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वार्षिक जल पुस्तिका
WATER YEAR BOOK
(जून 2017 – मई 2018)
(JUNE 2017– MAY 2018)
पश्चिम प्रवाही नदियाँ बेसिन
WEST FLOWING RIVERS BASIN
खंड– I, नदी प्रवाह एवं निलंबित गाद आँकड़ा
Volume-I, Stream Flow & Suspended Sediment Data

कावेरी एवं दक्षिणी नदियाँ परिमण्डल, बेंगलूरु
CAUVERY & SOUTHERN RIVERS CIRCLE, BENGALURU
कावेरी एवं दक्षिणी नदियाँ संगठन, कोयंबतूर
CAUVERY & SOUTHERN RIVERS ORGANISATION, COIMBATORE

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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 the whole world. It's planning and optimal utilization calls for a well developed Data Bank and maintenance of the Data Bank by regular updation. The 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 data collection Network in different River Basins in India. The collected Hydrological data is being published every water year on basin wise for the benefit of users. This book pertains to the data of West Flowing Rivers Basin under the states of Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu.

With the advent of computerisation 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 is being published in Two Volumes, Volume-I Containing the Stream Flow and Suspended Sediment Data and the Volume-II containing the Water Quality Data. The Book presented here contains the Stream Flow and the Suspended Sediment data in Volume-I for the Water Year 2017-18.

The efforts made by the South Western Rivers Division, Kochi, Cauvery Division, Bangalore, Southern Rivers Division, Coimbatore, under this Circle and Upper Krishna Division, Pune under Krishna & Godavari Basin Organization, Hyderabad in bringing out this Book deserves appreciation.

Bengaluru
April, 2019

(V. Mohan Murali)
Superintending Engineer
Cauvery & Southern Rivers Circle

प्रस्तावना

जल लगभग तय मात्रा में उपलब्धता के साथ एक कीमती प्राकृतिक संसाधन है। ताजा पानी पूरी दुनिया में दिन–ब–दिन एक दुलर्भ वस्तु बन गया है। यह योजना है कि जल संसाधनों का इष्टतम उपयोग के लिए एक अच्छी तरह से विकसित डाटा बैंक हो और नियमित रूप से डाटा बैंक का अद्यतन किया जाना चाहिए। जल संसाधन, नदी विकास और गंगा संरक्षण मंत्रालय के अंतर्गत केन्द्रीय जल आयोग जल संसाधन क्षेत्र के शीर्ष मंत्रालय के निकाय होने के अलावा भारत के विभिन्न नदी घाटियों का हाइड्रोलॉजिक डाटा संग्रह का एक विशाल नेटवर्क प्रणाली बनाये रखा है। एकत्रित हाइड्रोलॉजिक डाटा का प्रकाशन प्रत्येक जल वर्ष पुस्तक में बेसिन क्रम में उपयोगकर्त्ताओं के लाभ के लिए किया जाता है। इस पुस्तक में महाराष्ट्र, गोवा, कर्नाटक, केरल, तथा तमिलनाडु राज्यों के अंतर्गत पश्चिम प्रवाही बेसिन का डाटा है।

डाटा के कम्प्यूटरीकरण के आगमन से जल वर्ष पुस्तक के प्रकाशन प्रारूप में बहुत परिवर्त्तन आया है। संशोधित प्रारूप के अनुसार जल वर्ष पुस्तक दो संस्करणों में प्रकाशन हो रहा है। प्रथम संस्करण में धारा प्रवाह तथा निलंबित तलछट डाटा और द्वितीय संस्करण में जल गुणवत्ता डाटा के साथ प्रकाशित किया जा रहा है। 2017–18 के जल वर्ष पुस्तक के प्रथम संस्करण में धारा प्रवाह तथा निलंबित तलछट डाटा शामिल है।

इस परिमंडल के अंतगर्त दक्षिण पश्चिमी नदियॉ मंडल कोच्ची, कावेरी मंडल बेंगलुरू, दक्षिणी नदियॉ मंडल कोयंबत्तूर, तथा कृष्णा एवं गोदावरी बेसिन संगठन के अंतगर्त ऊपरी कृष्णा मंडल, पूने के प्रयासों से इस पुस्तक का प्रकाशन हुआ सभी प्रशंसा के हकदार है।

वू. मोहन मुरलि

बेंगलुरू
अप्रैल, 2019

(वू. मोहन मुरलि)
अधीक्षण अभियंता
कावेरी एवं दक्षिणी नदियाँ परिमण्डल

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1.0 BASIN DESCRIPTION

1.1 GEOGRAPHICAL DESCRIPTION OF THE BASIN

The West Flowing Rivers Basin consists of all the small independent river basins of peninsular India lying to the South of Krishna Basin (except Cauvery Basin) draining into the Arabian Sea. The basin is located in the South West corner of the peninsular India and covers the areas in the States of Maharashtra, Goa, Karnataka, Tamil Nadu and Kerala. There are as many as 31 Nos of medium and minor river basins in this region viz., Ulhas, Bhogeshwari, Amba, Kal, Kajavi, Gad, Mandovi/Madei, Aghanashini, Haladi, Sita, Swarna, Gurupur, Netravathi, Payaswani, Valatapatnam, Kuttyadi, Chaliyar, Kadalundi, Bharathapuzha, Chalakudi, Periyar, Muvattupuzha, Meenachil, Pamba, Achankovil, Manimala, Kallada, Vamanapuram, Tambraparani and Pazhayar. Maps showing these basins are presented as **Plates - I to III.**

All the rivers originate from the high mountains of the Western Ghats and exhibit similar characteristics. They have steep high banks which rarely overflow or cause floods.

There are **37** Gauge & Discharge stations and 17 Rain Gauge Stations operated by the Central Water Commission on these rivers during **2017-18**. Apart from these stations, there are 78 Gauge & Discharge Stations and 159 Nos of Rain Gauge Stations operated by State Government. Besides, there are another 45 No. of rain gauge stations operated by IMD. A map showing all these stations is presented as **Plates – IV to VI**. The details of Rain Gauge Station operated by CWC is enclosed as Annexure I. The Tree diagrams of Rivers showing the locations of the G&D Stations being operated by CWC are shown as **Plate No VII to XXXIII.**

1.2 DESCRIPTION OF THE RIVER SYSTEM

THE ULHAS

The Ulhas River is one of the West Flowing Rivers in Maharashtra falling into the Arabian Sea. The boundary of the basin consists of the main Sahyadri hills on the East, Westerly off shoots on the North and South and on the West, a narrow opening at the end leading to the sea. The Ulhas basin lies between North latitudes of 18º 44’ to 19º 42’ and East longitudes of 72º 45' to 73º 48’. The CWC Hydrological Observation Station is located at **Badlapur**.

The Ulhas drains an area of 4,637 Sq. km which lies completely in Maharashtra. The Thane, Raigad and Pune districts fall in the basin. The Ulhas rises from Sahyadri hill ranges in the Raigad district of Maharashtra at an elevation of 600m above M.S.L. The total length of this West flowing river from its origin to its outfall in to the Arabian Sea is 122 km.

The important tributaries of the Ulhas River are Pej, Barvi, Bhivapuri, Murbari, Kalu, Shari, Bhasta, Salpe, Poshir and Shilar. The Kalu and Bhasta are the major right bank tributaries which together accounts for 55.7% of the total catchment area of Ulhas.

BHOGESHWARI

The river Bhogeshwari rises in the Western ghats near village Bhogeshwari, District- Raighad of Maharashtra at an altitude of about 228.6 m above the sea level. The river flows in the West direction through the Taluka-Pen and merges in the Dharmtar creek near village Antora. The total length of the river is about 40 km. before joining the sea.

The tidal effect of the sea (backwater effect is felt up to 14 km. up-stream of confluence with the sea i.e, up to road bridge on NH-17 connecting Goa and Mumbai. The CWC Hydrological Observation site is located at **Pen** about 3 km. up-stream of the back water affected area. The catchment area of basin up to the site from the origin is 125 Sq.km.

The site covers the releases of Hetwane medium Irrigation project on Bhogeshwari river and Ambaghar project existing on the tributary of Bhogeswari river. The length of the river from it's origin to the site is 22 km.

AMBA

The river Amba originates in the Borghat hill of the Sahyadri ranges near Khopoli-khandala road at an altitude of about 554 m. Initially, the river flows in the South direction and then turns further into the North West direction till it joins the Arabian Sea in Dharmatar creek near village Revas. The total length of the river is about 76 km before joining the sea.

The river is affected by tidal effect of the Arabian Sea (backwater effect) up to Chikan village located at about 31 km from Arabian Sea. The CWC Hydrological Observation site is located at **Nagothane** about 2 km up-stream of backwater-affected area. Also due to the existence of K.T. weir at about 1.5 km down-stream of the site, the backwater effect of sea has no influence on the site.

The catchment of the river up to site from its origin is 420 Sq.km. and is free from backwater. The length of the river up to the site is 41 km. There is no structure in the up-stream of the river and the flow is seasonal.

THE KAL

The Kal River is one of the West Flowing Rivers in Maharashtra. This is a major tributary of the river Savitri. The Kal basin lies between North latitudes of 18^0 05' to 18^0 25' and East longitudes of 73^0 10' to 73^0 13' approximately. The CWC Hydrological Observation Station is located at **Mangaon**.

The Kal rises from Sahyadri hill ranges in the Raigad district of Maharashtra at an elevation of 652 m above M.S.L. The total length of this West Flowing River from its origin to its confluence with the Savitri River is 40 km.

The Kal River drains a total area of 670 Sq.km., in Raigad district of Maharashtra. This is an important tributary of the Savitri river on the right and accounts for 23% of the total catchment area of the Savitri Basin.

KAJAVI RIVER

The Kajavi River rises in the Vishalghat region of Sahyadri hills and flows West ward and joins the Arabian Sea near Ratnagiri port where a 10 km. long creak named Bhatya Creak has been formed.

During monsoon, tidal effect is felt up to village Hercheri that is about 25 km. from the mouth of river. The nature of Bed is sandy mixed with gravels.

The Hydrological Observation site is at **Anjanari** village in Lanja Taluk of Ratnagiri District of Maharashtra State.

THE GAD

The Gad River is one of the West Flowing Rivers in Maharashtra falling into Arabian Sea. The Gad Basin lies between North latitude 16^{o} to 16^{o} 20' and East longitude 73º 30' to 74º approximately. The CWC Hydrological Observation Station is located at **Belne Bridge.**

The Gad drains an area of 890 Sq.km which lies completely in Sindhudurg district of Maharashtra.

The Gad rises from the Sahyadri hill ranges in the Sindhudurg district of Maharashtra at an elevation of 600 m above M.S.L. The total length of the River from its origin to its outfall into the Arabian Sea is 66 km.

The important major tributary of the Gad River is Kasal. The Kasal River joins river Gad near the village Chunavara. During monsoon, tidal effect reaches up to this village. The Kasal River accounts for 20.8% of the total catchment area of the Gad. At present there is no existing project on this river.

MANDOVI / MADEI

The Mandovi River is one of the main West Flowing Rivers of Goa State. The river runs in the North-East direction for about 5 km and then follows in the West ward direction. The Mandovi Basin lies between North latitudes of 15º 15' to 15º 40' and East longitudes of 73º 15' to 73º 45' approximately. There are two CWC Hydrological Observation Stations located at **Ganjim & Collem.**

The Mandovi River drains an area of 1,550 Sq.km., which lies in Tiswadi, Berdez, Bicholim, Sanguem and Ponda Talukas of Goa State.

The Mandovi River rises in the Jamboti Ghats in Karnataka State. At the origin, near the village Mabulyesheir, it is known as Bhaburnal, which is at an elevation of 600m above M.S.L. The total length of this West Flowing River from its origin to its out fall into the Arabian Sea is 62 km.

The important tributaries of Mandovi River are Sarang, Mahainada, Udel, Lohi, Velvota Bicholim, Mapuce, Nanoda and Khandepar.

THE AGHANASHINI

The River Aghanashini originates from Gadihalli (Sirsi) at an altitude of 676 m above M.S.L in the Western Ghats of Karnataka State. The river has a catchment area of 1350 Sq.km and its length up to the confluence to the Arabian Sea is 117 km. The river flows mostly through forest areas and has intermittent structures of rocky bed (with rock out crops), deep stagnant pools and channelled flow with island formation. No major or medium projects exist on the river. The CWC Hydrological Observation Station is located at **Santeguli** on this river.

THE HALADI

This river originates at an altitude of 870 m above M.S.L in the Western Ghats near Someswara in the reserved forests of Karnataka. The river is called as Varahi in the upper reaches and takes the name Haladi after confluence with Munda Koduhole near Haladi village. The river has a catchment area of 781 Sq.km and a total length of 70 km. The CWC Hydrological Observation Station is located at **Haladi.** The Haladi hydro-electric project, which is on the upstream of this Station, has been commissioned in 1990.

THE SITA

The River Sita rises in the Western Ghats beyond Someswar to the North- East of the Udupi Taluk, while the River Swarna flows from the hills situated at the South-Eastern boundary of the same Taluk. Both these Rivers are perennial and join the Sea at Barakur, about 13 km to the North of Udupi Town. The junction of these two rivers forms a large pool. The River Sita is navigable for about 18 km only. There is one CWC Hydrological Observation Station at **Avershe** on this river, which is located at 9.2 km from its outfall into Sea.

THE SWARNA

The river Swarna is one of the major West Flowing Rivers in Dakshina Kannada District of Karnataka State taking its origin in Western Ghats and joining Arabian Sea near Kameshwara village in Udupi taluk. The river flows for a length of 61.05 km. up to its confluence with the sea. The river Swarna is called "Yennehole" in the initial reaches and Swarna River after confluence with `Kaud-hole' its tributary. There is one CWC Hydrological Observation Station at **Yennehole** on this river

The River Swarna is perennial. Though the flow in the river is meagre in summer months, an abundant quantity of flow is experienced during monsoon. The catchment area of the river is under the influence of South West monsoon between June and September.

THE GURPUR

The River Gurpur is one of the streams joining the Arabian sea in the Dakshina Kannada District. The drainage area of the stream is 870.40 Sq.km.

There is one CWC Hydrological Observation Station at **Addoor** on this River. The Site is located at 35.0 km of its outfall into Arabian sea.

THE NETRAVATHI

The Netravathi rises between Kudrermukh and Ballalaryan Durga in the Dakshina Kannada district of Karnataka at an elevation of about 1000 m at 75^0 20' East longitude and 30^0 10' North latitude and flows generally in a North-South direction for 40 km up to Gohattu, where it takes a turn towards the West and there after flows in East-West direction up to its out fall into the Arabian Sea near Mangalore. There is one CWC Hydrological Observation Station at **Bantwa**l on this river. The Kumaradhara, a major left-bank tributary joins near the village Uppinangadi. The total length of the Netravathi is 103 km from its source to the outfall. The river drains an area of 3,657 Sq.km. No major project is in existence in this basin. However, the investigations for a project called "Multi-purpose Netravathi Anicut Scheme" has reported to be completed.

THE PAYASWANI

This river is a tributary to the Chandragiri. The Payaswani River originates from Patti Ghat reserve forest in Coorg district of Karnataka at an altitude of about 1,350 m above M.S.L. The river has a length of 105 km. The catchment area of the river is 1,538 Sq.km. There is one CWC Hydrological Observation Station at **Erinjipuzha** on this river.

THE VALAPATANAM

The Valapatanam River rises South of Ammatti village in the district of Coorg in Karnataka State at 75^0 52' East longitude and 12^0 13' North latitude at an elevation of 900m above MSL. The river has a total length of 101 km from its source to its outfall into the Arabian Sea. The river drains an area of 1,867 Sq.km. of which 546 Sq.km lies in Karnataka and the rest in Kerala. There is one CWC Hydrological Observation Station at **Perumannu** on this river.

THE KUTTYADI

The river Kuttyadi also known by the name Murat River in the lower reaches is one of the important rivers in the Southern part of India, which has great water potential. The river Kuttyadi originates from South Wayanad, flows towards North-West and joins the Arabian Sea near Badayana town. The Kuttyadi river basin is bounded by the Chaliyar basin on the South, Kabini basin in the East and Mahe basin in the North. The basin lies approximately between latitudes 11^o 30' to 11^o 40' North and longitudes 75^o 40' to 76^o 00' East. The catchment area of the river is 583 Sq.Km. The total length of the river is 90 Km. There is one CWC Hydrological Observation Station at **Kuttyadi** on this river.

THE CHALIYAR

The Chaliyar, known in the lower reaches, as the Beypore is one of the major rivers of Kerala. The main river starts from the Elambalari hills at an altitude of 2,067 m above MSL. It is formed by the confluence of numerous

streams and rivers. Its important tributaries are the Cherupuzha, the Iringipuzha, the Kurumbanpuzha, the Kanhirapuzha, the Punnapuzha, the Karimpuzha, the Vadapuram-puzha and the Chaliyarpuzha. The Chaliyar, flowing for a total length of about 169 km finally joins the Arabian Sea at Beypore. The river drains a total area of about 2,933 Sq.km. of which 388 Sq.km. lies in Tamil Nadu. There is one CWC Hydrological Observation Station at **Kuniyil** on this river.

THE KADALUNDI

The Kadalundi River rising East of Karuvarakkundu village in the district of Calicut in Kerala state at 76^0 15' East longitude and 11^0 18' North latitude at an elevation of 900 m has a total length of 130 km from its source to its out fall and a drainage area is 1,112 Sq.km. The two major tributaries are the Olupuzha and the Veliyar. No major irrigation project is in existence in the basin. The basin has no Hydel potential also. There is one CWC Hydrological Observation Station at **Karathodu** on this river.

THE BHARATHAPUZHA

The Bharathapuzha River is the second longest West Flowing River that drains into the Arabian Sea in Kerala State. This basin is bounded in the East by the Cauvery basin, in the West by the Arabian Sea. The basin lies approximately between 10^0 26' and 11^0 13' North latitudes and 75^0 53' to 77^0 13' East longitudes. Its drainage area is 6,186 Sq.km spread over the two states namely Tamil Nadu and Kerala. The basin is elongated in shape and finds its outlet into the Arabian Sea. There are five Hydrological Observation Stations on this river maintained by CWC i.e at **Kumbidi, Pulamanthole, Mankara, Pudur & Ambarampalayam.**

The Total drainage area of the basin is 6,186 sq. km out of which nearly 71% lies in the Kerala State. The State wise distribution of the drainage area is given below:

Name of State	Drainage Area (Sq.km)	Percentage of Total Drainage Area
1. Tamil Nadu	1,786	29
2. Kerala	4,400	71
Total	6,186	100

The Bharathapuzha or Ponnani river as it is called in the lower reaches, rises in the Eastern slopes of Anamalai hills of the Western Ghats at an elevation of 2,250 m above MSL and flows in the North-Westerly direction in Pollachi taluk of Coimbatore district in Tamil Nadu State. On its 45^{th} km. run from its origin, it is joined by a tributary namely, the Palar on its right bank. Traversing another 15 km Westward, it enters the Palghat district of Kerala State through the Palghat gap. At its 100^{th} km run, it is jointed by the Kalpathipuzha on the right bank. Traversing another 109 km. in the Westward direction through Palghat and Malapuram districts, it finally discharges into the Arabian Sea near Ponnani town. The total length of the river from its origin to out fall is about 209 km and drains a total area

of 6,186 Sq.km. The upper reaches of the river is called as the Aliyar. When it enters Kerala, it is called as the Kannadipuzha till it meets the Kalpathipuzha. After confluence with the Kalpathipuzha, it is known as Bharathapuzha or Ponnani River. It is joined by the Gayathripuzha on the left bank and the Pulanthode on the right bank as it flows down to the Arabian Sea. It also receives a large number of small streams and rivulets.

The Gayathripuzha, the Kalpathipuzha and the Pulanthode, are the three major tributaries. All the three tributaries rise in the Western slopes of the different ranges of the Western Ghats and drains a major parts of the Palghat, Trichur and Malapuram districts.

THE CHALAKUDI

The Chalakudi river has its origin from the Anamalai hills of Western Ghats. It is formed by the confluence of five streams namely, the Parambikulam, the Kuriarkutty, the Sholayar, the Karappara and the Anakayam. The river has a length of 130 km. The total drainage area of the river is 1,704 Sq.km. of which 300 Sq.km lies in Tamil Nadu and the rest is in Kerala. There is one CWC Hydrological Observation Station at **Arangaly** on this river.

THE PERIYAR

The Periyar 244 km in length is the longest river of Kerala. The Total drainage area of the basin is 5,398 sq. km out of which nearly 98 % lies in the Kerala State. The State wise distribution of the drainage area is given below:

Name of State	Drainage Area (Sq.km)	Percentage of Total Drainage Area
1. Tamil Nadu	114	2
2. Kerala	5,284	98
Total	5,398	100

It rises at the forest land Sivagiri peak 80 km South of Devikulam at an elevation of 2,438 m above MSL and traverses the steep mountainous terrain before it is joined by the Mullayar, 16 km downstream. The river then turns West and continues to flow in the direction for about 16 km in a sandy bed. After a winding course of about 13 km, the river reaches Vandiperiyar and passes through a second narrow gorge below which it is joined by the Perumthura. Further down, it is joined by six tributaries after which the important tributary Edamala joins the Periyar. Passing Malayattur and there after taking a meandering course, the river reaches Alwaye where it divides itself into two branches. The upper branch joins the Chalakudi River at Punthenvelikara and then expands into a broad sheet of water at Munambham. The other branch taking a Southernly course is broken up into a number of small channels which fall into the Vembanad lake (as Varapuzha). There are two Hydrological Observation Stations maintained by CWC on this river i.e. at **Neeleswaram & Vandiperiyar**.

THE MUVATTUPUZHA

The Muvattupuzha River has its origin at East of Erattupetta village in the district of Kottayam in Kerala state at 76^0 53' East longitude and 9^0 43' North latitude at an elevation of 1,200 m. The river has a length of 121 km and a drainage area of 1,554 Sq.km. The three major tributaries of the river are the Thodupuzha Aar, the Kaliyar and the Kothamangalam Aar. There are two Hydrological Observation Stations maintained by CWC on this river/Tributory i.e. at **Ramamangalam & Kalampur.**

THE MEENACHIL

The river originates at East of Erattupeta in the district of Kottayam in Kerala State at 76^0 52' East longitude and 9^0 40' North latitude at an elevation of 900 m above MSL. The river has a number of tributaries namely, Kadapuzha Aar, Karipad thodu, Trikovil Aar, Poonjan Aar, Chit Aar, Payappara Thodu etc. This river has a length of 78 km from its origin to the confluence with the Vembanad lake. It drains a total area of 1,272 Sq.km. There is no major irrigation project in the basin at present. The basin has no power potential. There is one CWC Hydrological Observation Station at **Kidangoor** on this river.

THE PAMBA

The Pamba, 176 km in length is the third longest river in Kerala. It is formed by the confluence of the Pamba Aar, Kaki Aar, Arudhai Aar, Kakkad Aar and Kall Aar. The Pamba Aar rises in the Peerumedu Plateau at an elevation of 1,670m. The Kaki Aar, which forms the major tributary of the Pamba River, is a much larger stream at the beginning than the main river. The Pamba River, after receiving the Kaki Aar flows in a Westerly direction till it is joined by the Arudhai Aar. At Narayanamuzhi, it turns and follows a South-Easternly direction until the Kakkad Aar Joins it. Beyond the confluence, the river flows in a Southerly direction up to Vadasserikkara where it is joined by the Kall Aar which has its origin in the Valanjakkatti Malai. The catchment area of the river is 2,235 Sq.km. There are two Hydrological Observation Stations maintained by CWC on this river/Tributary ie at **Kalloppara & Malakkara.**Sacred due to its proximity to Sabarimalai

At Pandanad the river bifurcates, one branch taking a Westerly course. The Manimala joins the Pamba in its Neeretupuram branch. The river thereafter flows Northwards and falls into the Vembanad lake through several branches.

THE ACHANKOVIL

The river Achankovil is formed by several streams originating from the Pasukidamettu, Ramakkal Teri and Rishi Malai at altitudes ranging between 700 m and 160 m above MSL joined together to form the Achankovil river. This river originates South of Devermalai in the Quilon district of Kerala State at 77^0 15' East longitude and 9^0 10' North latitude at an elevation of 1,500m above MSL. The river has a length of 128 km and drains an area of 1,484 Sq.km. There are no major irrigation projects in the basin at present. There is a possibility of constructing a dam near Neduvathumazhi forest rest house with a

capacity to irrigate 5,000 hectares of land. No Hydel scheme is in existence in the basin at present. This river is a tributary of river Pamba. There is one CWC Hydrological Observation Station at **Thumpamon** on this river. Achankovil – Vaipar Link studied by NWDA.

THE KALLADA

The River is formed by the three rivers i.e. Kulathupuzha, Chendurni and Kalthuruthy joining together near Parappar. The river has its origin in Papanasam range South of Kulathupuzha in Quilon district of Kerala State at an altitude of 900m above MSL. The river has a length of 121 km. and drains an area of 1,699 sq.km before confluencing with the Ashtamudi Lake. There is one CWC Hydrological Observation Station at **Pattazhy** on this river.

THE VAMANAPURAM

The Vamanapuram river has its origin in the Chemunji Motai at about 1,860m, above MSL. The river has length of 88 km and drains an area of 687 sq.km. before joining the Anjengo lake at Chirayinkil. There is one CWC Hydrological Observation Station at **Ayilam** on this river.

THE PAZHAYAR

The river Pazhayar originating from the slopes of Mahendragiri hills at an altitude of 800 m above M.S.L, flows towards South-Western direction through Mahendragiri Estate, Palkulam, Bhuttapandi, Thazhikudi, Nagercoil town, Suchindram, etc. and joins the Arabian Sea near Manakudi . The basin contains number of water storage tanks/bunds. The catchment area of the river is 397 Sq.Km. The total length of the river is 40 Km. There is one CWC Hydrological Observation Station at **Ashramam** on this river.

The Tambraparni and Valliyar river basins lie Northern side of Pazhayar River. There exists one inter basin canal connecting Tambraparni basin and Pazhayar basins, so as to feed water for irrigation, etc in Pazhayar basin, as this basin is experiencing scarcity of water. There is no major project in Pazhayar basin.

TAMBRAPARNI BASIN

The River Tambraparni bounded by Neyyar river basin on the North and Pazhayar river basin on the South originates from the Western slopes of Western Ghats. It flows through hilly terrain in the initial stretch and continues its course through planes of Kanyakumari District of Tamil Nadu. The catchment area of the river is about 906 sq.km. The total length of the river is 55 km. Its drainage area is spread over Kanyakumari Districts of Tamil Nadu. After traversing over this district, it finally reaches the Arabian Sea.

Tambraparni River has two major tributories viz. Kodayar River and Paralayar River. The Kodayar River originates from Turuvattavaladam Malai at an elevation of 1500 m above M.S.L. The Paralayar River originates from Vanamutti Malai near Muthuzhi palace at an elevation of 1500 m about M.S.L.

The Kodayar River and Paralayar river confluence at Muvathumugam and the river course below this confluence is known as Tambraparni River.

Central Water Commission has at present one Hydrological Observation Station across river Tambraparni at **Kuzhithurai.**

1.3 CLIMATIC CHARACTERISTICS

There are two distinct rainfall seasons in this region, the South-West (June to September) and the North-East (October to January) monsoons. During these two seasons, about 90% of the annual rainfall is precipitated. The South-West coast of has fairly salubrious climate. Bracing cold climate exists in the high land region. Temperate climate exists in the plain with high humidity.

A brief description of the climatic characteristics of some of the basins is given below:

ULHAS

The average rainfall in the Ulhas basin is 2,943mm. The basin receives most of the rainfall from the South-West monsoon during June to October. Almost 99% of the total rainfall in the basin is received during this period. The average maximum and minimum temperatures are 38.90 C and 12.4^{0}C respectively. May is the hottest month of the year and January is the coldest month of the year.

KAL & GAD

These basins receive most of the rainfall from the South-West Monsoon during June to October. The average rainfall in the Kal basin is 2,795 mm where as the average rainfall in the Gad basin is 2,600 mm.

MANDOVI /MADEI

The average rainfall in the Mandovi Basin is 3,484mm. The lowest and highest temperatures recorded are 9.30º C during January 1937 and 42.6º C during March 1959 respectively. March to May are the hottest months of the year and December to January are the coldest months of the year.

AGHANASHINI

The basin experiences winter season from December to February. During this period clear weather prevails and it is followed by summer season up to May and there after the South West monsoon starts and ends by September. October and November constitute the Northeast monsoon. The annual rain fall of the basin varies from 2028 mm to 5465 mm. The temperature varies from 20.0°c to 32.7°c. The monthly average wind speed varies from 4.2 km/hr to 7.2 km/hr.

HALADI

This basin experiences its winter season from December to February and during this period clear weather prevails. It is then followed by summer season up to May. There after South West monsoon prevails up to September. October and November constitute the North East monsoon. The temperature varies from 32.4°c to 21.7°c. This basin experiences high humidity, especially during South-West monsoon season. The wind speed is fairly strong during monsoon period, and varies from 6.8 to 9.6 km/hr. The basin experiences an average annual rainfall of 5516 mm.

SWARNA

Three distinct seasons prevail in this basin, summer season from March to May, monsoon from June to November and winter from December to February. Due to proximity to sea, the region is generally humid with a further rise in humidity during monsoon season. The maximum, minimum and average annual rainfall of the basin are 7751 mm, 3465 mm and 4436 mm respectively. The monthly average Maximum & Minimum temperatures recorded are 32.4^{o} C in April and 21.7^{o} C in January respectively. The maximum monthly average wind speed varies from 7.2 to 9.6 km/hr.

NETRAVATHI

The climate of the basin is characterised by heavy rainfall, high humidity, and oppressive weather in the hot season. The hot season from March to May is followed by the South West monsoon from June to September. October and November constitute the retreating monsoon or post monsoon season. The annual rainfall varies from 2002 mm to 5277 mm. The temperature varies from 16.0°c Minimum to 42.0°c Maximum and the wind speed from 7.2 to 9.6 km/hr.

VALAPATANAM

The climate of this basin is characterised by heavy rainfall, high humidity and oppressive weather in hot season. The maximum rainfall observed is 4268 mm and minimum 2369 mm. The temperature varies from 22.0°c to 32.9°c.The velocity of wind varies from 8 km/hr. to 12.6 km/hr.

CHALIYAR AND KADALUNDI

Good rainfall and humid temperature through out the year are the characteristic features of these basins. The climate along the coastal area of the basin is generally hot with high humidity. These basins experience both South West and North East monsoons. The annual rainfall is 5042 mm maximum to a minimum of 1289 mm. The mean daily temperature of this basin varies from 25.8°c to 29.4°c as observed at IMD observatory. The wind speed varies from 12.6 km/hr to 8.1 km/hr.

BHARATHAPUZHA

The Bharathapuzha basin receives copious rainfall during the South West monsoon and it lies in the rain shed region of the Western Ghats. The rainfall varies from 2,000 to 2,800 mm in the hilly region to 3,000 mm in the coastal region. Since, the basin is located in tropical region, the temperature varies with season.

CHALAKUDI

Good rainfall and humid atmosphere are felt through out the year. The climate along the coastal area of this basin is generally hot with high humidity. This basin gets rainfall in both South West monsoon and North East monsoon. The rainfall varies from 1494 mm to 4588 mm. The normal daily mean temperature varies from 25.9°c to 28.7°c observed at Cochin. The mean monthly wind velocity varies from 6.7 to 10.9 km/hr observed at I.M.D. observatory.

MEENACHIL

This Basin is in receipt of good rainfall and humid atmosphere through out the year. The basin experiences both South West and North East monsoons. The annual rainfall varies from 2420 mm minimum to a maximum of 4686 mm. The monthly mean temperature varies from 26.2°c to 29.4°c observed at I.M.D. observatory. The wind speed observed is 6.55 to 10.55 km/hr

PAMBA

The Pamba basin experiences good rain fall, moderate temperature and humid atmosphere. The South West and North East monsoon have great influence over the climatic condition of the basin. Even though the coastal regions of the basin experience hot with high humidity, the hilly region is generally cold. As per the I.M.D observations, the normal mean daily temperature varies from 22.6°c to 32.7°c. The average annual rainfall varies from 2276 mm to 4275 mm. The wind speed varies from 8.5 to 13.6 km/hr.

ACHANKOVIL

Good rainfall and a humid atmosphere are through out the year in this basin and in receipt of both South West monsoon and North East monsoon. The annual average rainfall in this basin is 2520 mm. This basin experiences a tropical climate with out much variation in temperature. The mean daily temperature varies from 26.1°c to 29.1°c. The velocity of wind varies from 8.5 to 13.6 km/hr as observed at I.M.D. Observatory.

KALLADA

The Kallada basin experiences good rain fall and humid atmosphere throughout the year. The climate along the coastal region of this basin is generally hot with high humidity. The normal daily mean temperature of the basin

varies from 26.1°c to 29.1°c. Even-though the monsoon period of the basin is considered from June to November, the basin gets most of the rainfall during June to August. The annual rainfall varies from 2225 mm to 4038 mm. The basin experiences moderate and uniform wind velocity through out the year. Generally it varies from 8.5 to 13.6 km/hour as per the I.M.D. data.

VAMANAPURAM

The climate is generally hot with humidity through out the coastal belt and in mid land, where as in hilly region of the basin it is very cool, for most of the period in the year. As per the I.M.D observations, the normal mean daily temperature of the basin varies from 26.2°c to 28.8°c. The basin experiences annual rainfall between 1836 mm and 4651 mm. The mean monthly wind velocity as per the I.M.D. observation varies from 4.8 to 11.2 km/hour.

MUVATTUPUZHA KALIYAR BASIN

This basin experiences good rainfall and humid atmosphere through out the year. The normal daily mean temperature of this basin varies from 25.9°c to 28.7°c as observed at I. M. D Observatory. The Muvattupuzha basin is getting both South-West monsoon and North-East monsoon. The South- West monsoon begins in June and ends in September and North-East monsoon begins in October and ends in November. The average annual rainfall of this basin varies from minimum of 2779 mm to maximum of 4526 mm. The mean monthly wind velocity varies from 6.7 to 10.9 km/hr.

1.4 GEOLOGY

Physiographically the State is divided into three major units viz. the coastal plain, the midlands and the hill ranges. The coastal plains have an elevation of less than six meters whereas the elevation of midlands ranges from 6 to 80 m and that of hill ranges is more than 80 m above mean sea level. Two plateau regions are seen in the hill ranges, the important being the Wynad plateau covering major part of Wynad district, the elevation of which is about 700 m. above msl. The other plateau is Munnar plateau in Idukki district, the elevation of which is about 1000 m. Above msl.

Geologically 88% of the State is underlain by crystalline rocks of Archaean age which is part of the peninsular shield of India. The crystalline complex of Kerala is composed of charnockites, gneisses, schists, migmatites and rocks of the Wynad supra-crustals. Along the Western portion of the State the crystalline rocks are overlain by the sedimentary formations of Tertiary age and recent alluvial formation. The Tertiary sequence of formation have been divided into four beds viz. Alleppey, Vaikom, Quilon and Warkali, the age of which ranges from Eocene to Lower Miocene. Laterites of subrecent age are derived from the crystalline as well as sedimentary formations and are seen all along the midlands. Along the coastal plain, the sedimentaris and laterites are overlain by alluvium of recent age.

Laterites are the most widely distributed lithological unit in the State and the thickness of this formation varies from few metres to about 30m.

GEOLOGICAL SUCCESSION IN KERALA

Era	Age	Formation	Lithology
Quarternary	Recent	Alluvium	Sands, clays, riverine Alluvium and flood plain deposits of Kuttanad area.
	Sub-recent	Laterite	Laterite derived from crystalline and sedimentary formation.
Tertiary	Lower Miocene	Warkali beds	Sandstone and clay with lignite seams
	Lower Miocene	Quilon beds	Limestone, clay and marl.
	Eocene to Oligocene	Vaikom beds	Sandstone with pebbles and gravel beds, clays and lignite.
	Alleppey beds		Carbonaceous clay and sand
	Intrussives		Granite, granophyres, dolerite and gabbro.
Archean	Wyanad group		Foliated granite gneiss with bands of schist and ultramafics, Quartz mica schists .
	Migamtite group		Granite gneiss, bornblende biotite gneiss, Garnet biotite gneiss and quartzofeldspathic gneiss
	Charnockite group		Cordierite gneiss, Charnockite gneiss and pyroxene granulite
	Khondalite group		Garnet sillimanite gneiss, graphite gneiss, Quartzite and calc granulite.

1.5 DESCRIPTION OF THE WATER STORAGE/DIVERSION STRUCTURES

There are 25 Nos of on-going/completed projects in the basin of Mandovi, Bharathapuzha, Periyar and Pamba. The details of these projects is given in the **Annexures- II to V.** Maps showing these projects are enclosed as **Plates - XXXIV to XXXVII**

A brief feature of some of the projects is given below.

MANDOVI / MADEI

Anjunem project constructed across Nanoda, a tributary of Mandovi River is the main project of the basin. In addition to this, Mandovi project is also planned to be constructed, across Costinadi (Tributary of Velvota). This project consists of a straight gravity masonry dam of length 180 m. There are no direct canals from the dam. A pickup wier is constructed at 1.5 km downstream and two canals are taking off from this pickup wier. The right bank canal is of 15 km length.

The construction of the dam has been completed in May 1987.

SWARNA

A dam is proposed on this river at location consisting of East longitude 75^0 02` 30" and North latitude 13^0 15' 30" and the place is approachable from Karkala. The gross storage capacity of the reservoir is 370.95 M.Cum. and the dead storage is 108.65 M.Cum. The Total irrigatable area is about 44,000 ha.

PAYASWANI

There is no major irrigation project presently in the basin. However, Pallangode project on Payaswani River to irrigate an area of 10,930 hectares and the Moonam Kadavu project on the Chandragiri river to irrigate an area of 4,800 hectares are under investigation. The river basin has no Hydro-electric power potential.

VALAPATANAM

The multipurpose Kattampally project at Kattampally, and Pazhassi project at Valiambra are the main irrigation Projects in this basin. The Kattampally has been planned in two stages. The stage I will not only prevent saline water intrusion and reduction of flood, but also provide irrigation benefit to an area of 1280 ha. The stage II of the project is expected to irrigate an addition area of 1650 ha. The Pazhassi project is proposed to irrigate 16,110 ha. of land. Further, one more project viz., Avalam Irrigation Project is under investigation.

There is no Hydel project in existence in the basin. However, there is a proposal for the construction of upper Barapole Hydro-Electric Scheme in Makut forest Range in Karnataka. The tail race of this scheme is also planned to utilise for the Lower Barapole Hydro-Electric Scheme Kerala with an installed capacity of 140 MW.

BHARATHAPUZHA

At present there are 13 completed structures either reservoirs or weirs in the Bharathapuzha catchment out of which there are three important structures namely the Aliyar reservoir, Tirumurthi reservoir and Malampuzha reservoir. Brief particulars of Malampuzha reservoir are given below.

MALAMPUZHA RESERVOIR

This project consists of 1,849 m long straight gravity masonry dam and 222 m long earthen dam with a maximum height of 38.1 m, constructed across the Malampuzha River in the Palghat district. Two canals off taking from either side of the river, irrigate an area of 21,045 ha. This reservoir has a live capacity of 226.96 M.Cum. The project was commissioned in the year 1966.

2.0 STREAM FLOW DATA

2.1 METHODOLOGY

The standard method being adopted at all the sites for collecting the data is explained briefly as under:

Three lines of staff gauges are maintained at all the sites for observing water levels and surface slope. All these levels are connected to GTSBM value. The Water Level at Central Gauge line is used for arriving at a Stage-Discharge relationship at each site.

Velocities are recorded by using current meters as per IS:3918-1966 (reaffirmed-2001) by boat with cable way or with outboard engine at higher stages and by wading at lower stages. Where the facility of boats is not available, Discharge measurements are carried out from the near by bridges / Floats.

Observed data at the field station is entered / computed in different formats prescribed for the purpose and later processed at various levels using SWDES and HYMOS Softwares before publishing in the Water Year Book.

On the days when the discharge observations are not conducted due to holidays or any other reasons, the same have been estimated from the established Stage-Discharge curve of the site of the current year against 0800 Hrs stage. Some of the observations, which do not fall within the established curve due to some errors in observation or wind effect etc., are discarded and discharges are again estimated from the established Stage-Discharge curve against 0800 Hrs stage.

2.2 DATA AVAILABILITY

As already mentioned, Central Water Commission is conducting Hydrological Observations at **37** stations spread over five states of Karnataka, Kerala, Maharashtra, Tamil Nadu & Goa and daily discharge data collected at all these sites for the year **2017-18** has been finalized and presented in this volume in the form of Water Year Book.

The Data presented in this book has been collected by the four Divisions viz., Cauvery Division, Bangalore; South Western Rivers Division, Kochi ; Southern Rivers Division, Coimbatore and Upper Krishna Division, Pune.

2.3 EXPLANATORY NOTES

The explanatory notes described here under are designed to assist in the interpretation of hydrological parameters contained in the data presented subsequently. The notes are, therefore, valid in so far as data presented in this book is concerned.

i) Water year ranges from June 1st of one calendar year to May 31st of the next calendar year and covers one complete hydrological cycle.

ii) Discharge is given in Cubic meters per second.

iii) Discharges given are daily observed discharges commencing at 08.00 Hrs.

iv) Discharge indicated with asterisk (*) mark is estimated discharge Corresponding to stage at 08.00 Hrs.

v) The ZERO R.L. of a gauge is a datum level fixed for a given site, which is generally kept 1 m or 2 m lower than the lowest water level recorded in a perennial stream. In a non-perennial stream, it is kept 1 m or 2 m lower than the lowest bed level of the stream.

vi) Discharges are rounded to :
   a) nearest full integer when more than 1000
   b) nearest first decimal figure when between 100- 999
   c) nearest two decimal figure when between 10-99.
   d) nearest three decimal figure when less than 10.

vii) Maximum and Minimum discharge are taken from daily observed/estimated discharge.

viii) Run off in mm is the notional depth of water in millimeters over the catchments, equivalent to annual runoff calculated at the discharge measurement station. It is computed using the relation

$$\text{Run off (mm)} = \frac{\text{Annual runoff (M Cum)}}{\text{Catchment area (Km}^2\text{)}} \times 1000$$

iX) Peak and lowest flow correspond to the highest and lowest water levels recorded during the period of record.

X) Measuring Authority refers to the field division responsible for the operation of the Gauging Stations.

ix) The Gauging Station Code Number is a unique seven-column alphanumeric reference number, which facilitates storage and retrieval of flow data in data bank. The first column is identifier of either an integral river basin or for convenience a region having several continuous river catchments. This is followed by a column that identifies an independent river system, which either have one or more outlets to the sea or crosses international border to enter another country. The third, fourth and fifth column spaces 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 225 slots earmarked on the river. The blank column spaces are filled by zero.

3 HYDROLOGICAL DATA

3.1 HISTORY SHEET

The History sheets enclosed give the description of the Hydrological Observation Stations such as Site name, State, District, River basin, Catchment Area, Latitude/Longitude Etc., Peak and Minimum Discharges and the corresponding water levels right from the inception of the site up to the current year are also shown.

3.2 DATA SHEET

In this sheet the observed/estimated daily Stage-Discharge tables are shown month-wise together with Ten-Daily, Monthly and Annual summaries. Dates of occurrences of Graphs showing three highest flood peaks-water Level v/s Time that occurred during the current water year are also generated and included in the Year Book.

3.3 CHARTS / MAPS

The year wise total Annual Run-Offs of the site from the year of inception up to the current year is reflected in the bar charts. The Histogram/Hydrograph of monthly average discharge values are depicted in two separate pie charts one for the current year and the other for all the years from year of inception up to the previous year. The Pre-monsoon and Post-monsoon Cross Sections of each Site are also inserted wherever available.

4 SEDIMENT DATA

There are 23 Sediment observations Stations under West Flowing Rivers Basin.

4.1 SOURCE OF INFORMATION

Suspended Sediment observation stations for which data for 2017-18 is presented in this volume are maintained by the South Western Rivers Division, Kochi, Southern Rivers Division, Coimbatore and Cauvery Division, Bangalore, the names of the stations are given below:

4.1.1 (A) UPPER KRISHNA DIVISION, PUNE

1. Ulhas at Badlapur
2. Kal at Mangaon

4.1.1 (B) SOUTH WESTERN RIVERS DIVISION, KOCHI

1. Payaswani at Erinjipuzha
2. Kuttyadi at Kuttyadi
3. Valapatanam at Perumanu
4. Chaliyar at Kuniyil
5. Kadalundi at Karathodu
6. Bharathapuzha at Kumbidi
7. Pulanthodu at Pulamanthole
8. Bharathapuzha at Mankara
9. Bharathapuzha at Pudur
10. Chalakudi at Arangaly
11. Periyar at Neeleeswaram
12. Muvattupuzha at Ramamangalam
13. Kaliyar at Kalampur
14. Meenachil at Kidangoor
15. Manimala at Kallooppara
16. Pamba at Malakkara
17. Achankovil at Thumpamon
18. Kallada at Pattazhy
19. Vamanapuram at Ayilam

4.1.1 (C) SOUTHERN RIVERS DIVISION, COIMBATORE

Aliyar at Ambarampalayam

4.1.1 (D) CAUVERY DIVISION, BANGALORE

1. Nethravathi at Bantwal

4.1.2 OBSERVATION TECHNIQUE

Suspended sediment observations are conducted daily along with the discharge observations

Sampling is done from boat or by wading. The Punjab type bottle sampler is used for collecting sediment samples. The sediment samples collected from flowing channels are analysed for the three grades of sediment viz. Coarse, Medium and Fine. Coarse and Medium grades are separated by sieving using standard sieves of 212 microns and 75 microns respectively and Fine grade sediment by filtration. Grade wise concentration is determined by gravimetric method.

Samples are generally collected at 0.6 depth from various verticals along the cross section of the river. These verticals are grouped into three or more composite sections for the purpose of analysis of Coarse and Medium grades of sediment. For fine grade, the sediment samples, after removing the Coarse and Medium grade are combined into a single group and analysed. Selection of the composite sections is done in such a way so as to ensure that the discharges through each of the composite sections are nearly equal.

4.1.3 CLASSIFICATION OF SEDIMENT

Sediment is classified as Coarse, Medium and Fine according to the diameter as indicated below:

Coarse : Sediment above 0.20 mm diameter

Medium : Sediment between 0.20 and 0.075 mm diameter

Fine : Sediment below 0.075 mm diameter

The values given in the daily sediment data sheets are observed values. For non-observed days the values are either taken from Discharge–Sediment Curves or from neighborhood values.

4.2 METHOD OF PRESENTATION

The various data tables presented are generated from the validated SWDES Data base through SWDES software. Some of the features of the tables generated are briefly explained as below:

4.2.1 When the sediment samples analyzed give non-measurable sediment, it is presumed to be of “nil” value and recorded accordingly. The Table of Annual Sediment Load along with the season-wise Sediment Loads for the period from the Date of inception up to the Last Year is generated. A bar Chart for the same but including the Sediment load for current year is also generated separately. Separate tables showing Daily Observed Sediment Data & Pie Charts are also generated.

5.0 BED MATERIAL DATA

The Bed Material Survey and Analysis data used to be published separately as Bed material analysis data book till the year 1990. Since Bed material survey and analysis work also form a part of the sediment observation work, it was decided to publish the Sediment data and the Bed material survey and analysis data in a single volume from the year 1990-91 onwards. With the revision of format of Water Year Book, the Sediment and Bed Material data is included in the Water Year Book itself from 2007-08.

5.1 OBSERVATION TECHNIQUES

Bed material survey is conducted at the station gauge line three times in a Water Year i.e during Monsoon, Post monsoon and Pre-monsoon seasons. Samples at the required intervals from the dry as well as the flowing part of the river bed are collected and the river cross section on the date of survey is also taken. Sampling segments are fixed as per the standard requirements, subject to a minimum of three samples. Samples from the flowing channel are collected by means of a scoop type bed material sampler. For the dry part, the bed is cleared off the vegetation etc. by removing about 10 to 15 cm of the top layer with a scraper and a suitable pit of about 30 to 40 cm is dug out and representative samples are collected. These samples are reduced to the required quantity by the cone and quartering process. The samples thus reduced are put into polythene covers and packed into thick cloth bags. The cloth bags are then labeled with the relevant particulars of the river and the samples are sent to the divisional laboratory for analysis.

5.2 THE ANALYSIS

The bed material samples are analyzed at the divisional laboratory for the particles size distribution in two stages. First, the sample is weighed and then placed in the top 40.0 mm dia sieve of a set of Sieves having diameter ranging from 0.6 mm to 40 mm. Shaking the sieve is done with the help of a mechanical sieve shaker. After 10 to 15 minutes of shaking, the material retained in each sieve is collected and weighed. The total weight of various fractions must be equal to the initial weight of the sample used for analysis. The material passing through the last 0.6 mm dia sieve is again analyzed by means of the Puri's Siltometer. From the result of the above analysis, Summation Curves are drawn as per the standard procedure and the mean diameter of each example is worked out. From this the Silt Factor can be calculated using the formula $f = 1.76 \sqrt{m}$ where 'm' is the mean diameter of the sample in mm. The mean diameter of the sample, maximum diameter of the sample, details of the sample collected and the general data of the river are furnished in this publication.

5.2.1 DATA OF THE SAMPLE COLLECTED

In the data of the sample collected, the RD from which the sample is collected, RL of dry bed (in case sample is collected from dry bed), RL of bed level (in case sample is collected from flowing channel), Water level, Depth of water, Segment width, Velocity at the RD and the Segment discharge on the date of sampling are furnished.

5.2.2 GENERAL DATA OF RIVER

In the general data of the river the Hydraulic mean depth, Mean velocity, Surface water slope and the discharge on the date of sampling etc. are shown.

5.2.3 BED MATERIAL COMPOSITION

Under bed material composition, the maximum size and mean size of each sample and also the maximum size and the mean size for the entire cross section for each season are recorded. The minimum size for each sample has been assumed as 0.06 mm. since this has been observed uniformly in every sample.

Annexure - I

STATEMENT SHOWING HO SITES IN WEST FLOWING RIVERS BASIN			
Sl No.	**Name of the site**	**River Name**	**Type**
1	BADLAPUR	Ulhas	GDSQ
2	PEN	Bhogeshwari	GD
3	NAGAOTHANE	Amba	GD
4	MANGAON	Kal	GDSQ
5	ANJANARI	Kajavi	GD
6	BELNE BRIDGE	Gad	GDQ
7	GANJIM	Mandovi	GD
8	COLLEM	Khandepar	GD
9	SANTEGULI	Aghanashini	GDQ
10	HALADI	Haladi	GDQ & RF
11	AVERSHE	Sita	GDQ & RF
12	YENNEHOLE	Yennehole	GDQ & RF
13	ADDOOR	Gurpur	GDQ & RF
14	BANTWAL	Netravathi	GDSQ & RF
15	ERINJIPUZHA	Payaswani	GDSQ
16	PERUMANNU	Valapatnam	GDSQ & RF
17	KUTTYADI	Kuttyadi	GDSQ
18	KUNIYIL	Chaliyar	GDSQ
19	KARATHODU	Kadalundi	GDSQ
20	KUMBIDI	Bharathapuzha	GDSQ
21	PULAMANTHOLE	Pulanthodu	GDSQ
22	MANKARA	Bharathapuzha	GDSQ & RF
23	PUDUR	Kannadipuzha	GDSQ
24	AMBARAMPALAYAM	Aliyar	GDSQ & RF
25	ARANGALY	Chalakudi	GDSQ & RF
26	NEELESWARAM	Periyar	GDSQ & RF
27	VANDIPERIYAR	Periyar	GDQ & RF
28	RAMAMANGALAM	Muvattupuzha	GDSQ
29	KALAMPUR	Kaliyar	GDSQ
30	KIDANGOOR	Meenachil	GDSQ
31	KALLOOPPARA	Manimala	GDSQ & RF
32	MALAKKARA	Pamba	GDSQ & RF
33	THUMPAMON	Achankovil	GDSQ & RF
34	PATTAZHY	Kallada	GDSQ & RF
35	AYILAM	Vamanapuram	GDSQ
36	KUZHITHURAI	Thambraparani	GDQ & RF
37	ASHRAMAM	Pazhayar	GDQ & RF

Index: G= Gauge sites, GD= Gauge & Discharge, RF=Rainfall Station
GDQ= Gauge, Discharge & Water Quality,
GDSQ= Gauge, Discharge, Sediment & Water Quality

PLATE-I

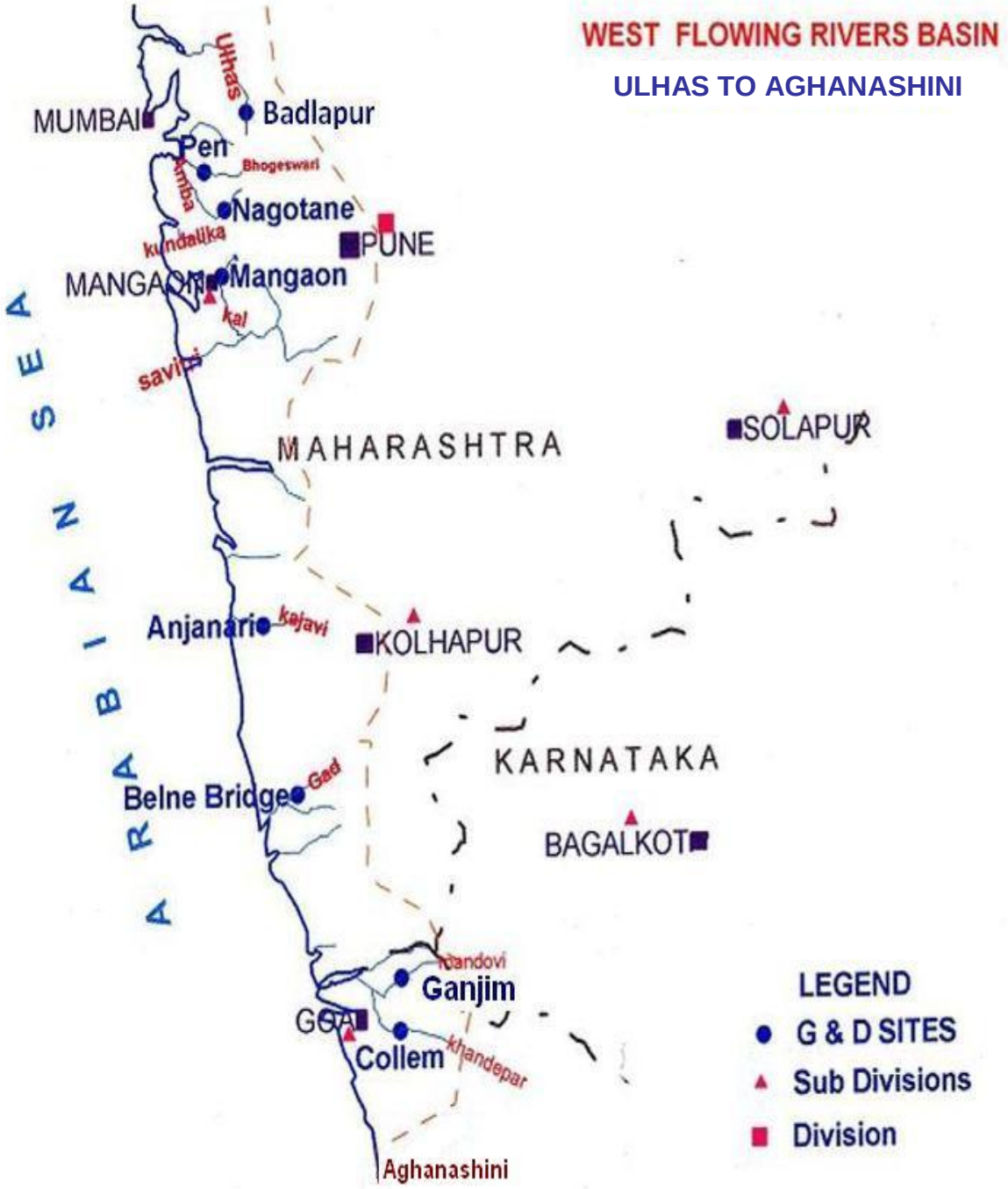
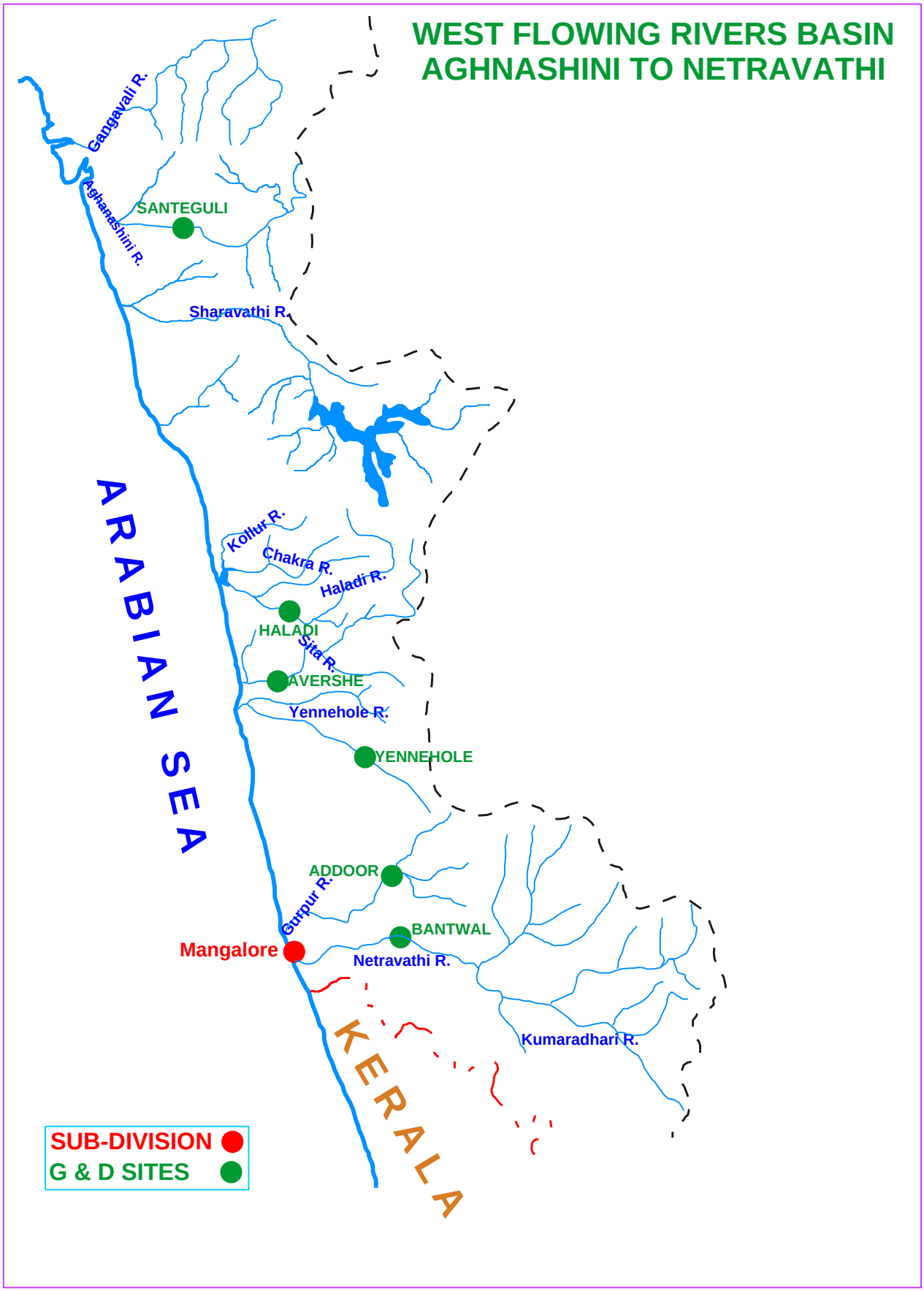
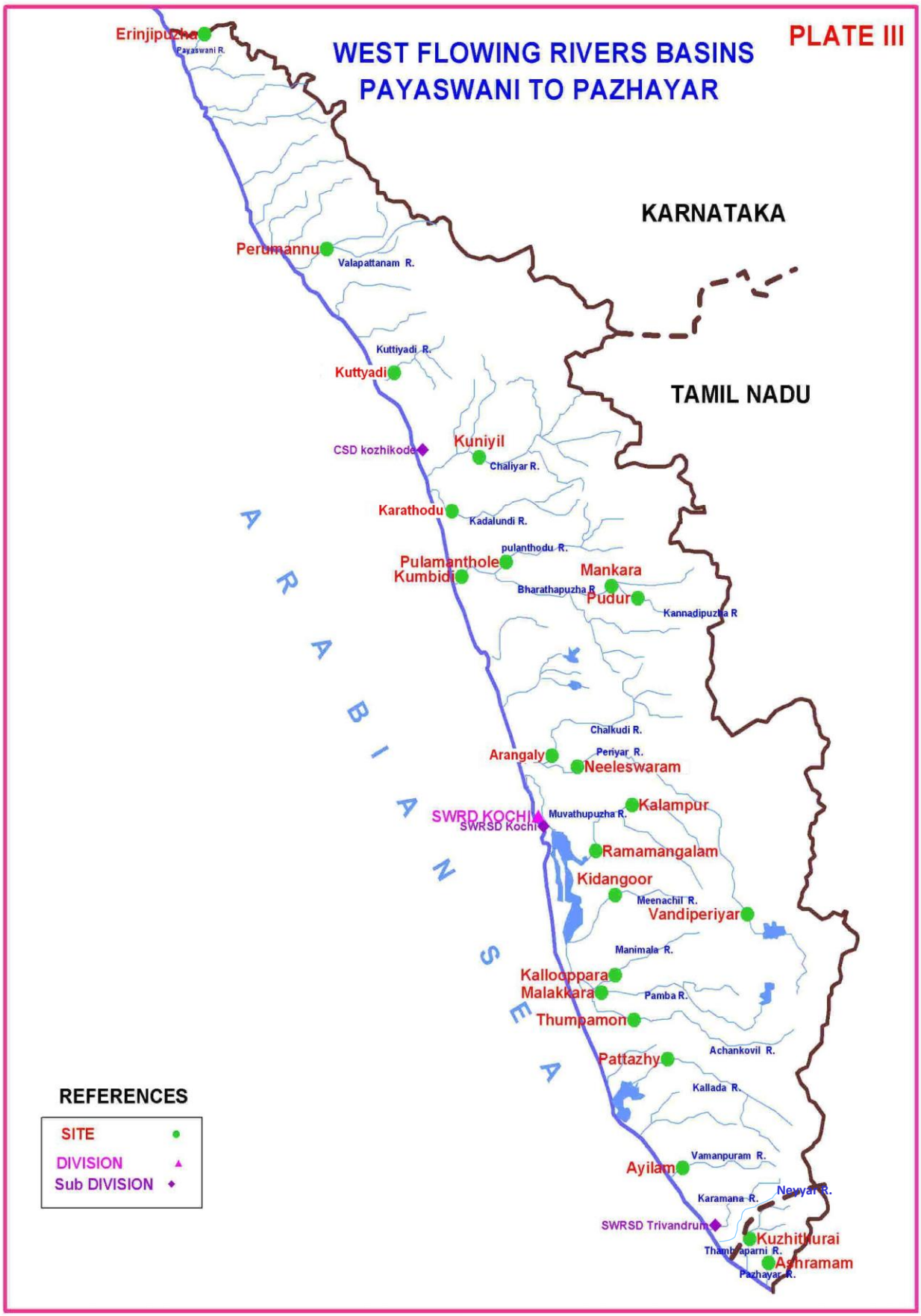
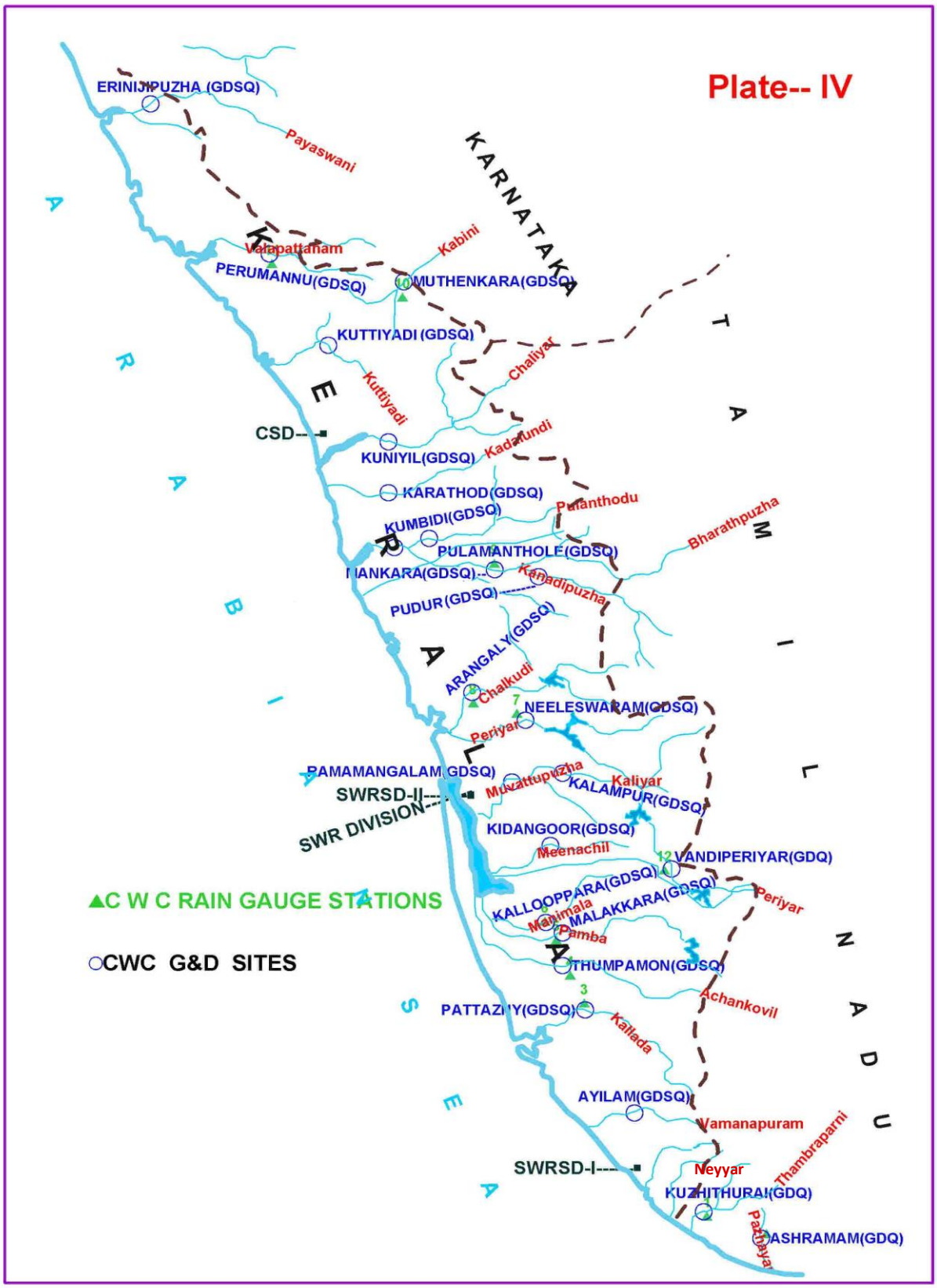

WEST FLOWING RIVERS BASIN
ULHAS TO AGHANASHINI
ARABIAN SEA
MUMBAI
Ulhas
Badlapur
Pen
Bhogeswari
Amba
Nagotane
Kundalika
PUNE
MANGAON
Mangaon
Kal
Savitri
MAHARASHTRA
SOLAPUR
Anjanari
Kajavi
KOLHAPUR
KARNATAKA
Belne Bridge
Gad
BAGALKOT
Mandovi
Ganjim
GOA
Collem
Khandepar
Aghanashini
LEGEND
G & D SITES
Sub Divisions
Division

PLATE-II

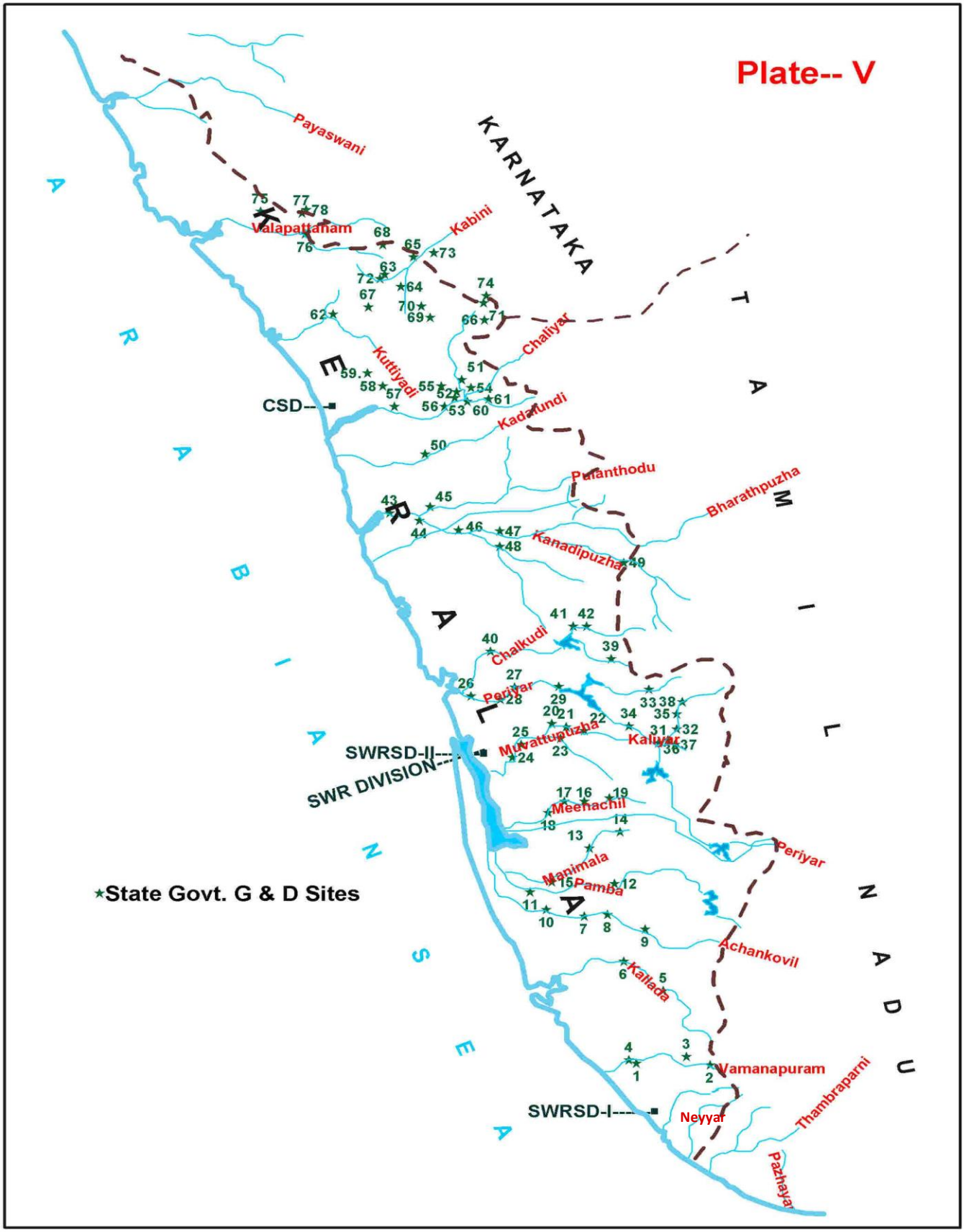

WEST FLOWING RIVERS BASIN
AGHNASHINI TO NETRAVATHI
Gangavali R.
Aghanashini R.
SANTEGULI
Sharavathi R.
ARABIAN SEA
Kollur R.
Chakra R.
Haladi R.
HALADI
Sita R.
AVERSHE
Yennehole R.
YENNEHOLE
ADDOOR
Gurpur R.
BANTWAL
Mangalore
Netravathi R.
Kumaradhari R.
KERALA
SUB-DIVISION
G & D SITES


PLATE III
WEST FLOWING RIVERS BASINS
PAYASWANI TO PAZHAYAR
KARNATAKA
TAMIL NADU
ARABIAN SEA
Erinjipuzha
Payaswani R.
Perumannu
Valapattanam R.
Kuttiyadi R.
Kuttyadi
CSD kozhikode
Kuniyil
Chaliyar R.
Karathodu
Kadalundi R.
pulanthodu R.
Pulamanthole
Kumbidi
Mankara
Bharathapuzha R
Pudur
Kannadipuzha R
Chalkudi R.
Arangaly
Periyar R.
Neeleswaram
SWRD KOCHI
SWRSD Kochi
Muvathupuzha R.
Kalampur
Ramamangalam
Kidangoor
Meenachil R.
Vandiperiyar
Manimala R.
Kallooppara
Malakkara
Pamba R.
Thumpamon
Achankovil R.
Pattazhy
Kallada R.
Vamanpuram R.
Ayilam
Karamana R.
Neyyar R.
SWRSD Trivandrum
Kuzhithurai
Thamirabarni R.
Ashramam
Pazhayar R.
REFERENCES
SITE
DIVISION
Sub DIVISION


Plate-- IV
ERINJIPUZHA (GDSQ)
Payaswani
KARNATAKA
Valapattanam
Kabini
PERUMANNU(GDSQ)
MUTHENKARA(GDSQ)
KUTTIYADI (GDSQ)
Chaliyar
Kuttiyadi
CSD---
KUNIYIL(GDSQ)
Kadalundi
KARATHOD(GDSQ)
KUMBIDI(GDSQ)
Puranthodu
PULAMANTHOLE(GDSQ)
Bharathpuzha
Kanadipuzha
PUDUR(GDSQ)
ARANGALY(GDSQ)
Chalkudi
NEELESWARAM(GDSQ)
Periyar
PAMAMANGALAM (GDSQ)
SWRSD-II---
SWR DIVISION---
Muvattupuzha
Kaliyar
KALAMPUR(GDSQ)
KIDANGOOR(GDSQ)
Meenachil
VANDIPERIYAR(GDSQ)
KALLOOPPARA(GDSQ)
MALAKKARA(GDSQ)
Periyar
Manimala
Pamba
THUMPAMON(GDSQ)
Achankovil
PATTAZHY(GDSQ)
Kallada
AYILAM(GDSQ)
Vamanapuram
Thambraparni
SWRSD-I----
Neyyar
KUZHITHURAI(GDQ)
Pambayar
ASHRAMAM(GDQ)
▲C W C RAIN GAUGE STATIONS
○CWC G&D SITES

INDEX-G& D STATIONS UNDER KERALA STATE GOVT.

SL.No.	Name of Gauging Station	SL.No.	Name of Gauging Station
	BASIN: VAMANAPURAM		**BASIN: CHALAKUDY**
1	Kollampuzha	40	Chalakudy(Ambalakadavu)
2	Valayankil	41	Kuriarkutty (KSEB)
3	Mylamoodu	42	Karappara (KSEB)
4	Anachil		**BASIN: BHARATHAPUZHA**
	BASIN: KALLADA	43	Kuttipuram
5	Punaloor	44	Thrithala
6	Enathu	45	Thiruvegapura
	BASIN: ACHANKOVIL	46	Cheruthuruthy
7	Pandalam	47	Pampady
8	Konni Bridge	48	Cheerakuzhi
9	Kalleli	49	Manakadavu
10	Kollakkadavu		**BASIN: KADULANDI**
	BASIN: PAMBA	50	Anakayam
11	Erapuzha		**BASIN: CHALIYAR**
12	Kurudamannil	51	Maruthapuzha
	BASIN: MANIMALA	52	Punnapuzha
13	Manimala	53	Karimpuzha
14	Mundakayam	54	Chaliyar
15	Thondra	55	Kanjirapuzha
	BASIN: MEENACHIL	56	Kuthirapuzha
16	Cheripad	57	Areacode
17	Palai	58	Mukkom
18	Peroor	59	Koodathaui
19	Teekoy	60	Cherupuzha
	BASIN: MUVATTUPUZHA	61	Nedumkayam
20	Muvattupuzha		**BASIN: KUTTIYADI**
21	Thodupuzha	62	Kadanthrapuzha
22	Kalampur		**BASIN: KABINI**
23	Kakkadasserry	63	Manathody
24	Malankara	64	Panamaram
25	Ramamangalam	65	Baveli
	BASIN: PERIYAR	66	Muthanga
26	Mangalapuzha	67	Choorani
27	Kalady	68	Thiruneli
28	Marthandavarma	69	Vzhavatta
29	Boothathankettu Barrage	70	Kakkavagal
30	Neeleswaram	71	Manjat
31	Perinjan Kutty Dam	72	Thondar
32	Chemmannur	73	Marakkadavu
33	Panniyoor	74	Ponkuzhi
34	Mudirapuzha		**BASIN: VALAPATANAM**
35	Kunjithani	75	Irude
36	Rajakkadu	76	Pala
37	Thuvallur	77	Vallithodu
38	Irythukanam	78	Koothupuzha
39	Upper Idamalayar		


Plate-- V
KARNATAKA
TAMILNADU
ARABIAN SEA
Payaswani
Valapattanam
Kabini
Chaliyar
Kuttiyadi
Kadalundi
Puranthodu
Bharathpuzha
Kanadipuzha
Chalkudi
Periyar
Muvattupuzha
Kaluvar
Meenachil
Manimala
Pamba
Achankovil
Kallada
Vamanapuram
Neyyar
Thambraparni
Pazhayar
CSD---
SWRSD-II---
SWR DIVISION---
SWRSD-I---
★State Govt. G & D Sites

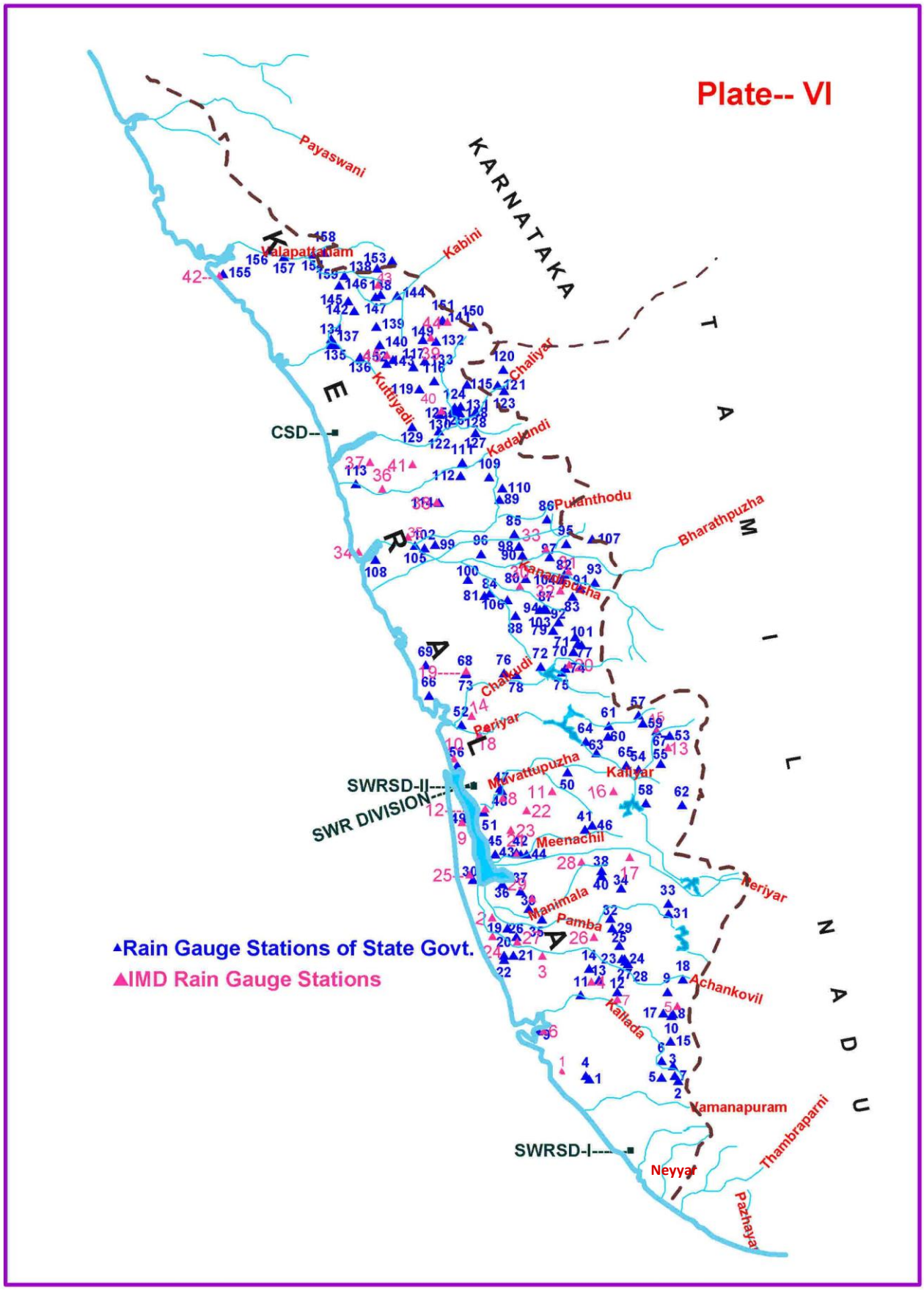
INDEX-RAIN GAUGE STATIONS UNDER I. M. D.

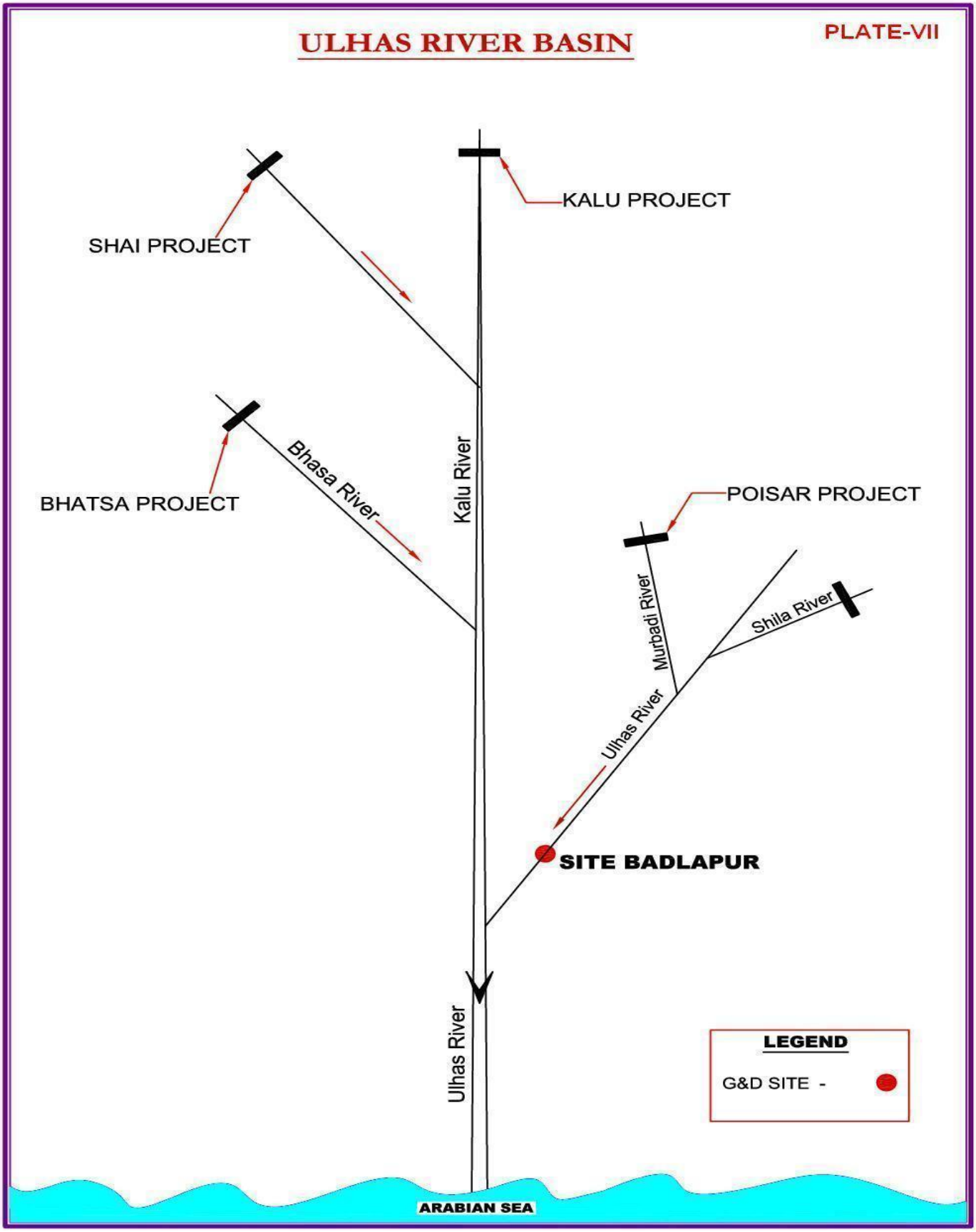
SL.No.	Name of Station	L.No.	Name of Station
	BASIN: VAMANAPURAM		**BASIN: PAMBA (ACHANKOVIL)**
1	Varkala	**24**	Haripad
	BASIN: PAMBA	**25**	Kayamkulam
2	Alappuzha	**26**	Konni
3	Chengannur	**27**	Mavelikara
4	Mancompu		**BASIN: PAMBA (MANIMALA)**
	BASIN: KALLADA	**28**	Kanjirapally
5	Aryankavu	**29**	Thiruvalla
6	Kollam		**BASIN: BHARATHAPUZHA**
7	Punalur (P/T)	**30**	Alathur
	BASIN: MUVATTUPUZHA	**31**	Chittur
8	Piravom	**32**	Kollengode Rly
9	Cherthala	**33**	Palakkad
10	Kochi AP (Navel)	**34**	Ponnani
11	Thodupuzha	**35**	Thrithala
12	Vaikkom		**BASIN: KADALUNDI**
	BASIN: PERIYAR	**36**	Angadipuram Rly
13	Munnar KSEB	**37**	Karipur AP
14	Aluva Rly	**38**	Perinthalmanna
15	Devikulam		**BASIN: CHALIYAR**
16	Idukki	**39**	Ambalavayal
17	Peermade	**40**	Nilambur
18	Perumbavur	**41**	Manjeri
	BASIN: CHALAKUDI		**BASIN: VALAPATANAM**
19	Chalakudy	**42**	Kannu**r**
20	Parambikulam		**BASIN: KABINI**
	BASIN: MEENACHIL	**43**	Mananthavadi
21	Kottayam	**44**	Kuppady
22	Kozha	**45**	Vythiri
23	Kumarakom		

INDEX- RAIN GAUGE STATIONS UNDER KERALA STATE GOVT.

SL.No.	Name of Station	SL.No.	Name of Station
	BASIN: VAMANAPURAM		**BASIN: MUVATTUPUZHA**
1	Attingal	47	Malankara
2	Bonacord Estate	48	Piravom
3	Marchistan Estate	49	Sherthalai
4	Varkala	50	Thodupuzha
5	Valayankil	51	Vaikom T.B
6	Brymore Estate		**BASIN: PERIYAR**
7	Ponmudi	52	Alwaye
	BASIN: KALLADA	53	Anayirangal Estate
8	Ambanad Estate	54	Chembakappara
9	Arinkavu	55	Chemmannur
10	Isfield Estate	56	Cochin NAS
11	Kottarakkara	57	Devikulam Estate
12	Punaloor T.O	58	Erattayar
13	Punaloor KIP Colony	59	Grahamsland
14	Rajagiri Estate	60	Iruttukanam
15	Venture Estate	61	Kallaravalley Estate
16	Quilon	62	Kamakshy Estate
17	Nagamala Estate	63	Kanjikuzhy
	BASIN: ACHANKOVIL	64	Karimanal
18	Achencoil	65	Keerithodu
19	Haripad	66	Kodungallur T.O
20	Kayamkulam R.R.S	67	Korandakkadu
21	Kayamkulam C.P.C.R.I		**BASIN: CHALAKUDI**
22	Kayamkulam K.R.S	68	Chalakudy
23	Konni D.F.O	69	Mattatur
24	Konni Estate	70	Parambikulam
25	Kumbazha	71	Peruvariipallam
26	Mavelikara	72	Perinjalkuthu
27	Konni S.C.R.S	73	Potta
28	Kalleli	74	Sholayar Dam
29	Pathanamthitta	75	Sholayar P.H
	BASIN: PAMBA	76	Thumburmuzhi
30	Alleppey	77	Thunakadavu
31	Anathodu	78	Vettilapara
32	Maniyur	79	Karappara
33	Pamba		**BASIN: BHARATHAPUZHA**
34	Perunthanaruvi	80	Alathur
35	Chengannur	81	Cheerakuzhi
36	Mancombu	82	Chittoor
	BASIN: MANIMALA	83	Chulliyar Dam
37	Chenganacherry	84	Elanad
38	Mundakayam R.H	85	Kanjirapuzha
39	Thiruvalla	86	Malampuzha
40	Boyee Estate	87	Manularoo Estate
	BASIN: MEENACHIL	88	Mangalam Dam
41	Erattupetta	89	Mannarghat
42	Kottayam R.H	90	Mathur
43	Kottayam R.R.I	91	Meenkara Dam
44	Kozha	92	Meerafloores Estate
45	Kumarakom	93	Moolathara Anicut
46	Teekoy	94	Nelliampathy

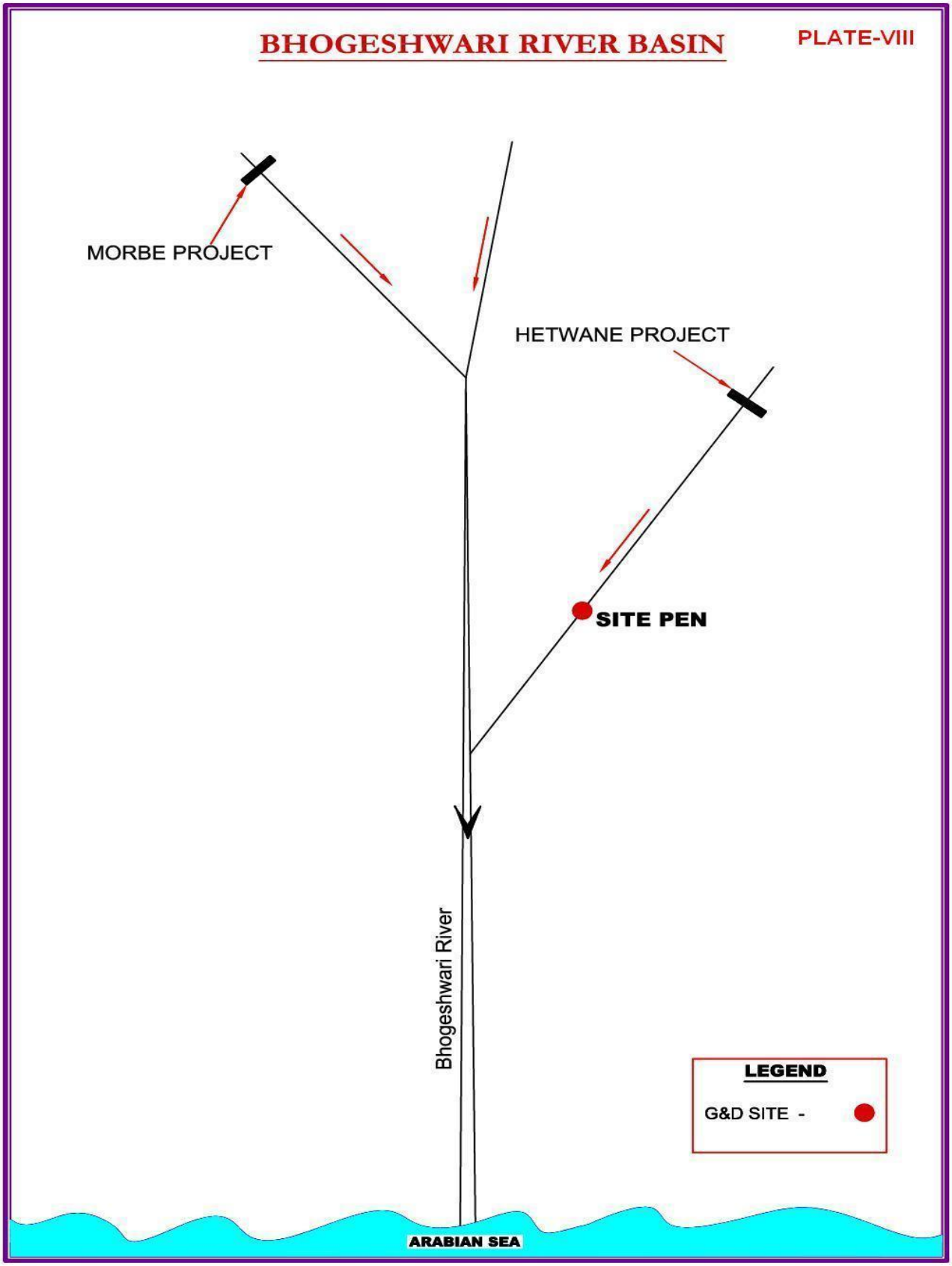
SL.No.	Name of Station	SL.No.	Name of Station
95	Olavakode	128	Vellikkatta
96	Ottapalam	129	Manjeri T.O
97	Palaghat Taluk Office	130	Nilambur Deptl.
98	Parali	131	Edakkara
99	Pattambi	132	Ambalavayal
100	Pazhayannur S.F	133	Rippen Estate
101	Pokkunni		**BASIN: KUTTIYADI**
102	Shorannur R.S	134	Koothali D.A.F
103	Pothundy Dam	135	Kuttiyadi Dam
104	Thembaramadaku	136	Kuttiyadi P.H
105	Thrithala	137	Peruvannamuzhy
106	Wadakkancherry		**BASIN: KABINI**
107	Walayar	138	Thiruneli
108	Ponmani T.O	139	Padinjarathara
109	Silent Vally	140	Achoor Estate
110	Pulikkal	141	Chedallath
	BASIN: KADULANDI	142	Makkiyad Monastry
111	Kalikavu	143	Lakkidi
112	Karuvarakundu	144	Mananthoddy T.O
113	Thirurangadi	145	Makki
114	Perunthalmanna	146	Periyar
	BASIN: CHALIYAR	147	Valat
115	Anamari	148	Mananthoddy KSEB
116	Aranapuzha	149	Vazhavatta
117	Choorelmala	150	Muthanga
118	Chungathra	151	Kuppadi
119	Kalladi	152	Vythiri
120	Thevanthappara	153	Vyakkatti
121	Nellikutha		**BASIN: VALAPATANAM**
122	Nilambur (F.R.O)	154	Aralam
123	Olikkathodu	155	Cannanore
124	Palunda	156	Irikkur
125	Punnapuzha K.S.E.B	157	Valiambra
126	Punnapuzha Agri.	158	Paripputhodu
127	Pullangode Rubber Estate	159	Kottiyoor


Plate-- VI
KARNATAKA
TAMIL NADU
KERALA
Payaswani
Kabini
Chaliyar
Kuttiyadi
Kadalundi
Bharathpuzha
Chaliyar
Periyar
Kallada
Neriyar
Pamba
Manimala
Meenachil
Achankovil
Thambraparni
Pazhayar
Neyyar
Kamanapuram
CSD
SWRSD-II
SWR DIVISION
SWRSD-I
Rain Gauge Stations of State Govt.
IMD Rain Gauge Stations


ULHAS RIVER BASIN
PLATE-VII
KALU PROJECT
SHAI PROJECT
Kalu River
BHATSA PROJECT
Bhasa River
POISAR PROJECT
Murbadi River
Shila River
Ulhas River
SITE BADLAPUR
Ulhas River
LEGEND
G&D SITE -
ARABIAN SEA

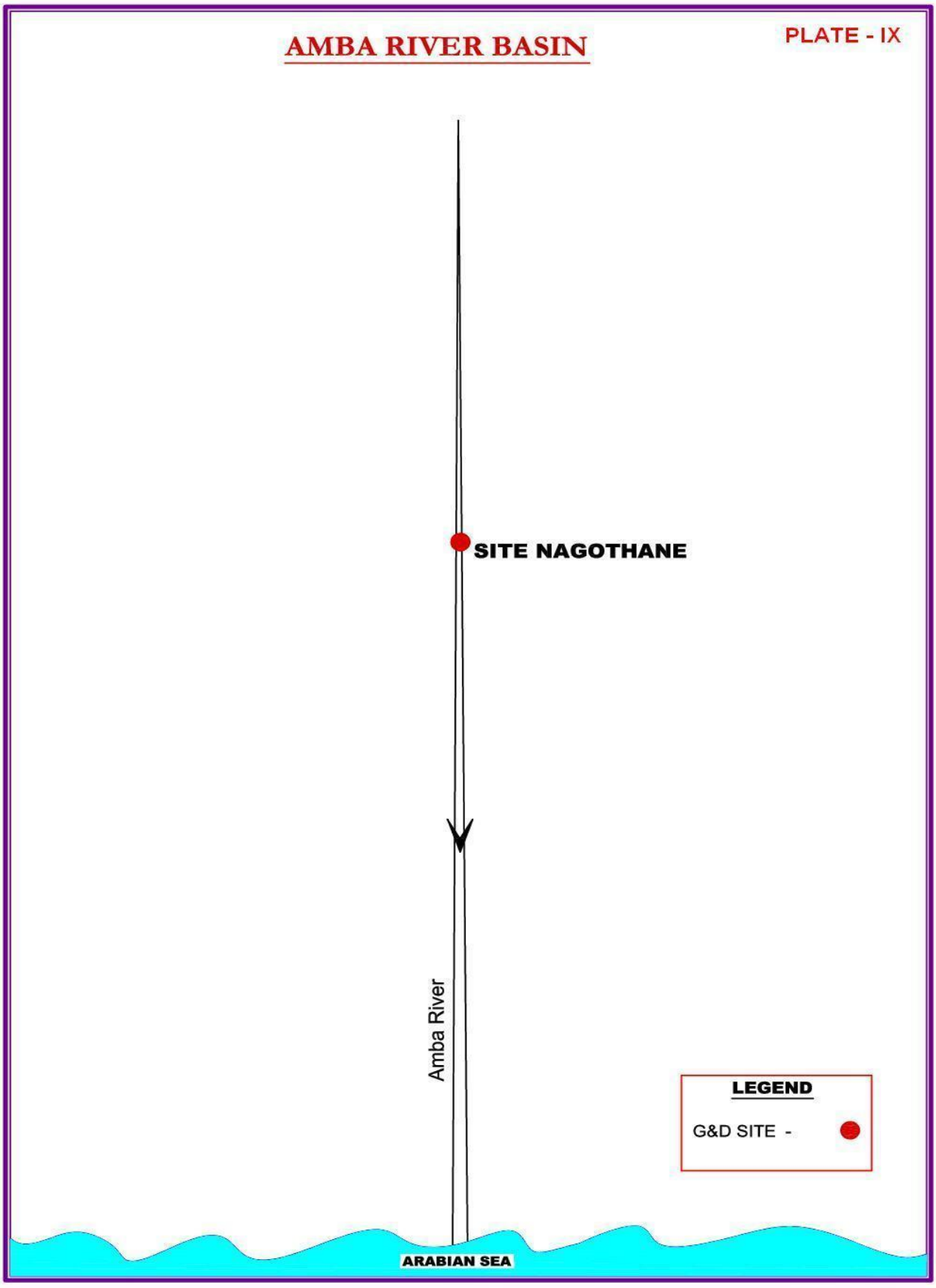
BHOGESHWARI RIVER BASIN

PLATE-VIII



AMBA RIVER BASIN

PLATE - IX



KAJAVI RIVER BASIN

PLATE- X

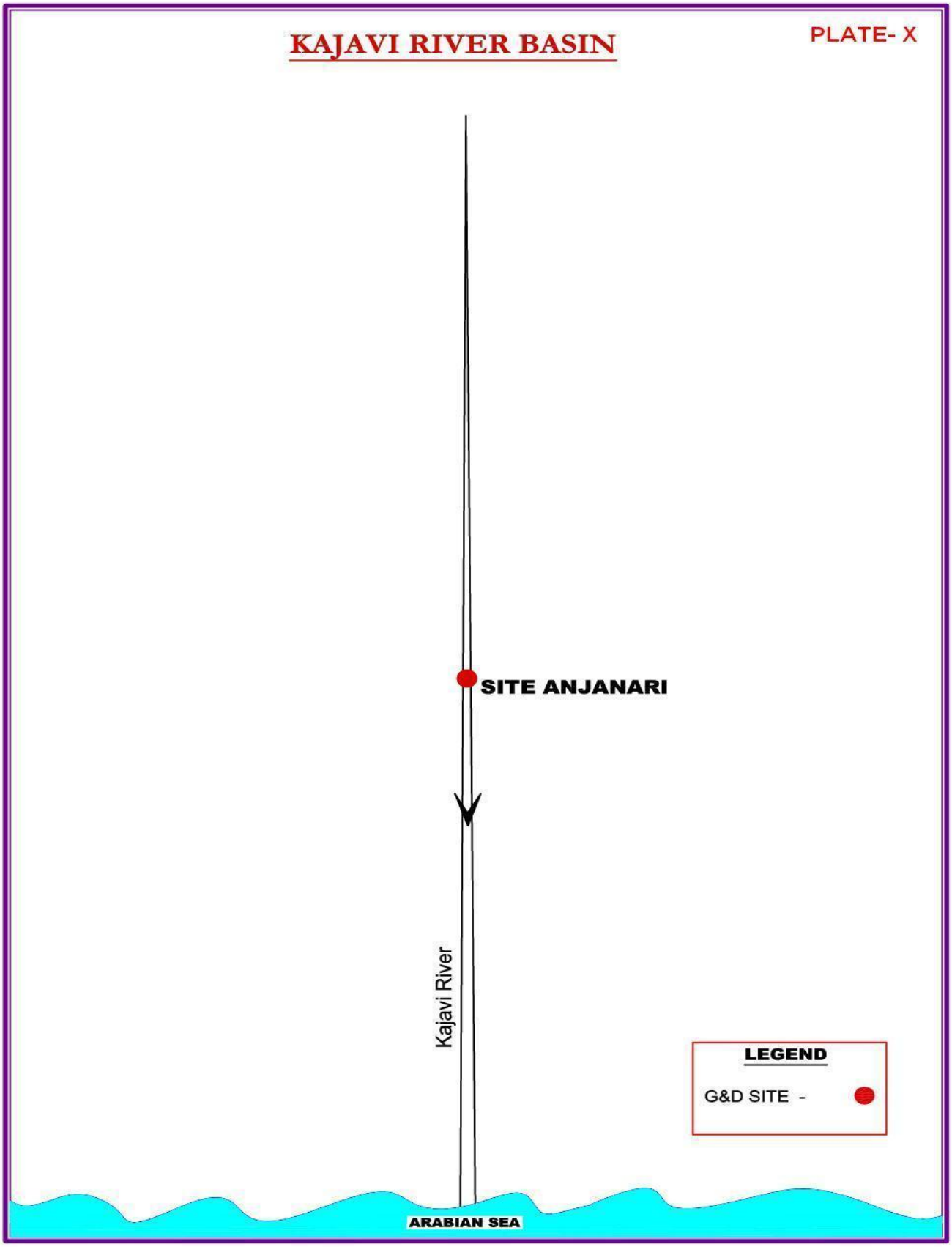


PLATE- XI

GAD RIVER BASIN

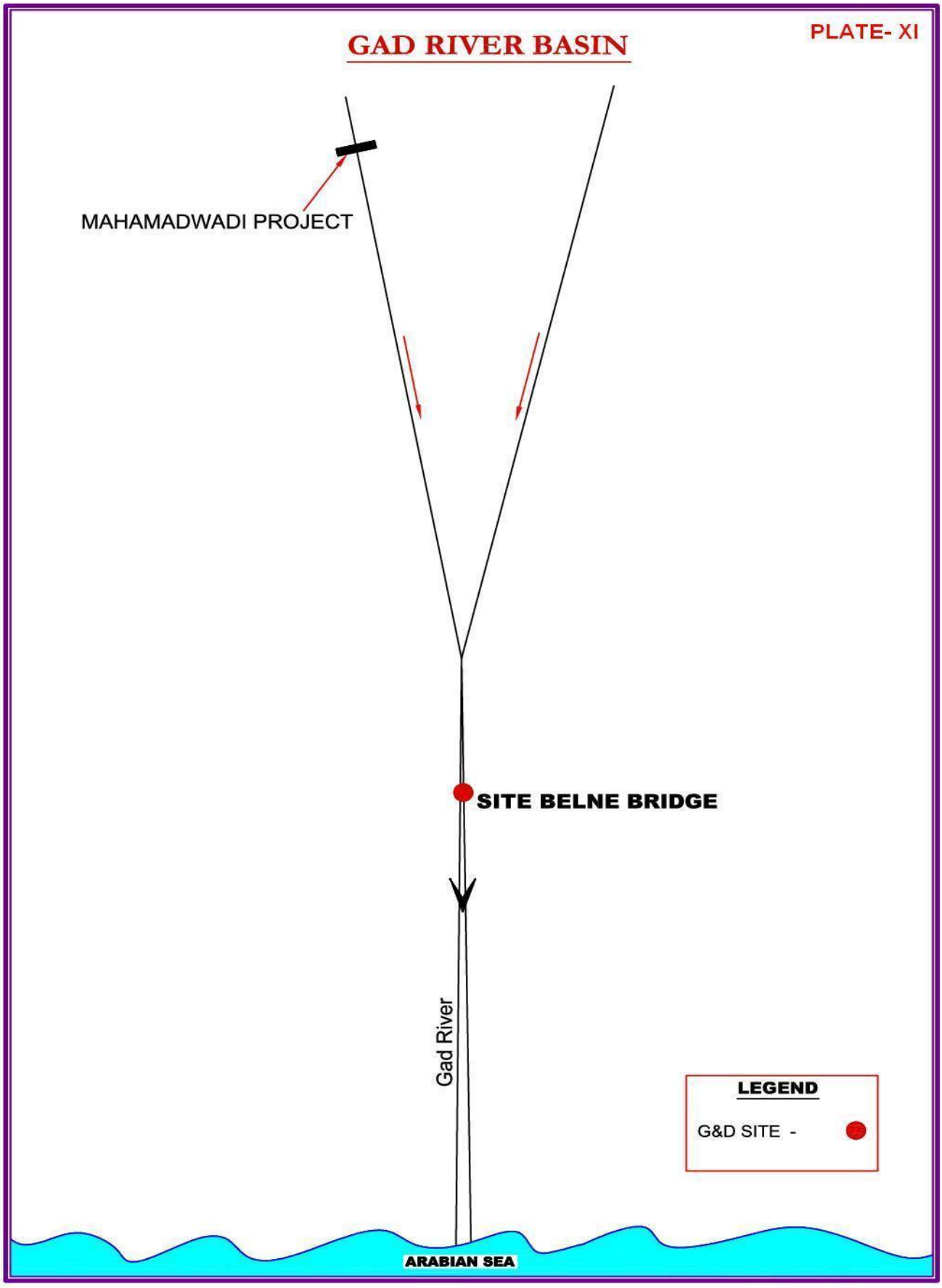


PLATE-XII

MADAI AND KHANDEPAR RIVER BASIN

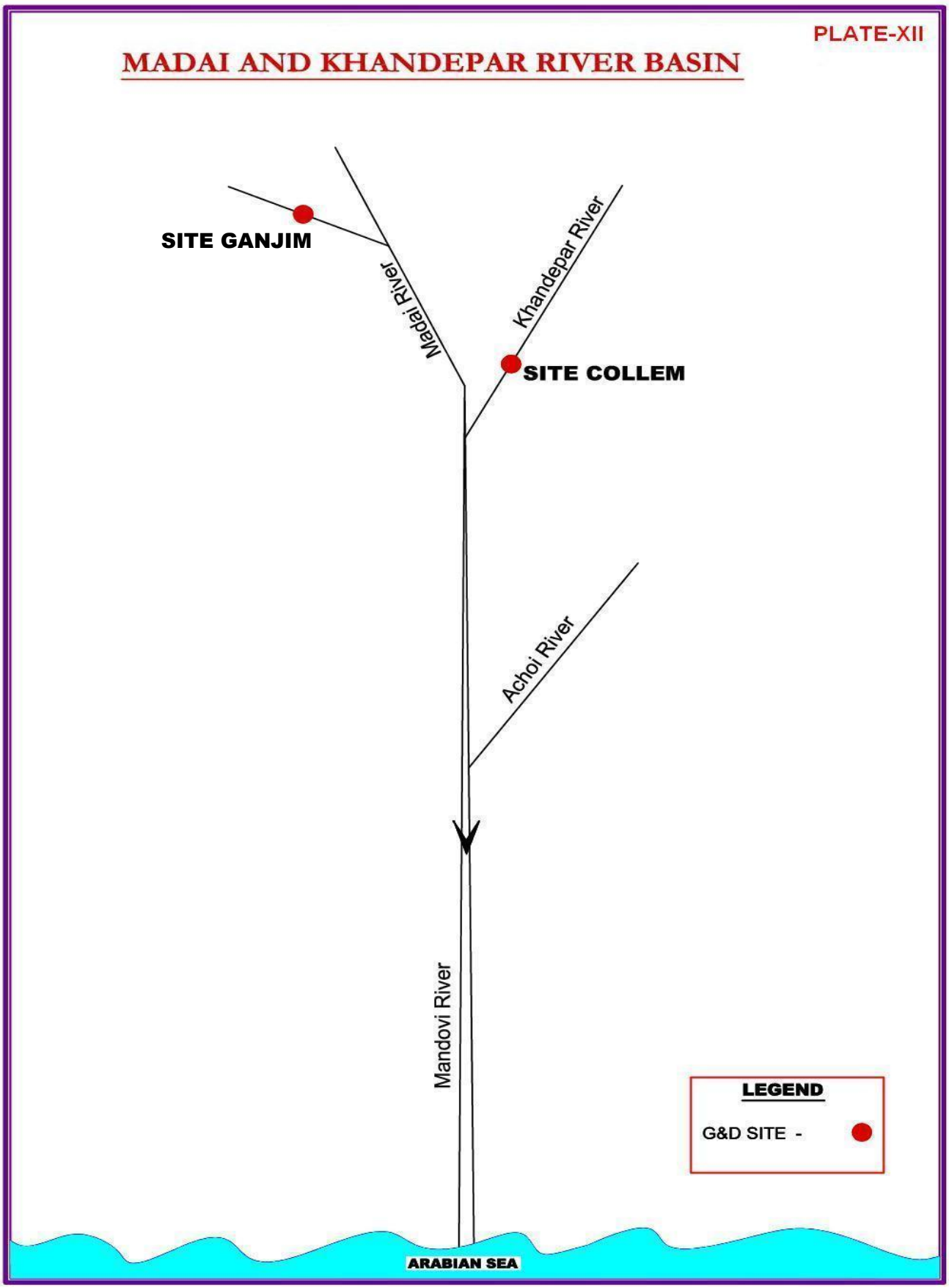


PLATE-XIII

AGHANASHINI RIVER BASIN

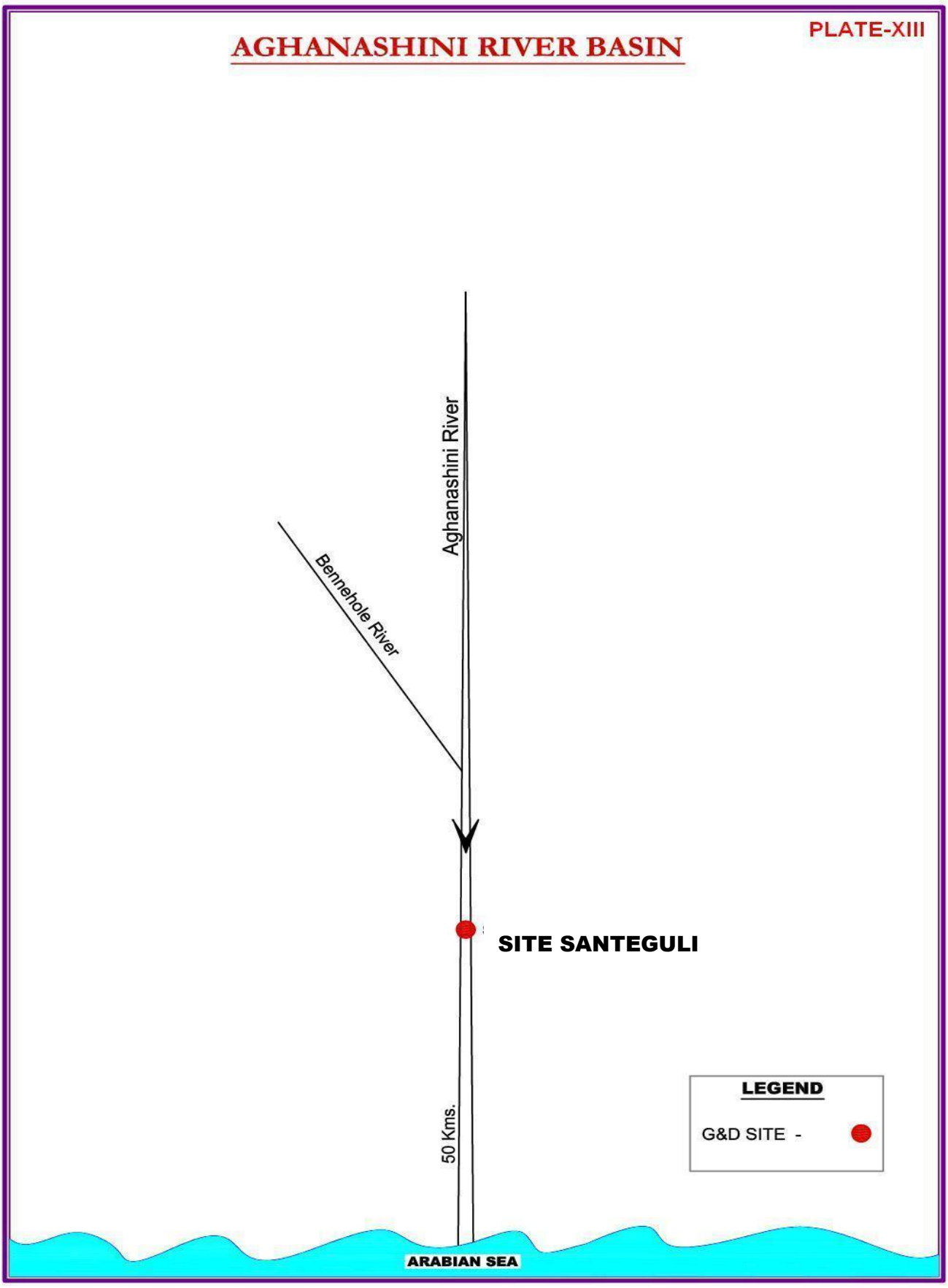


PLATE- XIV

HALADI RIVER BASIN

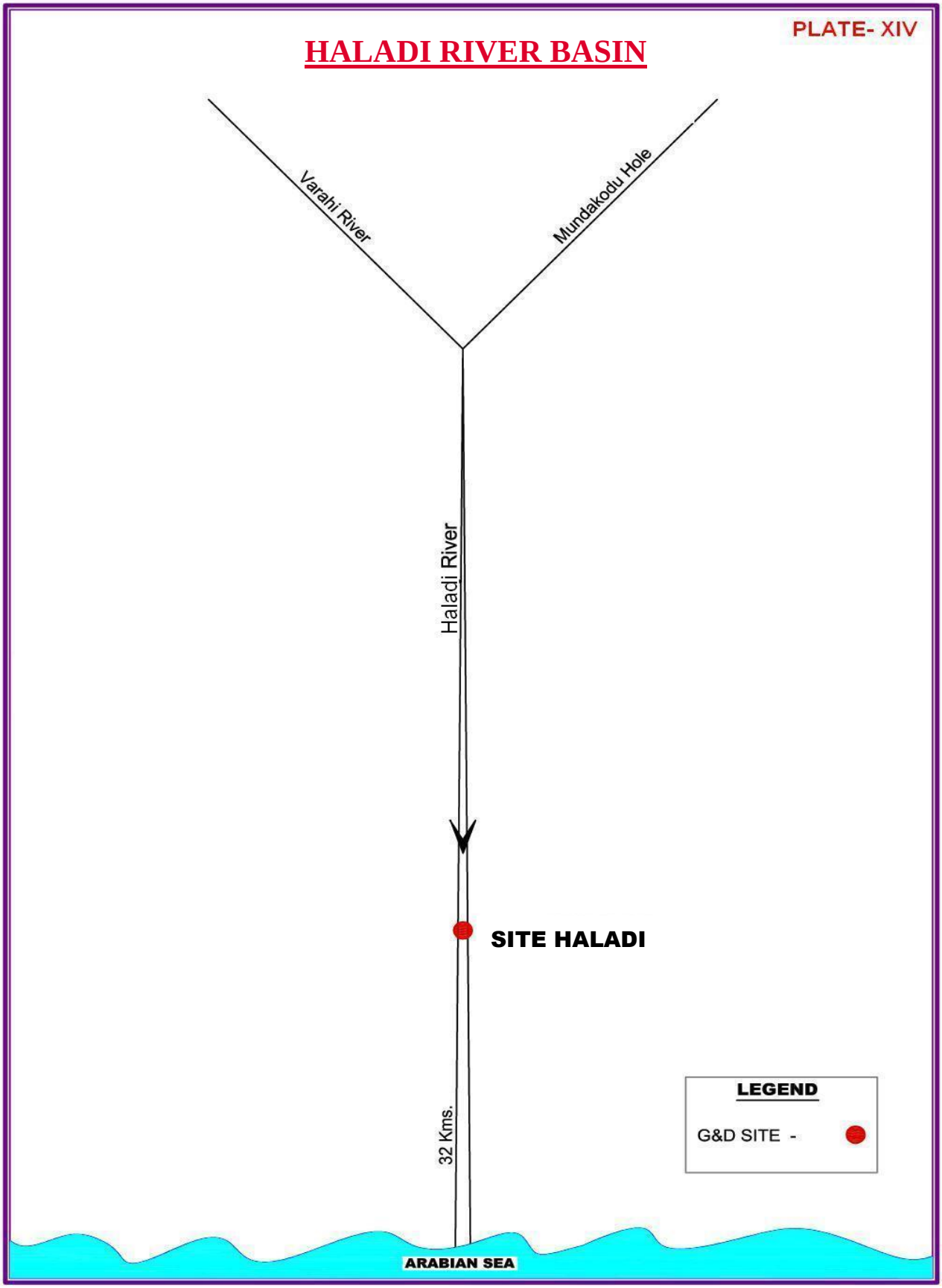


PLATE- XI

SITA RIVER BASIN

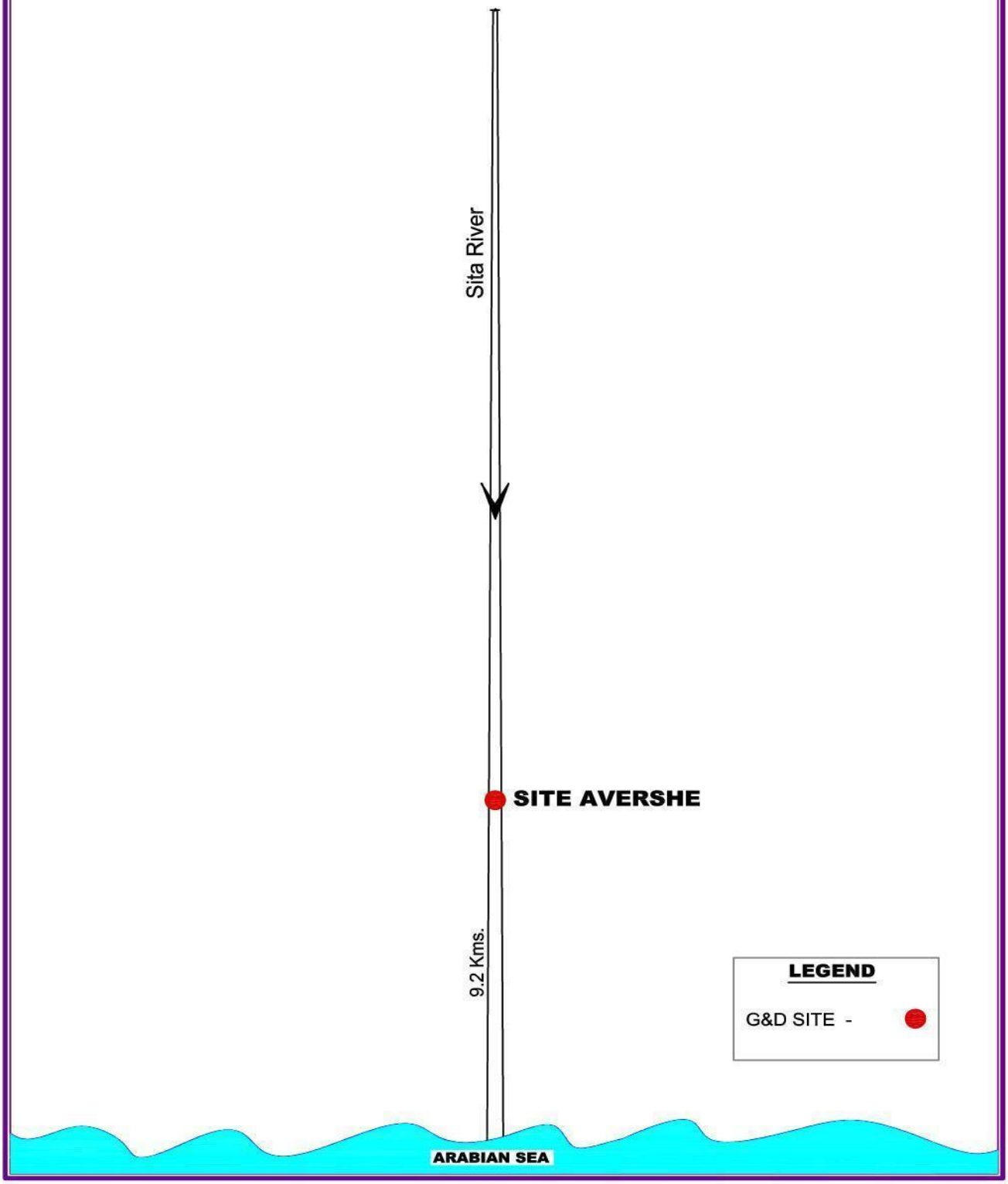


PLATE-XVI

SWARNA RIVER BASIN

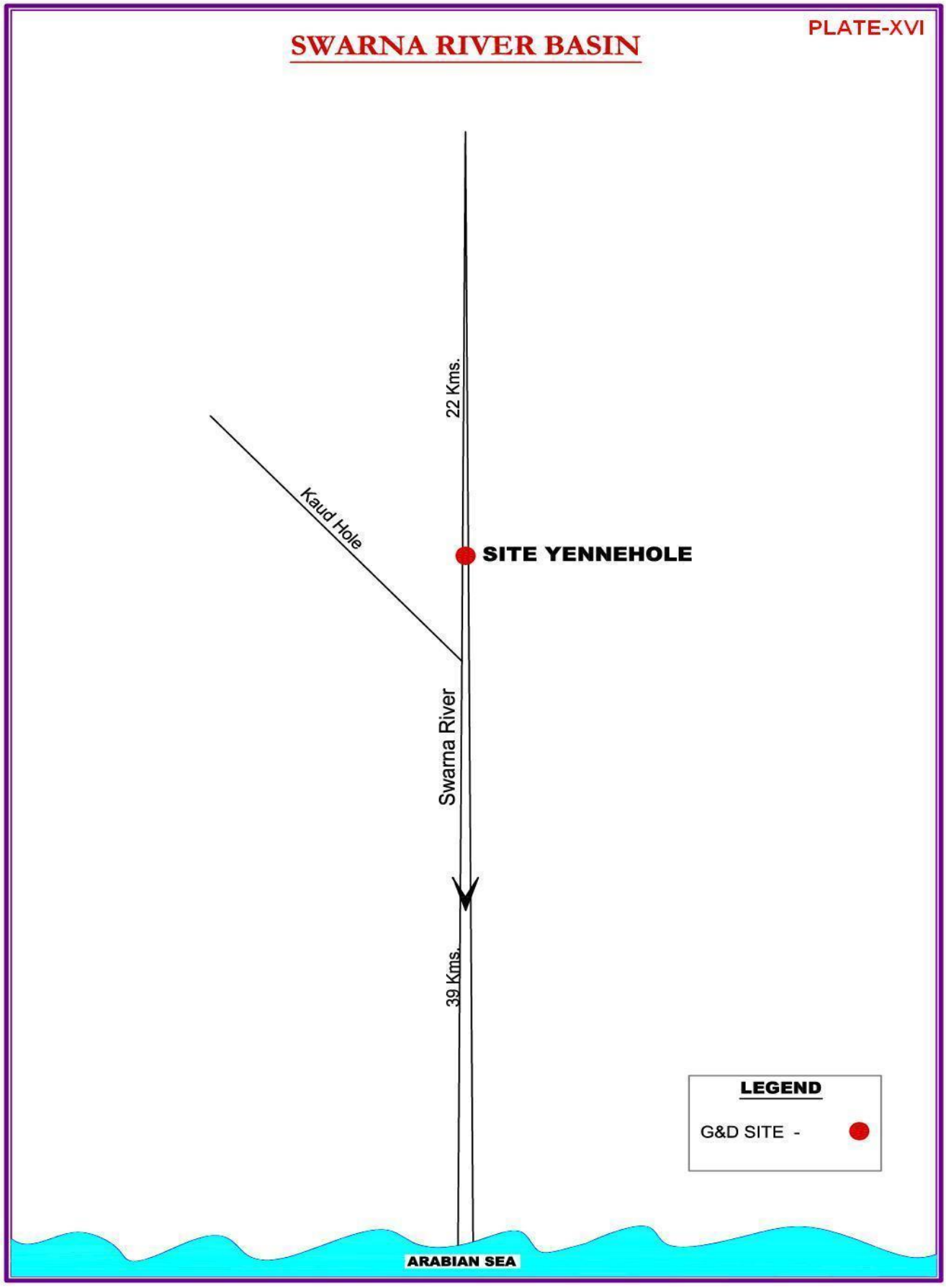


PLATE-XVII

GURPUR RIVER BASIN

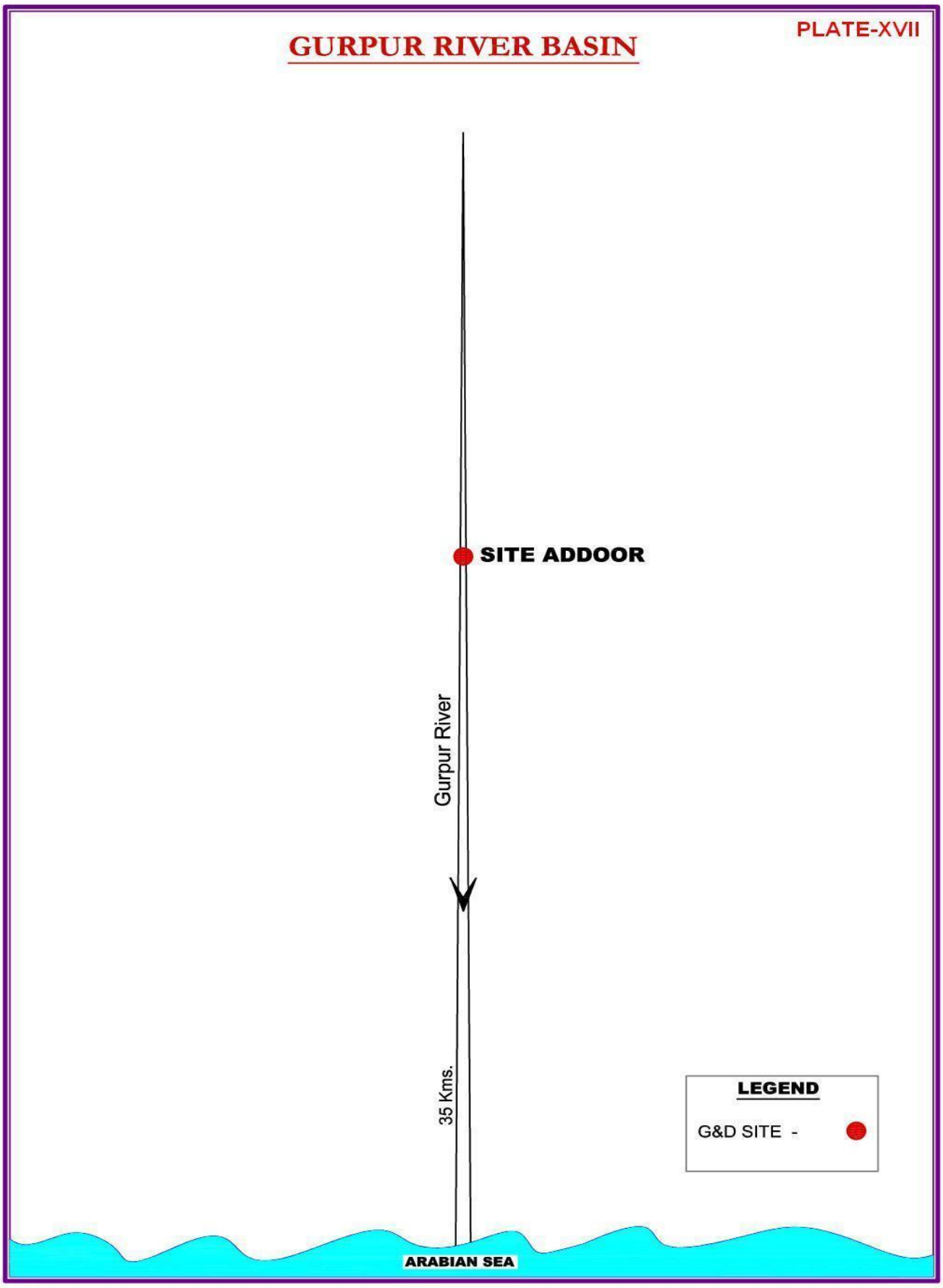


PLATE-XVIII

NETRAVATI RIVER BASIN

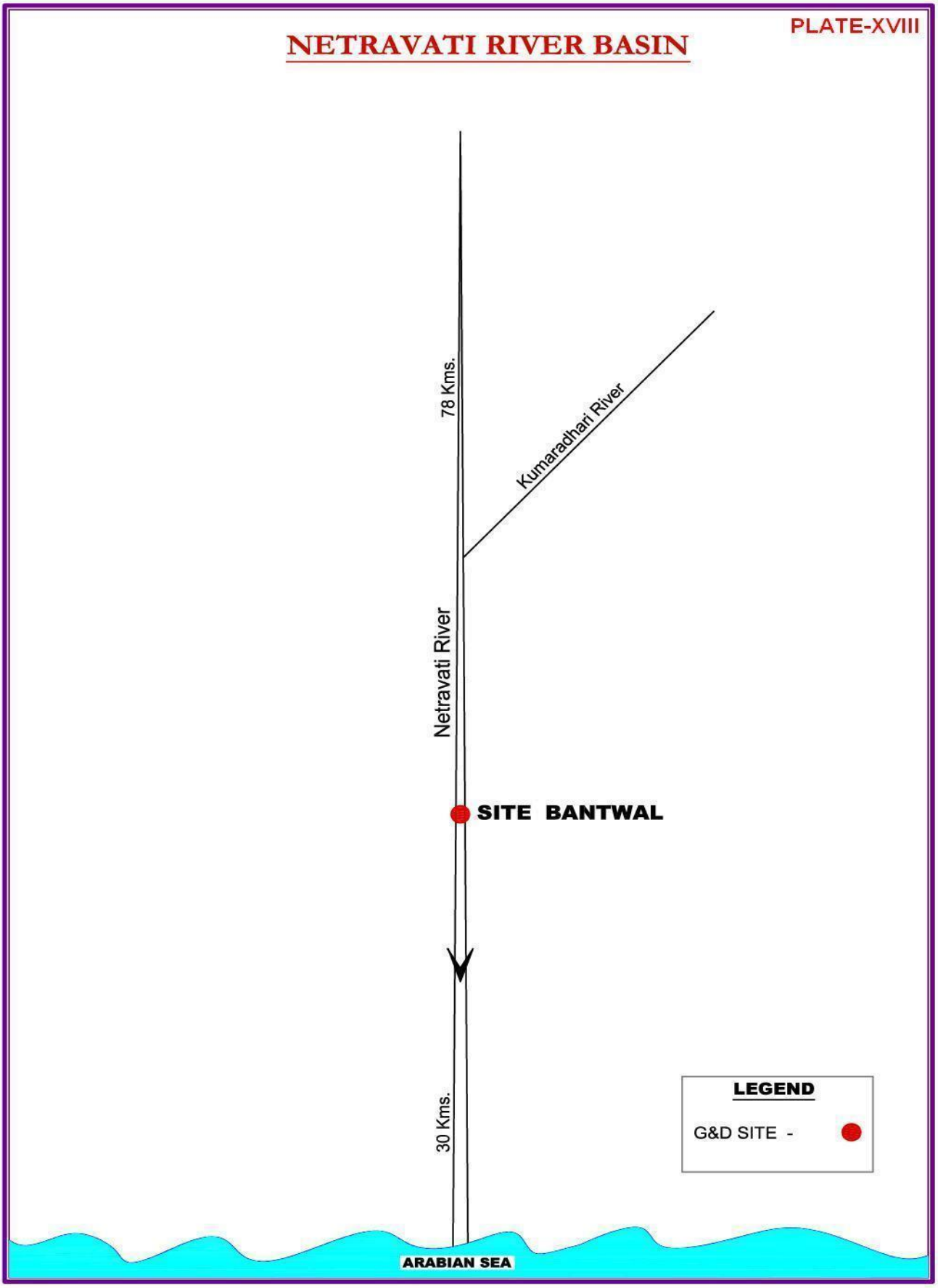


PLATE- XIX

PAYASWANI RIVER BASIN

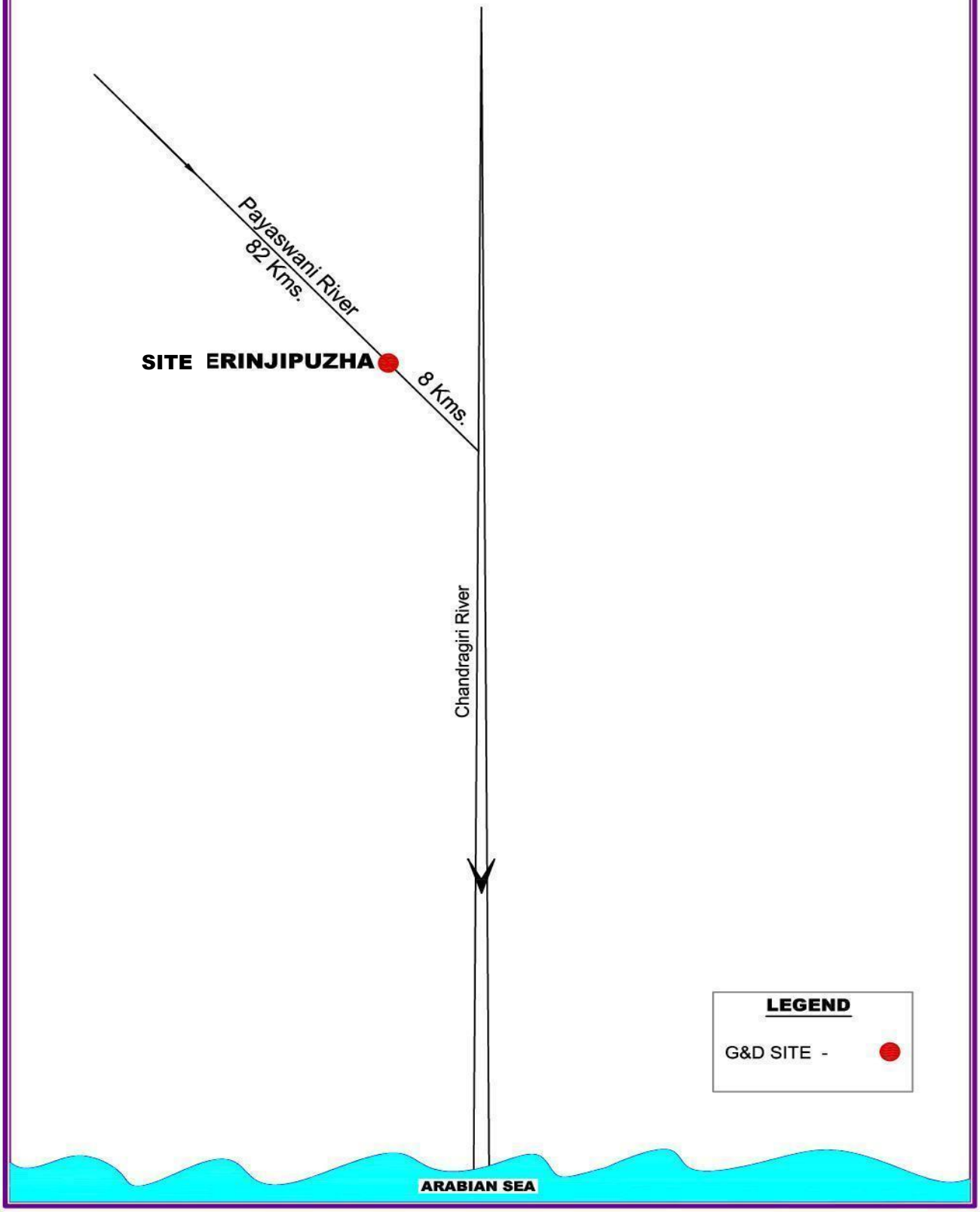


PLATE- XX

VALAPATTANAM RIVER BASIN

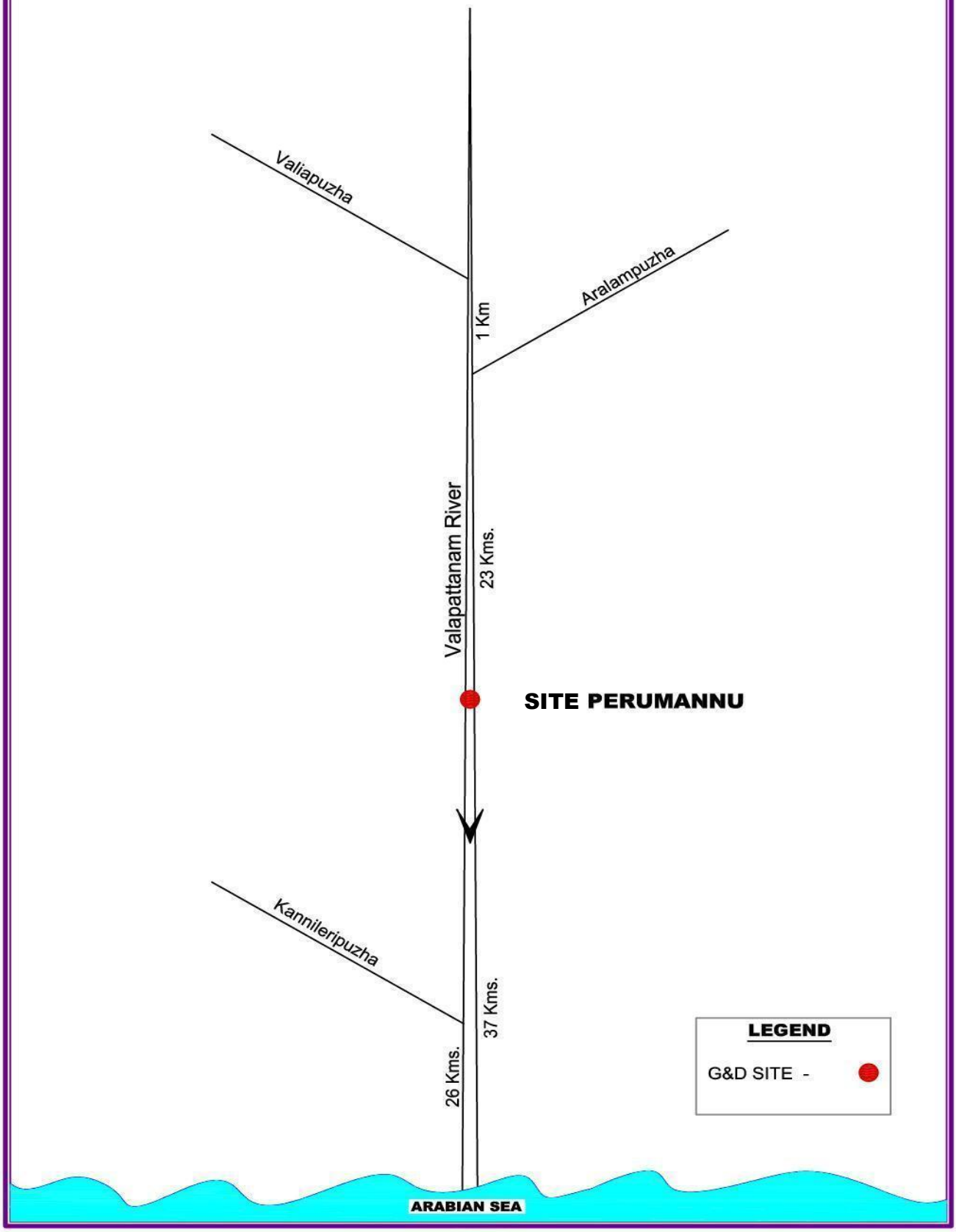


PLATE- XXI

KUTTYADI RIVER BASIN

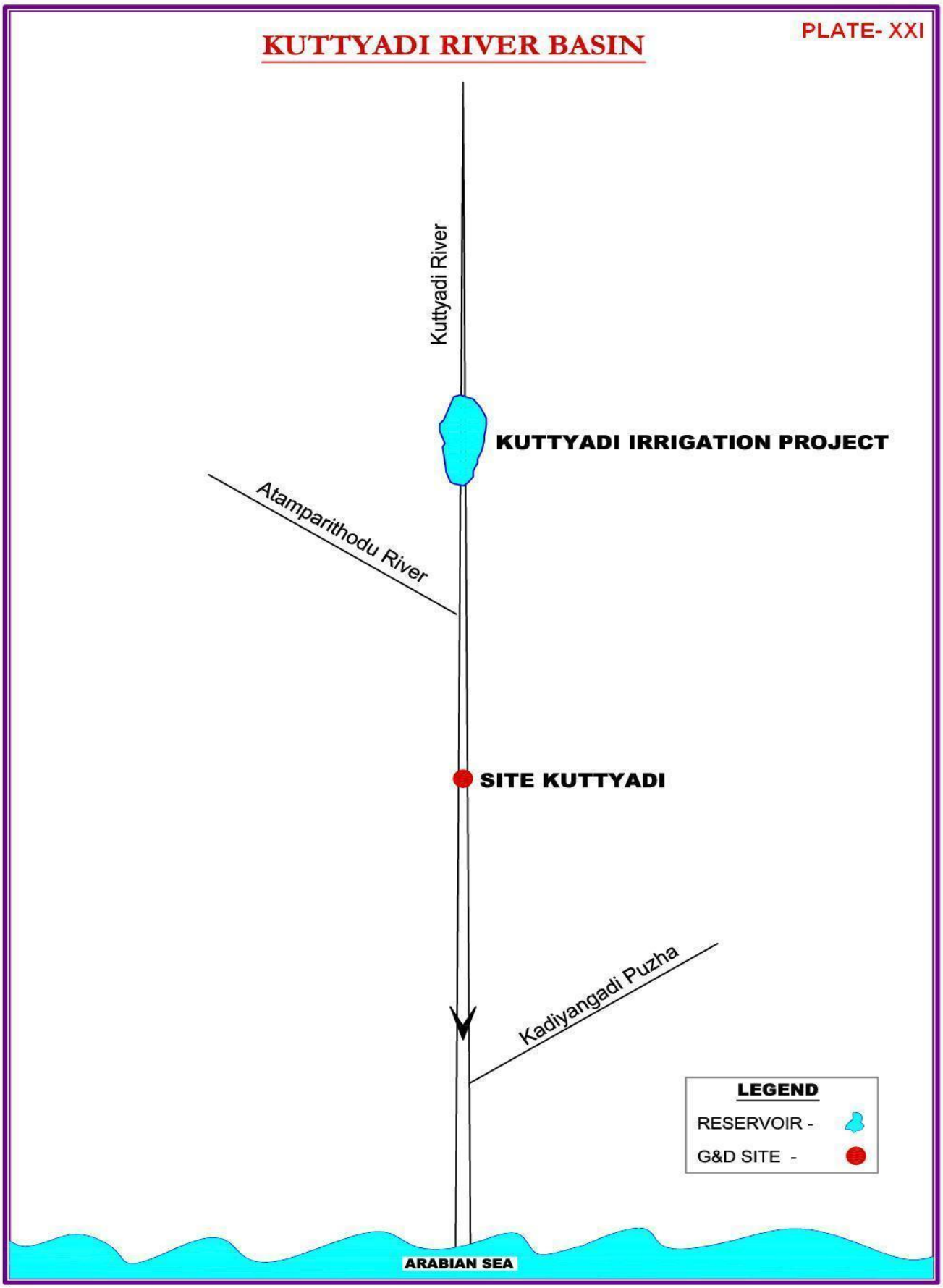


PLATE- XXII

CHALIYAR RIVER BASIN

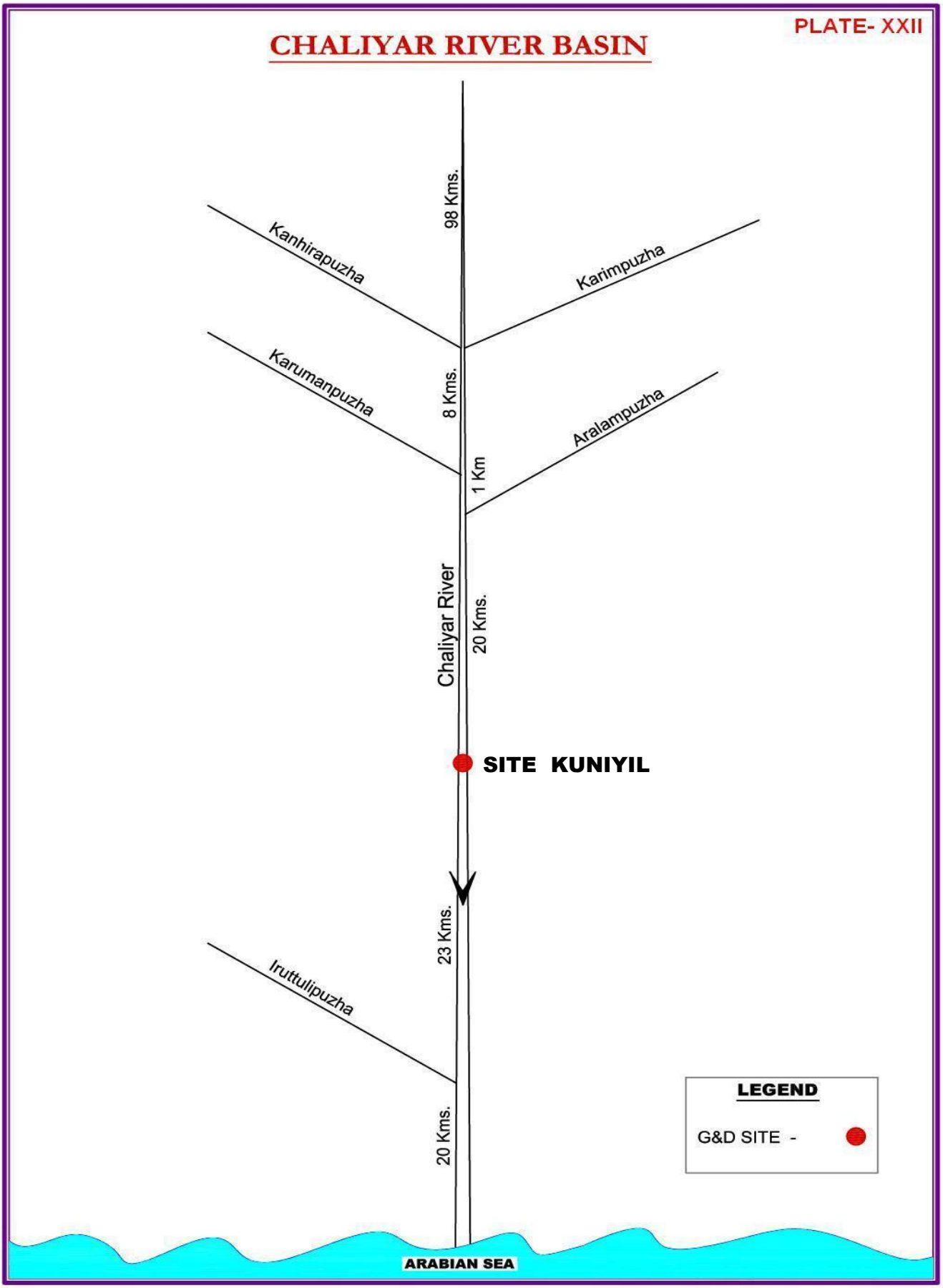


PLATE- XXIII

KADALUNDI RIVER BASIN

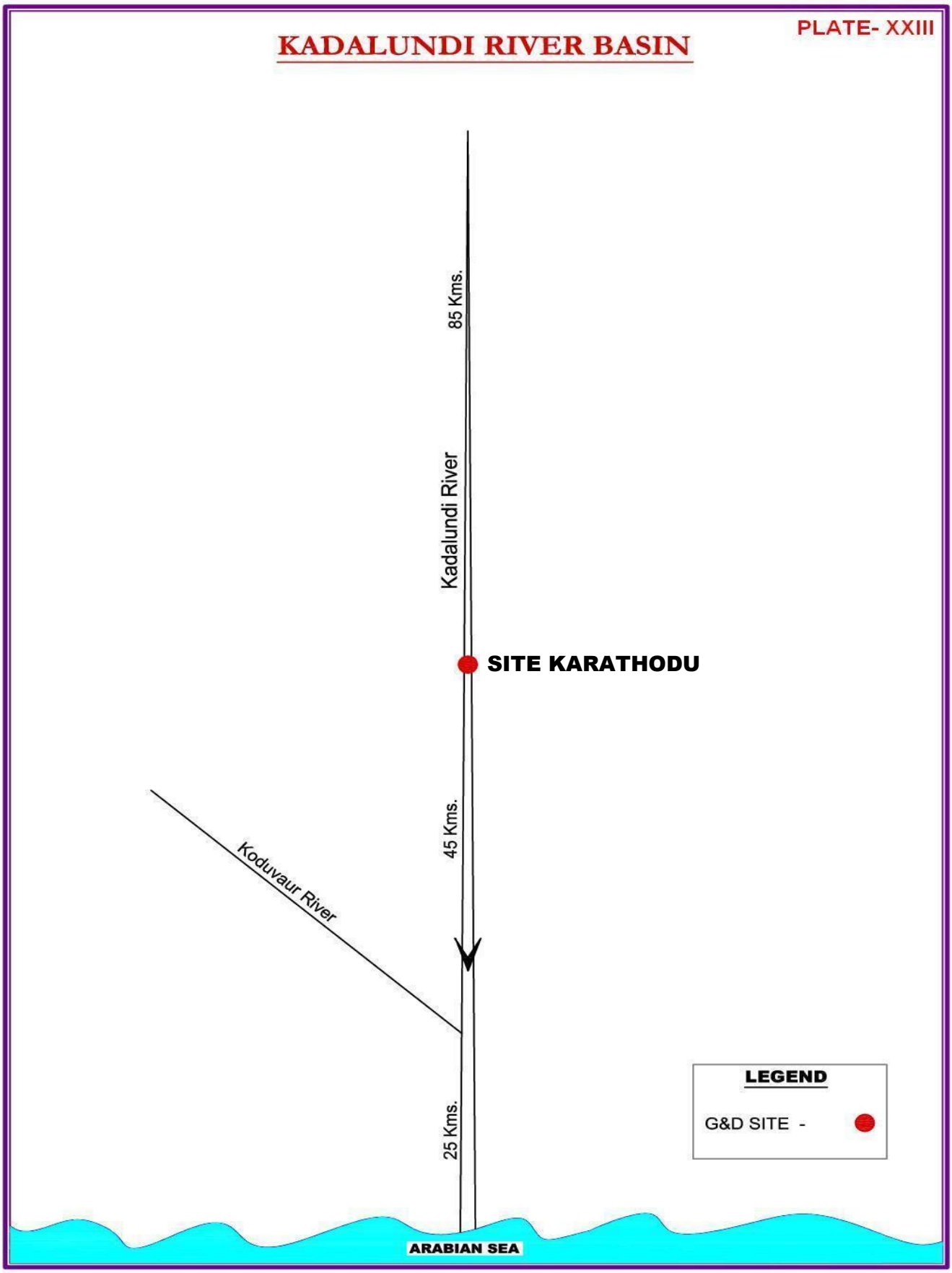


PLATE- XXIV

BHARATHAPUZHA RIVER BASIN

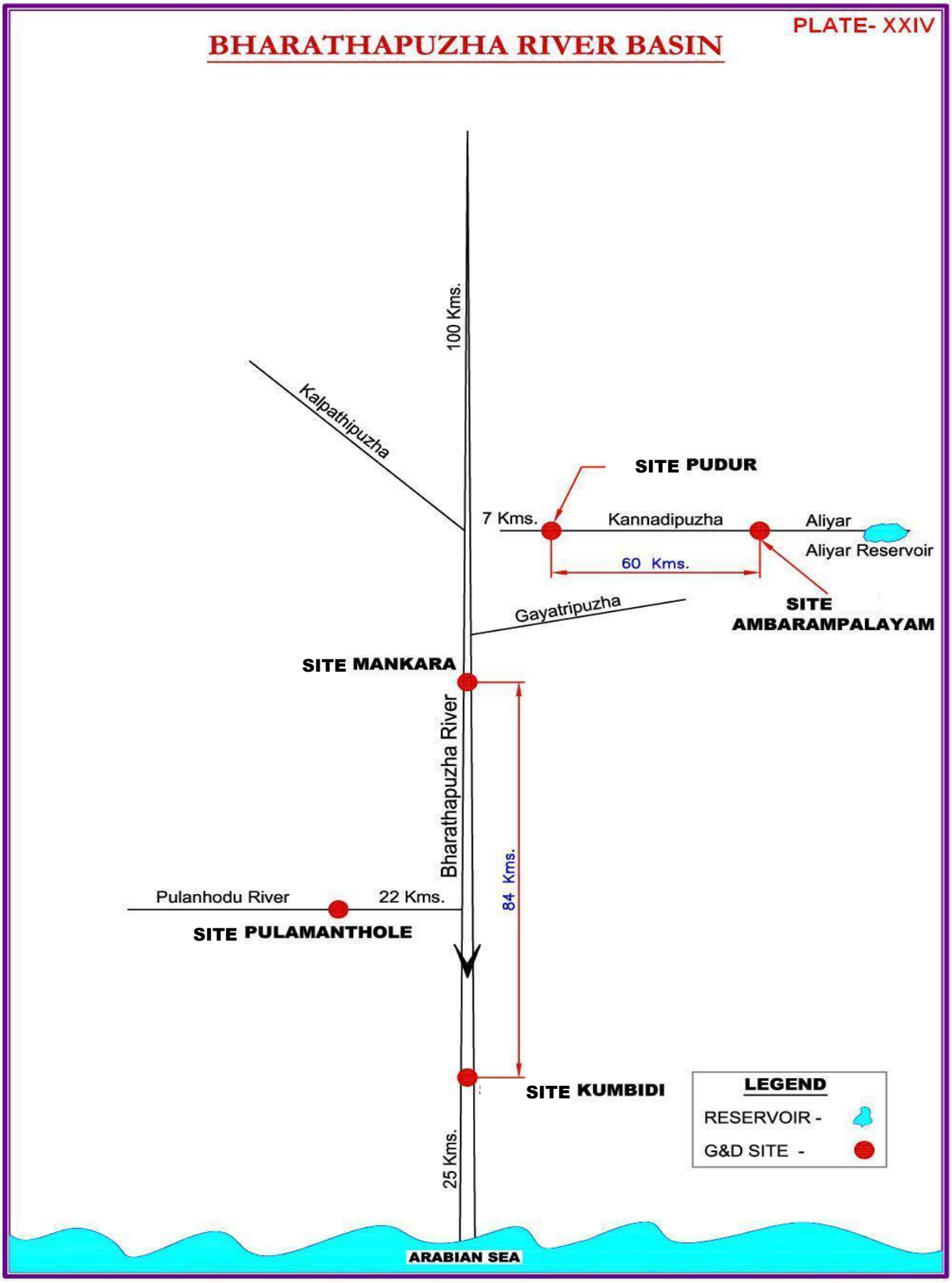


PLATE- XXV

CHALAKUDI RIVER BASIN

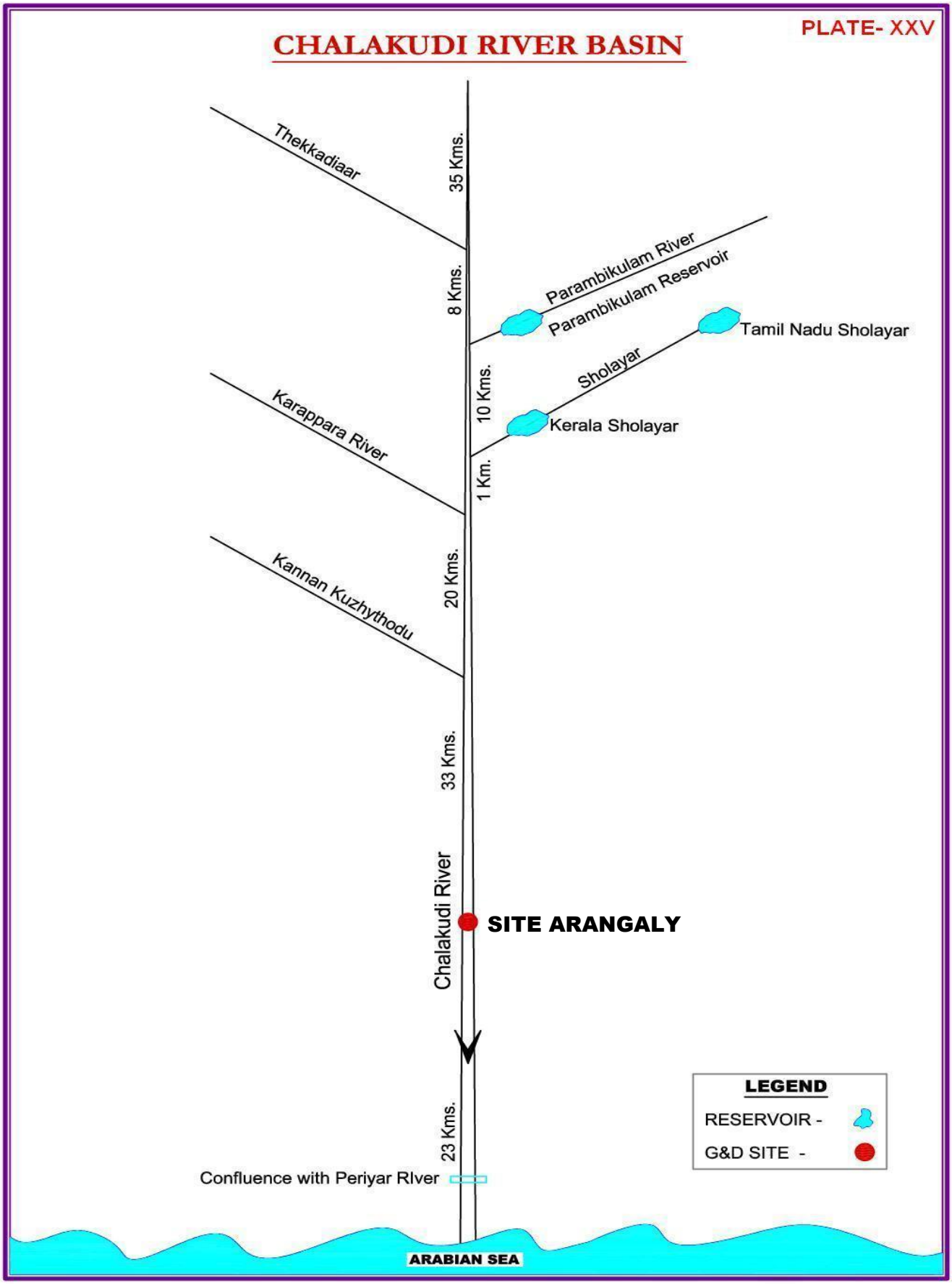


PLATE- XXVI

PERIYAR RIVER BASIN

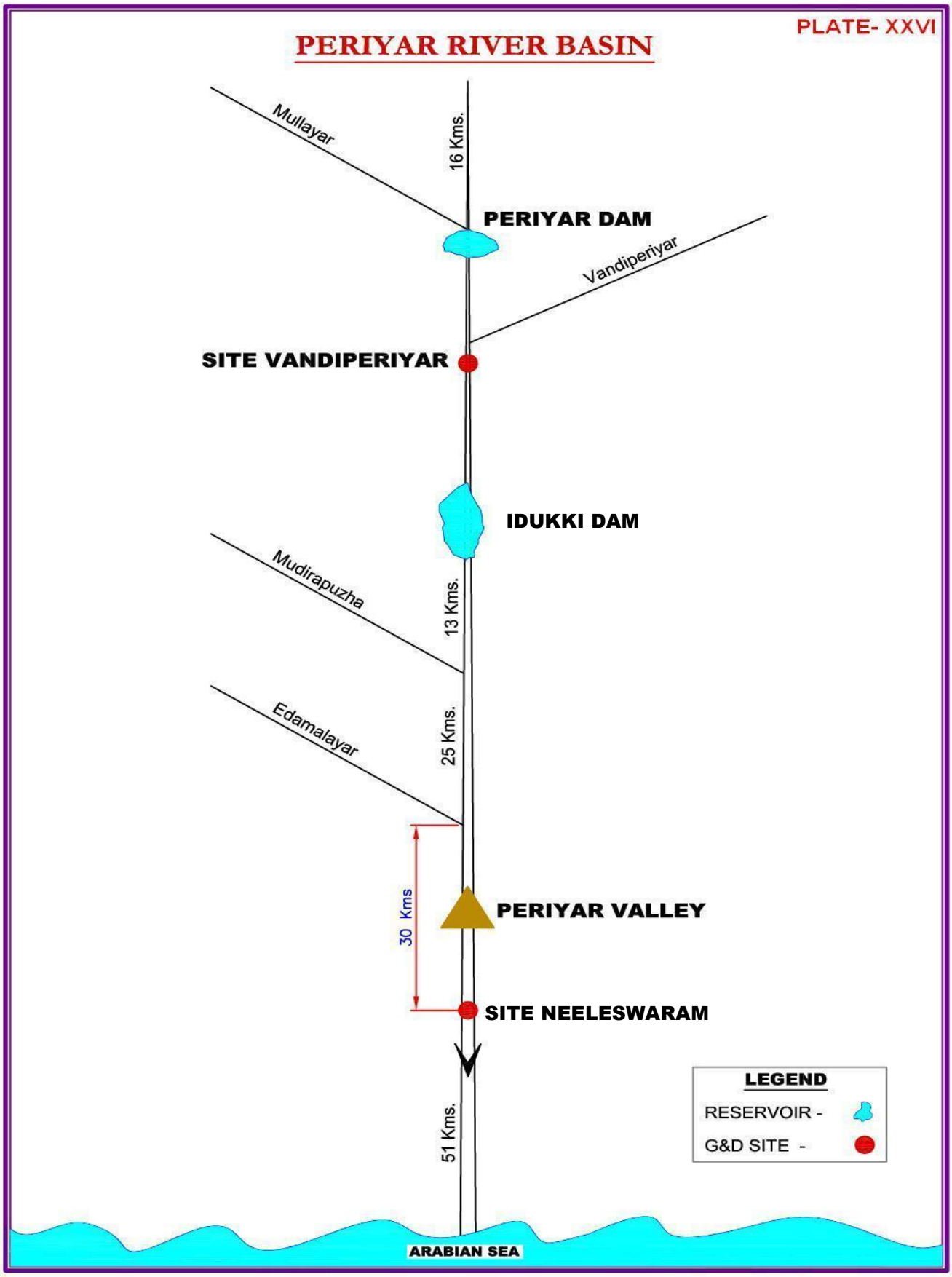


PLATE- XXVII

MUVATTUPUZHA RIVER BASIN

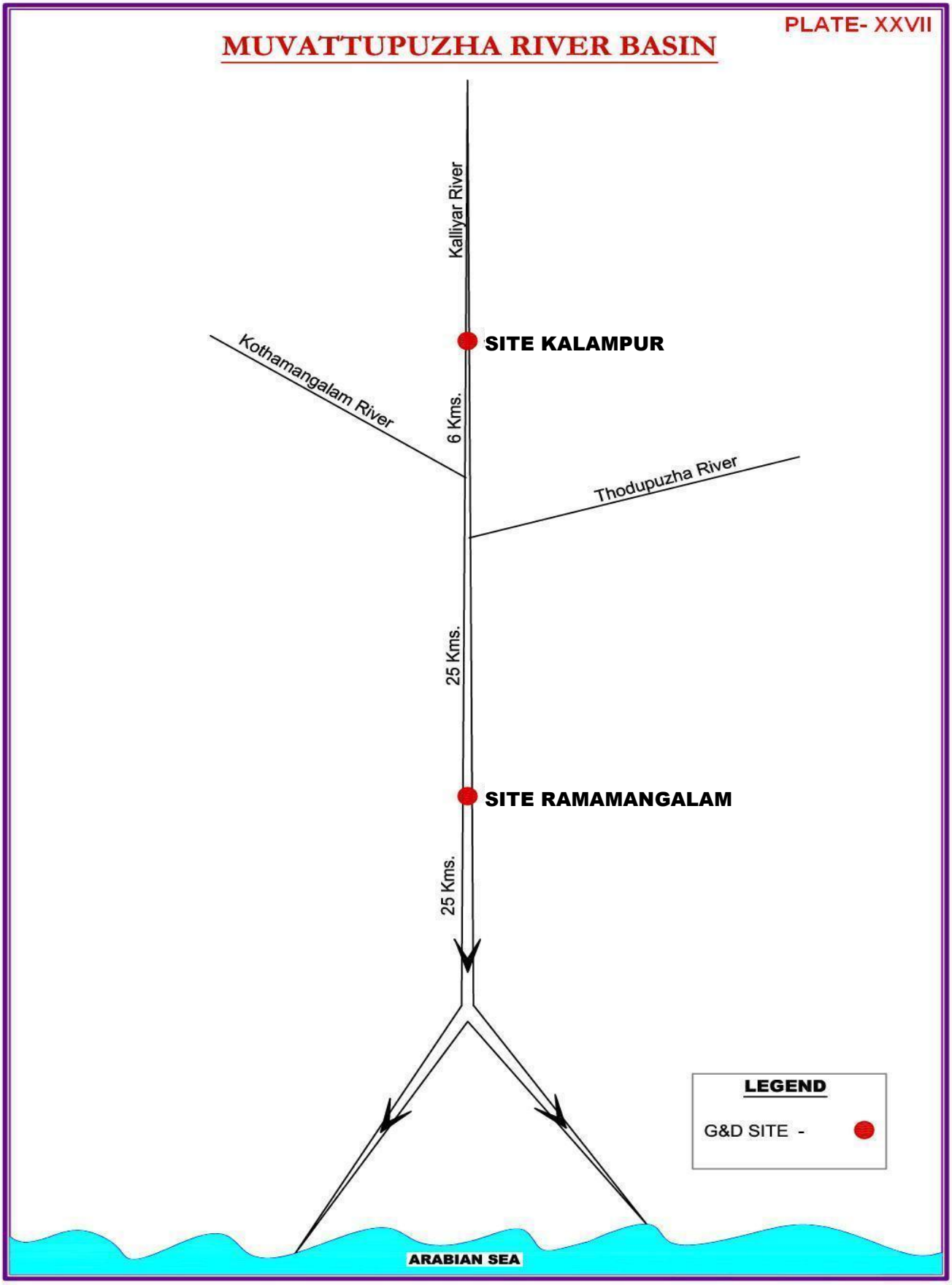


PLATE- XXVIII

MEENACHIL RIVER BASIN

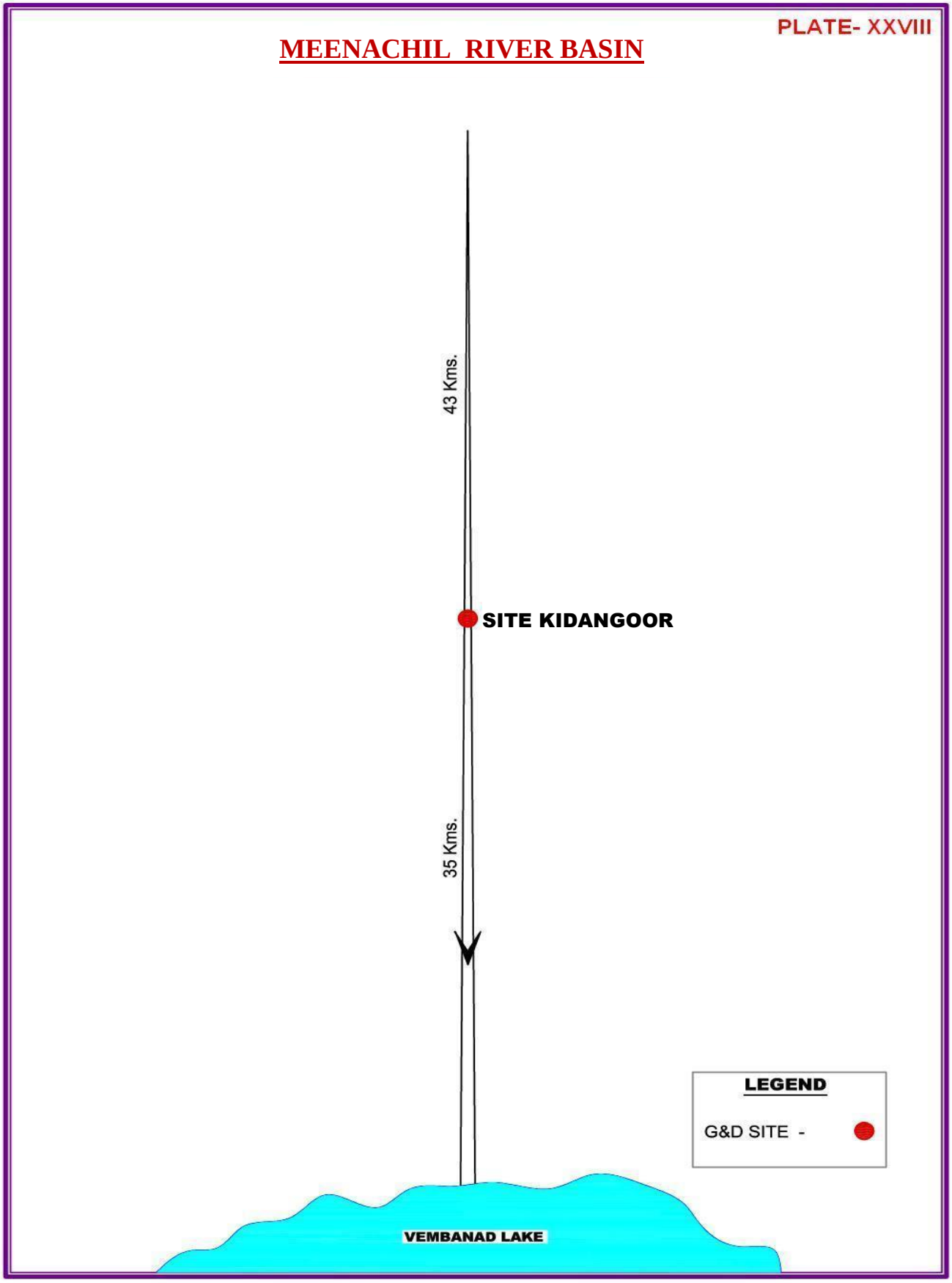


PLATE- XXIX

PAMBA - MANIMALA, ACHANKOVIL RIVER BASIN

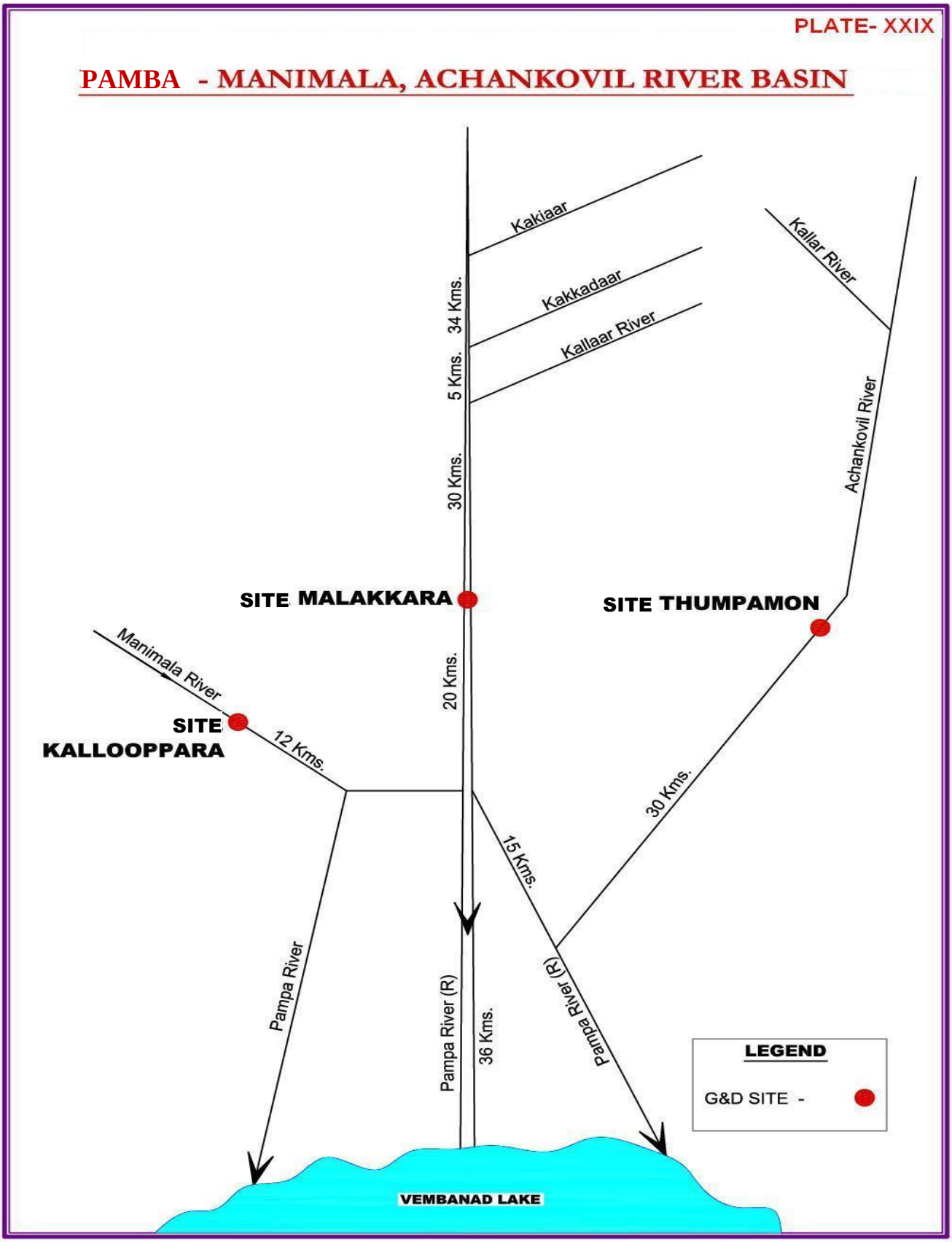


PLATE- XXX

KALLADA RIVER BASIN

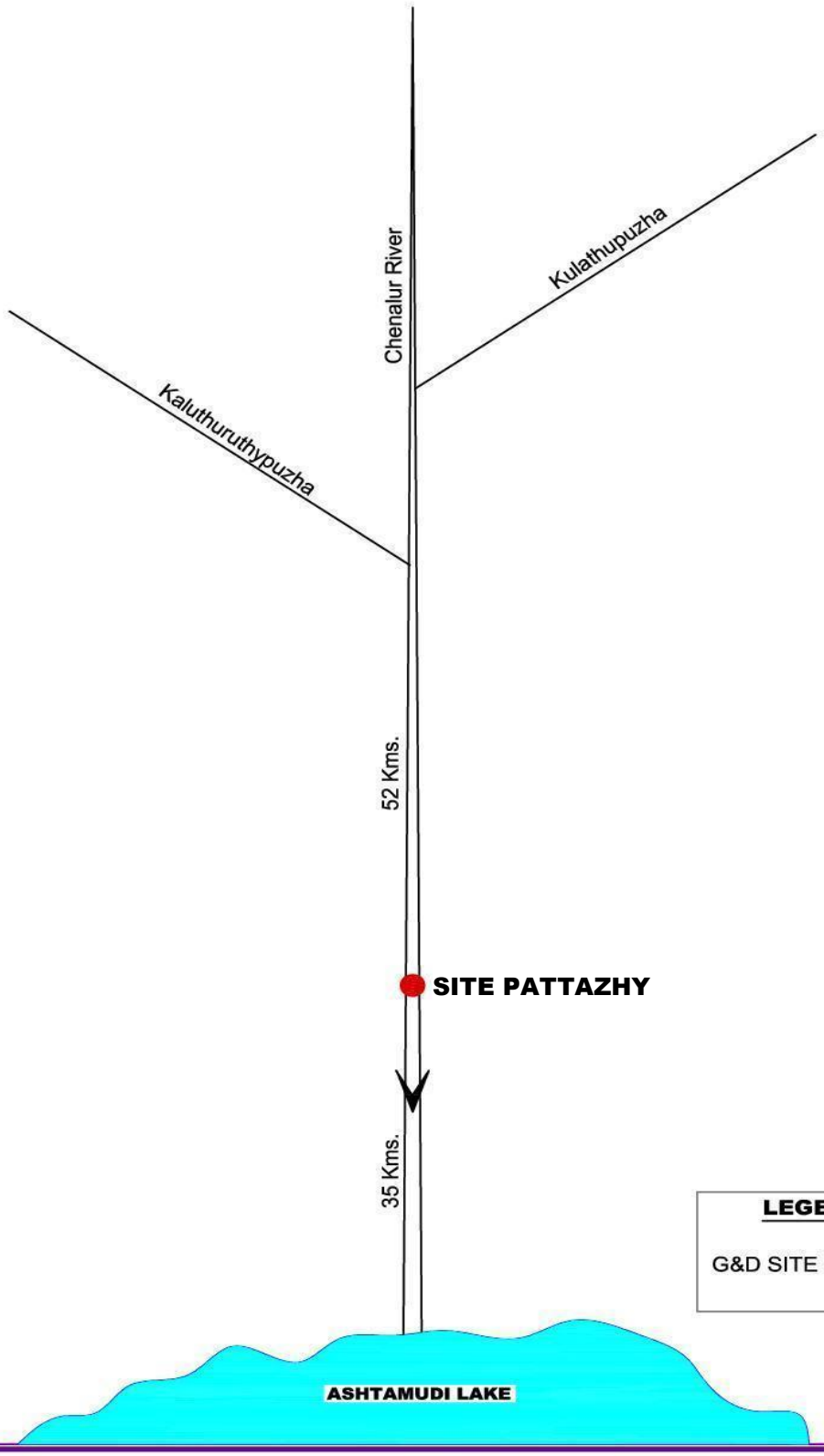


PLATE- XXXI

VAMANAPURAM RIVER BASIN

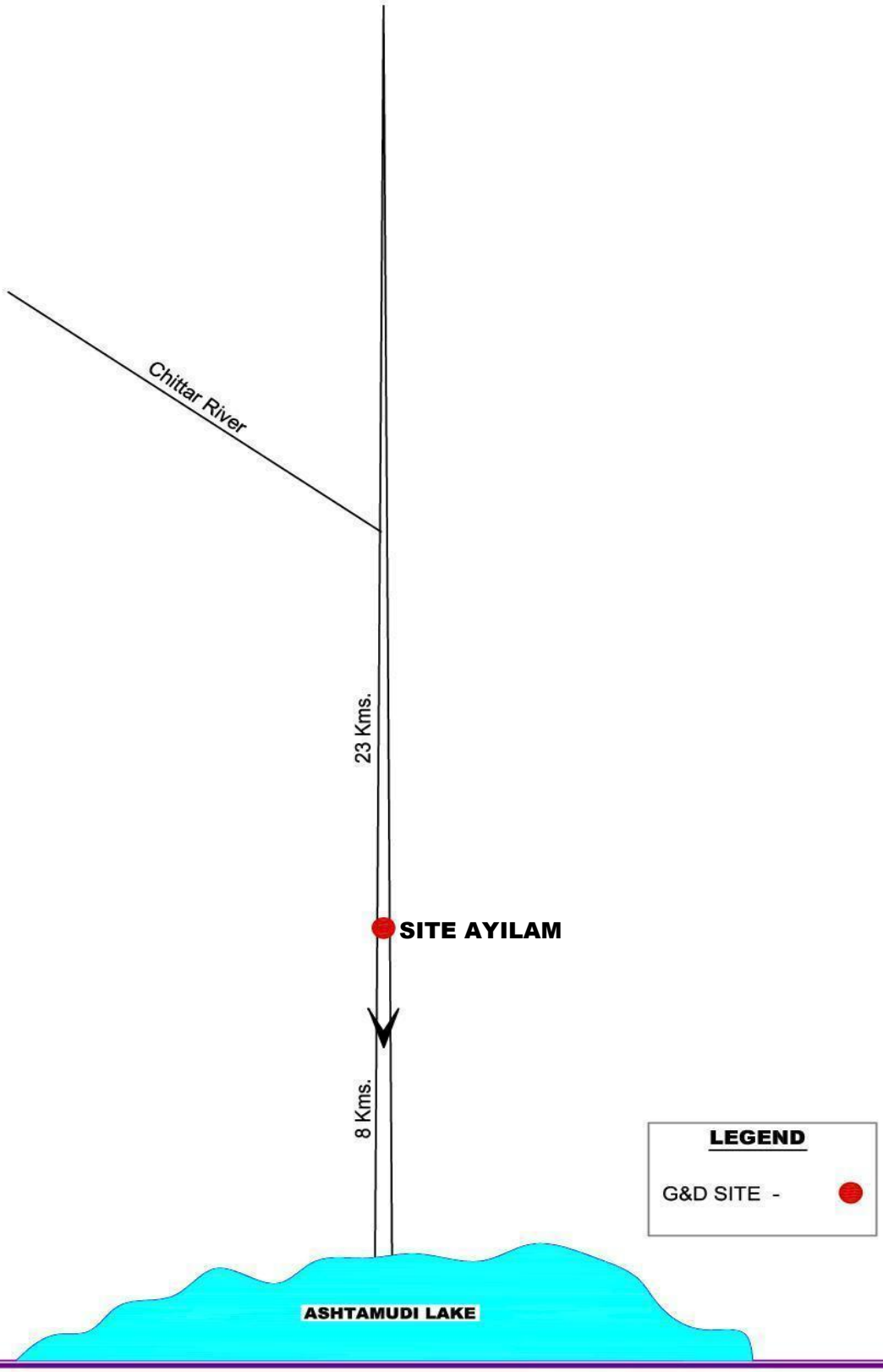
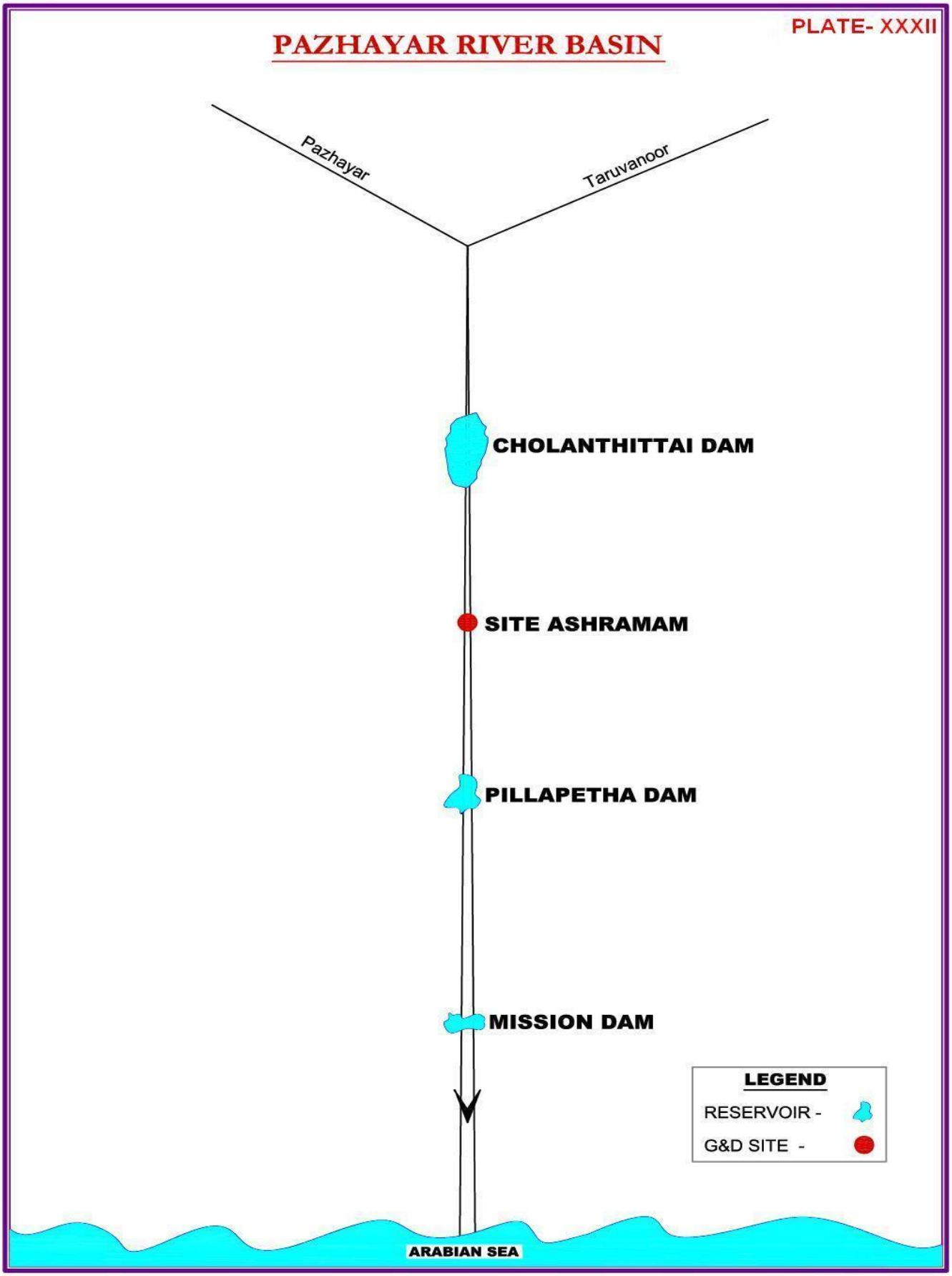


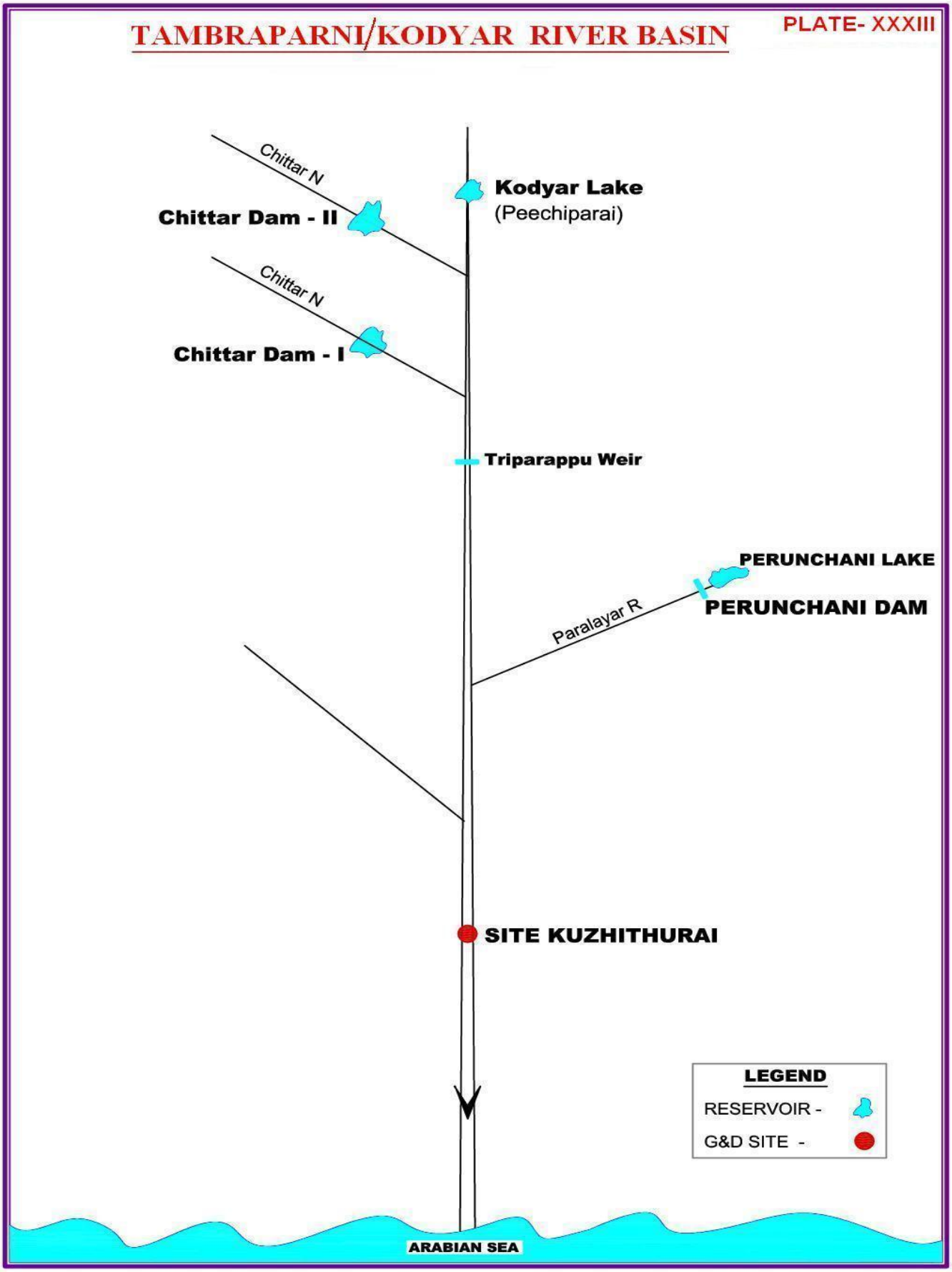
PLATE- XXXII

PAZHAYAR RIVER BASIN



TAMBRAPARNI/KODYAR RIVER BASIN

PLATE- XXXIII



HISTORY SHEET

Water Year : 2017-2018

Site	**: Badlapur**		**Code**	**: WU000P8**	
State	: Maharashtra		District	Thane	
Basin	: WFR South of Tapi		Independent River	: Ulhas	
Tributary	: -		Sub Tributary	: -	
Sub-Sub Tributary	: -		Local River	: Ulhas	
Division	: Upper Krishna Divn, Pune		Sub-Division	: Upper Krishna SD 3, Managaon	
Drainage Area	: 785 Sq. Km.		Bank	: Left	
Latitude	: 19°09'44"		Longitude	: 73°15'16"	
Zero of Gauge (m)	: 9.017 (m.s.l)		24-06-1981		
	Opening Date		Closing Date		
Gauge	: 24-06-1981				
Discharge	: 27-06-1981				
Sediment	: 22-12-2014				
Water Quality	: 02-07-1993				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1982-1983	1785	14.027	22-08-1982	0.000	9.207	19-11-1982
1983-1984	2600	16.217	16-08-1983	0.000	Dry bed	18-06-1983
1984-1985	1631	14.962	04-07-1984	1.000	10.037	05-06-1984
1985-1986	1517	13.867	17-07-1985	4.000	10.087	07-11-1985
1986-1987	3427	16.427	08-08-1986	0.000	10.257	13-06-1986
1987-1988	1503	14.177	20-08-1987	0.000	9.947	18-04-1988
1988-1989	4440	16.997	16-07-1988	1.897	10.027	24-04-1989
1989-1990	1603	14.417	24-07-1989	1.749	9.987	22-11-1989
1990-1991	2707	15.597	24-07-1990	4.025	10.107	08-03-1991
1991-1992	1875	13.867	13-07-1991	0.000	10.237	29-11-1991
1992-1993	3335	17.317	13-08-1992	0.000	9.917	11-04-1993
1993-1994	1500	13.527	19-06-1993	1.400	10.047	23-03-1994
1994-1995	3542	17.757	14-07-1994	1.481	9.957	07-01-1995
1995-1996	1500	14.567	03-09-1995	0.000	Dry Bed	31-03-1996
1996-1997	2405	16.142	23-07-1996	0.000	Dry Bed	11-03-1997
1997-1998	3075	16.967	23-08-1997	3.594	10.027	24-01-1998
1998-1999	1978	14.997	17-09-1998	3.151	10.017	29-01-1999
1999-2000	1240	13.817	23-06-1999	1.511	9.967	08-12-1999
2000-2001	2450	16.172	13-07-2000	0.000	Dry Bed	22-01-2001

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2001-2002	1103	13.707	10-07-2001	0.000	10.197	20-01-2002
2002-2003	3635	17.147	07-08-2002	2.730	10.077	18-04-2003
2003-2004	2645	15.757	27-07-2003	1.230	9.957	31-12-2003
2004-2005	3615	17.492	04-08-2004	2.366	10.072	08-06-2004
2005-2006	4483	21.097	27-07-2005	1.102	9.917	10-01-2006
2006-2007	2856	16.557	07-08-2006	0.710	9.887	02-01-2007
2007-2008	1575	14.077	03-07-2007	0.153	9.827	23-12-2007
2008-2009	2209	15.417	09-08-2008	0.472	10.127	25-05-2009
2009-2010	2597	15.457	15-07-2009	0.007	10.022	18-05-2010
2010-2011	1708	14.690	30-08-2010	0.661	10.037	01-06-2010
2011-2012	1956	15.127	29-08-2011	0.510	9.897	03-01-2012
2012-2013	1701	14.517	01-08-2012	0.427	9.957	29-03-2013
2013-2014	1680	14.637	12-07-2013	0.253	10.017	06-01-2014
2014-2015	4056	17.517	30-07-2014	0.905	10.017	07-04-2015
2015-2016	860.2	13.517	21-07-2015	0.000	9.937	29-03-2016
2016-2017	2932	15.070	01-08-2016	0.000	10.167	16-06-2016

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : Badlapur (WU000P8) **Division : Upper Krishna Divn, Pune**

Local River : Ulhas **Sub-Division : Upper Krishna SD 3, Managaon**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	10.297	10.58	12.767	553.9 *	11.613	227.5	11.768	273.6	10.737	55.66 *	10.507	29.50 *
2	10.307	11.15	13.757	905.2 *	11.750	264.5	11.497	198.5 *	10.497	28.55 *	10.467	25.78 *
3	10.287	11.13	12.527	478.1 *	11.247	149.5	11.182	128.9 *	10.727	54.35 #	10.407	20.65 *
4	10.227	8.627 *	11.997	325.3 *	11.295	159.6	11.280	152.2	10.733	55.13 #	10.437	23.15 *
5	9.997	0.000	12.022	333.7	11.097	111.6	11.065	106.7	10.712	52.43 #	10.527	31.46 *
6	10.057	1.960 *	11.707	233.3	10.987	93.15 *	10.932	85.81	10.685	48.98 #	10.207	7.604 *
7	10.297	10.54	12.042	345.4	10.837	69.53 #	10.835	69.16 #	10.810	65.56 #	10.407	20.65 *
8	10.267	10.26	12.117	358.1 *	10.847	71.00 #	10.733	55.13 #	11.407	177.1 *	10.507	29.50 *
9	10.297	11.13	11.747	260.6 *	10.787	62.41 #	11.507	200.9 *	12.197	407.1	10.487	27.61 *
10	10.327	14.69 *	11.372	179.5	11.007	102.7	11.337	161.3 *	11.546	204.0	10.417	21.47 *
11	10.337	15.38 *	11.222	129.0	11.370	166.8	10.945	88.21	11.770	271.9	10.467	25.78 *
12	9.997	0.000	11.267	165.5	11.287	150.5 *	10.902	77.69	11.391	180.9	10.447	24.01 *
13	10.317	11.18	11.180	125.0	11.377	170.2 *	11.772	274.6	11.150	126.7	10.097	3.112 *
14	10.367	17.55 *	14.712	1298 #	11.880	298.2	11.512	195.5	11.357	165.7 *	10.132	4.332 *
15	10.337	15.38 *	13.657	902.0	12.087	349.8 *	11.640	248.1	11.207	133.9 *	10.407	20.65 *
16	10.327	14.69 *	13.167	688.5 *	11.703	254.3	11.362	174.0	11.095	118.1	10.437	23.15 *
17	10.377	18.30 *	13.047	666.5	11.340	169.4	11.137	120.1 *	10.892	80.54	10.427	22.30 *
18	10.307	13.35 *	13.288	800.0	11.125	119.2	10.780	61.37 #	10.800	64.15 #	10.407	20.65 *
19	10.007	0.000	13.112	723.1	11.165	126.5	10.997	95.19	10.657	45.65 *	10.357	16.81 *
20	10.315	11.67	12.155	396.1	11.867	291.0 *	14.460	1189 #	10.623	37.34	10.177	6.188 *
21	10.347	13.81	13.723	928.9	12.732	506.3	12.630	477.6	10.602	35.85	10.377	18.30 *
22	10.267	10.86 *	14.130	1014	11.846	285.5 #	12.410	442.5 #	10.557	34.50 *	10.447	24.01 *
23	10.367	17.55 *	13.167	688.5 *	11.425	177.0	11.697	252.8	10.627	37.62	10.477	26.69 *
24	10.497	28.55 *	12.695	489.9	11.312	166.2	11.167	125.9 *	10.568	33.40	10.470	26.05 *
25	13.467	796.1 *	12.027	337.4	11.302	153.7 *	11.182	134.3	10.582	34.81	10.457	24.89 *
26	11.477	193.6 *	11.457	186.2	12.318	415.4 #	11.097	111.5	10.565	32.73	10.287	12.07 *
27	11.682	244.6 #	11.382	176.0	12.897	596.5 *	10.898	81.29	10.532	36.23	10.097	3.112 *
28	12.117	358.1 *	12.117	386.8	12.677	480.3	10.863	76.09	10.522	34.61	10.397	19.85 *
29	13.067	653.9 *	12.005	356.1	14.115	985.7	10.855	72.58	10.527	31.46 *	10.457	24.89 *
30	14.217	1088 *	11.957	314.6 *	13.800	937.0	11.039	102.1 *	10.522	34.18	10.407	20.65 *
31			12.030	344.8	12.230	389.8 #			10.572	40.42		
Ten-Daily Mean												
I Ten-Daily	10.236	9.007	12.205	397.3	11.147	131.1	11.213	143.2	11.005	114.9	10.437	23.74
II Ten-Daily	10.269	11.75	12.681	589.3	Dry bed	209.6	11.551	252.4	11.094	122.5	10.336	16.70
III Ten-Daily	11.750	340.5	12.426	474.8	12.423	463.0	11.384	187.7	10.561	35.07	10.387	20.05
Monthly												
Min.	9.997	0.000	11.179	125.0	10.787	62.41	10.733	55.13	10.497	28.55	10.097	3.112
Max.	14.217	1088	14.712	1298	14.115	985.7	14.460	1189	12.197	407.1	10.527	31.46
Mean	10.752	120.4	12.437	486.7	11.720	274.2	11.383	194.4	10.876	89.02	10.387	20.16

Annual Runoff in MCM = 3295 Annual Runoff in mm = 4197

Peak Observed Discharge = 1298 cumecs on 14/07/2017 Corres. Water Level :14.712 m

Lowest Observed Discharge = 0.000 cumecs on 05/06/2017 Corres. Water Level :9.997 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : Badlapur (WU000P8) **Division : Upper Krishna Divn, Pune**

Local River : Ulhas **Sub-Division : Upper Krishna SD 3, Managaon**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	10.427	22.30 *	10.117	3.785 *	10.307	13.35 *	10.157	5.323 *	10.257	10.28 *	10.167	5.748 *
2	10.407	20.65 *			10.357	16.81 *	10.167	5.748 *	10.177	6.188 *		
3	10.317	14.01 *	10.207	7.604 *	10.387	19.07 *	10.057	1.960 *			10.267	10.86 *
4	10.197	7.116 *	10.147	4.915 *	10.257	10.28 *	10.177	6.188 *	10.257	10.28 *	10.257	10.28 *
5	10.347	16.08 *	10.227	8.627 *	10.067	2.224 *	10.017	1.069 *	10.287	12.07 *	10.247	9.714 *
6	10.457	24.89 *	10.257	10.28 *					10.257	10.28 *	10.287	12.07 *
7	10.427	22.30 *	10.267	10.86 *	10.217	8.108 *	10.247	9.714 *	10.287	12.07 *	10.217	8.108 *
8	10.467	25.78 *	10.177	6.188 *	10.167	5.748 *	10.267	10.86 *	10.267	10.86 *	10.157	5.323 *
9	10.407	20.65 *	10.097	3.112 *	10.277	11.46 *	10.227	8.627 *	10.177	6.188 *	10.257	10.28 *
10	10.447	24.01 *	10.247	9.714 *	10.247	9.714 *	10.257	10.28 *	10.207	7.604 *	10.287	12.07 *
11	10.227	8.627 *	10.327	14.69 *	10.217	8.108 *	10.277	11.46 *	10.257	10.28 *	10.267	10.86 *
12	10.327	14.69 *	10.357	16.81 *	10.117	3.785 *	10.187	6.644 *	10.297	12.70 *	10.287	12.07 *
13	10.327	14.69 *	10.277	11.46 *	10.117	3.785 *	10.197	7.116 *	10.297	12.70 *	10.257	10.28 *
14	10.427	22.30 *	10.237	9.163 *	10.137	4.522 *	10.207	7.604 *	10.267	10.86 *	10.237	9.163 *
15	10.457	24.89 *	10.057	1.960 *	10.257	10.28 *	10.237	9.163 *	10.247	9.714 *	10.177	6.188 *
16	10.317	14.01 *	10.157	5.323 *	10.257	10.28 *	10.307	13.35 *	10.277	11.46 *	10.267	10.86 *
17	10.407	20.65 *	10.247	9.714 *	10.297	12.70 *	10.287	12.07 *	10.157	5.323 *	10.287	12.07 *
18	10.097	3.112 *	10.277	11.46 *	10.247	9.714 *	10.267	10.86 *	10.257	10.28 *	10.247	9.714 *
19	10.367	17.55 *	10.387	19.07 *	10.127	4.146 *	10.217	8.108 *	10.287	12.07 *	10.257	10.28 *
20	10.317	14.01 *	10.377	18.30 *	10.057	2.557	10.197	7.116 *	10.267	10.86 *	10.267	10.86 *
21	10.327	14.69 *	10.307	13.35 *	10.137	6.150	10.257	10.28 *	10.247	9.714 *	10.147	4.915 *
22	10.447	24.01 *	10.097	3.112 *	10.207	8.568	10.237	9.163 *			10.197	7.116 *
23	10.357	16.81 *	10.127	4.146 *	10.287	11.14	10.287	12.07 *	10.147	4.915 *	10.257	10.28 *
24	10.197	7.116 *	10.227	8.627 *	10.187	6.213	10.257	10.28 *	10.177	6.188 *		
25	10.057	1.960 *	10.217	8.108 *	10.167	5.748 *	10.287	12.07 *	10.247	9.714 *		
26	10.047	1.713 *	10.257	10.28 *	10.197	7.203	10.187	6.644 *	10.277	11.46 *		
27	10.147	4.915 *	10.327	14.69 *	10.107	4.903	10.117	3.785 *	10.267	10.86 *		
28	10.197	7.116 *	10.307	13.35 *	10.257	8.854	10.287	12.07 *	10.297	12.70 *	10.197	7.116 *
29	10.177	6.188 *	10.057	1.960 *			10.297	12.70 *	10.267	10.86 *	10.157	5.323 *
30	10.197	7.116 *	9.997	0.722 *			10.257	10.28 *	10.197	7.116 *	10.247	9.714 *
31	10.187	6.644 *	10.287	12.07 *			10.277	11.46 *			10.347	16.08 *
Ten-Daily Mean												
I Ten-Daily	10.390	19.78	10.194	7.232	10.254	10.75	10.175	6.641	10.241	9.537	10.238	9.385
II Ten-Daily	10.327	15.45	10.270	11.79	10.183	6.988	10.238	9.350	10.261	10.63	10.255	10.24
III Ten-Daily	10.212	8.934	10.201	8.219	10.193	7.347	10.250	10.07	10.236	9.282	10.221	8.650
Monthly												
Min.	10.047	1.713	9.997	0.722	10.057	2.224	10.017	1.069	10.147	4.915	10.147	4.915
Max.	10.467	25.78	10.387	19.07	10.387	19.07	10.307	13.35	10.297	12.70	10.347	16.08
Mean	10.307	14.53	10.222	9.115	10.210	8.349	10.223	8.803	10.247	9.844	10.240	9.515

Peak Computed Discharge = 1088 cumecs on 30/06/2017 **Corres. Water Level :14.217 m**

Lowest Computed Discharge = 0.722 cumecs on 30/01/2018 **Corres. Water Level :9.997 m**

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

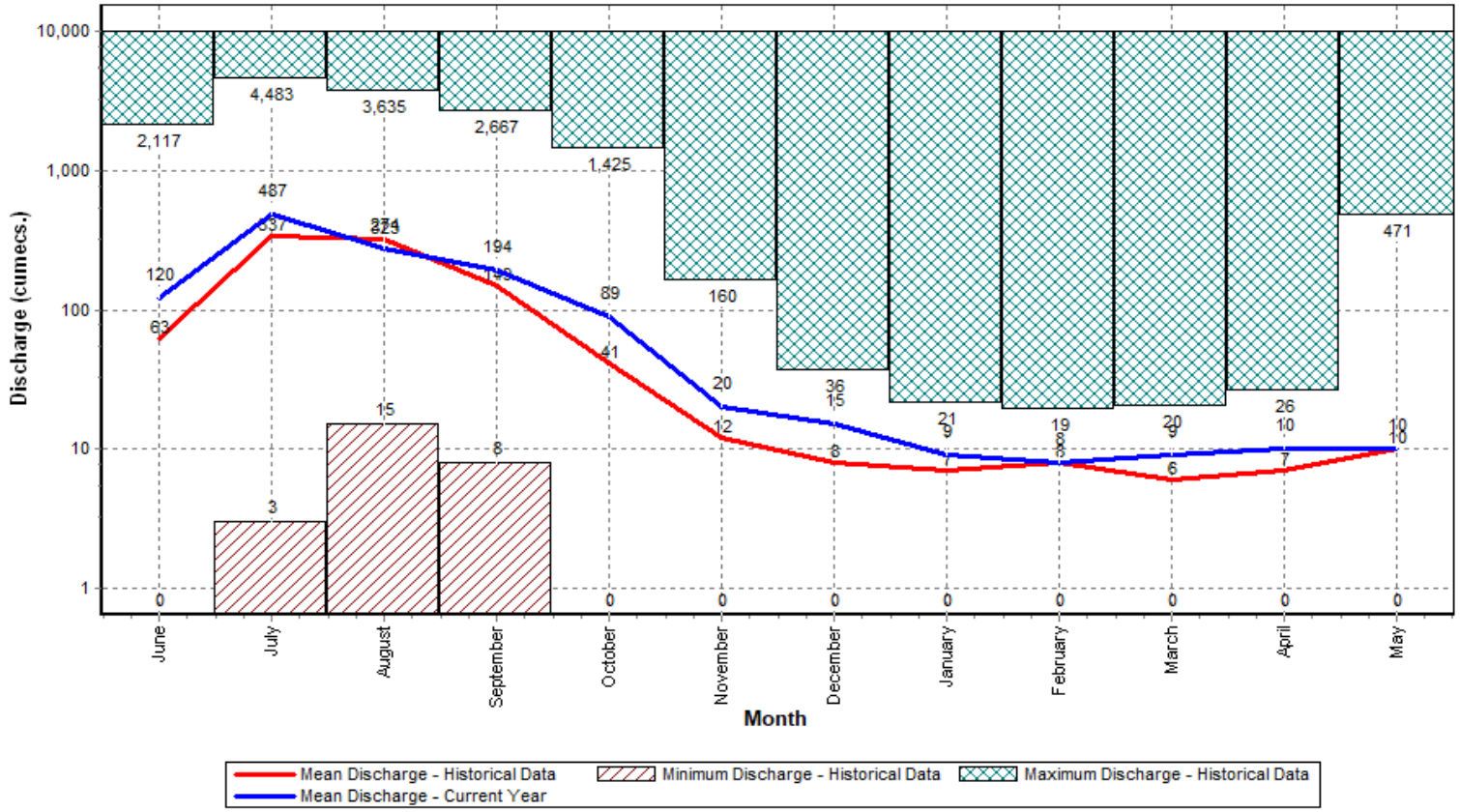
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : Badlapur (WU000P8) | **Data considered : 1982-2018** | **Division : Upper Krishna Divn, Pune**

Local River : Ulhas | **Sub-Division : Upper Krishna SD 3, Managaon**



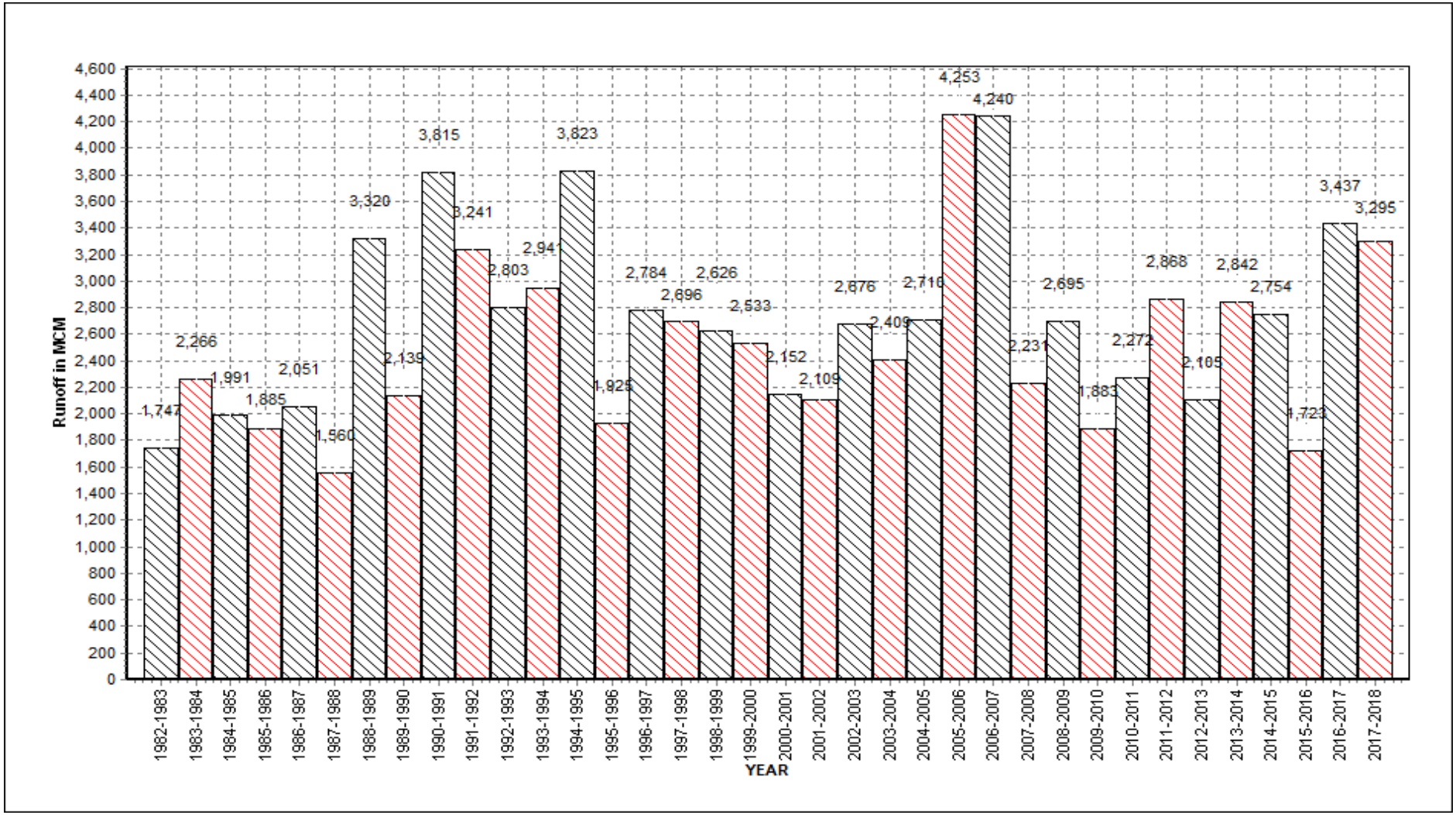
Annual Runoff Values for the period: 1982 - 2018

Station Name : Badlapur (WU000P8)

Local River : Ulhas

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD 3, Managaon



Note:Missing values have not been considered while arriving at Annual Runoff

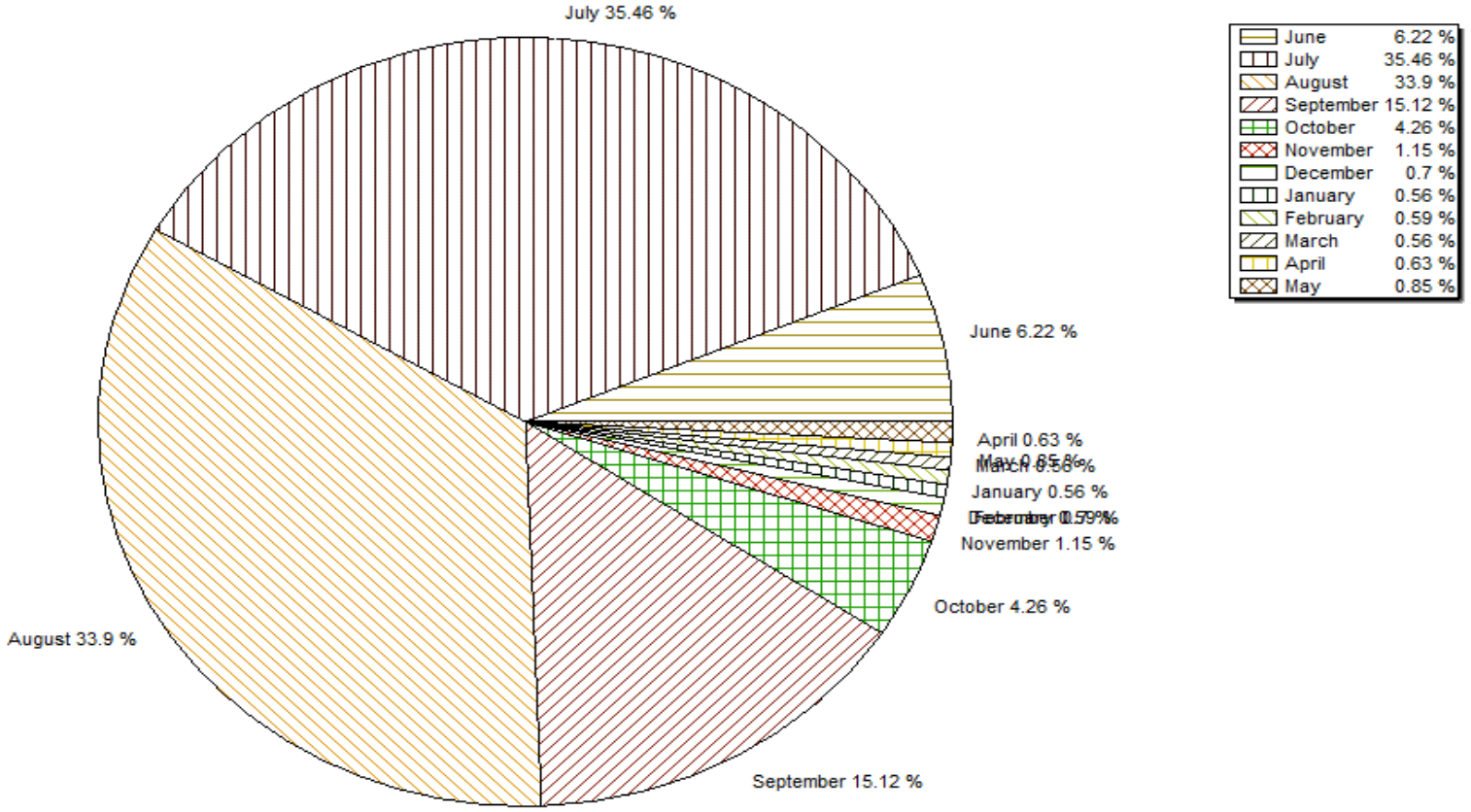
Monthly Average Runoff based on period : 1982-2017

Station Name : Badlapur (WU000P8)

Local River : Ulhas

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD 3, Managaon



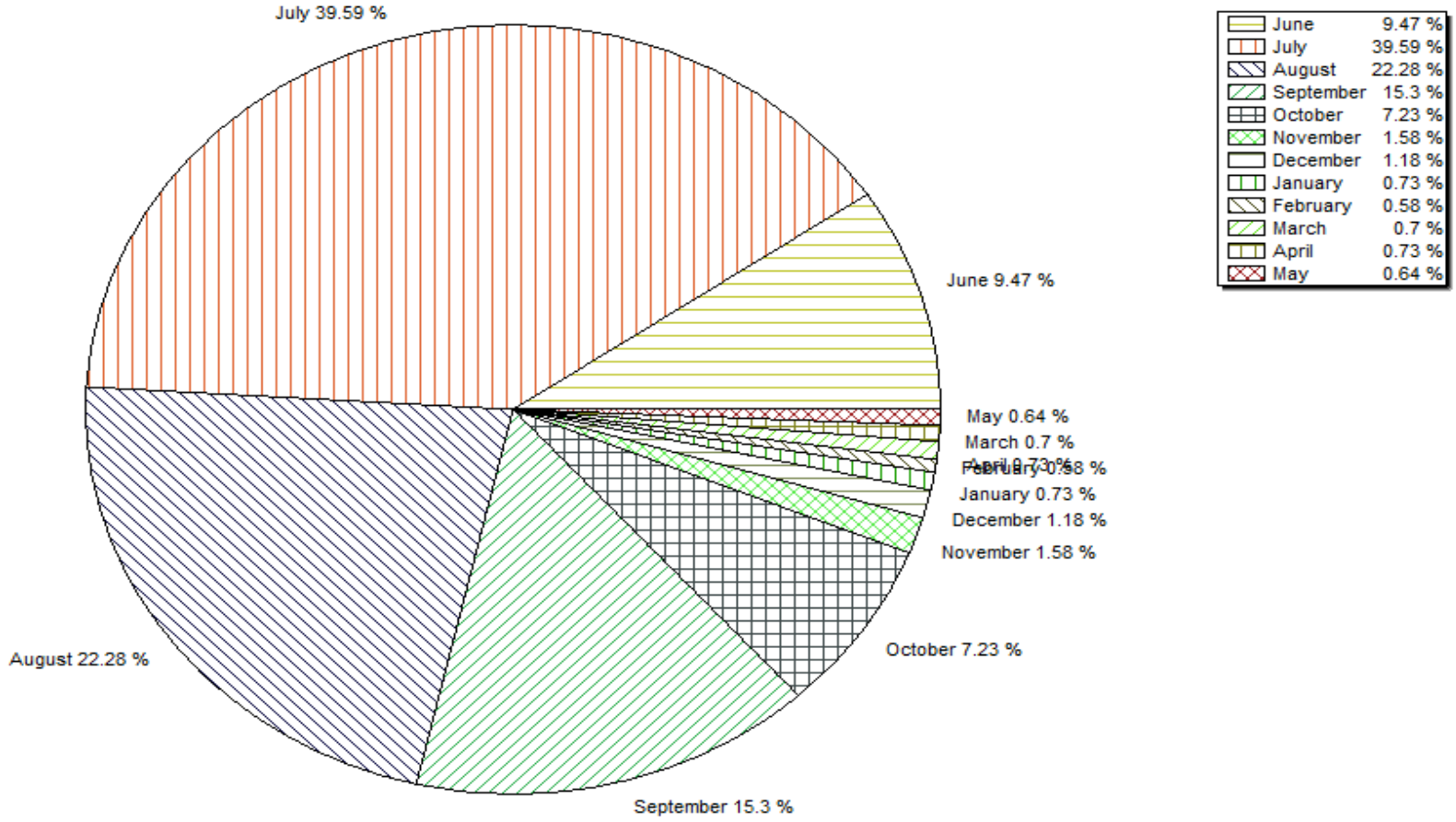
Monthly Runoff for the Year : 2017-2018

Station Name : Badlapur (WU000P8)

Local River : Ulhas

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD 3, Managaon



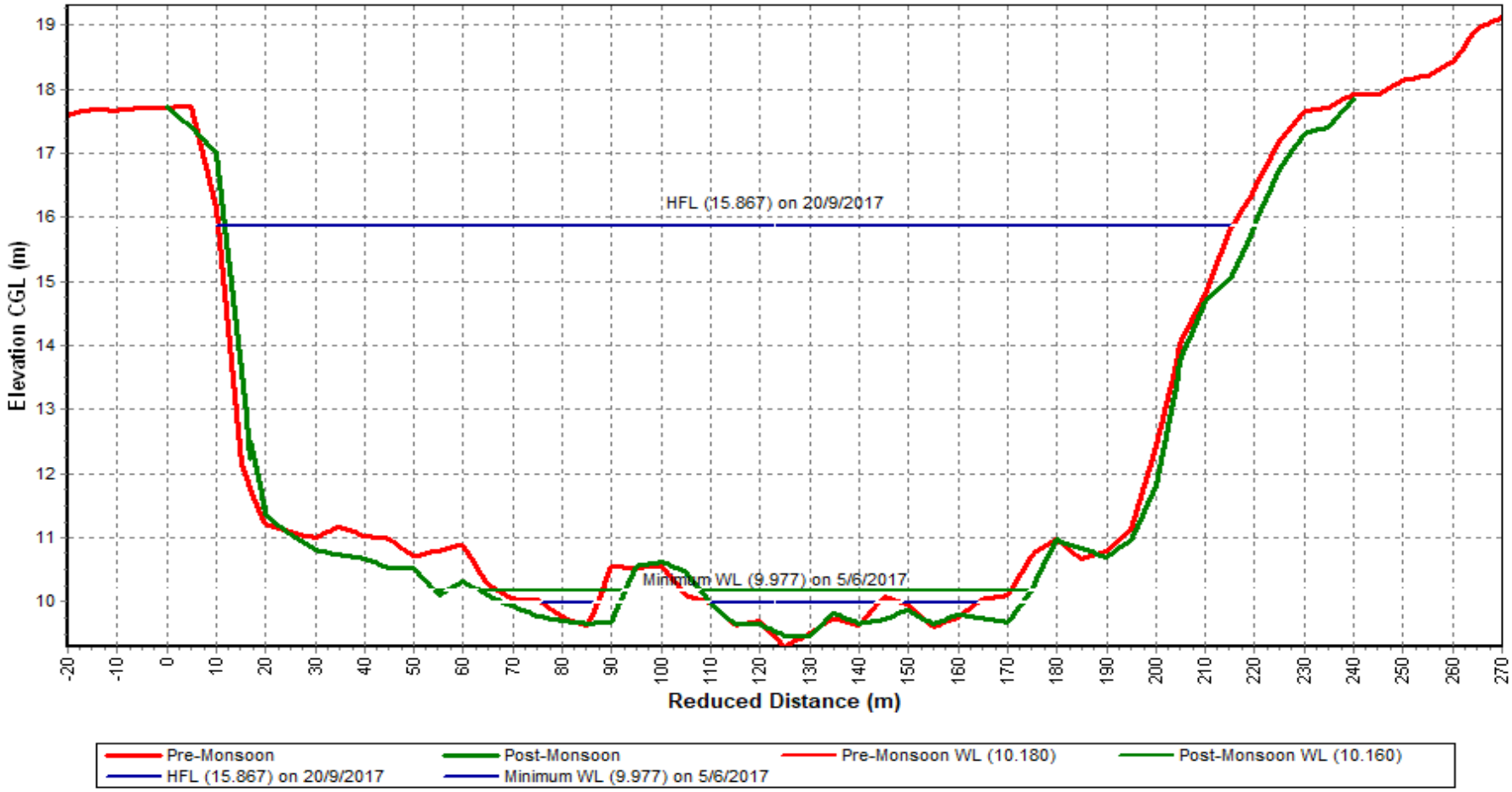
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : Badlapur (WU000P8)

Local River : Ulhas

Division : Upper Krishna Divn, Pune

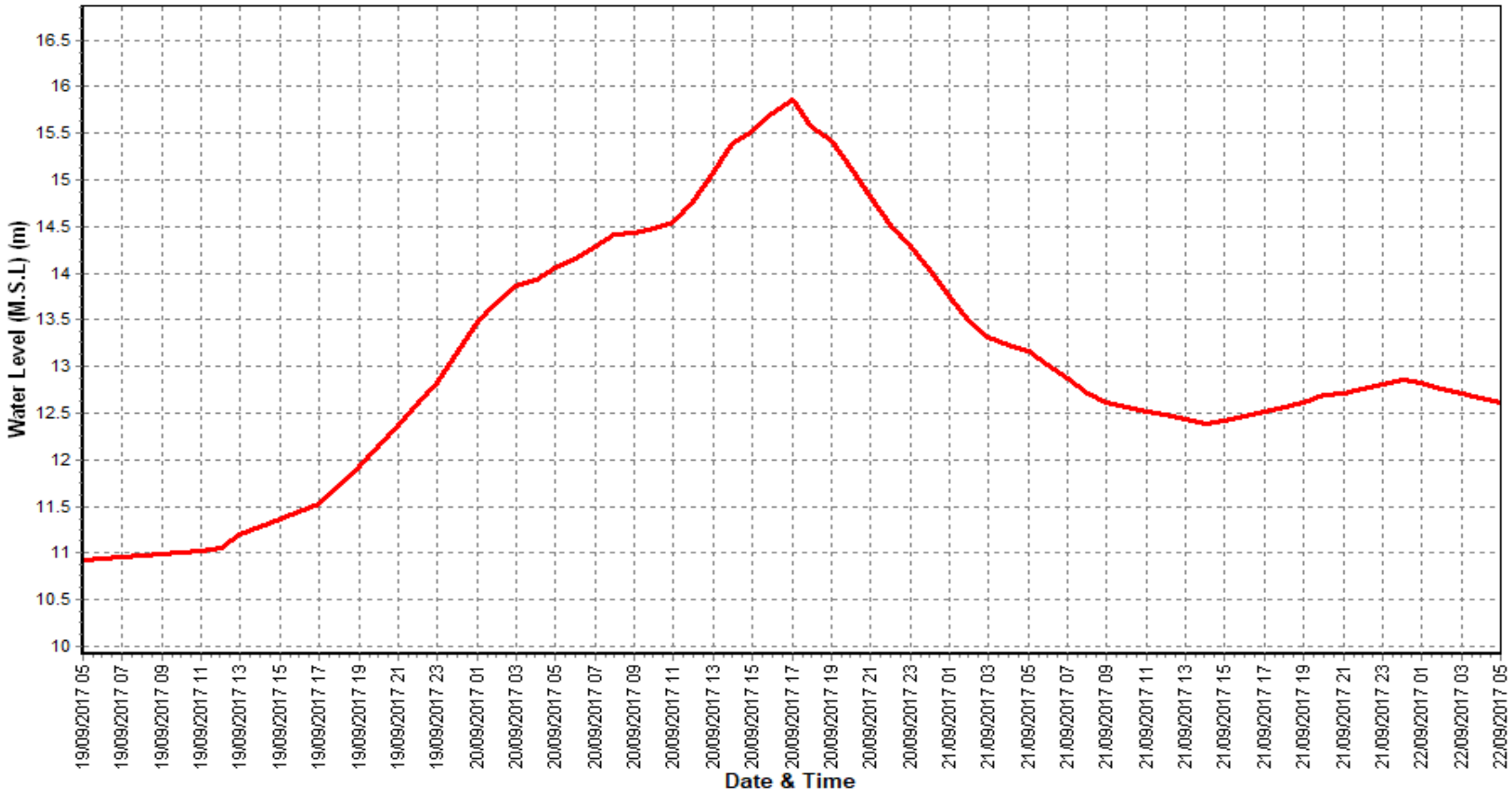
Sub-Division : Upper Krishna SD 3, Managaon



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : Badlapur (WU000P8) **Division : Upper Krishna Divn, Pune**

Local River : Ulhas **Sub-Division : Upper Krishna SD 3, Managaon**

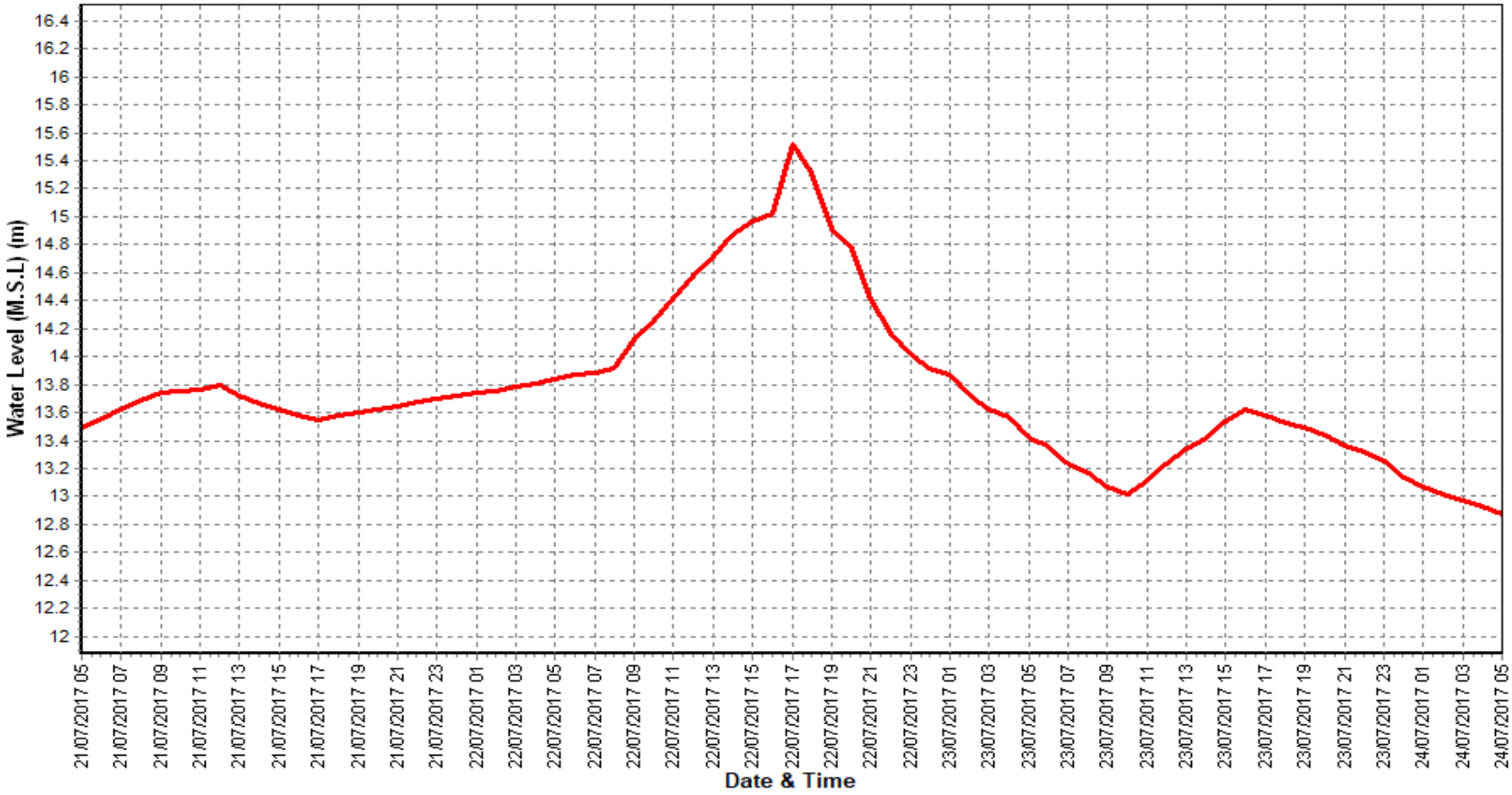


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : Badlapur (WU000P8) **Division : Upper Krishna Divn, Pune**

Local River : Ulhas **Sub-Division : Upper Krishna SD 3, Managaon**

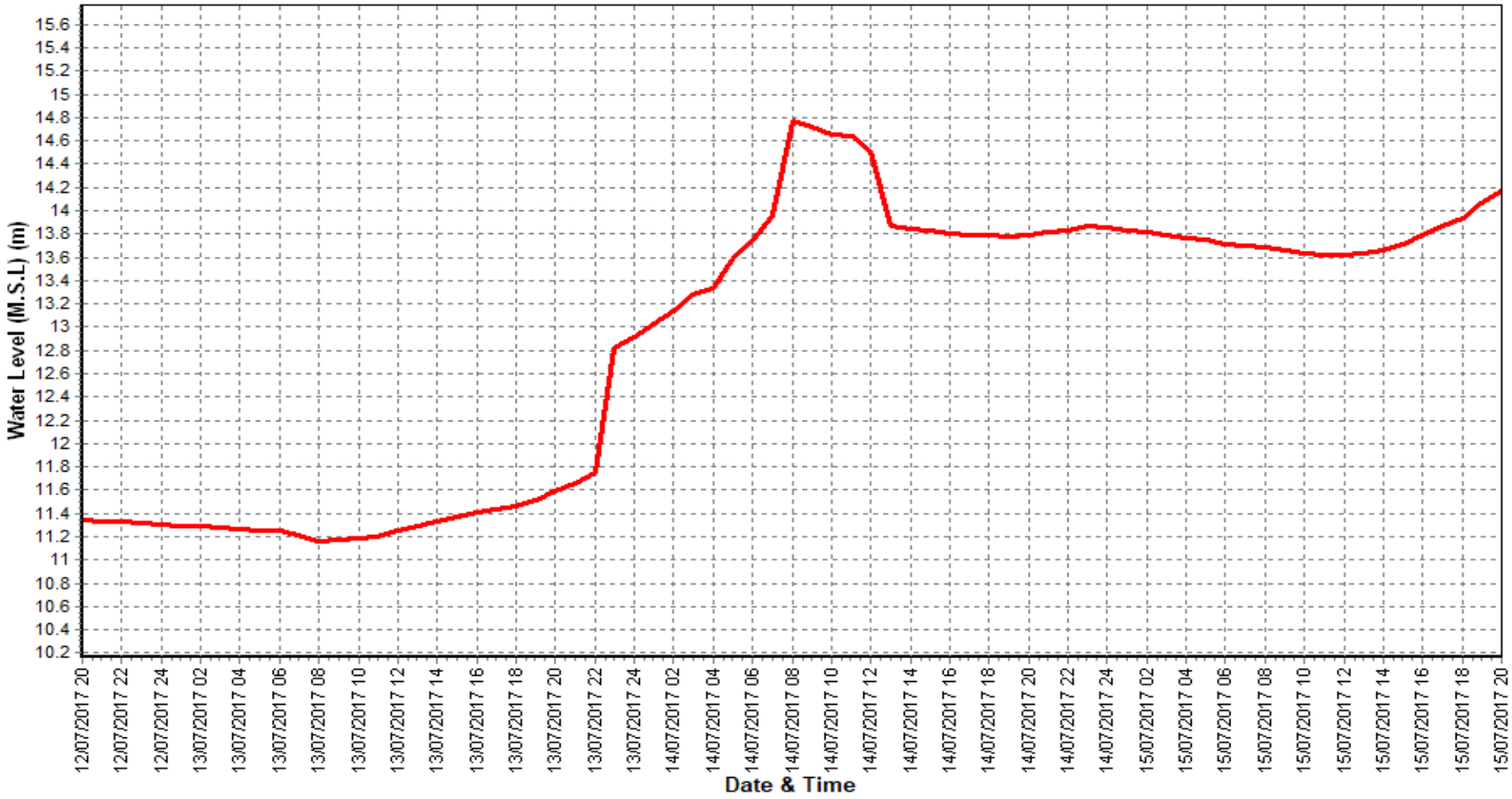


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : Badlapur (WU000P8) **Division : Upper Krishna Divn, Pune**

Local River : Ulhas **Sub-Division : Upper Krishna SD 3, Managaon**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-2018

Site	**: Pen**		**Code**	**: PEN**	
State	: Maharashtra		District		Raigad
Basin	: WFR South of Tapi		Independent River	:	Bhogeshwari
Tributary	: -		Sub Tributary	:	-
Sub-Sub Tributary	: -		Local River	:	Bhogeshwari
Division	: Upper Krishna Divn, Pune		Sub-Division	:	Upper Krishna SD 3, Managaon
Drainage Area	: 125 Sq. Km.		Bank	:	Left
Latitude	: 18°44'12"		Longitude	:	73°06'39"
Zero of Gauge (m)	: 7.000(m.s.l)		22-07-1996		
	Opening Date		Closing Date		
Gauge	: 22-07-1996				
Discharge	: 17-09-1996				
Sediment	:				
Water Quality	:				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1997-1998	366.0	12.550	23-08-1997	0.000	8.800	25-02-1998
1998-1999	285.0	12.200	08-07-1998	0.000	8.730	06-02-1999
1999-2000	344.0	12.295	16-07-1999	0.000	9.400	31-01-2000
2000-2001	212.0	11.900	08-07-2000	0.000	9.410	02-01-2001
2001-2002	223.0	12.000	08-07-2001	0.000	9.430	26-01-2002
2002-2003	242.4	11.375	08-08-2002	0.000	8.620	09-02-2003
2003-2004	89.11	10.720	17-07-2003	0.000	8.880	22-01-2004
2004-2005	280.5	12.010	04-08-2004	0.000	9.460	18-01-2005
2005-2006	732.0	14.730	25-07-2005	0.000	9.430	23-01-2006
2006-2007	204.3	11.480	17-08-2006	0.000	9.470	07-11-2006
2007-2008	117.6	11.000	30-06-2007	0.000	9.460	29-01-2008
2008-2009	222.0	11.830	11-08-2008	0.000	Dry Bed	25-01-2009
2009-2010	86.87	10.690	14-07-2009	0.000	9.500	18-03-2010

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2010-2011	229.0	11.550	22-07-2010	0.000	9.550	06-05-2011
2011-2012	262.9	11.950	29-08-2011	0.000	9.550	01-06-2011
2012-2013	147.3	11.320	05-09-2012	0.000	9.465	01-06-2012
2013-2014	346.9	12.460	12-07-2013	0.000	9.510	01-06-2013
2014-2015	188.8	11.485	31-07-2014	0.000	9.580	01-06-2014
2015-2016	151.7	10.570	21-06-2015	0.000	9.520	01-06-2015
2016-2017	257.3	11.807	23-09-2016	0.000	9.575	10-01-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : Pen (PEN) **Division : Upper Krishna Divn, Pune**

Local River : Bhogeshwari **Sub-Division : Upper Krishna SD 3, Managaon**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	9.620	0.000	10.210	30.68	9.943	19.02	11.000	145.7	9.800	7.348 *	9.700	0.000
2	9.640	0.000	9.943	14.16 #	9.838	9.868	10.195	31.71 #	9.775	7.065	9.705	0.000
3	9.635	0.000	9.945	14.30 *	9.878	9.259	10.000	17.54 *	9.780	7.338	9.725	0.000
4	9.610	0.000	9.810	8.956	9.938	19.12	9.952	14.72 #	9.770	6.633	9.730	0.000
5	9.580	0.000	9.930	14.21	9.823	7.662	9.913	13.97	9.780	6.904	9.725	0.000
6	9.560	0.000	9.840	9.859	9.945	14.30 *	9.843	9.226	9.750	4.850	9.710	0.000
7	9.540	0.000	9.808	8.321	9.795	8.528	9.845	9.845	9.800	6.922	9.700	0.000
8	9.560	0.000	9.725	0.000	9.820	8.465	9.795	8.139	9.810	7.753 *	9.720	0.000
9	9.580	0.000	9.818	8.313	9.798	6.598	9.800	6.789	9.780	6.874	9.735	0.000
10	9.620	0.000	9.813	8.372	9.820	7.624	9.820	8.169 *	9.864	9.558	9.710	0.000
11	9.710	0.000	9.773	6.290 #	9.843	9.250	9.775	6.596	9.830	7.155	9.700	0.000
12	9.660	0.000	9.768	7.129	9.840	9.825	9.780	6.960	9.815	6.950	9.720	0.000
13	9.620	0.000	9.743	4.131	9.855	9.712 *	9.810	7.636	9.785	6.838	9.710	0.000
14	9.680	0.000	10.228	32.56	9.850	9.511	9.775	6.922	9.795	6.648	9.700	0.000
15	9.605	0.000	10.085	29.11	9.870	10.41 *	9.835	9.334	9.825	8.381 *	9.720	0.000
16	9.525	0.000	10.215	32.66	9.830	7.724	9.803	6.600	9.785	6.729	9.705	0.000
17	9.620	0.000	10.300	45.12	9.833	7.696	9.770	6.198 *	9.755	4.838	9.700	0.000
18	9.700	0.000	10.315	47.50	9.825	7.468	9.780	6.910	9.780	6.858	9.680	0.000
19	9.650	0.000	10.000	17.54 *	9.935	13.35	9.770	6.937	9.750	0.000	9.690	0.000
20	9.650	0.000	10.425	53.83 *	10.085	23.20 *	10.375	46.58	9.725	0.000	9.710	0.000
21	9.675	0.000	10.320	43.00 *	10.910	119.7 #	10.565	70.16 #	9.730	0.000	9.700	0.000
22	9.660	0.000	11.040	141.8 *	10.543	67.39 #	10.405	44.88	9.755	0.000	9.720	0.000
23	9.700	0.000	10.545	67.69 #	10.005	17.85 #	10.030	25.80	9.725	0.000	9.670	0.000
24	9.635	0.000	10.050	20.77 #	9.865	8.991	9.990	16.92 *	9.750	4.835	9.650	0.000
25	9.655	0.000	9.960	15.15 *	9.970	15.73 *	9.895	11.64 *	9.735	0.000	9.510	0.000
26	10.015	18.48 *	9.825	8.381 *	10.365	46.09	9.805	6.627	9.740	0.000	9.480	0.000
27	10.450	56.58 *	9.940	14.02 #	10.350	45.97 *	9.760	6.386	9.730	0.000	9.460	0.000
28	10.850	110.1 *	9.913	13.94	11.118	146.9	9.780	6.859	9.725	0.000	9.460	0.000
29	10.750	95.08 *	9.952	18.62	12.130	394.7	9.803	6.679	9.730	0.000	9.450	0.000
30	10.500	62.30 *	9.935	13.74 *	12.020	375.9	9.770	6.932	9.725	0.000	9.550	0.000
31			9.808	8.293	11.593	256.8 #			9.715	0.000		
Ten-Daily Mean												
I Ten-Daily	9.594	0.000	9.884	11.72	9.859	11.04	10.016	26.58	9.791	7.124	9.716	0.000
II Ten-Daily	9.642	0.000	10.085	27.59	9.876	10.82	9.847	11.07	9.784	5.440	9.704	0.000
III Ten-Daily	10.089	34.26	10.117	33.22	10.806	136.0	9.980	20.29	9.733	0.440	9.565	0.000
Monthly												
Min.	9.525	0.000	9.725	0.000	9.795	6.598	9.760	6.198	9.715	0.000	9.450	0.000
Max.	10.850	110.1	11.040	141.8	12.130	394.7	11.000	145.7	9.864	9.558	9.735	0.000
Mean	9.775	11.42	10.032	24.47	10.201	55.31	9.948	19.31	9.768	4.209	9.661	0

Annual Runoff in MCM = 305 Annual Runoff in mm = 2437

Peak Observed Discharge = 394.7 cumecs on 29/08/2017 Corres. Water Level :12.13 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :9.62 m

Q Observed/Computed Discharge in cumecsWL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : Pen (PEN) **Division : Upper Krishna Divn, Pune**

Local River : Bhogeshwari **Sub-Division : Upper Krishna SD 3, Managaon**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	9.450	0.000	9.460	0.000	9.560	0.000	9.660	0.000	9.500	0.000	9.750	0.000
2	9.430	0.000	9.440	0.000	9.540	0.000	9.640	0.000	9.550	0.000	9.740	0.000
3	9.440	0.000	9.420	0.000	9.530	0.000	9.640	0.000	9.600	0.000	9.710	0.000
4	9.450	0.000	9.405	0.000	9.540	0.000	9.640	0.000	9.620	0.000	9.720	0.000
5	9.470	0.000	9.390	0.000	9.560	0.000	9.660	0.000	9.640	0.000	9.745	0.000
6	9.450	0.000	9.380	0.000	9.540	0.000	9.685	0.000	9.660	0.000	9.710	0.000
7	9.450	0.000	9.375	0.000	9.660	0.000	9.695	0.000	9.670	0.000	9.700	0.000
8	9.440	0.000	9.360	0.000	9.640	0.000	9.690	0.000	9.665	0.000	9.690	0.000
9	9.420	0.000	9.340	0.000	9.620	0.000	9.680	0.000	9.665	0.000	9.705	0.000
10	9.430	0.000	9.350	0.000	9.590	0.000	9.680	0.000	9.670	0.000	9.700	0.000
11	9.415	0.000	9.340	0.000	9.620	0.000	9.690	0.000	9.670	0.000	9.685	0.000
12	9.420	0.000	9.335	0.000	9.600	0.000	9.690	0.000	9.675	0.000	9.685	0.000
13	9.440	0.000	9.335	0.000	9.640	0.000	9.695	0.000	9.670	0.000	9.695	0.000
14	9.425	0.000	9.330	0.000	9.680	0.000	9.685	0.000	9.675	0.000	9.700	0.000
15	9.480	0.000	9.340	0.000	9.590	0.000	9.685	0.000	9.670	0.000	9.660	0.000
16	9.560	0.000	9.445	0.000	9.620	0.000	9.670	0.000	9.670	0.000	9.620	0.000
17	9.580	0.000	9.440	0.000	9.650	0.000	9.670	0.000	9.675	0.000	9.550	0.000
18	9.570	0.000	9.360	0.000	9.650	0.000	9.680	0.000	9.675	0.000	9.470	0.000
19	9.545	0.000	9.345	0.000	9.640	0.000	9.650	0.000	9.675	0.000	9.380	0.000
20	9.525	0.000	9.335	0.000	9.670	0.000	9.670	0.000	9.680	0.000	9.310	0.000
21	9.510	0.000	9.340	0.000	9.640	0.000	9.680	0.000	9.775	0.000	9.300	0.000
22	9.500	0.000	9.350	0.000	9.650	0.000	9.660	0.000	9.775	0.000	9.330	0.000
23	9.480	0.000	9.680	0.000	9.660	0.000	9.660	0.000	9.770	0.000	9.390	0.000
24	9.460	0.000	9.650	0.000	9.650	0.000	9.655	0.000	9.765	0.000	9.500	0.000
25	9.445	0.000	9.630	0.000	9.660	0.000	9.600	0.000	9.765	0.000	9.650	0.000
26	9.445	0.000	9.610	0.000	9.650	0.000	9.400	0.000	9.760	0.000	9.735	0.000
27	9.450	0.000	9.580	0.000	9.660	0.000	9.550	0.000	9.760	0.000	9.735	0.000
28	9.440	0.000	9.570	0.000	9.640	0.000	9.500	0.000	9.780	0.000	9.710	0.000
29	9.420	0.000	9.550	0.000			9.480	0.000	9.775	0.000	9.680	0.000
30	9.440	0.000	9.520	0.000			9.460	0.000	9.775	0.000	9.650	0.000
31	9.450	0.000	9.540	0.000			9.480	0.000			9.700	0.000
Ten-Daily Mean												
I Ten-Daily	9.443	0.000	9.392	0.000	9.578	0.000	9.667	0.000	9.624	0.000	9.717	0.000
II Ten-Daily	9.496	0.000	9.360	0.000	9.636	0.000	9.678	0.000	9.674	0.000	9.575	0.000
III Ten-Daily	9.458	0.000	9.547	0.000	9.651	0.000	9.557	0.000	9.770	0.000	9.580	0.000
Monthly												
Min.	9.415	0.000	9.330	0.000	9.530	0.000	9.400	0.000	9.500	0.000	9.300	0.000
Max.	9.580	0.000	9.680	0.000	9.680	0.000	9.695	0.000	9.780	0.000	9.750	0.000
Mean	9.465	0	9.437	0	9.620	0	9.632	0	9.689	0	9.623	0

Peak Computed Discharge = 141.8 cumecs on 22/07/2017 Corres. Water Level :11.04 m

Lowest Computed Discharge = 6.198 cumecs on 17/09/2017 Corres. Water Level :9.77 m

Q Observed/Computed Discharge in cumecsWL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

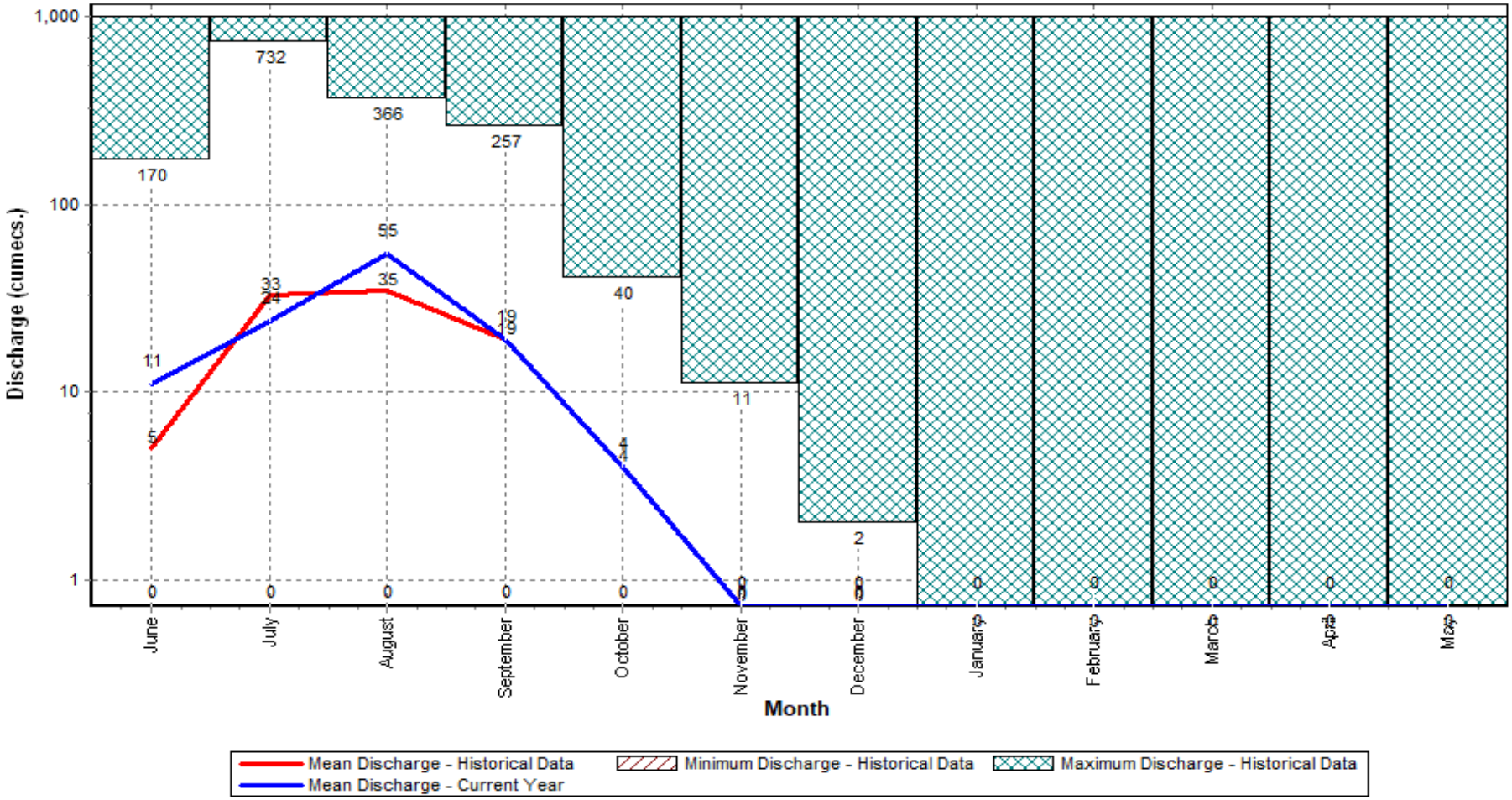
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : Pen (PEN) | **Data considered : 1997-2018** | **Division : Upper Krishna Divn, Pune**

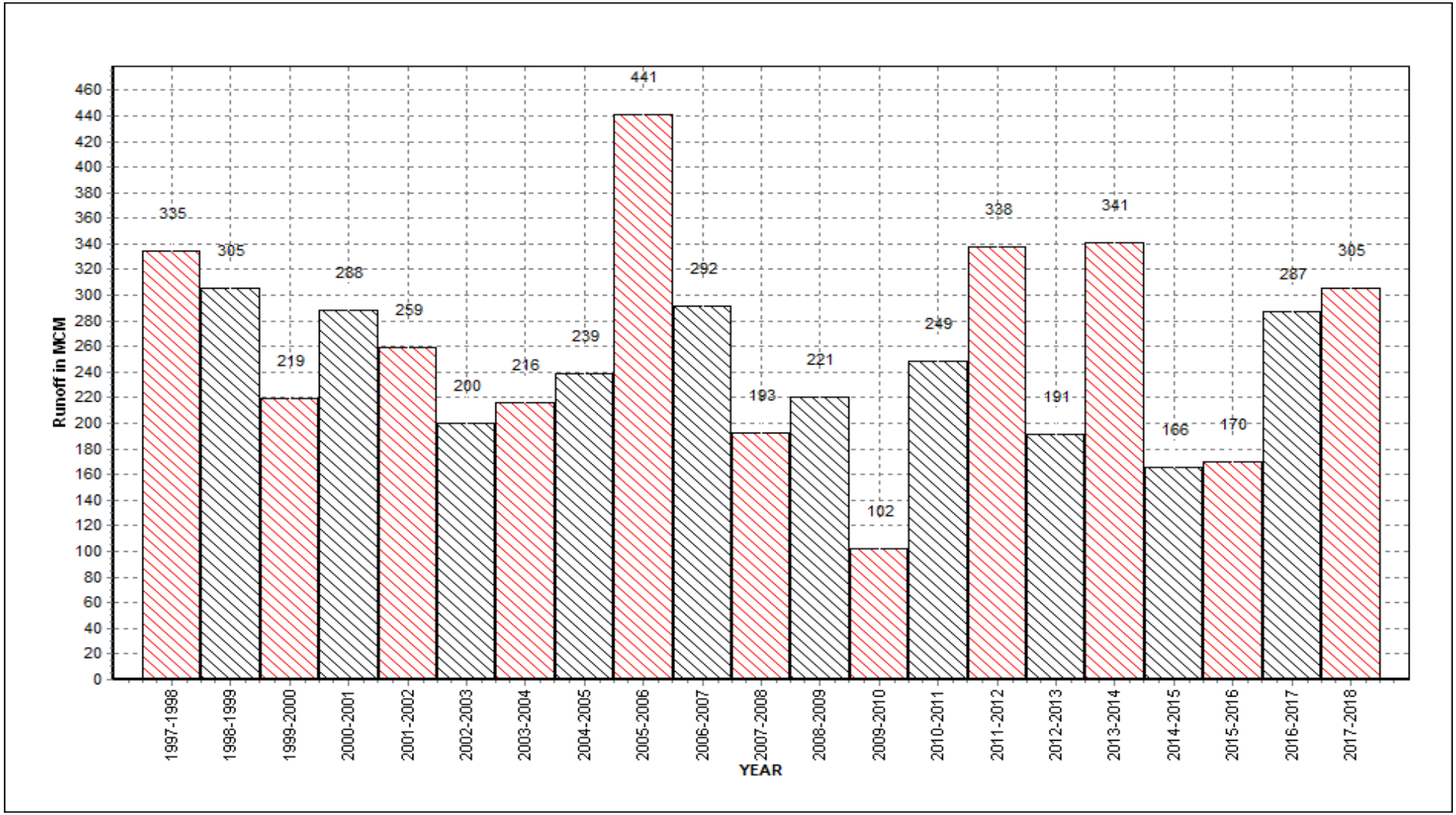
Local River : Bhogeshwari | **Sub-Division : Upper Krishna SD 3, Managaon**



Annual Runoff Values for the period: 1997 - 2018

Station Name : Pen (PEN)
Local River : Bhogeshwari

Division : Upper Krishna Divn, Pune
Sub-Division : Upper Krishna SD 3, Managaon

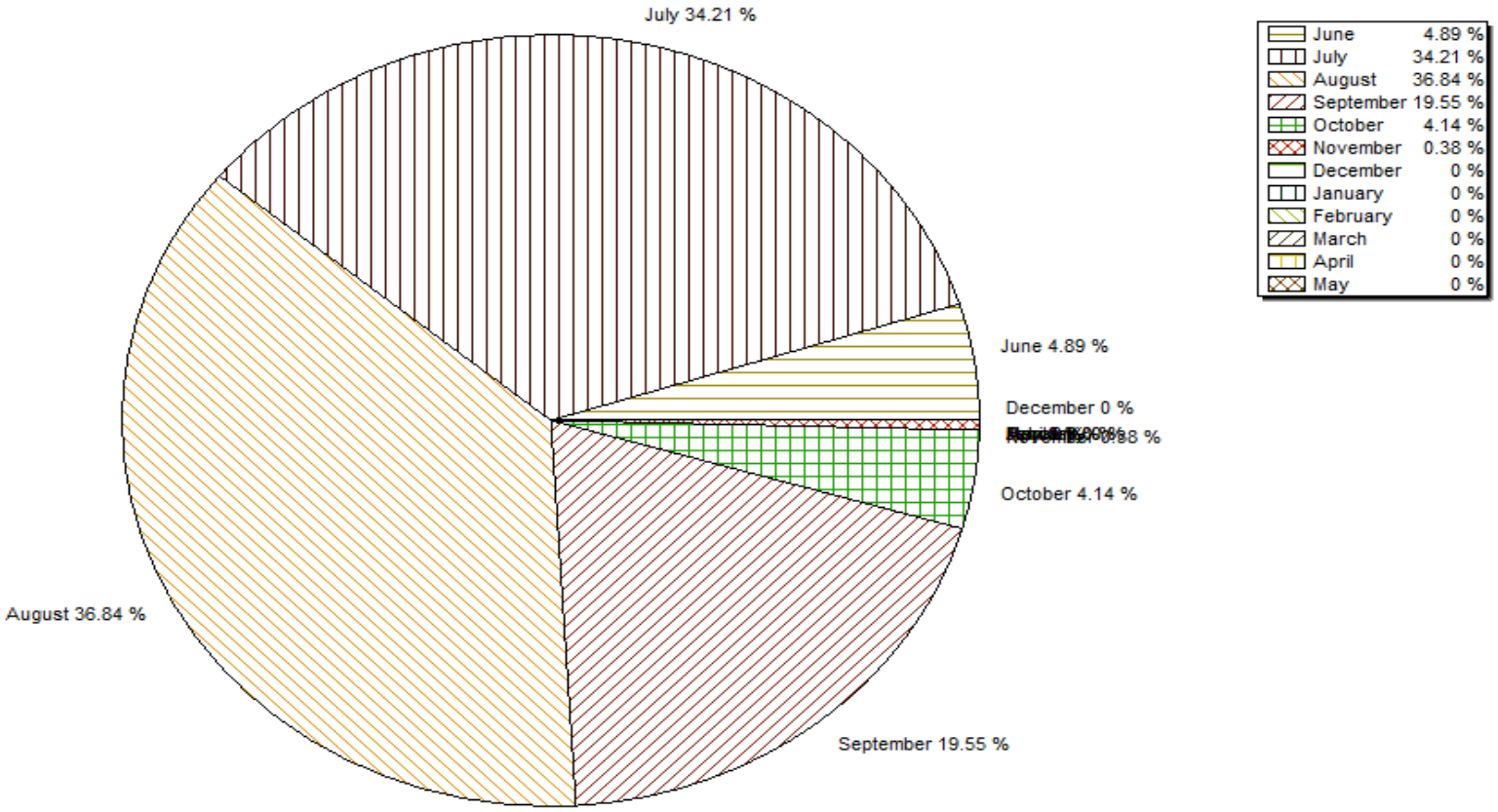


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1997-2017

Station Name : Pen (PEN)
Local River : Bhogeshwari

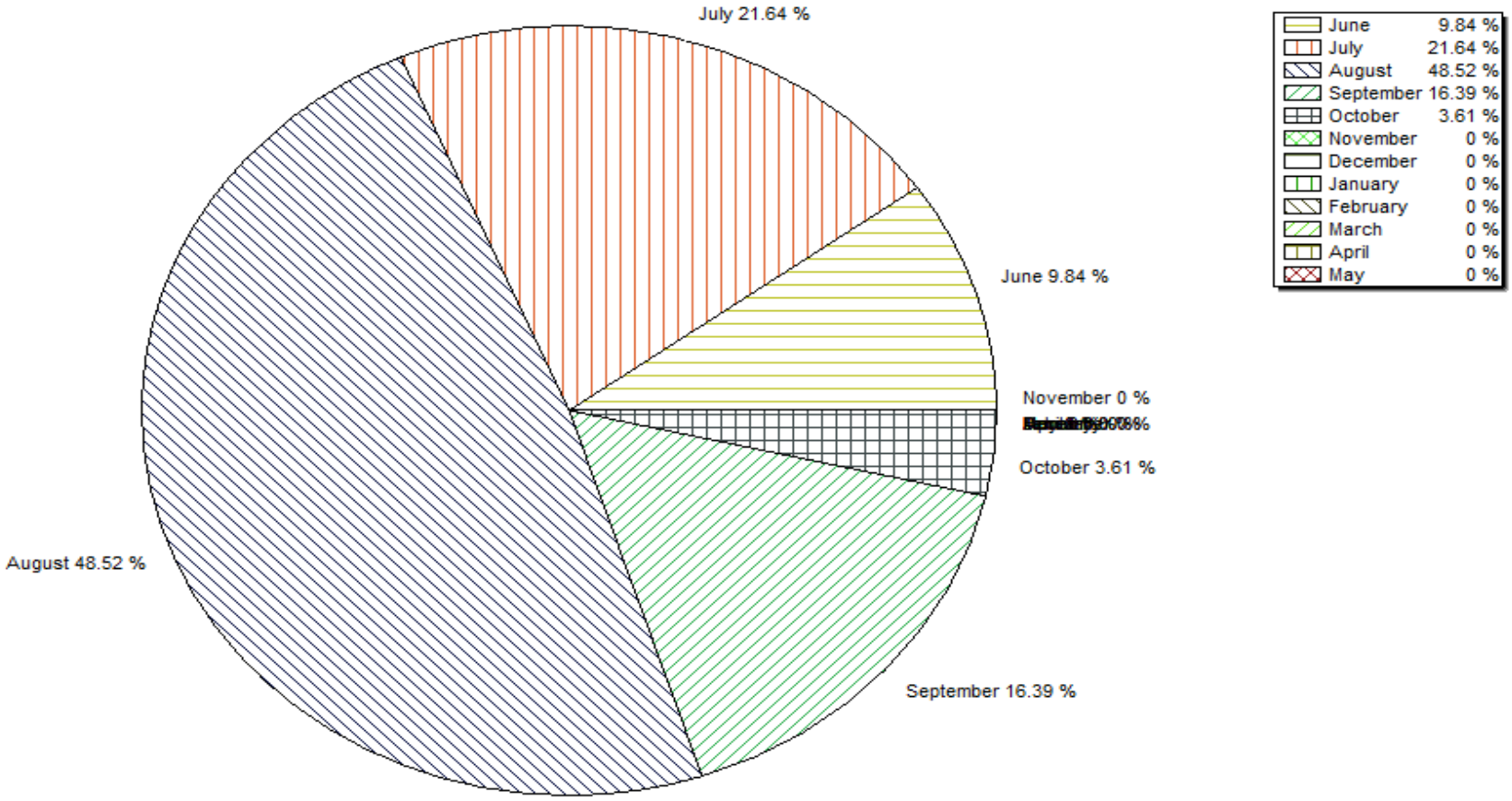
Division : Upper Krishna Divn, Pune
Sub-Division : Upper Krishna SD 3, Managaon



Monthly Runoff for the Year : 2017-2018

Station Name : Pen (PEN)
Local River : Bhogeshwari

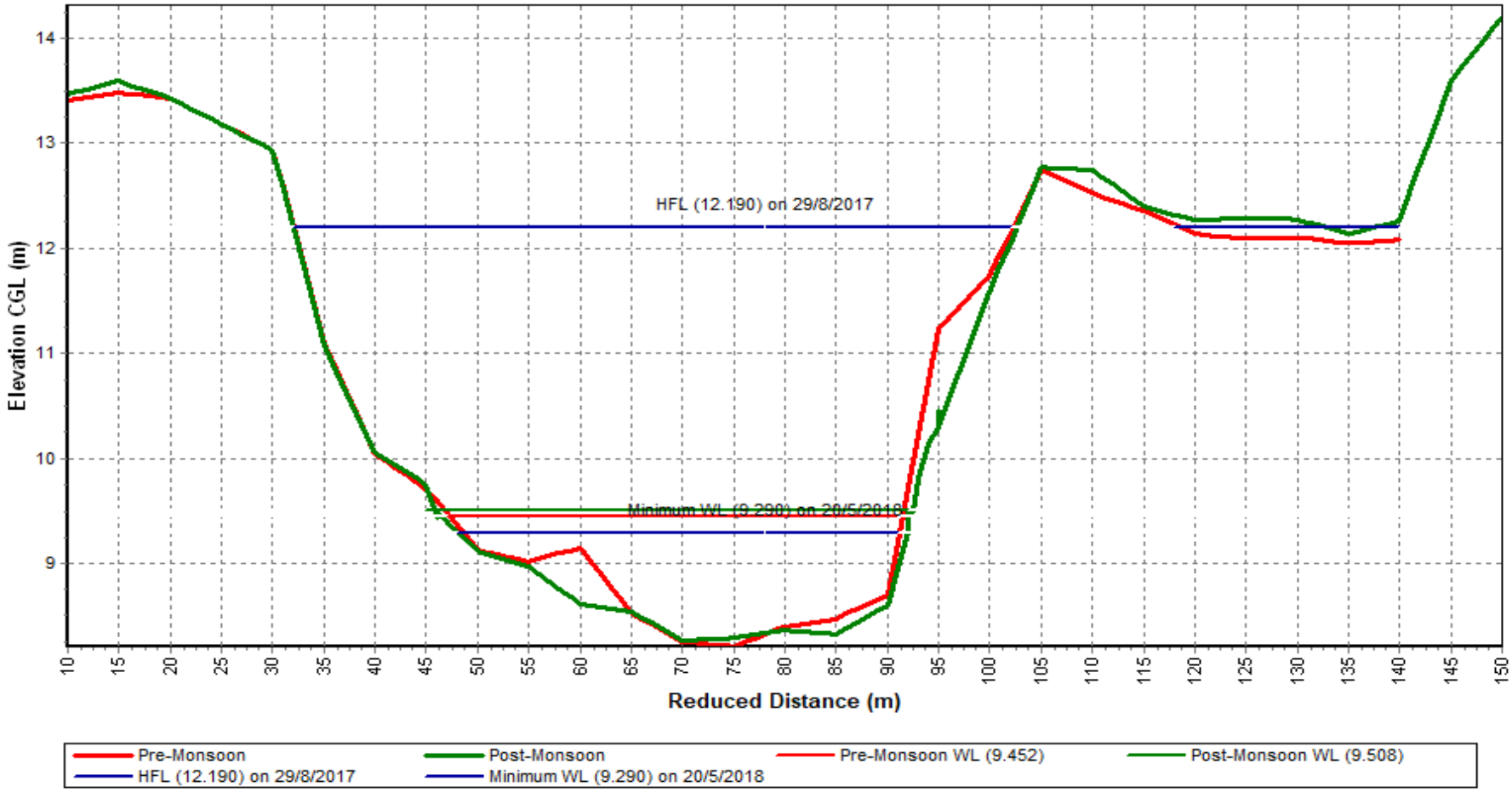
Division : Upper Krishna Divn, Pune
Sub-Division : Upper Krishna SD 3, Managaon



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : Pen (PEN)
Local River : Bhogeshwari

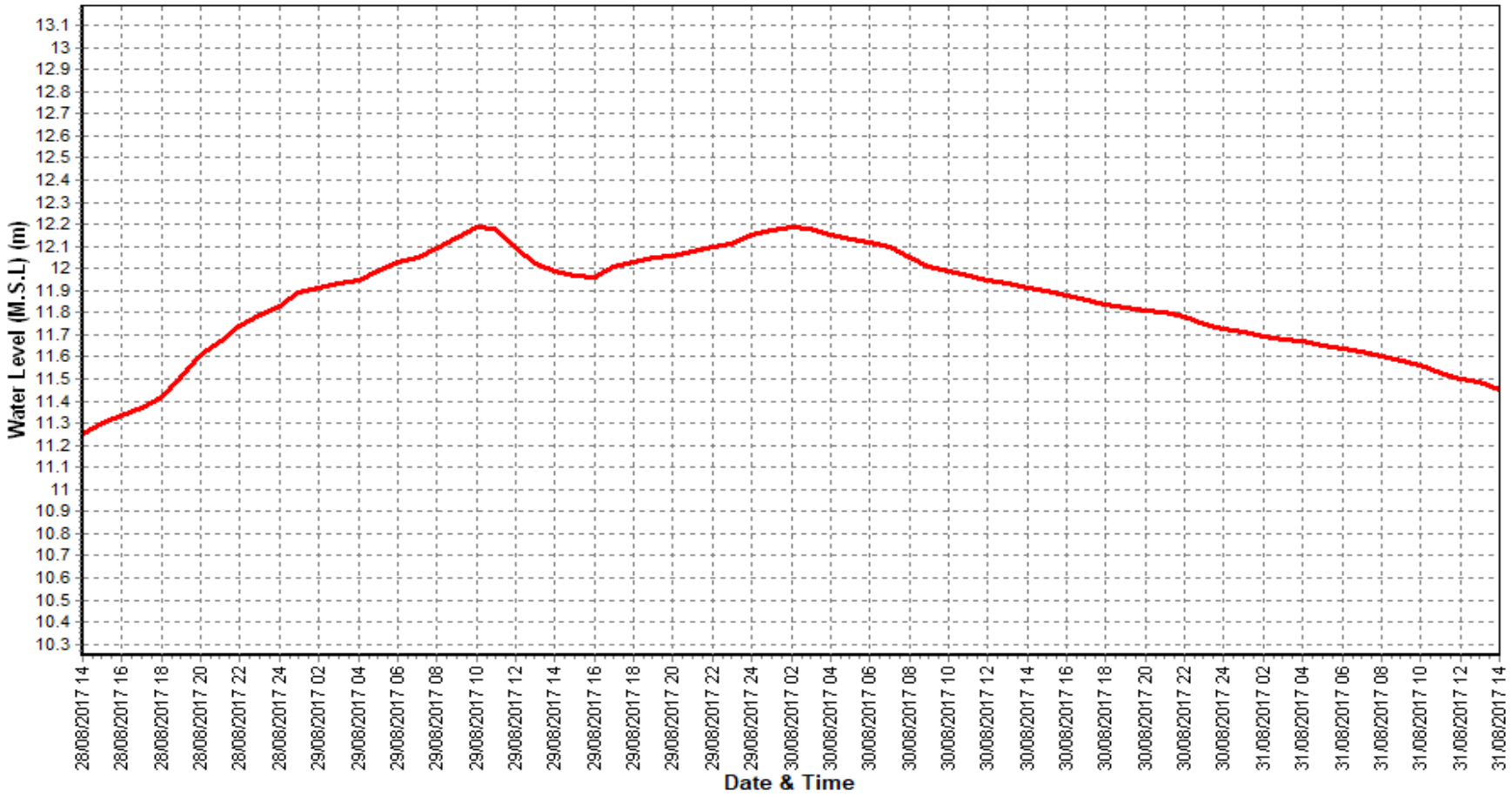
Division : Upper Krishna Divn, Pune
Sub-Division : Upper Krishna SD 3, Managaon



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : Pen (PEN) **Division : Upper Krishna Divn, Pune**

Local River : Bhogeshwari **Sub-Division : Upper Krishna SD 3, Managaon**

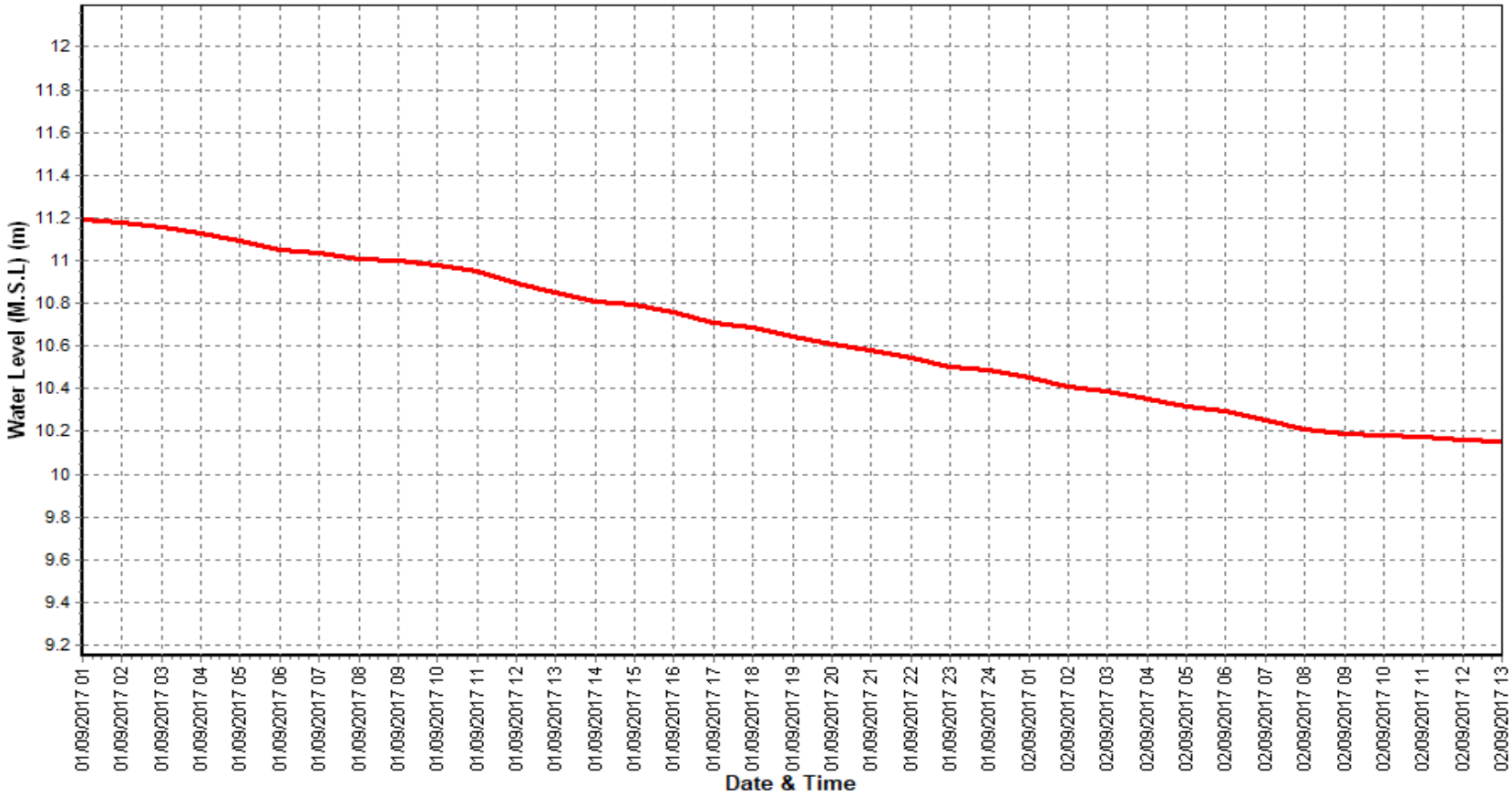


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : Pen (PEN) **Division : Upper Krishna Divn, Pune**

Local River : Bhc **anagaon**

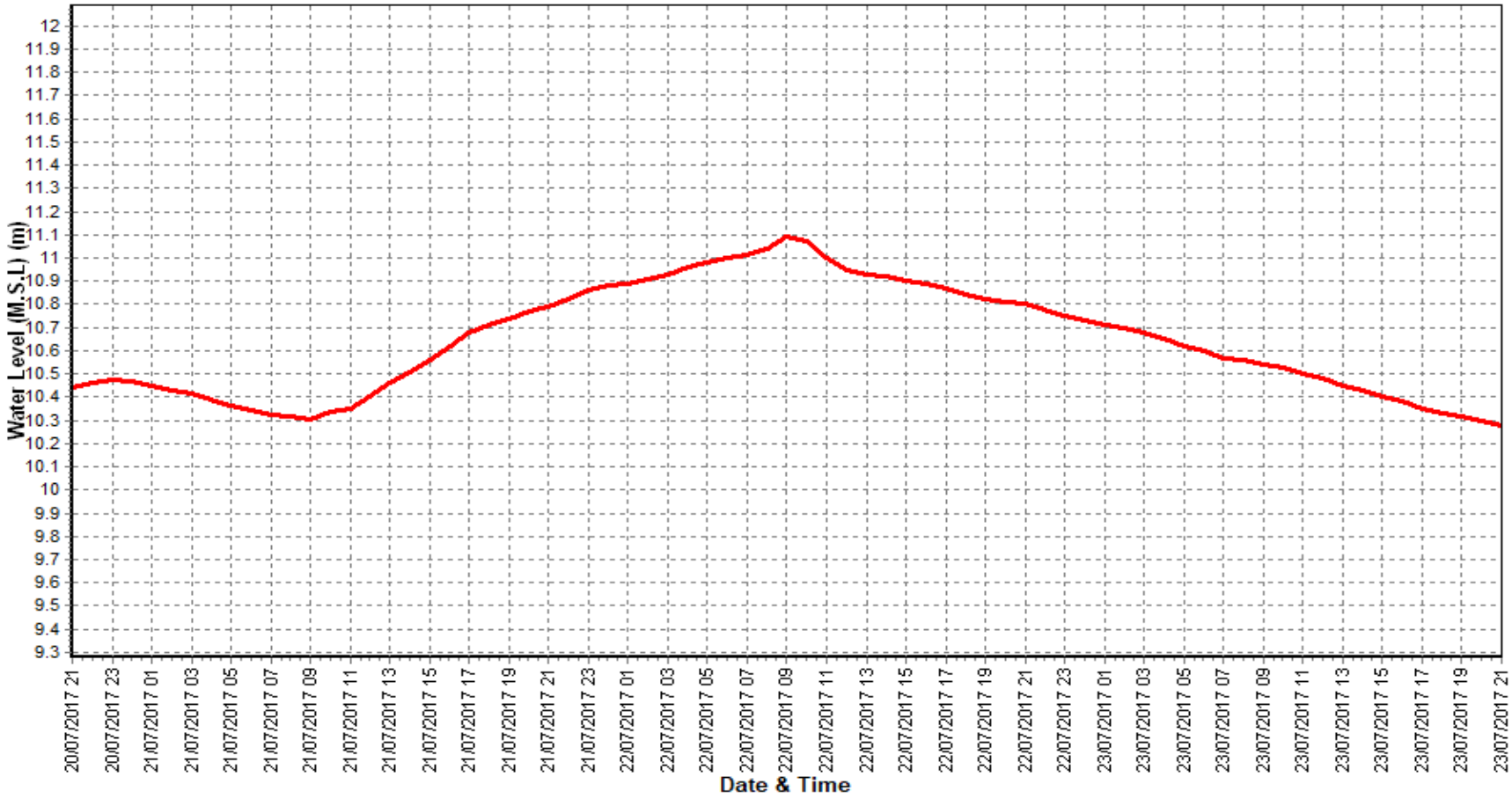


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : Pen (PEN) **Division : Upper Krishna Divn, Pune**

Local River : Bhogeshwari **Sub-Division : Upper Krishna SD 3, Managaon**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-2018

Site	:	**Nagothane**	**Code**	:	**NAGOTHANE**
State	:	Maharashtra	District		Raigad
Basin	:	WFR South of Tapi	Independent River	:	Amba
Tributary	:	-	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Amba
Division	:	Upper Krishna Divn, Pune	Sub-Division	:	Upper Krishna SD 3, Managaon
Drainage Area	:	420 Sq. Km.	Bank	:	Left
Latitude	:	18°31'09"	Longitude	:	73°09'23"
Zero of Gauge (m)	:	2.000 (m.s.l)	06-07-1996		
		Opening Date	Closing Date		
Gauge	:	06-07-1996			
Discharge	:	25-09-1996			
Sediment	:				
Water Quality	:				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1998-1999	750.0	10.670	08-07-1998	0.000	3.600	09-01-1999
1999-2000	1100	12.420	16-07-1999	0.000	7.480	10-01-2000
2000-2001	507.8	9.300	11-08-2000	0.000	3.700	03-01-2001
2001-2002	370.0	8.300	08-07-2001	0.000	5.900	24-01-2002
2002-2003	686.9	8.050	27-06-2002	0.000	4.810	17-01-2003
2003-2004	640.2	8.580	13-09-2003	0.000	5.350	12-01-2004
2004-2005	902.0	9.450	02-08-2004	0.000	6.860	14-01-2005
2005-2006	1290	11.210	25-07-2005	0.000	4.400	17-01-2006
2006-2007	909.5	8.980	17-08-2006	0.000	6.990	16-01-2007
2007-2008	1021	9.050	30-06-2007	0.000	6.100	08-03-2008
2008-2009	1588	9.950	10-08-2008	0.000	6.020	28-04-2009
2009-2010	1063	9.850	15-07-2009	0.000	5.835	26-05-2010
2010-2011	852.7	8.860	22-07-2010	0.000	6.410	03-03-2011
2011-2012	768.4	8.700	18-07-2011	0.000	4.630	01-06-2011
2012-2013	1008	9.140	10-08-2012	0.000	5.430	01-06-2012
2013-2014	1009	9.080	24-07-2013	0.000	5.290	01-06-2013
2014-2015	750.5	10.170	30-07-2014	0.000	6.160	01-06-2014
2015-2016	681.5	8.600	12-10-2015	0.000	3.900	01-06-2015
2016-2017	1015	11.500	22-09-2016	0.000	8.150	19-01-2017

Q:Observed/Computed Discharge
W:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : Nagothane (NAGOTHANE) **Division : Upper Krishna Divn, Pune**

Local River : Amba **Sub-Division : Upper Krishna SD 3, Managaon**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	4.210	0.000	6.720	318.2	5.470	150.6	5.450	146.3	4.940	88.78 *	6.220	0.000
2	4.050	0.000	5.770	187.8 *	5.380	138.3	5.010	96.86 *	4.560	44.73 *	6.200	0.000
3	3.930	0.000	6.020	221.6	5.190	116.5	4.800	72.58 *	4.430	29.23	6.250	0.000
4	3.850	0.000	5.340	131.7	5.250	124.5	4.870	85.94	4.360	24.81		0.000
5	3.850	0.000	5.960	218.5	5.010	98.22	4.740	58.69	4.420	28.74		0.000
6	3.760	0.000	5.400	145.2	4.830	76.06 *	4.580	41.00	4.360	24.85	6.270	0.000
7	3.680	0.000	5.530	162.5	4.700	57.71	4.500	33.52	5.900	204.2	5.820	0.000
8	3.540	0.000	5.540	164.4	4.670	53.87	5.270	122.6	5.720	180.8 *	5.580	0.000
9	3.650	0.000	5.340	134.9 *	4.600	49.38 *	4.840	81.78	6.070	249.1	5.500	0.000
10	3.510	0.000	5.310	128.1	4.700	57.39	4.870	80.68 *	5.600	164.9 *	5.420	0.000
11	4.620	0.000	4.980	98.88	4.890	87.54	5.030	101.4	4.790	62.53	4.980	0.000
12	4.810	0.000	5.110	108.7	5.480	151.6	4.770	61.48	4.710	56.03		0.000
13	5.040	0.000	5.220	120.8	5.000	95.70 *	5.780	185.1	4.540	39.48	3.820	0.000
14	5.310	0.000	8.250	801.2	4.890	87.90	4.840	82.47	6.170	260.1	3.780	0.000
15	6.030	0.000	7.090	463.3	5.350	135.1 *	6.730	390.1	6.280	271.8 *	4.400	0.000
16	6.150	0.000	6.510	318.0 *	5.190	117.9	5.210	121.0	6.260	114.0	4.680	0.000
17	6.130	0.000	6.775	413.5	4.990	96.46	5.030	99.17 *	5.150	80.00 *	5.710	0.000
18	6.180	0.000	7.250	518.1	4.890	89.95	4.930	95.08	6.100	60.60 *	5.900	0.000
19	6.100	0.700	6.610	353.0	5.950	228.6	4.980	97.98	6.050	43.80 *		0.000
20	6.360	0.000	7.430	554.9	5.830	196.5 *	7.600	660.0	6.040	40.44 *	6.050	0.000
21	6.000	0.000	7.110	464.9	6.370	299.3	6.130	245.8	6.050	43.80 *	6.430	0.000
22	6.030	0.000	7.120	468.1	5.530	163.6	6.520	333.3	6.030	37.08 *	7.030	0.000
23	6.010	0.000	6.100	239.4 *	5.090	105.8	5.690	173.7	6.000	27.00 *	7.330	0.000
24	6.000	0.000	6.070	237.0	4.990	96.77	5.330	133.7 *	6.010	30.36 *	7.330	0.000
25	6.530	322.3 *	6.090	237.6	5.890	205.5 *	5.110	113.0	5.940	0.000	7.440	0.000
26	7.750	682.4 *	5.510	165.3	7.200	471.5	4.980	94.15	5.910	0.000		0.000
27	8.650	1105 *	5.300	127.4	7.000	436.9 *	4.925	95.76	5.930	0.000	7.510	0.000
28	6.720	365.4 *	6.000	219.5	7.770	678.8	4.660	52.22	5.890	0.000	7.450	0.000
29	8.390	966.7 *	6.510	315.2	8.860	1281	5.120	117.1	5.950	0.000	7.430	0.000
30	7.110	467.7 *	5.680	175.4 *	7.800	709.5	5.110	108.4 *	6.020	0.000	7.720	0.000
31			5.290	126.0	6.390	333.9			6.210	0.000		
Ten-Daily Mean												
I Ten-Daily	3.803	0.000	5.693	181.3	4.980	92.27	4.893	82.00	5.036	104.0	5.908	0.000
II Ten-Daily	5.673	0.070	6.523	375.1	5.246	128.7	5.490	189.4	5.609	102.9	4.915	0.000
III Ten-Daily	6.919	391.0	6.071	252.3	6.626	434.8	5.357	146.7	5.995	12.57	7.297	0.000
Monthly												
Min.	3.510	0.000	4.980	98.88	4.600	49.38	4.500	33.52	4.360	0.000	3.780	0.000
Max.	8.650	1105	8.250	801.2	8.860	1281	7.600	660.0	6.280	271.8	7.720	0.000
Mean	5.465	130.4	6.095	269	5.650	225.6	5.247	139.4	5.561	71.2	6.090	0

Annual Runoff in MCM = 2214 Annual Runoff in mm = 5273

Peak Observed Discharge = 1281 cumecs on 29/08/2017 Corres. Water Level :8.860001 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :4.21 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : Nagothane (NAGOTHANE) **Division : Upper Krishna Divn, Pune**

Local River : Amba **Sub-Division : Upper Krishna SD 3, Managaon**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1		0.000	8.170	0.000	8.140	0.000	8.130	0.000			7.650	0.000
2	7.700	0.000	8.160	0.000	8.140	0.000		0.000	7.600	0.000	7.610	0.000
3		0.000	8.170	0.000	8.140	0.000	8.130	0.000	7.300	0.000	7.500	0.000
4	7.760	0.000	8.160	0.000		0.000		0.000	7.600	0.000	7.510	0.000
5	7.780	0.000	8.150	0.000	8.140	0.000	8.100	0.000	7.650	0.000	7.485	0.000
6	7.810	0.000	8.155	0.000	8.140	0.000	8.070	0.000	7.680	0.000		0.000
7	7.850	0.000		0.000	8.140	0.000	8.070	0.000	7.720	0.000	7.440	0.000
8	7.850	0.000	8.160	0.000	8.140	0.000	8.060	0.000		0.000	7.480	0.000
9	7.960	0.000	8.160	0.000	8.140	0.000	8.050	0.000	7.730	0.000	7.530	0.000
10		0.000	8.150	0.000	8.145	0.000	8.050	0.000	7.740	0.000	7.500	0.000
11	8.050	0.000	8.160	0.000		0.000		0.000	7.730	0.000	7.460	0.000
12	8.140	0.000	8.160	0.000	8.140	0.000	8.070	0.000	7.730	0.000	7.280	0.000
13	8.170	0.000	8.160	0.000	8.130	0.000	8.070	0.000	7.720	0.000		0.000
14	8.200	0.000		0.000	8.135	0.000	8.060	0.000	7.700	0.000	7.090	0.000
15	8.110	0.000	8.160	0.000	8.130	0.000	8.060	0.000		0.000	6.980	0.000
16	8.070	0.000	8.150	0.000	8.130	0.000	8.000	0.000	7.700	0.000	6.820	0.000
17		0.000	8.160	0.000	8.130	0.000	7.740	0.000	7.700	0.000	6.640	0.000
18	8.100	0.000	8.150	0.000		0.000		0.000	7.700	0.000		0.000
19	8.110	0.000	8.150	0.000	8.130	0.000	7.700	0.000	7.710	0.000	6.370	0.000
20		0.000	8.150	0.000	8.135	0.000	7.690	0.000	7.700	0.000	7.280	0.000
21		0.000		0.000	8.130	0.000	7.670	0.000	7.690	0.000	7.270	0.000
22		0.000	8.150	0.000	8.130	0.000	7.660	0.000	7.610	0.000	7.275	0.000
23	7.920	0.000	8.150	0.000	8.130	0.000	7.650	0.000	7.620	0.000	7.210	0.000
24	2.000	0.000	8.140	0.000	8.130	0.000	7.610	0.000	7.600	0.000	7.000	0.000
25	2.000	0.000	8.145	0.000		0.000		0.000	7.620	0.000	6.620	0.000
26	7.980	0.000		0.000	8.130	0.000	7.670	0.000	7.600	0.000	6.310	0.000
27	7.950	0.000	8.150	0.000	8.130	0.000	7.750	0.000	7.610	0.000	5.950	0.000
28	7.970	0.000		0.000	8.130	0.000	7.710	0.000	7.590	0.000	5.680	0.000
29	8.020	0.000	8.150	0.000			7.680	0.000	7.600	0.000	5.410	0.000
30	8.110	0.000	8.140	0.000			7.630	0.000	7.590	0.000	5.210	0.000
31			8.140	0.000			7.600	0.000			4.920	0.000
Ten-Daily Mean												
I Ten-Daily	7.816	0.000	8.159	0.000	8.141	0.000	8.082	0.000	7.627	0.000	7.523	0.000
II Ten-Daily	8.119	0.000	8.156	0.000	8.133	0.000	7.924	0.000	7.710	0.000	6.990	0.000
III Ten-Daily	6.494	0.000	8.146	0.000	8.130	0.000	7.663	0.000	7.613	0.000	6.260	0.000
Monthly												
Min.	2.000	0.000	8.140	0.000	8.130	0.000	7.600	0.000	7.300	0.000	4.920	0.000
Max.	8.200	0.000	8.170	0.000	8.145	0.000	8.130	0.000	7.740	0.000	7.650	0.000
Mean	7.461	0	8.154	0	8.135	0	7.872	0	7.650	0	6.874	0

Peak Computed Discharge = 1105 cumecs on 27/06/2017 Corres. Water Level :8.65 m

Lowest Computed Discharge = 27.00 cumecs on 23/10/2017 Corres. Water Level :6 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

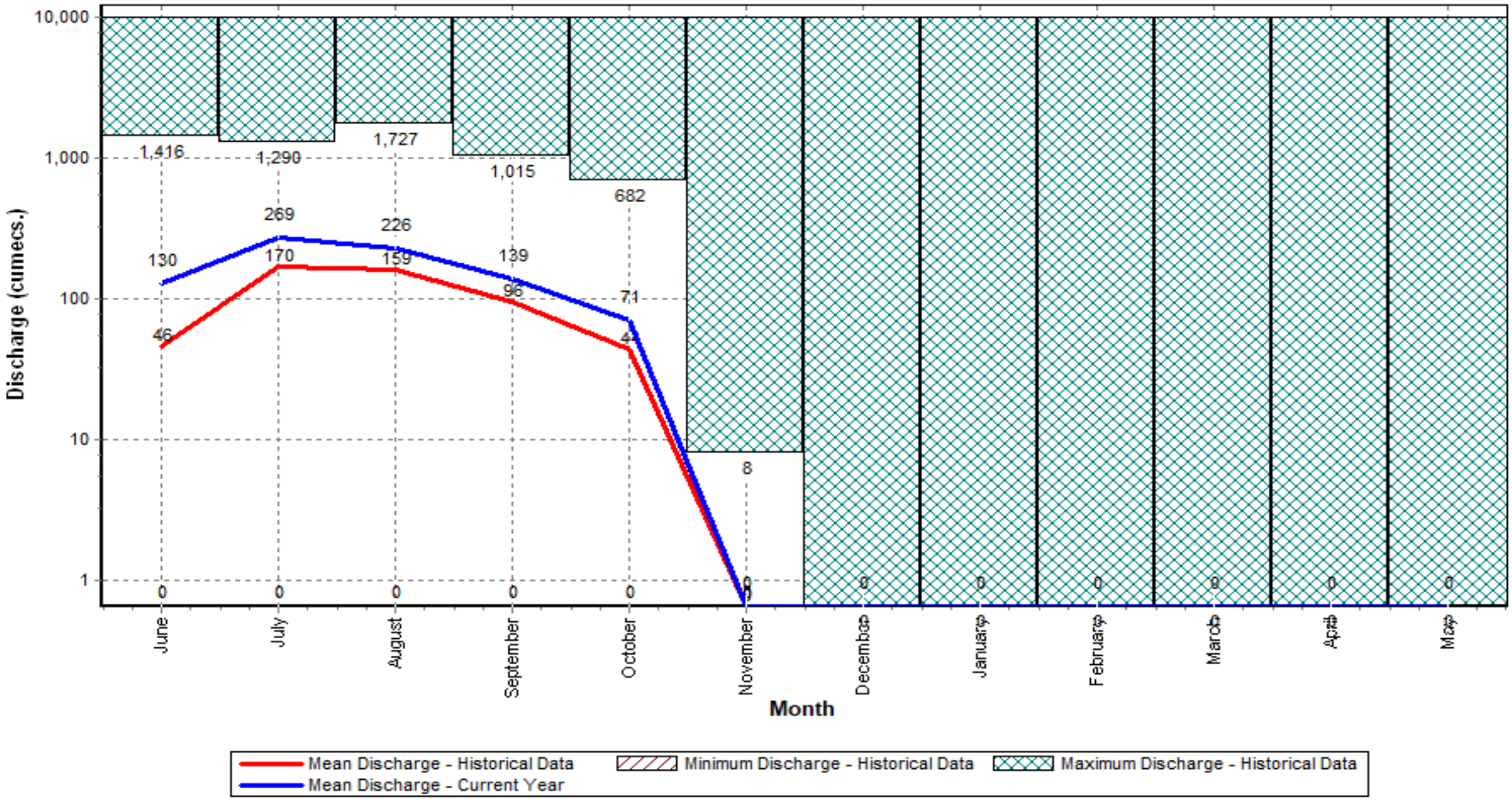
*:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : Nagothane (NAGOTHANE) | **Data considered : 1998-2018** | **Division : Upper Krishna Divn, Pune**

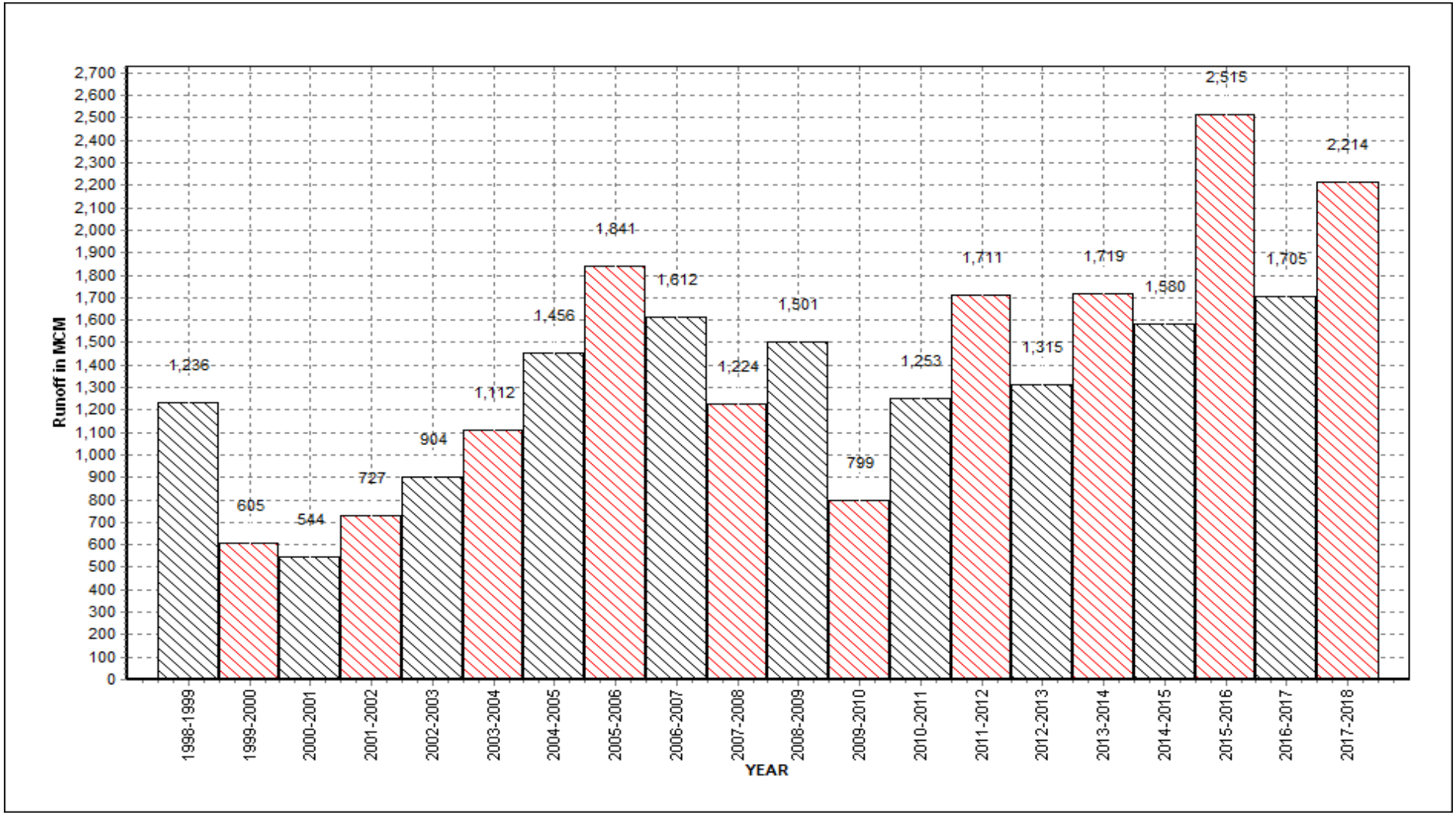
Local River : Amba | **Sub-Division : Upper Krishna SD 3, Managaon**



Annual Runoff Values for the period: 1998 - 2018

Station Name : Nagothane (NAGOTHANE) **Division : Upper Krishna Divn, Pune**

Local River : Amba **Sub-Division : Upper Krishna SD 3, Managaon**

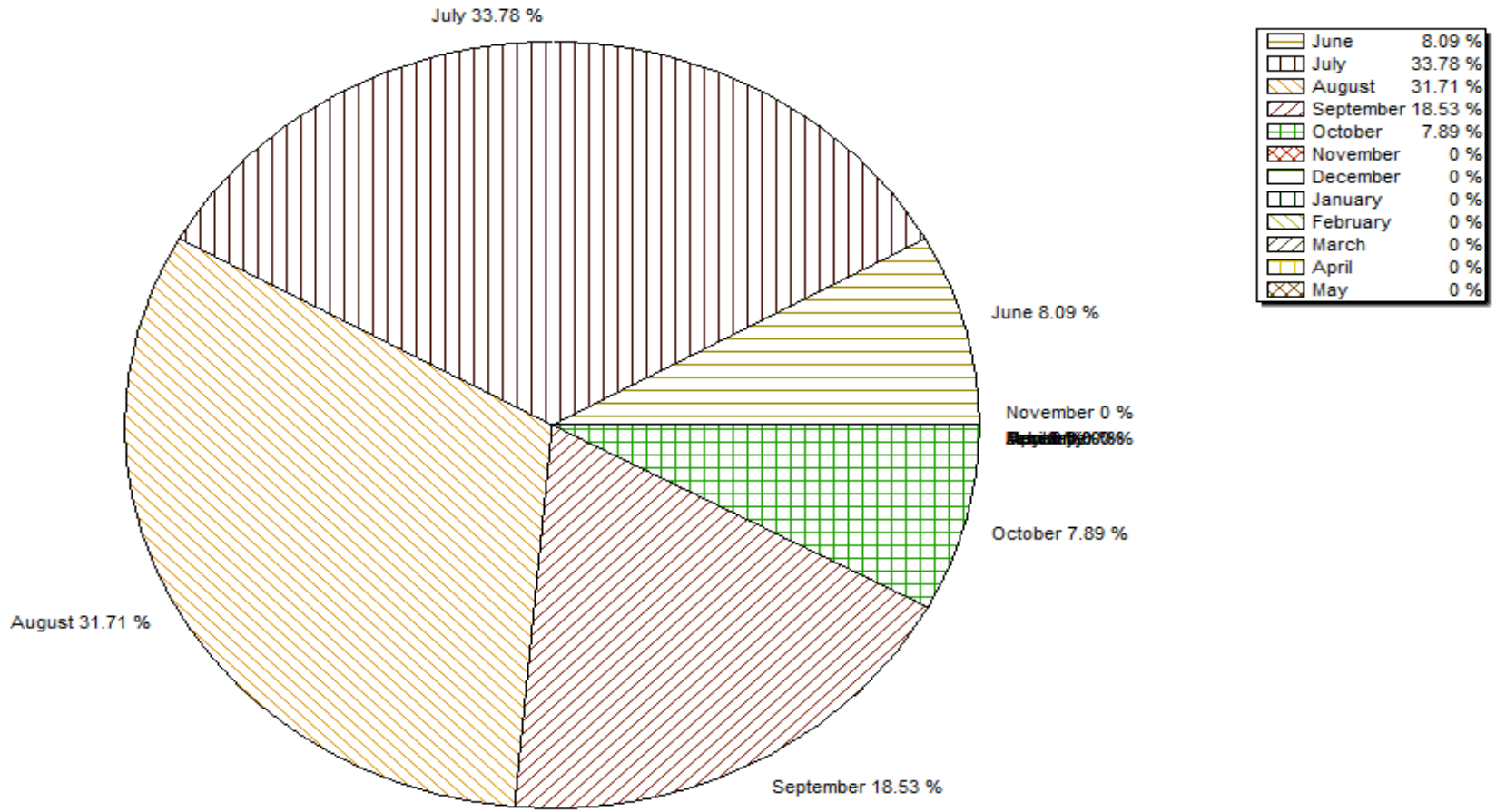


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1998-2017

Station Name : Nagothane (NAGOTHANE)
Local River : Amba

Division : Upper Krishna Divn, Pune
Sub-Division : Upper Krishna SD 3, Managaon



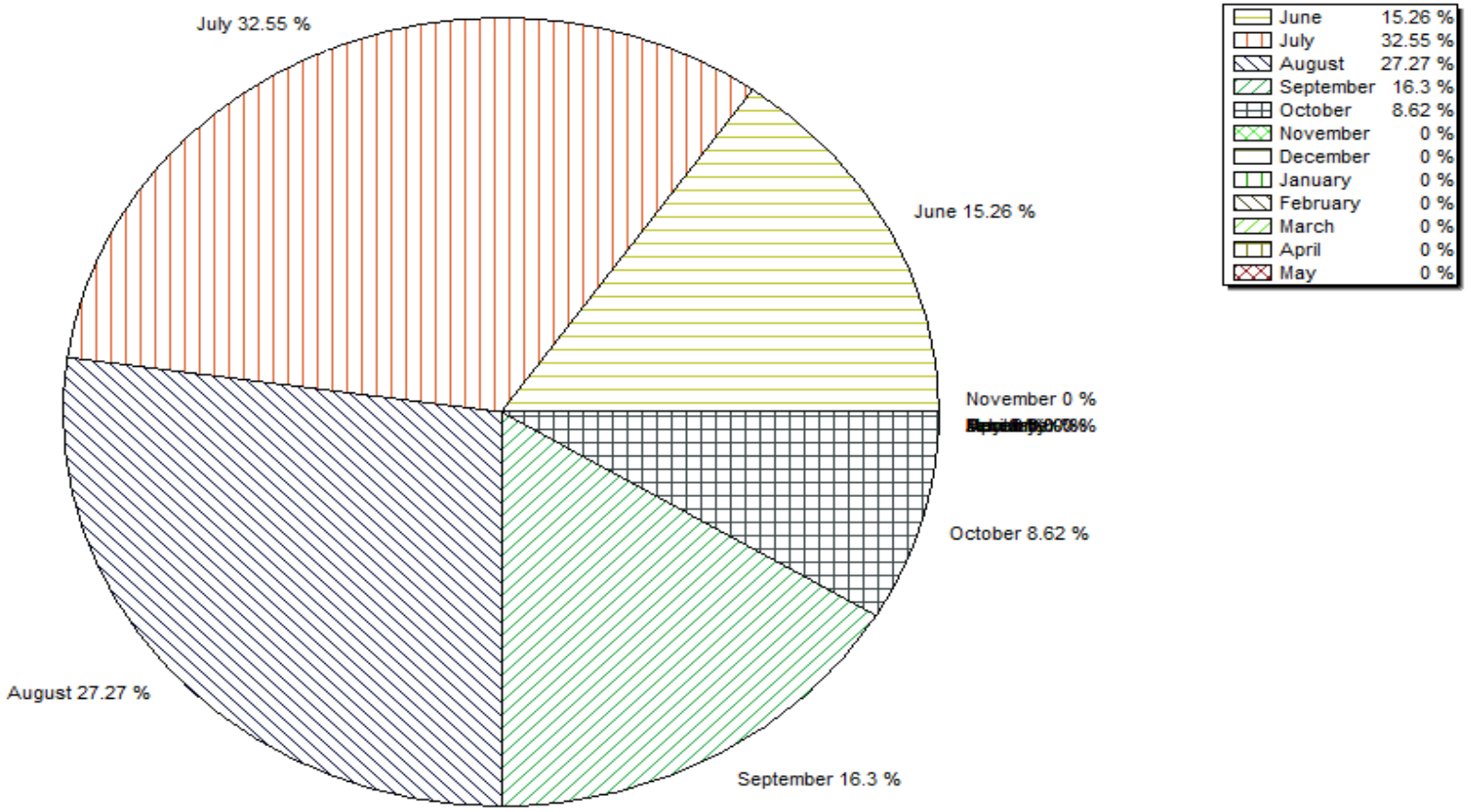
Monthly Runoff for the Year : 2017-2018

Station Name : Nagothane (NAGOTHANE)

Local River : Amba

Division : Upper Krishna Divn, Pune

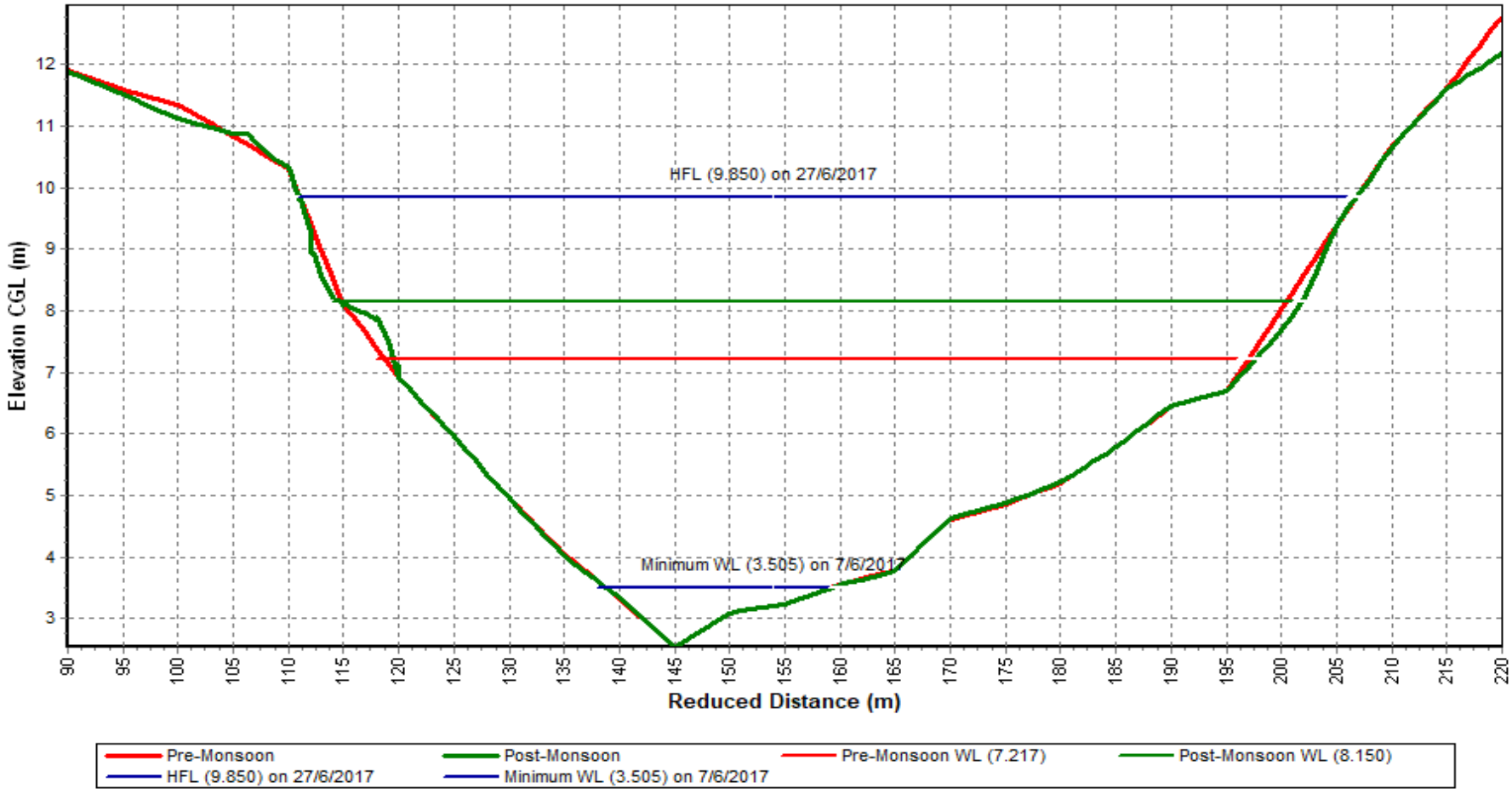
Sub-Division : Upper Krishna SD 3, Managaon



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : Nagothane (NAGOTHANE) **Division : Upper Krishna Divn, Pune**

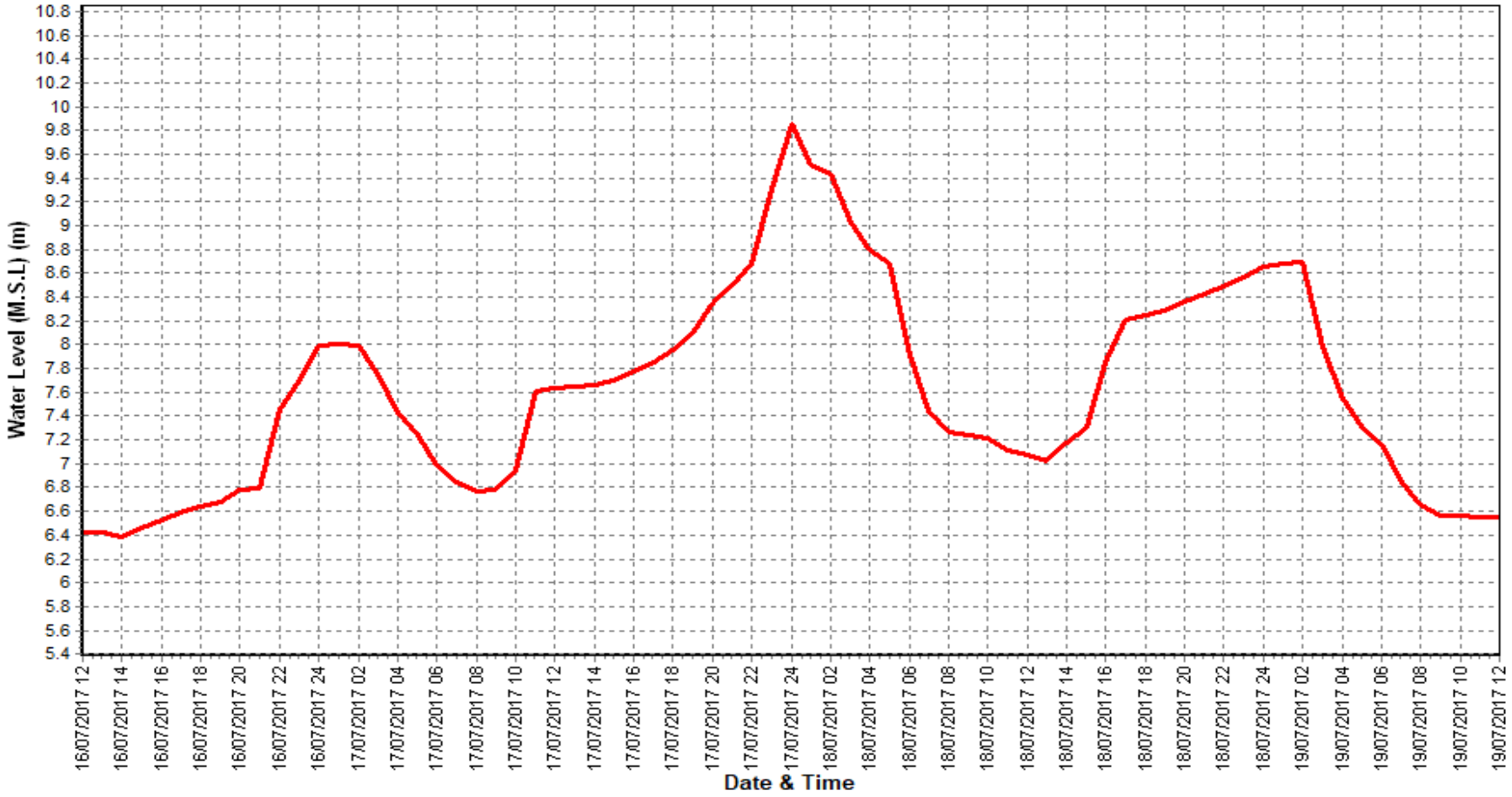
Local River : Amba **Sub-Division : Upper Krishna SD 3, Managaon**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : Nagothane (NAGOTHANE) **Division : Upper Krishna Divn, Pune**

Local River : Amba **Sub-Division : Upper Krishna SD 3, Managaon**

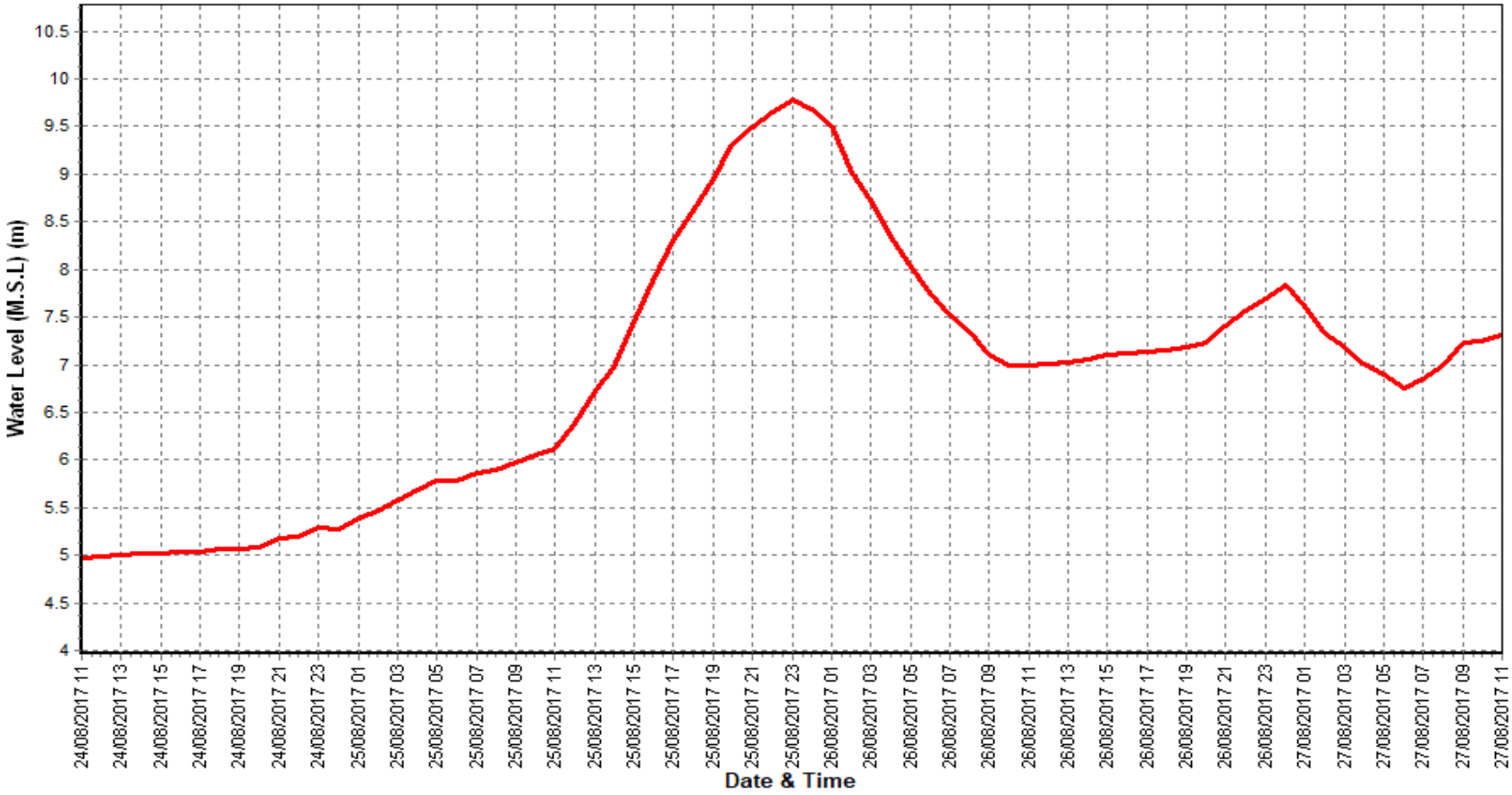


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : Nagothane (NAGOTHANE) **Division : Upper Krishna Divn, Pune**

Local River : Amba **Sub-Division : Upper Krishna SD 3, Managaon**

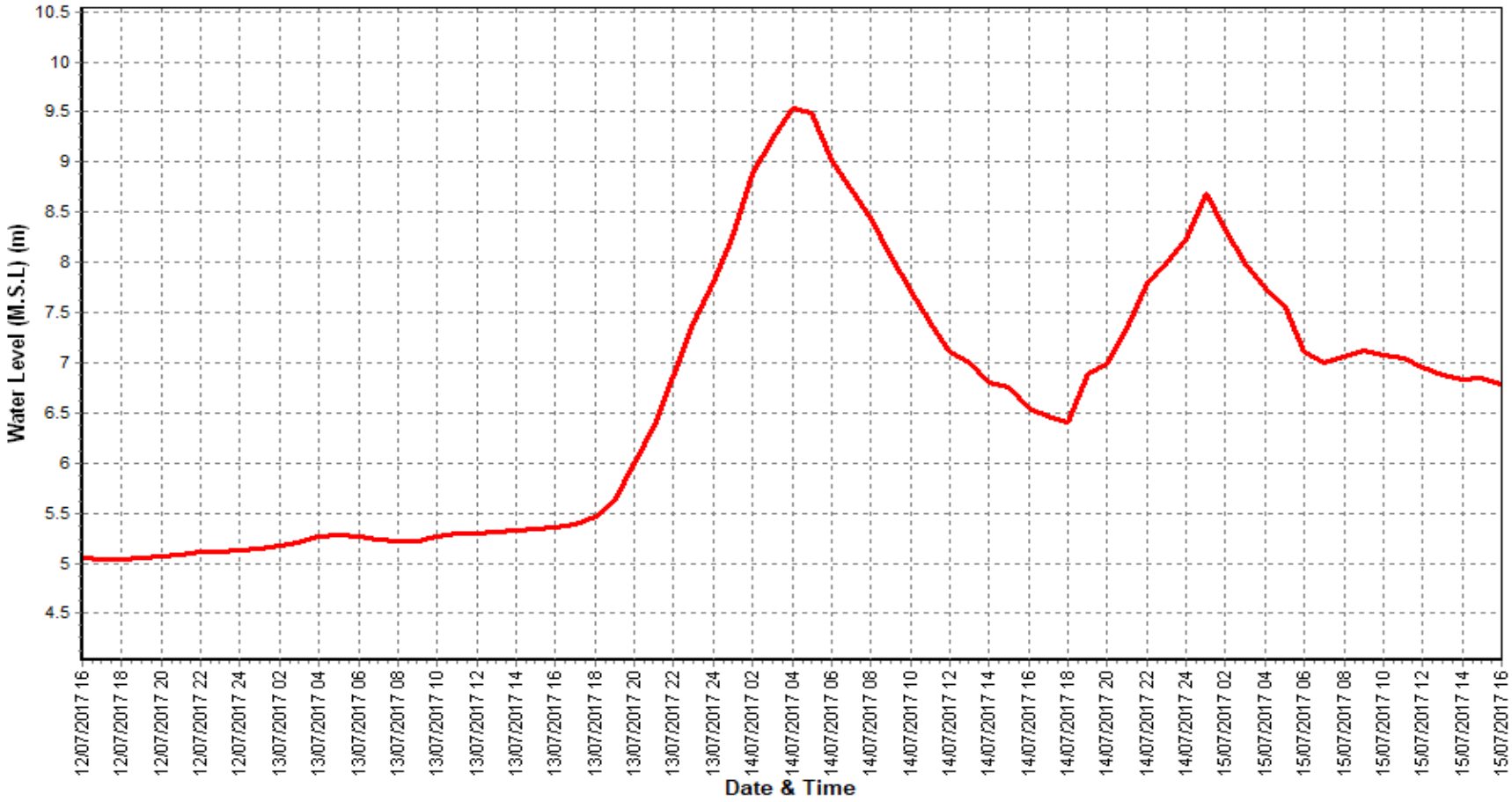


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : Nagothane (NAGOTHANE) **Division : Upper Krishna Divn, Pune**

