.0		
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0		
2	ALK-TOT (mgCaCO3/L)	119		
3	B (mg/L)	0.07		
4	Ca (mg/L)	30		
5	Cl (mg/L)	36.6		
6	CO3 (mg/L)	0.0		
7	F (mg/L)	0.36		
8	Fe (mg/L)	0.020		
9	HCO3 (mg/L)	145		
10	K (mg/L)	6.9		
11	Mg (mg/L)	13.4		
12	Na (mg/L)	26.6		
13	NH3-N (mg N/L)	0.09		
14	NO2+NO3 (mg N/L)	3.61		
15	NO2-N (mgN/L)	0.00		
16	NO3-N (mgN/L)	3.61		
17	o-PO4-P (mg P/L)	0.220		
18	SiO2 (mg/L)	17.3		
19	SO4 (mg/L)	15.9		
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)	11.7		
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	75		
2	HAR_Total (mgCaCO3/L)	131		
3	Na% (%)	29		
4	RSC (-)	0.0		
5	SAR (-)	1.0		
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : PARAMAKUDI (CV000F3)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	02/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_FLD (µmho/cm)			
4	EC_GEN (µmho/cm)			
5	Odour_Code (-)			
6	pH_FLD (pH units)			
7	pH_GEN (pH units)			
8	TDS (mg/L)			
9	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	B (mg/L)			
4	Ca (mg/L)			
5	Cl (mg/L)			
6	CO3 (mg/L)			
7	F (mg/L)			
8	Fe (mg/L)			
9	HCO3 (mg/L)			
10	K (mg/L)			
11	Mg (mg/L)			
12	Na (mg/L)			
13	NH3-N (mg N/L)			
14	NO2+NO3 (mg N/L)			
15	NO2-N (mgN/L)			
16	NO3-N (mgN/L)			
17	o-PO4-P (mg P/L)			
18	SiO2 (mg/L)			
19	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : PARAMAKUDI (CV000F3)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	41.55	0.000	2.252
2	EC_FLD (µmho/cm)	1	346	346	346
3	EC_GEN (µmho/cm)	1	346	346	346
4	pH_FLD (pH units)	1	7.9	7.9	7.9
5	pH_GEN (pH units)	1	7.9	7.9	7.9
6	TDS (mg/L)	1	202	202	202
7	Temp (deg C)	1	25.0	25.0	25
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	1	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	1	119	119	119
3	B (mg/L)	1	0.07	0.07	0.07
4	Ca (mg/L)	1	30	30	30
5	Cl (mg/L)	1	36.6	36.6	36.5
6	CO3 (mg/L)	1	0.0	0.0	0
7	F (mg/L)	1	0.36	0.36	0.36
8	Fe (mg/L)	1	0.020	0.020	0.02
9	HCO3 (mg/L)	1	145	145	145
10	K (mg/L)	1	6.9	6.9	6.9
11	Mg (mg/L)	1	13.4	13.4	13.4
12	Na (mg/L)	1	26.6	26.6	26.6
13	NH3-N (mg N/L)	1	0.09	0.09	0.09
14	NO2+NO3 (mg N/L)	1	3.61	3.61	3.61
15	NO2-N (mgN/L)	1	0.00	0.00	0
16	NO3-N (mgN/L)	1	3.61	3.61	3.61
17	o-PO4-P (mg P/L)	1	0.220	0.220	0.22
18	SiO2 (mg/L)	1	17.3	17.3	17.3
19	SO4 (mg/L)	1	15.9	15.9	15.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	COD (mg/L)	1	11.7	11.7	11.7
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	1	75	75	75
2	HAR_Total (mgCaCO3/L)	1	131	131	131
3	Na% (%)	1	29	29	29
4	RSC (-)	1	0.0	0.0	0
5	SAR (-)	1	1.0	1.0	1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : PARAMAKUDI (CV000F3)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	3.596	0.000	0.000	0.672	0.000
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	272				
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.4				
6	TDS (mg/L)					
7	Temp (deg C)	30.5				
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0				
2	ALK-TOT (mgCaCO3/L)	91				
3	B (mg/L)	0.24				
4	Ca (mg/L)	24				
5	Cl (mg/L)	16.6				
6	CO3 (mg/L)	0.0				
7	F (mg/L)	0.52				
8	Fe (mg/L)	0.059				
9	HCO3 (mg/L)	111				
10	K (mg/L)	4.4				
11	Mg (mg/L)	9.9				
12	Na (mg/L)	17.0				
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)	0.99				
15	NO2-N (mgN/L)	0.02				
16	NO3-N (mgN/L)	0.96				
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)	0.033				
19	SiO2 (mg/L)	18.4				
20	SO4 (mg/L)	19.9				
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)					
3	DO (mg/L)					
4	DO_SAT% (%)					
	TRACE & TOXIC					
1	Cd (µg/L)					
2	Cr (µg/L)					
3	Cu (µg/L)					
4	Pb (µg/L)					
5	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	59				
2	HAR_Total (mgCaCO3/L)	100				
3	Na% (%)	26				
4	RSC (-)	0.0				
5	SAR (-)	0.7				
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : PARAMAKUDI (CV000F3)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	0.000	0.000	0.000	0.000	0.000
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)					
4	pH_FLD (pH units)					
5	pH_GEN (pH units)					
6	TDS (mg/L)					
7	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					
2	ALK-TOT (mgCaCO3/L)					
3	B (mg/L)					
4	Ca (mg/L)					
5	Cl (mg/L)					
6	CO3 (mg/L)					
7	F (mg/L)					
8	Fe (mg/L)					
9	HCO3 (mg/L)					
10	K (mg/L)					
11	Mg (mg/L)					
12	Na (mg/L)					
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)					
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)					
20	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)					
3	DO (mg/L)					
4	DO_SAT% (%)					
	TRACE & TOXIC					
1	Cd (µg/L)					
2	Cr (µg/L)					
3	Cu (µg/L)					
4	Pb (µg/L)					
5	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : PARAMAKUDI (CV000F3)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	0.000	85.880	0.175	0.323	0.721
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)		369	434	490	414
4	pH_FLD (pH units)					
5	pH_GEN (pH units)		8.1	8.4	8.7	8.5
6	TDS (mg/L)					
7	Temp (deg C)		27.2	28.5	28.5	27.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		5.3	12.8	12.1	
2	ALK-TOT (mgCaCO3/L)		117	167	175	
3	B (mg/L)		0.27	0.36	0.29	0.00
4	Ca (mg/L)		27	34	32	32
5	Cl (mg/L)		28.3	38.5	50.0	33.7
6	CO3 (mg/L)		6.3	15.4	14.6	19.8
7	F (mg/L)		0.36	0.45	0.43	0.55
8	Fe (mg/L)		0.070	0.060	0.050	
9	HCO3 (mg/L)		130	172	183	127
10	K (mg/L)		5.2	5.5	5.2	4.5
11	Mg (mg/L)		15.3	16.5	18.5	17.5
12	Na (mg/L)		24.8	37.2	41.3	25.3
13	NH3-N (mg N/L)		0.10		0.05	
14	NO2+NO3 (mg N/L)		1.70		1.26	
15	NO2-N (mgN/L)		0.02		0.03	
16	NO3-N (mgN/L)		1.68		1.23	
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)		0.023	0.022	0.021	
19	SiO2 (mg/L)		21.0	18.8	24.4	
20	SO4 (mg/L)		21.1	11.9	17.5	27.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)					
3	DO (mg/L)					
4	DO_SAT% (%)					
	TRACE & TOXIC					
1	Cd (µg/L)					
2	Cr (µg/L)					
3	Cu (µg/L)					
4	Pb (µg/L)					
5	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		67	84	80	79
2	HAR_Total (mgCaCO3/L)		130	153	157	127
3	Na% (%)		28	34	36	26
4	RSC (-)		0.0	0.3	0.4	0.0
5	SAR (-)		0.9	1.3	1.4	0.9
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : PARAMAKUDI (CV000F3)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	8.034	19.100	5.867	0.000	0.000
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	278	333	299		
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.6	8.0	7.8		
6	TDS (mg/L)					
7	Temp (deg C)	26.5	25.2	25.5		
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	6.6	0.0		
2	ALK-TOT (mgCaCO3/L)	107	148	103		
3	B (mg/L)		0.20			
4	Ca (mg/L)	24	34	22		
5	Cl (mg/L)	19.5	42.9	47.2		
6	CO3 (mg/L)	0.0	8.0	0.0		
7	F (mg/L)	0.31	0.45	0.28		
8	Fe (mg/L)	0.310	0.000			
9	HCO3 (mg/L)	130	164	126		
10	K (mg/L)	4.0	5.1	5.0		
11	Mg (mg/L)	15.6	14.6	9.2		
12	Na (mg/L)	13.6	28.2	32.7		
13	NH3-N (mg N/L)		0.08			
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)	1.78	3.11	0.42		
17	o-PO4-P (mg P/L)	0.130	0.070			
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	22.4	15.8			
20	SO4 (mg/L)	23.5	14.3	11.4		
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)					
3	DO (mg/L)					
4	DO_SAT% (%)					
	TRACE & TOXIC					
1	Cd (µg/L)					
2	Cr (µg/L)					
3	Cu (µg/L)					
4	Pb (µg/L)					
5	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	60	84	56		
2	HAR_Total (mgCaCO3/L)	125	145	95		
3	Na% (%)	19	28	42		
4	RSC (-)	0.0	0.1	0.2		
5	SAR (-)	0.5	1.0	1.5		
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : PARAMAKUDI (CV000F3)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	12.720	9.053	10.330	0.000	8.817
2	EC_FLD (µmho/cm)	279	346			
3	EC_GEN (µmho/cm)	279	346	409		554
4	pH_FLD (pH units)	7.6	7.9			
5	pH_GEN (pH units)	7.5	7.9	8.4		8.7
6	TDS (mg/L)	161	202			
7	Temp (deg C)	26.0	25.0	29.0		26.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	11.8		17.3
2	ALK-TOT (mgCaCO3/L)	102	119	150		187
3	B (mg/L)		0.07	0.25		0.26
4	Ca (mg/L)	20	30	29		37
5	Cl (mg/L)	27.2	36.5	32.5		61.4
6	CO3 (mg/L)	0.0	0.0	14.3		20.9
7	F (mg/L)	0.27	0.36	0.41		0.58
8	Fe (mg/L)		0.020	0.086		0.060
9	HCO3 (mg/L)	124	145	155		186
10	K (mg/L)	7.4	6.9	4.9		6.1
11	Mg (mg/L)	13.6	13.4	16.5		21.4
12	Na (mg/L)	19.4	26.6	28.9		45.8
13	NH3-N (mg N/L)	0.12	0.09	0.06		0.05
14	NO2+NO3 (mg N/L)		3.61	1.48		1.14
15	NO2-N (mgN/L)		0.00	0.02		0.09
16	NO3-N (mgN/L)	2.66	3.61	1.46		1.05
17	o-PO4-P (mg P/L)		0.220			
18	P-Tot (mgP/L)			0.133		0.083
19	SiO2 (mg/L)		17.3	22.2		25.6
20	SO4 (mg/L)	8.9	15.9	9.1		21.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	3.9				
2	COD (mg/L)	14.5	11.7			
3	DO (mg/L)	6.3				
4	DO_SAT% (%)	78				
	TRACE & TOXIC					
1	Cd (µg/L)					
2	Cr (µg/L)					
3	Cu (µg/L)					
4	Pb (µg/L)					
5	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	50	75	72		92
2	HAR_Total (mgCaCO3/L)	107	131	141		181
3	Na% (%)	27	29	30		35
4	RSC (-)	0.0	0.0	0.2		0.1
5	SAR (-)	0.8	1.0	1.1		1.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : PARAMAKUDI (CV000F3)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	0.000	0.000	0.957	0.000
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)			535	
4	pH_FLD (pH units)				
5	pH_GEN (pH units)			8.4	
6	TDS (mg/L)				
7	Temp (deg C)			26.5	
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)			17.9	
2	ALK-TOT (mgCaCO3/L)			168	
3	B (mg/L)			0.00	
4	Ca (mg/L)			36	
5	Cl (mg/L)			89.7	
6	CO3 (mg/L)			21.6	
7	F (mg/L)			0.44	
8	Fe (mg/L)			0.000	
9	HCO3 (mg/L)			161	
10	K (mg/L)			6.0	
11	Mg (mg/L)			20.4	
12	Na (mg/L)			59.6	
13	NH3-N (mg N/L)			0.01	
14	NO2+NO3 (mg N/L)				
15	NO2-N (mgN/L)				
16	NO3-N (mgN/L)			0.95	
17	o-PO4-P (mg P/L)			0.000	
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)			23.7	
20	SO4 (mg/L)			18.3	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
2	COD (mg/L)				
3	DO (mg/L)				
4	DO_SAT% (%)				
	TRACE & TOXIC				
1	Cd (µg/L)			0.02	
2	Cr (µg/L)			4.52	
3	Cu (µg/L)			3.52	
4	Pb (µg/L)			0.69	
5	Zn (µg/L)			17.45	
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)			90	
2	HAR_Total (mgCaCO3/L)			175	
3	Na% (%)			40	
4	RSC (-)			0.2	
5	SAR (-)			2.0	
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : PARAMAKUDI (CV000F3)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	0.000	0.000	0.000	0.000
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)				
4	pH_FLD (pH units)				
5	pH_GEN (pH units)				
6	TDS (mg/L)				
7	Temp (deg C)				
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				
2	ALK-TOT (mgCaCO3/L)				
3	B (mg/L)				
4	Ca (mg/L)				
5	Cl (mg/L)				
6	CO3 (mg/L)				
7	F (mg/L)				
8	Fe (mg/L)				
9	HCO3 (mg/L)				
10	K (mg/L)				
11	Mg (mg/L)				
12	Na (mg/L)				
13	NH3-N (mg N/L)				
14	NO2+NO3 (mg N/L)				
15	NO2-N (mgN/L)				
16	NO3-N (mgN/L)				
17	o-PO4-P (mg P/L)				
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)				
20	SO4 (mg/L)				
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
2	COD (mg/L)				
3	DO (mg/L)				
4	DO_SAT% (%)				
	TRACE & TOXIC				
1	Cd (µg/L)				
2	Cr (µg/L)				
3	Cu (µg/L)				
4	Pb (µg/L)				
5	Zn (µg/L)				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)				
2	HAR_Total (mgCaCO3/L)				
3	Na% (%)				
4	RSC (-)				
5	SAR (-)				
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: THENI	Code	: CVA00D4
State	: Tamil Nadu	District	: Theni
Basin	: EFR South of Cauvery	Independent River	: Vaigai
Tributary	: Suruliyar	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Suruliyar
Division	: SR Division, Coimbatore	Sub-Division	: Vaigai SD, Madurai
Drainage Area	: 1200 Sq. Km.	Bank	: Right
Latitude	: 10°00'04"	Longitude	: 77°29'06"
Zero of Gauge (m)	: 281.65 (m.s.l) 278.000 (m.s.l)	01/06/1978	- 31/05/1982
	Opening Date	Closing Date	
Gauge	: 01/06/1978		
Discharge	: 01/06/1978		
Sediment	: 29/01/1979		
Water Quality	: 15/07/1978		

Water Quality Datasheet for the period : 2015-2016

Station Name : THENI (CVA00D4)

Division : SR Division, Coimbatore

Local River : Suruliyar

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	4.052	30.79	25.96
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	500	54	118
4	EC_GEN (µmho/cm)	500	63	118
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	8.1	7.5	7.2
7	pH_GEN (pH units)	8.1	7.8	7.5
8	TDS (mg/L)	290	36	67
9	Temp (deg C)	27.0	27.0	26.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	194	15	35
3	B (mg/L)	0.15	0.11	
4	Ca (mg/L)	14	6	13
5	Cl (mg/L)	46.8	8.1	15.5
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.67	0.12	
8	Fe (mg/L)	0.070	0.000	0.080
9	HCO3 (mg/L)	237	19	42
10	K (mg/L)	5.1	1.4	2.1
11	Mg (mg/L)	41.4	1.9	2.9
12	Na (mg/L)	34.8	4.4	8.2
13	NH3-N (mg N/L)	0.00	0.00	0.29
14	NO2+NO3 (mg N/L)	3.26	1.02	1.29
15	NO2-N (mgN/L)	0.16	0.00	0.00
16	NO3-N (mgN/L)	3.10	1.02	1.29
17	o-PO4-P (mg P/L)	0.100	0.040	0.020
18	SiO2 (mg/L)	34.8	7.5	9.3
19	SO4 (mg/L)	16.3	4.2	5.0
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.6	0.8	1.0
2	COD (mg/L)	5.3	7.4	7.3
3	DO (mg/L)	4.6	6.0	7.2
4	DO_SAT% (%)	58	75	89
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	36	16	32
2	HAR_Total (mgCaCO3/L)	208	24	44
3	Na% (%)	26	27	28
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	1.1	0.4	0.5
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : THENI (CVA00D4)

Division : SR Division, Coimbatore

Local River : Suruliyar

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	02/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	10.4	59.57	20.46
2	Colour_Cod (-)	Clear	Light Brown	Clear
3	EC_FLD (µmho/cm)	177	:	182
4	EC_GEN (µmho/cm)	177	148	182
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.7	7.5	7.9
7	pH_GEN (pH units)	7.7	7.5	7.3
8	TDS (mg/L)	101	86	106
9	Temp (deg C)	26.5	24.0	25.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	62	46	61
3	B (mg/L)		0.00	0.04
4	Ca (mg/L)	17	21	19
5	Cl (mg/L)	17.4	17.3	19.2
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)			
8	Fe (mg/L)	0.070	0.060	0.170
9	HCO3 (mg/L)	75	56	75
10	K (mg/L)	2.1	4.1	6.7
11	Mg (mg/L)	6.7	1.9	4.8
12	Na (mg/L)	11.7	10.0	13.5
13	NH3-N (mg N/L)	0.12	0.18	0.19
14	NO2+NO3 (mg N/L)	1.31	1.69	1.88
15	NO2-N (mgN/L)	0.01	0.00	0.02
16	NO3-N (mgN/L)	1.30	1.69	1.86
17	o-PO4-P (mg P/L)	0.020	0.030	0.040
18	SiO2 (mg/L)	11.9	13.8	18.9
19	SO4 (mg/L)	6.0	8.1	8.5
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	0.6	1.8	2.1
2	COD (mg/L)	5.5	11.8	14.5
3	DO (mg/L)	4.6	7.4	12.7
4	DO_SAT% (%)	57	88	154
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	44	51	47
2	HAR_Total (mgCaCO3/L)	72	59	67
3	Na% (%)	26	25	28
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	0.6	0.6	0.7
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : THENI (CVA00D4)

Division : SR Division, Coimbatore

Local River : Suruliyar

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	40.61	39.58	21.16
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	203	101	143
4	EC_GEN (µmho/cm)	203	150	143
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.0	8.1	7.3
7	pH_GEN (pH units)	7.3	8.1	7.4
8	TDS (mg/L)	118	85	82
9	Temp (deg C)	25.0	22.5	24.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	57	54	50
3	B (mg/L)	0.00	0.04	0.05
4	Ca (mg/L)	21	21	17
5	Cl (mg/L)	23.1	13.9	15.6
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.31	0.17	0.25
8	Fe (mg/L)	0.150	0.050	0.000
9	HCO3 (mg/L)	70	65	61
10	K (mg/L)	4.0	1.9	1.8
11	Mg (mg/L)	6.7	2.9	2.9
12	Na (mg/L)	14.5	8.1	9.5
13	NH3-N (mg N/L)	0.10	0.01	0.47
14	NO2+NO3 (mg N/L)	3.60	0.96	0.75
15	NO2-N (mgN/L)	0.01	0.03	0.00
16	NO3-N (mgN/L)	3.59	0.93	0.75
17	o-PO4-P (mg P/L)	0.070	0.030	0.020
18	SiO2 (mg/L)	8.7	12.8	14.6
19	SO4 (mg/L)	9.4	5.5	4.8
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	2.1	1.3	1.9
2	COD (mg/L)	10.6	3.0	7.1
3	DO (mg/L)	7.4	7.6	7.5
4	DO_SAT% (%)	90	87	89
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	51	51	43
2	HAR_Total (mgCaCO3/L)	79	63	55
3	Na% (%)	27	21	26
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	0.7	0.4	0.6
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : THENI (CVA00D4)

Division : SR Division, Coimbatore

Local River : Suruliyar

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	09/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	15.15	6.017	4.833
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	217	220	229
4	EC_GEN (µmho/cm)	217	220	229
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.4	7.7	7.8
7	pH_GEN (pH units)	7.8	7.8	7.8
8	TDS (mg/L)	122	125	129
9	Temp (deg C)	25.0	26.5	27.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	75	79	90
3	B (mg/L)	0.09	0.08	0.05
4	Ca (mg/L)	28	24	22
5	Cl (mg/L)	23.7	20.0	18.2
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.26	0.26	0.25
8	Fe (mg/L)	0.000	0.000	0.060
9	HCO3 (mg/L)	91	96	109
10	K (mg/L)	2.8	3.4	4.1
11	Mg (mg/L)	4.8	6.7	8.6
12	Na (mg/L)	13.2	14.8	14.1
13	NH3-N (mg N/L)	0.03	0.11	0.00
14	NO2+NO3 (mg N/L)	2.06	2.02	1.20
15	NO2-N (mgN/L)	0.04	0.00	0.00
16	NO3-N (mgN/L)	2.02	2.02	1.20
17	o-PO4-P (mg P/L)	0.030	0.020	0.060
18	SiO2 (mg/L)	16.7	18.4	12.4
19	SO4 (mg/L)	5.8	5.4	5.8
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	0.8	1.4	1.5
2	COD (mg/L)	2.7	9.6	12.8
3	DO (mg/L)	6.3	10.6	1.3
4	DO_SAT% (%)	76	131	16
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	71	59	55
2	HAR_Total (mgCaCO3/L)	91	87	91
3	Na% (%)	23	26	24
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	0.6	0.7	0.6
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : THENI (CVA00D4)

Division : SR Division, Coimbatore

Local River : Suruliar

Sub-Division : Vaigai SD, Madurai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	162.1	0.000	21.68
2	EC_FLD (µmho/cm)	12	500	54	191
3	EC_GEN (µmho/cm)	12	500	63	196
4	pH_FLD (pH units)	12	8.1	7.0	7.6
5	pH_GEN (pH units)	12	8.1	7.3	7.7
6	TDS (mg/L)	12	290	36	112
7	Temp (deg C)	12	27.0	22.5	25.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	12	194	15	68
3	B (mg/L)	10	0.15	0.00	0.06
4	Ca (mg/L)	12	28	6	19
5	Cl (mg/L)	12	46.8	8.1	19.9
6	CO3 (mg/L)	12	0.0	0.0	0
7	F (mg/L)	8	0.67	0.12	0.28
8	Fe (mg/L)	12	0.170	0.000	0.059
9	HCO3 (mg/L)	12	237	19	83
10	K (mg/L)	12	6.7	1.4	3.3
11	Mg (mg/L)	12	41.4	1.9	7.7
12	Na (mg/L)	12	34.8	4.4	13.1
13	NH3-N (mg N/L)	12	0.47	0.00	0.13
14	NO2+NO3 (mg N/L)	12	3.60	0.75	1.75
15	NO2-N (mgN/L)	12	0.16	0.00	0.02
16	NO3-N (mgN/L)	12	3.59	0.75	1.73
17	o-PO4-P (mg P/L)	12	0.100	0.020	0.04
18	SiO2 (mg/L)	12	34.8	7.5	15
19	SO4 (mg/L)	12	16.3	4.2	7.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	2.1	0.6	1.4
2	COD (mg/L)	12	14.5	2.7	8.1
3	DO (mg/L)	12	12.7	1.3	6.9
4	DO_SAT% (%)	12	154	16	84
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	71	16	46
2	HAR_Total (mgCaCO3/L)	12	208	24	78
3	Na% (%)	12	28	21	26
4	RSC (-)	12	0.0	0.0	0
5	SAR (-)	12	1.1	0.4	0.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : THENI (CVA00D4)

Division : SR Division, Coimbatore

Local River : Suruliar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	26.56	13.84	26.97	20.38	10.24
2	EC_FLD (µmho/cm)	209	140	107	141	274
3	EC_GEN (µmho/cm)	233	143	112	163	234
4	pH_FLD (pH units)	7.6	8.0	7.6	7.9	7.8
5	pH_GEN (pH units)	7.7	7.8	7.6	7.9	7.9
6	TDS (mg/L)					
7	Temp (deg C)	26.1	23.9	23.9	24.8	25.4
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	82	53	37	40	104
3	B (mg/L)	0.14	0.20	0.15	0.14	0.20
4	Ca (mg/L)	21	12	9	14	23
5	Cl (mg/L)	17.6	9.9	9.0	12.5	14.8
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.31	0.29	0.21	0.22	0.34
8	Fe (mg/L)	0.071	0.069	0.070	0.071	0.170
9	HCO3 (mg/L)	100	65	45	69	123
10	K (mg/L)	2.8	1.5	1.7	1.8	2.7
11	Mg (mg/L)	10.0	5.6	4.9	6.3	11.6
12	Na (mg/L)	12.8	7.0	6.1	7.9	10.2
13	NH3-N (mg N/L)			0.03	0.05	0.14
14	NO2+NO3 (mg N/L)	1.42	0.97	2.11	1.32	
15	NO2-N (mgN/L)	0.01	0.02	0.33	0.02	
16	NO3-N (mgN/L)	1.41	0.96	1.78	1.30	0.80
17	o-PO4-P (mg P/L)				0.010	0.052
18	P-Tot (mgP/L)	0.012	0.007	0.011		
19	SiO2 (mg/L)	12.5	10.5	9.2	11.6	17.6
20	SO4 (mg/L)	10.9	4.0	4.7	5.2	5.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	1.3	1.3	1.0	1.2
2	COD (mg/L)					
3	DO (mg/L)	6.6	7.3	6.9	6.1	6.2
4	DO_SAT% (%)	81	86	81	72	75
	TRACE & TOXIC					
1	Ag (µg/L)					
2	As (µg/L)					
3	Cd (µg/L)					
4	Cr (µg/L)					
5	Cu (µg/L)					
6	Hg (µg/L)					
7	Ni (µg/L)					
8	Pb (µg/L)					
9	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	52	29	23	35	58
2	HAR_Total (mgCaCO3/L)	94	52	43	61	106
3	Na% (%)	21	22	23	21	18
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.5	0.4	0.4	0.4	0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : THENI (CVA00D4)

Division : SR Division, Coimbatore

Local River : Suruliar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	17.23	22.39	0.497	33.17	15.39
2	EC_FLD (µmho/cm)	232	108	291	95	143
3	EC_GEN (µmho/cm)	239	101	291	96	143
4	pH_FLD (pH units)	7.3	7.7	7.6	7.6	7.3
5	pH_GEN (pH units)	7.8	7.6	7.8	7.6	7.6
6	TDS (mg/L)					78
7	Temp (deg C)	25.0	24.9	27.0	24.8	24.8
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	113	42	112	36	54
3	B (mg/L)	0.10				
4	Ca (mg/L)	25	11	29	10	14
5	Cl (mg/L)	32.4	11.0	32.4	9.5	14.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.53	0.22	0.33	0.14	0.21
8	Fe (mg/L)	0.157			0.141	
9	HCO3 (mg/L)	138	51	136	43	66
10	K (mg/L)	3.5	1.9	3.2	1.3	2.2
11	Mg (mg/L)	13.4	3.4	8.7	3.6	6.0
12	Na (mg/L)	18.3	6.9	21.8	5.0	9.2
13	NH3-N (mg N/L)	0.05			0.25	0.17
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)	3.90	0.25	0.30	0.31	0.67
17	o-PO4-P (mg P/L)	0.169				
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	31.6				
20	SO4 (mg/L)	8.1	3.0	8.1	3.5	4.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.9	1.5	1.2	1.8	1.3
2	COD (mg/L)				8.3	7.5
3	DO (mg/L)	6.9	8.3	7.0	7.9	8.1
4	DO_SAT% (%)	83	99	87	95	97
	TRACE & TOXIC					
1	Ag (µg/L)					
2	As (µg/L)				0.98	
3	Cd (µg/L)				0.07	
4	Cr (µg/L)				10.77	
5	Cu (µg/L)				3.12	
6	Hg (µg/L)				0.28	
7	Ni (µg/L)				12.22	
8	Pb (µg/L)				5.99	
9	Zn (µg/L)				9.00	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	63	28	72	26	34
2	HAR_Total (mgCaCO3/L)	118	42	109	41	59
3	Na% (%)	21	25	30	20	25
4	RSC (-)	0.0	0.0	0.1	0.0	0.0
5	SAR (-)	0.6	0.5	0.9	0.3	0.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : THENI (CVA00D4)

Division : SR Division, Coimbatore

Local River : Suruliar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	26.15	20.58	37.72	29.65	18.3
2	EC_FLD (µmho/cm)	199	224	178	296	251
3	EC_GEN (µmho/cm)	201	233	150	251	253
4	pH_FLD (pH units)	7.6	8.0	8.2	7.5	7.8
5	pH_GEN (pH units)	7.7	7.9	7.8	7.9	7.8
6	TDS (mg/L)	116				
7	Temp (deg C)	26.1	24.6	23.1	22.6	21.7
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	70	82	56	89	216
3	B (mg/L)	0.09	0.10	0.20	0.15	0.11
4	Ca (mg/L)	14	18	14	20	26
5	Cl (mg/L)	21.0	14.5	11.1	20.0	21.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.39	0.33	0.24	0.25	0.57
8	Fe (mg/L)	0.056	0.075	0.115	0.067	0.133
9	HCO3 (mg/L)	86	100	68	109	137
10	K (mg/L)	3.0	1.9	2.1	2.4	3.4
11	Mg (mg/L)	11.0	11.9	6.8	9.5	11.8
12	Na (mg/L)	13.8	11.8	7.3	16.8	15.5
13	NH3-N (mg N/L)	0.12	0.19		0.04	
14	NO2+NO3 (mg N/L)	1.71	1.58	1.74	2.17	
15	NO2-N (mgN/L)	0.03	0.01	0.03	0.02	
16	NO3-N (mgN/L)	1.68	1.57	1.70	2.15	0.23
17	o-PO4-P (mg P/L)	0.042				0.010
18	P-Tot (mgP/L)		0.025	0.006	0.028	
19	SiO2 (mg/L)	15.5	14.2	14.4	13.3	3.0
20	SO4 (mg/L)	7.9	12.4	4.3	8.1	14.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.1	1.0	1.4	1.5
2	COD (mg/L)	7.5				
3	DO (mg/L)	6.0	7.1	7.7	6.0	7.1
4	DO_SAT% (%)	73	85	90	69	82
	TRACE & TOXIC					
1	Ag (µg/L)					
2	As (µg/L)					
3	Cd (µg/L)					
4	Cr (µg/L)					
5	Cu (µg/L)					
6	Hg (µg/L)					
7	Ni (µg/L)					
8	Pb (µg/L)					
9	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	36	45	36	49	66
2	HAR_Total (mgCaCO3/L)	81	95	64	89	115
3	Na% (%)	26	21	19	24	22
4	RSC (-)	0.0	0.0	0.0	0.0	0.1
5	SAR (-)	0.6	0.5	0.4	0.7	0.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : THENI (CVA00D4)

Division : SR Division, Coimbatore

Local River : Suruliar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	18.66	24.11	51.63	10.54	7.852
2	EC_FLD (µmho/cm)	169	181	168	293	213
3	EC_GEN (µmho/cm)	160	162	178	293	217
4	pH_FLD (pH units)	7.5	8.0	7.9	7.7	7.7
5	pH_GEN (pH units)	7.9	8.0	7.9	7.7	7.7
6	TDS (mg/L)					
7	Temp (deg C)	23.8	22.9	23.4	24.0	25.2
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	79	75	69	115	92
3	B (mg/L)	0.10	0.18			
4	Ca (mg/L)	17	20	20	30	23
5	Cl (mg/L)	11.8	17.3	19.7	27.2	18.7
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.47	0.22	0.26	0.28	0.33
8	Fe (mg/L)	0.270	0.119	0.050		
9	HCO3 (mg/L)	96	92	84	141	113
10	K (mg/L)	1.7	3.0	2.5	3.2	3.5
11	Mg (mg/L)	9.5	8.0	7.5	12.6	10.3
12	Na (mg/L)	7.6	10.1	11.8	15.7	10.8
13	NH3-N (mg N/L)	0.07	0.02			0.23
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)	0.90	2.61	1.44	0.48	0.72
17	o-PO4-P (mg P/L)	0.040	0.097			
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	16.0	15.4			
20	SO4 (mg/L)	2.3	6.0	6.7	8.3	7.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	0.9	1.6	1.6	1.3
2	COD (mg/L)				8.4	10.6
3	DO (mg/L)	7.2	7.6	8.6	6.6	6.3
4	DO_SAT% (%)	85	88	101	79	76
	TRACE & TOXIC					
1	Ag (µg/L)					
2	As (µg/L)			0.29		
3	Cd (µg/L)			0.03		
4	Cr (µg/L)			4.83		
5	Cu (µg/L)			31.49		
6	Hg (µg/L)					
7	Ni (µg/L)					
8	Pb (µg/L)			1.79		
9	Zn (µg/L)			21.70		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	42	50	49	75	57
2	HAR_Total (mgCaCO3/L)	81	84	80	127	100
3	Na% (%)	17	20	23	20	19
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.4	0.5	0.6	0.6	0.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : THENI (CVA00D4)

