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# GOVERNMENT OF INDIA
# CENTRAL WATER COMMISSION

# KRISHNA BASIN
# STAGE - DISCHARGE DATA (Vol.I)
## (JUNE 2016 – MAY 2017)

KRISHNA & CO-ORDINATION CIRCLE
HYDERABAD

**January – 2018**

# PREFACE

Water, being a limited resource needs to be judiciously utilized for which proper planning is very essential. In order to plan, a statistically valid data bank is a primary requirement. Central Water Commission endeavours to achieve this objective through a good network of Hydrological observation Stations in all river basins in India. This report pertains to the Krishna river basin which encompasses four states viz. Maharashtra, Karnataka, Telangana and Andhra Pradesh.

Water Year Book 2016-17 pertaining to Krishna Basin is prepared in three volumes. The Volume I, II & III contains stream flow data, Sediment data and Water Quality data respectively. Site-wise history of stream flow data and Hydrological data for the year 2016-17 comprising abstract of daily stage-discharge data and charts/maps are included in Volume I. Similarly, site-wise daily sediment data with charts are included in the Volume II and site-wise results of Water Quality analysis of Water Samples are included in Volume III.

This volume of the Water Year Book (Vol-I) contains the daily discharge data collected at 40 sites in the Krishna Basin, out of which 31 sites are under the jurisdiction of Krishna and Co-ordination Circle, Hyderabad and remaining 9 sites are under Cauvery and Southern Rivers Circle, Bengaluru. The Water Year Book containing data from June to May is published every year. The data is also available in digital form and would be uploaded onto WRIS website and also supplied to various user agencies according to their requirement following the guidelines on data dissemination.

The efforts of the officers and staff of this office and that of field Divisions viz. Upper Krishna Division, Pune, Lower Krishna Division, Hyderabad and Cauvery Division, Bengaluru in bringing out this Water Year Book 2016-17 are hereby acknowledged, without which, it would not have been possible to bring out this volume.

Rajeev Singhal

**Hyderabad**
**January 2018**

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**Superintending Engineer**

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# KRISHNA BASIN
# DAILY DISCHARGE DATA (VOL.I)
# (JUNE 2016 – MAY 2017)

## 1.0 INTRODUCTION

## 1.1 THE KRISHNA RIVER SYSTEM

**1.1.1** The River Krishna is the second largest eastward draining interstate river in Peninsular India. The basin of Krishna is situated between East longitudes $73^0$ 21′ to $81^0$ 09′ and North latitudes $13^0$ 07′ to $19^0$ 25′ in the Deccan Plateau covering large areas in the States of Maharashtra, Karnataka, Telangana and Andhra Pradesh.

The Krishna Basin is bounded on the North by the ridge, separating it from the Godavari basin and on the South and East by the Eastern Ghats and on the West by the Western Ghats. The basin is more or less triangular in shape with its base along the Western Ghats, the apex at Vijayawada and the river Krishna itself forming the median. All the major tributaries are originating in the Western Ghats and joining river Krishna at the base of the triangle in the upper two-thirds of its length.

**1.1.2** The Krishna drains an area of 2,59,439 sq.km (based on geo spatial data sets) which is nearly 8% of the total geographical area of the country.

The State wise distribution of drainage area is shown in the Table given below.

| Name of State | Length (km) | Drainage area (sq.km) | Drainage area % |
|---|---|---|---|
| Maharashtra | 306 | 69,044 | 26.8 |
| Karnataka | 483 | 1,13,622 | 43.7 |
| Telangana | 612 | 51,388 | 19.8 |
| Andhra Pradesh | | 25,385 | 9.8 |
| **Total** | **1401** | **2,59,439** | **100.0** |

**1.1.3** The river Krishna rises in the Western Ghats at an altitude of 1337m just North of Mahabaleswar, about 64 km from the Arabian Sea and flows from West to East through the States of Maharashtra, Karnataka,Telangana and Andhra Pradesh before it joins the Bay of Bengal at downstream of Vijayawada.

**1.1.4** There are about 13 major tributaries which join the river Krishna along its 1400 km course, out of which, six tributaries are on right bank and remaining seven are on left bank. Among the major tributaries, the Ghataprabha, Malaprabha and Tunga-Bhadra are the principal right bank tributaries which together contribute 35.45% of the total catchment area, whereas the Bhima, Musi and Munneru are the principal left bank tributaries which together contribute 35.62% of the total catchment area.

The elevation of source, length and catchment areas of the tributaries are indicated in given table below.

**The important tributaries of river Krishna**

| Sl.No. | Name of tributary | Bank | Elevation of source in m above MSL | Length (km) | Catchment area (sq.km) |
|---|---|---|---|---|---|
| 1 | Koyna | Right | 1441 | 118 | 4,890 |
| 2 | Panchganga | Right | 1020 | 74 | 2,575 |
| 3 | Dudhganga | Right | 870 | 103 | 2,350 |
| 4 | Ghataprabha | Right | 884 | 283 | 8,829 |
| 5 | Malaprabha | Right | 793 | 304 | 11,549 |
| 6 | Bhima | Left | 945 | 861 | 70,614 |
| 7 | Tunga Bhadra | Right | 610 | 531 | 71,417 |
| 8 | Dindi | Left | 718 | 178 | 3,490 |
| 9 | Peddavagu | Left | 707 | 109 | 2,343 |
| 10 | Halia | Left | 708 | 112 | 3,780 |
| 11 | Musi | Left | 661 | 265 | 11,212 |
| 12 | Paleru | Left | 515 | 152 | 3,263 |
| 13 | Munneru | Left | 238 | 195 | 10,409 |

## 1.2 RAINFALL PATTERN IN THE KRISHNA BASIN

The average annual rainfall in the Krishna basin is 750 mm. In 2016-17 Tungabhadra sub basin in Krishna River Basin experienced less rainfall and above average rainfall in other areas, due to which less annual yield observed at many of the sites in Tungabhadra basin while most of other sites experienced good runoff compared to the previous year. The South West Monsoon sets in the middle of June and withdraws by the middle of October. About 90% of annual rainfall is received during the Monsoon period, of which more than 70% occurs during July, August and September.

## 1.3 Hydrological Network in Krishna Basin

Krishna Godavari Commission in their report of July 1962 recommended for establishment of daily discharge observation sites on permanent basis and in a scientific way at 40 locations in Krishna basin. Krishna Water Dispute Tribunal in their report of 1973 also recommended setting up of additional Hydrological Observation stations in Krishna basin. Central Water Commission commenced Hydrological Observations in Krishna Basin in 1963. Hydrological Observation sites on main Krishna River and its tributaries were established and data collection is being continued.

Under DWRIS plan scheme the following HO sites were opened in Krishna Basin under Krishna &Co-ordination Circle.

| Sl.No. | Name | Date of opening | Sl.No. | Name | Date of opening |
|---|---|---|---|---|---|
| 1 | Yekunathpet | 19-10-2016 | 9 | Mirawadi | 29-11-2016 |
| 2 | Veerlapalem | 21-10-2016 | 10 | Doddipadu | 18-11-2014 |
| 3 | Munugodu | 24-10-2016 | 11 | Suddakallu | 20-11-2014 |
| 4 | Megalnur | 24-10-2016 | 12 | Navalgund | 28-11-2014 |
| 5 | Anantharam | 26-10-2016 | 13 | Mudhol | 28-11-2014 |
| 6 | Daredu | 26-10-2016 | 14 | Paragaon | 28-11-2014 |

| | | | | | |
|---|---|---|---|---|---|
| 7 | Nandre | 03-11-2016 | | | |
| 8 | Targaon | 08-11-2016 | | | |

Under DWRIS plan scheme the following sites were opened in Krishna Basin under Cauvery Division of Cauvery &Southern Rivers Circle, Bengaluru during the year 2015-16.

| | | | | | |
|---|---|---|---|---|---|
| 1 | Hariharapura | 29-10-2014 | 2 | Mahishi | 29-10-2014 |

Out of 40 Hydrological observation stations in the Krishna Basin, 31 are under the control of Krishna & Co-Ordination Circle, Hyderabad and 9 are under Cauvery Division, Bengaluru under Cauvery & Southern Rivers Circle (C&SRC), Bengaluru. Under the Krishna & Co-Ordination Circle, there are two divisions namely, Upper Krishna Division, (UKD) Pune maintaining 17 observation stations and Lower Krishna Division, (LKD) Hyderabad maintaining 14 observation stations.

The daily gauge and discharge data of 40 stations collected during 2016-17 have been presented in this volume. In addition to gauge and discharge observations, Sediment and Water Quality monitoring are also conducted at some of these stations. The water level and discharge data for the year 2016-17 of all the 40 sites are presented in Volume-I. Suspended Sediment data (26 sites) and Water Quality data (32 Sites) are presented for the year 2016-17 in volumes II and III respectively.

## 1.4 OBSERVATION TECHNIQUES

The standard methods adopted for collection of Gauge and Discharge data are explained briefly in the following paras.

### 1.4.1 Gauge Observation

Water level or stage of the river is measured as its elevation above MSL datum. Water level measurement is carried out by manually reading non-recording gauges. Series of vertical staff gauges are fixed at three sections at every site. Enameled gauge plates with metric unit markings are fixed on the gauge posts so that gauges can be read up to three decimals. Out of the three gauging lines, the central one is used as station gauge line and readings of the other two lines are used for calculation of water surface slope. During monsoon season, gauges are read hourly at the station gauge line. During non-monsoon season gauges are read thrice daily at 0800 hours, 1300 hours and 1800 hours.

### 1.4.2 Discharge Observation

In general, discharge observations are conducted once in a day commencing at about 0800 hours using area-velocity method on all days except Sundays and holidays.

Across the river at station gauge line, the river is divided into 15 – 25 segments as outlined in IS 1192 – 2013 for conducting depth and velocity observations. The central point of each segment is located / marked using the tag line or by Segmentation system depending on the width of the river and flow conditions.

Mid section method is generally followed and depth and velocity are observed at midpoint of each segment. Depth is recorded using wading rod and sounding rod up

to 3.0 m above which Sounding reel or Echo Sounder is used. In exceptional cases, where the river bed is stable, depths are estimated using recent cross section of the stream at the observation section.

Depth and velocity observations are carried out by wading during lean flow and at higher flow conditions by Boat with cable way or Boat with IB /OB Engine or Catamaran or Motor Launch. At certain sites, Bridge sections are used for collection of data depending on the means of observation facilities available at that site.

The velocity is measured as per IS 3918 - 1966 by using a cup type current meter conforming to IS 3910 - 1992. In general the current meter is lowered to the requisite depth i.e. 0.6 of total depth from the surface at every segment point by suspension equipment as per IS: 6064 - 1971 and when the depth is less than 0.3 meter, the velocity is observed just below the water surface.

At medium and high stages with significant flow velocities, boats fitted with power engines are being used. At some stations cableway has been established for navigating the boat, where FRP boats without engines are used. Measurements of velocity are sometimes carried out from road bridges, wherever feasible, when it becomes difficult to keep the boat stable for velocity observations due to the river flow conditions. When none of the above procedures is possible, either float observation is resorted to or computed by slope area method.

The data observed by different methods at various sites is entered in prescribed standard forms to compute the discharge and then transmitted to sub divisional data centre to be entered into Surface Water Data Entry System (SWDES). The soft copy of the data is submitted to division. After Primary validation at Divisional Data Processing Centre, the data is processed and finalized in Regional Data Processing Centre using the HYMOS software at the Circle.

### 1.4.3 Computation of discharge for non-observed days

The stages and corresponding discharges measured during each season (monsoon or non-monsoon) are exported to HYMOS from SWDES. Stage-Discharge rating curve will be generated in HYMOS giving weightage to all the observation points and discarding such observations which appear inconsistent. The Stage-Discharge curve for the current season is then finalised such that it is free from bias and passes all the goodness of fit tests. It is also compared by superimposition with the previous year's S-D curve and shift, if any, of the current year's curve is studied with reference to changes in the river cross-section and using the stage-area and stage-velocity diagrams for verification. On satisfactory conclusion of the appropriateness of the shift, the Stage-Discharge curve of the current season is finalised and used for computation of discharge from the rating curve against 0800 hours water level for non observed days. The discharge for the discarded observations, are computed from the Stage-Discharge rating curve.

## 1.5 EXPLANATORY & INTERPRETATION NOTE

**1.5.1** The following explanatory/ interpretation note is given for assistance in understanding hydrological parameters contained in the data and graphical representations presented in this publication.

i. Water year commences from 1st of June of a calendar year and extends up to 31st of May of next calendar year and covers one complete hydrologic cycle.

ii. The discharge figures given are daily observed/estimated flows. For non-observation days and discarded observations, the discharge is estimated against 0800 hours gauge reading and represented in cubic meter per second (cumec).

iii. The zero RL of gauge is a reference of datum level, fixed for each site and is kept 1 or 2m lower than the lowest water level of a perennial stream. In a non-perennial stream, it is kept 1m lower than the bed level of the stream.

iv. Discharge is rounded off to
   a) Nearest full integer when it exceeds 1000 cumec.
   b) Nearest first decimal value when it is between 100-999 cumec.
   c) Nearest second decimal value when it is between 10-99 cumec.
   d) Nearest third decimal value when it is less than 10 cumec.

v. Maximum and minimum discharges (observed / computed) of the month are taken from daily discharges.

vi. Run-off in millimeters (mm) is the notional depth of water over the drainage area up to the discharge measurement station converted as equivalent to the calculated Annual run-off, which is computed using the following relation.

$$\text{Run-off (mm)} = \frac{\text{Annual run-off (Million cubic metre)} * 1000}{\text{Catchment area (sq.km)}}$$

vii. The peak and the lowest discharge on record correspond to the measuring time (Discharge measuring time is generally from 08.00 hours to the end of discharge measurement) and are not corresponding to absolute peak and lowest observed water level.
However Maximum Water level occurred with date and time of occurrence and corresponding estimated discharge has been mentioned in History sheet of each site.
The gauging site's code number is a unique seven-column alphanumeric reference number, which facilitates storage and retrieval of flow data in data banks. The first character is identifier of either an integral river basin or for convenience a region having several contiguous river catchments. This is followed by a character, which identifies an independent river system, which either has one or more outlets to the sea or crosses international border to enter another country. The third, fourth and fifth characters denote first, second and third order of tributaries respectively from the sea/international boundary moving upstream. The sixth and seventh characters indicate the location of gauging site earmarked on the river. Blank spaces, if any, are filled by zeros.

## 1.5.2 Interpretation of Graphical representations

Histogram-Hydrograph, Bar Chart and a pie diagram etc; are automatically generated by the software based on the data entered, which are briefly interpreted below.

**A) Histogram-Hydrograph:** This graphical representation reveals (a) Maximum discharge historical, which means, highest discharge observed, on a day, in each month of water year, in the entire period of available data. (b) Similarly minimum historical discharge means, lowest discharge observed , on a day, in each month of water year, in the entire period of available data. (c) Mean discharge-Historical means, average value of discharge, for each month, in a water year, for the entire period of available data including current year. (d) Mean discharge current year means, average value of daily discharge in each month, in current water year. Therefore this graph represents maximum, minimum discharge observed on a day and mean of each month discharge for all years for which data is available and comparing these values with current year monthly mean values.

**B) Bar chart of Runoff:** This is the graphical representation of annual runoff of each water year, for all years of available data, including current year, in million cubic meter (MCM) using the following formula.

Daily discharge, in Cubic meter per second X (60 X60X24/ 1000000) = Runoff of the day in MCM.

Sum of daily Run off, in a year, gives annual runoff. This chart compares annual run off of each year at a site for all years of available data.

**C) Pie Diagrams:** Pie diagram of monthly average runoff represents average percentage of annual run off, for each month of water year, of all years, for which data is available including current year. Similarly current year pie diagram represents percentage of annual runoff of each month in current water year. This representation shows monthly contribution of water yield, in annual runoff, at a particular site. The monthly run off may vary from one site to another site depending up on rain fall at upstream in that region.

**D) Superimposed cross section:** The profile of river bed along standard discharge section is recorded, at on set and off set of monsoon at each site and superimpose the same, to find out cross sectional variations of river bed.

**E) Water level Vs Time Charts:** At each site 3 highest peak floods have been represented by these charts, showing water level ,date and time of occurrence with a time span of 72 hours ( 3 days ) for each flood.

## 1.6 METHOD OF PRESENTATION

Site-wise hydrological data history sheets, flow tables and pictorial summary are presented in this volume. The serial order of hydrological stations is arranged along the river moving upstream from the sea or confluence with main river /international boundary towards its source, giving due priority to sites on intermediate tributary in similar way.

The flow tables indicate the following.

a) Daily discharge (in cumec)
b) Ten-daily mean discharge (in cumec)
c) Monthly mean discharge (in cumec)
d) Monthly maximum and minimum discharge (in cumec)
e) Annual run-off (in M.cum. & mm)

# KRISHNA BASIN

E 72°
82°
N 19°
19°
14°
72°
82°

N

TO NASIK
TO MUMBAI
AHMADNAGAR
PHULGAON(s)
GHOD RES.
PARGAON
DHOND
KHADAKWASALA
PUNE
MANGAON
OSMANABAD
UJJAINI DAM
Nira
Sina
NARASINGPUR
SARATI
Bhima
SOLAPUR
Shivaji Sagar
Krishna R.
Yerla
MAHARASHTRA
KOYNA
WARUNJI
KARAD
NIVALI
SIRDHON
KOKANGAON
WADAKBAL
BOROMERGA
TAKALI
DEONGAON BRIDGE
MALKHED
Kagna R.
JEWANGI
PANDEGAON
SAMDOLI(s)
MIRAJ
ARJUNWAD
KOLHAPUR
TERWAD(s)
KURUNDWAD
SADALGA(s)
VANDUR
BIJAPUR
Don
Krishna
TALIKOT(s)
YADGIR
HUVINHEDGI
DEOSUGAR
P.D. JURALA PROJ.
K.AGRAHARAM
SRISAILAM PROJ.
TELANGANA
KOILSAGAR
N.S.DAM
SUDDAKALLU
Dindi
HALIA
PONDUGALA
WADENAPALLI
SAMERACHERLA
P.BRIDGE
MADHIRA
KESSARA
P. BARRAGE
VIJAYAWADA
Halia
Musi
Wyra
Munneru
POLAMPALLI(s)
WARANGAL
TO NAGPUR
HYDERABAD
TO VISAKAPATNAM
TO CHENNAI
GOTUR
Ghatprabha
MUDHOL
BAGALKOT
ALAMATI
GOKAKFALLS(s)
DADDI
BELGUM
NARAYANPUR DAM
MANTRALAYAM
CHOLACHGUDA(s)
KARNATAKA
PONDA(GOA)
TO PANAJI
Malaprabha
Bennihalla
DHARWAD
KUSTAGI
NAVALGUND
T.B.DAM
BENNUR BARRAGE
OOLLENUR(s)
Tungabhadra
T.RAMAPURAM(s)
DODDIPADU
Handri
BAWAPURAM
KURNOOL
TO CHENNAI
TO BANGALORE
MAROL
HARALAHALLI
HAGRI-BOMMANAHALLI
Varada R.
KUPPELUR
BYALADAHALLI
DAVANGERE
Vedavati
HONNALI
SHIMOGA
HOLEHONNUR
V.SAGAR PROJ.
HOOVINAHOLE
TUNGA PROJ.
BHADRA PROJ.
KELLODU
Swarnamukhi
R. Tunga
R. Bhadra
CHIKMAGALLUR
HASSAN
ANDHRA PRADESH
MARELLA
Gundlakamma
BAY OF BENGAL
KESSARA
Not to scale

| LEGEND | |
|---|---|
| STATE BOUNDARY | |
| CATCHMENT BOUNDARY | |
| NATIONAL HIGHWAY | 44 |
| RIVERS/TRIBUTARIES | |
| DAMS/BARRAGE | |
| GAUGE SITE (G) | |
| GAUGE DISCHARGE (GD) | |
| GAUGE DISCHARGE WATER QUALITY (GDQ) | |
| GAUGE DISCHARGE SEDIMENT WATER QUALITY (GDSQ) | |
| GUAGE & WATER QUALITY (GQ) | |
| FLOOD FORECASTING | |
| WIRELESS STATION | |
| TELEMETRY STATION | |
| WATER QUALITY LABORATORY LEVEL-II | |
| IMPORTANT PLACE | |
| STATE CAPITAL | |
| CE+CIRCLE+DIV.+SUB-DIV. OFFICES | |
| SUB-DIVISION | |
| AIRPORT | |

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Vijayawada** | | **Code** | **: AK000B9** | |
| State | : Andhra Pradesh | | District | Krishna | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : - | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Krishna | |
| Division | : Lower Krishna Divn., Hyderabad | | Sub-Division | : Lower Krishna SD2, Vijayawada | |
| Drainage Area | : 251360 Sq. Km. | | Bank | : Left | |
| Latitude | : 16°30'04" | | Longitude | : 80°37'30" | |
| **Zero of Gauge (m)** | : 8.69 (m.s.l)<br>8.152 (m.s.l) | | 01/01/1964<br>01/09/1964 | - 31/08/1964 | |
| | Opening Date | | Closing Date | | |
| Gauge | : 21/03/1964 | | **HFL During 2016-17** | **: 13.432m** | |
| Discharge | : 24/03/1964 | | **Corres. Discharge** | **: 4196(Estimated)** | |
| Sediment | : 01/02/1965 | | **Date & Time of occurance** | **: 24/09/2016 : 18.00 hrs.** | |
| Water Quality | : 01/01/1972 | | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1965-1966 | 14925 | 17.392 | 06/08/1965 | 2.100 | 9.182 | 20/12/1965 |
| 1966-1967 | 10950 | 16.822 | 06/08/1966 | 0.000 | 8.997 | 28/05/1967 |
| 1967-1968 | 15215 | 18.192 | 07/08/1967 | 0.000 | 9.047 | 16/07/1967 |
| 1968-1969 | 8806 | 16.932 | 21/05/1969 | 2.509 | 8.997 | 13/04/1969 |
| 1969-1970 | 14346 | 17.552 | 08/08/1969 | 1.868 | 9.092 | 05/05/1970 |
| 1970-1971 | 14193 | 17.592 | 23/09/1970 | 2.930 | 9.032 | 16/04/1971 |
| 1971-1972 | 6915 | 15.132 | 08/09/1971 | 3.969 | 8.842 | 21/05/1972 |
| 1972-1973 | 3451 | 13.777 | 18/07/1972 | 1.700 | 8.812 | 27/04/1973 |
| 1973-1974 | 7795 | 15.302 | 30/10/1973 | 2.400 | 9.022 | 07/05/1974 |
| 1974-1975 | 13307 | 17.092 | 30/09/1974 | 5.045 | 9.122 | 21/02/1975 |
| 1975-1976 | 18513 | 18.182 | 13/10/1975 | 5.100 | 9.312 | 23/04/1976 |
| 1976-1977 | 14218 | 17.102 | 11/08/1976 | 2.470 | 9.052 | 29/03/1977 |
| 1977-1978 | 6793 | 15.122 | 02/08/1977 | 8.046 | 9.182 | 21/04/1978 |
| 1978-1979 | 17024 | 17.742 | 16/08/1978 | 2.954 | 9.012 | 21/05/1979 |
| 1979-1980 | 18620 | 17.572 | 30/09/1979 | 15.37 | 9.192 | 06/04/1980 |
| 1980-1981 | 13473 | 16.777 | 15/07/1980 | 3.489 | 8.982 | 18/02/1981 |
| 1981-1982 | 11661 | 16.442 | 27/09/1981 | 10.94 | 8.932 | 21/06/1981 |
| 1982-1983 | 6388 | 14.847 | 24/08/1982 | 22.70 | 9.032 | 30/06/1982 |
| 1983-1984 | 20712 | 18.217 | 07/10/1983 | 9.200 | 8.842 | 20/07/1983 |
| 1984-1985 | 3082 | 13.392 | 21/08/1984 | 15.50 | 9.222 | 10/07/1984 |
| 1985-1986 | 2799 | 12.992 | 14/08/1985 | 7.900 | 8.872 | 15/02/1986 |

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 | 10144 | 16.237 | 13/08/1986 | 3.306 | 8.692 | 17/05/1987 |
| 1987-1988 | 2345 | 12.802 | 15/11/1987 | 6.161 | 8.802 | 15/10/1987 |
| 1988-1989 | 12071 | 16.782 | 01/10/1988 | 6.370 | 8.932 | 12/07/1988 |
| 1989-1990 | 17619 | 17.302 | 24/07/1989 | 13.95 | 9.052 | 07/07/1989 |
| 1990-1991 | 12239 | 16.502 | 23/08/1990 | 21.62 | 9.022 | 30/06/1990 |
| 1991-1992 | 11306 | 16.551 | 06/08/1991 | 27.70 | 8.954 | 07/07/1991 |
| 1992-1993 | 4072 | 13.679 | 12/09/1992 | 18.68 | 8.852 | 29/07/1992 |
| 1993-1994 | 8724 | 15.386 | 22/10/1993 | 26.56 | 8.832 | 28/07/1993 |
| 1994-1995 | 12366 | 16.572 | 24/07/1994 | 21.91 | 8.782 | 29/06/1994 |
| 1995-1996 | 3764 | 13.057 | 21/10/1995 | 9.194 | 8.592 | 02/04/1996 |
| 1996-1997 | 12323 | 16.992 | 04/10/1996 | 28.49 | 8.802 | 05/08/1996 |
| 1997-1998 | 13120 | 16.652 | 31/08/1997 | 13.45 | 8.542 | 22/07/1997 |
| 1998-1999 | 25082 | 18.947 | 16/10/1998 | 13.89 | 9.412 | 15/12/1998 |
| 1999-2000 | 5864 | 14.602 | 15/08/1999 | 11.31 | 8.932 | 29/01/2000 |
| 2000-2001 | 8135 | 15.537 | 24/08/2000 | 5.482 | 8.852 | 20/01/2001 |
| 2001-2002 | 4486 | 13.677 | 01/10/2001 | 4.424 | 8.772 | 24/07/2001 |
| 2002-2003 | 165.2 | 9.622 | 09/06/2002 | 2.989 | 8.772 | 25/03/2003 |
| 2003-2004 | 577.9 | 10.902 | 09/08/2003 | 0.176 | 8.852 | 29/05/2004 |
| 2004-2005 | 1481 | 12.122 | 07/10/2004 | 0.000 | 8.832 | 01/08/2004 |
| 2005-2006 | 20545 | 17.937 | 21/09/2005 | 0.000 | 9.432 | 08/04/2006 |
| 2006-2007 | 14636 | 16.772 | 17/08/2006 | 0.000 | 9.702 | 17/02/2007 |
| 2007-2008 | 14590 | 16.852 | 21/09/2007 | 0.431 | 9.392 | 24/05/2008 |
| 2008-2009 | 10580 | 16.302 | 11/08/2008 | 29.00 | 9.252 | 24/05/2009 |
| 2009-2010 | 27660 | 19.272 | 06/10/2009 | 23.72 | 9.132 | 16/08/2009 |
| 2010-2011 | 6954 | 14.662 | 06/09/2010 | 0.000 | 9.332 | 13/01/2011 |
| 2011-2012 | 11812 | 16.047 | 10/09/2011 | 0.000 | 9.332 | 28/12/2011 |
| 2012-2013 | 3182 | 13.172 | 05/09/2012 | 0.000 | 8.922 | 27/11/2012 |
| 2013-2014 | 10899 | 16.202 | 27/10/2013 | 0.000 | 9.152 | 03/01/2014 |
| 2014-2015 | 2456 | 12.702 | 19/09/2014 | 0.000 | 8.882 | 24/12/2014 |
| 2015-2016 | 1596 | 12.032 | 22/06/2015 | 0.000 | 8.762 | 21/01/2016 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Vijayawada ( AK000B9)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Lower Krishna SD2, Vijayawada**

| 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 | 8.732 | 0.000 | 8.772 | 0.000 | 8.772 | 0.000 | 10.322 | 233.0 | 10.622 | 497.5 | 8.952 | 0.000 |
| 2 | 8.732 | 0.000 | 8.772 | 0.000 | 8.772 | 0.000 | 9.552 | 0.000 | 9.352 | 94.90 * | 8.952 | 0.000 |
| 3 | 8.752 | 0.000 | 8.772 | 0.000 | 8.772 | 0.000 | 8.852 | 0.000 | 9.457 | 112.3 | 8.952 | 0.000 |
| 4 | 8.752 | 0.000 | 8.772 | 0.000 | 8.772 | 0.000 | 8.832 | 0.000 | 10.212 | 186.7 | 8.952 | 0.000 |
| 5 | 8.752 | 0.000 | 8.772 | 0.000 | 8.772 | 0.000 | 8.832 | 0.000 | 9.252 | 0.000 | 8.952 | 0.000 |
| 6 | 8.752 | 0.000 | 8.772 | 0.000 | 8.772 | 0.000 | 8.832 | 0.000 | 9.002 | 0.000 | 8.952 | 0.000 |
| 7 | 8.752 | 0.000 | 8.772 | 0.000 | 8.772 | 0.000 | 8.832 | 0.000 | 8.992 | 0.000 | 8.952 | 0.000 |
| 8 | 8.752 | 0.000 | 8.772 | 0.000 | 8.772 | 0.000 | 8.832 | 0.000 | 8.992 | 0.000 | 8.952 | 0.000 |
| 9 | 8.752 | 0.000 | 8.772 | 0.000 | 8.772 | 0.000 | 8.832 | 0.000 | 8.992 | 0.000 | 8.932 | 0.000 |
| 10 | 8.752 | 0.000 | 8.772 | 0.000 | 8.772 | 0.000 | 8.832 | 0.000 | 10.222 | 212.6 | 8.932 | 0.000 |
| 11 | 8.752 | 0.000 | 8.772 | 0.000 | 8.772 | 0.000 | 8.812 | 0.000 | 10.192 | 258.1 * | 8.932 | 0.000 |
| 12 | 8.752 | 0.000 | 8.772 | 0.000 | 9.082 | 0.000 | 8.812 | 0.000 | 9.652 | 126.5 * | 8.932 | 0.000 |
| 13 | 8.752 | 0.000 | 8.772 | 0.000 | 9.252 | 0.000 | 8.812 | 0.000 | 9.212 | 0.000 | 8.932 | 0.000 |
| 14 | 8.752 | 0.000 | 8.772 | 0.000 | 9.292 | 0.000 | 8.802 | 0.000 | 8.952 | 0.000 | 8.932 | 0.000 |
| 15 | 8.752 | 0.000 | 8.772 | 0.000 | 9.352 | 0.000 | 8.802 | 0.000 | 8.952 | 0.000 | 8.932 | 0.000 |
| 16 | 8.752 | 0.000 | 8.772 | 0.000 | 9.402 | 0.000 | 8.802 | 0.000 | 8.952 | 0.000 | 8.932 | 0.000 |
| 17 | 8.752 | 0.000 | 8.772 | 0.000 | 9.452 | 0.000 | 8.802 | 0.000 | 8.952 | 0.000 | 8.932 | 0.000 |
| 18 | 8.752 | 0.000 | 8.772 | 0.000 | 9.452 | 0.000 | 8.802 | 0.000 | 8.952 | 0.000 | 8.932 | 0.000 |
| 19 | 8.752 | 0.000 | 8.772 | 0.000 | 9.472 | 0.000 | 8.802 | 0.000 | 8.952 | 0.000 | 8.932 | 0.000 |
| 20 | 8.752 | 0.000 | 8.772 | 0.000 | 9.472 | 0.000 | 8.802 | 0.000 | 8.952 | 0.000 | 8.932 | 0.000 |
| 21 | 8.752 | 0.000 | 8.772 | 0.000 | 9.472 | 0.000 | 8.802 | 0.000 | 8.952 | 0.000 | 8.932 | 0.000 |
| 22 | 8.752 | 0.000 | 8.772 | 0.000 | 9.512 | 0.000 | 8.802 | 0.000 | 8.952 | 0.000 | 8.892 | 0.000 |
| 23 | 8.752 | 0.000 | 8.772 | 0.000 | 9.542 | 0.000 | 13.102 | 3596 | 8.952 | 0.000 | 8.892 | 0.000 |
| 24 | 8.752 | 0.000 | 8.772 | 0.000 | 9.542 | 0.000 | 13.042 | 3192 | 8.952 | 0.000 | 8.892 | 0.000 |
| 25 | 8.752 | 0.000 | 8.772 | 0.000 | 9.262 | 0.000 | 12.852 | 2973 * | 8.952 | 0.000 | 8.892 | 0.000 |
| 26 | 8.752 | 0.000 | 8.772 | 0.000 | 9.132 | 0.000 | 12.322 | 2304 | 8.952 | 0.000 | 8.862 | 0.000 |
| 27 | 8.772 | 0.000 | 8.772 | 0.000 | 9.092 | 0.000 | 11.352 | 1033 | 8.952 | 0.000 | 8.862 | 0.000 |
| 28 | 8.772 | 0.000 | 8.772 | 0.000 | 9.092 | 0.000 | 11.112 | 869.5 | 8.952 | 0.000 | 8.862 | 0.000 |
| 29 | 8.772 | 0.000 | 8.772 | 0.000 | 9.072 | 0.000 | 11.102 | 840.5 | 8.952 | 0.000 | 8.862 | 0.000 |
| 30 | 8.772 | 0.000 | 8.772 | 0.000 | 9.072 | 0.000 | 9.802 | 129.5 | 8.952 | 0.000 | 8.862 | 0.000 |
| 31 | | | 8.772 | 0.000 | 9.072 | 0.000 | | | 8.952 | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 8.748 | 0.000 | 8.772 | 0.000 | 8.772 | 0.000 | 9.055 | 23.30 | 9.510 | 110.4 | 8.948 | 0.000 |
| II Ten-Daily | 8.752 | 0.000 | 8.772 | 0.000 | 9.300 | 0.000 | 8.805 | 0.000 | 9.172 | 38.46 | 8.932 | 0.000 |
| III Ten-Daily | 8.760 | 0.000 | 8.772 | 0.000 | 9.260 | 0.000 | 11.229 | 1494 | 8.952 | 0.000 | 8.881 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 8.732 | 0.000 | 8.772 | 0.000 | 8.772 | 0.000 | 8.802 | 0.000 | 8.952 | 0.000 | 8.862 | 0.000 |
| Max. | 8.772 | 0.000 | 8.772 | 0.000 | 9.542 | 0.000 | 13.102 | 3596 | 10.622 | 497.5 | 8.952 | 0.000 |
| Mean | 8.753 | 0 | 8.772 | 0 | 9.116 | 0 | 9.696 | 505.7 | 9.203 | 48.02 | 8.920 | 0 |

**Annual Runoff in MCM = 1439 Annual Runoff in mm = 6**

**Peak Observed Discharge = 3596 cumecs on 23/09/2016 Corres. Water Level :13.102 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016 Corres. Water Level :8.732 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 2016 - 2017