Local River : Amba **Sub-Division : Upper Krishna SD 3, Managaon**



Time Span: 72 Hrs

HISTORY SHEET

			Water Year	:	**2017-2018**
Site	:	**Mangaon (Seasonal)**	**Code**	:	**WMA00I8**
State	:	Maharashtra	District		Raigad
Basin	:	WFR South of Tapi	Independent River	:	Savitri
Tributary	:	Kal	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Kal
Division	:	Upper Krishna Divn, Pune	Sub-Division	:	Upper Krishna SD 3, Managaon
Drainage Area	:	259 Sq. Km.	Bank	:	Left
Latitude	:	18°13'53"	Longitude	:	73°17'01"
Zero of Gauge (m)	:	3.905 (m.s.l)	01-06-1980		
		Opening Date	Closing Date		
Gauge	:	01-06-1980			
Discharge	:	27-06-1980			
Sediment	:	22-12-2014			
Water Quality	:	02-07-1993			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1981-1982	652.0	8.529	24-07-1981	0.000	4.625	05-01-1982
1982-1983	481.4	8.315	21-07-1982	0.000	4.875	21-10-1982
1983-1984	1466	9.855	15-08-1983	0.000	4.855	27-10-1983
1984-1985	975.9	9.235	18-07-1984	0.000	4.920	06-10-1984
1985-1986	1190	9.755	02-08-1985	0.000	4.855	20-10-1985
1986-1987	581.6	8.130	06-08-1986	0.000	4.645	18-02-1987
1987-1988	737.2	8.685	07-07-1987	0.000	4.710	23-01-1988
1988-1989	564.3	8.005	16-07-1988	0.000	4.590	25-01-1989
1989-1990	1340	10.255	24-07-1989	0.000	4.590	24-01-1990
1990-1991	645.0	8.725	17-07-1990	0.000	4.535	25-01-1991
1991-1992	625.0	8.880	15-07-1991	0.000	4.525	26-01-1992
1992-1993	909.8	8.643	13-08-1992	0.000	4.685	25-01-1993
1993-1994	698.1	8.030	26-07-1993	0.000	4.650	25-01-1994
1994-1995	1096	8.730	20-07-1994	0.000	4.605	17-02-1995
1995-1996	1116	8.935	03-08-1995	0.000	4.535	07-02-1996
1996-1997	760.0	8.205	22-07-1996	0.000	4.590	11-02-1997
1997-1998	1320	9.155	23-08-1997	0.000	4.625	09-01-1998
1998-1999	1047	8.620	08-07-1998	0.000	4.425	29-01-1999

Q:Observed/Computed Discharge
WL : Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1999-2000	1256	9.245	16-07-1999	0.000	4.420	27-01-2000
2000-2001	994.9	8.880	13-07-2000	0.000	4.670	20-01-2001
2001-2002	801.6	8.505	09-07-2001	0.000	4.570	10-01-2002
2002-2003	533.9	7.985	12-08-2002	0.000	4.935	24-10-2002
2003-2004	584.1	8.475	15-07-2003	0.000	4.575	26-01-2004
2004-2005	846.0	8.765	03-08-2004	0.000	4.385	23-12-2004
2005-2006	870.0	8.825	26-07-2005	0.000	4.605	24-02-2006
2006-2007	1036	8.780	03-07-2006	0.000	4.645	25-01-2007
2007-2008	2028	9.425	30-06-2007	0.000	4.580	31-10-2007
2008-2009	663.9	8.568	28-07-2008	0.000	4.565	30-10-2008
2009-2010	1119	8.820	15-07-2009	0.000	4.425	26-06-2009
2010-2011	782.4	8.595	30-08-2010	0.000	4.545	13-06-2010
2011-2012	764.3	8.725	17-07-2011	0.000	4.380	01-06-2011
2012-2013	430.8	7.725	19-07-2012	0.000	4.595	22-11-2012
2013-2014	762.2	8.405	02-08-2013	0.000	4.390	01-06-2013
2014-2015	503.7	8.085	31-07-2014	0.000	4.625	01-06-2014
2015-2016	390.2	7.685	22-06-2015	0.000	4.545	01-06-2015
2016-2017	682.1	8.545	03-08-2016	0.000	4.580	17-11-2016

Q:Observed/Computed Discharge
WL : Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : Mangaon (Seasonal) (WMA00I8) **Division : Upper Krishna Divn, Pune**

Local River : Kal **Sub-Division : Upper Krishna SD 3, Managaon**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	4.635	0.000	6.080	105.5	6.165	115.4	5.595	49.33	5.490	38.27 *	4.845	1.300 *
2	4.655	0.000	6.115	109.3 *	6.205	124.0	5.493	38.04	5.355	27.20 *	4.830	1.200 *
3	4.675	0.000	6.465	162.5	5.845	72.64	5.380	29.13 *	5.245	20.79	4.790	0.900 *
4	4.670	0.000	5.810	76.18	5.870	78.18	5.323	23.19	5.190	16.42	4.755	0.500 *
5	4.670	0.000	6.025	97.58	5.600	50.05	5.235	17.37	5.125	12.02	4.730	0.400 *
6	4.655	0.000	5.698	77.49	5.443	34.79	5.195	14.51	5.095	10.94	4.755	0.569
7	4.655	0.000	5.875	77.81	5.345	24.47	5.115	10.82	5.375	32.63	4.755	0.539
8	4.665	0.000	5.900	82.97	5.350	27.50	6.215	152.1	5.385	29.52 *	4.745	0.498
9	4.670	0.000	5.705	59.63	5.360	26.90	5.685	59.25	5.495	38.22	4.715	0.373
10	4.555	0.000	5.558	42.94	5.440	34.49	5.535	42.32 *	5.280	22.05	4.695	0.292
11	4.605	0.000	5.435	31.45	5.958	84.60	5.915	83.61	5.260	20.80	4.685	0.249
12	4.765	0.214 *	5.635	49.06	6.095	115.6	5.865	71.99	5.305	21.71	4.675	0.200 *
13	5.955	88.20 *	5.625	48.17	5.705	59.15 *	5.935	100.2	5.200	16.54	4.665	0.180 *
14	5.035	7.820 *	7.035	256.9	5.500	37.74	5.505	40.15	5.510	37.74	4.655	0.165 *
15	4.875	2.183 *	6.825	218.6	5.930	85.07 *	6.570	192.4	5.380	29.13 *	4.615	0.100 *
16	4.795	0.789	6.520	175.2	5.625	49.71	5.585	47.73	5.330	22.68	4.585	0.080 *
17	5.050	8.029	7.265	332.1	5.640	50.76	5.485	37.83 *	5.220	16.22	4.555	0.000
18	4.995	6.134 *	7.650	398.0	5.435	31.75	5.530	36.31	5.150	12.72	4.550	0.000
19	4.985	4.702	7.395	330.9	5.395	29.02	6.695	200.6	5.100	10.93 *	4.545	0.000
20	5.265	20.75 *	7.295	302.8	5.755	64.56 *	6.955	239.2	5.065	8.299	4.540	0.000
21	5.385	29.52 *	7.705	458.4	5.975	90.57	6.345	139.2	4.995	6.980	4.585	0.000
22	5.225	18.12 *	6.990	243.4	5.735	62.95	6.515	169.2	4.945	4.000 *	4.575	0.000
23	5.240	19.09 *	6.305	132.8	5.505	39.53	5.865	84.37	4.980	6.087	4.570	0.000
24	5.405	31.11 *	6.080	111.0	5.450	35.16	5.585	47.02 *	4.965	4.536	4.560	0.000
25	5.455	35.25 *	5.895	85.35	5.615	45.63	5.525	43.77	4.970	4.270	4.550	0.000
26	6.545	175.6 *	5.700	61.74	6.625	194.9	5.350	26.21	4.940	3.050	4.540	0.000
27	7.185	298.3 *	5.545	45.64	6.545	175.6 *	5.465	38.59	4.925	2.656	4.555	0.000
28	6.385	149.4 *	5.920	86.05	6.940	252.0	5.365	30.93	4.885	2.323	4.575	0.000
29	7.255	313.4 *	5.925	85.19	7.650	391.9	5.525	40.00	4.895	2.400 *	4.565	0.000
30	7.605	393.6 *	6.055	106.9	6.790	199.1	5.735	62.37 *	4.825	1.327	4.575	0.000
31			5.805	73.28	5.885	76.93			4.855	1.312		
Ten-Daily Mean												
I Ten-Daily	4.650	0.000	5.923	89.19	5.662	58.84	5.477	43.61	5.304	24.81	4.761	0.657
II Ten-Daily	5.033	13.88	6.668	214.3	5.704	60.79	6.004	105.0	5.252	19.68	4.607	0.097
III Ten-Daily	6.169	146.3	6.175	135.4	6.247	142.2	5.728	68.16	4.925	3.540	4.565	0.000
Monthly												
Min.	4.555	0.000	5.435	31.45	5.345	24.47	5.115	10.82	4.825	1.312	4.540	0.000
Max.	7.605	393.6	7.705	458.4	7.650	391.9	6.955	239.2	5.510	38.27	4.845	1.300
Mean	5.284	53.41	6.253	146	5.883	89.05	5.736	72.26	5.153	15.61	4.644	0.251

Annual Runoff in MCM = 998 Annual Runoff in mm = 3852

Peak Observed Discharge = 458.4 cumecs on 21/07/2017 Corres. Water Level :7.705 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :4.635 m

Q Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

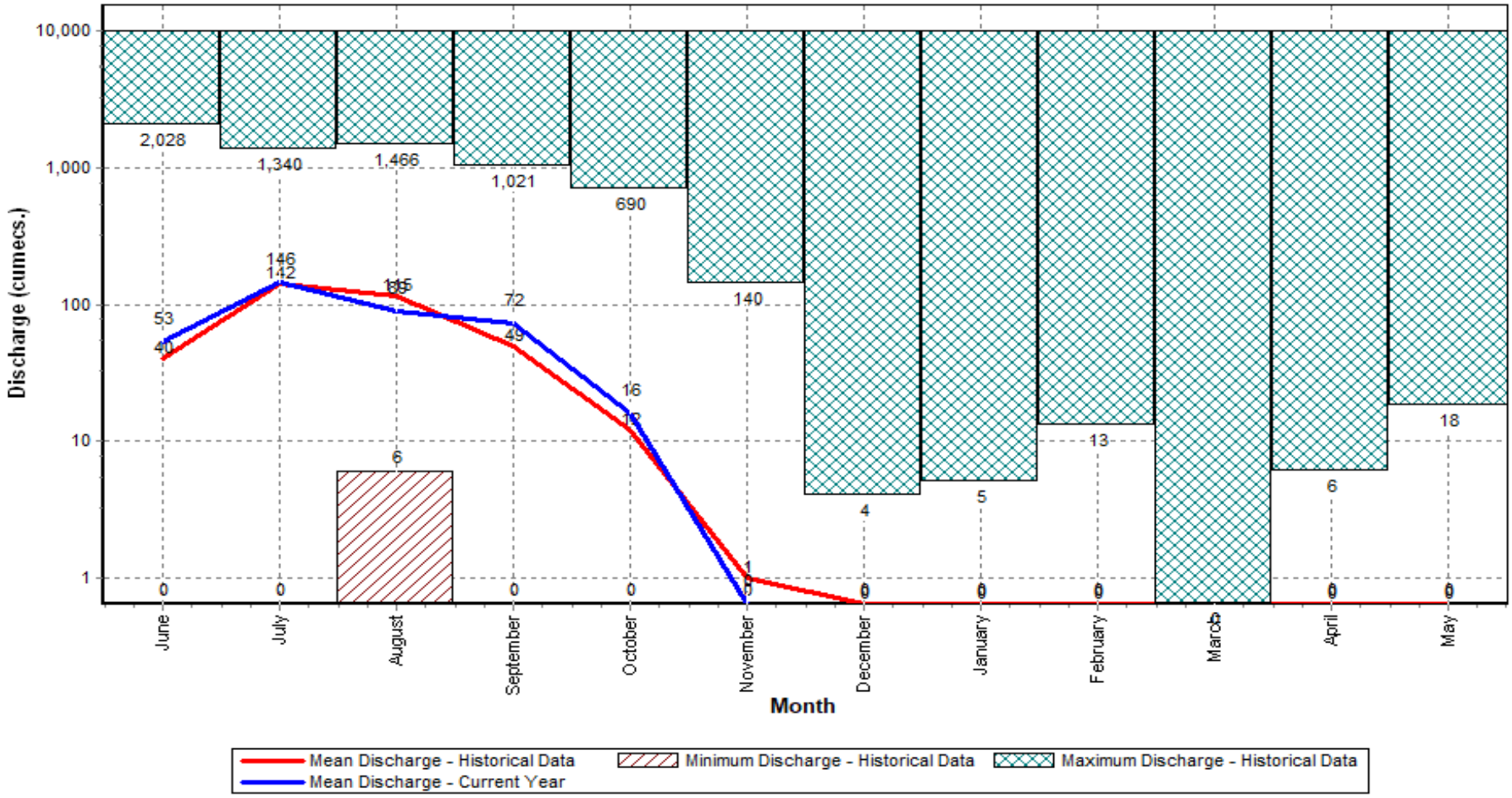
*:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : Mangaon (Seasonal) (WMA00I8) **Data considered : 1981-2018** **Division : Upper Krishna Divn, Pune**

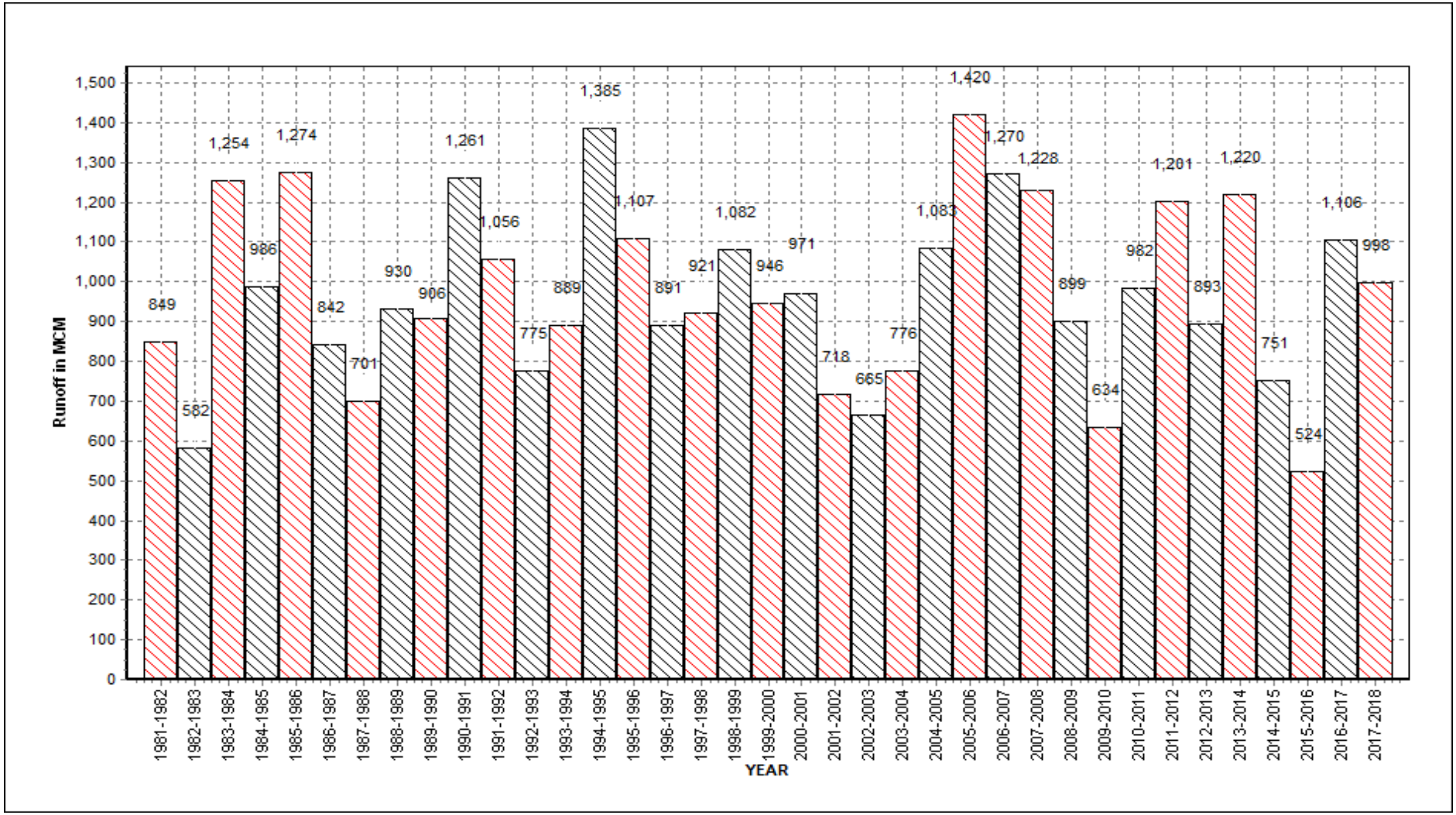
Local River : Kal **Sub-Division : Upper Krishna SD 3, Managaon**



Annual Runoff Values for the period: 1981 - 2018

Station Name : Mangaon (Seasonal) (WMA00I8) **Division : Upper Krishna Divn, Pune**

Local River : Kal **Sub-Division : Upper Krishna SD 3, Managaon**

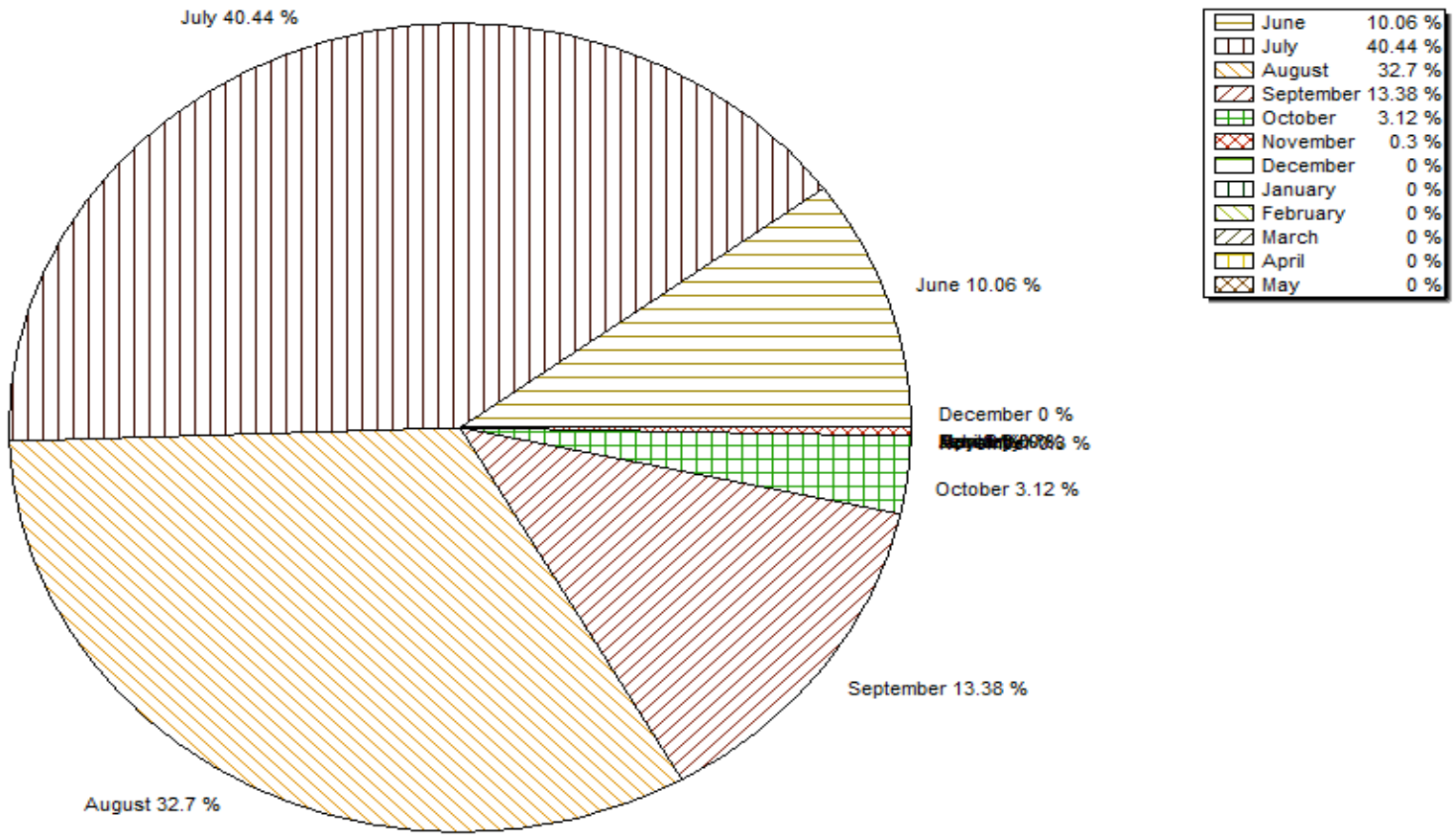


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1981-2017

Station Name : Mangaon (Seasonal) (WMA00I8) **Division : Upper Krishna Divn, Pune**

Local River : Kal **Sub-Division : Upper Krishna SD 3, Managaon**



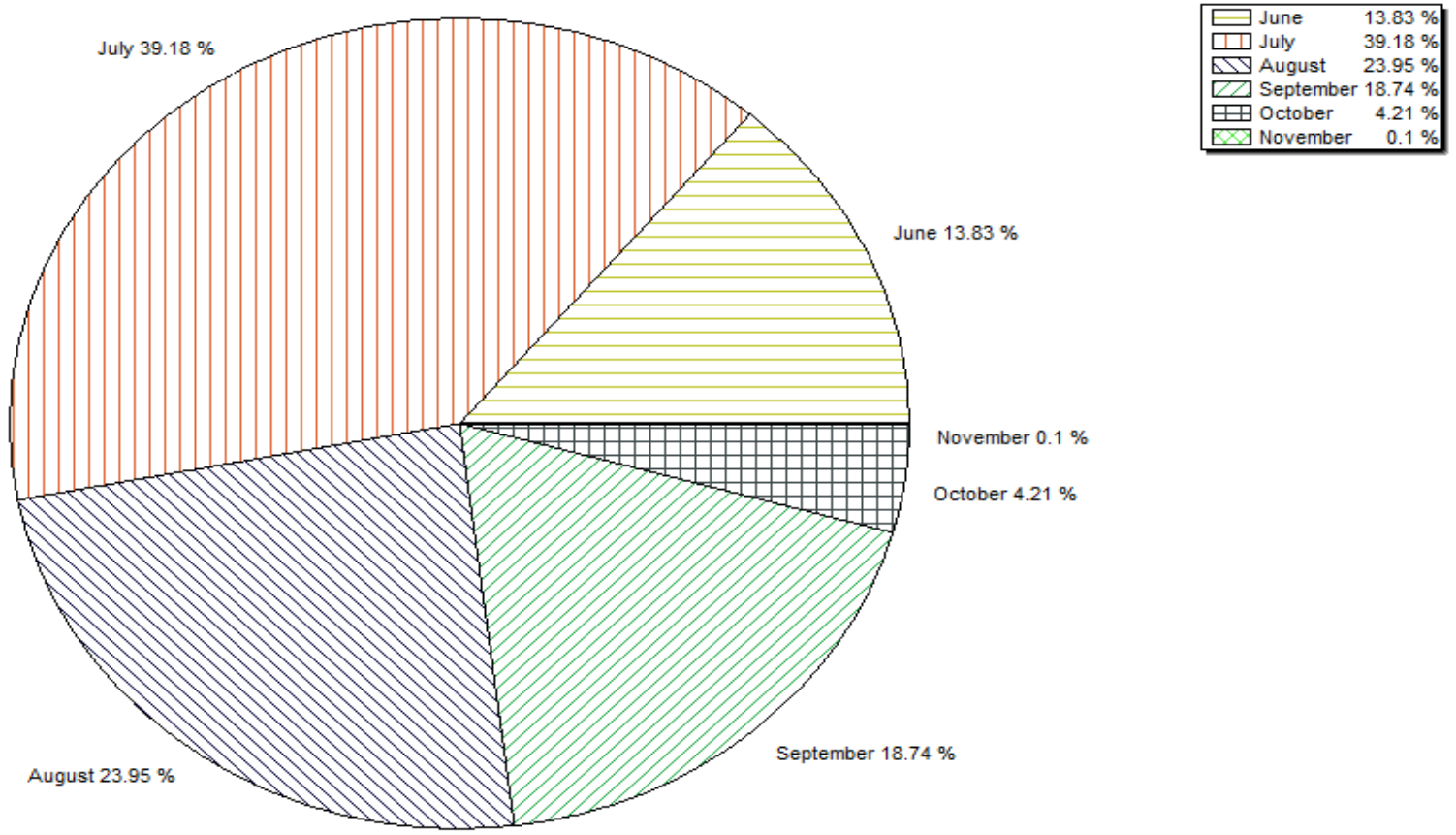
Monthly Runoff for the Year : 2017-2018

Station Name : Mangaon (Seasonal) (WMA00I8)

Division : Upper Krishna Divn, Pune

Local River : Kal

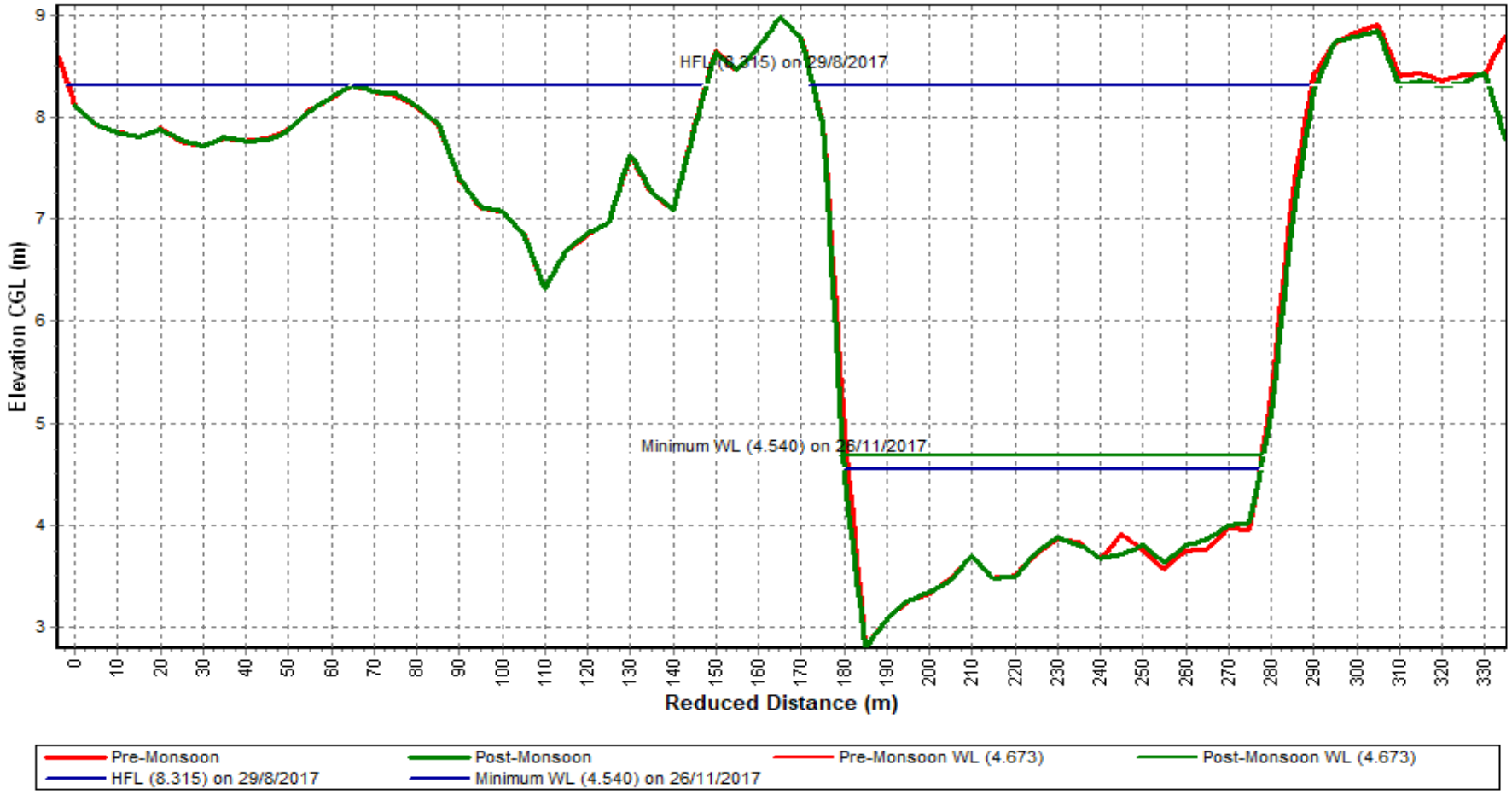
Sub-Division : Upper Krishna SD 3, Managaon



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : Mangaon (Seasonal) (WMA00I8) **Division : Upper Krishna Divn, Pune**

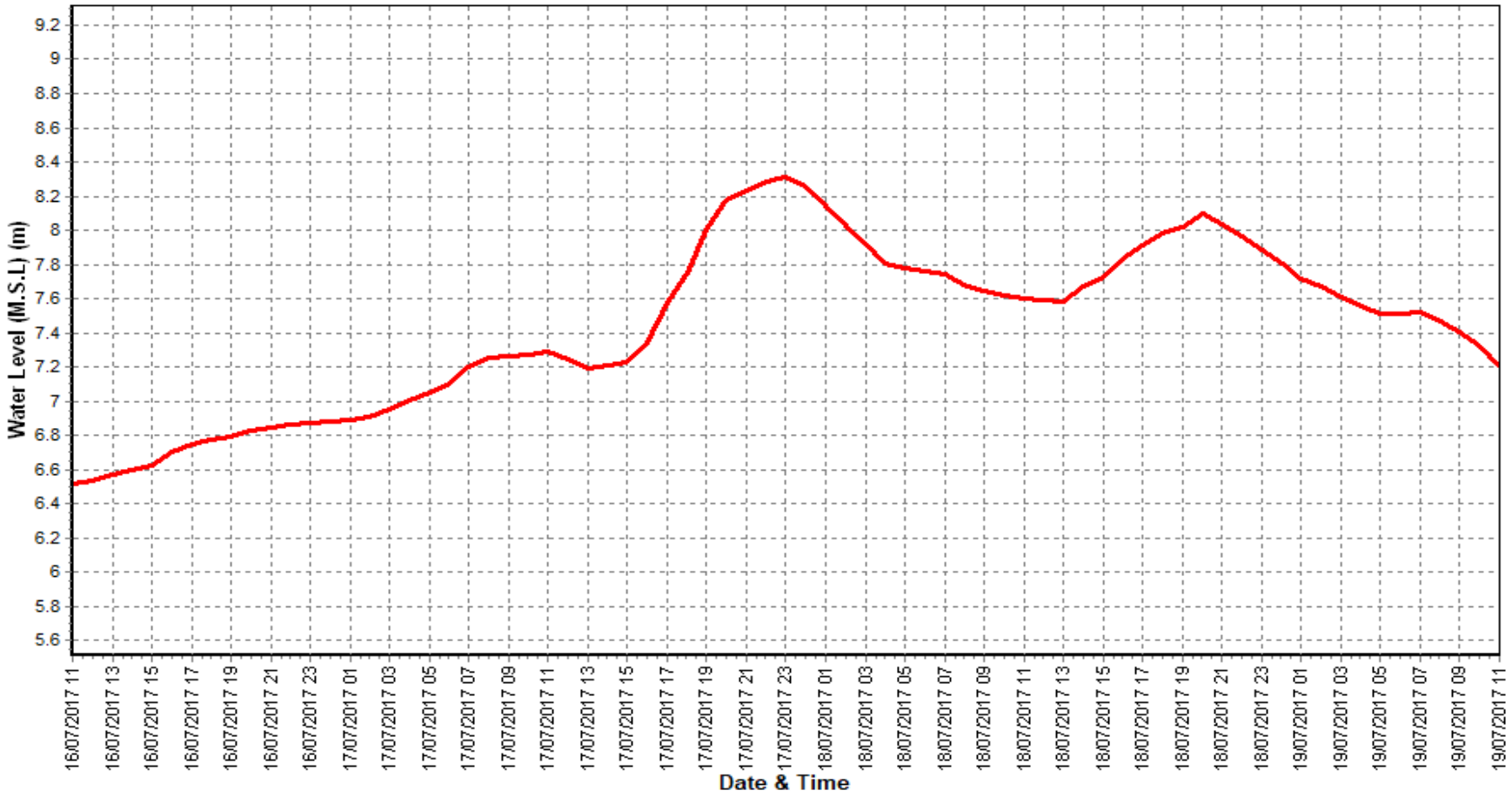
Local River : Kal **Sub-Division : Upper Krishna SD 3, Managaon**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : Mangaon (Seasonal) (WMA00I8) **Division : Upper Krishna Divn, Pune**

Local River : Kal **Sub-Division : Upper Krishna SD 3, Managaon**

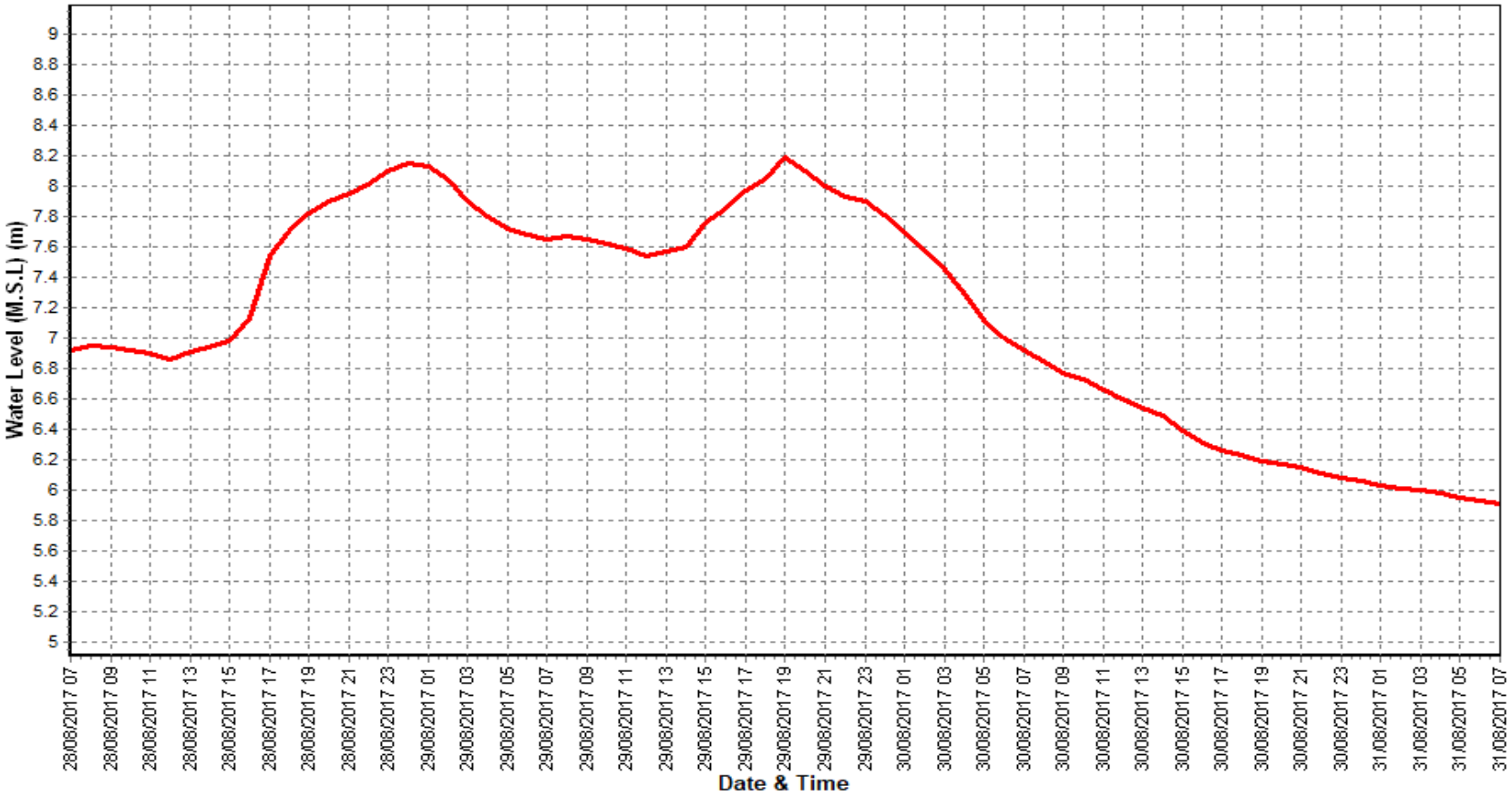


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : Mangaon (Seasonal) (WMA00I8) **Division : Upper Krishna Divn, Pune**

Local River : Kal **Sub-Division : Upper Krishna SD 3, Managaon**

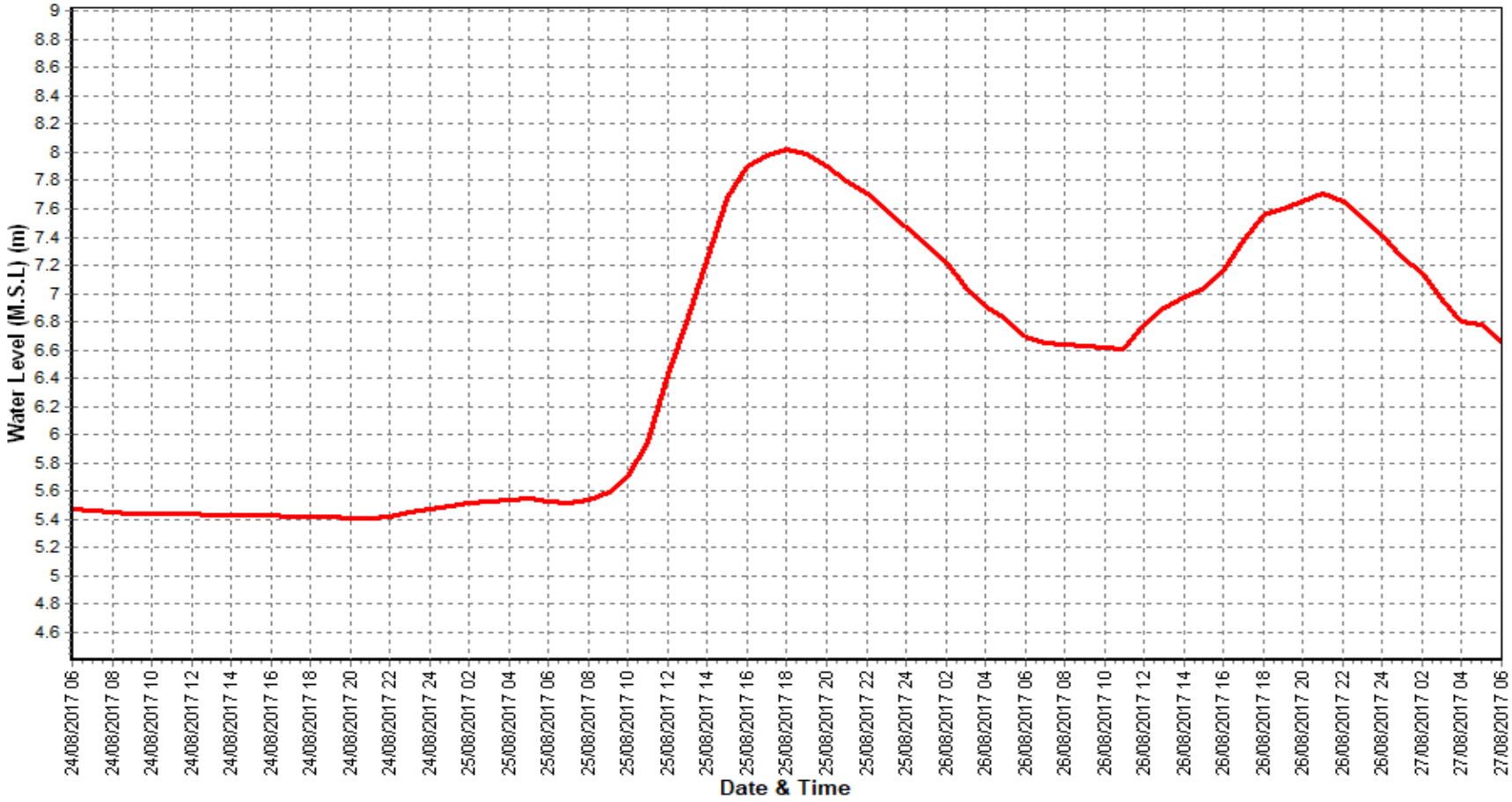


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : Mangaon (Seasonal) (WMA00I8) **Division : Upper Krishna Divn, Pune**

Local River : Kal **Sub-Division : Upper Krishna SD 3, Managaon**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-2018

Site	:	**Anjanari**	**Code**	:	**WL000M3**
State	:	Maharashtra	District		Ratnagiri
Basin	:	WFR South of Tapi	Independent River	:	Kajvi
Tributary	:	-	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Kajvi
Division	:	Upper Krishna Divn, Pune	Sub-Division	:	South Western Rivers SD 4,Goa
Drainage Area	:	315 Sq. Km.	Bank	:	Left
Latitude	:	16°56'04"	Longitude	:	73°30'50"
Zero of Gauge (m)	:	11.000 (m.s.l)	26-05-1985		
		Opening Date	Closing Date		
Gauge	:	01-06-1987			
Discharge	:	08-08-1991			
Sediment	:				
Water Quality	:				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1992-1993	522.4	16.690	19-07-1992	0.000	11.700	24-11-1992
1993-1994	276.4	16.660	03-08-1993	0.217	11.665	26-12-1993
1994-1995	470.0	16.800	30-06-1994	0.000	11.610	22-11-1994
1995-1996	290.1	14.930	02-09-1995	0.000	12.280	24-01-1996
1996-1997	315.0	15.140	04-10-1996	0.000	11.480	21-11-1996
1997-1998	412.3	14.780	31-07-1997	0.000	11.530	25-11-1997
1998-1999	516.0	13.900	01-07-1998	0.000	11.620	15-06-1998
1999-2000	948.0	17.713	16-07-1999	0.000	11.440	01-05-2000
2000-2001	647.2	15.715	28-08-2000	0.000	11.000	05-05-2001
2001-2002	787.1	16.985	08-07-2001	0.000	11.000	26-05-2002
2002-2003	534.1	15.580	09-08-2002	0.000	11.440	28-01-2003
2003-2004	241.5	14.910	05-08-2003	0.000	Dry	10-06-2003
2004-2005	317.0	15.320	12-08-2004	0.000	11.455	04-05-2005
2005-2006	839.0	18.245	26-07-2005	0.000	11.000	13-06-2005
2006-2007	644.5	16.980	11-08-2006	0.000	11.470	02-03-2007
2007-2008	423.7	15.490	29-06-2007	0.000	11.700	27-01-2008
2008-2009	701.5	17.200	10-08-2008	0.000	11.185	25-01-2009
2009-2010	661.4	17.000	01-10-2009	0.000	11.605	12-02-2010
2010-2011	1008	18.650	24-07-2010	0.000	11.610	02-06-2010

Q:Observed/Computed Discharge
WL : Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2011-2012	627.7	16.637	17-07-2011	0.000	Dry	01-06-2011
2012-2013	337.3	15.130	04-07-2012	0.000	Dry	01-06-2012
2013-2014	1542	18.810	03-07-2013	0.000	Dry	01-06-2013
2014-2015	635.4	15.670	31-08-2014	0.000	11.700	01-06-2014
2015-2016	398.5	14.800	21-06-2015	0.000	Dry	01-06-2015
2016-2017	663.4	15.410	24-09-2016	0.000	11.610	15-01-2017

Q:Observed/Computed Discharge
WL : Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : Anjanari (WL000M3) **Division : Upper Krishna Divn, Pune**

Local River : Kajvi **Sub-Division : South Western Rivers SD 4,Goa**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	11.510	0.000	13.240	64.95 *	13.085	85.85	13.360	98.85	13.150	56.36 *	12.250	0.000
2	11.490	0.000	13.380	79.76 *	12.980	42.03 #	13.325	85.35	13.070	49.31 *	12.230	0.000
3	11.480	0.000	13.080	50.16 *	12.900	36.12 #	12.960	43.42	13.390	75.70	12.220	0.000
4	11.460	0.000	13.090	51.02 *	13.200	60.87	12.825	34.18	13.025	44.79	12.220	0.000
5	11.460	0.000	13.000	43.59 *	13.200	64.19	12.735	24.01	12.875	36.33	12.210	0.000
6	11.450	0.000	12.950	39.75 #	13.205	64.06	12.635	21.43	12.755	27.20	12.200	0.000
7	11.440	0.000	12.820	30.73 #	13.095	43.35	12.580	17.21	12.688	27.17	12.190	0.000
8	11.460	0.000	12.725	24.97 #	13.105	48.32	12.965	41.51	12.890	35.42 *	12.190	0.000
9	11.490	0.000	12.930	38.27 #	13.005	41.10	12.755	29.40	13.130	48.89	12.170	0.000
10	12.320	0.000	13.015	44.78 #	13.045	42.60	12.665	22.83	12.945	36.82	12.140	0.000
11	12.680	0.000	12.875	34.38 #	13.165	54.13	12.770	28.39	12.990	40.86	12.110	0.000
12	12.620	0.000	12.865	33.70 #	13.505	95.05	12.660	22.36	12.890	34.66	12.060	0.000
13	13.270	0.000	12.730	25.26 #	13.300	76.40	13.095	49.92	13.040	38.43	12.020	0.000
14	12.740	0.000	14.840	352.2 #	13.100	44.75	12.745	27.03	13.740	126.3 *	11.990	0.000
15	12.880	0.000	13.785	133.0 #	13.045	39.89	12.650	20.69	13.210	62.01 *	11.950	0.000
16	12.880	0.000	13.740	126.3 #	13.175	63.78	12.780	28.22 #	13.140	47.92	11.920	0.000
17	12.720	0.000	13.230	63.96 #	13.245	68.82	12.800	32.63	12.935	35.23	11.880	0.000
18	12.520	0.000	14.435	253.4 #	13.140	50.84	13.530	96.65	12.800	26.95	11.850	0.000
19	12.370	0.000	14.975	389.3 #	13.000	41.45	14.610	293.8 *	12.700	23.58 *	11.820	0.000
20	12.470	0.000	15.660	615.8	13.045	41.04	14.600	286.8	12.598	18.60	11.780	0.000
21	12.600	0.000	14.240	212.6 #	13.020	44.92	14.050	173.1	12.528	16.17	11.740	0.000
22	12.410	0.000	13.760	129.3 #	12.950	38.73	13.680	107.6	12.510	16.61	11.720	0.000
23	12.430	0.000	13.280	69.00 #	12.870	28.69	13.395	80.13	12.450	18.59	11.700	0.000
24	12.690	0.000	13.200	77.08	12.940	44.08	13.190	60.09 *	12.400	14.69	11.680	0.000
25	13.360	0.000	13.425	84.91 #	13.015	44.21	13.235	62.39	12.370	11.86	11.660	0.000
26	14.720	0.000	13.145	55.90 #	13.710	135.2	13.045	53.97	12.350	8.019	11.640	0.000
27	14.570	0.000	13.015	44.78 #	13.910	194.0	12.958	39.78	12.420	16.81	11.630	0.000
28	13.710	0.000	13.040	46.80 #	14.150	195.1 *	12.845	35.93	12.320	9.328	11.610	0.000
29	13.920	0.000	13.385	80.33 #	14.675	308.3	13.140	53.55	12.300	6.639 *	11.600	0.000
30	14.050	0.000	13.140	55.44 #	14.260	207.7	13.400	82.03 *	12.280	5.338	11.590	0.000
31			13.000	43.59 #	13.685	124.3			12.260	3.934		
Ten-Daily Mean												
I Ten-Daily	11.556	0.000	13.023	46.80	13.082	52.85	12.881	41.82	12.992	43.80	12.202	0.000
II Ten-Daily	12.715	0.000	13.913	202.7	13.172	57.61	13.224	88.65	13.004	45.45	11.938	0.000
III Ten-Daily	13.446	0.000	13.330	81.78	13.562	124.1	13.294	74.85	12.381	11.63	11.657	0.000
Monthly												
Min.	11.440	0.000	12.725	24.97	12.870	28.69	12.580	17.21	12.260	3.934	11.590	0.000
Max.	14.720	0.000	15.660	615.8	14.675	308.3	14.610	293.8	13.740	126.3	12.250	0.000
Mean	12.572	0	13.419	109.5	13.281	79.67	13.133	68.44	12.779	32.92	11.932	0

Annual Runoff in MCM = 772 Annual Runoff in mm = 2452

Peak Observed Discharge = 615.8 cumecs on 20/07/2017 Corres. Water Level :15.66 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :11.51 m

Q: Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : Anjanari (WL000M3) **Division : Upper Krishna Divn, Pune**

Local River : Kajvi **Sub-Division : South Western Rivers SD 4,Goa**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	11.575	0.000	11.460	0.000	11.540	0.000	11.520	0.000	11.500	0.000		0.000
2	11.570	0.000	11.460	0.000	11.540	0.000	11.520	0.000	11.500	0.000		0.000
3	11.560	0.000	11.460	0.000	11.540	0.000	11.520	0.000	11.500	0.000		0.000
4	11.560	0.000	11.460	0.000	11.540	0.000	11.520	0.000	11.500	0.000		0.000
5	11.550	0.000	11.460	0.000	11.540	0.000	11.520	0.000	11.500	0.000		0.000
6	11.540	0.000	11.460	0.000	11.540	0.000	11.520	0.000	11.490	0.000		0.000
7	11.540	0.000	11.460	0.000	11.540	0.000	11.520	0.000	11.490	0.000		0.000
8	11.520	0.000	11.460	0.000	11.540	0.000	11.520	0.000	11.490	0.000		0.000
9	11.520	0.000	11.460	0.000	11.540	0.000	11.520	0.000	11.490	0.000		0.000
10	11.510	0.000	11.460	0.000	11.540	0.000	11.520	0.000	11.490	0.000		0.000
11	11.500	0.000	11.440	0.000	11.540	0.000	11.520	0.000	11.490	0.000		0.000
12	11.490	0.000	11.440	0.000	11.540	0.000	11.520	0.000	11.480	0.000		0.000
13	11.490	0.000	11.460	0.000	11.540	0.000	11.520	0.000	11.480	0.000		0.000
14	11.480	0.000	11.490	0.000	11.540	0.000	11.520	0.000	11.480	0.000		0.000
15	11.480	0.000	11.500	0.000	11.540	0.000	11.520	0.000	11.480	0.000		0.000
16	11.480	0.000	11.510	0.000	11.540	0.000	11.520	0.000	11.480	0.000		0.000
17	11.480	0.000	11.520	0.000	11.540	0.000	11.510	0.000	11.480	0.000		0.000
18	11.480	0.000	11.540	0.000	11.540	0.000	11.510	0.000	11.480	0.000		0.000
19	11.480	0.000	11.550	0.000	11.540	0.000	11.510	0.000	11.470	0.000		0.000
20	11.470	0.000	11.550	0.000	11.540	0.000	11.510	0.000	11.470	0.000		0.000
21	11.470	0.000	11.540	0.000	11.540	0.000	11.510	0.000	11.470	0.000		0.000
22	11.470	0.000	11.540	0.000	11.530	0.000	11.500	0.000	11.470	0.000		0.000
23	11.470	0.000	11.540	0.000	11.530	0.000	11.500	0.000	11.470	0.000		0.000
24	11.460	0.000	11.540	0.000	11.530	0.000	11.500	0.000	11.470	0.000		0.000
25	11.460	0.000	11.540	0.000	11.530	0.000	11.500	0.000	11.460	0.000		0.000
26	11.460	0.000	11.540	0.000	11.530	0.000	11.500	0.000	11.460	0.000		0.000
27	11.460	0.000	11.540	0.000	11.530	0.000	11.500	0.000	11.460	0.000		0.000
28	11.460	0.000	11.540	0.000	11.530	0.000	11.500	0.000	11.460	0.000		0.000
29	11.460	0.000	11.550	0.000			11.500	0.000	11.460	0.000		0.000
30	11.460	0.000	11.550	0.000			11.500	0.000	11.460	0.000		0.000
31	11.460	0.000	11.540	0.000			11.500	0.000				0.000
Ten-Daily Mean												
I Ten-Daily	11.545	0.000	11.460	0.000	11.540	0.000	11.520	0.000	11.495	0.000		0.000
II Ten-Daily	11.483	0.000	11.500	0.000	11.540	0.000	11.516	0.000	11.479	0.000		0.000
III Ten-Daily	11.463	0.000	11.542	0.000	11.531	0.000	11.501	0.000	11.464	0.000		0.000
Monthly												
Min.	11.460	0.000	11.440	0.000	11.530	0.000	11.500	0.000	11.460	0.000		0.000
Max.	11.575	0.000	11.550	0.000	11.540	0.000	11.520	0.000	11.500	0.000		0.000
Mean	11.496	0	11.502	0	11.537	0	11.512	0	11.479	0		0

Peak Computed Discharge = 293.8 cumecs on 19/09/2017 **Corres. Water Level :14.61 m**

Lowest Computed Discharge = 6.639 cumecs on 29/10/2017 **Corres. Water Level :12.3 m**

Q: Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

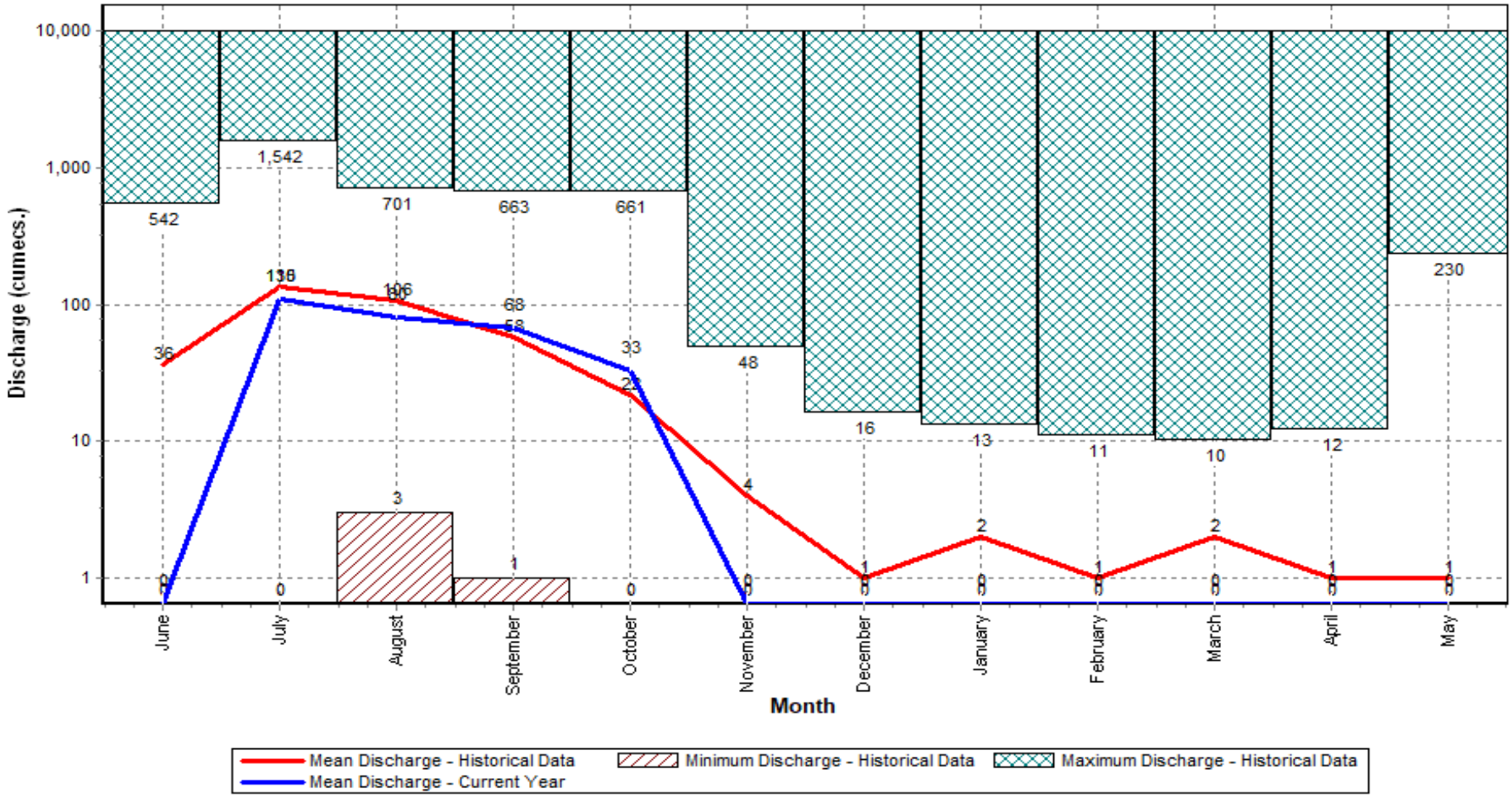
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : Anjanari (WL000M3) | **Data considered : 1992-2018** | **Division : Upper Krishna Divn, Pune**

Local River : Kajvi | **Sub-Division : South Western Rivers SD 4,Goa**


Discharge (cumecs.)
10,000
1,000
100
10
1
542
1,542
701
663
661
48
16
13
11
10
12
230
36
138
106
68
58
33
23
4
1
2
1
2
1
1
3
1
0
0
0

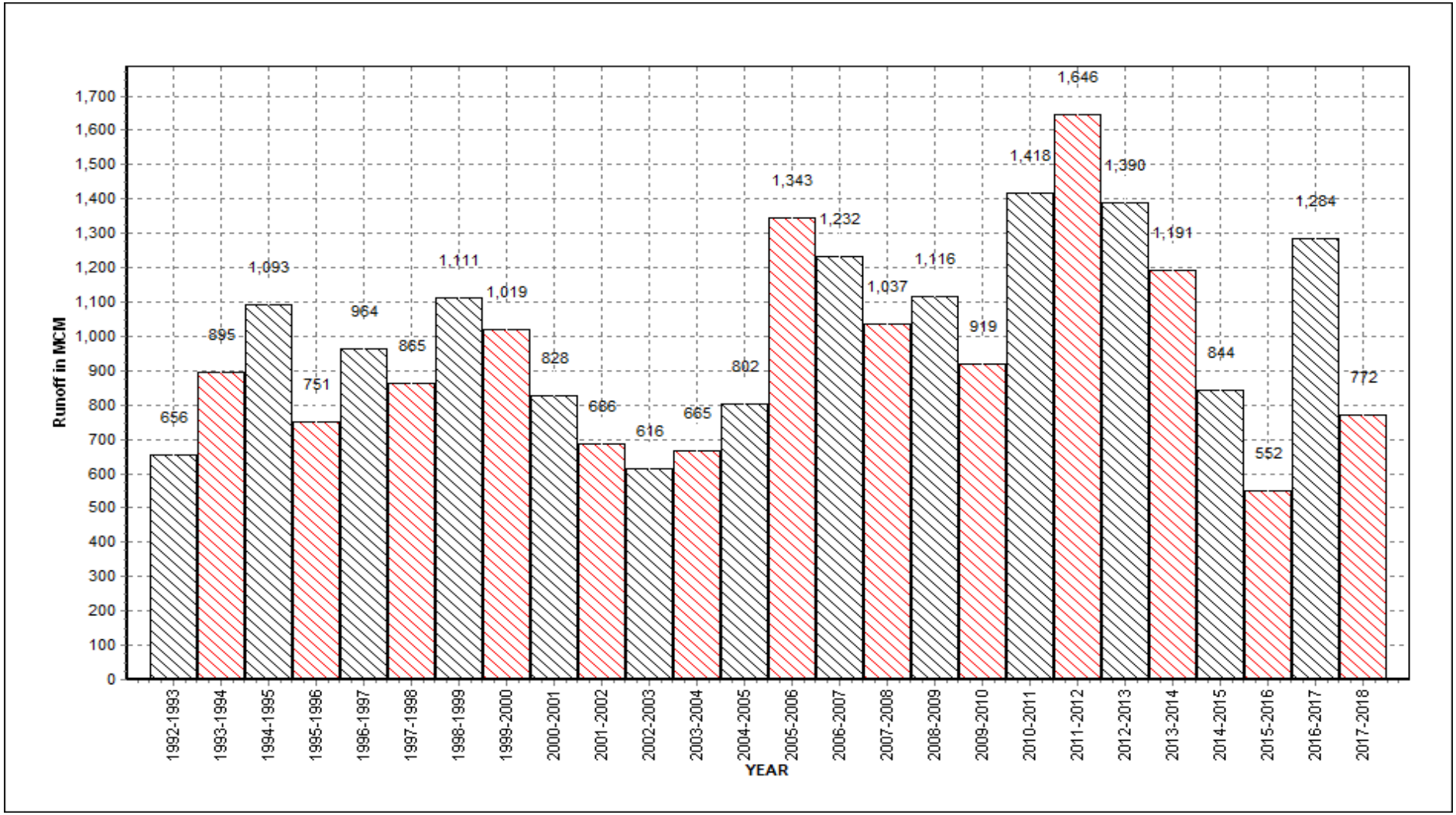
Annual Runoff Values for the period: 1992 - 2018

Station Name : Anjanari (WL000M3)

Local River : Kajvi

Division : Upper Krishna Divn, Pune

Sub-Division : South Western Rivers SD 4,Goa



Note: Missing values have not been considered while arriving at Annual Runoff

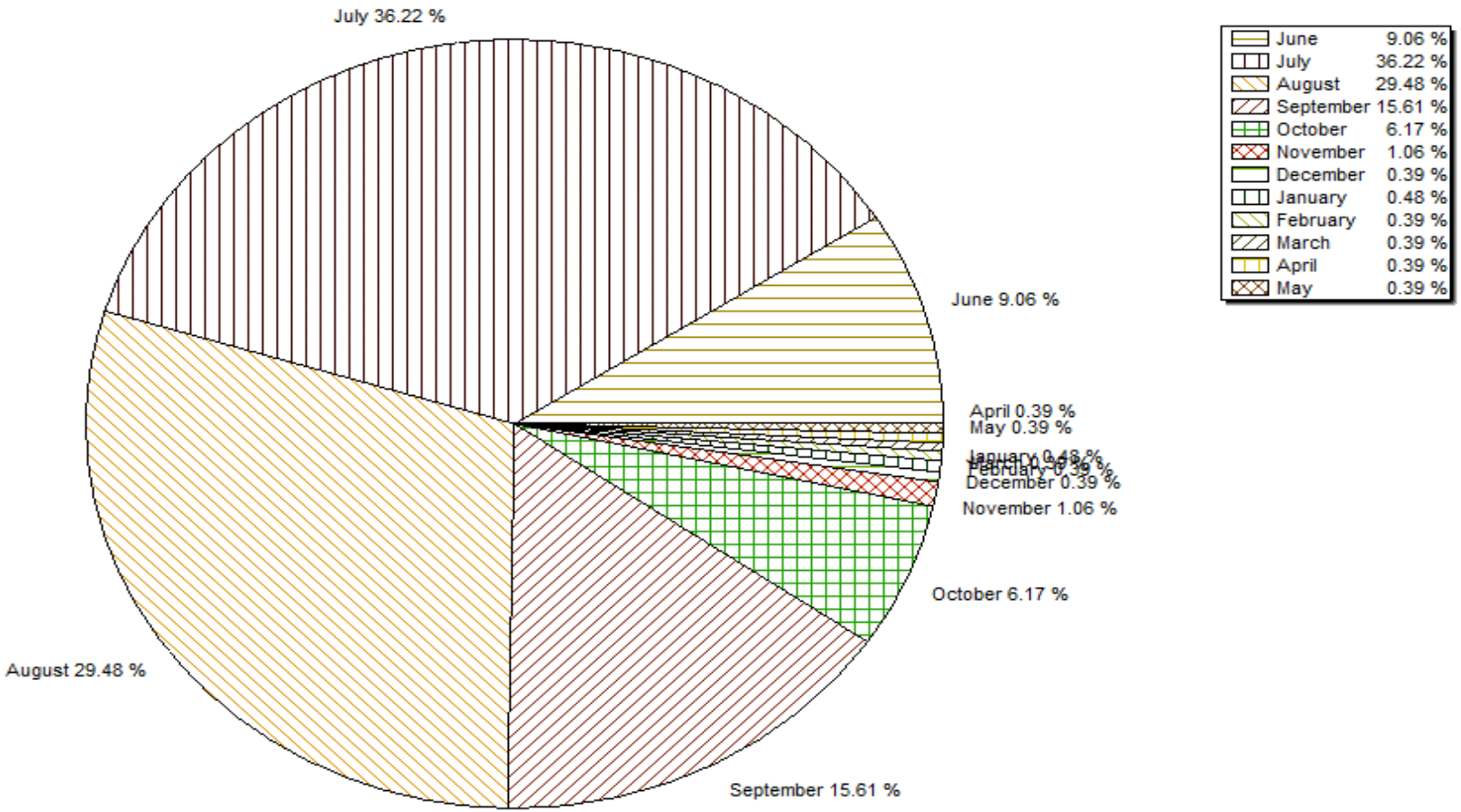
Monthly Average Runoff based on period : 1992-2017

Station Name : Anjanari (WL000M3)

Local River : Kajvi

Division : Upper Krishna Divn, Pune

Sub-Division : South Western Rivers SD 4,Goa



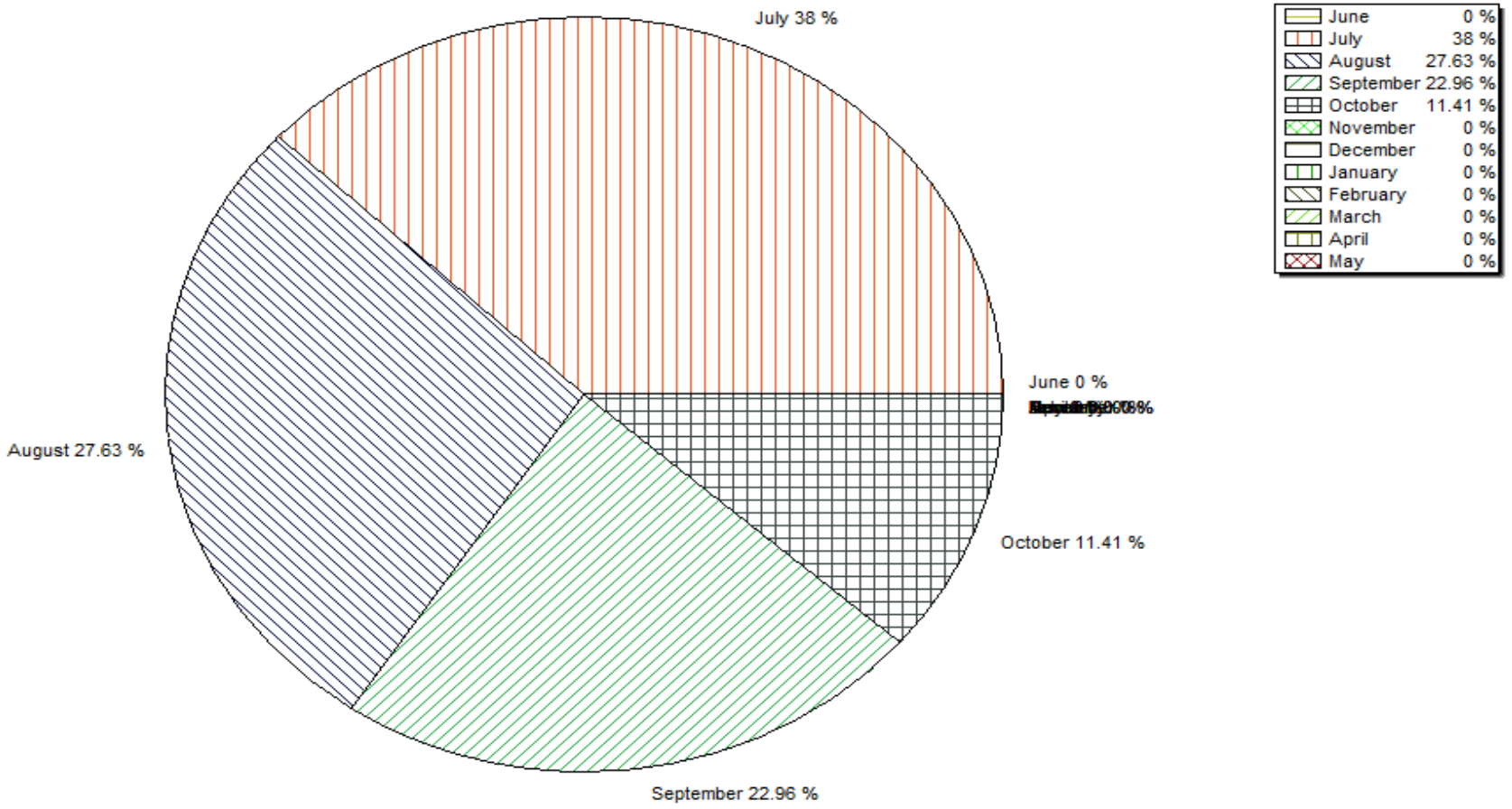
Monthly Runoff for the Year : 2017-2018

Station Name : Anjanari (WL000M3)

Division : Upper Krishna Divn, Pune

Local River : Kajvi

Sub-Division : South Western Rivers SD 4,Goa



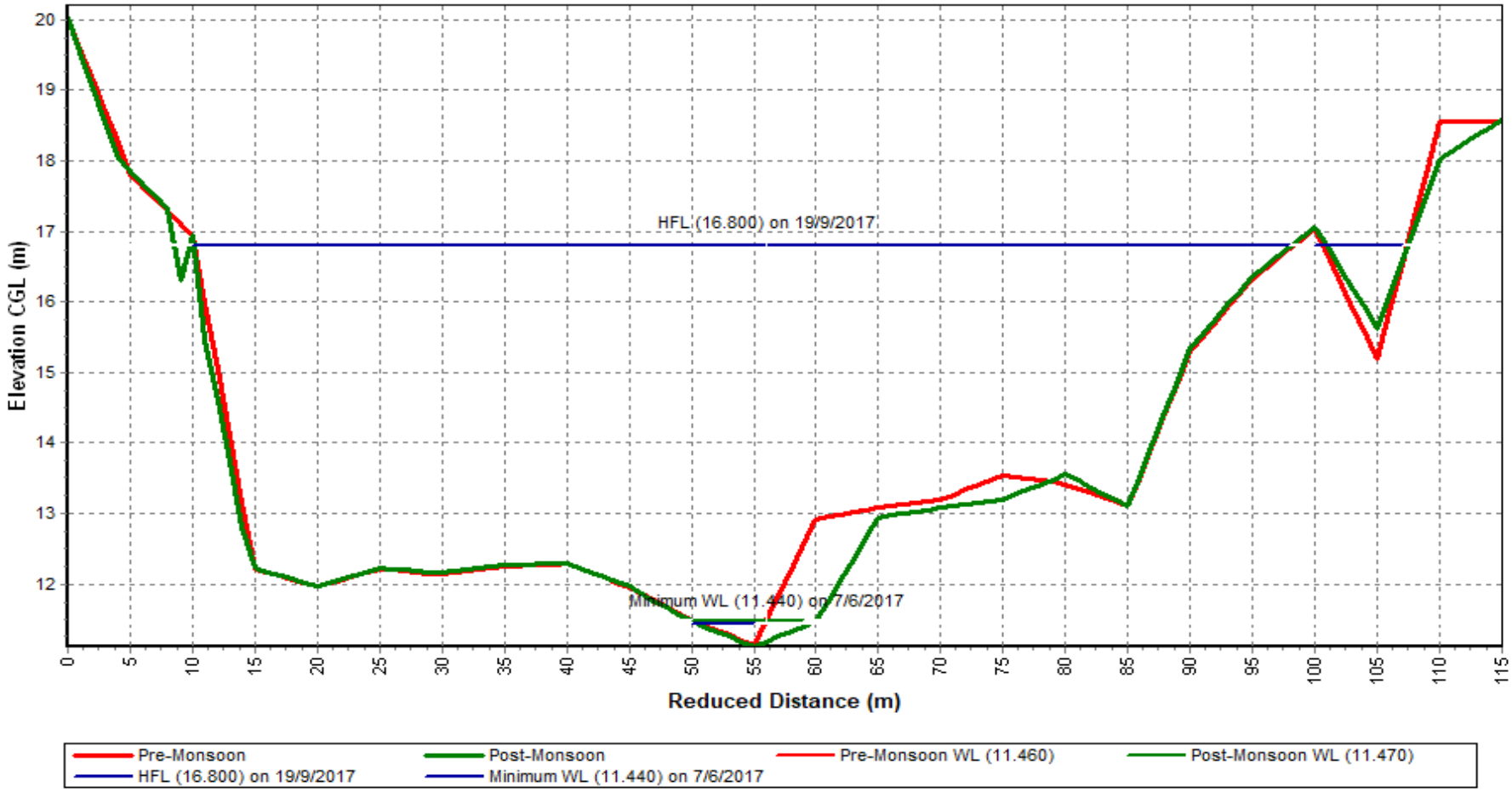
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : Anjanari (WL000M3)

Division : Upper Krishna Divn, Pune

Local River : Kajvi

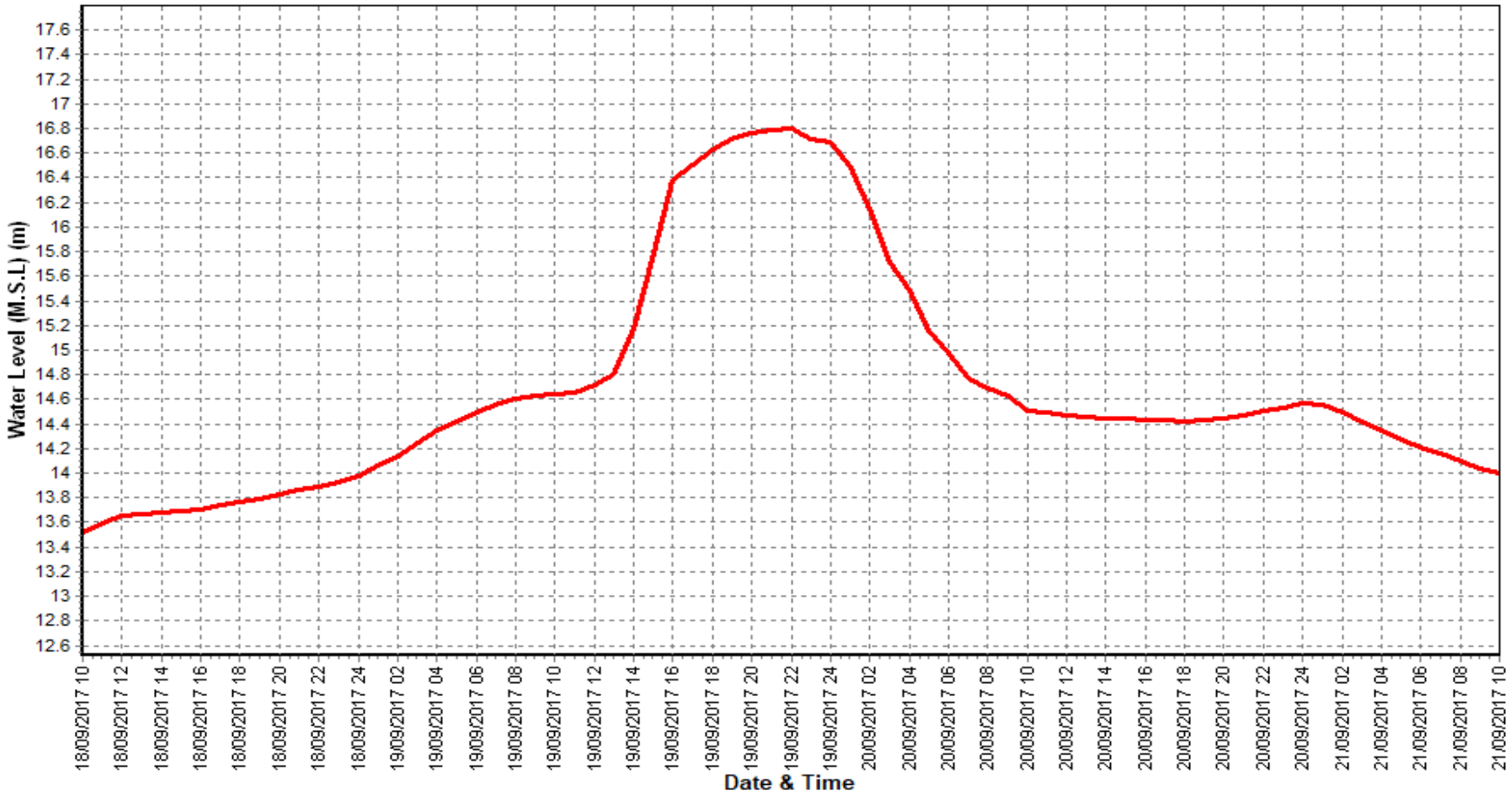
Sub-Division : South Western Rivers SD 4,Goa



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : Anjanari (WL000M3) **Division : Upper Krishna Divn, Pune**

Local River : Kajvi **Sub-Division : South Western Rivers SD 4,Goa**

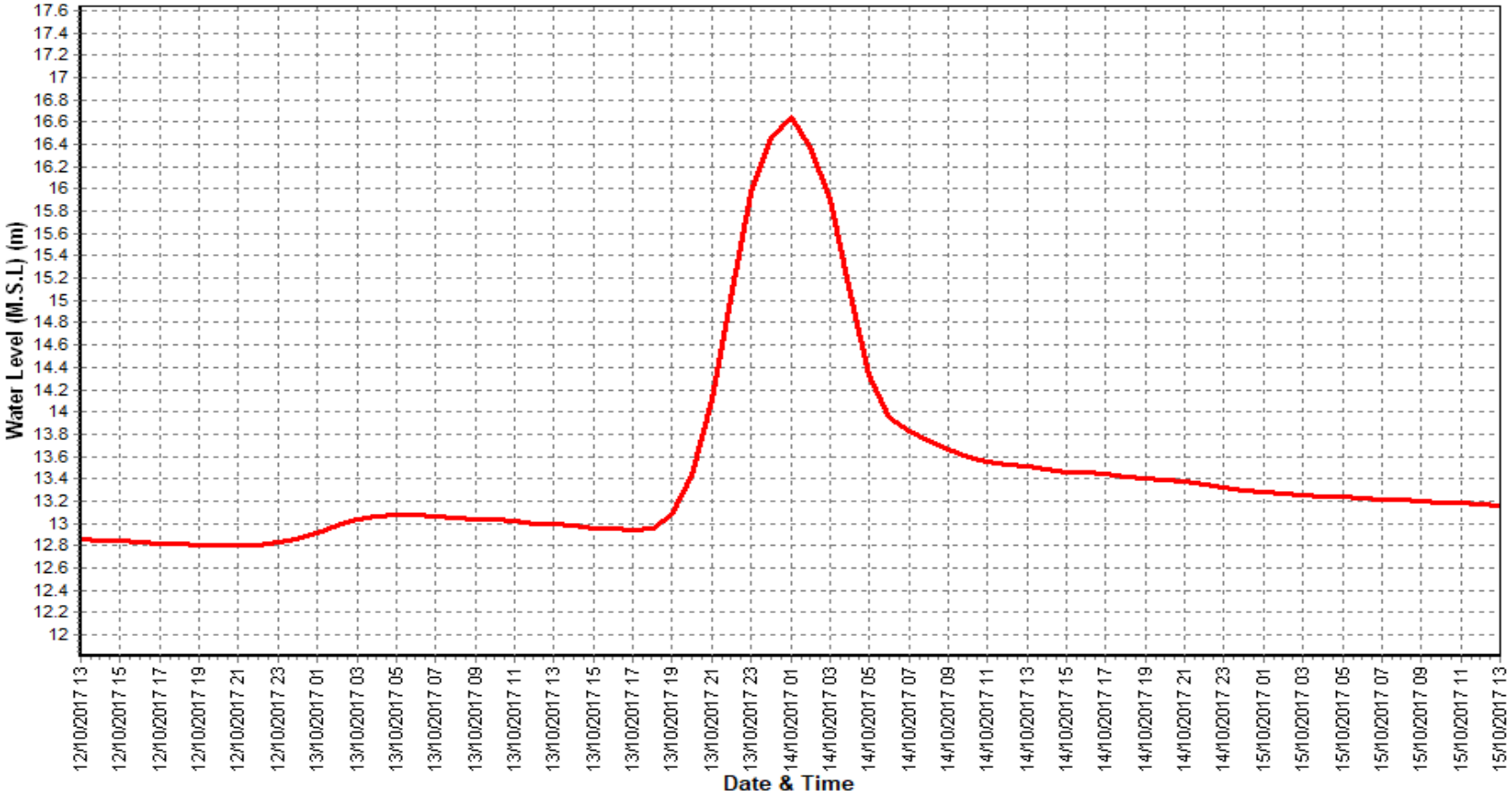


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : Anjanari (WL000M3) **Division : Upper Krishna Divn, Pune**

Local River : Kajvi **Sub-Division : South Western Rivers SD 4,Goa**

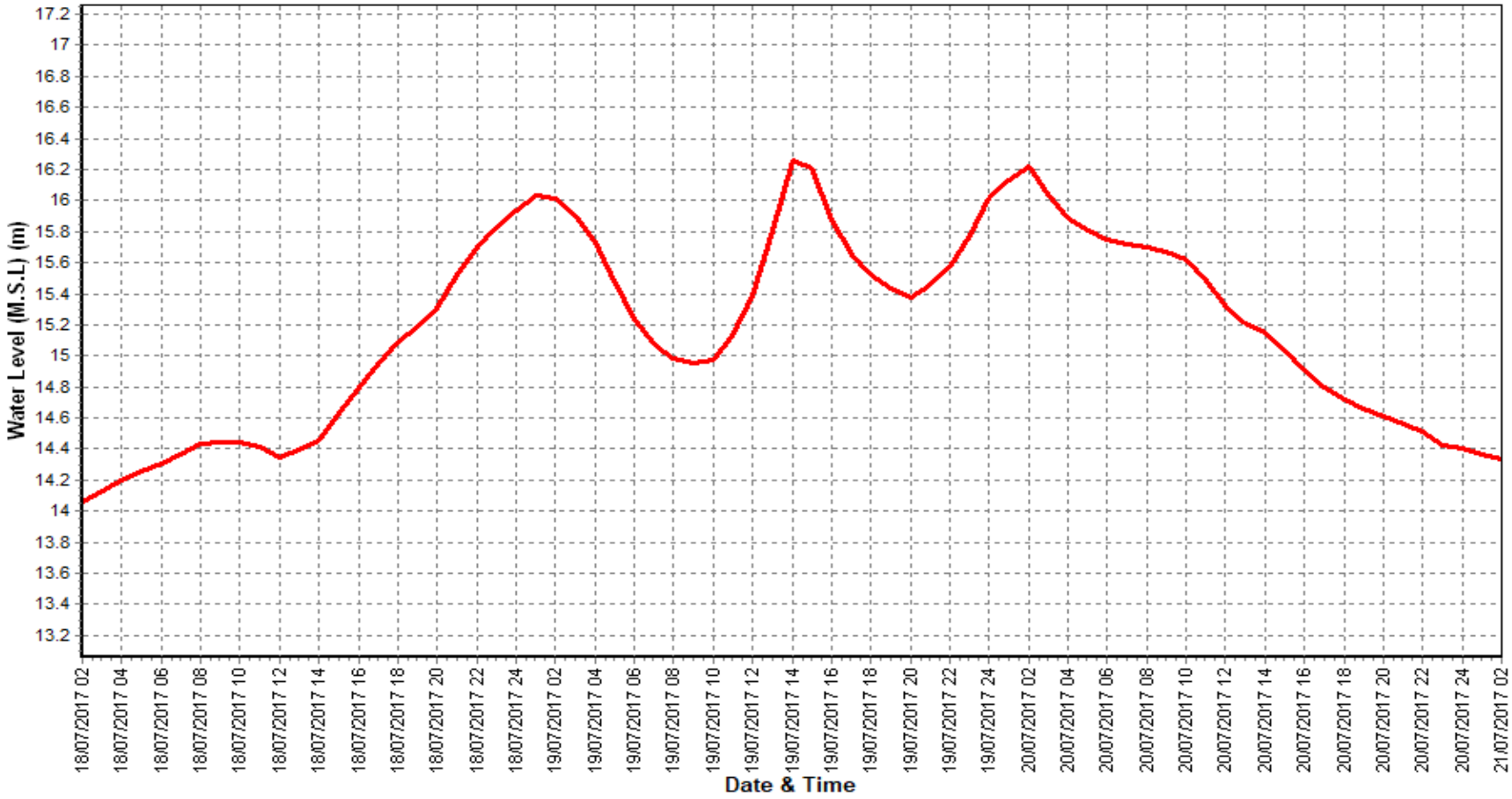


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : Anjanari (WL000M3) **Division : Upper Krishna Divn, Pune**

Local River : Kajvi **Sub-Division : South Western Rivers SD 4,Goa**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-2018

Site	**: Belne Bridge**		**Code**	**: BELNE BRIDGE**	
State	: Maharashtra		District	Sindudurg	
Basin	: WFR South of Tapi		Independent River	: Gad	
Tributary	: -		Sub Tributary	:	
Sub-Sub Tributary	:		Local River	: Gad	
Division	: Upper Krishna Divn, Pune		Sub-Division	: South Western Rivers SD 4,Goa	
Drainage Area	: 605 Sq. Km.		Bank	: Right	
Latitude	: 16°13'18"		Longitude	: 73°36'40"	
Zero of Gauge (m)	: 8.500 (m.s.l)		01-06-2000		
	Opening Date		Closing Date		
Gauge	: 16-06-2000				
Discharge	: 16-06-2000				
Sediment	:				
Water Quality	: 03-07-2000				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2001-2002	775.6	15.070	04-08-2001	0.000	9.530	27-04-2002
2002-2003	767.8	15.400	09-08-2002	0.000	9.660	19-03-2003
2003-2004	439.5	13.820	16-07-2003	0.000	Dry	13-03-2004
2004-2005	738.9	15.090	04-08-2004	0.000	Dry	14-02-2005
2005-2006	1135	16.275	26-07-2005	0.000	Dry	11-04-2006
2006-2007	1145	16.330	08-08-2006	0.000	9.745	30-03-2007
2007-2008	1005	15.980	30-06-2007	0.000	Dry	13-03-2008
2008-2009	1022	17.660	12-08-2008	0.000	9.890	25-01-2009
2009-2010	1261	16.230	09-07-2009	0.000	9.800	21-03-2010
2010-2011	1334	18.380	29-07-2010	0.000	10.020	28-01-2011
2011-2012	1041	16.400	18-07-2011	0.000	10.330	08-11-2011
2012-2013	766.0	17.125	28-08-2012	0.000	9.900	26-01-2013
2013-2014	885.2	15.900	03-07-2013	0.000	Dry	01-06-2013
2014-2015	773.7	15.250	31-07-2014	0.000	10.120	01-06-2014
2015-2016	501.8	14.100	21-06-2015	0.000	9.880	01-06-2015
2016-2017	811.5	15.980	25-09-2016	0.000	9.630	29-01-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : Belne Bridge (BELNE BRIDGE) **Division : Upper Krishna Divn, Pune**

Local River : Gad **Sub-Division : South Western Rivers SD 4,Goa**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	10.280	0.000	13.850	301.1 *	12.170	114.1	12.690	136.7	12.060	90.67 *	10.730	0.000
2	9.800	0.000	13.090	195.4 *	11.885	77.11 #	12.160	98.96 *	11.960	82.78 *	10.700	0.000
3	9.680	0.000	12.860	168.2 *	12.105	106.8	12.030	88.26 *	12.230	90.62	10.680	0.000
4	9.650	0.000	13.055	176.8	12.310	133.0	11.700	63.19	11.860	72.88	10.650	0.000
5	9.620	0.000	12.820	170.4	12.570	160.3	11.535	49.55	11.650	54.24	10.620	0.000
6	9.590	0.000	12.685	143.8	12.280	109.4 *	11.405	49.30	11.395	58.99	10.600	0.000
7	9.570	0.000	12.250	106.8 *	11.970	78.43	11.255	44.01	11.285	38.61	10.580	0.000
8	9.560	0.000	12.000	85.89 #	12.195	92.85	11.560	53.01	11.580	56.31 *	10.560	0.000
9	9.820	0.000	12.200	102.4 *	11.960	77.40	11.200	35.27 *	11.935	66.18	10.540	0.000
10	9.760	0.000	12.365	95.75	12.110	95.60	11.770	68.85 *	11.530	44.30	10.520	0.000
11	11.300	0.000	12.080	92.30 #	11.950	74.14	11.990	74.53	11.265	43.46	10.500	0.000
12	10.680	0.000	12.240	106.1	12.540	118.9	11.870	75.30	11.260	39.49	10.480	0.000
13	10.880	0.000	12.210	103.3 *	12.280	109.4 *	13.610	250.4	11.075	29.50 #	10.460	0.000
14	10.600	12.57 #	15.300	573.5 #	11.850	67.92	12.265	108.6	12.170	99.81 *	10.450	0.000
15	10.535	10.85 #	14.595	499.4	11.650	60.77 *	11.820	74.53	12.570	137.1 *	10.430	0.000
16	11.540	55.37	14.010	326.5 *	11.530	53.23 #	11.890	78.95	13.240	214.3 *	10.400	0.000
17	11.450	54.43	13.150	202.8 *	11.705	68.89	11.900	78.23 *	12.440	124.3 *	10.380	0.000
18	11.270	38.75 *	12.940	196.7	11.640	62.91	13.640	307.0	11.950	82.01 *	10.350	0.000
19	11.090	30.17 *	15.055	559.6	11.620	58.83 *	14.840	476.8 *	11.580	56.31 *	10.330	0.000
20	11.840	79.39	15.240	487.5	12.120	95.60 *	14.800	468.8 *	11.460	49.09 *	10.310	0.000
21	12.000	93.95	14.165	389.4	12.050	89.86 *	13.560	257.8 *	11.230	36.74 *	10.280	0.000
22	11.540	59.50	13.745	299.6	12.050	89.86 *	12.760	142.9	11.120	31.51 *	10.260	0.000
23	11.295	35.49	12.910	173.9 *	11.730	66.09 *	12.250	100.2	11.030	27.56 #	10.230	0.000
24	11.280	39.26 *	13.315	243.2	11.980	84.32 *	12.010	86.68 *	10.990	27.47	10.210	0.000
25	11.160	33.36 *	12.770	174.0	12.640	144.3 *	12.470	109.2	10.935	24.95	10.180	0.000
26	11.480	50.25 *	12.480	133.2	13.820	290.0	12.280	109.4 #	10.900	24.98	10.150	0.000
27	12.390	119.5 *	12.460	144.5	13.380	232.8 *	12.040	89.06 *	10.915	25.17	10.110	0.000
28	13.220	211.7 *	12.440	131.0	14.210	332.8	11.690	63.40 #	10.860	19.41	10.090	0.000
29	14.220	361.6 *	13.180	227.2	13.515	256.9	12.590	123.4	10.820	19.45 *	10.070	0.000
30	13.960	318.5 *	12.760	157.1 *	13.675	254.5	12.480	128.2 *	10.790	18.42 #	10.050	0.000
31			12.360	135.0	13.715	251.5			10.750	14.65		
Ten-Daily Mean												
I Ten-Daily	9.733	0.000	12.717	154.7	12.156	104.5	11.730	68.71	11.748	65.56	10.618	0.000
II Ten-Daily	11.118	28.15	13.682	314.8	11.889	77.07	12.863	199.3	11.901	87.53	10.409	0.000
III Ten-Daily	12.254	132.3	12.962	200.7	12.979	190.3	12.413	121.0	10.940	24.57	10.163	0.000
Monthly												
Min.	9.560	0.000	12.000	85.89	11.530	53.23	11.200	35.27	10.750	14.65	10.050	0.000
Max.	14.220	361.6	15.300	573.5	14.210	332.8	14.840	476.8	13.240	214.3	10.730	0.000
Mean	11.035	53.49	13.115	222.7	12.361	126.1	12.335	129.7	11.511	58.1	10.397	0

Annual Runoff in MCM = 1564 Annual Runoff in mm = 2586

Peak Observed Discharge = 573.5 cumecs on 14/07/2017 Corres. Water Level :15.3 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :10.28 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : Belne Bridge (BELNE BRIDGE) **Division : Upper Krishna Divn, Pune**

Local River : Gad **Sub-Division : South Western Rivers SD 4,Goa**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	10.030	0.000	9.790	0.000	9.780	0.000	9.660	0.000	9.510	0.000	9.680	0.000
2	10.010	0.000	9.780	0.000	9.760	0.000	9.660	0.000	9.510	0.000	9.640	0.000
3	10.000	0.000	9.780	0.000	9.760	0.000	9.660	0.000	9.500	0.000	9.610	0.000
4	9.990	0.000	9.780	0.000	9.750	0.000	9.650	0.000	9.500	0.000	9.570	0.000
5	9.980	0.000	9.800	0.000	9.740	0.000	9.630	0.000	9.490	0.000	9.590	0.000
6	9.960	0.000	9.820	0.000	9.740	0.000	9.640	0.000	9.480	0.000	9.570	0.000
7	9.950	0.000	9.840	0.000	9.740	0.000	9.660	0.000	9.480	0.000	9.560	0.000
8	9.930	0.000	9.860	0.000	9.750	0.000	9.660	0.000	9.480	0.000	9.550	0.000
9	9.930	0.000	9.870	0.000	9.750	0.000	9.660	0.000	9.480	0.000	9.560	0.000
10	9.970	0.000	9.860	0.000	9.750	0.000	9.660	0.000	9.480	0.000	9.570	0.000
11	9.940	0.000	9.860	0.000	9.750	0.000	9.660	0.000	9.480	0.000	9.550	0.000
12	9.940	0.000	9.840	0.000	9.750	0.000	9.660	0.000	9.470	0.000	9.540	0.000
13	9.930	0.000	9.830	0.000	9.750	0.000	9.680	0.000	9.470	0.000	9.530	0.000
14	9.950	0.000	9.830	0.000	9.740	0.000	9.670	0.000	9.470	0.000	9.550	0.000
15	9.940	0.000	9.820	0.000	9.730	0.000	9.660	0.000	9.470	0.000	9.570	0.000
16	9.920	0.000	9.830	0.000	9.730	0.000	9.650	0.000	9.470	0.000	9.580	0.000
17	9.910	0.000	9.830	0.000	9.730	0.000	9.690	0.000	9.470	0.000	9.570	0.000
18	9.880	0.000	9.820	0.000	9.730	0.000	9.710	0.000	9.460	0.000	9.610	0.000
19	9.860	0.000	9.820	0.000	9.720	0.000	9.700	0.000	9.460	0.000	9.620	0.000
20	9.870	0.000	9.810	0.000	9.720	0.000	9.880	0.000	9.460	0.000	9.610	0.000
21	9.860	0.000	9.800	0.000	9.710	0.000	9.760	0.000	9.460	0.000	9.600	0.000
22	9.850	0.000	9.800	0.000	9.710	0.000	9.690	0.000	9.450	0.000	9.590	0.000
23	9.830	0.000	9.800	0.000	9.700	0.000	9.650	0.000	9.440	0.000	9.570	0.000
24	9.820	0.000	9.800	0.000	9.700	0.000	9.620	0.000	9.440	0.000	9.570	0.000
25	9.820	0.000	9.800	0.000	9.690	0.000	9.590	0.000	9.430	0.000	9.560	0.000
26	9.810	0.000	9.790	0.000	9.690	0.000	9.580	0.000	9.430	0.000	9.560	0.000
27	9.790	0.000	9.780	0.000	9.680	0.000	9.580	0.000	9.610	0.000	9.550	0.000
28	9.770	0.000	9.780	0.000	9.680	0.000	9.560	0.000	9.770	0.000	9.550	0.000
29	9.750	0.000	9.780	0.000			9.550	0.000	9.750	0.000	9.550	0.000
30	9.770	0.000	9.780	0.000			9.530	0.000	9.720	0.000	9.550	0.000
31	9.790	0.000	9.780	0.000			9.520	0.000			9.540	0.000
Ten-Daily Mean												
I Ten-Daily	9.975	0.000	9.818	0.000	9.752	0.000	9.654	0.000	9.491	0.000	9.590	0.000
II Ten-Daily	9.914	0.000	9.829	0.000	9.735	0.000	9.696	0.000	9.468	0.000	9.573	0.000
III Ten-Daily	9.805	0.000	9.790	0.000	9.695	0.000	9.603	0.000	9.550	0.000	9.563	0.000
Monthly												
Min.	9.750	0.000	9.780	0.000	9.680	0.000	9.520	0.000	9.430	0.000	9.530	0.000
Max.	10.030	0.000	9.870	0.000	9.780	0.000	9.880	0.000	9.770	0.000	9.680	0.000
Mean	9.895	0	9.812	0	9.730	0	9.649	0	9.503	0	9.575	0

Peak Computed Discharge = 476.8 cumecs on 19/09/2017 Corres. Water Level :14.84 m

Lowest Computed Discharge = 19.45 cumecs on 29/10/2017 Corres. Water Level :10.82 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

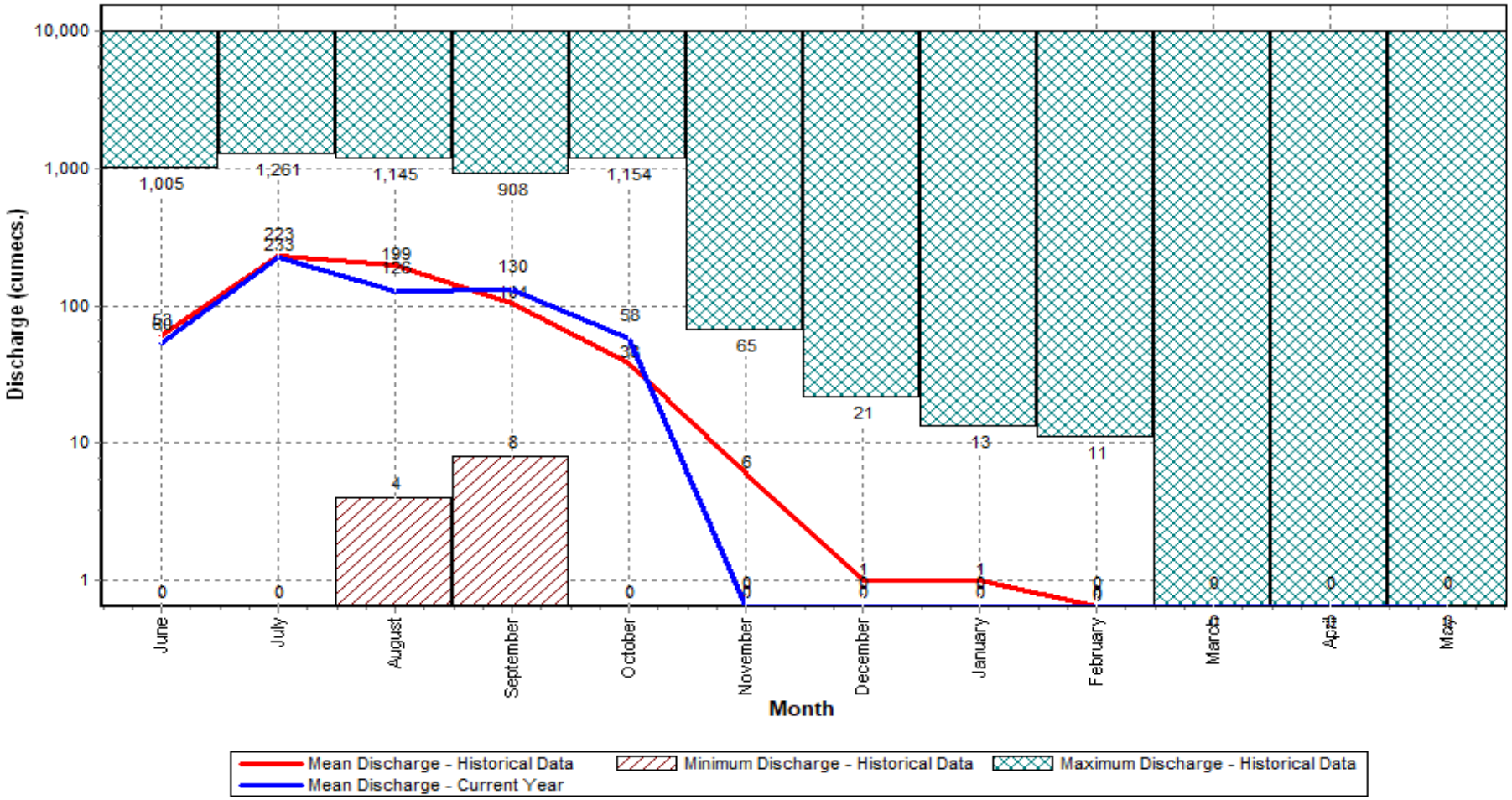
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : Belne Bridge (BELNE BRIDGE) | **Data considered : 2001-2018** | **Division : Upper Krishna Divn, Pune**

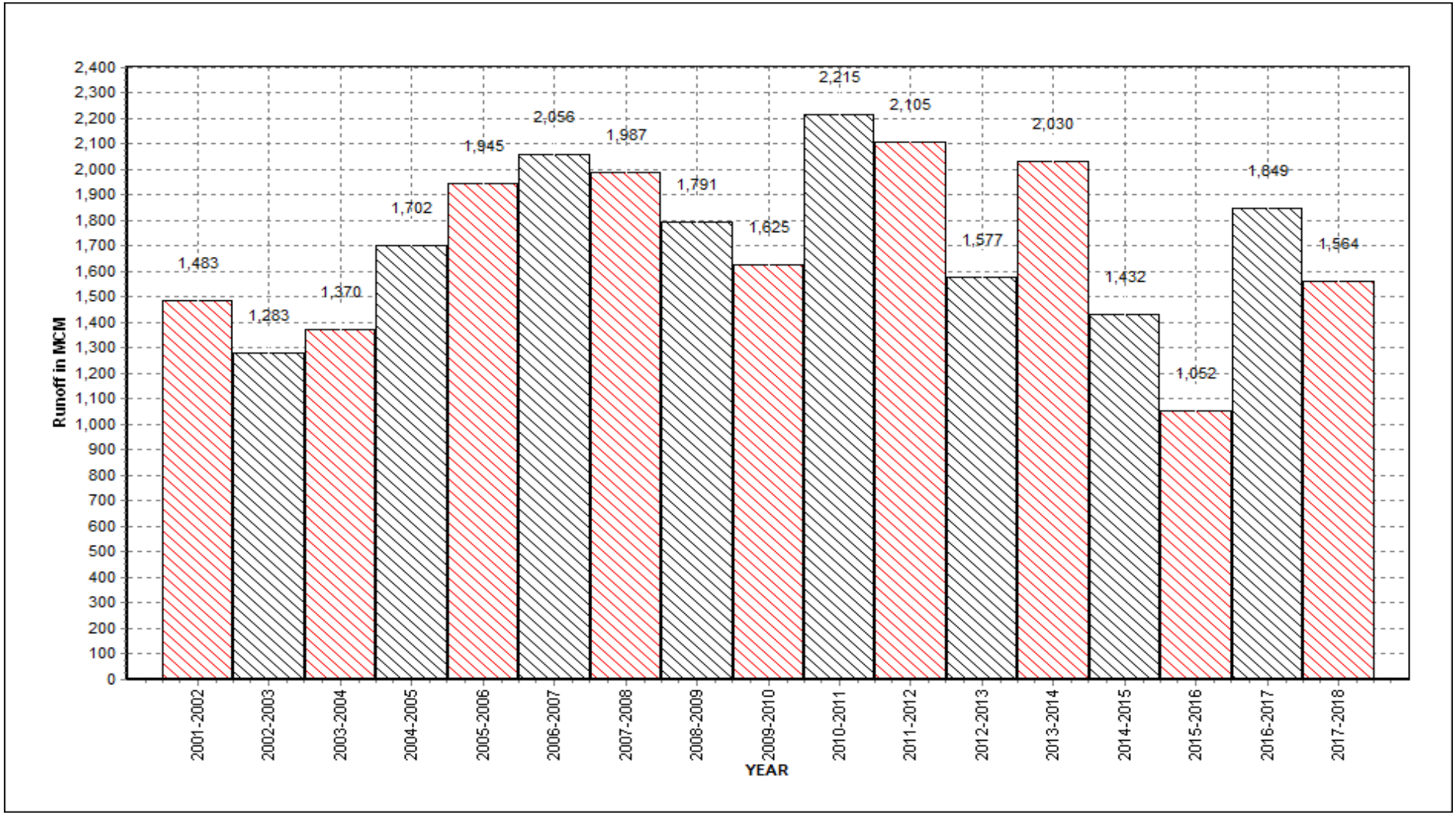
Local River : Gad | **Sub-Division : South Western Rivers SD 4,Goa**



Annual Runoff Values for the period: 2001 - 2018

Station Name : Belne Bridge (BELNE BRIDGE) **Division : Upper Krishna Divn, Pune**

Local River : Gad **Sub-Division : South Western Rivers SD 4,Goa**

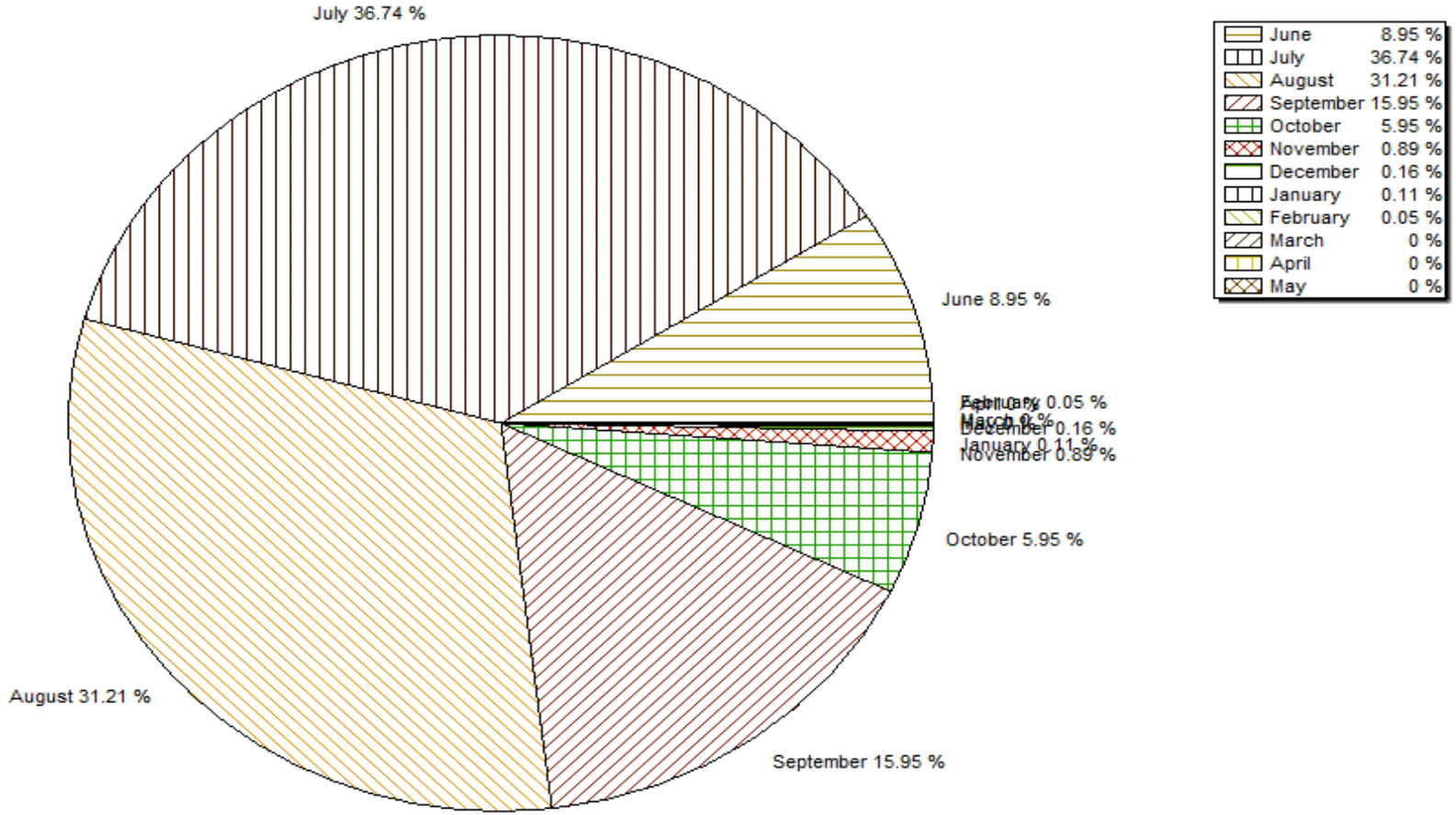


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 2001-2017

Station Name : Belne Bridge (BELNE BRIDGE) **Division : Upper Krishna Divn, Pune**

Local River : Gad **Sub-Division : South Western Rivers SD 4,Goa**



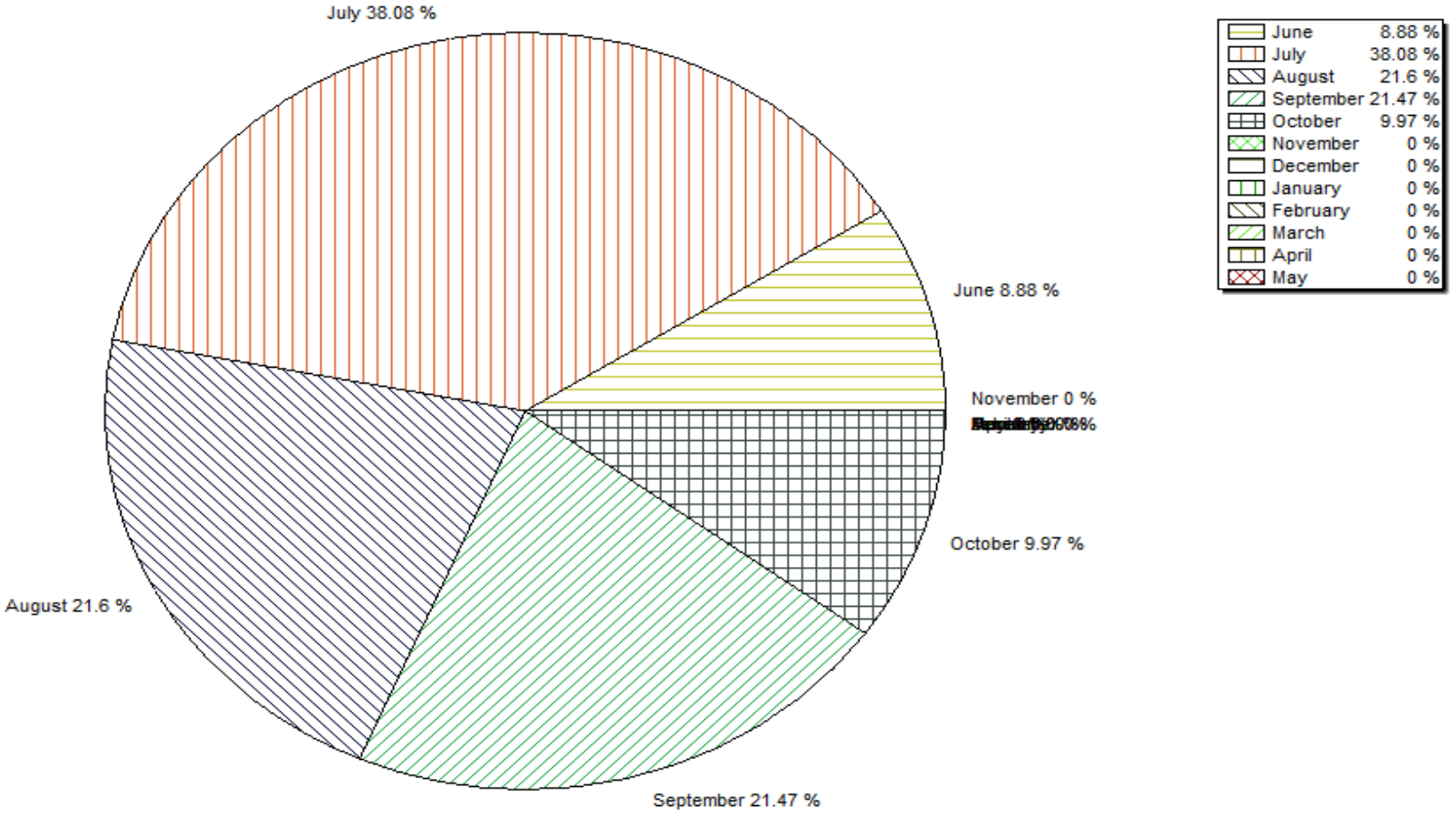
Monthly Runoff for the Year : 2017-2018

Station Name : Belne Bridge (BELNE BRIDGE)

Division : Upper Krishna Divn, Pune

Local River : Gad

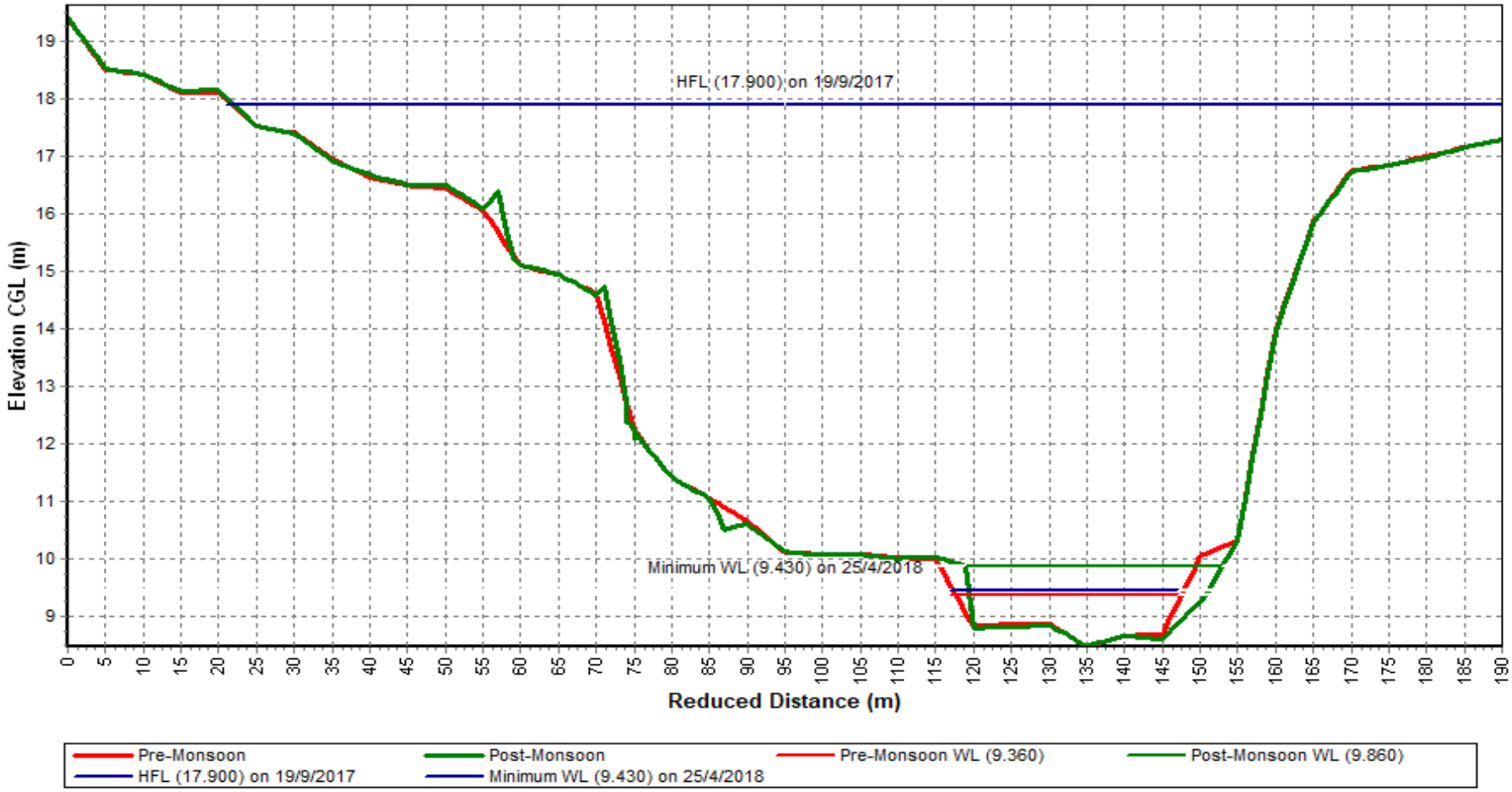
Sub-Division : South Western Rivers SD 4,Goa



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : Belne Bridge (BELNE BRIDGE) **Division : Upper Krishna Divn, Pune**

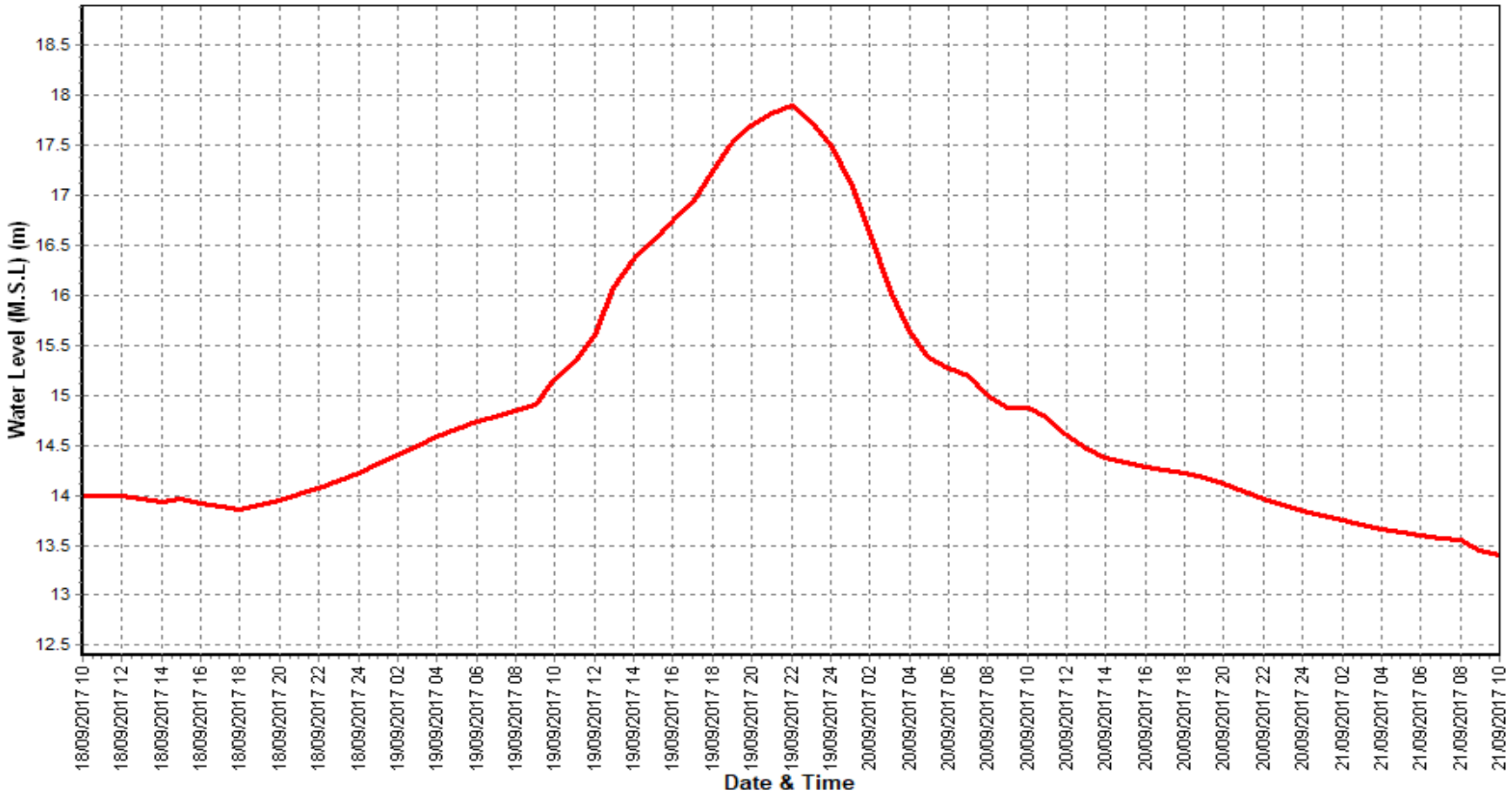
Local River : Gad **Sub-Division : South Western Rivers SD 4,Goa**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : Belne Bridge (BELNE BRIDGE) **Division : Upper Krishna Divn, Pune**

Local River : Gad **Sub-Division : South Western Rivers SD 4,Goa**

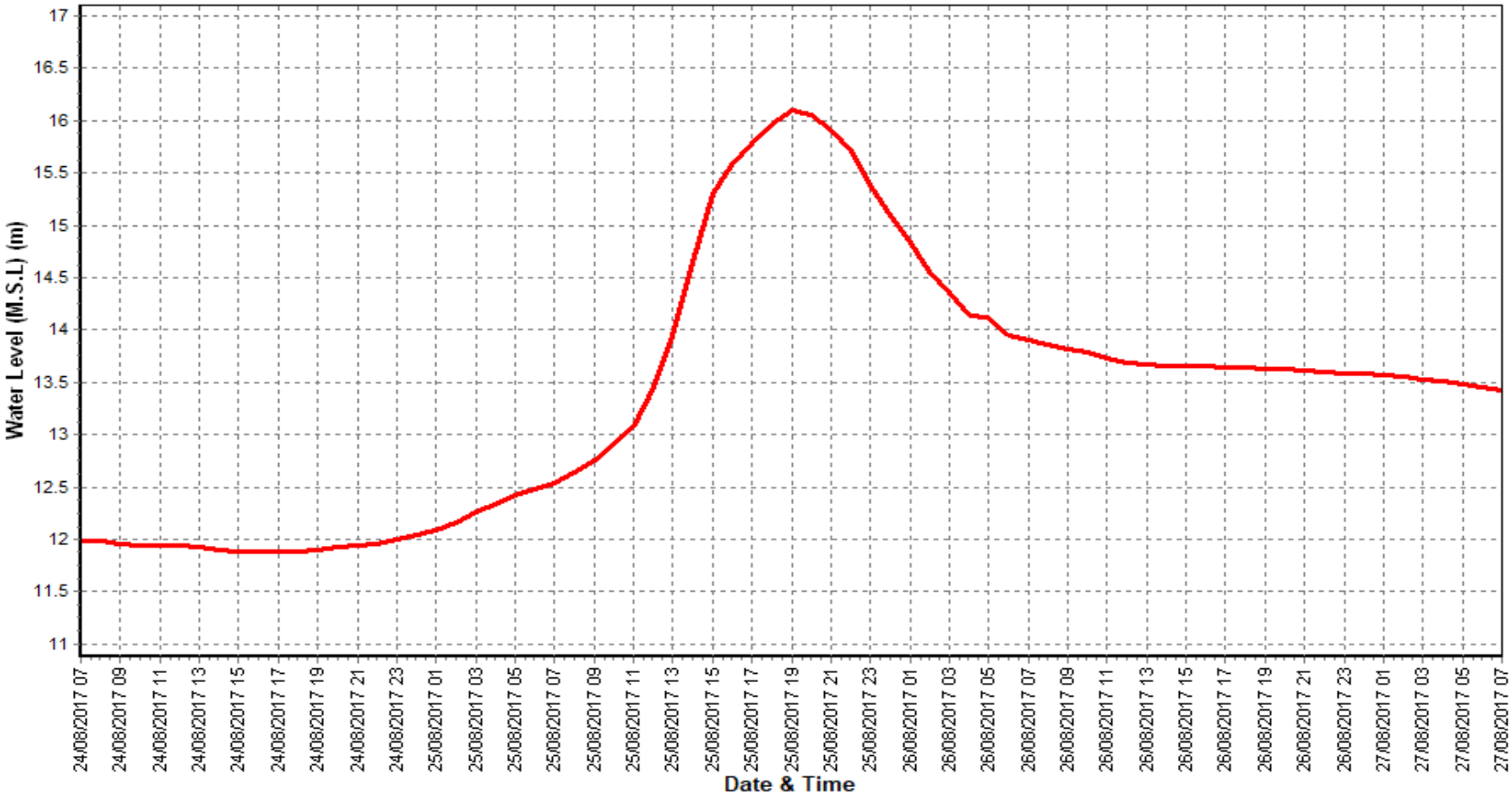


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : Belne Bridge (BELNE BRIDGE) **Division : Upper Krishna Divn, Pune**

Local River : Gad **Sub-Division : South Western Rivers SD 4,Goa**

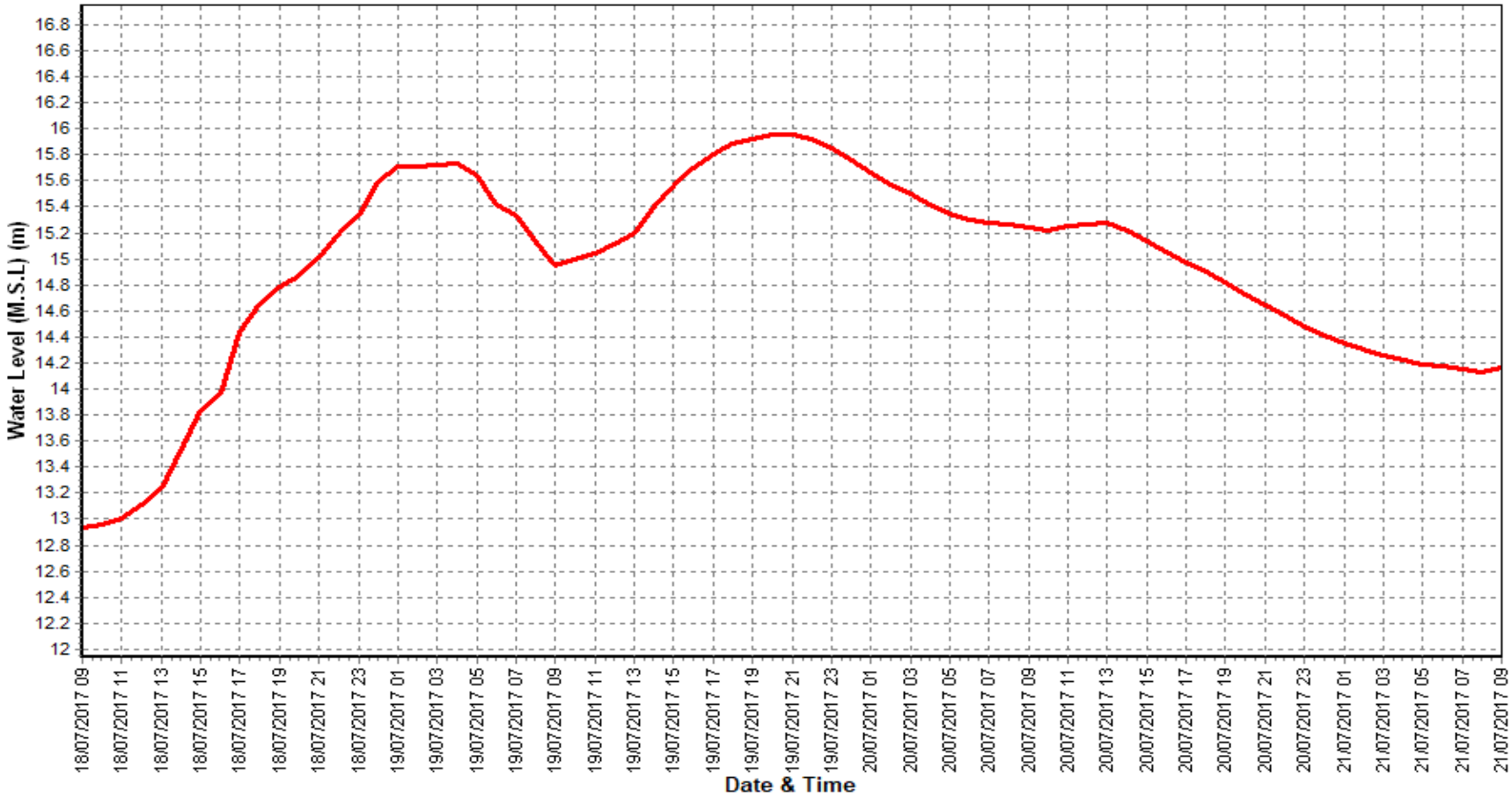


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : Belne Bridge (BELNE BRIDGE) **Division : Upper Krishna Divn, Pune**

Local River : Gad **Sub-Division : South Western Rivers SD 4,Goa**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-2018

Site	**: Ganjim**		**Code**	**: WM000P8**	
State	: Goa		District	North Goa	
Basin	: WFR South of Tapi		Independent River	: Mandovi	
Tributary	: -		Sub Tributary	: -	
Sub-Sub Tributary	: -		Local River	: Mandovi	
Division	: Upper Krishna Divn, Pune		Sub-Division	: South Western Rivers SD 4,Goa	
Drainage Area	: 880 Sq. Km.		Bank	: Left	
Latitude	: 15°28'16"		Longitude	: 74°05'58"	
Zero of Gauge (m)	: 0.000 (m.s.l)		01-01-1979		
	Opening Date		Closing Date		
Gauge	: 20-01-1979				
Discharge	: 20-01-1979				
Sediment	:				
Water Quality	:				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1979-1980	1650	8.210	11-08-1979	0.500	1.605	02-06-1979
1980-1981	2837	9.535	02-07-1980	0.395	1.540	03-06-1980
1981-1982	1570	7.160	02-08-1981	0.398	1.550	15-05-1982
1982-1983	4746	12.510	29-07-1982	0.400	1.490	13-05-1983
1983-1984	1910	8.205	12-08-1983	0.400	1.510	28-05-1984
1984-1985	3013	10.125	01-07-1984	0.400	1.510	02-06-1984
1985-1986	2868	9.815	01-08-1985	0.600	1.470	30-04-1986
1986-1987	2654	9.080	08-08-1986	0.200	1.560	09-05-1987
1987-1988	985.4	6.453	08-07-1987	0.177	1.600	23-05-1988
1988-1989	3454	10.620	18-07-1988	0.313	1.580	02-05-1989
1989-1990	1995	8.570	24-07-1989	0.100	1.470	02-05-1990
1990-1991	1766	7.910	03-07-1990	0.500	1.595	15-05-1991
1991-1992	2403	8.880	26-07-1991	0.000	1.520	17-05-1992
1992-1993	1835	8.140	26-07-1992	0.450	1.610	29-04-1993
1993-1994	1613	8.700	11-07-1993	0.450	1.580	23-05-1994
1994-1995	2066	8.620	14-07-1994	0.700	1.600	01-06-1994
1995-1996	1555	7.375	21-07-1995	0.698	1.410	27-05-1996
1996-1997	1050	6.210	20-07-1996	0.220	1.490	30-05-1997
1997-1998	1678	7.765	30-07-1997	0.220	1.490	01-06-1997

Q :Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1998-1999	805.0	5.750	09-07-1998	0.000	1.470	13-05-1999
1999-2000	2865	9.870	22-07-1999	0.000	1.600	04-05-2000
2000-2001	1736	8.380	12-06-2000	0.382	1.550	11-05-2001
2001-2002	1276	7.240	09-07-2001	0.161	1.540	07-05-2002
2002-2003	1978	8.550	09-08-2002	0.000	1.500	28-05-2003
2003-2004	829.7	5.745	07-07-2003	0.000	1.440	07-06-2003
2004-2005	1850	8.240	04-08-2004	0.000	1.525	25-05-2005
2005-2006	2375	9.620	25-07-2005	0.000	1.680	01-06-2005
2006-2007	1386	7.400	08-08-2006	0.000	2.660	31-01-2007
2007-2008	1867	8.190	09-07-2007	0.000	4.290	15-03-2008
2008-2009	2659	9.680	11-08-2008	0.000	Dry Bed	26-01-2009
2009-2010	1266	7.570	15-07-2009	0.000	4.690	25-01-2010
2010-2011	1297	7.650	31-07-2010	0.000	5.950	13-05-2011
2011-2012	1682	8.750	03-09-2011	0.000	3.100	21-11-2011
2012-2013	1154	7.500	27-07-2012	0.000	5.190	25-01-2013
2013-2014	1493	8.100	26-07-2013	0.000	2.950	03-06-2013
2014-2015	1678	9.410	31-07-2014	0.000	3.210	01-02-2015
2015-2016	938.7	6.910	08-08-2015	0.000	4.750	03-01-2016
2016-2017	1186	7.100	04-08-2016	0.000	6.140	25-01-2017

Q :Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : Ganjim (WM000P8) **Division : Upper Krishna Divn, Pune**

Local River : Mandovi **Sub-Division : South Western Rivers SD 4,Goa**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	4.340	210.3 *	5.790	622.9	4.325	207.1 #	4.685	279.6	3.740	95.08 *	3.310	0.000
2	4.260	193.2 *	5.500	508.9 *	4.195	172.9	4.425	209.2	3.950	131.8 *	3.290	0.000
3	4.170	174.6 *	5.060	388.4	4.185	168.5	4.430	230.1 *	4.035	152.1	3.250	0.000
4	4.110	162.5 *	5.290	495.4	4.410	229.6	4.005	143.9	3.835	111.2 #	3.190	0.000
5	4.000	141.2 *	4.730	305.0	4.440	238.7	3.855	115.5	3.855	114.7 #	3.150	0.000
6	3.800	105.2 *	4.710	290.4	4.320	206.0 *	3.785	95.98	3.755	97.57 #	3.120	0.000
7	3.690	86.96 *	4.735	300.7	4.195	175.4	3.730	90.76	3.835	111.2 #	3.110	0.000
8	3.290	31.86 *	4.480	239.5	4.225	184.8	3.755	89.33	3.880	119.1 *	3.150	0.000
9	3.250	27.44 *	4.160	172.5 *	4.145	167.0	3.660	82.20 *	3.790	103.5 #	3.320	0.000
10	3.310	34.14 *	4.150	164.6	4.230	184.4	3.660	82.20 *	3.845	112.9 #	3.290	0.000
11	3.750	96.74 *	3.995	139.1	4.000	155.7	3.660	78.14	3.735	94.26 #	3.300	0.000
12	4.050	150.7 *	4.100	160.7	4.050	150.7 *	3.590	68.25	3.790	103.5 #	3.280	0.000
13	3.870	117.3 *	4.085	156.6	3.970	135.5 *	4.560	250.0	3.705	89.37 #	3.260	0.000
14	3.680	85.36 *	6.125	716.0	3.945	135.6	3.730	91.10	3.790	103.5 *	3.250	0.000
15	3.560	67.04 *	5.650	574.1	3.870	117.3 *	3.660	81.55	3.780	101.8 *	3.240	0.000
16	3.540	64.14 *	5.900	631.3 *	3.815	119.2	3.765	94.93	3.940	141.0	3.230	0.000
17	3.510	59.87 *	5.430	511.3	3.845	125.4	3.680	85.36 *	4.035	154.1	3.220	0.000
18	3.470	54.33 *	5.870	642.1	3.850	126.9	4.990	361.5	3.835	111.2 #	3.210	0.000
19	3.410	46.39 *	9.300	1986 *	4.000	155.4	5.440	511.3	3.710	90.18 *	3.200	0.000
20	3.370	41.34 *	8.600	1666 *	4.040	148.8 *	6.360	796.5	3.560	66.26	3.190	0.000
21	3.310	34.14 *	7.265	1071	4.765	282.7	5.570	539.5	3.520	60.18	3.180	0.000
22	3.320	35.31 *	6.225	755.0	4.630	241.9	4.835	336.7	3.520	61.28 *	3.170	0.000
23	3.220	24.29 *	5.490	506.0 *	4.450	234.6 *	4.010	150.3	3.475	54.69	3.160	0.000
24	3.280	30.73 *	5.225	438.9	4.450	207.4	4.160	172.5 *	3.450	50.65	3.150	0.000
25	3.780	101.8 *	5.215	424.0	4.670	286.0 *	4.080	159.0	3.420	47.64	3.140	0.000
26	5.140	406.9 *	4.910	344.0	4.700	256.3	4.110	165.9	3.405	45.30	3.140	0.000
27	5.510	511.9 *	4.580	264.6 *	5.250	437.2 *	4.005	156.4	3.370	41.57	3.130	0.000
28	6.020	669.7 *	4.450	234.6 *	5.000	365.0	4.005	153.4	3.400	44.52	3.130	0.000
29	5.940	644.0 *	5.080	390.6 *	4.650	281.2 *	3.980	121.9	3.370	41.34 *	3.120	0.000
30	6.220	735.5 *	4.820	323.0 *	4.900	343.7	3.820	108.6 *	3.320	36.94	3.120	0.000
31			4.550	257.5 *	4.965	338.0			3.300	33.70		
Ten-Daily Mean												
I Ten-Daily	3.822	116.7	4.860	348.8	4.267	193.4	3.999	141.9	3.852	114.9	3.218	0.000
II Ten-Daily	3.621	78.33	5.905	718.4	3.939	137.1	4.344	241.9	3.788	105.5	3.238	0.000
III Ten-Daily	4.574	319.4	5.255	455.4	4.766	297.6	4.258	206.4	3.414	47.08	3.144	0.000
Monthly												
Min.	3.220	24.29	3.995	139.1	3.815	117.3	3.590	68.25	3.300	33.70	3.110	0.000
Max.	6.220	735.5	9.300	1986	5.250	437.2	6.360	796.5	4.035	154.1	3.320	0.000
Mean	4.006	171.5	5.338	505.8	4.338	212.2	4.200	196.7	3.676	87.81	3.200	0

Annual Runoff in MCM = 8930 Annual Runoff in mm = 10148

Peak Observed Discharge = 1071 cumecs on 21/07/2017 Corres. Water Level :7.265 m

Lowest Observed Discharge = 0.000 cumecs on 01/11/2017 Corres. Water Level :3.31 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : Ganjim (WM000P8) **Division : Upper Krishna Divn, Pune**

Local River : Mandovi **Sub-Division : South Western Rivers SD 4,Goa**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	3.110	0.000	5.640	550.7 *	5.590	535.7 *	5.620	544.7 *	5.550	523.7 *	4.500	246.0 *
2	3.100	0.000	5.630	547.7 *	5.590	535.7 *	5.620	544.7 *	5.480	503.1 *	4.150	170.5 *
3	3.100	0.000	5.630	547.7 *	5.580	532.7 *	5.620	544.7 *	5.440	491.4 *	3.900	122.7 *
4	3.100	0.000	5.630	547.7 *	5.580	532.7 *	5.620	544.7 *	5.400	479.8 *	3.900	122.7 *
5	3.100	0.000	5.630	547.7 *	5.580	532.7 *	5.620	544.7 *	5.360	468.3 *	3.840	112.1 *
6	3.110	0.000	5.630	547.7 *	5.580	532.7 *	5.700	569.0 *	5.360	468.3 *	3.820	108.6 *
7	3.130	0.000	5.630	547.7 *	5.580	532.7 *	5.750	584.3 *	5.300	451.2 *	3.820	108.6 *
8	3.130	0.000	5.650	553.7 *	5.590	535.7 *	5.820	606.1 *	5.260	440.0 *	3.820	108.6 *
9	3.120	0.000	5.650	553.7 *	5.590	535.7 *	5.830	609.2 *	5.240	434.4 *	3.750	96.74 *
10	3.120	0.000	5.640	550.7 *	5.590	535.7 *	5.850	615.5 *	5.200	423.3 *	3.720	91.80 *
11	3.120	0.000	5.630	547.7 *	5.580	532.7 *	5.850	615.5 *	5.160	412.3 *	3.700	88.56 *
12	3.120	0.000	5.640	550.7 *	5.580	532.7 *	5.850	615.5 *	5.150	409.6 *	3.680	85.36 *
13	3.110	0.000	5.640	550.7 *	5.580	532.7 *	5.840	612.3 *	5.150	409.6 *	3.620	76.01 *
14	3.170	0.000	5.640	550.7 *	5.580	532.7 *	5.840	612.3 *	5.150	409.6 *	3.600	72.98 *
15	3.190	0.000	5.650	553.7 *	5.580	532.7 *	5.840	612.3 *	5.150	409.6 *	3.700	88.56 *
16	3.180	0.000	5.650	553.7 *	5.580	532.7 *	5.840	612.3 *	5.140	406.9 *	3.770	100.1 *
17	3.170	0.000	5.650	553.7 *	5.580	532.7 *	5.840	612.3 *	5.100	396.0 *	3.850	113.8 *
18	3.120	0.000	5.630	547.7 *	5.560	526.7 *	5.840	612.3 *	5.080	390.6 *	4.260	193.2 *
19	3.090	0.000	5.630	547.7 *	5.560	526.7 *	5.840	612.3 *	5.040	379.9 *	4.280	197.4 *
20	3.070	0.000	5.630	547.7 *	5.560	526.7 *	5.860	618.6 *	4.990	366.7 *	4.300	201.7 *
21	3.060	0.000	5.630	547.7 *	5.560	526.7 *	5.860	618.6 *	4.950	356.2 *	4.420	227.9 *
22	3.050	0.000	5.620	544.7 *	5.560	526.7 *	5.860	618.6 *	4.920	348.5 *	4.500	246.0 *
23	3.050	0.000	5.620	544.7 *	5.560	526.7 *	5.870	621.8 *	4.890	340.7 *	4.560	259.9 *
24	3.400	0.000	5.620	544.7 *	5.560	526.7 *	5.870	621.8 *	4.860	333.1 *	4.580	264.6 *
25	4.120	0.000	5.620	544.7 *	5.560	526.7 *	5.890	628.1 *	4.800	317.9 *	4.610	271.6 *
26	4.850	0.000	5.620	544.7 *	5.560	526.7 *	5.820	606.1 *	4.770	310.5 *	4.650	281.2 *
27	5.030	0.000	5.610	541.7 *	5.560	526.7 *	5.790	596.7 *	4.700	293.3 *	4.560	259.9 *
28	5.250	0.000	5.600	538.7 *	5.620	544.7 *	5.730	578.2 *	4.660	283.6 *	4.540	255.2 *
29	5.400	0.000	5.600	538.7 *			5.700	569.0 *	4.590	266.9 *	4.520	250.6 *
30	5.500	0.000	5.590	535.7 *			5.660	556.8 *	4.500	246.0 *	4.520	250.6 *
31	5.610	0.000	5.590	535.7 *			5.600	538.7 *			4.510	248.3 *
Ten-Daily Mean												
I Ten-Daily	3.112	0.000	5.636	549.5	5.585	534.2	5.705	570.7	5.359	468.4	3.922	128.8
II Ten-Daily	3.134	0.000	5.639	550.4	5.574	530.9	5.844	613.6	5.111	399.1	3.876	121.8
III Ten-Daily	4.393	0.000	5.611	541.9	5.568	528.9	5.786	595.9	4.764	309.7	4.543	256.0
Monthly												
Min.	3.050	0.000	5.590	535.7	5.560	526.7	5.600	538.7	4.500	246.0	3.600	72.98
Max.	5.610	0.000	5.650	553.7	5.620	544.7	5.890	628.1	5.550	523.7	4.650	281.2
Mean	3.574	0	5.628	547.1	5.576	531.5	5.779	593.5	5.078	392.4	4.127	171.7

Peak Computed Discharge = 1986 cumecs on 19/07/2017 Corres. Water Level :9.3 m

Lowest Computed Discharge = 24.29 cumecs on 23/06/2017 Corres. Water Level :3.22 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

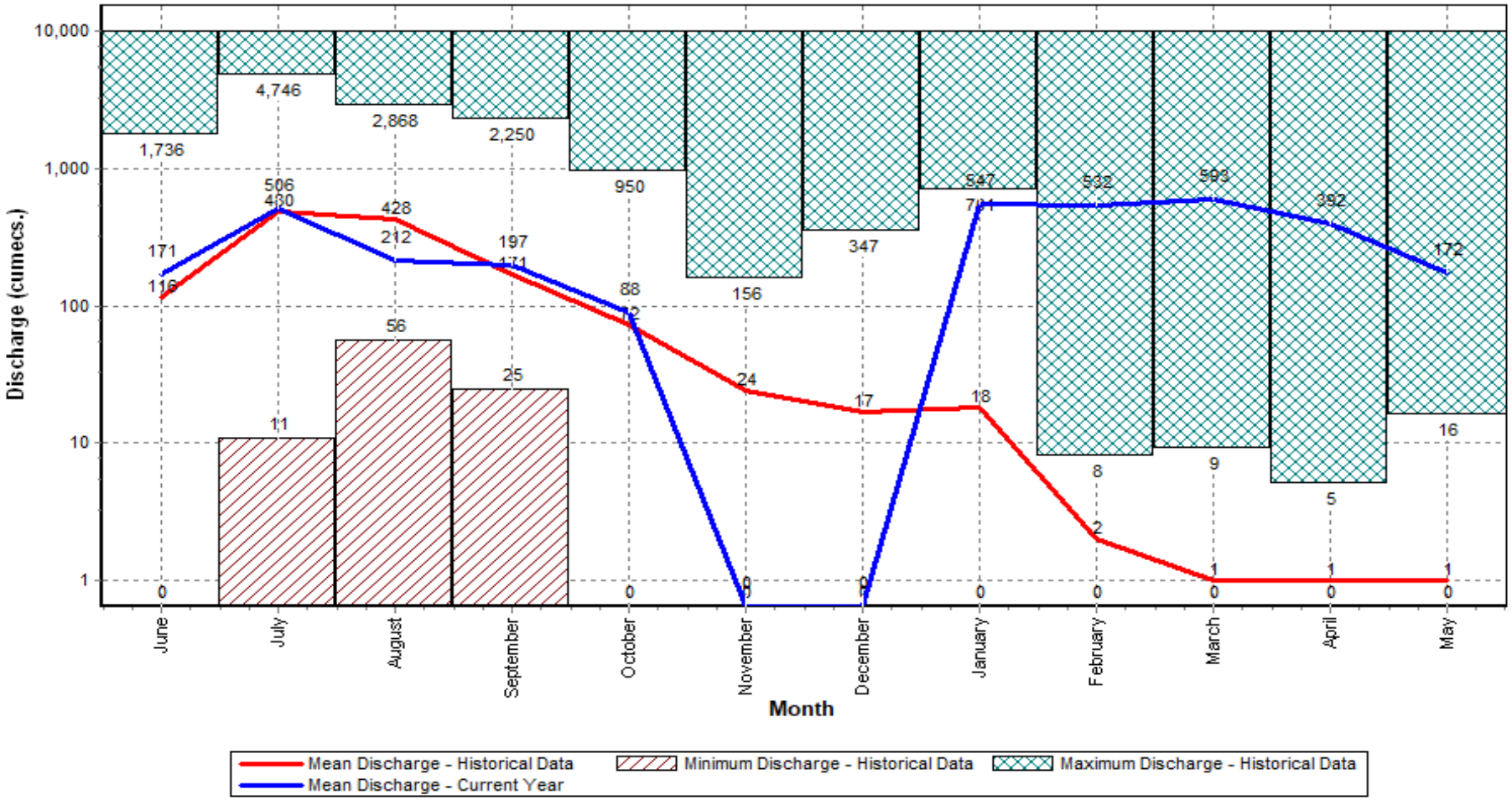
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : Ganjim (WM000P8) | **Data considered : 1979-2018** | **Division : Upper Krishna Divn, Pune**

Local River : Mandovi | **Sub-Division : South Western Rivers SD 4,Goa**



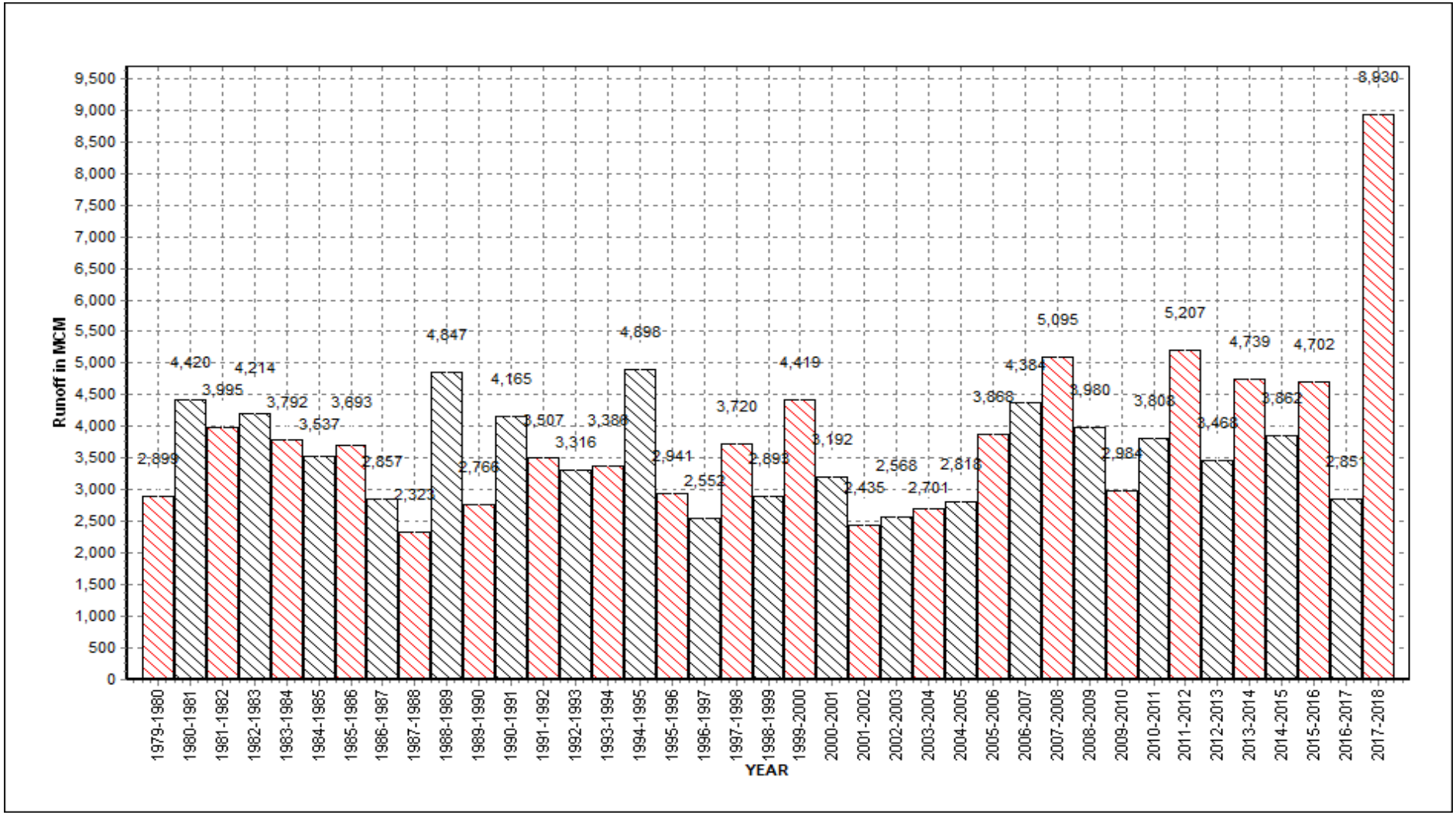
Annual Runoff Values for the period: 1979 - 2018

Station Name : Ganjim (WM000P8)

Local River : Mandovi

Division : Upper Krishna Divn, Pune

Sub-Division : South Western Rivers SD 4,Goa

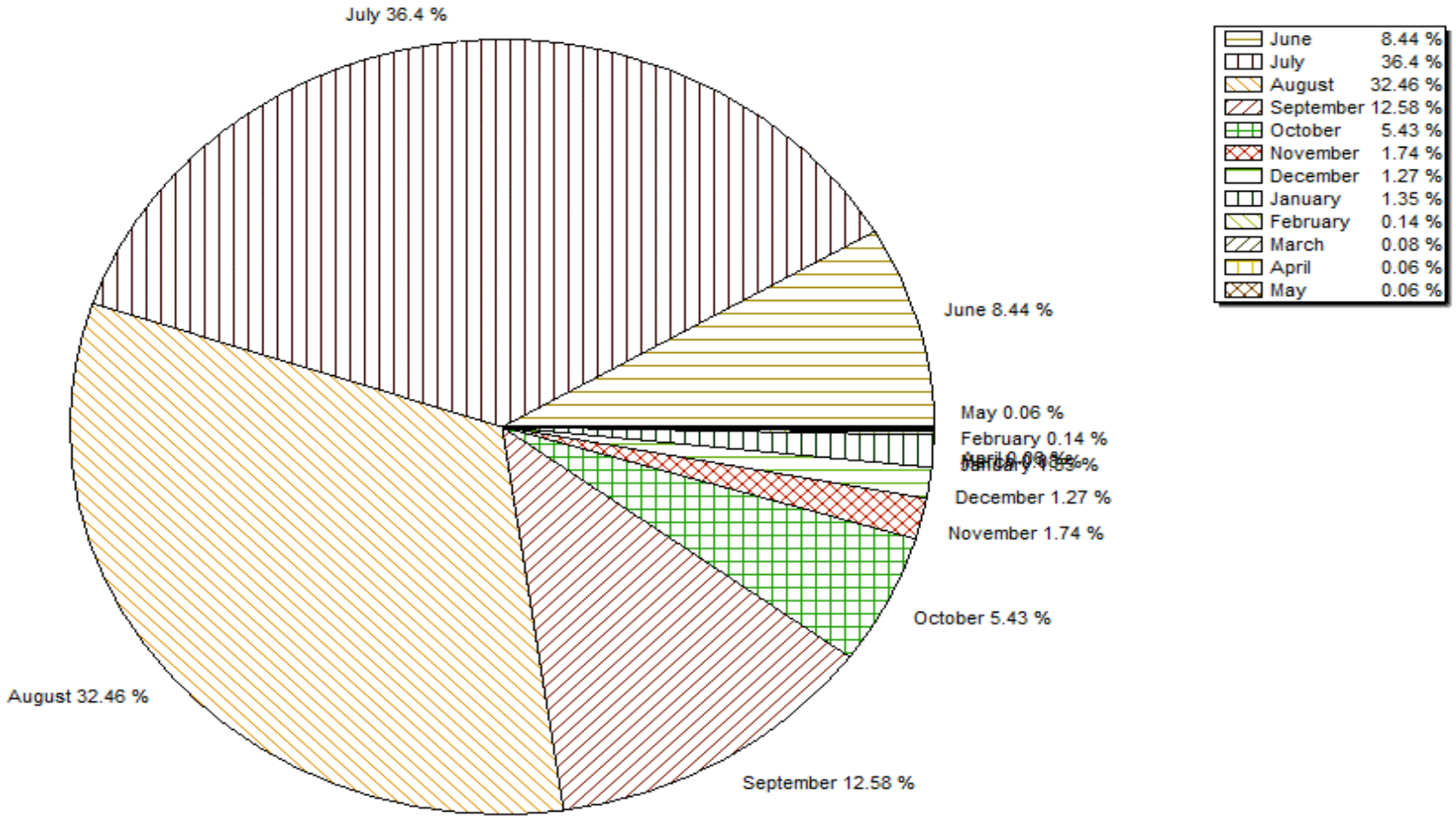


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1979-2017

Station Name : Ganjim (WM000P8)
Local River : Mandovi

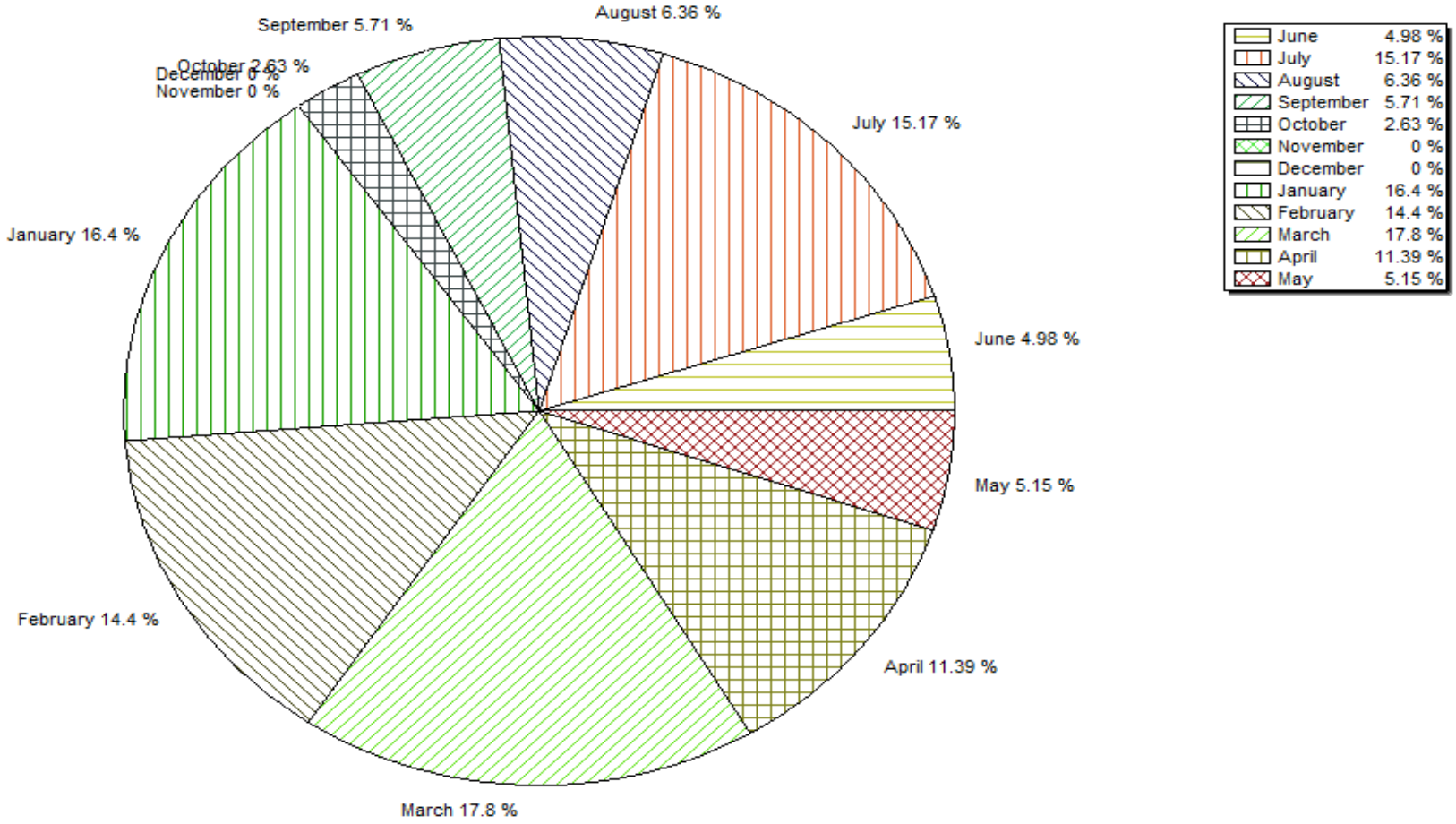
Division : Upper Krishna Divn, Pune
Sub-Division : South Western Rivers SD 4,Goa



Monthly Runoff for the Year : 2017-2018

Station Name : Ganjim (WM000P8)
Local River : Mandovi

Division : Upper Krishna Divn, Pune
Sub-Division : South Western Rivers SD 4,Goa



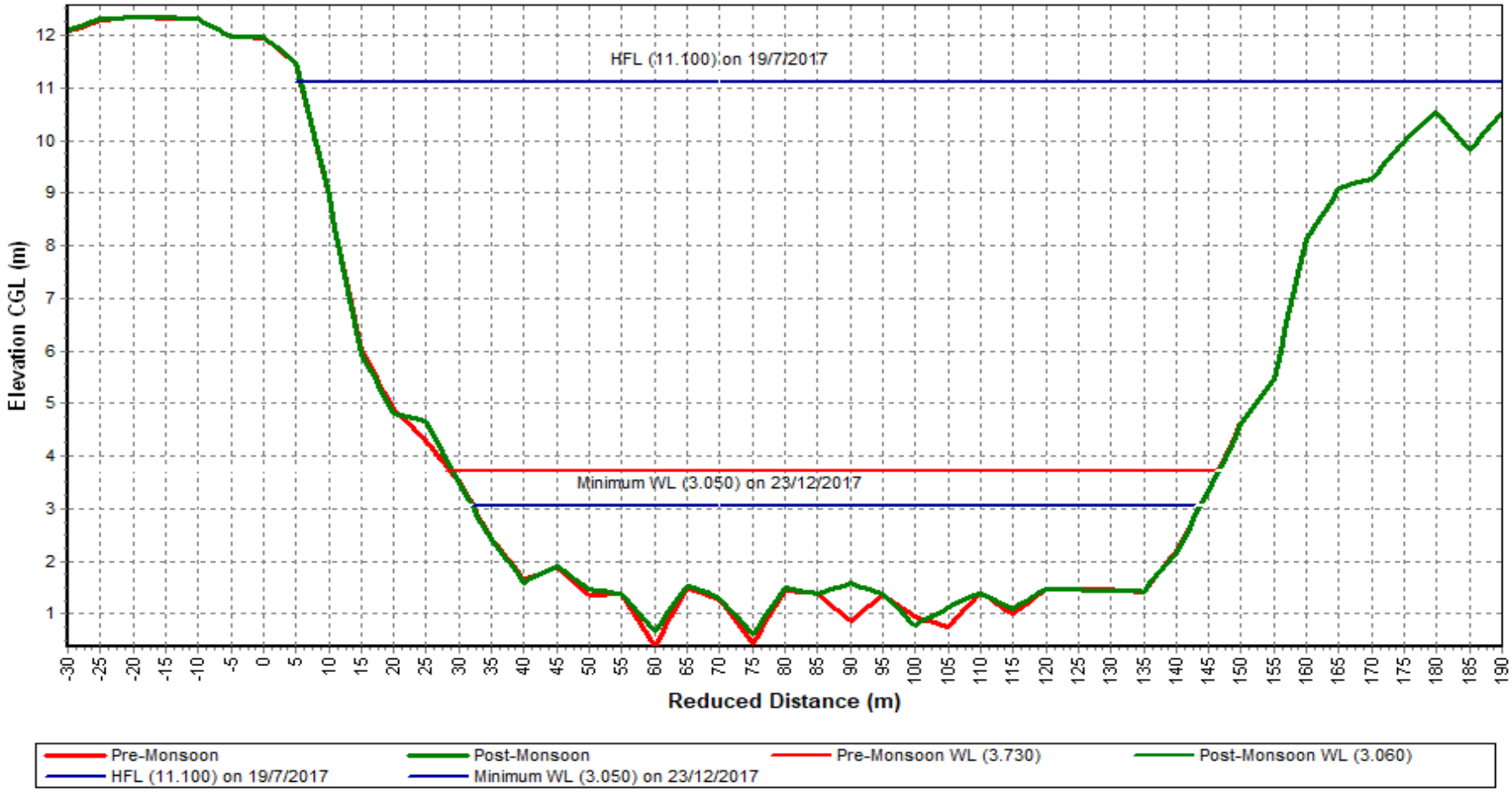
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : Ganjim (WM000P8)

Local River : Mandovi

Division : Upper Krishna Divn, Pune

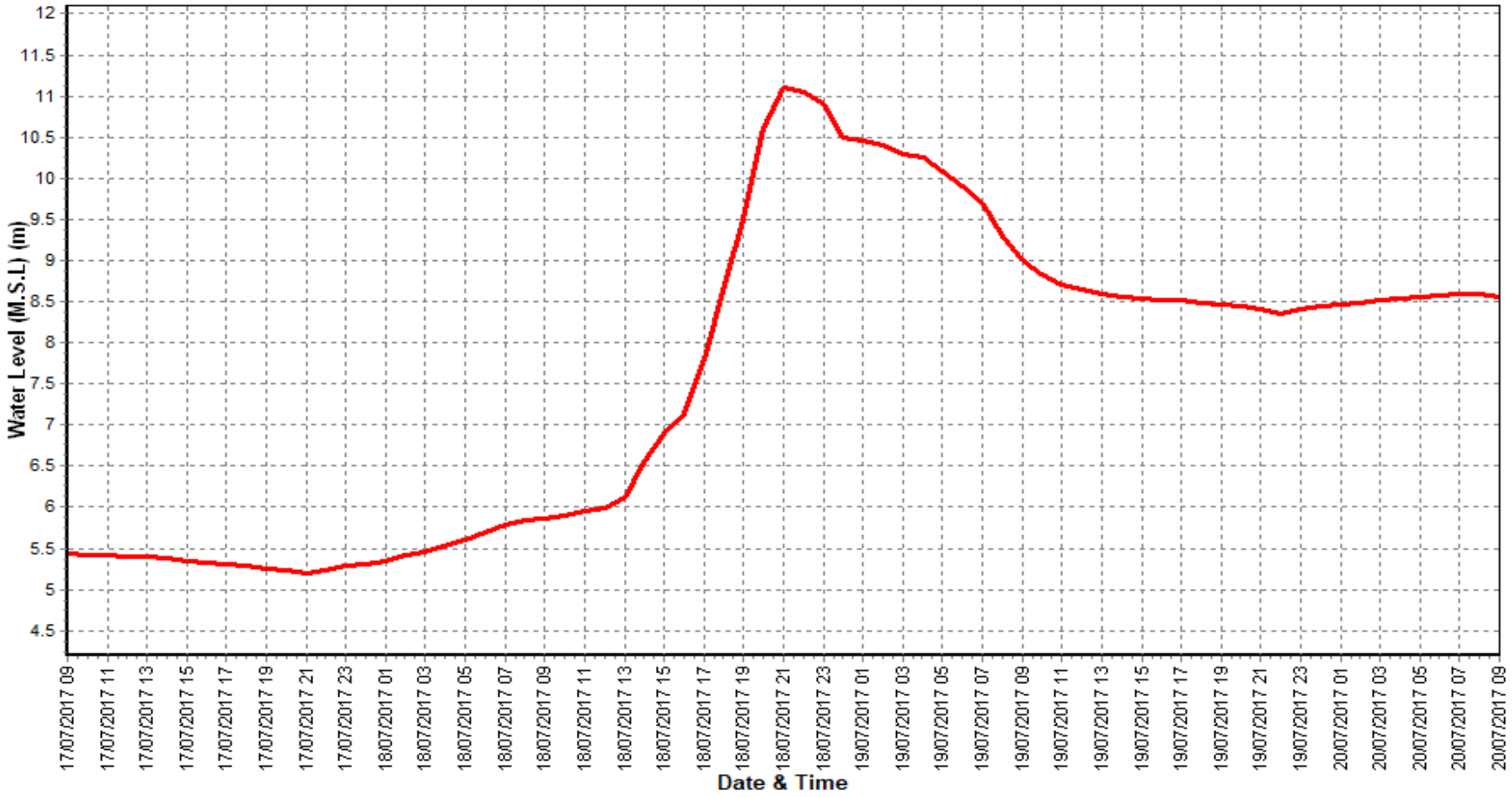
Sub-Division : South Western Rivers SD 4,Goa



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : Ganjim (WM000P8) **Division : Upper Krishna Divn, Pune**

Local River : Mandovi **Sub-Division : South Western Rivers SD 4,Goa**

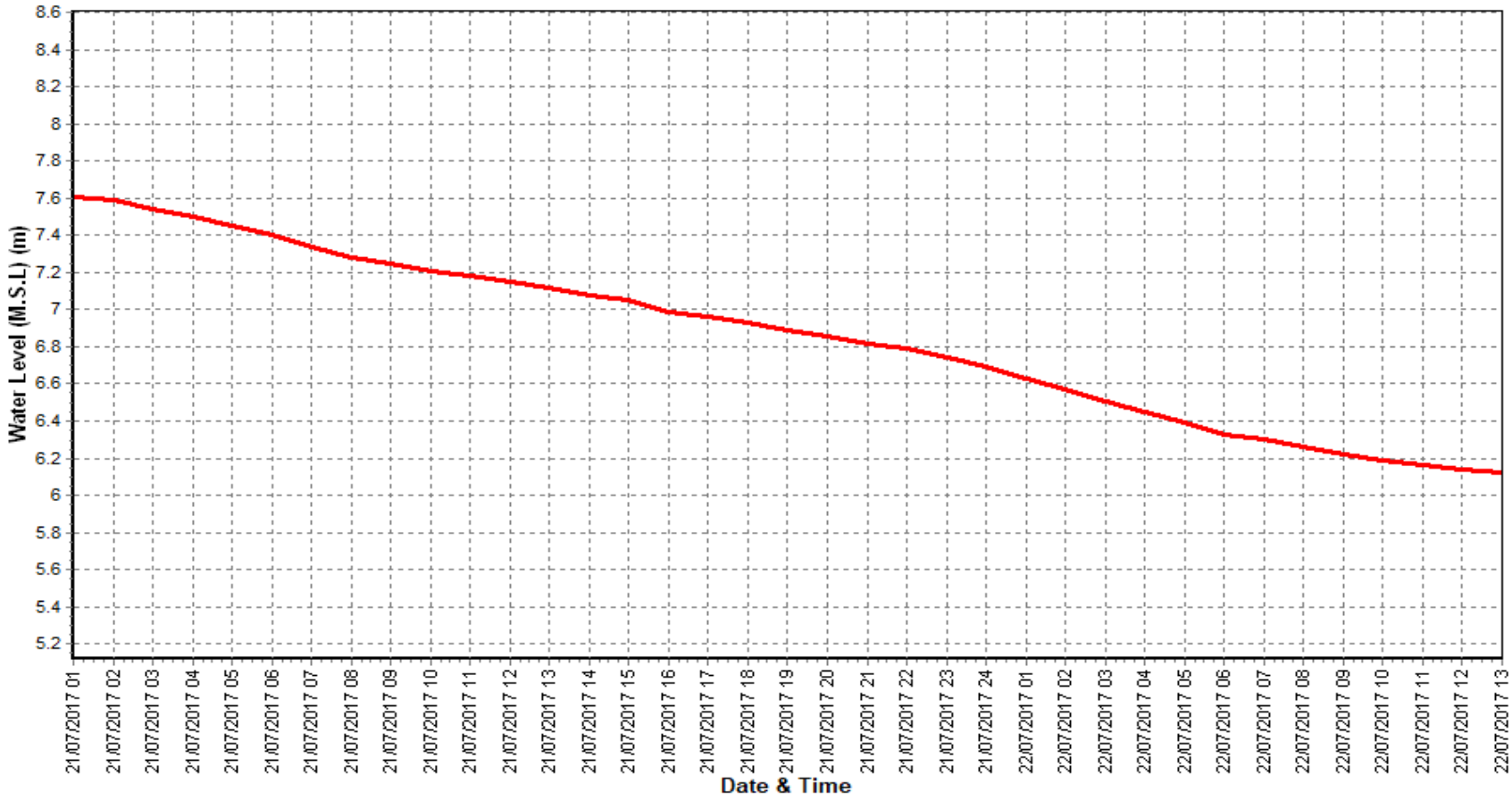


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : Ganjim (WM000P8) **Division : Upper Krishna Divn, Pune**

Local River : Mandovi **Sub-Division : South Western Rivers SD 4,Goa**

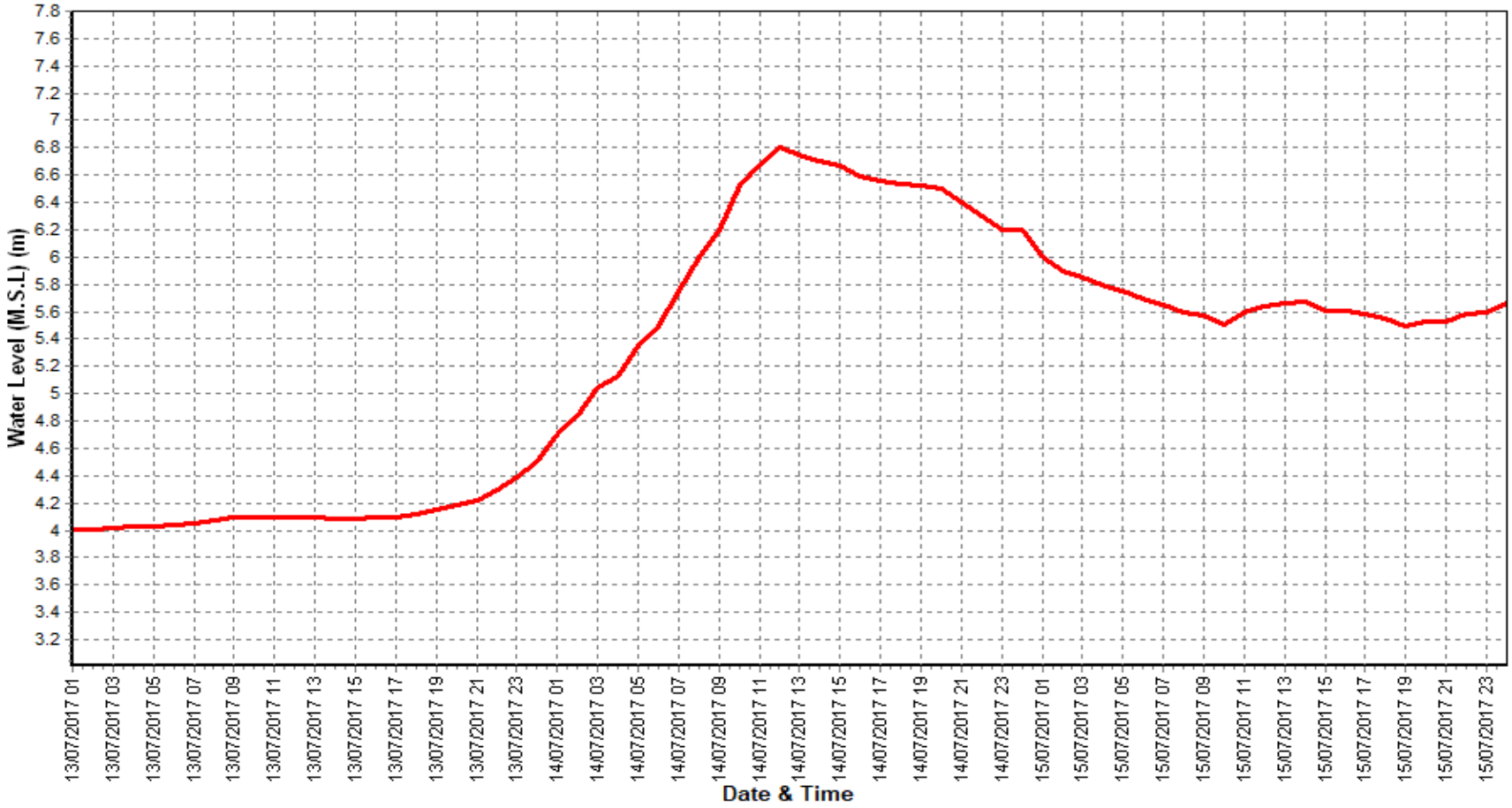


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : Ganjim (WM000P8) **Division : Upper Krishna Divn, Pune**

Local River : Mandovi **Sub-Division : South Western Rivers SD 4,Goa**



Time Span: 72 Hrs

Water Year : 2017-2018

Site	**:**	**Collem**	**Code**	**:**	**WMA00E7**
State	:	Goa	District		South Goa
Basin	:	WFR South of Tapi	Independent River	:	Mandovi
Tributary	:	Khandepar	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Khandepar
Division	:	Upper Krishna Divn, Pune	Sub-Division	:	South Western Rivers SD 4,Goa
Drainage Area	:	117 Sq. Km.	Bank	:	Left
Latitude	:	15°20'20"	Longitude	:	74°14'55"
Zero of Gauge (m)	:	65.000 (m.s.l)	01-12-1979		
		Opening Date	Closing Date		
Gauge	:	15-12-1979			
Discharge	:	15-12-1979			
Sediment	:				
Water Quality	:				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1980-1981	409.1	69.765	02-07-1980	0.210	66.585	01-06-1980
1981-1982	237.0	69.125	05-06-1981	0.190	66.540	14-05-1982
1982-1983	232.8	69.410	29-07-1982	0.300	66.520	21-04-1983
1983-1984	416.3	70.670	12-08-1983	0.000	66.920	07-04-1984
1984-1985	435.0	69.955	18-07-1984	0.000	66.975	27-04-1985
1985-1986	617.5	71.550	01-08-1985	0.000	67.040	18-04-1986
1986-1987	355.2	70.420	07-08-1986	0.000	67.050	13-06-1986
1987-1988	158.7	68.712	07-07-1987	0.311	66.970	17-03-1988
1988-1989	423.9	70.303	18-07-1988	0.331	67.015	27-02-1989
1989-1990	229.4	69.715	22-07-1989	0.200	66.880	01-04-1990
1990-1991	325.8	70.320	18-07-1990	0.260	66.920	25-03-1991
1991-1992	156.8	68.985	26-07-1991	0.000	66.850	19-04-1992
1992-1993	424.2	71.100	21-07-1992	0.000	66.875	14-06-1992
1993-1994	182.2	69.820	12-08-1993	0.000	66.890	25-04-1994
1994-1995	240.0	69.740	30-06-1994	0.000	66.990	15-04-1995
1995-1996	225.0	69.870	18-10-1995	0.000	66.995	06-05-1996
1996-1997	260.7	70.125	21-07-1996	0.000	66.900	06-05-1997
1997-1998	310.0	70.350	31-07-1997	0.000	66.965	14-05-1998
1998-1999	144.0	69.000	13-09-1998	0.000	66.945	07-05-1999

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1999-2000	442.0	71.520	22-07-1999	0.000	66.945	02-06-1999
2000-2001	223.0	70.050	09-07-2000	0.100	66.995	19-04-2001
2001-2002	115.2	68.690	09-07-2001	0.200	67.000	02-06-2001
2002-2003	220.8	70.070	11-08-2002	0.250	66.900	02-05-2003
2003-2004	97.23	68.400	05-08-2003	0.160	66.900	08-06-2003
2004-2005	211.8	70.020	03-08-2004	0.000	66.890	29-04-2005
2005-2006	270.0	70.340	25-07-2005	0.000	66.920	14-06-2005
2006-2007	220.7	69.500	08-08-2006	0.000	66.970	31-05-2007
2007-2008	258.0	70.125	05-08-2007	0.000	66.975	14-06-2007
2008-2009	442.8	71.550	10-08-2008	0.000	66.910	02-04-2009
2009-2010	299.7	70.550	15-07-2009	0.000	66.890	24-04-2010
2010-2011	173.0	69.385	26-07-2010	0.000	66.870	22-03-2011
2011-2012	189.9	70.050	04-08-2011	0.000	66.830	01-06-2011
2012-2013	103.7	68.813	03-08-2012	0.000	66.785	09-04-2013
2013-2014	265.7	70.350	03-07-2013	0.000	66.785	01-06-2013
2014-2015	117.0	69.050	21-07-2014	0.000	66.585	25-04-2015
2015-2016	136.1	69.100	20-07-2015	0.000	66.585	01-06-2015
2016-2017	111.8	68.700	04-08-2016	0.000	66.500	20-02-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : Collem (WMA00E7) **Division : Upper Krishna Divn, Pune**

Local River : Khandepar **Sub-Division : South Western Rivers SD 4,Goa**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	66.720	0.000	67.750	49.32	67.485	27.96	67.370	25.72	67.050	10.41 *	66.800	3.847
2	66.680	0.000	67.620	38.88 *	67.385	24.75	67.250	20.16	67.040	10.08 *	66.790	3.690
3	66.620	0.000	67.615	32.66	67.325	22.03	67.200	16.06 *	67.010	8.629	66.790	3.687
4	66.600	0.000	67.685	42.39	68.090	72.16	67.140	16.11	66.990	7.912	66.790	3.605 *
5	66.580	0.000	67.460	26.16	67.735	48.00	67.090	14.54	67.050	10.02	66.790	3.605 *
6	66.570	0.000	67.480	29.21	67.600	37.55 *	67.060	10.81	67.000	8.133	66.790	3.292
7	66.570	0.000	67.710	48.75	67.440	29.86	67.030	8.178	67.000	8.418	66.790	3.325
8	66.590	0.000	67.390	25.08 *	67.420	27.83	67.020	7.963	66.980	8.209 *	66.780	3.251
9	66.610	0.000	67.220	16.91 *	67.310	22.76	67.000	7.807	66.970	7.375	66.770	3.307
10	66.760	0.000	67.060	10.41	67.460	29.04	67.000	8.809 *	66.950	6.942	66.760	3.082
11	66.890	0.000	67.115	13.15	67.290	19.98	66.975	7.438	66.940	6.429	66.760	3.053
12	67.200	0.000	67.105	13.19	67.240	19.50	66.955	7.097	66.910	6.123	66.760	3.057 *
13	66.880	0.000	67.210	18.98	67.160	14.42 *	67.185	12.04	66.910	5.902	66.760	2.760
14	66.730	0.000	68.385	96.97	67.105	13.22	66.970	7.300	66.900	5.901	66.760	2.768
15	66.720	2.125	67.830	60.63	67.100	12.15 *	66.928	6.412	67.120	12.88 *	66.750	2.708
16	66.830	3.683	68.090	77.13 *	67.100	13.04	66.940	6.873	66.980	7.972	66.750	2.704
17	66.780	2.898	68.075	71.59	67.150	14.53	67.160	14.42 *	67.000	8.129	66.740	2.681
18	66.780	3.417 *	68.700	147.6 *	67.250	20.42	67.595	38.04	66.950	7.127	66.740	2.630
19	66.800	3.364	69.100	207.0 *	67.340	22.04	68.135	81.74	66.940	7.075 *	66.740	2.718 *
20	66.740	2.357	68.980	188.1 *	67.340	22.50 *	68.140	88.19	66.920	6.810	66.740	2.549
21	66.725	2.147	68.600	134.4 *	68.810	162.9 *	67.800	61.78	66.910	6.299	66.730	2.483
22	66.700	2.102 #	68.120	80.04 *	67.605	37.88 #	67.515	35.12	66.900	6.030 *	66.730	2.472
23	66.730	2.209	67.740	47.35 *	67.415	30.10	67.290	22.33	66.885	5.103	66.730	2.390
24	67.060	10.74 *	67.890	59.18 *	67.570	39.42	67.190	15.64 *	66.875	5.068	66.720	2.369
25	67.300	20.54 *	67.850	55.89 *	67.680	43.00 *	67.155	16.28	66.865	4.914	66.720	2.336
26	67.280	19.60 *	67.600	37.55 *	67.745	49.53	67.175	16.51	66.860	4.881	66.720	2.399 *
27	67.420	26.70 *	67.430	27.25 *	67.820	53.48 *	67.120	14.10	66.850	4.706	66.710	2.252
28	67.375	24.73	67.913	63.38	67.910	64.79	67.080	11.43 *	66.825	4.402	66.710	2.199
29	67.335	23.73	68.060	69.85	67.670	43.69	67.110	13.81	66.810	3.998 *	66.710	2.194
30	67.750	50.53	67.780	50.37 *	67.860	63.36	67.060	10.74 *	66.805	4.191	66.710	2.113
31			67.600	39.35	67.560	39.51			66.800	3.956		
Ten-Daily Mean												
I Ten-Daily	66.630	0.000	67.499	31.98	67.525	34.19	67.116	13.62	67.004	8.612	66.785	3.469
II Ten-Daily	66.835	1.784	68.059	89.43	67.207	17.18	67.298	26.95	66.957	7.435	66.750	2.763
III Ten-Daily	67.168	18.30	67.871	60.42	67.786	57.06	67.249	21.78	66.853	4.868	66.719	2.321
Monthly												
Min.	66.570	0.000	67.060	10.41	67.100	12.15	66.927	6.412	66.800	3.956	66.710	2.113
Max.	67.750	50.53	69.100	207.0	68.810	162.9	68.140	88.19	67.120	12.88	66.800	3.847
Mean	66.878	6.696	67.812	60.6	67.515	36.82	67.221	20.78	66.935	6.904	66.751	2.851

Annual Runoff in MCM = 365 Annual Runoff in mm = 3116

Peak Observed Discharge = 96.97 cumecs on 14/07/2017 Corres. Water Level :68.385 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :66.72 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : Collem (WMA00E7) **Division : Upper Krishna Divn, Pune**

Local River : Khandepar **Sub-Division : South Western Rivers SD 4,Goa**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	66.700	2.034	66.570	0.768	66.540	0.625	66.520	0.000	66.500	0.000	66.470	0.000
2	66.700	2.102 *	66.570	0.765	66.540	0.617	66.520	0.000	66.500	0.000	66.470	0.000
3	66.700	2.102 *	66.570	0.763	66.540	0.452 #	66.520	0.000	66.500	0.000	66.470	0.000
4	66.700	2.018	66.570	0.769	66.540	0.452 *	66.520	0.000	66.500	0.000	66.470	0.000
5	66.700	2.041	66.570	0.766	66.540	0.593	66.520	0.000	66.500	0.000	66.470	0.000
6	66.700	2.046	66.570	0.665 *	66.540	0.599	66.520	0.000	66.500	0.000	66.470	0.000
7	66.700	2.033	66.570	0.665 *	66.540	0.587	66.520	0.000	66.500	0.000	66.470	0.000
8	66.700	2.042	66.570	0.725	66.540	0.582	66.520	0.000	66.490	0.000	66.460	0.000
9	66.700	2.039	66.560	0.639	66.540	0.452 *	66.520	0.000	66.490	0.000	66.460	0.000
10	66.700	2.102 *	66.560	0.622	66.540	0.452 *	66.520	0.000	66.490	0.000	66.540	0.000
11	66.690	1.637	66.560	0.617	66.540	0.452 *	66.520	0.000	66.490	0.000	66.680	0.000
12	66.690	1.599	66.560	0.589 *	66.540	0.452 *	66.520	0.000	66.490	0.000	66.530	0.000
13	66.690	1.961 *	66.560	0.589 *	66.540	0.452 *	66.520	0.000	66.490	0.000	66.520	0.000
14	66.680	1.537	66.560	0.589 *	66.540	0.452 *	66.520	0.000	66.490	0.000	66.510	0.000
15	66.680	1.595	66.560	0.589 *	66.540	0.452 *	66.520	0.000	66.480	0.000	66.560	0.000
16	66.670	1.454	66.560	0.583	66.540	0.452 *	66.520	0.000	66.480	0.000	66.530	0.000
17	66.650	1.448 *	66.560	0.645	66.540	0.452 *	66.510	0.000	66.480	0.000	66.530	0.000
18	66.590	0.981	66.560	0.639	66.530	0.391 *	66.510	0.000	66.480	0.000	66.520	0.000
19	66.590	0.978	66.560	0.645	66.530	0.391 *	66.510	0.000	66.480	0.000	66.520	0.000
20	66.590	0.976	66.560	0.647	66.530	0.391 *	66.510	0.000	66.480	0.000	66.520	0.000
21	66.580	0.746 *	66.560	0.589 *	66.530	0.391 *	66.510	0.000	66.480	0.000	66.520	0.000
22	66.580	0.746 *	66.560	0.643	66.530	0.391 *	66.510	0.000	66.480	0.000	66.520	0.000
23	66.580	0.746 *	66.550	0.518 *	66.530	0.391 *	66.510	0.000	66.480	0.000	66.520	0.000
24	66.580	0.746 *	66.550	0.518 *	66.530	0.391 *	66.510	0.000	66.480	0.000	66.520	0.000
25	66.580	0.746 *	66.550	0.518 *	66.530	0.391 *	66.510	0.000	66.480	0.000	66.510	0.000
26	66.580	0.746 *	66.550	0.518 *	66.520	0.334 *	66.500	0.000	66.480	0.000	66.510	0.000
27	66.580	0.793	66.550	0.518 *	66.520	0.334 *	66.500	0.000	66.480	0.000	66.510	0.000
28	66.580	0.795	66.540	0.452 *	66.520	0.334 *	66.500	0.000	66.480	0.000	66.510	0.000
29	66.580	0.779	66.540	0.605			66.500	0.000	66.480	0.000	66.510	0.000
30	66.570	0.765	66.540	0.647			66.500	0.000	66.480	0.000	66.510	0.000
31	66.570	0.665 *	66.540	0.649			66.500	0.000			66.510	0.000
Ten-Daily Mean												
I Ten-Daily	66.700	2.056	66.568	0.715	66.540	0.541	66.520	0.000	66.497	0.000	66.475	0.000
II Ten-Daily	66.652	1.417	66.560	0.613	66.537	0.434	66.516	0.000	66.484	0.000	66.542	0.000
III Ten-Daily	66.578	0.752	66.548	0.562	66.526	0.369	66.505	0.000	66.480	0.000	66.514	0.000
Monthly												
Min.	66.570	0.665	66.540	0.452	66.520	0.334	66.500	0.000	66.480	0.000	66.460	0.000
Max.	66.700	2.102	66.570	0.769	66.540	0.625	66.520	0.000	66.500	0.000	66.680	0.000
Mean	66.641	1.387	66.558	0.628	66.535	0.454	66.513	0	66.487	0	66.510	0

Peak Computed Discharge = 207.0 cumecs on 19/07/2017 Corres. Water Level :69.1 m

Lowest Computed Discharge = 0.334 cumecs on 26/02/2018 Corres. Water Level :66.52 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

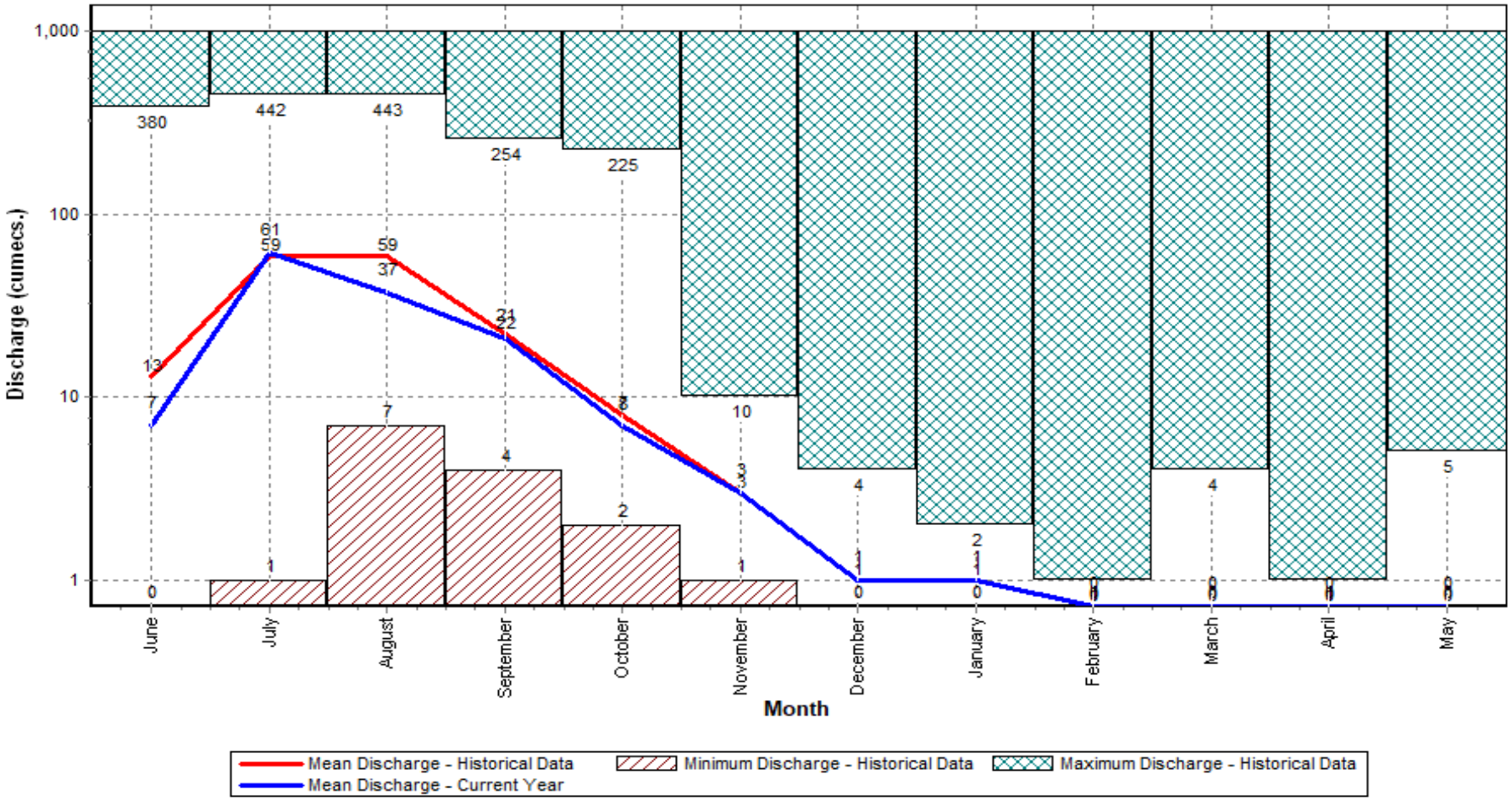
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : Collem (WMA00E7) | **Data considered : 1980-2018** | **Division : Upper Krishna Divn, Pune**

Local River : Khandepar | **Sub-Division : South Western Rivers SD 4,Goa**


Discharge (cumecs.)
1,000
100
10
1
380
442
443
254
225
61
59
59
37
21
22
13
7
8
10
3
3
4
4
2
2
1
1
1
7
4
2
1
0
0
0

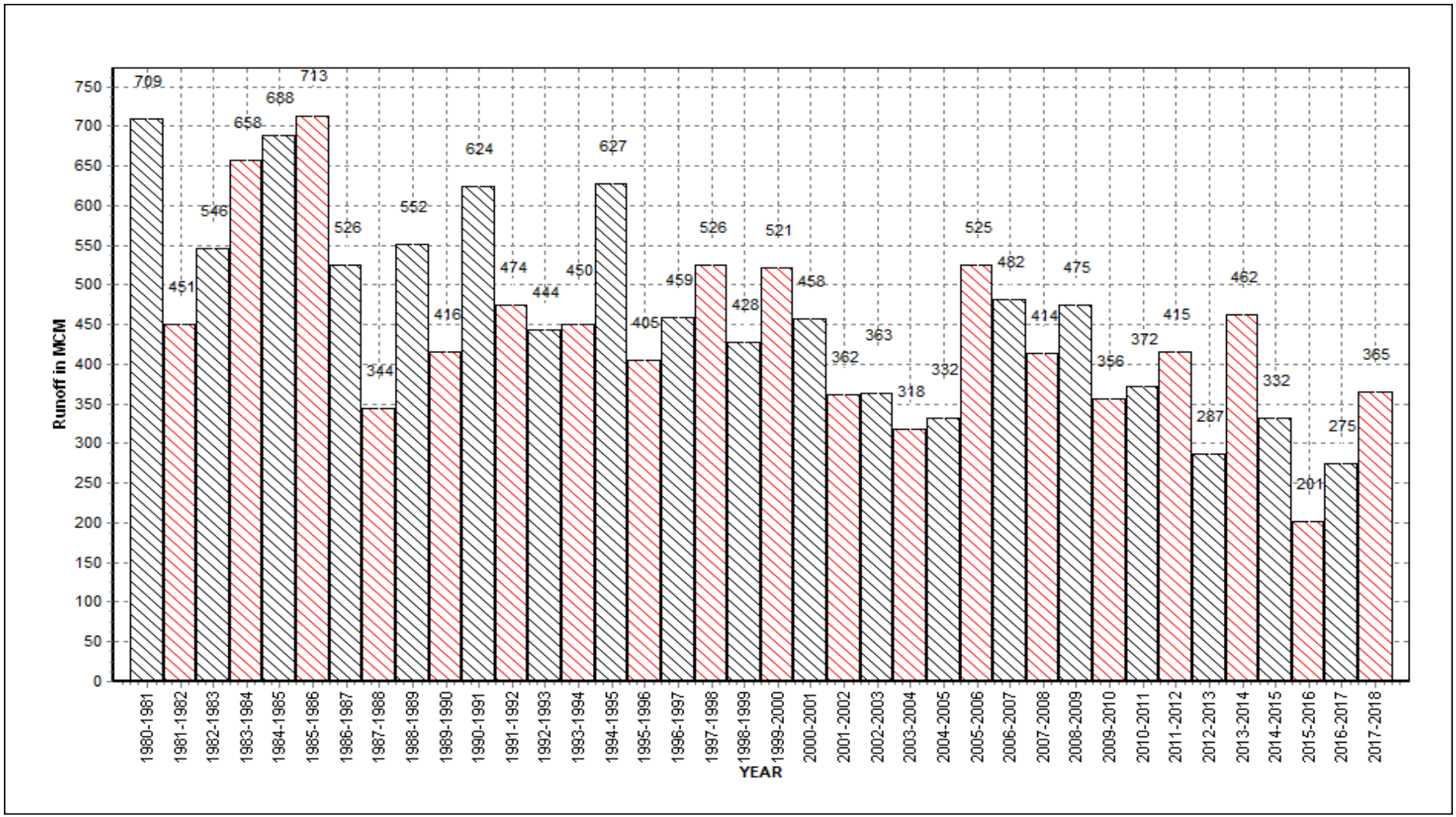
Annual Runoff Values for the period: 1980 - 2018

Station Name : Collem (WMA00E7)

Local River : Khandepar

Division : Upper Krishna Divn, Pune

Sub-Division : South Western Rivers SD 4,Goa



Note: Missing values have not been considered while arriving at Annual Runoff

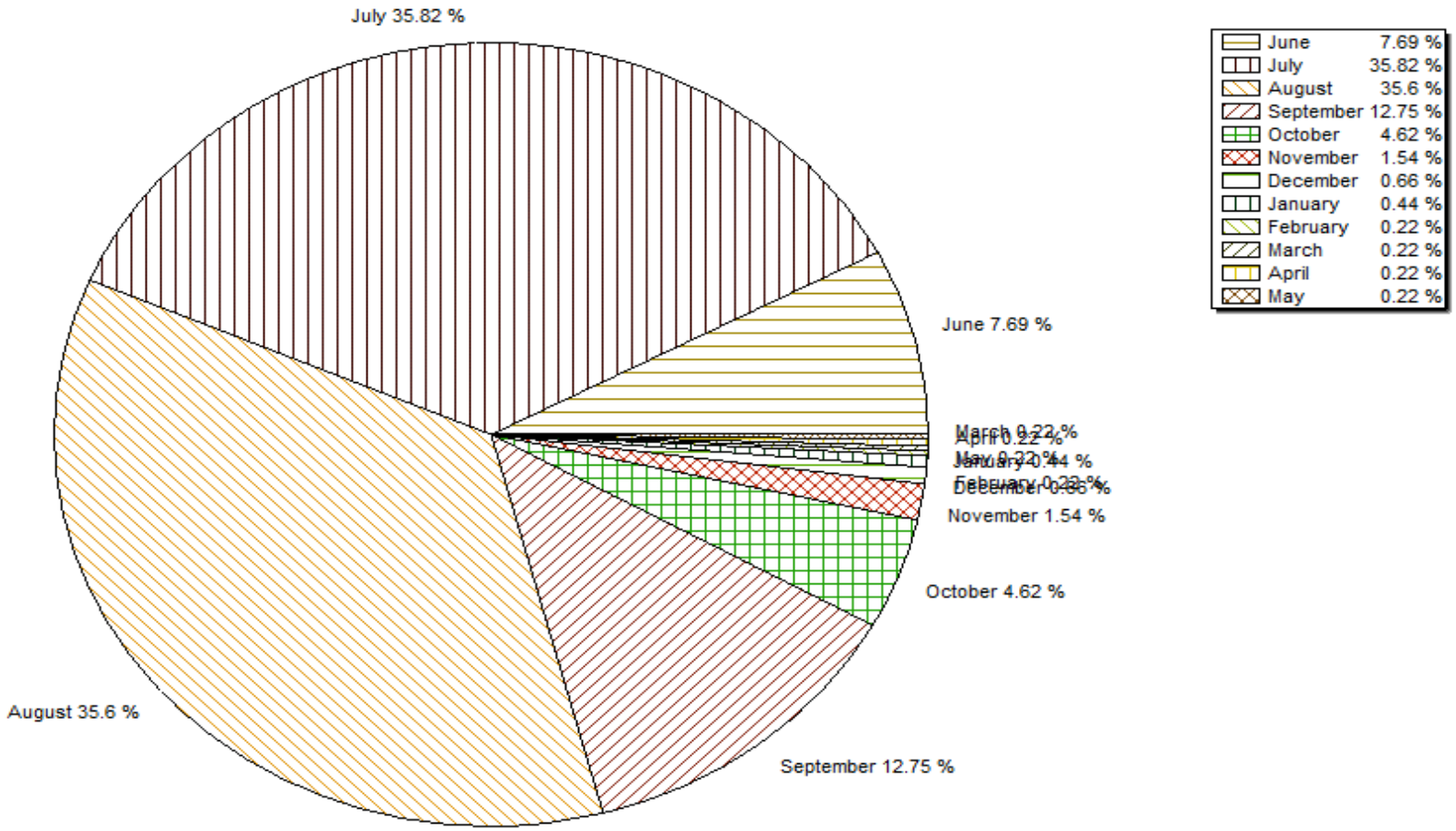
Monthly Average Runoff based on period : 1980-2017

Station Name : Collem (WMA00E7)

Local River : Khandepar

Division : Upper Krishna Divn, Pune

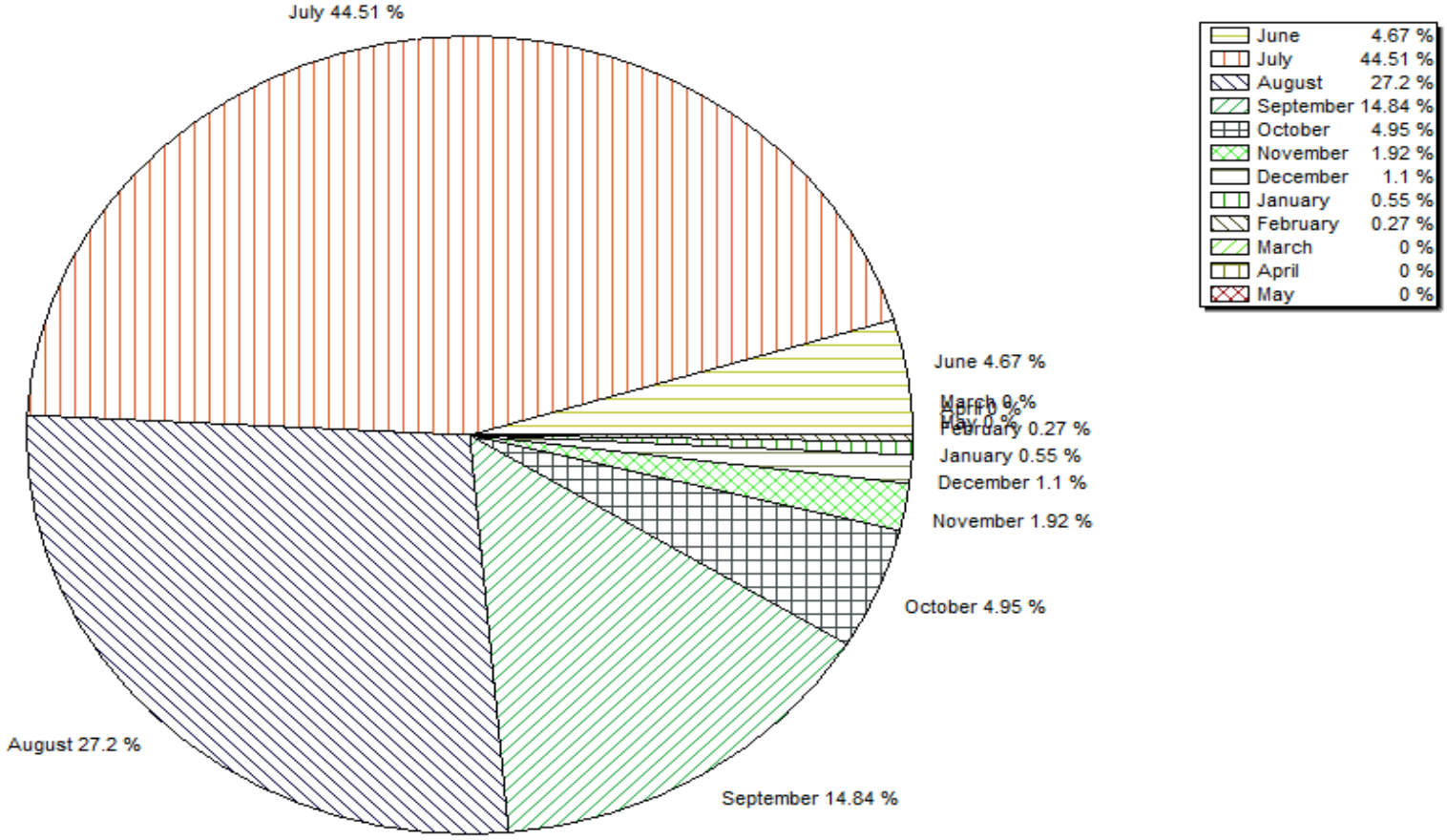
Sub-Division : South Western Rivers SD 4,Goa



Monthly Runoff for the Year : 2017-2018

Station Name : Collem (WMA00E7)
Local River : Khandepar

Division : Upper Krishna Divn, Pune
Sub-Division : South Western Rivers SD 4,Goa



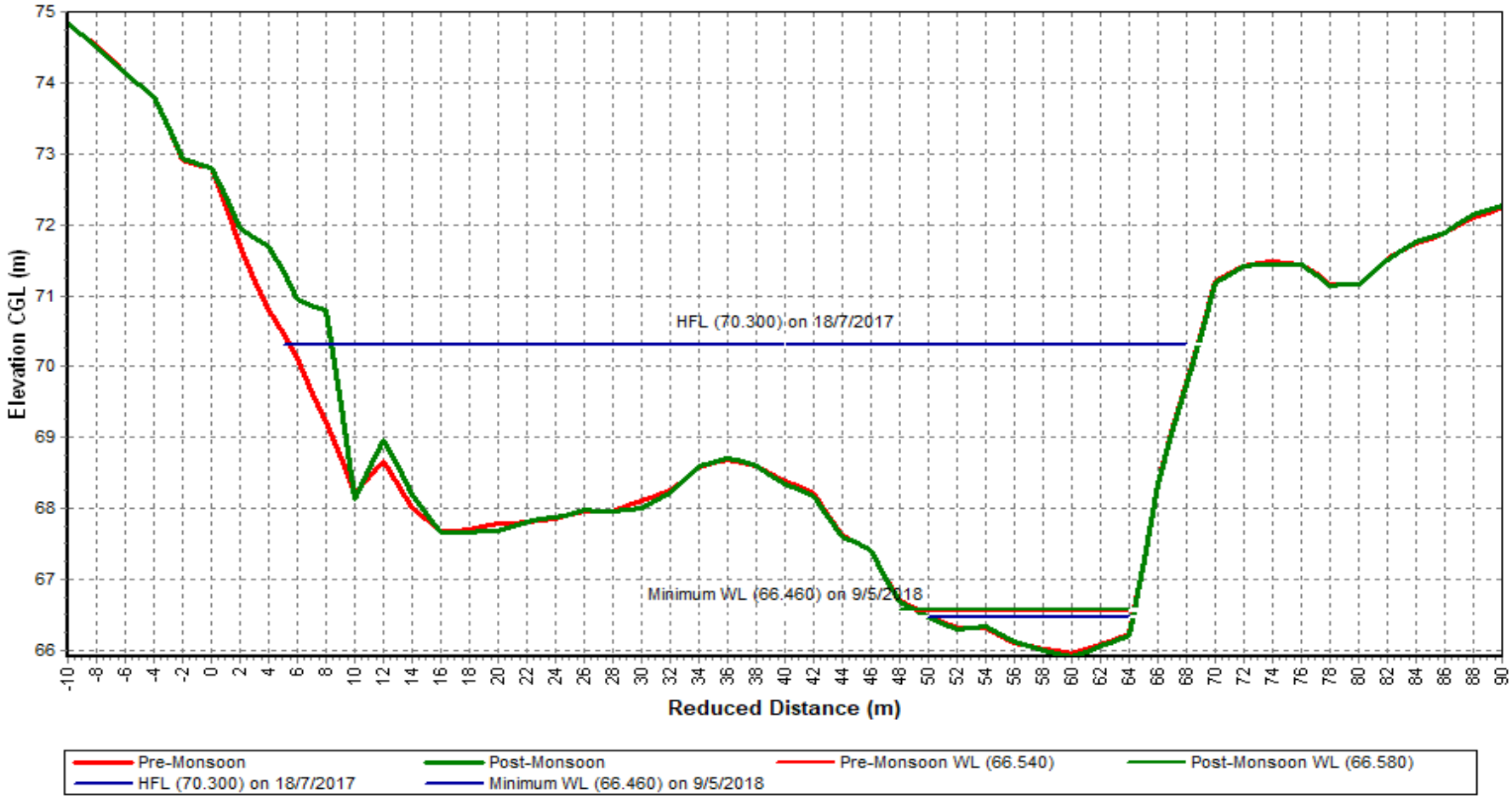
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : Collem (WMA00E7)

Local River : Khandepar

Division : Upper Krishna Divn, Pune

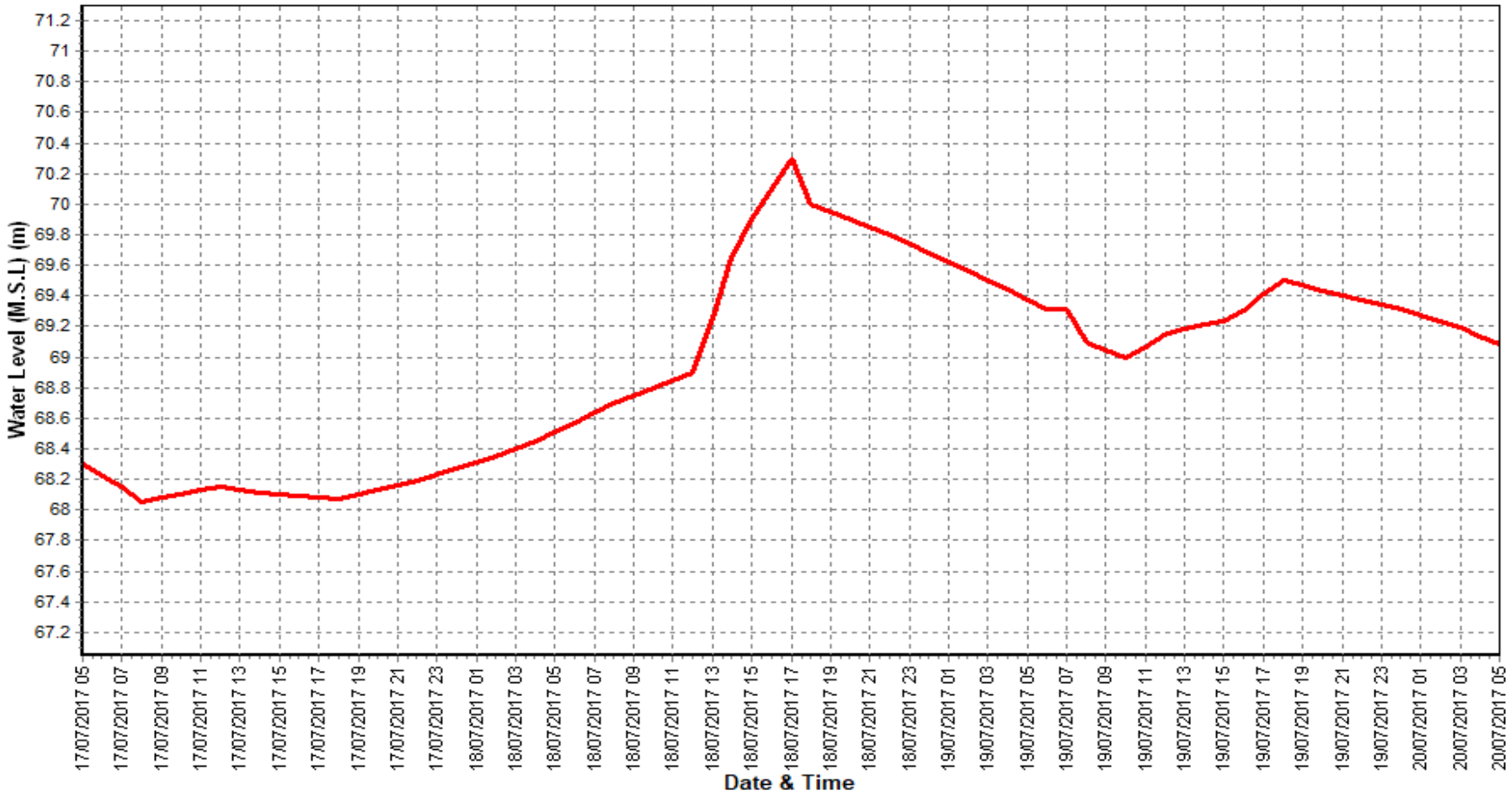
Sub-Division : South Western Rivers SD 4,Goa



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : Collem (WMA00E7) **Division : Upper Krishna Divn, Pune**

Local River : Khandepar **Sub-Division : South Western Rivers SD 4,Goa**

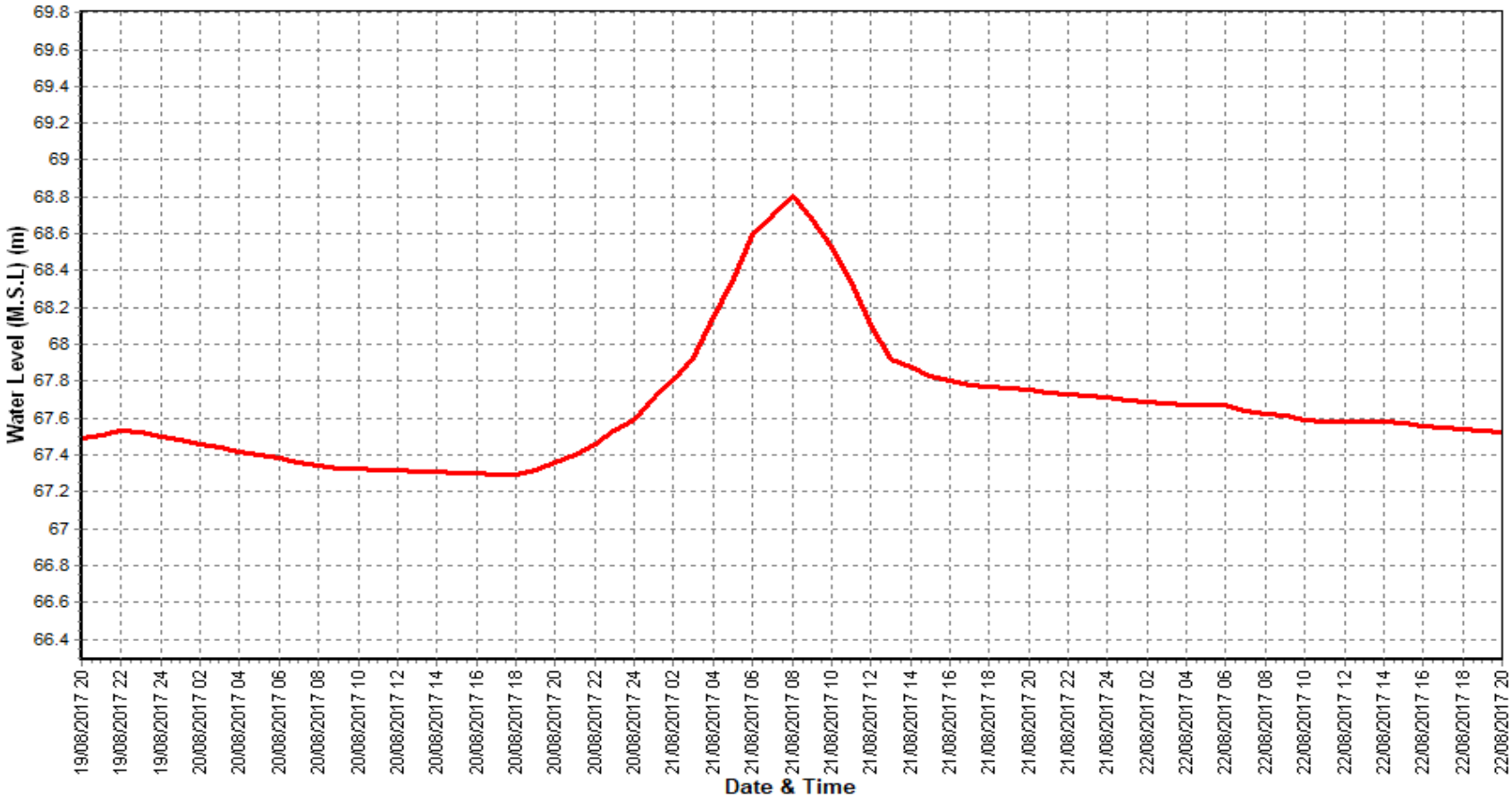


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : Collem (WMA00E7) **Division : Upper Krishna Divn, Pune**

Local River : Khandepar **Sub-Division : South Western Rivers SD 4,Goa**

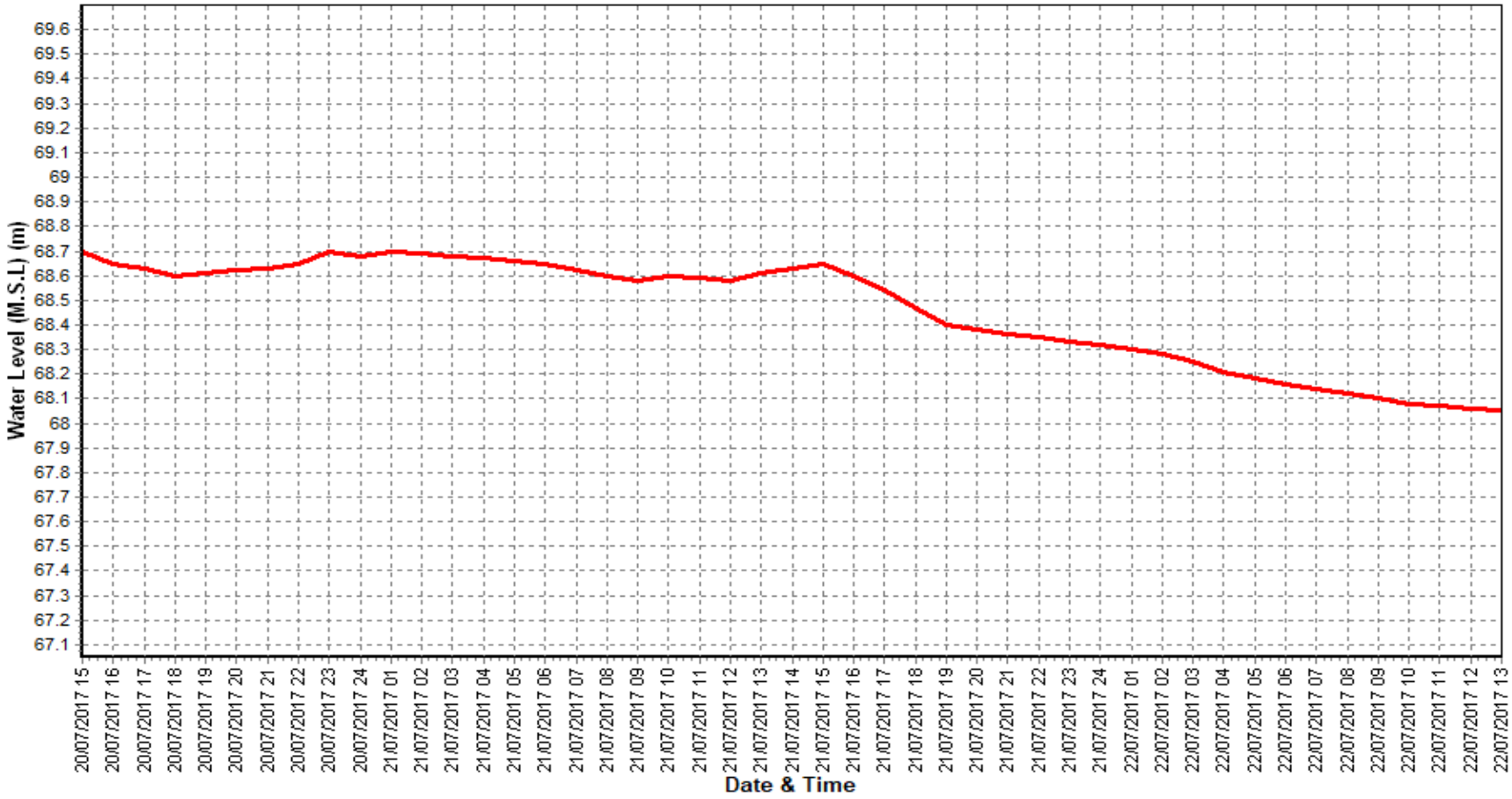


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : Collem (WMA00E7) **Division : Upper Krishna Divn, Pune**

Local River : Khandepar **Sub-Division : South Western Rivers SD 4,Goa**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-2018

Site	**: Santeguli**		**Code**	**: WA000K9**	
State	: Karnataka		District	North Canara	
Basin	: WFR South of Tapi		Independent River	: Aghanashini	
Tributary	: -		Sub Tributary	:	
Sub-Sub Tributary	:		Local River	: Aghanashini	
Division	: Cauvery Division, Bangalore		Sub-Division	: SWRSD-III, Mangalore	
Drainage Area	: 1090 Sq. Km.		Bank	: Left	
Latitude	: 14°26'04"		Longitude	: 74°35'20"	
Zero of Gauge (m)	: 8.000(m.s.l)		21-05-1988		
	Opening Date		Closing Date		
Gauge	: 21-05-1988				
Discharge	: 09-06-1988				
Sediment	:				
Water Quality	: 01-09-1993				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1988-1989	6730	17.995	18-07-1988	0.000	10.280	08-06-1988
1989-1990	3640	16.310	22-07-1989	0.000	10.110	23-04-1990
1990-1991	2893	16.380	14-08-1990	0.900	10.520	28-04-1991
1991-1992	2144	16.303	17-07-1991	5.360	10.619	03-06-1991
1992-1993	2913	17.142	21-07-1992	1.450	10.490	06-05-1993
1993-1994	1982	15.788	16-07-1993	0.503	10.625	02-06-1993
1994-1995	3995	17.200	12-07-1994	1.227	10.240	29-05-1995
1995-1996	2020	16.500	21-07-1995	0.000	10.515	18-05-1996
1996-1997	1450	15.600	23-07-1996	0.000	10.650	08-06-1996
1997-1998	3061	16.590	12-07-1997	0.000	10.510	16-06-1997
1998-1999	2962	15.950	29-06-1998	0.500	10.450	07-06-1998
1999-2000	2870	17.660	23-07-1999	0.000	10.500	12-05-2000
2000-2001	4959	18.090	13-07-2000	0.001	10.650	01-06-2000
2001-2002	1421	14.630	09-07-2001	0.000	10.740	02-06-2001
2002-2003	1440	15.660	10-08-2002	0.992	10.490	15-04-2003
2003-2004	956.5	14.990	28-07-2003	0.468	10.475	07-06-2003
2004-2005	765.1	15.530	13-08-2004	0.000	10.410	31-05-2005
2005-2006	1808	17.000	25-07-2005	0.000	10.400	01-06-2005
2006-2007	1780	16.480	15-07-2006	0.000	10.420	31-05-2007

Q:Observed / Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2007-2008	2412	17.640	07-08-2007	0.000	10.420	09-06-2007
2008-2009	2053	17.300	12-08-2008	0.247	10.430	17-05-2009
2009-2010	1848	17.750	16-07-2009	1.071	10.490	04-06-2009
2010-2011	1246	16.030	29-07-2010	0.874	10.430	30-05-2011
2011-2012	2355	18.370	17-07-2011	0.970	10.440	01-06-2011
2012-2013	1319	16.330	11-08-2012	0.073	10.805	17-06-2012
2013-2014	1820	17.370	03-07-2013	0.607	10.430	25-04-2014
2014-2015	1955	17.540	31-07-2014	0.737	10.450	12-04-2015
2015-2016	449.6	14.130	20-07-2015	0.000	10.220	11-05-2016
2016-2017	782.5	15.100	05-07-2016	0.120	10.240	06-06-2016

Q:Observed / Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : Santeguli (WA000K9) **Division : Cauvery Division, Bangalore**

Local River : Aghanashini **Sub-Division : SWRSD-III, Mangalore**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	10.340	0.710	13.400	231.9	12.680	129.3	13.060	198.2	12.030	55.92 *	11.530	25.31
2	10.350	0.728	14.320	444.7 *	12.550	103.7	12.770	133.9 *	12.620	114.8 *	11.510	25.26
3	10.400	0.844	13.610	257.2 #	12.470	94.29	12.590	111.2 *	12.160	62.63	11.490	23.44
4	10.400	1.051 *	13.550	290.9	13.500	281.4	12.460	89.50	12.070	50.34	11.460	21.12 *
5	10.380	0.824	13.210	201.2	13.600	293.4	12.370	82.30	12.010	53.84	11.450	20.68 *
6	10.490	1.881	13.290	219.1	13.140	188.8 *	12.300	74.83	12.360	80.40	11.440	20.17
7	10.480	1.840	12.890	153.4	13.130	202.5	12.250	72.27	12.380	81.16	11.430	21.24
8	10.500	2.150	12.600	108.3	12.840	150.2	12.300	85.53	12.070	59.13 *	11.420	20.56
9	10.480	1.987	12.390	88.84 *	12.610	113.9	12.220	72.25	11.990	50.75	11.400	19.25
10	10.690	6.489	12.380	75.40	12.520	103.1	12.130	64.16 *	11.950	44.16	11.390	19.04
11	11.700	33.36 *	12.200	71.19	12.380	82.65	12.160	63.17	12.080	53.16	11.370	18.93
12	12.940	154.1	12.440	100.9	12.830	148.1	12.150	60.52	11.990	43.29	11.340	16.21 *
13	12.360	91.67	12.430	97.42	12.490	99.64 *	12.070	50.57	11.900	41.53	11.340	17.26
14	11.940	49.81 #	13.470	264.3	12.340	71.03	12.040	54.78	12.270	73.31	11.330	18.63
15	11.560	27.55	13.400	243.3	12.270	76.85 *	12.050	55.42	12.150	65.89 *	11.320	16.09
16	11.880	43.43 #	13.440	241.7 *	12.200	65.48	12.210	72.18	11.980	45.56	11.300	16.15
17	11.920	46.91 #	13.410	243.2	12.480	97.18	12.640	117.2 *	11.880	39.71	11.300	16.07
18	11.830	41.42 *	13.710	337.2	12.220	72.75	12.530	105.9	11.820	40.76 *	11.300	16.21
19	11.660	31.64 #	15.030	649.1	12.180	71.09	12.350	81.55	11.790	33.86	11.290	14.39 *
20	11.550	23.94	16.050	1056	12.550	105.3 *	12.280	73.55	11.750	33.63	11.440	20.56
21	11.620	28.38 #	14.780	620.5	12.630	122.1	12.350	81.95	11.720	29.24	11.440	22.41
22	12.115	56.18	14.020	413.8	13.140	210.5	12.390	81.28	11.700	33.36 *	11.360	18.07
23	12.000	54.18	13.600	273.2 *	12.760	138.7	12.240	72.10	11.680	28.64	11.310	15.93
24	11.990	54.16	13.640	307.3	12.590	105.0	12.160	66.76 *	11.660	26.92	11.270	15.93
25	13.140	188.8 *	13.600	294.0	12.700	124.8 *	12.090	58.91	12.320	76.78	11.230	14.24
26	13.410	236.1 *	13.250	222.2	12.750	124.2	12.400	82.86	12.000	46.53	11.220	12.06 *
27	13.480	268.7	13.030	181.8	12.970	162.2 *	12.490	88.17	11.760	33.27	11.210	13.94
28	12.770	121.9	13.030	180.9	13.000	176.1	12.350	81.30	11.690	29.13	11.200	13.52
29	13.380	217.2	13.240	220.7	14.530	585.4	12.130	64.16 *	11.630	29.44 *	11.180	13.05
30	13.400	229.9	13.010	168.2 *	14.460	539.9	12.060	56.24	11.590	25.64	11.170	10.54 #
31			12.780	140.0	13.610	275.3 #			11.550	25.64		
Ten-Daily Mean												
I Ten-Daily	10.451	1.850	13.164	207.1	12.904	166.1	12.445	98.42	12.164	65.31	11.452	21.61
II Ten-Daily	11.934	54.38	13.558	330.4	12.394	89.00	12.248	73.49	11.961	47.07	11.333	17.05
III Ten-Daily	12.730	145.5	13.453	274.8	13.195	233.1	12.266	73.37	11.755	34.96	11.259	14.97
Monthly												
Min.	10.340	0.710	12.200	71.19	12.180	65.48	12.040	50.57	11.550	25.64	11.170	10.54
Max.	13.480	268.7	16.050	1056	14.530	585.4	13.060	198.2	12.620	114.8	11.530	25.31
Mean	11.705	67.26	13.394	270.9	12.843	165	12.320	81.76	11.953	48.66	11.348	17.88

Annual Runoff in MCM = 1802 Annual Runoff in mm = 1653

Peak Observed Discharge = 1056 cumecs on 20/07/2017 Corres. Water Level :16.05 m

Lowest Observed Discharge = 0.555 cumecs on 19/04/2018 Corres. Water Level :10.31 m

Q: Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : Santeguli (WA000K9) **Division : Cauvery Division, Bangalore**

Local River : Aghanashini **Sub-Division : SWRSD-III, Mangalore**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	11.150	14.26	10.820	8.664	10.620	4.956	10.470	1.869	10.400	1.271 *	10.380	1.931
2	11.140	18.30 *	10.820	8.677	10.610	5.036	10.470	1.842	10.400	1.266	10.350	1.714
3	11.120	17.55 *	10.800	8.273	10.600	4.817	10.460	1.834	10.390	1.138	10.350	1.700
4	11.110	13.99	10.800	8.059	10.600	3.802 *	10.460	1.879 *	10.380	1.118	10.340	1.467
5	11.100	13.46	10.800	8.016	10.590	4.272	10.460	1.858	10.380	1.073	10.340	1.458
6	11.100	13.44	10.790	7.867	10.590	4.096	10.450	1.817	10.360	1.071	10.330	1.474 *
7	11.100	13.45	10.780	7.354 *	10.590	4.176	10.450	1.699	10.360	1.031	10.350	1.520
8	11.100	13.39	10.780	7.681	10.590	4.132	10.440	1.675	10.360	0.935 *	10.350	1.493
9	11.090	13.65	10.780	7.661	10.590	3.917	10.440	1.677	10.350	0.865	10.320	1.398
10	11.080	16.11 *	10.770	7.572	10.590	4.091	10.440	1.659	10.350	0.706	10.300	1.366
11	11.050	12.62	10.760	7.131	10.590	3.641 *	10.440	1.662 *	10.350	0.751	10.310	1.367
12	11.030	12.85	10.750	7.031	10.590	3.768	10.430	1.598	10.340	0.734	10.300	1.366
13	11.020	12.01	10.750	7.032	10.590	3.819	10.430	1.598	10.330	0.643	10.340	1.525 *
14	11.020	12.07	10.740	6.457 *	10.580	3.575	10.430	1.522	10.330	0.642	10.470	1.796
15	11.010	11.92	10.730	6.242 *	10.570	3.386	10.430	1.582	10.330	0.718 *	10.680	3.829
16	11.000	11.66	10.720	6.582	10.560	3.453	10.430	1.582	10.330	0.628	10.600	3.313
17	11.000	13.42 *	10.710	6.466	10.550	3.237	10.430	1.635	10.320	0.610	10.590	3.270
18	10.950	11.10	10.710	6.410	10.550	3.033 *	10.450	1.769 *	10.320	0.607	10.670	3.631
19	10.940	11.25	10.700	6.035	10.540	2.979	10.550	3.116	10.310	0.555	10.580	3.176
20	10.920	10.74	10.690	5.951	10.540	2.959	10.540	2.990	10.410	1.420	10.540	2.758 *
21	10.910	10.68	10.690	5.423 *	10.520	2.660	10.530	2.876	10.330	0.624	10.500	2.350
22	10.900	10.66	10.680	5.781	10.520	2.723	10.570	3.478	10.330	0.718 *	10.510	2.380
23	10.890	10.13	10.680	5.748	10.520	2.727	10.520	2.643	10.330	0.608	10.540	3.070
24	10.880	9.871 *	10.670	5.572	10.510	2.618	10.490	2.330	10.330	0.605	10.580	3.132
25	10.860	9.336 *	10.660	5.491	10.500	2.355 *	10.470	1.993 *	10.320	0.602	10.560	2.904 *
26	10.850	9.702	10.660	4.848 *	10.490	2.343	10.450	1.678	10.320	0.589	10.600	3.266
27	10.840	9.638	10.650	5.390	10.500	2.418	10.440	1.645	10.320	0.580	10.580	3.054 *
28	10.840	9.616	10.650	4.665 *	10.490	2.052	10.440	1.496	10.320	0.579	10.560	2.983
29	10.830	9.566	10.650	5.538			10.430	1.559 *	10.340	0.787 *	10.550	2.931
30	10.830	8.746	10.640	5.053			10.420	1.459 *	10.360	0.935 *	10.540	2.852
31	10.820	8.313 *	10.630	4.308 *			10.400	1.283			10.530	2.709
Ten-Daily Mean												
I Ten-Daily	11.109	14.76	10.794	7.982	10.597	4.330	10.454	1.781	10.373	1.047	10.341	1.552
II Ten-Daily	10.994	11.96	10.726	6.534	10.566	3.385	10.456	1.905	10.337	0.731	10.508	2.603
III Ten-Daily	10.859	9.659	10.660	5.256	10.506	2.487	10.469	2.040	10.330	0.663	10.550	2.876
Monthly												
Min.	10.820	8.313	10.630	4.308	10.490	2.052	10.400	1.283	10.310	0.555	10.300	1.366
Max.	11.150	18.30	10.820	8.677	10.620	5.036	10.570	3.478	10.410	1.420	10.680	3.829
Mean	10.983	12.05	10.725	6.548	10.560	3.466	10.460	1.913	10.347	0.814	10.469	2.361

Peak Computed Discharge = 444.7 cumecs on 02/07/2017 **Corres. Water Level :14.32 m**

Lowest Computed Discharge = 0.718 cumecs on 15/04/2018 **Corres. Water Level :10.33 m**

Q: Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

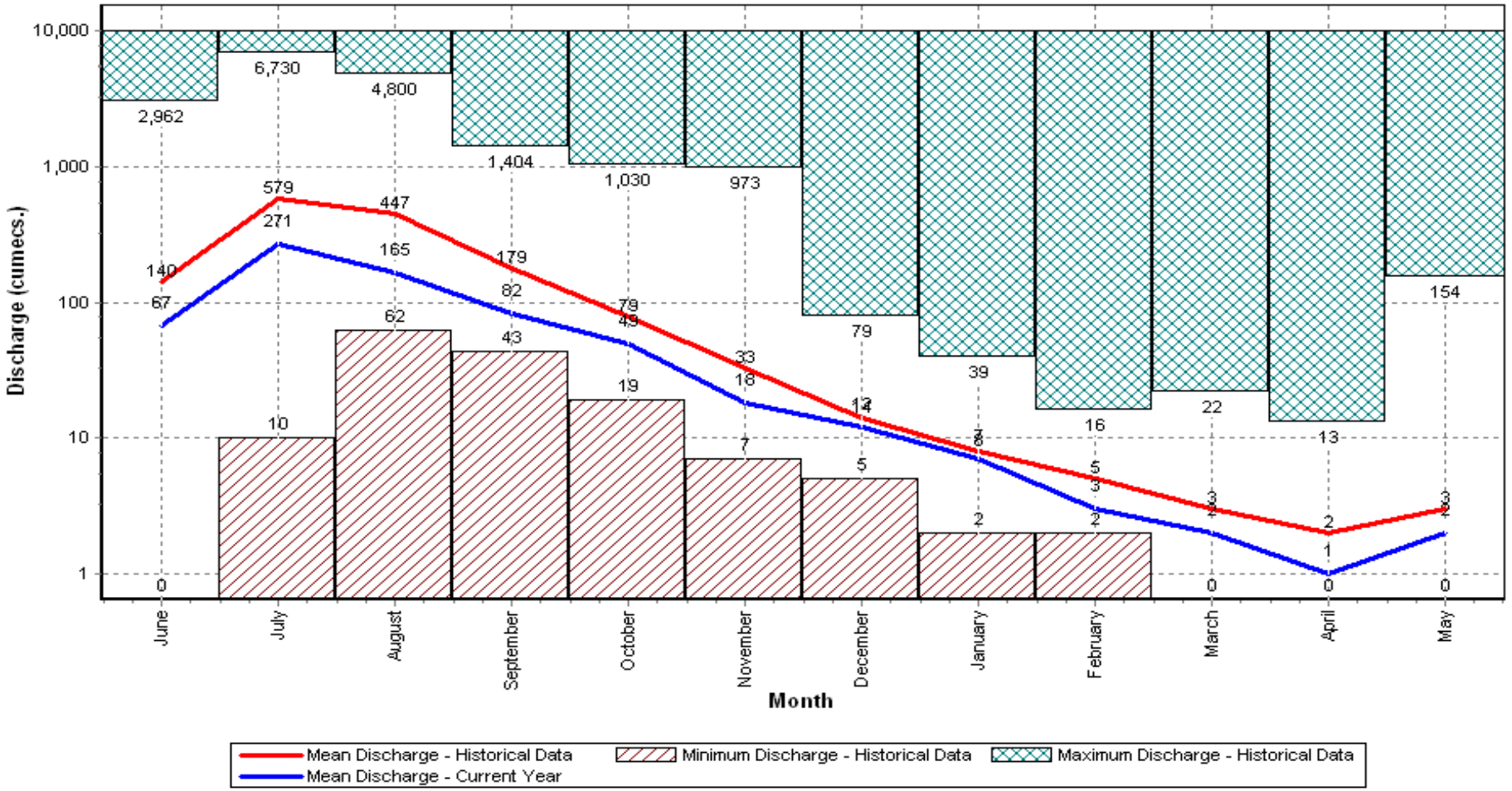
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : Santeguli (WA000K9) | **Data considered : 2016-2018** | **Division : Cauvery Division, Bangalore**

Local River : Aghanashini | **Sub-Division : SWRSD-III, Mangalore**



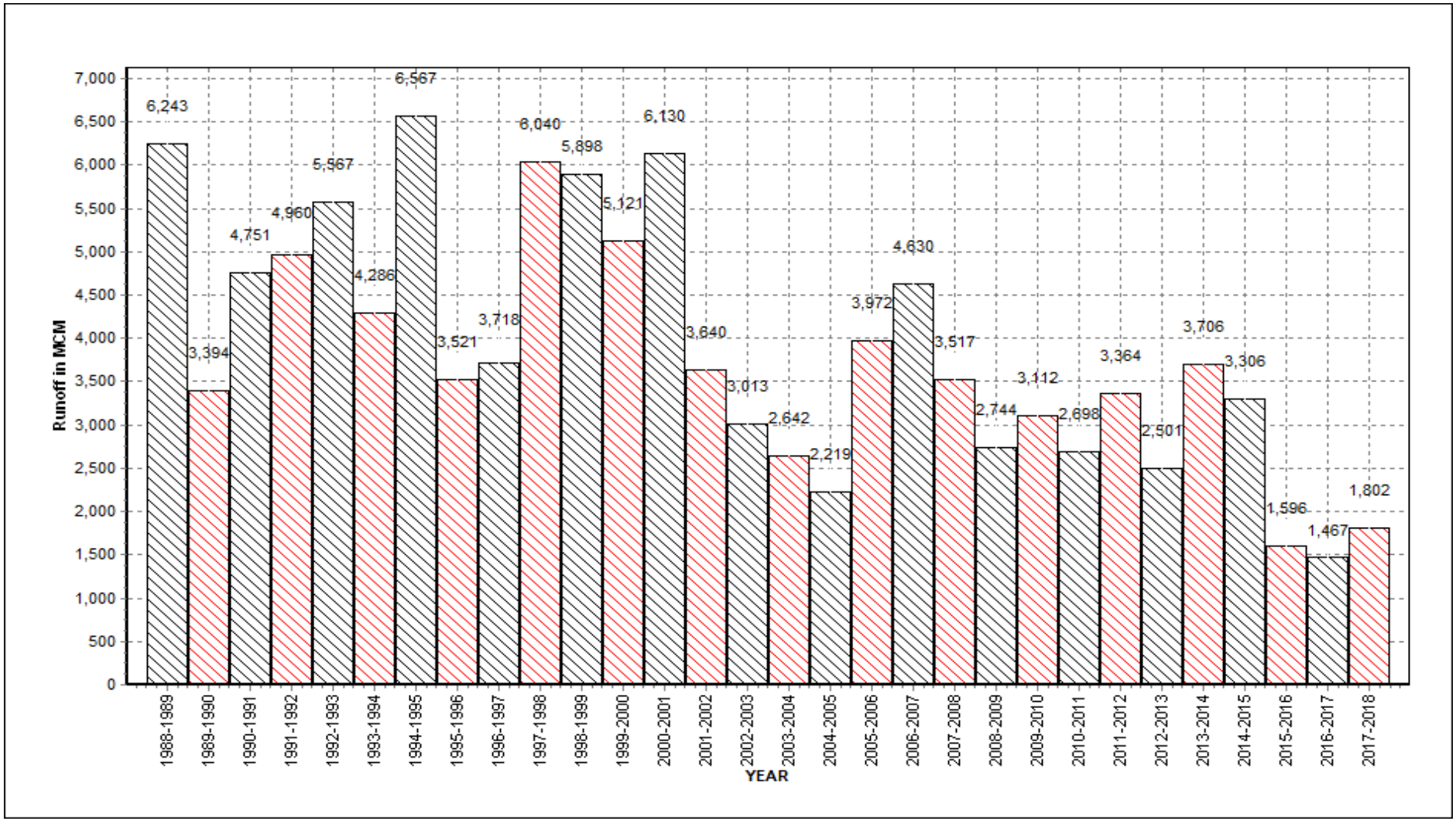
Annual Runoff Values for the period: 2016 - 2018

Station Name : Santeguli (WA000K9)

Local River : Aghanashini

Division : Cauvery Division, Bangalore

Sub-Division : SWRSD-III, Mangalore



Note: Missing values have not been considered while arriving at Annual Runoff

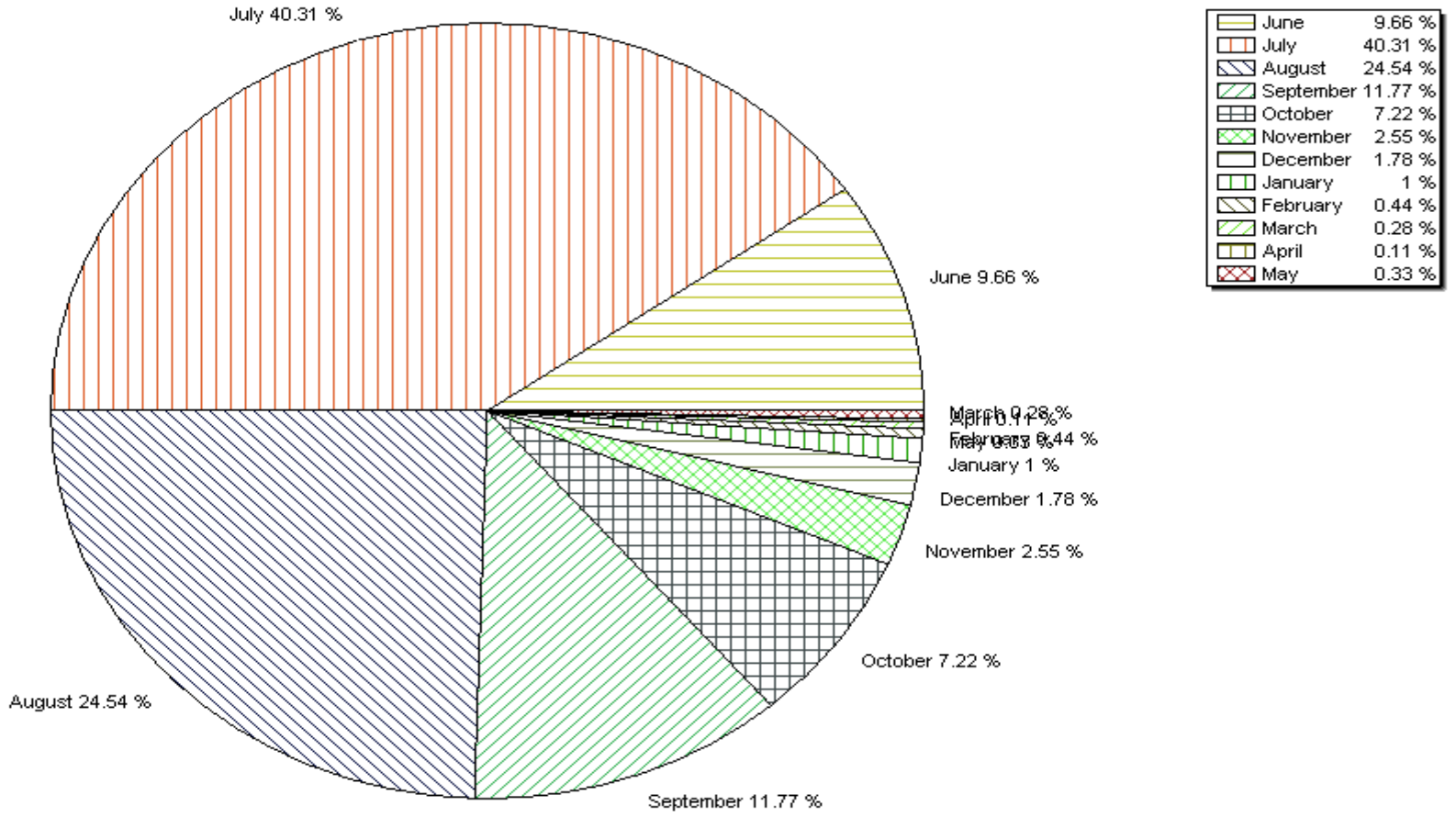
Monthly Average Runoff based on period : 1988-2017

Station Name : Santeguli (WA000K9)

Local River : Aghanashini

Division : Cauvery Division, Bangalore

Sub-Division : SWRSD-III, Mangalore



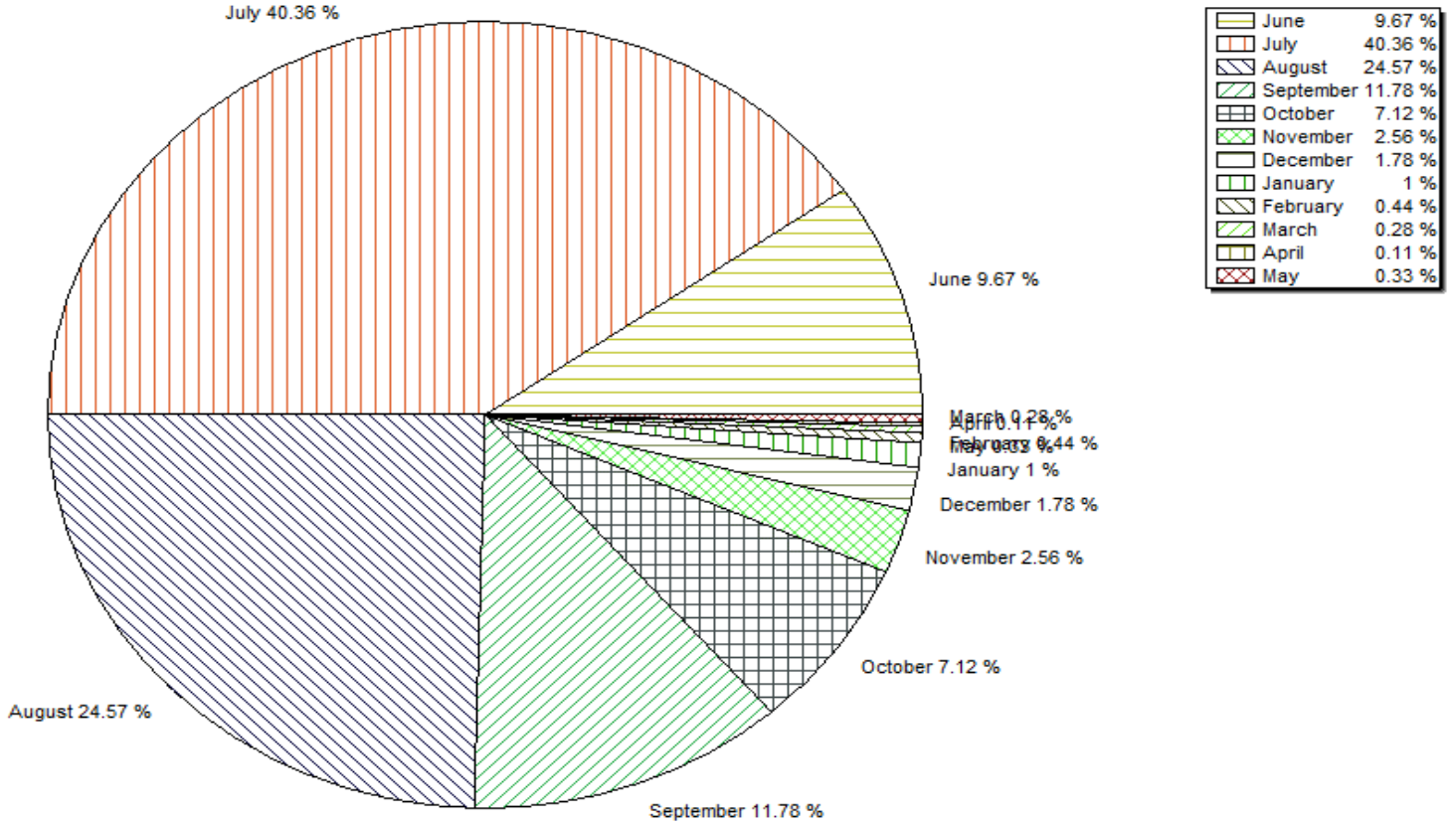
Monthly Runoff for the Year : 2017-2018

Station Name : Santeguli (WA000K9)

Local River : Aghanashini

Division : Cauvery Division, Bangalore

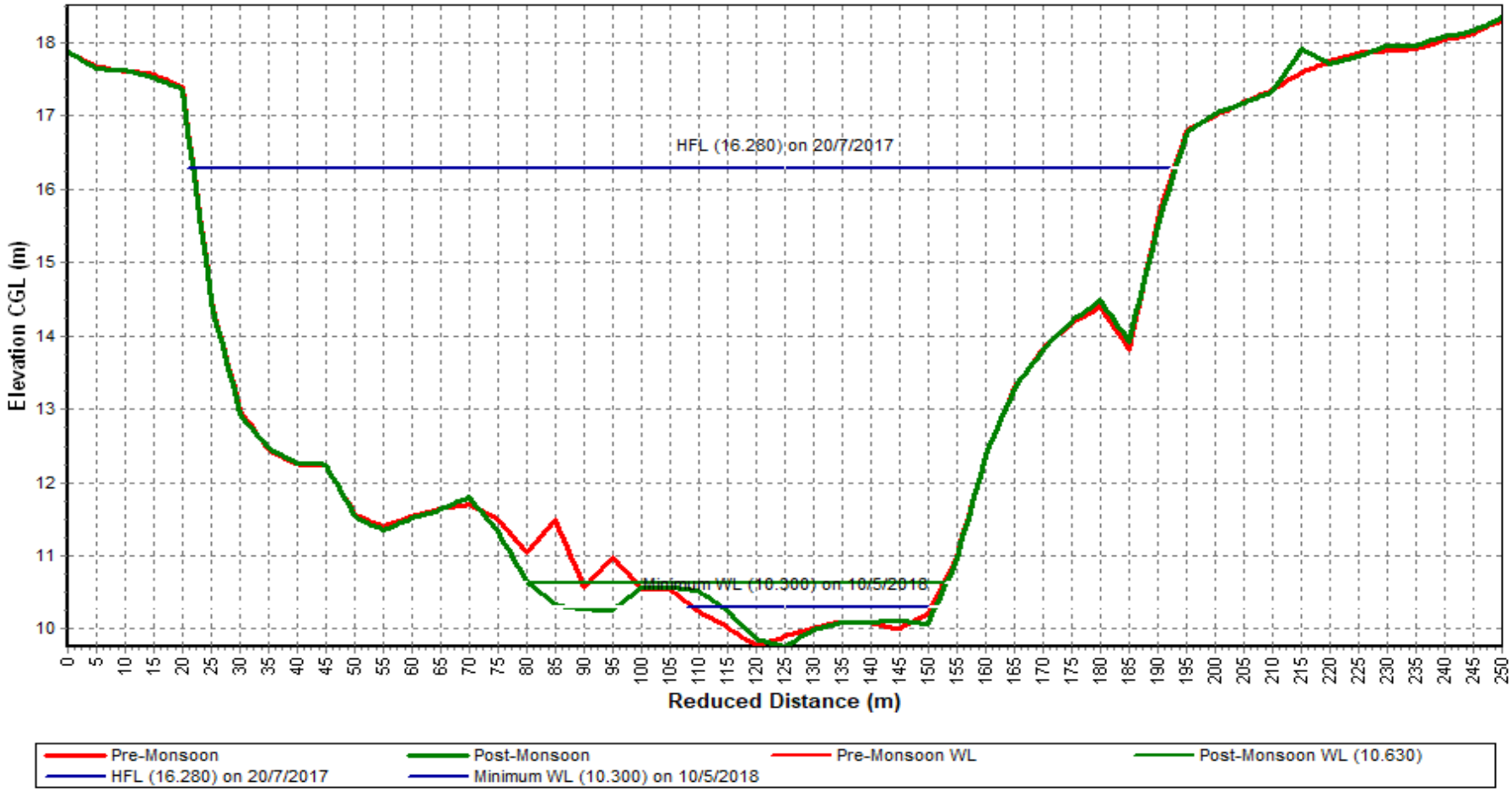
Sub-Division : SWRSD-III, Mangalore



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : Santeguli (WA000K9) **Division : Cauvery Division, Bangalore**

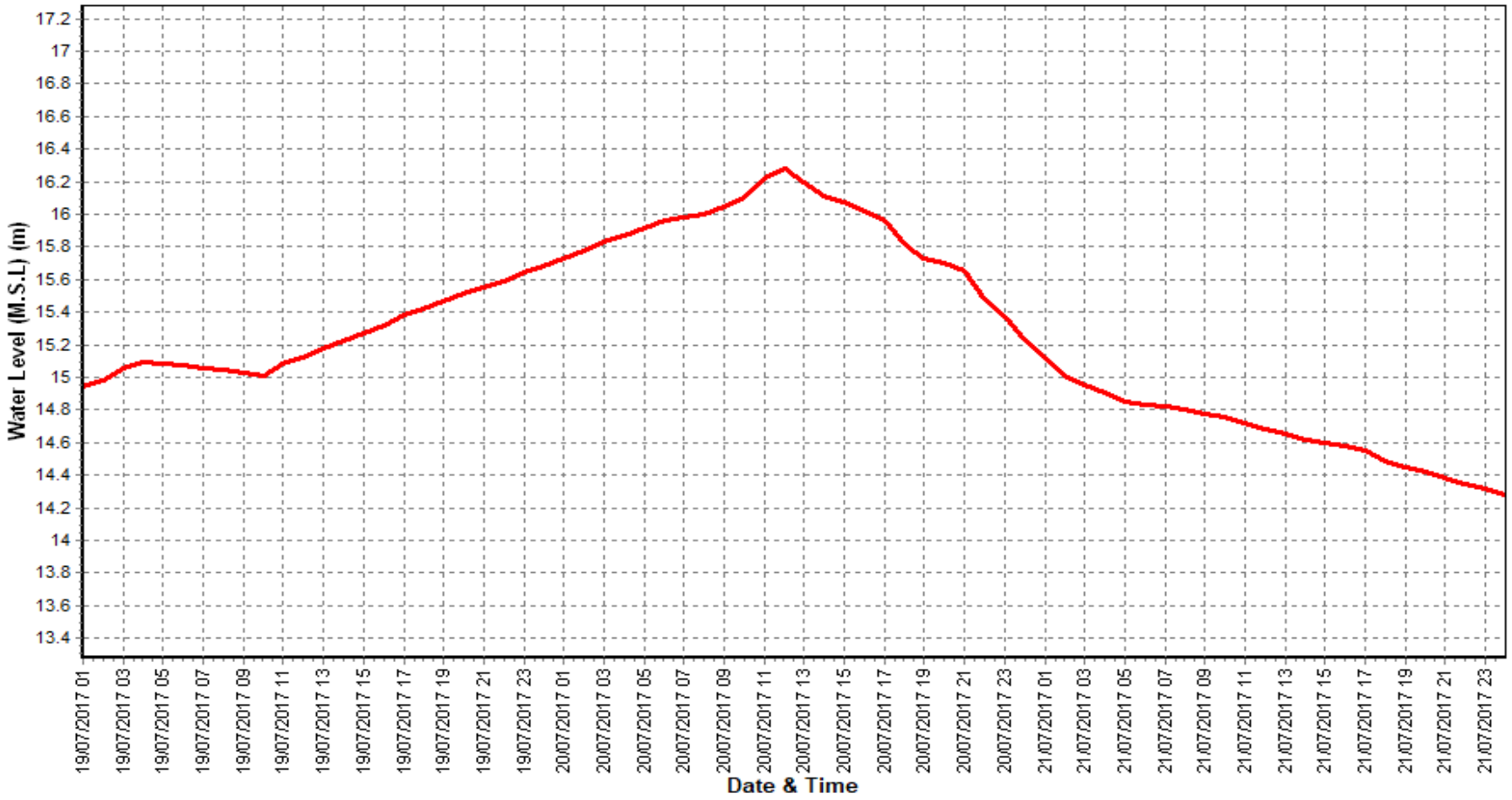
Local River : Aghanashini **Sub-Division : SWRSD-III, Mangalore**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : Santeguli (WA000K9) **Division : Cauvery Division, Bangalore**

Local River : Aghanashini **Sub-Division : SWRSD-III, Mangalore**

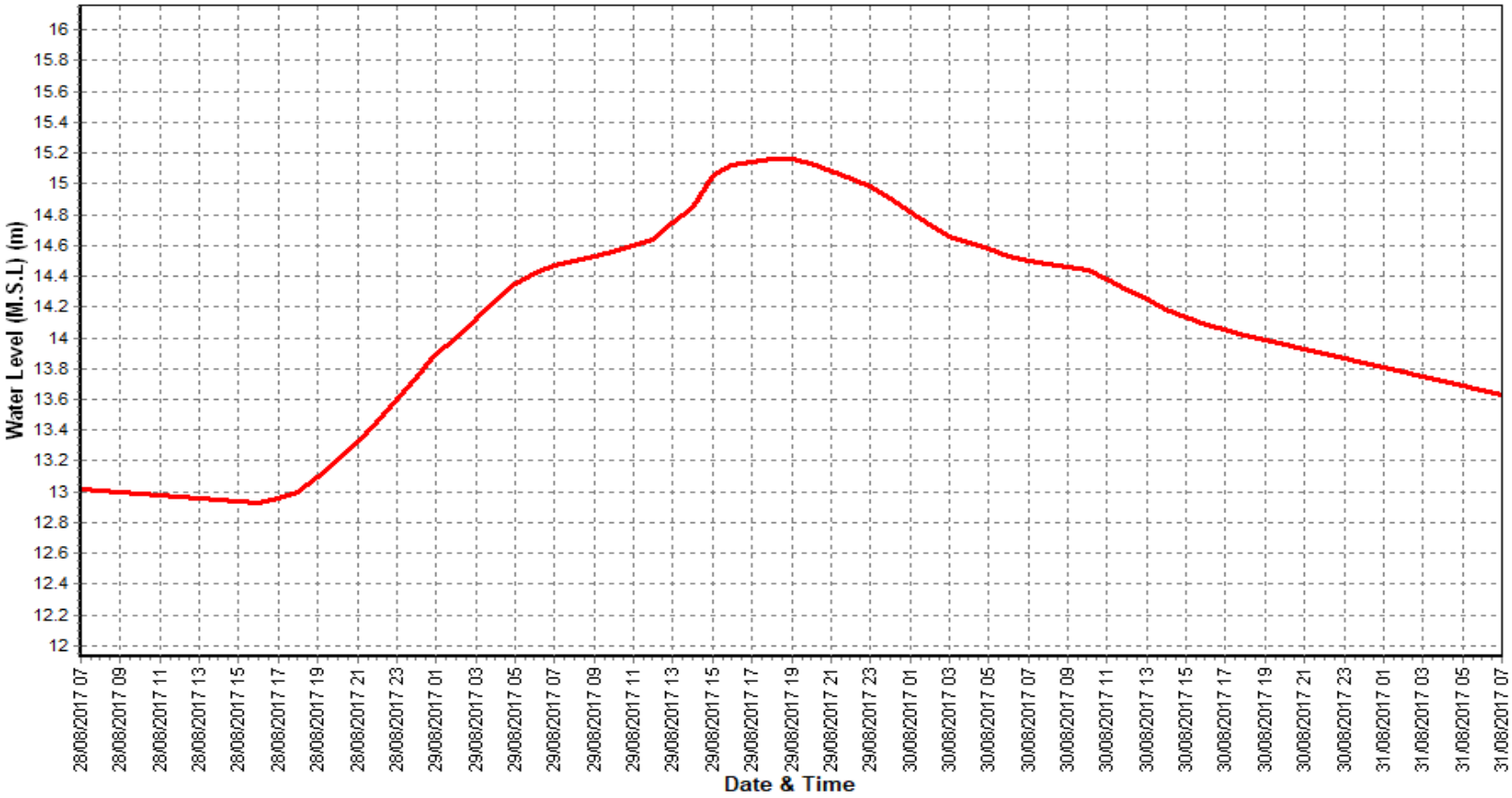


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : Santeguli (WA000K9) **Division : Cauvery Division, Bangalore**

Local River : Aghanashini **Sub-Division : SWRSD-III, Mangalore**

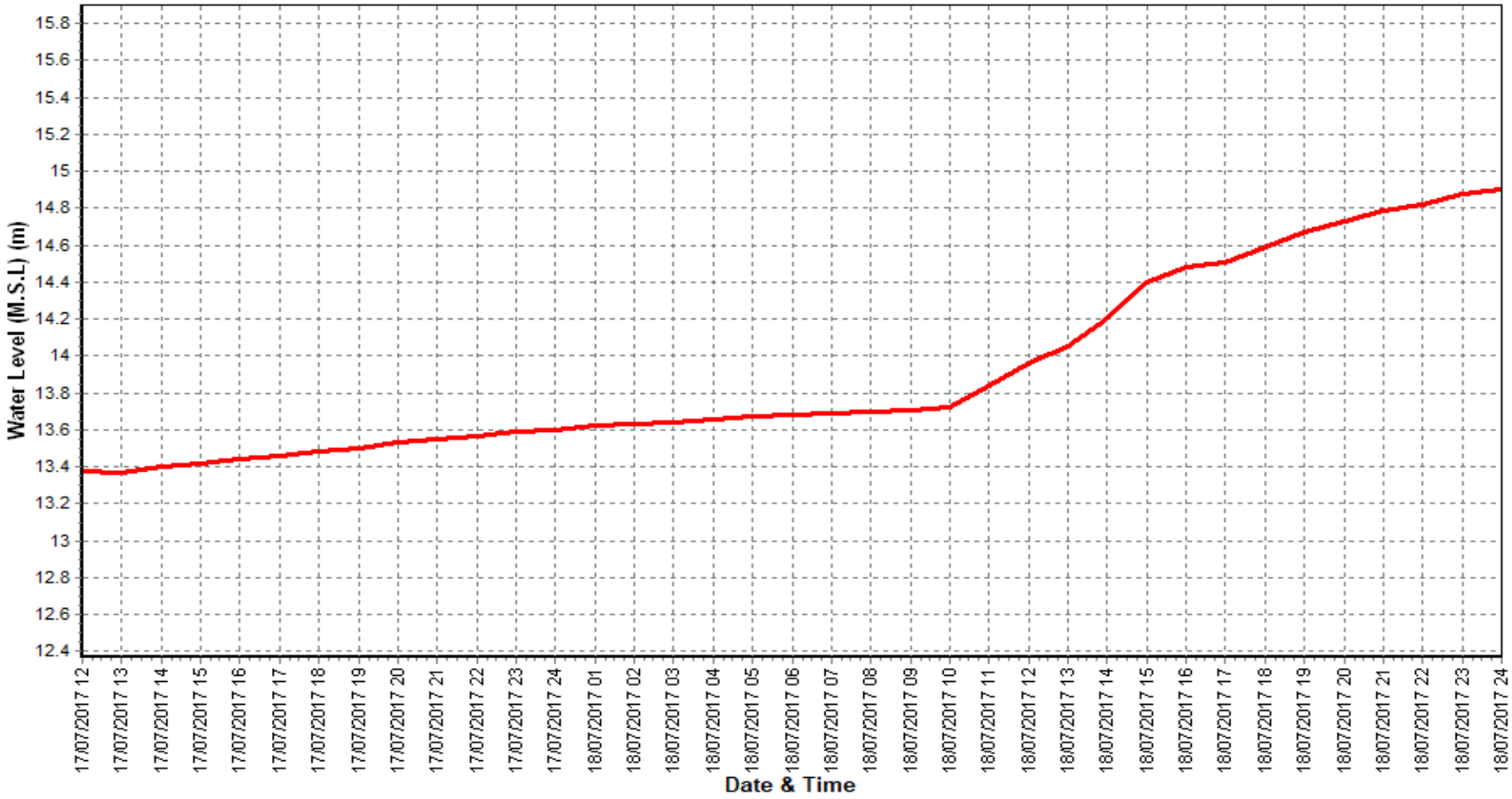


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : Santeguli (WA000K9) **Division : Cauvery Division, Bangalore**

Local River : Aghanashini **Sub-Division : SWRSD-III, Mangalore**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-2018

Site	**: Haladi**		**Code**	**: WH000N1**	
State	: Karnataka		District	Udupi	
Basin	: WFR South of Tapi		Independent River	: Haladi	
Tributary	: -		Sub Tributary	:	
Sub-Sub Tributary	:		Local River	: Haladi	
Division	: Cauvery Division, Bangalore		Sub-Division	: SWRSD-III, Mangalore	
Drainage Area	: 583 Sq. Km.		Bank	: Left	
Latitude	: 13°34'54"		Longitude	: 74°51'28"	
Zero of Gauge (m)	: 15.115 (m.s.l)	03-07-1984	- 31-05-1985		
	13.700 (m.s.l)	01-06-1985	- 31-05-1987		
	-2.000 (m.s.l)	01-06-1987			
	Opening Date	Closing Date			
Gauge	: 03-07-1984				
Discharge	: 30-12-1985				
Sediment	:				
Water Quality	: 01-09-1993				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1986-1987	804.9	21.666	09-08-1986	0.000	15.905	04-05-1987
1987-1988	515.1	4.730	03-07-1987	0.000	0.260	20-05-1988
1988-1989	674.2	5.900	20-07-1988	0.000	0.900	25-04-1989
1989-1990	577.5	5.990	27-07-1989	0.000	0.880	02-06-1989
1990-1991	564.0	5.920	15-08-1990	16.80	1.400	12-05-1991
1991-1992	520.4	5.475	01-08-1991	17.23	1.527	17-05-1992
1992-1993	530.2	5.403	17-08-1992	12.03	1.347	04-02-1993
1993-1994	466.5	5.131	11-07-1993	13.17	1.403	08-06-1993
1994-1995	915.8	7.120	15-07-1994	11.78	1.470	03-06-1994
1995-1996	382.3	5.100	31-08-1995	9.200	1.400	26-05-1996
1996-1997	392.6	4.900	18-07-1996	2.288	1.140	21-03-1997
1997-1998	682.4	6.480	11-07-1997	7.500	1.460	13-06-1997
1998-1999	502.0	5.450	13-09-1998	9.080	1.380	18-05-1999
1999-2000	696.0	6.750	18-07-1999	11.18	1.480	29-02-2000
2000-2001	553.4	6.210	09-07-2000	1.702	1.100	14-04-2001
2001-2002	328.4	4.435	25-07-2001	5.677	1.300	25-12-2001
2002-2003	287.5	4.420	06-08-2002	7.482	1.290	21-04-2003
2003-2004	405.5	5.000	06-07-2003	4.798	1.240	05-04-2004

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2004-2005	407.3	5.020	13-08-2004	9.042	1.340	13-04-2005
2005-2006	549.6	5.640	02-08-2005	10.33	1.280	19-05-2006
2006-2007	565.8	5.840	12-08-2006	9.202	1.400	20-04-2007
2007-2008	613.0	6.320	25-09-2007	10.60	1.360	11-12-2007
2008-2009	640.9	6.480	11-08-2008	1.082	0.970	26-05-2009
2009-2010	741.4	6.720	16-07-2009	4.077	1.120	02-05-2010
2010-2011	409.3	5.050	30-07-2010	0.991	1.000	29-04-2011
2011-2012	1004	8.205	17-07-2011	0.468	0.940	12-04-2012
2012-2013	565.9	5.940	09-08-2012	0.000	0.900	20-05-2013
2013-2014	559.4	6.020	26-07-2013	0.001	0.830	31-05-2014
2014-2015	965.0	7.990	01-08-2014	0.157	0.950	21-05-2015
2015-2016	391.0	5.010	20-07-2015	0.296	0.950	08-05-2016
2016-2017	485.0	5.580	05-07-2016	1.761	0.980	26-05-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : Haladi (WH000N1) **Division : Cauvery Division, Bangalore**

Local River : Haladi **Sub-Division : SWRSD-III, Mangalore**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	1.970	59.19	2.770	128.7	2.260	82.14	2.370	94.55	2.070	62.30 *	1.650	34.39
2	1.530	23.44	3.500	224.0 *	2.170	68.81	2.250	78.22 *	2.060	61.46 *	1.660	34.56
3	1.240	9.296	3.440	208.4	2.200	73.27	2.160	70.09 *	1.900	49.29	1.320	11.73
4	1.620	29.05 *	2.570	103.5	3.770	254.7	2.080	67.94	1.760	38.42	1.410	17.09 *
5	1.630	28.19	2.450	98.33	2.920	140.9	2.010	61.11	1.780	40.68	1.600	27.81 *
6	1.810	41.15	2.620	101.2	2.980	156.3 *	1.720	36.92	1.790	41.36	1.510	19.55
7	1.800	44.95	2.660	102.5	2.670	118.8	2.000	56.70	2.830	142.1	1.740	41.28
8	1.350	14.68	2.560	100.3	2.380	90.61	1.970	55.55	2.160	70.09 *	1.470	20.14
9	1.390	16.95	2.400	92.54 *	2.470	100.2	1.990	59.70	1.780	42.39	1.370	13.07
10	1.520	24.19	2.120	73.11	1.880	48.31	2.060	61.46 *	1.790	42.02	1.420	16.13
11	2.600	113.1 *	2.140	74.53	2.210	76.73	2.000	53.78	1.645	30.22	1.340	11.94
12	2.960	144.1	2.250	82.86	2.920	127.0	2.005	61.07	1.780	41.59	1.740	36.95 *
13	1.890	50.98	2.340	88.88	2.210	185.1 *	2.020	63.27	1.895	54.82	1.380	14.33
14	2.150	83.26	2.690	121.6	2.090	67.08	1.960	53.33	1.640	32.20	1.360	12.91
15	2.080	78.78	2.910	139.1	2.240	77.30 *	1.730	39.82	1.950	52.49 *	1.450	17.67
16	1.990	59.34	2.880	144.4 *	2.010	62.81	1.730	39.02	1.700	32.58	1.650	35.23
17	1.860	47.54	2.800	130.2	2.150	69.71	2.410	93.53 *	1.640	32.22	1.460	18.40
18	1.720	35.59 *	3.350	187.4	2.160	70.34	3.170	197.2	1.470	20.26 *	1.190	6.161
19	1.520	23.73	4.280	311.0	2.770	122.6	2.380	95.90	1.620	28.49	1.690	33.57 *
20	1.540	23.77	5.270	552.2	2.900	146.8 *	1.900	51.17	1.830	44.45	1.610	32.85
21	1.680	34.13	3.920	292.4	3.590	230.8	2.190	79.11	1.610	28.21	1.580	30.85
22	1.840	51.59	3.120	159.2	3.270	172.0	2.130	69.74	1.580	26.59 *	1.200	6.591
23	1.570	28.28	2.860	142.1 *	2.345	84.34	1.690	36.45	1.670	33.52	1.800	44.44
24	1.810	44.58	2.790	124.8	2.480	98.43	1.790	40.46 *	1.520	21.62	1.580	30.66
25	3.370	203.5 *	2.650	115.3	3.130	174.9 *	1.640	29.71	1.530	22.05	1.180	5.947
26	3.530	228.2 *	2.790	124.6	2.920	140.1	1.640	28.91	1.420	17.76	1.560	25.39 *
27	2.780	112.9	2.790	120.5	4.140	319.8 *	1.730	34.60	1.590	28.32	1.510	19.29
28	2.710	112.5	2.860	138.3	3.200	153.6	2.320	90.49	1.640	32.26	1.290	10.76
29	2.690	110.0	2.950	144.8	3.210	192.8	3.630	242.4 *	1.840	44.09 *	1.190	6.225
30	2.830	135.7	3.240	189.0 *	3.460	220.7	2.050	65.02	1.710	34.43	1.610	32.80
31			2.460	101.6	2.740	129.2			1.740	37.32		
Ten-Daily Mean												
I Ten-Daily	1.586	29.11	2.709	123.3	2.570	113.4	2.061	64.22	1.992	59.01	1.515	23.57
II Ten-Daily	2.031	66.02	3.091	183.2	2.366	100.6	2.130	74.81	1.717	36.93	1.487	22.00
III Ten-Daily	2.481	106.1	2.948	150.2	3.135	174.2	2.081	71.69	1.623	29.65	1.450	21.30
Monthly												
Min.	1.240	9.296	2.120	73.11	1.880	48.31	1.640	28.91	1.420	17.76	1.180	5.947
Max.	3.530	228.2	5.270	552.2	4.140	319.8	3.630	242.4	2.830	142.1	1.800	44.44
Mean	2.033	67.09	2.917	152.2	2.705	130.8	2.091	70.24	1.772	41.47	1.484	22.29

Annual Runoff in MCM = 1623 Annual Runoff in mm = 2783

Peak Observed Discharge = 552.2 cumecs on 20/07/2017 Corres. Water Level :5.27 m

Lowest Observed Discharge = 2.125 cumecs on 08/02/2018 Corres. Water Level :1.05 m

Q: Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : Haladi (WH000N1) **Division : Cauvery Division, Bangalore**

Local River : Haladi **Sub-Division : SWRSD-III, Mangalore**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	1.540	22.92 #	1.780	43.60	1.700	35.05	1.560	23.39	1.440	16.91 *	1.060	2.620
2	1.300	10.00 *	1.340	10.88 *	1.220	5.830 #	1.680	36.18	1.430	15.37	1.490	14.97
3	1.390	14.24 *	1.410	15.28 *	1.550	24.90	1.110	3.688	1.320	10.08	1.310	10.19
4	1.630	33.09	1.400	14.59	1.400	14.75 *	1.060	2.330 *	1.310	9.503	1.090	2.997
5	1.330	11.33 #	1.400	14.61	1.170	5.190 #	1.660	33.15	1.180	4.946	1.290	6.829
6	1.330	11.33 #	1.510	21.20	1.520	23.14	1.570	24.04	1.320	10.31	1.470	18.62 *
7	1.710	35.89	1.400	14.75 *	1.160	5.416	1.550	25.18	1.200	6.265	1.070	2.881
8	1.420	15.95	1.670	33.64	1.050	2.125 #	1.680	31.76	1.340	11.79 *	1.240	6.443
9	1.700	36.65	1.390	14.45	1.530	24.02	1.530	23.30	1.080	3.326	1.360	12.78
10	1.550	23.58 *	1.390	14.59	1.340	13.46	1.590	25.44	1.670	34.90	1.490	19.62
11	1.520	21.43	1.660	31.49	1.350	12.26 *	1.850	47.29 *	1.740	36.21	1.350	11.93
12	1.560	30.35	1.440	14.80	1.770	42.06	1.650	32.87	1.660	34.35	1.120	3.752 *
13	1.280	9.162 #	1.690	34.56	1.620	29.48	1.570	26.03	1.430	14.89	1.600	26.97 *
14	1.460	20.32	1.600	26.97 *	1.340	12.49	1.440	16.81	1.950	56.25	1.360	11.39
15	1.640	34.48	1.400	14.75 *	1.370	14.44	1.370	12.51	1.720	36.02 *	1.490	19.98
16	1.400	15.63	1.690	34.29	1.650	32.58	1.420	17.07	1.330	10.61	1.740	37.27
17	1.490	19.80 *	1.660	30.31	1.660	31.30	1.470	18.12	1.360	11.05	1.760	37.94
18	1.710	32.53	1.680	32.86 *	1.700	34.43 *	1.440	16.91 *	1.100	3.241 #	1.920	54.59
19	1.170	5.777	1.990	53.78	1.160	5.486	1.350	11.95	1.630	28.35	1.960	60.44
20	1.530	22.41	1.670	33.64	1.420	15.48	1.320	11.54	1.260	6.998	1.740	37.66 *
21	1.060	2.330 #	1.750	38.49 *	1.400	12.61	1.300	10.66	1.720	35.06	1.380	13.46
22	1.310	6.164 #	1.380	14.32	1.710	37.74	1.350	12.09	1.660	31.33 *	1.530	20.11
23	1.340	13.92	1.550	21.43	1.640	32.14	1.400	12.73	1.335	10.64	1.920	54.45
24	1.340	11.79 *	1.980	58.48	1.460	17.32	1.440	15.42	1.230	6.530	1.875	49.64
25	1.690	33.64 *	1.620	31.02	1.500	20.41 *	1.460	18.04 *	1.440	14.27	1.860	49.55
26	1.650	35.87	1.130	4.021 *	1.090	3.440	1.480	17.45	1.340	10.50	1.830	47.00
27	1.400	15.18	1.670	29.61	1.420	17.21	1.450	15.64	1.430	16.89	1.370	13.23 *
28	1.330	11.09	1.550	23.58 *	1.520	19.55	1.550	24.75	1.370	13.01	1.750	36.75
29	1.220	6.978	1.520	20.73			1.860	48.22 *	1.290	9.578 *	1.390	15.48
30	1.660	36.36	1.380	14.10			1.280	9.162 *	1.700	34.43 *	1.920	53.98 *
31	1.730	36.84 *	1.710	33.61			1.130	3.594			1.700	32.37
Ten-Daily Mean												
I Ten-Daily	1.490	21.50	1.469	19.76	1.364	15.39	1.499	22.85	1.329	12.34	1.287	9.794
II Ten-Daily	1.476	21.19	1.648	30.75	1.504	23.00	1.488	21.11	1.518	23.80	1.604	30.19
III Ten-Daily	1.430	19.11	1.567	26.31	1.467	20.05	1.427	17.07	1.452	18.22	1.684	35.09
Monthly												
Min.	1.060	2.330	1.130	4.021	1.050	2.125	1.060	2.330	1.080	3.241	1.060	2.620
Max.	1.730	36.84	1.990	58.48	1.770	42.06	1.860	48.22	1.950	56.25	1.960	60.44
Mean	1.464	20.55	1.562	25.63	1.444	19.44	1.470	20.24	1.433	18.12	1.530	25.35

Peak Computed Discharge = 319.8 cumecs on 27/08/2017 Corres. Water Level :4.14 m

Lowest Computed Discharge = 2.330 cumecs on 04/03/2018 Corres. Water Level :1.06 m

Q: Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

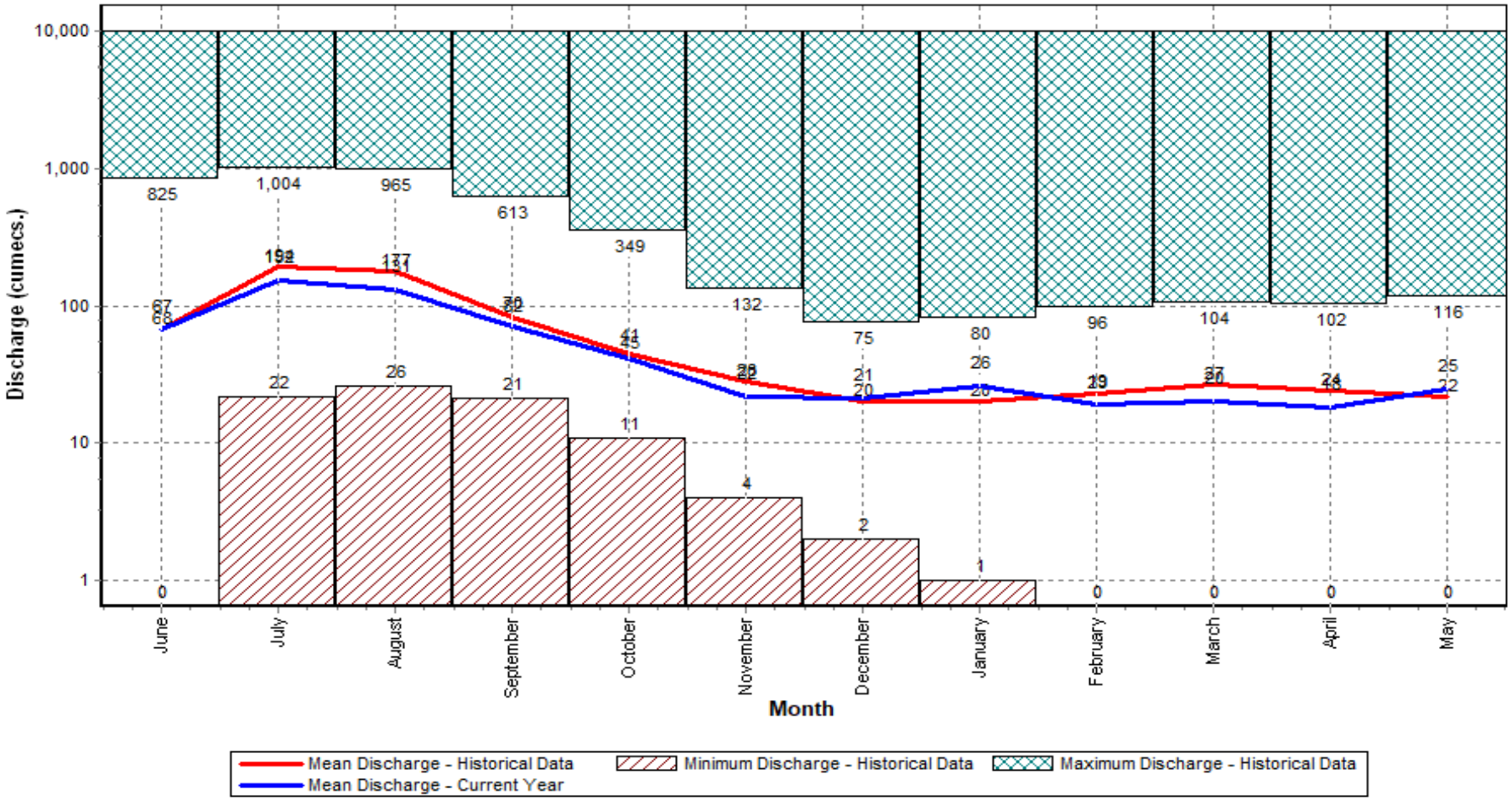
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : Haladi (WH000N1) | **Data considered : 1986-2018** | **Division : Cauvery Division, Bangalore**

Local River : Haladi | **Sub-Division : SWRSD-III, Mangalore**



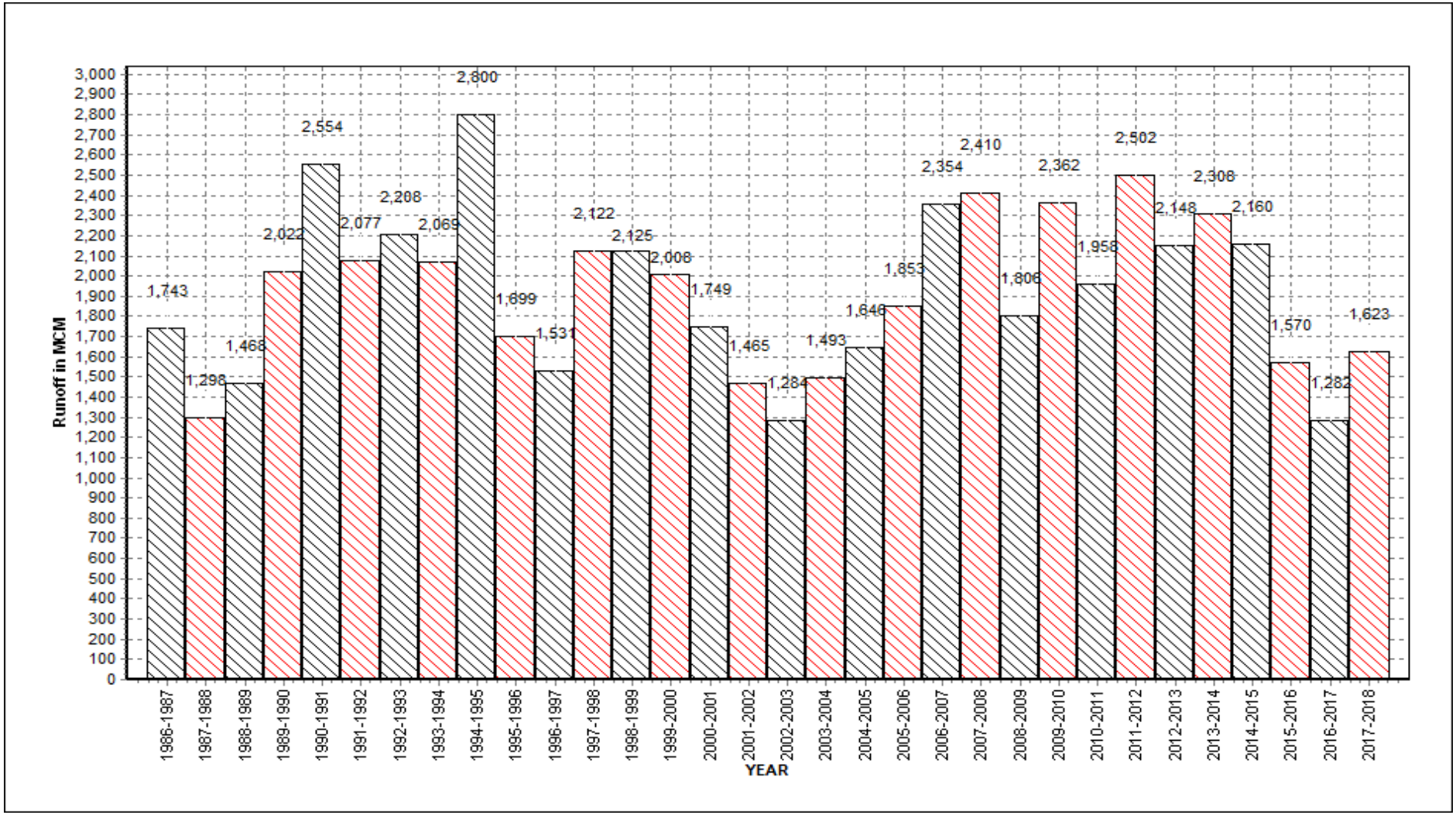
Annual Runoff Values for the period: 1986 - 2018

Station Name : Haladi (WH000N1)

Local River : Haladi

Division : Cauvery Division, Bangalore

Sub-Division : SWRSD-III, Mangalore

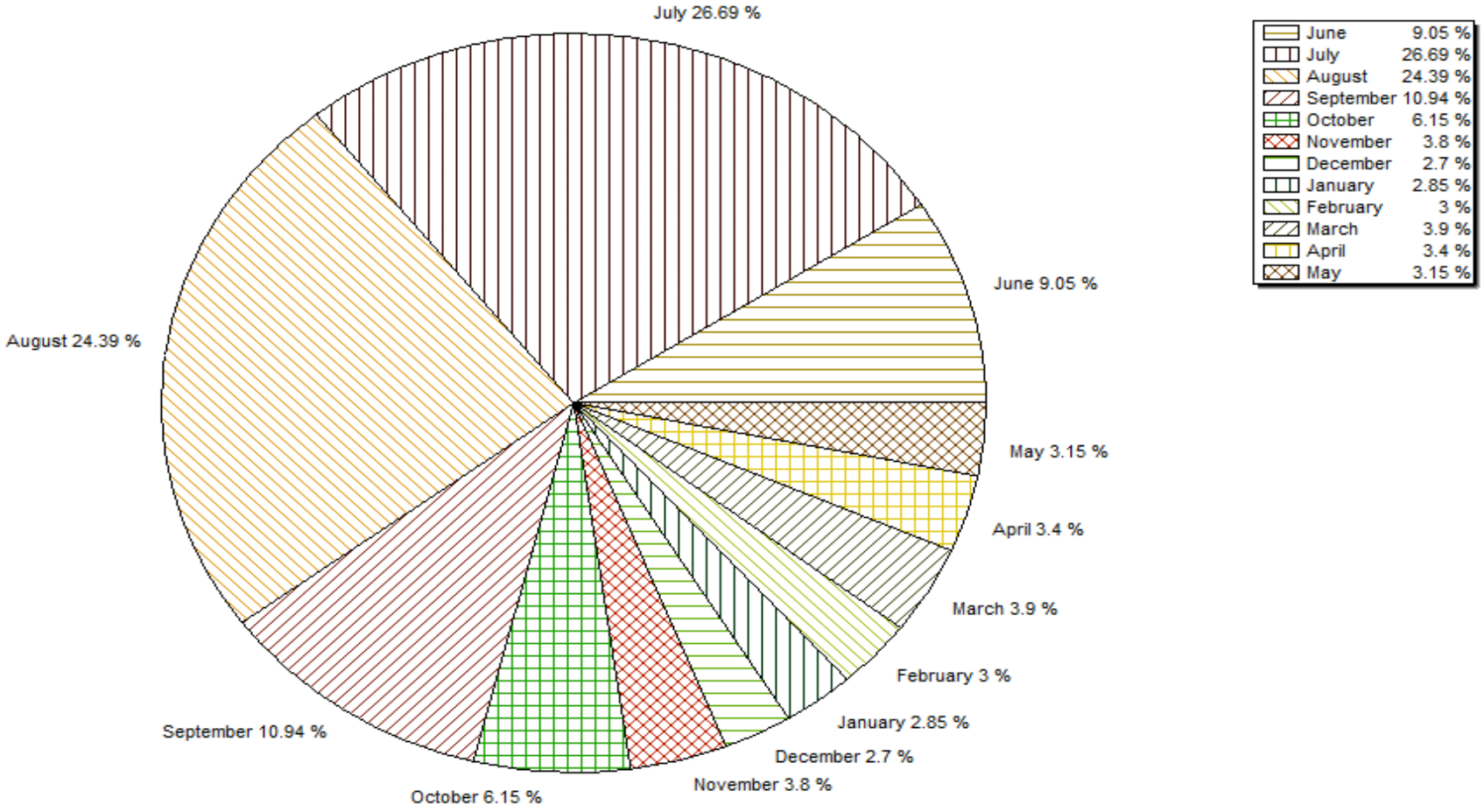


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1986-2017

Station Name : Haladi (WH000N1)
Local River : Haladi

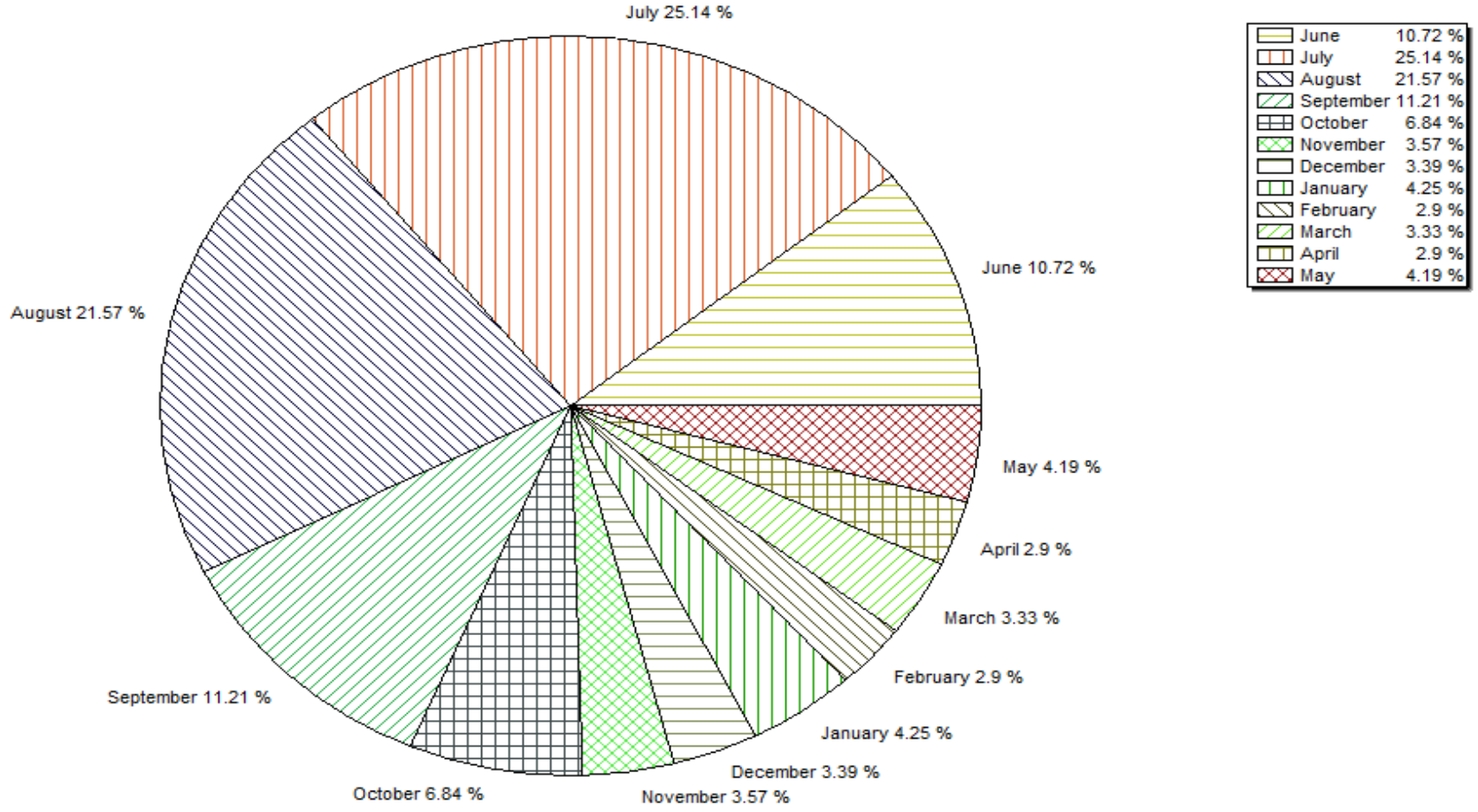
Division : Cauvery Division, Bangalore
Sub-Division : SWRSD-III, Mangalore



Monthly Runoff for the Year : 2017-2018

Station Name : Haladi (WH000N1)
Local River : Haladi

Division : Cauvery Division, Bangalore
Sub-Division : SWRSD-III, Mangalore



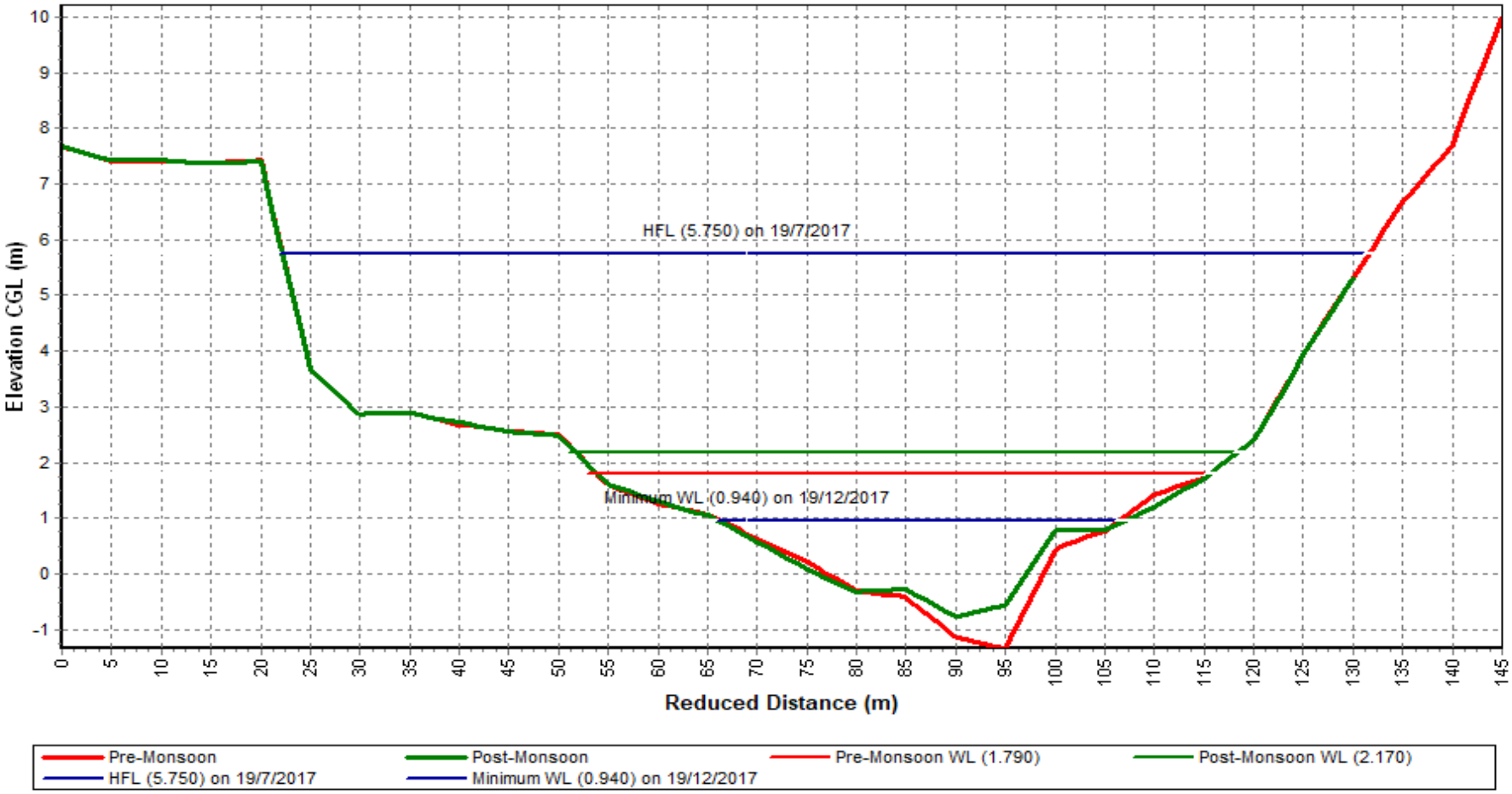
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : Haladi (WH000N1)

Local River : Haladi

Division : Cauvery Division, Bangalore

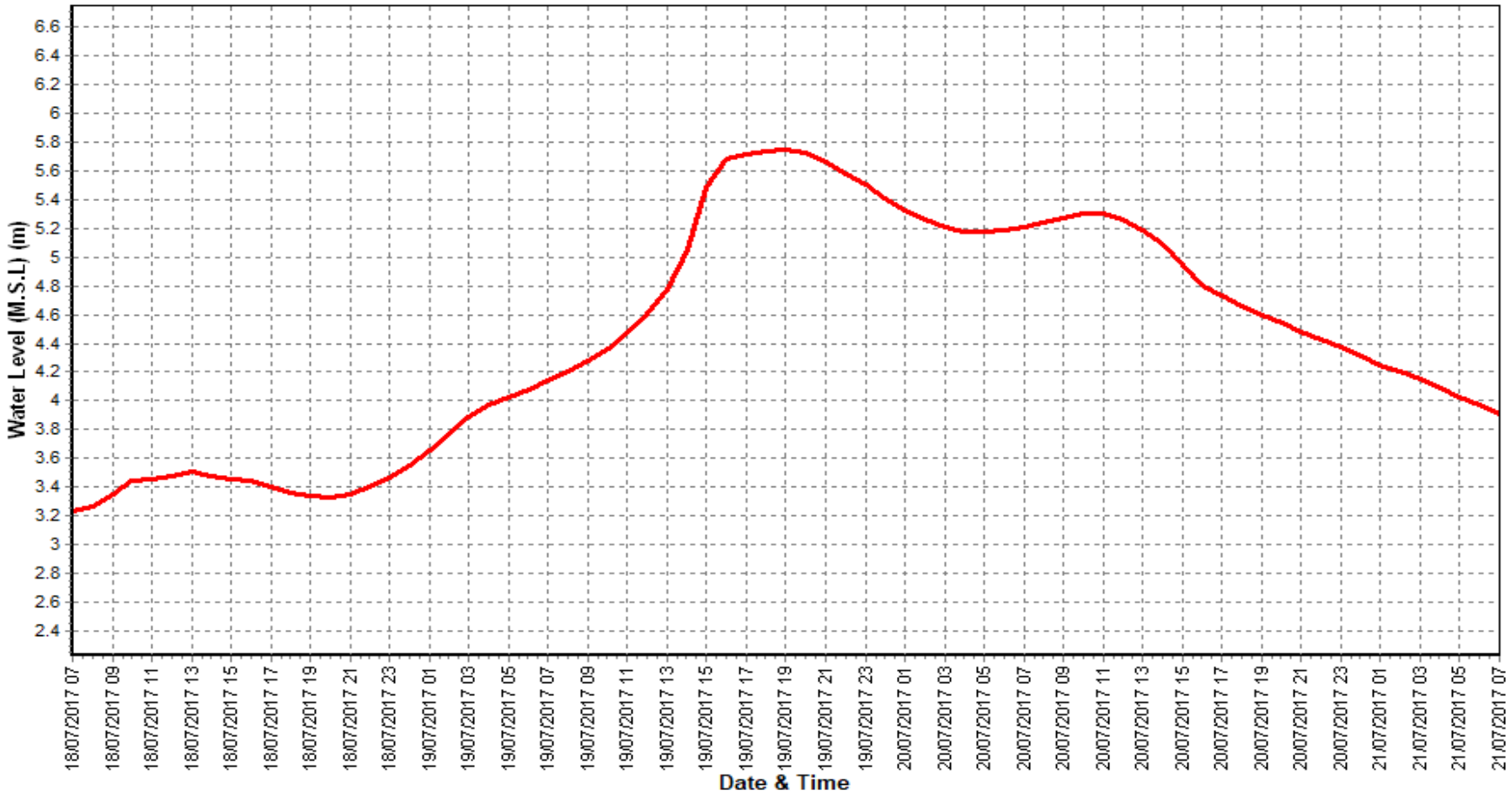
Sub-Division : SWRSD-III, Mangalore



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : Haladi (WH000N1) **Division : Cauvery Division, Bangalore**

Local River : Haladi **Sub-Division : SWRSD-III, Mangalore**

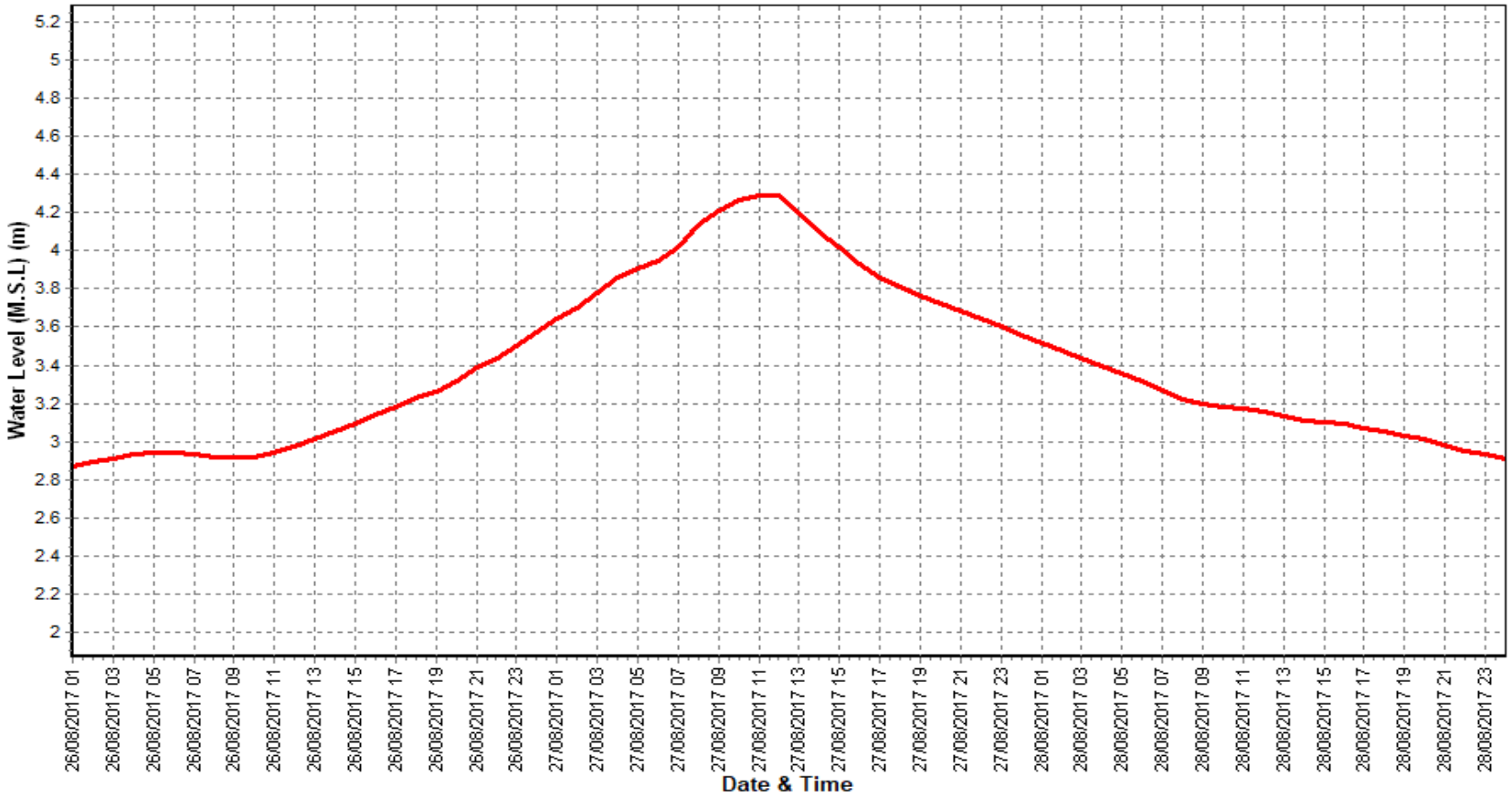


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : Haladi (WH000N1) **Division : Cauvery Division, Bangalore**

Local River : Haladi **Sub-Division : SWRSD-III, Mangalore**

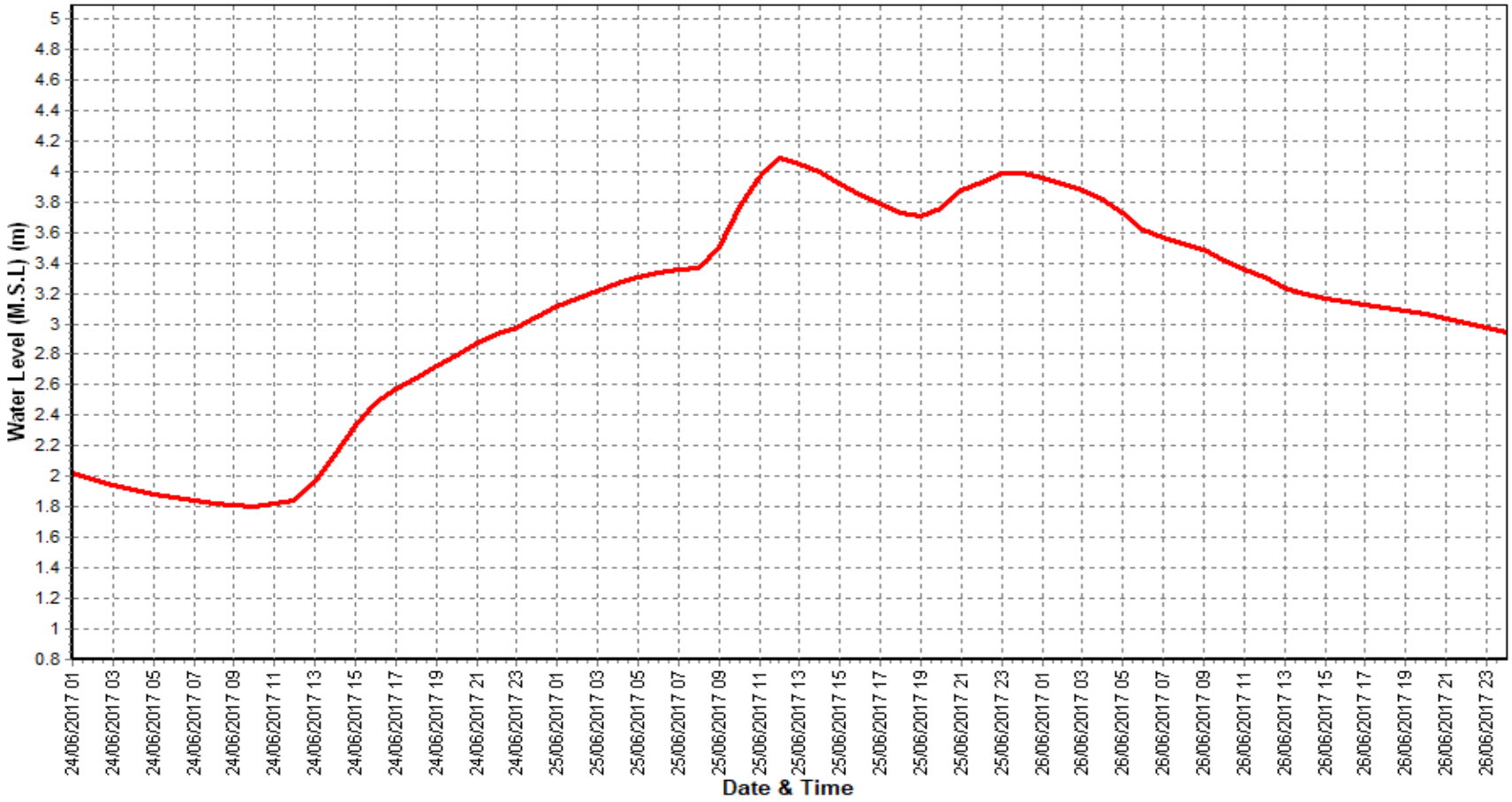


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : Haladi (WH000N1) **Division : Cauvery Division, Bangalore**

Local River : Haladi **Sub-Division : SWRSD-III, Mangalore**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-2018

Site	:	**Avershe**	**Code**	:	**WI000J2**
State	:	Karnataka	District		Udupi
Basin	:	WFR South of Tapi	Independent River	:	Sita
Tributary	:	-	Sub Tributary	:	
Sub-Sub Tributary	:		Local River	:	Sita
Division	:	Cauvery Division, Bangalore	Sub-Division	:	SWRSD-III, Mangalore
Drainage Area	:	253 Sq. Km.	Bank	:	Right
Latitude	:	13°31'17"	Longitude	:	74°52'48"
Zero of Gauge (m)	:	88 (m.s.l) 8.78 (m.s.l)	21-07-1998 01-06-2006	-	31-05-2006
		Opening Date	Closing Date		
Gauge	:	21-07-1998			
Discharge	:	25-06-2002			
Sediment	:				
Water Quality	:	02-09-2002			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2003-2004	338.3	94.050	23-08-2003	0.000	91.110	28-03-2004
2004-2005	544.0	95.060	04-08-2004	0.000	91.180	27-03-2005
2005-2006	616.5	95.670	02-08-2005	0.000	91.240	20-03-2006
2006-2007	462.7	14.480	12-08-2006	0.000	11.050	20-04-2007
2007-2008	545.4	15.200	30-06-2007	0.000	11.040	16-05-2008
2008-2009	806.5	16.360	13-08-2008	0.000	10.860	23-04-2009
2009-2010	555.7	15.430	16-07-2009	0.000	11.120	03-04-2010
2010-2011	422.9	14.380	30-07-2010	0.000	11.130	08-04-2011
2011-2012	680.2	15.310	17-07-2011	0.000	10.930	28-03-2012
2012-2013	477.7	14.860	10-08-2012	0.000	11.090	01-03-2013
2013-2014	389.9	14.600	04-07-2013	0.000	10.340	16-04-2014
2014-2015	943.8	16.680	01-08-2014	0.000	11.120	17-03-2015
2015-2016	343.5	14.130	19-07-2015	0.000	Dry Bed	04-05-2016
2016-2017	400.0	14.440	05-07-2016	0.000	11.110	19-02-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : Avershe (WI000J2) **Division : Cauvery Division, Bangalore**

Local River : Sita **Sub-Division : SWRSD-III, Mangalore**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	0.000	0.000 *	12.760	102.3	12.590	110.0	12.550	80.49	12.160	41.76 *	11.750	11.24
2	0.000	0.000 *	12.760	113.2 *	12.530	81.62	12.360	61.61 *	12.490	76.63 *	11.740	10.56
3	11.375	1.264 #	12.680	100.3	12.300	60.86	12.255	50.69 *	12.560	85.03	11.730	10.49
4	11.500	3.827 *	12.800	112.7	13.490	221.3	12.220	52.89	12.300	61.28	11.720	11.85 *
5	11.390	1.497 #	12.680	99.99	13.120	151.4	12.190	49.23	12.230	46.15	11.710	11.38 *
6	11.470	3.082 #	12.680	100.1	12.870	130.3 *	12.170	48.64	12.260	51.58	11.700	9.783
7	11.890	18.06	12.670	96.40	12.620	96.92	12.160	47.38	12.540	81.50	11.700	9.648
8	11.880	17.50	12.630	93.73	12.480	78.37	12.150	46.75	12.250	50.20 *	11.690	9.240
9	11.590	7.240	12.440	70.65 *	12.350	70.24	12.180	49.57	12.160	42.79	11.680	8.838
10	11.615	7.736	12.340	69.42	12.320	66.10	12.160	41.76 *	12.130	39.97	11.660	8.565
11	13.350	218.9 *	12.240	59.72	12.220	58.85	12.140	45.74	12.080	34.68	11.660	8.392
12	12.810	103.0	12.240	59.32	13.150	155.5	12.055	34.04	12.160	41.84	11.660	9.005 *
13	12.300	58.29	12.270	63.67	12.640	96.07 *	12.020	31.90	12.080	34.88	11.650	8.126
14	12.270	52.19	12.630	93.53	12.280	62.97	12.040	33.78	12.070	34.07	11.640	7.832
15	12.020	32.99	12.800	112.3	12.180	43.57 *	12.010	32.33	12.090	35.74 *	11.630	7.634
16	12.130	39.62	12.850	127.1 *	12.220	50.50	12.000	29.42	12.060	33.80	11.620	7.287
17	12.220	51.42	12.570	86.26	12.250	53.63	12.340	59.44 *	12.040	32.03	11.620	7.288
18	12.040	31.74 *	12.730	108.0	12.260	53.96	12.310	66.61	12.020	30.21 *	11.610	6.988
19	11.990	30.98	13.480	218.3	13.160	156.4	12.375	73.48	12.010	30.31	11.620	7.639 *
20	11.950	28.48	14.980	535.3	13.540	260.5 *	12.220	50.90	11.990	29.57	11.620	7.221
21	12.050	34.07	13.080	147.8	13.200	171.6	12.270	61.56	11.980	28.42	11.610	6.969
22	12.090	35.51	13.490	217.5	12.620	97.23	12.165	42.67	11.965	26.19 *	11.610	6.939
23	12.050	33.95	12.780	113.2 *	12.670	95.79	12.090	35.02	11.950	27.50	11.600	6.616
24	12.310	61.61	12.710	105.3	12.500	81.15	12.040	31.74 *	11.940	27.09	11.590	6.471
25	13.180	184.8 *	12.660	96.48	12.420	68.33 *	12.010	31.60	11.920	25.61	11.590	6.397
26	13.960	365.7 *	12.640	93.31	12.750	111.2	12.000	31.37	11.900	24.04	11.590	6.389 *
27	12.990	125.5	12.560	84.78	13.980	371.2 *	12.205	44.74	11.880	22.14	11.580	5.423
28	12.770	102.1	12.540	83.06	13.220	176.3	12.330	66.07	11.880	22.62	11.560	4.991
29	12.540	76.11	13.060	143.9	13.180	164.0	12.300	55.24 *	11.850	18.74 *	11.560	5.008
30	12.740	100.6	12.440	70.65 *	12.760	115.4	12.340	66.42	11.780	12.01	11.550	4.827
31			12.640	98.19	12.970	132.6			11.760	11.59		
Ten-Daily Mean												
I Ten-Daily	9.271	6.021	12.644	95.87	12.667	106.7	12.240	52.90	12.308	57.69	11.708	10.16
II Ten-Daily	12.308	64.76	12.879	146.3	12.590	99.19	12.151	45.76	12.060	33.71	11.633	7.741
III Ten-Daily	12.668	112.0	12.782	114.0	12.934	144.1	12.175	46.64	11.891	22.36	11.584	6.003
Monthly												
Min.	0.000	0.000	12.240	59.32	12.180	43.57	12.000	29.42	11.760	11.59	11.550	4.827
Max.	13.960	365.7	14.980	535.3	13.980	371.2	12.550	80.49	12.560	85.03	11.750	11.85
Mean	11.416	60.93	12.769	118.6	12.737	117.5	12.189	48.44	12.080	37.42	11.642	7.968

Annual Runoff in MCM = 1051 Annual Runoff in mm = 4154

Peak Observed Discharge = 535.3 cumecs on 20/07/2017 Corres. Water Level :14.98 m

Lowest Observed Discharge = 0.000 cumecs on 03/02/2018 Corres. Water Level :11.28 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : Avershe (WI000J2) **Division : Cauvery Division, Bangalore**

Local River : Sita **Sub-Division : SWRSD-III, Mangalore**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	11.550	4.962	11.420	2.797	11.320	0.800	10.970	0.000	11.000	0.000		0.000
2	11.540	5.058 *	11.410	2.285 *	11.300	0.637	10.970	0.000	10.990	0.000		0.000
3	11.530	4.801 *	11.400	2.121 *	11.280	0.000	10.970	0.000	10.990	0.000		0.000
4	11.530	4.665	11.400	2.476	11.260	0.000	10.970	0.000	10.980	0.000		0.000
5	11.530	4.599	11.390	2.322	11.090	0.000	10.940	0.000	10.980	0.000		0.000
6	11.520	4.458	11.380	2.121	11.020	0.000	10.910	0.000	10.980	0.000		0.000
7	11.520	4.442	11.380	1.814 *	11.010	0.000	10.880	0.000	10.980	0.000		0.000
8	11.510	4.316	11.400	2.469	11.010	0.000	10.850	0.000	10.780	0.000		0.000
9	11.510	4.224	11.390	2.320	11.010	0.000	10.820	0.000	10.730	0.000		0.000
10	11.510	4.309 *	11.360	1.522	11.040	0.000	10.810	0.000	10.730	0.000		0.000
11	11.520	4.421	11.360	1.506	11.100	0.000	10.800	0.000	10.720	0.000		0.000
12	11.515	4.040	11.360	1.516	11.240	0.000	10.760	0.000	10.720	0.000	10.740	0.000
13	11.510	3.814	11.360	1.504	11.240	0.000	10.700	0.000	10.680	0.000	11.080	0.000
14	11.500	3.577	11.360	1.533 *	11.180	0.000	10.640	0.000	10.680	0.000	11.100	0.000
15	11.500	3.565	11.360	1.533 *	11.130	0.000	10.610	0.000	10.690	0.000	11.090	0.000
16	11.500	3.584	11.340	1.279 *	11.090	0.000	10.670	0.000	10.670	0.000	11.090	0.000
17	11.500	4.074 *	11.340	1.421	11.080	0.000	10.730	0.000	10.690	0.000	11.150	0.000
18	11.490	3.476	11.340	1.422	11.050	0.000	10.780	0.000	10.680	0.000	11.170	0.000
19	11.470	3.245	11.340	1.429	11.010	0.000	10.800	0.000	10.690	0.000	11.150	0.000
20	11.440	2.971	11.330	1.337	10.990	0.000	10.800	0.000	10.730	0.000	11.130	0.000
21	11.450	3.069	11.330	1.161 *	10.990	0.000	10.800	0.000	10.690	0.000	11.120	0.000
22	11.450	3.275	11.330	1.333	10.980	0.000	10.840	0.000	10.680	0.000	11.110	0.000
23	11.450	3.029	11.330	1.332	10.980	0.000	10.920	0.000	10.670	0.000	11.130	0.000
24	11.450	3.009 *	11.320	0.916	10.970	0.000	11.040	0.000	10.670	0.000	11.150	0.000
25	11.440	2.818 *	11.290	0.745	10.970	0.000	11.120	0.000	10.600	0.000	11.140	0.000
26	11.440	2.962	11.290	0.753 *	10.970	0.000	11.160	0.000		0.000	11.140	0.000
27	11.430	2.849	11.290	0.744	10.970	0.000	11.160	0.000		0.000	11.140	0.000
28	11.430	2.849	11.290	0.753 *	10.970	0.000	11.070	0.000		0.000	11.300	0.000
29	11.420	2.753	11.300	0.755			11.020	0.000		0.000	11.350	0.000
30	11.420	2.745	11.300	0.735			10.980	0.000		0.000	11.780	0.000
31	11.420	2.456 *	11.320	0.816			10.980	0.000			11.630	0.000
Ten-Daily Mean												
I Ten-Daily	11.525	4.583	11.393	2.225	11.134	0.144	10.909	0.000	10.914	0.000	0.000	0.000
II Ten-Daily	11.495	3.677	11.349	1.448	11.111	0.000	10.729	0.000	10.695	0.000	9.970	0.000
III Ten-Daily	11.436	2.892	11.308	0.913	10.975	0.000	11.008	0.000	10.662	0.000	11.272	0.000
Monthly												
Min.	11.420	2.456	11.290	0.735	10.970	0.000	10.610	0.000	10.600	0.000	0.000	0.000
Max.	11.550	5.058	11.420	2.797	11.320	0.800	11.160	0.000	11.000	0.000	11.780	0.000
Mean	11.484	3.691	11.349	1.509	11.080	0.051	10.886	0	10.776	0	7.216	0

Peak Computed Discharge = 371.2 cumecs on 27/08/2017 **Corres. Water Level :13.98 m**

Lowest Computed Discharge = 0.000 cumecs on 01/06/2017 **Corres. Water Level :0 m**

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

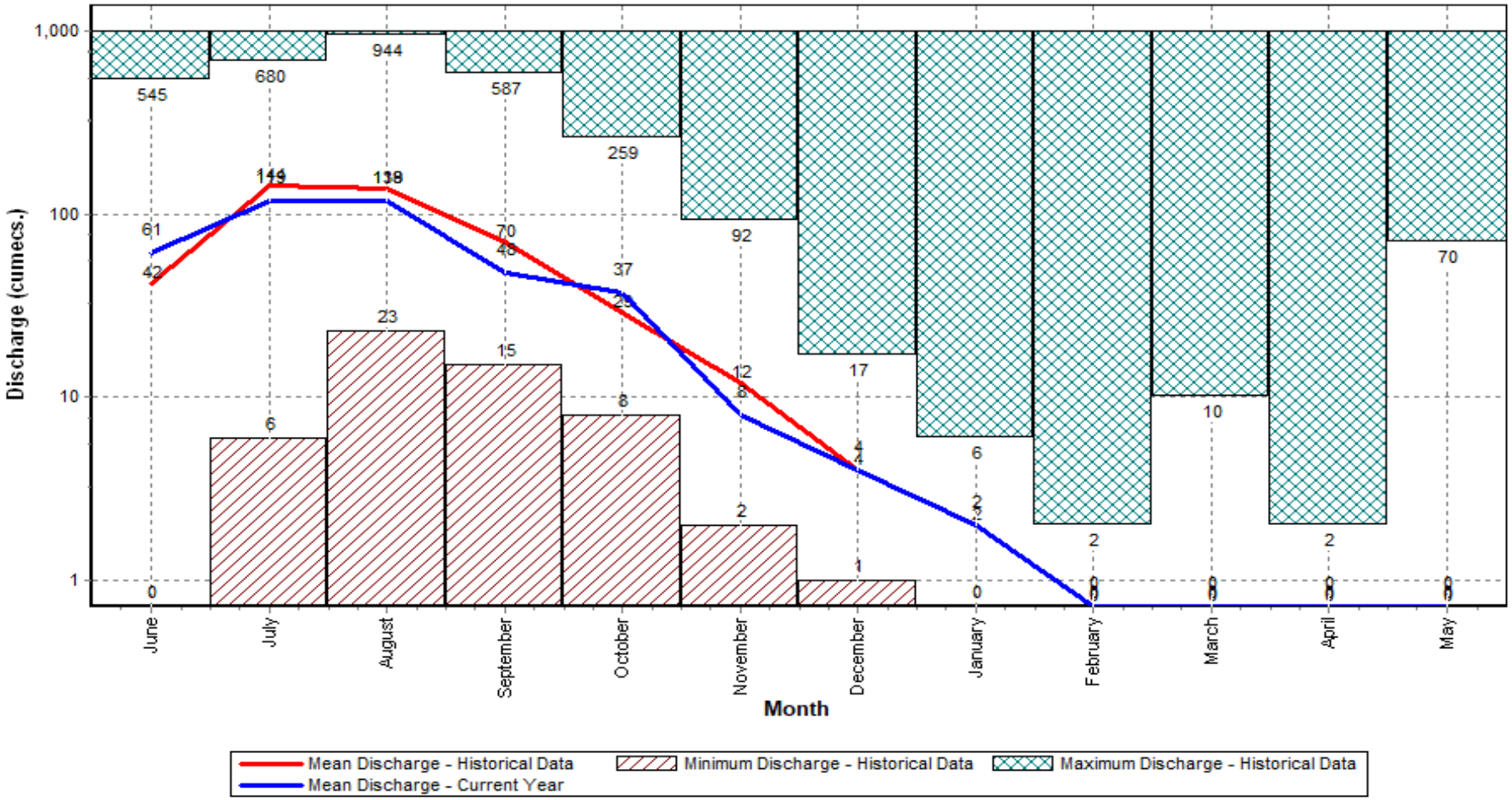
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : Avershe (WI000J2) | **Data considered : 2003-2018** | **Division : Cauvery Division, Bangalore**