Division : SR Division, Coimbatore

Local River : Suruliar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	29.81	30.45	13.11	5.023	12.73
2	EC_FLD (µmho/cm)	140	157	168	324	393
3	EC_GEN (µmho/cm)	140	170	173	366	438
4	pH_FLD (pH units)	7.8	7.6	7.9	8.2	7.8
5	pH_GEN (pH units)	7.6	7.5	7.8	7.9	8.1
6	TDS (mg/L)	78	98			
7	Temp (deg C)	23.8	24.1	24.2	27.2	23.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	3.8	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	47	56	61	153	156
3	B (mg/L)		0.03	0.12	0.15	0.19
4	Ca (mg/L)	11	19	15	29	33
5	Cl (mg/L)	16.0	17.9	18.1	17.8	35.4
6	CO3 (mg/L)	4.6	0.0	0.0	0.0	0.0
7	F (mg/L)	0.16	0.24	0.29	0.30	0.34
8	Fe (mg/L)	0.019	0.093	0.098	0.069	0.060
9	HCO3 (mg/L)	48	68	75	187	190
10	K (mg/L)	2.5	3.6	5.4	3.6	5.2
11	Mg (mg/L)	6.3	4.3	6.8	15.6	16.2
12	Na (mg/L)	10.0	11.4	7.2	18.2	32.5
13	NH3-N (mg N/L)	0.14	0.19	0.14		0.03
14	NO2+NO3 (mg N/L)	1.02	1.80	0.96	2.41	2.87
15	NO2-N (mgN/L)	0.00	0.01	0.01	0.01	0.01
16	NO3-N (mgN/L)	1.19	1.78	0.95	2.40	2.87
17	o-PO4-P (mg P/L)	0.005	0.040			
18	P-Tot (mgP/L)			0.028	0.015	0.019
19	SiO2 (mg/L)	11.1	13.7	14.3	13.5	20.8
20	SO4 (mg/L)	3.0	7.0	4.8	6.1	21.5
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.9	0.8	1.3	1.5
2	COD (mg/L)	5.7	8.8			
3	DO (mg/L)	7.0	8.8	6.2	7.6	7.8
4	DO_SAT% (%)	83	105	73	96	90
	TRACE & TOXIC					
1	Ag (µg/L)					
2	As (µg/L)			10.85	9.10	6.67
3	Cd (µg/L)	0.69		10.00	3.00	0.61
4	Cr (µg/L)	4.86				
5	Cu (µg/L)	3.48				1.41
6	Hg (µg/L)					
7	Ni (µg/L)	2.18			3.08	
8	Pb (µg/L)	1.86				1.56
9	Zn (µg/L)	2.25		10.00	3.00	9.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	28	48	38	73	83
2	HAR_Total (mgCaCO3/L)	54	66	66	138	150
3	Na% (%)	28	26	18	22	30
4	RSC (-)	0.0	0.0	0.0	0.3	0.2
5	SAR (-)	0.6	0.6	0.4	0.7	1.1
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : THENI (CVA00D4)

Division : SR Division, Coimbatore

Local River : Suruliar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	2.059	6.822	5.342	1.233
2	EC_FLD (µmho/cm)	314	281	433	341
3	EC_GEN (µmho/cm)	314	264	433	341
4	pH_FLD (pH units)	7.3	7.8	8.0	8.1
5	pH_GEN (pH units)	7.9	7.8	7.9	8.0
6	TDS (mg/L)				
7	Temp (deg C)	25.3	23.5	25.0	25.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)		0.0	9.3	0.0
2	ALK-TOT (mgCaCO3/L)		56	177	138
3	B (mg/L)	0.20	0.00	0.00	
4	Ca (mg/L)	35	27	43	28
5	Cl (mg/L)	30.5	21.3	49.7	42.5
6	CO3 (mg/L)	0.0	0.0	11.2	0.0
7	F (mg/L)	0.44	0.57	0.56	0.70
8	Fe (mg/L)	0.046	0.622	0.000	0.030
9	HCO3 (mg/L)	195	156	194	168
10	K (mg/L)	3.3	3.0	4.6	3.3
11	Mg (mg/L)	13.8	15.4	17.8	17.5
12	Na (mg/L)	21.1	14.8	34.7	29.3
13	NH3-N (mg N/L)	0.05		0.00	
14	NO2+NO3 (mg N/L)				
15	NO2-N (mgN/L)				
16	NO3-N (mgN/L)	0.16	1.40	1.88	1.16
17	o-PO4-P (mg P/L)	0.010	0.034	0.000	
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)	19.0	24.7	23.5	
20	SO4 (mg/L)	8.7	4.4	13.3	13.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3.7	1.8	2.4	1.7
2	COD (mg/L)				
3	DO (mg/L)	5.8	5.8	8.4	6.5
4	DO_SAT% (%)	71	69	102	79
	TRACE & TOXIC				
1	Ag (µg/L)				
2	As (µg/L)			0.59	0.09
3	Cd (µg/L)			0.24	0.02
4	Cr (µg/L)			5.95	3.53
5	Cu (µg/L)	1.56		3.96	3.92
6	Hg (µg/L)				
7	Ni (µg/L)	11.67			4.80
8	Pb (µg/L)			1.22	4.39
9	Zn (µg/L)			23.44	30.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	88	68	107	70
2	HAR_Total (mgCaCO3/L)	163	132	181	143
3	Na% (%)	23	21	27	30
4	RSC (-)	0.3	0.0	0.1	0.0
5	SAR (-)	0.7	0.6	1.1	1.1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : THENI (CVA00D4)

Division : SR Division, Coimbatore

Local River : Suruliar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	2.055	0.537	4.277	8.666
2	EC_FLD (µmho/cm)	478	363	238	222
3	EC_GEN (µmho/cm)	478	363	238	222
4	pH_FLD (pH units)	7.5	7.6	7.8	7.6
5	pH_GEN (pH units)	7.5	7.6	7.9	7.8
6	TDS (mg/L)		205	138	125
7	Temp (deg C)	25.8	26.0	26.8	26.2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	206	151	98	81
3	B (mg/L)			0.03	0.07
4	Ca (mg/L)	42	35	16	25
5	Cl (mg/L)	45.8	32.1	18.5	20.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.71	0.41	0.35	0.26
8	Fe (mg/L)	0.012	0.056	0.000	0.020
9	HCO3 (mg/L)	251	184	120	99
10	K (mg/L)	5.8	5.6	3.6	3.4
11	Mg (mg/L)	24.9	15.3	14.7	6.7
12	Na (mg/L)	29.8	23.0	13.4	14.0
13	NH3-N (mg N/L)	0.22	0.11	0.11	0.05
14	NO2+NO3 (mg N/L)			1.51	1.76
15	NO2-N (mgN/L)			0.00	0.01
16	NO3-N (mgN/L)	0.15	0.92	1.51	1.75
17	o-PO4-P (mg P/L)			0.025	0.037
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)			22.9	15.8
20	SO4 (mg/L)	11.2	6.9	5.4	5.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.7	1.9	1.7	1.2
2	COD (mg/L)	9.7	3.6	6.0	8.3
3	DO (mg/L)	7.4	8.1	6.4	6.1
4	DO_SAT% (%)	91	100	80	74
	TRACE & TOXIC				
1	Ag (µg/L)	0.61			
2	As (µg/L)	0.38	4.84		
3	Cd (µg/L)	0.10	0.05		
4	Cr (µg/L)	0.45	0.74		
5	Cu (µg/L)	1.16	3.07		
6	Hg (µg/L)	0.32			
7	Ni (µg/L)	4.82	10.27		
8	Pb (µg/L)	3.64	0.76		
9	Zn (µg/L)	0.31	7.00		
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	106	86	40	62
2	HAR_Total (mgCaCO3/L)	210	150	101	89
3	Na% (%)	22	24	22	25
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	0.9	0.8	0.6	0.6
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: AMBASAMUDRAM	Code	: CV000U2
State	: Tamil Nadu	District	: Theni
Basin	: EFR South of Cauvery	Independent River	: Vaigai
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Vaigai
Division	: SR Division, Coimbatore	Sub-Division	: Vaigai SD, Madurai
Drainage Area	: 850 Sq. Km.	Bank	: Left
Latitude	: 09°55'32"	Longitude	: 77°30'42"
Zero of Gauge (m)	: 296.5 (m.s.l)	01/08/1998	
	Opening Date	Closing Date	
Gauge	: 01/08/1998		
Discharge	: 05/01/1999		
Sediment	: 09/10/2002		
Water Quality	: 01/08/1999		

Water Quality Datasheet for the period : 2015-2016

Station Name : AMBASAMUDRAM (CV000U2)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_FLD (µmho/cm)			
4	EC_GEN (µmho/cm)			
5	Odour_Code (-)			
6	pH_FLD (pH units)			
7	pH_GEN (pH units)			
8	TDS (mg/L)			
9	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	B (mg/L)			
4	Ca (mg/L)			
5	Cl (mg/L)			
6	CO3 (mg/L)			
7	F (mg/L)			
8	Fe (mg/L)			
9	HCO3 (mg/L)			
10	K (mg/L)			
11	Mg (mg/L)			
12	Na (mg/L)			
13	NH3-N (mg N/L)			
14	NO2+NO3 (mg N/L)			
15	NO2-N (mgN/L)			
16	NO3-N (mgN/L)			
17	o-PO4-P (mg P/L)			
18	SiO2 (mg/L)			
19	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
2	COD (mg/L)			
3	DO (mg/L)			
4	DO_SAT% (%)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : AMBASAMUDRAM (CV000U2)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	02/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	12.23
2	Colour_Cod (-)		Light Brown	Clear
3	EC_FLD (µmho/cm)		132	98
4	EC_GEN (µmho/cm)		132	98
5	Odour_Code (-)		odour free	odour free
6	pH_FLD (pH units)		7.5	7.2
7	pH_GEN (pH units)		7.4	7.6
8	TDS (mg/L)		77	57
9	Temp (deg C)		24.0	25.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)		0.0	0.0
2	ALK-TOT (mgCaCO3/L)		38	23
3	B (mg/L)		0.01	0.05
4	Ca (mg/L)		16	9
5	Cl (mg/L)		15.4	11.5
6	CO3 (mg/L)		0.0	0.0
7	F (mg/L)			
8	Fe (mg/L)		0.080	0.120
9	HCO3 (mg/L)		47	28
10	K (mg/L)		4.4	3.2
11	Mg (mg/L)		1.9	1.9
12	Na (mg/L)		10.5	7.8
13	NH3-N (mg N/L)		0.18	0.20
14	NO2+NO3 (mg N/L)		2.04	1.40
15	NO2-N (mgN/L)		0.02	0.00
16	NO3-N (mgN/L)		2.02	1.40
17	o-PO4-P (mg P/L)		0.070	0.090
18	SiO2 (mg/L)		17.2	15.0
19	SO4 (mg/L)		9.6	8.5
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)		2.0	1.5
2	COD (mg/L)		16.3	10.0
3	DO (mg/L)		7.0	17.2
4	DO_SAT% (%)		83	208
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)		40	24
2	HAR_Total (mgCaCO3/L)		48	32
3	Na% (%)		30	32
4	RSC (-)		0.0	0.0
5	SAR (-)		0.7	0.6
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : AMBASAMUDRAM (CV000U2)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	14.44	5.325	Dry Bed
2	Colour_Cod (-)	Clear	Clear	
3	EC_FLD (µmho/cm)	115	128	
4	EC_GEN (µmho/cm)	134	249	
5	Odour_Code (-)	odour free	odour free	
6	pH_FLD (pH units)	7.8	7.9	
7	pH_GEN (pH units)	7.8	9.0	
8	TDS (mg/L)	78	143	
9	Temp (deg C)	25.0	24.0	
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	11.4	
2	ALK-TOT (mgCaCO3/L)	27	84	
3	B (mg/L)	0.00	0.14	
4	Ca (mg/L)	14	22	
5	Cl (mg/L)	19.2	20.8	
6	CO3 (mg/L)	0.0	13.8	
7	F (mg/L)	0.20	0.36	
8	Fe (mg/L)	0.010	0.000	
9	HCO3 (mg/L)	33	75	
10	K (mg/L)	2.7	3.1	
11	Mg (mg/L)	1.9	10.5	
12	Na (mg/L)	12.7	15.4	
13	NH3-N (mg N/L)	0.23	0.68	
14	NO2+NO3 (mg N/L)	3.54	2.04	
15	NO2-N (mgN/L)	0.00	0.01	
16	NO3-N (mgN/L)	3.54	2.03	
17	o-PO4-P (mg P/L)	0.080	0.130	
18	SiO2 (mg/L)	3.1	41.6	
19	SO4 (mg/L)	8.4	16.0	
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.0	2.1	
2	COD (mg/L)	1.1	4.1	
3	DO (mg/L)	6.9	8.1	
4	DO_SAT% (%)	84	96	
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	36	55	
2	HAR_Total (mgCaCO3/L)	44	99	
3	Na% (%)	37	25	
4	RSC (-)	0.0	0.0	
5	SAR (-)	0.8	0.7	
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : AMBASAMUDRAM (CV000U2)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	02/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_FLD (µmho/cm)			
4	EC_GEN (µmho/cm)			
5	Odour_Code (-)			
6	pH_FLD (pH units)			
7	pH_GEN (pH units)			
8	TDS (mg/L)			
9	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	B (mg/L)			
4	Ca (mg/L)			
5	Cl (mg/L)			
6	CO3 (mg/L)			
7	F (mg/L)			
8	Fe (mg/L)			
9	HCO3 (mg/L)			
10	K (mg/L)			
11	Mg (mg/L)			
12	Na (mg/L)			
13	NH3-N (mg N/L)			
14	NO2+NO3 (mg N/L)			
15	NO2-N (mgN/L)			
16	NO3-N (mgN/L)			
17	o-PO4-P (mg P/L)			
18	SiO2 (mg/L)			
19	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)			
2	COD (mg/L)			
3	DO (mg/L)			
4	DO_SAT% (%)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : AMBASAMUDRAM (CV000U2)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	56.95	0.000	2.736
2	EC_FLD (µmho/cm)	4	132	98	118
3	EC_GEN (µmho/cm)	4	249	98	153
4	pH_FLD (pH units)	4	7.9	7.2	7.6
5	pH_GEN (pH units)	4	9.0	7.4	8
6	TDS (mg/L)	4	143	57	89
7	Temp (deg C)	4	25.0	24.0	24.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	4	11.4	0.0	2.9
2	ALK-TOT (mgCaCO3/L)	4	84	23	43
3	B (mg/L)	4	0.14	0.00	0.05
4	Ca (mg/L)	4	22	9	15
5	Cl (mg/L)	4	20.8	11.5	16.7
6	CO3 (mg/L)	4	13.8	0.0	3.4
7	F (mg/L)	2	0.36	0.20	0.28
8	Fe (mg/L)	4	0.120	0.000	0.052
9	HCO3 (mg/L)	4	75	28	46
10	K (mg/L)	4	4.4	2.7	3.4
11	Mg (mg/L)	4	10.5	1.9	4.1
12	Na (mg/L)	4	15.4	7.8	11.6
13	NH3-N (mg N/L)	4	0.68	0.18	0.32
14	NO2+NO3 (mg N/L)	4	3.54	1.40	2.25
15	NO2-N (mgN/L)	4	0.02	0.00	0.01
16	NO3-N (mgN/L)	4	3.54	1.40	2.25
17	o-PO4-P (mg P/L)	4	0.130	0.070	0.092
18	SiO2 (mg/L)	4	41.6	3.1	19.2
19	SO4 (mg/L)	4	16.0	8.4	10.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	4	2.1	1.0	1.6
2	COD (mg/L)	4	16.3	1.1	7.9
3	DO (mg/L)	4	17.2	6.9	9.8
4	DO_SAT% (%)	4	208	83	118
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	4	55	24	39
2	HAR_Total (mgCaCO3/L)	4	99	32	55
3	Na% (%)	4	37	25	31
4	RSC (-)	4	0.0	0.0	0
5	SAR (-)	4	0.8	0.6	0.7
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : AMBASAMUDRAM (CV000U2)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	7.806	1.667	2.563	3.407	0.000
2	EC_FLD (µmho/cm)	237		194	419	
3	EC_GEN (µmho/cm)	273	155	224	452	
4	pH_FLD (pH units)	7.4		8.1	8.5	
5	pH_GEN (pH units)	8.0	8.0	8.2	8.4	
6	TDS (mg/L)					
7	Temp (deg C)	24.5	22.5	22.3	22.5	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	3.1	0.0	0.0	14.6	
2	ALK-TOT (mgCaCO3/L)	86	54	82	154	
3	B (mg/L)	0.23	0.26	0.23	0.23	
4	Ca (mg/L)	20	13	18	28	
5	Cl (mg/L)	24.1	12.7	15.0	35.8	
6	CO3 (mg/L)	3.7	0.0	0.0	17.2	
7	F (mg/L)	0.50	0.43	0.54	0.58	
8	Fe (mg/L)	0.065	0.098	0.070	0.065	
9	HCO3 (mg/L)	97	66	101	149	
10	K (mg/L)	4.1	3.9	4.0	5.0	
11	Mg (mg/L)	11.0	6.8	7.3	16.4	
12	Na (mg/L)	22.0	9.6	16.2	43.4	
13	NH3-N (mg N/L)			0.04	0.11	
14	NO2+NO3 (mg N/L)	1.97	1.60	2.60	3.67	
15	NO2-N (mgN/L)	0.02	0.02	0.02	0.04	
16	NO3-N (mgN/L)	1.95	1.58	2.58	3.63	
17	o-PO4-P (mg P/L)				0.010	
18	P-Tot (mgP/L)	0.018	0.018	0.016		
19	SiO2 (mg/L)	16.8	15.6	12.8	23.9	
20	SO4 (mg/L)	9.6	7.4	8.3	29.3	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5		2.9	1.2	
2	COD (mg/L)					
3	DO (mg/L)	6.5		6.4	6.3	
4	DO_SAT% (%)	78		73	72	
	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)	49	32	46	70	
2	HAR_Total (mgCaCO3/L)	95	60	76	138	
3	Na% (%)	28	24	30	38	
4	RSC (-)	0.0	0.0	0.1	0.3	
5	SAR (-)	0.9	0.5	0.8	1.5	
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : AMBASAMUDRAM (CV000U2)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	0.143	1.425	0.329	0.000	2.068
2	EC_FLD (µmho/cm)	162	129	169		111
3	EC_GEN (µmho/cm)	162	129	169		111
4	pH_FLD (pH units)	7.8	7.2	7.8		8.0
5	pH_GEN (pH units)	7.8	7.2	7.8		8.4
6	TDS (mg/L)					59
7	Temp (deg C)	23.5	23.0	27.0		25.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0		15.3
2	ALK-TOT (mgCaCO3/L)	68	31	56		42
3	B (mg/L)	0.00				
4	Ca (mg/L)	18	8	14		15
5	Cl (mg/L)	16.5	18.9	12.9		9.4
6	CO3 (mg/L)	0.0	0.0	0.0		18.5
7	F (mg/L)	0.19	0.25	0.10		0.17
8	Fe (mg/L)	0.000				
9	HCO3 (mg/L)	83	37	68		14
10	K (mg/L)	3.9	4.2	3.5		2.9
11	Mg (mg/L)	6.8	4.9	6.8		1.9
12	Na (mg/L)	9.4	9.9	9.2		6.6
13	NH3-N (mg N/L)	0.02				0.05
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)	4.04	0.31	0.70		0.75
17	o-PO4-P (mg P/L)	0.664				
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	21.3				
20	SO4 (mg/L)	7.1	6.7	15.2		5.6
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.4	2.5	1.0		0.8
2	COD (mg/L)					2.2
3	DO (mg/L)	7.5	7.8	8.0		7.6
4	DO_SAT% (%)	88	91	100		92
	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)	44	20	36		39
2	HAR_Total (mgCaCO3/L)	72	40	64		46
3	Na% (%)	21	32	23		22
4	RSC (-)	0.0	0.0	0.0		0.0
5	SAR (-)	0.5	0.7	0.5		0.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : AMBASAMUDRAM (CV000U2)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	0.000	4.492	13.010	5.244	3.913
2	EC_FLD (µmho/cm)	132	348	527	473	420
3	EC_GEN (µmho/cm)	132	381	510	498	489
4	pH_FLD (pH units)	7.5	8.3	8.8	7.9	8.3
5	pH_GEN (pH units)	7.4	7.7	8.4	8.5	8.4
6	TDS (mg/L)	77				
7	Temp (deg C)	24.0	23.3	22.0	21.4	21.2
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	4.6	16.0	19.1	12.9
2	ALK-TOT (mgCaCO3/L)	38	108	200	183	200
3	B (mg/L)	0.01	0.25	0.32	0.24	0.30
4	Ca (mg/L)	16	22	35	32	38
5	Cl (mg/L)	15.4	24.1	36.1	36.1	42.9
6	CO3 (mg/L)	0.0	5.5	19.3	23.0	16.2
7	F (mg/L)		0.54	0.60	0.55	0.75
8	Fe (mg/L)	0.080	0.077	0.119	0.062	0.079
9	HCO3 (mg/L)	47	121	205	176	183
10	K (mg/L)	4.4	3.6	4.9	4.3	6.2
11	Mg (mg/L)	1.9	16.5	21.6	20.2	18.9
12	Na (mg/L)	10.5	28.6	48.0	43.9	45.9
13	NH3-N (mg N/L)	0.17	0.06	0.05	0.04	
14	NO2+NO3 (mg N/L)	2.04	2.30	5.38	3.75	
15	NO2-N (mgN/L)	0.02	0.02	0.03	0.01	
16	NO3-N (mgN/L)	2.02	2.29	5.35	3.74	1.75
17	o-PO4-P (mg P/L)	0.070				0.010
18	P-Tot (mgP/L)		0.055	0.060	0.046	
19	SiO2 (mg/L)	17.2	19.4	39.3	28.1	4.2
20	SO4 (mg/L)	9.6	44.6	28.5	26.7	42.0
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	2.0	0.5	1.3	0.9	1.3
2	COD (mg/L)	16.3				
3	DO (mg/L)	7.0	6.9	7.7	6.5	6.9
4	DO_SAT% (%)	83	80	88	74	79
	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)	40	56	87	80	96
2	HAR_Total (mgCaCO3/L)	48	125	177	164	175
3	Na% (%)	30	33	34	36	35
4	RSC (-)	0.0	0.1	0.5	0.4	0.1
5	SAR (-)	0.7	1.1	1.5	1.5	1.5
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : AMBASAMUDRAM (CV000U2)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	6.412	6.217	29.800	0.439	0.809
2	EC_FLD (µmho/cm)	235	236	396	301	206
3	EC_GEN (µmho/cm)	243	216	396	301	186
4	pH_FLD (pH units)	7.5	8.0	8.2	7.9	8.1
5	pH_GEN (pH units)	8.2	8.0	8.2	7.9	8.0
6	TDS (mg/L)					
7	Temp (deg C)	21.7	21.2	23.1	24.5	26.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	2.7	0.0	9.8	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	85	100	150	111	68
3	B (mg/L)	0.46	0.11			
4	Ca (mg/L)	20	26	34	30	19
5	Cl (mg/L)	17.3	28.6	44.1	27.9	11.6
6	CO3 (mg/L)	3.2	0.0	11.8	0.0	0.0
7	F (mg/L)	0.48	0.36	0.55	0.29	0.27
8	Fe (mg/L)	0.327	0.000	0.070		
9	HCO3 (mg/L)	98	122	159	136	83
10	K (mg/L)	3.4	3.6	5.1	5.4	2.0
11	Mg (mg/L)	10.4	8.1	18.2	9.7	6.0
12	Na (mg/L)	12.6	20.0	33.6	19.9	6.5
13	NH3-N (mg N/L)	0.09	0.04			0.35
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)	1.39	3.55	2.24	0.57	0.39
17	o-PO4-P (mg P/L)	0.080	0.406			
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	28.3	28.3			
20	SO4 (mg/L)	16.3	15.2	24.4	18.8	7.9
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.3	0.9	1.7	1.0	1.7
2	COD (mg/L)				4.9	3.9
3	DO (mg/L)	6.2	7.2	7.4	7.3	10.0
4	DO_SAT% (%)	71	81	86	87	123
	TRACE & TOXIC					
1	As (µg/L)			0.36		
2	Cd (µg/L)			0.63		
3	Cr (µg/L)			4.48		
4	Cu (µg/L)			10.41		
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)			2.17		
8	Zn (µg/L)			19.20		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	49	65	85	74	47
2	HAR_Total (mgCaCO3/L)	93	99	161	115	72
3	Na% (%)	21	28	31	26	16
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.5	0.8	1.2	0.8	0.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : AMBASAMUDRAM (CV000U2)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	2.210	7.998	8.389	0.000	11.530
2	EC_FLD (µmho/cm)	156	114	849		563
3	EC_GEN (µmho/cm)	156	160	600		586
4	pH_FLD (pH units)	7.9	7.6	8.4		8.3
5	pH_GEN (pH units)	8.0	8.2	8.1		8.5
6	TDS (mg/L)	90	93			
7	Temp (deg C)	25.2	24.7	24.0		22.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	5.1	3.8	7.9		26.1
2	ALK-TOT (mgCaCO3/L)	49	45	193		218
3	B (mg/L)		0.06	0.34		0.26
4	Ca (mg/L)	13	15	19		47
5	Cl (mg/L)	20.1	17.2	46.7		40.6
6	CO3 (mg/L)	6.2	4.6	9.5		31.5
7	F (mg/L)	0.14	0.28	0.59		0.67
8	Fe (mg/L)	0.004	0.043	0.084		0.067
9	HCO3 (mg/L)	47	45	217		202
10	K (mg/L)	3.0	3.0	6.5		5.1
11	Mg (mg/L)	5.3	4.8	32.6		23.0
12	Na (mg/L)	13.8	12.0	52.6		54.1
13	NH3-N (mg N/L)	0.24	0.37	0.25		0.05
14	NO2+NO3 (mg N/L)	1.81	2.33	3.12		3.76
15	NO2-N (mgN/L)	0.00	0.00	0.01		0.01
16	NO3-N (mgN/L)	1.53	2.32	3.11		3.75
17	o-PO4-P (mg P/L)	0.000	0.100			
18	P-Tot (mgP/L)			0.090		0.036
19	SiO2 (mg/L)	10.1	19.9	12.6		27.3
20	SO4 (mg/L)	5.6	11.0	35.1		46.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.6	1.5	1.9		1.2
2	COD (mg/L)	3.5	5.0			
3	DO (mg/L)	6.9	10.7	6.2		7.4
4	DO_SAT% (%)	83	129	74		85
	TRACE & TOXIC					
1	As (µg/L)			24.73		9.40
2	Cd (µg/L)	0.53		14.00		0.68
3	Cr (µg/L)	1.24		4.80		
4	Cu (µg/L)	2.42		3.59		1.07
5	Hg (µg/L)					
6	Ni (µg/L)	0.28		8.52		
7	Pb (µg/L)	1.01				2.26
8	Zn (µg/L)	0.01		15.00		8.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	33	38	48		117
2	HAR_Total (mgCaCO3/L)	55	58	184		213
3	Na% (%)	34	31	36		34
4	RSC (-)	0.0	0.0	0.2		0.5
5	SAR (-)	0.8	0.7	1.6		1.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : AMBASAMUDRAM (CV000U2)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	0.000	0.000	0.134	0.000
2	EC_FLD (µmho/cm)			731	
3	EC_GEN (µmho/cm)			731	
4	pH_FLD (pH units)			8.5	
5	pH_GEN (pH units)			8.5	
6	TDS (mg/L)				
7	Temp (deg C)			23.0	
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)			19.9	
2	ALK-TOT (mgCaCO3/L)			228	
3	B (mg/L)			0.00	
4	Ca (mg/L)			71	
5	Cl (mg/L)			95.9	
6	CO3 (mg/L)			24.0	
7	F (mg/L)			0.51	
8	Fe (mg/L)			0.000	
9	HCO3 (mg/L)			229	
10	K (mg/L)			6.7	
11	Mg (mg/L)			12.6	
12	Na (mg/L)			73.0	
13	NH3-N (mg N/L)			0.06	
14	NO2+NO3 (mg N/L)				
15	NO2-N (mgN/L)				
16	NO3-N (mgN/L)			4.82	
17	o-PO4-P (mg P/L)			0.000	
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)			36.2	
20	SO4 (mg/L)			41.5	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)			1.0	
2	COD (mg/L)				
3	DO (mg/L)			6.8	
4	DO_SAT% (%)			79	
	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)			176	
2	HAR_Total (mgCaCO3/L)			229	
3	Na% (%)			40	
4	RSC (-)			0.0	
5	SAR (-)			2.1	
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : AMBASAMUDRAM (CV000U2)

Division : SR Division, Coimbatore

Local River : Vaigai

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	0.000	0.000	4.534	0.000
2	EC_FLD (µmho/cm)			190	
3	EC_GEN (µmho/cm)			141	
4	pH_FLD (pH units)			7.5	
5	pH_GEN (pH units)			7.6	
6	TDS (mg/L)			81	
7	Temp (deg C)			25.0	
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)			0.0	
2	ALK-TOT (mgCaCO3/L)			42	
3	B (mg/L)			0.08	
4	Ca (mg/L)			15	
5	Cl (mg/L)			16.3	
6	CO3 (mg/L)			0.0	
7	F (mg/L)			0.24	
8	Fe (mg/L)			0.320	
9	HCO3 (mg/L)			52	
10	K (mg/L)			2.9	
11	Mg (mg/L)			1.8	
12	Na (mg/L)			11.7	
13	NH3-N (mg N/L)			0.13	
14	NO2+NO3 (mg N/L)			1.33	
15	NO2-N (mgN/L)			0.00	
16	NO3-N (mgN/L)			1.33	
17	o-PO4-P (mg P/L)			0.090	
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)			30.5	
20	SO4 (mg/L)			10.9	
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)			2.9	
2	COD (mg/L)			15.6	
3	DO (mg/L)			6.2	
4	DO_SAT% (%)			75	
	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)			38	
2	HAR_Total (mgCaCO3/L)			45	
3	Na% (%)			34	
4	RSC (-)			0.0	
5	SAR (-)			0.8	
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: IRRUKKANKUDI	Code	: CY000K7
State	: Tamil Nadu	District	: Virudhunagar
Basin	: EFR South of Cauvery	Independent River	: Vaippar
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Vaippar
Division	: SR Division, Coimbatore	Sub-Division	: Vaigai SD, Madurai
Drainage Area	: 3721 Sq. Km.	Bank	: Left
Latitude	: 09°19'27"	Longitude	: 77°59'26"
Zero of Gauge (m)	: 46 (m.s.l)	25/09/1989	
	Opening Date	Closing Date	
Gauge	: 25/09/1989		
Discharge	: 25/11/1989		
Sediment	:		
Water Quality	: 01/06/1993		

Water Quality Datasheet for the period : 2015-2016

Station Name : IRUKKANKUDI (CY000K7)

Division : SR Division, Coimbatore

Local River : Vaippar

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_GEN (µmho/cm)			
4	Odour_Code (-)			
5	pH_GEN (pH units)			
6	TDS (mg/L)			
7	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	B (mg/L)			
4	Ca (mg/L)			
5	Cl (mg/L)			
6	CO3 (mg/L)			
7	F (mg/L)			
8	Fe (mg/L)			
9	HCO3 (mg/L)			
10	K (mg/L)			
11	Mg (mg/L)			
12	Na (mg/L)			
13	NH3-N (mg N/L)			
14	NO2+NO3 (mg N/L)			
15	NO2-N (mgN/L)			
16	NO3-N (mgN/L)			
17	o-PO4-P (mg P/L)			
18	SiO2 (mg/L)			
19	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : IRUKKANKUDI (CY000K7)

Division : SR Division, Coimbatore

Local River : Vaippar

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	02/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	Dry Bed	Dry Bed	Dry Bed
2	Colour_Cod (-)			
3	EC_GEN (µmho/cm)			
4	Odour_Code (-)			
5	pH_GEN (pH units)			
6	TDS (mg/L)			
7	Temp (deg C)			
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			
2	ALK-TOT (mgCaCO3/L)			
3	B (mg/L)			
4	Ca (mg/L)			
5	Cl (mg/L)			
6	CO3 (mg/L)			
7	F (mg/L)			
8	Fe (mg/L)			
9	HCO3 (mg/L)			
10	K (mg/L)			
11	Mg (mg/L)			
12	Na (mg/L)			
13	NH3-N (mg N/L)			
14	NO2+NO3 (mg N/L)			
15	NO2-N (mgN/L)			
16	NO3-N (mgN/L)			
17	o-PO4-P (mg P/L)			
18	SiO2 (mg/L)			
19	SO4 (mg/L)			
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)			
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			
2	HAR_Total (mgCaCO3/L)			
3	Na% (%)			
4	RSC (-)			
5	SAR (-)			
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : IRUKKANKUDI (CY000K7)

Division : SR Division, Coimbatore

Local River : Vaippar

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	04/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	33.12	0.483	0.187
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	301	400	363
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_GEN (pH units)	7.5	7.7	8.3
6	TDS (mg/L)	175	226	205
7	Temp (deg C)	24.0	25.5	25.5
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	19.1
2	ALK-TOT (mgCaCO3/L)	100	134	122
3	B (mg/L)	0.04	0.22	0.07
4	Ca (mg/L)	25	32	32
5	Cl (mg/L)	32.7	31.2	31.2
6	CO3 (mg/L)	0.0	0.0	23.0
7	F (mg/L)	0.18	0.32	0.35
8	Fe (mg/L)	0.050	0.000	0.000
9	HCO3 (mg/L)	121	163	103
10	K (mg/L)	8.9	7.3	8.5
11	Mg (mg/L)	8.6	14.4	7.7
12	Na (mg/L)	28.9	25.4	32.9
13	NH3-N (mg N/L)	0.08	0.67	0.44
14	NO2+NO3 (mg N/L)	3.83	1.81	1.87
15	NO2-N (mgN/L)	0.00	0.05	0.02
16	NO3-N (mgN/L)	3.83	1.76	1.85
17	o-PO4-P (mg P/L)	0.220	0.080	0.030
18	SiO2 (mg/L)	5.4	18.3	16.4
19	SO4 (mg/L)	16.3	16.7	19.9
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)	13.8	12.1	15.2
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	63	79	79
2	HAR_Total (mgCaCO3/L)	99	139	111
3	Na% (%)	36	27	37
4	RSC (-)	0.0	0.0	0.2
5	SAR (-)	1.3	0.9	1.4
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : IRUKKANKUDI (CY000K7)

Division : SR Division, Coimbatore

Local River : Vaippar

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	02/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	0.178	0.136	0.155
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	395	417	461
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_GEN (pH units)	7.9	7.6	7.8
6	TDS (mg/L)	226	238	263
7	Temp (deg C)	26.0	30.0	30.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	135	138	172
3	B (mg/L)	0.23	0.08	0.16
4	Ca (mg/L)	36	41	28
5	Cl (mg/L)	34.6	36.4	36.4
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.28	0.27	0.33
8	Fe (mg/L)	0.000	0.000	0.000
9	HCO3 (mg/L)	164	169	210
10	K (mg/L)	8.8	9.6	10.1
11	Mg (mg/L)	11.4	9.5	21.9
12	Na (mg/L)	32.6	32.0	37.6
13	NH3-N (mg N/L)	0.07	0.08	0.02
14	NO2+NO3 (mg N/L)	3.65	5.31	4.39
15	NO2-N (mgN/L)	0.00	0.00	0.00
16	NO3-N (mgN/L)	3.65	5.31	4.39
17	o-PO4-P (mg P/L)	0.030	0.040	0.110
18	SiO2 (mg/L)	14.9	16.7	14.7
19	SO4 (mg/L)	20.0	19.8	17.0
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)	9.8	18.1	10.6
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	90	102	71
2	HAR_Total (mgCaCO3/L)	138	142	162
3	Na% (%)	32	31	32
4	RSC (-)	0.0	0.0	0.2
5	SAR (-)	1.2	1.2	1.3
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : IRUKKANKUDI (CY000K7)