**Station Name : Vijayawada ( AK000B9)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Lower Krishna SD2, Vijayawada**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 8.862 | 0.000 | 8.802 | 0.000 | 8.752 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 |
| 2 | 8.862 | 0.000 | 8.802 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 |
| 3 | 8.862 | 0.000 | 8.802 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.732 | 0.000 | 8.682 | 0.000 |
| 4 | 8.862 | 0.000 | 8.802 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.732 | 0.000 | 8.682 | 0.000 |
| 5 | 8.862 | 0.000 | 8.802 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.682 | 0.000 |
| 6 | 8.862 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.682 | 0.000 |
| 7 | 8.862 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.682 | 0.000 |
| 8 | 8.862 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.682 | 0.000 |
| 9 | 8.862 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.682 | 0.000 |
| 10 | 8.862 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.682 | 0.000 |
| 11 | 8.862 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.682 | 0.000 |
| 12 | 8.862 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.682 | 0.000 |
| 13 | 8.832 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.682 | 0.000 |
| 14 | 8.832 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.682 | 0.000 |
| 15 | 8.832 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.682 | 0.000 |
| 16 | 8.832 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.682 | 0.000 |
| 17 | 8.832 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| 18 | 8.832 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| 19 | 8.832 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| 20 | 8.832 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| 21 | 8.802 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| 22 | 8.802 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| 23 | 8.802 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| 24 | 8.802 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| 25 | 8.802 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| 26 | 8.802 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| 27 | 8.802 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| 28 | 8.802 | 0.000 | 8.752 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| 29 | 8.802 | 0.000 | 8.752 | 0.000 | | | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| 30 | 8.802 | 0.000 | 8.752 | 0.000 | | | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| 31 | 8.802 | 0.000 | 8.752 | 0.000 | | | 8.732 | 0.000 | | | 8.702 | 0.000 |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 8.862 | 0.000 | 8.792 | 0.000 | 8.752 | 0.000 | 8.734 | 0.000 | 8.714 | 0.000 | 8.686 | 0.000 |
| II Ten-Daily | 8.838 | 0.000 | 8.782 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.690 | 0.000 |
| III Ten-Daily | 8.802 | 0.000 | 8.771 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.702 | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 8.802 | 0.000 | 8.752 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 | 8.682 | 0.000 |
| Max. | 8.862 | 0.000 | 8.802 | 0.000 | 8.752 | 0.000 | 8.752 | 0.000 | 8.732 | 0.000 | 8.702 | 0.000 |
| Mean | 8.833 | 0 | 8.781 | 0 | 8.752 | 0 | 8.733 | 0 | 8.706 | 0 | 8.693 | 0 |

**Peak Computed Discharge = 2973 cumecs on 25/09/2016** **Corres. Water Level :12.852 m**

**Lowest Computed Discharge = 94.90 cumecs on 02/10/2016** **Corres. Water Level :9.352 m**

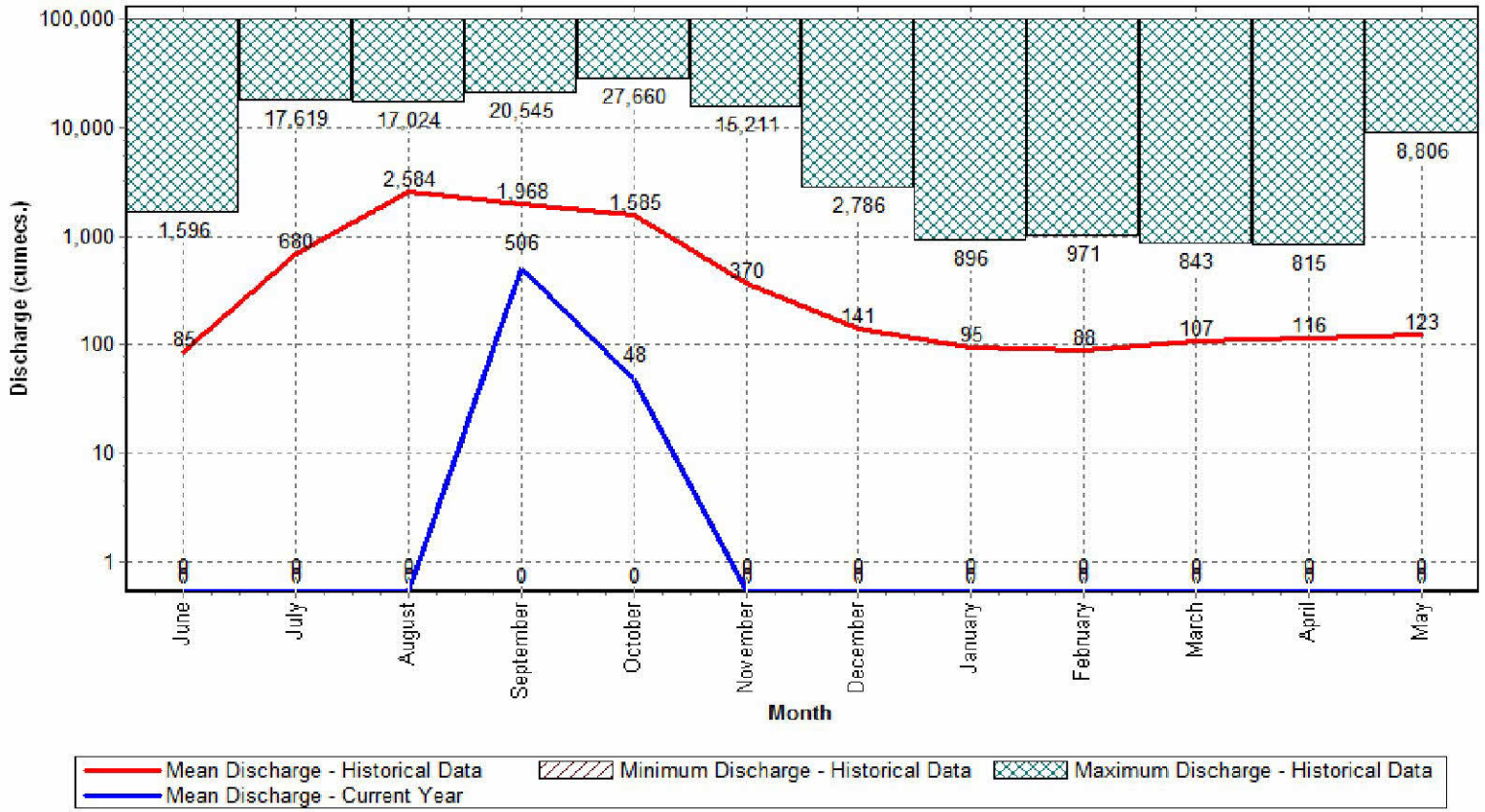
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Vijayawada ( AK000B9)** | **Data considered : 1965-2017** | **Division : Lower Krishna Divn., Hyderabad**

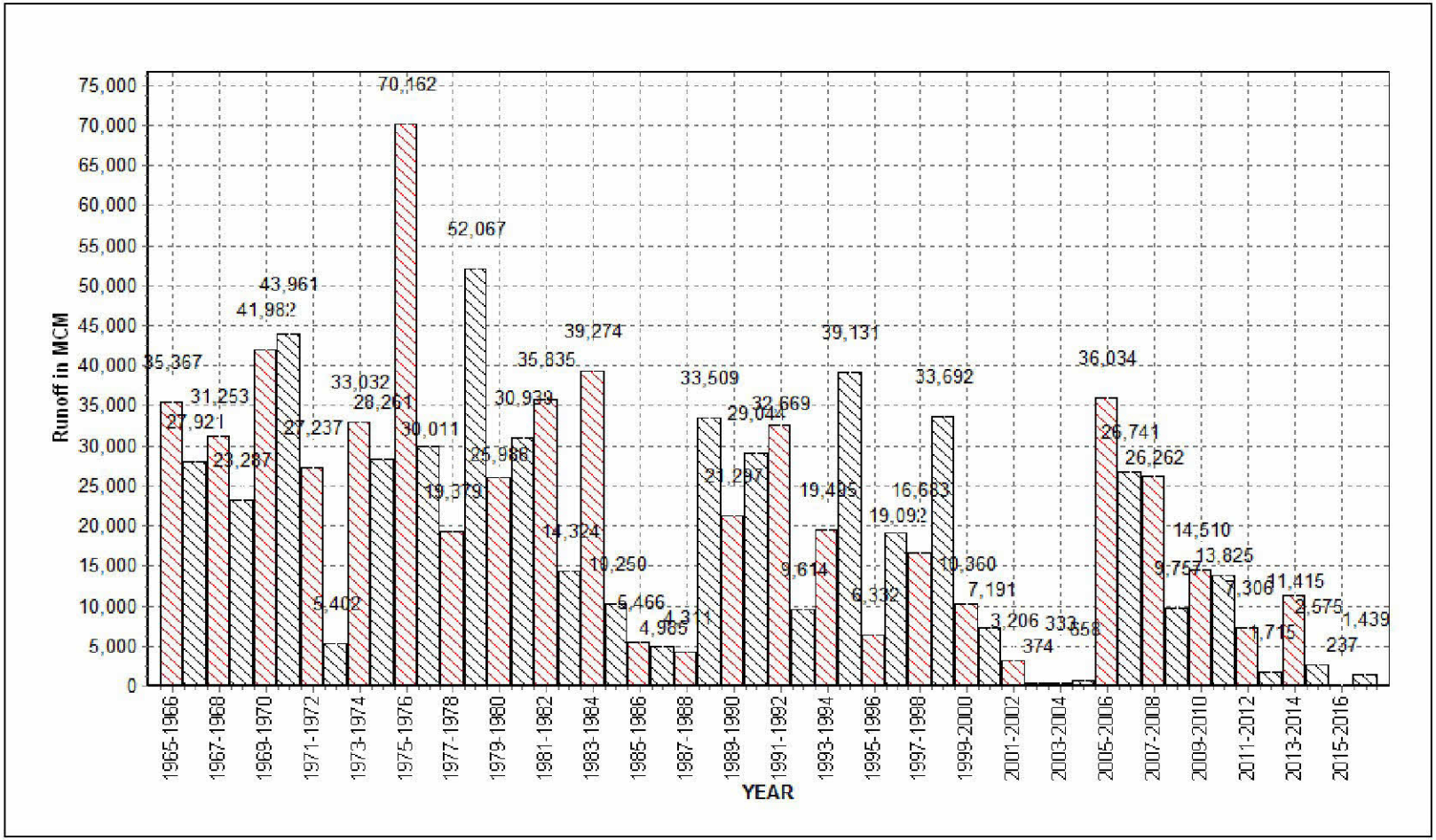
**Local River : Krishna** | **Sub-Division : Lower Krishna SD2, Vijayawada**



**Annual Runoff Values for the period: 1965 - 2017**

**Station Name : Vijayawada ( AK000B9)**
**Local River : Krishna**

**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD2, Vijayawada**

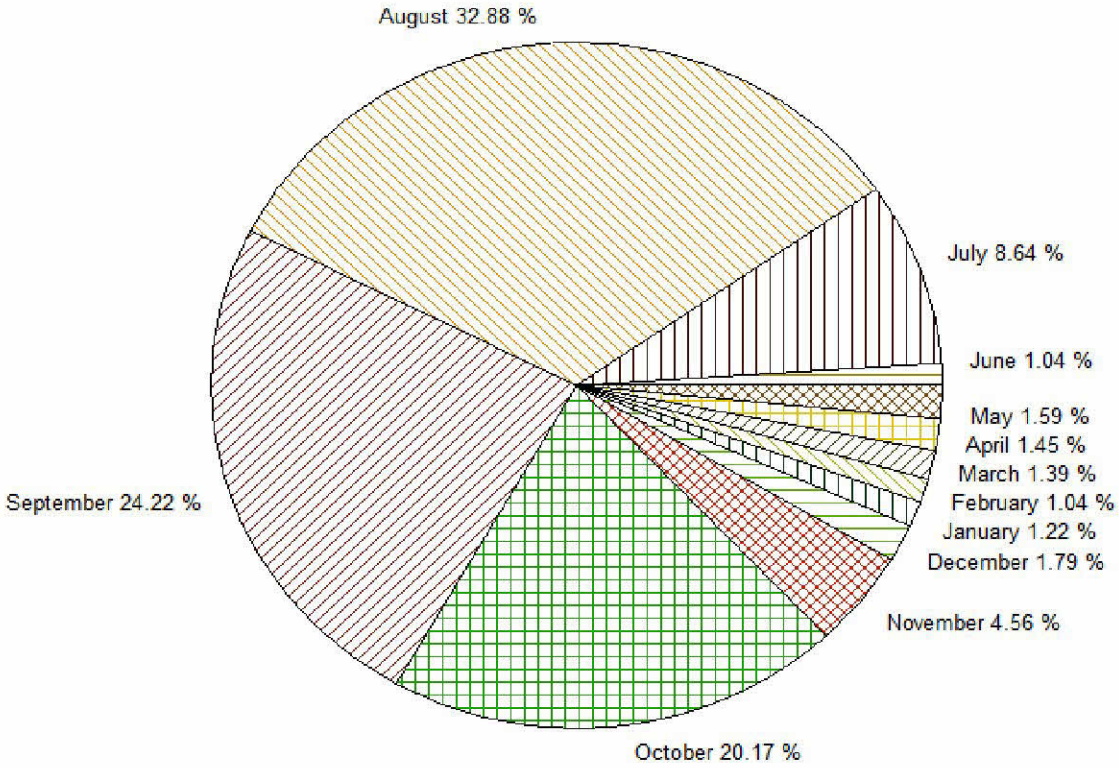



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1965-2016**

**Station Name : Vijayawada ( AK000B9)**
**Local River : Krishna**

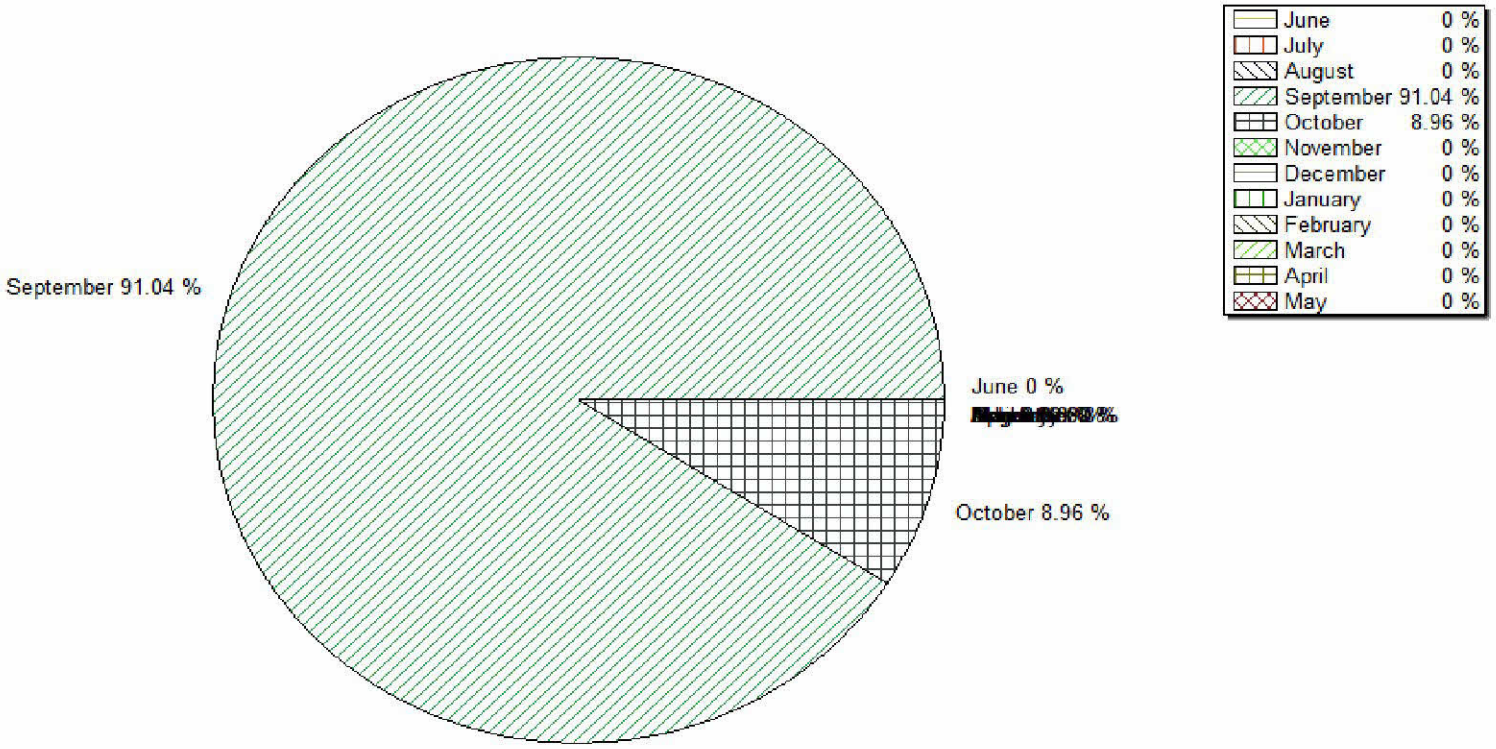
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD2, Vijayawada**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Vijayawada ( AK000B9)**
**Local River : Krishna**

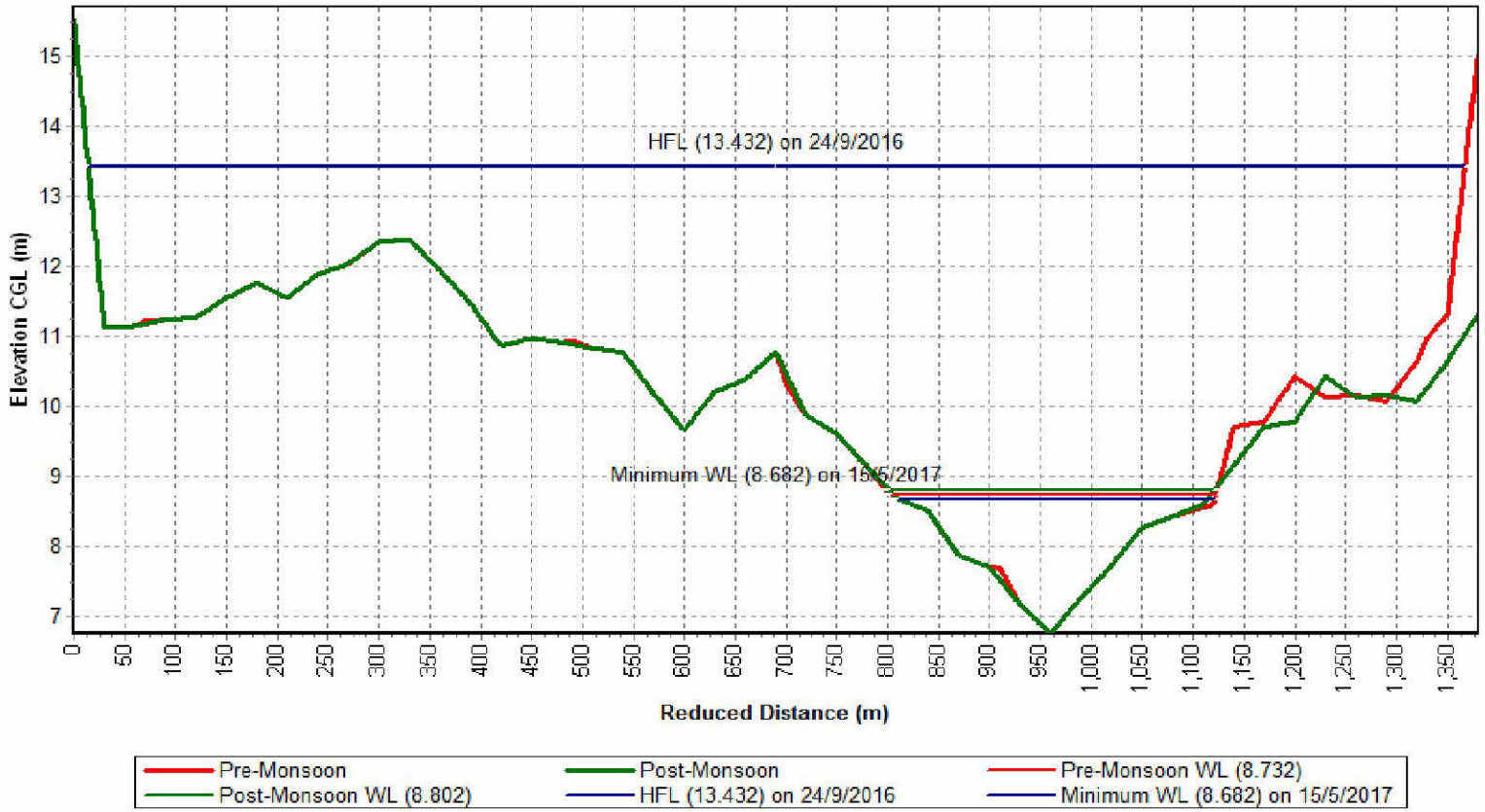
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD2, Vijayawada**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Vijayawada ( AK000B9)** **Division : Lower Krishna Divn., Hyderabad**

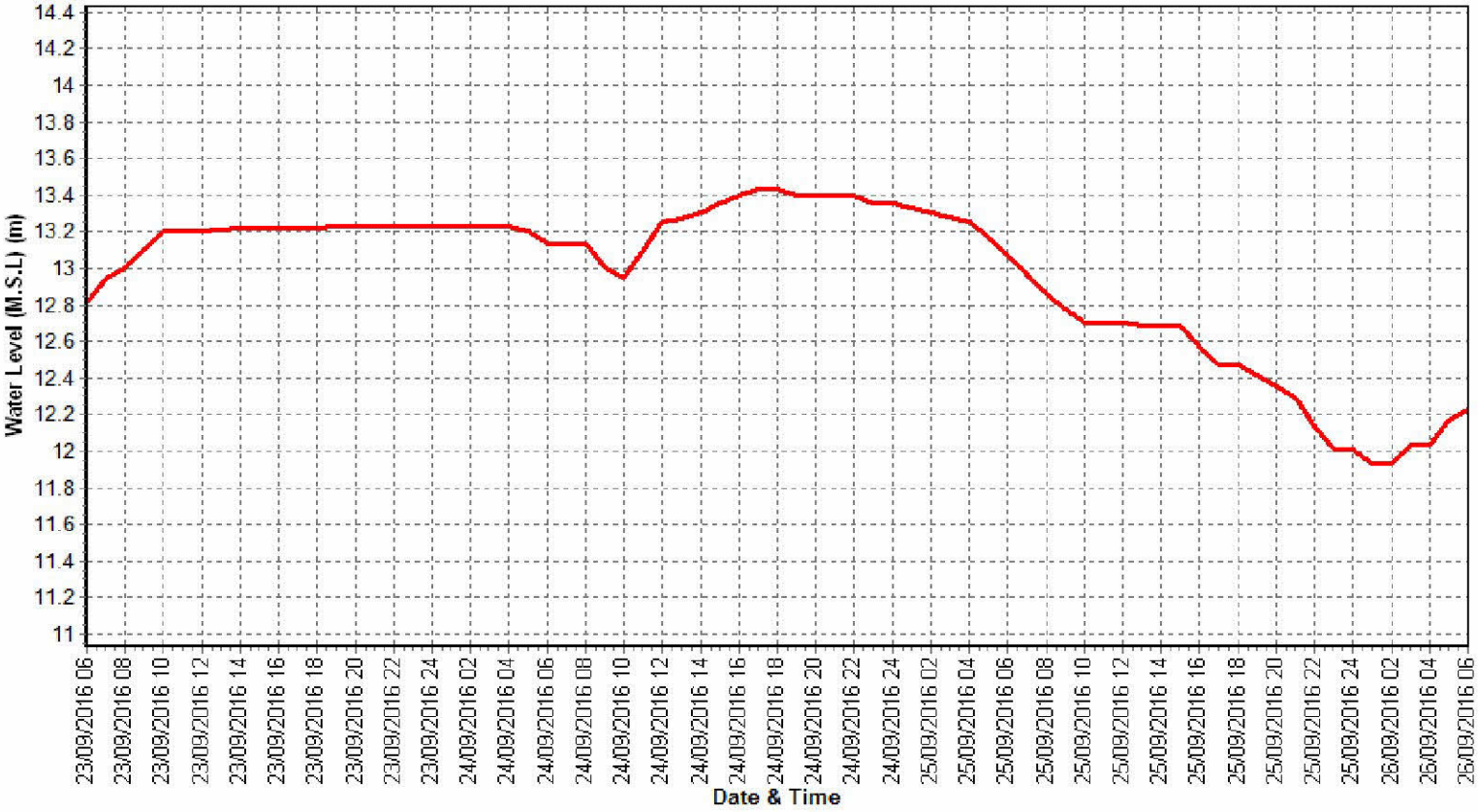
**Local River : Krishna** **Sub-Division : Lower Krishna SD2, Vijayawada**



**Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017**

**Station Name : Vijayawada ( AK000B9)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Lower Krishna SD2, Vijayawada**

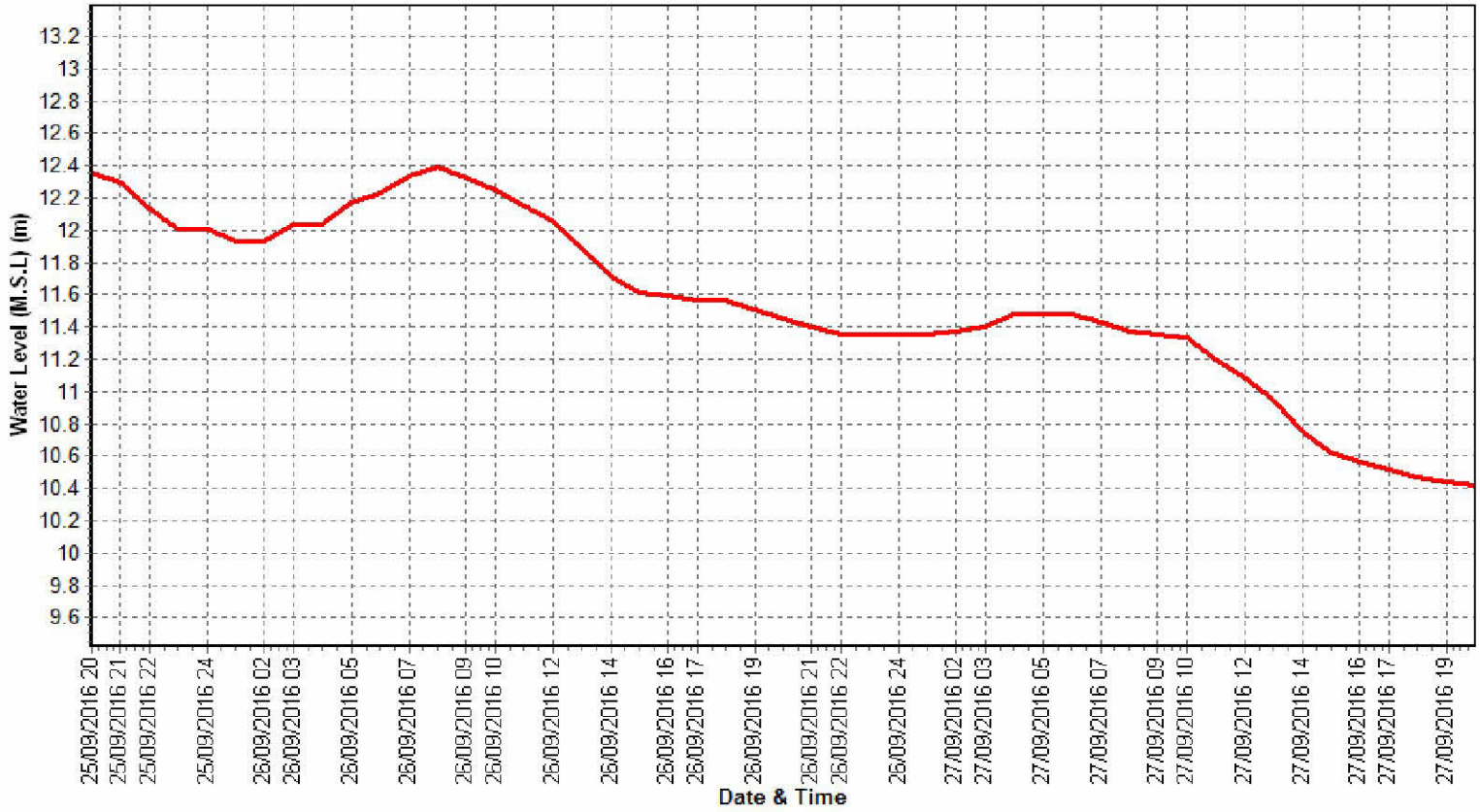



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Vijayawada ( AK000B9)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Lower Krishna SD2, Vijayawada**

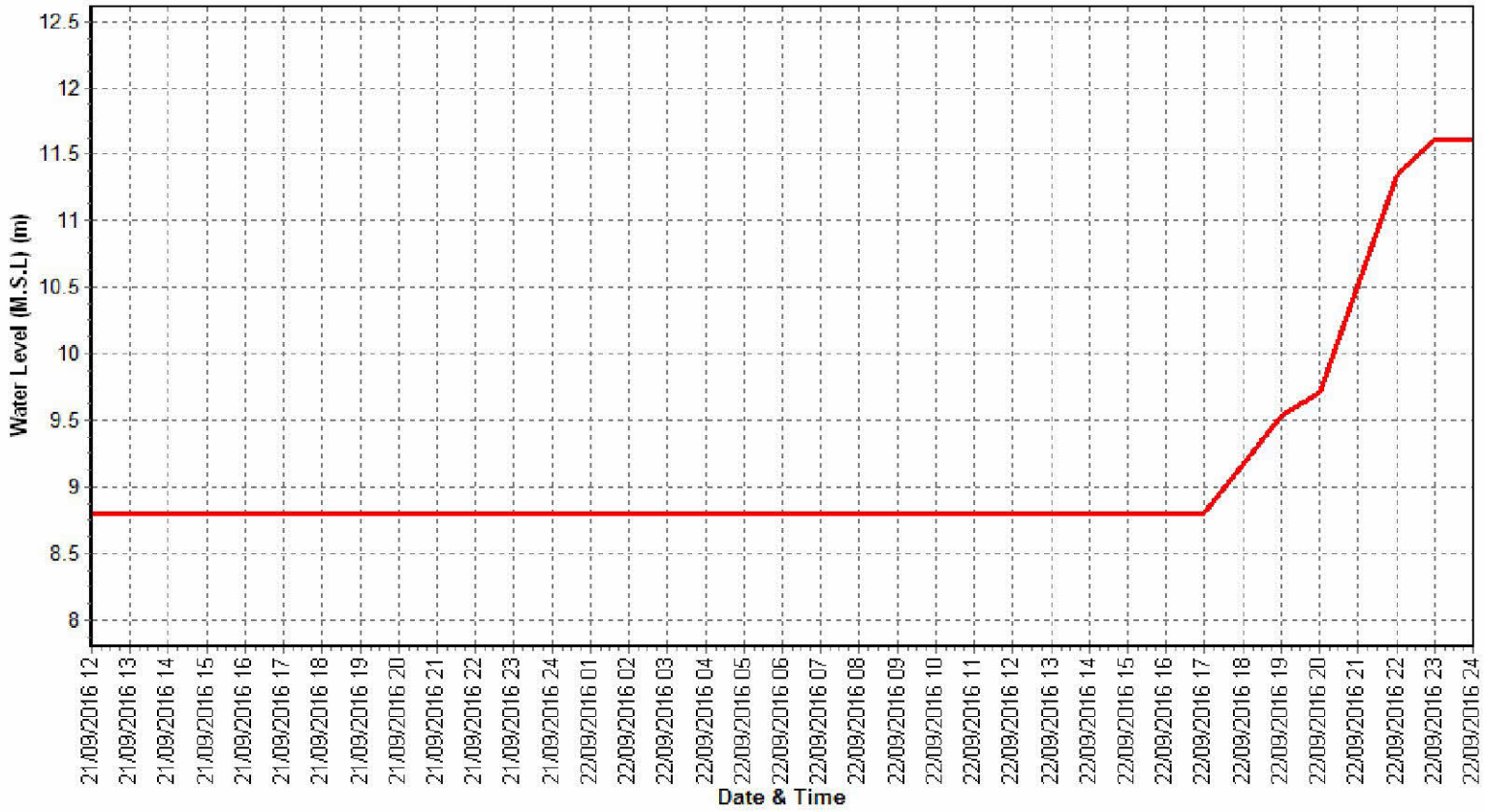



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Vijayawada ( AK000B9)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Lower Krishna SD2, Vijayawada**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | |
|---|---|---|---|
| **Site** | **: Keesara** | **Code** | **: AKA00B4** |
| State | : Andhra Pradesh | District | Krishna |
| Basin | : Krishna | Independent River | : Krishna |
| Tributary | : Munneru | Sub Tributary | : - |
| Sub-Sub Tributary | : - | Local River | : Munneru |
| Division | : Lower Krishna Divn., Hyderabad | Sub-Division | : Lower Krishna SD2, Vijayawada |
| Drainage Area | : 9854 Sq. Km. | Bank | : Left |
| Latitude | : 16°42'53" | Longitude | : 80°19'13" |
| **Zero of Gauge (m)** | : 27.5 (m.s.l) | 01/06/1984 | |
| | 28.585 (m.s.l) | 01/04/1964 | - 04/08/1970 |
| | 28.186 (m.s.l) | 05/08/1970 | - 31/01/1972 |
| | 27.186 (m.s.l) | 01/02/1972 | - 31/05/1972 |
| | 27.035 (m.s.l) | 01/06/1972 | - 31/05/1984 |
| | Opening Date | Closing Date | |
| Gauge | : 23/09/1963 | **HFL During 2016-17** | **: 32.040m** |
| | | **Corres. Discharge** | **: 2031(Estimated)** |
| Discharge | : 26/06/1964 | **Date & Time of occurance** | **: 24/09/2016 13.00 hrs.** |
| Sediment | : 02/07/1965 | | |
| Water Quality | : 01/01/1972 | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1965-1966 | 1130 | 31.435 | 16/07/1965 | 0.000 | | 18/05/1966 |
| 1966-1967 | 1485 | 31.785 | 06/09/1966 | 0.000 | 29.050 | 21/05/1967 |
| 1967-1968 | 1092 | 31.357 | 24/07/1967 | 0.000 | 28.770 | 15/04/1968 |
| 1968-1969 | 7000 | 36.810 | 20/05/1969 | 0.000 | 28.700 | 28/03/1969 |
| 1969-1970 | 2396 | 32.585 | 31/07/1969 | 0.700 | 28.605 | 26/04/1970 |
| 1970-1971 | 2473 | 32.286 | 23/08/1970 | 0.000 | 28.056 | 06/04/1971 |
| 1971-1972 | 324.5 | 30.016 | 12/10/1971 | 0.000 | 28.001 | 21/03/1972 |
| 1972-1973 | 117.5 | 29.000 | 04/07/1972 | 0.000 | 27.785 | 24/03/1973 |
| 1973-1974 | 936.9 | 30.500 | 10/08/1973 | 0.000 | 27.840 | 20/03/1974 |
| 1974-1975 | 871.5 | 30.565 | 16/10/1974 | 0.000 | 27.815 | 13/04/1975 |
| 1975-1976 | 1605 | 31.465 | 11/09/1975 | 0.000 | 27.955 | 22/04/1976 |
| 1976-1977 | 4553 | 32.753 | 22/07/1976 | 0.000 | 28.025 | 28/03/1977 |
| 1977-1978 | 1023 | 30.840 | 20/11/1977 | 0.200 | 28.010 | 14/04/1978 |
| 1978-1979 | 5180 | 33.000 | 15/08/1978 | 0.000 | 27.855 | 23/04/1979 |
| 1979-1980 | 477.2 | 30.020 | 24/09/1979 | 0.000 | 28.005 | 12/07/1979 |
| 1980-1981 | 912.1 | 30.755 | 23/08/1980 | 0.000 | 27.925 | 27/02/1981 |
| 1981-1982 | 3003 | 32.550 | 04/08/1981 | 0.000 | 27.825 | 20/04/1982 |
| 1982-1983 | 1559 | 31.430 | 13/08/1982 | 0.000 | 27.865 | 12/06/1982 |
| 1983-1984 | 6140 | 33.755 | 06/10/1983 | 0.000 | 28.055 | 12/06/1983 |
| 1984-1985 | 664.4 | 31.260 | 12/10/1984 | 0.200 | 28.940 | 07/06/1984 |