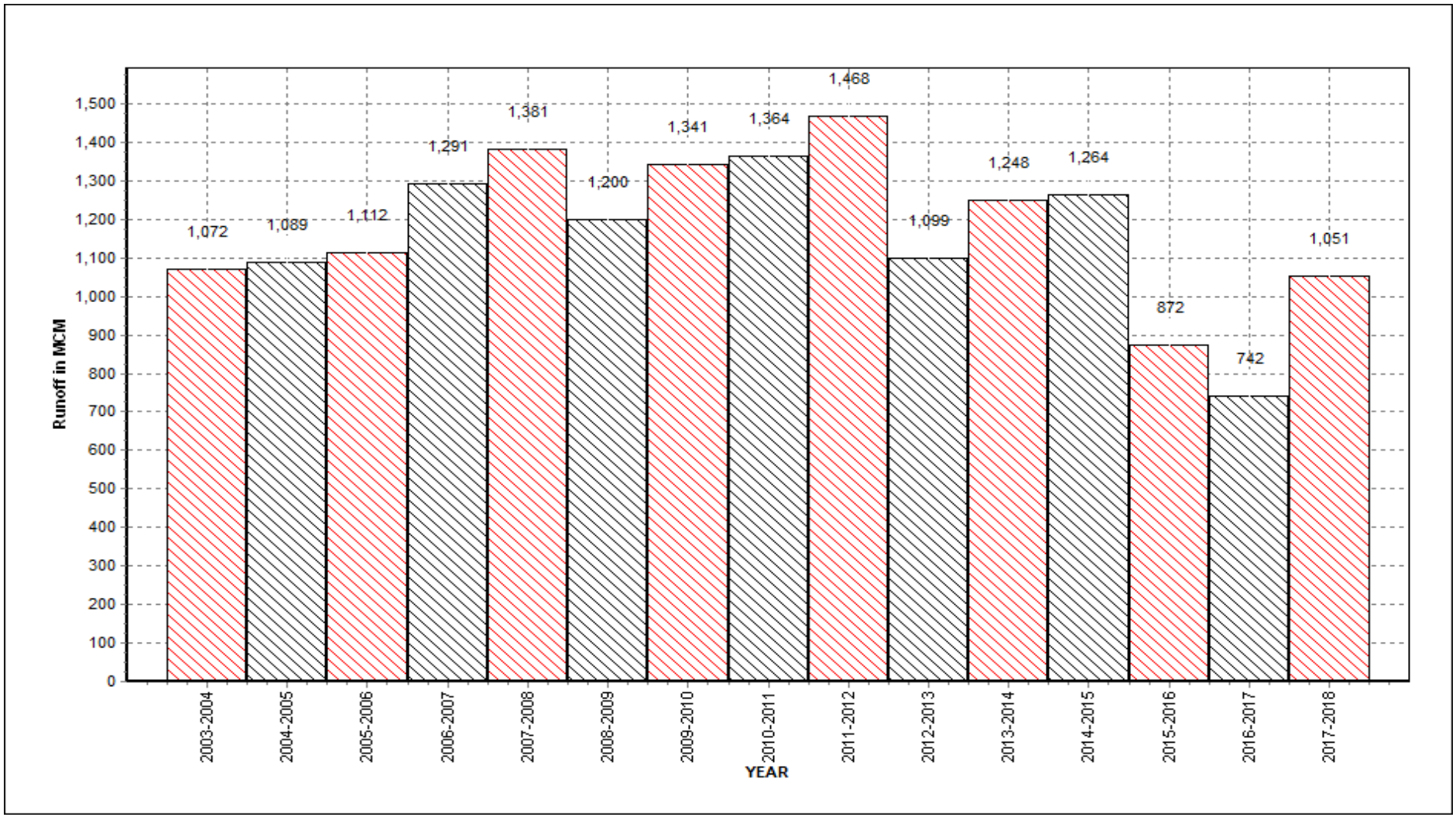
Local River : Sita | **Sub-Division : SWRSD-III, Mangalore**



Annual Runoff Values for the period: 2003 - 2018

Station Name : Avershe (WI000J2)
Local River : Sita

Division : Cauvery Division, Bangalore
Sub-Division : SWRSD-III, Mangalore

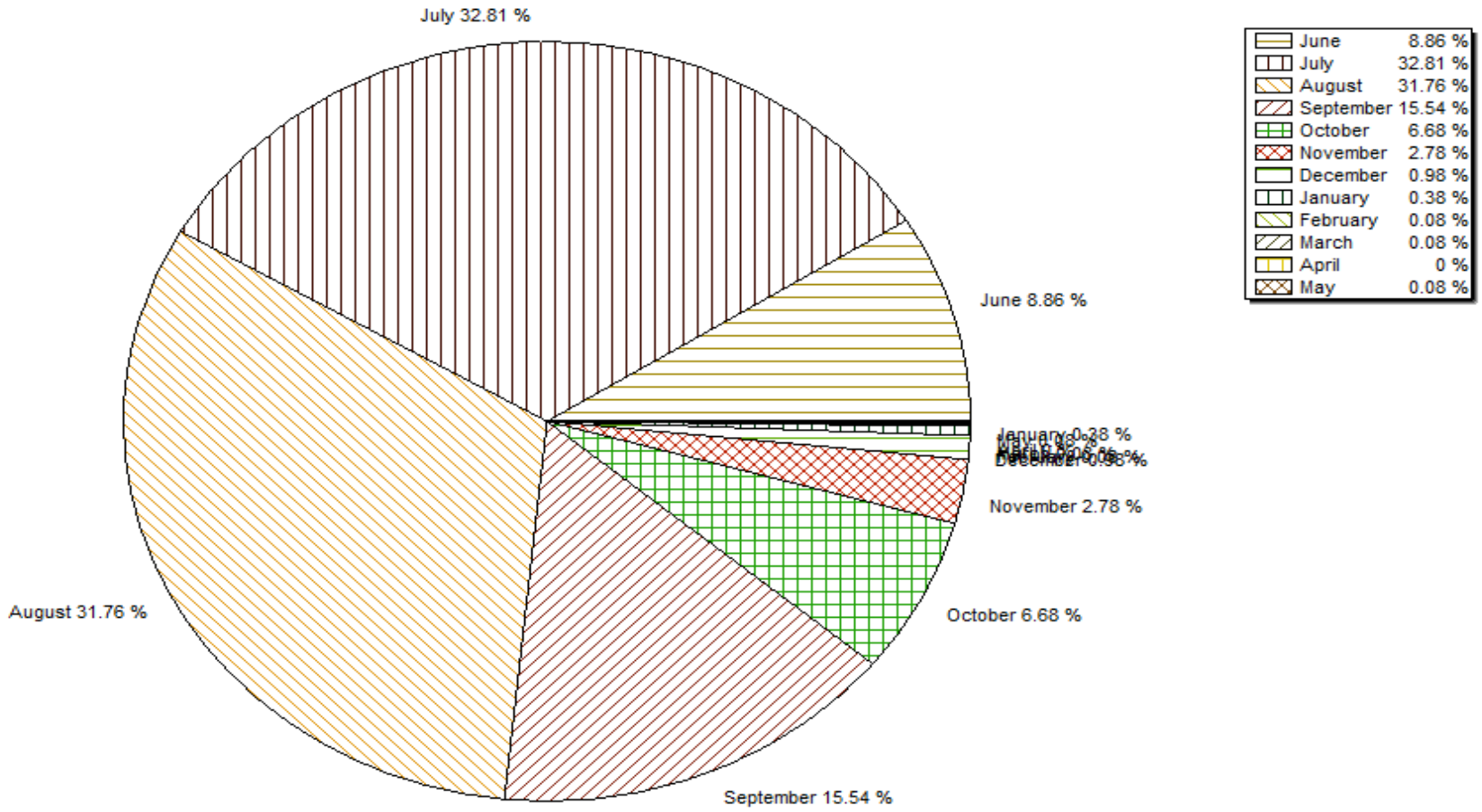


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 2003-2017

Station Name : Avershe (WI000J2)
Local River : Sita

Division : Cauvery Division, Bangalore
Sub-Division : SWRSD-III, Mangalore



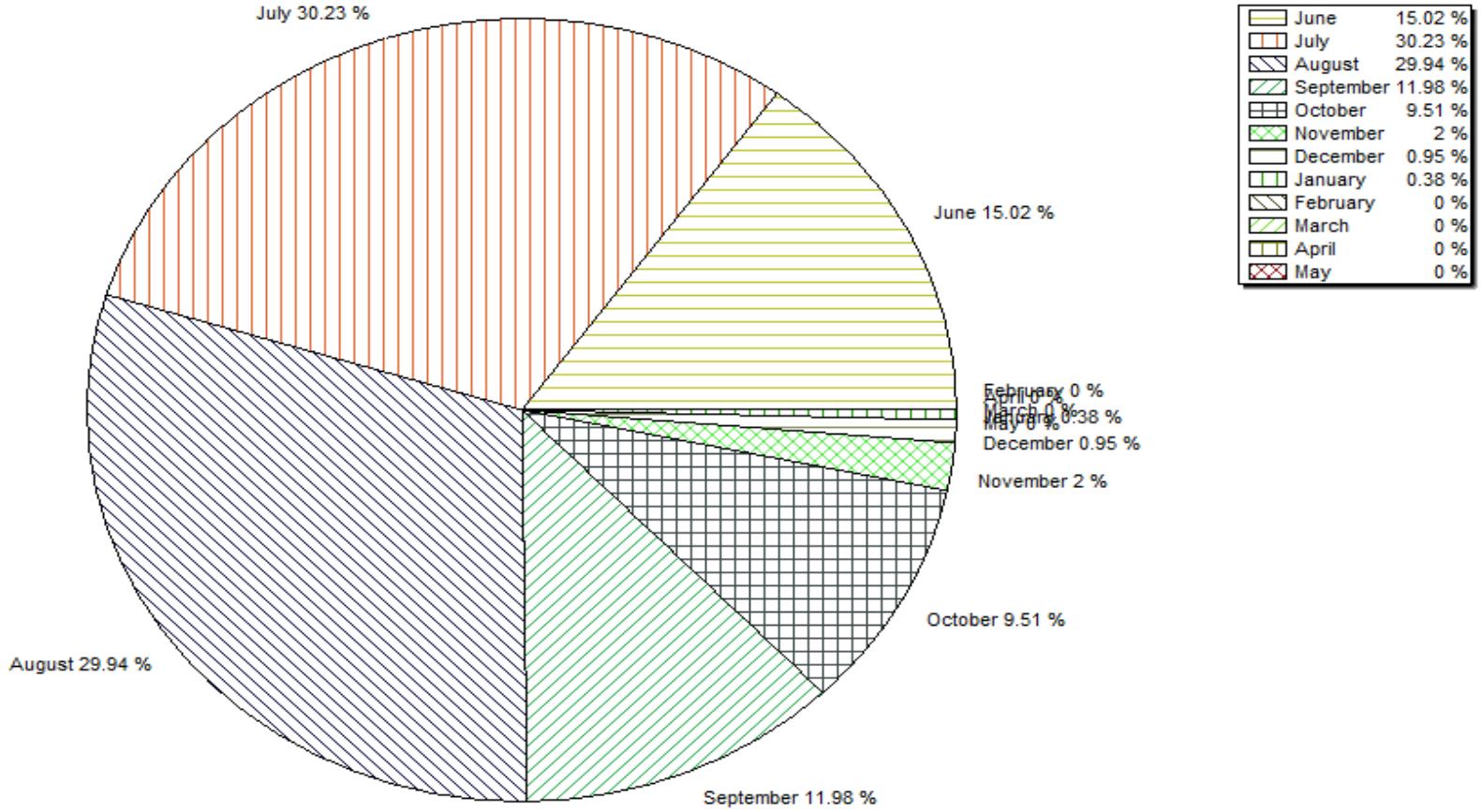
Monthly Runoff for the Year : 2017-2018

Station Name : Avershe (WI000J2)

Local River : Sita

Division : Cauvery Division, Bangalore

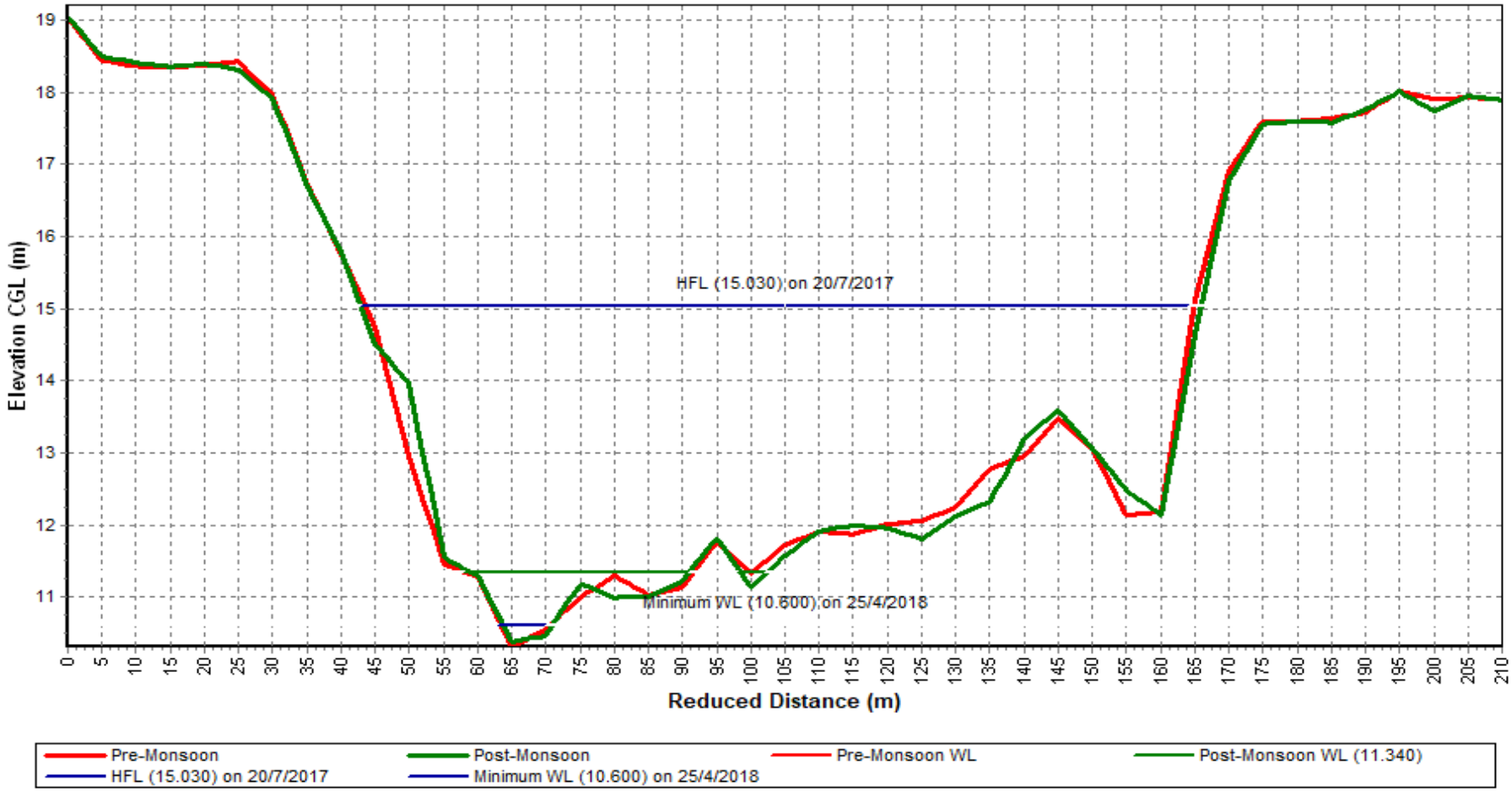
Sub-Division : SWRSD-III, Mangalore



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : Avershe (WI000J2) **Division : Cauvery Division, Bangalore**

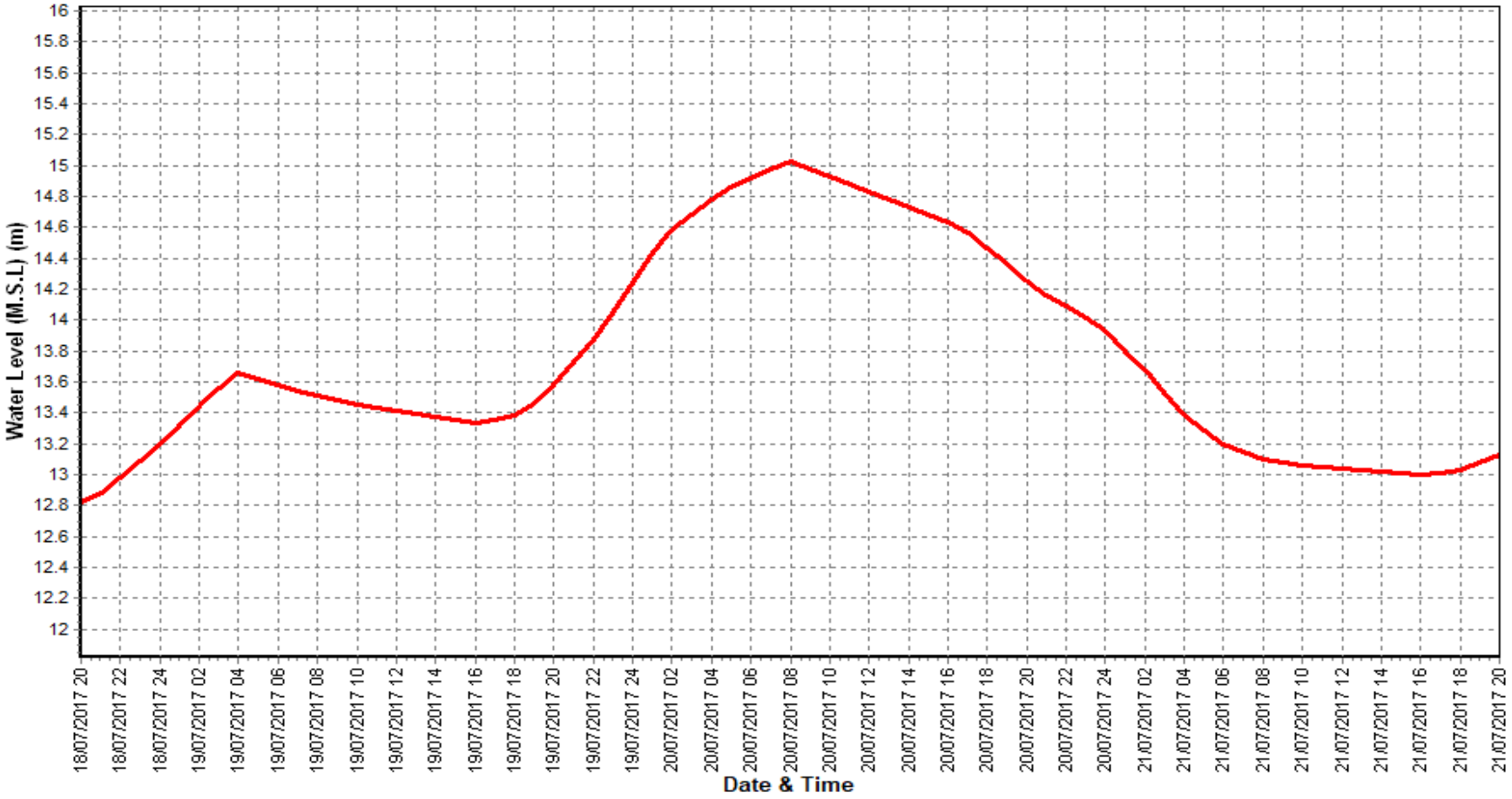
Local River : Sita **Sub-Division : SWRSD-III, Mangalore**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : Avershe (WI000J2) **Division : Cauvery Division, Bangalore**

Local River : Sita **Sub-Division : SWRSD-III, Mangalore**

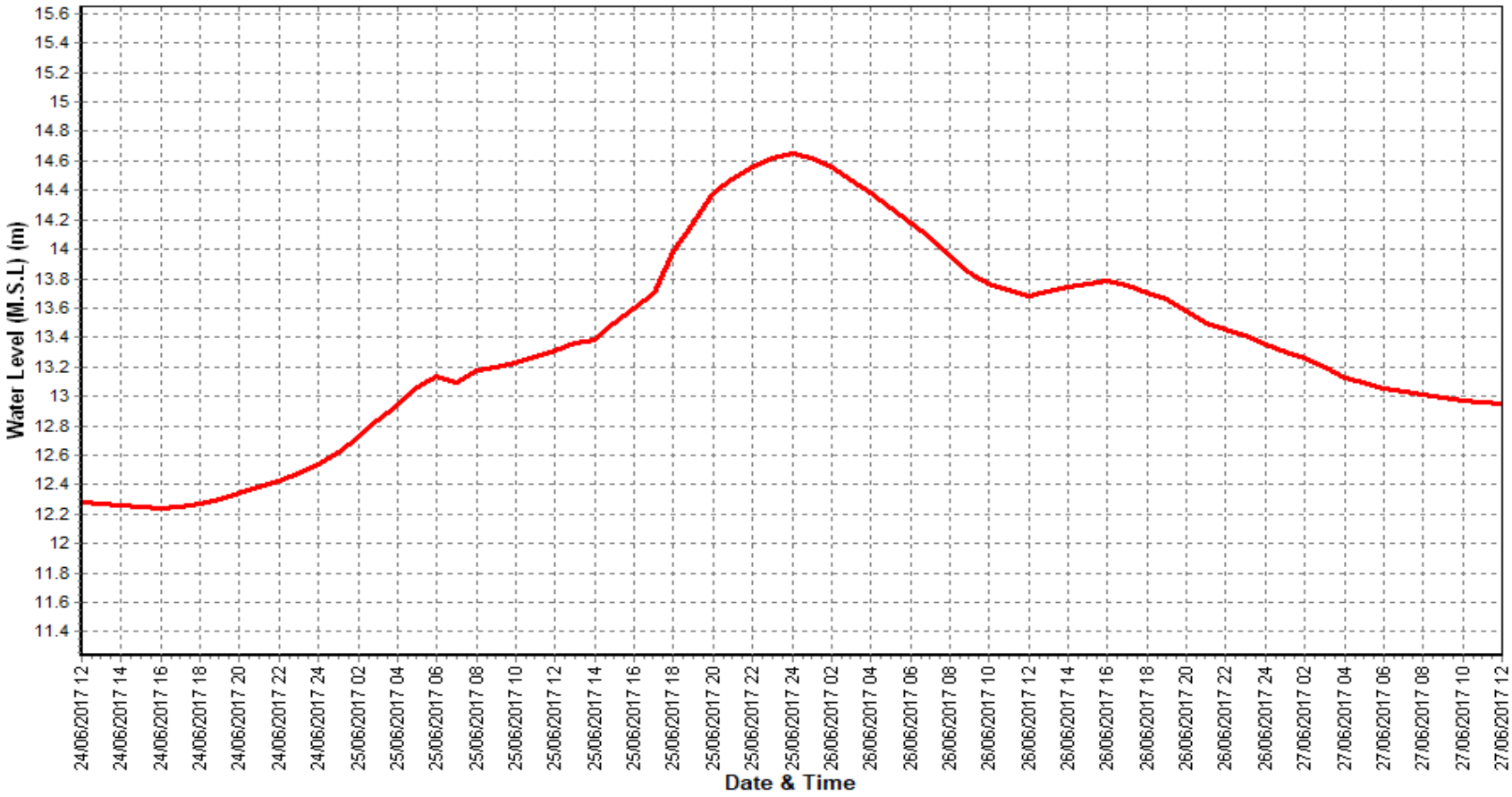


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : Avershe (WI000J2) **Division : Cauvery Division, Bangalore**

Local River : Sita **Sub-Division : SWRSD-III, Mangalore**

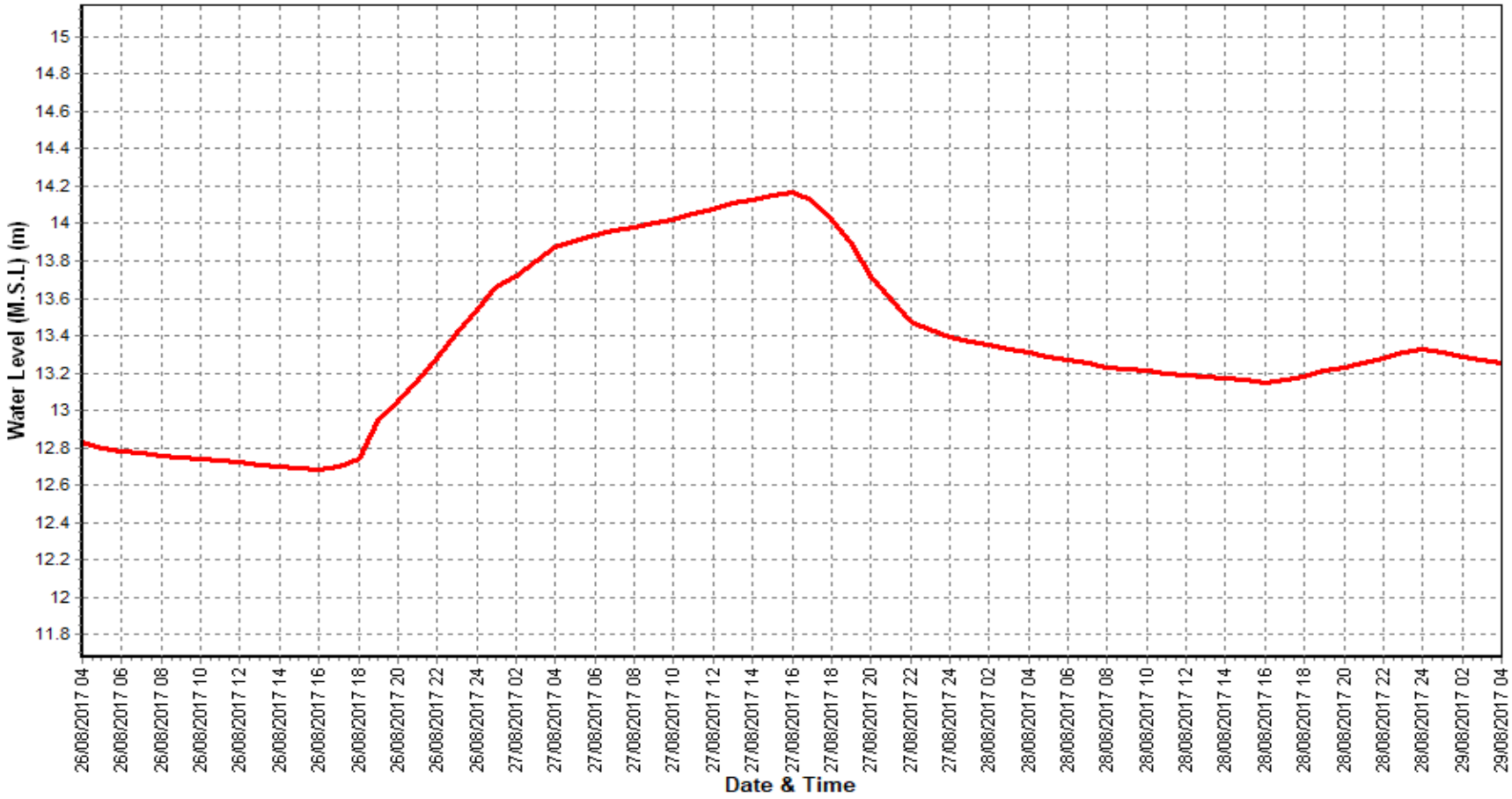


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : Avershe (WI000J2) **Division : Cauvery Division, Bangalore**

Local River : Sita **Sub-Division : SWRSD-III, Mangalore**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-2018

Site	**: Yennehole**		**Code**	**: WS000Q1**	
State	: Karnataka		District	Udupi	
Basin	: WFR South of Tapi		Independent River	: Swarna	
Tributary	: Yennehole		Sub Tributary	:	
Sub-Sub Tributary	:		Local River	: Yennehole	
Division	: Cauvery Division, Bangalore		Sub-Division	: SWRSD-III, Mangalore	
Drainage Area	: 327 Sq. Km.		Bank	: Right	
Latitude	: 13°17'39"		Longitude	: 74°58'51"	
Zero of Gauge (m)	: 15.000(m.s.l)		24-07-1989		
	Opening Date		Closing Date		
Gauge	: 24-07-1989				
Discharge	: 24-07-1989				
Sediment	:				
Water Quality	: 01-09-1993				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1990-1991	708.0	22.100	17-08-1990	0.000	17.130	05-04-1991
1991-1992	585.5	21.676	01-08-1991	0.000	17.075	22-03-1992
1992-1993	545.8	21.709	27-07-1992	0.000	17.088	04-05-1993
1993-1994	453.2	20.993	10-07-1993	0.000	17.095	22-03-1994
1994-1995	1062	23.390	13-07-1994	0.000	17.025	18-04-1995
1995-1996	696.3	22.800	11-07-1995	0.000	17.080	07-04-1996
1996-1997	910.0	23.925	29-09-1996	0.000	17.050	09-04-1997
1997-1998	789.5	23.045	10-07-1997	0.000	17.105	01-05-1998
1998-1999	626.5	21.650	06-07-1998	0.000	17.030	22-04-1999
1999-2000	695.7	22.410	18-07-1999	0.000	17.160	04-04-2000
2000-2001	610.6	22.290	25-08-2000	0.000	17.005	30-03-2001
2001-2002	370.3	20.770	05-07-2001	0.000	17.335	13-03-2002
2002-2003	310.2	20.425	17-08-2002	0.000	17.140	15-04-2003
2003-2004	766.0	22.670	23-06-2003	0.000	17.235	09-03-2004
2004-2005	704.1	22.300	03-08-2004	0.000	17.105	02-04-2005
2005-2006	658.8	22.590	02-08-2005	0.000	17.035	22-04-2006
2006-2007	578.1	21.930	20-07-2006	0.000	17.115	23-04-2007
2007-2008	721.0	22.400	30-06-2007	0.023	17.260	12-03-2008
2008-2009	746.7	22.640	11-08-2008	0.003	17.195	11-03-2009

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2009-2010	1531	24.650	06-07-2009	0.000	17.240	28-04-2010
2010-2011	482.5	21.650	22-10-2010	0.000	17.270	09-05-2011
2011-2012	859.9	23.525	18-07-2011	0.000	17.280	01-06-2011
2012-2013	740.1	22.800	26-08-2012	0.000	17.040	01-06-2012
2013-2014	1069	23.640	04-07-2013	0.000	17.190	19-02-2014
2014-2015	792.5	22.600	20-07-2014	0.000	17.240	15-02-2015
2015-2016	610.7	21.200	10-07-2015	0.000	17.200	29-02-2016
2016-2017	803.2	21.380	05-07-2016	0.000	16.980	28-03-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : Yennehole (WS000Q1) **Division : Cauvery Division, Bangalore**

Local River : Yennehole **Sub-Division : SWRSD-III, Mangalore**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	16.780	0.000	19.500	148.8	18.970	80.96	19.000	71.64	18.800	74.39 *	18.010	14.26
2	16.830	0.000	19.350	130.6 *	18.790	57.78	18.820	69.58 *	18.900	85.73 *	17.980	13.07 #
3	17.010	0.000	19.500	166.3	18.780	57.41	18.720	60.38 *	18.820	66.45	17.980	10.39
4	17.060	0.000	19.290	130.1	20.560	311.9	18.630	53.88	18.660	61.28	17.980	13.07 *
5	17.140	0.000	19.320	139.4	20.590	316.6	18.590	52.93	18.550	51.33	17.980	13.07 *
6	17.160	0.000	19.300	126.4	19.750	190.9 *	18.540	51.57	18.640	61.06	17.970	10.64
7	17.820	7.921 #	19.140	106.7	19.290	123.7	18.600	50.76	18.830	70.07	17.980	13.07 #
8	17.620	2.554	19.080	93.67	19.470	157.2	18.460	41.68	18.650	59.01 *	18.080	15.00
9	17.800	7.635 #	19.020	90.14 *	19.040	75.65	18.580	52.27	18.600	53.53	17.970	10.82
10	18.010	15.73	18.840	77.52	18.940	76.36	18.480	41.20 *	18.250	28.43	17.970	10.01
11	19.630	171.5 *	18.810	65.82	18.700	52.75	18.480	44.99	18.330	40.71	18.070	14.44
12	19.290	128.7	18.790	67.70	19.480	133.4	18.300	35.89	18.230	29.19 #	17.910	10.29 *
13	18.810	61.29	18.810	61.29	18.830	70.54 *	18.240	31.80	18.270	29.28	17.890	11.61
14	18.670	52.02	19.370	136.0	18.710	57.53	18.350	33.23	18.360	44.43	17.940	13.35
15	18.200	23.79 #	19.340	136.7	18.600	50.29 *	18.500	47.21	19.810	230.7 *	17.940	12.92
16	18.610	46.88	19.250	117.5 *	18.750	66.72	18.310	31.95	18.830	73.78	17.900	11.25
17	18.670	42.92	19.160	113.1	18.740	63.27	18.550	46.38 *	18.740	54.07	17.900	11.82
18	18.600	50.29 *	19.360	142.2	19.050	104.2	18.680	61.36	18.360	34.68 *	17.900	10.48
19	18.090	18.36 #	19.850	231.9	19.420	143.5	18.900	63.65	18.340	42.32	17.980	13.07 *
20	18.070	17.45 #	21.180	466.3	19.550	159.2 *	18.480	50.99	18.350	37.62 #	17.900	12.09
21	18.520	53.00	19.730	219.1	20.330	285.4	18.450	49.87	18.290	31.67	17.850	9.986
22	18.090	18.36 #	19.500	144.1	19.630	190.0	18.300	33.12	18.330	32.56 *	17.800	6.280
23	18.440	39.56	19.240	116.2 *	19.220	108.5	18.110	16.03	18.340	42.18	18.000	13.28
24	19.000	90.54	19.330	123.0	19.070	85.97	18.220	24.86 *	18.400	37.62 #	17.790	5.965
25	19.750	190.9 *	19.160	114.3	19.900	216.8 *	18.120	15.67	18.260	29.34	17.750	4.812
26	21.320	555.0 *	19.030	81.75	20.250	290.6	18.070	14.62	18.390	36.52	17.780	6.078 *
27	19.760	194.6	18.980	80.45	20.490	336.5 *	18.500	50.80	18.120	17.05	17.800	6.522
28	19.420	132.7	19.230	119.3	19.820	217.8	19.000	76.58	18.220	29.27	17.790	6.024
29	19.230	124.6	19.330	126.9	20.250	240.2	18.900	77.45 *	18.110	19.20 *	17.780	5.773
30	19.300	148.6	19.100	99.20 *	20.230	266.8	18.520	54.11	18.090	15.32	17.780	6.059
31			19.070	91.19	19.250	111.2			18.080	14.58		
Ten-Daily Mean												
I Ten-Daily	17.323	3.384	19.234	121.0	19.418	144.8	18.642	54.59	18.670	61.13	17.990	12.34
II Ten-Daily	18.664	61.32	19.392	153.8	18.983	90.14	18.479	44.74	18.562	61.68	17.933	12.13
III Ten-Daily	19.283	154.8	19.245	119.6	19.858	213.6	18.419	41.31	18.239	27.76	17.812	7.078
Monthly												
Min.	16.780	0.000	18.790	61.29	18.600	50.29	18.070	14.62	18.080	14.58	17.750	4.812
Max.	21.320	555.0	21.180	466.3	20.590	336.5	19.000	77.45	19.810	230.7	18.080	15.00
Mean	18.423	73.16	19.289	131.1	19.434	151.6	18.513	46.88	18.482	49.46	17.912	10.52

Annual Runoff in MCM = 1251 **Annual Runoff in mm = 3827**

Peak Observed Discharge = 466.3 cumecs on 20/07/2017 **Corres. Water Level :21.18 m**

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 **Corres. Water Level :16.78 m**

Q: Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : Yennehole (WS000Q1) **Division : Cauvery Division, Bangalore**

Local River : Yennehole **Sub-Division : SWRSD-III, Mangalore**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	17.770	5.733	17.470	1.488	17.280	0.241 #	17.200	0.000	17.130	0.000	17.120	0.000
2	17.760	6.001 *	17.455	1.310	17.260	0.128	17.160	0.000	17.130	0.000	17.120	0.000
3	17.740	5.575 *	17.430	1.349	17.260	0.131	17.160	0.000	17.120	0.000	17.120	0.000
4	17.730	4.660	17.430	1.321	17.250	0.149 *	17.150	0.000	17.120	0.000	17.120	0.000
5	17.730	5.356	17.420	1.212	17.250	0.136	17.150	0.000	17.120	0.000	17.120	0.000
6	17.760	5.141	17.410	0.823	17.250	0.121	17.150	0.000	17.110	0.000	17.120	0.000
7	17.760	5.346	17.370	0.678 *	17.250	0.123	17.150	0.000	17.100	0.000	17.130	0.000
8	17.760	5.032	17.360	0.721	17.250	0.131	17.150	0.000	17.100	0.000	17.130	0.000
9	17.740	5.026	17.350	0.645	17.240	0.119	17.140	0.000	17.100	0.000	17.150	0.000
10	17.720	5.167 *	17.360	0.726	17.240	0.117	17.140	0.000	17.090	0.000	17.160	0.000
11	17.700	4.560	17.370	0.807	17.240	0.124 *	17.140	0.000	17.080	0.000	17.160	0.000
12	17.660	3.706	17.370	0.824	17.240	0.114	17.140	0.000	17.080	0.000	17.170	0.000
13	17.650	3.574	17.370	0.854	17.230	0.104	17.140	0.000	17.080	0.000	17.170	0.000
14	17.630	3.142	17.380	0.743 *	17.230	0.098	17.130	0.000	17.080	0.000	17.170	0.000
15	17.630	3.147	17.380	0.743 *	17.230	0.080	17.200	0.000	17.080	0.000	17.470	1.175
16	17.640	3.776	17.370	0.809	17.230	0.105	17.170	0.000	17.080	0.000	17.470	1.267
17	17.620	3.385 *	17.360	0.781	17.230	0.102	17.160	0.000	17.080	0.000	17.480	1.919
18	17.610	3.017	17.360	0.762	17.230	0.101 *	17.160	0.000	17.080	0.000	17.560	2.517 #
19	17.600	2.958	17.320	0.404 #	17.230	0.097	17.150	0.000	17.080	0.000	17.560	3.078
20	17.590	2.934	17.330	0.542	17.220	0.000	17.140	0.000	17.150	0.000	17.500	1.791 *
21	17.590	2.856	17.320	0.404 *	17.230	0.000	17.140	0.000	17.150	0.000	17.520	2.098
22	17.590	3.109	17.310	0.452	17.220	0.000	17.140	0.000	17.130	0.000	17.520	2.093
23	17.570	2.906	17.320	0.471	17.220	0.000	17.140	0.000	17.130	0.000	17.480	1.899
24	17.560	2.517 *	17.330	0.587	17.210	0.000	17.140	0.000	17.130	0.000	17.500	1.997
25	17.540	2.259 *	17.310	0.451	17.210	0.000	17.140	0.000	17.130	0.000	17.570	2.651 #
26	17.510	1.769	17.320	0.404 *	17.210	0.000	17.140	0.000	17.120	0.000	17.570	2.651 #
27	17.500	1.649	17.320	0.568	17.200	0.000	17.140	0.000	17.120	0.000	17.600	3.079 *
28	17.490	1.594	17.300	0.317 *	17.200	0.000	17.140	0.000	17.120	0.000	17.630	3.544 #
29	17.480	1.594	17.290	0.277 #			17.130	0.000	17.120	0.000	18.200	30.74
30	17.480	1.564	17.280	0.251			17.130	0.000	17.120	0.000	18.750	54.84
31	17.470	1.480 *	17.280	0.241 #			17.130	0.000			18.230	18.92
Ten-Daily Mean												
I Ten-Daily	17.747	5.304	17.406	1.027	17.253	0.140	17.155	0.000	17.112	0.000	17.129	0.000
II Ten-Daily	17.633	3.420	17.361	0.727	17.231	0.093	17.153	0.000	17.087	0.000	17.371	1.175
III Ten-Daily	17.525	2.118	17.307	0.402	17.212	0.000	17.137	0.000	17.127	0.000	17.779	11.32
Monthly												
Min.	17.470	1.480	17.280	0.241	17.200	0.000	17.130	0.000	17.080	0.000	17.120	0.000
Max.	17.770	6.001	17.470	1.488	17.280	0.241	17.200	0.000	17.150	0.000	18.750	54.84
Mean	17.632	3.566	17.356	0.709	17.234	0.083	17.148	0	17.109	0	17.438	4.395

Peak Computed Discharge = 555.0 cumecs on 26/06/2017 **Corres. Water Level :21.32 m**

Lowest Computed Discharge = 0.101 cumecs on 18/02/2018 **Corres. Water Level :17.23 m**

Q: Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

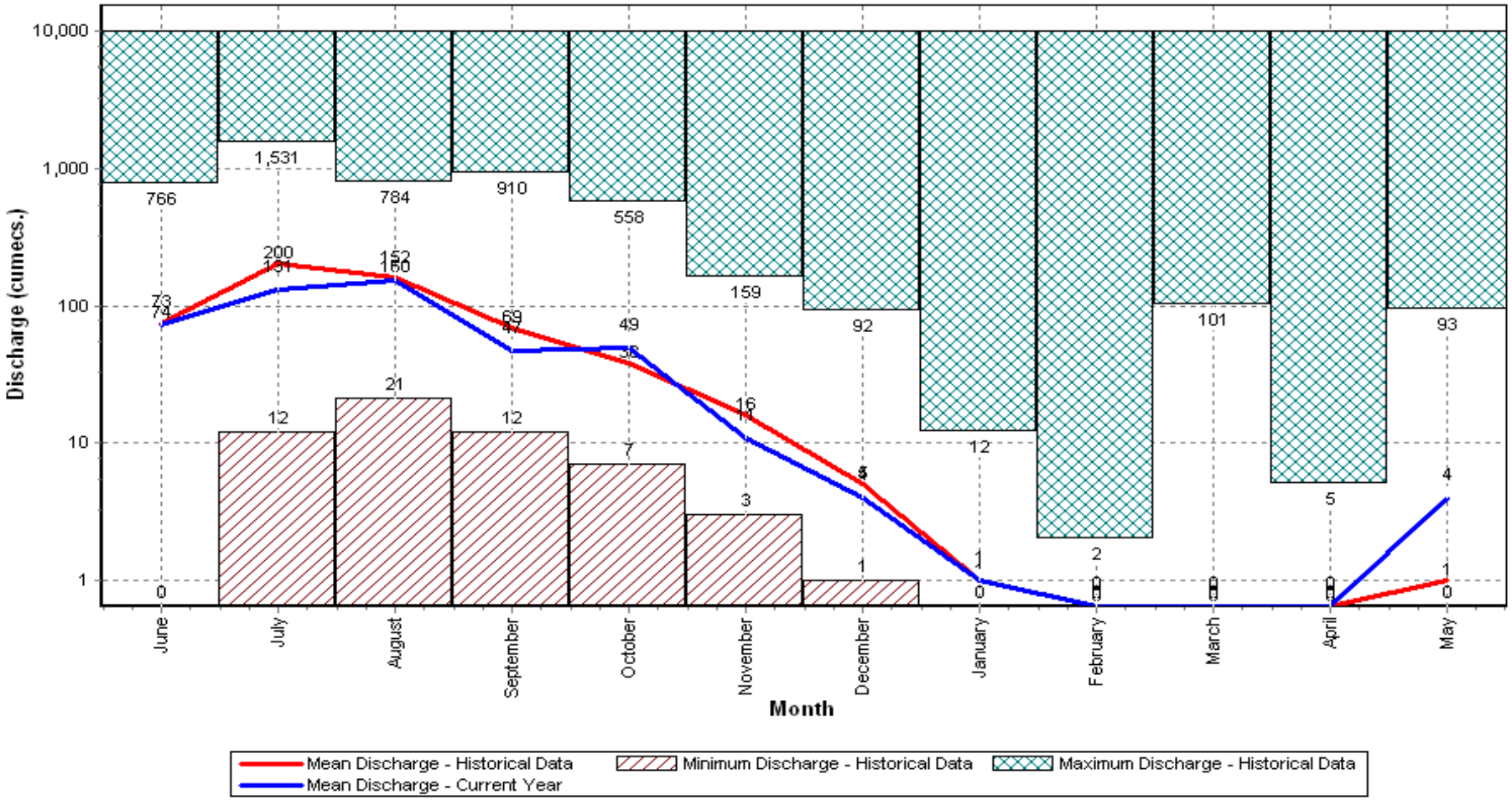
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : Yennehole (WS000Q1) | **Data considered : 1990-2018** | **Division : Cauvery Division, Bangalore**

Local River : Yennehole | **Sub-Division : SWRSD-III, Mangalore**



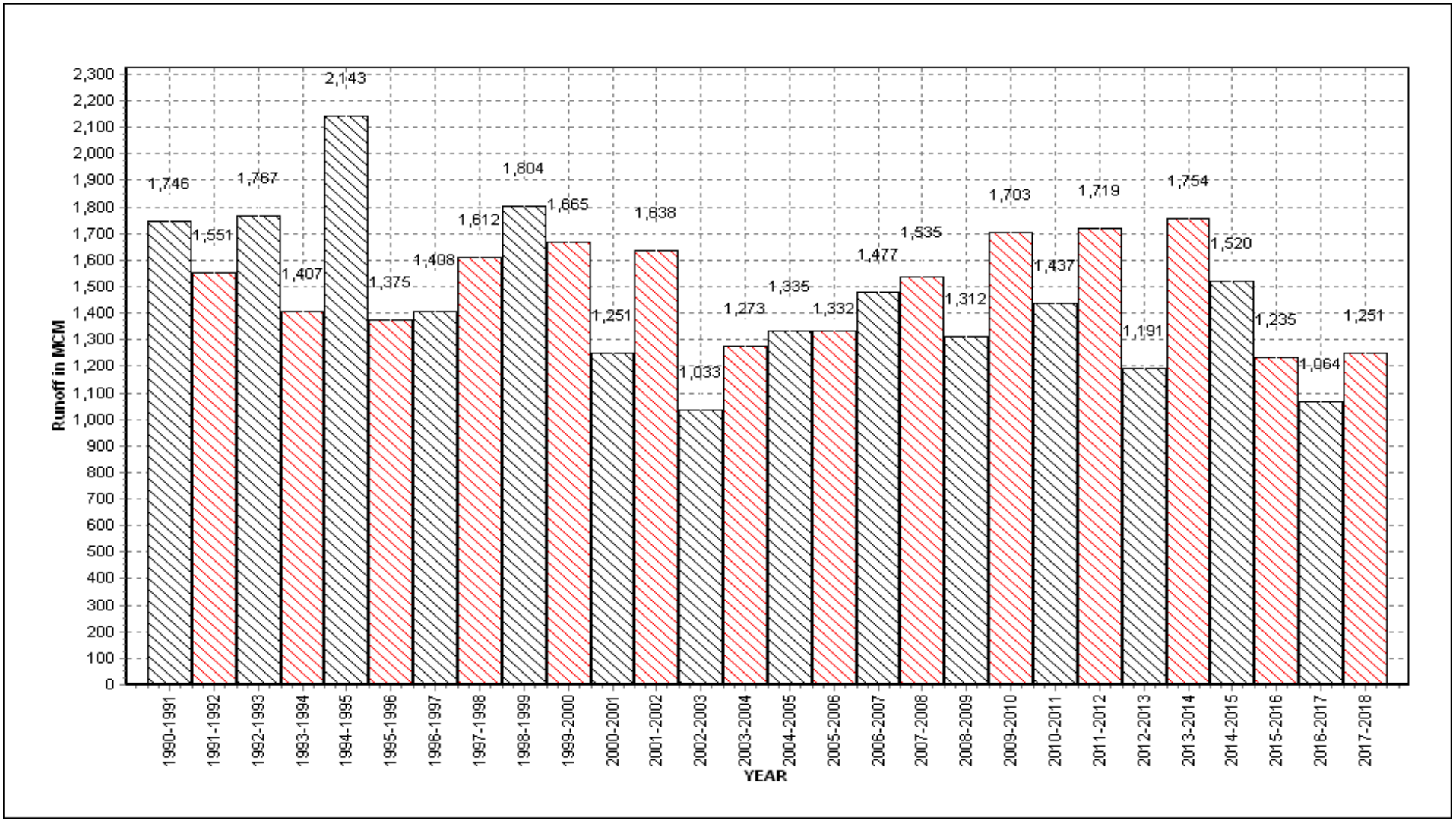
Annual Runoff Values for the period: 1990 - 2018

Station Name : Yennehole (WS000Q1)

Division : Cauvery Division, Bangalore

Local River : Yennehole

Sub-Division : SWRSD-III, Mangalore



Note: Missing values have not been considered while arriving at Annual Runoff

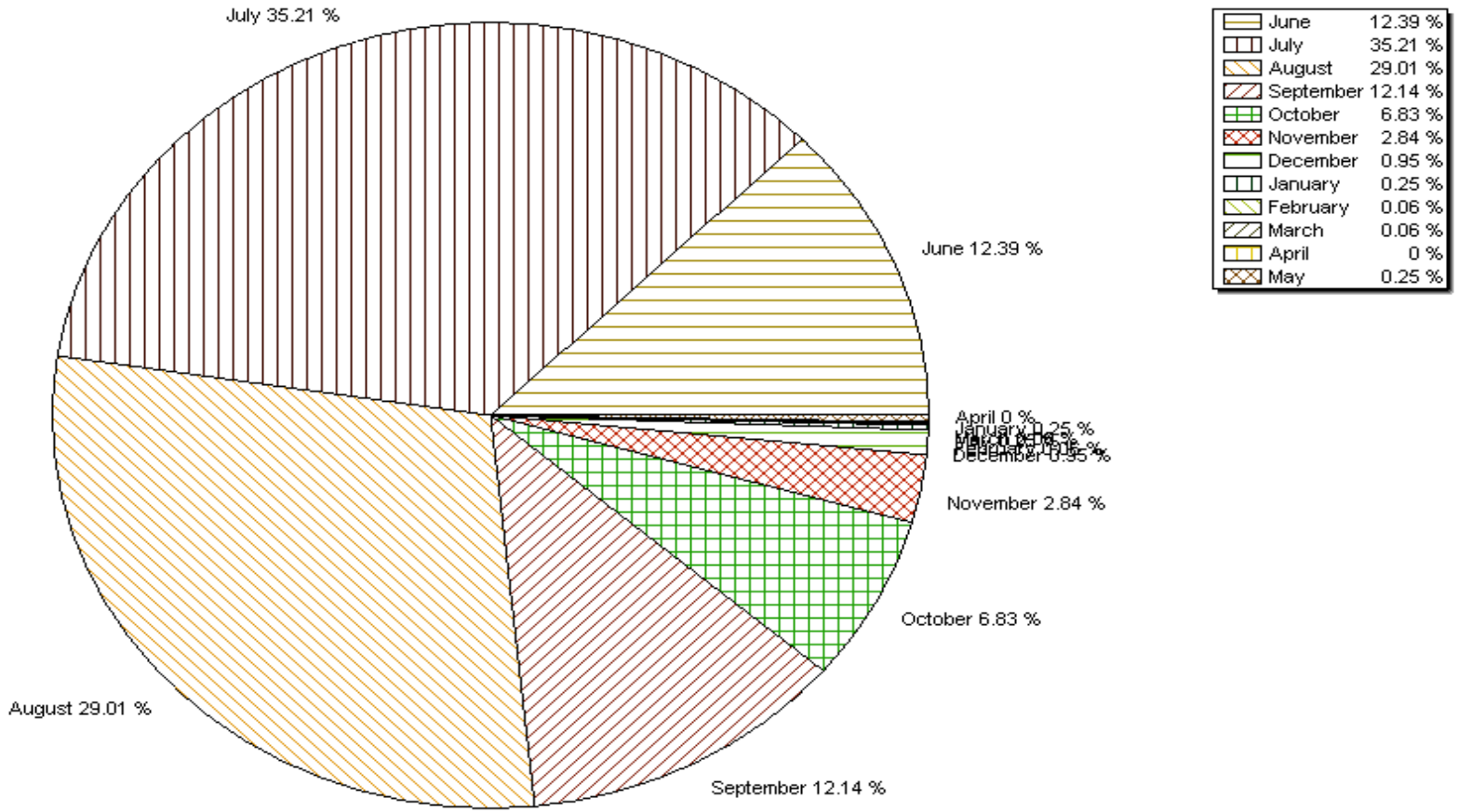
Monthly Average Runoff based on period : 1990-2017

Station Name : Yennehole (WS000Q1)

Local River : Yennehole

Division : Cauvery Division, Bangalore

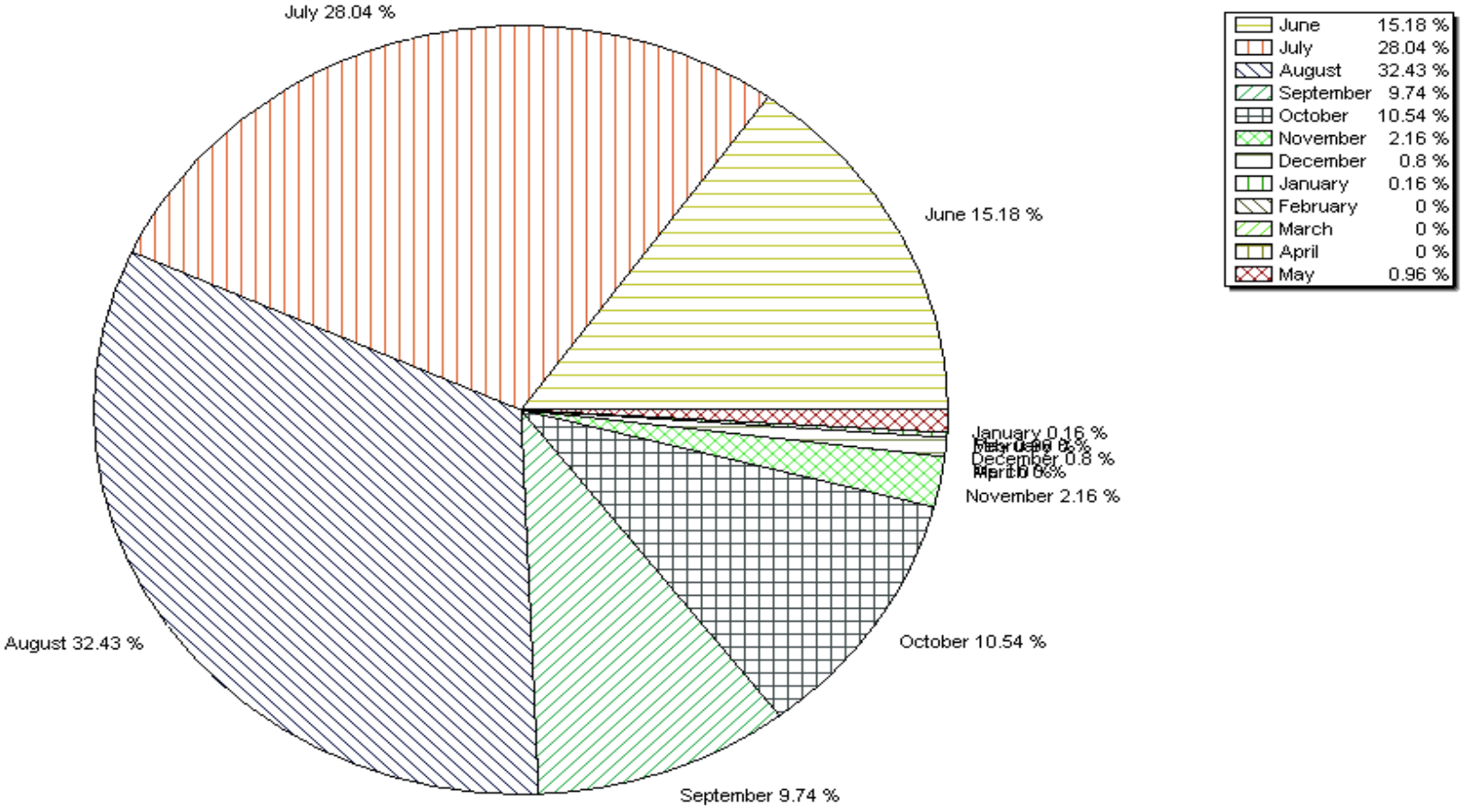
Sub-Division : SWRSD-III, Mangalore



Monthly Runoff for the Year : 2017-2018

Station Name : Yennehole (WS000Q1)
Local River : Yennehole

Division : Cauvery Division, Bangalore
Sub-Division : SWRSD-III, Mangalore



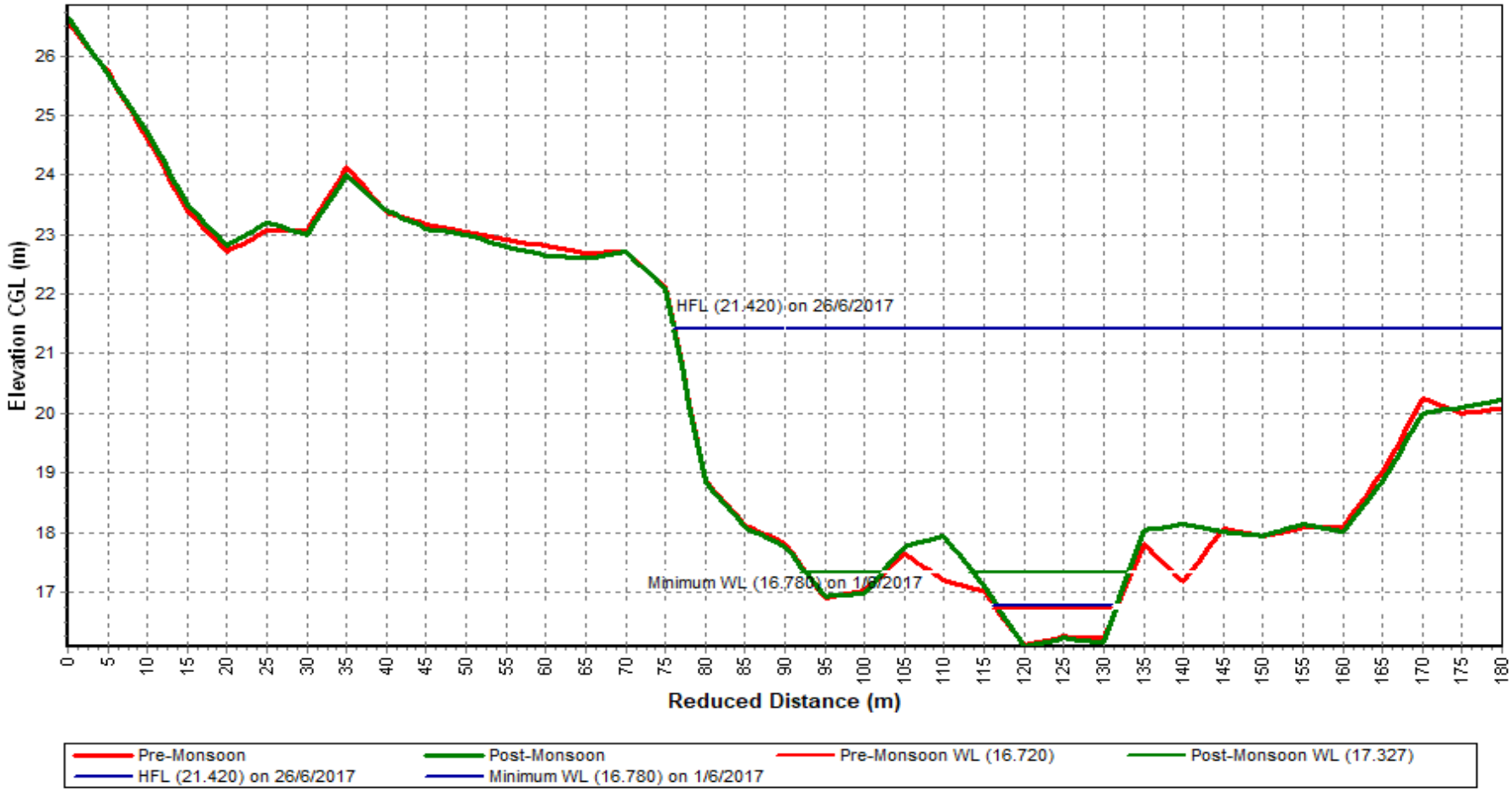
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : Yennehole (WS000Q1)

Local River : Yennehole

Division : Cauvery Division, Bangalore

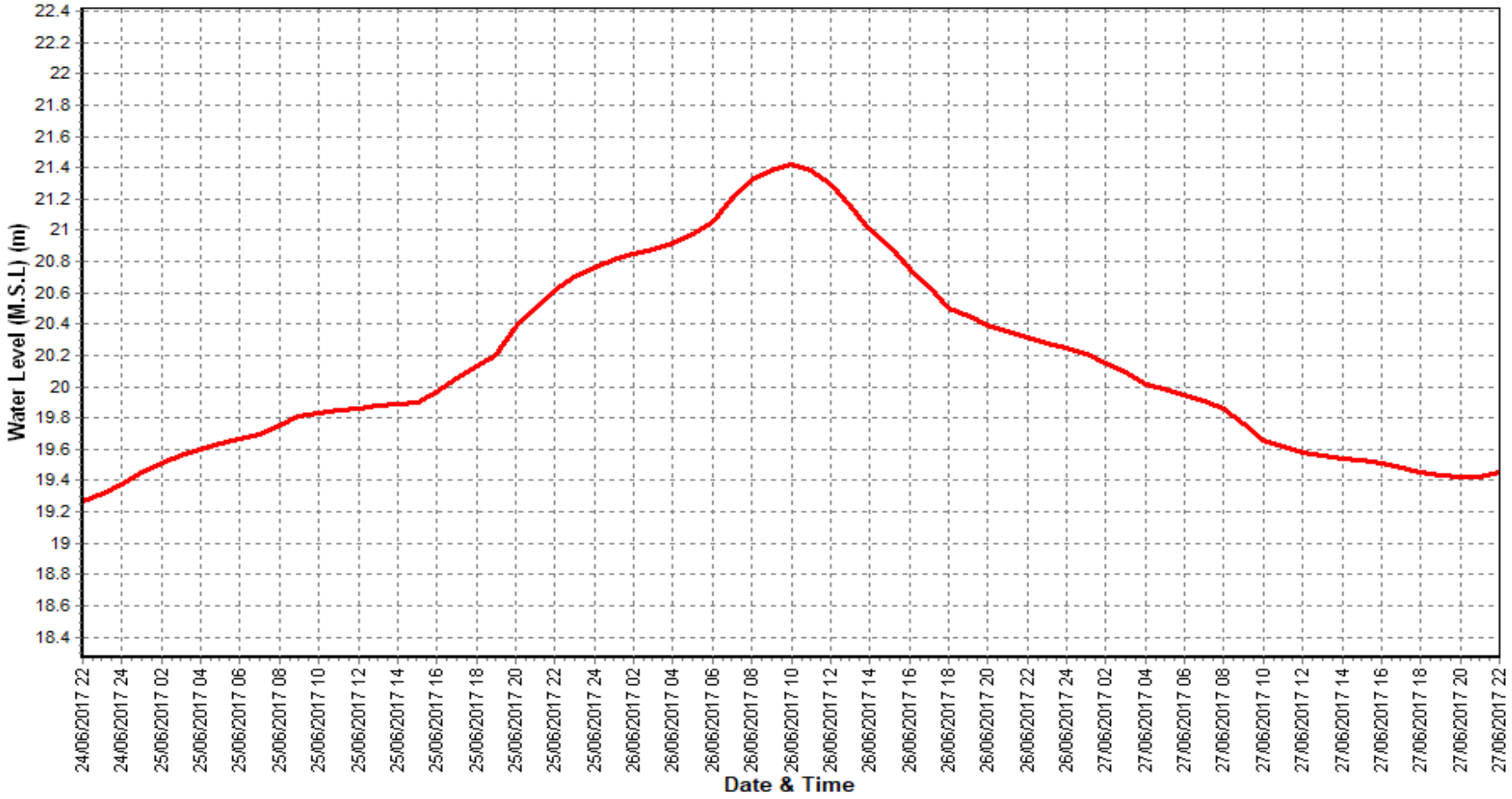
Sub-Division : SWRSD-III, Mangalore



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : Yennehole (WS000Q1) **Division : Cauvery Division, Bangalore**

Local River : Yennehole **Sub-Division : SWRSD-III, Mangalore**

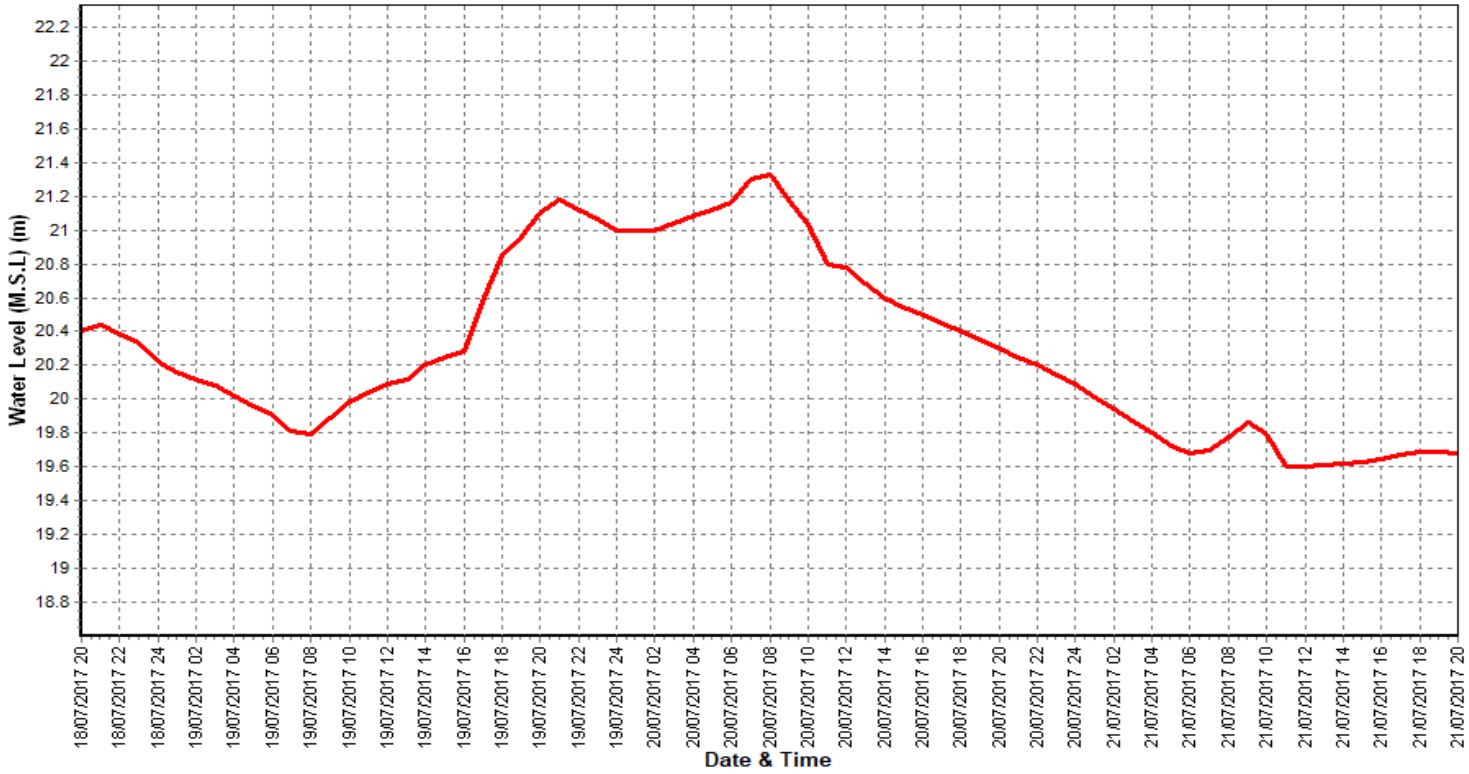


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : Yennehole (WS000Q1) **Division : Cauvery Division, Bangalore**

Local River : Yennehole **Sub-Division : SWRSD-III, Mangalore**

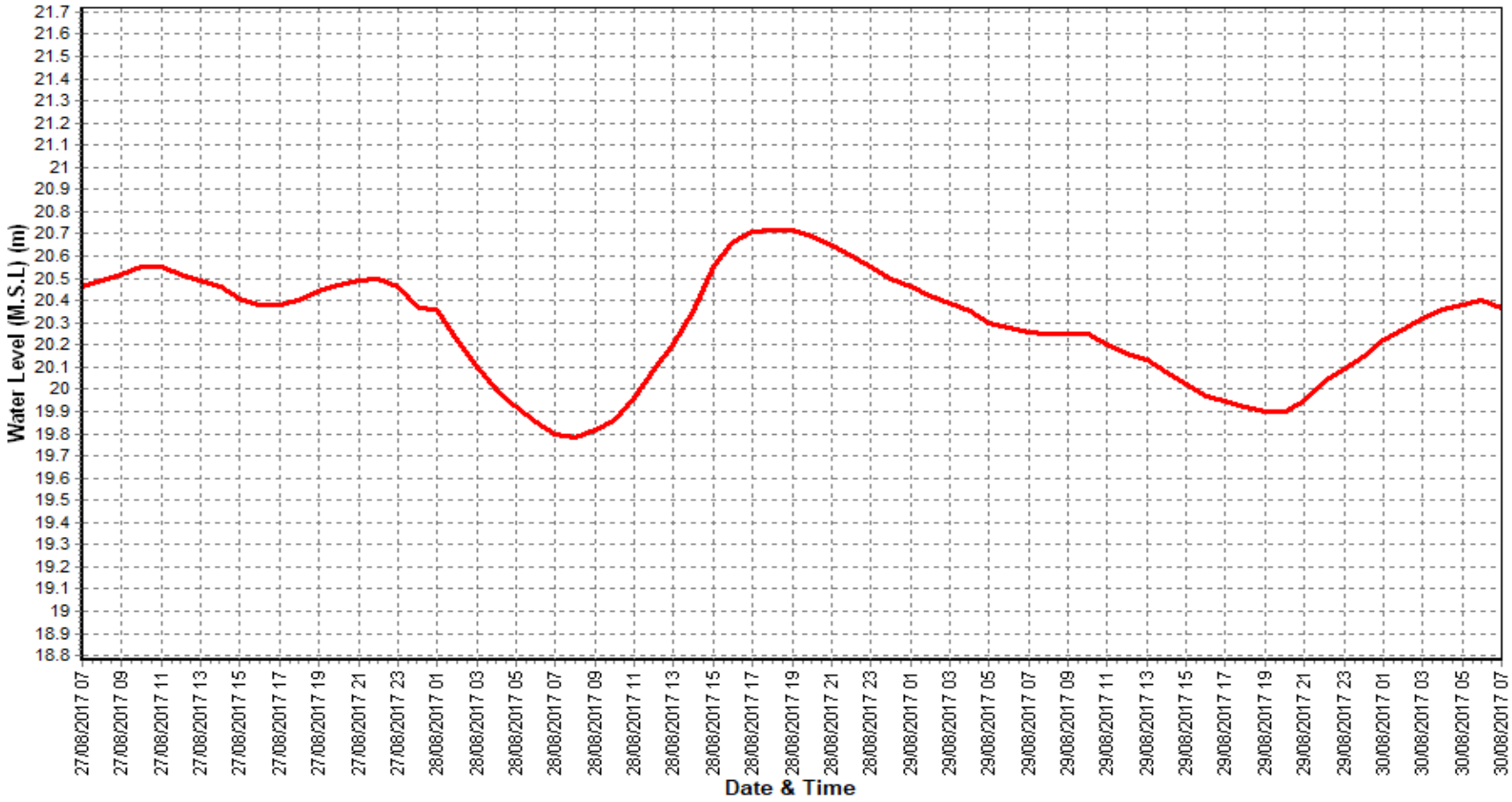


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : Yennehole (WS000Q1) **Division : Cauvery Division, Bangalore**

Local River : Yennehole **Sub-Division : SWRSD-III, Mangalore**



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Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-2018

Site	**: Addoor**		**Code**	**: WG000E8**	
State	: Karnataka		District	South Canara	
Basin	: WFR South of Tapi		Independent River	: Gurpur	
Tributary	: -		Sub Tributary	:	
Sub-Sub Tributary	:		Local River	: Gurpur	
Division	: Cauvery Division, Bangalore		Sub-Division	: SWRSD-III, Mangalore	
Drainage Area	: 688 Sq. Km.		Bank	: Right	
Latitude	: 12°55'44"		Longitude	: 74°57'14"	
Zero of Gauge (m)	: 10.000(Arb.) -1.000 (m.s.l)		21-08-1998 01-06-2005	- 31-05-2005	
	Opening Date		Closing Date		
Gauge	: 21-08-1998				
Discharge	: 17-07-2003				
Sediment	:				
Water Quality	: 02-09-2002				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2004-2005	930.3	15.480	04-08-2004	0.000	10.430	06-02-2005
2005-2006	692.8	5.200	03-08-2005	0.000	0.060	14-02-2006
2006-2007	920.6	6.140	30-06-2006	0.000	1.520	27-01-2007
2007-2008	754.9	5.375	25-09-2007	0.000	1.620	31-01-2008
2008-2009	1043	5.990	13-08-2008	0.000	0.420	06-12-2008
2009-2010	1028	5.300	03-10-2009	0.000	0.960	31-01-2010
2010-2011	1170	6.245	30-07-2010	0.000	1.160	30-01-2011
2011-2012	888.6	5.120	18-07-2011	0000	0.575	01-06-2011
2012-2013	862.7	5.140	11-08-2012	0.000	0.030	01-06-2012
2013-2014	1408	6.510	04-07-2013	0.000	-0.600	01-06-2013
2014-2015	1083	5.390	20-07-2014	0.000	0.460	01-06-2014
2015-2016	903.5	3.570	26-06-2015	0.000	0.570	01-06-2015
2003-2004	766.0	22.670	23-06-2003	0.000	17.235	09-03-2004
2004-2005	704.1	22.300	03-08-2004	0.000	17.105	02-04-2005
2005-2006	658.8	22.590	02-08-2005	0.000	17.035	22-04-2006
2006-2007	578.1	21.930	20-07-2006	0.000	17.115	23-04-2007
2007-2008	721.0	22.400	30-06-2007	0.023	17.260	12-03-2008
2008-2009	746.7	22.640	11-08-2008	0.003	17.195	11-03-2009

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2009-2010	1531	24.650	06-07-2009	0.000	17.240	28-04-2010
2010-2011	482.5	21.650	22-10-2010	0.000	17.270	09-05-2011
2011-2012	859.9	23.525	18-07-2011	0.000	17.280	01-06-2011
2012-2013	740.1	22.800	26-08-2012	0.000	17.040	01-06-2012
2013-2014	1069	23.640	04-07-2013	0.000	17.190	19-02-2014
2014-2015	792.5	22.600	20-07-2014	0.000	17.240	15-02-2015
2015-2016	610.7	21.200	10-07-2015	0.000	17.200	29-02-2016
2016-2017	644.4	3.730	29-06-2016	0.000	1.095	17-03-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : Addoor (WG000E8) **Division : Cauvery Division, Bangalore**

Local River : Gurpur **Sub-Division : SWRSD-III, Mangalore**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	0.390	0.000	2.250	257.7	1.600	148.7	1.680	141.6	1.480	114.5 *	0.930	22.38
2	0.390	0.000	1.840	174.9 *	1.350	96.00	1.520	122.5 *	1.700	161.6 *	0.930	21.37
3	0.430	0.000	1.790	164.8 #	1.280	71.73	1.400	99.57 *	1.395	102.6	1.000	25.25
4	0.440	0.000	2.090	215.0	2.920	493.4	1.310	92.22	1.250	85.16	1.200	57.44 *
5	0.460	0.000	1.650	138.9	2.380	263.4	1.280	82.59	1.210	68.49 #	1.200	57.44 *
6	0.470	0.000	1.860	191.6	2.220	259.1 *	1.200	74.17	1.220	81.97	1.010	26.11
7	0.530	0.000	1.910	206.8	1.880	182.4	1.210	68.21	2.040	213.2	1.410	105.5
8	0.860	0.000	1.690	146.2	1.780	159.4	1.230	85.24	1.400	99.57 *	1.300	24.59
9	1.070	0.000	1.580	125.2 *	1.590	137.4	1.190	64.31	1.275	81.85	1.220	20.62
10	1.160	0.000	1.470	112.6	1.400	112.7	1.620	143.5 *	1.180	64.16 #	1.200	9.630 **
11	1.700	0.000	1.360	105.5	1.360	85.92	1.200	80.88	1.100	63.64	1.160	12.00 **
12	2.430	248.1	1.360	105.9	1.680	178.9	1.200	75.48	1.100	62.24	1.120	11.50 **
13	1.780	162.8 #	1.330	83.97 #	1.380	91.69 *	1.160	61.35 #	1.070	52.60	1.110	11.18 **
14	1.650	137.9 #	1.880	178.4	1.340	84.81	1.160	66.74	1.520	129.0	1.120	11.45 **
15	1.360	88.57 #	1.910	184.4	1.190	63.86 *	1.100	52.53	2.180	295.2 *	1.110	10.39 **
16	1.390	93.26 #	2.100	231.1 *	1.460	99.72	1.520	110.2	1.560	117.6	1.110	10.38 **
17	1.410	71.41	1.930	192.4	1.440	108.3	1.840	196.1 *	1.290	87.25	1.100	10.32 **
18	1.380	91.69 *	2.150	265.2	1.530	132.6	1.590	129.9	1.250	74.52 *	1.130	0.000
19	1.280	76.54 #	2.550	301.4	2.210	288.4	1.640	134.0	1.180	58.93	1.210	0.000
20	1.050	32.38	3.290	547.6	2.420	308.7 *	1.400	100.5	1.230	74.29	1.290	0.000
21	0.920	35.94	2.340	276.2	2.410	301.8	1.230	92.29	1.100	63.68	1.300	0.000
22	0.950	30.46	2.200	218.6	2.690	345.0	1.250	82.57	1.020	43.57 *	1.330	0.000
23	0.950	31.97	1.940	195.8 *	1.930	183.7	1.170	67.04	1.000	38.41	1.310	0.000
24	1.440	72.91	1.840	157.4	1.820	177.8	1.120	55.93 *	0.980	31.69	1.500	0.000
25	2.600	356.2 *	1.740	152.0	1.620	132.4 *	1.080	49.76	0.960	31.03	1.580	0.000
26	2.780	406.4 *	1.610	129.5	1.630	145.2	1.100	54.18	0.980	30.70	1.580	0.000
27	2.120	223.8	1.550	133.6	2.420	308.7 *	1.300	68.22	0.980	31.81	1.690	0.000
28	1.960	203.3	1.710	164.0	2.400	351.6	1.740	169.6	1.205	61.15	1.580	0.000
29	1.960	215.9	1.750	173.1	3.050	485.4	1.860	201.4 *	0.960	36.95 *	1.560	0.000
30	2.190	264.2	1.760	158.9 *	2.580	318.7	1.300	68.96	0.950	29.37	1.580	0.000
31			1.510	118.0	1.960	203.1			0.930	33.86 #		
Ten-Daily Mean												
I Ten-Daily	0.620	0.000	1.813	173.4	1.840	192.4	1.364	97.40	1.415	107.3	1.140	37.03
II Ten-Daily	1.543	100.3	1.986	219.6	1.601	144.3	1.381	100.8	1.348	101.5	1.146	7.721
III Ten-Daily	1.787	184.1	1.814	170.6	2.228	268.5	1.315	90.99	1.006	39.29	1.501	0.000
Monthly												
Min.	0.390	0.000	1.330	83.97	1.190	63.86	1.080	49.76	0.930	29.37	0.930	0.000
Max.	2.780	406.4	3.290	547.6	3.050	493.4	1.860	201.4	2.180	295.2	1.690	105.5
Mean	1.317	94.79	1.869	187.3	1.901	203.9	1.353	96.39	1.248	81.31	1.262	14.92

Annual Runoff in MCM = 1800 Annual Runoff in mm = 2616

Peak Observed Discharge = 547.6 cumecs on 20/07/2017 Corres. Water Level :3.29 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :0.39 m

**** : Observed/Computed Discharge due to Back water effect**

Q: Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : Addoor (WG000E8) **Division : Cauvery Division, Bangalore**

Local River : Gurpur **Sub-Division : SWRSD-III, Mangalore**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	1.560	0.000	1.600	0.000	1.310	0.000	1.050	0.000	0.750	0.000	0.460	0.000
2	1.570	0.000	1.590	0.000	1.300	0.000	1.020	0.000	0.740	0.000	0.450	0.000
3	1.550	0.000	1.610	0.000	1.290	0.000	0.990	0.000	0.730	0.000	0.440	0.000
4	1.620	0.000	1.600	0.000	1.280	0.000	0.980	0.000	0.700	0.000	0.430	0.000
5	1.600	0.000	1.600	0.000	1.270	0.000	0.970	0.000	0.670	0.000	0.400	0.000
6	1.600	0.000	1.590	0.000	1.270	0.000	0.960	0.000	0.660	0.000	0.390	0.000
7	1.620	0.000	1.560	0.000	1.260	0.000	0.950	0.000	0.650	0.000	0.380	0.000
8	1.600	0.000	1.530	0.000	1.250	0.000	0.940	0.000	0.640	0.000	0.400	0.000
9	1.590	0.000	1.500	0.000	1.220	0.000	0.930	0.000	0.640	0.000	0.410	0.000
10	1.580	0.000	1.490	0.000	1.200	0.000	0.920	0.000	0.630	0.000	0.420	0.000
11	1.570	0.000	1.480	0.000	1.200	0.000	0.910	0.000	0.620	0.000	0.470	0.000
12	1.560	0.000	1.480	0.000	1.200	0.000	0.900	0.000	0.620	0.000	0.500	0.000
13	1.600	0.000	1.470	0.000	1.190	0.000	0.890	0.000	0.610	0.000	0.500	0.000
14	1.740	0.000	1.460	0.000	1.180	0.000	0.880	0.000	0.600	0.000	0.510	0.000
15	1.740	0.000	1.450	0.000	1.170	0.000	0.870	0.000	0.590	0.000	0.520	0.000
16	1.700	0.000	1.450	0.000	1.170	0.000	0.860	0.000	0.580	0.000	0.530	0.000
17	1.690	0.000	1.440	0.000	1.180	0.000	0.860	0.000	0.570	0.000	0.550	0.000
18	1.710	0.000	1.430	0.000	1.210	0.000	0.860	0.000	0.570	0.000	0.570	0.000
19	1.720	0.000	1.430	0.000	1.210	0.000	0.850	0.000	0.500	0.000	0.590	0.000
20	1.730	0.000	1.440	0.000	1.200	0.000	0.840	0.000	0.550	0.000	0.600	0.000
21	1.700	0.000	1.430	0.000	1.140	0.000	0.830	0.000	0.580	0.000	0.610	0.000
22	1.680	0.000	1.400	0.000	1.110	0.000	0.820	0.000	0.580	0.000	0.620	0.000
23	1.680	0.000	1.390	0.000	1.110	0.000	0.810	0.000	0.580	0.000	0.630	0.000
24	1.680	0.000	1.380	0.000	1.100	0.000	0.800	0.000	0.570	0.000	0.640	0.000
25	1.660	0.000	1.380	0.000	1.090	0.000	0.790	0.000	0.560	0.000	0.550	0.000
26	1.650	0.000	1.370	0.000	1.080	0.000	0.780	0.000	0.560	0.000	0.550	0.000
27	1.650	0.000	1.360	0.000	1.070	0.000	0.780	0.000	0.550	0.000	0.600	0.000
28	1.670	0.000	1.350	0.000	1.060	0.000	0.770	0.000	0.560	0.000	0.650	0.000
29	1.660	0.000	1.340	0.000			0.770	0.000	0.520	0.000	0.680	0.000
30	1.640	0.000	1.330	0.000			0.770	0.000	0.480	0.000	1.620	0.000
31	1.620	0.000	1.320	0.000			0.760	0.000			1.410	0.000
Ten-Daily Mean												
I Ten-Daily	1.589	0.000	1.567	0.000	1.265	0.000	0.971	0.000	0.681	0.000	0.418	0.000
II Ten-Daily	1.676	0.000	1.453	0.000	1.191	0.000	0.872	0.000	0.581	0.000	0.534	0.000
III Ten-Daily	1.663	0.000	1.368	0.000	1.095	0.000	0.789	0.000	0.554	0.000	0.778	0.000
Monthly												
Min.	1.550	0.000	1.320	0.000	1.060	0.000	0.760	0.000	0.480	0.000	0.380	0.000
Max.	1.740	0.000	1.610	0.000	1.310	0.000	1.050	0.000	0.750	0.000	1.620	0.000
Mean	1.643	0	1.460	0	1.190	0	0.875	0	0.605	0	0.583	0

Peak Computed Discharge = 406.4 cumecs on 26/06/2017 Corres. Water Level :2.78 m

Lowest Computed Discharge = 10.38 cumecs on 16/11/2017 Corres. Water Level :1.11 m

Q: Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

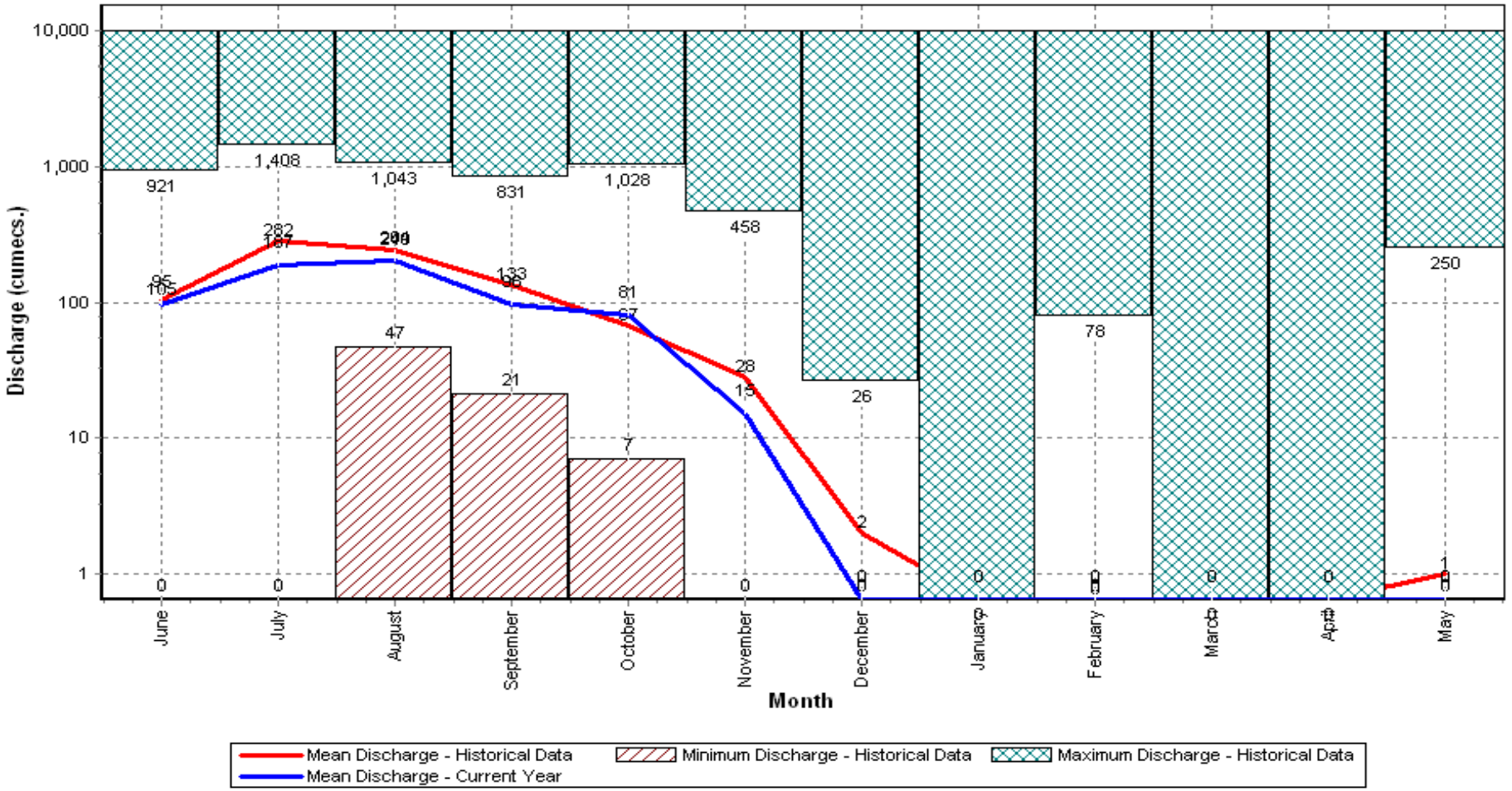
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : Addoor (WG000E8) | **Data considered : 2004-2018** | **Division : Cauvery Division, Bangalore**

Local River : Gurpur | **Sub-Division : SWRSD-III, Mangalore**



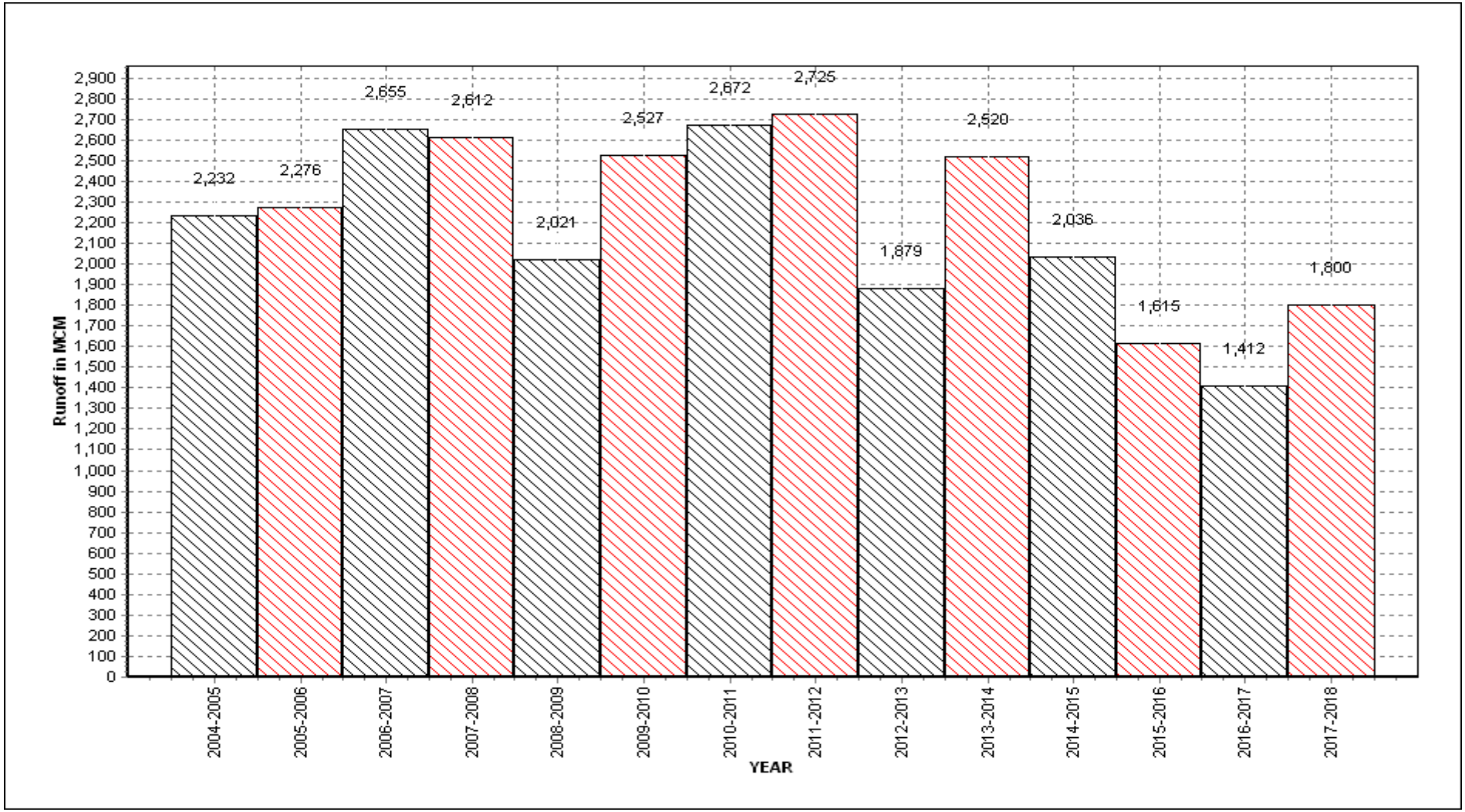
Annual Runoff Values for the period: 2004 - 2018

Station Name : Addoor (WG000E8)

Local River : Gurpur

Division : Cauvery Division, Bangalore

Sub-Division : SWRSD-III, Mangalore

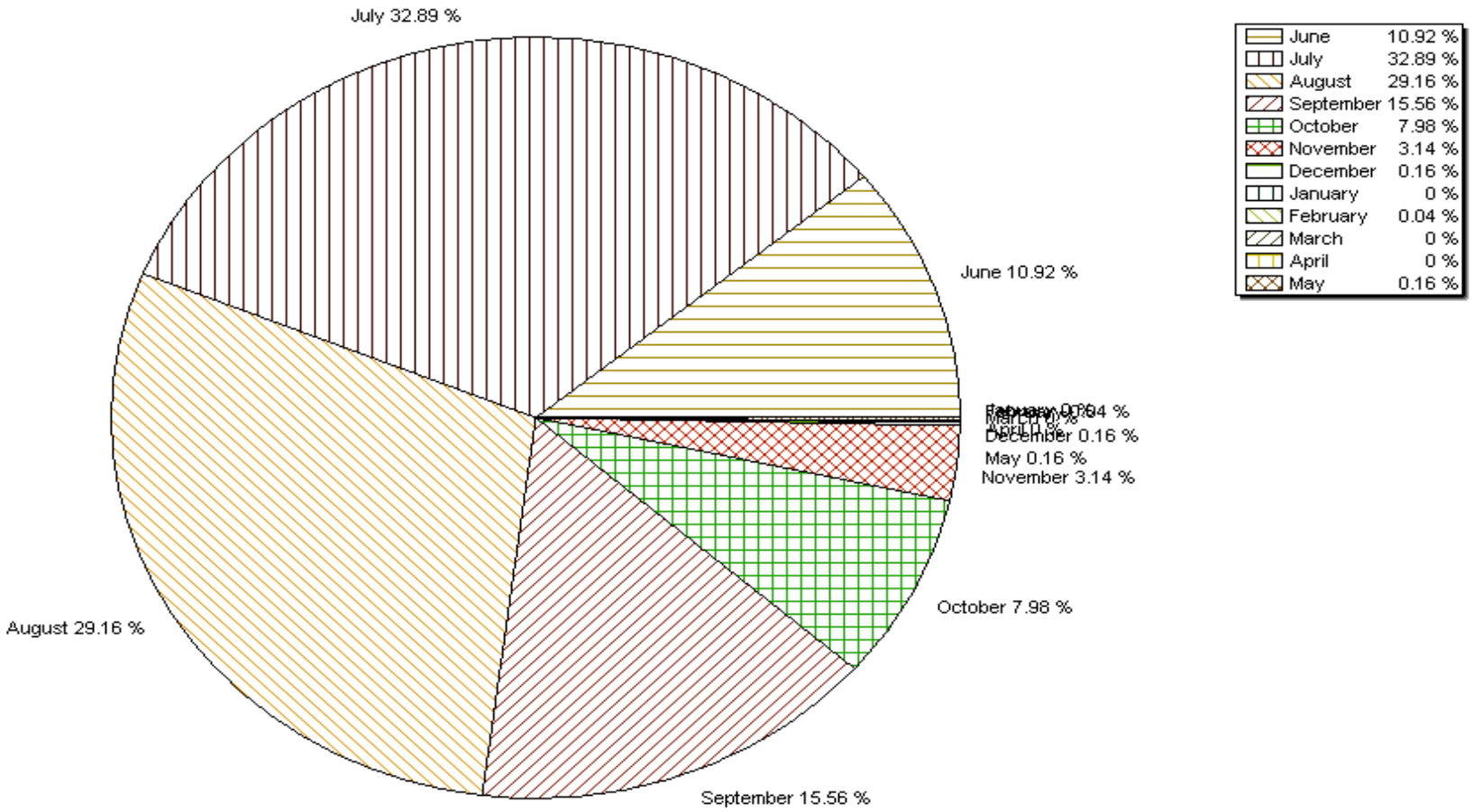


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 2004-2017

Station Name : Addoor (WG000E8)
Local River : Gurpur

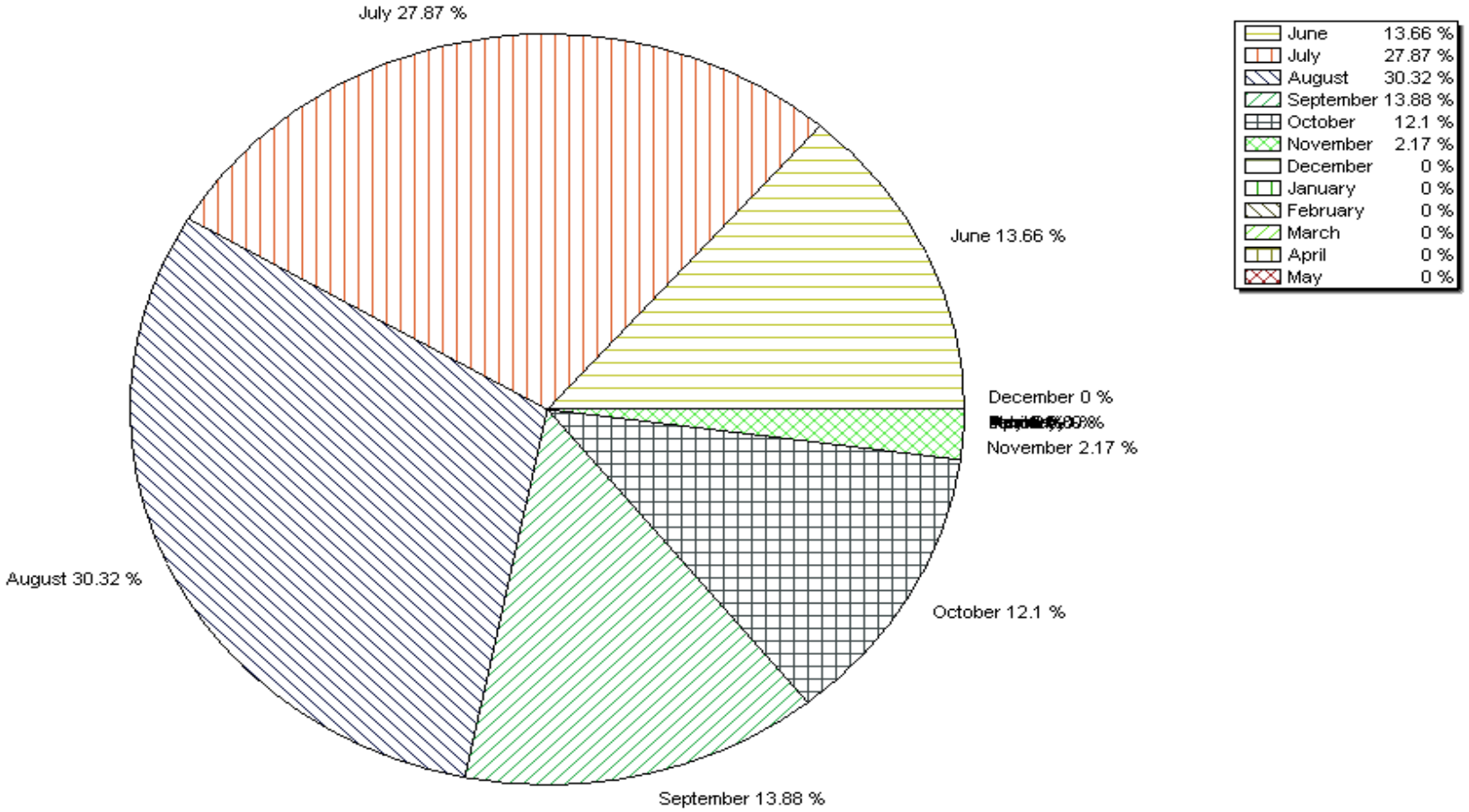
Division : Cauvery Division, Bangalore
Sub-Division : SWRSD-III, Mangalore



Monthly Runoff for the Year : 2017-2018

Station Name : Addoor (WG000E8)
Local River : Gurpur

Division : Cauvery Division, Bangalore
Sub-Division : SWRSD-III, Mangalore



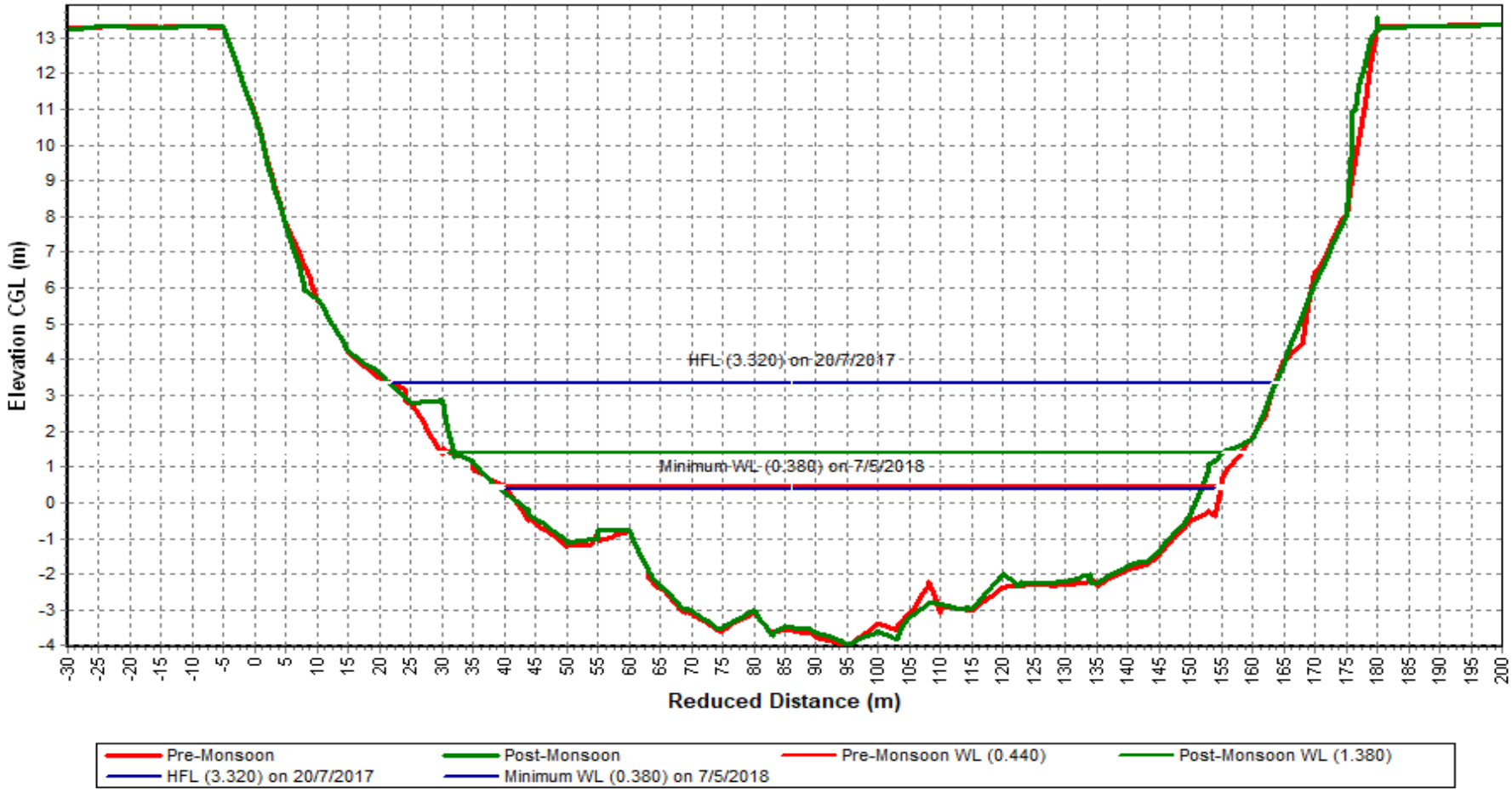
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : Addoor (WG000E8)

Local River : Gurpur

Division : Cauvery Division, Bangalore

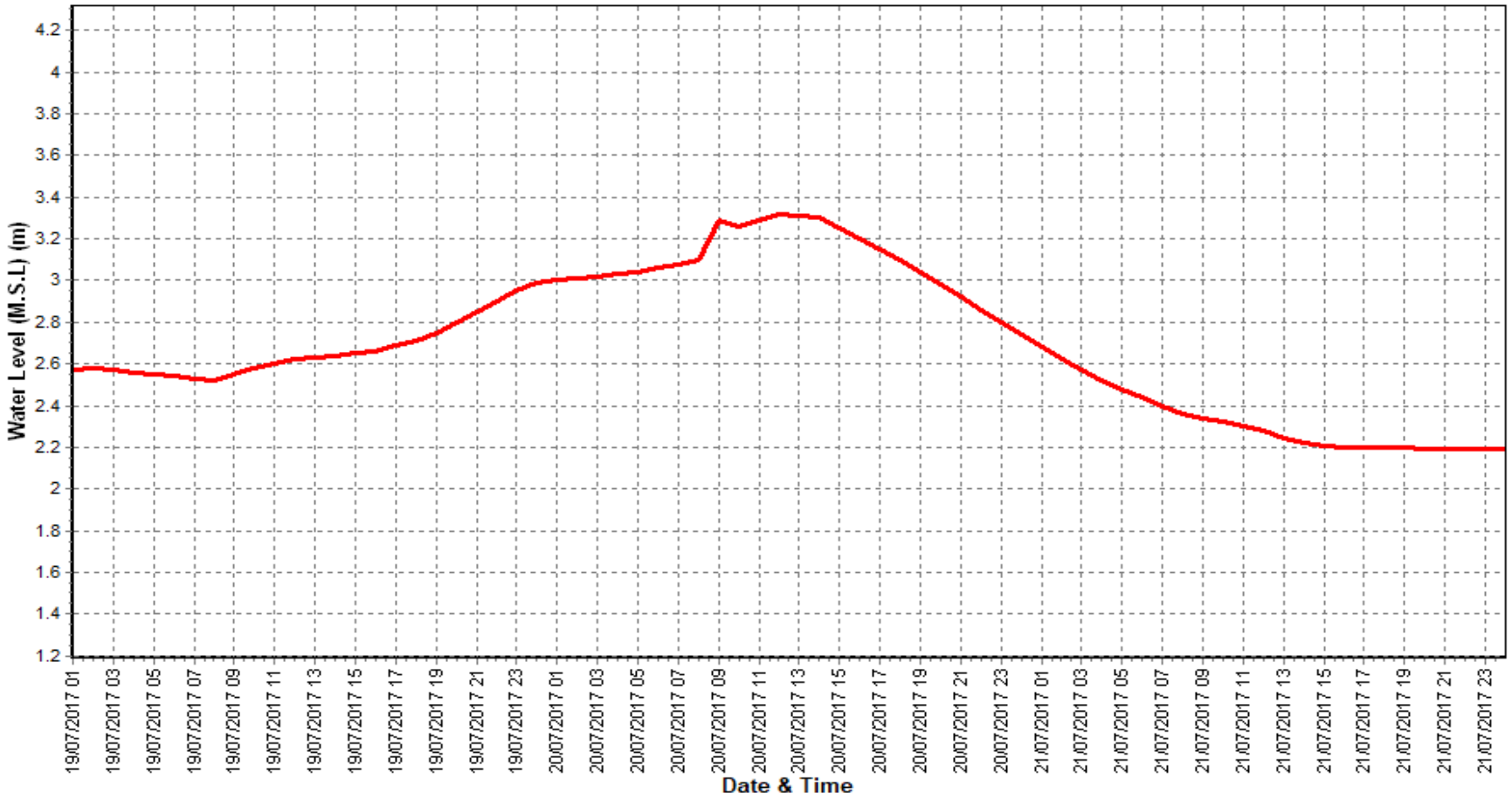
Sub-Division : SWRSD-III, Mangalore



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : Addoor (WG000E8) **Division : Cauvery Division, Bangalore**

Local River : Gurpur **Sub-Division : SWRSD-III, Mangalore**

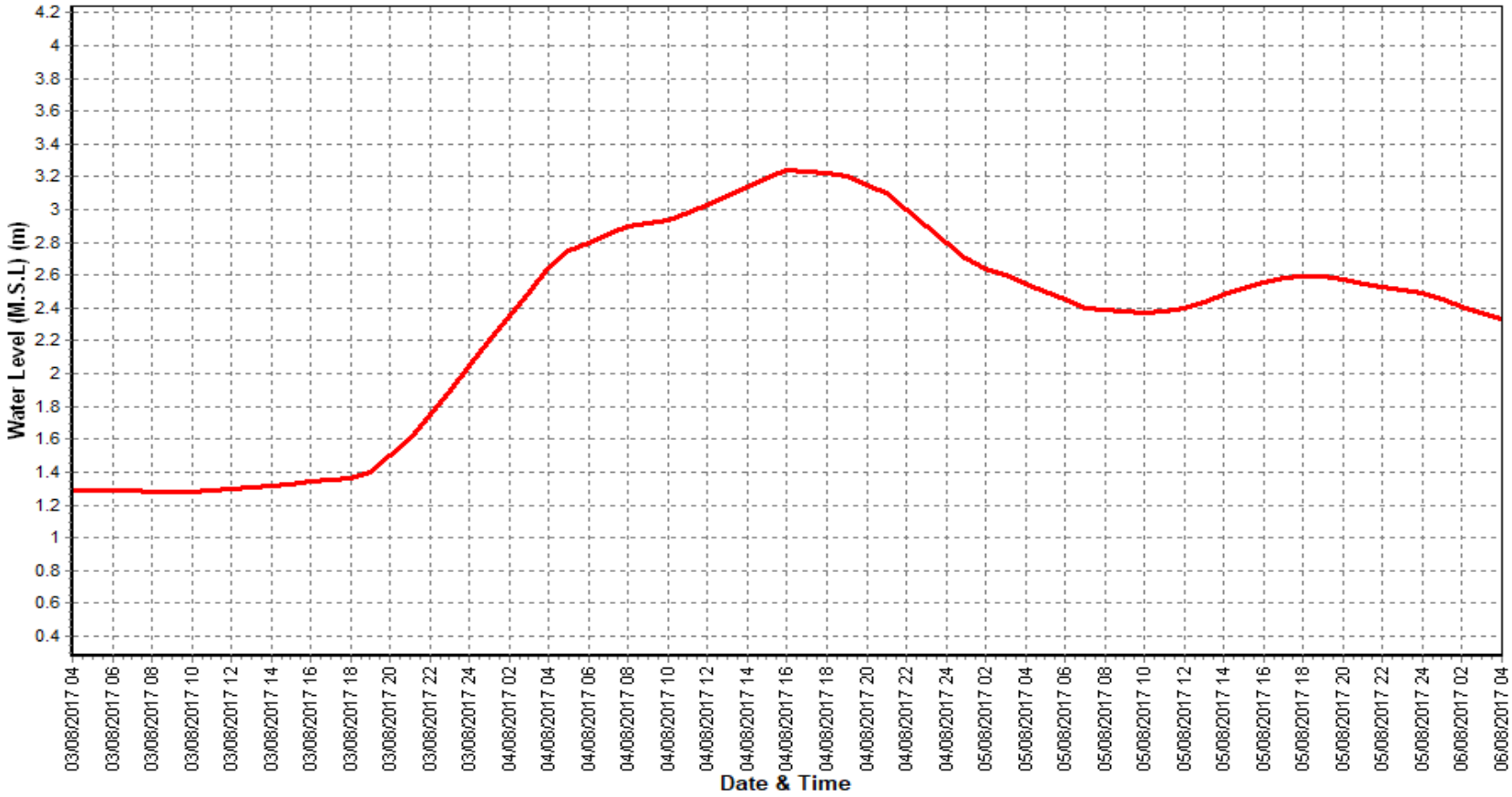


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : Addoor (WG000E8) **Division : Cauvery Division, Bangalore**

Local River : Gurpur **Sub-Division : SWRSD-III, Mangalore**

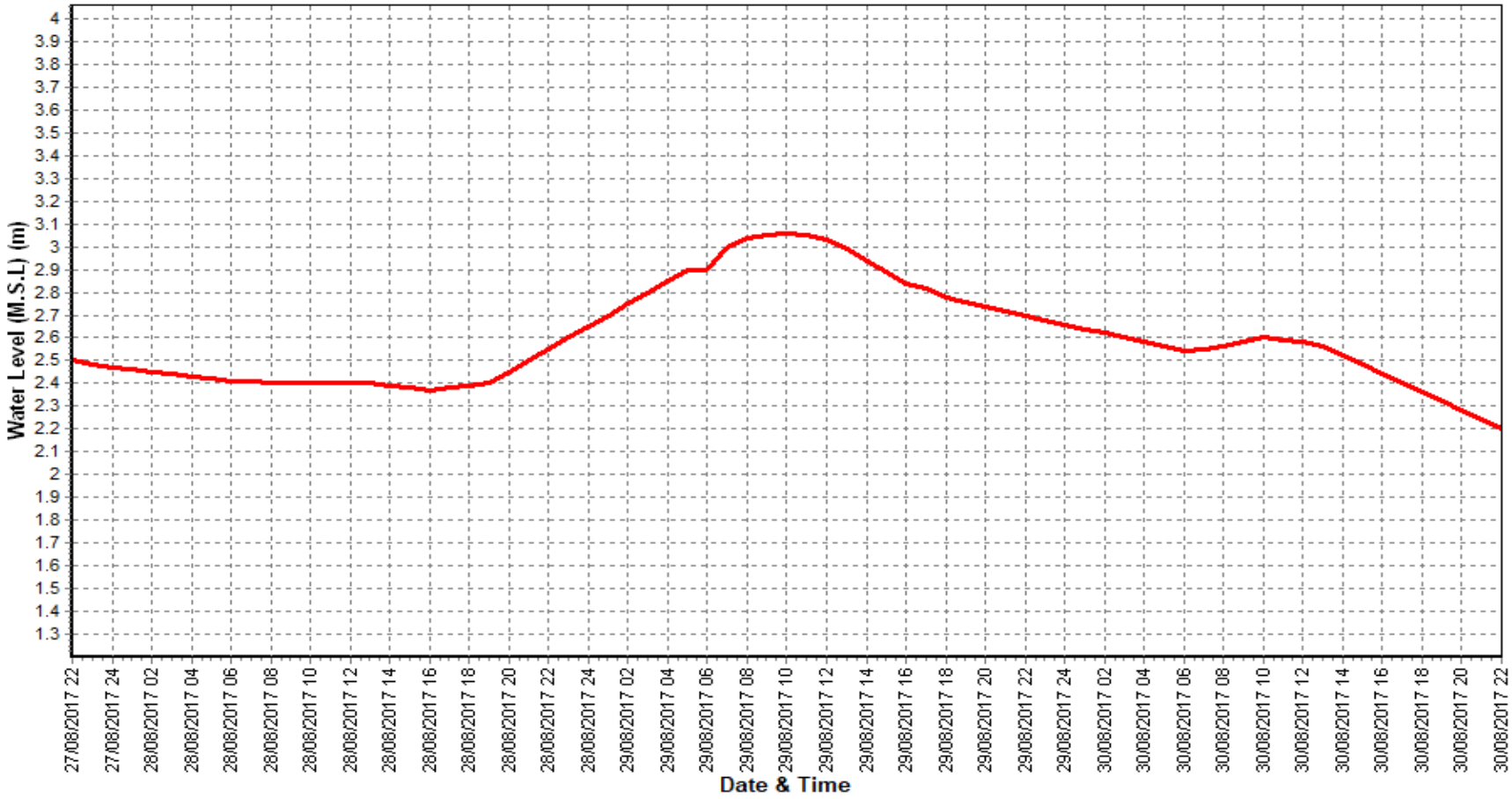


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : Addoor (WG000E8) **Division : Cauvery Division, Bangalore**

Local River : Gurpur **Sub-Division : SWRSD-III, Mangalore**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-2018

Site	:	**Bantwal**	**Code**	:	**WN000G9**
State	:	Karnataka	District		South Canara
Basin	:	WFR South of Tapi	Independent River	:	Netravathi
Tributary	:	-	Sub Tributary	:	
Sub-Sub Tributary	:		Local River	:	Netravathi
Division	:	Cauvery Division, Bangalore	Sub-Division	:	SWRSD-III, Mangalore
Drainage Area	:	3184 Sq. Km.	Bank	:	Right
Latitude	:	12°52'51"	Longitude	:	75°02'28"
Zero of Gauge (m)	:	1.000 (m.s.l)	01-11-1970		
		Opening Date	Closing Date		
Gauge	:	01-11-1970			
Discharge	:	01-11-1970			
Sediment	:	22-06-1972			
Water Quality	:	15-06-1978			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1971-1972	4558	9.105	24-06-1971	2.000	1.370	31-03-1972
1972-1973	3679	8.445	08-07-1972	1.100	1.405	04-05-1973
1973-1974	3998	8.045	07-07-1973	2.800	1.480	20-03-1974
1974-1975	9832	12.650	26-07-1974	1.000	1.355	21-04-1975
1975-1976	5232	9.700	12-08-1975	1.700	1.460	28-05-1976
1976-1977	3370	8.550	24-07-1976	2.700	1.380	20-04-1977
1977-1978	4542	9.810	24-07-1977	2.400	1.420	28-04-1978
1978-1979	5415	10.350	25-07-1978	1.200	1.300	16-04-1979
1979-1980	5212	10.013	02-08-1979	2.200	1.335	01-06-1979
1980-1981	6601	11.200	02-07-1980	1.000	1.290	19-04-1981
1981-1982	5889	10.610	17-08-1981	1.200	1.575	15-04-1982
1982-1983	6505	11.462	02-08-1982	0.100	1.210	13-05-1983
1983-1984	3574	9.360	22-07-1983	2.100	1.467	08-06-1983
1984-1985	3576	9.090	18-07-1984	0.400	1.440	15-05-1985
1985-1986	2600	7.712	26-06-1985	0.500	1.380	20-04-1986
1986-1987	5506	10.875	08-08-1986	0.100	1.310	13-05-1987
1987-1988	1781	6.590	09-07-1987	0.750	1.465	10-04-1988
1988-1989	3746	9.345	05-08-1988	0.250	1.520	18-04-1989
1989-1990	3722	9.100	23-07-1989	0.050	1.160	06-05-1990

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1971-1972	4558	9.105	24-06-1971	2.000	1.370	31-03-1972
1990-1991	3558	8.650	17-08-1990	0.632	1.530	27-03-1991
1991-1992	4568	10.124	28-07-1991	0.507	1.455	15-04-1992
1992-1993	3342	8.810	27-07-1992	1.688	1.727	17-05-1993
1993-1994	2658	7.955	12-07-1993	5.935	4.025	12-04-1994
1994-1995	4846	10.590	14-07-1994	0.570	2.920	23-04-1995
1995-1996	3940	9.450	17-07-1995	0.552	1.820	30-05-1996
1996-1997	2874	7.990	24-07-1996	0.277	3.630	23-04-1997
1997-1998	5030	11.110	10-07-1997	0.264	2.170	04-06-1997
1998-1999	3150	8.735	29-06-1998	4.272	1.700	06-06-1998
1999-2000	4207	10.480	18-07-1999	1.000	2.880	21-04-2000
2000-2001	2669	8.200	25-08-2000	0.000	1.950	19-01-2001
2001-2002	2658	8.110	08-07-2001	0.000	2.520	18-12-2001
2002-2003	2432	7.655	17-08-2002	0.000	2.850	08-12-2002
2003-2004	2715	7.130	21-08-2003	0.000	1.120	06-06-2003
2004-2005	3567	8.835	04-08-2004	0.000	2.800	01-12-2004
2005-2006	4197	9.200	02-08-2005	0.000	2.610	01-06-2005
2006-2007	3304	9.000	30-06-2006	0.000	2.550	13-12-2006
2007-2008	3990	9.220	07-08-2007	0.000	4.035	18-12-2007
2008-2009	5610	10.600	13-08-2008	0.000	2.460	05-11-2008
2009-2010	4218	9.420	16-07-2009	0.000	3.070	22-11-2009
2010-2011	3775	8.930	30-07-2010	0.000	2.385	01-06-2010
2011-2012	2709	7.490	17-07-2011	0.001	2.200	31-05-2012
2012-2013	3928	9.245	07-08-2012	0.000	2.670	01-12-2012
2013-2014	6055	10.820	04-07-2013	0.000	3.930	21-12-2013
2014-2015	3949	9.020	01-08-2014	0.000	3.940	19-12-2014
2015-2016	2159	6.580	20-07-2015	0.000	2.890	02-06-2015
2016-2017	2456	6.440	29-06-2016	0.000	5.180	23-02-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : Bantwal (WN000G9) **Division : Cauvery Division, Bangalore**

Local River : Netravathi **Sub-Division : SWRSD-III, Mangalore**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	3.980	0.000	4.580	1078	4.050	415.9	4.330	742.3	4.370	525.9 *	4.370	145.1 **
2	4.010	0.000	4.120	415.1 *	3.920	378.8	4.300	681.3 *	4.350	519.0 *	4.340	131.4 **
3	3.970	0.000	4.070	470.8	4.130	420.3	4.100	540.4 *	4.180	466.2	3.975	87.48 **
4	3.450	0.000	4.370	756.0	5.040	1458	4.040	510.8	4.240	410.1	4.240	140.8 **
5	3.450	0.000	4.190	472.7 *	4.690	1260	4.080	501.9	4.230	478.9 *	4.015	155.5 **
6	3.440	0.000	4.220	521.4	4.800	1108 *	3.980	426.3	4.330	503.8 **	4.190	162.3 **
7	3.320	0.000	4.520	786.8	4.360	917.1	4.510	589.8 #	4.300	553.7 **	4.040	222.1 **
8	3.000	0.000	4.250	534.1	4.340	731.2	4.330	512.2 #	4.170	348.0 **	4.000	103.6 **
9	2.930	0.000	4.070	376.7 *	4.085	564.3	4.060	519.2	4.220	352.5 **	4.020	44.11 **
10	2.985	0.000	4.130	349.2	4.350	725.0	4.420	543.2 *	4.050	289.3 **	4.230	14.34 **
11	2.580	0.000	4.110	355.0	4.090	481.4	3.930	414.9	4.130	221.2 **	3.870	55.14 **
12	3.760	604.5	4.070	346.6	4.700	1244	3.920	331.4	4.120	216.8 **	3.860	55.00 **
13	3.260	353.6	4.010	339.0	4.080	527.3 *	3.980	305.8	4.330	242.3 **	3.860	63.03 **
14	3.130	299.1	4.400	633.5	3.950	391.1	4.300	592.9	4.230	177.6 **	2.250	44.32 **
15	2.900	235.5	4.310	473.6	3.960	451.8 *	4.140	455.7	4.370	300.0 **	4.155	58.70 **
16	2.640	166.1	4.140	431.1 *	4.020	424.2	3.950	382.4	4.320	284.4 **	4.190	30.31 **
17	2.955	250.1	4.120	479.6	4.180	476.2	4.590	604.5 *	4.090	325.4 **	4.350	35.89 **
18	3.745	581.7 *	4.430	772.5	4.380	641.2	4.350	461.2	4.090	325.0 **	4.280	26.48 **
19	4.055	89.94 **	5.300	1552	4.570	836.0	4.510	575.2 #	4.210	208.5 **	4.360	35.97 **
20	4.220	105.8 **	6.520	2575	4.760	1070 *	4.230	539.1	4.150	204.7 **	4.130	21.51 **
21	4.160	97.93 **	4.980	1412	5.050	1389	4.080	442.8	4.020	230.1 **	4.450	36.71 **
22	4.130	79.09 **	4.820	1334	5.000	1400	4.340	455.1	4.040	231.2 **	4.310	33.02 **
23	4.140	70.37 **	4.430	782.0 *	4.740	1233	4.040	419.4	3.990	154.3 **	4.240	11.94 **
24	4.140	46.09 **	4.280	757.4	4.480	940.6	3.980	401.0 *	3.920	155.6 **	4.220	11.77 **
25	4.220	863.8 *	4.270	648.8	4.600	924.7 *	3.900	382.7	4.300	176.4 **	4.400	28.38 **
26	4.450	1025 *	4.250	662.9	4.380	885.2	4.170	468.2	4.320	192.9 **	4.380	0.000
27	4.840	1308	4.270	636.2	4.940	1247 *	4.050	289.4 **	3.990	156.1 **	4.300	0.000
28	4.520	1138	4.430	769.3	4.750	1299	4.400	790.5 **	4.206	202.5 **	4.280	0.000
29	4.270	848.9	4.490	805.4	6.150	2188	4.340	780.0 **	4.250	189.7 **	4.310	0.000
30	4.450	1093	4.250	644.5 *	5.550	1738	4.130	323.7 **	4.400	145.7 **	3.070	0.000
31			4.050	486.3	4.640	1167			4.270	109.5 **		
Ten-Daily Mean												
I Ten-Daily	3.454	0.000	4.252	576.1	4.377	797.9	4.215	556.7	4.244	444.7	4.142	120.7
II Ten-Daily	3.325	268.6	4.541	795.8	4.269	654.3	4.190	466.3	4.204	250.6	3.931	42.63
III Ten-Daily	4.332	657.0	4.411	812.6	4.935	1310	4.143	475.3	4.155	176.7	4.196	12.18
Monthly												
Min.	2.580	0.000	4.010	339.0	3.920	378.8	3.900	289.4	3.920	109.5	2.250	0.000
Max.	4.840	1308	6.520	2575	6.150	2188	4.590	790.5	4.400	553.7	4.450	222.1
Mean	3.703	308.5	4.402	730.9	4.540	933.4	4.183	499.4	4.200	287	4.089	58.5

Annual Runoff in MCM = 7472 Annual Runoff in mm = 2347

Peak Observed Discharge = 2575 cumecs on 20/07/2017 Corres. Water Level :6.52 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :3.98 m

**** : Observed/Computed Discharge due to Back water effect**

Q: Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : Bantwal (WN000G9) **Division : Cauvery Division, Bangalore**

Local River : Netravathi **Sub-Division : SWRSD-III, Mangalore**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	4.180	0.000	5.340	0.000	6.170	0.000	6.180	0.000	5.080	0.000	5.600	0.000
2	4.240	0.000	5.330	0.000	6.195	0.000	6.160	0.000	5.040	0.000	5.540	0.000
3	4.370	0.000	5.205	0.000	6.190	0.000	6.140	0.000	4.980	0.000	5.470	0.000
4	4.380	0.000	5.400	0.000	6.190	0.000	6.120	0.000	4.940	0.000	5.400	0.000
5	4.450	0.000	5.460	0.000	6.200	0.000	6.100	0.000	4.890	0.000	5.330	0.000
6	4.390	0.000	5.150	0.000	6.200	0.000	6.080	0.000	4.860	0.000	5.250	0.000
7	4.280	0.000	5.180	0.000	6.200	0.000	6.050	0.000	4.790	0.000	5.190	0.000
8	4.440	0.000	5.280	0.000	6.170	0.000	6.020	0.000	4.740	0.000	5.110	0.000
9	4.540	0.000	5.205	0.000	6.200	0.000	5.980	0.000	4.700	0.000	5.400	0.000
10	4.400	0.000	5.320	0.000	6.220	0.000	5.930	0.000	4.650	0.000	6.120	0.000
11	4.130	0.000	5.245	0.000	6.190	0.000	5.890	0.000	5.210	0.000	6.210	0.000
12	4.160	0.000	5.340	0.000	6.220	0.000	5.840	0.000	5.840	0.000	6.190	0.000
13	4.310	0.000	5.870	0.000	6.210	0.000	5.800	0.000	6.010	0.000	6.120	0.000
14	4.420	0.000	5.900	0.000	6.250	0.000	5.760	0.000	5.970	0.000	6.000	0.000
15	4.180	0.000	6.180	0.000	6.210	0.000	5.800	0.000	5.920	0.000	5.950	0.000
16	4.340	0.000	6.180	0.000	6.220	0.000	5.770	0.000	6.240	0.000	5.900	0.000
17	4.500	0.000	6.240	0.000	6.240	0.000	5.740	0.000	6.200	0.000	5.930	0.000
18	4.440	0.000	6.175	0.000	6.240	0.000	5.710	0.000	6.160	0.000	6.000	0.000
19	4.720	0.000	6.200	0.000	6.220	0.000	5.680	0.000	6.110	0.000	6.200	0.000
20	4.920	0.000	6.230	0.000	6.210	0.000	5.640	0.000	6.090	0.000	6.130	0.000
21	5.230	0.000	6.230	0.000	6.220	0.000	5.600	0.000	6.060	0.000	6.150	0.000
22	5.370	0.000	6.310	0.000	6.210	0.000	5.560	0.000	6.020	0.000	6.090	0.000
23	5.390	0.000	6.190	0.000	6.220	0.000	5.510	0.000	5.980	0.000	6.190	0.000
24	5.290	0.000	6.190	0.000	6.230	0.000	5.460	0.000	5.930	0.000	6.190	0.000
25	5.290	0.000	6.160	0.000	6.220	0.000	5.420	0.000	5.900	0.000	6.290	0.000
26	5.450	0.000	6.190	0.000	6.220	0.000	5.380	0.000	5.850	0.000	6.190	0.000
27	5.380	0.000	6.190	0.000	6.210	0.000	5.330	0.000	5.800	0.000	6.200	0.000
28	5.420	0.000	6.220	0.000	6.200	0.000	5.280	0.000	5.760	0.000	6.150	0.000
29	5.190	0.000	6.150	0.000			5.230	0.000	5.720	0.000	6.140	0.000
30	5.330	0.000	6.150	0.000			5.190	0.000	5.670	0.000	6.000	0.000
31	5.380	0.000	6.155	0.000			5.140	0.000			6.000	0.000
Ten-Daily Mean												
I Ten-Daily	4.367	0.000	5.287	0.000	6.194	0.000	6.076	0.000	4.867	0.000	5.441	0.000
II Ten-Daily	4.412	0.000	5.956	0.000	6.221	0.000	5.763	0.000	5.975	0.000	6.063	0.000
III Ten-Daily	5.338	0.000	6.194	0.000	6.216	0.000	5.373	0.000	5.869	0.000	6.145	0.000
Monthly												
Min.	4.130	0.000	5.150	0.000	6.170	0.000	5.140	0.000	4.650	0.000	5.110	0.000
Max.	5.450	0.000	6.310	0.000	6.250	0.000	6.180	0.000	6.240	0.000	6.290	0.000
Mean	4.726	0	5.825	0	6.210	0	5.725	0	5.570	0	5.891	0

Peak Computed Discharge = 1247 cumecs on 27/08/2017 Corres. Water Level :4.94 m

Lowest Computed Discharge = 0.000 cumecs on 26/11/2017 Corres. Water Level :4.38 m

Q: Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

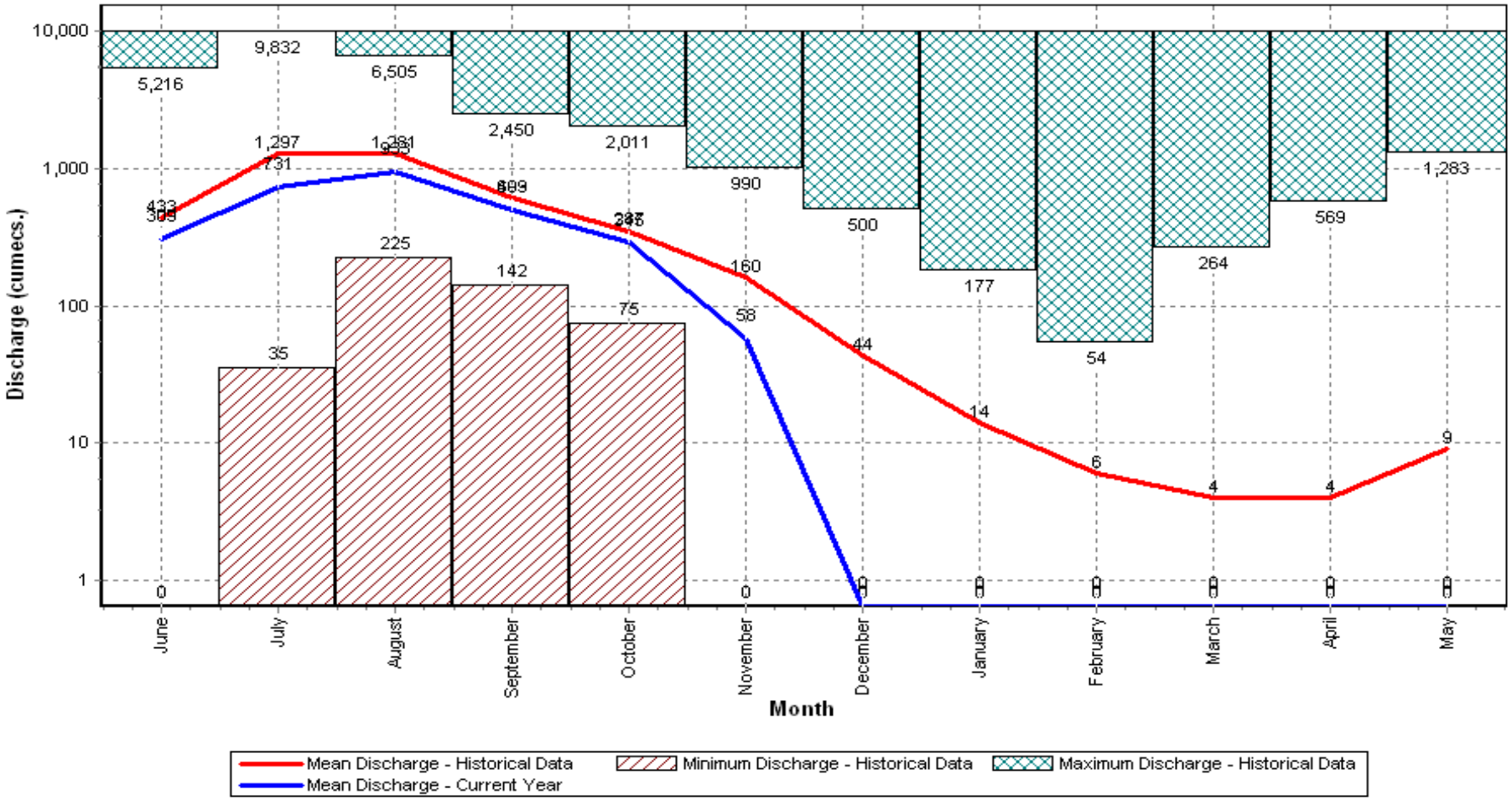
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : Bantwal (WN000G9) | **Data considered : 1977-2018** | **Division : Cauvery Division, Bangalore**

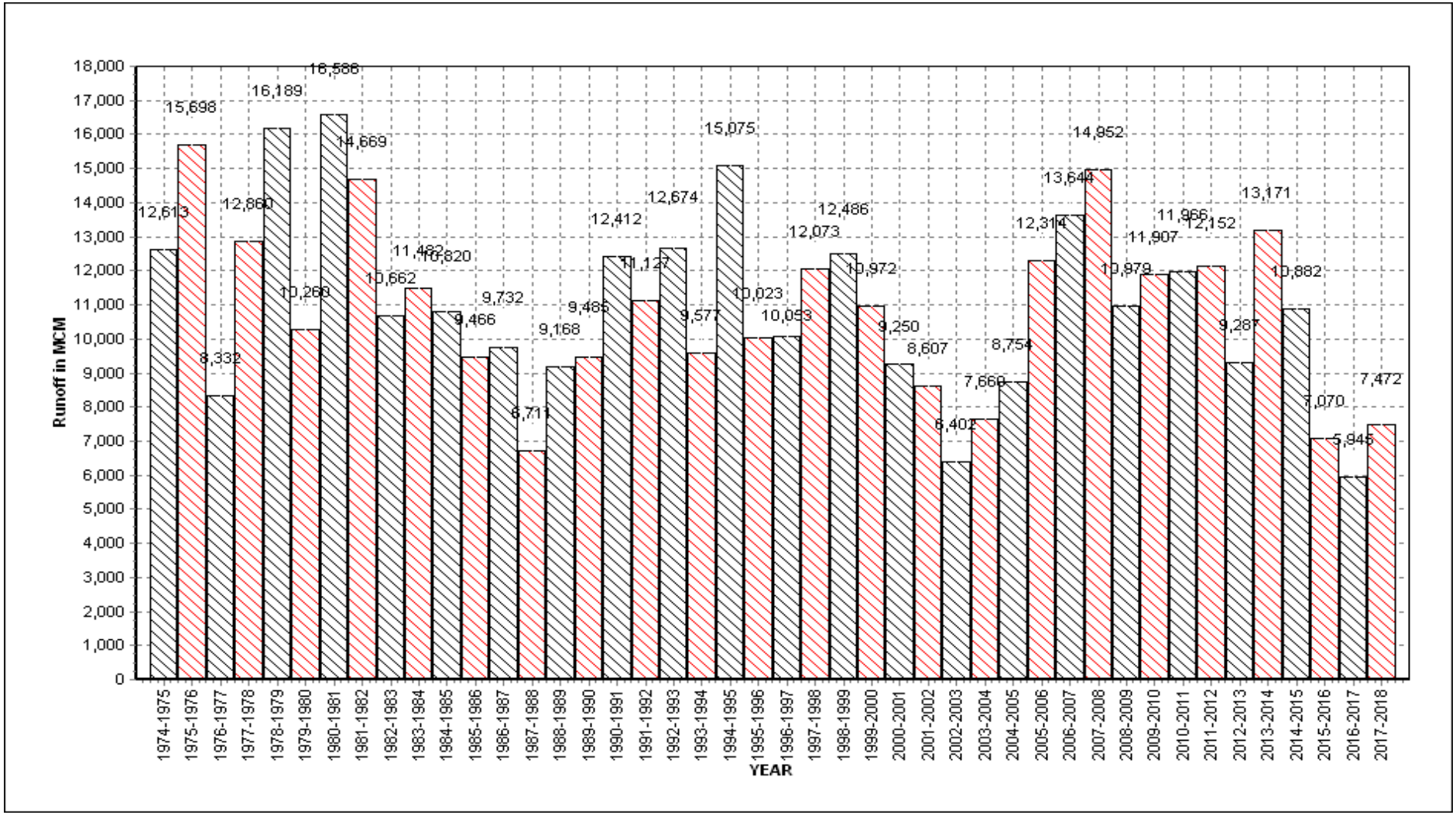
Local River : Netravathi | **Sub-Division : SWRSD-III, Mangalore**



Annual Runoff Values for the period: 1977 - 2018

Station Name : Bantwal (WN000G9) **Division : Cauvery Division, Bangalore**

Local River : Netravathi **Sub-Division : SWRSD-III, Mangalore**



Note: Missing values have not been considered while arriving at Annual Runoff

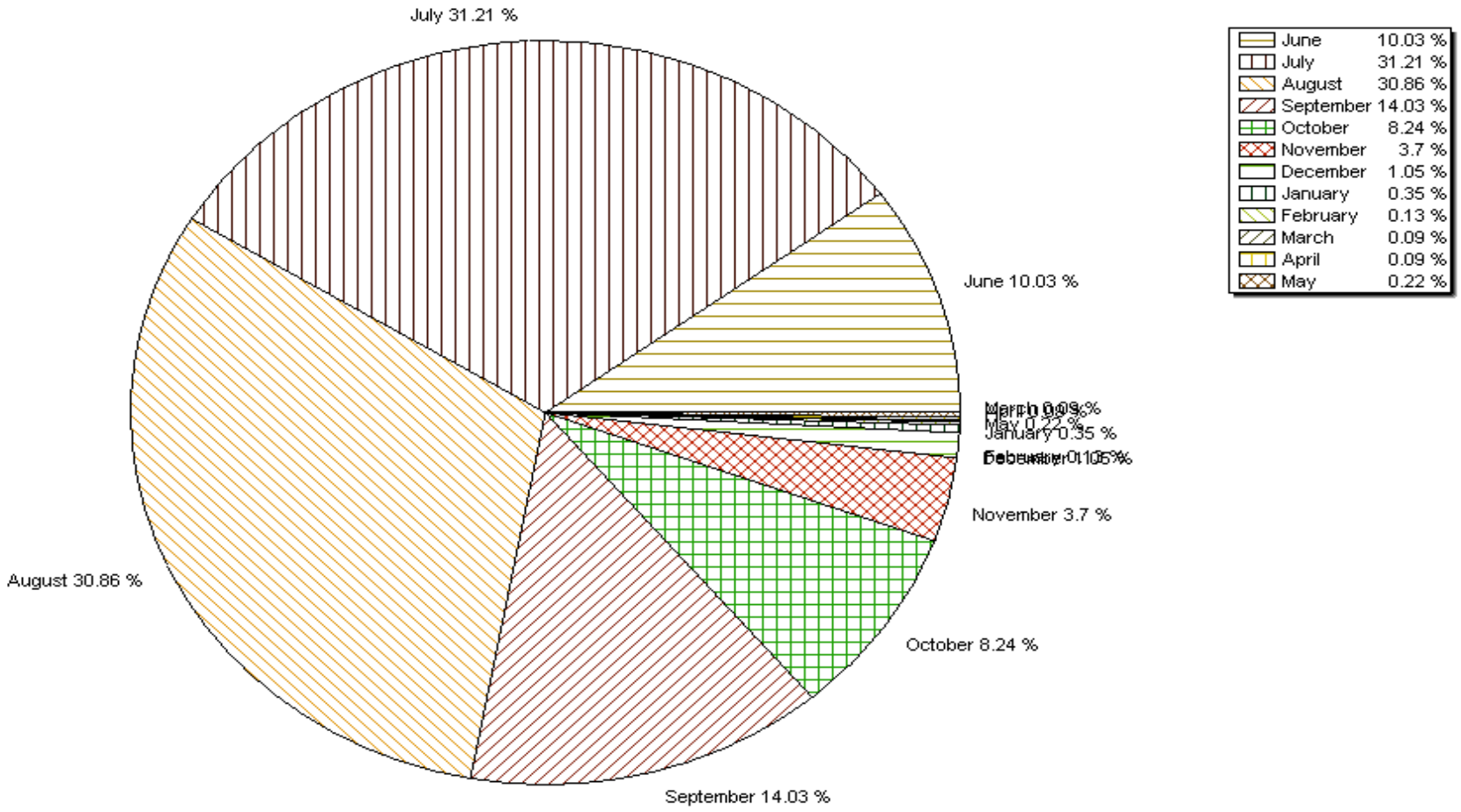
Monthly Average Runoff based on period : 1977-2017

Station Name : Bantwal (WN000G9)

Local River : Netravathi

Division : Cauvery Division, Bangalore

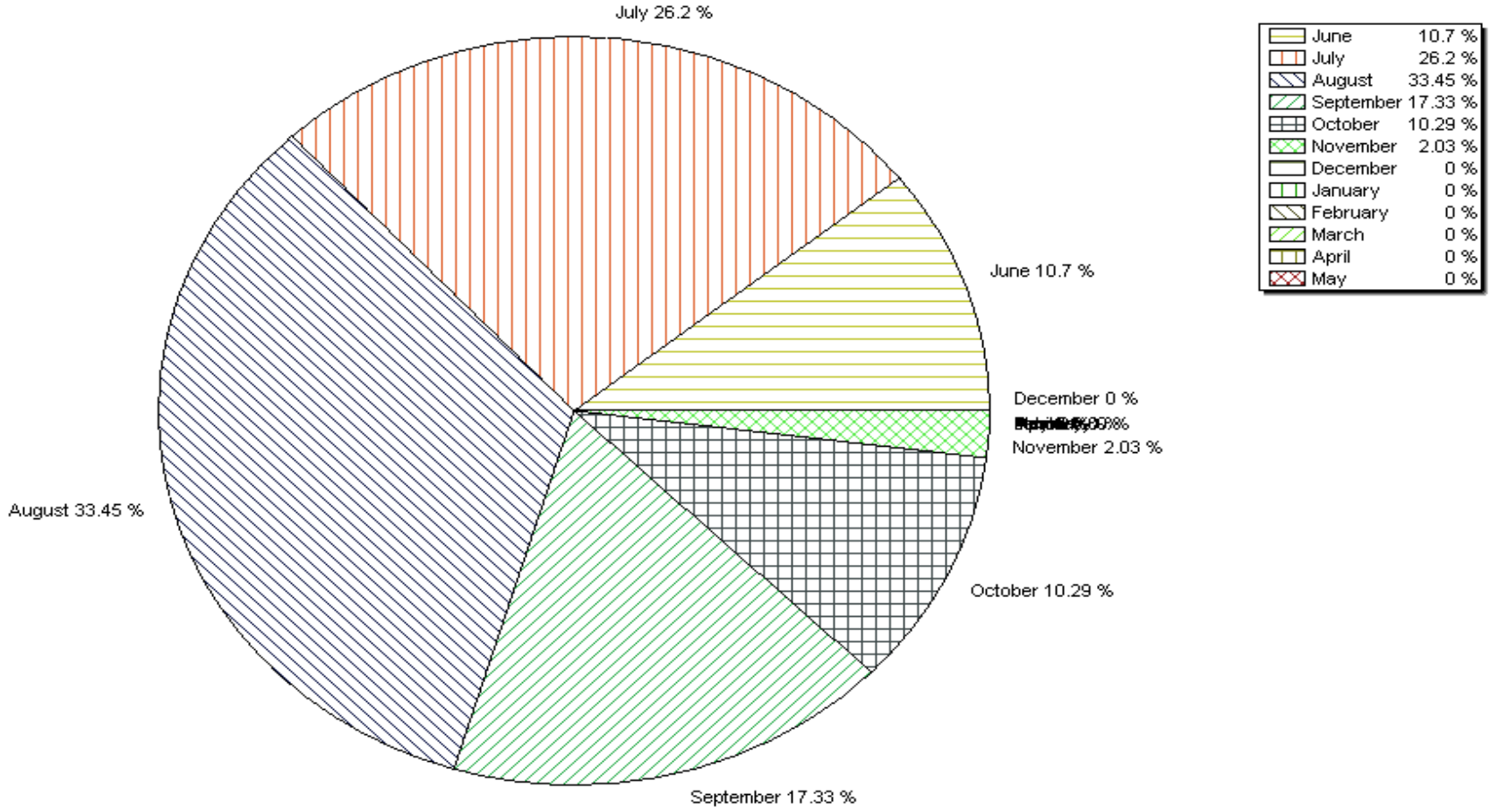
Sub-Division : SWRSD-III, Mangalore



Monthly Runoff for the Year : 2017-2018

Station Name : Bantwal (WN000G9)
Local River : Netravathi

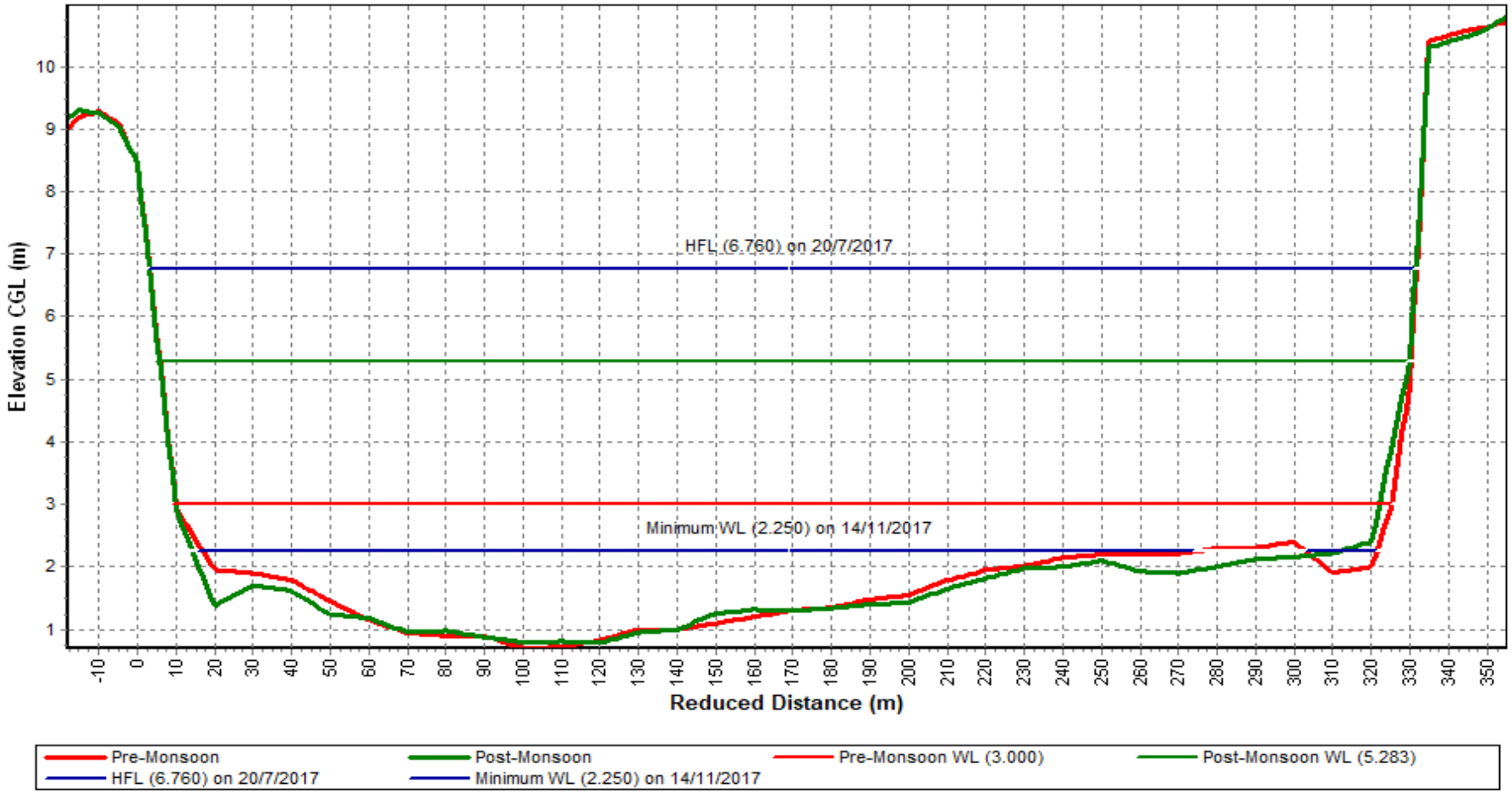
Division : Cauvery Division, Bangalore
Sub-Division : SWRSD-III, Mangalore



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : Bantwal (WN000G9) **Division : Cauvery Division, Bangalore**

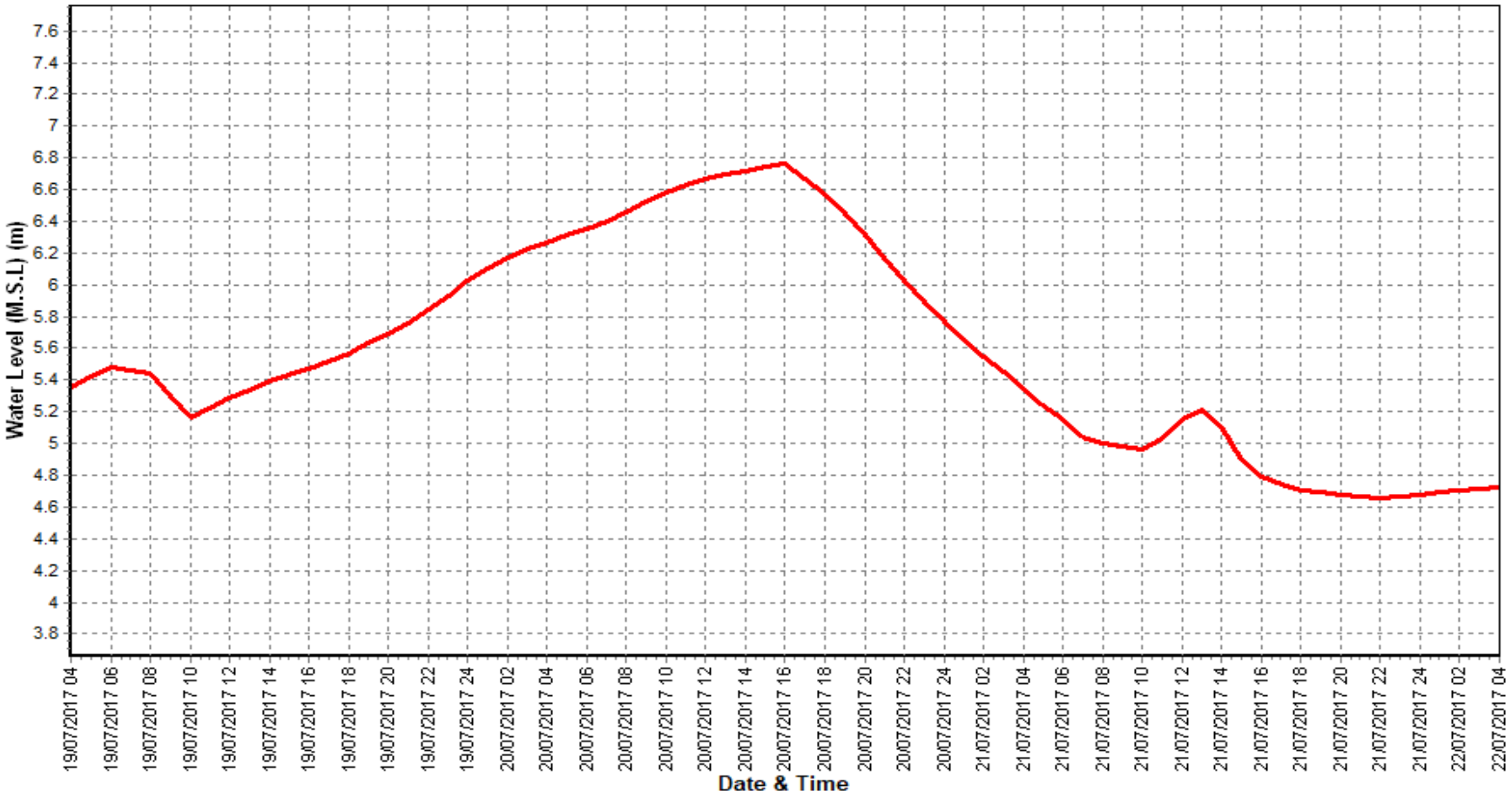
Local River : Netravathi **Sub-Division : SWRSD-III, Mangalore**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : Bantwal (WN000G9) **Division : Cauvery Division, Bangalore**

Local River : Netravathi **Sub-Division : SWRSD-III, Mangalore**

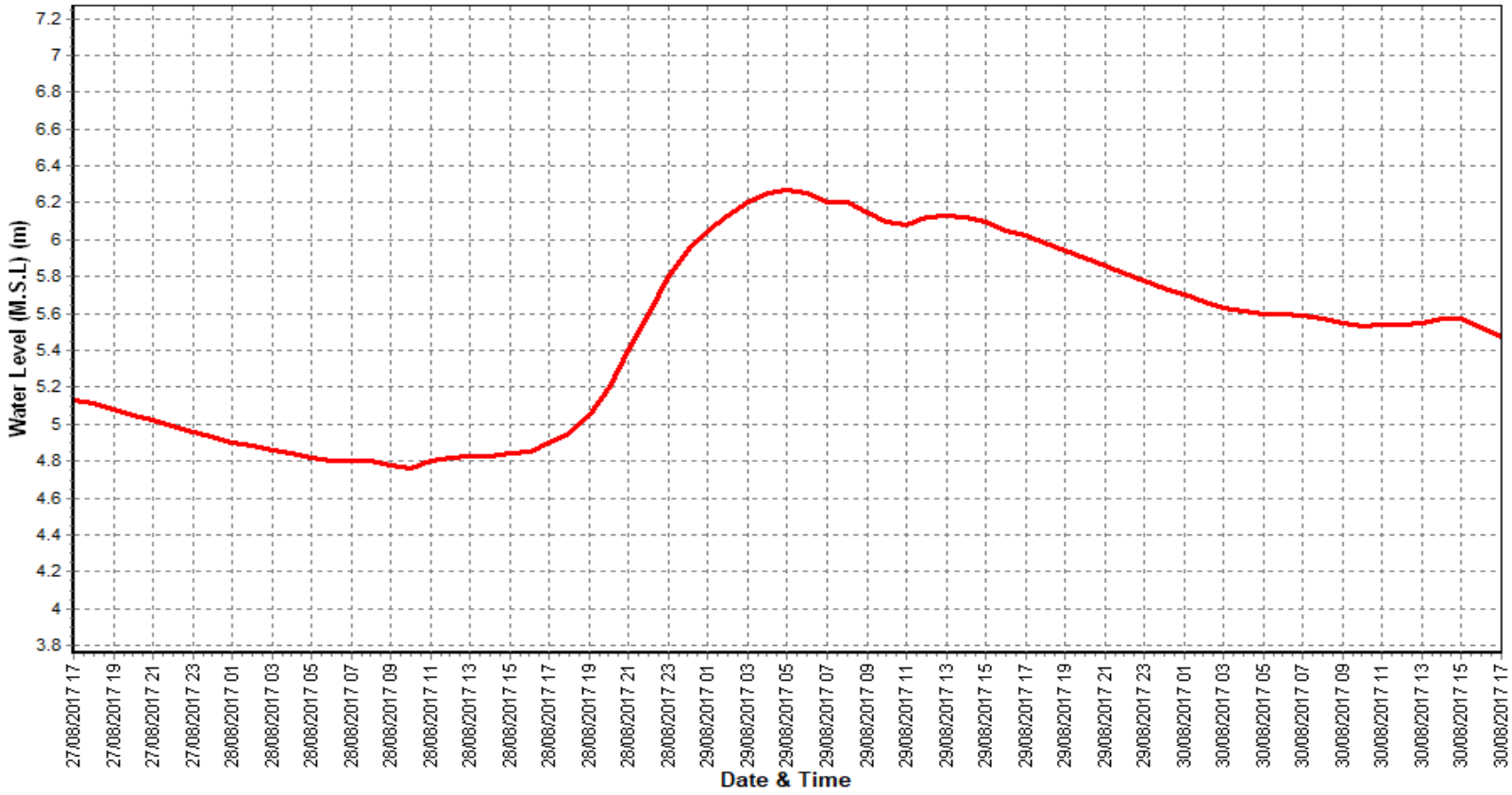


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : Bantwal (WN000G9) **Division : Cauvery Division, Bangalore**

Local River : Netravathi **Sub-Division : SWRSD-III, Mangalore**

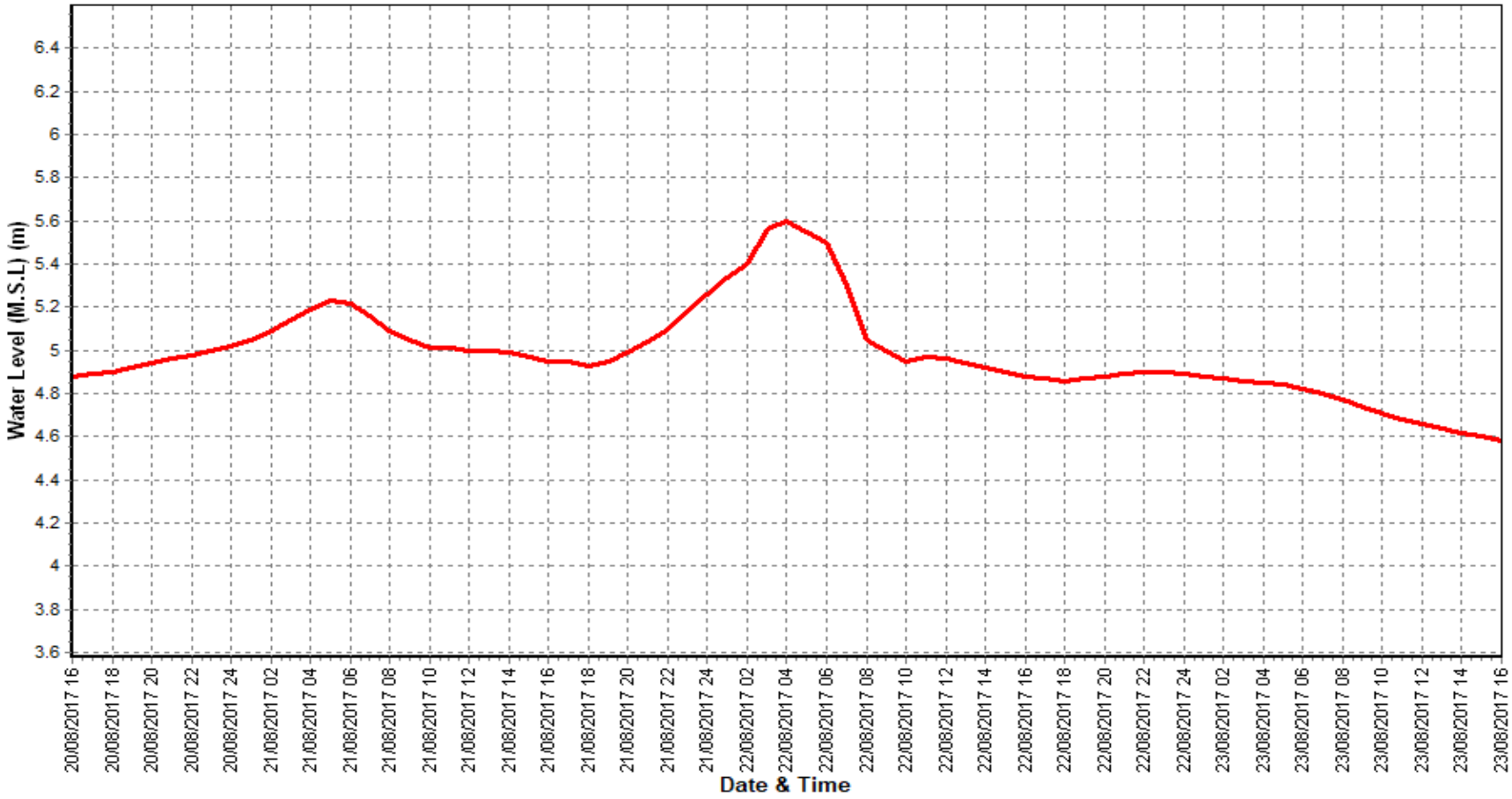


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : Bantwal (WN000G9) **Division : Cauvery Division, Bangalore**

Local River : Netravathi **Sub-Division : SWRSD-III, Mangalore**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-2018

Site	**: ERINJIPUZHA**		**Code**	**: KP000C3**	
State	: Kerala		District	Kasaragod	
Basin	: WFR South of Tapi		Independent River	: Payaswani	
Tributary	: -		Sub Tributary	: -	
Sub-Sub Tributary	: -		Local River	: Payaswani	
Division	: SWR Division, Kochi		Sub-Division	: Chaliyar SD, Calicut	
Drainage Area	: 957 Sq. Km.		Bank	: Right	
Latitude	: 12°29'45"		Longitude	: 75°09'25"	
Zero of Gauge (m)	: 0.000 (Arb.)	20-07-1984	- 31-05-1985		
	1.910 (Arb.)	01-06-1985	- 31-03-1989		
	9.100 (m.s.l)	01-04-1989			
	Opening Date	Closing Date			
Gauge	: 20-07-1984				
Discharge	: 25-06-1985				
Sediment	: 13-06-1988				
Water Quality	: 01-07-1988				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1986-1987	866.8	10.500	08-08-1986	0.000	5.450*	01-06-1986
1987-1988	377.2	8.990	21-08-1987	0.000	6.180*	09-03-1988
1988-1989	725.0	10.260	18-07-1988	0.000	6.360*	01-06-1988
1989-1990	852.5	17.720	23-07-1989	0.000	13.240	22-03-1990
1990-1991	717.8	17.040	15-08-1990	0.000	13.065	22-03-1991
1991-1992	1047	17.800	18-08-1991	0.000	13.187	18-03-1992
1992-1993	975.2	17.454	28-07-1992	0.000	13.183	08-04-1993
1993-1994	474.9	16.705	26-07-1993	0.181	12.865	05-04-1994
1994-1995	1277	18.120	30-07-1994	0.000	12.990	27-03-1995
1995-1996	1085	17.840	12-07-1995	0.000	12.920	09-03-1996
1996-1997	675.3	17.170	13-08-1996	0.000	12.430	01-06-1996
1997-1998	1332	18.275	22-08-1997	0.000	12.740	03-06-1997
1998-1999	820.0	17.300	01-07-1998	0.000	13.280	31-03-1999
1999-2000	1388	18.790	18-07-1999	0.000	12.890	20-03-2000
2000-2001	632.1	16.850	25-08-2000	0.000	13.330	10-03-2001
2001-2002	749.3	17.120	08-07-2001	0.000	13.230	25-03-2002
2002-2003	388.5	16.395	17-08-2002	0.000	12.820	17-03-2003
2003-2004	507.4	16.660	24-08-2003	0.000	12.590	01-06-2003

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2004-2005	1064	17.750	04-08-2004	0.000	12.880	27-02-2005
2005-2006	631.7	17.125	25-07-2005	0.000	12.780	09-03-2006
2006-2007	619.6	17.060	12-08-2006	0.000	12.800	18-03-2007
2007-2008	866.0	17.410	07-08-2007	0.000	12.735	14-03-2008
2008-2009	840.5	17.310	13-08-2008	0.000	12.790	25-02-2009
2009-2010	850.5	17.500	17-07-2009	0.000	12.740	01-04-2010
2010-2011	988.4	17.900	30-07-2010	0.000	13.140	02-03-2011
2011-2012	926.7	17.740	06-08-2011	0.000	12.850	19-03-2012
2012-2013	721.6	17.195	09-08-2012	0.000	12.810	02-06-2012
2013-2014	870.2	17.570	04-07-2013	0.000	12.550	23-03-2014
2014-2015	1042	17.870	07-08-2014	0.012	12.650	30-03-2015
2015-2016	772.9	17.190	20-07-2015	0.000	12.650	15-03-2016
2016-2017	418.6	16.480	29-06-2016	0.000	12.930	05-03-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : ERINJIPUZHA (KP000C3) **Division : SWR Division, Cochin**

Local River : Payaswani **Sub-Division : Chaliyar SD, Calicut**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	14.050	14.60	15.170	106.0	15.100	103.6	15.780	219.3 *	15.120	96.75 *	14.390	31.75
2	13.900	8.435 *	15.640	191.9 *	15.020	94.77	15.480	162.5	15.030	86.22 *	14.370	30.81
3	13.800	5.548 *	15.510	164.2	14.950	77.33	15.340	140.0 *	14.990	84.90	14.340	30.90
4	13.720	3.718 *	15.440	140.0	15.720	211.6	15.240	124.8 *	14.930	73.97	14.340	27.34 *
5	13.820	6.073 *	15.080	93.36	16.310	370.7	15.520	169.1	14.890	72.42	14.340	27.34 *
6	14.010	12.41 *	15.230	114.4	16.270	331.7 *	15.100	104.7	14.820	63.50	14.320	29.33
7	13.900	8.435 *	15.290	121.6	15.920	284.1	15.160	107.8	14.830	66.66	14.340	30.20
8	13.860	8.819	15.140	102.6	15.870	235.3	15.620	206.3	14.630	62.38 *	14.360	31.43
9	13.930	11.97	15.080	102.4 *	15.540	170.2	15.080	104.7	14.770	57.63	14.320	29.17
10	13.980	13.55	14.850	65.90	15.370	140.6	15.040	98.48 *	14.710	50.99	14.310	28.49
11	14.520	43.02 *	14.790	58.39	15.200	116.2	14.980	87.38	14.700	50.36	14.300	28.61
12	15.510	164.6	14.770	57.22	15.540	169.4	14.920	78.19	14.670	50.91	14.260	22.87 *
13	14.850	69.13	14.670	52.99	15.150	111.9 *	15.010	84.92	14.660	50.70	14.250	25.98
14	14.940	84.85 *	15.210	119.2	15.040	88.48	15.040	100.9	14.900	72.71	14.240	25.15
15	14.640	53.26	15.430	141.9	14.980	89.67 *	14.890	76.88	14.540	50.82 *	14.230	24.48
16	14.450	38.49	15.470	161.4 *	15.060	95.52	14.860	72.89	14.750	53.26	14.210	22.02
17	14.490	41.43	15.300	123.4	15.330	133.1	11.360	143.2 *	14.640	46.73	14.190	21.34
18	14.420	35.35 *	15.300	132.3 *	15.050	88.72	15.340	131.4	14.460	53.37 *	14.180	19.48
19	14.530	43.44	16.280	344.9	15.440	185.2	15.900	285.1	14.570	40.35	14.160	17.90 *
20	14.390	35.59	16.760	524.3	15.670	197.6 *	15.830	262.1	14.540	40.43	14.160	17.69
21	14.380	33.45	15.970	255.9	16.080	323.0	15.500	173.4	14.520	38.93	14.160	16.97
22	14.450	39.88	15.680	220.0	15.890	273.7	15.310	134.0	14.390	38.41 *	14.190	17.95
23	14.390	31.34	15.410	151.3 *	15.670	177.4	15.140	100.9	14.480	35.60	14.150	15.38
24	14.570	45.67	15.320	136.2	15.490	173.5	15.030	95.92 *	14.460	33.63	14.130	14.66
25	14.680	57.09 *	15.170	111.3	15.550	176.5	14.980	81.43	14.450	29.10	14.110	13.39
26	15.410	151.3 *	15.050	99.20	15.520	174.3	15.240	115.4	14.440	29.90	14.100	15.25 *
27	15.700	224.9	14.990	87.73	16.190	311.5 *	15.150	106.8	14.450	30.51	14.080	14.35
28	15.130	98.77	15.240	138.3	16.350	389.8	15.480	171.0	14.940	74.94	14.070	11.93
29	15.110	91.76	15.280	154.6	17.270	645.8 #	15.460	159.7 *	14.310	37.70 *	14.070	13.27
30	15.020	87.02	15.330	138.5 *	16.570	478.0	15.130	109.1 *	14.440	33.59 #	14.060	12.68
31			15.240	120.5	16.000	313.2			14.410	33.11		
Ten-Daily Mean												
I Ten-Daily	13.897	9.355	15.243	120.2	15.607	202.0	15.336	143.8	14.872	71.54	14.343	29.68
II Ten-Daily	14.674	60.92	15.398	171.6	15.246	127.6	14.813	132.3	14.643	50.96	14.218	22.55
III Ten-Daily	14.884	86.12	15.335	146.7	16.053	312.4	15.242	124.8	14.481	37.76	14.112	14.58
Monthly												
Min.	13.720	3.718	14.670	52.99	14.950	77.33	11.360	72.89	14.310	29.10	14.060	11.93
Max.	15.700	224.9	16.760	524.3	17.270	645.8	15.900	285.1	15.120	96.75	14.390	31.75
Mean	14.485	52.13	15.325	146.2	15.649	217.2	15.130	133.6	14.659	52.92	14.224	22.27

Annual Runoff in MCM = 1720 Annual Runoff in mm = 1798

Peak Observed Discharge = 645.8 cumecs on 29/08/2017 Corres. Water Level :17.27 m

Lowest Observed Discharge = 0.000 cumecs on 06/03/2018 Corres. Water Level :12.94 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : ERINJIPUZHA (KP000C3) **Division : SWR Division, Cochin**

Local River : Payaswani **Sub-Division : Chaliyar SD, Calicut**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	14.040	10.29	13.670	5.521	13.360	1.817	13.080	0.071	12.940	0.000	13.150	0.501 #
2	23.140	10.54 *	13.660	5.413	13.350	1.842	13.070	0.072	12.850	0.000	13.100	0.323
3	23.130	10.35 *	13.660	5.386	13.340	1.751	13.050	0.069	12.790	0.000	13.050	0.193 #
4	14.010	10.02	13.660	5.237	13.320	1.600 *	13.040	0.109 *	12.790	0.000	13.010	0.124
5	14.000	9.982	13.650	5.028	13.290	1.356	13.010	0.065 #	12.780	0.000	12.980	0.076
6	14.000	9.831	13.640	5.054	13.280	1.315	12.940	0.000	12.770	0.000	12.950	0.040 *
7	13.980	10.55	13.620	4.731 *	13.270	1.408 #	12.900	0.000	12.740	0.000	12.900	0.000
8	13.980	8.991	13.600	4.647	13.180	1.098 #	12.830	0.000	12.730	0.000	12.880	0.000
9	13.970	9.207 #	13.590	4.537	13.150	1.050	12.780	0.000	12.680	0.000	12.900	0.000
10	13.960	9.024	13.570	3.835	13.140	0.999	12.750	0.000	12.650	0.000	13.610	4.395
11	13.960	9.972	13.570	3.917	13.130	0.945 *	12.740	0.000	12.680	0.000	13.790	7.178
12	13.960	9.211	13.550	3.820	13.120	0.923	12.700	0.000	12.650	0.000	13.670	6.281
13	13.960	9.264	13.540	3.721	13.110	0.888 *	12.670	0.000	12.800	0.000	13.880	8.979 *
14	13.940	8.382	13.530	3.683 *	13.090	0.875	12.640	0.000	12.760	0.000	13.760	6.360
15	13.940	8.663 #	13.530	3.671	13.090	0.838	12.660	0.000	13.570	0.000	13.730	5.405
16	13.940	8.512	13.520	3.100	13.120	0.840	12.710	0.000	13.570	2.999	13.720	5.531
17	13.920	8.311 *	13.500	3.055	13.310	1.560 #	12.740	0.000	13.520	2.637	13.670	5.239
18	13.900	7.211	13.500	3.158	13.300	1.521 *	12.750	0.000	13.430	1.657	13.750	6.643
19	13.880	7.119	13.480	3.069	13.270	1.408 #	12.770	0.000	13.370	1.446 #	13.660	4.747
20	13.880	7.463 #	13.450	2.796	13.300	0.636	12.810	0.000	13.460	1.917	13.710	5.877 *
21	13.860	7.145	13.440	2.738 *	13.280	0.387	12.840	0.000	13.450	1.807	13.720	5.975
22	13.850	6.779	13.410	2.452	13.270	0.417	13.050	0.127 #	13.420	1.795 *	13.700	5.355
23	13.850	6.716	13.400	2.286	13.230	0.226	13.500	2.150	13.440	1.952	13.650	5.034
24	13.820	6.664 *	13.370	2.101	13.210	0.251	13.430	1.807	13.390	1.770	13.690	5.228
25	13.780	6.060 *	13.360	1.995	13.120	0.203 *	13.370	1.446 *	13.380	1.857	13.850	8.155
26	13.750	6.374	13.350	1.905 *	13.120	0.158	13.330	1.196 #	13.420	2.083	14.670	34.27 #
27	13.730	6.146 #	13.320	1.813	13.100	0.084	13.300	1.025 #	13.380	1.766	14.400	23.48 *
28	13.720	6.397	13.320	1.654 *	13.100	0.082	13.200	0.418	13.330	1.353	14.880	44.32 #
29	13.710	6.161	13.320	1.775			13.140	0.345 *	13.290	0.972 *	14.390	29.71
30	13.690	6.015	13.340	1.885			13.070	0.165 *	13.200	0.555 *	15.400	75.85 #
31	13.680	5.485 *	13.360	1.957			13.000	0.055			14.760	38.39 #
Ten-Daily Mean												
I Ten-Daily	15.821	9.878	13.632	4.939	13.268	1.424	12.945	0.039	12.772	0.000	13.053	0.565
II Ten-Daily	13.928	8.411	13.517	3.399	13.184	1.043	12.719	0.000	13.181	1.066	13.734	6.224
III Ten-Daily	13.767	6.358	13.363	2.051	13.179	0.226	13.203	0.794	13.370	1.591	14.283	25.07
Monthly												
Min.	13.680	5.485	13.320	1.654	13.090	0.082	12.640	0.000	12.650	0.000	12.880	0.000
Max.	23.140	10.55	13.670	5.521	13.360	1.842	13.500	2.150	13.570	2.999	15.400	75.85
Mean	14.482	8.156	13.499	3.417	13.213	0.946	12.964	0.294	13.108	0.886	13.709	11.09

Peak Computed Discharge = 331.7 cumecs on 06/08/2017 **Corres. Water Level :16.27 m**

Lowest Computed Discharge = 0.040 cumecs on 06/05/2018 **Corres. Water Level :12.95 m**

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

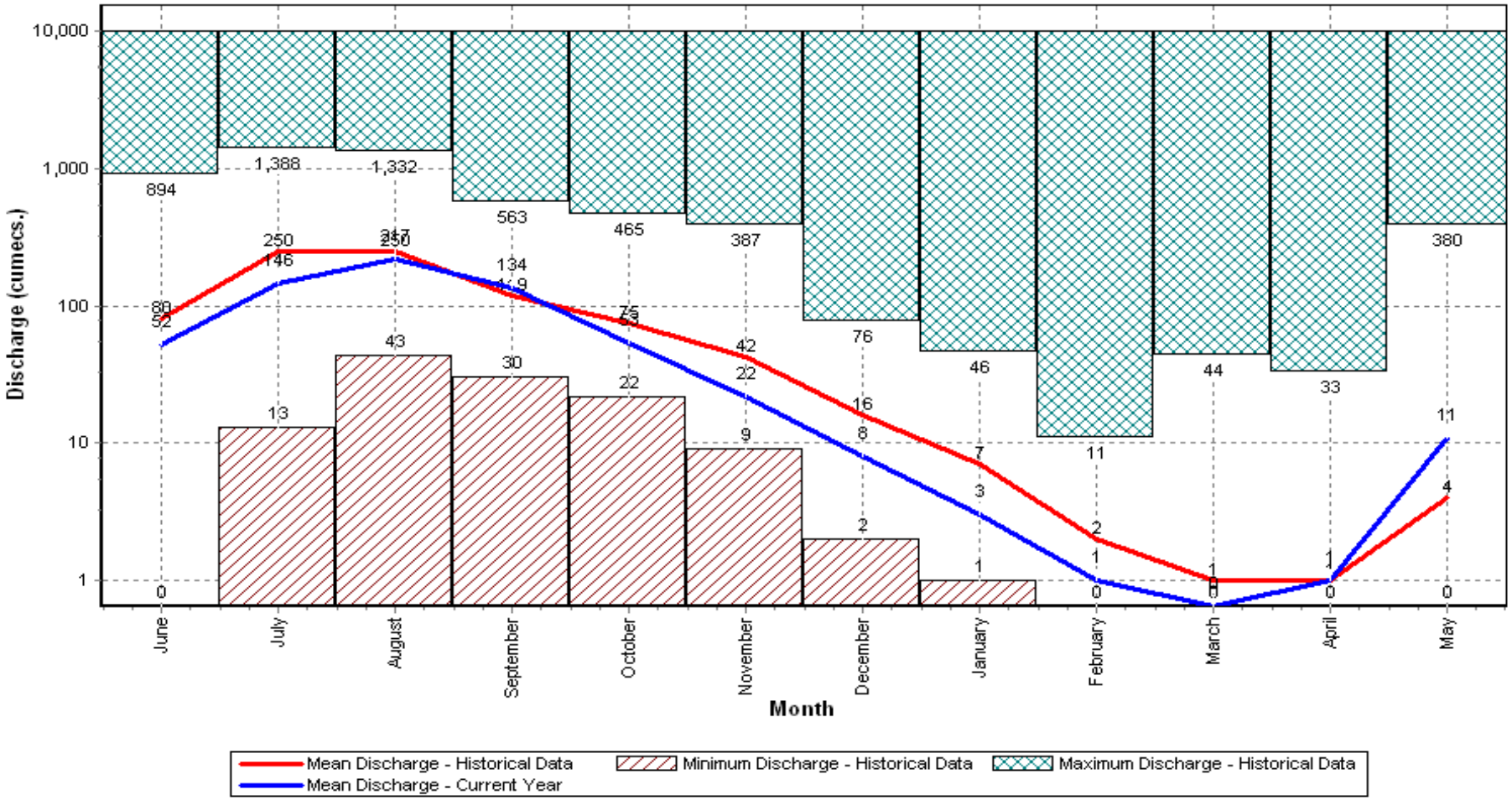
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : ERINJIPUZHA (KP000C3) | **Data considered : 1986-2018** | **Division : SWR Division, Cochin**

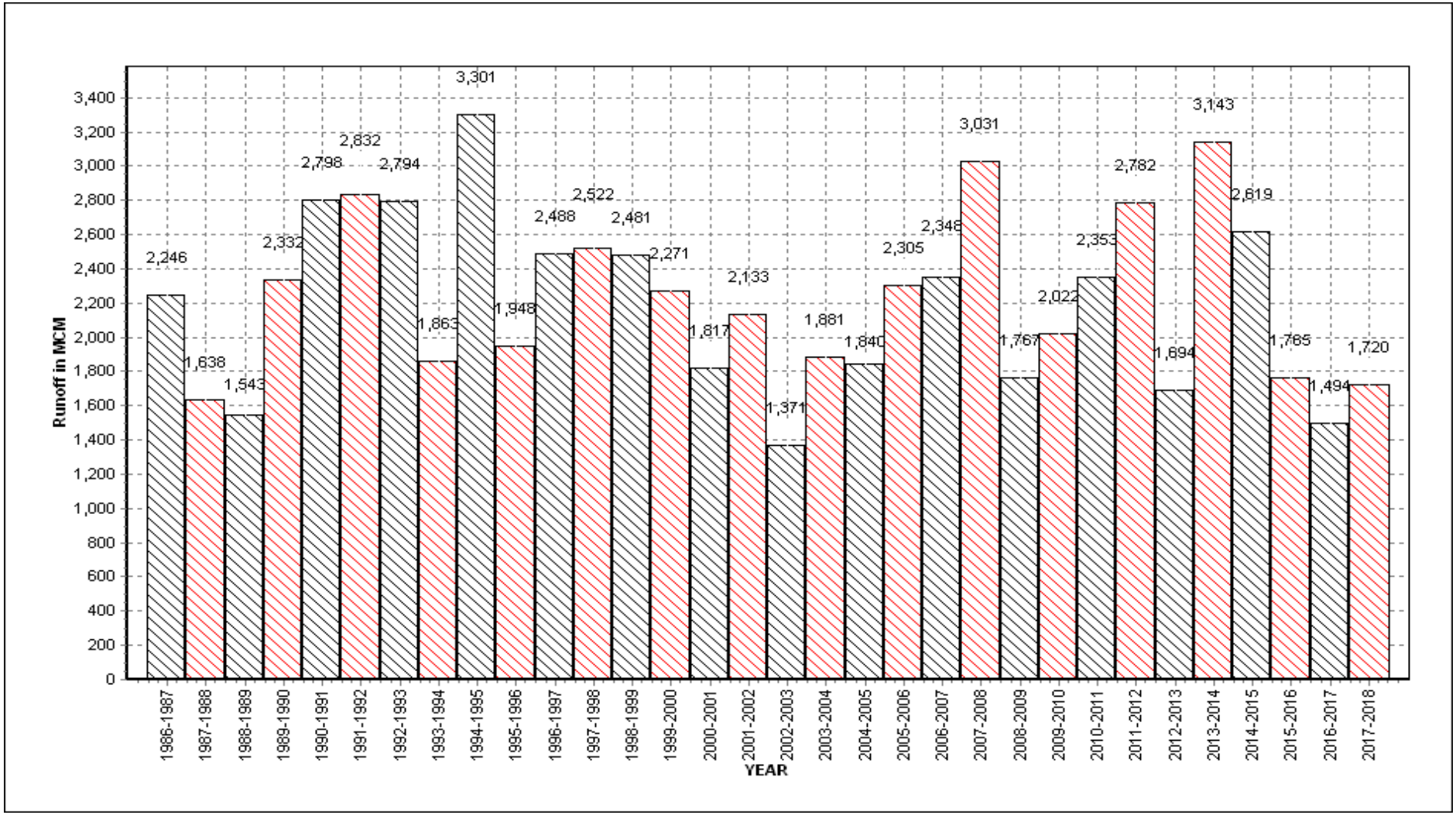
Local River : Payaswani | **Sub-Division : Chaliyar SD, Calicut**



Annual Runoff Values for the period: 1986 - 2018

Station Name : ERINJIPUZHA (KP000C3) **Division : SWR Division, Cochin**

Local River : Payaswani **Sub-Division : Chaliyar SD, Calicut**



Note: Missing values have not been considered while arriving at Annual Runoff

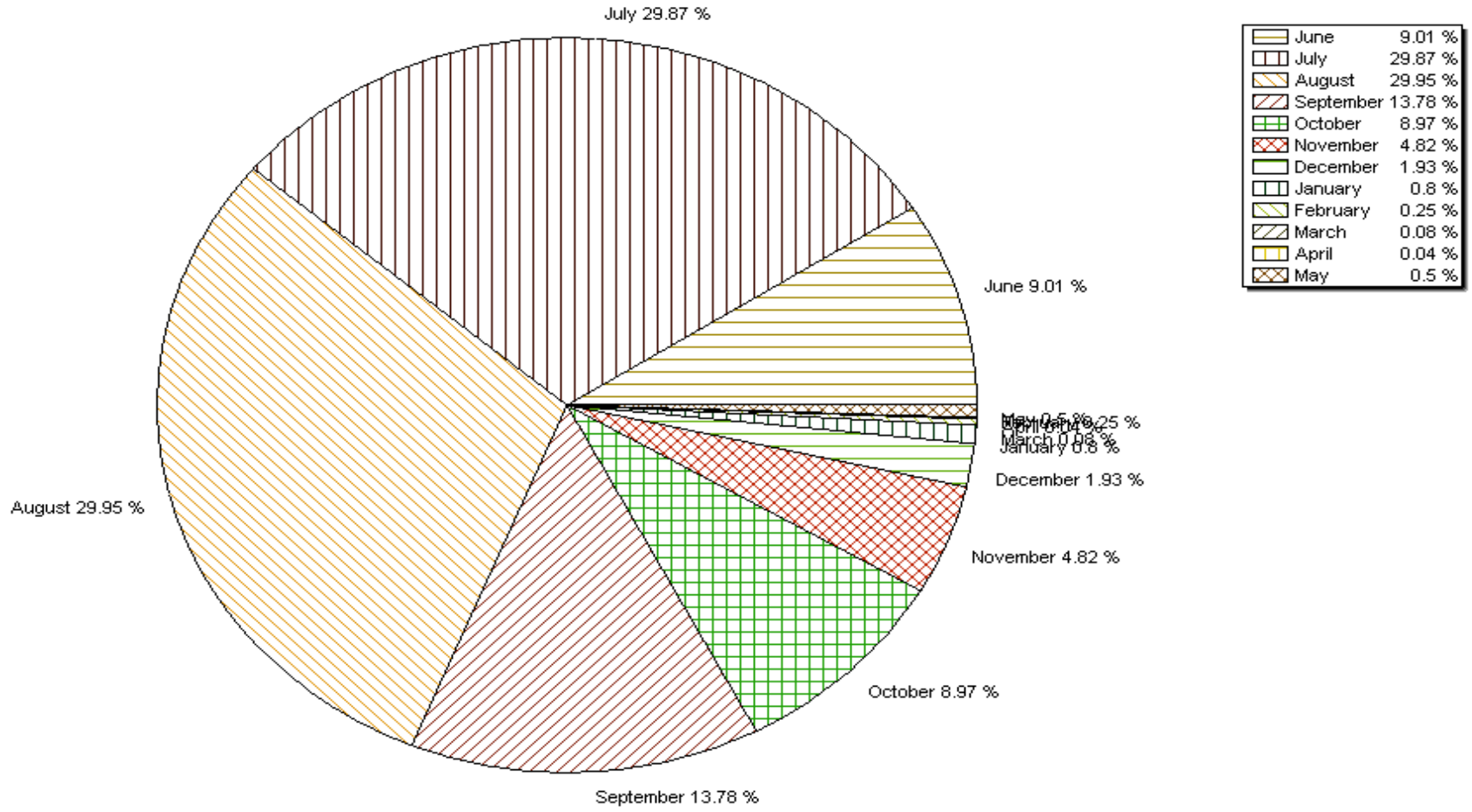
Monthly Average Runoff based on period : 1986-2017

Station Name : ERINJIPUZHA (KP000C3)

Local River : Payaswani

Division : SWR Division, Cochin

Sub-Division : Chaliyar SD, Calicut



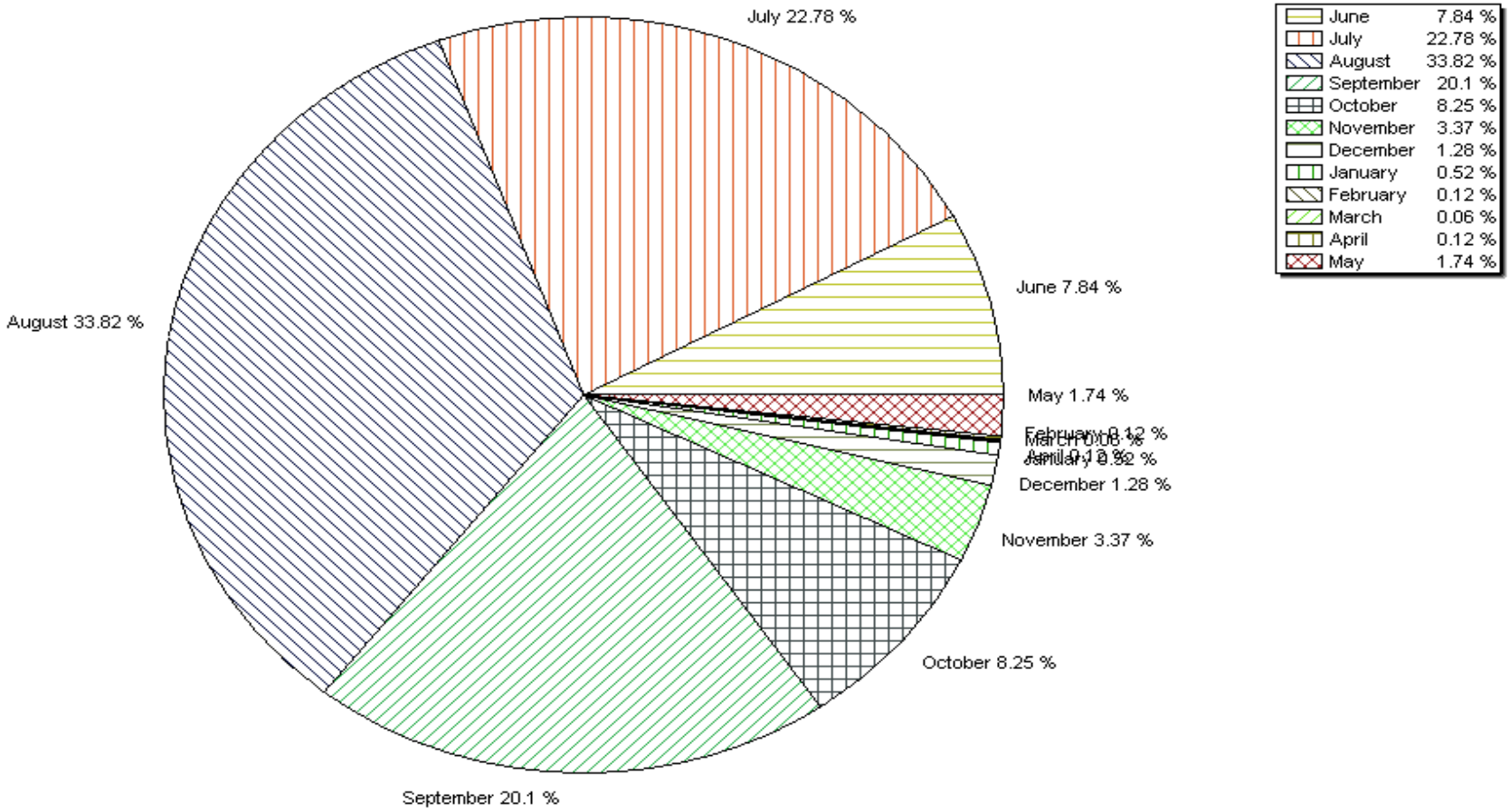
Monthly Runoff for the Year : 2017-2018

Station Name : ERINJIPUZHA (KP000C3)

Local River : Payaswani

Division : SWR Division, Cochin

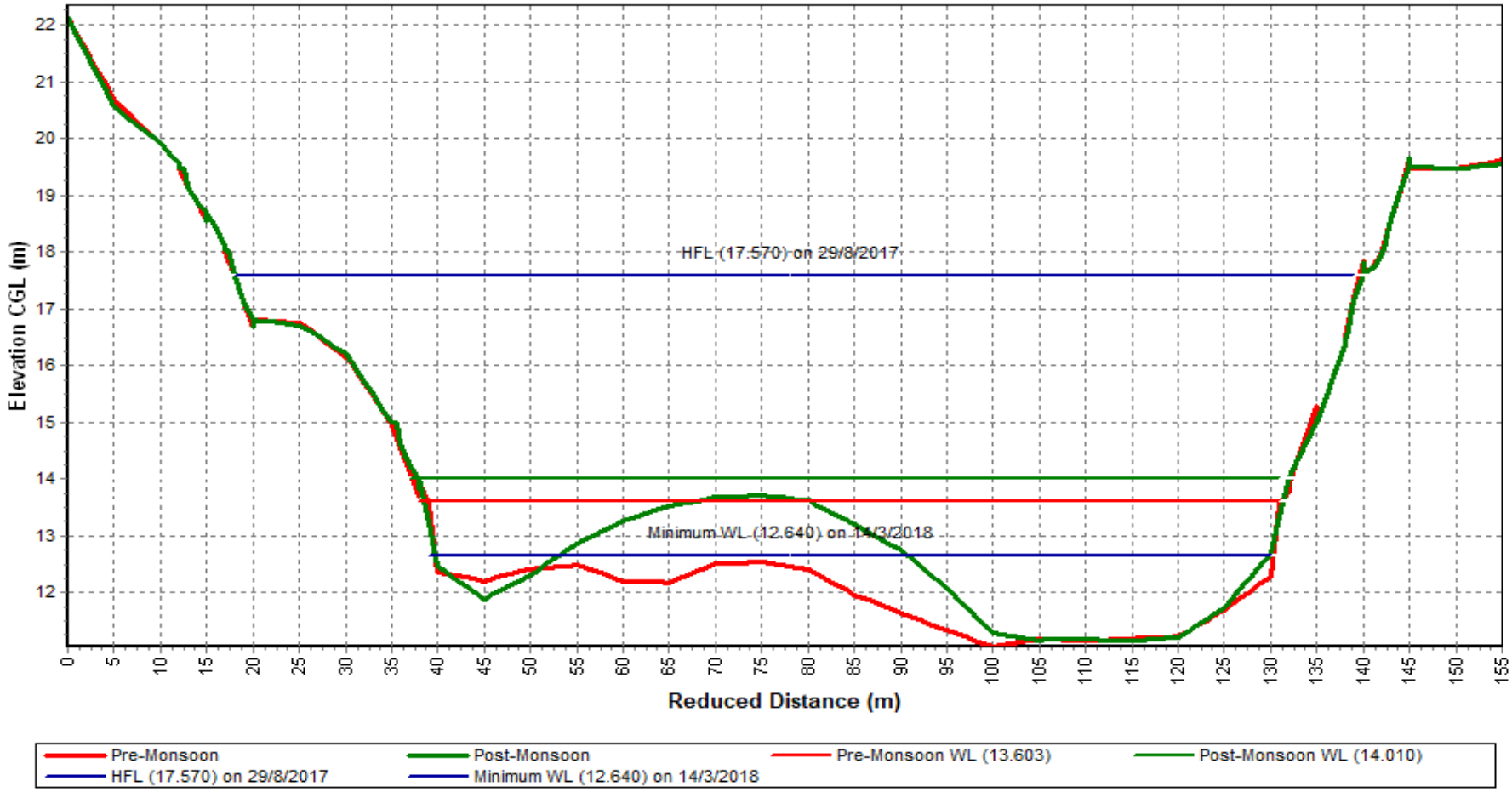
Sub-Division : Chaliyar SD, Calicut



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : ERINJIPUZHA (KP000C3) **Division : SWR Division, Cochin**

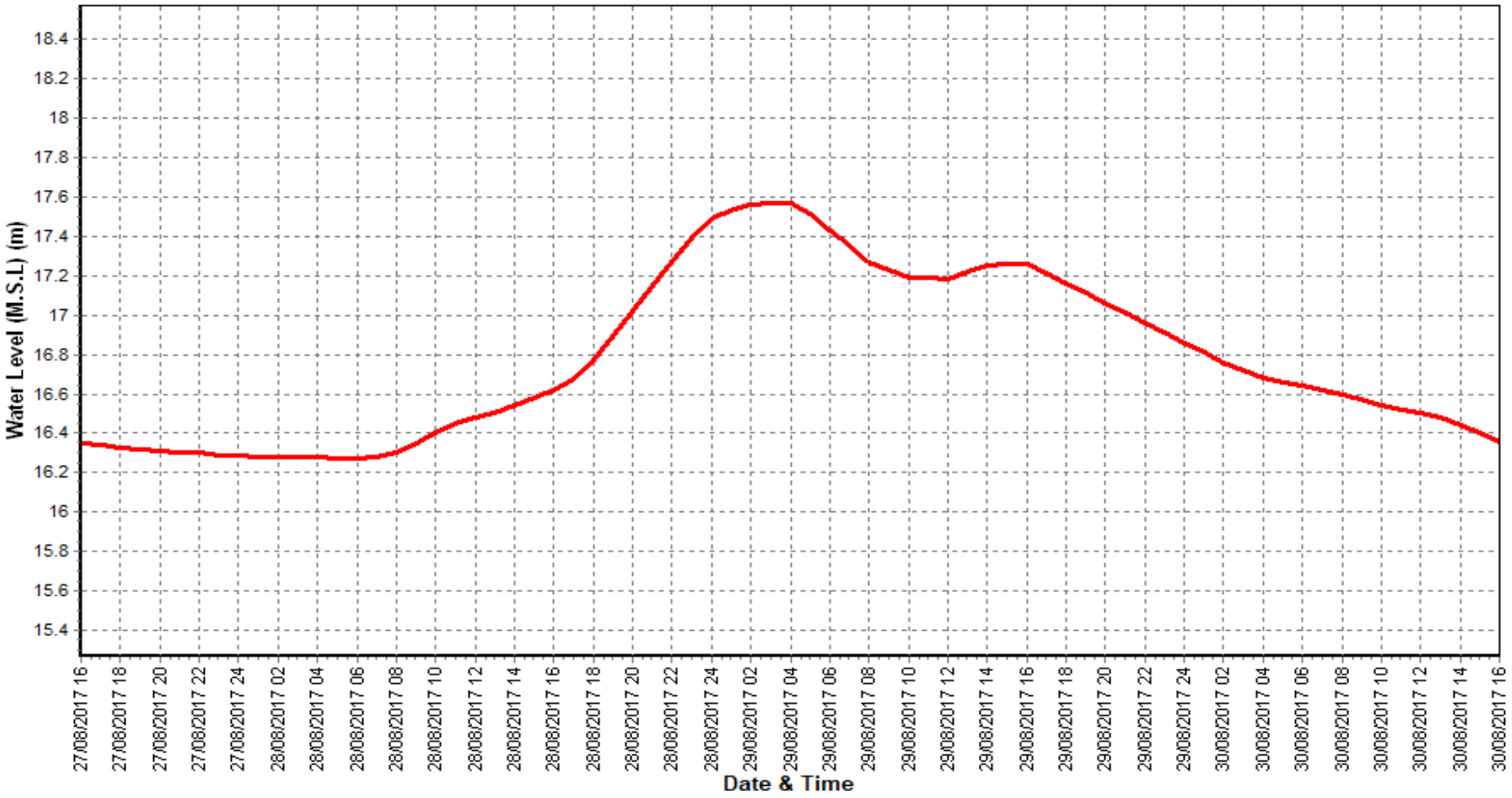
Local River : Payaswani **Sub-Division : Chaliyar SD, Calicut**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : ERINJIPUZHA (KP000C3) **Division : SWR Division, Cochin**

Local River : Payaswani **Sub-Division : Chaliyar SD, Calicut**

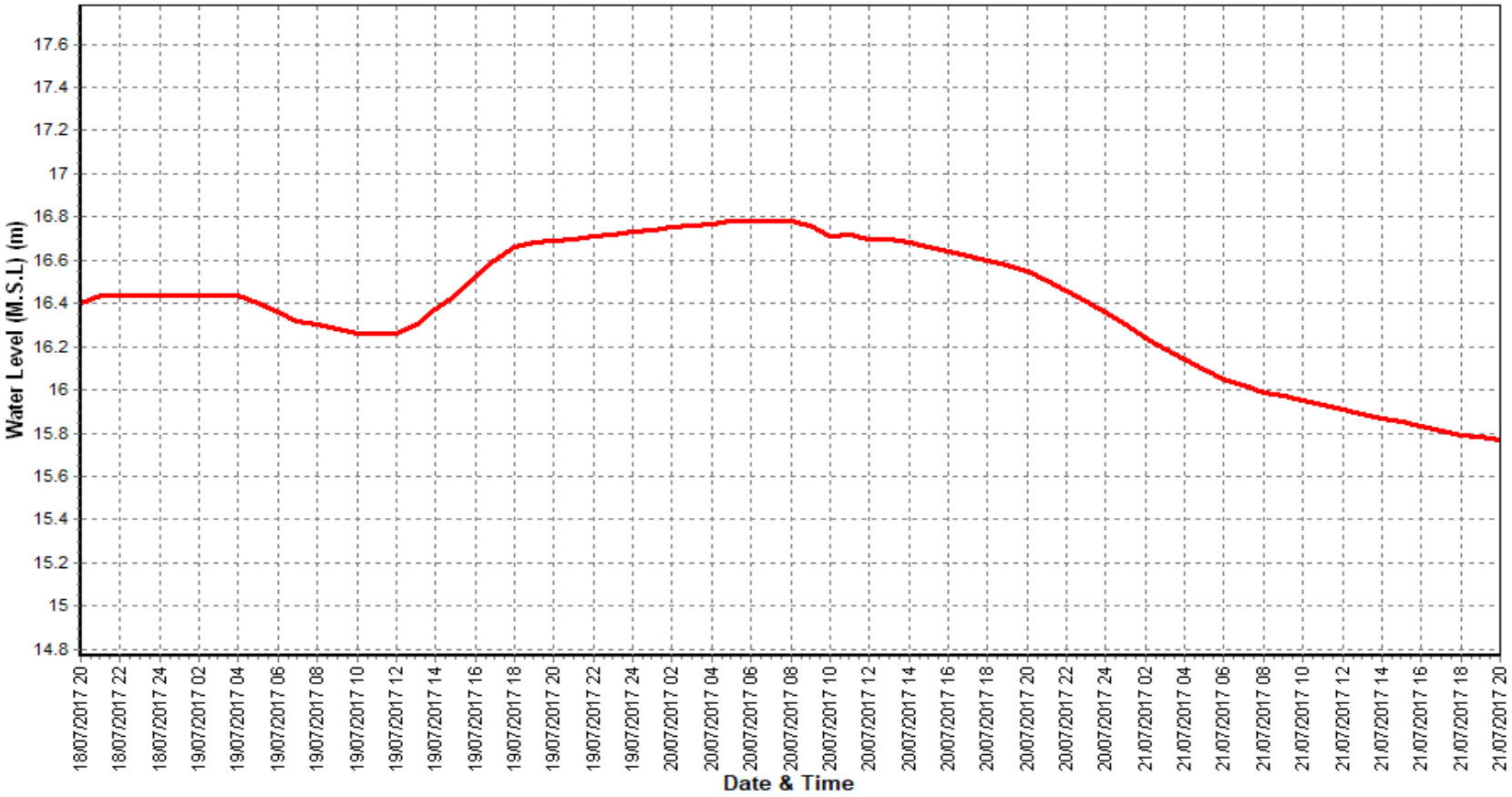


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : ERINJIPUZHA (KP000C3) **Division : SWR Division, Cochin**

Local River : Payaswani **Sub-Division : Chaliyar SD, Calicut**

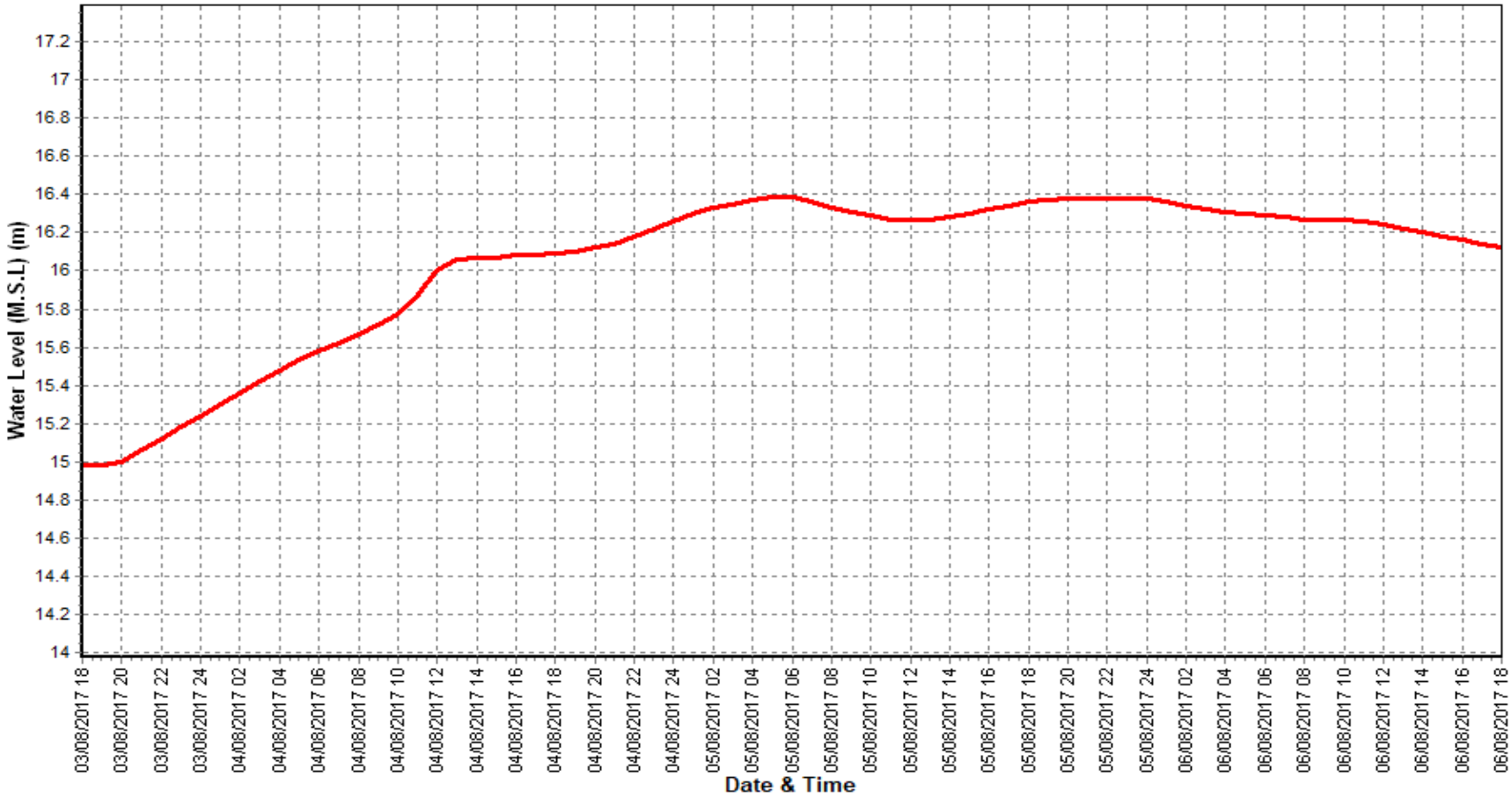


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : ERINJIPUZHA (KP000C3) **Division : SWR Division, Cochin**

Local River : Payaswani **Sub-Division : Chaliyar SD, Calicut**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-2018

Site	**: PERUMANNU**		**Code**	**: KA000K8**	
State	: Kerala		District		Cannanore
Basin	: WFR South of Tapi		Independent River	:	Valapatnam
Tributary	: -		Sub Tributary	:	-
Sub-Sub Tributary	: -		Local River	:	Valapatnam
Division	: SWR Division, Kochi		Sub-Division	:	Chaliyar SD, Calicut
Drainage Area	: 1070 Sq. Km.		Bank	:	Right
Latitude	: 11°58'51"		Longitude	:	75°34'40"
Zero of Gauge (m)	: 3.470 (m.s.l)		23-05-1984		
	Opening Date		Closing Date		
Gauge	: 23-05-1984				
Discharge	: 26-06-1985				
Sediment	: 26-07-1986				
Water Quality	: 02-06-1986				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1986-1987	1040	12.480	09-08-1986	0.000	5.865	13-05-1987
1987-1988	837.9	10.620	26-08-1987	0.805	6.030	01-06-1987
1988-1989	1267	12.370	04-08-1988	0.000	5.880	22-03-1989
1989-1990	1794	13.750	24-07-1989	0.139	5.930	02-06-1989
1990-1991	1010	11.430	27-06-1990	1.250	6.150	16-12-1990
1991-1992	1659	13.136	27-07-1991	1.141	6.070	01-12-1991
1992-1993	1878	13.211	21-06-1992	1.082	6.195	19-05-1993
1993-1994	1025	11.354	04-08-1993	0.288	6.038	21-05-1994
1994-1995	1856	13.673	15-07-1994	1.505	6.205	10-12-1994
1995-1996	1163	11.605	01-09-1995	0.800	6.110	17-12-1995
1996-1997	975.6	11.085	25-07-1996	1.300	6.190	22-05-1997
1997-1998	1776	12.975	07-08-1997	1.200	6.185	01-06-1997
1998-1999	1304	11.930	02-07-1998	2.254	6.255	01-05-1999
1999-2000	2380	13.870	18-07-1999	1.100	6.220	02-04-2000
2000-2001	1200	11.905	12-07-2000	0.973	6.160	02-05-2001
2001-2002	1782	12.600	08-07-2001	1.438	6.270	06-12-2001
2002-2003	1777	13.100	14-10-2002	0.676	6.130	30-04-2003
2003-2004	764.4	10.605	17-07-2003	0.730	6.145	03-05-2004
2004-2005	1813	13.175	04-08-2004	1.208	6.235	20-04-2005
2005-2006	1499	12.435	29-05-2006	1.230	6.230	04-06-2005
2006-2007	1614	12.640	03-07-2006	2.100	6.225	21-05-2007
2007-2008	2370	14.530	17-07-2007	0.002	6.165	11-06-2007

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2008-2009	1285	11.965	12-08-2008	1.641	6.215	18-05-2009
2009-2010	2202	13.780	18-07-2009	2.683	6.280	05-06-2009
2010-2011	1463	12.430	30-07-2010	1.966	6.270	08-04-2011
2011-2012	1326	12.400	17-07-2011	0.916	6.380	01-06-2011
2012-2013	2082	14.690	07-08-2012	0.000	6.310	29-11-2012
2013-2014	2197	14.500	04-07-2013	0.000	6.480	01-06-2013
2014-2015	2006	13.555	01-08-2014	0.880	6.150	13-01-2015
2015-2016	1296	12.135	23-06-2015	0.384	6.140	05-05-2016
2016-2017	788.1	11.060	29-06-2016	0.014	6.100	11-04-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : PERUMANNU (KA000K8) **Division : SWR Division, Cochin**

Local River : Valapatnam **Sub-Division : Chaliyar SD, Calicut**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	6.290	1.323 #	9.285	255.4	8.445	131.9	9.550	315.3 *	6.340	206.4 *	7.430	37.19
2	6.200	0.878	9.210	248.2 *	8.580	147.8	9.155	218.8	8.800	179.6 *	7.405	35.86
3	6.250	1.220	9.310	269.5	8.370	121.0	8.980	208.1 *	8.620	156.1	7.430	37.64
4	6.620	5.932 *	9.015	195.8	9.195	236.3	9.080	225.0 *	8.480	134.8	7.360	33.47 *
5	6.340	1.777 *	8.775	176.8	9.210	235.9	9.360	271.4	8.345	116.6	7.390	35.18 *
6	8.430	128.6 *	8.950	197.1	9.530	311.1 *	9.100	212.1	8.320	111.4	7.380	36.45
7	7.020	17.49 *	9.730	362.4	9.460	298.9	8.735	169.1	8.280	106.7	7.380	30.86
8	6.290	1.119	9.160	240.1	9.090	231.6	8.790	166.0	5.870	98.60 *	7.350	34.83
9	6.200	0.882	8.680	161.9	8.980	204.5	8.975	208.3	8.540	147.6	7.375	31.22
10	6.210	0.981	8.470	130.6	9.105	231.8	8.490	136.2 *	8.145	100.9	7.320	28.09
11	6.500	3.797 *	8.360	115.8	8.770	168.2	8.405	122.4	8.395	123.2	7.280	28.94
12	7.705	53.28	8.340	112.2	9.230	254.7	8.280	115.0	8.110	93.13	7.250	27.63 *
13	8.005	70.16	8.201	98.78	8.750	172.1 *	8.175	106.8	8.145	92.99	7.230	25.99
14	8.785	154.2	8.530	143.6	8.630	145.8	8.240	110.1	8.255	110.6	7.200	22.39
15	8.390	130.6	8.620	145.2	8.450	131.1 *	8.380	124.6	6.270	113.0 *	7.180	23.77
16	7.610	49.16	8.870	190.4	8.670	160.4	8.220	109.7	8.110	96.15	7.170	23.67
17	8.115	92.60	9.090	222.2	8.695	159.0	9.400	211.4 *	8.060	87.97	7.155	23.78
18	7.750	59.76 *	9.450	295.3	8.620	153.8	10.470	533.3	6.000	89.30 *	7.140	20.17
19	7.540	41.46	11.055	916.0	9.680	363.3	10.735	646.5	7.970	78.84	7.150	22.89 *
20	7.590	45.23	11.835	1117	9.230	251.9 *	10.530	579.3	7.960	82.91	7.130	18.39
21	7.745	51.96	10.530	729.9	9.785	375.3	9.800	392.3	7.860	67.90	7.115	18.05
22	7.655	47.68	10.180	584.1	10.550	571.5	9.450	305.8	7.780	63.79 *	6.935	14.69
23	7.630	42.84	9.640	334.7 *	9.780	385.6	9.170	252.9	7.730	59.81	7.125	20.50
24	7.905	63.56	9.395	286.8	9.700	360.3	9.400	188.8 *	7.680	52.36	7.120	20.03
25	9.080	225.0 *	9.135	239.6	9.390	299.9	8.890	193.5 #	7.620	49.27	7.040	17.28
26	9.020	214.8 *	8.835	184.1	9.030	230.8	8.725	177.0	7.605	47.34	6.240	0.945 *
27	10.945	777.0	8.850	190.7	10.310	501.0 *	8.810	186.0	7.680	51.97	6.220	0.815 #
28	9.850	409.0	8.880	181.4	10.070	462.8	9.240	286.5	7.670	49.13	6.880	13.32
29	10.075	440.1	9.055	228.8	11.345	810.1	9.830	214.8 *	7.570	46.51 *	6.880	13.37
30	9.400	276.3	8.740	170.6 *	10.940	710.2	9.500	181.1 *	7.515	43.78	6.880	13.38
31			8.545	135.9	9.965	441.8			7.460	34.93		
Ten-Daily Mean												
I Ten-Daily	6.585	16.02	9.059	223.8	8.997	215.1	9.021	213.0	7.974	135.9	7.382	34.08
II Ten-Daily	7.799	70.03	9.235	335.6	8.873	196.0	9.084	265.9	7.727	96.80	7.188	23.76
III Ten-Daily	8.931	254.8	9.253	297.0	10.079	468.1	9.281	237.9	7.652	51.53	6.843	13.24
Monthly												
Min.	6.200	0.878	8.201	98.78	8.370	121.0	8.175	106.8	5.870	34.93	6.220	0.815
Max.	10.945	777.0	11.835	1117	11.345	810.1	10.735	646.5	8.800	206.4	7.430	37.64
Mean	7.772	113.6	9.185	285.8	9.340	298.7	9.129	238.9	7.780	93.34	7.138	23.69

Annual Runoff in MCM = 2840 Annual Runoff in mm = 2654

Peak Observed Discharge = 1117 cumecs on 20/07/2017 Corres. Water Level :11.835 m

Lowest Observed Discharge = 0.423 cumecs on 19/04/2018 Corres. Water Level :6.17 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : PERUMANNU (KA000K8) **Division : SWR Division, Cochin**

Local River : Valapatnam **Sub-Division : Chaliyar SD, Calicut**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	6.890	10.77	7.290	21.36 *	6.180	0.614	6.170	0.546	6.170	0.530 *	6.170	0.469
2	7.160	17.16 *	7.270	20.68 *	6.180	0.674	6.170	0.440	6.170	0.535	6.170	0.467
3	7.130	16.26 *	7.250	21.82	6.180	0.640	6.170	0.562	6.170	0.535	6.170	0.534
4	7.120	17.67	7.230	19.35 #	6.180	0.593 *	6.170	0.530 *	6.170	0.548	6.170	0.499
5	6.240	0.907	6.750	7.400	6.180	0.599	6.170	0.516	6.170	0.514	6.170	0.623
6	6.170	0.954	6.200	0.936	6.180	0.624	6.170	0.516	6.170	0.543	6.170	0.530 *
7	6.230	1.262	6.180	0.805 *	6.180	0.633	6.170	0.559	6.170	0.570	6.170	0.561
8	6.200	1.008	6.180	0.751	6.180	0.600	6.170	0.554	6.170	0.530 *	6.170	0.645
9	6.200	1.001	6.880	8.663	6.180	0.648	6.170	0.556	6.170	0.482	6.170	0.624
10	9.670	0.910 *	6.220	0.792	6.180	0.629	6.170	0.532	6.170	0.484	6.170	0.632
11	6.200	1.004	6.860	8.591	6.180	0.593 *	6.170	0.530 *	6.170	0.501	6.205	0.829
12	6.200	0.995	7.040	12.43	6.180	0.589	6.170	0.523	6.170	0.469	6.210	0.799
13	6.200	0.992	6.220	1.023 #	6.180	0.593 *	6.170	0.515	6.180	0.562	6.210	0.802 *
14	6.200	0.994	6.150	0.661 *	6.180	0.577	6.170	0.532	6.180	0.593 *	6.180	0.612
15	6.205	1.043	6.170	0.642	6.170	0.541	6.170	0.545	6.200	0.491 *	6.180	0.596
16	6.210	1.073	6.170	0.755 #	6.170	0.494	6.170	0.516	6.170	0.491	6.180	0.623
17	6.200	0.910 *	6.180	0.827	6.170	0.492	6.170	0.539	6.170	0.468	6.180	0.619
18	6.200	1.011	6.180	0.734	6.170	0.530 *	6.170	0.530 *	6.170	0.502	6.170	0.581
19	6.200	0.967	6.180	0.798	6.170	0.514	6.170	0.541	6.170	0.423	6.180	0.664
20	6.200	0.978	6.170	0.714	6.170	0.567	6.170	0.544	6.170	0.446	6.190	0.660 *
21	6.200	0.990	6.170	0.755 *	6.170	0.540	6.170	0.509	6.170	0.509	6.200	0.818
22	6.200	0.992	6.170	0.634	6.170	0.531	6.170	0.576	6.180	0.593 *	6.180	0.644
23	6.200	0.995	6.180	0.723	6.170	0.522	6.170	0.528	6.170	0.471	6.180	0.659
24	9.670	0.910 *	6.180	0.681	6.170	0.525	6.170	0.606	6.170	0.429	6.180	0.532
25	9.670	0.910 *	6.180	0.628	6.170	0.530 *	6.170	0.530 *	6.170	0.431	6.180	0.593
26	6.180	0.925	6.180	0.805 *	6.170	0.534	6.170	0.582	6.170	0.486	6.200	0.701
27	6.200	1.000	6.180	0.670	6.170	0.588	6.170	0.554	6.170	0.486	6.290	1.509 *
28	6.200	0.991	6.180	0.831 *	6.170	0.546	6.170	0.601	6.170	0.480	6.270	1.164
29	6.200	0.998	6.180	0.646			6.170	0.530 *	6.170	0.530 *	8.670	116.6 #
30	6.960	11.39	6.180	0.676			6.170	0.530 *	6.170	0.530 *	7.975	64.99
31	7.300	21.70 *	6.180	0.638			6.170	0.547			7.935	61.28
Ten-Daily Mean												
I Ten-Daily	6.901	6.790	6.745	10.26	6.180	0.626	6.170	0.531	6.170	0.527	6.170	0.559
II Ten-Daily	6.202	0.997	6.332	2.717	6.174	0.549	6.170	0.531	6.175	0.495	6.188	0.678
III Ten-Daily	6.998	3.801	6.178	0.699	6.170	0.539	6.170	0.554	6.171	0.495	6.751	22.68
Monthly												
Min.	6.170	0.907	6.150	0.628	6.170	0.492	6.170	0.440	6.170	0.423	6.170	0.467
Max.	9.670	21.70	7.290	21.82	6.180	0.674	6.170	0.606	6.200	0.593	8.670	116.6
Mean	6.710	3.86	6.411	4.433	6.175	0.574	6.170	0.539	6.172	0.505	6.382	8.447

Peak Computed Discharge = 501.0 cumecs on 27/08/2017 Corres. Water Level :10.31 m

Lowest Computed Discharge = 0.491 cumecs on 15/04/2018 Corres. Water Level :6.2 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

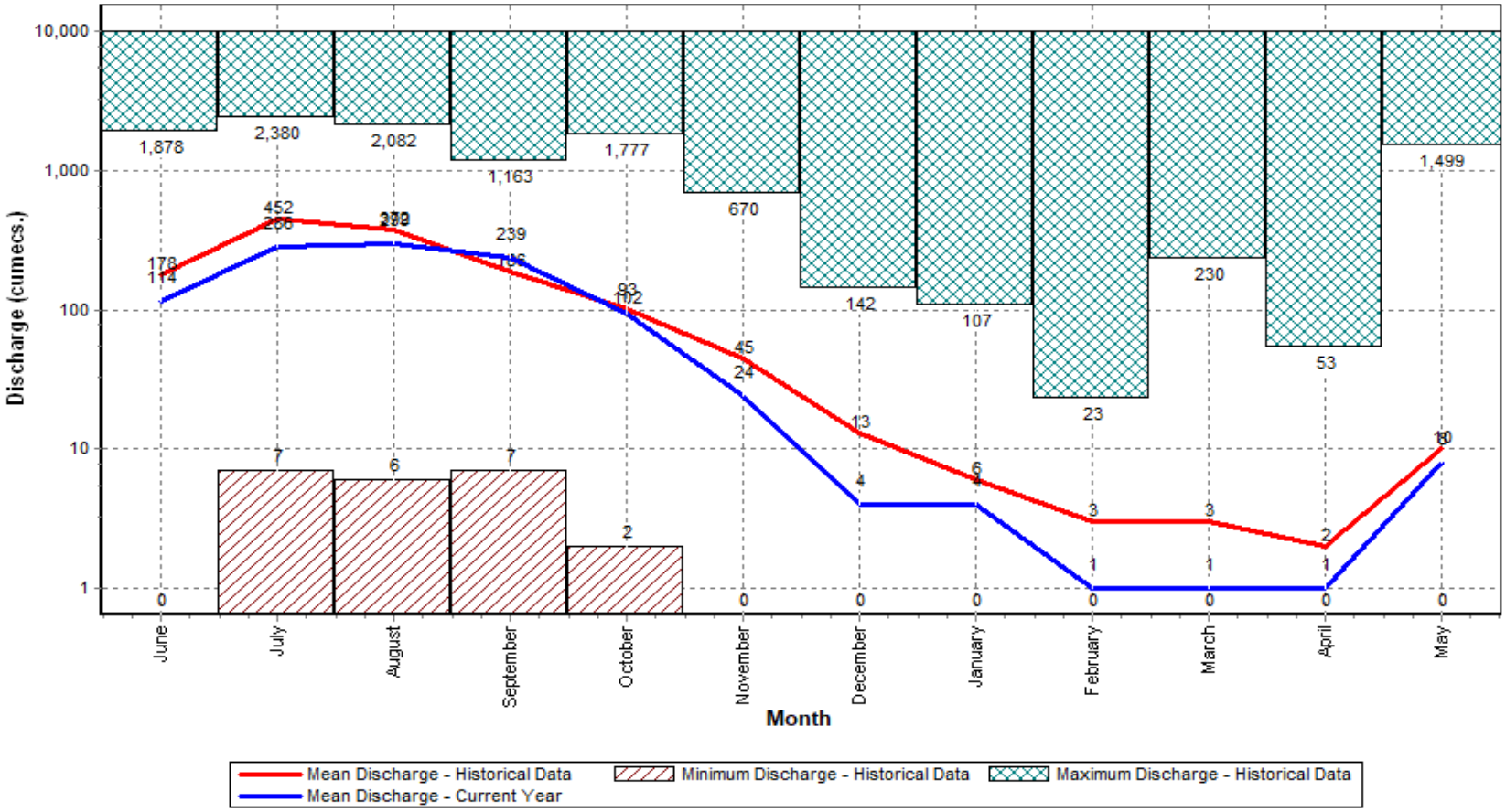
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : PERUMANNU (KA000K8) | **Data considered : 1986-2018** | **Division : SWR Division, Cochin**

Local River : Valapatnam | **Sub-Division : Chaliyar SD, Calicut**



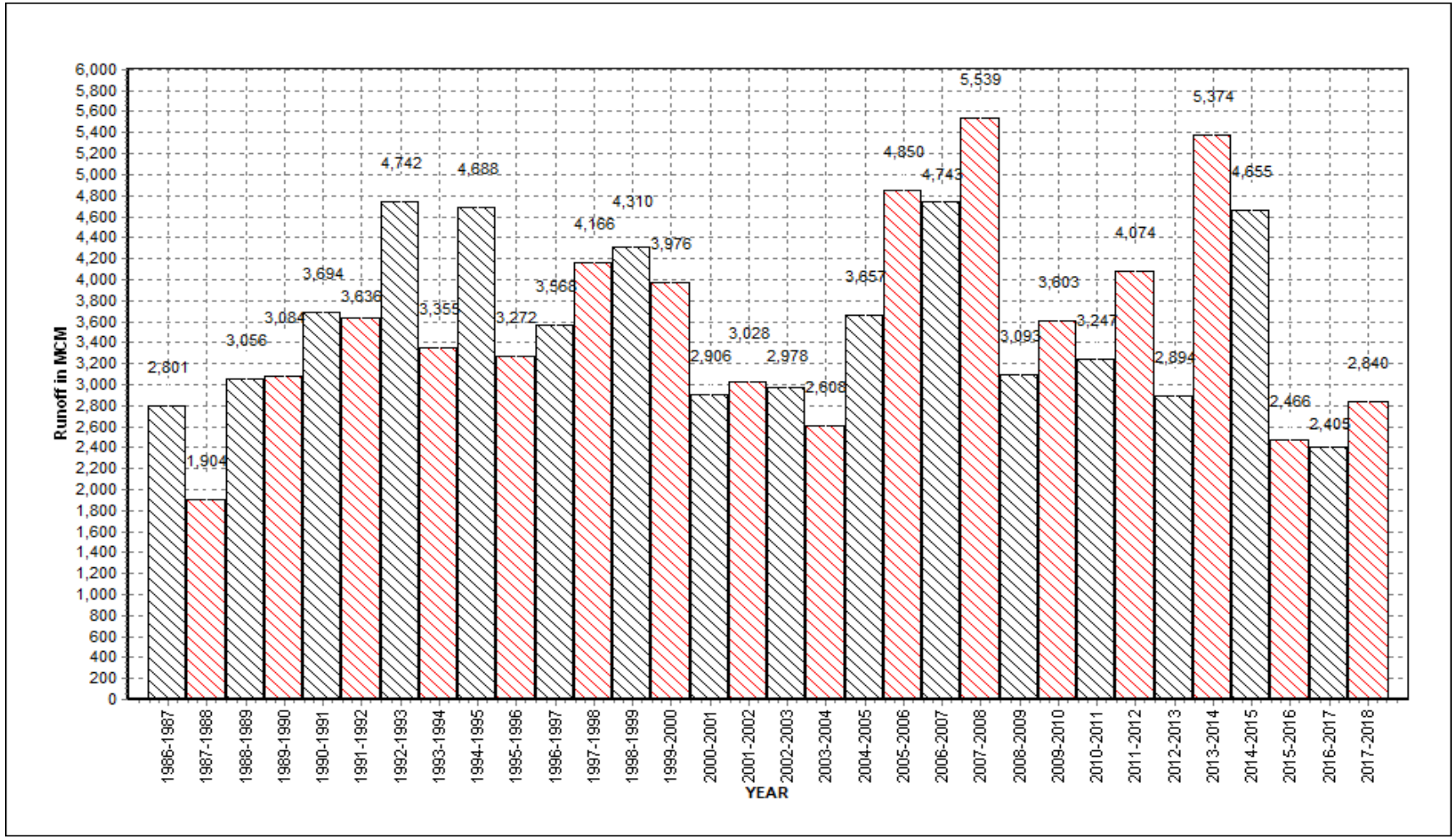
Annual Runoff Values for the period: 1986 - 2018

Station Name : PERUMANNU (KA000K8)

Local River : Valapatnam

Division : SWR Division, Cochin

Sub-Division : Chaliyar SD, Calicut



Note: Missing values have not been considered while arriving at Annual Runoff

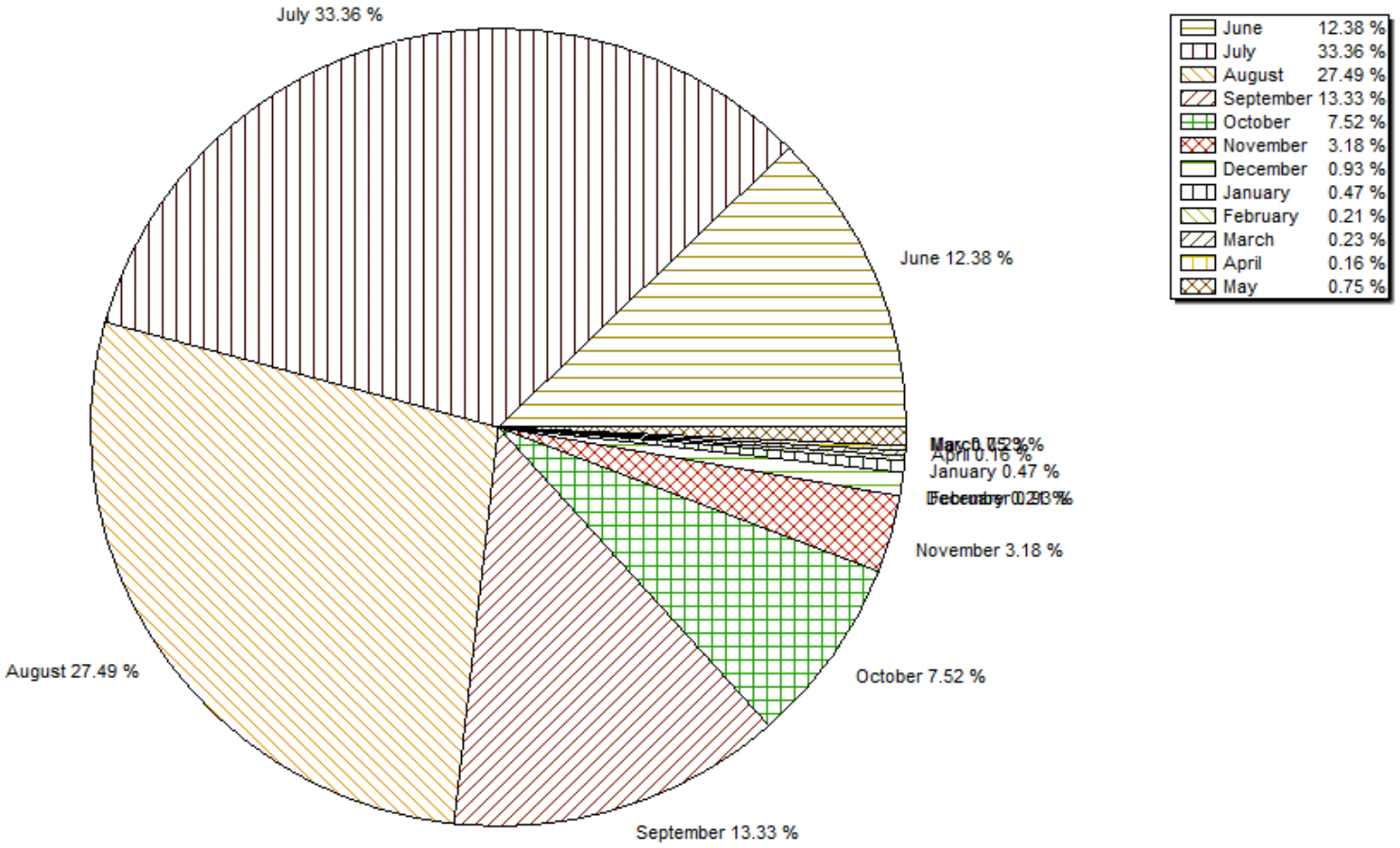
Monthly Average Runoff based on period : 1986-2017

Station Name : PERUMANNU (KA000K8)

Local River : Valapatnam

Division : SWR Division, Cochin

Sub-Division : Chaliyar SD, Calicut



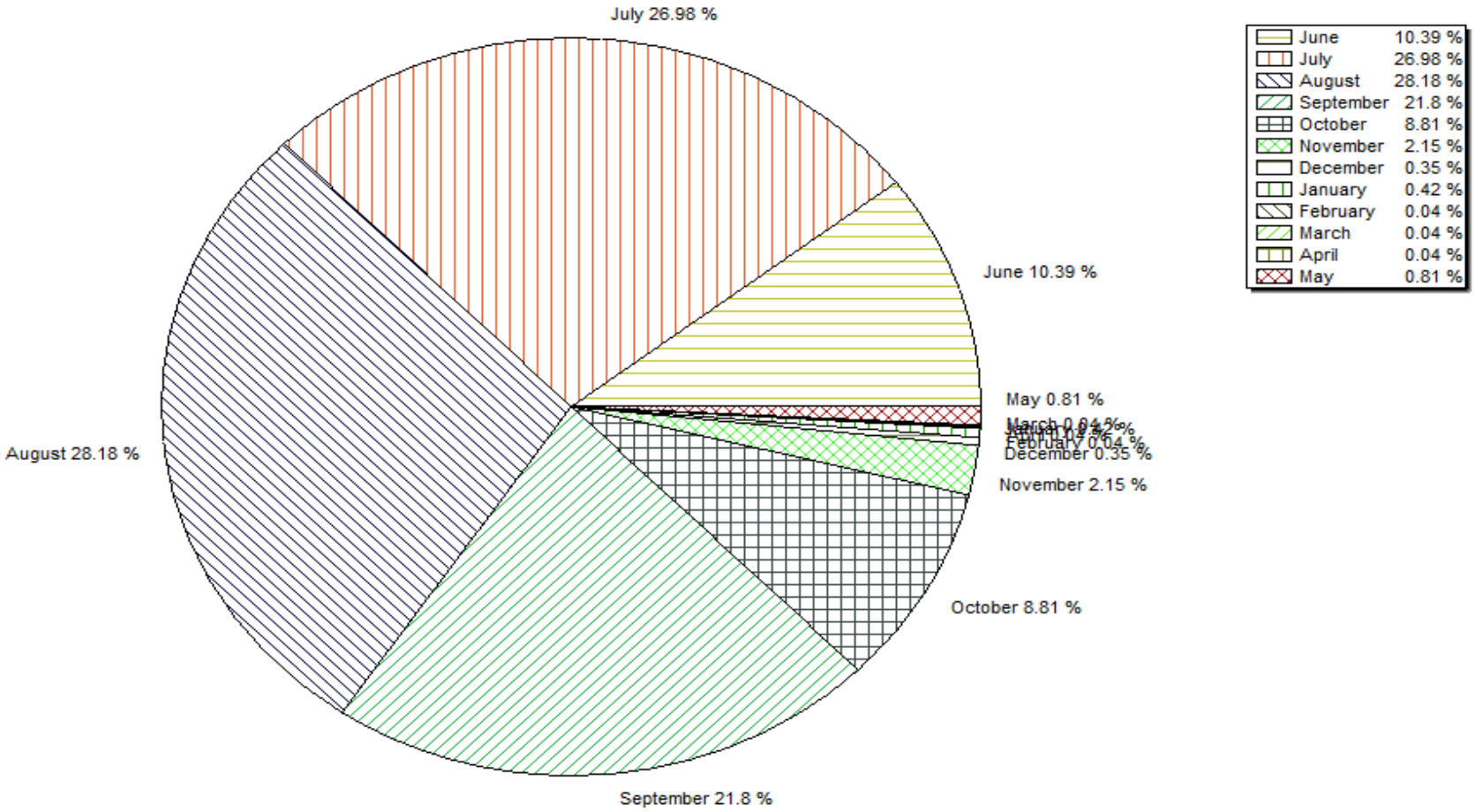
Monthly Runoff for the Year : 2017-2018

Station Name : PERUMANNU (KA000K8)

Local River : Valapatnam

Division : SWR Division, Cochin

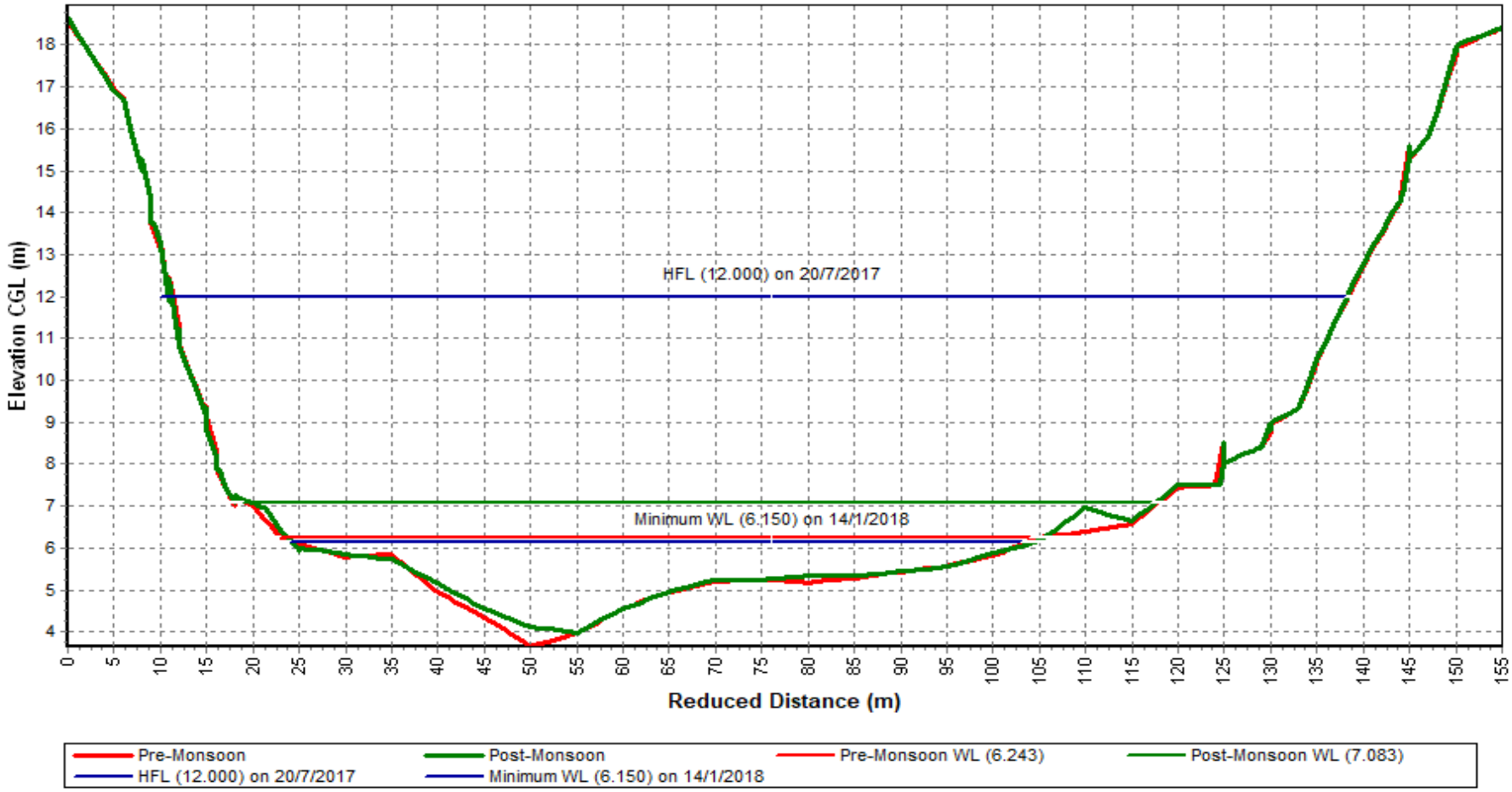
Sub-Division : Chaliyar SD, Calicut



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : PERUMANNU (KA000K8)
Local River : Valapatnam

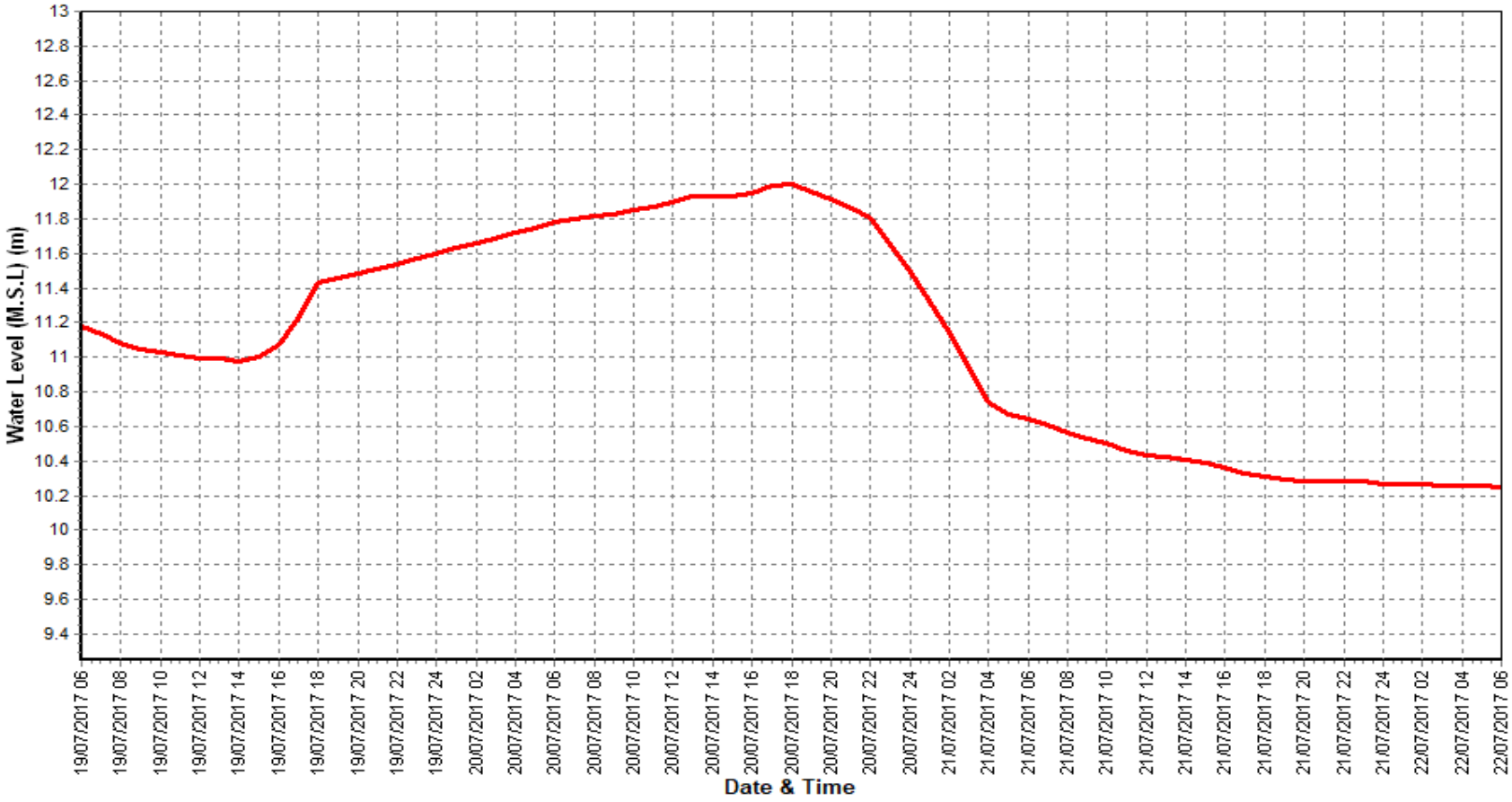
Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : PERUMANNU (KA000K8) **Division : SWR Division, Cochin**

Local River : Valapatnam **Sub-Division : Chaliyar SD, Calicut**

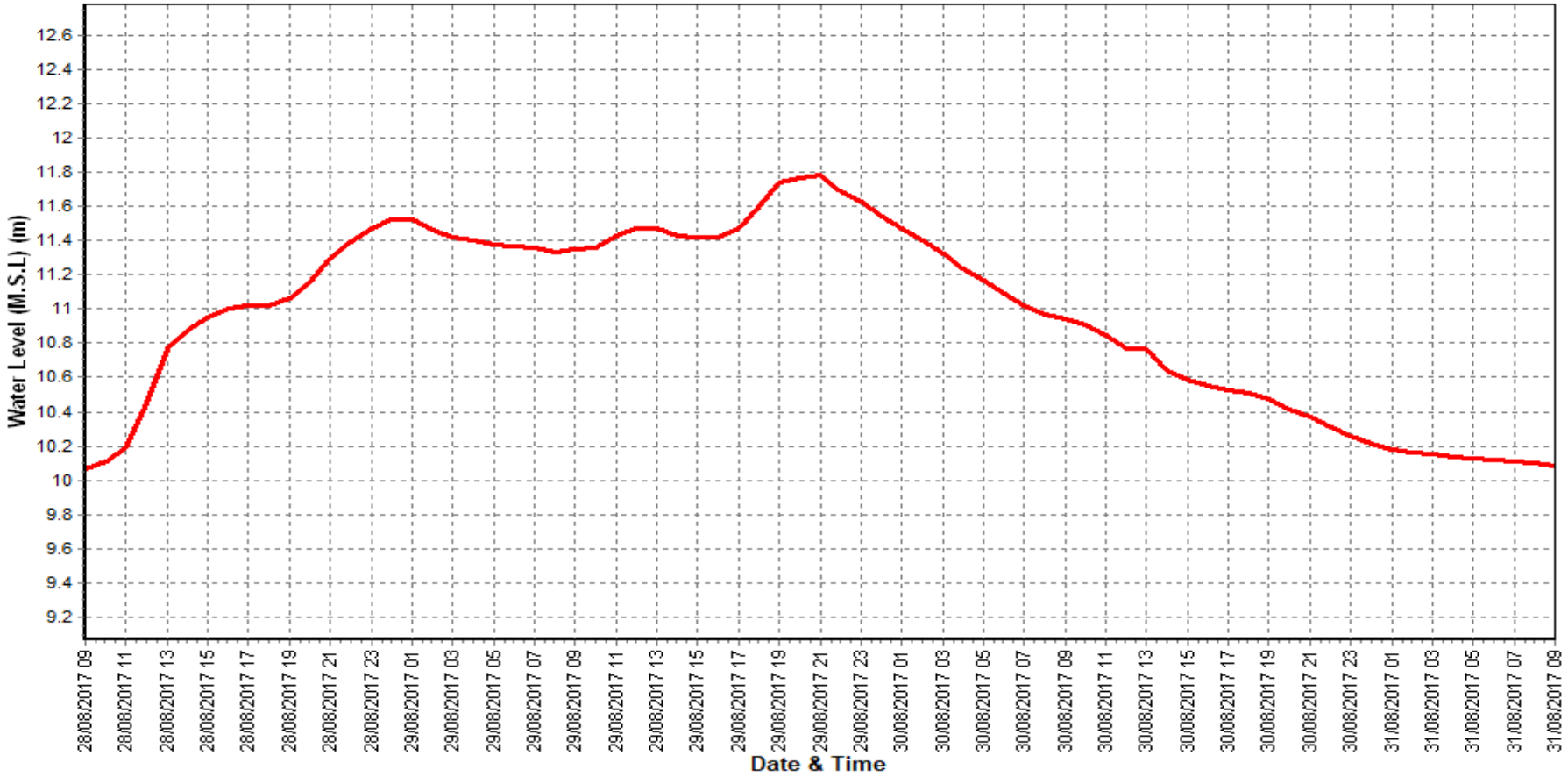


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : PERUMANNU (KA000K8) **Division : SWR Division, Cochin**

Local River : Valapatnam **Sub-Division : Chaliyar SD, Calicut**

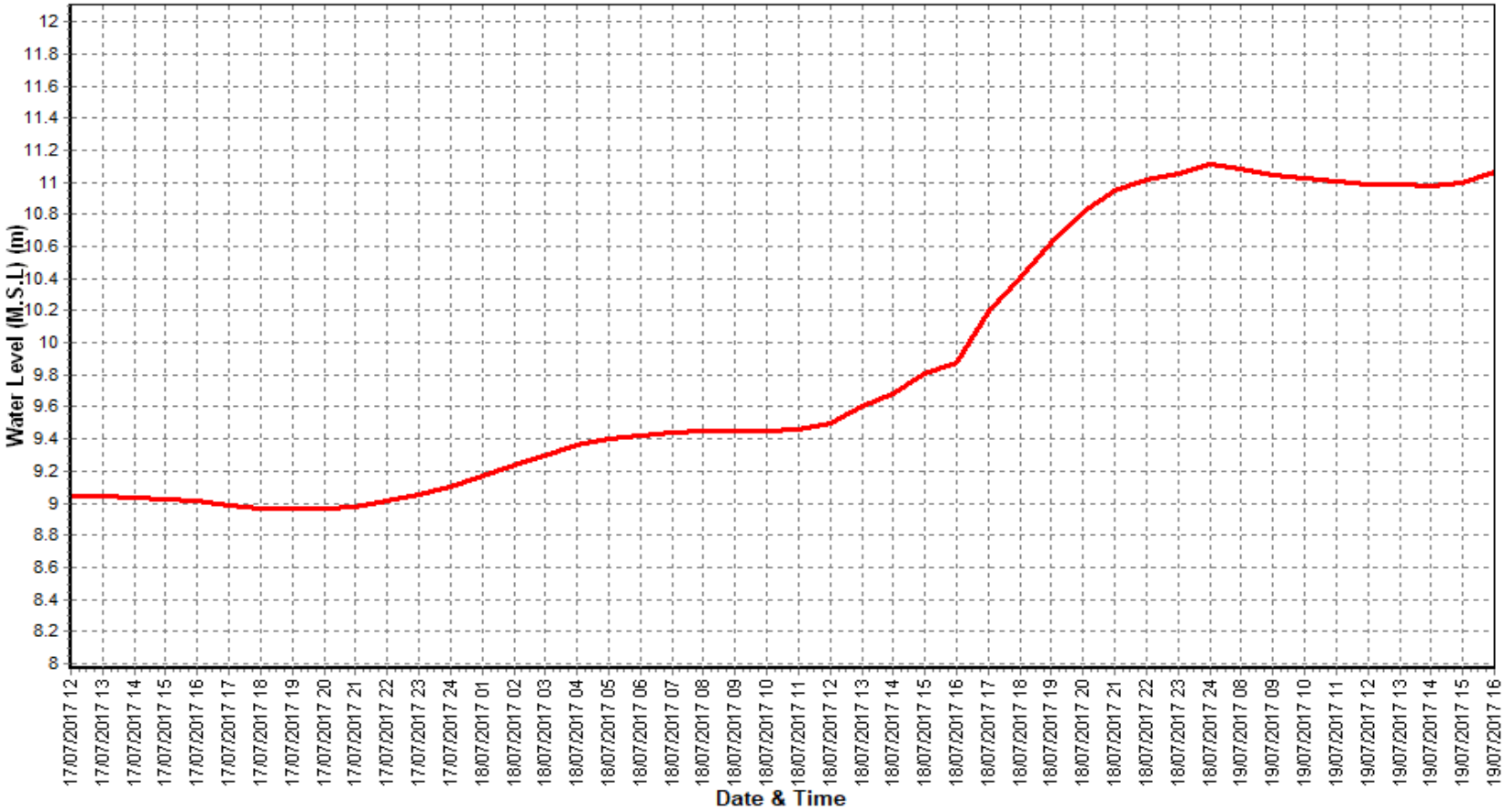


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : PERUMANNU (KA000K8) **Division : SWR Division, Cochin**

Local River : Valapatnam **Sub-Division : Chaliyar SD, Calicut**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	**: KUTTYADI**		**Code**	**: KK000N2**	
State	: Kerala		District		Kozhikode
Basin	: WFR South of Tapi		Independent River	:	Kuttyadi
Tributary	: -		Sub Tributary	:	-
Sub-Sub Tributary	: -		Local River	:	Kuttyadi
Division	: SWR Division, Kochi		Sub-Division	:	Chaliyar SD, Calicut
Drainage Area	: 238 Sq. Km.		Bank	:	Right
Latitude	: 11°39'03"		Longitude	:	75°45'30"
Zero of Gauge (m)	: 0.000 (m.s.l)		16-03-1996		
	Opening Date		Closing Date		
Gauge	: 16-03-1996				
Discharge	: 13-03-2000				
Sediment	: 01-06-2013				
Water Quality	: 01-10-2002				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2000-2001	476.5	6.930	27-08-2000	0.712	2.695	16-05-2001
2001-2002	403.9	6.800	08-07-2001	0.587	2.670	23-04-2002
2002-2003	292.3	6.830	17-08-2002	0.910	2.700	13-03-2003
2003-2004	159.8	5.540	21-06-2003	0.000	2.380	12-03-2004
2004-2005	341.2	5.445	04-08-2004	0.742	0.550	27-05-2005
2005-2006	480.9	5.810	07-07-2005	0.698	0.605	16-05-2006
2006-2007	280.7	4.310	30-06-2006	1.297	0.600	02-03-2007
2007-2008	757.4	7.180	18-07-2007	1.097	0.460	12-02-2008
2008-2009	273.0	4.360	13-08-2008	0.799	0.320	05-02-2009
2009-2010	957.8	7.790	18-07-2009	0.313	0.440	05-06-2009
2010-2011	267.8	4.120	30-07-2010	1.274	0.530	20-02-2011
2011-2012	300.8	4.250	18-06-2011	1.539	0.620	09-04-2012
2012-2013	231.8	3.800	07-08-2012	0.028	0.520	03-06-2012
2013-2014	470.6	5.360	20-06-2013	1.293	0.580	23-01-2014
2014-2015	431.6	5.270	06-08-2014	1.102	0.740	02-06-2014
2015-2016	432.4	5.220	28-06-2015	1.627	0.620	12-01-2016
2016-2017	191.4	3.310	09-07-2016	0.093	0.590	30-11-2016

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : KUTTYADI (KK000N2) **Division : SWR Division, Cochin**

Local River : Kuttyadi **Sub-Division : Chaliyar SD, Calicut**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	0.850	7.936 #	1.950	61.35	1.690	49.73	2.140	75.59 *	1.760	50.55 *	1.260	22.20
2	0.820	7.046 *	2.180	78.45 *	1.645	44.75	1.940	65.29	1.710	47.48 *	1.180	17.77
3	1.100	16.80 *	2.665	106.2	1.640	39.58	2.000	65.90 *	1.615	39.40	1.180	17.33
4	1.050	14.83 *	2.310	86.92	1.990	69.98	1.830	54.83 *	1.710	45.97	1.190	20.56 *
5	0.790	6.196 #	2.065	70.83	2.975	139.2	2.095	72.06	1.730	50.10	1.260	23.69 *
6	1.345	24.44	2.165	77.70	2.090	72.07 *	2.145	74.45	1.840	58.11	1.190	19.26
7	1.355	23.99	2.080	73.42	2.485	100.4	1.935	65.44	1.800	53.23	1.275	21.03
8	1.240	18.60	2.035	72.60	2.330	96.22	1.825	57.28	1.680	45.71 *	1.300	24.09
9	1.245	19.46	1.980	64.56 *	2.385	98.46	1.905	63.20	1.895	59.42	1.260	20.79
10	1.310	24.16	1.815	53.81	2.140	78.46	1.950	62.57 *	1.720	48.67	1.260	20.22
11	2.230	82.08 *	2.035	73.08	1.920	66.27	1.830	57.39	2.290	89.95	1.285	23.08
12	2.010	65.41	2.070	73.66	2.170	79.78	1.755	52.46	1.845	56.32	1.240	22.78 *
13	1.805	53.93	1.830	55.96	1.980	64.56 *	1.760	51.88	1.800	52.37	1.115	13.96
14	1.915	57.58	2.000	66.52	1.780	56.00	2.065	69.22	2.180	72.87	1.130	15.21
15	1.650	40.22	2.040	69.64	1.800	52.96 *	2.120	72.21	1.960	62.23	1.005	11.17
16	1.600	41.03	1.930	61.25 *	1.740	53.21	1.945	64.37	1.810	52.64	0.710	4.275
17	1.630	41.55	1.790	54.37	1.740	51.35	3.650	208.8 *	1.760	47.15	0.685	3.992
18	1.540	37.77 *	2.135	70.21	1.890	61.15	3.575	206.3	1.960	63.23 *	0.680	4.045
19	1.540	38.44	2.650	110.3	2.010	69.57	2.830	128.7	1.680	48.62	0.660	3.018 *
20	1.475	33.20	3.375	160.3	2.010	66.58 *	2.895	141.6	1.640	47.38	0.680	3.834
21	1.565	36.56	2.615	112.2	2.395	97.28	2.515	109.9	1.670	47.76	0.670	3.684
22	1.600	40.84	2.665	114.0	3.085	163.1	2.265	87.75	1.630	42.81 *	0.665	3.484
23	1.535	37.34	2.310	88.01 *	2.210	83.69	2.070	71.92	1.490	34.81	0.655	3.215
24	1.760	50.20	2.085	76.89	2.230	84.48	1.990	65.23 *	1.370	27.30	0.640	3.071
25	1.790	52.34 *	2.030	71.58	1.975	67.79	1.800	54.38	1.435	29.74	0.640	3.048
26	2.280	85.77 *	1.930	65.48	1.830	58.94	1.790	53.05	1.520	38.18	0.640	2.608 *
27	2.560	97.35	1.860	62.66	2.310	88.01 *	1.955	61.15	1.485	36.29	0.680	3.856
28	2.530	110.4	1.965	68.62	3.175	163.2	1.965	64.14	1.460	34.83	0.665	2.928
29	2.135	76.86	1.815	57.50	3.490	195.8	1.840	55.46 *	1.430	31.95 *	0.665	3.032
30	1.930	59.61	1.730	48.68 *	2.945	141.1	1.870	57.37 *	1.300	22.98	0.675	2.583
31			1.720	51.43	2.415	98.00			1.280	23.63		
Ten-Daily Mean												
I Ten-Daily	1.110	16.35	2.125	74.59	2.137	78.89	1.976	65.66	1.746	49.86	1.236	20.69
II Ten-Daily	1.740	49.12	2.185	79.54	1.904	62.14	2.443	105.3	1.892	59.28	0.919	10.54
III Ten-Daily	1.968	64.72	2.066	74.28	2.551	112.8	2.006	68.03	1.461	33.66	0.659	3.151
Monthly												
Min.	0.790	6.196	1.720	48.68	1.640	39.58	1.755	51.88	1.280	22.98	0.640	2.583
Max.	2.560	110.4	3.375	160.3	3.490	195.8	3.650	208.8	2.290	89.95	1.300	24.09
Mean	1.606	43.4	2.123	76.07	2.209	85.54	2.142	79.66	1.692	47.15	0.938	11.46

Annual Runoff in MCM = 993 Annual Runoff in mm = 4172

Peak Observed Discharge = 206.3 cumecs on 18/09/2017 Corres. Water Level :3.575 m

Lowest Observed Discharge = 1.459 cumecs on 08/01/2018 Corres. Water Level :0.55 m

Q: Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : KUTTYADI (KK000N2) **Division : SWR Division, Cochin**

Local River : Kuttyadi **Sub-Division : Chaliyar SD, Calicut**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	0.610	2.579	0.550	1.846	1.330	24.82	1.030	12.64	0.620	2.749 *	0.630	2.927
2	0.960	10.01 *	0.530	1.747	0.960	8.772	1.110	15.44	0.620	2.833	0.670	3.491
3	0.910	8.596 *	0.530	1.599	0.960	8.785	0.990	11.76	0.620	2.900	0.670	3.515
4	0.910	8.780	0.530	1.518	0.860	7.311 *	0.900	8.330 *	0.620	2.866	0.650	3.150
5	0.700	3.972	0.530	1.526	0.850	6.968	0.800	6.176	0.630	2.842	0.640	3.157
6	0.700	3.765	0.530	1.626	0.850	7.053	0.780	5.138	0.620	2.906	0.630	2.889 *
7	0.680	3.647	0.520	1.564 *	0.850	6.874	0.780	5.231	0.630	3.046	0.620	2.830
8	0.680	3.475	0.550	1.459	0.850	7.129	0.800	5.916	0.630	2.889 *	0.640	3.033
9	1.090	14.32	0.900	8.258	0.840	6.671	0.850	7.049	0.630	2.926	0.610	2.805
10	0.640	3.033 *	0.990	9.636	0.920	8.554	0.850	7.112	0.630	2.938	0.630	2.962
11	0.660	2.421	0.900	8.309	0.920	8.868 *	0.690	3.817 *	0.630	2.826	0.630	3.006
12	0.660	2.447	0.700	3.438	1.060	12.72	0.600	2.743	0.620	2.921	0.650	3.281
13	0.990	11.67	0.680	3.381	1.050	12.86 *	0.600	2.596	0.620	2.882	0.630	2.889 *
14	1.200	19.32	0.690	3.817 *	0.920	9.198	0.600	2.673	0.620	2.749 *	0.670	3.586
15	1.300	22.76	0.680	3.661	0.900	8.788	0.600	2.677	0.620	2.749 *	0.630	2.860
16	1.280	23.23	0.660	3.441	0.730	4.171	0.600	2.701	0.620	2.875	0.650	3.245
17	1.270	21.69 *	0.660	3.490	0.650	3.115	0.600	2.690	0.620	3.004	0.670	3.774
18	1.250	21.85	0.660	3.386	0.410	0.686 *	0.600	2.481 *	0.620	2.851	0.680	4.096
19	1.240	21.94	0.660	3.330	0.690	3.614	0.600	2.837	0.630	2.943	0.640	3.149
20	0.600	2.375	0.690	3.511	0.690	3.700	0.600	2.581	0.630	2.908	0.640	3.033 *
21	0.600	2.420	0.700	3.987 *	0.730	4.472	0.600	2.669	0.630	3.084	0.630	3.099
22	0.590	2.342	0.690	3.937	0.750	4.998	0.600	2.751	0.630	2.889 *	0.630	2.919
23	0.590	2.415	0.690	3.804	0.880	7.357	0.610	2.773	0.650	3.261	0.630	2.820
24	0.560	1.992 *	0.860	7.820	0.850	7.405	0.610	2.730	0.650	3.213	0.640	3.048
25	0.560	1.992 *	0.880	8.083	0.810	2.613 *	0.610	2.613 *	0.630	2.782	0.700	3.907
26	0.590	2.035	0.890	8.068 *	0.710	4.602	0.600	2.532	0.620	2.850	0.800	5.872
27	0.590	2.007	0.900	8.444	0.780	5.677	0.600	2.459	0.630	2.984	0.870	7.558 *
28	0.590	2.010	0.900	8.330 *	0.830	6.237	0.600	2.550	0.630	3.000	0.930	8.890
29	0.600	2.245	0.860	6.936			0.620	2.749 *	0.630	2.889 *	0.710	4.466
30	0.660	3.334 #	0.860	6.861			0.620	2.749 *	0.630	2.889 *	1.515	33.65
31	0.650	3.182 *	1.350	25.36			0.620	2.852			0.990	11.20
Ten-Daily Mean												
I Ten-Daily	0.788	6.218	0.616	3.078	0.927	9.294	0.889	8.479	0.625	2.889	0.639	3.076
II Ten-Daily	1.045	14.97	0.698	3.976	0.802	6.772	0.609	2.780	0.623	2.871	0.649	3.292
III Ten-Daily	0.598	2.361	0.871	8.330	0.793	5.420	0.608	2.675	0.633	2.984	0.822	7.948
Monthly												
Min.	0.560	1.992	0.520	1.459	0.410	0.686	0.600	2.459	0.620	2.749	0.610	2.805
Max.	1.300	23.23	1.350	25.36	1.330	24.82	1.110	15.44	0.650	3.261	1.515	33.65
Mean	0.804	7.673	0.733	5.231	0.844	7.286	0.699	4.581	0.627	2.915	0.707	4.874

Peak Computed Discharge = 208.8 cumecs on 17/09/2017 **Corres. Water Level :3.65 m**

Lowest Computed Discharge = 0.686 cumecs on 18/02/2018 **Corres. Water Level :0.41 m**

Q: Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

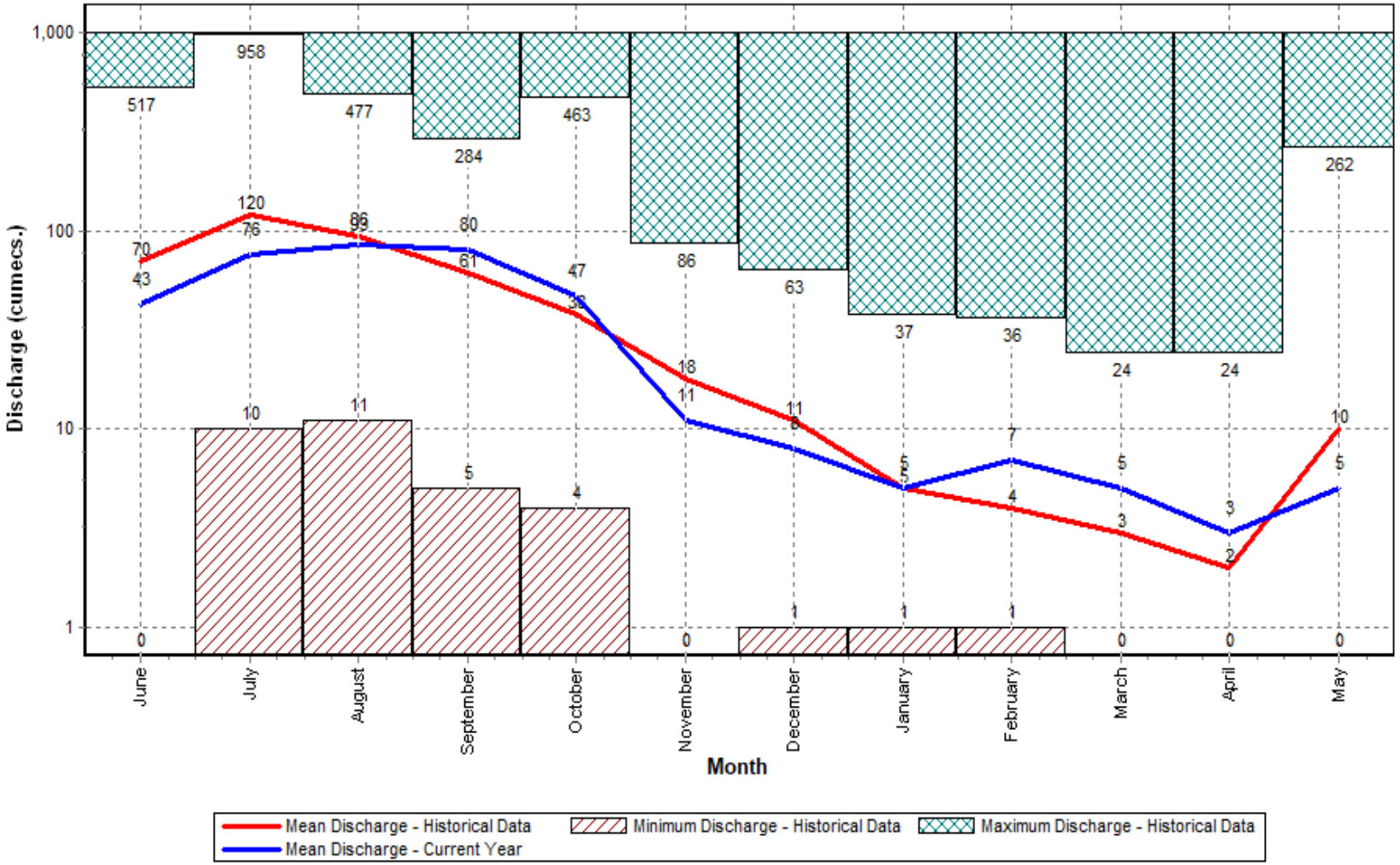
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : KUTTYADI (KK000N2) | **Data considered : 2000-2018** | **Division : SWR Division, Cochin**

Local River : Kuttyadi | **Sub-Division : Chaliyar SD, Calicut**


Discharge (cumecs.)
1,000
100
10
1
517
958
477
284
463
86
63
37
36
24
24
262
120
76
99
80
61
47
38
18
11
11
8
5
5
4
7
5
5
4
3
3
2
10
10
11
5
4
1
1
1
0
0
0

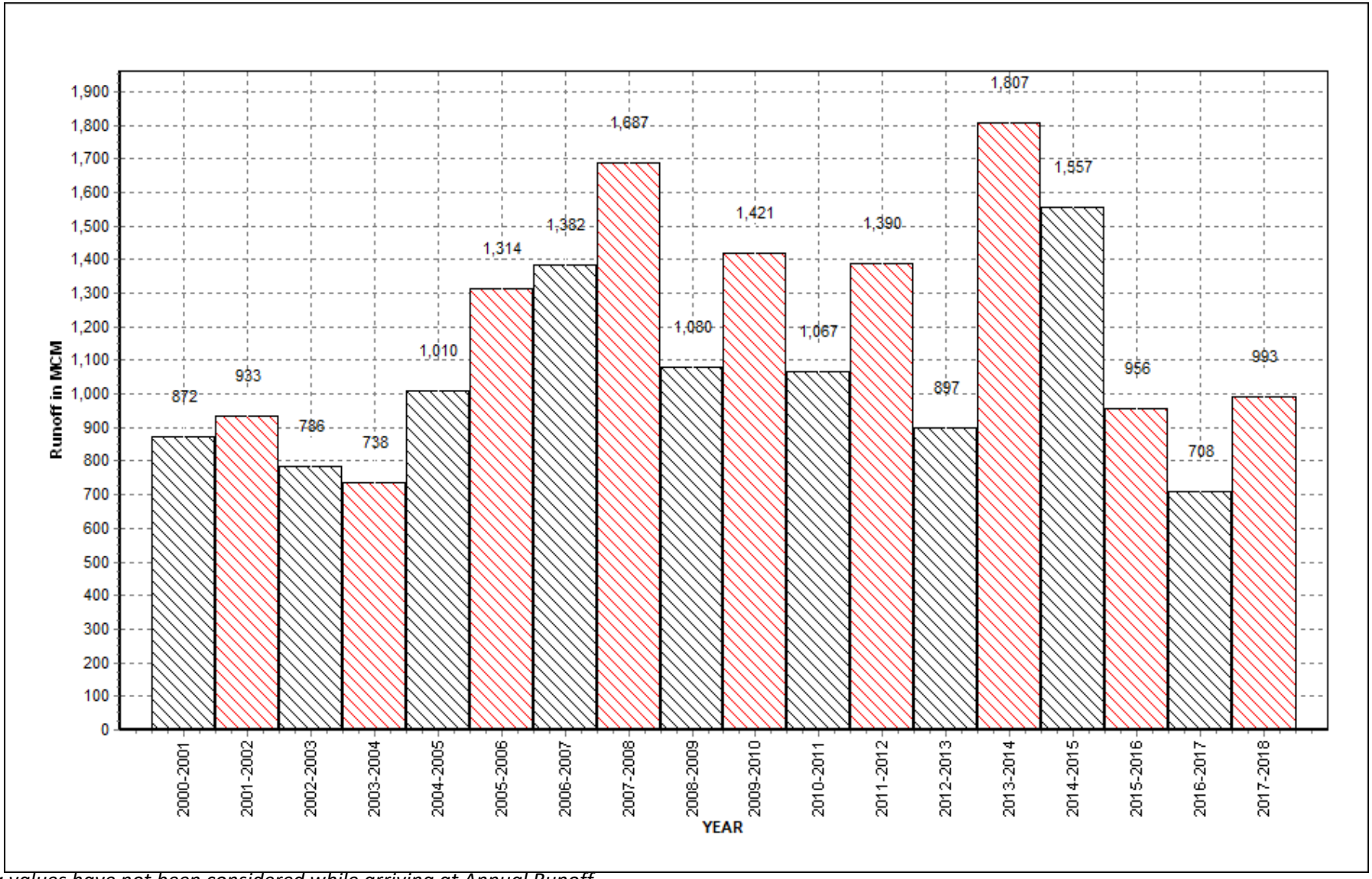
Annual Runoff Values for the period: 2000 - 2018

Station Name : KUTTYADI (KK000N2)

Local River : Kuttyadi

Division : SWR Division, Cochin

Sub-Division : Chaliyar SD, Calicut

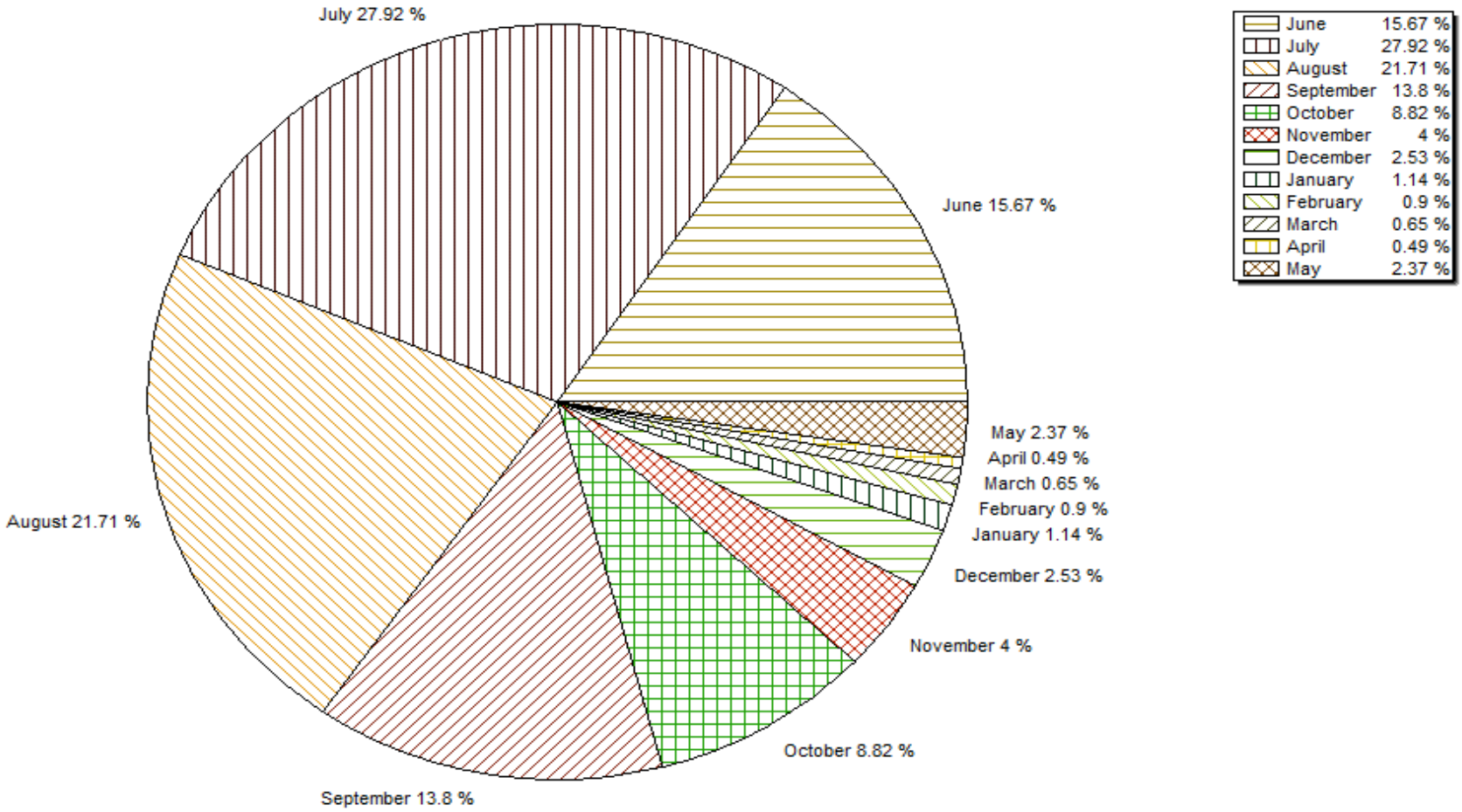


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 2000-2017

Station Name : KUTTYADI (KK000N2)
Local River : Kuttyadi

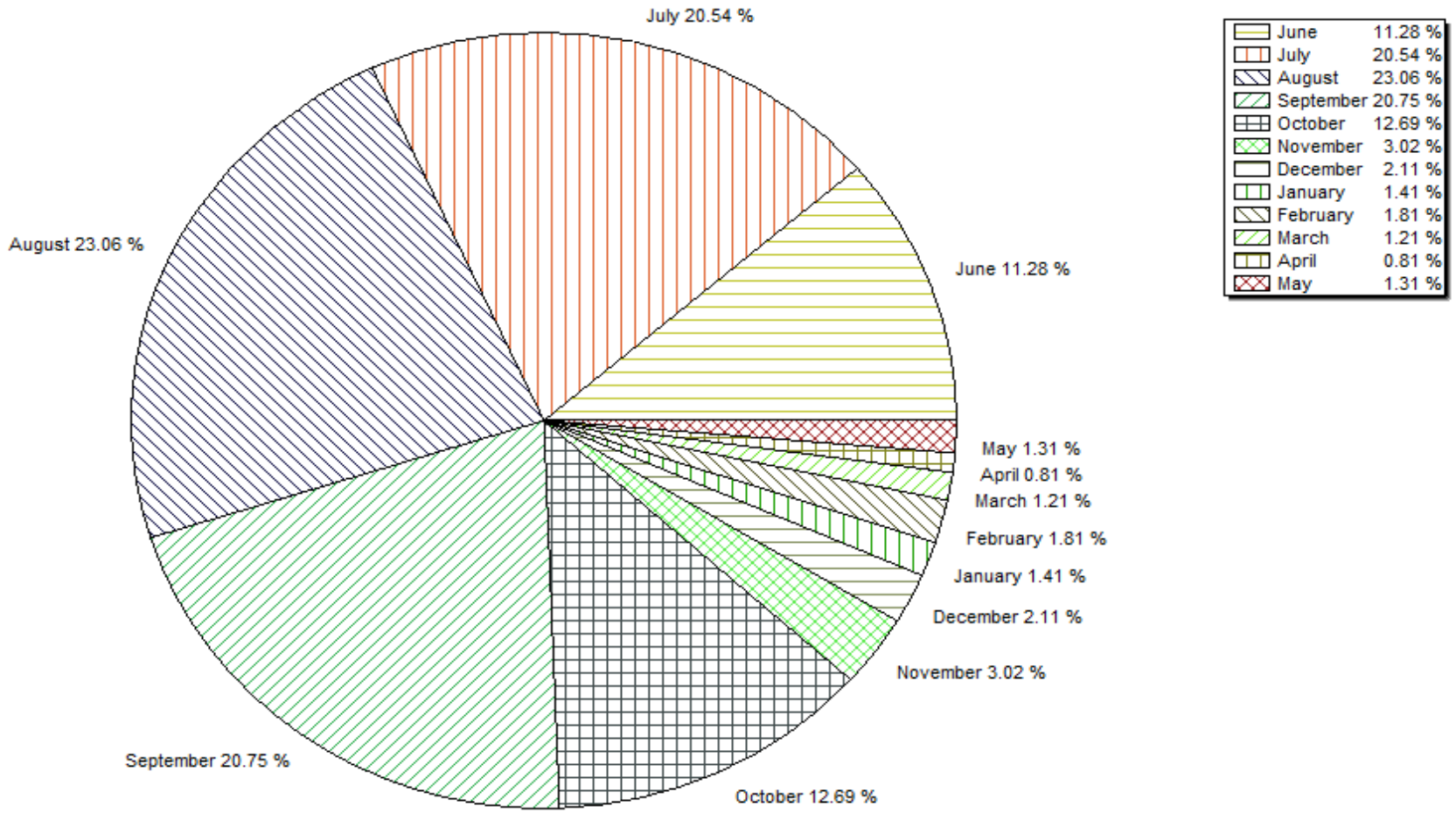
Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



Monthly Runoff for the Year : 2017-2018

Station Name : KUTTYADI (KK000N2)
Local River : Kuttyadi

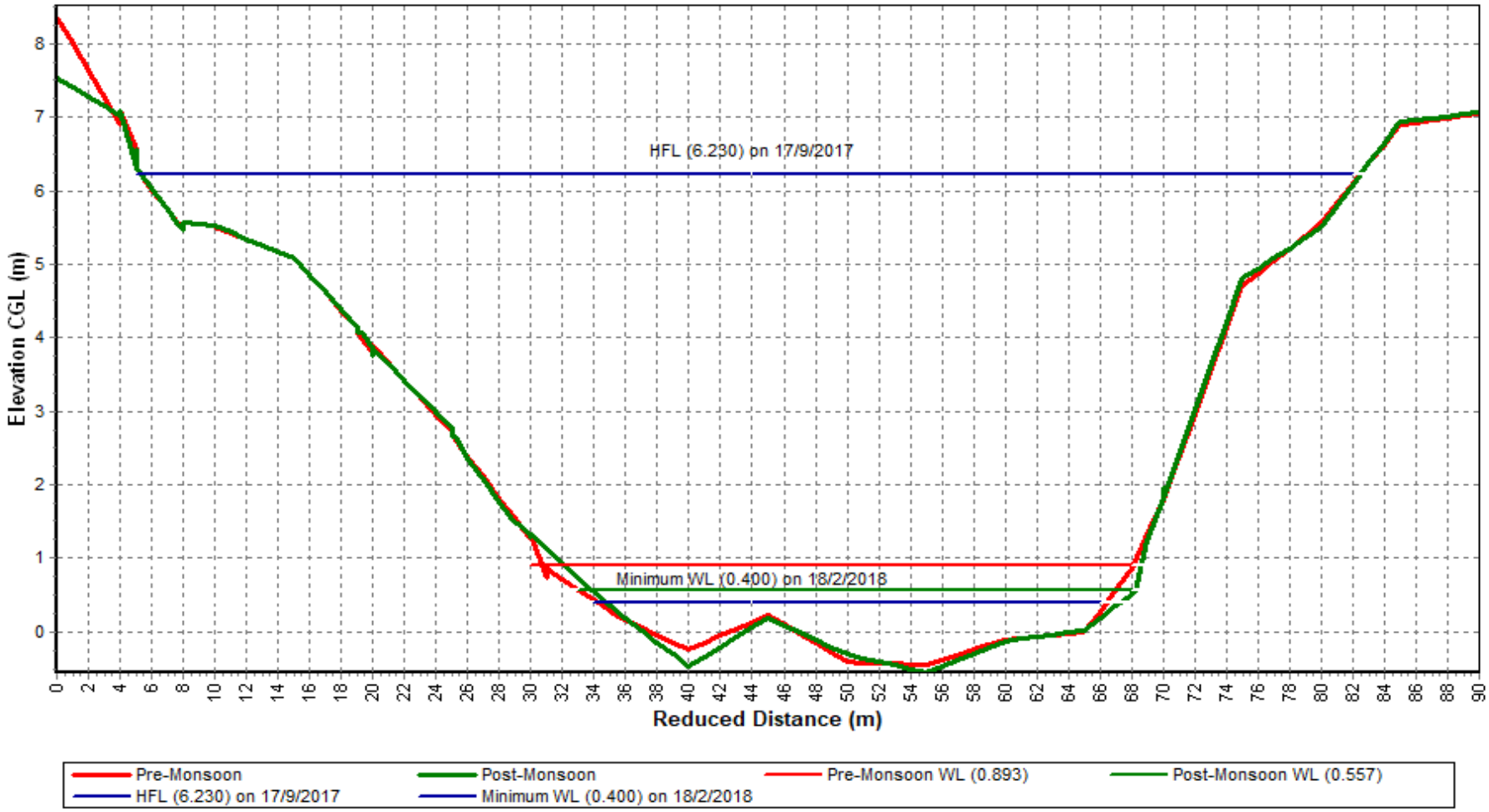
Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : KUTTYADI (KK000N2) **Division : SWR Division, Cochin**

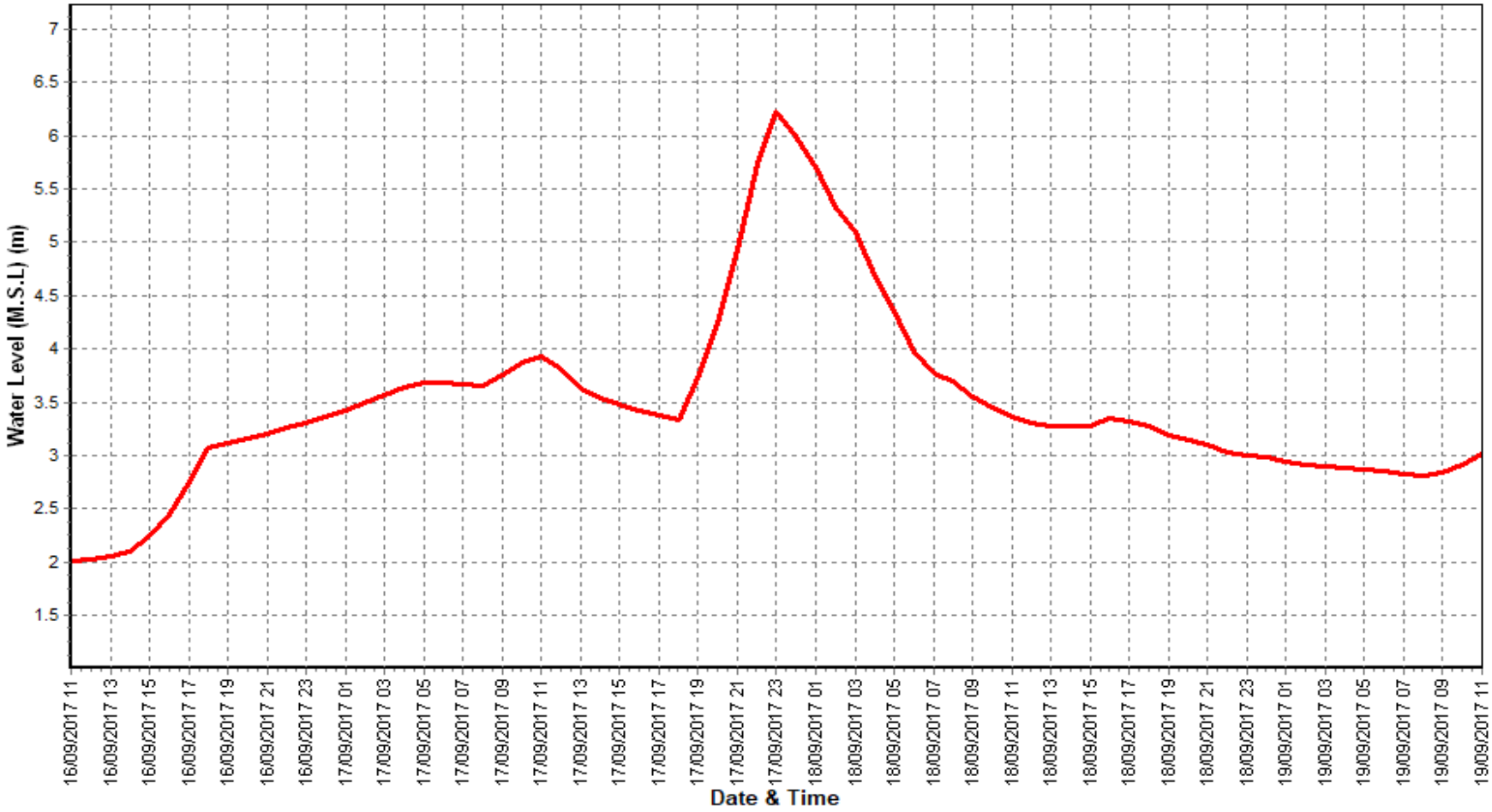
Local River : Kuttyadi **Sub-Division : Chaliyar SD, Calicut**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : KUTTYADI (KK000N2) **Division : SWR Division, Cochin**

Local River : Kuttyadi **Sub-Division : Chaliyar SD, Calicut**

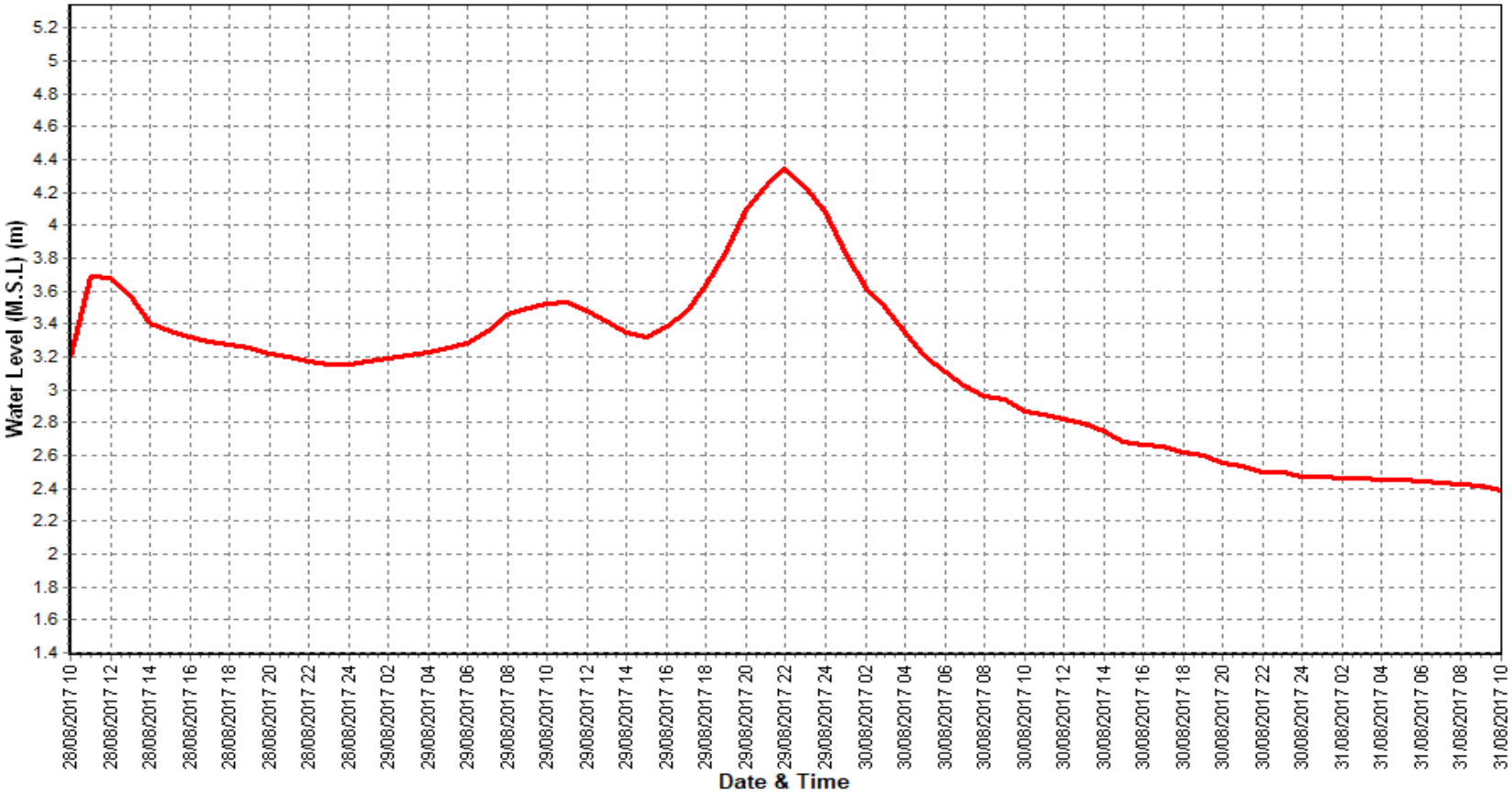


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : KUTTYADI (KK000N2) **Division : SWR Division, Cochin**

Local River : Kuttyadi **Sub-Division : Chaliyar SD, Calicut**

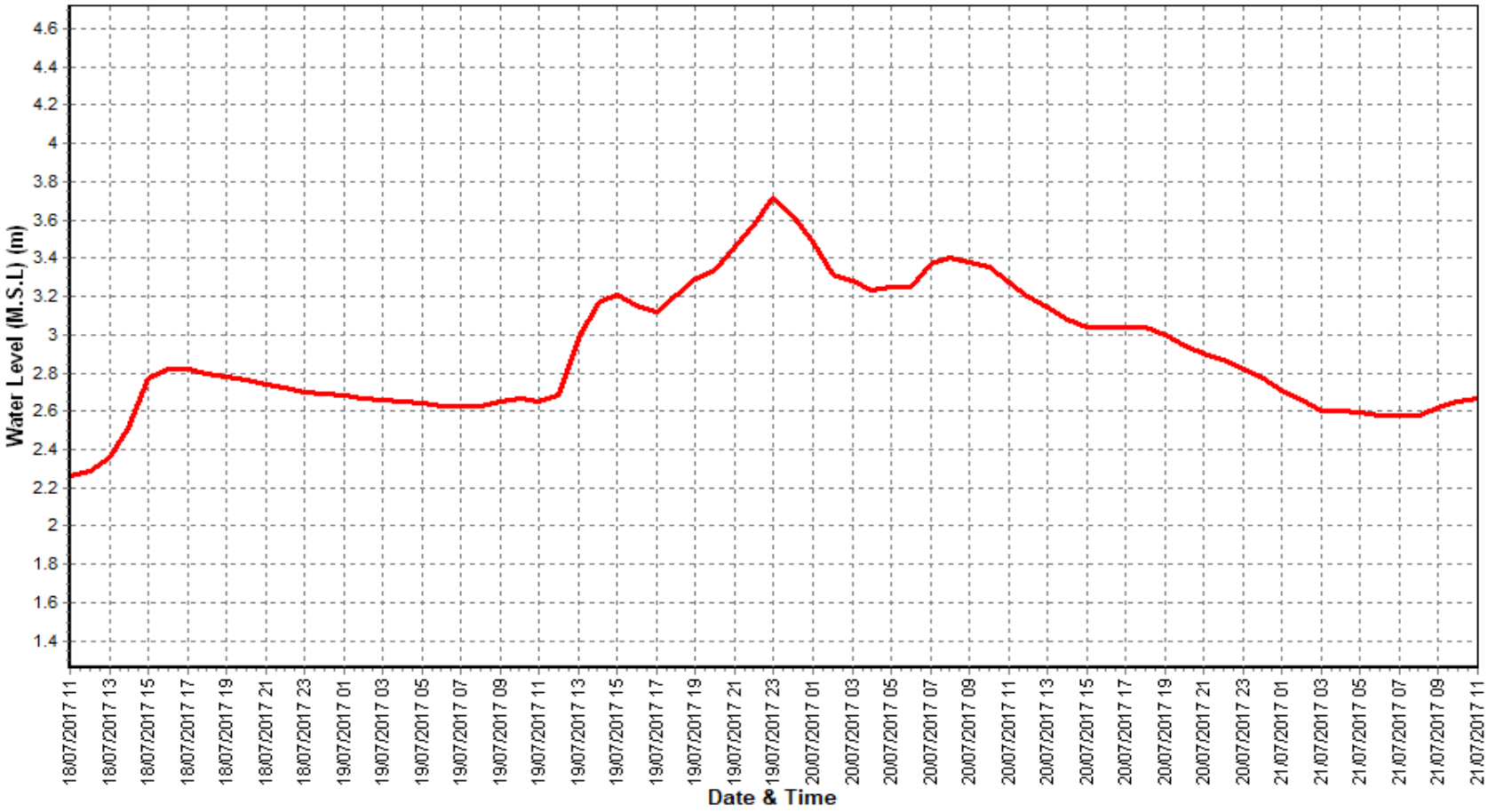


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : KUTTYADI (KK000N2) **Division : SWR Division, Cochin**

Local River : Kuttyadi **Sub-Division : Chaliyar SD, Calicut**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	:	**KUNIYIL**	**Code**	:	**KB000J3**
State	:	Kerala	District		Malappuram
Basin	:	WFR South of Tapi	Independent River	:	Chaliyar
Tributary	:	-	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Chaliyar
Division	:	SWR Division, Kochi	Sub-Division	:	Chaliyar SD, Calicut
Drainage Area	:	1876 Sq. Km.	Bank	:	Right
Latitude	:	11°14'22"	Longitude	:	76°01'24"
Zero of Gauge (m)	:	3.300 (Arb.) 0.000 (m.s.l)	01-06-1978 01-06-1984	-	31-05-1984
		Opening Date	Closing Date		
Gauge	:	01-06-1978			
Discharge	:	04-01-1979			
Sediment	:	21-01-1979			
Water Quality	:	15-01-1979			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1981-1982	2141	12.530	18-08-1981	1.800	4.675	22-04-1982
1982-1983	1560	11.885	21-07-1982	0.200	4.520	01-05-1983
1983-1984	1635	11.935	22-07-1983	1.300	4.590	06-06-1983
1984-1985	2162	8.940	17-06-1984	1.100	0.610	11-05-1985
1985-1986	2073	8.610	26-06-1985	0.300	0.550	19-04-1986
1986-1987	1485	7.248	08-08-1986	0.200	0.505	26-04-1987
1987-1988	674.2	4.690	26-08-1987	1.250	0.455	31-03-1988
1988-1989	1779	7.990	20-07-1988	0.400	0.475	16-04-1989
1989-1990	2100	9.100	24-07-1989	0.441	0.490	30-04-1990
1990-1991	1056	5.685	17-08-1990	0.300	0.295	07-04-1991
1991-1992	1664	7.886	28-07-1991	0.026	0.537	01-06-1991
1992-1993	2499	9.147	28-07-1992	2.138	0.585	16-05-1993
1993-1994	1354	5.902	01-08-1993	2.946	0.383	08-03-1994
1994-1995	3086	10.380	14-07-1994	0.511	0.455	31-03-1995
1995-1996	1350	6.678	01-09-1995	0.000	0.460	29-02-1996
1996-1997	1336	6.260	20-06-1996	0.000	0.365	02-06-1996
1997-1998	2193	8.820	11-07-1997	0.000	0.210	22-03-1998
1998-1999	1600	7.430	29-06-1998	0.000	0.120	01-03-1999

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1999-2000	1533	7.210	18-07-1999	0.000	0.080	01-02-2000
2000-2001	1412	6.490	27-08-2000	0.000	0.770	01-06-2000
2001-2002	1359	6.300	08-07-2001	6.256	0.450	04-02-2002
2002-2003	1054	5.200	18-08-2002	0.000	1.040	01-12-2002
2003-2004	569.4	3.610	17-07-2003	0.000	1.160	02-01-2004
2004-2005	2370	7.265	05-08-2004	0.000	1.295	07-12-2004
2005-2006	2254	6.635	02-08-2005	0.000	1.980	02-02-2006
2006-2007	1631	6.260	01-06-2006	0.000	1.290	02-12-2006
2007-2008	3256	8.880	17-07-2007	0.000	1.380	01-06-2007
2008-2009	1482	5.605	28-07-2008	0.000	1.890	22-11-2009
2009-2010	2730	8.250	16-07-2009	0.000	2.220	01-06-2009
2010-2011	992.5	4.580	30-07-2010	0.000	2.270	01-06-2010
2011-2012	1496	5.400	19-06-2011	0.000	1.780	15-12-2011
2012-2013	1136	4.840	07-08-2012	0.000	2.250	01-06-2012
2013-2014	2251	6.755	02-08-2013	0.000	1.880	19-12-2013
2014-2015	1931	6.370	24-07-2014	0.000	2.270	01-06-2014
2015-2016	1539	5.125	23-06-2015	0.000	2.140	01-06-2015
2016-2017	815.8	4.075	29-06-2016	0.000	2.370	26-01-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : KUNIYIL (KB000J3) **Division : SWR Division, Cochin**

Local River : Chaliyar **Sub-Division : Chaliyar SD, Calicut**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	2.160	0.000	1.945	137.2	1.740	121.8	2.270	256.0 #	2.000	149.5 *	2.080	57.37 #
2	2.240	0.000	2.410	220.2 *	2.105	125.2	2.730	315.1	2.200	149.5 *	2.110	59.40 #
3	2.480	0.000	2.410	222.0	1.915	115.2	2.410	287.4 *	2.055	193.8	2.090	56.51
4	2.540	0.000	2.230	177.9	2.260	135.4	2.000	201.0 *	2.095	196.6	2.060	56.03 *
5	2.260	0.000	2.040	118.0	2.640	211.5	2.220	284.2	1.900	115.8 #	2.000	52.12 *
6	2.120	0.000	2.060	121.5	2.820	336.0 *	2.170	263.6	2.110	200.1	2.280	59.66
7	2.030	0.000	2.225	149.3	2.520	214.9	1.910	177.9	2.140	201.8	2.370	78.80 #
8	2.090	0.000	2.075	121.5	2.330	150.3	2.240	294.6	1.970	138.9 *	2.020	58.10
9	2.190	0.000	1.950	121.0 *	2.185	146.2	2.225	282.0	1.910	119.0 #	1.985	56.76
10	2.500	0.000	1.880	91.50	2.355	201.0	2.140	228.6 *	1.830	95.15 #	1.860	42.86
11	2.980	0.000	1.870	89.85	2.015	142.4	2.005	208.4	2.030	182.0	1.760	40.94
12	2.710	302.4 #	2.405	222.0	2.625	248.7	1.945	190.8	2.180	241.7	1.720	35.99 *
13	2.430	225.2 #	2.100	137.5	2.080	145.8 *	1.760	140.2	2.285	252.2	1.680	35.54
14	2.340	203.0 #	2.380	219.4	1.875	120.3	2.580	291.0	2.770	339.9	1.875	42.45
15	2.200	170.9 #	2.295	201.2	1.820	98.61 *	2.395	275.3	2.270	267.0 *	1.900	43.43
16	1.845	87.99	2.230	177.5 *	1.835	117.0	2.110	203.3	2.090	161.1	1.905	38.04
17	1.725	78.50	2.210	186.4	2.000	136.1	3.860	733.6 *	2.250	246.1	2.150	62.19 #
18	2.110	151.9 *	2.295	194.5	2.050	138.2	5.165	1337	2.100	188.4 *	2.250	69.46 #
19	2.700	299.4 #	3.475	633.2	2.370	202.6	4.170	826.0	2.050	161.9	2.280	71.74 *
20	2.800	329.8 #	4.270	881.6	2.410	220.2 *	3.350	578.3	1.880	133.1	2.360	78.00 #
21	2.590	267.8 #	3.425	645.7	2.985	357.0	2.895	413.7	1.780	76.19	2.340	76.41 #
22	2.860	348.8 #	2.830	413.0	2.760	307.7	2.500	323.9	1.730	69.69 *	2.340	76.41 #
23	2.610	273.4 #	2.320	198.2 *	2.800	347.3	2.190	252.2	1.675	66.03	2.300	36.11
24	2.900	361.7 #	1.990	137.2	2.445	257.3	1.990	199.0 *	1.765	69.75	2.250	69.46 #
25	3.450	566.5 *	1.825	129.3	2.190	191.3	1.930	186.2	1.980	128.6	2.210	66.50 #
26	2.420	225.2 *	1.670	75.86 #	2.000	130.2 #	2.015	188.0	1.970	138.9 #	2.170	63.61 *
27	3.970	806.3 #	1.840	130.0	2.150	160.2 *	2.040	192.2	2.400	338.3 #	2.140	61.48 #
28	3.590	692.8	1.830	129.9	2.400	207.0	2.420	290.3	2.200	232.7 #	2.110	59.40 #
29	2.645	288.0	1.890	110.3 #	3.680	667.0 #	2.250	251.7 *	1.950	123.8 *	2.010	52.76 #
30	2.150	203.1	1.750	87.59 *	3.600	695.7	2.050	210.6 *	1.820	92.40 #	2.010	52.76 #
31			1.790	93.80 #	2.740	317.8			1.750	64.15		
Ten-Daily Mean												
I Ten-Daily	2.261	0.000	2.122	148.0	2.287	175.7	2.232	259.0	2.021	156.0	2.086	57.76
II Ten-Daily	2.384	184.9	2.553	294.3	2.108	157.0	2.934	478.4	2.190	217.4	1.988	51.78
III Ten-Daily	2.918	403.4	2.105	195.5	2.705	330.8	2.228	250.8	1.911	127.3	2.188	61.49
Monthly												
Min.	1.725	0.000	1.670	75.86	1.740	98.61	1.760	140.2	1.675	64.15	1.680	35.54
Max.	3.970	806.3	4.270	881.6	3.680	695.7	5.165	1337	2.770	339.9	2.370	78.80
Mean	2.521	196.1	2.255	212.1	2.377	224.7	2.464	329.4	2.037	165.6	2.087	57.01

Annual Runoff in MCM = 3123 Annual Runoff in mm = 1665

Peak Observed Discharge = 1337 cumecs on 18/09/2017 Corres. Water Level :5.165 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :2.16 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : KUNIYIL (KB000J3) **Division : SWR Division, Cochin**

Local River : Chaliyar **Sub-Division : Chaliyar SD, Calicut**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	2.010	0.000	2.270	0.000	2.400	0.000	2.370	0.000	2.430	0.000	2.440	0.000
2	2.070	0.000	2.310	0.000	3.350	0.000	2.360	0.000	2.420	0.000	2.530	0.000
3	2.100	0.000	2.340	0.000	2.280	0.000	2.350	0.000	2.430	0.000	2.600	0.000
4	2.090	0.000	2.360	0.000	2.285	0.000	2.345	0.000	2.470	0.000	2.470	0.000
5	2.030	0.000	2.380	0.000	2.320	0.000	2.345	0.000	2.500	0.000	2.240	0.000
6	1.930	0.000	2.340	0.000	2.340	0.000	2.340	0.000	2.520	0.000	2.270	0.000
7	1.870	0.000	2.300	0.000	2.360	0.000	2.330	0.000	2.520	0.000	2.320	0.000
8	1.850	0.000	2.250	0.000	2.390	0.000	2.330	0.000	2.530	0.000	2.360	0.000
9	1.985	0.000	2.210	0.000	2.420	0.000	2.320	0.000	2.540	0.000	2.560	0.000
10	2.060	0.000	2.150	0.000	2.500	0.000	2.310	0.000	2.540	0.000	2.700	0.000
11	2.120	0.000	2.110	0.000	2.580	0.000	2.310	0.000	2.490	0.000	2.450	0.000
12	2.160	0.000	2.130	0.000	2.400	0.000	2.300	0.000	2.490	0.000	2.500	0.000
13	2.190	0.000	2.150	0.000	2.250	0.000	2.300	0.000	2.540	0.000	2.590	0.000
14	2.250	0.000	2.180	0.000	2.130	0.000	2.290	0.000	2.410	0.000	2.440	0.000
15	2.270	0.000	2.210	0.000	2.170	0.000	2.305	0.000	2.390	0.000	2.250	0.000
16	2.310	0.000	2.150	0.000	2.230	0.000	2.375	0.000	2.400	0.000	2.360	0.000
17	2.335	0.000	2.120	0.000	2.270	0.000	2.415	0.000	2.420	0.000	2.320	0.000
18	2.310	0.000	2.110	0.000	2.290	0.000	2.430	0.000	2.430	0.000	2.460	0.000
19	2.250	0.000	2.200	0.000	2.320	0.000	2.445	0.000	2.440	0.000	2.570	0.000
20	2.220	0.000	2.260	0.000	2.340	0.000	2.480	0.000	2.470	0.000	2.460	0.000
21	2.150	0.000	2.310	0.000	2.360	0.000	2.530	0.000	2.500	0.000	2.340	0.000
22	2.080	0.000	2.350	0.000	2.380	0.000	2.410	0.000	2.510	0.000	2.240	0.000
23	2.150	0.000	2.400	0.000	2.380	0.000	2.410	0.000	2.530	0.000	2.130	0.000
24	2.150	0.000	2.440	0.000	2.380	0.000	2.450	0.000	2.510	0.000	2.070	0.000
25	2.110	0.000	2.480	0.000	2.380	0.000	2.470	0.000	2.430	0.000	2.280	0.000
26	2.080	0.000	2.410	0.000	2.380	0.000	2.490	0.000	2.450	0.000	2.700	0.000
27	2.070	0.000	2.340	0.000	2.380	0.000	2.510	0.000	2.490	0.000	2.370	0.000
28	2.050	0.000	2.360	0.000	2.370	0.000	2.510	0.000	2.490	0.000	2.350	0.000
29	2.110	0.000	2.420	0.000			2.450	0.000	2.550	0.000 *	2.400	0.000
30	2.170	0.000	2.480	0.000			2.450	0.000	2.590	0.000	2.700	0.000
31	2.225	0.000	2.460	0.000			2.440	0.000			2.020	0.000
Ten-Daily Mean												
I Ten-Daily	1.999		2.291	0.000	2.464	0.000	2.340	0.000	2.490	0.000	2.449	0.000
II Ten-Daily	2.241		2.162	0.000	2.298	0.000	2.365	0.000	2.448	0.000	2.440	0.000
III Ten-Daily	2.122		2.405	0.000	2.376	0.000	2.465	0.000	2.505	0.000	2.327	0.000
Monthly												
Min.	1.850		2.110	0.000	2.130	0.000	2.290	0.000	2.390	0.000	2.020	0.000
Max.	2.335		2.480	0.000	3.350	0.000	2.530	0.000	2.590	0.000	2.700	0.000
Mean	2.121		2.290	0	2.380	0	2.393	0	2.481	0	2.403	0

Peak Computed Discharge = 733.6 cumecs on 17/09/2017 Corres. Water Level :3.86 m

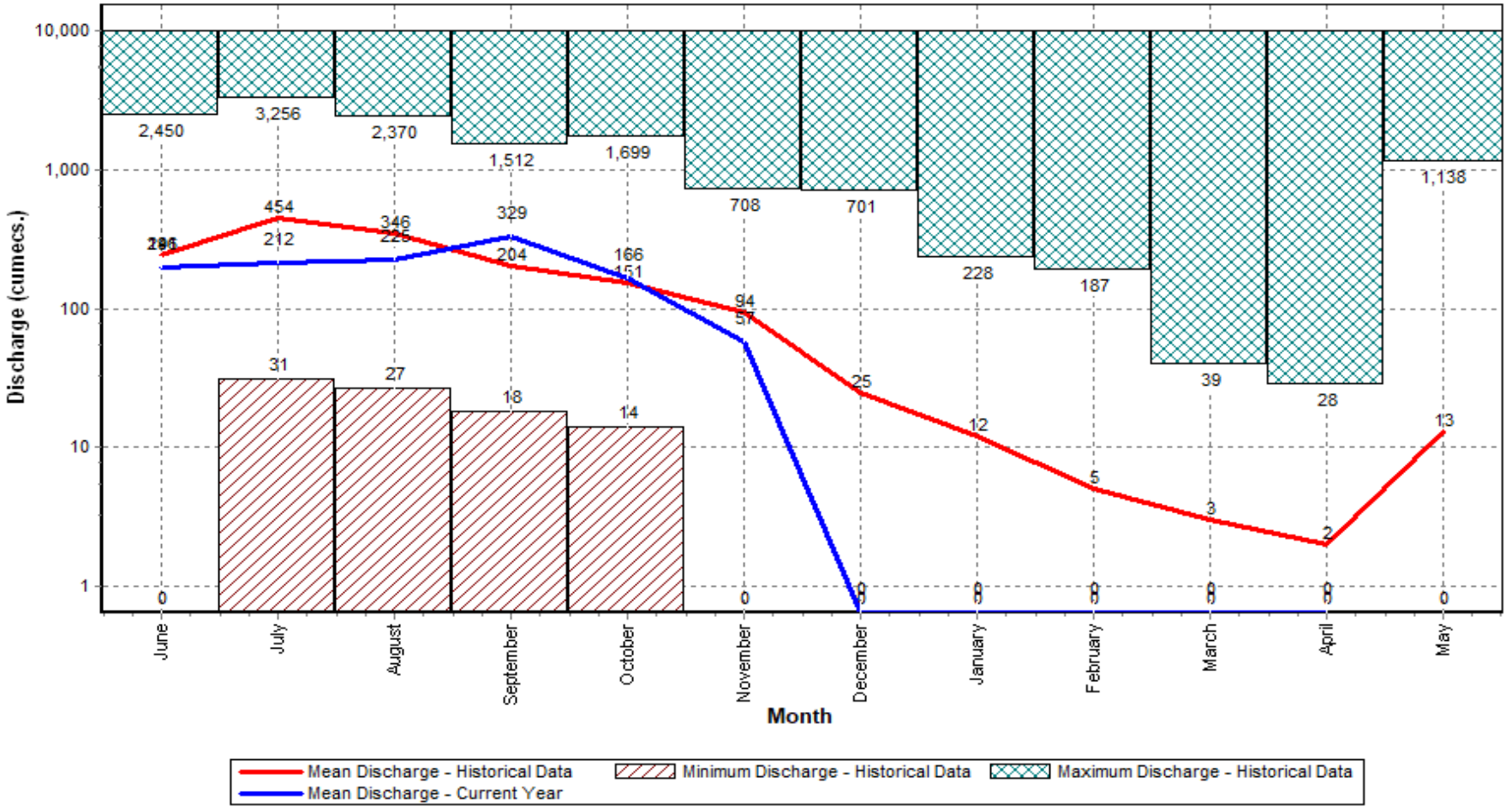
Lowest Computed Discharge = 0.000 cumecs on 29/04/2018 Corres. Water Level :2.55 m

Q:Observed/Computed Discharge in cumecs
WL:Corresponding Mean Water Level(m.s.l) in m
*:Computed Discharge
#:Discarded Discharge (values changed as per rating curve)
Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : KUNIYIL (KB000J3) | **Data considered : 1981-2018** | **Division : SWR Division, Cochin**

Local River : Chaliyar | **Sub-Division : Chaliyar SD, Calicut**



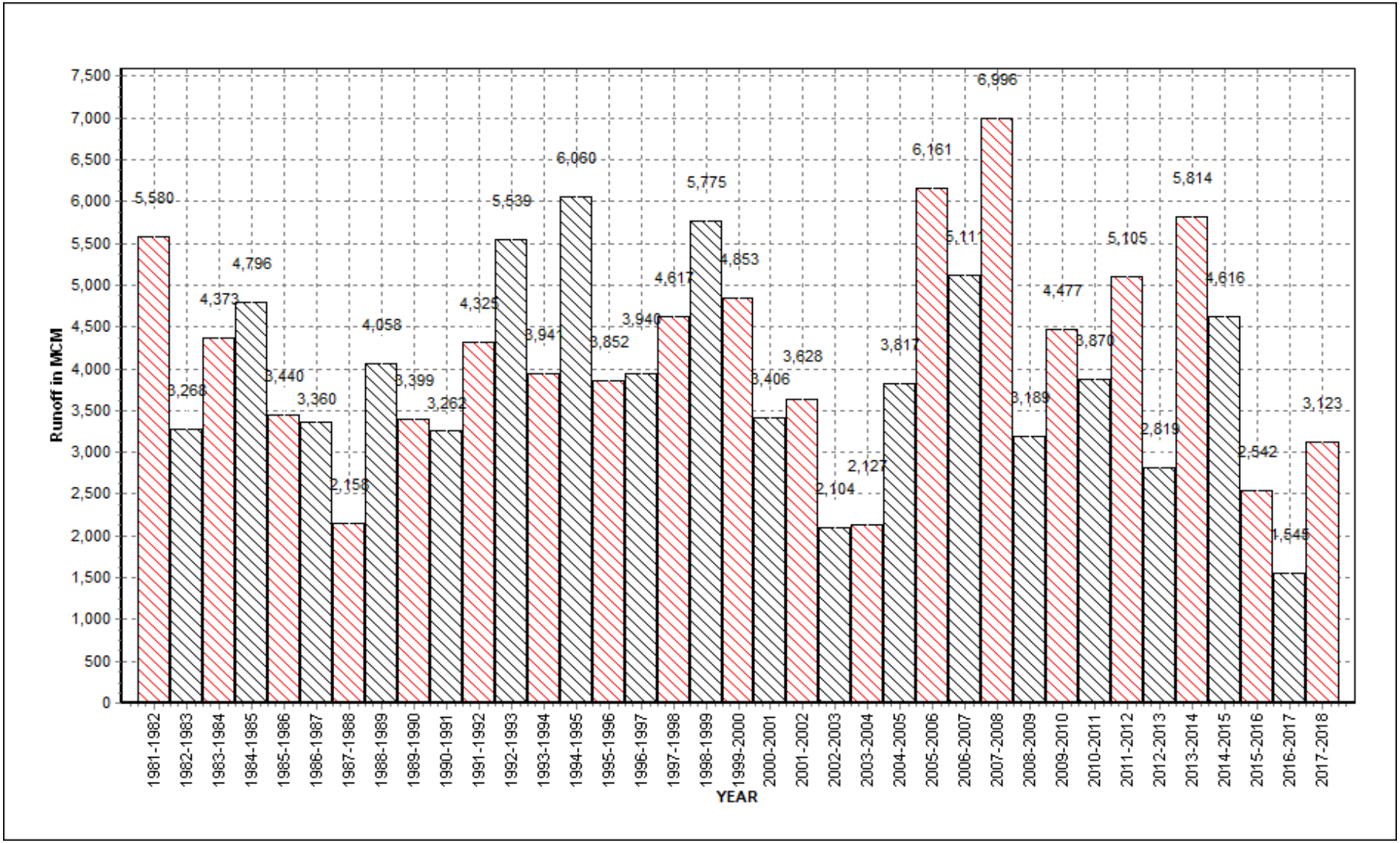
Annual Runoff Values for the period: 1981 - 2018

Station Name : KUNIYIL (KB000J3)

Local River : Chaliyar

Division : SWR Division, Cochin

Sub-Division : Chaliyar SD, Calicut

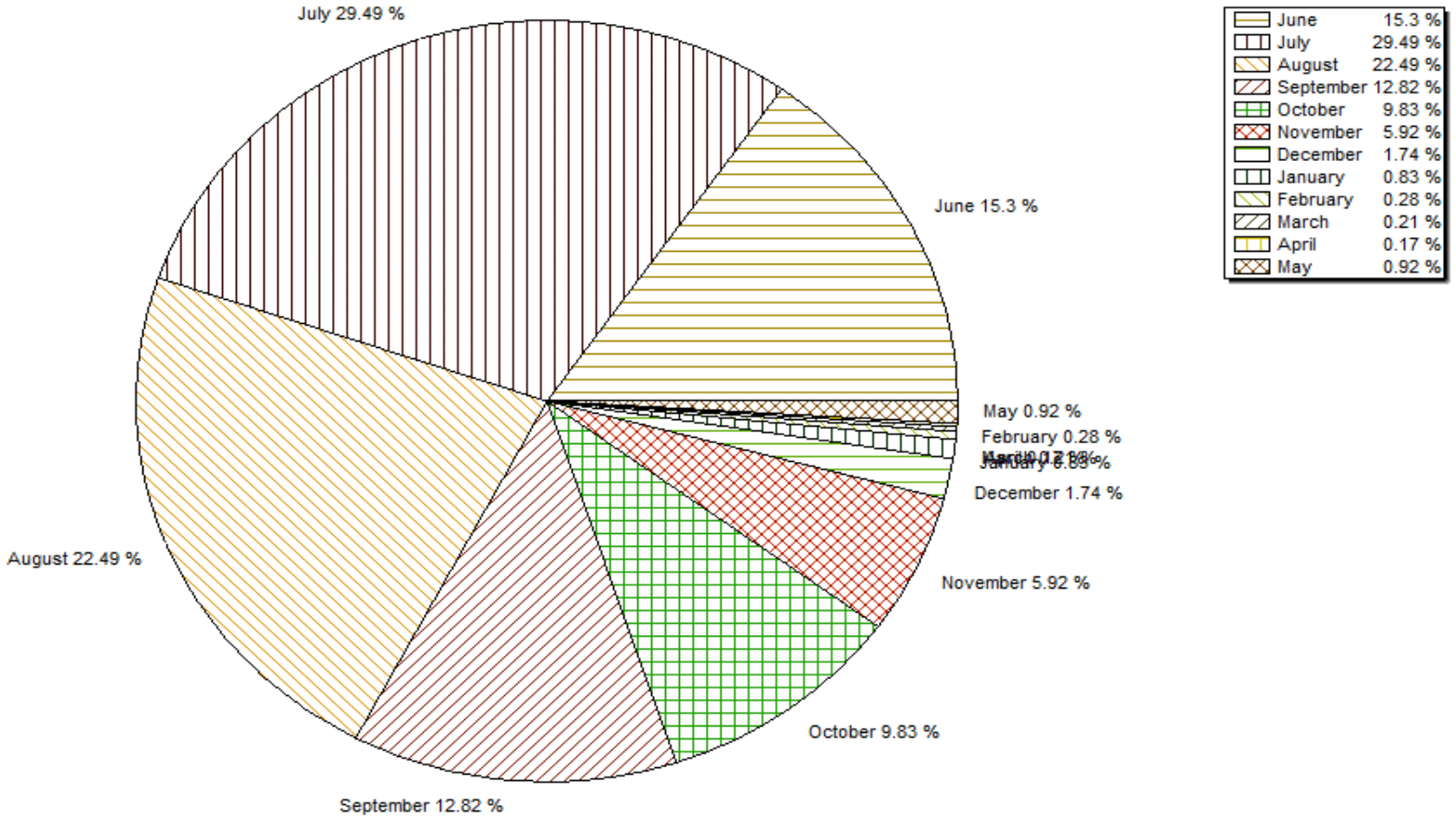


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1981-2017

Station Name : KUNIYIL (KB000J3)
Local River : Chaliyar

Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



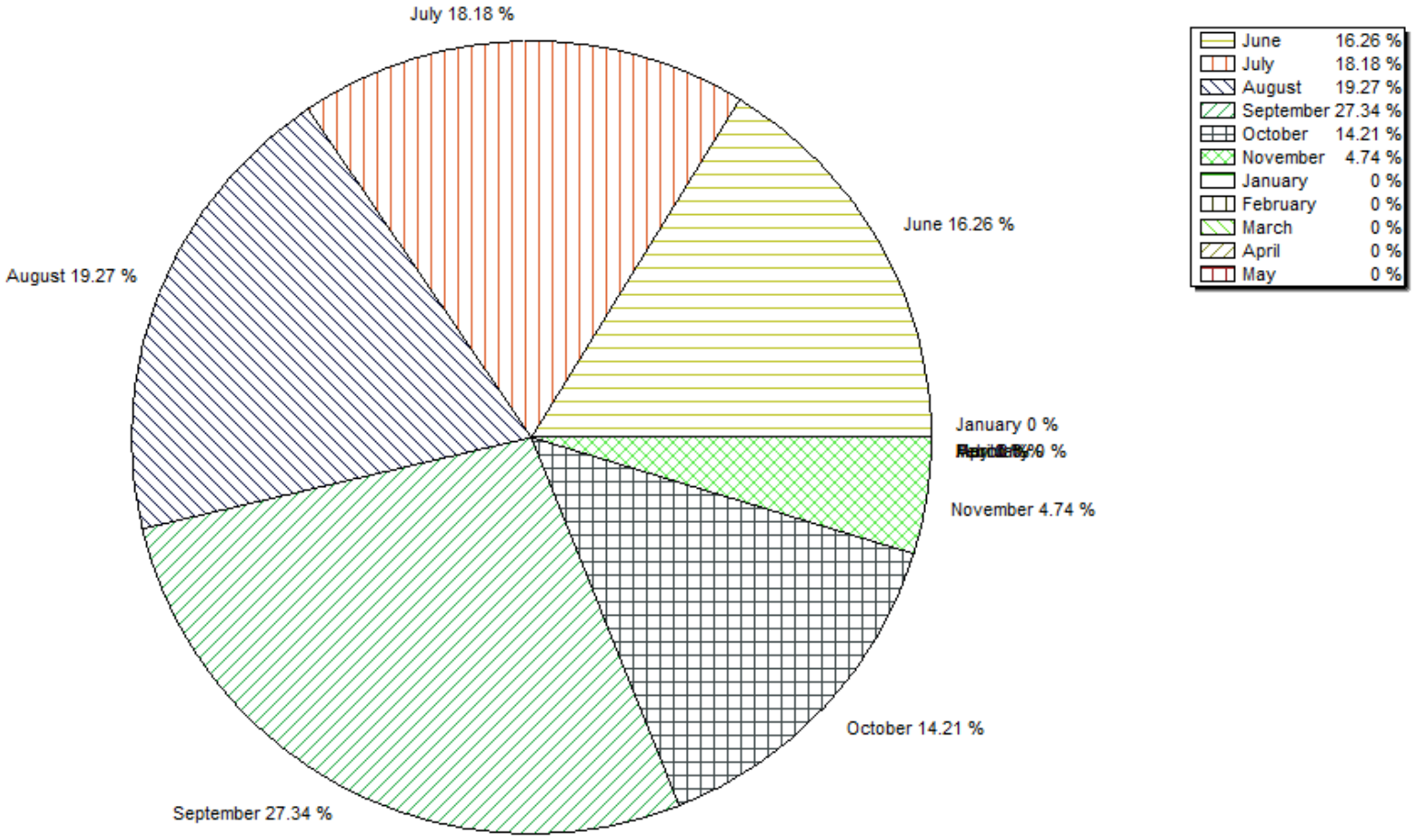
Monthly Runoff for the Year : 2017-2018

Station Name : KUNIYIL (KB000J3)