Division : SR Division, Coimbatore

Local River : Vaippar

Sub-Division : Vaigai SD, Madurai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	37.58	0.000	1.136
2	EC_GEN (µmho/cm)	6	461	301	390
3	pH_GEN (pH units)	6	8.3	7.5	7.8
4	TDS (mg/L)	6	263	175	222
5	Temp (deg C)	6	30.0	24.0	26.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	6	19.1	0.0	3.2
2	ALK-TOT (mgCaCO3/L)	6	172	100	133
3	B (mg/L)	6	0.23	0.04	0.13
4	Ca (mg/L)	6	41	25	32
5	Cl (mg/L)	6	36.4	31.2	33.7
6	CO3 (mg/L)	6	23.0	0.0	3.8
7	F (mg/L)	6	0.35	0.18	0.29
8	Fe (mg/L)	6	0.050	0.000	0.008
9	HCO3 (mg/L)	6	210	103	155
10	K (mg/L)	6	10.1	7.3	8.9
11	Mg (mg/L)	6	21.9	7.7	12.3
12	Na (mg/L)	6	37.6	25.4	31.6
13	NH3-N (mg N/L)	6	0.67	0.02	0.23
14	NO2+NO3 (mg N/L)	6	5.31	1.81	3.48
15	NO2-N (mgN/L)	6	0.05	0.00	0.01
16	NO3-N (mgN/L)	6	5.31	1.76	3.46
17	o-PO4-P (mg P/L)	6	0.220	0.030	0.085
18	SiO2 (mg/L)	6	18.3	5.4	14.4
19	SO4 (mg/L)	6	20.0	16.3	18.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	COD (mg/L)	6	18.1	9.8	13.3
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	6	102	63	81
2	HAR_Total (mgCaCO3/L)	6	162	99	132
3	Na% (%)	6	37	27	33
4	RSC (-)	6	0.2	0.0	0.1
5	SAR (-)	6	1.4	0.9	1.2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : IRUKKANKUDI (CY000K7)

Division : SR Division, Coimbatore

Local River : Vaippar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	0.000	0.070	0.000	0.000	0.000
2	EC_GEN (µmho/cm)		508	576		
3	pH_GEN (pH units)		8.1	9.1		
4	TDS (mg/L)					
5	Temp (deg C)		27.3	22.5		
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0	11.9		
2	ALK-TOT (mgCaCO3/L)		141	92		
3	B (mg/L)		0.31	0.31		
4	Ca (mg/L)		22	22		
5	Cl (mg/L)		36.8	73.1		
6	CO3 (mg/L)		0.0	14.3		
7	F (mg/L)		0.40	0.46		
8	Fe (mg/L)		0.060	0.060		
9	HCO3 (mg/L)		172	83		
10	K (mg/L)		7.8	6.7		
11	Mg (mg/L)		15.6	13.6		
12	Na (mg/L)		59.4	83.6		
13	NH3-N (mg N/L)		0.09	0.10		
14	NO2+NO3 (mg N/L)		1.37	5.78		
15	NO2-N (mgN/L)		0.01	2.36		
16	NO3-N (mgN/L)		1.35	3.42		
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)		0.020	0.013		
19	SiO2 (mg/L)		24.7	12.6		
20	SO4 (mg/L)		61.2	75.7		
	BIOLOGICAL/BACTERIOLOGICAL					
1	COD (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)		54	56		
2	HAR_Total (mgCaCO3/L)		119	113		
3	Na% (%)		50	60		
4	RSC (-)		0.5	0.0		
5	SAR (-)		2.4	3.4		
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : IRUKKANKUDI (CY000K7)

Division : SR Division, Coimbatore

Local River : Vaippar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	0.000	0.000	0.000	0.000	0.000
2	EC_GEN (µmho/cm)					
3	pH_GEN (pH units)					
4	TDS (mg/L)					
5	Temp (deg C)					
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					
2	ALK-TOT (mgCaCO3/L)					
3	B (mg/L)					
4	Ca (mg/L)					
5	Cl (mg/L)					
6	CO3 (mg/L)					
7	F (mg/L)					
8	Fe (mg/L)					
9	HCO3 (mg/L)					
10	K (mg/L)					
11	Mg (mg/L)					
12	Na (mg/L)					
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)					
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)					
20	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	COD (mg/L)					
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)					
8	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					
2	HAR_Total (mgCaCO3/L)					
3	Na% (%)					
4	RSC (-)					
5	SAR (-)					
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : IRUKKANKUDI (CY000K7)

Division : SR Division, Coimbatore

Local River : Vaippar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	0.000	1.137	1.412	0.123	0.594
2	EC_GEN (µmho/cm)		336	536	660	958
3	pH_GEN (pH units)		7.8	8.0	8.5	8.2
4	TDS (mg/L)					
5	Temp (deg C)		23.5	17.4	17.0	17.6
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		0.0	3.2	0.0	
2	ALK-TOT (mgCaCO3/L)		102	134	150	
3	B (mg/L)		0.24	0.29	0.27	0.35
4	Ca (mg/L)		21	32	29	43
5	Cl (mg/L)		17.9	50.8	63.0	174.3
6	CO3 (mg/L)		0.0	3.8	0.0	11.2
7	F (mg/L)		0.37	0.40	0.58	0.64
8	Fe (mg/L)		0.077	0.074	0.060	
9	HCO3 (mg/L)		124	156	182	174
10	K (mg/L)		5.3	6.2	6.4	6.1
11	Mg (mg/L)		10.7	14.1	14.9	30.0
12	Na (mg/L)		28.1	65.4	86.2	128.8
13	NH3-N (mg N/L)				0.08	
14	NO2+NO3 (mg N/L)		1.69	2.94	1.53	
15	NO2-N (mgN/L)		0.01	0.01	0.05	
16	NO3-N (mgN/L)		1.67	2.92	1.48	0.66
17	o-PO4-P (mg P/L)					
18	P-Tot (mgP/L)		0.019	0.008	0.031	
19	SiO2 (mg/L)		19.5	18.0	20.8	
20	SO4 (mg/L)		34.3	78.7	87.3	132.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	COD (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)		54	79	72	107
2	HAR_Total (mgCaCO3/L)		98	138	134	249
3	Na% (%)		36	46	55	54
4	RSC (-)		0.2	0.0	0.3	0.0
5	SAR (-)		1.2	2.3	3.1	3.7
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : IRUKKANKUDI (CY000K7)

Division : SR Division, Coimbatore

Local River : Vaippar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	0.000	0.831	0.694	0.000	0.000
2	EC_GEN (µmho/cm)		263	425		
3	pH_GEN (pH units)		8.5	8.1		
4	TDS (mg/L)					
5	Temp (deg C)		23.0	22.5		
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		9.3	4.4		
2	ALK-TOT (mgCaCO3/L)		100	129		
3	B (mg/L)		0.19			
4	Ca (mg/L)		30	29		
5	Cl (mg/L)		44.1	69.3		
6	CO3 (mg/L)		11.2	5.3		
7	F (mg/L)		0.49	0.32		
8	Fe (mg/L)		0.000			
9	HCO3 (mg/L)		99	147		
10	K (mg/L)		5.2	6.5		
11	Mg (mg/L)		5.8	16.0		
12	Na (mg/L)		28.4	53.0		
13	NH3-N (mg N/L)		0.04			
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)		1.37	0.69		
17	o-PO4-P (mg P/L)		0.022			
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)		5.9			
20	SO4 (mg/L)		18.5	34.9		
	BIOLOGICAL/BACTERIOLOGICAL					
1	COD (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)		76	72		
2	HAR_Total (mgCaCO3/L)		100	139		
3	Na% (%)		36	44		
4	RSC (-)		0.1	0.0		
5	SAR (-)		1.2	2.0		
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : IRUKKANKUDI (CY000K7)

Division : SR Division, Coimbatore

Local River : Vaippar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	0.000	8.446	0.140	0.146	1.261
2	EC_GEN (µmho/cm)		355	410	982	697
3	pH_GEN (pH units)		7.8	8.7	8.8	8.0
4	TDS (mg/L)		202			
5	Temp (deg C)		25.0	27.2	19.0	19.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)		6.4	14.4	4.0	0.0
2	ALK-TOT (mgCaCO3/L)		119	128	139	160
3	B (mg/L)		0.11	0.26	0.23	0.27
4	Ca (mg/L)		29	20	26	34
5	Cl (mg/L)		31.7	28.1	128.1	76.9
6	CO3 (mg/L)		7.7	17.4	4.8	0.0
7	F (mg/L)		0.28	0.46	0.44	0.39
8	Fe (mg/L)		0.017	0.077	0.058	0.060
9	HCO3 (mg/L)		129	120	160	195
10	K (mg/L)		8.2	6.8	7.6	6.9
11	Mg (mg/L)		10.2	11.3	24.3	17.5
12	Na (mg/L)		29.1	43.0	152.5	81.6
13	NH3-N (mg N/L)		0.40	0.22	0.05	0.05
14	NO2+NO3 (mg N/L)		2.50	0.84	4.37	1.20
15	NO2-N (mgN/L)		0.02	0.01	0.03	0.02
16	NO3-N (mgN/L)		2.48	0.83	4.34	1.18
17	o-PO4-P (mg P/L)		0.110			
18	P-Tot (mgP/L)			0.022	0.012	0.032
19	SiO2 (mg/L)		13.4	16.0	29.3	25.5
20	SO4 (mg/L)		17.6	32.6	170.8	74.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	COD (mg/L)		13.7			
	TRACE & TOXIC					
1	As (µg/L)			16.25		9.28
2	Cd (µg/L)			14.00		0.79
3	Cr (µg/L)					
4	Cu (µg/L)			1.20		1.90
5	Hg (µg/L)					
6	Ni (µg/L)			3.74		
7	Pb (µg/L)			2.35		1.76
8	Zn (µg/L)			10.00		9.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)		74	51	64	84
2	HAR_Total (mgCaCO3/L)		116	98	165	157
3	Na% (%)		34	47	66	50
4	RSC (-)		0.1	0.6	0.0	0.1
5	SAR (-)		1.2	1.9	5.2	2.8
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : IRUKKANKUDI (CY000K7)

Division : SR Division, Coimbatore

Local River : Vaippar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	0.000	0.000	0.480	0.000
2	EC_GEN (µmho/cm)			384	
3	pH_GEN (pH units)			8.4	
4	TDS (mg/L)				
5	Temp (deg C)			26.7	
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)			10.6	
2	ALK-TOT (mgCaCO3/L)			129	
3	B (mg/L)			0.00	
4	Ca (mg/L)			30	
5	Cl (mg/L)			57.4	
6	CO3 (mg/L)			12.8	
7	F (mg/L)			0.25	
8	Fe (mg/L)			0.000	
9	HCO3 (mg/L)			132	
10	K (mg/L)			6.9	
11	Mg (mg/L)			10.0	
12	Na (mg/L)			44.2	
13	NH3-N (mg N/L)			0.06	
14	NO2+NO3 (mg N/L)				
15	NO2-N (mgN/L)				
16	NO3-N (mgN/L)			2.22	
17	o-PO4-P (mg P/L)			0.000	
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)			10.1	
20	SO4 (mg/L)			25.2	
	BIOLOGICAL/BACTERIOLOGICAL				
1	COD (mg/L)				
	TRACE & TOXIC				
1	As (µg/L)			1.39	
2	Cd (µg/L)			0.03	
3	Cr (µg/L)			1.67	
4	Cu (µg/L)			3.34	
5	Hg (µg/L)				
6	Ni (µg/L)				
7	Pb (µg/L)			2.17	
8	Zn (µg/L)			19.75	
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)			76	
2	HAR_Total (mgCaCO3/L)			118	
3	Na% (%)			43	
4	RSC (-)			0.2	
5	SAR (-)			1.8	
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : IRUKKANKUDI (CY000K7)

Division : SR Division, Coimbatore

Local River : Vaippar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	0.000	0.000	0.000	0.156
2	EC_GEN (µmho/cm)				424
3	pH_GEN (pH units)				7.8
4	TDS (mg/L)				242
5	Temp (deg C)				28.7
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)				0.0
2	ALK-TOT (mgCaCO3/L)				148
3	B (mg/L)				0.16
4	Ca (mg/L)				35
5	Cl (mg/L)				35.8
6	CO3 (mg/L)				0.0
7	F (mg/L)				0.30
8	Fe (mg/L)				0.000
9	HCO3 (mg/L)				181
10	K (mg/L)				9.5
11	Mg (mg/L)				14.3
12	Na (mg/L)				34.1
13	NH3-N (mg N/L)				0.06
14	NO2+NO3 (mg N/L)				4.45
15	NO2-N (mgN/L)				0.00
16	NO3-N (mgN/L)				4.45
17	o-PO4-P (mg P/L)				0.060
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)				15.4
20	SO4 (mg/L)				18.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	COD (mg/L)				12.8
	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)				88
2	HAR_Total (mgCaCO3/L)				147
3	Na% (%)				32
4	RSC (-)				0.1
5	SAR (-)				1.2
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: MURAPPANADU	Code	: CT000H9
State	: Tamil Nadu	District	: Tuticorin
Basin	: EFR South of Cauvery	Independent River	: Thambraparani
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Thambraparani
Division	: SR Division, Coimbatore	Sub-Division	: Vaigai SD, Madurai
Drainage Area	: 4380 Sq. Km.	Bank	: Right
Latitude	: 08°42'52"	Longitude	: 77°50'06"
Zero of Gauge (m)	: 14 (m.s.l) 14.025 (m.s.l)	29/08/1977 01/06/1980	- 31/05/1980
	Opening Date	Closing Date	
Gauge	: 29/08/1977		
Discharge	: 23/11/1977		
Sediment	: 15/02/1979		
Water Quality	: 15/08/1978		

Water Quality Datasheet for the period : 2015-2016

Station Name : MURAPPANADU (CT000H9)

Division : SR Division, Coimbatore

Local River : Thambraparani

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	7.907	11.58	22.51
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	156	114	119
4	EC_GEN (µmho/cm)	192	114	119
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.8	7.1	7.2
7	pH_GEN (pH units)	7.8	7.1	7.8
8	TDS (mg/L)	111	66	68
9	Temp (deg C)	30.5	29.5	27.5
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	61	27	31
3	B (mg/L)	0.05	0.06	
4	Ca (mg/L)	10	10	11
5	Cl (mg/L)	24.4	20.3	19.3
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.18	0.09	
8	Fe (mg/L)	0.070	0.000	0.020
9	HCO3 (mg/L)	74	33	38
10	K (mg/L)	3.7	2.7	2.3
11	Mg (mg/L)	8.6	2.9	2.9
12	Na (mg/L)	18.4	11.3	11.1
13	NH3-N (mg N/L)	0.06	0.00	0.38
14	NO2+NO3 (mg N/L)	0.94	0.91	0.95
15	NO2-N (mgN/L)	0.00	0.00	0.00
16	NO3-N (mgN/L)	0.94	0.91	0.95
17	o-PO4-P (mg P/L)	0.060	0.020	0.040
18	SiO2 (mg/L)	13.2	8.9	8.5
19	SO4 (mg/L)	6.7	5.6	5.7
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	3.3	1.0	1.4
2	COD (mg/L)	10.5	8.4	11.0
3	DO (mg/L)	5.6	6.0	5.7
4	DO_SAT% (%)	74	78	72
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	24	24	28
2	HAR_Total (mgCaCO3/L)	59	36	40
3	Na% (%)	39	39	36
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	1.0	0.8	0.8
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : MURAPPANADU (CT000H9)

Division : SR Division, Coimbatore

Local River : Thambraparani

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	02/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	1.846	16.87	16.38
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	219		313
4	EC_GEN (µmho/cm)	219	223	313
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.4	7.2	7.0
7	pH_GEN (pH units)	7.6	7.5	7.3
8	TDS (mg/L)	125	130	182
9	Temp (deg C)	29.0	28.0	26.5
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	73	65	96
3	B (mg/L)		0.03	0.04
4	Ca (mg/L)	24	24	33
5	Cl (mg/L)	27.1	30.8	40.4
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)			
8	Fe (mg/L)	0.050	0.010	0.040
9	HCO3 (mg/L)	90	79	117
10	K (mg/L)	3.1	6.0	8.6
11	Mg (mg/L)	4.8	4.8	7.7
12	Na (mg/L)	19.0	18.1	24.6
13	NH3-N (mg N/L)	0.11	0.15	0.19
14	NO2+NO3 (mg N/L)	1.07	1.53	2.42
15	NO2-N (mgN/L)	0.00	0.01	0.01
16	NO3-N (mgN/L)	1.07	1.52	2.41
17	o-PO4-P (mg P/L)	0.040	0.010	0.060
18	SiO2 (mg/L)	4.4	13.1	16.2
19	SO4 (mg/L)	8.0	12.7	16.1
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.2	1.6	1.7
2	COD (mg/L)	8.2	13.6	14.5
3	DO (mg/L)	5.5	5.2	5.9
4	DO_SAT% (%)	72	66	73
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	60	59	83
2	HAR_Total (mgCaCO3/L)	80	79	115
3	Na% (%)	33	31	30
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	0.9	0.9	1.0
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : MURAPPANADU (CT000H9)

Division : SR Division, Coimbatore

Local River : Thambraparani

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	197.4	73.64	14.57
2	Colour_Cod (-)	Light Brown	Clear	Clear
3	EC_FLD (µmho/cm)	387	123	306
4	EC_GEN (µmho/cm)	387	123	306
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	7.8	7.6	7.4
7	pH_GEN (pH units)	7.6	7.6	7.4
8	TDS (mg/L)	225	90	175
9	Temp (deg C)	26.0	26.0	26.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	103	42	96
3	B (mg/L)	0.13	0.05	0.17
4	Ca (mg/L)	30	17	27
5	Cl (mg/L)	55.8	26.0	39.9
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.35	0.18	0.33
8	Fe (mg/L)	0.040	0.000	0.000
9	HCO3 (mg/L)	126	51	117
10	K (mg/L)	7.3	2.9	3.4
11	Mg (mg/L)	15.5	2.9	10.5
12	Na (mg/L)	32.5	15.6	25.3
13	NH3-N (mg N/L)	0.07	0.04	0.27
14	NO2+NO3 (mg N/L)	4.11	0.96	1.94
15	NO2-N (mgN/L)	0.00	0.05	0.02
16	NO3-N (mgN/L)	4.11	0.91	1.92
17	o-PO4-P (mg P/L)	0.230	0.050	0.070
18	SiO2 (mg/L)	14.7	15.4	17.8
19	SO4 (mg/L)	18.5	7.6	9.5
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.7	1.0	2.0
2	COD (mg/L)	16.0	6.1	3.0
3	DO (mg/L)	5.7	5.5	6.4
4	DO_SAT% (%)	70	68	79
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	75	43	67
2	HAR_Total (mgCaCO3/L)	140	55	111
3	Na% (%)	32	37	32
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	1.2	0.9	1.0
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : MURAPPANADU (CT000H9)

Division : SR Division, Coimbatore

Local River : Thambraparani

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	02/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	15.67	12.28	11.74
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	107	256	136
4	EC_GEN (µmho/cm)	107	256	138
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	6.8	7.4	7.5
7	pH_GEN (pH units)	6.8	7.4	8.0
8	TDS (mg/L)	60	146	79
9	Temp (deg C)	27.5	27.5	29.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	22	71	37
3	B (mg/L)	0.14	0.12	0.03
4	Ca (mg/L)	9	24	13
5	Cl (mg/L)	12.7	36.4	20.0
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.19	0.16	0.08
8	Fe (mg/L)	0.000	0.000	0.000
9	HCO3 (mg/L)	27	87	46
10	K (mg/L)	1.7	4.6	2.6
11	Mg (mg/L)	2.9	5.7	2.9
12	Na (mg/L)	9.5	24.1	12.7
13	NH3-N (mg N/L)	0.06	0.08	0.00
14	NO2+NO3 (mg N/L)	3.31	2.19	1.05
15	NO2-N (mgN/L)	0.01	0.00	0.00
16	NO3-N (mgN/L)	3.30	2.19	1.05
17	o-PO4-P (mg P/L)	0.040	0.020	0.070
18	SiO2 (mg/L)	15.3	12.7	7.9
19	SO4 (mg/L)	6.7	8.5	5.6
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.4	2.5	1.7
2	COD (mg/L)	6.2	19.2	16.0
3	DO (mg/L)	4.5	5.7	6.3
4	DO_SAT% (%)	57	72	82
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	24	59	31
2	HAR_Total (mgCaCO3/L)	35	83	43
3	Na% (%)	36	37	37
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	0.7	1.2	0.8
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : MURAPPANADU (CT000H9)

Division : SR Division, Coimbatore

Local River : Thambraparani

Sub-Division : Vaigai SD, Madurai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	428.4	1.846	32.11
2	EC_FLD (µmho/cm)	12	387	107	205
3	EC_GEN (µmho/cm)	12	387	107	208
4	pH_FLD (pH units)	12	7.8	6.8	7.4
5	pH_GEN (pH units)	12	8.0	6.8	7.5
6	TDS (mg/L)	12	225	60	121
7	Temp (deg C)	12	30.5	26.0	27.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	12	103	22	60
3	B (mg/L)	10	0.17	0.03	0.08
4	Ca (mg/L)	12	33	9	19
5	Cl (mg/L)	12	55.8	12.7	29.4
6	CO3 (mg/L)	12	0.0	0.0	0
7	F (mg/L)	8	0.35	0.08	0.2
8	Fe (mg/L)	12	0.070	0.000	0.019
9	HCO3 (mg/L)	12	126	27	74
10	K (mg/L)	12	8.6	1.7	4.1
11	Mg (mg/L)	12	15.5	2.9	6
12	Na (mg/L)	12	32.5	9.5	18.5
13	NH3-N (mg N/L)	12	0.38	0.00	0.12
14	NO2+NO3 (mg N/L)	12	4.11	0.91	1.78
15	NO2-N (mgN/L)	12	0.05	0.00	0.01
16	NO3-N (mgN/L)	12	4.11	0.91	1.77
17	o-PO4-P (mg P/L)	12	0.230	0.010	0.059
18	SiO2 (mg/L)	12	17.8	4.4	12.3
19	SO4 (mg/L)	12	18.5	5.6	9.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	3.3	1.0	1.7
2	COD (mg/L)	12	19.2	3.0	11.1
3	DO (mg/L)	12	6.4	4.5	5.7
4	DO_SAT% (%)	12	82	57	72
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	83	24	48
2	HAR_Total (mgCaCO3/L)	12	140	35	73
3	Na% (%)	12	39	30	35
4	RSC (-)	12	0.0	0.0	0
5	SAR (-)	12	1.2	0.7	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : MURAPPANADU (CT000H9)

Division : SR Division, Coimbatore

Local River : Thambraparani

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	11.57	10.69	9.166	10.89	8.243
2	EC_FLD (µmho/cm)	132	137	131	146	119
3	EC_GEN (µmho/cm)	129	136	136	151	124
4	pH_FLD (pH units)	7.4	7.6	7.4	7.3	7.4
5	pH_GEN (pH units)	7.2	7.3	7.5	7.5	7.4
6	TDS (mg/L)					
7	Temp (deg C)	27.5	27.0	27.6	27.4	27.1
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	41	45	42	46	43
3	B (mg/L)	0.16	0.24	0.21	0.16	0.12
4	Ca (mg/L)	10	11	12	12	11
5	Cl (mg/L)	14.8	12.9	13.4	17.0	16.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.33	0.21	0.18	0.18	0.16
8	Fe (mg/L)	0.075	0.073	0.070	0.078	0.153
9	HCO3 (mg/L)	50	55	51	56	52
10	K (mg/L)	1.5	1.6	1.7	2.2	1.8
11	Mg (mg/L)	5.9	5.3	4.1	4.3	4.5
12	Na (mg/L)	7.8	8.6	9.8	11.2	9.4
13	NH3-N (mg N/L)		0.05	0.05	0.05	0.13
14	NO2+NO3 (mg N/L)	0.59	0.81	1.54	1.01	
15	NO2-N (mgN/L)	0.01	0.03	0.02	0.02	
16	NO3-N (mgN/L)	0.57	0.78	1.52	0.99	0.37
17	o-PO4-P (mg P/L)				0.013	0.061
18	P-Tot (mgP/L)	0.013	0.016	0.011		
19	SiO2 (mg/L)	10.1	10.4	9.6	9.2	10.1
20	SO4 (mg/L)	4.1	6.3	5.7	6.7	2.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	1.5	1.1	1.0	1.1
2	COD (mg/L)					
3	DO (mg/L)	5.5	5.9	5.9	6.0	6.2
4	DO_SAT% (%)	70	73	74	75	78
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)					
8	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	25	26	30	31	26
2	HAR_Total (mgCaCO3/L)	50	48	47	49	45
3	Na% (%)	25	28	33	32	31
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.5	0.5	0.7	0.7	0.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : MURAPPANADU (CT000H9)

Division : SR Division, Coimbatore

Local River : Thambraparani

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	7.62	5.452	3.083	12.7	7.876
2	EC_FLD (µmho/cm)	115	125	124	114	146
3	EC_GEN (µmho/cm)	101	105	97	127	146
4	pH_FLD (pH units)	7.4	7.4	7.4	7.5	7.3
5	pH_GEN (pH units)	7.3	7.6	7.2	7.3	7.3
6	TDS (mg/L)					79
7	Temp (deg C)	26.6	27.7	26.8	26.1	26.9
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	35	36	32	42	51
3	B (mg/L)	0.16				
4	Ca (mg/L)	12	10	10	12	14
5	Cl (mg/L)	10.6	13.2	13.3	14.8	19.8
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.29	0.18	0.18	0.13	0.14
8	Fe (mg/L)	0.089			0.280	
9	HCO3 (mg/L)	43	44	38	51	62
10	K (mg/L)	1.8	1.7	1.6	1.9	3.1
11	Mg (mg/L)	2.9	3.9	1.9	4.3	4.0
12	Na (mg/L)	6.2	7.4	8.8	8.2	13.4
13	NH3-N (mg N/L)	0.05			0.17	0.13
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)	2.22	0.18	0.10	0.15	0.28
17	o-PO4-P (mg P/L)	0.132				
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	8.9				
20	SO4 (mg/L)	4.5	4.0	3.6	4.4	5.1
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	1.7	1.2	0.9	1.4
2	COD (mg/L)				6.5	13.6
3	DO (mg/L)	6.5	6.2	5.9	5.6	5.8
4	DO_SAT% (%)	81	79	74	69	73
	TRACE & TOXIC					
1	As (µg/L)			12.67	0.49	
2	Cd (µg/L)			0.14	0.01	
3	Cr (µg/L)			2.90	22.01	
4	Cu (µg/L)			7.77	3.96	
5	Hg (µg/L)				0.19	
6	Ni (µg/L)			3.69	16.16	
7	Pb (µg/L)			2.93	7.73	
8	Zn (µg/L)			1.06	12.00	
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	30	26	25	30	35
2	HAR_Total (mgCaCO3/L)	42	42	33	48	51
3	Na% (%)	23	27	37	26	35
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.4	0.5	0.7	0.5	0.8
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : MURAPPANADU (CT000H9)

Division : SR Division, Coimbatore

Local River : Thambraparani

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	12.14	6.63	79.38	11.55	15.72
2	EC_FLD (µmho/cm)	166	241	276	215	304
3	EC_GEN (µmho/cm)	173	247	283	238	315
4	pH_FLD (pH units)	7.4	7.6	7.6	7.5	7.4
5	pH_GEN (pH units)	7.6	7.5	7.6	7.7	7.6
6	TDS (mg/L)	100				
7	Temp (deg C)	28.9	25.4	25.0	26.4	26.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	51	71	87	71	105
3	B (mg/L)	0.05	0.14	0.22	0.18	0.08
4	Ca (mg/L)	16	19	23	19	26
5	Cl (mg/L)	24.4	24.8	33.8	25.8	42.8
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.14	0.30	0.32	0.21	0.38
8	Fe (mg/L)	0.030	0.081	0.086	0.070	0.117
9	HCO3 (mg/L)	63	87	106	86	128
10	K (mg/L)	3.6	3.2	4.4	3.0	4.1
11	Mg (mg/L)	4.8	9.9	9.2	8.0	13.0
12	Na (mg/L)	15.6	16.6	21.7	17.2	26.5
13	NH3-N (mg N/L)	0.14	0.13		0.04	
14	NO2+NO3 (mg N/L)	1.08	1.27	2.00	1.41	
15	NO2-N (mgN/L)	0.00	0.01	0.02	0.01	
16	NO3-N (mgN/L)	1.08	1.26	1.98	1.40	0.24
17	o-PO4-P (mg P/L)	0.034				0.010
18	P-Tot (mgP/L)		0.053	0.014	0.024	
19	SiO2 (mg/L)	9.6	19.1	14.6	12.6	1.3
20	SO4 (mg/L)	7.8	13.3	10.7	8.0	15.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.7	1.0	1.9	1.1	1.1
2	COD (mg/L)	10.4				
3	DO (mg/L)	5.6	5.9	5.6	6.0	6.3
4	DO_SAT% (%)	72	72	68	74	77
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)					
8	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	39	49	57	47	65
2	HAR_Total (mgCaCO3/L)	59	90	96	81	119
3	Na% (%)	36	28	32	31	32
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.9	0.8	1.0	0.8	1.1
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : MURAPPANADU (CT000H9)

Division : SR Division, Coimbatore

Local River : Thambraparani

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	13.17	14.66	36.05	11.27	11.19
2	EC_FLD (µmho/cm)	196	195	171	218	199
3	EC_GEN (µmho/cm)	203	181	155	241	199
4	pH_FLD (pH units)	7.5	7.5	7.7	7.6	7.4
5	pH_GEN (pH units)	7.5	7.7	7.6	7.4	7.4
6	TDS (mg/L)					
7	Temp (deg C)	26.1	25.5	25.4	24.5	25.4
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	71	67	55	75	67
3	B (mg/L)	0.38	0.14			
4	Ca (mg/L)	19	20	14	23	18
5	Cl (mg/L)	26.3	26.4	20.5	27.9	22.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.35	0.22	0.29	0.23	0.21
8	Fe (mg/L)	0.243	0.000	0.050		
9	HCO3 (mg/L)	87	82	67	91	82
10	K (mg/L)	2.9	3.9	3.7	4.1	2.6
11	Mg (mg/L)	7.8	6.1	6.1	7.8	7.5
12	Na (mg/L)	15.4	14.4	12.1	16.2	12.4
13	NH3-N (mg N/L)	0.07	0.04			0.15
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)	0.82	2.07	0.24	0.51	0.15
17	o-PO4-P (mg P/L)	0.060	0.094			
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	16.7	14.6			
20	SO4 (mg/L)	3.4	8.9	7.5	14.1	7.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.3	0.8	1.4	1.0	0.7
2	COD (mg/L)				8.2	5.6
3	DO (mg/L)	5.9	6.2	6.2	5.7	5.6
4	DO_SAT% (%)	73	75	75	68	69
	TRACE & TOXIC					
1	As (µg/L)			0.30		
2	Cd (µg/L)			1.81		
3	Cr (µg/L)			2.43		
4	Cu (µg/L)			17.90		
5	Hg (µg/L)					
6	Ni (µg/L)			1.92		
7	Pb (µg/L)			1.65		
8	Zn (µg/L)			18.00		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	48	50	34	57	46
2	HAR_Total (mgCaCO3/L)	80	75	59	90	77
3	Na% (%)	28	28	29	27	25
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	0.7	0.7	0.7	0.7	0.6
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : MURAPPANADU (CT000H9)

Division : SR Division, Coimbatore

Local River : Thambraparani

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	38.72	75.5	9.201	9.933	11.27
2	EC_FLD (µmho/cm)	265	282	154	214	299
3	EC_GEN (µmho/cm)	265	282	164	224	309
4	pH_FLD (pH units)	7.5	7.5	7.6	7.7	7.8
5	pH_GEN (pH units)	7.6	7.5	7.3	7.6	7.7
6	TDS (mg/L)	149	168			
7	Temp (deg C)	26.1	26.1	28.0	28.2	28.2
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	88	84	51	64	89
3	B (mg/L)		0.10	0.19	0.20	0.31
4	Ca (mg/L)	21	27	13	14	21
5	Cl (mg/L)	35.3	40.5	18.2	24.6	39.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.31	0.29	0.25	0.24	0.26
8	Fe (mg/L)	0.023	0.020	0.089	0.071	0.067
9	HCO3 (mg/L)	107	103	63	78	108
10	K (mg/L)	5.1	5.6	1.9	2.4	3.6
11	Mg (mg/L)	10.0	9.1	5.5	7.5	9.1
12	Na (mg/L)	22.8	24.5	12.3	19.3	26.4
13	NH3-N (mg N/L)	0.20	0.14	0.10		0.04
14	NO2+NO3 (mg N/L)	1.25	2.36	0.79	1.57	0.89
15	NO2-N (mgN/L)	0.04	0.02	0.01	0.07	0.00
16	NO3-N (mgN/L)	1.31	2.34	0.79	1.50	0.89
17	o-PO4-P (mg P/L)	0.010	0.103			
18	P-Tot (mgP/L)			0.140	0.019	0.032
19	SiO2 (mg/L)	11.6	16.0	11.6	11.5	13.4
20	SO4 (mg/L)	8.4	12.9	5.4	13.3	16.2
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	1.6	0.9	1.6	1.0
2	COD (mg/L)	7.5	9.9			
3	DO (mg/L)	5.8	5.9	5.7	6.0	5.9
4	DO_SAT% (%)	71	72	72	77	75
	TRACE & TOXIC					
1	As (µg/L)			11.56	7.50	4.22
2	Cd (µg/L)	0.62		11.00	2.00	0.55
3	Cr (µg/L)	3.75				
4	Cu (µg/L)	4.96		1.90	1.45	1.19
5	Hg (µg/L)					
6	Ni (µg/L)	2.21			2.29	
7	Pb (µg/L)	6.63				
8	Zn (µg/L)	3.75		12.00	3.00	7.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	54	67	32	36	53
2	HAR_Total (mgCaCO3/L)	95	105	55	67	91
3	Na% (%)	33	33	32	37	38
4	RSC (-)	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	1.0	1.0	0.7	1.0	1.2
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : MURAPPANADU (CT000H9)