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 |
| 1985-1986 | 1133 | 32.025 | 14/08/1985 | 0.000 | | 25/05/1986 |
| 1986-1987 | 5950 | 35.110 | 13/08/1986 | 0.000 | 29.135 | 15/06/1986 |
| 1987-1988 | 1508 | 32.290 | 11/07/1987 | 0.129 | 29.000 | 27/06/1987 |
| 1988-1989 | 3390 | 33.740 | 30/07/1988 | 0.244 | 29.060 | 16/06/1988 |
| 1989-1990 | 6750 | 35.295 | 24/07/1989 | 0.576 | 28.605 | 01/06/1989 |
| 1990-1991 | 4090 | 33.680 | 02/10/1990 | 3.000 | 29.230 | 29/05/1991 |
| 1991-1992 | 2757 | 33.024 | 22/09/1991 | 0.100 | 29.310 | 18/05/1992 |
| 1992-1993 | 380.5 | 30.705 | 10/10/1992 | 0.000 | 29.300 | 05/06/1992 |
| 1993-1994 | 297.1 | 30.550 | 08/09/1993 | 0.550 | 29.195 | 21/05/1994 |
| 1994-1995 | 957.6 | 31.500 | 07/10/1994 | 0.201 | 29.120 | 02/07/1994 |
| 1995-1996 | 1801 | 32.440 | 17/10/1995 | 0.200 | 29.180 | 19/05/1996 |
| 1996-1997 | 2354 | 32.680 | 28/08/1996 | 0.340 | 29.180 | 02/06/1996 |
| 1997-1998 | 727.6 | 31.250 | 29/10/1997 | 0.504 | 29.050 | 07/06/1997 |
| 1998-1999 | 1478 | 32.070 | 16/10/1998 | 0.372 | 29.080 | 05/06/1998 |
| 1999-2000 | 654.0 | 31.115 | 12/09/1999 | 0.016 | 28.940 | 25/05/2000 |
| 2000-2001 | 3267 | 33.055 | 27/08/2000 | 0.034 | 28.870 | 30/05/2001 |
| 2001-2002 | 264.4 | 30.480 | 05/08/2001 | 0.010 | 28.920 | 30/05/2002 |
| 2002-2003 | 200.6 | 30.370 | 25/08/2002 | 0.000 | | 25/01/2003 |
| 2003-2004 | 763.4 | 31.260 | 08/08/2003 | 0.000 | | 11/04/2004 |
| 2004-2005 | 1064 | 31.580 | 05/08/2004 | 0.000 | | 16/04/2005 |
| 2005-2006 | 6157 | 35.660 | 21/09/2005 | 0.000 | | 03/07/2005 |
| 2006-2007 | 3799 | 33.700 | 05/08/2006 | 0.109 | 28.730 | 31/05/2007 |
| 2007-2008 | 864.2 | 31.100 | 21/09/2007 | 0.211 | 28.725 | 01/06/2007 |
| 2008-2009 | 4691 | 34.150 | 10/08/2008 | 0.000 | 28.650 | 01/06/2008 |
| 2009-2010 | 1104 | 31.635 | 22/05/2010 | 0.000 | 28.400 | 12/07/2009 |
| 2010-2011 | 1578 | 31.675 | 08/09/2010 | 3.047 | 28.790 | 26/05/2011 |
| 2011-2012 | 662.5 | 30.755 | 26/08/2011 | 0.000 | 28.260 | 01/05/2012 |
| 2012-2013 | 3036 | 33.150 | 04/09/2012 | 0.000 | 28.400 | 27/04/2013 |
| 2013-2014 | 1371 | 31.810 | 27/10/2013 | 0.000 | 28.780 | 14/07/2013 |
| 2014-2015 | 514.8 | 30.585 | 28/10/2014 | 0.000 | 28.600 | 25/08/2014 |
| 2015-2016 | 1194 | 31.650 | 22/06/2015 | 0.000 | | 23/03/2016 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Keesara ( AKA00B4)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Munneru** **Sub-Division : Lower Krishna SD2, Vijayawada**

| 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 | 29.570 | 109.2 | 29.245 | 50.21 | 29.360 | 66.83 | 30.010 | 260.3 | 29.420 | 76.95 |
| 2 | | 0.000 | 29.230 | 49.54 | 29.205 | 48.34 | 29.645 | 138.7 | 30.220 | 366.5 * | 29.290 | 56.16 |
| 3 | | 0.000 | 28.990 | 18.23 * | 29.025 | 19.03 | 29.480 | 95.85 | 30.080 | 259.5 | 29.110 | 32.23 |
| 4 | | 0.000 | 28.900 | 11.39 | 28.920 | 14.32 | 29.980 | 256.4 * | 29.840 | 208.6 | 29.010 | 19.43 |
| 5 | | 0.000 | 28.980 | 16.26 | 28.860 | 7.769 | 29.890 | 220.9 * | 29.680 | 153.4 | 28.910 | 10.74 |
| 6 | | 0.000 | 28.920 | 14.17 | 29.640 | 133.1 | 29.665 | 145.0 | 29.520 | 101.4 | 28.890 | 10.64 * |
| 7 | | 0.000 | 28.880 | 10.09 * | 29.320 | 62.75 * | 29.495 | 95.89 | 29.370 | 67.61 | 28.840 | 8.049 |
| 8 | | 0.000 | 28.835 | 6.712 | 29.150 | 43.70 | 29.250 | 51.86 | 29.290 | 56.33 | 28.820 | 6.634 |
| 9 | | 0.000 | 28.810 | 5.994 | 29.000 | 19.19 | 29.055 | 25.35 | 29.710 | 158.8 * | 28.800 | 5.789 |
| 10 | | 0.000 | 28.840 | 8.086 * | 28.880 | 9.377 | 28.980 | 19.04 | 30.220 | 320.6 | 28.770 | 4.622 |
| 11 | | 0.000 | 28.785 | 4.746 | 28.800 | 4.946 | 28.960 | 15.66 * | 30.140 | 327.3 * | 28.750 | 4.370 |
| 12 | | 0.000 | 28.750 | 4.416 | 28.730 | 3.741 | 28.940 | 14.55 | 29.900 | 224.7 * | 28.730 | 3.623 |
| 13 | | 0.000 | 28.720 | 3.342 | 28.690 | 3.431 | 28.880 | 10.09 * | 29.670 | 152.3 | 28.720 | 3.734 * |
| 14 | | 0.000 | 28.670 | 2.952 | 28.640 | 1.970 * | 28.980 | 20.37 | 29.475 | 94.07 | 28.700 | 3.219 * |
| 15 | | 0.000 | 28.630 | 1.214 | 28.590 | 1.226 * | 29.240 | 50.49 | 29.300 | 56.70 | 28.700 | 3.301 |
| 16 | | 0.000 | 28.540 | 0.745 | 28.540 | 0.729 | 29.940 | 236.9 | 29.210 | 44.45 * | 28.730 | 3.930 |
| 17 | | 0.000 | 28.510 | 0.479 * | 28.520 | 0.680 | 29.730 | 166.2 | 29.120 | 32.78 | 28.730 | 3.840 |
| 18 | | 0.000 | 28.500 | 0.569 | 28.520 | 0.661 | 29.530 | 108.2 * | 29.040 | 24.75 | 28.700 | 3.261 |
| 19 | | 0.000 | 28.575 | 0.929 | 28.520 | 0.677 | 29.300 | 56.61 | 28.980 | 20.57 | 28.700 | 3.255 |
| 20 | | 0.000 | 28.645 | 1.472 | 28.520 | 0.680 | 29.100 | 31.13 | 28.880 | 10.09 | 28.690 | 2.981 * |
| 21 | | 0.000 | 28.620 | 1.271 | 28.520 | 0.547 * | 29.280 | 55.81 | 28.900 | 10.45 | 28.680 | 2.946 |
| 22 | | 0.000 | 28.685 | 3.370 | 28.520 | 0.676 | 29.235 | 47.57 | 28.850 | 9.923 | 28.680 | 2.922 |
| 23 | | 0.000 | 28.870 | 7.811 | 28.510 | 0.618 | 30.300 | 350.4 | 28.810 | 6.776 * | 28.670 | 2.818 |
| 24 | | 0.000 | 28.990 | 18.23 * | 28.480 | 0.000 | 32.020 | 1769 | 28.780 | 4.985 | 28.710 | 3.434 |
| 25 | | 0.000 | 28.885 | 9.443 | 28.480 | 0.000 | 31.060 | 941.9 * | 28.790 | 4.999 | 28.700 | 3.289 |
| 26 | | 0.000 | 28.890 | 10.05 | 28.490 | 0.000 | 30.850 | 574.8 | 28.790 | 4.949 | 28.720 | 3.521 |
| 27 | 29.040 | 20.29 | 28.810 | 6.209 | 28.480 | 0.000 | 30.580 | 465.1 | 28.810 | 5.213 | 28.730 | 6.926 * |
| 28 | 28.965 | 15.43 | 29.420 | 93.64 | 28.640 | 1.970 * | 30.505 | 451.4 | 28.790 | 4.999 | 28.730 | 5.646 |
| 29 | 28.960 | 15.31 | 29.250 | 51.64 | 28.800 | 5.061 | 30.310 | 352.3 | 28.790 | 4.921 | 28.710 | 3.464 |
| 30 | 28.990 | 19.70 | 29.235 | 23.91 | 28.890 | 9.953 | 30.130 | 273.4 | 28.780 | 5.622 * | 28.710 | 3.431 |
| 31 | | | 29.200 | 42.97 * | 29.280 | 56.55 | | | 28.780 | 4.583 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | 28.995 | 24.97 | 29.125 | 40.78 | 29.480 | 111.6 | 29.794 | 195.3 | 28.986 | 23.12 |
| II Ten-Daily | | 0.000 | 28.632 | 2.086 | 28.607 | 1.874 | 29.260 | 71.01 | 29.372 | 98.76 | 28.715 | 3.551 |
| III Ten-Daily | 28.989 | 7.072 | 28.987 | 24.41 | 28.645 | 6.852 | 30.427 | 528.2 | 28.806 | 6.129 | 28.704 | 3.840 |
| Monthly | | | | | | | | | | | | |
| Min. | 28.960 | 0.000 | 28.500 | 0.479 | 28.480 | 0.000 | 28.880 | 10.09 | 28.780 | 4.583 | 28.670 | 2.818 |
| Max. | 29.040 | 20.29 | 29.570 | 109.2 | 29.640 | 133.1 | 32.020 | 1769 | 30.220 | 366.5 | 29.420 | 76.95 |
| Mean | 28.989 | 2.357 | 28.875 | 17.39 | 28.787 | 16.19 | 29.722 | 236.9 | 29.307 | 97.03 | 28.802 | 10.17 |

**Annual Runoff in MCM = 1009 Annual Runoff in mm = 102**

**Peak Observed Discharge = 1769 cumecs on 24/09/2016 Corres. Water Level :32.02 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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 2016 - 2017

**Station Name : Keesara ( AKA00B4)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Munneru** **Sub-Division : Lower Krishna SD2, Vijayawada**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 28.690 | 3.231 | 28.650 | 2.394 * | 28.620 | 0.000 | 28.560 | 0.000 | | 0.000 | | 0.000 |
| 2 | 28.680 | 3.021 | 28.650 | 2.413 | 28.620 | 0.000 | 28.550 | 0.000 | | 0.000 | | 0.000 |
| 3 | 28.660 | 2.705 | 28.640 | 2.048 | 28.620 | 0.000 | 28.550 | 0.000 | | 0.000 | | 0.000 |
| 4 | 28.680 | 3.007 * | 28.640 | 2.063 | 28.610 | 0.000 | 28.550 | 0.000 | | 0.000 | | 0.000 |
| 5 | 28.760 | 4.495 | 28.650 | 2.467 | 28.610 | 0.000 | 28.550 | 0.000 | | 0.000 | | 0.000 |
| 6 | 28.820 | 2.120 | 28.640 | 2.037 | 28.610 | 0.000 | 28.550 | 0.000 | | 0.000 | | 0.000 |
| 7 | 28.800 | 5.852 | 28.630 | 1.981 | 28.610 | 0.000 | 28.540 | 0.000 | | 0.000 | | 0.000 |
| 8 | 28.760 | 4.420 | 28.630 | 1.981 * | 28.610 | 0.000 | 28.540 | 0.000 | | 0.000 | | 0.000 |
| 9 | 28.760 | 4.386 | 28.630 | 1.987 | 28.600 | 0.000 | 28.540 | 0.000 | | 0.000 | | 0.000 |
| 10 | 28.740 | 3.831 | 28.630 | 1.988 | 28.590 | 0.000 | 28.540 | 0.000 | | 0.000 | | 0.000 |
| 11 | 28.750 | 4.409 * | 28.630 | 1.991 | 28.590 | 0.000 | 28.540 | 0.000 | | 0.000 | | 0.000 |
| 12 | 28.710 | 3.611 * | 28.630 | 1.995 | 28.590 | 0.000 | 28.540 | 0.000 | | 0.000 | | 0.000 |
| 13 | 28.700 | 3.331 | 28.640 | 2.062 | 28.590 | 0.000 | 28.540 | 0.000 | | 0.000 | | 0.000 |
| 14 | 28.710 | 3.447 | 28.660 | 2.363 | 28.580 | 0.000 | 28.530 | 0.000 | | 0.000 | | 0.000 |
| 15 | 28.700 | 3.346 | 28.650 | 2.394 * | 28.580 | 0.000 | 28.520 | 0.000 | | 0.000 | | 0.000 |
| 16 | 28.700 | 3.337 | 28.650 | 2.294 | 28.580 | 0.000 | 28.520 | 0.000 | | 0.000 | | 0.000 |
| 17 | 28.700 | 3.319 | 28.650 | 2.321 | 28.580 | 0.000 | 28.500 | 0.000 | | 0.000 | | 0.000 |
| 18 | 28.690 | 3.209 * | 28.650 | 2.354 | 28.580 | 0.000 | 28.490 | 0.000 | | 0.000 | | 0.000 |
| 19 | 28.680 | 3.084 | 28.650 | 2.300 | 28.580 | 0.000 | 28.480 | 0.000 | | 0.000 | | 0.000 |
| 20 | 28.670 | 3.078 | 28.640 | 2.058 | 28.580 | 0.000 | 28.470 | 0.000 | | 0.000 | | 0.000 |
| 21 | 28.680 | 3.097 | 28.620 | 0.000 | 28.580 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 22 | 28.660 | 2.795 | 28.620 | 0.000 | 28.570 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 23 | 28.640 | 2.120 | 28.620 | 0.000 | 28.570 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 24 | 28.640 | 2.057 | 28.620 | 0.000 | 28.570 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 25 | 28.640 | 2.188 * | 28.610 | 0.000 | 28.570 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 26 | 28.660 | 2.933 | 28.610 | 0.000 | 28.570 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 27 | 28.660 | 2.913 | 28.610 | 0.000 | 28.570 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 28 | 28.660 | 2.925 | 28.600 | 0.000 | 28.570 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 29 | 28.660 | 2.919 | 28.610 | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 30 | 28.660 | 2.882 | 28.620 | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 31 | 28.660 | 2.821 | 28.620 | 0.000 | | | | 0.000 | | | | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 28.735 | 3.707 | 28.639 | 2.136 | 28.610 | 0.000 | 28.547 | 0.000 | | 0.000 | | 0.000 |
| II Ten-Daily | 28.701 | 3.417 | 28.645 | 2.213 | 28.583 | 0.000 | 28.513 | 0.000 | | 0.000 | | 0.000 |
| III Ten-Daily | 28.656 | 2.695 | 28.615 | 0.000 | 28.571 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 28.640 | 2.057 | 28.600 | 0.000 | 28.570 | 0.000 | 28.470 | 0.000 | | 0.000 | | 0.000 |
| Max. | 28.820 | 5.852 | 28.660 | 2.467 | 28.620 | 0.000 | 28.560 | 0.000 | | 0.000 | | 0.000 |
| Mean | 28.696 | 3.254 | 28.632 | 1.403 | 28.589 | 0 | 28.530 | 0 | | 0 | | 0 |

**Peak Computed Discharge = 941.9 cumecs on 25/09/2016** **Corres. Water Level :31.06 m**

**Lowest Computed Discharge = 0.479 cumecs on 17/07/2016** **Corres. Water Level :28.51 m**

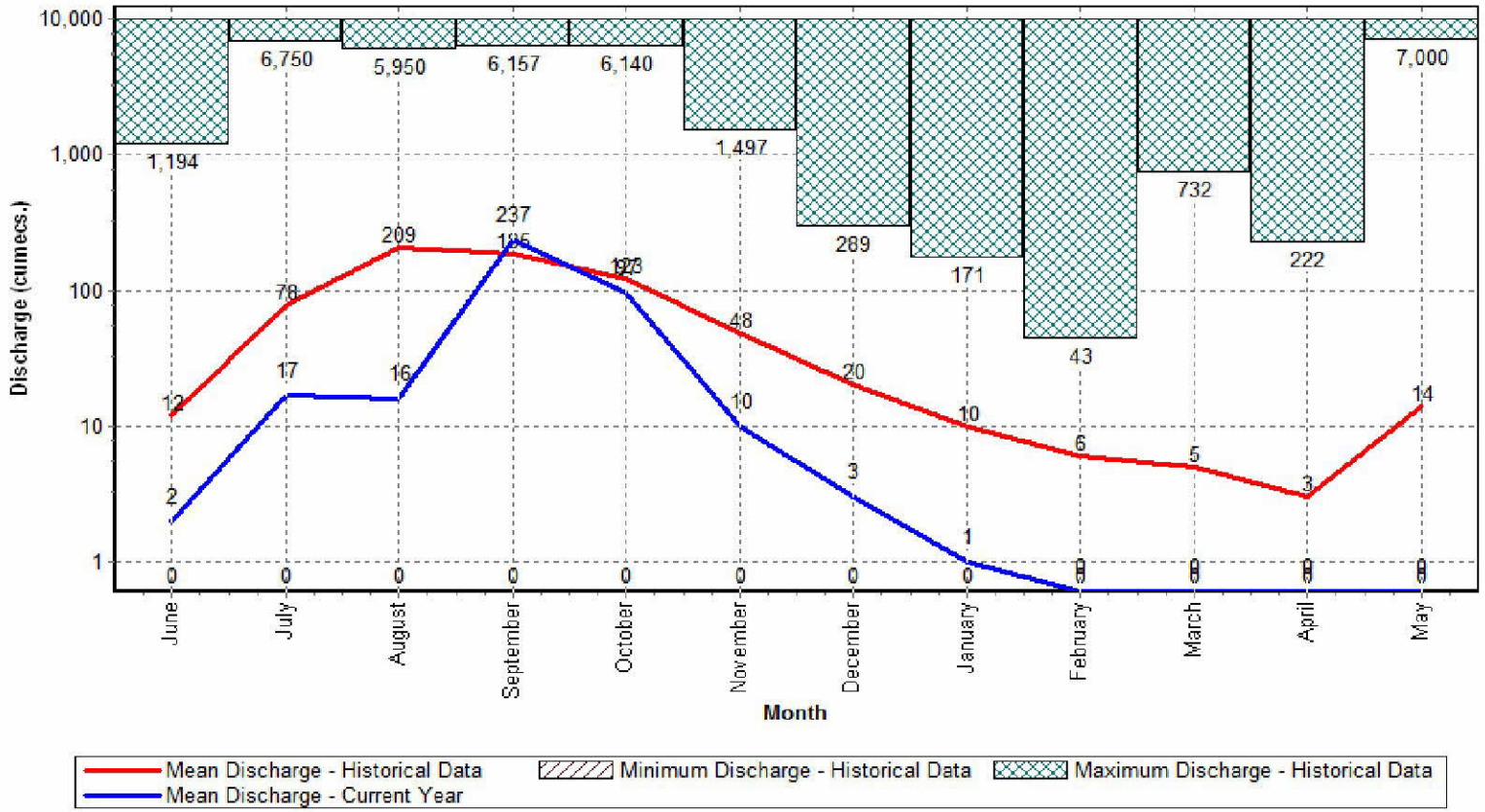
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Keesara ( AKA00B4)** | **Data considered : 1965-2017** | **Division : Lower Krishna Divn., Hyderabad**

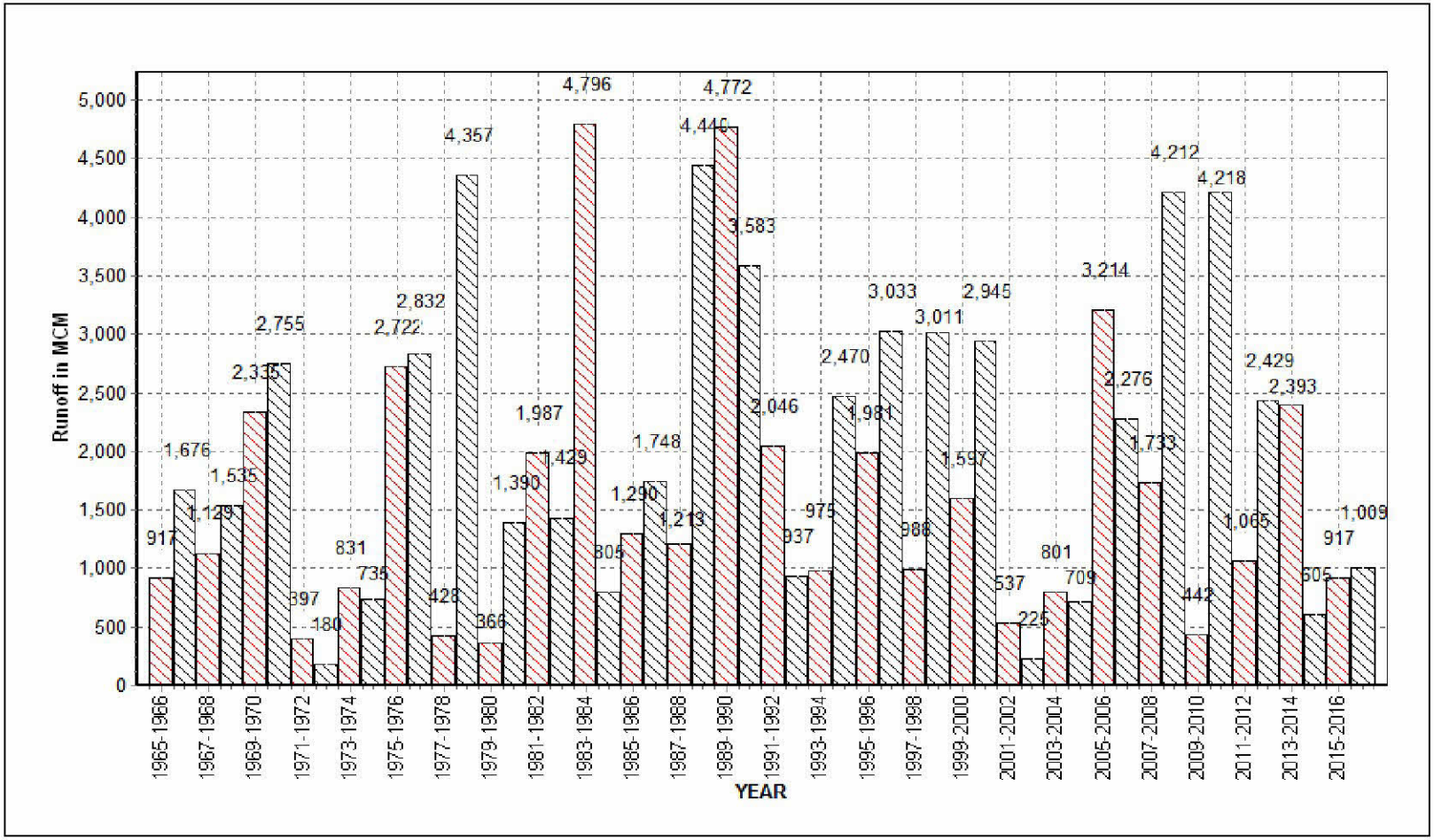
**Local River : Munneru** | **Sub-Division : Lower Krishna SD2, Vijayawada**



**Annual Runoff Values for the period: 1965 - 2017**

**Station Name : Keesara ( AKA00B4)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Munneru** **Sub-Division : Lower Krishna SD2, Vijayawada**

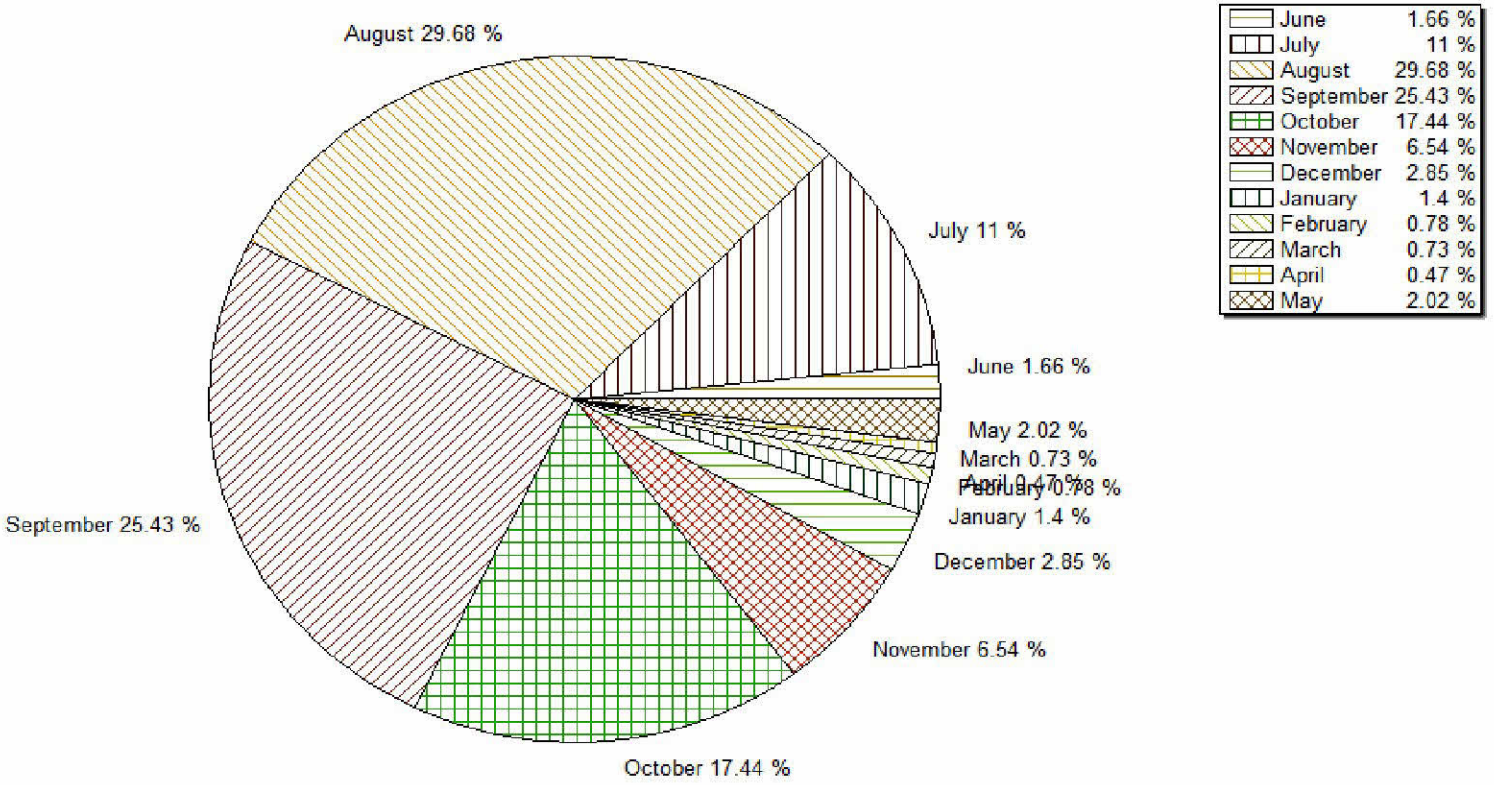



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1965-2016**

**Station Name : Keesara ( AKA00B4)**
**Local River : Munneru**

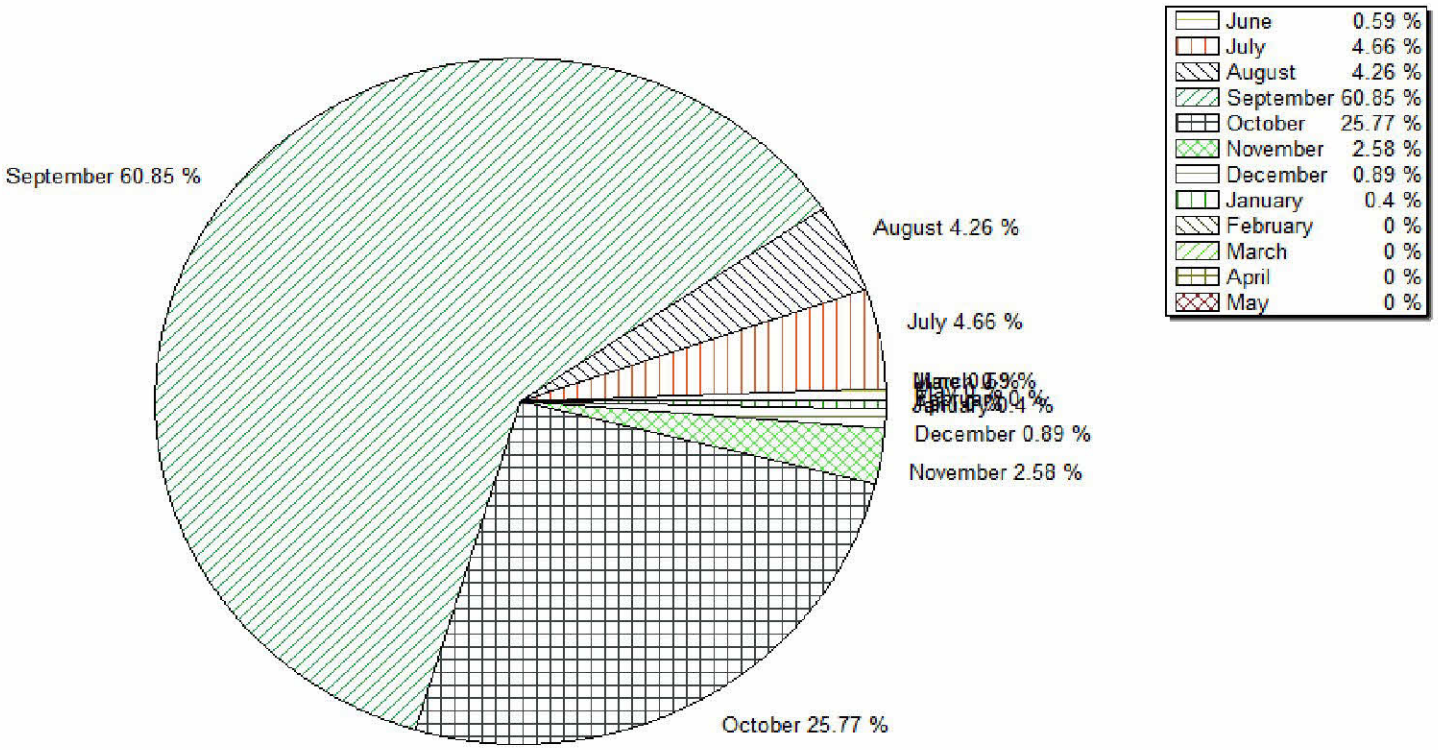
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD2, Vijayawada**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Keesara ( AKA00B4)**
**Local River : Munneru**

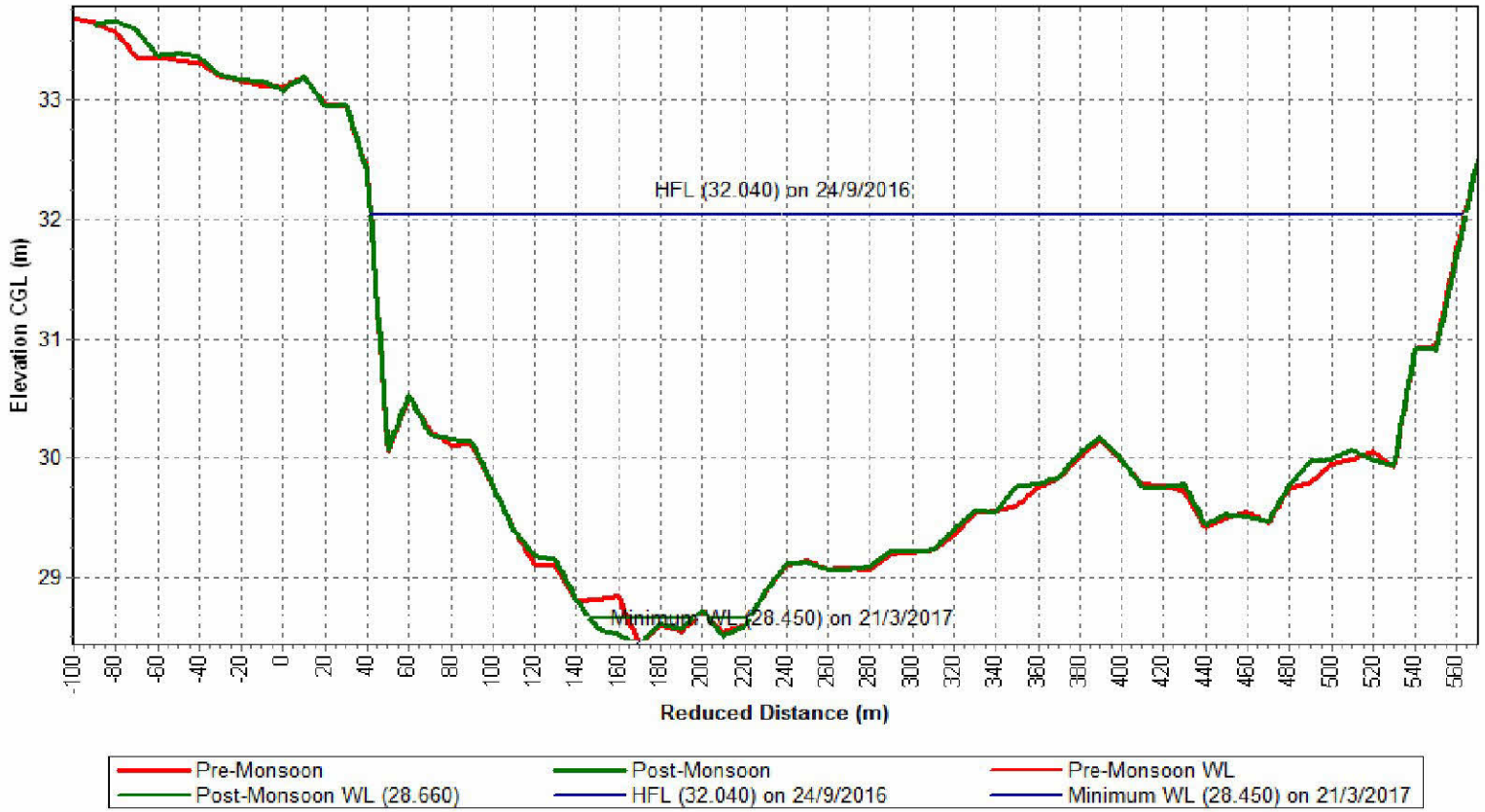
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD2, Vijayawada**



## Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017

**Station Name : Keesara ( AKA00B4)** | **Division : Lower Krishna Divn., Hyderabad**

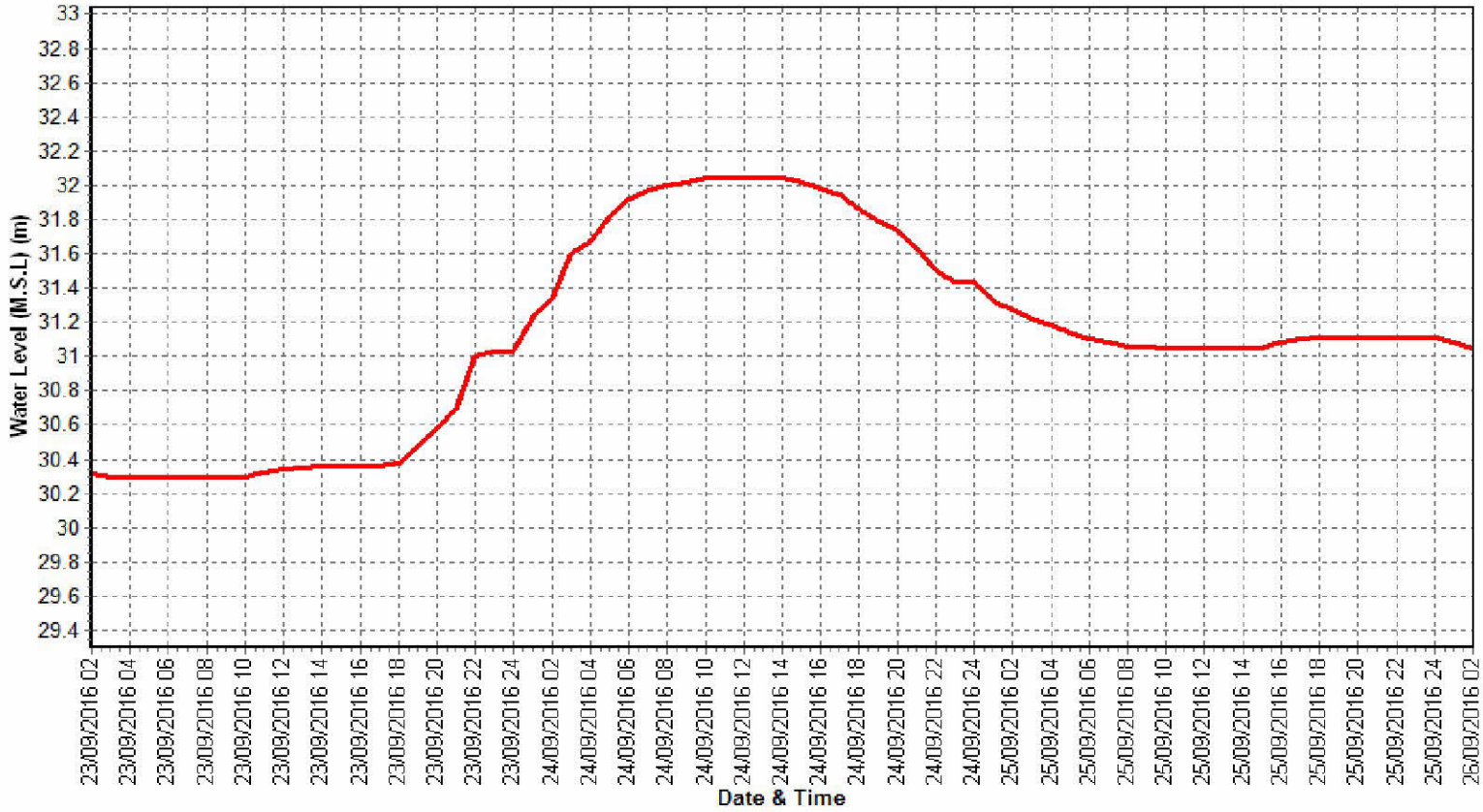
**Local River : Munneru** | **Sub-Division : Lower Krishna SD2, Vijayawada**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Keesara ( AKA00B4)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Munneru** | **Sub-Division : Lower Krishna SD2, Vijayawada**

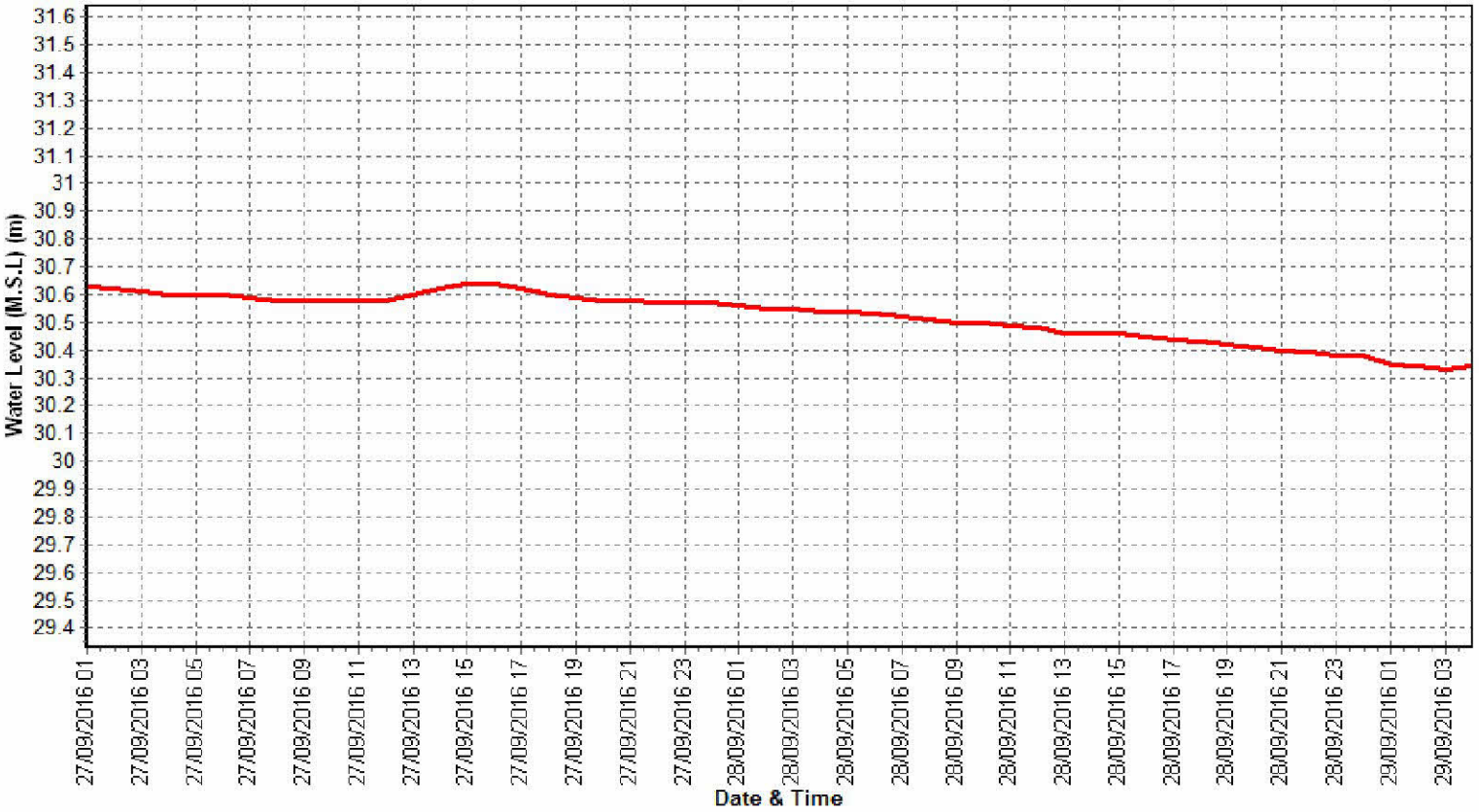



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Keesara ( AKA00B4)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Munneru** | **Sub-Division : Lower Krishna SD2, Vijayawada**

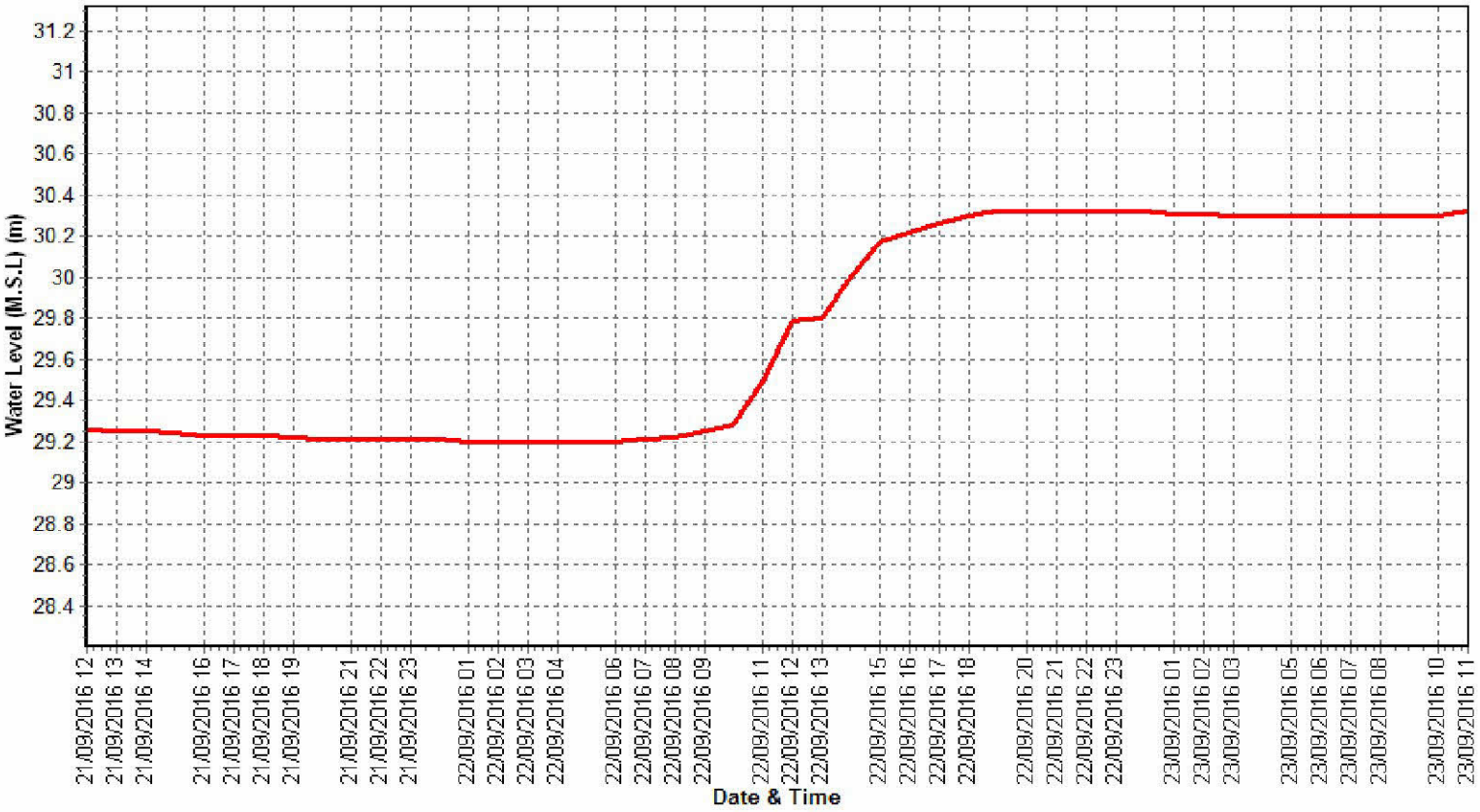



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Keesara ( AKA00B4)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Munneru** **Sub-Division : Lower Krishna SD2, Vijayawada**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Madhira** | | **Code** | **: AKA10D2** | |
| State | : Telangana | | District | Khammam | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Munneru | | Sub Tributary | : Wyra | |
| Sub-Sub Tributary | : - | | Local River | : Wyra | |
| Division | : Lower Krishna Divn., Hyderabad | | Sub-Division | : Lower Krishna SD2, Vijayawada | |
| Drainage Area | : 1850 Sq. Km. | | Bank | : Left | |
| Latitude | : 16°55'05" | | Longitude | : 80°21'32" | |
| **Zero of Gauge (m)** | : 44.5 (m.s.l) | | 01/06/1984 | | |
| | Opening Date | | Closing Date | | |
| Gauge | : 23/02/1984 | | **HFL During 2016-17** | **: 45.550m** | |
| | | | **Corres. Discharge** | **: 79.74(Estimated)** | |
| Discharge | : 07/06/1984 | | **Date & Time of occurance** | **: 09/10/2016 : 18.00 hrs.** | |
| Sediment | : 01/03/2014 | | | | |
| Water Quality | : 01/06/1992 | | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1984-1985 | 346.3 | 47.175 | 12/10/1984 | 0.000 | | 01/06/1984 |
| 1985-1986 | 865.1 | 48.230 | 11/10/1985 | 0.000 | 44.850 | 28/05/1986 |
| 1986-1987 | 1269 | 49.205 | 13/08/1986 | 0.000 | 44.870 | 06/07/1986 |
| 1987-1988 | 110.8 | 46.365 | 13/11/1987 | 0.076 | 44.830 | 29/06/1987 |
| 1988-1989 | 859.7 | 48.260 | 19/09/1988 | 0.168 | 44.860 | 15/06/1988 |
| 1989-1990 | 1238 | 49.250 | 31/08/1989 | 0.224 | 44.860 | 26/06/1989 |
| 1990-1991 | 946.7 | 49.200 | 02/10/1990 | 1.000 | 44.850 | 22/05/1991 |
| 1991-1992 | 1306 | 49.280 | 22/09/1991 | 0.100 | 44.740 | 16/05/1992 |
| 1992-1993 | 147.9 | 46.300 | 10/10/1992 | 0.142 | 44.670 | 13/05/1993 |
| 1993-1994 | 80.44 | 46.021 | 28/08/1993 | 0.262 | 44.690 | 10/06/1993 |
| 1994-1995 | 419.1 | 47.400 | 07/10/1994 | 0.146 | 44.650 | 01/07/1994 |
| 1995-1996 | 554.6 | 48.015 | 16/10/1995 | 0.392 | 44.700 | 16/05/1996 |
| 1996-1997 | 356.1 | 46.995 | 28/08/1996 | 0.504 | 44.730 | 01/06/1996 |
| 1997-1998 | 91.39 | 46.070 | 12/09/1997 | 0.407 | 44.680 | 03/06/1997 |
| 1998-1999 | 411.0 | 47.160 | 16/10/1998 | 0.177 | 44.710 | 03/06/1998 |
| 1999-2000 | 303.9 | 46.950 | 26/08/1999 | 0.052 | 44.540 | 23/05/2000 |
| 2000-2001 | 867.1 | 48.505 | 27/08/2000 | 0.040 | 44.530 | 31/05/2001 |
| 2001-2002 | 98.37 | 45.925 | 15/08/2001 | 0.000 | 44.540 | 04/07/2001 |
| 2002-2003 | 73.22 | 45.915 | 14/10/2002 | 0.000 | | 27/01/2003 |
| 2003-2004 | 142.4 | 46.140 | 08/08/2003 | 0.000 | | 17/04/2004 |
| 2004-2005 | 303.8 | 46.900 | 05/08/2004 | 0.000 | | 16/04/2005 |
| 2005-2006 | 2309 | 50.820 | 21/09/2005 | 0.000 | | 18/06/2005 |

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** |
| 2006-2007 | 802.2 | 47.975 | 20/09/2006 | 0.374 | 44.510 | 30/05/2007 |
| 2007-2008 | 431.3 | 47.030 | 06/10/2007 | 0.000 | | 31/05/2008 |
| 2008-2009 | 1854 | 49.600 | 10/08/2008 | 0.000 | 44.390 | 12/04/2009 |
| 2009-2010 | 412.5 | 47.145 | 22/05/2010 | 0.000 | | 11/08/2009 |
| 2010-2011 | 316.7 | 46.545 | 08/09/2010 | 0.000 | 44.430 | 31/05/2011 |
| 2011-2012 | 211.6 | 46.175 | 26/08/2011 | 0.000 | 44.250 | 28/04/2012 |
| 2012-2013 | 441.3 | 47.220 | 03/11/2012 | 0.000 | 44.260 | 07/02/2013 |
| 2013-2014 | 301.7 | 46.570 | 26/10/2013 | 0.000 | 44.520 | 28/07/2013 |
| 2014-2015 | 173.1 | 46.040 | 28/10/2014 | 0.000 | | 08/07/2014 |
| 2015-2016 | 347.3 | 46.550 | 21/06/2015 | 0.000 | | 02/02/2016 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Madhira ( AKA10D2)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Wyra** **Sub-Division : Lower Krishna SD2, Vijayawada**

| 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 | 45.250 | 35.20 | | 0.000 | | 0.000 | 44.940 | 13.45 | | 0.000 |
| 2 | | 0.000 | 45.055 | 19.22 | | 0.000 | | 0.000 | 45.360 | 48.97 * | | 0.000 |
| 3 | | 0.000 | 44.870 | 10.96 * | | 0.000 | 44.775 | 9.817 | 45.205 | 30.11 | | 0.000 |
| 4 | | 0.000 | 44.750 | 6.678 | | 0.000 | 45.030 | 17.76 * | 45.050 | 17.78 | | 0.000 |
| 5 | | 0.000 | 44.640 | 4.338 | | 0.000 | 45.000 | 16.37 * | 44.950 | 13.87 | | 0.000 |
| 6 | | 0.000 | 44.570 | 2.366 | | 0.000 | 44.760 | 6.791 | 44.865 | 10.62 | | 0.000 |
| 7 | | 0.000 | 44.530 | 1.777 * | | 0.000 | 44.575 | 2.484 | 44.845 | 9.744 | | 0.000 |
| 8 | | 0.000 | 44.480 | 1.120 | | 0.000 | | 0.000 | 45.060 | 20.55 | | 0.000 |
| 9 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 45.410 | 56.02 * | | 0.000 |
| 10 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 45.535 | 76.88 | | 0.000 |
| 11 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 45.310 | 42.59 * | | 0.000 |
| 12 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 45.150 | 26.24 * | | 0.000 |
| 13 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 45.040 | 18.39 | | 0.000 |
| 14 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 44.925 | 13.09 | | 0.000 |
| 15 | | 0.000 | | 0.000 | | 0.000 | 44.610 | 2.843 | 44.820 | 9.133 | | 0.000 |
| 16 | | 0.000 | | 0.000 | | 0.000 | 45.065 | 18.62 | 44.700 | 5.450 * | | 0.000 |
| 17 | | 0.000 | | 0.000 | | 0.000 | 44.875 | 11.74 | 44.540 | 1.595 | | 0.000 |
| 18 | | 0.000 | | 0.000 | | 0.000 | 44.680 | 4.920 * | 44.510 | 1.365 | | 0.000 |
| 19 | | 0.000 | | 0.000 | | 0.000 | 44.555 | 2.186 | 44.455 | 0.817 | | 0.000 |
| 20 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 44.430 | 0.556 | | 0.000 |
| 21 | | 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 |
| 23 | | 0.000 | 45.070 | 19.80 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 24 | | 0.000 | 44.800 | 8.475 * | | 0.000 | 45.135 | 25.92 | | 0.000 | | 0.000 |
| 25 | | 0.000 | 44.565 | 2.315 | | 0.000 | 45.070 | 20.07 * | | 0.000 | | 0.000 |
| 26 | | 0.000 | 44.430 | 0.624 | | 0.000 | 45.235 | 35.84 | | 0.000 | | 0.000 |
| 27 | | 0.000 | 44.420 | 0.397 | | 0.000 | 45.190 | 29.44 | | 0.000 | | 0.000 |
| 28 | | 0.000 | | 0.000 | | 0.000 | 45.170 | 27.56 | | 0.000 | | 0.000 |
| 29 | | 0.000 | | 0.000 | | 0.000 | 45.075 | 20.93 | | 0.000 | | 0.000 |
| 30 | | 0.000 | | 0.000 | | 0.000 | 45.115 | 23.49 | | 0.000 | | 0.000 |
| 31 | | | | 0.000 | | 0.000 | | | | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | 44.768 | 8.166 | | 0.000 | 44.828 | 5.322 | 45.122 | 29.80 | | 0.000 |
| II Ten-Daily | | 0.000 | | 0.000 | | 0.000 | 44.757 | 4.031 | 44.788 | 11.92 | | 0.000 |
| III Ten-Daily | | 0.000 | 44.657 | 2.874 | | 0.000 | 45.141 | 18.33 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | | 0.000 | 44.420 | 0.000 | | 0.000 | 44.555 | 0.000 | 44.430 | 0.000 | | 0.000 |
| Max. | | 0.000 | 45.250 | 35.20 | | 0.000 | 45.235 | 35.84 | 45.535 | 76.88 | | 0.000 |
| Mean | | 0 | 44.725 | 3.654 | | 0 | 44.936 | 9.226 | 44.955 | 13.46 | | 0 |

**Annual Runoff in MCM = 75 Annual Runoff in mm = 41**

**Peak Observed Discharge = 76.88 cumecs on 10/10/2016 Corres. Water Level :45.535 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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 2016 - 2017

**Station Name : Madhira ( AKA10D2)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Wyra** **Sub-Division : Lower Krishna SD2, Vijayawada**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | | 0.000 | 44.570 | 2.086 * | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 2 | | 0.000 | 44.620 | 3.012 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 3 | | 0.000 | 44.570 | 2.181 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 4 | | 0.000 | 44.610 | 2.640 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 5 | | 0.000 | 44.680 | 5.491 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 6 | | 0.000 | 44.610 | 2.682 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 7 | | 0.000 | 44.530 | 1.684 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 8 | | 0.000 | 44.560 | 1.916 * | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 9 | | 0.000 | 44.450 | 0.888 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 10 | | 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 |
| 12 | | 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 |
| 14 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 15 | 44.590 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 16 | 44.560 | 2.440 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 17 | 44.580 | 2.056 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 18 | 44.600 | 2.274 * | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 19 | 44.620 | 2.542 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 20 | 44.690 | 2.934 | 44.530 | 1.699 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 21 | 44.650 | 5.477 | 44.490 | 1.122 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 22 | 44.610 | 5.072 | 44.440 | 1.235 * | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 23 | 44.550 | 2.628 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 24 | 44.530 | 1.669 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 25 | 44.530 | 1.510 * | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 26 | 44.570 | 1.344 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 27 | 44.560 | 2.108 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 28 | 44.540 | 1.929 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 29 | 44.530 | 1.719 | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 30 | 44.530 | 1.678 | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 31 | 44.530 | 1.645 | | 0.000 | | | | 0.000 | | | | 0.000 |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | 44.578 | 2.258 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| II Ten-Daily | 44.607 | 1.225 | 44.530 | 0.170 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| III Ten-Daily | 44.560 | 2.434 | 44.465 | 0.214 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 44.530 | 0.000 | 44.440 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Max. | 44.690 | 5.477 | 44.680 | 5.491 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Mean | 44.577 | 1.259 | 44.555 | 0.859 | | 0 | | 0 | | 0 | | 0 |

**Peak Computed Discharge = 56.02 cumecs on 09/10/2016** **Corres. Water Level :45.41 m**

**Lowest Computed Discharge = 1.235 cumecs on 22/01/2017** **Corres. Water Level :44.44 m**

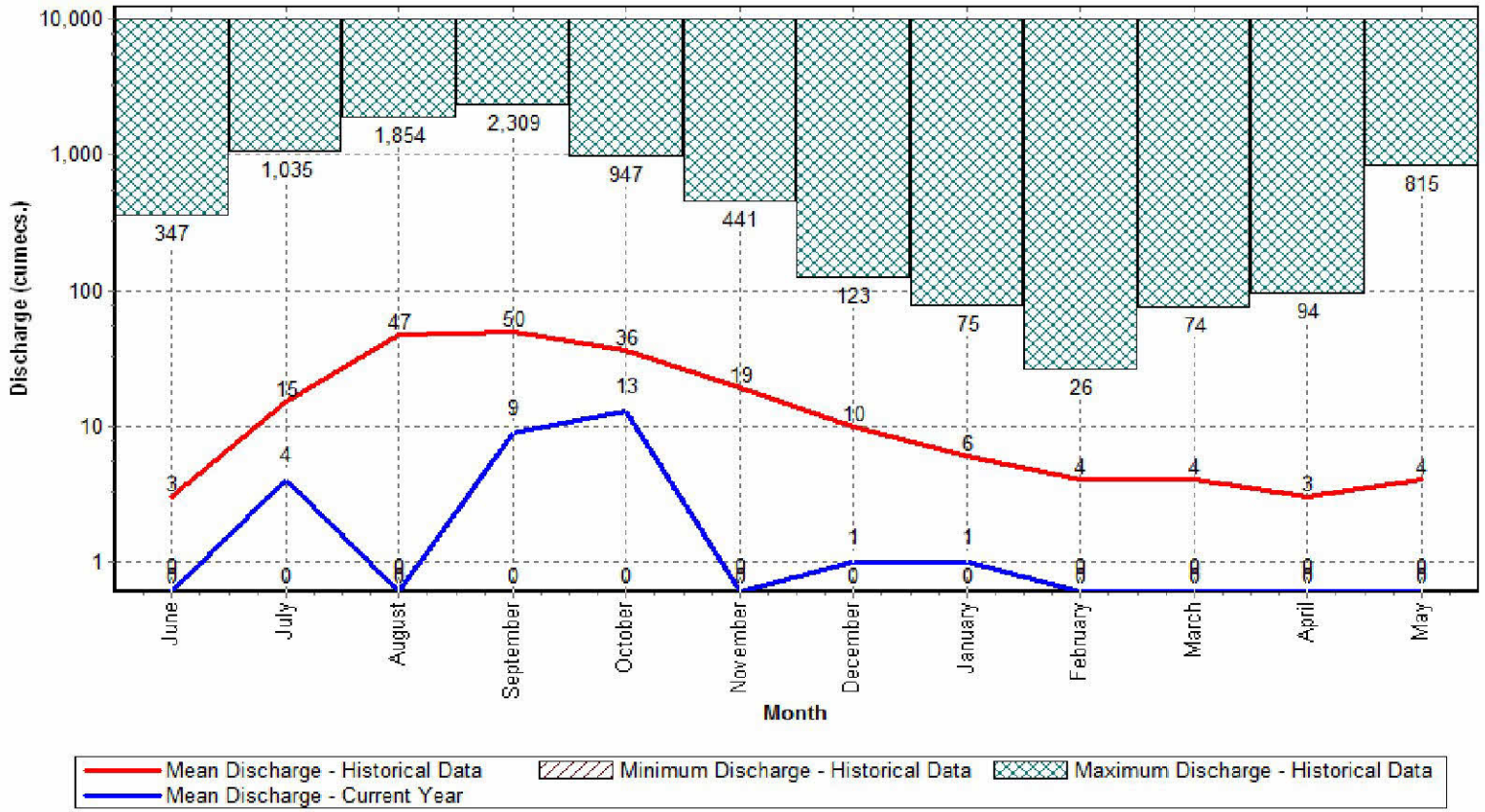
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Madhira ( AKA10D2)** | **Data considered : 1984-2017** | **Division : Lower Krishna Divn., Hyderabad**

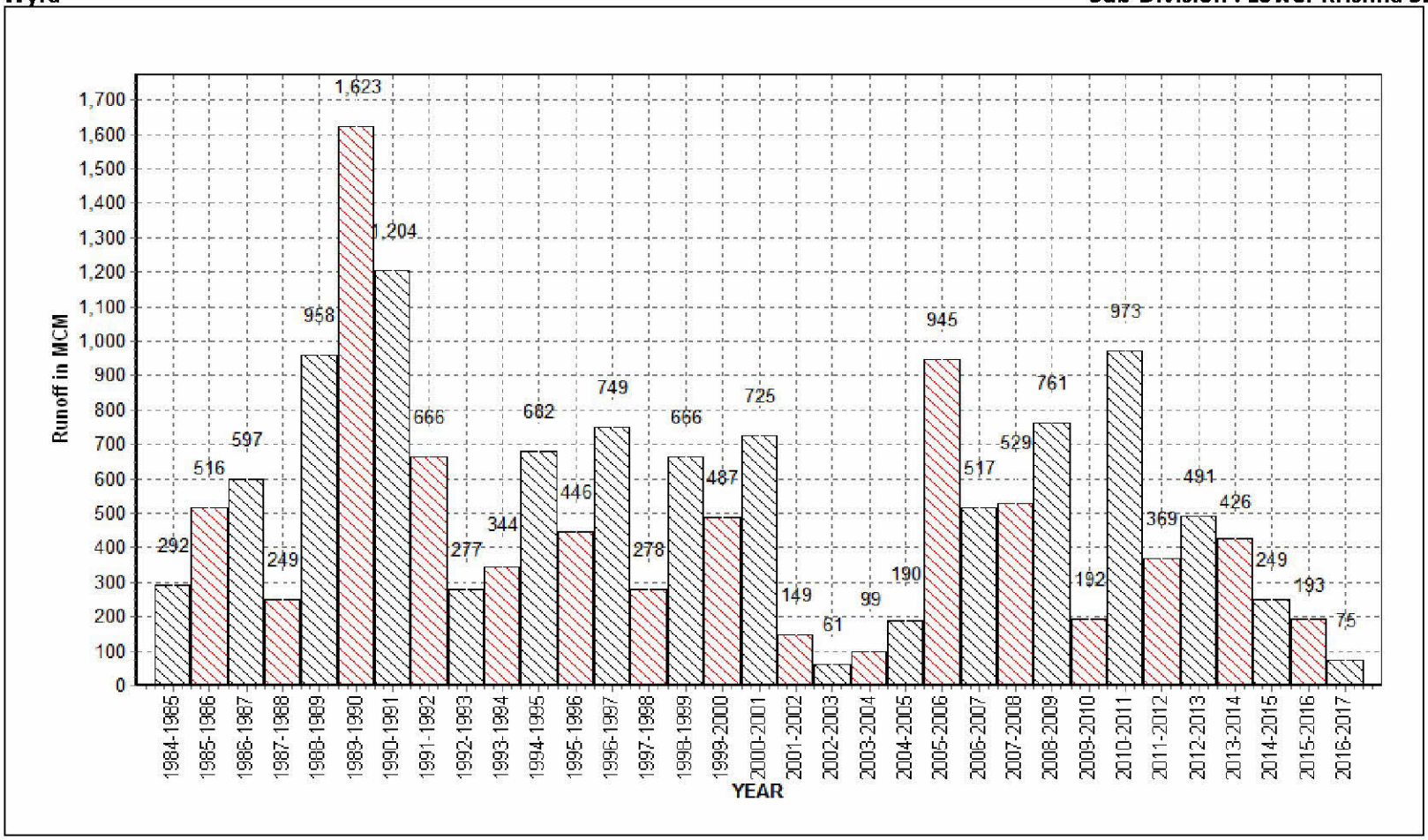
**Local River : Wyra** | **Sub-Division : Lower Krishna SD2, Vijayawada**



## Annual Runoff Values for the period: 1984 - 2017

**Station Name : Madhira ( AKA10D2)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Wyra** | **Sub-Division : Lower Krishna SD2, Vijayawada**

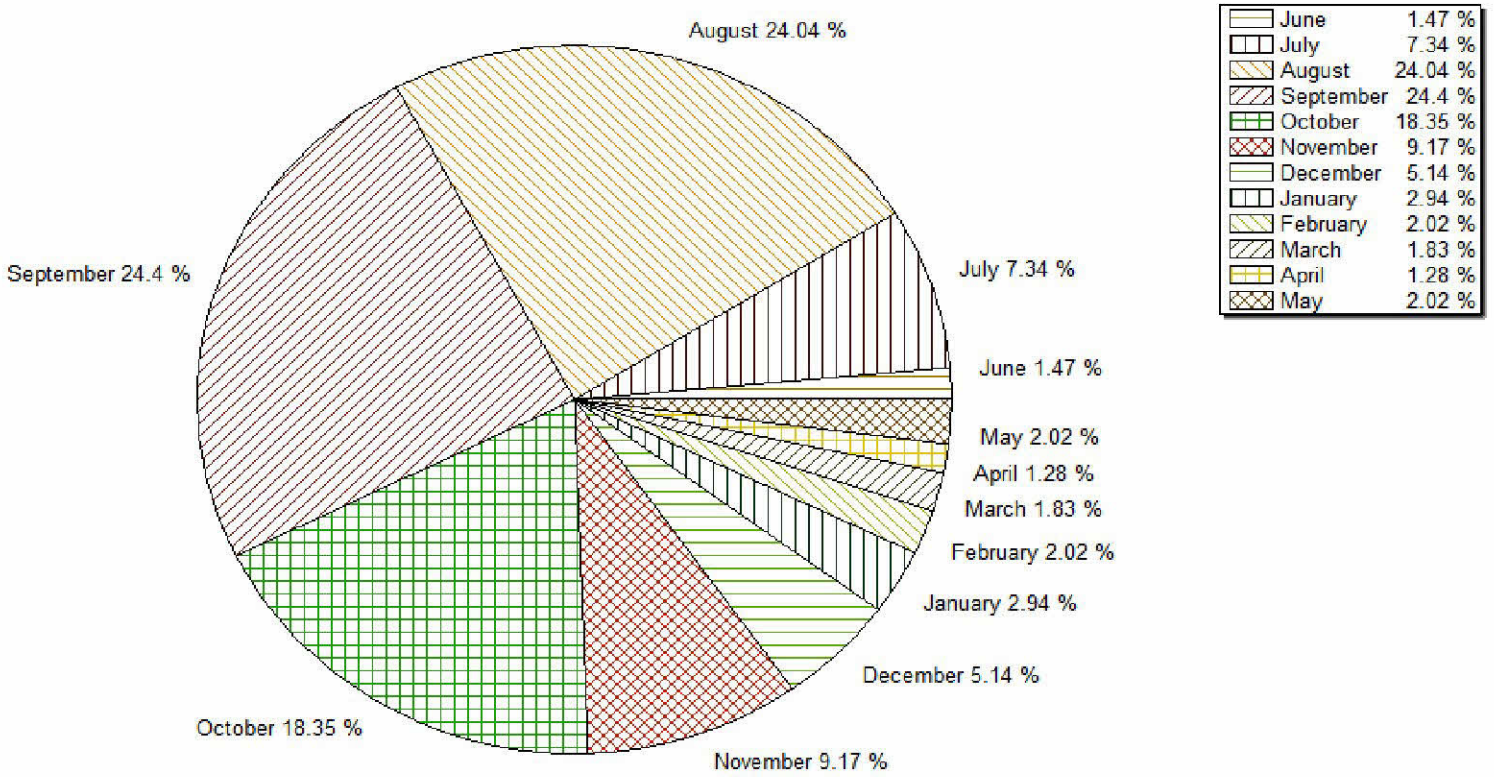



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1984-2016**

**Station Name : Madhira ( AKA10D2)**
**Local River : Wyra**

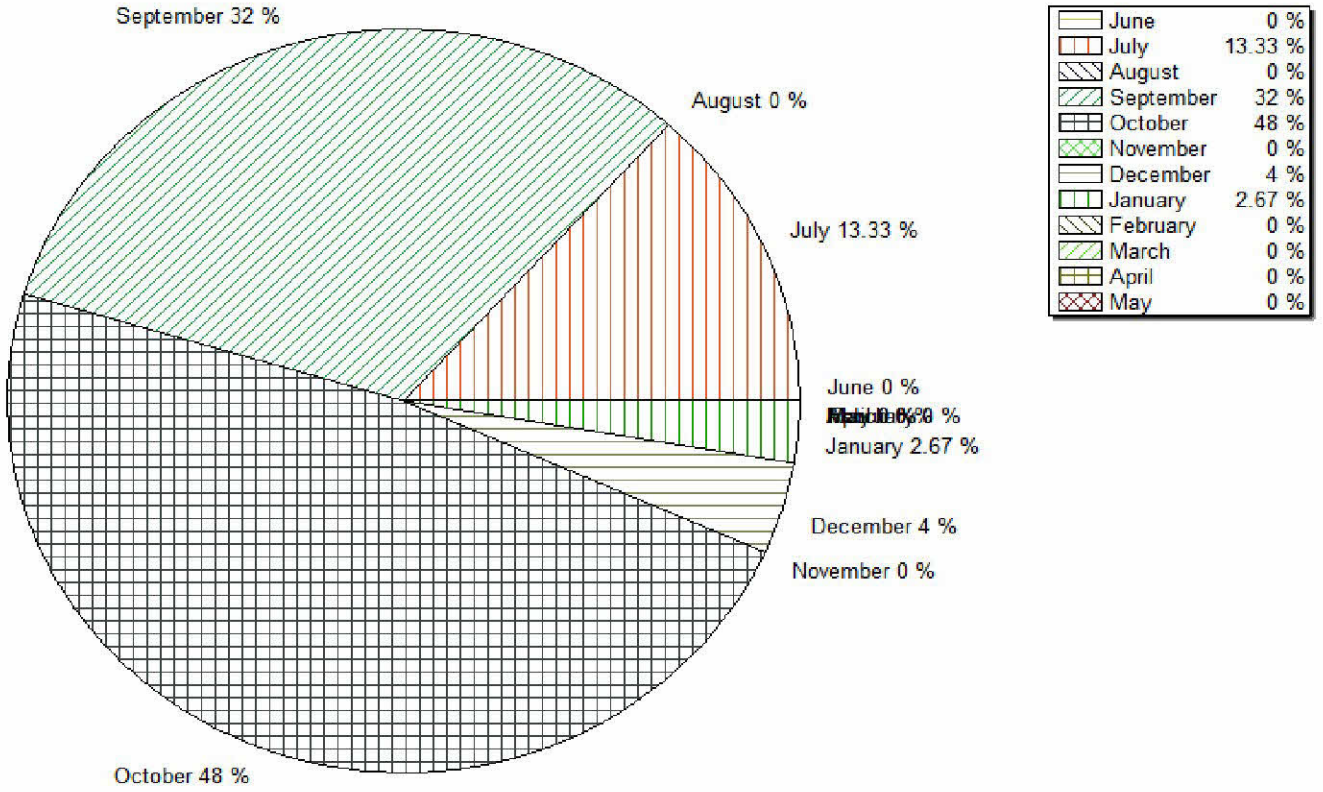
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD2, Vijayawada**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Madhira ( AKA10D2)**
**Local River : Wyra**