Local River : Chaliyar

Division : SWR Division, Cochin

Sub-Division : Chaliyar SD, Calicut



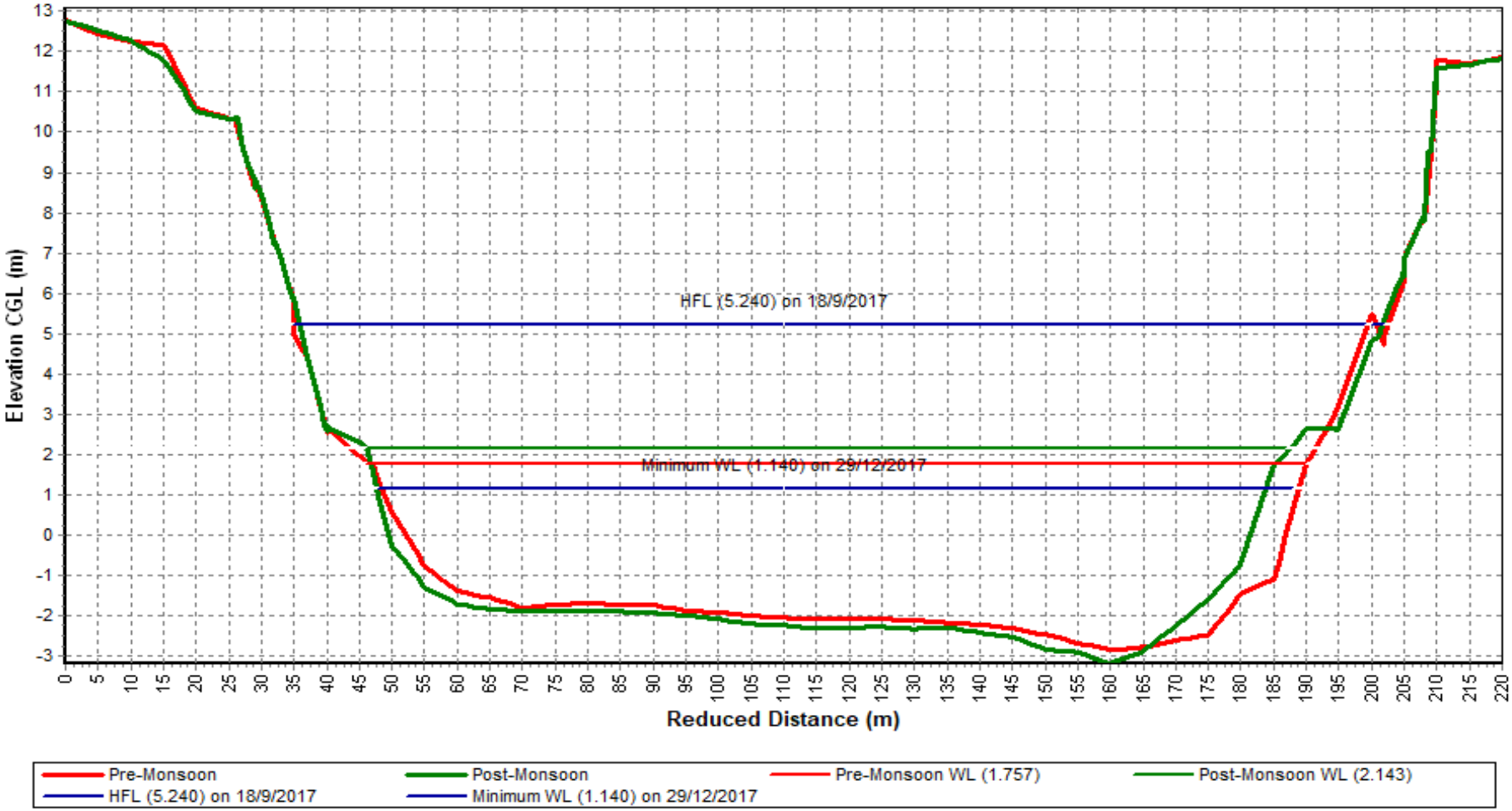
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : KUNIYIL (KB000J3)

Local River : Chaliyar

Division : SWR Division, Cochin

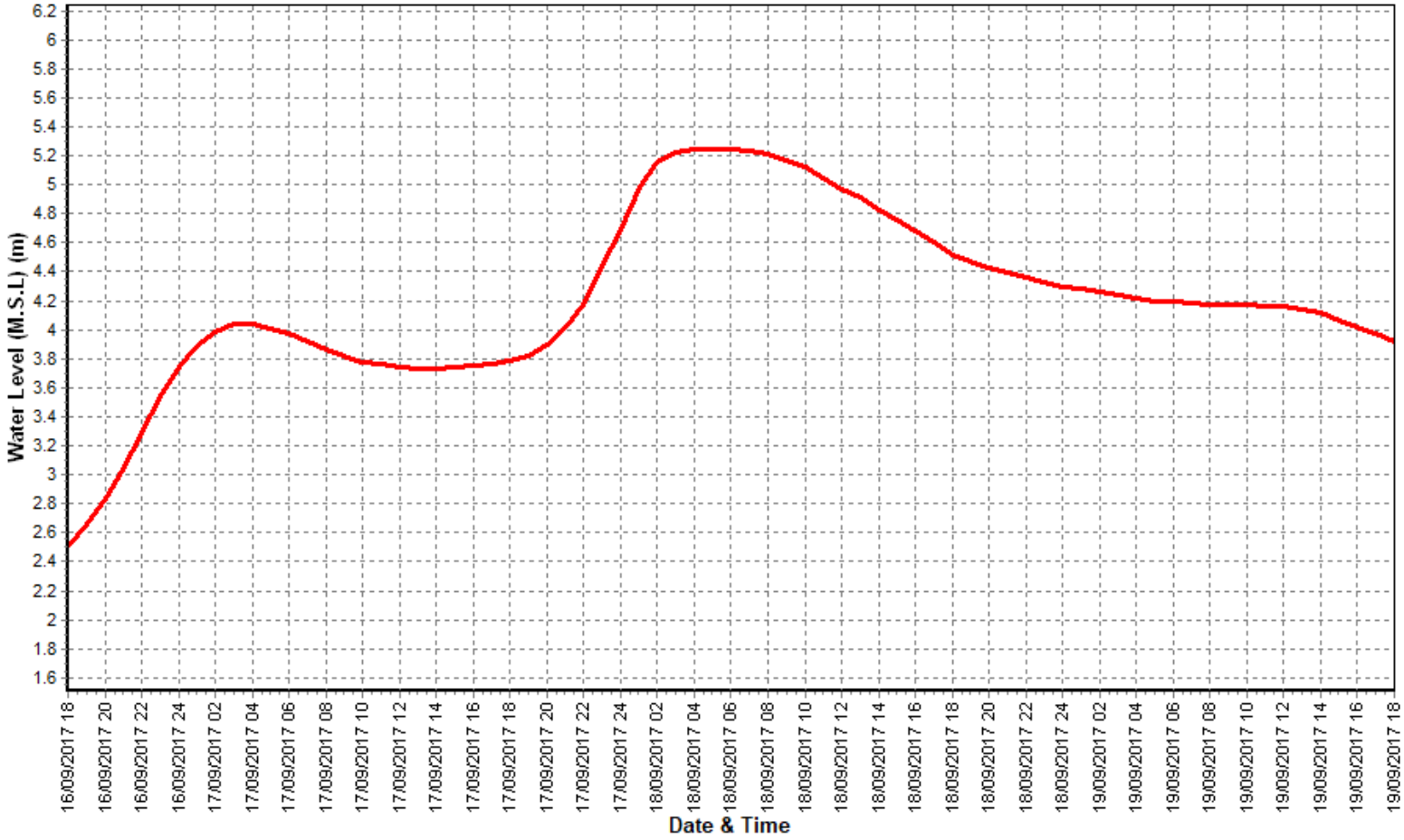
Sub-Division : Chaliyar SD, Calicut



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : KUNIYIL (KB000J3) **Division : SWR Division, Cochin**

Local River : Chaliyar **Sub-Division : Chaliyar SD, Calicut**



Time Span: 72 Hrs

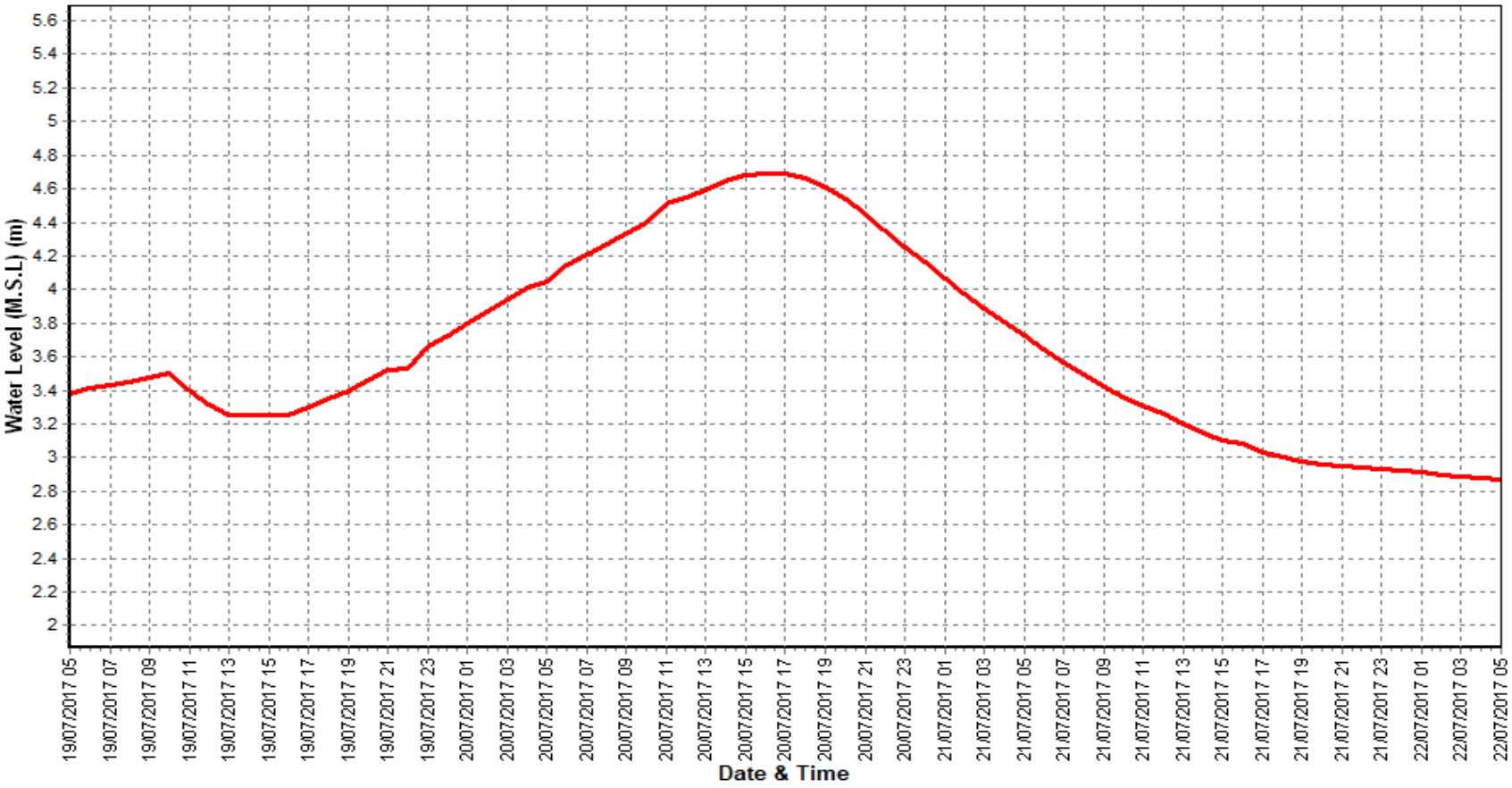
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : KUNIYIL (KB000J3)

Division : SWR Division, Cochin

Local River : Chaliyar

Sub-Division : Chaliyar SD, Calicut

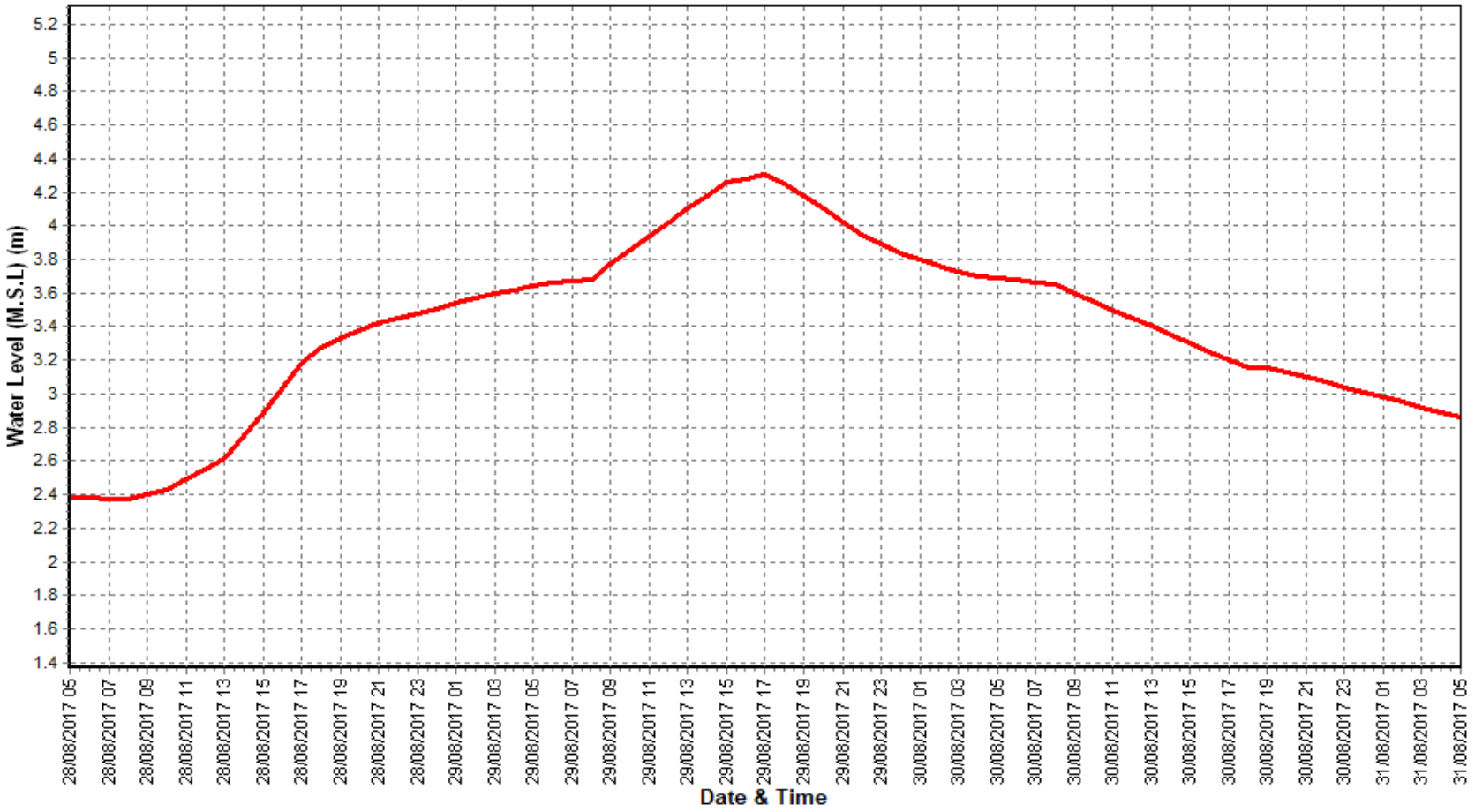


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : KUNIYIL (KB000J3) **Division : SWR Division, Cochin**

Local River : Chaliyar **Sub-Division : Chaliyar SD, Calicut**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	**: KARATHODU**		**Code**	**: KL000L7**	
State	: Kerala		District	Malappuram	
Basin	: WFR South of Tapi		Independent River	: Kadalundi	
Tributary	: -		Sub Tributary	: -	
Sub-Sub Tributary	: -		Local River	: Kadalundi	
Division	: SWR Division, Kochi		Sub-Division	: Chaliyar SD, Calicut	
Drainage Area	: 750 Sq. Km.		Bank	: Right	
Latitude	: 11°03'25"		Longitude	: 76°02'22"	
Zero of Gauge (m)	: 89.000 (Arb.) 2.000 (m.s.l)		28-12-1985 01-05-1988	- 30-04-1988	
	Opening Date		Closing Date		
Gauge	: 28-12-1985				
Discharge	: 20-06-1986				
Sediment	: 22-06-1989				
Water Quality	: 01-12-1988				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1987-1988	215.6	93.615	09-07-1987	0.000	89.950	01-06-1987
1988-1989	337.8	9.298	23-07-1988	0.000	4.085	17-01-1989
1989-1990	330.0	9.165	24-07-1989	0.000	3.955	06-02-1990
1990-1991	308.7	8.370	11-07-1990	0.000	3.850	11-02-1991
1991-1992	485.0	9.985	09-07-1991	0.000	Dry Bed	01-03-1992
1992-1993	690.6	11.959	28-07-1992	0.000	3.830	08-02-1993
1993-1994	294.7	8.511	03-07-1993	0.000	3.700	03-02-1994
1994-1995	784.4	13.270	16-07-1994	0.000	3.830	22-01-1995
1995-1996	333.0	8.650	02-09-1995	0.000	3.810	09-01-1996
1996-1997	267.0	7.900	19-10-1996	0.000	3.540	20-01-1997
1997-1998	745.0	12.950	12-07-1997	0.000	3.600	01-06-1997
1998-1999	357.5	9.080	05-07-1998	0.000	3.400	01-06-1998
1999-2000	366.8	9.180	20-06-1999	3.400	3.750	22-09-1999
2000-2001	216.3	7.440	12-07-2000	0.000	3.420	01-01-2001
2001-2002	431.0	8.720	25-06-2001	0.000	2.940	03-01-2002
2002-2003	361.4	7.520	18-08-2002	0.000	2.690	26-12-2002
2003-2004	153.3	6.120	06-07-2003	0.000	2.665	23-12-2003
2004-2005	331.1	8.425	05-08-2004	0.000	2.385	23-12-2004

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2005-2006	295.3	7.935	02-07-2005	0.000	2.400	25-01-2006
2006-2007	454.4	8.960	17-09-2006	0.000	2.210	27-01-2007
2007-2008	1201	13.495	18-07-2007	0.000	2.850	01-06-2007
2008-2009	389.9	8.250	25-10-2008	0.000	2.975	01-06-2008
2009-2010	781.7	12.170	19-07-2009	0.000	2.850	01-06-2009
2010-2011	221.3	7.585	30-07-2010	0.000	2.100	01-06-2010
2011-2012	376.5	8.870	02-09-2011	0.000	2.255	23-12-2011
2012-2013	189.7	6.160	23-07-2012	0.000	2.970	01-06-2012
2013-2014	581.7	9.565	04-07-2013	0.000	2.555	19-12-2013
2014-2015	760.2	10.340	02-08-2014	0.000	3.145	01-06-2014
2015-2016	437.0	8.520	27-06-2015	0.000	3.230	01-06-2015
2016-2017	172.7	6.060	11-07-2016	0.000	2.755	25-01-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : KARATHODU (KL000L7) **Division : SWR Division, Cochin**

Local River : Kadalundi **Sub-Division : Chaliyar SD, Calicut**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	2.085	0.000	4.210	45.55	3.610	23.65	4.930	105.9 *	4.600	81.10 *	3.970	42.82
2	4.090	0.000	4.430	69.23 *	3.635	24.10	4.855	102.6	5.280	134.4 *	3.900	37.77
3	4.095	0.000	4.310	61.24 *	3.610	23.46	5.360	141.3 *	4.720	93.45	3.720	27.91
4	4.080	0.000	4.310	47.77	3.835	41.49	4.930	105.9 *	4.770	99.11	3.680	25.17 *
5	4.080	0.000	4.040	40.14	4.310	55.56	5.115	125.2	4.445	73.44	3.600	21.39 *
6	4.110	0.000	3.860	33.00	5.430	147.4 *	4.885	106.5	4.410	71.05	2.370	19.28
7	4.130	0.000	3.965	35.48	4.690	85.01	4.460	75.89	4.620	83.43	3.730	28.08
8	4.110	0.000	3.810	28.42	4.295	61.49	5.640	162.0	4.440	69.91 *	3.800	30.85
9	3.780	0.000	7.980	30.17 *	4.110	52.03	4.615	80.50	4.335	66.22	3.900	37.82
10	4.090	0.000	3.725	26.16	4.005	44.41	5.050	115.4 *	4.140	50.57	3.635	23.99
11	4.145	0.000	3.760	27.44	3.885	34.45	4.680	90.21	4.335	76.12	3.530	18.34
12	4.200	0.000	3.680	26.27	4.115	49.36	4.910	98.13	4.110	49.73	3.500	16.97
13	5.170	0.000	3.570	20.03 *	3.910	37.10 *	4.490	78.44	4.665	90.00	3.440	12.89
14	5.175	0.000	4.445	66.77	3.775	36.37	4.390	67.93	4.940	98.23	3.410	13.24
15	5.255	0.000	3.695	46.03	3.695	25.90 *	5.200	129.4	4.635	83.62 *	3.380	12.40
16	4.030	0.000	4.030	43.92 *	3.700	26.14 #	4.720	91.74	4.440	73.92	3.420	15.85
17	2.110	0.000	3.820	28.32	4.170	54.92	6.750	276.9 *	4.235	54.94	3.350	11.16
18	5.110	0.000	4.003	43.80	3.900	40.02	9.660	412.0	4.520	75.44 *	3.330	10.04
19	5.100	0.000	5.620	152.3	4.325	64.23	8.920	328.9	4.200	56.27	3.310	9.579 *
20	5.070	0.000	5.740	170.6	4.390	66.53 *	7.280	336.0 #	4.195	54.65	3.260	7.880 #
21	5.050	0.000	5.935	171.1	4.915	104.8	6.015	182.3	4.045	45.81	3.250	7.553 #
22	5.075	0.000	5.455	132.7	4.780	99.14	5.555	146.2	4.060	45.68 *	3.230	5.693
23	5.185	0.000	5.010	112.2 *	4.720	87.08	5.090	111.9	3.915	41.92	3.270	8.211 #
24	5.300	0.000	4.590	70.40	4.390	70.44	4.810	96.61 *	3.815	30.45	3.250	7.553 #
25	5.540	18.70 *	4.390	65.42	4.280	58.67	4.735	85.63	3.745	28.85	3.230	6.914 #
26	5.490	36.00 *	4.170	55.77	4.105	49.25	4.525	76.89	3.685	27.15	3.210	6.295 *
27	4.825	104.7	4.020	38.64	4.300	60.59 *	4.705	91.69	3.935	41.61	3.200	4.303
28	5.800	177.6	3.955	39.28	4.625	83.18	5.500	162.0	4.035	45.68	3.230	6.914 #
29	5.185	123.4	3.885	35.30	5.610	153.6	5.030	113.8 *	3.820	32.25 *	3.240	6.623
30	4.525	75.04	3.750	28.64 *	7.200	326.9 #	5.850	185.6 *	3.660	25.81	3.180	5.402 #
31			3.650	23.73 *	5.520	152.2			3.620	24.65		
Ten-Daily Mean												
I Ten-Daily	3.865	0.000	4.464	41.72	4.153	55.86	4.984	112.1	4.576	82.27	3.631	29.51
II Ten-Daily	4.536	0.000	4.236	62.55	3.986	43.50	6.100	191.0	4.428	71.29	3.393	12.83
III Ten-Daily	5.198	53.54	4.437	70.29	4.950	113.3	5.181	125.3	3.849	35.44	3.229	6.546
Monthly												
Min.	2.085	0.000	3.570	20.03	3.610	23.46	4.390	67.93	3.620	24.65	2.370	4.303
Max.	5.800	177.6	7.980	171.1	7.200	326.9	9.660	412.0	5.280	134.4	3.970	42.82
Mean	4.533	17.85	4.381	58.58	4.382	72.24	5.422	142.8	4.270	62.11	3.417	16.3

Annual Runoff in MCM = 990 Annual Runoff in mm = 1319

Peak Observed Discharge = 412.0 cumecs on 18/09/2017 Corres. Water Level :9.66 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :2.085 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : KARATHODU (KL000L7) **Division : SWR Division, Cochin**

Local River : Kadalundi **Sub-Division : Chaliyar SD, Calicut**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	3.160	0.915 #	5.010	0.000	2.910	0.000	2.800	0.000	2.490	0.000	2.340	0.000
2	3.420	7.303 *	5.010	0.000	2.910	0.000	2.775	0.000	2.495	0.000	2.400	0.000
3	2.400	8.472 *	4.950	0.000	2.910	0.000	2.765	0.000	2.485	0.000	2.400	0.000
4	3.270	2.613	4.910	0.000	2.905	0.000	2.755	0.000	2.480	0.000	2.390	0.000
5	3.210	1.643 #	4.910	0.000	2.905	0.000	2.750	0.000	2.465	0.000	2.380	0.000
6	3.185	0.000	4.910	0.000	2.900	0.000	2.740	0.000	2.460	0.000	2.370	0.000
7	2.305	0.000	4.910	0.000	2.900	0.000	2.730	0.000	2.460	0.000	2.365	0.000
8	2.355	0.000	4.890	0.000	2.895	0.000	2.710	0.000	2.435	0.000	2.355	0.000
9	2.430	0.000	4.890	0.000	2.890	0.000	2.695	0.000	2.430	0.000	2.430	0.000
10	2.400	0.000	4.940	0.000	2.890	0.000	2.680	0.000	2.400	0.000	2.440	0.000
11	2.430	0.000	4.940	0.000	2.890	0.000	2.675	0.000	2.395	0.000	2.430	0.000
12	2.800	0.000	4.960	0.000	2.885	0.000	2.665	0.000	2.385	0.000	2.800	0.000
13	3.190	0.000	4.960	0.000	2.880	0.000	2.655	0.000	2.380	0.000	3.190	0.000
14	3.150	0.000	4.950	0.000	2.875	0.000	2.645	0.000	2.375	0.000	3.150	0.000
15	3.140	0.000	4.950	0.000	2.870	0.000	2.640	0.000	2.370	0.000	3.140	0.000
16	3.330	0.000	4.940	0.000	2.870	0.000	2.630	0.000	2.360	0.000	3.330	0.000
17	3.160	0.000	4.930	0.000	2.865	0.000	2.625	0.000	2.360	0.000	3.160	0.000
18	3.140	0.000	4.930	0.000	2.865	0.000	2.610	0.000	2.355	0.000	3.140	0.000
19	3.110	0.000	4.930	0.000	2.855	0.000	2.595	0.000	2.345	0.000	3.110	0.000
20	3.080	0.000	4.930	0.000	2.855	0.000	2.590	0.000	2.340	0.000	3.080	0.000
21	3.180	0.000	4.930	0.000	2.850	0.000	2.590	0.000	2.335	0.000	3.180	0.000
22	3.140	0.000	4.940	0.000	2.850	0.000	2.585	0.000	2.325	0.000	3.140	0.000
23	3.140	0.000	4.940	0.000	2.840	0.000	2.575	0.000	2.340	0.000	3.140	0.000
24	3.100	0.000	4.940	0.000	2.830	0.000	2.560	0.000	2.335	0.000	3.100	0.000
25	3.200	0.000	4.930	0.000	2.830	0.000	2.550	0.000	2.330	0.000	3.200	0.000
26	3.330	0.000	4.920	0.000	2.830	0.000	2.540	0.000	2.320	0.000	3.330	0.000
27	3.300	0.000	4.920	0.000	2.825	0.000	2.530	0.000	2.300	0.000	3.300	0.000
28	4.135	0.000	4.920	0.000	2.825	0.000	2.530	0.000	2.290	0.000	4.135	57.16
29	3.730	0.000	4.910	0.000			2.525	0.000	2.290	0.000	3.730	24.03
30	3.970	0.000	4.910	0.000			2.515	0.000	2.290	0.000	3.970	44.56
31	3.625	0.000	4.910	0.000			2.500	0.000			3.630	17.48 #
Ten-Daily Mean												
I Ten-Daily	2.813	2.095	4.933	0.000	2.901	0.000	2.740	0.000	2.460	0.000	2.387	0.000
II Ten-Daily	3.053	0.000	4.942	0.000	2.871	0.000	2.633	0.000	2.366	0.000	3.053	0.000
III Ten-Daily	3.441	0.000	4.925	0.000	2.835	0.000	2.545	0.000	2.316	0.000	3.441	13.02
Monthly												
Min.	2.305	0.000	4.890	0.000	2.825	0.000	2.500	0.000	2.290	0.000	2.340	0.000
Max.	4.135	8.472	5.010	0.000	2.910	0.000	2.800	0.000	2.495	0.000	4.135	57.16
Mean	3.113	0.676	4.933	0	2.872	0	2.636	0	2.381	0	2.976	4.62

Peak Computed Discharge = 276.9 cumecs on 17/09/2017 Corres. Water Level :6.75 m

Lowest Computed Discharge = 6.295 cumecs on 26/11/2017 Corres. Water Level :3.21 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

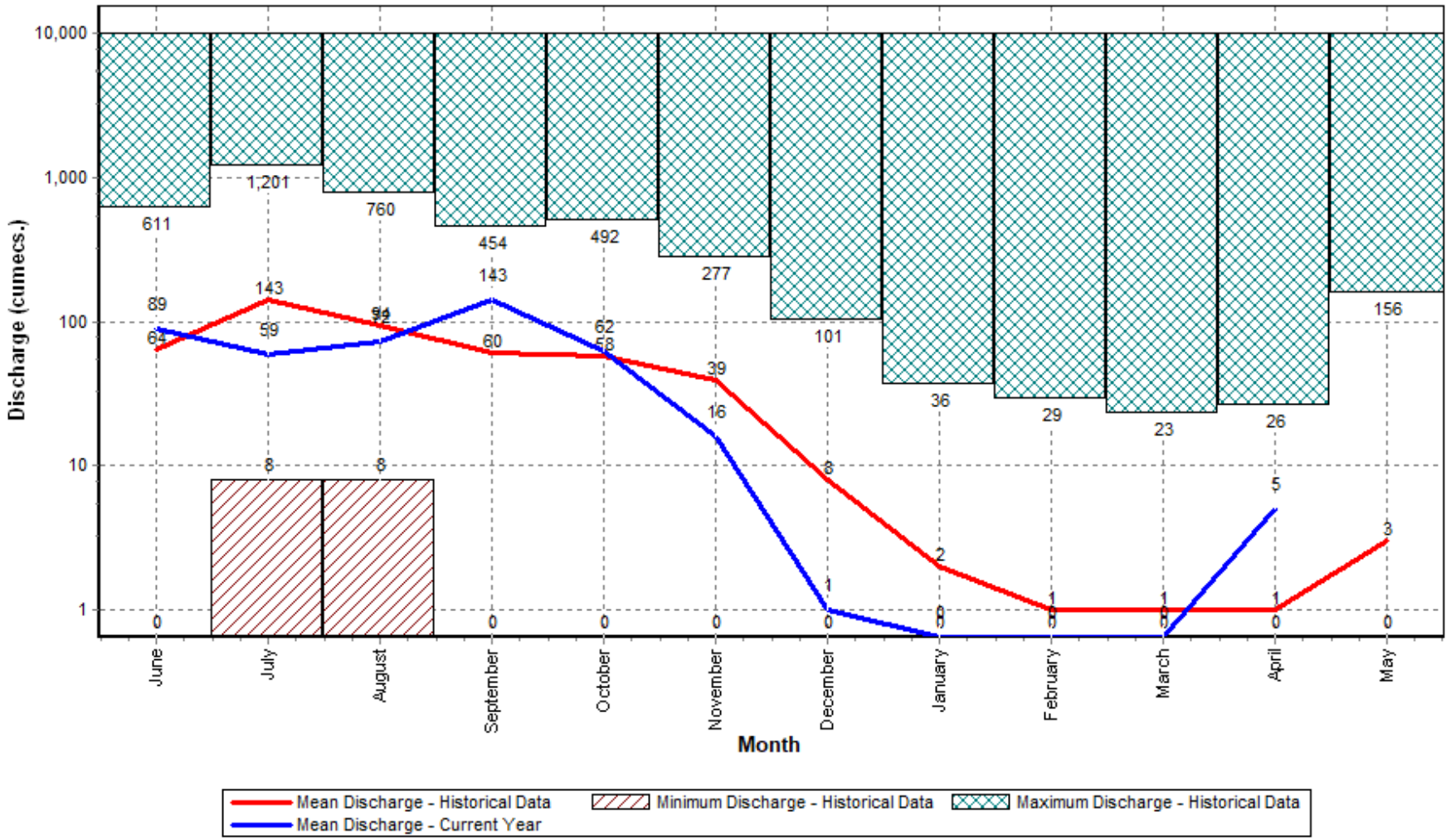
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : KARATHODU (KL000L7) | **Data considered : 1987-2018** | **Division : SWR Division, Cochin**

Local River : Kadalundi | **Sub-Division : Chaliyar SD, Calicut**


Discharge (cumecs.)
10,000
1,000
100
10
1
611
1,201
760
454
492
277
101
36
29
23
26
156
89
64
143
59
94
60
143
62
58
39
16
8
8
8
0
0
0

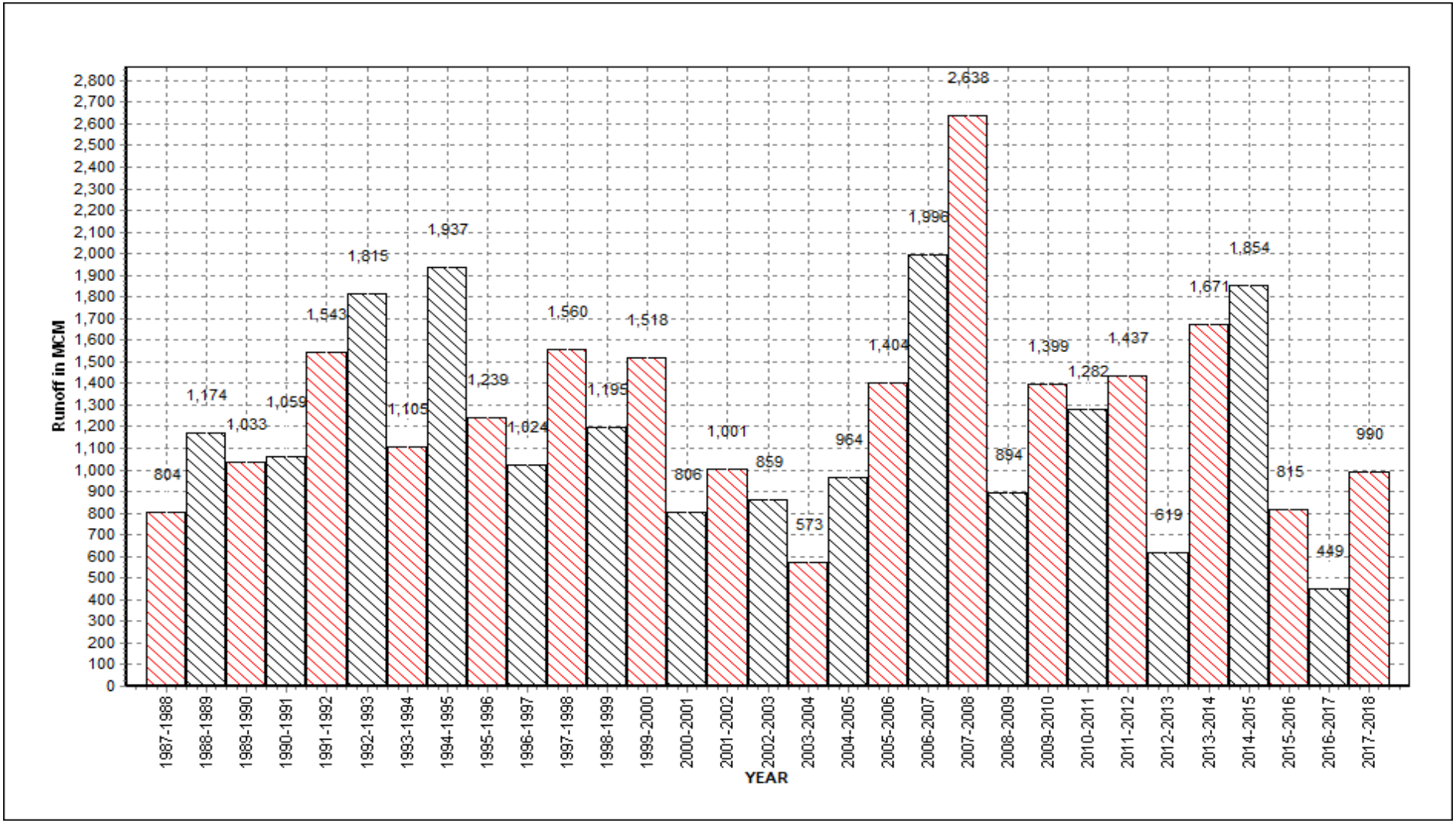
Annual Runoff Values for the period: 1987 - 2018

Station Name : KARATHODU (KL000L7)

Local River : Kadalundi

Division : SWR Division, Cochin

Sub-Division : Chaliyar SD, Calicut



Note: Missing values have not been considered while arriving at Annual Runoff

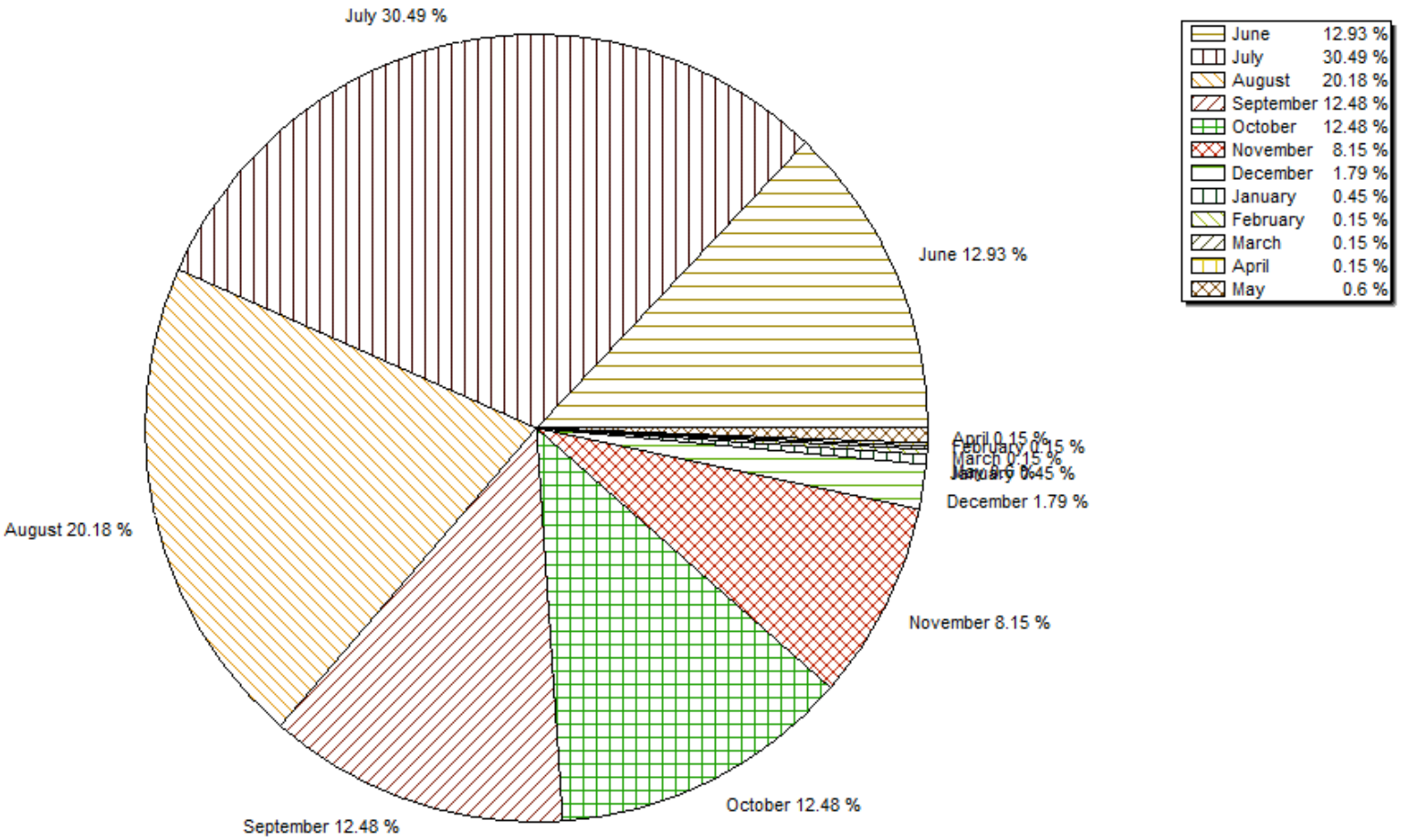
Monthly Average Runoff based on period : 1987-2017

Station Name : KARATHODU (KL000L7)

Local River : Kadalundi

Division : SWR Division, Cochin

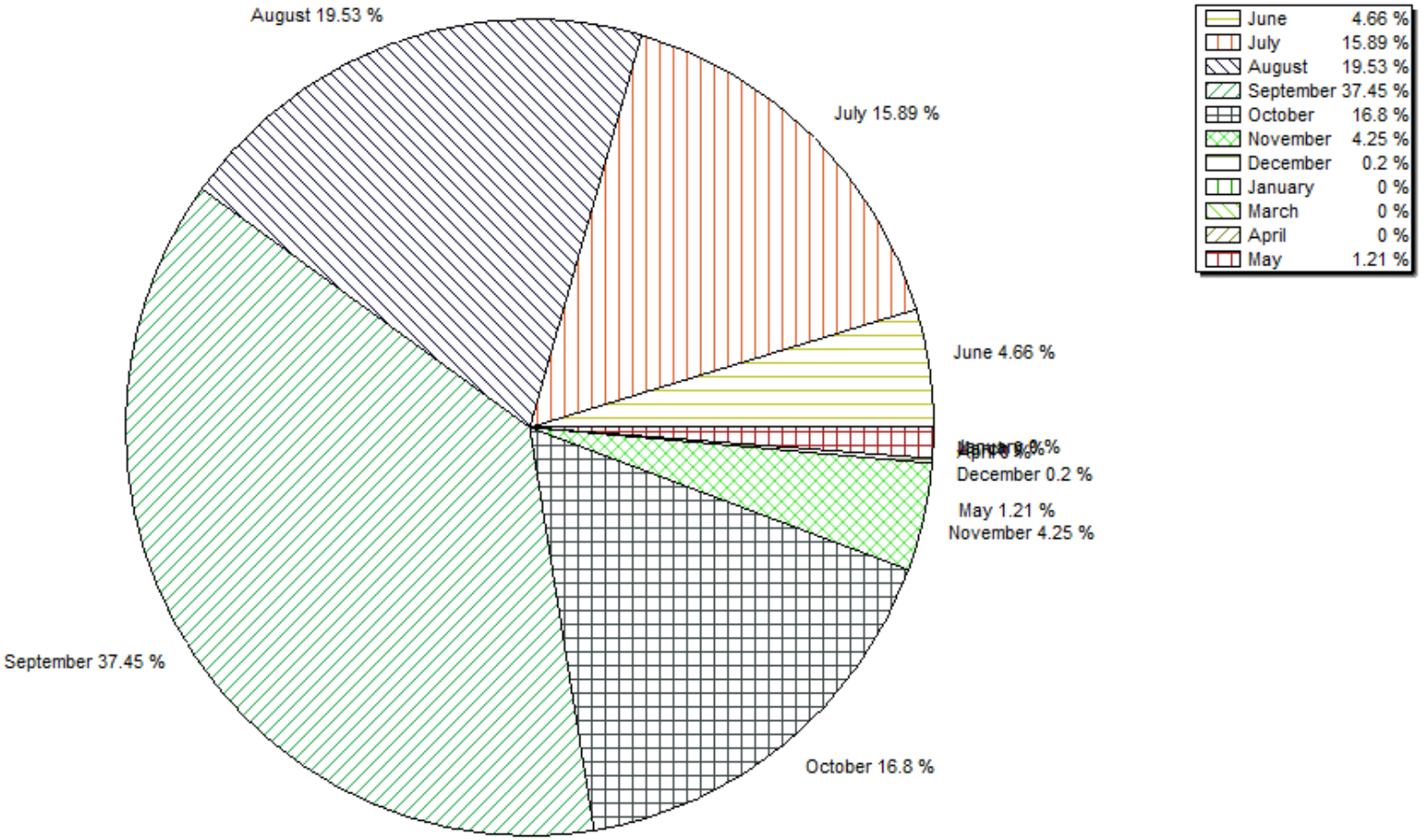
Sub-Division : Chaliyar SD, Calicut



Monthly Runoff for the Year : 2017-2018

Station Name : KARATHODU (KL000L7)
Local River : Kadalundi

Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



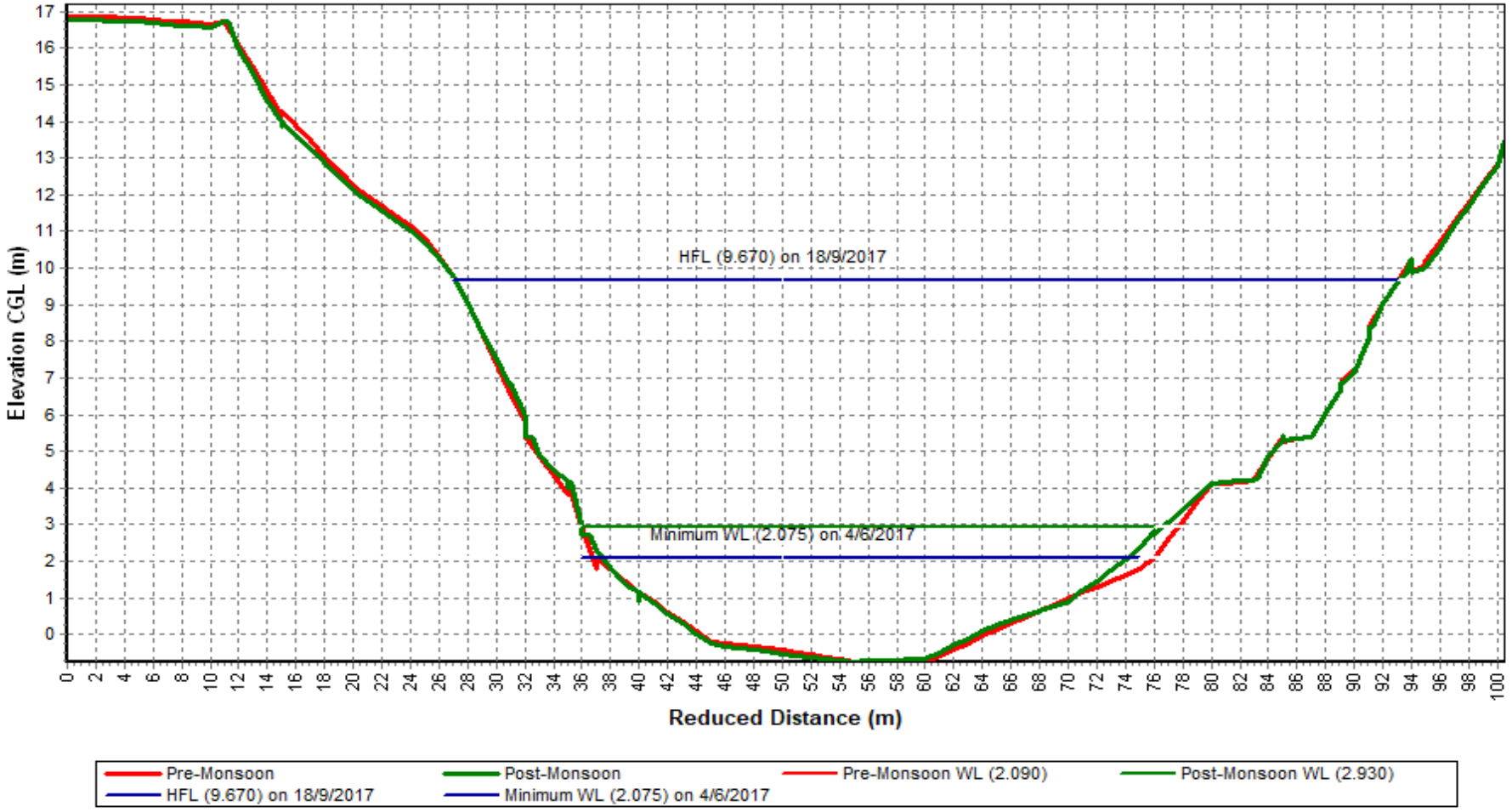
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : KARATHODU (KL000L7)

Local River : Kadalundi

Division : SWR Division, Cochin

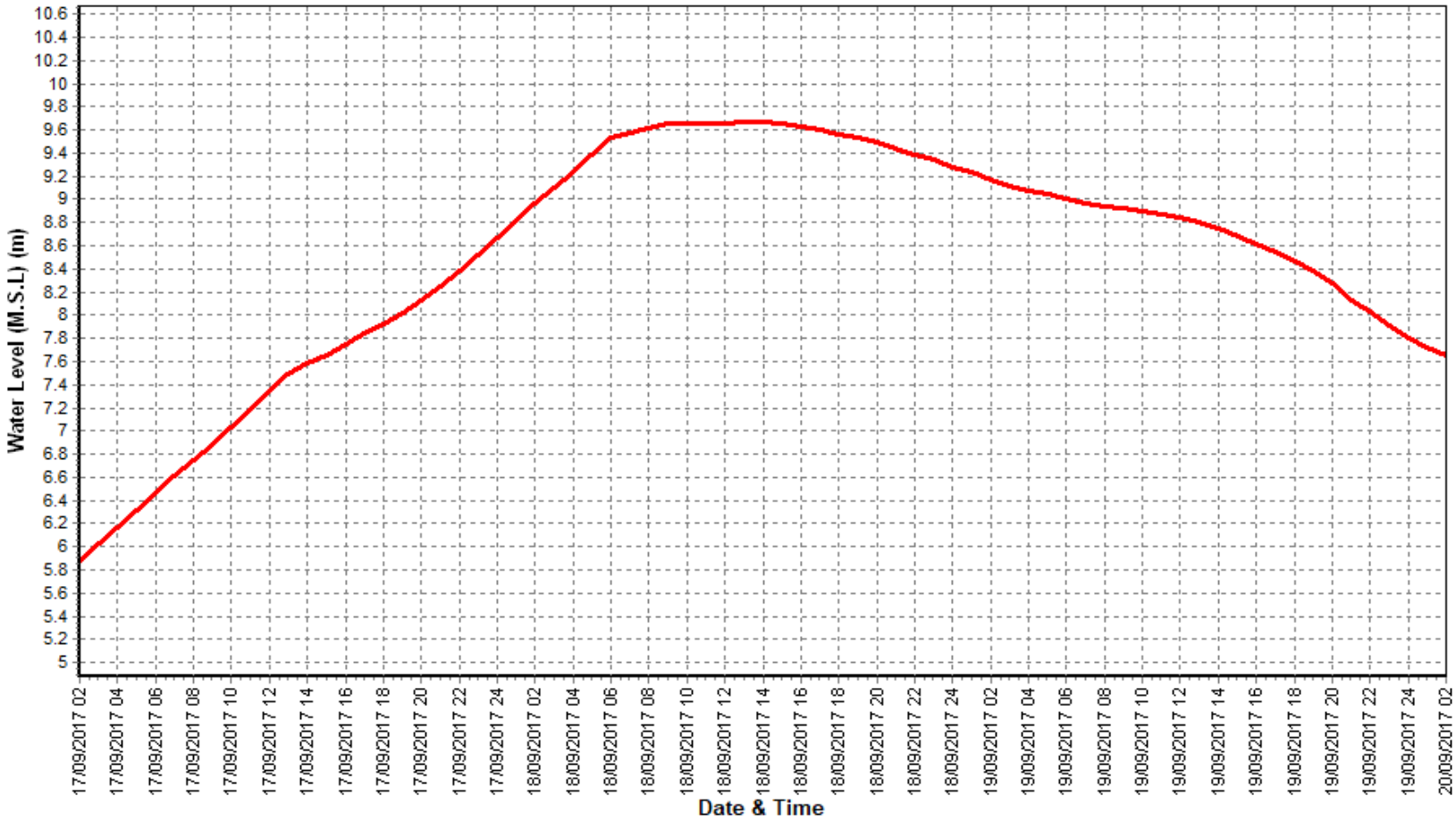
Sub-Division : Chaliyar SD, Calicut



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : KARATHODU (KL000L7) **Division : SWR Division, Cochin**

Local River : Kadalundi **Sub-Division : Chaliyar SD, Calicut**

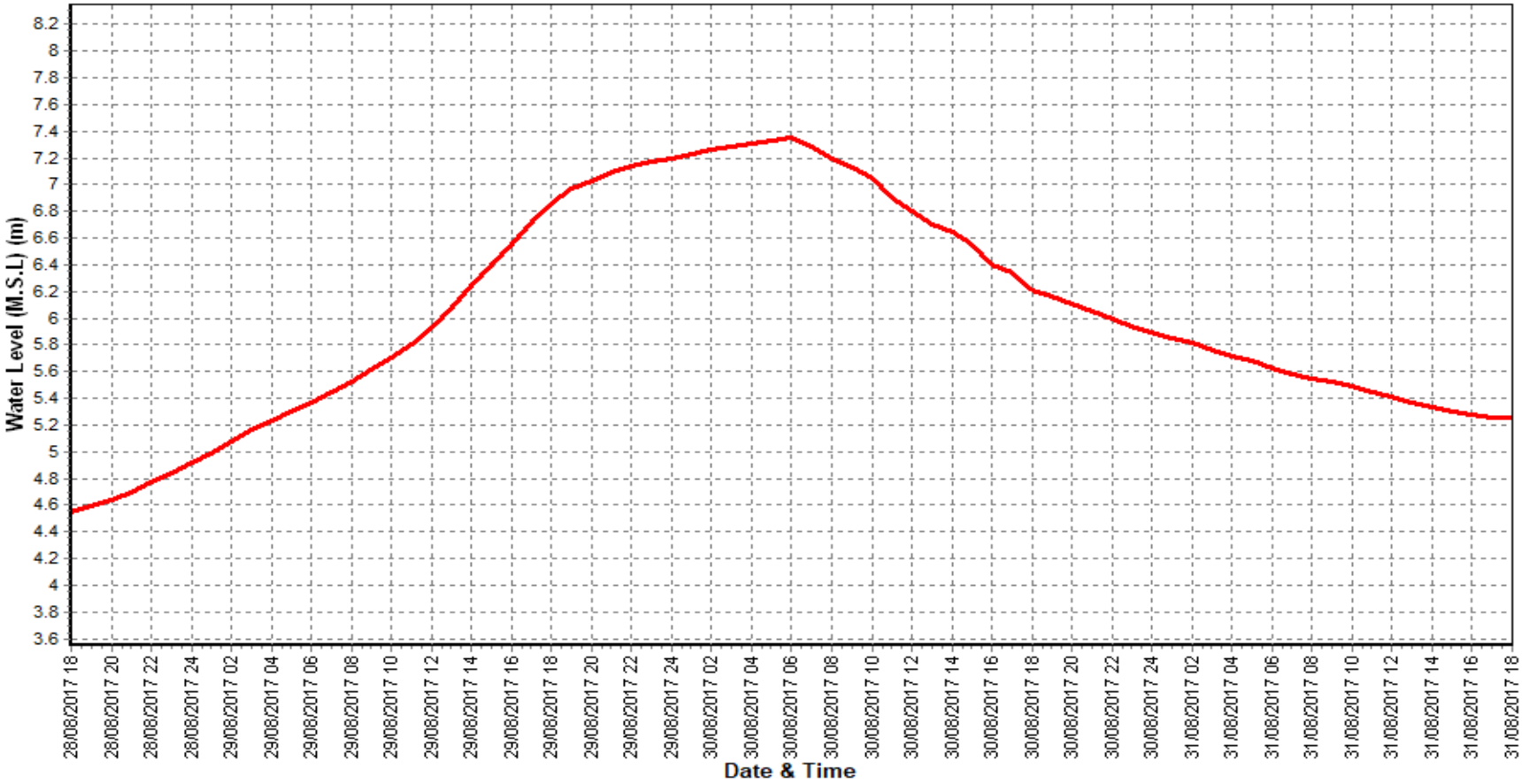


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : KARATHODU (KL000L7) **Division : SWR Division, Cochin**

Local River : Kadalundi **Sub-Division : Chaliyar SD, Calicut**

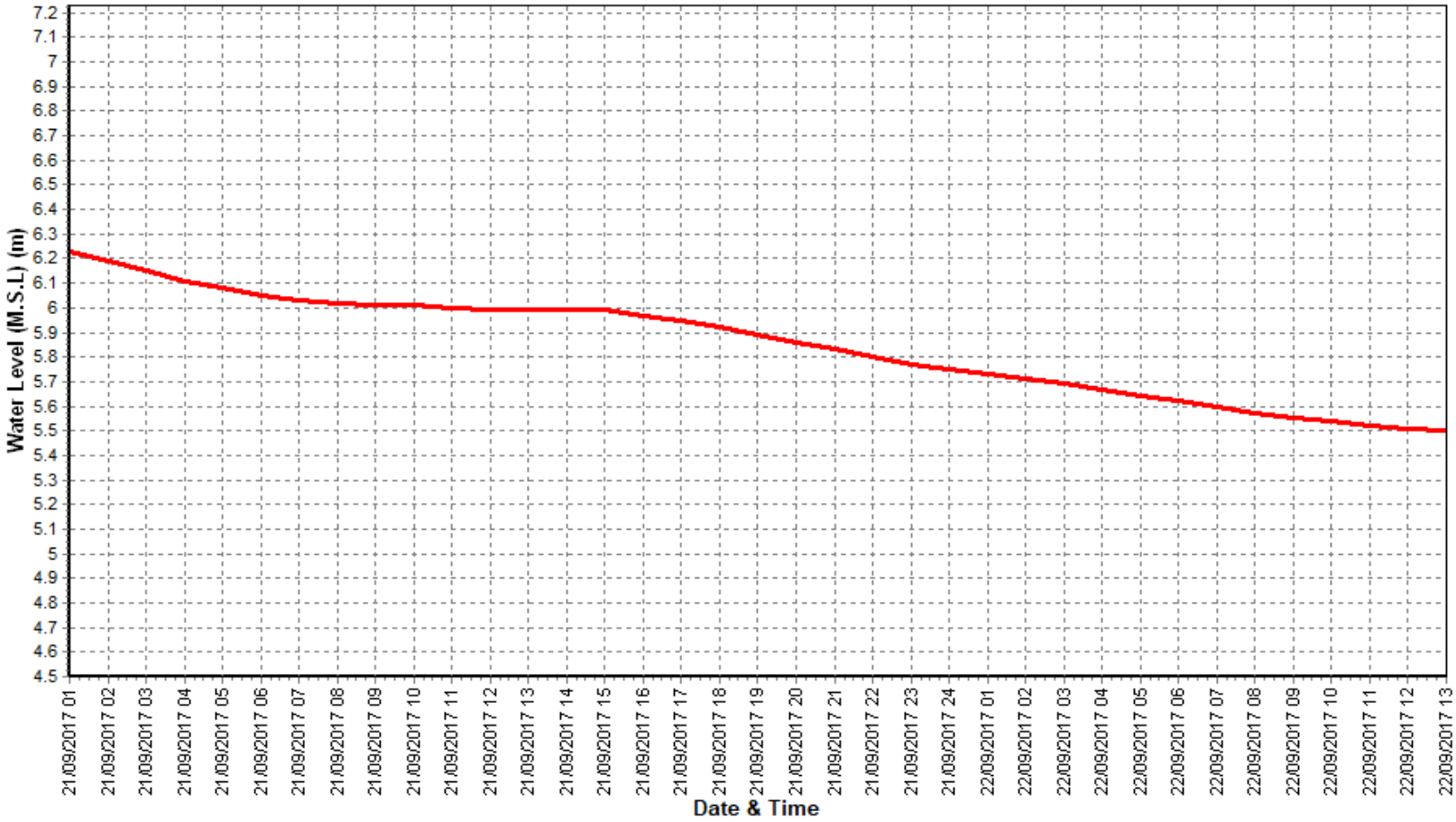


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : KARATHODU (KL000L7) **Division : SWR Division, Cochin**

Local River : Kadalundi **Sub-Division : Chaliyar SD, Calicut**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	:	**KUMBIDI**	**Code**	:	**KR000C9**
State	:	Kerala	District		Palakkad
Basin	:	WFR South of Tapi	Independent River	:	Bharathapuzha
Tributary	:	-	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Bharathapuzha
Division	:	SWR Division, Kochi	Sub-Division	:	Chaliyar SD, Calicut
Drainage Area	:	5755 Sq. Km.	Bank	:	Left
Latitude	:	10°51'16"	Longitude	:	76°01'12"
Zero of Gauge (m)	:	4.000 (m.s.l) 2.000 (m.s.l)	01-06-1978 01-06-2007	-	31-05-2007
		Opening Date	Closing Date		
Gauge	:	01-06-1978			
Discharge	:	08-01-1979			
Sediment	:	24-06-1980			
Water Quality	:	03-12-1979			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1979-1980 *	141.5	6.090	01-12-1979	0.000	4.760	02-03-1980
1980-1981	2084	9.490	03-07-1980	0.000	4.605	26-02-1981
1981-1982	1729	8.885	18-08-1981	0.000	4.485	03-03-1982
1982-1983	1336	8.560	02-08-1982	0.000	4.310	07-03-1983
1983-1984	1557	8.800	22-07-1983	0.000	4.300	02-06-1983
1984-1985	1803	8.650	18-06-1984	0.000	Dry Bed	17-03-1984
1985-1986	2295	9.610	27-06-1985	0.000	4.420	05-03-1986
1986-1987	1555	8.745	10-08-1986	0.000	4.445	09-03-1987
1987-1988	754.6	7.210	25-09-1987	0.000	4.465	01-06-1987
1988-1989	1242	8.330	05-08-1988	0.000	4.670	11-02-1989
1989-1990	1810	8.665	24-07-1989	0.000	4.650	01-06-1989
1990-1991	1015	7.890	11-07-1990	0.000	4.620	09-02-1991
1991-1992	2164	9.192	28-07-1991	0.000	4.495	14-03-1992
1992-1993	2519	9.247	29-07-1992	0.949	4.540	10-05-1993
1993-1994	745.7	7.201	04-08-1993	0.000	4.420	12-03-1994
1994-1995	2813	9.440	15-07-1994	0.177	4.100	30-03-1995
1995-1996	1410	8.100	17-07-1995	0.000	4.050	27-12-1996
1996-1997	1080	7.530	30-09-1996	0.226	4.260	02-05-1997
1997-1998	1758	8.660	11-07-1997	0.650	4.230	05-06-1997

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1979-1980 *	141.5	6.090	01-12-1979	0.000	4.760	02-03-1980
1998-1999	1190	7.830	01-07-1998	0.000	4.290	02-04-1999
1999-2000	1102	7.670	14-06-1999	0.000	4.440	10-02-2000
2000-2001	1073	7.450	13-07-2000	0.000	4.280	01-06-2000
2001-2002	1311	7.780	25-06-2001	1.591	3.950	12-05-2002
2002-2003	1464	7.805	18-08-2002	0.258	3.940	26-05-2003
2003-2004	479.3	6.077	23-08-2003	0.000	3.870	14-02-2004
2004-2005	2175	8.450	05-08-2004	0.000	3.680	12-03-2005
2005-2006	1838	8.015	02-08-2005	0.901	3.670	15-05-2006
2006-2007	1294	7.470	17-09-2006	0.398	3.900	09-04-2007
2007-2008	3032	9.475	18-07-2007	3.805	3.770	19-05-2008
2008-2009	978.2	7.100	27-10-2008	0.592	3.430	17-05-2009
2009-2010	3545	9.110	18-07-2009	0.000	3.330	18-03-2010
2010-2011	1417	7.020	30-07-2010	1.575	2.980	13-04-2011
2011-2012	1772	7.660	02-09-2011	0.000	3.565	28-03-2012
2012-2013	518.9	5.775	05-09-2012	0.000	3.250	14-02-2013
2013-2014	2686	7.445	02-08-2013	0.000	3.130	06-03-2014
2014-2015	3363	8.590	02-08-2014	0.000	3.000	12-02-2015
2015-2016	1297	6.820	27-06-2015	0.000	2.780	27-03-2016
2016-2017	630.9	5.820	12-07-2016	0.000	2.790	11-02-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : KUMBIDI (KR000C9) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : Chaliyar SD, Calicut**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	3.130	11.42 #	5.160	280.8	4.120	71.90	5.600	373.9 *	4.870	200.8 *	4.030	63.41
2	3.130	11.42 *	5.030	233.4 *	4.310	109.1	5.480	357.7	5.010	229.1 *	4.080	71.30
3	3.160	12.53 #	4.920	220.2	4.210	100.9	5.800	432.7 *	5.880	562.1	4.000	61.42
4	3.160	12.53 *	4.920	214.8	4.120	91.13	5.390	317.6 *	4.740	196.4	3.880	59.29 *
5	3.300	21.04	4.890	210.2	4.560	148.4	5.230	272.1	4.530	122.5	3.840	55.57 *
6	3.380	23.23	4.830	205.1	5.280	290.2 *	5.010	188.7	4.510	120.1	3.860	53.27
7	3.370	22.84	4.750	198.2	5.480	358.9	4.910	178.1	4.320	116.1	3.870	54.05
8	3.520	32.98	4.700	188.2	5.260	211.1	4.940	196.2	4.400	121.2 *	3.750	51.47
9	3.380	21.80	4.700	169.3 *	4.910	212.6	5.380	326.0	4.350	117.0	4.020	64.11
10	3.370	22.03	4.550	137.3	4.700	140.4	5.230	278.3 *	4.250	116.9	4.090	73.04
11	3.370	22.01 *	4.490	129.1	4.400	123.0	5.160	221.1	4.200	109.0	3.880	56.41
12	3.610	43.09	4.440	115.6	4.740	169.6	4.910	178.6	4.160	95.30	3.730	46.07 *
13	3.750	51.78	4.290	98.34	4.400	121.2 *	4.810	170.7	4.150	94.25	3.720	50.45
14	3.880	59.14	4.500	130.8	4.330	101.4	4.740	145.1	4.770	183.3	3.650	39.66
15	4.090	71.95	4.740	194.1	4.240	99.38 *	5.200	226.0	4.800	187.4 *	3.630	38.33
16	3.960	64.55	4.650	160.6 *	4.200	83.15	4.910	181.0	4.660	161.3	3.610	39.16
17	3.860	57.36	4.480	127.0	4.290	95.66	6.100	530.5 *	4.540	123.2	3.590	36.33
18	3.750	47.72 *	4.550	135.7	4.240	91.75	7.620	1219 #	4.530	140.9 *	3.480	28.27 #
19	3.610	43.32	5.100	268.1	4.520	116.4	7.060	926.1 #	4.510	109.6	3.460	27.06 #
20	3.520	32.56	6.100	613.4	4.240	212.7 *	6.280	737.2	4.390	85.61	3.440	29.36
21	3.470	26.33	6.080	604.3	5.390	329.6	5.840	548.7	4.180	83.02	3.520	38.90
22	3.630	45.64	5.860	573.8	5.500	365.9	5.670	464.6	4.150	88.21 *	3.480	34.12
23	3.660	47.59	5.630	382.4 *	5.820	485.8	5.430	331.8	4.080	72.22	3.660	39.61
24	3.940	63.29	5.270	292.2	5.340	332.8	5.100	248.6 *	4.030	66.10	3.650	38.56
25	4.080	80.06 *	4.960	224.0	5.020	217.6	4.900	223.3	3.870	55.15	3.530	37.63
26	4.440	127.1 *	4.740	190.3	4.810	154.3	4.790	193.3	3.730	50.38	3.480	28.27 *
27	4.650	170.2	4.700	186.0	4.730	174.6 *	4.740	164.1	3.880	55.06	3.450	28.04
28	6.455	794.9	4.300	106.2	5.250	269.4	5.090	251.9	4.410	87.64	3.440	27.50
29	6.055	529.4	4.280	107.4	5.840	495.1	5.010	229.1 *	4.400	121.2 *	3.420	26.38
30	5.455	350.0	4.240	99.38 *	6.460	750.0	4.960	218.8 *	4.380	118.3 #	3.400	25.35
31			4.200	93.12	5.780	476.4			4.070	72.08		
Ten-Daily Mean												
I Ten-Daily	3.290	19.18	4.845	205.8	4.695	173.5	5.297	292.1	4.686	190.2	3.942	60.69
II Ten-Daily	3.740	49.35	4.734	197.3	4.360	121.4	5.679	453.5	4.471	129.0	3.619	39.11
III Ten-Daily	4.583	223.5	4.933	259.9	5.449	368.3	5.153	287.4	4.107	79.03	3.503	32.43
Monthly												
Min.	3.130	11.42	4.200	93.12	4.120	71.90	4.740	145.1	3.730	50.38	3.400	25.35
Max.	6.455	794.9	6.100	613.4	6.460	750.0	7.620	1219	5.880	562.1	4.090	73.04
Mean	3.871	97.33	4.840	222.2	4.855	225.8	5.376	344.4	4.411	131	3.688	44.08

Annual Runoff in MCM = 2985 Annual Runoff in mm = 519

Peak Observed Discharge = 1219 cumecs on 18/09/2017 Corres. Water Level :7.62 m

Lowest Observed Discharge = 0.000 cumecs on 18/01/2018 Corres. Water Level :2.94 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : KUMBIDI (KR000C9) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : Chaliyar SD, Calicut**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	3.390	24.95	3.210	11.78	2.930	0.000	2.940	0.000	3.070	0.000	3.110	0.000
2	3.750	42.59 *	3.190	11.30	2.950	0.000	2.950	0.000	3.040	0.000	3.110	0.000
3	3.860	50.85 *	3.190	11.20	2.960	0.000	2.960	0.000	3.030	0.000	3.320	16.91
4	3.750	48.82	3.170	10.74	3.170	10.74	2.950	0.000	3.010	0.000	3.200	13.40
5	3.890	53.22 #	3.160	10.41	2.950	0.000	2.980	0.000	3.010	0.000	3.220	14.47
6	3.850	42.40	3.160	10.23	2.960	0.000	2.970	0.000	3.000	0.000	3.200	11.29 *
7	3.640	35.68	3.160	9.715 *	3.020	0.000	3.120	0.000	2.980	0.000	3.130	0.000
8	3.550	30.36	3.150	10.04	3.020	0.000	3.120	0.000	2.960	0.000	3.120	0.000
9	3.450	26.17	3.140	8.966 #	3.250	12.17	3.120	0.000	2.920	0.000	3.300	15.80
10	3.400	20.65 *	3.110	7.157	3.220	11.54	3.130	0.000	2.890	0.000	3.460	26.04
11	3.400	26.04	3.090	6.843	3.220	12.12 *	3.120	0.000	2.870	0.000	3.680	36.54
12	3.390	23.88	3.050	6.011	3.270	12.49	3.090	0.000	2.850	0.000	3.923	53.71
13	3.360	17.24	3.050	5.787	3.220	12.12 *	3.080	0.000	2.850	0.000	4.000	71.95 *
14	3.350	17.10	3.020	5.034 *	3.210	10.90	3.070	0.000	2.850	0.000	3.450	22.27
15	3.360	17.19	2.980	3.945 #	3.130	9.305	3.020	0.000	2.840	0.000	3.690	37.82
16	3.380	17.62	2.970	1.429	2.960	0.000	2.990	0.000	2.900	0.000	3.700	39.16
17	3.390	18.59 *	2.970	3.691 #	2.960	0.000	2.960	0.000	3.050	0.000	3.680	37.16
18	3.380	18.03	2.940	0.000	2.950	0.000	2.950	0.000	3.120	0.000	3.680	35.68
19	3.345	15.36	2.990	4.206 #	2.940	0.000	3.120	0.000	3.120	0.000	3.740	44.01
20	3.330	14.28	3.080	5.011	2.930	0.000	3.130	0.000	3.100	0.000	3.460	23.92 *
21	3.310	14.46	2.990	4.206 *	2.930	0.000	3.130	0.000	3.080	0.000	3.680	34.65
22	3.180	11.27	2.940	0.000	2.900	0.000	3.130	0.000	3.070	0.000	3.850	49.85
23	3.190	11.11	2.930	0.000	2.890	0.000	3.120	0.000	3.070	0.000	3.820	48.86
24	3.190	10.89 *	2.900	0.000	2.900	0.000	3.100	0.000	3.080	0.000	3.440	25.80
25	3.180	10.49 *	11.000	0.000	2.920	0.000	3.080	0.000	3.080	0.000	3.670	34.28
26	3.190	11.42	2.890	0.000	2.930	0.000	3.100	0.000	3.110	0.000	3.840	50.76
27	3.215	11.65	2.890	0.000	2.950	0.000	3.120	0.000	3.100	0.000	3.670	36.98 *
28	3.210	11.79	2.000	0.000	2.960	0.000	3.120	0.000	3.060	0.000	3.800	45.75
29	3.210	11.93	2.910	0.000			3.130	0.000	3.050	0.000	4.200	80.49
30	3.220	12.15	2.940	0.000			3.110	0.000	3.090	0.000	4.240	85.41
31	3.210	11.70 *	2.930	0.000			3.080	0.000			4.440	104.5 #
Ten-Daily Mean												
I Ten-Daily	3.653	37.57	3.164	10.15	3.043	3.445	3.024	0.000	2.991	0.000	3.217	9.791
II Ten-Daily	3.369	18.53	3.014	4.196	3.079	5.694	3.053	0.000	2.955	0.000	3.700	40.22
III Ten-Daily	3.210	11.72	3.575	0.382	2.923	0.000	3.111	0.000	3.079	0.000	3.877	54.30
Monthly												
Min.	3.180	10.49	2.000	0.000	2.890	0.000	2.940	0.000	2.840	0.000	3.110	0.000
Max.	3.890	53.22	11.000	11.78	3.270	12.49	3.130	0.000	3.120	0.000	4.440	104.5
Mean	3.404	22.25	3.261	4.764	3.021	3.264	3.064	0	3.008	0	3.607	35.4

Peak Computed Discharge = 530.5 cumecs on 17/09/2017 **Corres. Water Level :6.1 m**

Lowest Computed Discharge = 4.206 cumecs on 21/01/2018 **Corres. Water Level :2.99 m**

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

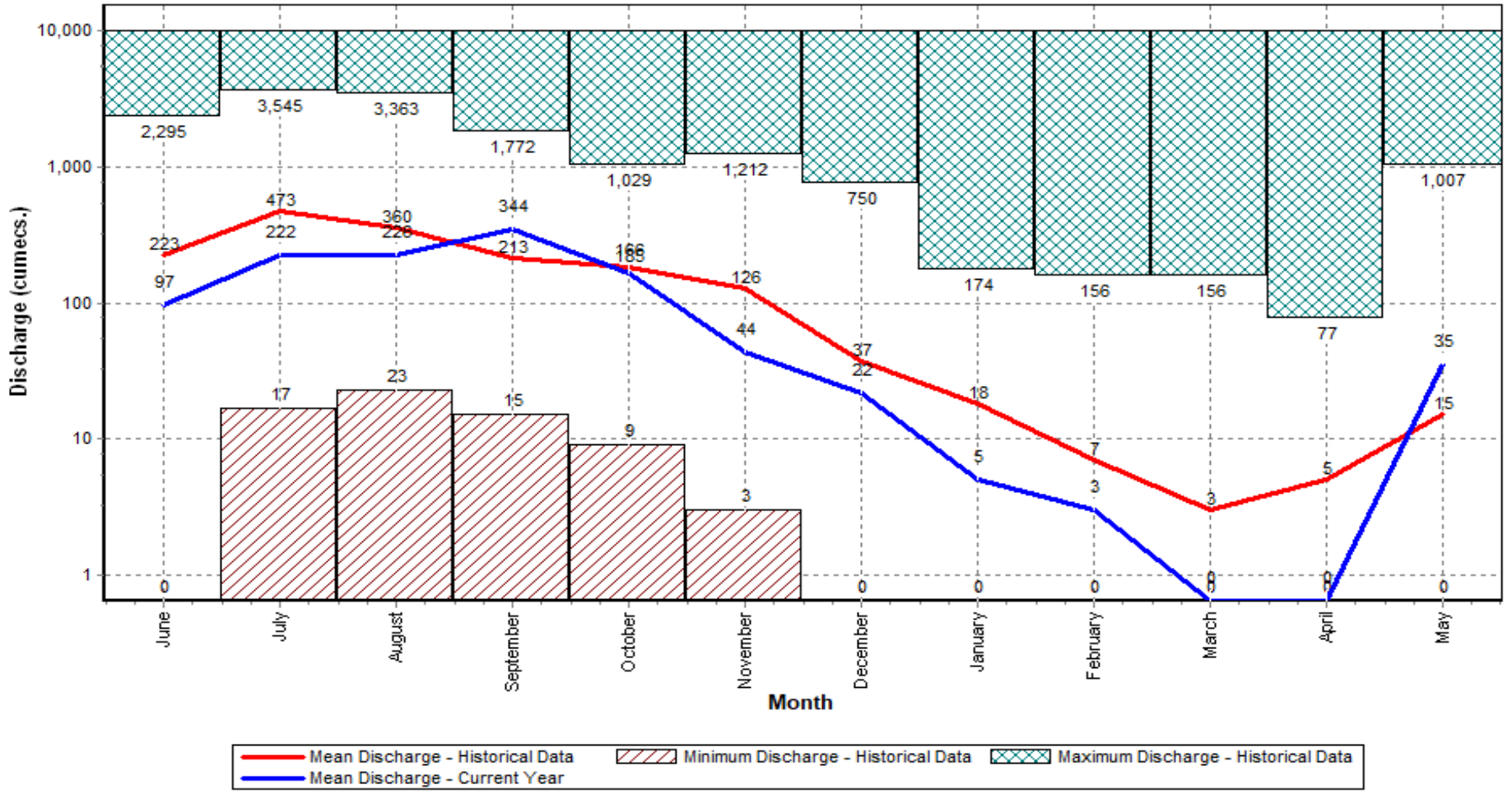
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : KUMBIDI (KR000C9) | **Data considered : 1980-2018** | **Division : SWR Division, Cochin**

Local River : Bharathapuzha | **Sub-Division : Chaliyar SD, Calicut**



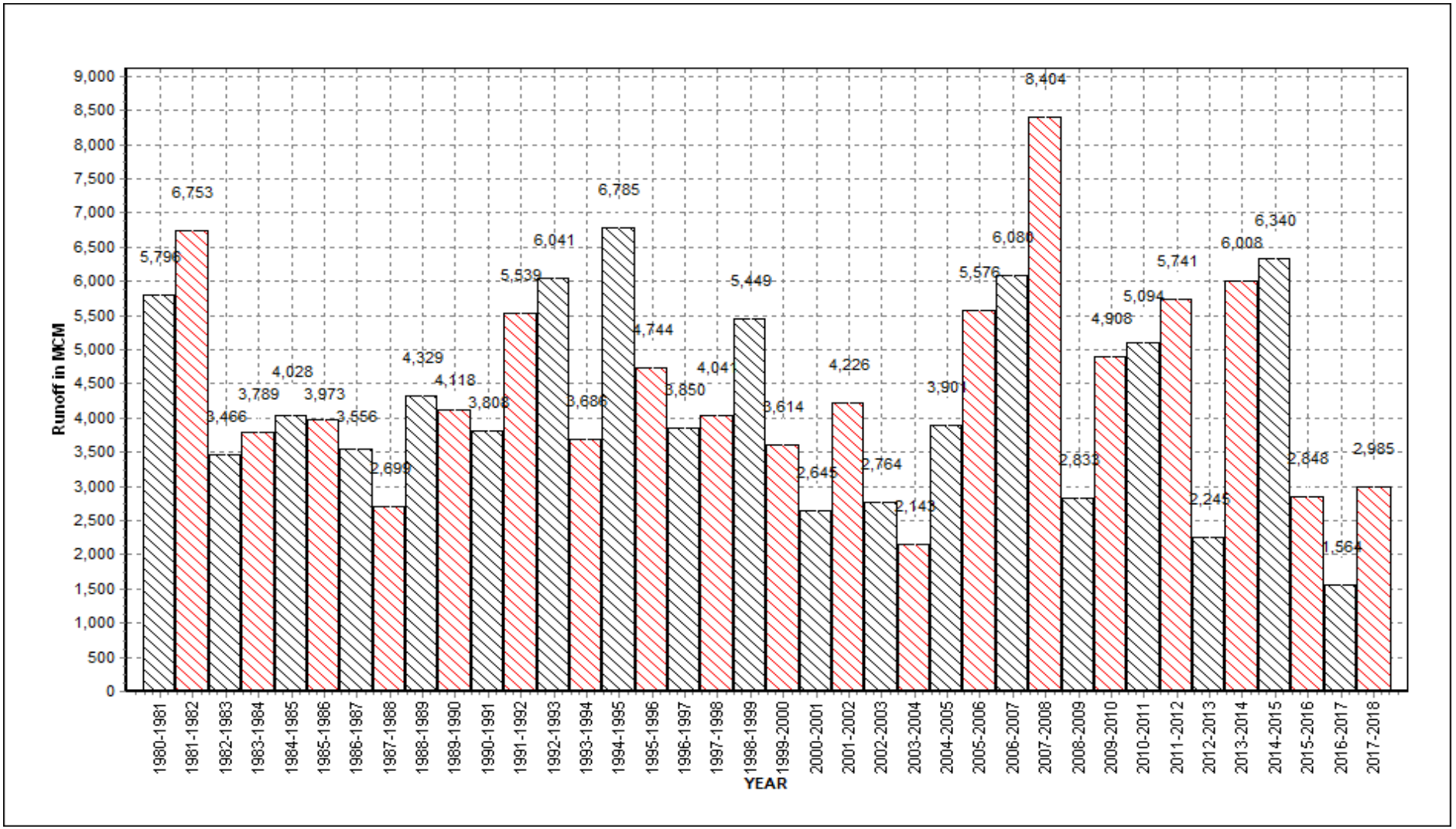
Annual Runoff Values for the period: 1980 - 2018

Station Name : KUMBIDI (KR000C9)

Local River : Bharathapuzha

Division : SWR Division, Cochin

Sub-Division : Chaliyar SD, Calicut

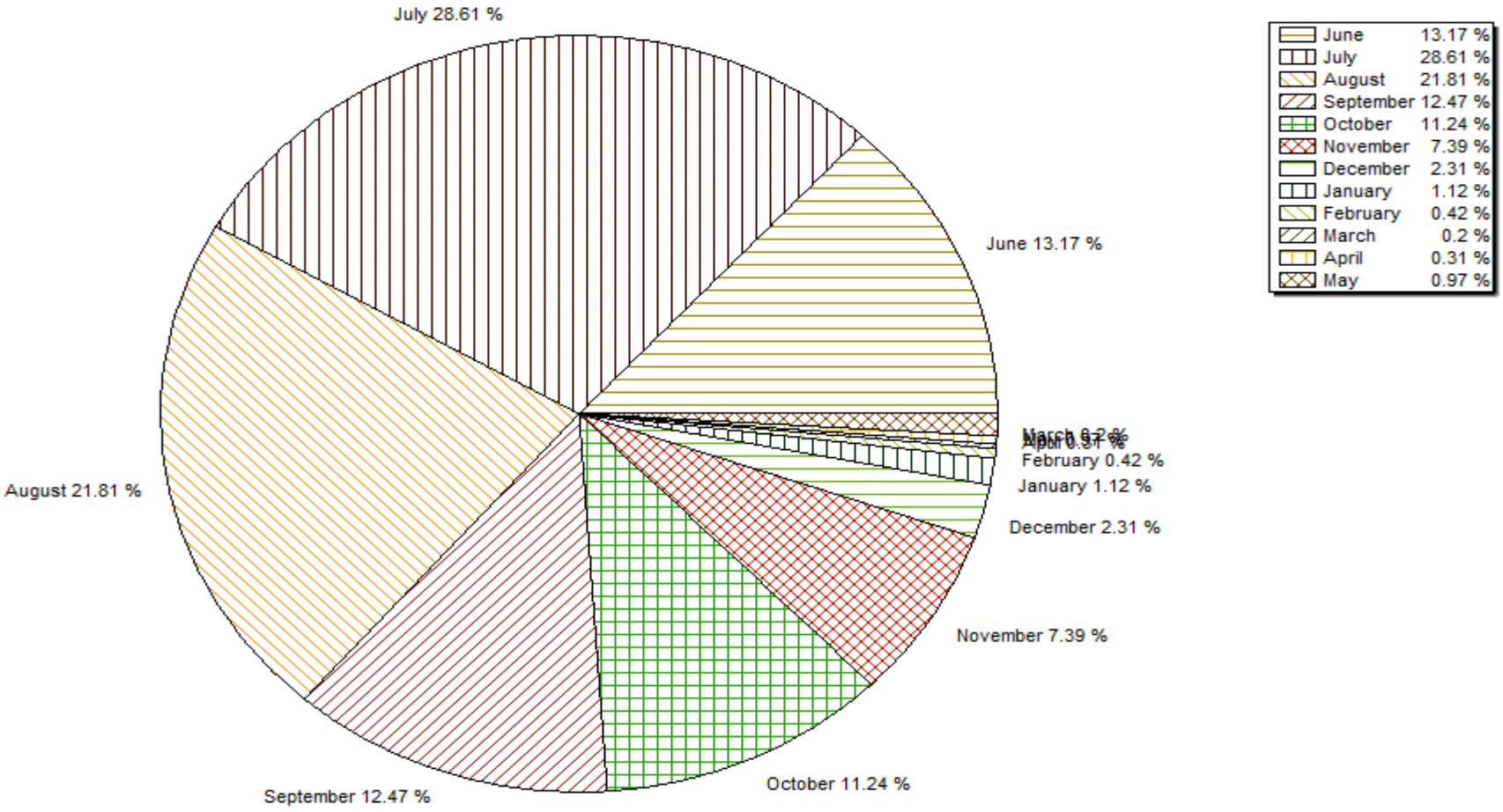


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1980-2017

Station Name : KUMBIDI (KR000C9)
Local River : Bharathapuzha

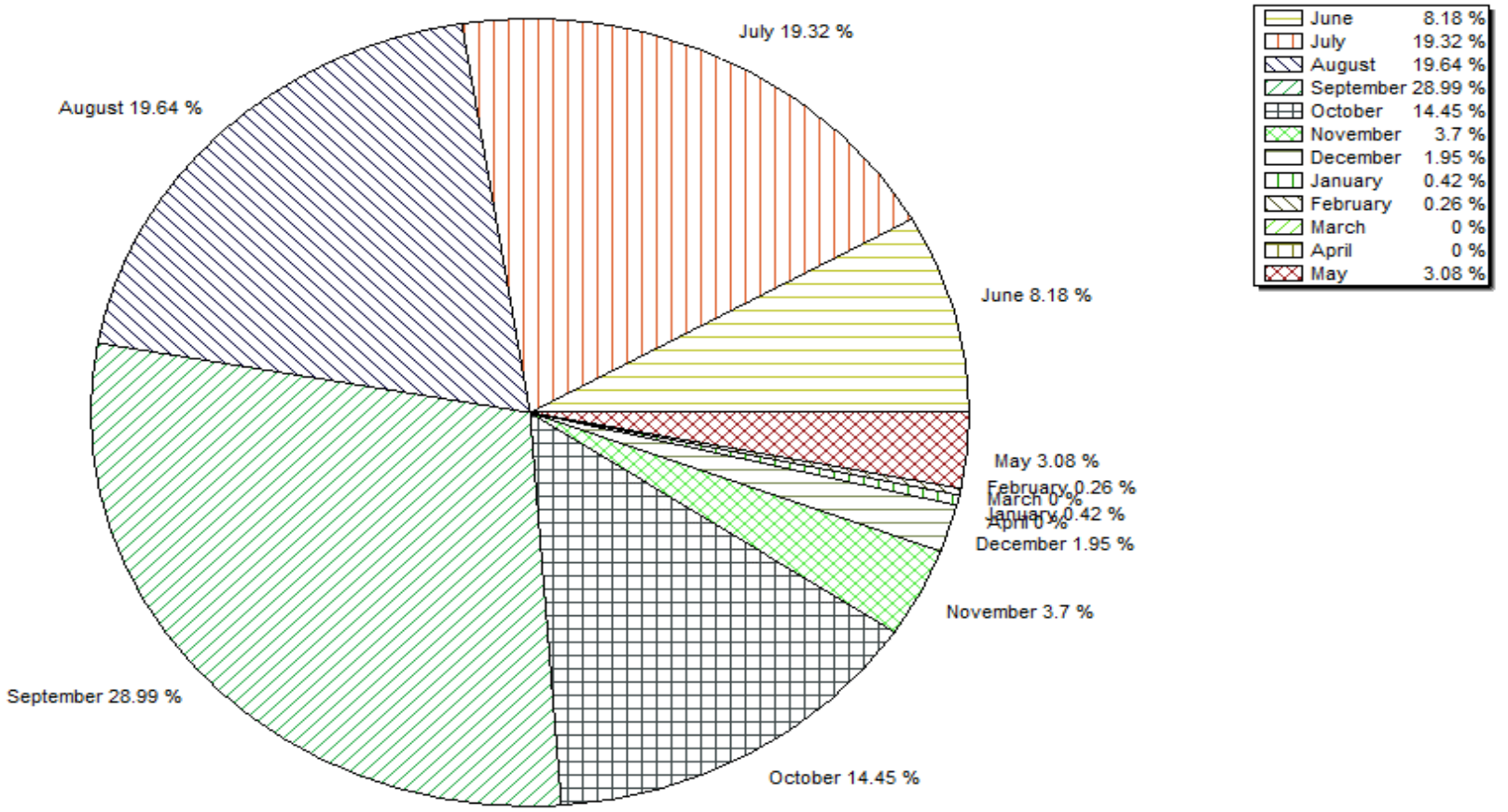
Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



Monthly Runoff for the Year : 2017-2018

Station Name : KUMBIDI (KR000C9)
Local River : Bharathapuzha

Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



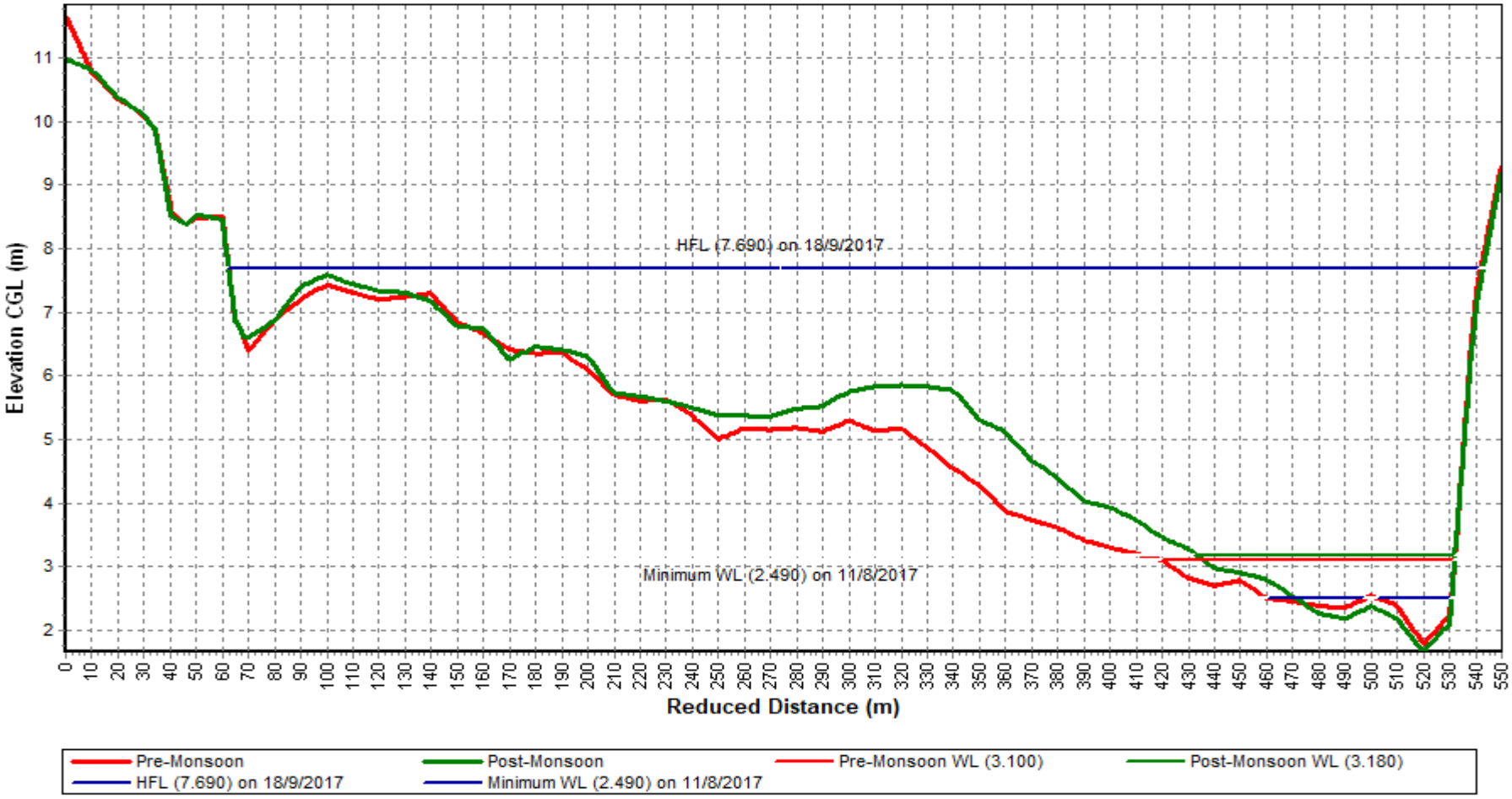
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : KUMBIDI (KR000C9)

Local River : Bharathapuzha

Division : SWR Division, Cochin

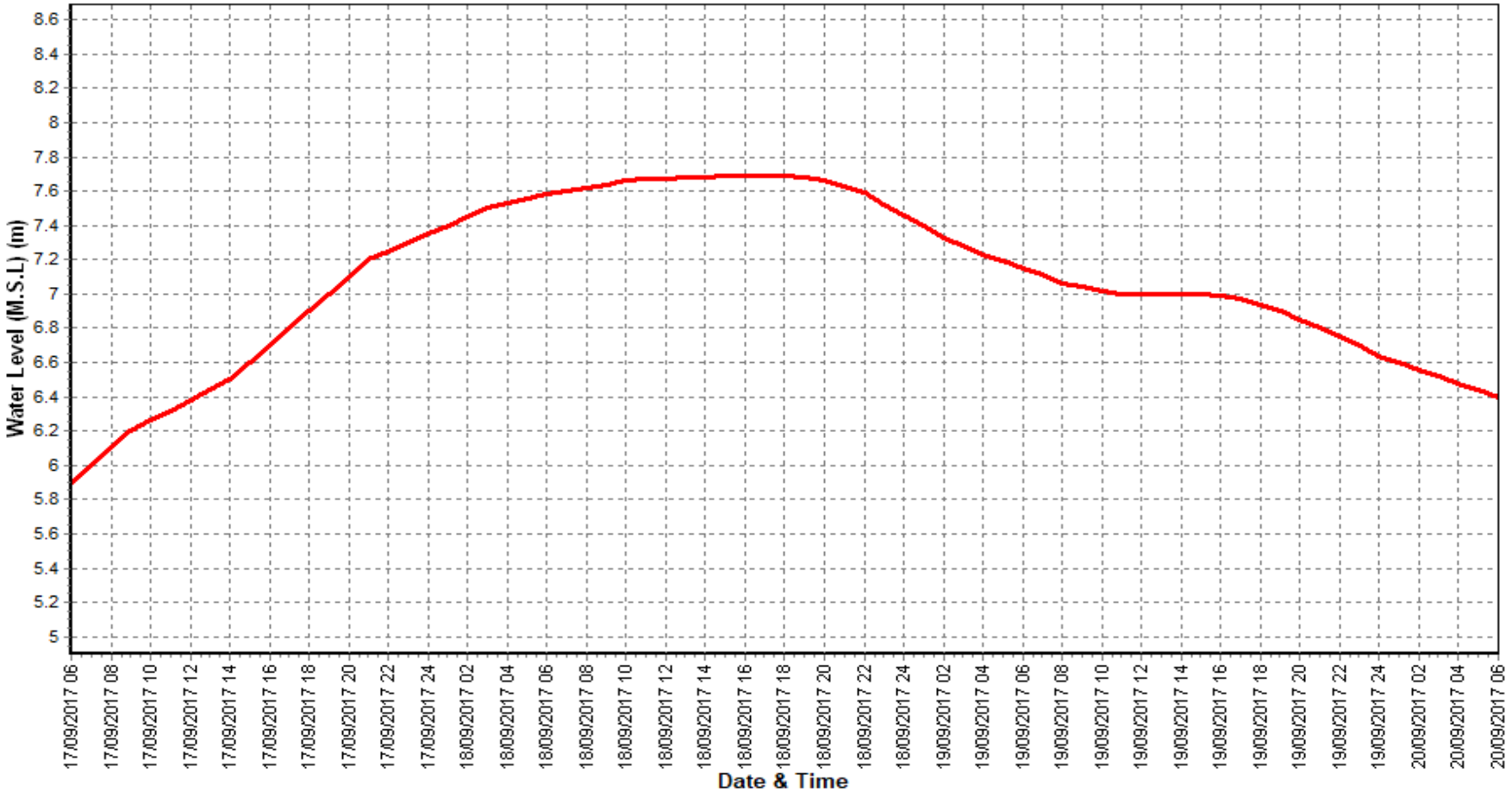
Sub-Division : Chaliyar SD, Calicut



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : KUMBIDI (KR000C9) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : Chaliyar SD, Calicut**

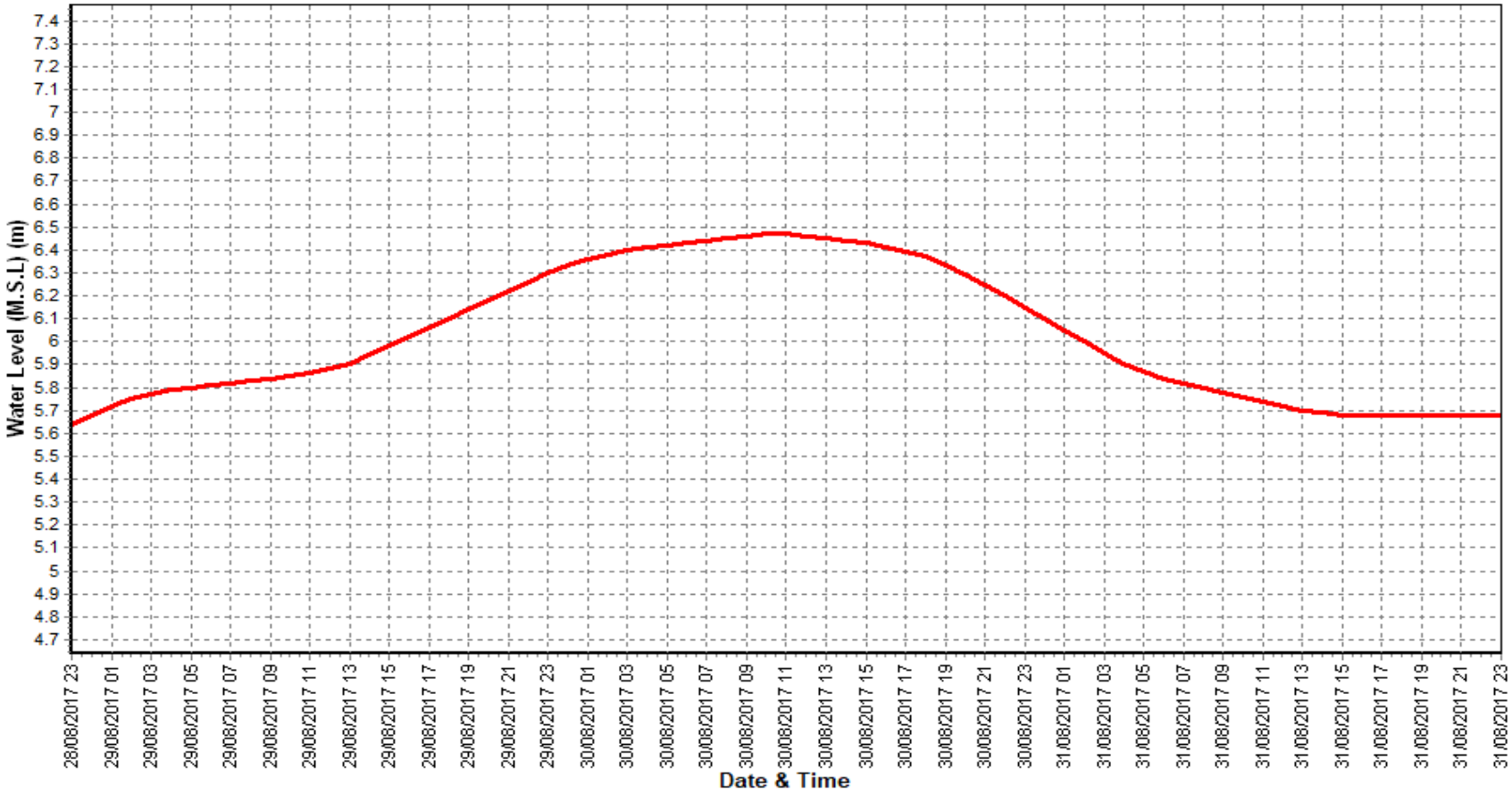


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : KUMBIDI (KR000C9) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : Chaliyar SD, Calicut**

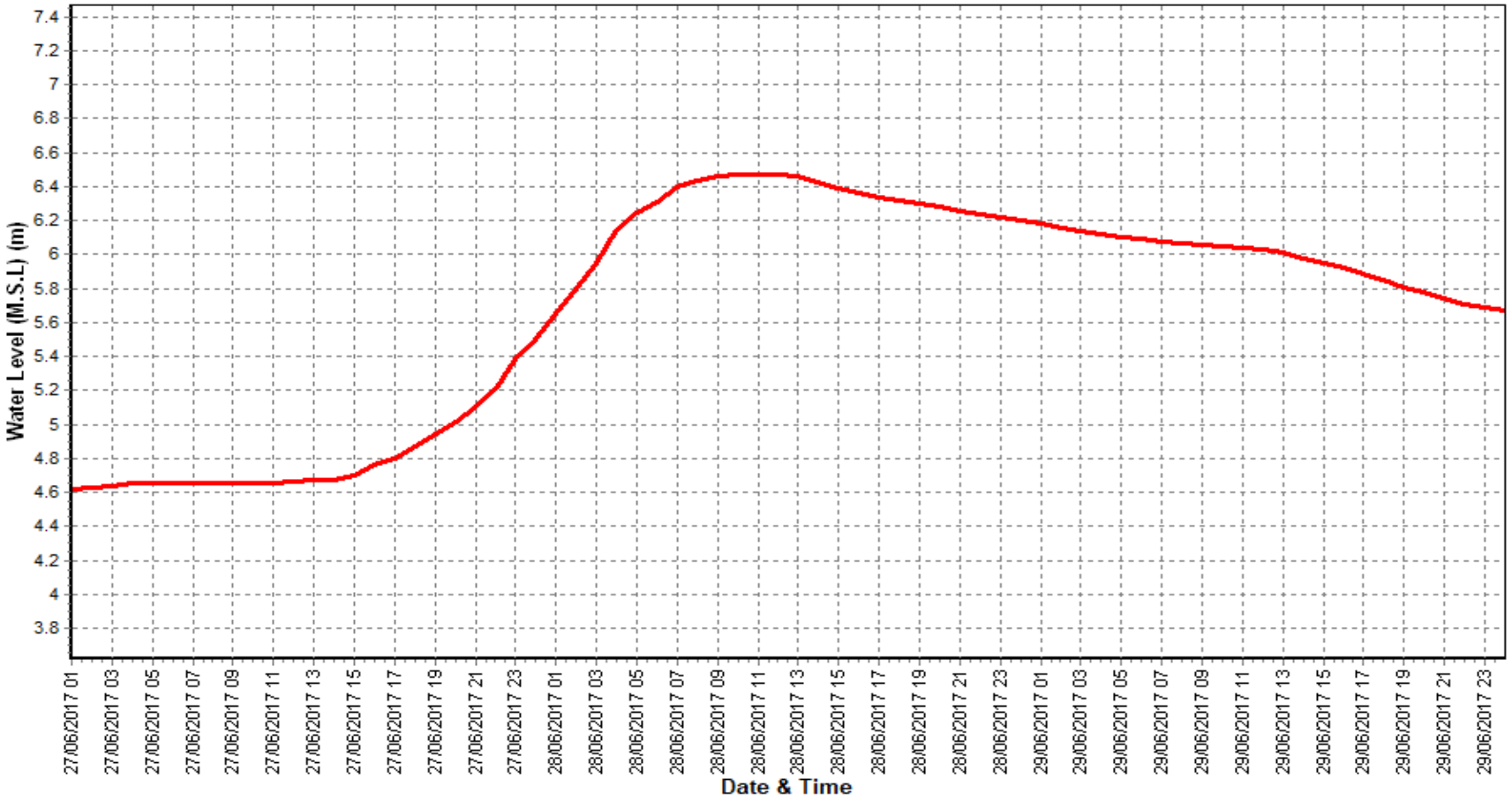


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : KUMBIDI (KR000C9) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : Chaliyar SD, Calicut**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-2018

Site	:	**PULAMANTHOLE**	**Code**	:	**KRA00G4**
State	:	Kerala	District		Palakkad
Basin	:	WFR South of Tapi	Independent River	:	Bharathapuzha
Tributary	:	Pulanthodu	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Pulanthodu
Division	:	SWR Division, Kochi	Sub-Division	:	Chaliyar SD, Calicut
Drainage Area	:	940 Sq. Km.	Bank	:	Left
Latitude	:	10°53'53"	Longitude	:	76°11'31"
Zero of Gauge (m)	:	84.500 (m.s.l) 10.400 (m.s.l)	24-05-1985 01-06-1987	-	31-05-1987
		Opening Date	Closing Date		
Gauge	:	24-05-1985			
Discharge	:	17-02-1986			
Sediment	:	28-08-1986			
Water Quality	:	02-06-1986			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1986-1987	782.7	90.145	09-08-1986	0.000	85.545	06-04-1987
1987-1988	273.7	14.175	20-11-1987	0.000	11.420	02-04-1988
1988-1989	436.9	15.265	19-07-1988	0.000	11.265	05-03-1989
1989-1990	677.9	16.175	23-07-1989	0.000	11.340	22-03-1990
1990-1991	465.0	15.180	02-07-1990	0.000	11.450	17-03-1991
1991-1992	580.3	15.728	28-07-1991	0.059	11.315	24-03-1992
1992-1993	1410	18.489	28-07-1992	0.568	11.355	27-04-1993
1993-1994	325.0	14.398	03-07-1993	0.724	11.302	12-03-1994
1994-1995	1344	18.800	14-07-1994	0.091	11.340	25-03-1995
1995-1996	483.4	15.340	31-08-1995	0.600	11.250	09-03-1996
1996-1997	500.0	15.395	29-09-1996	0.449	11.310	12-03-1997
1997-1998	1020	17.680	11-07-1997	0.956	11.380	24-04-1998
1998-1999	560.0	15.500	24-08-1998	1.000	11.320	02-05-1999
1999-2000	605.0	16.000	18-07-1999	0.000	11.295	12-03-2000
2000-2001	479.1	15.090	12-07-2000	0.360	11.130	25-03-2001
2001-2002	538.0	15.230	08-07-2001	0.555	11.110	03-05-2002
2002-2003	408.7	14.410	18-08-2002	0.990	11.030	13-02-2003
2003-2004	175.1	13.100	20-06-2003	0.000	10.810	28-02-2004

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2004-2005	630.2	15.620	05-08-2004	0.000	10.960	05-03-2005
2005-2006	535.0	15.240	31-07-2005	1.038	10.920	16-05-2006
2006-2007	672.0	15.800	17-09-2006	0.123	10.930	08-04-2007
2007-2008	1166	16.995	03-07-2007	1.189	11.030	12-03-2008
2008-2009	632.8	15.400	26-10-2008	0.000	11.070	26-01-2009
2009-2010	1125	16.780	17-07-2009	0.000	11.170	01-06-2009
2010-2011	603.6	14.470	10-11-2010	0.086	10.770	19-03-2011
2011-2012	673.6	14.920	18-06-2011	0.165	10.675	20-04-2012
2012-2013	305.6	13.650	07-08-2012	0.000	10.625	09-02-2013
2013-2014	619.5	15.190	26-06-2013	0.000	11.465	12-04-2014
2014-2015	690.8	15.705	02-08-2014	0.000	12.930	01-06-2015
2015-2016	401.2	14.500	27-06-2015	0.000	12.910	01-03-2016
2016-2017	212.7	13.875	29-06-2016	0.000	11.800	21-02-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Daily Discharge Data for the period 2017 - 2018

Station Name : PULAMANTHOLE (KRA00G4) **Division : SWR Division, Cochin**

Local River : Pulanthodu **Sub-Division : Chaliyar SD, Calicut**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	12.950	4.155	13.360	58.46	13.335	67.88	13.490	93.97 *	13.540	107.4 *	13.150	22.58
2	12.950	4.125	13.370	65.28 *	13.695	164.9	13.795	191.6	13.600	124.6 *	13.205	28.18
3	12.960	5.963	13.260	42.83	13.250	44.45	13.620	130.6 *	13.440	88.62	13.160	24.57
4	12.980	7.246 *	13.330	54.50	13.420	83.99	13.500	96.59 *	13.430	82.05	13.140	24.37 *
5	13.000	9.616	13.270	46.60	13.350	67.70	13.435	87.24	13.435	80.06	13.130	23.02 *
6	12.980	8.989	13.220	36.50	13.610	127.6 *	13.575	126.9	13.535	105.7	13.180	28.69
7	13.020	12.13	13.210	34.18	13.450	88.59	13.480	102.1	13.400	69.42	13.160	24.64
8	12.990	9.345	13.170	29.08	13.370	72.71	13.855	203.6	13.380	67.48 *	13.160	24.91
9	12.970	7.697	13.150	25.75 *	13.305	58.04	13.765	178.7	13.370	64.76	13.240	36.50
10	12.950	4.122	13.140	22.92	13.600	132.3	13.690	152.7 *	13.300	46.85	13.160	24.58
11	12.960	5.788 *	13.140	23.03	13.355	73.12	13.410	84.32	13.460	76.68	13.110	18.73
12	13.110	21.56	13.130	22.22	13.525	112.1	13.490	90.61	13.325	54.78	13.100	19.19 *
13	13.080	16.52	13.090	19.26	13.300	50.85 *	13.360	64.32	13.860	195.8	13.090	17.13
14	13.120	21.74	13.340	65.57	13.240	42.22	13.335	60.82	13.630	123.2	13.080	16.03
15	13.160	26.67	13.220	36.22	13.250	41.59 *	13.735	153.4	13.540	107.4 *	13.060	14.34
16	13.080	15.42	13.200	33.22 *	13.310	53.26	13.440	86.79	13.445	76.30	13.070	15.90
17	13.020	12.03	13.160	25.16	13.270	44.30	15.500	1268 *	13.360	58.79	13.050	13.30
18	13.010	9.722 *	13.270	45.59	13.245	39.62	16.310	2091 #	13.530	104.6 *	13.040	11.98
19	12.995	9.392	13.845	201.9	13.340	59.97	14.455	381.3	13.620	129.5	13.035	12.05 *
20	13.000	9.967	13.860	216.9	13.410	74.29 *	14.015	262.9	13.340	64.70	13.030	11.41
21	13.000	9.992	13.760	184.9	13.620	139.5	13.860	200.8	13.300	46.75	13.050	13.67
22	13.000	10.02	13.670	152.8	13.575	125.2	13.765	167.8	13.300	50.85 *	13.030	11.47
23	13.000	10.10	13.490	93.97 *	13.535	115.1	13.635	136.6	13.270	43.04	13.040	12.05
24	13.040	13.01	13.390	76.91	13.500	103.2	13.470	88.85 *	13.250	34.58	13.040	12.19
25	13.160	27.18 *	13.330	62.03	13.435	89.63	13.530	97.80	13.190	26.54	13.020	10.61
26	13.250	41.59 *	13.250	44.34	13.310	57.08	13.675	137.0	13.160	25.12	13.010	9.722 *
27	13.740	179.5	13.210	36.72	13.450	83.86 *	13.600	113.1	13.475	85.62	13.010	9.389
28	13.820	205.2	13.180	31.11	13.420	84.44	13.740	148.8	13.480	89.41	13.010	9.673
29	13.590	125.5	13.150	24.74	13.870	208.2	13.930	240.7 *	13.240	39.85 *	13.010	9.599
30	13.425	77.68	13.130	23.02 *	13.935	243.2	13.650	139.9 *	13.180	28.59	13.000	7.379
31			13.220	36.44	13.695	160.9			13.210	30.02		
Ten-Daily Mean												
I Ten-Daily	12.975	7.338	13.248	41.61	13.438	90.82	13.620	136.4	13.443	83.69	13.168	26.20
II Ten-Daily	13.054	14.88	13.325	68.90	13.324	59.14	14.105	454.3	13.511	99.18	13.066	15.01
III Ten-Daily	13.302	69.98	13.344	69.73	13.577	128.2	13.685	147.1	13.278	45.49	13.022	10.58
Monthly												
Min.	12.950	4.122	13.090	19.26	13.240	39.62	13.335	60.82	13.160	25.12	13.000	7.379
Max.	13.820	205.2	13.860	216.9	13.935	243.2	16.310	2091	13.860	195.8	13.240	36.50
Mean	13.110	30.73	13.307	60.39	13.451	93.87	13.804	246	13.406	75.13	13.086	17.26

Annual Runoff in MCM = 1477 Annual Runoff in mm = 1571

Peak Observed Discharge = 2091 cumecs on 18/09/2017 Corres. Water Level :16.31 m

Lowest Observed Discharge = 0.000 cumecs on 01/02/2018 Corres. Water Level :12.865 m

* : Computed Discharge

#:Discarded Discharge(values changed as per rating curve)

Note: Missing values have not been considered while arriving at Annual Runoff

Daily Discharge Data for the period 2017 - 2018

Station Name : PULAMANTHOLE (KRA00G4) **Division : SWR Division, Cochin**

Local River : Pulanthodu **Sub-Division : Chaliyar SD, Calicut**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	12.990	6.661	12.920	2.296	12.865	0.000	12.920	2.797	12.900	1.501 *	12.060	0.000 *
2	13.170	36.36 *	12.920	2.366	12.810	0.000	12.910	2.059	12.910	2.080	12.470	0.000 *
3	13.160	34.13 *	12.920	2.375	12.750	0.000	12.910	2.052	12.900	1.477	12.750	5.551 #
4	13.090	17.27	12.920	2.373	12.730	0.000	12.910	1.931 *	12.895	1.423	12.795	6.930 #
5	13.070	16.01	12.920	2.633	12.720	0.000	12.910	2.025	12.890	1.129 #	12.940	16.66
6	13.070	15.89	12.915	1.796	12.710	0.000	12.900	1.481	12.890	1.129 #	12.660	2.441 *
7	13.050	13.45	12.910	1.931 *	12.700	0.000	12.910	2.051	12.880	0.000	12.930	16.37
8	13.020	10.63	12.910	1.458	13.030	11.49	12.910	2.046	12.860	0.000	12.550	0.484 #
9	13.000	9.425	12.910	1.640	12.970	5.739	12.910	2.075	12.810	0.000	12.430	6.583
10	12.980	6.657 *	12.910	1.622	12.960	4.634	12.910	2.051	12.720	0.000	13.120	38.59
11	12.970	7.500	12.910	1.653	12.940	3.580 *	12.900	1.501 *	12.725	0.000	13.050	29.67
12	12.970	7.452	12.905	1.363	12.940	3.655	12.900	1.472	12.560	0.000	13.090	35.29
13	12.970	7.483	12.905	1.373	12.915	2.168 *	12.875	0.000	12.580	0.000	12.950	18.57 *
14	13.010	10.37	12.905	1.708 *	12.910	2.055	12.770	0.000	12.770	0.000	12.850	14.06
15	13.060	13.90	12.900	1.229	12.910	2.063	12.710	0.000	12.820	0.000	12.660	2.441 #
16	13.000	7.843	12.900	1.215	12.900	1.460	12.690	0.000	12.960	5.308	12.530	0.308 #
17	12.980	6.657 *	12.895	1.308 #	12.900	1.437	12.960	5.316	12.970	5.950	12.900	15.00
18	12.970	6.108	12.890	1.129 #	12.900	1.501 *	12.950	4.253 *	12.940	4.146	12.855	13.87
19	12.960	4.809	12.890	1.129 #	12.900	1.460	12.950	4.005	12.930	3.170	12.910	15.29
20	12.950	4.232	12.890	1.129 #	12.900	1.456	12.940	3.696	12.920	2.734	12.950	18.57 *
21	12.950	4.222	12.890	1.129 *	12.890	1.129 #	12.940	3.691	12.920	2.721	12.965	17.21
22	12.950	4.230	12.890	1.129 #	12.895	1.308 #	12.930	3.028	12.930	2.969 *	12.950	16.16
23	12.950	4.217	12.880	0.814 #	12.890	1.129 #	12.920	2.377	12.950	4.005	12.925	14.39
24	12.940	3.580 *	12.880	0.814 #	12.900	1.471	12.920	2.344	12.935	3.962	12.910	13.43
25	12.940	3.580 *	12.880	0.814 #	12.910	1.931 *	12.970	5.791 *	12.920	2.711	13.240	58.41
26	12.940	3.673	12.885	0.965 *	12.910	2.064	12.950	4.002	12.920	2.730	13.010	20.49
27	12.930	3.144	12.890	1.129 #	12.915	2.387	12.940	3.702	12.910	1.880	12.995	22.83 *
28	12.900	1.513	12.890	1.129 *	12.910	2.266	12.930	3.098	12.890	1.129 #	13.420	89.81 #
29	12.920	2.495	12.900	1.214			12.930	2.969 *	12.560	0.000	13.195	54.01
30	12.920	2.311	12.890	1.129 #			12.920	2.420 *	12.100	0.000	13.240	58.53
31	12.910	1.931 *	12.885	0.965 #			12.910	2.081			13.095	34.07
Ten-Daily Mean												
I Ten-Daily	13.060	16.65	12.916	2.049	12.824	2.186	12.910	2.057	12.865	0.874	12.670	9.362
II Ten-Daily	12.984	7.635	12.899	1.324	12.912	2.084	12.864	2.024	12.818	2.131	12.875	16.31
III Ten-Daily	12.932	3.172	12.887	1.021	12.903	1.711	12.933	3.227	12.804	2.211	13.086	36.30
Monthly												
Min.	12.900	1.513	12.880	0.814	12.700	0.000	12.690	0.000	12.100	0.000	12.060	0.000
Max.	13.170	36.36	12.920	2.633	13.030	11.49	12.970	5.791	12.970	5.950	13.420	89.81
Mean	12.990	8.959	12.900	1.45	12.878	2.014	12.903	2.462	12.829	1.739	12.884	21.16

Peak Computed Discharge = 1268 cumecs on 17/09/2017 Corres. Water Level :15.5 m

Lowest Computed Discharge = 0.000 cumecs on 01/05/2018 Corres. Water Level :12.06 m

* : Computed Discharge

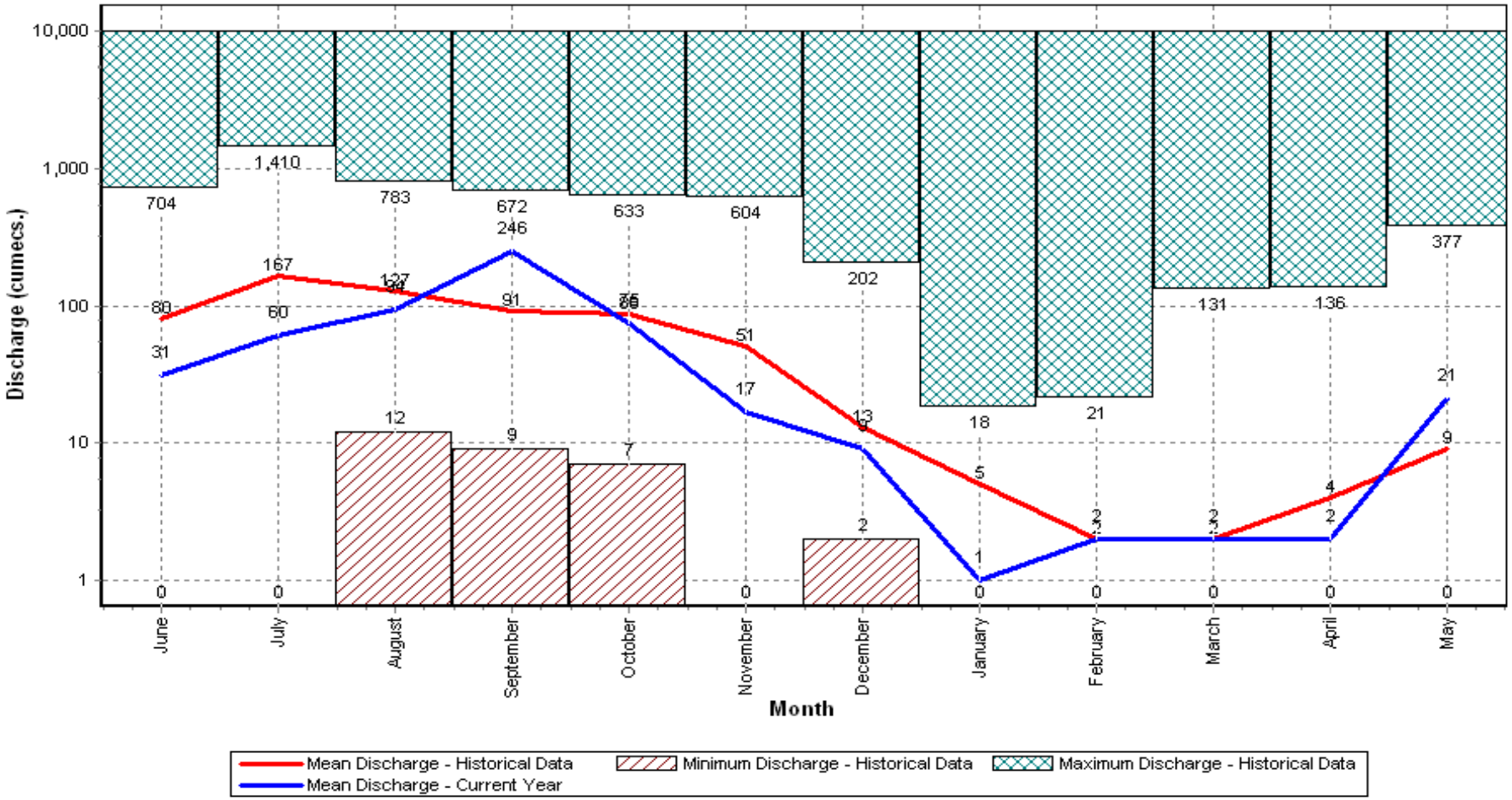
#:Discarded Discharge(values changed as per rating curve)

Note: Missing values have not been considered while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : PULAMANTHOLE (KRA00G4) | **Data considered : 1986-2018** | **Division : SWR Division, Cochin**

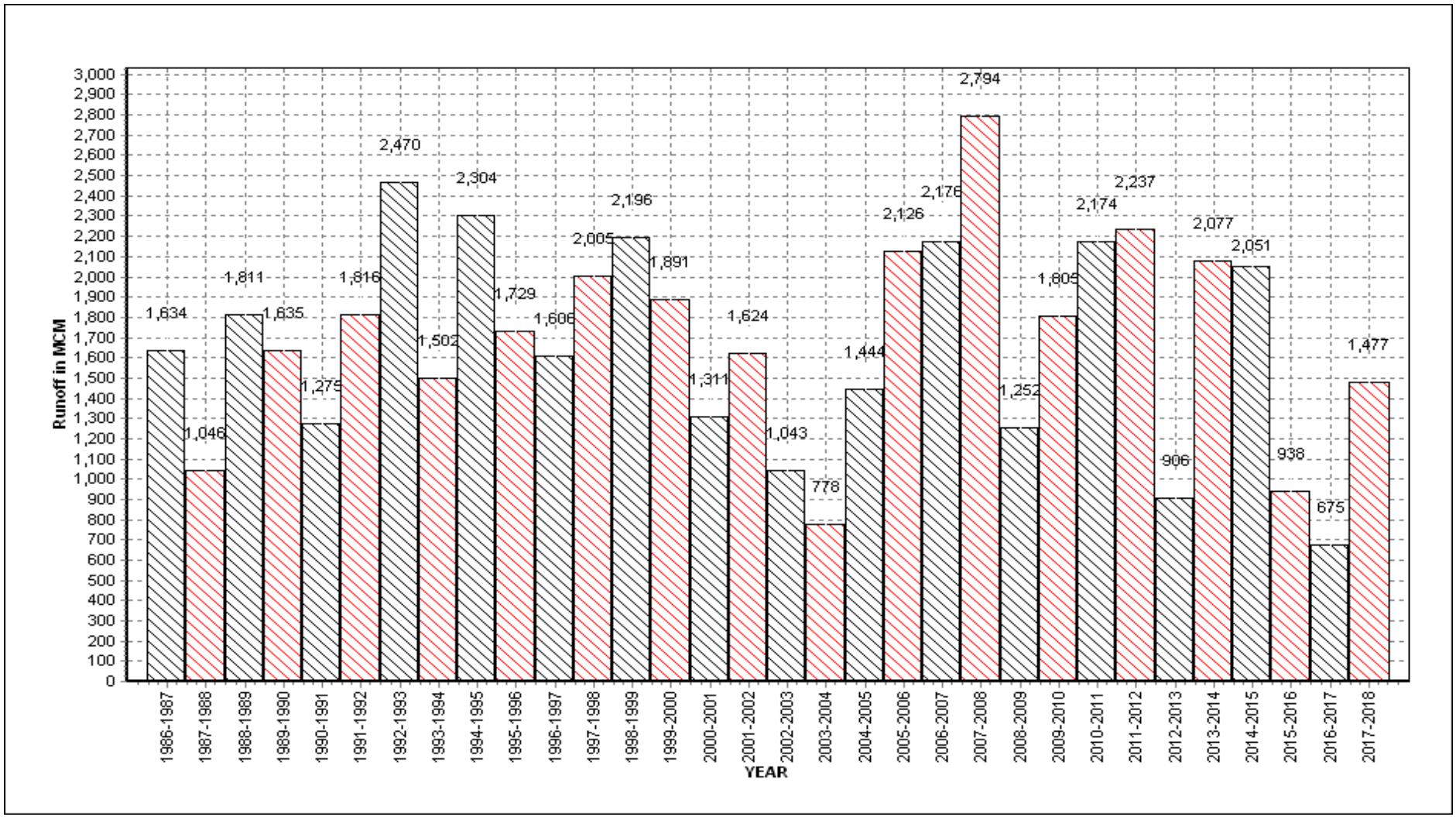
Local River : Pulanthodu | **Sub-Division : Chaliyar SD, Calicut**



Annual Runoff Values for the period: 1986 - 2018

Station Name : PULAMANTHOLE (KRA00G4) **Division : SWR Division, Cochin**

Local River : Pulanthodu **Sub-Division : Chaliyar SD, Calicut**



Note: Missing values have not been considered while arriving at Annual Runoff

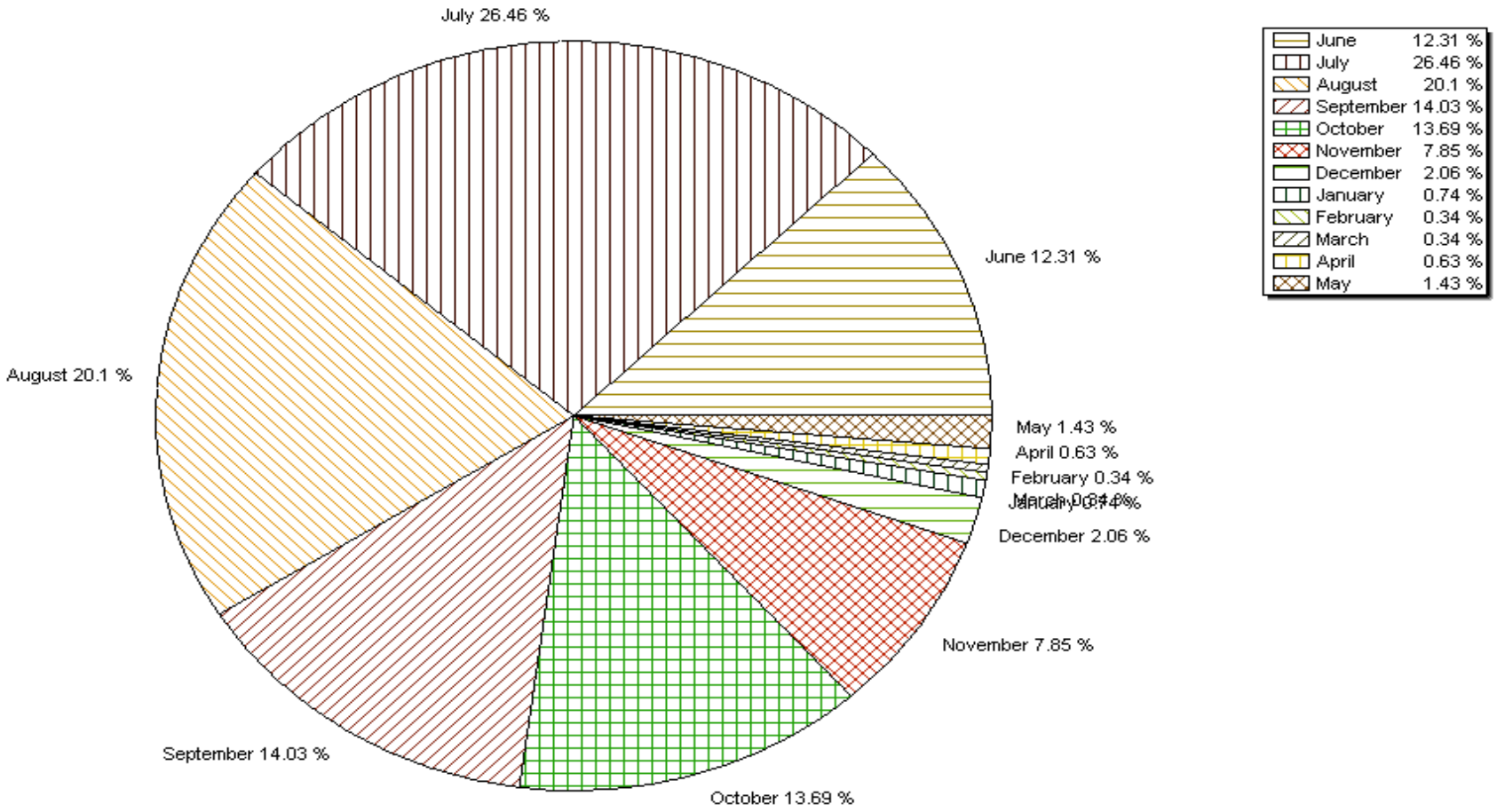
Monthly Average Runoff based on period : 1986-2017

Station Name : PULAMANTHOLE (KRA00G4)

Local River : Pulanthodu

Division : SWR Division, Cochin

Sub-Division : Chaliyar SD, Calicut



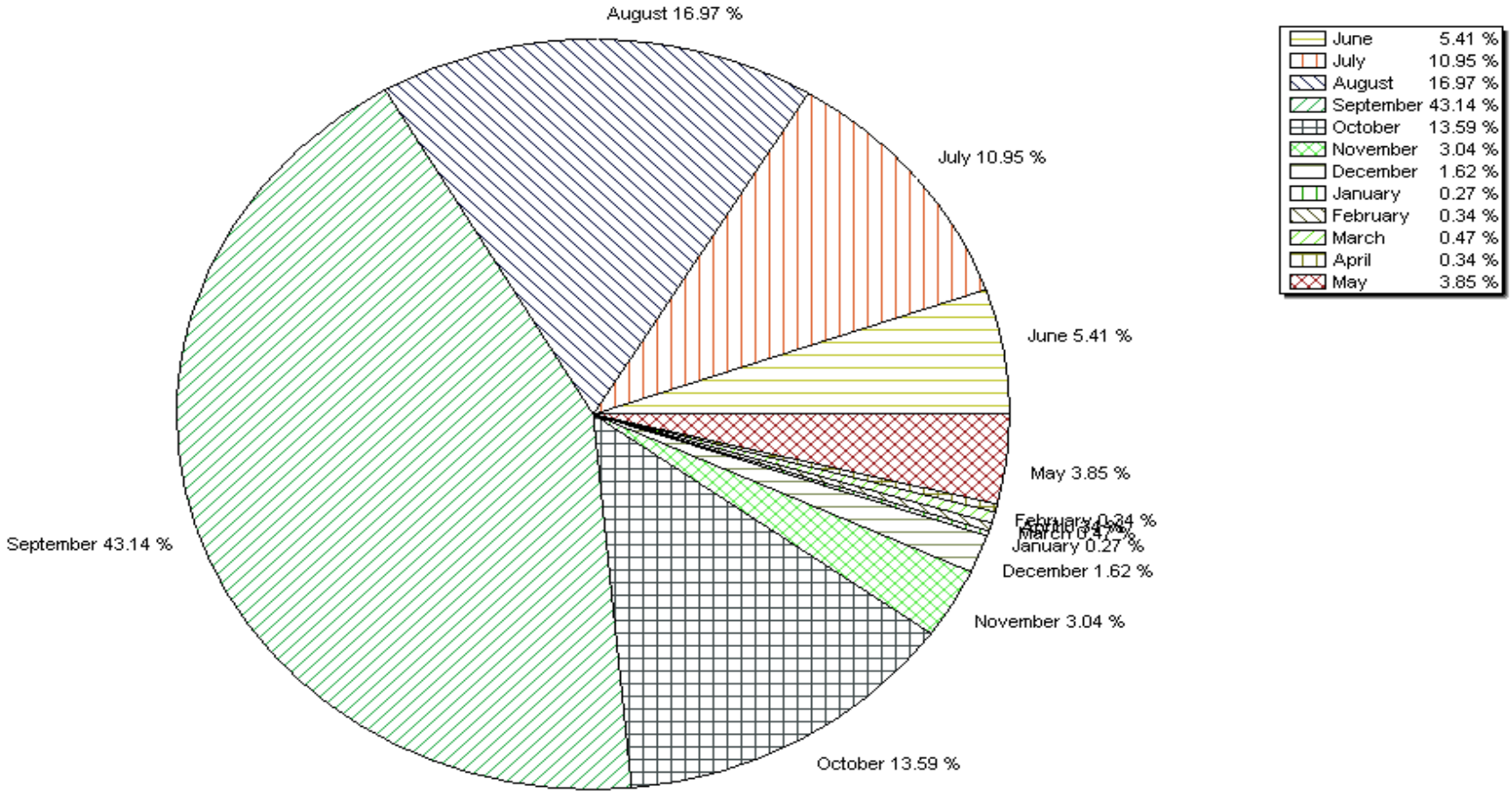
Monthly Runoff for the Year : 2017-2018

Station Name : PULAMANTHOLE (KRA00G4)

Division : SWR Division, Cochin

Local River : Pulanthodu

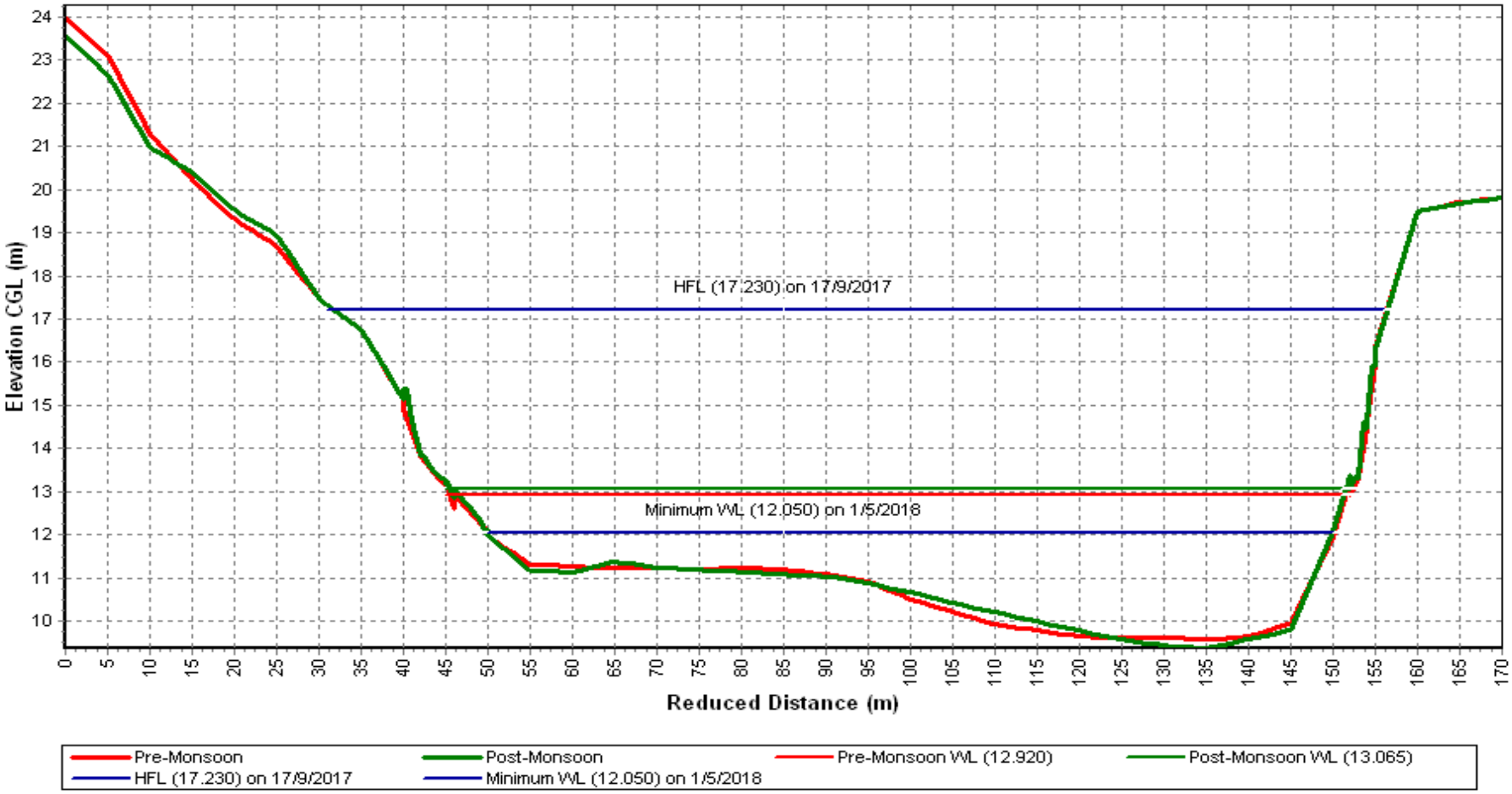
Sub-Division : Chaliyar SD, Calicut



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : PULAMANTHOLE (KRA00G4) **Division : SWR Division, Cochin**

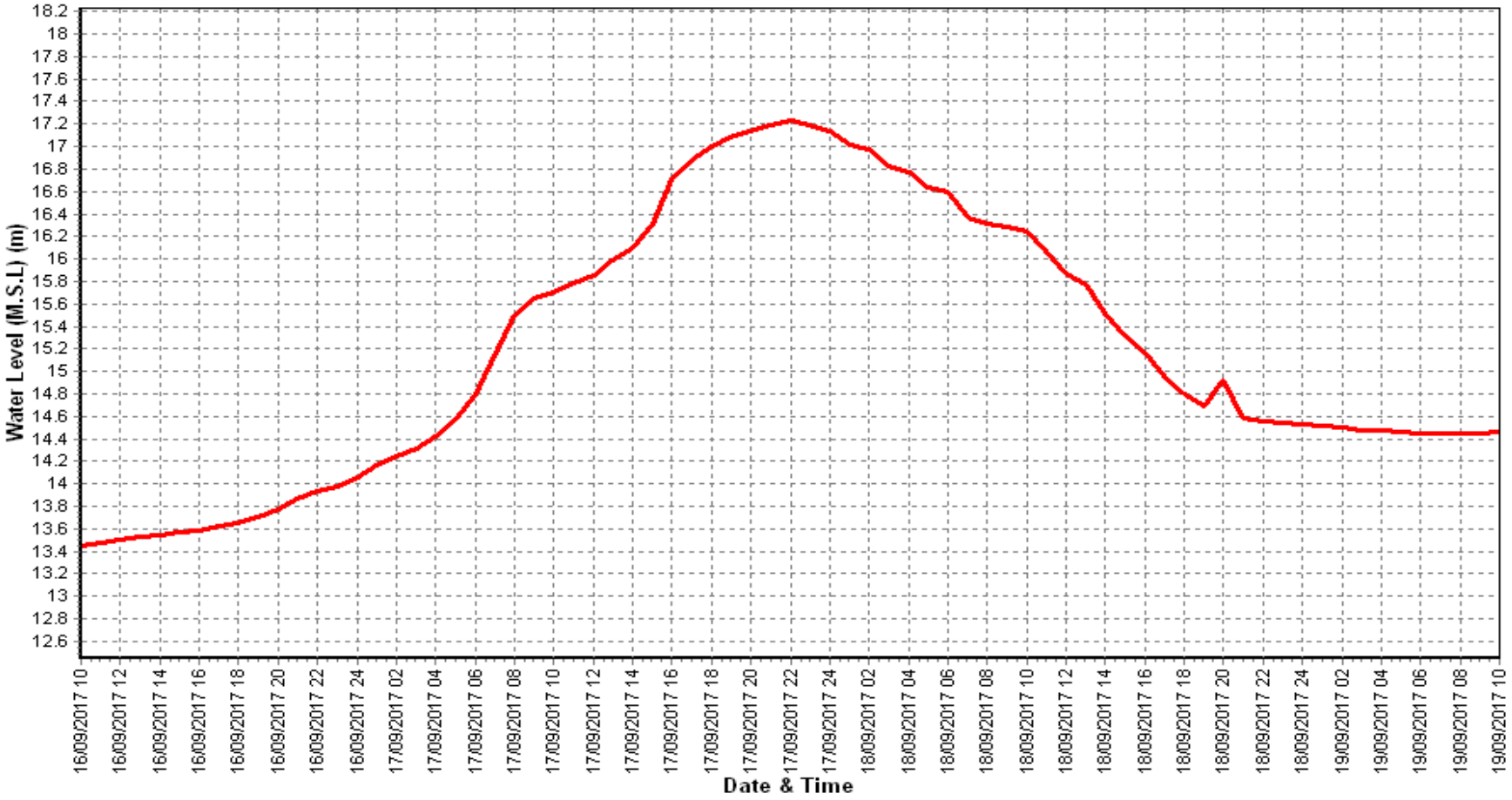
Local River : Pulanthodu **Sub-Division : Chaliyar SD, Calicut**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : PULAMANTHOLE (KRA00G4) **Division : SWR Division, Cochin**

Local River : Pulanthodu **Sub-Division : Chaliyar SD, Calicut**

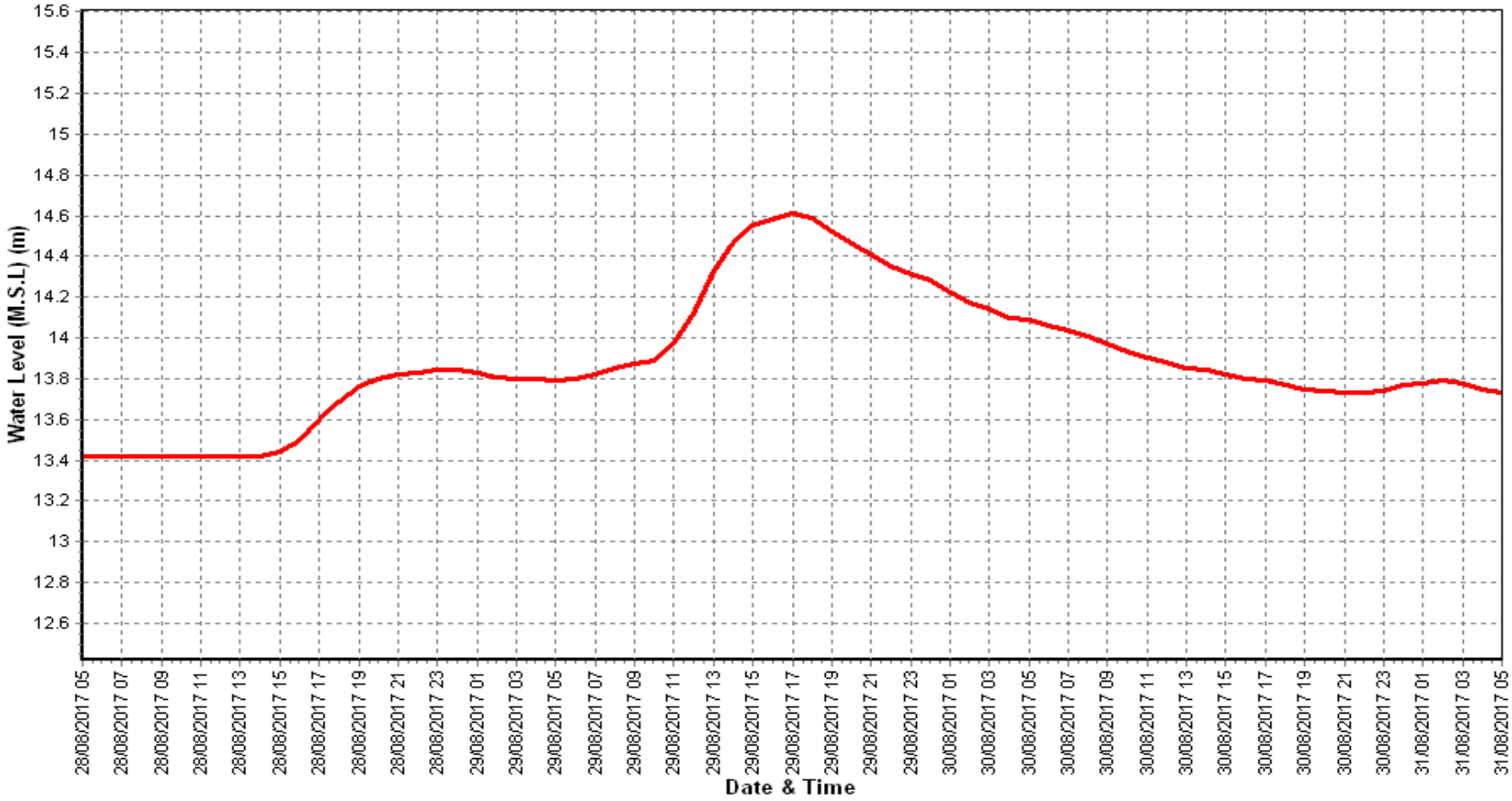


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : PULAMANTHOLE (KRA00G4) **Division : SWR Division, Cochin**

Local River : Pulanthodu **Sub-Division : Chaliyar SD, Calicut**

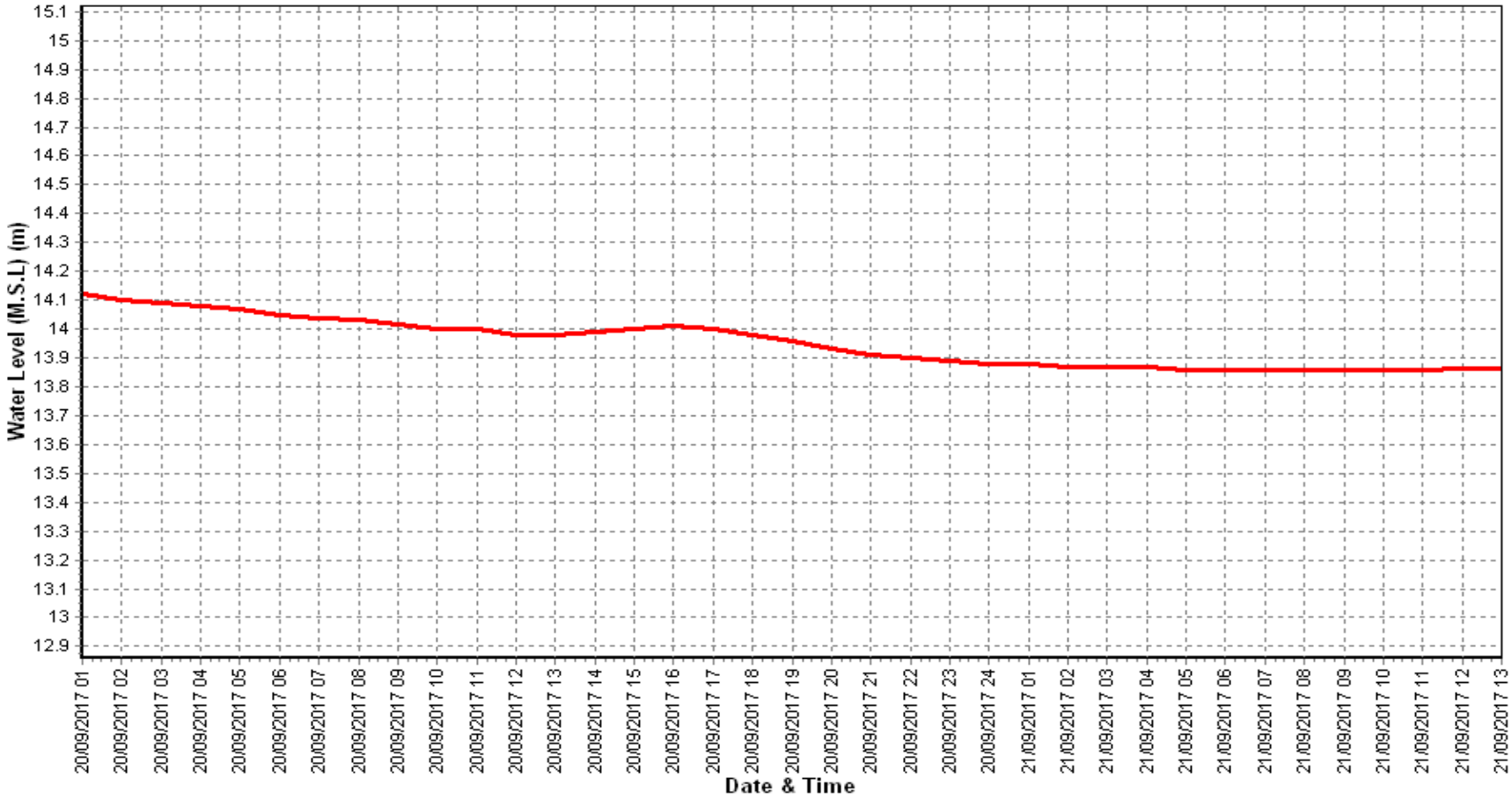


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : PULAMANTHOLE (KRA00G4) **Division : SWR Division, Cochin**

Local River : Pulanthodu **Sub-Division : Chaliyar SD, Calicut**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	**: MANKARA**		**Code**	**: KR000K4**	
State	: Kerala		District	Palakkad	
Basin	: WFR South of Tapi		Independent River	: Bharathapuzha	
Tributary	: -		Sub Tributary	: -	
Sub-Sub Tributary	: -		Local River	: Bharathapuzha	
Division	: SWR Division, Kochi		Sub-Division	: SWR SD No 2, Kochi	
Drainage Area	: 2775 Sq. Km.		Bank	: Right	
Latitude	: 10°45'40"		Longitude	: 76°29'10"	
Zero of Gauge (m)	: 45.830 (m.s.l) 45.000 (m.s.l)		26-05-1984 01-06-1989	- 31-05-1989	
	Opening Date		Closing Date		
Gauge	: 26-05-1984				
Discharge	: 21-06-1985				
Sediment	: 24-09-2013				
Water Quality	: 02-06-1986				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1986-1987	351.1	49.080	09-08-1986	0.000	47.095	08-06-1986
1987-1988	153.6	48.435	16-12-1987	0.000	47.035	01-06-1987
1988-1989	275.8	49.295	04-08-1988	0.025	46.930	10-04-1989
1989-1990	232.0	49.115	24-07-1989	0.000	47.000	02-03-1990
1990-1991	217.9	49.056	31-10-1990	0.000	47.010	28-03-1991
1991-1992	664.0	49.923	28-07-1991	0.093	46.990	17-03-1992
1992-1993	1220	50.971	14-11-1992	0.340	47.020	03-05-1993
1993-1994	305.3	49.733	09-11-1993	0.000	47.055	05-03-1994
1994-1995	827.3	50.290	06-11-1994	0.000	47.040	01-06-1994
1995-1996	329.1	49.090	17-07-1995	0.000	47.112	01-06-1995
1996-1997	246.0	48.860	15-10-1996	0.000	46.970	01-06-1996
1997-1998	486.1	49.900	25-11-1997	0.000	47.080	01-06-1997
1998-1999	529.5	50.050	14-12-1998	0.000	47.080	01-06-1998
1999-2000	395.0	48.920	27-07-1999	0.000	47.195	14-02-2000
2000-2001	311.6	48.840	12-07-2000	0.000	46.965	01-06-2000
2001-2002	116.1	48.550	08-11-2001	0.000	47.090	01-06-2001
2002-2003	141.4	48.610	18-08-2002	0.000	47.060	03-02-2003
2003-2004	85.81	48.245	21-10-2003	0.000	47.060	01-01-2004
2004-2005	234.4	49.145	05-08-2004	0.000	47.010	22-03-2005

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1986-1987	351.1	49.080	09-08-1986	0.000	47.095	08-06-1986
1987-1988	153.6	48.435	16-12-1987	0.000	47.035	01-06-1987
2005-2006	370.8	49.780	24-11-2005	0.191	47.060	05-06-2005
2006-2007	190.2	48.860	17-09-2006	0.000	47.045	16-03-2007
2007-2008	637.8	49.740	03-07-2007	0.000	47.030	12-03-2008
2008-2009	316.3	49.180	22-10-2008	0.000	46.990	21-02-2009
2009-2010	371.3	49.590	17-07-2009	0.000	47.005	22-02-2010
2010-2011	404.2	49.585	18-11-2010	0.000	47.030	01-06-2010
2011-2012	578.1	49.460	07-11-2011	0.000	47.025	18-04-2012
2012-2013	71.26	48.100	05-09-2012	0.000	47.045	10-12-2012
2013-2014	492.2	49.525	23-10-2013	0.000	47.045	12-03-2014
2014-2015	459.2	49.500	02-08-2014	0.000	47.015	06-04-2015
2015-2016	308.1	49.035	27-06-2015	0.000	47.020	29-04-2016
2014-2015	459.2	49.500	02-08-2014	0.000	47.015	06-04-2015
2015-2016	308.1	49.035	27-06-2015	0.000	47.020	30-04-2016
2016-2017	72.64	48.050	11-07-2016	0.000	46.870	07-02-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : MANKARA (KR000K4) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : SWR SD No 2, Kochi**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	47.050	0.000	47.575	17.18	47.265	1.857	47.800	41.14 *	47.470	11.37 *	47.310	2.759
2	47.050	0.000	47.510	11.41 *	47.280	2.166	47.800	41.88	47.490	12.74 *	47.320	2.605
3	47.080	0.000	47.470	9.582	47.280	1.962	47.880	50.42 *	47.490	11.82	47.300	2.508
4	47.100	0.000	47.450	8.756	47.270	1.962	47.835	45.11 *	47.450	10.53	47.270	2.087 *
5	47.090	0.000	47.420	6.885	47.415	7.753	47.650	28.90	47.420	7.896	47.250	1.821 *
6	47.140	0.000	47.385	5.471	47.835	44.54 *	47.630	25.50	47.390	7.177	47.220	1.524
7	47.120	0.000	47.370	5.696	47.870	51.17	47.590	22.63	47.350	4.607	47.210	1.387
8	47.090	0.000	47.360	4.763	47.730	36.01	48.160	78.86	47.350	4.512 *	47.220	1.391
9	47.080	0.000	47.345	3.841 *	47.620	26.22	47.780	43.75	47.330	2.783	47.240	1.887
10	47.070	0.000	47.325	2.457	47.520	17.42	47.620	23.09 *	47.310	2.224	47.260	2.212
11	47.100	0.000	47.305	2.081	47.450	9.288	47.545	23.06 #	47.310	2.426	47.260	2.162
12	47.170	0.000	47.275	1.779	47.435	10.13	47.520	17.22	47.290	2.249	47.260	1.951 *
13	47.240	0.000	47.255	1.339	47.390	6.501 *	47.520	18.25	47.300	2.410	47.230	1.513
14	47.310	0.000	47.370	5.125	47.350	5.127	47.530	15.67 #	47.600	23.52	47.220	1.428
15	47.300	1.438	47.430	7.084	47.320	3.738 *	47.525	15.29 #	47.590	20.49 *	47.220	1.430
16	47.310	1.412	47.380	5.077 *	47.310	2.695	47.490	15.27	47.500	14.91	47.240	1.906
17	47.300	1.224	47.360	4.941	47.330	2.674	47.970	61.74 *	47.450	11.30	47.220	1.229
18	47.270	1.068 *	47.460	10.73	47.330	2.576	48.625	153.2	47.440	9.429 *	47.210	1.336
19	47.220	0.657	48.045	56.46	47.500	16.30	48.330	100.1	47.390	5.904	47.210	1.351 *
20	47.200	0.522	48.310	101.4	47.575	17.88 *	48.095	71.22	47.360	5.394	47.200	1.247 #
21	47.230	0.674	48.100	77.80	47.770	39.86	47.850	41.78	47.330	2.850	47.210	1.288
22	47.355	2.018	47.975	54.62	47.870	48.92	47.755	35.15	47.320	3.202 *	47.310	2.467
23	47.380	2.614	47.800	40.20 *	47.770	35.70	47.640	23.92	47.300	2.206	47.270	2.087 #
24	47.330	1.665	47.610	21.40	47.630	26.70	47.640	24.89 *	47.290	2.456	47.290	2.375 #
25	47.295	2.399 *	47.525	16.55	47.560	20.53	47.540	17.49	47.290	2.453	47.300	2.527 #
26	47.460	8.642 *	47.445	8.707	47.495	14.71	47.570	19.41	47.290	2.363	47.320	2.849 *
27	47.830	35.76	47.395	7.520	47.570	17.49 *	47.500	13.73	47.330	3.020	47.330	3.018 #
28	48.050	57.49	47.380	6.320	47.630	26.87	47.495	12.05	47.440	13.93	47.340	3.194 #
29	47.835	37.92	47.350	5.080	47.925	49.07	47.470	11.37 *	47.490	7.070 *	47.340	3.194 #
30	47.650	24.61	47.305	3.251 *	48.120	88.90	47.450	10.06 *	47.410	8.239	47.340	1.987
31			47.280	1.839	48.060	74.34			47.340	3.256		
Ten-Daily Mean												
I Ten-Daily	47.087	0.000	47.421	7.604	47.508	19.11	47.774	40.13	47.405	7.566	47.260	2.018
II Ten-Daily	47.242	0.632	47.519	19.60	47.399	7.691	47.815	49.10	47.423	9.803	47.227	1.555
III Ten-Daily	47.541	17.38	47.560	22.12	47.764	40.28	47.591	20.99	47.348	4.640	47.305	2.499
Monthly												
Min.	47.050	0.000	47.255	1.339	47.265	1.857	47.450	10.06	47.290	2.206	47.200	1.229
Max.	48.050	57.49	48.310	101.4	48.120	88.90	48.625	153.2	47.600	23.52	47.340	3.194
Mean	47.290	6.004	47.502	16.62	47.564	22.94	47.727	36.74	47.391	7.25	47.264	2.024

Annual Runoff in MCM = 276 Annual Runoff in mm = 99

Peak Observed Discharge = 153.2 cumecs on 18/09/2017 Corres. Water Level :48.625 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :47.05 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : MANKARA (KR000K4) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : SWR SD No 2, Kochi**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	47.360	2.353	47.270	1.228 *	47.250	1.634 #	47.030	0.000	47.055	0.149 *	47.090	0.248
2	47.460	5.141 *	47.260	1.103 *	47.280	1.987 #	47.020	0.000	47.080	0.253 #	47.080	0.253 #
3	47.540	7.747 *	47.240	0.877 *	47.290	2.114 #	47.010	0.000	47.050	0.132 #	47.160	0.826 #
4	47.530	7.388 #	47.210	0.590 #	47.300	2.245 *	47.000	0.000	47.090	0.303 #	47.350	3.216
5	47.470	5.434 #	47.200	0.662	47.310	2.381 #	47.000	0.000	47.110	0.422 #	47.420	6.915
6	47.420	4.060 #	47.160	0.249 #	47.310	2.381 #	46.990	0.000	47.110	0.488	47.360	4.317 *
7	47.400	3.573 #	47.160	0.249 *	47.470	5.217 #	46.970	0.000	47.100	0.416	47.410	5.791
8	47.370	2.907 #	47.250	0.972	47.450	4.792 #	46.970	0.000	47.090	0.303 *	47.320	3.306
9	47.350	2.973	47.280	1.355	47.370	3.769	46.960	0.000	47.070	0.207 #	47.310	2.610
10	47.340	2.318 *	47.320	1.634	47.310	2.586	46.950	0.000	47.050	0.112	47.470	9.518
11	47.330	2.673	47.320	1.550	47.270	1.865 *	46.940	0.000	47.040	0.096	47.530	15.76
12	47.340	2.497	47.310	1.440	47.240	1.495	46.930	0.000	47.030	0.000	47.630	20.70
13	47.340	2.829	47.310	1.551	47.260	1.747 *	46.920	0.000	47.020	0.000	47.490	8.526 *
14	47.380	3.215	47.305	1.725 *	47.280	2.159	46.910	0.000	47.020	0.000	47.510	15.73
15	47.450	4.902	47.310	1.615	47.290	2.114 #	46.910	0.000	47.120	0.000	47.575	16.80
16	47.400	4.272	47.310	1.533	47.230	1.278	47.120	0.000	47.070	0.247 #	47.515	11.78
17	47.380	3.121 *	47.310	1.604	47.210	1.224 #	47.120	0.000	47.070	0.248	47.510	8.526 #
18	47.360	2.836	47.300	1.384	47.180	0.961 *	47.150	0.000	47.080	0.253 #	47.480	8.141 #
19	47.350	2.667	47.280	1.147	47.150	0.733 #	47.330	1.826	47.060	0.189	47.410	6.031
20	47.340	2.521	47.310	1.439	47.120	0.000	47.250	1.475	47.040	0.112	47.460	7.403 *
21	47.330	2.347	47.280	1.360 *	47.100	0.000	47.180	0.926	47.030	0.000	47.470	8.790
22	47.320	2.124	47.240	0.754	47.100	0.000	47.140	0.613	47.080	0.000	47.410	6.121
23	47.310	2.141	47.210	0.590 #	47.090	0.000	47.120	0.406	47.070	0.000	47.350	3.647
24	47.320	1.967 *	47.170	0.349	47.090	0.000	47.100	0.411	47.060	0.000	47.320	2.961
25	47.320	1.967 *	47.150	0.193	47.090	0.000	47.090	0.382 *	47.060	0.000	47.320	2.637
26	47.340	2.454	47.130	0.120 *	47.080	0.000	47.090	0.412	47.060	0.000	47.315	3.024
27	47.340	2.453	47.140	0.157 #	47.080	0.000	47.080	0.375	47.070	0.000	47.340	3.815 *
28	47.330	2.217	47.140	0.157 #	47.040	0.000	47.080	0.357	47.060	0.000	47.370	4.423
29	47.360	2.849	47.130	0.120 #			47.080	0.336 *	47.060	0.000	47.360	4.121
30	47.350	2.622	47.120	0.088 #			47.070	0.293 *	47.060	0.000	47.500	8.526 #
31	47.310	1.803 *	47.180	0.379			47.060	0.290			47.540	13.17
Ten-Daily Mean												
I Ten-Daily	47.424	4.389	47.235	0.892	47.334	2.911	46.990	0.000	47.080	0.279	47.297	3.700
II Ten-Daily	47.367	3.153	47.306	1.499	47.223	1.358	47.058	0.330	47.055	0.114	47.511	11.94
III Ten-Daily	47.330	2.268	47.172	0.388	47.084	0.000	47.099	0.436	47.061	0.000	47.390	5.567
Monthly												
Min.	47.310	1.803	47.120	0.088	47.040	0.000	46.910	0.000	47.020	0.000	47.080	0.248
Max.	47.540	7.747	47.320	1.725	47.470	5.217	47.330	1.826	47.120	0.488	47.630	20.70
Mean	47.372	3.238	47.236	0.909	47.223	1.524	47.051	0.261	47.065	0.131	47.399	7.02

Peak Computed Discharge = 61.74 cumecs on 17/09/2017 **Corres. Water Level :47.97 m**

Lowest Computed Discharge = 0.120 cumecs on 26/01/2018 **Corres. Water Level :47.13 m**

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

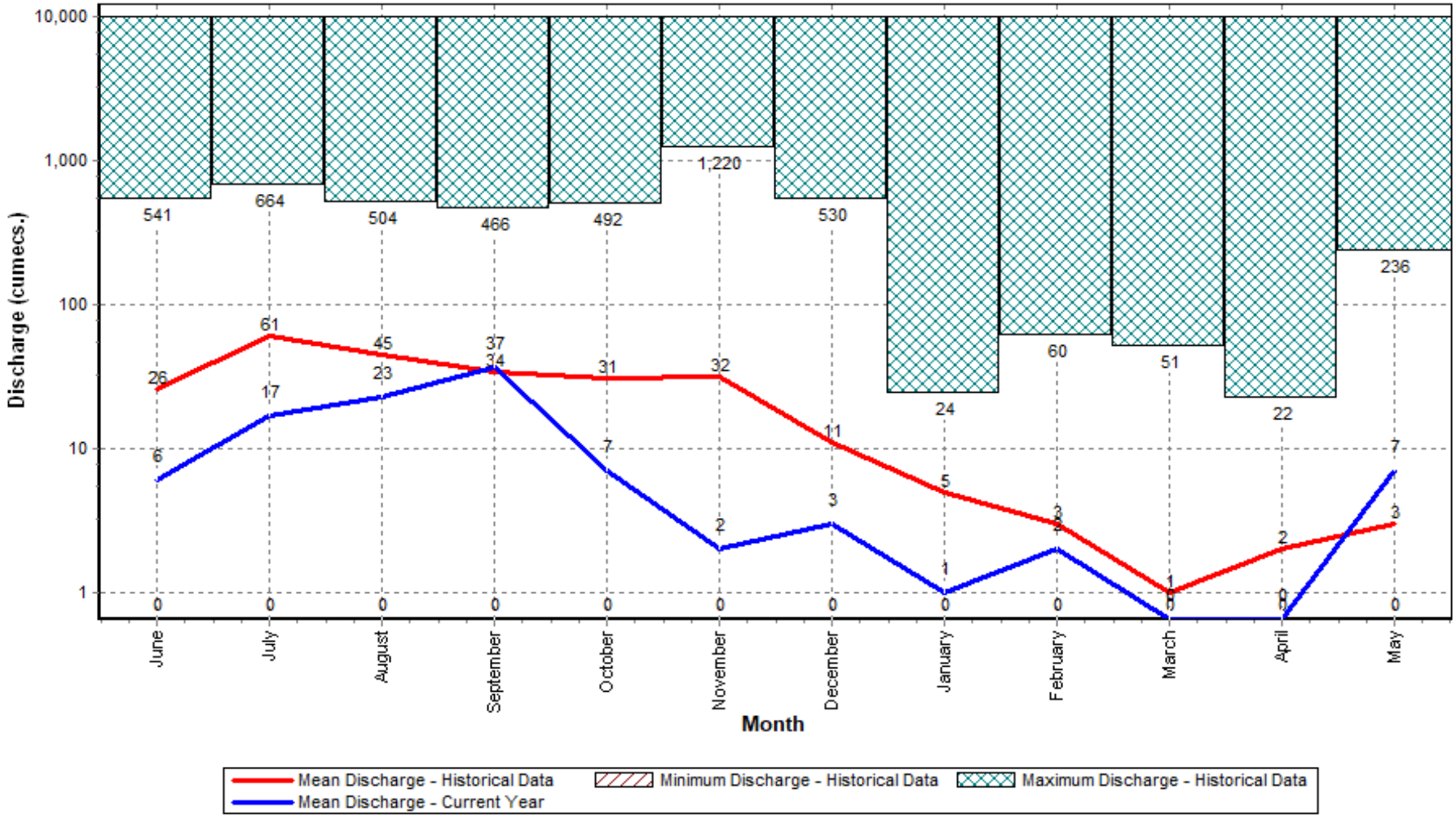
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : MANKARA (KR000K4) | **Data considered : 1986-2018** | **Division : SWR Division, Cochin**

Local River : Bharathapuzha | **Sub-Division : SWR SD No 2, Kochi**



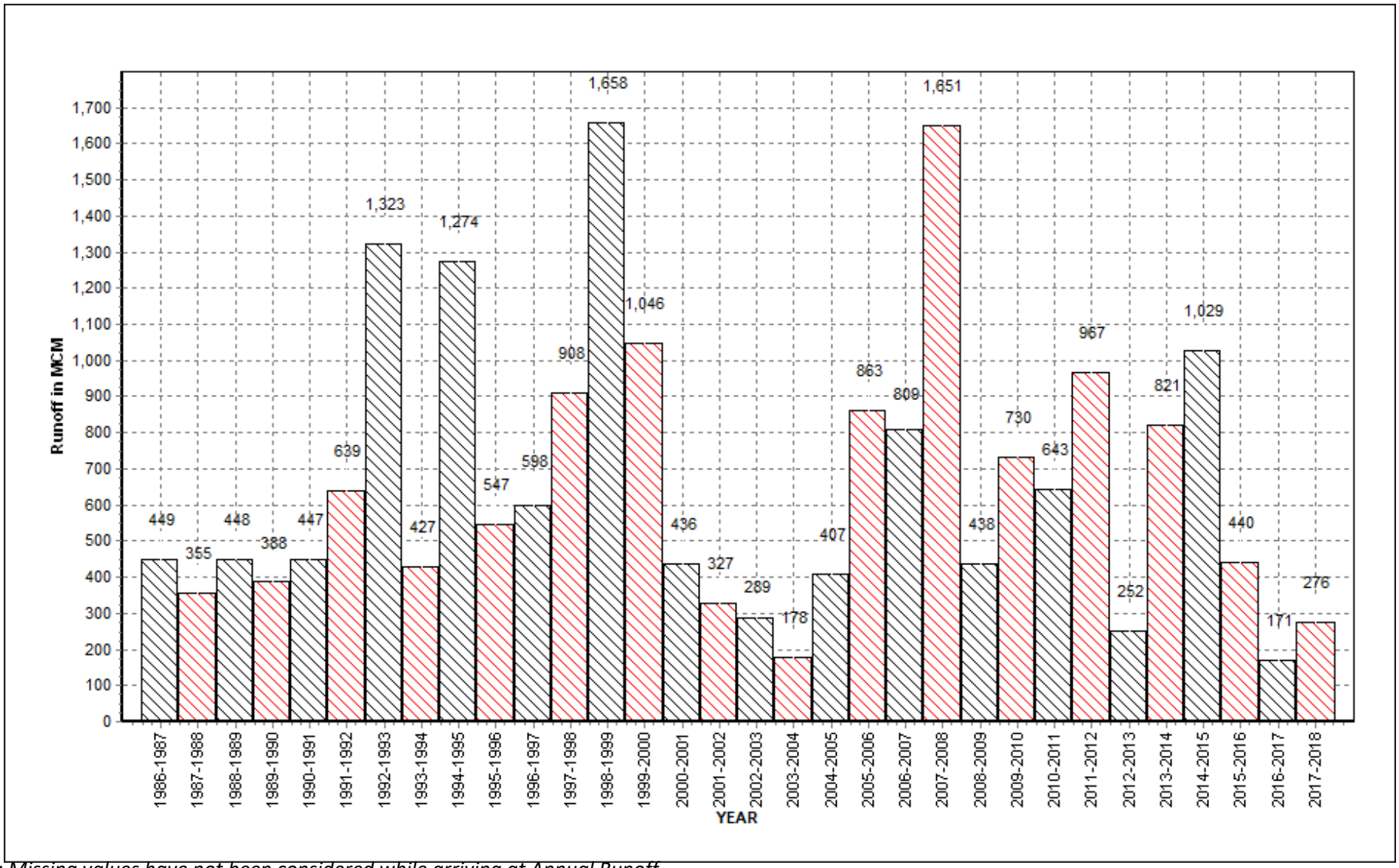
Annual Runoff Values for the period: 1986 - 2018

Station Name : MANKARA (KR000K4)

Local River : Bharathapuzha

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi

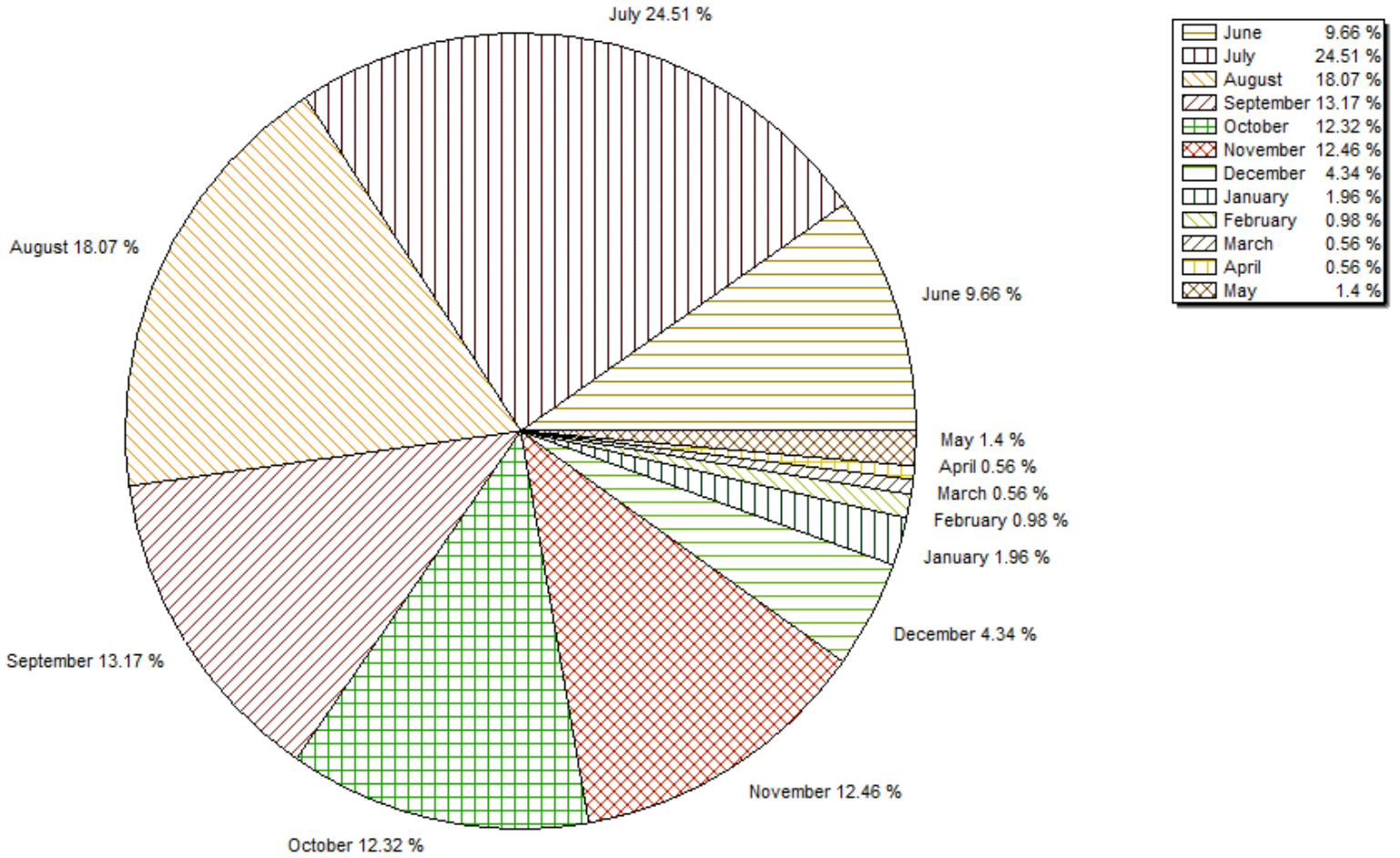


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1986-2017

Station Name : MANKARA (KR000K4)
Local River : Bharathapuzha

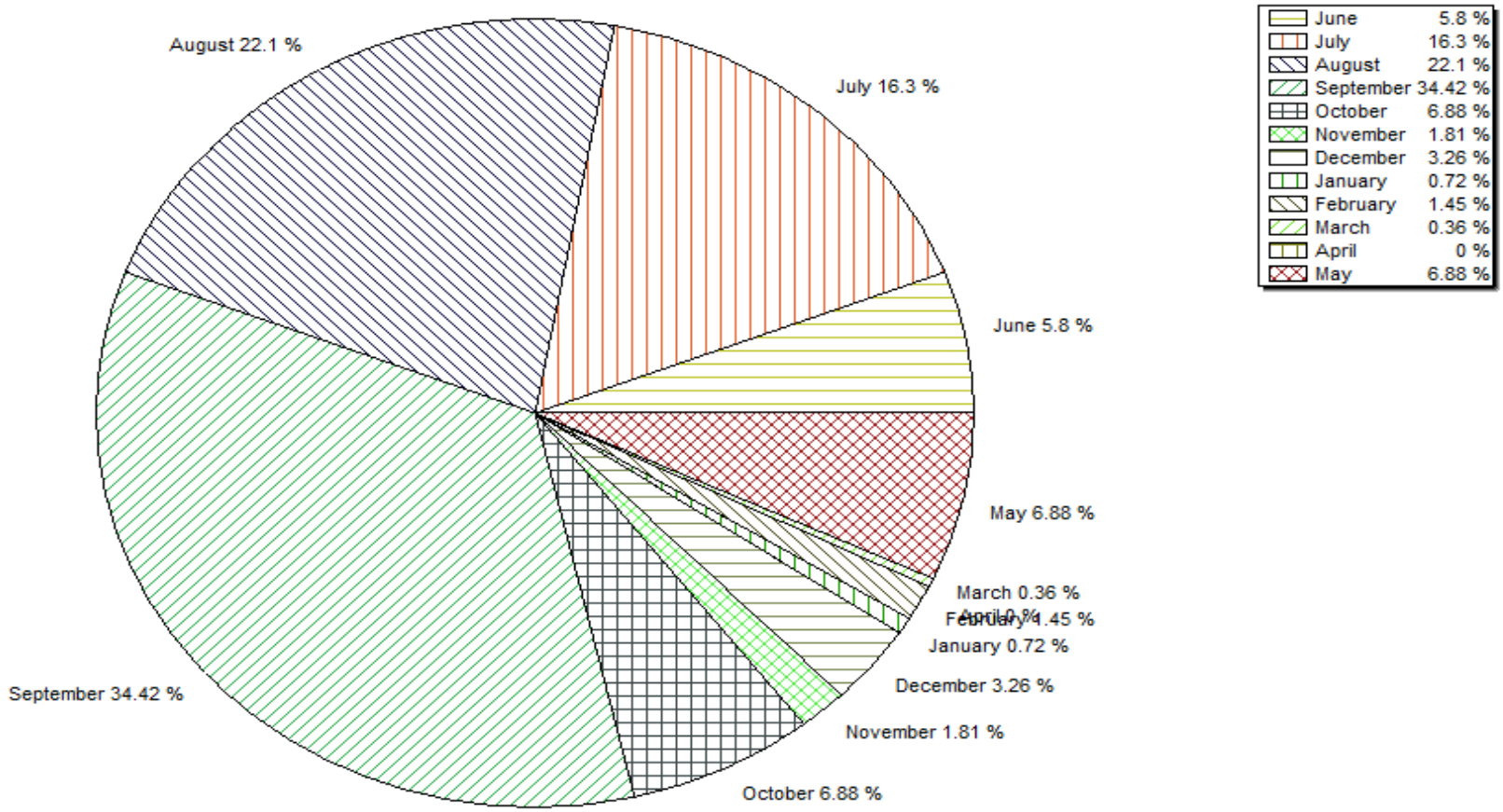
Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



Monthly Runoff for the Year : 2017-2018

Station Name : MANKARA (KR000K4)
Local River : Bharathapuzha

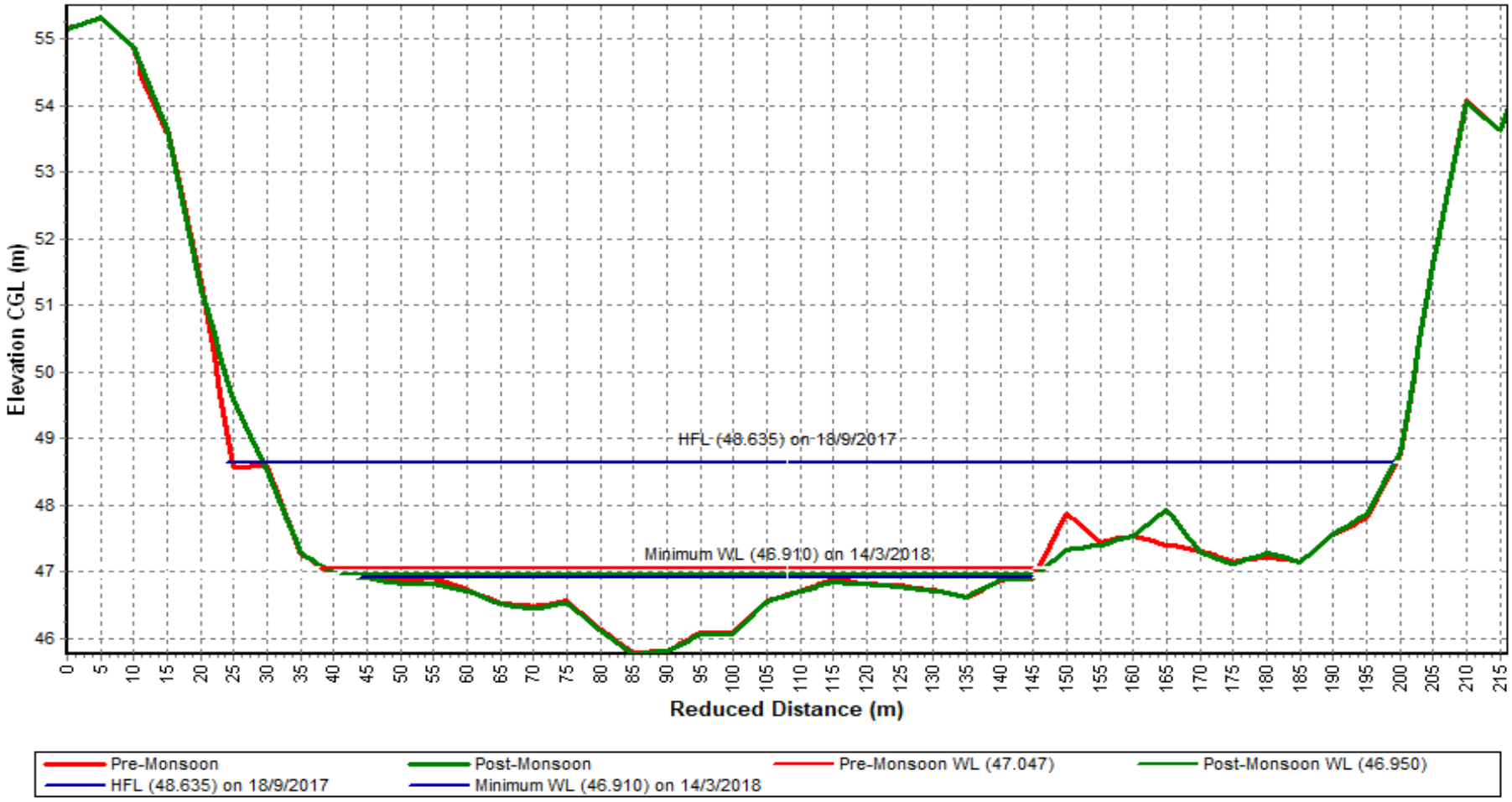
Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : MANKARA (KR000K4) **Division : SWR Division, Cochin**

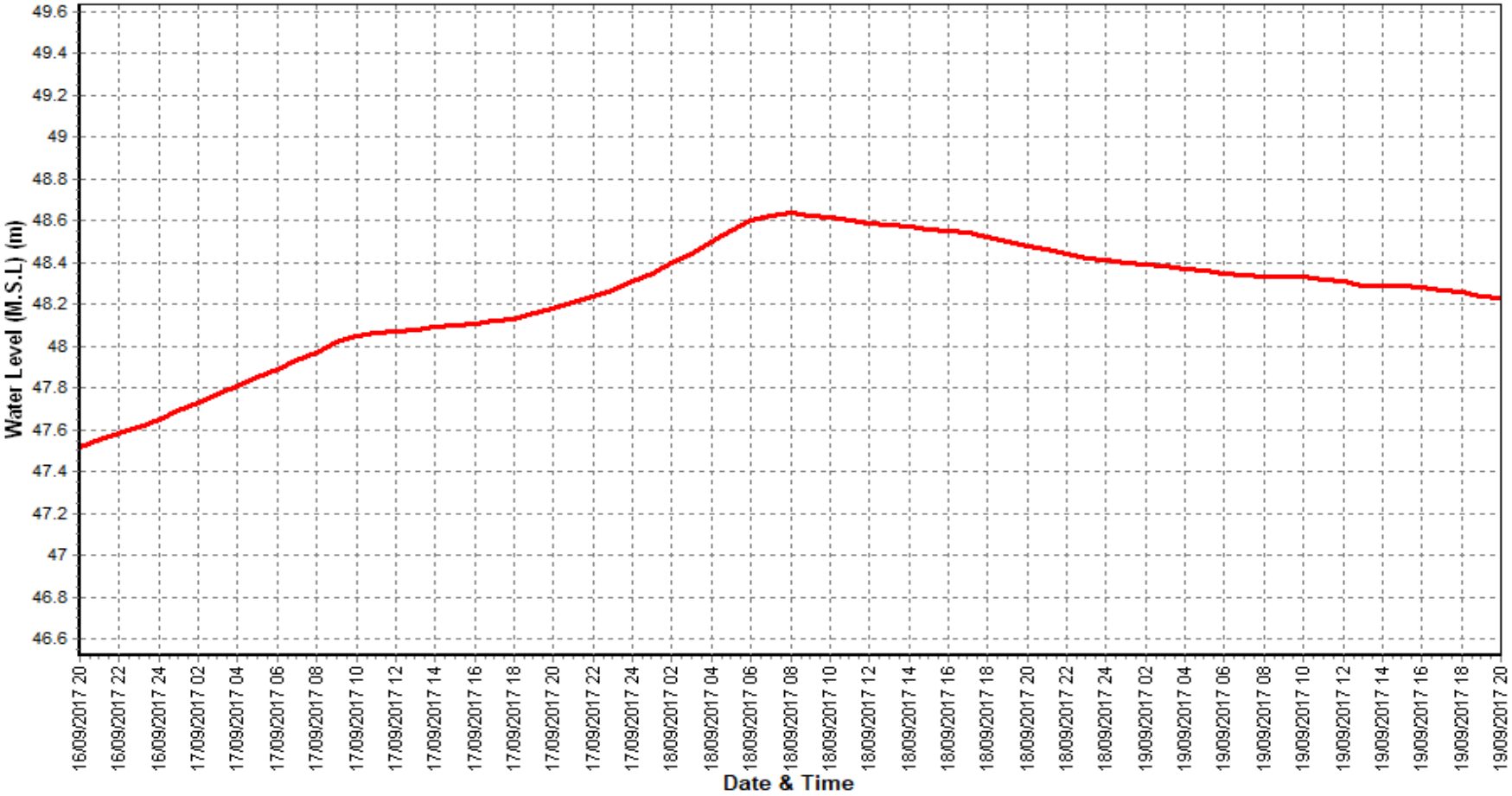
Local River : Bharathapuzha **Sub-Division : SWR SD No 2, Kochi**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : MANKARA (KR000K4) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : SWR SD No 2, Kochi**

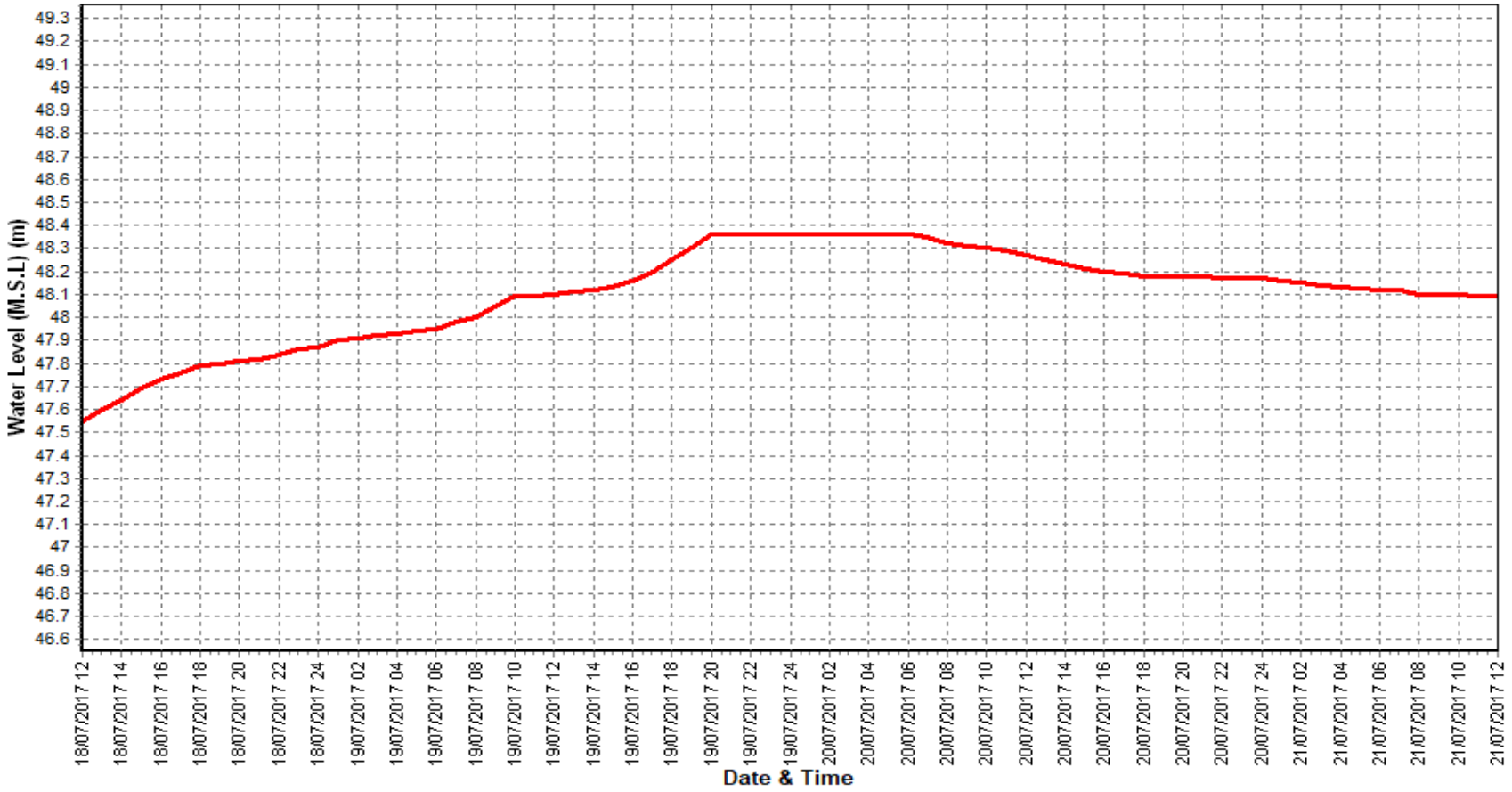


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : MANKARA (KR000K4) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : SWR SD No 2, Kochi**

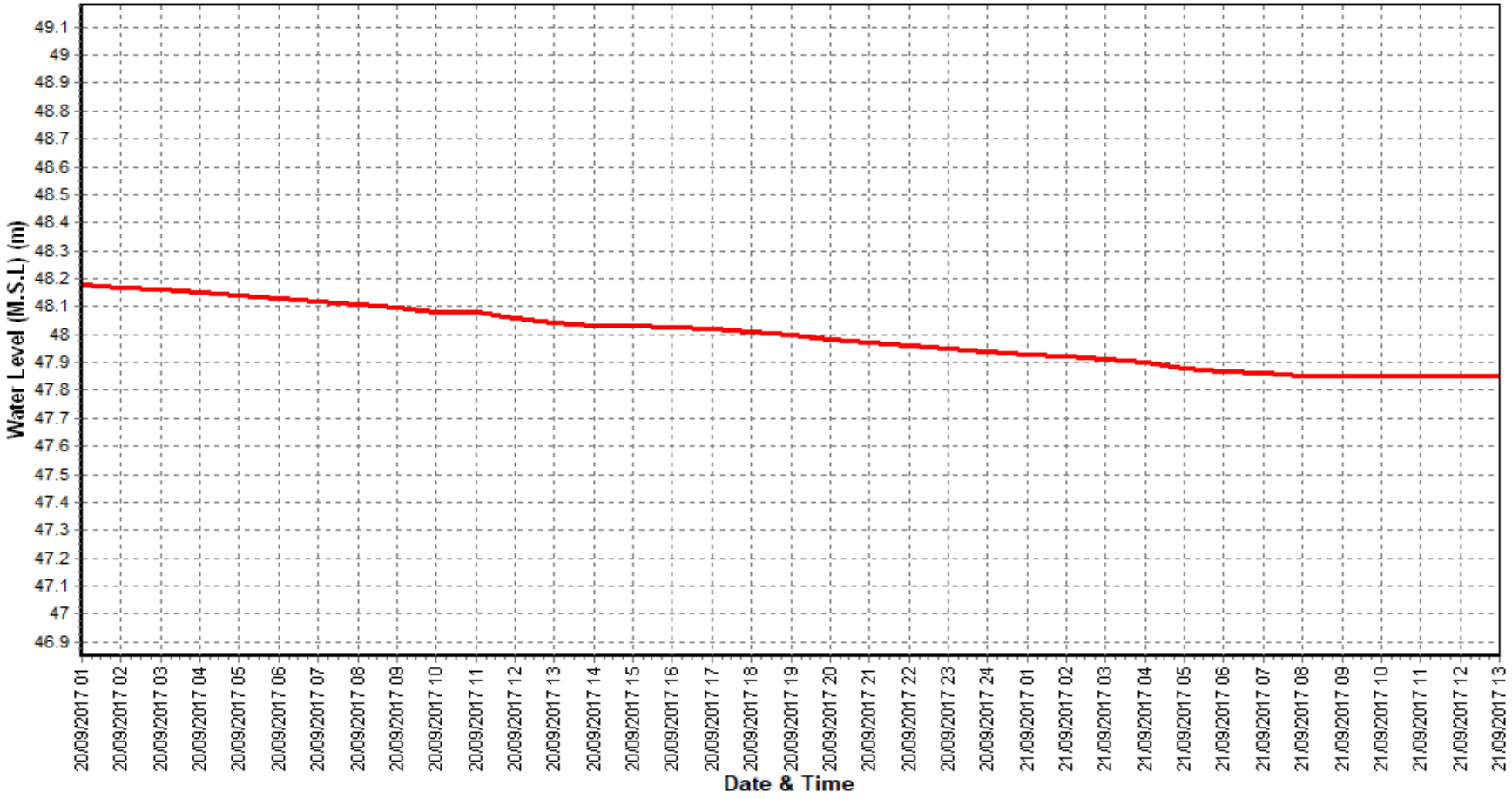


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : MANKARA (KR000K4) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : SWR SD No 2, Kochi**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	:	**PUDUR**	**Code**	:	**KR000M1**
State	:	Kerala	District		Palakkad
Basin	:	WFR South of Tapi	Independent River	:	Bharathapuzha
Tributary	:	Kannadipuzha	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Kannadipuzha
Division	:	SWR Division, Kochi	Sub-Division	:	SWR SD No 2, Kochi
Drainage Area	:	1313 Sq. Km.	Bank	:	Left
Latitude	:	10°46'39"	Longitude	:	76°30'44"
Zero of Gauge (m)	:	40.500 (m.s.l)	01-06-1985	-	31-08-1985
		58.285 (m.s.l)	01-09-1985	-	31-05-1989
		58.000 (m.s.l)	01-06-1989		
		Opening Date	Closing Date		
Gauge	:	01-06-1985			
Discharge	:	02-09-1985			
Sediment	:	01-10-2013			
Water Quality	:	02-06-1986			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1986-1987	111.5	61.480	09-08-1986	0.000	59.935	10-06-1986
1987-1988	48.19	61.205	16-12-1987	0.000	59.905	01-06-1987
1988-1989	73.85	61.620	05-08-1988	0.000	59.935	01-06-1988
1989-1990	87.41	61.860	24-07-1989	0.000	59.915	01-06-1989
1990-1991	85.63	61.845	31-10-1990	0.000	60.000	31-03-1991
1991-1992	135.9	62.213	27-07-1991	0.000	59.885	16-03-1992
1992-1993	744.1	64.729	14-11-1992	0.623	59.997	08-04-1993
1993-1994	230.2	62.574	09-11-1993	0.761	59.923	04-03-1994
1994-1995	475.8	63.500	06-11-1994	0.000	59.930	01-06-1994
1995-1996	78.00	61.550	17-07-1995	0.000	59.840	01-06-1995
1996-1997	67.15	61.555	15-10-1996	0.000	Dry Bed	01-06-1996
1997-1998	70.00	61.580	08-12-1997	0.000	59.910	01-06-1997
1998-1999	316.9	63.050	14-12-1998	0.000	59.830	04-06-1998
1999-2000	81.27	61.600	27-07-1999	0.000	59.880	03-07-1999
2000-2001	82.54	61.330	01-12-2000	0.000	59.680	01-06-2000
2001-2002	44.10	61.300	08-11-2001	0.000	59.740	01-06-2001
2002-2003	48.68	61.275	18-08-2002	0.000	59.710	01-06-2002
2003-2004	34.32	61.060	05-10-2003	0.000	59.555	01-06-2003

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1986-1987	111.5	61.480	09-08-1986	0.000	59.935	10-06-1986
1987-1988	48.19	61.205	16-12-1987	0.000	59.905	01-06-1987
2004-2005	87.46	61.840	05-08-2004	0.000	59.770	02-09-2004
2005-2006	163.1	62.300	24-11-2005	0.000	59.670	01-06-2005
2006-2007	64.69	61.475	14-08-2006	0.000	59.960	18-06-2006
2007-2008	165.9	62.130	10-08-2007	0.349	59.740	14-05-2008
2008-2009	140.8	62.110	22-10-2008	0.000	59.720	13-02-2009
2009-2010	740.1	64.930	08-11-2009	0.000	59.525	01-06-2009
2010-2011	181.0	62.660	18-11-2010	0.000	59.685	01-06-2010
2011-2012	125.1	61.975	06-11-2011	0.000	59.770	01-06-2011
2012-2013	82.24	62.040	21-10-2012	0.000	59.620	13-02-2013
2013-2014	142.9	61.495	03-08-2013	0.000	59.410	01-06-2013
2014-2015	183.0	61.925	02-08-2014	0.010	59.725	17-06-2014
2015-2016	146.9	62.040	07-12-2015	0.000	59.655	26-02-2016
2014-2015	183.0	61.925	02-08-2014	0.010	59.725	17-06-2014
2015-2016	146.9	62.040	07-12-2015	0.000	59.230	29-04-2016
2016-2017	47.33	61.150	11-07-2016	0.000	59.435	24-03-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : PUDUR (KR000M1) **Division : SWR Division, Cochin**

Local River : Kannadipuzha **Sub-Division : SWR SD No 2, Kochi**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	59.320	0.000	60.905	0.000	60.000	0.629	61.560	22.09 *	60.990	8.782 *	60.425	1.818
2	59.325	0.000	60.740	0.000	59.945	0.484	61.520	20.59	61.200	12.50	60.360	1.651
3	59.325	0.000	60.630	0.000	59.895	0.378	61.635	24.37 *	61.320	16.35	60.315	1.165
4	59.330	0.000	60.545	0.000	59.905	0.424	61.590	22.99 *	61.150	10.49	60.250	0.997 *
5	59.340	0.000	60.455	3.534	59.985	0.774	61.460	23.85	61.060	10.14 #	60.180	0.790 *
6	59.390	0.000	60.380	2.175	61.285	14.20 *	61.485	19.93 #	60.785	5.692 #	60.190	0.820
7	59.415	0.000	60.320	2.004	61.645	23.85	61.285	15.15	60.695	4.488 #	60.190	0.816
8	59.415	0.000	60.295	2.161	61.545	19.02	61.505	20.64 #	60.680	4.313 *	60.255	1.188
9	59.410	0.000	60.295	2.207 *	61.360	16.23	61.280	13.64	60.580	3.246 #	60.415	1.580 #
10	59.410	0.000	60.285	2.117	60.935	9.107 #	61.000	8.957 *	60.530	2.516	60.460	2.241
11	59.440	0.000	60.220	1.837	60.615	5.224 #	60.840	6.466 #	60.475	2.197	60.415	1.601 #
12	59.450	0.000	60.150	1.580	60.450	2.578	60.855	6.761 #	60.340	1.461	60.370	1.420 *
13	59.500	0.000	60.095	1.291	60.305	2.429 *	61.265	13.78	60.215	0.734 #	60.325	1.087
14	59.550	0.000	60.235	2.157	60.210	1.756	61.230	13.81	60.395	1.886	60.275	1.007
15	60.040	1.099	60.290	2.542	60.120	1.272 *	61.055	10.05 #	60.590	2.429 *	60.240	0.850
16	59.855	0.546	60.270	2.116 *	60.065	0.949	60.885	7.064 *	60.795	4.233	60.235	0.837
17	59.800	0.000	60.335	2.680 #	60.070	1.157	61.580	22.68 *	60.885	3.916	60.240	0.966
18	59.765	0.376 *	60.540	5.213	60.040	0.849	61.935	34.63 #	60.810	3.000	60.245	0.989
19	59.735	0.000	61.625	40.75	60.275	1.461	61.820	30.74 #	60.655	2.639	60.240	0.966 *
20	59.715	0.000	61.950	53.93 #	60.460	3.676 *	61.720	27.28 #	60.600	2.579	60.215	0.931
21	59.750	0.000	61.765	43.23	61.605	20.38 #	61.580	22.68 #	60.520	2.343	60.235	0.841
22	59.840	0.000	61.730	42.56 #	61.620	20.79 #	61.520	20.24	60.440	1.707 *	60.185	0.699
23	59.830	0.000	61.560	34.42 *	61.545	19.37 #	61.395	17.31 *	60.410	1.580 #	60.083	0.552 #
24	59.800	0.000	61.390	27.84 #	61.420	15.42	61.470	19.52 *	60.510	2.026 #	60.120	0.627
25	59.785	0.414 *	61.060	16.88 #	61.110	11.98	61.370	18.73	60.510	2.026 #	60.200	0.841
26	59.860	0.000	60.680	7.780 #	60.810	7.466 #	61.150	10.59	60.420	1.825	60.185	0.804 *
27	60.240	2.303	60.475	4.434 #	60.955	9.315 *	61.050	9.862 #	60.445	1.707 #	60.215	0.926
28	61.485	13.97 #	60.355	2.394	61.565	19.57 #	60.905	7.454 #	60.725	3.082	60.220	0.945
29	61.550	15.13 #	60.260	1.884	61.700	22.36 #	60.790	5.692 *	61.015	5.300 *	60.215	0.935
30	61.270	11.15 #	60.160	1.212 *	61.780	24.32 #	60.840	6.393 *	60.815	60.82 #	60.235	0.952
31			60.065	0.835	61.710	22.79 #			60.548	2.052		
Ten-Daily Mean												
I Ten-Daily	59.368	0.000	60.485	1.420	60.650	8.510	61.432	19.22	60.899	7.852	60.304	1.307
II Ten-Daily	59.685	0.225	60.571	11.41	60.261	2.135	61.319	17.33	60.576	2.507	60.280	1.065
III Ten-Daily	60.341	4.297	60.864	16.68	61.438	17.61	61.207	13.85	60.578	7.679	60.189	0.812
Monthly												
Min.	59.320	0.000	60.065	0.000	59.895	0.378	60.790	5.692	60.215	0.734	60.083	0.552
Max.	61.550	15.13	61.950	53.93	61.780	24.32	61.935	34.63	61.320	60.82	60.460	2.241
Mean	59.798	1.607	60.647	10.06	60.804	9.684	61.319	16.8	60.681	6.066	60.258	1.061

Annual Runoff in MCM = 132 Annual Runoff in mm = 101

Peak Observed Discharge = 60.82 cumecs on 30/10/2017 Corres. Water Level :60.815 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :59.32 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : PUDUR (KR000M1) **Division : SWR Division, Cochin**

Local River : Kannadipuzha **Sub-Division : SWR SD No 2, Kochi**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	60.310	1.161	60.120	0.933 *	59.650	0.000	60.590	0.000	60.730	0.000	60.035	0.000
2	60.450	2.074 *	60.060	0.722 *	59.645	0.000	60.565	0.000	60.720	0.000	60.020	0.000
3	61.055	7.255 *	60.030	0.625 *	59.855	0.000	60.535	0.000	60.790	0.000	60.140	0.000
4	61.085	7.608 #	59.935	0.368 #	59.855	0.178 #	60.500	0.000	60.865	0.000	60.390	0.000
5	60.835	4.999 #	59.850	0.000	59.900	0.272 *	60.470	0.000	60.835	0.000	60.620	0.000
6	60.650	3.393 #	59.805	0.000	59.965	0.497	60.445	0.000	60.795	0.000	60.665	0.000
7	60.520	2.557	59.780	0.000	60.045	0.673 #	60.415	0.000	60.760	0.000	60.795	0.000
8	60.510	2.737	59.940	0.368 #	60.155	0.000	60.390	0.000	60.720	0.000	60.725	0.000
9	60.475	2.377	60.028	0.609 #	60.290	0.000	60.365	0.000	60.685	0.000	60.650	0.000
10	60.420	1.908 *	60.030	0.658	60.440	0.000	60.330	0.000	60.650	0.000	60.945	0.000
11	60.510	2.823	59.990	0.505	60.570	0.000	60.305	0.000	60.620	0.000	61.425	9.756 #
12	60.453	2.180	59.950	0.385	61.170	0.000	60.285	0.000	60.590	0.000	61.555	11.06 #
13	60.330	1.418	59.910	0.258	61.385	0.000	60.270	0.000	60.560	0.000	61.490	10.37 *
14	60.255	0.997	59.880	0.000	61.320	0.000	60.260	0.000	60.530	0.000	61.530	10.76 #
15	60.200	0.746	59.845	0.000	61.210	0.000	60.260	0.000	60.510	0.000	61.600	10.38
16	60.185	0.645	59.810	0.000	61.110	0.000	60.300	0.000	60.475	0.000	61.505	10.57 #
17	60.190	0.889 *	59.790	0.000	61.030	0.000	60.300	0.000	60.390	0.000	61.510	10.57 #
18	60.195	0.904 #	59.790	0.000	60.980	0.000	60.310	0.000	60.350	0.000	61.480	0.000
19	60.170	0.866	59.750	0.000	60.920	0.000	60.390	0.000	60.320	0.000	61.375	0.000
20	60.135	0.833	59.735	0.000	60.880	0.000	60.395	0.000	60.280	0.000	61.395	0.000
21	60.075	0.560	59.725	0.000	60.840	0.000	60.500	0.000	60.250	0.000	61.340	0.000
22	60.070	0.618	59.705	0.000	60.810	0.000	60.745	0.000	60.220	0.000	61.210	0.000
23	60.105	0.723	59.700	0.000	60.770	0.000	60.845	0.000	60.200	0.000	61.115	0.000
24	60.100	0.603 *	59.700	0.000	60.735	0.000	60.860	0.000	60.180	0.000	60.990	0.000
25	60.130	0.690 *	59.695	0.000	60.700	0.000	60.870	0.000	60.145	0.000	60.955	0.000
26	60.220	0.995 #	59.695	0.000	60.675	0.000	60.870	0.000	60.115	0.000	60.895	0.000
27	60.220	0.995 #	59.680	0.000	60.645	0.000	60.850	0.000	60.095	0.000	60.670	0.000
28	60.403	1.775 #	59.670	0.000	60.615	0.000	60.845	0.000	60.065	0.000	60.300	0.000
29	60.435	1.978	59.655	0.000			60.830	0.000	60.025	0.000	60.290	1.461
30	60.288	1.067	59.650	0.000			60.800	0.000	59.990	0.000	60.725	4.916
31	60.165	0.801 *	59.650	0.000			60.760	0.000			61.035	4.048
Ten-Daily Mean												
I Ten-Daily	60.631	3.607	59.958	0.428	59.980	0.162	60.461	0.000	60.755	0.000	60.499	0.000
II Ten-Daily	60.262	1.230	59.845	0.115	61.058	0.000	60.308	0.000	60.463	0.000	61.487	7.347
III Ten-Daily	60.201	0.982	59.684	0.000	60.724	0.000	60.798	0.000	60.128	0.000	60.866	0.948
Monthly												
Min.	60.070	0.560	59.650	0.000	59.645	0.000	60.260	0.000	59.990	0.000	60.020	0.000
Max.	61.085	7.608	60.120	0.933	61.385	0.673	60.870	0.000	60.865	0.000	61.600	11.06
Mean	60.359	1.909	59.824	0.175	60.577	0.058	60.531	0	60.449	0	60.948	2.706

Peak Computed Discharge = 34.42 cumecs on 23/07/2017 **Corres. Water Level :61.56 m**

Lowest Computed Discharge = 0.272 cumecs on 05/02/2018 **Corres. Water Level :59.9 m**

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

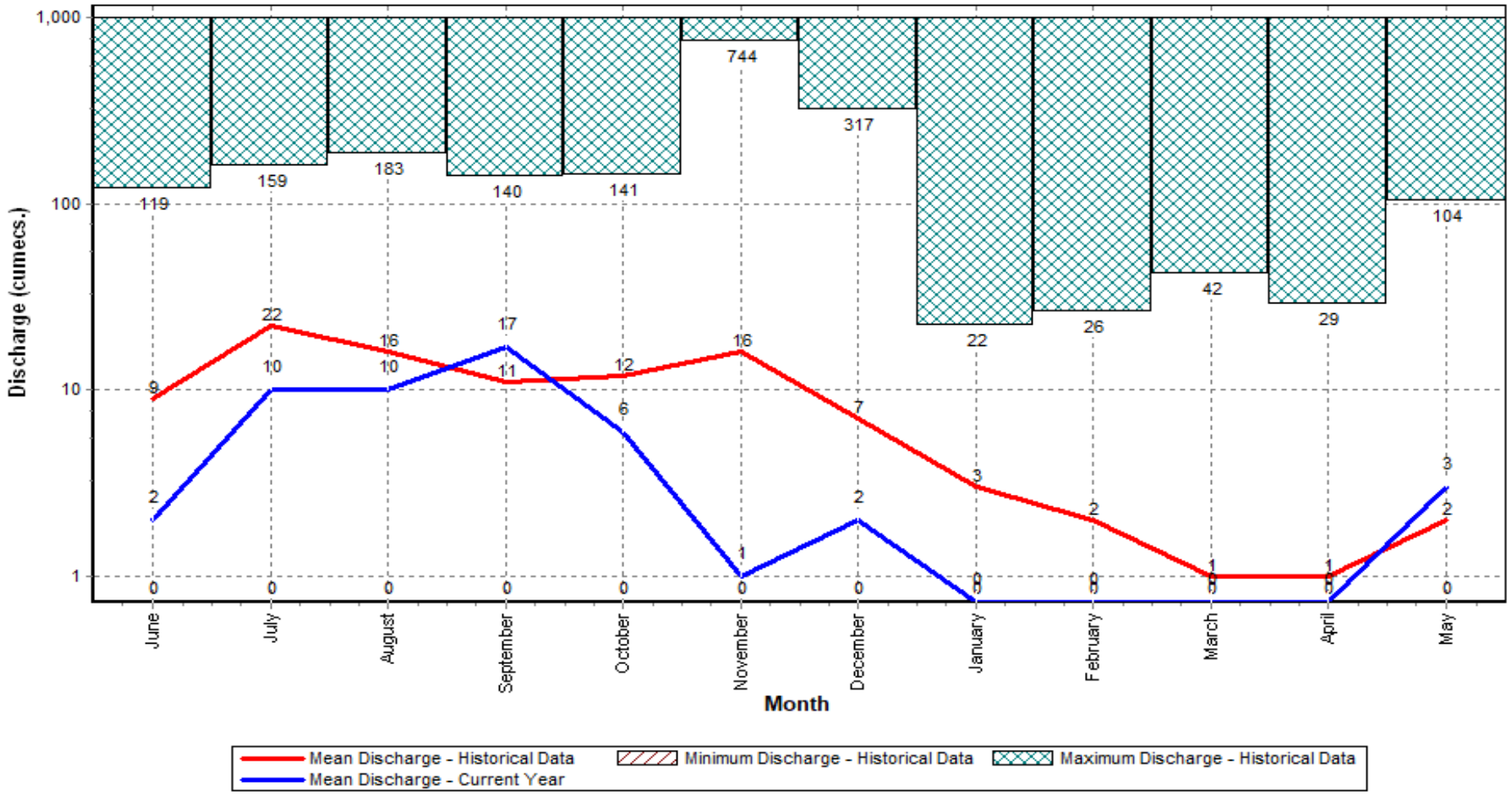
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : PUDUR (KR000M1) | **Data considered : 1986-2018** | **Division : SWR Division, Cochin**

Local River : Kannadipuzha | **Sub-Division : SWR SD No 2, Kochi**



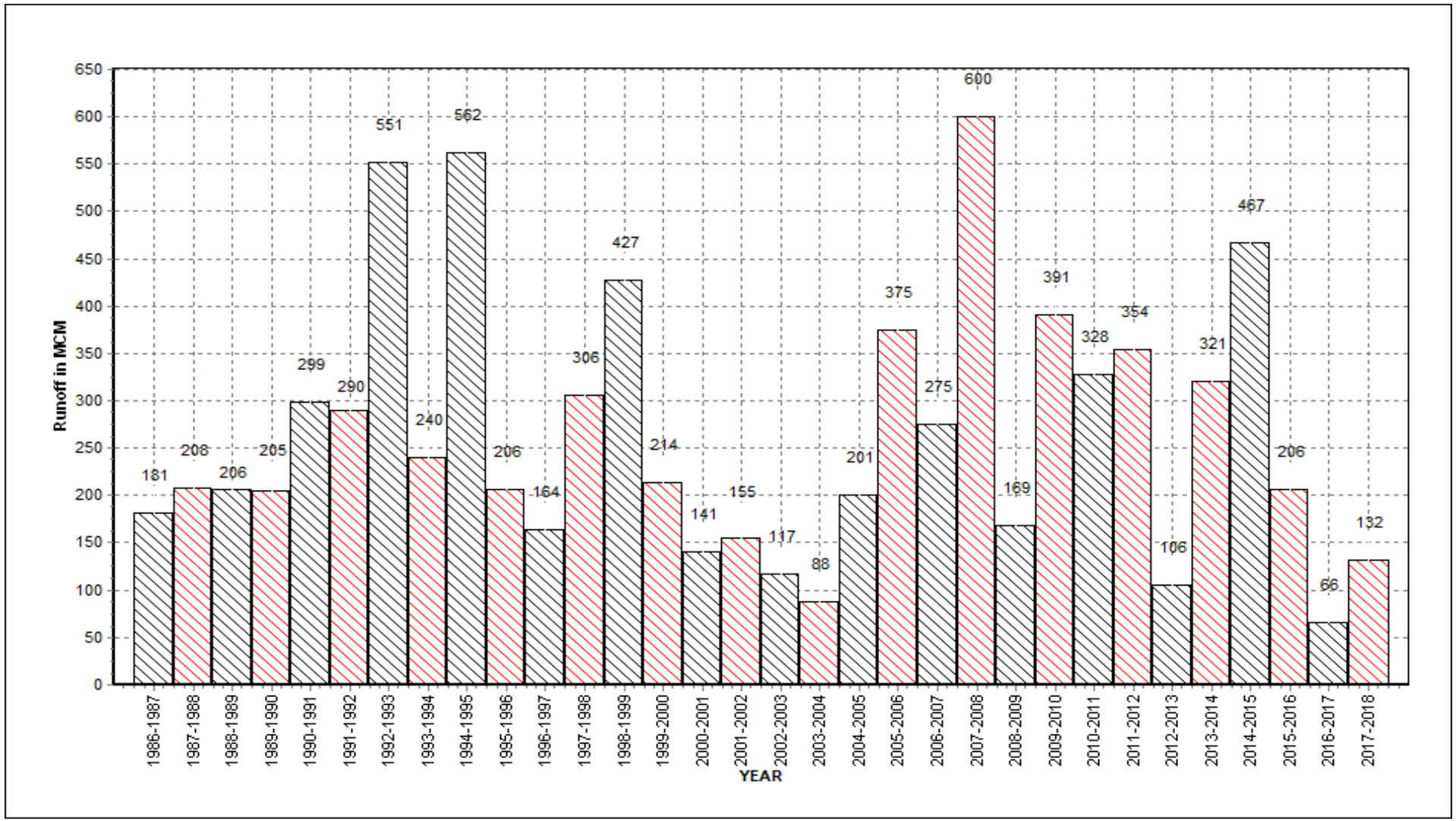
Annual Runoff Values for the period: 1986 - 2018

Station Name : PUDUR (KR000M1)

Local River : Kannadipuzha

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi

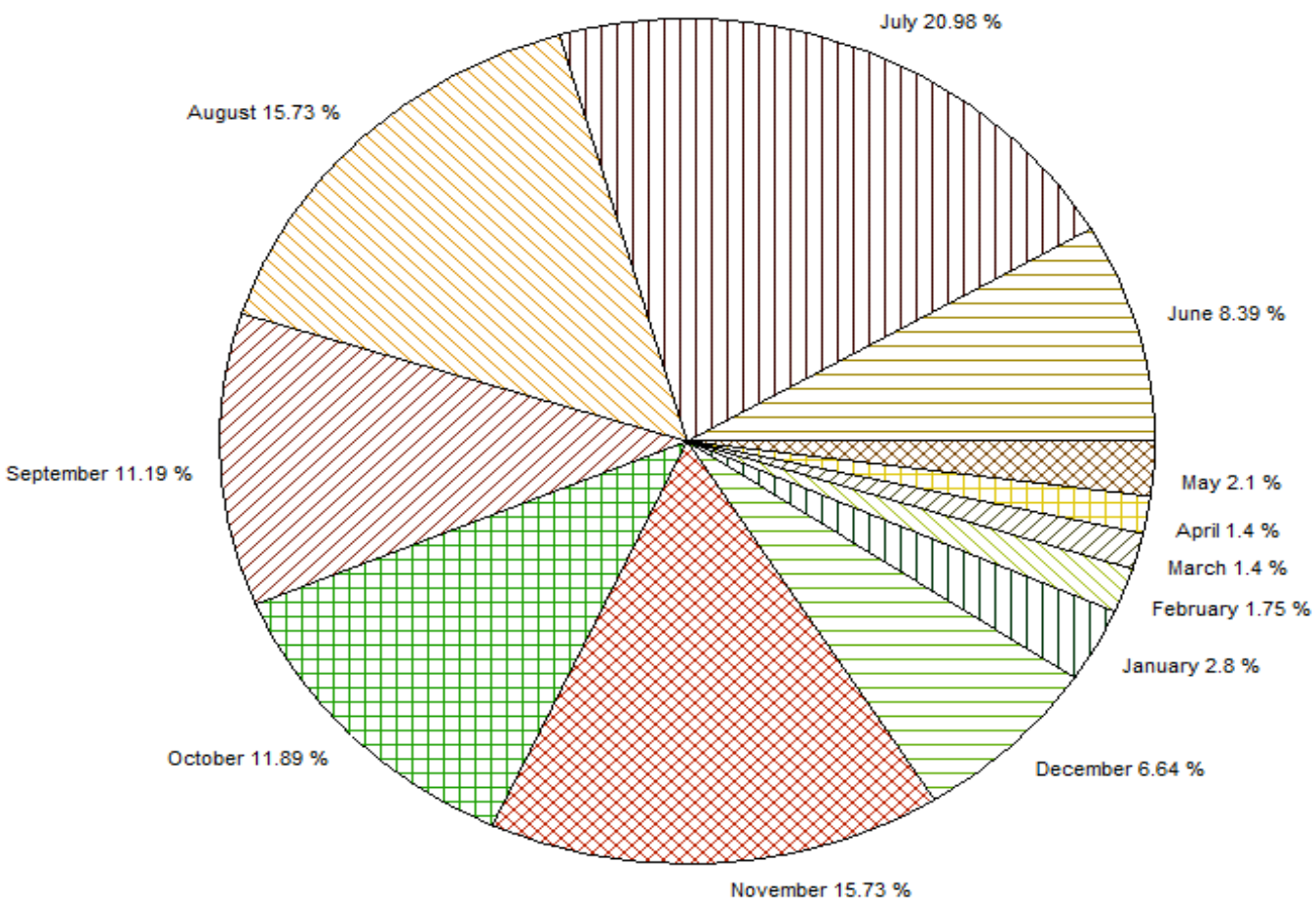


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1986-2017

Station Name : PUDUR (KR000M1)
Local River : Kannadipuzha

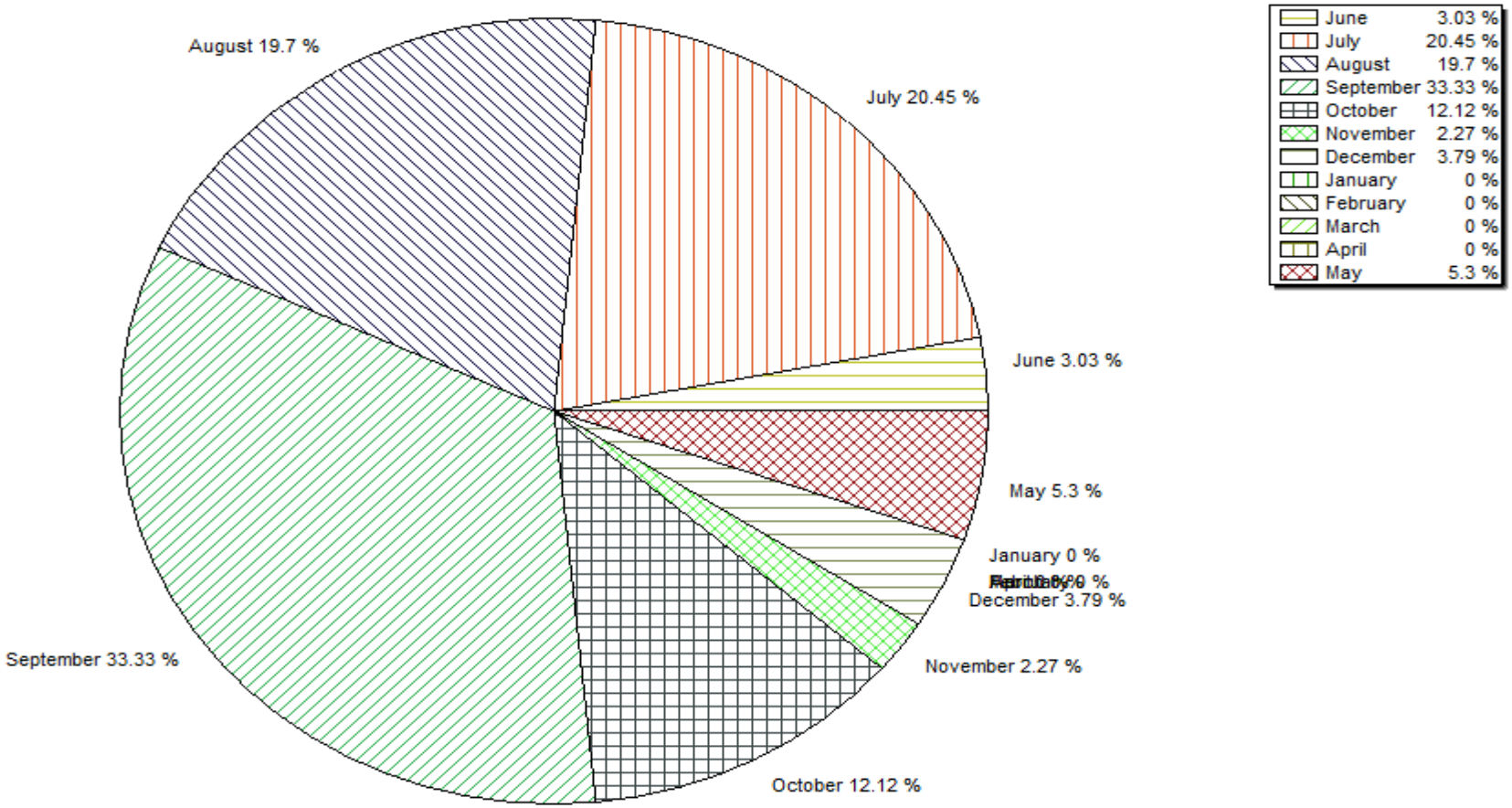
Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



Monthly Runoff for the Year : 2017-2018

Station Name : PUDUR (KR000M1)
Local River : Kannadipuzha

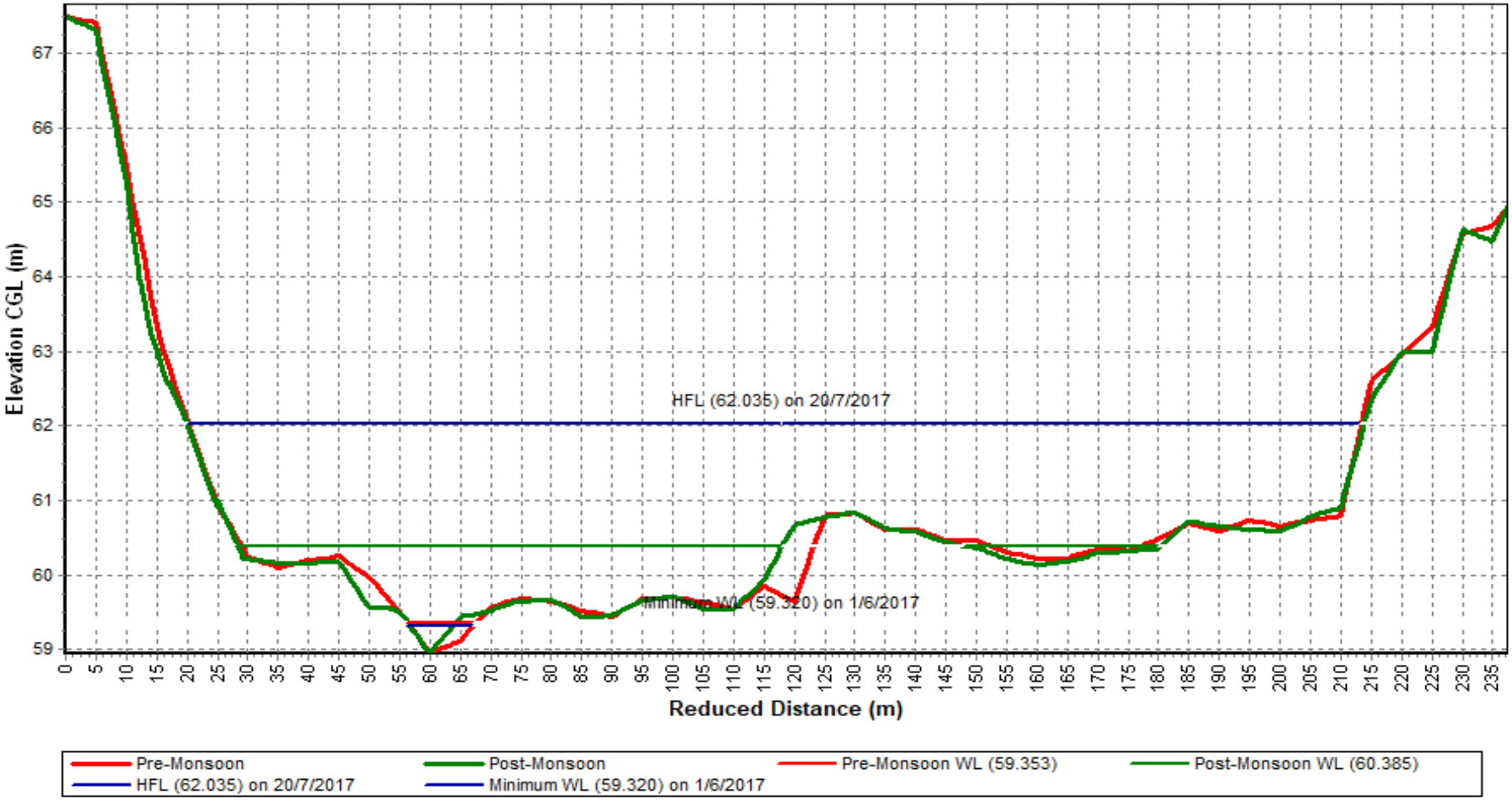
Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : PUDUR (KR000M1)
Local River : Kannadipuzha

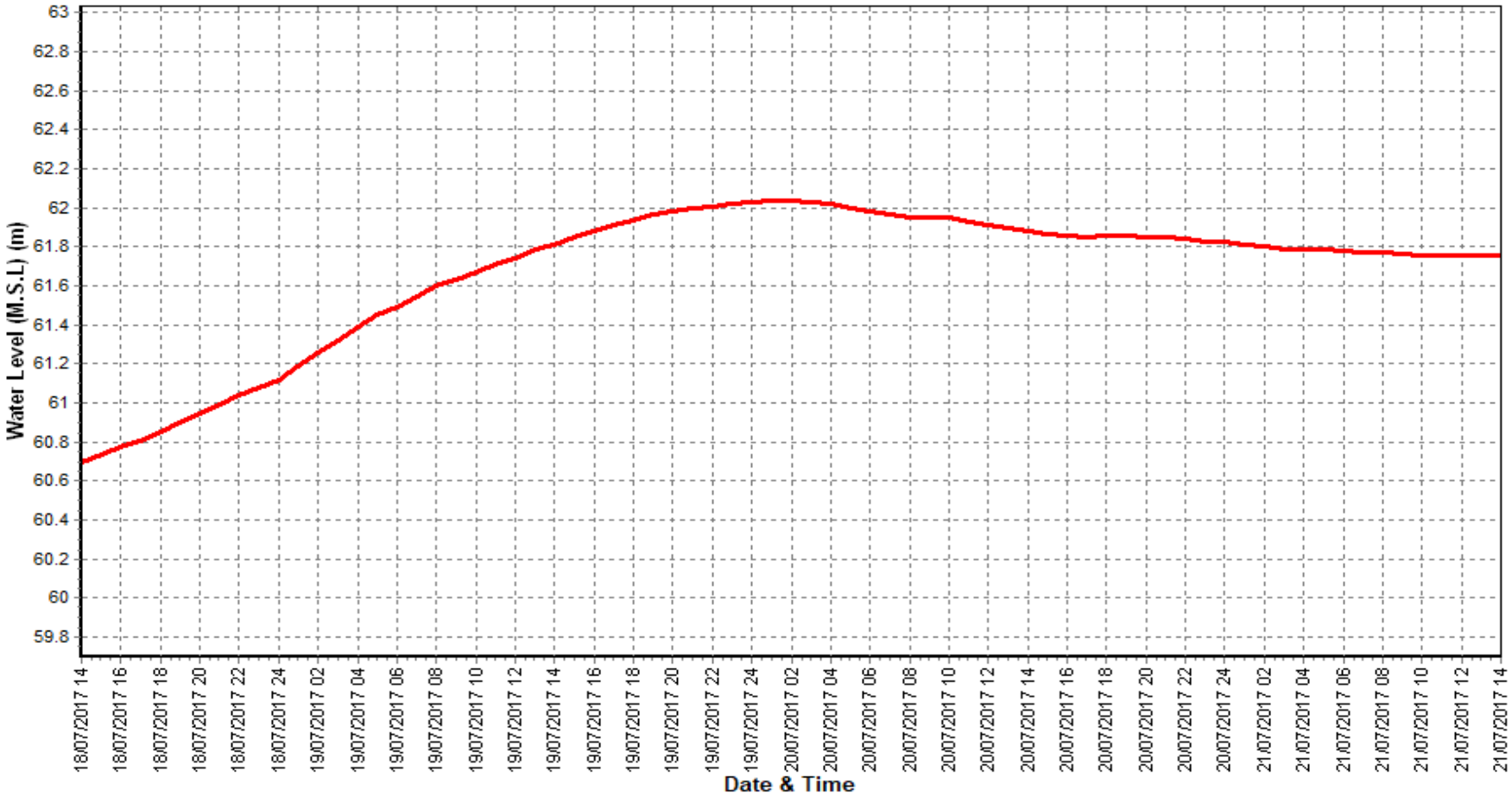
Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : PUDUR (KR000M1) **Division : SWR Division, Cochin**

Local River : Kannadipuzha **Sub-Division : SWR SD No 2, Kochi**

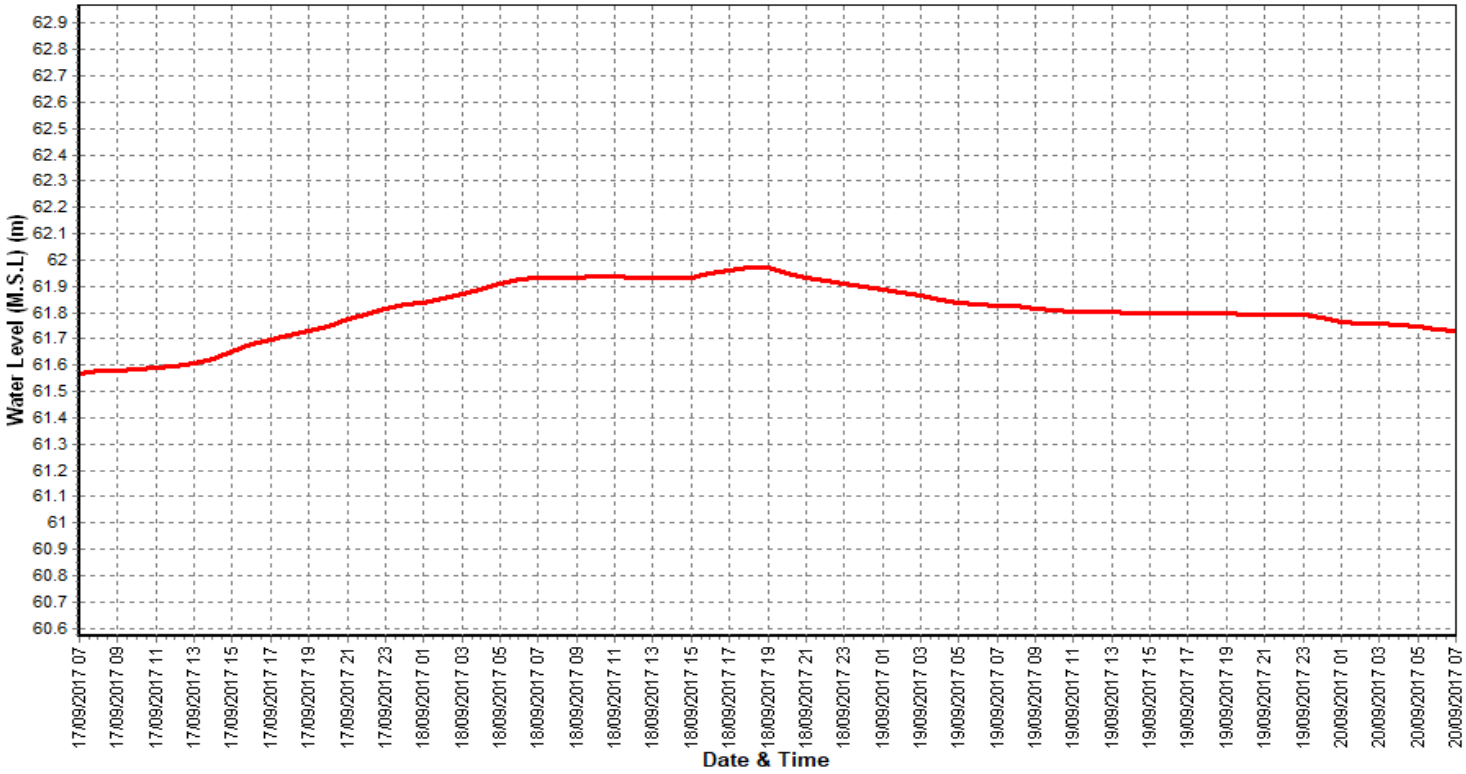


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : PUDUR (KR000M1) **Division : SWR Division, Cochin**

Local River : Kannadipuzha **Sub-Division : SWR SD No 2, Kochi**

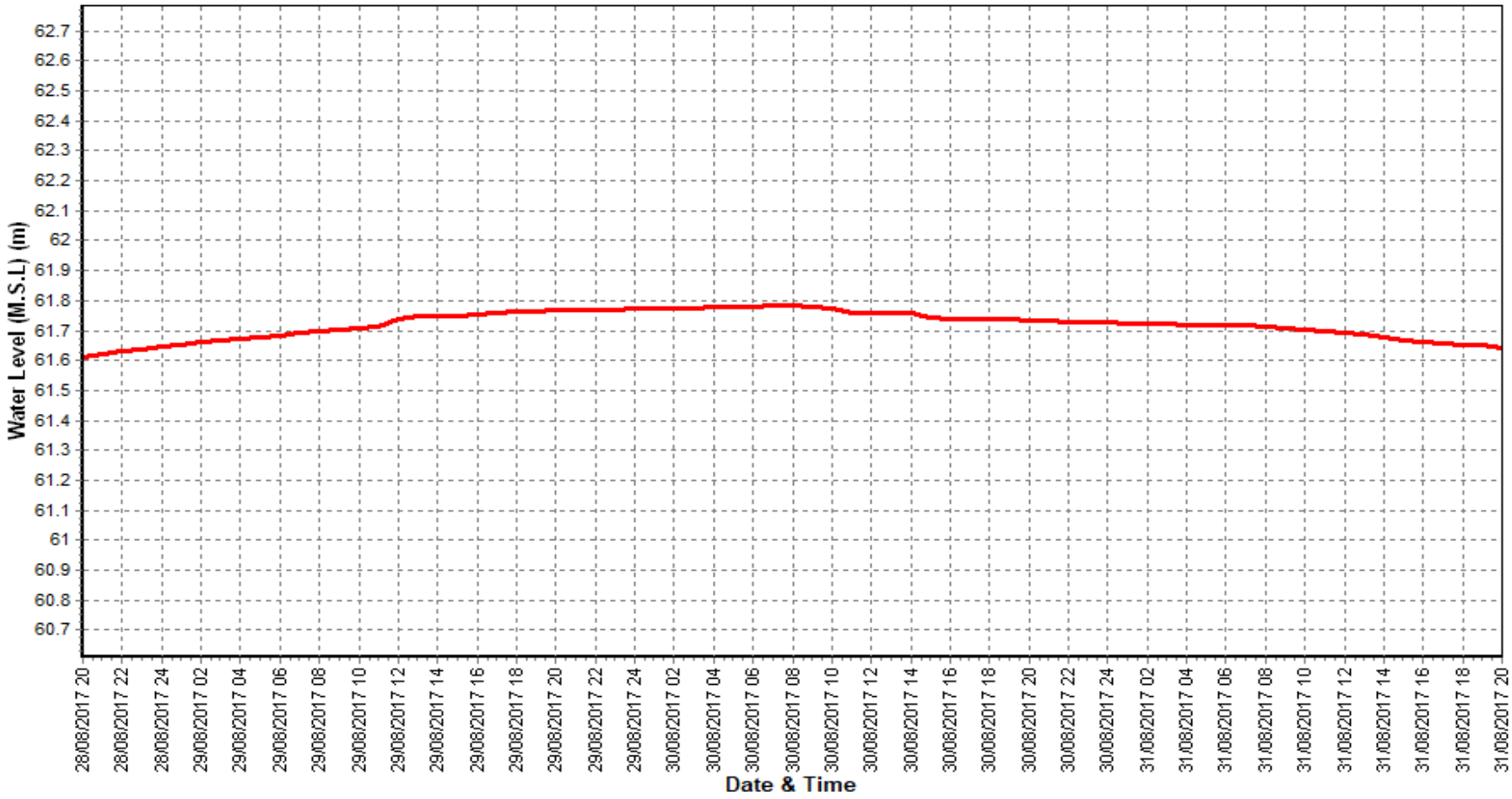


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : PUDUR (KR000M1) **Division : SWR Division, Cochin**

Local River : Kannadipuzha **Sub-Division : SWR SD No 2, Kochi**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	**: AMBARAMPALAYAM**		**Code**	**: KR000U2**	
State	: Tamil Nadu		District		Coimbatore
Basin	: WFR South of Tapi		Independent River	:	Bharathapuzha
Tributary	: Aliyar		Sub Tributary	:	
Sub-Sub Tributary	:		Local River	:	Aliyar
Division	: SR Division, Coimbatore		Sub-Division	:	Middle Cauvery SD, Coimbatore
Drainage Area	: 950 Sq. Km.		Bank	:	Right
Latitude	: 10°37'53"		Longitude	:	76°56'46"
Zero of Gauge (m)	: 217.000 (m.s.l)		26-09-1977		
	Opening Date		Closing Date		
Gauge	: 26-09-1977				
Discharge	: 09-03-1978				
Sediment	: 01-08-2002				
Water Quality	: 01-08-1978				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1978-1979	72.90	220.500	25-11-1978	1.000	219.210	28-05-1979
1979-1980	399.0	221.770	17-11-1979	1.200	219.300	29-03-1980
1980-1981	285.0	221.500	16-11-1980	0.500	219.195	13-04-1981
1981-1982	47.60	220.185	24-09-1981	0.400	219.130	29-04-1982
1982-1983	23.70	219.920	14-10-1982	0.100	219.055	30-05-1983
1983-1984	38.90	220.160	28-10-1983	0.000	218.990	06-06-1983
1984-1985	50.80	220.325	03-01-1985	0.000	218.900	01-06-1984
1985-1986	20.30	219.860	01-01-1986	0.500	219.100	14-05-1986
1986-1987	24.40	220.070	26-10-1986	0.100	219.000	10-05-1987
1987-1988	39.51	220.150	10-12-1987	0.608	219.150	06-04-1988
1988-1989	20.16	219.810	14-12-1988	0.540	219.140	25-05-1989
1989-1990	29.10	220.020	09-01-1990	0.644	219.120	03-05-1990
1990-1991	125.0	222.100	04-11-1990	0.418	219.070	13-05-1991
1991-1992	25.18	219.825	01-01-1992	0.066	219.087	10-04-1992
1992-1993	5122	223.274	14-11-1992	1.274	219.268	06-08-1992
1993-1994	409.5	221.466	09-11-1993	1.695	219.280	23-04-1994
1994-1995	278.0	221.200	06-11-1994	3.000	219.410	25-06-1994
1995-1996	39.40	220.145	07-11-1995	1.280	219.040	17-05-1996
1996-1997	38.30	220.025	15-12-1996	0.000	219.115	03-06-1996

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1997-1998	62.40	220.430	26-10-1997	2.428	219.330	01-05-1998
1998-1999	285.0	221.080	08-11-1998	1.483	219.260	06-05-1999
1999-2000	65.87	220.240	05-10-1999	0.000	218.850	31-05-2000
2000-2001	73.37	220.293	29-12-2000	0.004	218.790	05-05-2001
2001-2002	39.34	220.010	07-11-2001	0.000	218.900	17-06-2001
2002-2003	35.47	219.995	27-02-2003	0.000	218.830	16-06-2002
2003-2004	34.71	219.960	18-12-2003	0.000	218.840	05-05-2004
2004-2005	183.4	220.900	01-11-2004	0.591	219.040	22-05-2005
2005-2006	215.4	221.035	24-11-2005	0.579	219.055	01-06-2005
2006-2007	27.55	220.005	22-11-2006	0.425	219.040	16-05-2007
2007-2008	88.15	220.385	25-10-2007	0.541	219.045	06-05-2008
2008-2009	24.42	219.905	21-10-2008	0.449	219.000	03-05-2009
2009-2010	1287	224.780	08-11-2009	1.273	219.160	12-04-2010
2010-2011	404.0	222.250	21-11-2010	1.025	219.130	20-05-2011
2011-2012	122.8	220.625	02-11-2011	1.666	219.150	20-04-2012
2012-2013	27.60	219.960	21-10-2012	0.418	219.020	06-04-2013
2013-2014	40.66	220.060	07-08-2013	1.800	219.180	22-04-2014
2014-2015	94.87	220.475	28-10-2014	0.949	219.045	14-06-2014
2015-2016	116.9	220.540	09-12-2015	0.355	219.010	19-10-2015
2016-2017	29.47	219.940	31-10-2016	0.679	219.105	25-04-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : AMBARAMPALAYAM (KR000U2) **Division : SR Division, Coimbatore**

Local River : Aliyar **Sub-Division : Middle Cauvery SD, Coimbatore**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	219.265	2.449	219.320	3.383	219.240	2.337	219.530	8.653	219.590	9.037 *	219.580	7.863
2	219.240	1.964	219.340	3.702 *	219.240	2.218	219.550	8.027 *	219.700	12.12 *	219.520	6.406
3	219.305	2.884	219.390	4.398	219.540	8.724	219.420	5.156 *	219.730	13.81	219.540	6.978
4	219.565	8.399 *	219.390	4.649	219.530	8.555	219.320	3.395	219.780	15.62	219.640	10.38 *
5	219.570	10.31	219.400	5.005	219.320	3.113	219.330	3.819	219.760	14.74	219.600	9.299 *
6	219.560	10.10	219.380	3.958	219.230	2.092 *	219.550	9.149	219.790	16.30	219.570	8.575
7	219.540	8.748	219.360	3.384	219.240	2.169	219.510	8.553	219.730	13.29	219.620	8.623
8	219.460	6.356	219.300	3.097	219.360	4.639	219.480	6.131	219.730	13.04 *	219.610	9.111
9	219.305	3.354	219.280	2.767 *	219.360	4.645	219.380	4.806	219.720	13.11	219.610	9.092
10	219.220	1.826	219.280	2.868	219.250	2.206	219.480	6.403 *	219.730	13.30	219.520	6.851
11	219.200	1.731 *	219.270	2.303	219.400	5.952	219.570	10.05	219.780	14.73	219.580	7.861
12	219.220	1.918	219.250	2.178	219.240	2.147	219.490	5.971	219.790	16.13	219.580	8.779 *
13	219.290	2.922	219.240	2.196	219.400	4.770 *	219.460	5.630	219.680	12.08	219.560	7.445
14	219.310	3.461	219.300	3.018	219.400	5.736	219.360	4.131	219.760	14.31	219.560	7.448
15	219.280	2.904	219.300	3.213	219.300	3.064 *	219.490	6.791	219.760	13.99 *	219.560	7.512
16	219.270	2.528	219.280	2.767 *	219.310	3.596	219.630	10.19	219.730	13.13	219.530	6.764
17	219.250	2.130	219.280	2.781	219.350	4.324	219.570	8.525 *	219.650	9.888	219.730	12.72
18	219.300	3.064 *	219.300	2.973	219.330	3.928	219.460	5.671	219.680	11.53 *	219.590	8.598
19	219.300	3.062	219.300	3.014	219.330	3.530	219.400	4.711	219.640	9.689	219.500	6.849 *
20	219.300	3.205	219.300	3.235	219.330	3.537 *	219.540	7.423	219.620	9.804	219.560	7.207
21	219.300	3.185	219.310	3.239	219.340	4.052	219.520	6.875	219.610	9.002	219.590	8.311
22	219.290	2.914	219.300	3.108	219.320	3.338	219.550	7.808	219.570	8.525 *	219.590	8.057
23	219.290	2.981	219.300	3.064 *	219.330	3.753	219.730	12.97	219.660	11.84	219.530	7.061
24	219.300	3.153	219.280	2.825	219.330	3.743	219.730	13.04 *	219.660	11.51	219.580	7.735
25	219.300	3.064 *	219.300	3.167	219.330	3.537 *	219.730	12.82	219.660	11.44	219.560	7.448
26	219.340	3.702 *	219.270	2.721	219.330	3.752	219.700	11.42	219.610	8.914	219.610	9.833 *
27	219.340	3.835	219.270	2.542	219.340	3.870 *	219.700	11.35	219.620	9.962	219.590	8.056
28	219.330	3.266	219.250	2.272	219.530	8.582	219.720	13.04	219.810	18.46	219.600	8.480
29	219.300	3.144	219.250	2.247	219.510	7.955	219.710	12.63	219.590	9.037 *	219.590	8.261
30	219.290	2.835	219.250	2.351 *	219.350	4.210	219.600	9.299 *	219.580	8.169	219.630	9.600
31			219.230	2.036	219.250	2.284			219.600	9.035		
Ten-Daily Mean												
I Ten-Daily	219.403	5.638	219.344	3.721	219.331	4.070	219.455	6.409	219.726	13.44	219.581	8.318
II Ten-Daily	219.272	2.693	219.282	2.768	219.339	4.058	219.497	6.909	219.709	12.53	219.575	8.118
III Ten-Daily	219.308	3.208	219.274	2.688	219.360	4.461	219.669	11.12	219.634	10.53	219.587	8.284
Monthly												
Min.	219.200	1.731	219.230	2.036	219.230	2.092	219.320	3.395	219.570	8.169	219.500	6.406
Max.	219.570	10.31	219.400	5.005	219.540	8.724	219.730	13.04	219.810	18.46	219.730	12.72
Mean	219.328	3.846	219.299	3.047	219.344	4.205	219.540	8.147	219.688	12.11	219.581	8.24

Annual Runoff in MCM = 202 Annual Runoff in mm = 213

Peak Observed Discharge = 18.46 cumecs on 28/10/2017 Corres. Water Level :219.81 m

Lowest Observed Discharge = 0.428 cumecs on 07/05/2018 Corres. Water Level :219.01 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : AMBARAMPALAYAM (KR000U2) **Division : SR Division, Coimbatore**

Local River : Aliyar **Sub-Division : Middle Cauvery SD, Coimbatore**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	219.600	8.258	219.700	11.63	219.510	6.179	219.630	9.216	219.250	2.249 *	219.410	4.495
2	219.570	7.687 *	219.740	14.37	219.530	6.808	219.640	10.01	219.290	2.262	219.310	2.929
3	219.480	5.403 *	219.680	11.65	219.580	7.800	219.630	9.481	219.280	2.050	219.200	1.822
4	219.560	7.820	219.710	12.93	219.500	6.399 *	219.640	9.850 *	219.280	2.454	219.310	2.723
5	219.640	10.28	219.700	12.71	219.510	6.530	219.640	10.33	219.260	2.006	219.230	1.984
6	219.590	7.946	219.700	12.70	219.360	3.538	219.640	9.884	219.250	2.121	219.080	0.732 *
7	219.600	8.595	219.700	11.60 *	219.220	2.039	219.640	9.913	219.260	2.304	219.010	0.428
8	219.630	9.239	219.710	13.45	219.130	1.239	219.640	10.00	219.450	5.369 *	219.010	0.434
9	219.580	8.183	219.710	13.65	219.130	1.215	219.640	9.647	219.530	6.384	219.120	1.099
10	219.600	8.540 *	219.700	12.59	219.340	3.441	219.640	9.606	219.480	5.753	219.210	1.617
11	219.560	7.769	219.700	12.87	219.370	3.935 *	219.550	7.533 *	219.490	5.962	219.200	1.786
12	219.590	7.794	219.700	12.51	219.370	3.839	219.650	10.67	219.500	6.300	219.250	2.139
13	219.590	7.589	219.690	12.03	219.390	4.240	219.650	10.87	219.510	6.391	219.190	1.603 *
14	219.620	9.580	219.650	10.13 *	219.370	3.933	219.600	9.128	219.530	6.649	219.290	2.268
15	219.670	10.63	219.650	10.24	219.430	5.036	219.630	9.476	219.480	5.974 *	219.150	1.238
16	219.610	9.267	219.650	10.12	219.460	5.881	219.400	4.120	219.400	4.013	219.110	1.072
17	219.700	11.72 *	219.660	10.99	219.430	4.961	219.380	3.735	219.360	3.576	219.110	0.940
18	219.700	11.93	219.700	13.00	219.420	4.802 *	219.370	3.935 *	219.400	4.125	219.080	0.749
19	219.700	11.38	219.700	13.07	219.420	4.845	219.280	2.318	219.430	4.758	219.080	0.758
20	219.670	10.40	219.660	10.89	219.420	5.898	219.150	1.287	219.430	4.770	219.060	0.614 *
21	219.740	12.46	219.670	10.70 *	219.380	3.985	219.150	1.330	219.490	5.662	219.230	1.904
22	219.640	9.776	219.670	11.13	219.360	3.637	219.130	1.156	219.450	5.369 *	219.240	2.052
23	219.650	10.08	219.580	7.744	219.360	3.571	219.140	1.217	219.360	3.495	219.230	1.951
24	219.680	11.04 *	219.680	11.30	219.360	3.583	219.120	1.212	219.340	3.274	219.230	1.952
25	219.700	11.72 *	219.670	11.01	219.340	3.463 *	219.080	0.732 *	219.420	4.588	219.090	0.911
26	219.450	6.123	219.660	10.41 *	219.660	12.51	219.120	1.057	219.200	1.884	219.280	2.160
27	219.390	2.859	219.640	9.883	219.670	11.63	219.270	2.265	219.080	0.743	219.200	1.702 *
28	219.470	5.443	219.640	9.850 *	219.670	12.13	219.250	1.907	219.390	3.767	219.120	1.036
29	219.510	6.083	219.640	10.23			219.250	2.249 *	219.410	4.802 *	219.080	0.784
30	219.630	9.251	219.630	9.448			219.260	2.369 *	219.410	4.620 *	219.300	2.707
31	219.630	11.60 *	219.630	9.398			219.250	1.955			219.310	2.966
Ten-Daily Mean												
I Ten-Daily	219.585	8.196	219.705	12.73	219.381	4.519	219.638	9.794	219.333	3.295	219.189	1.826
II Ten-Daily	219.641	9.806	219.676	11.58	219.408	4.737	219.466	6.308	219.453	5.252	219.152	1.317
III Ten-Daily	219.590	8.766	219.646	10.10	219.475	6.813	219.184	1.586	219.355	3.820	219.210	1.830
Monthly												
Min.	219.390	2.859	219.580	7.744	219.130	1.215	219.080	0.732	219.080	0.743	219.010	0.428
Max.	219.740	12.46	219.740	14.37	219.670	12.51	219.650	10.87	219.530	6.649	219.410	4.495
Mean	219.605	8.917	219.675	11.43	219.417	5.252	219.421	5.757	219.380	4.122	219.185	1.663

Peak Computed Discharge = 13.99 cumecs on 15/10/2017 Corres. Water Level :219.76 m

Lowest Computed Discharge = 0.614 cumecs on 20/05/2018 Corres. Water Level :219.06 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

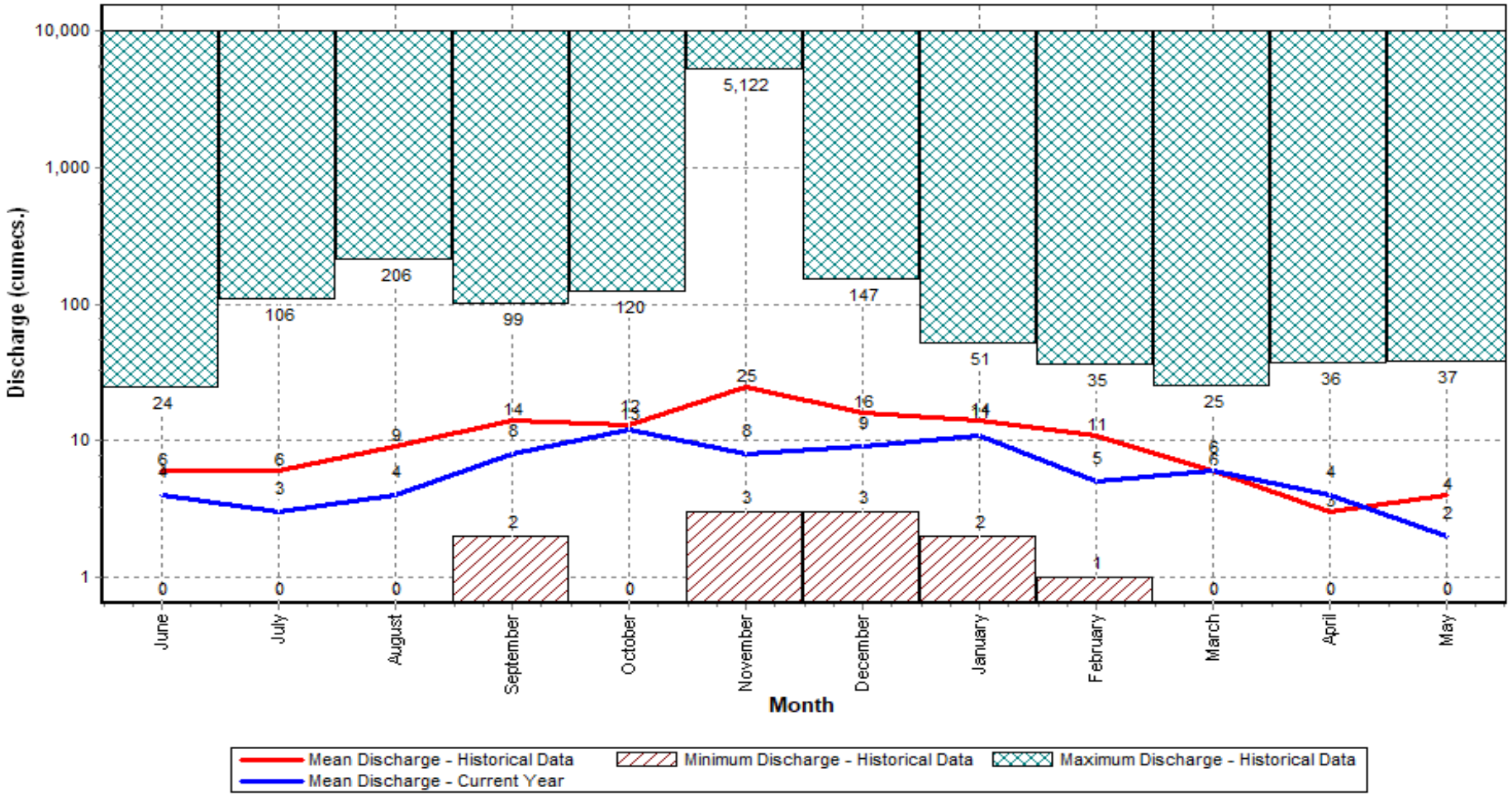
*:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : AMBARAMPALAYAM (KR000U2) **Data considered : 1978-2018** **Division : SR Division, Coimbatore**

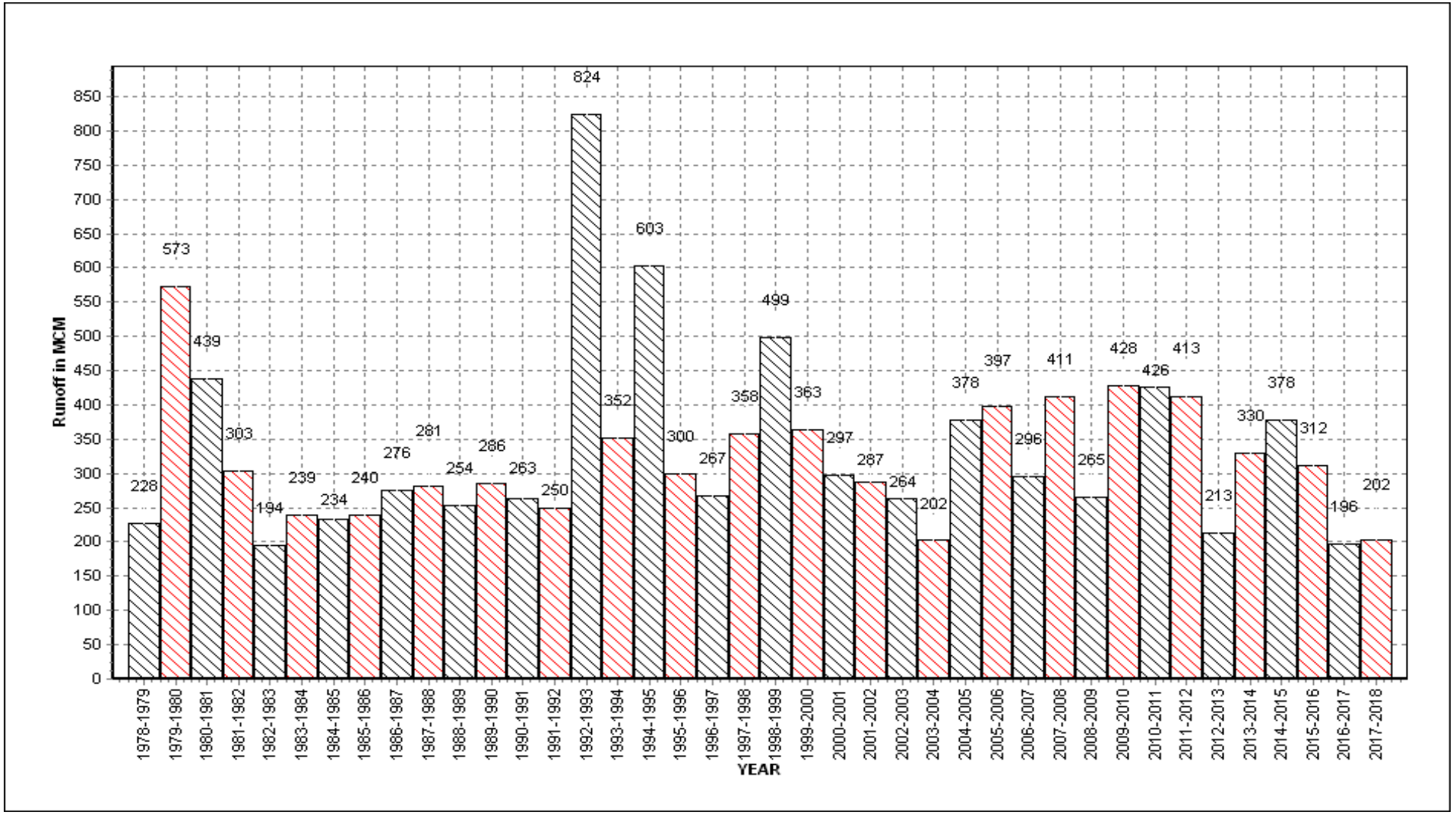
Local River : Aliyar **Sub-Division : Middle Cauvery SD, Coimbatore**



Annual Runoff Values for the period: 1978 - 2018

Station Name : AMBARAMPALAYAM (KR000U2) **Division : SR Division, Coimbatore**

Local River : Aliyar **Sub-Division : Middle Cauvery SD, Coimbatore**



Note: Missing values have not been considered while arriving at Annual Runoff

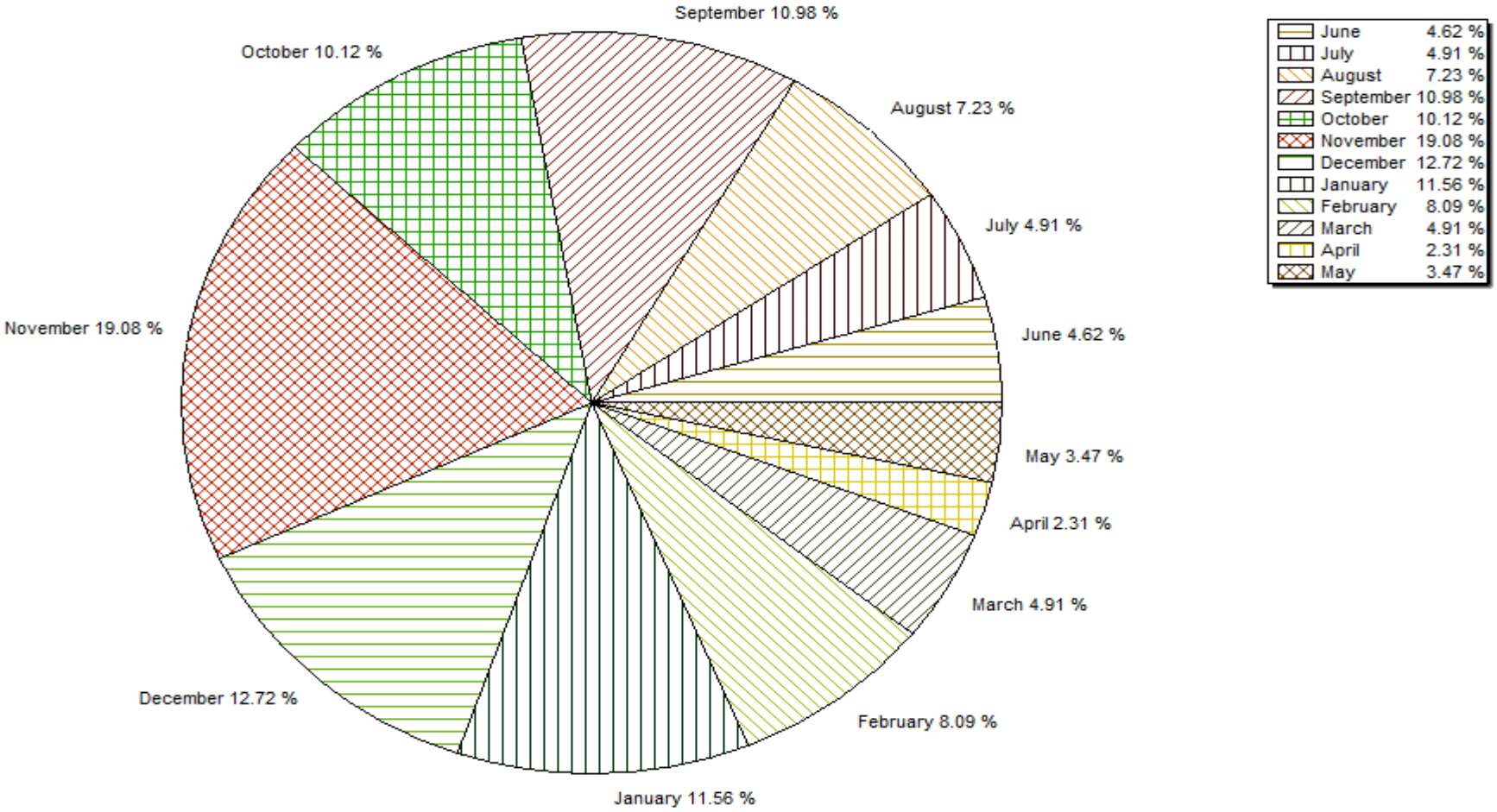
Monthly Average Runoff based on period : 1978-2017

Station Name : AMBARAMPALAYAM (KR000U2)

Local River : Aliyar

Division : SR Division, Coimbatore

Sub-Division : Middle Cauvery SD, Coimbatore



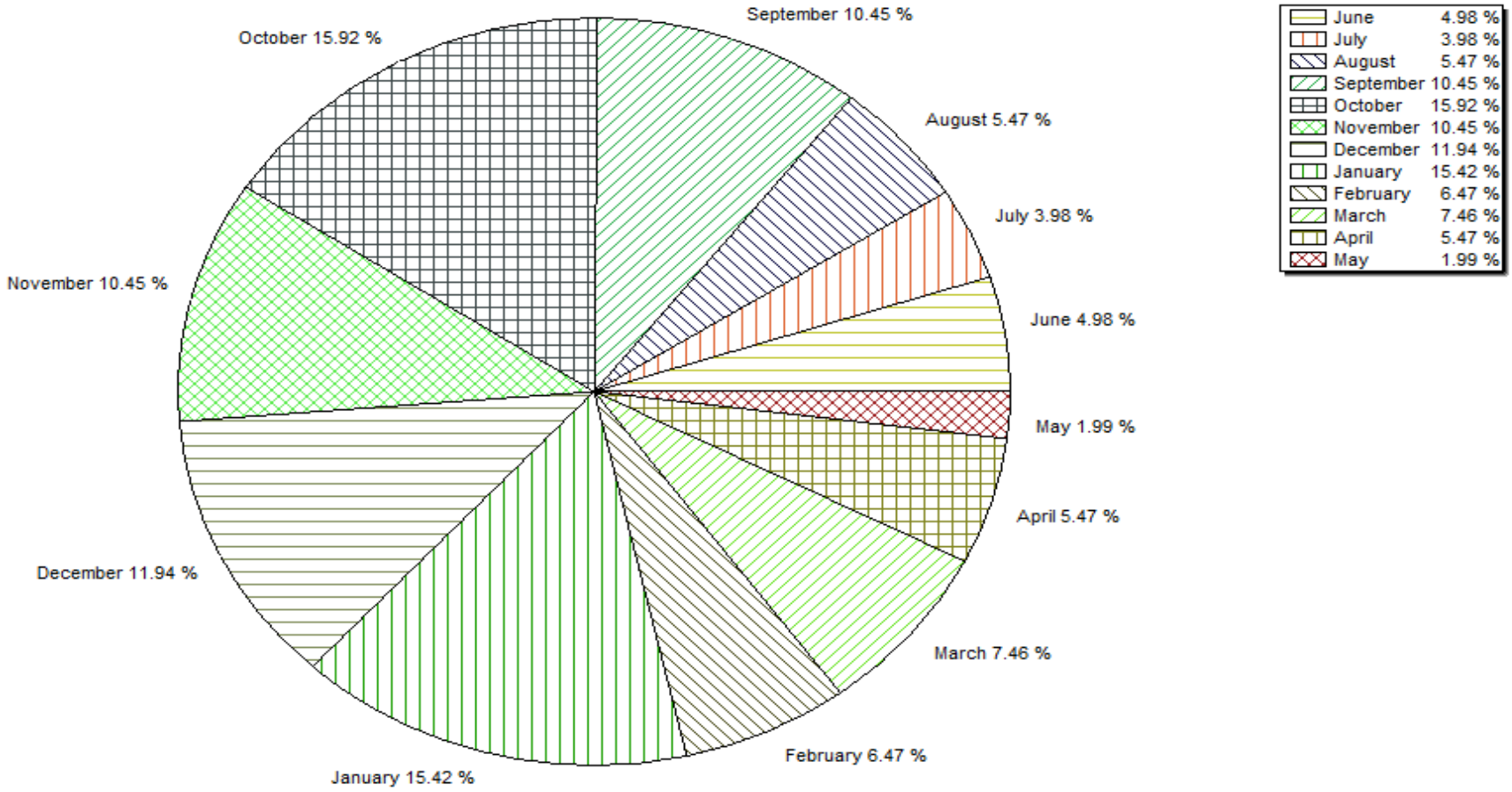
Monthly Runoff for the Year : 2017-2018

Station Name : AMBARAMPALAYAM (KR000U2)

Local River : Aliyar

Division : SR Division, Coimbatore

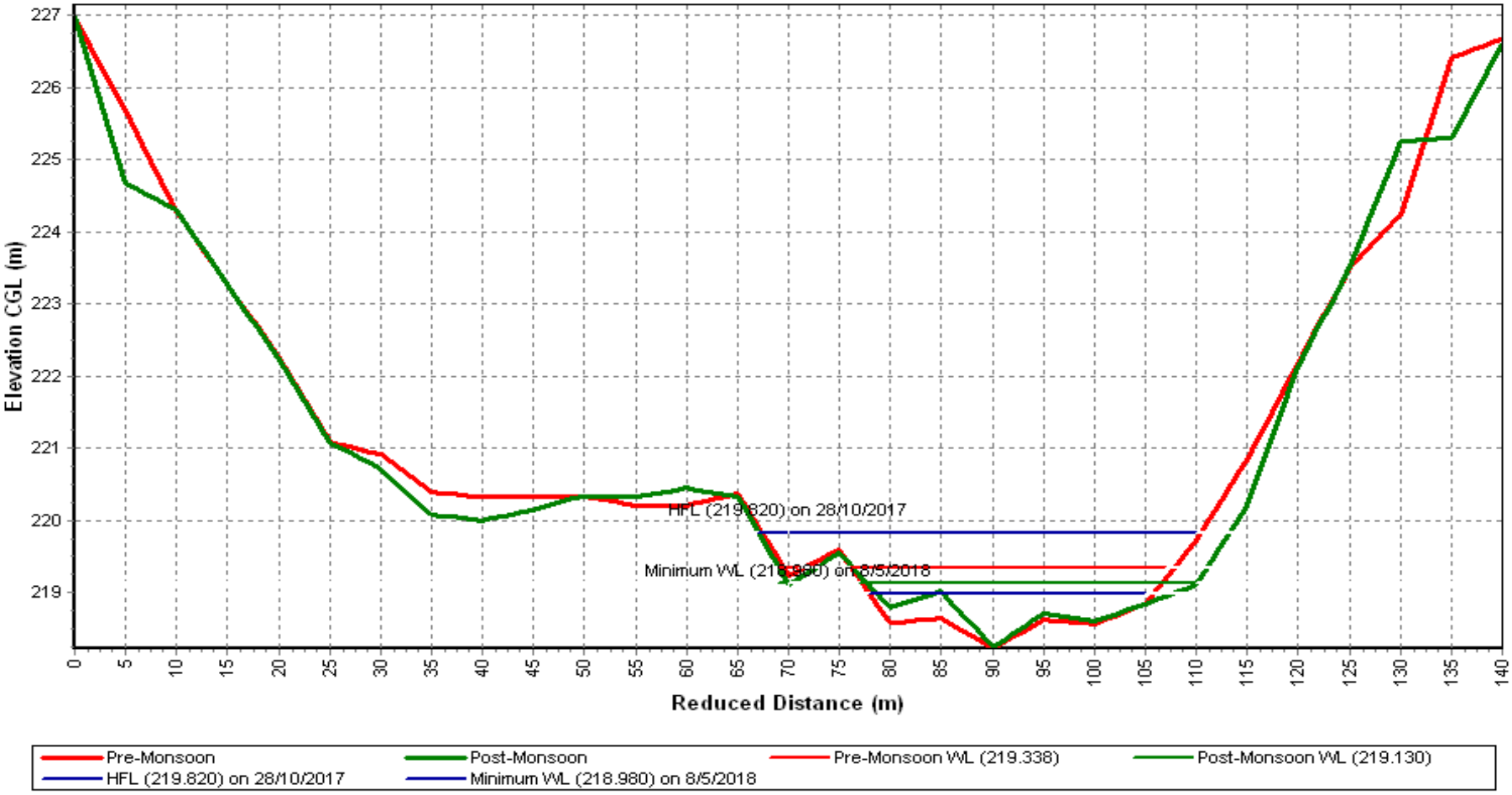
Sub-Division : Middle Cauvery SD, Coimbatore



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : AMBARAMPALAYAM (KR000U2) **Division : SR Division, Coimbatore**

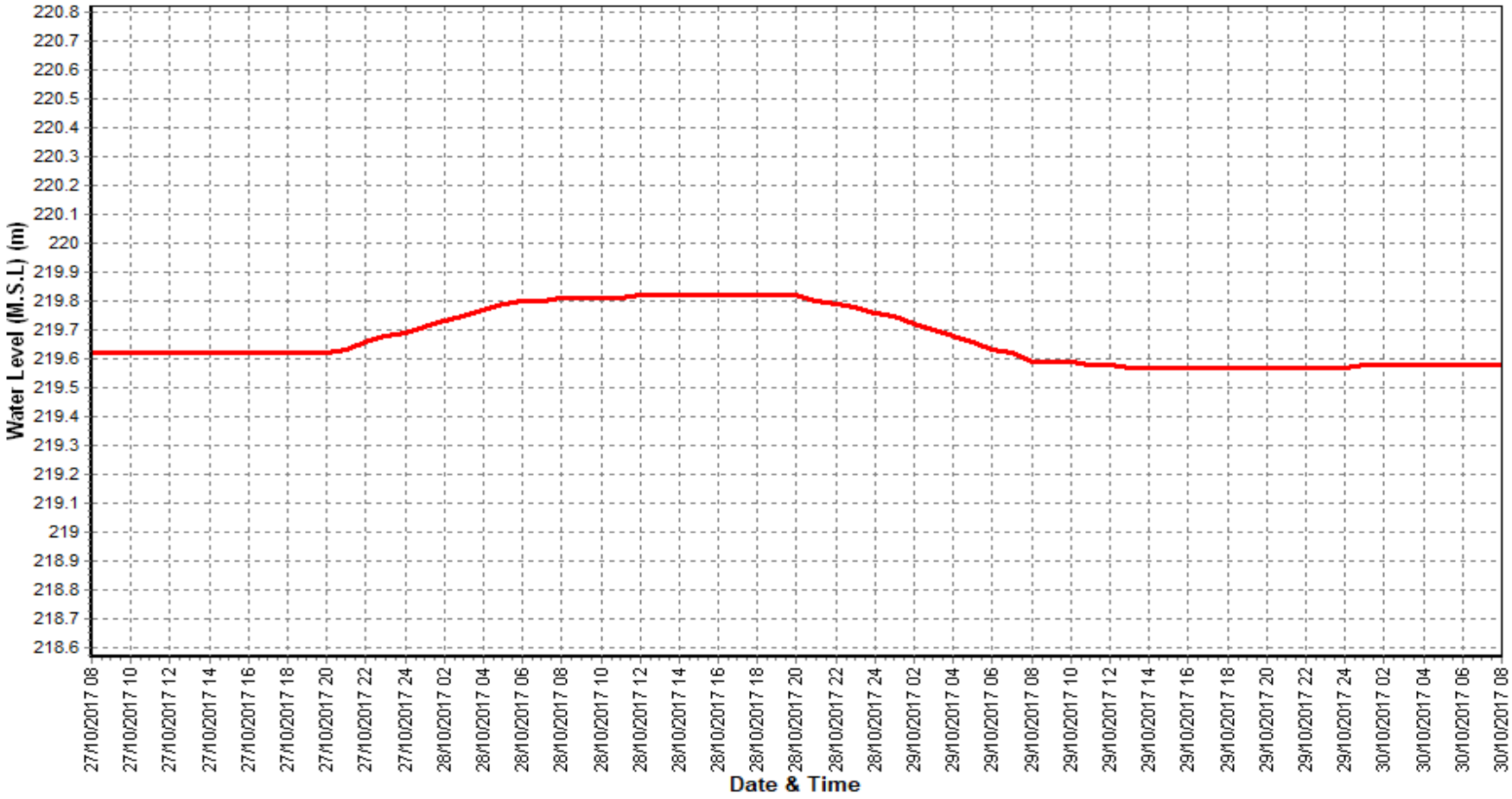
Local River : Aliyar **Sub-Division : Middle Cauvery SD, Coimbatore**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : AMBARAMPALAYAM (KR000U2) **Division : SR Division, Coimbatore**

Local River : Aliyar **Sub-Division : Middle Cauvery SD, Coimbatore**

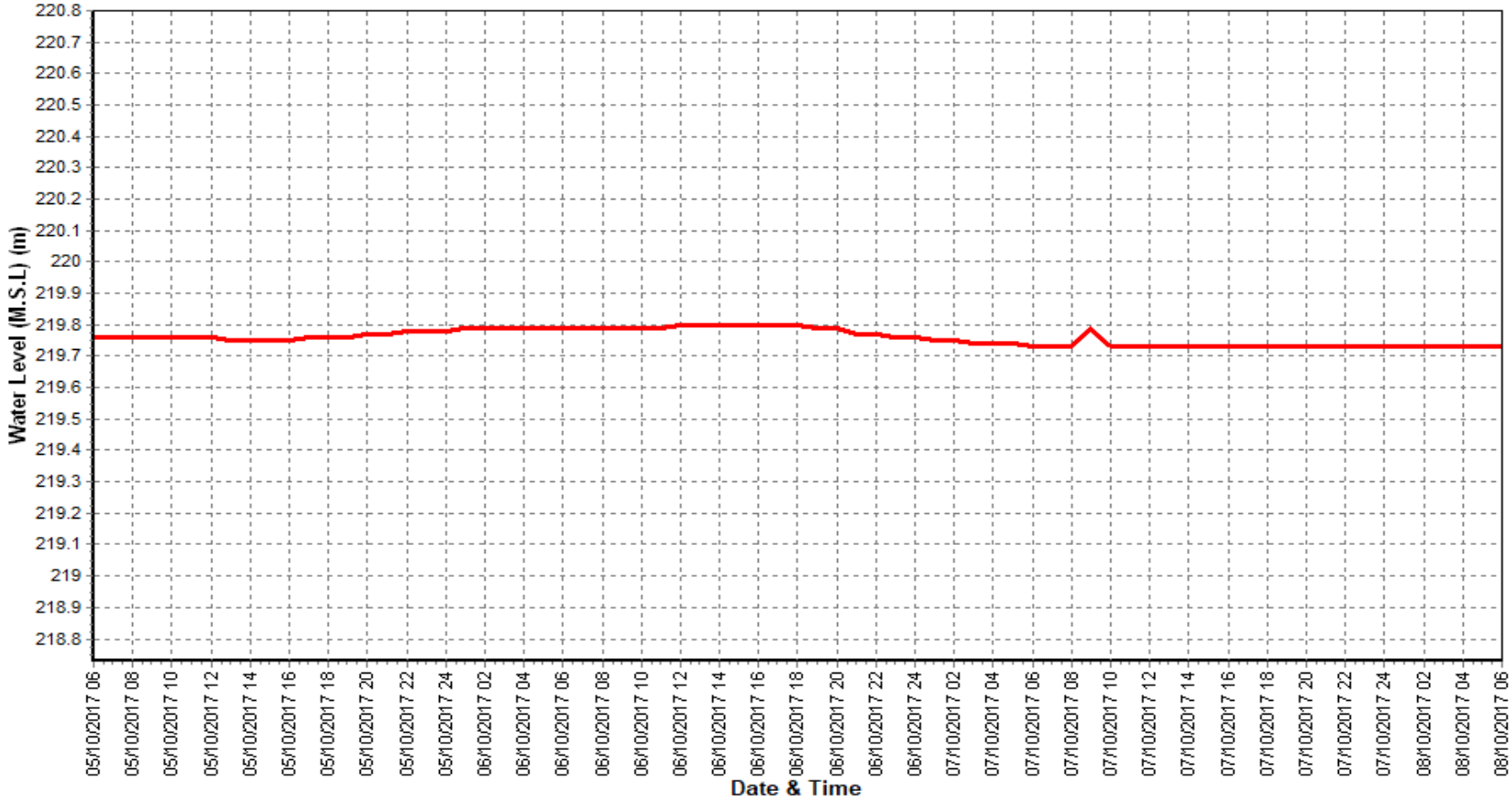


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : AMBARAMPALAYAM (KR000U2) **Division : SR Division, Coimbatore**

Local River : Aliyar **Sub-Division : Middle Cauvery SD, Coimbatore**

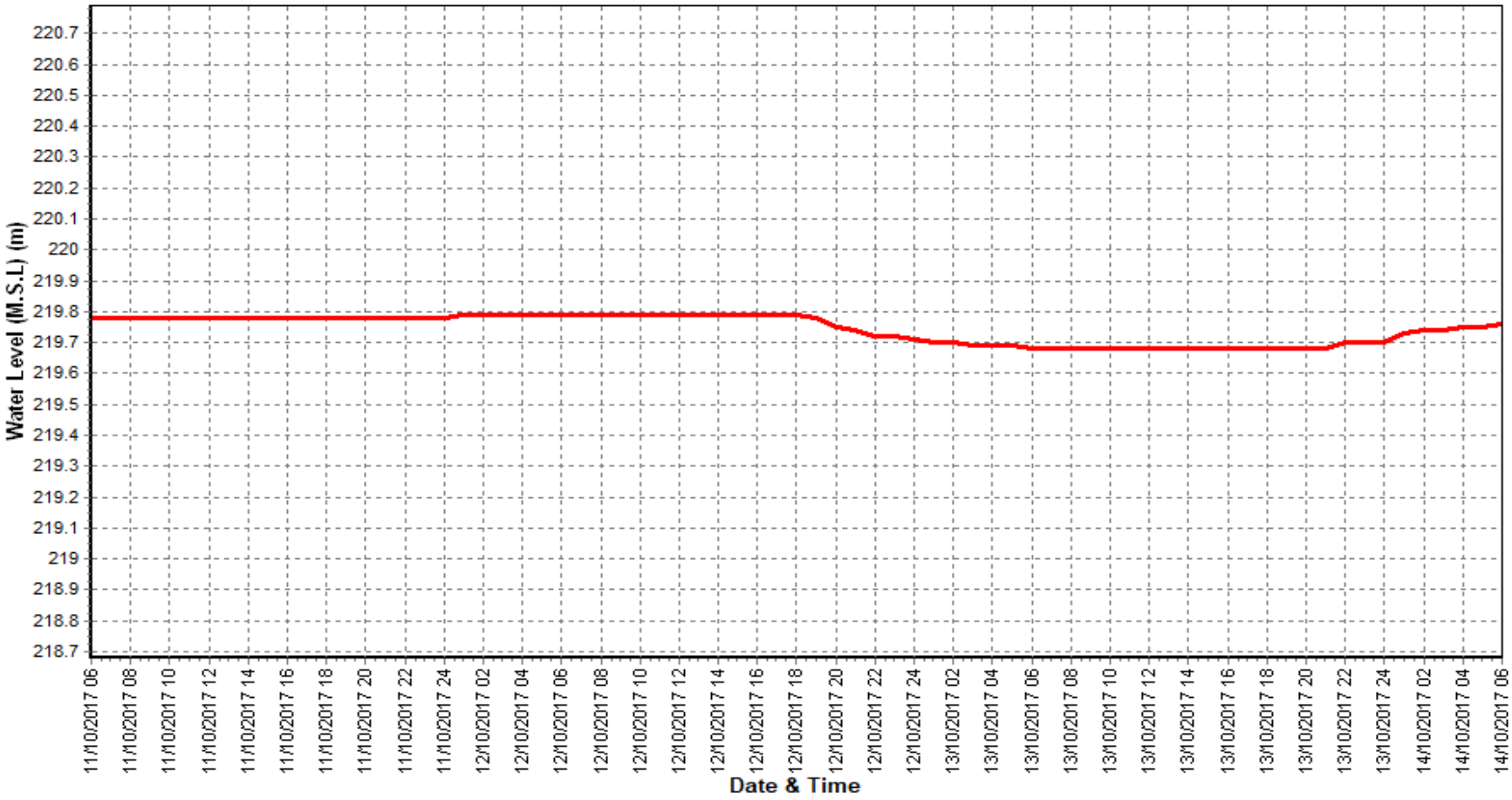


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : AMBARAMPALAYAM (KR000U2) **Division : SR Division, Coimbatore**

Local River : Aliyar **Sub-Division : Middle Cauvery SD, Coimbatore**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	**: ARANGALY**		**Code**	**: KSA00F3**	
State	: Kerala		District	Thrissur	
Basin	: WFR South of Tapi		Independent River	: Periyar	
Tributary	: Chalakudy		Sub Tributary	: -	
Sub-Sub Tributary	: -		Local River	: Chalakudy	
Division	: SWR Division, Kochi		Sub-Division	: SWR SD No 2, Kochi	
Drainage Area	: 1342 Sq. Km.		Bank	: Left	
Latitude	: 10°17'10"		Longitude	: 76°19'20"	
Zero of Gauge (m)	: 0.000 (m.s.l)		17-02-1978		
	Opening Date		Closing Date		
Gauge	: 17-02-1978				
Discharge	: 27-04-1978				
Sediment	: 08-07-1980				
Water Quality	: 01-08-1978				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1978-1979	504.5	4.980	11-08-1978	3.000	1.138	01-05-1979
1979-1980	875.0	6.930	08-08-1979	3.000	1.115	16-04-1980
1980-1981	707.4	6.240	02-07-1980	4.200	1.205	06-02-1981
1981-1982	568.0	5.850	24-09-1981	3.100	1.130	16-04-1982
1982-1983	356.9	4.410	02-08-1982	2.500	0.980	14-05-1983
1983-1984	599.4	5.750	21-07-1983	4.900	1.105	11-06-1983
1984-1985	466.7	5.190	20-07-1984	3.300	0.795	08-05-1985
1985-1986	793.0	7.580	27-06-1985	2.200	0.630	22-04-1986
1986-1987	770.5	5.985	09-08-1986	2.600	0.610	06-05-1987
1987-1988	502.0	4.650	26-08-1987	4.840	0.580	08-02-1988
1988-1989	539.3	4.715	18-07-1988	2.233	0.530	25-05-1989
1989-1990	859.5	6.605	24-07-1989	3.018	0.330	16-05-1990
1990-1991	431.0	3.800	04-11-1990	0.800	0.440	27-12-1990
1991-1992	718.8	5.562	29-07-1991	2.803	0.087	07-03-1992
1992-1993	910.4	5.861	28-07-1992	4.900	0.330	02-05-1993
1993-1994	432.4	3.928	04-08-1993	3.850	0.177	07-02-1994
1994-1995	915.3	6.445	03-08-1994	0.000	0.500	20-12-1994
1995-1996	520.5	4.640	03-09-1995	0.000	0.560	18-01-1996
1996-1997	524.0	4.590	29-09-1996	0.000	0.480	01-06-1996
1997-1998	605.0	4.190	25-07-1997	0.000	0.410	28-04-1998

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Year	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1978-1979	504.5	4.980	11-08-1978	3.000	1.138	01-05-1979
1979-1980	875.0	6.930	08-08-1979	3.000	1.115	16-04-1980
1980-1981	707.4	6.240	02-07-1980	4.200	1.205	06-02-1981
1998-1999	838.8	5.725	12-10-1998	2.809	0.340	01-06-1998
1999-2000	690.0	4.650	18-07-1999	0.000	0.415	03-03-2000
2000-2001	608.5	4.635	25-08-2000	0.000	0.310	01-06-2000
2001-2002	576.0	4.775	09-07-2001	0.000	0.620	23-01-2002
2002-2003	668.4	4.945	17-08-2002	0.126	0.310	11-12-2002
2003-2004	292.8	2.500	24-08-2003	0.000	0.350	17-03-2004
2004-2005	680.6	4.875	05-08-2004	0.000	0.660	05-01-2005
2005-2006	881.8	6.120	01-08-2005	0.000	0.630	01-06-2005
2006-2007	551.4	4.160	16-08-2006	0.000	0.620	01-02-2007
2007-2008	1265	7.160	17-07-2007	0.000	0.610	16-12-2007
2008-2009	379.4	3.230	28-07-2008	0.000	0.450	0/06/2008
2009-2010	1363	6.355	18-07-2009	0.000	0.590	01-06-2009
2010-2011	359.0	2.850	04-10-2010	0.000	0.680	15-01-2011
2011-2012	710.1	4.725	03-09-2011	0.000	0.440	11-12-2011
2012-2013	374.0	2.950	18-08-2012	0.000	0.520	01-06-2012
2013-2014	1266	5.870	05-08-2013	0.000	0.540	01-06-2013
2014-2015	639.9	3.610	01-09-2014	1.587	0.600	07-02-2015
2015-2016	531.5	3.910	27-06-2015	0.095	0.570	02-06-2015
2013-2014	1266	5.870	05-08-2013	0.000	0.680	22-01-2014
2014-2015	639.9	3.610	01-09-2014	1.587	0.600	07-02-2015
2015-2016	531.5	3.910	27-06-2015	0.095	0.570	02-06-2015
2016-2017	194.2	1.870	13-07-2016	0.000	0.390	30-12-2016

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : ARANGALY (KSA00F3) **Division : SWR Division, Cochin**

Local River : Chalakudy **Sub-Division : SWR SD No 2, Kochi**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	0.620	46.58 *	1.110	82.55	0.750	50.93	1.150	89.68 *	0.750	51.99 *	0.910	39.22
2	0.890	66.55 *	1.240	98.61 *	0.690	48.21	1.150	104.3	0.860	58.66 *	0.780	30.74
3	1.240	98.61 *	1.210	103.8	0.930	49.49	1.360	111.3 *	0.850	62.73	1.000	41.79
4	1.000	75.86 *	1.130	94.98	1.040	73.39	0.900	67.37 *	0.780	64.46	0.910	36.02 *
5	0.990	74.99 *	0.900	80.56	1.100	74.87	0.860	64.13 #	0.740	65.51	0.890	35.34 *
6	1.270	101.7 *	0.820	60.99 #	1.540	131.9 *	0.870	52.84	0.910	65.51	0.960	36.81
7	0.570	43.32 *	0.790	59.45 #	1.700	152.1	0.840	62.55 #	0.830	53.91	0.870	33.31
8	1.330	108.0 *	0.770	57.93 #	1.360	118.3	1.240	92.75	0.910	61.85 *	1.070	42.00
9	0.680	50.67 *	0.730	54.23 *	1.280	109.5	1.090	88.80	0.930	62.28	1.040	44.10
10	0.590	44.61 *	1.360	101.9	1.390	112.1	1.040	79.42 *	0.840	56.19	0.900	37.21
11	0.720	53.51 *	1.380	100.3	1.270	94.43	0.980	94.55	0.790	52.40	0.870	38.43
12	0.750	55.70 *	0.840	71.67	1.430	110.5	0.970	72.10	0.780	47.18	0.720	29.80 *
13	0.950	71.55 *	0.830	66.95	1.240	98.61 *	0.920	71.63	0.880	50.59	0.620	26.51 #
14	0.930	69.86 *	1.140	89.64	1.100	84.38	1.500	120.7	0.920	52.15	0.590	20.32
15	1.090	68.93	1.050	82.84	0.980	74.12 *	1.120	93.03	0.950	64.47 *	0.740	33.86
16	1.110	69.33	0.940	70.70 *	0.840	67.31	1.040	82.78	0.880	54.26	0.710	32.61
17	0.840	52.14	0.780	68.00	0.850	68.76	2.800	335.1 *	1.080	66.82	0.480	19.64
18	0.800	59.45 *	0.900	77.82	1.020	89.49	5.380	845.8	1.010	68.52 *	0.640	29.64
19	0.680	50.67 #	0.900	76.11	1.630	138.8	3.290	417.3	0.880	62.92	0.680	28.58 *
20	0.790	46.39	1.250	104.7	1.420	117.9 *	2.070	230.0	0.820	56.10	0.850	37.72
21	0.770	45.95	1.530	134.7	1.780	159.7	1.430	147.5	0.760	52.59	0.830	36.19
22	0.770	40.81	1.270	107.6	2.200	257.3	1.250	125.7	0.870	59.29 *	0.480	26.57
23	0.640	37.41	1.140	88.72 *	1.865	160.6	0.930	63.15 #	0.680	46.75	0.410	24.44
24	1.040	80.32 #	0.990	86.37	1.280	122.0	0.830	56.79 *	0.685	47.64	0.530	23.34
25	1.380	113.5 *	0.970	82.17	1.130	98.78	0.760	52.58 #	0.660	47.76	0.840	31.01
26	1.500	127.1 *	1.010	78.23	1.240	95.71	1.160	90.33	0.690	47.99	1.020	39.94 *
27	1.630	174.6	0.970	74.19	1.380	113.5 *	1.100	80.21	0.830	33.32 #	0.980	38.49 #
28	1.830	186.4	1.240	101.3	1.470	118.0	1.080	75.33	0.470	27.31	1.090	32.38
29	1.560	120.6	1.090	79.03	1.680	151.0	1.090	74.16 *	0.740	30.43 *	1.110	31.29
30	1.320	106.5	0.970	73.25 *	2.540	307.9	0.790	54.36 *	0.880	44.80	0.900	35.68 #
31			0.840	58.16	1.620	143.6			0.820	35.62		
Ten-Daily Mean												
I Ten-Daily	0.918	71.09	1.006	79.50	1.178	92.08	1.050	81.31	0.840	60.31	0.933	37.65
II Ten-Daily	0.866	59.75	1.001	80.87	1.178	94.43	2.007	236.3	0.899	57.54	0.690	29.71
III Ten-Daily	1.244	103.3	1.093	87.61	1.653	157.1	1.042	82.01	0.735	43.05	0.819	31.93
Monthly												
Min.	0.570	37.41	0.730	54.23	0.690	48.21	0.760	52.58	0.470	27.31	0.410	19.64
Max.	1.830	186.4	1.530	134.7	2.540	307.9	5.380	845.8	1.080	68.52	1.110	44.10
Mean	1.009	78.06	1.035	82.82	1.347	115.9	1.366	133.2	0.822	53.29	0.814	33.1

Annual Runoff in MCM = 1352 Annual Runoff in mm = 1007

Peak Observed Discharge = 845.8 cumecs on 18/09/2017 Corres. Water Level :5.38 m

Lowest Observed Discharge = 0.000 cumecs on 15/12/2017 Corres. Water Level :0.49 m

Q:Observed/Computed Discharge in cumecs **** : Observed/Computed Discharge due to Back wtaer effect**

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : ARANGALY (KSA00F3) **Division : SWR Division, Cochin**

Local River : Chalakudy **Sub-Division : SWR SD No 2, Kochi**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	0.900	22.55	0.490	0.000	0.610	0.000	0.610	0.000	0.730	0.000	0.970	0.000
2	0.830	20.00	0.450	0.000	0.590	0.000	0.630	0.000	0.780	0.000	0.960	0.000
3	0.770	18.87 *	0.450	0.000	0.580	0.000	0.640	0.000	0.760	0.000	0.960	0.000
4	0.990	31.54	0.400	0.000	0.580	0.000	0.660	0.000	0.750	0.000	0.960	0.000
5	0.960	25.03	0.400	0.000	0.610	0.000	0.690	0.000	0.740	0.000	0.960	0.000
6	0.850	18.37	0.410	0.000	0.590	0.000	0.610	0.000	0.710	0.000	0.970	0.000
7	0.790	18.29	0.410	0.000	0.580	0.000	0.630	0.000	0.680	0.000	0.980	0.000
8	0.750	20.12	0.470	0.000	0.560	0.000	0.590	0.000	0.680	0.000	0.990	0.000
9	0.700	15.15	0.480	0.000	0.550	0.000	0.560	0.000	0.670	0.000	0.990	0.000
10	0.680	15.90 *	0.510	0.000	0.520	0.000	0.570	0.000	0.640	0.000	1.170	0.000
11	0.620	12.48	0.550	0.000	0.490	0.000	0.600	0.000	0.650	0.000	1.180	6.260 **
12	0.740	21.93	0.570	0.000	0.540	0.000	0.640	0.000	0.640	0.000	1.220	4.262 **
13	0.670	17.94	0.580	0.000	0.540	0.000 *	0.630	0.000	0.660	0.000	1.200	3.100 **
14	0.690	16.22 #	0.590	0.000	0.550	0.000	0.640	0.000	0.700	0.000	1.190	2.839 **
15	0.490	0.000	0.630	0.000	0.550	0.000	0.640	0.000	0.780	0.000	1.140	0.000
16	0.410	0.000	0.620	0.000	0.550	0.000	0.650	0.000	0.840	0.000	1.140	0.000
17	0.420	0.000	0.630	0.000	0.540	0.000	0.660	0.000	0.860	0.000	1.160	0.000
18	0.500	0.000	0.620	0.000	0.520	0.000	0.690	0.000	0.880	0.000	1.180	0.000
19	0.490	0.000	0.600	0.000	0.550	0.000	0.730	0.000	0.910	0.000	1.130	0.000
20	0.540	0.000	0.590	0.000	0.510	0.000	0.730	0.000	0.890	0.000	1.140	0.000
21	0.670	0.000	0.600	0.000	0.500	0.000	0.720	0.000	0.870	0.000	1.180	0.000
22	0.670	0.000	0.640	0.000	0.510	0.000	0.710	0.000	0.870	0.000	1.140	0.000
23	0.650	0.000	0.630	0.000	0.520	0.000	0.710	0.000	0.880	0.000	1.130	0.000
24	0.630	0.000	0.620	0.000	0.510	0.000	0.740	0.000	0.860	0.000	1.120	11.86 **
25	0.600	0.000	0.630	0.000	0.540	0.000	0.740	0.000	0.840	0.000	1.110	13.25 **
26	0.560	0.000	0.620	0.000	0.580	0.000	0.810	0.000	0.810	0.000	1.090	7.172 **
27	0.500	0.000	0.620	0.000	0.560	0.000	0.790	0.000	0.960	0.000	1.110	10.00 **
28	0.590	0.000	0.600	0.000	0.570	0.000	0.770	0.000	0.980	0.000	1.100	13.60 **
29	0.540	0.000	0.640	0.000			0.770	0.000	0.980	0.000	1.390	56.73 **
30	0.520	0.000	0.630	0.000			0.750	0.000	0.990	0.000	0.880	56.58 **
31	0.490	0.000	0.610	0.000			0.760	0.000			0.600	43.50
Ten-Daily Mean												
I Ten-Daily	0.822	20.58	0.447	0.000	0.577	0.000	0.619	0.000	0.714	0.000	0.991	0.000
II Ten-Daily	0.557	6.857	0.598	0.000	0.534	0.000	0.661	0.000	0.781	0.000	1.168	1.646
III Ten-Daily	0.584	0.000	0.622	0.000	0.536	0.000	0.752	0.000	0.904	0.000	1.077	19.34
Monthly												
Min.	0.410	0.000	0.400	0.000	0.490	0.000	0.560	0.000	0.640	0.000	0.600	0.000
Max.	0.990	31.54	0.640	0.000	0.610	0.000	0.810	0.000	0.990	0.000	1.390	56.73
Mean	0.652	8.851	0.558	0	0.550	0	0.680	0	0.800	0	1.079	7.392

Peak Computed Discharge = 335.1 cumecs on 17/09/2017 Corres. Water Level :2.8 m

Lowest Computed Discharge = 0.000 cumecs on 13/02/2018 Corres. Water Level :0.54 m

Q:Observed/Computed Discharge in cumecs **** : Observed/Computed Discharge due to Back wtaer effect**

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

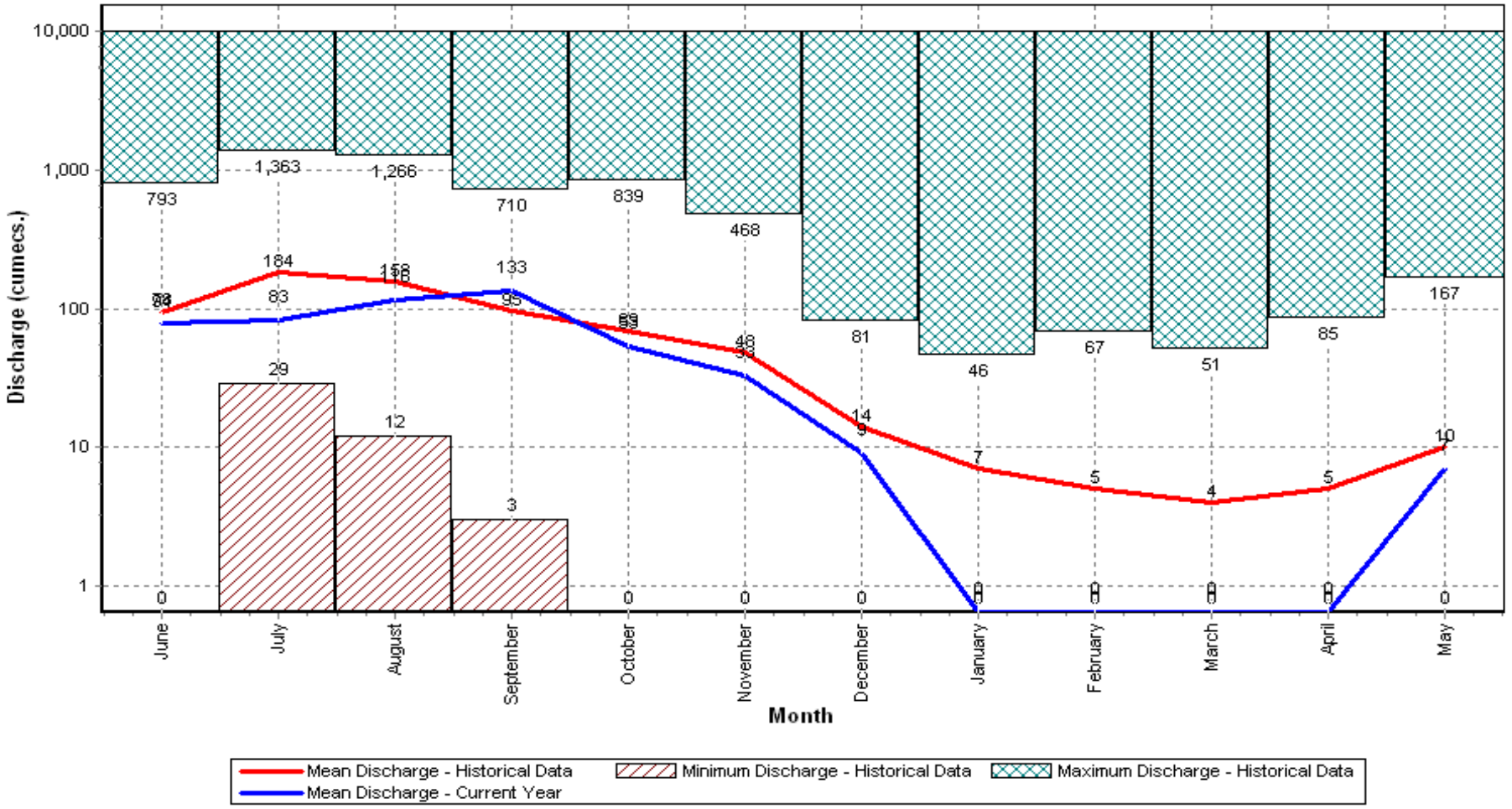
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : ARANGALY (KSA00F3) | **Data considered : 1978-2018** | **Division : SWR Division, Cochin**

Local River : Chalakudy | **Sub-Division : SWR SD No 2, Kochi**



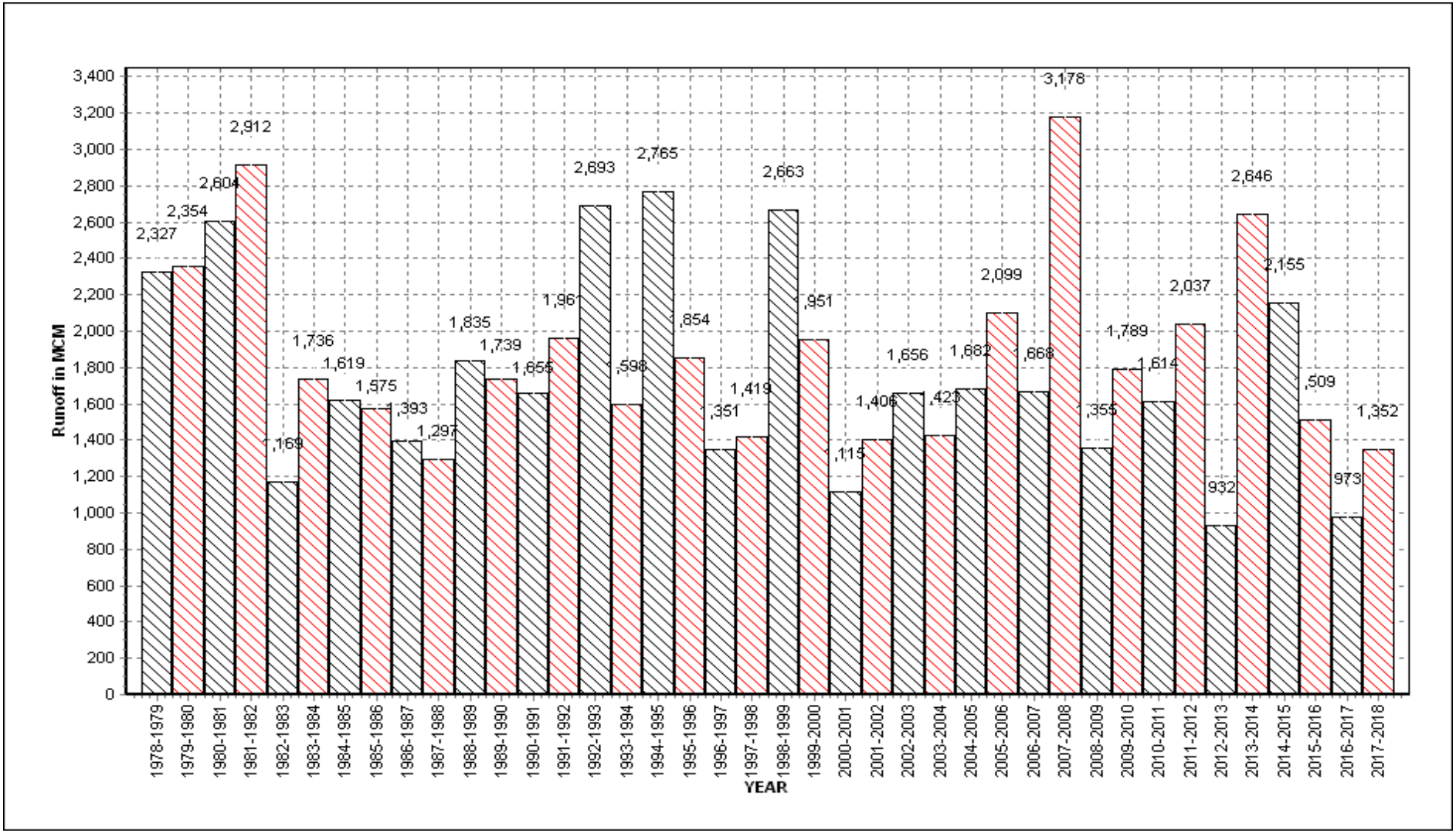
Annual Runoff Values for the period: 1978 - 2018

Station Name : ARANGALY (KSA00F3)

Local River : Chalakudy

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi

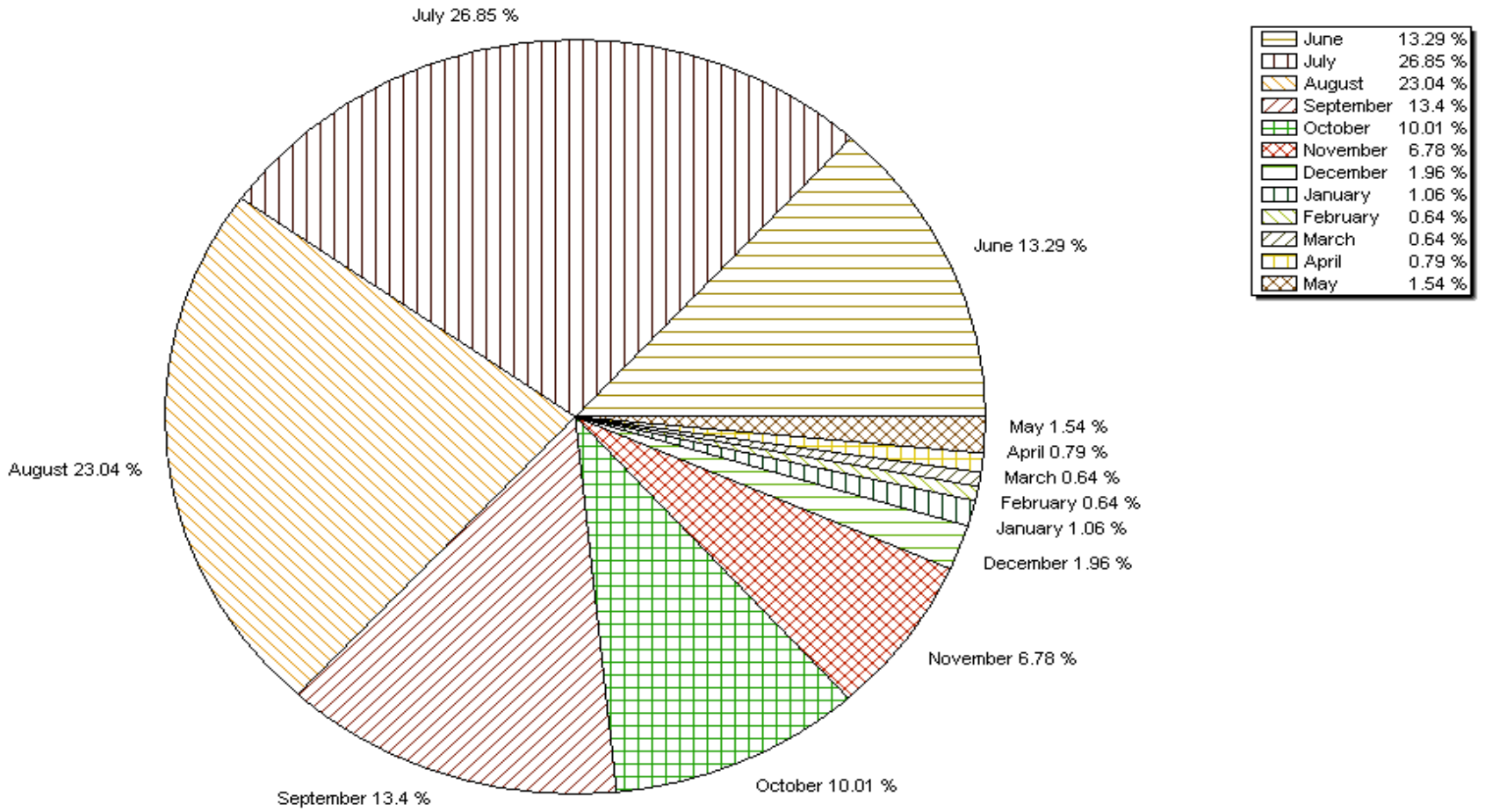


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1978-2017

Station Name : ARANGALY (KSA00F3)
Local River : Chalakudy

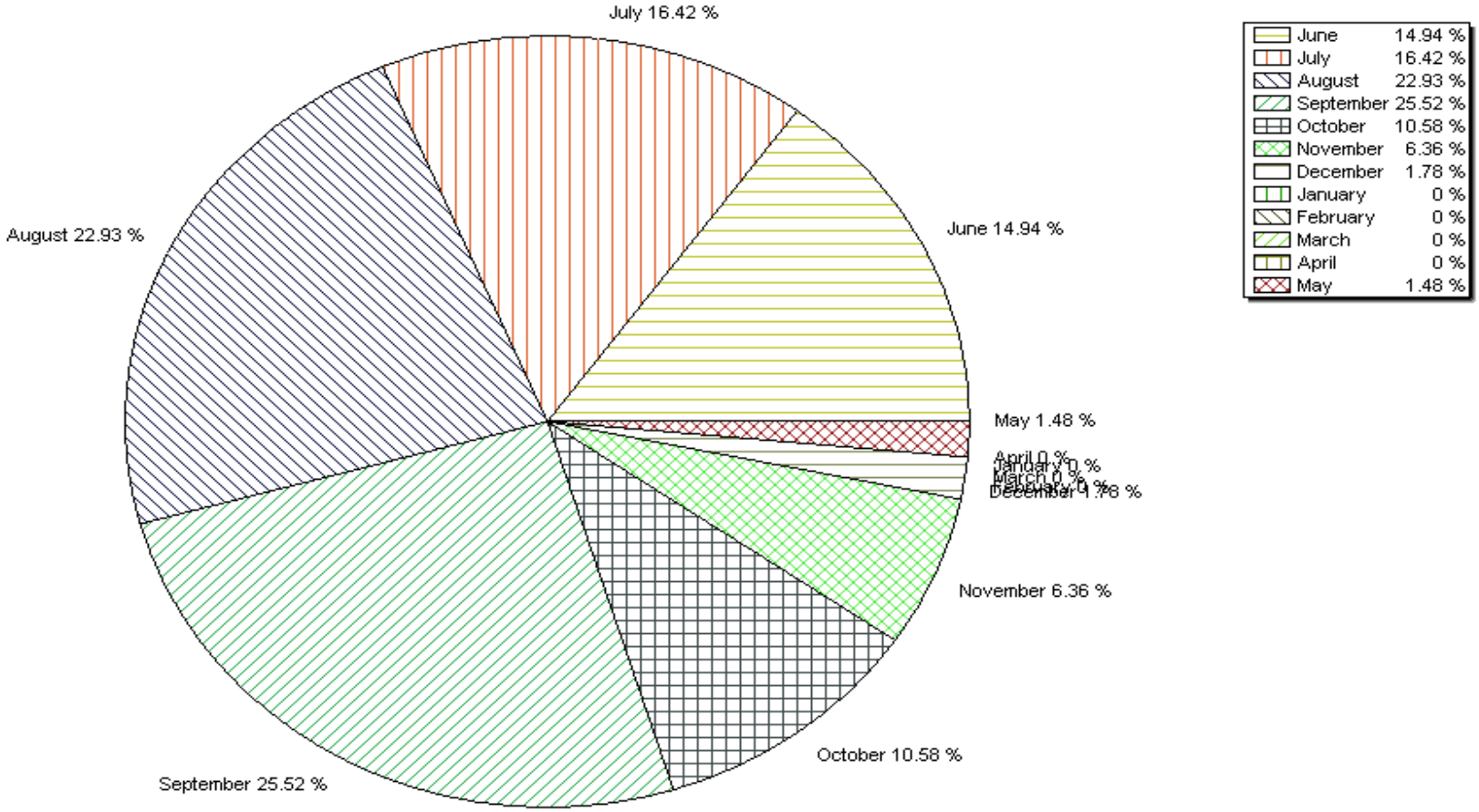
Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



Monthly Runoff for the Year : 2017-2018

Station Name : ARANGALY (KSA00F3)
Local River : Chalakudy

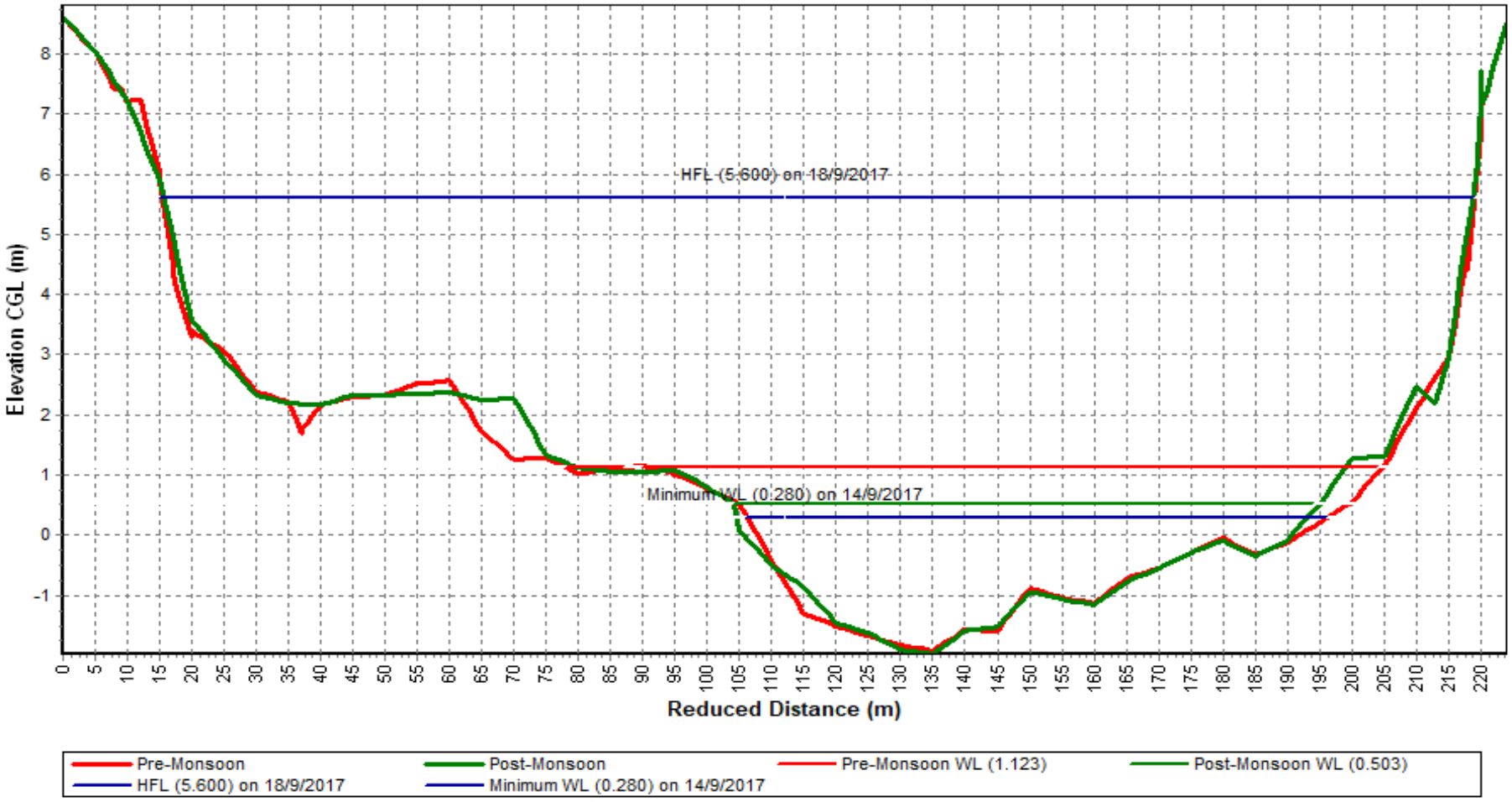
Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : ARANGALY (KSA00F3) **Division : SWR Division, Cochin**