Division : SR Division, Coimbatore

Local River : Thambraparani

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	8.594	9.625	6.455	6.833
2	EC_FLD (µmho/cm)	200	135	150	162
3	EC_GEN (µmho/cm)	173	156	152	134
4	pH_FLD (pH units)	7.4	7.4	7.5	7.6
5	pH_GEN (pH units)	7.5	7.5	7.5	7.5
6	TDS (mg/L)				
7	Temp (deg C)	29.7	28.3	29.0	25.2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	66	54	53	48
3	B (mg/L)	0.29	0.33	0.00	
4	Ca (mg/L)	15	12	15	12
5	Cl (mg/L)	29.0	22.7	21.8	18.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.20	0.32	0.12	0.33
8	Fe (mg/L)	0.012	0.245	0.073	0.010
9	HCO3 (mg/L)	80	66	65	59
10	K (mg/L)	2.3	1.6	2.4	2.3
11	Mg (mg/L)	8.1	5.8	4.5	4.5
12	Na (mg/L)	19.0	12.9	12.1	12.3
13	NH3-N (mg N/L)	0.11		0.00	
14	NO2+NO3 (mg N/L)				
15	NO2-N (mgN/L)				
16	NO3-N (mgN/L)	0.12	0.48	0.50	0.12
17	o-PO4-P (mg P/L)	0.021	0.062	0.000	
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)	14.3	13.2	17.6	
20	SO4 (mg/L)	5.9	1.1	5.6	4.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1.6	2.3	1.5	1.3
2	COD (mg/L)				
3	DO (mg/L)	6.1	5.7	5.8	5.8
4	DO_SAT% (%)	80	73	75	71
	TRACE & TOXIC				
1	As (µg/L)	1.71		0.54	1.03
2	Cd (µg/L)			0.02	0.03
3	Cr (µg/L)			0.82	15.44
4	Cu (µg/L)	1.73		3.52	0.13
5	Hg (µg/L)				
6	Ni (µg/L)	10.32			1.14
7	Pb (µg/L)			0.13	3.83
8	Zn (µg/L)			17.66	20.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	39	31	37	29
2	HAR_Total (mgCaCO3/L)	72	55	56	48
3	Na% (%)	35	33	32	34
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	1.0	0.7	0.7	0.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : MURAPPANADU (CT000H9)

Division : SR Division, Coimbatore

Local River : Thambraparani

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	6.348	7.213	10.14	13.23
2	EC_FLD (µmho/cm)	181	173	170	166
3	EC_GEN (µmho/cm)	200	173	183	167
4	pH_FLD (pH units)	7.5	7.7	7.9	7.2
5	pH_GEN (pH units)	7.3	7.7	8.0	7.4
6	TDS (mg/L)		78	105	95
7	Temp (deg C)	27.8	26.8	28.7	28.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	2.6	0.0
2	ALK-TOT (mgCaCO3/L)	73	57	50	44
3	B (mg/L)			0.00	0.10
4	Ca (mg/L)	20	15	15	15
5	Cl (mg/L)	22.9	20.8	28.3	23.0
6	CO3 (mg/L)	0.0	0.0	3.1	0.0
7	F (mg/L)	0.45	0.13	0.23	0.14
8	Fe (mg/L)	0.002	0.051	0.020	0.000
9	HCO3 (mg/L)	89	70	55	53
10	K (mg/L)	2.5	2.9	3.3	3.0
11	Mg (mg/L)	7.1	5.8	5.8	3.8
12	Na (mg/L)	14.0	12.9	17.5	15.4
13	NH3-N (mg N/L)	0.23	0.13	0.12	0.05
14	NO2+NO3 (mg N/L)			1.14	2.18
15	NO2-N (mgN/L)			0.00	0.00
16	NO3-N (mgN/L)	0.10	0.23	1.14	2.18
17	o-PO4-P (mg P/L)			0.023	0.043
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)			17.1	12.0
20	SO4 (mg/L)	5.6	3.6	6.5	6.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.7	1.2	1.6	1.9
2	COD (mg/L)	3.7	6.0	11.8	13.8
3	DO (mg/L)	5.8	6.1	6.1	5.5
4	DO_SAT% (%)	74	75	78	70
	TRACE & TOXIC				
1	As (µg/L)	0.70	3.14		
2	Cd (µg/L)	0.19	0.05		
3	Cr (µg/L)	0.75	1.12		
4	Cu (µg/L)	1.42	2.19		
5	Hg (µg/L)	0.24			
6	Ni (µg/L)	8.49	10.19		
7	Pb (µg/L)	1.65	0.85		
8	Zn (µg/L)	1.11	8.00		
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	49	38	37	38
2	HAR_Total (mgCaCO3/L)	79	63	61	54
3	Na% (%)	27	30	37	37
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	0.7	0.7	1.0	0.9
	PESTICIDES				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: A.P.PURAM	Code	: CTA00J1
State	: Tamil Nadu	District	: Tirunelveli
Basin	: EFR South of Cauvery	Independent River	: Thambraparani
Tributary	: Chittar	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Chittar
Division	: SR Division, Coimbatore	Sub-Division	: Vaigai SD, Madurai
Drainage Area	: 1095 Sq. Km.	Bank	: Right
Latitude	: 08°54'05"	Longitude	: 77°38'55"
Zero of Gauge (m)	: 63 (m.s.l) 61 (m.s.l)	11/06/1978 01/06/1980	- 31/05/1980
	Opening Date	Closing Date	
Gauge	: 11/06/1978		
Discharge	: 01/12/1979		
Sediment	:		
Water Quality	: 01/06/1993		

Water Quality Datasheet for the period : 2015-2016

Station Name : A.P.PURAM (CTA00J1)

Division : SR Division, Coimbatore

Local River : Chittar

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/06/2015	01/07/2015	01/08/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	0.072	0.058	0.049
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	2947	3219	3488
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_GEN (pH units)	8.0	7.8	8.2
6	TDS (mg/L)	1713	1867	1989
7	Temp (deg C)	27.0	27.0	27.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	248	343	216
3	B (mg/L)	0.50	0.00	
4	Ca (mg/L)	70	132	178
5	Cl (mg/L)	718.1	762.8	866.0
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	1.46	1.55	
8	Fe (mg/L)	0.050	0.000	0.020
9	HCO3 (mg/L)	302	418	264
10	K (mg/L)	11.1	11.8	11.9
11	Mg (mg/L)	129.0	132.8	95.3
12	Na (mg/L)	389.0	398.0	454.0
13	NH3-N (mg N/L)	0.00	0.02	0.25
14	NO2+NO3 (mg N/L)	4.10	4.33	5.15
15	NO2-N (mgN/L)	0.00	0.00	0.00
16	NO3-N (mgN/L)	4.10	4.33	5.15
17	o-PO4-P (mg P/L)	0.030	0.020	0.020
18	SiO2 (mg/L)	62.5	58.0	49.9
19	SO4 (mg/L)	186.5	206.6	244.2
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)	18.9	24.2	17.4
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	175	329	444
2	HAR_Total (mgCaCO3/L)	712	883	841
3	Na% (%)	54	49	54
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	6.4	5.9	6.8
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : A.P.PURAM (CTA00J1)

Division : SR Division, Coimbatore

Local River : Chittar

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/09/2015	01/10/2015	16/11/2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	0.000	0.000	0.357
2	Colour_Cod (-)			Clear
3	EC_GEN (µmho/cm)			2882
4	Odour_Code (-)			odour free
5	pH_GEN (pH units)			8.0
6	TDS (mg/L)			1677
7	Temp (deg C)			25.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)			0.0
2	ALK-TOT (mgCaCO3/L)			195
3	B (mg/L)			0.52
4	Ca (mg/L)			128
5	Cl (mg/L)			723.2
6	CO3 (mg/L)			0.0
7	F (mg/L)			
8	Fe (mg/L)			0.030
9	HCO3 (mg/L)			238
10	K (mg/L)			11.5
11	Mg (mg/L)			87.2
12	Na (mg/L)			388.0
13	NH3-N (mg N/L)			0.22
14	NO2+NO3 (mg N/L)			5.07
15	NO2-N (mgN/L)			0.00
16	NO3-N (mgN/L)			5.07
17	o-PO4-P (mg P/L)			0.250
18	SiO2 (mg/L)			42.4
19	SO4 (mg/L)			227.8
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)			20.0
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)			320
2	HAR_Total (mgCaCO3/L)			683
3	Na% (%)			55
4	RSC (-)			0.0
5	SAR (-)			6.5
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : A.P.PURAM (CTA00J1)

Division : SR Division, Coimbatore

Local River : Chittar

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/12/2015	01/01/2016	01/02/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	12.010	3.857	0.085
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	637	640	2452
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_GEN (pH units)	8.2	7.5	7.7
6	TDS (mg/L)	369	365	1395
7	Temp (deg C)	24.5	24.5	23.5
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	161	122	299
3	B (mg/L)	0.11	0.16	0.51
4	Ca (mg/L)	39	52	66
5	Cl (mg/L)	109.6	121.4	518.6
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.50	0.62	1.46
8	Fe (mg/L)	0.030	0.050	0.000
9	HCO3 (mg/L)	196	149	364
10	K (mg/L)	9.9	5.4	10.1
11	Mg (mg/L)	26.8	17.2	97.7
12	Na (mg/L)	58.1	65.0	291.0
13	NH3-N (mg N/L)	0.06	0.65	0.45
14	NO2+NO3 (mg N/L)	3.91	2.78	6.58
15	NO2-N (mgN/L)	0.00	0.19	0.01
16	NO3-N (mgN/L)	3.91	2.59	6.57
17	o-PO4-P (mg P/L)	0.200	0.160	0.150
18	SiO2 (mg/L)	16.4	30.3	70.9
19	SO4 (mg/L)	30.5	33.7	158.1
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)	11.7	12.1	11.1
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	99	130	166
2	HAR_Total (mgCaCO3/L)	210	202	573
3	Na% (%)	36	40	52
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	1.7	2.0	5.3
	PESTICIDES			

Water Quality Datasheet for the period : 2015-2016

Station Name : A.P.PURAM (CTA00J1)

Division : SR Division, Coimbatore

Local River : Chittar

Sub-Division : Vaigai SD, Madurai

River Water Analysis

S.No	Parameters	01/03/2016	01/04/2016	02/05/2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	0.085	0.063	0.067
2	Colour_Cod (-)	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	2592	2861	2961
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_GEN (pH units)	7.6	7.6	7.9
6	TDS (mg/L)	1486	1625	1673
7	Temp (deg C)	24.0	26.0	28.5
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	221	292	273
3	B (mg/L)	0.54	0.47	0.53
4	Ca (mg/L)	86	149	96
5	Cl (mg/L)	618.7	651.4	716.9
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	1.39	1.52	1.31
8	Fe (mg/L)	0.000	0.000	0.000
9	HCO3 (mg/L)	269	356	333
10	K (mg/L)	10.4	11.5	11.4
11	Mg (mg/L)	98.2	82.9	115.3
12	Na (mg/L)	335.0	343.0	377.0
13	NH3-N (mg N/L)	0.49	0.10	0.00
14	NO2+NO3 (mg N/L)	9.76	9.10	6.01
15	NO2-N (mgN/L)	0.00	0.00	0.00
16	NO3-N (mgN/L)	9.76	9.10	6.01
17	o-PO4-P (mg P/L)	0.100	0.050	0.100
18	SiO2 (mg/L)	49.1	50.3	47.3
19	SO4 (mg/L)	175.7	177.0	189.5
	BIOLOGICAL/BACTERIOLOGICAL			
1	COD (mg/L)	14.3	25.5	27.7
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	216	373	240
2	HAR_Total (mgCaCO3/L)	625	719	720
3	Na% (%)	54	51	53
4	RSC (-)	0.0	0.0	0.0
5	SAR (-)	5.9	5.6	6.1
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : A.P.PURAM (CTA00J1)

Division : SR Division, Coimbatore

Local River : Chittar

Sub-Division : Vaigai SD, Madurai

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	67.53	0.000	1.400
2	EC_GEN (µmho/cm)	10	3488	637	2468
3	pH_GEN (pH units)	10	8.2	7.5	7.8
4	TDS (mg/L)	10	1989	365	1416
5	Temp (deg C)	10	28.5	23.5	25.7
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	10	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	10	343	122	237
3	B (mg/L)	9	0.54	0.00	0.37
4	Ca (mg/L)	10	178	39	100
5	Cl (mg/L)	10	866.0	109.6	580.7
6	CO3 (mg/L)	10	0.0	0.0	0
7	F (mg/L)	8	1.55	0.50	1.23
8	Fe (mg/L)	10	0.050	0.000	0.018
9	HCO3 (mg/L)	10	418	149	289
10	K (mg/L)	10	11.9	5.4	10.5
11	Mg (mg/L)	10	132.8	17.2	88.2
12	Na (mg/L)	10	454.0	58.1	309.8
13	NH3-N (mg N/L)	10	0.65	0.00	0.22
14	NO2+NO3 (mg N/L)	10	9.76	2.78	5.68
15	NO2-N (mgN/L)	10	0.19	0.00	0.02
16	NO3-N (mgN/L)	10	9.76	2.59	5.66
17	o-PO4-P (mg P/L)	10	0.250	0.020	0.108
18	SiO2 (mg/L)	10	70.9	16.4	47.7
19	SO4 (mg/L)	10	244.2	30.5	163
	BIOLOGICAL/BACTERIOLOGICAL				
1	COD (mg/L)	10	27.7	11.1	18.3
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	10	444	99	249
2	HAR_Total (mgCaCO3/L)	10	883	202	617
3	Na% (%)	10	55	36	50
4	RSC (-)	10	0.0	0.0	0
5	SAR (-)	10	6.8	1.7	5.2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : A.P.PURAM (CTA00J1)

Division : SR Division, Coimbatore

Local River : Chittar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2005	2006	2007	2008	2009
	PHYSICAL					
1	Q (cumec)	0.008	0.013	0.023	0.033	0.012
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	3430	3455	2583	2508	2620
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.9	8.1	8.2	8.5	8.2
6	TDS (mg/L)					
7	Temp (deg C)		25.0	24.1	24.3	24.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	4.0	19.2	0.0
2	ALK-TOT (mgCaCO3/L)	124	196	188	222	251
3	B (mg/L)	0.62	0.47	0.38	0.47	0.54
4	Ca (mg/L)	144	108	82	67	82
5	Cl (mg/L)	965.3	875.0	624.7	614.5	648.1
6	CO3 (mg/L)	0.0	0.0	4.8	27.9	0.0
7	F (mg/L)	0.78	1.08	1.03	1.38	1.58
8	Fe (mg/L)	0.076	0.078	0.082	0.093	0.040
9	HCO3 (mg/L)	151	239	219	219	306
10	K (mg/L)	8.7	8.9	8.8	9.0	9.5
11	Mg (mg/L)	118.6	111.3	97.8	85.1	105.6
12	Na (mg/L)	439.0	425.0	325.1	332.3	366.5
13	NH3-N (mg N/L)	0.05	0.05	0.07	0.07	0.14
14	NO2+NO3 (mg N/L)	4.27	4.05	7.69	3.94	
15	NO2-N (mgN/L)	0.03	0.01	0.05	0.01	2.11
16	NO3-N (mgN/L)	4.24	4.04	7.64	3.93	2.10
17	o-PO4-P (mg P/L)				0.023	0.039
18	P-Tot (mgP/L)	0.031	0.038	0.071		
19	SiO2 (mg/L)	61.8	50.5	32.4	42.8	32.6
20	SO4 (mg/L)	181.4	245.8	154.8	156.7	189.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (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)	361	271	204	168	205
2	HAR_Total (mgCaCO3/L)	855	734	612	522	645
3	Na% (%)	53	55	53	58	55
4	SAR (-)	6.6	6.8	5.7	6.3	6.3
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : A.P.PURAM (CTA00J1)

Division : SR Division, Coimbatore

Local River : Chittar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood				
		Jun - Oct				
		2010	2011	2012	2013	2014
	PHYSICAL					
1	Q (cumec)	0.004	0.000	0.007	0.007	0.007
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	1620		3080	344	457
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.1		7.7	7.9	7.9
6	TDS (mg/L)					244
7	Temp (deg C)	27.5		27.5	24.5	25.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0		0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	248		346	63	100
3	B (mg/L)	0.58				
4	Ca (mg/L)	93		199	32	26
5	Cl (mg/L)	280.8		683.1	64.5	76.8
6	CO3 (mg/L)	0.0		0.0	0.0	0.0
7	F (mg/L)	1.33		0.72	0.29	0.39
8	Fe (mg/L)	0.114				
9	HCO3 (mg/L)	303		422	77	122
10	K (mg/L)	8.1		9.1	5.5	5.2
11	Mg (mg/L)	91.4		63.2	9.6	23.4
12	Na (mg/L)	186.0		360.5	33.6	39.9
13	NH3-N (mg N/L)	0.01			0.12	0.02
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)	2.28		1.29	1.09	2.23
17	o-PO4-P (mg P/L)	0.000				
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	108.7				
20	SO4 (mg/L)	287.8		212.2	29.4	36.3
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)				20.0	11.1
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)					
8	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	232		497	79	66
2	HAR_Total (mgCaCO3/L)	613		760	119	163
3	Na% (%)	40		51	37	34
4	SAR (-)	3.3		5.7	1.3	1.4
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : A.P.PURAM (CTA00J1)

Division : SR Division, Coimbatore

Local River : Chittar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Flood	Winter			
		Jun - Oct	Nov - Feb			
		2015	2005-2006	2006-2007	2007-2008	2008-2009
	PHYSICAL					
1	Q (cumec)	0.036	0.064	5.210	0.128	0.115
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	3218	2720	908	1819	1537
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	8.0	7.8	7.9	8.1	7.9
6	TDS (mg/L)	1856				
7	Temp (deg C)	27.0		21.8	22.5	22.4
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	269	206	171	237	287
3	B (mg/L)	0.25	0.54	0.44	0.37	0.27
4	Ca (mg/L)	126	109	53	74	73
5	Cl (mg/L)	782.3	657.8	162.9	388.0	331.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	6.0
7	F (mg/L)	1.50	0.93	0.89	1.05	1.20
8	Fe (mg/L)	0.023	0.091	0.087	0.080	0.079
9	HCO3 (mg/L)	328	252	209	289	334
10	K (mg/L)	11.6	8.2	8.3	6.8	8.1
11	Mg (mg/L)	119.0	106.2	29.6	64.4	63.1
12	Na (mg/L)	413.7	302.1	93.4	196.6	194.1
13	NH3-N (mg N/L)	0.09	0.08	0.07	0.06	
14	NO2+NO3 (mg N/L)	4.53	3.64	6.91	3.26	
15	NO2-N (mgN/L)	0.00	0.06	0.05	0.05	
16	NO3-N (mgN/L)	4.53	3.58	6.86	3.21	1.69
17	o-PO4-P (mg P/L)	0.023				0.010
18	P-Tot (mgP/L)		0.118	0.114	0.030	
19	SiO2 (mg/L)	56.8	42.4	26.0	35.2	5.0
20	SO4 (mg/L)	212.4	144.6	57.2	122.8	83.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)	20.2				
	TRACE & TOXIC					
1	As (µg/L)					
2	Cd (µg/L)					
3	Cr (µg/L)					
4	Cu (µg/L)					
5	Hg (µg/L)					
6	Ni (µg/L)					
7	Pb (µg/L)					
8	Zn (µg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	316	273	131	184	181
2	HAR_Total (mgCaCO3/L)	812	715	255	452	444
3	Na% (%)	52	48	42	48	48
4	SAR (-)	6.4	4.9	2.4	4.0	4.0
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : A.P.PURAM (CTA00J1)

Division : SR Division, Coimbatore

Local River : Chittar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Winter				
		Nov - Feb				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	PHYSICAL					
1	Q (cumec)	0.092	0.036	0.067	0.031	0.008
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	1633	1917	1390	2347	475
4	pH_FLD (pH units)					
5	pH_GEN (pH units)	7.8	7.7	7.5	7.4	7.3
6	TDS (mg/L)					
7	Temp (deg C)	22.8	21.2	21.6	25.0	24.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	4.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	283	211	233	252	122
3	B (mg/L)	0.71	0.40			
4	Ca (mg/L)	77	99	81	143	41
5	Cl (mg/L)	372.1	470.3	338.4	557.1	72.7
6	CO3 (mg/L)	4.8	0.0	0.0	0.0	0.0
7	F (mg/L)	1.14	1.64	1.00	0.49	0.54
8	Fe (mg/L)	0.110	0.000	0.080		
9	HCO3 (mg/L)	336	257	285	308	148
10	K (mg/L)	7.0	8.4	6.4	8.7	6.4
11	Mg (mg/L)	63.8	84.0	51.5	63.5	17.2
12	Na (mg/L)	217.5	246.5	186.4	293.8	37.8
13	NH3-N (mg N/L)	0.09	0.05			0.05
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)	3.83				
16	NO3-N (mgN/L)	3.05	4.72	3.27	0.97	0.02
17	o-PO4-P (mg P/L)	0.077	0.000			
18	P-Tot (mgP/L)					
19	SiO2 (mg/L)	35.9	44.2			
20	SO4 (mg/L)	94.8	171.1	108.5	155.9	36.4
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)				35.6	30.0
	TRACE & TOXIC					
1	As (µg/L)			0.47		
2	Cd (µg/L)			0.21		
3	Cr (µg/L)			3.32		
4	Cu (µg/L)			18.55		
5	Hg (µg/L)					
6	Ni (µg/L)			3.15		
7	Pb (µg/L)			11.77		
8	Zn (µg/L)			23.10		
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	193	247	203	358	103
2	HAR_Total (mgCaCO3/L)	459	597	418	623	174
3	Na% (%)	50	46	49	50	31
4	SAR (-)	4.4	4.3	3.9	5.1	1.2
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : A.P.PURAM (CTA00J1)

Division : SR Division, Coimbatore

Local River : Chittar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Winter		Summer		
		Nov - Feb		Mar - May		
		2014-2015	2015-2016	2006	2007	2008
	PHYSICAL					
1	Q (cumec)	0.449	4.077	0.063	0.043	0.982
2	EC_FLD (µmho/cm)	2382				
3	EC_GEN (µmho/cm)	1510	1653	2950	2343	1540
4	pH_FLD (pH units)	8.4				
5	pH_GEN (pH units)	7.9	7.9	7.9	7.9	8.3
6	TDS (mg/L)	850	952			
7	Temp (deg C)	25.3	24.4		24.0	24.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	4.8	0.0	0.0	0.0	8.7
2	ALK-TOT (mgCaCO3/L)	195	194	266	271	262
3	B (mg/L)	0.08	0.32	0.74	0.41	0.35
4	Ca (mg/L)	63	71	100	86	55
5	Cl (mg/L)	329.9	368.2	694.6	573.9	282.4
6	CO3 (mg/L)	5.8	0.0	0.0	0.0	10.4
7	F (mg/L)	0.72	0.86	1.13	1.11	1.06
8	Fe (mg/L)	0.012	0.027	0.105	0.096	0.080
9	HCO3 (mg/L)	226	237	324	330	298
10	K (mg/L)	9.0	9.2	8.2	10.1	7.5
11	Mg (mg/L)	59.6	57.2	111.6	81.8	53.1
12	Na (mg/L)	174.5	200.5	344.7	285.2	174.8
13	NH3-N (mg N/L)	0.23	0.34	0.13	0.08	0.06
14	NO2+NO3 (mg N/L)	4.19	4.59	3.44	6.11	2.50
15	NO2-N (mgN/L)	0.01	0.05	0.02	0.04	0.01
16	NO3-N (mgN/L)	3.42	4.54	3.42	6.07	2.49
17	o-PO4-P (mg P/L)	0.020	0.190			
18	P-Tot (mgP/L)			0.041	0.155	1.227
19	SiO2 (mg/L)	31.3	40.0	62.3	35.9	32.2
20	SO4 (mg/L)	88.4	112.5	164.2	115.5	87.7
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					
2	COD (mg/L)	24.4	13.7			
	TRACE & TOXIC					
1	As (µg/L)			57.14	29.03	17.73
2	Cd (µg/L)	7.78		15.00	7.00	1.08
3	Cr (µg/L)	8.20				
4	Cu (µg/L)	5.10		4.22	1.74	2.30
5	Hg (µg/L)					
6	Ni (µg/L)	1.33		29.41	10.53	
7	Pb (µg/L)	5.09			3.85	4.82
8	Zn (µg/L)	2.45		13.00	5.00	13.00
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	156	179	249	214	136
2	HAR_Total (mgCaCO3/L)	405	417	714	555	358
3	Na% (%)	47	46	51	53	51
4	SAR (-)	3.7	3.9	5.6	5.3	4.0
	PESTICIDES					

Water Quality Seasonal Average for the period: 2005-2016

Station Name : A.P.PURAM (CTA00J1)

Division : SR Division, Coimbatore

Local River : Chittar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2009	2010	2011	2012
	PHYSICAL				
1	Q (cumec)	0.075	0.060	0.008	0.054
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)	1953	2010	1380	1880
4	pH_FLD (pH units)				
5	pH_GEN (pH units)	7.9	7.8	7.4	7.9
6	TDS (mg/L)				
7	Temp (deg C)	22.7	24.0	26.5	25.2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)		296	176	324
3	B (mg/L)	0.78	0.79		
4	Ca (mg/L)	54	77	85	78
5	Cl (mg/L)	498.7	503.7	305.4	471.1
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	1.32	1.18	0.81	0.95
8	Fe (mg/L)	0.046	0.098		0.010
9	HCO3 (mg/L)	315	361	215	395
10	K (mg/L)	7.7	7.6	7.6	7.9
11	Mg (mg/L)	73.9	86.8	46.7	73.2
12	Na (mg/L)	291.4	273.8	158.5	301.0
13	NH3-N (mg N/L)	0.14			
14	NO2+NO3 (mg N/L)				
15	NO2-N (mgN/L)				
16	NO3-N (mgN/L)	2.06	2.42	2.62	1.21
17	o-PO4-P (mg P/L)	0.034	0.069		
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)	27.7	53.7		
20	SO4 (mg/L)	134.6	162.0	101.7	157.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)				
2	COD (mg/L)				
	TRACE & TOXIC				
1	As (µg/L)	50.61		1.12	1.26
2	Cd (µg/L)			0.03	0.19
3	Cr (µg/L)	4.78		5.93	17.12
4	Cu (µg/L)	5.53		3.35	5.98
5	Hg (µg/L)				
6	Ni (µg/L)	34.61			5.80
7	Pb (µg/L)	1.21		0.51	13.24
8	Zn (µg/L)			65.29	352.00
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	136	192	212	195
2	HAR_Total (mgCaCO3/L)	477	554	407	500
3	Na% (%)	58	52	45	56
4	SAR (-)	6.1	5.1	3.4	5.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2005-2016

Station Name : A.P.PURAM (CTA00J1)

Division : SR Division, Coimbatore

Local River : Chittar

Sub-Division : Vaigai SD, Madurai

River Water

S.No	Parameters	Summer			
		Mar - May			
		2013	2014	2015	2016
	PHYSICAL				
1	Q (cumec)	0.000	8.837	0.051	0.072
2	EC_FLD (µmho/cm)				
3	EC_GEN (µmho/cm)		311	2856	2805
4	pH_FLD (pH units)				
5	pH_GEN (pH units)		7.1	8.0	7.7
6	TDS (mg/L)		165	1641	1595
7	Temp (deg C)		24.0	26.2	26.2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)		81	279	262
3	B (mg/L)			0.45	0.51
4	Ca (mg/L)		31	100	111
5	Cl (mg/L)		45.4	668.4	662.3
6	CO3 (mg/L)		0.0	0.0	0.0
7	F (mg/L)		0.27	1.35	1.41
8	Fe (mg/L)		0.053	0.003	0.000
9	HCO3 (mg/L)		99	341	319
10	K (mg/L)		5.3	11.1	11.1
11	Mg (mg/L)		11.4	99.1	98.8
12	Na (mg/L)		24.4	365.0	351.7
13	NH3-N (mg N/L)		0.09	0.21	0.20
14	NO2+NO3 (mg N/L)			4.78	8.29
15	NO2-N (mgN/L)			0.01	0.00
16	NO3-N (mgN/L)		1.45	4.77	8.29
17	o-PO4-P (mg P/L)			0.007	0.083
18	P-Tot (mgP/L)				
19	SiO2 (mg/L)			53.8	48.9
20	SO4 (mg/L)		30.3	179.1	180.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)			0.8	
2	COD (mg/L)		27.4	18.3	22.5
	TRACE & TOXIC				
1	As (µg/L)		0.02		
2	Cd (µg/L)		0.04		
3	Cr (µg/L)		1.03		
4	Cu (µg/L)		0.27		
5	Hg (µg/L)				
6	Ni (µg/L)		10.48		
7	Pb (µg/L)		0.27		
8	Zn (µg/L)		8.00		
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)		79	251	276
2	HAR_Total (mgCaCO3/L)		126	664	688
3	Na% (%)		29	54	52
4	SAR (-)		0.9	6.2	5.9
	PESTICIDES				

(केवल कार्यालय उपयोग हेतु)
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वार्षिक जल पुस्तिका
जल गुणवत्ता परिदृश्य
WATER YEAR BOOK
WATER QUALITY SCENARIO

जून 2015 – मई 2016
JUNE 2015 – MAY 2016

पूरब प्रवाही नदियाँ बेसिन
EAST FLOWING RIVERS BASIN



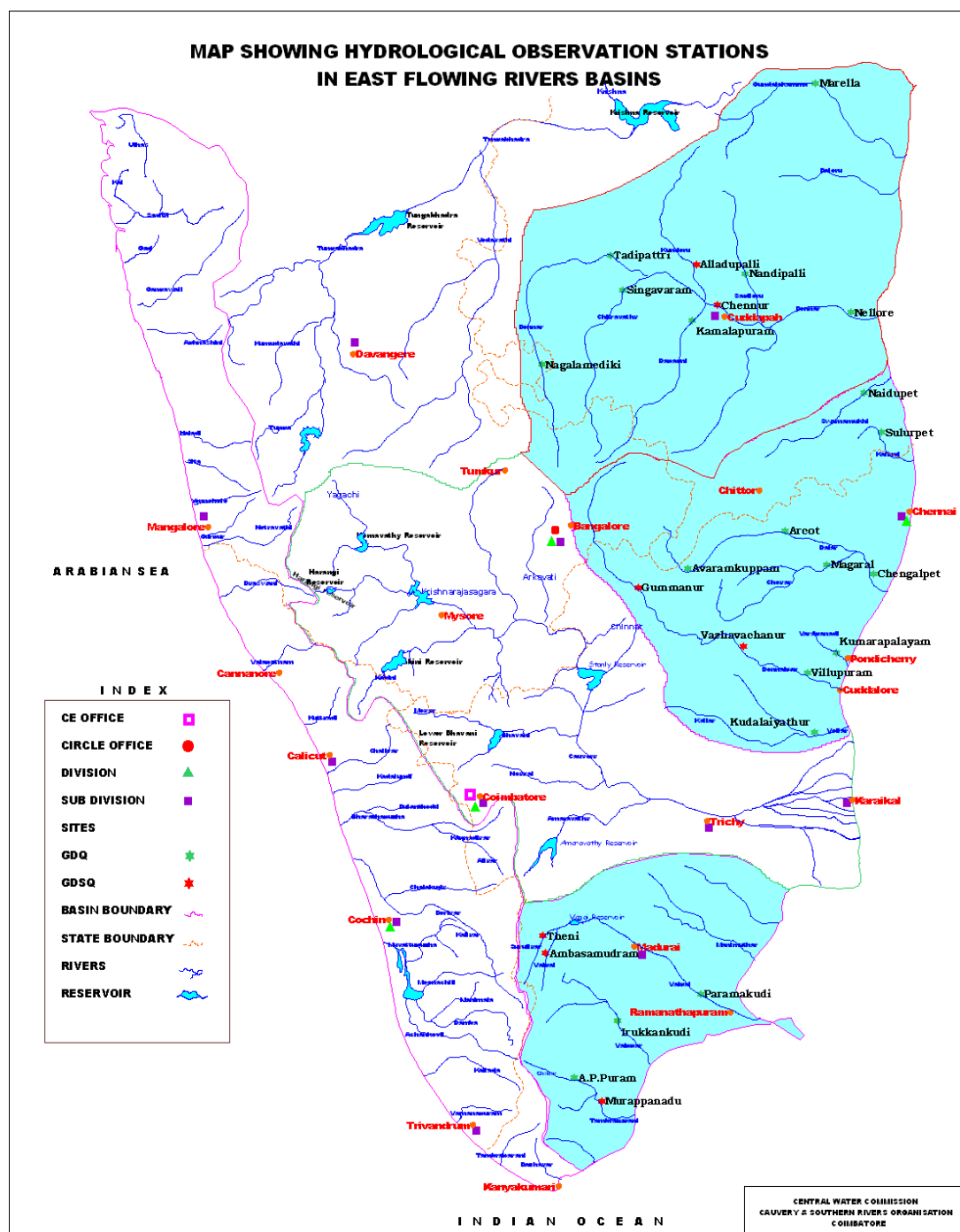
कावेरी एवं दक्षिणी नदियाँ परिमण्डल, बंगलुरु
CAUVERY & SOUTHERN RIVERS CIRCLE, BENGALURU

कावेरी एवं दक्षिणी नदियाँ संगठन, कोयम्बतूर
CAUVERY & SOUTHERN RIVERS ORGANISATION, COIMBATORE

मार्च- 2017
MARCH - 2017

1. INTRODUCTION:

The East Flowing Rivers (South of river Krishna excluding Cauvery Basin) cover large areas in the states of Andhra Pradesh, Tamilnadu and some parts of Karnataka and Union territory of Puducherry.



2. MAJOR RIVERS:

2.1. PENNAR RIVER BASIN

The Pennar River is one of the major East flowing rivers in Southern India. It rises in the Chennakesava hill of the Nandidurg range in Karnataka. The Pennar drains an area of 55,213 Sq.Kms in the states of Karnataka and Andhra Pradesh. The total length of Pennar River is 597 Km of which 61 Km runs in Karnataka and the rest in Andhra Pradesh. This river has six major tributaries viz., the Jayamangali, the Kunderu and the Sagileru joining from the left, the Chitravathi, the Papagini and the Cheyyeru joining on the right. There are eight water quality stations on Pennar river Basin i.e. the sites at **Nagalamadike, Tadipatri, Chennur and Nellore** in the main river, rest on the tributaries viz., Chitravathi at **Singavaram**, Kunderu at **Alladupalli**, Papagni at **Kamalapuram** and Sagileru at **Nandipalli**.

The tree structure of Pennar River Basin is at **Plate – 1**.

2.2. PALAR RIVER BASIN

River Palar rises in the Kolar District of Karnataka State. It has two tributaries viz., Poini and Cheyyar. The total length of the river is 348 Kms. Three out of four stations in Palar Basin are on the main river. They are **Chengalpet, Arcot and Avarankuppam**. The fourth station i.e. **Magaral** is on the tributary Cheyyar. The tree structure of Palar River is at **Plate – 2**.