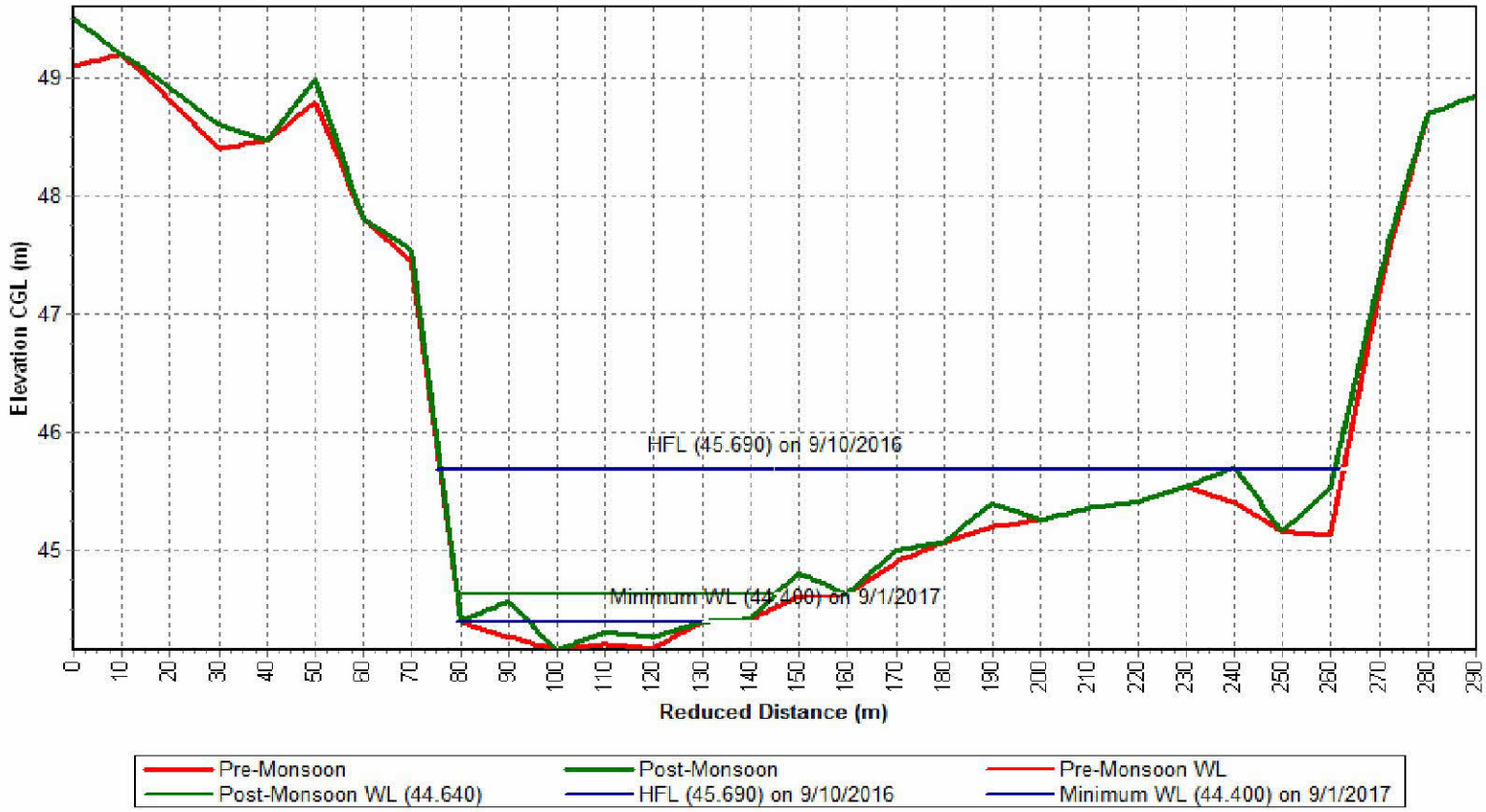
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD2, Vijayawada**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Madhira ( AKA10D2)** **Division : Lower Krishna Divn., Hyderabad**

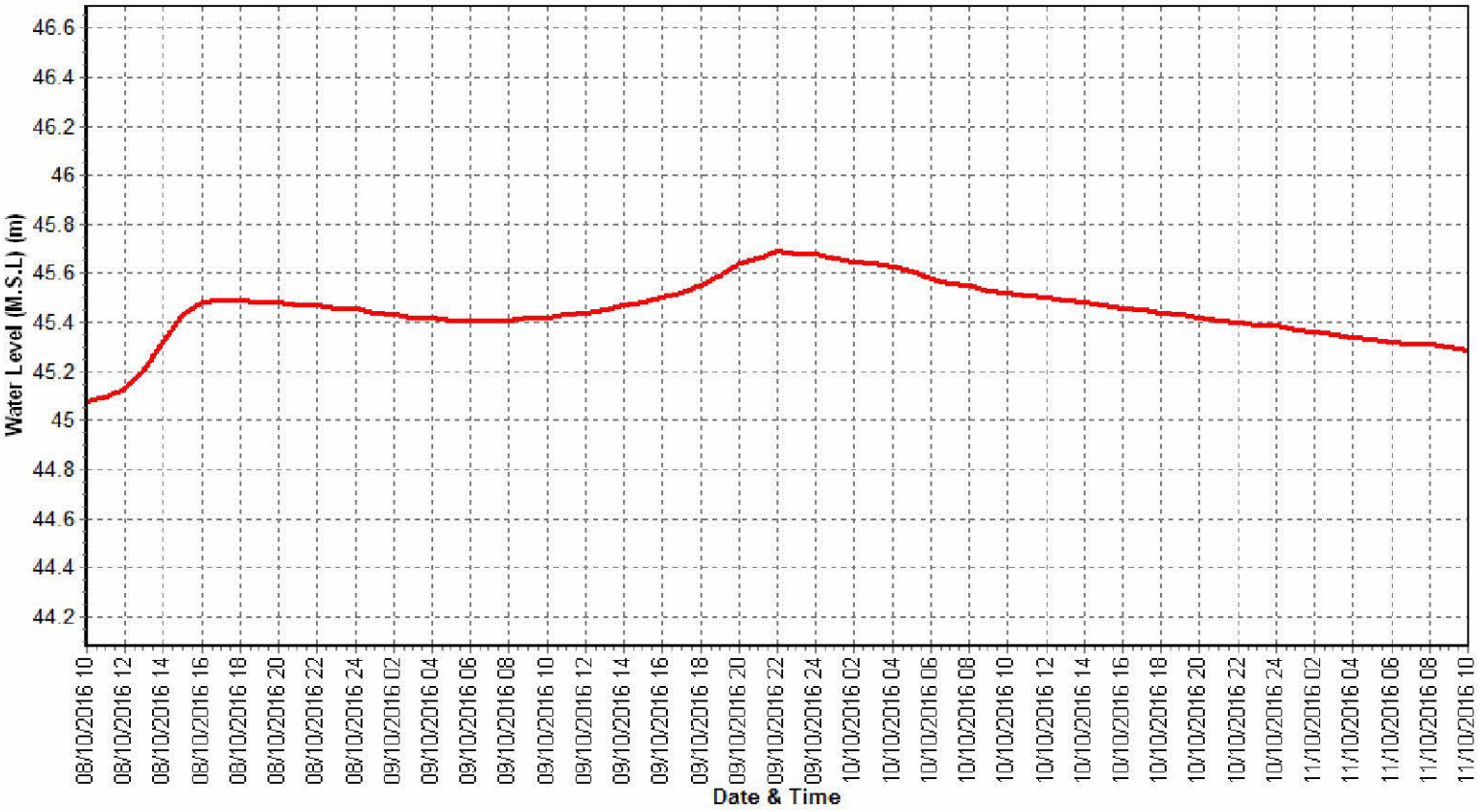
**Local River : Wyra** **Sub-Division : Lower Krishna SD2, Vijayawada**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Madhira ( AKA10D2)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Wyra** | **Sub-Division : Lower Krishna SD2, Vijayawada**

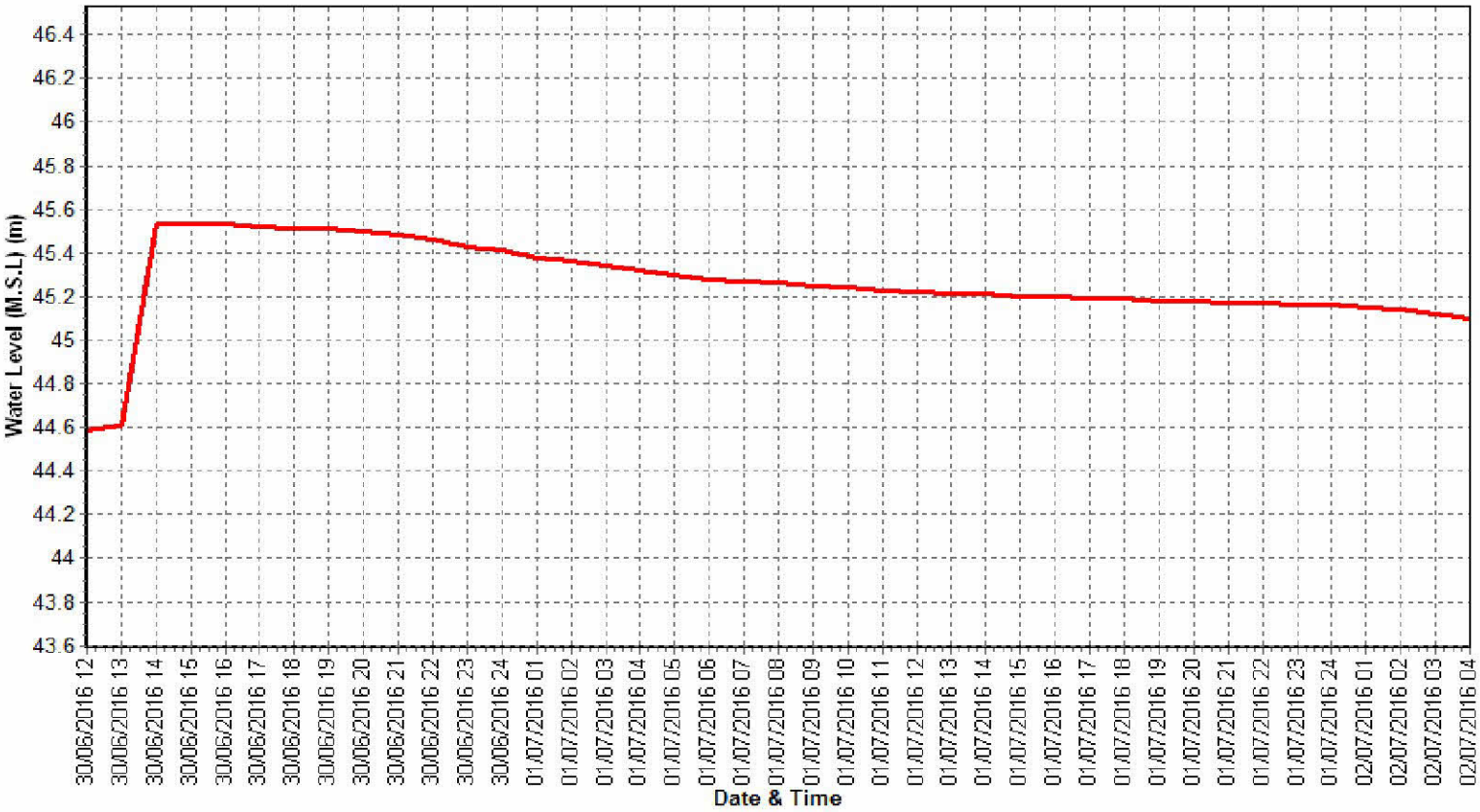



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Madhira ( AKA10D2)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Wyra** **Sub-Division : Lower Krishna SD2, Vijayawada**

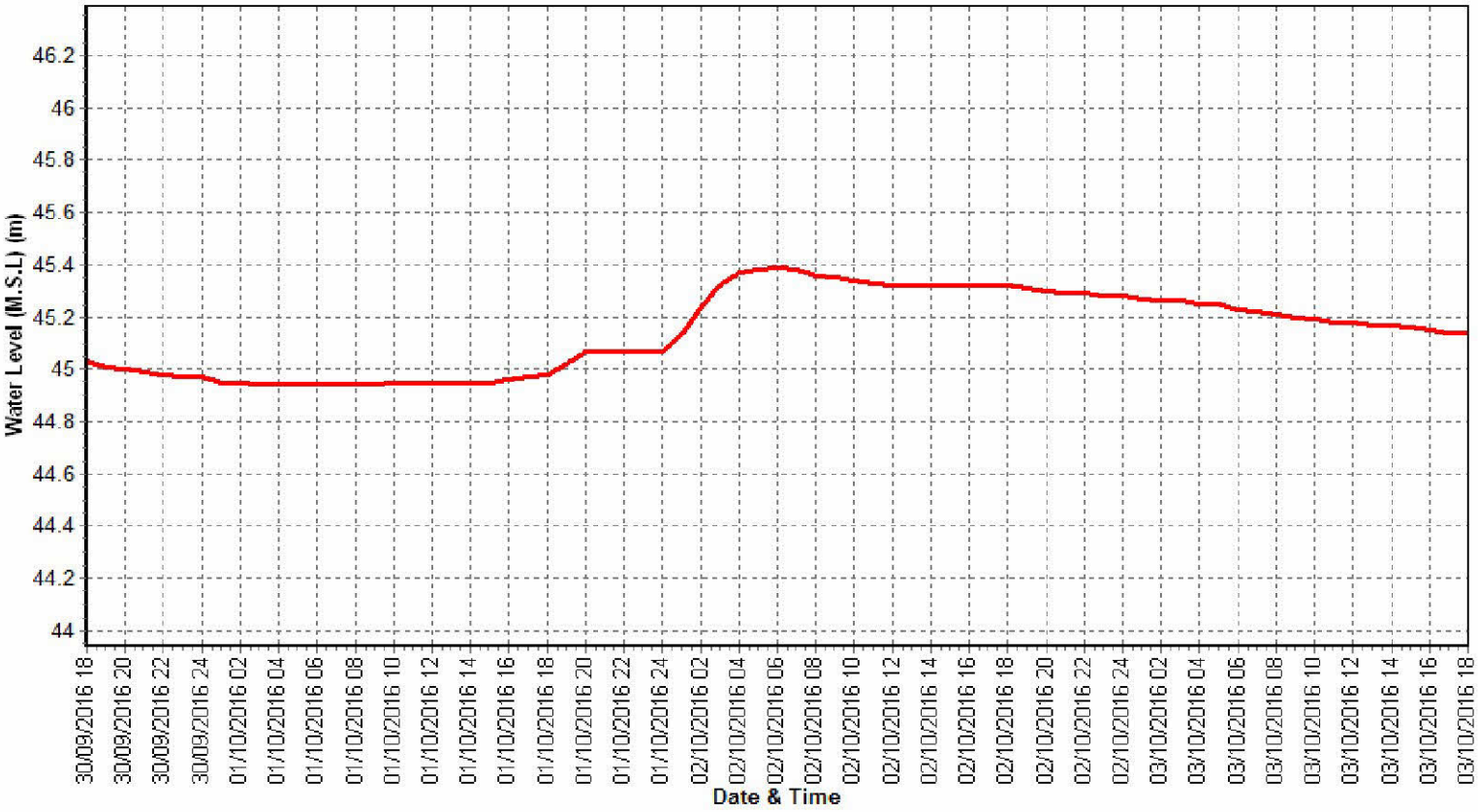



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Madhira ( AKA10D2)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Wyra** **Sub-Division : Lower Krishna SD2, Vijayawada**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | |
|---|---|---|---|
| **Site** | **: Paleru Bridge** | **Code** | **: AKC00D3** |
| State | : Andhra Pradesh | District | Krishna |
| Basin | : Krishna | Independent River | : Krishna |
| Tributary | : Paleru | Sub Tributary | : - |
| Sub-Sub Tributary | : - | Local River | : Paleru |
| Division | : Lower Krishna Divn., Hyderabad | Sub-Division | : Lower Krishna SD2, Vijayawada |
| Drainage Area | : 2928 Sq. Km. | Bank | : Right |
| Latitude | : 16°56'56" | Longitude | : 80°02'57" |
| **Zero of Gauge (m)** | : 70.357 (m.s.l) | 01/11/1984 | |
| | 73.232 (m.s.l) | 01/06/1964 | - 20/09/1964 |
| | 71.367 (m.s.l) | 21/09/1964 | - 31/05/1970 |
| | 71.857 (m.s.l) | 01/06/1970 | - 31/10/1984 |
| | Opening Date | Closing Date | |
| Gauge | : 18/05/1964 | **HFL During 2016-17** | **: 72.597m** |
| | | **Corres. Discharge** | **: 36.31(Estimated)** |
| Discharge | : 01/07/1964 | **Date & Time of occurance** | **: 22/09/2016 : 18.00 hrs.** |
| Sediment | : 01/03/2014 | | |
| Water Quality | : 01/06/1992 | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1965-1966 | 461.0 | 74.464 | 14/07/1965 | 0.120 | 71.742 | 10/07/1965 |
| 1966-1967 | 18.80 | 72.372 | 25/07/1966 | 0.000 | 71.627 | 31/05/1967 |
| 1967-1968 | 129.4 | 73.202 | 25/07/1967 | 0.000 | 71.777 | 13/06/1967 |
| 1968-1969 | 427.0 | 73.937 | 20/05/1969 | 0.030 | 71.757 | 15/06/1968 |
| 1969-1970 | 284.8 | 73.777 | 14/12/1969 | 0.161 | 71.597 | 07/07/1969 |
| 1970-1971 | 825.3 | 75.507 | 23/08/1970 | 0.400 | 72.282 | 19/06/1970 |
| 1971-1972 | 51.00 | 73.147 | 03/10/1971 | 0.100 | 72.207 | 21/05/1972 |
| 1972-1973 | 28.00 | 73.207 | 05/11/1972 | 0.040 | 72.437 | 11/03/1973 |
| 1973-1974 | 45.00 | 73.462 | 03/10/1973 | 0.100 | 72.362 | 01/06/1973 |
| 1974-1975 | 442.8 | 74.947 | 16/10/1974 | 0.100 | 72.382 | 23/07/1974 |
| 1975-1976 | 492.6 | 74.965 | 09/09/1975 | 0.700 | 72.110 | 25/06/1975 |
| 1976-1977 | 460.3 | 74.872 | 26/08/1976 | 0.300 | 72.207 | 10/04/1977 |
| 1977-1978 | 139.5 | 73.757 | 04/10/1977 | 0.200 | 72.187 | 17/07/1977 |
| 1978-1979 | 1165 | 76.132 | 16/08/1978 | 0.800 | 72.057 | 23/05/1979 |
| 1979-1980 | 208.7 | 74.077 | 28/09/1979 | 0.200 | 71.992 | 16/07/1979 |
| 1980-1981 | 109.4 | 73.522 | 02/08/1980 | 0.400 | 72.097 | 31/05/1981 |
| 1981-1982 | 223.8 | 74.137 | 04/08/1981 | 0.300 | 72.077 | 17/04/1982 |
| 1982-1983 | 183.7 | 73.997 | 12/08/1982 | 0.100 | 72.167 | 31/05/1983 |
| 1983-1984 | 2250 | 78.002 | 06/10/1983 | 0.200 | 72.067 | 13/07/1983 |
| 1984-1985 | 202.9 | 73.697 | 12/10/1984 | 0.200 | 71.607 | 08/07/1984 |

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** |
| 1985-1986 | 587.6 | 75.332 | 14/08/1985 | 0.600 | 71.767 | 09/07/1985 |
| 1986-1987 | 406.4 | 74.465 | 13/08/1986 | 0.500 | 71.972 | 08/07/1986 |
| 1987-1988 | 104.0 | 73.322 | 13/11/1987 | 0.649 | 72.027 | 30/05/1988 |
| 1988-1989 | 1086 | 76.282 | 20/09/1988 | 1.000 | 72.052 | 15/06/1988 |
| 1989-1990 | 1564 | 78.447 | 24/07/1989 | 1.000 | 72.017 | 06/08/1989 |
| 1990-1991 | 537.6 | 74.807 | 03/10/1990 | 3.745 | 72.007 | 05/07/1990 |
| 1991-1992 | 378.3 | 74.286 | 22/09/1991 | 0.867 | 71.902 | 04/05/1992 |
| 1992-1993 | 69.63 | 73.102 | 02/09/1992 | 0.275 | 71.792 | 31/07/1992 |
| 1993-1994 | 154.3 | 73.615 | 10/10/1993 | 1.749 | 71.958 | 24/06/1993 |
| 1994-1995 | 348.7 | 74.357 | 06/10/1994 | 0.684 | 71.912 | 18/07/1994 |
| 1995-1996 | 448.9 | 74.807 | 19/10/1995 | 0.387 | 71.722 | 07/08/1995 |
| 1996-1997 | 220.7 | 74.057 | 28/08/1996 | 0.274 | 71.772 | 08/08/1996 |
| 1997-1998 | 130.2 | 73.552 | 24/09/1997 | 0.097 | 71.717 | 12/08/1997 |
| 1998-1999 | 344.6 | 74.652 | 16/10/1998 | 0.376 | 71.727 | 22/07/1998 |
| 1999-2000 | 174.2 | 74.027 | 29/09/1999 | 0.269 | 71.727 | 17/01/2000 |
| 2000-2001 | 592.3 | 75.407 | 24/08/2000 | 0.287 | 71.797 | 31/03/2001 |
| 2001-2002 | 148.7 | 73.572 | 30/09/2001 | 0.038 | 71.757 | 04/09/2001 |
| 2002-2003 | 160.0 | 73.657 | 13/10/2002 | 0.000 | 71.147 | 08/03/2003 |
| 2003-2004 | 11.13 | 72.487 | 08/08/2003 | 0.000 | | 20/04/2004 |
| 2004-2005 | 24.03 | 72.657 | 22/09/2004 | 0.004 | 71.517 | 03/09/2004 |
| 2005-2006 | 665.7 | 75.607 | 22/09/2005 | 0.010 | 71.667 | 22/06/2005 |
| 2006-2007 | 276.0 | 74.277 | 20/09/2006 | 0.008 | 71.707 | 21/07/2006 |
| 2013-2014 | 7.192 | 72.357 | 10/05/2014 | 0.493 | 71.657 | 28/03/2014 |
| 2014-2015 | 158.2 | 73.682 | 27/10/2014 | 0.000 | 71.457 | 26/07/2014 |
| 2015-2016 | 33.60 | 73.357 | 19/06/2015 | 0.000 | 71.257 | 16/01/2016 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Paleru Bridge ( AKC00D3)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Paleru** **Sub-Division : Lower Krishna SD2, Vijayawada**

| 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 | | 0.000 | 71.617 | 0.619 | 71.997 | 4.465 | 71.567 | 0.394 |
| 2 | | 0.000 | | 0.000 | | 0.000 | 71.547 | 0.187 | 72.047 | 6.567 * | 71.597 | 0.565 |
| 3 | | 0.000 | | 0.000 | | 0.000 | 71.457 | 0.000 | 72.177 | 16.02 | 71.597 | 0.578 |
| 4 | | 0.000 | | 0.000 | | 0.000 | 71.447 | 0.000 | 72.097 | 7.488 | 71.577 | 0.499 |
| 5 | | 0.000 | | 0.000 | | 0.000 | 71.447 | 0.000 | 72.017 | 4.693 | 71.567 | 0.464 |
| 6 | | 0.000 | | 0.000 | | 0.000 | 71.407 | 0.000 | 71.907 | 3.190 | 71.557 | 0.391 * |
| 7 | | 0.000 | | 0.000 | | 0.000 | 71.377 | 0.000 | 71.757 | 1.721 | 71.617 | 0.649 |
| 8 | | 0.000 | | 0.000 | | 0.000 | 71.357 | 0.000 | 71.737 | 1.659 | 71.617 | 0.653 |
| 9 | | 0.000 | | 0.000 | | 0.000 | 71.357 | 0.000 | 71.777 | 1.825 * | 71.607 | 0.585 |
| 10 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 71.787 | 1.839 | 71.577 | 0.437 |
| 11 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 72.017 | 5.718 * | 71.527 | 0.000 |
| 12 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 71.937 | 3.965 * | 71.507 | 0.000 |
| 13 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 71.737 | 1.661 | 71.517 | 0.000 |
| 14 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 71.617 | 0.610 | 71.527 | 0.000 |
| 15 | | 0.000 | | 0.000 | | 0.000 | 71.497 | 0.000 | 71.597 | 0.584 | 71.527 | 0.000 |
| 16 | | 0.000 | | 0.000 | | 0.000 | 71.707 | 1.485 | 71.587 | 0.508 * | 71.527 | 0.000 |
| 17 | | 0.000 | | 0.000 | | 0.000 | 72.017 | 4.695 | 71.587 | 0.543 | 71.517 | 0.000 |
| 18 | | 0.000 | | 0.000 | | 0.000 | 71.827 | 2.377 * | 71.587 | 0.547 | 71.517 | 0.000 |
| 19 | | 0.000 | | 0.000 | | 0.000 | 71.747 | 1.706 | 71.567 | 0.408 | 71.517 | 0.000 |
| 20 | | 0.000 | | 0.000 | | 0.000 | 71.692 | 1.434 | 71.547 | 0.194 | 71.527 | 0.294 * |
| 21 | | 0.000 | | 0.000 | | 0.000 | 71.742 | 1.748 | 71.537 | 0.142 | 71.812 | 1.859 |
| 22 | | 0.000 | | 0.000 | | 0.000 | 72.342 | 22.34 | 71.447 | 0.000 | 71.937 | 2.541 |
| 23 | | 0.000 | | 0.000 | | 0.000 | 72.297 | 19.60 | 71.477 | 0.171 * | 71.907 | 2.025 |
| 24 | | 0.000 | | 0.000 | | 0.000 | 72.452 | 22.99 | 71.657 | 1.247 | 71.807 | 1.904 |
| 25 | | 0.000 | | 0.000 | | 0.000 | 72.197 | 11.90 * | 71.617 | 0.648 | 71.757 | 1.699 |
| 26 | | 0.000 | | 0.000 | | 0.000 | 72.097 | 7.501 | 71.597 | 0.553 | 71.757 | 1.704 |
| 27 | | 0.000 | | 0.000 | | 0.000 | 72.077 | 7.139 | 71.597 | 0.562 | 71.707 | 1.209 * |
| 28 | | 0.000 | | 0.000 | | 0.000 | 72.109 | 8.012 | 71.587 | 0.522 | 71.617 | 0.651 |
| 29 | | 0.000 | | 0.000 | | 0.000 | 72.047 | 6.213 | 71.577 | 0.480 | 71.587 | 0.511 |
| 30 | | 0.000 | | 0.000 | | 0.000 | 72.047 | 6.442 | 71.567 | 0.428 * | 71.587 | 0.533 |
| 31 | | | | 0.000 | | 0.000 | | | 71.577 | 0.447 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | | 0.000 | | 0.000 | 71.446 | 0.081 | 71.930 | 4.947 | 71.588 | 0.521 |
| II Ten-Daily | | 0.000 | | 0.000 | | 0.000 | 71.748 | 1.170 | 71.678 | 1.474 | 71.521 | 0.029 |
| III Ten-Daily | | 0.000 | | 0.000 | | 0.000 | 72.141 | 11.39 | 71.567 | 0.473 | 71.747 | 1.463 |
| Monthly | | | | | | | | | | | | |
| Min. | | 0.000 | | 0.000 | | 0.000 | 71.357 | 0.000 | 71.447 | 0.000 | 71.507 | 0.000 |
| Max. | | 0.000 | | 0.000 | | 0.000 | 72.452 | 22.99 | 72.177 | 16.02 | 71.937 | 2.541 |
| Mean | | 0 | | 0 | | 0 | 71.796 | 4.213 | 71.720 | 2.239 | 71.619 | 0.671 |

**Annual Runoff in MCM = 21 Annual Runoff in mm = 7**

**Peak Observed Discharge = 22.99 cumecs on 24/09/2016 Corres. Water Level :72.452 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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 2016 - 2017

**Station Name : Paleru Bridge ( AKC00D3)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Paleru** **Sub-Division : Lower Krishna SD2, Vijayawada**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 71.717 | 1.407 | 71.597 | 0.287 * | 71.427 | 0.000 | | 0.000 | | 0.000 | 70.917 | 0.000 |
| 2 | 71.657 | 1.201 | 71.617 | 0.539 | 71.417 | 0.000 | | 0.000 | | 0.000 | 70.977 | 0.000 |
| 3 | 71.617 | 0.627 | 71.617 | 0.527 | 71.397 | 0.000 | | 0.000 | | 0.000 | 70.977 | 0.000 |
| 4 | 71.617 | 0.454 * | 71.627 | 0.584 | 71.397 | 0.000 | | 0.000 | | 0.000 | 70.977 | 0.000 |
| 5 | 71.637 | 1.170 | 71.657 | 0.837 | 71.397 | 0.000 | | 0.000 | | 0.000 | 70.957 | 0.000 |
| 6 | 71.647 | 1.012 | 71.667 | 0.850 | 71.397 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 7 | 71.587 | 0.236 | 71.647 | 0.777 | 71.387 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 8 | 71.587 | 0.240 | 71.617 | 0.454 * | 71.377 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 9 | 71.577 | 0.207 | 71.597 | 0.527 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 10 | 71.577 | 0.206 | 71.577 | 0.263 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 11 | 71.617 | 0.120 * | 71.547 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 12 | 71.717 | 1.291 * | 71.527 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 13 | 71.687 | 0.884 | 71.517 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 14 | 71.687 | 0.872 | 71.517 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 15 | 71.687 | 0.867 | 71.507 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 16 | 71.657 | 0.838 | 71.497 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 17 | 71.637 | 0.810 | 71.487 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 18 | 71.627 | 0.538 * | 71.487 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 19 | 71.617 | 0.728 | 71.487 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 20 | 71.587 | 0.347 | 71.467 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 21 | 71.587 | 0.341 | 71.437 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 22 | 71.577 | 0.302 | 71.437 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 23 | 71.617 | 0.637 | 71.437 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 24 | 71.597 | 0.637 | 71.437 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 25 | 71.597 | 0.287 * | 71.427 | 0.000 | | 0.000 | | 0.000 | 70.977 | 0.000 | | 0.000 |
| 26 | 71.637 | 0.821 | 71.427 | 0.000 | | 0.000 | | 0.000 | 70.937 | 0.000 | | 0.000 |
| 27 | 71.637 | 0.837 | 71.427 | 0.000 | | 0.000 | | 0.000 | 70.917 | 0.000 | | 0.000 |
| 28 | 71.617 | 0.544 | 71.417 | 0.000 | | 0.000 | | 0.000 | 70.917 | 0.000 | | 0.000 |
| 29 | 71.627 | 0.597 | 71.387 | 0.000 | | | | 0.000 | 70.917 | 0.000 | | 0.000 |
| 30 | 71.627 | 0.596 | 71.387 | 0.000 | | | | 0.000 | 70.917 | 0.000 | | 0.000 |
| 31 | 71.597 | 0.416 | 71.407 | 0.000 | | | | 0.000 | | | | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 71.622 | 0.676 | 71.622 | 0.565 | 71.399 | 0.000 | | 0.000 | | 0.000 | 70.961 | 0.000 |
| II Ten-Daily | 71.652 | 0.730 | 71.504 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| III Ten-Daily | 71.611 | 0.547 | 71.421 | 0.000 | | 0.000 | | 0.000 | 70.930 | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 71.577 | 0.120 | 71.387 | 0.000 | 71.377 | 0.000 | | 0.000 | 70.917 | 0.000 | 70.917 | 0.000 |
| Max. | 71.717 | 1.407 | 71.667 | 0.850 | 71.427 | 0.000 | | 0.000 | 70.977 | 0.000 | 70.977 | 0.000 |
| Mean | 71.628 | 0.647 | 71.512 | 0.182 | 71.399 | 0 | | 0 | 70.930 | 0 | 70.961 | 0 |