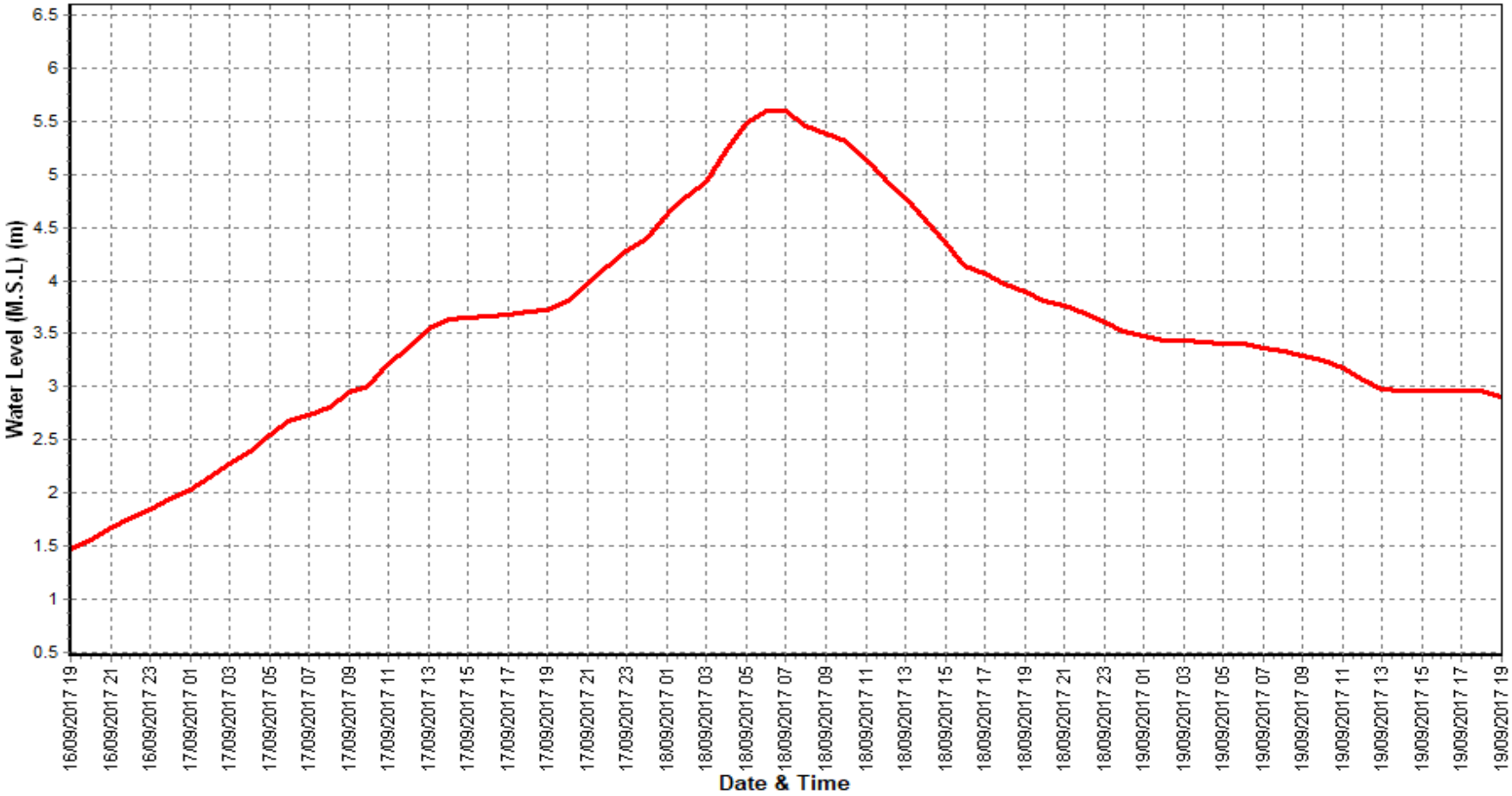
Local River : Chalakudy **Sub-Division : SWR SD No 2, Kochi**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : ARANGALY (KSA00F3) **Division : SWR Division, Cochin**

Local River : Chalakudy **Sub-Division : SWR SD No 2, Kochi**

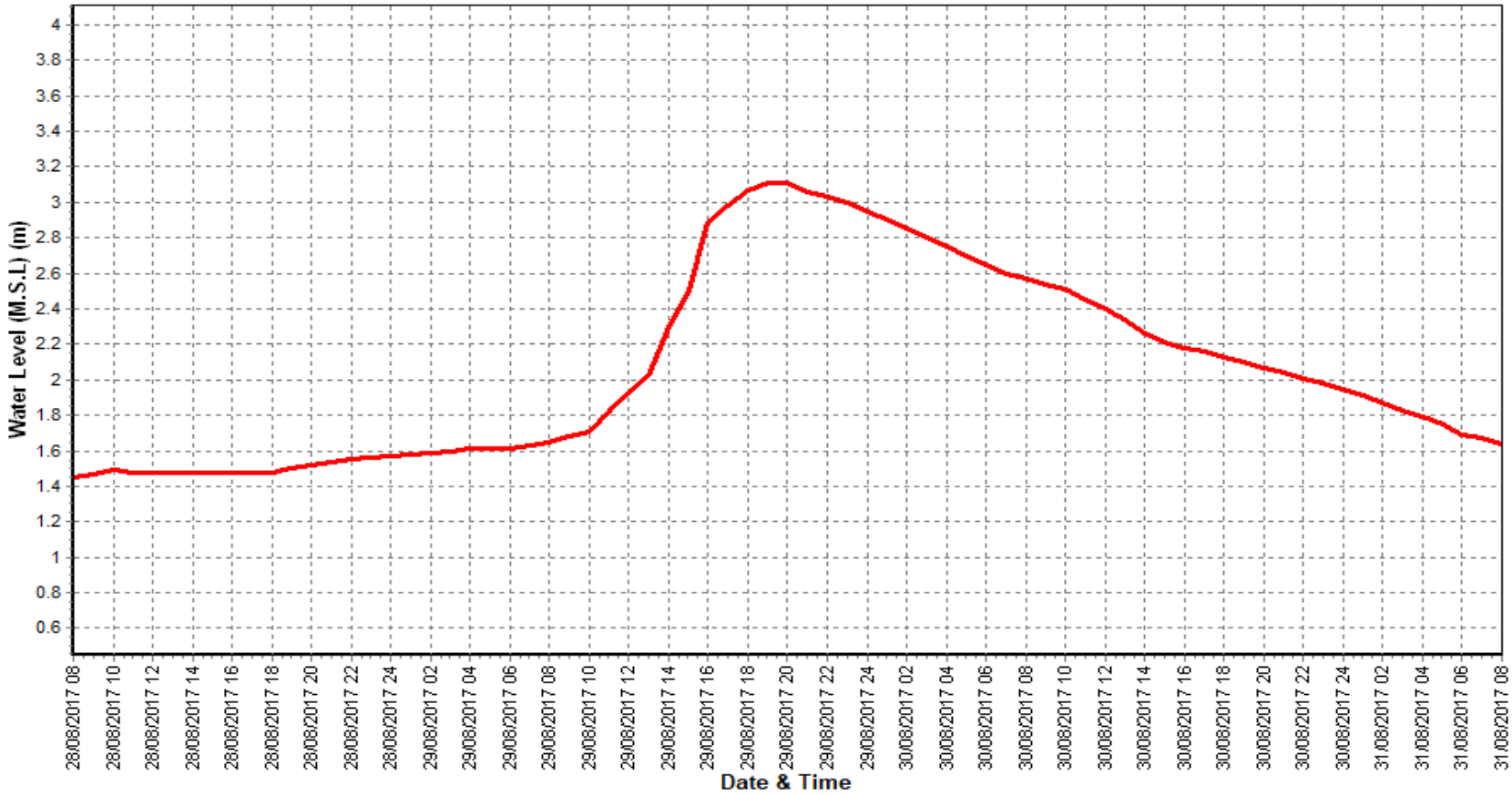


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : ARANGALY (KSA00F3) **Division : SWR Division, Cochin**

Local River : Chalakudy **Sub-Division : SWR SD No 2, Kochi**

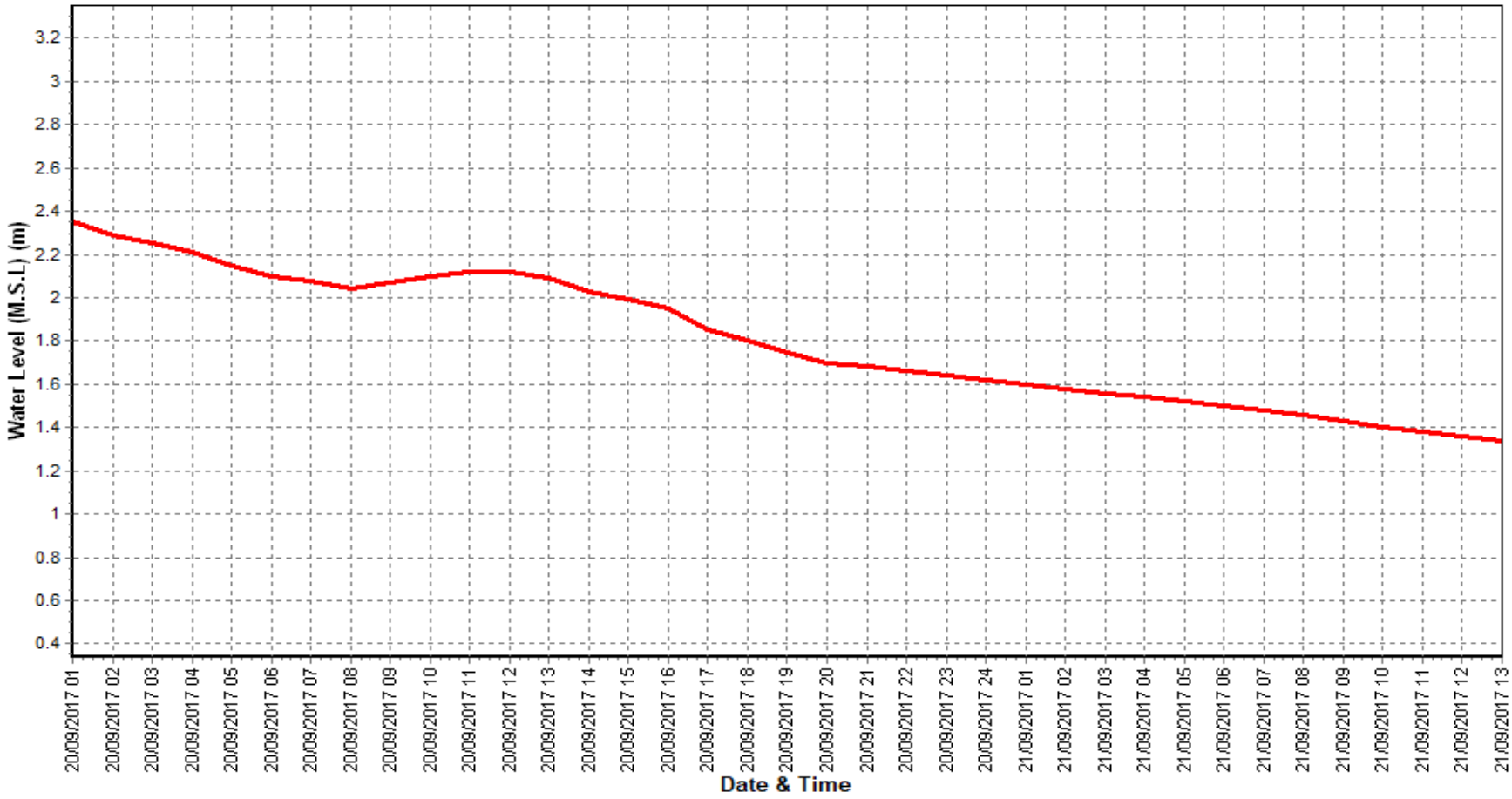


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : ARANGALY (KSA00F3) **Division : SWR Division, Cochin**

Local River : Chalakudy **Sub-Division : SWR SD No 2, Kochi**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	:	**NEELESWARAM**	**Code**	:	**KS000F3**
State	:	Kerala	District		Ernakulam
Basin	:	WFR South of Tapi	Independent River	:	Periyar
Tributary	:	-	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Periyar
Division	:	SWR Division, Kochi	Sub-Division	:	SWR SD No 2, Kochi
Drainage Area	:	4234 Sq. Km.	Bank	:	Right
Latitude	:	10°11'01"	Longitude	:	76°29'44"
Zero of Gauge (m)	:	1.000 (m.s.l) -3.000 (m.s.l)	19-01-1971 01-06-2005	-	31-05-2005
		Opening Date	Closing Date		
Gauge	:	19-01-1971			
Discharge	:	16-03-1971			
Sediment	:	26-09-1972			
Water Quality	:	15-06-1978			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1971-1972	2410	9.750	25-06-1971	11.00	2.035	02-02-1972
1972-1973	2611	8.755	17-07-1972	10.60	2.095	14-02-1973
1973-1974	2523	8.105	08-07-1973	8.300	2.060	28-01-1974
1974-1975	3300	9.470	27-07-1974	4.000	2.155	22-04-1975
1975-1976	3502	9.350	16-08-1975	9.100	2.265	12-05-1976
1976-1977	2822	8.735	24-07-1976	5.400	2.182	15-02-1977
1977-1978	1514	7.225	25-07-1977	6.500	2.125	21-04-1978
1978-1979	2041	6.815	11-07-1978	4.900	2.370	06-02-1979
1979-1980	2570	8.445	01-08-1979	6.700	2.165	28-03-1980
1980-1981	2175	7.780	02-07-1980	6.500	2.240	11-04-1981
1981-1982	2117	7.390	16-06-1981	2.700	1.940	13-04-1982
1982-1983	1052	5.780	21-07-1982	1.500	1.800	13-05-1983
1983-1984	1862	7.540	18-08-1983	3.600	2.015	31-03-1984
1984-1985	1549	6.785	17-06-1984	3.100	2.085	13-02-1985
1985-1986	2920	9.280	26-06-1985	7.000	2.020	08-03-1986
1986-1987	2745	9.420	09-08-1986	7.900	1.940	31-01-1987
1987-1988	960.8	5.870	24-08-1987	21.00	2.130	31-03-1988
1988-1989	1675	7.720	04-08-1988	11.83	1.975	06-02-1989
1989-1990	2760	9.315	24-07-1989	10.50	1.940	20-12-1989

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Year	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1971-1972	2410	9.750	25-06-1971	11.00	2.035	02-02-1972
1972-1973	2611	8.755	17-07-1972	10.60	2.095	14-02-1973
1973-1974	2523	8.105	08-07-1973	8.300	2.060	28-01-1974
1990-1991	1019	5.275	15-06-1990	29.23	2.040	18-10-1990
1991-1992	2603	7.120	29-07-1991	27.96	2.000	31-03-1992
1992-1993	2555	7.814	28-07-1992	23.23	1.913	12-05-1993
1993-1994	1684	6.172	04-08-1993	19.28	1.857	01-02-1994
1994-1995	2401	6.890	14-07-1994	30.78	1.810	15-02-1995
1995-1996	1455	6.050	02-09-1995	30.79	1.580	08-03-1996
1996-1997	1475	6.060	21-07-1996	27.00	1.340	09-02-1997
1997-1998	1928	6.300	24-07-1997	25.00	1.250	22-06-1997
1998-1999	1784	5.800	12-10-1998	34.38	1.060	09-06-1998
1999-2000	1365	4.770	18-07-1999	22.50	0.720	16-05-2000
2000-2001	1901	5.410	25-08-2000	21.87	0.490	23-12-2000
2001-2002	2537	6.960	09-07-2001	27.38	0.420	20-01-2002
2002-2003	1292	4.700	17-08-2002	36.34	0.380	29-05-2003
2003-2004	1490	5.325	22-08-2003	13.63	0.200	04-02-2004
2004-2005	2074	5.790	04-08-2004	20.36	0.270	03-12-2004
2005-2006	3025	4.250	31-05-2006	0.011	0.300	25-01-2006
2006-2007	1150	4.040	17-08-2006	32.27	0.140	31-05-2007
2007-2008	2474	6.500	23-06-2007	0.023	0.210	08-02-2008
2008-2009	1169	3.670	31-07-2008	0.000	0.070	10-03-2009
2009-2010	2303	6.025	18-07-2009	0.000	0.355	18-01-2010
2010-2011	1392	4.700	13-06-2010	0.000	0.190	17-01-2011
2011-2012	1395	4.460	07-08-2011	0.000	0.410	18-01-2012
2012-2013	1521	3.840	18-08-2012	0.000	0.120	08-12-2012
2013-2014	6324	9.455	05-08-2013	0.000	0.280	05-06-2013
2014-2015	1820	5.120	04-08-2014	0.688	0.150	05-12-2014
2015-2016	1726	4.630	27-06-2015	0.000	0.140	02-08-2015
2013-2014	6324	9.455	05-08-2013	0.000	0.410	12-04-2014
2014-2015	1820	5.120	04-08-2014	0.688	0.150	05-12-2014
2015-2016	1726	4.630	27-06-2015	0.000	0.680	03-03-2016
2016-2017	690.0	-0.050	15-09-2016	0.000	0.430	05-05-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : NEELESWARAM (KS000F3) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	0.360	128.3 #	1.065	274.0	1.405	376.3	1.460	353.7 *	0.830	213.0 *	0.820	238.4
2	0.700	189.0 *	1.330	314.0 *	1.475	391.4	2.330	537.3	0.720	192.6 *	0.740	175.9
3	0.590	170.0 *	1.325	358.9	1.080	295.2	1.800	447.3 *	0.760	182.8	1.060	276.6
4	0.050	93.25 *	1.110	309.9	1.025	281.9	1.440	348.6 *	0.925	241.4	0.790	205.5 *
5	0.100	99.26 *	0.880	265.1	1.560	430.4	1.400	336.3	0.700	168.6	1.000	259.6 *
6	0.540	161.8 *	0.690	209.6	2.380	637.4 *	1.450	361.6	1.100	263.7	0.830	204.3
7	0.520	158.6 *	0.735	234.9	2.180	535.9	1.145	295.0	0.920	230.8	0.890	209.1
8	0.390	138.5 *	0.660	196.7	1.775	454.4	1.535	389.4	0.880	222.7 *	0.845	208.1
9	1.200	290.6 *	0.730	194.4 *	1.980	522.3	1.770	460.9	0.720	173.2	0.930	227.5
10	0.380	137.0 *	0.630	201.1	1.700	416.9	1.340	323.7 *	0.885	204.1	0.990	213.6
11	0.730	194.4 *	0.600	198.0	1.395	369.7	1.140	308.5	0.670	164.4	0.990	236.1
12	0.590	170.0 *	0.595	193.7	1.330	322.9	1.090	261.0	1.845	437.0	0.870	220.7 *
13	0.850	216.9 *	0.545	183.5	1.250	302.2 *	0.940	232.1	1.310	316.4 *	0.740	166.6
14	0.760	199.9 *	0.860	257.7	0.920	240.6	1.340	328.5	1.500	353.1	0.620	155.9
15	0.900	246.2	0.760	210.3	0.890	224.7 *	1.085	280.2	1.180	286.1 *	0.560	149.3
16	0.720	209.9	0.640	178.5 *	0.870	245.3	0.930	228.3	0.930	223.6	0.410	134.9
17	0.525	171.2	0.255	96.24	0.770	211.6	2.160	560.7 *	1.095	257.5	0.425	123.0
18	0.400	140.0 *	0.680	206.2	0.820	240.2	5.030	2050 #	1.150	279.3 *	0.505	137.2
19	0.510	139.5	0.980	279.9	2.375	576.7	2.820	782.5	0.820	236.4	0.630	176.8 *
20	0.505	160.2	2.010	513.4	1.760	435.6 *	2.105	488.1	0.745	209.7	0.655	145.0
21	0.610	199.4	1.615	437.9	2.440	604.2	1.700	397.2	0.815	239.5	0.750	198.1 *
22	0.660	210.1	1.170	320.5	2.910	845.8	1.650	411.5	0.860	218.8 *	0.710	151.9
23	0.485	112.5	1.050	257.5 *	2.080	496.1	1.330	321.3 *	0.640	173.5	0.770	160.8
24	1.090	303.9	0.570	198.4	1.690	430.5	1.150	279.3 *	0.605	183.2	0.675	152.3
25	1.850	462.2 *	0.560	195.7	1.430	311.1	1.085	272.2	0.730	194.4 *	0.635	133.1
26	1.650	404.4 *	0.650	179.6	1.075	272.5	1.255	321.5	0.850	253.2	0.580	168.4 *
27	2.710	675.3	0.735	202.8	1.750	432.7 *	1.075	274.5	1.085	299.5	0.430	144.5 #
28	2.965	734.5	0.930	274.7	1.670	422.5	1.095	275.5	0.815	233.2	0.500	111.1
29	1.660	436.0	0.935	245.1	2.150	583.6	1.000	246.9 *	0.860	218.8 *	0.605	127.9
30	1.280	296.8	0.910	228.6 *	3.220	879.6	1.100	268.2 *	0.670	173.3	0.530	126.0
31			0.920	224.7 #	2.080	480.6			0.650	162.2		
Ten-Daily Mean												
I Ten-Daily	0.483	156.6	0.915	255.9	1.656	434.2	1.567	385.4	0.844	209.3	0.889	221.9
II Ten-Daily	0.649	184.8	0.793	231.7	1.238	317.0	1.864	552.0	1.124	276.4	0.640	164.6
III Ten-Daily	1.496	383.5	0.913	251.4	2.045	523.6	1.244	306.8	0.780	213.6	0.618	147.4
Monthly												
Min.	0.050	93.25	0.255	96.24	0.770	211.6	0.930	228.3	0.605	162.2	0.410	111.1
Max.	2.965	734.5	2.010	513.4	3.220	879.6	5.030	2050	1.845	437.0	1.060	276.6
Mean	0.876	241.7	0.875	246.5	1.659	428.1	1.558	414.7	0.912	232.5	0.716	177.9

Annual Runoff in MCM = 5604 Annual Runoff in mm = 1324

Peak Observed Discharge = 2050 cumecs on 18/09/2017 Corres. Water Level :5.03 m

Lowest Observed Discharge = 0.000 cumecs on 08/02/2018 Corres. Water Level :0.35 m

Q Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : NEELESWARAM (KS000F3) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	0.210	82.83	0.300	9.308 *	0.540	11.26 #	0.540	54.31 #	0.560	57.25 *	0.790	73.63
2	0.380	78.75 *	0.230	8.780 *	0.515	13.54	0.470	53.34	0.610	77.00	0.710	82.33 #
3	0.570	94.56 *	0.200	8.560 *	0.400	10.09 #	0.630	68.28 #	0.445	45.81	0.610	65.01 #
4	0.500	88.53 #	0.180	8.415 #	0.450	10.50 *	0.740	88.00 *	0.420	38.54 #	0.660	73.37 #
5	0.660	102.7 *	0.190	9.779	0.410	7.547	0.660	73.11	0.515	44.23	0.600	63.41 #
6	0.600	97.22 *	0.200	9.235	0.510	11.00 #	0.550	55.77 #	0.415	35.37	0.840	108.5 *
7	0.490	87.69 *	0.300	9.308 *	0.410	9.256 #	0.560	57.25 #	0.570	48.67	0.820	94.77
8	0.600	97.22 *	0.410	10.63	0.350	0.000	0.640	74.52	0.680	76.88 *	0.515	54.41
9	0.720	108.3 *	0.490	12.11	0.400	0.000	0.700	65.21	0.685	70.82	0.905	95.91
10	0.720	108.3 *	0.500	10.92 #	0.400	0.000	0.580	60.29 #	0.610	59.50	1.040	178.1
11	0.670	103.7 *	0.570	12.91	0.480	10.75 *	0.610	65.01 *	0.710	70.04	1.115	219.8
12	0.800	116.1 *	0.640	12.86	0.400	10.09 #	0.565	48.60	0.690	78.67 #	0.495	55.65
13	0.930	129.4 *	0.520	9.852	0.450	10.50 #	0.625	67.21	0.560	57.25 *	0.560	57.25 *
14	1.040	152.5	0.600	11.78 *	0.350	9.696 #	0.690	89.54	0.740	88.00 *	0.350	30.29 #
15	0.900	126.2	0.560	11.48	0.400	0.000	0.670	81.22	0.600	63.41 *	0.770	77.87
16	0.630	102.0	0.630	11.53	0.450	8.097	0.580	70.22	0.705	65.05	1.010	160.0
17	0.740	110.2 *	0.670	13.61	0.480	10.75 #	0.660	74.36	0.710	84.42	1.010	134.6
18	0.715	125.8	0.620	11.33	0.520	11.09 *	0.620	66.64 *	0.610	75.89	1.110	157.6
19	0.720	123.1	0.460	12.74	0.410	0.000	0.590	61.84 #	0.550	58.12	0.630	63.43
20	0.880	134.5	0.410	9.178	0.450	10.50 #	0.640	69.96 #	0.640	55.55	1.080	168.7 *
21	0.940	126.7	0.500	10.92 *	0.490	0.000	0.520	65.56	0.530	59.46	0.680	72.56
22	0.920	125.0	0.550	11.61 *	0.500	9.214	0.650	76.93	0.620	66.64 *	0.680	76.88 #
23	1.000	133.9	0.530	11.17 *	0.550	11.34 #	0.590	71.17	0.820	104.2 #	0.610	74.15
24	0.720	108.3 *	0.560	11.97	0.580	11.60 #	0.595	67.99	0.590	53.52	0.910	153.0
25	0.630	99.92 *	0.520	11.82	0.540	54.31 *	0.630	68.28 *	0.670	59.25	0.900	147.0
26	0.520	90.23 *	0.550	11.34 *	0.510	50.06 #	0.590	61.84 #	0.545	46.67	0.560	57.25 #
27	0.585	103.6	0.560	11.52 #	0.630	68.28 #	0.490	48.70 #	0.700	80.49 *	0.510	50.06 *
28	0.560	85.27	0.510	11.00 *	0.560	57.25 #	0.370	32.90 #	0.860	113.0 *	0.955	150.7
29	0.580	71.94	0.560	11.43 #			0.730	86.09 *	0.450	42.18 *	1.680	433.2
30	0.510	65.80	0.610	11.96 #			0.700	80.49 *	0.570	58.76 *	1.530	326.1 *
31	0.420	10.26 *	0.540	11.26 #			0.615	70.87			1.195	203.2 #
Ten-Daily Mean												
I Ten-Daily	0.545	94.61	0.300	9.705	0.439	7.319	0.607	65.01	0.551	55.41	0.749	88.94
II Ten-Daily	0.803	122.3	0.568	11.73	0.439	8.147	0.625	69.46	0.652	69.64	0.813	112.5
III Ten-Daily	0.671	92.81	0.545	11.45	0.545	32.76	0.589	66.44	0.636	68.42	0.928	158.6
Monthly												
Min.	0.210	10.26	0.180	8.415	0.350	0.000	0.370	32.90	0.415	35.37	0.350	30.29
Max.	1.040	152.5	0.670	13.61	0.630	68.28	0.740	89.54	0.860	113.0	1.680	433.2
Mean	0.673	102.9	0.473	10.98	0.469	14.88	0.606	66.95	0.613	64.49	0.833	121.2

Peak Computed Discharge = 637.4 cumecs on 06/08/2017 **Corres. Water Level :2.38 m**

Lowest Computed Discharge = 8.560 cumecs on 03/01/2018 **Corres. Water Level :0.2 m**

Q Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

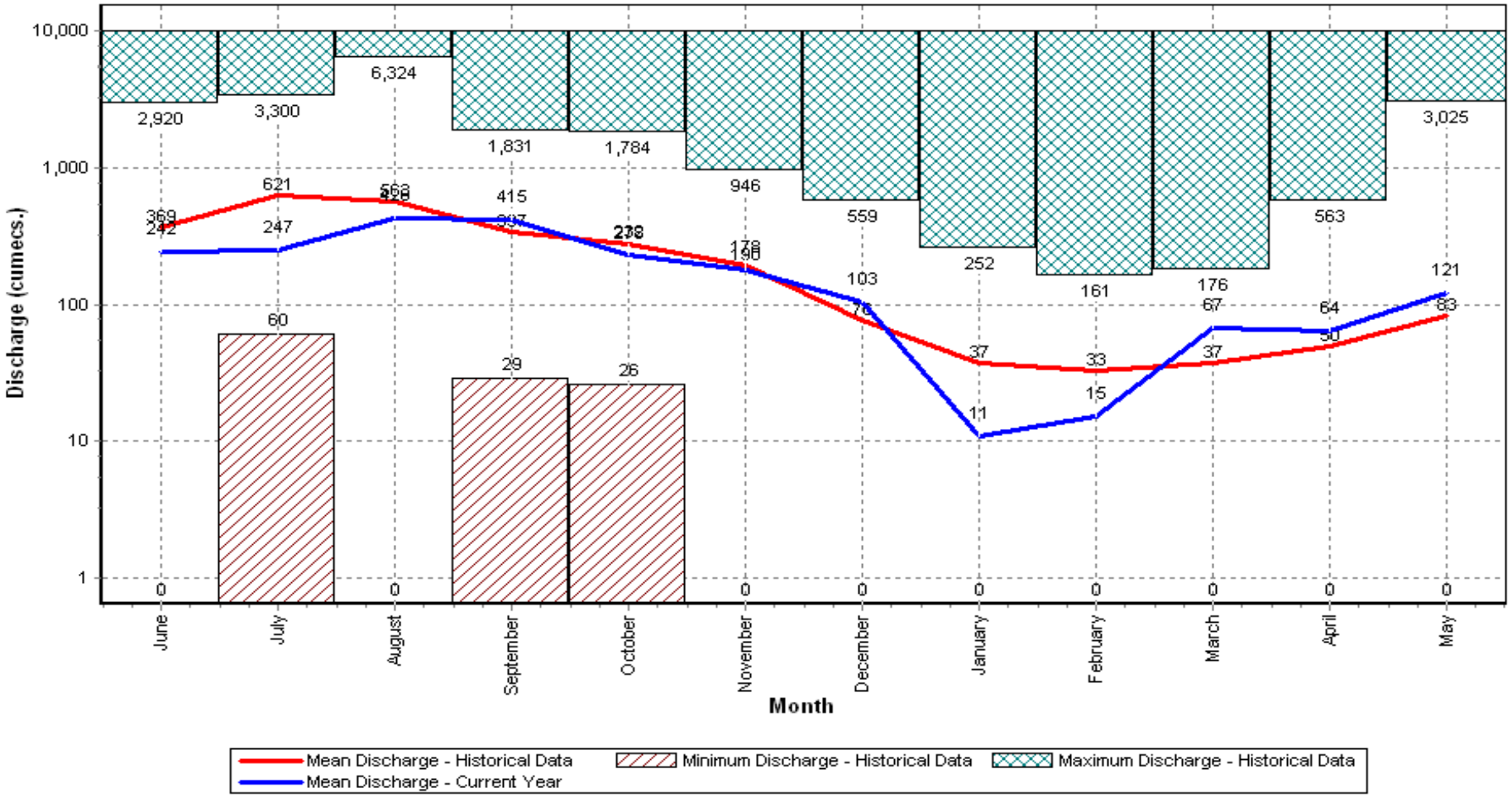
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : NEELESWARAM (KS000F3) | **Data considered : 1971-2018** | **Division : SWR Division, Cochin**

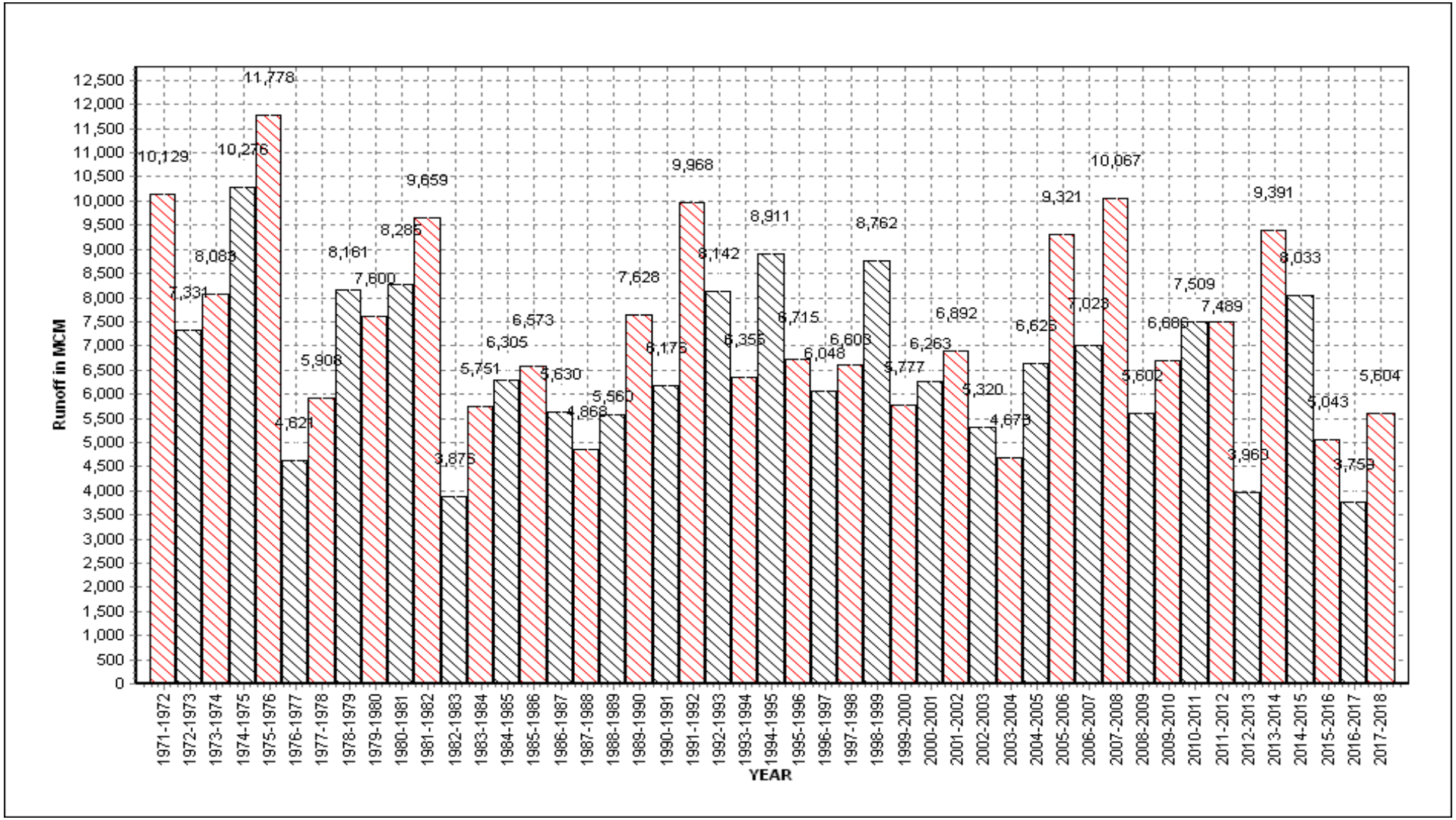
Local River : Periyar | **Sub-Division : SWR SD No 2, Kochi**



Annual Runoff Values for the period: 1971 - 2018

Station Name : NEELESWARAM (KS000F3) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**

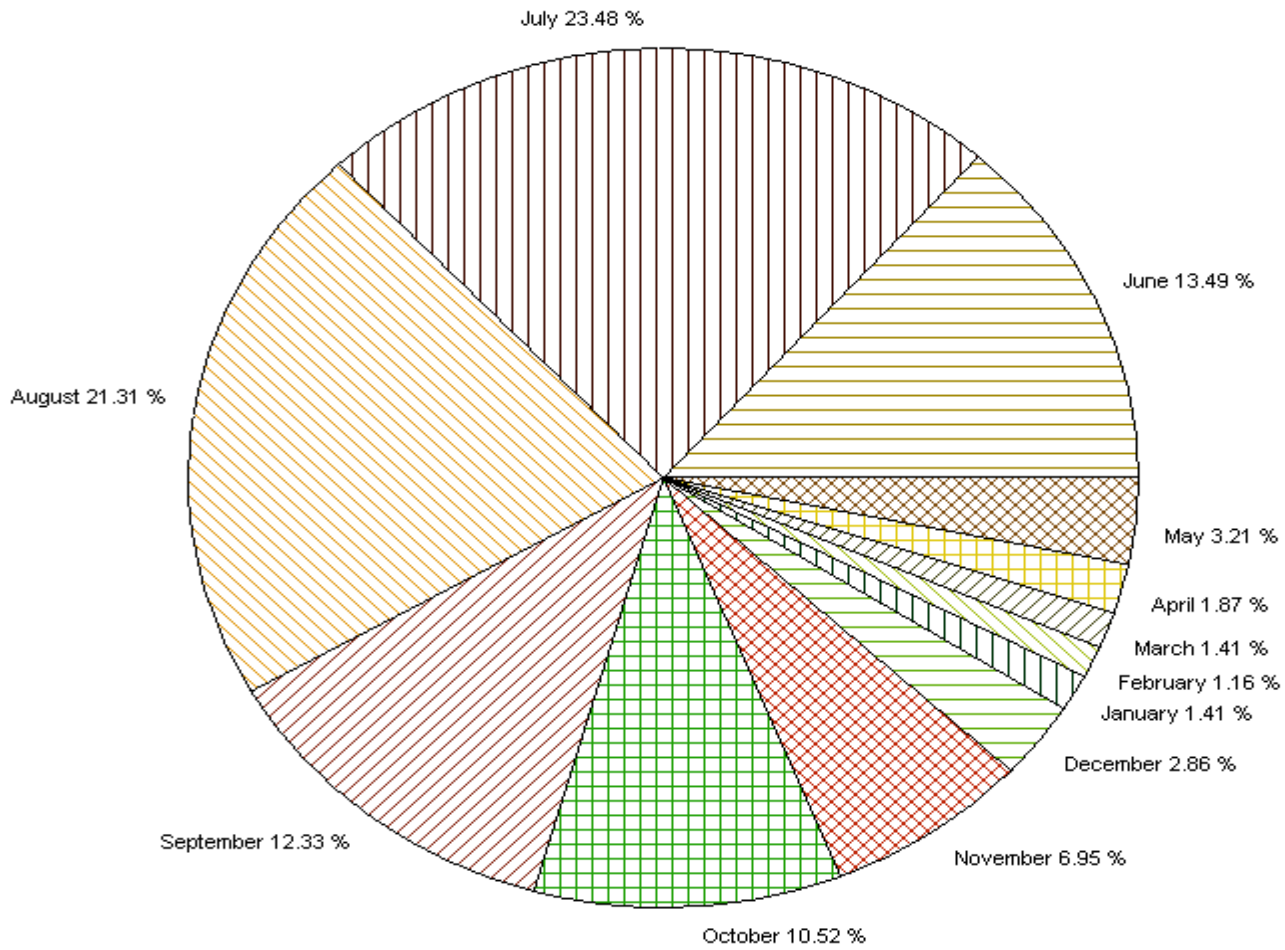


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1971-2017

Station Name : NEELESWARAM (KS000F3)
Local River : Periyar

Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



June	13.49 %
July	23.48 %
August	21.31 %
September	12.33 %
October	10.52 %
November	6.95 %
December	2.86 %
January	1.41 %
February	1.16 %
March	1.41 %
April	1.87 %
May	3.21 %

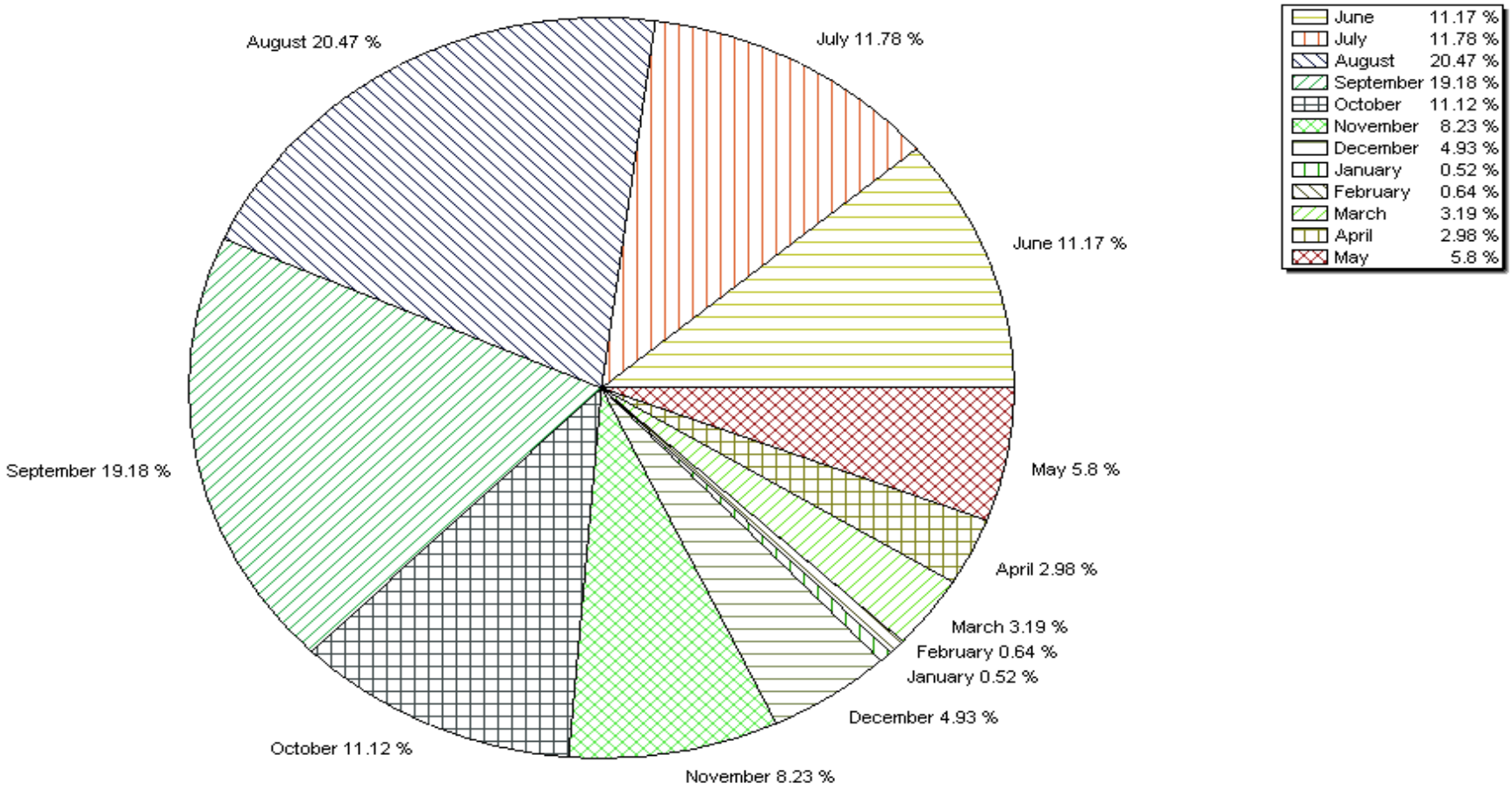
Monthly Runoff for the Year : 2017-2018

Station Name : NEELESWARAM (KS000F3)

Local River : Periyar

Division : SWR Division, Cochin

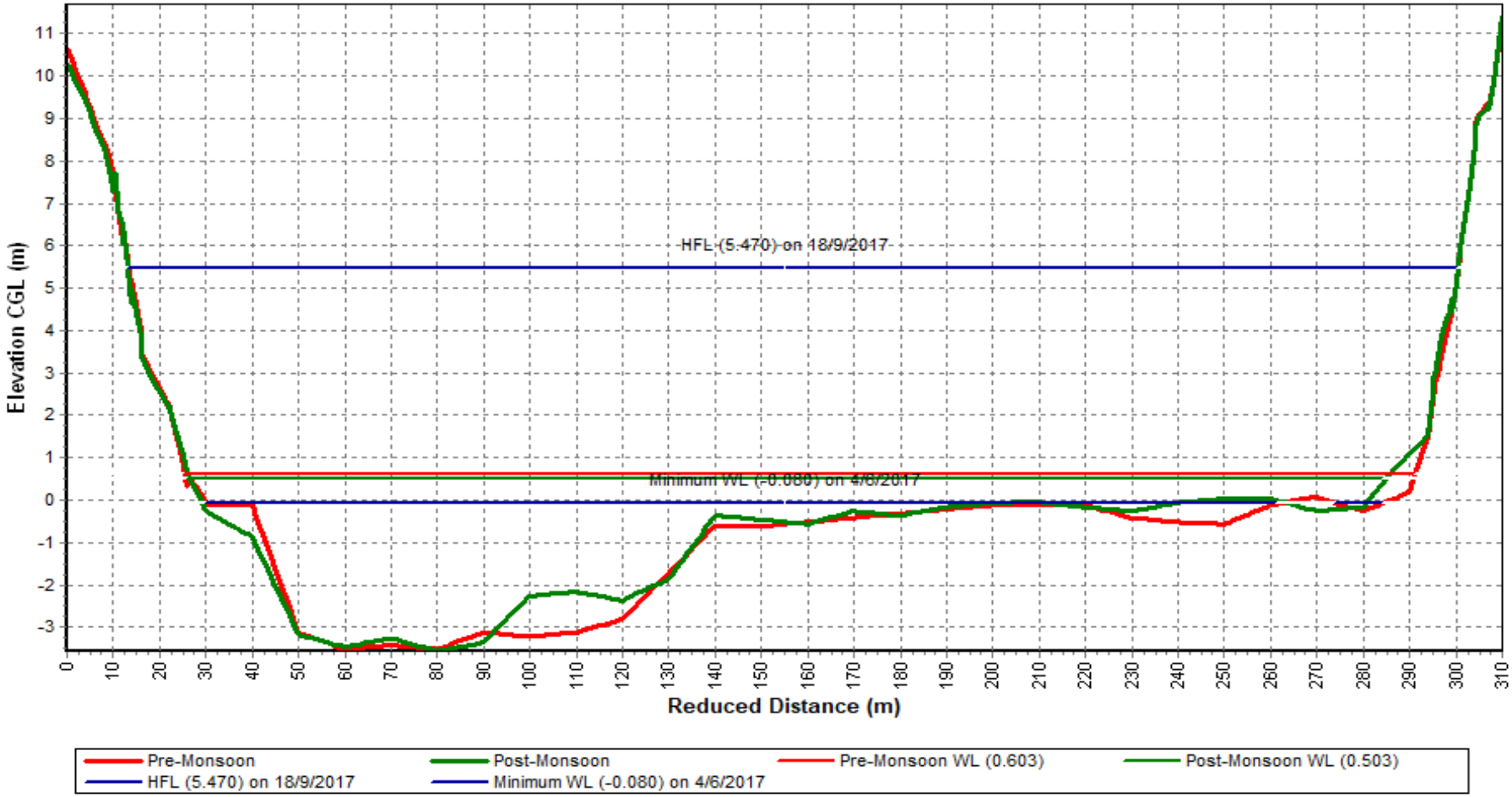
Sub-Division : SWR SD No 2, Kochi



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : NEELESWARAM (KS000F3) **Division : SWR Division, Cochin**

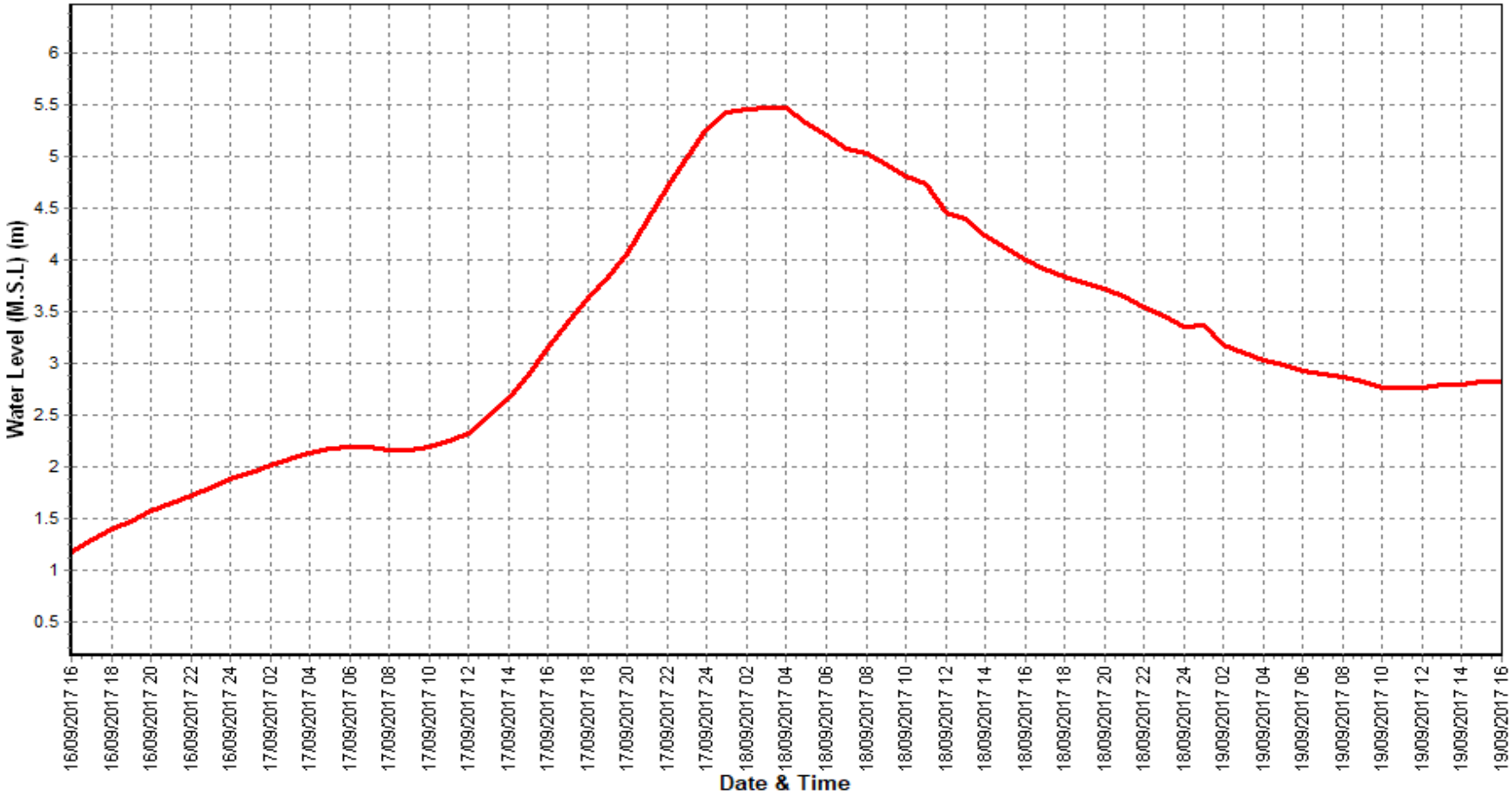
Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : NEELESWARAM (KS000F3) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**

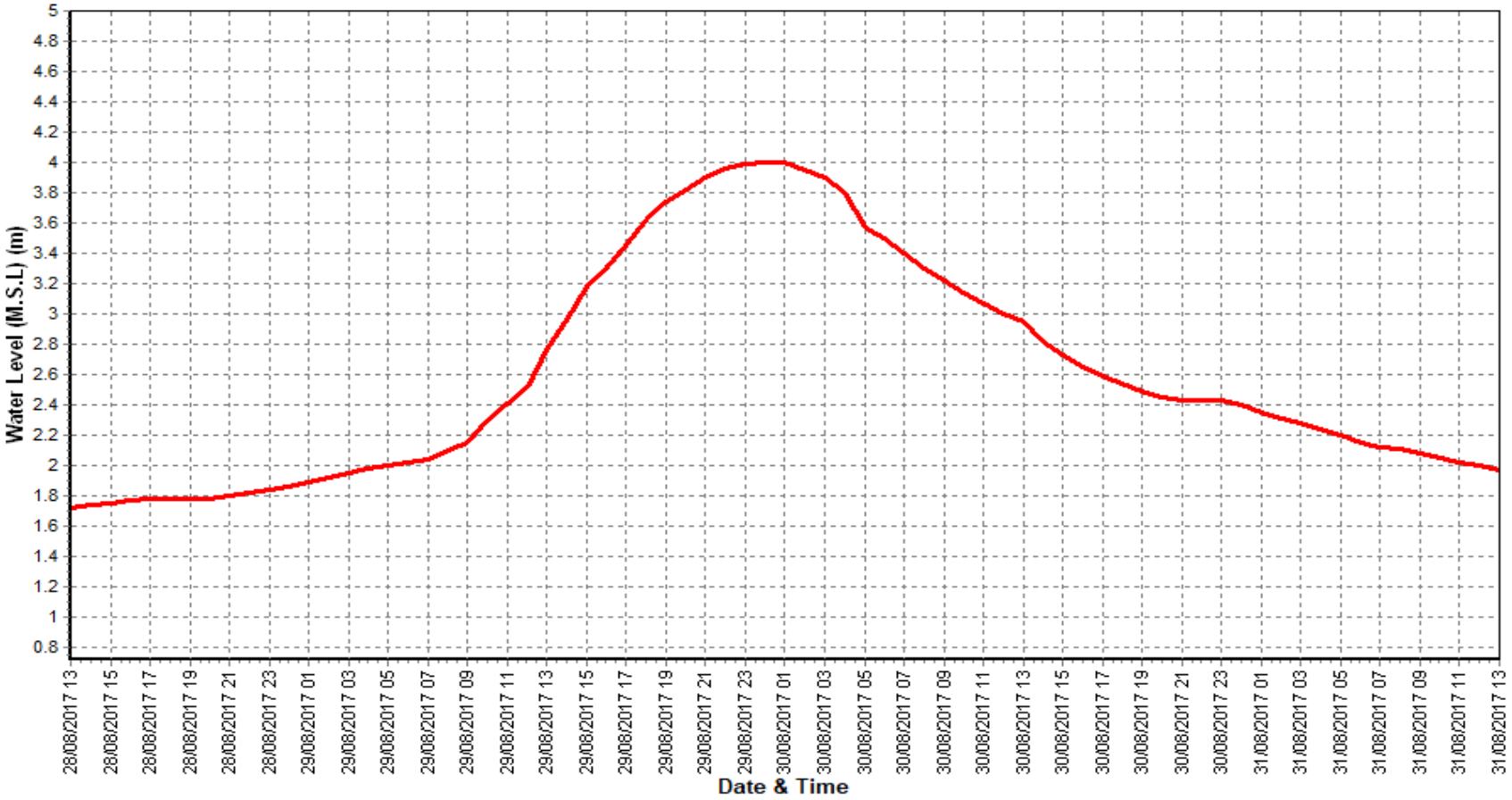


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : NEELESWARAM (KS000F3) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**

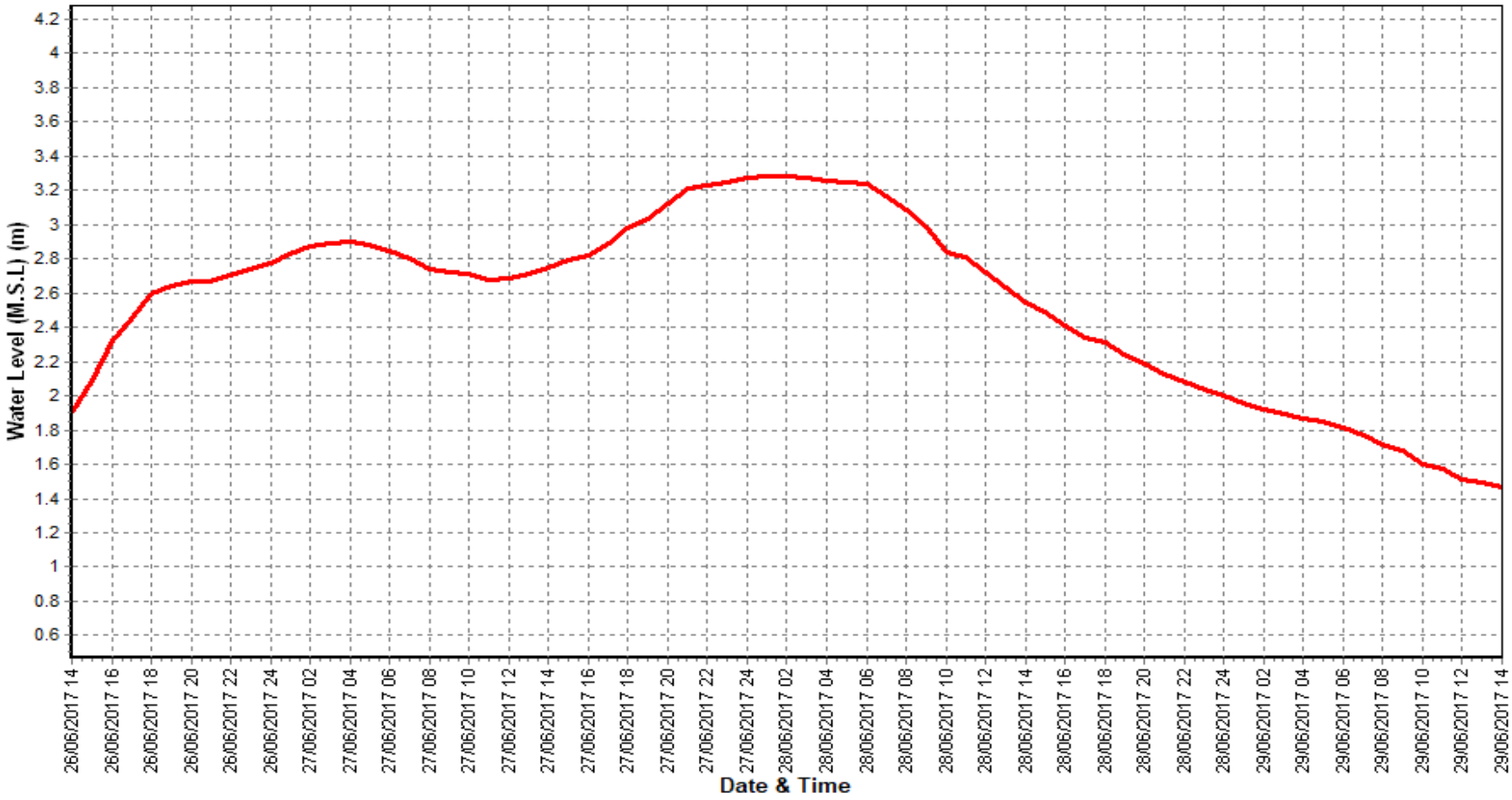


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : NEELESWARAM (KS000F3) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	**:**	**VANDIPERIYAR**	**Code**	**:**	**KS000U1**
State	:	Kerala	District		Idukki
Basin	:	WFR South of Tapi	Independent River	:	Periyar
Tributary	:	-	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Periyar
Division	:	SWR Division,Kochi	Sub-Division	:	SWR SD No 2, Kochi
Drainage Area	:	712 Sq. Km.	Bank	:	Left
Latitude	:	09°34'24"	Longitude	:	77°05'26"
Zero of Gauge (m)	:	789.000 (m.s.l)	19-04-1999		
		Opening Date	Closing Date		
Gauge	:	19-04-1999			
Discharge	:	07-06-2000			
Sediment	:				
Water Quality	:	01-10-2002			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2000-2001	146.5	793.215	26-08-2000	0.000	791.220	16-12-2000
2001-2002	206.1	793.540	09-07-2001	0.000	791.340	01-06-2001
2002-2003	36.66	792.320	18-08-2002	0.000	791.010	13-02-2003
2003-2004	62.07	792.530	07-10-2003	0.000	790.980	05-06-2003
2004-2005	171.6	793.265	04-08-2004	0.000	790.980	24-02-2005
2005-2006	203.2	793.620	27-07-2005	0.000	790.990	05-03-2006
2006-2007	134.3	793.260	20-11-2006	0.000	790.970	15-03-2007
2007-2008	152.0	793.600	01-07-2007	0.000	791.020	01-03-2008
2008-2009	65.11	792.800	28-07-2008	0.000	791.050	01-06-2008
2009-2010	69.31	793.060	16-07-2009	0.000	791.030	01-06-2009
2010-2011	36.23	792.575	13-06-2010	0.000	791.080	01-06-2010
2011-2012	52.60	792.890	07-08-2011	0.000	791.060	01-06-2011
2012-2013	31.09	792.360	18-08-2012	0.000	791.020	01-06-2012
2013-2014	87.61	793.135	25-06-2013	0.000	791.015	22-02-2014
2014-2015	88.16	793.070	04-08-2014	0.000	791.040	18-02-2015
2015-2016	58.89	792.870	08-12-2015	0.000	791.110	03-03-2016
2014-2015	88.16	793.070	04-08-2014	0.000	791.035	20-02-2015
2015-2016	58.89	792.870	08-12-2015	0.000	791.090	16-05-2016
2016-2017	20.75	792.175	09-07-2016	0.000	790.875	31-03-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : VANDIPERIYAR (KS000U1) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	791.100	0.000	791.685	5.492	791.490	2.857	791.925	10.36 *	791.830	8.303 *	791.770	7.283
2	791.315	1.163 *	791.720	6.209 *	791.435	2.228	792.080	14.58	791.800	7.700 *	791.785	7.677
3	791.605	4.354 #	791.625	3.701	791.425	2.208	792.010	12.41 *	791.745	6.529	791.865	8.484
4	791.450	2.388 *	791.640	4.011	791.470	2.638	791.910	10.02 *	791.690	5.396	791.770	7.122 *
5	791.355	1.579	791.565	4.004	791.570	3.781	791.825	8.201 *	791.655	5.695	791.855	8.822 *
6	791.340	1.267	791.530	3.348	791.930	10.48 *	791.785	7.408 *	791.740	6.633	791.765	6.442
7	791.320	1.168	791.495	2.858	791.860	8.084	791.725	5.637	791.650	5.164	791.850	8.461
8	791.285	0.985	791.495	2.880	791.780	6.260	791.690	5.409	791.640	4.884 *	791.765	5.942
9	791.260	0.874	791.480	2.721 *	791.700	4.962	791.725	5.860	791.860	8.790	791.750	5.985
10	791.220	0.645	791.440	2.344	791.750	6.165	791.700	5.863 *	791.675	5.015	791.720	4.878
11	791.290	0.986 *	791.435	2.302	791.650	3.806	791.685	5.370	791.620	4.882	791.675	5.866
12	791.350	1.565	791.435	2.313	791.700	5.863 #	791.700	5.554	791.820	8.531	791.645	4.962 *
13	791.370	1.724	791.400	2.085	791.635	4.806 *	791.615	4.494	791.825	8.506	791.650	5.232
14	791.355	1.624	791.395	1.917	791.595	4.304	792.310	23.78	791.765	6.386	791.600	3.970
15	791.450	2.358	791.385	1.810	791.555	3.654 *	792.165	19.48	791.770	7.122 *	791.570	3.948
16	791.360	1.474	791.375	1.652 *	791.550	3.727	792.070	15.96	791.710	5.664	791.550	3.516
17	791.310	0.947	791.365	1.565	791.550	3.711	792.580	31.10 *	791.685	5.100	791.525	3.276
18	791.265	0.823 *	791.355	1.412	791.620	4.645	792.875	52.03	791.720	6.209 *	791.515	3.080
19	791.240	0.733	791.400	2.044	791.865	8.901	792.530	37.34	791.650	5.504	791.500	2.956 *
20	791.200	0.471 #	791.610	4.416	791.980	11.67 *	792.330	25.47	791.615	4.993	791.495	2.697
21	791.225	0.685	791.715	4.955	792.160	15.66	792.140	16.64	791.655	5.579	791.475	2.459
22	791.210	0.633	791.665	4.361	792.320	23.54	792.000	13.34	791.790	7.505 *	791.465	2.446
23	791.225	0.699	791.590	4.138 *	792.090	15.14	791.890	9.917	791.690	5.385	791.450	2.257
24	791.335	1.334	791.545	3.343	791.910	10.09	791.810	7.899 *	791.650	5.186	791.440	2.223
25	791.900	9.799 *	791.495	2.727	791.810	7.623	791.750	6.556	791.610	4.648	791.425	2.123
26	791.965	11.30 *	791.455	2.487	791.725	5.911	791.725	6.287	791.595	4.451	791.410	1.977 *
27	792.380	24.64	791.430	2.204	791.710	6.035 *	791.670	4.717	791.665	4.876	791.505	2.930
28	792.315	23.23	791.660	5.199 #	792.020	13.98	791.685	5.129	791.830	8.413	791.445	2.324
29	791.965	11.82	791.540	3.491	792.250	20.79	791.950	10.95 *	791.795	7.602 *	791.415	2.074
30	791.800	8.130	791.490	2.837 *	792.220	20.24	791.905	9.911 *	791.725	6.326	791.565	3.732
31			791.455	2.401	792.065	14.64			791.730	6.448		
Ten-Daily Mean												
I Ten-Daily	791.325	1.442	791.568	3.757	791.641	4.966	791.838	8.575	791.728	6.411	791.790	7.110
II Ten-Daily	791.319	1.270	791.415	2.152	791.670	5.509	792.186	22.06	791.718	6.290	791.573	3.950
III Ten-Daily	791.732	9.227	791.549	3.468	792.025	13.97	791.853	9.135	791.703	6.038	791.459	2.455
Monthly												
Min.	791.100	0.000	791.355	1.412	791.425	2.208	791.615	4.494	791.595	4.451	791.410	1.977
Max.	792.380	24.64	791.720	6.209	792.320	23.54	792.875	52.03	791.860	8.790	791.865	8.822
Mean	791.459	3.98	791.512	3.136	791.787	8.335	791.959	13.26	791.716	6.24	791.607	4.505

Annual Runoff in MCM = 118 Annual Runoff in mm = 166

Peak Observed Discharge = 52.03 cumecs on 18/09/2017 Corres. Water Level :792.875 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :791.1 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : VANDIPERIYAR (KS000U1) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	791.890	9.005	791.275	0.986	791.125	0.240	791.035	0.000	791.010	0.000	791.085	0.000
2	791.715	6.087 *	791.275	0.981	791.120	0.229	791.030	0.000	791.005	0.000	791.080	0.000
3	791.635	4.765 *	791.270	0.931	791.115	0.203	791.025	0.000	791.005	0.000	791.060	0.000
4	791.595	4.371	791.260	0.884	791.110	0.000	791.025	0.000	791.055	0.000	791.150	0.000
5	791.545	3.228	791.260	0.880	791.110	0.000	791.020	0.000	791.035	0.000	791.060	0.000
6	791.515	3.059	791.255	0.832	791.105	0.000	791.015	0.000	791.025	0.000	791.075	0.000
7	791.495	2.819	791.255	0.810 *	791.100	0.000	791.015	0.000	791.020	0.000	791.085	0.000
8	791.475	2.636	791.245	0.740	791.110	0.000	791.010	0.000	791.015	0.000	791.160	0.000
9	791.485	2.701	791.235	0.737	791.250	0.969	791.010	0.000	791.010	0.000	791.160	0.000
10	791.455	2.431 *	791.235	0.735	791.310	1.313	791.005	0.000	791.010	0.000	791.605	4.306
11	791.435	2.210	791.230	0.707	791.230	0.674 *	791.005	0.000	791.025	0.000	791.360	1.638
12	791.425	2.096	791.230	0.674 *	791.175	0.375	790.995	0.000	791.025	0.000	791.300	1.237
13	791.425	2.104	791.230	0.677	791.150	0.329 *	790.995	0.000	791.020	0.000	791.300	1.091 *
14	791.455	2.418	791.225	0.648 *	791.130	0.268	791.000	0.000	791.025	0.000	791.310	1.358
15	791.415	1.999	791.225	0.619	791.115	0.000	791.000	0.000	791.150	0.000	791.360	1.676
16	791.400	1.902	791.210	0.558	791.110	0.000	791.020	0.000	791.080	0.000	791.290	1.118
17	791.385	1.753 *	791.205	0.515	791.100	0.000	791.050	0.000	791.070	0.000	791.265	0.881
18	791.370	1.524	791.195	0.496	791.090	0.000	791.050	0.000	791.070	0.000	791.420	2.069
19	791.360	1.480	791.185	0.456	791.085	0.000	791.040	0.000	791.060	0.000	791.355	1.469
20	791.355	1.526	791.185	0.437	791.080	0.000	791.025	0.000	791.050	0.000	791.295	1.057 *
21	791.350	1.478	791.175	0.422 *	791.075	0.000	791.020	0.000	791.040	0.000	791.255	0.783
22	791.345	1.422	791.175	0.389	791.070	0.000	791.020	0.000	791.030	0.000	791.230	0.683
23	791.335	1.343	791.170	0.354	791.060	0.000	791.040	0.000	791.020	0.000	791.200	0.611
24	791.325	1.268 *	791.170	0.354	791.055	0.000	791.100	0.000	791.015	0.000	791.185	0.540
25	791.320	1.231 *	791.170	0.357	791.050	0.000	791.085	0.000	791.010	0.000	791.200	0.617
26	791.315	1.142	791.160	0.320	791.050	0.000	791.050	0.000	791.010	0.000	791.280	0.923
27	791.310	1.099	791.160	0.344	791.050	0.000	791.040	0.000	791.280	0.000	791.700	5.825 *
28	791.300	1.047	791.150	0.329 *	791.040	0.000	791.030	0.000	791.210	0.000	791.510	2.605
29	791.290	1.055	791.150	0.327			791.025	0.000	791.140	0.000	792.290	21.49
30	791.280	1.035	791.140	0.300			791.025	0.000	791.105	0.000	791.965	10.60
31	791.275	0.929 *	791.130	0.271			791.025	0.000			791.765	4.776
Ten-Daily Mean												
I Ten-Daily	791.581	4.110	791.256	0.852	791.145	0.295	791.019	0.000	791.019	0.000	791.152	0.431
II Ten-Daily	791.403	1.901	791.212	0.579	791.127	0.165	791.018	0.000	791.057	0.000	791.326	1.359
III Ten-Daily	791.313	1.186	791.159	0.342	791.056	0.000	791.042	0.000	791.086	0.000	791.507	4.496
Monthly												
Min.	791.275	0.929	791.130	0.271	791.040	0.000	790.995	0.000	791.005	0.000	791.060	0.000
Max.	791.890	9.005	791.275	0.986	791.310	1.313	791.100	0.000	791.280	0.000	792.290	21.49
Mean	791.428	2.36	791.208	0.583	791.113	0.164	791.027	0	791.054	0	791.334	2.173

Peak Computed Discharge = 31.10 cumecs on 17/09/2017 Corres. Water Level :792.58 m

Lowest Computed Discharge = 0.329 cumecs on 28/01/2018 Corres. Water Level :791.15 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

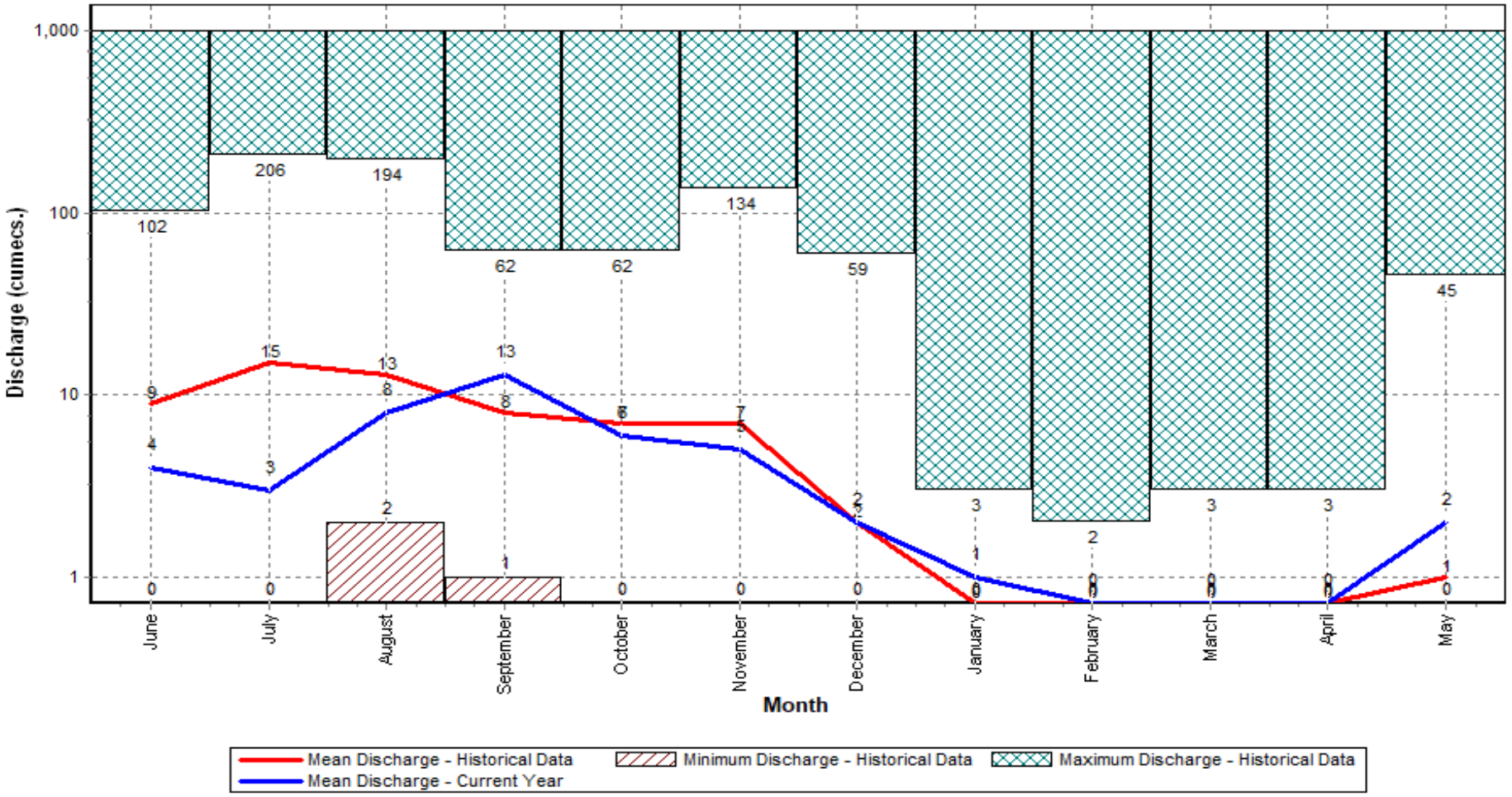
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : VANDIPERIYAR (KS000U1) | **Data considered : 2000-2018** | **Division : SWR Division, Cochin**

Local River : Periyar | **Sub-Division : SWR SD No 2, Kochi**



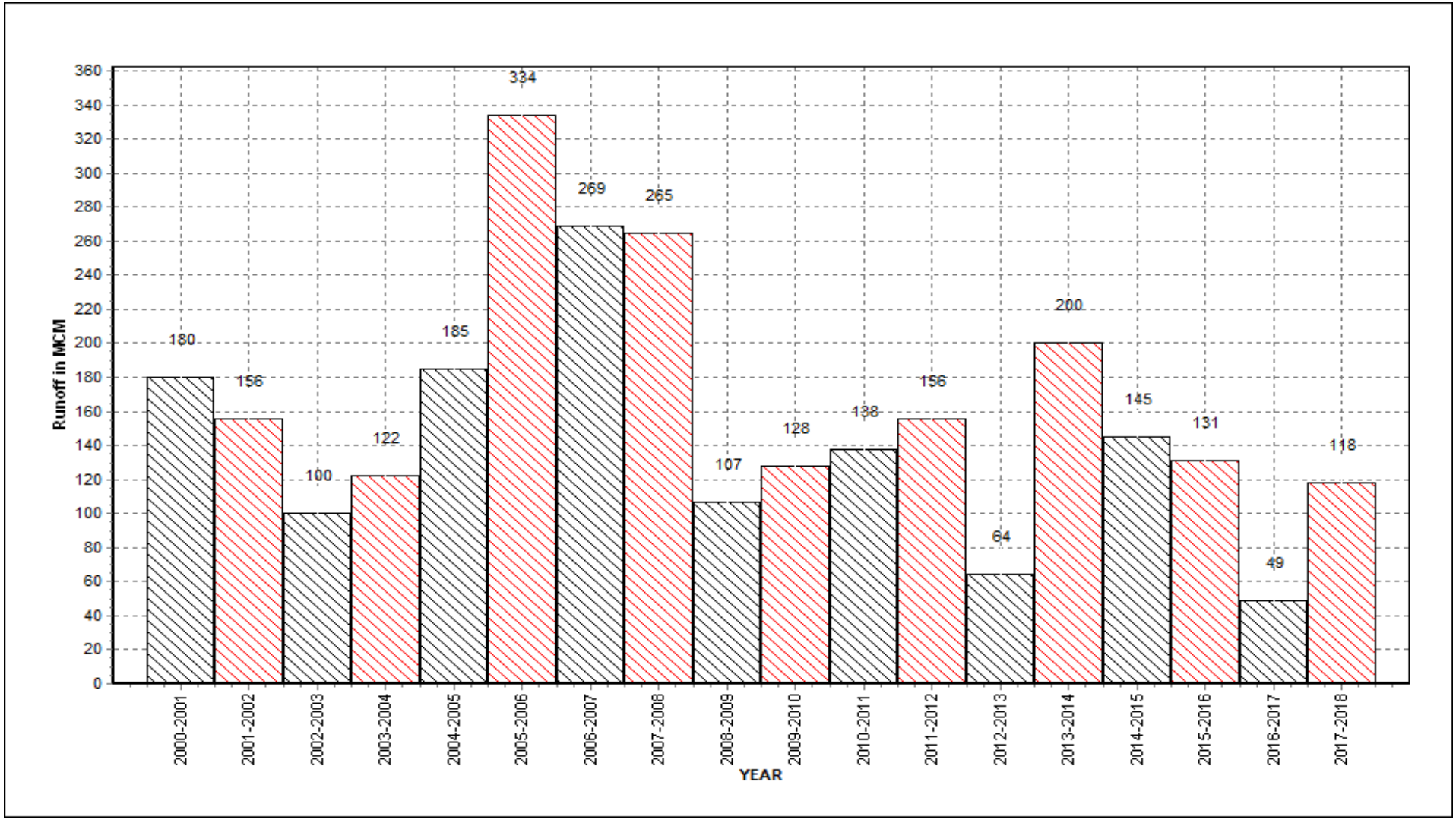
Annual Runoff Values for the period: 2000 - 2018

Station Name : VANDIPERIYAR (KS000U1)

Local River : Periyar

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi



Note: Missing values have not been considered while arriving at Annual Runoff

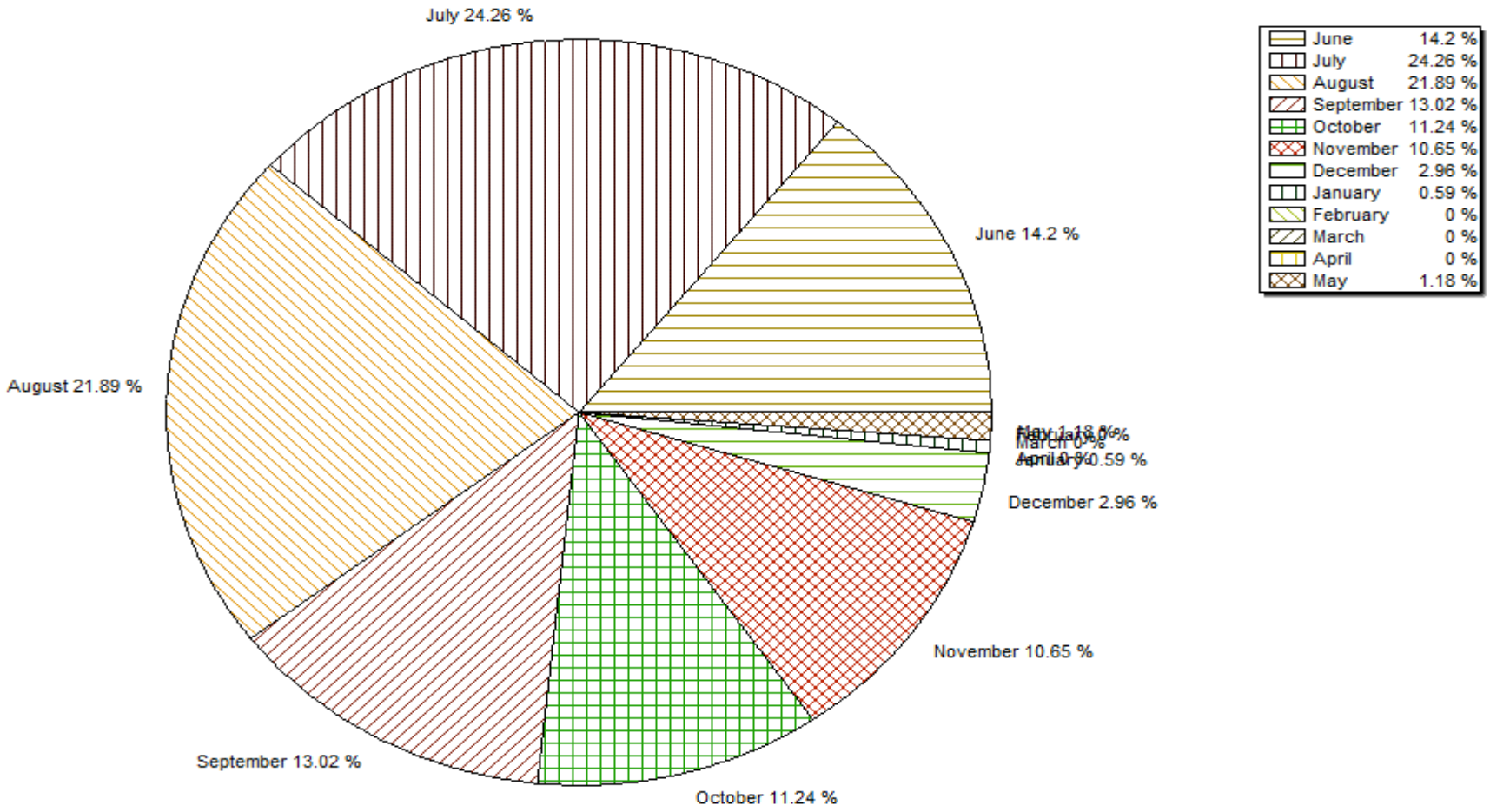
Monthly Average Runoff based on period : 2000-2017

Station Name : VANDIPERIYAR (KS000U1)

Local River : Periyar

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi



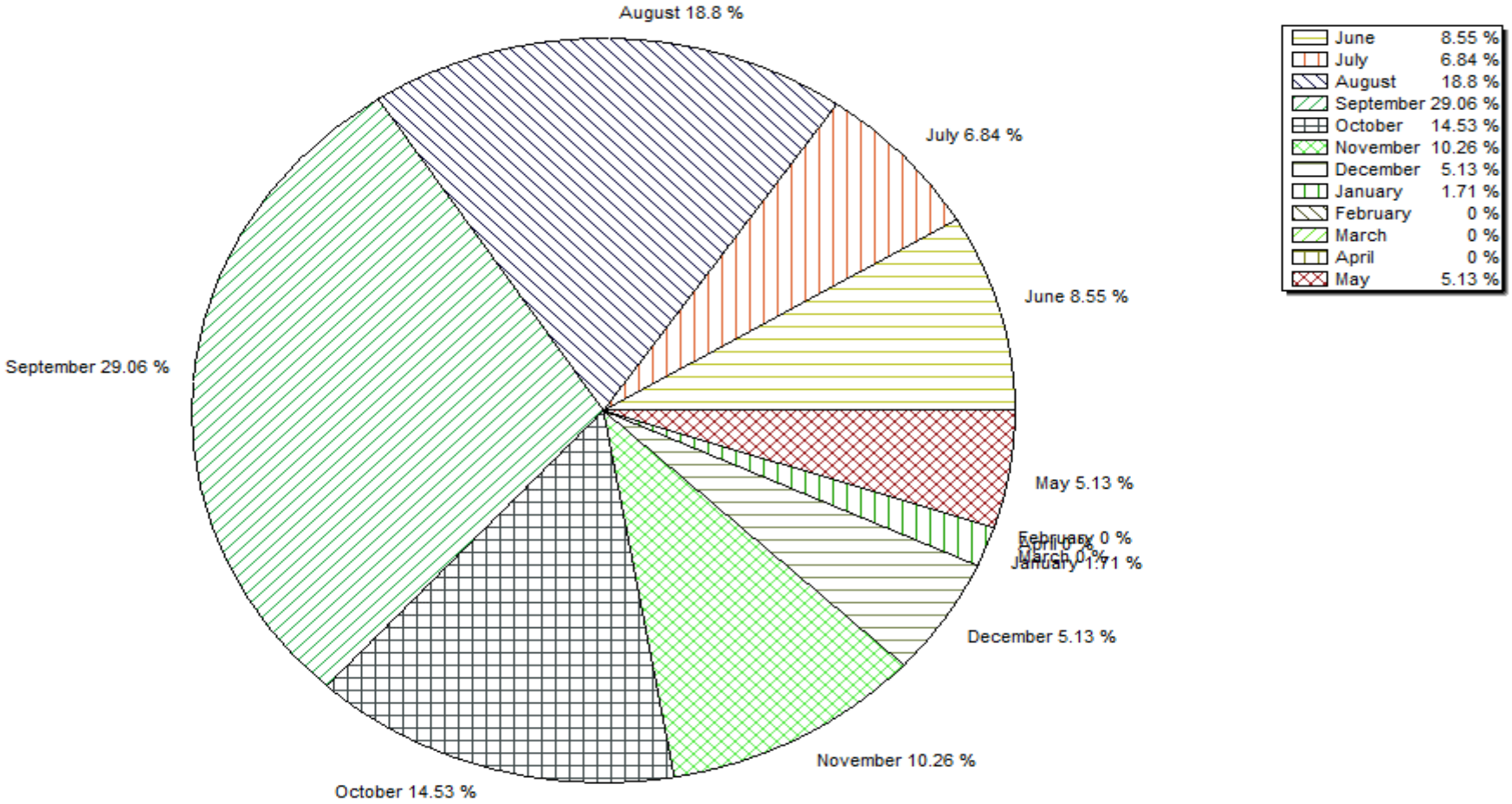
Monthly Runoff for the Year : 2017-2018

Station Name : VANDIPERIYAR (KS000U1)

Local River : Periyar

Division : SWR Division, Cochin

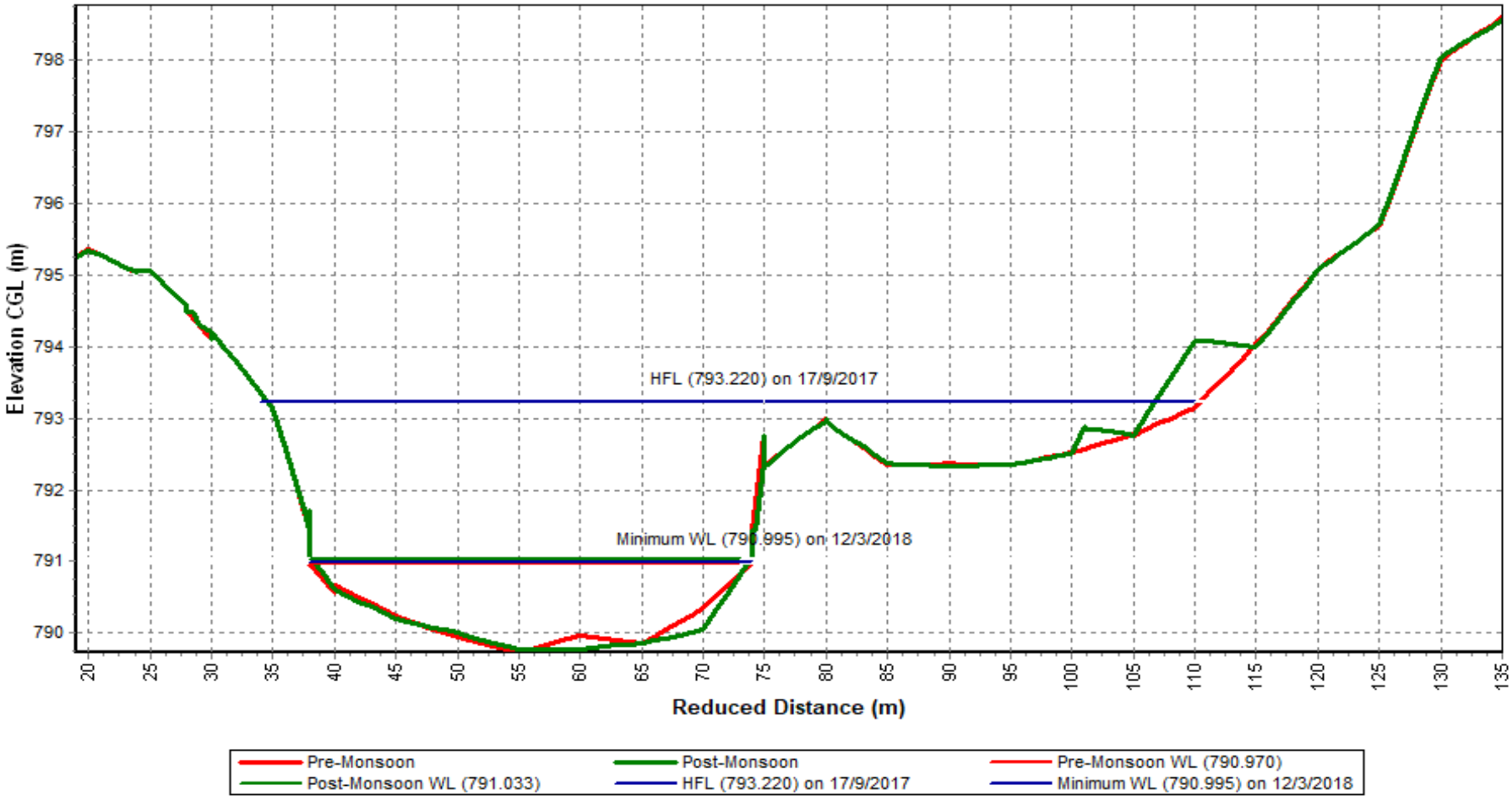
Sub-Division : SWR SD No 2, Kochi



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : VANDIPERIYAR (KS000U1) **Division : SWR Division, Cochin**

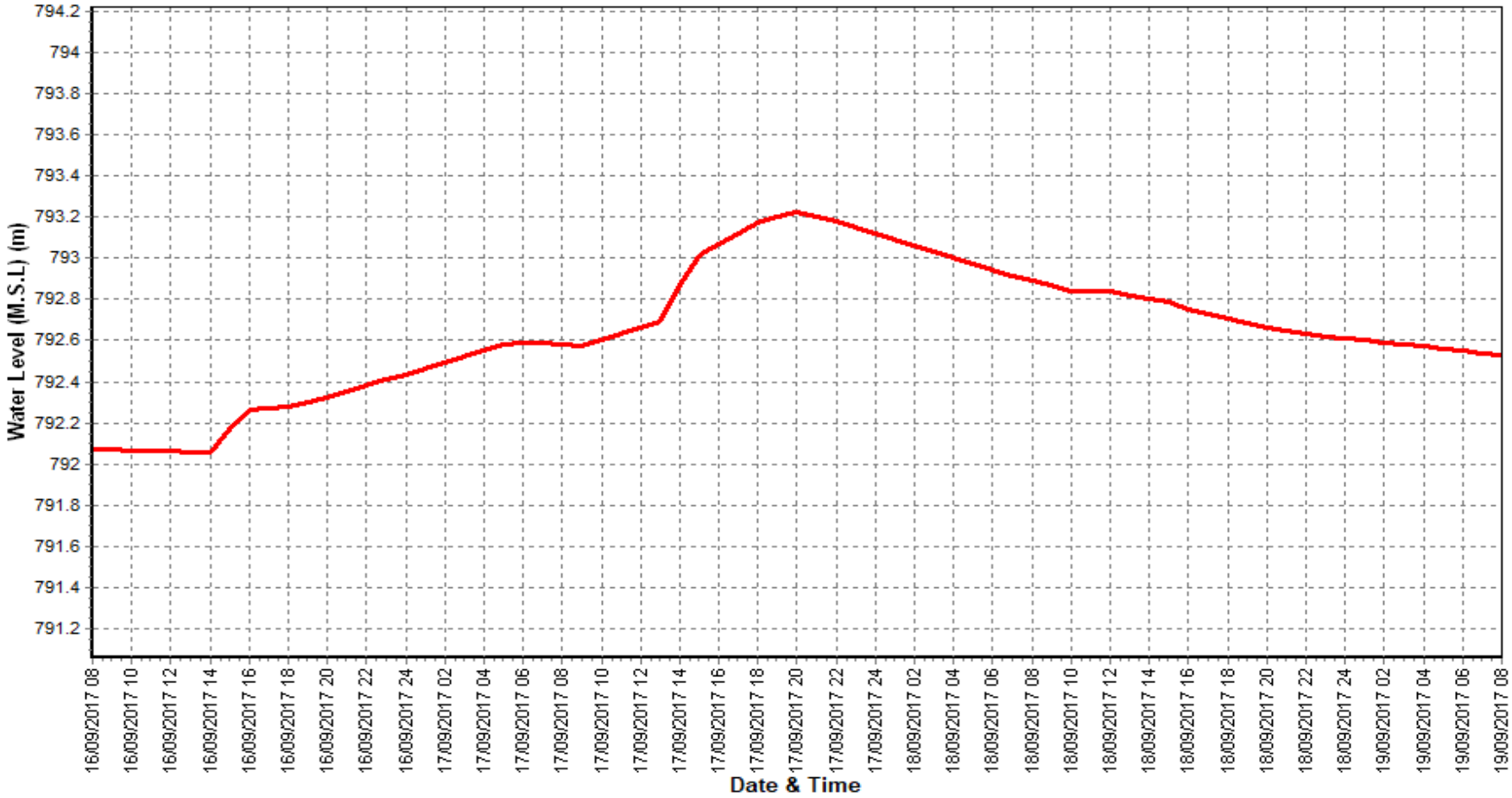
Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : VANDIPERIYAR (KS000U1) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**

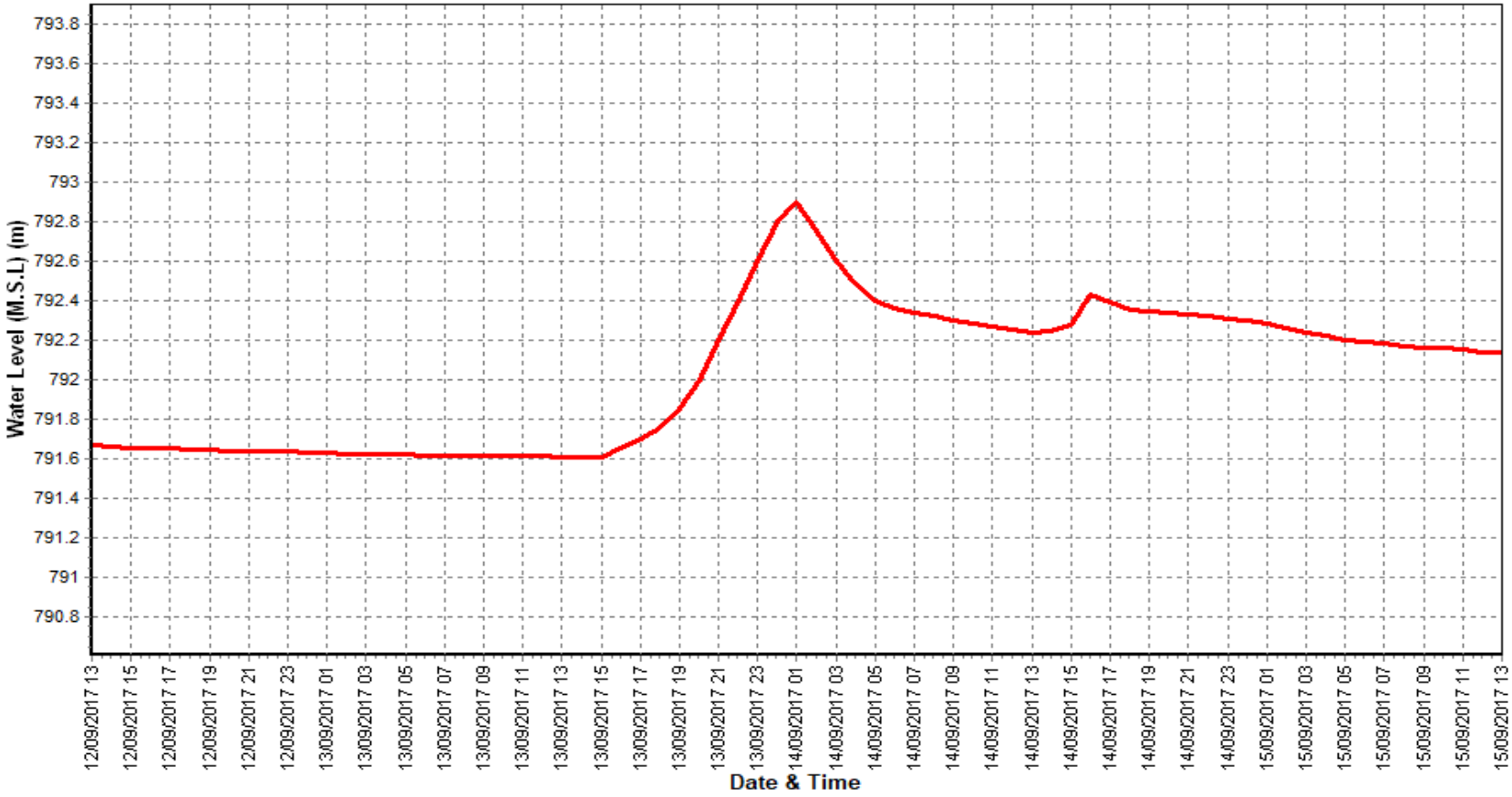


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : VANDIPERIYAR (KS000U1) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**

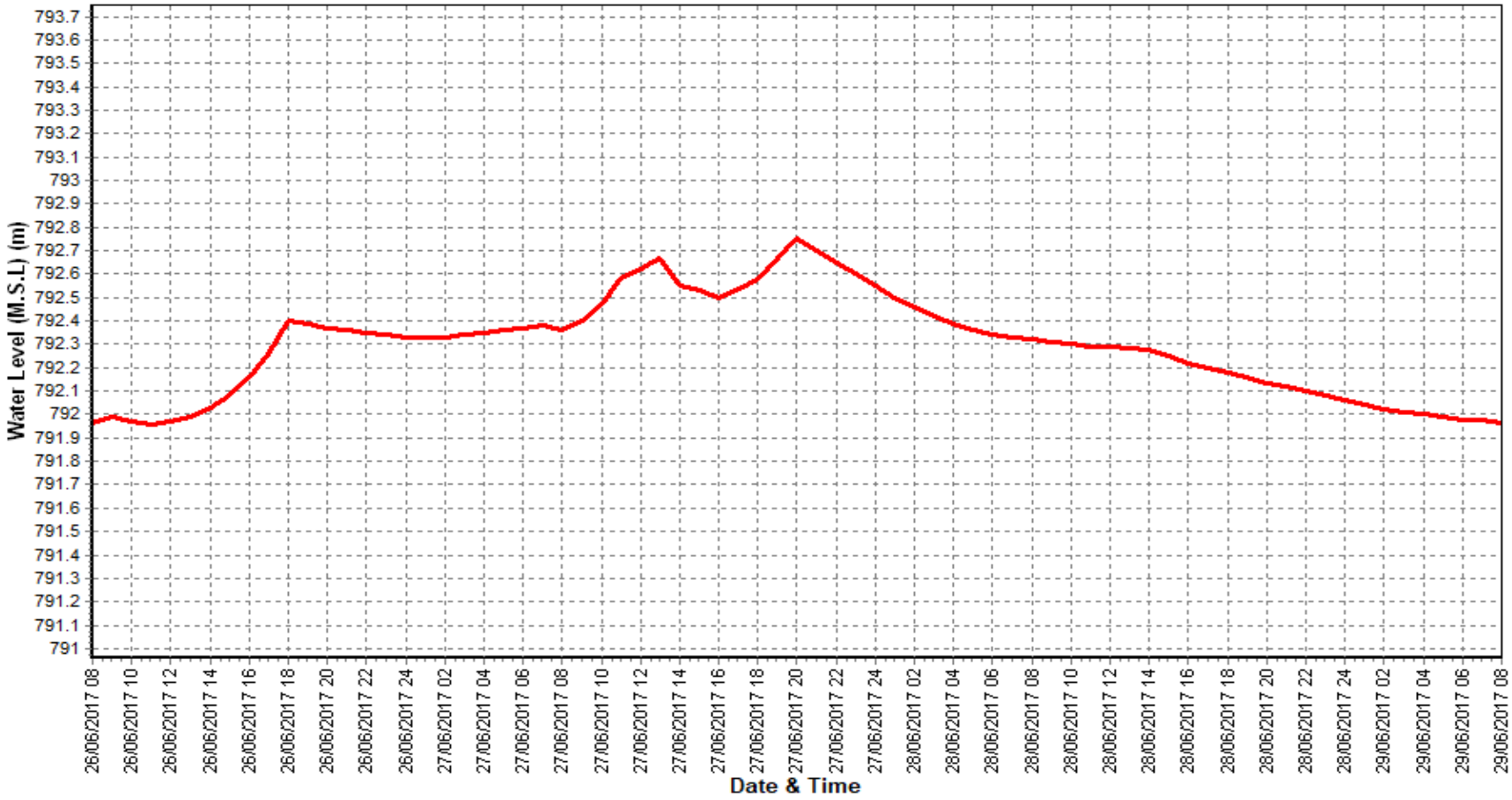


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : VANDIPERIYAR (KS000U1) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	:	**RAMAMANGALAM**	**Code**	:	**KM000I2**
State	:	Kerala	District		Ernakulam
Basin	:	WFR South of Tapi	Independent River	:	Muvattupuzha
Tributary	:	-	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Muvattupuzha
Division	:	SWR Division, Kochi	Sub-Division	:	SWR SD No 2, Kochi
Drainage Area	:	1208 Sq. Km.	Bank	:	Left
Latitude	:	09°56'37"	Longitude	:	76°28'42"
Zero of Gauge (m)	:	0.000 (m.s.l)	24-02-1978		
		Opening Date	Closing Date		
Gauge	:	24-02-1978			
Discharge	:	25-04-1978			
Sediment	:	20-02-1979			
Water Quality	:	15-08-1978			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1978-1979	900.5	7.003	29-07-1978	36.40	2.025	12-03-1979
1979-1980	725.6	6.465	04-08-1979	38.90	1.950	19-03-1980
1980-1981	809.9	6.855	03-07-1980	38.60	1.910	28-04-1981
1981-1982	1048	7.305	28-07-1981	42.40	1.980	03-05-1982
1982-1983	568.8	5.460	19-06-1982	15.00	1.430	04-04-1983
1983-1984	940.5	6.693	21-08-1983	21.80	1.560	24-03-1984
1984-1985	1178	7.420	18-06-1984	22.10	1.530	08-04-1985
1985-1986	1304	8.300	28-06-1985	32.50	1.640	16-02-1986
1986-1987	1102	7.943	11-08-1986	12.50	1.230	06-04-1987
1987-1988	743.3	6.023	26-08-1987	16.55	1.220	15-02-1988
1988-1989	616.0	5.900	05-08-1988	25.00	1.230	20-05-1989
1989-1990	766.0	7.028	28-07-1989	38.00	1.360	29-01-1990
1990-1991	595.5	5.620	16-06-1990	43.25	1.390	25-03-1991
1991-1992	891.5	6.702	29-07-1991	46.08	1.443	06-05-1992
1992-1993	1068	7.481	29-07-1992	57.23	1.557	18-01-1993
1993-1994	927.9	6.282	17-07-1993	58.14	1.517	14-03-1994
1994-1995	1273	7.560	03-08-1994	64.27	1.580	27-02-1995
1995-1996	750.6	5.715	01-07-1995	18.44	0.965	15-05-1996
1996-1997	837.2	6.400	22-07-1996	30.00	1.000	22-05-1997
1997-1998	1197	7.090	25-07-1997	20.00	0.880	22-06-1997

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Year	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1978-1979	900.5	7.003	29-07-1978	36.40	2.025	12-03-1979
1979-1980	725.6	6.465	04-08-1979	38.90	1.950	19-03-1980
1980-1981	809.9	6.855	03-07-1980	38.60	1.910	28-04-1981
1998-1999	1084	6.250	13-10-1998	58.00	1.200	15-02-1999
1999-2000	755.2	5.290	21-10-1999	52.20	1.130	22-05-2000
2000-2001	1021	6.540	26-08-2000	29.98	0.780	18-11-2000
2001-2002	1450	7.550	09-07-2001	47.83	0.880	22-04-2002
2002-2003	1221	6.870	18-08-2002	23.18	0.630	21-01-2003
2003-2004	932.0	5.670	08-10-2003	19.08	0.560	10-03-2004
2004-2005	943.7	5.945	06-08-2004	32.65	0.700	26-03-2005
2005-2006	1207	7.200	02-08-2005	47.23	0.985	19-12-2005
2006-2007	673.0	5.215	24-06-2006	28.68	0.590	11-12-2006
2007-2008	1139	6.850	18-07-2007	43.67	0.780	04-01-2008
2008-2009	685.7	4.885	09-09-2008	21.28	0.620	05-01-2009
2009-2010	917.0	5.490	19-07-2009	38.47	0.750	08-02-2010
2010-2011	1161	6.380	13-06-2010	36.63	0.700	27-12-2010
2011-2012	794.3	5.670	08-08-2011	39.03	0.650	12-03-2012
2012-2013	1200	6.240	18-08-2012	10.25	0.630	12-01-2013
2013-2014	1909	8.210	06-08-2013	30.30	0.545	17-03-2014
2014-2015	917.1	5.970	02-08-2014	34.01	0.575	07-01-2015
2015-2016	740.9	4.870	27-06-2015	32.83	0.510	03-02-2016
2013-2014	1909	8.210	06-08-2013	30.30	0.545	17-03-2014
2014-2015	917.1	5.970	02-08-2014	34.01	0.575	07-01-2015
2015-2016	740.9	4.870	27-06-2015	32.83	0.510	03-02-2016
2016-2017	493.2	3.710	17-07-2016	14.06	0.480	23-12-2016

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : RAMAMANGALAM (KM000I2) **Division : SWR Division, Cochin**

Local River : Muvattupuzha **Sub-Division : SWR SD No 2, Kochi**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	0.990	79.12	2.180	202.2	1.755	178.4	2.180	208.3 *	1.880	172.5 *	2.050	185.7
2	0.980	82.64 *	2.690	275.4 *	1.545	139.0	2.715	281.9	1.610	142.7 *	1.670	155.7
3	1.230	104.9 *	2.350	220.3	1.480	133.1	3.200	350.0 *	1.375	126.1	2.280	254.1
4	1.090	92.15 *	2.340	220.8	1.920	180.4	3.080	331.8 *	1.380	130.9	1.650	147.0 *
5	1.010	85.19 *	1.975	176.3	2.260	219.8	2.770	291.1	1.340	124.6	2.280	220.8 *
6	1.330	114.4 *	1.775	160.1 *	3.730	435.3 *	2.870	303.2	1.480	144.3	1.620	144.9
7	1.260	107.7 *	1.625	146.1	4.040	462.6	2.310	227.7	1.530	148.4	1.615	142.7
8	1.260	107.7 *	1.745	162.4	3.465	382.3	2.040	193.2	1.800	163.4 *	1.650	148.4
9	1.020	86.05 *	1.690	151.3 *	2.810	282.9	3.220	354.4	1.815	172.7	1.720	156.7
10	0.970	81.80 *	1.435	121.1	2.535	249.6	2.170	207.0 *	1.505	142.2	1.500	120.5
11	1.560	138.5 *	1.330	104.3	2.295	220.4	1.895	185.7	1.420	139.6	1.325	123.4
12	1.550	136.4 *	1.320	109.4	2.755	280.9	2.035	197.3	1.640	161.1	1.360	117.3 *
13	1.450	126.2 *	1.190	98.84	2.150	204.6 *	1.885	181.9	2.400	268.6	1.130	97.79
14	1.540	135.4 *	1.470	126.0	1.880	181.8	2.350	248.7	2.495	261.9	1.020	83.34
15	1.570	121.9	1.260	108.5	1.590	140.6 *	2.150	215.0	2.010	187.7 *	1.000	78.00
16	1.300	101.1	1.200	102.1 *	1.720	163.6	1.935	190.5	1.645	157.3	1.010	85.19 *
17	1.175	87.95	1.200	102.2	1.555	144.2	2.900	305.2 *	1.500	131.3 *	0.985	82.90
18	1.180	100.2 *	1.235	111.2	1.600	148.4	6.010	827.3	2.550	256.2 *	1.020	84.40
19	0.950	80.12 *	1.390	127.6	1.820	174.2	4.910	572.0	1.650	147.0 *	1.120	94.82 *
20	0.920	65.01	2.260	219.3	2.350	229.8 *	3.175	299.7	1.410	130.1	1.070	91.27 *
21	0.910	59.86	2.135	196.5	2.615	215.4	2.490	247.4	1.475	144.4	1.400	128.8
22	0.990	73.67	1.945	180.6	2.760	279.8	2.320	219.5	1.520	133.3 *	1.330	121.0
23	0.955	68.80	1.570	138.5 *	2.585	262.3	1.920	181.3	1.190	111.5	1.210	103.0 *
24	1.680	155.2	1.415	127.3	2.200	219.0	1.670	149.1 *	1.200	112.4	0.980	82.64 *
25	2.960	314.0 *	1.405	126.0	1.950	188.0	1.520	136.7	0.995	84.85	0.910	70.45
26	3.050	327.3 *	1.335	122.0	1.745	168.9	1.525	135.0	1.065	90.51	0.880	73.57 *
27	3.590	409.9	1.395	125.7	1.670	149.1 *	1.640	151.5	2.090	206.8	0.890	66.71
28	5.240	664.2	1.805	180.0	2.425	257.0	2.010	191.3	1.610	154.3	0.850	59.99
29	3.685	318.6	1.725	159.7	2.650	273.4	2.280	220.8 *	1.980	184.1 *	0.810	54.60
30	2.650	234.5	1.580	131.3 *	3.070	325.2	2.190	209.5 *	1.290	118.7	0.790	54.30
31			1.480	132.9	2.755	285.4			1.655	159.1		
Ten-Daily Mean												
I Ten-Daily	1.114	94.17	1.980	183.6	2.554	266.3	2.655	274.9	1.572	146.8	1.803	167.7
II Ten-Daily	1.320	109.3	1.386	120.9	1.972	188.8	2.924	322.3	1.872	184.1	1.104	93.84
III Ten-Daily	2.571	262.6	1.617	147.3	2.402	238.5	1.957	184.2	1.461	136.4	1.005	81.50
Monthly												
Min.	0.910	59.86	1.190	98.84	1.480	133.1	1.520	135.0	0.995	84.85	0.790	54.30
Max.	5.240	664.2	2.690	275.4	4.040	462.6	6.010	827.3	2.550	268.6	2.280	254.1
Mean	1.668	155.4	1.660	150.5	2.312	231.5	2.512	260.5	1.629	155.1	1.304	114.3

Annual Runoff in MCM = 4026 Annual Runoff in mm = 3333

Peak Observed Discharge = 827.3 cumecs on 18/09/2017 Corres. Water Level :6.01 m

Lowest Observed Discharge = 22.64 cumecs on 26/12/2017 Corres. Water Level :0.545 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : RAMAMANGALAM (KM000I2) **Division : SWR Division, Cochin**

Local River : Muvattupuzha **Sub-Division : SWR SD No 2, Kochi**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	0.780	51.51	0.590	35.08 *	0.730	44.65	1.120	104.4	0.720	46.14 *	1.135	106.6
2	0.830	56.93 *	0.640	39.12 *	0.695	43.39	1.065	88.19	0.675	46.08	0.995	89.48
3	0.760	49.91 *	0.670	41.67 *	0.685	40.62	1.040	84.17	0.560	32.53	0.900	73.75
4	0.790	51.44	0.610	26.38	0.710	45.23 *	0.840	57.98 *	0.635	39.28	0.900	72.60
5	0.735	45.30	0.670	36.77	0.690	40.92	0.780	51.86 *	0.985	85.06	0.950	82.22
6	0.700	42.12	0.640	32.52	0.645	37.16	0.990	80.82	1.185	121.2	1.340	125.4 *
7	0.665	36.57	0.630	38.29 *	0.650	39.03	1.035	85.42	1.145	113.2	1.520	142.7
8	0.650	34.06	0.710	38.29	0.660	40.81 *	1.005	82.88	1.040	81.33 *	1.330	117.0
9	0.650	34.73	0.640	32.59	0.640	37.39	1.030	83.23	0.740	56.82	1.645	157.5
10	0.680	42.55 *	0.590	35.08 *	0.685	42.56	1.020	84.77	0.700	49.75	1.495	142.0
11	0.690	39.42	0.560	27.27	0.770	50.88 *	1.040	81.33 *	1.040	82.80	1.455	135.6
12	0.690	38.03	0.675	41.85	0.655	41.10	0.985	81.37	0.935	72.18	1.500	129.8
13	0.720	41.22	0.670	41.08	0.740	48.00 *	0.950	76.40	0.815	67.50	2.050	277.5 *
14	0.900	69.15	0.780	51.86 *	0.685	42.76	0.990	82.55	1.080	86.57 *	1.545	139.3
15	0.995	85.11	0.610	37.47 *	0.655	42.02	0.805	56.83	1.110	90.62 *	1.235	108.9
16	0.880	63.09	0.660	39.84	0.675	43.75	0.995	81.90	1.035	82.10	1.460	131.1
17	0.850	59.03 *	0.725	46.57	0.665	43.30	0.945	77.64	0.785	56.66	2.240	330.5 #
18	0.750	47.77	0.820	58.87	0.670	42.55 *	0.840	57.98 *	0.980	79.68	1.855	175.7
19	0.705	43.25	0.650	40.71	0.675	43.00	0.775	56.45	1.130	95.99	1.580	140.7
20	0.745	48.30	0.660	39.87	0.710	49.97	0.645	36.48	1.325	118.1	1.680	189.5 *
21	0.750	50.51	0.700	44.32 *	0.895	70.84	0.855	66.68	1.120	95.67	1.840	168.4
22	0.770	50.72	0.660	36.33	0.870	65.31	0.940	75.70	1.150	96.20 *	1.465	129.8
23	0.775	48.59	0.645	34.35	0.930	72.79	0.740	52.94	1.175	103.5	1.440	132.3
24	0.720	46.14 *	0.660	36.73	0.895	69.61	0.895	74.66	0.970	80.26	2.000	191.4
25	0.670	41.67 *	0.760	48.45	0.910	65.62 *	0.740	48.00 *	1.030	86.61	1.430	128.1
26	0.545	22.64	0.670	41.67 *	0.860	70.04	0.690	46.38	1.075	97.13	1.435	128.8
27	0.550	32.03 *	0.675	38.23	0.900	74.09	0.750	54.49	1.340	123.5	1.270	114.1 *
28	0.595	25.29	0.690	43.43 *	0.955	84.21	0.880	76.79	1.195	108.4	1.320	112.1
29	0.560	32.77 *	0.715	45.63			0.940	69.07 *	1.160	97.62 *	2.810	496.9 #
30	0.590	35.08 *	0.710	45.98			0.980	73.83 *	1.140	94.79 *	2.830	539.0 #
31	0.720	46.14 *	0.880	65.81			0.945	78.66			2.345	232.0
Ten-Daily Mean												
I Ten-Daily	0.724	44.51	0.639	35.58	0.679	41.18	0.992	80.37	0.838	67.14	1.221	110.9
II Ten-Daily	0.792	53.44	0.681	42.54	0.690	44.73	0.897	68.89	1.023	83.22	1.660	175.9
III Ten-Daily	0.659	39.23	0.706	43.72	0.902	71.56	0.850	65.20	1.135	98.37	1.835	215.7
Monthly												
Min.	0.545	22.64	0.560	26.38	0.640	37.16	0.645	36.48	0.560	32.53	0.900	72.60
Max.	0.995	85.11	0.880	65.81	0.955	84.21	1.120	104.4	1.340	123.5	2.830	539.0
Mean	0.723	45.52	0.676	40.71	0.747	51.13	0.911	71.29	0.999	82.91	1.580	169.1

Peak Computed Discharge = 435.3 cumecs on 06/08/2017 **Corres. Water Level :3.73 m**

Lowest Computed Discharge = 32.03 cumecs on 27/12/2017 **Corres. Water Level :0.55 m**

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

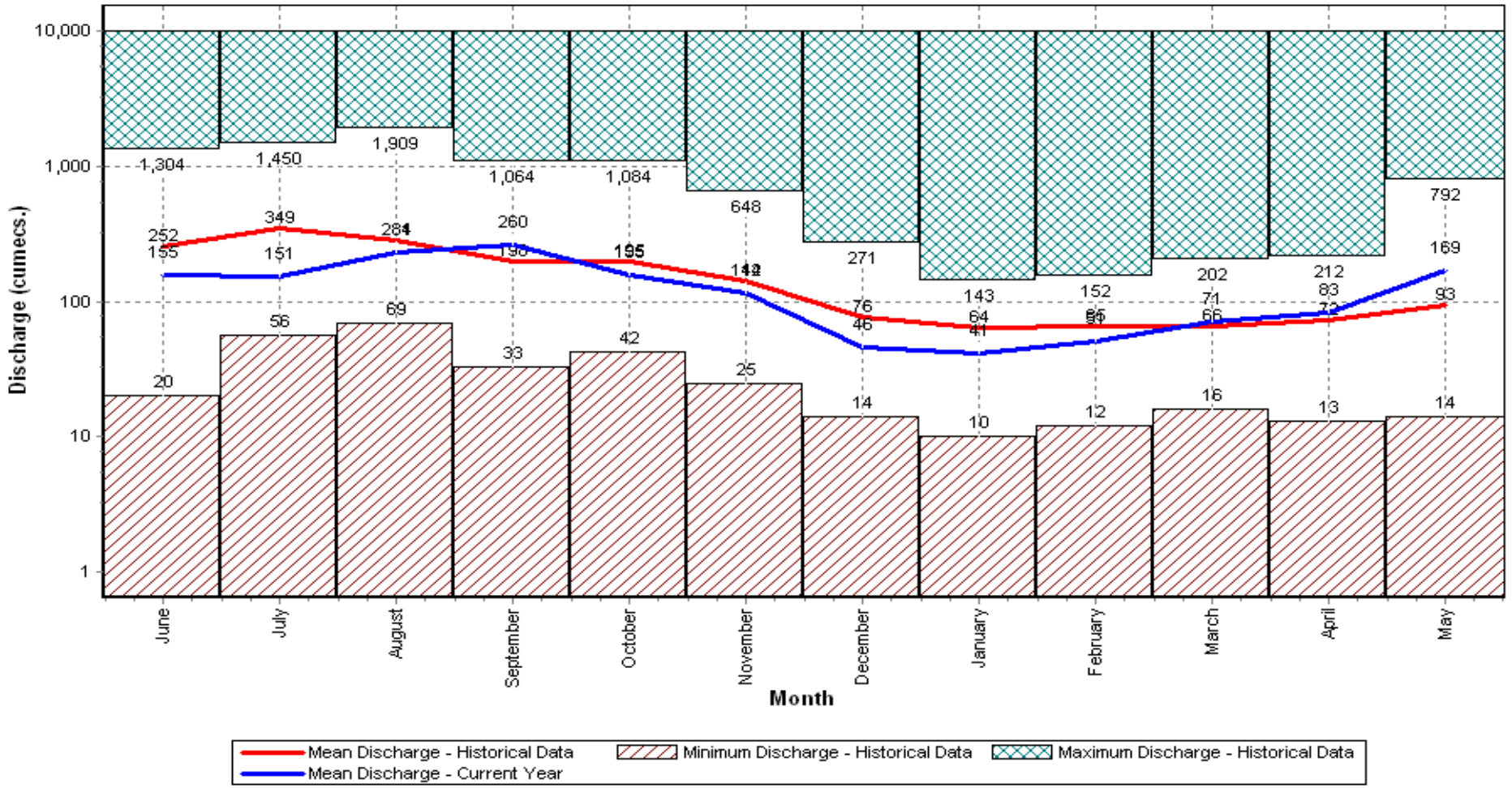
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : RAMAMANGALAM (KM000I2) | **Data considered : 1978-2018** | **Division : SWR Division, Cochin**

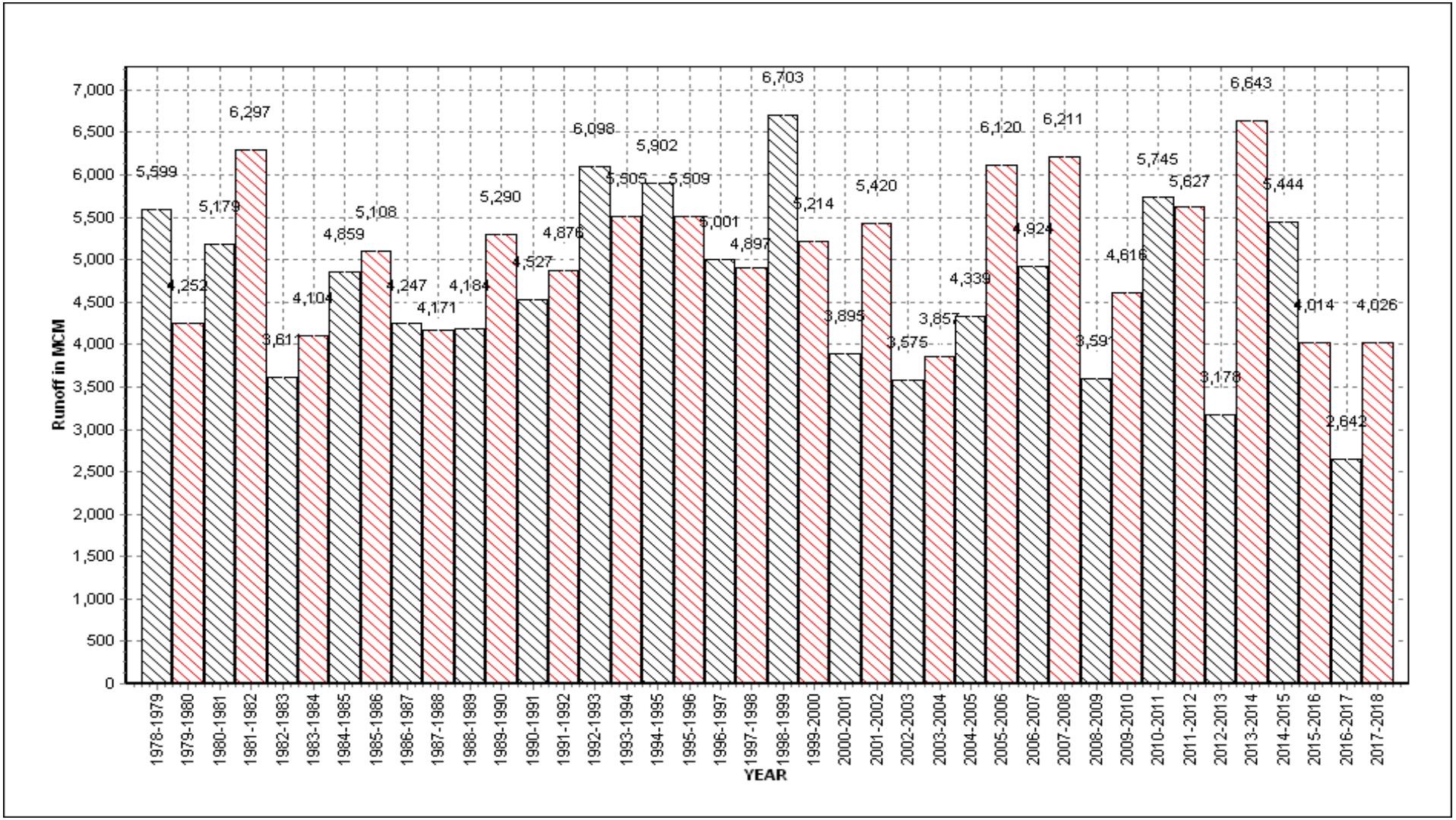
Local River : Muvattupuzha | **Sub-Division : SWR SD No 2, Kochi**



Annual Runoff Values for the period: 1978 - 2018

Station Name : RAMAMANGALAM (KM000I2) **Division : SWR Division, Cochin**

Local River : Muvattupuzha **Sub-Division : SWR SD No 2, Kochi**



Note: Missing values have not been considered while arriving at Annual Runoff

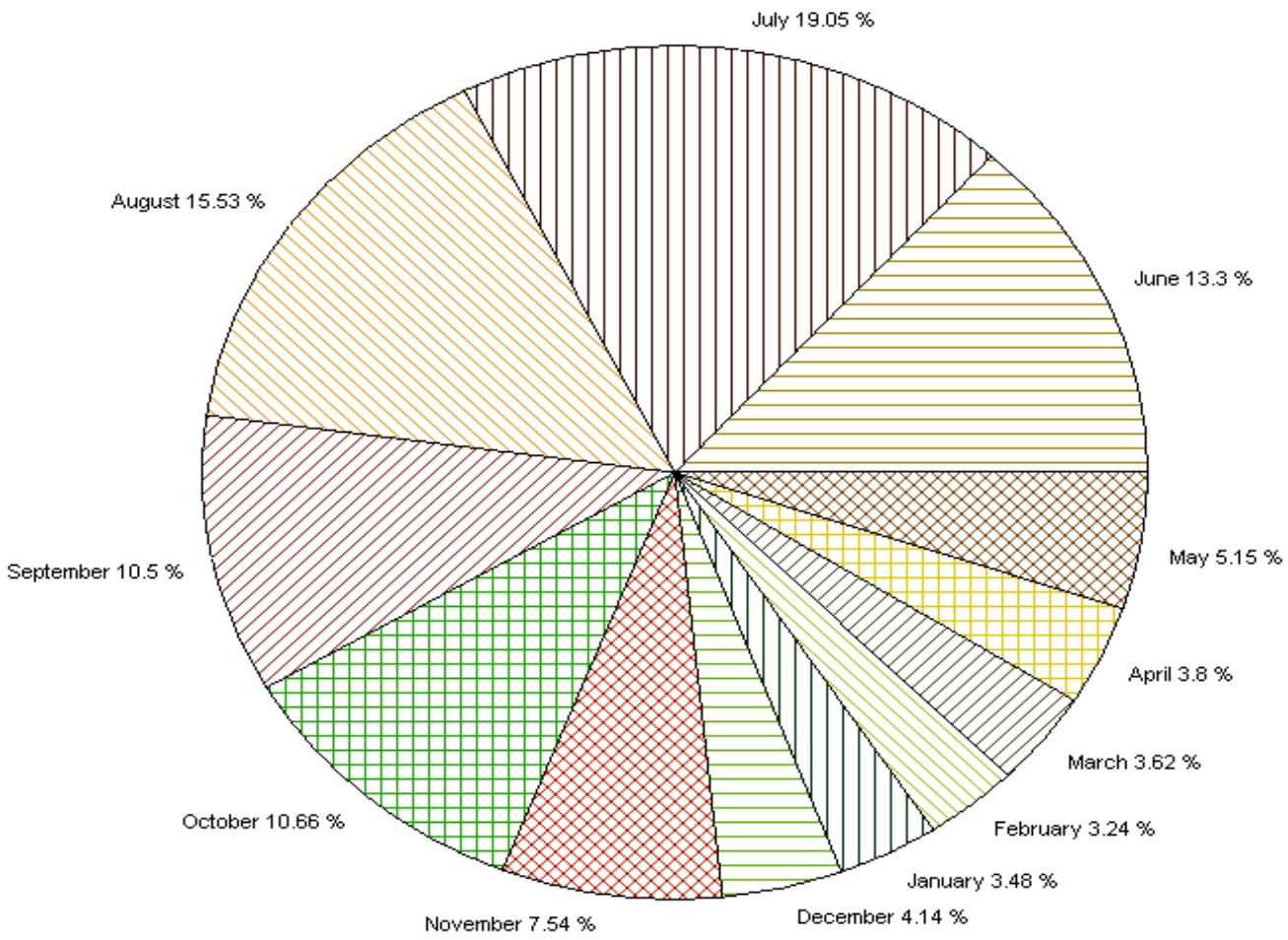
Monthly Average Runoff based on period : 1978-2017

Station Name : RAMAMANGALAM (KM000I2)

Local River : Muvattupuzha

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi



June	13.3 %
July	19.05 %
August	15.53 %
September	10.5 %
October	10.66 %
November	7.54 %
December	4.14 %
January	3.48 %
February	3.24 %
March	3.62 %
April	3.8 %
May	5.15 %

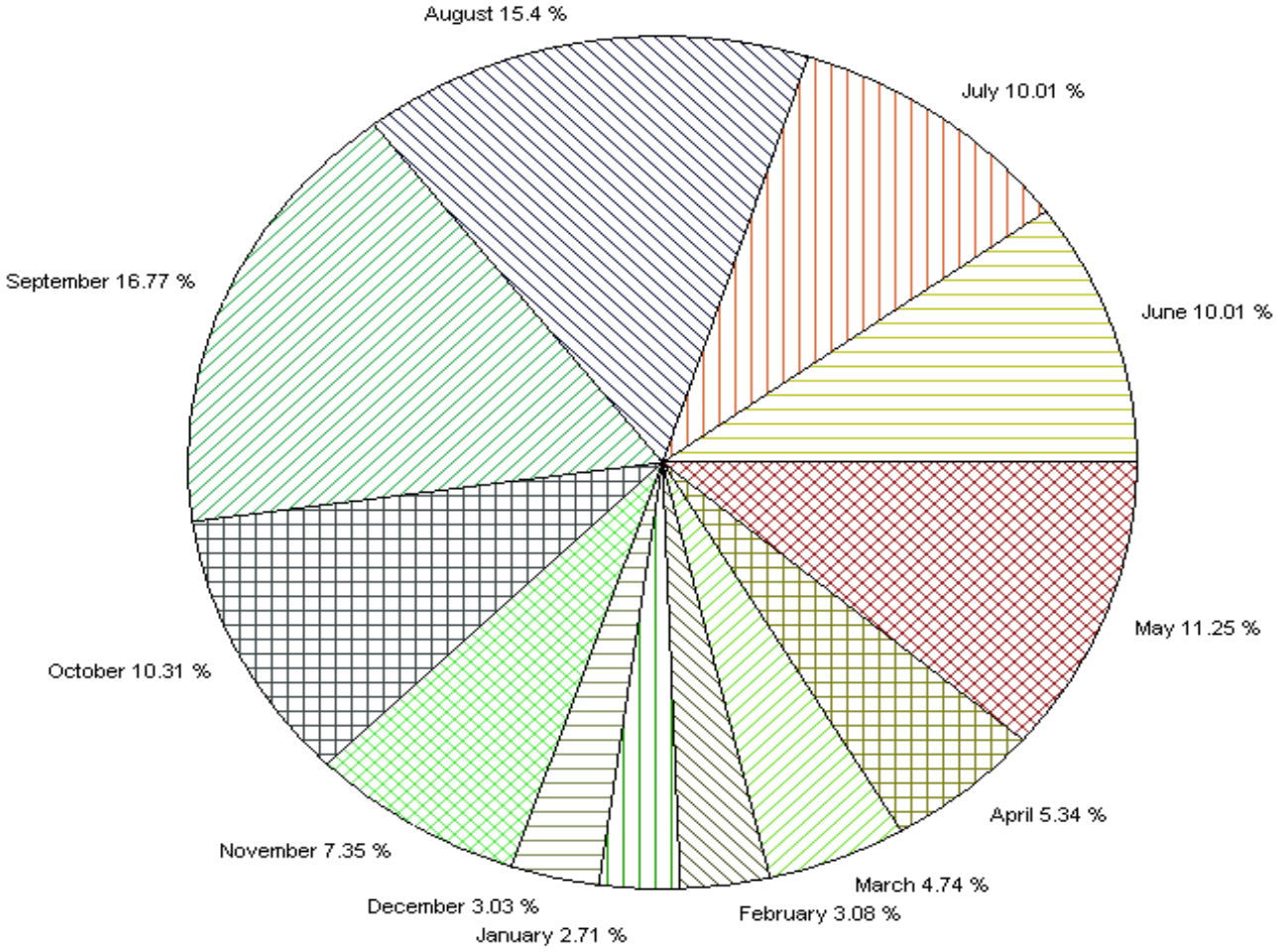
Monthly Runoff for the Year : 2017-2018

Station Name : RAMAMANGALAM (KM000I2)

Local River : Muvattupuzha

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi

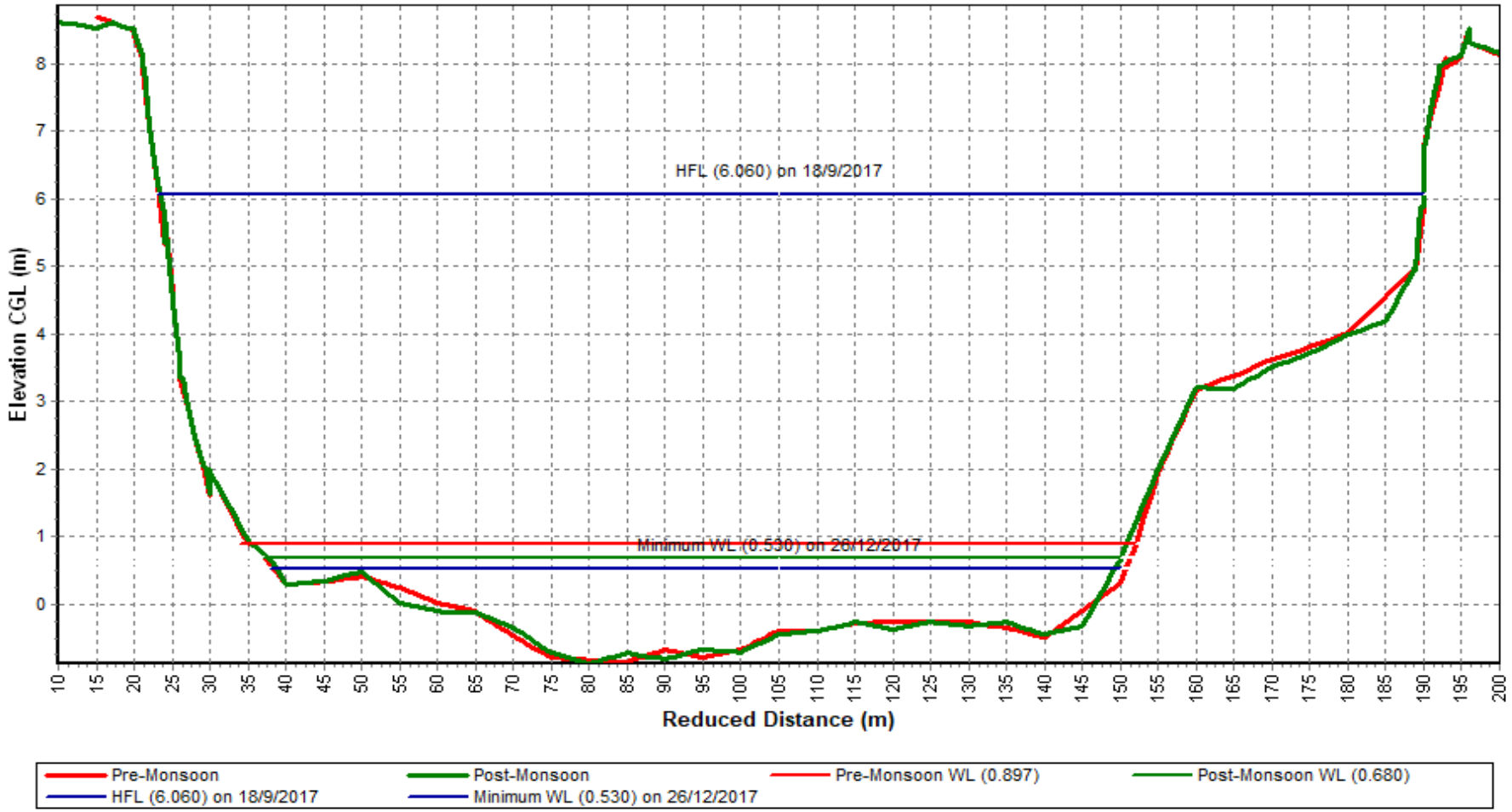


June	10.01 %
July	10.01 %
August	15.4 %
September	16.77 %
October	10.31 %
November	7.35 %
December	3.03 %
January	2.71 %
February	3.08 %
March	4.74 %
April	5.34 %
May	11.25 %

Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : RAMAMANGALAM (KM000I2) **Division : SWR Division, Cochin**

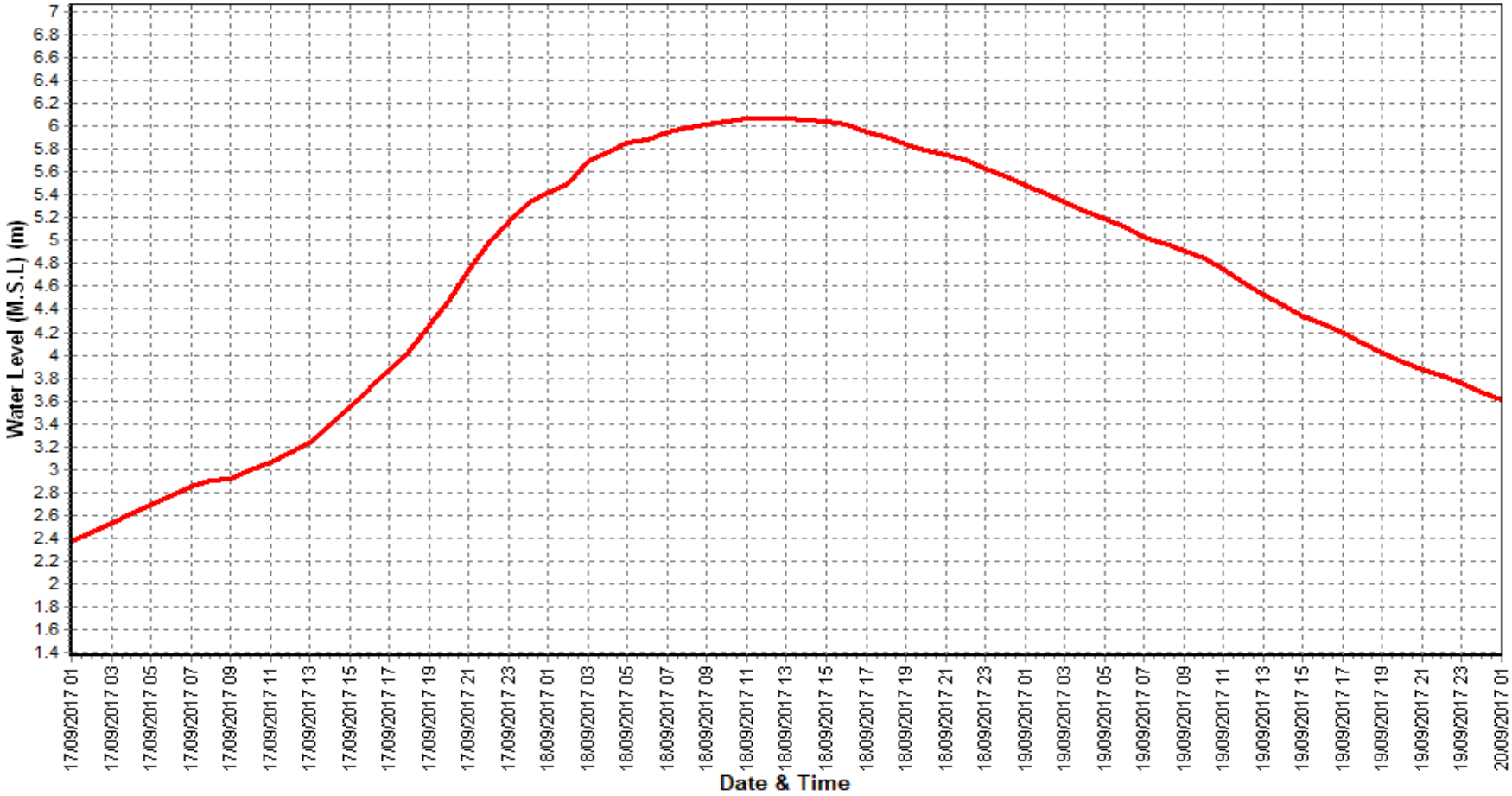
Local River : Muvattupuzha **Sub-Division : SWR SD No 2, Kochi**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : RAMAMANGALAM (KM000I2) **Division : SWR Division, Cochin**

Local River : Muvattupuzha **Sub-Division : SWR SD No 2, Kochi**

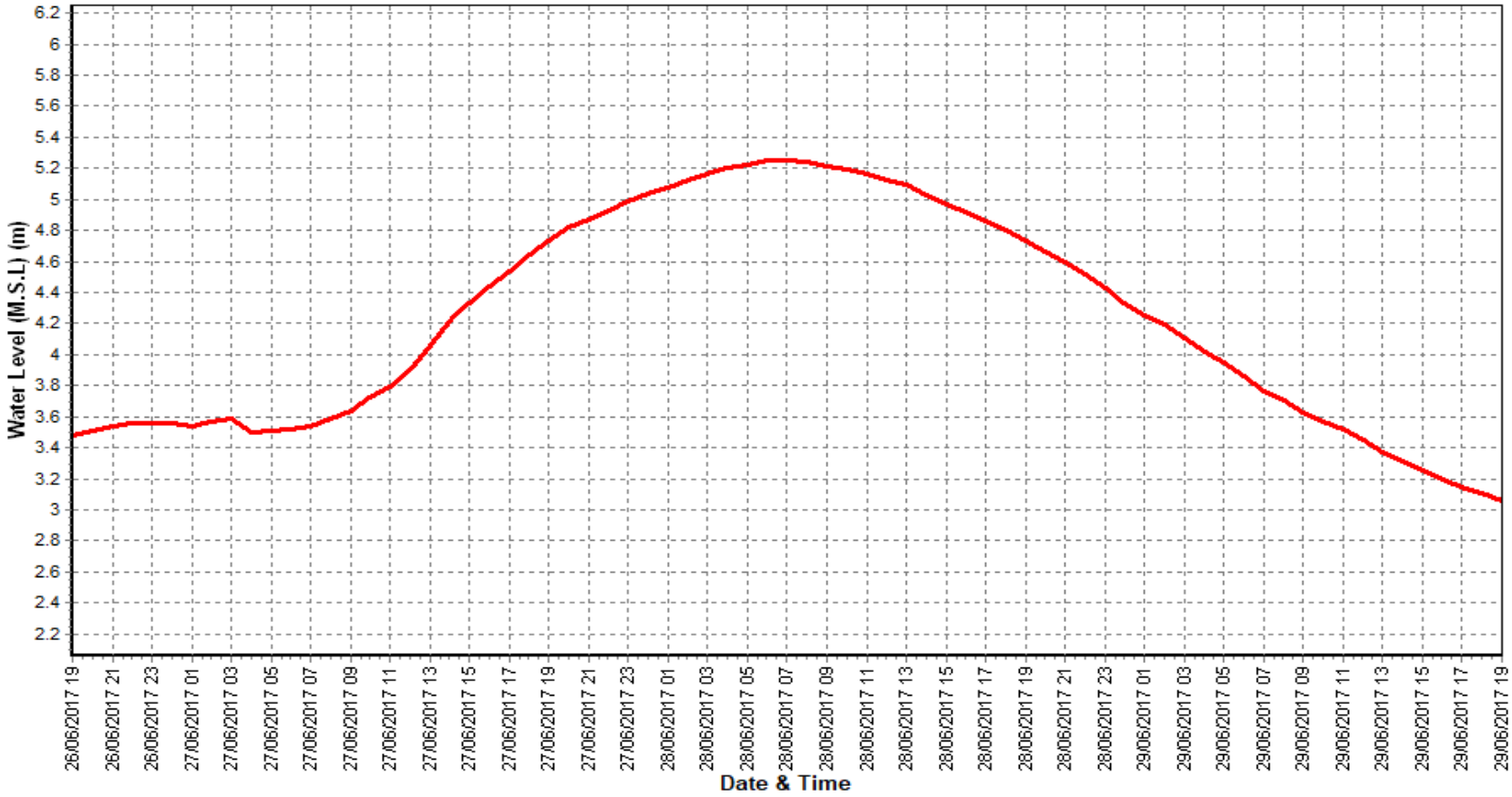


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : RAMAMANGALAM (KM000I2) **Division : SWR Division, Cochin**

Local River : Muvattupuzha **Sub-Division : SWR SD No 2, Kochi**

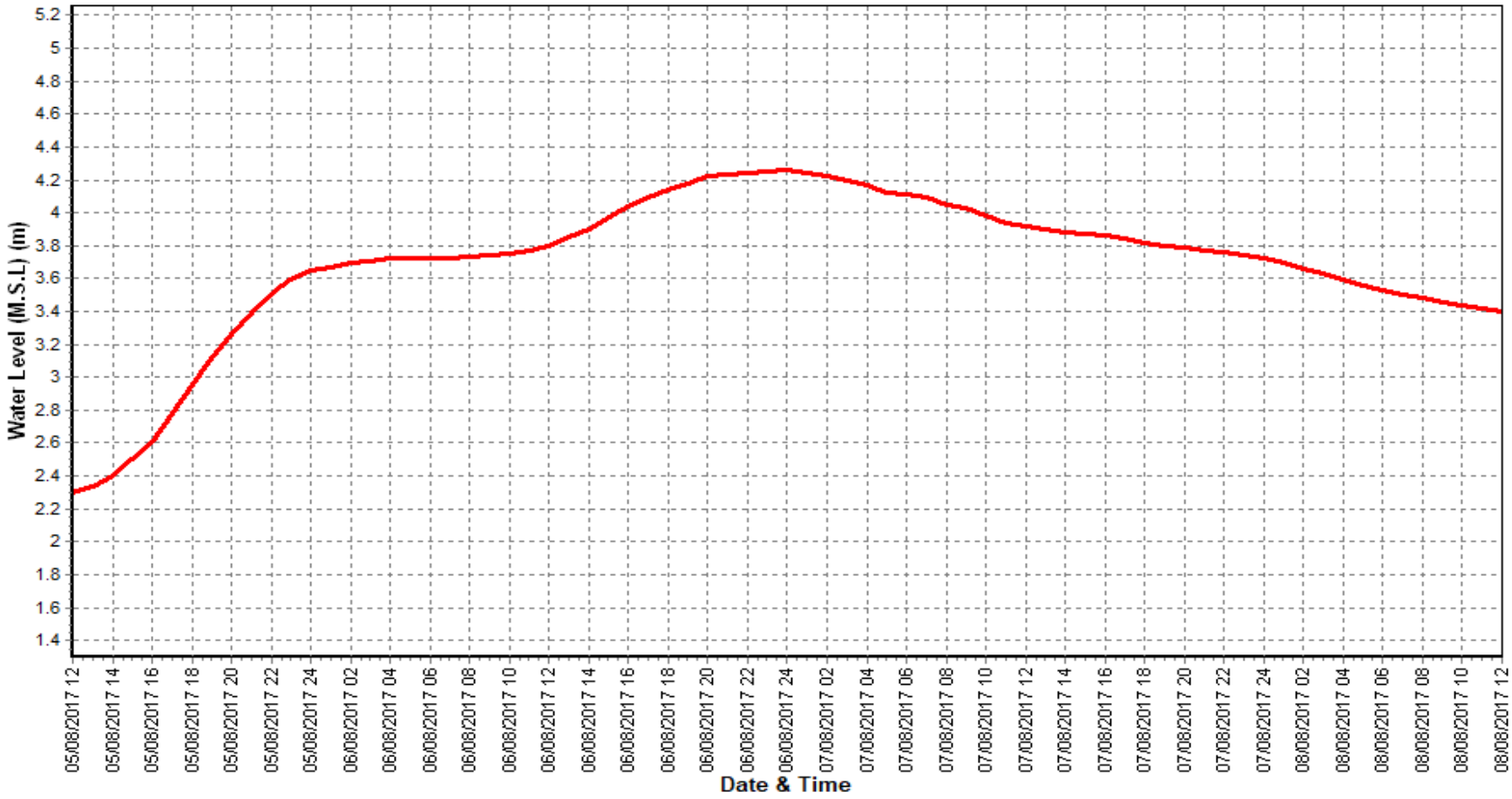


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : RAMAMANGALAM (KM000I2) **Division : SWR Division, Cochin**

Local River : Muvattupuzha **Sub-Division : SWR SD No 2, Kochi**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	**: KALAMPUR**		**Code**	**: KMA00C6**	
State	: Kerala		District	Ernakulam	
Basin	: WFR South of Tapi		Independent River	: Muvattupuzha	
Tributary	: Kaliyar		Sub Tributary	: -	
Sub-Sub Tributary	: -		Local River	: Kaliyar	
Division	: SWR Division, Kochi		Sub-Division	: SWR SD No 2, Kochi	
Drainage Area	: 405 Sq. Km.		Bank	: Right	
Latitude	: 09°59'26"		Longitude	: 76°37'56"	
Zero of Gauge (m)	: 89.535 (Arb.) 5.000 (m.s.l)		29-11-1985 01-02-1988	- 31-01-1988	
	Opening Date		Closing Date		
Gauge	: 29-11-1985				
Discharge	: 23-06-1986				
Sediment	: 01-06-1988				
Water Quality	: 01-06-1988				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1987-1988	249.8	94.955	26-08-1987	0.220	7.285	05-04-1988
1988-1989	362.1	12.440	04-08-1988	0.000	7.255	19-02-1989
1989-1990	397.0	12.930	24-07-1989	0.000	7.145	02-03-1990
1990-1991	266.6	11.025	16-06-1990	0.000	7.260	20-02-1991
1991-1992	312.7	12.260	29-07-1991	0.000	7.312	11-02-1992
1992-1993	438.0	13.478	29-07-1992	0.000	7.335	13-02-1993
1993-1994	282.9	11.625	04-08-1993	0.000	7.398	05-03-1994
1994-1995	439.1	13.293	03-08-1994	0.000	7.345	20-01-1995
1995-1996	294.1	11.653	12-07-1995	0.000	7.350	27-01-1996
1996-1997	388.0	12.800	21-07-1996	0.000	7.535	28-01-1997
1997-1998	493.1	13.835	24-07-1997	0.000	7.385	07-02-1998
1998-1999	377.3	12.065	12-10-1998	0.000	7.370	01-06-1998
1999-2000	336.0	11.340	24-10-1999	0.000	7.300	01-02-2000
2000-2001	500.6	12.645	26-08-2000	0.000	7.450	16-01-2001
2001-2002	805.5	14.800	09-07-2001	0.000	7.325	05-02-2002
2002-2003	443.5	12.130	18-08-2002	0.000	7.375	23-01-2003
2003-2004	290.5	11.410	08-10-2003	0.000	7.480	19-12-2003
2004-2005	334.7	11.970	04-08-2004	0.000	7.400	29-12-2004
2005-2006	692.6	13.670	07-09-2005	0.000	7.380	24-01-2006

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Year	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1987-1988	249.8	94.955	26-08-1987	0.220	7.285	05-04-1988
1988-1989	362.1	12.440	04-08-1988	0.000	7.255	19-02-1989
1989-1990	397.0	12.930	24-07-1989	0.000	7.145	02-03-1990
2006-2007	320.3	11.260	16-07-2006	0.000	7.330	20-02-2007
2007-2008	680.3	13.650	17-07-2007	0.000	7.590	02-01-2008
2008-2009	235.7	11.290	31-08-2008	0.000	9.000	10-12-2008
2009-2010	424.7	12.680	18-07-2009	0.000	7.870	05-03-2010
2010-2011	611.6	13.460	13-06-2010	0.000	8.340	11-12-2010
2011-2012	277.3	11.775	19-07-2011	0.000	8.590	14-12-2011
2012-2013	493.3	12.495	18-08-2012	0.000	7.850	01-06-2012
2013-2014	763.3	14.650	05-08-2013	0.000	8.270	01-06-2013
2014-2015	359.4	12.115	04-08-2014	0.000	7.630	04-01-2015
2015-2016	218.2	10.650	13-08-2015	0.000	8.330	10-01-2016
2013-2014	763.3	14.650	05-08-2013	0.000	7.670	18-02-2014
2014-2015	359.4	12.115	04-08-2014	0.000	8.360	27-03-2015
2015-2016	218.2	10.650	13-08-2015	0.000	8.120	10-04-2016
2016-2017	296.5	11.360	16-07-2016	0.000	7.660	03-02-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : KALAMPUR (KMA00C6) **Division : SWR Division, Cochin**

Local River : Kaliyar **Sub-Division : SWR SD No 2, Kochi**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	8.080	0.000	9.615	67.73	10.040	127.4	9.820	87.45 *	9.550	70.35 *	9.335	53.44
2	8.140	0.000	9.790	85.44 *	9.610	70.08	10.135	131.0	9.450	64.57 *	8.920	39.19
3	8.330	0.000	9.620	68.28	9.520	60.66	10.350	127.7 *	9.235	49.05	9.550	64.34
4	8.140	0.000	9.610	70.80	9.730	78.91	10.080	106.1 *	9.020	41.43	9.180	50.42 *
5	8.070	0.000	9.425	55.80	9.960	108.0	10.380	130.2 #	8.925	37.87	9.270	54.91 *
6	8.400	0.000	9.265	48.92	10.580	148.0 *	10.125	129.4	9.145	50.04	8.895	35.98
7	8.280	0.000	9.300	50.64	10.390	149.4	9.875	93.59	8.770	31.02	9.165	48.04
8	8.660	0.000	9.400	49.77	10.130	132.9	9.705	81.15	9.500	67.42 *	9.220	49.33
9	8.240	0.000	9.250	53.89 *	9.930	110.8	10.030	123.5	9.270	52.57	9.145	47.96
10	8.100	0.000	9.040	45.79	9.995	118.4	9.720	80.85 *	9.005	45.61	8.720	32.97
11	9.420	0.000	8.940	39.56	9.790	89.91	9.690	76.93	8.770	37.03	9.545	62.48
12	9.440	0.000	8.930	39.08	9.870	102.3	9.610	71.77	9.540	62.08	9.010	42.57 *
13	9.320	0.000	8.760	31.06	9.650	76.42 *	9.470	56.64	9.685	80.11	8.690	29.61
14	8.890	0.000	9.185	45.10	9.535	60.60	9.920	109.6	9.755	85.09	8.540	25.15
15	8.775	28.61	8.895	39.36	9.410	62.34 *	9.560	69.34	9.580	72.14 *	8.470	22.41
16	8.685	28.05	8.810	34.32 *	9.560	60.19	9.600	73.03	9.420	55.03	8.380	20.18
17	8.550	24.12	8.720	30.90	9.480	55.87	10.010	100.8 *	9.385	52.25	8.310	21.30
18	8.400	20.61 *	8.650	29.64	9.760	85.64	11.930	305.9 #	9.800	86.10 *	8.350	22.66
19	8.200	17.73	8.825	32.20	9.660	73.13	10.160	143.2	9.525	58.31	8.600	26.78 *
20	8.145	15.79	9.775	89.48	10.070	105.3 *	9.915	110.0	9.305	48.58	8.530	25.73
21	8.140	14.97	9.715	82.02	10.060	122.6	9.750	84.02	9.130	43.84	8.925	38.98
22	8.280	18.33	9.550	66.24	10.545	143.5 #	9.685	80.73	9.230	52.89 *	8.730	31.51
23	8.290	21.23	9.390	61.24 *	9.955	114.3	9.535	62.00	8.880	35.73	8.490	27.27
24	9.540	57.02	9.190	45.52	9.785	93.18	9.810	86.77 *	8.730	31.01	8.310	16.98
25	9.980	98.64 *	9.000	40.30	9.675	80.00	9.465	57.62	8.630	30.58	8.250	15.52
26	10.020	101.6 *	8.820	32.01	9.565	68.03	9.580	67.14	8.600	31.03	8.200	15.38 *
27	10.735	123.5 #	8.880	36.57	10.030	102.3 *	9.335	52.16	9.535	60.46	8.390	22.04
28	10.550	164.3 #	9.940	105.8	10.360	128.5 #	9.650	75.04	9.180	48.63	8.215	16.41
29	9.900	88.02	9.450	61.72	10.330	126.0 #	9.750	82.80 *	9.340	58.55 *	8.150	14.25
30	9.730	82.50	9.360	59.62 *	10.205	145.6	9.660	77.04 *	8.920	40.36	8.100	15.17
31			9.330	43.77	10.135	139.5			9.105	44.47		
Ten-Daily Mean												
I Ten-Daily	8.244	0.000	9.432	59.71	9.989	110.5	10.022	109.1	9.187	50.99	9.140	47.66
II Ten-Daily	8.782	13.49	8.949	41.07	9.678	77.17	9.987	111.7	9.477	63.67	8.642	29.89
III Ten-Daily	9.517	77.01	9.330	57.71	10.059	114.9	9.622	72.53	9.025	43.41	8.376	21.35
Monthly												
Min.	8.070	0.000	8.650	29.64	9.410	55.87	9.335	52.16	8.600	30.58	8.100	14.25
Max.	10.735	164.3	9.940	105.8	10.580	149.4	11.930	305.9	9.800	86.10	9.550	64.34
Mean	8.848	30.17	9.240	52.99	9.913	101.3	9.877	97.78	9.223	52.39	8.720	32.97

Annual Runoff in MCM = 1036 Annual Runoff in mm = 2558

Peak Observed Discharge = 305.9 cumecs on 18/09/2017 Corres. Water Level :11.93 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :8.08 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : KALAMPUR (KMA00C6) **Division : SWR Division, Cochin**

Local River : Kaliyar **Sub-Division : SWR SD No 2, Kochi**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	8.180	17.80	8.130	0.000	8.010	0.000	7.980	0.000	7.990	0.000	8.160	0.000
2	8.230	17.17 *	8.120	0.000	8.000	0.000	7.980	0.000	7.990	0.000	8.140	0.000
3	8.130	14.32 *	8.110	0.000	8.010	0.000	7.980	0.000	7.980	0.000	8.120	0.000
4	8.360	21.65	8.100	0.000	8.010	0.000	7.980	0.000	7.970	0.000	8.140	0.000
5	8.080	14.80	8.100	0.000	8.010	0.000	7.980	0.000	7.980	0.000	8.530	0.000
6	8.010	12.86	8.090	0.000	8.020	0.000	7.950	0.000	8.010	0.000	8.800	0.000
7	7.960	11.14	8.080	0.000	8.080	0.000	7.960	0.000	8.020	0.000	8.660	0.000
8	7.955	10.31	8.000	0.000	8.080	0.000	7.950	0.000	8.050	0.000	8.490	0.000
9	8.280	17.37	8.050	0.000	8.170	0.000	7.980	0.000	7.980	0.000	9.150	0.000
10	7.990	10.84 *	8.050	0.000	8.220	0.000	8.000	0.000	7.970	0.000	8.920	0.000
11	8.000	10.60	8.040	0.000	8.220	0.000	8.000	0.000	8.030	0.000	8.860	0.000
12	7.920	10.70	8.070	0.000	8.160	0.000	7.990	0.000	8.060	0.000	8.940	0.000
13	7.880	9.547	8.030	0.000	8.110	0.000	7.970	0.000	8.040	0.000	9.420	0.000
14	8.290	19.96	8.030	0.000	8.110	0.000	7.990	0.000	8.130	0.000	9.090	0.000
15	8.415	20.74	8.020	0.000	8.090	0.000	8.000	0.000	8.070	0.000	8.690	0.000
16	7.990	10.28	8.000	0.000	8.080	0.000	8.020	0.000	8.060	0.000	8.930	0.000
17	7.900	8.906 *	7.990	0.000	8.050	0.000	8.020	0.000	8.030	0.000	9.470	0.000
18	7.840	8.850	8.020	0.000	8.020	0.000	7.990	0.000	8.070	0.000	9.040	0.000
19	7.790	6.625	8.020	0.000	8.040	0.000	8.130	0.000	8.160	0.000	8.780	0.000
20	7.760	4.822	8.070	0.000	8.030	0.000	8.050	0.000	8.120	0.000	8.620	0.000
21	7.760	7.071	8.110	0.000	8.030	0.000	8.050	0.000	8.090	0.000	9.490	0.000
22	7.740	4.464	8.120	0.000	8.030	0.000	8.040	0.000	8.150	0.000	8.830	0.000
23	7.700	5.385 *	8.120	0.000	8.000	0.000	8.000	0.000	8.090	0.000	9.000	0.000
24	7.680	5.090 *	8.090	0.000	7.970	0.000	8.030	0.000	8.080	0.000	9.540	70.29 #
25	7.650	4.665 *	8.110	0.000	7.980	0.000	7.990	0.000	8.070	0.000	9.310	57.68 #
26	8.220	0.000	8.100	0.000	7.980	0.000	7.940	0.000	8.230	0.000	8.760	33.04 #
27	8.210	0.000	8.080	0.000	7.980	0.000	7.920	0.000	8.530	0.000	8.640	28.66 *
28	8.200	0.000	8.070	0.000	7.980	0.000	8.000	0.000	8.210	0.000	8.520	22.94
29	8.125	0.000	8.030	0.000			8.000	0.000	8.140	0.000	10.120	108.4 #
30	8.050	0.000	8.020	0.000			8.000	0.000	8.120	0.000	9.660	77.43 #
31	8.110	0.000	8.010	0.000			8.000	0.000			9.540	70.26 *
Ten-Daily Mean												
I Ten-Daily	8.118	14.83	8.083	0.000	8.061	0.000	7.974	0.000	7.994	0.000	8.511	0.000
II Ten-Daily	7.979	11.10	8.029	0.000	8.091	0.000	8.016	0.000	8.077	0.000	8.984	0.000
III Ten-Daily	7.950	2.425	8.078	0.000	7.994	0.000	7.997	0.000	8.171	0.000	9.219	42.61
Monthly												
Min.	7.650	0.000	7.990	0.000	7.970	0.000	7.920	0.000	7.970	0.000	8.120	0.000
Max.	8.415	21.65	8.130	0.000	8.220	0.000	8.130	0.000	8.530	0.000	10.120	108.4
Mean	8.013	9.225	8.064	0	8.052	0	7.996	0	8.081	0	8.915	15.12

Peak Computed Discharge = 148.0 cumecs on 06/08/2017 Corres. Water Level :10.58 m

Lowest Computed Discharge = 4.665 cumecs on 25/12/2017 Corres. Water Level :7.65 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

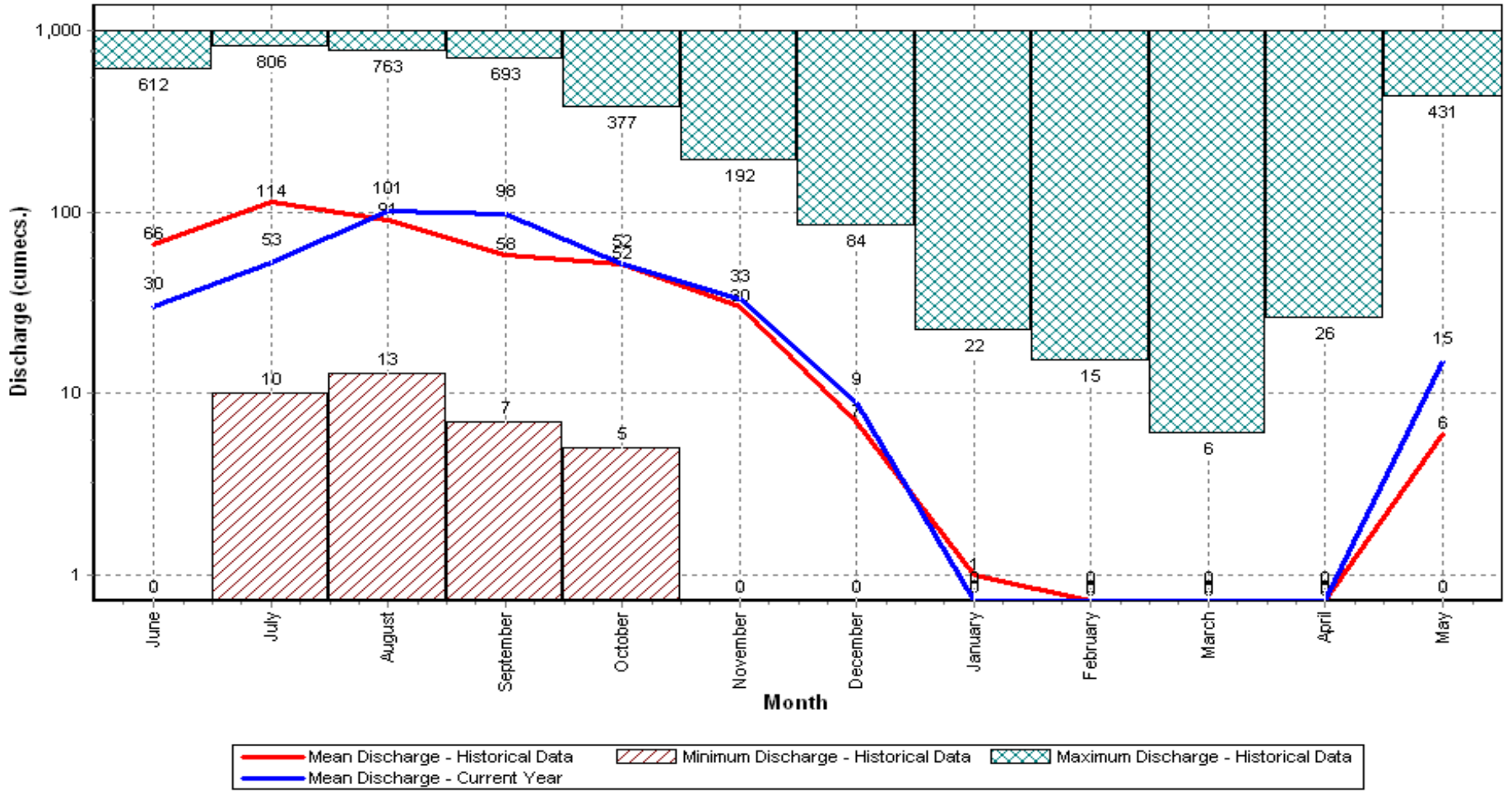
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : KALAMPUR (KMA00C6) | **Data considered : 1987-2018** | **Division : SWR Division, Cochin**

Local River : Kaliyar | **Sub-Division : SWR SD No 2, Kochi**



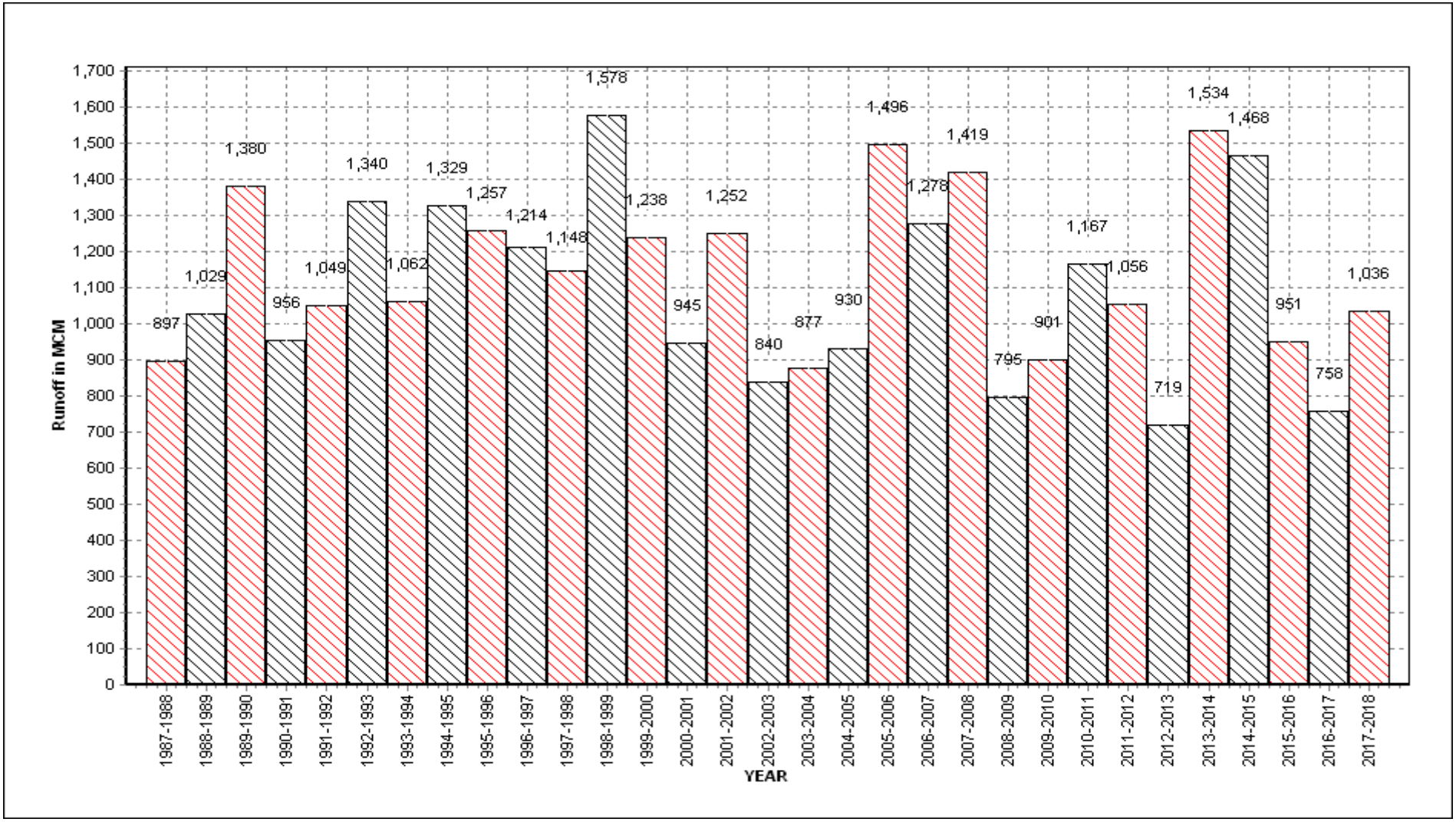
Annual Runoff Values for the period: 1987 - 2018

Station Name : KALAMPUR (KMA00C6)

Local River : Kaliyar

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi



Note: Missing values have not been considered while arriving at Annual Runoff

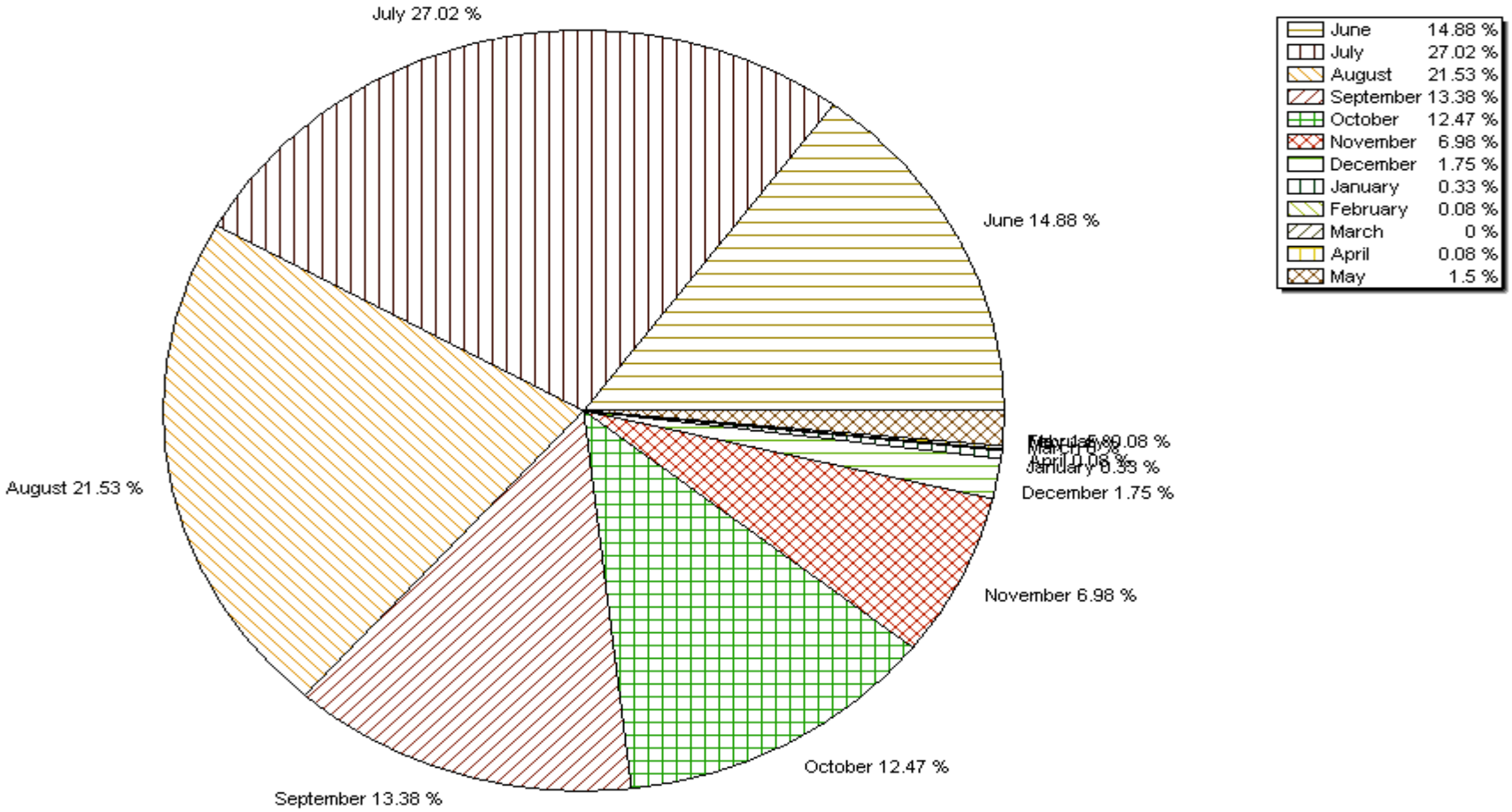
Monthly Average Runoff based on period : 1987-2017

Station Name : KALAMPUR (KMA00C6)

Local River : Kaliyar

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi



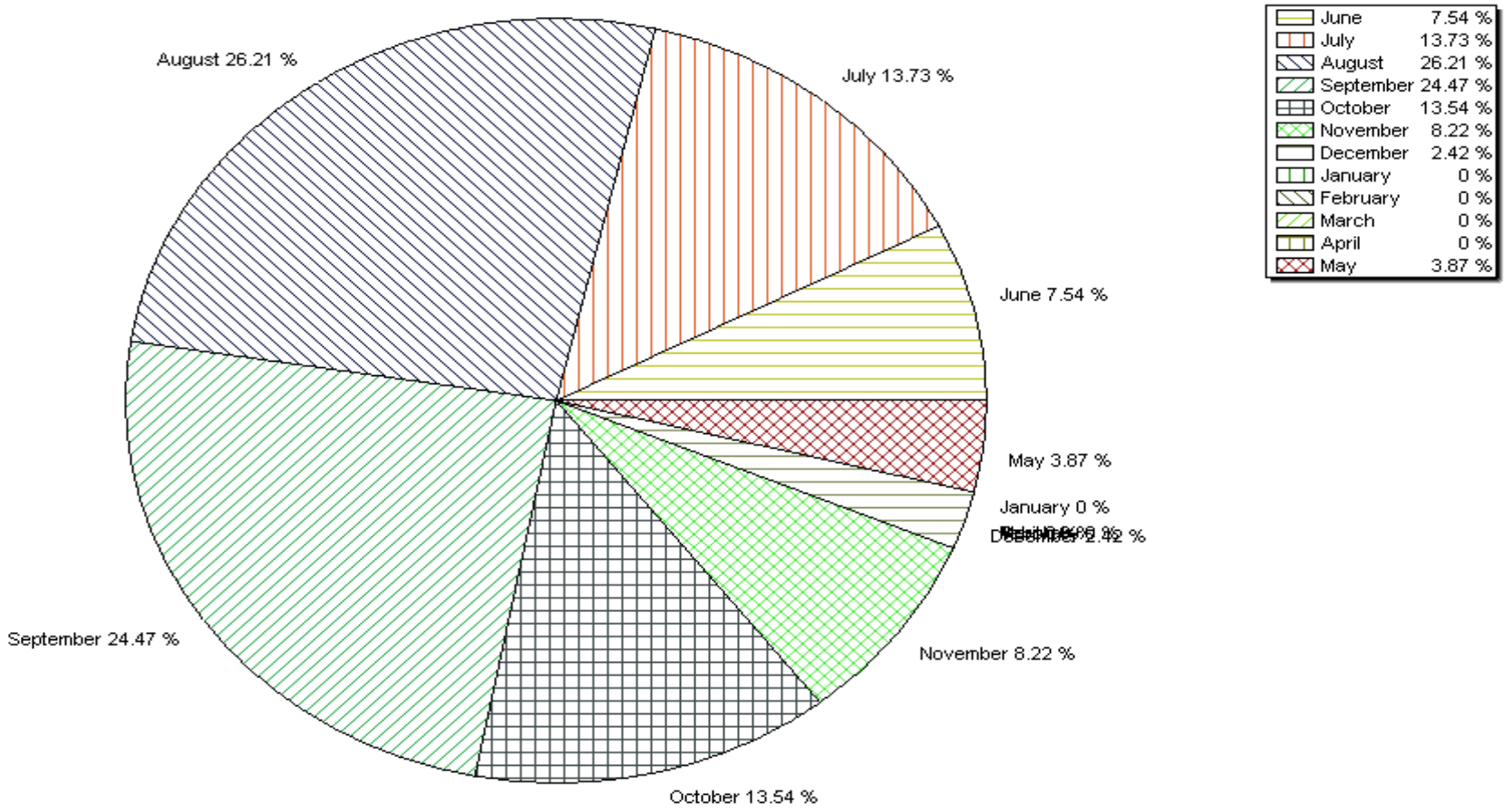
Monthly Runoff for the Year : 2017-2018

Station Name : KALAMPUR (KMA00C6)

Local River : Kaliyar

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi



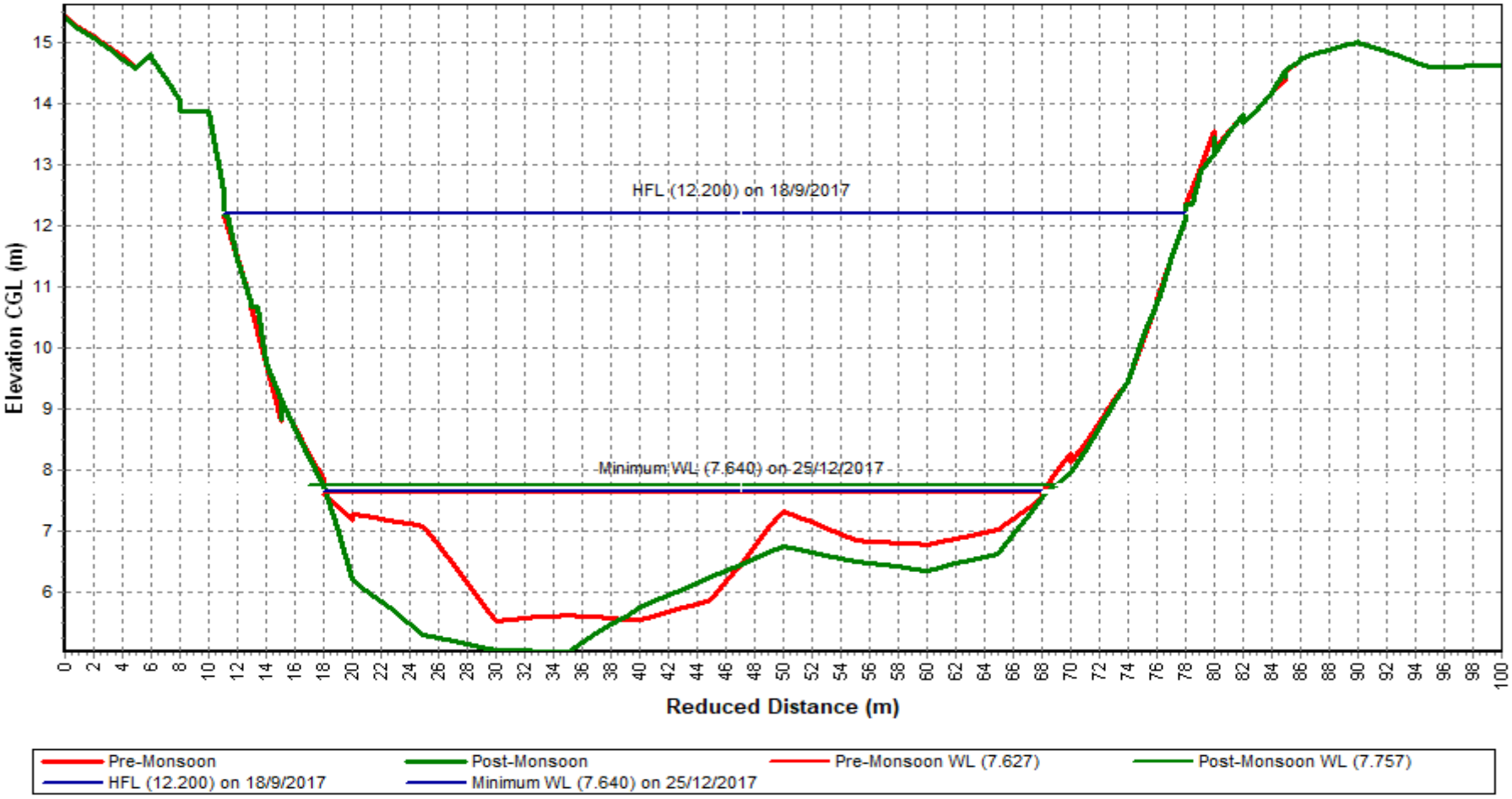
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : KALAMPUR (KMA00C6)

Local River : Kaliyar

Division : SWR Division, Cochin

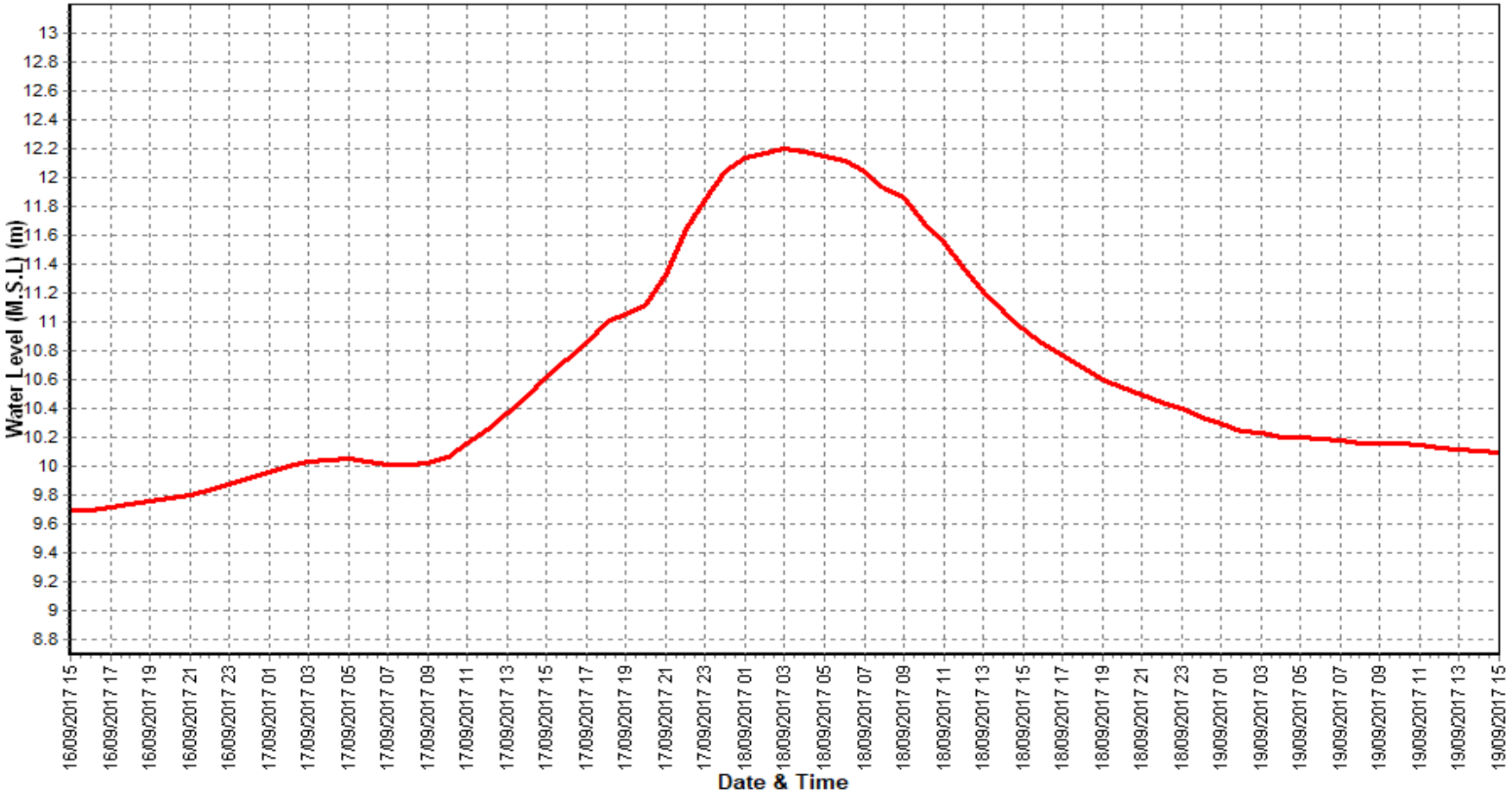
Sub-Division : SWR SD No 2, Kochi



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : KALAMPUR (KMA00C6) **Division : SWR Division, Cochin**

Local River : Kaliyar **Sub-Division : SWR SD No 2, Kochi**

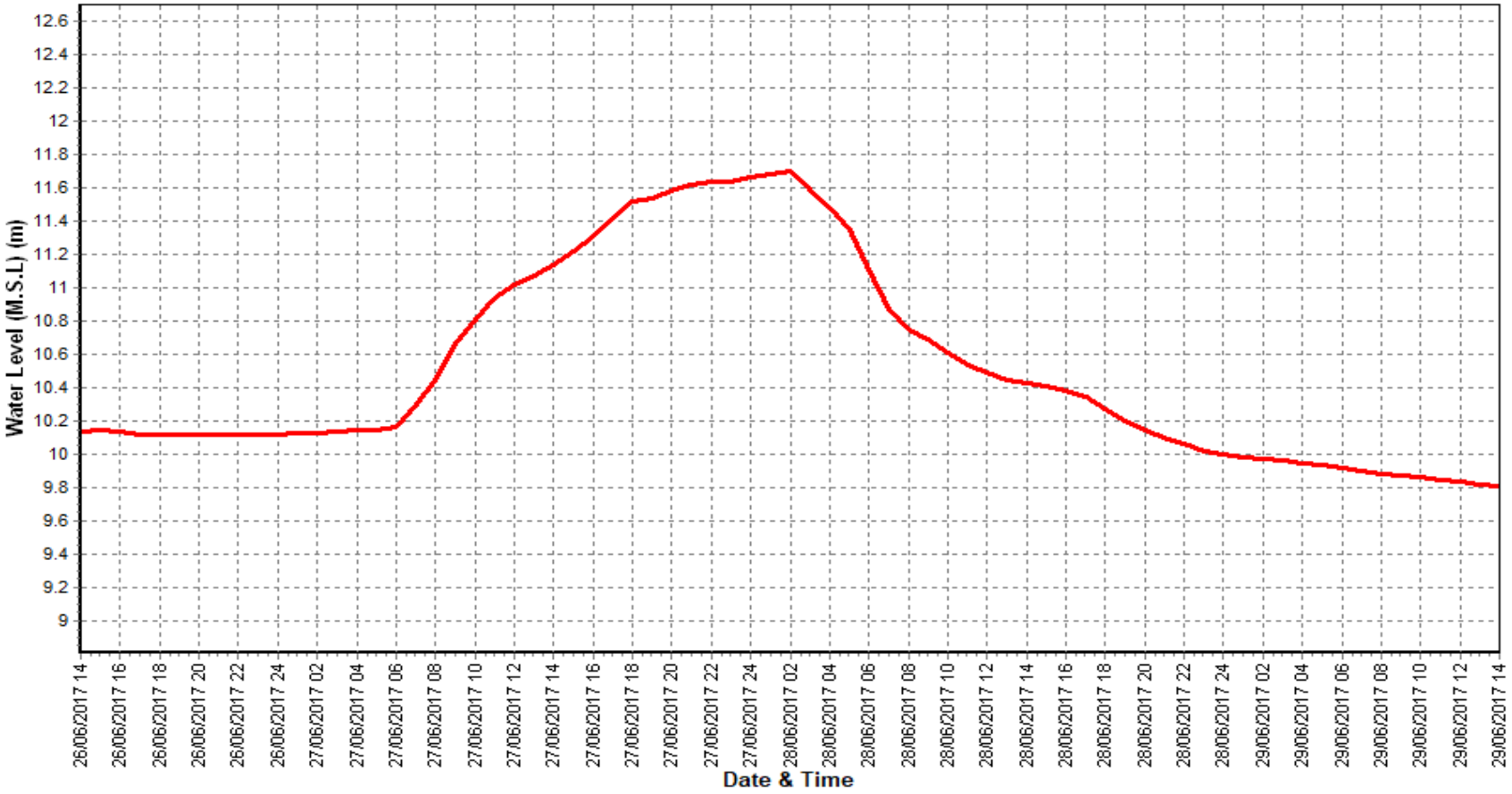


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : KALAMPUR (KMA00C6) **Division : SWR Division, Cochin**

Local River : Kaliyar **Sub-Division : SWR SD No 2, Kochi**

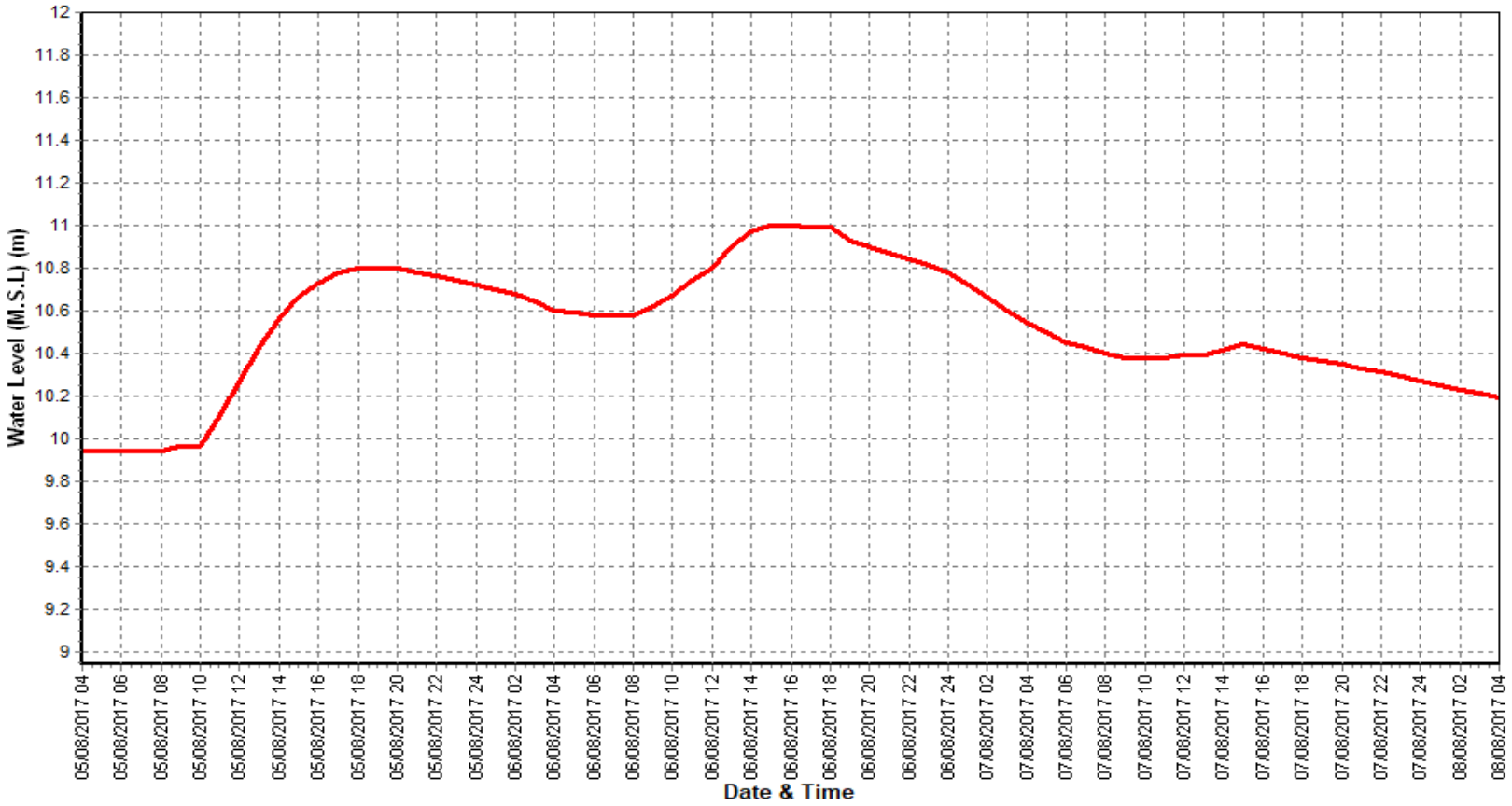


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : KALAMPUR (KMA00C6) **Division : SWR Division, Cochin**

Local River : Kaliyar **Sub-Division : SWR SD No 2, Kochi**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	:	**KIDANGOOR**	**Code**	:	**KT000L3**
State	:	Kerala	District		Kottayam
Basin	:	WFR South of Tapi	Independent River	:	Meenachil
Tributary	:	-	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Meenachil
Division	:	SWR Division, Kochi	Sub-Division	:	SWR SD No 2, Kochi
Drainage Area	:	615 Sq. Km.	Bank	:	Left
Latitude	:	09°40'30"	Longitude	:	76°36'10"
Zero of Gauge (m)	:	-1.184 (m.s.l) -1.200 (m.s.l)	01-06-1985 01-06-1988	-	31-05-1988
		Opening Date	Closing Date		
Gauge	:	01-06-1985			
Discharge	:	02-07-1985			
Sediment	:	01-06-1987			
Water Quality	:	02-06-1986			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1986-1987	565.0	6.996	09-08-1986	0.000	0.596	02-02-1987
1987-1988	300.7	4.987	26-08-1987	0.212	0.526	09-02-1988
1988-1989	350.8	5.205	03-09-1988	0.000	0.525	19-02-1989
1989-1990	384.0	5.915	21-09-1989	0.000	0.340	18-02-1990
1990-1991	352.2	4.700	16-06-1990	0.000	0.370	03-02-1991
1991-1992	622.5	6.678	08-06-1991	0.000	0.345	19-01-1992
1992-1993	630.4	5.942	10-10-1992	0.153	0.190	18-02-1993
1993-1994	483.8	5.730	08-06-1993	0.000	0.220	21-03-1994
1994-1995	819.9	7.900	03-08-1994	0.000	0.145	01-02-1995
1995-1996	458.0	6.120	30-07-1995	0.000	0.190	01-02-1996
1996-1997	466.0	6.270	29-09-1996	0.000	0.290	27-01-1997
1997-1998	530.4	6.500	25-07-1997	0.000	0.180	08-02-1998
1998-1999	568.0	6.600	29-06-1998	0.000	0.115	01-03-1999
1999-2000	557.7	6.410	08-06-1999	0.000	0.120	01-02-2000
2000-2001	505.2	7.120	26-08-2000	0.000	0.160	17-12-2000
2001-2002	690.2	7.775	09-07-2001	0.000	0.190	07-01-2002
2002-2003	563.7	6.500	18-08-2002	0.000	0.130	01-01-2003
2003-2004	422.0	4.530	23-06-2003	0.000	0.130	28-12-2003
2004-2005	464.5	5.710	06-06-2004	0.000	0.180	24-12-2004

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1986-1987	565.0	6.996	09-08-1986	0.000	0.596	02-02-1987
1987-1988	300.7	4.987	26-08-1987	0.212	0.526	09-02-1988
2005-2006	679.8	7.170	07-09-2005	0.000	0.330	25-01-2006
2006-2007	491.6	5.945	01-06-2006	0.000	0.110	11-01-2007
2007-2008	706.2	7.485	23-06-2007	0.000	0.310	04-01-2008
2008-2009	594.4	6.115	08-09-2008	0.000	0.260	10-01-2009
2009-2010	465.7	5.610	18-07-2009	0.000	0.280	24-01-2010
2010-2011	533.7	6.050	13-06-2010	0.000	0.290	07-02-2011
2011-2012	547.8	6.120	02-06-2011	0.000	0.240	31-01-2012
2012-2013	503.6	6.100	18-08-2012	0.000	0.200	09-01-2013
2013-2014	674.5	7.180	06-08-2013	0.000	0.230	16-01-2014
2014-2015	577.2	6.830	04-08-2014	0.000	0.190	07-02-2015
2015-2016	450.2	5.680	28-06-2015	0.000	0.270	02-02-2016
2014-2015	577.2	6.830	04-08-2014	0.000	0.180	09-02-2015
2015-2016	450.2	5.680	28-06-2015	0.000	0.210	04-05-2016
2016-2017	156.0	4.390	17-07-2016	0.000	0.100	26-01-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : KIDANGOOR (KT000L3) **Division : SWR Division, Cochin**

Local River : Meenachil **Sub-Division : SWR SD No 2, Kochi**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	1.700	67.86	3.220	194.0	1.580	54.30	2.290	112.8	1.950	74.22 *	2.900	153.1
2	1.780	69.44	3.040	156.7 *	1.585	62.01	2.590	115.6	1.780	63.39 *	2.910	146.9
3	2.490	120.0	2.890	143.2	1.595	59.74	2.500	113.2 *	1.525	48.53	3.620	185.9
4	2.400	105.7 *	2.895	133.0	1.830	78.37	2.680	127.1 *	1.330	36.17	3.300	179.6
5	2.310	98.34	2.340	113.8	2.775	133.7	2.975	141.7	1.300	35.71	4.000	245.6 *
6	2.590	131.6	2.090	94.76	4.540	301.5 *	2.495	121.0	1.780	60.77	3.295	185.7
7	2.200	103.9	1.925	71.36	4.090	226.5	2.143	91.81	1.750	61.05	3.040	151.7
8	1.890	86.17	1.830	73.06	3.850	241.8	2.200	101.0	1.890	70.33 *	3.010	148.5
9	1.610	56.36	2.110	84.95 *	3.270	174.3	2.380	105.7	1.795	62.89	2.890	129.0
10	1.500	46.50	1.900	75.29	2.675	122.0	2.050	80.86 *	1.660	59.34	2.380	105.7
11	2.400	105.7 *	1.855	73.02	2.340	106.0	2.285	119.2	1.535	51.43	2.340	106.0
12	2.295	106.2	1.750	56.98	2.965	122.3	2.485	116.9	1.888	65.81	2.470	110.9 *
13	2.110	88.67	1.525	51.11	2.660	125.5 *	2.745	132.3	2.530	114.2	1.980	70.95
14	1.900	85.24	1.655	55.34	2.075	89.32	4.060	234.2	2.508	115.8	1.703	65.33
15	2.000	90.45	1.460	43.83	1.860	68.41 *	3.150	176.5	2.400	105.7 *	1.438	44.74
16	1.800	76.02	1.390	40.93 *	1.750	63.75	2.743	130.4	1.945	68.38	1.293	38.29
17	1.600	47.77	1.310	32.46	1.560	53.12	3.800	225.9 *	1.770	63.45	1.140	24.98
18	1.440	43.61 *	1.260	30.49	1.580	53.49	6.175	463.9	1.900	70.97 *	1.050	22.62
19	1.480	44.39	1.360	33.75	1.835	76.19	5.220	359.6	1.860	65.95	1.230	32.75 *
20	1.190	25.22	1.680	53.05	2.360	102.7 *	4.025	190.3	1.760	61.74	1.410	52.35
21	1.110	21.43	1.760	55.63	3.215	164.5	3.013	150.2	1.540	55.17	1.393	39.38
22	1.180	23.08	1.760	55.54	3.345	174.7	2.393	118.5	1.670	56.71 *	1.240	37.89
23	1.420	39.02	1.740	60.93 *	2.855	138.3	1.933	58.60	1.400	53.58	1.100	23.98
24	1.810	65.25 #	1.590	44.37	2.210	99.53	1.590	52.01 *	1.255	27.32	0.995	17.67
25	2.780	135.1 *	1.330	41.56	2.025	85.95	1.460	40.06	1.100	23.67	0.930	19.25 #
26	3.600	206.9 *	1.200	30.93	1.770	63.97	1.660	47.79	1.000	17.88	0.890	17.65 *
27	4.785	321.4	1.170	29.88	2.270	96.18 *	1.475	39.62	1.860	64.26	0.870	17.83
28	6.165	468.8	1.650	60.47	3.085	149.4	1.905	61.69	2.515	121.7	0.940	18.23
29	5.400	404.1	1.530	57.40	3.200	163.8	2.600	120.8 *	2.540	116.2 *	0.820	17.71
30	4.095	253.4	1.600	52.59 *	3.330	169.5	2.210	91.91 *	1.840	61.81	0.770	14.94
31			1.550	58.16	2.890	129.0			2.155	98.64		
Ten-Daily Mean												
I Ten-Daily	2.047	88.59	2.424	114.0	2.779	145.4	2.430	111.1	1.676	57.24	3.134	163.2
II Ten-Daily	1.822	71.33	1.525	47.10	2.099	86.08	3.669	214.9	2.010	78.34	1.605	56.89
III Ten-Daily	3.234	193.8	1.535	49.77	2.745	130.4	2.024	78.12	1.716	63.36	0.995	22.45
Monthly												
Min.	1.110	21.43	1.170	29.88	1.560	53.12	1.460	39.62	1.000	17.88	0.770	14.94
Max.	6.165	468.8	3.220	194.0	4.540	301.5	6.175	463.9	2.540	121.7	4.000	245.6
Mean	2.368	117.9	1.818	69.63	2.547	121	2.708	134.7	1.798	66.22	1.912	80.84

Annual Runoff in MCM = 1788 Annual Runoff in mm = 2907

Peak Observed Discharge = 468.8 cumecs on 28/06/2017 Corres. Water Level :6.165 m

Lowest Observed Discharge = 0.000 cumecs on 13/01/2018 Corres. Water Level :0.28 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : KIDANGOOR (KT000L3) **Division : SWR Division, Cochin**

Local River : Meenachil **Sub-Division : SWR SD No 2, Kochi**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	0.760	13.91	0.480	4.892 #	0.180	0.000	0.020	0.000	0.160	0.000	0.590	7.922 #
2	0.800	16.89 *	0.450	3.483	0.160	0.000	0.050	0.000	0.170	0.000	0.570	7.335 #
3	0.770	15.40 *	0.450	4.155 #	0.160	0.000	0.020	0.000	0.150	0.000	0.500	5.586
4	0.745	13.71	0.460	4.396 #	0.160	0.000	0.040	0.000	0.130	0.000	0.490	5.574
5	0.700	12.28	0.450	4.155 #	0.150	0.000	0.010	0.000	0.120	0.000	0.500	5.599
6	0.640	11.89	0.470	4.642 #	0.140	0.000	0.010	0.000	0.130	0.000	0.560	7.047 *
7	0.540	6.086 #	0.420	3.461 *	0.140	0.000	-0.010	0.000	0.120	0.000	1.400	35.55
8	0.550	6.412 #	0.300	1.182	0.130	0.000	0.020	0.000	0.110	0.000	1.395	36.94
9	0.605	8.521 #	0.300	1.126	0.140	0.000	0.040	0.000	0.090	0.000	1.690	61.85
10	0.610	8.521 *	0.300	1.175	0.250	0.000	0.040	0.000	0.085	0.000	1.470	44.81
11	0.610	8.521 #	0.320	1.226	0.240	0.000	0.030	0.000	0.080	0.000	1.950	72.65
12	0.650	11.80	0.295	0.855	0.245	0.000	0.030	0.000	0.700	12.50	2.050	74.17
13	1.120	23.65	0.280	0.000	0.220	0.000	0.020	0.000	0.705	12.78	2.600	119.8 *
14	0.840	12.42	0.270	0.000	0.190	0.000	0.030	0.000	0.800	14.96 *	2.085	81.24
15	0.900	18.44	0.250	0.000	0.180	0.000	0.035	0.000	0.740	12.79 *	2.080	80.22
16	0.750	14.30	0.250	0.000	0.170	0.000	0.070	0.000	0.690	12.72	2.150	83.09
17	0.680	11.31 *	0.200	0.000	0.170	0.000	0.075	0.000	0.600	9.349	3.020	150.9
18	0.610	8.304	0.200	0.000	0.140	0.000	0.130	0.000	0.600	9.520	3.230	190.3
19	0.550	8.502	0.190	0.000	0.080	0.000	0.270	0.000	0.520	5.853	2.420	104.0
20	0.550	8.230	0.185	0.000	0.100	0.000	0.250	0.000	0.510	5.773	1.950	74.37 *
21	0.490	4.471	0.170	0.000	0.090	0.000	0.200	0.000	0.500	5.704	1.740	63.19
22	0.510	4.495	0.150	0.000	0.100	0.000	0.180	0.000	0.490	5.146 *	1.430	52.12
23	0.505	4.497	0.150	0.000	0.080	0.000	0.160	0.000	0.500	5.648	1.450	49.96
24	0.510	5.156 *	0.160	0.000	0.070	0.000	0.200	0.000	0.530	5.959	1.560	48.40
25	0.510	5.156 *	0.160	0.000	0.060	0.000	0.170	0.000	0.590	9.984	2.120	81.72
26	0.480	4.002	0.180	0.000	0.040	0.000	0.150	0.000	0.900	18.81 #	1.790	67.15
27	0.480	3.857	0.200	0.000	0.030	0.000	0.135	0.000	0.800	14.96 #	1.800	64.97 *
28	0.490	4.170	0.200	0.000	0.030	0.000	0.140	0.000	0.790	14.59 #	1.910	65.59
29	0.510	5.014	0.160	0.000			0.130	0.000	0.700	11.42 *	3.600	203.0 #
30	0.470	3.985	0.170	0.000			0.140	0.000	0.600	8.222 *	3.080	147.8
31	0.450	3.503 *	0.180	0.000			0.130	0.000			2.585	118.7 #
Ten-Daily Mean												
I Ten-Daily	0.672	11.36	0.408	3.267	0.161	0.000	0.024	0.000	0.127	0.000	0.916	21.82
II Ten-Daily	0.726	12.55	0.244	0.208	0.174	0.000	0.094	0.000	0.594	9.624	2.353	103.1
III Ten-Daily	0.491	4.391	0.171	0.000	0.062	0.000	0.158	0.000	0.640	10.04	2.097	87.50
Monthly												
Min.	0.450	3.503	0.150	0.000	0.030	0.000	-0.010	0.000	0.080	0.000	0.490	5.574
Max.	1.120	23.65	0.480	4.892	0.250	0.000	0.270	0.000	0.900	18.81	3.600	203.0
Mean	0.625	9.271	0.271	1.121	0.137	0	0.094	0	0.454	6.556	1.799	71.34

Peak Computed Discharge = 301.5 cumecs on 06/08/2017 **Corres. Water Level :4.54 m**

Lowest Computed Discharge = 3.461 cumecs on 07/01/2018 **Corres. Water Level :0.42 m**

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

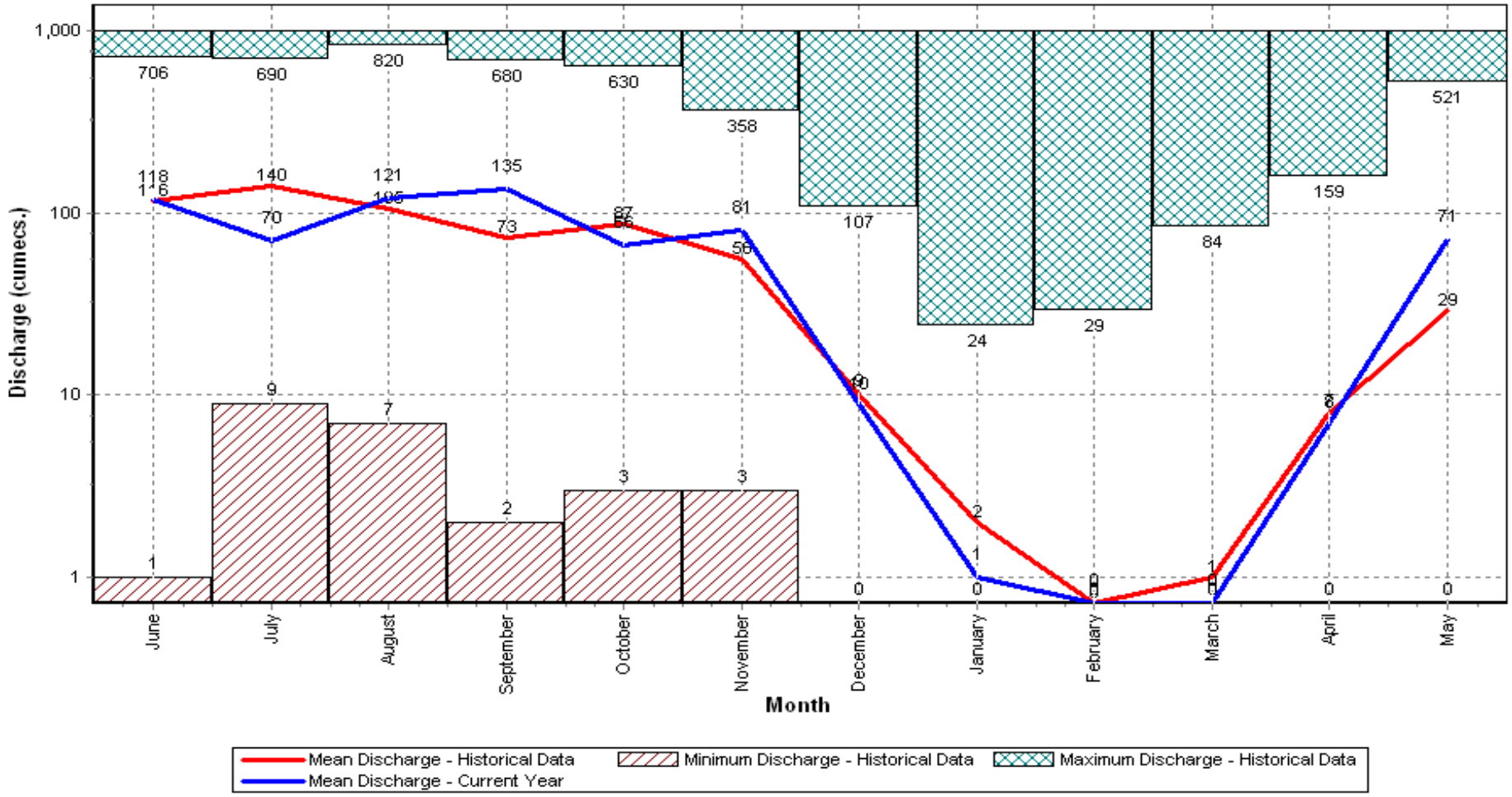
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : KIDANGOOR (KT000L3) | **Data considered : 1986-2018** | **Division : SWR Division, Cochin**

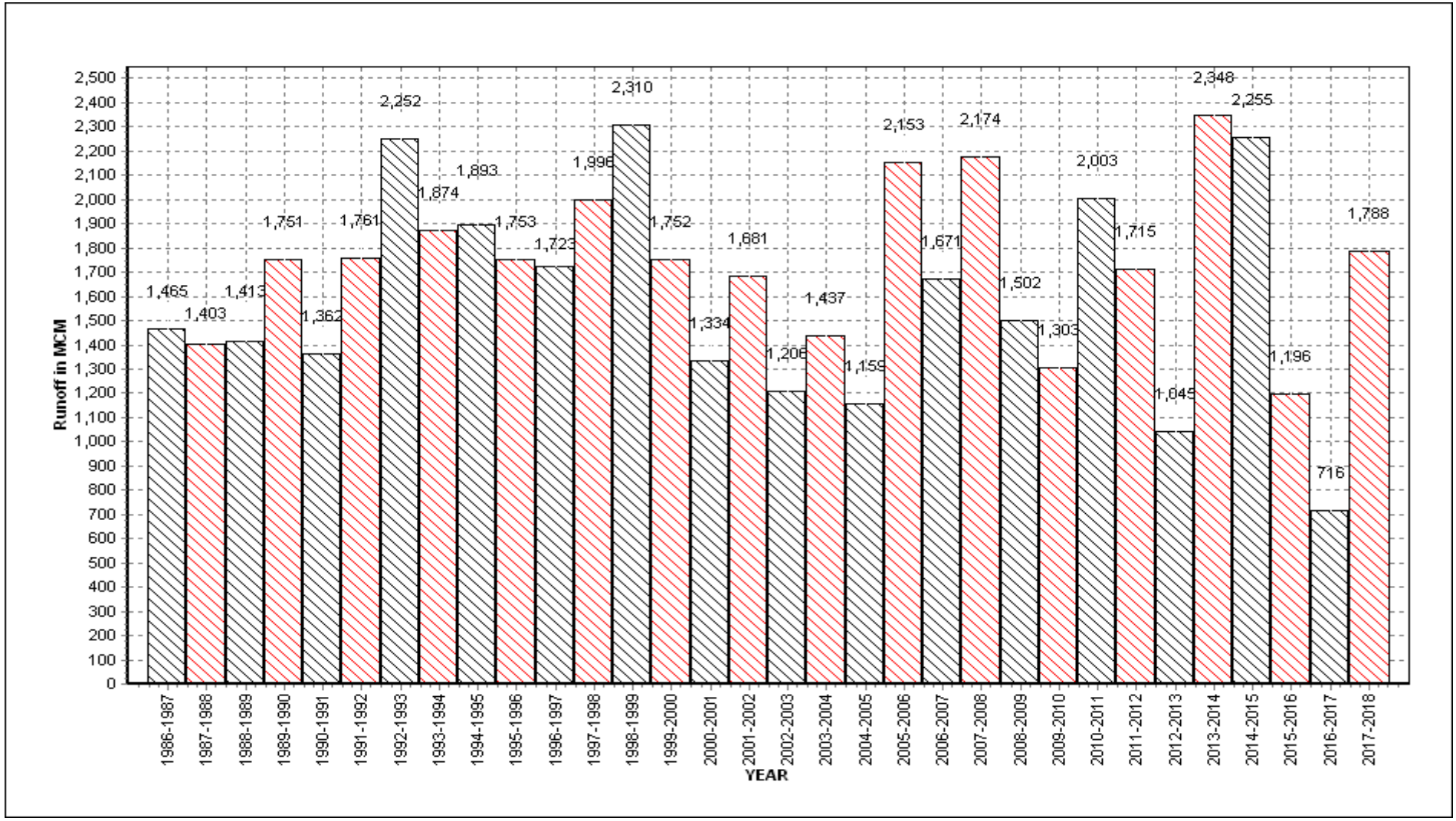
Local River : Meenachil | **Sub-Division : SWR SD No 2, Kochi**



Annual Runoff Values for the period: 1986 - 2018

Station Name : KIDANGOOR (KT000L3) **Division : SWR Division, Cochin**

Local River : Meenachil **Sub-Division : SWR SD No 2, Kochi**



Note: Missing values have not been considered while arriving at Annual Runoff

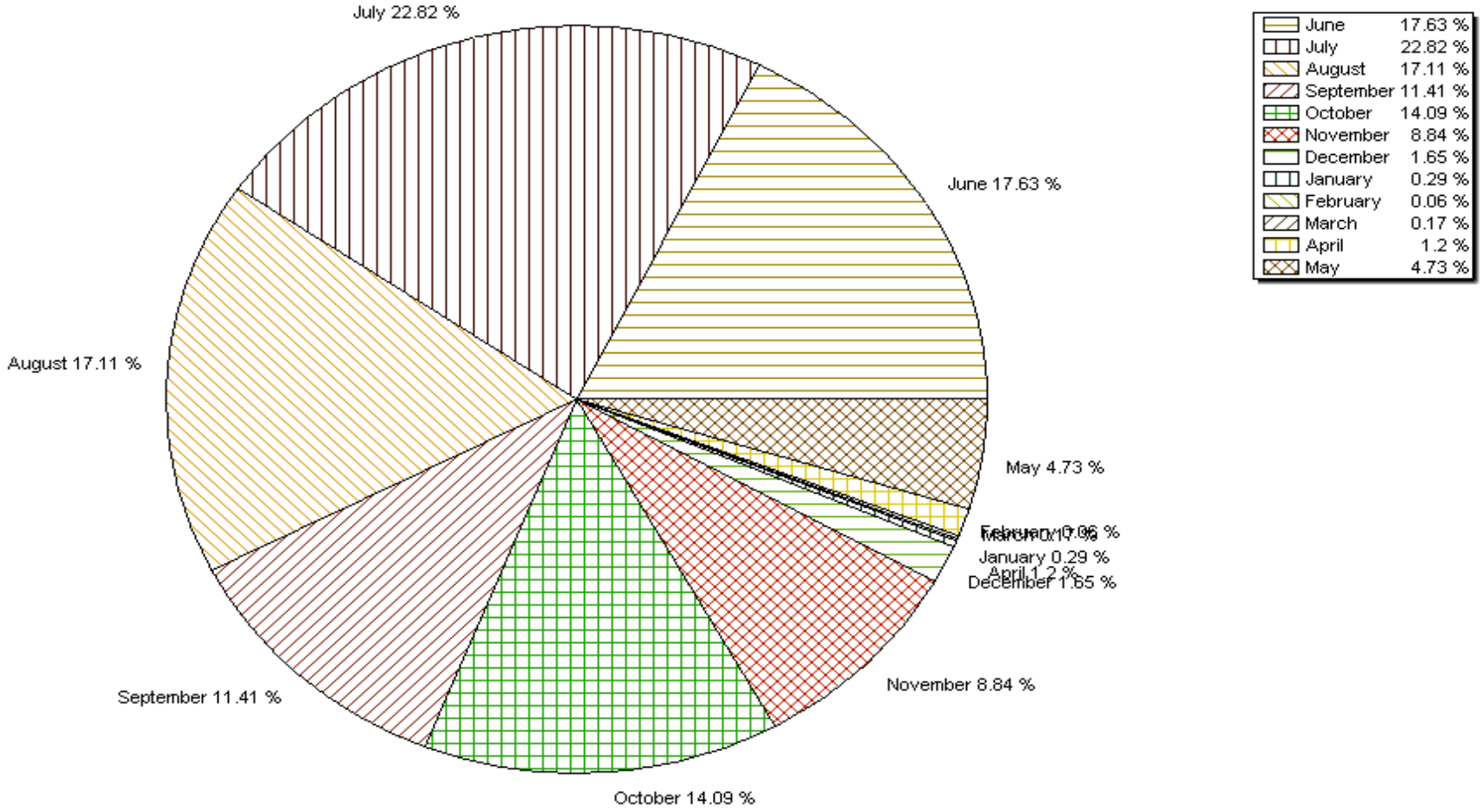
Monthly Average Runoff based on period : 1986-2017

Station Name : KIDANGOOR (KT000L3)

Local River : Meenachil

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi



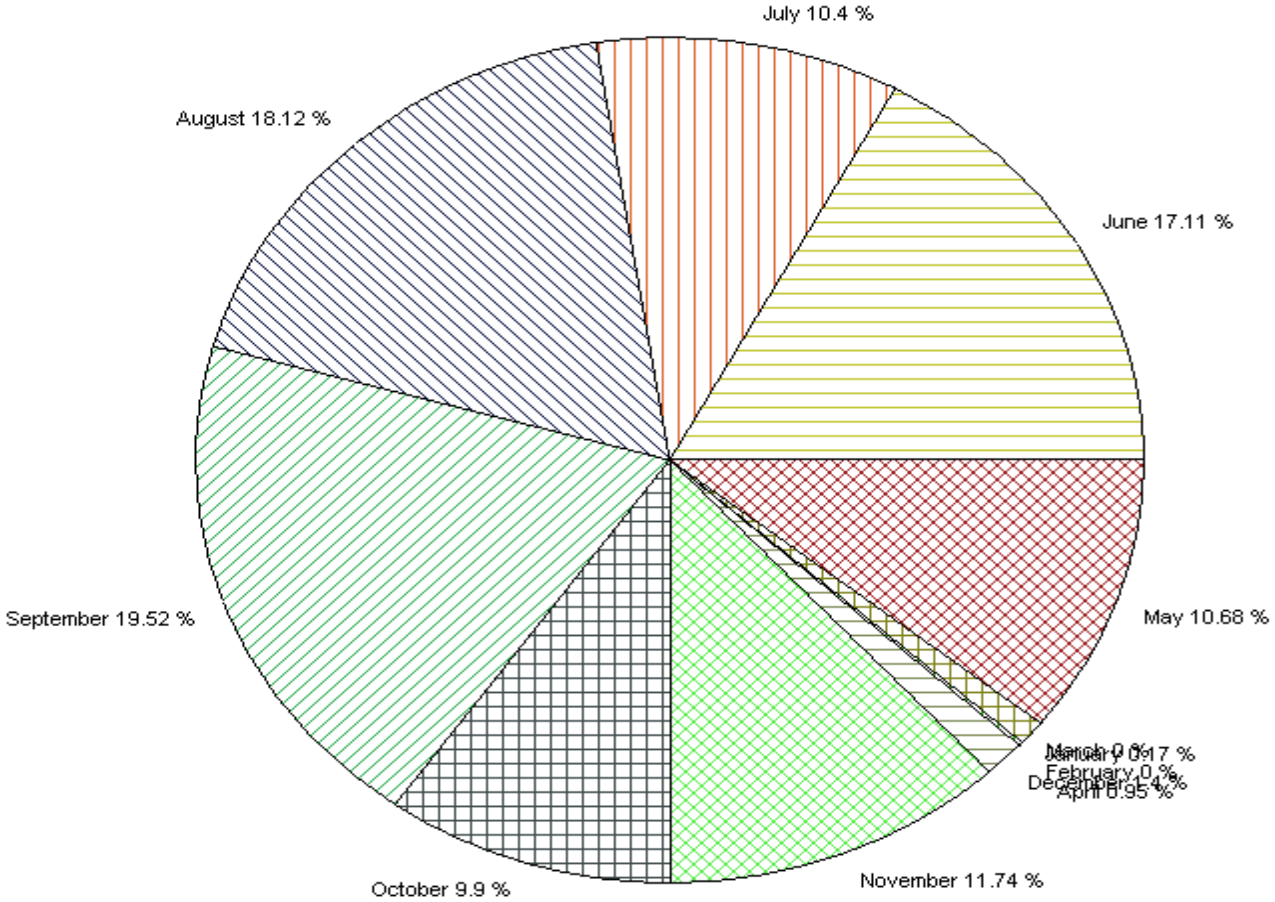
Monthly Runoff for the Year : 2017-2018

Station Name : KIDANGOOR (KT000L3)

Local River : Meenachil

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi



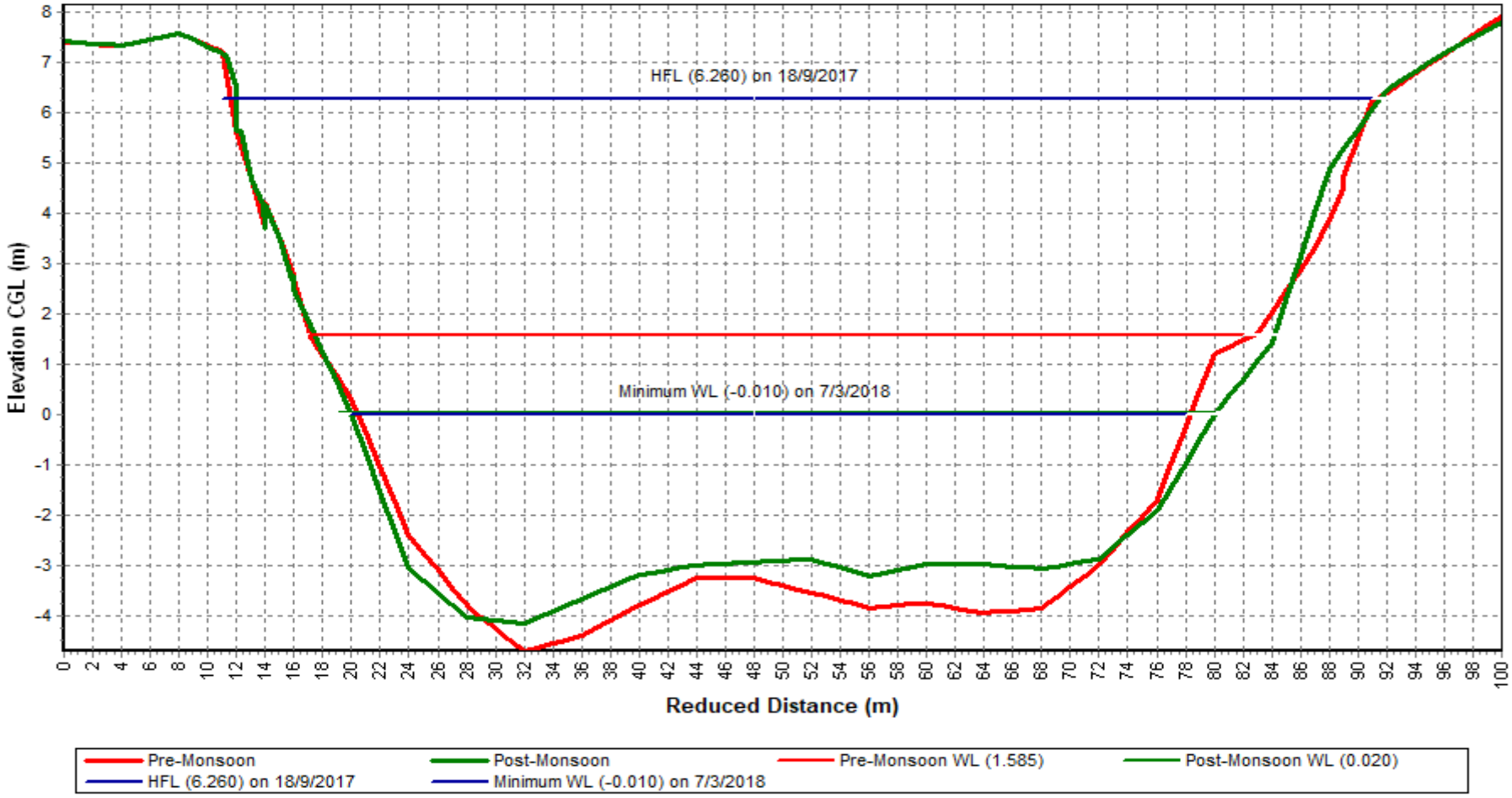
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : KIDANGOOR (KT000L3)

Local River : Meenachil

Division : SWR Division, Cochin

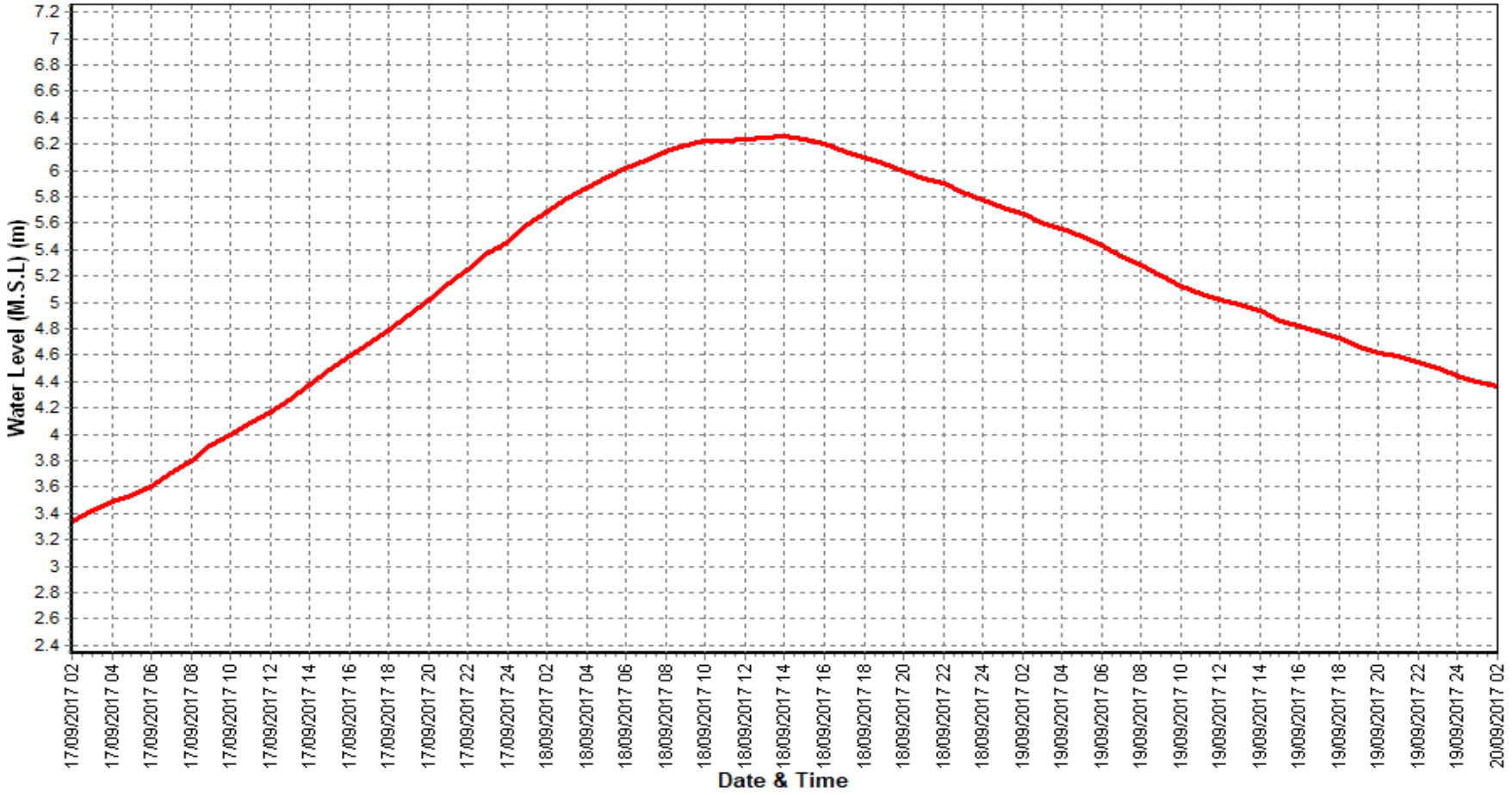
Sub-Division : SWR SD No 2, Kochi



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : KIDANGOOR (KT000L3) **Division : SWR Division, Cochin**

Local River : Meenachil **Sub-Division : SWR SD No 2, Kochi**

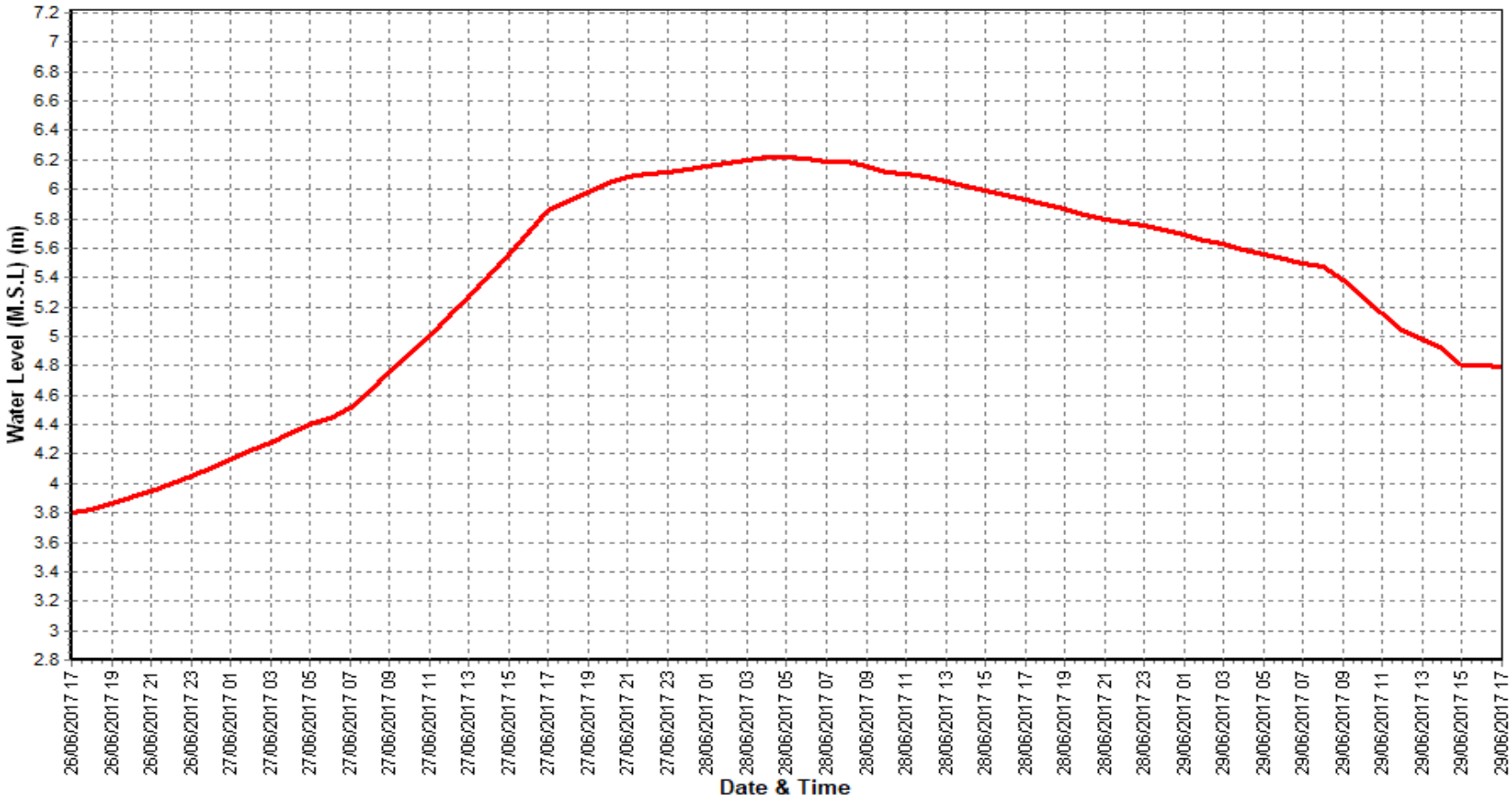


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : KIDANGOOR (KT000L3) **Division : SWR Division, Cochin**

Local River : Meenachil **Sub-Division : SWR SD No 2, Kochi**

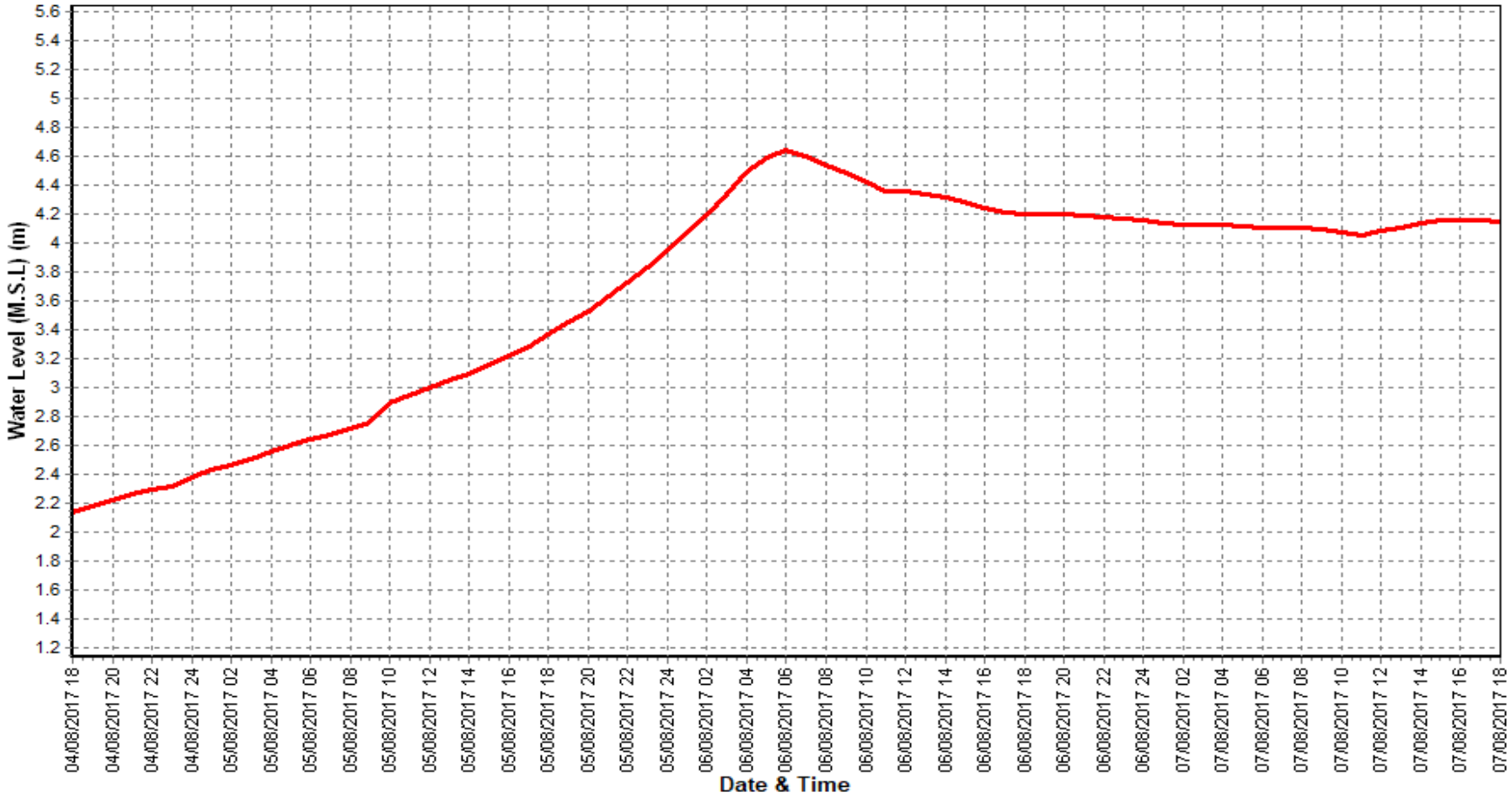


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : KIDANGOOR (KT000L3) **Division : SWR Division, Cochin**

Local River : Meenachil **Sub-Division : SWR SD No 2, Kochi**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	**:**	**KALLOOPPARA**	**Code**	**:**	**KYB00F2**
State	:	Kerala	District		Pathanamthitta
Basin	:	WFR South of Tapi	Independent River	:	Pamba
Tributary	:	Manimala	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Manimala
Division	:	SWR Division, Kochi	Sub-Division	:	SWR SD No 1, Trivandrum
Drainage Area	:	731 Sq. Km.	Bank	:	Right
Latitude	:	09°24'13"	Longitude	:	76°39'01"
Zero of Gauge (m)	:	0.000 (m.s.l)	01-06-1985		
		Opening Date	Closing Date		
Gauge	:	01-06-1985			
Discharge	:	19-06-1985			
Sediment	:	19-05-1986			
Water Quality	:	02-06-1986			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1986-1987	692.8	8.735	09-08-1986	0.000	2.095	01-06-1986
1987-1988	373.3	6.225	26-08-1987	0.000	1.730	07-02-1988
1988-1989	328.5	5.485	01-07-1988	0.000	1.510	08-02-1989
1989-1990	523.4	6.930	20-09-1989	0.000	1.370	08-02-1990
1990-1991	390.0	5.920	04-11-1990	0.000	1.300	03-02-1991
1991-1992	639.7	7.583	09-06-1991	0.302	1.298	31-01-1992
1992-1993	701.6	7.706	11-10-1992	0.043	1.163	31-01-1993
1993-1994	650.3	7.742	08-06-1993	0.919	1.170	22-03-1994
1994-1995	848.3	9.050	03-08-1994	0.000	1.020	14-02-1995
1995-1996	627.1	7.475	31-07-1995	0.000	0.945	19-02-1996
1996-1997	524.9	6.700	18-10-1996	0.000	0.940	23-02-1997
1997-1998	570.0	6.955	25-07-1997	0.000	0.990	20-02-1998
1998-1999	558.5	7.585	29-06-1998	0.000	0.710	01-04-1999
1999-2000	534.4	7.100	08-06-1999	0.400	0.545	03-02-2000
2000-2001	888.5	8.420	26-08-2000	0.000	0.490	23-03-2001
2001-2002	785.6	8.425	09-07-2001	0.000	0.550	26-02-2002
2002-2003	469.9	5.925	17-08-2002	0.000	0.520	29-01-2003
2003-2004	307.5	4.420	25-06-2003	0.000	0.765	01-01-2004
2004-2005	362.9	5.515	05-08-2004	0.000	0.700	02-01-2005

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2005-2006	699.1	7.295	05-09-2005	0.000	0.700	12-02-2006
2006-2007	511.5	6.115	01-06-2006	0.000	0.830	30-01-2007
2007-2008	747.9	7.615	23-06-2007	0.000	0.810	13-01-2008
2008-2009	559.8	6.335	08-09-2008	0.000	0.970	13-10-2008
2009-2010	464.9	5.990	18-07-2009	0.000	0.930	08-01-2010
2010-2011	686.4	7.215	14-06-2010	0.000	0.790	19-02-2011
2011-2012	585.2	6.560	08-08-2011	0.000	0.815	05-02-2012
2012-2013	436.6	6.025	18-08-2012	0.000	0.800	07-01-2013
2013-2014	699.9	7.240	06-08-2013	0.000	0.840	07-01-2014
2014-2015	732.7	7.440	24-08-2014	0.000	0.820	29-01-2015
2015-2016	483.9	5.840	28-06-2015	0.000	1.330	01-02-2016
2016-2017	260.7	4.390	09-06-2016	0.000	1.930	01-10-2016

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : KALLOOPPARA (KYB00F2) **Division : SWR Division, Cochin**

Local River : Manimala **Sub-Division : SWR SD No 1, Trivandrum**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	2.495	40.98	3.190	118.0	2.810	79.56	3.080	92.97 *	2.703	68.78	3.680	162.4
2	2.800	77.48	3.120	96.99 *	3.125	114.7	3.275	125.1	2.590	51.19 *	3.880	193.5
3	4.020	204.0	2.913	87.46	2.865	74.68	3.210	106.4 *	2.433	40.36	4.145	224.8
4	3.530	174.2 *	2.930	89.31	2.848	73.64	3.610	154.1 *	2.305	34.47	3.860	189.0 *
5	3.205	120.1	2.725	61.95	3.510	146.8	3.208	118.1	2.210	23.90	3.950	202.5 *
6	3.420	139.7	2.565	51.11	4.940	386.5 *	3.440	144.0	2.360	37.80	3.435	142.3
7	3.210	120.7	2.533	47.53	4.365	232.5	3.098	111.4	2.395	39.75	3.343	137.2
8	2.963	99.84	2.480	43.72	3.915	186.0	3.215	118.2	2.320	33.89 *	3.408	140.6
9	2.685	59.73	2.690	58.60 *	3.695	169.1	3.615	160.4	2.245	32.53	3.423	143.6
10	2.590	53.71	2.748	64.70	3.600	158.2	3.510	141.3 *	2.215	24.00	3.043	108.0
11	2.680	56.78 *	2.655	62.12	3.265	121.4	3.160	113.4	2.368	38.67	3.138	114.9
12	2.750	64.98	2.620	54.82	3.503	146.9	3.160	115.8	2.700	71.17	3.160	101.1 *
13	2.680	61.66	2.510	48.08	3.160	101.1 *	3.275	117.1	3.480	145.9	3.048	109.4
14	2.575	52.90	2.603	49.12	2.805	69.78	5.615	452.9	3.063	108.1	2.713	69.35
15	2.680	61.50	2.508	41.09	2.580	50.47 *	4.630	285.2	2.930	78.71 *	2.500	44.93
16	2.550	49.67	2.430	40.46 *	2.530	47.29	3.868	191.2	2.683	67.67	2.360	39.10
17	2.410	36.82	2.365	33.71	2.478	43.69	4.590	313.9 *	2.495	44.86	2.258	33.49
18	2.330	28.41 *	2.278	29.35	2.463	42.24	6.425	572.2	2.470	43.01 *	2.190	23.96
19	2.255	25.32	2.240	25.70	2.428	39.96	5.245	369.9	2.545	45.00	2.150	24.99 *
20	2.175	22.10	2.513	41.57	2.750	63.32 *	3.988	186.7	2.405	39.23	2.285	27.58
21	2.095	12.05	2.503	40.61	3.708	164.5	3.230	112.8	2.315	34.96	2.358	34.39
22	2.130	13.41	2.520	42.75	4.080	215.3	2.893	89.36	2.580	50.47 *	2.335	34.32
23	2.140	14.30	2.450	41.73 *	3.860	192.1	2.623	56.07	2.505	45.01	2.238	32.95
24	2.358	34.14	2.368	33.82	3.363	142.0	2.460	42.37 *	2.383	38.89	2.170	23.39
25	3.450	41.73 *	2.285	29.34	3.003	104.2	2.290	34.22	2.288	34.75	2.120	19.33
26	3.810	181.7 *	2.210	23.71	2.733	64.04	2.360	37.83	2.210	24.28	2.080	21.76 *
27	5.345	395.7	2.158	21.97	2.640	54.83 *	2.213	24.19	2.410	35.73	2.070	17.95
28	6.610	600.7	2.245	26.76	3.248	120.7	2.258	33.36	3.343	137.5	2.130	19.94
29	5.220	363.2	2.430	35.00	3.640	161.2	2.860	72.51 *	3.190	104.3 *	2.060	17.29
30	3.800	190.2	2.370	36.80 *	3.928	198.1	2.890	75.13 *	2.873	74.53	2.020	13.63
31			2.320	35.95	3.543	153.1			3.225	109.2		
Ten-Daily Mean												
I Ten-Daily	3.092	109.0	2.789	71.94	3.567	162.2	3.326	127.2	2.378	38.67	3.617	164.4
II Ten-Daily	2.508	46.01	2.472	42.60	2.796	72.62	4.396	271.8	2.714	68.23	2.580	58.88
III Ten-Daily	3.696	184.7	2.351	33.49	3.431	142.7	2.608	57.78	2.666	62.69	2.158	23.50
Monthly												
Min.	2.095	12.05	2.158	21.97	2.428	39.96	2.213	24.19	2.210	23.90	2.020	13.63
Max.	6.610	600.7	3.190	118.0	4.940	386.5	6.425	572.2	3.480	145.9	4.145	224.8
Mean	3.099	113.3	2.531	48.83	3.270	126.4	3.443	152.3	2.588	56.73	2.785	82.26

Annual Runoff in MCM = 1730 Annual Runoff in mm = 2367

Peak Observed Discharge = 600.7 cumecs on 28/06/2017 Corres. Water Level :6.61 m

Lowest Observed Discharge = 0.000 cumecs on 16/12/2017 Corres. Water Level :1.9 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : KALLOOPPARA (KYB00F2) **Division : SWR Division, Cochin**

Local River : Manimala **Sub-Division : SWR SD No 1, Trivandrum**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	2.050	15.53	1.745	0.000	1.610	0.000	1.580	0.000	1.195	0.000	1.850	0.000
2	2.030	12.32 *	1.745	0.000	1.605	0.000	1.570	0.000	1.200	0.000	1.840	0.000
3	2.040	13.55 *	1.730	0.000	1.600	0.000	1.560	0.000	1.200	0.000	1.860	0.000
4	2.000	7.396	1.720	0.000	1.605	0.000	1.550	0.000	1.195	0.000	1.880	0.000
5	1.960	5.175	1.710	0.000	1.610	0.000	1.530	0.000	1.210	0.000	1.950	0.000
6	1.940	4.045 #	1.700	0.000	1.605	0.000	1.520	0.000	1.250	0.000	1.980	0.000
7	1.930	3.426 #	1.700	0.000	1.600	0.000	1.500	0.000	1.260	0.000	2.030	0.000
8	1.910	2.350 #	1.695	0.000	1.600	0.000	1.485	0.000	1.255	0.000	2.120	17.70
9	2.023	13.50	1.690	0.000	1.600	0.000	1.460	0.000	1.280	0.000	2.600	54.05
10	1.980	7.109 *	1.675	0.000	1.610	0.000	1.445	0.000	1.750	0.000	2.710	68.70
11	1.980	6.595	1.670	0.000	1.600	0.000	1.430	0.000	1.890	0.000	3.320	107.3
12	1.960	6.398	1.670	0.000	1.730	0.000	1.415	0.000	2.100	13.24	2.915	88.00
13	1.945	4.377 #	1.670	0.000	1.710	0.000	1.390	0.000	2.020	15.48 #	3.200	104.0 *
14	2.070	16.97	1.665	0.000	1.680	0.000	1.370	0.000	2.050	16.63 *	2.960	90.69
15	2.050	14.13	1.660	0.000	1.670	0.000	1.360	0.000	2.080	17.83 *	3.260	102.2
16	1.900	0.000	1.660	0.000	1.660	0.000	1.340	0.000	1.980	14.02 *	3.090	93.75
17	1.960	0.000	1.655	0.000	1.645	0.000	1.325	0.000	1.920	0.000	3.560	148.7
18	1.910	0.000	1.650	0.000	1.640	0.000	1.315	0.000	1.910	0.000	3.805	183.9
19	1.890	0.000	1.645	0.000	1.640	0.000	1.330	0.000	1.900	0.000	3.150	97.61
20	1.870	0.000	1.640	0.000	1.630	0.000	1.325	0.000	1.880	0.000	2.760	59.81 *
21	1.850	0.000	1.640	0.000	1.625	0.000	1.305	0.000	1.870	0.000	2.550	44.89
22	1.840	0.000	1.650	0.000	1.620	0.000	1.290	0.000	1.880	0.000	2.415	31.61
23	1.820	0.000	1.640	0.000	1.620	0.000	1.275	0.000	1.880	0.000	2.270	26.85
24	1.810	0.000	1.640	0.000	1.610	0.000	1.265	0.000	1.870	0.000	2.170	23.76
25	1.800	0.000	1.650	0.000	1.600	0.000	1.260	0.000	1.880	0.000	2.515	45.07
26	1.795	0.000	1.650	0.000	1.600	0.000	1.240	0.000	2.000	0.000	2.615	54.51
27	1.790	0.000	1.635	0.000	1.595	0.000	1.235	0.000	1.970	0.000	2.880	70.42 *
28	1.780	0.000	1.630	0.000	1.585	0.000	1.225	0.000	1.950	0.000	2.945	91.56
29	1.775	0.000	1.630	0.000			1.220	0.000	1.920	0.000	4.543	257.3
30	1.765	0.000	1.620	0.000			1.210	0.000	1.880	0.000	3.905	189.2
31	1.750	0.000	1.615	0.000			1.200	0.000			3.385	140.0
Ten-Daily Mean												
I Ten-Daily	1.986	8.440	1.711	0.000	1.605	0.000	1.520	0.000	1.280	0.000	2.082	14.05
II Ten-Daily	1.954	4.847	1.658	0.000	1.660	0.000	1.360	0.000	1.973	7.720	3.202	107.6
III Ten-Daily	1.798	0.000	1.636	0.000	1.607	0.000	1.248	0.000	1.910	0.000	2.927	88.65
Monthly												
Min.	1.750	0.000	1.615	0.000	1.585	0.000	1.200	0.000	1.195	0.000	1.840	0.000
Max.	2.070	16.97	1.745	0.000	1.730	0.000	1.580	0.000	2.100	17.83	4.543	257.3
Mean	1.909	4.286	1.668	0	1.625	0	1.372	0	1.721	2.573	2.743	70.7

Peak Computed Discharge = 386.5 cumecs on 06/08/2017 Corres. Water Level :4.94 m

Lowest Computed Discharge = 7.109 cumecs on 10/12/2017 Corres. Water Level :1.98 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

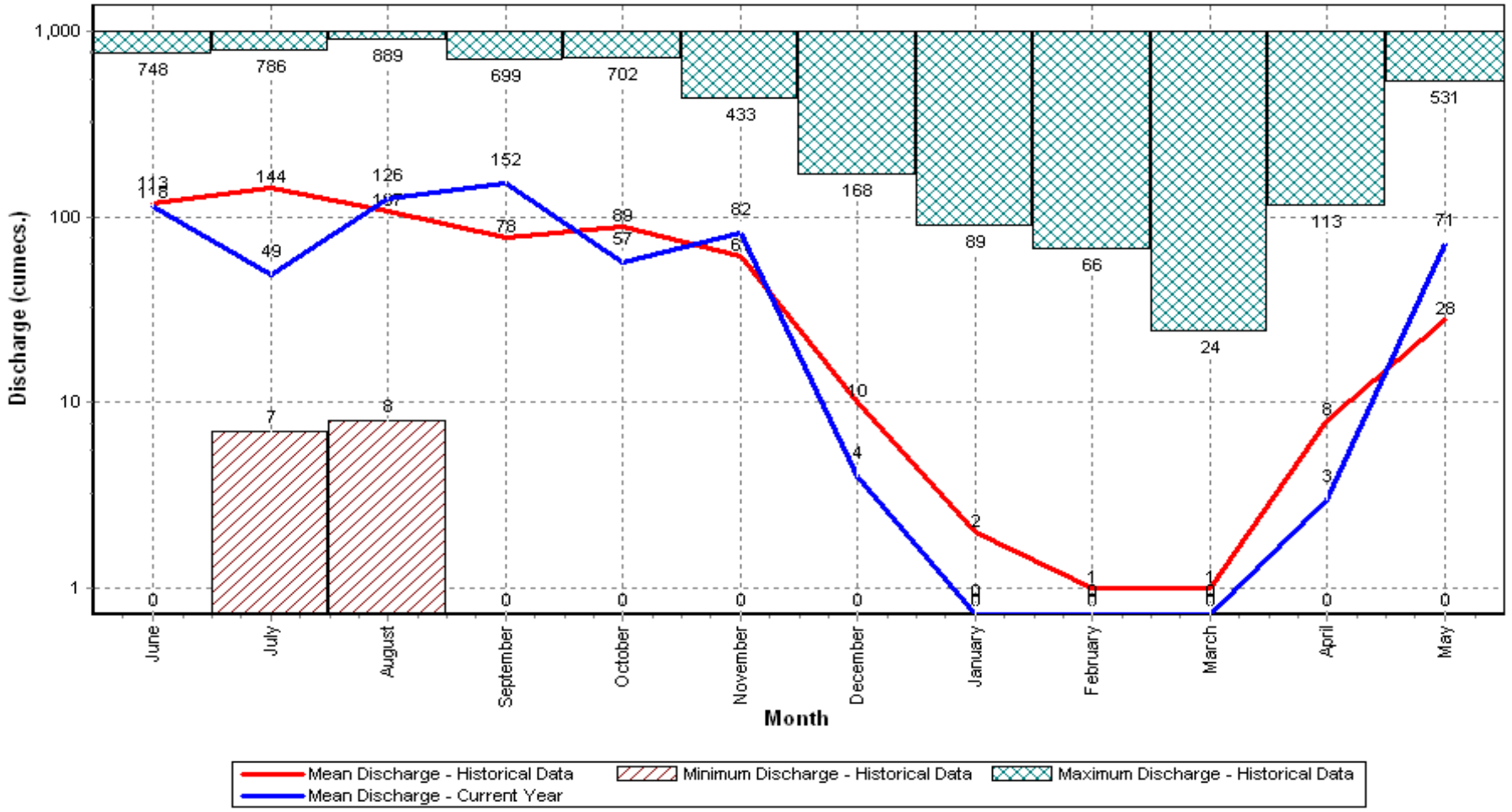
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : KALLOOPPARA (KYB00F2) | **Data considered : 1986-2018** | **Division : SWR Division, Cochin**

Local River : Manimala | **Sub-Division : SWR SD No 1, Trivandrum**



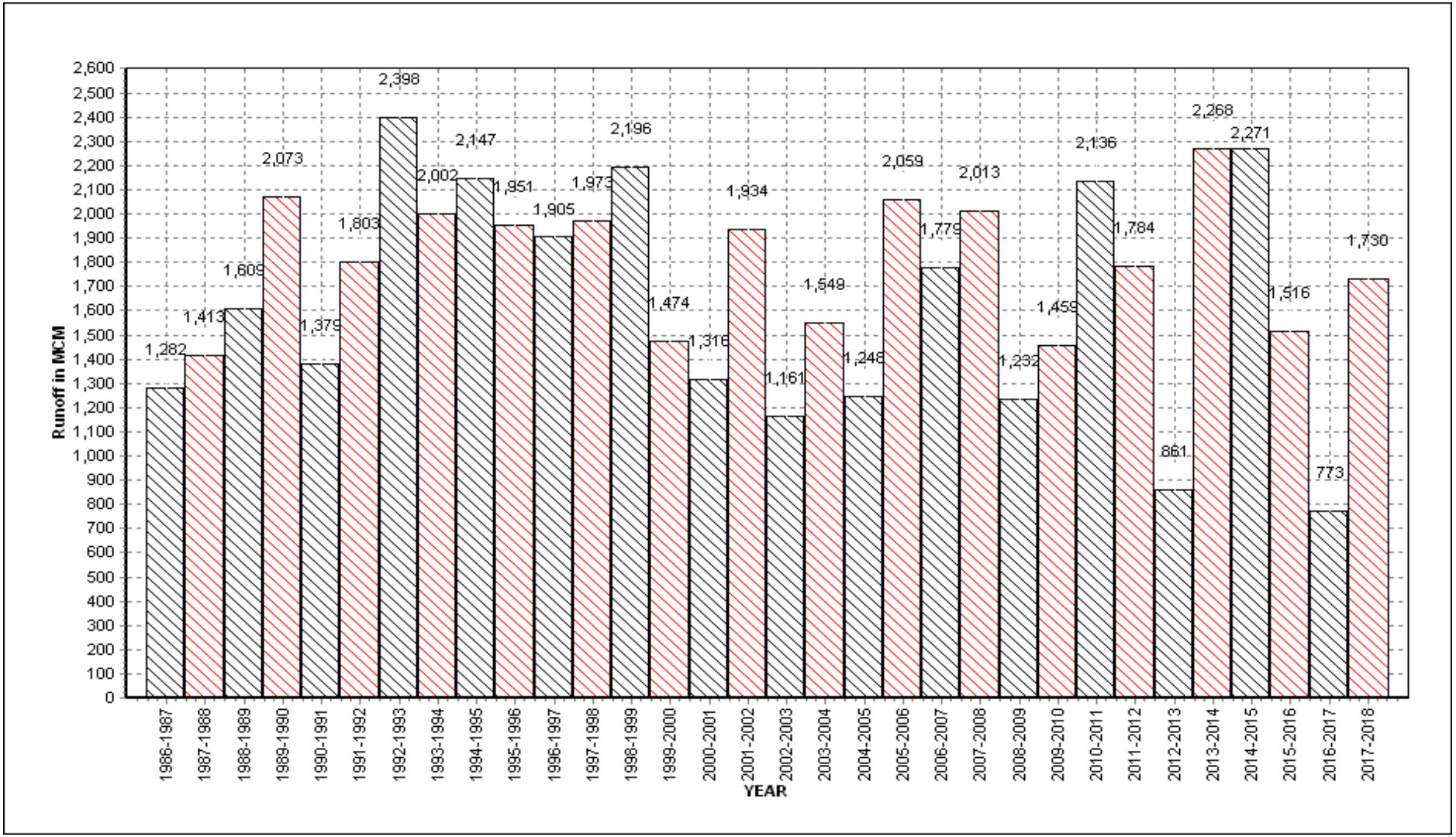
Annual Runoff Values for the period: 1986 - 2018

Station Name : KALLOOPPARA (KYB00F2)

Local River : Manimala

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum



Note: Missing values have not been considered while arriving at Annual Runoff

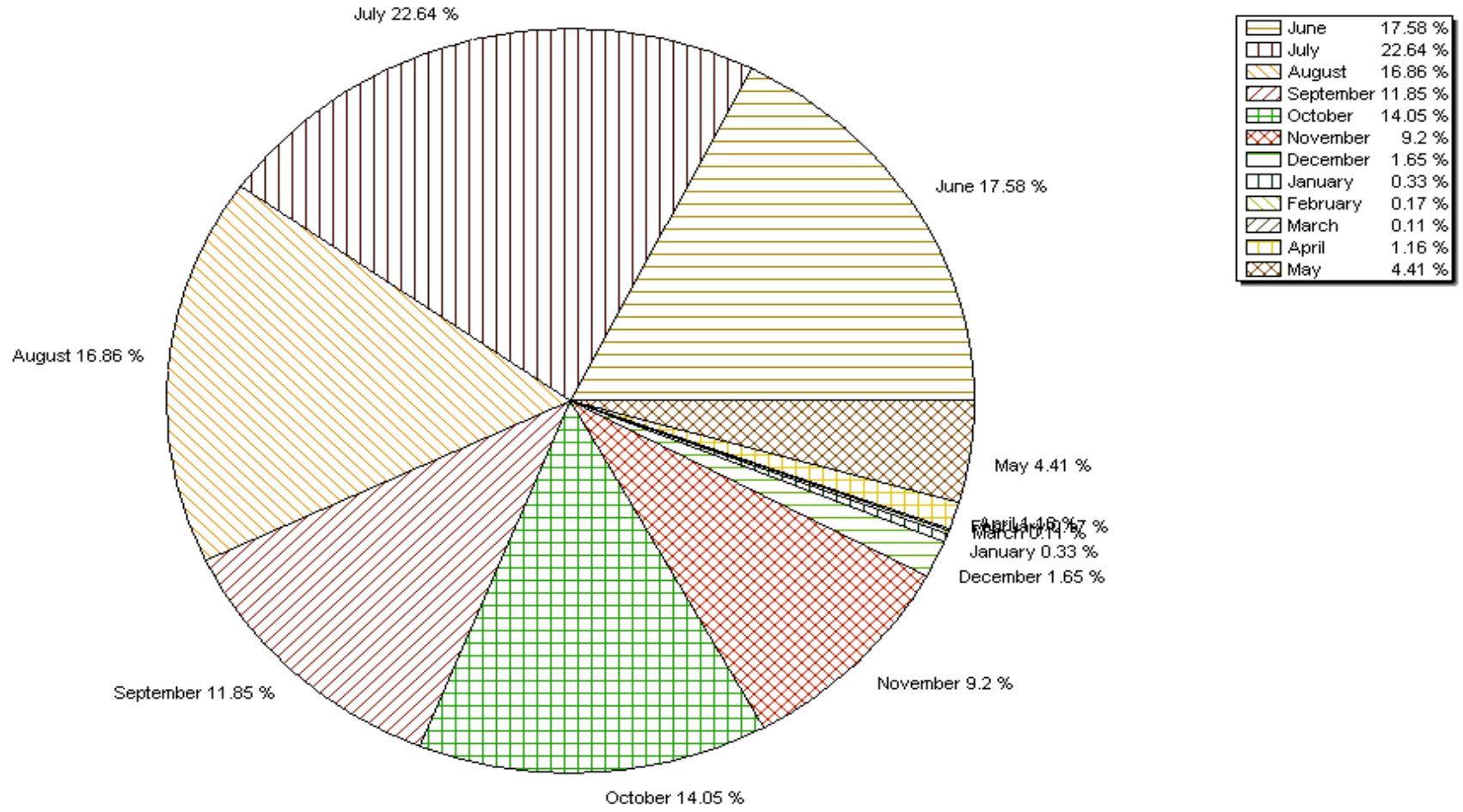
Monthly Average Runoff based on period : 1986-2017

Station Name : KALLOOPPARA (KYB00F2)

Local River : Manimala

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum



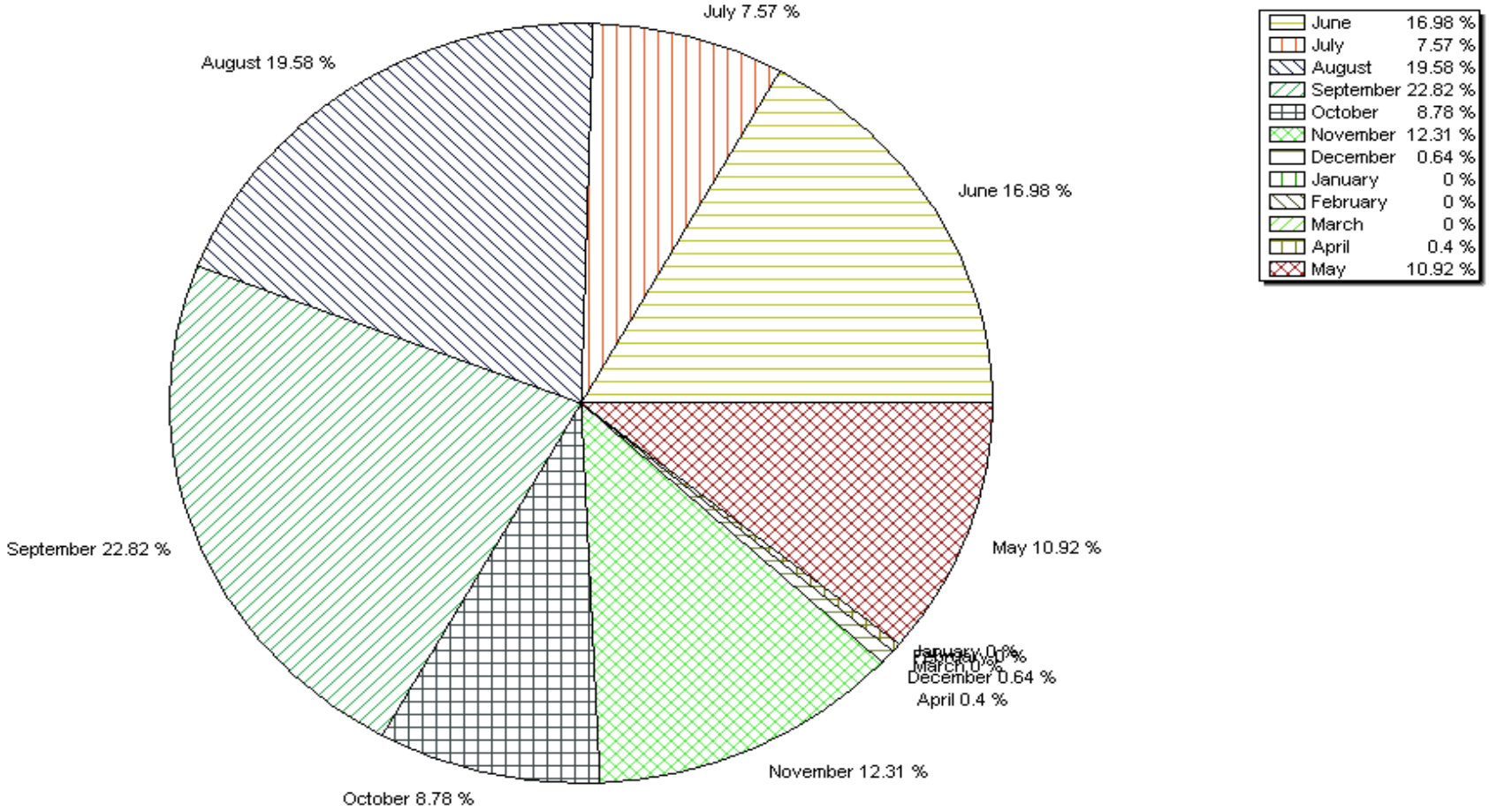
Monthly Runoff for the Year : 2017-2018

Station Name : KALLOOPPARA (KYB00F2)

Local River : Manimala

Division : SWR Division, Cochin

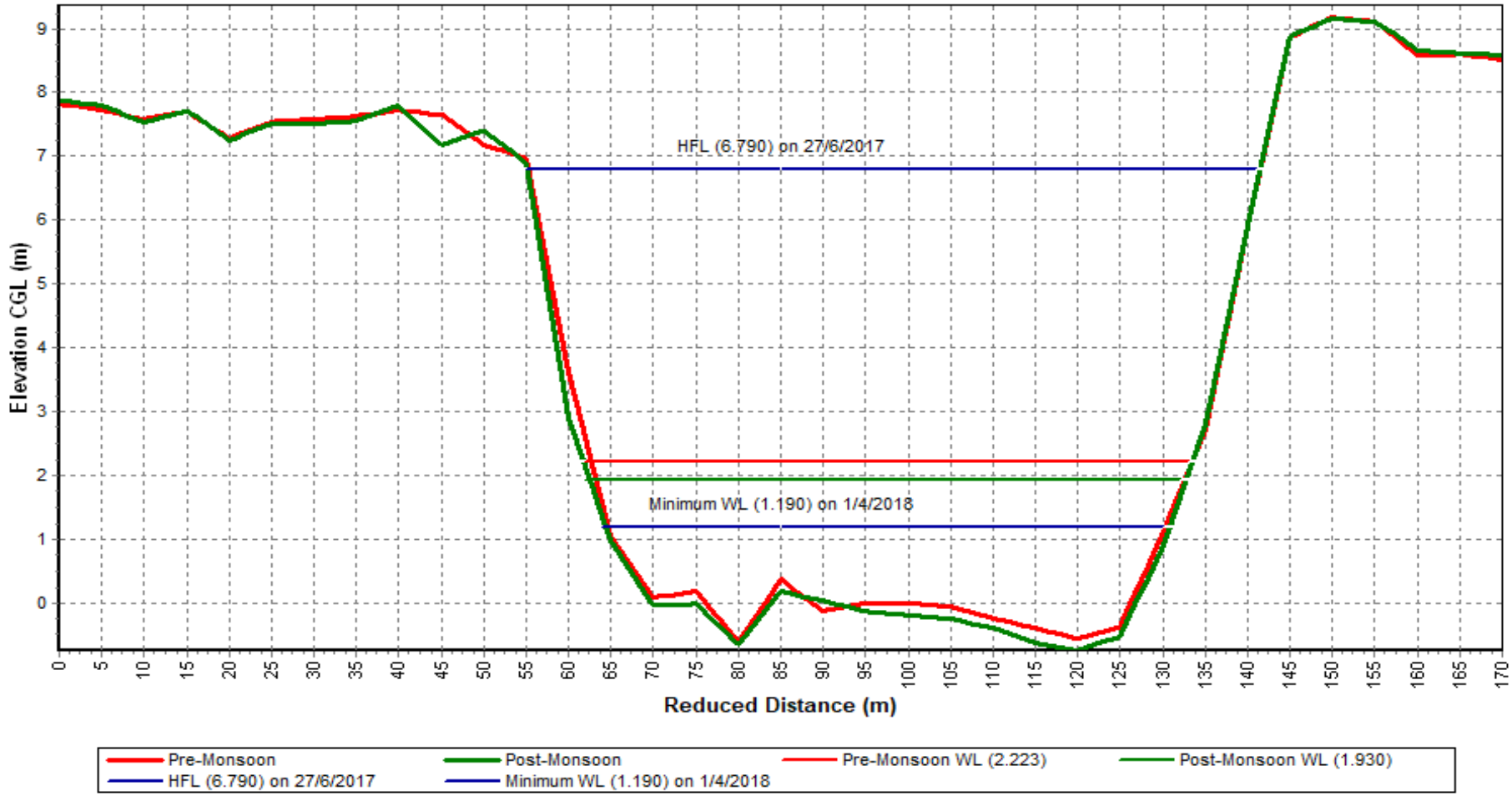
Sub-Division : SWR SD No 1, Trivandrum



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : KALLOOPPARA (KYB00F2) **Division : SWR Division, Cochin**

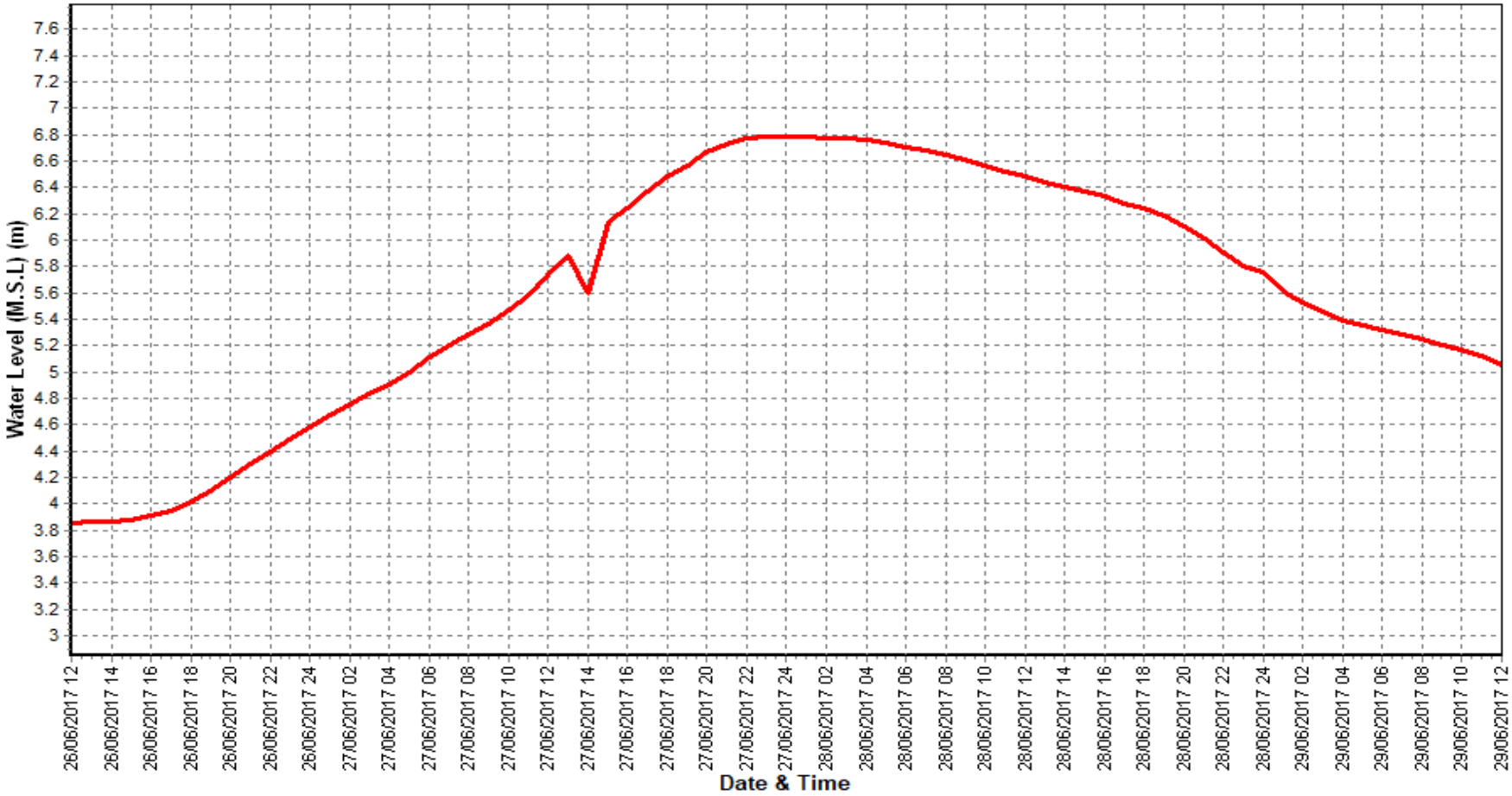
Local River : Manimala **Sub-Division : SWR SD No 1, Trivandrum**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : KALLOOPPARA (KYB00F2) **Division : SWR Division, Cochin**

Local River : Manimala **Sub-Division : SWR SD No 1, Trivandrum**

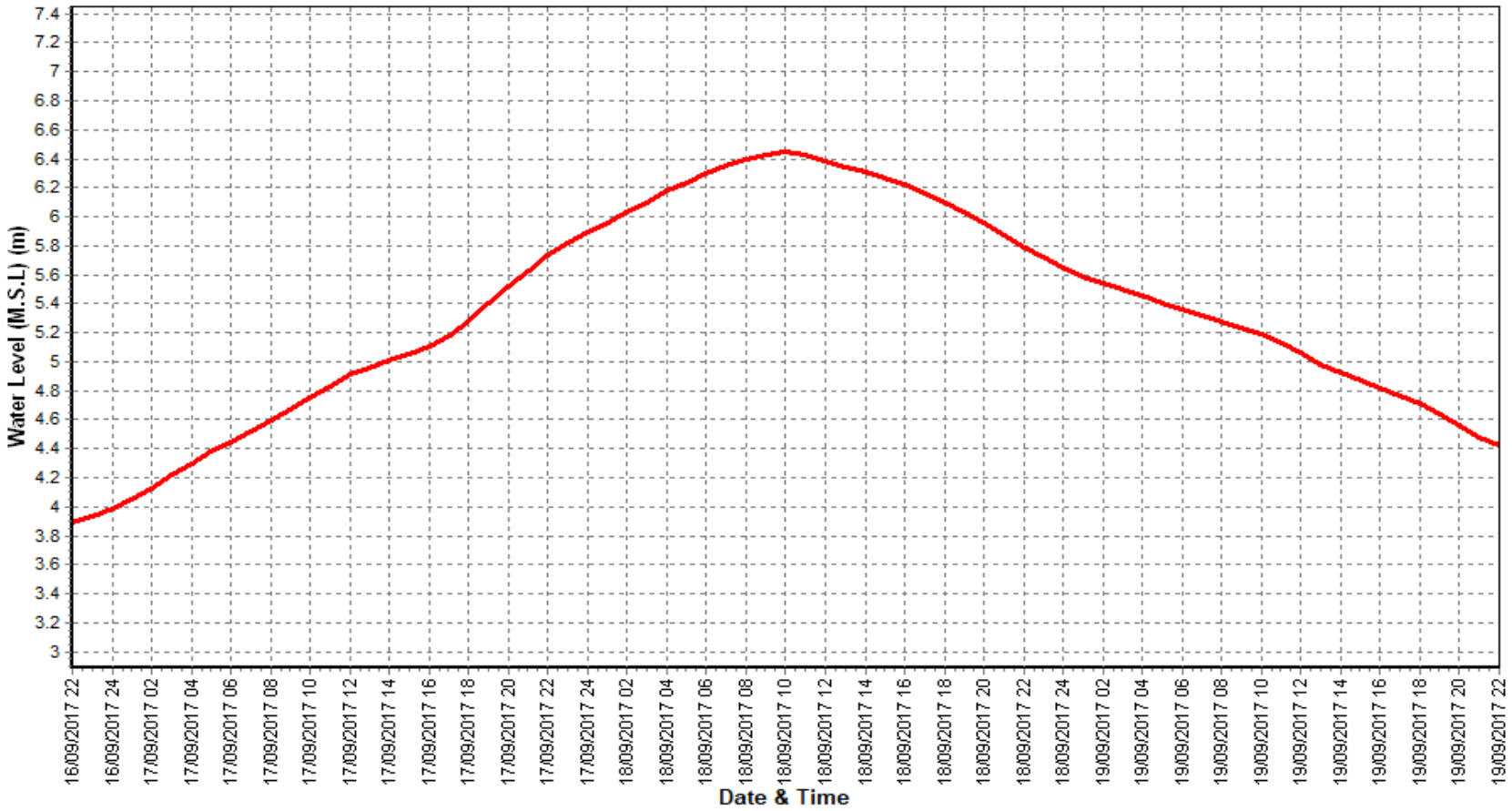


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : KALLOOPPARA (KYB00F2) **Division : SWR Division, Cochin**

Local River : Manimala **Sub-Division : SWR SD No 1, Trivandrum**

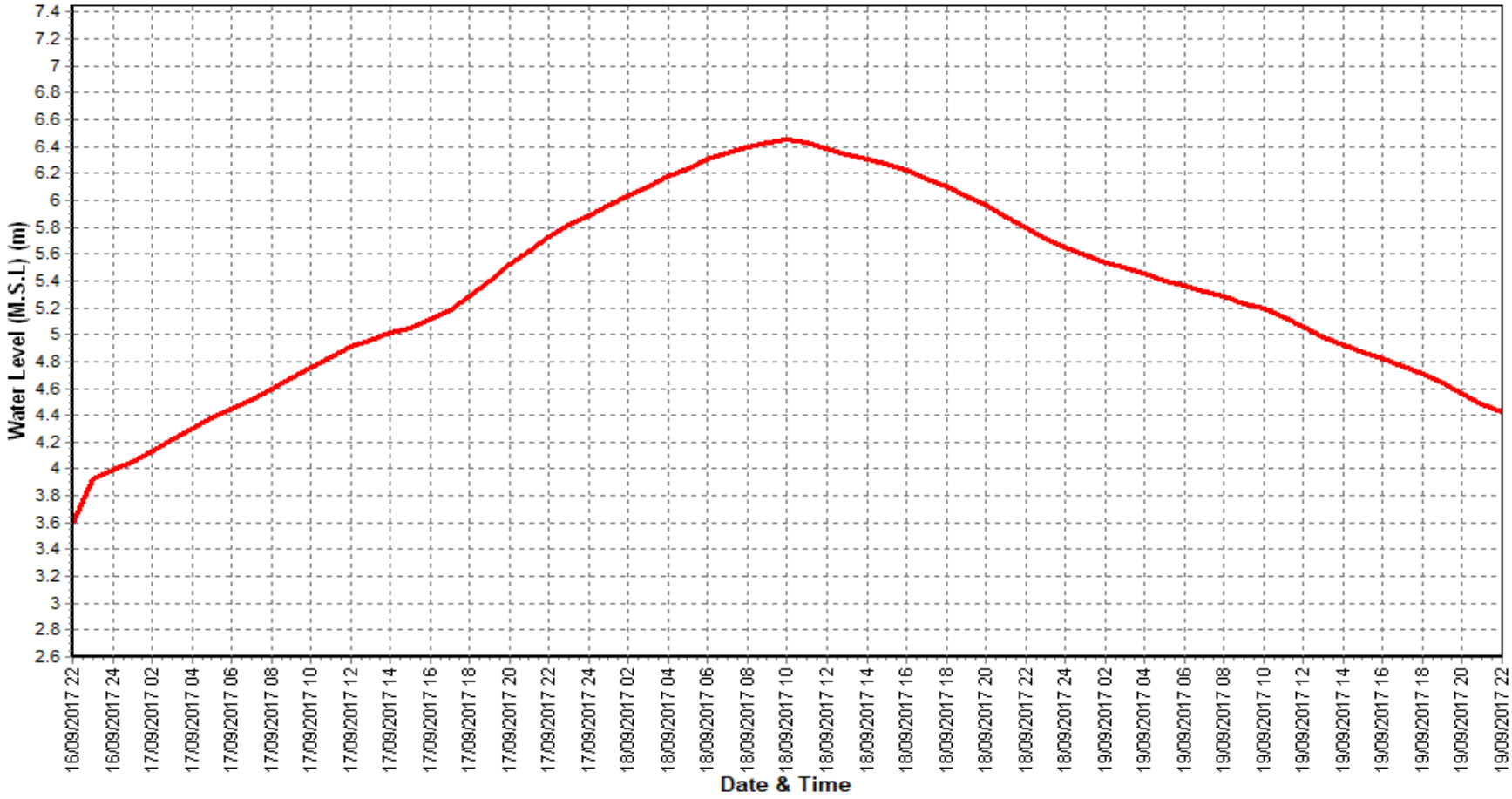


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : KALLOOPPARA (KYB00F2) **Division : SWR Division, Cochin**

Local River : Manimala **Sub-Division : SWR SD No 1, Trivandrum**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	:	**MALAKKARA**	**Code**	:	**KY000J4**
State	:	Kerala	District		Pathanamthitta
Basin	:	WFR South of Tapi	Independent River	:	Pamba
Tributary	:	-	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Pamba
Division	:	SWR Division, Kochi	Sub-Division	:	SWR SD No 1, Trivandrum
Drainage Area	:	1713 Sq. Km.	Bank	:	Left
Latitude	:	09°19'57"	Longitude	:	76°39'47"
Zero of Gauge (m)	:	-1.000 (m.s.l)	20-05-1984		
		Opening Date	Closing Date		
Gauge	:	20-05-1984			
Discharge	:	19-06-1985			
Sediment	:	18-06-1986			
Water Quality	:	01-07-1986			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1986-1987	1570	7.560	09-08-1986	6.200	0.525	12-02-1987
1987-1988	747.4	4.980	26-08-1987	4.842	0.380	23-02-1988
1988-1989	628.9	4.450	18-07-1988	9.362	0.290	04-04-1989
1989-1990	1243	6.200	24-07-1989	5.342	0.063	05-03-1990
1990-1991	822.0	4.980	04-11-1990	5.250	-0.125	29-03-1991
1991-1992	1134	6.081	08-06-1991	1.222	-0.397	13-04-1992
1992-1993	1464	6.802	10-10-1992	7.866	-0.240	06-04-1993
1993-1994	883.1	4.894	04-07-1993	16.65	0.033	28-03-1994
1994-1995	1988	7.710	03-08-1994	2.279	-0.040	17-02-1995
1995-1996	1068	5.943	31-07-1995	0.000	0.050	11-02-1996
1996-1997	770.2	4.828	26-07-1996	0.000	0.110	20-01-1997
1997-1998	1088	5.785	24-07-1997	0.000	0.020	06-02-1998
1998-1999	1170	6.720	12-10-1998	0.000	0.040	08-04-1999
1999-2000	836.7	5.420	08-06-1999	0.000	0.140	15-03-2000
2000-2001	1340	7.380	26-08-2000	0.000	0.010	01-06-2000
2001-2002	1212	7.790	10-07-2001	0.000	0.260	15-12-2001
2002-2003	601.1	4.300	18-08-2002	0.000	0.100	26-09-2002
2003-2004	578.8	4.115	08-10-2003	0.000	0.010	01-06-2003
2004-2005	925.8	5.240	05-08-2004	0.000	-0.010	12-02-2005

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1986-1987	1570	7.560	09-08-1986	6.200	0.525	12-02-1987
2005-2006	1215	6.450	05-09-2005	0.000	0.090	01-03-2006
2006-2007	606.5	4.350	17-08-2006	0.000	0.015	02-02-2007
2007-2008	1127	6.510	17-07-2007	0.000	0.080	28-01-2008
2008-2009	662.7	4.605	28-07-2008	0.000	0.040	01-06-2008
2009-2010	832.8	5.040	03-10-2009	0.000	0.010	18-03-2010
2010-2011	994.1	5.360	16-08-2010	0.000	0.140	31-01-2011
2011-2012	783.3	4.700	02-06-2011	0.000	0.240	26-12-2011
2012-2013	920.3	5.035	18-08-2012	0.000	0.200	06-06-2012
2013-2014	1220	5.850	05-08-2013	0.000	0.200	24-12-2013
2014-2015	930.6	5.450	04-08-2014	0.000	0.110	01-06-2014
2015-2016	619.9	3.920	28-06-2015	0.000	0.160	01-01-2016
2015-2016	619.9	3.920	28-06-2015	0.000	0.040	23-02-2016
2016-2017	415.8	3.070	13-07-2016	0.000	-0.180	16-02-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : MALAKKARA (KY000J4) **Division : SWR Division, Cochin**

Local River : Pamba **Sub-Division : SWR SD No 1, Trivandrum**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	0.330	60.58	2.030	237.7	0.570	71.79	1.990	232.2 *	1.330	147.0 *	2.105	293.5
2	0.660	83.86	2.000	233.6 *	0.980	92.59	2.340	271.4	1.380	152.7 *	2.620	309.9
3	1.950	236.3	1.690	215.0	0.730	77.67	3.070	418.1 *	1.260	134.3	2.850	363.8
4	1.730	196.1 *	1.490	181.6	1.130	124.1	2.390	294.2 *	1.030	115.8	2.220	266.9 *
5	0.850	127.1	1.190	128.7	1.780	203.1	2.020	232.1	1.050	116.3	2.340	286.0 *
6	1.040	146.2	1.130	126.6	3.550	519.9 *	2.100	297.5	1.630	214.2	1.890	225.4
7	1.110	157.0	0.920	88.64	3.390	487.6	1.980	235.7	1.310	150.9	1.950	226.7
8	1.110	157.0	0.950	94.64	2.750	378.3	2.110	283.5	1.380	152.7 *	1.770	191.2
9	0.840	91.88	0.770	90.83 *	2.290	271.1	2.530	309.1	1.050	116.4	2.620	356.6
10	0.550	80.97	0.870	85.08	2.400	305.4	2.130	253.0 *	1.130	141.2	2.020	247.7
11	0.700	84.83 *	0.840	82.84	2.200	301.9	1.760	193.0	0.940	110.4	1.705	190.8
12	0.610	86.27	0.750	78.87	2.410	305.2	1.690	185.4	1.560	187.1	1.310	144.7 *
13	0.620	89.03	0.660	70.84	1.890	217.9 *	1.720	189.5	2.500	305.5	1.335	147.6
14	0.620	84.21	0.640	70.97	1.410	178.9	4.500	699.7	2.120	283.8	1.065	118.2
15	0.860	98.87	0.630	70.92	1.100	123.2 *	3.590	431.8	1.680	189.5 *	0.910	108.4
16	0.730	91.45	0.490	68.15 *	0.960	104.9	2.860	374.7	1.360	174.2	0.780	86.50
17	0.630	87.11	0.490	60.50	0.840	94.35	4.200	677.1 *	1.110	140.9	0.735	77.64
18	0.530	71.18 *	0.510	63.43	0.840	92.71	5.540	916.0	1.090	121.1 *	0.635	79.92
19	0.340	65.72	0.440	50.32	0.800	88.90	4.480	705.8	0.970	117.3	0.480	67.41 *
20	0.370	68.93	0.900	110.6	1.210	133.7 *	3.690	456.7	0.780	88.80	0.515	51.85
21	0.440	79.83	0.830	87.21	2.730	367.0	2.860	305.8	0.830	93.15	0.560	61.31
22	0.430	71.47	0.850	88.19	3.160	420.3	2.280	227.8	1.250	138.0 *	0.610	63.65
23	0.400	70.30	0.700	84.83 *	3.120	417.5	1.760	193.5	0.890	108.8	0.480	73.19
24	0.550	78.50	0.610	70.72	2.460	304.1	1.400	155.0 *	0.790	86.39	0.450	60.79
25	1.510	168.1 *	0.590	71.68	1.830	217.0	0.930	108.0	0.665	93.74	0.465	60.49
26	1.850	212.3 *	0.520	61.91	1.410	177.8	0.990	116.0	0.825	92.09	0.380	60.20 *
27	3.420	461.0	0.470	56.09	1.090	121.1 *	0.880	112.9	0.910	107.1	0.410	62.23
28	4.800	822.5	0.454	62.54	1.690	219.9	0.910	110.0	1.600	206.6	0.360	60.80
29	3.570	500.7	0.640	68.96	2.150	301.8	1.560	174.3 *	1.430	158.5 *	0.250	42.29
30	2.570	346.6	0.460	65.93 *	2.790	381.3	1.650	185.6 *	1.160	140.3	0.410	60.67
31			0.420	59.46	2.480	297.4			1.740	207.9		
Ten-Daily Mean												
I Ten-Daily	1.017	133.7	1.304	148.2	1.957	253.2	2.266	282.7	1.255	144.2	2.239	276.8
II Ten-Daily	0.601	82.76	0.635	72.74	1.366	164.2	3.403	483.0	1.411	171.9	0.947	107.3
III Ten-Daily	1.954	281.1	0.595	70.68	2.265	293.2	1.522	168.9	1.099	130.2	0.438	60.56
Monthly												
Min.	0.330	60.58	0.420	50.32	0.570	71.79	0.880	108.0	0.665	86.39	0.250	42.29
Max.	4.800	822.5	2.030	237.7	3.550	519.9	5.540	916.0	2.500	305.5	2.850	363.8
Mean	1.191	165.9	0.837	96.37	1.875	238.7	2.397	311.5	1.250	148.2	1.208	148.2

Annual Runoff in MCM = 3461 Annual Runoff in mm = 2021

Peak Observed Discharge = 916.0 cumecs on 18/09/2017 Corres. Water Level :5.54 m

Lowest Observed Discharge = 0.000 cumecs on 08/01/2018 Corres. Water Level :0.08 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : MALAKKARA (KY000J4) **Division : SWR Division, Cochin**

Local River : Pamba **Sub-Division : SWR SD No 1, Trivandrum**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	0.735	80.13	0.130	35.88 *	-0.010	0.000	-0.100	0.000	0.110	0.000	0.140	0.000
2	0.760	83.65 *	0.120	35.31 *	0.000	0.000	-0.120	0.000	0.010	0.000	0.270	42.45
3	0.700	78.07 *	0.140	36.46 *	-0.020	0.000	-0.110	0.000	-0.050	0.000	0.245	40.96
4	0.520	47.43	0.195	39.10	-0.030	0.000	-0.100	0.000	-0.020	0.000	0.230	38.86
5	0.375	50.83	0.170	38.33	-0.080	0.000	-0.100	0.000	0.125	40.10	0.060	0.000
6	0.400	54.32	0.185	34.31	-0.070	0.000	-0.090	0.000	0.135	39.45	0.180	38.83 *
7	0.340	41.16	0.140	36.46 *	-0.060	0.000	0.000	0.000	0.145	38.39	0.335	58.91
8	0.300	40.08	0.080	0.000	-0.050	0.000	0.050	0.000	0.130	35.88 *	0.425	71.86
9	0.345	57.58	0.040	0.000	0.000	0.000	0.030	0.000	-0.060	0.000	0.540	75.77
10	0.400	56.44 *	0.070	0.000	0.020	0.000	0.030	0.000	0.125	38.09	1.270	132.3
11	0.405	59.53	0.080	0.000	0.020	0.000	0.060	0.000	0.140	41.32	0.960	117.8
12	0.390	61.43	0.060	0.000	-0.050	0.000	0.000	0.000	0.150	41.94	0.680	81.80
13	0.665	65.11	0.080	0.000	-0.060	0.000	0.050	0.000	0.125	37.74	0.810	88.49 *
14	0.695	80.40	0.080	0.000	-0.070	0.000	0.060	0.000	0.140	36.46 *	0.525	74.40
15	0.580	56.64	0.050	0.000	-0.070	0.000	0.050	0.000	0.300	46.47 *	0.665	77.62
16	0.550	63.02	0.060	0.000	-0.080	0.000	0.060	0.000	0.360	50.64	0.630	74.13
17	0.350	49.90 *	0.070	0.000	-0.060	0.000	0.060	0.000	0.310	46.48	0.955	109.2
18	0.290	42.52	0.060	0.000	-0.050	0.000	0.050	0.000	0.360	51.47	1.460	175.0
19	0.360	49.57	0.080	0.000	-0.100	0.000	0.000	0.000	0.390	47.00	1.275	129.7
20	0.375	48.07	0.060	0.000	-0.100	0.000	0.060	0.000	0.355	38.33	1.080	117.4 *
21	0.280	44.86	0.080	0.000	-0.100	0.000	0.050	0.000	0.310	46.77	0.715	81.77
22	0.330	45.64	0.050	0.000	-0.100	0.000	0.230	41.93	0.300	46.47 *	0.605	78.49
23	0.240	40.74	0.030	0.000	-0.080	0.000	0.190	40.05 #	0.165	37.64	0.430	54.94 #
24	0.245	42.55 *	0.040	0.000	-0.090	0.000	0.150	29.42	0.250	43.84	0.530	76.95
25	0.150	37.05 *	0.040	0.000	-0.110	0.000	0.080	33.07 *	0.180	32.46	0.605	76.76
26	0.235	42.45	0.050	0.000	-0.130	0.000	0.010	0.000	0.340	48.15	0.630	82.34
27	0.275	45.45	0.040	0.000	-0.110	0.000	0.155	39.15	0.305	41.34	0.930	100.8 *
28	0.285	46.36	0.030	0.000	-0.110	0.000	0.140	36.92	0.335	46.35	1.275	133.0
29	0.230	42.77	-0.020	0.000			0.150	37.05 *	0.210	48.86 *	2.420	337.0
30	0.185	40.23	-0.010	0.000			0.120	35.31 *	0.240	40.67 *	2.175	280.8
31	0.210	40.67 *	-0.010	0.000			0.150	34.27			1.690	188.9
Ten-Daily Mean												
I Ten-Daily	0.488	58.97	0.127	25.59	-0.030	0.000	-0.051	0.000	0.065	19.19	0.369	49.99
II Ten-Daily	0.466	57.62	0.068	0.000	-0.062	0.000	0.045	0.000	0.263	43.79	0.904	104.6
III Ten-Daily	0.242	42.62	0.029	0.000	-0.104	0.000	0.130	29.74	0.264	43.26	1.091	135.6
Monthly												
Min.	0.150	37.05	-0.020	0.000	-0.130	0.000	-0.120	0.000	-0.060	0.000	0.060	0.000
Max.	0.760	83.65	0.195	39.10	0.020	0.000	0.230	41.93	0.390	51.47	2.420	337.0
Mean	0.394	52.73	0.073	8.253	-0.063	0	0.044	10.55	0.197	35.41	0.798	97.98

Peak Computed Discharge = 677.1 cumecs on 17/09/2017 Corres. Water Level :4.2 m

Lowest Computed Discharge = 33.07 cumecs on 25/03/2018 Corres. Water Level :0.08 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

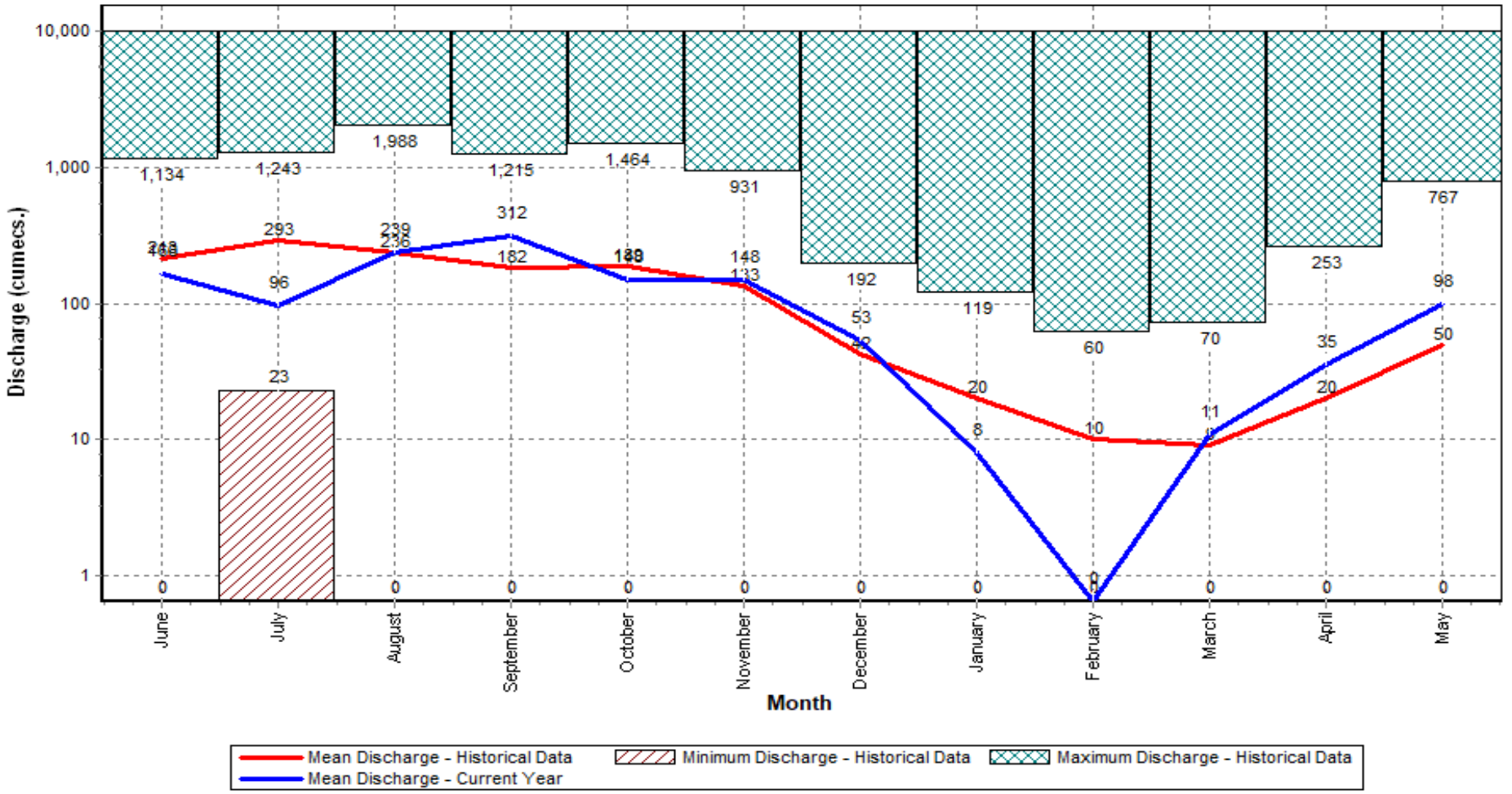
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : MALAKKARA (KY000J4) | **Data considered : 1986-2018** | **Division : SWR Division, Cochin**

Local River : Pamba | **Sub-Division : SWR SD No 1, Trivandrum**



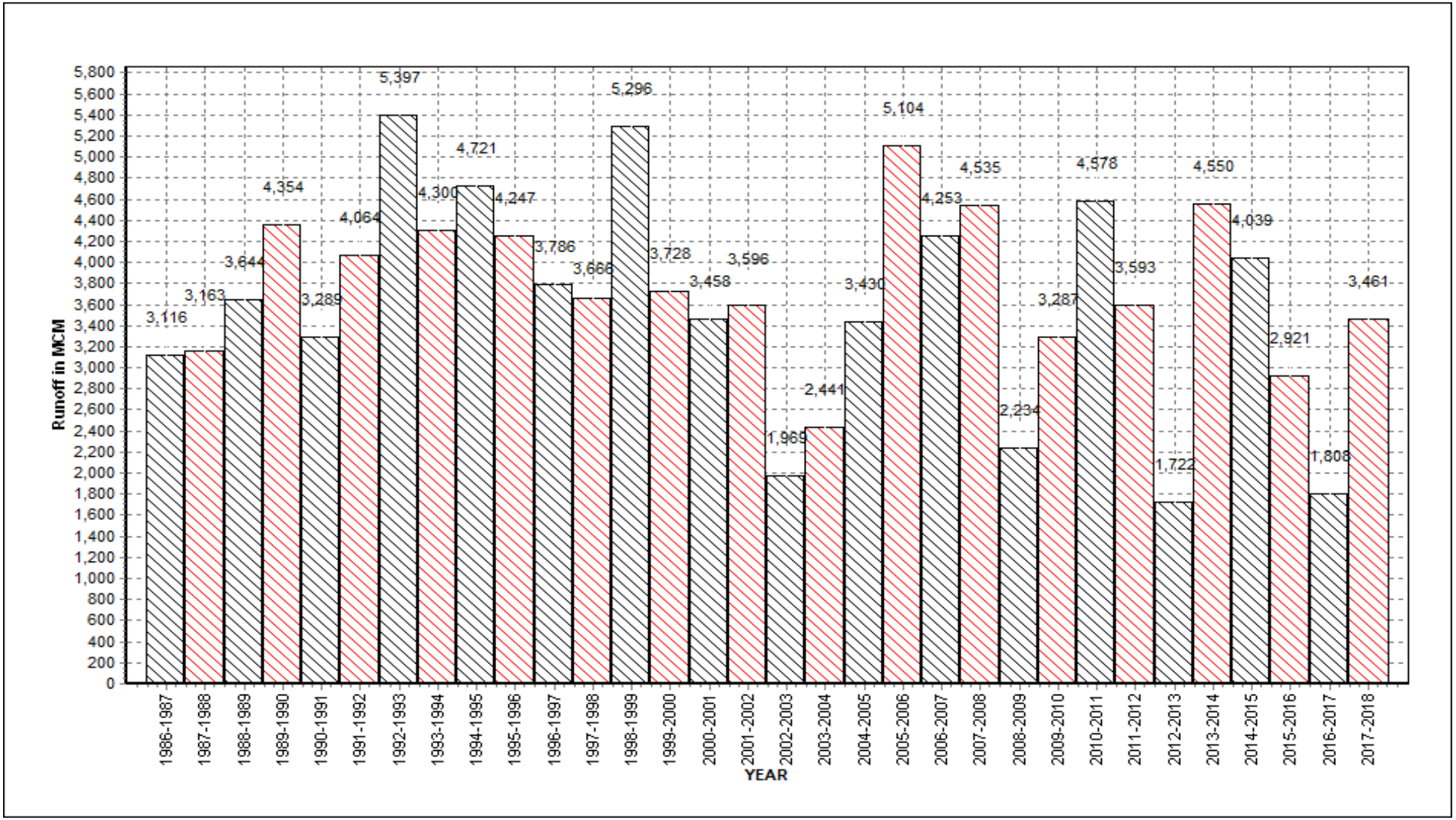
Annual Runoff Values for the period: 1986 - 2018

Station Name : MALAKKARA (KY000J4)

Local River : Pamba

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum



Note: Missing values have not been considered while arriving at Annual Runoff

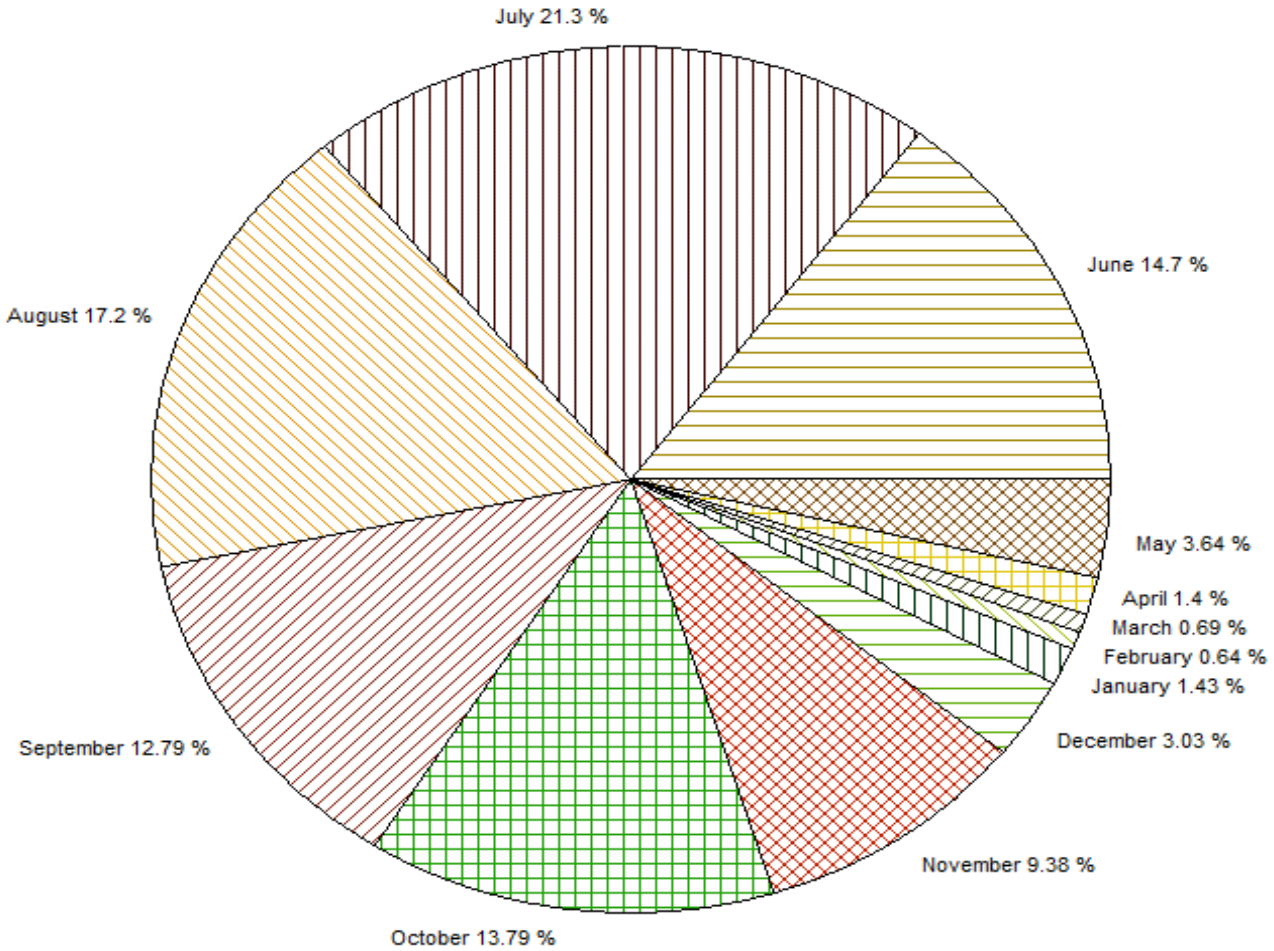
Monthly Average Runoff based on period : 1986-2017

Station Name : MALAKKARA (KY000J4)

Local River : Pamba

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum



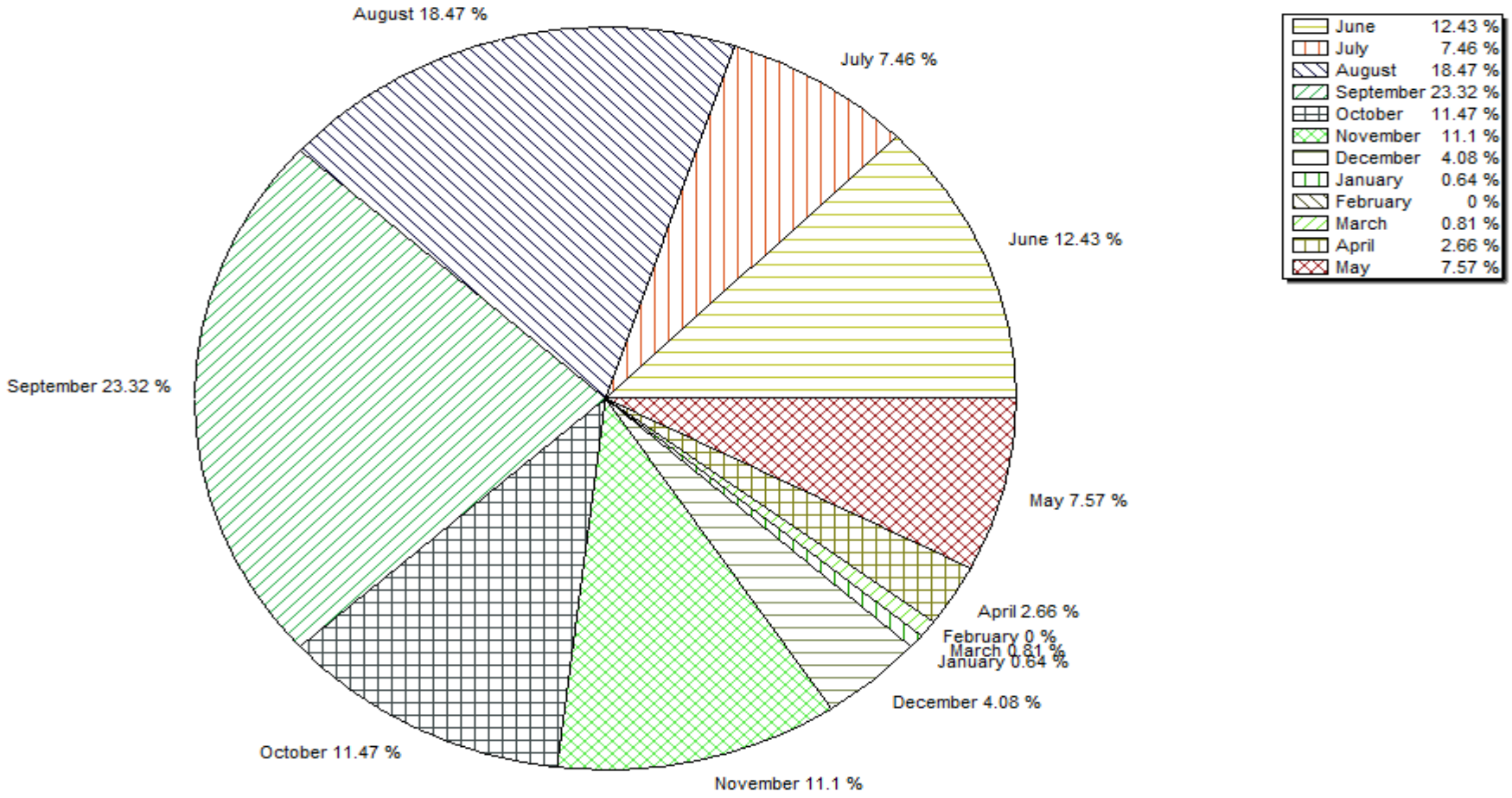
Monthly Runoff for the Year : 2017-2018

Station Name : MALAKKARA (KY000J4)

Local River : Pamba

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum



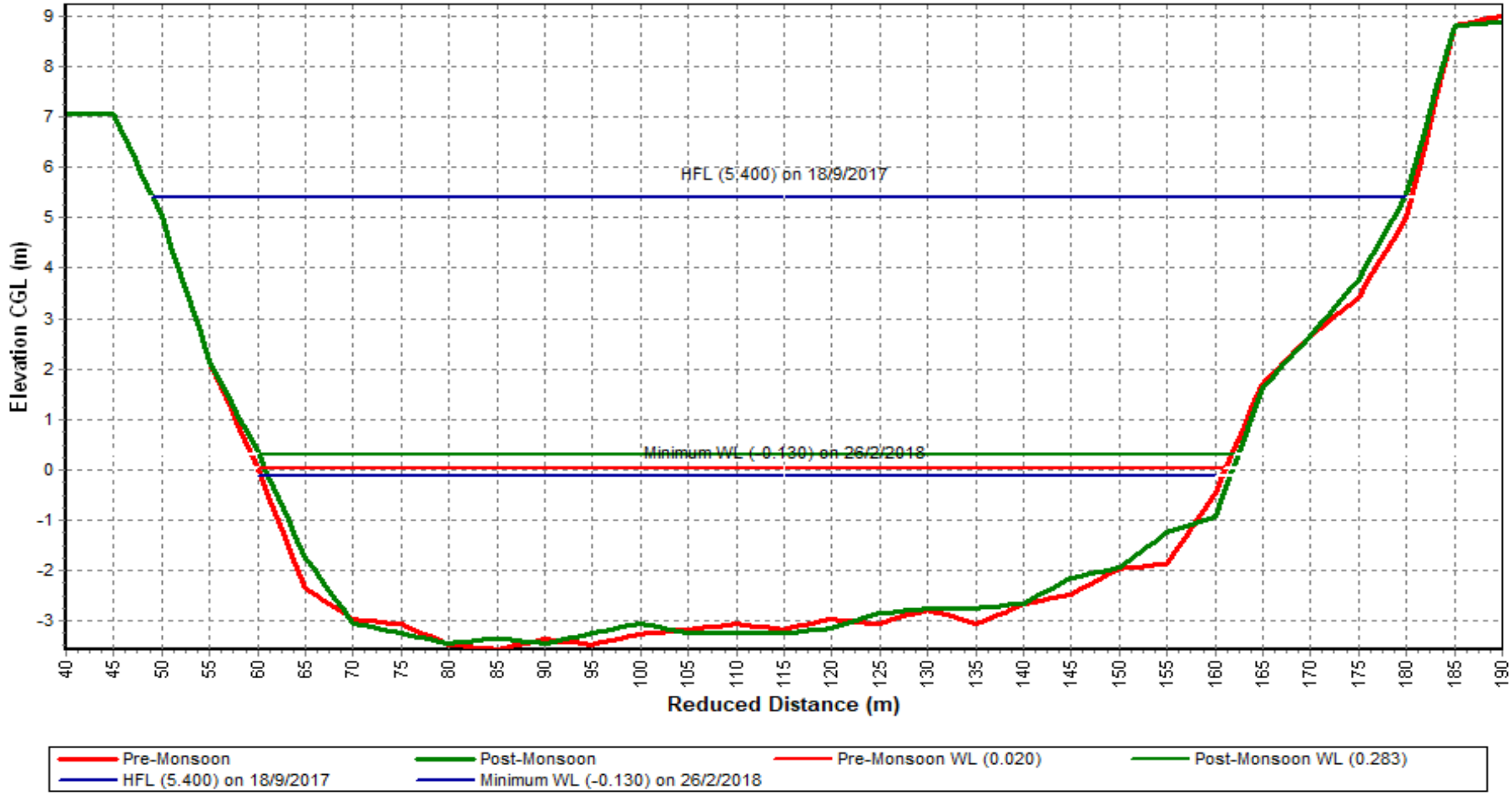
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : MALAKKARA (KY000J4)

Local River : Pamba

Division : SWR Division, Cochin

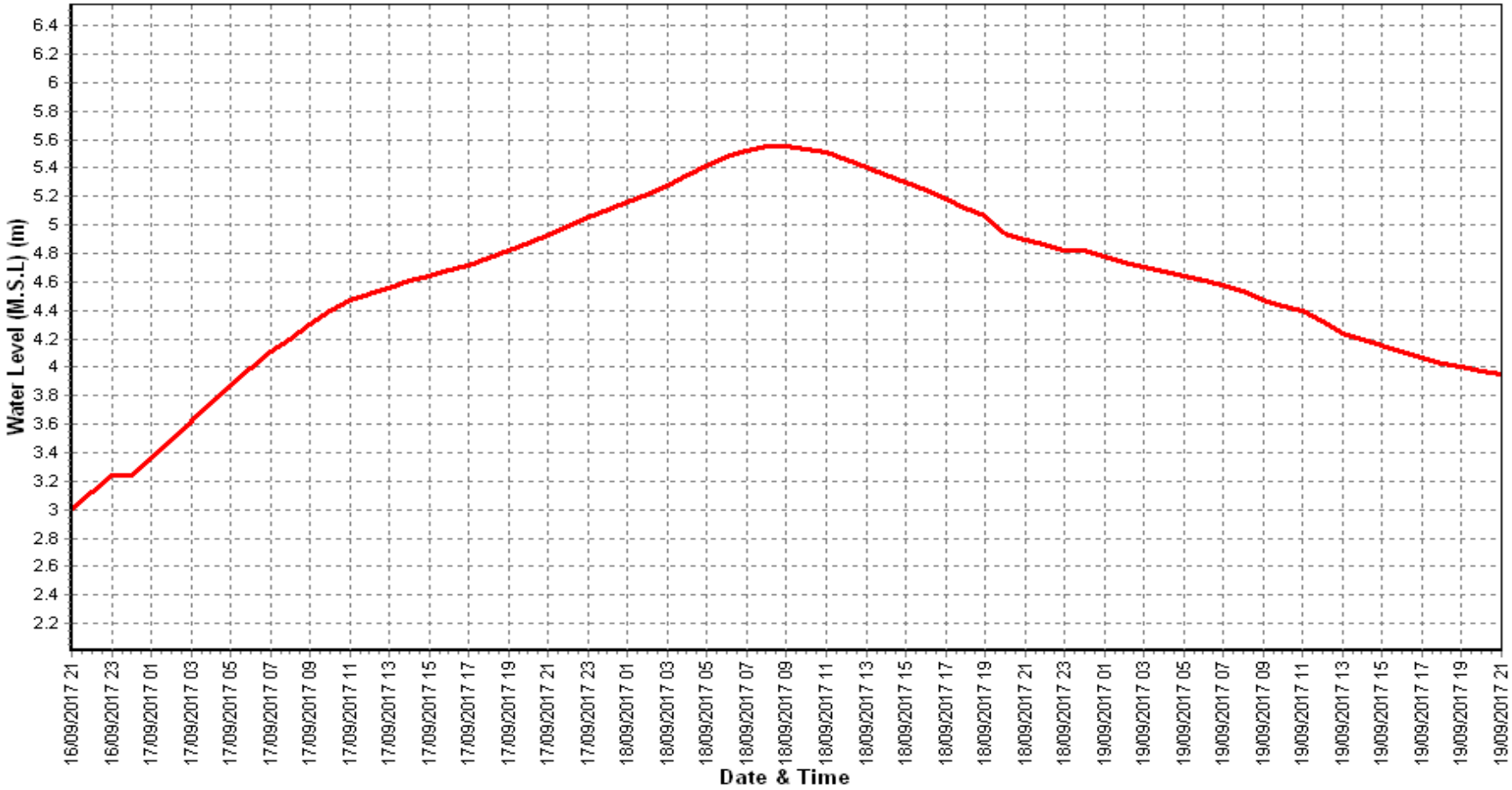
Sub-Division : SWR SD No 1, Trivandrum



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : MALAKKARA (KY000J4) **Division : SWR Division, Cochin**

Local River : Pamba **Sub-Division : SWR SD No 1, Trivandrum**

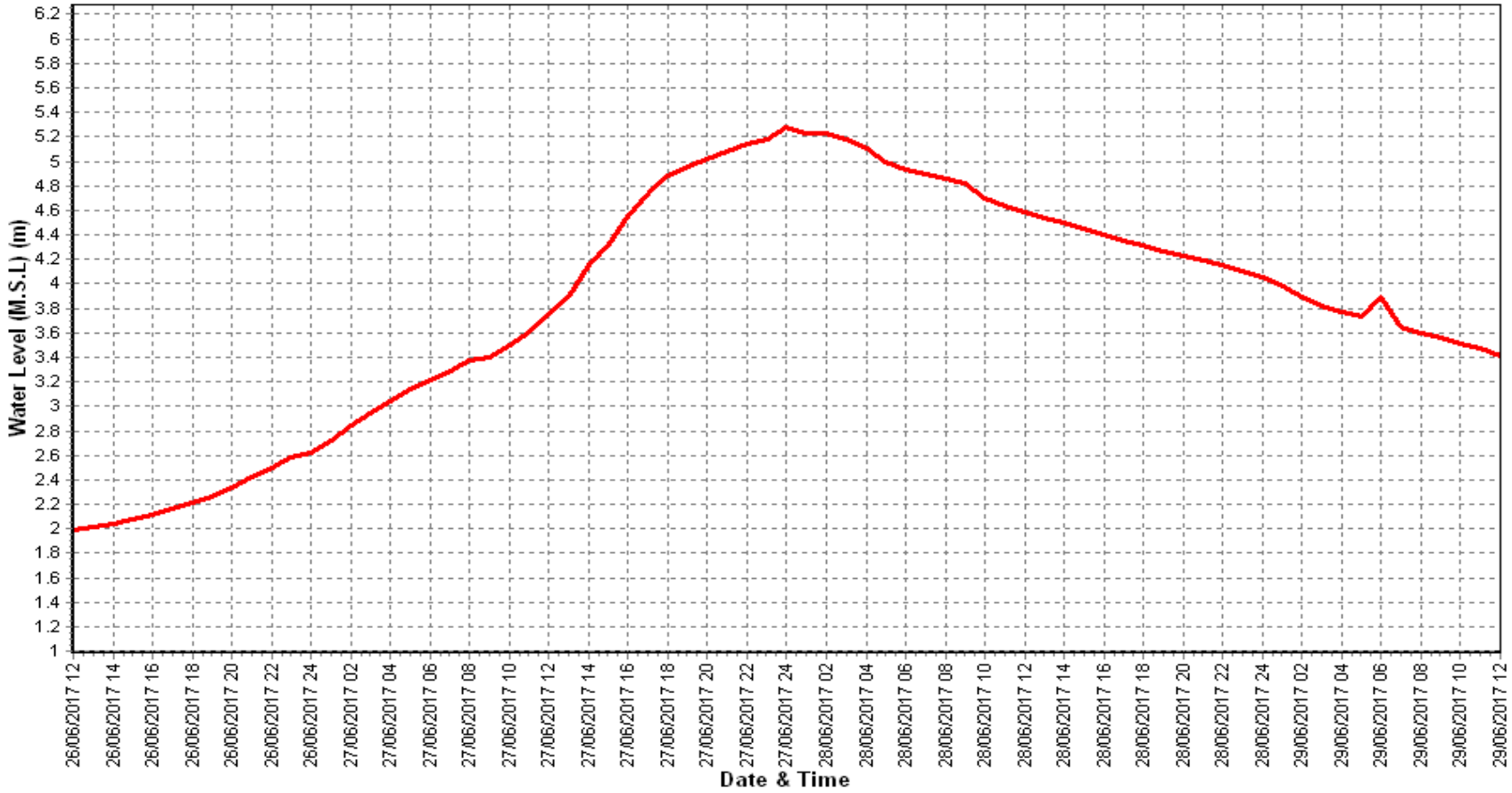


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : MALAKKARA (KY000J4) **Division : SWR Division, Cochin**