2.3. PONNAIYAR RIVER BASIN

The Ponnaiyar or the Dakshina Pinakini River rises near Hongashenhalli village at an elevation of the about 900 m. above m.s.l. in the Kolar district of Karnataka. From its origin, the river Ponnaiyar generally flows in the Southern direction for a length of 79 Kms. through Kolar and Bangalore districts of Karnataka before entering the Dharmपुरi district of Tamil Nadu. The total length of the river is 326 Kms. The Ponnaiyar drains an area of 16,019 Sq.Kms. There are three water quality stations on this river at **Villupuram, Vazhavachanur and Gummanur**. The tree structure of Ponnaiyar River is at **Plate – 3**.

2.4. VAIGAI RIVER BASIN

River Vaigai originates in Theni district of Tamilnadu and traverses through the state draining in its course a total area of 7741 Sq.Kms. There are three water quality stations on Vaigai basin. Two are on the main river at **Paramakudi** and **Ambasamudram** and the third is on its tributary Suruliar at **Theni**. The river Vaigai remained practically dry throughout the year and had flow only during the North East monsoon. The tributary Suruliar had flow throughout the year. The tree structure of Vaigai River is at **Plate – 4**.

2.5. SWARNAMUKHI RIVER BASIN

The Swarnamukhi is an East Flowing river basin having a small catchment area of 3,225 Sq.Km. It rises at an elevation of 300 m. in the Eastern Ghat ranges near Pakala village in Chittur district of Andhra Pradesh. Its total length is 130 Km. This is an independent river and has no major tributaries and therefore its flow depends only on rainfall in its upper catchment.

The only site on this basin at **Naidupeta**.

2.6. VAIPPAR RIVER BASIN

Vaippar River originates from the Western Ghats near Sivagiri in Thirunelveli district in Tamilnadu. It drains an area of 5069 Sq.Kms and lies entirely in Tamilnadu. The river covers a distance of 125 Kms from its origin to its out-falling into the Gulf of Mannar near Kalattur. The water quality station on this river is located at **Irrukkankudi**.

2.7. THAMBRAPARANI RIVER BASIN

The Thambraparani River originating in the Thirunelveli district of Tamilnadu, traverses through the state and joins the Gulf of Mannar, covering a total length of 130 Km. and draining an area of 5482 Sq.Kms. Its two important tributaries are Chittar and Manimuthar. There are two water quality stations in this basin, one on the main river at **Murappanadu** and another on its tributary Chittar at **A.P.Puram**.

2.8. GUNDLAKAMMA RIVER BASIN

Gundlakamma River originates in the Kurnool district of Andhra Pradesh. The river has a total length of 220 Kms. from its origin to its out fall into the Bay of Bengal. This perennial river drains an area of 8494 Sq.Kms. The water quality station on this river is located presently at **Marella** and has been shifted from the earlier station 'Thammavaram' and the hydrological observations started at the present site with effect from 28/06/2007.

2.9. KALINGI RIVER BASIN

The river Kalingi is one of the East flowing rivers in Andhra Pradesh. It originates near Kalahasti in Andhra Pradesh and drains completely in Andhra Pradesh and joins Pulicat Lake after Sullurpet. The catchment area of Kalingi river is 5,927 Sq.Km and the length is 76 Km. The important tributary is Kalleru river which joins Kalingi river after Sullurpet town.

The only site on this basin at **Sullurpet**.

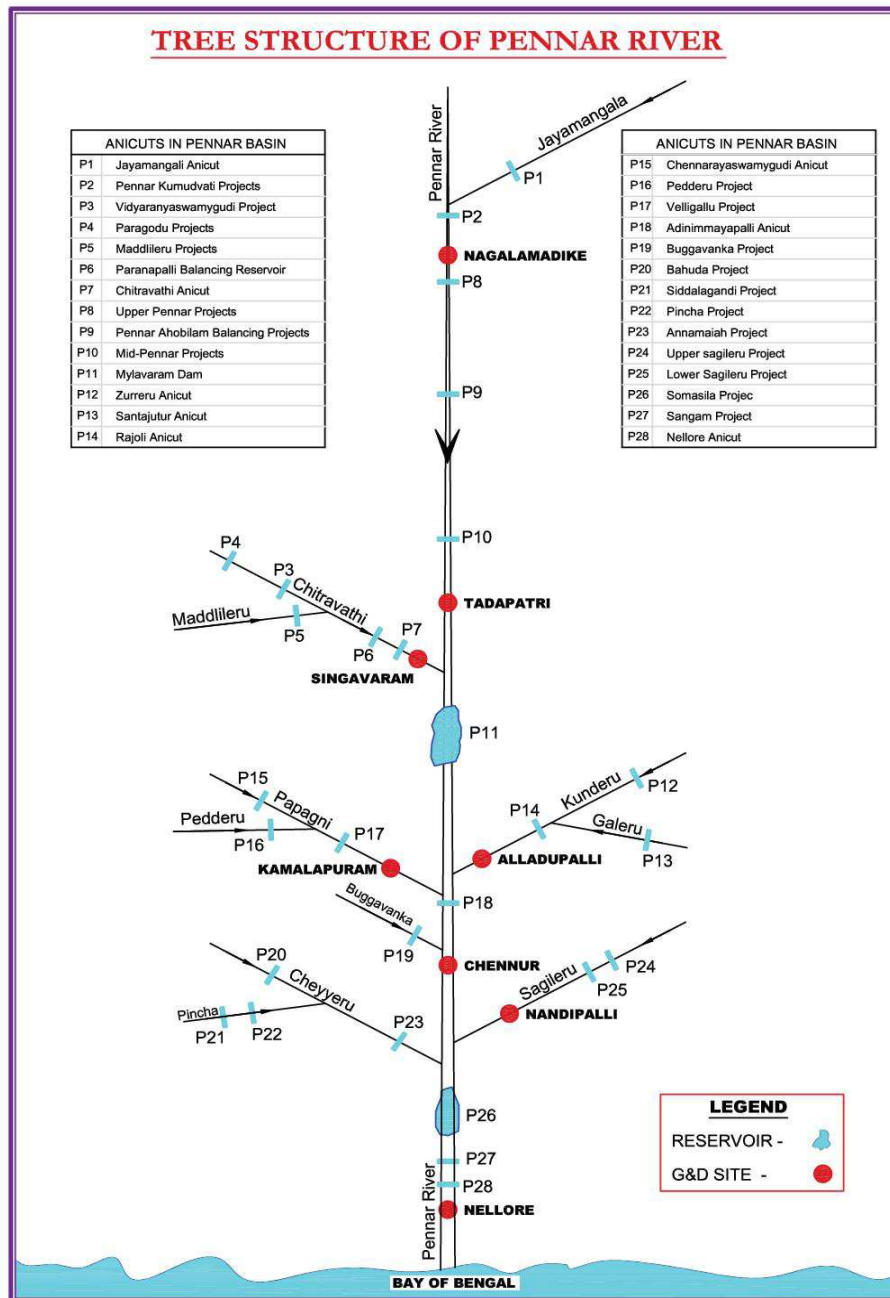
2.10. VELLAR RIVER BASIN

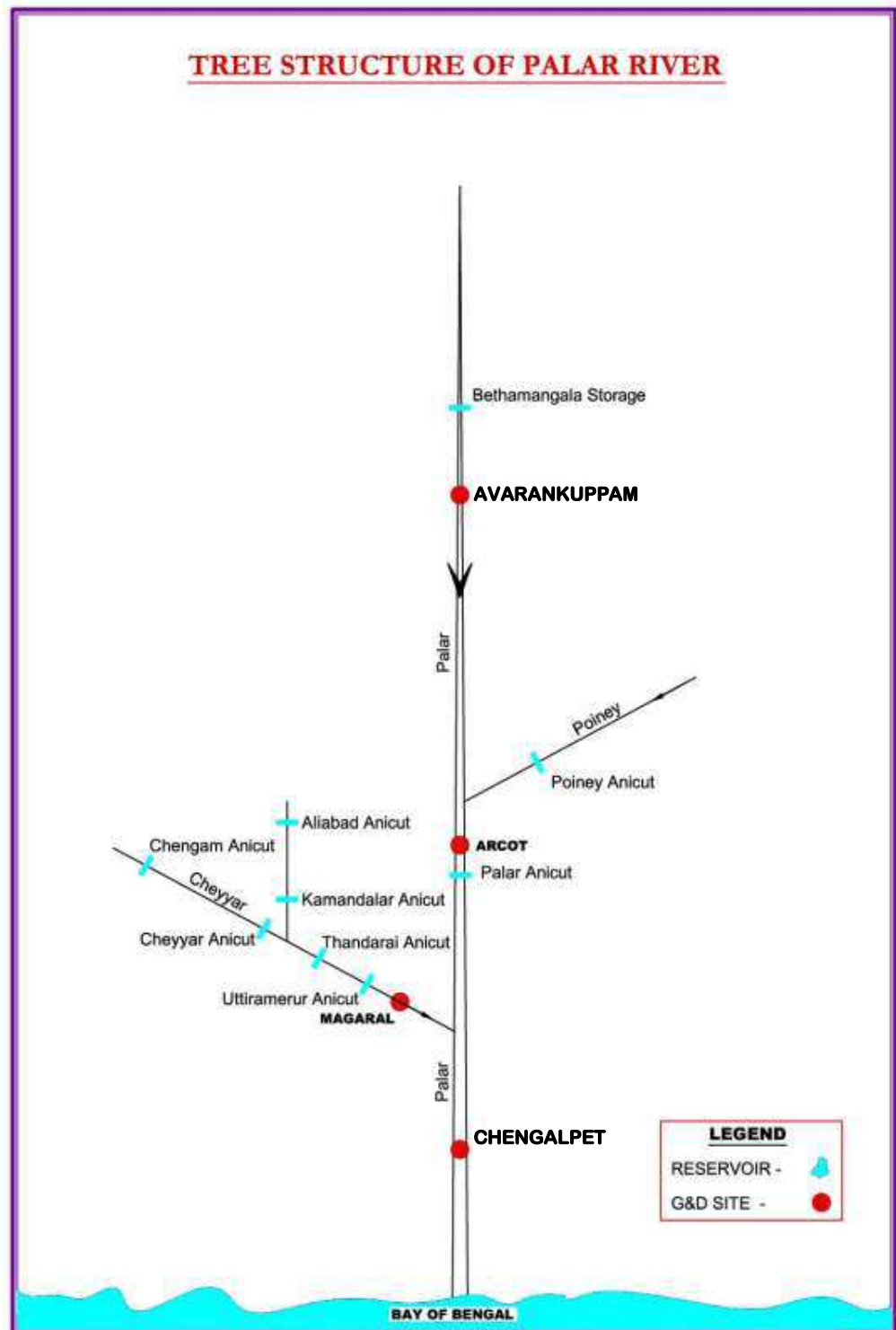
The basin is located between Ponnaiyar and Cauvery basins. The Vellar River rises at an elevation of 900 m near the village of Tumba in the Chittori hills, of the Eastern Ghats in the Salem district of Tamil Nadu. It flows generally in an Easterly direction for a total length of 210 Km in the Salem and Cuddalore districts in Tamil Nadu and finally out falls in to the Bay of Bengal near Porto Nova in Cuddalore district. The Gomukinadhi and Manimukthanadhi are the important left tributaries and Swetanadhi and Chinnar are the right tributaries of the Vellar. The Vellar drains an area of 8,922 Sq.Km. The only site on this basin at **Kudalaiyathur**

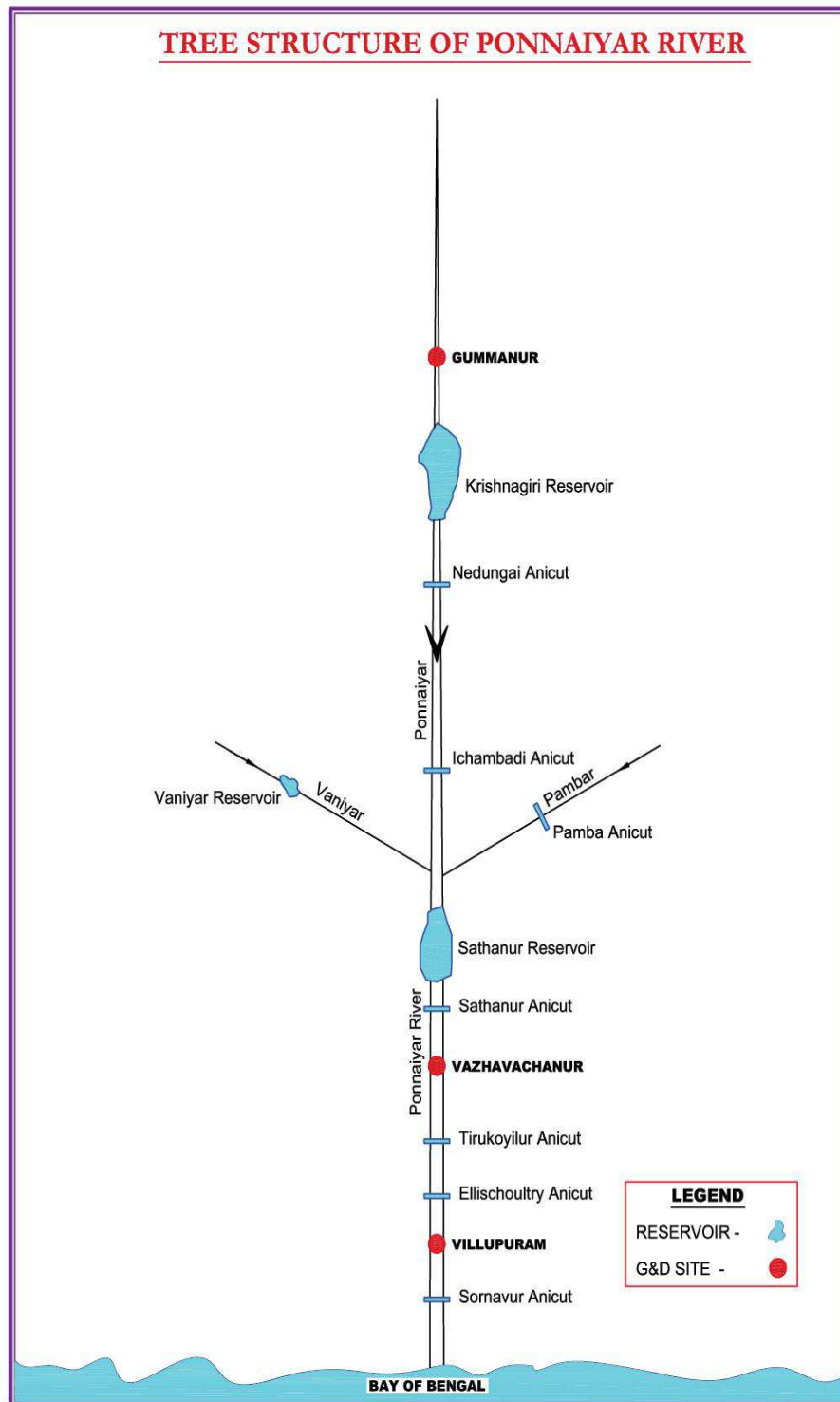
2.11. VARAHANADHI RIVER BASIN

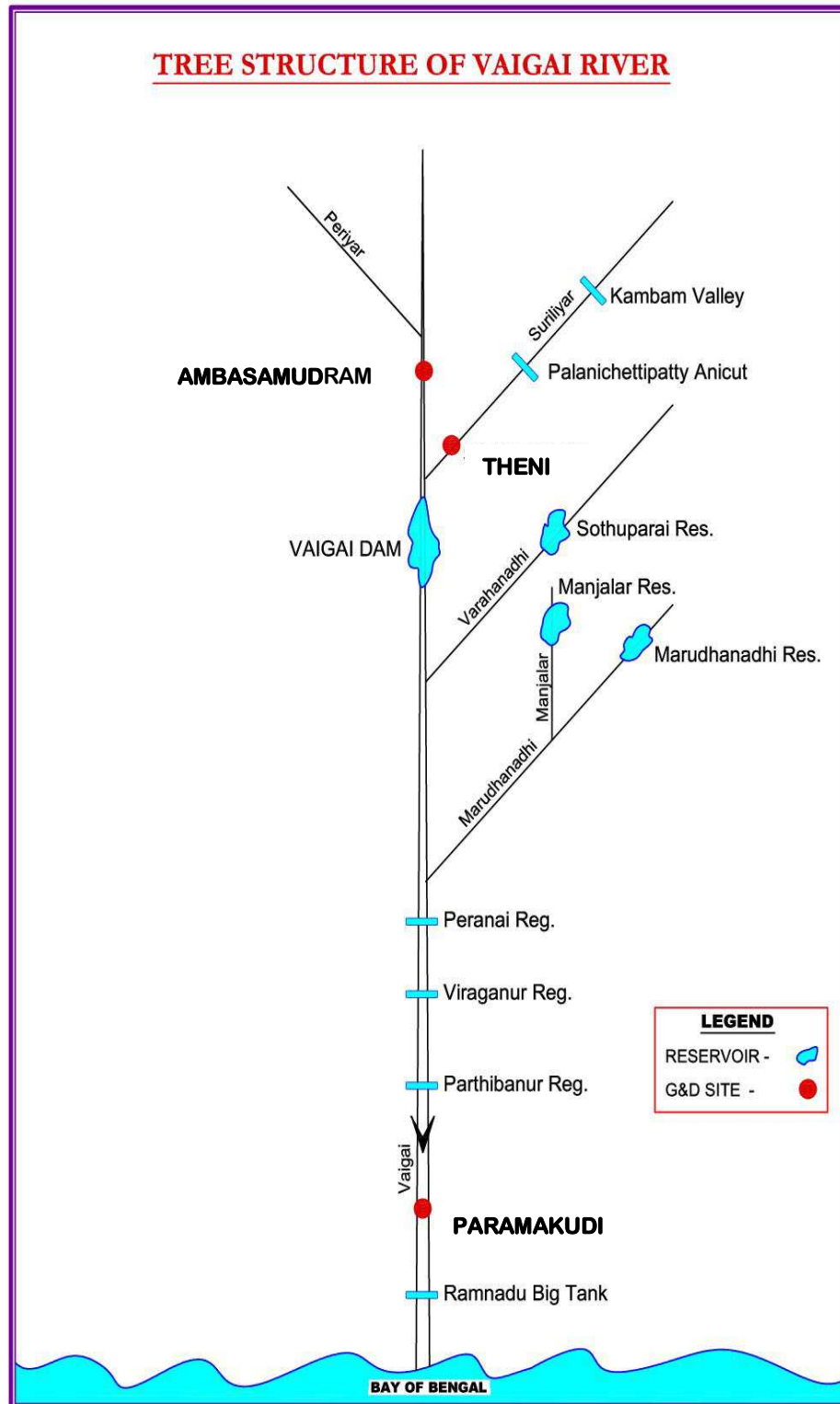
The main river Varahanadhi originates from the Northern part of Pakkammalai hills at an elevation of 566 m above m.s.l. The total drainage area of the basin is 2564 Sq.Kms. The river runs in Easterly direction up to Kodukkur and South-Easterly direction alternately in Tami Nadu and Puduchery states. The total length of

Varahanadhi up to its outfall into Bay of Bengal, a little South of Union territory Puduchery, is about 78.50 kms. The only site on this basin is at **Kumarapalayam**.









3. Water Quality Network:

River wise network details in East Flowing Rivers Basin

River	River Type	WQ Sites	Date of Opening	Drainage Area (Sq.Km)	State
Pennar	Main River	Nagalamadike	01/06/1980	5050	Karnataka
		Tadipatri	01/09/1979	12482	Andhra Pradesh
		Chennur	01/09/1989	37981	
		Nellore	01/09/1988	50800	
Chitravathi	Tributary	Singavaram	15/09/1981	6262	Andhra Pradesh
Kunderu	Tributary	Alladupalli	01/07/1987	8758	Andhra Pradesh
Papagni	Tributary	Kamalapuram	01/06/1994	7187	Andhra Pradesh
Sagileru	Tributary	Nandipalli	01/06/1994	2486	Andhra Pradesh
Palar	Main River	Avarankuppam	01/08/1979	3300	Tamil Nadu
		Arcot	01/06/1988	10174	
		Chengalpet	01/06/1979	16230	
Cheyar	Tributary	Magaral	01/11/1983	1803	Tamil Nadu
Ponnaiyar	Main River	Gummanur	20/09/1978	4620	Tamil Nadu
		Vazhavachanur	01/08/1978	10780	
		Villupuram	01/01/1987	12900	
Vaigai	Main River	Ambasamudram	01/08/1999	850	Tamil Nadu
		Paramakudi	05/11/1989	6796	
Suruliyar	Tributary	Theni	15/07/1978	1200	Tamil Nadu
Swarnamukhi	Main River	Naidupeta	01/12/1980	2650	Andhra Pradesh
Vaippar	Main River	Irrukkankudi	01/06/1993	3721	Tamil Nadu
Tambraparani	Main River	Murappanadu	15/08/1978	4380	Tamil Nadu
Chittar	Tributary	A.P. Puram	01/06/1993	1095	Tamil Nadu
Gundlakamma	Main River	Marella	01/09/2007	7681	Andhra Pradesh
Kalingi	Main River	Sulurpet	01/12/1988	5927	Andhra Pradesh
Vellar	Main River	Kudalaiyathur	01/06/1993	7890	Tamil Nadu
Varahanadi	Main River	Kumarapalayam	12/12/2005	2208	Pondicherry

4. Analysis:

Water Quality monitoring provides information on the physical, chemical and biological status of water resources. The river water quality monitoring is a part of hydrological observation of Central Water Commission. The objectives of the river water quality monitoring is to assess the suitability of river water for various designated uses viz, irrigation, drinking purposes, out- door bathing and propagation of wildlife and fisheries, water quality improving or degrading etc.

River Water Quality Data of sites on the main river for the period given in Table – 1 has been taken into consideration for studying the WQ Scenario of the Rivers. Average of yearly Maximum, Average of yearly Minimum and Annual Average for the period of Since Inception, Last 10 years i.e. 2005 – 2006 to 2014 – 2015 and One year (2015 – 2016) for the major parameters like Electrical conductivity, pH, Fluoride, Biochemical Oxygen Demand and Dissolved Oxygen are taken into consideration for concluding the WQ Scenario of Pennar, Palar and Ponnaiyar and Vaigai Rivers.

Table-1

River	WQ Site Name	Year of Inception	Last 10 years	Last One Year
Pennar	Nagalamdike	1995 - 1996	2005-06 to 2014-15	2015 - 2016
	Tadipatri	1995 - 1996	2005-06 to 2014-15	2015 - 2016
	Chennur	1995 - 1996	2005-06 to 2014-15	2015 - 2016
	Nellore	1995 - 1996	2005-06 to 2014-15	2015 - 2016
Palar	Avarankuppam	1980 - 1981	2005-06 to 2014-15	2015 - 2016
	Arcot	1995 - 1996	2005-06 to 2014-15	2015 - 2016
	Chengalpet	1995 - 1996	2005-06 to 2014-15	2015 - 2016
Ponnaiyar	Gummanur	1978 - 1979	2005-06 to 2014-15	2015 - 2016
	Vazhavachanur	1995 - 1996	2005-06 to 2014-15	2015 - 2016
	Villupuram	1995 - 1996	2005-06 to 2014-15	2015 - 2016
Vaigai	Ambasamudram	1999 - 2000	2005-06 to 2014-15	2015 - 2016
	Paramakudi	1987 - 1988	2005-06 to 2014-15	2015 - 2016

WQ Scenario of these Rivers is concluded with relation to the Tolerance limits of selected pollution indicating parameters for inland surface waters designated for different uses as prescribed by the Bureau of Indian Standards (BIS IS: 2296-1982) which is shown in Annexure - IV and Drinking Water Specification as prescribed by Bureau of Indian Standards (IS 10500: 2012) which is shown in Annexure - V.

4.1 Pennar River:

The water quality scenario is being presented in pictorial graph among the sites **Nagalamadike, Tadipatri, Chennur** and **Nellore** on river Pennar under East Flowing Rivers Basin. The data details considered for water quality trend study from upstream to downstream of Pennar River is given below.

4.1.1 Electrical Conductivity (EC) (µmhos/cm)

EC values for the period considered is given in Table - 2 and their graphical representation is given in Figure - 1.1, Figure - 1.2 & Figure - 1.3.

Table – 2

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Nagalamadike	535	153	NA	327	153	NA	404	153	NA
Tadipatri	727	528	NA	380	349	NA	561	447	NA
Chennur	1445	1412	1540	447	452	251	878	855	980
Nellore	900	689	544	430	480	179	610	579	389

Figure - 1.1

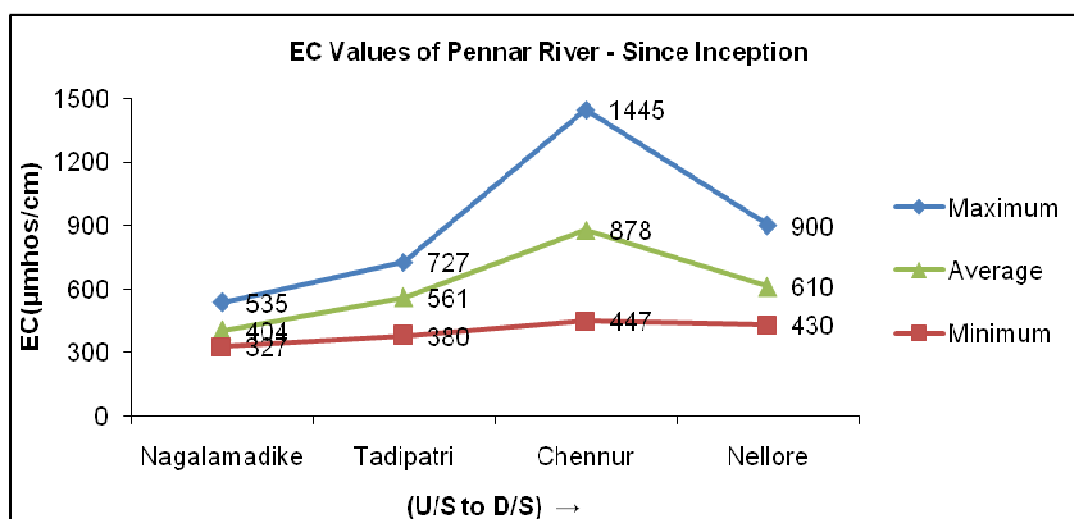


Figure - 1.2

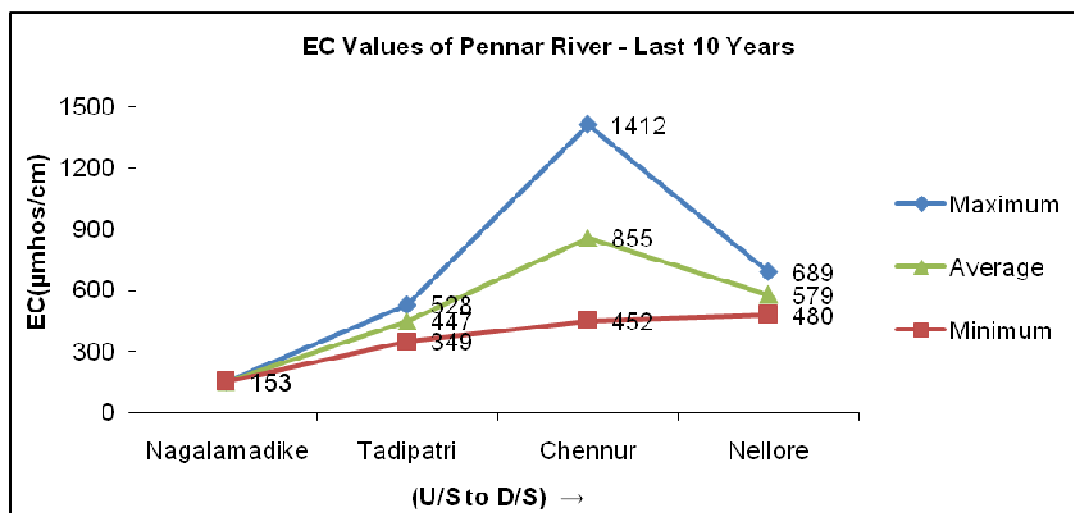
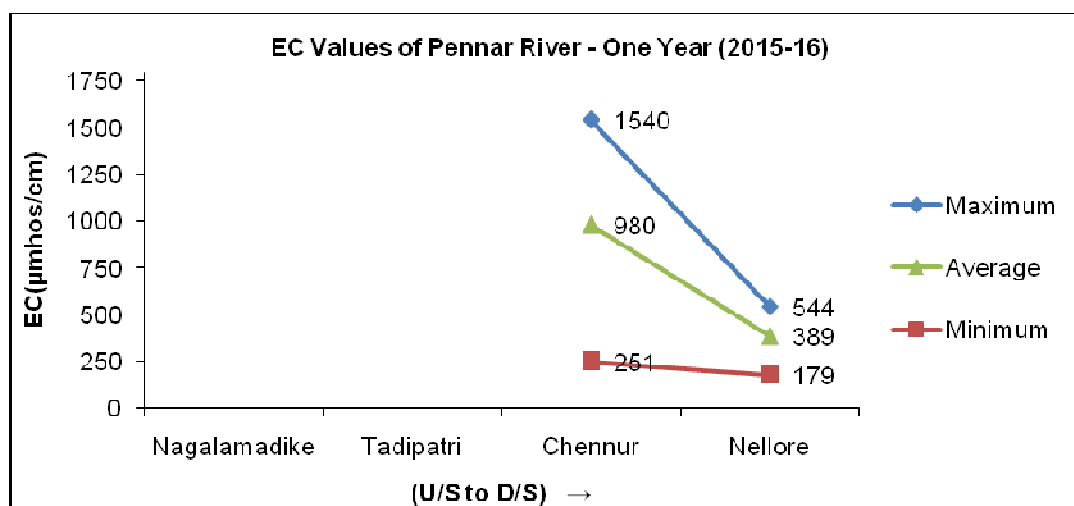


Figure - 1.3



4.1.2 pH

pH values for the period considered is given in Table - 3 and their graphical representation is given in Figure - 2.1, Figure - 2.2 & Figure - 2.3.

Table – 3

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Nagalamadike	7.8	7.5	NA	7.6	7.5	NA	7.7	7.5	NA
Tadipatri	8.4	8.5	NA	8.1	8.2	NA	8.2	8.4	NA
Chennur	8.4	8.5	8.1	7.5	7.5	7.3	8.0	8.0	7.8
Nellore	8.3	8.3	8.0	7.5	7.6	7.2	7.9	8.0	7.5

Figure - 2.1

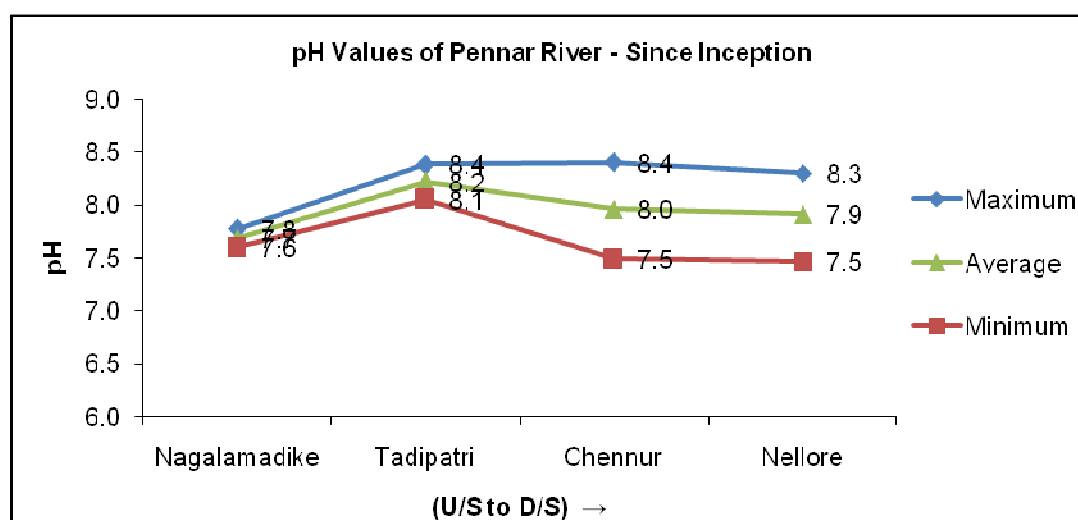


Figure - 2.2

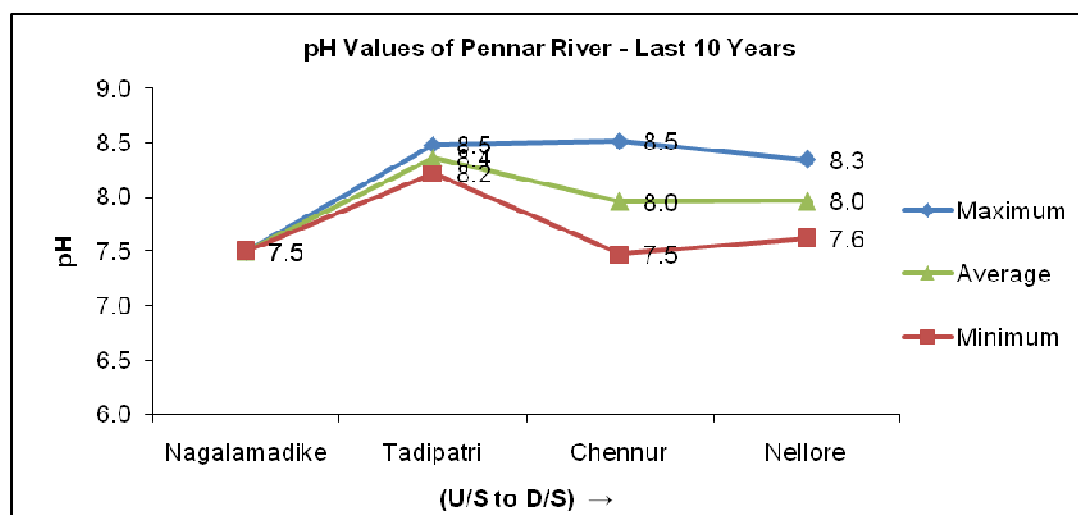
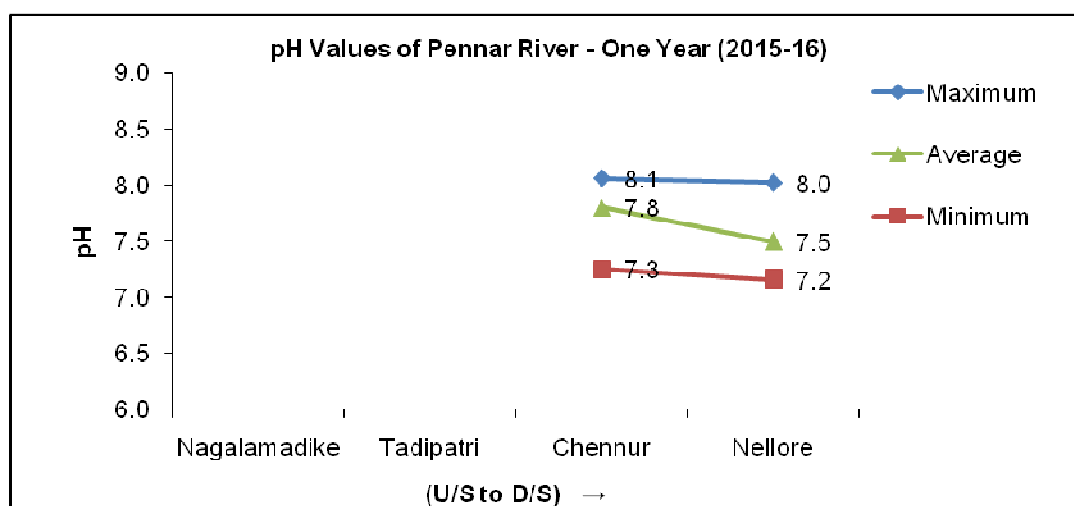


Figure - 2.3



4.1.3 Fluoride, mg/L

Fluoride values for the period considered is given in Table - 4 and their graphical representation is given in Figure - 3.1, Figure - 3.2 & Figure - 3.3.