**Peak Computed Discharge = 11.90 cumecs on 25/09/2016** **Corres. Water Level :72.197 m**

**Lowest Computed Discharge = 0.120 cumecs on 11/12/2016** **Corres. Water Level :71.617 m**

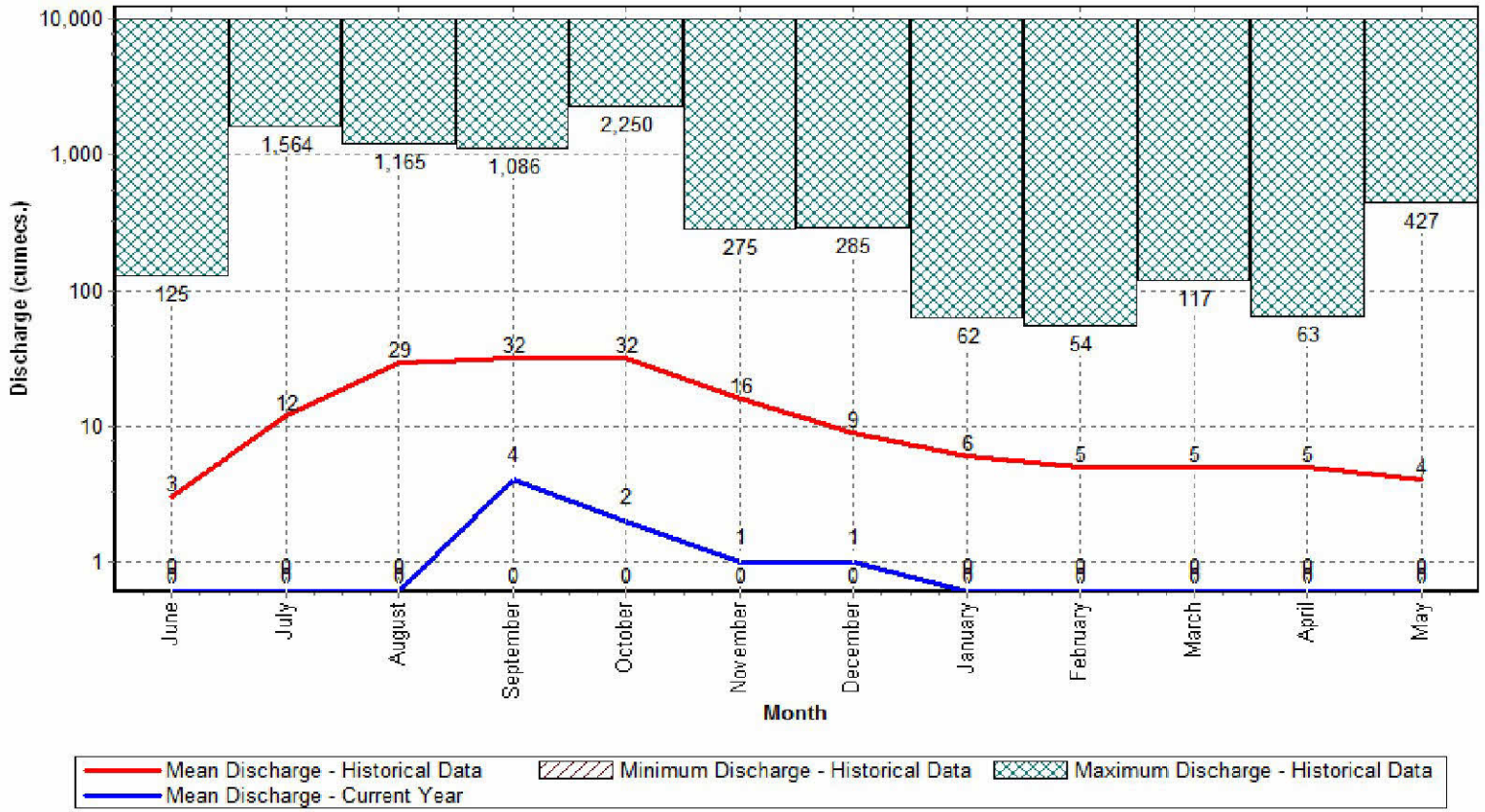
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Paleru Bridge ( AKC00D3)** | **Data considered : 1965-2017** | **Division : Lower Krishna Divn., Hyderabad**

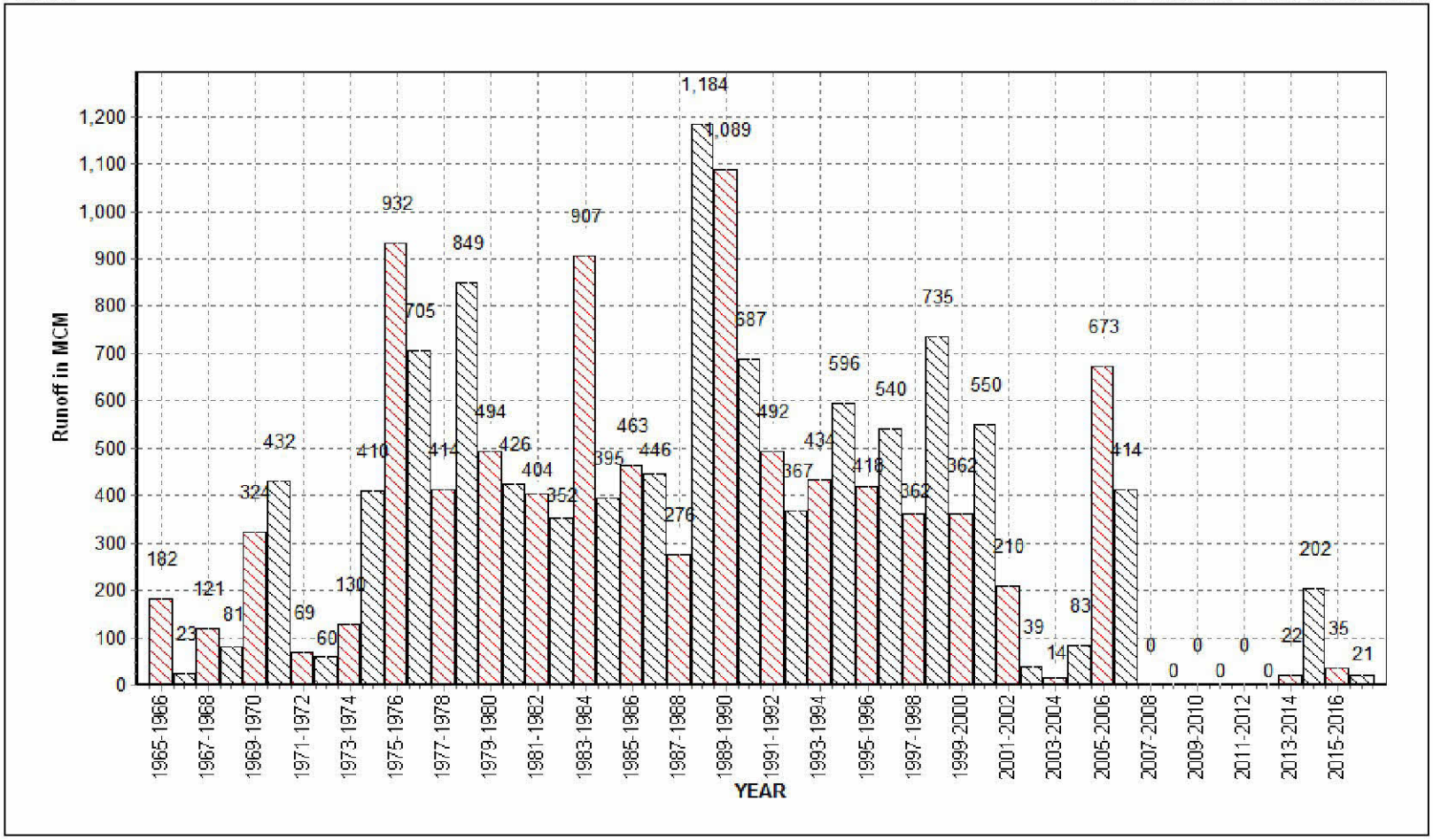
**Local River : Paleru** | **Sub-Division : Lower Krishna SD2, Vijayawada**



**Annual Runoff Values for the period: 1965 - 2017**

**Station Name : Paleru Bridge ( AKC00D3)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Paleru** **Sub-Division : Lower Krishna SD2, Vijayawada**

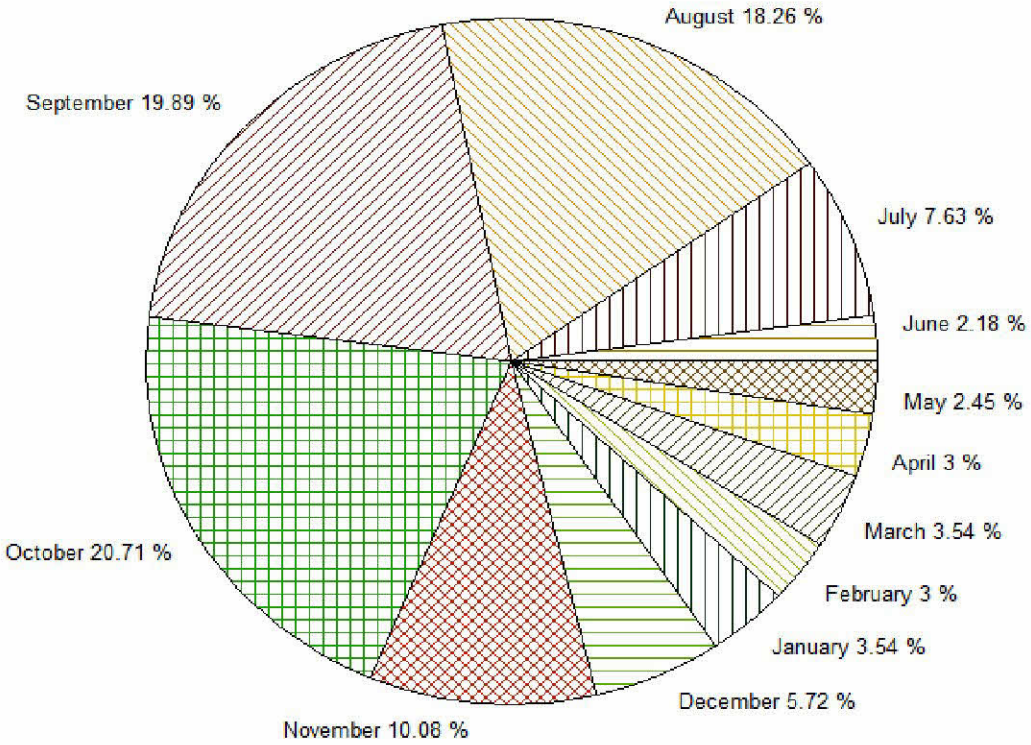



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1965-2016**

**Station Name : Paleru Bridge ( AKC00D3)**
**Local River : Paleru**

**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD2, Vijayawada**

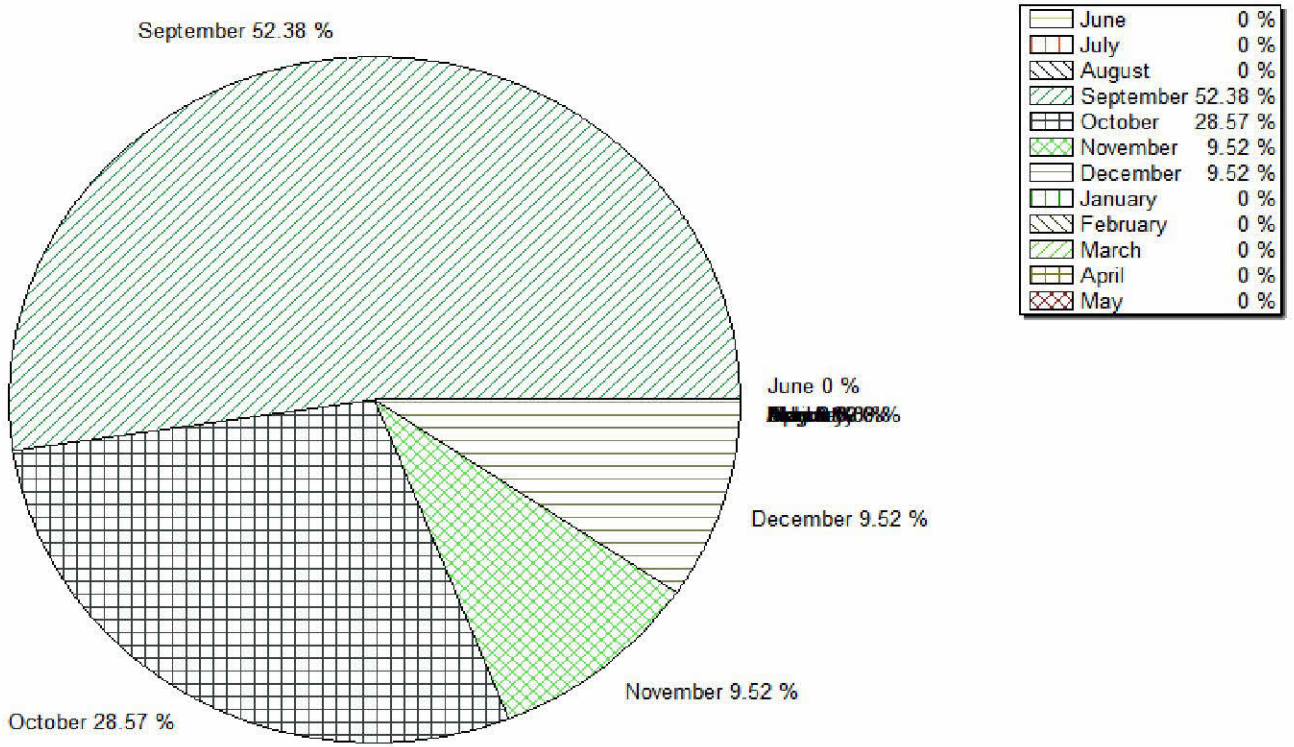



| | |
|---|---|
| June | 2.18 % |
| July | 7.63 % |
| August | 18.26 % |
| September | 19.89 % |
| October | 20.71 % |
| November | 10.08 % |
| December | 5.72 % |
| January | 3.54 % |
| February | 3 % |
| March | 3.54 % |
| April | 3 % |
| May | 2.45 % |

## Monthly Runoff for the Year : 2016-2017

**Station Name : Paleru Bridge ( AKC00D3)**
**Local River : Paleru**

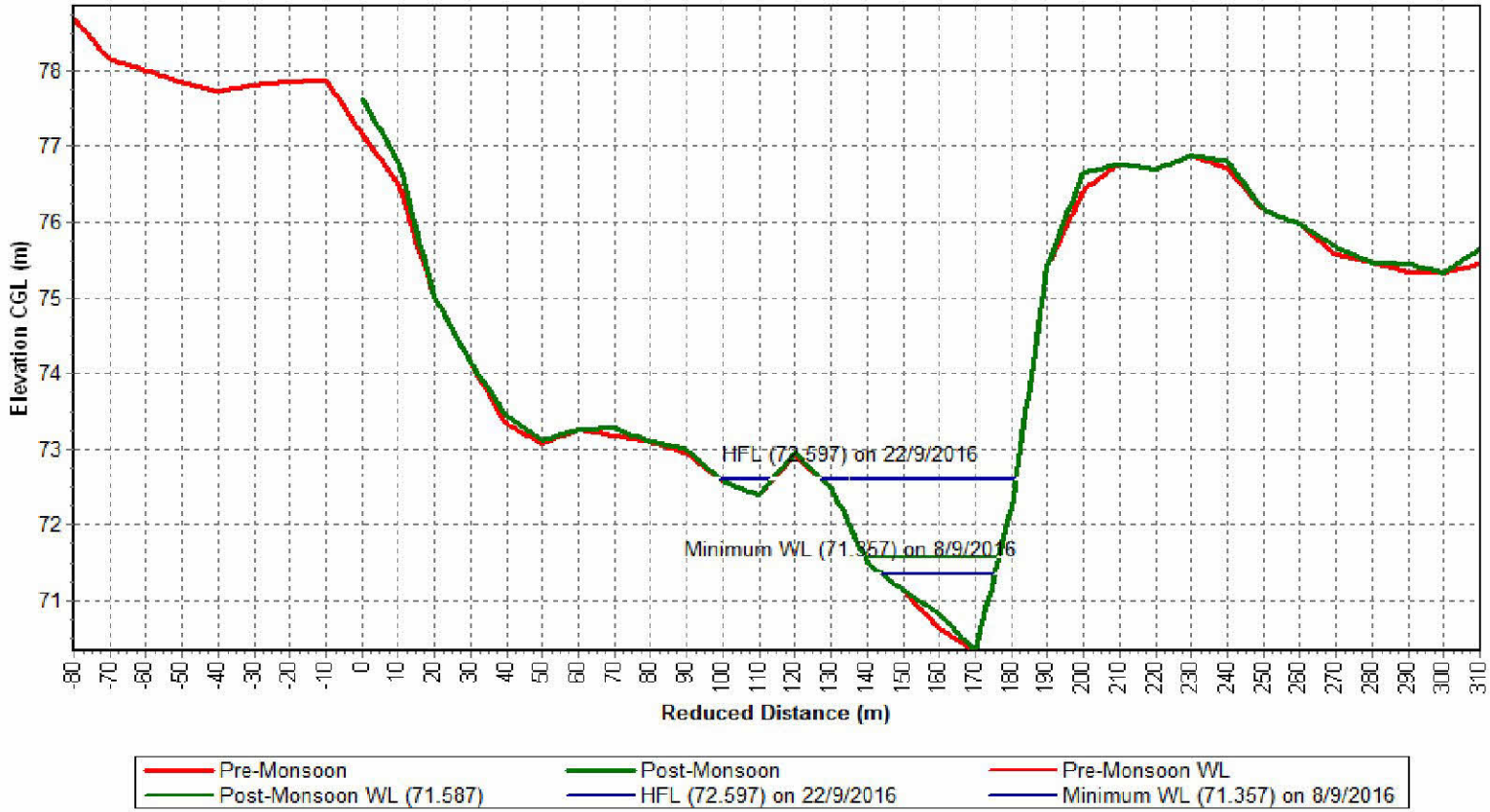
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD2, Vijayawada**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Paleru Bridge ( AKC00D3)** **Division : Lower Krishna Divn., Hyderabad**

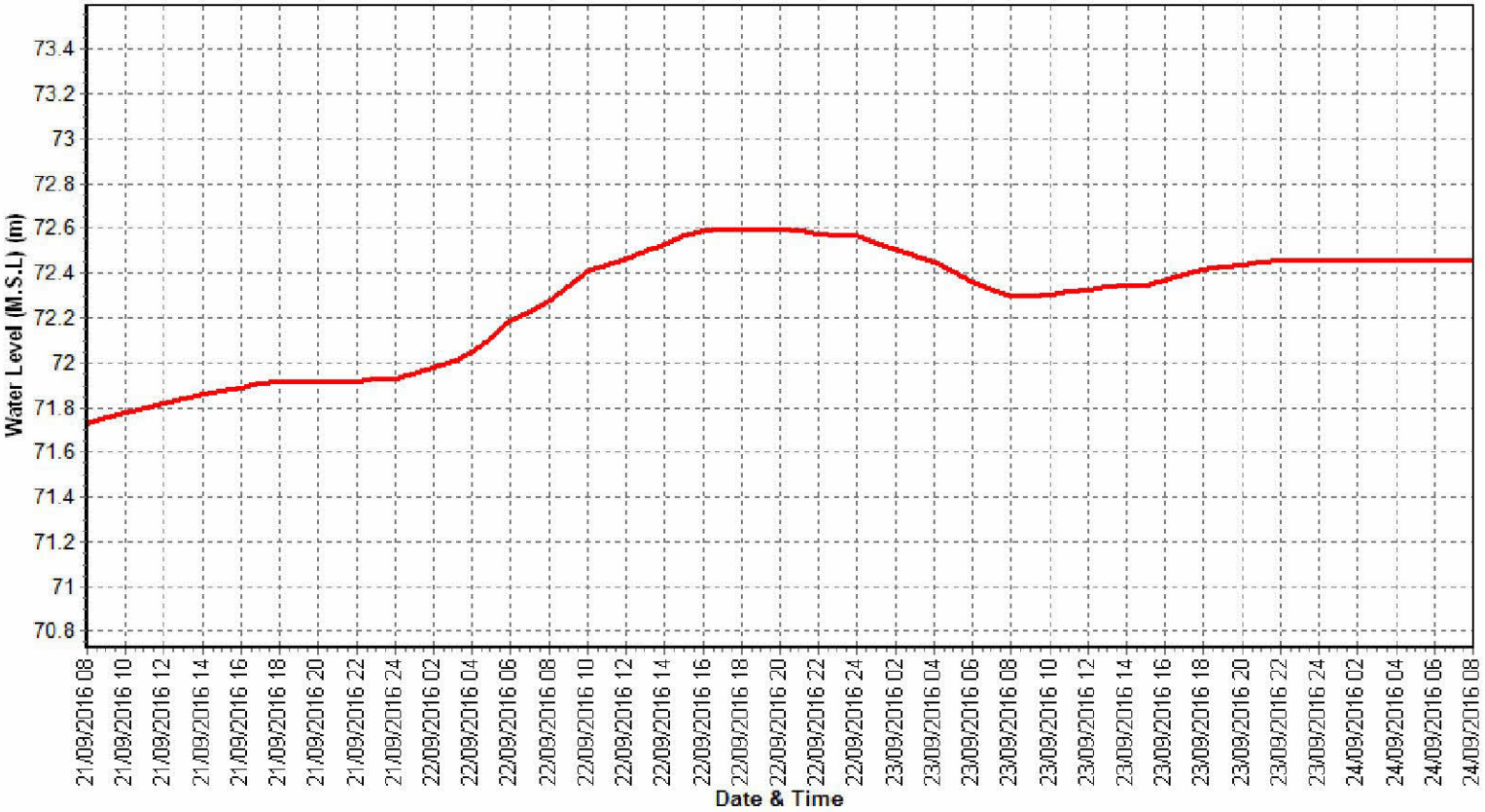
**Local River : Paleru** **Sub-Division : Lower Krishna SD2, Vijayawada**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Paleru Bridge ( AKC00D3)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Paleru** | **Sub-Division : Lower Krishna SD2, Vijayawada**

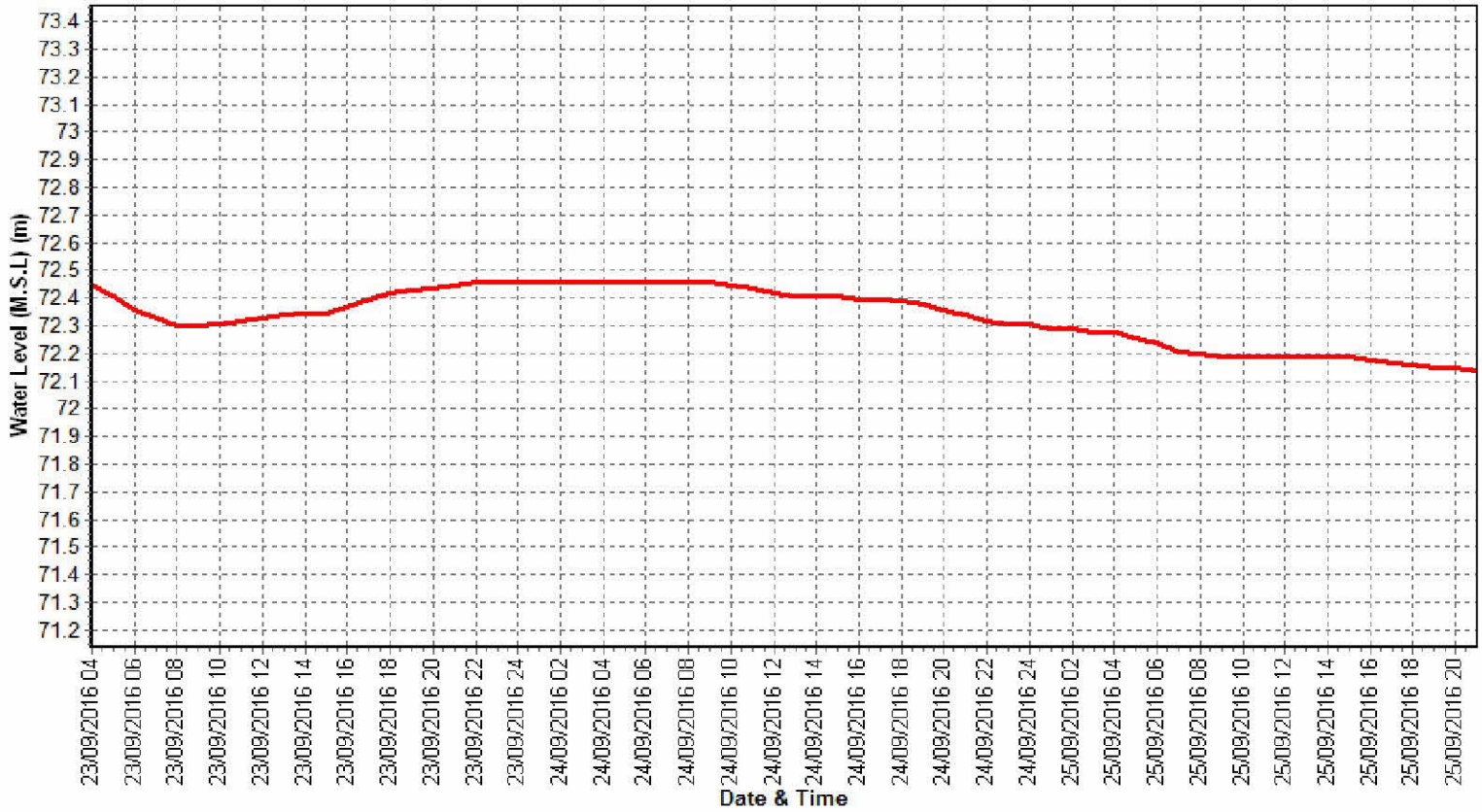



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Paleru Bridge ( AKC00D3)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Paleru** **Sub-Division : Lower Krishna SD2, Vijayawada**

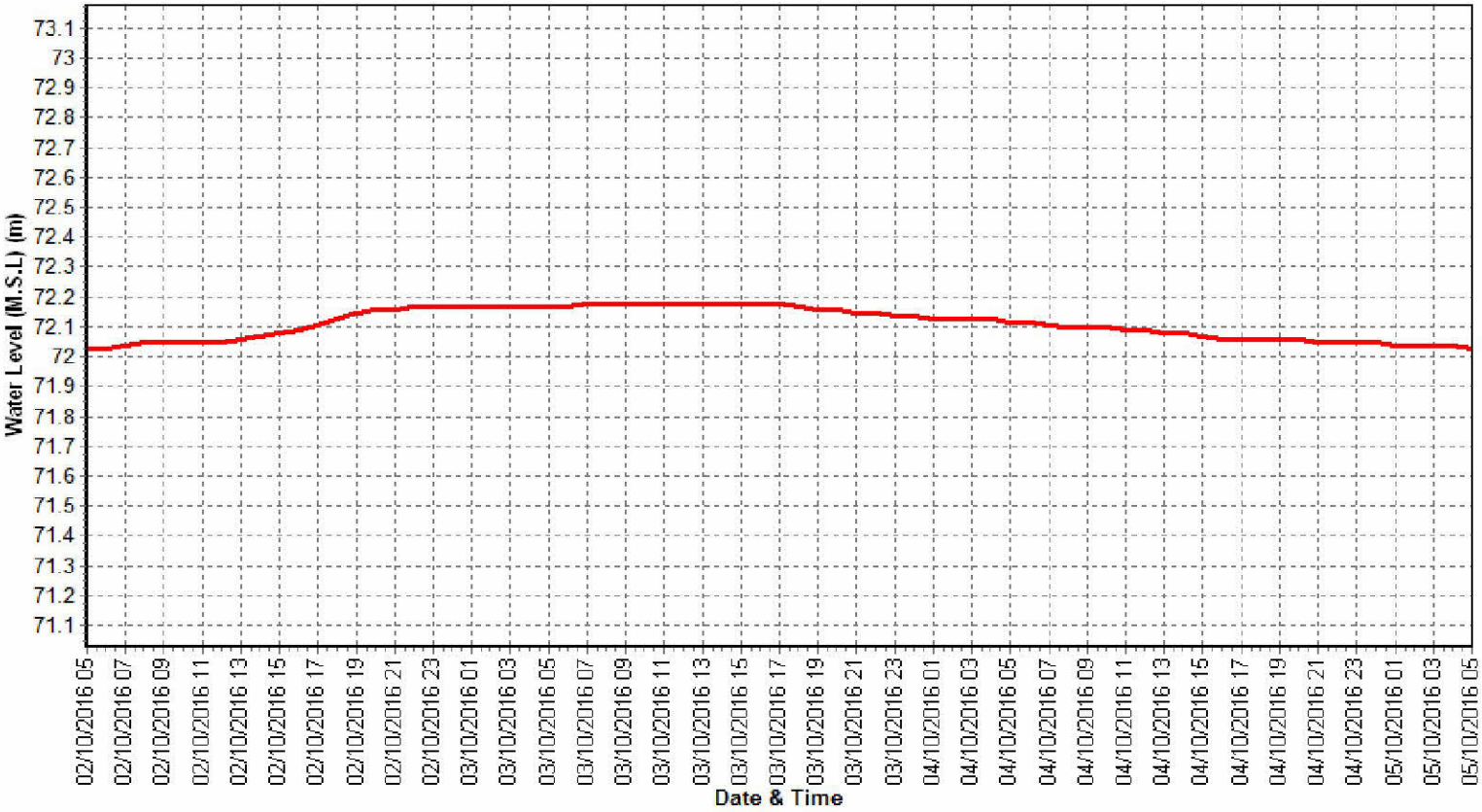



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Paleru Bridge ( AKC00D3)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Paleru** **Sub-Division : Lower Krishna SD2, Vijayawada**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | |
|---|---|---|---|
| **Site** | **: Wadenapally** | **Code** | **: AK000D5** |
| State | : Telangana | District | : Suryapet |
| Basin | : Krishna | Independent River | : Krishna |
| Tributary | : - | Sub Tributary | : - |
| Sub-Sub Tributary | : - | Local River | : Krishna |
| Division | : Lower Krishna Divn., Hyderabad | Sub-Division | : Lower Krishna SD2, Vijayawada |
| Drainage Area | : 235544 Sq. Km. | Bank | : Left |
| Latitude | : 16°47'39" | Longitude | : 80°04'23" |
| **Zero of Gauge (m)** | : 22.054 (m.s.l) | 01/01/1964 | |
| | Opening Date | Closing Date | |
| Gauge | : 27/05/1964 | **HFL During 2016-17** | **: 32.554m** |
| | | **Corres. Discharge** | **: 16228(Estimated)** |
| Discharge | : 10/12/1965 | **Date & Time of occurance** | **: 22/09/2016 : 18.00 hrs.** |
| Sediment | : 01/12/1966 | | |
| Water Quality | : 01/01/1972 | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1966-1967 | 11140 | 35.334 | 05/08/1966 | 1.094 | 24.529 | 16/05/1967 |
| 1967-1968 | 20016 | 38.554 | 06/08/1967 | 2.120 | 24.669 | 14/07/1967 |
| 1968-1969 | 7152 | 33.149 | 14/08/1968 | 20.44 | 24.789 | 17/05/1969 |
| 1969-1970 | 16486 | 37.139 | 08/08/1969 | 7.920 | 24.824 | 21/05/1970 |
| 1970-1971 | 14596 | 36.634 | 23/09/1970 | 0.000 | 24.799 | 29/05/1971 |
| 1971-1972 | 7122 | 32.969 | 07/09/1971 | 0.000 | 24.854 | 15/05/1972 |
| 1972-1973 | 4313 | 30.794 | 18/07/1972 | 0.000 | 24.704 | 02/06/1972 |
| 1973-1974 | 8333 | 33.139 | 18/07/1973 | 2.500 | 24.609 | 06/06/1973 |
| 1974-1975 | 16473 | 36.909 | 29/09/1974 | 6.797 | 24.594 | 02/06/1974 |
| 1975-1976 | 18962 | 38.129 | 13/10/1975 | 8.184 | 24.694 | 30/05/1976 |
| 1976-1977 | 14408 | 36.459 | 11/08/1976 | 2.717 | 24.529 | 06/06/1976 |
| 1977-1978 | 6737 | 33.064 | 02/08/1977 | 79.00 | 25.184 | 06/06/1977 |
| 1978-1979 | 18256 | 37.454 | 02/10/1978 | 14.20 | 24.749 | 22/05/1979 |
| 1979-1980 | 21560 | 37.514 | 30/09/1979 | 128.1 | 25.324 | 12/06/1979 |
| 1980-1981 | 15450 | 36.584 | 14/07/1980 | 20.00 | 24.724 | 11/05/1981 |
| 1981-1982 | 12919 | 35.334 | 24/09/1981 | 125.7 | 25.244 | 13/06/1981 |
| 1982-1983 | 6540 | 32.474 | 31/08/1982 | 148.2 | 25.312 | 17/05/1983 |
| 1983-1984 | 14393 | 36.294 | 22/08/1983 | 82.40 | 24.954 | 14/06/1983 |
| 1984-1985 | 3832 | 30.924 | 21/08/1984 | 59.46 | 24.954 | 26/05/1985 |
| 1985-1986 | 2101 | 28.989 | 14/08/1985 | 50.81 | 24.854 | 01/04/1986 |
| 1986-1987 | 2675 | 29.574 | 13/08/1986 | 5.942 | 24.054 | 13/05/1987 |
| 1987-1988 | 2196 | 29.054 | 05/11/1987 | 4.835 | 24.004 | 07/06/1987 |