Local River : Pamba **Sub-Division : SWR SD No 1, Trivandrum**

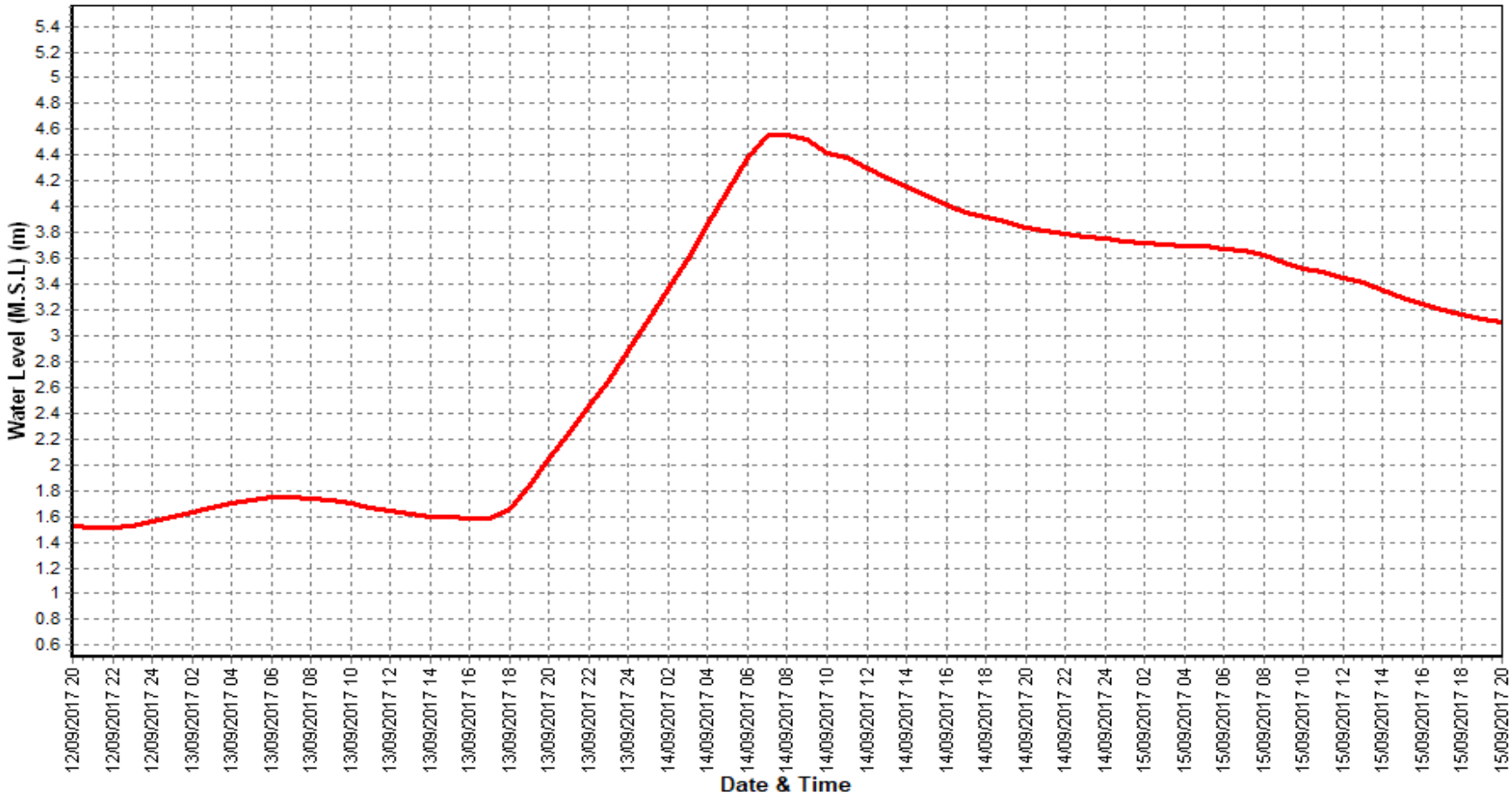


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : MALAKKARA (KY000J4) **Division : SWR Division, Cochin**

Local River : Pamba **Sub-Division : SWR SD No 1, Trivandrum**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	:	**THUMPAMON**	**Code**	:	**KYA00J4**
State	:	Kerala	District		Pathanamthitta
Basin	:	WFR South of Tapi	Independent River	:	Pamba
Tributary	:	Achankovil	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Achankovil
Division	:	SWR Division, Kochi	Sub-Division	:	SWR SD No 1, Trivandrum
Drainage Area	:	810 Sq. Km.	Bank	:	Right
Latitude	:	09°13'30"	Longitude	:	76°42'52"
Zero of Gauge (m)	:	5.000 (m.s.l)	21-12-1977		
		Opening Date	Closing Date		
Gauge	:	21-12-1977			
Discharge	:	28-01-1978			
Sediment	:	23-03-1981			
Water Quality	:	15-10-1978			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1978-1979	680.0	13.735	07-11-1978	0.100	7.145	30-03-1979
1979-1980	255.0	10.500	11-07-1979	0.100	6.765	26-03-1980
1980-1981	269.9	10.760	04-07-1980	0.300	6.775	08-03-1981
1981-1982	429.9	11.775	22-09-1981	0.100	6.815	02-03-1982
1982-1983	152.0	9.560	08-08-1982	0.000	6.595	07-03-1983
1983-1984	382.2	11.388	21-08-1983	0.000	6.600	04-06-1983
1984-1985	204.7	9.950	04-10-1984	0.200	6.300	18-05-1985
1985-1986	426.0	11.900	27-06-1985	0.200	6.025	02-04-1986
1986-1987	504.6	12.170	10-08-1986	0.000	6.025	15-03-1987
1987-1988	232.6	9.590	26-08-1987	0.250	6.090	03-04-1988
1988-1989	231.1	9.510	19-07-1988	0.000	6.000	06-03-1989
1989-1990	346.6	10.800	24-07-1989	0.050	5.800	29-04-1990
1990-1991	304.5	10.400	04-11-1990	0.300	5.850	29-03-1991
1991-1992	572.3	12.516	09-06-1991	0.548	5.885	29-01-1992
1992-1993	699.0	13.146	15-11-1992	0.783	6.095	07-02-1993
1993-1994	400.6	11.147	07-06-1993	0.493	5.755	26-03-1994
1994-1995	720.6	12.690	03-08-1994	0.668	5.775	10-03-1995
1995-1996	375.5	10.340	31-07-1995	0.200	5.555	31-03-1996
1996-1997	379.9	10.010	19-10-1996	0.299	5.420	19-03-1997

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1997-1998	297.8	9.800	24-07-1997	0.000	5.310	28-03-1998
1998-1999	800.0	12.570	13-10-1998	1.048	5.420	05-03-1999
1999-2000	547.5	11.250	09-06-1999	0.701	5.300	03-02-2000
2000-2001	575.9	11.660	26-08-2000	0.111	5.120	01-04-2001
2001-2002	677.5	12.775	10-07-2001	0.000	5.170	25-02-2002
2002-2003	171.1	8.653	31-10-2002	0.000	5.480	04-01-2003
2003-2004	297.6	9.540	08-10-2003	0.000	5.460	01-06-2003
2004-2005	265.9	9.060	19-06-2004	0.000	5.540	23-12-2004
2005-2006	404.3	11.100	02-08-2005	0.000	5.530	01-02-2006
2006-2007	302.6	9.530	30-10-2006	0.000	5.620	01-01-2007
2007-2008	578.6	11.895	18-07-2007	0.000	5.620	07-06-2007
2008-2009	229.6	8.970	08-09-2008	0.000	5.620	29-12-2008
2009-2010	301.9	10.060	03-10-2009	0.000	5.620	01-06-2009
2010-2011	505.6	11.020	23-11-2010	0.000	5.690	29-01-2011
2011-2012	225.2	9.120	06-06-2011	0.000	5.700	28-12-2011
2012-2013	225.2	9.415	18-08-2012	0.000	5.650	01-06-2012
2013-2014	336.3	10.065	27-06-2013	0.000	5.650	01-06-2013
2014-2015	520.6	11.530	24-08-2014	0.000	6.620	01-06-2014
2015-2016	236.8	8.930	28-06-2015	0.000	6.615	11-01-2016
2016-2017	215.4	8.592	09-06-2016	0.000	6.615	29-11-2016

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : THUMPAMON (KYA00J4) **Division : SWR Division, Cochin**

Local River : Achankovil **Sub-Division : SWR SD No 1, Trivandrum**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	6.840	13.73	7.455	57.26	6.695	5.535	7.440	56.67 *	7.500	60.36 *	7.730	96.16
2	7.180	38.33	7.690	81.93 *	6.780	8.840	7.730	82.83	7.460	57.89 *	8.055	120.2
3	7.623	70.30	7.625	75.46	6.850	14.31	7.980	94.24 *	7.410	56.97	8.390	138.4
4	7.560	4.044 *	7.445	55.56	6.905	16.62	7.800	94.24 *	7.280	44.04	7.840	88.64 *
5	7.430	57.96	7.278	47.14	7.905	27.04 #	7.550	67.86	7.320	49.22	8.210	128.5 *
6	7.465	63.46	7.180	38.92	7.590	70.51 *	7.800	85.59	7.770	91.86	7.850	90.19
7	7.295	43.77	7.100	28.81	7.530	66.86	7.670	78.54	7.690	80.84	7.690	79.87
8	7.133	30.19	7.090	27.56	7.350	51.00	7.745	82.21	7.500	60.36 *	7.800	85.42
9	7.005	24.30	7.080	26.39 *	7.243	40.12	7.885	92.45	7.490	64.60	9.020	198.0
10	6.960	18.71 *	7.195	39.26	7.303	51.61	7.640	69.44 *	7.370	52.88	8.205	132.3
11	7.040	23.26 *	7.095	31.14	7.235	37.37 #	7.475	62.80	7.260	46.53	8.050	111.5
12	6.975	20.55	7.040	26.69	7.400	55.09	7.620	73.50	7.410	56.66	7.710	76.53 *
13	6.945	20.53	6.990	24.19	7.240	37.76 *	7.470	59.06	7.800	85.25	7.580	76.24
14	6.908	15.27	6.990	24.44	7.100	32.76	8.700	205.2	8.305	132.6	7.415	55.69
15	6.935	18.69	6.925	19.30	7.020	22.69 *	8.510	156.2	7.940	91.12 *	7.300	43.29
16	6.960	21.34	6.880	15.22 *	6.970	22.31	8.020	100.7	7.615	74.28	7.205	36.24
17	6.893	16.70	6.855	15.19	6.950	19.49	8.930	184.5 *	7.450	58.74	7.130	33.88
18	6.840	12.95 *	6.825	13.58	6.915	18.22	10.875	372.4	7.400	54.28 *	7.080	36.66
19	6.790	10.62	6.810	12.57	6.900	16.54	10.300	259.5	7.310	48.35	7.060	30.27 *
20	6.760	8.577	6.915	18.26	7.130	43.43 *	9.045	172.3	7.230	37.90	7.220	36.98
21	6.748	8.575	6.880	16.70	8.285	132.3	8.185	127.7	7.180	35.83	7.170	36.71
22	6.730	6.979	6.875	16.97	8.133	122.6	7.813	80.80	7.130	39.51 *	7.600	68.95
23	6.740	7.822	6.850	13.83 *	7.895	97.61	7.850	73.38	7.350	52.22	7.320	48.00
24	6.790	10.63	6.790	10.18	7.650	76.34	7.460	57.89 *	7.205	41.73	7.170	36.21
25	6.940	17.66 *	6.765	9.175	7.450	56.71	7.295	45.26	7.135	29.53	7.075	26.29
26	7.190	33.41 *	6.740	8.774	7.335	50.95	7.235	37.46	7.120	32.73	7.050	29.74 *
27	8.195	123.6	6.725	7.032	7.250	38.54 *	7.185	35.75	7.850	89.39	7.110	32.41
28	10.355	759.2 #	6.776	8.810	7.350	51.15	7.310	48.16	7.975	112.8	7.260	42.55
29	8.410	138.4	6.740	7.853	7.450	56.66	7.600	66.78 *	7.930	90.35 *	7.100	30.91
30	7.690	82.35	6.760	10.09 *	7.880	89.27	7.630	68.77 *	7.490	63.03	7.035	24.81
31			6.705	6.102	7.615	70.81			8.180	125.2		
Ten-Daily Mean												
I Ten-Daily	7.249	36.48	7.314	47.83	7.215	35.24	7.724	80.41	7.479	61.90	8.079	115.8
II Ten-Daily	6.905	16.85	6.933	20.06	7.086	30.57	8.695	164.6	7.572	68.57	7.375	53.73
III Ten-Daily	7.579	118.9	6.782	10.50	7.663	76.63	7.556	64.20	7.504	64.76	7.189	37.66
Monthly												
Min.	6.730	4.044	6.705	6.102	6.695	5.535	7.185	35.75	7.120	29.53	7.035	24.81
Max.	10.355	759.2	7.690	81.93	8.285	132.3	10.875	372.4	8.305	132.6	9.020	198.0
Mean	7.244	57.4	7.002	25.63	7.332	48.42	7.992	103.1	7.518	65.07	7.548	69.05

Annual Runoff in MCM = 1116 Annual Runoff in mm = 1378

Peak Observed Discharge = 759.2 cumecs on 28/06/2017 Corres. Water Level :10.355 m

Lowest Observed Discharge = 0.000 cumecs on 07/01/2018 Corres. Water Level :6.66 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : THUMPAMON (KYA00J4) **Division : SWR Division, Cochin**

Local River : Achankovil **Sub-Division : SWR SD No 1, Trivandrum**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	9.145	225.1	6.735	7.166	6.490	0.000	5.630	0.000	6.020	0.000	6.570	0.000
2	8.140	125.5 *	6.725	6.742	6.435	0.000	5.580	0.000	5.960	0.000	6.530	0.000
3	7.690	75.00 *	6.715	5.753	6.335	0.000	5.610	0.000	5.940	0.000	6.440	0.000
4	7.480	65.61	6.710	4.945	6.270	0.000	5.590	0.000	6.200	0.000	6.320	0.000
5	7.345	50.09	6.710	6.239 #	6.170	0.000	5.520	0.000	6.200	0.000	6.200	0.000
6	7.250	40.43	6.665	3.407	6.070	0.000	5.480	0.000	6.140	0.000	6.800	0.000
7	7.150	35.63	6.660	0.000	6.020	0.000	5.550	0.000	6.120	0.000	6.820	13.44
8	7.095	31.43	6.650	0.000	6.000	0.000	5.535	0.000	6.060	0.000	6.710	5.897
9	7.183	38.12	6.645	0.000	6.390	0.000	5.530	0.000	6.050	0.000	6.910	17.70
10	7.330	44.79 *	6.640	0.000	6.630	0.000	5.570	0.000	6.385	0.000	6.890	16.90
11	7.120	35.02	6.625	0.000	6.590	0.000	5.610	0.000	6.580	0.000	6.925	18.34
12	7.060	29.76	6.640	0.000	6.540	0.000	5.470	0.000	6.510	0.000	6.840	14.23
13	7.535	70.38	6.625	0.000	6.495	0.000	5.460	0.000	6.645	0.000	6.800	9.991 *
14	7.225	52.70 #	6.625	0.000	6.430	0.000	5.470	0.000	6.640	0.000	6.820	13.70
15	7.200	39.56	6.625	0.000	6.270	0.000	5.940	0.000	6.670	0.000	6.730	7.303
16	7.105	31.36	6.600	0.000	6.115	0.000	6.600	0.000	6.610	0.000	6.700	5.816
17	7.060	27.70 *	6.595	0.000	6.080	0.000	6.500	0.000	6.580	0.000	6.740	8.437
18	6.990	21.86	6.625	0.000	5.940	0.000	6.350	0.000	6.530	0.000	7.160	38.61
19	6.940	21.67	6.600	0.000	5.890	0.000	6.700	0.000	6.550	0.000	7.050	26.40
20	6.900	20.58	6.585	0.000	5.830	0.000	6.675	0.000	6.590	0.000	6.890	9.991 *
21	6.890	16.25	6.570	0.000	5.780	0.000	6.560	0.000	6.540	0.000	6.905	17.13
22	6.870	16.02	6.570	0.000	5.730	0.000	6.560	0.000	6.580	0.000	6.800	10.57
23	6.850	12.41	6.565	0.000	5.690	0.000	6.530	0.000	6.575	0.000	6.750	7.061
24	6.830	16.68 *	6.555	0.000	5.675	0.000	6.420	0.000	6.540	0.000	6.750	7.561
25	6.810	15.87 *	6.540	0.000	5.700	0.000	6.220	0.000	6.570	0.000	6.745	7.085
26	6.805	15.67 #	6.545	0.000	5.720	0.000	6.080	0.000	6.580	0.000	6.750	7.210
27	6.800	9.023	6.550	0.000	5.710	0.000	5.980	0.000	6.560	0.000	7.040	14.79 *
28	6.760	8.591	6.540	0.000	5.630	0.000	6.150	0.000	6.770	0.000	7.180	39.96
29	6.760	7.823	6.540	0.000			6.230	0.000	6.630	0.000	7.520	65.12
30	6.750	7.230	6.530	0.000			6.130	0.000	6.580	0.000	7.335	50.66
31	6.735	7.377 *	6.515	0.000			6.170	0.000			7.160	35.78
Ten-Daily Mean												
I Ten-Daily	7.581	73.17	6.686	3.425	6.281	0.000	5.559	0.000	6.107	0.000	6.619	5.394
II Ten-Daily	7.114	35.06	6.614	0.000	6.218	0.000	6.077	0.000	6.590	0.000	6.865	15.28
III Ten-Daily	6.805	12.09	6.547	0.000	5.704	0.000	6.275	0.000	6.593	0.000	6.994	23.90
Monthly												
Min.	6.735	7.230	6.515	0.000	5.630	0.000	5.460	0.000	5.940	0.000	6.200	0.000
Max.	9.145	225.1	6.735	7.166	6.630	0.000	6.700	0.000	6.770	0.000	7.520	65.12
Mean	7.155	39.2	6.614	1.105	6.094	0	5.981	0	6.430	0	6.832	15.15

Peak Computed Discharge = 184.5 cumecs on 17/09/2017 **Corres. Water Level :8.93 m**

Lowest Computed Discharge = 4.044 cumecs on 04/06/2017 **Corres. Water Level :7.56 m**

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

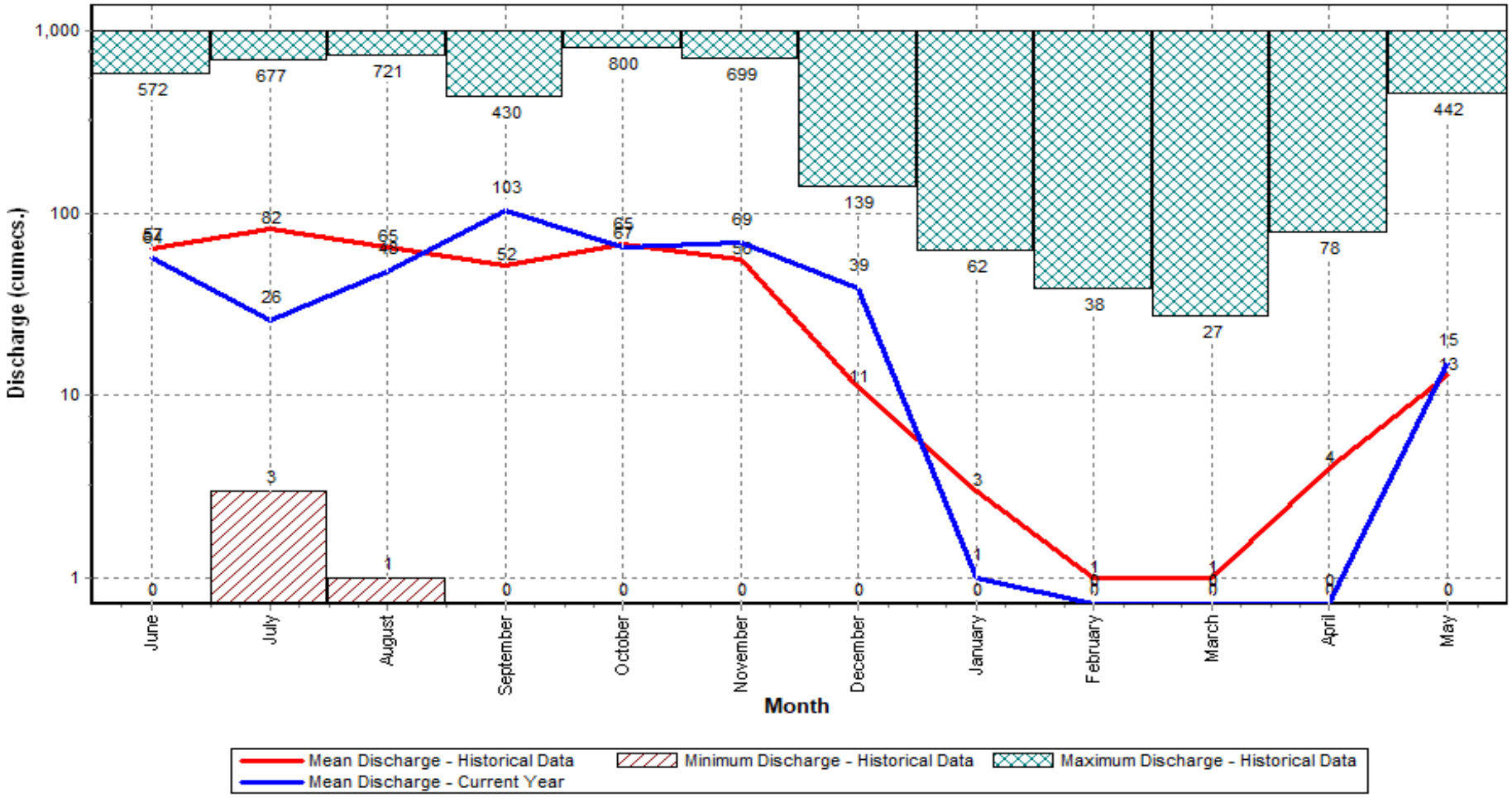
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : THUMPAMON (KYA00J4) | **Data considered : 1978-2018** | **Division : SWR Division, Cochin**

Local River : Achankovil | **Sub-Division : SWR SD No 1, Trivandrum**



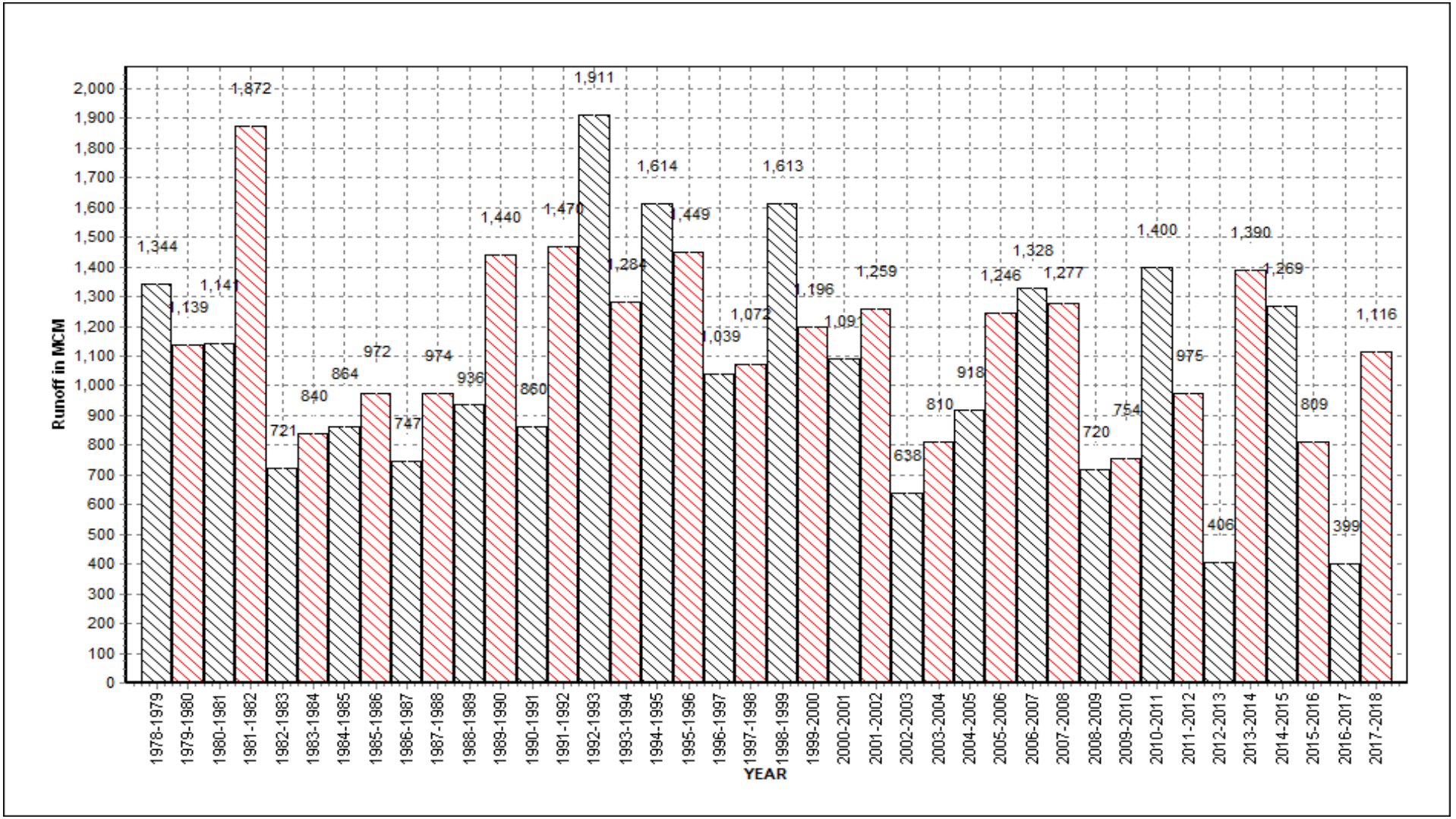
Annual Runoff Values for the period: 1978 - 2018

Station Name : THUMPAMON (KYA00J4)

Division : SWR Division, Cochin

Local River : Achankovil

Sub-Division : SWR SD No 1, Trivandrum



Note: Missing values have not been considered while arriving at Annual Runoff

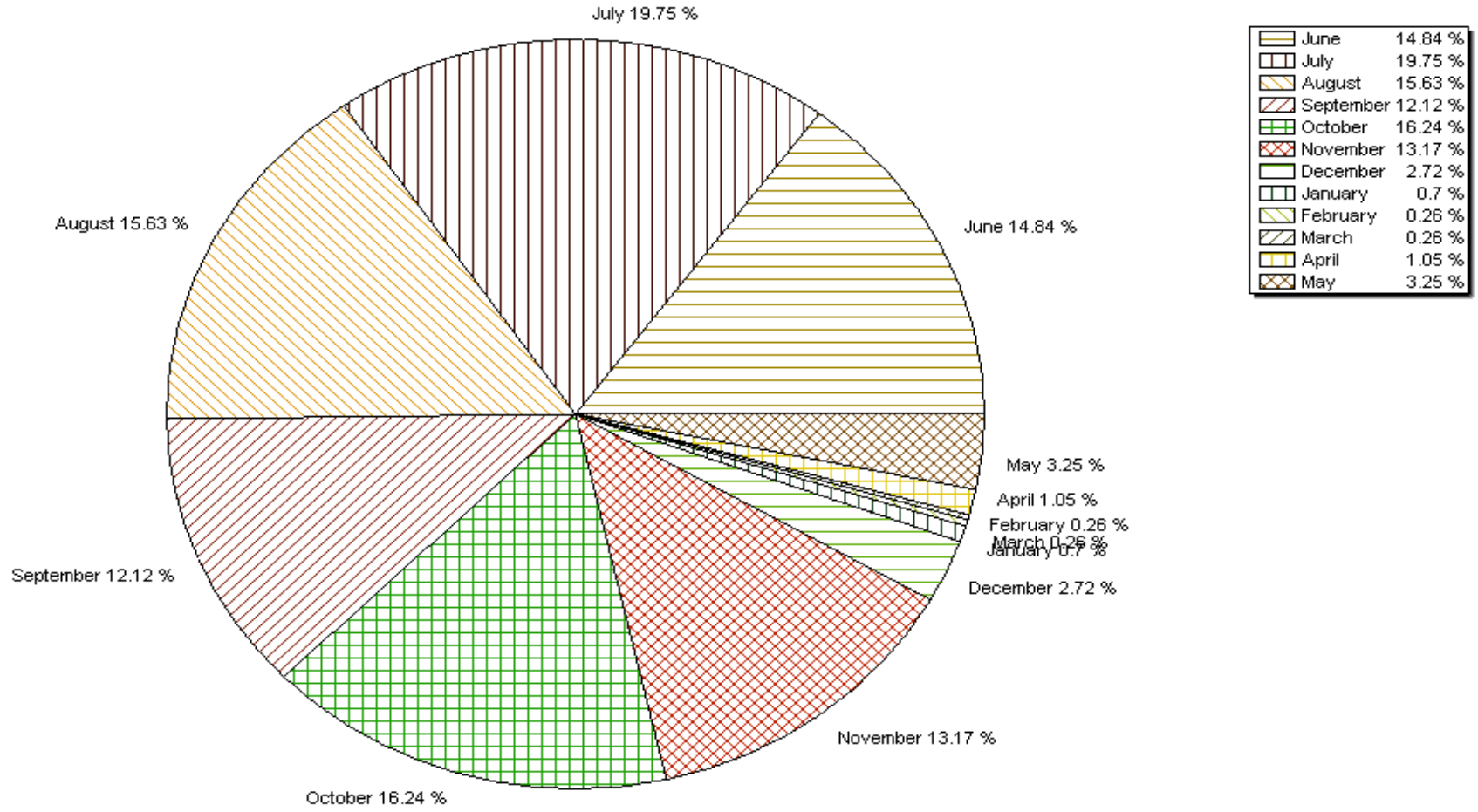
Monthly Average Runoff based on period : 1978-2017

Station Name : THUMPAMON (KYA00J4)

Local River : Achankovil

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum



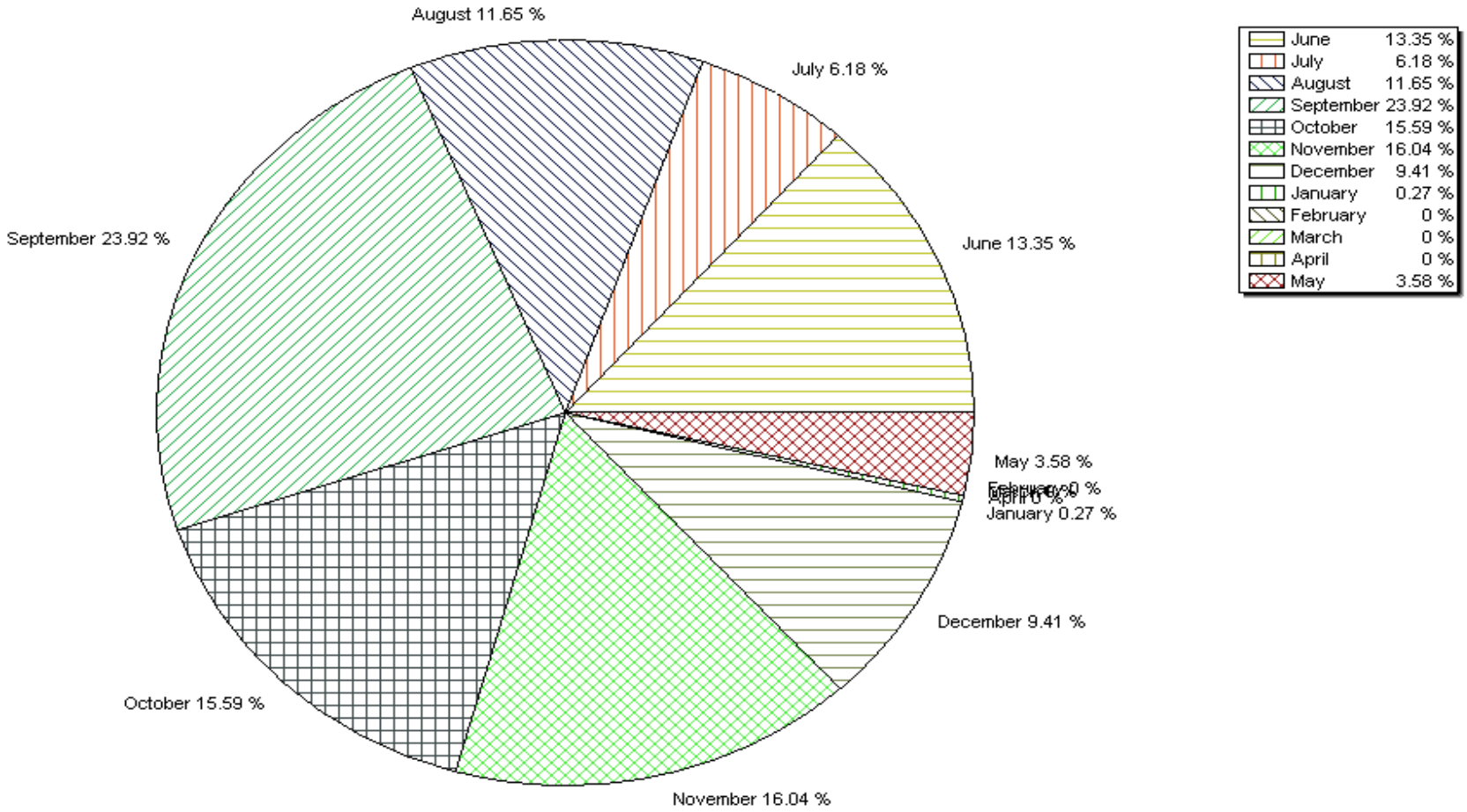
Monthly Runoff for the Year : 2017-2018

Station Name : THUMPAMON (KYA00J4)

Local River : Achankovil

Division : SWR Division, Cochin

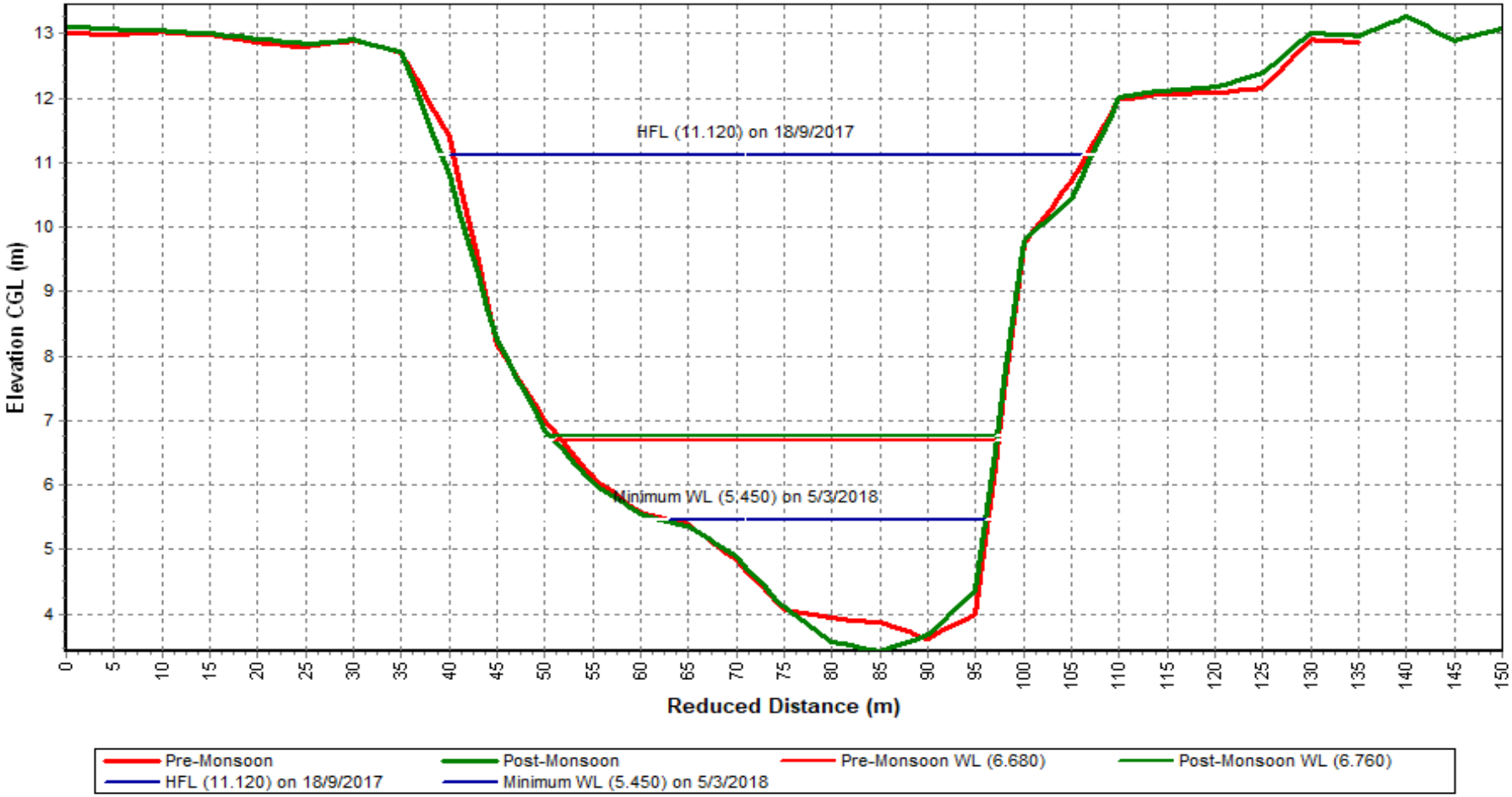
Sub-Division : SWR SD No 1, Trivandrum



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : THUMPAMON (KYA00J4) **Division : SWR Division, Cochin**

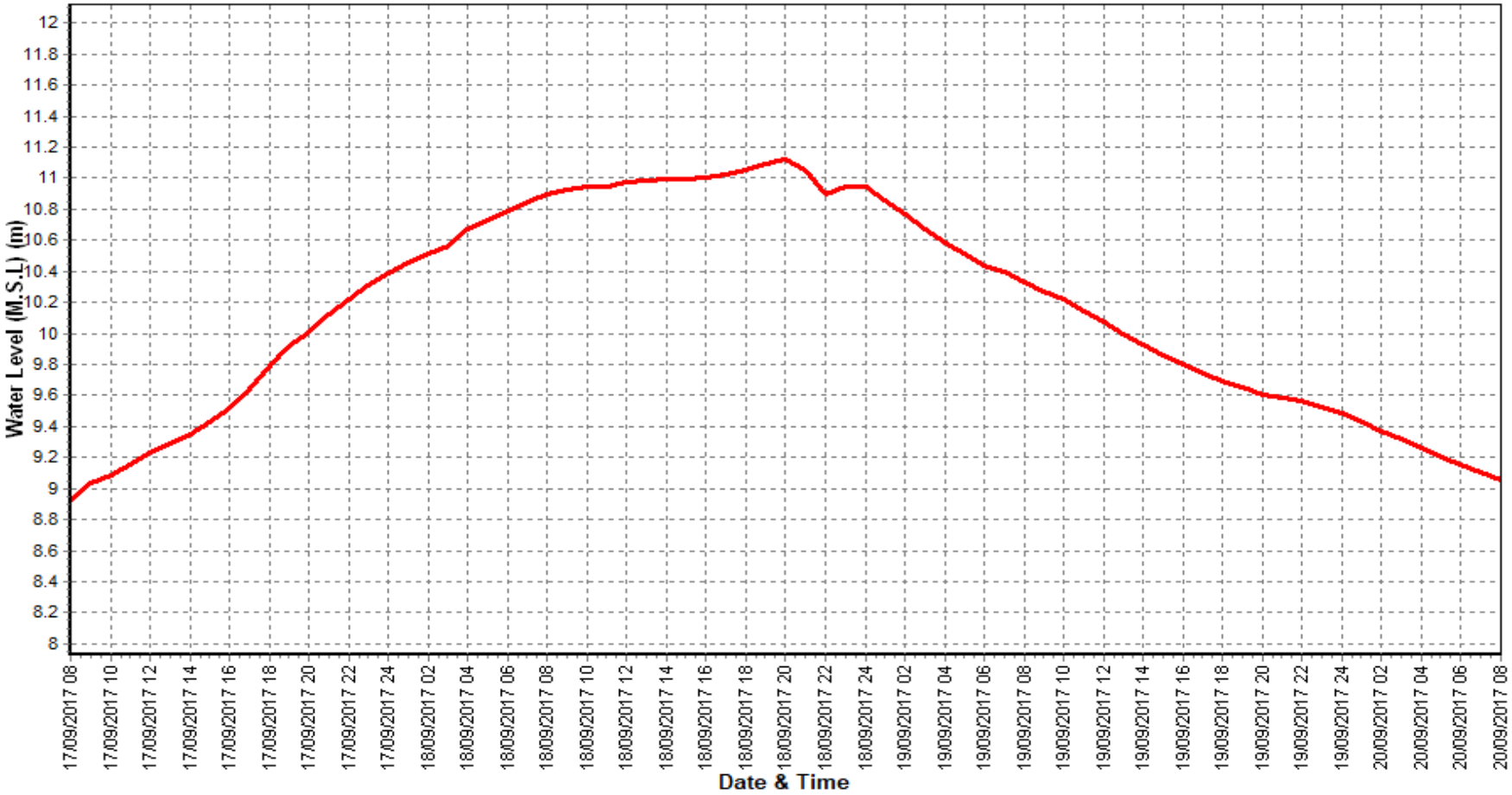
Local River : Achankovil **Sub-Division : SWR SD No 1, Trivandrum**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : THUMPAMON (KYA00J4) **Division : SWR Division, Cochin**

Local River : Achankovil **Sub-Division : SWR SD No 1, Trivandrum**

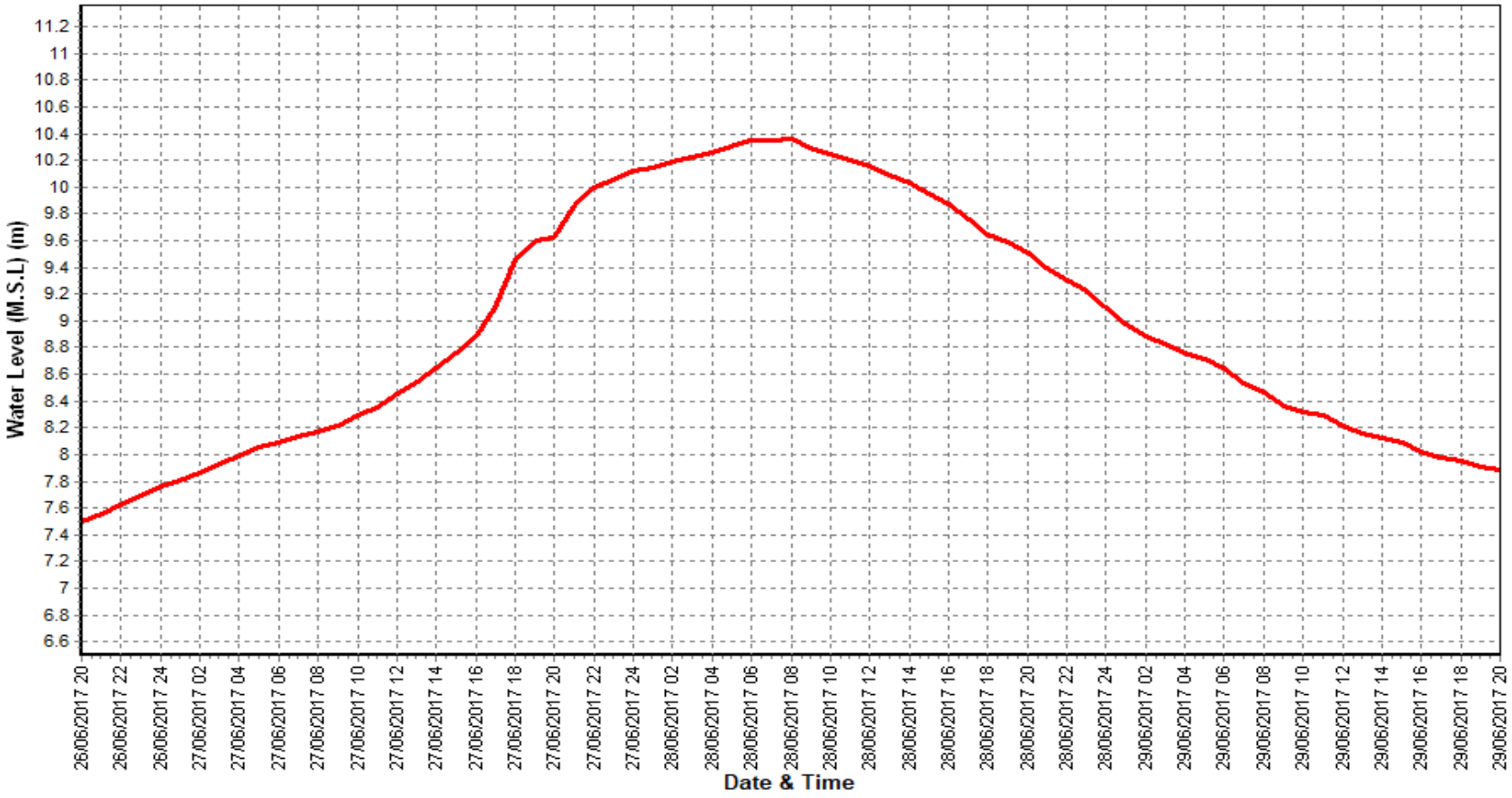


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : THUMPAMON (KYA00J4) **Division : SWR Division, Cochin**

Local River : Achankovil **Sub-Division : SWR SD No 1, Trivandrum**

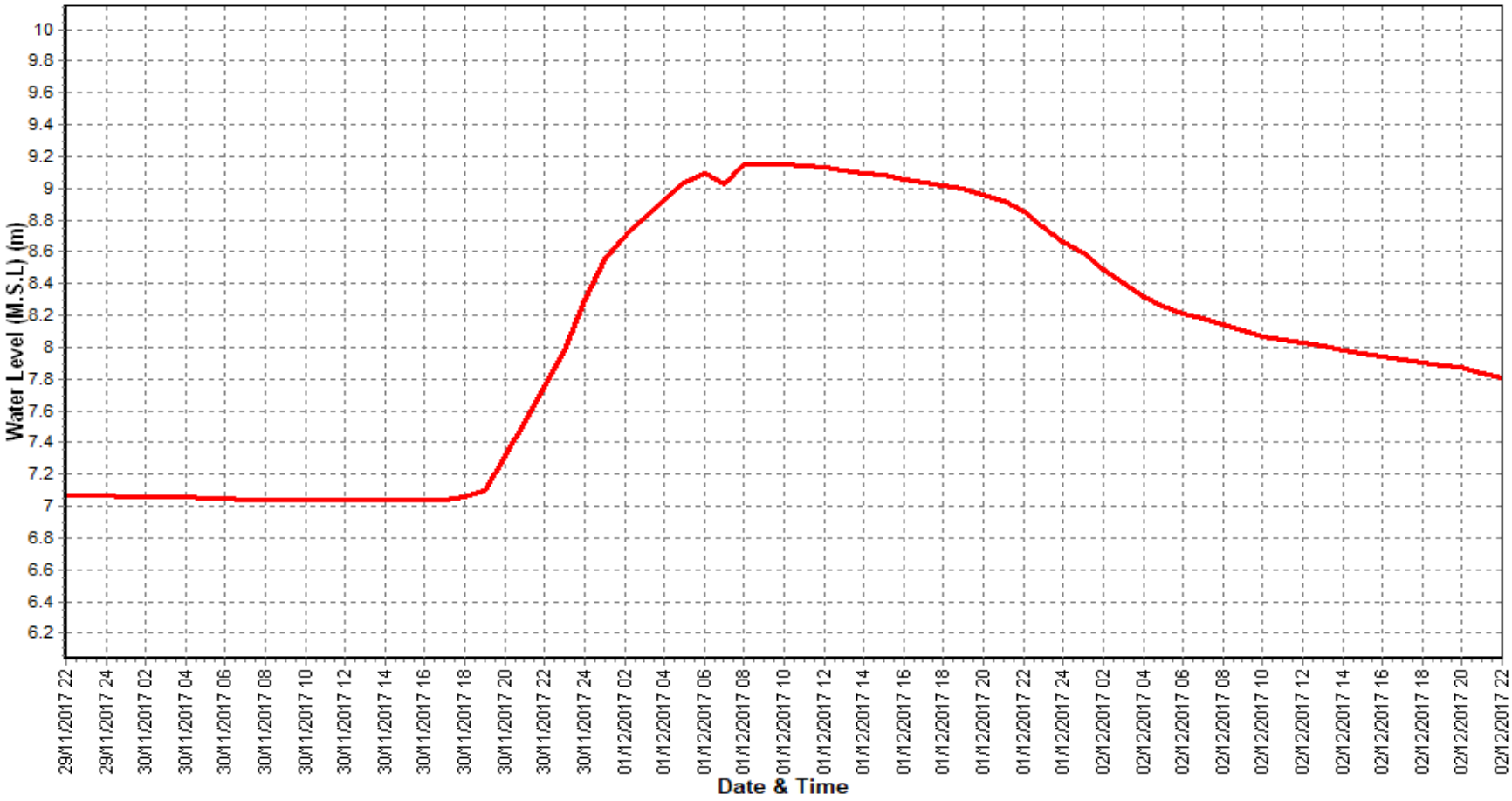


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : THUMPAMON (KYA00J4) **Division : SWR Division, Cochin**

Local River : Achankovil **Sub-Division : SWR SD No 1, Trivandrum**



450

Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	:	**PATTAZHY**	**Code**	:	**KD000G4**
State	:	Kerala	District		Quilon
Basin	:	WFR South of Tapi	Independent River	:	Kallada
Tributary	:	-	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Kallada
Division	:	SWR Division, Kochi	Sub-Division	:	SWR SD No 1, Trivandrum
Drainage Area	:	1210 Sq. Km.	Bank	:	Right
Latitude	:	09°04'22"	Longitude	:	76°45'40"
Zero of Gauge (m)	:	3.000 (m.s.l) -2.000 (m.s.l)	20-04-1978 01-06-2005	-	31-05-2005
		Opening Date	Closing Date		
Gauge	:	20-04-1978			
Discharge	:	20-04-1978			
Sediment	:	25-09-1980			
Water Quality	:	15-10-1978			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1978-1979	1130	13.340	07-11-1978	0.500	3.790	08-04-1979
1979-1980	453.5	8.943	20-11-1979	0.500	3.645	30-03-1980
1980-1981	226.2	6.843	04-07-1980	1.100	3.685	29-05-1981
1981-1982	464.0	9.040	22-09-1981	0.400	3.620	22-03-1982
1982-1983	192.9	6.560	10-11-1982	0.100	3.555	14-04-1983
1983-1984	448.8	8.875	20-08-1983	0.200	3.550	09-06-1983
1984-1985	399.9	8.483	04-10-1984	0.500	3.710	12-03-1985
1985-1986	247.6	7.058	01-07-1985	0.200	3.630	23-03-1986
1986-1987	210.8	6.643	09-08-1986	0.300	3.580	15-02-1987
1987-1988	264.1	6.918	27-06-1987	0.250	3.490	03-04-1988
1988-1989	270.3	6.720	03-09-1988	0.900	3.455	19-02-1989
1989-1990	488.2	8.465	23-07-1989	0.000	3.315	27-04-1990
1990-1991	581.9	8.840	04-11-1990	1.851	3.280	23-04-1991
1991-1992	482.7	8.411	08-06-1991	1.178	3.103	16-01-1992
1992-1993	2367	13.702	15-11-1992	0.998	2.957	11-04-1993
1993-1994	345.8	7.198	17-07-1993	0.417	2.888	01-02-1994
1994-1995	850.6	11.340	03-08-1994	6.837	2.920	21-02-1995
1995-1996	246.0	5.990	31-07-1995	1.875	2.340	21-05-1996

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1996-1997	223.6	5.710	13-10-1996	1.765	2.160	17-03-1997
1997-1998	223.0	5.700	22-10-1997	2.103	2.150	05-06-1997
1998-1999	746.1	10.610	13-10-1998	4.896	2.100	02-03-1999
1999-2000	367.0	6.905	18-10-1999	1.600	1.650	23-01-2000
2000-2001	417.7	7.720	28-09-2000	1.958	1.500	29-03-2001
2001-2002	333.3	6.780	09-07-2001	2.293	1.300	12-05-2002
2002-2003	221.1	5.200	09-11-2002	3.646	1.470	10-03-2003
2003-2004	160.3	4.410	06-05-2004	3.658	1.400	06-02-2004
2004-2005	164.5	4.850	05-08-2004	3.483	1.060	25-01-2005
2005-2006	250.8	4.600	14-09-2005	1.256	1.270	22-02-2006
2006-2007	301.5	6.130	30-10-2006	2.179	1.580	19-05-2007
2007-2008	322.9	7.650	17-07-2007	0.449	1.550	06-06-2007
2008-2009	103.6	4.200	07-09-2008	4.888	1.330	11-02-2009
2009-2010	253.4	5.970	10-11-2009	2.882	1.800	05-11-2009
2010-2011	502.6	7.530	04-10-2010	8.771	1.120	25-01-2011
2011-2012	174.9	3.800	08-11-2011	6.248	1.170	28-05-2012
2012-2013	118.3	3.110	01-09-2012	0.524	0.920	17-01-2013
2013-2014	265.0	5.020	17-10-2013	3.626	1.300	12-02-2014
2014-2015	563.3	8.800	23-08-2014	1.428	1.160	19-02-2015
2015-2016	335.0	5.680	28-06-2015	0.000	0.840	05-02-2016
2016-2017	287.5	4.220	09-06-2016	0.111	1.000	14-02-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : PATTAZHY (KD000G4) **Division : SWR Division, Cochin**

Local River : Kallada **Sub-Division : SWR SD No 1, Trivandrum**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	2.730	32.62 #	3.030	53.42	2.070	7.071	2.570	24.57 *	3.200	64.02 *	3.450	123.3
2	3.050	54.01	3.060	58.24 *	2.120	8.010	2.500	22.60	3.200	64.02 *	3.685	162.9
3	4.020	220.5	2.930	47.06	2.100	7.616	2.440	18.57 *	3.140	47.11	3.850	227.8
4	3.300	81.80 *	2.900	44.70	2.370	15.43	2.540	23.10 *	2.790	36.16	3.570	163.7 *
5	3.050	54.21	2.780	35.79	2.470	20.62	2.840	45.91	3.090	46.94	4.110	244.9 *
6	3.180	66.35	2.690	31.95	2.690	31.03 *	4.080	182.4	3.490	85.74 #	3.670	190.9
7	2.960	48.73	2.650	28.21	2.640	26.92	3.500	117.9	3.200	61.21	3.610	169.8
8	2.930	44.46	2.650	28.73	2.620	25.78	3.280	87.70	3.220	65.40 *	3.730	198.6
9	2.720	32.62 #	2.600	25.59 *	2.650	28.81	3.420	98.75	3.120	75.60	4.205	277.3
10	2.630	21.08	2.640	27.10	2.500	22.53	3.200	89.68 *	2.980	55.35	3.690	197.2
11	2.670	29.57 *	2.570	24.68	2.430	18.73	3.200	90.00	2.940	48.85	3.590	172.1
12	2.640	23.95	2.500	22.60	2.570	25.03	2.860	64.03	3.030	54.25	3.530	154.3 *
13	2.580	20.47	2.430	18.55	2.400	16.92 *	2.750	54.19	3.210	64.71 #	3.450	147.8
14	2.500	18.81	2.470	20.38	2.320	14.09	3.600	124.5 #	3.210	78.46	2.970	93.75
15	2.580	20.97	2.360	14.62	2.260	11.85 *	3.480	113.4 #	3.160	61.31 *	2.810	81.45
16	2.420	17.85	2.310	12.58 *	2.250	10.63	2.960	88.60	3.120	75.22	2.740	63.83
17	2.420	17.85	2.290	12.53	2.240	10.39	4.070	140.5 *	3.010	49.64	2.680	50.19
18	2.310	12.58 *	2.250	10.66	2.240	10.46	5.550	337.0	3.000	51.13 *	2.620	62.27 #
19	2.240	11.35	2.350	14.51	2.500	20.60	3.870	119.9 #	3.030	49.13	2.580	59.16 *
20	2.240	9.672	2.620	25.58	2.410	17.32 *	3.600	94.95 #	2.940	47.70	2.880	92.63
21	2.170	9.650	2.400	15.38	2.780	35.99	3.420	82.63	2.930	47.33	2.880	94.12
22	2.150	8.778	2.320	11.90	2.960	48.10	3.450	84.80	3.380	77.07 *	3.145	127.8
23	2.270	11.98	2.700	31.37 *	2.930	47.60	3.310	90.39	3.030	47.65	2.780	90.27
24	2.590	21.07	2.550	23.00	2.690	31.86	3.250	67.50 *	2.690	67.92 #	2.680	76.61
25	2.820	39.25 *	2.190	9.110	2.570	23.23	3.180	57.79	2.940	90.39 #	2.580	61.11
26	2.970	50.60 *	2.130	7.928	2.470	20.52	3.160	56.98	3.120	76.93	2.510	53.95 *
27	3.760	139.3 #	2.100	7.575	2.460	19.43 *	3.140	55.20	3.610	164.2	2.780	82.39
28	4.400	268.1	2.170	8.839	2.570	22.41	3.180	58.25	3.880	209.2	3.050	111.9
29	3.500	133.8	2.180	9.131	2.650	29.43	3.390	77.84 *	3.600	167.8 *	2.950	91.66
30	3.280	83.03	2.100	7.328 *	2.780	36.67	3.280	69.65 *	3.310	110.1	2.960	94.84
31			2.070	7.018	2.640	27.20			3.450	131.2		
Ten-Daily Mean												
I Ten-Daily	3.057	65.64	2.793	38.08	2.423	19.38	3.037	71.12	3.143	60.15	3.757	195.6
II Ten-Daily	2.460	18.31	2.415	17.67	2.362	15.60	3.594	122.7	3.065	58.04	2.985	97.75
III Ten-Daily	2.991	76.56	2.265	12.60	2.682	31.13	3.276	70.10	3.267	108.2	2.832	88.47
Monthly												
Min.	2.150	8.778	2.070	7.018	2.070	7.071	2.440	18.57	2.690	36.16	2.510	50.19
Max.	4.400	268.1	3.060	58.24	2.960	48.10	5.550	337.0	3.880	209.2	4.205	277.3
Mean	2.836	53.5	2.484	22.45	2.495	22.33	3.302	87.98	3.162	76.51	3.191	127.3

Annual Runoff in MCM = 1482 Annual Runoff in mm = 1225

Peak Observed Discharge = 572.1 cumecs on 01/12/2017 Corres. Water Level :6.675 m

Lowest Observed Discharge = 1.287 cumecs on 21/02/2018 Corres. Water Level :1.65 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : PATTAZHY (KD000G4) **Division : SWR Division, Cochin**

Local River : Kallada **Sub-Division : SWR SD No 1, Trivandrum**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	6.675	572.1	2.120	14.05 *	1.970	5.446	1.900	4.279	2.030	5.983 *	2.240	10.29
2	7.350	728.9 *	2.120	14.05 *	1.970	4.752	1.900	4.537	2.050	6.398	2.090	6.645
3	4.800	298.6 *	2.120	14.05 *	1.970	4.924	1.910	4.107	2.050	5.583	2.040	6.088
4	3.450	179.9	2.100	13.25	2.000	5.538 *	1.900	4.193 *	2.050	5.595	2.040	6.716
5	3.330	155.6	2.090	12.83	1.900	4.033	1.990	4.863	2.050	6.040	2.100	7.152
6	3.230	128.1	2.070	10.41	1.910	4.044	1.900	4.072	2.050	5.959	2.320	11.32 *
7	3.230	129.3	2.060	11.20 *	1.910	4.259	1.920	4.517	2.040	5.870	2.240	9.295
8	3.210	128.1	2.070	10.46	2.080	6.851	1.910	4.142	2.280	10.47 *	2.050	7.150
9	3.200	130.2	2.050	6.676	2.170	8.073	1.990	4.749	2.100	6.824	2.080	7.595
10	3.310	137.0 *	2.040	6.663	2.100	7.038	1.990	4.807	2.200	8.789	2.100	7.738
11	3.230	136.3	2.030	6.814	2.050	6.290 *	1.870	3.831 *	2.200	8.694	2.150	8.540
12	3.090	110.0	2.030	6.908	1.950	5.382	2.010	4.733	2.330	11.58	2.080	6.844
13	3.050	101.6	2.030	6.211	1.910	4.318 *	2.040	5.623	2.200	8.634	2.050	6.290 *
14	3.270	137.9	2.030	5.983 *	1.880	4.257	2.180	7.090	2.210	9.070 *	1.960	5.375
15	3.160	109.4	2.000	6.075	1.860	3.822	2.250	8.237	2.270	10.26 *	1.880	4.384
16	3.040	98.71	1.990	5.732	1.860	3.776	2.140	7.210	2.020	5.812	1.880	4.340
17	2.900	92.97 *	2.000	6.068	1.830	3.789	2.100	6.369	2.230	8.965	1.880	4.363
18	2.880	86.74	2.050	6.449	2.250	9.856 *	2.350	11.98 *	2.150	7.768	2.300	12.14
19	2.620	62.47	2.030	6.266	1.870	4.167	2.200	8.957	2.100	7.078	2.310	12.11
20	2.380	34.92	2.030	6.137	1.870	4.711	2.130	7.003	2.260	10.01	2.100	3.677 *
21	2.350	32.98	2.030	5.983 *	1.650	1.287	2.090	6.177	2.100	7.198	2.260	10.44
22	2.800	69.86	2.020	6.193	1.730	1.868	2.130	7.389	2.100	7.097 *	2.100	3.677 #
23	2.770	79.14	2.090	7.029	1.800	2.645	2.130	7.540	2.040	6.282	2.050	2.416 #
24	2.770	73.77 *	2.080	6.929	1.860	3.983	2.080	6.434	2.010	5.828	2.250	9.808
25	2.750	71.05 *	1.950	5.189	1.870	3.831 *	2.140	7.783 *	2.040	6.271	2.350	12.37
26	2.750	73.86	1.990	5.394 *	1.840	3.170	2.080	6.472	2.040	6.274	2.250	10.20
27	2.450	38.39	1.940	5.145	1.870	4.435	2.050	6.747	2.040	6.124	2.800	64.68 *
28	2.410	15.63 #	1.940	4.706 *	1.900	4.549	2.070	6.646	2.310	11.63	2.660	41.99
29	2.170	16.99	2.030	5.500			2.050	6.290 *	2.100	7.097 *	2.760	59.02
30	2.150	15.16	1.990	5.097			2.080	6.768 *	2.280	10.47 *	2.560	42.36
31	2.140	15.09 *	1.970	5.499			2.030	5.948			2.880	74.61
Ten-Daily Mean												
I Ten-Daily	4.179	258.8	2.084	11.36	1.998	5.496	1.931	4.427	2.090	6.751	2.130	7.999
II Ten-Daily	2.962	97.10	2.022	6.264	1.933	5.037	2.127	7.103	2.197	8.787	2.059	6.806
III Ten-Daily	2.501	45.63	2.003	5.697	1.815	3.221	2.085	6.745	2.106	7.427	2.447	30.14
Monthly												
Min.	2.140	15.09	1.940	4.706	1.650	1.287	1.870	3.831	2.010	5.583	1.880	2.416
Max.	7.350	728.9	2.120	14.05	2.250	9.856	2.350	11.98	2.330	11.63	2.880	74.61
Mean	3.191	131	2.035	7.708	1.923	4.682	2.049	6.113	2.131	7.655	2.220	15.47

Peak Computed Discharge = 728.9 cumecs on 02/12/2017 **Corres. Water Level :7.35 m**

Lowest Computed Discharge = 3.677 cumecs on 20/05/2018 **Corres. Water Level :2.1 m**

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m:Computed Discharge

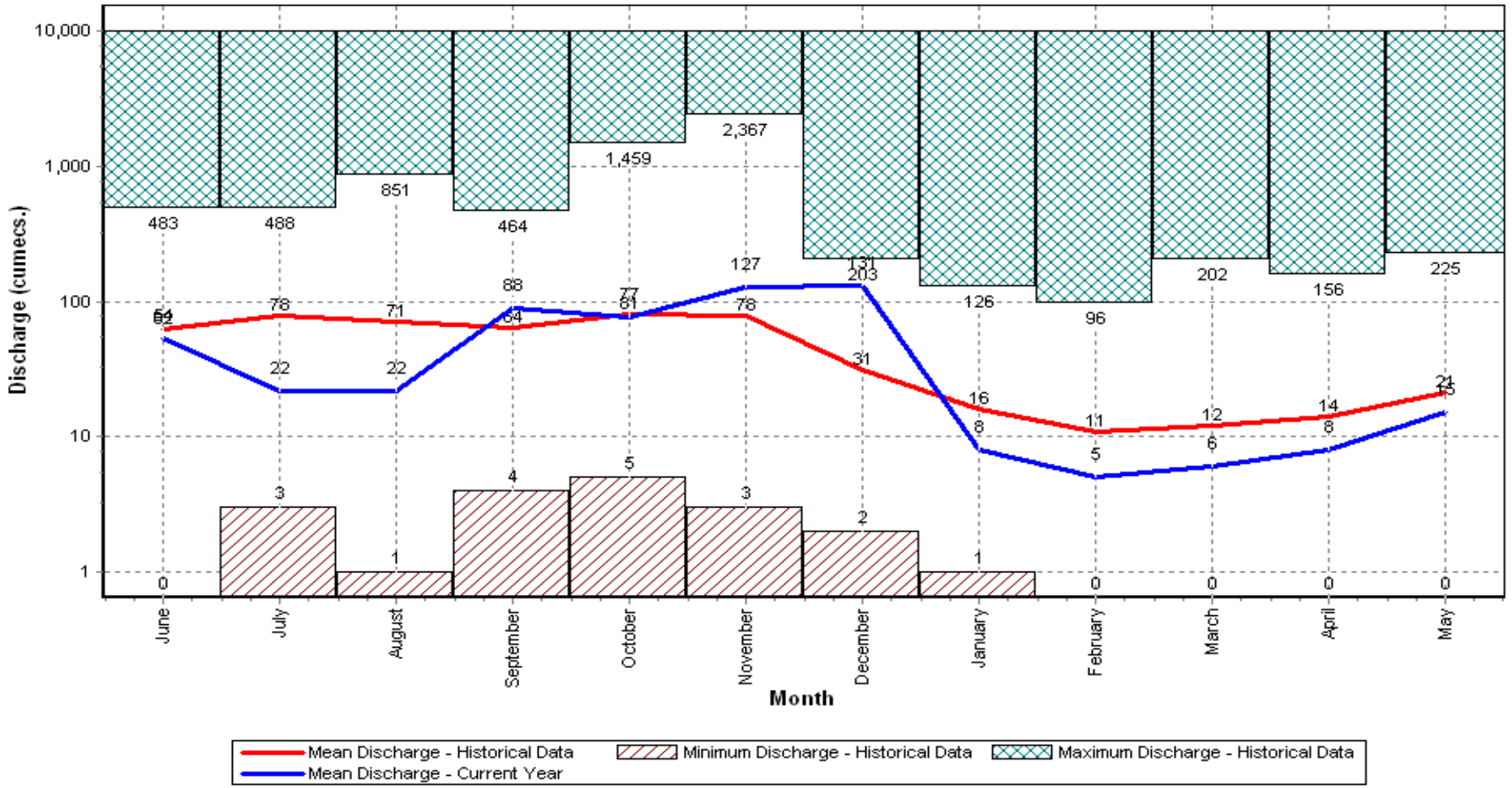
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : PATTAZHY (KD000G4) | **Data considered : 1978-2018** | **Division : SWR Division, Cochin**

Local River : Kallada | **Sub-Division : SWR SD No 1, Trivandrum**



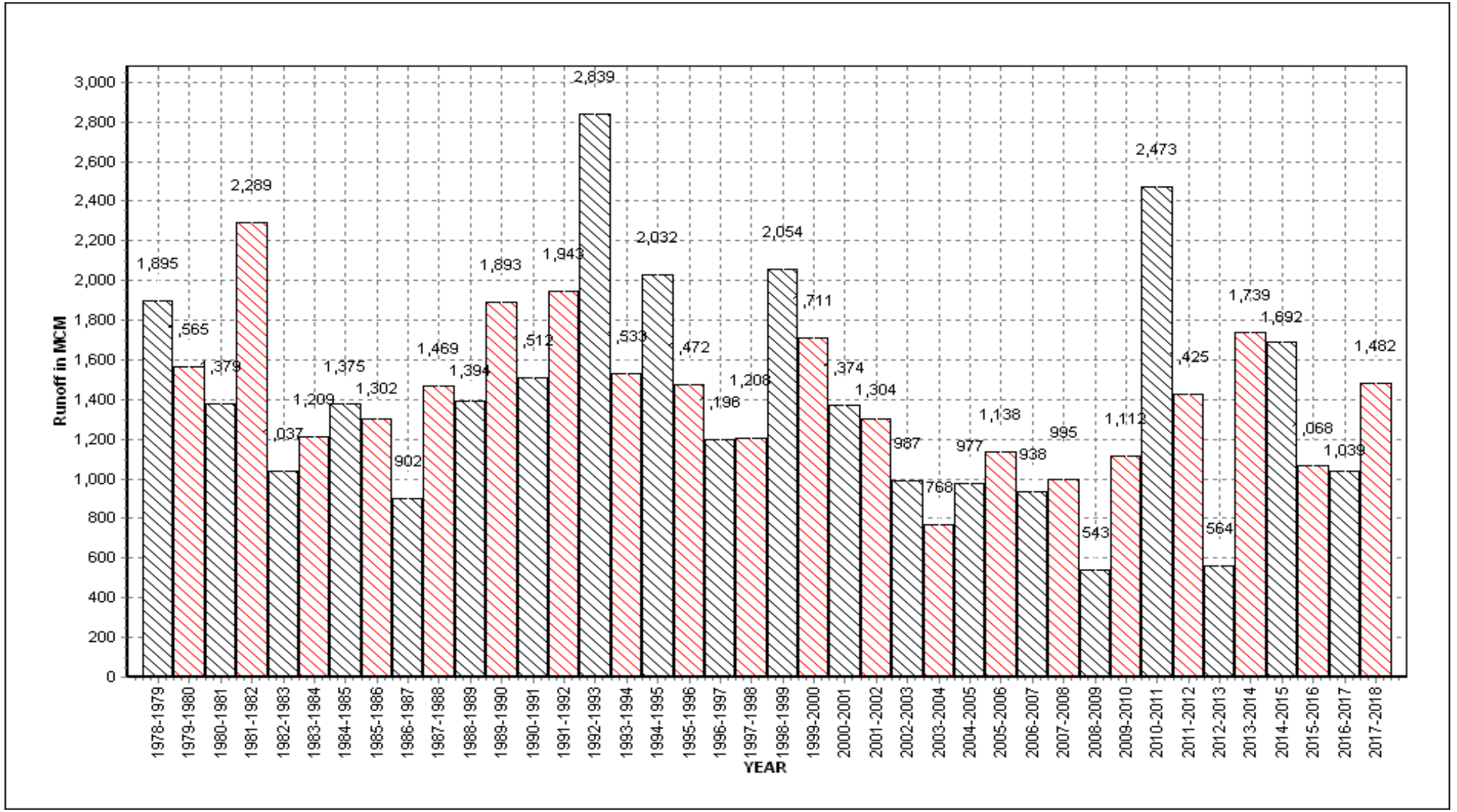
Annual Runoff Values for the period: 1978 - 2018

Station Name : PATTAZHY (KD000G4)

Local River : Kallada

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum



Note: Missing values have not been considered while arriving at Annual Runoff

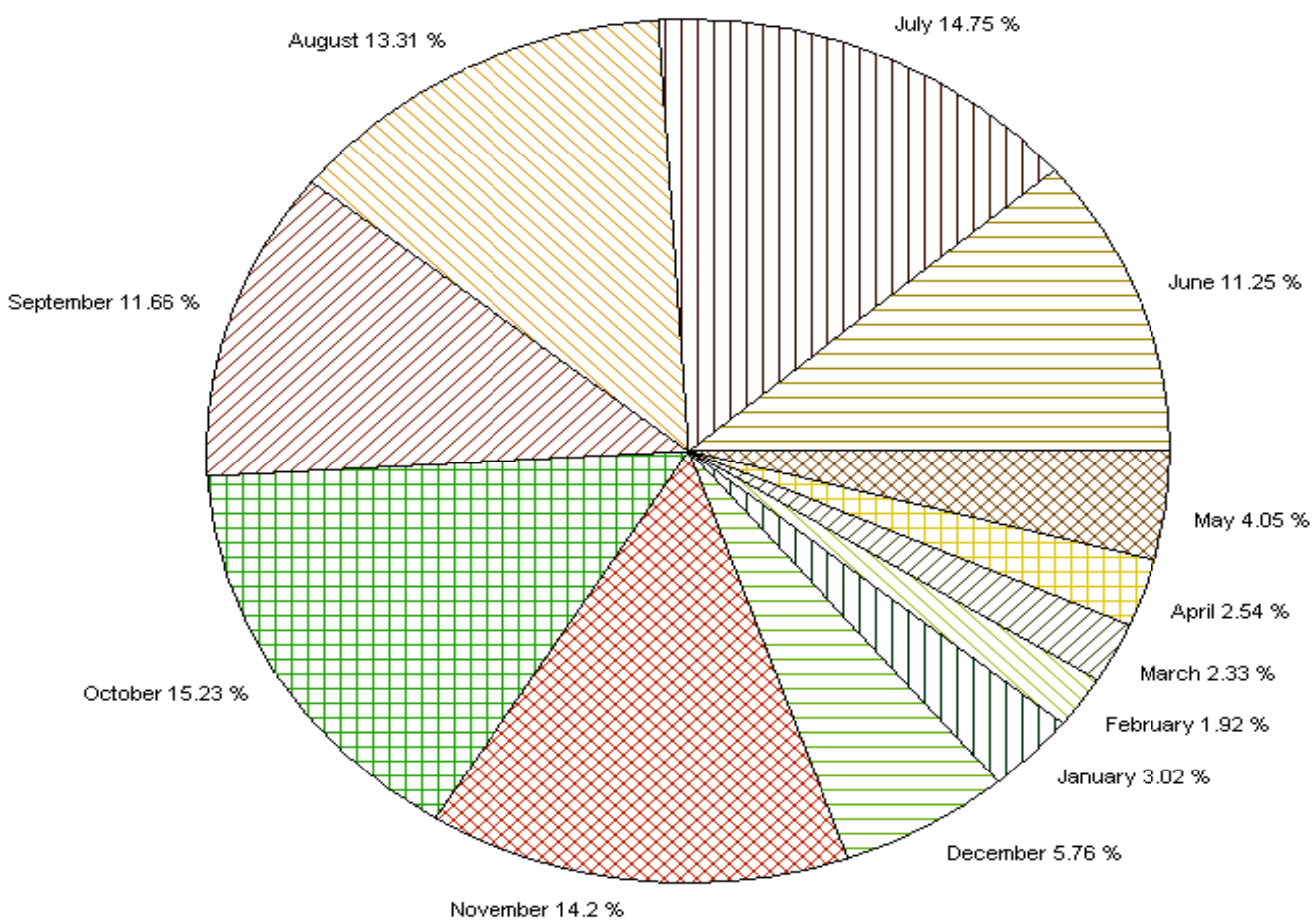
Monthly Average Runoff based on period : 1978-2017

Station Name : PATTAZHY (KD000G4)

Local River : Kallada

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum



June	11.25 %
July	14.75 %
August	13.31 %
September	11.66 %
October	15.23 %
November	14.2 %
December	5.76 %
January	3.02 %
February	1.92 %
March	2.33 %
April	2.54 %
May	4.05 %

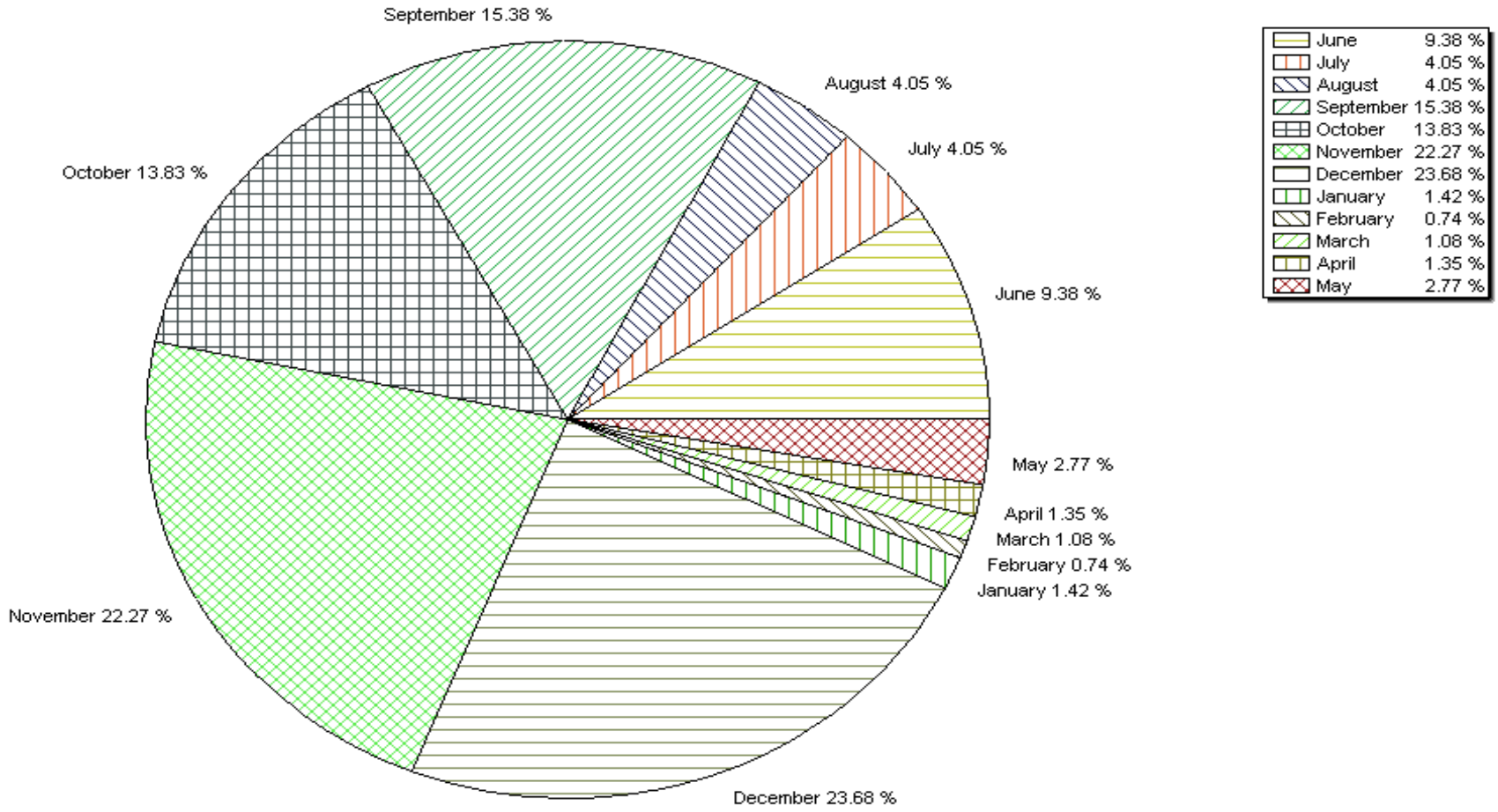
Monthly Runoff for the Year : 2017-2018

Station Name : PATTAZHY (KD000G4)

Local River : Kallada

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum



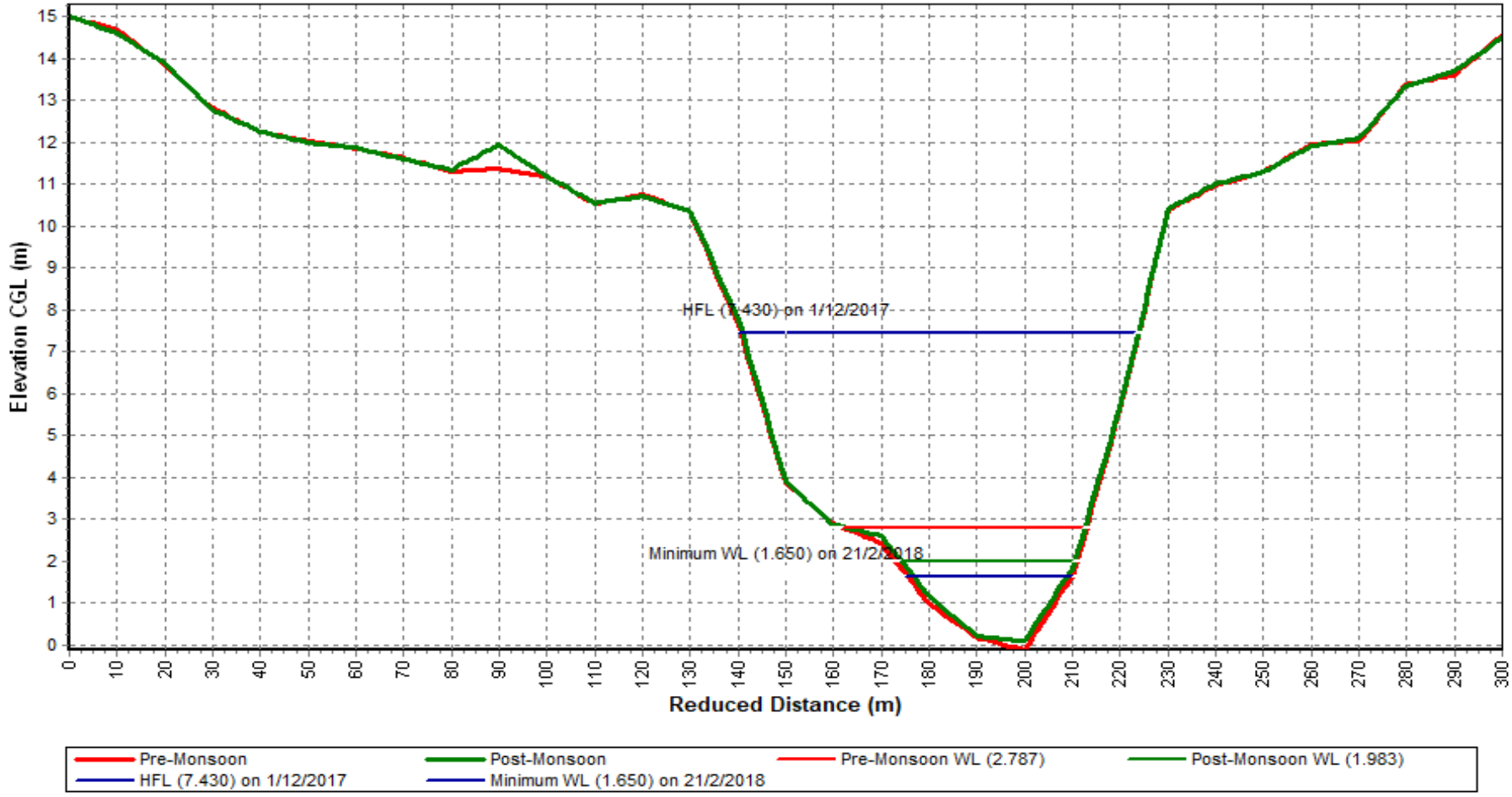
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : PATTAZHY (KD000G4)

Local River : Kallada

Division : SWR Division, Cochin

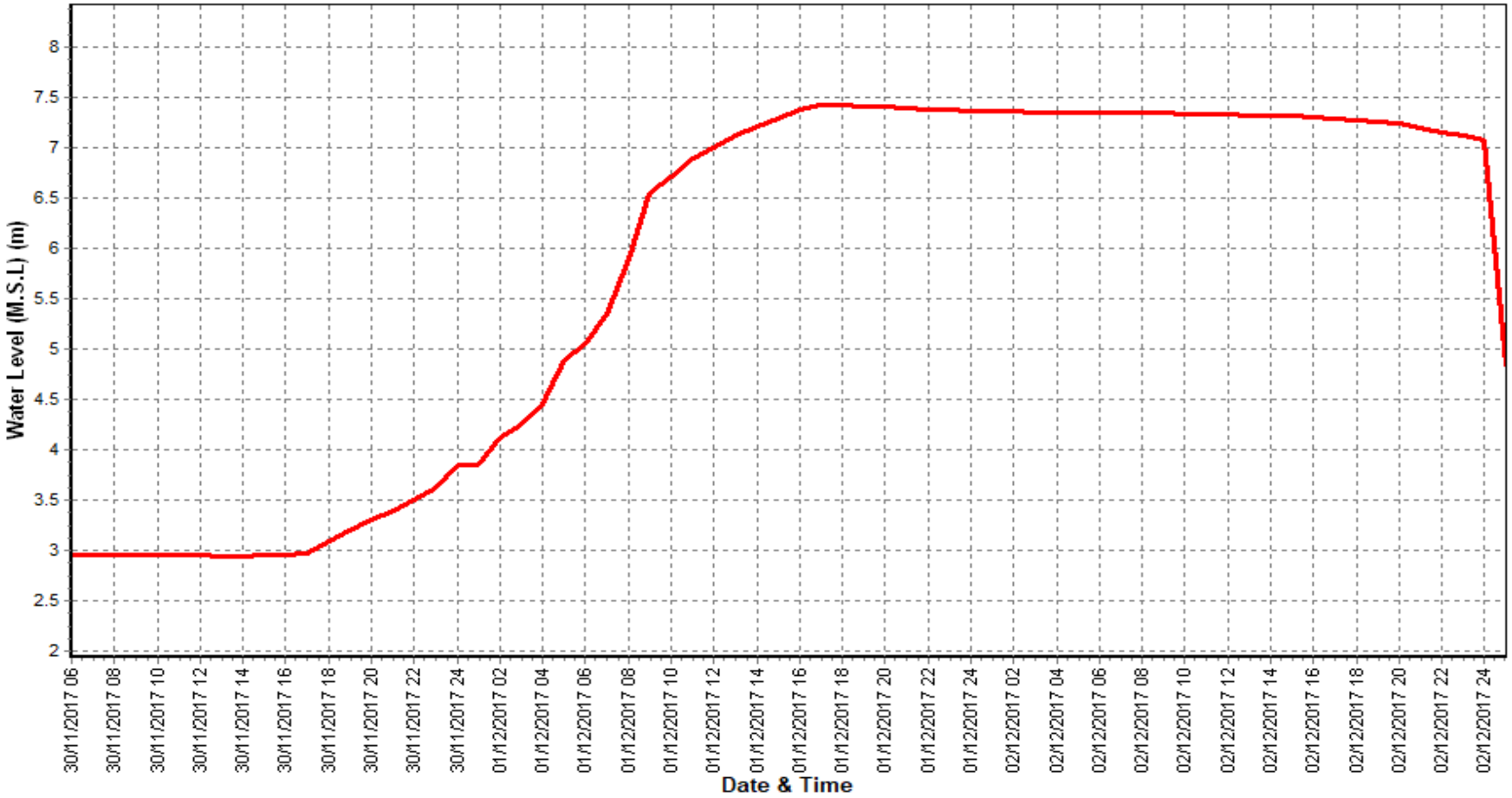
Sub-Division : SWR SD No 1, Trivandrum



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : PATTAZHY (KD000G4) **Division : SWR Division, Cochin**

Local River : Kallada **Sub-Division : SWR SD No 1, Trivandrum**



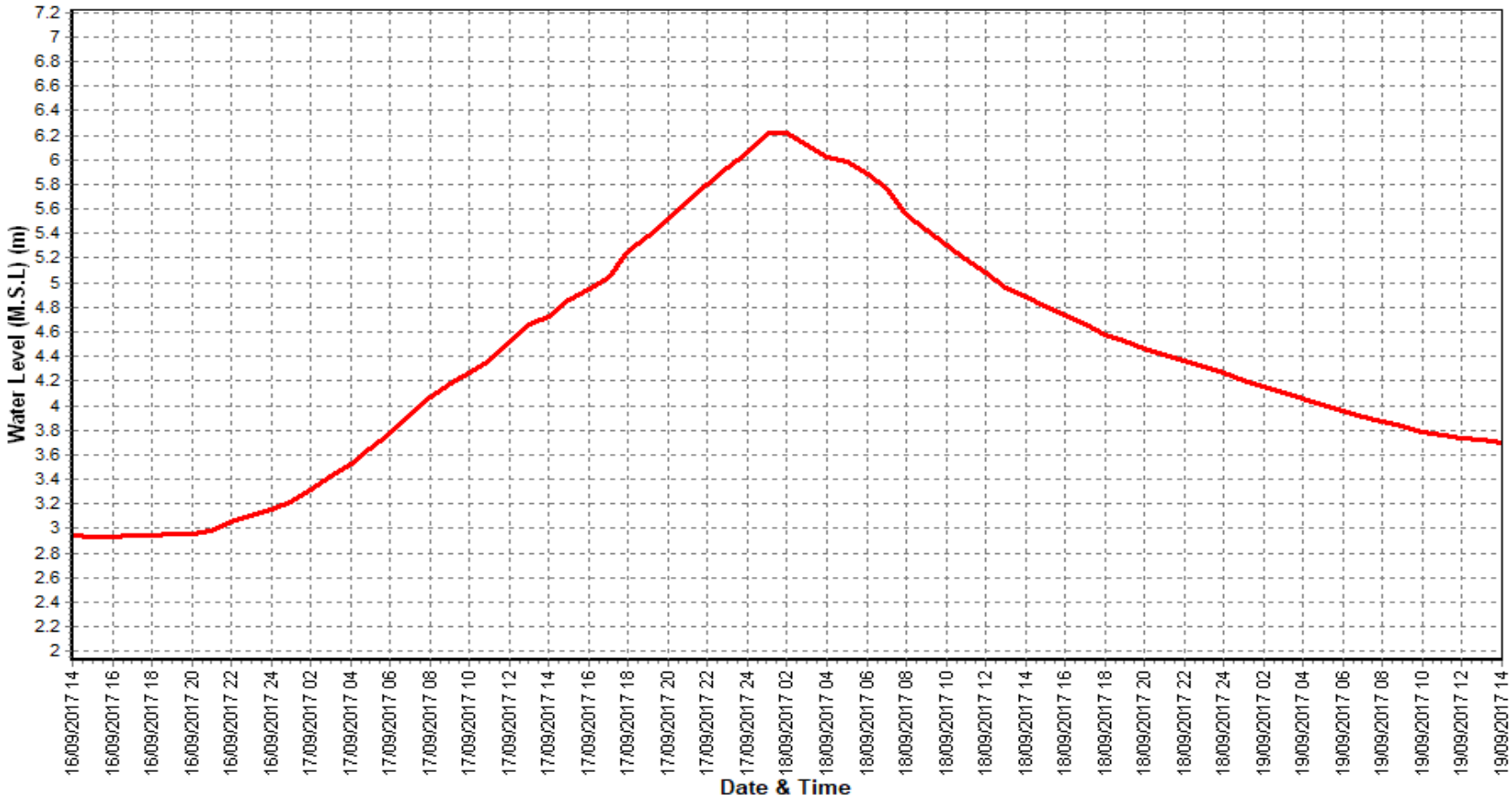
460

Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : PATTAZHY (KD000G4) **Division : SWR Division, Cochin**

Local River : Kallada **Sub-Division : SWR SD No 1, Trivandrum**

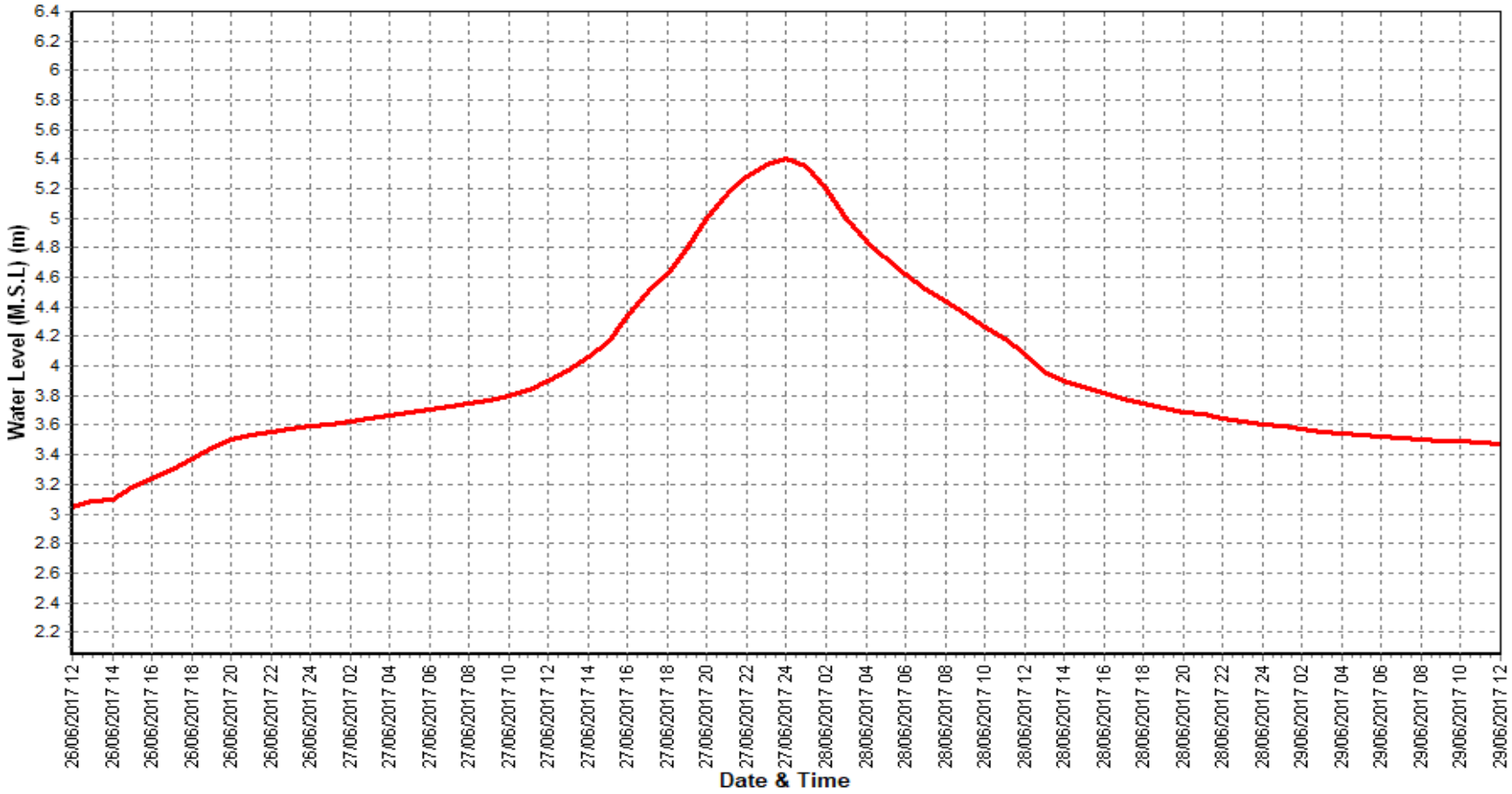


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : PATTAZHY (KD000G4) **Division : SWR Division, Cochin**

Local River : Kallada **Sub-Division : SWR SD No 1, Trivandrum**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	**: AYILAM**		**Code**	**: KV000G3**	
State	: Kerala		District	Thiruvananthapuram	
Basin	: WFR South of Tapi		Independent River	: Vamanapuram	
Tributary	: -		Sub Tributary	: -	
Sub-Sub Tributary	: -		Local River	: Vamanapuram	
Division	: SWR Division, Kochi		Sub-Division	: SWR SD No 1, Trivandrum	
Drainage Area	: 540 Sq. Km.		Bank	: Left	
Latitude	: 08°42'54"		Longitude	: 76°51'00"	
Zero of Gauge (m)	: 0.000 (m.s.l)		01-06-1978		
	Opening Date		Closing Date		
Gauge	: 01-06-1978				
Discharge	: 18-12-1978				
Sediment	: 26-12-1978				
Water Quality	: 02-01-1979				

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1979-1980	169.9	4.878	17-11-1979	0.300	1.260	25-03-1980
1980-1981	227.1	5.633	17-11-1980	0.500	0.725	29-05-1981
1981-1982	268.5	5.735	05-06-1981	0.000	0.300	02-03-1982
1982-1983	196.3	4.570	09-06-1982	0.000	0.050	14-01-1983
1983-1984	93.50	2.653	23-09-1983	0.000	0.930	01-06-1983
1984-1985	298.5	5.490	03-10-1984	0.000	0.370	11-03-1985
1985-1986	141.1	3.915	24-06-1985	0.000	0.790	24-02-1986
1986-1987	185.3	4.298	08-08-1986	0.000	0.410	09-01-1987
1987-1988	138.5	3.700	24-09-1987	0.000	0.870	16-03-1988
1988-1989	165.5	4.070	03-09-1988	0.000	0.625	21-01-1989
1989-1990	213.6	4.335	22-07-1989	0.000	0.330	01-02-1990
1990-1991	305.4	6.275	04-11-1990	0.000	0.380	02-02-1991
1991-1992	251.3	5.522	08-06-1991	1.137	0.283	28-05-1992
1992-1993	974.8	10.367	10-10-1992	0.301	0.230	26-01-1993
1993-1994	365.1	6.204	11-11-1993	0.242	0.353	08-02-1994
1994-1995	340.7	6.945	03-08-1994	0.000	0.490	25-01-1995
1995-1996	116.5	3.245	31-07-1995	0.000	0.490	06-01-1996
1996-1997	506.3	7.095	18-10-1996	0.000	0.400	10-01-1997
1997-1998	326.3	5.700	16-09-1997	0.000	0.370	01-06-1997

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
1998-1999	500.3	8.310	12-10-1998	0.000	0.440	26-02-1999
1999-2000	272.5	5.500	17-10-1999	0.600	0.300	17-04-2000
2000-2001	341.4	5.432	26-08-2000	0.000	0.805	01-06-2000
2001-2002	360.1	5.852	09-07-2001	0.000	0.480	16-01-2002
2002-2003	204.0	3.840	09-11-2002	0.000	0.360	16-01-2003
2003-2004	207.7	3.975	07-10-2003	0.000	0.730	01-06-2003
2004-2005	220.7	4.105	30-05-2005	0.000	0.690	15-01-2005
2005-2006	296.2	5.193	12-12-2005	0.000	0.560	01-02-2006
2006-2007	287.2	4.920	30-10-2006	0.000	0.250	17-01-2007
2007-2008	323.3	5.243	17-07-2007	0.000	0.360	03-01-2008
2008-2009	223.1	4.100	25-10-2008	0.000	0.520	01-06-2008
2009-2010	331.4	5.480	02-10-2009	0.000	0.490	01-06-2009
2010-2011	522.0	8.030	04-10-2010	0.000	0.700	30-01-2011
2011-2012	252.3	4.785	31-12-2011	0.000	1.050	01-06-2011
2012-2013	33.59	2.470	21-10-2012	0.000	1.200	01-06-2012
2013-2014	163.9	3.100	20-10-2013	0.000	1.235	01-06-2013
2014-2015	399.1	7.310	23-08-2014	0.000	1.250	01-06-2014
2015-2016	307.6	5.710	28-06-2015	0.000	1.380	12-06-2015
2016-2017	234.2	4.830	11-06-2016	0.000	-0.750	23-04-2017

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : AYILAM (KV000G3) **Division : SWR Division, Cochin**

Local River : Vamanapuram **Sub-Division : SWR SD No 1, Trivandrum**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	1.450	11.54 #	1.710	16.16	1.200	0.000	1.520	11.70 *	1.760	23.19 *	2.405	50.63
2	2.025	33.54	1.740	17.74 *	1.200	0.000	1.745	18.78	1.750	22.83 *	2.510	56.03
3	3.320	91.52	1.650	15.19	1.200	0.000	1.960	25.26 *	1.750	23.92	2.940	70.81
4	2.000	26.75 *	1.560	12.43	1.240	0.000	1.725	17.44 *	1.600	20.09	2.300	48.63 *
5	1.810	17.99	1.520	10.47	1.320	0.000	1.490	9.157	1.560	19.17	2.200	43.07 *
6	2.250	36.09 #	1.450	5.253	1.510	11.46 *	3.750	118.9	2.120	49.52	2.505	56.19
7	1.820	21.18	1.470	5.328	1.520	10.32	2.200	35.21 #	1.840	25.10	2.195	49.97
8	1.800	19.84	1.400	0.000	1.450	10.07 #	2.100	30.84 #	1.600	17.72 *	2.315	55.84
9	1.540	11.06	1.450	10.07 *	1.600	11.67	2.100	30.84 #	1.625	14.51	2.080	33.63
10	1.490	9.680	1.470	10.52 #	1.450	5.640	2.250	37.53 *	1.550	12.02	2.300	54.34
11	1.480	10.75 *	1.460	0.000	1.400	0.000	1.860	24.35	1.540	11.97	2.265	49.82
12	1.430	9.629 #	1.380	0.000	1.680	14.15	1.850	23.08	1.910	29.32	2.020	34.05 *
13	1.350	7.980 *	1.370	0.000	1.440	0.000	1.870	26.04	1.900	29.26	1.885	31.61
14	1.370	8.376 #	1.320	0.000	1.390	0.000	3.100	75.74	1.830	24.93	1.680	21.44
15	1.370	8.376 #	1.300	0.000	1.380	0.000	2.345	42.41 #	1.990	24.70 *	1.700	22.42
16	1.290	0.000	1.300	0.000	1.320	0.000	2.035	34.99	1.800	24.78	1.650	22.26
17	1.260	0.000	1.290	0.000	1.300	0.000	2.080	30.00 *	1.760	23.00	1.550	14.75
18	1.240	0.000	1.280	0.000	1.290	0.000	4.250	162.7	1.600	17.72 *	1.580	15.60
19	1.220	0.000	1.280	0.000	1.370	0.000	2.700	68.13	1.600	19.21	1.500	14.73 *
20	1.240	0.000	1.280	0.000	1.310	0.000	2.400	50.60	1.600	17.87	1.585	15.80
21	1.220	0.000	1.280	0.000	1.350	0.000	2.256	48.88	1.600	17.43	2.345	53.45
22	1.220	0.000	1.310	0.000	1.570	14.32	1.960	30.40	3.100	108.6 *	2.045	32.32
23	1.220	0.000	1.260	0.000	1.520	11.14	1.835	23.97	2.620	67.24	1.800	24.82
24	1.220	0.000	1.250	0.000	1.475	9.168	1.740	22.46 *	2.020	34.20	1.700	23.02
25	1.470	0.000	1.240	0.000	1.350	0.000	1.975	20.34	1.900	33.06	1.600	17.42
26	1.970	0.000	1.210	0.000	1.350	0.000	1.570	18.44	2.000	33.01	1.540	15.88 *
27	2.475	48.67	1.210	0.000	8.000	0.000	1.580	19.38	2.030	32.49	2.005	32.06
28	3.080	76.14	1.210	0.000	1.480	10.75 #	1.765	22.09	2.185	48.47	1.790	25.60
29	1.970	27.77	1.200	0.000	1.580	14.49	2.150	40.43 *	2.190	42.53 *	1.685	18.30
30	1.760	21.90	1.200	0.000	1.860	24.05	1.930	30.01 *	1.905	32.77	1.700	19.77
31			1.200	0.000	1.680	17.41			1.930	33.44		
Ten-Daily Mean												
I Ten-Daily	1.950	27.92	1.542	10.32	1.369	4.916	2.084	33.56	1.716	22.81	2.375	51.91
II Ten-Daily	1.325	4.511	1.326	0.000	1.388	1.415	2.449	53.80	1.753	22.28	1.742	24.25
III Ten-Daily	1.760	17.45	1.234	0.000	2.110	9.212	1.876	27.64	2.135	43.93	1.821	26.26
Monthly												
Min.	1.220	0.000	1.200	0.000	1.200	0.000	1.490	9.157	1.540	11.97	1.500	14.73
Max.	3.320	91.52	1.740	17.74	8.000	24.05	4.250	162.7	3.100	108.6	2.940	70.81
Mean	1.679	16.63	1.363	3.328	1.638	5.311	2.136	38.34	1.876	30.13	1.979	34.14

Annual Runoff in MCM = 422 Annual Runoff in mm = 782

Peak Observed Discharge = 162.7 cumecs on 18/09/2017 Corres. Water Level :4.25 m

Lowest Observed Discharge = 0.000 cumecs on 16/06/2017 Corres. Water Level :1.29 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : AYILAM (KV000G3) **Division : SWR Division, Cochin**

Local River : Vamanapuram **Sub-Division : SWR SD No 1, Trivandrum**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	4.040	152.1	1.300	0.000	1.220	0.000	1.230	0.000	1.230	0.000	1.700	0.000
2	3.090	76.36	1.380	0.000	1.220	0.000	1.240	0.000	1.150	0.000	1.700	0.000
3	2.755	66.17 *	1.270	0.000	1.210	0.000	1.240	0.000	1.080	0.000	1.680	0.000
4	2.295	54.94	1.270	0.000	1.200	0.000	1.230	0.000	1.040	0.000	1.650	0.000
5	2.055	33.40	1.220	0.000	1.200	0.000	1.220	0.000	0.980	0.000	1.600	0.000
6	1.935	29.66	1.220	0.000	1.200	0.000	1.220	0.000	0.950	0.000	1.600	0.000
7	1.790	26.13	1.250	0.000	1.190	0.000	1.220	0.000	0.950	0.000	1.950	0.000
8	1.850	27.00	1.260	0.000	1.190	0.000	1.210	0.000	0.960	0.000	1.900	0.000
9	1.800	24.15	1.260	0.000	1.200	0.000	1.210	0.000	0.920	0.000	2.165	12.59
10	1.805	23.37 *	1.230	0.000	1.240	0.000	1.190	0.000	0.980	0.000	2.175	18.50
11	1.695	18.45	1.190	0.000	1.260	0.000	1.160	0.000	0.940	0.000	2.110	11.74
12	1.660	17.29	1.230	0.000	1.230	0.000	1.150	0.000	0.960	0.000	1.850	0.000
13	1.880	28.06	1.260	0.000	1.230	0.000	1.060	0.000	1.510	0.000	1.800	8.652 *
14	1.705	22.20	1.260	0.000	1.220	0.000	0.960	0.000	2.030	0.000	2.150	13.89
15	1.650	17.69	1.280	0.000	1.200	0.000	0.840	0.000	1.970	0.000	1.960	5.650
16	1.680	19.87	1.260	0.000	1.190	0.000	0.800	0.000	1.850	0.000	1.850	9.223 *
17	1.620	18.03 *	1.280	0.000	1.190	0.000	0.750	0.000	1.830	0.000	1.880	9.575 *
18	1.540	11.93	1.280	0.000	1.180	0.000	0.720	0.000	1.830	0.000	2.350	16.04 *
19	1.500	9.827	1.260	0.000	1.180	0.000	0.700	0.000	1.800	0.000	2.000	11.06 *
20	1.500	9.793	1.260	0.000	1.180	0.000	0.820	0.000	1.800	0.000	1.820	8.788 *
21	1.480	9.539	1.250	0.000	1.180	0.000	0.950	0.000	1.860	0.000	1.750	8.102 *
22	1.460	9.088	1.230	0.000	1.180	0.000	1.200	0.000	1.820	0.000	1.810	8.765 *
23	1.450	6.336	1.230	0.000	1.180	0.000	1.250	0.000	1.790	0.000	1.700	7.571 *
24	1.430	6.704 *	1.220	0.000	1.190	0.000	1.280	0.000	1.760	0.000	2.420	17.17 *
25	1.410	5.907 *	1.230	0.000	1.190	0.000	1.340	0.000	1.670	0.000	2.200	13.78 *
26	1.400	5.406	1.240	0.000	1.220	0.000	1.460	0.000	1.700	0.000	2.250	14.52 *
27	1.390	5.291	1.240	0.000	1.220	0.000	1.450	0.000	1.700	0.000	2.300	15.27 *
28	1.370	4.655	1.240	0.000	1.230	0.000	1.400	0.000	1.690	0.000	1.850	9.223 *
29	1.340	3.607	1.240	0.000			1.340	0.000	1.720	0.000	2.320	15.58 #
30	1.340	3.467	1.240	0.000			1.310	0.000	1.700	0.000	2.140	12.93 #
31	1.320	4.166 *	1.230	0.000			1.250	0.000			2.070	11.97 #
Ten-Daily Mean												
I Ten-Daily	2.341	51.33	1.266	0.000	1.207	0.000	1.221	0.000	1.024	0.000	1.812	3.109
II Ten-Daily	1.643	17.31	1.256	0.000	1.206	0.000	0.896	0.000	1.652	0.000	1.977	9.462
III Ten-Daily	1.399	5.833	1.235	0.000	1.199	0.000	1.294	0.000	1.741	0.000	2.074	12.26
Monthly												
Min.	1.320	3.467	1.190	0.000	1.180	0.000	0.700	0.000	0.920	0.000	1.600	0.000
Max.	4.040	152.1	1.380	0.000	1.260	0.000	1.460	0.000	2.030	0.000	2.420	18.50
Mean	1.782	24.21	1.252	0	1.204	0	1.142	0	1.472	0	1.958	8.406

Peak Computed Discharge = 108.6 cumecs on 22/10/2017 Corres. Water Level :3.1 m

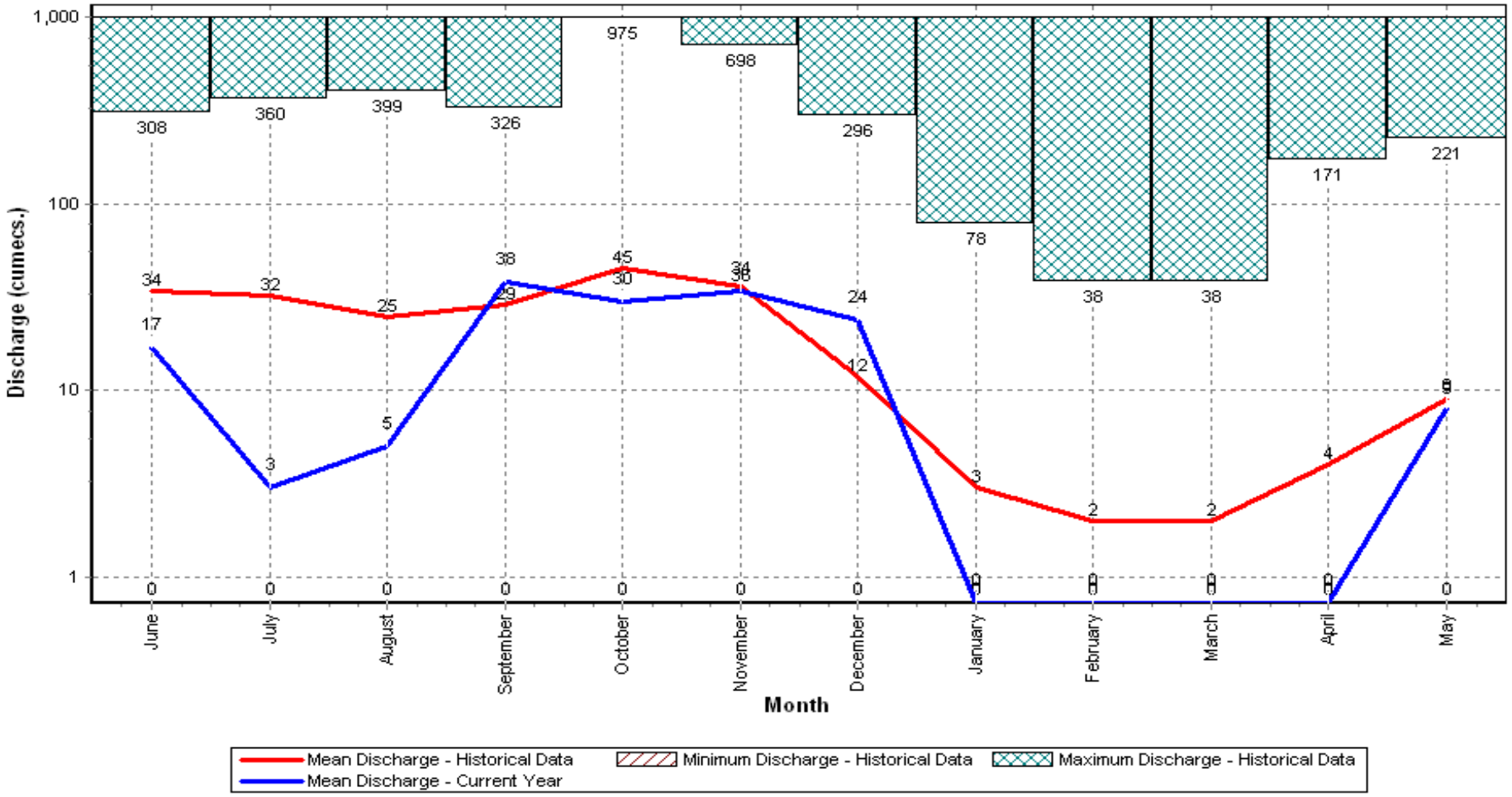
Lowest Computed Discharge = 4.166 cumecs on 31/12/2017 Corres. Water Level :1.32 m

Q:Observed/Computed Discharge in cumecs
WL:Corresponding Mean Water Level(m.s.l) in
*:Computed Discharge
#:Discarded Discharge (values changed as per rating curve)
Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : AYILAM (KV000G3) | **Data considered : 1979-2018** | **Division : SWR Division, Cochin**

Local River : Vamanapuram | **Sub-Division : SWR SD No 1, Trivandrum**



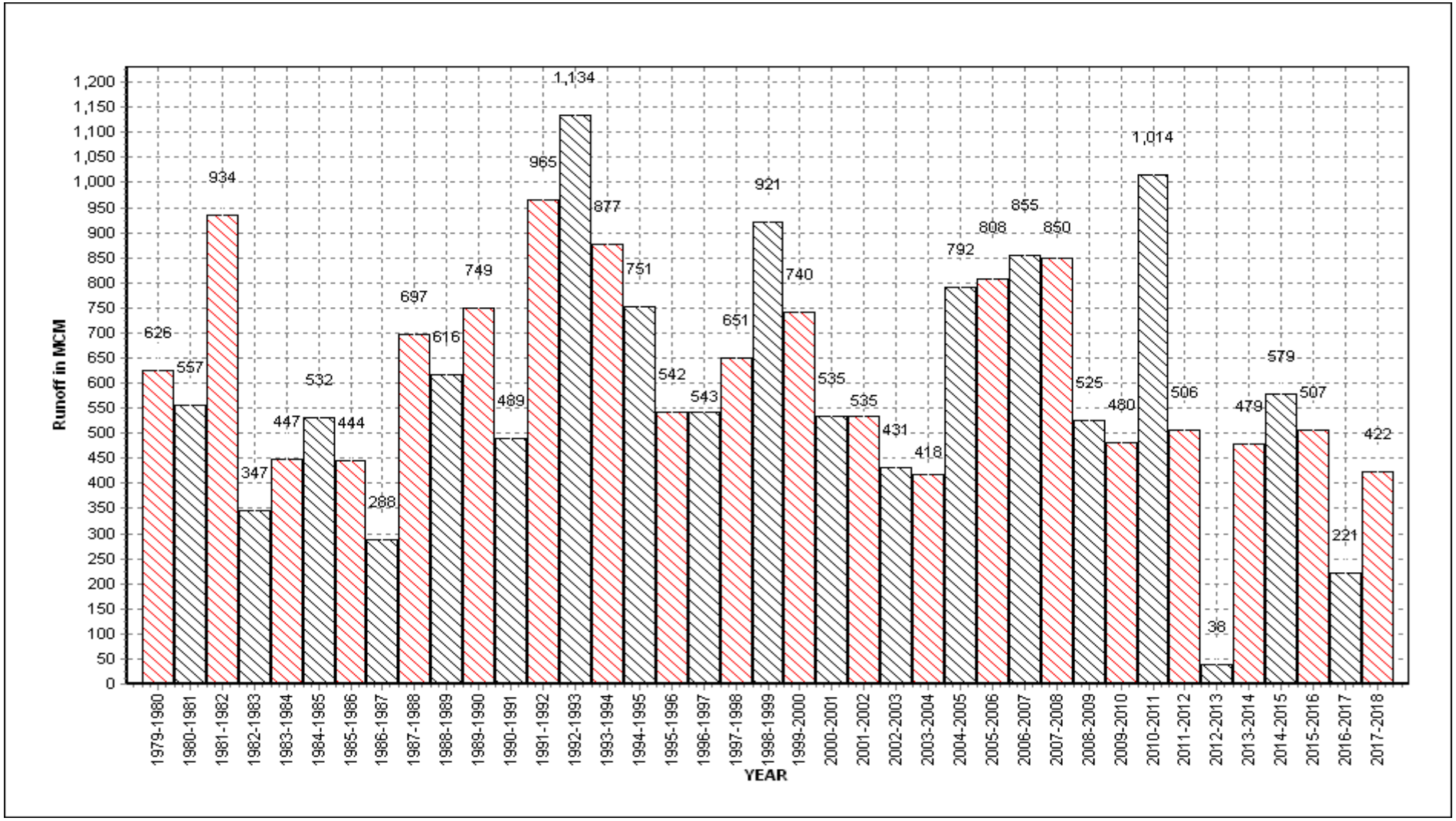
Annual Runoff Values for the period: 1979 - 2018

Station Name : AYILAM (KV000G3)

Division : SWR Division, Cochin

Local River : Vamanapuram

Sub-Division : SWR SD No 1, Trivandrum

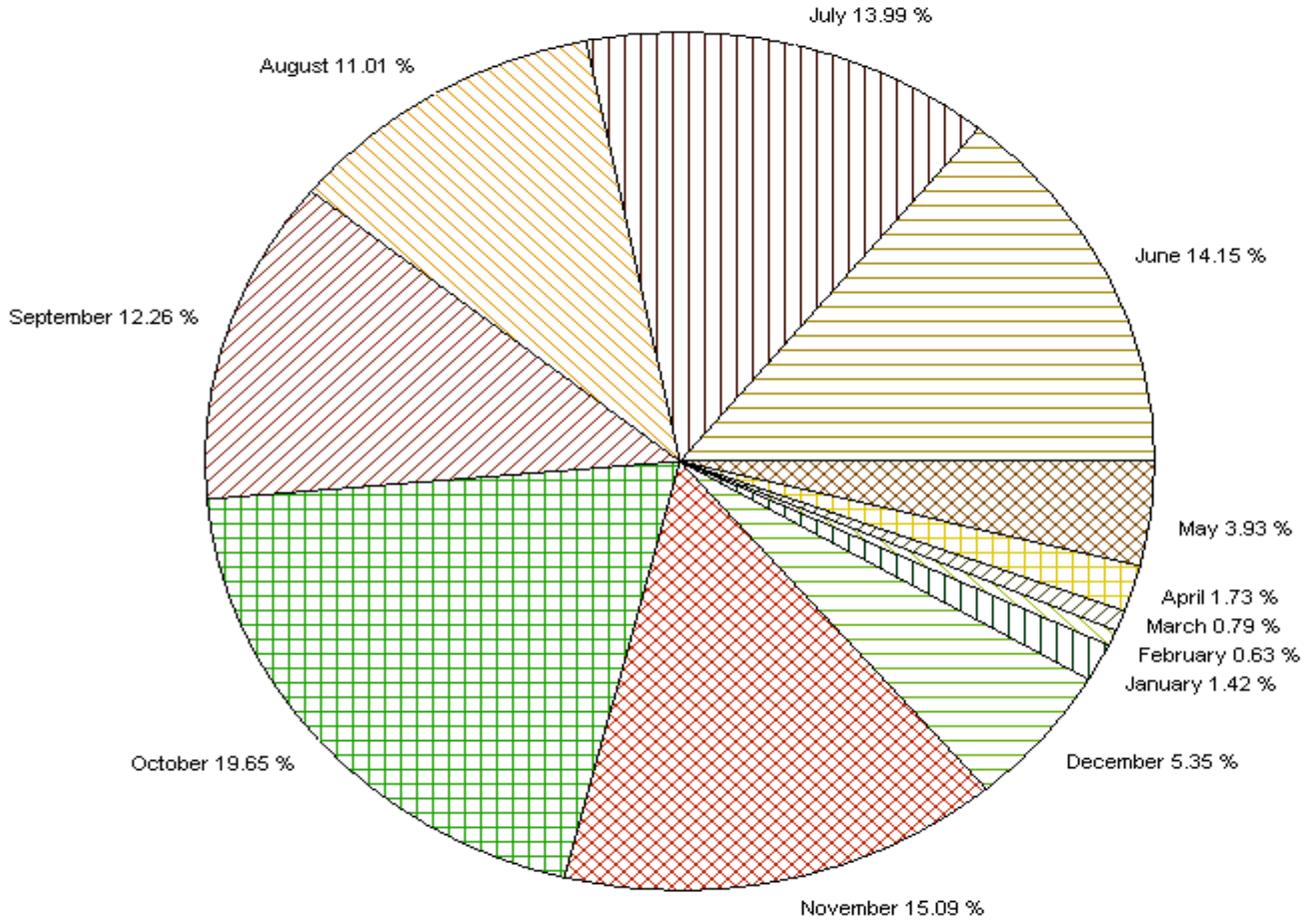


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1979-2017

Station Name : AYILAM (KV000G3)
Local River : Vamanapuram

Division : SWR Division, Cochin
Sub-Division : SWR SD No 1, Trivandrum



June	14.15 %
July	13.99 %
August	11.01 %
September	12.26 %
October	19.65 %
November	15.09 %
December	5.35 %
January	1.42 %
February	0.63 %
March	0.79 %
April	1.73 %
May	3.93 %

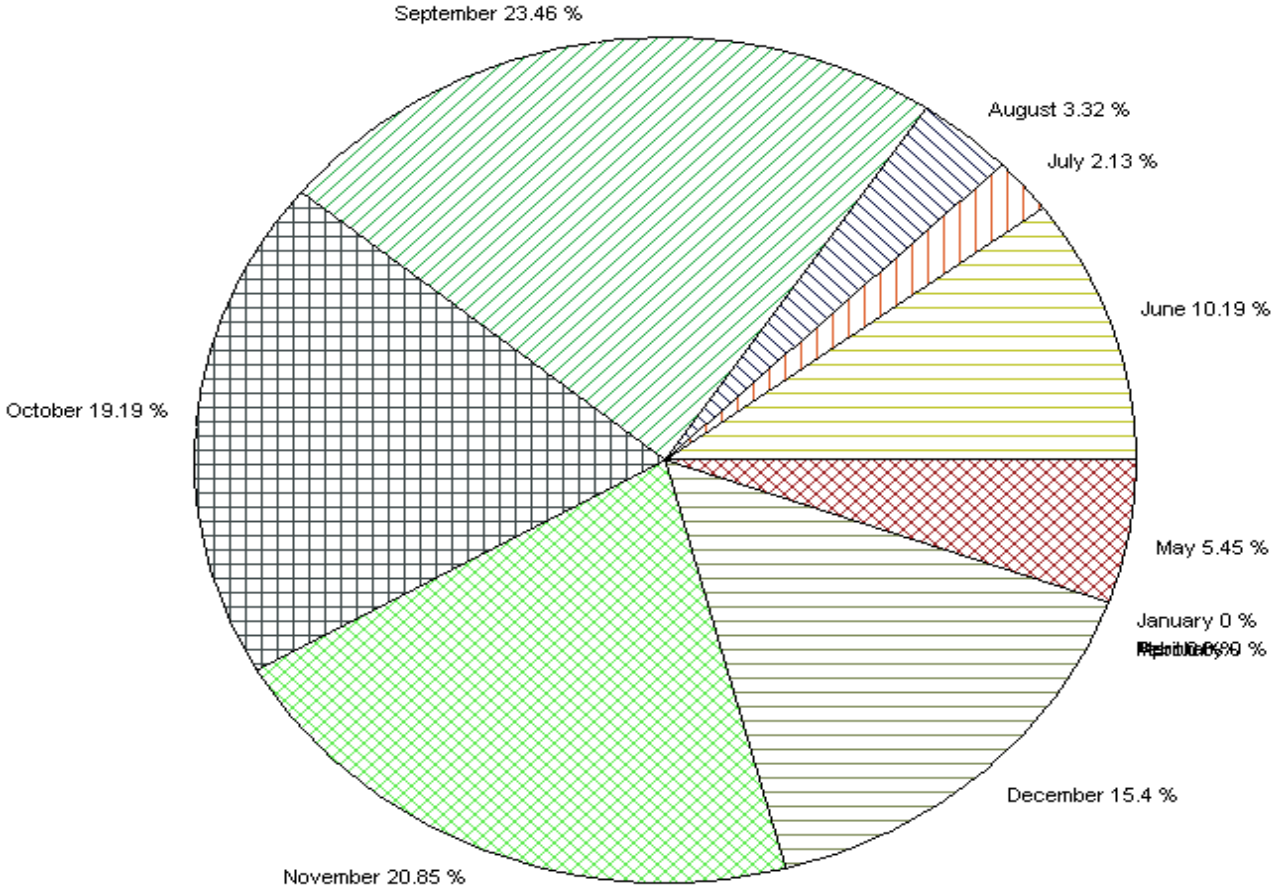
Monthly Runoff for the Year : 2017-2018

Station Name : AYILAM (KV000G3)

Local River : Vamanapuram

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum



June	10.19 %
July	2.13 %
August	3.32 %
September	23.46 %
October	19.19 %
November	20.85 %
December	15.4 %
January	0 %
February	0 %
March	0 %
April	0 %
May	5.45 %

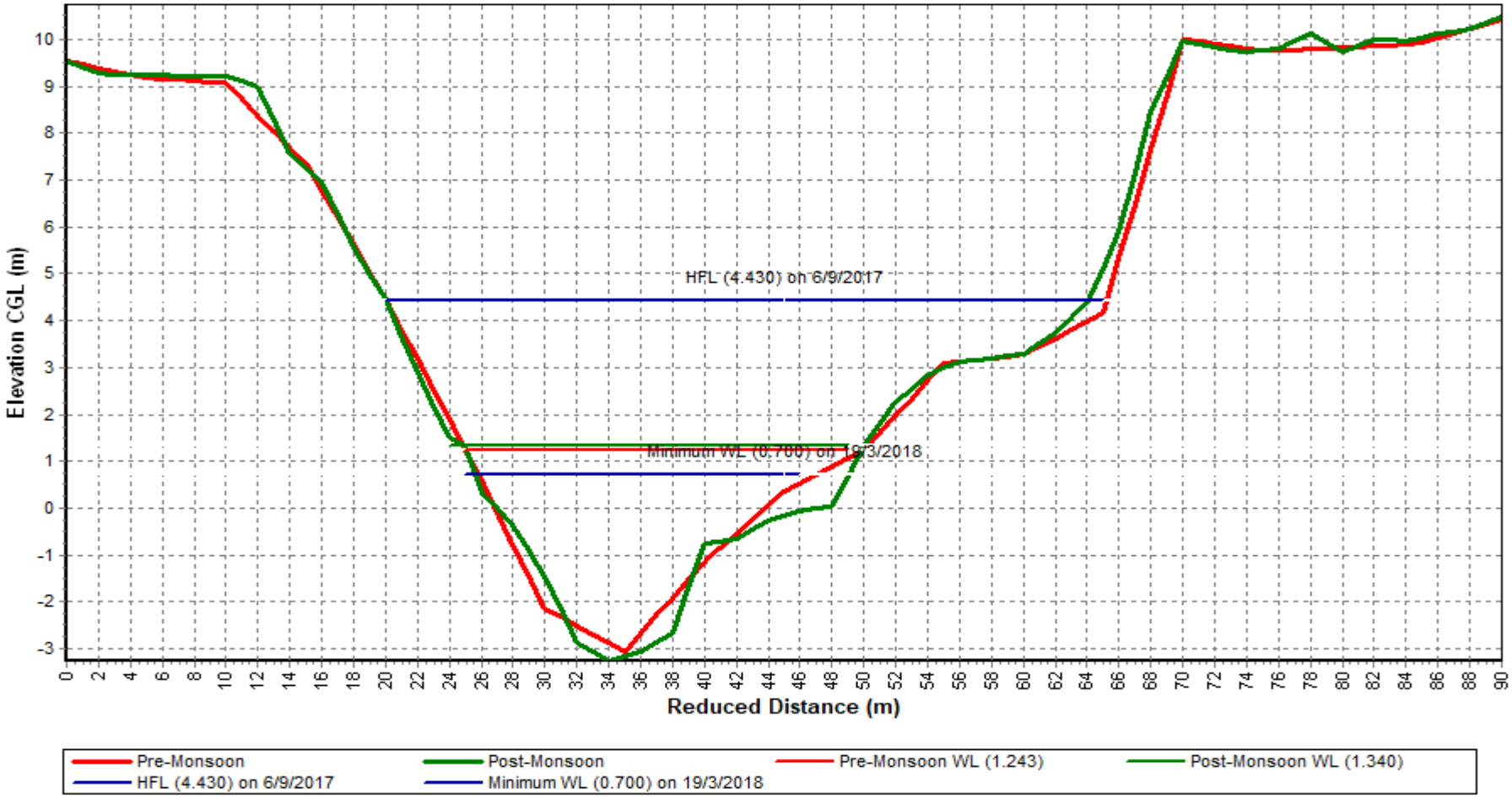
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : AYILAM (KV000G3)

Local River : Vamanapuram

Division : SWR Division, Cochin

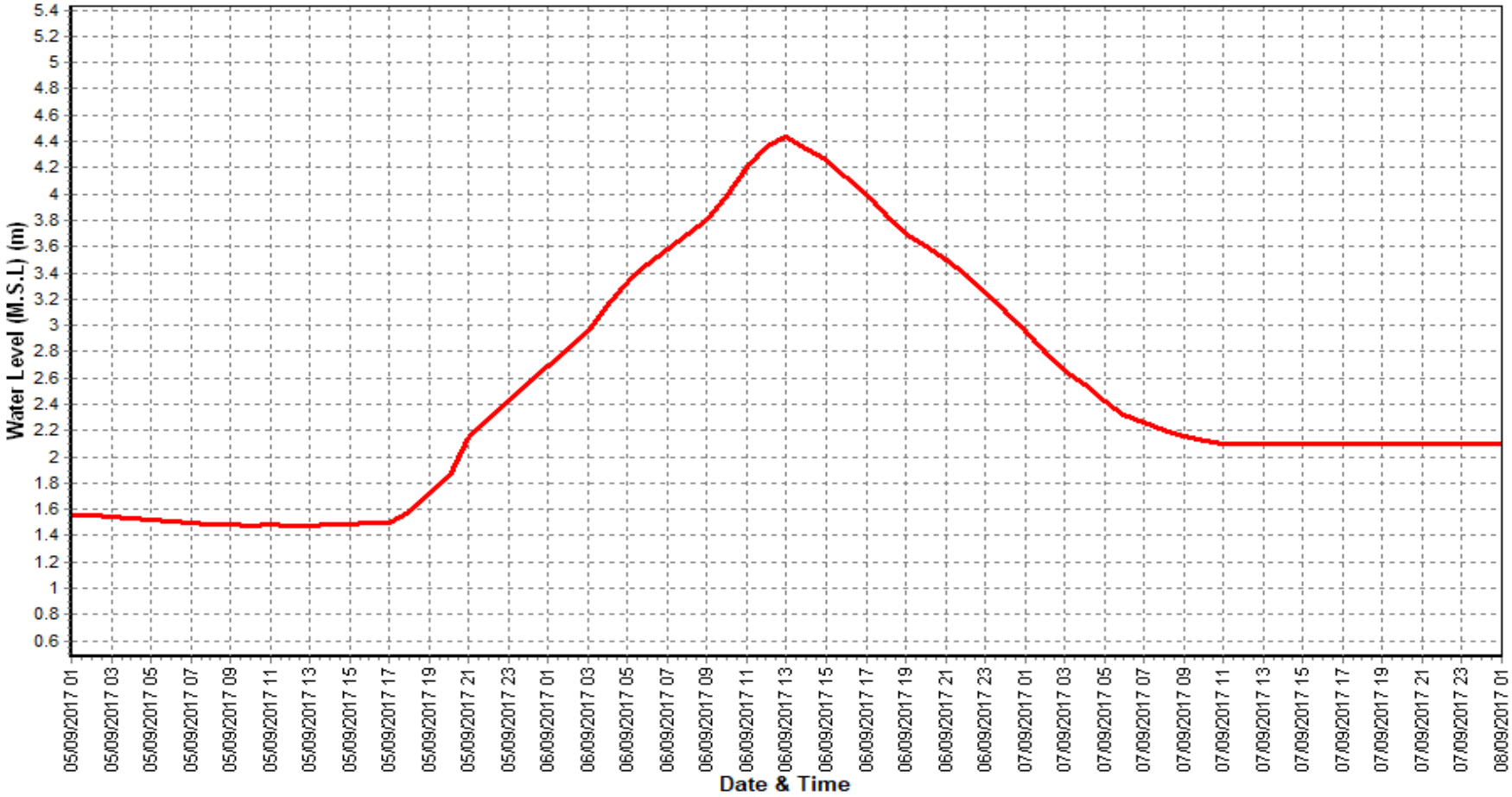
Sub-Division : SWR SD No 1, Trivandrum



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : AYILAM (KV000G3) **Division : SWR Division, Cochin**

Local River : Vamanapuram **Sub-Division : SWR SD No 1, Trivandrum**

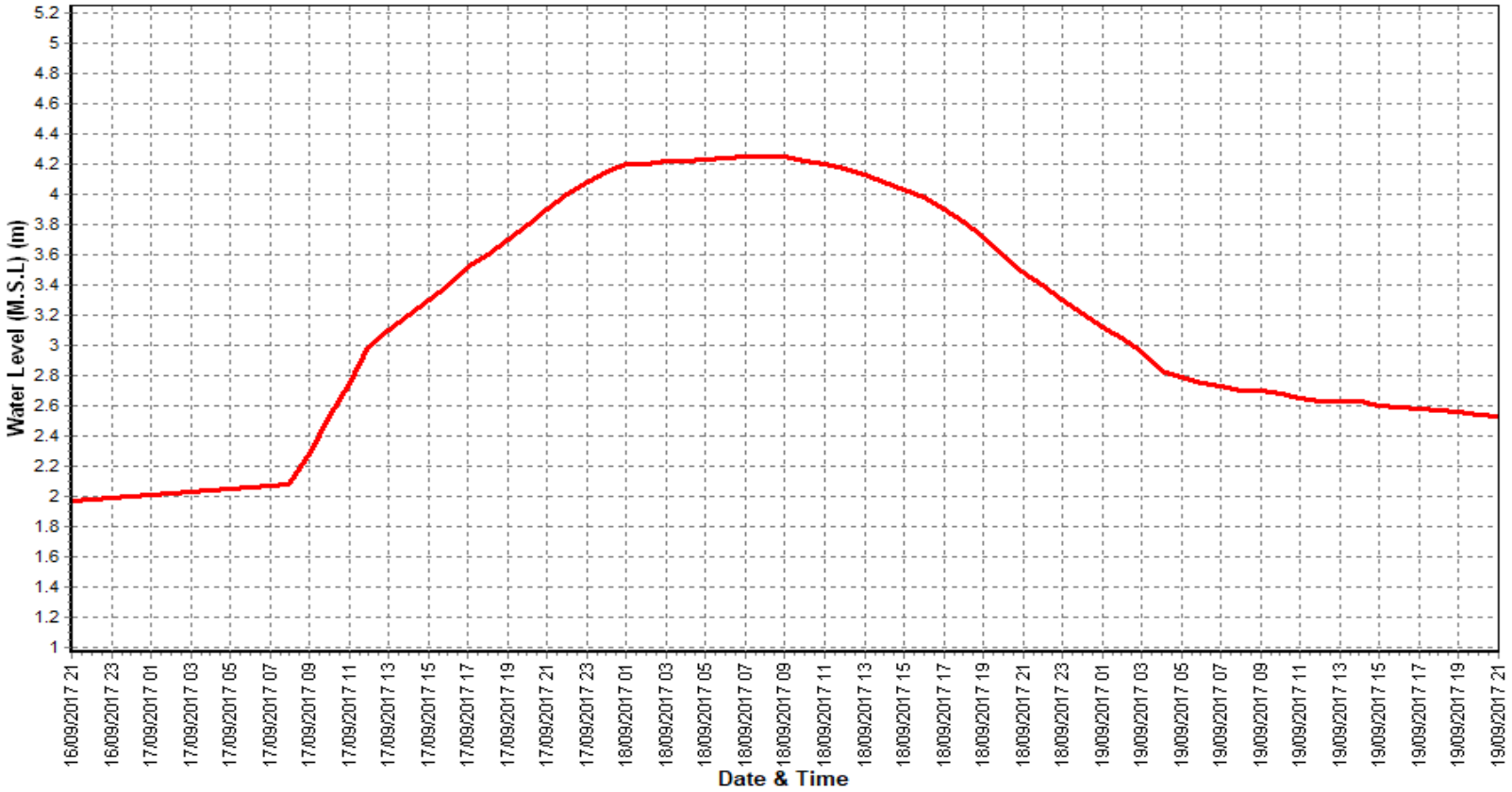


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : AYILAM (KV000G3) **Division : SWR Division, Cochin**

Local River : Vamanapuram **Sub-Division : SWR SD No 1, Trivandrum**

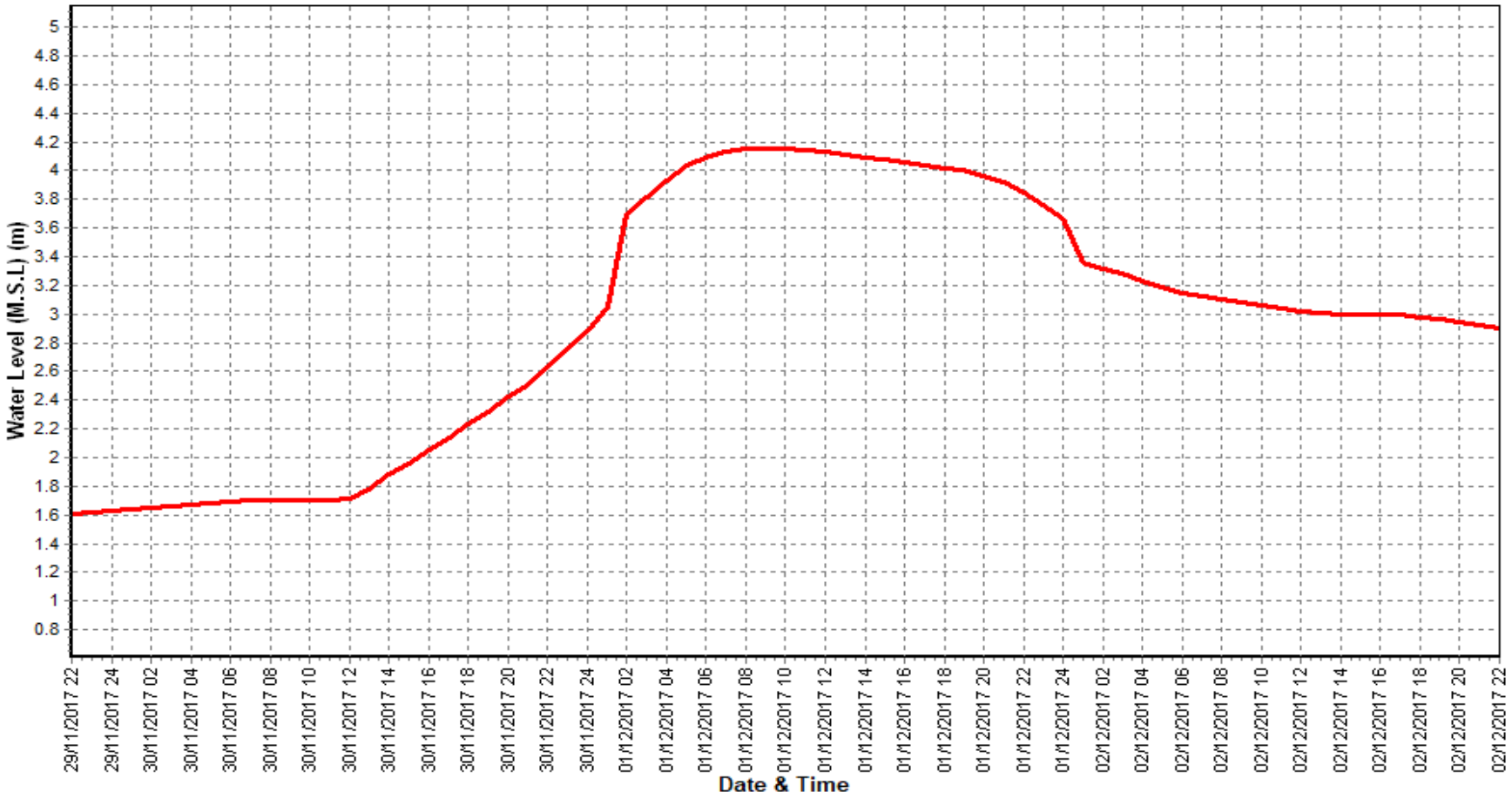


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : AYILAM (KV000G3) **Division : SWR Division, Cochin**

Local River : Vamanapuram **Sub-Division : SWR SD No 1, Trivandrum**



Time Span: 72 Hrs

HISTORY SHEET

Water Year : 2017-18

Site	:	**KUZHITHURAI**	**Code**	:	**KF000E1**
State	:	Tamil Nadu	District		Kanyakumari
Basin	:	WFR South of Tapi	Independent River	:	Thambraparni
Tributary	:	-	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Thambraparni
Division	:	SWR Division, Kochi	Sub-Division	:	SWR SD No 1, Trivandrum
Drainage Area	:	841 Sq. Km.	Bank	:	Right
Latitude	:	08°18'21"	Longitude	:	77°11'50"
Zero of Gauge (m)	:	0.000 (m.s.l)	26-11-1997		
		Opening Date	Closing Date		
Gauge	:	26-11-1997			
Discharge	:	01-11-2000			
Sediment	:				
Water Quality	:	02-12-2002			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2001-2002	43.81	2.870	25-09-2001	0.000	1.040	21-06-2001
2002-2003	46.14	2.470	31-10-2002	0.000	0.910	01-06-2002
2003-2004	34.62	2.300	06-05-2004	0.000	1.095	01-06-2003
2004-2005	31.63	2.198	28-09-2004	0.000	1.350	01-06-2004
2005-2006	39.52	2.233	25-11-2005	0.000	1.290	01-06-2005
2006-2007	241.2	4.715	30-10-2006	0.000	1.545	01-06-2006
2007-2008	181.4	3.700	07-11-2007	0.000	0.795	01-06-2007
2008-2009	154.5	3.475	25-10-2008	0.000	1.395	01/06/208
2009-2010	18.53	1.575	21-11-2009	0.000	0.820	01-06-2009
2010-2011	525.5	8.830	08-12-2010	0.000	0.965	01-06-2010
2011-2012	49.98	1.750	27-11-2011	0.000	0.710	01-06-2011
2012-2013	0.000	1.255	03-09-2012	0.000	1.210	01-06-2012
2013-2014	0.000	1.340	01-06-2013	0.000	1.340	01-06-2013
2014-2015	75.48	2.840	18-05-2015	0.000	0.910	01-06-2014
2015-2016	162.2	4.600	28-06-2015	0.000	0.390	14-03-2016
2016-2017	46.02	2.090	12-06-2016	0.000	0.210	23-10-2016

Q:Observed/Computed Discharge
WL:Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : KUZHITHURAI (KF000E1) **Division : SWR Division, Cochin**

Local River : Thambraparani **Sub-Division : SWR SD No 1, Trivandrum**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	-0.350	0.000	0.680	4.764 #	-0.450	0.000	-0.300	0.000	0.700	0.000	1.650	29.17
2	-0.360	0.000	0.580	3.504 *	-0.480	0.000	-0.310	0.000	0.700	0.000	1.620	32.48
3	-0.350	0.000	0.500	3.010	-0.530	0.000	-0.350	0.000	0.700	0.000	1.460	20.91
4	-0.310	0.000	0.410	0.000	-0.550	0.000	-0.390	0.000	0.730	0.000	1.230	16.22 *
5	-0.270	0.000	0.360	0.000	-0.540	0.000	-0.420	0.000	0.710	0.000	1.550	26.88 *
6	-0.070	0.000	0.310	0.000	-0.510	0.000	-0.270	0.000	0.760	0.000	1.250	17.68
7	0.100	0.000	0.270	0.000	-0.490	0.000	0.910	9.709	0.740	0.000	1.440	19.45
8	0.310	0.000	0.250	0.000	-0.430	0.000	0.920	10.87	0.810	0.000	1.380	17.77
9	0.380	0.000	0.230	0.000	-0.300	0.000	0.850	6.161	0.790	0.000	1.370	16.47
10	0.380	0.000	0.220	0.000	-0.190	0.000	0.800 *	6.588 *	0.720	0.000	1.620	25.66
11	0.330	0.000	0.220	0.000	-0.080	0.000	0.750	4.802	0.720	0.000	1.320	16.72
12	0.330	0.000	0.210	0.000	0.010	0.000	0.600	3.738	0.740	0.000	1.160	14.30 *
13	0.450	0.000	0.190	0.000	0.070	0.000	0.540	3.063	1.070	11.76	1.090	14.00
14	0.450	0.000	0.140	0.000	0.060	0.000	0.860	7.634 #	0.980	12.23	0.990	10.81
15	0.450	2.005	0.080	0.000	0.010	0.000	0.940	9.670	1.260	17.08 *	0.930	10.00
16	0.450	2.120	0.020	0.000	0.010	0.000	0.910	8.412	1.120	11.59	0.900	9.353
17	0.410	0.000	-0.020	0.000	0.020	0.000	0.910	8.576 *	1.000	9.507	0.870	8.536
18	0.400	0.000	-0.080	0.000	0.150	0.000	1.450	25.40	0.980	10.01 *	0.750	4.450
19	0.390	0.000	-0.090	0.000	0.120	0.000	1.110	12.39	1.000	10.88	0.750	5.120 *
20	0.380	0.000	-0.100	0.000	0.080	0.000	0.990	10.12	0.970	10.53	0.740	4.636
21	0.370	0.000	-0.130	0.000	0.100	0.000	0.970	10.65	0.950	9.238	1.070	14.73
22	0.350	0.000	-0.130	0.000	0.060	0.000	0.940	10.10	1.460	23.56 *	1.070	11.08
23	0.350	0.000	-0.140	0.000	0.030	0.000	0.920	9.879	1.230	17.48	0.910	8.277
24	0.370	0.000	-0.160	0.000	-0.060	0.000	0.870	0.000	1.110	12.27	0.880	8.503
25	0.370	0.000	-0.200	0.000	-0.090	0.000	0.780	0.000	1.030	11.24	0.860	8.131
26	0.400	0.000	-0.220	0.000	-0.120	0.000	0.540	0.000	0.980	9.526	0.850	7.274 *
27	0.470	2.297	-0.250	0.000	-0.150	0.000	0.420	0.000	1.000	12.37	0.870	7.397
28	0.640	4.232 #	-0.290	0.000	-0.170	0.000	0.700	0.000	1.390	22.80	0.900	8.957
29	0.850	7.453 #	-0.350	0.000	-0.210	0.000	0.890	8.191 *	1.340	19.52 *	0.900	9.417
30	0.780	6.260 #	-0.390	0.000	-0.220	0.000	0.850	7.453 *	1.100	11.64	1.160	16.58
31			-0.420	0.000	-0.260	0.000			1.840	50.28		
Ten-Daily Mean												
I Ten-Daily	-0.054	0.000	0.381	1.128	-0.447	0.000	0.144	3.333	0.736	0.000	1.457	22.27
II Ten-Daily	0.404	0.413	0.057	0.000	0.045	0.000	0.906	9.381	0.984	9.359	0.950	9.793
III Ten-Daily	0.495	2.024	-0.244	0.000	-0.099	0.000	0.788	4.627	1.221	18.17	0.947	10.03
Monthly												
Min.	-0.360	0.000	-0.420	0.000	-0.550	0.000	-0.420	0.000	0.700	0.000	0.740	4.450
Max.	0.850	7.453	0.680	4.764	0.150	0.000	1.450	25.40	1.840	50.28	1.650	32.48
Mean	0.282	0.812	0.055	0.364	-0.165	0	0.613	5.78	0.988	9.468	1.118	14.03

Annual Runoff in MCM = 169 Annual Runoff in mm = 201

Peak Observed Discharge = 148.1 cumecs on 02/12/2017 Corres. Water Level :3.74 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :-0.35 m

Q:Observed/Computed Discharge in cumecs

**** : Observed/Computed Discharge due to Back water effect**

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : KUZHITHURAI (KF000E1) **Division : SWR Division, Cochin**

Local River : Thambraparani **Sub-Division : SWR SD No 1, Trivandrum**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	3.700	151.6 *	0.560	0.000	0.640	0.000	0.790	0.000	0.430	0.000	0.250	0.000
2	3.740	148.1	0.620	0.000	0.630	0.000	0.760	0.000	0.420	0.000	0.230	0.000
3	3.180	98.96	0.750	0.000	0.670	0.000	0.750	0.000	0.400	0.000	0.210	0.000
4	2.100	49.96	0.740	0.000	0.650	0.000	0.730	0.000	0.350	0.000	0.210	0.000
5	1.930	40.51 #	0.710	0.000	0.630	0.000	0.720	0.000	0.330	0.000	0.200	0.000
6	1.380	20.45	0.670	0.000	0.590	0.000	0.700	0.000	0.310	0.000	0.180	0.000
7	1.130	14.45	0.660	0.000	0.580	0.000	0.700	0.000	0.290	0.000	0.160	0.000
8	1.140	13.66 *	0.700	0.000	0.590	0.000	0.690	0.000	0.270	0.000	0.150	0.000
9	1.620	28.02 *	0.730	0.000	0.610	0.000	0.650	0.000	0.260	0.000	0.360	0.000
10	2.050	45.35 *	0.720	0.000	0.640	0.000	0.590	0.000	0.260	0.000	0.550	0.000
11	1.530	28.32	0.710	0.000	0.630	0.000	0.550	0.000	0.290	0.000	0.590	0.000
12	1.320	21.28	0.700	0.000	0.620	0.000	0.490	0.000	0.290	0.000	0.690	0.000
13	1.470	27.73	0.690	0.000	0.610	0.000	0.450	0.000	0.350	0.000	0.980	0.000
14	1.540	28.87	0.680	0.000	0.770	0.000	0.490	0.000	0.370	0.000	2.060	0.000
15	1.440	23.63	0.670	0.000	0.840	0.000	0.520	0.000	0.400	0.000	1.630	8.057 **
16	1.330	19.44	0.660	0.000	0.860	0.000	0.520	0.000	0.440	0.000	1.560	6.294 **
17	1.130	13.41 *	0.660	0.000	0.890	0.000	0.490	0.000	0.450	0.000	1.520	5.159 **
18	0.930	10.84	0.650	0.000	0.930	0.000	0.500	0.000	0.460	0.000	1.840	32.87 **
19	0.870	7.857 #	0.630	0.000	0.950	0.000	0.550	0.000	0.470	0.000	1.630	8.612 **
20	0.840	9.162	0.540	0.000	0.970	0.000	0.610	0.000	0.470	0.000	1.200	7.000 **
21	0.810	7.556	0.530	0.000	0.960	0.000	0.450	0.000	0.470	0.000	1.550	6.528 **
22	0.790	7.099	0.540	0.000	0.930	0.000	0.330	0.000	0.450	0.000	1.150	9.322 **
23	0.780	7.077	0.540	0.000	0.910	0.000	0.280	0.000	0.430	0.000	1.020	9.464 **
24	0.770	6.120 *	0.550	0.000	0.900	0.000	0.430	0.000	0.350	0.000	1.000	8.970 **
25	0.750	5.790 *	0.550	0.000	0.910	0.000	0.520	0.000	0.300	0.000	0.980	7.585 **
26	0.740	5.642 #	0.580	0.000	0.880	0.000	0.700	0.000	0.290	0.000	0.980	7.122 **
27	0.730	5.458	0.590	0.000	0.850	0.000	0.780	0.000	0.260	0.000	1.000	8.000 **
28	0.720	5.040	0.590	0.000	0.830	0.000	0.700	0.000	0.260	0.000	1.090	10.39 **
29	0.710	4.367	0.590	0.000			0.550	0.000	0.270	0.000	1.390	14.52 **
30	0.670	4.604 #	0.540	0.000			0.490	0.000	0.270	0.000	1.180	11.29 **
31	0.530	2.849 *	0.540	0.000			0.440	0.000			1.060	10.04 **
Ten-Daily Mean												
I Ten-Daily	2.197	61.11	0.686	0.000	0.623	0.000	0.708	0.000	0.332	0.000	0.250	0.000
II Ten-Daily	1.240	19.05	0.659	0.000	0.807	0.000	0.517	0.000	0.399	0.000	1.370	6.799
III Ten-Daily	0.727	5.600	0.558	0.000	0.896	0.000	0.515	0.000	0.335	0.000	1.127	9.385
Monthly												
Min.	0.530	2.849	0.530	0.000	0.580	0.000	0.280	0.000	0.260	0.000	0.150	0.000
Max.	3.740	151.6	0.750	0.000	0.970	0.000	0.790	0.000	0.470	0.000	2.060	32.87
Mean	1.367	27.85	0.632	0	0.767	0	0.578	0	0.355	0	0.923	5.523

Peak Computed Discharge = 151.6 cumecs on 01/12/2017 Corres. Water Level :3.7 m

Lowest Computed Discharge = 2.849 cumecs on 31/12/2017 Corres. Water Level :0.53 m

Q:Observed/Computed Discharge in cumecs **** : Observed/Computed Discharge due to Back water effect**

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

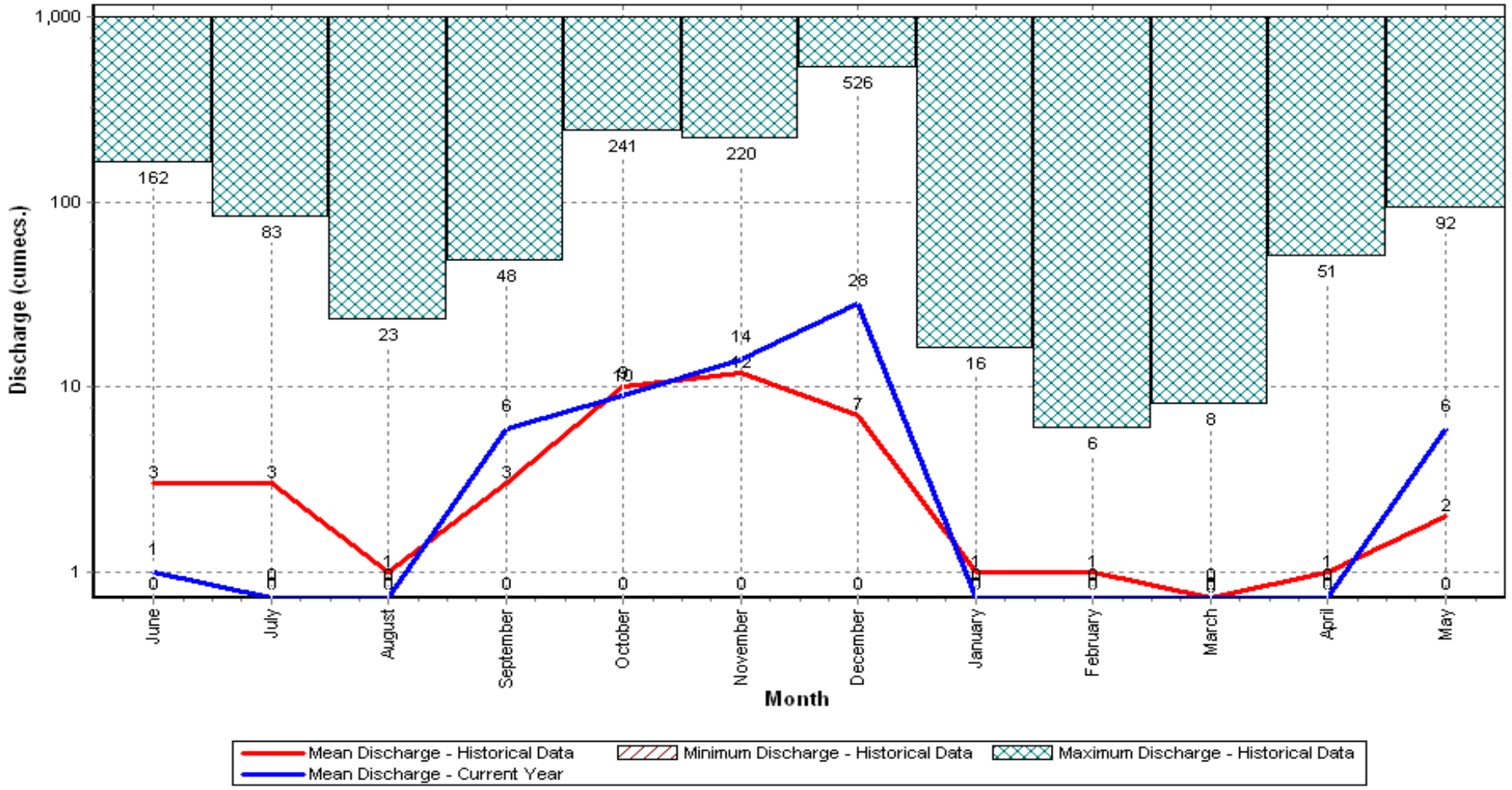
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : KUZHITHURAI (KF000E1) | **Data considered : 2001-2018** | **Division : SWR Division, Cochin**

Local River : Thambraparani | **Sub-Division : SWR SD No 1, Trivandrum**



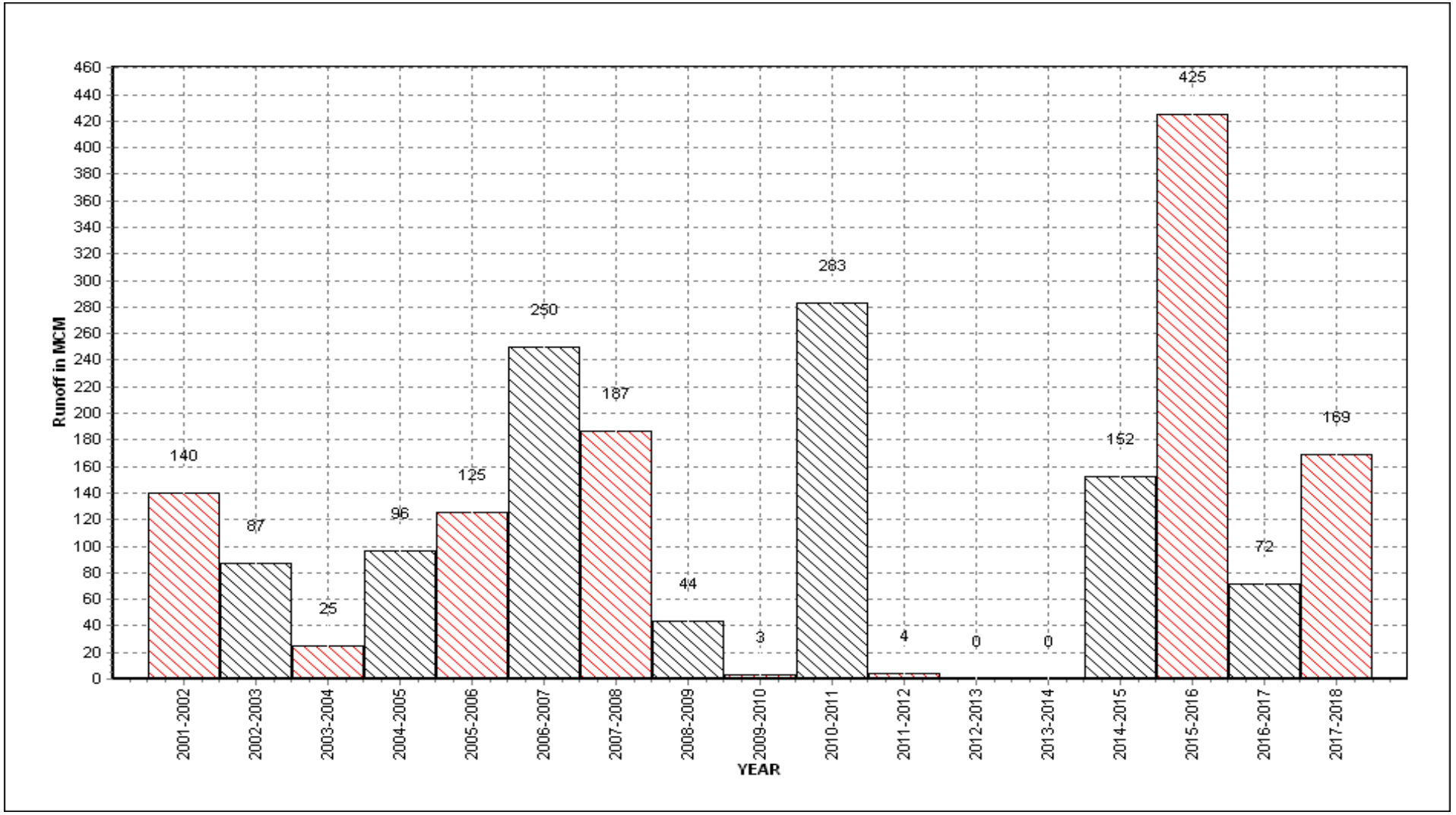
Annual Runoff Values for the period: 2001 - 2018

Station Name : KUZHITHURAI (KF000E1)

Division : SWR Division, Cochin

Local River : Thambraparani

Sub-Division : SWR SD No 1, Trivandrum



Note: Missing values have not been considered while arriving at Annual Runoff

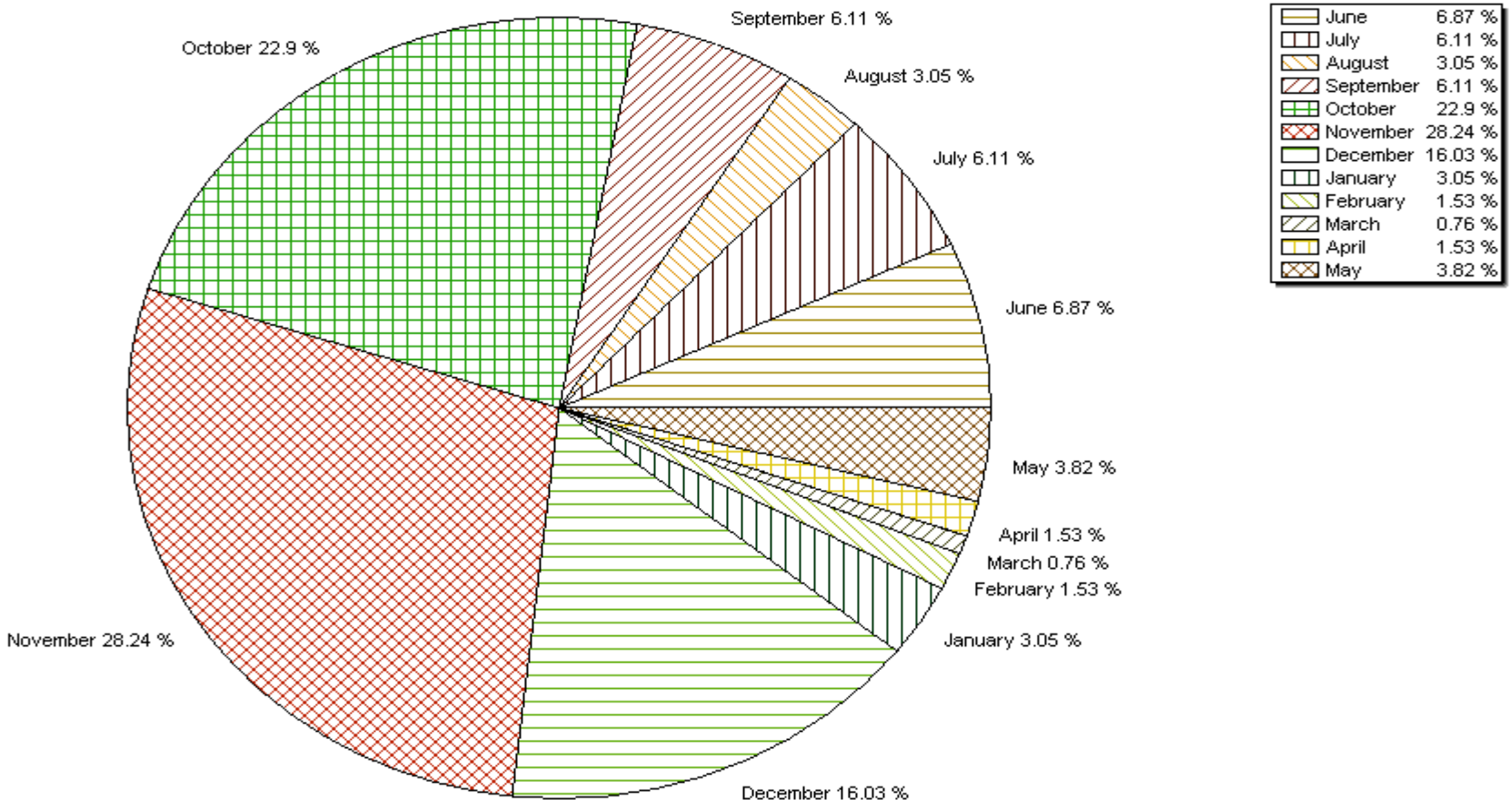
Monthly Average Runoff based on period : 2001-2017

Station Name : KUZHITHURAI (KF000E1)

Local River : Thambraparani

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum



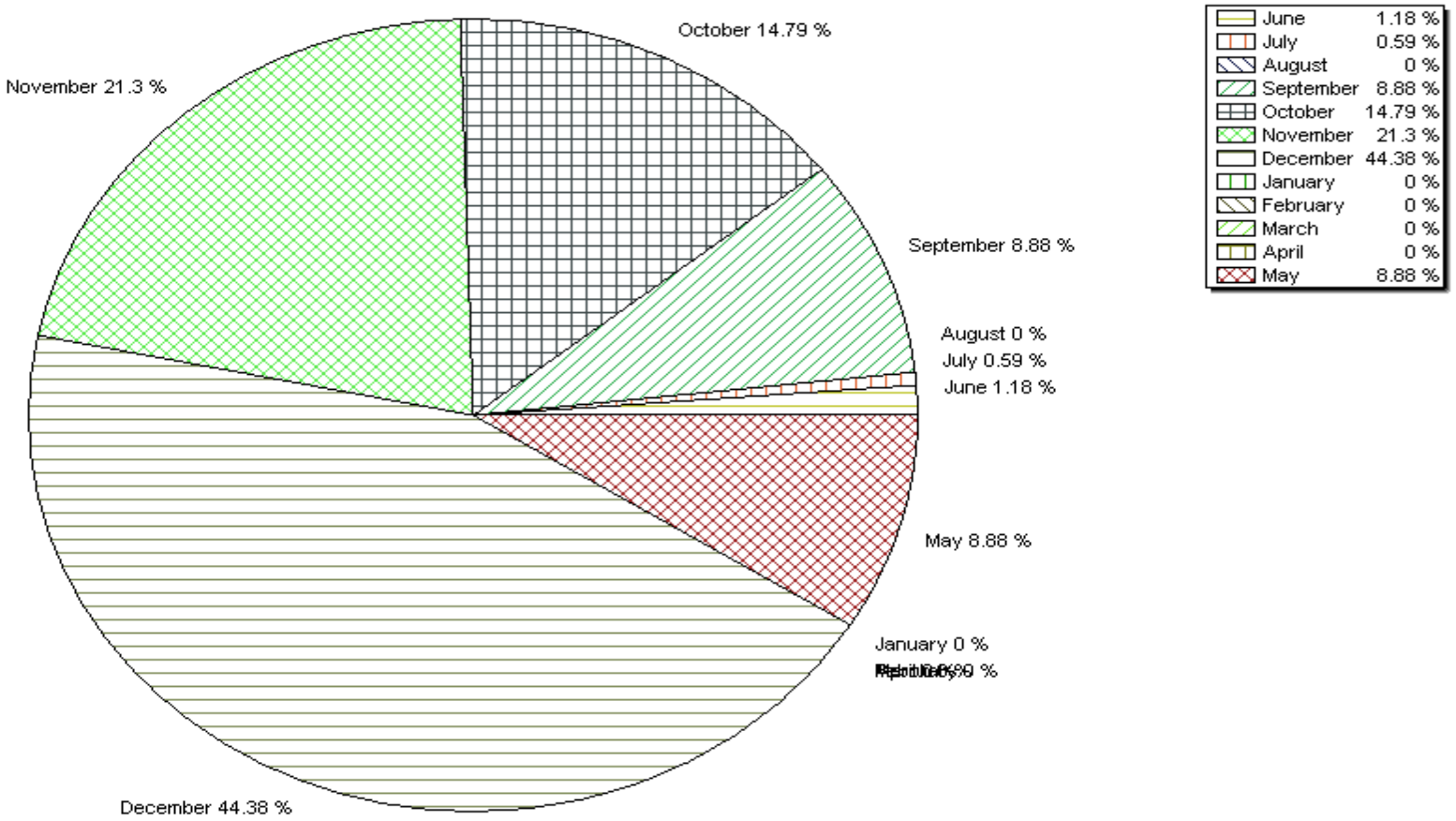
Monthly Runoff for the Year : 2017-2018

Station Name : KUZHITHURAI (KF000E1)

Local River : Thambraparani

Division : SWR Division, Cochin

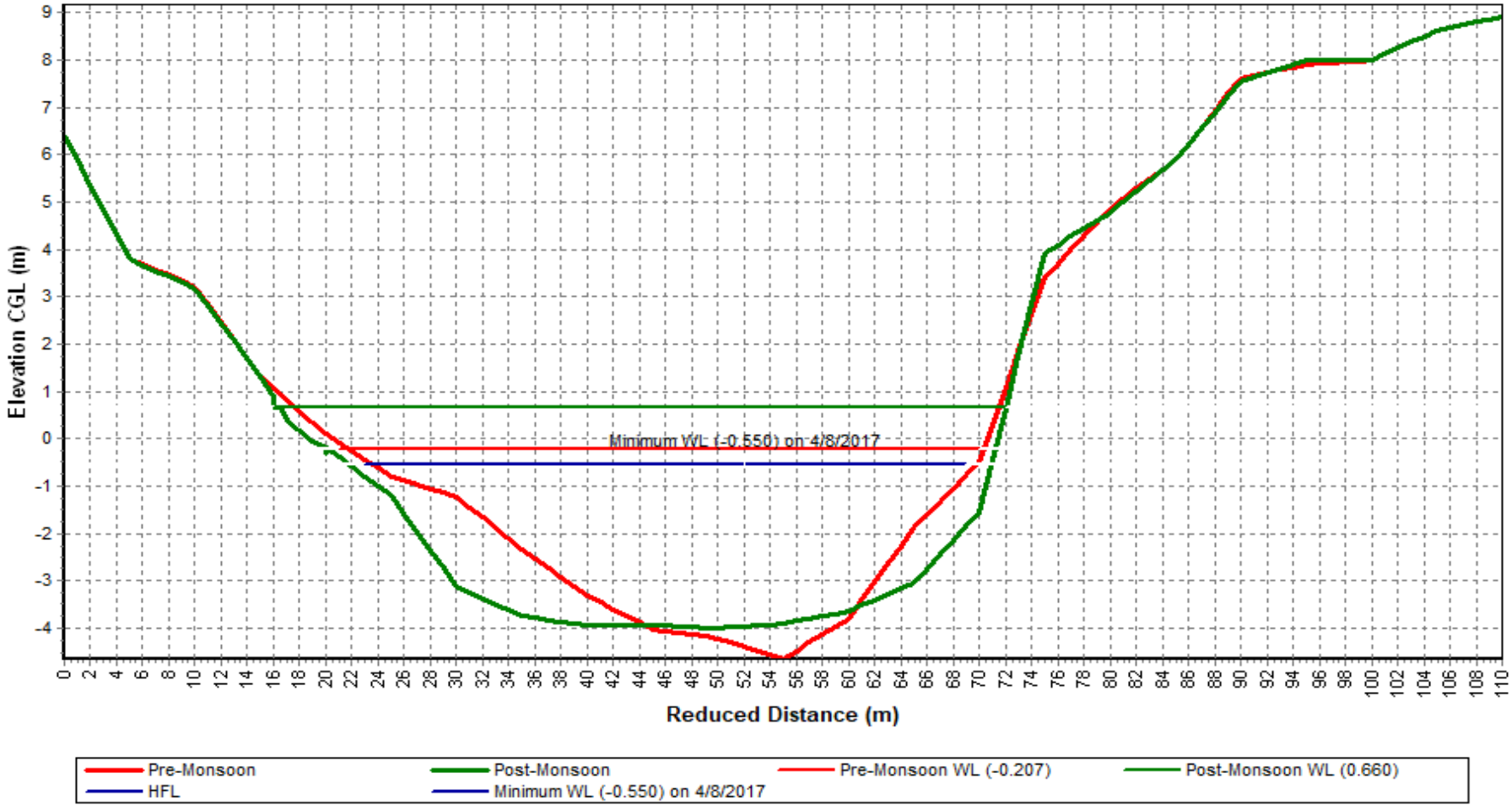
Sub-Division : SWR SD No 1, Trivandrum



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : KUZHITHURAI (KF000E1) **Division : SWR Division, Cochin**

Local River : Thambraparani **Sub-Division : SWR SD No 1, Trivandrum**



HISTORY SHEET

Water Year : 2017-2018

Site	:	**ASHRAMAM**	**Code**	:	**KE000G2**
State	:	Tamil Nadu	District		Kanyakumari
Basin	:	WFR South of Tapi	Independent River	:	Pazhayar
Tributary	:	-	Sub Tributary	:	-
Sub-Sub Tributary	:	-	Local River	:	Pazhayar
Division	:	SWR Division, Kochi	Sub-Division	:	SWR SD No 1, Trivandrum
Drainage Area	:	258 Sq. Km.	Bank	:	Right
Latitude	:	08°09'33"	Longitude	:	77°27'32"
Zero of Gauge (m)	:	1.000 (m.s.l)	01-04-1996		
		Opening Date	Closing Date		
Gauge	:	01-04-1996			
Discharge	:	21-09-1999			
Sediment	:				
Water Quality	:	02-12-2002			

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

	Maximum			Minimum		
Year	**Q (cumecs)**	**WL (m)**	**Date**	**Q (cumecs)**	**WL (m)**	**Date**
2000-2001	91.58	4.525	25-08-2000	0.000	2.060	01-06-2000
2001-2002	63.65	3.990	09-07-2001	0.000	2.245	01-06-2001
2002-2003	120.4	4.855	09-11-2002	0.000	2.280	01-06-2002
2003-2004	45.17	3.535	06-05-2004	0.000	2.200	01-06-2003
2004-2005	68.80	4.190	28-09-2004	0.000	2.355	01-06-2004
2005-2006	103.9	4.500	13-11-2005	0.000	2.430	03-06-2005
2006-2007	79.28	4.295	29-10-2006	0.000	2.420	02-06-2006
2007-2008	51.73	3.700	07-11-2007	0.000	2.440	01-06-2007
2008-2009	119.3	4.783	25-10-2008	0.000	2.105	01-06-2008
2009-2010	134.6	4.310	15-11-2009	0.000	2.330	01-06-2009
2010-2011	169.3	5.675	09-12-2010	0.000	2.280	01-06-2010
2011-2012	113.4	4.945	08-11-2011	0.000	2.050	01-06-2011
2012-2013	59.83	3.900	20-10-2012	0.000	2.050	01-06-2012
2013-2014	82.28	4.460	09-05-2014	0.000	2.220	01-06-2013
2014-2015	118.6	4.960	20-05-2015	0.000	2.200	01-06-2014
2015-2016	103.7	4.900	09-10-2015	0.000	2.270	01-06-2015
2015-2016	103.7	4.900	09-10-2015	0.000	2.370	13-03-2016
2016-2017	38.98	3.550	10-06-2016	0.000	2.290	31-08-2016

Q:Observed/Computed Discharge
WL : Corresponding Water Level(m.s.l)

Stage-Discharge Data for the period 2017 - 2018

Station Name : ASHRAMAM (KE000G2) **Division : SWR Division, Cochin**

Local River : Pazhayar **Sub-Division : SWR SD No 1, Trivandrum**

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	2.470	0.000	2.480	0.000	2.460	0.000	2.480	0.000	2.570	0.000	3.270	19.47 #
2	2.480	0.000	2.460	0.000	2.450	0.000	2.520	0.000	2.770	0.000	3.100	12.40 #
3	2.480	0.000	2.440	0.000	2.470	0.000	2.530	0.000	2.680	1.510	3.000	9.010 #
4	2.470	0.000	2.440	0.000	2.490	0.000	2.540	0.000	2.650	1.467 *	2.940	7.242 #
5	2.460	0.000	2.430	0.000	2.470	0.000	2.550	0.000	2.610	1.130	3.350	23.36 *
6	2.450	0.000	2.420	0.000	2.460	0.000	2.600	0.000	2.615	1.330	3.580	36.62 #
7	2.450	0.000	2.430	0.000	2.460	0.000	2.650	0.000	2.675	1.990	3.310	21.37 #
8	2.440	0.000	2.450	0.000	2.460	0.000	2.710	0.000	2.630	1.234 *	3.095	13.99
9	2.460	0.000	2.460	0.000	2.470	0.000	2.660	0.000	2.580	0.743 #	3.155	14.76
10	2.470	0.000	2.460	0.000	2.470	0.000	2.640	0.000	2.490	0.000	3.140	14.31
11	2.470	0.000	2.450	0.000	2.540	0.000	2.600	0.000	2.470	0.000	3.080	13.25
12	2.450	0.000	2.440	0.000	2.510	0.000	2.660	0.000	2.440	0.000	3.040	10.30 *
13	2.440	0.000	2.430	0.000	2.500	0.000	2.720	0.000	2.500	0.000	3.010	9.324 #
14	2.430	0.000	2.430	0.000	2.490	0.000	2.880	0.000	2.530	0.000	2.815	3.770
15	2.430	0.000	2.440	0.000	2.490	0.000	2.840	0.000	2.660	0.000	2.750	2.870
16	2.420	0.000	2.450	0.000	2.480	0.000	2.660	0.000	2.810	4.330	2.690	2.240
17	2.430	0.000	2.450	0.000	2.480	0.000	2.720	0.000	2.640	1.370	2.660	1.740
18	2.440	0.000	2.440	0.000	2.490	0.000	2.950	0.000	2.560	0.000	2.640	1.660
19	2.430	0.000	2.430	0.000	2.500	0.000	2.780	3.495 #	2.520	0.000	2.620	1.126 *
20	2.430	0.000	2.470	0.000	2.500	0.000	2.800	4.020	2.510	0.000	2.600	0.924 *
21	2.420	0.000	2.470	0.000	2.520	0.000	2.940	4.737 #	2.490	0.000	3.415	27.84
22	2.420	0.000	2.460	0.000	2.450	0.000	2.780	3.390	2.630	0.000	3.370	19.78
23	2.410	0.000	2.440	0.000	2.490	0.000	2.710	1.720	2.785	3.210	2.825	3.930
24	2.410	0.000	2.430	0.000	2.480	0.000	2.650	0.000	2.810	3.760	2.710	2.190
25	2.400	0.000	2.430	0.000	2.460	0.000	2.480	0.000	2.625	1.340	2.670	1.590
26	2.430	0.000	2.450	0.000	2.450	0.000	2.440	0.000	2.515	0.320 *	2.646	1.348 *
27	2.490	0.000	2.470	0.000	2.460	0.000	2.420	0.000	2.650	1.420	2.990	8.399 #
28	2.530	0.000	2.480	0.000	2.460	0.000	2.440	0.000	2.830	4.190	2.905	6.433 #
29	2.540	0.000	2.480	0.000	2.470	0.000	2.480	0.000	3.120	13.15 *	2.810	2.870
30	2.500	0.000	2.470	0.000	2.460	0.000	2.520	0.000	3.300	24.75	4.640	77.91
31			2.460	0.000	2.460	0.000			3.330	26.86		
Ten-Daily Mean												
I Ten-Daily	2.463	0.000	2.447	0.000	2.466	0.000	2.588	0.000	2.627	0.940	3.194	17.25
II Ten-Daily	2.437	0.000	2.443	0.000	2.498	0.000	2.761	0.752	2.564	0.570	2.791	4.720
III Ten-Daily	2.455	0.000	2.458	0.000	2.469	0.000	2.586	0.985	2.826	7.182	3.098	15.23
Monthly												
Min.	2.400	0.000	2.420	0.000	2.450	0.000	2.420	0.000	2.440	0.000	2.600	0.924
Max.	2.540	0.000	2.480	0.000	2.540	0.000	2.950	4.737	3.330	26.86	4.640	77.91
Mean	2.452	0	2.450	0	2.477	0	2.645	0.579	2.677	3.036	3.028	12.4

Annual Runoff in MCM = 124 Annual Runoff in mm = 482

Peak Observed Discharge = 166.8 cumecs on 02/12/2017 Corres. Water Level :5.73 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2017 Corres. Water Level :2.47 m

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2017 - 2018

Station Name : ASHRAMAM (KE000G2) **Division : SWR Division, Cochin**

Local River : Pazhayar **Sub-Division : SWR SD No 1, Trivandrum**

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	6.720	282.9 *	2.530	0.000	2.570	0.000	2.390	0.000	2.420	0.000	2.470	0.000
2	5.730	166.8	2.560	0.000	2.600	2.650	2.410	0.000	2.410	0.000	2.460	0.000
3	3.540	91.03 *	2.580	0.000	2.570	2.012 #	2.410	0.000	2.400	0.000	2.450	0.000
4	3.550	38.98	2.580	2.012	2.490	0.000	2.420	0.000	2.410	0.000	2.450	0.000
5	3.245	28.17	2.660	3.260	2.480	0.000	2.420	0.000	2.400	0.000	2.460	0.000
6	3.070	22.62	2.610	2.170	2.470	0.000	2.430	0.000	2.400	0.000	2.470	0.000
7	3.040	20.09	2.600	2.230 *	2.470	0.000	2.430	0.000	2.390	0.000	2.460	0.000
8	2.980	17.02	2.580	1.800	2.700	3.512 #	2.440	0.000	2.390	0.000	2.450	0.000
9	3.120	18.58	2.610	1.900	2.620	2.461 #	2.440	0.000	2.390	0.000	2.480	0.000
10	3.080	18.90 *	2.600	2.030	2.580	2.450	2.450	0.000	2.470	0.000	2.440	0.000
11	2.980	11.59	2.610	2.344 #	2.550	1.709 *	2.450	0.000	2.600	0.000	2.440	0.000
12	2.870	13.15	2.600	2.230 #	2.520	1.520	2.450	0.000	2.630	0.000	2.430	0.000
13	3.435	38.53	2.580	2.012 #	2.510	1.346 *	2.460	0.000	2.640	0.000	2.440	0.000
14	3.205	23.35	2.570	1.908 *	2.500	1.410	2.620	2.566 #	2.580	0.000	2.470	0.000
15	2.975	15.48	2.560	0.000	2.440	0.825 *	2.540	1.210	2.530	0.000	2.510	0.000
16	2.890	12.32	2.570	0.000	2.505	1.280	2.500	1.000	2.470	0.000	2.500	0.000
17	2.860	12.72 *	2.570	0.000	2.495	1.080	2.500	1.060	2.460	0.000	2.490	0.000
18	2.850	10.34	2.580	0.000	2.490	1.183 *	2.530	1.285 *	2.440	0.000	2.730	5.279 #
19	2.735	5.120	2.580	0.000	2.450	0.000	2.480	0.774 *	2.400	0.000	2.670	3.020
20	2.710	4.870	2.540	0.000	2.430	0.000	2.520	1.050	2.410	0.000	2.600	2.241 *
21	2.600	2.350	2.500	0.000	2.430	0.000	2.510	0.990	2.470	0.000	2.730	4.480
22	2.550	1.590	2.480	0.000	2.470	0.000	2.500	0.970	2.510	0.000	2.650	3.220
23	2.540	1.310	2.470	0.000	2.420	0.000	2.470	0.688 *	2.480	0.000	2.560	1.660 #
24	2.530	1.264 *	2.460	0.000	2.410	0.000	2.540	1.404 #	2.580	0.000	2.480	0.000
25	2.520	1.146 *	2.460	0.000	2.400	0.000	2.540	1.285 *	2.540	0.000	2.460	0.000
26	2.500	0.000	2.520	0.000	2.400	0.000	2.510	1.090	2.480	0.000	2.460	0.000
27	2.480	0.000	2.530	0.000	2.390	0.000	2.500	0.990	2.450	0.000	2.500	0.000
28	2.470	0.000	2.540	0.000	2.390	0.000	2.470	0.000	2.500	0.000	2.490	0.000
29	2.460	0.000	2.550	0.000			2.460	0.000	2.480	0.000	2.650	3.270
30	2.460	0.000	2.570	0.000			2.450	0.000	2.470	0.000	2.630	2.980
31	2.490	0.000	2.560	0.000			2.430	0.000			2.780	6.056 #
Ten-Daily Mean												
I Ten-Daily	3.807	70.51	2.591	1.540	2.555	1.309	2.424	0.000	2.408	0.000	2.459	0.000
II Ten-Daily	2.951	14.75	2.576	0.849	2.489	1.035	2.505	0.895	2.516	0.000	2.528	1.054
III Ten-Daily	2.509	0.696	2.513	0.000	2.414	0.000	2.489	0.674	2.496	0.000	2.581	1.970
Monthly												
Min.	2.460	0.000	2.460	0.000	2.390	0.000	2.390	0.000	2.390	0.000	2.430	0.000
Max.	6.720	282.9	2.660	3.260	2.700	3.512	2.620	2.566	2.640	0.000	2.780	6.056
Mean	3.070	27.75	2.558	0.771	2.491	0.837	2.473	0.528	2.473	0	2.525	1.039

Peak Computed Discharge = 282.9 cumecs on 01/12/2017 **Corres. Water Level :6.72 m**

Lowest Computed Discharge = 0.320 cumecs on 26/10/2017 **Corres. Water Level :2.515 m**

Q:Observed/Computed Discharge in cumecs

WL:Corresponding Mean Water Level(m.s.l) in m

*:Computed Discharge

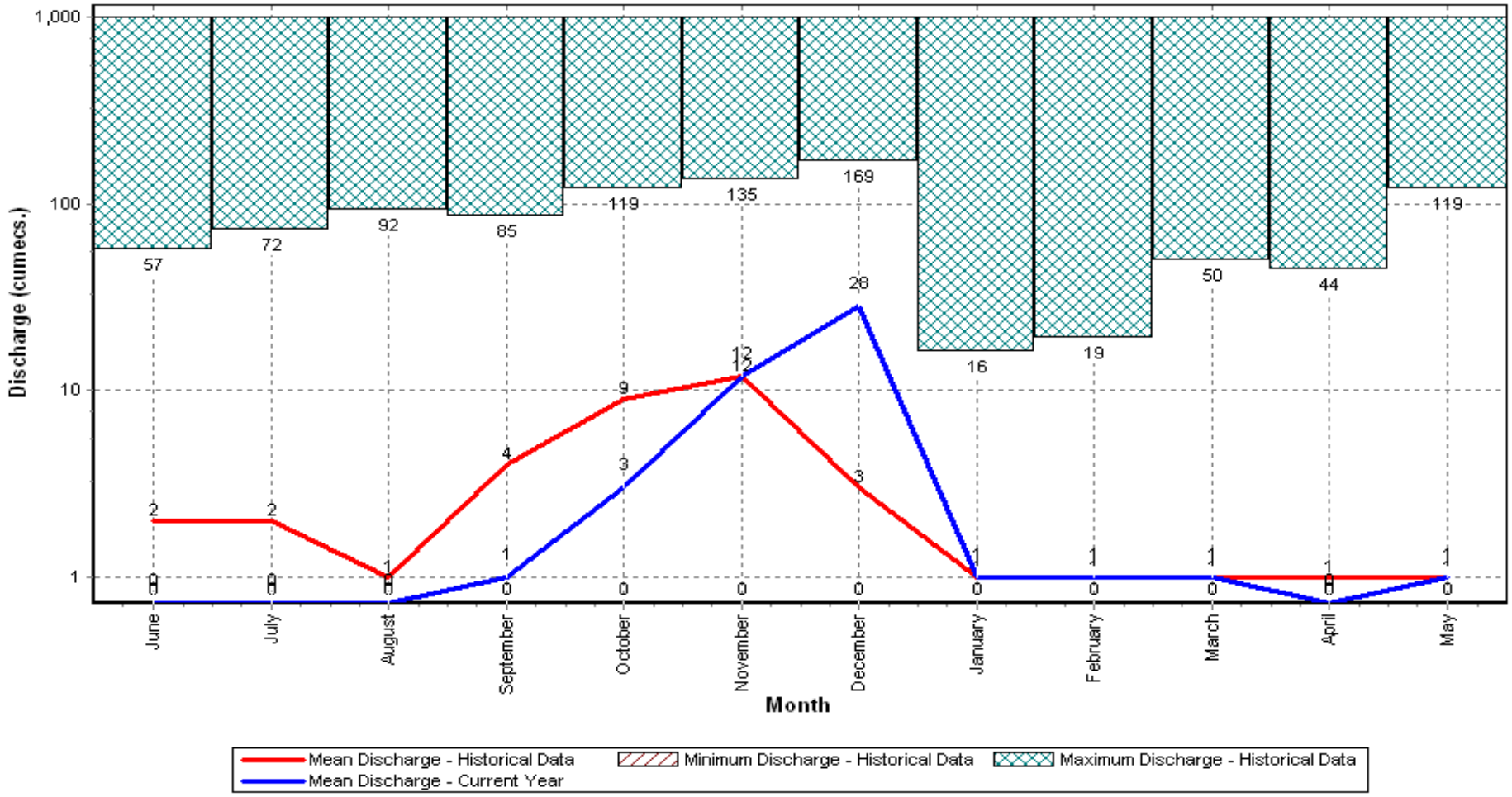
#:Discarded Discharge (values changed as per rating curve)

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2017-2018

Station Name : ASHRAMAM (KE000G2) | **Data considered : 2000-2018** | **Division : SWR Division, Cochin**

Local River : Pazhayar | **Sub-Division : SWR SD No 1, Trivandrum**



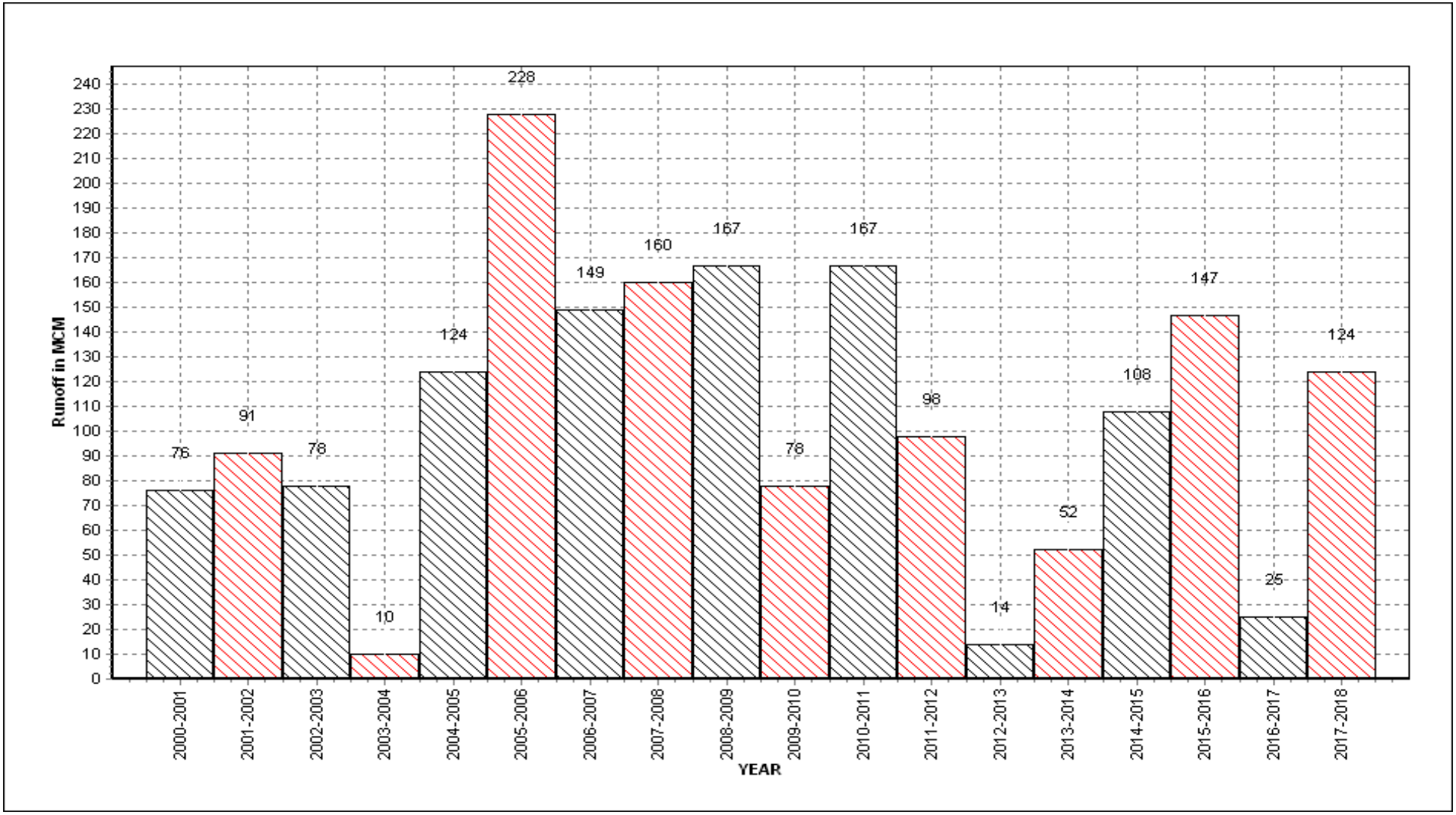
Annual Runoff Values for the period: 2000 - 2018

Station Name : ASHRAMAM (KE000G2)

Local River : Pazhayar

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum



Note: Missing values have not been considered while arriving at Annual Runoff

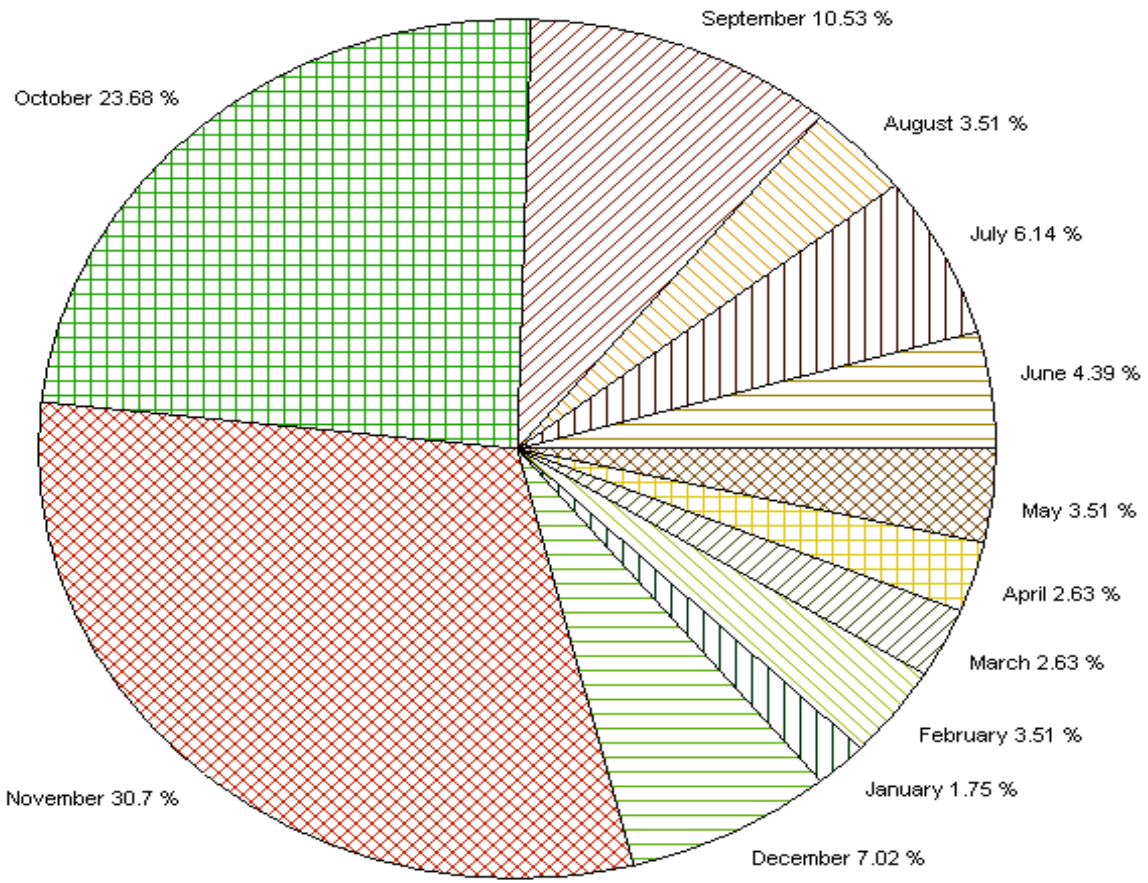
Monthly Average Runoff based on period : 2000-2017

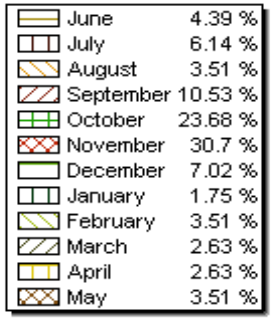
Station Name : ASHRAMAM (KE000G2)

Local River : Pazhayar

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum





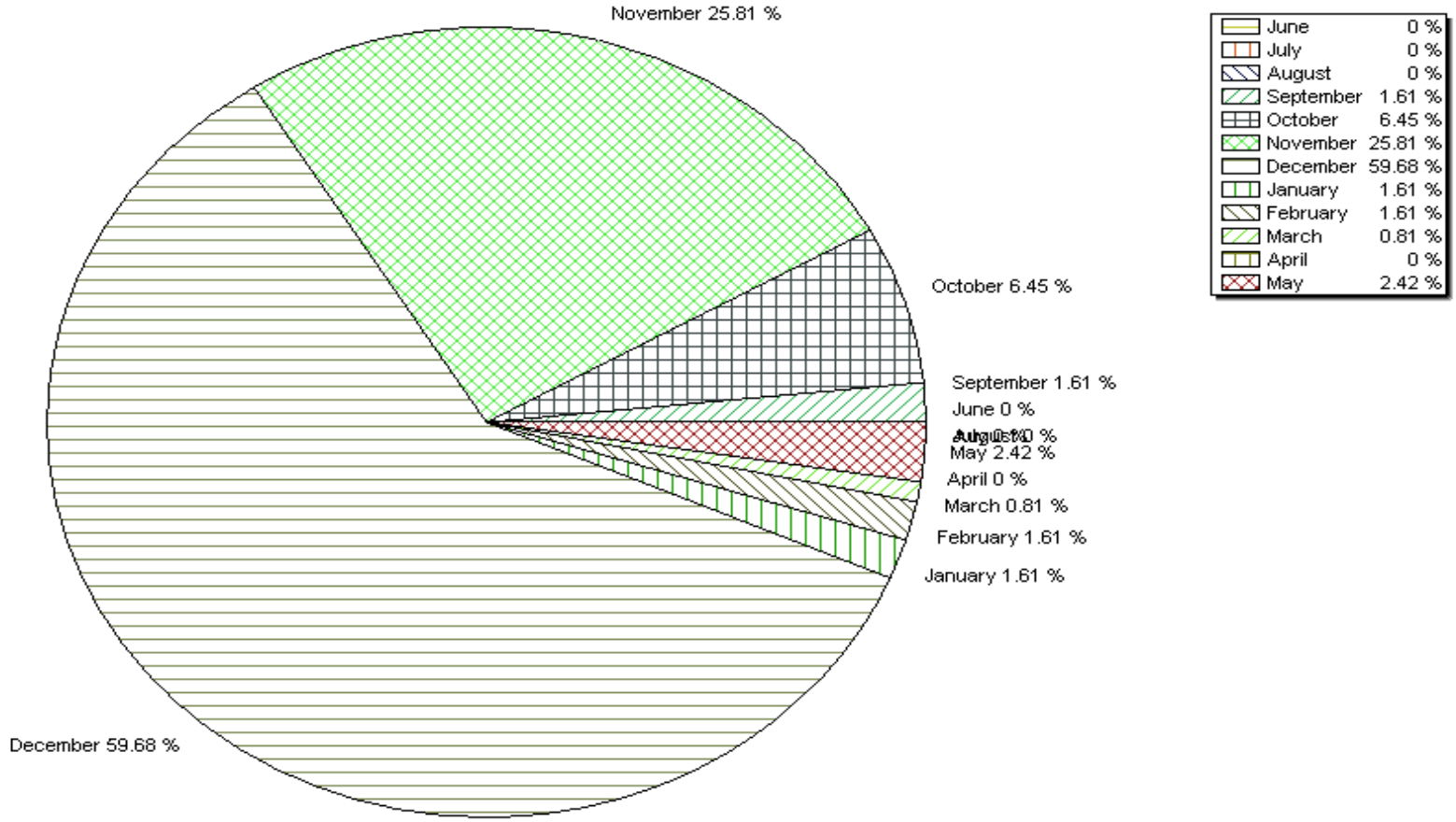
Monthly Runoff for the Year : 2017-2018

Station Name : ASHRAMAM (KE000G2)

Local River : Pazhayar

Division : SWR Division, Cochin

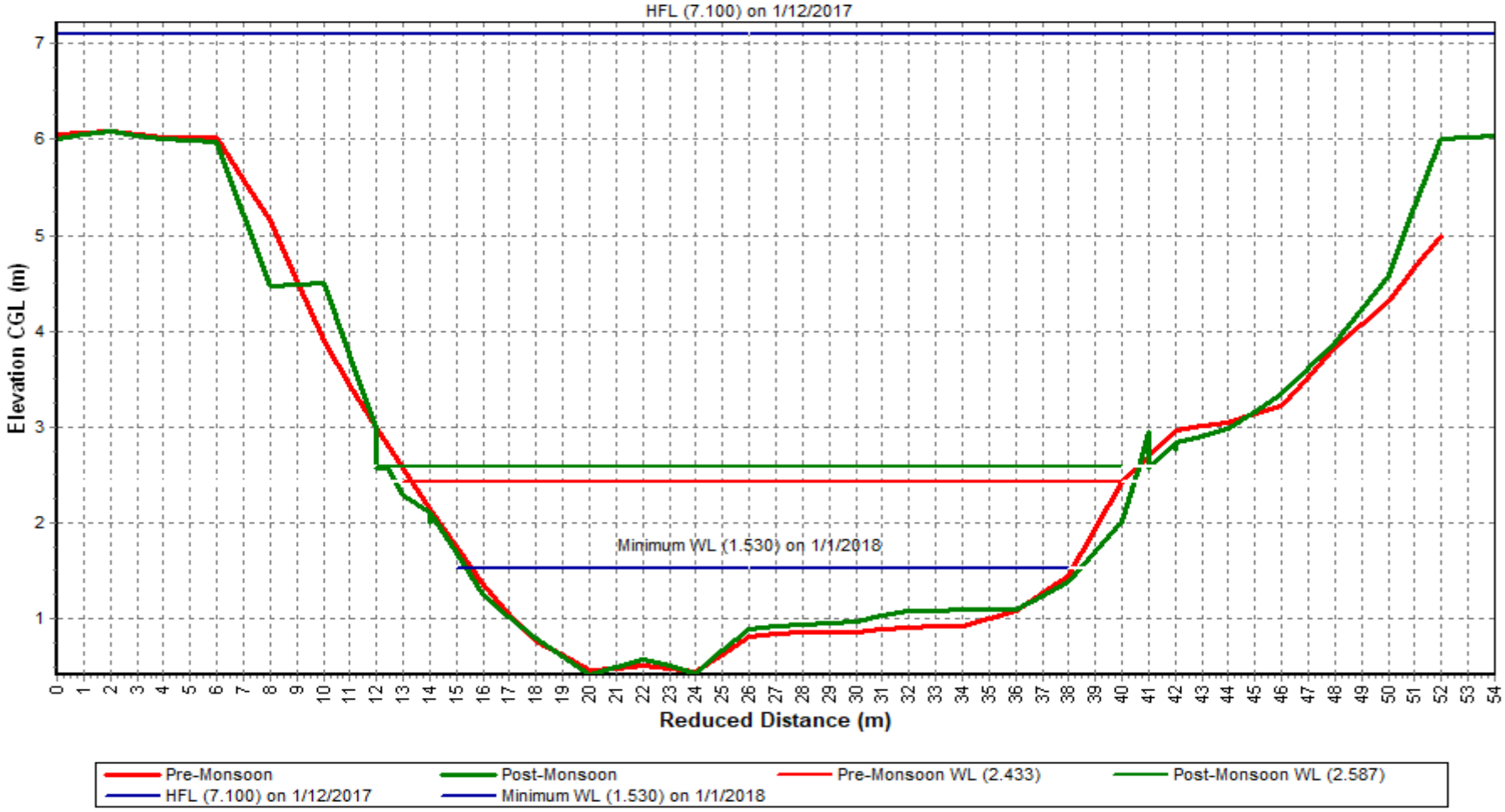
Sub-Division : SWR SD No 1, Trivandrum



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2017-2018

Station Name : ASHRAMAM (KE000G2) **Division : SWR Division, Cochin**

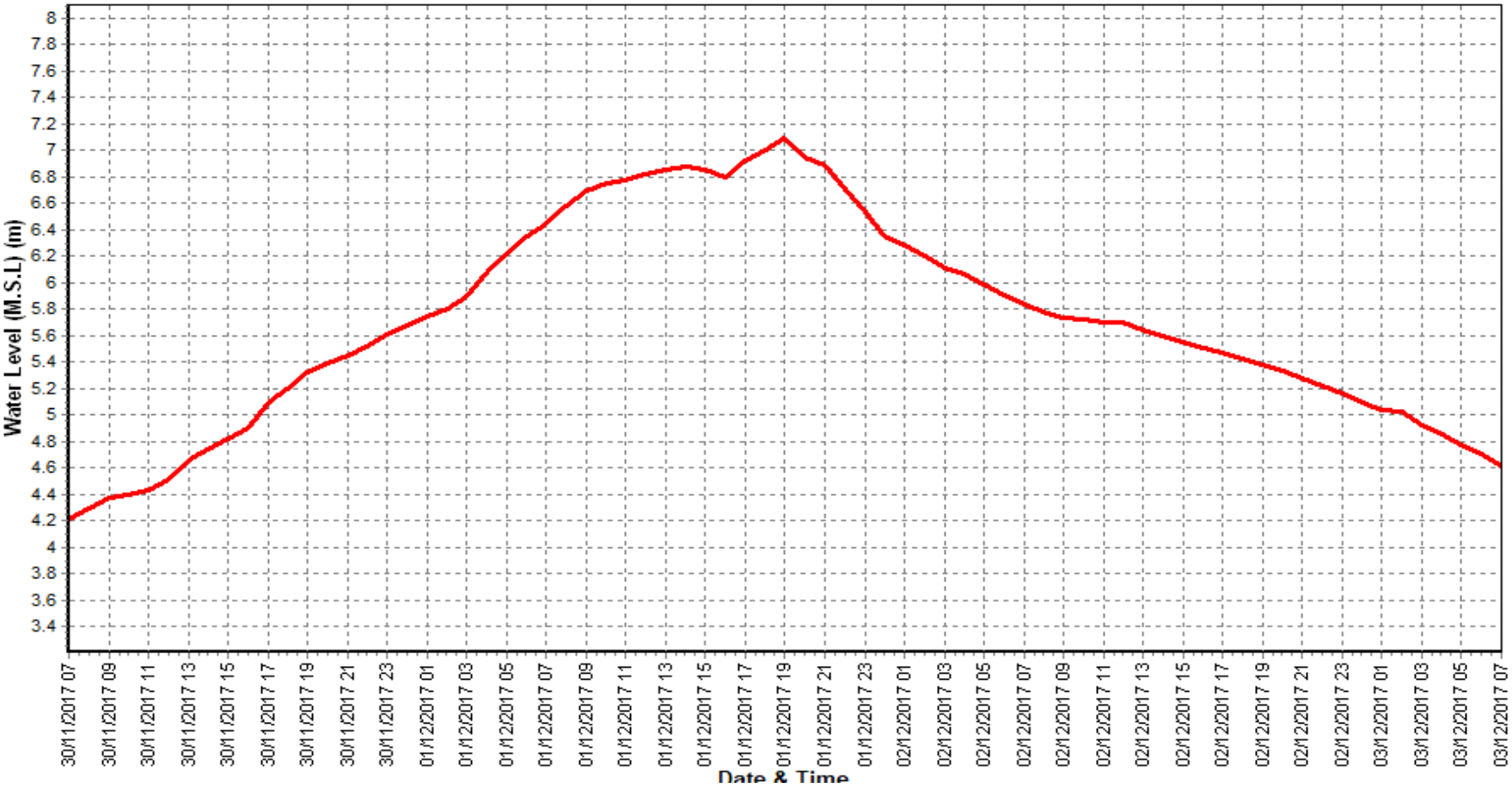
Local River : Pazhayar **Sub-Division : SWR SD No 1, Trivandrum**



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2017-2018

Station Name : ASHRAMAM (KE000G2) **Division : SWR Division, Cochin**

Local River : Pazhayar **Sub-Division : SWR SD No 1, Trivandrum**

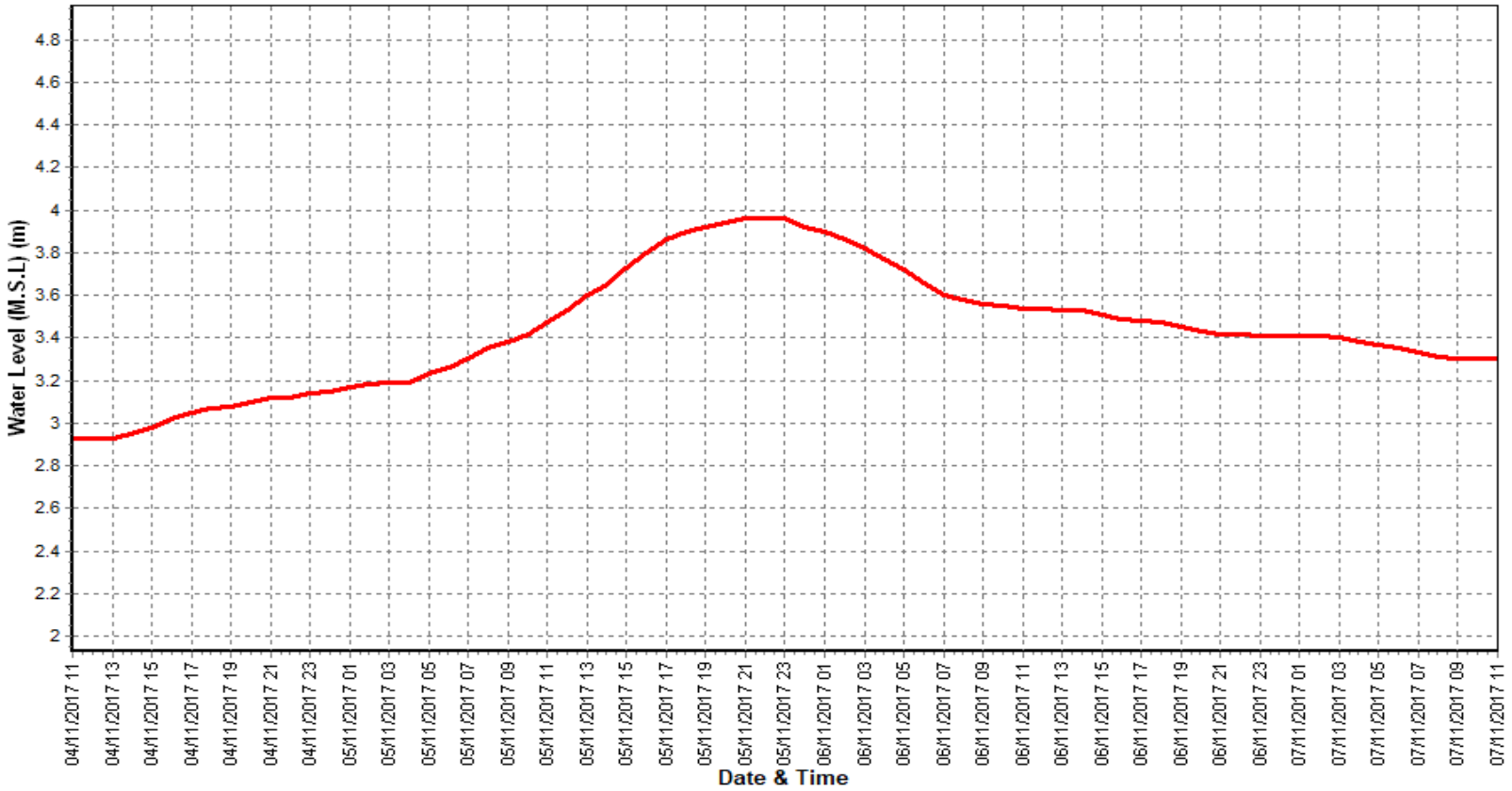


Time Span: 72 Hrs

Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2017-2018

Station Name : ASHRAMAM (KE000G2) **Division : SWR Division, Cochin**

Local River : Pazhayar **Sub-Division : SWR SD No 1, Trivandrum**

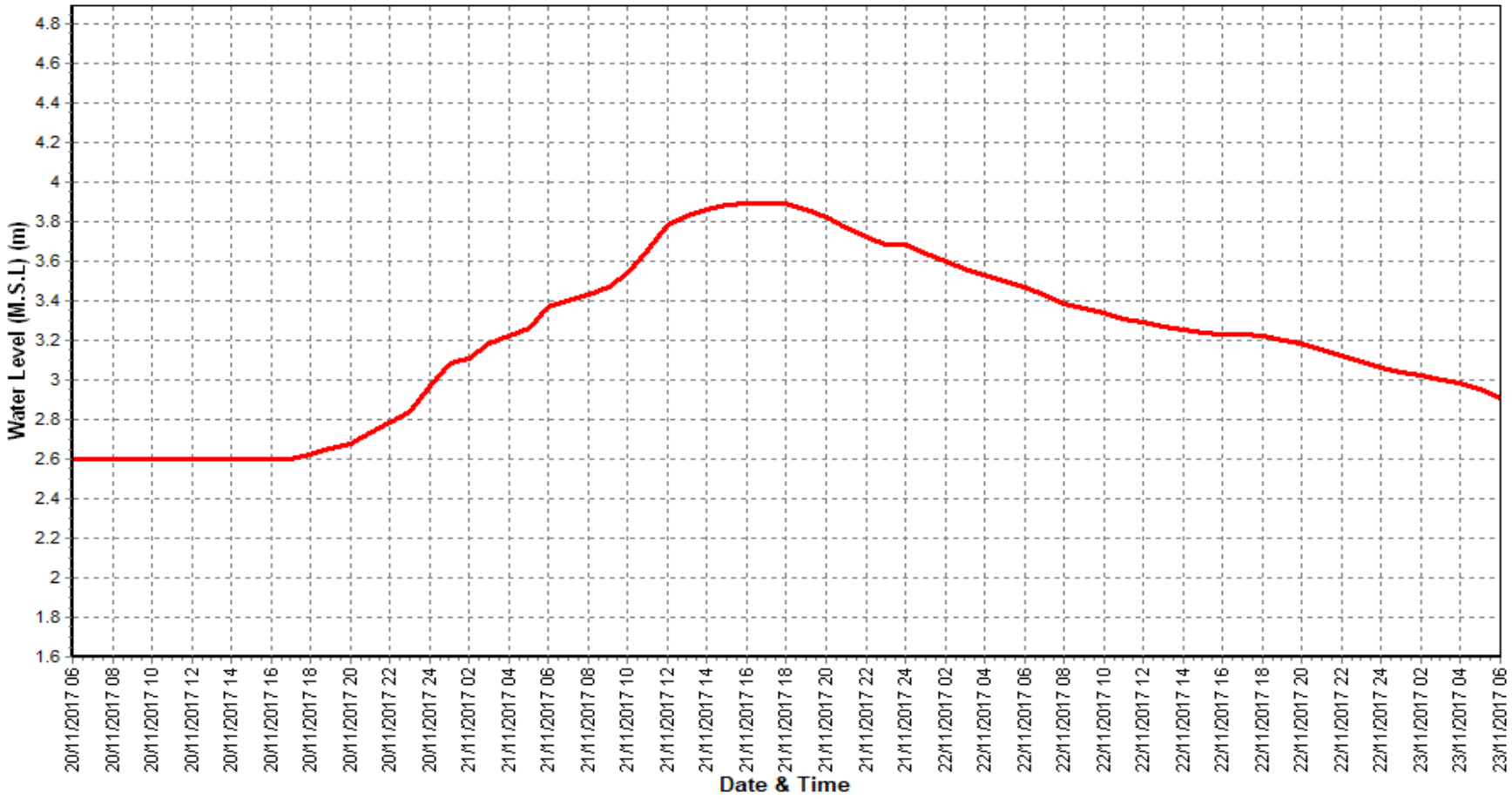


Time Span: 72 Hrs

Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2017-2018

Station Name : ASHRAMAM (KE000G2) **Division : SWR Division, Cochin**

Local River : Pazhayar **Sub-Division : SWR SD No 1, Trivandrum**



Time Span: 72 Hrs

ANNEXURE-II

DETAILS OF IMPORTANT PROJECTS IN MANDOVI BASIN

Sl.No.	Name of Project	River	Status	Capacity in MCM		Utilisation in MCM
				Gross	Live	
1.	Mandovi Irrigation Project	Mandovi	Completed	111.19	107.75	--
2.	Anjunem Project	Guleli (Vaivanta)	Completed			

ANNEXURE-III

DETAILS OF IMPORTANT PROJECTS IN BHARATHAPUZHA BASIN

Sl.No.	Name of Project	River	Status	Capacity in MCM		Utilisation in MCM
				Gross	Live	
1.	Kanhirapuzha Regulator	Kanhirapuzha	Completed	70.83	70.21	*
2.	Cheerakuzhy Regulator	Gayathripuzha	Completed			
3.	Mangalam Dam	Cherukimnupuzha	Completed	25.49	25.34	*
4.	Pothundi Dam	Ayalurpuzha	Completed	50.91	43.89	*
5.	Malampuzha Reservoir	Malampuzha	Completed	228.40	226.00	*
6.	Walayar Reservoir	Walayar	Completed	18.90	18.40	*
7.	Chulliyar Dam	Chulliyar	Completed	--	--	--
8.	Meenakara Dam	Meenakarapuzha	Completed	--	--	--
9.	Chitturpuzha Regulator	Chitturpuzha	Completed	Diversion scheme		*
10.	Aliyar Reservoir	Aliyar	Completed	109.43	109.43	
11.	Upper Aliyar Dam	Aliyar	Completed			
12.	Nallar Scheme	Nallar	Completed			
13.	Thirumurthi Reservoir	Palar	Completed	58.40	49.39	

NOTE: '*' - Release through canal are to be collected from the Project itself for utilisation purpose. The specified figure for utilisation is not readily available in CE, Irrigation office, Thiruvananthapuram.

ANNEXURE-IV

DETAILS OF IMPORTANT PROJECTS IN PERIYAR BASIN

Sl.No.	Name of Project	River	Status	Capacity in MCM		Utilisation in MCM
				Gross	Live	
1.	Periyar Valley Project	Periyar	Completed	443.5	299.35	--
2.	Chalakudy Diversion Scheme	Chalakudy	Completed			*
3.	Edamalayar Irrigation Scheme	Edamalayar	On Going	1,089.80	1,017.80	1,824.00
4.	Pallivasal Hydel Project	Mudirepuzha	Completed	63.00	63.00	155.40
5.	Sengulam Hydel Project	Mudirepuzha	Completed	49.85	49.00	230.10
6.	Penniar Hydel Project	Penniar	Completed			
7.	Neriamangalam Hydel Project	Mudirepuzha	Completed	6.80	5.49	732.00
8.	Idukky Hydel Project	Periyar and Cherutheni	Completed	1,996.30	1,459.50	2,027.90

ANNEXURE-V

DETAILS OF IMPORTANT PROJECTS IN PAMBA BASIN

Sl.No.	Name of Project	River	Status	Capacity in MCM		Utilisation in MCM
				Gross	Live	
1.	Pambar Irrigation Project	Kakkad	Completed	Barrage		*
2.	Sabarigiri Hydel Project	Pamba and Kakki	Completed	487.3	471.68	1,046.8

NOTE: `*' - Release through canal are to be collected from the Project itself for utilisation purpose. The specified figure for utilisation is not readily available in CE, Irrigation office, Thiruvananthapuram.

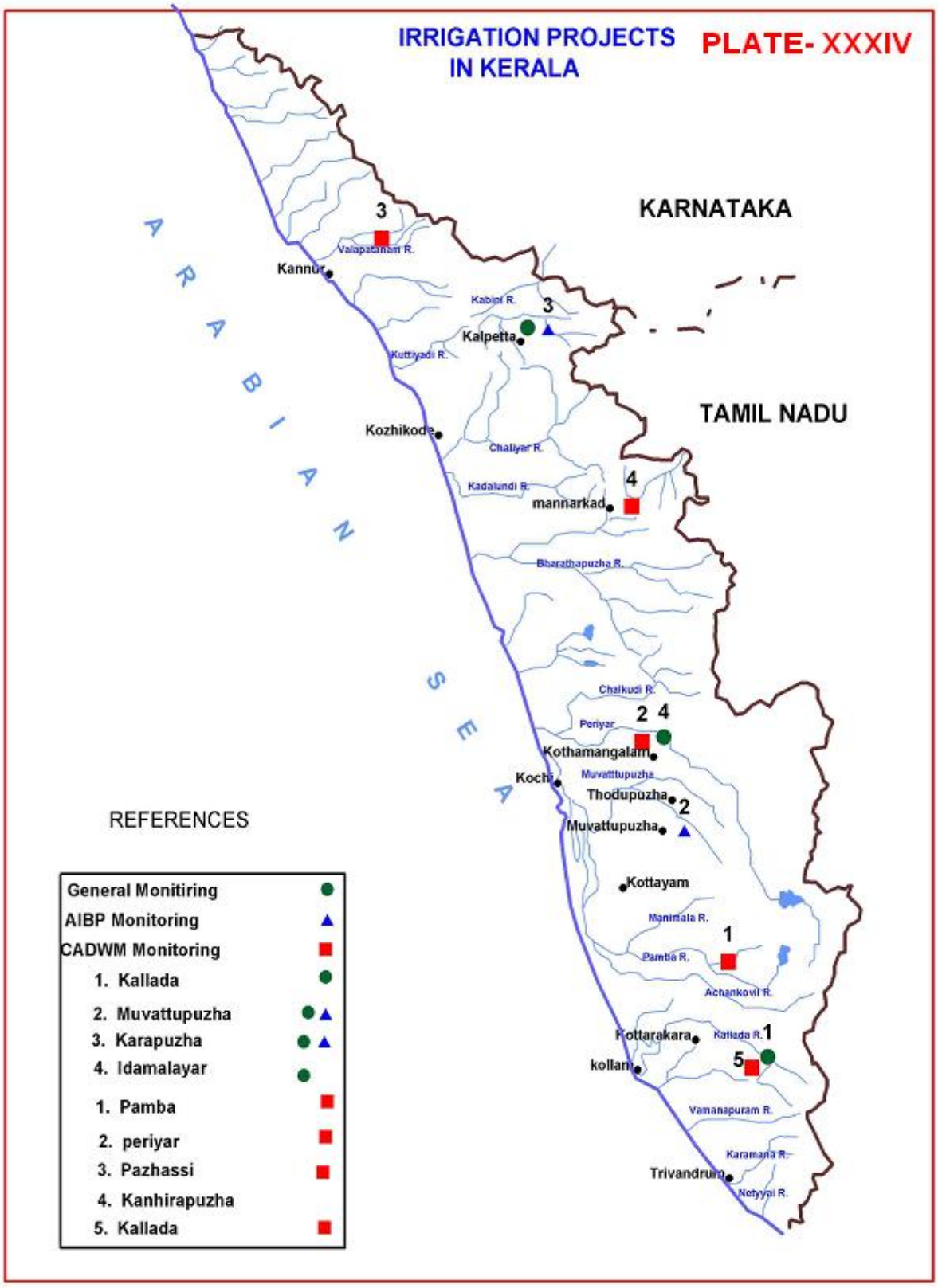
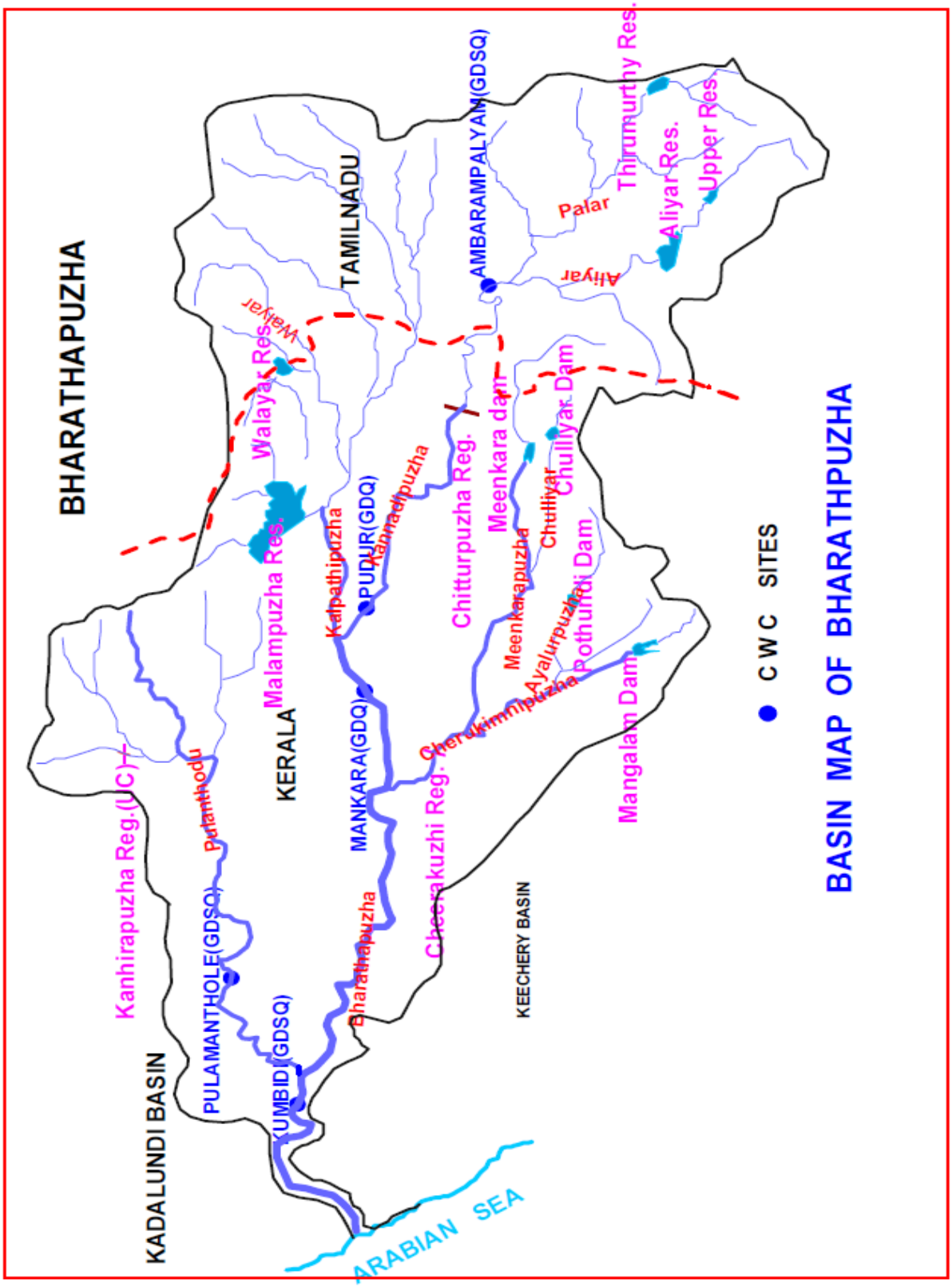

IRRIGATION PROJECTS
IN KERALA
PLATE- XXXIV
KARNATAKA
TAMIL NADU
ARABIAN SEA
Valapattanam R.
Kannur
Kabini R.
Kalpetta
Kuttiyadi R.
Kozhikode
Chaliyar R.
Kadalundi R.
mannarkad
Bharathapuzha R.
Chalkudi R.
Periyar
Kothamangalam
Kochi
Muvatttupuzha
Thodupuzha
Muvattupuzha
Kottayam
Manimala R.
Pamba R.
Achankovil R.
Pottarakara
Kallada R.
kollam
Vamanapuram R.
Karamana R.
Trivandrum
Nettyar R.
REFERENCES
General Monitiring
AIBP Monitoring
CADWM Monitoring
1. Kallada
2. Muvattupuzha
3. Karapuzha
4. Idamalayar
1. Pamba
2. periyar
3. Pazhassi
4. Kanhirapuzha
5. Kallada

PLATE-XXXV


BHARATHAPUZHA
TAMILNADU
KERALA
KADALUNDI BASIN
KEECHERY BASIN
ARABIAN SEA
AMBARAMPALYAM(GDSQ)
PUDUR(GDQ)
MANKARA(GDQ)
PULAMANTHOLE(GDSQ)
UMBIDI(GDSQ)
Walayar Res.
Malampuzha Res.
Kanhirapuzha Reg.(UC)
Kalpathipuzha
Kannadipuzha
Chitturpuzha Reg.
Meenkara dam
Chulliyar Dam
Chulliyar
Meenkarapuzha
Ayalurpuzha
Cherukimmipuzha
Pothundi Dam
Mangalam Dam
Cheerakuzhi Reg.
Bharathapuzha
Puranthodu
Palar
Aliyar
Thirumurthy Res.
Aliyar Res.
Upper Res.
C W C SITES
BASIN MAP OF BHARATHPUZHA

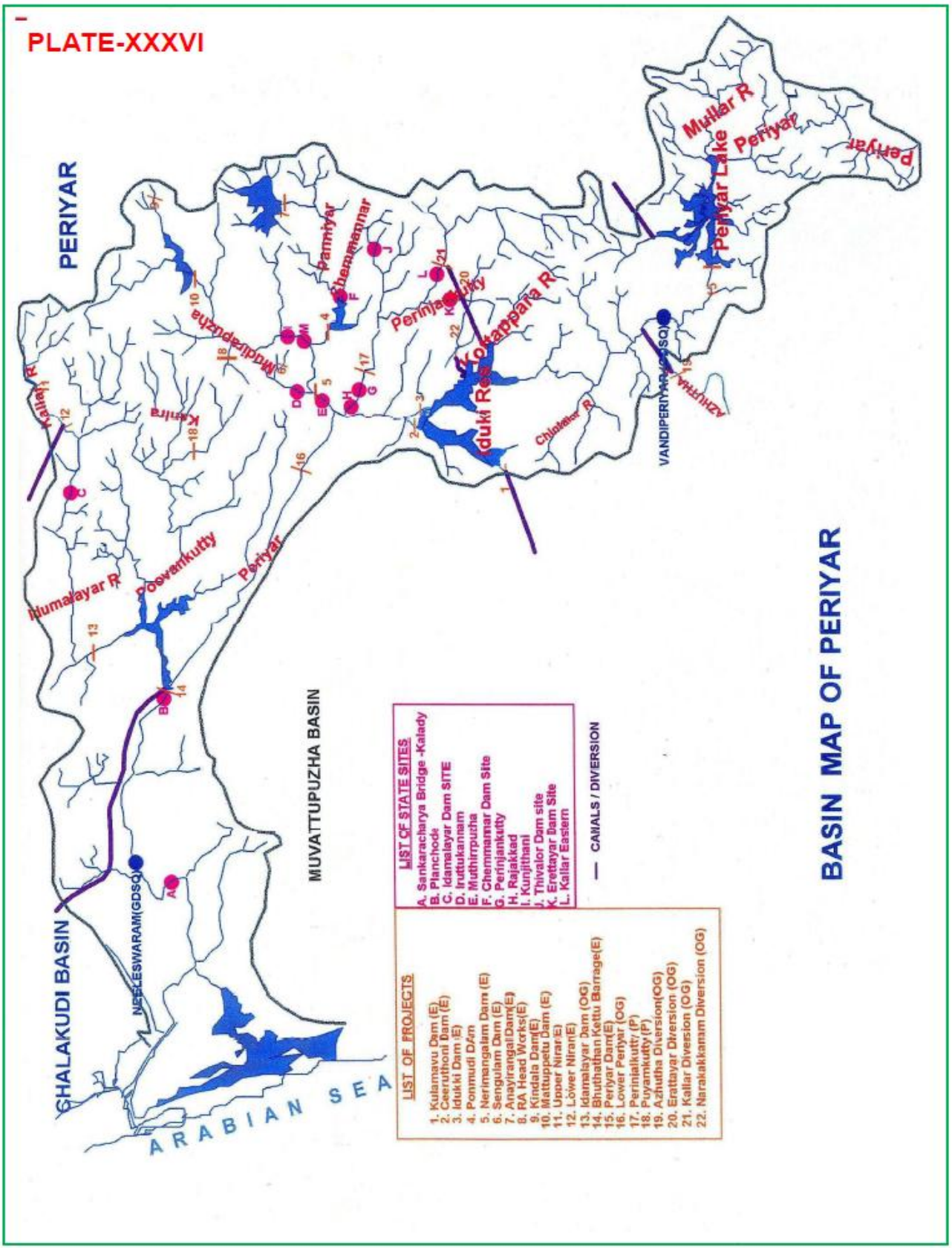
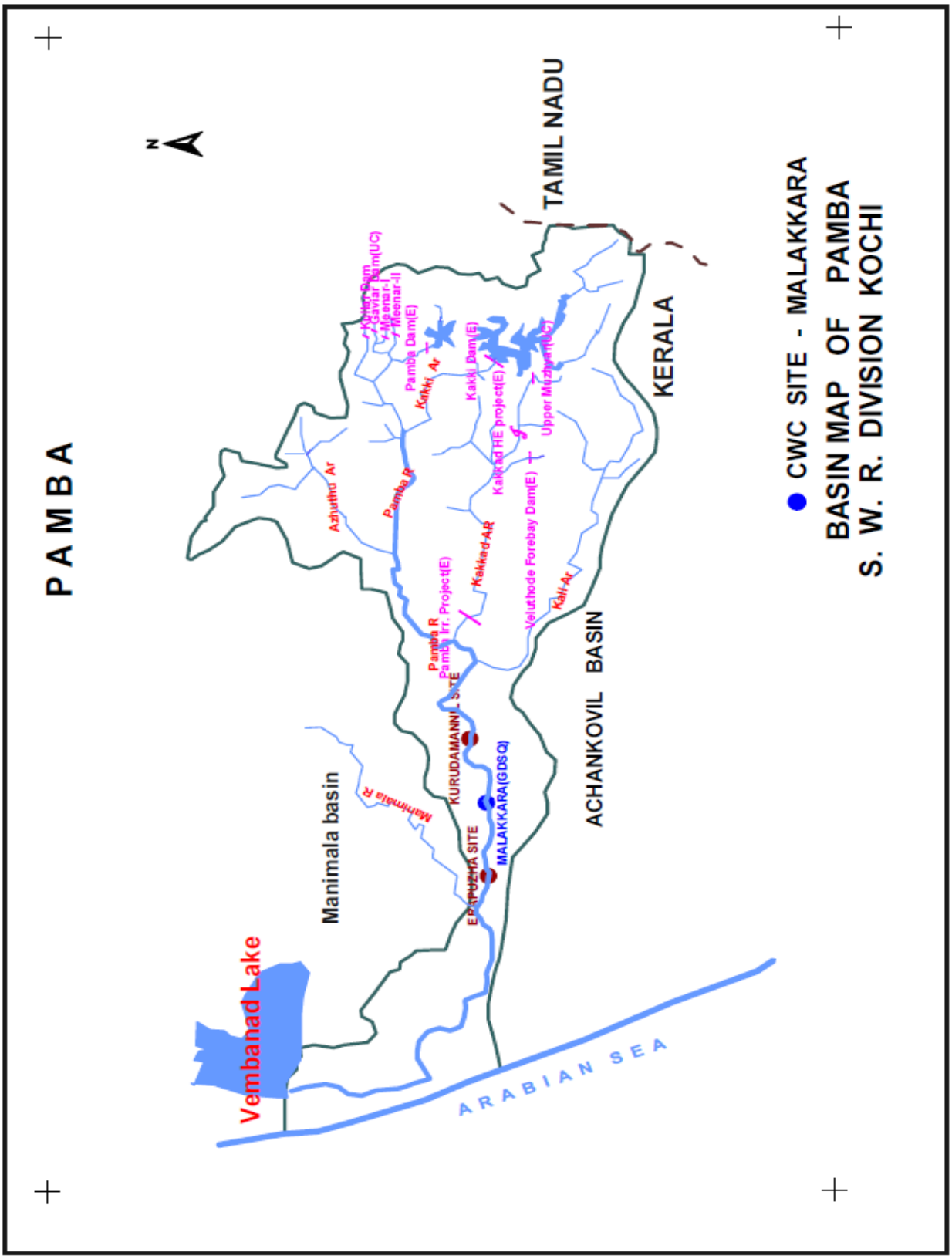

PLATE-XXXVI
PERIYAR
Mullar R
Periyar
Periyar Lake
Pamiyar
Cheruthoni
Perinjankutty
Kokkappara R
Idukki Reservoir
Chinnar R
VANDIPERIYAR(GDSQ)
AZHUTHA
Mandiarpuzha
Kallar R
Karira
Idumalayar R
Poovarnkutty
Periyar
MUVATTUPUZHA BASIN
CHALAKUDI BASIN
NEELESWARAM(GDSQ)
ARABIAN SEA
BASIN MAP OF PERIYAR
CANALS / DIVERSION
LIST OF STATE SITES
A. Sankaracharya Bridge -Kalady
B. Planchodi
C. Idamalayar Dam SITE
D. Iruttukannam
E. Muthirpuzha
F. Chemmannar Dam Site
G. Perinjankutty
H. Rajakkad
I. Kunjithani
J. Thivalor Dam site
K. Erattayar Dam Site
L. Kallar Eastern
LIST OF PROJECTS
1. Kulamavu Dam (E)
2. Ceeruthoni Dam (E)
3. Idukki Dam (E)
4. Ponmudi Dam
5. Nerimangalam Dam (E)
6. Sengulam Dam (E)
7. Anayirangal Dam(E)
8. RA Head Works(E)
9. Kindala Dam(E)
10. Mattuppetu Dam (E)
11. Upper Niran(E)
12. Lower Niran(E)
13. Idamalayar Dam (OG)
14. Bhuthathan Kettu Barrage(E)
15. Periyar Dam(E)
16. Lower Periyar (OG)
17. Perinialkutty (P)
18. Puyamkutty (P)
19. Azhutha Diversion(OG)
20. Erattayar Diversion (OG)
21. Kallar Diversion (OG)
22. Narakakkanam Diversion (OG)

PLATE-XXXVII



C O N T E N T S

SUSPENDED SEDIMENT & BED MATERIAL DATA

Sl.No.	CHAPTER	PAGE No.
1.	Ulhas at Badlapur	500-508
2.	Kal at Mangaon	509-515
3.	Nethravathi at Bantwal	516-525
4.	Payaswani at Erinjipuzha	526-534
5.	Valapatanam at Perumannu	535-543
6.	Kuttyadi at Kuttyadi	544-552
7.	Chaliyar at Kuniyil	553-561
8.	Kadalundi at Karathodu	562-570
9.	Bharathapuzha at Kumbidi	571-579
10.	Pulanthodu at Pulamanthole	580-588
11.	Bharathapuzha at Mankara	589-597
12.	Bharathapuzha at Pudur	598-606
13.	Aliyar at Ambarampalayam	607-614
14.	Chalakudi at Arangaly	615-623
15.	Periyar at Neeleswaram	624-633
16.	Muvattupuzha at Ramamangalam	634-642
17.	Kaliyar at Kalampur	643-651
18.	Meenachil at Kidangoor	652-660
19.	Manimala at Kallooppara	661-669
20.	Pamba at Malakkara	670-678
21.	Achankovil at Thumpamon	679-687
22.	Kallada at Pattazhy	688-696
23.	Vamanapuram at Ayilam	697-705

Annual Sediment Load for period : 2015-2018

Station Name : Badlapur (WU000P8) **Division : Upper Krishna Divn, Pune**

Local River : Ulhas **Sub-Division : Upper Krishna SD 3, Managaon**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2015-2016	28391	1553	29945	1723
2016-2017	334663	2661	337324	3437
2017-2018	305499	2885	308384	3295

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : Badlapur (WU000P8) | **Division : Upper Krishna Divn, Pune**

Local River : Ulhas | **Sub-Division : Upper Krishna SD 3, Managaon**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	10.58	0.000	0.000	0.024	0.024	22	553.9	0.000	0.000	0.060	0.060	2852	227.5	0.000	0.000	0.022	0.022	425
2	11.15	0.000	0.000	0.024	0.024	23	905.2	0.000	0.000	0.067	0.067	5224	264.5	0.000	0.000	0.015	0.015	347
3	11.13	0.000	0.000	0.024	0.024	23	478.1	0.000	0.000	0.058	0.058	2379	149.5	0.000	0.000	0.011	0.011	139
4	8.627	0.000	0.000	0.023	0.023	17	325.3	0.000	0.000	0.053	0.053	1481	159.6	0.000	0.000	0.051	0.051	703
5	0.000	0.000	0.000	0.000	0.000	0	333.7	0.000	0.000	0.037	0.037	1061	111.6	0.000	0.000	0.052	0.052	501
6	1.960	0.000	0.000	0.016	0.016	3	233.3	0.000	0.000	0.051	0.051	1025	93.15	0.000	0.000	0.039	0.039	316
7	10.54	0.000	0.000	0.024	0.024	22	345.4	0.000	0.000	0.059	0.059	1767	69.53	0.000	0.000	0.036	0.036	214
8	10.26	0.000	0.000	0.024	0.024	21	358.1	0.000	0.000	0.054	0.054	1664	71.00	0.000	0.000	0.039	0.039	237
9	11.13	0.000	0.000	0.024	0.024	23	260.6	0.000	0.000	0.050	0.050	1126	62.41	0.000	0.000	0.020	0.020	110
10	14.69	0.000	0.000	0.026	0.026	32	179.5	0.000	0.000	0.059	0.059	920	102.7	0.000	0.000	0.052	0.052	459
11	15.38	0.000	0.000	0.026	0.026	34	129.0	0.000	0.000	0.051	0.051	574	166.8	0.000	0.000	0.059	0.059	843
12	0.000	0.000	0.000	0.024	0.024	0	165.5	0.000	0.000	0.060	0.060	861	150.5	0.000	0.000	0.044	0.044	572
13	11.18	0.000	0.000	0.024	0.024	23	125.0	0.000	0.000	0.053	0.053	575	170.2	0.000	0.000	0.045	0.045	666
14	17.55	0.000	0.000	0.027	0.027	40	1298	0.000	0.000	0.083	0.083	9294	298.2	0.000	0.000	0.059	0.059	1522
15	15.38	0.000	0.000	0.026	0.026	34	902.0	0.000	0.000	0.059	0.059	4583	349.8	0.000	0.000	0.054	0.054	1620
16	14.69	0.000	0.000	0.026	0.026	32	688.5	0.000	0.000	0.063	0.063	3730	254.3	0.000	0.000	0.057	0.057	1257
17	18.30	0.000	0.000	0.027	0.027	43	666.5	0.000	0.000	0.056	0.056	3207	169.4	0.000	0.000	0.055	0.055	808
18	13.35	0.000	0.000	0.025	0.025	29	800.0	0.000	0.000	0.068	0.068	4721	119.2	0.000	0.000	0.051	0.051	529
19	0.000	0.000	0.000	0.000	0.000	0	723.1	0.000	0.000	0.059	0.059	3668	126.5	0.000	0.000	0.051	0.051	562
20	11.67	0.000	0.000	0.024	0.024	25	396.1	0.000	0.000	0.060	0.060	2040	291.0	0.000	0.000	0.051	0.051	1290
21	13.81	0.000	0.000	0.025	0.025	30	928.9	0.000	0.000	0.067	0.067	5401	506.3	0.000	0.000	0.059	0.059	2563
22	10.86	0.000	0.000	0.024	0.024	22	1014	0.000	0.000	0.082	0.082	7198	285.5	0.000	0.000	0.059	0.059	1458
23	17.55	0.000	0.000	0.027	0.027	40	688.5	0.000	0.000	0.063	0.063	3730	177.0	0.000	0.000	0.044	0.044	674
24	28.55	0.000	0.000	0.030	0.030	74	489.9	0.000	0.000	0.052	0.052	2209	166.2	0.000	0.000	0.042	0.042	605
25	796.1	0.000	0.000	0.065	0.065	4464	337.4	0.000	0.000	0.059	0.059	1720	153.7	0.000	0.000	0.044	0.044	587
26	193.6	0.000	0.000	0.047	0.047	781	186.2	0.000	0.000	0.060	0.060	970	415.4	0.000	0.000	0.052	0.052	1873
27	244.6	0.000	0.000	0.049	0.049	1042	176.0	0.000	0.000	0.060	0.060	911	596.5	0.000	0.000	0.061	0.061	3123
28	358.1	0.000	0.000	0.054	0.054	1664	386.8	0.000	0.000	0.059	0.059	1965	480.3	0.000	0.000	0.052	0.052	2162
29	653.9	0.000	0.000	0.062	0.062	3503	356.1	0.000	0.000	0.041	0.041	1265	985.7	0.000	0.000	0.060	0.060	5076
30	1088	0.000	0.000	0.070	0.070	6562	314.6	0.000	0.000	0.052	0.052	1419	937.0	0.000	0.000	0.067	0.067	5440
31							344.8	0.000	0.000	0.059	0.059	1763	389.8	0.000	0.000	0.052	0.052	1755
Ten Daily Mean																		
Ten Daily I	9.007	0.000	0.000	0.021	0.021	19	397.3	0.000	0.000	0.055	0.055	1950	131.1	0.000	0.000	0.034	0.034	345
Ten Daily II	11.75	0.000	0.000	0.023	0.023	26	589.3	0.000	0.000	0.061	0.061	3325	209.6	0.000	0.000	0.053	0.053	967
Ten Daily III	340.5	0.000	0.000	0.045	0.045	1818	474.8	0.000	0.000	0.060	0.060	2596	463.0	0.000	0.000	0.054	0.054	2301
Monthly																		
Total						18629						81303						38438

Annual Sediment Load (Metric Tonnes) : 308384

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : Badlapur (WU000P8) **Division : Upper Krishna Divn, Pune**

Local River : Ulhas **Sub-Division : Upper Krishna SD 3, Managaon**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	273.6	0.000	0.000	0.051	0.051	1196	55.66	0.000	0.000	0.184	0.184	883	29.50	0.000	0.000	0.003	0.003	7
2	198.5	0.000	0.000	0.047	0.047	804	28.55	0.000	0.000	0.077	0.077	189	25.78	0.000	0.000	0.002	0.002	5
3	128.9	0.000	0.000	0.042	0.042	472	54.35	0.000	0.000	0.170	0.170	796	20.65	0.000	0.000	0.002	0.002	4
4	152.2	0.000	0.000	0.044	0.044	580	55.13	0.000	0.000	0.223	0.223	1060	23.15	0.000	0.000	0.001	0.001	2
5	106.7	0.000	0.000	0.041	0.041	374	52.43	0.000	0.000	0.921	0.921	4170	31.46	0.000	0.000	0.001	0.001	4
6	85.81	0.000	0.000	0.030	0.030	222	48.98	0.000	0.000	0.157	0.157	666	7.604	0.000	0.000	0.001	0.001	0
7	69.16	0.000	0.000	0.037	0.037	219	65.56	0.000	0.000	0.232	0.232	1312	20.65	0.000	0.000	0.006	0.006	11
8	55.13	0.000	0.000	0.035	0.035	166	177.1	0.000	0.000	0.727	0.727	11129	29.50	0.000	0.000	0.006	0.006	15
9	200.9	0.000	0.000	0.047	0.047	818	407.1	0.000	0.000	1.538	1.538	54084	27.61	0.000	0.000	0.005	0.005	11
10	161.3	0.000	0.000	0.045	0.045	623	204.0	0.000	0.000	0.626	0.626	11040	21.47	0.000	0.000	0.002	0.002	3
11	88.21	0.000	0.000	0.039	0.039	296	271.9	0.000	0.000	1.228	1.228	28844	25.78	0.000	0.000	0.003	0.003	6
12	77.69	0.000	0.000	0.038	0.038	253	180.9	0.000	0.000	0.474	0.474	7402	24.01	0.000	0.000	0.005	0.005	9
13	274.6	0.000	0.000	0.051	0.051	1201	126.7	0.000	0.000	0.348	0.348	3814	3.112	0.000	0.000	0.000	0.000	0
14	195.5	0.000	0.000	0.047	0.047	791	165.7	0.000	0.000	0.508	0.508	7272	4.332	0.000	0.000	0.000	0.000	0
15	248.1	0.000	0.000	0.049	0.049	1059	133.9	0.000	0.000	0.313	0.313	3623	20.65	0.000	0.000	0.003	0.003	5
16	174.0	0.000	0.000	0.046	0.046	684	118.1	0.000	0.000	0.368	0.368	3757	23.15	0.000	0.000	0.005	0.005	10
17	120.1	0.000	0.000	0.042	0.042	434	80.54	0.000	0.000	0.263	0.263	1827	22.30	0.000	0.000	0.004	0.004	8
18	61.37	0.000	0.000	0.036	0.036	189	64.15	0.000	0.000	0.168	0.168	929	20.65	0.000	0.000	0.005	0.005	10
19	95.19	0.000	0.000	0.040	0.040	325	45.65	0.000	0.000	0.140	0.140	553	16.81	0.000	0.000	0.005	0.005	8
20	1189	0.000	0.000	0.042	0.042	4274	37.34	0.000	0.000	0.068	0.068	218	6.188	0.000	0.000	0.002	0.002	1
21	477.6	0.000	0.000	0.058	0.058	2377	35.85	0.000	0.000	0.040	0.040	123	18.30	0.000	0.000	0.009	0.009	14
22	442.5	0.000	0.000	0.057	0.057	2164	34.50	0.000	0.000	0.001	0.001	4	24.01	0.000	0.000	0.003	0.003	7
23	252.8	0.000	0.000	0.050	0.050	1085	37.62	0.000	0.000	0.006	0.006	20	26.69	0.000	0.000	0.005	0.005	11
24	125.9	0.000	0.000	0.042	0.042	459	33.40	0.000	0.000	0.004	0.004	12	26.05	0.000	0.000	0.009	0.009	19
25	134.3	0.000	0.000	0.043	0.043	496	34.81	0.000	0.000	0.003	0.003	9	24.89	0.000	0.000	0.009	0.009	20
26	111.5	0.000	0.000	0.041	0.041	395	32.73	0.000	0.000	0.002	0.002	4	12.07	0.000	0.000	0.003	0.003	3
27	81.29	0.000	0.000	0.038	0.038	268	36.23	0.000	0.000	0.001	0.001	3	3.112	0.000	0.000	0.000	0.000	0
28	76.09	0.000	0.000	0.038	0.038	247	34.61	0.000	0.000	0.032	0.032	95	19.85	0.000	0.000	0.002	0.002	4
29	72.58	0.000	0.000	0.037	0.037	233	31.46	0.000	0.000	0.002	0.002	5	24.89	0.000	0.000	0.004	0.004	9
30	102.1	0.000	0.000	0.040	0.040	355	34.18	0.000	0.000	0.001	0.001	4	20.65	0.000	0.000	0.005	0.005	9
31							40.42	0.000	0.000	0.003	0.003	9						
Ten Daily Mean																		
Ten Daily I	143.2	0.000	0.000	0.042	0.042	548	114.9	0.000	0.000	0.485	0.485	8533	23.74	0.000	0.000	0.003	0.003	6
Ten Daily II	252.4	0.000	0.000	0.043	0.043	951	122.5	0.000	0.000	0.388	0.388	5824	16.70	0.000	0.000	0.003	0.003	6
Ten Daily III	187.7	0.000	0.000	0.044	0.044	808	35.07	0.000	0.000	0.009	0.009	26	20.05	0.000	0.000	0.005	0.005	10
Monthly																		
Total						23058						143855						215

Annual Sediment Load (Metric Tonnes) : 308384

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : Badlapur (WU000P8) **Division : Upper Krishna Divn, Pune**

Local River : Ulhas **Sub-Division : Upper Krishna SD 3, Managaon**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	22.30	0.000	0.000	0.001	0.001	2	3.785	0.000	0.000	0.019	0.019	6	13.35	0.000	0.000	0.025	0.025	29
2	20.65	0.000	0.000	0.002	0.002	3	0.000	0.000	0.000	0.000	0.000	0	16.81	0.000	0.000	0.026	0.026	38
3	14.01	0.000	0.000	0.004	0.004	5	7.604	0.000	0.000	0.022	0.022	14	19.07	0.000	0.000	0.027	0.027	45
4	7.116	0.000	0.000	0.001	0.001	1	4.915	0.000	0.000	0.020	0.020	8	10.28	0.000	0.000	0.024	0.024	21
5	16.08	0.000	0.000	0.003	0.003	3	8.627	0.000	0.000	0.023	0.023	17	2.224	0.000	0.000	0.017	0.017	3
6	24.89	0.000	0.000	0.002	0.002	5	10.28	0.000	0.000	0.024	0.024	21	0.000	0.000	0.000	0.000	0.000	0
7	22.30	0.000	0.000	0.002	0.002	4	10.86	0.000	0.000	0.024	0.024	22	8.108	0.000	0.000	0.022	0.022	16
8	25.78	0.000	0.000	0.005	0.005	11	6.188	0.000	0.000	0.021	0.021	11	5.748	0.000	0.000	0.021	0.021	10
9	20.65	0.000	0.000	0.001	0.001	2	3.112	0.000	0.000	0.018	0.018	5	11.46	0.000	0.000	0.024	0.024	24
10	24.01	0.000	0.000	0.003	0.003	5	9.714	0.000	0.000	0.023	0.023	19	9.714	0.000	0.000	0.023	0.023	19
11	8.627	0.000	0.000	0.001	0.001	1	14.69	0.000	0.000	0.026	0.026	32	8.108	0.000	0.000	0.022	0.022	16
12	14.69	0.000	0.000	0.003	0.003	4	16.81	0.000	0.000	0.026	0.026	38	3.785	0.000	0.000	0.019	0.019	6
13	14.69	0.000	0.000	0.003	0.003	3	11.46	0.000	0.000	0.024	0.024	24	3.785	0.000	0.000	0.019	0.019	6
14	22.30	0.000	0.000	0.006	0.006	11	9.163	0.000	0.000	0.023	0.023	18	4.522	0.000	0.000	0.019	0.019	8
15	24.89	0.000	0.000	0.008	0.008	18	1.960	0.000	0.000	0.016	0.016	3	10.28	0.000	0.000	0.024	0.024	21
16	14.01	0.000	0.000	0.005	0.005	6	5.323	0.000	0.000	0.020	0.020	9	10.28	0.000	0.000	0.024	0.024	21
17	20.65	0.000	0.000	0.010	0.010	19	9.714	0.000	0.000	0.023	0.023	19	12.70	0.000	0.000	0.025	0.025	27
18	3.112	0.000	0.000	0.000	0.000	0	11.46	0.000	0.000	0.024	0.024	24	9.714	0.000	0.000	0.023	0.023	19
19	17.55	0.000	0.000	0.003	0.003	4	19.07	0.000	0.000	0.027	0.027	45	4.146	0.000	0.000	0.019	0.019	7
20	14.01	0.000	0.000	0.004	0.004	5	18.30	0.000	0.000	0.027	0.027	43	2.557	0.000	0.000	0.017	0.017	4
21	14.69	0.000	0.000	0.005	0.005	6	13.35	0.000	0.000	0.025	0.025	29	6.150	0.000	0.000	0.021	0.021	11
22	24.01	0.000	0.000	0.003	0.003	5	3.112	0.000	0.000	0.018	0.018	5	8.568	0.000	0.000	0.023	0.023	17
23	16.81	0.000	0.000	0.002	0.002	3	4.146	0.000	0.000	0.019	0.019	7	11.14	0.000	0.000	0.024	0.024	23
24	7.116	0.000	0.000	0.001	0.001	0	8.627	0.000	0.000	0.023	0.023	17	6.213	0.000	0.000	0.021	0.021	11
25	1.960	0.000	0.000	0.000	0.000	0	8.108	0.000	0.000	0.022	0.022	16	5.748	0.000	0.000	0.021	0.021	10
26	1.713	0.000	0.000	0.000	0.000	0	10.28	0.000	0.000	0.024	0.024	21	7.203	0.000	0.000	0.022	0.022	14
27	4.915	0.000	0.000	0.002	0.002	1	14.69	0.000	0.000	0.026	0.026	32	4.903	0.000	0.000	0.020	0.020	8
28	7.116	0.000	0.000	0.002	0.002	1	13.35	0.000	0.000	0.025	0.025	29	8.854	0.000	0.000	0.023	0.023	17
29	6.188	0.000	0.000	0.001	0.001	1	1.960	0.000	0.000	0.016	0.016	3						
30	7.116	0.000	0.000	0.000	0.000	0	0.722	0.000	0.000	0.013	0.013	1						
31	6.644	0.000	0.000	0.000	0.000	0	12.07	0.000	0.000	0.012	0.012	13						
Ten Daily Mean																		
Ten Daily I	19.78	0.000	0.000	0.002	0.002	4	7.232	0.000	0.000	0.021	0.021	14	10.75	0.000	0.000	0.023	0.023	23
Ten Daily II	15.45	0.000	0.000	0.004	0.004	7	11.79	0.000	0.000	0.024	0.024	26	6.988	0.000	0.000	0.021	0.021	13
Ten Daily III	8.934	0.000	0.000	0.001	0.001	2	8.219	0.000	0.000	0.020	0.020	16	7.347	0.000	0.000	0.022	0.022	14
Monthly																		
Total						129						551						451

Annual Sediment Load (Metric Tonnes) : 308384

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : Badlapur (WU000P8) **Division : Upper Krishna Divn, Pune**

Local River : Ulhas **Sub-Division : Upper Krishna SD 3, Managaon**

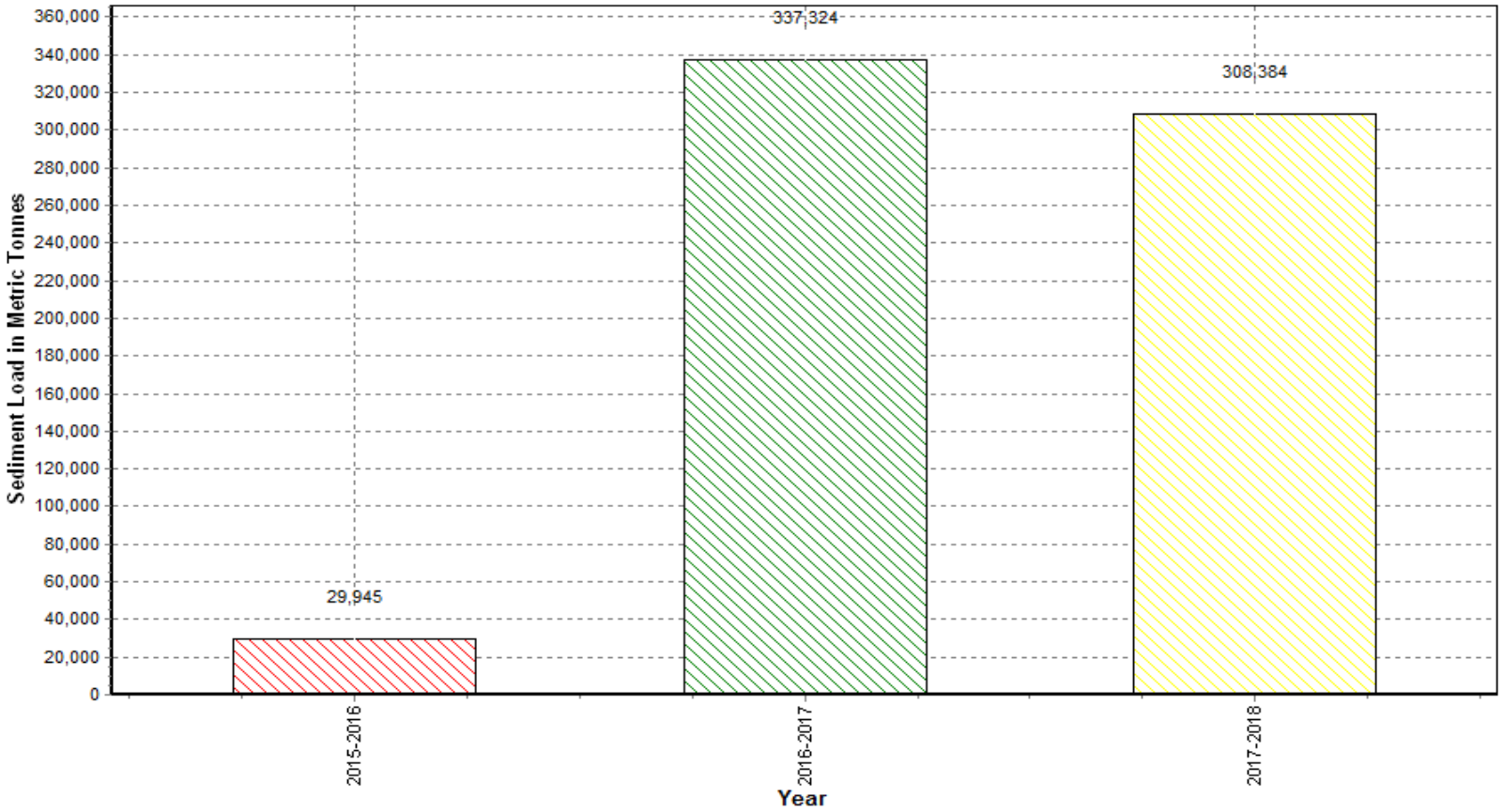
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	5.323	0.000	0.000	0.020	0.020	9	10.28	0.000	0.000	0.024	0.024	21	5.748	0.000	0.000	0.001	0.001	0
2	5.748	0.000	0.000	0.021	0.021	10	6.188	0.000	0.000	0.021	0.021	11	0.000	0.000	0.000	0.000	0.000	0
3	1.960	0.000	0.000	0.016	0.016	3	0.000	0.000	0.000	0.000	0.000	0	10.86	0.000	0.000	0.002	0.002	2
4	6.188	0.000	0.000	0.021	0.021	11	10.28	0.000	0.000	0.024	0.024	21	10.28	0.000	0.000	0.002	0.002	2
5	1.069	0.000	0.000	0.014	0.014	1	12.07	0.000	0.000	0.024	0.024	25	9.714	0.000	0.000	0.003	0.003	2
6	0.000	0.000	0.000	0.000	0.000	0	10.28	0.000	0.000	0.024	0.024	21	12.07	0.000	0.000	0.004	0.004	4
7	9.714	0.000	0.000	0.023	0.023	19	12.07	0.000	0.000	0.024	0.024	25	8.108	0.000	0.000	0.003	0.003	2
8	10.86	0.000	0.000	0.024	0.024	22	10.86	0.000	0.000	0.024	0.024	22	5.323	0.000	0.000	0.001	0.001	1
9	8.627	0.000	0.000	0.023	0.023	17	6.188	0.000	0.000	0.021	0.021	11	10.28	0.000	0.000	0.024	0.024	21
10	10.28	0.000	0.000	0.024	0.024	21	7.604	0.000	0.000	0.022	0.022	14	12.07	0.000	0.000	0.078	0.078	81
11	11.46	0.000	0.000	0.024	0.024	24	10.28	0.000	0.000	0.024	0.024	21	10.86	0.000	0.000	0.024	0.024	22
12	6.644	0.000	0.000	0.021	0.021	12	12.70	0.000	0.000	0.025	0.025	27	12.07	0.000	0.000	0.039	0.039	40
13	7.116	0.000	0.000	0.022	0.022	13	12.70	0.000	0.000	0.025	0.025	27	10.28	0.000	0.000	0.049	0.049	44
14	7.604	0.000	0.000	0.022	0.022	14	10.86	0.000	0.000	0.024	0.024	22	9.163	0.000	0.000	0.024	0.024	19
15	9.163	0.000	0.000	0.023	0.023	18	9.714	0.000	0.000	0.023	0.023	19	6.188	0.000	0.000	0.013	0.013	7
16	13.35	0.000	0.000	0.025	0.025	29	11.46	0.000	0.000	0.024	0.024	24	10.86	0.000	0.000	0.024	0.024	22
17	12.07	0.000	0.000	0.024	0.024	25	5.323	0.000	0.000	0.020	0.020	9	12.07	0.000	0.000	0.048	0.048	50
18	10.86	0.000	0.000	0.024	0.024	22	10.28	0.000	0.000	0.024	0.024	21	9.714	0.000	0.000	0.073	0.073	61
19	8.108	0.000	0.000	0.022	0.022	16	12.07	0.000	0.000	0.024	0.024	25	10.28	0.000	0.000	0.025	0.025	22
20	7.116	0.000	0.000	0.022	0.022	13	10.86	0.000	0.000	0.024	0.024	22	10.86	0.000	0.000	0.018	0.018	17
21	10.28	0.000	0.000	0.024	0.024	21	9.714	0.000	0.000	0.023	0.023	19	4.915	0.000	0.000	0.006	0.006	2
22	9.163	0.000	0.000	0.023	0.023	18	0.000	0.000	0.000	0.000	0.000	0	7.116	0.000	0.000	0.013	0.013	8
23	12.07	0.000	0.000	0.024	0.024	25	4.915	0.000	0.000	0.030	0.030	13	10.28	0.000	0.000	0.026	0.026	23
24	10.28	0.000	0.000	0.024	0.024	21	6.188	0.000	0.000	0.021	0.021	11	0.000	0.000	0.000	0.000	0.000	0
25	12.07	0.000	0.000	0.024	0.024	25	9.714	0.000	0.000	0.023	0.023	19	0.000	0.000	0.000	0.000	0.000	0
26	6.644	0.000	0.000	0.021	0.021	12	11.46	0.000	0.000	0.024	0.024	24	0.000	0.000	0.000	0.000	0.000	0
27	3.785	0.000	0.000	0.019	0.019	6	10.86	0.000	0.000	0.024	0.024	22	0.000	0.000	0.000	0.000	0.000	0
28	12.07	0.000	0.000	0.024	0.024	25	12.70	0.000	0.000	0.025	0.025	27	7.116	0.000	0.000	0.008	0.008	5
29	12.70	0.000	0.000	0.025	0.025	27	10.86	0.000	0.000	0.024	0.024	22	5.323	0.000	0.000	0.006	0.006	3
30	10.28	0.000	0.000	0.024	0.024	21	7.116	0.000	0.000	0.022	0.022	13	9.714	0.000	0.000	0.017	0.017	14
31	11.46	0.000	0.000	0.024	0.024	23							16.08	0.000	0.000	0.135	0.135	188
Ten Daily Mean																		
Ten Daily I	6.641	0.000	0.000	0.021	0.021	13	9.537	0.000	0.000	0.023	0.023	19	9.385	0.000	0.000	0.013	0.013	13
Ten Daily II	9.350	0.000	0.000	0.023	0.023	19	10.63	0.000	0.000	0.024	0.024	22	10.24	0.000	0.000	0.034	0.034	30
Ten Daily III	10.07	0.000	0.000	0.023	0.023	21	9.282	0.000	0.000	0.024	0.024	19	8.650	0.000	0.000	0.030	0.030	35
Monthly																		
Total						527						563						663

Annual Sediment Load (Metric Tonnes) : 308384

Annual Sediment Load for the period: 2015-2018

Station Name : Badlapur (WU000P8)
Local River : Ulhas

Division : Upper Krishna Divn, Pune
Sub-Division : Upper Krishna SD 3, Managaon



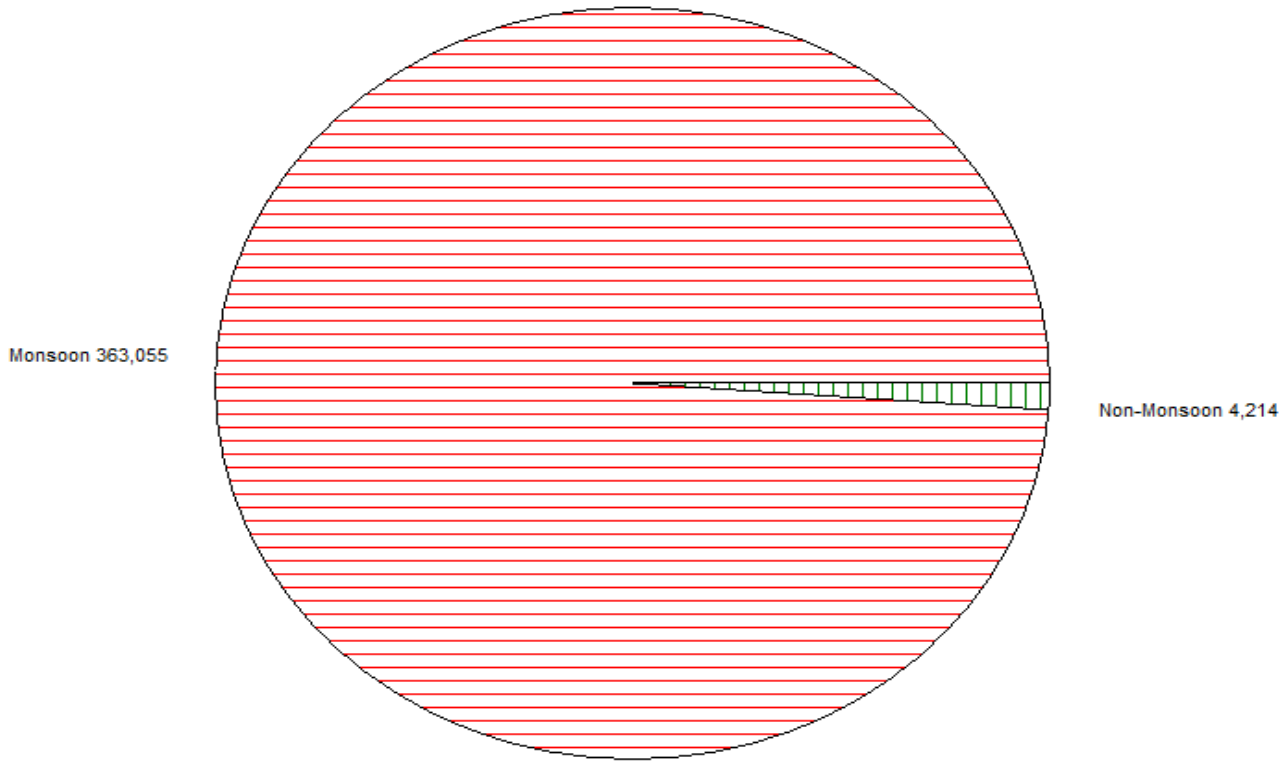
Seasonal Sediment Load for the period : 2015-2017

Station Name : Badlapur (WU000P8)

Local River : Ulhas

Division : Upper Krishna Divn, Pune

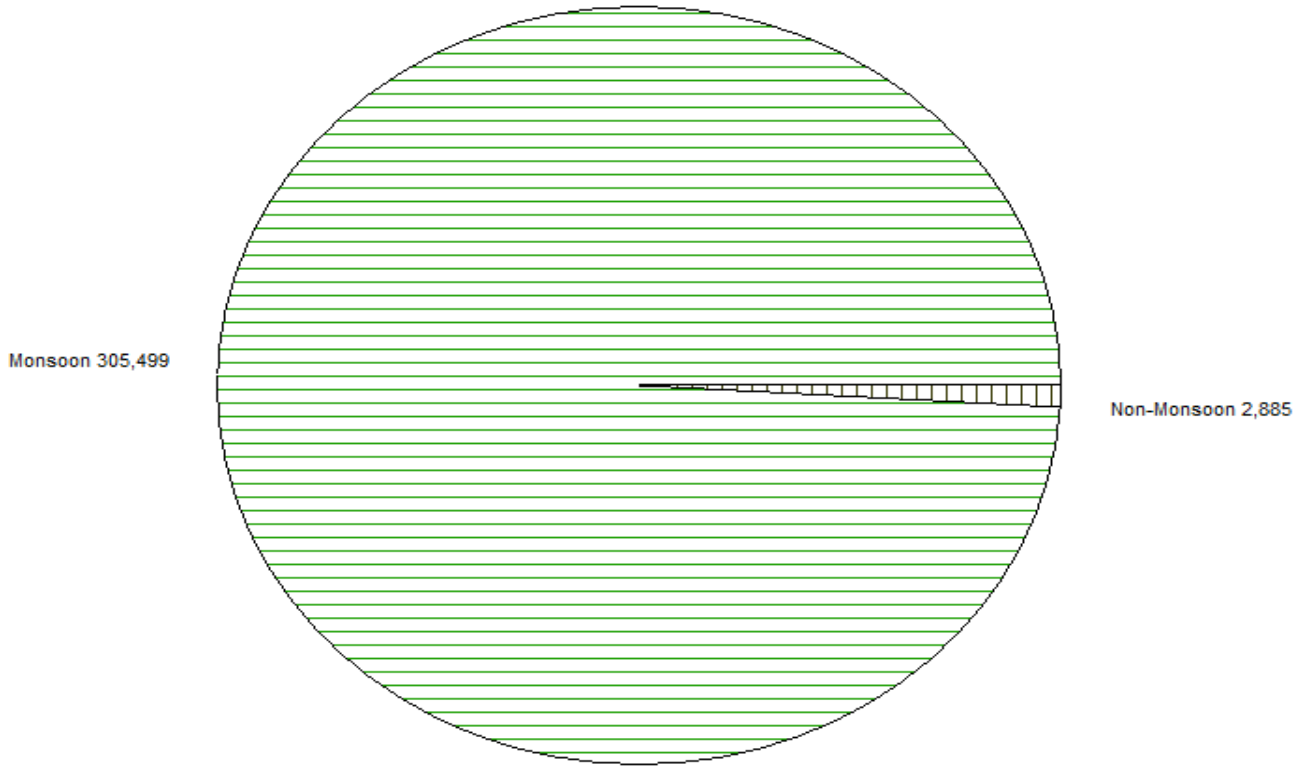
Sub-Division : Upper Krishna SD 3, Managaon



Seasonal Sediment Load for the Year: 2017-2018

Station Name : Badlapur (WU000P8)
Local River : Ulhas

Division : Upper Krishna Divn, Pune
Sub-Division : Upper Krishna SD 3, Managaon



BED MATERIAL ANALYSIS DATA FOR THE YEAR 2017-18

SITE : ULHAS AT BADALAPUR CODE : WU000P8

MEASURING AUTHORITY : UKDn CROSS SECTION : Station gauge line

PreMonsoon Survey (Date 16/05/2017)

Discharge Observed : 8.02 cumec Water edge RB : 172.00 m LB : 59.50 m

Area of section : 37.52 sq.m MeanVelocity : 0.2138 m/sec

Wetted perimeter : 90.72 m Hydraulic Mean Depth : 0.4136 m

Sl. No	R.D.of sampling point in meters	R.L. of bed in meters	Mean diameter in mm	Remarks
1	63	10.500	27.48	
2	66.5	10.100	30.17	

Av.mean dia "m" = **28.83**

Silt factor "f" $=1.76\sqrt{m}$ = **9.45**

Note : i. Discharge observation was at station gauge line.
ii. River bed : Flowing water.

Monsoon Survey (Date)

Discharge Observed : --- cumec Water edge RB : --- m LB : --- m

Area of section : --- sq.m MeanVelocity : --- m/sec

Wetted perimeter : --- m Hydraulic Mean Depth : --- m

Sl. No	R.D.of sampling point in meters	R.L. of bed in meters	Mean diameter in mm	Remarks

Survey not conducted

Note :

PostMonsoon Survey (Date 13/12/2017)

Discharge Observed : --- cumec Water edge RB : --- m LB : --- m

Area of section : --- sq.m MeanVelocity : --- m/sec

Wetted perimeter : --- m Hydraulic Mean Depth : --- m

Sl. No	R.D.of sampling point in meters	R.L. of bed in meters	Mean diameter in mm	Remarks
1	63	10.150	22.94	
2	66.5	9.985	23.48	

Av.mean dia "m" = **23.21**

Silt factor "f" $=1.76\sqrt{m}$ = **8.48**

Note : i. Discharge observation was at station gauge line.
ii. River bed : Stagnent Water.
iii. Water flows in multi channels

Annual Sediment Load for period : 2015-2018

Station Name : Mangaon (Seasonal) (WMA00I8) **Division : Upper Krishna Divn, Pune**

Local River : Kal **Sub-Division : Upper Krishna SD 3, Managaon**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2015-2016	50590	0	50590	523
2016-2017	38542	0	38542	1106
2017-2018	17506	0	17506	998

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : Mangaon (Seasonal) (WMA00I8) **Division : Upper Krishna Divn, Pune**

Local River : Kal **Sub-Division : Upper Krishna SD 3, Managaon**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	105.5	0.000	0.000	0.011	0.011	103	115.4	0.000	0.000	0.019	0.019	187
2	0.000	0.000	0.000	0.000	0.000	0	109.3	0.000	0.000	0.015	0.015	145	124.0	0.000	0.000	0.021	0.021	224
3	0.000	0.000	0.000	0.000	0.000	0	162.5	0.000	0.000	0.015	0.015	206	72.64	0.000	0.000	0.015	0.015	92
4	0.000	0.000	0.000	0.000	0.000	0	76.18	0.000	0.000	0.011	0.011	73	78.18	0.000	0.000	0.021	0.021	144
5	0.000	0.000	0.000	0.000	0.000	0	97.58	0.000	0.000	0.011	0.011	93	50.05	0.000	0.000	0.016	0.016	69
6	0.000	0.000	0.000	0.000	0.000	0	77.49	0.000	0.000	0.012	0.012	82	34.79	0.000	0.000	0.020	0.020	61
7	0.000	0.000	0.000	0.000	0.000	0	77.81	0.000	0.000	0.010	0.010	69	24.47	0.000	0.000	0.016	0.016	33
8	0.000	0.000	0.000	0.000	0.000	0	82.97	0.000	0.000	0.011	0.011	77	27.50	0.000	0.000	0.015	0.015	35
9	0.000	0.000	0.000	0.000	0.000	0	59.63	0.000	0.000	0.010	0.010	54	26.90	0.000	0.000	0.016	0.016	37
10	0.000	0.000	0.000	0.000	0.000	0	42.94	0.000	0.000	0.014	0.014	51	34.49	0.000	0.000	0.021	0.021	61
11	0.000	0.000	0.000	0.000	0.000	0	31.45	0.000	0.000	0.000	0.000	1	84.60	0.000	0.000	0.022	0.022	158
12	0.214	0.000	0.000	0.015	0.015	0	49.06	0.000	0.000	0.001	0.001	3	115.6	0.000	0.000	0.013	0.013	133
13	88.20	0.000	0.000	0.008	0.008	60	48.17	0.000	0.000	0.001	0.001	3	59.15	0.000	0.000	0.013	0.013	67
14	7.820	0.000	0.000	0.006	0.006	4	256.9	0.000	0.000	0.014	0.014	302	37.74	0.000	0.000	0.018	0.018	60
15	2.183	0.000	0.000	0.004	0.004	1	218.6	0.000	0.000	0.012	0.012	225	85.07	0.000	0.000	0.014	0.014	106
16	0.789	0.000	0.000	0.004	0.004	0	175.2	0.000	0.000	0.013	0.013	197	49.71	0.000	0.000	0.018	0.018	76
17	8.029	0.000	0.000	0.008	0.008	5	332.1	0.000	0.000	0.015	0.015	419	50.76	0.000	0.000	0.019	0.019	83
18	6.134	0.000	0.000	0.007	0.007	4	398.0	0.000	0.000	0.018	0.018	626	31.75	0.000	0.000	0.018	0.018	48
19	4.702	0.000	0.000	0.007	0.007	3	330.9	0.000	0.000	0.012	0.012	338	29.02	0.000	0.000	0.015	0.015	37
20	20.75	0.000	0.000	0.010	0.010	17	302.8	0.000	0.000	0.013	0.013	340	64.56	0.000	0.000	0.015	0.015	82
21	29.52	0.000	0.000	0.011	0.011	28	458.4	0.000	0.000	0.062	0.062	2452	90.57	0.000	0.000	0.020	0.020	156
22	18.12	0.000	0.000	0.010	0.010	15	243.4	0.000	0.000	0.028	0.028	582	62.95	0.000	0.000	0.019	0.019	103
23	19.09	0.000	0.000	0.010	0.010	16	132.8	0.000	0.000	0.024	0.024	274	39.53	0.000	0.000	0.011	0.011	37
24	31.11	0.000	0.000	0.011	0.011	29	111.0	0.000	0.000	0.016	0.016	151	35.16	0.000	0.000	0.011	0.011	32
25	35.25	0.000	0.000	0.011	0.011	34	85.35	0.000	0.000	0.013	0.013	96	45.63	0.000	0.000	0.011	0.011	45
26	175.6	0.000	0.000	0.017	0.017	263	61.74	0.000	0.000	0.005	0.005	29	194.9	0.000	0.000	0.013	0.013	217
27	298.3	0.000	0.000	0.020	0.020	513	45.64	0.000	0.000	0.011	0.011	43	175.6	0.000	0.000	0.018	0.018	266
28	149.4	0.000	0.000	0.017	0.017	213	86.05	0.000	0.000	0.018	0.018	137	252.0	0.000	0.000	0.018	0.018	385
29	313.4	0.000	0.000	0.020	0.020	544	85.19	0.000	0.000	0.018	0.018	129	391.9	0.000	0.000	0.022	0.022	735
30	393.6	0.000	0.000	0.021	0.021	728	106.9	0.000	0.000	0.018	0.018	165	199.1	0.000	0.000	0.015	0.015	261
31							73.28	0.000	0.000	0.026	0.026	162	76.93	0.000	0.000	0.013	0.013	87
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	89.19	0.000	0.000	0.012	0.012	95	58.84	0.000	0.000	0.018	0.018	94
Ten Daily II	13.88	0.000	0.000	0.007	0.007	9	214.3	0.000	0.000	0.010	0.010	245	60.79	0.000	0.000	0.016	0.016	85
Ten Daily III	146.3	0.000	0.000	0.015	0.015	238	135.4	0.000	0.000	0.022	0.022	384	142.2	0.000	0.000	0.015	0.015	211
Monthly																		
Total						2476						7628						4118

Annual Sediment Load (Metric Tonnes) : 17506

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : Mangaon (Seasonal) (WMA00I8) **Division : Upper Krishna Divn, Pune**

Local River : Kal **Sub-Division : Upper Krishna SD 3, Managaon**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	49.33	0.000	0.000	0.013	0.013	54	38.27	0.000	0.000	0.012	0.012	39	1.300	0.000	0.000	0.005	0.005	1
2	38.04	0.000	0.000	0.012	0.012	38	27.20	0.000	0.000	0.011	0.011	25	1.200	0.000	0.000	0.005	0.005	0
3	29.13	0.000	0.000	0.011	0.011	27	20.79	0.000	0.000	0.010	0.010	18	0.900	0.000	0.000	0.004	0.004	0
4	23.19	0.000	0.000	0.010	0.010	21	16.42	0.000	0.000	0.009	0.009	13	0.500	0.000	0.000	0.004	0.004	0
5	17.37	0.000	0.000	0.009	0.009	14	12.02	0.000	0.000	0.009	0.009	9	0.400	0.000	0.000	0.004	0.004	0
6	14.51	0.000	0.000	0.009	0.009	11	10.94	0.000	0.000	0.009	0.009	8	0.569	0.000	0.000	0.004	0.004	0
7	10.82	0.000	0.000	0.008	0.008	8	32.63	0.000	0.000	0.011	0.011	32	0.539	0.000	0.000	0.004	0.004	0
8	152.1	0.000	0.000	0.017	0.017	221	29.52	0.000	0.000	0.011	0.011	28	0.498	0.000	0.000	0.004	0.004	0
9	59.25	0.000	0.000	0.013	0.013	68	38.22	0.000	0.000	0.012	0.012	39	0.373	0.000	0.000	0.004	0.004	0
10	42.32	0.000	0.000	0.012	0.012	44	22.05	0.000	0.000	0.010	0.010	19	0.292	0.000	0.000	0.003	0.003	0
11	83.61	0.000	0.000	0.014	0.014	104	20.80	0.000	0.000	0.010	0.010	18	0.249	0.000	0.000	0.003	0.003	0
12	71.99	0.000	0.000	0.014	0.014	86	21.71	0.000	0.000	0.010	0.010	19	0.200	0.000	0.000	0.003	0.003	0
13	100.2	0.000	0.000	0.015	0.015	131	16.54	0.000	0.000	0.009	0.009	13	0.180	0.000	0.000	0.003	0.003	0
14	40.15	0.000	0.000	0.012	0.012	41	37.74	0.000	0.000	0.012	0.012	38	0.165	0.000	0.000	0.003	0.003	0
15	192.4	0.000	0.000	0.018	0.018	298	29.13	0.000	0.000	0.011	0.011	27	0.100	0.000	0.000	0.003	0.003	0
16	47.73	0.000	0.000	0.012	0.012	51	22.68	0.000	0.000	0.010	0.010	20	0.080	0.000	0.000	0.002	0.002	0
17	37.83	0.000	0.000	0.012	0.012	38	16.22	0.000	0.000	0.009	0.009	13	0.000	0.000	0.000	0.000	0.000	0
18	36.31	0.000	0.000	0.012	0.012	36	12.72	0.000	0.000	0.009	0.009	10	0.000	0.000	0.000	0.000	0.000	0
19	200.6	0.000	0.000	0.018	0.018	314	10.93	0.000	0.000	0.009	0.009	8	0.000	0.000	0.000	0.000	0.000	0
20	239.2	0.000	0.000	0.019	0.019	393	8.299	0.000	0.000	0.008	0.008	6	0.000	0.000	0.000	0.000	0.000	0
21	139.2	0.000	0.000	0.017	0.017	198	6.980	0.000	0.000	0.008	0.008	5	0.000	0.000	0.000	0.000	0.000	0
22	169.2	0.000	0.000	0.017	0.017	253	4.000	0.000	0.000	0.007	0.007	2	0.000	0.000	0.000	0.000	0.000	0
23	84.37	0.000	0.000	0.014	0.014	105	6.087	0.000	0.000	0.007	0.007	4	0.000	0.000	0.000	0.000	0.000	0
24	47.02	0.000	0.000	0.012	0.012	50	4.536	0.000	0.000	0.007	0.007	3	0.000	0.000	0.000	0.000	0.000	0
25	43.77	0.000	0.000	0.012	0.012	46	4.270	0.000	0.000	0.007	0.007	2	0.000	0.000	0.000	0.000	0.000	0
26	26.21	0.000	0.000	0.011	0.011	24	3.050	0.000	0.000	0.006	0.006	2	0.000	0.000	0.000	0.000	0.000	0
27	38.59	0.000	0.000	0.012	0.012	39	2.656	0.000	0.000	0.006	0.006	1	0.000	0.000	0.000	0.000	0.000	0
28	30.93	0.000	0.000	0.011	0.011	30	2.323	0.000	0.000	0.006	0.006	1	0.000	0.000	0.000	0.000	0.000	0
29	40.00	0.000	0.000	0.012	0.012	41	2.400	0.000	0.000	0.006	0.006	1	0.000	0.000	0.000	0.000	0.000	0
30	62.37	0.000	0.000	0.013	0.013	72	1.327	0.000	0.000	0.005	0.005	1	0.000	0.000	0.000	0.000	0.000	0
31							1.312	0.000	0.000	0.005	0.005	1						
Ten Daily Mean																		
Ten Daily I	43.61	0.000	0.000	0.011	0.011	51	24.81	0.000	0.000	0.010	0.010	23	0.657	0.000	0.000	0.004	0.004	0
Ten Daily II	105.0	0.000	0.000	0.015	0.015	149	19.68	0.000	0.000	0.010	0.010	17	0.097	0.000	0.000	0.002	0.002	0
Ten Daily III	68.16	0.000	0.000	0.013	0.013	86	3.540	0.000	0.000	0.006	0.006	2	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						2857						425						3

Annual Sediment Load (Metric Tonnes) : 17506

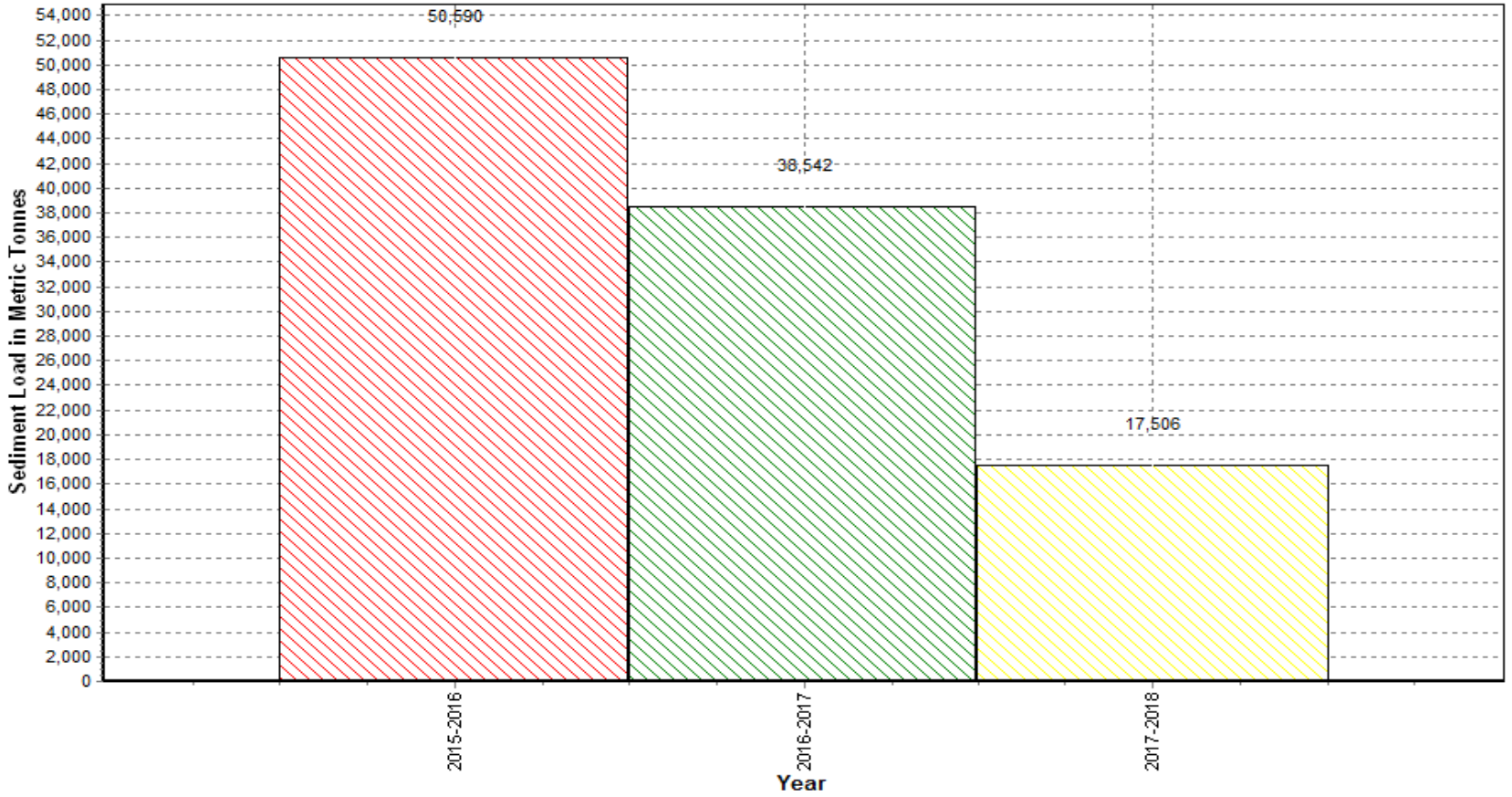
Annual Sediment Load for the period: 2015-2018

Station Name : Mangaon (Seasonal) (WMA00I8)

Local River : Kal

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD 3, Managaon



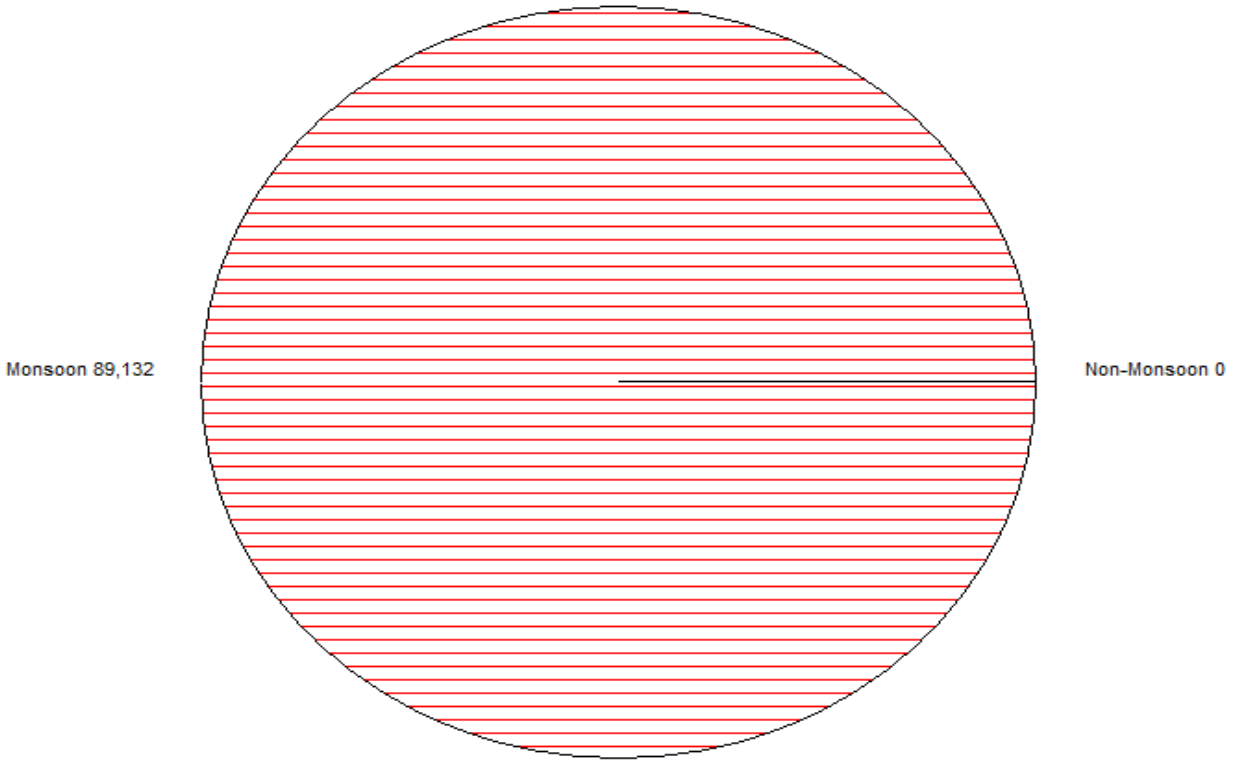
Seasonal Sediment Load for the period : 2015-2017

Station Name : Mangaon (Seasonal) (WMA00I8)

Local River : Kal

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD 3, Managaon



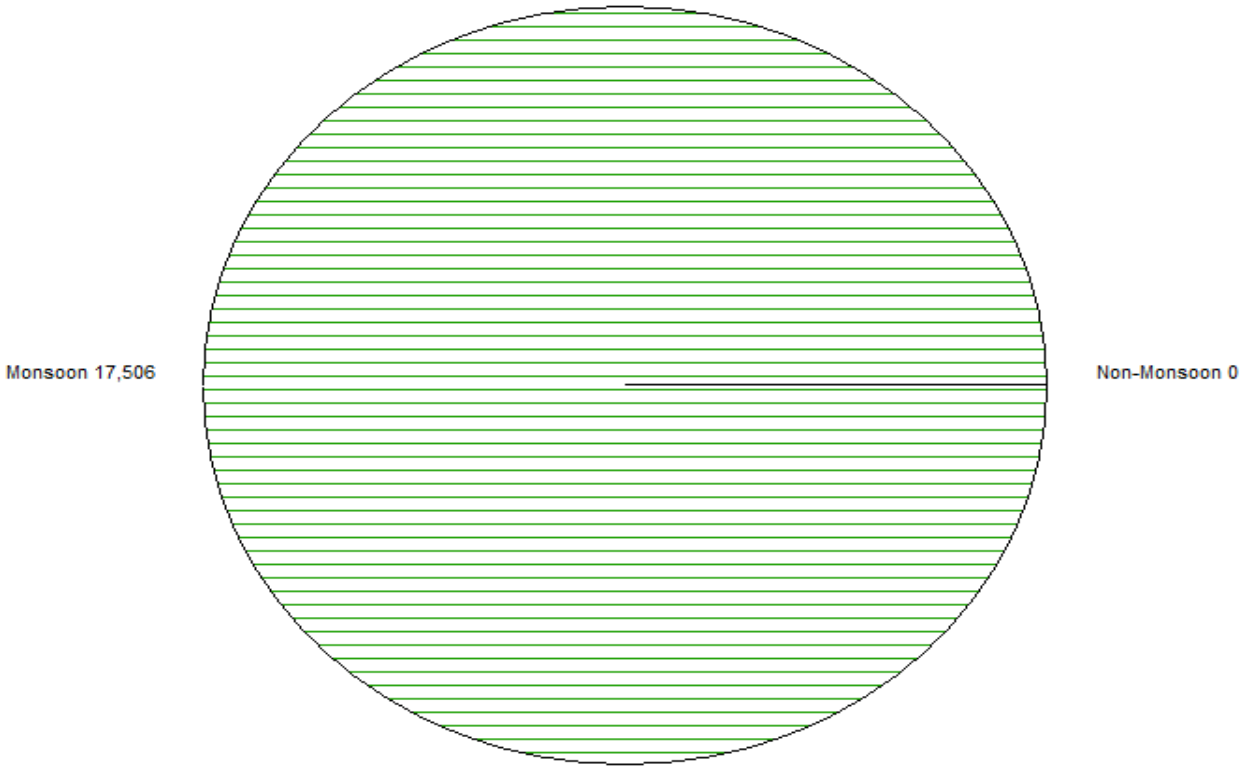
Seasonal Sediment Load for the Year: 2017-2018

Station Name : Mangaon (Seasonal) (WMA00I8)

Local River : Kal

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD 3, Managaon



BED MATERIAL ANALYSIS DATA FOR THE YEAR 2017-18

SITE	:	KAL AT MANGAON(SEASONAL)	CODE	:	WMA00I8
MEASURING AUTHORITY	:	UKDn	CROSS SECTION	:	Station gauge line

PreMonsoon Survey (Date 11/05/2017)

Discharge Observed	:	---	cumec	Water edge RB :	--- m	LB :	--- m
Area of section	:	---	sq.m	MeanVelocity	:		--- m/sec
Wetted perimeter	:	---	m	Hydraulic Mean Depth	:		--- m

Sl. No	R.D.of sampling point in meters	R.L. of bed in meters	Mean diameter in mm	Remarks
1	205	3.465	9.90	
2	230	3.865	10.86	Av.mean dia "m" = **11.05**
3	255	3.565	12.40	

Silt factor "f" =1.76 $\sqrt{m}$ = **5.85**

Note : i. Discharge observation was at station gauge line.
ii. River bed : Stagnent Water.

Monsoon Survey (Date)

Discharge Observed	:	---	cumec	Water edge RB :	--- m	LB :	--- m
Area of section	:	---	sq.m	MeanVelocity	:		--- m/sec
Wetted perimeter	:	---	m	Hydraulic Mean Depth	:		--- m

Sl. No	R.D.of sampling point in meters	R.L. of bed in meters	Mean diameter in mm	Remarks

Survey not conducted

Note :

PostMonsoon Survey (Date 12/12/2017)

Discharge Observed	:	---	cumec	Water edge RB :	--- m	LB :	--- m
Area of section	:	---	sq.m	MeanVelocity	:		--- m/sec
Wetted perimeter	:	---	m	Hydraulic Mean Depth	:		--- m

Sl. No	R.D.of sampling point in meters	R.L. of bed in meters	Mean diameter in mm	Remarks
1	205	3.450		
2	230	3.875		Av.mean dia "m" =
3	255	3.635		

Silt factor "f" =1.76 $\sqrt{m}$ =

Note : i. Discharge observation was at station gauge line.
ii. River bed : Stagnent Water.