Table – 4

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Nagalamadike	0.65	0.17	NA	0.50	0.17	NA	0.57	0.17	NA
Tadipatri	1.05	0.86	NA	0.56	0.68	NA	0.78	0.78	NA
Chennur	2.47	0.99	0.82	0.44	0.47	0.58	0.86	0.70	0.69
Nellore	1.14	1.39	0.39	0.38	0.43	0.25	0.67	0.71	0.34

Figure - 3.1

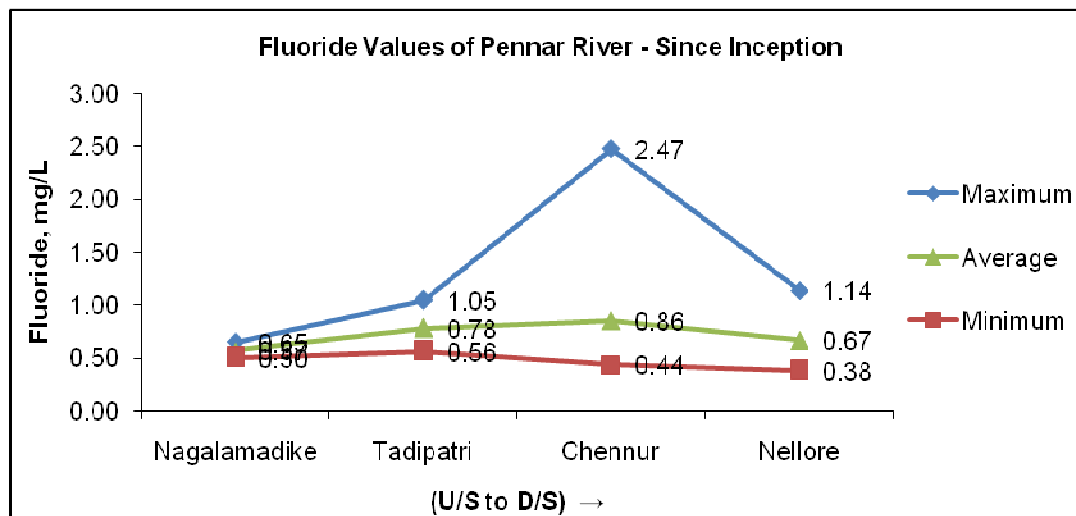


Figure - 3.2

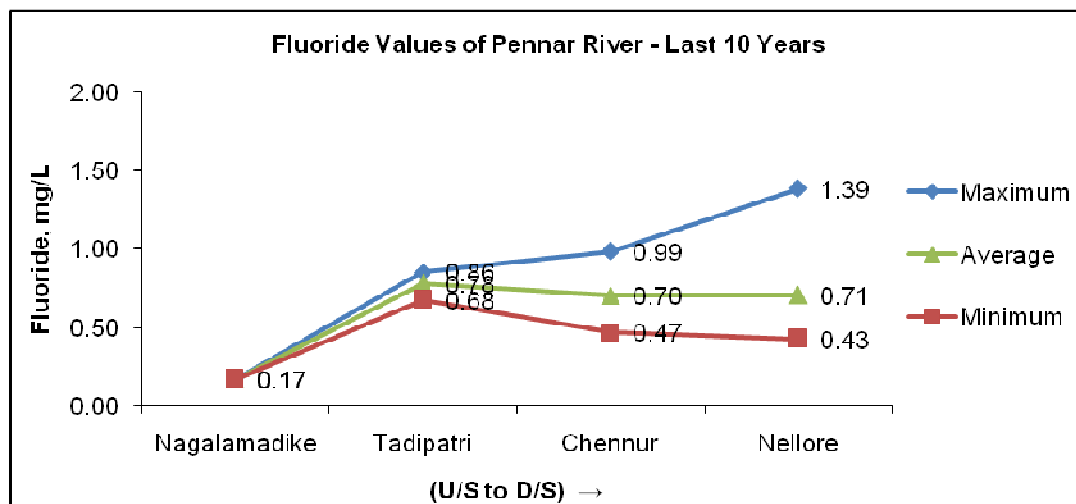
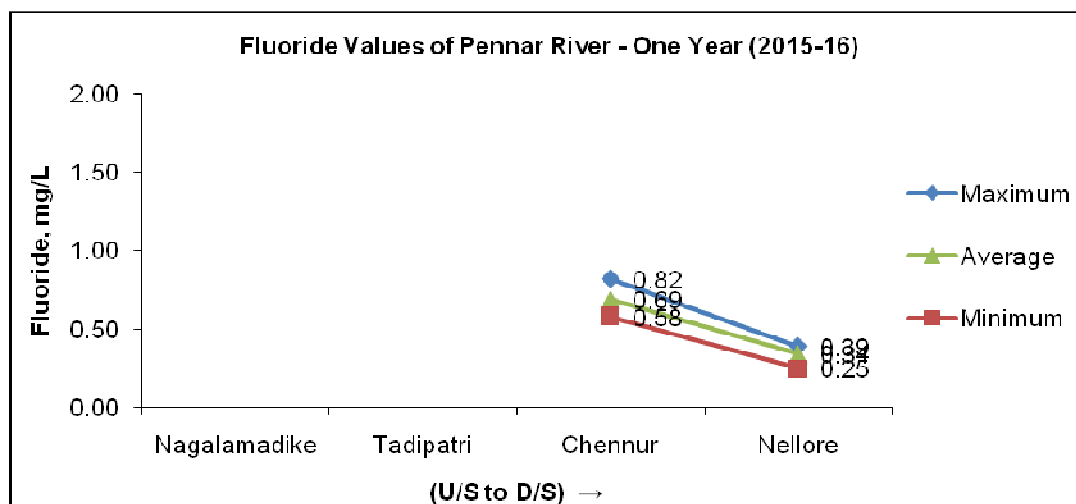


Figure - 3.3



4.1.4 BOD, mg/L

Biochemical Oxygen Demand (BOD) values for the period considered is given in Table - 5 and their graphical representation is given in Figure - 4.1, Figure - 4.2 & Figure - 4.3.

Table – 5

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Nagalamadike	0.7	0.7	NA	0.7	0.7	NA	0.7	0.7	NA
Tadipatri	1.8	1.8	NA	1.4	1.4	NA	1.6	1.6	NA
Chennur	2.9	2.9	2.9	0.6	0.5	0.7	1.6	1.6	1.8
Nellore	2.8	2.8	2.4	0.7	0.7	0.6	1.7	1.7	1.4

Figure - 4.1

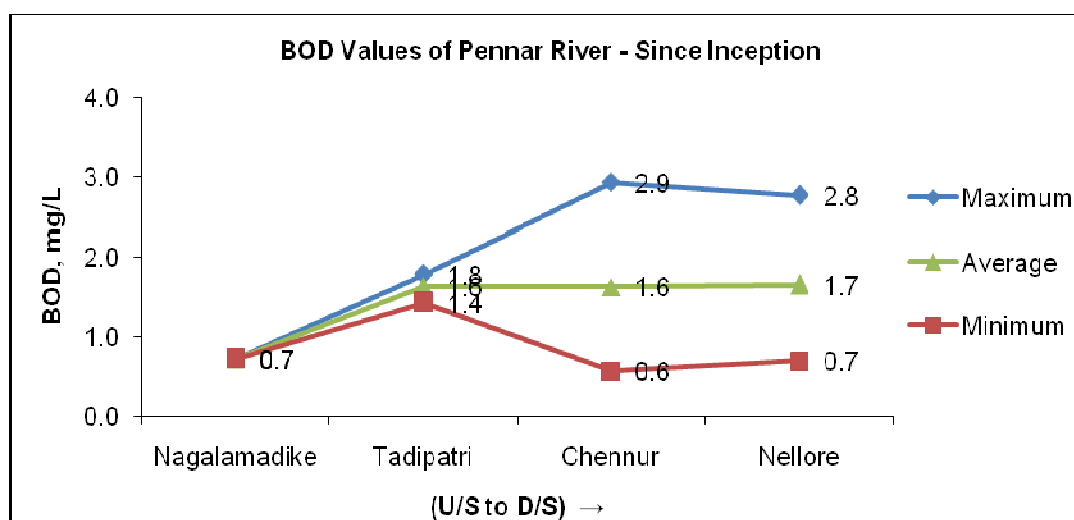


Figure - 4.2

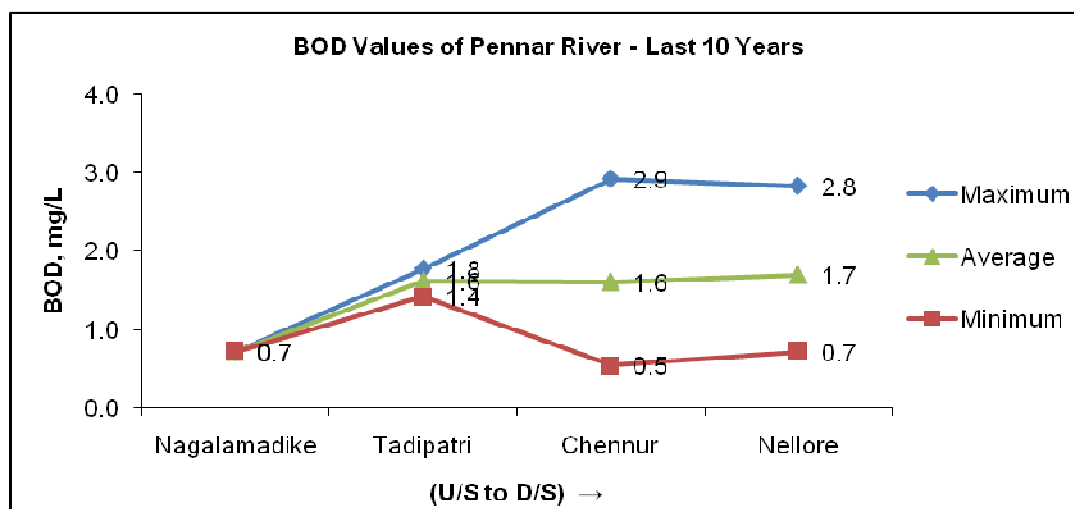
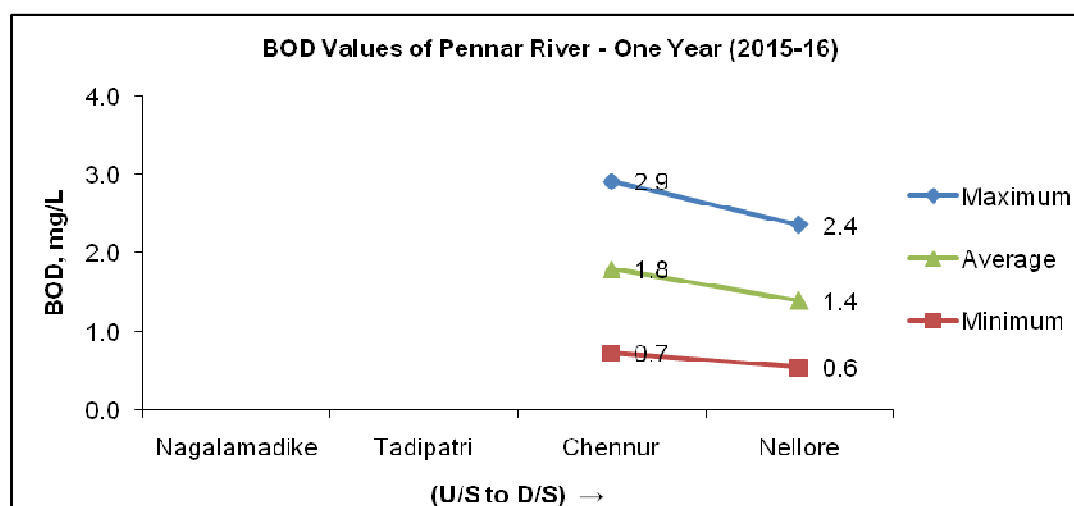


Figure - 4.3



4.1.5 DO, mg/L

Dissolved Oxygen (DO) values for the period considered is given in Table - 6 and their graphical representation is given in Figure - 5.1, Figure - 5.2 & Figure - 5.3.

Table - 6

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Nagalamadike	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tadipatri	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chennur	7.2	7.2	7.1	5.7	5.7	5.9	6.5	6.5	6.5
Nellore	7.2	7.9	6.5	4.8	4.7	4.9	5.9	6.1	5.7

Figure - 5.1

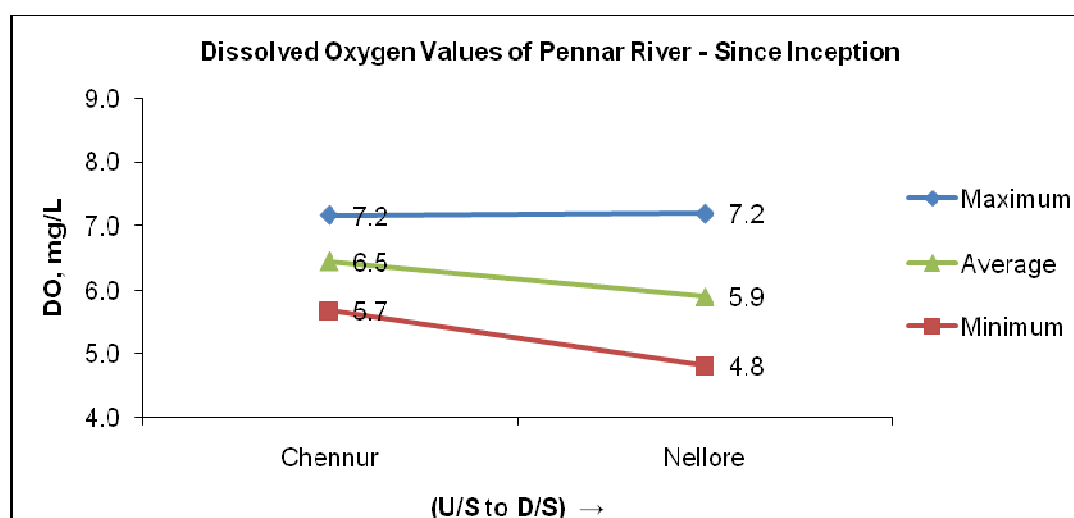


Figure - 5.2

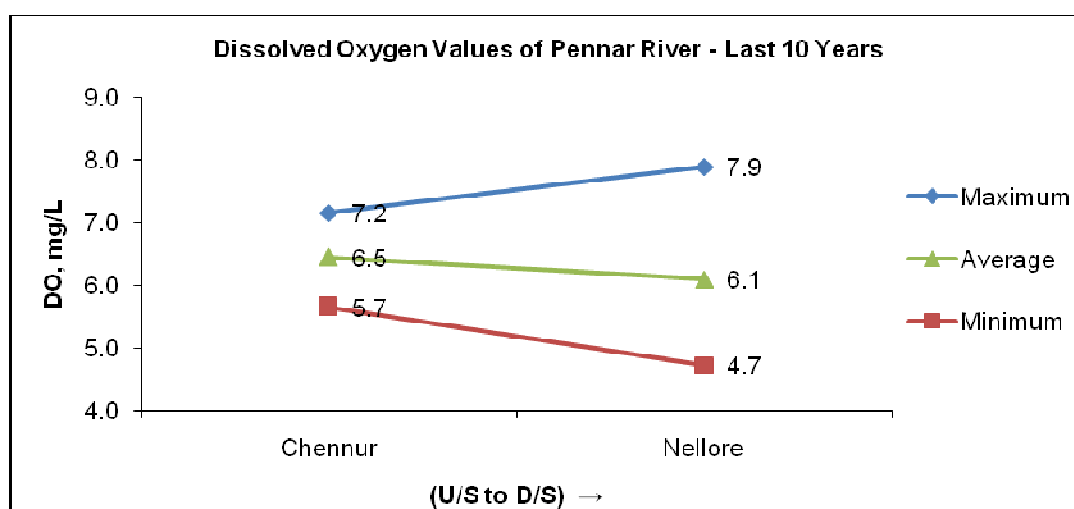
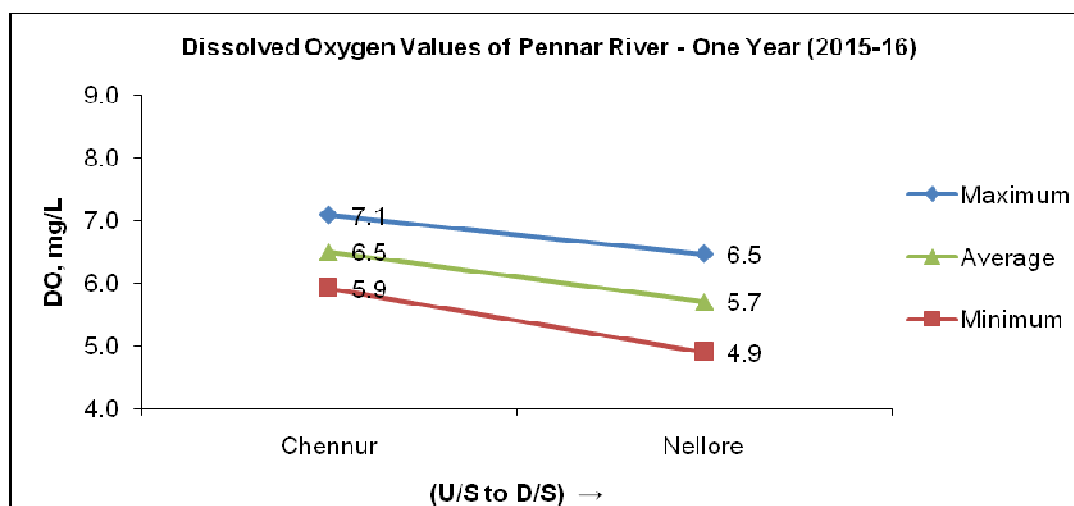


Figure - 5.3



5.1 General Remarks / Conclusion about Water Quality Trend:

Trends of the river Pennar with its tributaries are as follows:

In Pennar river basin the ionic concentration is gradually increasing from upstream to downstream. From Origin to site Tadipatri, the Electrical Conductivity is low and within the tolerance limit. The water of Pennar Basin is generally alkaline in nature but within the tolerance limit of BIS. The Fluoride concentration of Pennar basin is mostly within the tolerance limit. BOD and DO values of Pennar basin are mostly within the tolerance limit of BIS.

As far as the Water Quality is concerned, it is found that the water quality of River Pennar shows deteriorating trend from site Nagalamdike to Site Chennur due to direct human activities which can be seen from the above graphs and then improves

gradually up to site Nellore the downstream site which may be due to self purification of the river in its own course before its confluence into the sea.

4.2 Palar River:

The water quality scenario is being presented in pictorial graph among the sites **Avarankuppam**, **Arcot** and **Chengalpet** on river Palar under East Flowing Rivers Basin. The data details considered for water quality trend study from upstream to downstream of Palar River is given below.

4.2.1 Electrical Conductivity (EC) ($\mu\text{mhos/cm}$)

EC values for the period considered is given in Table - 7 and their graphical representation is given in Figure - 6.1, Figure - 6.2 & Figure - 6.3.

Table – 7

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Avarankuppam	886	910	664	441	535	402	669	728	533
Arcot	1659	1623	1345	1029	1172	758	1338	1379	1005
Chengalpet	606	585	674	365	341	172	492	471	407

Figure - 6.1

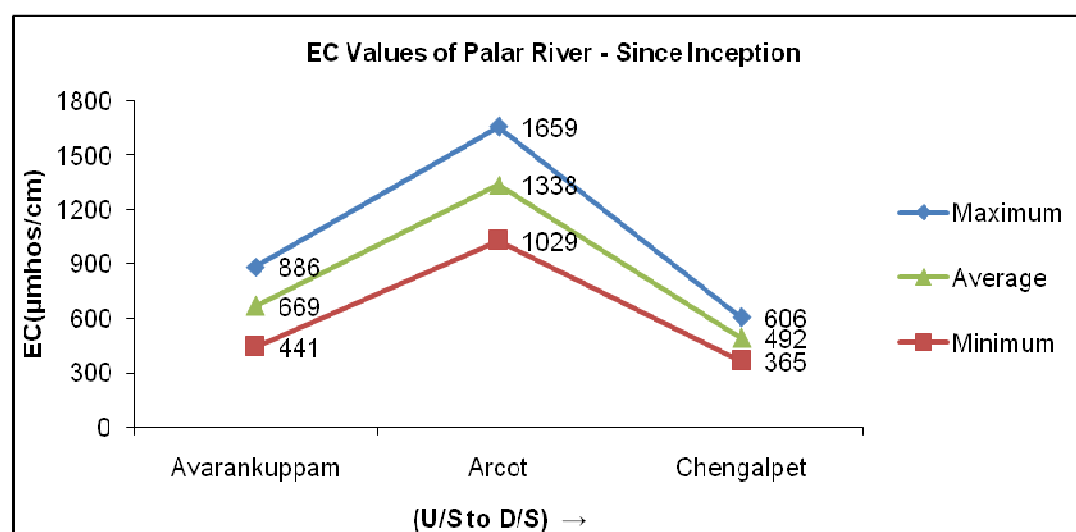


Figure - 6.2

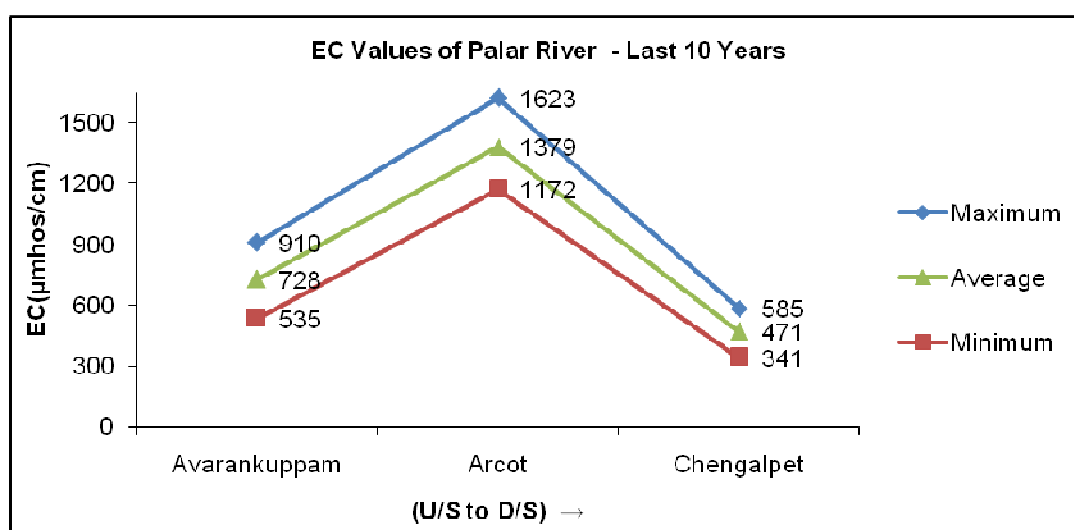
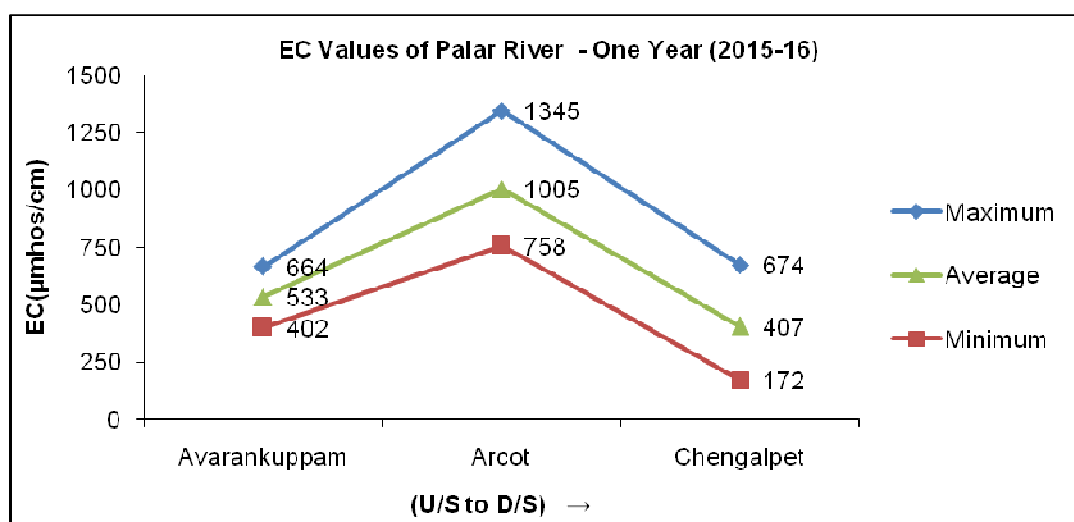


Figure - 6.3



4.2.2 pH

pH values for the period considered is given in Table - 8 and their graphical representation is given in Figure - 7.1, Figure - 7.2 & Figure - 7.3.

Table – 8

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Avarankuppam	8.5	8.5	8.3	7.8	7.9	7.8	8.2	8.2	8.1
Arcot	8.2	7.8	8.1	7.7	7.5	7.6	8.0	7.7	7.8
Chengalpet	8.2	8.0	8.5	7.5	7.3	7.4	7.9	7.7	7.9

Figure - 7.1

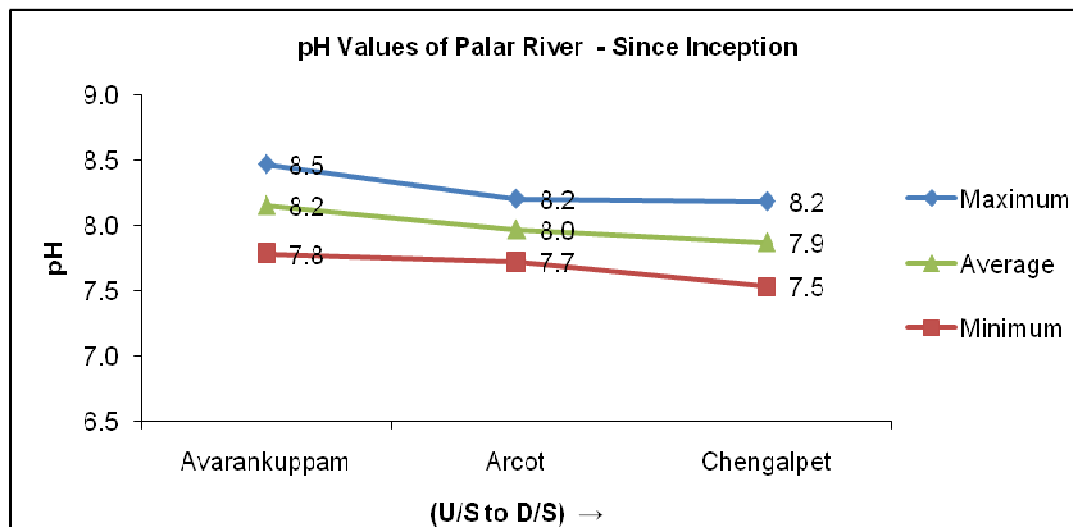


Figure - 7.2

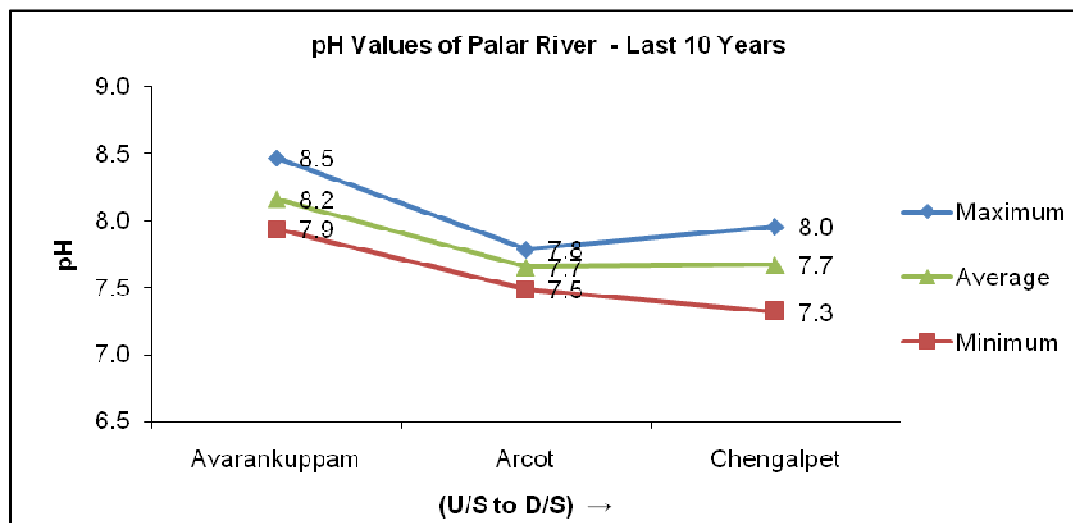
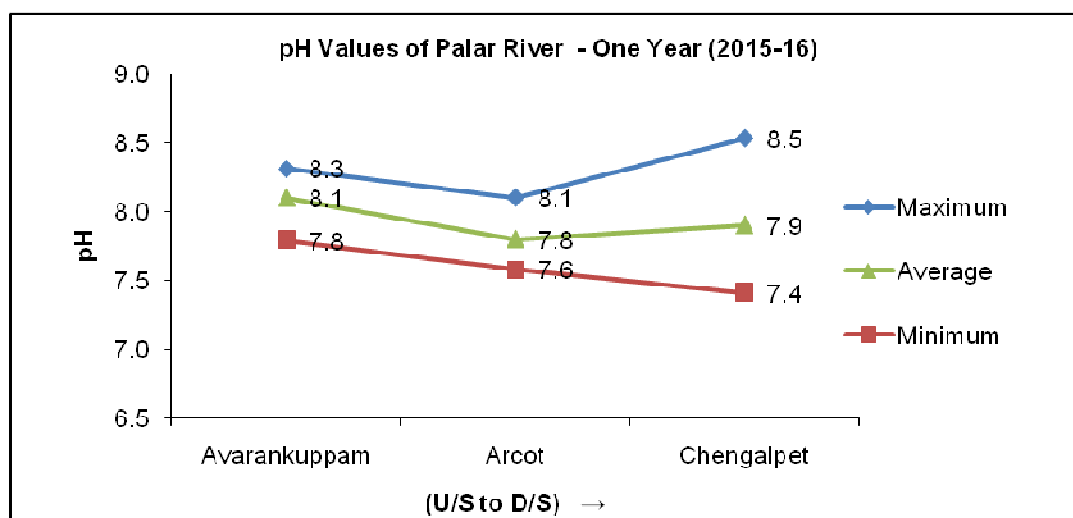


Figure - 7.3



4.2.3 Fluoride, mg/L

Fluoride values for the period considered is given in Table - 9 and their graphical representation is given in Figure - 8.1, Figure - 8.2 & Figure - 8.3.