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 |
| 1988-1989 | 12959 | 36.374 | 29/09/1988 | 36.16 | 24.894 | 22/05/1989 |
| 1989-1990 | 11930 | 36.074 | 02/10/1989 | 61.22 | 24.994 | 20/06/1989 |
| 1990-1991 | 15540 | 36.034 | 24/08/1990 | 46.14 | 24.894 | 04/06/1990 |
| 1991-1992 | 12693 | 36.344 | 03/08/1991 | 31.32 | 24.804 | 08/06/1991 |
| 1992-1993 | 4913 | 31.363 | 12/09/1992 | 35.70 | 24.824 | 28/06/1992 |
| 1993-1994 | 10144 | 34.276 | 12/10/1993 | 53.30 | 24.774 | 06/06/1993 |
| 1994-1995 | 15575 | 36.974 | 23/07/1994 | 63.31 | 24.914 | 31/05/1995 |
| 1995-1996 | 1581 | 28.214 | 19/10/1995 | 49.16 | 24.774 | 31/05/1996 |
| 1996-1997 | 13740 | 36.809 | 04/10/1996 | 58.38 | 24.989 | 10/06/1996 |
| 1997-1998 | 15214 | 36.714 | 01/09/1997 | 41.58 | 24.754 | 08/06/1997 |
| 1998-1999 | 23689 | 41.144 | 16/10/1998 | 47.17 | 24.854 | 04/05/1999 |
| 1999-2000 | 6212 | 32.904 | 14/08/1999 | 15.00 | 24.854 | 03/06/1999 |
| 2000-2001 | 2957 | 30.224 | 24/08/2000 | 50.72 | 25.174 | 16/04/2001 |
| 2001-2002 | 2414 | 30.194 | 01/10/2001 | 34.17 | 24.734 | 29/05/2002 |
| 2002-2003 | 726.6 | 27.214 | 17/08/2002 | 5.563 | 24.199 | 15/03/2003 |
| 2003-2004 | 388.2 | 26.614 | 25/11/2003 | 5.948 | 24.264 | 24/06/2003 |
| 2004-2005 | 1178 | 28.204 | 05/10/2004 | 2.174 | 24.384 | 20/08/2004 |
| 2005-2006 | 16793 | 37.639 | 11/08/2005 | 4.244 | 24.504 | 26/06/2005 |
| 2006-2007 | 18000 | 37.484 | 16/08/2006 | 16.45 | 24.504 | 22/05/2007 |
| 2007-2008 | 15956 | 36.834 | 20/09/2007 | 16.27 | 24.474 | 31/05/2008 |
| 2008-2009 | 8408 | 32.514 | 17/09/2008 | 9.436 | 24.294 | 31/05/2009 |
| 2009-2010 | 31803 | 42.484 | 05/10/2009 | 7.808 | 24.234 | 10/06/2009 |
| 2010-2011 | 6021 | 31.324 | 08/10/2010 | 13.80 | 24.734 | 08/06/2010 |
| 2011-2012 | 12951 | 35.494 | 09/09/2011 | 7.703 | 24.204 | 15/05/2012 |
| 2012-2013 | 366.0 | 26.174 | 29/11/2012 | 11.72 | 24.284 | 06/04/2013 |
| 2013-2014 | 13434 | 35.704 | 26/10/2013 | 10.74 | 24.354 | 02/06/2013 |
| 2014-2015 | 4272 | 30.304 | 16/09/2014 | 0.000 | 23.794 | 24/06/2014 |
| 2015-2016 | 229.4 | 25.364 | 22/10/2015 | 0.000 | 23.204 | 30/01/2016 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Wadenapally ( AK000D5)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Lower Krishna SD2, Vijayawada**

| 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 | 24.144 | 18.60 | 23.674 | 0.000 | 23.704 | 0.000 | 24.014 | 11.03 | 26.054 | 507.9 | 25.594 | 296.4 |
| 2 | 24.084 | 11.16 | 23.674 | 0.000 | 23.674 | 0.000 | 23.884 | 17.26 | 24.934 | 145.7 * | 25.494 | 263.5 |
| 3 | 24.034 | 5.464 | 23.674 | 0.000 | 23.674 | 0.000 | 23.874 | 13.81 | 25.364 | 186.5 | 25.414 | 239.9 |
| 4 | 23.914 | 4.260 | 23.674 | 0.000 | 23.674 | 0.000 | 23.874 | 13.66 * | 25.364 | 187.5 | 25.404 | 226.0 |
| 5 | 23.894 | 15.39 * | 23.674 | 0.000 | 23.674 | 0.000 | 23.804 | 8.143 * | 24.304 | 13.16 | 25.374 | 236.3 |
| 6 | 23.914 | 4.053 | 23.674 | 0.000 | 23.674 | 0.000 | 23.804 | 7.451 | 24.534 | 90.39 | 25.374 | 227.0 * |
| 7 | 24.084 | 11.06 | 23.674 | 0.000 | 24.544 | 85.26 | 23.804 | 8.059 | 24.534 | 92.37 | 25.374 | 217.8 |
| 8 | 24.114 | 17.55 | 23.674 | 0.000 | 25.404 | 223.0 | 23.804 | 8.998 | 24.154 | 42.50 | 25.374 | 236.2 |
| 9 | 23.734 | 3.581 | 23.674 | 0.000 | 25.564 | 245.2 | 25.519 | 279.6 | 25.804 | 337.5 * | 25.374 | 230.7 |
| 10 | 23.694 | 0.000 | 23.674 | 0.000 | 25.344 | 158.5 | 24.814 | 157.5 | 25.599 | 301.5 | 25.304 | 191.7 |
| 11 | 23.654 | 0.000 | 23.674 | 0.000 | 25.514 | 224.5 | 24.774 | 122.7 * | 25.814 | 340.5 * | 25.304 | 209.7 |
| 12 | 23.654 | 0.000 | 23.674 | 0.000 | 25.494 | 225.4 | 24.799 | 188.8 | 24.354 | 68.17 * | 24.744 | 170.2 |
| 13 | 23.654 | 0.000 | 23.674 | 0.000 | 25.724 | 280.1 | 25.304 | 212.1 * | 24.004 | 10.39 | 25.374 | 227.0 * |
| 14 | 23.654 | 0.000 | 23.674 | 0.000 | 25.414 | 235.8 * | 25.624 | 303.5 | 24.004 | 10.66 | 25.374 | 227.0 * |
| 15 | 23.654 | 0.000 | 23.674 | 0.000 | 25.834 | 346.6 * | 24.924 | 146.3 | 24.414 | 12.53 | 25.534 | 271.4 |
| 16 | 23.654 | 0.000 | 23.674 | 0.000 | 25.964 | 363.7 | 25.734 | 397.2 | 23.994 | 24.86 * | 25.294 | 207.0 |
| 17 | 23.654 | 0.000 | 23.674 | 0.000 | 25.494 | 233.7 | 25.244 | 261.1 | 25.614 | 273.4 | 25.264 | 212.9 |
| 18 | 23.654 | 0.000 | 23.674 | 0.000 | 25.679 | 304.7 | 24.654 | 107.4 * | 24.879 | 154.6 | 24.784 | 159.4 |
| 19 | 23.654 | 0.000 | 23.674 | 0.000 | 25.924 | 391.0 | 25.304 | 265.9 | 25.624 | 251.5 | 24.504 | 84.55 |
| 20 | 23.654 | 0.000 | 23.674 | 0.000 | 26.004 | 410.4 | 25.414 | 286.1 | 25.554 | 248.7 | 24.404 | 75.12 * |
| 21 | 23.654 | 0.000 | 23.674 | 0.000 | 25.934 | 378.1 * | 25.569 | 281.2 | 25.579 | 282.2 | 24.404 | 76.94 |
| 22 | 23.674 | 0.000 | 23.674 | 0.000 | 25.864 | 351.8 | 24.564 | 68.58 | 25.594 | 280.9 | 24.734 | 134.2 |
| 23 | 23.674 | 0.000 | 23.674 | 0.000 | 25.269 | 185.2 | 30.454 | 4919 | 25.594 | 279.2 * | 24.734 | 122.8 |
| 24 | 23.674 | 0.000 | 23.674 | 0.000 | 25.264 | 196.3 | 29.709 | 3579 | 25.594 | 277.2 | 24.734 | 134.8 |
| 25 | 23.674 | 0.000 | 23.674 | 0.000 | 25.324 | 205.5 | 27.354 | 1127 * | 25.564 | 269.2 | 24.404 | 72.12 |
| 26 | 23.674 | 0.000 | 23.674 | 0.000 | 25.154 | 193.1 | 27.434 | 909.6 | 25.544 | 224.7 | 24.504 | 85.21 |
| 27 | 23.674 | 0.000 | 23.674 | 0.000 | 25.034 | 161.0 | 26.129 | 116.2 # | 25.594 | 270.3 | 24.404 | 75.12 * |
| 28 | 23.674 | 0.000 | 23.674 | 0.000 | 24.354 | 68.17 * | 26.734 | 824.4 | 25.004 | 185.2 | 24.404 | 76.36 |
| 29 | 23.674 | 0.000 | 23.674 | 0.000 | 24.124 | 8.772 | 26.004 | 218.1 # | 24.354 | 9.443 | 24.744 | 6.926 |
| 30 | 23.674 | 23.91 | 23.674 | 0.000 | 24.254 | 22.92 | 25.954 | 467.7 | 25.604 | 281.8 * | 24.704 | 5.646 |
| 31 | | | 23.684 | 0.000 | 24.154 | 18.14 | | | 25.634 | 317.7 | | |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 23.961 | 9.111 | 23.674 | 0.000 | 24.293 | 71.19 | 24.119 | 52.55 | 25.065 | 190.5 | 25.408 | 236.5 |
| II Ten-Daily | 23.654 | 0.000 | 23.674 | 0.000 | 25.705 | 301.6 | 25.178 | 229.1 | 24.825 | 139.5 | 25.058 | 184.4 |
| III Ten-Daily | 23.672 | 2.391 | 23.675 | 0.000 | 24.975 | 162.6 | 26.990 | 1251 | 25.424 | 243.4 | 24.577 | 79.01 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 23.654 | 0.000 | 23.674 | 0.000 | 23.674 | 0.000 | 23.804 | 7.451 | 23.994 | 9.443 | 24.404 | 5.646 |
| Max. | 24.144 | 23.91 | 23.684 | 0.000 | 26.004 | 410.4 | 30.454 | 4919 | 26.054 | 507.9 | 25.594 | 296.4 |
| Mean | 23.762 | 3.834 | 23.674 | 0 | 24.990 | 178 | 25.429 | 510.9 | 25.115 | 192.8 | 25.014 | 166.7 |

**Annual Runoff in MCM = 3634 Annual Runoff in mm = 15**

**Peak Observed Discharge = 4919 cumecs on 23/09/2016 Corres. Water Level :30.454 m**

**Lowest Observed Discharge = 0.000 cumecs on 10/06/2016 Corres. Water Level :23.694 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 2016 - 2017

**Station Name : Wadenapally ( AK000D5)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Lower Krishna SD2, Vijayawada**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 24.504 | 86.29 | 24.564 | 105.1 * | 24.214 | 51.65 | 24.134 | 39.37 | 24.174 | 36.99 | 23.654 | 3.496 |
| 2 | 24.504 | 82.90 | 24.694 | 122.4 | 24.214 | 51.94 | 24.294 | 39.37 | 24.034 | 30.32 * | 23.644 | 3.439 |
| 3 | 24.454 | 79.60 | 23.854 | 16.50 | 24.214 | 48.81 | 24.034 | 34.52 | 23.914 | 17.66 | 23.704 | 8.578 |
| 4 | 24.454 | 85.69 * | 24.564 | 110.3 | 24.214 | 51.75 | 24.034 | 33.07 | 23.954 | 25.42 | 23.704 | 8.214 |
| 5 | 24.404 | 79.64 | 24.574 | 112.8 | 24.214 | 49.43 * | 24.034 | 30.32 * | 24.014 | 28.52 * | 23.704 | 8.501 |
| 6 | 24.404 | 69.64 | 24.584 | 115.1 | 24.234 | 57.07 | 24.034 | 34.70 | 24.014 | 27.66 | 23.704 | 9.057 |
| 7 | 24.354 | 72.81 | 24.584 | 109.7 | 24.234 | 59.40 | 24.004 | 31.80 | 23.924 | 19.92 | 23.704 | 8.186 * |
| 8 | 24.354 | 70.98 | 24.564 | 105.1 * | 24.234 | 58.37 | 24.014 | 32.50 | 23.854 | 14.89 | 23.704 | 7.806 |
| 9 | 24.354 | 69.53 | 24.544 | 102.5 | 24.464 | 74.52 | 24.324 | 65.02 | 23.904 | 19.70 * | 23.704 | 7.860 |
| 10 | 24.334 | 63.63 | 24.544 | 111.9 | 24.344 | 64.95 | 24.194 | 40.35 | 23.954 | 25.74 | 23.654 | 6.161 * |
| 11 | 24.334 | 65.15 * | 24.544 | 107.0 | 24.344 | 63.83 | 24.134 | 38.81 | 23.954 | 23.04 | 23.654 | 4.406 |
| 12 | 24.334 | 65.15 * | 24.584 | 117.5 | 24.304 | 60.99 * | 24.374 | 71.38 * | 23.894 | 16.25 | 23.604 | 3.275 |
| 13 | 24.644 | 130.3 | 24.584 | 115.2 | 24.294 | 59.36 | 24.354 | 64.11 | 23.884 | 17.33 | 23.604 | 4.018 |
| 14 | 24.479 | 73.65 | 24.634 | 117.9 | 24.274 | 58.55 | 24.244 | 45.41 | 23.894 | 18.99 * | 23.604 | 4.455 * |
| 15 | 24.354 | 44.02 # | 24.634 | 117.3 * | 24.274 | 58.00 | 24.124 | 34.49 | 23.864 | 13.72 | 23.604 | 3.752 |
| 16 | 24.244 | 40.69 | 24.634 | 117.8 | 24.254 | 57.44 | 23.954 | 58.00 | 23.864 | 16.94 * | 23.604 | 3.506 |
| 17 | 24.034 | 35.17 | 24.634 | 117.2 | 24.234 | 54.68 | 23.904 | 18.33 | 23.864 | 14.09 | 23.604 | 4.118 |
| 18 | 24.354 | 68.01 * | 24.584 | 107.5 | 24.234 | 55.16 | 24.204 | 47.09 | 23.954 | 24.09 | 23.534 | 1.740 |
| 19 | 24.214 | 52.37 | 24.554 | 104.4 | 24.234 | 51.88 * | 24.344 | 66.57 * | 23.904 | 17.88 | 23.504 | 1.748 |
| 20 | 24.564 | 127.6 | 24.534 | 102.7 | 24.184 | 37.01 | 24.339 | 73.07 | 23.854 | 13.93 | 23.504 | 1.678 |
| 21 | 24.564 | 128.4 | 24.504 | 88.57 | 24.154 | 44.15 | 24.304 | 56.10 | 24.129 | 43.74 | 24.744 | 136.3 * |
| 22 | 25.354 | 222.2 | 24.444 | 83.91 * | 24.154 | 40.15 | 24.174 | 39.82 | 23.634 | 2.676 | 24.804 | 123.2 |
| 23 | 24.744 | 127.5 | 24.434 | 79.65 | 24.289 | 79.18 # | 24.314 | 60.57 | 23.554 | 3.053 * | 25.234 | 161.4 |
| 24 | 24.684 | 120.1 | 24.404 | 69.08 | 24.474 | 88.08 | 24.304 | 55.14 | 23.554 | 2.985 | 25.514 | 188.4 |
| 25 | 24.654 | 120.8 * | 24.404 | 76.56 | 24.364 | 62.41 | 24.194 | 42.39 | 23.504 | 1.803 | 24.134 | 197.0 |
| 26 | 24.594 | 98.56 | 24.404 | 76.77 * | 24.334 | 65.15 * | 24.194 | 47.04 * | 23.454 | 1.041 | 23.704 | 37.70 |
| 27 | 24.524 | 88.33 | 24.474 | 94.87 | 24.244 | 51.83 | 23.904 | 20.23 | 23.434 | 0.596 | 23.594 | 9.382 |
| 28 | 24.454 | 91.59 | 24.454 | 84.68 | 24.184 | 39.07 | 23.834 | 11.70 | 23.434 | 0.570 | 23.474 | 1.409 * |
| 29 | 24.354 | 77.42 | 24.204 | 48.23 * | | | 24.224 | 50.64 * | 23.904 | 13.67 | 23.474 | 1.749 |
| 30 | 24.454 | 84.93 | 24.194 | 48.41 | | | 24.344 | 65.12 | 23.754 | 10.54 * | 24.664 | 1.707 |
| 31 | 24.564 | 105.5 | 24.194 | 50.22 | | | 24.294 | 54.55 | | | | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 24.412 | 76.07 | 24.507 | 101.1 | 24.258 | 56.79 | 24.110 | 38.10 | 23.974 | 24.68 | 23.688 | 7.130 |
| II Ten-Daily | 24.356 | 70.22 | 24.592 | 112.4 | 24.263 | 55.69 | 24.198 | 51.73 | 23.893 | 17.63 | 23.582 | 3.270 |
| III Ten-Daily | 24.631 | 115.0 | 24.374 | 72.81 | 24.275 | 58.75 | 24.189 | 45.75 | 23.636 | 8.067 | 24.334 | 78.03 |
| Monthly | | | | | | | | | | | | |
| Min. | 24.034 | 35.17 | 23.854 | 16.50 | 24.154 | 37.01 | 23.834 | 11.70 | 23.434 | 0.570 | 23.474 | 0.000 |
| Max. | 25.354 | 222.2 | 24.694 | 122.4 | 24.474 | 88.08 | 24.374 | 73.07 | 24.174 | 43.74 | 25.514 | 197.0 |
| Mean | 24.472 | 88.01 | 24.487 | 94.74 | 24.265 | 56.96 | 24.166 | 45.21 | 23.834 | 16.79 | 23.868 | 31.04 |

**Peak Computed Discharge = 1127 cumecs on 25/09/2016** **Corres. Water Level :27.354 m**

**Lowest Computed Discharge = 1.409 cumecs on 28/05/2017** **Corres. Water Level :23.474 m**

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

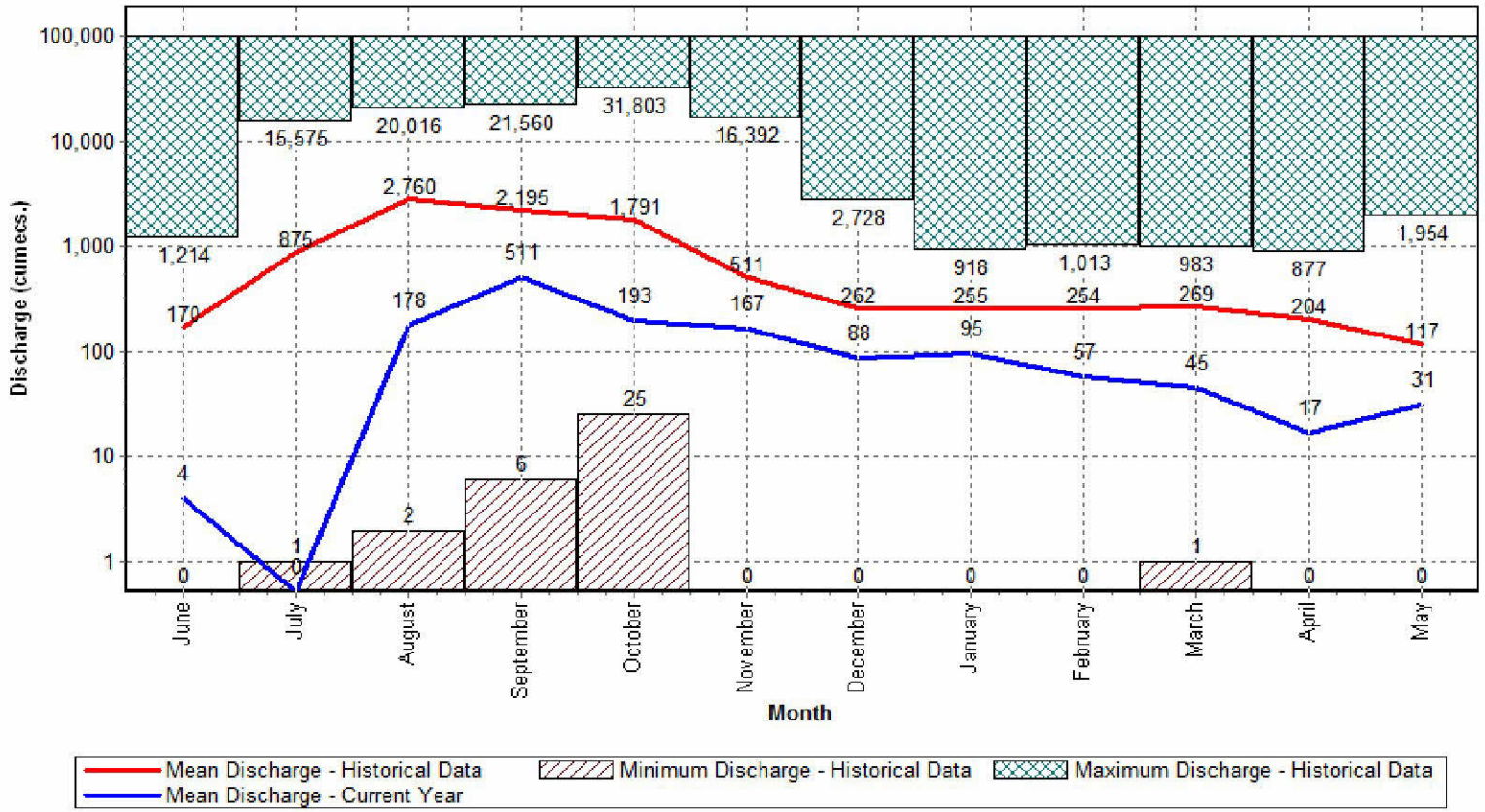
#:Discarded Discharge (values changed as per rating curve)

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Wadenapally ( AK000D5)** | **Data considered : 1966-2017** | **Division : Lower Krishna Divn., Hyderabad**

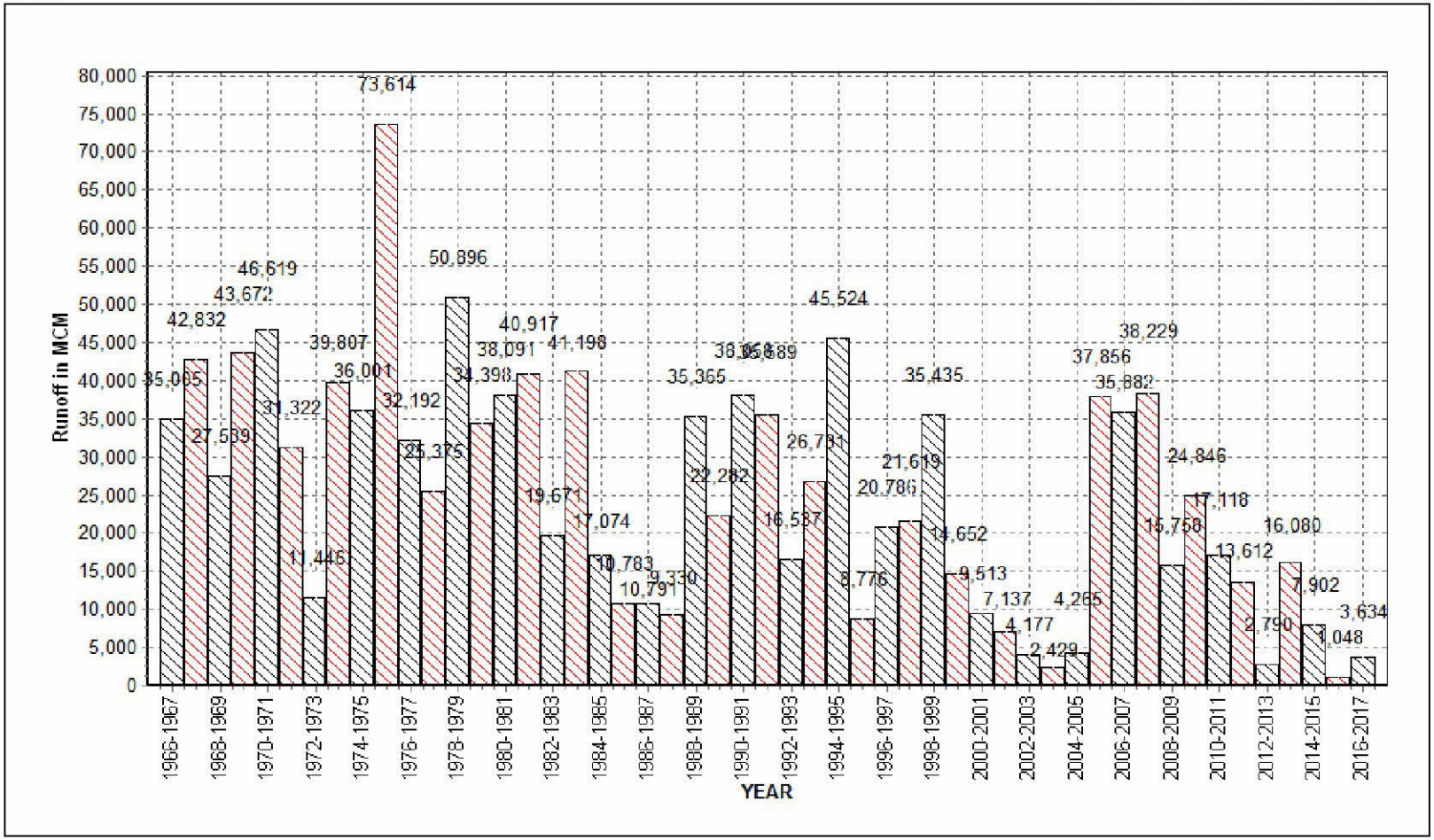
**Local River : Krishna** | **Sub-Division : Lower Krishna SD2, Vijayawada**



**Annual Runoff Values for the period: 1966 - 2017**

**Station Name : Wadenapally ( AK000D5)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Lower Krishna SD2, Vijayawada**

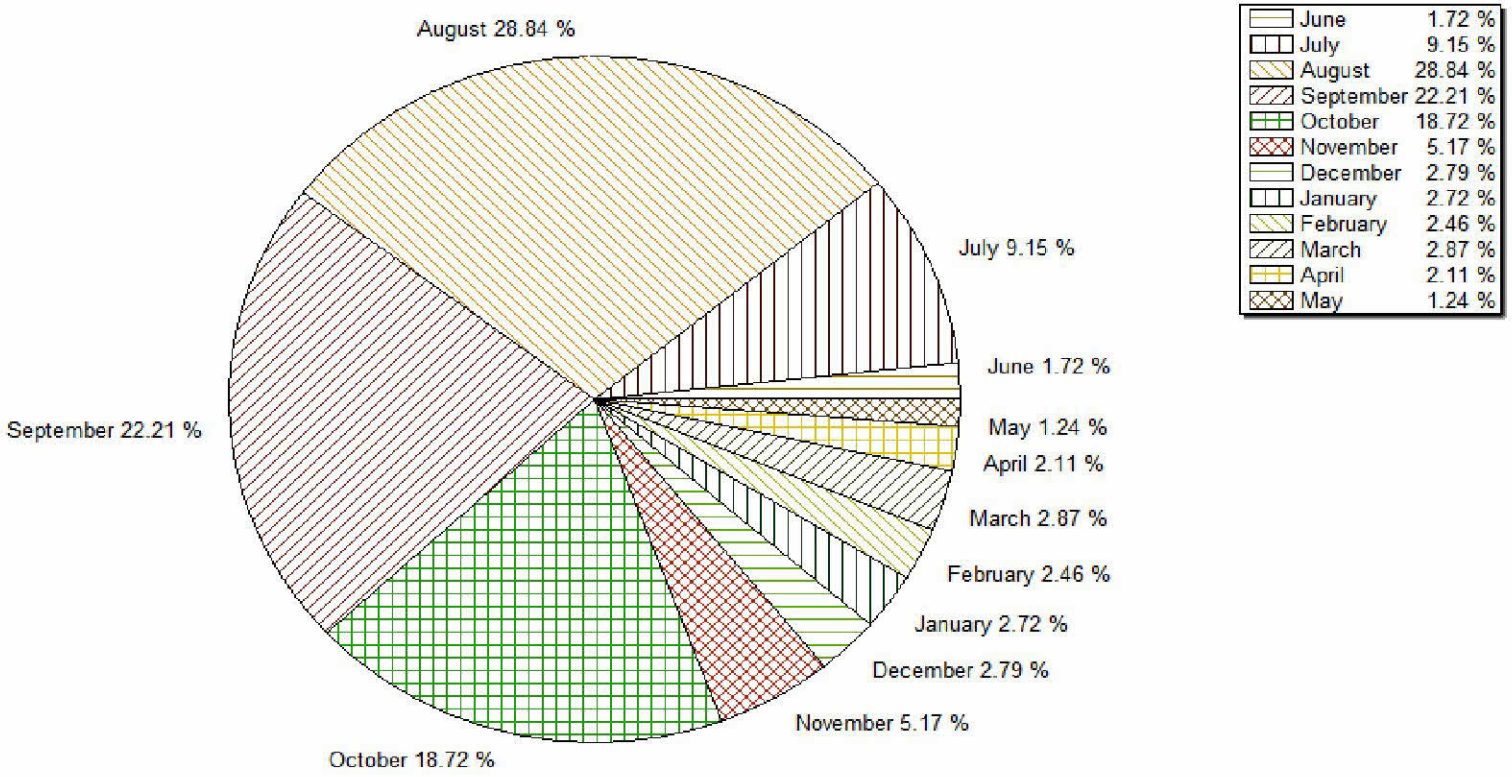



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1966-2016**

**Station Name : Wadenapally ( AK000D5)**
**Local River : Krishna**

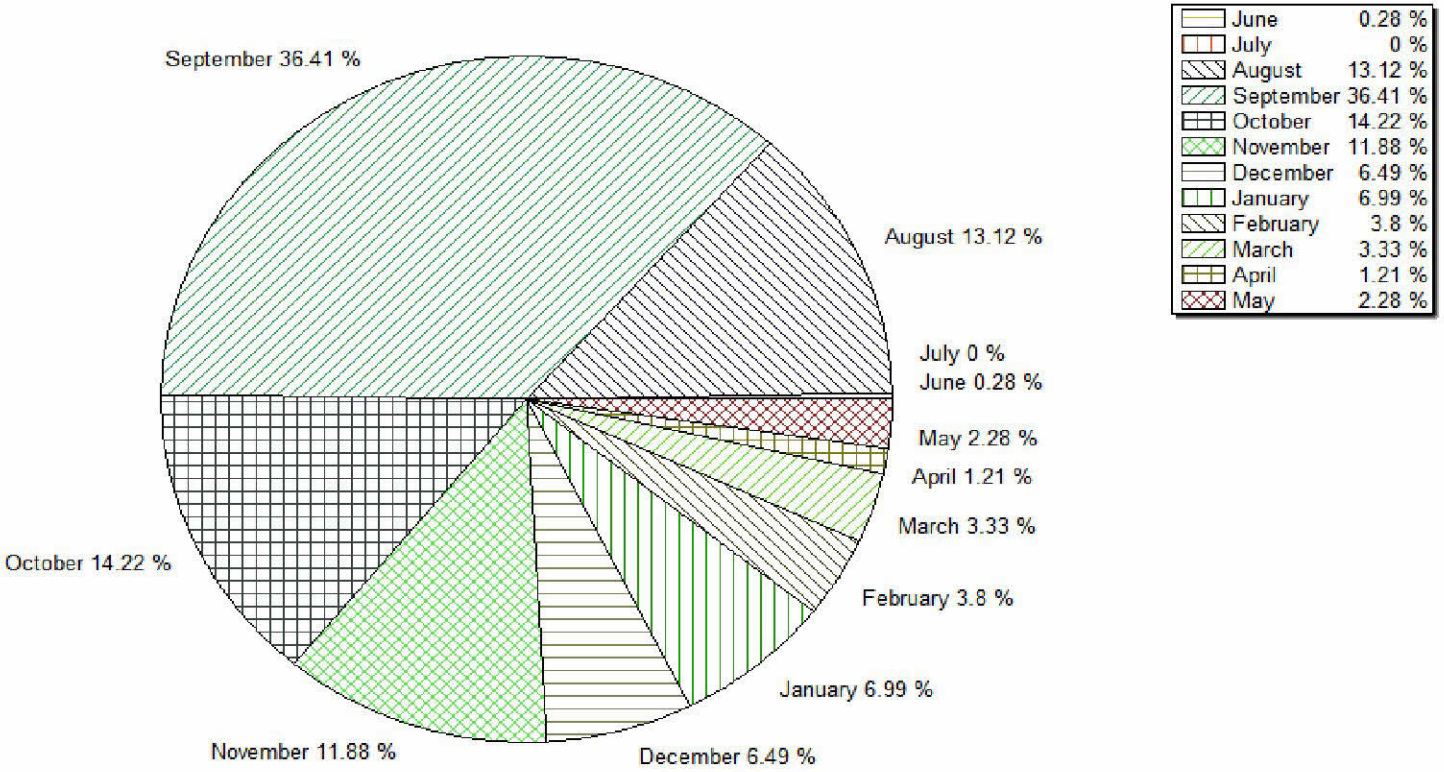
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD2, Vijayawada**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Wadenapally ( AK000D5)**
**Local River : Krishna**

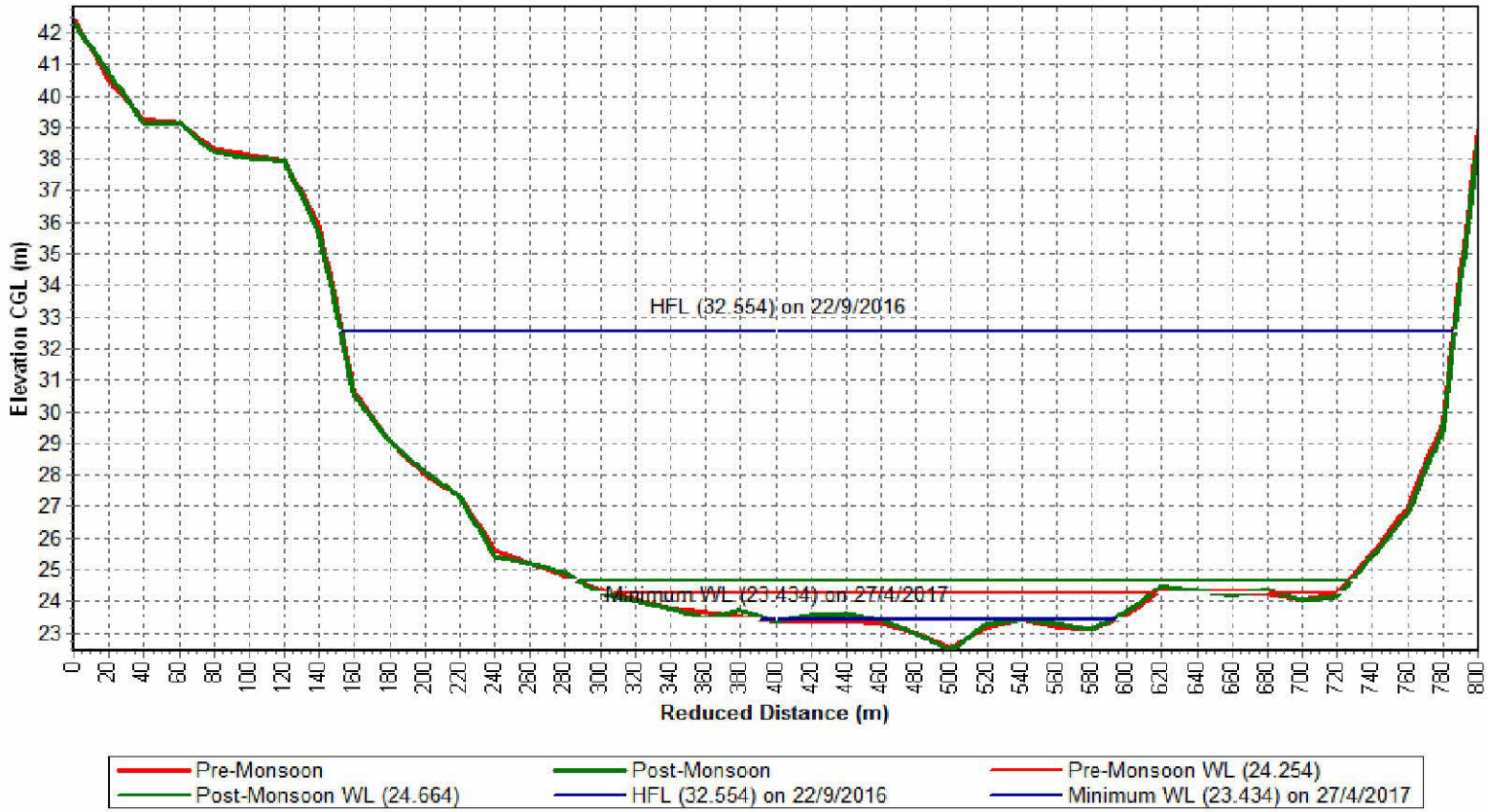
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD2, Vijayawada**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Wadenapally ( AK000D5)** **Division : Lower Krishna Divn., Hyderabad**