Annual Sediment Load for period : 1973-2018

Station Name : Bantwal (WN000G9) **Division : Cauvery Division, Bangalore**

Local River : Netravathi **Sub-Division : SWRSD-III, Mangalore**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1973-1974	1610171	6397	1616567	11815
1974-1975	2085899	3222	2089121	12613
1975-1976	2021559	3086	2024645	15698
1976-1977	891833	9365	901197	8332
1977-1978	1031018	9464	1040482	12860
1978-1979	3129481	8393	3137874	16189
1979-1980	1339866	9038	1348904	10260
1980-1981	1614787	4473	1619261	16586
1981-1982	1933785	3355	1937140	14669
1982-1983	1068017	1992	1070009	10662
1983-1984	1346970	7425	1354395	11482
1984-1985	1220504	2945	1223450	10820
1985-1986	650693	1521	652214	9466
1986-1987	1062228	2331	1064559	9732
1987-1988	626882	3874	630756	6711
1988-1989	955353	1946	957300	9168
1989-1990	758310	19711	778021	9485
1990-1991	1041864	1517	1043381	12412
1991-1992	1086399	2844	1089243	11127
1992-1993	1041627	1724	1043351	12674
1993-1994	700163	1817	701979	9577
1994-1995	1530304	7284	1537588	15075
1995-1996	1334517	1202	1335719	10023
1996-1997	1249069	1841	1250910	10053
1997-1998	2795454	14072	2809525	12073
1998-1999	2034175	2245	2036420	12486
1999-2000	1349182	1181	1350362	10972
2000-2001	321684	339	322024	9250
2001-2002	359444	346	359789	8607
2002-2003	441835	171	442006	6402
2003-2004	650489	181	650670	7660
2004-2005	883156	0	883156	8754
2005-2006	1645644	25482	1671126	12314
2006-2007	0	0	0	13644
2007-2008	0	0	0	14952
2008-2009	0	0	0	10979
2009-2010	0	0	0	11907
2010-2011	0	0	0	11966

Annual Sediment Load for period : 1973-2018

Station Name : Bantwal (WN000G9) **Division : Cauvery Division, Bangalore**

Local River : Netravathi **Sub-Division : SWRSD-III, Mangalore**

2011-2012	0	1397	1397	12152
2012-2013	477029	152	477180	9287
2013-2014	824092	917	825009	13171
2014-2015	727821	1012	728834	10868
2015-2016	224738	2373	227111	7070
2016-2017	163548	0	163548	7423
2017-2018	168201	0	168201	7472

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : Bantwal (WN000G9) **Division : Cauvery Division, Bangalore**

Local River : Netravathi **Sub-Division : SWRSD-III, Mangalore**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	1078	0.001	0.001	0.017	0.019	1742	415.9	0.000	0.001	0.011	0.013	453
2	0.000	0.000	0.000	0.000	0.000	0	415.1	0.000	0.000	0.011	0.011	377	378.8	0.000	0.000	0.010	0.010	334
3	0.000	0.000	0.000	0.000	0.000	0	470.8	0.000	0.001	0.010	0.011	464	420.3	0.000	0.000	0.011	0.011	392
4	0.000	0.000	0.000	0.000	0.000	0	756.0	0.000	0.001	0.011	0.012	790	1458	0.001	0.002	0.025	0.027	3427
5	0.000	0.000	0.000	0.000	0.000	0	472.7	0.000	0.000	0.010	0.010	417	1260	0.001	0.001	0.023	0.025	2690
6	0.000	0.000	0.000	0.000	0.000	0	521.4	0.001	0.001	0.011	0.013	572	1108	0.000	0.000	0.026	0.026	2527
7	0.000	0.000	0.000	0.000	0.000	0	786.8	0.000	0.000	0.020	0.020	1373	917.1	0.001	0.002	0.030	0.033	2591
8	0.000	0.000	0.000	0.000	0.000	0	534.1	0.001	0.001	0.011	0.013	586	731.2	0.001	0.001	0.023	0.025	1567
9	0.000	0.000	0.000	0.000	0.000	0	376.7	0.000	0.000	0.011	0.011	348	564.3	0.001	0.001	0.017	0.019	912
10	0.000	0.000	0.000	0.000	0.000	0	349.2	0.000	0.001	0.010	0.011	341	725.0	0.000	0.001	0.011	0.013	789
11	0.000	0.000	0.000	0.000	0.000	0	355.0	0.000	0.001	0.011	0.012	371	481.4	0.000	0.001	0.011	0.013	524
12	604.5	0.001	0.001	0.015	0.016	846	346.6	0.000	0.001	0.010	0.011	338	1244	0.001	0.002	0.025	0.027	2924
13	353.6	0.000	0.001	0.018	0.020	602	339.0	0.001	0.001	0.015	0.016	477	527.3	0.000	0.000	0.025	0.025	1153
14	299.1	0.000	0.001	0.013	0.014	372	633.5	0.000	0.001	0.011	0.012	651	391.1	0.001	0.001	0.023	0.024	825
15	235.5	0.001	0.001	0.017	0.019	378	473.6	0.001	0.001	0.017	0.019	765	451.8	0.000	0.000	0.024	0.024	937
16	166.1	0.000	0.001	0.013	0.014	207	431.1	0.000	0.000	0.010	0.010	387	424.2	0.001	0.002	0.021	0.024	861
17	250.1	0.001	0.001	0.023	0.025	534	479.6	0.001	0.001	0.020	0.022	899	476.2	0.001	0.001	0.023	0.024	1004
18	581.7	0.000	0.000	0.014	0.014	678	772.5	0.001	0.000	0.017	0.018	1181	641.2	0.001	0.001	0.023	0.025	1374
19	89.94	0.004	0.001	0.012	0.017	131	1552	0.001	0.001	0.023	0.025	3313	836.0	0.001	0.002	0.030	0.033	2362
20	105.8	0.000	0.001	0.010	0.011	104	2575	0.001	0.002	0.030	0.033	7275	1070	0.000	0.000	0.028	0.028	2552
21	97.93	0.000	0.001	0.011	0.012	102	1412	0.001	0.001	0.023	0.024	2977	1389	0.001	0.002	0.030	0.033	3923
22	79.09	0.001	0.001	0.015	0.016	111	1334	0.001	0.002	0.021	0.024	2708	1400	0.001	0.002	0.027	0.029	3533
23	70.37	0.000	0.001	0.011	0.012	72	782.0	0.000	0.000	0.021	0.021	1392	1233	0.001	0.002	0.026	0.029	3133
24	46.09	0.000	0.001	0.010	0.011	45	757.4	0.001	0.001	0.020	0.022	1420	940.6	0.001	0.002	0.021	0.024	1910
25	863.8	0.000	0.000	0.011	0.011	843	648.8	0.001	0.001	0.016	0.018	987	924.7	0.000	0.000	0.021	0.021	1678
26	1025	0.000	0.000	0.015	0.015	1293	662.9	0.001	0.001	0.023	0.025	1420	885.2	0.001	0.001	0.015	0.017	1270
27	1308	0.001	0.001	0.023	0.024	2745	636.2	0.001	0.001	0.016	0.018	967	1247	0.000	0.000	0.023	0.023	2456
28	1138	0.001	0.001	0.017	0.019	1829	769.3	0.001	0.001	0.023	0.025	1642	1299	0.001	0.001	0.020	0.022	2435
29	848.9	0.001	0.001	0.011	0.013	932	805.4	0.001	0.002	0.025	0.027	1893	2188	0.002	0.004	0.044	0.051	9546
30	1093	0.001	0.001	0.015	0.016	1530	644.5	0.000	0.000	0.018	0.018	1002	1738	0.008	0.002	0.025	0.034	5165
31	0.000	0.000	0.000	0.000	0.000	0	486.3	0.001	0.001	0.017	0.019	786	1167	0.001	0.001	0.023	0.024	2461
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	576.1	0.000	0.001	0.012	0.013	701	797.9	0.000	0.001	0.019	0.020	1568
Ten Daily II	268.6	0.001	0.001	0.013	0.015	385	795.8	0.001	0.001	0.016	0.018	1566	654.3	0.000	0.001	0.023	0.025	1451
Ten Daily III	657.0	0.000	0.001	0.014	0.015	950	812.6	0.001	0.001	0.020	0.022	1563	1310	0.001	0.002	0.025	0.028	3410
Monthly																		
Total						13356						39863						67706

Annual Sediment Load (Metric Tonnes) : 168201

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : Bantwal (WN000G9) **Division : Cauvery Division, Bangalore**

Local River : Netravathi **Sub-Division : SWRSD-III, Mangalore**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	742.3	0.001	0.002	0.021	0.024	1507	525.9	0.000	0.000	0.020	0.020	900	145.1	0.000	0.000	0.010	0.010	128
2	681.3	0.000	0.000	0.024	0.024	1430	519.0	0.000	0.000	0.021	0.021	928	131.4	0.000	0.000	0.010	0.010	113
3	540.4	0.000	0.000	0.026	0.026	1219	466.2	0.001	0.001	0.017	0.019	753	87.48	0.000	0.000	0.010	0.010	76
4	510.8	0.001	0.001	0.017	0.019	825	410.1	0.001	0.001	0.011	0.013	446	140.8	0.000	0.000	0.010	0.010	127
5	501.9	0.001	0.001	0.015	0.017	720	478.9	0.000	0.000	0.019	0.019	778	155.5	0.000	0.000	0.010	0.010	132
6	426.3	0.007	0.001	0.020	0.028	1031	503.8	0.001	0.001	0.023	0.025	1080	162.3	0.000	0.000	0.010	0.010	135
7	589.8	0.001	0.001	0.023	0.025	1264	553.7	0.001	0.001	0.016	0.018	842	222.1	0.001	0.001	0.023	0.024	468
8	512.2	0.001	0.002	0.025	0.027	1204	348.0	0.000	0.000	0.020	0.020	586	103.6	0.001	0.001	0.011	0.013	114
9	519.2	0.001	0.001	0.017	0.019	839	352.5	0.001	0.001	0.020	0.022	661	44.11	0.000	0.000	0.010	0.010	37
10	543.2	0.000	0.000	0.026	0.026	1225	289.3	0.001	0.001	0.015	0.016	407	14.34	0.000	0.000	0.009	0.009	11
11	414.9	0.001	0.001	0.017	0.019	670	221.2	0.001	0.001	0.016	0.018	348	55.14	0.000	0.000	0.008	0.008	37
12	331.4	0.001	0.001	0.015	0.016	467	216.8	0.001	0.001	0.014	0.015	283	55.00	0.000	0.000	0.008	0.008	37
13	305.8	0.004	0.002	0.030	0.036	941	242.3	0.001	0.001	0.016	0.018	371	63.03	0.000	0.000	0.003	0.003	18
14	592.9	0.001	0.002	0.027	0.029	1496	177.6	0.001	0.002	0.021	0.024	361	44.32	0.000	0.000	0.003	0.003	10
15	455.7	0.001	0.001	0.023	0.024	961	300.0	0.000	0.000	0.017	0.017	451	58.70	0.000	0.000	0.005	0.005	27
16	382.4	0.001	0.002	0.025	0.027	899	284.4	0.001	0.001	0.017	0.019	459	30.31	0.000	0.000	0.008	0.008	22
17	604.5	0.000	0.000	0.029	0.029	1494	325.4	0.000	0.001	0.011	0.012	335	35.89	0.000	0.000	0.008	0.008	24
18	461.2	0.001	0.002	0.027	0.029	1164	325.0	0.000	0.000	0.019	0.019	519	26.48	0.000	0.000	0.007	0.007	15
19	575.2	0.002	0.003	0.043	0.048	2361	208.5	0.001	0.001	0.011	0.013	229	35.97	0.000	0.000	0.004	0.004	14
20	539.1	0.001	0.001	0.023	0.025	1155	204.7	0.000	0.001	0.010	0.011	202	21.51	0.000	0.000	0.005	0.005	9
21	442.8	0.001	0.001	0.023	0.025	957	230.1	0.001	0.001	0.015	0.016	324	36.71	0.000	0.000	0.005	0.005	15
22	455.1	0.001	0.002	0.027	0.029	1152	231.2	0.000	0.000	0.015	0.015	296	33.02	0.000	0.000	0.004	0.004	11
23	419.4	0.001	0.001	0.022	0.024	870	154.3	0.000	0.001	0.011	0.012	159	11.94	0.000	0.000	0.003	0.003	4
24	401.0	0.000	0.000	0.022	0.022	762	155.6	0.000	0.000	0.011	0.011	152	11.77	0.000	0.000	0.003	0.003	3
25	382.7	0.001	0.001	0.022	0.023	767	176.4	0.000	0.000	0.011	0.011	163	28.38	0.000	0.000	0.003	0.003	8
26	468.2	0.001	0.001	0.022	0.024	979	192.9	0.000	0.000	0.010	0.010	170	0.000	0.000	0.000	0.000	0.000	0
27	289.4	0.001	0.001	0.020	0.022	545	156.1	0.000	0.000	0.011	0.011	143	0.000	0.000	0.000	0.000	0.000	0
28	790.5	0.001	0.002	0.023	0.025	1714	202.5	0.000	0.000	0.010	0.010	178	0.000	0.000	0.000	0.000	0.000	0
29	780.0	0.000	0.000	0.023	0.023	1516	189.7	0.000	0.000	0.013	0.013	205	0.000	0.000	0.000	0.000	0.000	0
30	323.7	0.001	0.001	0.019	0.021	596	145.7	0.000	0.000	0.010	0.010	126	0.000	0.000	0.000	0.000	0.000	0
31							109.5	0.000	0.000	0.010	0.010	98						
Ten Daily Mean																		
Ten Daily I	556.7	0.001	0.001	0.021	0.023	1126	444.7	0.000	0.001	0.018	0.019	738	120.7	0.000	0.000	0.011	0.012	134
Ten Daily II	466.3	0.001	0.002	0.026	0.028	1161	250.6	0.000	0.001	0.015	0.017	356	42.63	0.000	0.000	0.006	0.006	21
Ten Daily III	475.3	0.000	0.001	0.022	0.024	986	176.7	0.000	0.000	0.011	0.012	183	12.18	0.000	0.000	0.004	0.004	8
Monthly																		
Total						32728						12952						1594

Annual Sediment Load (Metric Tonnes) : 168201

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : Bantwal (WN000G9) **Division : Cauvery Division, Bangalore**

Local River : Netravathi **Sub-Division : SWRSD-III, Mangalore**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000						
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000						
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000						
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Monthly Total																		

Annual Sediment Load (Metric Tonnes) : 168201

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : Bantwal (WN000G9) | **Division : Cauvery Division, Bangalore**

Local River : Netravathi | **Sub-Division : SWRSD-III, Mangalore**

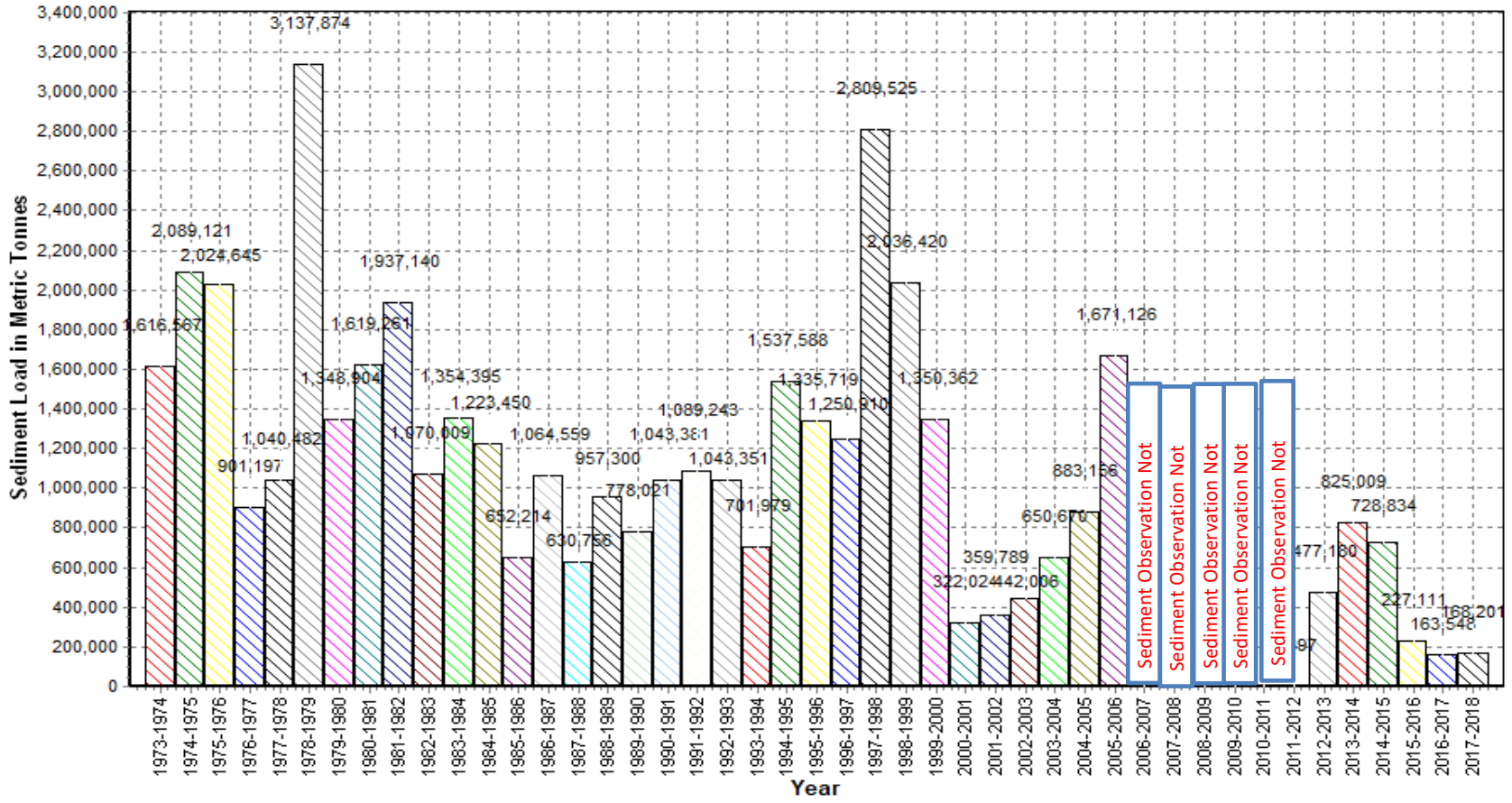
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	0.000	0.000	0.000	0.000	0.000							0.000	0.000	0.000	0.000	0.000	0.000
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Monthly Total																		

Annual Sediment Load (Metric Tonnes) : 168201

Annual Sediment Load for the period: 1973-2018

Station Name : Bantwal (WN000G9)
Local River : Netravathi

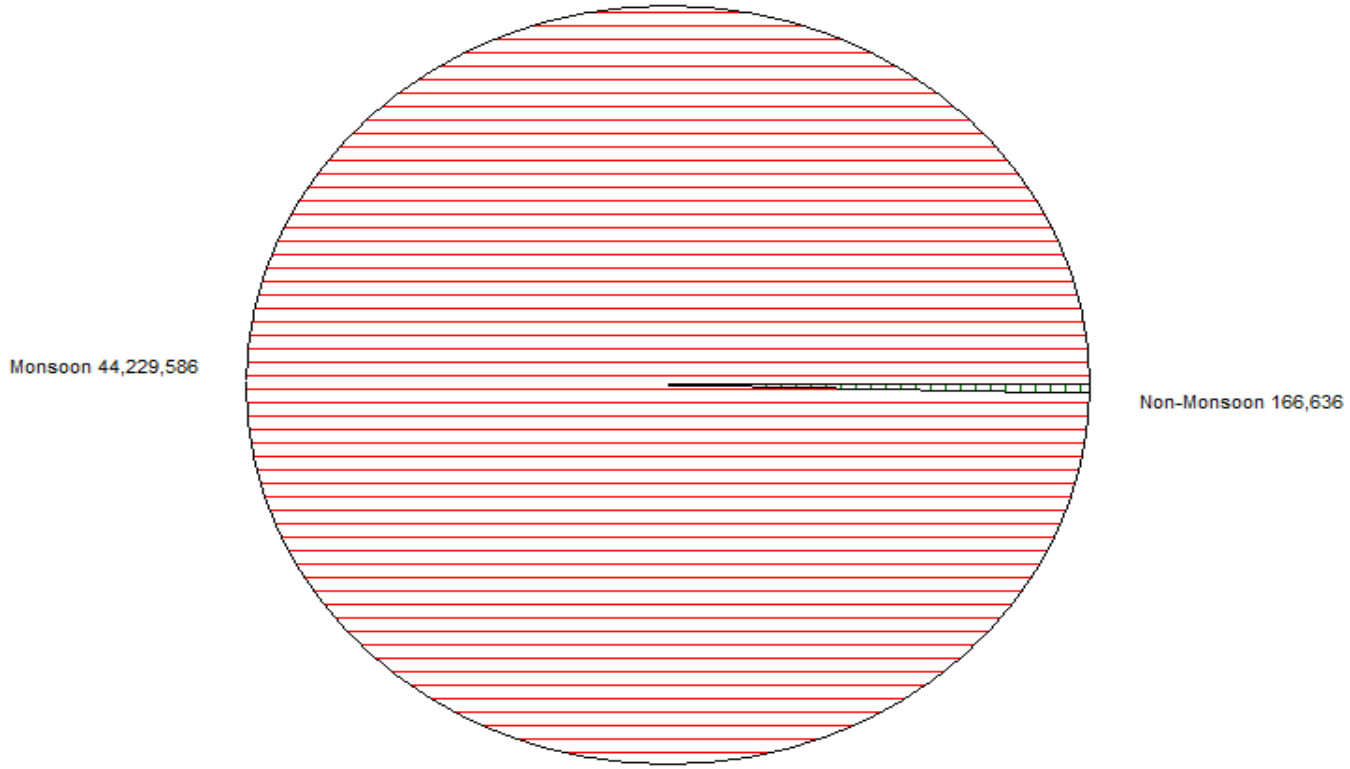
Division : Cauvery Division, Bangalore
Sub-Division : SWRSD-III, Mangalore



Seasonal Sediment Load for the period : 1973-2017

Station Name : Bantwal (WN000G9)
Local River : Netravathi

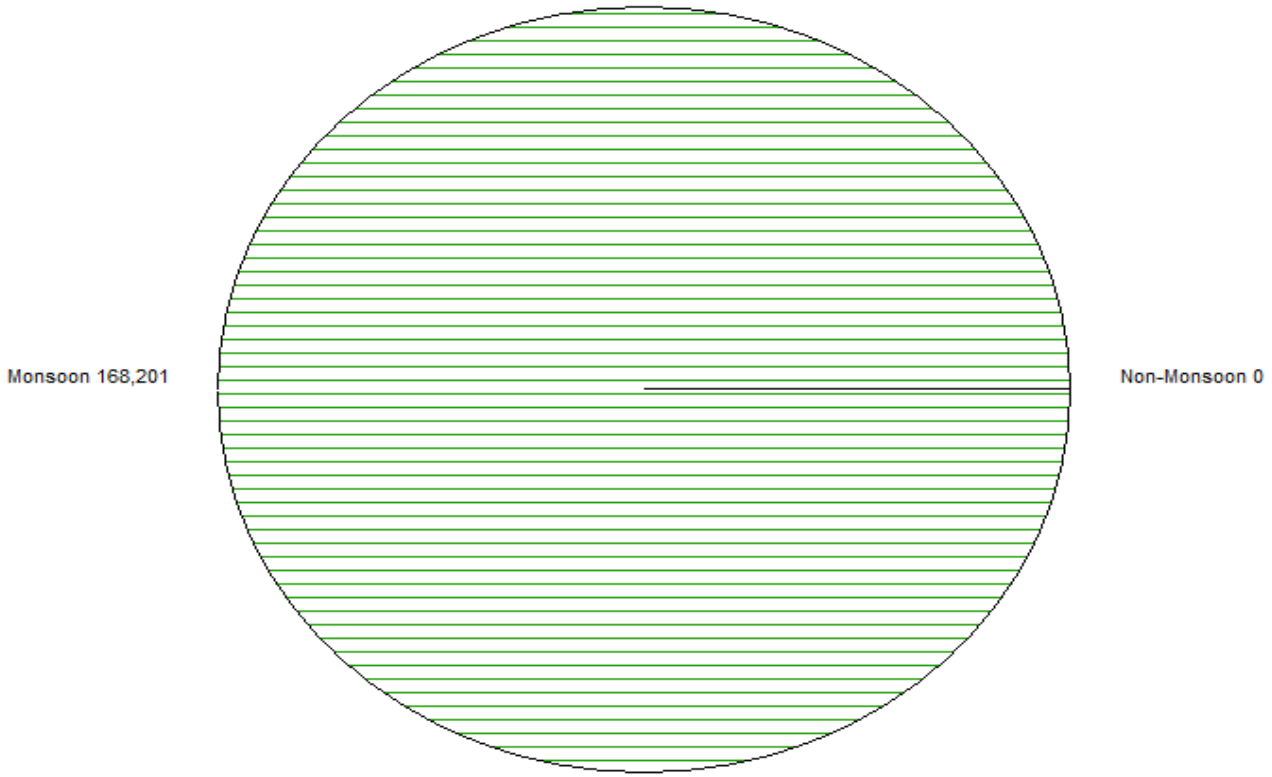
Division : Cauvery Division, Bangalore
Sub-Division : SWRSD-III, Mangalore



Seasonal Sediment Load for the Year: 2017-2018

Station Name : Bantwal (WN000G9)
Local River : Netravathi

Division : Cauvery Division, Bangalore
Sub-Division : SWRSD-III, Mangalore



BED MATERIAL ANALYSIS DATA

RIVER : Netravathi **CODE NO. :** WN000G9

SITE : BANTWAL **CROSS SECTION :** SGL

SL. NO.	DATA FOR SAMPLE COLLECTED								Bed Material Composition		GENERAL DATA OF THE RIVER					Bed Material Composition	
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS) OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)	WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017							**DATE OF COLLECTION**										
1																	
2																	
3							**Sample not collected**										
4																	
5																	
POSTMONSOON 2017							**DATE OF COLLECTION 02-01-2018**										
1	60	-	1.180	5.290	4.110	350			18	5.84							
2	120	-	0.790	5.290	4.500	350	Discharge		14	3.89							
3	180	-	1.340	5.290	3.950	350	observed along		14	2.62	325.217	3.660	-	0.000	-	13.7	3.418
4	240	-	2.000	5.290	3.290	350	S/G Line		11.5	2.11							
5	300	-	2.160	5.290	3.130	350			11	2.63							
PREMONSOON 2018							**DATE OF COLLECTION 24-05-2018**										
1	60	-	1.230	6.250	5.020	360			18	3.12							
2	120	-	0.950	6.250	5.300	360			24	3.74							
3	180	-	1.450	6.250	4.800	360	Dry bed		20	3.37	327.259	4.50	-	0.000	-	19.6	3.004
4	240	-	1.750	6.250	4.500	360			18	1.50							
5	300	-	1.750	6.250	4.500	360			18	3.29							

Annual Sediment Load for period : 1988-2018

Station Name : ERINJIPUZHA (KP000C3) **Division : SWR Division, Cochin**

Local River : Payaswani **Sub-Division : Chaliyar SD, Calicut**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1988-1989	140200	653	140853	1543
1989-1990	318922	1457	320378	2332
1990-1991	278510	964	279474	2798
1991-1992	344075	1053	345127	2832
1992-1993	365137	1043	366180	2794
1993-1994	148695	1745	150440	1863
1994-1995	403112	1175	404287	3301
1995-1996	197955	629	198585	1948
1996-1997	183983	863	184845	2488
1997-1998	207496	1524	209019	2522
1998-1999	130892	1790	132681	2481
1999-2000	266535	748	267283	2271
2000-2001	118814	760	119574	1817
2001-2002	119908	1314	121222	2133
2002-2003	82422	724	83146	1371
2003-2004	111715	2073	113788	1881
2004-2005	120737	489	121227	1840
2005-2006	180627	8977	189604	2305
2006-2007	0	0	0	2348
2007-2008	0	0	0	3031
2008-2009	107708	576	108284	1767
2009-2010	146599	1514	148112	2022
2010-2011	166985	1523	168508	2353
2011-2012	144712	1185	145896	2782
2012-2013	85837	891	86727	1694
2013-2014	140276	2499	142774	3143
2014-2015	268859	1365	270225	2619
2015-2016	109886	1169	111055	1765
2016-2017	49030	412	49443	1494
2017-2018	59080	4877	63956	1720

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : ERINJIPUZHA (KP000C3) **Division : SWR Division, Cochin**

Local River : Payaswani **Sub-Division : Chaliyar SD, Calicut**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	14.60	0.000	0.001	0.018	0.019	24	106.0	0.002	0.005	0.025	0.032	293	103.6	0.001	0.004	0.009	0.014	125
2	8.435	0.000	0.003	0.018	0.021	16	191.9	0.003	0.005	0.043	0.051	842	94.77	0.001	0.003	0.007	0.011	90
3	5.548	0.000	0.004	0.021	0.025	12	164.2	0.003	0.005	0.046	0.054	766	77.33	0.001	0.003	0.008	0.012	80
4	3.718	0.000	0.005	0.023	0.028	9	140.0	0.002	0.005	0.015	0.022	266	211.6	0.002	0.005	0.044	0.051	932
5	6.073	0.000	0.004	0.021	0.025	13	93.36	0.002	0.005	0.033	0.040	323	370.7	0.003	0.004	0.049	0.056	1794
6	12.41	0.000	0.002	0.014	0.016	17	114.4	0.002	0.005	0.013	0.020	198	331.7	0.002	0.006	0.041	0.049	1390
7	8.435	0.000	0.003	0.018	0.021	16	121.6	0.002	0.005	0.021	0.028	294	284.1	0.002	0.005	0.027	0.034	835
8	8.819	0.000	0.003	0.021	0.024	18	102.6	0.002	0.005	0.039	0.046	408	235.3	0.002	0.005	0.053	0.060	1220
9	11.97	0.000	0.002	0.009	0.011	11	102.4	0.002	0.005	0.025	0.032	280	170.2	0.002	0.004	0.019	0.025	368
10	13.55	0.000	0.002	0.009	0.011	13	65.90	0.001	0.004	0.018	0.023	131	140.6	0.001	0.003	0.013	0.017	207
11	43.02	0.001	0.003	0.016	0.020	74	58.39	0.001	0.004	0.042	0.047	237	116.2	0.001	0.003	0.012	0.016	161
12	164.6	0.002	0.007	0.028	0.037	526	57.22	0.001	0.004	0.040	0.045	222	169.4	0.002	0.004	0.017	0.023	337
13	69.13	0.001	0.004	0.018	0.023	137	52.99	0.001	0.004	0.030	0.035	160	111.9	0.001	0.003	0.018	0.022	211
14	84.85	0.001	0.004	0.018	0.023	167	119.2	0.002	0.005	0.004	0.011	113	88.48	0.001	0.002	0.012	0.015	115
15	53.26	0.000	0.001	0.008	0.009	41	141.9	0.002	0.005	0.010	0.017	208	89.67	0.001	0.003	0.016	0.019	150
16	38.49	0.000	0.003	0.020	0.023	76	161.4	0.002	0.004	0.021	0.027	382	95.52	0.001	0.003	0.017	0.021	173
17	41.43	0.000	0.002	0.010	0.012	43	123.4	0.002	0.005	0.009	0.016	171	133.1	0.002	0.004	0.041	0.047	541
18	35.35	0.000	0.002	0.028	0.030	91	132.3	0.002	0.005	0.017	0.024	274	88.72	0.001	0.003	0.014	0.018	138
19	43.44	0.000	0.003	0.035	0.038	143	344.9	0.002	0.003	0.050	0.055	1639	185.2	0.002	0.005	0.011	0.018	288
20	35.59	0.000	0.002	0.018	0.020	61	524.3	0.003	0.004	0.039	0.046	2084	197.6	0.002	0.004	0.023	0.029	500
21	33.45	0.000	0.002	0.040	0.042	121	255.9	0.002	0.003	0.016	0.021	464	323.0	0.002	0.005	0.047	0.054	1507
22	39.88	0.000	0.003	0.014	0.017	59	220.0	0.002	0.004	0.039	0.045	855	273.7	0.002	0.005	0.012	0.019	449
23	31.34	0.000	0.002	0.009	0.011	30	151.3	0.002	0.004	0.018	0.024	309	177.4	0.002	0.004	0.014	0.020	307
24	45.67	0.000	0.002	0.013	0.015	59	136.2	0.002	0.005	0.010	0.017	200	173.5	0.002	0.004	0.016	0.022	330
25	57.09	0.001	0.003	0.014	0.018	86	111.3	0.001	0.005	0.012	0.018	173	176.5	0.002	0.004	0.018	0.024	366
26	151.3	0.002	0.006	0.035	0.043	559	99.20	0.001	0.004	0.017	0.022	189	174.3	0.002	0.004	0.016	0.022	331
27	224.9	0.003	0.008	0.054	0.065	1263	87.73	0.001	0.003	0.017	0.021	159	311.5	0.002	0.004	0.042	0.048	1281
28	98.77	0.002	0.005	0.015	0.022	188	138.3	0.001	0.004	0.024	0.029	347	389.8	0.002	0.004	0.041	0.047	1583
29	91.76	0.002	0.005	0.019	0.026	206	154.6	0.001	0.004	0.016	0.021	280	645.8	0.002	0.004	0.110	0.116	6495
30	87.02	0.002	0.004	0.013	0.019	143	138.5	0.001	0.004	0.017	0.022	266	478.0	0.002	0.004	0.050	0.056	2313
31							120.5	0.001	0.004	0.014	0.019	198	313.2	0.002	0.004	0.019	0.025	676
Ten Daily Mean																		
Ten Daily I	9.355	0.000	0.003	0.017	0.020	15	120.2	0.002	0.005	0.028	0.035	380	202.0	0.002	0.004	0.027	0.033	704
Ten Daily II	60.92	0.000	0.003	0.020	0.023	136	171.6	0.002	0.004	0.026	0.032	549	127.6	0.001	0.003	0.018	0.023	261
Ten Daily III	86.12	0.001	0.004	0.023	0.028	271	146.7	0.001	0.004	0.018	0.024	313	312.4	0.002	0.004	0.035	0.041	1422
Monthly																		
Total						4224						12732						25290

Annual Sediment Load (Metric Tonnes) : 63956

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : ERINJIPUZHA (KP000C3) **Division : SWR Division, Cochin**

Local River : Payaswani **Sub-Division : Chaliyar SD, Calicut**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	219.3	0.003	0.003	0.025	0.031	584	96.75	0.001	0.002	0.021	0.023	193	31.75	0.000	0.001	0.007	0.008	22
2	162.5	0.002	0.003	0.016	0.021	295	86.22	0.001	0.001	0.020	0.023	169	30.81	0.000	0.001	0.007	0.008	21
3	140.0	0.002	0.003	0.018	0.024	284	84.90	0.001	0.001	0.016	0.018	132	30.90	0.000	0.001	0.008	0.009	24
4	124.8	0.002	0.003	0.017	0.022	240	73.97	0.001	0.001	0.028	0.030	192	27.34	0.000	0.001	0.010	0.011	25
5	169.1	0.001	0.003	0.017	0.021	307	72.42	0.001	0.001	0.013	0.015	94	27.34	0.000	0.001	0.010	0.011	25
6	104.7	0.001	0.003	0.024	0.028	253	63.50	0.001	0.001	0.030	0.032	176	29.33	0.000	0.001	0.008	0.009	23
7	107.8	0.001	0.003	0.018	0.022	205	66.66	0.000	0.001	0.023	0.024	138	30.20	0.000	0.001	0.009	0.010	26
8	206.3	0.002	0.004	0.196	0.202	3602	62.38	0.000	0.001	0.017	0.019	100	31.43	0.000	0.001	0.007	0.008	22
9	104.7	0.001	0.002	0.047	0.050	452	57.63	0.000	0.001	0.010	0.011	55	29.17	0.000	0.001	0.007	0.008	20
10	98.48	0.001	0.002	0.036	0.040	338	50.99	0.000	0.001	0.013	0.014	62	28.49	0.000	0.001	0.007	0.008	20
11	87.38	0.001	0.002	0.015	0.018	136	50.36	0.000	0.001	0.008	0.009	39	28.61	0.000	0.001	0.006	0.007	17
12	78.19	0.001	0.002	0.015	0.018	122	50.91	0.000	0.001	0.012	0.013	57	22.87	0.000	0.000	0.006	0.006	12
13	84.92	0.001	0.002	0.039	0.042	308	50.70	0.000	0.001	0.016	0.017	74	25.98	0.000	0.000	0.006	0.006	13
14	100.9	0.001	0.002	0.016	0.019	166	72.71	0.001	0.001	0.020	0.022	138	25.15	0.000	0.000	0.007	0.007	15
15	76.88	0.001	0.002	0.020	0.023	153	50.82	0.000	0.001	0.013	0.014	61	24.48	0.000	0.000	0.006	0.006	13
16	72.89	0.001	0.002	0.022	0.025	157	53.26	0.000	0.001	0.011	0.012	55	22.02	0.000	0.000	0.006	0.006	11
17	143.2	0.001	0.002	0.031	0.035	432	46.73	0.000	0.001	0.008	0.009	36	21.34	0.000	0.000	0.005	0.005	9
18	131.4	0.001	0.003	0.022	0.026	295	53.37	0.000	0.001	0.013	0.014	65	19.48	0.000	0.000	0.009	0.009	15
19	285.1	0.002	0.003	0.091	0.096	2365	40.35	0.000	0.001	0.012	0.013	45	17.90	0.000	0.000	0.008	0.008	13
20	262.1	0.002	0.003	0.033	0.038	861	40.43	0.000	0.001	0.008	0.009	31	17.69	0.000	0.000	0.008	0.008	12
21	173.4	0.001	0.003	0.017	0.021	315	38.93	0.000	0.001	0.009	0.010	34	16.97	0.000	0.000	0.008	0.008	12
22	134.0	0.001	0.003	0.008	0.012	139	38.41	0.000	0.001	0.012	0.013	42	17.95	0.000	0.000	0.008	0.008	12
23	100.9	0.001	0.002	0.011	0.014	122	35.60	0.000	0.001	0.021	0.022	68	15.38	0.000	0.000	0.008	0.008	11
24	95.92	0.001	0.002	0.019	0.022	180	33.63	0.000	0.001	0.012	0.013	38	14.66	0.000	0.000	0.021	0.021	27
25	81.43	0.001	0.002	0.016	0.019	134	29.10	0.000	0.001	0.008	0.009	23	13.39	0.000	0.000	0.008	0.008	9
26	115.4	0.001	0.002	0.023	0.026	259	29.90	0.000	0.001	0.008	0.009	23	15.25	0.000	0.000	0.120	0.120	158
27	106.8	0.001	0.002	0.024	0.027	249	30.51	0.000	0.001	0.011	0.012	32	14.35	0.000	0.000	0.012	0.012	15
28	171.0	0.001	0.003	0.020	0.024	355	74.94	0.001	0.001	0.009	0.011	71	11.93	0.000	0.000	0.004	0.004	4
29	159.7	0.001	0.003	0.022	0.025	350	37.70	0.000	0.001	0.009	0.010	33	13.27	0.000	0.000	0.004	0.004	5
30	109.1	0.001	0.002	0.021	0.024	222	33.59	0.000	0.001	0.010	0.011	32	12.68	0.000	0.000	0.009	0.009	10
31							33.11	0.000	0.001	0.008	0.009	26						
Ten Daily Mean																		
Ten Daily I	143.8	0.002	0.003	0.041	0.046	656	71.54	0.001	0.001	0.019	0.021	131	29.68	0.000	0.001	0.008	0.009	23
Ten Daily II	132.3	0.001	0.002	0.030	0.034	499	50.96	0.000	0.001	0.012	0.013	60	22.55	0.000	0.000	0.007	0.007	13
Ten Daily III	124.8	0.001	0.002	0.018	0.021	232	37.76	0.000	0.001	0.011	0.012	38	14.58	0.000	0.000	0.020	0.020	26
Monthly																		
Total						13879						2333						622

Annual Sediment Load (Metric Tonnes) : 63956

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : ERINJIPUZHA (KP000C3) **Division : SWR Division, Cochin**

Local River : Payaswani **Sub-Division : Chaliyar SD, Calicut**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	10.29	0.000	0.000	0.010	0.010	9	5.521	0.000	0.000	7.000	7.000	3339	1.817	0.000	0.000	0.006	0.006	1
2	10.54	0.000	0.000	0.004	0.004	4	5.413	0.000	0.000	0.008	0.008	4	1.842	0.000	0.000	0.007	0.007	1
3	10.35	0.000	0.000	0.004	0.004	4	5.386	0.000	0.000	0.008	0.008	4	1.751	0.000	0.000	0.006	0.006	1
4	10.02	0.000	0.000	0.006	0.006	5	5.237	0.000	0.000	0.007	0.007	3	1.600	0.000	0.000	0.006	0.006	1
5	9.982	0.000	0.000	0.000	0.000	0	5.028	0.000	0.000	0.007	0.007	3	1.356	0.000	0.000	0.007	0.007	1
6	9.831	0.000	0.000	0.000	0.000	0	5.054	0.000	0.000	0.007	0.007	3	1.315	0.000	0.000	0.006	0.006	1
7	10.55	0.000	0.000	0.000	0.000	0	4.731	0.000	0.000	0.007	0.007	3	1.408	0.000	0.000	0.006	0.006	1
8	8.991	0.000	0.000	0.000	0.000	0	4.647	0.000	0.000	0.004	0.004	2	1.098	0.000	0.000	0.006	0.006	1
9	9.207	0.000	0.000	0.000	0.000	0	4.537	0.000	0.000	0.004	0.004	2	1.050	0.000	0.000	0.006	0.006	1
10	9.024	0.000	0.000	0.000	0.000	0	3.835	0.000	0.000	0.008	0.008	3	0.999	0.000	0.000	0.005	0.005	0
11	9.972	0.000	0.000	0.006	0.006	5	3.917	0.000	0.000	0.004	0.004	1	0.945	0.000	0.000	0.005	0.005	0
12	9.211	0.000	0.000	0.000	0.000	0	3.820	0.000	0.000	0.005	0.005	2	0.923	0.000	0.000	0.005	0.005	0
13	9.264	0.000	0.000	0.000	0.000	0	3.721	0.000	0.000	0.004	0.004	1	0.888	0.000	0.000	0.005	0.005	0
14	8.382	0.000	0.000	0.000	0.000	0	3.683	0.000	0.000	0.005	0.005	2	0.875	0.000	0.000	0.006	0.006	0
15	8.663	0.000	0.000	0.005	0.005	4	3.671	0.000	0.000	0.007	0.007	2	0.838	0.000	0.000	0.007	0.007	1
16	8.512	0.000	0.000	0.005	0.005	4	3.100	0.000	0.000	0.006	0.006	2	0.840	0.000	0.000	0.006	0.006	0
17	8.311	0.000	0.000	0.004	0.004	3	3.055	0.000	0.000	0.007	0.007	2	1.560	0.000	0.000	0.013	0.013	2
18	7.211	0.000	0.000	0.005	0.005	3	3.158	0.000	0.000	0.009	0.009	2	1.521	0.000	0.000	0.009	0.009	1
19	7.119	0.000	0.000	0.005	0.005	3	3.069	0.000	0.000	0.008	0.008	2	1.408	0.000	0.000	0.004	0.004	0
20	7.463	0.000	0.000	0.005	0.005	3	2.796	0.000	0.000	0.007	0.007	2	0.636	0.000	0.000	0.007	0.007	0
21	7.145	0.000	0.000	0.005	0.005	3	2.738	0.000	0.000	0.007	0.007	2	0.387	0.000	0.000	0.004	0.004	0
22	6.779	0.000	0.000	0.005	0.005	3	2.452	0.000	0.000	0.006	0.006	1	0.417	0.000	0.000	0.005	0.005	0
23	6.716	0.000	0.000	0.005	0.005	3	2.286	0.000	0.000	0.006	0.006	1	0.226	0.000	0.000	0.004	0.004	0
24	6.664	0.000	0.000	0.005	0.005	3	2.101	0.000	0.000	0.007	0.007	1	0.251	0.000	0.000	0.004	0.004	0
25	6.060	0.000	0.000	0.004	0.004	2	1.995	0.000	0.000	0.005	0.005	1	0.203	0.000	0.000	0.004	0.004	0
26	6.374	0.000	0.000	0.003	0.003	2	1.905	0.000	0.000	0.006	0.006	1	0.158	0.000	0.000	0.004	0.004	0
27	6.146	0.000	0.000	0.006	0.006	3	1.813	0.000	0.000	0.006	0.006	1	0.084	0.000	0.000	0.004	0.004	0
28	6.397	0.000	0.000	0.003	0.003	2	1.654	0.000	0.000	0.005	0.005	1	0.082	0.000	0.000	0.004	0.004	0
29	6.161	0.000	0.000	0.008	0.008	4	1.775	0.000	0.000	0.005	0.005	1						
30	6.015	0.000	0.000	0.012	0.012	6	1.885	0.000	0.000	0.006	0.006	1						
31	5.485	0.000	0.000	0.012	0.012	6	1.957	0.000	0.000	0.008	0.008	1						
Ten Daily Mean																		
Ten Daily I	9.878	0.000	0.000	0.002	0.002	2	4.939	0.000	0.000	0.706	0.706	336	1.424	0.000	0.000	0.006	0.006	1
Ten Daily II	8.411	0.000	0.000	0.003	0.003	2	3.399	0.000	0.000	0.006	0.006	2	1.043	0.000	0.000	0.007	0.007	1
Ten Daily III	6.358	0.000	0.000	0.006	0.006	3	2.051	0.000	0.000	0.006	0.006	1	0.226	0.000	0.000	0.004	0.004	0
Monthly																		
Total						83						3394						15

Annual Sediment Load (Metric Tonnes) : 63956

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : ERINJIPUZHA (KP000C3) **Division : SWR Division, Cochin**

Local River : Payaswani **Sub-Division : Chaliyar SD, Calicut**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.071	0.000	0.000	0.004	0.004	0	0.000	0.000	0.000	0.000	0.000	0	0.501	0.000	0.000	0.029	0.029	1
2	0.072	0.000	0.000	0.004	0.004	0	0.000	0.000	0.000	0.000	0.000	0	0.323	0.000	0.000	0.027	0.027	1
3	0.069	0.000	0.000	0.004	0.004	0	0.000	0.000	0.000	0.000	0.000	0	0.193	0.000	0.000	0.023	0.023	0
4	0.109	0.000	0.000	0.004	0.004	0	0.000	0.000	0.000	0.000	0.000	0	0.124	0.000	0.000	0.000	0.000	0
5	0.065	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.076	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.040	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	4.395	0.000	0.000	0.023	0.023	9
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	7.178	0.000	0.000	0.012	0.012	7
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	6.281	0.000	0.000	0.013	0.013	7
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	8.979	0.000	0.000	0.008	0.008	6
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	6.360	0.000	0.000	0.020	0.020	11
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	5.405	0.000	0.000	0.010	0.010	5
16	0.000	0.000	0.000	0.000	0.000	0	2.999	0.000	0.000	0.010	0.010	3	5.531	0.000	0.000	0.018	0.018	9
17	0.000	0.000	0.000	0.000	0.000	0	2.637	0.000	0.000	0.004	0.004	1	5.239	0.000	0.000	0.009	0.009	4
18	0.000	0.000	0.000	0.000	0.000	0	1.657	0.000	0.000	0.014	0.014	2	6.643	0.000	0.000	0.009	0.009	5
19	0.000	0.000	0.000	0.000	0.000	0	1.446	0.000	0.000	0.014	0.014	2	4.747	0.000	0.000	0.007	0.007	3
20	0.000	0.000	0.000	0.000	0.000	0	1.917	0.000	0.000	0.014	0.014	2	5.877	0.000	0.000	0.008	0.008	4
21	0.000	0.000	0.000	0.000	0.000	0	1.807	0.000	0.000	0.011	0.011	2	5.975	0.000	0.000	0.009	0.009	5
22	0.127	0.000	0.000	0.003	0.003	0	1.795	0.000	0.000	0.013	0.013	2	5.355	0.000	0.000	0.005	0.005	2
23	2.150	0.000	0.000	0.006	0.006	1	1.952	0.000	0.000	0.012	0.012	2	5.034	0.000	0.000	0.010	0.010	4
24	1.807	0.000	0.000	0.004	0.004	1	1.770	0.000	0.000	0.011	0.011	2	5.228	0.000	0.000	0.014	0.014	6
25	1.446	0.000	0.000	0.000	0.000	0	1.857	0.000	0.000	0.013	0.013	2	8.155	0.000	0.000	0.012	0.012	8
26	1.196	0.000	0.000	0.005	0.005	1	2.083	0.000	0.000	0.018	0.018	3	34.27	0.000	0.000	0.011	0.011	33
27	1.025	0.000	0.000	0.004	0.004	0	1.766	0.000	0.000	0.016	0.016	2	23.48	0.000	0.000	0.027	0.027	55
28	0.418	0.000	0.000	0.005	0.005	0	1.353	0.000	0.000	0.013	0.013	2	44.32	0.000	0.000	0.056	0.056	214
29	0.345	0.000	0.000	0.000	0.000	0	0.972	0.000	0.000	0.022	0.022	2	29.71	0.000	0.000	0.045	0.045	115
30	0.165	0.000	0.000	0.000	0.000	0	0.555	0.000	0.000	0.025	0.025	1	75.85	0.000	0.000	0.105	0.105	688
31	0.055	0.000	0.000	0.000	0.000	0							38.39	0.000	0.000	0.045	0.045	149
Ten Daily Mean																		
Ten Daily I	0.039	0.000	0.000	0.002	0.002	0	0.000	0.000	0.000	0.000	0.000	0	0.565	0.000	0.000	0.010	0.010	1
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	1.066	0.000	0.000	0.006	0.006	1	6.224	0.000	0.000	0.011	0.011	6
Ten Daily III	0.794	0.000	0.000	0.002	0.002	0	1.591	0.000	0.000	0.015	0.015	2	25.07	0.000	0.000	0.031	0.031	116
Monthly																		
Total						3						29						1353

Annual Sediment Load (Metric Tonnes) : 63956

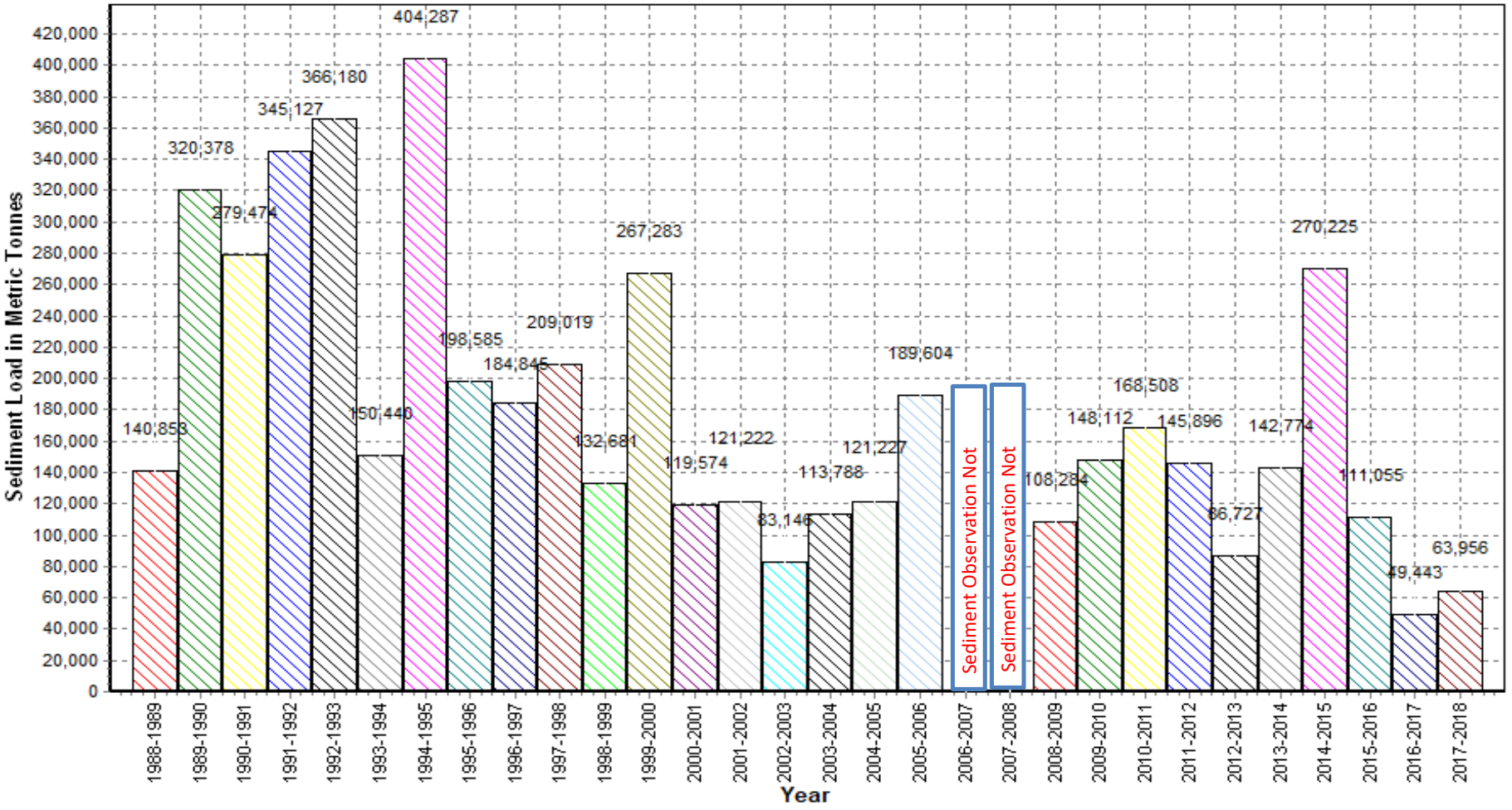
Annual Sediment Load for the period: 1988-2018

Station Name : ERINJIPUZHA (KP000C3)

Local River : Payaswani

Division : SWR Division, Cochin

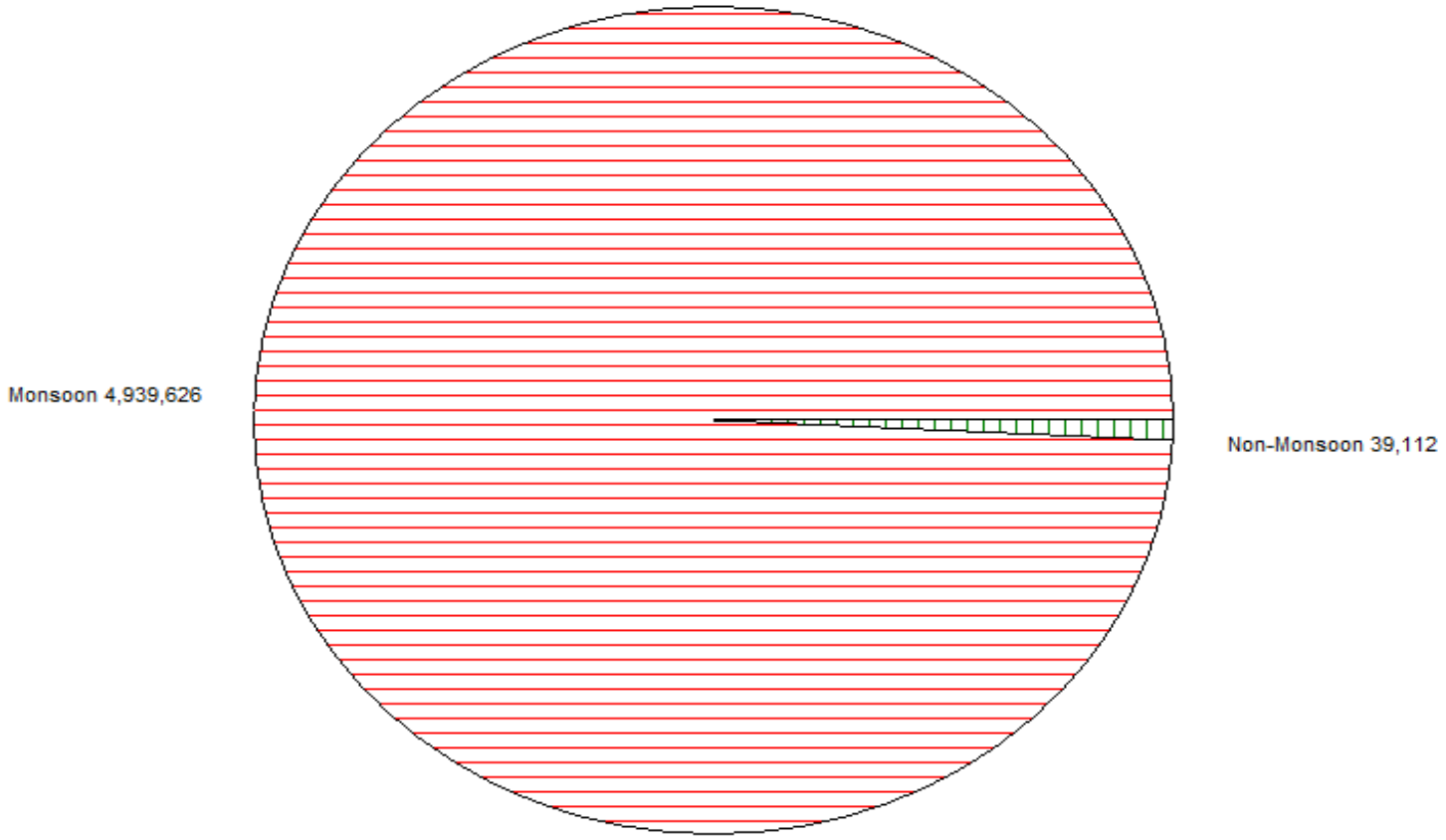
Sub-Division : Chaliyar SD, Calicut



Seasonal Sediment Load for the period : 1988-2017

Station Name : ERINJIPUZHA (KP000C3)
Local River : Payaswani

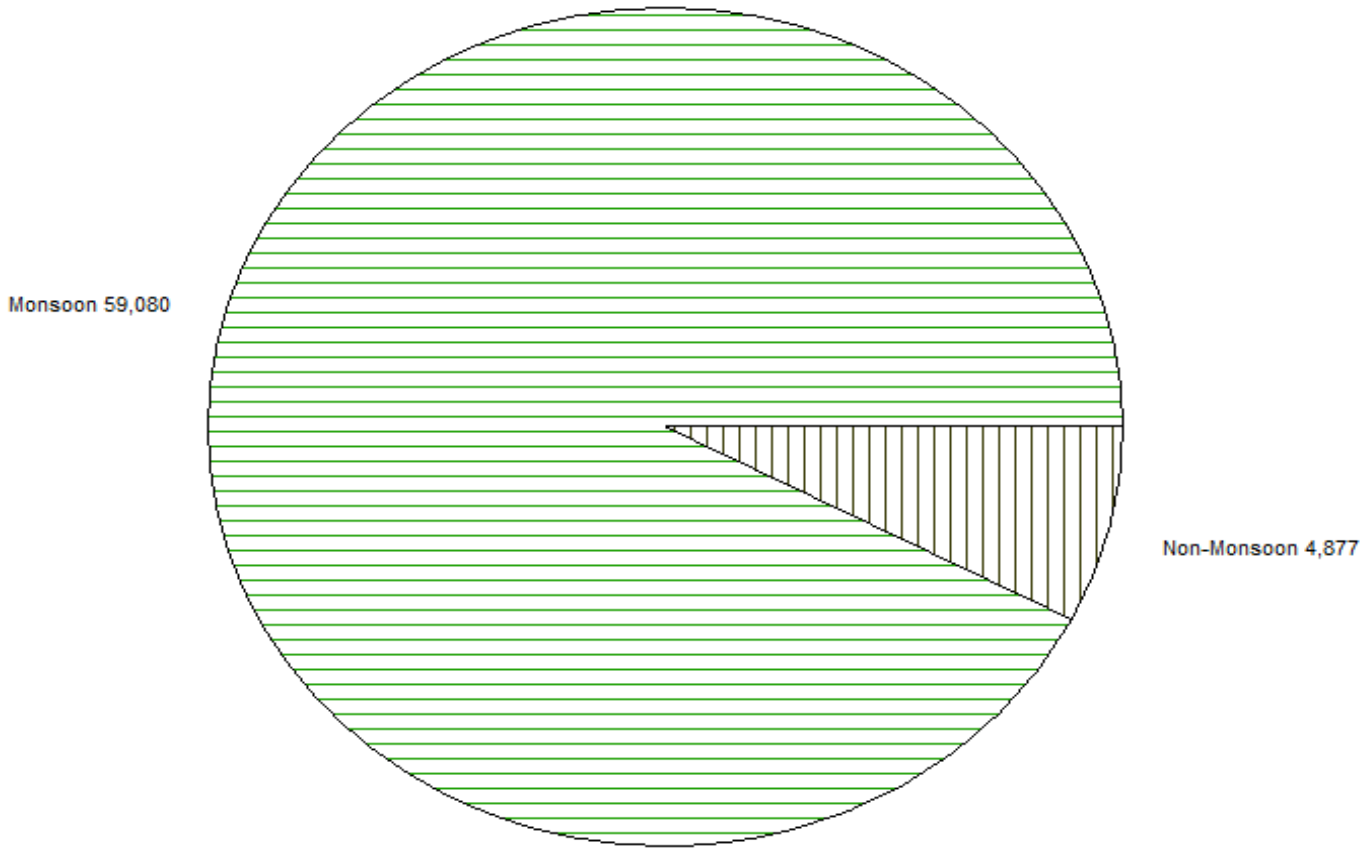
Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



Seasonal Sediment Load for the Year: 2017-2018

Station Name : ERINJIPUZHA (KP000C3)
Local River : Payaswani

Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



BED MATERIAL ANALYSIS DATA

RIVER : *Payaswini* **CODE NO :** *KPOOOC3*

SITE : *Erinjipuzha* **CROSS SECTION :** *SGL*

SL. NO.	DATA FOR SAMPLE COLLECTED											GENERAL DATA OF THE RIVER						
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS) OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	Bed Material Composition			WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	Bed Material Composition	
									MAX SIZE (mm)	MEAN SIZE (mm)							MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11		12	13	14	15	16	17	18
MONSOON 2017						**DATE OF COLLECTION**					**13-09-2017**							
1	60	-	12.230	14.940	1.71	5.00	0.311	0.5567	5.0	1.34								
2	85	-	12.210	12.940	1.73	5.00	0.330	0.6006	22.0	4.13		100.6	2.5111	0.3403	0.0010	84.60	22.0	3.11
3	105	-	11.130	12.940	3.81	5.00	0.472	1.8266	14.0	3.87								
POSTMONSOON 2017						**DATE OF COLLECTION**					**04-12-2017**							
1	60	-	13.260	14.01	0.75	5.00	0.105	0.0788	18.0	2.50								
2	85	-	13.190	14.01	0.82	5.00	0.162	0.1328	5.0	2.12		95.32	1.5809	0.0675	0.00005	10.03	18.0	2.71
3	105	-	11.160	14.01	2.85	5.00	0.145	0.4133	16.0	3.53								
PREMONSOON 2018						**DATE OF COLLECTION**					**25-05-2018**							
1	60	-	13.230	13.780	-	5.00	-	-	5.0	2.49								
2	85	-	13.130	13.780	-	5.00	-	-	18.0	3.04		94.05	1.4324	0.0616	0.00005	8.158	22.0	2.79
3	105	-	11.080	13.780	-	5.00	-	-	22.0	2.84								

Annual Sediment Load for period : 1986-2018

Station Name : PERUMANNU (KA000K8) **Division : SWR Division, Cochin**

Local River : Valapatnam **Sub-Division : Chaliyar SD, Calicut**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1986-1987	84667	801	85468	2801
1987-1988	66371	1566	67936	1904
1988-1989	272789	913	273703	3056
1989-1990	178853	1195	180048	3084
1990-1991	273924	1130	275054	3694
1991-1992	270385	774	271160	3636
1992-1993	469398	969	470367	4742
1993-1994	209483	1164	210647	3355
1994-1995	410839	1002	411841	4688
1995-1996	229820	945	230765	3272
1996-1997	262140	1251	263390	3568
1997-1998	395481	2086	397567	4166
1998-1999	231770	6289	238059	4310
1999-2000	235464	512	235976	3976
2000-2001	162311	8916	171227	2906
2001-2002	153046	749	153796	3028
2002-2003	136541	529	137071	2978
2003-2004	54369	7923	62292	2608
2004-2005	281367	591	281958	3657
2005-2006	358417	29954	388371	4850
2006-2007	0	0	0	4743
2007-2008	0	0	0	5539
2008-2009	91009	1172	92181	3093
2009-2010	240961	1582	242543	3603
2010-2011	103508	1976	105483	3247
2011-2012	131195	1223	132418	4074
2012-2013	95357	729	96085	2894
2013-2014	250627	1340	251967	5374
2014-2015	180539	2010	182550	4655
2015-2016	77250	1179	78429	2466
2016-2017	50891	9665	60556	2405
2017-2018	89190	1106	90296	2840

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PERUMANNU (KA000K8) **Division : SWR Division, Cochin**

Local River : Valapatnam **Sub-Division : Chaliyar SD, Calicut**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	1.323	0.000	0.000	0.023	0.023	3	255.4	0.000	0.003	0.021	0.024	539	131.9	0.000	0.000	0.011	0.011	123
2	0.878	0.000	0.000	0.023	0.023	2	248.2	0.000	0.003	0.016	0.018	395	147.8	0.000	0.002	0.023	0.025	319
3	1.220	0.000	0.000	0.023	0.023	2	269.5	0.000	0.003	0.027	0.031	710	121.0	0.000	0.000	0.006	0.006	60
4	5.932	0.000	0.000	0.021	0.021	11	195.8	0.000	0.000	0.011	0.011	188	236.3	0.000	0.006	0.046	0.052	1058
5	1.777	0.000	0.000	0.022	0.022	3	176.8	0.000	0.003	0.009	0.012	186	235.9	0.000	0.004	0.020	0.024	497
6	128.6	0.000	0.000	0.023	0.023	254	197.1	0.000	0.003	0.014	0.017	289	311.1	0.000	0.004	0.028	0.032	869
7	17.49	0.000	0.000	0.017	0.017	25	362.4	0.000	0.005	0.028	0.033	1046	298.9	0.000	0.002	0.015	0.017	426
8	1.119	0.000	0.000	0.021	0.021	2	240.1	0.000	0.004	0.012	0.016	332	231.6	0.000	0.002	0.012	0.014	274
9	0.882	0.000	0.000	0.029	0.029	2	161.9	0.000	0.001	0.013	0.014	194	204.5	0.002	0.004	0.033	0.039	680
10	0.981	0.000	0.000	0.018	0.018	2	130.6	0.000	0.000	0.012	0.012	134	231.8	0.002	0.004	0.019	0.025	499
11	3.797	0.000	0.000	0.024	0.024	8	115.8	0.000	0.000	0.009	0.009	89	168.2	0.000	0.000	0.007	0.007	100
12	53.28	0.000	0.004	0.020	0.024	110	112.2	0.000	0.000	0.009	0.009	90	254.7	0.000	0.003	0.022	0.025	557
13	70.16	0.000	0.000	0.002	0.002	9	98.78	0.000	0.000	0.007	0.007	60	172.1	0.000	0.001	0.010	0.011	161
14	154.2	0.000	0.000	0.004	0.004	49	143.6	0.000	0.004	0.020	0.024	303	145.8	0.000	0.000	0.002	0.002	24
15	130.6	0.000	0.000	0.003	0.003	37	145.2	0.000	0.000	0.013	0.013	164	131.1	0.000	0.002	0.002	0.004	42
16	49.16	0.000	0.000	0.002	0.002	8	190.4	0.001	0.003	0.020	0.024	393	160.4	0.000	0.002	0.017	0.019	258
17	92.60	0.000	0.000	0.003	0.003	22	222.2	0.003	0.005	0.032	0.039	752	159.0	0.000	0.002	0.022	0.024	328
18	59.76	0.000	0.000	0.010	0.010	49	295.3	0.002	0.004	0.026	0.033	829	153.8	0.000	0.000	0.005	0.005	70
19	41.46	0.000	0.000	0.015	0.015	52	916.0	0.004	0.010	0.082	0.095	7535	363.3	0.003	0.007	0.061	0.070	2204
20	45.23	0.000	0.000	0.016	0.016	61	1117	0.006	0.019	0.075	0.100	9620	251.9	0.001	0.003	0.021	0.025	535
21	51.96	0.000	0.000	0.012	0.012	53	729.9	0.003	0.006	0.039	0.047	2989	375.3	0.000	0.006	0.021	0.027	862
22	47.68	0.000	0.000	0.017	0.017	70	584.1	0.000	0.004	0.012	0.016	823	571.5	0.002	0.013	0.056	0.071	3520
23	42.84	0.000	0.000	0.015	0.015	57	334.7	0.000	0.001	0.011	0.013	367	385.6	0.000	0.002	0.009	0.011	363
24	63.56	0.000	0.002	0.020	0.022	119	286.8	0.000	0.000	0.005	0.005	124	360.3	0.000	0.002	0.029	0.031	971
25	225.0	0.001	0.003	0.028	0.031	610	239.6	0.000	0.000	0.008	0.008	170	299.9	0.000	0.003	0.015	0.018	456
26	214.8	0.001	0.003	0.029	0.033	603	184.1	0.000	0.000	0.010	0.010	153	230.8	0.000	0.000	0.008	0.008	161
27	777.0	0.002	0.003	0.066	0.072	4800	190.7	0.000	0.000	0.002	0.002	40	501.0	0.001	0.004	0.025	0.030	1303
28	409.0	0.002	0.007	0.040	0.049	1735	181.4	0.000	0.003	0.015	0.018	285	462.8	0.000	0.003	0.017	0.021	828
29	440.1	0.000	0.006	0.040	0.047	1772	228.8	0.000	0.002	0.022	0.024	466	810.1	0.002	0.009	0.043	0.054	3752
30	276.3	0.000	0.004	0.000	0.004	95	170.6	0.000	0.006	0.014	0.020	299	710.2	0.002	0.005	0.034	0.041	2540
31							135.9	0.000	0.000	0.010	0.010	121	441.8	0.000	0.003	0.008	0.010	385
Ten Daily Mean																		
Ten Daily I	16.02	0.000	0.000	0.022	0.022	31	223.8	0.000	0.003	0.016	0.019	401	215.1	0.000	0.003	0.021	0.024	481
Ten Daily II	70.03	0.000	0.000	0.010	0.010	41	335.6	0.002	0.004	0.029	0.035	1984	196.0	0.000	0.002	0.017	0.019	428
Ten Daily III	254.8	0.001	0.003	0.027	0.030	992	297.0	0.000	0.002	0.014	0.016	531	468.1	0.001	0.005	0.024	0.029	1377
Monthly																		
Total						10628						29686						24228

Annual Sediment Load (Metric Tonnes) : 90296

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PERUMANNU (KA000K8) **Division : SWR Division, Cochin**

Local River : Valapatnam **Sub-Division : Chaliyar SD, Calicut**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	315.3	0.001	0.003	0.033	0.037	1013	206.4	0.000	0.001	0.030	0.031	549	37.19	0.000	0.000	0.011	0.011	34
2	218.8	0.000	0.000	0.006	0.006	121	179.6	0.000	0.001	0.023	0.024	377	35.86	0.000	0.000	0.006	0.006	17
3	208.1	0.001	0.002	0.026	0.029	523	156.1	0.000	0.000	0.006	0.006	86	37.64	0.000	0.000	0.007	0.007	24
4	225.0	0.001	0.002	0.026	0.029	570	134.8	0.000	0.000	0.004	0.004	43	33.47	0.000	0.000	0.009	0.009	26
5	271.4	0.002	0.005	0.070	0.078	1827	116.6	0.000	0.000	0.002	0.002	20	35.18	0.000	0.000	0.008	0.008	26
6	212.1	0.002	0.004	0.040	0.046	845	111.4	0.000	0.000	0.005	0.005	49	36.45	0.000	0.000	0.008	0.008	26
7	169.1	0.000	0.000	0.007	0.007	98	106.7	0.000	0.002	0.015	0.017	153	30.86	0.000	0.000	0.011	0.011	30
8	166.0	0.000	0.002	0.041	0.043	617	98.60	0.000	0.000	0.007	0.008	66	34.83	0.000	0.000	0.007	0.007	22
9	208.3	0.002	0.006	0.049	0.058	1040	147.6	0.000	0.001	0.012	0.013	170	31.22	0.000	0.000	0.008	0.008	22
10	136.2	0.000	0.000	0.004	0.004	44	100.9	0.000	0.000	0.009	0.009	81	28.09	0.000	0.000	0.009	0.009	22
11	122.4	0.000	0.000	0.004	0.004	39	123.2	0.000	0.000	0.004	0.004	37	28.94	0.000	0.000	0.009	0.009	22
12	115.0	0.000	0.000	0.003	0.003	28	93.13	0.000	0.000	0.009	0.009	72	27.63	0.000	0.000	0.008	0.008	18
13	106.8	0.000	0.000	0.003	0.003	30	92.99	0.000	0.000	0.007	0.007	52	25.99	0.000	0.000	0.006	0.006	14
14	110.1	0.000	0.000	0.009	0.009	81	110.6	0.000	0.002	0.030	0.032	301	22.39	0.000	0.000	0.006	0.006	11
15	124.6	0.000	0.002	0.009	0.011	121	113.0	0.000	0.002	0.027	0.029	278	23.77	0.000	0.000	0.009	0.009	17
16	109.7	0.000	0.000	0.008	0.008	75	96.15	0.000	0.000	0.008	0.008	64	23.67	0.000	0.000	0.005	0.005	9
17	211.4	0.001	0.002	0.017	0.019	354	87.97	0.000	0.000	0.006	0.006	43	23.78	0.000	0.000	0.007	0.007	15
18	533.3	0.002	0.010	0.062	0.074	3405	89.30	0.000	0.000	0.011	0.012	89	20.17	0.000	0.000	0.004	0.004	6
19	646.5	0.004	0.008	0.057	0.068	3798	78.84	0.000	0.000	0.004	0.004	26	22.89	0.000	0.000	0.006	0.006	11
20	579.3	0.002	0.004	0.023	0.029	1471	82.91	0.000	0.000	0.005	0.005	37	18.39	0.000	0.000	0.005	0.005	7
21	392.3	0.000	0.002	0.012	0.013	451	67.90	0.000	0.000	0.008	0.008	48	18.05	0.000	0.000	0.008	0.008	12
22	305.8	0.000	0.000	0.013	0.013	346	63.79	0.000	0.000	0.006	0.006	34	14.69	0.000	0.000	0.006	0.006	7
23	252.9	0.000	0.000	0.011	0.011	238	59.81	0.000	0.000	0.007	0.007	34	20.50	0.000	0.000	0.005	0.005	9
24	188.8	0.000	0.001	0.026	0.027	445	52.36	0.000	0.000	0.008	0.008	34	20.03	0.000	0.000	0.007	0.007	12
25	193.5	0.000	0.000	0.014	0.014	239	49.27	0.000	0.000	0.004	0.004	17	17.28	0.000	0.000	0.006	0.006	9
26	177.0	0.000	0.003	0.024	0.027	408	47.34	0.000	0.000	0.004	0.004	17	0.945	0.000	0.000	0.006	0.006	0
27	186.0	0.000	0.001	0.049	0.050	808	51.97	0.000	0.000	0.005	0.005	24	0.815	0.000	0.000	0.006	0.006	0
28	286.5	0.002	0.003	0.044	0.049	1208	49.13	0.000	0.000	0.012	0.012	49	13.32	0.000	0.000	0.005	0.005	6
29	214.8	0.001	0.002	0.032	0.035	651	46.51	0.000	0.000	0.007	0.007	27	13.37	0.000	0.000	0.006	0.006	7
30	181.1	0.000	0.001	0.023	0.025	388	43.78	0.000	0.000	0.003	0.003	11	13.38	0.000	0.000	0.012	0.012	14
31							34.93	0.000	0.000	0.006	0.006	18						
Ten Daily Mean																		
Ten Daily I	213.0	0.001	0.002	0.030	0.034	670	135.9	0.000	0.001	0.011	0.012	160	34.08	0.000	0.000	0.009	0.009	25
Ten Daily II	265.9	0.001	0.003	0.019	0.023	940	96.80	0.000	0.000	0.011	0.011	100	23.76	0.000	0.000	0.006	0.006	13
Ten Daily III	237.9	0.000	0.001	0.025	0.026	518	51.53	0.000	0.000	0.006	0.006	28	13.24	0.000	0.000	0.007	0.007	8
Monthly																		
Total						21283						2904						460

Annual Sediment Load (Metric Tonnes) : 90296

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PERUMANNU (KA000K8) **Division : SWR Division, Cochin**

Local River : Valapatnam **Sub-Division : Chaliyar SD, Calicut**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	10.77	0.000	0.000	0.008	0.008	7	21.36	0.000	0.000	0.013	0.013	24	0.614	0.000	0.000	0.016	0.016	1
2	17.16	0.000	0.000	0.009	0.009	13	20.68	0.000	0.000	0.013	0.013	24	0.674	0.000	0.000	0.018	0.018	1
3	16.26	0.000	0.000	0.009	0.009	12	21.82	0.000	0.000	0.014	0.014	26	0.640	0.000	0.000	0.017	0.017	1
4	17.67	0.000	0.000	0.008	0.008	12	19.35	0.000	0.000	0.013	0.013	22	0.593	0.000	0.000	0.017	0.017	1
5	0.907	0.000	0.000	0.008	0.008	1	7.400	0.000	0.000	0.010	0.010	6	0.599	0.000	0.000	0.017	0.017	1
6	0.954	0.000	0.000	0.006	0.006	1	0.936	0.000	0.000	0.016	0.016	1	0.624	0.000	0.000	0.017	0.017	1
7	1.262	0.000	0.000	0.003	0.003	0	0.805	0.000	0.000	0.015	0.015	1	0.633	0.000	0.000	0.020	0.020	1
8	1.008	0.000	0.000	0.009	0.009	1	0.751	0.000	0.000	0.021	0.021	1	0.600	0.000	0.000	0.016	0.016	1
9	1.001	0.000	0.000	0.013	0.013	1	8.663	0.000	0.000	0.012	0.012	9	0.648	0.000	0.000	0.017	0.017	1
10	0.910	0.000	0.000	0.016	0.016	1	0.792	0.000	0.000	0.012	0.012	1	0.629	0.000	0.000	0.017	0.017	1
11	1.004	0.000	0.000	0.012	0.012	1	8.591	0.000	0.000	0.006	0.006	4	0.593	0.000	0.000	0.017	0.017	1
12	0.995	0.000	0.000	0.020	0.020	2	12.43	0.000	0.000	0.005	0.005	5	0.589	0.000	0.000	0.015	0.015	1
13	0.992	0.000	0.000	0.008	0.008	1	1.023	0.000	0.000	0.008	0.008	1	0.593	0.000	0.000	0.002	0.002	0
14	0.994	0.000	0.000	0.002	0.002	0	0.661	0.000	0.000	0.008	0.008	0	0.577	0.000	0.000	0.019	0.019	1
15	1.043	0.000	0.000	0.009	0.009	1	0.642	0.000	0.000	0.007	0.007	0	0.541	0.000	0.000	0.018	0.018	1
16	1.073	0.000	0.000	0.012	0.012	1	0.755	0.000	0.000	0.003	0.003	0	0.494	0.000	0.000	0.019	0.019	1
17	0.910	0.000	0.000	0.009	0.009	1	0.827	0.000	0.000	0.013	0.013	1	0.492	0.000	0.000	0.023	0.023	1
18	1.011	0.000	0.000	0.009	0.009	1	0.734	0.000	0.000	0.012	0.012	1	0.530	0.000	0.000	0.019	0.019	1
19	0.967	0.000	0.000	0.012	0.012	1	0.798	0.000	0.000	0.013	0.013	1	0.514	0.000	0.000	0.022	0.022	1
20	0.978	0.000	0.000	0.013	0.013	1	0.714	0.000	0.000	0.013	0.013	1	0.567	0.000	0.000	0.015	0.015	1
21	0.990	0.000	0.000	0.008	0.008	1	0.755	0.000	0.000	0.017	0.017	1	0.540	0.000	0.000	0.019	0.019	1
22	0.992	0.000	0.000	0.012	0.012	1	0.634	0.000	0.000	0.014	0.014	1	0.531	0.000	0.000	0.015	0.015	1
23	0.995	0.000	0.000	0.011	0.011	1	0.723	0.000	0.000	0.015	0.015	1	0.522	0.000	0.000	0.016	0.016	1
24	0.910	0.000	0.000	0.013	0.013	1	0.681	0.000	0.000	0.017	0.017	1	0.525	0.000	0.000	0.022	0.022	1
25	0.910	0.000	0.000	0.013	0.013	1	0.628	0.000	0.000	0.019	0.019	1	0.530	0.000	0.000	0.018	0.018	1
26	0.925	0.000	0.000	0.013	0.013	1	0.805	0.000	0.000	0.010	0.010	1	0.534	0.000	0.000	0.018	0.018	1
27	1.000	0.000	0.000	0.012	0.012	1	0.670	0.000	0.000	0.010	0.010	1	0.588	0.000	0.000	0.020	0.020	1
28	0.991	0.000	0.000	0.015	0.015	1	0.831	0.000	0.000	0.119	0.119	9	0.546	0.000	0.000	0.021	0.021	1
29	0.998	0.000	0.000	0.014	0.014	1	0.646	0.000	0.000	0.014	0.014	1						
30	11.39	0.000	0.000	0.014	0.014	14	0.676	0.000	0.000	0.010	0.010	1						
31	21.70	0.000	0.000	0.013	0.013	25	0.638	0.000	0.000	0.116	0.116	6						
Ten Daily Mean																		
Ten Daily I	6.790	0.000	0.000	0.009	0.009	5	10.26	0.000	0.000	0.014	0.014	12	0.626	0.000	0.000	0.017	0.017	1
Ten Daily II	0.997	0.000	0.000	0.011	0.011	1	2.717	0.000	0.000	0.009	0.009	1	0.549	0.000	0.000	0.017	0.017	1
Ten Daily III	3.801	0.000	0.000	0.013	0.013	4	0.699	0.000	0.000	0.033	0.033	2	0.539	0.000	0.000	0.019	0.019	1
Monthly																		
Total						106						152						24

Annual Sediment Load (Metric Tonnes) : 90296

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PERUMANNU (KA000K8) **Division : SWR Division, Cochin**

Local River : Valapatnam **Sub-Division : Chaliyar SD, Calicut**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.546	0.000	0.000	0.016	0.016	1	0.530	0.000	0.000	0.082	0.082	4	0.469	0.000	0.000	0.012	0.012	0
2	0.440	0.000	0.000	0.017	0.017	1	0.535	0.000	0.000	0.014	0.014	1	0.467	0.000	0.000	0.010	0.010	0
3	0.562	0.000	0.000	0.015	0.015	1	0.535	0.000	0.000	0.010	0.010	0	0.534	0.000	0.000	0.015	0.015	1
4	0.530	0.000	0.000	0.017	0.017	1	0.548	0.000	0.000	0.017	0.017	1	0.499	0.000	0.000	0.014	0.014	1
5	0.516	0.000	0.000	0.017	0.017	1	0.514	0.000	0.000	0.013	0.013	1	0.623	0.000	0.000	0.010	0.010	1
6	0.516	0.000	0.000	0.019	0.019	1	0.543	0.000	0.000	0.010	0.010	0	0.530	0.000	0.000	0.016	0.016	1
7	0.559	0.000	0.000	0.016	0.016	1	0.570	0.000	0.000	0.013	0.013	1	0.561	0.000	0.000	0.010	0.010	0
8	0.554	0.000	0.000	0.017	0.017	1	0.530	0.000	0.000	0.014	0.014	1	0.645	0.000	0.000	0.013	0.013	1
9	0.556	0.000	0.000	0.014	0.014	1	0.482	0.000	0.000	0.016	0.016	1	0.624	0.000	0.000	0.015	0.015	1
10	0.532	0.000	0.000	0.017	0.017	1	0.484	0.000	0.000	0.016	0.016	1	0.632	0.000	0.000	0.008	0.008	0
11	0.530	0.000	0.000	0.017	0.017	1	0.501	0.000	0.000	0.013	0.013	1	0.829	0.000	0.000	0.017	0.017	1
12	0.523	0.000	0.000	0.017	0.017	1	0.469	0.000	0.000	0.013	0.013	1	0.799	0.000	0.000	0.016	0.016	1
13	0.515	0.000	0.000	0.020	0.020	1	0.562	0.000	0.000	0.012	0.012	1	0.802	0.000	0.000	0.016	0.016	1
14	0.532	0.000	0.000	0.016	0.016	1	0.593	0.000	0.000	0.014	0.014	1	0.612	0.000	0.000	0.012	0.012	1
15	0.545	0.000	0.000	0.019	0.019	1	0.491	0.000	0.000	0.014	0.014	1	0.596	0.000	0.000	0.017	0.017	1
16	0.516	0.000	0.000	0.013	0.013	1	0.491	0.000	0.000	0.019	0.019	1	0.623	0.000	0.000	0.019	0.019	1
17	0.539	0.000	0.000	0.016	0.016	1	0.468	0.000	0.000	0.018	0.018	1	0.619	0.000	0.000	0.022	0.022	1
18	0.530	0.000	0.000	0.016	0.016	1	0.502	0.000	0.000	0.015	0.015	1	0.581	0.000	0.000	0.014	0.014	1
19	0.541	0.000	0.000	0.017	0.017	1	0.423	0.000	0.000	0.019	0.019	1	0.664	0.000	0.000	0.014	0.014	1
20	0.544	0.000	0.000	0.016	0.016	1	0.446	0.000	0.000	0.016	0.016	1	0.660	0.000	0.000	0.019	0.019	1
21	0.509	0.000	0.000	0.015	0.015	1	0.509	0.000	0.000	0.017	0.017	1	0.818	0.000	0.000	0.014	0.014	1
22	0.576	0.000	0.000	0.018	0.018	1	0.593	0.000	0.000	0.013	0.013	1	0.644	0.000	0.000	0.014	0.014	1
23	0.528	0.000	0.000	0.015	0.015	1	0.471	0.000	0.000	0.117	0.117	5	0.659	0.000	0.000	0.020	0.020	1
24	0.606	0.000	0.000	0.018	0.018	1	0.429	0.000	0.000	0.019	0.019	1	0.532	0.000	0.000	0.023	0.023	1
25	0.530	0.000	0.000	0.012	0.012	1	0.431	0.000	0.000	0.018	0.018	1	0.593	0.000	0.000	0.016	0.016	1
26	0.582	0.000	0.000	0.015	0.015	1	0.486	0.000	0.000	0.015	0.015	1	0.701	0.000	0.000	0.023	0.023	1
27	0.554	0.000	0.000	0.019	0.019	1	0.486	0.000	0.000	0.015	0.015	1	1.509	0.000	0.000	0.013	0.013	2
28	0.601	0.000	0.000	0.016	0.016	1	0.480	0.000	0.000	0.009	0.009	0	1.164	0.000	0.000	0.015	0.015	1
29	0.530	0.000	0.000	0.014	0.014	1	0.530	0.000	0.000	0.011	0.011	0	116.6	0.000	0.000	0.041	0.041	415
30	0.530	0.000	0.000	0.014	0.014	1	0.530	0.000	0.000	0.015	0.015	1	64.99	0.000	0.000	0.031	0.031	176
31	0.547	0.000	0.000	0.016	0.016	1							61.28	0.000	0.000	0.030	0.030	159
Ten Daily Mean																		
Ten Daily I	0.531	0.000	0.000	0.016	0.016	1	0.527	0.000	0.000	0.020	0.020	1	0.559	0.000	0.000	0.012	0.012	1
Ten Daily II	0.531	0.000	0.000	0.017	0.017	1	0.495	0.000	0.000	0.015	0.015	1	0.678	0.000	0.000	0.017	0.017	1
Ten Daily III	0.554	0.000	0.000	0.016	0.016	1	0.495	0.000	0.000	0.025	0.025	1	22.68	0.000	0.000	0.022	0.022	69
Monthly																		
Total						23						26						775

Annual Sediment Load (Metric Tonnes) : 90296

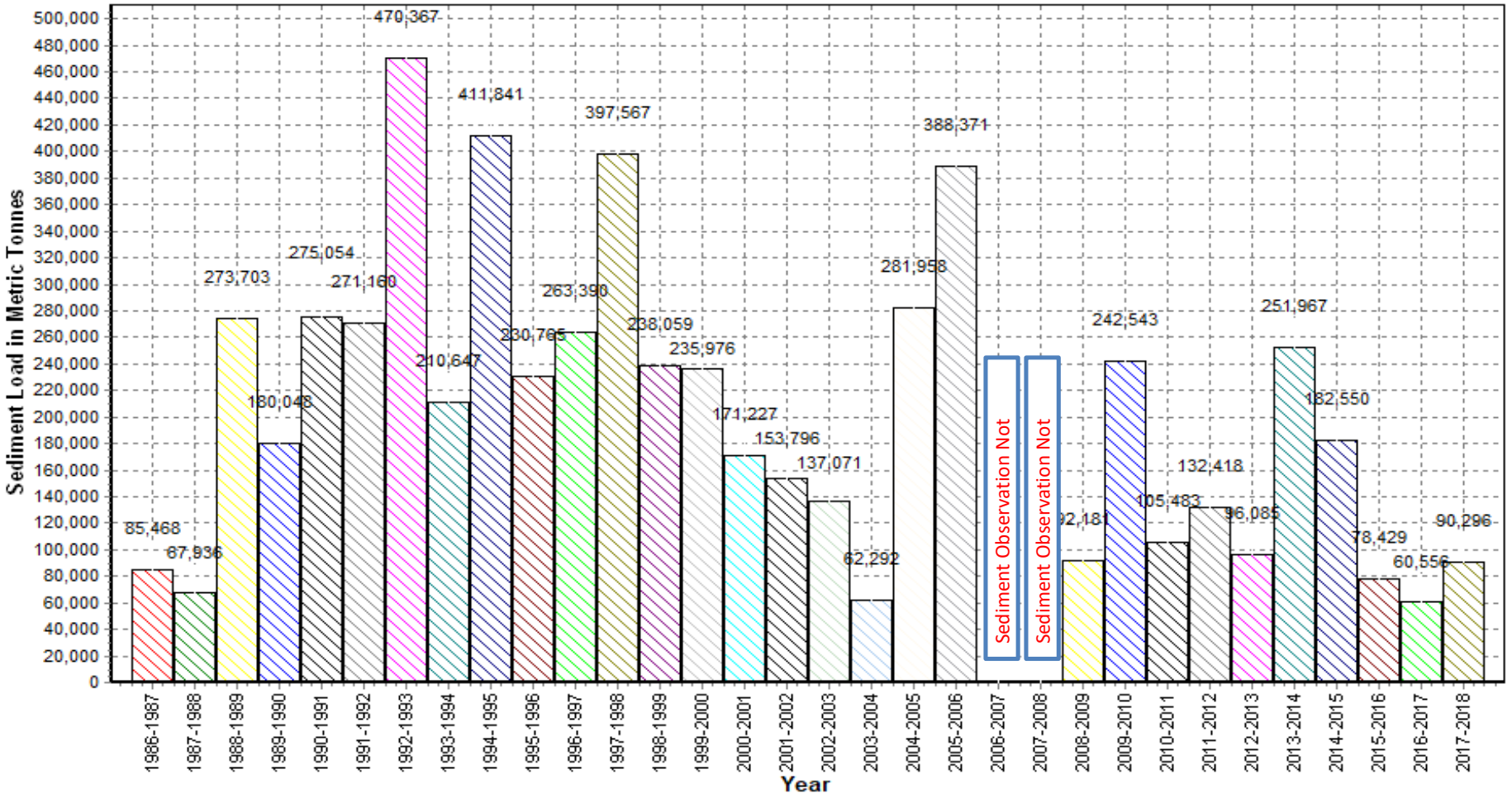
Annual Sediment Load for the period: 1986-2018

Station Name : PERUMANNU (KA000K8)

Local River : Valapatnam

Division : SWR Division, Cochin

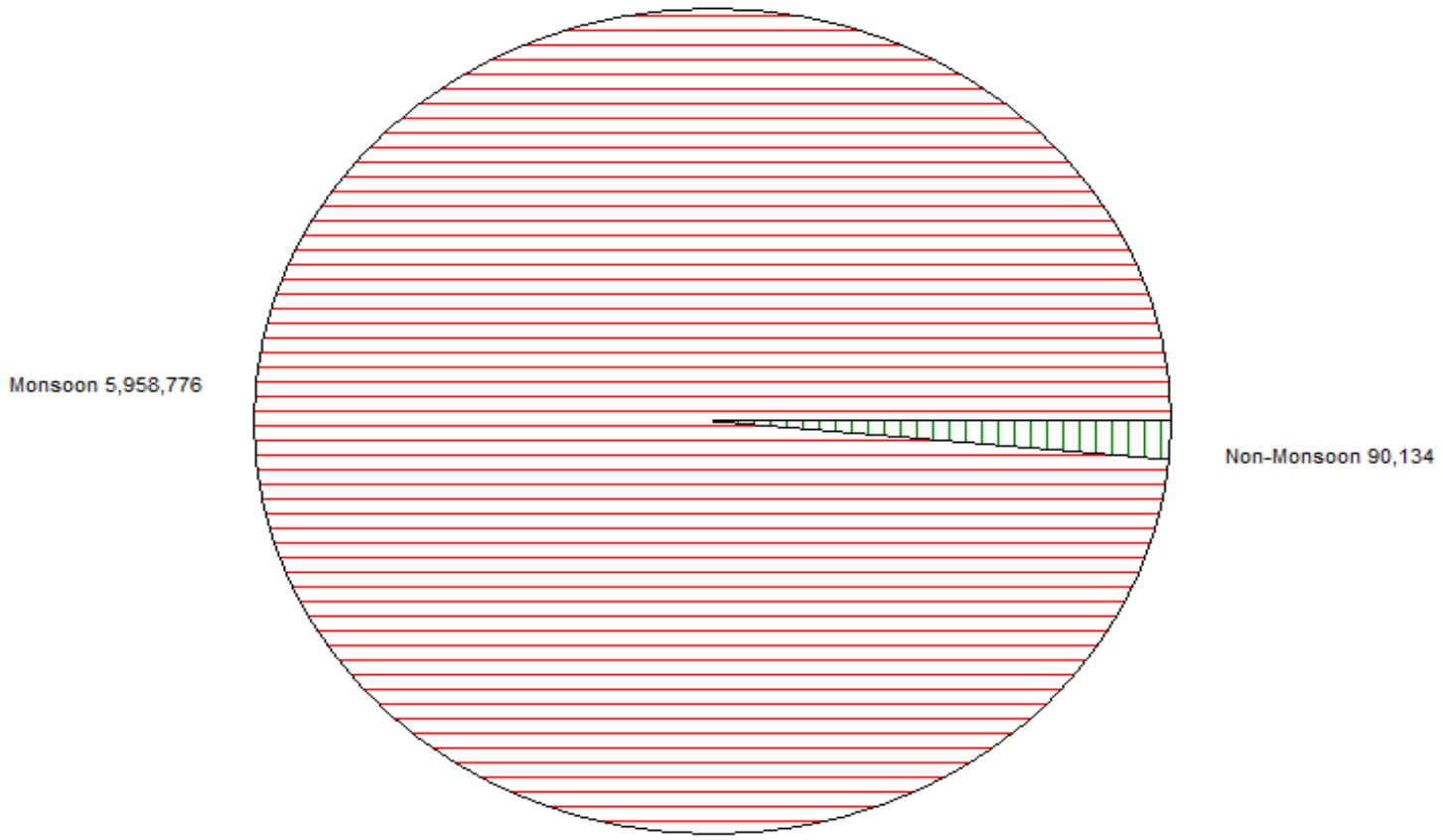
Sub-Division : Chaliyar SD, Calicut



Seasonal Sediment Load for the period : 1986-2017

Station Name : PERUMANNU (KA000K8)
Local River : Valapatnam

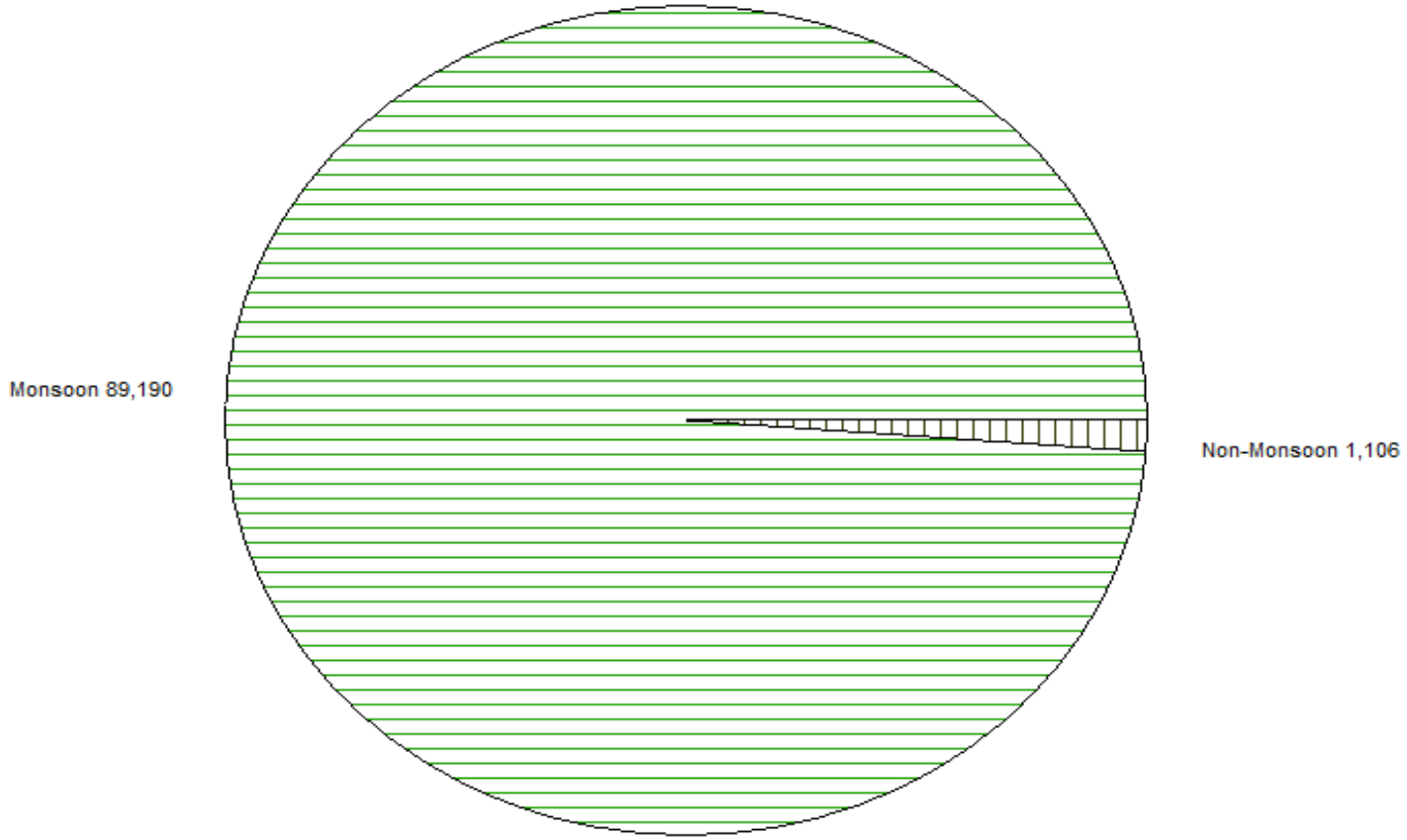
Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



Seasonal Sediment Load for the Year: 2017-2018

Station Name : PERUMANNU (KA000K8)
Local River : Valapatnam

Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



BED MATERIAL ANALYSIS DATA

RIVER : *Valapatanam* **CODE NO. :** *KAOOOK8*

SITE : *perumannu* **CROSS SECTION :** *SGL*

SL. NO.	DATA FOR SAMPLE COLLECTED									Bed Material Composition		GENERAL DATA OF THE RIVER					Bed Material Composition	
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GIS) OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)	WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017						**DATE OF COLLECTION**		**29-08-2017**										
1	35	-	6.130	11.430	5.30	124.5	1.215	7.1928	5.0	2.31							
2	70	-	5.230	11.430	6.20	124.5	1.619	10.118	18.0	2.95	126.47	5.15	1.2430	0.00025	810.2	18.0	2.42
3	105	-	6.260	11.430	5.17	124.5	0.728	3.9446	14.0	2.01							
POSTMONSOON 2017						**DATE OF COLLECTION**		**30-12-2017**										
1	35	-	5.740	6.960	1.22	88.70	no	flow	11.0	1.03							
2	70	-	5.240	6.960	1.72	88.70	0.140	0.2408	8.0	1.97	89.06	1.64	0.0781	0.00008	11.41	11.0	1.23
3	105	-	6.160	6.960	0.80	88.70	no	flow	5.0	0.68							
PREMONSOON 2018						**DATE OF COLLECTION**		**30-05-2018**										
1																		
2						Sample not collected												
3																		

Annual Sediment Load for period : 2013-2018

Station Name : KUTTYADI (KK000N2) **Division : SWR Division, Cochin**

Local River : Kuttyadi **Sub-Division : Chaliyar SD, Calicut**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2013-2014	16203	116	16319	1807
2014-2015	142301	325	142627	1557
2015-2016	0	104	104	956
2016-2017	2765	18	2783	708
2017-2018	1365	41	1406	993

Annual Sediment Load for period : 2013-2018

Station Name : KUTTYADI (KK000N2) **Division : SWR Division, Cochin**

Local River : Kuttyadi **Sub-Division : Chaliyar SD, Calicut**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	7.936	0.000	0.000	0.005	0.005	3	61.35	0.000	0.000	0.000	0.000	1	49.73	0.000	0.000	0.003	0.003	13
2	7.046	0.000	0.000	0.003	0.003	2	78.45	0.000	0.000	0.001	0.001	9	44.75	0.000	0.000	0.000	0.000	1
3	16.80	0.000	0.000	0.002	0.002	2	106.2	0.000	0.000	0.004	0.004	37	39.58	0.000	0.000	0.001	0.001	2
4	14.83	0.000	0.000	0.002	0.002	2	86.92	0.000	0.000	0.000	0.000	1	69.98	0.000	0.000	0.000	0.000	2
5	6.196	0.000	0.000	0.001	0.001	0	70.83	0.000	0.000	0.000	0.000	1	139.2	0.000	0.000	0.001	0.001	16
6	24.44	0.000	0.000	0.001	0.001	1	77.70	0.000	0.000	0.000	0.000	2	72.07	0.000	0.000	0.001	0.001	6
7	23.99	0.000	0.000	0.001	0.001	1	73.42	0.000	0.000	0.000	0.000	1	100.4	0.000	0.000	0.002	0.002	15
8	18.60	0.000	0.000	0.001	0.001	1	72.60	0.000	0.000	0.000	0.000	1	96.22	0.000	0.000	0.001	0.001	4
9	19.46	0.000	0.000	0.001	0.001	1	64.56	0.000	0.000	0.025	0.025	137	98.46	0.000	0.000	0.001	0.001	6
10	24.16	0.000	0.000	0.001	0.001	1	53.81	0.000	0.000	0.001	0.001	4	78.46	0.000	0.000	0.002	0.002	11
11	82.08	0.000	0.000	0.001	0.001	7	73.08	0.000	0.000	0.001	0.001	4	66.27	0.000	0.000	0.001	0.001	4
12	65.41	0.000	0.000	0.001	0.001	7	73.66	0.000	0.000	0.001	0.001	4	79.78	0.000	0.000	0.001	0.001	4
13	53.93	0.000	0.000	0.001	0.001	2	55.96	0.000	0.000	0.101	0.101	487	64.56	0.000	0.000	0.001	0.001	5
14	57.58	0.000	0.000	0.001	0.001	3	66.52	0.000	0.000	0.000	0.000	2	56.00	0.000	0.000	0.001	0.001	3
15	40.22	0.000	0.000	0.001	0.001	2	69.64	0.000	0.000	0.001	0.001	5	52.96	0.000	0.000	0.000	0.000	1
16	41.03	0.000	0.000	0.005	0.005	18	61.25	0.000	0.000	0.025	0.025	130	53.21	0.000	0.000	0.000	0.000	0
17	41.55	0.000	0.000	0.000	0.000	1	54.37	0.000	0.000	0.000	0.000	1	51.35	0.000	0.000	0.000	0.000	0
18	37.77	0.000	0.000	0.001	0.001	4	70.21	0.000	0.000	0.001	0.001	7	61.15	0.000	0.000	0.000	0.000	1
19	38.44	0.000	0.000	0.001	0.001	2	110.3	0.000	0.000	0.001	0.001	9	69.57	0.000	0.000	0.000	0.000	1
20	33.20	0.000	0.000	0.001	0.001	2	160.3	0.000	0.000	0.002	0.002	26	66.58	0.000	0.000	0.000	0.000	0
21	36.56	0.000	0.000	0.000	0.000	1	112.2	0.000	0.000	0.001	0.001	13	97.28	0.000	0.000	0.000	0.000	3
22	40.84	0.000	0.000	0.003	0.003	11	114.0	0.000	0.000	0.001	0.001	8	163.1	0.000	0.000	0.001	0.001	13
23	37.34	0.000	0.000	0.001	0.001	2	88.01	0.000	0.000	0.001	0.001	6	83.69	0.000	0.000	0.000	0.000	1
24	50.20	0.000	0.000	0.001	0.001	5	76.89	0.000	0.000	0.001	0.001	7	84.48	0.000	0.000	0.000	0.000	1
25	52.34	0.000	0.000	0.002	0.002	8	71.58	0.000	0.000	0.001	0.001	6	67.79	0.000	0.000	0.000	0.000	1
26	85.77	0.000	0.000	0.001	0.001	10	65.48	0.000	0.000	0.000	0.000	2	58.94	0.000	0.000	0.000	0.000	2
27	97.35	0.000	0.000	0.001	0.001	8	62.66	0.000	0.000	0.002	0.002	11	88.01	0.000	0.000	0.000	0.000	1
28	110.4	0.000	0.000	0.001	0.001	10	68.62	0.000	0.000	0.000	0.000	2	163.2	0.000	0.001	0.001	0.002	28
29	76.86	0.000	0.000	0.002	0.002	11	57.50	0.000	0.000	0.000	0.000	1	195.8	0.000	0.001	0.001	0.002	27
30	59.61	0.000	0.000	0.001	0.001	6	48.68	0.000	0.000	0.001	0.001	4	141.1	0.000	0.000	0.000	0.000	2
31							51.43	0.000	0.000	0.000	0.000	1	98.00	0.000	0.000	0.000	0.000	2
Ten Daily Mean																		
Ten Daily I	16.35	0.000	0.000	0.002	0.002	2	74.59	0.000	0.000	0.003	0.003	19	78.89	0.000	0.000	0.001	0.001	7
Ten Daily II	49.12	0.000	0.000	0.001	0.001	5	79.54	0.000	0.000	0.013	0.013	68	62.14	0.000	0.000	0.000	0.000	2
Ten Daily III	64.72	0.000	0.000	0.001	0.001	7	74.28	0.000	0.000	0.001	0.001	5	112.8	0.000	0.000	0.000	0.001	7
Monthly																		
Total						137						928						174

Annual Sediment Load (Metric Tonnes) : 1406

Annual Sediment Load for period : 2013-2018

Station Name : KUTTYADI (KK000N2) **Division : SWR Division, Cochin**

Local River : Kuttyadi **Sub-Division : Chaliyar SD, Calicut**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	75.59	0.000	0.000	0.000	0.000	1	50.55	0.000	0.000	0.000	0.000	1	22.20	0.000	0.000	0.001	0.001	1
2	65.29	0.000	0.000	0.000	0.000	1	47.48	0.000	0.000	0.000	0.000	1	17.77	0.000	0.000	0.001	0.001	1
3	65.90	0.000	0.000	0.000	0.000	1	39.40	0.000	0.000	0.000	0.000	0	17.33	0.000	0.000	0.001	0.001	1
4	54.83	0.000	0.000	0.000	0.000	1	45.97	0.000	0.000	0.000	0.000	0	20.56	0.000	0.000	0.000	0.000	0
5	72.06	0.000	0.001	0.001	0.001	8	50.10	0.000	0.000	0.000	0.000	1	23.69	0.000	0.000	0.000	0.000	0
6	74.45	0.000	0.000	0.000	0.000	2	58.11	0.000	0.000	0.000	0.000	1	19.26	0.000	0.000	0.000	0.000	0
7	65.44	0.000	0.000	0.000	0.000	1	53.23	0.000	0.000	0.001	0.001	2	21.03	0.000	0.000	0.000	0.000	0
8	57.28	0.000	0.000	0.000	0.000	0	45.71	0.000	0.000	0.001	0.001	2	24.09	0.000	0.000	0.001	0.001	1
9	63.20	0.000	0.000	0.000	0.000	1	59.42	0.000	0.000	0.002	0.002	9	20.79	0.000	0.000	0.001	0.001	1
10	62.57	0.000	0.000	0.000	0.000	0	48.67	0.000	0.000	0.000	0.000	1	20.22	0.000	0.000	0.000	0.000	1
11	57.39	0.000	0.000	0.000	0.000	0	89.95	0.000	0.000	0.000	0.000	3	23.08	0.000	0.000	0.000	0.000	1
12	52.46	0.000	0.000	0.000	0.000	1	56.32	0.000	0.000	0.000	0.000	0	22.78	0.000	0.000	0.000	0.000	0
13	51.88	0.000	0.000	0.000	0.000	1	52.37	0.000	0.000	0.000	0.000	0	13.96	0.000	0.000	0.000	0.000	0
14	69.22	0.000	0.000	0.000	0.000	1	72.87	0.000	0.000	0.000	0.000	1	15.21	0.000	0.000	0.000	0.000	0
15	72.21	0.000	0.000	0.000	0.000	1	62.23	0.000	0.000	0.000	0.000	0	11.17	0.000	0.000	0.000	0.000	0
16	64.37	0.000	0.000	0.000	0.000	2	52.64	0.000	0.000	0.000	0.000	1	4.275	0.000	0.000	0.000	0.000	0
17	208.8	0.000	0.000	0.001	0.001	11	47.15	0.000	0.000	0.000	0.000	0	3.992	0.000	0.000	0.000	0.000	0
18	206.3	0.000	0.000	0.000	0.000	5	63.23	0.000	0.000	0.000	0.000	0	4.045	0.000	0.000	0.000	0.000	0
19	128.7	0.000	0.000	0.001	0.001	7	48.62	0.000	0.000	0.000	0.000	0	3.018	0.000	0.000	0.000	0.000	0
20	141.6	0.000	0.000	0.001	0.001	6	47.38	0.000	0.000	0.000	0.000	1	3.834	0.000	0.000	0.000	0.000	0
21	109.9	0.000	0.000	0.001	0.001	7	47.76	0.000	0.000	0.000	0.000	0	3.684	0.000	0.000	0.000	0.000	0
22	87.75	0.000	0.000	0.001	0.001	4	42.81	0.000	0.000	0.000	0.000	0	3.484	0.000	0.000	0.001	0.001	0
23	71.92	0.000	0.000	0.001	0.001	7	34.81	0.000	0.000	0.000	0.000	1	3.215	0.000	0.000	0.000	0.000	0
24	65.23	0.000	0.000	0.001	0.001	3	27.30	0.000	0.000	0.001	0.001	3	3.071	0.000	0.000	0.000	0.000	0
25	54.38	0.000	0.000	0.000	0.000	0	29.74	0.000	0.000	0.000	0.000	0	3.048	0.000	0.000	0.000	0.000	0
26	53.05	0.000	0.000	0.001	0.001	2	38.18	0.000	0.000	0.000	0.000	1	2.608	0.000	0.000	0.000	0.000	0
27	61.15	0.000	0.000	0.000	0.000	0	36.29	0.000	0.000	0.001	0.001	3	3.856	0.000	0.000	0.000	0.000	0
28	64.14	0.000	0.000	0.000	0.000	1	34.83	0.000	0.000	0.000	0.000	1	2.928	0.000	0.000	0.001	0.001	0
29	55.46	0.000	0.000	0.000	0.000	1	31.95	0.000	0.000	0.000	0.000	1	3.032	0.000	0.000	0.000	0.000	0
30	57.37	0.000	0.000	0.000	0.000	1	22.98	0.000	0.000	0.000	0.000	1	2.583	0.000	0.000	0.000	0.000	0
31							23.63	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	65.66	0.000	0.000	0.000	0.000	2	49.86	0.000	0.000	0.000	0.000	2	20.69	0.000	0.000	0.000	0.000	1
Ten Daily II	105.3	0.000	0.000	0.000	0.000	4	59.28	0.000	0.000	0.000	0.000	1	10.54	0.000	0.000	0.000	0.000	0
Ten Daily III	68.03	0.000	0.000	0.000	0.000	3	33.66	0.000	0.000	0.000	0.000	1	3.151	0.000	0.000	0.000	0.000	0
Monthly																		
Total						78						39						9

Annual Sediment Load (Metric Tonnes) : 1406

Annual Sediment Load for period : 2013-2018

Station Name : KUTTYADI (KK000N2) **Division : SWR Division, Cochin**

Local River : Kuttyadi **Sub-Division : Chaliyar SD, Calicut**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	2.579	0.000	0.000	0.001	0.001	0	1.846	0.000	0.000	0.000	0.000	0	24.82	0.000	0.000	0.001	0.001	1
2	10.01	0.000	0.000	0.001	0.001	1	1.747	0.000	0.000	0.001	0.001	0	8.772	0.000	0.000	0.000	0.000	0
3	8.596	0.000	0.000	0.001	0.001	1	1.599	0.000	0.000	0.001	0.001	0	8.785	0.000	0.000	0.000	0.000	0
4	8.780	0.000	0.000	0.001	0.001	1	1.518	0.000	0.000	0.000	0.000	0	7.311	0.000	0.000	0.000	0.000	0
5	3.972	0.000	0.000	0.000	0.000	0	1.526	0.000	0.000	0.001	0.001	0	6.968	0.000	0.000	0.001	0.001	0
6	3.765	0.000	0.000	0.000	0.000	0	1.626	0.000	0.000	0.000	0.000	0	7.053	0.000	0.000	0.000	0.000	0
7	3.647	0.000	0.000	0.001	0.001	0	1.564	0.000	0.000	0.000	0.000	0	6.874	0.000	0.000	0.000	0.000	0
8	3.475	0.000	0.000	0.000	0.000	0	1.459	0.000	0.000	0.000	0.000	0	7.129	0.000	0.000	0.001	0.001	0
9	14.32	0.000	0.000	0.001	0.001	1	8.258	0.000	0.000	0.001	0.001	1	6.671	0.000	0.000	0.001	0.001	0
10	3.033	0.000	0.000	0.000	0.000	0	9.636	0.000	0.000	0.001	0.001	0	8.554	0.000	0.000	0.001	0.001	1
11	2.421	0.000	0.000	0.000	0.000	0	8.309	0.000	0.000	0.001	0.001	0	8.868	0.000	0.000	0.001	0.001	1
12	2.447	0.000	0.000	0.001	0.001	0	3.438	0.000	0.000	0.001	0.001	0	12.72	0.000	0.000	0.001	0.001	1
13	11.67	0.000	0.000	0.000	0.000	0	3.381	0.000	0.000	0.000	0.000	0	12.86	0.000	0.000	0.001	0.001	1
14	19.32	0.000	0.000	0.001	0.001	1	3.817	0.000	0.000	0.002	0.002	0	9.198	0.000	0.000	0.001	0.001	1
15	22.76	0.000	0.000	0.000	0.000	1	3.661	0.000	0.000	0.001	0.001	0	8.788	0.000	0.000	0.001	0.001	1
16	23.23	0.000	0.000	0.000	0.000	0	3.441	0.000	0.000	0.000	0.000	0	4.171	0.000	0.000	0.000	0.000	0
17	21.69	0.000	0.000	0.001	0.001	1	3.490	0.000	0.000	0.000	0.000	0	3.115	0.000	0.000	0.001	0.001	0
18	21.85	0.000	0.000	0.000	0.000	1	3.386	0.000	0.000	0.000	0.000	0	0.686	0.000	0.000	0.001	0.001	0
19	21.94	0.000	0.000	0.001	0.001	1	3.330	0.000	0.000	0.000	0.000	0	3.614	0.000	0.000	0.000	0.000	0
20	2.375	0.000	0.000	0.000	0.000	0	3.511	0.000	0.000	0.001	0.001	0	3.700	0.000	0.000	0.001	0.001	0
21	2.420	0.000	0.000	0.000	0.000	0	3.987	0.000	0.000	0.000	0.000	0	4.472	0.000	0.000	0.001	0.001	0
22	2.342	0.000	0.000	0.001	0.001	0	3.937	0.000	0.000	0.000	0.000	0	4.998	0.000	0.000	0.001	0.001	0
23	2.415	0.000	0.000	0.000	0.000	0	3.804	0.000	0.000	0.000	0.000	0	7.357	0.000	0.000	0.001	0.001	0
24	1.992	0.000	0.000	0.001	0.001	0	7.820	0.000	0.000	0.001	0.001	0	7.405	0.000	0.000	0.001	0.001	0
25	1.992	0.000	0.000	0.001	0.001	0	8.083	0.000	0.000	0.000	0.000	0	2.613	0.000	0.000	0.001	0.001	0
26	2.035	0.000	0.000	0.000	0.000	0	8.068	0.000	0.000	0.000	0.000	0	4.602	0.000	0.000	0.001	0.001	0
27	2.007	0.000	0.000	0.001	0.001	0	8.444	0.000	0.000	0.000	0.000	0	5.677	0.000	0.000	0.001	0.001	0
28	2.010	0.000	0.000	0.001	0.001	0	8.330	0.000	0.000	0.000	0.000	0	6.237	0.000	0.000	0.001	0.001	0
29	2.245	0.000	0.000	0.001	0.001	0	6.936	0.000	0.000	0.000	0.000	0						
30	3.334	0.000	0.000	0.001	0.001	0	6.861	0.000	0.000	0.000	0.000	0						
31	3.182	0.000	0.000	0.001	0.001	0	25.36	0.000	0.000	0.000	0.000	1						
Ten Daily Mean																		
Ten Daily I	6.218	0.000	0.000	0.001	0.001	0	3.078	0.000	0.000	0.000	0.000	0	9.294	0.000	0.000	0.000	0.000	0
Ten Daily II	14.97	0.000	0.000	0.000	0.000	1	3.976	0.000	0.000	0.000	0.000	0	6.772	0.000	0.000	0.001	0.001	0
Ten Daily III	2.361	0.000	0.000	0.001	0.001	0	8.330	0.000	0.000	0.000	0.000	0	5.420	0.000	0.000	0.001	0.001	0
Monthly																		
Total						10						5						11

Annual Sediment Load (Metric Tonnes) : 1406

Annual Sediment Load for period : 2013-2018

Station Name : KUTTYADI (KK000N2) **Division : SWR Division, Cochin**

Local River : Kuttyadi **Sub-Division : Chaliyar SD, Calicut**

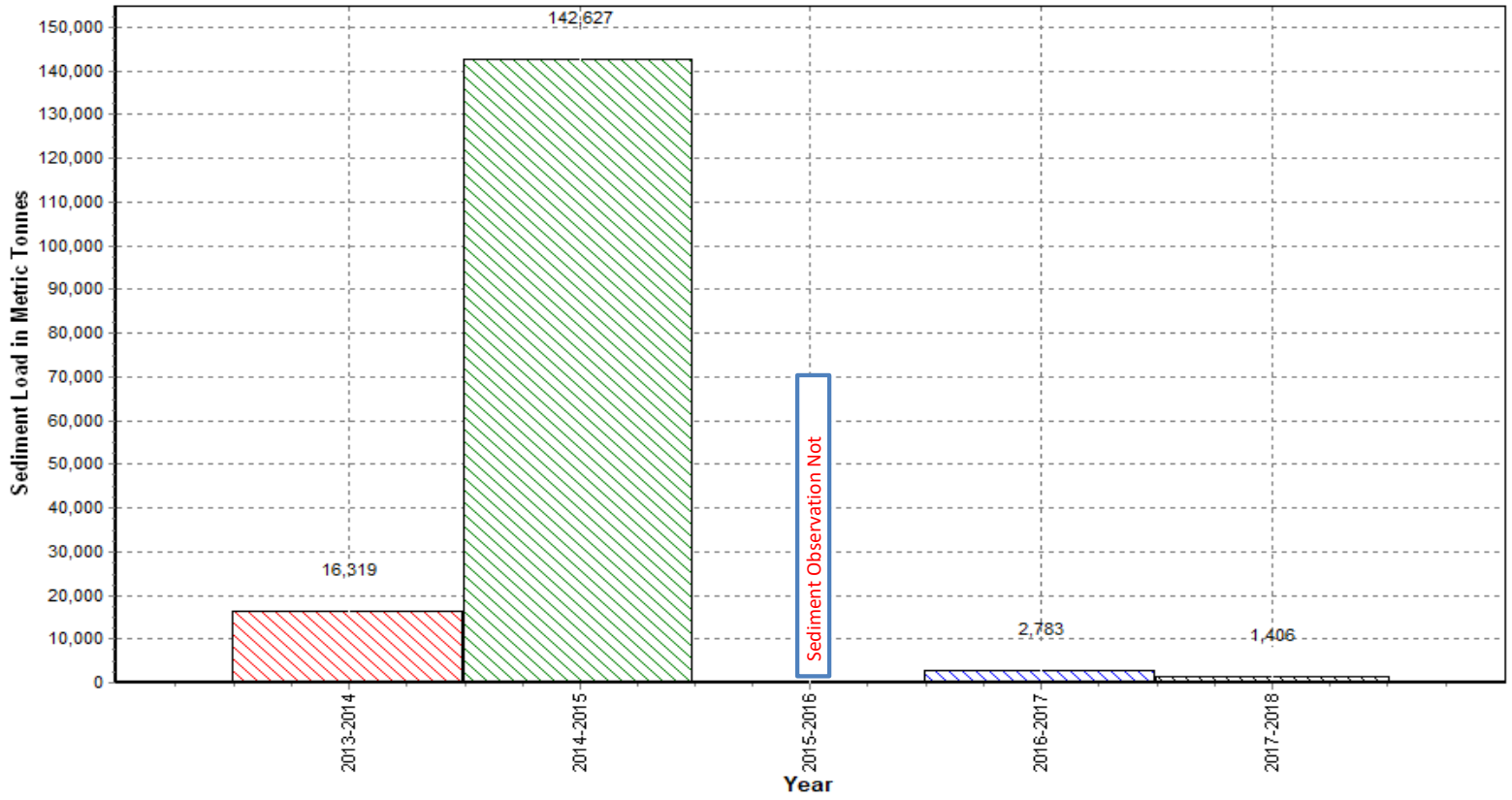
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	12.64	0.000	0.000	0.000	0.000	0	2.749	0.000	0.000	0.001	0.001	0	2.927	0.000	0.000	0.000	0.000	0
2	15.44	0.000	0.000	0.000	0.000	1	2.833	0.000	0.000	0.000	0.000	0	3.491	0.000	0.000	0.000	0.000	0
3	11.76	0.000	0.000	0.000	0.000	0	2.900	0.000	0.000	0.000	0.000	0	3.515	0.000	0.000	0.001	0.001	0
4	8.330	0.000	0.000	0.000	0.000	0	2.866	0.000	0.000	0.000	0.000	0	3.150	0.000	0.000	0.001	0.001	0
5	6.176	0.000	0.000	0.000	0.000	0	2.842	0.000	0.000	0.001	0.001	0	3.157	0.000	0.000	0.001	0.001	0
6	5.138	0.000	0.000	0.000	0.000	0	2.906	0.000	0.000	0.000	0.000	0	2.889	0.000	0.000	0.001	0.001	0
7	5.231	0.000	0.000	0.000	0.000	0	3.046	0.000	0.000	0.000	0.000	0	2.830	0.000	0.000	0.001	0.001	0
8	5.916	0.000	0.000	0.000	0.000	0	2.889	0.000	0.000	0.000	0.000	0	3.033	0.000	0.000	0.001	0.001	0
9	7.049	0.000	0.000	0.000	0.000	0	2.926	0.000	0.000	0.000	0.000	0	2.805	0.000	0.000	0.001	0.001	0
10	7.112	0.000	0.000	0.000	0.000	0	2.938	0.000	0.000	0.000	0.000	0	2.962	0.000	0.000	0.001	0.001	0
11	3.817	0.000	0.000	0.000	0.000	0	2.826	0.000	0.000	0.000	0.000	0	3.006	0.000	0.000	0.001	0.001	0
12	2.743	0.000	0.000	0.000	0.000	0	2.921	0.000	0.000	0.000	0.000	0	3.281	0.000	0.000	0.001	0.001	0
13	2.596	0.000	0.000	0.000	0.000	0	2.882	0.000	0.000	0.000	0.000	0	2.889	0.000	0.000	0.001	0.001	0
14	2.673	0.000	0.000	0.001	0.001	0	2.749	0.000	0.000	0.001	0.001	0	3.586	0.000	0.000	0.000	0.000	0
15	2.677	0.000	0.000	0.001	0.001	0	2.749	0.000	0.000	0.001	0.001	0	2.860	0.000	0.000	0.001	0.001	0
16	2.701	0.000	0.000	0.000	0.000	0	2.875	0.000	0.000	0.001	0.001	0	3.245	0.000	0.000	0.000	0.000	0
17	2.690	0.000	0.000	0.000	0.000	0	3.004	0.000	0.000	0.000	0.000	0	3.774	0.000	0.000	0.000	0.000	0
18	2.481	0.000	0.000	0.000	0.000	0	2.851	0.000	0.000	0.000	0.000	0	4.096	0.000	0.000	0.001	0.001	0
19	2.837	0.000	0.000	0.001	0.001	0	2.943	0.000	0.000	0.001	0.001	0	3.149	0.000	0.000	0.000	0.000	0
20	2.581	0.000	0.000	0.001	0.001	0	2.908	0.000	0.000	0.001	0.001	0	3.033	0.000	0.000	0.000	0.000	0
21	2.669	0.000	0.000	0.001	0.001	0	3.084	0.000	0.000	0.000	0.000	0	3.099	0.000	0.000	0.000	0.000	0
22	2.751	0.000	0.000	0.001	0.001	0	2.889	0.000	0.000	0.001	0.001	0	2.919	0.000	0.000	0.000	0.000	0
23	2.773	0.000	0.000	0.001	0.001	0	3.261	0.000	0.000	0.000	0.000	0	2.820	0.000	0.000	0.001	0.001	0
24	2.730	0.000	0.000	0.001	0.001	0	3.213	0.000	0.000	0.000	0.000	0	3.048	0.000	0.000	0.001	0.001	0
25	2.613	0.000	0.000	0.001	0.001	0	2.782	0.000	0.000	0.001	0.001	0	3.907	0.000	0.000	0.001	0.001	0
26	2.532	0.000	0.000	0.000	0.000	0	2.850	0.000	0.000	0.001	0.001	0	5.872	0.000	0.000	0.000	0.000	0
27	2.459	0.000	0.000	0.001	0.001	0	2.984	0.000	0.000	0.000	0.000	0	7.558	0.000	0.000	0.001	0.001	0
28	2.550	0.000	0.000	0.001	0.001	0	3.000	0.000	0.000	0.001	0.001	0	8.890	0.000	0.000	0.001	0.001	1
29	2.749	0.000	0.000	0.001	0.001	0	2.889	0.000	0.000	0.000	0.000	0	4.466	0.000	0.000	0.001	0.001	0
30	2.749	0.000	0.000	0.001	0.001	0	2.889	0.000	0.000	0.000	0.000	0	33.65	0.000	0.000	0.001	0.001	2
31	2.852	0.000	0.000	0.001	0.001	0							11.20	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	8.479	0.000	0.000	0.000	0.000	0	2.889	0.000	0.000	0.000	0.000	0	3.076	0.000	0.000	0.001	0.001	0
Ten Daily II	2.780	0.000	0.000	0.000	0.000	0	2.871	0.000	0.000	0.000	0.000	0	3.292	0.000	0.000	0.001	0.001	0
Ten Daily III	2.675	0.000	0.000	0.001	0.001	0	2.984	0.000	0.000	0.001	0.001	0	7.948	0.000	0.000	0.001	0.001	0
Monthly																		
Total						4						3						8

Annual Sediment Load (Metric Tonnes) : 1406

Annual Sediment Load for period : 2013-2018

Station Name : KUTTYADI (KK000N2)
Local River : Kuttyadi

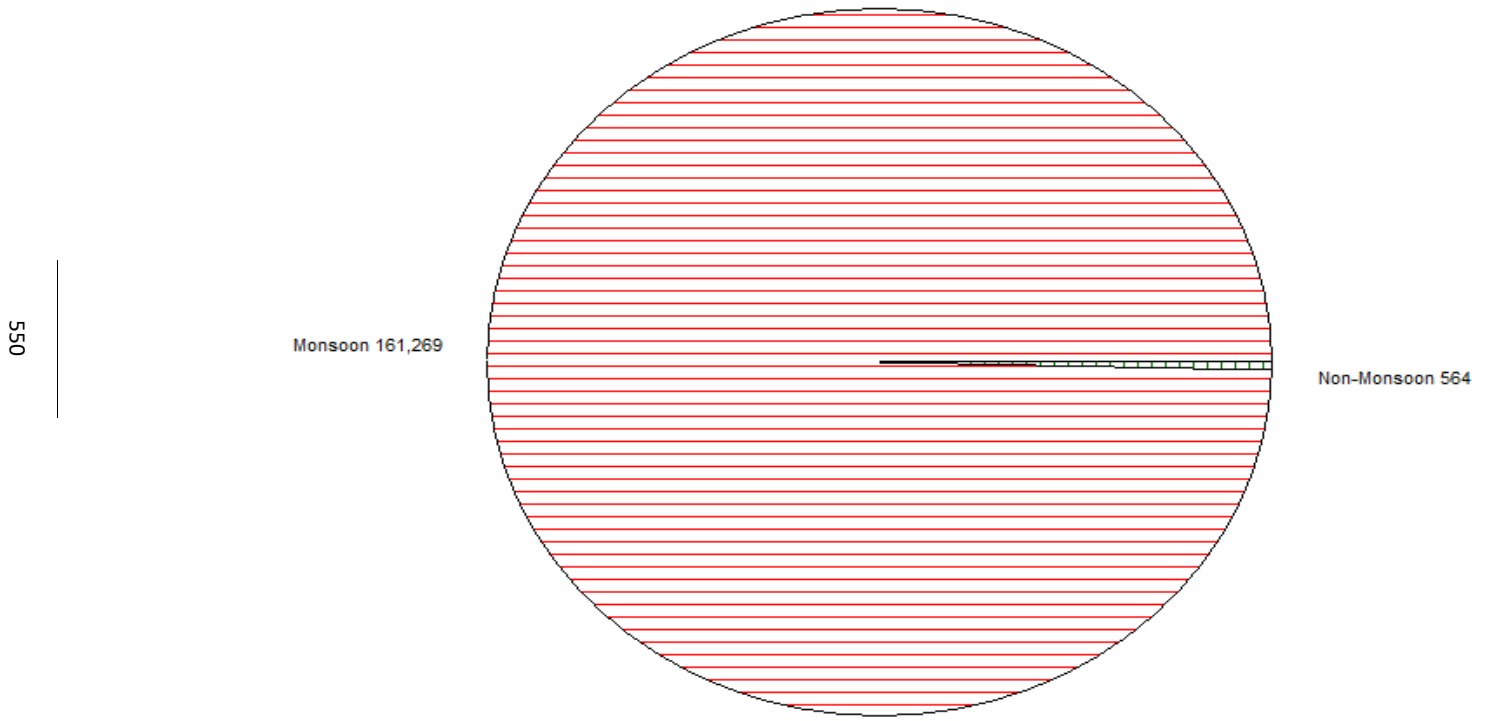
Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



Annual Sediment Load for period : 2013-2018

Station Name : KUTTYADI (KK000N2)
Local River : Kuttyadi

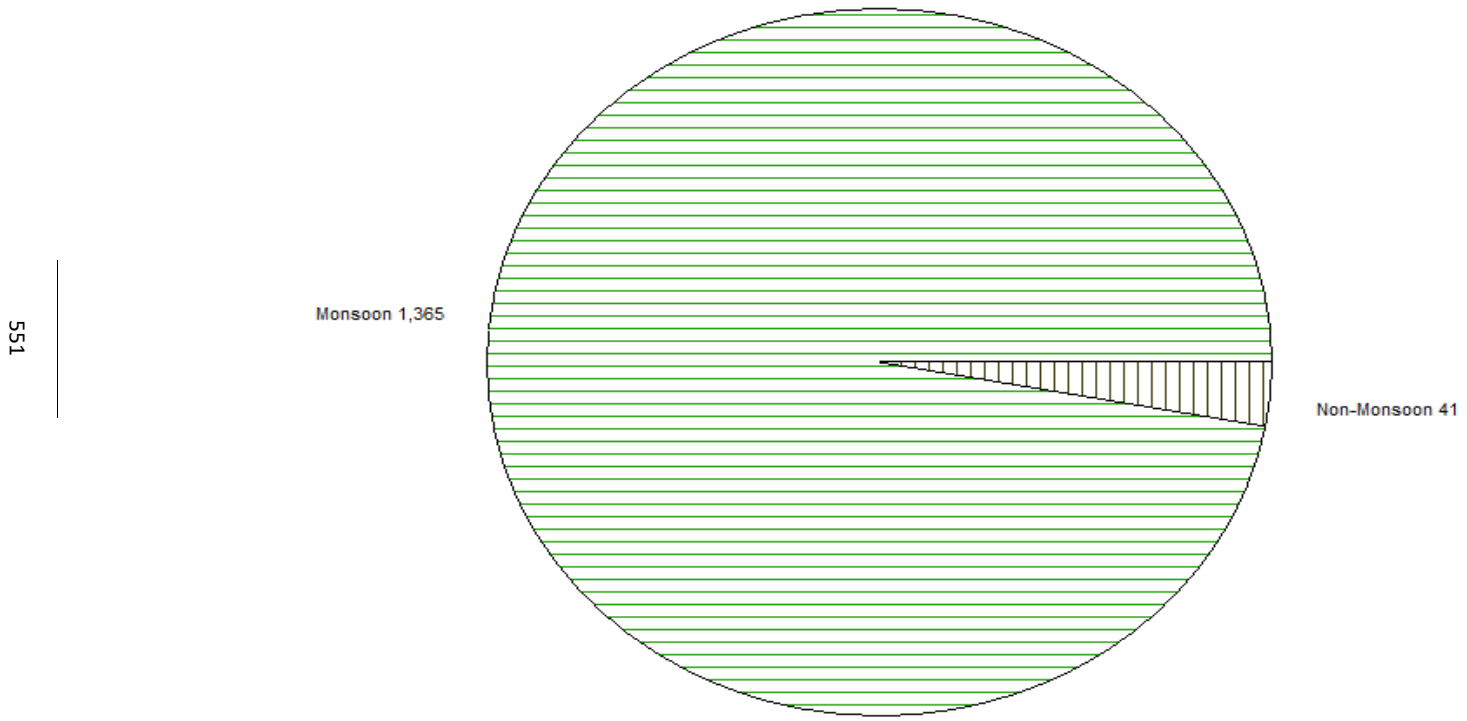
Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



Annual Sediment Load for period : 2013-2018

Station Name : KUTTYADI (KK000N2)
Local River : Kuttyadi

Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



BED MATERIAL ANALYSIS DATA

RIVER : *Thottathankandi* **CODE NO.** : *KKOOON2*

SITE : *Kuttiyadi* **CROSS SECTION** : *SGL*

SL. NO.	DATA FOR SAMPLE COLLECTED											GENERAL DATA OF THE RIVER						
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS) Of THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m³/Sec)	Bed Material Composition		WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m³/Sec)	Bed Material Composition	
									MAX SIZE (mm)	MEAN SIZE (mm)						MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017									**DATE OF COLLECTION**		**10-10-2017**						
1	35	-	0.300	1.730	1.40				5.0	1.70							
2	50	-	(-)0.410	1.730	2.14	41.100	0.7056	48.68	5.0	0.98	41.960	1.6442	0.7056	0.00015	48.68	7.0	1.57
3	65	-	(-)0.020	1.730	1.75				7.0	2.04							
POSTMONSOON 2017									**DATE OF COLLECTION**		**28-12-2017**						
1	35	-	0.340	0.540	0.020				5.0	1.65							
2	50	-	0.310	0.540	0.85	35.55	0.0743	1.958	12.0	1.43	35.941	0.7331	0.0743	0.00005	1.958	12.0	1.49
3	65	-	0.010	0.540	0.53				6.0	1.40							
PREMONSOON 2018									**DATE OF COLLECTION**		11-05-2018						
1	35	-	0.270	0.630	0.36				5.0	1.43							
2	50	-	0.330	0.630	0.36	35.55	0.1182	3.006	10.0	2.33	35.865	0.7090	0.1165	0.00005	3.006	10.0	1.84
3	65	-	0.020	0.630	0.36				8.0	1.76							

Annual Sediment Load for period : 1981-2018

Station Name : KUNIYIL (KB000J3) **Division : SWR Division, Cochin**

Local River : Chaliyar **Sub-Division : Chaliyar SD, Calicut**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1981-1982	839947	4617	844565	5580
1982-1983	334220	1719	335939	3268
1983-1984	550979	4324	555303	4373
1984-1985	609274	3979	613254	4796
1985-1986	271602	2438	274040	3440
1986-1987	277131	2358	279489	3360
1987-1988	149729	6359	156088	2158
1988-1989	458789	1576	460364	4058
1989-1990	321746	12371	334117	3399
1990-1991	287934	1680	289614	3262
1991-1992	761358	2935	764293	4325
1992-1993	812527	2408	814936	5539
1993-1994	324716	2543	327258	3941
1994-1995	516051	3314	519366	6060
1995-1996	271512	1417	272929	3852
1996-1997	346795	5780	352575	3940
1997-1998	333688	3619	337307	4617
1998-1999	300859	15095	315954	5775
1999-2000	0	0	0	4853
2000-2001	0	0	0	3406
2001-2002	124630	5627	130257	3628
2002-2003	67221	0	67221	2104
2003-2004	49072	5116	54188	2127
2004-2005	244257	168	244425	3817
2005-2006	314514	42356	356870	6161
2006-2007	0	0	0	5111
2007-2008	0	0	0	6996
2008-2009	110538	0	110538	3189
2009-2010	255927	1334	257262	4477
2010-2011	171578	1272	172850	3870
2011-2012	254642	1102	255745	5105
2012-2013	118185	0	118185	2819
2013-2014	823691	1892	825583	5814
2014-2015	298465	0	298465	4616
2015-2016	128923	0	128923	2542
2016-2017	47013	0	47013	1545
2017-2018	195935	0	195935	3123

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KUNIYIL (KB000J3) **Division : SWR Division, Cochin**

Local River : Chaliyar **Sub-Division : Chaliyar SD, Calicut**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	137.2	0.000	0.000	0.025	0.025	292	121.8	0.000	0.000	0.024	0.024	252
2	0.000	0.000	0.000	0.000	0.000	0	220.2	0.000	0.000	0.034	0.034	637	125.2	0.000	0.000	0.023	0.023	249
3	0.000	0.000	0.000	0.000	0.000	0	222.0	0.000	0.000	0.033	0.033	633	115.2	0.000	0.000	0.023	0.023	229
4	0.000	0.000	0.000	0.000	0.000	0	177.9	0.000	0.000	0.029	0.029	446	135.4	0.000	0.000	0.026	0.026	304
5	0.000	0.000	0.000	0.000	0.000	0	118.0	0.000	0.000	0.022	0.022	224	211.5	0.000	0.000	0.033	0.033	603
6	0.000	0.000	0.000	0.000	0.000	0	121.5	0.000	0.000	0.024	0.024	252	336.0	0.000	0.000	0.046	0.046	1341
7	0.000	0.000	0.000	0.000	0.000	0	149.3	0.000	0.000	0.028	0.028	361	214.9	0.000	0.000	0.034	0.034	631
8	0.000	0.000	0.000	0.000	0.000	0	121.5	0.000	0.000	0.023	0.023	241	150.3	0.000	0.000	0.029	0.029	376
9	0.000	0.000	0.000	0.000	0.000	0	121.0	0.000	0.000	0.013	0.013	139	146.2	0.000	0.000	0.026	0.026	328
10	0.000	0.000	0.000	0.000	0.000	0	91.50	0.000	0.000	0.022	0.022	174	201.0	0.000	0.000	0.032	0.032	556
11	0.000	0.000	0.000	0.000	0.000	0	89.85	0.000	0.000	0.018	0.018	140	142.4	0.000	0.000	0.026	0.026	320
12	302.4	0.000	0.000	0.014	0.014	376	222.0	0.000	0.000	0.033	0.033	633	248.7	0.000	0.000	0.036	0.036	774
13	225.2	0.000	0.000	0.014	0.014	269	137.5	0.000	0.000	0.240	0.240	2852	145.8	0.000	0.000	0.027	0.027	343
14	203.0	0.000	0.000	0.014	0.014	239	219.4	0.000	0.000	0.034	0.034	645	120.3	0.000	0.000	0.027	0.027	281
15	170.9	0.000	0.000	0.011	0.011	162	201.2	0.000	0.000	0.032	0.032	556	98.61	0.000	0.000	0.017	0.017	144
16	87.99	0.000	0.000	0.013	0.013	99	177.5	0.000	0.000	0.079	0.079	1213	117.0	0.000	0.000	0.025	0.025	253
17	78.50	0.000	0.000	0.012	0.012	81	186.4	0.000	0.000	0.031	0.031	499	136.1	0.000	0.000	0.025	0.025	294
18	151.9	0.000	0.000	0.013	0.013	175	194.5	0.000	0.000	0.033	0.033	554	138.2	0.000	0.000	0.025	0.025	298
19	299.4	0.000	0.000	0.011	0.011	285	633.2	0.000	0.000	0.080	0.080	4377	202.6	0.000	0.000	0.330	0.330	5777
20	329.8	0.000	0.000	0.011	0.011	313	881.6	0.000	0.000	0.078	0.078	5941	220.2	0.000	0.000	0.083	0.083	1585
21	267.8	0.000	0.000	0.024	0.024	555	645.7	0.000	0.000	0.073	0.073	4073	357.0	0.000	0.000	0.014	0.014	432
22	348.8	0.000	0.000	0.021	0.021	633	413.0	0.000	0.000	0.041	0.041	1463	307.7	0.000	0.000	0.013	0.013	346
23	273.4	0.000	0.000	0.026	0.026	614	198.2	0.000	0.000	0.030	0.030	509	347.3	0.000	0.000	0.050	0.050	1500
24	361.7	0.000	0.000	0.082	0.082	2575	137.2	0.000	0.000	0.024	0.024	285	257.3	0.000	0.000	0.025	0.025	556
25	566.5	0.000	0.000	0.304	0.304	14884	129.3	0.000	0.000	0.023	0.023	257	191.3	0.000	0.000	0.025	0.025	413
26	225.2	0.000	0.000	0.025	0.025	477	75.86	0.000	0.000	0.023	0.023	151	130.2	0.000	0.000	0.030	0.030	337
27	806.3	0.000	0.000	0.850	0.850	59215	130.0	0.000	0.000	0.027	0.027	303	160.2	0.000	0.000	0.029	0.029	396
28	692.8	0.000	0.000	0.085	0.085	5088	129.9	0.000	0.000	0.025	0.025	281	207.0	0.000	0.000	0.038	0.038	680
29	288.0	0.000	0.000	0.037	0.037	921	110.3	0.000	0.000	0.025	0.025	238	667.0	0.000	0.000	0.063	0.063	3631
30	203.1	0.000	0.000	0.036	0.036	632	87.59	0.000	0.000	0.024	0.024	179	695.7	0.000	0.000	0.036	0.036	2164
31							93.80	0.000	0.000	0.024	0.024	195	317.8	0.000	0.000	0.029	0.029	796
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	148.0	0.000	0.000	0.025	0.025	340	175.7	0.000	0.000	0.030	0.030	487
Ten Daily II	184.9	0.000	0.000	0.011	0.011	200	294.3	0.000	0.000	0.066	0.066	1741	157.0	0.000	0.000	0.062	0.062	1007
Ten Daily III	403.4	0.000	0.000	0.149	0.149	8559	195.5	0.000	0.000	0.031	0.031	721	330.8	0.000	0.000	0.032	0.032	1023
Monthly																		
Total						87592						28742						26189

Annual Sediment Load (Metric Tonnes) : 195935

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KUNIYIL (KB000J3) | **Division : SWR Division, Cochin**

Local River : Chaliyar | **Sub-Division : Chaliyar SD, Calicut**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	256.0	0.000	0.000	0.031	0.031	675	149.5	0.000	0.000	0.034	0.034	433	57.37	0.000	0.000	0.020	0.020	99
2	315.1	0.000	0.000	0.030	0.030	817	149.5	0.000	0.000	0.034	0.034	433	59.40	0.000	0.000	0.020	0.020	103
3	287.4	0.000	0.000	0.032	0.032	790	193.8	0.000	0.000	0.041	0.041	687	56.51	0.000	0.000	0.019	0.019	93
4	201.0	0.000	0.000	0.031	0.031	540	196.6	0.000	0.000	0.040	0.040	679	56.03	0.000	0.000	0.019	0.019	93
5	284.2	0.000	0.000	0.035	0.035	859	115.8	0.000	0.000	0.030	0.030	300	52.12	0.000	0.000	0.019	0.019	87
6	263.6	0.000	0.000	0.033	0.033	752	200.1	0.000	0.000	0.038	0.038	657	59.66	0.000	0.000	0.019	0.019	98
7	177.9	0.000	0.000	0.031	0.031	477	201.8	0.000	0.000	0.033	0.033	575	78.80	0.000	0.000	0.019	0.019	129
8	294.6	0.000	0.000	0.038	0.038	967	138.9	0.000	0.000	0.028	0.028	341	58.10	0.000	0.000	0.019	0.019	95
9	282.0	0.000	0.000	0.037	0.037	901	119.0	0.000	0.000	0.028	0.028	288	56.76	0.000	0.000	0.018	0.018	88
10	228.6	0.000	0.000	0.034	0.034	662	95.15	0.000	0.000	0.022	0.022	181	42.86	0.000	0.000	0.017	0.017	63
11	208.4	0.000	0.000	0.033	0.033	594	182.0	0.000	0.000	0.026	0.026	409	40.94	0.000	0.000	0.018	0.018	64
12	190.8	0.000	0.000	0.031	0.031	511	241.7	0.000	0.000	0.028	0.028	585	35.99	0.000	0.000	0.018	0.018	57
13	140.2	0.000	0.000	0.025	0.025	303	252.2	0.000	0.000	0.030	0.030	654	35.54	0.000	0.000	0.019	0.019	58
14	291.0	0.000	0.000	0.038	0.038	955	339.9	0.000	0.000	0.032	0.032	940	42.45	0.000	0.000	0.018	0.018	66
15	275.3	0.000	0.000	0.033	0.033	785	267.0	0.000	0.000	0.029	0.029	669	43.43	0.000	0.000	0.018	0.018	68
16	203.3	0.000	0.000	0.031	0.031	545	161.1	0.000	0.000	0.023	0.023	320	38.04	0.000	0.000	0.018	0.018	59
17	733.6	0.002	0.003	0.048	0.053	3353	246.1	0.000	0.000	0.027	0.027	574	62.19	0.000	0.000	0.020	0.020	107
18	1337	0.008	0.010	0.109	0.127	14718	188.4	0.000	0.000	0.025	0.025	400	69.46	0.000	0.000	0.020	0.020	120
19	826.0	0.000	0.000	0.011	0.011	785	161.9	0.000	0.000	0.024	0.024	336	71.74	0.000	0.000	0.021	0.021	127
20	578.3	0.000	0.000	0.011	0.011	550	133.1	0.000	0.000	0.021	0.021	242	78.00	0.000	0.000	0.020	0.020	135
21	413.7	0.000	0.000	0.042	0.042	1501	76.19	0.000	0.000	0.020	0.020	132	76.41	0.000	0.000	0.021	0.021	139
22	323.9	0.000	0.000	0.037	0.037	1035	69.69	0.000	0.000	0.018	0.018	108	76.41	0.000	0.000	0.022	0.022	145
23	252.2	0.000	0.000	0.036	0.036	784	66.03	0.000	0.000	0.017	0.017	97	36.11	0.000	0.000	0.021	0.021	66
24	199.0	0.000	0.000	0.033	0.033	561	69.75	0.000	0.000	0.018	0.018	108	69.46	0.000	0.000	0.020	0.020	120
25	186.2	0.000	0.000	0.033	0.033	531	128.6	0.000	0.000	0.019	0.019	211	66.50	0.000	0.000	0.019	0.019	109
26	188.0	0.000	0.000	0.032	0.032	520	138.9	0.000	0.000	0.020	0.020	240	63.61	0.000	0.000	0.020	0.020	110
27	192.2	0.000	0.000	0.031	0.031	515	338.3	0.000	0.000	0.024	0.024	701	61.48	0.000	0.000	0.017	0.017	90
28	290.3	0.000	0.000	0.035	0.035	878	232.7	0.000	0.000	0.023	0.023	462	59.40	0.000	0.000	0.020	0.020	102
29	251.7	0.000	0.000	0.036	0.036	792	123.8	0.000	0.000	0.021	0.021	219	52.76	0.000	0.000	0.020	0.020	91
30	210.6	0.000	0.000	0.035	0.035	640	92.40	0.000	0.000	0.020	0.020	160	52.76	0.000	0.000	0.020	0.020	91
31							64.15	0.000	0.000	0.019	0.019	105						
Ten Daily Mean																		
Ten Daily I	259.0	0.000	0.000	0.033	0.033	744	156.0	0.000	0.000	0.033	0.033	457	57.76	0.000	0.000	0.019	0.019	95
Ten Daily II	478.4	0.001	0.001	0.037	0.039	2310	217.4	0.000	0.000	0.026	0.026	513	51.78	0.000	0.000	0.019	0.019	86
Ten Daily III	250.8	0.000	0.000	0.035	0.035	776	127.3	0.000	0.000	0.020	0.020	231	61.49	0.000	0.000	0.020	0.020	106
Monthly																		
Total						38294						12247						2872

Annual Sediment Load (Metric Tonnes) : 195935

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KUNIYIL (KB000J3) **Division : SWR Division, Cochin**

Local River : Chaliyar **Sub-Division : Chaliyar SD, Calicut**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 195935

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KUNIYIL (KB000J3) **Division : SWR Division, Cochin**

Local River : Chaliyar **Sub-Division : Chaliyar SD, Calicut**

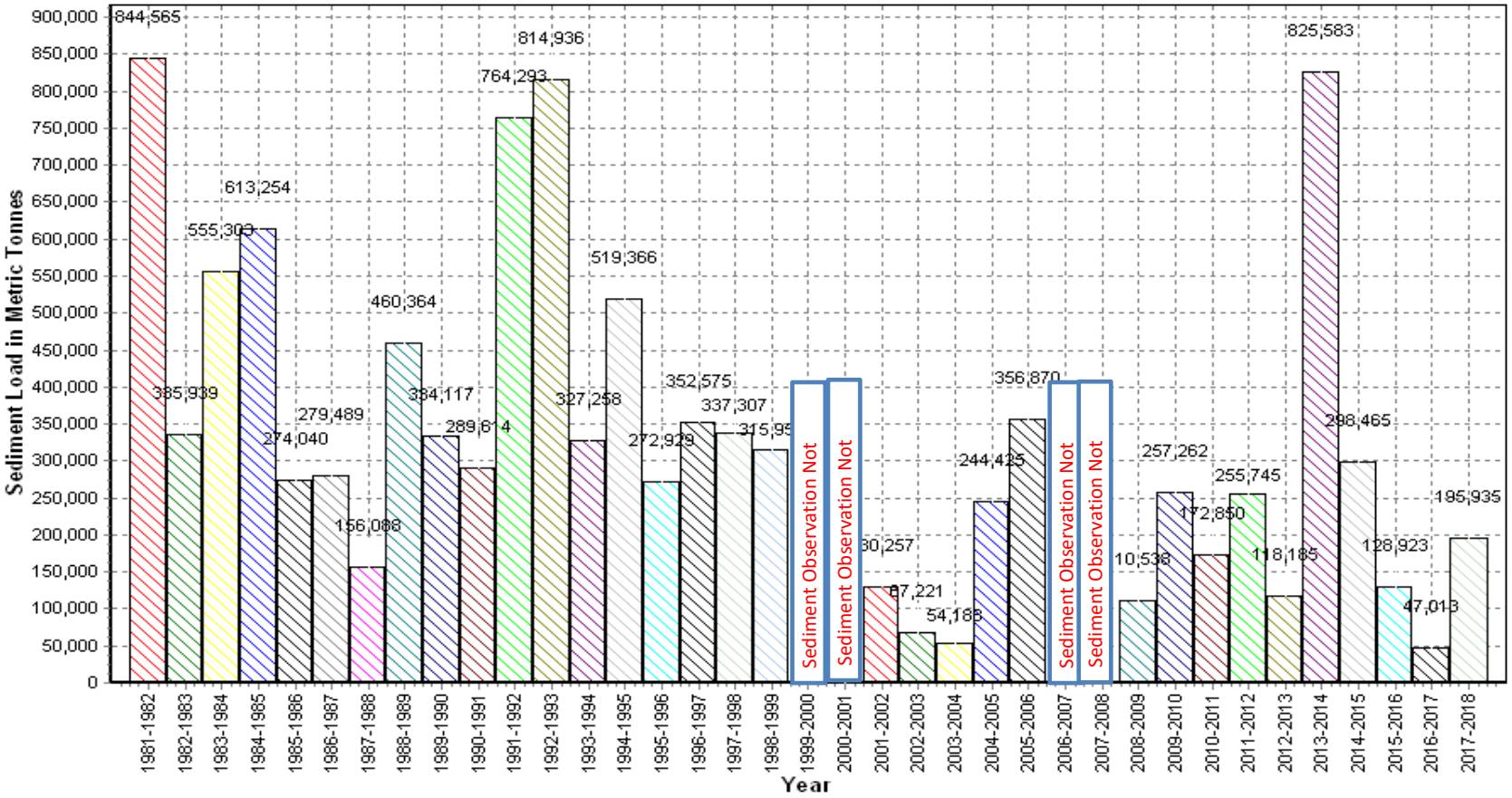
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 195935

Annual Sediment Load for the period: 1981-2018

Station Name : KUNIYIL (KB000J3)
Local River : Chaliyar

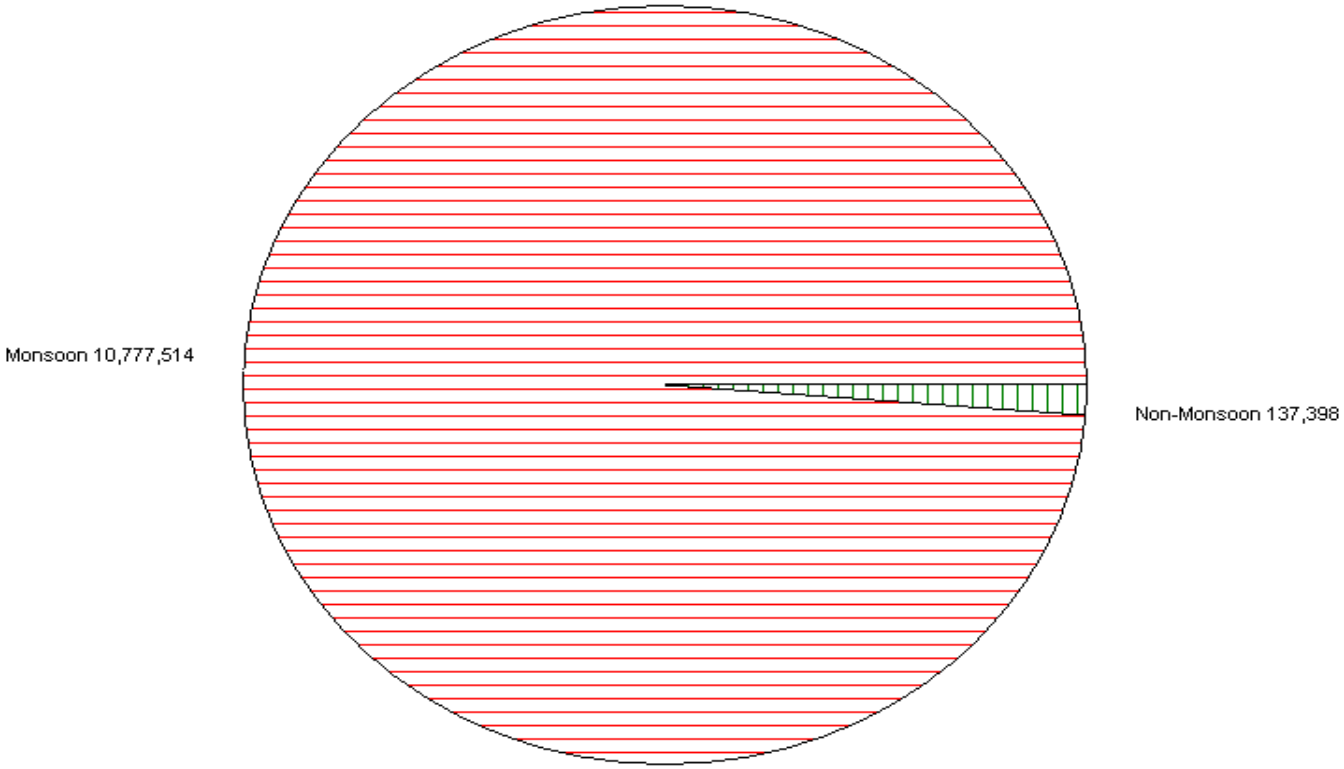
Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



Seasonal Sediment Load for the period : 1981-2017

Station Name : KUNIYIL (KB000J3)
Local River : Chaliyar

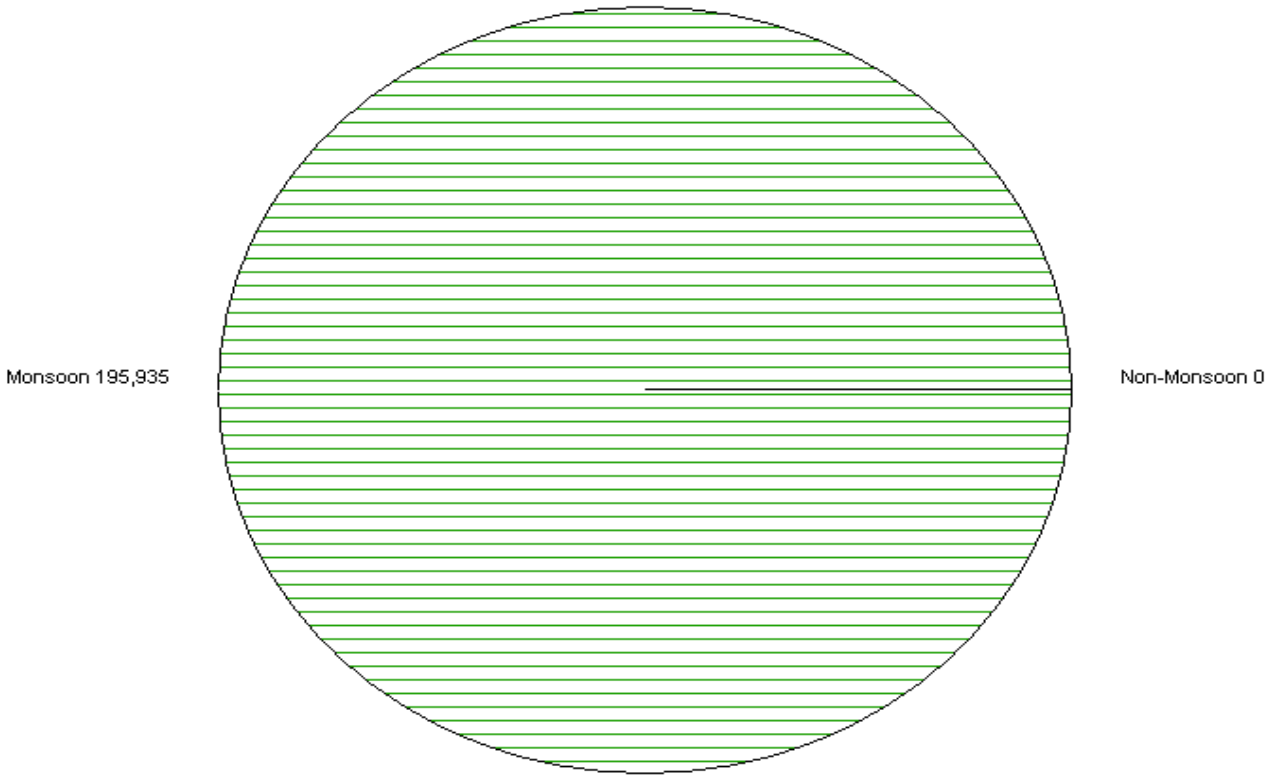
Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



Seasonal Sediment Load for the Year: 2017-2018

Station Name : KUNIYIL (KB000J3)
Local River : Chaliyar

Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



BED MATERIAL ANALYSIS DATA

RIVER : *Chaliyar* **CODE NO. :** *KBOOOJ3*

SITE : *Kuniyil* **CROSS SECTION :** *SGL*

SL. NO.	DATA FOR SAMPLE COLLECTED											GENERAL DATA OF THE RIVER						
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (G.T.S) OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	Bed Material Composition			WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	Bed Material Composition	
									MAX SIZE (mm)	MEAN SIZE (mm)							MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11		12	13	14	15	16	17	18
MONSOON 2017					**DATE OF COLLECTION**						**19-08-2017**							
1	50	-	(-)0.230	-	2.65	142.0	nil	nil	18.0	2.21								
2	80	-	(-)1.800	-	4.22	142.0	0.340	14.008	12.0	2.84								
3	120	-	(-)2.250	-	4.67	142.0	0.361	16.425	22.0	4.68		143.58	4.1063	0.3438	0.00005	202.7	22.0	2.43
4	150	-	(-)2.790	-	5.21	142.0	0.493	25.247	5.0	1.23								
5	180	-	(-) 0.640	-	3.06	142.0	0.289	7.8550	5.0	1.21								
POSTMONSOON 2017					**DATE OF COLLECTION**						**20-12-2017**							
1	50	-	(-)0.250	-	2.46	142.0	No	flow	14.0	3.11								
2	80	-	(-) 1.860	-	4.07	142.0	No	flow	8.0	2.72								
3	120	-	(-) 2.290	-	4.50	142.0	No	flow	7.0	1.60		-	-	-	-	-	14.0	2.15
4	150	-	(-) 2.830	-	5.04	142.0	No	flow	12.0	1.53								
5	180	-	(-) 0.720	-	2.93	142.0	No	flow	5.0	1.79								
PREMONSOON 2018					**DATE OF COLLECTION**						**24-05-2018**							
1	50	-	(-)0.230	-	1.85	141.0	No	Flow	12.0	2.41								
2	80	-	(-)1.850	-	2.38	141.0	No	Flow	10.0	2.67								
3	120	-	(-)2.300	-	5.90	141.0	No	Flow	5.0	1.29		-	-	-	-	-	12.0	2.08
4	150	-	(-)2.300	-	5.30	141.0	No	Flow	8.0	1.44								
5	180	-	(-) 0.720	-	2.95	141.0	No	Flow	11.0	2.57								

Annual Sediment Load for period : 1989-2018

Station Name : KARATHODU (KL000L7) **Division : SWR Division, Cochin**

Local River : Kadalundi **Sub-Division : Chaliyar SD, Calicut**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1989-1990	59148	418	59566	1033
1990-1991	59038	214	59252	1059
1991-1992	105287	379	105666	1543
1992-1993	127133	1042	128175	1815
1993-1994	64857	1373	66230	1105
1994-1995	151405	792	152197	1937
1995-1996	76760	584	77344	1239
1996-1997	53082	497	53579	1024
1997-1998	112555	1225	113779	1560
1998-1999	74661	2093	76754	1195
1999-2000	0	0	0	1518
2000-2001	39843	4189	44032	806
2001-2002	68818	293	69111	1001
2002-2003	45382	321	45704	859
2003-2004	20500	80	20580	573
2004-2005	51847	33	51880	964
2005-2006	61033	4232	65265	1404
2006-2007	0	0	0	1996
2007-2008	0	0	0	2638
2008-2009	0	0	0	894
2009-2010	0	0	0	1399
2010-2011	52570	688	53259	1282
2011-2012	59609	260	59869	1437
2012-2013	19125	0	19125	619
2013-2014	51511	311	51823	1671
2014-2015	113047	978	114025	1854
2015-2016	29452	207	29659	815
2016-2017	16905	0	16905	449
2017-2018	59819	35	59854	990

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KARATHODU (KL000L7) **Division : SWR Division, Cochin**

Local River : Kadalundi **Sub-Division : Chaliyar SD, Calicut**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	45.55	0.000	0.001	0.022	0.024	92	23.65	0.000	0.000	0.017	0.017	35
2	0.000	0.000	0.000	0.000	0.000	0	69.23	0.000	0.001	0.017	0.018	105	24.10	0.000	0.000	0.018	0.018	37
3	0.000	0.000	0.000	0.000	0.000	0	61.24	0.000	0.001	0.017	0.018	93	23.46	0.000	0.000	0.015	0.015	30
4	0.000	0.000	0.000	0.000	0.000	0	47.77	0.000	0.000	0.013	0.013	55	41.49	0.000	0.000	0.022	0.022	80
5	0.000	0.000	0.000	0.000	0.000	0	40.14	0.000	0.000	0.013	0.013	45	55.56	0.000	0.000	0.021	0.021	100
6	0.000	0.000	0.000	0.000	0.000	0	33.00	0.000	0.000	0.016	0.016	45	147.4	0.000	0.002	0.013	0.015	191
7	0.000	0.000	0.000	0.000	0.000	0	35.48	0.000	0.000	0.025	0.025	76	85.01	0.000	0.001	0.014	0.016	114
8	0.000	0.000	0.000	0.000	0.000	0	28.42	0.000	0.000	0.015	0.015	38	61.49	0.000	0.001	0.015	0.017	89
9	0.000	0.000	0.000	0.000	0.000	0	30.17	0.000	0.000	0.017	0.017	44	52.03	0.000	0.000	0.018	0.018	79
10	0.000	0.000	0.000	0.000	0.000	0	26.16	0.000	0.000	0.014	0.014	32	44.41	0.000	0.000	0.012	0.012	44
11	0.000	0.000	0.000	0.000	0.000	0	27.44	0.000	0.000	0.014	0.014	33	34.45	0.000	0.000	0.012	0.012	35
12	0.000	0.000	0.000	0.000	0.000	0	26.27	0.000	0.000	0.014	0.014	32	49.36	0.000	0.000	0.011	0.011	48
13	0.000	0.000	0.000	0.000	0.000	0	20.03	0.000	0.000	0.015	0.015	26	37.10	0.000	0.000	0.012	0.012	38
14	0.000	0.000	0.000	0.000	0.000	0	66.77	0.000	0.000	0.016	0.016	93	36.37	0.000	0.000	0.009	0.009	29
15	0.000	0.000	0.000	0.000	0.000	0	46.03	0.000	0.000	0.018	0.018	72	25.90	0.000	0.000	0.010	0.010	22
16	0.000	0.000	0.000	0.000	0.000	0	43.92	0.000	0.000	0.018	0.018	69	26.14	0.000	0.000	0.012	0.012	28
17	0.000	0.000	0.000	0.000	0.000	0	28.32	0.000	0.000	0.018	0.018	43	54.92	0.000	0.000	0.019	0.019	91
18	0.000	0.000	0.000	0.000	0.000	0	43.80	0.000	0.000	0.019	0.019	70	40.02	0.000	0.000	0.012	0.012	43
19	0.000	0.000	0.000	0.000	0.000	0	152.3	0.001	0.001	0.058	0.060	790	64.23	0.000	0.000	0.026	0.026	146
20	0.000	0.000	0.000	0.000	0.000	0	170.6	0.001	0.001	0.045	0.047	697	66.53	0.003	0.000	0.021	0.025	142
21	0.000	0.000	0.000	0.000	0.000	0	171.1	0.001	0.002	0.062	0.065	955	104.8	0.001	0.002	0.029	0.032	289
22	0.000	0.000	0.000	0.000	0.000	0	132.7	0.001	0.001	0.064	0.066	757	99.14	0.001	0.001	0.028	0.030	256
23	0.000	0.000	0.000	0.000	0.000	0	112.2	0.001	0.001	0.040	0.043	413	87.08	0.001	0.001	0.025	0.028	208
24	0.000	0.000	0.000	0.000	0.000	0	70.40	0.000	0.001	0.030	0.031	188	70.44	0.000	0.001	0.017	0.018	108
25	18.70	0.000	0.000	0.018	0.018	29	65.42	0.000	0.001	0.022	0.023	130	58.67	0.000	0.000	0.017	0.017	87
26	36.00	0.000	0.000	0.017	0.018	54	55.77	0.000	0.000	0.017	0.017	83	49.25	0.000	0.000	0.009	0.009	39
27	104.7	0.000	0.002	0.016	0.018	159	38.64	0.000	0.000	0.016	0.016	55	60.59	0.000	0.001	0.015	0.016	85
28	177.6	0.000	0.000	0.000	0.000	0	39.28	0.000	0.000	0.017	0.017	59	83.18	0.002	0.002	0.026	0.029	207
29	123.4	0.000	0.002	0.015	0.018	188	35.30	0.000	0.000	0.017	0.017	53	153.6	0.001	0.001	0.028	0.030	398
30	75.04	0.000	0.001	0.017	0.018	114	28.64	0.001	0.002	0.017	0.020	50	326.9	0.003	0.004	0.067	0.073	2070
31							23.73	0.001	0.002	0.017	0.020	41	152.2	0.001	0.002	0.026	0.029	377
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	41.72	0.000	0.000	0.017	0.017	63	55.86	0.000	0.000	0.016	0.017	80
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	62.55	0.000	0.000	0.023	0.024	192	43.50	0.000	0.000	0.015	0.015	62
Ten Daily III	53.54	0.000	0.001	0.008	0.009	54	70.29	0.000	0.001	0.029	0.031	253	113.3	0.001	0.001	0.026	0.028	375
Monthly																		
Total						544						5335						5544

Annual Sediment Load (Metric Tonnes) : 59854

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KARATHODU (KL000L7) **Division : SWR Division, Cochin**

Local River : Kadalundi **Sub-Division : Chaliyar SD, Calicut**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	105.9	0.001	0.002	0.021	0.024	220	81.10	0.000	0.002	0.031	0.033	228	42.82	0.000	0.000	0.021	0.021	79
2	102.6	0.001	0.001	0.016	0.018	162	134.4	0.002	0.003	0.043	0.048	554	37.77	0.000	0.000	0.022	0.022	70
3	141.3	0.001	0.002	0.031	0.035	429	93.45	0.001	0.002	0.038	0.041	329	27.91	0.000	0.000	0.020	0.020	49
4	105.9	0.001	0.002	0.025	0.028	257	99.11	0.001	0.001	0.027	0.030	255	25.17	0.000	0.000	0.019	0.019	41
5	125.2	0.002	0.003	0.037	0.041	443	73.44	0.000	0.002	0.033	0.034	216	21.39	0.000	0.000	0.018	0.018	34
6	106.5	0.001	0.002	0.022	0.025	227	71.05	0.000	0.000	0.022	0.022	138	19.28	0.000	0.000	0.018	0.018	30
7	75.89	0.001	0.002	0.028	0.031	202	83.43	0.000	0.002	0.022	0.024	172	28.08	0.000	0.000	0.019	0.019	45
8	162.0	0.003	0.005	0.063	0.071	988	69.91	0.000	0.001	0.026	0.027	162	30.85	0.000	0.000	0.019	0.019	50
9	80.50	0.002	0.003	0.043	0.048	331	66.22	0.000	0.001	0.027	0.028	160	37.82	0.000	0.000	0.023	0.023	74
10	115.4	0.003	0.004	0.049	0.056	554	50.57	0.000	0.001	0.025	0.027	117	23.99	0.000	0.000	0.029	0.029	59
11	90.21	0.002	0.003	0.019	0.023	178	76.12	0.000	0.001	0.025	0.027	174	18.34	0.000	0.001	0.019	0.020	31
12	98.13	0.003	0.004	0.067	0.075	633	49.73	0.000	0.001	0.028	0.030	128	16.97	0.000	0.000	0.019	0.019	28
13	78.44	0.002	0.004	0.036	0.041	280	90.00	0.001	0.001	0.039	0.042	323	12.89	0.000	0.000	0.018	0.018	20
14	67.93	0.001	0.002	0.022	0.026	153	98.23	0.001	0.002	0.051	0.054	460	13.24	0.000	0.000	0.022	0.022	25
15	129.4	0.002	0.004	0.033	0.039	435	83.62	0.001	0.001	0.041	0.043	313	12.40	0.000	0.000	0.017	0.017	18
16	91.74	0.002	0.004	0.046	0.052	409	73.92	0.001	0.001	0.038	0.041	259	15.85	0.000	0.000	0.009	0.009	12
17	276.9	0.005	0.007	0.190	0.201	4818	54.94	0.000	0.001	0.033	0.035	164	11.16	0.000	0.000	0.016	0.016	15
18	412.0	0.010	0.014	0.646	0.670	23852	75.44	0.001	0.001	0.040	0.041	270	10.04	0.000	0.000	0.020	0.020	18
19	328.9	0.004	0.007	0.047	0.058	1660	56.27	0.000	0.001	0.036	0.038	182	9.579	0.000	0.000	0.017	0.017	14
20	336.0	0.003	0.005	0.035	0.044	1263	54.65	0.000	0.001	0.025	0.026	123	7.880	0.000	0.000	0.020	0.020	14
21	182.3	0.003	0.005	0.040	0.047	739	45.81	0.000	0.001	0.020	0.021	84	7.553	0.000	0.000	0.019	0.019	13
22	146.2	0.002	0.003	0.029	0.034	427	46.68	0.000	0.001	0.025	0.026	104	5.693	0.000	0.000	0.019	0.019	9
23	111.9	0.001	0.003	0.023	0.028	266	41.92	0.000	0.000	0.023	0.023	82	8.211	0.000	0.000	0.015	0.015	10
24	96.61	0.001	0.002	0.025	0.028	236	30.45	0.000	0.000	0.020	0.020	51	7.553	0.000	0.000	0.014	0.014	9
25	85.63	0.000	0.002	0.018	0.020	144	28.85	0.000	0.000	0.016	0.016	40	6.914	0.000	0.000	0.011	0.011	7
26	76.89	0.000	0.002	0.019	0.021	138	27.15	0.000	0.000	0.025	0.025	58	6.295	0.000	0.000	0.019	0.019	10
27	91.69	0.001	0.002	0.040	0.043	337	41.61	0.000	0.001	0.024	0.025	91	4.303	0.000	0.000	0.021	0.021	8
28	162.0	0.003	0.004	0.057	0.064	901	45.68	0.000	0.001	0.019	0.020	79	6.914	0.000	0.000	0.023	0.023	14
29	113.8	0.002	0.003	0.038	0.042	412	32.25	0.000	0.002	0.022	0.025	68	6.623	0.000	0.000	0.022	0.022	13
30	185.6	0.004	0.004	0.054	0.062	996	25.81	0.000	0.000	0.024	0.024	52	5.402	0.000	0.000	0.012	0.012	5
31							24.65	0.000	0.000	0.020	0.020	42						
Ten Daily Mean																		
Ten Daily I	112.1	0.002	0.003	0.033	0.038	381	82.27	0.001	0.001	0.029	0.031	233	29.51	0.000	0.000	0.021	0.021	53
Ten Daily II	191.0	0.003	0.005	0.114	0.123	3368	71.29	0.001	0.001	0.036	0.038	240	12.83	0.000	0.000	0.018	0.018	20
Ten Daily III	125.3	0.002	0.003	0.034	0.039	460	35.53	0.000	0.001	0.022	0.022	68	6.546	0.000	0.000	0.017	0.017	10
Monthly																		
Total						42091						5479						827

Annual Sediment Load (Metric Tonnes) : 59854

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KARATHODU (KL000L7) **Division : SWR Division, Cochin**

Local River : Kadalundi **Sub-Division : Chaliyar SD, Calicut**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.915	0.000	0.000	0.013	0.013	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
2	7.303	0.000	0.000	0.021	0.021	13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
3	8.472	0.000	0.000	0.022	0.022	16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
4	2.613	0.000	0.000	0.011	0.011	3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
5	1.643	0.000	0.000	0.014	0.014	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	2.095	0.000	0.000	0.008	0.008	3	0.000	0.000	0.000	0.000	0.000	0		0.000	0.000	0.000	0.000	0.000
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0		0.000	0.000	0.000	0.000	0.000
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0		0.000	0.000	0.000	0.000	0.000
Monthly																		
Total						35						0						0

Annual Sediment Load (Metric Tonnes) : 59854

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KARATHODU (KL000L7) | **Division : SWR Division, Cochin**

Local River : Kadalundi | **Sub-Division : Chaliyar SD, Calicut**

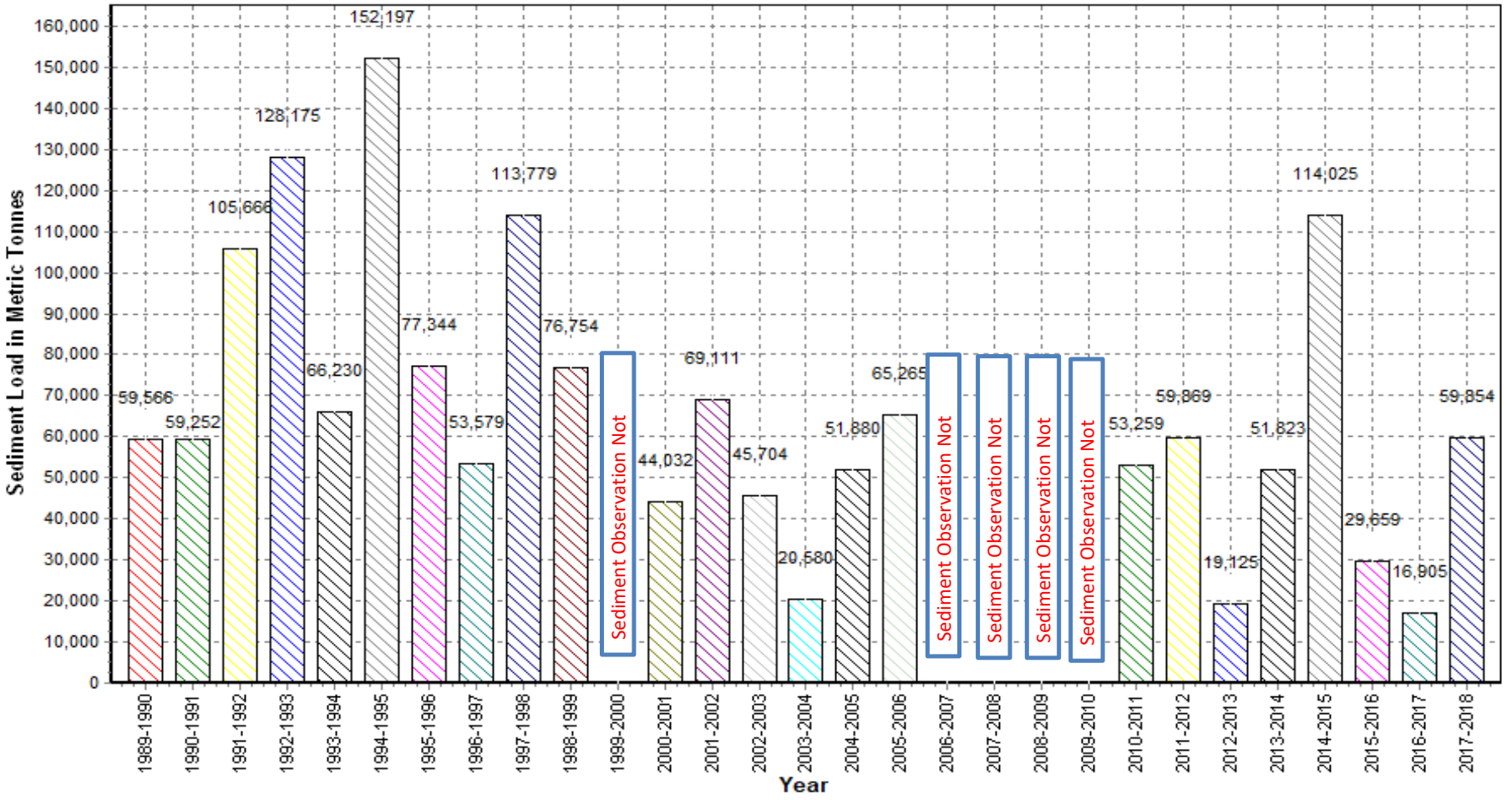
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	57.16	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	24.03	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	44.56	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							17.48	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	13.02	0.000	0.000	0.000	0.000	0
Monthly																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 59854

Annual Sediment Load for the period: 1989-2018

Station Name : KARATHODU (KL000L7)
Local River : Kadalundi

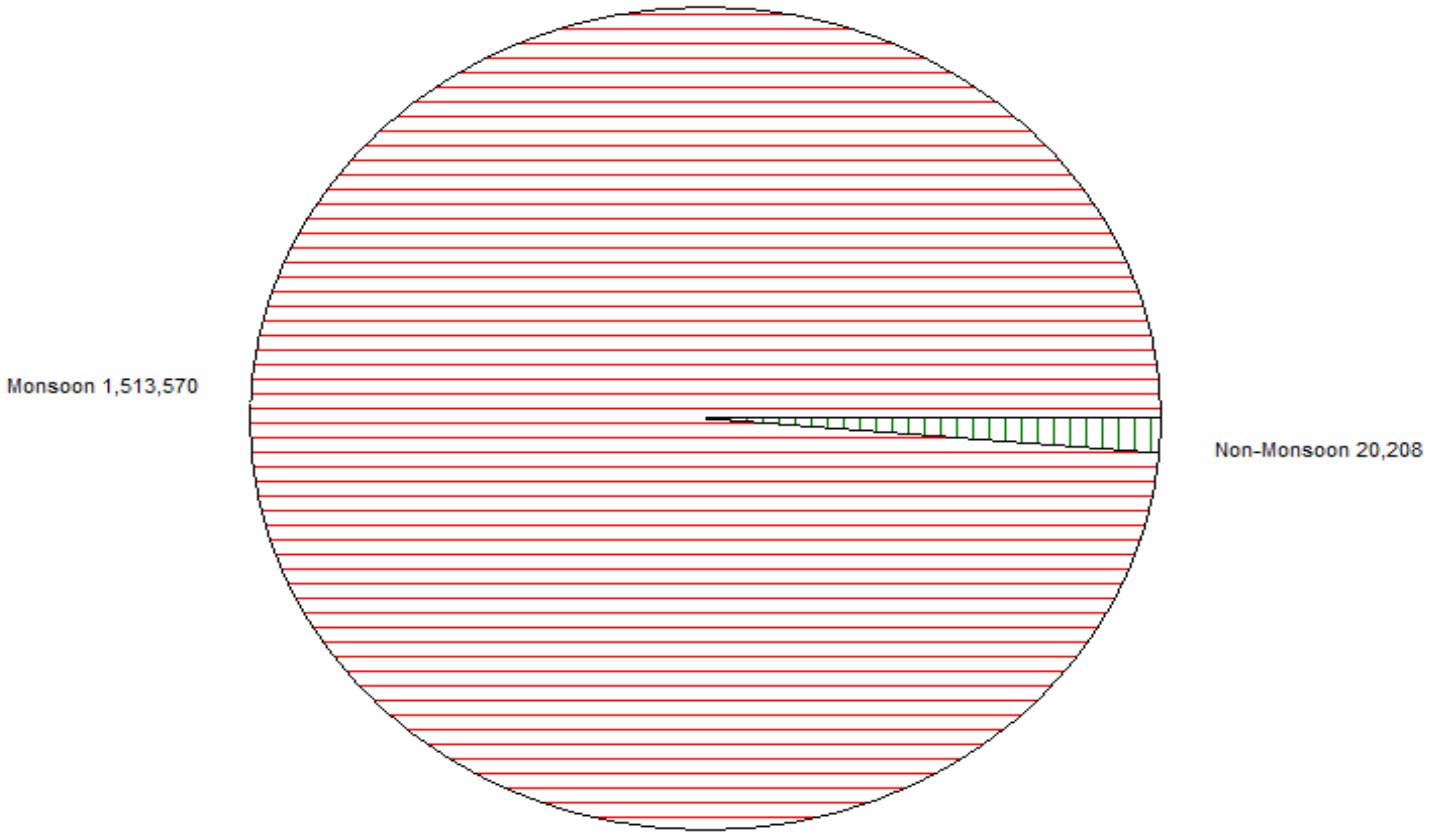
Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



Seasonal Sediment Load for the period : 1989-2017

Station Name : KARATHODU (KL000L7)
Local River : Kadalundi

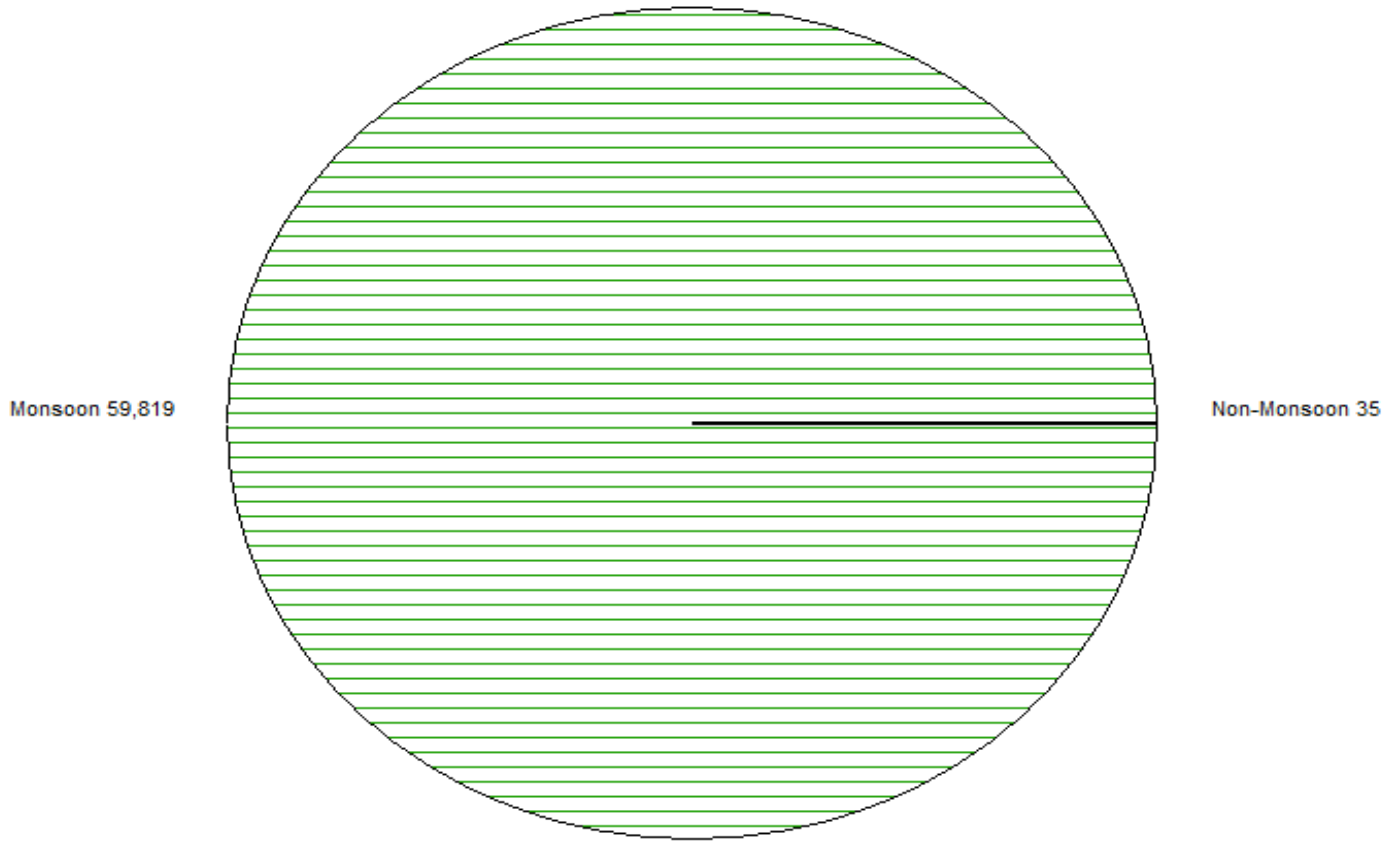
Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



Seasonal Sediment Load for the Year: 2017-2018

Station Name : KARATHODU (KL000L7)
Local River : Kadalundi

Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



BED MATERIAL ANALYSIS DATA

RIVER : *Kadalundi* **CODE NO :** *KLOOOL7*

SITE : *Karathodu* **CROSS SECTION :** *SGL*

SL. NO.	DATA FOR SAMPLE COLLECTED										GENERAL DATA OF THE RIVER						
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS) OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	Bed Material Composition		WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	Bed Material Composition	
									MAX SIZE (mm)	MEAN SIZE (mm)						MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017				**DATE OF COLLECTION**								**00-00-00000**					
				Sample not collected													
POSTMONSOON 2017				**DATE OF COLLECTION**								**01-02-2018**					
1	45	-	-	3.09	3.09		NIL	NIL	6.3	0.96							
2	60	-	-	3.59	3.59	38.0	NIL	NIL	6.3	0.94	-	-	-	-	-	8.0	0.97
3	75	-	-	0.06	0.06		NIL	NIL	8.0	1.01							
PREMONSOON 2018				**DATE OF COLLECTION**								**00-00-0000**					
1																	
2																	
3				Sample not collected													

Annual Sediment Load for period : 1980-2018

Station Name : KUMBIDI (KR000C9) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : Chaliyar SD, Calicut**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1980-1981	624334	4451	628785	5796
1981-1982	839037	4823	843860	6753
1982-1983	360913	973	361885	3466
1983-1984	306101	10929	317030	3789
1984-1985	435988	8399	444387	4028
1985-1986	442240	1546	443785	3973
1986-1987	354360	1552	355913	3556
1987-1988	144195	10621	154815	2699
1988-1989	275838	992	276830	4329
1989-1990	296488	4953	301441	4118
1990-1991	270147	2205	272352	3808
1991-1992	573815	2373	576187	5539
1992-1993	534309	5082	539391	6041
1993-1994	347719	5991	353710	3686
1994-1995	755985	13059	769044	6785
1995-1996	367290	3458	370748	4744
1996-1997	237537	3265	240802	3850
1997-1998	327387	5121	332508	4041
1998-1999	486281	35262	521543	5449
1999-2000	277126	3786	280913	3614
2000-2001	180853	10802	191656	2645
2001-2002	283903	6091	289994	4226
2002-2003	150072	3642	153714	2764
2003-2004	80583	7070	87653	2143
2004-2005	265648	2817	268465	3901
2005-2006	301562	32816	334378	5576
2006-2007	309073	5005	314078	6080
2007-2008	551366	19718	571085	8404
2008-2009	125737	3613	129350	2833
2009-2010	384806	4229	389035	4908
2010-2011	141630	6870	148501	5094
2011-2012	401223	3522	404745	5741
2012-2013	103635	514	104149	2245
2013-2014	287026	2085	289111	6008
2014-2015	637073	7951	645024	6340
2015-2016	204851	5768	210619	2848
2016-2017	101185	139	101324	1564
2017-2018	193896	4840	198736	2985

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KUMBIDI (KR000C9) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : Chaliyar SD, Calicut**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	11.42	0.000	0.000	0.010	0.010	10	280.8	0.001	0.006	0.065	0.072	1747	71.90	0.000	0.000	0.044	0.044	273
2	11.42	0.000	0.000	0.015	0.015	15	233.4	0.000	0.002	0.064	0.066	1337	109.1	0.000	0.000	0.053	0.053	500
3	12.53	0.000	0.000	0.021	0.021	23	220.2	0.000	0.000	0.065	0.065	1237	100.9	0.000	0.000	0.052	0.052	453
4	12.53	0.000	0.000	0.016	0.016	17	214.8	0.000	0.000	0.064	0.064	1188	91.13	0.000	0.000	0.051	0.051	402
5	21.04	0.000	0.000	0.023	0.023	42	210.2	0.000	0.000	0.063	0.063	1144	148.4	0.000	0.000	0.054	0.054	692
6	23.23	0.000	0.000	0.025	0.025	50	205.1	0.000	0.000	0.054	0.054	957	290.2	0.001	0.004	0.058	0.063	1577
7	22.84	0.000	0.000	0.023	0.023	45	198.2	0.000	0.000	0.045	0.045	771	358.9	0.002	0.007	0.062	0.071	2202
8	32.98	0.000	0.000	0.032	0.032	91	188.2	0.000	0.000	0.043	0.043	699	211.1	0.000	0.000	0.054	0.054	985
9	21.80	0.000	0.000	0.026	0.026	49	169.3	0.000	0.000	0.041	0.041	595	212.6	0.000	0.000	0.053	0.053	974
10	22.03	0.000	0.000	0.025	0.025	48	137.3	0.000	0.000	0.032	0.032	380	140.4	0.000	0.000	0.032	0.032	388
11	22.01	0.000	0.000	0.026	0.026	50	129.1	0.000	0.000	0.030	0.030	335	123.0	0.000	0.000	0.031	0.031	329
12	43.09	0.000	0.000	0.033	0.033	123	115.6	0.000	0.000	0.030	0.030	300	169.6	0.000	0.000	0.060	0.060	879
13	51.78	0.000	0.000	0.035	0.035	157	98.34	0.000	0.000	0.052	0.052	442	121.2	0.000	0.000	0.047	0.047	493
14	59.14	0.000	0.000	0.037	0.037	190	130.8	0.000	0.000	0.061	0.061	690	101.4	0.000	0.000	0.055	0.055	482
15	71.95	0.000	0.000	0.040	0.040	249	194.1	0.000	0.000	0.051	0.051	855	99.38	0.000	0.000	0.050	0.050	427
16	64.55	0.000	0.000	0.039	0.039	218	160.6	0.000	0.000	0.053	0.054	742	83.15	0.000	0.000	0.053	0.053	381
17	57.36	0.000	0.000	0.035	0.035	173	127.0	0.000	0.000	0.048	0.048	527	95.66	0.000	0.000	0.052	0.052	430
18	47.72	0.000	0.000	0.034	0.034	139	135.7	0.000	0.000	0.050	0.050	586	91.75	0.000	0.000	0.050	0.050	396
19	43.32	0.000	0.000	0.032	0.032	120	268.1	0.002	0.002	0.054	0.058	1344	116.4	0.000	0.000	0.052	0.052	523
20	32.56	0.000	0.000	0.031	0.031	87	613.4	0.004	0.010	0.085	0.099	5247	212.7	0.001	0.002	0.059	0.063	1149
21	26.33	0.000	0.000	0.027	0.027	61	604.3	0.003	0.009	0.081	0.093	4855	329.6	0.001	0.004	0.065	0.070	1993
22	45.64	0.000	0.000	0.034	0.034	134	573.8	0.002	0.004	0.076	0.082	4065	365.9	0.002	0.007	0.071	0.080	2529
23	47.59	0.000	0.000	0.034	0.034	140	382.4	0.002	0.005	0.064	0.070	2326	485.8	0.003	0.008	0.081	0.092	3862
24	63.29	0.000	0.000	0.039	0.039	213	292.2	0.002	0.004	0.062	0.068	1717	332.8	0.001	0.008	0.070	0.079	2272
25	80.06	0.000	0.001	0.041	0.042	290	224.0	0.001	0.003	0.055	0.059	1142	217.6	0.000	0.000	0.068	0.068	1279
26	127.1	0.002	0.002	0.045	0.048	532	190.3	0.000	0.000	0.042	0.042	691	154.3	0.000	0.000	0.061	0.061	813
27	170.2	0.000	0.002	0.056	0.058	853	186.0	0.000	0.000	0.050	0.050	804	174.6	0.000	0.001	0.061	0.061	925
28	794.9	0.003	0.014	0.088	0.105	7212	106.2	0.000	0.000	0.054	0.054	496	269.4	0.000	0.000	0.050	0.050	1164
29	529.4	0.002	0.012	0.086	0.100	4574	107.4	0.000	0.000	0.050	0.050	466	495.1	0.003	0.007	0.082	0.092	3935
30	350.0	0.002	0.008	0.070	0.080	2419	99.38	0.000	0.000	0.051	0.051	434	750.0	0.004	0.009	0.082	0.095	6156
31							93.12	0.000	0.000	0.054	0.054	434	476.4	0.002	0.007	0.074	0.083	3416
Ten Daily Mean																		
Ten Daily I	19.18	0.000	0.000	0.022	0.022	39	205.8	0.000	0.001	0.054	0.055	1005	173.5	0.000	0.001	0.051	0.053	845
Ten Daily II	49.35	0.000	0.000	0.034	0.034	150	197.3	0.001	0.001	0.051	0.053	1107	121.4	0.000	0.000	0.051	0.051	549
Ten Daily III	223.5	0.001	0.004	0.052	0.057	1643	259.9	0.001	0.002	0.058	0.061	1584	368.3	0.001	0.005	0.070	0.076	2577
Monthly Total						18322						38551						42278

Annual Sediment Load (Metric Tonnes) : 198736

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KUMBIDI (KR000C9) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : Chaliyar SD, Calicut**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	373.9	0.001	0.004	0.067	0.072	2336	200.8	0.000	0.000	0.056	0.056	972	63.41	0.000	0.000	0.038	0.038	208
2	357.7	0.001	0.005	0.064	0.070	2164	229.1	0.000	0.001	0.058	0.059	1168	71.30	0.000	0.000	0.038	0.038	234
3	432.7	0.002	0.005	0.069	0.075	2804	562.1	0.003	0.008	0.083	0.094	4565	61.42	0.000	0.000	0.036	0.036	191
4	317.6	0.001	0.003	0.064	0.067	1849	196.4	0.000	0.000	0.052	0.052	883	59.29	0.000	0.000	0.035	0.035	179
5	272.1	0.000	0.000	0.054	0.054	1270	122.5	0.000	0.000	0.051	0.051	540	55.57	0.000	0.000	0.034	0.034	164
6	188.7	0.000	0.000	0.062	0.062	1011	120.1	0.000	0.000	0.051	0.051	529	53.27	0.000	0.000	0.033	0.033	152
7	178.1	0.000	0.000	0.061	0.061	939	116.1	0.000	0.000	0.050	0.050	501	54.05	0.000	0.000	0.034	0.034	159
8	196.2	0.000	0.000	0.068	0.068	1153	121.2	0.000	0.000	0.051	0.051	537	51.47	0.000	0.000	0.032	0.032	142
9	326.0	0.001	0.004	0.068	0.073	2056	117.0	0.000	0.000	0.051	0.051	516	64.11	0.000	0.000	0.038	0.038	210
10	278.3	0.001	0.002	0.067	0.070	1678	116.9	0.000	0.000	0.051	0.051	515	73.04	0.000	0.000	0.039	0.039	246
11	221.1	0.000	0.000	0.065	0.065	1241	109.0	0.000	0.000	0.049	0.049	462	56.41	0.000	0.000	0.034	0.034	166
12	178.6	0.000	0.000	0.061	0.061	942	95.30	0.000	0.000	0.047	0.047	387	46.07	0.000	0.000	0.033	0.033	131
13	170.7	0.000	0.000	0.062	0.062	915	94.25	0.000	0.000	0.047	0.047	383	50.45	0.000	0.000	0.033	0.033	144
14	145.1	0.000	0.000	0.058	0.058	727	183.3	0.000	0.000	0.053	0.053	839	39.66	0.000	0.000	0.032	0.032	110
15	226.0	0.000	0.000	0.058	0.058	1133	187.4	0.000	0.000	0.053	0.053	865	38.33	0.000	0.000	0.032	0.032	106
16	181.0	0.000	0.000	0.060	0.060	938	161.3	0.000	0.000	0.051	0.051	711	39.16	0.000	0.000	0.031	0.031	105
17	530.5	0.003	0.006	0.073	0.081	3713	123.2	0.000	0.000	0.052	0.052	553	36.33	0.000	0.000	0.030	0.030	94
18	1219	0.008	0.013	0.098	0.119	12533	140.9	0.000	0.000	0.050	0.050	614	28.27	0.000	0.000	0.030	0.030	73
19	926.1	0.007	0.015	0.088	0.110	8802	109.6	0.000	0.000	0.049	0.049	464	27.06	0.000	0.000	0.030	0.030	70
20	737.2	0.004	0.010	0.083	0.097	6178	85.61	0.000	0.000	0.049	0.049	362	29.36	0.000	0.000	0.030	0.030	76
21	548.7	0.003	0.008	0.081	0.092	4361	83.02	0.000	0.000	0.040	0.040	287	38.90	0.000	0.000	0.032	0.032	108
22	464.6	0.002	0.006	0.074	0.082	3292	88.21	0.000	0.000	0.044	0.044	338	34.12	0.000	0.000	0.031	0.031	91
23	331.8	0.001	0.007	0.064	0.072	2064	72.22	0.000	0.000	0.039	0.039	243	39.61	0.000	0.000	0.032	0.032	110
24	248.6	0.000	0.002	0.060	0.062	1327	66.10	0.000	0.000	0.038	0.038	217	38.56	0.000	0.000	0.032	0.032	107
25	223.3	0.000	0.000	0.058	0.058	1119	55.15	0.000	0.000	0.037	0.037	176	37.63	0.000	0.000	0.032	0.032	104
26	193.3	0.000	0.000	0.056	0.056	935	50.38	0.000	0.000	0.034	0.034	148	28.27	0.000	0.000	0.027	0.027	65
27	164.1	0.000	0.000	0.054	0.054	766	55.06	0.000	0.000	0.036	0.036	171	28.04	0.000	0.000	0.027	0.027	65
28	251.9	0.000	0.000	0.058	0.058	1262	87.64	0.000	0.000	0.035	0.035	265	27.50	0.000	0.000	0.026	0.026	62
29	229.1	0.000	0.001	0.058	0.059	1168	121.2	0.000	0.000	0.036	0.036	380	26.38	0.000	0.000	0.025	0.025	57
30	218.8	0.000	0.001	0.057	0.058	1093	118.3	0.000	0.000	0.036	0.036	368	25.35	0.000	0.000	0.024	0.024	53
31							72.08	0.000	0.000	0.038	0.038	237						
Ten Daily Mean																		
Ten Daily I	292.1	0.001	0.002	0.064	0.067	1726	190.2	0.000	0.001	0.055	0.057	1073	60.69	0.000	0.000	0.036	0.036	189
Ten Daily II	453.5	0.002	0.004	0.071	0.077	3712	129.0	0.000	0.000	0.050	0.050	564	39.11	0.000	0.000	0.031	0.031	107
Ten Daily III	287.4	0.001	0.002	0.062	0.065	1739	79.03	0.000	0.000	0.038	0.038	257	32.43	0.000	0.000	0.029	0.029	82
Monthly																		
Total						71767						19196						3781

Annual Sediment Load (Metric Tonnes) : 198736

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KUMBIDI (KR000C9) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : Chaliyar SD, Calicut**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	24.95	0.000	0.000	0.026	0.026	56	11.78	0.000	0.000	0.017	0.017	17	0.000	0.000	0.000	0.000	0.000	0
2	42.59	0.000	0.000	0.031	0.031	113	11.30	0.000	0.000	0.018	0.018	18	0.000					
3	50.85	0.000	0.000	0.034	0.034	147	11.20	0.000	0.000	0.017	0.017	16	0.000	0.000	0.000	0.000	0.000	0
4	48.82	0.000	0.000	0.032	0.032	135	10.74	0.000	0.000	0.016	0.016	15	10.74	0.000	0.000	0.000	0.000	0
5	53.22	0.000	0.000	0.033	0.033	152	10.41	0.000	0.000	0.016	0.016	14	0.000	0.000	0.000	0.000	0.000	0
6	42.40	0.000	0.000	0.034	0.034	125	10.23	0.000	0.000	0.016	0.016	14	0.000	0.000	0.000	0.000	0.000	0
7	35.68	0.000	0.000	0.030	0.030	92	9.715	0.000	0.000	0.013	0.013	11	0.000	0.000	0.000	0.000	0.000	0
8	30.36	0.000	0.000	0.028	0.028	73	10.04	0.000	0.000	0.015	0.015	13	0.000	0.000	0.000	0.000	0.000	0
9	26.17	0.000	0.000	0.027	0.027	61	8.966	0.000	0.000	0.015	0.015	12	12.17	0.000	0.000	0.000	0.000	0
10	20.65	0.000	0.000	0.023	0.023	41	7.157	0.000	0.000	0.014	0.014	9	11.54	0.000	0.000	0.000	0.000	0
11	26.04	0.000	0.000	0.024	0.024	54	6.843	0.000	0.000	0.014	0.014	8	12.12	0.000	0.000	0.000	0.000	0
12	23.88	0.000	0.000	0.023	0.023	47	6.011	0.000	0.000	0.014	0.014	7	12.49	0.000	0.000	0.000	0.000	0
13	17.24	0.000	0.000	0.022	0.022	33	5.787	0.000	0.000	0.013	0.013	6	12.12	0.000	0.000	0.000	0.000	0
14	17.10	0.000	0.000	0.021	0.021	31	5.034	0.000	0.000	0.013	0.013	6	10.90	0.000	0.000	0.000	0.000	0
15	17.19	0.000	0.000	0.021	0.021	31	3.945	0.000	0.000	0.013	0.013	4	9.305	0.000	0.000	0.000	0.000	0
16	17.62	0.000	0.000	0.022	0.022	33	1.429	0.000	0.000	0.012	0.012	1	0.000	0.000	0.000	0.000	0.000	0
17	18.59	0.000	0.000	0.022	0.022	35	3.691	0.000	0.000	0.012	0.012	4	0.000	0.000	0.000	0.000	0.000	0
18	18.03	0.000	0.000	0.021	0.021	33	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	15.36	0.000	0.000	0.020	0.020	27	4.206	0.000	0.000	0.012	0.012	4	0.000	0.000	0.000	0.000	0.000	0
20	14.28	0.000	0.000	0.019	0.019	23	5.011	0.000	0.000	0.013	0.013	6	0.000	0.000	0.000	0.000	0.000	0
21	14.46	0.000	0.000	0.019	0.019	24	4.206	0.000	0.000	0.013	0.013	5	0.000	0.000	0.000	0.000	0.000	0
22	11.27	0.000	0.000	0.018	0.018	18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	11.11	0.000	0.000	0.018	0.018	17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	10.89	0.000	0.000	0.017	0.017	16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	10.49	0.000	0.000	0.017	0.017	16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	11.42	0.000	0.000	0.018	0.018	18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	11.65	0.000	0.000	0.017	0.017	17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	11.79	0.000	0.000	0.017	0.017	17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	11.93	0.000	0.000	0.017	0.017	18	0.000	0.000	0.000	0.000	0.000	0						
30	12.15	0.000	0.000	0.018	0.018	19	0.000	0.000	0.000	0.000	0.000	0						
31	11.70	0.000	0.000	0.017	0.017	17	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	37.57	0.000	0.000	0.030	0.030	100	10.15	0.000	0.000	0.016	0.016	14	3.445	0.000	0.000	0.000	0.000	0
Ten Daily II	18.53	0.000	0.000	0.022	0.022	35	4.196	0.000	0.000	0.012	0.012	5	5.694	0.000	0.000	0.000	0.000	0
Ten Daily III	11.72	0.000	0.000	0.018	0.018	18	0.382	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						1540						191						0

Annual Sediment Load (Metric Tonnes) : 198736

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KUMBIDI (KR000C9) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : Chaliyar SD, Calicut**

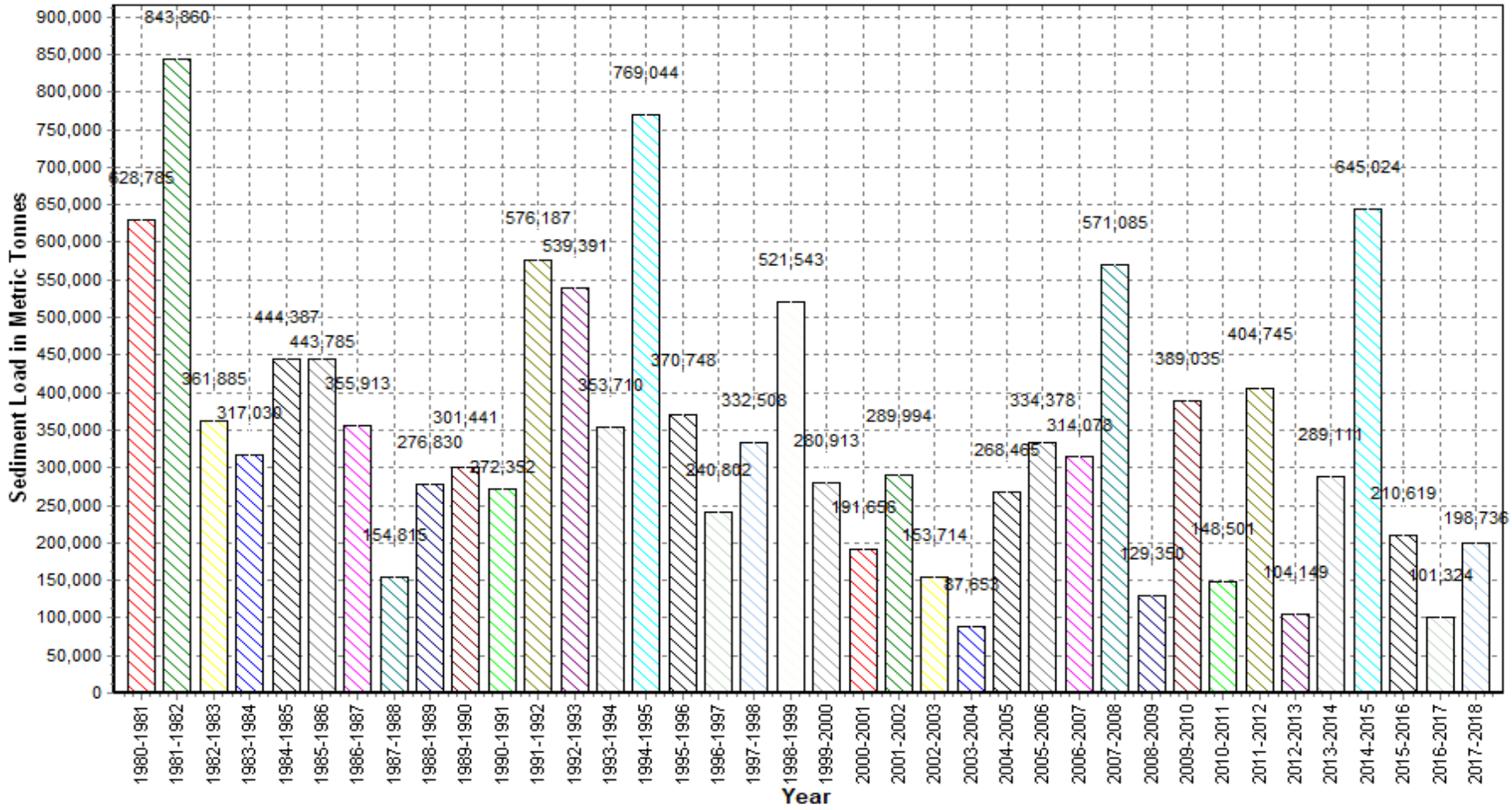
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	16.91	0.000	0.000	0.020	0.020	29
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	13.40	0.000	0.000	0.019	0.019	22
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	14.47	0.000	0.000	0.019	0.019	24
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	11.29	0.000	0.000	0.018	0.018	18
7	0.000	0.000	0.000	0.005	0.005	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	15.80	0.000	0.000	0.021	0.021	29
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	26.04	0.000	0.000	0.026	0.026	58
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	36.54	0.000	0.000	0.029	0.029	92
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	53.71	0.000	0.000	0.032	0.032	149
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	71.95	0.000	0.000	0.037	0.037	231
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	22.27	0.000	0.000	0.025	0.025	48
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	37.82	0.000	0.000	0.031	0.031	101
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	39.16	0.000	0.000	0.031	0.031	105
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	37.16	0.000	0.000	0.031	0.031	100
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	35.68	0.000	0.000	0.029	0.029	89
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	44.01	0.000	0.000	0.030	0.030	114
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	23.92	0.000	0.000	0.029	0.029	59
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	34.65	0.000	0.000	0.029	0.029	87
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	49.85	0.000	0.000	0.031	0.031	134
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	48.86	0.000	0.000	0.030	0.030	127
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	25.80	0.000	0.000	0.026	0.026	58
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	34.28	0.000	0.000	0.033	0.033	98
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	50.76	0.000	0.000	0.031	0.031	136
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	36.98	0.000	0.000	0.030	0.030	96
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	45.75	0.000	0.000	0.031	0.031	123
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	80.49	0.000	0.000	0.038	0.038	264
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	85.41	0.000	0.000	0.039	0.039	288
31	0.000	0.000	0.000	0.000	0.000	0							104.5	0.000	0.000	0.048	0.048	433
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0	9.791	0.000	0.000	0.012	0.012	18
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	40.22	0.000	0.000	0.030	0.030	109
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	54.30	0.000	0.000	0.033	0.033	167
Monthly																		
Total						0						0						3109

Annual Sediment Load (Metric Tonnes) : 198736

Annual Sediment Load for the period: 1980-2018

Station Name : KUMBIDI (KR000C9)
Local River : Bharathapuzha

Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut

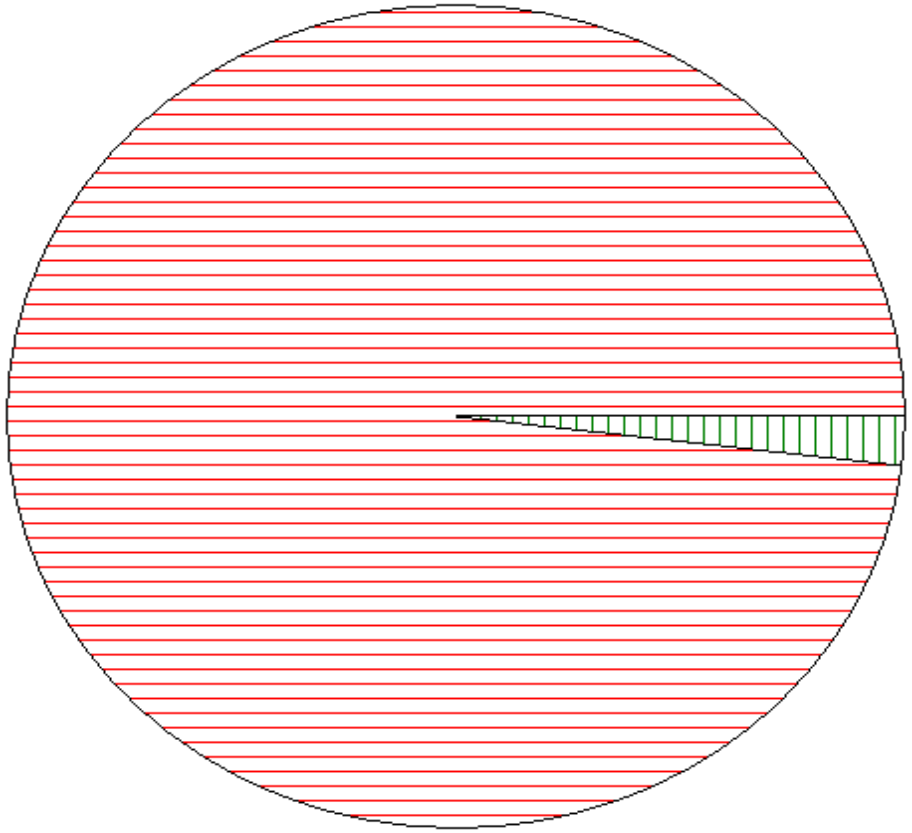


Seasonal Sediment Load for the period : 1980-2017

Station Name : KUMBIDI (KR000C9)
Local River : Bharathapuzha

Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut

577

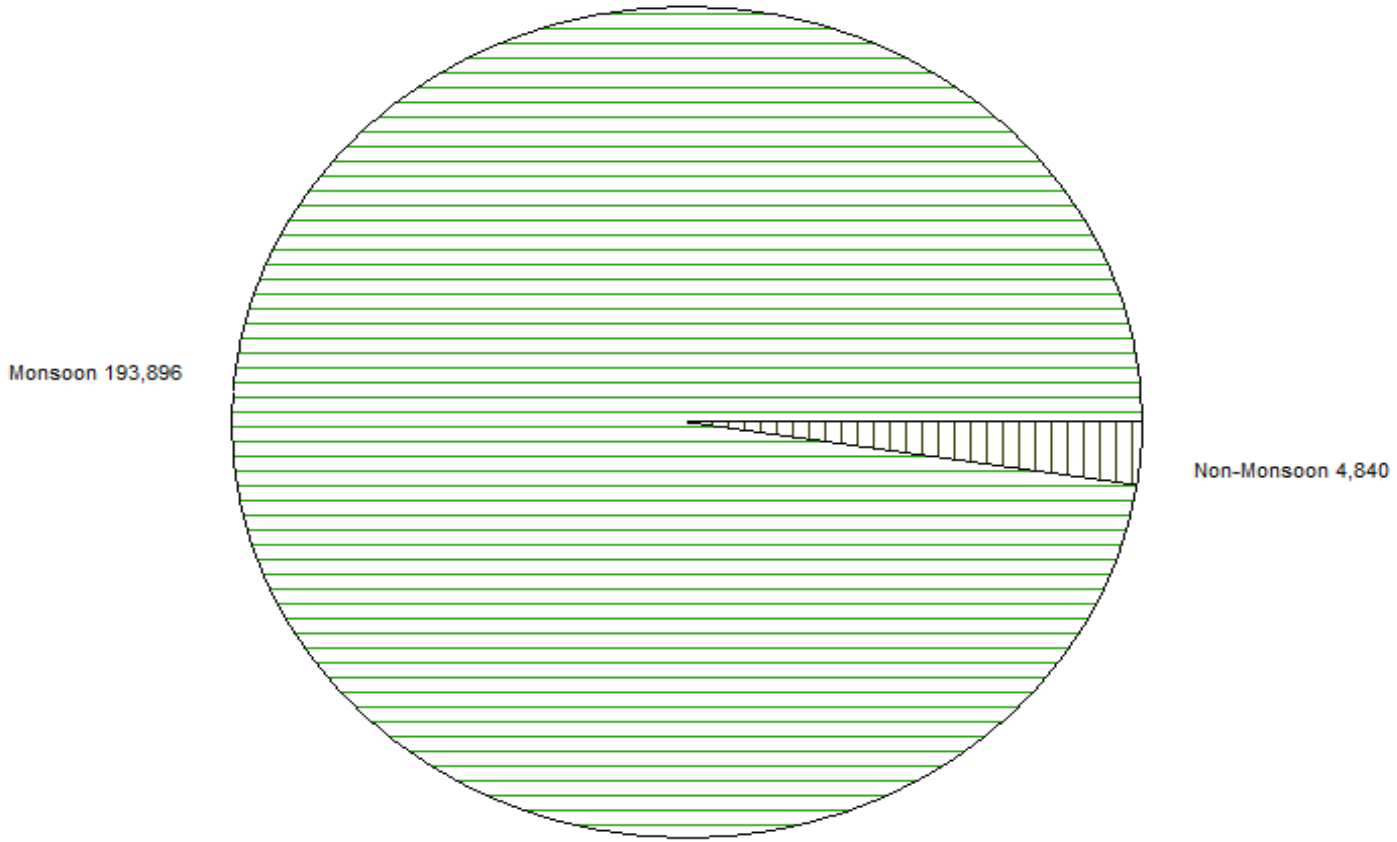


Seasonal Sediment Load for the Year: 2017-2018

Station Name : KUMBIDI (KR000C9)
Local River : Bharathapuzha

Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut

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BED MATERIAL ANALYSIS DATA

RIVER : *Bharathapuzha* **CODE NO. :** *KROOOC9*

SITE : *kumbidi* **CROSS SECTION :** *SGL*

	DATA FOR SAMPLE COLLECTED											GENERAL DATA OF THE RIVER						
										Bed Material Composition							Bed Material Composition	
SL. NO.	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS)/ AT THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)	WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017							DATE OF COLLECTION		28-08-2017								
1	80	6.845	-	-	-	-		-	1.6	0.27							
2	160	6.830	-	-	-	-		-	2.2	0.29							
3	240	5.390	-	-	-	-	NIL	-	2.5	0.32							
4	320	5.060	-	-	-	-		-	3.0	0.71	288.39	1.4987	0.6231	0.00016	269.3	4.5	0.43
5	400	3.800	-	-	-	-		-	3.5	0.51							
6	480	-	2.400	5.250	2.29	288.0		269.3	4.5	0.50							
POSTMONSOON 2017							DATE OF COLLECTION		22-12-2017								
1	80	6.865	-	-	-		-	-	5.0	0.52							
2	160	6.745	-	-	-		-	-	5.0	0.92							
3	240	5.500	-	-	-	97.0	-	-	5.0	0.89							
4	320	5.850	-	-	-		-	-	5.0	0.93	97.42	0.7918	0.1452	0.00003	11.20	5.0	1.36
5	400	3.925	-	-	-		-	-	5.0	2.49							
6	480	-	2.260	3.180	0.92		11.20	11.20	5.0	2.40							
PREMONSOON 2018							DATE OF COLLECTION		21-05-2018								
1	80	-	6.865	-	-			-	5.0	0.35							
2	160	-	6.765	-	-			-	5.0	0.39							
3	240	-	5.500	-	-	122.0	NIL	-	5.0	0.34	122.44	1.2290	0.2543	0.00005	35.16	5.0	1.00
4	320	-	5.790	-	-			-	5.0	1.04							
5	400	-	3.980	-	-			-	5.0	1.76							
6	480	-	-	2.160	1.52			35.16	5.0	2.15							

Annual Sediment Load for period : 1986-2018

Station Name : PULAMANTHOLE (KRA00G4) **Division : SWR Division, Cochin**

Local River : Pulanthodu **Sub-Division : Chaliyar SD, Calicut**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1986-1987	44878	398	45276	1634
1987-1988	40827	4386	45213	1046
1988-1989	137915	337	138252	1811
1989-1990	102706	5702	108408	1635
1990-1991	51842	300	52141	1275
1991-1992	118605	693	119297	1816
1992-1993	151031	3829	154859	2470
1993-1994	64866	1828	66694	1502
1994-1995	192583	2142	194726	2304
1995-1996	94190	603	94794	1729
1996-1997	83598	1693	85291	1606
1997-1998	121871	1821	123692	2005
1998-1999	116900	2996	119896	2196
1999-2000	78288	223	78512	1891
2000-2001	41560	1273	42833	1311
2001-2002	85513	975	86487	1624
2002-2003	53776	791	54568	1043
2003-2004	23229	3676	26906	778
2004-2005	89982	915	90896	1444
2005-2006	118615	10463	129079	2126
2006-2007	0	0	0	2176
2007-2008	0	0	0	2794
2008-2009	0	0	0	1252
2009-2010	109133	1685	110819	1805
2010-2011	112481	3338	115820	2174
2011-2012	103534	1459	104992	2237
2012-2013	18753	523	19276	906
2013-2014	51460	294	51754	2077
2014-2015	15952	268	16220	2051
2015-2016	10501	823	11323	938
2016-2017	12339	56	12396	675
2017-2018	38729	1640	40369	1477

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PULAMANTHOLE (KRA00G4) **Division : SWR Division, Cochin**

Local River : Pulanthodu **Sub-Division : Chaliyar SD, Calicut**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	4.155	0.000	0.000	0.000	0.000	0	58.46	0.000	0.004	0.020	0.024	121	67.88	0.000	0.000	0.014	0.014	82
2	4.125	0.000	0.000	0.000	0.000	0	65.28	0.000	0.003	0.020	0.022	125	164.9	0.000	0.005	0.026	0.031	442
3	5.963	0.000	0.000	0.000	0.000	0	42.83	0.000	0.000	0.018	0.018	67	44.45	0.000	0.004	0.019	0.023	88
4	7.246	0.000	0.000	0.000	0.000	0	54.50	0.000	0.000	0.019	0.019	89	83.99	0.000	0.000	0.018	0.018	131
5	9.616	0.000	0.000	0.000	0.000	0	46.60	0.000	0.000	0.017	0.017	68	67.70	0.000	0.000	0.017	0.017	99
6	8.989	0.000	0.000	0.000	0.000	0	36.50	0.000	0.000	0.016	0.016	50	127.6	0.000	0.005	0.023	0.028	308
7	12.13	0.000	0.000	0.000	0.000	0	34.18	0.000	0.000	0.016	0.016	47	88.59	0.000	0.004	0.023	0.027	207
8	9.345	0.000	0.000	0.000	0.000	0	29.08	0.000	0.000	0.014	0.014	35	72.71	0.000	0.000	0.018	0.018	113
9	7.697	0.000	0.000	0.000	0.000	0	25.75	0.000	0.000	0.014	0.014	31	58.04	0.000	0.000	0.016	0.016	80
10	4.122	0.000	0.000	0.000	0.000	0	22.92	0.000	0.000	0.014	0.014	28	132.3	0.000	0.004	0.022	0.026	297
11	5.788	0.000	0.000	0.004	0.004	2	23.03	0.000	0.000	0.014	0.014	28	73.12	0.000	0.000	0.014	0.014	88
12	21.56	0.000	0.000	0.011	0.011	20	22.22	0.000	0.000	0.012	0.012	23	112.1	0.000	0.000	0.015	0.015	145
13	16.52	0.000	0.000	0.012	0.012	17	19.26	0.000	0.000	0.005	0.005	8	50.85	0.000	0.000	0.013	0.013	56
14	21.74	0.000	0.000	0.013	0.013	24	65.57	0.000	0.006	0.016	0.022	125	42.22	0.000	0.000	0.012	0.012	44
15	26.67	0.000	0.000	0.015	0.015	35	36.22	0.000	0.000	0.014	0.014	44	41.59	0.000	0.000	0.013	0.013	47
16	15.42	0.000	0.000	0.015	0.015	20	33.22	0.000	0.001	0.012	0.013	37	53.26	0.000	0.000	0.012	0.012	55
17	12.03	0.000	0.000	0.000	0.000	0	25.16	0.000	0.000	0.014	0.014	30	44.30	0.000	0.000	0.014	0.014	54
18	9.722	0.000	0.000	0.002	0.002	1	45.59	0.000	0.000	0.015	0.015	59	39.62	0.000	0.000	0.014	0.014	48
19	9.392	0.000	0.000	0.000	0.000	0	201.9	0.000	0.008	0.031	0.039	680	59.97	0.000	0.000	0.015	0.015	78
20	9.967	0.000	0.000	0.000	0.000	0	216.9	0.000	0.008	0.032	0.040	749	74.29	0.000	0.000	0.019	0.019	122
21	9.992	0.000	0.000	0.000	0.000	0	184.9	0.000	0.007	0.024	0.031	495	139.5	0.000	0.004	0.023	0.027	325
22	10.02	0.000	0.000	0.000	0.000	0	152.8	0.000	0.005	0.023	0.028	370	125.2	0.000	0.000	0.023	0.023	249
23	10.10	0.000	0.000	0.000	0.000	0	93.97	0.000	0.003	0.019	0.023	183	115.1	0.000	0.000	0.024	0.024	239
24	13.01	0.000	0.000	0.000	0.000	0	76.91	0.000	0.004	0.019	0.023	153	103.2	0.000	0.000	0.020	0.020	178
25	27.18	0.000	0.005	0.020	0.025	58	62.03	0.000	0.003	0.016	0.019	102	89.63	0.000	0.000	0.022	0.022	170
26	41.59	0.000	0.005	0.020	0.025	91	44.34	0.000	0.000	0.015	0.015	57	57.08	0.000	0.000	0.020	0.020	99
27	179.5	0.000	0.008	0.025	0.033	512	36.72	0.000	0.000	0.016	0.016	51	83.86	0.000	0.000	0.021	0.021	154
28	205.2	0.000	0.008	0.027	0.035	620	31.11	0.000	0.000	0.016	0.016	43	84.44	0.000	0.000	0.022	0.022	161
29	125.5	0.000	0.006	0.023	0.029	315	24.74	0.000	0.000	0.013	0.013	28	208.2	0.000	0.006	0.030	0.036	647
30	77.68	0.000	0.006	0.022	0.028	188	23.02	0.000	0.001	0.013	0.014	27	243.2	0.000	0.007	0.030	0.037	778
31							36.44	0.000	0.000	0.013	0.013	41	160.9	0.000	0.005	0.025	0.030	417
Ten Daily Mean																		
Ten Daily I	7.338	0.000	0.000	0.000	0.000	0	41.61	0.000	0.001	0.017	0.017	66	90.82	0.000	0.002	0.020	0.022	185
Ten Daily II	14.88	0.000	0.000	0.007	0.007	12	68.90	0.000	0.002	0.017	0.019	178	59.14	0.000	0.000	0.014	0.014	74
Ten Daily III	69.98	0.000	0.004	0.014	0.017	178	69.73	0.000	0.002	0.017	0.019	141	128.2	0.000	0.002	0.024	0.026	311
Monthly																		
Total						1903						3996						6001

Annual Sediment Load (Metric Tonnes) : 40369

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PULAMANTHOLE (KRA00G4) **Division : SWR Division, Cochin**

Local River : Pulanthodu **Sub-Division : Chaliyar SD, Calicut**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	93.97	0.000	0.000	0.021	0.021	171	107.4	0.000	0.009	0.020	0.029	273	22.58	0.000	0.000	0.014	0.014	27
2	191.6	0.000	0.006	0.026	0.032	530	124.6	0.000	0.002	0.023	0.024	262	28.18	0.000	0.000	0.015	0.015	37
3	130.6	0.000	0.002	0.022	0.024	269	88.62	0.000	0.000	0.019	0.019	145	24.57	0.000	0.000	0.013	0.013	28
4	96.59	0.000	0.000	0.020	0.020	166	82.05	0.000	0.000	0.016	0.016	113	24.37	0.000	0.000	0.014	0.014	30
5	87.24	0.000	0.000	0.022	0.022	166	80.06	0.000	0.000	0.018	0.018	125	23.02	0.000	0.000	0.014	0.014	28
6	126.9	0.000	0.000	0.021	0.021	230	105.7	0.000	0.000	0.020	0.020	183	28.69	0.000	0.000	0.014	0.014	35
7	102.1	0.000	0.000	0.018	0.018	159	69.42	0.000	0.000	0.017	0.017	102	24.64	0.000	0.000	0.013	0.013	28
8	203.6	0.000	0.007	0.030	0.037	651	67.48	0.000	0.000	0.015	0.015	86	24.91	0.000	0.000	0.016	0.016	34
9	178.7	0.000	0.004	0.025	0.029	448	64.76	0.000	0.000	0.014	0.014	78	36.50	0.000	0.000	0.024	0.024	76
10	152.7	0.000	0.003	0.024	0.027	359	46.85	0.000	0.000	0.012	0.012	49	24.58	0.000	0.000	0.022	0.022	47
11	84.32	0.000	0.000	0.020	0.020	146	76.68	0.000	0.000	0.013	0.013	86	18.73	0.000	0.000	0.017	0.017	28
12	90.61	0.000	0.000	0.017	0.017	133	54.78	0.000	0.000	0.019	0.019	90	19.19	0.000	0.000	0.018	0.018	29
13	64.32	0.000	0.000	0.017	0.017	94	195.8	0.000	0.006	0.027	0.033	558	17.13	0.000	0.000	0.015	0.015	22
14	60.82	0.000	0.000	0.015	0.015	79	123.2	0.000	0.003	0.023	0.026	277	16.03	0.000	0.000	0.017	0.017	24
15	153.4	0.000	0.004	0.021	0.025	331	107.4	0.000	0.000	0.021	0.021	192	14.34	0.000	0.000	0.015	0.015	19
16	86.79	0.000	0.000	0.017	0.017	127	76.30	0.000	0.000	0.017	0.017	112	15.90	0.000	0.000	0.013	0.013	18
17	1268	0.003	0.006	0.026	0.035	3823	58.79	0.000	0.000	0.017	0.017	86	13.30	0.000	0.000	0.012	0.012	14
18	2091	0.004	0.008	0.036	0.048	8672	104.6	0.000	0.001	0.020	0.021	191	11.98	0.000	0.000	0.013	0.013	13
19	381.3	0.003	0.006	0.029	0.038	1252	129.5	0.000	0.000	0.021	0.021	235	12.05	0.000	0.000	0.013	0.013	13
20	262.9	0.000	0.004	0.028	0.032	727	64.70	0.000	0.000	0.018	0.018	101	11.41	0.000	0.000	0.012	0.012	12
21	200.8	0.000	0.004	0.024	0.028	486	46.75	0.000	0.000	0.015	0.015	61	13.67	0.000	0.000	0.014	0.014	17
22	167.8	0.000	0.000	0.021	0.021	304	50.85	0.000	0.000	0.016	0.016	71	11.47	0.000	0.000	0.013	0.013	13
23	136.6	0.000	0.000	0.023	0.023	272	43.04	0.000	0.000	0.017	0.017	63	12.05	0.000	0.000	0.014	0.014	15
24	88.85	0.000	0.000	0.019	0.019	148	34.58	0.000	0.000	0.015	0.015	45	12.19	0.000	0.000	0.013	0.013	14
25	97.80	0.000	0.000	0.018	0.018	152	26.54	0.000	0.000	0.014	0.014	32	10.61	0.000	0.000	0.012	0.012	11
26	137.0	0.000	0.004	0.024	0.028	332	25.12	0.000	0.000	0.012	0.012	26	9.722	0.000	0.000	0.012	0.012	10
27	113.1	0.000	0.000	0.020	0.020	195	85.62	0.000	0.000	0.014	0.014	104	9.389	0.000	0.000	0.011	0.011	9
28	148.8	0.000	0.004	0.026	0.030	386	89.41	0.000	0.000	0.020	0.020	155	9.673	0.000	0.000	0.012	0.012	10
29	240.7	0.000	0.010	0.037	0.047	969	39.85	0.000	0.000	0.016	0.016	54	9.599	0.000	0.000	0.013	0.013	11
30	139.9	0.000	0.003	0.024	0.028	335	28.59	0.000	0.000	0.019	0.019	47	7.379	0.000	0.000	0.013	0.013	8
31							30.02	0.000	0.000	0.016	0.016	42						
Ten Daily Mean																		
Ten Daily I	136.4	0.000	0.002	0.023	0.025	315	83.69	0.000	0.001	0.017	0.018	142	26.20	0.000	0.000	0.016	0.016	37
Ten Daily II	454.3	0.001	0.003	0.023	0.026	1538	99.18	0.000	0.001	0.020	0.021	193	15.01	0.000	0.000	0.014	0.014	19
Ten Daily III	147.1	0.000	0.003	0.024	0.026	358	45.49	0.000	0.000	0.016	0.016	63	10.58	0.000	0.000	0.013	0.013	12
Monthly																		
Total						22111						4042						676

Annual Sediment Load (Metric Tonnes) : 40369

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PULAMANTHOLE (KRA00G4) **Division : SWR Division, Cochin**

Local River : Pulanthodu **Sub-Division : Chaliyar SD, Calicut**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	6.661	0.000	0.000	0.012	0.012	7	2.296	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	36.36	0.000	0.000	0.018	0.018	55	2.366	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	34.13	0.000	0.000	0.017	0.017	50	2.375	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	17.27	0.000	0.000	0.013	0.013	19	2.373	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	16.01	0.000	0.000	0.015	0.015	21	2.633	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	15.89	0.000	0.000	0.015	0.015	21	1.796	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	13.45	0.000	0.000	0.016	0.016	19	1.931	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	10.63	0.000	0.000	0.014	0.014	13	1.458	0.000	0.000	0.000	0.000	0	11.49	0.000	0.000	0.013	0.013	13
9	9.425	0.000	0.000	0.017	0.017	14	1.640	0.000	0.000	0.000	0.000	0	5.739	0.000	0.000	0.014	0.014	7
10	6.657	0.000	0.000	0.014	0.014	8	1.622	0.000	0.000	0.000	0.000	0	4.634	0.000	0.000	0.013	0.013	5
11	7.500	0.000	0.000	0.015	0.015	10	1.653	0.000	0.000	0.000	0.000	0	3.580	0.000	0.000	0.005	0.005	1
12	7.452	0.000	0.000	0.014	0.014	9	1.363	0.000	0.000	0.000	0.000	0	3.655	0.000	0.000	0.000	0.000	0
13	7.483	0.000	0.000	0.013	0.013	8	1.373	0.000	0.000	0.000	0.000	0	2.168	0.000	0.000	0.000	0.000	0
14	10.37	0.000	0.000	0.012	0.012	11	1.708	0.000	0.000	0.000	0.000	0	2.055	0.000	0.000	0.000	0.000	0
15	13.90	0.000	0.000	0.016	0.016	19	1.229	0.000	0.000	0.000	0.000	0	2.063	0.000	0.000	0.000	0.000	0
16	7.843	0.000	0.000	0.014	0.014	9	1.215	0.000	0.000	0.000	0.000	0	1.460	0.000	0.000	0.000	0.000	0
17	6.657	0.000	0.000	0.013	0.013	7	1.308	0.000	0.000	0.000	0.000	0	1.437	0.000	0.000	0.000	0.000	0
18	6.108	0.000	0.000	0.012	0.012	6	1.129	0.000	0.000	0.000	0.000	0	1.501	0.000	0.000	0.000	0.000	0
19	4.809	0.000	0.000	0.011	0.011	5	1.129	0.000	0.000	0.000	0.000	0	1.460	0.000	0.000	0.000	0.000	0
20	4.232	0.000	0.000	0.015	0.015	5	1.129	0.000	0.000	0.000	0.000	0	1.456	0.000	0.000	0.000	0.000	0
21	4.222	0.000	0.000	0.010	0.010	4	1.129	0.000	0.000	0.000	0.000	0	1.129	0.000	0.000	0.000	0.000	0
22	4.230	0.000	0.000	0.012	0.012	4	1.129	0.000	0.000	0.000	0.000	0	1.308	0.000	0.000	0.000	0.000	0
23	4.217	0.000	0.000	0.015	0.015	5	0.814	0.000	0.000	0.000	0.000	0	1.129	0.000	0.000	0.000	0.000	0
24	3.580	0.000	0.000	0.006	0.006	2	0.814	0.000	0.000	0.000	0.000	0	1.471	0.000	0.000	0.000	0.000	0
25	3.580	0.000	0.000	0.006	0.006	2	0.814	0.000	0.000	0.000	0.000	0	1.931	0.000	0.000	0.000	0.000	0
26	3.673	0.000	0.000	0.000	0.000	0	0.965	0.000	0.000	0.000	0.000	0	2.064	0.000	0.000	0.000	0.000	0
27	3.144	0.000	0.000	0.000	0.000	0	1.129	0.000	0.000	0.000	0.000	0	2.387	0.000	0.000	0.000	0.000	0
28	1.513	0.000	0.000	0.000	0.000	0	1.129	0.000	0.000	0.000	0.000	0	2.266	0.000	0.000	0.000	0.000	0
29	2.495	0.000	0.000	0.000	0.000	0	1.214	0.000	0.000	0.000	0.000	0						
30	2.311	0.000	0.000	0.000	0.000	0	1.129	0.000	0.000	0.000	0.000	0						
31	1.931	0.000	0.000	0.000	0.000	0	0.965	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	16.65	0.000	0.000	0.015	0.015	23	2.049	0.000	0.000	0.000	0.000	0	2.186	0.000	0.000	0.004	0.004	3
Ten Daily II	7.635	0.000	0.000	0.014	0.014	9	1.324	0.000	0.000	0.000	0.000	0	2.084	0.000	0.000	0.001	0.001	0
Ten Daily III	3.172	0.000	0.000	0.004	0.004	2	1.021	0.000	0.000	0.000	0.000	0	1.711	0.000	0.000	0.000	0.000	0
Monthly																		
Total						334						0						27

Annual Sediment Load (Metric Tonnes) : 40369

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PULAMANTHOLE (KRA00G4) **Division : SWR Division, Cochin**

Local River : Pulanthodu **Sub-Division : Chaliyar SD, Calicut**

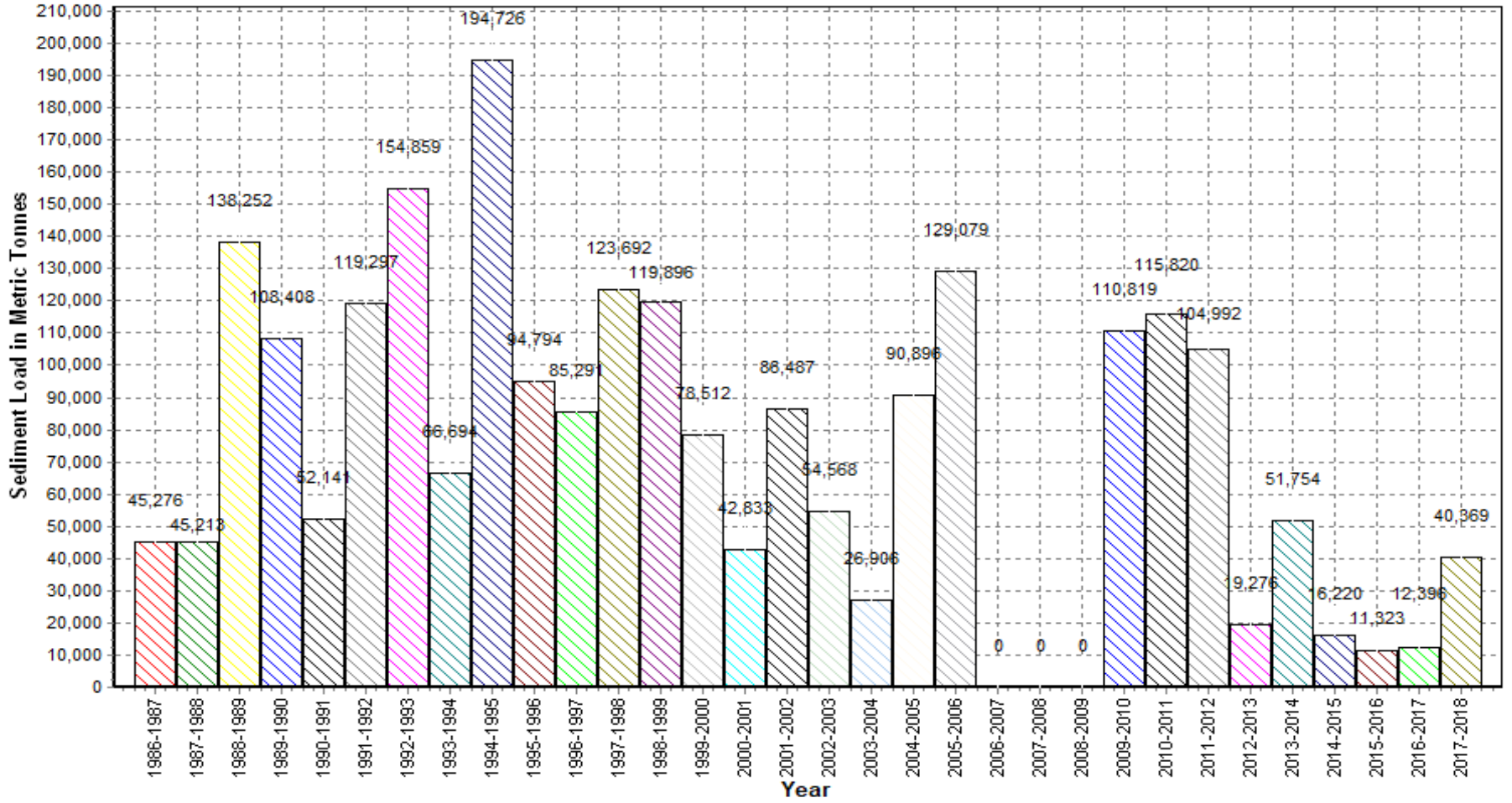
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	2.797	0.000	0.000	0.000	0.000	0	1.501	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0
2	2.059	0.000	0.000	0.000	0.000	0	2.080	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	2.052	0.000	0.000	0.000	0.000	0	1.477	0.000	0.000	0.000	0.000	0	5.551	0.000	0.000	0.010	0.010	5
4	1.931	0.000	0.000	0.000	0.000	0	1.423	0.000	0.000	0.000	0.000	0	6.930	0.000	0.000	0.011	0.011	7
5	2.025	0.000	0.000	0.000	0.000	0	1.129	0.000	0.000	0.000	0.000	0	16.66	0.000	0.000	0.012	0.012	17
6	1.481	0.000	0.000	0.000	0.000	0	1.129	0.000	0.000	0.000	0.000	0	2.441	0.000	0.000	0.010	0.010	2
7	2.051	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	16.37	0.000	0.000	0.011	0.011	16
8	2.046	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.484	0.000	0.000	0.010	0.010	0
9	2.075	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	6.583	0.000	0.000	0.010	0.010	6
10	2.051	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	38.59	0.000	0.000	0.008	0.008	27
11	1.501	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	29.67	0.000	0.000	0.016	0.016	41
12	1.472	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	35.29	0.000	0.000	0.015	0.015	46
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	18.57	0.000	0.000	0.013	0.013	21
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	14.06	0.000	0.000	0.012	0.012	15
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	2.441	0.000	0.000	0.011	0.011	2
16	0.000	0.000	0.000	0.000	0.000	0	5.308	0.000	0.000	0.013	0.013	6	0.308	0.000	0.000	0.013	0.013	0
17	5.316	0.000	0.000	0.000	0.000	0	5.950	0.000	0.000	0.014	0.014	7	15.00	0.000	0.000	0.011	0.011	14
18	4.253	0.000	0.000	0.008	0.008	3	4.146	0.000	0.000	0.014	0.014	5	13.87	0.000	0.000	0.011	0.011	13
19	4.005	0.000	0.000	0.012	0.012	4	3.170	0.000	0.000	0.013	0.013	4	15.29	0.000	0.000	0.011	0.011	15
20	3.696	0.000	0.000	0.012	0.012	4	2.734	0.000	0.000	0.000	0.000	0	18.57	0.000	0.000	0.014	0.014	23
21	3.691	0.000	0.000	0.011	0.011	4	2.721	0.000	0.000	0.000	0.000	0	17.21	0.000	0.000	0.012	0.012	18
22	3.028	0.000	0.000	0.012	0.012	3	2.969	0.000	0.000	0.006	0.006	1	16.16	0.000	0.000	0.017	0.017	24
23	2.377	0.000	0.000	0.000	0.000	0	4.005	0.000	0.000	0.010	0.010	3	14.39	0.000	0.000	0.016	0.016	20
24	2.344	0.000	0.000	0.000	0.000	0	3.962	0.000	0.000	0.012	0.012	4	13.43	0.000	0.000	0.017	0.017	20
25	5.791	0.000	0.000	0.034	0.034	17	2.711	0.000	0.000	0.000	0.000	0	58.41	0.000	0.000	0.024	0.024	121
26	4.002	0.000	0.000	0.014	0.014	5	2.730	0.000	0.000	0.000	0.000	0	20.49	0.000	0.000	0.017	0.017	30
27	3.702	0.000	0.000	0.014	0.014	4	1.880	0.000	0.000	0.000	0.000	0	22.83	0.000	0.000	0.018	0.018	36
28	3.098	0.000	0.000	0.015	0.015	4	1.129	0.000	0.000	0.000	0.000	0	89.81	0.000	0.006	0.039	0.045	349
29	2.969	0.000	0.000	0.010	0.010	2	0.000	0.000	0.000	0.006	0.006	0	54.01	0.000	0.000	0.028	0.028	131
30	2.420	0.000	0.000	0.003	0.003	1	0.000	0.000	0.000	0.001	0.001	0	58.53	0.000	0.000	0.023	0.023	116
31	2.081	0.000	0.000	0.000	0.000	0							34.07	0.000	0.000	0.022	0.022	65
Ten Daily Mean																		
Ten Daily I	2.057	0.000	0.000	0.000	0.000	0	0.874	0.000	0.000	0.000	0.000	0	9.362	0.000	0.000	0.008	0.008	8
Ten Daily II	2.024	0.000	0.000	0.003	0.003	1	2.131	0.000	0.000	0.005	0.005	2	16.31	0.000	0.000	0.013	0.013	19
Ten Daily III	3.227	0.000	0.000	0.010	0.010	4	2.211	0.000	0.000	0.003	0.003	1	36.30	0.000	0.001	0.021	0.022	84
Monthly																		
Total						51						31						1198

Annual Sediment Load (Metric Tonnes) : 40369

Annual Sediment Load for the period: 1986-2018

Station Name : PULAMANTHOLE (KRA00G4)
Local River : Pulanthodu

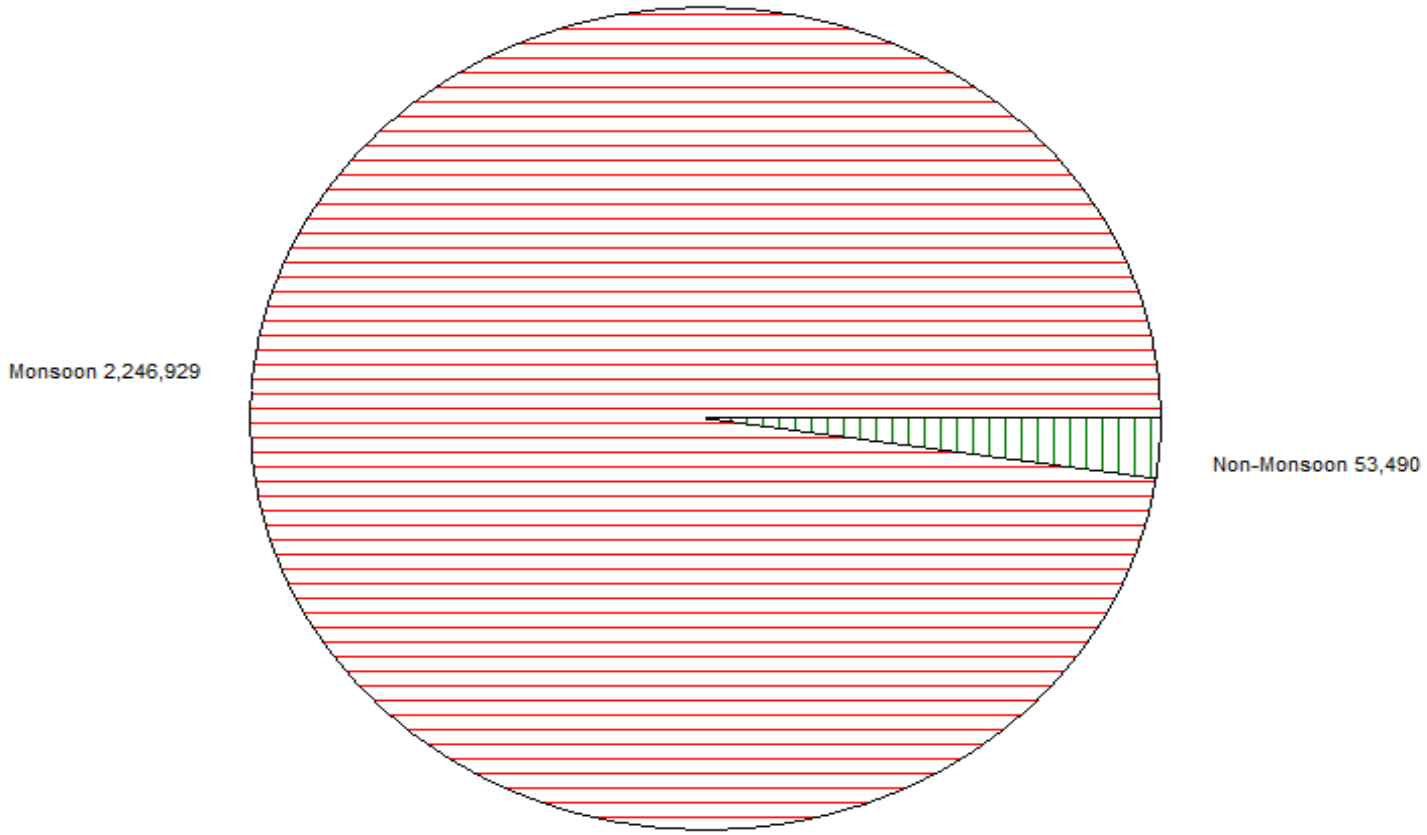
Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



Seasonal Sediment Load for the period : 1986-2017

Station Name : PULAMANTHOLE (KRA00G4)
Local River : Pulanthodu

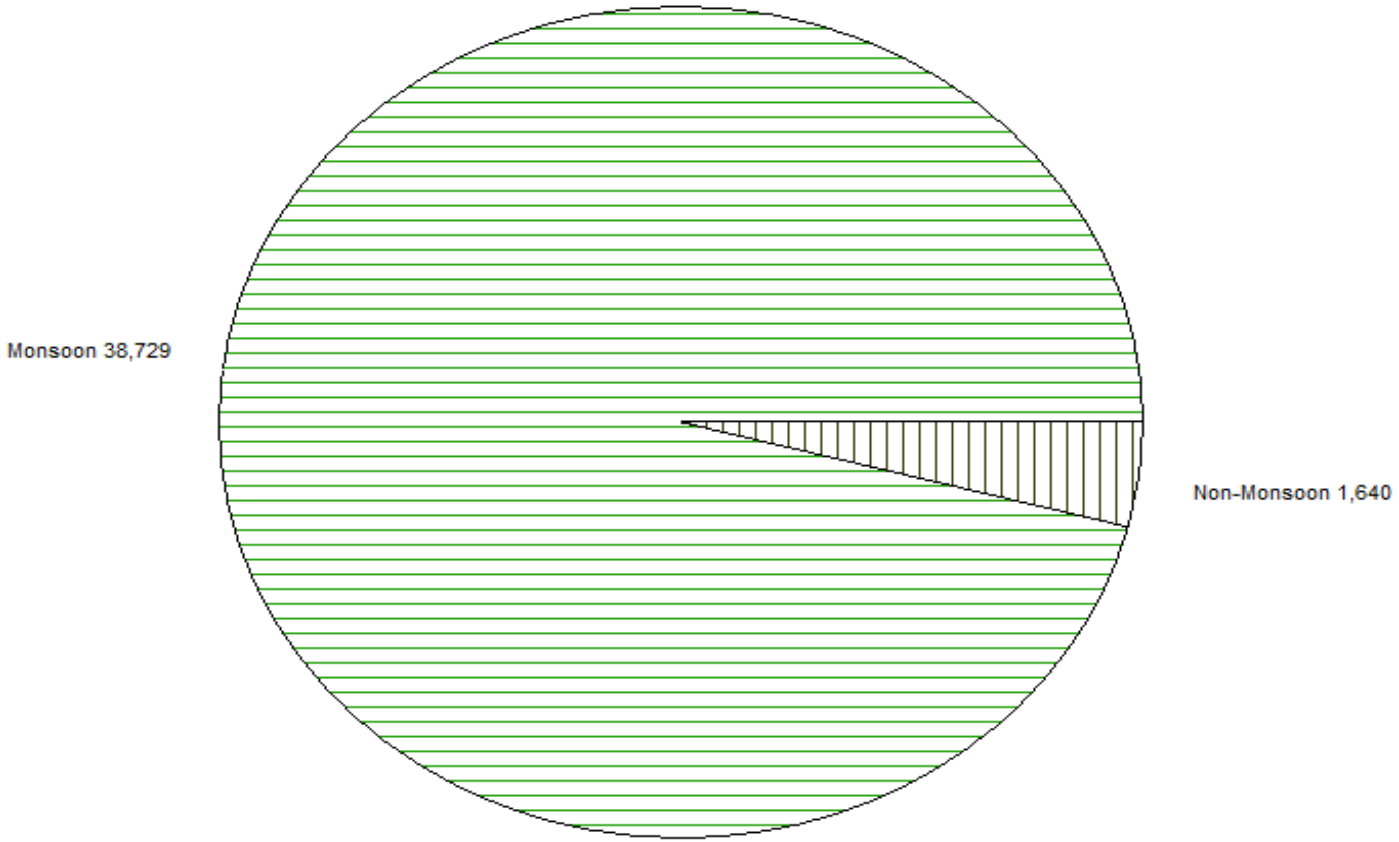
Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



Seasonal Sediment Load for the Year: 2017-2018

Station Name : PULAMANTHOLE (KRA00G4)
Local River : Pulanthodu

Division : SWR Division, Cochin
Sub-Division : Chaliyar SD, Calicut



BED MATERIAL ANALYSIS DATA

RIVER : *Pulanthodu* **CODE NO. :** *KRA00G4*

SITE : *Pulamanthole* **CROSS SECTION :** *SGL*

SL. NO.	DATA FOR SAMPLE COLLECTED										GENERAL DATA OF THE RIVER						
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS) OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	Bed Material Composition		WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	Bed Material Composition	
									MAX SIZE (mm)	MEAN SIZE (mm)						MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017						**DATE OF COLLECTION**					**00-00-0000**						
1																	
2																	
3							Samples not collected										
4																	
5																	
6																	
POSTMONSOON 2017						**DATE OF COLLECTION**					**03-12-2017**						
1	60	-	11.130	13.070	1.94		NIL		14.0	2.20							
2	100	-	10.420	13.070	2.65	106.0	NIL	15.85	5.0	1.81	107.05	2.4256	0.0616	0.00003	15.85	14.0	1.91
3	140	-	09.570	13.070	3.50		NIL		5.0	1.71							
PREMONSOON 2018						**DATE OF COLLECTION**					**22-05-2018**						
1	60	-	11.120	12.950	1.83		NIL		5.0	1.39							
2	100	-	10.550	12.950	2.40	106.0	NIL	16.21	5.0	1.60	106.93	2.3145	0.0661	0.0002	16.21	5.0	1.62
3	140	-	09.450	12.950	3.50		NIL		5.0	1.87							

Annual Sediment Load for period : 2013-2018

Station Name : MANKARA (KR000K4) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : SWR SD No 2, Kochi**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2013-2014	11823	1844	13667	821
2014-2015	64208	92713	156921	1029
2015-2016	17581	14961	32542	440
2016-2017	4725	406	5131	171
2017-2018	11167	1200	12367	276

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : MANKARA (KR000K4) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : SWR SD No 2, Kochi**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	17.18	0.001	0.004	0.025	0.031	46	1.857	0.000	0.000	0.013	0.013	2
2	0.000	0.000	0.000	0.000	0.000	0	11.41	0.000	0.000	0.025	0.025	25	2.166	0.000	0.000	0.016	0.016	3
3	0.000	0.000	0.000	0.000	0.000	0	9.582	0.000	0.000	0.025	0.025	21	1.962	0.000	0.000	0.018	0.018	3
4	0.000	0.000	0.000	0.000	0.000	0	8.756	0.000	0.000	0.018	0.018	14	1.962	0.000	0.000	0.009	0.009	2
5	0.000	0.000	0.000	0.000	0.000	0	6.885	0.000	0.000	0.014	0.014	8	7.753	0.000	0.000	0.019	0.019	13
6	0.000	0.000	0.000	0.005	0.005	0	5.471	0.000	0.000	0.013	0.013	6	44.54	0.000	0.000	0.018	0.018	70
7	0.000	0.000	0.000	0.000	0.000	0	5.696	0.000	0.000	0.015	0.015	7	51.17	0.000	0.000	0.021	0.021	92
8	0.000	0.000	0.000	0.000	0.000	0	4.763	0.000	0.000	0.008	0.008	3	36.01	0.000	0.000	0.017	0.017	53
9	0.000	0.000	0.000	0.000	0.000	0	3.841	0.000	0.000	0.014	0.014	5	26.22	0.000	0.000	0.012	0.012	27
10	0.000	0.000	0.000	0.000	0.000	0	2.457	0.000	0.000	0.014	0.014	3	17.42	0.000	0.000	0.010	0.010	16
11	0.001	0.000	0.000	0.000	0.000	0	2.081	0.000	0.000	0.019	0.019	3	9.288	0.000	0.000	0.009	0.009	7
12	0.000	0.000	0.000	0.000	0.000	0	1.779	0.000	0.000	0.016	0.016	2	10.13	0.000	0.000	0.013	0.013	11
13	0.000	0.000	0.000	0.000	0.000	0	1.339	0.000	0.000	0.016	0.016	2	6.501	0.000	0.000	0.010	0.010	6
14	0.000	0.000	0.000	0.000	0.000	0	5.125	0.000	0.000	0.019	0.019	8	5.127	0.000	0.000	0.012	0.012	5
15	1.438	0.000	0.000	0.014	0.014	2	7.084	0.000	0.000	0.016	0.016	9	3.738	0.000	0.000	0.011	0.011	4
16	1.412	0.000	0.000	0.023	0.023	3	5.077	0.000	0.000	0.018	0.018	8	2.695	0.000	0.000	0.011	0.011	3
17	1.224	0.000	0.000	0.010	0.010	1	4.941	0.000	0.000	0.024	0.024	10	2.674	0.000	0.000	0.007	0.007	2
18	1.068	0.000	0.000	0.012	0.012	1	10.73	0.000	0.000	0.016	0.016	15	2.576	0.000	0.000	0.014	0.014	3
19	0.657	0.000	0.000	0.007	0.007	0	56.46	0.000	0.000	0.075	0.075	368	16.30	0.000	0.000	0.021	0.021	30
20	0.522	0.000	0.000	0.004	0.004	0	101.4	0.000	0.000	0.071	0.071	621	17.88	0.000	0.000	0.015	0.015	23
21	0.674	0.000	0.000	0.006	0.006	0	77.80	0.000	0.000	0.077	0.077	520	39.86	0.000	0.000	0.023	0.023	77
22	2.018	0.000	0.000	0.016	0.016	3	54.62	0.000	0.000	0.009	0.009	40	48.92	0.000	0.000	0.019	0.019	79
23	2.614	0.000	0.000	0.028	0.028	6	40.20	0.000	0.000	0.027	0.027	95	35.70	0.000	0.000	0.014	0.014	44
24	1.665	0.000	0.000	0.012	0.012	2	21.40	0.000	0.000	0.011	0.011	20	26.70	0.000	0.000	0.013	0.013	29
25	2.399	0.000	0.000	0.020	0.020	4	16.55	0.000	0.000	0.012	0.012	17	20.53	0.000	0.000	0.008	0.008	13
26	8.642	0.000	0.000	0.023	0.023	17	8.707	0.000	0.000	0.013	0.013	10	14.71	0.000	0.000	0.006	0.006	7
27	35.76	0.000	0.000	0.043	0.043	134	7.520	0.000	0.000	0.008	0.008	5	17.49	0.000	0.000	0.010	0.010	16
28	57.49	0.000	0.000	0.040	0.040	197	6.320	0.000	0.000	0.007	0.007	4	26.87	0.000	0.000	0.016	0.016	36
29	37.92	0.000	0.000	0.040	0.040	130	5.080	0.000	0.000	0.005	0.005	2	49.07	0.000	0.000	0.027	0.027	114
30	24.61	0.000	0.000	0.031	0.031	66	3.251	0.000	0.000	0.010	0.010	3	88.90	0.000	0.000	0.028	0.028	218
31							1.839	0.000	0.000	0.006	0.006	1	74.34	0.000	0.000	0.032	0.032	206
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	7.604	0.000	0.000	0.017	0.018	14	19.11	0.000	0.000	0.015	0.015	28
Ten Daily II	0.702	0.000	0.000	0.008	0.008	1	19.60	0.000	0.000	0.029	0.029	105	7.691	0.000	0.000	0.012	0.012	9
Ten Daily III	17.38	0.000	0.000	0.026	0.026	56	22.12	0.000	0.000	0.017	0.017	65	40.28	0.000	0.000	0.018	0.018	76
Monthly																		
Total						567						1902						1212

Annual Sediment Load (Metric Tonnes) : 12367

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : MANKARA (KR000K4) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : SWR SD No 2, Kochi**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	41.14	0.000	0.001	0.023	0.024	85	11.37	0.000	0.000	0.014	0.014	14	2.759	0.000	0.000	0.016	0.016	4
2	41.88	0.005	0.006	0.027	0.038	137	12.74	0.000	0.000	0.013	0.013	15	2.605	0.000	0.000	0.014	0.014	3
3	50.42	0.001	0.001	0.024	0.026	114	11.82	0.000	0.000	0.016	0.016	17	2.508	0.000	0.000	0.014	0.014	3
4	45.11	0.001	0.001	0.024	0.025	99	10.53	0.000	0.000	0.016	0.016	15	2.087	0.000	0.000	0.015	0.015	3
5	28.90	0.000	0.000	0.019	0.019	47	7.896	0.000	0.000	0.012	0.012	8	1.821	0.000	0.000	0.015	0.015	2
6	25.50	0.000	0.000	0.015	0.015	33	7.177	0.000	0.000	0.017	0.017	10	1.524	0.000	0.000	0.016	0.016	2
7	22.63	0.000	0.000	0.022	0.022	43	4.607	0.000	0.000	0.012	0.012	5	1.387	0.000	0.000	0.016	0.016	2
8	78.86	0.006	0.222	0.052	0.280	1908	4.512	0.000	0.000	0.012	0.012	5	1.391	0.000	0.000	0.015	0.015	2
9	43.75	0.008	0.009	0.020	0.037	139	2.783	0.000	0.000	0.009	0.009	2	1.887	0.000	0.000	0.017	0.017	3
10	23.09	0.001	0.001	0.018	0.020	40	2.224	0.000	0.000	0.011	0.011	2	2.212	0.000	0.000	0.017	0.017	3
11	23.06	0.000	0.000	0.016	0.016	32	2.426	0.000	0.000	0.011	0.011	2	2.162	0.000	0.000	0.019	0.019	4
12	17.22	0.000	0.000	0.017	0.017	25	2.249	0.000	0.000	0.008	0.008	2	1.951	0.000	0.000	0.018	0.018	3
13	18.25	0.000	0.000	0.017	0.017	27	2.410	0.000	0.000	0.013	0.013	3	1.513	0.000	0.000	0.018	0.018	2
14	15.67	0.000	0.000	0.023	0.023	32	23.52	0.000	0.000	0.025	0.025	50	1.428	0.000	0.000	0.018	0.018	2
15	15.29	0.000	0.000	0.019	0.019	25	20.49	0.000	0.000	0.025	0.025	45	1.430	0.000	0.000	0.017	0.017	2
16	15.27	0.000	0.000	0.009	0.009	12	14.91	0.000	0.000	0.025	0.025	32	1.906	0.000	0.000	0.019	0.019	3
17	61.74	0.007	0.012	0.050	0.069	370	11.30	0.000	0.000	0.019	0.019	18	1.229	0.000	0.000	0.017	0.017	2
18	153.2	0.013	0.030	0.097	0.140	1848	9.429	0.000	0.000	0.019	0.019	15	1.336	0.000	0.000	0.014	0.014	2
19	100.1	0.015	0.027	0.083	0.126	1085	5.904	0.000	0.000	0.014	0.014	7	1.351	0.000	0.000	0.018	0.018	2
20	71.22	0.016	0.019	0.076	0.110	678	5.394	0.000	0.000	0.016	0.016	7	1.247	0.000	0.000	0.020	0.020	2
21	41.78	0.000	0.000	0.012	0.012	43	2.850	0.000	0.000	0.017	0.017	4	1.288	0.000	0.000	0.021	0.021	2
22	35.15	0.000	0.000	0.017	0.017	53	3.202	0.000	0.000	0.012	0.012	3	2.467	0.000	0.000	0.018	0.018	4
23	23.92	0.000	0.000	0.011	0.011	23	2.206	0.000	0.000	0.010	0.010	2	2.087	0.000	0.000	0.015	0.015	3
24	24.89	0.000	0.000	0.013	0.013	28	2.456	0.000	0.000	0.010	0.010	2	2.375	0.000	0.000	0.016	0.016	3
25	17.49	0.000	0.000	0.015	0.015	22	2.453	0.000	0.000	0.009	0.009	2	2.527	0.000	0.000	0.015	0.015	3
26	19.41	0.000	0.000	0.008	0.008	14	2.363	0.000	0.000	0.013	0.013	3	2.849	0.000	0.000	0.021	0.021	5
27	13.73	0.000	0.000	0.014	0.014	16	3.020	0.000	0.000	0.014	0.014	4	3.018	0.000	0.000	0.018	0.018	5
28	12.05	0.000	0.000	0.014	0.014	15	13.93	0.000	0.000	0.047	0.047	56	3.194	0.000	0.000	0.015	0.015	4
29	11.37	0.000	0.000	0.015	0.015	14	7.070	0.000	0.000	0.024	0.024	14	3.194	0.000	0.000	0.021	0.021	6
30	10.06	0.000	0.000	0.015	0.015	13	8.239	0.000	0.000	0.014	0.014	10	1.987	0.000	0.000	0.021	0.021	4
31							3.256	0.000	0.000	0.015	0.015	4						
Ten Daily Mean																		
Ten Daily I	40.13	0.002	0.024	0.024	0.051	264	7.566	0.000	0.000	0.013	0.013	9	2.018	0.000	0.000	0.016	0.016	3
Ten Daily II	49.10	0.005	0.009	0.041	0.055	413	9.803	0.000	0.000	0.017	0.017	18	1.555	0.000	0.000	0.018	0.018	2
Ten Daily III	20.99	0.000	0.000	0.013	0.013	24	4.640	0.000	0.000	0.017	0.017	10	2.499	0.000	0.000	0.018	0.018	4
Monthly																		
Total						7019						378						90

Annual Sediment Load (Metric Tonnes) : 12367

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : MANKARA (KR000K4) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : SWR SD No 2, Kochi**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	2.353	0.000	0.000	0.025	0.025	5	1.228	0.000	0.000	0.021	0.021	2	1.634	0.000	0.000	0.017	0.017	2
2	5.141	0.000	0.000	0.022	0.022	10	1.103	0.000	0.000	0.021	0.021	2	1.987	0.000	0.000	0.018	0.018	3
3	7.747	0.000	0.000	0.022	0.022	15	0.877	0.000	0.000	0.020	0.020	2	2.114	0.000	0.000	0.023	0.023	4
4	7.388	0.000	0.000	0.024	0.024	15	0.590	0.000	0.000	0.019	0.019	1	2.245	0.000	0.006	0.021	0.027	5
5	5.434	0.000	0.000	0.023	0.023	11	0.662	0.000	0.000	0.019	0.019	1	2.381	0.000	0.000	0.024	0.024	5
6	4.060	0.000	0.000	0.017	0.017	6	0.249	0.000	0.000	0.022	0.022	0	2.381	0.000	0.000	0.022	0.022	5
7	3.573	0.000	0.000	0.020	0.020	6	0.249	0.000	0.000	0.015	0.015	0	5.217	0.002	0.035	0.024	0.061	27
8	2.907	0.000	0.000	0.019	0.019	5	0.972	0.000	0.000	0.015	0.015	1	4.792	0.002	0.002	0.019	0.023	9
9	2.973	0.000	0.000	0.016	0.016	4	1.355	0.000	0.000	0.027	0.027	3	3.769	0.000	0.000	0.017	0.017	6
10	2.318	0.000	0.000	0.016	0.016	3	1.634	0.000	0.000	0.021	0.021	3	2.586	0.000	0.000	0.012	0.012	3
11	2.673	0.000	0.000	0.013	0.013	3	1.550	0.000	0.000	0.022	0.022	3	1.865	0.000	0.000	0.011	0.011	2
12	2.497	0.000	0.000	0.020	0.020	4	1.440	0.000	0.000	0.021	0.021	3	1.495	0.000	0.000	0.019	0.019	2
13	2.829	0.000	0.000	0.015	0.015	4	1.551	0.000	0.000	0.019	0.019	3	1.747	0.000	0.000	0.014	0.014	2
14	3.215	0.000	0.000	0.016	0.016	4	1.725	0.000	0.000	0.018	0.018	3	2.159	0.000	0.000	0.012	0.012	2
15	4.902	0.000	0.000	0.020	0.020	9	1.615	0.000	0.000	0.020	0.020	3	2.114	0.000	0.000	0.013	0.013	2
16	4.272	0.000	0.000	0.018	0.018	7	1.533	0.000	0.000	0.019	0.019	2	1.278	0.000	0.000	0.012	0.012	1
17	3.121	0.000	0.000	0.018	0.018	5	1.604	0.000	0.000	0.018	0.018	2	1.224	0.000	0.000	0.011	0.011	1
18	2.836	0.000	0.000	0.021	0.021	5	1.384	0.000	0.000	0.015	0.015	2	0.961	0.000	0.000	0.010	0.010	1
19	2.667	0.000	0.000	0.017	0.017	4	1.147	0.000	0.000	0.013	0.013	1	0.733	0.000	0.000	0.009	0.009	1
20	2.521	0.000	0.000	0.017	0.017	4	1.439	0.000	0.000	0.019	0.019	2	0.000	0.000	0.000	0.000	0.000	0
21	2.347	0.000	0.000	0.018	0.018	4	1.360	0.000	0.000	0.016	0.016	2	0.000	0.000	0.000	0.000	0.000	0
22	2.124	0.000	0.000	0.020	0.020	4	0.754	0.000	0.000	0.014	0.014	1	0.000	0.000	0.000	0.000	0.000	0
23	2.141	0.000	0.000	0.020	0.020	4	0.590	0.000	0.000	0.016	0.016	1	0.000	0.000	0.000	0.000	0.000	0
24	1.967	0.000	0.000	0.019	0.019	3	0.349	0.000	0.000	0.019	0.019	1	0.000	0.000	0.000	0.000	0.000	0
25	1.967	0.000	0.000	0.019	0.019	3	0.193	0.000	0.000	0.021	0.021	0	0.000	0.000	0.000	0.000	0.000	0
26	2.454	0.000	0.000	0.023	0.023	5	0.120	0.000	0.000	0.019	0.019	0	0.000	0.000	0.000	0.000	0.000	0
27	2.453	0.000	0.000	0.022	0.022	5	0.157	0.000	0.000	0.019	0.019	0	0.000	0.000	0.000	0.000	0.000	0
28	2.217	0.000	0.000	0.022	0.022	4	0.157	0.000	0.000	0.019	0.019	0	0.000	0.000	0.000	0.000	0.000	0
29	2.849	0.000	0.000	0.022	0.022	5	0.120	0.000	0.000	0.019	0.019	0						
30	2.622	0.000	0.000	0.022	0.022	5	0.088	0.000	0.000	0.019	0.019	0						
31	1.803	0.000	0.000	0.021	0.021	3	0.379	0.000	0.000	0.017	0.017	1						
Ten Daily Mean																		
Ten Daily I	4.389	0.000	0.000	0.020	0.020	8	0.892	0.000	0.000	0.020	0.020	2	2.911	0.000	0.004	0.020	0.024	7
Ten Daily II	3.153	0.000	0.000	0.017	0.017	5	1.499	0.000	0.000	0.018	0.018	2	1.358	0.000	0.000	0.011	0.011	1
Ten Daily III	2.268	0.000	0.000	0.021	0.021	4	0.388	0.000	0.000	0.018	0.018	1	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						173						46						84

Annual Sediment Load (Metric Tonnes) : 12367

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : MANKARA (KR000K4) **Division : SWR Division, Cochin**

Local River : Bharathapuzha **Sub-Division : SWR SD No 2, Kochi**

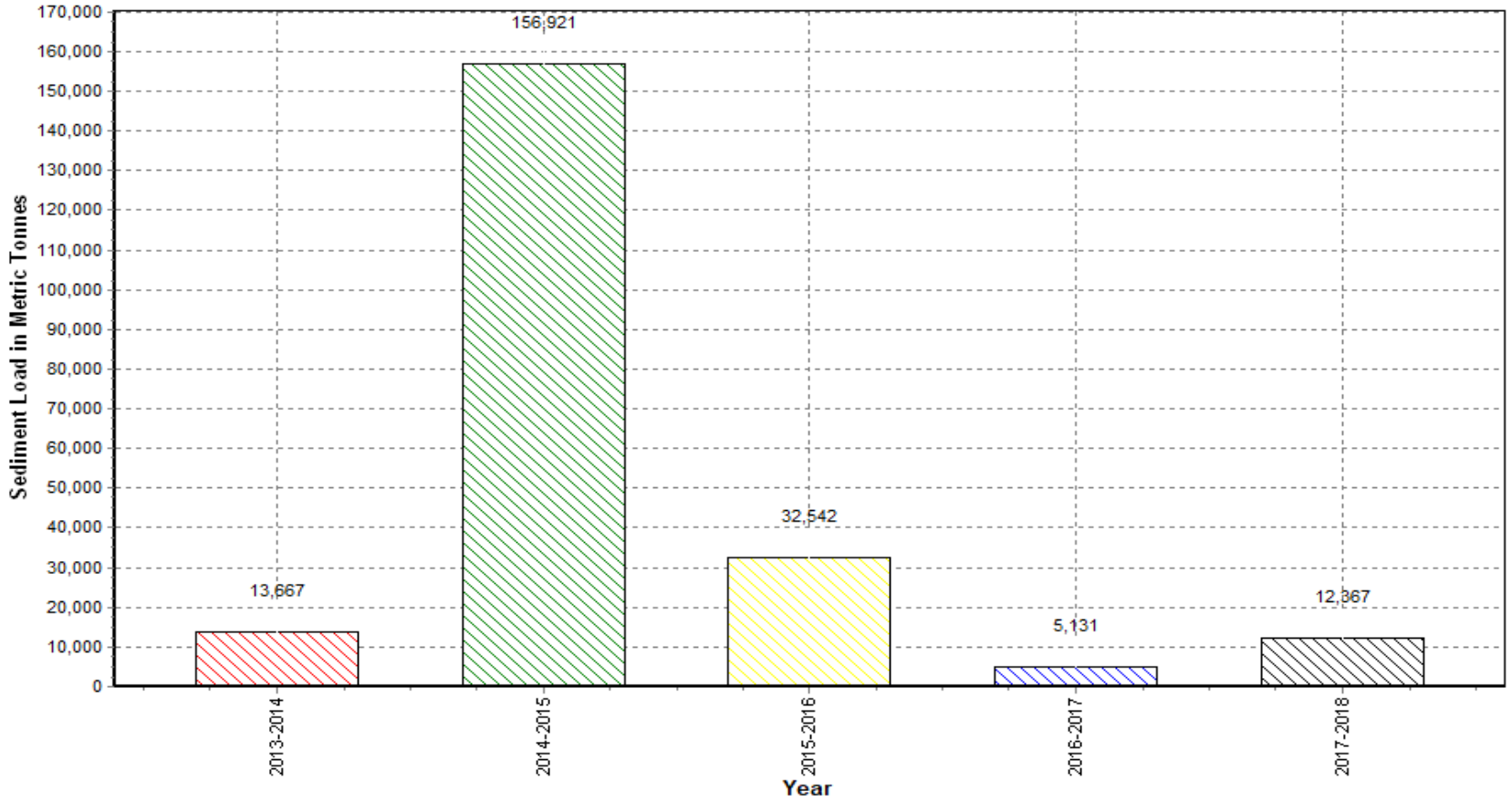
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.149	0.000	0.000	0.007	0.007	0	0.248	0.000	0.000	0.009	0.009	0
2	0.000	0.000	0.000	0.000	0.000	0	0.253	0.000	0.000	0.014	0.014	0	0.253	0.000	0.000	0.012	0.012	0
3	0.000	0.000	0.000	0.000	0.000	0	0.132	0.000	0.000	0.011	0.011	0	0.826	0.000	0.000	0.006	0.006	0
4	0.000	0.000	0.000	0.000	0.000	0	0.303	0.000	0.000	0.015	0.015	0	3.216	0.000	0.000	0.009	0.009	2
5	0.000	0.000	0.000	0.000	0.000	0	0.422	0.000	0.000	0.017	0.017	1	6.915	0.000	0.000	0.015	0.015	9
6	0.000	0.000	0.000	0.000	0.000	0	0.488	0.000	0.000	0.015	0.015	1	4.317	0.000	0.000	0.016	0.016	6
7	0.000	0.000	0.000	0.000	0.000	0	0.416	0.000	0.000	0.013	0.013	0	5.791	0.000	0.000	0.026	0.026	13
8	0.000	0.000	0.000	0.000	0.000	0	0.303	0.000	0.000	0.011	0.011	0	3.306	0.000	0.000	0.022	0.022	6
9	0.000	0.000	0.000	0.000	0.000	0	0.207	0.000	0.000	0.009	0.009	0	2.610	0.000	0.000	0.020	0.020	4
10	0.000	0.000	0.000	0.000	0.000	0	0.112	0.000	0.000	0.006	0.006	0	9.518	0.004	0.017	0.028	0.048	40
11	0.000	0.000	0.000	0.000	0.000	0	0.096	0.000	0.000	0.006	0.006	0	15.76	0.003	0.010	0.018	0.030	41
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	20.70	0.000	0.006	0.015	0.020	36
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	8.526	0.004	0.015	0.028	0.047	34
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	15.73	0.000	0.000	0.017	0.017	23
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	16.80	0.000	0.000	0.017	0.017	25
16	0.000	0.000	0.000	0.000	0.000	0	0.247	0.000	0.000	0.010	0.010	0	11.78	0.000	0.000	0.016	0.016	16
17	0.000	0.000	0.000	0.000	0.000	0	0.248	0.000	0.000	0.010	0.010	0	8.526	0.003	0.017	0.025	0.045	33
18	0.000	0.000	0.000	0.000	0.000	0	0.253	0.000	0.000	0.012	0.012	0	8.141	0.000	0.007	0.024	0.031	22
19	1.826	0.000	0.000	0.012	0.012	2	0.189	0.000	0.000	0.009	0.009	0	6.031	0.000	0.000	0.020	0.020	11
20	1.475	0.000	0.000	0.012	0.012	2	0.112	0.000	0.000	0.006	0.006	0	7.403	0.000	0.003	0.018	0.021	14
21	0.926	0.000	0.000	0.010	0.010	1	0.000	0.000	0.000	0.000	0.000	0	8.790	0.000	0.000	0.017	0.017	13
22	0.613	0.000	0.000	0.007	0.007	0	0.000	0.000	0.000	0.000	0.000	0	6.121	0.000	0.000	0.015	0.015	8
23	0.406	0.000	0.000	0.006	0.006	0	0.000	0.000	0.000	0.000	0.000	0	3.647	0.000	0.000	0.012	0.012	4
24	0.411	0.000	0.000	0.006	0.006	0	0.000	0.000	0.000	0.000	0.000	0	2.961	0.000	0.000	0.016	0.016	4
25	0.382	0.000	0.000	0.009	0.009	0	0.000	0.000	0.000	0.000	0.000	0	2.637	0.000	0.000	0.011	0.011	3
26	0.412	0.000	0.000	0.011	0.011	0	0.000	0.000	0.000	0.000	0.000	0	3.024	0.000	0.000	0.014	0.014	4
27	0.375	0.000	0.000	0.010	0.010	0	0.000	0.000	0.000	0.000	0.000	0	3.815	0.000	0.000	0.016	0.016	5
28	0.357	0.000	0.000	0.011	0.011	0	0.000	0.000	0.000	0.000	0.000	0	4.423	0.000	0.000	0.017	0.017	7
29	0.336	0.000	0.000	0.011	0.011	0	0.000	0.000	0.000	0.000	0.000	0	4.121	0.000	0.000	0.017	0.017	6
30	0.293	0.000	0.000	0.011	0.011	0	0.000	0.000	0.000	0.000	0.000	0	8.526	0.005	0.022	0.036	0.064	47
31	0.290	0.000	0.000	0.010	0.010	0							13.17	0.005	0.019	0.371	0.395	449
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.279	0.000	0.000	0.012	0.012	0	3.700	0.000	0.002	0.016	0.018	8
Ten Daily II	0.330	0.000	0.000	0.002	0.002	0	0.114	0.000	0.000	0.005	0.005	0	11.94	0.001	0.006	0.020	0.027	26
Ten Daily III	0.436	0.000	0.000	0.009	0.009	0	0.000	0.000	0.000	0.000	0.000	0	5.567	0.001	0.004	0.049	0.054	50
Monthly																		
Total						7						4						885

Annual Sediment Load (Metric Tonnes) : 12367

Annual Sediment Load for the period: 2013-2018

Station Name : MANKARA (KR000K4)
Local River : Bharathapuzha

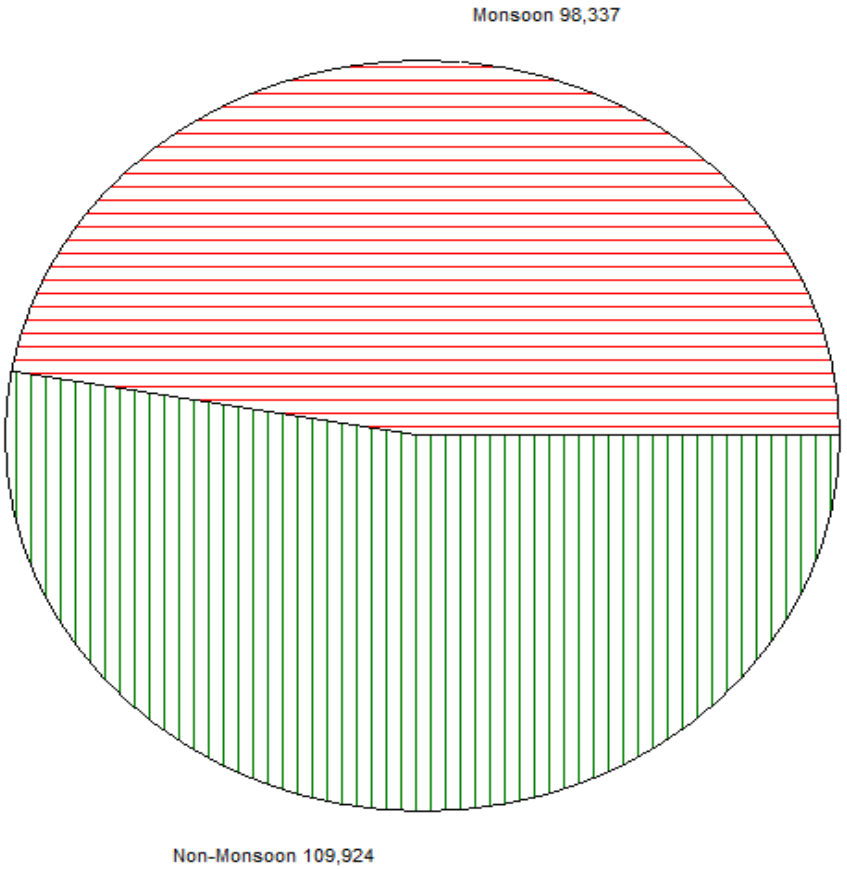
Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



Seasonal Sediment Load for the period : 2013-2017

Station Name : MANKARA (KR000K4)
Local River : Bharathapuzha

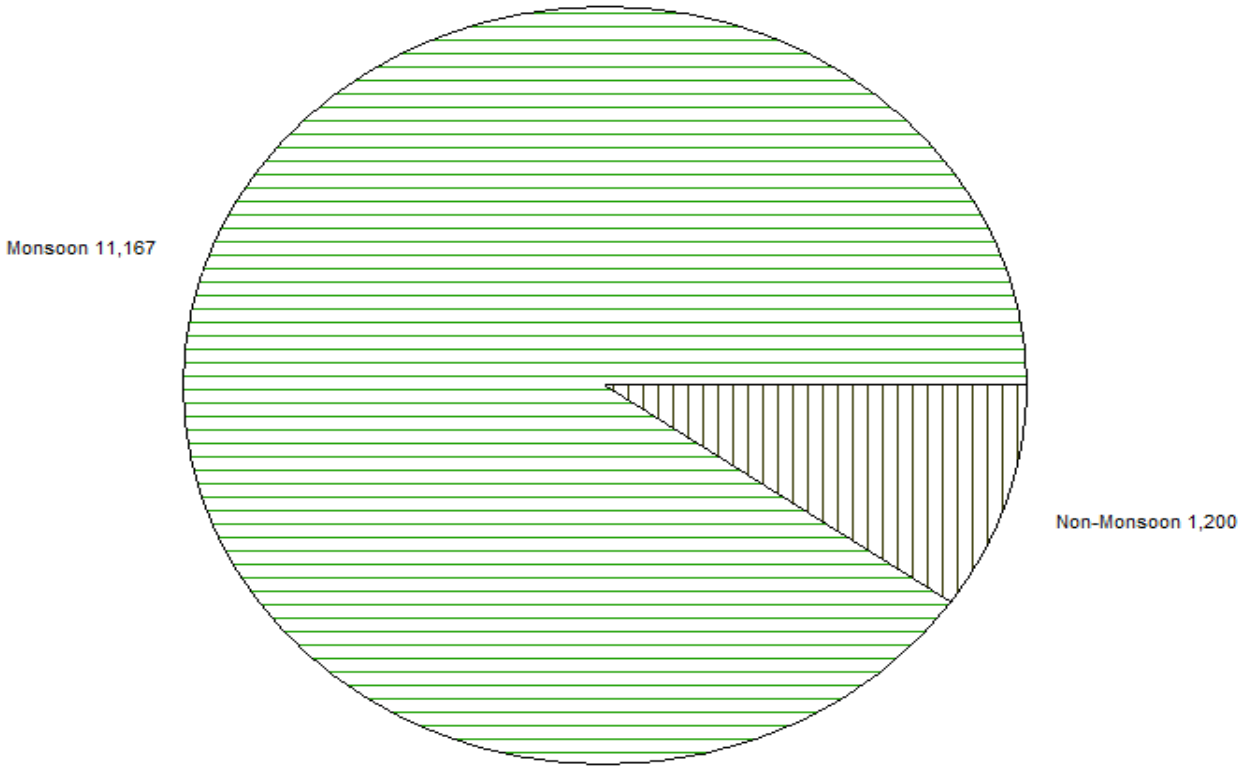
Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



Seasonal Sediment Load for the Year: 2017-2018

Station Name : MANKARA (KR000K4)
Local River : Bharathapuzha

Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



BED MATERIAL ANALYSIS DATA

RIVER : *Bharathapuzha* **CODE NO. :** *KROOOK4*

SITE : *Mankara* **CROSS SECTION :** *SGL*

SL. NO.	DATA FOR SAMPLE COLLECTED											GENERAL DATA OF THE RIVER						
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS) OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	Bed Material Composition		WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	Bed Material Composition	
									MAX SIZE (mm)	MEAN SIZE (mm)						MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017					**DATE OF COLLECTION**		**25-07-2017**										
1	68	-	46.460	47.530	1.07	70.0	0.412	1.7634	22.0	7.01							
2	72	-	46.230	47.530	1.30	70.0	0.282	1.4664	5.0	1.97							
3	88	-	45.880	47.530	1.65	70.0	0.331	2.1842	30.0	13.37	70.37	1.0658	0.2207	0.00038	16.55	30.0	5.95
4	92	-	45.810	47.530	1.72	70.0	0.326	2.2429	5.0	1.44							
POSTMONSOON 2017					**DATE OF COLLECTION**		**00-00-0000**										
				Samples not collected													
PREMONSOON 2018					**DATE OF COLLECTION**		**26-05-2018**										
1	50	46.895	-	47.315	0.42	70.60	-		5.0	1.10							
2	60	46.645	-	47.315	0.67	70.60	-	3.024	5.0	3.82	70.77	0.7591	0.0563	0.00025	3.024	6.0	3.08
3	90	45.715	-	47.315	1.60	70.60	-		5.0	3.91							
4	120	46.835	-	47.315	0.48	70.60	-		6.0	3.51							

Annual Sediment Load for period : 2013-2018

Station Name : PUDUR (KR000M1) **Division : SWR Division, Cochin**

Local River : Kannadipuzha **Sub-Division : SWR SD No 2, Kochi**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2013-2014	1094	241	1335	321
2014-2015	9102	1283	10385	467
2015-2016	5526	759	6285	206
2016-2017	2093	2	2095	66
2017-2018	20656	1739	22394	132

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PUDUR (KR000M1) | **Division : SWR Division, Cochin**

Local River : Kannadipuzha | **Sub-Division : SWR SD No 2, Kochi**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.629	0.000	0.000	0.110	0.110	6
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.484	0.000	0.000	0.130	0.130	5
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.378	0.000	0.000	0.150	0.150	5
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.424	0.000	0.000	0.140	0.140	5
5	0.000	0.000	0.000	0.000	0.000	0	3.534	0.000	0.000	0.150	0.150	46	0.774	0.000	0.000	0.160	0.160	11
6	0.000	0.000	0.000	0.000	0.000	0	2.175	0.000	0.000	0.100	0.100	19	14.20	0.000	0.000	0.151	0.151	185
7	0.000	0.000	0.000	0.000	0.000	0	2.004	0.000	0.000	0.150	0.150	26	23.85	0.000	0.000	0.160	0.160	330
8	0.000	0.000	0.000	0.000	0.000	0	2.161	0.000	0.000	0.510	0.510	95	19.02	0.000	0.000	0.150	0.150	246
9	0.000	0.000	0.000	0.000	0.000	0	2.207	0.000	0.000	0.262	0.262	50	16.23	0.000	0.000	0.140	0.140	196
10	0.000	0.000	0.000	0.000	0.000	0	2.117	0.000	0.000	0.180	0.180	33	9.107	0.000	0.000	0.100	0.100	79
11	0.000	0.000	0.000	0.000	0.000	0	1.837	0.000	0.000	0.180	0.180	29	5.224	0.000	0.000	0.080	0.080	36
12	0.000	0.000	0.000	0.000	0.000	0	1.580	0.000	0.000	0.130	0.130	18	2.578	0.000	0.000	0.120	0.120	27
13	0.000	0.000	0.000	0.000	0.000	0	1.291	0.000	0.000	0.100	0.100	11	2.429	0.000	0.000	0.111	0.111	23
14	0.000	0.000	0.000	0.000	0.000	0	2.157	0.000	0.000	0.120	0.120	22	1.756	0.000	0.000	0.130	0.130	20
15	1.099	0.000	0.000	0.170	0.170	16	2.542	0.000	0.000	0.130	0.130	29	1.272	0.000	0.000	0.130	0.130	14
16	0.546	0.000	0.000	0.140	0.140	7	2.116	0.000	0.000	0.112	0.112	20	0.949	0.000	0.000	0.090	0.090	7
17	0.000	0.000	0.000	0.000	0.000	0	2.680	0.000	0.000	0.120	0.120	28	1.157	0.000	0.000	0.130	0.130	13
18	0.376	0.000	0.000	0.114	0.114	4	5.213	0.000	0.000	0.120	0.120	54	0.849	0.000	0.000	0.110	0.110	8
19	0.000	0.000	0.000	0.000	0.000	0	40.75	0.000	0.000	0.490	0.490	1725	1.461	0.000	0.000	0.110	0.110	14
20	0.000	0.000	0.000	0.000	0.000	0	53.93	0.000	0.000	0.190	0.190	885	3.676	0.000	0.000	0.117	0.117	37
21	0.000	0.000	0.000	0.000	0.000	0	43.23	0.000	0.000	0.310	0.310	1158	20.38	0.000	0.000	0.140	0.140	247
22	0.000	0.000	0.000	0.000	0.000	0	42.56	0.000	0.000	0.230	0.230	846	20.79	0.000	0.000	0.120	0.120	216
23	0.000	0.000	0.000	0.000	0.000	0	34.42	0.000	0.000	0.204	0.204	607	19.37	0.000	0.000	0.110	0.110	184
24	0.000	0.000	0.000	0.000	0.000	0	27.84	0.000	0.000	0.180	0.180	433	15.42	0.000	0.000	0.070	0.070	93
25	0.414	0.000	0.000	0.115	0.115	4	16.88	0.000	0.000	0.140	0.140	204	11.98	0.000	0.000	0.120	0.120	124
26	0.000	0.000	0.000	0.000	0.000	0	7.780	0.000	0.000	0.140	0.140	94	7.466	0.000	0.000	0.070	0.070	45
27	2.303	0.000	0.000	0.196	0.196	39	4.434	0.000	0.000	0.120	0.120	46	9.315	0.000	0.000	0.088	0.088	70
28	13.97	0.000	0.000	0.483	0.483	583	2.394	0.000	0.000	0.120	0.120	25	19.57	0.000	0.000	0.080	0.080	135
29	15.13	0.000	0.000	0.285	0.285	373	1.884	0.000	0.000	0.140	0.140	23	22.36	0.000	0.000	0.080	0.080	155
30	11.15	0.000	0.000	0.211	0.211	203	1.212	0.000	0.000	0.173	0.173	18	24.32	0.000	0.000	0.070	0.070	147
31							0.835	0.000	0.000	0.500	0.500	36	22.79	0.000	0.000	0.120	0.120	236
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	1.420	0.000	0.000	0.135	0.135	27	8.510	0.000	0.000	0.139	0.139	107
Ten Daily II	0.202	0.000	0.000	0.042	0.042	3	11.41	0.000	0.000	0.169	0.169	282	2.135	0.000	0.000	0.113	0.113	20
Ten Daily III	4.297	0.000	0.000	0.129	0.129	120	16.68	0.000	0.000	0.205	0.205	317	17.61	0.000	0.000	0.097	0.097	150
Monthly																		
Total						1228						6579						2920

Annual Sediment Load (Metric Tonnes) : 22394

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PUDUR (KR000M1) | **Division : SWR Division, Cochin**

Local River : Kannadipuzha | **Sub-Division : SWR SD No 2, Kochi**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	22.09	0.000	0.000	0.095	0.095	180	8.782	0.000	0.000	0.145	0.145	110	1.818	0.000	0.000	0.100	0.100	16
2	20.59	0.000	0.000	0.110	0.110	196	12.50	0.000	0.000	0.151	0.151	163	1.651	0.000	0.000	0.170	0.170	24
3	24.37	0.000	0.000	0.127	0.127	268	16.35	0.000	0.000	0.160	0.160	226	1.165	0.000	0.000	0.140	0.140	14
4	22.99	0.000	0.000	0.114	0.114	226	10.49	0.000	0.000	0.110	0.110	100	0.997	0.000	0.000	0.157	0.157	14
5	23.85	0.000	0.000	0.120	0.120	247	10.14	0.000	0.000	0.200	0.200	175	0.790	0.000	0.000	0.163	0.163	11
6	19.93	0.000	0.000	0.070	0.070	121	5.692	0.000	0.000	0.260	0.260	128	0.820	0.000	0.000	0.180	0.180	13
7	15.15	0.000	0.000	0.040	0.040	52	4.488	0.000	0.000	0.290	0.290	112	0.816	0.000	0.000	0.130	0.130	9
8	20.64	0.000	0.000	0.230	0.230	410	4.313	0.000	0.000	0.273	0.273	102	1.188	0.000	0.000	0.180	0.180	18
9	13.64	0.000	0.000	0.040	0.040	47	3.246	0.000	0.000	0.450	0.450	126	1.580	0.000	0.000	0.230	0.230	31
10	8.957	0.000	0.000	0.109	0.109	84	2.516	0.000	0.000	0.220	0.220	48	2.241	0.000	0.000	0.220	0.220	43
11	6.466	0.000	0.000	0.110	0.110	61	2.197	0.000	0.000	0.200	0.200	38	1.601	0.000	0.000	0.140	0.140	19
12	6.761	0.000	0.000	0.140	0.140	82	1.461	0.000	0.000	0.180	0.180	23	1.420	0.000	0.000	0.168	0.168	21
13	13.78	0.000	0.000	0.190	0.190	226	0.734	0.000	0.000	0.130	0.130	8	1.087	0.000	0.000	0.130	0.130	12
14	13.81	0.000	0.000	0.170	0.170	203	1.886	0.000	0.000	0.220	0.220	36	1.007	0.000	0.000	0.150	0.150	13
15	10.05	0.000	0.000	0.120	0.120	104	2.429	0.000	0.000	0.160	0.160	34	0.850	0.000	0.000	0.130	0.130	10
16	7.064	0.000	0.000	0.131	0.131	80	4.233	0.000	0.000	0.170	0.170	62	0.837	0.000	0.000	0.120	0.120	9
17	22.68	0.000	0.000	0.173	0.173	338	3.916	0.000	0.000	0.130	0.130	44	0.966	0.000	0.000	0.150	0.150	13
18	34.63	0.000	0.000	0.290	0.290	868	3.000	0.000	0.000	0.287	0.287	74	0.989	0.000	0.000	0.120	0.120	10
19	30.74	0.000	0.000	0.160	0.160	425	2.639	0.000	0.000	0.130	0.130	30	0.966	0.000	0.000	0.116	0.116	10
20	27.28	0.000	0.000	0.090	0.090	212	2.579	0.000	0.000	0.210	0.210	47	0.931	0.000	0.000	0.080	0.080	6
21	22.68	0.000	0.000	0.120	0.120	235	2.343	0.000	0.000	0.900	0.900	182	0.841	0.000	0.000	0.100	0.100	7
22	20.24	0.000	0.000	0.160	0.160	280	1.707	0.000	0.000	0.826	0.826	122	0.699	0.000	0.000	0.130	0.130	8
23	17.31	0.000	0.000	0.110	0.110	165	1.580	0.000	0.000	0.900	0.900	123	0.552	0.000	0.000	0.110	0.110	5
24	19.52	0.000	0.000	0.119	0.119	200	2.026	0.000	0.000	0.170	0.170	30	0.627	0.000	0.000	0.110	0.110	6
25	18.73	0.000	0.000	0.070	0.070	113	2.026	0.000	0.000	0.900	0.900	158	0.841	0.000	0.000	0.090	0.090	7
26	10.59	0.000	0.000	0.150	0.150	137	1.825	0.000	0.000	0.180	0.180	28	0.804	0.000	0.000	0.123	0.123	9
27	9.862	0.000	0.000	0.120	0.120	102	1.707	0.000	0.000	0.110	0.110	16	0.926	0.000	0.000	0.160	0.160	13
28	7.454	0.000	0.000	0.150	0.150	97	3.082	0.000	0.000	0.140	0.140	37	0.945	0.000	0.000	0.140	0.140	11
29	5.692	0.000	0.000	0.139	0.139	68	5.300	0.000	0.000	0.137	0.137	63	0.935	0.000	0.000	0.130	0.130	11
30	6.393	0.000	0.000	0.140	0.140	77	60.82	0.000	0.000	0.220	0.220	1156	0.952	0.000	0.000	0.080	0.080	7
31							2.052	0.000	0.000	0.130	0.130	23						
Ten Daily Mean																		
Ten Daily I	19.22	0.000	0.000	0.105	0.105	183	7.852	0.000	0.000	0.226	0.226	129	1.307	0.000	0.000	0.167	0.167	19
Ten Daily II	17.33	0.000	0.000	0.157	0.157	260	2.507	0.000	0.000	0.182	0.182	40	1.065	0.000	0.000	0.130	0.130	12
Ten Daily III	13.85	0.000	0.000	0.128	0.128	147	7.679	0.000	0.000	0.419	0.419	176	0.812	0.000	0.000	0.117	0.117	8
Monthly																		
Total						5906						3624						398

Annual Sediment Load (Metric Tonnes) : 22394

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PUDUR (KR000M1) | **Division : SWR Division, Cochin**

Local River : Kannadipuzha | **Sub-Division : SWR SD No 2, Kochi**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	1.161	0.000	0.000	0.260	0.260	26	0.933	0.000	0.000	0.151	0.151	12	0.000	0.000	0.000	0.000	0.000	0
2	2.074	0.000	0.000	0.151	0.151	27	0.722	0.000	0.000	0.146	0.146	9	0.000	0.000	0.000	0.000	0.000	0
3	7.255	0.000	0.000	0.155	0.155	97	0.625	0.000	0.000	0.144	0.144	8	0.000	0.000	0.000	0.000	0.000	0
4	7.608	0.000	0.000	0.170	0.170	112	0.368	0.000	0.000	0.130	0.130	4	0.178	0.000	0.000	0.000	0.000	0
5	4.999	0.000	0.000	0.130	0.130	56	0.000	0.000	0.000	0.000	0.000	0	0.272	0.000	0.000	0.000	0.000	0
6	3.393	0.000	0.000	0.140	0.140	41	0.000	0.000	0.000	0.000	0.000	0	0.497	0.000	0.000	0.000	0.000	0
7	2.557	0.000	0.000	0.150	0.150	33	0.000	0.000	0.000	0.000	0.000	0	0.673	0.000	0.000	0.000	0.000	0
8	2.737	0.000	0.000	0.180	0.180	43	0.368	0.000	0.000	0.170	0.170	5	0.000	0.000	0.000	0.000	0.000	0
9	2.377	0.000	0.000	0.120	0.120	25	0.609	0.000	0.000	0.120	0.120	6	0.000	0.000	0.000	0.000	0.000	0
10	1.908	0.000	0.000	0.155	0.155	26	0.658	0.000	0.000	0.110	0.110	6	0.000	0.000	0.000	0.000	0.000	0
11	2.823	0.000	0.000	0.150	0.150	37	0.505	0.000	0.000	0.130	0.130	6	0.000	0.000	0.000	0.000	0.000	0
12	2.180	0.000	0.000	0.210	0.210	40	0.385	0.000	0.000	0.140	0.140	5	0.000	0.000	0.000	0.000	0.000	0
13	1.418	0.000	0.000	0.140	0.140	17	0.258	0.000	0.000	0.140	0.140	3	0.000	0.000	0.000	0.000	0.000	0
14	0.997	0.000	0.000	0.090	0.090	8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.746	0.000	0.000	0.100	0.100	6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.645	0.000	0.000	0.130	0.130	7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.889	0.000	0.000	0.099	0.099	8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.904	0.000	0.000	0.150	0.150	12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.866	0.000	0.000	0.120	0.120	9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.833	0.000	0.000	0.020	0.020	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.560	0.000	0.000	0.210	0.210	10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.618	0.000	0.000	0.100	0.100	5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.723	0.000	0.000	0.130	0.130	8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.603	0.000	0.000	0.135	0.135	7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.690	0.000	0.000	0.139	0.139	8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.995	0.000	0.000	0.160	0.160	14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.995	0.000	0.000	0.090	0.090	8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	1.775	0.000	0.000	0.210	0.210	32	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	1.978	0.000	0.000	0.150	0.150	26	0.000	0.000	0.000	0.000	0.000	0						
30	1.067	0.000	0.000	0.140	0.140	13	0.000	0.000	0.000	0.000	0.000	0						
31	0.801	0.000	0.000	0.148	0.148	10	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	3.607	0.000	0.000	0.161	0.161	48	0.428	0.000	0.000	0.097	0.097	5	0.162	0.000	0.000	0.000	0.000	0
Ten Daily II	1.230	0.000	0.000	0.121	0.121	14	0.115	0.000	0.000	0.041	0.041	1	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.982	0.000	0.000	0.146	0.146	13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						771						65						0

Annual Sediment Load (Metric Tonnes) : 22394

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PUDUR (KR000M1) **Division : SWR Division, Cochin**

Local River : Kannadipuzha **Sub-Division : SWR SD No 2, Kochi**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	9.756	0.000	0.000	0.130	0.130	110
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	11.06	0.000	0.000	0.160	0.160	153
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	10.37	0.000	0.000	0.124	0.124	111
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	10.76	0.000	0.000	0.090	0.090	84
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	10.38	0.000	0.000	0.130	0.130	117
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	10.57	0.000	0.000	0.120	0.120	110
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	10.57	0.000	0.000	0.130	0.130	119
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	1.461	0.000	0.000	0.080	0.080	10
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	4.916	0.000	0.000	0.090	0.090	38
31	0.000	0.000	0.000	0.000	0.000	0							4.048	0.000	0.000	0.150	0.150	52
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	7.347	0.000	0.000	0.088	0.088	80
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.948	0.000	0.000	0.029	0.029	9
Monthly																		
Total						0						0						903

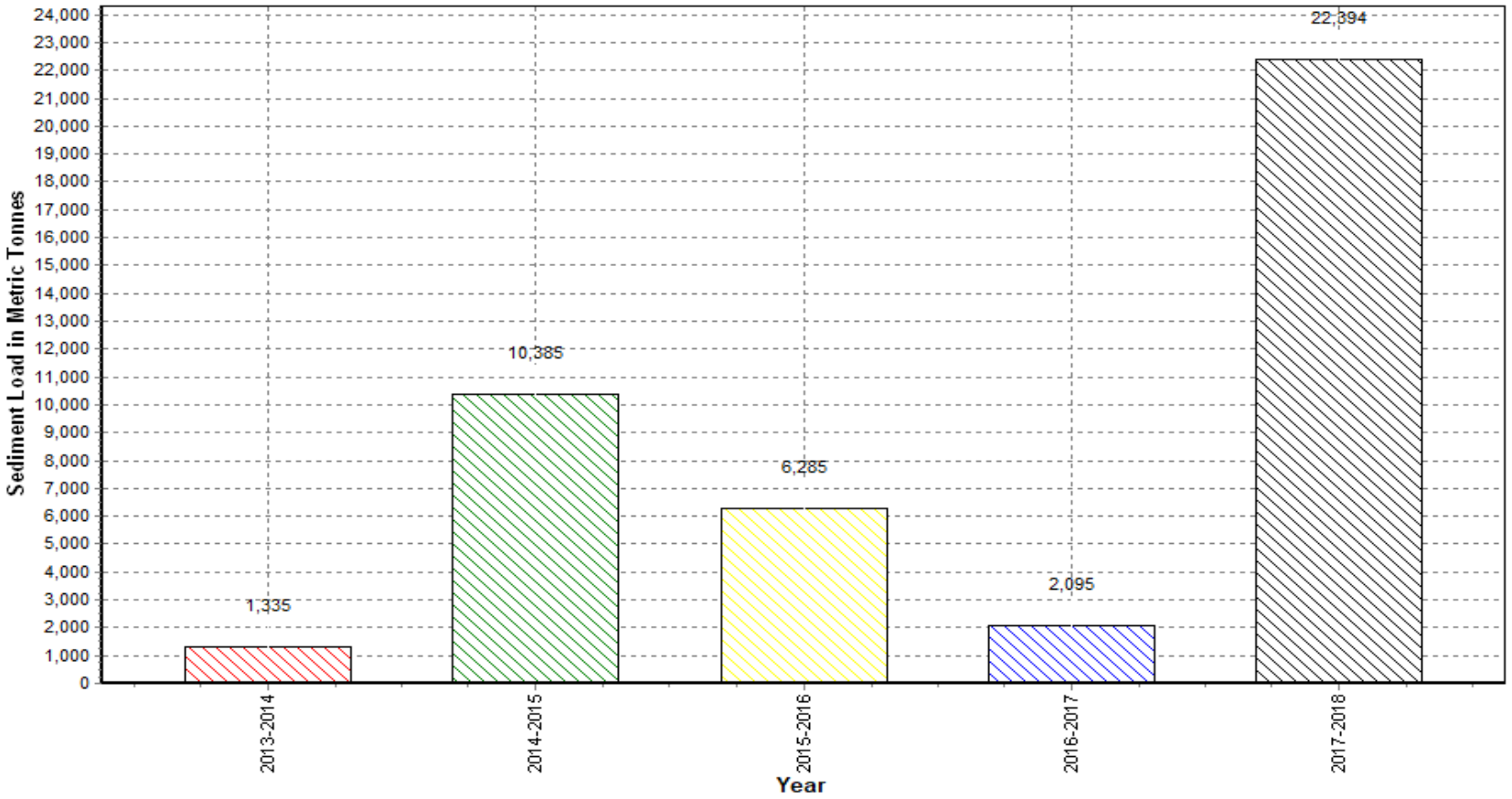
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Annual Sediment Load (Metric Tonnes) : 22394

Annual Sediment Load for the period: 2013-2018

Station Name : PUDUR (KR000M1)
Local River : Kannadipuzha

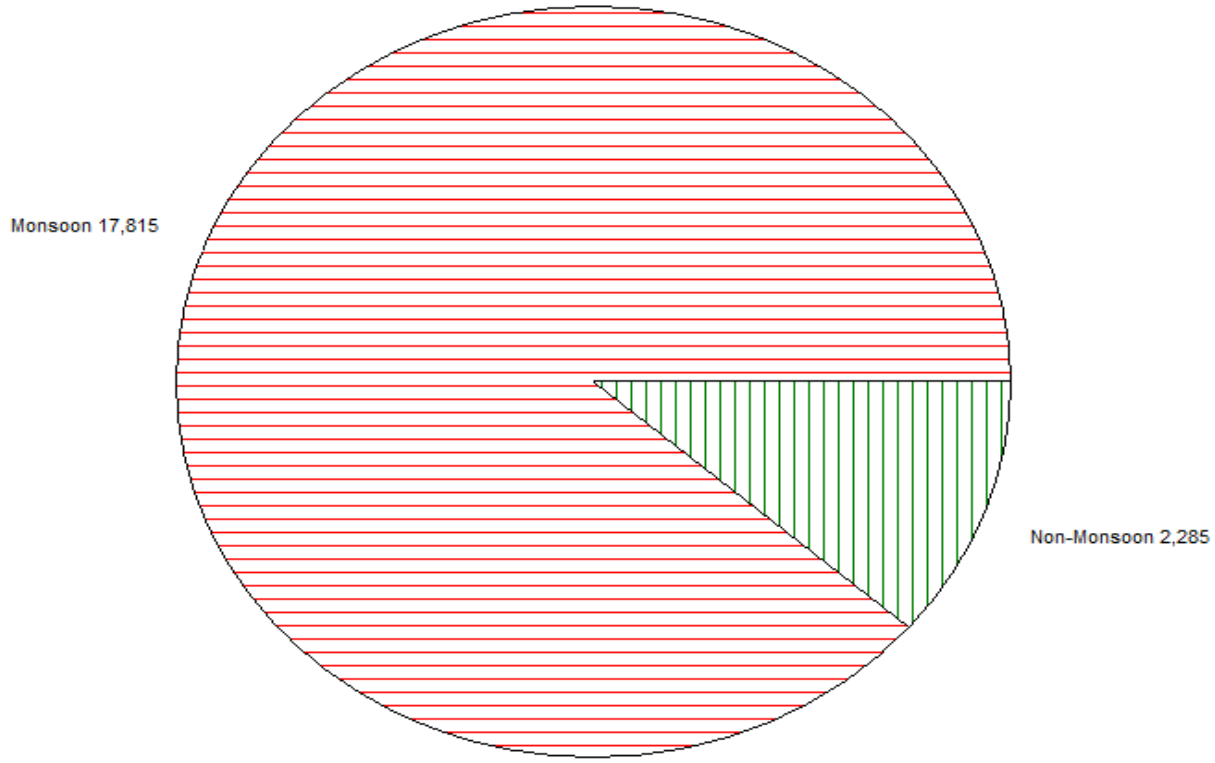
Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



Seasonal Sediment Load for the period : 2013-2017

Station Name : PUDUR (KR000M1)
Local River : Kannadipuzha

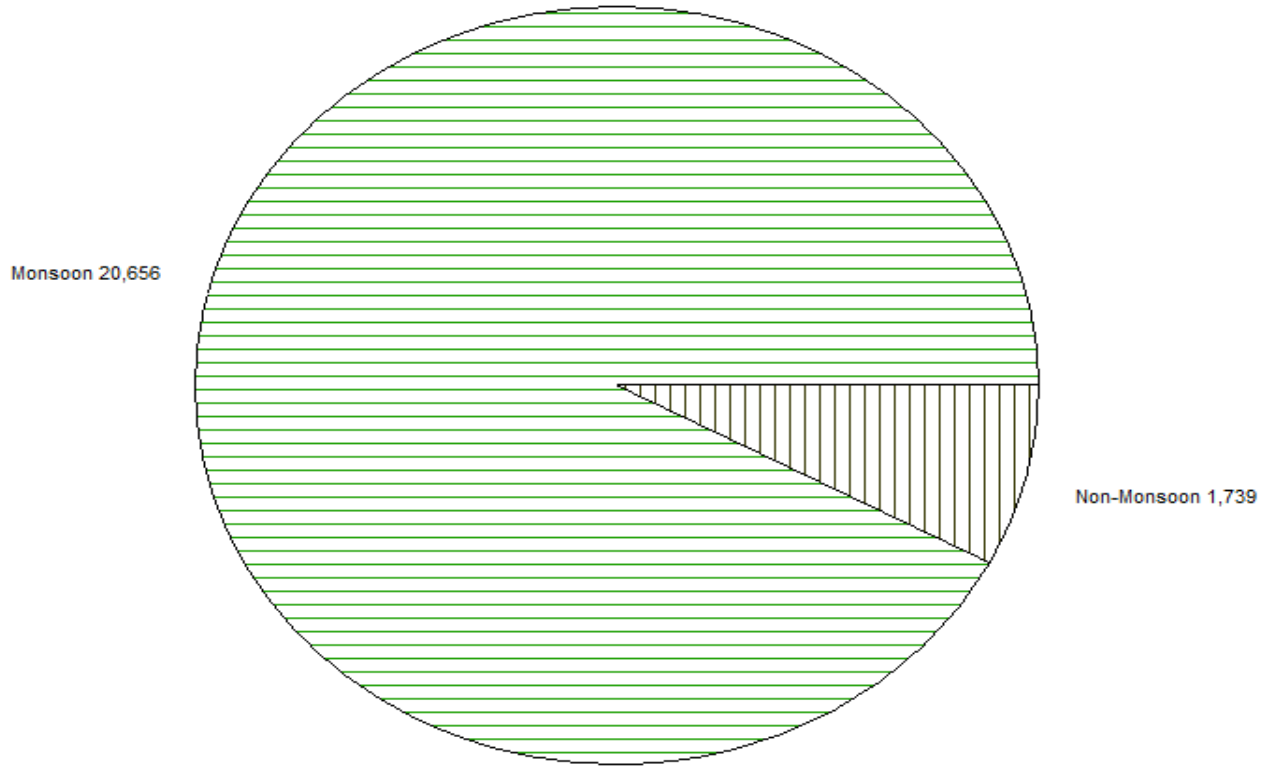
Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



Seasonal Sediment Load for the Year: 2017-2018

Station Name : PUDUR (KR000M1)
Local River : Kannadipuzha

Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



BED MATERIAL ANALYSIS DATA

RIVER : *Bharathapuzha* **CODE NO. :** *KROOOM1*

SITE : *pudur* **CROSS SECTION :** *SGL*

SL. NO.	DATA FOR SAMPLE COLLECTED											GENERAL DATA OF THE RIVER						
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS) Or THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	Bed Material Composition		WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	Bed Material Composition	
									MAX SIZE (mm)	MEAN SIZE (mm)						MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017						**DATE OF COLLECTION**						**00-00-0000**						
				Sample not collected													
POSTMONSOON 2017						**DATE OF COLLECTION**						**00-00-0000**						
				Sample not collected													
PREMONSOON 2018						**DATE OF COLLECTION**						**30-05-2018**						
1	60	-	58.985	1.73	1.73	68.00	-	-	9.0	2.07							
2	100	-	59.515	1.34	1.34	68.00	0.236	-	5.0	1.43	68.406	1.0537	0.0682	0.020	4.916	14.0	2.43
3	140	-	60.565	0.15	0.15	68.00	-	-	14.0	3.78							

Annual Sediment Load for period : 2003-2018

Station Name : AMBARAMPALAYAM (KR000U2) **Division : SR Division, Coimbatore**

Local River : Aliyar **Sub-Division : Middle Cauvery SD, Coimbatore**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2003-2004	2477	615	3092	202
2004-2005	13079	1561	14640	378
2005-2006	5332	3462	8794	397
2006-2007	Sediment Data Observation Not Done			166
2007-2008	Sediment Data Observation Not Done			411
2008-2009	1788	1319	3107	265
2009-2010	9329	1600	10929	428
2010-2011	4585	2727	7312	426
2011-2012	7832	3107	10939	413
2012-2013	1703	1571	3273	213
2013-2014	2603	2107	4710	330
2014-2015	6335	3842	10177	378
2015-2016	2780	5561	8342	312
2016-2017	1650	1214	2864	194
2017-2018	1403	1173	2576	202

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : AMBARAMPALAYAM (KR000U2) **Division : SR Division, Coimbatore**

Local River : Aliyar **Sub-Division : Middle Cauvery SD, Coimbatore**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	2.449	0.000	0.000	0.010	0.010	2	3.383	0.000	0.000	0.017	0.017	5	2.337	0.000	0.000	0.016	0.016	3
2	1.964	0.000	0.000	0.012	0.012	2	3.702	0.000	0.000	0.020	0.020	6	2.218	0.000	0.000	0.014	0.014	3
3	2.884	0.000	0.000	0.011	0.011	3	4.398	0.000	0.000	0.017	0.017	6	8.724	0.000	0.000	0.013	0.013	10
4	8.399	0.000	0.000	0.010	0.010	7	4.649	0.000	0.000	0.015	0.015	6	8.555	0.000	0.000	0.013	0.013	10
5	10.31	0.000	0.000	0.009	0.009	8	5.005	0.000	0.000	0.012	0.012	5	3.113	0.000	0.000	0.011	0.011	3
6	10.10	0.000	0.000	0.009	0.009	8	3.958	0.000	0.000	0.014	0.014	5	2.092	0.000	0.000	0.048	0.048	9
7	8.748	0.000	0.000	0.010	0.010	8	3.384	0.000	0.000	0.015	0.015	4	2.169	0.000	0.000	0.045	0.045	8
8	6.356	0.000	0.000	0.010	0.010	5	3.097	0.000	0.000	0.011	0.011	3	4.639	0.000	0.000	0.011	0.011	4
9	3.354	0.000	0.000	0.009	0.009	3	2.767	0.000	0.000	0.009	0.009	2	4.645	0.000	0.000	0.012	0.012	5
10	1.826	0.000	0.000	0.014	0.014	2	2.868	0.000	0.000	0.011	0.011	3	2.206	0.000	0.000	0.011	0.011	2
11	1.731	0.000	0.000	0.003	0.003	0	2.303	0.000	0.000	0.010	0.010	2	5.952	0.000	0.000	0.011	0.011	6
12	1.918	0.000	0.000	0.025	0.025	4	2.178	0.000	0.000	0.012	0.012	2	2.147	0.000	0.000	0.013	0.013	2
13	2.922	0.000	0.000	0.019	0.019	5	2.196	0.000	0.000	0.014	0.014	3	4.770	0.000	0.000	0.014	0.014	6
14	3.461	0.000	0.000	0.013	0.013	4	3.018	0.000	0.000	0.015	0.015	4	5.736	0.000	0.000	0.014	0.014	7
15	2.904	0.000	0.000	0.013	0.013	3	3.213	0.000	0.000	0.010	0.010	3	3.064	0.000	0.000	0.151	0.151	40
16	2.528	0.000	0.000	0.010	0.010	2	2.767	0.000	0.000	0.098	0.098	23	3.596	0.000	0.000	0.124	0.124	39
17	2.130	0.000	0.000	0.015	0.015	3	2.781	0.000	0.000	0.010	0.010	2	4.324	0.000	0.000	0.011	0.011	4
18	3.064	0.000	0.000	0.009	0.009	2	2.973	0.000	0.000	0.014	0.014	4	3.928	0.000	0.000	0.010	0.010	3
19	3.062	0.000	0.000	0.009	0.009	2	3.014	0.000	0.000	0.011	0.011	3	3.530	0.000	0.000	0.011	0.011	3
20	3.205	0.000	0.000	0.017	0.017	5	3.235	0.000	0.000	0.013	0.013	4	3.537	0.000	0.000	0.011	0.011	3
21	3.185	0.000	0.000	0.011	0.011	3	3.239	0.000	0.000	0.013	0.013	4	4.052	0.000	0.000	0.011	0.011	4
22	2.914	0.000	0.000	0.015	0.015	4	3.108	0.000	0.000	0.012	0.012	3	3.338	0.000	0.000	0.011	0.011	3
23	2.981	0.000	0.000	0.013	0.013	3	3.064	0.000	0.000	0.012	0.012	3	3.753	0.000	0.000	0.011	0.011	4
24	3.153	0.000	0.000	0.014	0.014	4	2.825	0.000	0.000	0.011	0.011	3	3.743	0.000	0.000	0.011	0.011	4
25	3.064	0.000	0.000	0.015	0.015	4	3.167	0.000	0.000	0.011	0.011	3	3.537	0.000	0.000	0.010	0.010	3
26	3.702	0.000	0.000	0.011	0.011	3	2.721	0.000	0.000	0.014	0.014	3	3.752	0.000	0.000	0.011	0.011	4
27	3.835	0.000	0.000	0.010	0.010	3	2.542	0.000	0.000	0.015	0.015	3	3.870	0.000	0.000	0.012	0.012	4
28	3.266	0.000	0.000	0.011	0.011	3	2.272	0.000	0.000	0.015	0.015	3	8.582	0.000	0.000	0.010	0.010	7
29	3.144	0.000	0.000	0.012	0.012	3	2.247	0.000	0.000	0.014	0.014	3	7.955	0.000	0.000	0.009	0.009	6
30	2.835	0.000	0.000	0.012	0.012	3	2.351	0.000	0.000	0.014	0.014	3	4.210	0.000	0.000	0.010	0.010	4
31							2.036	0.000	0.000	0.015	0.015	3	2.284	0.000	0.000	0.013	0.013	3
Ten Daily Mean																		
Ten Daily I	5.638	0.000	0.000	0.010	0.010	5	3.721	0.000	0.000	0.014	0.014	5	4.070	0.000	0.000	0.019	0.019	6
Ten Daily II	2.693	0.000	0.000	0.013	0.013	3	2.768	0.000	0.000	0.021	0.021	5	4.058	0.000	0.000	0.037	0.037	11
Ten Daily III	3.208	0.000	0.000	0.012	0.012	3	2.688	0.000	0.000	0.013	0.013	3	4.461	0.000	0.000	0.011	0.011	4
Monthly																		
Total						112						129						215

Annual Sediment Load (Metric Tonnes) : 2576

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : AMBARAMPALAYAM (KR000U2) **Division : SR Division, Coimbatore**

Local River : Aliyar **Sub-Division : Middle Cauvery SD, Coimbatore**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	8.653	0.000	0.000	0.009	0.009	7	9.037	0.000	0.000	0.016	0.016	13	7.863	0.000	0.000	0.011	0.011	7
2	8.027	0.000	0.000	0.009	0.009	6	12.12	0.000	0.000	0.015	0.015	16	6.406	0.000	0.000	0.010	0.010	6
3	5.156	0.000	0.000	0.010	0.010	5	13.81	0.000	0.000	0.014	0.014	17	6.978	0.000	0.000	0.011	0.011	7
4	3.395	0.000	0.000	0.011	0.011	3	15.62	0.000	0.000	0.016	0.016	22	10.38	0.000	0.000	0.011	0.011	10
5	3.819	0.000	0.000	0.010	0.010	3	14.74	0.000	0.000	0.015	0.015	19	9.299	0.000	0.000	0.011	0.011	9
6	9.149	0.000	0.000	0.010	0.010	8	16.30	0.000	0.000	0.018	0.018	25	8.575	0.000	0.000	0.012	0.012	9
7	8.553	0.000	0.000	0.011	0.011	8	13.29	0.000	0.000	0.015	0.015	17	8.623	0.000	0.000	0.011	0.011	8
8	6.131	0.000	0.000	0.009	0.009	5	13.04	0.000	0.000	0.015	0.015	17	9.111	0.000	0.000	0.011	0.011	9
9	4.806	0.000	0.000	0.010	0.010	4	13.11	0.000	0.000	0.014	0.014	16	9.092	0.000	0.000	0.012	0.012	9
10	6.403	0.000	0.000	0.012	0.012	6	13.30	0.000	0.000	0.014	0.014	16	6.851	0.000	0.000	0.011	0.011	7
11	10.05	0.000	0.000	0.010	0.010	9	14.73	0.000	0.000	0.015	0.015	19	7.861	0.000	0.000	0.010	0.010	7
12	5.971	0.000	0.000	0.011	0.011	6	16.13	0.000	0.000	0.015	0.015	21	8.779	0.000	0.000	0.011	0.011	8
13	5.630	0.000	0.000	0.011	0.011	5	12.08	0.000	0.000	0.015	0.015	16	7.445	0.000	0.000	0.010	0.010	6
14	4.131	0.000	0.000	0.014	0.014	5	14.31	0.000	0.000	0.015	0.015	19	7.448	0.000	0.000	0.010	0.010	6
15	6.791	0.000	0.000	0.012	0.012	7	13.99	0.000	0.000	0.015	0.015	18	7.512	0.000	0.000	0.012	0.012	8
16	10.19	0.000	0.000	0.012	0.012	11	13.13	0.000	0.000	0.014	0.014	16	6.764	0.000	0.000	0.010	0.010	6
17	8.525	0.000	0.000	0.012	0.012	9	9.888	0.000	0.000	0.015	0.015	13	12.72	0.000	0.000	0.011	0.011	12
18	5.671	0.000	0.000	0.013	0.013	6	11.53	0.000	0.000	0.015	0.015	15	8.598	0.000	0.000	0.010	0.010	8
19	4.711	0.000	0.000	0.011	0.011	4	9.689	0.000	0.000	0.014	0.014	12	6.849	0.000	0.000	0.011	0.011	7
20	7.423	0.000	0.000	0.012	0.012	8	9.804	0.000	0.000	0.014	0.014	12	7.207	0.000	0.000	0.010	0.010	6
21	6.875	0.000	0.000	0.015	0.015	9	9.002	0.000	0.000	0.014	0.014	11	8.311	0.000	0.000	0.010	0.010	7
22	7.808	0.000	0.000	0.012	0.012	8	8.525	0.000	0.000	0.017	0.017	12	8.057	0.000	0.000	0.011	0.011	8
23	12.97	0.000	0.000	0.011	0.011	12	11.84	0.000	0.000	0.014	0.014	14	7.061	0.000	0.000	0.010	0.010	6
24	13.04	0.000	0.000	0.013	0.013	15	11.51	0.000	0.000	0.015	0.015	15	7.735	0.000	0.000	0.010	0.010	7
25	12.82	0.000	0.000	0.010	0.010	11	11.44	0.000	0.000	0.015	0.015	15	7.448	0.000	0.000	0.010	0.010	7
26	11.42	0.000	0.000	0.011	0.011	11	8.914	0.000	0.000	0.014	0.014	11	9.833	0.000	0.000	0.011	0.011	9
27	11.35	0.000	0.000	0.013	0.013	13	9.962	0.000	0.000	0.013	0.013	11	8.056	0.000	0.000	0.011	0.011	8
28	13.04	0.000	0.000	0.012	0.012	14	18.46	0.000	0.000	0.013	0.013	21	8.480	0.000	0.000	0.010	0.010	7
29	12.63	0.000	0.000	0.012	0.012	13	9.037	0.000	0.000	0.015	0.015	12	8.261	0.000	0.000	0.011	0.011	8
30	9.299	0.000	0.000	0.012	0.012	10	8.169	0.000	0.000	0.013	0.013	9	9.600	0.000	0.000	0.011	0.011	9
31							9.035	0.000	0.000	0.013	0.013	10						
Ten Daily Mean																		
Ten Daily I	6.409	0.000	0.000	0.010	0.010	6	13.44	0.000	0.000	0.015	0.015	18	8.318	0.000	0.000	0.011	0.011	8
Ten Daily II	6.909	0.000	0.000	0.012	0.012	7	12.53	0.000	0.000	0.015	0.015	16	8.118	0.000	0.000	0.011	0.011	7
Ten Daily III	11.12	0.000	0.000	0.012	0.012	12	10.53	0.000	0.000	0.014	0.014	13	8.284	0.000	0.000	0.010	0.010	8
Monthly																		
Total						240						478						229

Annual Sediment Load (Metric Tonnes) : 2576

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : AMBARAMPALAYAM (KR000U2) **Division : SR Division, Coimbatore**

Local River : Aliyar **Sub-Division : Middle Cauvery SD, Coimbatore**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	8.258	0.000	0.000	0.011	0.011	8	11.63	0.000	0.000	0.010	0.010	10	6.179	0.000	0.000	0.012	0.012	6
2	7.687	0.000	0.000	0.010	0.010	6	14.37	0.000	0.000	0.010	0.010	12	6.808	0.000	0.000	0.010	0.010	6
3	5.403	0.000	0.000	0.009	0.009	4	11.65	0.000	0.000	0.009	0.009	9	7.800	0.000	0.000	0.011	0.011	7
4	7.820	0.000	0.000	0.011	0.011	7	12.93	0.000	0.000	0.010	0.010	11	6.399	0.000	0.000	0.011	0.011	6
5	10.28	0.000	0.000	0.010	0.010	9	12.71	0.000	0.000	0.009	0.009	10	6.530	0.000	0.000	0.012	0.012	7
6	7.946	0.000	0.000	0.011	0.011	8	12.70	0.000	0.000	0.009	0.009	10	3.538	0.000	0.000	0.010	0.010	3
7	8.595	0.000	0.000	0.011	0.011	8	11.60	0.000	0.000	0.010	0.010	10	2.039	0.000	0.000	0.014	0.014	2
8	9.239	0.000	0.000	0.011	0.011	9	13.45	0.000	0.000	0.010	0.010	12	1.239	0.000	0.000	0.013	0.013	1
9	8.183	0.000	0.000	0.010	0.010	7	13.65	0.000	0.000	0.010	0.010	12	1.215	0.000	0.000	0.014	0.014	1
10	8.540	0.000	0.000	0.010	0.010	7	12.59	0.000	0.000	0.009	0.009	10	3.441	0.000	0.436	0.013	0.449	133
11	7.769	0.000	0.000	0.011	0.011	7	12.87	0.000	0.000	0.009	0.009	10	3.935	0.000	0.000	0.013	0.013	4
12	7.794	0.000	0.000	0.010	0.010	7	12.51	0.000	0.000	0.009	0.009	10	3.839	0.000	0.000	0.016	0.016	5
13	7.589	0.000	0.000	0.010	0.010	7	12.03	0.000	0.000	0.010	0.010	10	4.240	0.000	0.000	0.014	0.014	5
14	9.580	0.000	0.000	0.011	0.011	9	10.13	0.000	0.000	0.011	0.011	9	3.933	0.000	0.000	0.015	0.015	5
15	10.63	0.000	0.000	0.010	0.010	9	10.24	0.000	0.000	0.011	0.011	10	5.036	0.000	0.000	0.014	0.014	6
16	9.267	0.000	0.000	0.010	0.010	8	10.12	0.000	0.000	0.010	0.010	9	5.881	0.000	0.000	0.013	0.013	7
17	11.72	0.000	0.000	0.011	0.011	11	10.99	0.000	0.000	0.009	0.009	9	4.961	0.000	0.000	0.014	0.014	6
18	11.93	0.000	0.000	0.010	0.010	10	13.00	0.000	0.000	0.009	0.009	10	4.802	0.000	0.000	0.012	0.012	5
19	11.38	0.000	0.000	0.010	0.010	10	13.07	0.000	0.000	0.009	0.009	10	4.845	0.000	0.000	0.012	0.012	5
20	10.40	0.000	0.000	0.011	0.011	10	10.89	0.000	0.000	0.008	0.008	8	5.898	0.000	0.000	0.011	0.011	6
21	12.46	0.000	0.000	0.011	0.011	12	10.70	0.000	0.000	0.011	0.011	10	3.985	0.000	0.000	0.010	0.010	3
22	9.776	0.000	0.000	0.011	0.011	9	11.13	0.000	0.000	0.009	0.009	9	3.637	0.000	0.000	0.011	0.011	3
23	10.08	0.000	0.000	0.011	0.011	10	7.744	0.000	0.000	0.011	0.011	7	3.571	0.000	0.000	0.012	0.012	4
24	11.04	0.000	0.000	0.011	0.011	10	11.30	0.000	0.000	0.009	0.009	9	3.583	0.000	0.000	0.011	0.011	3
25	11.72	0.000	0.000	0.011	0.011	11	11.01	0.000	0.000	0.009	0.009	9	3.463	0.000	0.000	0.013	0.013	4
26	6.123	0.000	0.000	0.011	0.011	6	10.41	0.000	0.000	0.011	0.011	10	12.51	0.000	0.000	0.008	0.008	9
27	2.859	0.000	0.000	0.014	0.014	3	9.883	0.000	0.000	0.010	0.010	9	11.63	0.000	0.000	0.008	0.008	8
28	5.443	0.000	0.000	0.009	0.009	4	9.850	0.000	0.000	0.011	0.011	9	12.13	0.000	0.000	0.008	0.008	8
29	6.083	0.000	0.000	0.010	0.010	5	10.23	0.000	0.000	0.010	0.010	9						
30	9.251	0.000	0.000	0.011	0.011	9	9.448	0.000	0.000	0.011	0.011	9						
31	11.60	0.000	0.000	0.011	0.011	11	9.398	0.000	0.000	0.010	0.010	8						
Ten Daily Mean																		
Ten Daily I	8.196	0.000	0.000	0.010	0.010	7	12.73	0.000	0.000	0.010	0.010	11	4.519	0.000	0.044	0.012	0.056	17
Ten Daily II	9.806	0.000	0.000	0.010	0.010	9	11.58	0.000	0.000	0.009	0.009	9	4.737	0.000	0.000	0.013	0.013	5
Ten Daily III	8.766	0.000	0.000	0.011	0.011	8	10.10	0.000	0.000	0.010	0.010	9	6.813	0.000	0.000	0.010	0.010	5
Monthly																		
Total						252						297						272

Annual Sediment Load (Metric Tonnes) : 2576

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : AMBARAMPALAYAM (KR000U2) **Division : SR Division, Coimbatore**

Local River : Aliyar **Sub-Division : Middle Cauvery SD, Coimbatore**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	9.216	0.000	0.000	0.010	0.010	8	2.249	0.000	0.000	0.013	0.013	2	4.495	0.000	0.000	0.011	0.011	4
2	10.01	0.000	0.000	0.010	0.010	9	2.262	0.000	0.000	0.021	0.021	4	2.929	0.000	0.000	0.010	0.010	3
3	9.481	0.000	0.000	0.010	0.010	8	2.050	0.000	0.000	0.023	0.023	4	1.822	0.000	0.000	0.010	0.010	2
4	9.850	0.000	0.000	0.009	0.009	8	2.454	0.000	0.000	0.021	0.021	4	2.723	0.000	0.000	0.006	0.006	1
5	10.33	0.000	0.000	0.009	0.009	8	2.006	0.000	0.000	0.022	0.022	4	1.984	0.000	0.000	0.012	0.012	2
6	9.884	0.000	0.000	0.010	0.010	9	2.121	0.000	0.000	0.021	0.021	4	0.732	0.000	0.000	0.012	0.012	1
7	9.913	0.000	0.000	0.010	0.010	9	2.304	0.000	0.000	0.021	0.021	4	0.428	0.000	0.000	0.012	0.012	0
8	10.00	0.000	0.000	0.010	0.010	9	5.369	0.000	0.000	0.011	0.011	5	0.434	0.000	0.000	0.025	0.025	1
9	9.647	0.000	0.000	0.010	0.010	8	6.384	0.000	0.000	0.015	0.015	8	1.099	0.000	0.000	0.009	0.009	1
10	9.606	0.000	0.000	0.010	0.010	8	5.753	0.000	0.000	0.014	0.014	7	1.617	0.000	0.000	0.013	0.013	2
11	7.533	0.000	0.000	0.010	0.010	6	5.962	0.000	0.000	0.014	0.014	7	1.786	0.000	0.000	0.009	0.009	1
12	10.67	0.000	0.000	0.009	0.009	8	6.300	0.000	0.000	0.012	0.012	7	2.139	0.000	0.000	0.014	0.014	3
13	10.87	0.000	0.000	0.009	0.009	8	6.391	0.000	0.000	0.013	0.013	7	1.603	0.000	0.000	0.012	0.012	2
14	9.128	0.000	0.000	0.010	0.010	8	6.649	0.000	0.000	0.011	0.011	6	2.268	0.000	0.000	0.000	0.000	0
15	9.476	0.000	0.000	0.010	0.010	8	5.974	0.000	0.000	0.011	0.011	6	1.238	0.000	0.000	0.003	0.003	0
16	4.120	0.000	0.000	0.014	0.014	5	4.013	0.000	0.000	0.013	0.013	5	1.072	0.000	0.000	0.013	0.013	1
17	3.735	0.000	0.000	0.013	0.013	4	3.576	0.000	0.000	0.013	0.013	4	0.940	0.000	0.000	0.006	0.006	0
18	3.935	0.000	0.000	0.010	0.010	4	4.125	0.000	0.000	0.013	0.013	5	0.749	0.000	0.000	0.017	0.017	1
19	2.318	0.000	0.000	0.014	0.014	3	4.758	0.000	0.000	0.015	0.015	6	0.758	0.000	0.000	0.009	0.009	1
20	1.287	0.000	0.000	0.013	0.013	1	4.770	0.000	0.000	0.016	0.016	7	0.614	0.000	0.000	0.012	0.012	1
21	1.330	0.000	0.000	0.013	0.013	1	5.662	0.000	0.000	0.014	0.014	7	1.904	0.000	0.000	0.010	0.010	2
22	1.156	0.000	0.000	0.013	0.013	1	5.369	0.000	0.000	0.011	0.011	5	2.052	0.000	0.000	0.014	0.014	2
23	1.217	0.000	0.000	0.017	0.017	2	3.495	0.000	0.000	0.012	0.012	4	1.951	0.000	0.000	0.010	0.010	2
24	1.212	0.000	0.000	0.015	0.015	2	3.274	0.000	0.000	0.012	0.012	3	1.952	0.000	0.000	0.010	0.010	2
25	0.732	0.000	0.000	0.011	0.011	1	4.588	0.000	0.000	0.017	0.017	7	0.911	0.000	0.000	0.015	0.015	1
26	1.057	0.000	0.000	0.015	0.015	1	1.884	0.000	0.000	0.000	0.000	0	2.160	0.000	0.000	0.017	0.017	3
27	2.265	0.000	0.000	0.013	0.013	3	0.743	0.000	0.000	0.013	0.013	1	1.702	0.000	0.000	0.012	0.012	2
28	1.907	0.000	0.000	0.015	0.015	2	3.767	0.000	0.000	0.013	0.013	4	1.036	0.000	0.000	0.014	0.014	1
29	2.249	0.000	0.000	0.011	0.011	2	4.802	0.000	0.000	0.012	0.012	5	0.784	0.000	0.000	0.015	0.015	1
30	2.369	0.000	0.000	0.011	0.011	2	4.620	0.000	0.000	0.012	0.012	5	2.707	0.000	0.000	0.010	0.010	2
31	1.955	0.000	0.000	0.015	0.015	3							2.966	0.000	0.000	0.007	0.007	2
Ten Daily Mean																		
Ten Daily I	9.794	0.000	0.000	0.010	0.010	8	3.295	0.000	0.000	0.018	0.018	5	1.826	0.000	0.000	0.012	0.012	2
Ten Daily II	6.308	0.000	0.000	0.011	0.011	6	5.252	0.000	0.000	0.013	0.013	6	1.317	0.000	0.000	0.009	0.009	1
Ten Daily III	1.586	0.000	0.000	0.014	0.014	2	3.820	0.000	0.000	0.012	0.012	4	1.830	0.000	0.000	0.012	0.012	2
Monthly																		
Total						159						147						47

Annual Sediment Load (Metric Tonnes) : 2576

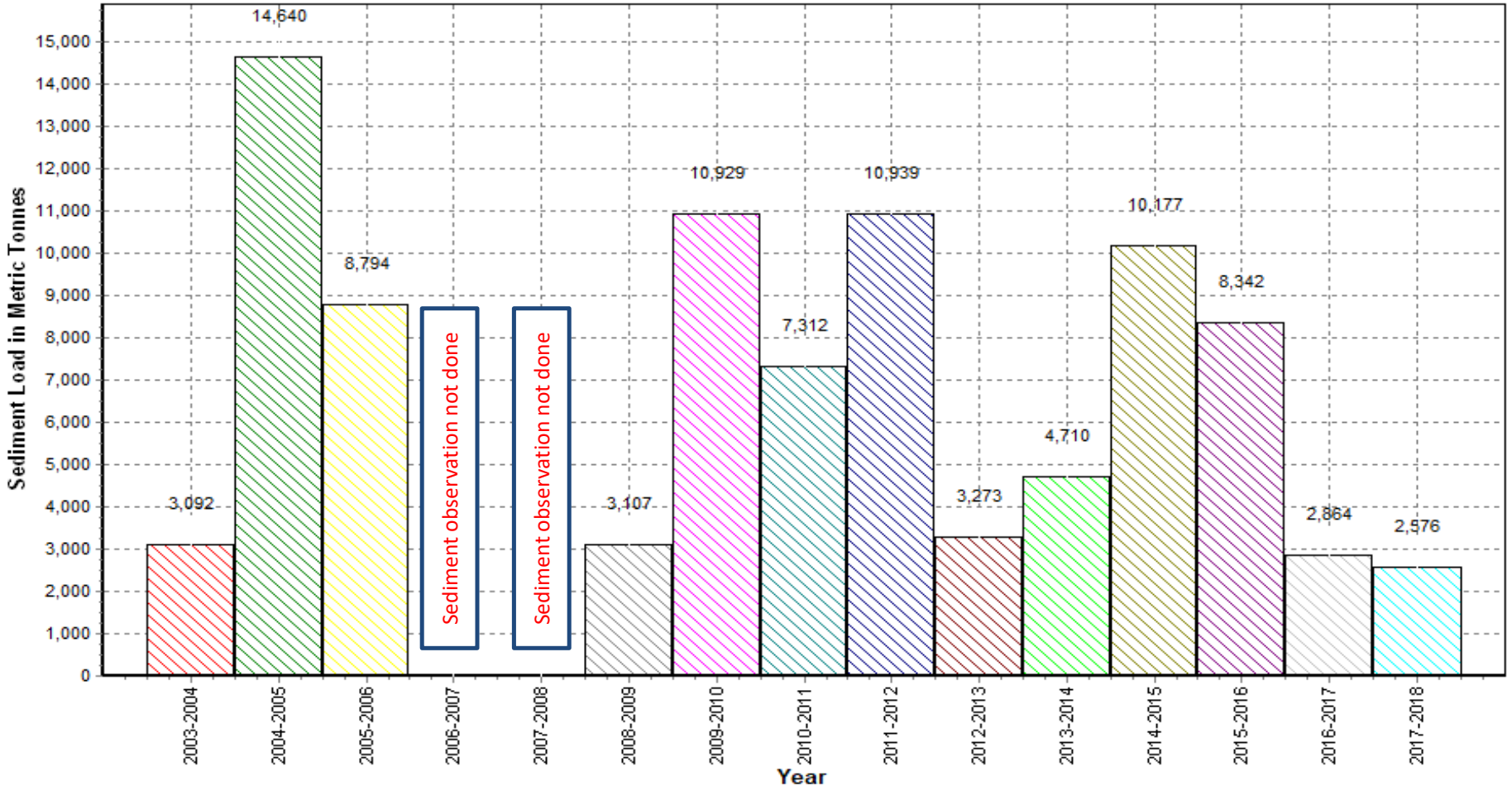
Annual Sediment Load for the period: 2003-2018

Station Name : AMBARAMPALAYAM (KR000U2)

Local River : Aliyar

Division : SR Division, Coimbatore

Sub-Division : Middle Cauvery SD, Coimbatore



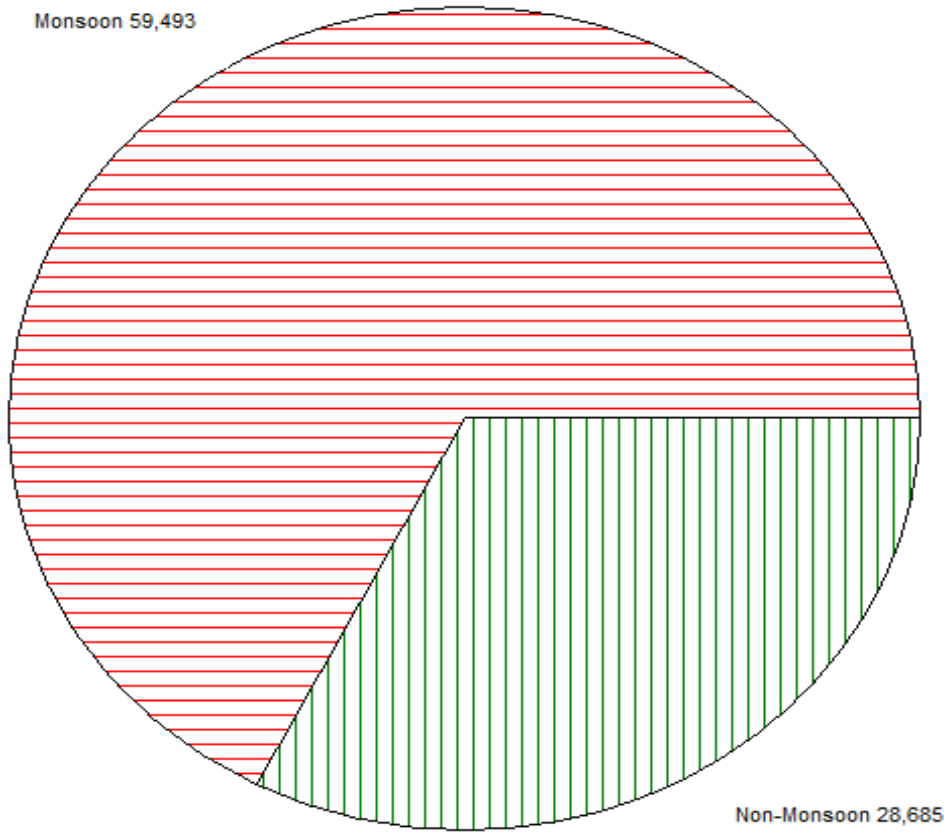
Seasonal Sediment Load for the period : 2003-2017

Station Name : AMBARAMPALAYAM (KR000U2)