Table – 9

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Avarankuppam	1.61	1.48	0.86	0.72	0.81	0.60	1.13	1.09	0.73
Arcot	0.95	1.26	0.42	0.58	0.93	0.35	0.74	1.07	0.39
Chengalpet	0.75	0.51	0.36	0.33	0.30	0.21	0.51	0.41	0.29

Figure - 8.1

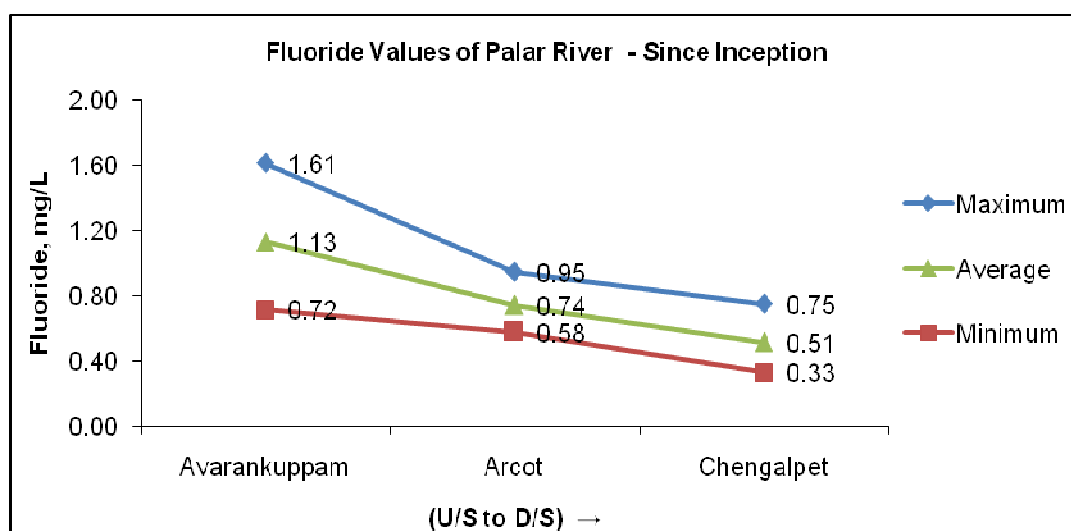


Figure - 8.2

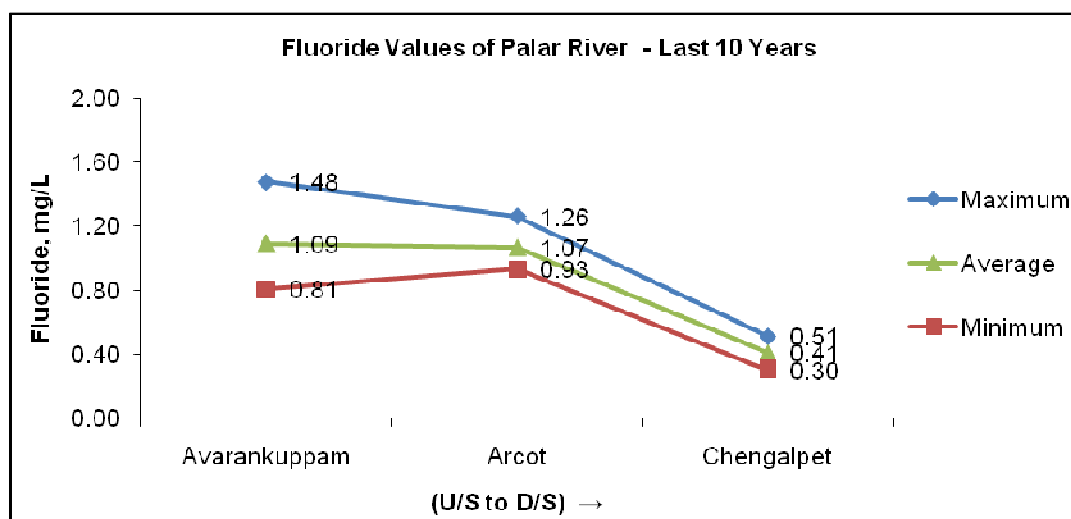
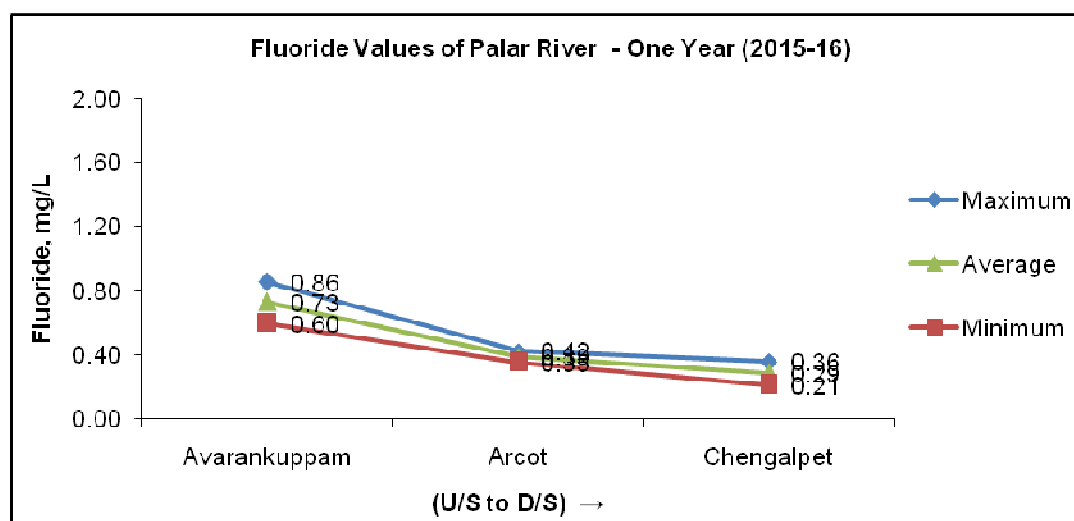


Figure - 8.3



4.2.4 BOD, mg/L

Biochemical Oxygen Demand (BOD) values for the period considered is given in Table - 10 and their graphical representation is given in Figure - 9.1, Figure - 9.2 & Figure - 9.3.

Table – 10

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Avarankuppam	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arcot	2.1	1.8	2.4	0.6	0.2	1.1	1.5	1.1	1.8
Chengalpet	1.8	1.7	2.4	0.6	0.6	0.7	1.1	1.1	1.7

Figure - 9.1

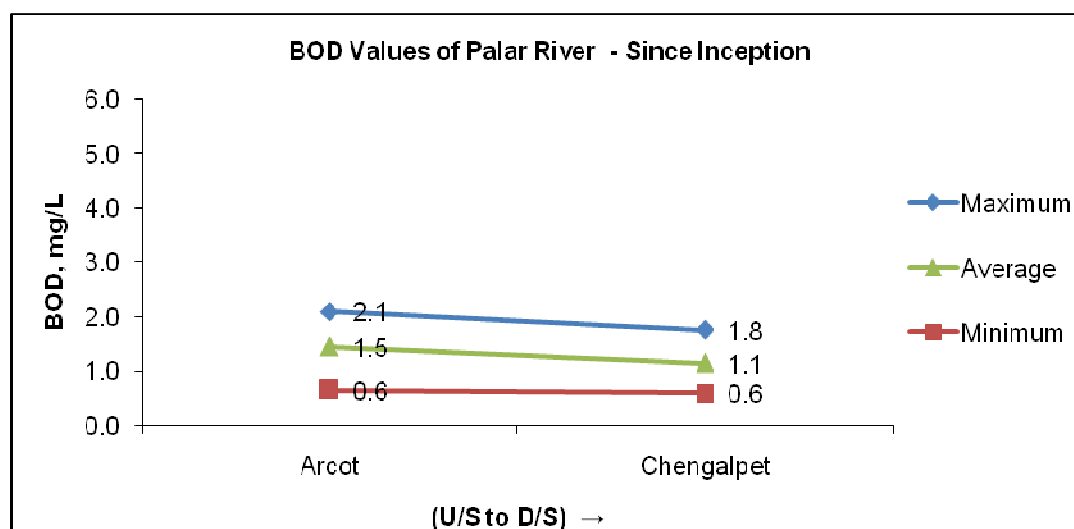


Figure - 9.2

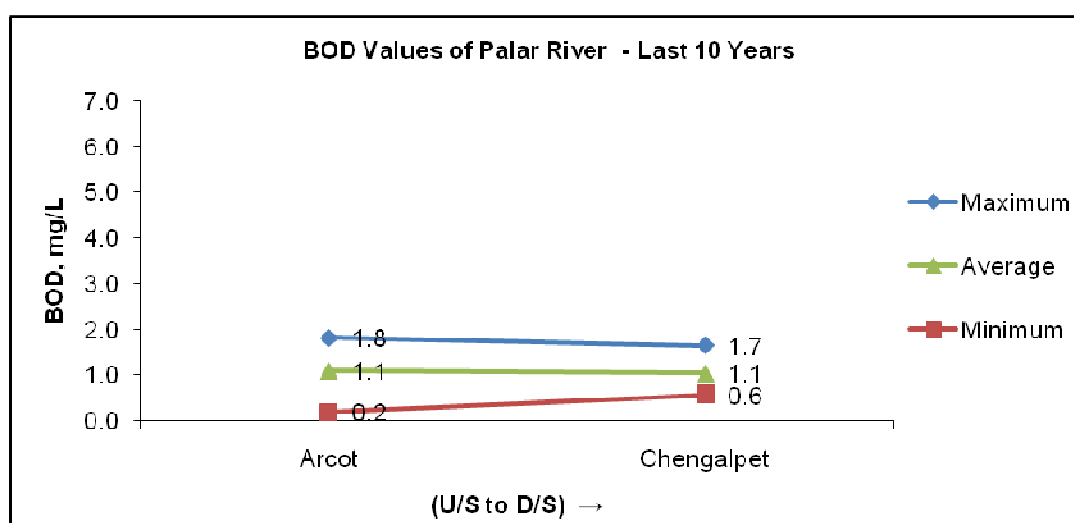
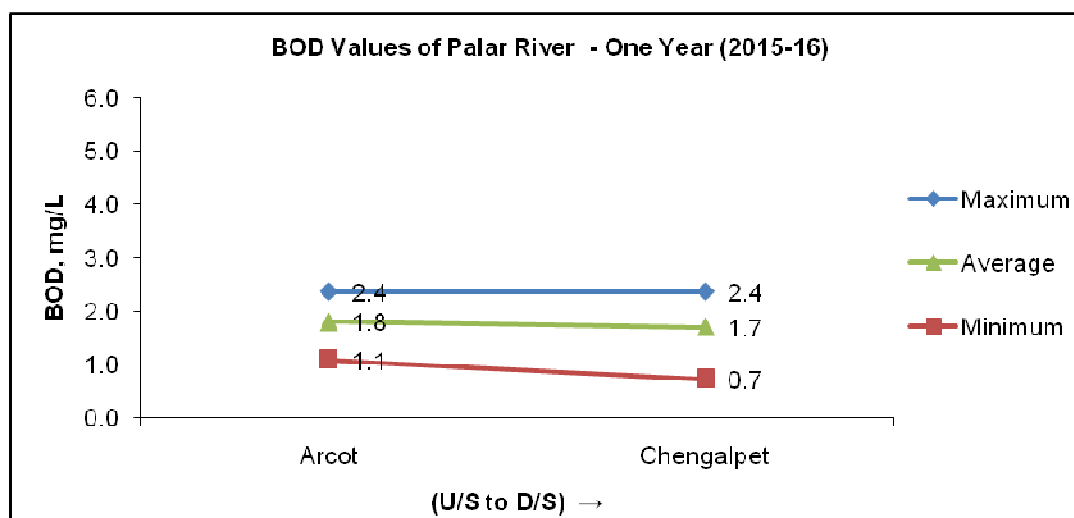


Figure - 9.3



5.2 General Remarks / Conclusion about Water Quality Trend:

Trends of the river Palar with its tributaries are as follows:

In Palar river basin the ionic concentration is first gradually increasing then decreasing from upstream to downstream. The Electrical Conductivity is moderate and within the tolerance limit up to site Avarankuppam. The EC values are maximum at the Site Arcot where the values were mostly found to be above the Tolerance limit. From Arcot to Chengalpet the values were gradually decreasing and found to be within the Tolerance Limit. Palar Basin is generally alkaline in nature but within the tolerance limit of BIS. The Fluoride concentration of Palar basin is gradually decreasing from upstream to downstream.

As far as the Water Quality is concerned, it is found that the water quality of River Palar shows deteriorating trend due to direct human activities which can be seen from the above graphs.

4.3 Ponnaiyar River:

The water quality scenario is being presented in pictorial graph among the sites **Gummanur**, **Vazhavachanur** and **Villupuram** on river Ponnaiyar under East Flowing Rivers Basin. The data details considered for water quality trend study from upstream to downstream of Ponnaiyar River is given below.

4.3.1 Electrical Conductivity (EC) ($\mu\text{mhos/cm}$)

EC values for the period considered is given in Table - 11 and their graphical representation is given in Figure - 10.1, Figure - 10.2 & Figure - 10.3.

Table – 11

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Gummanur	1075	1189	1317	607	718	977	865	991	1113
Vazhavachanur	950	1084	1019	513	590	456	762	868	827
Villupuram	632	624	617	519	519	394	582	578	506

Figure - 10.1

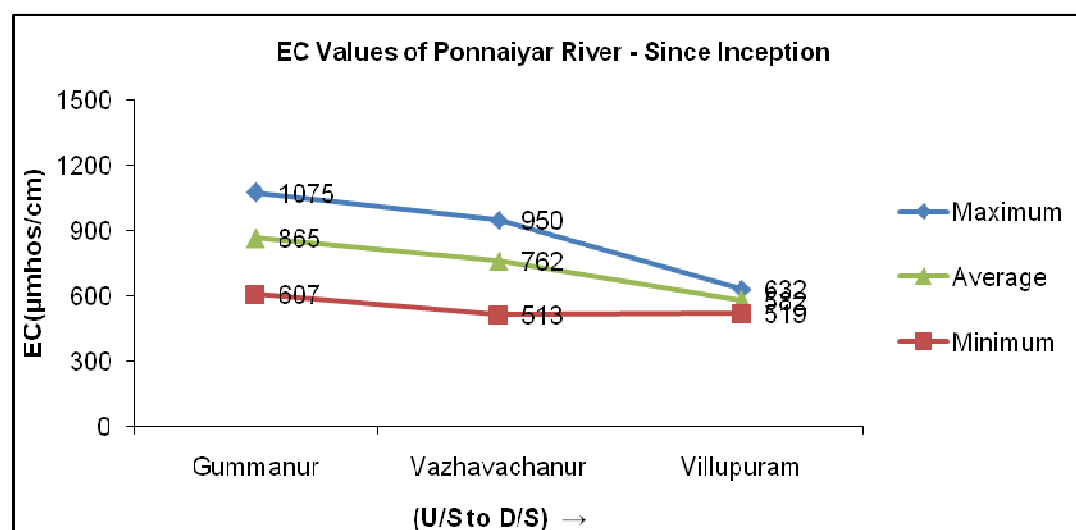


Figure - 10.2

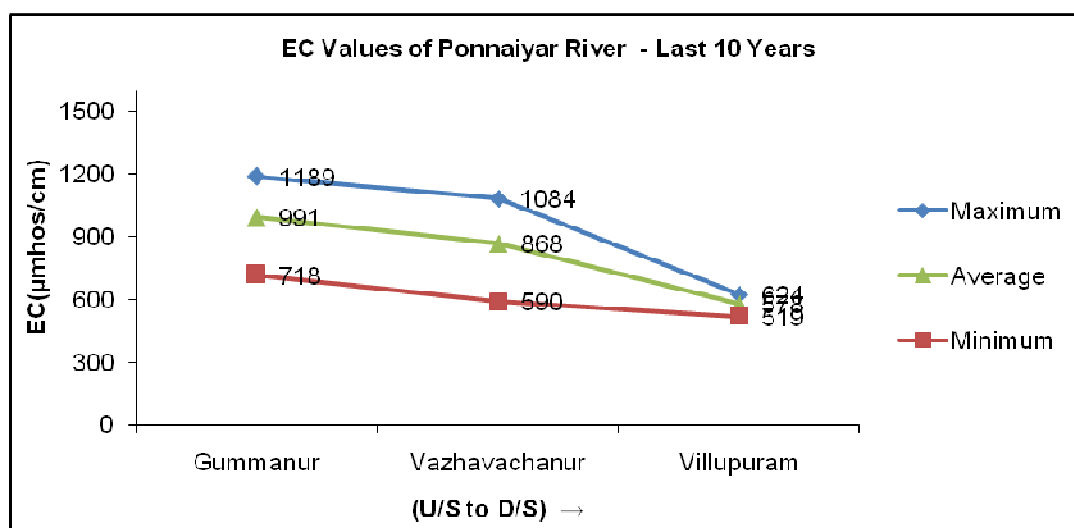
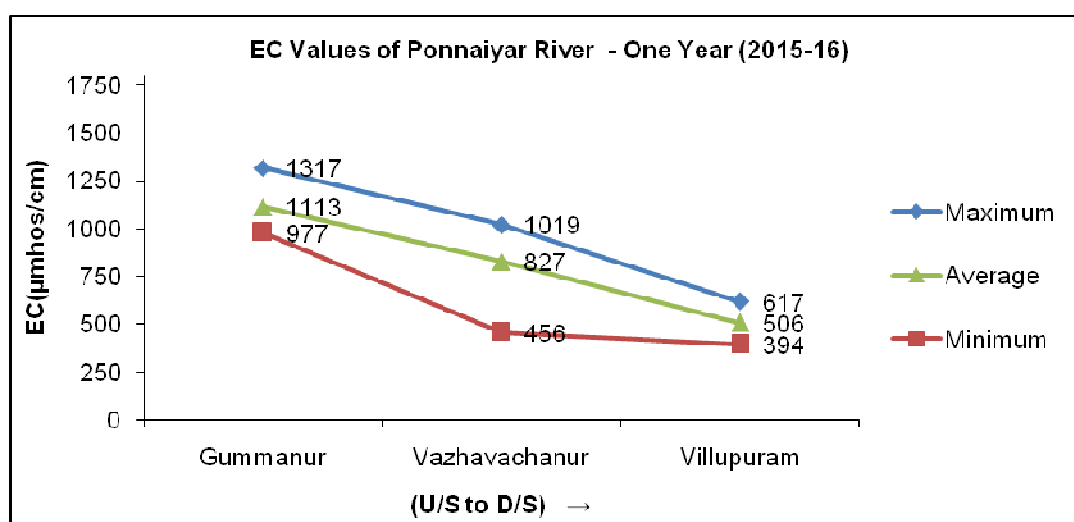


Figure - 10.3



4.3.2 pH

pH values for the period considered is given in Table - 12 and their graphical representation is given in Figure - 11.1, Figure - 11.2 & Figure - 11.3.

Table – 12

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Gummanur	8.4	8.7	8.5	7.5	7.6	7.6	8.0	8.3	7.9
Vazhavachanur	8.4	8.5	8.4	7.5	7.5	7.2	7.9	7.9	7.8
Villupuram	8.4	8.2	7.9	8.0	7.9	7.8	8.2	8.0	7.8

Figure - 11.1

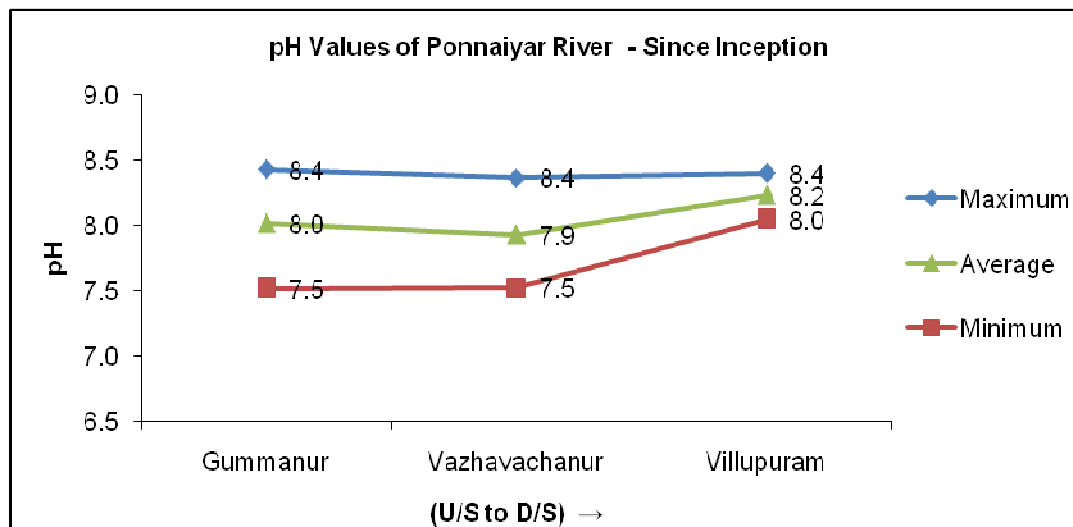


Figure - 11.2

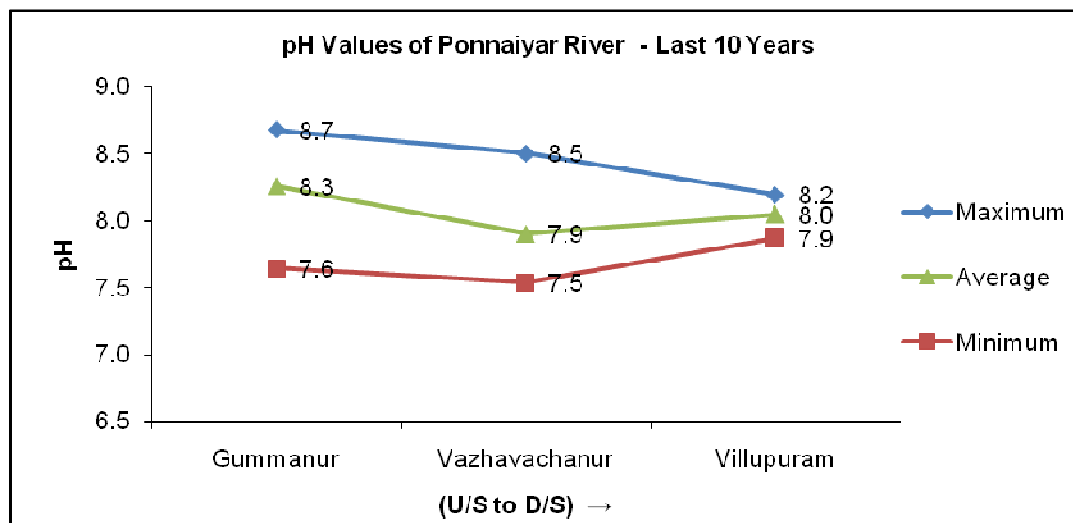
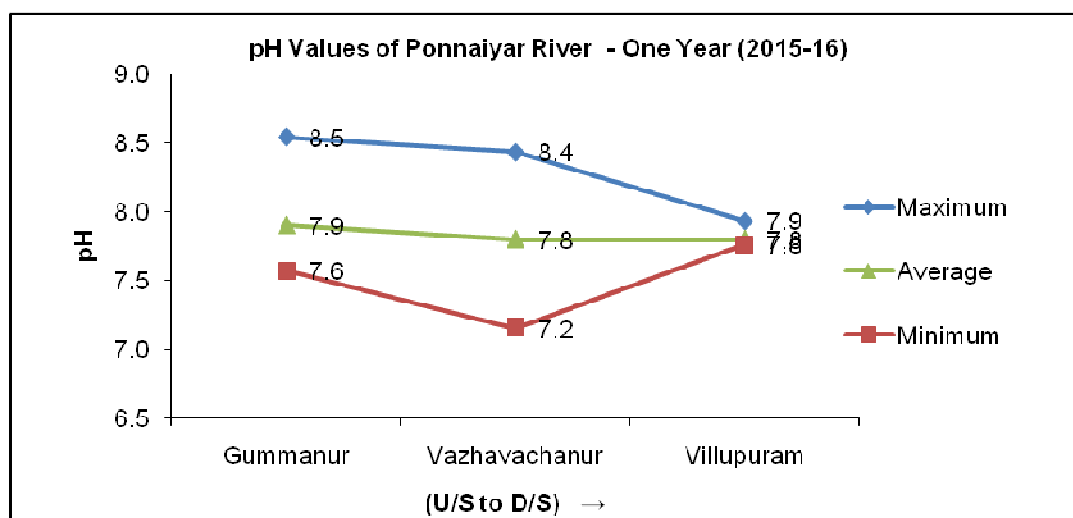


Figure - 11.3



4.3.3 Fluoride, mg/L

Fluoride values for the period considered is given in Table - 13 and their graphical representation is given in Figure - 12.1, Figure - 12.2 & Figure - 12.3.

Table – 13

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Gummanur	1.23	1.01	0.61	0.47	0.47	0.44	0.84	0.71	0.52
Vazhavachanur	0.90	0.73	0.67	0.36	0.36	0.30	0.60	0.58	0.51
Villupuram	0.80	0.48	0.39	0.52	0.38	0.30	0.63	0.43	0.35

Figure - 12.1

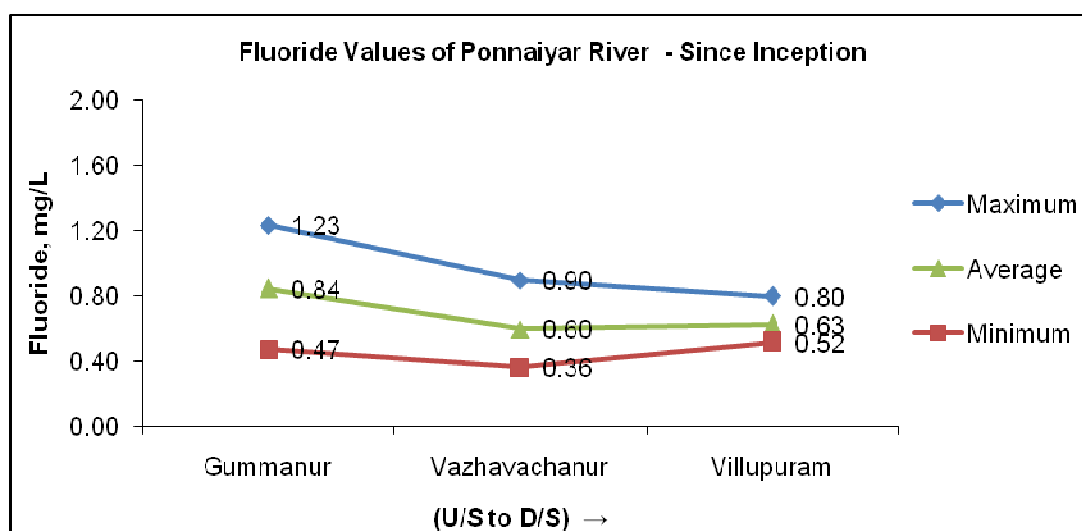


Figure - 12.2

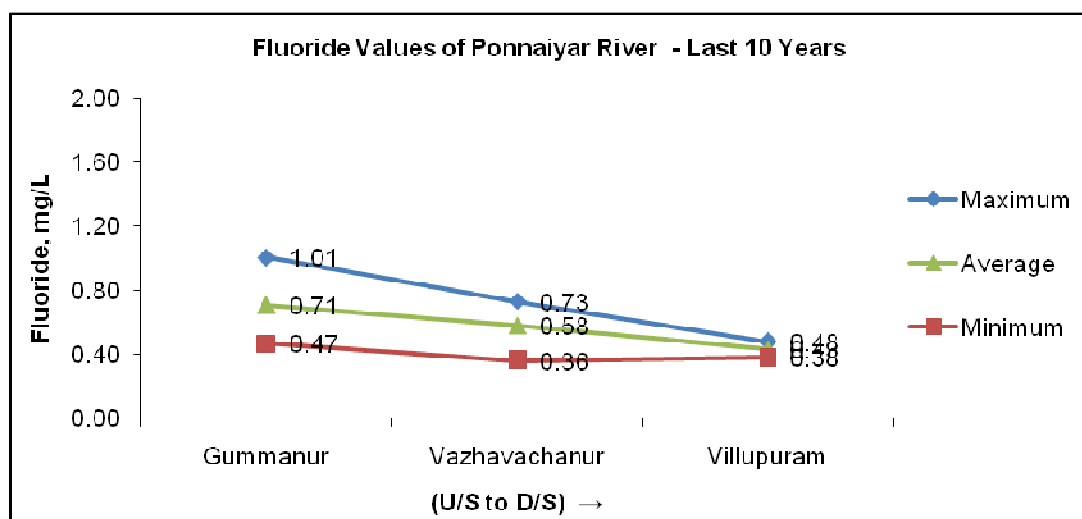
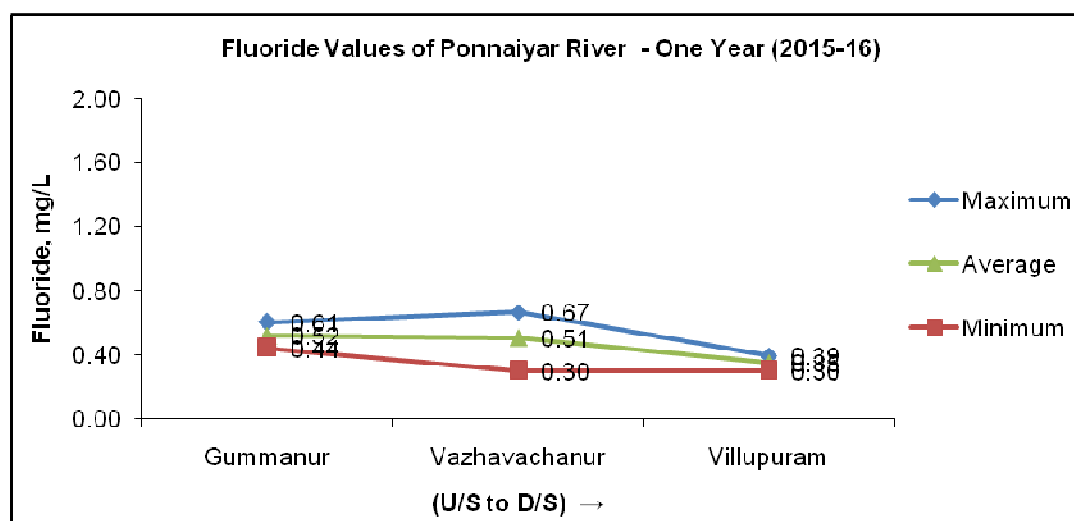


Figure - 12.3



4.3.4 BOD, mg/L

Biochemical Oxygen Demand (BOD) values for the period considered is given in Table - 14 and their graphical representation is given in Figure - 13.1, Figure - 13.2 & Figure - 13.3.

Table – 14

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Gummanur	5.69	6.50	5.46	1.47	1.35	1.62	3.11	3.16	3.70
Vazhavachanur	2.2	2.7	2.4	0.5	0.5	0.6	1.3	1.5	1.6
Villupuram	1.6	1.3	2.7	1.1	0.9	1.8	1.3	1.1	2.3

Figure - 13.1

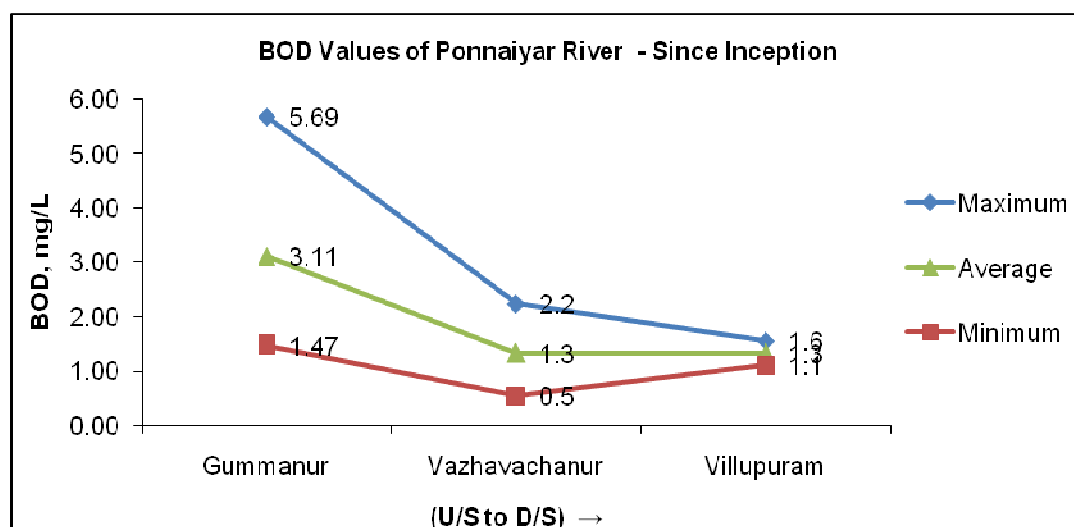


Figure - 13.2

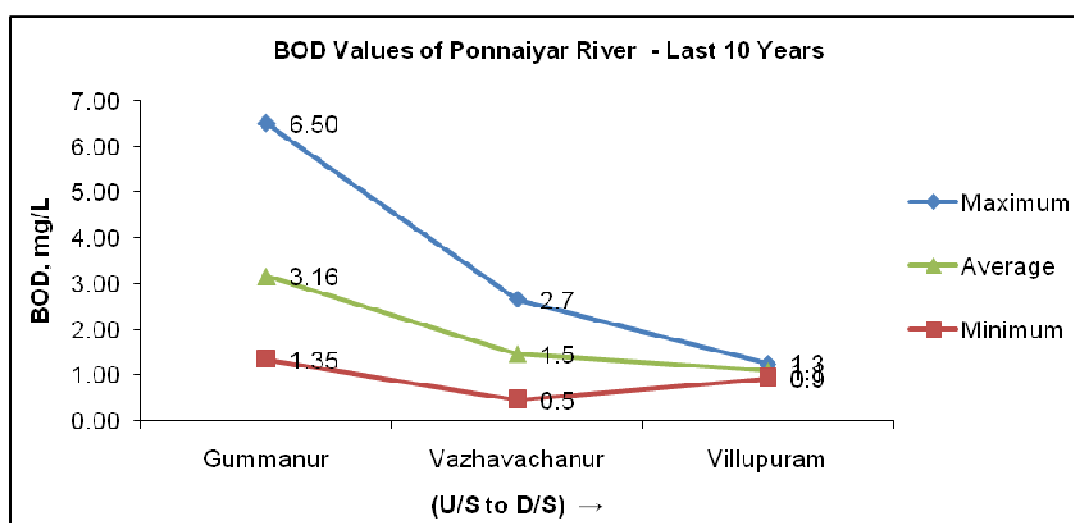
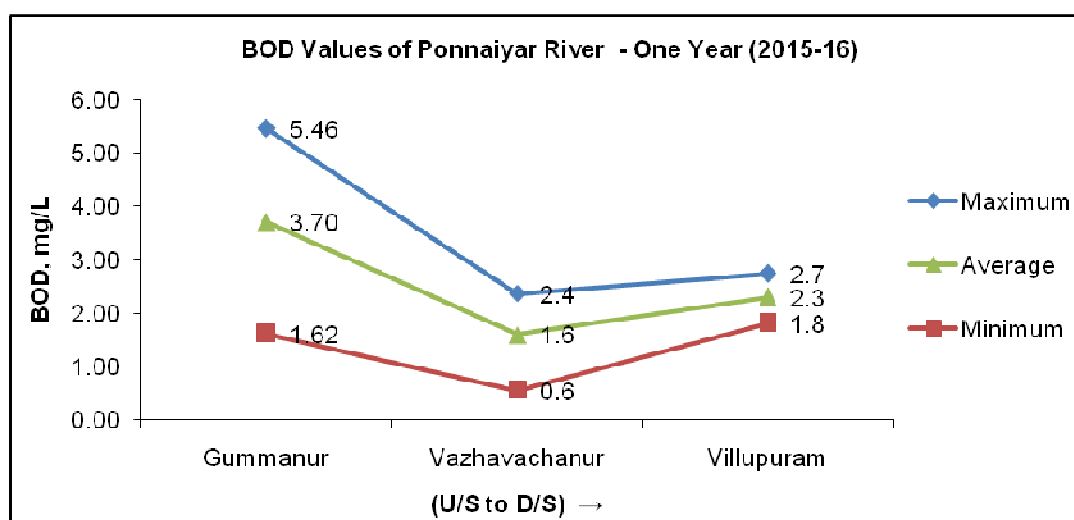


Figure - 13.3



4.3.5 DO, mg/L

Dissolved Oxygen (DO) values for the period considered is given in Table - 15 and their graphical representation is given in Figure - 14.1, Figure - 14.2 & Figure - 14.3.

Table – 15

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Gummanur	7.8	8.2	9.3	5.8	5.5	6.7	6.8	6.8	8.3
Vazhavachanur	7.1	7.6	7.6	3.8	3.7	4.3	5.6	5.9	6.3
Villupuram	NA	NA	NA	NA	NA	NA	NA	NA	NA

Figure - 14.1

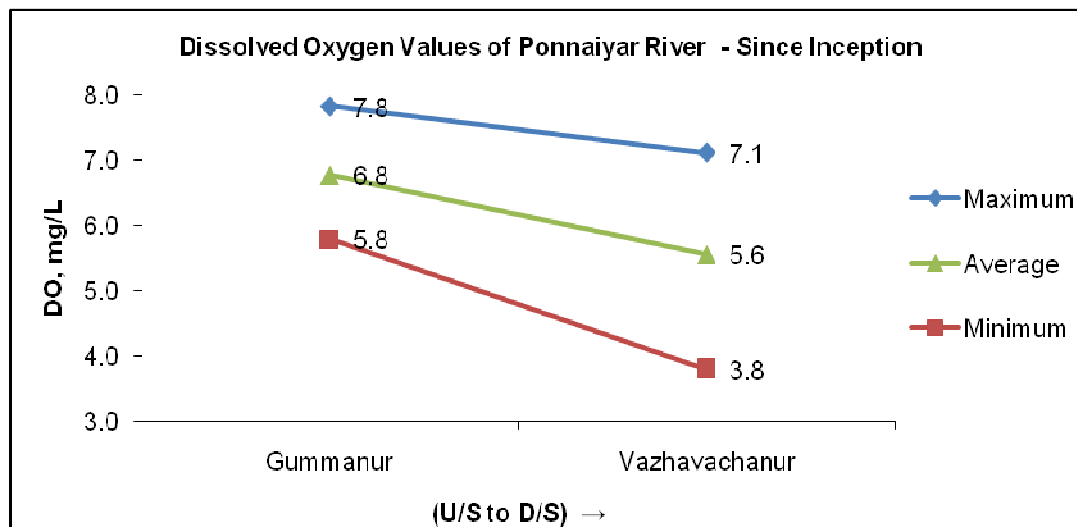


Figure - 14.2

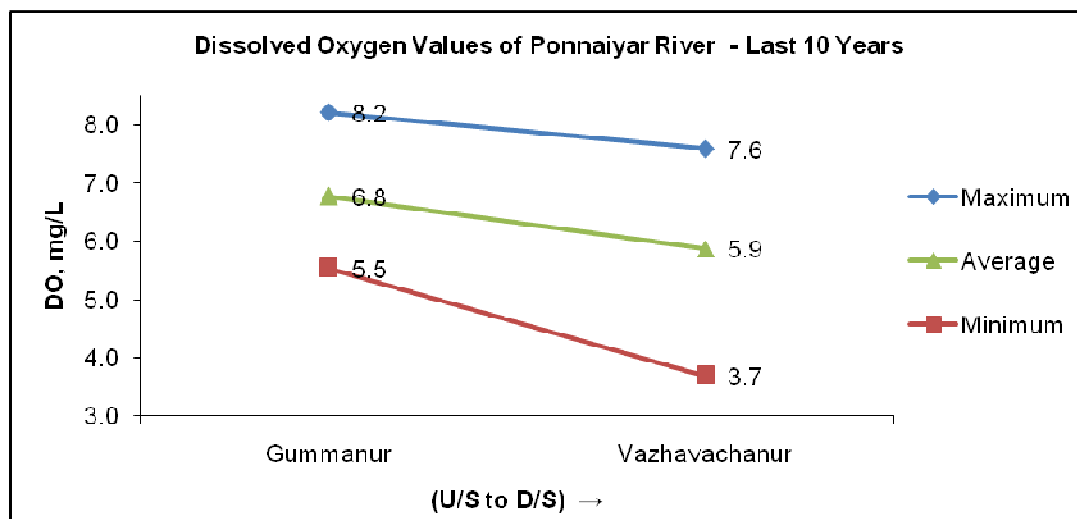
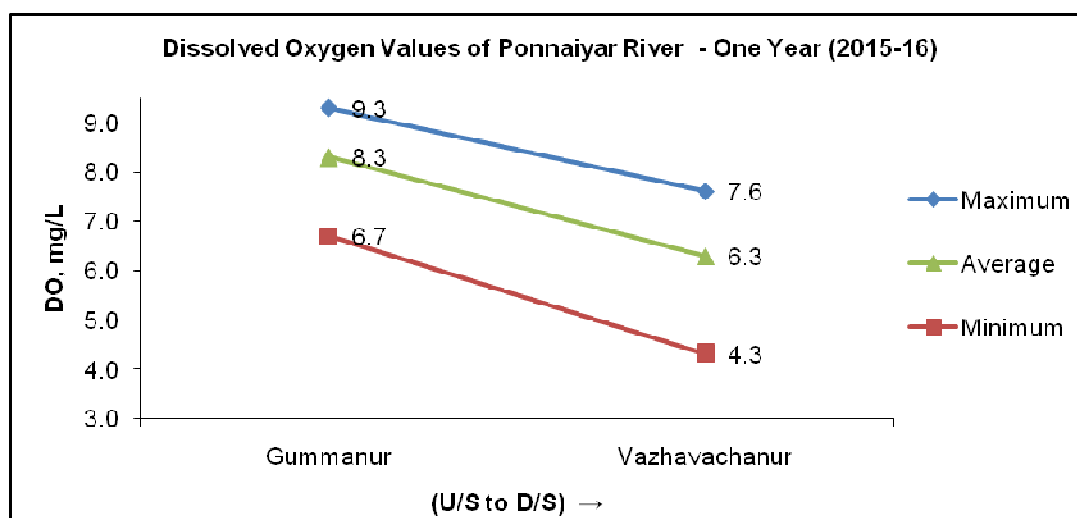


Figure - 14.3



5.3 General Remarks / Conclusion about Water Quality Trend:

Trends of the river Ponnaiyar with its tributaries are as follows:

In Ponnaiyar river basin the ionic concentration is gradually decreasing from upstream to downstream. The water of Ponnaiyar Basin is generally alkaline in nature. At the upstream site Gummanur the concentration of the maximum water quality parameters are beyond the tolerance limit of BIS. But at the downstream site the maximum water quality parameters are within the tolerance limit of BIS.

As far as the water quality is concerned, in general the water quality of river Ponnaiyar is not good. It is found that the water quality of river Ponnaiyar showing improving trends from upstream to downstream which can be seen from the above graphs, which may be due to self purification of the river in its own course.

4.4 Vaigai River:

The water quality scenario is being presented in pictorial graph among the sites **Ambasamudram** and **Paramakudi** on river Vaigai under East Flowing Rivers Basin. The data details considered for water quality trend study from upstream to downstream of Ponnaiyar River is given below.

4.4.1 Electrical Conductivity (EC) ($\mu\text{mhos/cm}$)

EC values for the period considered is given in Table - 16 and their graphical representation is given in Figure - 15.1, Figure - 15.2 & Figure - 15.3

Table – 16

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Ambasamudram	486	554	249	169	154	98	297	324	153
Paramakudi	447	424	346	327	330	346	380	373	346

Figure - 15.1

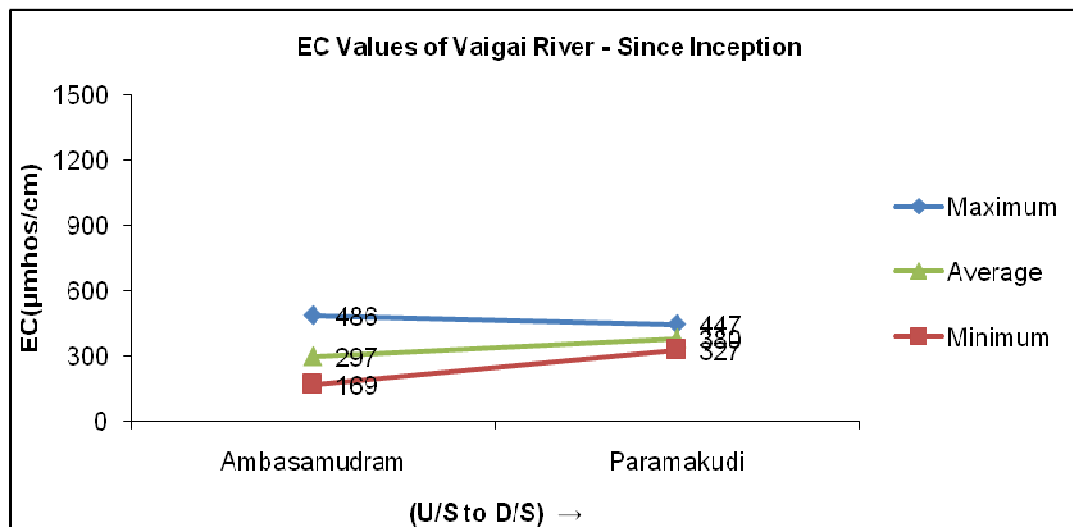


Figure - 15.2

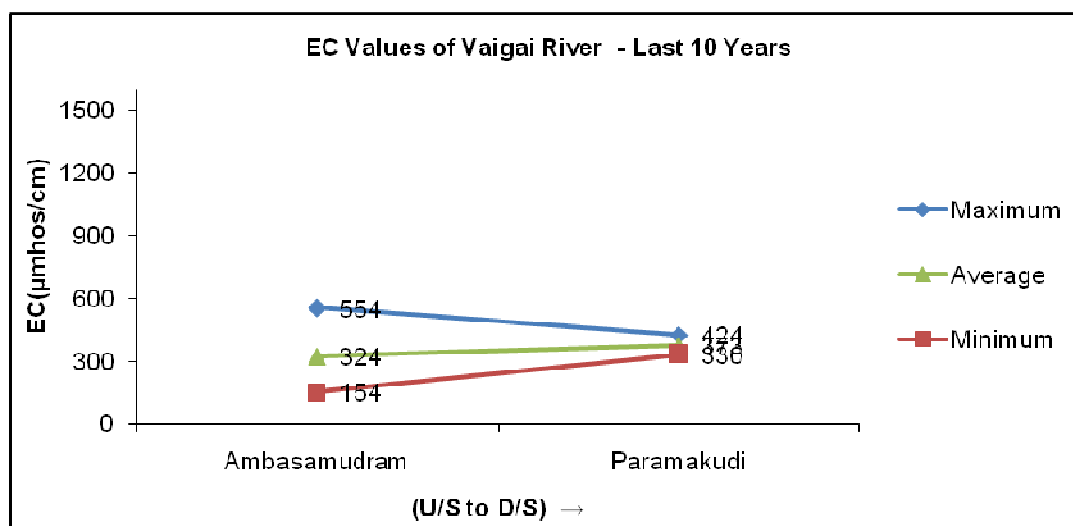
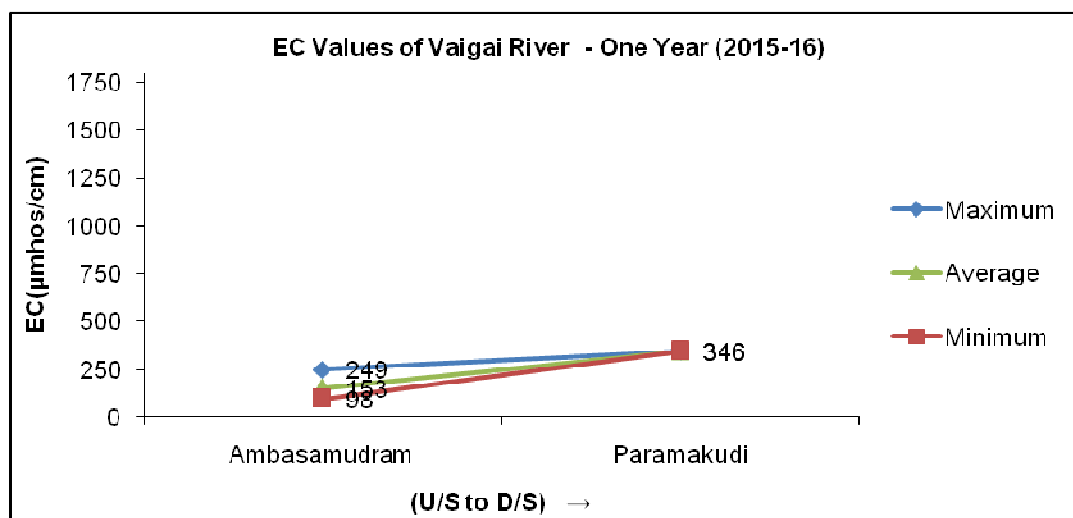


Figure - 15.3



4.4.2 pH

pH values for the period considered is given in Table - 17 and their graphical representation is given in Figure - 16.1, Figure - 16.2 & Figure - 16.3.

Table – 17

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Ambasamudram	8.4	8.4	9.0	7.7	7.7	7.4	8.1	8.1	8.0
Paramakudi	8.3	8.2	7.9	7.9	7.9	7.9	8.1	8.1	7.9

Figure - 16.1

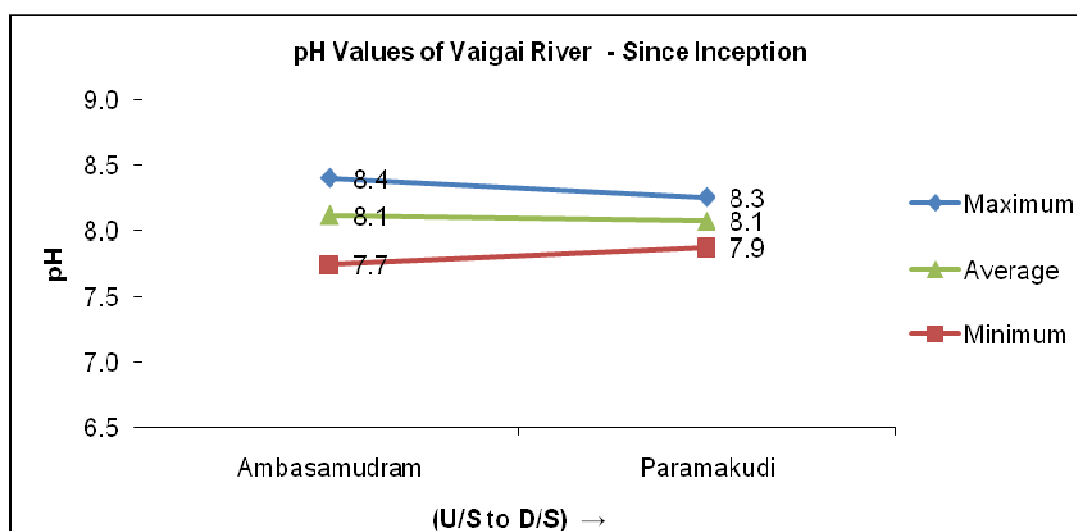


Figure - 16.2

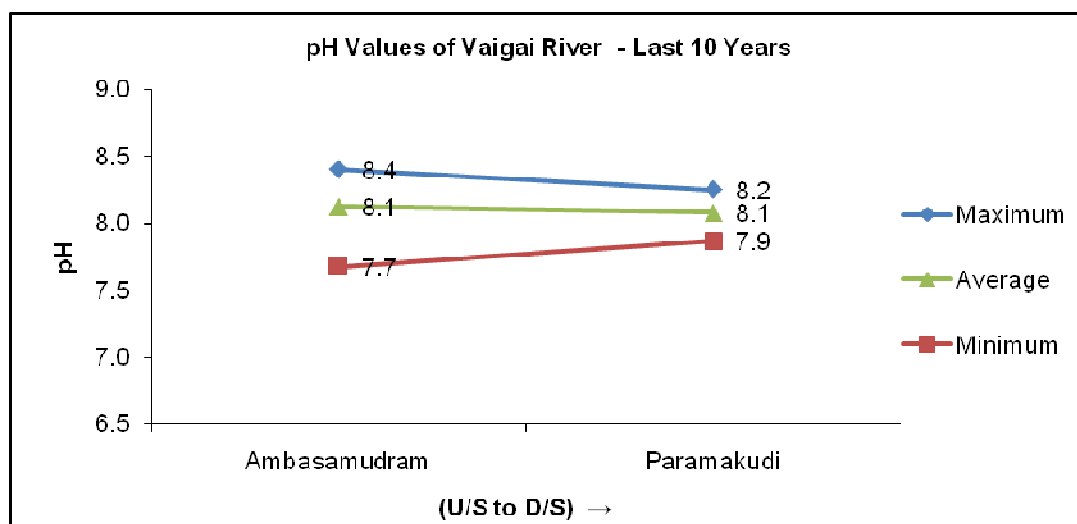
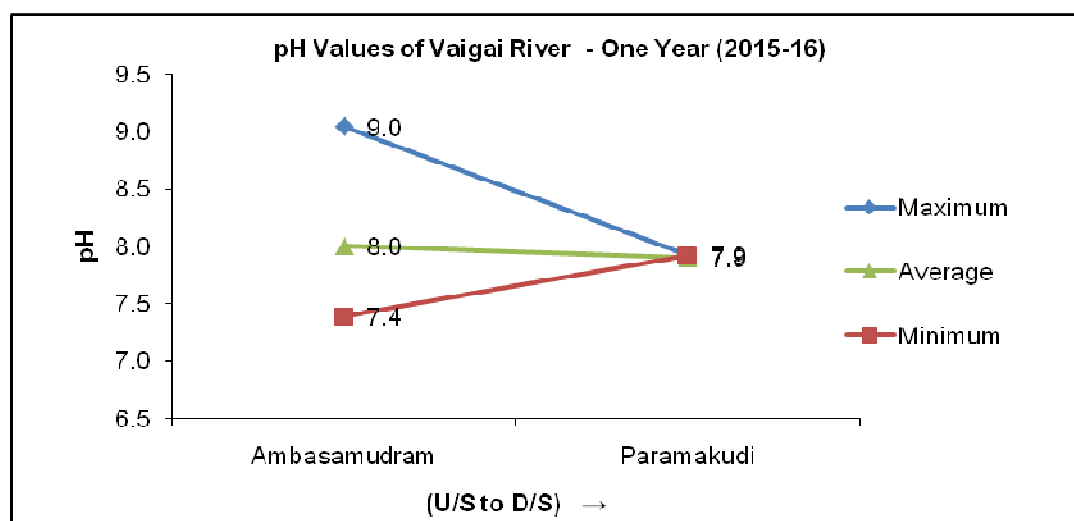


Figure - 16.3



4.4.3 Fluoride, mg/L

Fluoride values for the period considered is given in Table - 18 and their graphical representation is given in Figure - 17.1, Figure - 17.2 & Figure - 17.3.

Table – 18

Site Name	Average of Yearly Maximum			Average of Yearly Minimum			Annual Average		
	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year	Since Inception	Last 10 Years	One Year
Ambasamudram	0.67	0.65	0.36	0.29	0.25	0.20	0.44	0.44	0.28
Paramakudi	0.50	0.46	0.36	0.34	0.37	0.36	0.41	0.40	0.36

Figure - 17.1

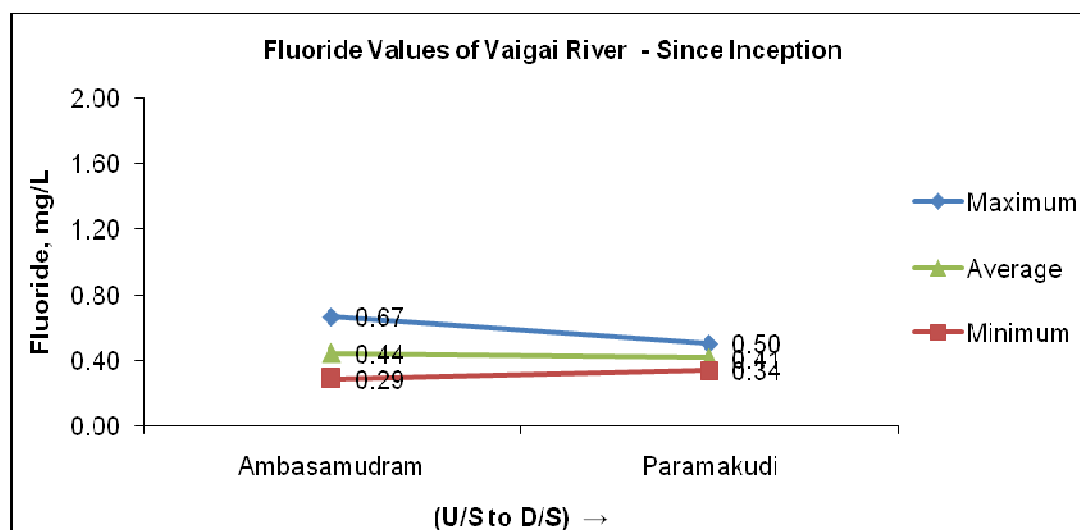


Figure - 17.2

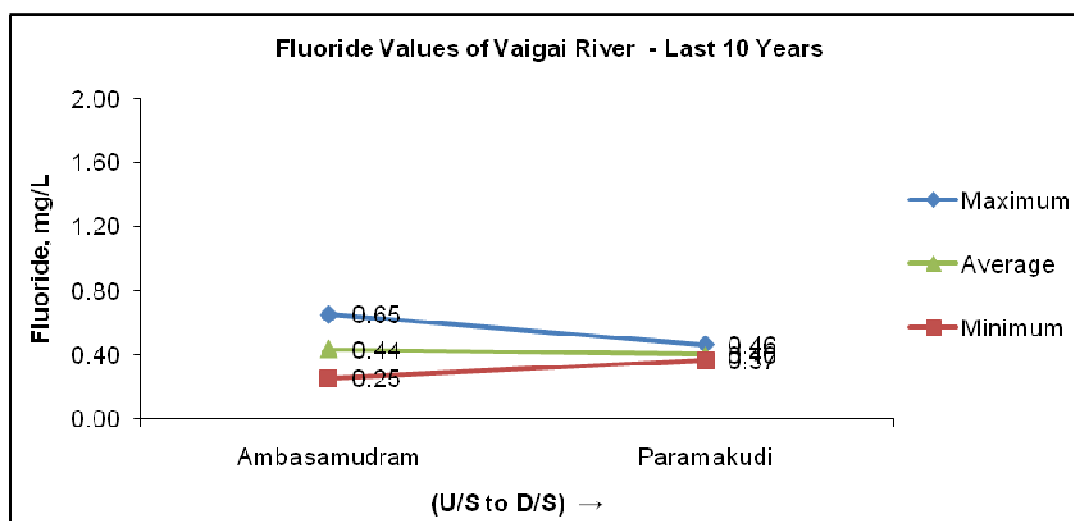
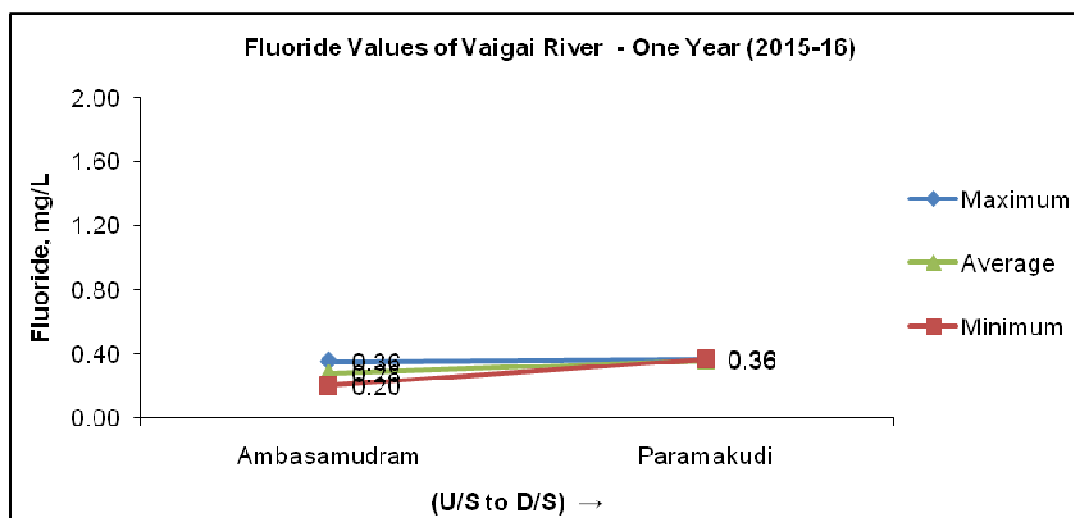


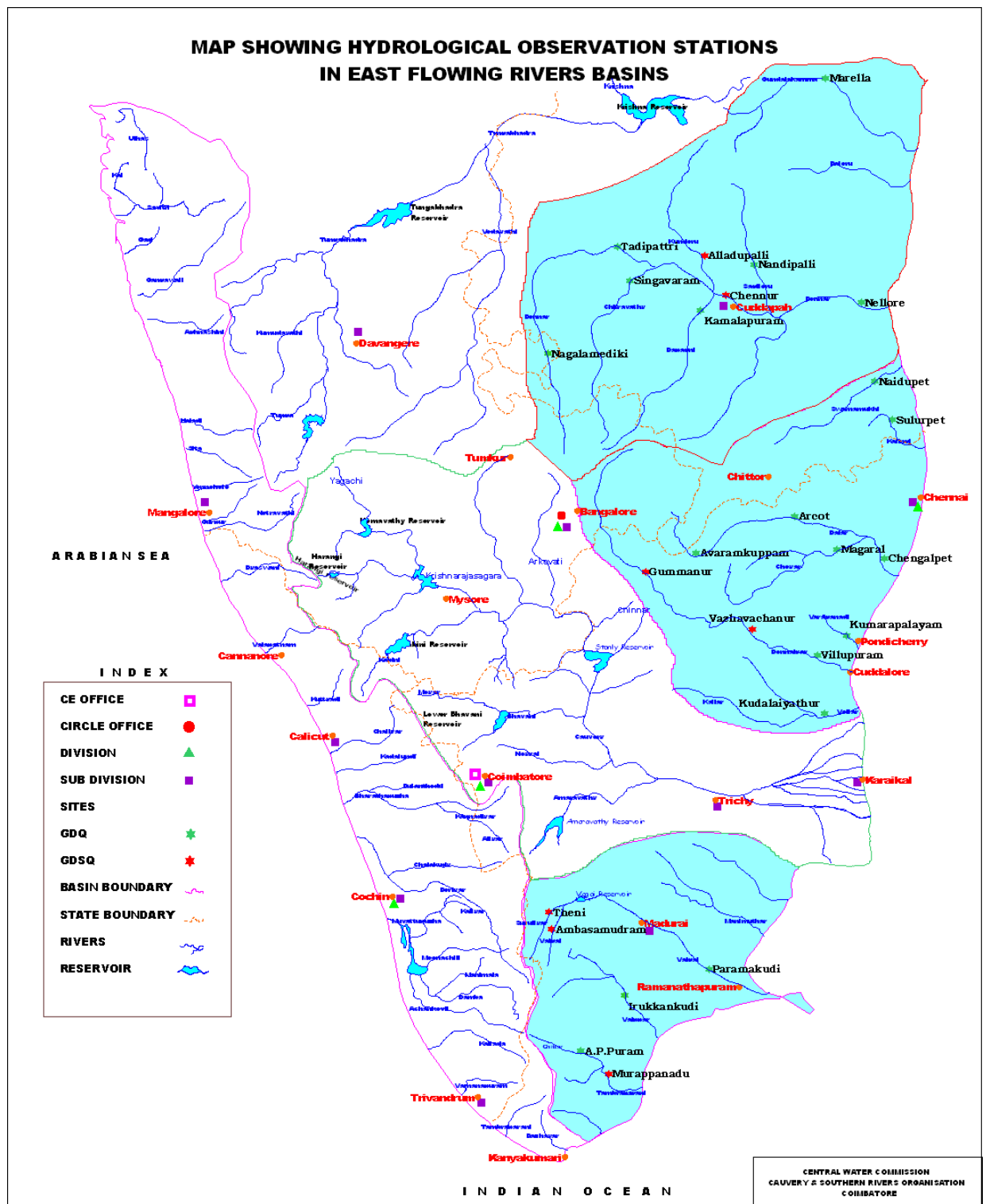
Figure - 17.3



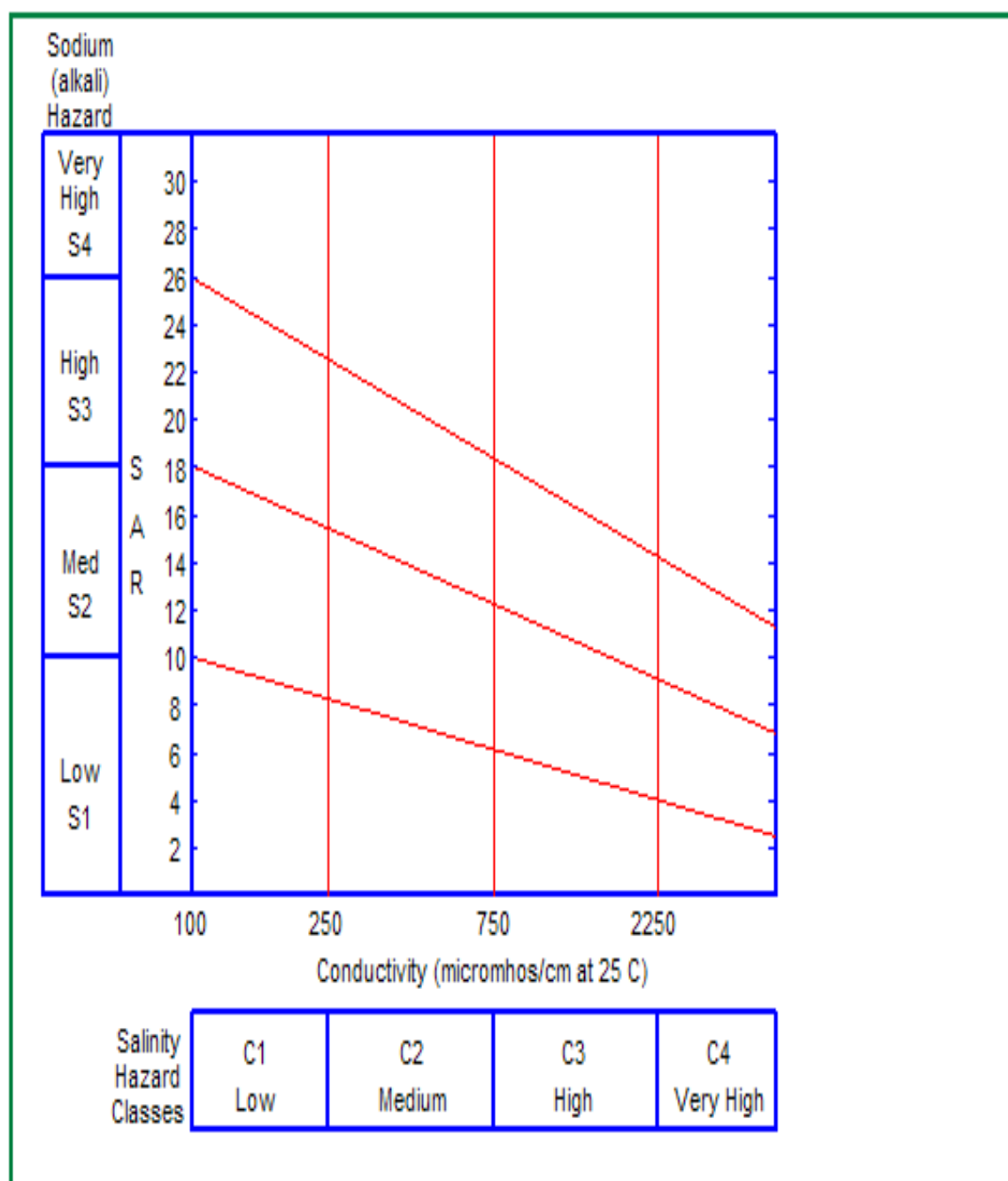
5.4 General Remarks / Conclusion about Water Quality Trend:

Trends of the river Vaigai with its tributaries are as follows:

The water quality of river Vaigai is almost same and good in nature from upstream to downstream. It is found that the maximum water quality parameters are within the tolerance limit of BIS.



Wilcox Diagram



ABBREVIATIONS AND SYMBOLS

Q (Cumec)	: Discharge in Cubic meter per second
EC_FLD	: Electrical Conductivity Field
EC_GEN	: Electrical Conductivity General
pH_FLD	: Negative logarithm of hydrogen ion concentration - Field
pH_GEN	: Negative logarithm of hydrogen ion concentration - General
Temp (°C)	: Temperature in degree celsius
Alk-Phen	: Phenolphthalein Alkalinity
ALK-TOT	: Total Alkalinity
B	: Boron
Ca	: Calcium
Cl	: Chloride
CO ₃	: Carbonate
F	: Fluoride
Fe	: Iron
HCO ₃	: Bicarbonate
K	: Potassium
Mg	: Magnesium
Na	: Sodium
NH ₃ -N	: Ammonia Nitrogen
NO ₂ -N	: Nitrite Nitrogen
NO ₃ -N	: Nitrate Nitrogen
o-PO ₄ -P	: Ortho Phosphate Phosphorus
SiO ₂	: Silica
SO ₄	: Sulphate
BOD	: Biochemical Oxygen Demand (3 days incubation at 27°C)
COD	: Chemical Oxygen Demand
DO	: Dissolved Oxygen
As	: Arsenic
Cd	: Cadmium
Cr	: Chromium
Cu	: Copper
Hg	: Mercury
Ni	: Nickel
Pb	: Lead
Zn	: Zinc
HAR_Ca	: Calcium Hardness
HAR_Total	: Total Hardness
Na%	: Sodium Percentage
RSC	: Residual Sodium Carbonate
SAR	: Sodium Adsorption Ratio
SRD	: Southern Rivers Division, Coimbatore
CD	: Cauvery Division, Bengaluru

TOLERANCE LIMITS OF THE WATER QUALITY PARAMETERS FOR USE IN
IRRIGATION, INDUSTRIAL, COOLING AND CONTROLLED WASTE DISPOSAL

(According to ISI publication IS: 2296 - 1982)

Sl.No.	Characteristics	Tolerance limits
1	pH	6.0 to 8.5
2	Electrical Conductance at 25°C, mhos/cm, max.	2250×10^{-6}
3	Total Dissolved Solids (inorganic)	2100
4	Sodium Adsorption Ratio, max.	26
5	Percent Sodium, max.	60
6	Boron (as B), mg/L, max.	2
7	Chlorides (as Cl) mg/L, max.	600
8	Sulphates (as SO ₄) mg/L, max.	1000

TOLERANCE LIMITS OF SELECTED WATER QUALITY
PARAMETERS FOR OTHER PURPOSES

(According to ISI publication IS: 2296 - 1982)

Sl. No.	Characteristics	Tolerance limits *			
		Class-A	Class-B	Class-C	Class-D
1	pH value	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5
2	Dissolved Oxygen mg/L, min.	6	5	4	4
3	Bio-chemical Oxygen Demand (5 days at 20°C) mg/L, max	2	3	3	-
4	Total Coliform Organisms MPN/100 ml, max.	50	500	5000	-
5	Total Dissolved Solids, mg/L, max.	500	-	1500	-
6	Chlorides (as Cl) mg/L, max.	250	-	600	-
7	Sulphates (as SO ₄) mg/L max.	400	-	400	-
8	Electrical Conductance at 25°C, mhos/cm, max.	-	-	-	1000 x 10 ⁻⁶

* Class-A : Refers drinking water without conventional treatment but after disinfection.

Class-B : Refers outdoor bathing.

Class-C : Refers drinking water with conventional treatment followed by disinfection.

Class-D : Refers fish culture and wild life propagation.