Division : SR Division, Coimbatore

Local River : Aliyar

Sub-Division : Middle Cauvery SD, Coimbatore



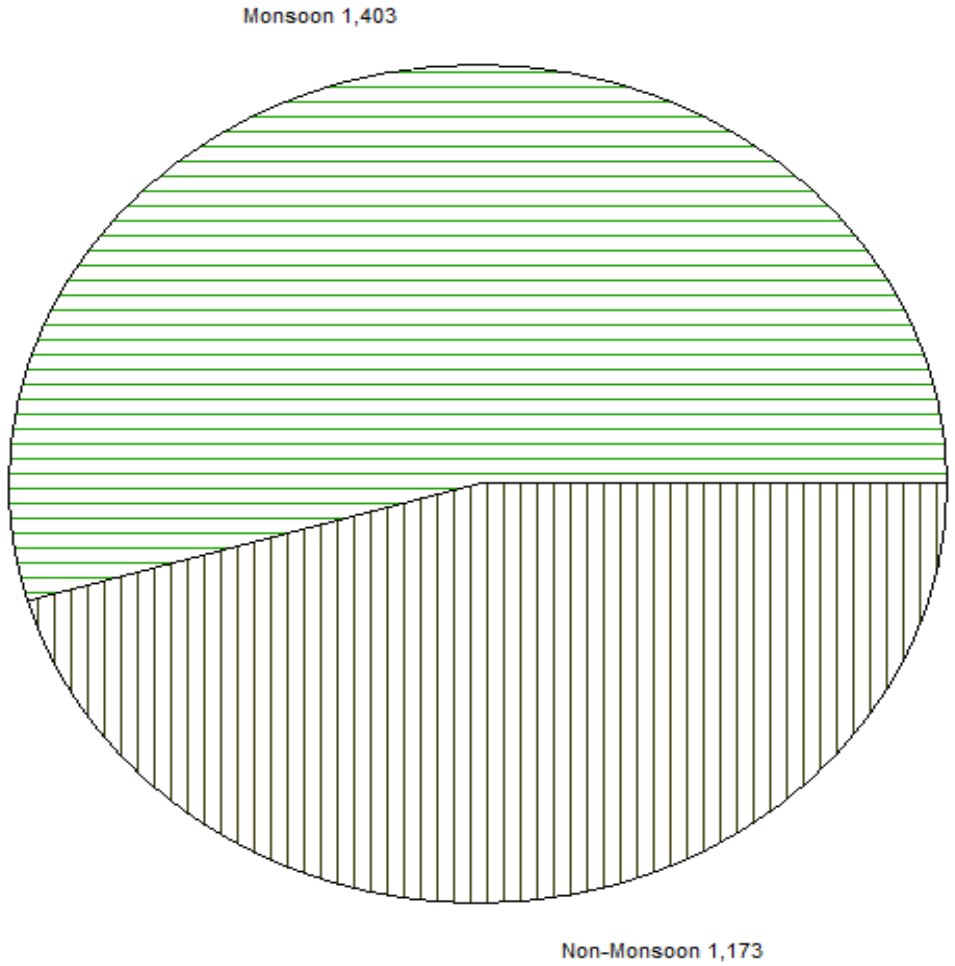
Seasonal Sediment Load for the Year: 2017-2018

Station Name : AMBARAMPALAYAM (KR000U2)

Local River : Aliyar

Division : SR Division, Coimbatore

Sub-Division : Middle Cauvery SD, Coimbatore



Annual Sediment Load for period : 1980-2018

Station Name : ARANGALY (KSA00F3) **Division : SWR Division, Cochin**

Local River : Chalakudy **Sub-Division : SWR SD No 2, Kochi**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1982-1983	23743	839	24582	1169
1983-1984	54309	1390	55699	1736
1984-1985	31314	772	32085	1619
1985-1986	24720	899	25619	1575
1986-1987	29666	542	30208	1393
1987-1988	23061	2333	25394	1297
1988-1989	41575	515	42090	1835
1989-1990	59258	810	60068	1739
1990-1991	29616	576	30192	1655
1991-1992	69592	1061	70653	1961
1992-1993	99558	825	100383	2693
1993-1994	36480	785	37266	1598
1994-1995	129230	892	130121	2765
1995-1996	42885	491	43376	1854
1996-1997	28983	1099	30082	1351
1997-1998	31916	1024	32941	1419
1998-1999	79108	1964	81072	2663
1999-2000	40703	493	41196	1951
2000-2001	15408	31	15438	1115
2001-2002	19080	364	19444	1406
2002-2003	20014	2354	22369	1656
2003-2004	14318	1976	16294	1423
2004-2005	67184	733	67917	1682
2005-2006	66132	2283	68416	2099
2006-2007	0	0	0	1668
2007-2008	0	0	0	3178
2008-2009	34867	858	35725	1355
2009-2010	97095	1229	98324	1789
2010-2011	56090	2395	58485	1614
2011-2012	59480	172	59653	2037
2012-2013	14021	97	14118	932
2013-2014	85750	154	85904	2646
2014-2015	14800	257	15057	2155
2015-2016	6986	357	7344	1509
2016-2017	2876	55	2932	973
2017-2018	21058	1209	22267	1352

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : ARANGALY (KSA00F3) **Division : SWR Division, Cochin**

Local River : Chalakudy **Sub-Division : SWR SD No 2, Kochi**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	46.58	0.000	0.001	0.001	0.002	8	82.55	0.000	0.001	0.002	0.003	20	50.93	0.002	0.003	0.005	0.010	45
2	66.55	0.000	0.001	0.001	0.002	13	98.61	0.001	0.002	0.002	0.005	43	48.21	0.002	0.002	0.003	0.007	29
3	98.61	0.001	0.001	0.001	0.003	26	103.8	0.002	0.003	0.003	0.008	75	49.49	0.002	0.003	0.006	0.011	45
4	75.86	0.001	0.001	0.001	0.003	16	94.98	0.001	0.001	0.002	0.004	34	73.39	0.002	0.004	0.006	0.012	79
5	74.99	0.001	0.001	0.001	0.003	16	80.56	0.001	0.002	0.002	0.006	38	74.87	0.003	0.003	0.006	0.012	78
6	101.7	0.001	0.001	0.001	0.003	27	60.99	0.000	0.002	0.003	0.004	23	131.9	0.005	0.007	0.011	0.023	267
7	43.32	0.000	0.001	0.001	0.002	7	59.45	0.000	0.001	0.002	0.003	15	152.1	0.006	0.009	0.013	0.028	367
8	108.0	0.001	0.001	0.001	0.003	30	57.93	0.000	0.001	0.002	0.003	16	118.3	0.005	0.007	0.013	0.025	250
9	50.67	0.000	0.001	0.001	0.002	9	54.23	0.000	0.000	0.001	0.001	7	109.5	0.003	0.004	0.006	0.013	118
10	44.61	0.000	0.001	0.001	0.002	8	101.9	0.002	0.003	0.003	0.008	74	112.1	0.002	0.004	0.005	0.011	106
11	53.51	0.000	0.001	0.001	0.002	10	100.3	0.002	0.003	0.004	0.009	75	94.43	0.002	0.003	0.004	0.009	69
12	55.70	0.000	0.001	0.001	0.002	10	71.67	0.000	0.001	0.002	0.003	17	110.5	0.004	0.004	0.005	0.012	114
13	71.55	0.000	0.001	0.001	0.002	15	66.95	0.000	0.001	0.002	0.003	16	98.61	0.003	0.004	0.004	0.011	89
14	69.86	0.000	0.001	0.001	0.002	14	89.64	0.001	0.002	0.002	0.005	37	84.38	0.002	0.002	0.003	0.007	47
15	68.93	0.001	0.001	0.001	0.003	17	82.84	0.001	0.001	0.002	0.004	27	74.12	0.002	0.003	0.014	0.019	121
16	69.33	0.001	0.001	0.001	0.003	19	70.70	0.000	0.001	0.002	0.004	22	67.31	0.001	0.005	0.002	0.008	45
17	52.14	0.000	0.001	0.001	0.002	10	68.00	0.000	0.001	0.002	0.003	18	68.76	0.001	0.002	0.002	0.005	31
18	59.45	0.000	0.001	0.001	0.003	14	77.82	0.000	0.001	0.002	0.003	22	89.49	0.002	0.002	0.002	0.006	48
19	50.67	0.000	0.001	0.001	0.002	11	76.11	0.000	0.002	0.002	0.004	28	138.8	0.004	0.005	0.006	0.015	182
20	46.39	0.000	0.002	0.002	0.004	14	104.7	0.002	0.003	0.003	0.008	73	117.9	0.003	0.006	0.006	0.015	150
21	45.95	0.000	0.001	0.002	0.003	13	134.7	0.003	0.004	0.005	0.012	138	159.7	0.002	0.005	0.012	0.019	259
22	40.81	0.000	0.000	0.002	0.002	6	107.6	0.002	0.003	0.004	0.009	86	257.3	0.003	0.010	0.014	0.027	600
23	37.41	0.000	0.000	0.002	0.002	5	88.72	0.002	0.003	0.003	0.007	56	160.6	0.007	0.010	0.013	0.029	405
24	80.32	0.000	0.001	0.002	0.002	15	86.37	0.002	0.003	0.003	0.008	57	122.0	0.002	0.003	0.003	0.007	77
25	113.5	0.000	0.001	0.002	0.003	32	82.17	0.001	0.002	0.003	0.006	43	98.78	0.002	0.003	0.003	0.008	70
26	127.1	0.000	0.002	0.002	0.004	43	78.23	0.001	0.002	0.002	0.005	36	95.71	0.002	0.002	0.004	0.008	66
27	174.6	0.000	0.001	0.003	0.004	54	74.19	0.001	0.002	0.002	0.005	32	113.5	0.002	0.003	0.005	0.011	103
28	186.4	0.001	0.002	0.002	0.005	81	101.3	0.001	0.002	0.003	0.006	56	118.0	0.002	0.003	0.007	0.012	122
29	120.6	0.000	0.002	0.003	0.004	42	79.03	0.002	0.002	0.002	0.006	42	151.0	0.003	0.004	0.011	0.018	235
30	106.5	0.000	0.001	0.002	0.003	31	73.25	0.002	0.002	0.003	0.006	39	307.9	0.004	0.005	0.022	0.032	849
31							58.16	0.002	0.002	0.003	0.007	34	143.6	0.003	0.004	0.005	0.013	155
Ten Daily Mean																		
Ten Daily I	71.09	0.000	0.001	0.001	0.002	16	79.50	0.001	0.002	0.002	0.005	35	92.08	0.003	0.005	0.007	0.015	138
Ten Daily II	59.75	0.000	0.001	0.001	0.003	13	80.87	0.001	0.002	0.002	0.005	34	94.43	0.002	0.003	0.005	0.011	90
Ten Daily III	103.3	0.000	0.001	0.002	0.003	32	87.61	0.002	0.002	0.003	0.007	56	157.1	0.003	0.005	0.009	0.017	267
Monthly Total						617						1300						5221

Annual Sediment Load (Metric Tonnes) : 22267

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : ARANGALY (KSA00F3) **Division : SWR Division, Cochin**

Local River : Chalakudy **Sub-Division : SWR SD No 2, Kochi**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	89.68	0.002	0.003	0.007	0.013	97	51.99	0.001	0.002	0.021	0.024	109	39.22	0.002	0.002	0.002	0.006	19
2	104.3	0.002	0.003	0.011	0.017	150	58.66	0.002	0.002	0.019	0.022	113	30.74	0.001	0.002	0.002	0.006	15
3	111.3	0.002	0.003	0.008	0.013	125	62.73	0.001	0.002	0.013	0.016	88	41.79	0.001	0.002	0.003	0.006	22
4	67.37	0.002	0.003	0.005	0.009	55	64.46	0.001	0.001	0.019	0.021	118	36.02	0.002	0.002	0.003	0.006	20
5	64.13	0.002	0.003	0.005	0.010	54	65.51	0.002	0.003	0.018	0.023	127	35.34	0.002	0.002	0.003	0.006	19
6	52.84	0.002	0.002	0.007	0.010	45	65.51	0.002	0.002	0.011	0.014	82	36.81	0.002	0.003	0.003	0.008	25
7	62.55	0.001	0.002	0.003	0.007	37	53.91	0.002	0.002	0.004	0.009	40	33.31	0.001	0.002	0.002	0.006	16
8	92.75	0.004	0.005	0.010	0.019	154	61.85	0.002	0.002	0.007	0.011	59	42.00	0.002	0.002	0.003	0.007	24
9	88.80	0.004	0.006	0.016	0.026	203	62.28	0.002	0.002	0.005	0.009	48	44.10	0.002	0.002	0.003	0.007	25
10	79.42	0.003	0.004	0.009	0.015	106	56.19	0.001	0.001	0.003	0.006	27	37.21	0.001	0.002	0.003	0.006	19
11	94.55	0.002	0.002	0.007	0.011	88	52.40	0.001	0.002	0.004	0.007	30	38.43	0.001	0.002	0.005	0.008	27
12	72.10	0.002	0.003	0.006	0.011	69	47.18	0.000	0.002	0.005	0.006	25	29.80	0.002	0.001	0.006	0.009	23
13	71.63	0.003	0.003	0.013	0.019	116	50.59	0.001	0.001	0.007	0.008	37	26.51	0.000	0.001	0.003	0.004	9
14	120.7	0.004	0.006	0.055	0.064	671	52.15	0.001	0.001	0.006	0.008	36	20.32	0.000	0.001	0.005	0.006	11
15	93.03	0.002	0.003	0.023	0.028	223	64.47	0.002	0.002	0.007	0.011	60	33.86	0.001	0.001	0.016	0.018	51
16	82.78	0.002	0.002	0.009	0.014	97	54.26	0.002	0.002	0.003	0.007	31	32.61	0.003	0.005	0.021	0.029	81
17	335.1	0.003	0.004	0.033	0.039	1132	66.82	0.002	0.003	0.004	0.009	51	19.64	0.000	0.000	0.025	0.025	42
18	845.8	0.003	0.006	0.052	0.060	4399	68.52	0.002	0.002	0.008	0.012	68	29.64	0.001	0.001	0.023	0.025	64
19	417.3	0.002	0.004	0.047	0.053	1893	62.92	0.001	0.001	0.014	0.017	92	28.58	0.001	0.001	0.023	0.025	62
20	230.0	0.002	0.003	0.005	0.010	189	56.10	0.002	0.003	0.005	0.010	48	37.72	0.001	0.001	0.020	0.021	68
21	147.5	0.002	0.003	0.026	0.031	390	52.59	0.002	0.002	0.003	0.006	27	36.19	0.002	0.002	0.020	0.023	73
22	125.7	0.003	0.003	0.013	0.019	211	59.29	0.001	0.002	0.008	0.012	59	26.57	0.000	0.000	0.025	0.025	57
23	63.15	0.001	0.002	0.011	0.014	74	46.75	0.001	0.002	0.002	0.005	20	24.44	0.000	0.000	0.031	0.031	65
24	56.79	0.001	0.003	0.020	0.023	114	47.64	0.001	0.001	0.003	0.005	19	23.34	0.000	0.000	0.024	0.024	49
25	52.58	0.001	0.003	0.004	0.008	36	47.76	0.001	0.002	0.002	0.004	18	31.01	0.000	0.000	0.025	0.025	67
26	90.33	0.001	0.003	0.005	0.009	68	47.99	0.001	0.001	0.002	0.004	17	39.94	0.000	0.000	0.026	0.026	91
27	80.21	0.002	0.003	0.004	0.008	57	33.32	0.002	0.002	0.003	0.007	20	38.49	0.000	0.000	0.024	0.024	80
28	75.33	0.002	0.003	0.004	0.009	55	27.31	0.000	0.000	0.003	0.003	7	32.38	0.000	0.000	0.024	0.024	68
29	74.16	0.002	0.003	0.004	0.008	53	30.43	0.001	0.001	0.003	0.005	13	31.29	0.000	0.000	0.032	0.032	88
30	54.36	0.002	0.002	0.011	0.015	69	44.80	0.001	0.003	0.004	0.008	31	35.68	0.000	0.000	0.024	0.024	74
31							35.62	0.001	0.002	0.003	0.006	18						
Ten Daily Mean																		
Ten Daily I	81.31	0.002	0.003	0.008	0.014	103	60.31	0.001	0.002	0.012	0.015	81	37.65	0.002	0.002	0.003	0.006	21
Ten Daily II	236.3	0.002	0.004	0.025	0.031	888	57.54	0.001	0.002	0.006	0.009	48	29.71	0.001	0.001	0.015	0.017	44
Ten Daily III	82.01	0.002	0.003	0.010	0.014	113	43.05	0.001	0.002	0.003	0.006	23	31.93	0.000	0.000	0.026	0.026	71
Monthly																		
Total						11029						1536						1355

Annual Sediment Load (Metric Tonnes) : 22267

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : ARANGALY (KSA00F3) | **Division : SWR Division, Cochin**

Local River : Chalakudy | **Sub-Division : SWR SD No 2, Kochi**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	22.55	0.000	0.000	0.023	0.023	45	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	20.00	0.000	0.000	0.023	0.023	39	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	18.87	0.000	0.000	0.022	0.022	36	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	31.54	0.000	0.000	0.022	0.022	59	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	25.03	0.000	0.000	0.018	0.018	39	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	18.37	0.000	0.000	0.024	0.024	39	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	18.29	0.000	0.000	0.023	0.023	37	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	20.12	0.000	0.000	0.024	0.024	41	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	15.15	0.000	0.000	0.027	0.027	36	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	15.90	0.000	0.000	0.029	0.029	40	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	12.48	0.000	0.000	0.038	0.038	41	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	21.93	0.000	0.000	0.024	0.024	46	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	17.94	0.000	0.000	0.022	0.022	34	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	16.22	0.000	0.000	0.019	0.019	27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	20.58	0.000	0.000	0.024	0.024	41	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	6.857	0.000	0.000	0.010	0.010	15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						560						0						0

Annual Sediment Load (Metric Tonnes) : 22267

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : ARANGALY (KSA00F3) **Division : SWR Division, Cochin**

Local River : Chalakudy **Sub-Division : SWR SD No 2, Kochi**

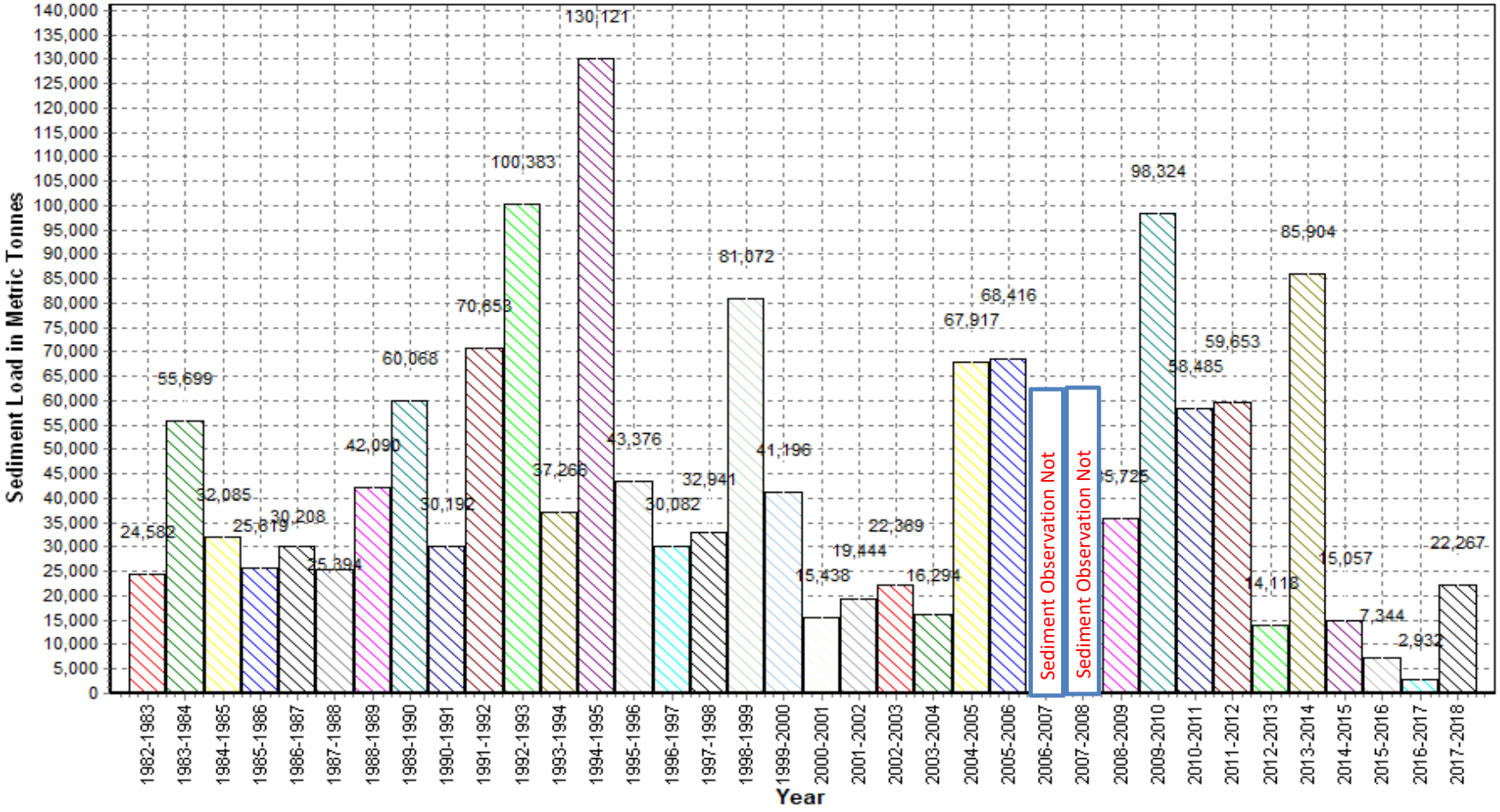
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	6.260	0.000	0.000	0.082	0.082	45
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	4.262	0.000	0.000	0.063	0.063	23
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	3.100	0.000	0.000	0.071	0.071	19
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	2.839	0.000	0.000	0.065	0.065	16
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	11.86	0.000	0.002	0.045	0.047	48
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	13.25	0.000	0.002	0.043	0.044	51
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	7.172	0.000	0.002	0.073	0.075	47
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	10.00	0.000	0.002	0.051	0.053	45
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	13.60	0.000	0.002	0.030	0.032	37
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	56.73	0.000	0.002	0.026	0.027	134
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	56.58	0.000	0.003	0.015	0.017	85
31	0.000	0.000	0.000	0.000	0.000	0							43.50	0.000	0.002	0.025	0.027	101
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	1.646	0.000	0.000	0.028	0.028	10
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	19.34	0.000	0.001	0.028	0.029	50
Monthly																		
Total						0						0						650

Annual Sediment Load (Metric Tonnes) : 22267

Annual Sediment Load for the period: 1980-2018

Station Name : ARANGALY (KSA00F3)
Local River : Chalakudy

Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi

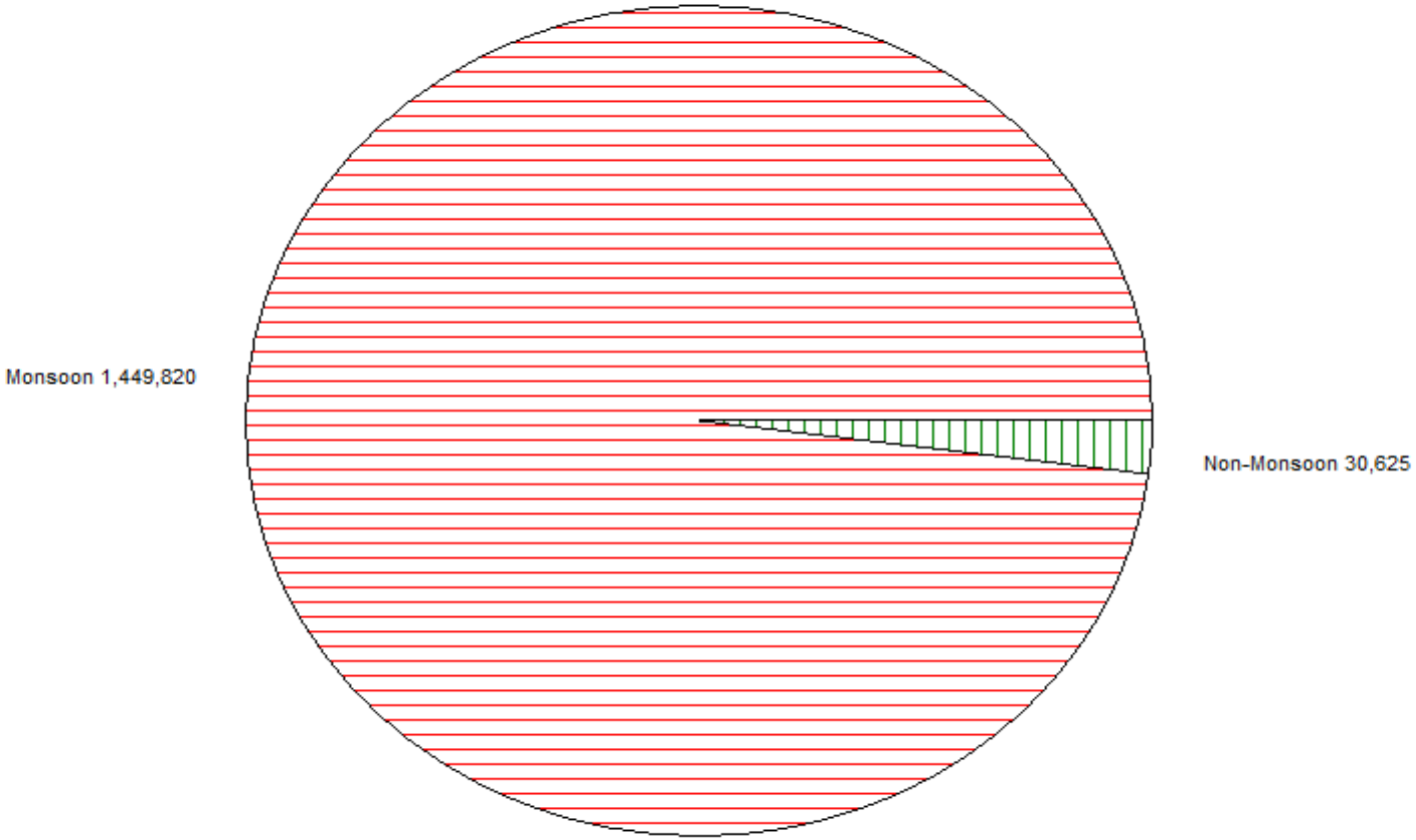


Seasonal Sediment Load for the period : 1980-2017

Station Name : ARANGALY (KSA00F3)
Local River : Chalakudy

Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi

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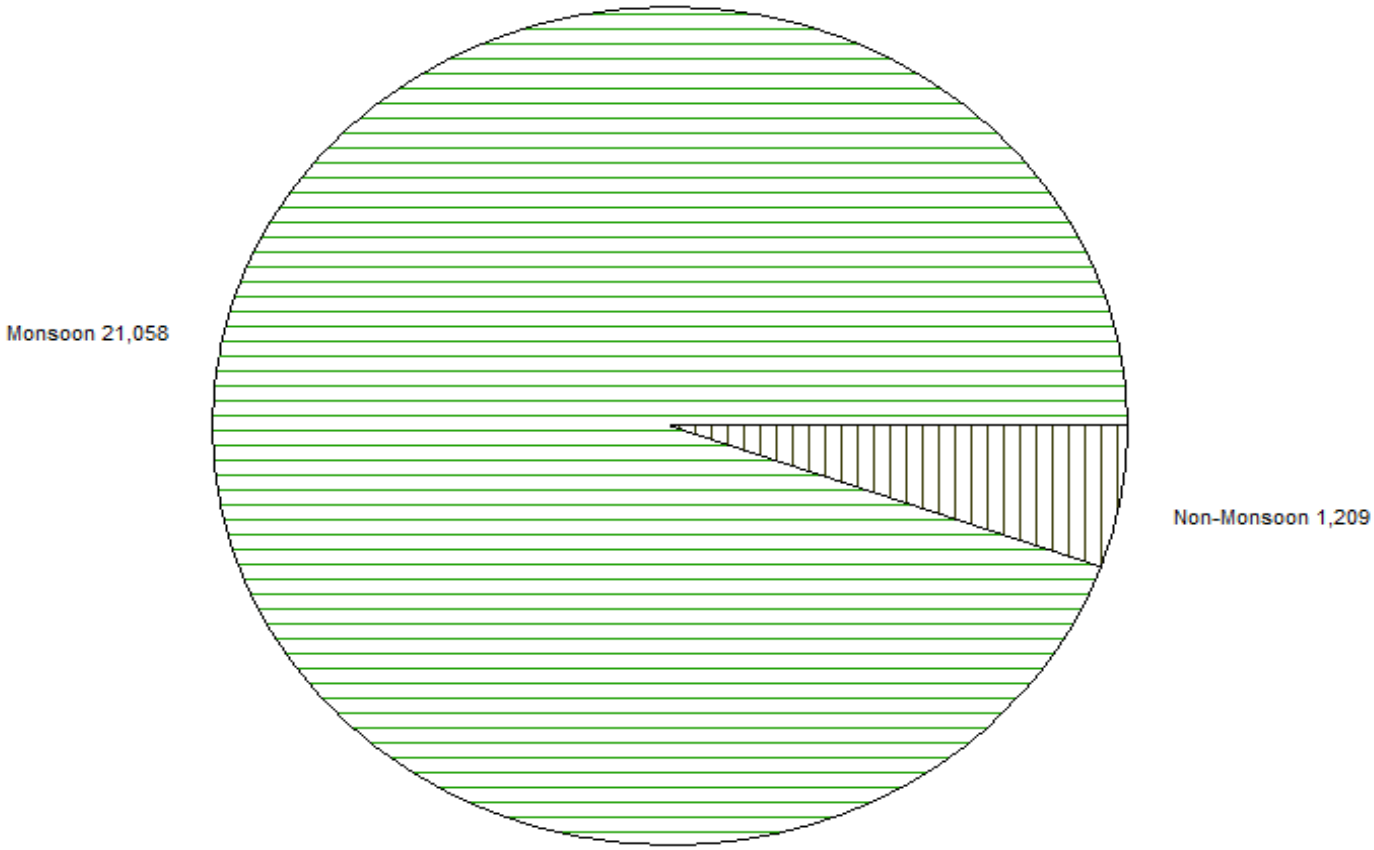


Seasonal Sediment Load for the Year: 2017-2018

Station Name : ARANGALY (KSA00F3)
Local River : Chalakudy

Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi

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BED MATERIAL ANALYSIS DATA

RIVER : *Chalakudy* **CODE NO. :** *KSAOOF3*

SITE : *Arangaly* **CROSS SECTION :** *SGL*

SL. NO.	DATA FOR SAMPLE COLLECTED										GENERAL DATA OF THE RIVER						
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS) OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	Bed Material Composition		WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	Bed Material Composition	
									MAX SIZE (mm)	MEAN SIZE (mm)						MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017						**DATE OF COLLECTION**				**11-08-2017**							
1	30	2.340	-	-	-		-	-	5.0	2.45							
2	60	2.660	-	-	-		-	-	5.0	1.14							
3	100	0.80	-	-	-		-	-	11.0	2.11	127.76	1.6543	0.4449	0.0011	94.03	11.0	2.47
4	150	-	(-)1.110	-	2.38	7.5	0.549	9.7997	6.0	2.69							
5	200	1.270	-	-	-		-	-	5.0	3.97							
POSTMONSOON 2017						**DATE OF COLLECTION**				**23-02-2018**							
1	30	2.330	-						5.0	1.64							
2	60	2.370	-						5.0	1.11							
3	100	0.860	-	-	-	-	-	-	7.0	1.57	-	-	-	-	-	18.0	2.39
4	150	-	0.950						18.0	4.11							
5	200	1.280	-						5.0	3.53							
PREMONSOON 2018						**DATE OF COLLECTION**				**15-05-2018**							
1	30	2.330	-	-	-	-		-	4.8	0.99							
2	60	2.370	-	-	-	-		-	5.0	1.25							
3	100	0.810	-	-	-	-	-	-	5.0	1.44	-	-	-	-	-	6.0	1.93
4	150	-	0.930	-	-	-		-	6.0	2.62							
5	200	1.130	-	-	-	-		-	5.0	3.37							

Annual Sediment Load for period : 1972-2018

Station Name : NEELESWARAM (KS000F3) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1972-1973	191966	12429	204395	7331
1973-1974	211647	915	212563	8083
1974-1975	467008	1135	468144	10276
1975-1976	850208	1954	852162	11778
1976-1977	114408	10240	124648	4621
1977-1978	156892	4312	161205	5908
1978-1979	321991	50798	372790	8161
1979-1980	336763	2775	339538	7600
1980-1981	225591	4817	230408	8285
1981-1982	492807	3119	495926	9659
1982-1983	133552	1184	134736	3876
1983-1984	202183	5391	207574	5751
1984-1985	195317	4052	199370	6305
1985-1986	414469	6837	421305	6573
1986-1987	314169	6791	320960	5630
1987-1988	111528	11804	123332	4868
1988-1989	248319	8271	256590	5560
1989-1990	634652	12115	646767	7628
1990-1991	193662	7126	200789	6176
1991-1992	504747	5948	510695	9968
1992-1993	462811	6619	469431	8142
1993-1994	186198	6210	192408	6355
1994-1995	432591	6447	439038	8911
1995-1996	534591	2518	537110	6715
1996-1997	335735	1512	337247	6048
1997-1998	219279	2070	221348	6603
1998-1999	342130	12505	354635	8762
1999-2000	101315	381	101696	5777
2000-2001	83211	3969	87180	6263
2001-2002	108555	3679	112234	6892
2002-2003	52805	2203	55008	5320
2003-2004	47538	9366	56904	4678
2004-2005	88695	2634	91329	6626
2005-2006	126985	17249	144234	9321
2006-2007	75529	0	75529	7023
2007-2008	145675	0	145675	10067
2008-2009	53839	0	53839	5602
2009-2010	119887	2459	122346	6686
2010-2011	55901	2936	58837	7509

Annual Sediment Load for period : 1972-2018

Station Name : NEELESWARAM (KS000F3) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**

2011-2012	48913	5419	54332	7489
2012-2013	3183	634	3817	3960
2013-2014	287786	2172	289958	9391
2014-2015	142442	4778	147220	8033
2015-2016	68740	4084	72824	5043
2016-2017	36009	1440	37449	3759
2017-2018	128253	9521	137774	5604

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : NEELESWARAM (KS000F3) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	128.3	0.000	0.000	0.006	0.006	63	274.0	0.000	0.001	0.009	0.010	230	376.3	0.002	0.005	0.033	0.040	1304
2	189.0	0.000	0.000	0.004	0.004	69	314.0	0.000	0.001	0.011	0.012	323	391.4	0.001	0.006	0.047	0.054	1809
3	170.0	0.000	0.000	0.004	0.004	65	358.9	0.000	0.001	0.013	0.014	428	295.2	0.001	0.001	0.015	0.017	421
4	93.25	0.000	0.000	0.005	0.005	41	309.9	0.000	0.001	0.005	0.006	171	281.9	0.001	0.001	0.013	0.015	373
5	99.26	0.000	0.000	0.005	0.005	44	265.1	0.000	0.001	0.004	0.005	112	430.4	0.001	0.002	0.016	0.019	688
6	161.8	0.000	0.000	0.004	0.004	62	209.6	0.000	0.001	0.004	0.004	74	637.4	0.001	0.002	0.010	0.013	722
7	158.6	0.000	0.000	0.005	0.005	62	234.9	0.000	0.000	0.005	0.005	97	535.9	0.001	0.002	0.013	0.016	732
8	138.5	0.000	0.000	0.005	0.005	56	196.7	0.000	0.000	0.006	0.006	109	454.4	0.000	0.001	0.008	0.009	342
9	290.6	0.000	0.000	0.003	0.003	78	194.4	0.000	0.000	0.007	0.007	118	522.3	0.000	0.002	0.006	0.008	338
10	137.0	0.000	0.000	0.005	0.005	56	201.1	0.000	0.000	0.004	0.004	68	416.9	0.000	0.001	0.010	0.011	396
11	194.4	0.000	0.000	0.004	0.004	69	198.0	0.000	0.008	0.004	0.012	198	369.7	0.000	0.001	0.008	0.009	291
12	170.0	0.000	0.000	0.004	0.004	65	193.7	0.000	0.000	0.005	0.005	84	322.9	0.000	0.001	0.006	0.006	173
13	216.9	0.000	0.000	0.004	0.004	73	183.5	0.000	0.001	0.002	0.003	43	302.2	0.000	0.001	0.005	0.006	157
14	199.9	0.000	0.000	0.004	0.004	71	257.7	0.000	0.000	0.001	0.002	38	240.6	0.000	0.001	0.002	0.003	69
15	246.2	0.000	0.000	0.005	0.005	102	210.3	0.000	0.005	0.001	0.006	111	224.7	0.000	0.004	0.005	0.010	190
16	209.9	0.000	0.000	0.002	0.002	44	178.5	0.000	0.004	0.001	0.005	76	245.3	0.000	0.000	0.001	0.001	19
17	171.2	0.000	0.000	0.004	0.004	61	96.24	0.000	0.000	0.002	0.002	12	211.6	0.000	0.000	0.002	0.002	31
18	140.0	0.000	0.000	0.004	0.004	48	206.2	0.000	0.001	0.002	0.002	36	240.2	0.000	0.000	0.000	0.000	0
19	139.5	0.000	0.000	0.004	0.004	45	279.9	0.000	0.002	0.016	0.017	416	576.7	0.000	0.002	0.017	0.020	977
20	160.2	0.000	0.000	0.005	0.005	69	513.4	0.000	0.016	0.088	0.104	4613	435.6	0.028	0.028	0.028	0.084	3173
21	199.4	0.000	0.000	0.005	0.005	91	437.9	0.000	0.004	0.015	0.019	726	604.2	0.001	0.004	0.039	0.044	2292
22	210.1	0.000	0.000	0.008	0.008	142	320.5	0.000	0.003	0.009	0.011	310	845.8	0.005	0.015	0.039	0.059	4326
23	112.5	0.000	0.000	0.019	0.019	183	257.5	0.000	0.002	0.005	0.007	154	496.1	0.001	0.005	0.014	0.020	836
24	303.9	0.000	0.000	0.032	0.032	851	198.4	0.000	0.000	0.002	0.002	36	430.5	0.000	0.004	0.009	0.013	476
25	462.2	0.000	0.000	0.038	0.038	1498	195.7	0.000	0.000	0.004	0.004	71	311.1	0.000	0.001	0.003	0.004	118
26	404.4	0.000	0.000	0.045	0.045	1572	179.6	0.000	0.000	0.006	0.006	88	272.5	0.000	0.000	0.000	0.000	0
27	675.3	0.000	0.000	0.045	0.045	2608	202.8	0.000	0.000	0.004	0.004	65	432.7	0.000	0.003	0.020	0.024	879
28	734.5	0.000	0.000	0.101	0.101	6435	274.7	0.000	0.000	0.008	0.008	199	422.5	0.000	0.003	0.019	0.021	781
29	436.0	0.000	0.000	0.043	0.043	1616	245.1	0.000	0.003	0.010	0.013	273	583.6	0.002	0.013	0.025	0.040	2032
30	296.8	0.000	0.000	0.014	0.014	346	228.6	0.000	0.003	0.011	0.014	275	879.6	0.004	0.012	0.050	0.067	5069
31							224.7	0.000	0.003	0.007	0.010	190	480.6	0.001	0.004	0.011	0.016	652
Ten Daily Mean																		
Ten Daily I	156.6	0.000	0.000	0.005	0.005	59	255.9	0.000	0.001	0.007	0.007	173	434.2	0.001	0.002	0.017	0.020	712
Ten Daily II	184.8	0.000	0.000	0.004	0.004	65	231.7	0.000	0.004	0.012	0.016	563	317.0	0.003	0.004	0.007	0.014	508
Ten Daily III	383.5	0.000	0.000	0.035	0.035	1534	251.4	0.000	0.002	0.007	0.009	217	523.6	0.001	0.006	0.021	0.028	1587
Monthly																		
Total						16581						9744						29664

Annual Sediment Load (Metric Tonnes) : 137774

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : NEELESWARAM (KS000F3) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	353.7	0.001	0.004	0.029	0.034	1048	213.0	0.000	0.000	0.010	0.011	195	238.4	0.000	0.001	0.019	0.020	414
2	537.3	0.001	0.004	0.029	0.034	1588	192.6	0.000	0.000	0.009	0.009	146	175.9	0.000	0.001	0.010	0.011	169
3	447.3	0.000	0.004	0.011	0.015	591	182.8	0.000	0.000	0.008	0.008	128	276.6	0.001	0.002	0.035	0.037	889
4	348.6	0.000	0.003	0.012	0.015	443	241.4	0.000	0.000	0.008	0.008	175	205.5	0.001	0.002	0.005	0.008	133
5	336.3	0.000	0.004	0.010	0.014	392	168.6	0.000	0.000	0.003	0.003	48	259.6	0.001	0.002	0.028	0.031	689
6	361.6	0.000	0.004	0.019	0.023	715	263.7	0.000	0.000	0.009	0.009	198	204.3	0.001	0.002	0.004	0.007	115
7	295.0	0.000	0.004	0.014	0.018	454	230.8	0.000	0.000	0.005	0.005	104	209.1	0.000	0.001	0.003	0.005	87
8	389.4	0.000	0.004	0.080	0.083	2806	222.7	0.000	0.000	0.005	0.005	94	208.1	0.000	0.000	0.009	0.009	156
9	460.9	0.000	0.038	0.034	0.072	2871	173.2	0.000	0.000	0.004	0.004	54	227.5	0.000	0.000	0.010	0.010	204
10	323.7	0.000	0.005	0.014	0.019	529	204.1	0.000	0.000	0.009	0.009	153	213.6	0.000	0.000	0.010	0.010	179
11	308.5	0.000	0.001	0.012	0.013	344	164.4	0.000	0.000	0.003	0.003	45	236.1	0.000	0.000	0.007	0.007	149
12	261.0	0.000	0.004	0.009	0.013	286	437.0	0.000	0.009	0.134	0.143	5403	220.7	0.000	0.000	0.008	0.008	147
13	232.1	0.000	0.000	0.003	0.003	62	316.4	0.000	0.002	0.072	0.074	2023	166.6	0.000	0.000	0.010	0.010	148
14	328.5	0.000	0.005	0.033	0.038	1067	353.1	0.000	0.004	0.091	0.095	2910	155.9	0.000	0.000	0.011	0.011	154
15	280.2	0.000	0.001	0.015	0.017	402	286.1	0.000	0.004	0.047	0.051	1261	149.3	0.000	0.000	0.006	0.006	74
16	228.3	0.000	0.001	0.014	0.015	296	223.6	0.000	0.004	0.006	0.009	182	134.9	0.000	0.000	0.004	0.004	50
17	560.7	0.001	0.002	0.043	0.046	2228	257.5	0.000	0.001	0.014	0.016	352	123.0	0.000	0.000	0.005	0.005	53
18	2050	0.005	0.031	0.121	0.157	27808	279.3	0.000	0.001	0.025	0.026	637	137.2	0.000	0.000	0.003	0.003	37
19	782.5	0.001	0.005	0.031	0.037	2468	236.4	0.000	0.001	0.003	0.004	86	176.8	0.000	0.000	0.008	0.008	124
20	488.1	0.001	0.003	0.009	0.013	552	209.7	0.000	0.001	0.005	0.006	103	145.0	0.000	0.000	0.004	0.004	51
21	397.2	0.000	0.001	0.019	0.020	697	239.5	0.000	0.000	0.003	0.003	62	198.1	0.000	0.000	0.004	0.004	67
22	411.5	0.000	0.002	0.008	0.010	352	218.8	0.000	0.000	0.003	0.003	62	151.9	0.000	0.000	0.003	0.003	37
23	321.3	0.000	0.001	0.007	0.008	225	173.5	0.000	0.001	0.003	0.004	57	160.8	0.000	0.000	0.010	0.010	132
24	279.3	0.000	0.001	0.006	0.007	174	183.2	0.000	0.000	0.007	0.007	114	152.3	0.000	0.000	0.007	0.007	89
25	272.2	0.000	0.001	0.006	0.007	165	194.4	0.000	0.000	0.007	0.007	114	133.1	0.000	0.000	0.002	0.002	26
26	321.5	0.000	0.001	0.010	0.011	306	253.2	0.000	0.000	0.006	0.006	125	168.4	0.000	0.000	0.001	0.001	17
27	274.5	0.000	0.001	0.010	0.011	259	299.5	0.002	0.004	0.028	0.034	890	144.5	0.000	0.000	0.001	0.001	6
28	275.5	0.000	0.001	0.015	0.016	376	233.2	0.000	0.009	0.038	0.047	945	111.1	0.000	0.000	0.002	0.002	21
29	246.9	0.000	0.001	0.013	0.014	288	218.8	0.000	0.007	0.031	0.038	720	127.9	0.000	0.000	0.003	0.003	35
30	268.2	0.000	0.001	0.014	0.015	355	173.3	0.000	0.000	0.010	0.010	156	126.0	0.000	0.000	0.004	0.004	41
31							162.2	0.000	0.000	0.006	0.006	81						
Ten Daily Mean																		
Ten Daily I	385.4	0.000	0.007	0.025	0.033	1144	209.3	0.000	0.000	0.007	0.007	130	221.9	0.000	0.001	0.013	0.015	303
Ten Daily II	552.0	0.001	0.005	0.029	0.035	3551	276.4	0.000	0.003	0.040	0.043	1300	164.6	0.000	0.000	0.007	0.007	99
Ten Daily III	306.8	0.000	0.001	0.011	0.012	319	213.6	0.000	0.002	0.013	0.015	302	147.4	0.000	0.000	0.004	0.004	47
Monthly																		
Total						50145						17625						4494

Annual Sediment Load (Metric Tonnes) : 137774

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : NEELESWARAM (KS000F3) **Division : SWR Division, Cochin**

Local River : Periyar **Sub-Division : SWR SD No 2, Kochi**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	82.83	0.000	0.000	0.003	0.003	18	9.308	0.000	0.000	0.003	0.003	2	11.26	0.000	0.000	0.005	0.005	5
2	78.75	0.000	0.000	0.004	0.004	24	8.780	0.000	0.000	0.003	0.003	2	13.54	0.000	0.000	0.004	0.004	5
3	94.56	0.000	0.000	0.004	0.004	35	8.560	0.000	0.000	0.003	0.003	2	10.09	0.000	0.000	0.004	0.004	3
4	88.53	0.000	0.000	0.004	0.004	29	8.415	0.000	0.000	0.003	0.003	2	10.50	0.000	0.000	0.005	0.005	4
5	102.7	0.000	0.000	0.005	0.005	42	9.779	0.000	0.000	0.003	0.003	2	7.547	0.000	0.000	0.007	0.007	5
6	97.22	0.000	0.000	0.004	0.004	37	9.235	0.000	0.000	0.010	0.010	8	11.00	0.000	0.000	0.004	0.004	4
7	87.69	0.000	0.000	0.004	0.004	30	9.308	0.000	0.000	0.010	0.010	8	9.256	0.000	0.000	0.006	0.006	4
8	97.22	0.000	0.000	0.004	0.004	37	10.63	0.000	0.000	0.010	0.010	9	0.000	0.000	0.000	0.000	0.000	0
9	108.3	0.000	0.000	0.005	0.005	46	12.11	0.000	0.000	0.008	0.008	8	0.000	0.000	0.000	0.000	0.000	0
10	108.3	0.000	0.000	0.005	0.005	46	10.92	0.000	0.000	0.007	0.007	7	0.000	0.000	0.000	0.000	0.000	0
11	103.7	0.000	0.000	0.005	0.005	42	12.91	0.000	0.000	0.007	0.007	7	10.75	0.000	0.000	0.008	0.008	7
12	116.1	0.000	0.000	0.005	0.005	53	12.86	0.000	0.000	0.006	0.006	7	10.09	0.000	0.000	0.006	0.006	5
13	129.4	0.000	0.000	0.006	0.006	66	9.852	0.000	0.000	0.003	0.003	3	10.50	0.000	0.000	0.014	0.014	12
14	152.5	0.000	0.000	0.007	0.007	88	11.78	0.000	0.000	0.012	0.012	12	9.696	0.000	0.000	0.010	0.010	8
15	126.2	0.000	0.000	0.003	0.003	36	11.48	0.000	0.000	0.010	0.010	10	0.000	0.000	0.000	0.000	0.000	0
16	102.0	0.000	0.000	0.005	0.005	42	11.53	0.000	0.000	0.007	0.007	7	8.097	0.000	0.000	0.003	0.003	2
17	110.2	0.000	0.000	0.006	0.006	54	13.61	0.000	0.000	0.002	0.002	3	10.75	0.000	0.000	0.011	0.011	10
18	125.8	0.000	0.000	0.006	0.006	65	11.33	0.000	0.000	0.003	0.003	3	11.09	0.000	0.000	0.019	0.019	18
19	123.1	0.000	0.000	0.003	0.003	33	12.74	0.000	0.000	0.003	0.003	3	0.000	0.000	0.000	0.000	0.000	0
20	134.5	0.000	0.000	0.004	0.004	44	9.178	0.000	0.000	0.002	0.002	2	10.50	0.000	0.000	0.006	0.006	6
21	126.7	0.000	0.000	0.004	0.004	39	10.92	0.000	0.000	0.011	0.011	10	0.000	0.000	0.000	0.000	0.000	0
22	125.0	0.000	0.000	0.003	0.003	35	11.61	0.000	0.000	0.013	0.013	13	9.214	0.000	0.000	0.003	0.003	2
23	133.9	0.000	0.000	0.006	0.006	67	11.17	0.000	0.000	0.012	0.012	11	11.34	0.000	0.000	0.008	0.008	8
24	108.3	0.000	0.000	0.005	0.005	49	11.97	0.000	0.000	0.014	0.014	15	11.60	0.000	0.000	0.013	0.013	13
25	99.92	0.000	0.000	0.005	0.005	43	11.82	0.000	0.000	0.017	0.017	17	54.31	0.000	0.000	0.083	0.083	389
26	90.23	0.000	0.000	0.005	0.005	36	11.34	0.000	0.000	0.030	0.030	30	50.06	0.000	0.000	0.135	0.135	584
27	103.6	0.000	0.000	0.008	0.008	70	11.52	0.000	0.000	0.000	0.000	0	68.28	0.000	0.000	0.009	0.009	51
28	85.27	0.000	0.000	0.058	0.058	427	11.00	0.000	0.000	0.004	0.004	4	57.25	0.000	0.000	0.007	0.007	34
29	71.94	0.000	0.000	0.084	0.084	522	11.43	0.000	0.000	0.006	0.006	6						
30	65.80	0.000	0.000	0.006	0.006	34	11.96	0.000	0.000	0.005	0.005	5						
31	10.26	0.000	0.000	0.006	0.006	5	11.26	0.000	0.000	0.007	0.007	7						
Ten Daily Mean																		
Ten Daily I	94.61	0.000	0.000	0.004	0.004	34	9.705	0.000	0.000	0.006	0.006	5	7.319	0.000	0.000	0.005	0.005	4
Ten Daily II	122.3	0.000	0.000	0.005	0.005	52	11.73	0.000	0.000	0.006	0.006	6	8.147	0.000	0.000	0.010	0.010	9
Ten Daily III	92.81	0.000	0.000	0.017	0.017	121	11.45	0.000	0.000	0.011	0.011	11	32.76	0.000	0.000	0.037	0.037	154
Monthly Total						2194						224						1181

Annual Sediment Load (Metric Tonnes) : 137774

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : NEELESWARAM (KS000F3) | **Division : SWR Division, Cochin**

Local River : Periyar | **Sub-Division : SWR SD No 2, Kochi**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	54.31	0.000	0.000	0.008	0.008	35	57.25	0.000	0.000	0.004	0.004	19	73.63	0.000	0.000	0.005	0.005	33
2	53.34	0.000	0.000	0.005	0.005	24	77.00	0.000	0.000	0.003	0.003	17	82.33	0.000	0.000	0.006	0.006	41
3	68.28	0.000	0.000	0.004	0.004	22	45.81	0.000	0.000	0.004	0.004	14	65.01	0.000	0.000	0.003	0.003	19
4	88.00	0.000	0.000	0.007	0.007	52	38.54	0.000	0.000	0.003	0.003	9	73.37	0.000	0.000	0.006	0.006	36
5	73.11	0.000	0.000	0.002	0.002	15	44.23	0.000	0.000	0.004	0.004	16	63.41	0.000	0.000	0.011	0.011	58
6	55.77	0.000	0.000	0.004	0.004	17	35.37	0.000	0.000	0.004	0.004	11	108.5	0.000	0.000	0.010	0.010	93
7	57.25	0.000	0.000	0.003	0.003	13	48.67	0.000	0.000	0.006	0.006	25	94.77	0.000	0.000	0.010	0.010	83
8	74.52	0.000	0.000	0.003	0.003	17	76.88	0.000	0.000	0.002	0.002	13	54.41	0.000	0.000	0.013	0.013	60
9	65.21	0.000	0.000	0.006	0.006	35	70.82	0.000	0.000	0.003	0.003	16	95.91	0.000	0.000	0.010	0.010	80
10	60.29	0.000	0.000	0.006	0.006	32	59.50	0.000	0.000	0.004	0.004	23	178.1	0.000	0.000	0.012	0.012	180
11	65.01	0.000	0.000	0.004	0.004	23	70.04	0.000	0.000	0.003	0.003	18	219.8	0.000	0.000	0.009	0.009	167
12	48.60	0.000	0.000	0.005	0.005	21	78.67	0.000	0.000	0.006	0.006	42	55.65	0.000	0.000	0.014	0.014	67
13	67.21	0.000	0.000	0.007	0.007	41	57.25	0.000	0.000	0.009	0.009	43	57.25	0.000	0.000	0.017	0.017	86
14	89.54	0.000	0.000	0.004	0.004	34	88.00	0.000	0.000	0.005	0.005	40	30.29	0.000	0.000	0.006	0.006	16
15	81.22	0.000	0.000	0.004	0.004	29	63.41	0.000	0.000	0.010	0.010	53	77.87	0.000	0.000	0.013	0.013	84
16	70.22	0.000	0.000	0.004	0.004	21	65.05	0.000	0.000	0.008	0.008	43	160.0	0.000	0.000	0.010	0.010	134
17	74.36	0.000	0.000	0.005	0.005	30	84.42	0.000	0.000	0.004	0.004	30	134.6	0.000	0.000	0.007	0.007	83
18	66.64	0.000	0.000	0.002	0.002	10	75.89	0.000	0.000	0.002	0.002	13	157.6	0.000	0.000	0.013	0.013	177
19	61.84	0.000	0.000	0.003	0.003	15	58.12	0.000	0.000	0.002	0.002	9	63.43	0.000	0.000	0.007	0.007	37
20	69.96	0.000	0.000	0.003	0.003	16	55.55	0.000	0.000	0.004	0.004	19	168.7	0.000	0.000	0.019	0.019	278
21	65.56	0.000	0.000	0.002	0.002	11	59.46	0.000	0.000	0.004	0.004	20	72.56	0.000	0.000	0.008	0.008	47
22	76.93	0.000	0.000	0.002	0.002	10	66.64	0.000	0.000	0.004	0.004	23	76.88	0.000	0.000	0.005	0.005	33
23	71.17	0.000	0.000	0.002	0.002	12	104.2	0.000	0.000	0.004	0.004	37	74.15	0.000	0.000	0.007	0.007	44
24	67.99	0.000	0.000	0.003	0.003	15	53.52	0.000	0.000	0.004	0.004	20	153.0	0.000	0.000	0.010	0.010	126
25	68.28	0.000	0.000	0.009	0.009	53	59.25	0.000	0.000	0.012	0.012	60	147.0	0.000	0.000	0.011	0.011	142
26	61.84	0.000	0.000	0.008	0.008	43	46.67	0.000	0.000	0.012	0.012	47	57.25	0.000	0.000	0.014	0.014	68
27	48.70	0.000	0.000	0.005	0.005	23	80.49	0.000	0.000	0.008	0.008	53	50.06	0.000	0.000	0.016	0.016	68
28	32.90	0.000	0.000	0.005	0.005	14	113.0	0.000	0.000	0.005	0.005	44	150.7	0.000	0.000	0.009	0.009	112
29	86.09	0.000	0.000	0.004	0.004	26	42.18	0.000	0.000	0.015	0.015	55	433.2	0.000	0.000	0.023	0.023	872
30	80.49	0.000	0.000	0.004	0.004	26	58.76	0.000	0.000	0.011	0.011	57	326.1	0.000	0.000	0.021	0.021	604
31	70.87	0.000	0.000	0.004	0.004	26							203.2	0.000	0.000	0.020	0.020	346
Ten Daily Mean																		
Ten Daily I	65.01	0.000	0.000	0.005	0.005	26	55.41	0.000	0.000	0.004	0.004	16	88.94	0.000	0.000	0.008	0.008	68
Ten Daily II	69.46	0.000	0.000	0.004	0.004	24	69.64	0.000	0.000	0.005	0.005	31	112.5	0.000	0.000	0.011	0.011	113
Ten Daily III	66.44	0.000	0.000	0.004	0.004	24	68.42	0.000	0.000	0.008	0.008	42	158.6	0.000	0.000	0.013	0.013	224
Monthly																		
Total						761						888						4274

Annual Sediment Load (Metric Tonnes) : 137774

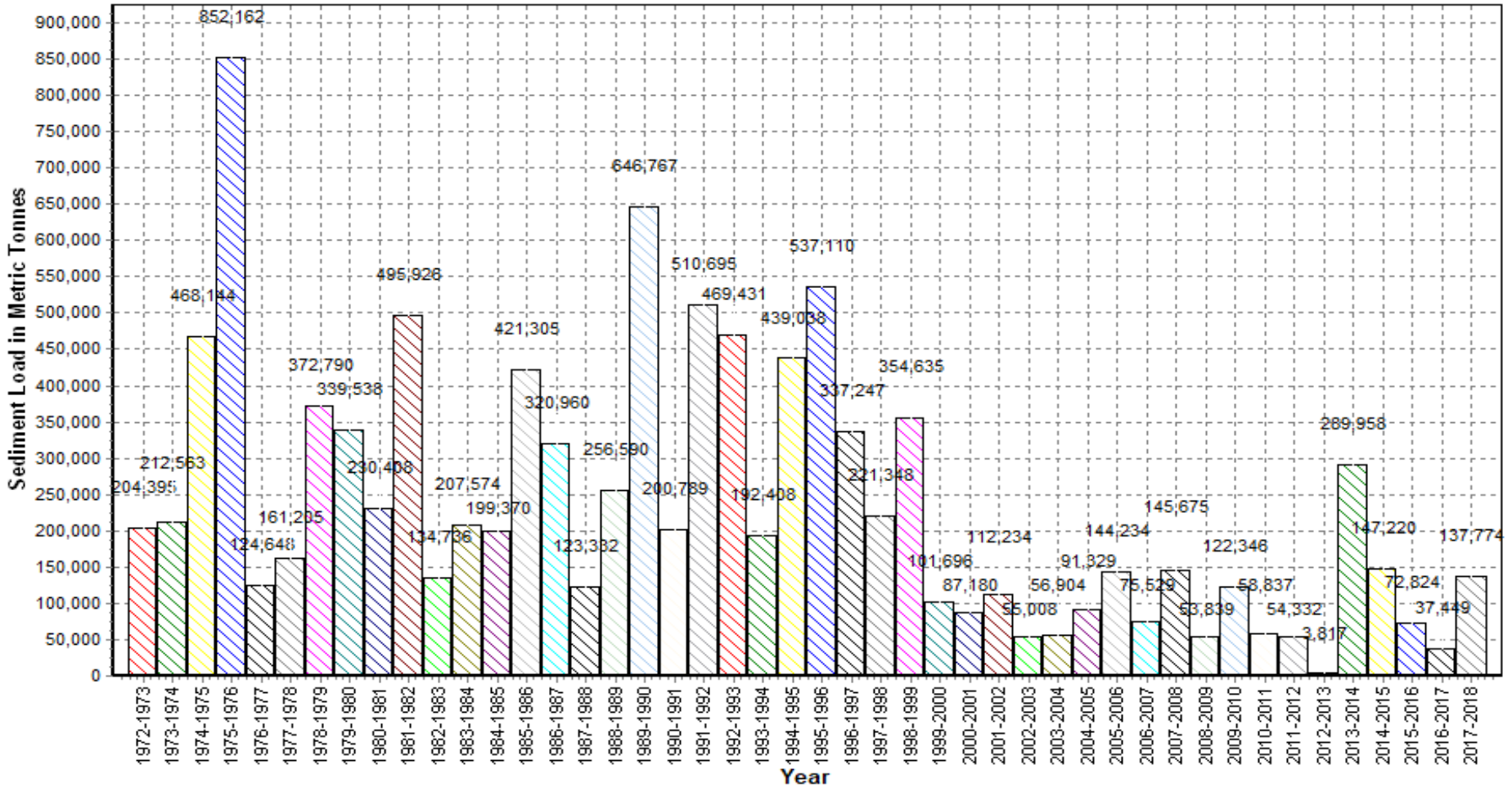
Annual Sediment Load for the period: 1972-2018

Station Name : NEELESWARAM (KS000F3)

Local River : Periyar

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi

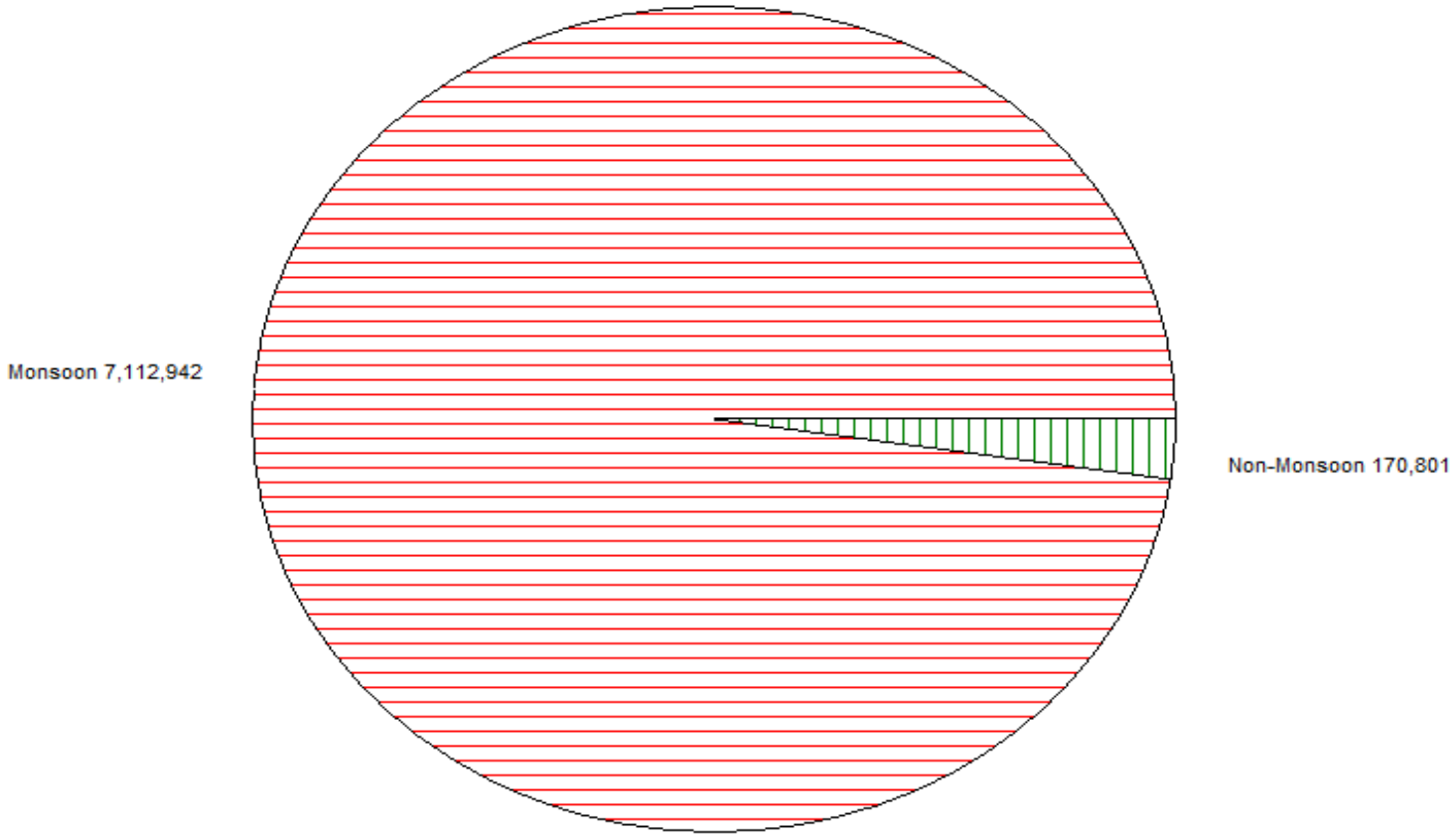


Seasonal Sediment Load for the period : 1972-2017

Station Name : NEELESWARAM (KS000F3)
Local River : Periyar

Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi

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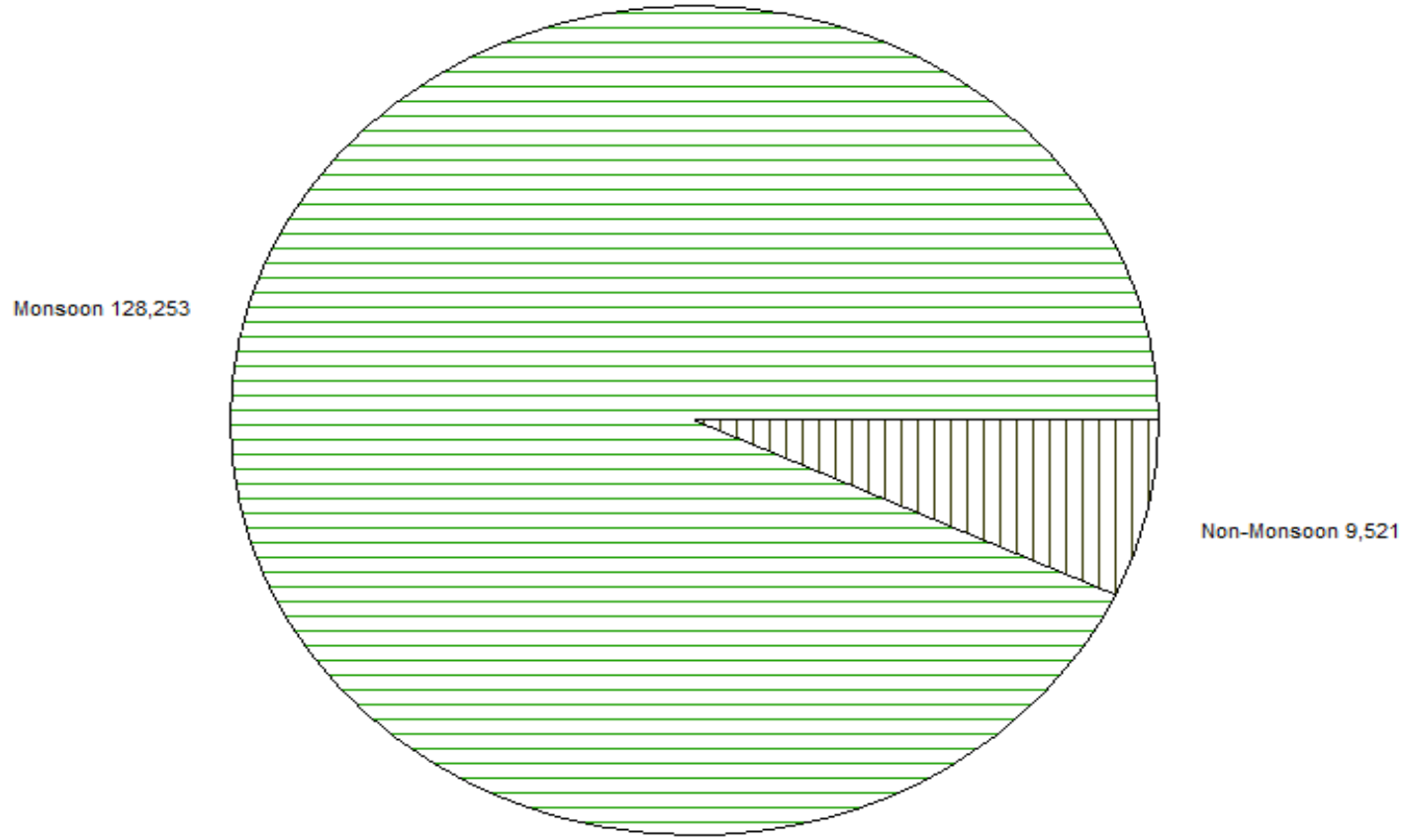
Seasonal Sediment Load for the Year: 2017-2018

Station Name : NEELESWARAM (KS000F3)

Local River : Periyar

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi



BED MATERIAL ANALYSIS DATA

RIVER : *Periyar* **CODE NO. :** *KSOOOF3*

SITE : *Neeleeswaram* **CROSS SECTION :** *SGL*

	DATA FOR SAMPLE COLLECTED										GENERAL DATA OF THE RIVER						
									Bed Material Composition							Bed Material Composition	
SL. NO.	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS) OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)	WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017						**DATE OF COLLECTION**		**25-11-2017**									
1	60	-	(-)3.670	0.630	4.300		0.328	28.208	6.0	0.81							
2	100	-	(-)2.770	0.630	3.400		0.353	24.004	6.0	0.49							
3	160	-	(-)0.870	0.630	1.500	265.5	0.170	4.080	6.0	0.81	265.901	1.828	0.2739	0.00006	133.1	8.0	0.74
4	200	-	(-)0.270	0.630	0.900		0.240	4.320	8.0	0.83							
5	260	-	(-)0.270	0.630	0.900		0.218	4.360	6.0	0.78							
POSTMONSOON 2017						**DATE OF COLLECTION**		**09-03-2018**									
1	60	-	(-)3.500	0.700	4.20		0.2180	18.312	5.0	0.79							
2	100	-	(-)3.100	0.700	3.80		0.2215	16.834	5.0	1.37							
3	160	-	(-)0.600	0.700	1.30	260.0	0.0815	2.2126	11.0	1.09	260.436	1.834	0.1367	0.00006	65.21	11.0	1.72
4	200	-	(-)0.100	0.700	0.80		0.1542	2.4672	5.0	2.00							
5	260	-	(-)0.050	0.700	0.65		NIL	NIL	6.0	3.34							
PREMONSOON 2018						**DATE OF COLLECTION**		**22-05-2018**									
1	60	-	(-)3.460	0.640	4.10		0.249	20.418	5.0	0.84							
2	100	-	(-)3.060	0.640	3.70		0.258	19.092	5.0	1.05							
3	160	-	(-)0.460	0.640	1.10	260.0	0.169	3.718	9.0	1.25	260.373	1.770	0.170	0.00006	78.40	9.0	1.69
4	200	-	(-)0.160	0.640	0.80		0.164	2.624	7.0	2.09							
5	260	-	(-)0.040	0.640	0.60		0.052	0.624	5.0	3.21							

Annual Sediment Load for period : 1979-2018

Station Name : RAMAMANGALAM (KM000I2) **Division : SWR Division, Cochin**

Local River : Muvattupuzha **Sub-Division : SWR SD No 2, Kochi**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1979-1980	141204	14811	156015	4252
1980-1981	212552	13604	226156	5179
1981-1982	332851	9749	342600	6297
1982-1983	128875	4394	133269	3611
1983-1984	168109	13417	181526	4104
1984-1985	147177	10369	157546	4859
1985-1986	152210	15427	167637	5108
1986-1987	144133	7740	151873	4247
1987-1988	129176	17359	146535	4171
1988-1989	136276	9029	145305	4184
1989-1990	204484	13357	217841	5290
1990-1991	91498	11029	102527	4527
1991-1992	135122	14722	149844	4876
1992-1993	212329	17729	230059	6098
1993-1994	203126	11482	214607	5505
1994-1995	144305	15868	160173	5902
1995-1996	154759	11078	165837	5509
1996-1997	127248	12872	140120	5001
1997-1998	133839	13040	146879	4897
1998-1999	138625	23688	162313	6703
1999-2000	120259	12581	132840	5214
2000-2001	74091	14175	88267	3895
2001-2002	172501	23908	196409	5420
2002-2003	167079	11287	178366	3575
2003-2004	94957	11324	106281	3857
2004-2005	85948	14454	100402	4339
2005-2006	103929	24059	127989	6120
2006-2007	0	0	0	4924
2007-2008	0	0	0	6211
2008-2009	77045	6639	83684	3591
2009-2010	80242	8330	88572	4616
2010-2011	102768	13312	116080	5745
2011-2012	77711	12928	90639	5627
2012-2013	69289	2125	71414	3178
2013-2014	124891	11766	136656	6643
2014-2015	101859	10719	112578	5441
2015-2016	37559	8894	46453	4008
2016-2017	16564	1602	18166	2642
2017-2018	51227	10417	61644	4026

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : RAMAMANGALAM (KM000I2) **Division : SWR Division, Cochin**

Local River : Muvattupuzha **Sub-Division : SWR SD No 2, Kochi**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	79.12	0.000	0.000	0.000	0.000	1	202.2	0.000	0.000	0.003	0.003	44	178.4	0.000	0.000	0.010	0.010	156
2	82.64	0.000	0.000	0.008	0.008	54	275.4	0.000	0.000	0.004	0.004	86	139.0	0.000	0.009	0.012	0.021	246
3	104.9	0.000	0.000	0.010	0.010	86	220.3	0.000	0.000	0.009	0.009	179	133.1	0.000	0.008	0.001	0.009	100
4	92.15	0.000	0.000	0.008	0.008	67	220.8	0.000	0.000	0.002	0.002	29	180.4	0.000	0.008	0.008	0.016	245
5	85.19	0.000	0.000	0.008	0.008	57	176.3	0.000	0.000	0.004	0.004	59	219.8	0.000	0.010	0.007	0.017	323
6	114.4	0.000	0.000	0.010	0.010	103	160.1	0.000	0.000	0.001	0.001	10	435.3	0.000	0.009	0.010	0.019	700
7	107.7	0.000	0.000	0.010	0.010	91	146.1	0.000	0.000	0.005	0.005	68	462.6	0.000	0.008	0.012	0.020	791
8	107.7	0.000	0.000	0.010	0.010	91	162.4	0.000	0.000	0.001	0.001	7	382.3	0.000	0.010	0.006	0.016	532
9	86.05	0.000	0.000	0.008	0.008	58	151.3	0.000	0.000	0.002	0.002	29	282.9	0.000	0.009	0.004	0.013	308
10	81.80	0.000	0.000	0.007	0.007	52	121.1	0.000	0.000	0.001	0.001	8	249.6	0.000	0.001	0.004	0.005	97
11	138.5	0.000	0.000	0.013	0.013	152	104.3	0.000	0.000	0.016	0.016	148	220.4	0.000	0.009	0.021	0.030	571
12	136.4	0.000	0.000	0.013	0.013	147	109.4	0.000	0.000	0.004	0.004	42	280.9	0.000	0.008	0.015	0.023	558
13	126.2	0.000	0.000	0.012	0.012	125	98.84	0.000	0.000	0.001	0.001	5	204.6	0.000	0.004	0.011	0.015	272
14	135.4	0.000	0.000	0.012	0.012	145	126.0	0.000	0.000	0.004	0.004	39	181.8	0.000	0.000	0.005	0.005	75
15	121.9	0.000	0.000	0.010	0.010	106	108.5	0.000	0.000	0.005	0.005	43	140.6	0.000	0.006	0.013	0.018	221
16	101.1	0.000	0.000	0.010	0.010	86	102.1	0.000	0.002	0.003	0.005	40	163.6	0.000	0.002	0.006	0.008	110
17	87.95	0.000	0.000	0.015	0.015	111	102.2	0.000	0.000	0.004	0.004	38	144.2	0.000	0.008	0.017	0.025	309
18	100.2	0.000	0.000	0.010	0.010	86	111.2	0.000	0.012	0.002	0.015	139	148.4	0.000	0.002	0.017	0.019	242
19	80.12	0.000	0.000	0.008	0.008	56	127.6	0.000	0.009	0.004	0.012	136	174.2	0.000	0.001	0.001	0.002	29
20	65.01	0.000	0.000	0.007	0.007	39	219.3	0.000	0.009	0.017	0.026	495	229.8	0.000	0.003	0.008	0.011	214
21	59.86	0.000	0.000	0.006	0.006	33	196.5	0.000	0.000	0.006	0.006	97	215.4	0.000	0.008	0.006	0.014	257
22	73.67	0.000	0.000	0.003	0.003	18	180.6	0.000	0.000	0.002	0.002	33	279.8	0.000	0.001	0.008	0.009	222
23	68.80	0.000	0.000	0.009	0.009	51	138.5	0.000	0.000	0.002	0.002	23	262.3	0.000	0.001	0.007	0.008	175
24	155.2	0.000	0.000	0.013	0.013	177	127.3	0.000	0.000	0.000	0.000	3	219.0	0.000	0.009	0.003	0.012	229
25	314.0	0.000	0.000	0.013	0.013	364	126.0	0.000	0.000	0.001	0.001	15	188.0	0.000	0.002	0.005	0.007	120
26	327.3	0.000	0.000	0.014	0.014	396	122.0	0.000	0.000	0.002	0.002	22	168.9	0.000	0.009	0.005	0.014	207
27	409.9	0.000	0.000	0.010	0.010	365	125.7	0.000	0.000	0.001	0.001	15	149.1	0.000	0.005	0.003	0.008	102
28	664.2	0.000	0.000	0.035	0.035	2026	180.0	0.000	0.010	0.007	0.017	258	257.0	0.000	0.002	0.022	0.023	520
29	318.6	0.000	0.000	0.003	0.003	80	159.7	0.000	0.002	0.003	0.005	72	273.4	0.000	0.001	0.011	0.012	283
30	234.5	0.000	0.000	0.003	0.003	51	131.3	0.000	0.002	0.004	0.007	74	325.2	0.000	0.010	0.015	0.025	691
31							132.9	0.000	0.000	0.003	0.003	34	285.4	0.000	0.009	0.010	0.019	459
Ten Daily Mean																		
Ten Daily I	94.17	0.000	0.000	0.008	0.008	66	183.6	0.000	0.000	0.003	0.003	52	266.3	0.000	0.007	0.007	0.014	350
Ten Daily II	109.3	0.000	0.000	0.011	0.011	105	120.9	0.000	0.003	0.006	0.009	112	188.8	0.000	0.004	0.011	0.016	260
Ten Daily III	262.6	0.000	0.000	0.011	0.011	356	147.3	0.000	0.001	0.003	0.004	59	238.5	0.000	0.005	0.009	0.014	297
Monthly																		
Total						5274						2288						9365

Annual Sediment Load (Metric Tonnes) : 61644

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : RAMAMANGALAM (KM000I2) **Division : SWR Division, Cochin**

Local River : Muvattupuzha **Sub-Division : SWR SD No 2, Kochi**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	208.3	0.000	0.000	0.000	0.000	0	172.5	0.000	0.002	0.011	0.014	206	185.7	0.000	0.009	0.042	0.051	821
2	281.9	0.000	0.000	0.002	0.002	49	142.7	0.000	0.003	0.009	0.011	141	155.7	0.000	0.010	0.009	0.018	248
3	350.0	0.000	0.012	0.026	0.038	1158	126.1	0.000	0.006	0.008	0.014	156	254.1	0.000	0.011	0.020	0.032	696
4	331.8	0.000	0.011	0.023	0.034	975	130.9	0.000	0.001	0.007	0.007	83	147.0	0.000	0.005	0.010	0.015	196
5	291.1	0.000	0.009	0.001	0.010	262	124.6	0.000	0.000	0.003	0.003	37	220.8	0.000	0.010	0.023	0.033	628
6	303.2	0.000	0.012	0.044	0.057	1488	144.3	0.000	0.001	0.005	0.007	81	144.9	0.000	0.001	0.007	0.008	104
7	227.7	0.000	0.009	0.016	0.025	494	148.4	0.000	0.001	0.006	0.007	94	142.7	0.000	0.009	0.003	0.012	145
8	193.2	0.000	0.002	0.072	0.074	1230	163.4	0.000	0.002	0.024	0.027	374	148.4	0.000	0.000	0.007	0.007	90
9	354.4	0.000	0.002	0.042	0.044	1332	172.7	0.000	0.002	0.038	0.040	600	156.7	0.000	0.010	0.010	0.020	273
10	207.0	0.000	0.007	0.031	0.038	680	142.2	0.000	0.000	0.007	0.007	85	120.5	0.000	0.009	0.007	0.015	156
11	185.7	0.000	0.011	0.043	0.054	858	139.6	0.000	0.009	0.003	0.011	135	123.4	0.000	0.000	0.011	0.011	112
12	197.3	0.000	0.010	0.009	0.018	310	161.1	0.000	0.010	0.003	0.012	170	117.3	0.000	0.004	0.007	0.011	114
13	181.9	0.000	0.003	0.011	0.014	218	268.6	0.000	0.008	0.052	0.060	1395	97.79	0.000	0.000	0.004	0.004	34
14	248.7	0.000	0.002	0.014	0.016	352	261.9	0.000	0.010	0.050	0.060	1358	83.34	0.000	0.000	0.004	0.004	30
15	215.0	0.000	0.001	0.012	0.013	234	187.7	0.000	0.009	0.020	0.029	462	78.00	0.000	0.000	0.002	0.002	15
16	190.5	0.000	0.011	0.012	0.023	385	157.3	0.000	0.014	0.006	0.020	276	85.19	0.000	0.000	0.003	0.003	22
17	305.2	0.000	0.005	0.014	0.019	501	131.3	0.000	0.005	0.003	0.009	98	82.90	0.000	0.000	0.002	0.002	17
18	827.3	0.000	0.018	0.077	0.095	6798	256.2	0.000	0.011	0.045	0.056	1240	84.40	0.000	0.000	0.003	0.003	21
19	572.0	0.000	0.007	0.008	0.015	726	147.0	0.000	0.006	0.009	0.015	185	94.82	0.000	0.000	0.005	0.005	43
20	299.7	0.000	0.001	0.006	0.007	176	130.1	0.000	0.009	0.004	0.013	147	91.27	0.000	0.000	0.005	0.005	37
21	247.4	0.000	0.010	0.006	0.016	340	144.4	0.000	0.000	0.004	0.004	55	128.8	0.000	0.001	0.009	0.010	111
22	219.5	0.000	0.009	0.005	0.014	262	133.3	0.000	0.003	0.005	0.009	99	121.0	0.000	0.001	0.009	0.010	103
23	181.3	0.000	0.000	0.003	0.003	45	111.5	0.000	0.000	0.004	0.004	35	103.0	0.000	0.001	0.006	0.007	58
24	149.1	0.000	0.005	0.009	0.014	179	112.4	0.000	0.000	0.004	0.004	34	82.64	0.000	0.000	0.003	0.003	24
25	136.7	0.000	0.009	0.007	0.016	191	84.85	0.000	0.000	0.002	0.002	15	70.45	0.000	0.000	0.004	0.004	24
26	135.0	0.000	0.001	0.006	0.007	80	90.51	0.000	0.000	0.004	0.004	30	73.57	0.000	0.000	0.002	0.002	13
27	151.5	0.000	0.009	0.018	0.027	359	206.8	0.000	0.009	0.027	0.035	633	66.71	0.000	0.000	0.000	0.000	2
28	191.3	0.000	0.000	0.010	0.010	169	154.3	0.000	0.009	0.024	0.033	444	59.99	0.000	0.000	0.002	0.002	10
29	220.8	0.000	0.002	0.016	0.018	336	184.1	0.000	0.009	0.028	0.037	593	54.60	0.000	0.000	0.001	0.001	7
30	209.5	0.000	0.002	0.015	0.017	300	118.7	0.000	0.003	0.007	0.009	94	54.30	0.000	0.000	0.002	0.002	9
31							159.1	0.000	0.010	0.012	0.022	298						
Ten Daily Mean																		
Ten Daily I	274.9	0.000	0.006	0.026	0.032	767	146.8	0.000	0.002	0.012	0.014	185	167.7	0.000	0.007	0.014	0.021	336
Ten Daily II	322.3	0.000	0.007	0.020	0.027	1056	184.1	0.000	0.009	0.019	0.028	547	93.84	0.000	0.000	0.005	0.005	44
Ten Daily III	184.2	0.000	0.005	0.010	0.014	226	136.4	0.000	0.004	0.011	0.015	212	81.50	0.000	0.000	0.004	0.004	36
Monthly																		
Total						20488						9650						4162

Annual Sediment Load (Metric Tonnes) : 61644

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : RAMAMANGALAM (KM000I2) **Division : SWR Division, Cochin**

Local River : Muvattupuzha **Sub-Division : SWR SD No 2, Kochi**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	51.51	0.000	0.000	0.003	0.003	12	35.08	0.000	0.000	0.005	0.005	16	44.65	0.000	0.000	0.005	0.005	18
2	56.93	0.000	0.000	0.002	0.002	10	39.12	0.000	0.000	0.005	0.005	16	43.39	0.000	0.000	0.003	0.003	10
3	49.91	0.000	0.000	0.002	0.002	8	41.67	0.000	0.000	0.004	0.004	15	40.62	0.000	0.000	0.005	0.005	17
4	51.44	0.000	0.000	0.002	0.002	8	26.38	0.000	0.000	0.004	0.004	8	45.23	0.000	0.000	0.004	0.004	16
5	45.30	0.000	0.000	0.002	0.002	8	36.77	0.000	0.000	0.007	0.007	23	40.92	0.000	0.000	0.002	0.002	6
6	42.12	0.000	0.000	0.001	0.001	3	32.52	0.000	0.000	0.004	0.004	12	37.16	0.000	0.000	0.003	0.003	9
7	36.57	0.000	0.000	0.002	0.002	5	38.29	0.000	0.000	0.007	0.007	22	39.03	0.000	0.000	0.004	0.004	13
8	34.06	0.000	0.000	0.001	0.001	4	38.29	0.000	0.000	0.006	0.006	21	40.81	0.000	0.000	0.001	0.001	4
9	34.73	0.000	0.000	0.002	0.002	6	32.59	0.000	0.000	0.006	0.006	17	37.39	0.000	0.000	0.000	0.000	0
10	42.55	0.000	0.000	0.003	0.003	11	35.08	0.000	0.000	0.007	0.007	22	42.56	0.000	0.000	0.000	0.000	0
11	39.42	0.000	0.000	0.003	0.003	10	27.27	0.000	0.000	0.003	0.003	8	50.88	0.000	0.000	0.005	0.005	20
12	38.03	0.000	0.000	0.006	0.006	19	41.85	0.000	0.000	0.008	0.008	30	41.10	0.000	0.000	0.000	0.000	0
13	41.22	0.000	0.000	0.001	0.001	4	41.08	0.000	0.000	0.009	0.009	33	48.00	0.000	0.000	0.004	0.004	17
14	69.15	0.000	0.000	0.003	0.003	19	51.86	0.000	0.000	0.006	0.006	27	42.76	0.000	0.000	0.002	0.002	7
15	85.11	0.000	0.000	0.007	0.007	49	37.47	0.000	0.000	0.005	0.005	17	42.02	0.000	0.000	0.004	0.004	14
16	63.09	0.000	0.000	0.006	0.006	31	39.84	0.000	0.000	0.006	0.006	19	43.75	0.000	0.000	0.005	0.005	18
17	59.03	0.000	0.000	0.003	0.003	15	46.57	0.000	0.000	0.007	0.007	29	43.30	0.000	0.000	0.001	0.001	3
18	47.77	0.000	0.000	0.001	0.001	5	58.87	0.000	0.000	0.008	0.008	42	42.55	0.000	0.000	0.002	0.002	7
19	43.25	0.000	0.000	0.001	0.001	4	40.71	0.000	0.000	0.004	0.004	15	43.00	0.000	0.000	0.001	0.001	2
20	48.30	0.000	0.000	0.000	0.000	2	39.87	0.000	0.000	0.007	0.007	23	49.97	0.000	0.000	0.001	0.001	4
21	50.51	0.000	0.000	0.000	0.000	0	44.32	0.000	0.000	0.007	0.007	28	70.84	0.000	0.000	0.014	0.014	88
22	50.72	0.000	0.000	0.000	0.000	0	36.33	0.000	0.000	0.009	0.009	28	65.31	0.000	0.000	0.018	0.018	99
23	48.59	0.000	0.000	0.000	0.000	0	34.35	0.000	0.000	0.007	0.007	20	72.79	0.000	0.000	0.017	0.017	104
24	46.14	0.000	0.000	0.001	0.001	4	36.73	0.000	0.000	0.009	0.009	28	69.61	0.000	0.000	0.007	0.007	41
25	41.67	0.000	0.000	0.002	0.002	8	48.45	0.000	0.000	0.009	0.009	37	65.62	0.000	0.000	0.017	0.017	99
26	22.64	0.000	0.000	0.010	0.010	20	41.67	0.000	0.000	0.009	0.009	31	70.04	0.000	0.000	0.006	0.006	39
27	32.03	0.000	0.000	0.005	0.005	15	38.23	0.000	0.000	0.009	0.009	30	74.09	0.000	0.000	0.008	0.008	50
28	25.29	0.000	0.000	0.006	0.006	14	43.43	0.000	0.000	0.009	0.009	33	84.21	0.000	0.000	0.000	0.000	0
29	32.77	0.000	0.000	0.006	0.006	16	45.63	0.000	0.000	0.010	0.010	40						
30	35.08	0.000	0.000	0.005	0.005	16	45.98	0.000	0.000	0.007	0.007	29						
31	46.14	0.000	0.000	0.004	0.004	14	65.81	0.000	0.000	0.007	0.007	40						
Ten Daily Mean																		
Ten Daily I	44.51	0.000	0.000	0.002	0.002	8	35.58	0.000	0.000	0.005	0.005	17	41.18	0.000	0.000	0.003	0.003	9
Ten Daily II	53.44	0.000	0.000	0.003	0.003	16	42.54	0.000	0.000	0.006	0.006	24	44.73	0.000	0.000	0.002	0.002	9
Ten Daily III	39.23	0.000	0.000	0.004	0.004	10	43.72	0.000	0.000	0.008	0.008	31	71.56	0.000	0.000	0.011	0.011	65
Monthly																		
Total						338						757						704

Annual Sediment Load (Metric Tonnes) : 61644

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : RAMAMANGALAM (KM000I2) **Division : SWR Division, Cochin**

Local River : Muvattupuzha **Sub-Division : SWR SD No 2, Kochi**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	104.4	0.000	0.000	0.007	0.007	63	46.14	0.000	0.000	0.005	0.005	22	106.6	0.000	0.000	0.007	0.007	68
2	88.19	0.000	0.000	0.009	0.009	66	46.08	0.000	0.000	0.006	0.006	23	89.48	0.000	0.000	0.006	0.006	49
3	84.17	0.000	0.000	0.008	0.008	58	32.53	0.000	0.000	0.004	0.004	11	73.75	0.000	0.000	0.006	0.006	36
4	57.98	0.000	0.000	0.008	0.008	41	39.28	0.000	0.000	0.005	0.005	17	72.60	0.000	0.000	0.005	0.005	32
5	51.86	0.000	0.000	0.008	0.008	38	85.06	0.000	0.000	0.007	0.007	51	82.22	0.000	0.000	0.005	0.005	36
6	80.82	0.000	0.000	0.009	0.009	61	121.2	0.000	0.000	0.009	0.009	94	125.4	0.000	0.000	0.009	0.009	93
7	85.42	0.000	0.000	0.006	0.006	43	113.2	0.000	0.000	0.008	0.008	78	142.7	0.000	0.000	0.008	0.008	104
8	82.88	0.000	0.000	0.006	0.006	42	81.33	0.000	0.000	0.007	0.007	48	117.0	0.000	0.000	0.010	0.010	98
9	83.23	0.000	0.000	0.006	0.006	42	56.82	0.000	0.000	0.005	0.005	24	157.5	0.000	0.000	0.011	0.011	151
10	84.77	0.000	0.000	0.002	0.002	14	49.75	0.000	0.000	0.008	0.008	33	142.0	0.000	0.000	0.009	0.009	104
11	81.33	0.000	0.000	0.008	0.008	54	82.80	0.000	0.000	0.005	0.005	33	135.6	0.000	0.000	0.011	0.011	127
12	81.37	0.000	0.000	0.007	0.007	49	72.18	0.000	0.000	0.004	0.004	27	129.8	0.000	0.000	0.008	0.008	89
13	76.40	0.000	0.000	0.010	0.010	65	67.50	0.000	0.000	0.006	0.006	37	277.5	0.000	0.000	0.029	0.029	705
14	82.55	0.000	0.000	0.013	0.013	93	86.57	0.000	0.000	0.005	0.005	37	139.3	0.000	0.000	0.007	0.007	85
15	56.83	0.000	0.000	0.003	0.003	14	90.62	0.000	0.000	0.005	0.005	38	108.9	0.000	0.000	0.004	0.004	36
16	81.90	0.000	0.000	0.006	0.006	39	82.10	0.000	0.000	0.005	0.005	38	131.1	0.000	0.000	0.006	0.006	69
17	77.64	0.000	0.000	0.005	0.005	32	56.66	0.000	0.000	0.007	0.007	33	330.5	0.000	0.000	0.023	0.023	668
18	57.98	0.000	0.000	0.006	0.006	30	79.68	0.000	0.000	0.007	0.007	46	175.7	0.000	0.000	0.009	0.009	143
19	56.45	0.000	0.000	0.008	0.008	38	95.99	0.000	0.000	0.008	0.008	64	140.7	0.000	0.000	0.003	0.003	41
20	36.48	0.000	0.000	0.007	0.007	22	118.1	0.000	0.000	0.009	0.009	96	189.5	0.000	0.000	0.010	0.010	160
21	66.68	0.000	0.000	0.006	0.006	37	95.67	0.000	0.000	0.006	0.006	51	168.4	0.000	0.000	0.007	0.007	105
22	75.70	0.000	0.000	0.006	0.006	41	96.20	0.000	0.000	0.007	0.007	58	129.8	0.000	0.000	0.006	0.006	67
23	52.94	0.000	0.000	0.004	0.004	18	103.5	0.000	0.000	0.008	0.008	71	132.3	0.000	0.000	0.005	0.005	51
24	74.66	0.000	0.000	0.007	0.007	46	80.26	0.000	0.000	0.006	0.006	44	191.4	0.000	0.000	0.023	0.023	380
25	48.00	0.000	0.000	0.006	0.006	23	86.61	0.000	0.000	0.005	0.005	40	128.1	0.000	0.000	0.007	0.007	79
26	46.38	0.000	0.000	0.006	0.006	26	97.13	0.000	0.000	0.006	0.006	47	128.8	0.000	0.000	0.005	0.005	60
27	54.49	0.000	0.000	0.007	0.007	34	123.5	0.000	0.000	0.005	0.005	49	114.1	0.000	0.000	0.006	0.006	56
28	76.79	0.000	0.000	0.006	0.006	36	108.4	0.000	0.000	0.007	0.007	64	112.1	0.000	0.000	0.007	0.007	71
29	69.07	0.000	0.000	0.007	0.007	41	97.62	0.000	0.000	0.006	0.006	52	496.9	0.000	0.000	0.035	0.035	1511
30	73.83	0.000	0.000	0.007	0.007	45	94.79	0.000	0.000	0.006	0.006	51	539.0	0.000	0.000	0.012	0.012	554
31	78.66	0.000	0.000	0.008	0.008	54							232.0	0.000	0.000	0.005	0.005	106
Ten Daily Mean																		
Ten Daily I	80.37	0.000	0.000	0.007	0.007	47	67.14	0.000	0.000	0.006	0.006	40	110.9	0.000	0.000	0.008	0.008	77
Ten Daily II	68.89	0.000	0.000	0.007	0.007	44	83.22	0.000	0.000	0.006	0.006	45	175.9	0.000	0.000	0.011	0.011	212
Ten Daily III	65.20	0.000	0.000	0.006	0.006	37	98.37	0.000	0.000	0.006	0.006	53	215.7	0.000	0.000	0.011	0.011	276
Monthly																		
Total						1306						1376						5936

Annual Sediment Load (Metric Tonnes) : 61644

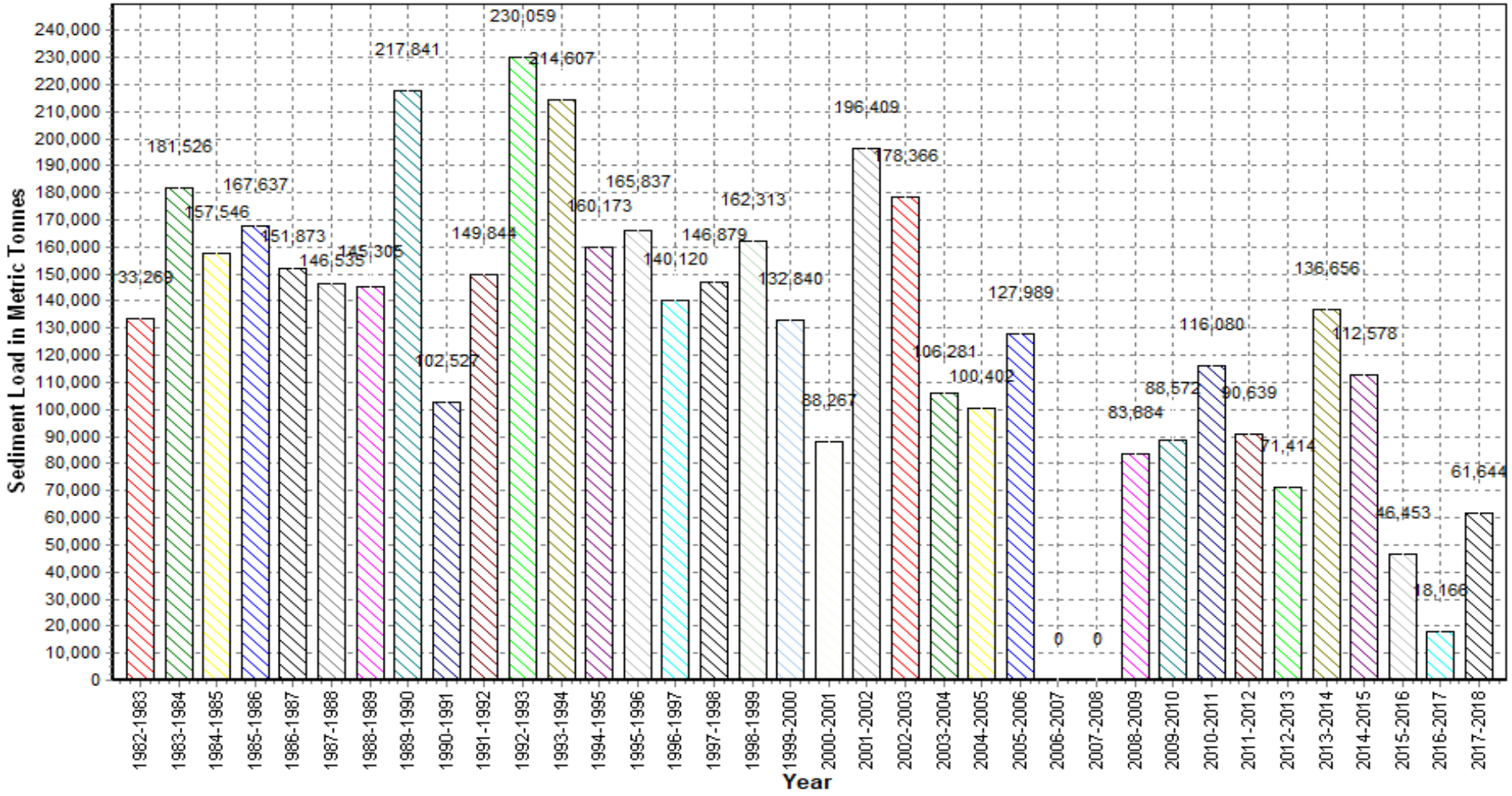
Annual Sediment Load for the period: 1979-2018

Station Name : RAMAMANGALAM (KM000I2)

Local River : Muvattupuzha

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi

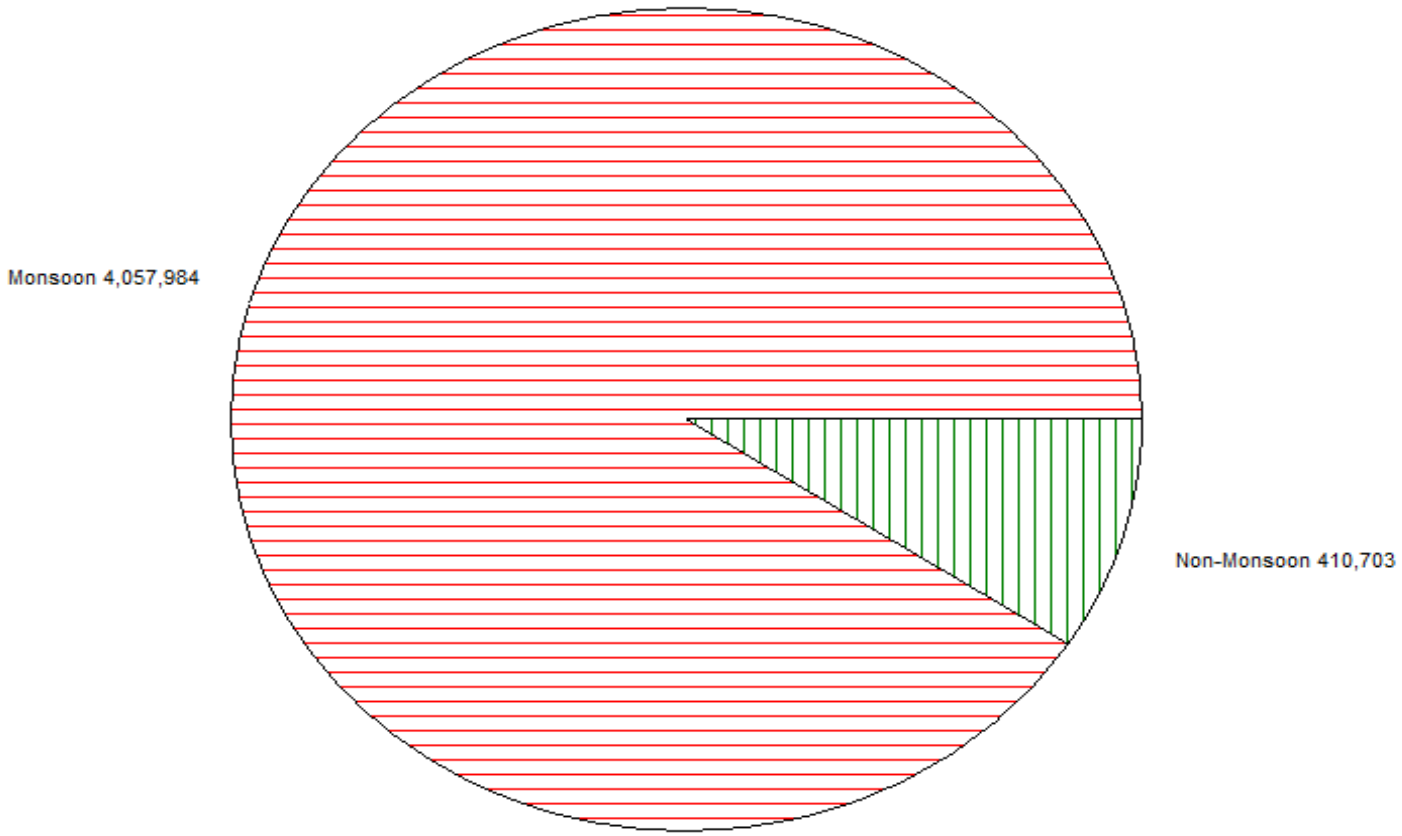


Seasonal Sediment Load for the period : 1979-2017

Station Name : RAMAMANGALAM (KM000I2)
Local River : Muvattupuzha

Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi

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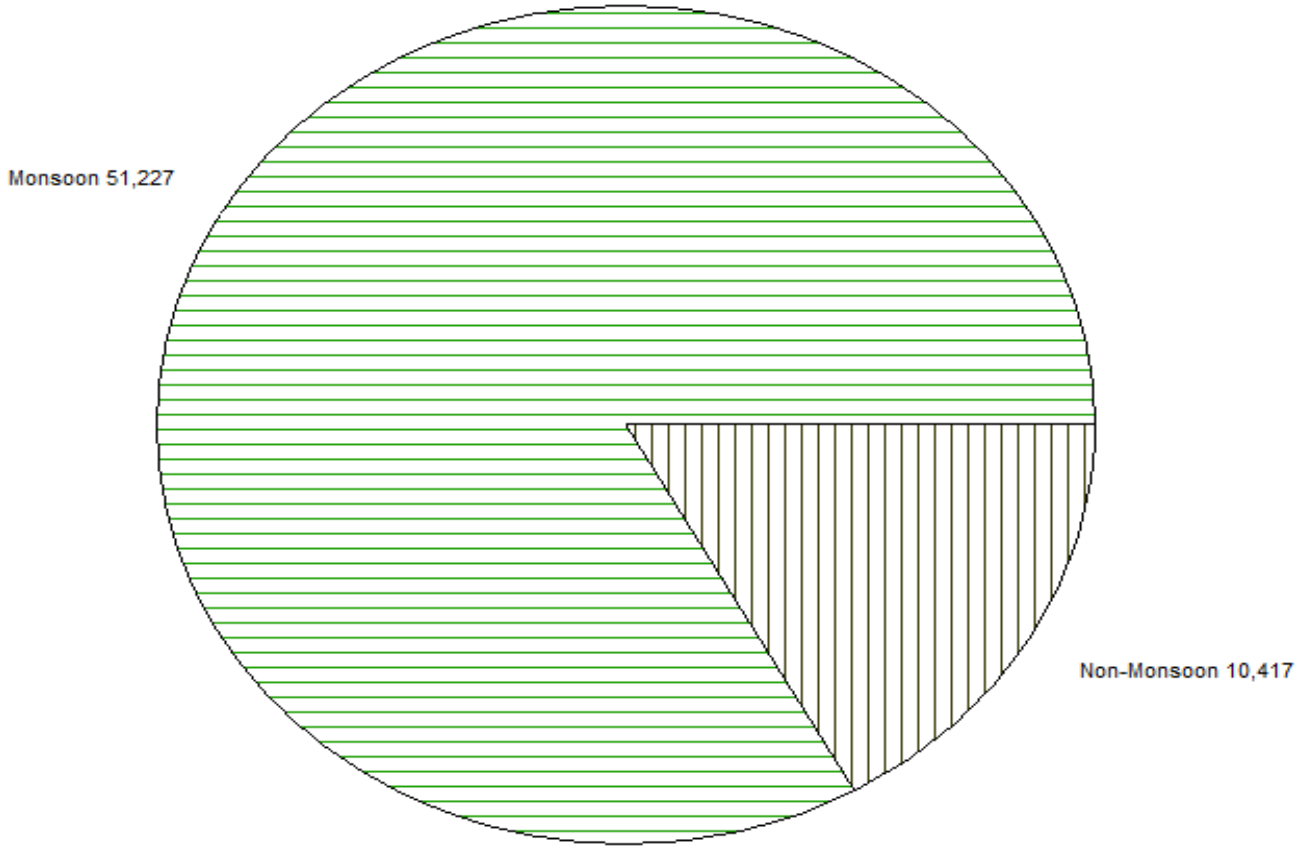
Seasonal Sediment Load for the Year: 2017-2018

Station Name : RAMAMANGALAM (KM000I2)

Local River : Muvattupuzha

Division : SWR Division, Cochin

Sub-Division : SWR SD No 2, Kochi



BED MATERIAL ANALYSIS DATA

RIVER : *Muvattupuzha* **CODE NO. :** *KM000I2*

SITE : *Ramamangalam* **CROSS SECTION :** *SGL*

	DATA FOR SAMPLE COLLECTED										GENERAL DATA OF THE RIVER						
									Bed Material Composition							Bed Material Composition	
SL NO.	R.D NO.	R.L OF DRY BED (m)	R.L OF BED LEVEL (m)	W.L (GTS) OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)	WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017					DATE OF COLLECTION		10-11-2017										
1	50	-	0.380	1.500	1.12	16	0.358	3.2077	14.0	4.41							
2	100	-	-0.520	1.500	2.020	50	0.756	12.217	22.0	7.71	118.34	1.5661	0.7041	0.0002	130.5	22.0	6.54
3	150	-	-0.090	1.500	1.590	50	-	-	22.0	7.49							
POSTMONSOON 2017					DATE OF COLLECTION												
					Samples not collected												
PREMONSOON 2018					DATE OF COLLECTION												
1																	
2																	
3					Samples not collected												
4																	
5																	
6																	

Annual Sediment Load for period : 1988-2018

Station Name : KALAMPUR (KMA00C6) **Division : SWR Division, Cochin**

Local River : Kaliyar **Sub-Division : SWR SD No 2, Kochi**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1988-1989	52092	512	52604	1029
1989-1990	71969	665	72634	1380
1990-1991	33902	69	33971	956
1991-1992	42029	125	42153	1049
1992-1993	46536	83	46620	1340
1993-1994	58944	281	59225	1062
1994-1995	42505	3898	46403	1329
1995-1996	43160	153	43312	1257
1996-1997	35091	827	35918	1214
1997-1998	39710	609	40319	1148
1998-1999	38149	2308	40457	1578
1999-2000	37492	250	37742	1238
2000-2001	29050	215	29265	945
2001-2002	40383	480	40862	1252
2002-2003	22687	285	22972	840
2003-2004	24237	339	24577	877
2004-2005	27821	38	27859	930
2005-2006	47166	3310	50476	1496
2006-2007	0	0	0	1278
2007-2008	0	0	0	1419
2008-2009	19417	14	19432	795
2009-2010	23294	197	23491	901
2010-2011	26786	239	27025	1167
2011-2012	6257	9	6265	1056
2012-2013	2566	7	2573	719
2013-2014	10075	71	10146	1534
2014-2015	7369	150	7519	1468
2015-2016	3135	185	3319	951
2016-2017	1643	0	1643	758
2017-2018	2264	75	2339	1036

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KALAMPUR (KMA00C6) **Division : SWR Division, Cochin**

Local River : Kaliyar **Sub-Division : SWR SD No 2, Kochi**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	67.73	0.000	0.000	0.001	0.001	8	127.4	0.002	0.002	0.002	0.006	67
2	0.000	0.000	0.000	0.000	0.000	0	85.44	0.000	0.000	0.002	0.002	16	70.08	0.000	0.000	0.001	0.001	7
3	0.000	0.000	0.000	0.000	0.000	0	68.28	0.000	0.000	0.001	0.001	7	60.66	0.000	0.000	0.001	0.001	5
4	0.000	0.000	0.000	0.000	0.000	0	70.80	0.000	0.000	0.001	0.001	8	78.91	0.000	0.000	0.001	0.001	8
5	0.000	0.000	0.000	0.000	0.000	0	55.80	0.000	0.000	0.001	0.001	5	108.0	0.000	0.000	0.001	0.001	12
6	0.000	0.000	0.000	0.000	0.000	0	48.92	0.000	0.000	0.001	0.001	4	148.0	0.006	0.001	0.001	0.008	107
7	0.000	0.000	0.000	0.000	0.000	0	50.64	0.000	0.000	0.001	0.001	4	149.4	0.001	0.002	0.002	0.005	59
8	0.000	0.000	0.000	0.000	0.000	0	49.77	0.000	0.000	0.001	0.001	6	132.9	0.000	0.000	0.000	0.000	1
9	0.000	0.000	0.000	0.000	0.000	0	53.89	0.000	0.000	0.002	0.002	8	110.8	0.000	0.000	0.001	0.001	10
10	0.000	0.000	0.000	0.000	0.000	0	45.79	0.000	0.000	0.001	0.001	4	118.4	0.001	0.001	0.002	0.004	37
11	0.000	0.000	0.000	0.000	0.000	0	39.56	0.000	0.000	0.001	0.001	4	89.91	0.000	0.000	0.001	0.001	11
12	0.000	0.000	0.000	0.000	0.000	0	39.08	0.000	0.000	0.001	0.001	4	102.3	0.000	0.000	0.001	0.001	8
13	0.000	0.000	0.000	0.000	0.000	0	31.06	0.000	0.000	0.001	0.001	3	76.42	0.000	0.000	0.001	0.001	7
14	0.000	0.000	0.000	0.000	0.000	0	45.10	0.000	0.000	0.001	0.001	5	60.60	0.000	0.000	0.001	0.001	5
15	28.61	0.000	0.000	0.001	0.001	2	39.36	0.000	0.000	0.001	0.001	4	62.34	0.000	0.000	0.001	0.001	5
16	28.05	0.000	0.000	0.001	0.001	2	34.32	0.000	0.000	0.001	0.001	3	60.19	0.000	0.000	0.001	0.001	6
17	24.12	0.000	0.000	0.001	0.001	3	30.90	0.000	0.000	0.001	0.001	3	55.87	0.000	0.000	0.001	0.001	5
18	20.61	0.000	0.000	0.001	0.001	2	29.64	0.000	0.000	0.001	0.001	2	85.64	0.000	0.001	0.002	0.003	21
19	17.73	0.000	0.000	0.001	0.001	2	32.20	0.000	0.000	0.001	0.001	3	73.13	0.000	0.001	0.001	0.002	14
20	15.79	0.000	0.000	0.001	0.001	1	89.48	0.002	0.002	0.002	0.006	46	105.3	0.001	0.001	0.002	0.004	32
21	14.97	0.000	0.000	0.001	0.001	1	82.02	0.000	0.001	0.001	0.002	16	122.6	0.001	0.002	0.002	0.005	54
22	18.33	0.000	0.000	0.001	0.001	2	66.24	0.000	0.000	0.001	0.001	6	143.5	0.002	0.002	0.003	0.007	81
23	21.23	0.000	0.000	0.001	0.001	2	61.24	0.000	0.001	0.001	0.002	12	114.3	0.000	0.000	0.001	0.001	14
24	57.02	0.000	0.000	0.002	0.002	8	45.52	0.000	0.000	0.001	0.001	4	93.18	0.000	0.000	0.001	0.001	10
25	98.64	0.000	0.000	0.002	0.002	20	40.30	0.000	0.000	0.001	0.001	3	80.00	0.000	0.000	0.001	0.001	8
26	101.6	0.000	0.000	0.002	0.002	20	32.01	0.000	0.000	0.001	0.001	3	68.03	0.000	0.000	0.001	0.001	6
27	123.5	0.000	0.000	0.003	0.003	29	36.57	0.000	0.000	0.001	0.001	3	102.3	0.000	0.001	0.001	0.002	20
28	164.3	0.000	0.000	0.003	0.003	47	105.8	0.002	0.002	0.002	0.006	58	128.5	0.001	0.002	0.002	0.005	53
29	88.02	0.000	0.000	0.002	0.002	13	61.72	0.000	0.001	0.002	0.003	15	126.0	0.002	0.002	0.002	0.006	65
30	82.50	0.000	0.000	0.002	0.002	11	59.62	0.000	0.001	0.001	0.002	11	145.6	0.000	0.000	0.001	0.001	14
31							43.77	0.000	0.000	0.001	0.001	3	139.5	0.000	0.000	0.001	0.001	13
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	59.71	0.000	0.000	0.001	0.001	7	110.5	0.001	0.001	0.001	0.003	31
Ten Daily II	13.49	0.000	0.000	0.001	0.001	1	41.07	0.000	0.000	0.001	0.002	8	77.17	0.000	0.000	0.001	0.002	11
Ten Daily III	77.01	0.000	0.000	0.002	0.002	15	57.71	0.000	0.001	0.001	0.002	12	114.9	0.001	0.001	0.002	0.003	31
Monthly																		
Total						164						282						767

Annual Sediment Load (Metric Tonnes) : 2339

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KALAMPUR (KMA00C6) **Division : SWR Division, Cochin**

Local River : Kaliyar **Sub-Division : SWR SD No 2, Kochi**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	87.45	0.005	0.006	0.005	0.015	114	70.35	0.000	0.000	0.001	0.001	6	53.44	0.000	0.000	0.001	0.001	5
2	131.0	0.000	0.000	0.001	0.001	12	64.57	0.000	0.000	0.001	0.001	6	39.19	0.000	0.000	0.001	0.001	4
3	127.7	0.000	0.001	0.003	0.004	39	49.05	0.000	0.000	0.001	0.001	4	64.34	0.000	0.000	0.001	0.001	6
4	106.1	0.000	0.001	0.002	0.003	30	41.43	0.000	0.000	0.001	0.001	4	50.42	0.000	0.000	0.001	0.001	4
5	130.2	0.002	0.002	0.007	0.011	120	37.87	0.000	0.000	0.001	0.001	4	54.91	0.000	0.000	0.001	0.001	5
6	129.4	0.000	0.002	0.004	0.006	63	50.04	0.000	0.000	0.001	0.001	4	35.98	0.000	0.000	0.001	0.001	3
7	93.59	0.000	0.000	0.001	0.001	8	31.02	0.000	0.000	0.001	0.001	3	48.04	0.000	0.000	0.001	0.001	5
8	81.15	0.000	0.000	0.001	0.001	8	67.42	0.000	0.000	0.001	0.001	6	49.33	0.000	0.000	0.001	0.001	6
9	123.5	0.000	0.001	0.003	0.004	44	52.57	0.000	0.000	0.001	0.001	5	47.96	0.000	0.000	0.001	0.001	5
10	80.85	0.000	0.000	0.001	0.001	9	45.61	0.000	0.000	0.001	0.001	4	32.97	0.000	0.000	0.001	0.001	3
11	76.93	0.000	0.000	0.001	0.001	7	37.03	0.000	0.000	0.001	0.001	3	62.48	0.000	0.000	0.001	0.001	5
12	71.77	0.000	0.000	0.001	0.001	6	62.08	0.001	0.001	0.001	0.004	19	42.57	0.000	0.000	0.001	0.001	4
13	56.64	0.000	0.000	0.001	0.001	5	80.11	0.002	0.002	0.002	0.007	45	29.61	0.000	0.000	0.001	0.001	3
14	109.6	0.001	0.001	0.004	0.007	63	85.09	0.002	0.002	0.002	0.005	38	25.15	0.000	0.000	0.001	0.001	2
15	69.34	0.000	0.000	0.001	0.001	7	72.14	0.001	0.001	0.002	0.004	26	22.41	0.000	0.000	0.001	0.001	2
16	73.03	0.000	0.000	0.001	0.001	6	55.03	0.000	0.000	0.001	0.001	5	20.18	0.000	0.000	0.001	0.001	2
17	100.8	0.000	0.000	0.001	0.001	9	52.25	0.000	0.000	0.001	0.001	5	21.30	0.000	0.000	0.001	0.001	2
18	305.9	0.000	0.000	0.001	0.001	26	86.10	0.002	0.002	0.001	0.004	32	22.66	0.000	0.000	0.001	0.001	3
19	143.2	0.000	0.000	0.001	0.001	12	58.31	0.000	0.000	0.001	0.001	6	26.78	0.000	0.000	0.001	0.001	3
20	110.0	0.000	0.000	0.001	0.001	10	48.58	0.000	0.000	0.001	0.001	4	25.73	0.000	0.000	0.002	0.002	4
21	84.02	0.000	0.000	0.001	0.001	8	43.84	0.000	0.000	0.001	0.001	4	38.98	0.000	0.000	0.001	0.001	5
22	80.73	0.000	0.000	0.001	0.001	8	52.89	0.000	0.000	0.001	0.001	5	31.51	0.000	0.000	0.001	0.001	4
23	62.00	0.000	0.000	0.001	0.001	6	35.73	0.000	0.000	0.001	0.001	3	27.27	0.000	0.000	0.001	0.001	3
24	86.77	0.000	0.000	0.001	0.001	7	31.01	0.000	0.000	0.001	0.001	3	16.98	0.000	0.000	0.001	0.001	2
25	57.62	0.000	0.000	0.001	0.001	6	30.58	0.000	0.000	0.001	0.001	3	15.52	0.000	0.000	0.001	0.001	1
26	67.14	0.000	0.000	0.001	0.001	5	31.03	0.000	0.000	0.001	0.001	3	15.38	0.000	0.000	0.001	0.001	1
27	52.16	0.000	0.000	0.001	0.001	5	60.46	0.000	0.001	0.002	0.003	16	22.04	0.000	0.000	0.001	0.001	2
28	75.04	0.000	0.000	0.001	0.001	8	48.63	0.000	0.000	0.001	0.001	6	16.41	0.000	0.000	0.001	0.001	1
29	82.80	0.000	0.000	0.001	0.001	7	58.55	0.000	0.001	0.002	0.002	10	14.25	0.000	0.000	0.001	0.001	1
30	77.04	0.000	0.000	0.001	0.001	7	40.36	0.000	0.000	0.001	0.001	5	15.17	0.000	0.000	0.001	0.001	1
31							44.47	0.000	0.000	0.001	0.001	5						
Ten Daily Mean																		
Ten Daily I	109.1	0.001	0.001	0.003	0.005	45	50.99	0.000	0.000	0.001	0.001	5	47.66	0.000	0.000	0.001	0.001	5
Ten Daily II	111.7	0.000	0.000	0.001	0.002	15	63.67	0.001	0.001	0.001	0.003	18	29.89	0.000	0.000	0.001	0.001	3
Ten Daily III	72.53	0.000	0.000	0.001	0.001	7	43.41	0.000	0.000	0.001	0.001	6	21.35	0.000	0.000	0.001	0.001	2
Monthly																		
Total						668						288						96

Annual Sediment Load (Metric Tonnes) : 2339

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KALAMPUR (KMA00C6) | **Division : SWR Division, Cochin**

Local River : Kaliyar | **Sub-Division : SWR SD No 2, Kochi**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	17.80	0.000	0.000	0.001	0.001	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	17.17	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	14.32	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	21.65	0.000	0.000	0.001	0.001	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	14.80	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	12.86	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	11.14	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	10.31	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	17.37	0.000	0.000	0.001	0.001	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	10.84	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	10.60	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	10.70	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	9.547	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	19.96	0.000	0.000	0.001	0.001	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	20.74	0.000	0.000	0.001	0.001	3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	10.28	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	8.906	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	8.850	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	6.625	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	4.822	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	7.071	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	4.464	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	5.385	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	5.090	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	4.665	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	14.83	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	11.10	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	2.425	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						24						0						0

Annual Sediment Load (Metric Tonnes) : 2339

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KALAMPUR (KMA00C6) **Division : SWR Division, Cochin**

Local River : Kaliyar **Sub-Division : SWR SD No 2, Kochi**

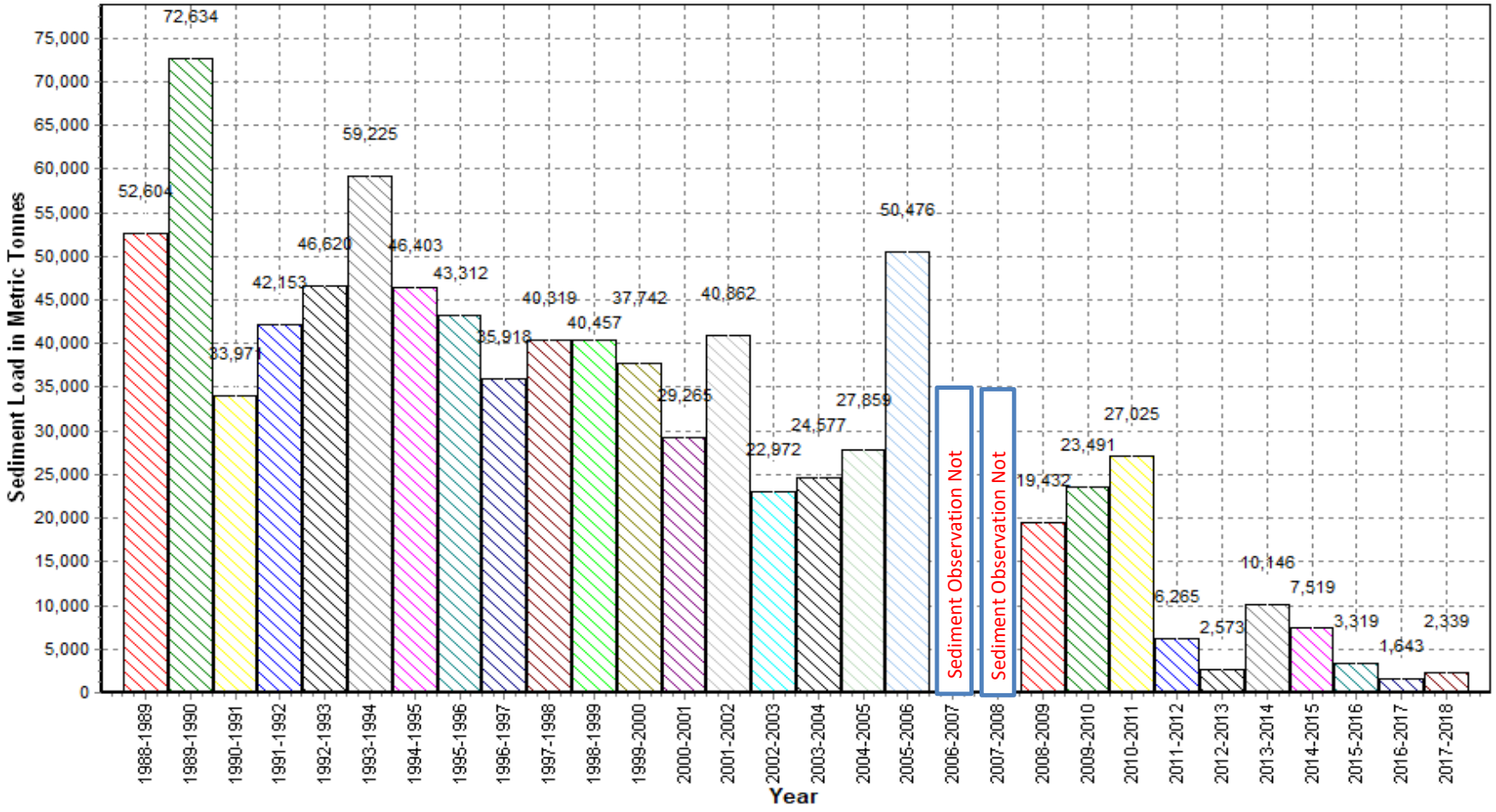
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	70.29	0.000	0.000	0.001	0.001	6
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	57.68	0.000	0.000	0.001	0.001	5
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	33.04	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	28.66	0.000	0.000	0.001	0.001	1
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	22.94	0.000	0.000	0.001	0.001	2
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	108.4	0.000	0.002	0.002	0.003	30
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	77.43	0.000	0.000	0.001	0.001	7
31	0.000	0.000	0.000	0.000	0.000	0							70.26	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	42.61	0.000	0.000	0.001	0.001	5
Monthly																		
Total						0						0						51

Annual Sediment Load (Metric Tonnes) : 2339

Annual Sediment Load for the period: 1988-2018

Station Name : KALAMPUR (KMA00C6)
Local River : Kaliyar

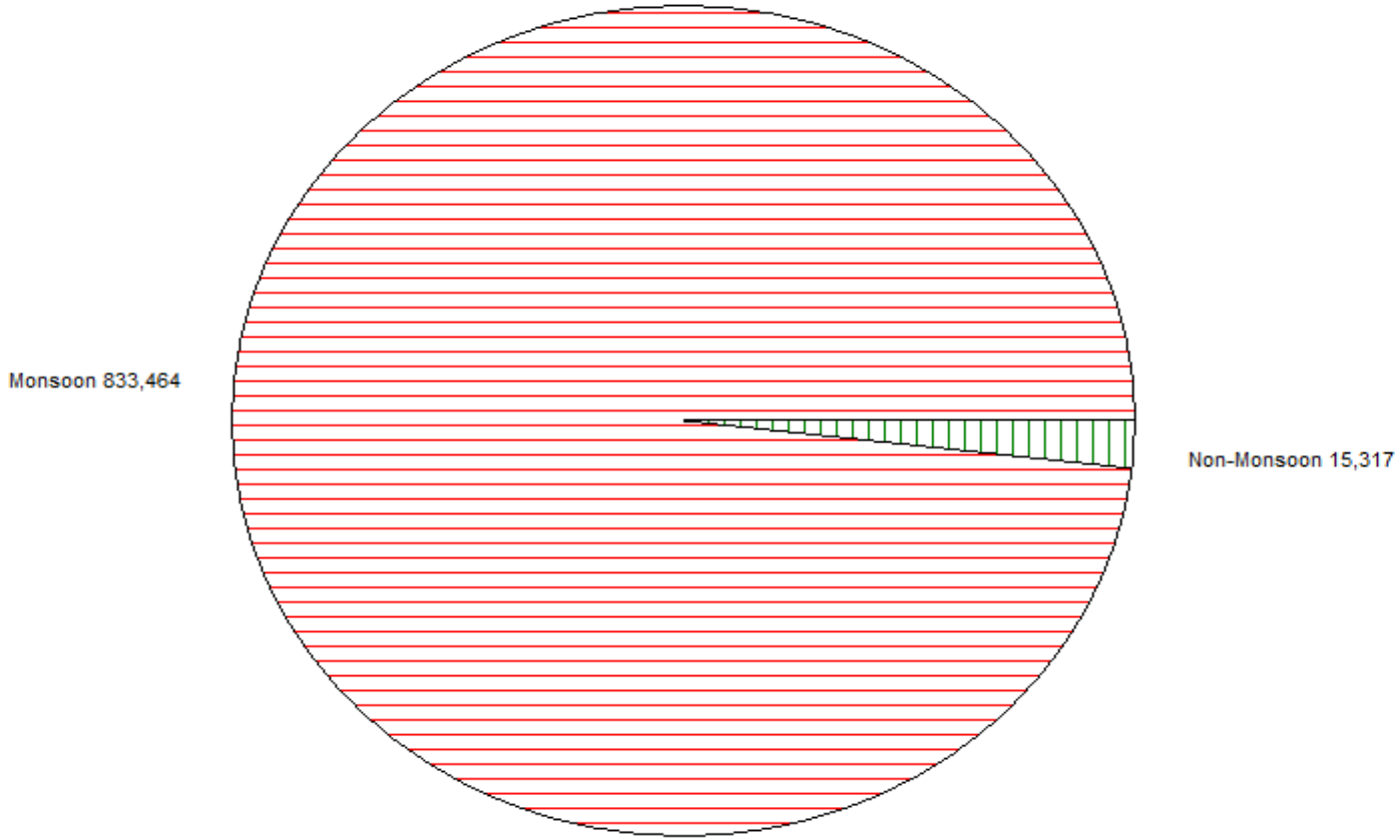
Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



Seasonal Sediment Load for the period : 1988-2017

Station Name : KALAMPUR (KMA00C6)
Local River : Kaliyar

Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi

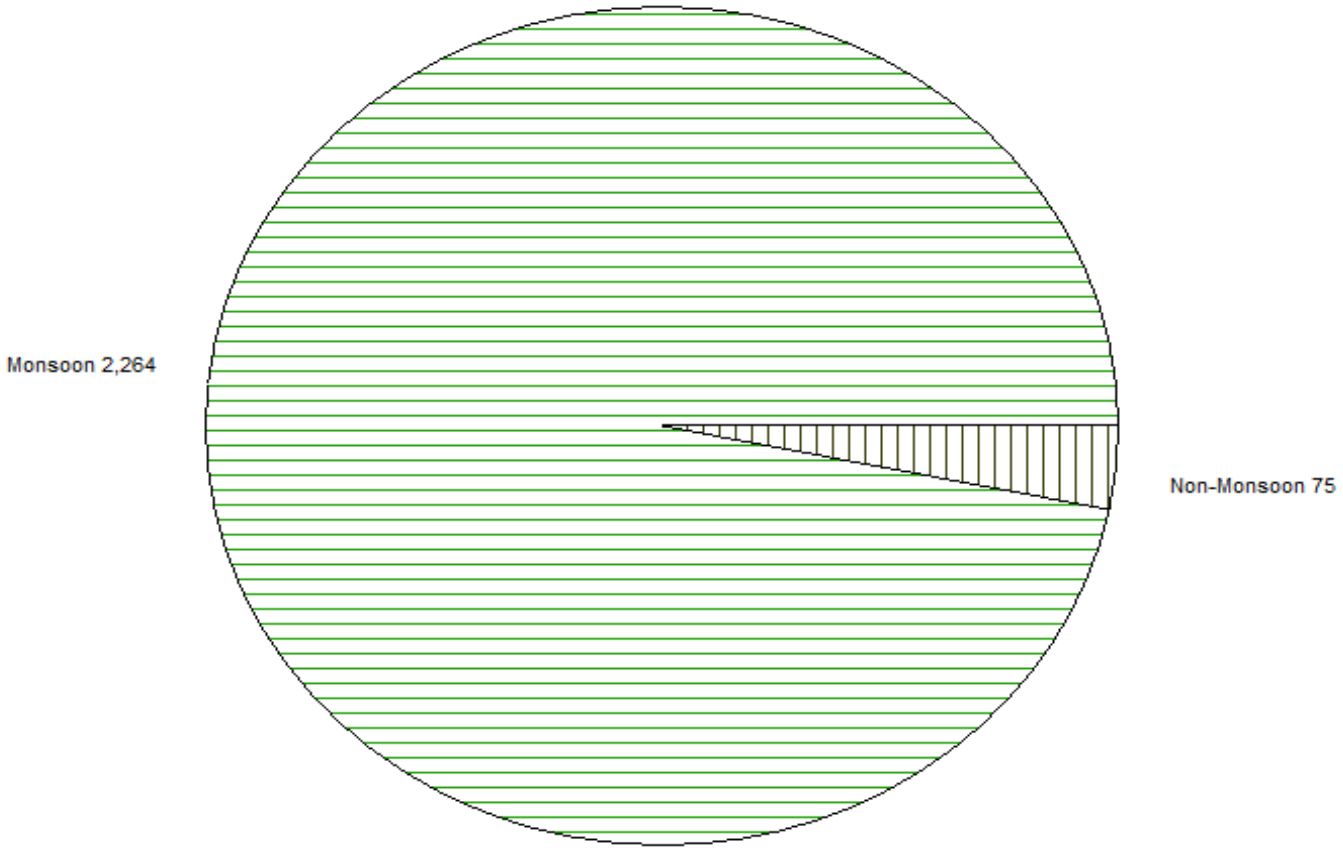


Seasonal Sediment Load for the Year: 2017-2018

Station Name : KALAMPUR (KMA00C6)
Local River : Kaliyar

Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi

650



BED MATERIAL ANALYSIS DATA

RIVER : *kaliyar* **CODE NO. :** *KMAOOC6*

SITE : *kalampur* **CROSS SECTION :** *SGL*

	DATA FOR SAMPLE COLLECTED											GENERAL DATA OF THE RIVER						
										Bed Material Composition						Bed Material Composition	
SL. NO.	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L.(GTS)Or THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m³/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)	WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m³/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017									**DATE OF COLLECTION**		**15-11-2017**						
1	24	-	8.470	6.00	2.70	7.0	0.102	0.8262	14.0	1.80							
2	48	-	8.470	6.90	1.68	24.0	0.305	1.5372	14.0	2.15	56.14	1.9284	0.2070	0.00013	22.41	15.0	1.84
3	66	-	8.470	7.20	1.35	18.0	0.231	0.9356	15.0	1.56							
POSTMONSOON 2017									**DATE OF COLLECTION**		**20-12-2017**						
1	24	-	7.755	7.10	2.00	6.0	NIL	NIL	22.0	3.13							
2	48	-	7.755	6.70	0.90	24.0	0.076	0.2052	22.0	4.33	51.81	1.3306	0.0699	0.00010	4.822	22.0	4.23
3	66	-	7.755	7.10	0.64	18.0	NIL	NIL	16.0	5.24							
PREMONSOON 2018									**DATE OF COLLECTION**								
					Sample not collected												

Annual Sediment Load for period : 1987-2018

Station Name : KIDANGOOR (KT000L3) **Division : SWR Division, Cochin**

Local River : Meenachil **Sub-Division : SWR SD No 2, Kochi**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1987-1988	21490	2651	24141	1403
1988-1989	26091	1080	27171	1413
1989-1990	44590	287	44877	1751
1990-1991	14017	28	14044	1362
1991-1992	57974	167	58141	1761
1992-1993	46901	544	47444	2252
1993-1994	60982	774	61756	1874
1994-1995	41679	5150	46829	1893
1995-1996	35413	153	35565	1753
1996-1997	34233	1007	35240	1723
1997-1998	16707	1652	18359	1996
1998-1999	23694	6394	30088	2310
1999-2000	26810	245	27054	1752
2000-2001	37968	3139	41107	1334
2001-2002	45744	4584	50328	1681
2002-2003	41253	2831	44084	1206
2003-2004	59012	14542	73553	1437
2004-2005	37061	1537	38597	1159
2005-2006	24918	3929	28846	2153
2006-2007	14757	595	15352	1671
2007-2008	27676	960	28636	2174
2008-2009	11628	623	12251	1502
2009-2010	12357	952	13308	1303
2010-2011	15451	1304	16755	2003
2011-2012	14688	616	15304	1715
2012-2013	7831	173	8004	1045
2013-2014	19076	877	19953	2348
2014-2015	17733	1855	19588	2255
2015-2016	11520	1061	12581	1192
2016-2017	4107	550	4657	716
2017-2018	18583	2316	20899	1788

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KIDANGOOR (KT000L3) **Division : SWR Division, Cochin**

Local River : Meenachil **Sub-Division : SWR SD No 2, Kochi**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	67.86	0.000	0.000	0.010	0.010	60	194.0	0.000	0.002	0.003	0.005	84	54.30	0.000	0.000	0.003	0.003	14
2	69.44	0.000	0.000	0.008	0.008	46	156.7	0.000	0.002	0.005	0.008	103	62.01	0.000	0.000	0.003	0.003	16
3	120.0	0.001	0.002	0.006	0.009	93	143.2	0.000	0.001	0.004	0.005	62	59.74	0.000	0.000	0.003	0.003	15
4	105.7	0.000	0.001	0.008	0.009	86	133.0	0.001	0.002	0.005	0.008	92	78.37	0.000	0.000	0.006	0.006	41
5	98.34	0.000	0.002	0.006	0.008	68	113.8	0.000	0.002	0.006	0.008	79	133.7	0.002	0.002	0.008	0.012	139
6	131.6	0.001	0.002	0.011	0.014	159	94.76	0.000	0.000	0.004	0.004	33	301.5	0.002	0.004	0.012	0.018	458
7	103.9	0.000	0.000	0.006	0.006	54	71.36	0.000	0.000	0.004	0.004	25	226.5	0.002	0.004	0.014	0.020	391
8	86.17	0.000	0.000	0.005	0.005	37	73.06	0.000	0.000	0.004	0.004	25	241.8	0.001	0.002	0.006	0.009	188
9	56.36	0.000	0.000	0.004	0.004	19	84.95	0.000	0.000	0.004	0.004	32	174.3	0.001	0.001	0.006	0.008	120
10	46.50	0.000	0.000	0.003	0.003	12	75.29	0.000	0.000	0.006	0.006	39	122.0	0.000	0.001	0.006	0.007	74
11	105.7	0.000	0.000	0.005	0.005	49	73.02	0.000	0.000	0.004	0.004	25	106.0	0.000	0.001	0.005	0.006	55
12	106.2	0.000	0.000	0.006	0.006	55	56.98	0.000	0.000	0.005	0.005	25	122.3	0.001	0.002	0.006	0.009	95
13	88.67	0.000	0.000	0.004	0.004	31	51.11	0.000	0.000	0.005	0.005	22	125.5	0.000	0.002	0.006	0.008	87
14	85.24	0.000	0.000	0.004	0.004	29	55.34	0.000	0.000	0.004	0.004	19	89.32	0.000	0.000	0.004	0.004	31
15	90.45	0.000	0.000	0.004	0.004	31	43.83	0.000	0.000	0.003	0.003	11	68.41	0.000	0.000	0.004	0.004	25
16	76.02	0.000	0.000	0.004	0.004	26	40.93	0.000	0.000	0.004	0.004	15	63.75	0.000	0.000	0.004	0.004	22
17	47.77	0.000	0.000	0.004	0.004	17	32.46	0.000	0.000	0.007	0.007	20	53.12	0.000	0.000	0.003	0.003	14
18	43.61	0.000	0.000	0.005	0.005	18	30.49	0.000	0.000	0.003	0.003	8	53.49	0.000	0.000	0.003	0.003	14
19	44.39	0.000	0.000	0.004	0.004	15	33.75	0.000	0.000	0.004	0.004	12	76.19	0.000	0.000	0.004	0.004	26
20	25.22	0.000	0.000	0.004	0.004	9	53.05	0.000	0.000	0.006	0.006	28	102.7	0.000	0.001	0.004	0.006	49
21	21.43	0.000	0.000	0.008	0.008	15	55.63	0.000	0.000	0.004	0.004	19	164.5	0.001	0.002	0.005	0.008	114
22	23.08	0.000	0.000	0.006	0.006	12	55.54	0.000	0.000	0.004	0.004	19	174.7	0.001	0.002	0.002	0.005	68
23	39.02	0.000	0.000	0.006	0.006	20	60.93	0.000	0.000	0.005	0.005	25	138.3	0.001	0.002	0.009	0.012	143
24	65.25	0.000	0.000	0.006	0.006	34	44.37	0.000	0.000	0.004	0.004	15	99.53	0.000	0.000	0.009	0.009	77
25	135.1	0.001	0.001	0.010	0.012	142	41.56	0.000	0.000	0.004	0.004	14	85.95	0.000	0.000	0.007	0.007	52
26	206.9	0.001	0.002	0.013	0.016	291	30.93	0.000	0.000	0.004	0.004	11	63.97	0.000	0.000	0.007	0.007	39
27	321.4	0.004	0.006	0.025	0.035	972	29.88	0.000	0.000	0.003	0.003	8	96.18	0.000	0.001	0.008	0.009	74
28	468.8	0.003	0.005	0.022	0.030	1215	60.47	0.000	0.000	0.003	0.003	16	149.4	0.002	0.004	0.010	0.016	207
29	404.1	0.002	0.003	0.016	0.021	733	57.40	0.000	0.000	0.007	0.007	35	163.8	0.001	0.002	0.011	0.014	198
30	253.4	0.001	0.002	0.011	0.014	307	52.59	0.000	0.000	0.004	0.004	16	169.5	0.002	0.002	0.008	0.012	176
31							58.16	0.000	0.000	0.003	0.003	15	129.0	0.001	0.002	0.009	0.012	134
Ten Daily Mean																		
Ten Daily I	88.59	0.000	0.001	0.007	0.008	63	114.0	0.000	0.001	0.005	0.006	57	145.4	0.001	0.001	0.007	0.009	146
Ten Daily II	71.33	0.000	0.000	0.004	0.004	28	47.10	0.000	0.000	0.005	0.005	18	86.08	0.000	0.001	0.004	0.005	42
Ten Daily III	193.8	0.001	0.002	0.012	0.015	374	49.77	0.000	0.000	0.004	0.004	18	130.4	0.001	0.002	0.008	0.010	116
Monthly																		
Total						4657						950						3156

Annual Sediment Load (Metric Tonnes) : 20899

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KIDANGOOR (KT000L3) **Division : SWR Division, Cochin**

Local River : Meenachil **Sub-Division : SWR SD No 2, Kochi**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	112.8	0.000	0.000	0.010	0.010	97	74.22	0.000	0.002	0.017	0.019	122	153.1	0.002	0.004	0.022	0.028	370
2	115.6	0.000	0.001	0.007	0.008	80	63.39	0.000	0.002	0.013	0.015	79	146.9	0.002	0.003	0.016	0.021	267
3	113.2	0.001	0.001	0.014	0.015	151	48.53	0.000	0.000	0.004	0.004	17	185.9	0.001	0.002	0.011	0.014	225
4	127.1	0.001	0.002	0.016	0.020	214	36.17	0.000	0.000	0.004	0.004	13	179.6	0.001	0.002	0.010	0.013	202
5	141.7	0.002	0.003	0.015	0.020	245	35.71	0.000	0.000	0.003	0.003	9	245.6	0.000	0.000	0.000	0.000	6
6	121.0	0.002	0.004	0.039	0.045	470	60.77	0.000	0.000	0.003	0.003	16	185.7	0.000	0.001	0.009	0.010	160
7	91.81	0.000	0.000	0.007	0.007	56	61.05	0.000	0.000	0.005	0.005	26	151.7	0.001	0.002	0.017	0.020	262
8	101.0	0.000	0.001	0.009	0.010	87	70.33	0.000	0.000	0.007	0.007	40	148.5	0.001	0.002	0.020	0.023	295
9	105.7	0.000	0.001	0.011	0.012	110	62.89	0.000	0.000	0.009	0.009	49	129.0	0.001	0.002	0.010	0.013	145
10	80.86	0.000	0.000	0.004	0.004	31	59.34	0.000	0.000	0.005	0.005	26	105.7	0.000	0.000	0.005	0.005	46
11	119.2	0.000	0.001	0.006	0.007	72	51.43	0.000	0.000	0.004	0.004	18	106.0	0.000	0.000	0.004	0.004	37
12	116.9	0.001	0.002	0.016	0.019	192	65.81	0.000	0.000	0.006	0.006	34	110.9	0.000	0.001	0.007	0.008	79
13	132.3	0.001	0.002	0.018	0.021	240	114.2	0.002	0.004	0.024	0.030	296	70.95	0.000	0.000	0.004	0.004	25
14	234.2	0.001	0.002	0.008	0.011	223	115.8	0.003	0.005	0.032	0.040	400	65.33	0.000	0.000	0.016	0.016	90
15	176.5	0.001	0.002	0.006	0.009	137	105.7	0.002	0.004	0.024	0.030	272	44.74	0.000	0.000	0.008	0.008	31
16	130.4	0.001	0.001	0.006	0.008	90	68.38	0.000	0.001	0.010	0.011	65	38.29	0.000	0.000	0.006	0.006	20
17	225.9	0.001	0.002	0.007	0.010	193	63.45	0.000	0.000	0.006	0.006	33	24.98	0.000	0.000	0.007	0.007	15
18	463.9	0.001	0.002	0.011	0.014	561	70.97	0.000	0.001	0.010	0.012	71	22.62	0.000	0.000	0.006	0.006	12
19	359.6	0.001	0.001	0.008	0.010	311	65.95	0.000	0.000	0.005	0.005	28	32.75	0.000	0.000	0.005	0.005	13
20	190.3	0.001	0.001	0.008	0.010	164	61.74	0.000	0.000	0.008	0.008	43	52.35	0.000	0.000	0.005	0.005	23
21	150.2	0.001	0.002	0.007	0.010	130	55.17	0.000	0.000	0.006	0.006	29	39.38	0.000	0.000	0.007	0.007	24
22	118.5	0.001	0.001	0.010	0.012	123	56.71	0.000	0.000	0.005	0.005	24	37.89	0.000	0.000	0.004	0.004	13
23	58.60	0.000	0.000	0.007	0.007	35	53.58	0.000	0.000	0.004	0.004	19	23.98	0.000	0.000	0.004	0.004	8
24	52.01	0.000	0.000	0.008	0.008	35	27.32	0.000	0.000	0.004	0.004	9	17.67	0.000	0.000	0.003	0.003	5
25	40.06	0.000	0.000	0.009	0.009	31	23.67	0.000	0.000	0.004	0.004	8	19.25	0.000	0.000	0.005	0.005	8
26	47.79	0.000	0.000	0.007	0.007	29	17.88	0.000	0.000	0.004	0.004	6	17.65	0.000	0.000	0.005	0.005	7
27	39.62	0.000	0.000	0.006	0.006	21	64.26	0.000	0.000	0.003	0.003	17	17.83	0.000	0.000	0.003	0.003	5
28	61.69	0.000	0.002	0.014	0.016	85	121.7	0.002	0.004	0.043	0.049	515	18.23	0.000	0.000	0.005	0.005	8
29	120.8	0.000	0.006	0.033	0.039	405	116.2	0.001	0.002	0.020	0.024	238	17.71	0.000	0.000	0.007	0.007	11
30	91.91	0.000	0.004	0.023	0.027	210	61.81	0.000	0.000	0.004	0.004	21	14.94	0.000	0.000	0.004	0.004	5
31							98.64	0.000	0.000	0.004	0.004	34						
Ten Daily Mean																		
Ten Daily I	111.1	0.001	0.001	0.013	0.015	154	57.24	0.000	0.000	0.007	0.007	40	163.2	0.001	0.002	0.012	0.015	198
Ten Daily II	214.9	0.001	0.002	0.009	0.012	218	78.34	0.001	0.001	0.013	0.015	126	56.89	0.000	0.000	0.007	0.007	34
Ten Daily III	78.12	0.000	0.001	0.012	0.014	110	63.36	0.000	0.001	0.009	0.010	84	22.45	0.000	0.000	0.005	0.005	9
Monthly																		
Total						4828						2578						2415

Annual Sediment Load (Metric Tonnes) : 20899

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KIDANGOOR (KT000L3) **Division : SWR Division, Cochin**

Local River : Meenachil **Sub-Division : SWR SD No 2, Kochi**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	13.91	0.000	0.000	0.004	0.004	5	4.892	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	16.89	0.000	0.000	0.006	0.006	9	3.483	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	15.40	0.000	0.000	0.004	0.004	6	4.155	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	13.71	0.000	0.000	0.000	0.000	0	4.396	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	12.28	0.000	0.000	0.000	0.000	0	4.155	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0
6	11.89	0.000	0.000	0.000	0.000	0	4.642	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	6.086	0.000	0.000	0.000	0.000	0	3.461	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	6.412	0.000	0.000	0.000	0.000	0	1.182	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0
9	8.521	0.000	0.000	0.001	0.001	1	1.126	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	8.521	0.000	0.000	0.000	0.000	0	1.175	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	8.521	0.000	0.000	0.000	0.000	0	1.226	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0
12	11.80	0.000	0.000	0.000	0.000	0	0.855	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0
13	23.65	0.000	0.000	0.000	0.000	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	12.42	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	18.44	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	14.30	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	11.31	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	8.304	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	8.502	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	8.230	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	4.471	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	4.495	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	4.497	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	5.156	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	5.156	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	4.002	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	3.857	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	4.170	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	5.014	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0						
30	3.985	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	3.503	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	11.36	0.000	0.000	0.002	0.002	2	3.267	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	12.55	0.000	0.000	0.000	0.000	0	0.208	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	4.391	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						27						1						0

Annual Sediment Load (Metric Tonnes) : 20899

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KIDANGOOR (KT000L3) **Division : SWR Division, Cochin**

Local River : Meenachil **Sub-Division : SWR SD No 2, Kochi**

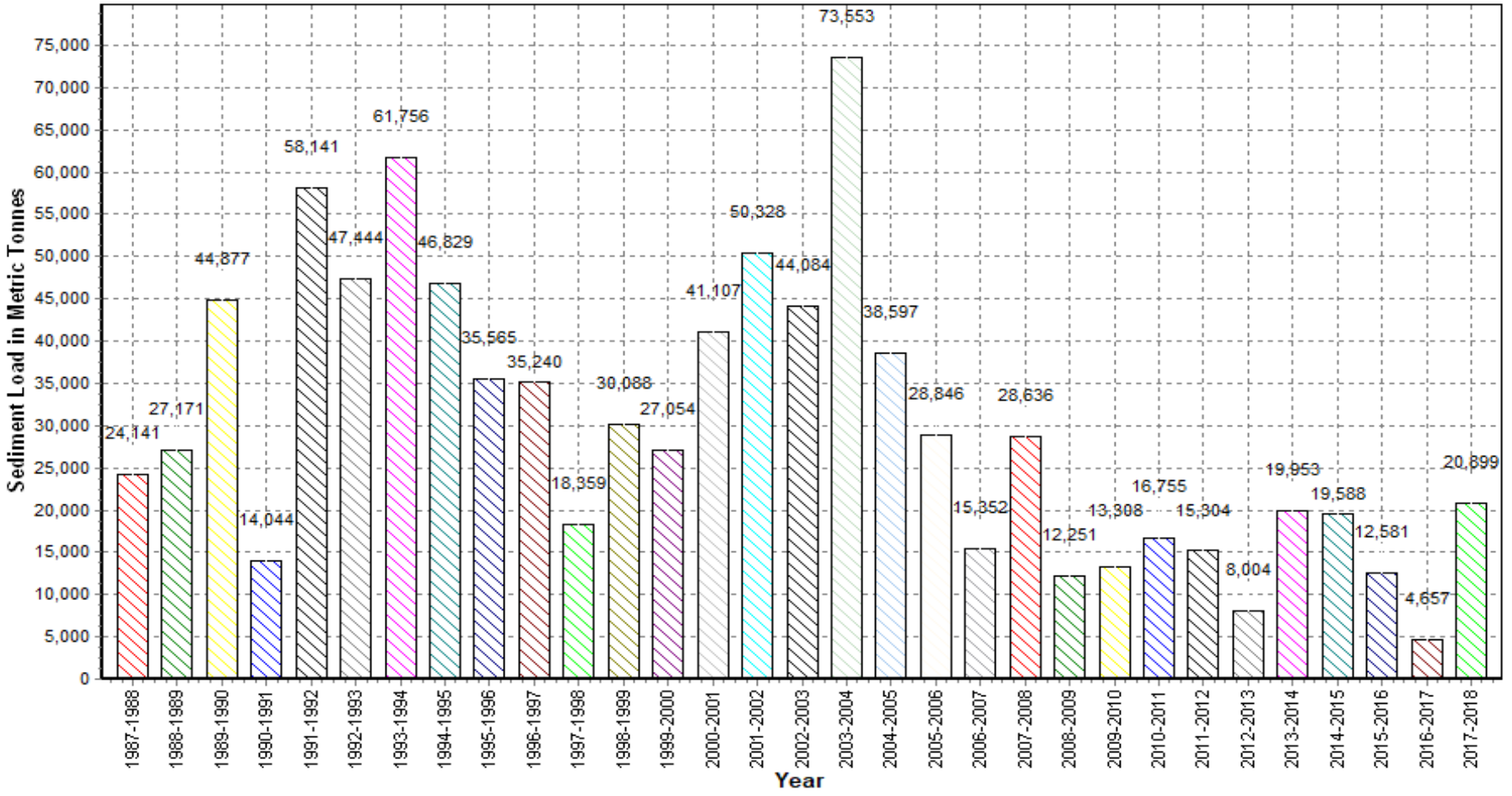
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	7.922	0.000	0.000	0.009	0.009	6
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	7.335	0.000	0.000	0.010	0.010	7
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	5.586	0.000	0.000	0.009	0.009	4
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	5.574	0.000	0.000	0.007	0.007	3
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	5.599	0.000	0.000	0.006	0.006	3
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	7.047	0.000	0.000	0.006	0.006	3
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	35.55	0.000	0.000	0.005	0.005	15
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	36.94	0.000	0.000	0.001	0.001	2
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	61.85	0.000	0.000	0.019	0.019	100
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	44.81	0.000	0.000	0.021	0.021	81
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	72.65	0.000	0.000	0.015	0.015	92
12	0.000	0.000	0.000	0.000	0.000	0	12.50	0.000	0.000	0.017	0.017	18	74.17	0.000	0.000	0.019	0.019	123
13	0.000	0.000	0.000	0.000	0.000	0	12.78	0.000	0.000	0.020	0.020	22	119.8	0.000	0.001	0.000	0.001	6
14	0.000	0.000	0.000	0.000	0.000	0	14.96	0.000	0.000	0.020	0.020	25	81.24	0.000	0.001	0.006	0.008	54
15	0.000	0.000	0.000	0.000	0.000	0	12.79	0.000	0.000	0.017	0.017	19	80.22	0.000	0.000	0.003	0.003	23
16	0.000	0.000	0.000	0.000	0.000	0	12.72	0.000	0.000	0.007	0.007	8	83.09	0.000	0.000	0.009	0.009	65
17	0.000	0.000	0.000	0.000	0.000	0	9.349	0.000	0.000	0.018	0.018	15	150.9	0.000	0.001	0.015	0.016	206
18	0.000	0.000	0.000	0.000	0.000	0	9.520	0.000	0.000	0.017	0.017	14	190.3	0.000	0.001	0.010	0.011	183
19	0.000	0.000	0.000	0.000	0.000	0	5.853	0.000	0.000	0.006	0.006	3	104.0	0.000	0.000	0.006	0.006	58
20	0.000	0.000	0.000	0.000	0.000	0	5.773	0.000	0.000	0.004	0.004	2	74.37	0.000	0.000	0.009	0.009	59
21	0.000	0.000	0.000	0.000	0.000	0	5.704	0.000	0.000	0.005	0.005	2	63.19	0.000	0.000	0.007	0.007	39
22	0.000	0.000	0.000	0.000	0.000	0	5.146	0.000	0.000	0.004	0.004	2	52.12	0.000	0.000	0.008	0.008	35
23	0.000	0.000	0.000	0.000	0.000	0	5.648	0.000	0.000	0.004	0.004	2	49.96	0.000	0.000	0.012	0.012	53
24	0.000	0.000	0.000	0.000	0.000	0	5.959	0.000	0.000	0.005	0.005	3	48.40	0.000	0.000	0.008	0.008	34
25	0.000	0.000	0.000	0.000	0.000	0	9.984	0.000	0.000	0.013	0.013	11	81.72	0.000	0.000	0.011	0.011	79
26	0.000	0.000	0.000	0.000	0.000	0	18.81	0.000	0.000	0.005	0.005	8	67.15	0.000	0.000	0.008	0.008	44
27	0.000	0.000	0.000	0.000	0.000	0	14.96	0.000	0.000	0.005	0.005	6	64.97	0.000	0.000	0.009	0.009	50
28	0.000	0.000	0.000	0.000	0.000	0	14.59	0.000	0.000	0.004	0.004	5	65.59	0.000	0.000	0.010	0.010	58
29	0.000	0.000	0.000	0.000	0.000	0	11.42	0.000	0.000	0.007	0.007	7	203.0	0.002	0.003	0.017	0.022	379
30	0.000	0.000	0.000	0.000	0.000	0	8.222	0.000	0.000	0.009	0.009	6	147.8	0.001	0.002	0.010	0.013	166
31	0.000	0.000	0.000	0.000	0.000	0							118.7	0.000	0.000	0.008	0.008	80
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	21.82	0.000	0.000	0.009	0.009	22
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	9.625	0.000	0.000	0.013	0.013	13	103.1	0.000	0.000	0.009	0.010	87
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	10.04	0.000	0.000	0.006	0.006	5	87.50	0.000	0.000	0.010	0.011	92
Monthly Total						0						178						2110

Annual Sediment Load (Metric Tonnes) : 20899

Annual Sediment Load for the period: 1987-2018

Station Name : KIDANGOOR (KT000L3)
Local River : Meenachil

Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi

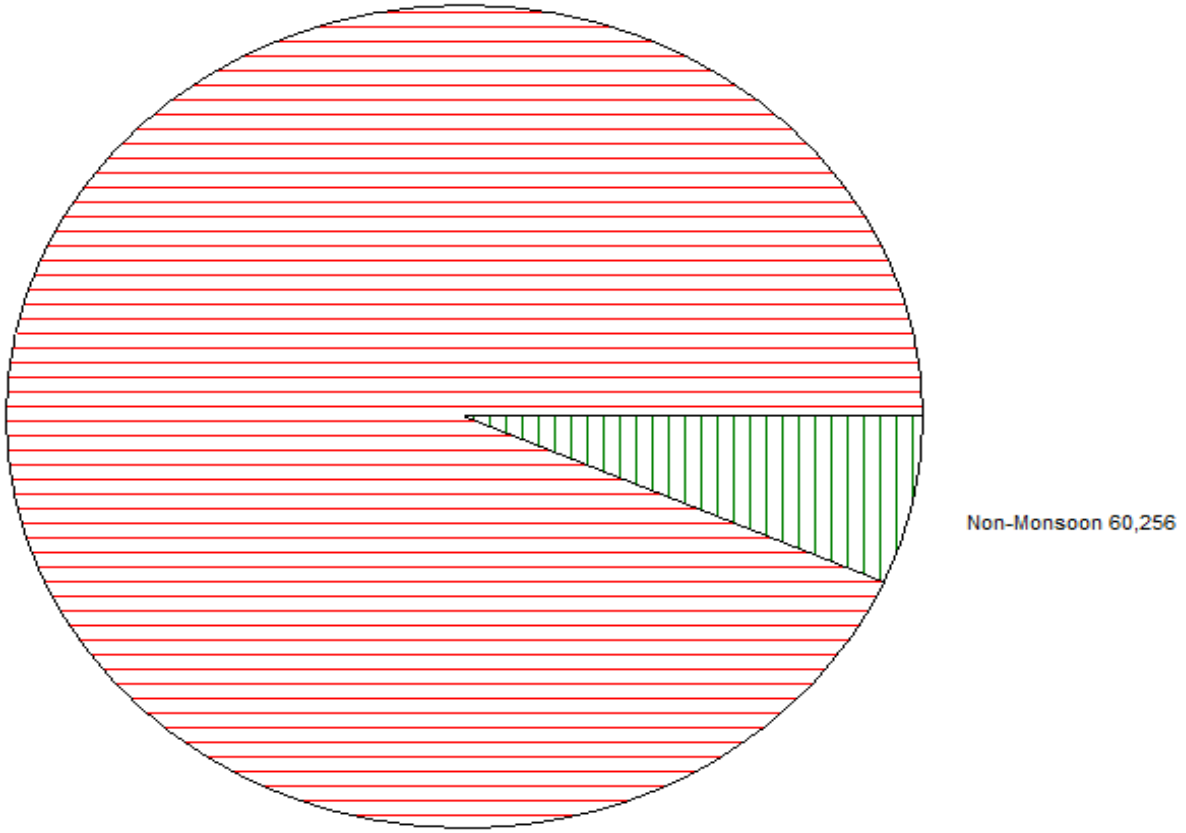


Seasonal Sediment Load for the period : 1987-2017

Station Name : KIDANGOOR (KT000L3)
Local River : Meenachil

Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi

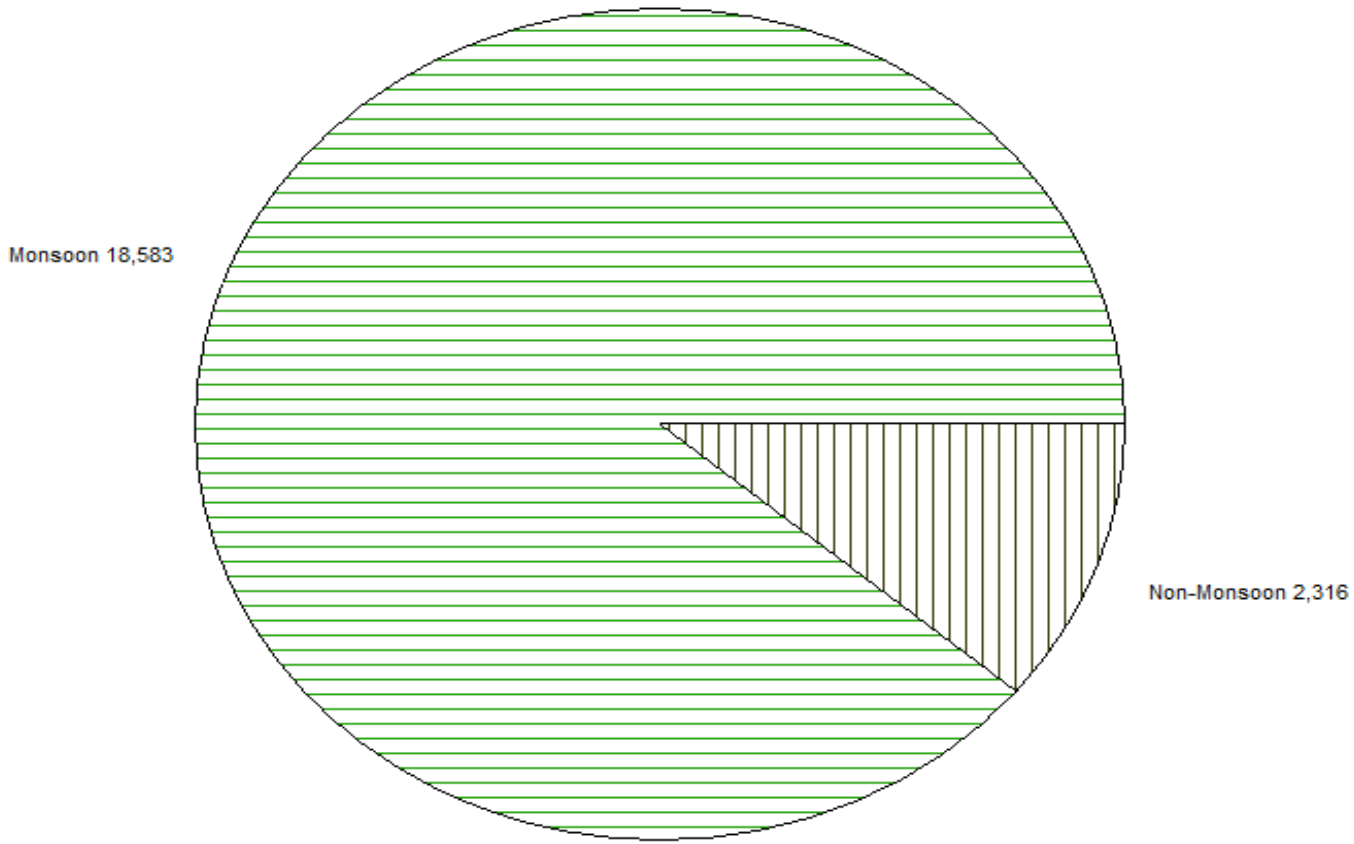
658



Seasonal Sediment Load for the Year: 2017-2018

Station Name : KIDANGOOR (KT000L3)
Local River : Meenachil

Division : SWR Division, Cochin
Sub-Division : SWR SD No 2, Kochi



BED MATERIAL ANALYSIS DATA

RIVER : *Meenachil* **CODE NO. :** *KTOOOL3*

SITE : *kidangoor* **CROSS SECTION :** *SGL*

SL. NO.	DATA FOR SAMPLE COLLECTED										GENERAL DATA OF THE RIVER						
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS) OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	Bed Material Composition		WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	Bed Material Composition	
									MAX SIZE (mm)	MEAN SIZE (mm)						MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017					**DATE OF COLLECTION**												
					Sample not collected												
POSTMONSOON 2017					**DATE OF COLLECTION**						**03-03-2018**						
1	32	-	(-)4.140	0.010	4.150	60.00			5.0	2.02							
2	48	-	(-)2.930	0.010	2.940	60.00	NIL	NIL	8.0	1.61	-	-	-	-	-	8.0	1.37
3	64	-	(-)2.970	0.010	2.980	60.00			6.0	0.47							
PREMONSOON 2018					**DATE OF COLLECTION**						**25-05-2018**						
1	32	-	4.116	2.134	6.25	67.00	0.352		11.0	0.99							
2	48	-	2.666	2.134	4.80	67.00	0.442	81.72	5.0	1.71	69.84	4.1707	0.2806	0.00013	81.72	14.0	1.49
3	64	-	2.766	2.134	4.90	67.00	no		14.0	1.75							

Annual Sediment Load for period : 1986-2018

Station Name : KALLOOPPARA (KYB00F2) **Division : SWR Division, Cochin**

Local River : Manimala **Sub-Division : SWR SD No 1, Trivandrum**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1986-1987	33911	493	34404	1282
1987-1988	64975	7192	72167	1413
1988-1989	67288	1850	69138	1609
1989-1990	96871	585	97456	2073
1990-1991	43300	162	43463	1379
1991-1992	58214	696	58910	1803
1992-1993	101131	2301	103432	2398
1993-1994	100628	1335	101964	2002
1994-1995	91051	16990	108041	2147
1995-1996	67318	1281	68600	1951
1996-1997	62382	3562	65944	1905
1997-1998	84336	1363	85699	1973
1998-1999	56902	7540	64441	2196
1999-2000	39222	294	39516	1474
2000-2001	42645	1400	44045	1316
2001-2002	51828	1493	53321	1934
2002-2003	19395	616	20011	1161
2003-2004	18978	4935	23913	1549
2004-2005	16362	937	17299	1248
2005-2006	47992	18184	66176	2059
2006-2007	25270	798	26068	1779
2007-2008	72512	567	73079	2013
2008-2009	25684	48	25732	1232
2009-2010	30891	1123	32014	1459
2010-2011	43051	834	43885	2136
2011-2012	38327	1420	39747	1784
2012-2013	8006	31	8037	861
2013-2014	44636	1365	46001	2268
2014-2015	59125	1784	60909	2271
2015-2016	26451	3561	30011	1516
2016-2017	4259	82	4341	773
2017-2018	15800	2122	17922	1730

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KALLOOPPARA (KYB00F2) **Division : SWR Division, Cochin**

Local River : Manimala **Sub-Division : SWR SD No 1, Trivandrum**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	40.98	0.001	0.002	0.006	0.009	33	118.0	0.000	0.000	0.002	0.002	20	79.56	0.000	0.009	0.002	0.011	74
2	77.48	0.000	0.001	0.003	0.004	24	96.99	0.000	0.000	0.003	0.003	27	114.7	0.001	0.002	0.003	0.006	58
3	204.0	0.001	0.002	0.007	0.010	174	87.46	0.000	0.000	0.004	0.004	27	74.68	0.000	0.001	0.002	0.003	22
4	174.2	0.004	0.001	0.004	0.010	144	89.31	0.000	0.000	0.002	0.002	12	73.64	0.000	0.001	0.002	0.003	20
5	120.1	0.000	0.001	0.002	0.003	32	61.95	0.000	0.000	0.002	0.002	10	146.8	0.002	0.006	0.012	0.020	252
6	139.7	0.000	0.001	0.002	0.003	41	51.11	0.000	0.000	0.001	0.001	6	386.5	0.003	0.005	0.009	0.017	574
7	120.7	0.000	0.001	0.003	0.004	38	47.53	0.000	0.000	0.002	0.002	7	232.5	0.001	0.003	0.005	0.009	189
8	99.84	0.000	0.000	0.001	0.001	12	43.72	0.000	0.000	0.002	0.002	6	186.0	0.001	0.002	0.004	0.007	106
9	59.73	0.000	0.000	0.004	0.004	18	58.60	0.000	0.000	0.002	0.002	9	169.1	0.001	0.002	0.004	0.007	101
10	53.71	0.000	0.000	0.003	0.003	14	64.70	0.000	0.000	0.002	0.002	12	158.2	0.000	0.002	0.002	0.004	59
11	56.78	0.000	0.000	0.003	0.004	17	62.12	0.000	0.000	0.002	0.002	12	121.4	0.001	0.001	0.006	0.008	86
12	64.98	0.000	0.001	0.003	0.004	21	54.82	0.000	0.000	0.001	0.001	6	146.9	0.001	0.002	0.004	0.008	99
13	61.66	0.000	0.000	0.001	0.001	6	48.08	0.000	0.000	0.001	0.001	6	101.1	0.000	0.001	0.003	0.005	39
14	52.90	0.000	0.001	0.004	0.005	24	49.12	0.000	0.000	0.001	0.001	5	69.78	0.000	0.001	0.002	0.003	16
15	61.50	0.000	0.000	0.002	0.002	8	41.09	0.000	0.000	0.001	0.001	4	50.47	0.000	0.000	0.002	0.002	9
16	49.67	0.000	0.000	0.001	0.001	5	40.46	0.000	0.000	0.000	0.000	0	47.29	0.000	0.000	0.002	0.002	6
17	36.82	0.000	0.000	0.001	0.001	3	33.71	0.000	0.000	0.001	0.001	3	43.69	0.000	0.000	0.002	0.002	8
18	28.41	0.000	0.000	0.002	0.002	4	29.35	0.000	0.000	0.001	0.001	4	42.24	0.000	0.000	0.001	0.001	4
19	25.32	0.000	0.000	0.002	0.002	4	25.70	0.000	0.000	0.001	0.001	3	39.96	0.000	0.000	0.004	0.004	14
20	22.10	0.000	0.000	0.002	0.002	3	41.57	0.000	0.000	0.002	0.002	7	63.32	0.000	0.001	0.003	0.004	20
21	12.05	0.000	0.000	0.002	0.002	2	40.61	0.000	0.000	0.003	0.003	9	164.5	0.002	0.003	0.005	0.009	128
22	13.41	0.000	0.000	0.002	0.002	3	42.75	0.000	0.000	0.002	0.002	9	215.3	0.002	0.003	0.007	0.012	216
23	14.30	0.000	0.000	0.002	0.002	2	41.73	0.000	0.000	0.002	0.002	9	192.1	0.002	0.003	0.006	0.011	179
24	34.14	0.000	0.000	0.001	0.001	4	33.82	0.000	0.000	0.002	0.002	5	142.0	0.001	0.002	0.003	0.006	77
25	41.73	0.000	0.000	0.001	0.001	2	29.34	0.000	0.000	0.002	0.002	4	104.2	0.001	0.003	0.006	0.009	84
26	181.7	0.001	0.002	0.005	0.007	104	23.71	0.000	0.000	0.001	0.001	3	64.04	0.000	0.001	0.003	0.004	23
27	395.7	0.002	0.004	0.002	0.008	267	21.97	0.000	0.000	0.002	0.002	4	54.83	0.000	0.002	0.004	0.006	27
28	600.7	0.002	0.007	0.024	0.034	1765	26.76	0.000	0.000	0.002	0.002	4	120.7	0.001	0.001	0.003	0.006	57
29	363.2	0.001	0.002	0.006	0.009	273	35.00	0.000	0.000	0.002	0.002	6	161.2	0.001	0.002	0.003	0.006	86
30	190.2	0.001	0.002	0.006	0.009	141	36.80	0.000	0.001	0.002	0.003	9	198.1	0.001	0.002	0.004	0.007	120
31							35.95	0.000	0.000	0.001	0.001	4	153.1	0.001	0.002	0.004	0.008	102
Ten Daily Mean																		
Ten Daily I	109.0	0.001	0.001	0.003	0.005	53	71.94	0.000	0.000	0.002	0.002	14	162.2	0.001	0.003	0.005	0.009	146
Ten Daily II	46.01	0.000	0.000	0.002	0.002	10	42.60	0.000	0.000	0.001	0.001	5	72.62	0.000	0.001	0.003	0.004	30
Ten Daily III	184.7	0.001	0.002	0.005	0.007	256	33.49	0.000	0.000	0.002	0.002	6	142.7	0.001	0.002	0.004	0.008	100
Monthly																		
Total						3187						249						2856

Annual Sediment Load (Metric Tonnes) : 17922

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KALLOOPPARA (KYB00F2) **Division : SWR Division, Cochin**

Local River : Manimala **Sub-Division : SWR SD No 1, Trivandrum**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	92.97	0.001	0.002	0.008	0.011	87	68.78	0.000	0.000	0.002	0.002	11	162.4	0.002	0.005	0.013	0.020	282
2	125.1	0.002	0.004	0.007	0.012	131	51.19	0.000	0.000	0.002	0.002	10	193.5	0.002	0.005	0.014	0.020	341
3	106.4	0.001	0.002	0.006	0.009	80	40.36	0.000	0.000	0.002	0.002	5	224.8	0.001	0.004	0.010	0.016	301
4	154.1	0.001	0.002	0.005	0.008	105	34.47	0.000	0.000	0.003	0.003	8	189.0	0.001	0.004	0.011	0.017	274
5	118.1	0.000	0.001	0.003	0.004	43	23.90	0.000	0.000	0.003	0.003	6	202.5	0.001	0.004	0.012	0.018	306
6	144.0	0.001	0.002	0.004	0.007	81	37.80	0.000	0.000	0.003	0.003	8	142.3	0.001	0.004	0.011	0.016	192
7	111.4	0.001	0.002	0.003	0.005	51	39.75	0.000	0.000	0.001	0.001	4	137.2	0.001	0.002	0.007	0.010	123
8	118.2	0.001	0.002	0.004	0.007	68	33.89	0.000	0.000	0.002	0.002	7	140.6	0.000	0.003	0.009	0.012	140
9	160.4	0.001	0.002	0.004	0.008	107	32.53	0.000	0.000	0.003	0.003	8	143.6	0.000	0.002	0.006	0.008	96
10	141.3	0.001	0.002	0.004	0.007	81	24.00	0.000	0.000	0.002	0.002	4	108.0	0.000	0.001	0.003	0.004	39
11	113.4	0.001	0.002	0.003	0.006	60	38.67	0.000	0.000	0.002	0.002	7	114.9	0.000	0.002	0.006	0.008	77
12	115.8	0.001	0.001	0.003	0.005	49	71.17	0.000	0.002	0.008	0.010	60	101.1	0.000	0.002	0.004	0.006	52
13	117.1	0.000	0.002	0.004	0.007	68	145.9	0.000	0.004	0.016	0.021	261	109.4	0.000	0.003	0.007	0.009	88
14	452.9	0.002	0.005	0.001	0.009	347	108.1	0.000	0.001	0.003	0.004	37	69.35	0.000	0.001	0.005	0.007	40
15	285.2	0.002	0.003	0.009	0.014	352	78.71	0.000	0.001	0.006	0.007	46	44.93	0.000	0.000	0.002	0.002	6
16	191.2	0.001	0.003	0.008	0.012	205	67.67	0.000	0.000	0.003	0.003	18	39.10	0.000	0.000	0.002	0.002	5
17	313.9	0.002	0.005	0.012	0.020	532	44.86	0.000	0.000	0.003	0.003	11	33.49	0.000	0.000	0.002	0.002	7
18	572.2	0.003	0.009	0.025	0.037	1804	43.01	0.000	0.000	0.003	0.003	10	23.96	0.000	0.000	0.003	0.003	5
19	369.9	0.004	0.009	0.027	0.040	1272	45.00	0.000	0.000	0.002	0.002	8	24.99	0.000	0.000	0.003	0.003	6
20	186.7	0.002	0.004	0.009	0.015	240	39.23	0.000	0.000	0.002	0.002	7	27.58	0.000	0.000	0.002	0.002	4
21	112.8	0.002	0.003	0.008	0.013	123	34.96	0.000	0.000	0.003	0.003	8	34.39	0.000	0.000	0.003	0.003	8
22	89.36	0.001	0.002	0.005	0.008	59	50.47	0.000	0.000	0.003	0.003	11	34.32	0.000	0.000	0.003	0.003	9
23	56.07	0.000	0.002	0.003	0.005	25	45.01	0.000	0.000	0.003	0.003	13	32.95	0.000	0.000	0.004	0.004	12
24	42.37	0.000	0.001	0.003	0.005	17	38.89	0.000	0.000	0.004	0.004	14	23.39	0.000	0.000	0.002	0.002	4
25	34.22	0.000	0.002	0.003	0.005	14	34.75	0.000	0.000	0.002	0.002	6	19.33	0.000	0.000	0.002	0.002	4
26	37.83	0.000	0.001	0.003	0.004	12	24.28	0.000	0.000	0.003	0.003	5	21.76	0.000	0.000	0.002	0.002	4
27	24.19	0.000	0.000	0.003	0.003	5	35.73	0.000	0.000	0.002	0.002	6	17.95	0.000	0.000	0.002	0.002	2
28	33.36	0.000	0.000	0.003	0.003	7	137.5	0.002	0.004	0.010	0.016	191	19.94	0.000	0.000	0.002	0.002	3
29	72.51	0.000	0.000	0.002	0.002	12	104.3	0.001	0.003	0.008	0.011	102	17.29	0.000	0.000	0.002	0.002	3
30	75.13	0.000	0.000	0.002	0.002	12	74.53	0.000	0.002	0.003	0.005	30	13.63	0.000	0.000	0.002	0.002	2
31							109.2	0.000	0.003	0.008	0.011	101						
Ten Daily Mean																		
Ten Daily I	127.2	0.001	0.002	0.005	0.008	83	38.67	0.000	0.000	0.002	0.002	7	164.4	0.001	0.003	0.009	0.014	209
Ten Daily II	271.8	0.002	0.004	0.010	0.016	493	68.23	0.000	0.001	0.005	0.006	46	58.88	0.000	0.001	0.003	0.004	29
Ten Daily III	57.78	0.000	0.001	0.003	0.005	29	62.69	0.000	0.001	0.004	0.006	44	23.50	0.000	0.000	0.002	0.002	5
Monthly																		
Total						6048						1025						2435

Annual Sediment Load (Metric Tonnes) : 17922

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KALLOOPPARA (KYB00F2) **Division : SWR Division, Cochin**

Local River : Manimala **Sub-Division : SWR SD No 1, Trivandrum**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	15.53	0.000	0.000	0.003	0.003	4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	12.29	0.000	0.000	0.003	0.003	3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	13.54	0.000	0.000	0.003	0.003	3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	7.396	0.000	0.000	0.003	0.003	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	5.175	0.000	0.000	0.003	0.003	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	4.095	0.000	0.000	0.003	0.003	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	13.50	0.000	0.000	0.004	0.004	5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	7.093	0.000	0.000	0.003	0.003	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	6.595	0.000	0.000	0.003	0.003	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	6.398	0.000	0.000	0.003	0.003	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	4.416	0.000	0.000	0.003	0.003	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	16.97	0.000	0.000	0.003	0.003	5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	14.13	0.000	0.000	0.003	0.003	4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	6.768	0.000	0.000	0.002	0.002	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	7.862	0.000	0.000	0.002	0.002	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	5.528	0.000	0.000	0.002	0.002	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						36						0						0

Annual Sediment Load (Metric Tonnes) : 17922

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : KALLOOPPARA (KYB00F2) **Division : SWR Division, Cochin**

Local River : Manimala **Sub-Division : SWR SD No 1, Trivandrum**

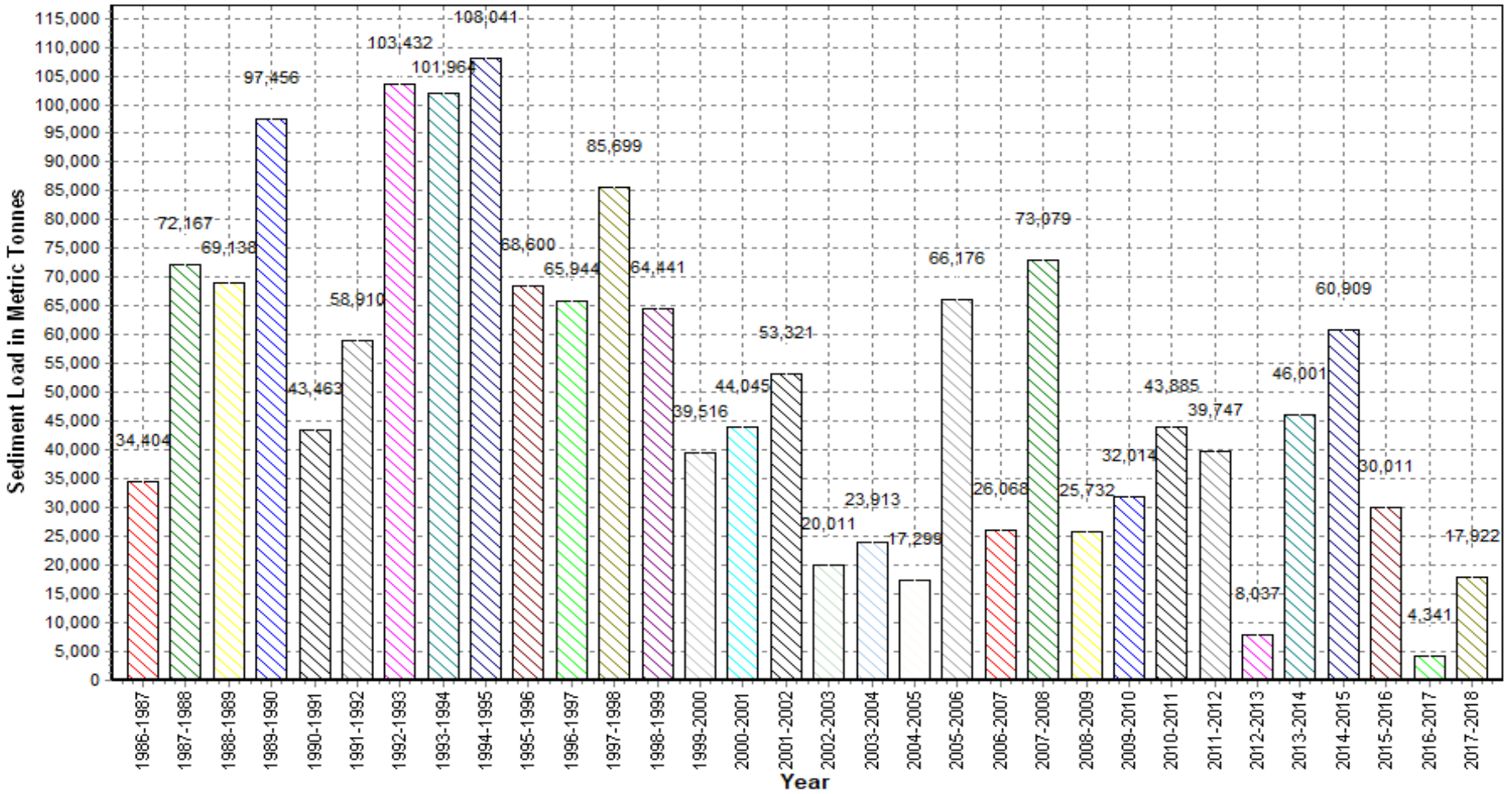
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	17.70	0.002	0.003	0.008	0.013	19
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	54.05	0.001	0.003	0.006	0.010	47
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	68.70	0.001	0.003	0.006	0.010	61
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	107.3	0.002	0.007	0.007	0.016	146
12	0.000	0.000	0.000	0.000	0.000	0	13.24	0.001	0.001	0.005	0.006	7	88.00	0.001	0.002	0.005	0.008	59
13	0.000	0.000	0.000	0.000	0.000	0	15.48	0.001	0.001	0.005	0.006	8	104.0	0.002	0.006	0.008	0.016	141
14	0.000	0.000	0.000	0.000	0.000	0	16.63	0.001	0.001	0.005	0.006	9	90.69	0.001	0.008	0.004	0.013	103
15	0.000	0.000	0.000	0.000	0.000	0	17.83	0.001	0.001	0.005	0.007	10	102.2	0.002	0.005	0.011	0.019	163
16	0.000	0.000	0.000	0.000	0.000	0	14.02	0.001	0.001	0.005	0.006	7	93.75	0.002	0.003	0.005	0.009	75
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	148.7	0.002	0.004	0.008	0.014	179
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	183.9	0.002	0.003	0.006	0.011	170
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	97.61	0.001	0.003	0.005	0.009	72
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	59.81	0.000	0.002	0.004	0.006	30
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	44.89	0.000	0.002	0.003	0.005	18
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	31.61	0.000	0.001	0.003	0.004	10
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	26.85	0.000	0.002	0.004	0.006	14
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	23.76	0.000	0.001	0.004	0.005	10
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	45.07	0.000	0.001	0.003	0.004	16
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	54.51	0.000	0.001	0.003	0.004	17
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	70.42	0.000	0.001	0.004	0.005	29
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	91.56	0.000	0.001	0.004	0.005	36
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	257.3	0.002	0.004	0.011	0.017	382
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	189.2	0.001	0.002	0.007	0.010	165
31	0.000	0.000	0.000	0.000	0.000	0							140.0	0.001	0.002	0.004	0.007	85
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	14.05	0.001	0.003	0.007	0.011	42
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	7.720	0.001	0.001	0.005	0.006	8	107.6	0.002	0.004	0.006	0.012	114
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	88.65	0.000	0.002	0.004	0.006	71
Monthly																		
Total						0						41						2045

Annual Sediment Load (Metric Tonnes) : 17922

Annual Sediment Load for the period: 1986-2018

Station Name : KALLOOPPARA (KYB00F2)
Local River : Manimala

Division : SWR Division, Cochin
Sub-Division : SWR SD No 1, Trivandrum



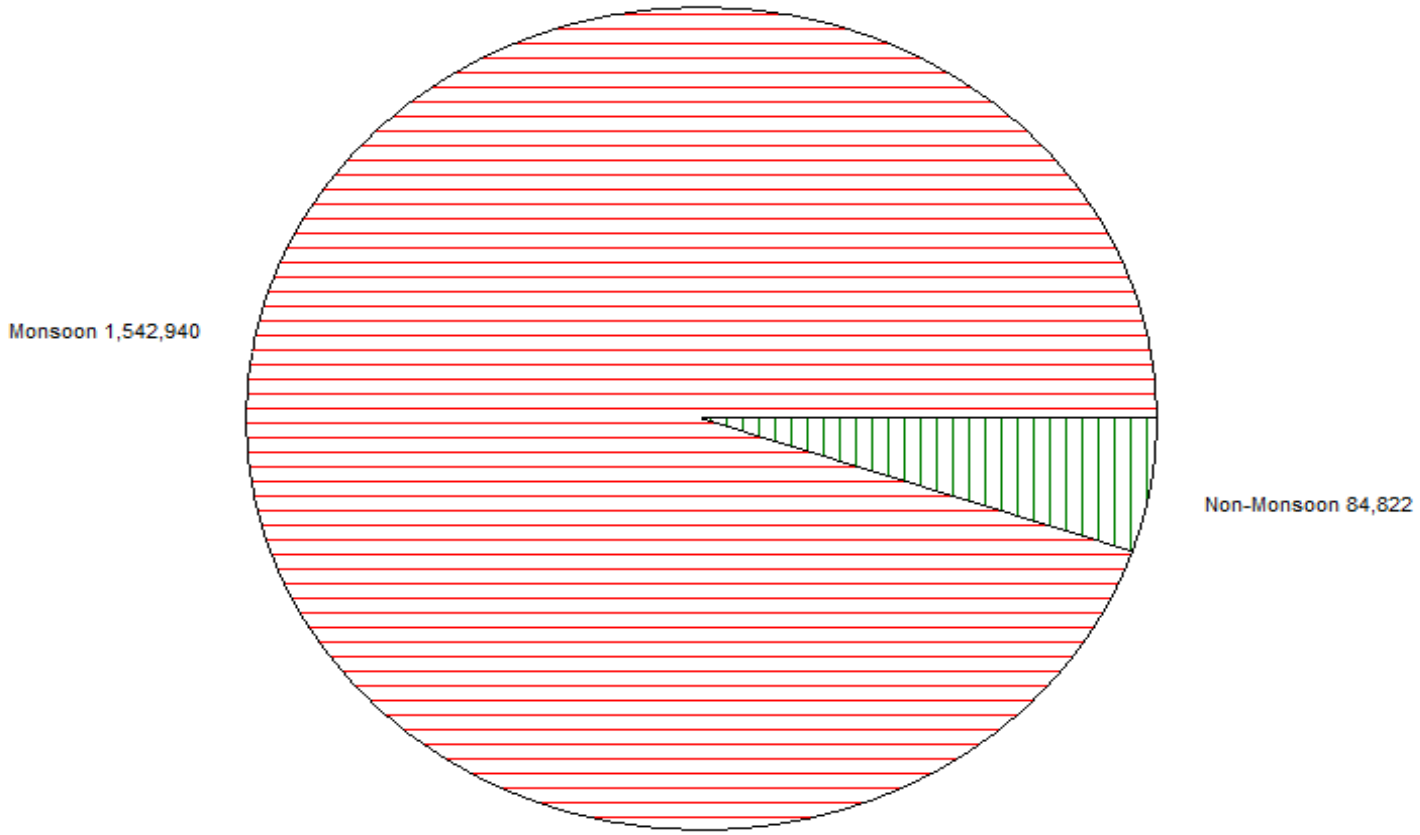
999

Seasonal Sediment Load for the period : 1986-2017

Station Name : KALLOOPPARA (KYB00F2)
Local River : Manimala

Division : SWR Division, Cochin
Sub-Division : SWR SD No 1, Trivandrum

667



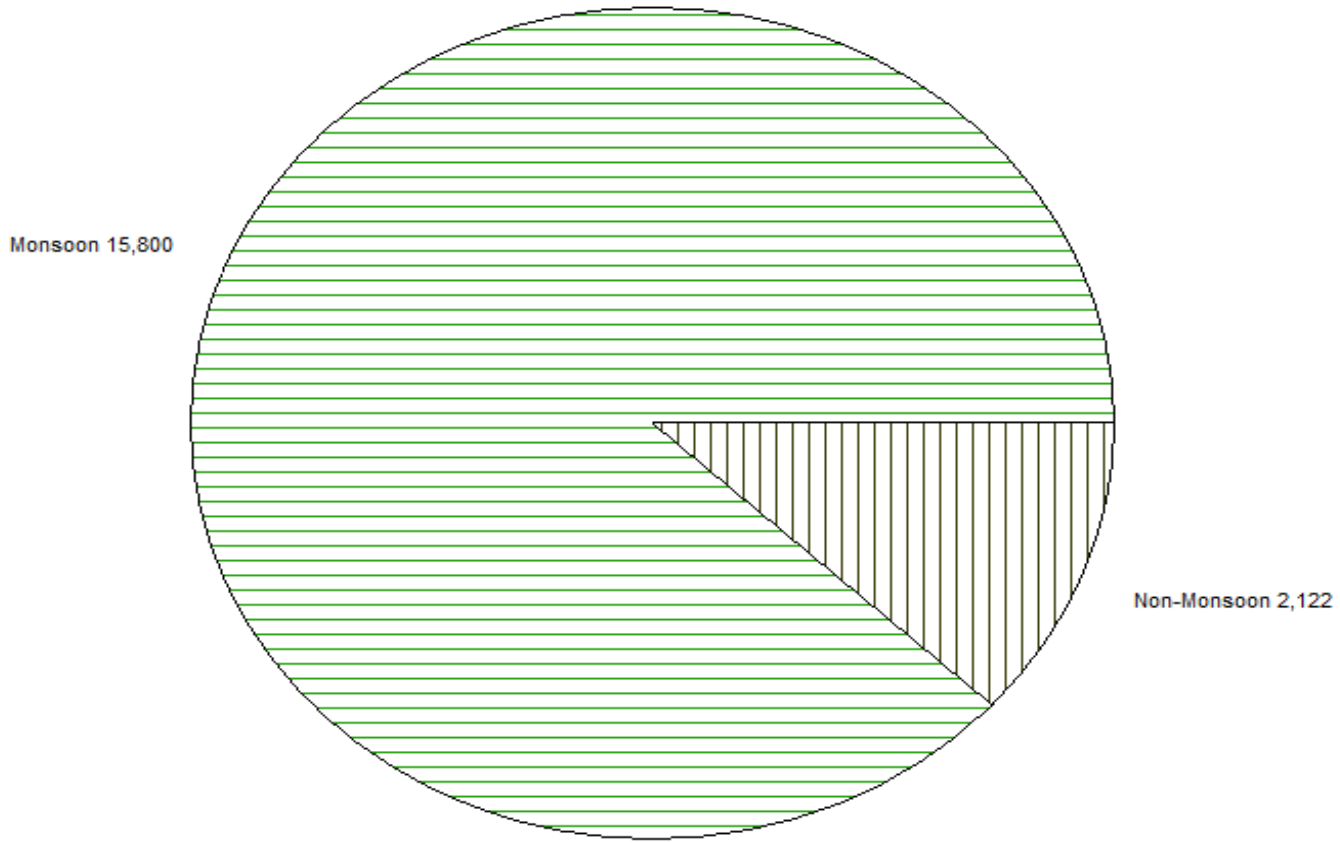
Seasonal Sediment Load for the Year: 2017-2018

Station Name : KALLOOPPARA (KYB00F2)

Local River : Manimala

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum



BED MATERIAL ANALYSIS DATA

RIVER : *Manimala* **CODE NO. :** *KYBOOF2*

SITE : *kallooppara* **CROSS SECTION :** *SGL*

SL. NO.	DATA FOR SAMPLE COLLECTED											GENERAL DATA OF THE RIVER						
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS) OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m³/Sec)	Bed Material Composition		WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m³/Sec)	Bed Material Composition	
									MAX SIZE (mm)	MEAN SIZE (mm)						MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017							**DATE OF COLLECTION 28-09-2017**										
1	73	-	(-)0.100	2.250	2.35	23	0.166		6.0	1.17							
2	96	-	(-)0.210	2.250	2.46	23	0.260	33.36	8.0	2.01	71.54	2.3384	0.1994	0.00008	33.36	8.0	1.65
3	120	-	(-)0.810	2.250	3.06	24	0.214		6.0	1.76							
POSTMONSOON 2017							**DATE OF COLLECTION 07-12-2017**										
1	73	-	(-)0.010	1.930	1.94	23	NIL		5.0	1.18							
2	96	-	(-)0.140	1.930	2.07	23	NIL	-	6.0	1.46	-	-	-	-	-	6.0	1.38
3	120	-	(-)0.740	1.930	2.67	23	NIL		6.0	1.50							
PREMONSOON 2018							**DATE OF COLLECTION**										
					Sample not collected												

Annual Sediment Load for period : 1986-2018

Station Name : MALAKKARA (KY000J4) **Division : SWR Division, Cochin**

Local River : Pamba **Sub-Division : SWR SD No 1, Trivandrum**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1986-1987	103443	2849	106293	3116
1987-1988	128049	15067	143116	3163
1988-1989	141700	3314	145014	3644
1989-1990	170762	2796	173558	4354
1990-1991	63496	2273	65769	3289
1991-1992	100939	3832	104770	4064
1992-1993	496387	5189	501576	5397
1993-1994	112485	4975	117460	4300
1994-1995	182623	18893	201516	4721
1995-1996	128498	2880	131379	4247
1996-1997	89485	9076	98561	3786
1997-1998	91579	3889	95468	3666
1998-1999	256820	33435	290255	5296
1999-2000	88434	1574	90009	3728
2000-2001	83998	4470	88468	3458
2001-2002	89196	933	90129	3596
2002-2003	34005	185	34191	1969
2003-2004	47115	5196	52311	2441
2004-2005	45485	2787	48272	3430
2005-2006	124224	7112	131336	5104
2006-2007	0	0	0	4253
2007-2008	0	0	0	4535
2008-2009	21905	100	22005	2234
2009-2010	31820	1368	33188	3287
2010-2011	49519	952	50471	4578
2011-2012	36685	691	37376	3593
2012-2013	12545	11	12556	1722
2013-2014	77319	497	77816	4550
2014-2015	23439	28800	52239	4039
2015-2016	8214	1283	9496	2921
2016-2017	5311	70	5381	1808
2017-2018	26587	1217	27804	3461

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : MALAKKARA (KY000J4) **Division : SWR Division, Cochin**

Local River : Pamba **Sub-Division : SWR SD No 1, Trivandrum**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	60.58	0.000	0.000	0.001	0.001	5	237.7	0.000	0.000	0.008	0.008	160	71.79	0.000	0.000	0.001	0.001	6
2	83.86	0.000	0.001	0.002	0.002	16	233.6	0.001	0.000	0.010	0.011	216	92.59	0.000	0.000	0.002	0.002	15
3	236.3	0.000	0.001	0.005	0.006	114	215.0	0.000	0.000	0.006	0.006	115	77.67	0.000	0.000	0.001	0.001	7
4	196.1	0.000	0.001	0.006	0.007	115	181.6	0.000	0.000	0.002	0.002	28	124.1	0.000	0.000	0.004	0.004	43
5	127.1	0.000	0.001	0.004	0.005	49	128.7	0.000	0.000	0.006	0.006	67	203.1	0.000	0.000	0.005	0.005	84
6	146.2	0.000	0.001	0.008	0.010	121	126.6	0.000	0.000	0.005	0.005	57	519.9	0.001	0.002	0.013	0.016	723
7	157.0	0.000	0.001	0.005	0.006	75	88.64	0.000	0.000	0.002	0.002	14	487.6	0.001	0.002	0.012	0.014	598
8	157.0	0.000	0.000	0.002	0.002	20	94.64	0.000	0.000	0.002	0.002	16	378.3	0.001	0.001	0.009	0.011	356
9	91.88	0.000	0.000	0.001	0.001	10	90.83	0.000	0.000	0.002	0.002	16	271.1	0.000	0.001	0.008	0.009	211
10	80.97	0.000	0.000	0.001	0.001	7	85.08	0.000	0.000	0.002	0.002	12	305.4	0.000	0.000	0.008	0.008	222
11	84.83	0.000	0.000	0.001	0.001	7	82.84	0.000	0.000	0.001	0.001	10	301.9	0.000	0.000	0.008	0.008	203
12	86.27	0.000	0.000	0.001	0.001	8	78.87	0.000	0.000	0.001	0.001	8	305.2	0.000	0.000	0.008	0.008	216
13	89.03	0.000	0.000	0.001	0.001	11	70.84	0.000	0.000	0.001	0.001	7	217.9	0.000	0.000	0.005	0.005	90
14	84.21	0.000	0.000	0.001	0.001	8	70.97	0.000	0.000	0.001	0.001	7	178.9	0.000	0.000	0.002	0.002	25
15	98.87	0.000	0.000	0.001	0.001	12	70.92	0.000	0.000	0.001	0.001	7	123.2	0.000	0.000	0.002	0.002	17
16	91.45	0.000	0.000	0.001	0.001	9	68.15	0.000	0.000	0.001	0.001	6	104.9	0.000	0.000	0.001	0.001	11
17	87.11	0.000	0.000	0.001	0.001	9	60.50	0.000	0.000	0.001	0.001	5	94.35	0.000	0.000	0.001	0.001	10
18	71.18	0.000	0.000	0.001	0.001	6	63.43	0.000	0.000	0.001	0.001	5	92.71	0.000	0.000	0.001	0.001	8
19	65.72	0.000	0.000	0.001	0.001	6	50.32	0.000	0.000	0.001	0.001	3	88.90	0.000	0.000	0.001	0.001	7
20	68.93	0.000	0.000	0.001	0.001	7	110.6	0.000	0.000	0.001	0.001	12	133.7	0.000	0.000	0.003	0.003	31
21	79.83	0.000	0.000	0.001	0.001	8	87.21	0.000	0.000	0.001	0.001	9	367.0	0.000	0.001	0.009	0.010	304
22	71.47	0.000	0.000	0.001	0.001	7	88.19	0.000	0.000	0.001	0.001	9	420.3	0.000	0.001	0.017	0.018	643
23	70.30	0.000	0.000	0.001	0.001	7	84.83	0.000	0.000	0.001	0.001	7	417.5	0.000	0.001	0.015	0.016	592
24	78.50	0.000	0.000	0.001	0.001	8	70.72	0.000	0.000	0.001	0.001	6	304.1	0.000	0.000	0.008	0.008	205
25	168.1	0.000	0.000	0.009	0.009	131	71.68	0.000	0.000	0.001	0.001	6	217.0	0.000	0.000	0.007	0.007	124
26	212.3	0.000	0.001	0.012	0.012	226	61.91	0.000	0.000	0.001	0.001	5	177.8	0.000	0.000	0.002	0.002	23
27	461.0	0.000	0.001	0.019	0.020	805	56.09	0.000	0.000	0.001	0.001	4	121.1	0.000	0.000	0.003	0.003	36
28	822.5	0.002	0.003	0.047	0.052	3674	62.54	0.000	0.000	0.001	0.001	5	219.9	0.000	0.001	0.007	0.008	152
29	500.7	0.001	0.002	0.050	0.052	2258	68.96	0.000	0.000	0.001	0.001	6	301.8	0.000	0.001	0.005	0.006	143
30	346.6	0.000	0.001	0.011	0.012	359	65.93	0.000	0.000	0.001	0.001	6	381.3	0.000	0.001	0.008	0.009	296
31							59.46	0.000	0.000	0.001	0.001	5	297.4	0.000	0.000	0.006	0.006	159
Ten Daily Mean																		
Ten Daily I	133.7	0.000	0.000	0.003	0.004	53	148.2	0.000	0.000	0.004	0.005	70	253.2	0.000	0.001	0.006	0.007	227
Ten Daily II	82.76	0.000	0.000	0.001	0.001	8	72.74	0.000	0.000	0.001	0.001	7	164.2	0.000	0.000	0.003	0.003	62
Ten Daily III	281.1	0.000	0.001	0.015	0.016	748	70.68	0.000	0.000	0.001	0.001	6	293.2	0.000	0.000	0.008	0.008	243
Monthly																		
Total						8099						839						5562

Annual Sediment Load (Metric Tonnes) : 27804

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : MALAKKARA (KY000J4) **Division : SWR Division, Cochin**

Local River : Pamba **Sub-Division : SWR SD No 1, Trivandrum**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	232.2	0.000	0.000	0.004	0.005	92	147.0	0.000	0.000	0.001	0.001	13	293.5	0.000	0.002	0.006	0.008	203
2	271.4	0.000	0.000	0.005	0.005	117	152.7	0.000	0.000	0.001	0.001	13	309.9	0.000	0.002	0.007	0.009	252
3	418.1	0.000	0.001	0.009	0.010	343	134.3	0.000	0.000	0.001	0.001	16	363.8	0.000	0.001	0.007	0.008	239
4	294.2	0.000	0.001	0.006	0.006	158	115.8	0.000	0.000	0.001	0.001	13	266.9	0.000	0.001	0.004	0.005	118
5	232.1	0.000	0.000	0.004	0.004	84	116.3	0.000	0.000	0.001	0.001	14	286.0	0.000	0.001	0.005	0.006	148
6	297.5	0.000	0.000	0.006	0.006	165	214.2	0.000	0.001	0.005	0.006	102	225.4	0.000	0.000	0.002	0.002	35
7	235.7	0.000	0.001	0.005	0.006	116	150.9	0.000	0.001	0.005	0.005	69	226.7	0.000	0.000	0.002	0.002	37
8	283.5	0.000	0.000	0.008	0.008	198	152.7	0.000	0.001	0.003	0.004	49	191.2	0.000	0.000	0.002	0.002	26
9	309.1	0.000	0.000	0.008	0.009	227	116.4	0.000	0.000	0.004	0.004	44	356.6	0.001	0.001	0.001	0.003	92
10	253.0	0.000	0.000	0.006	0.006	136	141.2	0.000	0.000	0.001	0.001	17	247.7	0.001	0.003	0.012	0.016	332
11	193.0	0.000	0.000	0.002	0.002	28	110.4	0.000	0.000	0.001	0.001	11	190.8	0.000	0.000	0.002	0.002	26
12	185.4	0.000	0.000	0.002	0.002	24	187.1	0.000	0.000	0.002	0.002	26	144.7	0.000	0.000	0.002	0.003	35
13	189.5	0.000	0.001	0.005	0.006	97	305.5	0.000	0.001	0.007	0.008	206	147.6	0.000	0.000	0.001	0.001	15
14	699.7	0.001	0.002	0.012	0.015	883	283.8	0.001	0.003	0.013	0.017	412	118.2	0.000	0.000	0.001	0.001	13
15	431.8	0.001	0.002	0.011	0.013	485	189.5	0.000	0.001	0.005	0.006	92	108.4	0.000	0.000	0.001	0.001	13
16	374.7	0.000	0.001	0.008	0.009	291	174.2	0.000	0.001	0.008	0.009	132	86.50	0.000	0.000	0.001	0.001	7
17	677.1	0.001	0.002	0.015	0.019	1106	140.9	0.000	0.000	0.001	0.001	17	77.64	0.000	0.000	0.001	0.001	6
18	916.0	0.003	0.005	0.028	0.035	2786	121.1	0.000	0.000	0.002	0.002	24	79.92	0.000	0.000	0.001	0.001	6
19	705.8	0.000	0.001	0.011	0.012	726	117.3	0.000	0.000	0.001	0.001	12	67.41	0.000	0.000	0.001	0.001	6
20	456.7	0.000	0.000	0.008	0.008	308	88.80	0.000	0.000	0.001	0.001	8	51.85	0.000	0.000	0.001	0.001	6
21	305.8	0.000	0.000	0.004	0.004	106	93.15	0.000	0.000	0.001	0.001	9	61.31	0.000	0.000	0.001	0.001	7
22	227.8	0.000	0.000	0.003	0.003	55	138.0	0.000	0.000	0.001	0.001	12	63.65	0.000	0.000	0.001	0.001	4
23	193.5	0.000	0.000	0.002	0.002	28	108.8	0.000	0.000	0.001	0.001	11	73.19	0.000	0.000	0.001	0.001	8
24	155.0	0.000	0.000	0.002	0.002	21	86.39	0.000	0.000	0.001	0.001	7	60.79	0.000	0.000	0.001	0.001	6
25	108.0	0.000	0.000	0.001	0.001	11	93.74	0.000	0.000	0.001	0.001	9	60.49	0.000	0.000	0.001	0.001	6
26	116.0	0.000	0.000	0.001	0.001	14	92.09	0.000	0.000	0.001	0.001	9	60.20	0.000	0.000	0.001	0.001	5
27	112.9	0.000	0.000	0.001	0.001	13	107.1	0.000	0.000	0.002	0.002	14	62.23	0.000	0.000	0.001	0.001	7
28	110.0	0.000	0.000	0.001	0.001	11	206.6	0.000	0.001	0.005	0.006	102	60.80	0.000	0.000	0.002	0.002	8
29	174.3	0.000	0.000	0.001	0.001	15	158.5	0.000	0.001	0.004	0.005	66	42.29	0.000	0.000	0.001	0.001	3
30	185.6	0.000	0.000	0.001	0.001	16	140.3	0.000	0.001	0.005	0.006	67	60.67	0.000	0.000	0.001	0.001	6
31							207.9	0.000	0.001	0.008	0.009	158						
Ten Daily Mean																		
Ten Daily I	282.7	0.000	0.000	0.006	0.006	164	144.2	0.000	0.000	0.002	0.003	35	276.8	0.000	0.001	0.005	0.006	148
Ten Daily II	483.0	0.001	0.001	0.010	0.012	673	171.9	0.000	0.001	0.004	0.005	94	107.3	0.000	0.000	0.001	0.001	13
Ten Daily III	168.9	0.000	0.000	0.002	0.002	29	130.2	0.000	0.000	0.003	0.003	42	60.56	0.000	0.000	0.001	0.001	6
Monthly																		
Total						8660						1753						1674

Annual Sediment Load (Metric Tonnes) : 27804

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : MALAKKARA (KY000J4) **Division : SWR Division, Cochin**

Local River : Pamba **Sub-Division : SWR SD No 1, Trivandrum**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	80.13	0.000	0.000	0.001	0.001	6	35.88	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	83.65	0.000	0.000	0.001	0.001	8	35.31	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	78.07	0.000	0.000	0.001	0.001	8	36.46	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	47.43	0.000	0.000	0.001	0.001	5	39.10	0.000	0.000	0.001	0.001	2	0.000	0.000	0.000	0.000	0.000	0
5	50.83	0.000	0.000	0.002	0.002	7	38.33	0.000	0.000	0.001	0.001	2	0.000	0.000	0.000	0.000	0.000	0
6	54.32	0.000	0.000	0.002	0.002	7	34.31	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0
7	41.16	0.000	0.000	0.001	0.001	2	36.46	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	40.08	0.000	0.000	0.001	0.001	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	57.58	0.000	0.000	0.001	0.001	3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	56.44	0.000	0.000	0.001	0.001	5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	59.53	0.000	0.000	0.001	0.001	4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	61.43	0.000	0.000	0.001	0.001	4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	65.11	0.000	0.000	0.001	0.001	5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	80.40	0.000	0.000	0.001	0.001	6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	56.64	0.000	0.000	0.001	0.001	6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	63.02	0.000	0.000	0.001	0.001	7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	49.90	0.000	0.000	0.001	0.001	4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	42.52	0.000	0.000	0.001	0.001	3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	49.57	0.000	0.000	0.001	0.001	3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	48.07	0.000	0.000	0.001	0.001	3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	44.86	0.000	0.000	0.001	0.001	3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	45.64	0.000	0.000	0.001	0.001	3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	40.74	0.000	0.000	0.001	0.001	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	42.55	0.000	0.000	0.001	0.001	4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	37.05	0.000	0.000	0.001	0.001	3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	42.45	0.000	0.000	0.001	0.001	3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	45.45	0.000	0.000	0.001	0.001	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	46.36	0.000	0.000	0.001	0.001	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	42.77	0.000	0.000	0.001	0.001	3	0.000	0.000	0.000	0.000	0.000	0						
30	40.23	0.000	0.000	0.001	0.001	2	0.000	0.000	0.000	0.000	0.000	0						
31	40.67	0.000	0.000	0.001	0.001	4	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	58.97	0.000	0.000	0.001	0.001	5	25.59	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	57.62	0.000	0.000	0.001	0.001	4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	42.62	0.000	0.000	0.001	0.001	3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						129						5						0

Annual Sediment Load (Metric Tonnes) : 27804

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : MALAKKARA (KY000J4) **Division : SWR Division, Cochin**

Local River : Pamba **Sub-Division : SWR SD No 1, Trivandrum**

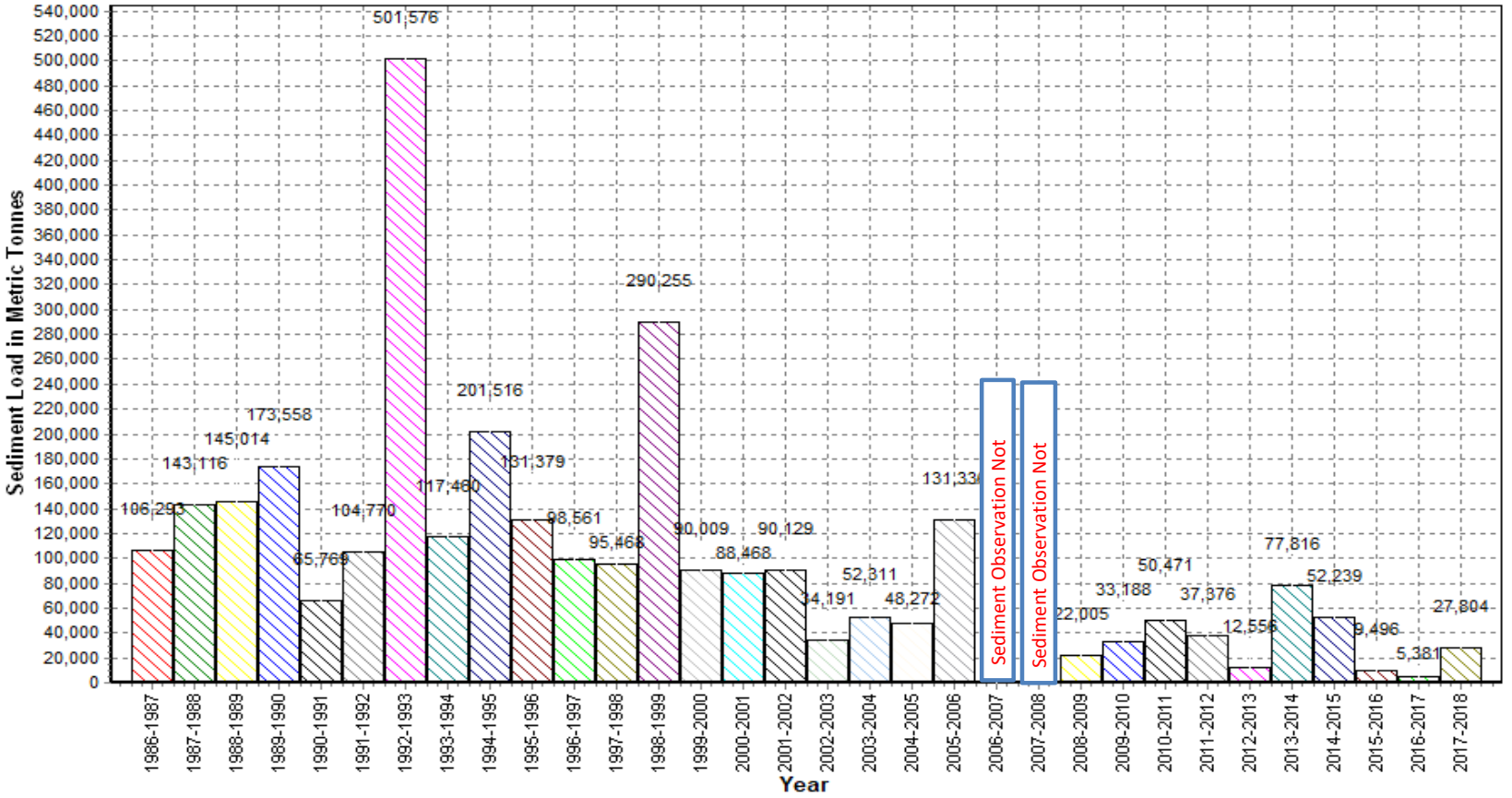
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	42.45	0.000	0.000	0.001	0.001	3
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	40.96	0.000	0.000	0.001	0.001	2
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	38.86	0.000	0.000	0.001	0.001	2
5	0.000	0.000	0.000	0.000	0.000	0	40.10	0.000	0.000	0.001	0.001	5	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	39.45	0.000	0.000	0.001	0.001	3	38.83	0.000	0.000	0.001	0.001	3
7	0.000	0.000	0.000	0.000	0.000	0	38.39	0.000	0.000	0.001	0.001	4	58.91	0.000	0.000	0.001	0.001	4
8	0.000	0.000	0.000	0.000	0.000	0	35.88	0.000	0.000	0.001	0.001	3	71.86	0.000	0.000	0.001	0.001	4
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	75.77	0.000	0.000	0.001	0.001	5
10	0.000	0.000	0.000	0.000	0.000	0	38.09	0.000	0.000	0.001	0.001	2	132.3	0.000	0.001	0.005	0.006	63
11	0.000	0.000	0.000	0.000	0.000	0	41.32	0.000	0.000	0.001	0.001	4	117.8	0.000	0.001	0.009	0.010	99
12	0.000	0.000	0.000	0.000	0.000	0	41.94	0.000	0.000	0.001	0.001	4	81.80	0.000	0.000	0.001	0.001	6
13	0.000	0.000	0.000	0.000	0.000	0	37.74	0.000	0.000	0.001	0.001	2	88.49	0.000	0.000	0.003	0.003	21
14	0.000	0.000	0.000	0.000	0.000	0	36.46	0.000	0.000	0.001	0.001	3	74.40	0.000	0.000	0.001	0.001	4
15	0.000	0.000	0.000	0.000	0.000	0	46.47	0.000	0.000	0.001	0.001	4	77.62	0.000	0.000	0.001	0.001	6
16	0.000	0.000	0.000	0.000	0.000	0	50.64	0.000	0.000	0.001	0.001	3	74.13	0.000	0.000	0.001	0.001	6
17	0.000	0.000	0.000	0.000	0.000	0	46.48	0.000	0.000	0.001	0.001	3	109.2	0.000	0.001	0.005	0.006	60
18	0.000	0.000	0.000	0.000	0.000	0	51.47	0.000	0.000	0.001	0.001	3	175.0	0.000	0.001	0.006	0.007	100
19	0.000	0.000	0.000	0.000	0.000	0	47.00	0.000	0.000	0.001	0.001	3	129.7	0.000	0.001	0.006	0.007	73
20	0.000	0.000	0.000	0.000	0.000	0	38.33	0.000	0.000	0.001	0.001	3	117.4	0.000	0.001	0.004	0.005	47
21	0.000	0.000	0.000	0.000	0.000	0	46.77	0.000	0.000	0.001	0.001	3	81.77	0.000	0.000	0.001	0.001	6
22	41.93	0.000	0.000	0.001	0.001	4	46.47	0.000	0.000	0.001	0.001	3	78.49	0.000	0.000	0.001	0.001	5
23	40.05	0.000	0.000	0.001	0.001	4	37.64	0.000	0.000	0.001	0.001	3	54.94	0.000	0.000	0.001	0.001	3
24	29.42	0.000	0.000	0.002	0.002	4	43.84	0.000	0.000	0.001	0.001	2	76.95	0.000	0.000	0.001	0.001	5
25	33.07	0.000	0.000	0.001	0.001	3	32.46	0.000	0.000	0.001	0.001	1	76.76	0.000	0.000	0.001	0.001	5
26	0.000	0.000	0.000	0.000	0.000	0	48.15	0.000	0.000	0.001	0.001	3	82.34	0.000	0.000	0.001	0.001	6
27	39.15	0.000	0.000	0.001	0.001	4	41.34	0.000	0.000	0.001	0.001	3	100.8	0.000	0.000	0.002	0.002	18
28	36.92	0.000	0.000	0.001	0.001	4	46.35	0.000	0.000	0.001	0.001	3	133.0	0.000	0.000	0.005	0.005	57
29	37.05	0.000	0.000	0.001	0.001	3	48.86	0.000	0.000	0.001	0.001	4	337.0	0.000	0.000	0.007	0.007	204
30	35.31	0.000	0.000	0.001	0.001	3	40.67	0.000	0.000	0.001	0.001	4	280.8	0.000	0.000	0.006	0.006	146
31	34.27	0.000	0.000	0.001	0.001	4							188.9	0.000	0.000	0.001	0.001	11
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	19.19	0.000	0.000	0.000	0.000	2	49.99	0.000	0.000	0.001	0.001	9
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	43.79	0.000	0.000	0.001	0.001	3	104.6	0.000	0.000	0.004	0.004	42
Ten Daily III	29.74	0.000	0.000	0.001	0.001	3	43.26	0.000	0.000	0.001	0.001	3	135.6	0.000	0.000	0.002	0.002	42
Monthly																		
Total						33						76						974

Annual Sediment Load (Metric Tonnes) : 27804

Annual Sediment Load for the period: 1986-2018

Station Name : MALAKKARA (KY000J4)
Local River : Pamba

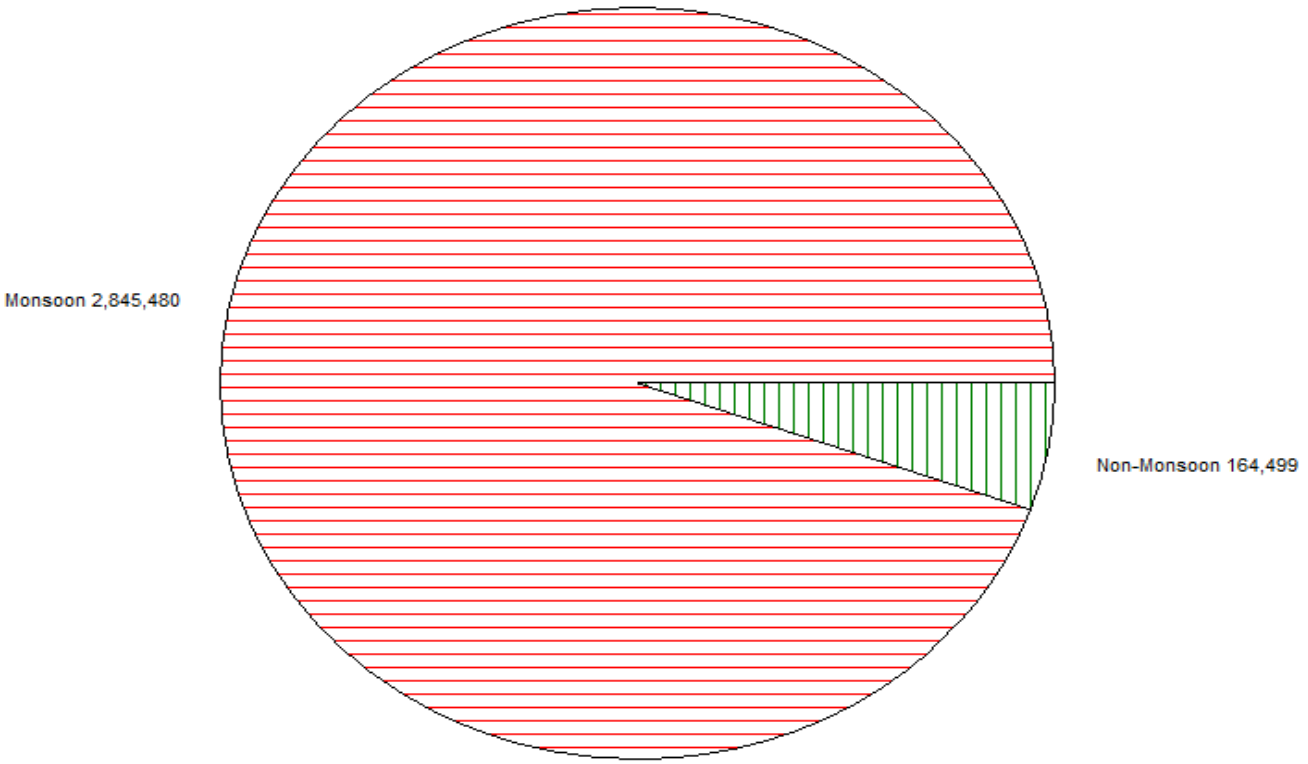
Division : SWR Division, Cochin
Sub-Division : SWR SD No 1, Trivandrum



Seasonal Sediment Load for the period : 1986-2017

Station Name : MALAKKARA (KY000J4)
Local River : Pamba

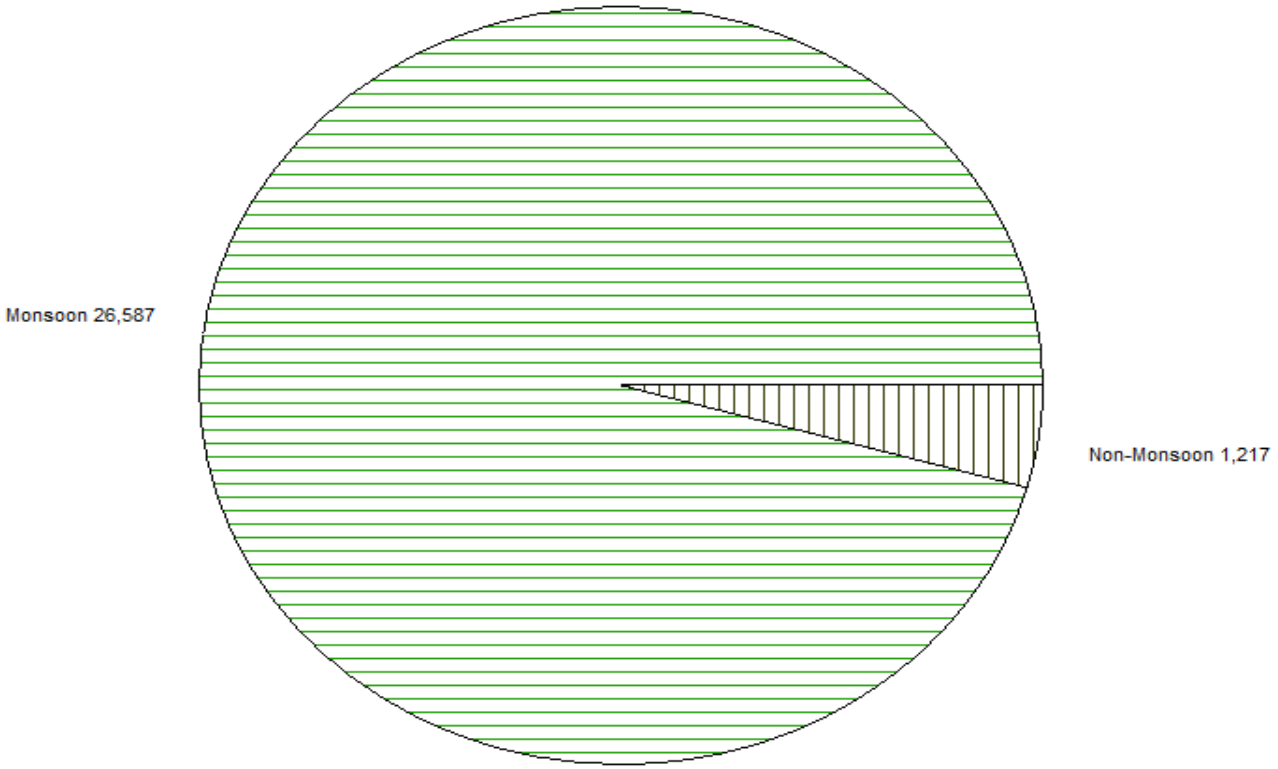
Division : SWR Division, Cochin
Sub-Division : SWR SD No 1, Trivandrum



Seasonal Sediment Load for the Year: 2017-2018

Station Name : MALAKKARA (KY000J4)
Local River : Pamba

Division : SWR Division, Cochin
Sub-Division : SWR SD No 1, Trivandrum



BED MATERIAL ANALYSIS DATA

RIVER : *Pamba* **CODE NO. :** *KYOOOJ4*
SITE : *Malakkara* **CROSS SECTION :** *SGL*

SL. NO.	DATA FOR SAMPLE COLLECTED								Bed Material Composition		GENERAL DATA OF THE RIVER					Bed Material Composition	
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	TIME OF SAMPLING	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)	WETTED PERIMETER (m)	HYDRAULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017						**DATE OF COLLECTION**					**27-09-2017**						
1	80	-	(-)3.610	0.890	4.50	102.0	0.324		8.0	2.07							
2	115	-	(-)3.210	0.890	4.10	102.0	0.340	112.9	7.0	1.12	103.35	3.3515	0.3117	0.00005	112.9	11.0	1.89
3	150	-	(-)2.010	0.890	2.90	102.0	0.222		11.0	2.47							
POSTMONSOON 2017						**DATE OF COLLECTION**											
						Sample not collected											
PREMONSOON 2018						**DATE OF COLLECTION**					**02-05-2018**						
1	80	-	(-)3.460		3.72	102.0	0.199		5.0	1.01							
2	115	-	(-)3.240	0.260	3.50	102.0	0.215	42.45	7.0	0.98	102.77	2.6433	0.1563	0.0003	42.45	12.0	1.34
3	150	-	(-)1.840		2.10	102.0	NIL		12.0	2.03							

Annual Sediment Load for period : 1980-2018

Station Name : THUMPAMON (KYA00J4) **Division : SWR Division, Cochin**

Local River : Achankovil **Sub-Division : SWR SD No 1, Trivandrum**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1980-1981	0	1255	1255	1141
1981-1982	143177	3828	147005	1872
1982-1983	51128	270	51398	721
1983-1984	33033	6441	39473	840
1984-1985	34680	1526	36206	864
1985-1986	42469	1643	44113	972
1986-1987	38914	383	39297	747
1987-1988	68271	14134	82404	974
1988-1989	48938	1076	50015	936
1989-1990	102685	1482	104166	1440
1990-1991	36097	784	36881	860
1991-1992	95939	6890	102829	1470
1992-1993	177589	4462	182052	1911
1993-1994	87550	1417	88967	1284
1994-1995	113969	16394	130363	1614
1995-1996	66416	1072	67488	1449
1996-1997	85160	1903	87063	1039
1997-1998	84376	1164	85540	1072
1998-1999	56224	1897	58121	1613
1999-2000	26704	286	26990	1196
2000-2001	17174	554	17728	1091
2001-2002	45907	105	46012	1259
2002-2003	15009	175	15183	638
2003-2004	11284	7738	19022	810
2004-2005	21866	232	22099	918
2005-2006	28138	8064	36203	1246
2006-2007	0	0	0	1328
2007-2008	0	0	0	1277
2008-2009	36261	203	36464	720
2009-2010	29208	1487	30695	754
2010-2011	85289	2812	88101	1400
2011-2012	20253	1401	21654	975
2012-2013	8628	36	8664	406
2013-2014	25354	1203	26558	1390
2014-2015	16958	999	17957	1269
2015-2016	7060	516	7576	809
2016-2017	4727	48	4775	399
2017-2018	22435	11362	33797	1116

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : THUMPAMON (KYA00J4) **Division : SWR Division, Cochin**

Local River : Achankovil **Sub-Division : SWR SD No 1, Trivandrum**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	13.73	0.008	0.007	0.019	0.033	40	57.26	0.000	0.000	0.001	0.001	5	5.535	0.000	0.000	0.004	0.004	2
2	38.33	0.007	0.002	0.009	0.018	60	81.93	0.019	0.003	0.003	0.024	173	8.840	0.000	0.000	0.006	0.006	4
3	70.30	0.011	0.009	0.018	0.038	233	75.46	0.002	0.002	0.001	0.005	33	14.31	0.000	0.000	0.003	0.003	4
4	4.044	0.006	0.005	0.016	0.027	10	55.56	0.000	0.000	0.004	0.004	17	16.62	0.000	0.000	0.002	0.002	3
5	57.96	0.000	0.000	0.014	0.014	72	47.14	0.000	0.000	0.001	0.001	2	27.04	0.000	0.000	0.001	0.001	3
6	63.46	0.000	0.000	0.011	0.011	58	38.92	0.000	0.000	0.003	0.003	11	70.51	0.003	0.009	0.010	0.023	139
7	43.77	0.000	0.000	0.019	0.019	71	28.81	0.000	0.000	0.001	0.001	3	66.86	0.008	0.010	0.013	0.031	176
8	30.19	0.000	0.000	0.022	0.022	56	27.56	0.000	0.000	0.004	0.004	9	51.00	0.000	0.005	0.004	0.009	40
9	24.30	0.000	0.000	0.011	0.011	23	26.39	0.000	0.000	0.005	0.005	12	40.12	0.000	0.003	0.002	0.006	19
10	18.71	0.000	0.000	0.019	0.019	30	39.26	0.000	0.000	0.001	0.001	2	51.61	0.000	0.000	0.016	0.016	71
11	23.26	0.000	0.000	0.019	0.019	39	31.14	0.000	0.000	0.017	0.017	45	37.37	0.000	0.004	0.004	0.008	26
12	20.55	0.000	0.000	0.029	0.029	52	26.69	0.000	0.000	0.002	0.002	4	55.09	0.002	0.004	0.003	0.010	45
13	20.53	0.000	0.000	0.035	0.035	61	24.19	0.000	0.000	0.001	0.001	3	37.76	0.000	0.001	0.006	0.008	25
14	15.27	0.000	0.000	0.002	0.002	2	24.44	0.000	0.000	0.001	0.001	3	32.76	0.000	0.000	0.005	0.005	14
15	18.69	0.000	0.000	0.034	0.034	54	19.30	0.000	0.000	0.002	0.002	3	22.69	0.000	0.000	0.005	0.005	9
16	21.34	0.000	0.000	0.001	0.001	1	15.22	0.000	0.000	0.002	0.002	3	22.31	0.000	0.000	0.003	0.003	7
17	16.70	0.000	0.000	0.001	0.001	2	15.19	0.000	0.000	0.001	0.001	2	19.49	0.000	0.000	0.003	0.003	5
18	12.95	0.000	0.000	0.007	0.007	8	13.58	0.000	0.000	0.001	0.001	1	18.22	0.000	0.000	0.007	0.007	11
19	10.62	0.000	0.000	0.001	0.001	1	12.57	0.000	0.000	0.004	0.004	4	16.54	0.000	0.000	0.002	0.002	3
20	8.577	0.000	0.000	0.007	0.007	5	18.26	0.000	0.000	0.002	0.002	3	43.43	0.001	0.002	0.007	0.010	38
21	8.575	0.000	0.000	0.003	0.003	2	16.70	0.000	0.002	0.009	0.011	16	132.3	0.005	0.017	0.041	0.063	718
22	6.979	0.000	0.000	0.003	0.003	2	16.97	0.000	0.000	0.001	0.001	2	122.6	0.002	0.006	0.004	0.012	123
23	7.822	0.000	0.000	0.003	0.003	2	13.83	0.000	0.000	0.004	0.004	5	97.61	0.002	0.004	0.011	0.017	143
24	10.63	0.000	0.000	0.001	0.001	1	10.18	0.000	0.000	0.005	0.005	4	76.34	0.000	0.006	0.006	0.013	82
25	17.66	0.001	0.020	0.003	0.023	35	9.175	0.000	0.000	0.003	0.003	2	56.71	0.000	0.014	0.002	0.016	78
26	33.41	0.001	0.019	0.003	0.023	66	8.774	0.000	0.000	0.003	0.003	2	50.95	0.000	0.002	0.005	0.007	31
27	123.6	0.003	0.101	0.002	0.106	1132	7.032	0.000	0.000	0.006	0.006	3	38.54	0.000	0.002	0.002	0.003	11
28	759.2	0.000	0.002	0.000	0.003	190	8.810	0.000	0.000	0.010	0.010	8	51.15	0.000	0.000	0.004	0.004	18
29	138.4	0.002	0.005	0.004	0.011	128	7.853	0.000	0.000	0.006	0.006	4	56.66	0.000	0.000	0.004	0.004	20
30	82.35	0.103	0.013	0.006	0.121	864	10.09	0.000	0.000	0.009	0.009	8	89.27	0.004	0.008	0.010	0.021	164
31							6.102	0.000	0.000	0.008	0.008	4	70.81	0.000	0.002	0.005	0.006	38
Ten Daily Mean																		
Ten Daily I	36.48	0.003	0.002	0.016	0.021	65	47.83	0.002	0.000	0.002	0.005	27	35.24	0.001	0.003	0.006	0.010	46
Ten Daily II	16.85	0.000	0.000	0.014	0.014	23	20.06	0.000	0.000	0.003	0.003	7	30.57	0.000	0.001	0.005	0.006	18
Ten Daily III	118.9	0.011	0.016	0.003	0.030	242	10.50	0.000	0.000	0.006	0.006	5	76.63	0.001	0.005	0.008	0.015	129
Monthly																		
Total						3300						397						2069

680

Annual Sediment Load (Metric Tonnes) : 33797

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : THUMPAMON (KYA00J4) **Division : SWR Division, Cochin**

Local River : Achankovil **Sub-Division : SWR SD No 1, Trivandrum**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	56.67	0.001	0.003	0.006	0.010	50	60.36	0.000	0.006	0.011	0.017	88	96.16	0.000	0.004	0.009	0.013	110
2	82.83	0.002	0.002	0.006	0.010	70	57.89	0.000	0.005	0.108	0.113	566	120.2	0.003	0.010	0.089	0.101	1052
3	94.24	0.001	0.002	0.006	0.009	69	56.97	0.000	0.007	0.016	0.022	110	138.4	0.002	0.005	0.046	0.053	633
4	94.24	0.001	0.002	0.006	0.009	69	44.04	0.000	0.003	0.007	0.010	38	88.64	0.000	0.004	0.018	0.023	174
5	67.86	0.000	0.002	0.008	0.009	55	49.22	0.000	0.001	0.003	0.004	15	128.5	0.002	0.007	0.059	0.068	754
6	85.59	0.002	0.003	0.002	0.006	47	91.86	0.001	0.003	0.016	0.020	159	90.19	0.000	0.010	0.006	0.015	120
7	78.54	0.003	0.003	0.007	0.012	83	80.84	0.002	0.005	0.018	0.025	171	79.87	0.000	0.001	0.003	0.005	31
8	82.21	0.002	0.003	0.010	0.014	101	60.36	0.000	0.001	0.007	0.008	43	85.42	0.000	0.001	0.035	0.036	269
9	92.45	0.001	0.001	0.008	0.010	81	64.60	0.000	0.000	0.003	0.003	14	198.0	0.003	0.008	0.022	0.033	570
10	69.44	0.002	0.003	0.014	0.019	111	52.88	0.000	0.000	0.005	0.005	22	132.3	0.000	0.005	0.013	0.018	200
11	62.80	0.000	0.002	0.012	0.014	77	46.53	0.000	0.000	0.003	0.003	10	111.5	0.000	0.005	0.015	0.020	188
12	73.50	0.002	0.002	0.018	0.022	141	56.66	0.000	0.000	0.002	0.002	11	76.53	0.000	0.002	0.006	0.007	47
13	59.06	0.002	0.003	0.021	0.026	133	85.25	0.001	0.026	0.015	0.042	308	76.24	0.000	0.000	0.002	0.002	13
14	205.2	0.001	0.002	0.027	0.030	530	132.6	0.013	0.036	0.012	0.061	694	55.69	0.000	0.000	0.001	0.001	6
15	156.2	0.002	0.004	0.023	0.029	387	91.12	0.005	0.018	0.013	0.036	281	43.29	0.000	0.000	0.003	0.003	13
16	100.7	0.000	0.003	0.007	0.010	86	74.28	0.000	0.000	0.010	0.010	63	36.24	0.000	0.000	0.010	0.010	30
17	184.5	0.006	0.005	0.018	0.029	462	58.74	0.000	0.000	0.008	0.008	40	33.88	0.000	0.000	0.002	0.002	6
18	372.4	0.001	0.005	0.043	0.049	1570	54.28	0.001	0.008	0.013	0.022	102	36.66	0.000	0.000	0.001	0.001	3
19	259.5	0.024	0.003	0.012	0.038	848	48.35	0.000	0.000	0.006	0.006	26	30.27	0.000	0.001	0.003	0.004	10
20	172.3	0.008	0.010	0.015	0.032	482	37.90	0.000	0.000	0.015	0.015	50	36.98	0.000	0.000	0.003	0.003	10
21	127.7	0.000	0.003	0.004	0.008	84	35.83	0.000	0.000	0.022	0.022	67	36.71	0.000	0.002	0.009	0.012	36
22	80.80	0.000	0.001	0.007	0.008	57	39.51	0.000	0.005	0.016	0.021	71	68.95	0.002	0.002	0.018	0.022	130
23	73.38	0.000	0.000	0.012	0.012	76	52.22	0.000	0.037	0.016	0.053	238	48.00	0.001	0.004	0.004	0.009	38
24	57.89	0.000	0.000	0.015	0.015	75	41.73	0.000	0.000	0.003	0.003	12	36.21	0.000	0.000	0.003	0.003	8
25	45.26	0.000	0.000	0.012	0.012	45	29.53	0.000	0.000	0.006	0.006	16	26.29	0.000	0.000	0.005	0.005	11
26	37.46	0.000	0.000	0.011	0.011	36	32.73	0.000	0.000	0.000	0.000	1	29.74	0.000	0.001	0.006	0.006	16
27	35.75	0.000	0.000	0.010	0.010	31	89.39	0.001	0.002	0.002	0.005	35	32.41	0.000	0.000	0.009	0.009	24
28	48.16	0.000	0.000	0.009	0.009	37	112.8	0.003	0.117	0.088	0.208	2022	42.55	0.000	0.000	0.016	0.016	60
29	66.78	0.000	0.008	0.012	0.019	111	90.35	0.007	0.023	0.010	0.041	317	30.91	0.000	0.003	0.004	0.007	19
30	68.77	0.000	0.008	0.012	0.020	119	63.03	0.000	0.000	0.019	0.019	105	24.81	0.000	0.000	0.002	0.002	4
31							125.2	0.000	0.004	0.021	0.025	267						
Ten Daily Mean																		
Ten Daily I	80.41	0.001	0.002	0.007	0.011	74	61.90	0.000	0.003	0.019	0.023	123	115.8	0.001	0.006	0.030	0.037	391
Ten Daily II	164.6	0.005	0.004	0.020	0.028	472	68.57	0.002	0.009	0.010	0.020	159	53.73	0.000	0.001	0.004	0.005	32
Ten Daily III	64.20	0.000	0.002	0.010	0.012	67	64.76	0.001	0.017	0.019	0.036	286	37.66	0.000	0.001	0.008	0.009	35
Monthly																		
Total						6124						5962						4583

Annual Sediment Load (Metric Tonnes) : 33797

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : THUMPAMON (KYA00J4) **Division : SWR Division, Cochin**

Local River : Achankovil **Sub-Division : SWR SD No 1, Trivandrum**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	225.1	0.001	0.066	0.376	0.443	8620	7.166	0.000	0.000	0.003	0.003	2	0.000	0.000	0.000	0.000	0.000	0
2	125.5	0.000	0.030	0.022	0.052	558	6.742	0.000	0.000	0.003	0.003	2	0.000	0.000	0.000	0.000	0.000	0
3	75.00	0.000	0.012	0.013	0.025	164	5.753	0.000	0.000	0.003	0.003	2	0.000	0.000	0.000	0.000	0.000	0
4	65.61	0.000	0.003	0.011	0.015	83	4.945	0.000	0.000	0.003	0.003	1	0.000	0.000	0.000	0.000	0.000	0
5	50.09	0.000	0.000	0.011	0.011	47	6.239	0.000	0.000	0.003	0.003	1	0.000	0.000	0.000	0.000	0.000	0
6	40.43	0.000	0.000	0.009	0.009	32	3.407	0.000	0.000	0.003	0.003	1	0.000	0.000	0.000	0.000	0.000	0
7	35.63	0.000	0.000	0.006	0.006	19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	31.43	0.000	0.000	0.004	0.004	10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	38.12	0.000	0.000	0.006	0.006	19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	44.79	0.000	0.001	0.012	0.013	49	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	35.02	0.000	0.004	0.005	0.009	26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	29.76	0.000	0.000	0.002	0.002	6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	70.38	0.000	0.026	0.030	0.056	338	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	52.70	0.000	0.006	0.034	0.040	180	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	39.56	0.000	0.004	0.088	0.092	313	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	31.36	0.000	0.000	0.002	0.002	6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	27.70	0.000	0.001	0.016	0.017	40	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	21.86	0.000	0.000	0.002	0.002	4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	21.67	0.000	0.000	0.005	0.005	9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	20.58	0.000	0.000	0.007	0.007	12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	16.25	0.000	0.000	0.006	0.006	8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	16.02	0.000	0.000	0.004	0.004	5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	12.41	0.000	0.000	0.004	0.004	4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	16.68	0.000	0.000	0.005	0.005	7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	15.87	0.000	0.000	0.005	0.005	6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	15.67	0.000	0.000	0.004	0.004	5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	9.023	0.000	0.000	0.003	0.003	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	8.591	0.000	0.000	0.003	0.003	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	7.823	0.000	0.000	0.004	0.004	2	0.000	0.000	0.000	0.000	0.000	0						
30	7.230	0.000	0.000	0.004	0.004	2	0.000	0.000	0.000	0.000	0.000	0						
31	7.377	0.000	0.000	0.003	0.003	2	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	73.17	0.000	0.011	0.047	0.058	960	3.425	0.000	0.000	0.002	0.002	1	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	35.06	0.000	0.004	0.019	0.023	93	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	12.09	0.000	0.000	0.004	0.004	4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						10582						9						0

Annual Sediment Load (Metric Tonnes) : 33797

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : THUMPAMON (KYA00J4) **Division : SWR Division, Cochin**

Local River : Achankovil **Sub-Division : SWR SD No 1, Trivandrum**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	13.44	0.000	0.000	0.002	0.002	2
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	5.897	0.000	0.000	0.002	0.002	1
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	17.70	0.000	0.002	0.002	0.004	6
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	16.90	0.000	0.001	0.002	0.003	5
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	18.34	0.000	0.002	0.003	0.004	6
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	14.23	0.000	0.000	0.002	0.002	3
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	9.991	0.000	0.000	0.002	0.002	2
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	13.70	0.000	0.000	0.003	0.003	3
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	7.303	0.000	0.000	0.002	0.002	1
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	5.816	0.000	0.000	0.002	0.002	1
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	8.437	0.000	0.000	0.002	0.002	1
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	38.61	0.000	0.002	0.002	0.004	12
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	26.40	0.000	0.000	0.002	0.002	4
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	9.991	0.000	0.001	0.002	0.003	2
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	17.13	0.000	0.000	0.002	0.002	2
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	10.57	0.000	0.000	0.002	0.002	2
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	7.061	0.000	0.000	0.002	0.002	1
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	7.561	0.000	0.000	0.002	0.002	1
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	7.085	0.000	0.000	0.002	0.002	1
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	7.210	0.000	0.000	0.002	0.002	1
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	14.79	0.000	0.001	0.003	0.003	4
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	39.96	0.000	0.000	0.002	0.002	6
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	65.12	0.000	0.002	0.017	0.019	109
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	50.66	0.000	0.000	0.134	0.134	587
31	0.000	0.000	0.000	0.000	0.000	0							35.78	0.000	0.000	0.003	0.003	8
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	5.394	0.000	0.000	0.001	0.001	1
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	15.28	0.000	0.000	0.002	0.002	4
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	23.90	0.000	0.000	0.015	0.016	66
Monthly																		
Total						0						0						771

Annual Sediment Load (Metric Tonnes) : 33797

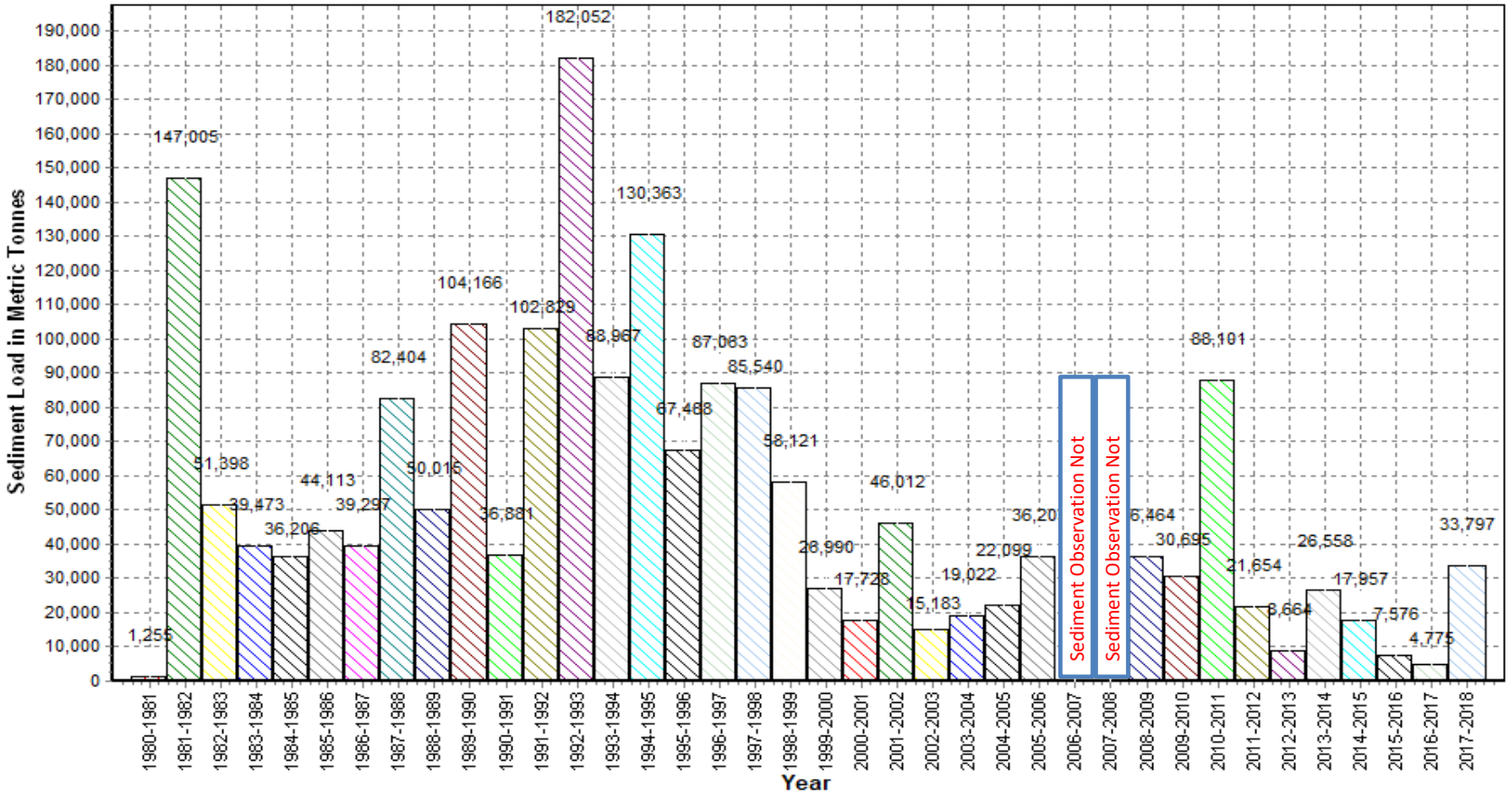
Annual Sediment Load for the period: 1980-2018

Station Name : THUMPAMON (KYA00J4)

Local River : Achankovil

Division : SWR Division, Cochin

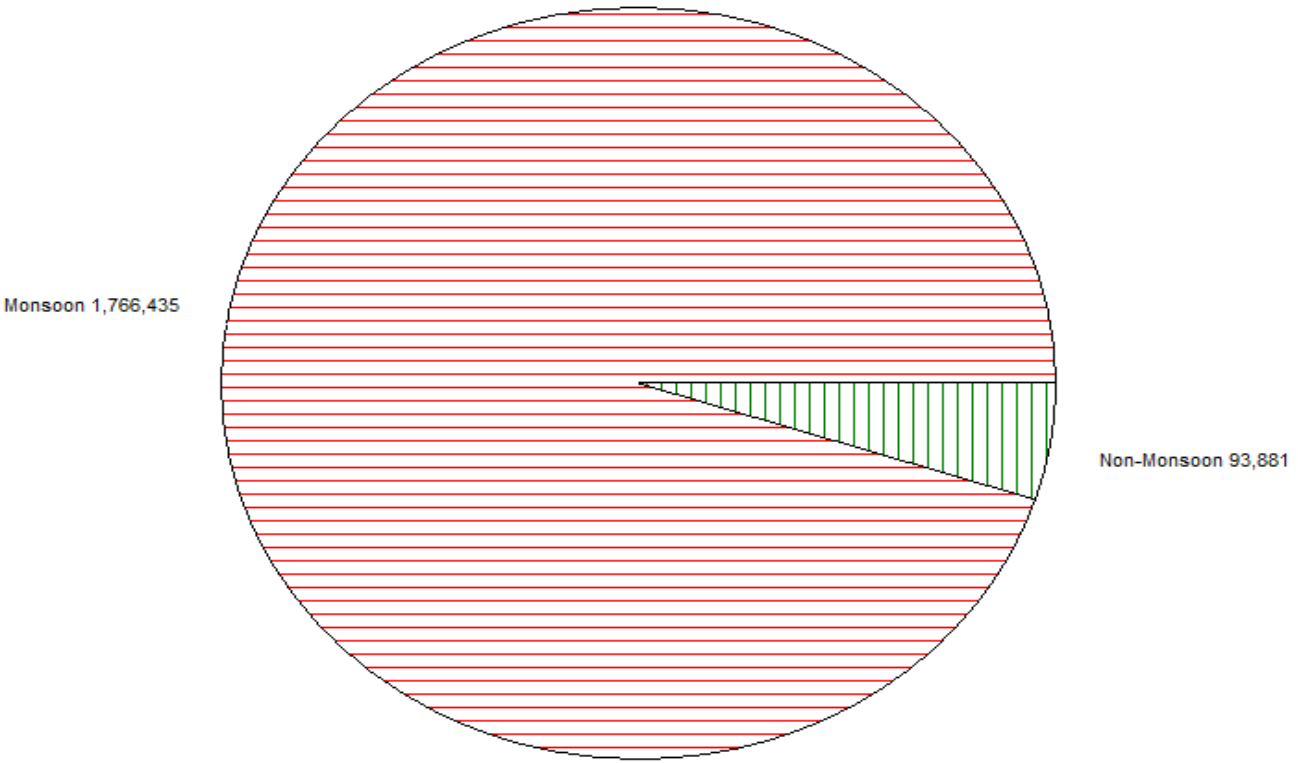
Sub-Division : SWR SD No 1, Trivandrum



Seasonal Sediment Load for the period : 1980-2017

Station Name : THUMPAMON (KYA00J4)
Local River : Achankovil

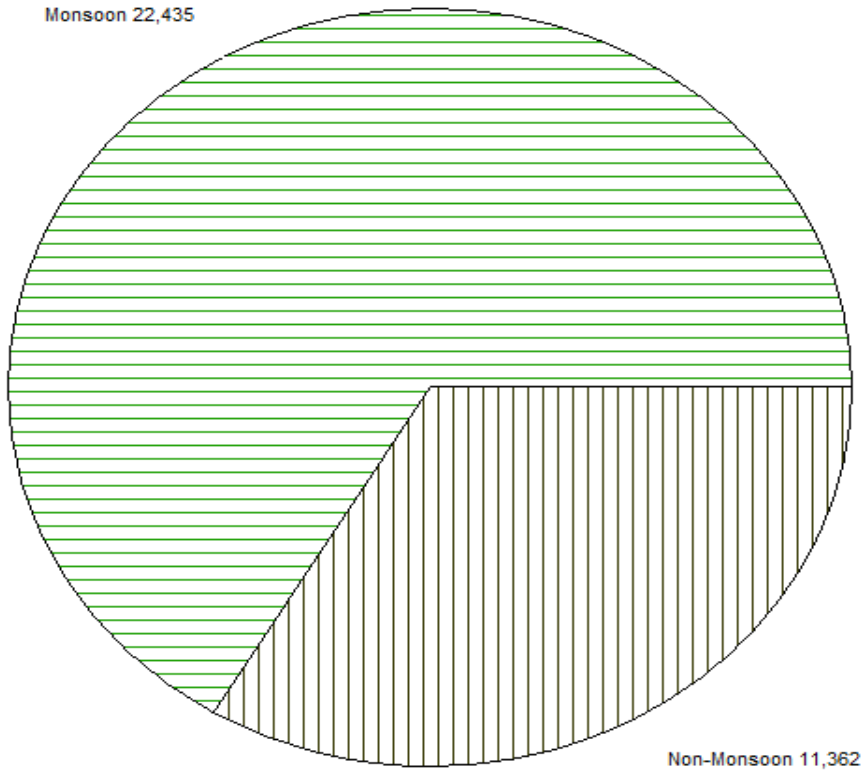
Division : SWR Division, Cochin
Sub-Division : SWR SD No 1, Trivandrum



Seasonal Sediment Load for the Year: 2017-2018

Station Name : THUMPAMON (KYA00J4)
Local River : Achankovil

Division : SWR Division, Cochin
Sub-Division : SWR SD No 1, Trivandrum



BED MATERIAL ANALYSIS DATA

RIVER : *Achenkovil* **CODE NO. :** *KYA00J4*

SITE : *Thumpamon* **CROSS SECTION :** *SGL*

	DATA FOR SAMPLE COLLECTED											GENERAL DATA OF THE RIVER						
										Bed Material Composition							Bed Material Composition	
SL.NO.	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS) OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)	WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017					DATE OF COLLECTION		26-09-2017										
1	60	5.500	-		1.73	15	0.204		5.0	3.73							
2	75	4.030	-	7.230	3.20	15	0.472	50.71	8.0	2.64	50.71	2.3329	0.3167	0.00010	50.71	5.5	2.49
3	90	3.560	-		3.67	15	0.223		6.0	1.09							
POSTMONSOON 2017					DATE OF COLLECTION		28-12-2017										
1	60	-	5.540		1.22	15	NIL		8.0	2.44							
2	75	-	4.100	6.760	1.87	15	0.118	8.591	11.0	2.17	45.25	2.0928	0.0907	0.00005	8.591	11.0	2.49
3	90	-	3.670		3.09	15	NIL		11.0	2.85							
PREMONSOON 2018					DATE OF COLLECTION		16-05-2018										
1	60	-	5.520		1.18	15	NIL		6.0	3.30							
2	75	-	3.820	6.700	2.88	15	0.101	5.816	5.0	1.52	44.22	2.1172	0.0639	0.00005	5.816	10.0	2.27
3	90	-	3.690		3.01	15	NIL		10.0	1.98							

Annual Sediment Load for period : 1980-2018

Station Name : PATTAZHY (KD000G4) **Division : SWR Division, Cochin**

Local River : Kallada **Sub-Division : SWR SD No 1, Trivandrum**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1980-1981	20344	12910	33254	1379
1981-1982	137542	7253	144795	2289
1982-1983	62395	1080	63475	1037
1983-1984	58345	19698	78043	1209
1984-1985	51947	5986	57933	1375
1985-1986	41663	5016	46679	1302
1986-1987	33874	5162	39036	902
1987-1988	75727	16361	92088	1469
1988-1989	58207	1359	59566	1394
1989-1990	97901	4155	102056	1893
1990-1991	63946	4334	68279	1512
1991-1992	86817	4265	91082	1943
1992-1993	559958	4261	564219	2839
1993-1994	78416	3439	81855	1533
1994-1995	105641	21934	127575	2032
1995-1996	49905	4407	54311	1472
1996-1997	40976	5380	46356	1196
1997-1998	48291	6802	55094	1208
1998-1999	75797	13601	89397	2054
1999-2000	42566	3829	46395	1711
2000-2001	47747	1640	49387	1374
2001-2002	18878	1628	20506	1304
2002-2003	13117	1963	15080	987
2003-2004	9633	5337	14970	768
2004-2005	15643	3832	19475	977
2005-2006	22360	9325	31685	1138
2006-2007	19620	2460	22080	938
2007-2008	0	0	0	995
2008-2009	7361	2240	9601	543
2009-2010	13115	6439	19554	1112
2010-2011	87498	14664	102161	2473
2011-2012	31530	8186	39716	1425
2012-2013	6587	987	7574	564
2013-2014	27632	4621	32252	1739
2014-2015	29175	5039	34214	1692
2015-2016	9819	4202	14021	1068
2016-2017	11732	1066	12798	1039
2017-2018	16680	105695	122375	1482

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PATTAZHY (KD000G4) **Division : SWR Division, Cochin**

Local River : Kallada **Sub-Division : SWR SD No 1, Trivandrum**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	32.62	0.000	0.000	0.012	0.012	35	53.42	0.000	0.000	0.001	0.001	5	7.071	0.000	0.000	0.010	0.010	6
2	54.01	0.000	0.000	0.014	0.014	66	58.24	0.000	0.000	0.010	0.010	48	8.010	0.000	0.000	0.010	0.010	7
3	220.5	0.000	0.002	0.020	0.021	406	47.06	0.000	0.000	0.011	0.011	46	7.616	0.000	0.000	0.008	0.008	6
4	81.80	0.000	0.000	0.015	0.015	106	44.70	0.000	0.000	0.011	0.011	42	15.43	0.000	0.000	0.009	0.009	13
5	54.21	0.000	0.000	0.013	0.013	60	35.79	0.000	0.000	0.010	0.010	32	20.62	0.000	0.000	0.010	0.010	17
6	66.35	0.000	0.000	0.014	0.014	82	31.95	0.000	0.000	0.010	0.010	28	31.03	0.000	0.000	0.013	0.013	35
7	48.73	0.000	0.000	0.014	0.014	58	28.21	0.000	0.000	0.010	0.010	24	26.92	0.000	0.000	0.010	0.010	24
8	44.46	0.000	0.000	0.013	0.013	51	28.73	0.000	0.000	0.010	0.010	25	25.78	0.000	0.000	0.014	0.014	32
9	32.62	0.000	0.000	0.010	0.010	29	25.59	0.000	0.000	0.010	0.010	22	28.81	0.000	0.000	0.010	0.010	25
10	21.08	0.000	0.000	0.010	0.010	19	27.10	0.000	0.000	0.010	0.010	24	22.53	0.000	0.000	0.010	0.010	19
11	29.57	0.000	0.000	0.011	0.011	28	24.68	0.000	0.000	0.010	0.010	22	18.73	0.000	0.000	0.010	0.010	16
12	23.95	0.000	0.000	0.011	0.011	22	22.60	0.000	0.000	0.010	0.010	20	25.03	0.000	0.000	0.010	0.010	22
13	20.47	0.000	0.000	0.010	0.010	18	18.55	0.000	0.000	0.010	0.010	16	16.92	0.000	0.000	0.009	0.009	14
14	18.81	0.000	0.000	0.010	0.010	16	20.38	0.000	0.000	0.010	0.010	18	14.09	0.000	0.000	0.009	0.009	11
15	20.97	0.000	0.000	0.011	0.011	19	14.62	0.000	0.000	0.010	0.010	12	11.85	0.000	0.000	0.009	0.009	9
16	17.85	0.000	0.000	0.010	0.010	16	12.58	0.000	0.000	0.009	0.009	10	10.63	0.000	0.000	0.008	0.008	8
17	17.85	0.000	0.000	0.010	0.010	16	12.53	0.000	0.000	0.009	0.009	10	10.39	0.000	0.000	0.010	0.010	9
18	12.58	0.000	0.000	0.010	0.010	11	10.66	0.000	0.000	0.008	0.008	8	10.46	0.000	0.000	0.008	0.008	8
19	11.35	0.000	0.000	0.010	0.010	10	14.51	0.000	0.000	0.011	0.011	14	20.60	0.000	0.000	0.010	0.010	18
20	9.672	0.000	0.000	0.010	0.010	8	25.58	0.000	0.000	0.014	0.014	32	17.32	0.000	0.000	0.010	0.010	15
21	9.650	0.000	0.000	0.010	0.010	8	15.38	0.000	0.000	0.014	0.014	18	35.99	0.000	0.000	0.014	0.014	44
22	8.778	0.000	0.000	0.009	0.009	7	11.90	0.000	0.000	0.010	0.010	11	48.10	0.000	0.000	0.014	0.014	57
23	11.98	0.000	0.000	0.010	0.010	11	31.37	0.000	0.000	0.014	0.014	38	47.60	0.000	0.000	0.011	0.011	46
24	21.07	0.000	0.000	0.014	0.014	25	23.00	0.000	0.000	0.010	0.010	20	31.86	0.000	0.000	0.010	0.010	28
25	39.25	0.000	0.000	0.012	0.012	42	9.110	0.000	0.000	0.010	0.010	8	23.23	0.000	0.000	0.010	0.010	20
26	50.60	0.000	0.000	0.013	0.013	56	7.928	0.000	0.000	0.009	0.009	6	20.52	0.000	0.000	0.010	0.010	18
27	139.3	0.000	0.001	0.020	0.021	252	7.575	0.000	0.000	0.008	0.008	5	19.43	0.000	0.000	0.001	0.001	2
28	268.1	0.001	0.002	0.021	0.024	561	8.839	0.000	0.000	0.010	0.010	7	22.41	0.000	0.000	0.010	0.010	20
29	133.8	0.000	0.000	0.014	0.014	165	9.131	0.000	0.000	0.009	0.009	7	29.43	0.000	0.000	0.010	0.010	25
30	83.03	0.000	0.000	0.013	0.013	92	7.328	0.000	0.000	0.010	0.010	6	36.67	0.000	0.000	0.010	0.010	33
31							7.018	0.000	0.000	0.010	0.010	6	27.20	0.000	0.000	0.010	0.010	24
Ten Daily Mean																		
Ten Daily I	65.64	0.000	0.000	0.014	0.014	91	38.08	0.000	0.000	0.009	0.009	30	19.38	0.000	0.000	0.010	0.010	18
Ten Daily II	18.31	0.000	0.000	0.010	0.010	16	17.67	0.000	0.000	0.010	0.010	16	15.60	0.000	0.000	0.009	0.009	13
Ten Daily III	76.56	0.000	0.000	0.014	0.014	122	12.60	0.000	0.000	0.010	0.010	12	31.13	0.000	0.000	0.010	0.010	29
Monthly																		
Total						2293						590						629

Annual Sediment Load (Metric Tonnes) : 122375

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PATTAZHY (KD000G4) **Division : SWR Division, Cochin**

Local River : Kallada **Sub-Division : SWR SD No 1, Trivandrum**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	24.57	0.000	0.000	0.007	0.007	15	64.02	0.000	0.000	0.014	0.014	76	123.3	0.000	0.000	0.015	0.015	162
2	22.60	0.000	0.000	0.014	0.014	28	64.02	0.000	0.000	0.014	0.014	76	162.9	0.000	0.000	0.033	0.033	462
3	18.57	0.000	0.000	0.007	0.007	11	47.11	0.000	0.000	0.013	0.013	52	227.8	0.000	0.000	0.034	0.034	669
4	23.10	0.000	0.000	0.007	0.007	14	36.16	0.000	0.000	0.010	0.010	32	163.7	0.000	0.000	0.021	0.021	301
5	45.91	0.000	0.000	0.002	0.002	9	46.94	0.000	0.000	0.014	0.014	55	244.9	0.000	0.000	0.034	0.034	715
6	182.4	0.000	0.000	0.021	0.021	334	85.74	0.000	0.000	0.002	0.002	18	190.9	0.000	0.000	0.014	0.014	231
7	117.9	0.000	0.000	0.010	0.010	104	61.21	0.000	0.000	0.013	0.013	68	169.8	0.000	0.000	0.014	0.014	205
8	87.70	0.000	0.000	0.010	0.010	77	65.40	0.000	0.000	0.010	0.010	55	198.6	0.000	0.000	0.032	0.032	549
9	98.75	0.000	0.000	0.014	0.014	123	75.60	0.000	0.000	0.012	0.012	78	277.3	0.000	0.000	0.148	0.148	3546
10	89.68	0.000	0.000	0.010	0.010	77	55.35	0.000	0.000	0.010	0.010	50	197.2	0.000	0.000	0.023	0.023	392
11	90.00	0.000	0.000	0.010	0.010	79	48.85	0.000	0.000	0.011	0.011	47	172.1	0.000	0.000	0.004	0.004	57
12	64.03	0.000	0.000	0.001	0.001	6	54.25	0.000	0.000	0.012	0.012	55	154.3	0.000	0.000	0.026	0.026	345
13	54.19	0.000	0.000	0.013	0.013	62	64.71	0.000	0.000	0.016	0.016	88	147.8	0.000	0.000	0.004	0.004	51
14	124.5	0.000	0.000	0.001	0.001	15	78.46	0.000	0.000	0.016	0.016	107	93.75	0.000	0.000	0.004	0.004	36
15	113.4	0.000	0.000	0.002	0.002	24	61.31	0.000	0.000	0.013	0.013	71	81.45	0.000	0.000	0.002	0.002	14
16	88.60	0.000	0.000	0.010	0.010	80	75.22	0.000	0.000	0.013	0.013	83	63.83	0.000	0.000	0.003	0.003	17
17	140.5	0.000	0.000	0.008	0.008	91	49.64	0.000	0.000	0.012	0.012	51	50.19	0.000	0.000	0.003	0.003	13
18	337.0	0.000	0.000	0.020	0.020	571	51.13	0.000	0.000	0.012	0.012	55	62.27	0.000	0.000	0.000	0.000	0.000
19	119.9	0.000	0.000	0.013	0.013	139	49.13	0.000	0.000	0.012	0.012	50	59.16	0.000	0.000	0.005	0.005	24
20	94.95	0.000	0.000	0.001	0.001	11	47.70	0.000	0.000	0.011	0.011	46	92.63	0.000	0.000	0.024	0.024	192
21	82.63	0.000	0.000	0.012	0.012	87	47.33	0.000	0.000	0.014	0.014	56	94.12	0.000	0.000	0.003	0.003	24
22	84.80	0.000	0.000	0.012	0.012	89	77.07	0.000	0.000	0.011	0.011	73	127.8	0.000	0.000	0.009	0.009	99
23	90.39	0.000	0.000	0.011	0.011	88	47.65	0.000	0.000	0.012	0.012	49	90.27	0.000	0.000	0.004	0.004	33
24	67.50	0.000	0.000	0.012	0.012	72	67.92	0.000	0.000	0.010	0.010	59	76.61	0.000	0.000	0.003	0.003	21
25	57.79	0.000	0.000	0.000	0.000	0.000	90.39	0.000	0.000	0.011	0.011	87	61.11	0.000	0.000	0.004	0.004	21
26	56.98	0.000	0.000	0.000	0.000	0.000	76.93	0.000	0.000	0.012	0.012	80	53.95	0.000	0.000	0.003	0.003	14
27	55.20	0.000	0.000	0.000	0.000	0.000	164.2	0.000	0.000	0.014	0.014	199	82.39	0.000	0.000	0.003	0.003	21
28	58.25	0.000	0.000	0.000	0.000	0.000	209.2	0.000	0.002	0.013	0.015	277	111.9	0.000	0.000	0.006	0.006	54
29	77.84	0.000	0.000	0.015	0.015	100	167.8	0.000	0.001	0.012	0.013	183	91.66	0.000	0.000	0.007	0.007	59
30	69.65	0.000	0.000	0.014	0.014	85	110.1	0.000	0.000	0.013	0.013	122	94.84	0.000	0.000	0.003	0.003	25
31							131.2	0.000	0.000	0.002	0.002	27						
Ten Daily Mean																		
Ten Daily I	71.12	0.000	0.000	0.010	0.010	79	60.16	0.000	0.000	0.011	0.011	56	195.6	0.000	0.000	0.037	0.037	723
Ten Daily II	122.7	0.000	0.000	0.008	0.008	108	58.04	0.000	0.000	0.013	0.013	65	97.75	0.000	0.000	0.008	0.008	83
Ten Daily III	70.10	0.000	0.000	0.013	0.013	87	108.2	0.000	0.000	0.011	0.012	110	88.47	0.000	0.000	0.005	0.005	37
Monthly																		
Total						2391						2424						8352

Annual Sediment Load (Metric Tonnes) : 122375

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PATTAZHY (KD000G4) **Division : SWR Division, Cochin**

Local River : Kallada **Sub-Division : SWR SD No 1, Trivandrum**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	572.1	0.031	0.103	0.557	0.690	34101	14.05	0.000	0.000	0.004	0.004	5	5.446	0.000	0.000	0.004	0.004	2
2	728.9	0.041	0.138	0.743	0.922	58058	14.05	0.000	0.000	0.004	0.004	5	4.752	0.000	0.000	0.003	0.003	1
3	298.6	0.011	0.037	0.204	0.252	6512	14.05	0.000	0.000	0.004	0.004	5	4.924	0.000	0.000	0.003	0.003	1
4	179.9	0.000	0.000	0.013	0.013	202	13.25	0.000	0.000	0.004	0.004	5	5.538	0.000	0.000	0.003	0.003	1
5	155.6	0.000	0.000	0.004	0.004	55	12.83	0.000	0.000	0.004	0.004	4	4.033	0.000	0.000	0.004	0.004	1
6	128.1	0.000	0.000	0.011	0.011	122	10.41	0.000	0.000	0.003	0.003	2	4.044	0.000	0.000	0.003	0.003	1
7	129.3	0.000	0.000	0.014	0.014	159	11.20	0.000	0.000	0.003	0.003	3	4.259	0.000	0.000	0.003	0.003	1
8	128.1	0.000	0.000	0.021	0.021	232	10.46	0.000	0.000	0.002	0.002	2	6.851	0.000	0.000	0.005	0.005	3
9	130.2	0.000	0.000	0.036	0.036	405	6.676	0.000	0.000	0.004	0.004	2	8.073	0.000	0.000	0.006	0.006	4
10	137.0	0.000	0.000	0.042	0.042	496	6.663	0.000	0.000	0.005	0.005	3	7.038	0.000	0.000	0.005	0.005	3
11	136.3	0.000	0.000	0.052	0.052	612	6.814	0.000	0.000	0.004	0.004	2	6.290	0.000	0.000	0.004	0.004	2
12	110.0	0.000	0.000	0.027	0.027	253	6.908	0.000	0.000	0.003	0.003	2	5.382	0.000	0.000	0.003	0.003	1
13	101.6	0.000	0.000	0.049	0.049	430	6.211	0.000	0.000	0.003	0.003	1	4.318	0.000	0.000	0.003	0.003	1
14	137.9	0.000	0.000	0.106	0.106	1263	5.983	0.000	0.000	0.005	0.005	2	4.257	0.000	0.000	0.003	0.003	1
15	109.4	0.000	0.000	0.026	0.026	246	6.075	0.000	0.000	0.006	0.006	3	3.822	0.000	0.000	0.003	0.003	1
16	98.71	0.000	0.000	0.003	0.003	26	5.732	0.000	0.000	0.005	0.005	2	3.776	0.000	0.000	0.006	0.006	2
17	92.97	0.000	0.000	0.015	0.015	116	6.068	0.000	0.000	0.007	0.007	4	3.789	0.000	0.000	0.006	0.006	2
18	86.74	0.000	0.000	0.021	0.021	157	6.449	0.000	0.000	0.005	0.005	3	9.856	0.000	0.000	0.000	0.000	0
19	62.47	0.000	0.000	0.003	0.003	18	6.266	0.000	0.000	0.005	0.005	3	4.167	0.000	0.000	0.002	0.002	1
20	34.92	0.000	0.000	0.004	0.004	11	6.137	0.000	0.000	0.006	0.006	3	4.711	0.000	0.000	0.002	0.002	1
21	32.98	0.000	0.000	0.003	0.003	9	5.983	0.000	0.000	0.006	0.006	3	1.287	0.000	0.000	0.003	0.003	0
22	69.86	0.000	0.000	0.003	0.003	21	6.193	0.000	0.000	0.003	0.003	2	1.868	0.000	0.000	0.003	0.003	1
23	79.14	0.000	0.000	0.004	0.004	30	7.029	0.000	0.000	0.003	0.003	2	2.645	0.000	0.000	0.004	0.004	1
24	73.77	0.000	0.000	0.003	0.003	20	6.929	0.000	0.000	0.004	0.004	2	3.983	0.000	0.000	0.004	0.004	1
25	71.05	0.000	0.000	0.003	0.003	19	5.189	0.000	0.000	0.003	0.003	1	3.831	0.000	0.000	0.004	0.004	1
26	73.86	0.000	0.000	0.002	0.002	13	5.394	0.000	0.000	0.004	0.004	2	3.170	0.000	0.000	0.004	0.004	1
27	38.39	0.000	0.000	0.004	0.004	15	5.145	0.000	0.000	0.003	0.003	1	4.435	0.000	0.000	0.004	0.004	1
28	15.63	0.000	0.000	0.010	0.010	14	4.706	0.000	0.000	0.001	0.001	1	4.549	0.000	0.000	0.005	0.005	2
29	16.99	0.000	0.000	0.004	0.004	6	5.500	0.000	0.000	0.006	0.006	3						
30	15.16	0.000	0.000	0.003	0.003	4	5.097	0.000	0.000	0.004	0.004	2						
31	15.09	0.000	0.000	0.004	0.004	5	5.499	0.000	0.000	0.004	0.004	2						
Ten Daily Mean																		
Ten Daily I	258.8	0.008	0.028	0.165	0.201	10034	11.36	0.000	0.000	0.004	0.004	4	5.496	0.000	0.000	0.004	0.004	2
Ten Daily II	97.10	0.000	0.000	0.031	0.031	313	6.264	0.000	0.000	0.005	0.005	3	5.037	0.000	0.000	0.003	0.003	1
Ten Daily III	45.63	0.000	0.000	0.004	0.004	14	5.697	0.000	0.000	0.004	0.004	2	3.221	0.000	0.000	0.004	0.004	1
Monthly																		
Total						103629						82						40

Annual Sediment Load (Metric Tonnes) : 122375

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : PATTAZHY (KD000G4) **Division : SWR Division, Cochin**

Local River : Kallada **Sub-Division : SWR SD No 1, Trivandrum**

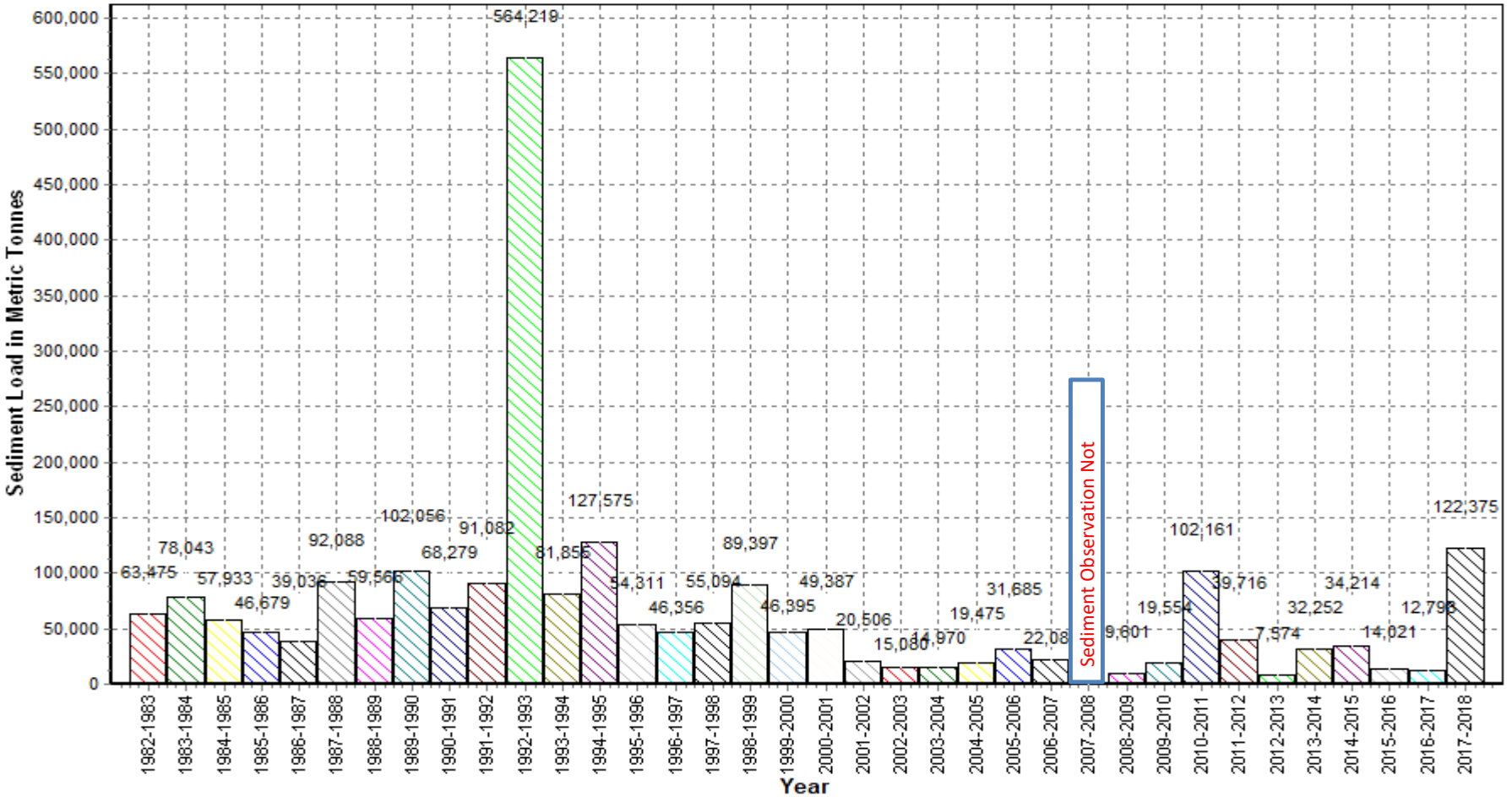
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	4.279	0.000	0.000	0.004	0.004	1	5.983	0.000	0.000	0.006	0.006	3	10.29	0.000	0.000	0.014	0.014	12
2	4.537	0.000	0.000	0.003	0.003	1	6.398	0.000	0.000	0.005	0.005	3	6.645	0.000	0.000	0.012	0.012	7
3	4.107	0.000	0.000	0.003	0.003	1	5.583	0.000	0.000	0.007	0.007	3	6.088	0.000	0.000	0.010	0.010	5
4	4.193	0.000	0.000	0.003	0.003	1	5.595	0.000	0.000	0.005	0.005	2	6.716	0.000	0.000	0.011	0.011	6
5	4.863	0.000	0.000	0.006	0.006	2	6.040	0.000	0.000	0.007	0.007	4	7.152	0.000	0.000	0.006	0.006	3
6	4.072	0.000	0.000	0.002	0.002	1	5.959	0.000	0.000	0.008	0.008	4	11.32	0.000	0.000	0.003	0.003	3
7	4.517	0.000	0.000	0.005	0.005	2	5.870	0.000	0.000	0.006	0.006	3	9.295	0.000	0.000	0.006	0.006	5
8	4.142	0.000	0.000	0.006	0.006	2	10.47	0.000	0.000	0.016	0.016	14	7.150	0.000	0.000	0.007	0.007	4
9	4.749	0.000	0.000	0.005	0.005	2	6.824	0.000	0.000	0.012	0.012	7	7.595	0.000	0.000	0.010	0.010	7
10	4.807	0.000	0.000	0.004	0.004	2	8.789	0.000	0.000	0.018	0.018	13	7.738	0.000	0.000	0.010	0.010	7
11	3.831	0.000	0.000	0.002	0.002	1	8.694	0.000	0.000	0.006	0.006	4	8.540	0.000	0.000	0.022	0.022	16
12	4.733	0.000	0.000	0.005	0.005	2	11.58	0.000	0.006	0.034	0.040	40	6.844	0.000	0.000	0.016	0.016	9
13	5.623	0.000	0.000	0.007	0.007	3	8.634	0.000	0.004	0.025	0.029	21	6.290	0.000	0.000	0.013	0.013	7
14	7.090	0.000	0.000	0.002	0.002	1	9.070	0.000	0.003	0.018	0.021	16	5.375	0.000	0.000	0.008	0.008	4
15	8.237	0.000	0.000	0.002	0.002	2	10.26	0.000	0.004	0.021	0.025	22	4.384	0.000	0.000	0.013	0.013	5
16	7.210	0.000	0.000	0.002	0.002	1	5.812	0.000	0.004	0.020	0.024	12	4.340	0.000	0.000	0.009	0.009	4
17	6.369	0.000	0.000	0.004	0.004	2	8.965	0.000	0.004	0.007	0.012	9	4.363	0.000	0.000	0.022	0.022	8
18	11.98	0.000	0.000	0.030	0.030	31	7.768	0.000	0.000	0.005	0.005	3	12.14	0.000	0.000	0.018	0.018	19
19	8.957	0.000	0.000	0.016	0.016	12	7.078	0.000	0.000	0.017	0.017	10	12.11	0.000	0.005	0.018	0.023	24
20	7.003	0.000	0.000	0.008	0.008	5	10.01	0.000	0.000	0.008	0.008	7	3.677	0.000	0.000	0.013	0.013	4
21	6.177	0.000	0.000	0.014	0.014	7	7.198	0.000	0.000	0.010	0.010	6	10.44	0.000	0.000	0.011	0.011	10
22	7.389	0.000	0.000	0.011	0.011	7	7.097	0.000	0.000	0.011	0.011	6	3.677	0.000	0.000	0.014	0.014	4
23	7.540	0.000	0.000	0.011	0.011	7	6.282	0.000	0.000	0.008	0.008	4	2.416	0.000	0.004	0.010	0.014	3
24	6.434	0.000	0.000	0.009	0.009	5	5.828	0.000	0.000	0.008	0.008	4	9.808	0.000	0.005	0.028	0.033	28
25	7.783	0.000	0.000	0.011	0.011	8	6.271	0.000	0.000	0.012	0.012	7	12.37	0.000	0.005	0.021	0.026	28
26	6.472	0.000	0.000	0.009	0.009	5	6.274	0.000	0.000	0.012	0.012	7	10.20	0.000	0.003	0.012	0.015	13
27	6.747	0.000	0.000	0.009	0.009	5	6.124	0.000	0.000	0.008	0.008	4	64.68	0.000	0.058	0.044	0.102	567
28	6.646	0.000	0.000	0.007	0.007	4	11.63	0.000	0.000	0.021	0.021	21	41.99	0.000	0.006	0.038	0.044	158
29	6.290	0.000	0.000	0.006	0.006	3	7.097	0.000	0.000	0.012	0.012	7	59.02	0.000	0.005	0.037	0.042	213
30	6.768	0.000	0.000	0.008	0.008	5	10.47	0.000	0.000	0.017	0.017	16	42.36	0.000	0.004	0.016	0.020	73
31	5.948	0.000	0.000	0.006	0.006	3							74.61	0.000	0.005	0.036	0.041	266
Ten Daily Mean																		
Ten Daily I	4.427	0.000	0.000	0.004	0.004	2	6.751	0.000	0.000	0.009	0.009	6	7.999	0.000	0.000	0.009	0.009	6
Ten Daily II	7.103	0.000	0.000	0.008	0.008	6	8.787	0.000	0.003	0.016	0.019	15	6.806	0.000	0.000	0.015	0.016	10
Ten Daily III	6.745	0.000	0.000	0.009	0.009	5	7.427	0.000	0.000	0.012	0.012	8	30.14	0.000	0.009	0.024	0.033	124
Monthly																		
Total						135						285						1524

Annual Sediment Load (Metric Tonnes) : 122375

Annual Sediment Load for the period: 1980-2018

Station Name : PATTAZHY (KD000G4)
Local River : Kallada

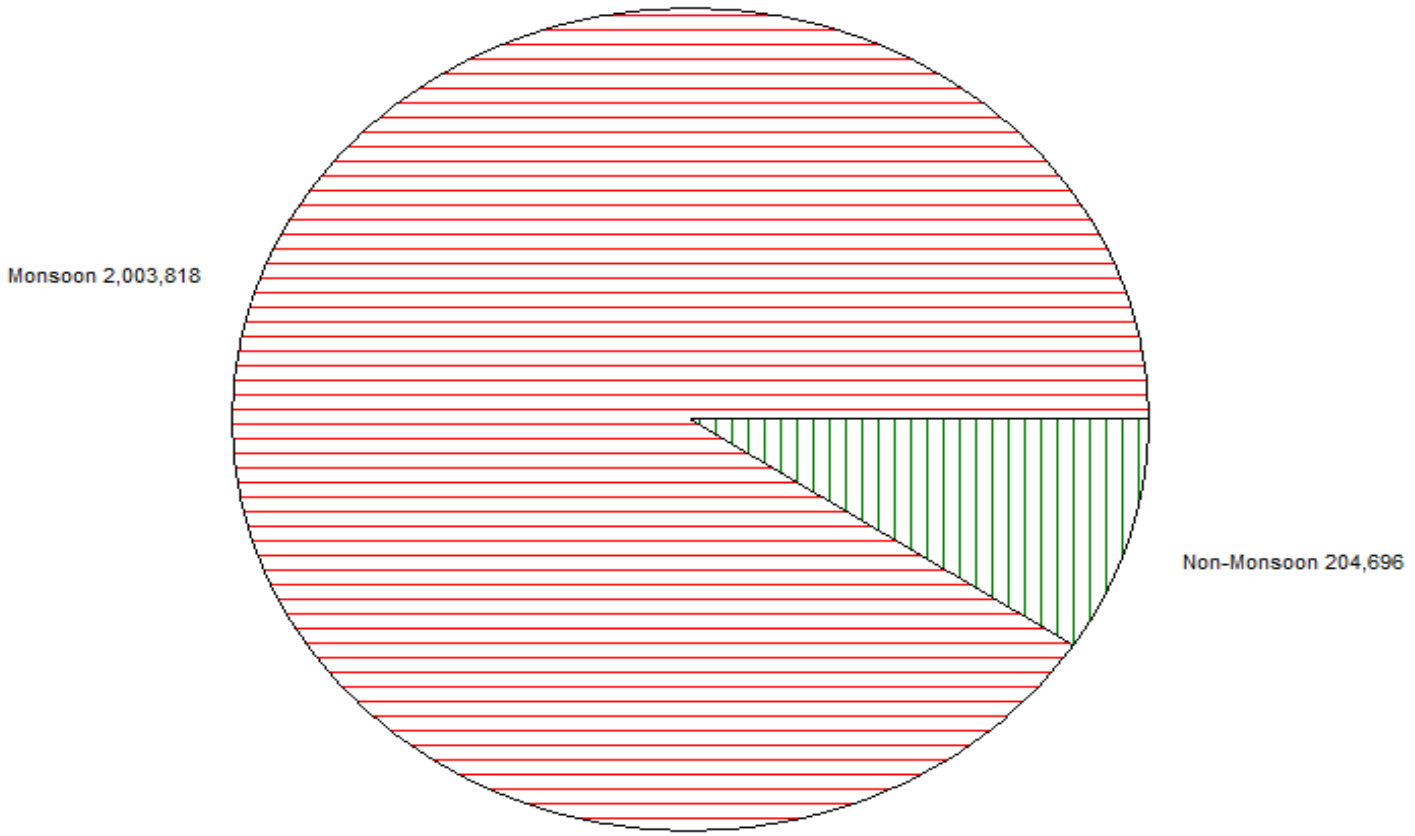
Division : SWR Division, Cochin
Sub-Division : SWR SD No 1, Trivandrum



Seasonal Sediment Load for the period : 1980-2017

Station Name : PATTAZHY (KD000G4)
Local River : Kallada

Division : SWR Division, Cochin
Sub-Division : SWR SD No 1, Trivandrum



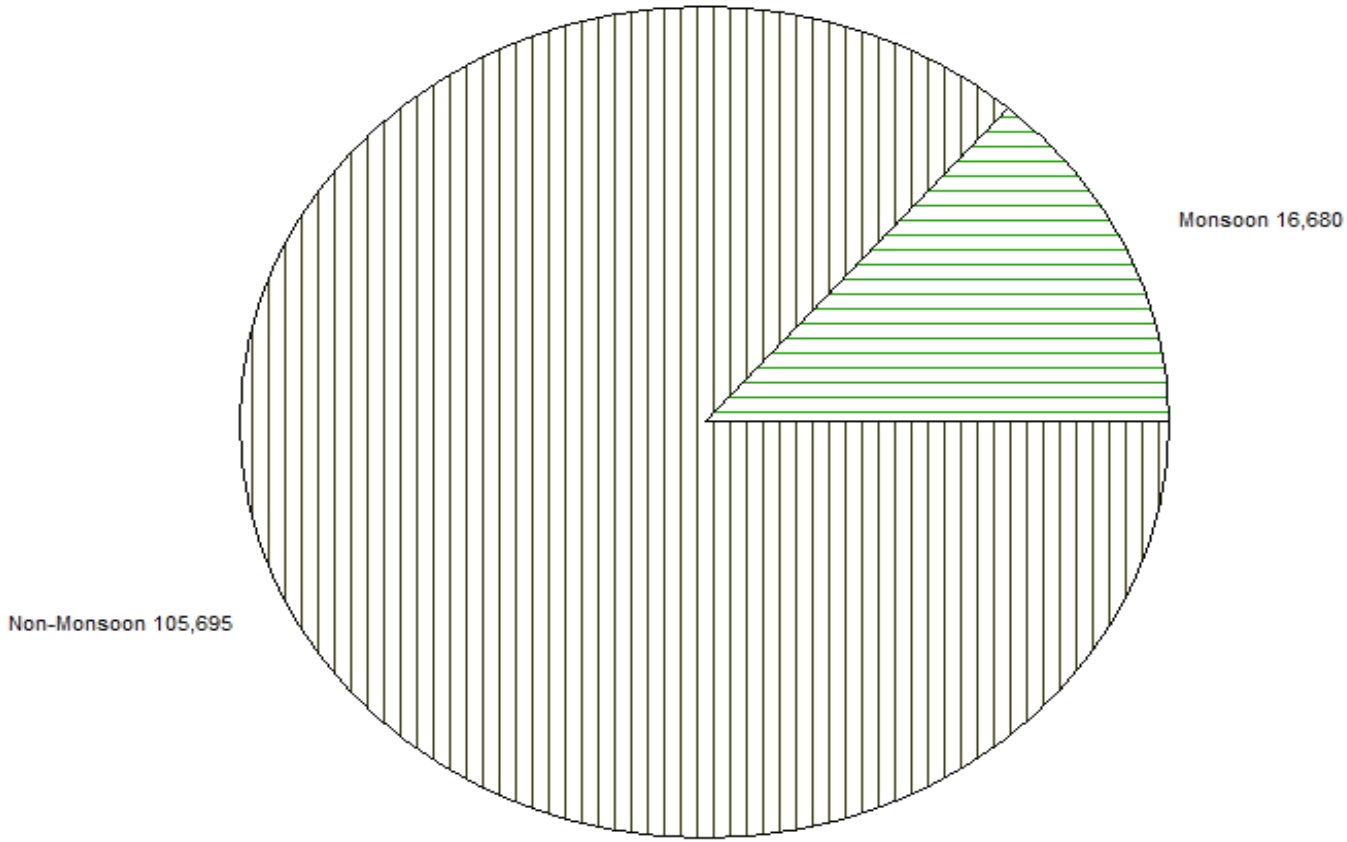
Seasonal Sediment Load for the Year: 2017-2018

Station Name : PATTAZHY (KD000G4)

Local River : Kallada

Division : SWR Division, Cochin

Sub-Division : SWR SD No 1, Trivandrum



BED MATERIAL ANALYSIS DATA

RIVER : *Kallada* **CODE NO. :** *KDOOOG4*

SITE : *Pattazhy* **CROSS SECTION :** *SGL*

SL. NO.	DATA FOR SAMPLE COLLECTED										GENERAL DATA OF THE RIVER						
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS) OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m^3/Sec)	Bed Material Composition		WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m^3/Sec)	Bed Material Composition	
									MAX SIZE (mm)	MEAN SIZE (mm)						MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017					**DATE OF COLLECTION**												
					Sample not collected												
POSTMONSOON 2017					**DATE OF COLLECTION**										**17-01-2018**		
1	160	2.880	-		-	37.0	NIL		6.0	1.27							
2	180	-	1.170	2.220	1.05	37.0	NIL	6.068	6.0	2.78	36.46	1.24	0.1362	0.00739	6.068	6.0	1.87
3	200	-	0.100		2.12	37.0	NIL		6.0	1.55							
PREMONSOON 2018					**DATE OF COLLECTION**												
					Sample not collected												

Annual Sediment Load for period : 1979-2018

Station Name : AYILAM (KV000G3) **Division : SWR Division, Cochin**

Local River : Vamanapuram **Sub-Division : SWR SD No 1, Trivandrum**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1979-1980	77090	4761	81851	626
1980-1981	52910	5938	58848	557
1981-1982	112660	6505	119164	934
1982-1983	45038	1011	46048	347
1983-1984	24707	11751	36458	447
1984-1985	49889	3771	53661	532
1985-1986	28592	2188	30780	444
1986-1987	27809	1510	29319	288
1987-1988	60563	24355	84919	697
1988-1989	55532	1275	56808	616
1989-1990	61657	2459	64117	749
1990-1991	20791	814	21605	489
1991-1992	99060	13156	112216	965
1992-1993	276610	2369	278979	1134
1993-1994	47825	2828	50653	877
1994-1995	56324	3136	59460	751
1995-1996	22179	205	22384	542
1996-1997	59677	2457	62134	543
1997-1998	23197	583	23780	651
1998-1999	73763	13100	86863	921
1999-2000	39047	308	39355	740
2000-2001	30738	4292	35030	535
2001-2002	37790	287	38077	535
2002-2003	16439	290	16729	431
2003-2004	12824	7254	20078	418
2004-2005	24593	9321	33915	792
2005-2006	14531	9198	23729	808
2006-2007	39027	390	39416	855
2007-2008	0	0	0	850
2008-2009	12615	462	13077	521
2009-2010	17276	2336	19612	480
2010-2011	61207	2232	63439	1014
2011-2012	9225	4417	13642	506
2012-2013	890	0	890	38
2013-2014	32384	2908	35291	479
2014-2015	33721	2778	36499	579
2015-2016	14462	1983	16445	507
2016-2017	12367	0	12367	221
2017-2018	8889	2841	11730	422

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : AYILAM (KV000G3) | **Division : SWR Division, Cochin**

Local River : Vamanapuram | **Sub-Division : SWR SD No 1, Trivandrum**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	11.54	0.000	0.000	0.019	0.019	19	16.16	0.000	0.000	0.016	0.016	23	0.000	0.000	0.000	0.000	0.000	0.000
2	33.54	0.000	0.000	0.088	0.088	254	17.74	0.000	0.000	0.016	0.016	25	0.000	0.000	0.000	0.000	0.000	0.000
3	91.52	0.000	0.000	0.090	0.090	712	15.19	0.000	0.000	0.020	0.020	27	0.000	0.000	0.000	0.000	0.000	0.000
4	26.75	0.000	0.000	0.026	0.026	61	12.43	0.000	0.000	0.015	0.015	16	0.000	0.000	0.000	0.000	0.000	0.000
5	17.99	0.000	0.000	0.022	0.022	34	10.47	0.000	0.000	0.015	0.015	13	0.000	0.000	0.000	0.000	0.000	0.000
6	36.09	0.000	0.000	0.036	0.036	112	5.253	0.000	0.000	0.015	0.015	7	11.46	0.000	0.000	0.013	0.013	12
7	21.18	0.000	0.000	0.041	0.041	74	5.328	0.000	0.000	0.014	0.014	6	10.32	0.000	0.000	0.012	0.012	10
8	19.84	0.000	0.000	0.005	0.005	9	0.000	0.000	0.000	0.000	0.000	0.000	10.07	0.000	0.000	0.010	0.010	9
9	11.06	0.000	0.000	0.017	0.017	17	10.07	0.000	0.000	0.015	0.015	13	11.67	0.000	0.000	0.011	0.011	11
10	9.680	0.000	0.000	0.008	0.008	6	10.52	0.000	0.000	0.015	0.015	14	5.640	0.000	0.000	0.012	0.012	6
11	10.75	0.000	0.000	0.017	0.017	16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	9.629	0.000	0.000	0.012	0.012	10	0.000	0.000	0.000	0.000	0.000	0.000	14.15	0.000	0.000	0.011	0.011	13
13	7.980	0.000	0.000	0.021	0.021	14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	8.376	0.000	0.000	0.019	0.019	13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	8.376	0.000	0.000	0.021	0.021	15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14.32	0.000	0.000	0.017	0.017	21
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.14	0.000	0.000	0.018	0.018	17
24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.168	0.000	0.000	0.005	0.005	4
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	48.67	0.000	0.000	0.059	0.059	247	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	76.14	0.000	0.000	0.071	0.071	464	0.000	0.000	0.000	0.000	0.000	0.000	10.75	0.000	0.000	0.003	0.003	3
29	27.77	0.000	0.000	0.015	0.015	36	0.000	0.000	0.000	0.000	0.000	0.000	14.49	0.000	0.000	0.008	0.008	10
30	21.90	0.000	0.000	0.016	0.016	30	0.000	0.000	0.000	0.000	0.000	0.000	24.05	0.000	0.000	0.014	0.014	28
31							0.000	0.000	0.000	0.000	0.000	0.000	17.41	0.000	0.000	0.011	0.011	16
Ten Daily Mean																		
Ten Daily I	27.92	0.000	0.000	0.035	0.035	130	10.32	0.000	0.000	0.016	0.016	16	4.916	0.000	0.000	0.011	0.011	10
Ten Daily II	4.511	0.000	0.000	0.018	0.018	14	0.000						1.415	0.000	0.000	0.011	0.011	13
Ten Daily III	17.45	0.000	0.000	0.040	0.040	194	0.000						9.212	0.000	0.000	0.011	0.011	14
Monthly																		
Total						2145						144						161

Annual Sediment Load (Metric Tonnes) : 11730

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : AYILAM (KV000G3) **Division : SWR Division, Cochin**

Local River : Vamanapuram **Sub-Division : SWR SD No 1, Trivandrum**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	11.70	0.000	0.000	0.008	0.008	8	23.19	0.000	0.000	0.014	0.014	29	50.63	0.000	0.000	0.010	0.010	42
2	18.78	0.000	0.000	0.011	0.011	18	22.83	0.000	0.000	0.014	0.014	27	56.03	0.000	0.000	0.016	0.016	76
3	25.26	0.000	0.000	0.021	0.021	45	23.92	0.000	0.000	0.016	0.016	33	70.81	0.000	0.000	0.018	0.018	108
4	17.44	0.000	0.000	0.015	0.015	23	20.09	0.000	0.000	0.012	0.012	21	48.63	0.000	0.000	0.020	0.020	84
5	9.157	0.000	0.000	0.026	0.026	20	19.17	0.000	0.000	0.009	0.009	15	43.07	0.000	0.000	0.023	0.023	87
6	118.9	0.000	0.000	0.087	0.087	890	49.52	0.000	0.000	0.031	0.031	133	56.19	0.000	0.000	0.037	0.037	177
7	35.21	0.000	0.000	0.023	0.023	70	25.10	0.000	0.000	0.021	0.021	45	49.97	0.000	0.000	0.010	0.010	44
8	30.84	0.000	0.000	0.024	0.024	63	17.72	0.000	0.000	0.009	0.009	14	55.84	0.000	0.000	0.020	0.020	97
9	30.84	0.000	0.000	0.064	0.064	171	14.51	0.000	0.000	0.003	0.003	4	33.63	0.000	0.000	0.016	0.016	46
10	37.53	0.000	0.000	0.043	0.043	140	12.02	0.000	0.000	0.007	0.007	7	54.34	0.000	0.000	0.022	0.022	102
11	24.35	0.000	0.000	0.018	0.018	37	11.97	0.000	0.000	0.002	0.002	2	49.82	0.000	0.000	0.017	0.017	74
12	23.08	0.000	0.000	0.008	0.008	16	29.32	0.000	0.000	0.015	0.015	38	34.05	0.000	0.000	0.014	0.014	41
13	26.04	0.000	0.000	0.024	0.024	54	29.26	0.000	0.000	0.020	0.020	50	31.61	0.000	0.000	0.014	0.014	38
14	75.74	0.000	0.000	0.033	0.033	215	24.93	0.000	0.000	0.004	0.004	9	21.44	0.000	0.000	0.012	0.012	22
15	42.41	0.000	0.000	0.039	0.039	141	24.70	0.000	0.000	0.013	0.013	28	22.42	0.000	0.000	0.006	0.006	11
16	34.99	0.000	0.000	0.008	0.008	25	24.78	0.000	0.000	0.013	0.013	28	22.26	0.000	0.000	0.003	0.003	5
17	30.00	0.000	0.000	0.009	0.009	23	23.00	0.000	0.000	0.019	0.019	38	14.75	0.000	0.000	0.007	0.007	9
18	162.7	0.000	0.000	0.085	0.085	1188	17.72	0.000	0.000	0.013	0.013	19	15.60	0.000	0.000	0.001	0.001	1
19	68.13	0.000	0.000	0.015	0.015	87	19.21	0.000	0.000	0.009	0.009	15	14.73	0.000	0.000	0.005	0.005	7
20	50.60	0.000	0.000	0.012	0.012	51	17.87	0.000	0.000	0.019	0.019	30	15.80	0.000	0.000	0.010	0.010	13
21	48.88	0.000	0.000	0.010	0.010	43	17.43	0.000	0.000	0.007	0.007	11	53.45	0.000	0.000	0.016	0.016	73
22	30.40	0.000	0.000	0.008	0.008	20	108.6	0.000	0.000	0.011	0.011	105	32.32	0.000	0.000	0.013	0.013	37
23	23.97	0.000	0.000	0.008	0.008	17	67.24	0.000	0.000	0.012	0.012	72	24.82	0.000	0.000	0.002	0.002	5
24	22.46	0.000	0.000	0.007	0.007	14	34.20	0.000	0.000	0.002	0.002	6	23.02	0.000	0.000	0.004	0.004	8
25	20.34	0.000	0.000	0.008	0.008	14	33.06	0.000	0.000	0.019	0.019	53	17.42	0.000	0.000	0.005	0.005	7
26	18.44	0.000	0.000	0.007	0.007	10	33.01	0.000	0.000	0.002	0.002	6	15.88	0.000	0.000	0.004	0.004	5
27	19.38	0.000	0.000	0.006	0.006	11	32.49	0.000	0.000	0.042	0.042	117	32.06	0.000	0.000	0.012	0.012	33
28	22.09	0.000	0.000	0.011	0.011	21	48.47	0.000	0.000	0.060	0.060	249	25.60	0.000	0.000	0.021	0.021	46
29	40.43	0.000	0.000	0.022	0.022	75	42.53	0.000	0.000	0.030	0.030	110	18.30	0.000	0.000	0.006	0.006	9
30	30.01	0.000	0.000	0.014	0.014	36	32.77	0.000	0.000	0.032	0.032	91	19.77	0.000	0.000	0.066	0.066	112
31							33.44	0.000	0.000	0.023	0.023	66						
Ten Daily Mean																		
Ten Daily I	33.56	0.000	0.000	0.032	0.032	145	22.81	0.000	0.000	0.014	0.014	33	51.91	0.000	0.000	0.019	0.019	86
Ten Daily II	53.80	0.000	0.000	0.025	0.025	184	22.28	0.000	0.000	0.013	0.013	26	24.25	0.000	0.000	0.009	0.009	22
Ten Daily III	27.64	0.000	0.000	0.010	0.010	26	43.93	0.000	0.000	0.022	0.022	81	26.26	0.000	0.000	0.015	0.015	34
Monthly																		
Total						3545						1472						1421

Annual Sediment Load (Metric Tonnes) : 11730

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : AYILAM (KV000G3) **Division : SWR Division, Cochin**

Local River : Vamanapuram **Sub-Division : SWR SD No 1, Trivandrum**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	152.1	0.000	0.000	0.056	0.056	735	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	76.36	0.000	0.000	0.051	0.051	338	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	66.17	0.000	0.000	0.049	0.049	278	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	54.94	0.000	0.000	0.103	0.103	489	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	33.40	0.000	0.000	0.006	0.006	16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	29.66	0.000	0.000	0.004	0.004	11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	26.13	0.000	0.000	0.006	0.006	13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	27.00	0.000	0.000	0.004	0.004	8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	24.15	0.000	0.000	0.004	0.004	8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	23.37	0.000	0.000	0.005	0.005	10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	18.45	0.000	0.000	0.004	0.004	6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	17.29	0.000	0.000	0.004	0.004	6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	28.06	0.000	0.000	0.009	0.009	21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	22.20	0.000	0.000	0.007	0.007	13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	17.69	0.000	0.000	0.011	0.011	17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	19.87	0.000	0.000	0.006	0.006	10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	18.03	0.000	0.000	0.009	0.009	13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	11.93	0.000	0.000	0.006	0.006	6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	9.827	0.000	0.000	0.021	0.021	18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	9.793	0.000	0.000	0.010	0.010	8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	9.539	0.000	0.000	0.008	0.008	6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	9.088	0.000	0.000	0.008	0.008	6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	6.336	0.000	0.000	0.010	0.010	6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	6.704	0.000	0.000	0.007	0.007	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	5.907	0.000	0.000	0.007	0.007	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	5.406	0.000	0.000	0.006	0.006	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	5.291	0.000	0.000	0.005	0.005	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	4.655	0.000	0.000	0.005	0.005	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	3.607	0.000	0.000	0.005	0.005	1	0.000	0.000	0.000	0.000	0.000	0.000						
30	3.467	0.000	0.000	0.006	0.006	2	0.000	0.000	0.000	0.000	0.000	0.000						
31	4.166	0.000	0.000	0.005	0.005	2	0.000	0.000	0.000	0.000	0.000	0.000						
Ten Daily Mean																		
Ten Daily I	51.33	0.000	0.000	0.029	0.029	191	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Ten Daily II	17.31	0.000	0.000	0.009	0.009	12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Ten Daily III	5.833	0.000	0.000	0.006	0.006	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Monthly																		
Total						2062						0						0

Annual Sediment Load (Metric Tonnes) : 11730

Daily Observed Sediment Datasheet for period : 2017-2018

Station Name : AYILAM (KV000G3) **Division : SWR Division, Cochin**

Local River : Vamanapuram **Sub-Division : SWR SD No 1, Trivandrum**

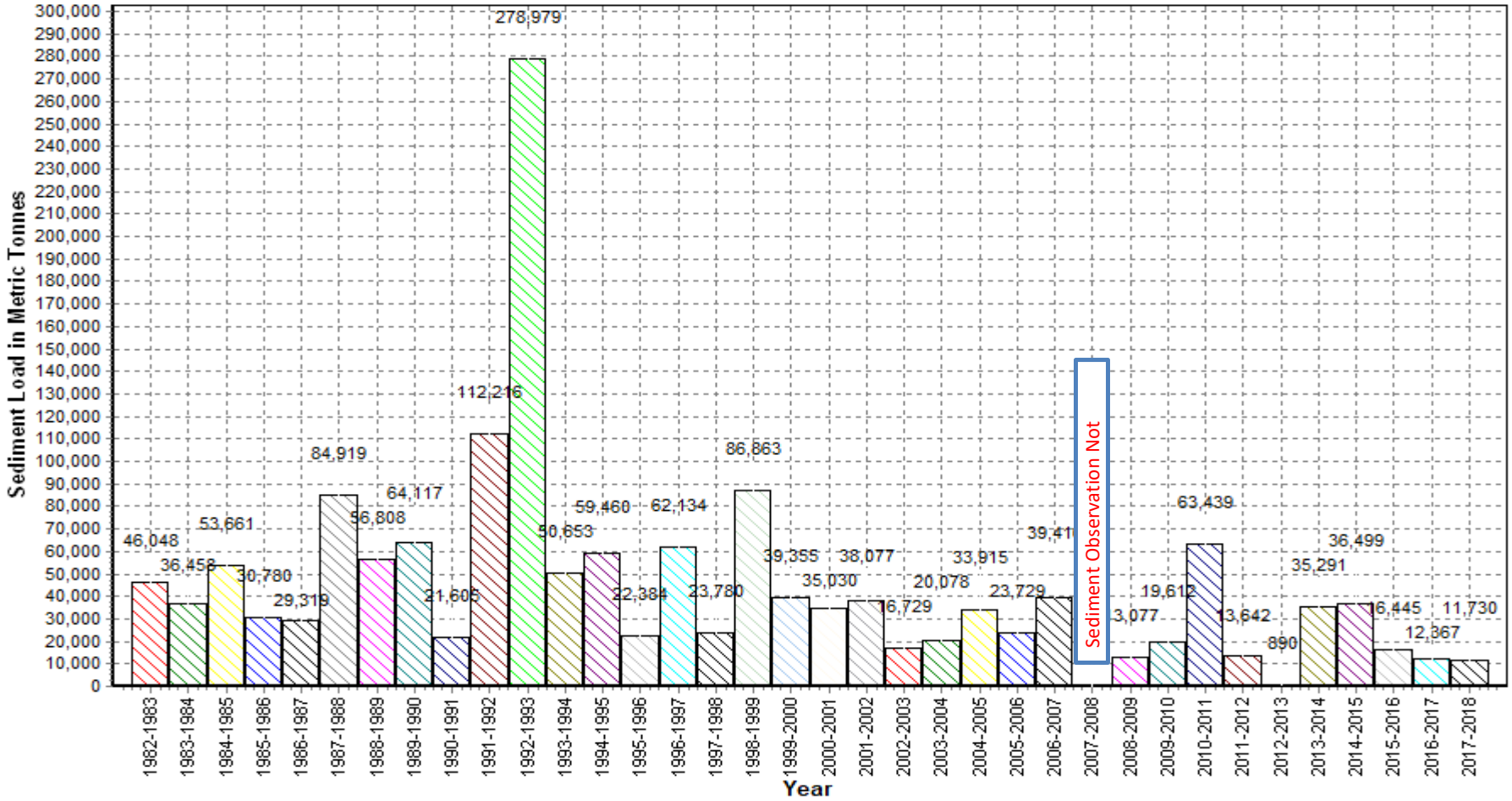
Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.59	0.000	0.000	0.046	0.046	50
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	18.50	0.000	0.000	0.070	0.070	112
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.74	0.000	0.000	0.052	0.052	52
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.652	0.000	0.000	0.036	0.036	27
14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	13.89	0.000	0.000	0.039	0.039	47
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.650	0.000	0.000	0.040	0.040	19
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.223	0.000	0.000	0.034	0.034	27
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.575	0.000	0.000	0.033	0.033	28
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	16.04	0.000	0.000	0.028	0.028	39
19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.06	0.000	0.000	0.032	0.032	31
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.788	0.000	0.000	0.034	0.034	26
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.102	0.000	0.000	0.035	0.035	24
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.765	0.000	0.000	0.034	0.034	26
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.571	0.000	0.000	0.035	0.035	23
24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.17	0.000	0.000	0.027	0.027	40
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	13.78	0.000	0.000	0.030	0.030	36
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14.52	0.000	0.000	0.029	0.029	37
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.27	0.000	0.000	0.029	0.029	38
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.223	0.000	0.000	0.034	0.034	27
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.58	0.000	0.000	0.035	0.035	47
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.93	0.000	0.000	0.016	0.016	17
31	0.000	0.000	0.000	0.000	0.000	0.000							11.97	0.000	0.000	0.007	0.007	8
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.109	0.000	0.000	0.058	0.058	81
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.462	0.000	0.000	0.036	0.036	33
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.26	0.000	0.000	0.028	0.028	29
Monthly																		
Total						0						0						779

Annual Sediment Load (Metric Tonnes) : 11730

Annual Sediment Load for the period: 1979-2018

Station Name : AYILAM (KV000G3)
Local River : Vamanapuram

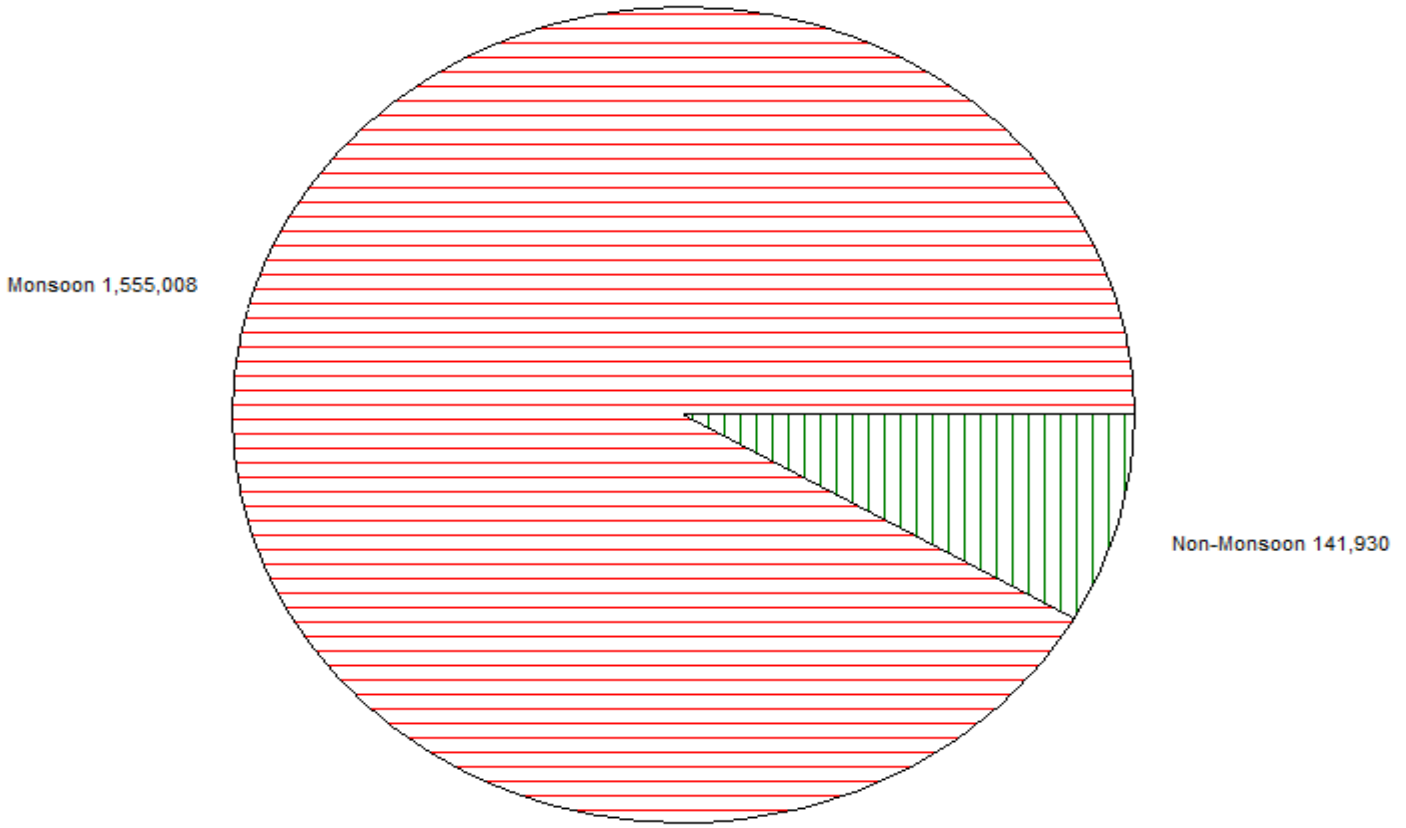
Division : SWR Division, Cochin
Sub-Division : SWR SD No 1, Trivandrum



Seasonal Sediment Load for the period : 1979-2017

Station Name : AYILAM (KV000G3)
Local River : Vamanapuram

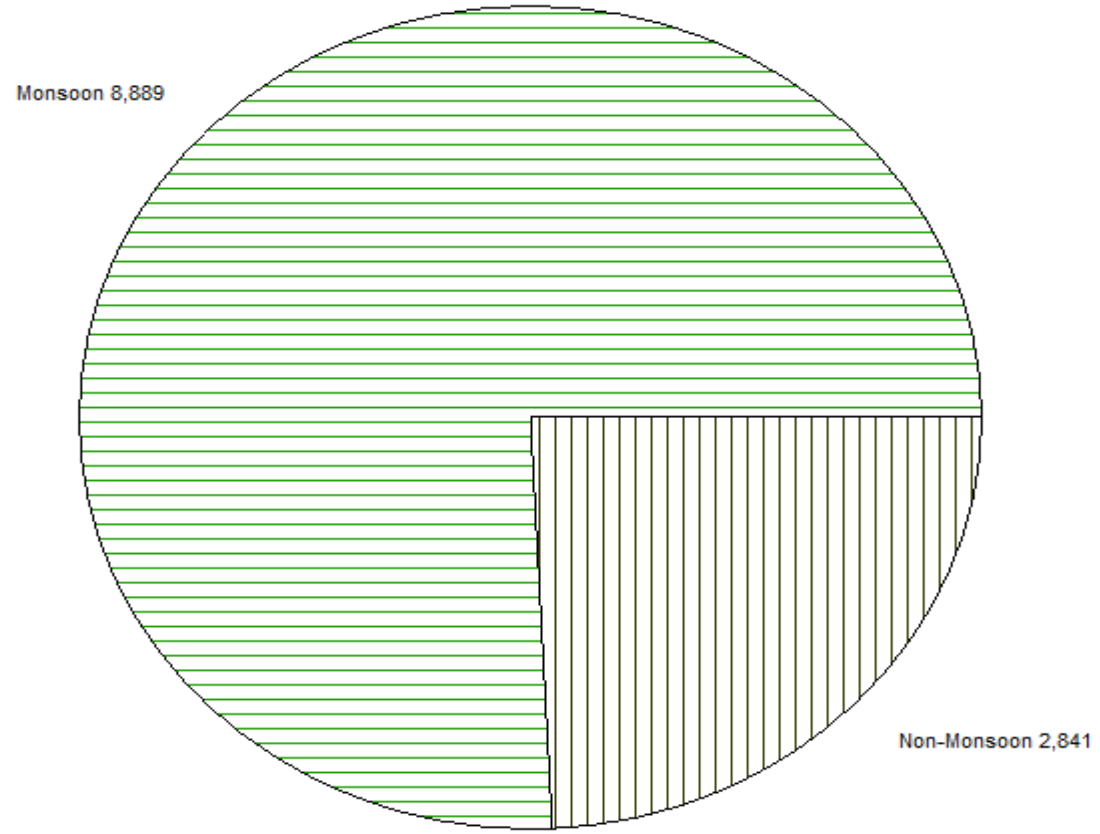
Division : SWR Division, Cochin
Sub-Division : SWR SD No 1, Trivandrum



Seasonal Sediment Load for the Year: 2017-2018

Station Name : AYILAM (KV000G3)
Local River : Vamanapuram

Division : SWR Division, Cochin
Sub-Division : SWR SD No 1, Trivandrum



BED MATERIAL ANALYSIS DATA

RIVER : *Vamanapuram* **CODE NO. :** *KV0006G3*

SITE : *Avilam* **CROSS SECTION :** *SGL*

SL NO.	DATA FOR SAMPLE COLLECTED								Bed Material Composition		GENERAL DATA OF THE RIVER					Bed Material Composition	
	R.D.NO.	R.L. OF DRY BED (m)	R.L. OF BED LEVEL (m)	W.L. (GTS)/ OF THE SAMPLING DEPTH (m)	DEPTH OF WATER (m)	WIDTH (m)	VELOCITY (m/Sec)	DISCHARGE (m³/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)	WETTED PERIMETER (m)	HYDRULIC MEAN DEPTH (m)	MEAN VELOCITY (m/Sec)	SURFACE WATER SLOPE (S)	DISCHARGE (m³/Sec)	MAX SIZE (mm)	MEAN SIZE (mm)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MONSOON 2017							DATE OF COLLECTION		03-10-2017								
1	30	-	(-)2.280	-	4.00	26.0	0.325	23.92	27.0	5.19							
2	36	-	(-)3.380	-	5.10	26.0	0.419	23.92	5.0	2.20	29.15	2.9923	0.3075	0.00013	23.92	27.0	2.67
3	40	-	(-)0.980	-	2.70	26.0	0.268	23.92	5.0	0.61							
POSTMONSOON 2017							DATE OF COLLECTION		29-12-2017								
1	30	-	(-)1.460	-	2.80	25.0	NIL		8.0	0.51							
2	36	-	(-)3.060	-	4.40	25.0	0.141	3.607	5.0	0.78	27.54	2.4680	0.0585	0.000067	3.607	11.0	0.80
3	40	-	(-)0.760	-	2.10	25.0	NIL		11.0	1.13							
PREMONSOON 2018							DATE OF COLLECTION		30-05-2018								
1	30	-	(-)2.560	-	4.70	26.0	0.306	23.14	5.0	0.99							
2	36	-	(-)3.460	-	5.60	26.0	0.379	23.14	8.0	2.85	29.51	3.2538	0.2735	0.000067	23.14	22.0	2.96
3	40	-	(-)0.860	-	3.00	26.0	0.205	23.14	22.0	5.03							

ABBREVIATION AND SYMBOLS

Av.	:	Average
Cumec	:	Cubic meter per second
Cum	:	Cubic meter
D	:	Days
Dis.	:	Discharge
G	:	Gauge
GD	:	Gauge Discharge
GDS	:	Gauge Discharge Sediment
GDSQ	:	Gauge Discharge Sediment Water Quality
G.T.S.	:	Great Trignometrical Survey
Km.	:	Kilometer
M	:	Million
UKD	:	Upper Krishna Division, Pune.
CD	:	Cauvery Division, Bangalore.
SWRD	:	South Western Rivers Division, Cochin.
SRD	:	Southern Rivers Division, Coimbatore.
m.	:	Meter
mm.	:	Millimeter
m/s.	:	Meter per Second
M.Cum.	:	Million Cubic Meter
Max.	:	Maximum
Min.	:	Minimum
m.s.l.	:	Mean Sea Level
R.Days.	:	Remaining Days
R.L.	:	Reduced Level
s.	:	Second
Sq.	:	Square
Sq.km.	:	Square Kilometer
W.L.	:	Water Level
W.Year	:	Water Year
W.Q.	:	Water Quality
º	:	Degree (30^{o})
’	:	Minute (25’)
”	:	Second (50”)
#	:	Discarded Discharge
r	:	Back Water Effect