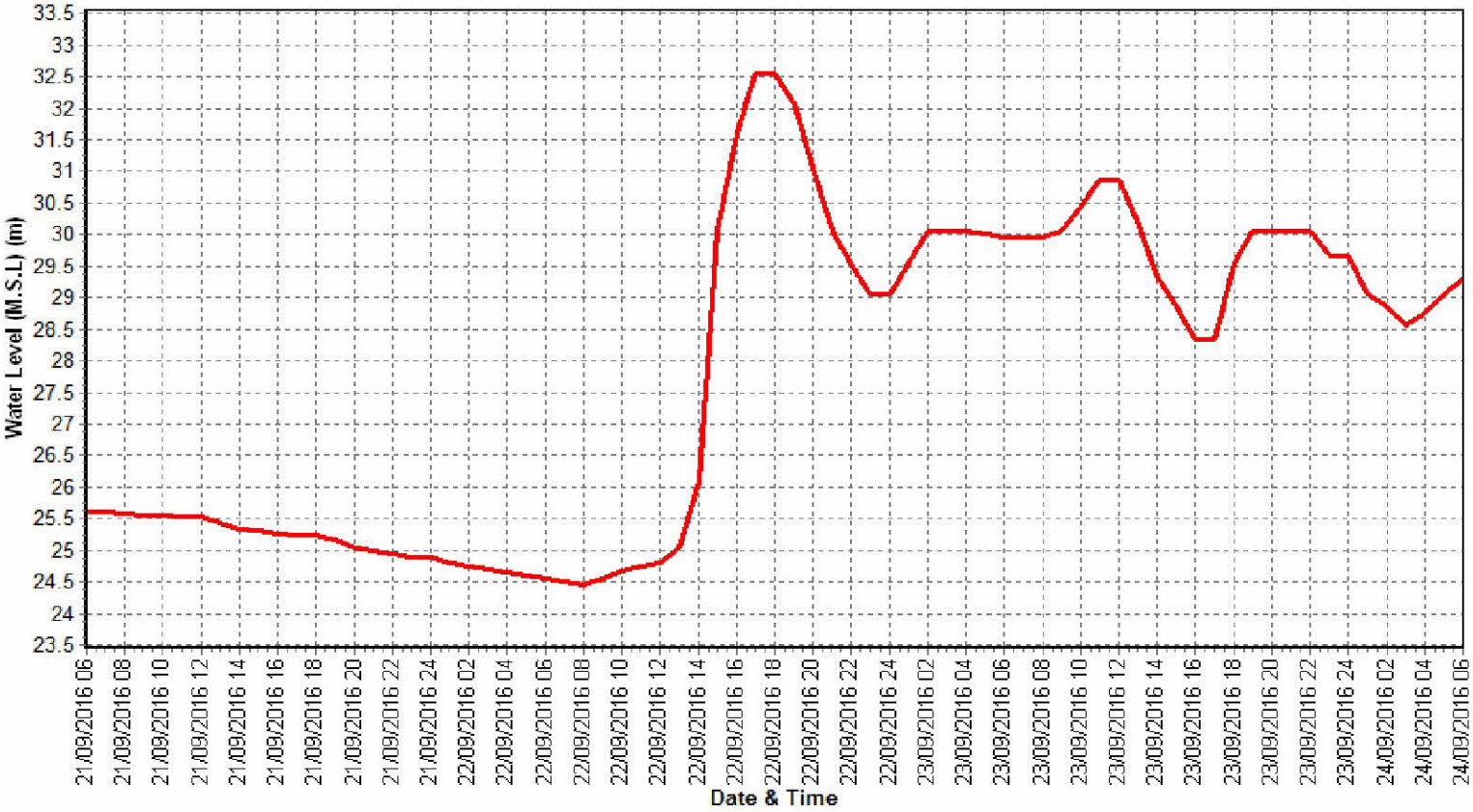
**Local River : Krishna** **Sub-Division : Lower Krishna SD2, Vijayawada**



**Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017**

**Station Name : Wadenapally ( AK000D5)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Lower Krishna SD2, Vijayawada**

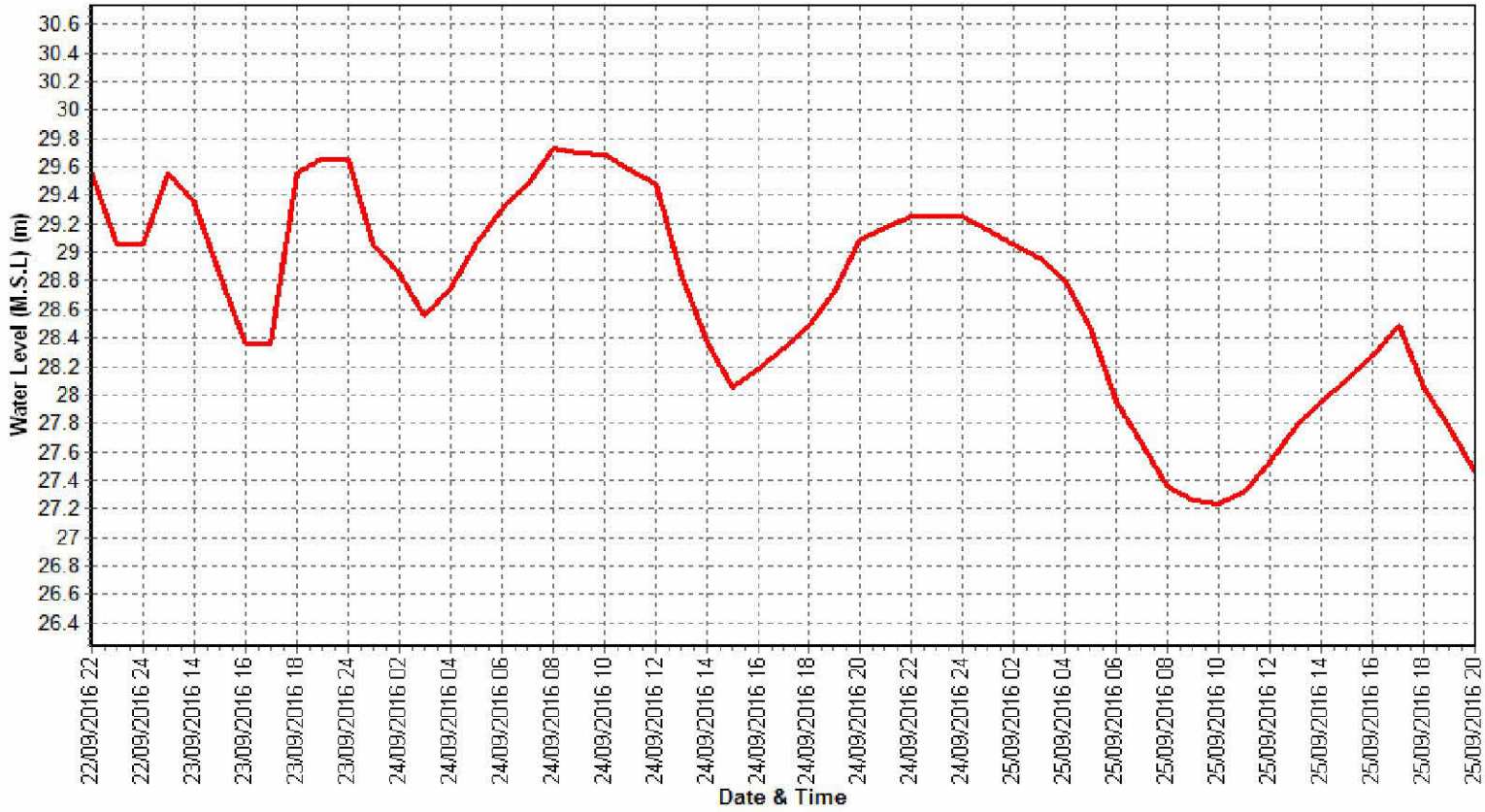



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Wadenapally ( AK000D5)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Lower Krishna SD2, Vijayawada**

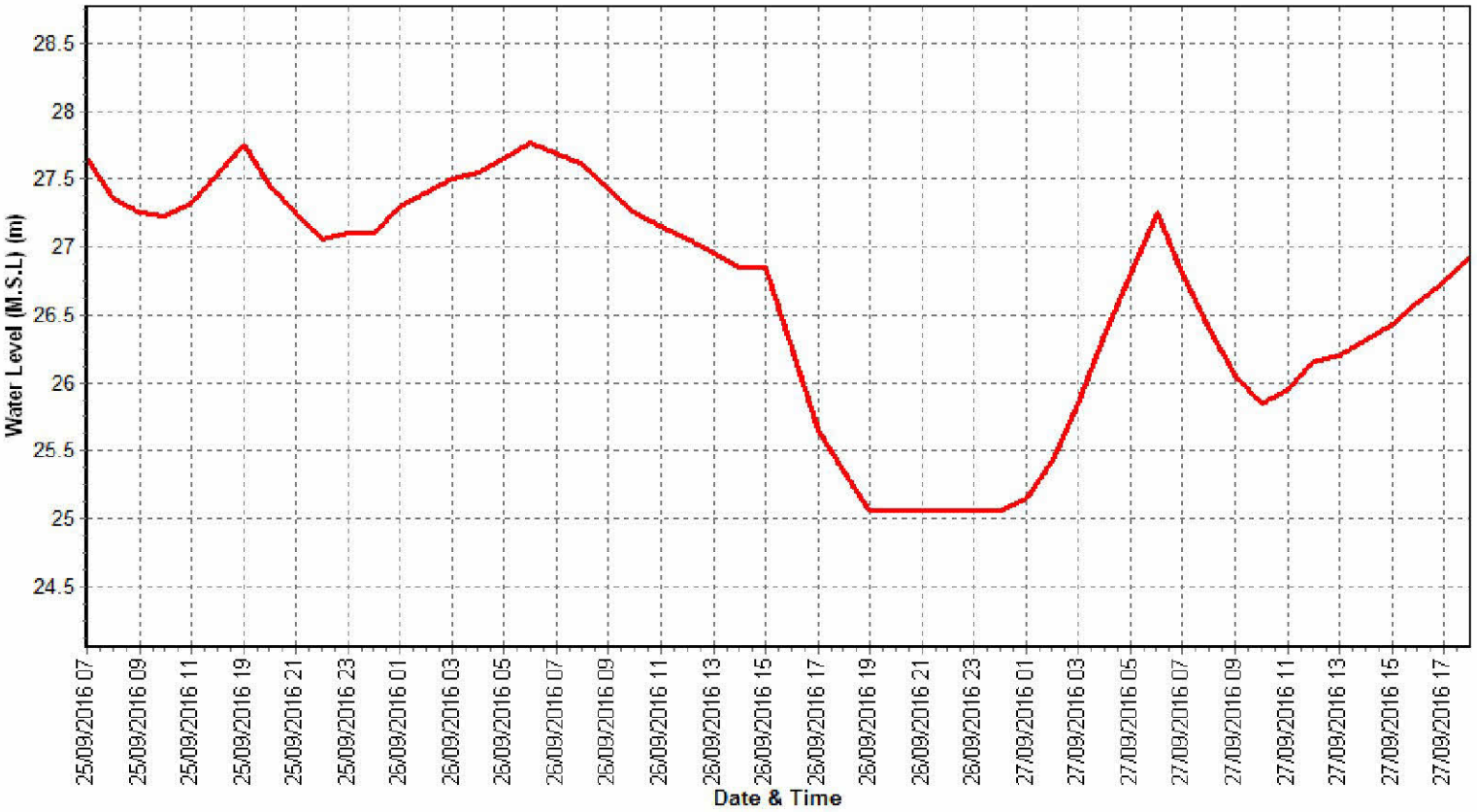



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Wadenapally ( AK000D5)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Lower Krishna SD2, Vijayawada**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Dameracherla** | | **Code** | **: AKF00A7** | |
| State | : Telangana | | District | Nalgonda | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Musi | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Musi | |
| Division | : Lower Krishna Divn., Hyderabad | | Sub-Division | : Lower Krishna SD 1, N.S.Dam | |
| Drainage Area | : 11501 Sq. Km. | | Bank | : Right | |
| Latitude | : 16°44'21" | | Longitude | : 79°40'11" | |
| **Zero of Gauge (m)** | : 56 (m.s.l)<br>55 (m.s.l)<br>53 (m.s.l) | | 01/06/1968<br>01/06/1972<br>01/06/2010 | - 31/05/1972<br>- 31/05/2010 | |
| | Opening Date | | Closing Date | | |
| Gauge | : 01/12/1967 | | **HFL During 2016-17** | **: 58.570m** | |
| Discharge | : 27/07/1968 | | **Corres. Discharge** | **: 2146(Estimated)** | |
| Sediment | : 02/09/2013 | | **Date & Time of occurance** | **: 23/09/2016 : 15.00 hrs.** | |
| Water Quality | : 01/01/1980 | | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1969-1970 | 215.0 | 57.575 | 06/09/1969 | 1.000 | 56.080 | 31/05/1970 |
| 1970-1971 | 644.0 | 59.180 | 23/09/1970 | 0.689 | 56.050 | 20/06/1970 |
| 1971-1972 | 473.0 | 57.590 | 03/10/1971 | 0.280 | 55.910 | 31/05/1972 |
| 1972-1973 | 275.5 | 57.195 | 06/10/1972 | 0.200 | 55.900 | 12/06/1972 |
| 1973-1974 | 367.5 | 57.300 | 13/08/1973 | 0.200 | 55.740 | 18/06/1973 |
| 1974-1975 | 164.0 | 56.715 | 24/10/1974 | 0.500 | 55.690 | 16/05/1975 |
| 1975-1976 | 1389 | 58.570 | 08/10/1975 | 1.100 | 55.685 | 11/06/1975 |
| 1976-1977 | 921.7 | 57.785 | 05/09/1976 | 0.800 | 55.410 | 09/06/1976 |
| 1977-1978 | 155.9 | 56.320 | 23/08/1977 | 0.900 | 55.335 | 13/06/1977 |
| 1978-1979 | 1420 | 58.790 | 16/08/1978 | 0.700 | 55.300 | 05/06/1978 |
| 1979-1980 | 662.5 | 57.300 | 28/09/1979 | 0.500 | 55.250 | 22/06/1979 |
| 1980-1981 | 143.0 | 56.400 | 18/09/1980 | 0.200 | 55.130 | 20/04/1981 |
| 1981-1982 | 380.8 | 56.900 | 10/10/1981 | 0.100 | 55.230 | 13/04/1982 |
| 1982-1983 | 684.2 | 57.513 | 20/10/1982 | 0.100 | 55.225 | 11/06/1982 |
| 1983-1984 | 5762 | 61.065 | 06/10/1983 | 0.000 | 55.100 | 20/06/1983 |
| 1984-1985 | 132.1 | 56.250 | 02/08/1984 | 0.600 | 55.245 | 13/07/1984 |
| 1985-1986 | 283.2 | 57.100 | 13/08/1985 | 0.400 | 55.130 | 25/05/1986 |
| 1986-1987 | 194.5 | 56.730 | 13/08/1986 | 0.300 | 55.130 | 02/06/1986 |
| 1987-1988 | 247.3 | 56.750 | 04/11/1987 | 0.097 | 55.090 | 09/06/1987 |
| 1988-1989 | 1356 | 58.450 | 20/09/1988 | 0.153 | 55.030 | 06/06/1988 |
| 1989-1990 | 2656 | 61.335 | 24/07/1989 | 0.545 | 55.110 | 04/07/1989 |

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 |
| 1990-1991 | 395.0 | 57.140 | 31/08/1990 | 0.538 | 55.100 | 29/06/1990 |
| 1991-1992 | 1077 | 58.751 | 22/09/1991 | 2.142 | 55.129 | 05/06/1991 |
| 1992-1993 | 121.6 | 56.291 | 11/09/1992 | 0.310 | 55.060 | 11/07/1992 |
| 1993-1994 | 171.9 | 56.500 | 10/10/1993 | 0.407 | 55.089 | 27/06/1993 |
| 1994-1995 | 744.4 | 57.500 | 06/10/1994 | 0.543 | 55.090 | 29/07/1994 |
| 1995-1996 | 915.9 | 57.710 | 20/10/1995 | 0.718 | 55.040 | 30/05/1996 |
| 1996-1997 | 538.5 | 57.170 | 08/09/1996 | 0.447 | 55.010 | 14/06/1996 |
| 1997-1998 | 196.5 | 56.450 | 23/09/1997 | 0.000 | 55.080 | 25/07/1997 |
| 1998-1999 | 1659 | 60.520 | 16/10/1998 | 0.000 | | 17/07/1998 |
| 1999-2000 | 225.9 | 56.570 | 07/09/1999 | 0.700 | 55.000 | 21/05/2000 |
| 2000-2001 | 1270 | 58.450 | 23/08/2000 | 0.708 | 55.000 | 24/07/2000 |
| 2001-2002 | 922.1 | 57.775 | 30/09/2001 | 0.008 | 54.750 | 23/07/2001 |
| 2002-2003 | 4.286 | 55.140 | 16/12/2002 | 0.000 | | 19/04/2003 |
| 2003-2004 | 42.52 | 55.590 | 24/08/2003 | 0.000 | 54.700 | 02/12/2003 |
| 2004-2005 | 272.3 | 56.400 | 06/10/2004 | 0.000 | 54.960 | 09/08/2004 |
| 2005-2006 | 699.0 | 58.800 | 30/10/2005 | 0.000 | 55.140 | 12/07/2005 |
| 2006-2007 | 446.1 | 56.345 | 28/10/2006 | 0.000 | 54.800 | 08/07/2006 |
| 2007-2008 | 353.8 | 56.620 | 25/03/2008 | 0.000 | 54.900 | 09/07/2007 |
| 2008-2009 | 1327 | 58.600 | 10/08/2008 | 0.827 | 55.000 | 22/06/2008 |
| 2009-2010 | 4300 | 62.500 | 05/10/2009 | 0.000 | 54.500 | 15/08/2009 |
| 2010-2011 | 461.5 | 57.150 | 28/08/2010 | 0.989 | 54.920 | 20/06/2010 |
| 2011-2012 | 282.0 | 56.910 | 20/08/2011 | 0.000 | 54.780 | 27/05/2012 |
| 2012-2013 | 107.6 | 55.920 | 03/10/2012 | 0.000 | 54.960 | 21/05/2013 |
| 2013-2014 | 3656 | 60.500 | 26/10/2013 | 0.000 | 54.980 | 05/06/2013 |
| 2014-2015 | 381.0 | 56.690 | 27/10/2014 | 0.000 | | 19/08/2014 |
| 2015-2016 | 100.9 | 55.665 | 21/08/2015 | 0.000 | 54.550 | 12/06/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Dameracherla ( AKF00A7)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Musi** **Sub-Division : Lower Krishna SD 1, N.S.Dam**

| 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 | 54.500 | 0.000 | 54.470 | 0.000 | 55.730 | 101.6 | 55.820 | 102.4 | 55.300 | 16.82 |
| 2 | | 0.000 | 54.500 | 0.000 | 54.470 | 0.000 | 55.280 | 22.39 | 55.820 | 110.2 * | 55.340 | 20.65 |
| 3 | | 0.000 | 54.500 | 0.000 | 54.470 | 0.000 | 55.250 | 19.38 | 55.890 | 129.4 | 55.360 | 28.47 |
| 4 | | 0.000 | 54.500 | 0.000 | 54.480 | 0.000 | 55.200 | 12.84 * | 55.765 | 87.17 | 55.350 | 26.61 |
| 5 | | 0.000 | 54.490 | 0.000 | 54.480 | 0.000 | 55.150 | 9.417 * | 55.700 | 79.85 | 55.300 | 21.97 |
| 6 | | 0.000 | 54.480 | 0.000 | 54.480 | 0.000 | 55.080 | 7.260 | 55.730 | 81.57 | 55.300 | 21.50 * |
| 7 | | 0.000 | 54.480 | 0.000 | 54.480 | 0.000 | 55.040 | 4.143 | 55.600 | 54.21 | 55.280 | 18.94 |
| 8 | | 0.000 | 54.480 | 0.000 | 54.480 | 0.000 | 55.000 | 1.736 | 55.635 | 66.56 | 55.330 | 23.31 |
| 9 | | 0.000 | 54.480 | 0.000 | 54.460 | 0.000 | 55.000 | 1.732 | 55.650 | 72.65 * | 55.300 | 21.48 |
| 10 | | 0.000 | 54.480 | 0.000 | 54.460 | 0.000 | 55.010 | 2.181 | 55.675 | 89.05 | 55.300 | 22.15 |
| 11 | | 0.000 | 54.480 | 0.000 | 54.460 | 0.000 | 55.100 | 6.574 * | 55.660 | 74.62 * | 55.280 | 18.58 |
| 12 | | 0.000 | 54.460 | 0.000 | 54.460 | 0.000 | 55.300 | 26.12 | 55.620 | 66.92 * | 55.250 | 14.99 |
| 13 | | 0.000 | 54.450 | 0.000 | 54.460 | 0.000 | 55.875 | 138.0 | 55.600 | 61.53 | 55.240 | 16.01 * |
| 14 | | 0.000 | 54.450 | 0.000 | 54.460 | 0.000 | 55.950 | 167.9 | 55.430 | 40.44 | 55.240 | 16.01 * |
| 15 | | 0.000 | 54.450 | 0.000 | 54.460 | 0.000 | 56.425 | 300.5 | 55.615 | 60.89 | 55.150 | 10.02 |
| 16 | | 0.000 | 54.450 | 0.000 | 54.460 | 0.000 | 56.235 | 213.3 | 55.630 | 68.80 * | 55.160 | 11.32 |
| 17 | | 0.000 | 54.450 | 0.000 | 54.460 | 0.000 | 55.690 | 99.64 | 55.600 | 55.90 | 55.170 | 12.65 |
| 18 | | 0.000 | 54.450 | 0.000 | | 0.000 | 56.200 | 243.8 | 55.650 | 73.81 | 55.170 | 13.39 |
| 19 | | 0.000 | | 0.000 | | 0.000 | 55.710 | 101.7 | 55.570 | 50.55 | 55.150 | 11.73 |
| 20 | | 0.000 | | 0.000 | | 0.000 | 55.665 | 89.28 | 55.400 | 35.60 | 55.150 | 9.417 * |
| 21 | 54.510 | 0.000 | | 0.000 | | 0.000 | 55.750 | 115.1 | 55.400 | 35.23 | 55.160 | 12.34 |
| 22 | 54.490 | 0.000 | | 0.000 | | 0.000 | 57.480 | 931.2 | 55.425 | 37.86 | 55.240 | 12.59 |
| 23 | 54.500 | 0.000 | | 0.000 | | 0.000 | 58.050 | 1563 | 55.420 | 35.27 * | 55.230 | 13.46 |
| 24 | 54.490 | 0.000 | | 0.000 | | 0.000 | 58.375 | 1963 | 55.400 | 34.80 | 55.160 | 9.209 |
| 25 | 54.480 | 0.000 | | 0.000 | | 0.000 | 57.725 | 1153 | 55.340 | 24.52 | 55.160 | 10.56 |
| 26 | 54.500 | 0.000 | | 0.000 | | 0.000 | 56.615 | 383.7 | 55.350 | 25.68 | 55.160 | 9.041 |
| 27 | 54.520 | 0.000 | | 0.000 | | 0.000 | 57.130 | 598.7 | 55.320 | 22.41 | 55.180 | 11.40 * |
| 28 | 54.530 | 0.000 | | 0.000 | | 0.000 | 56.460 | 305.8 | 55.340 | 23.68 | 55.200 | 14.07 |
| 29 | 54.520 | 0.000 | | 0.000 | 55.420 | 45.80 | 56.370 | 281.8 | 55.300 | 20.40 | 55.150 | 9.686 |
| 30 | 54.510 | 0.000 | | 0.000 | 56.160 | 209.0 | 55.825 | 109.3 | 55.300 | 21.50 * | 55.100 | 7.876 |
| 31 | | | | 0.000 | 56.710 | 40.00 # | | | 55.320 | 22.15 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | 54.489 | 0.000 | 54.473 | 0.000 | 55.174 | 18.27 | 55.729 | 87.31 | 55.316 | 22.19 |
| II Ten-Daily | | 0.000 | 54.455 | 0.000 | 54.460 | 0.000 | 55.815 | 138.7 | 55.578 | 58.91 | 55.196 | 13.41 |
| III Ten-Daily | 54.505 | 0.000 | | 0.000 | 56.097 | 26.80 | 56.978 | 740.5 | 55.356 | 27.59 | 55.174 | 11.02 |
| Monthly | | | | | | | | | | | | |
| Min. | 54.480 | 0.000 | 54.450 | 0.000 | 54.460 | 0.000 | 55.000 | 1.732 | 55.300 | 20.40 | 55.100 | 7.876 |
| Max. | 54.530 | 0.000 | 54.500 | 0.000 | 56.710 | 209.0 | 58.375 | 1963 | 55.890 | 129.4 | 55.360 | 28.47 |
| Mean | 54.505 | 0 | 54.474 | 0 | 54.712 | 9.511 | 55.989 | 299.1 | 55.548 | 56.96 | 55.229 | 15.54 |

**Annual Runoff in MCM = 1058 Annual Runoff in mm = 92**

**Peak Observed Discharge = 1963 cumecs on 24/09/2016 Corres. Water Level :58.375 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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 2016 - 2017

**Station Name : Dameracherla ( AKF00A7)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Musi** **Sub-Division : Lower Krishna SD 1, N.S.Dam**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 55.080 | 6.862 | 54.900 | 2.554 * | 54.950 | 3.347 | 55.200 | 13.90 | 55.130 | 9.750 | 54.800 | 0.894 |
| 2 | 55.050 | 5.345 | 55.080 | 6.639 | 54.930 | 3.012 | 55.160 | 11.31 | 55.120 | 9.007 * | 54.800 | 0.985 |
| 3 | 55.050 | 5.520 | 55.080 | 6.639 | 54.900 | 2.805 | 55.150 | 10.32 | 55.100 | 7.785 | 54.810 | 1.283 |
| 4 | 55.040 | 6.215 * | 55.060 | 6.208 | 54.900 | 2.570 | 55.170 | 10.32 | 55.090 | 8.046 | 54.780 | 0.685 |
| 5 | 55.030 | 4.067 | 55.040 | 4.839 | 54.900 | 2.554 * | 55.160 | 10.59 * | 55.090 | 7.901 * | 54.770 | 5.029 |
| 6 | 55.020 | 5.596 | 55.020 | 5.596 | 54.900 | 2.438 | 55.120 | 8.906 | 55.100 | 8.699 | 54.740 | 3.455 |
| 7 | 54.900 | 2.665 | 54.910 | 2.777 | 54.860 | 1.941 | 55.150 | 12.36 | 55.080 | 6.952 | 54.650 | 0.000 |
| 8 | 54.890 | 2.355 | 54.870 | 2.500 * | 54.840 | 1.793 | 55.140 | 10.90 | 55.090 | 7.604 | 54.600 | 0.000 |
| 9 | 54.890 | 2.345 | 54.850 | 1.732 | 54.840 | 1.768 | 55.130 | 9.586 | 55.100 | 8.262 * | 54.600 | 0.000 |
| 10 | 54.890 | 2.567 | 54.820 | 1.648 | 54.900 | 2.479 | 55.100 | 7.908 | 55.120 | 9.302 | 54.580 | 0.000 |
| 11 | 54.890 | 2.352 * | 54.820 | 1.620 | 54.930 | 3.097 | 55.090 | 7.901 | 55.100 | 8.687 | 54.580 | 0.000 |
| 12 | 54.900 | 2.554 * | 54.850 | 1.758 | 54.900 | 2.554 * | 55.100 | 8.262 * | 55.120 | 9.240 | 54.560 | 0.000 |
| 13 | 54.890 | 2.415 | 54.880 | 1.962 | 54.890 | 2.195 | 55.120 | 9.133 | 55.090 | 7.926 | 54.560 | 0.000 |
| 14 | 54.890 | 2.334 | 54.800 | 1.339 | 54.820 | 1.549 | 55.080 | 7.254 | 55.090 | 7.901 * | 54.560 | 0.000 |
| 15 | 54.880 | 2.040 | 54.800 | 0.895 * | 54.840 | 1.836 | 55.090 | 7.457 | 55.080 | 7.516 | 54.560 | 0.000 |
| 16 | 54.880 | 2.135 | 54.820 | 1.606 | 54.850 | 1.875 | 55.090 | 7.260 | 55.080 | 7.547 * | 54.560 | 0.000 |
| 17 | 54.870 | 1.844 | 54.830 | 1.704 | 54.890 | 2.336 | 55.050 | 4.638 | 55.080 | 7.511 | 54.560 | 0.000 |
| 18 | 54.900 | 2.554 * | 54.880 | 2.149 | 54.900 | 2.410 | 55.080 | 6.391 | 55.080 | 6.931 | 54.560 | 0.000 |
| 19 | 54.900 | 2.577 | 54.870 | 2.091 | 54.870 | 1.973 * | 55.070 | 7.202 * | 55.050 | 5.024 | 54.560 | 0.000 |
| 20 | 54.930 | 3.031 | 54.840 | 1.866 | 54.880 | 2.251 | 55.060 | 6.044 | 55.040 | 4.259 | 54.560 | 0.000 |
| 21 | 54.880 | 1.977 | 54.820 | 1.597 | 54.890 | 2.364 | 55.050 | 5.695 | 55.040 | 4.383 | 54.550 | 0.000 |
| 22 | 54.860 | 1.747 | 54.840 | 1.463 * | 54.900 | 2.468 | 55.040 | 5.414 | 54.900 | 2.477 | 54.540 | 0.000 |
| 23 | 54.870 | 1.950 | 54.870 | 2.399 | 55.140 | 9.854 | 55.060 | 5.915 | 54.900 | 2.554 * | 54.540 | 0.000 |
| 24 | 54.900 | 2.468 | 54.830 | 1.811 | 55.160 | 10.93 | 55.040 | 4.373 | 54.820 | 1.502 | 54.540 | 0.000 |
| 25 | 54.890 | 2.352 * | 54.820 | 1.629 | 55.160 | 11.10 | 55.110 | 8.756 | 54.800 | 1.059 | 54.540 | 0.000 |
| 26 | 54.860 | 1.670 | 54.850 | 1.625 * | 55.160 | 10.59 * | 55.120 | 9.007 * | 54.810 | 1.281 | 54.540 | 0.000 |
| 27 | 54.900 | 2.389 | 54.900 | 2.279 | 55.160 | 12.55 | 55.140 | 10.44 | 54.810 | 1.154 | 54.540 | 0.000 |
| 28 | 54.920 | 2.816 | 54.950 | 3.345 | 55.150 | 10.41 | 55.100 | 8.593 | 54.840 | 1.803 | 54.540 | 0.000 |
| 29 | 54.910 | 2.769 | 54.930 | 3.207 * | | | 55.120 | 9.007 * | 54.820 | 1.475 | 54.540 | 0.000 |
| 30 | 54.920 | 2.902 | 54.910 | 3.063 | | | 55.130 | 9.829 | 54.820 | 1.163 * | 54.540 | 0.000 |
| 31 | 54.870 | 1.933 | 54.920 | 2.870 | | | 55.130 | 9.791 | | | 54.540 | 0.000 |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 54.984 | 4.354 | 54.963 | 4.113 | 54.892 | 2.471 | 55.148 | 10.61 | 55.102 | 8.331 | 54.713 | 1.233 |
| II Ten-Daily | 54.893 | 2.384 | 54.839 | 1.699 | 54.877 | 2.208 | 55.083 | 7.154 | 55.081 | 7.254 | 54.562 | 0.000 |
| III Ten-Daily | 54.889 | 2.270 | 54.876 | 2.299 | 55.090 | 8.783 | 55.095 | 7.893 | 54.856 | 1.885 | 54.541 | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 54.860 | 1.670 | 54.800 | 0.895 | 54.820 | 1.549 | 55.040 | 4.373 | 54.800 | 1.059 | 54.540 | 0.000 |
| Max. | 55.080 | 6.862 | 55.080 | 6.639 | 55.160 | 12.55 | 55.200 | 13.90 | 55.130 | 9.750 | 54.810 | 5.029 |
| Mean | 54.921 | 2.979 | 54.892 | 2.691 | 54.943 | 4.18 | 55.108 | 8.531 | 55.013 | 5.823 | 54.603 | 0.398 |

**Peak Computed Discharge = 110.2 cumecs on 02/10/2016 Corres. Water Level :55.82 m**

**Lowest Computed Discharge = 0.895 cumecs on 15/01/2017 Corres. Water Level :54.8 m**

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

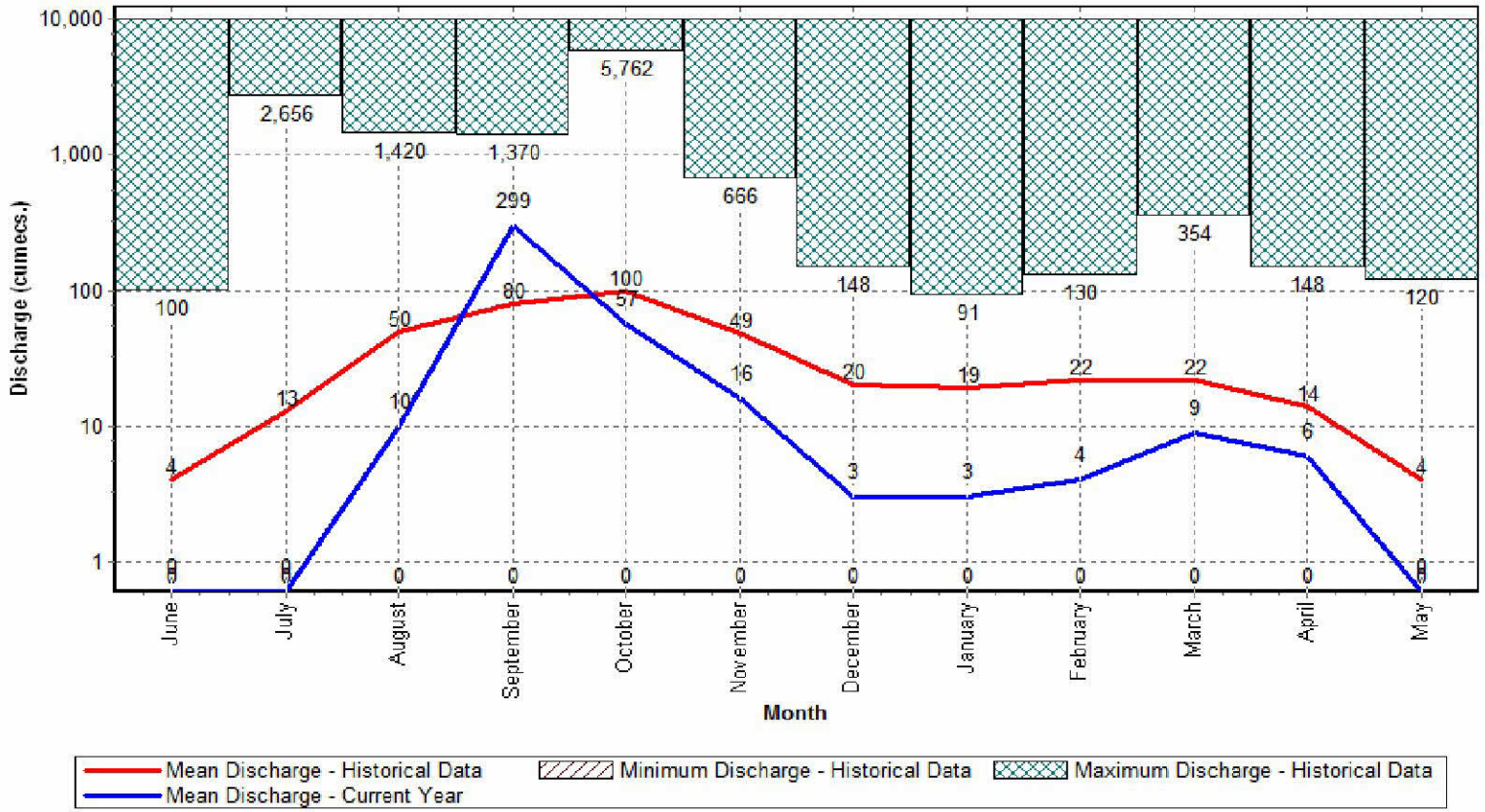
#:Discarded Discharge (values changed as per rating curve)

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Dameracherla ( AKF00A7)** | **Data considered : 1969-2017** | **Division : Lower Krishna Divn., Hyderabad**

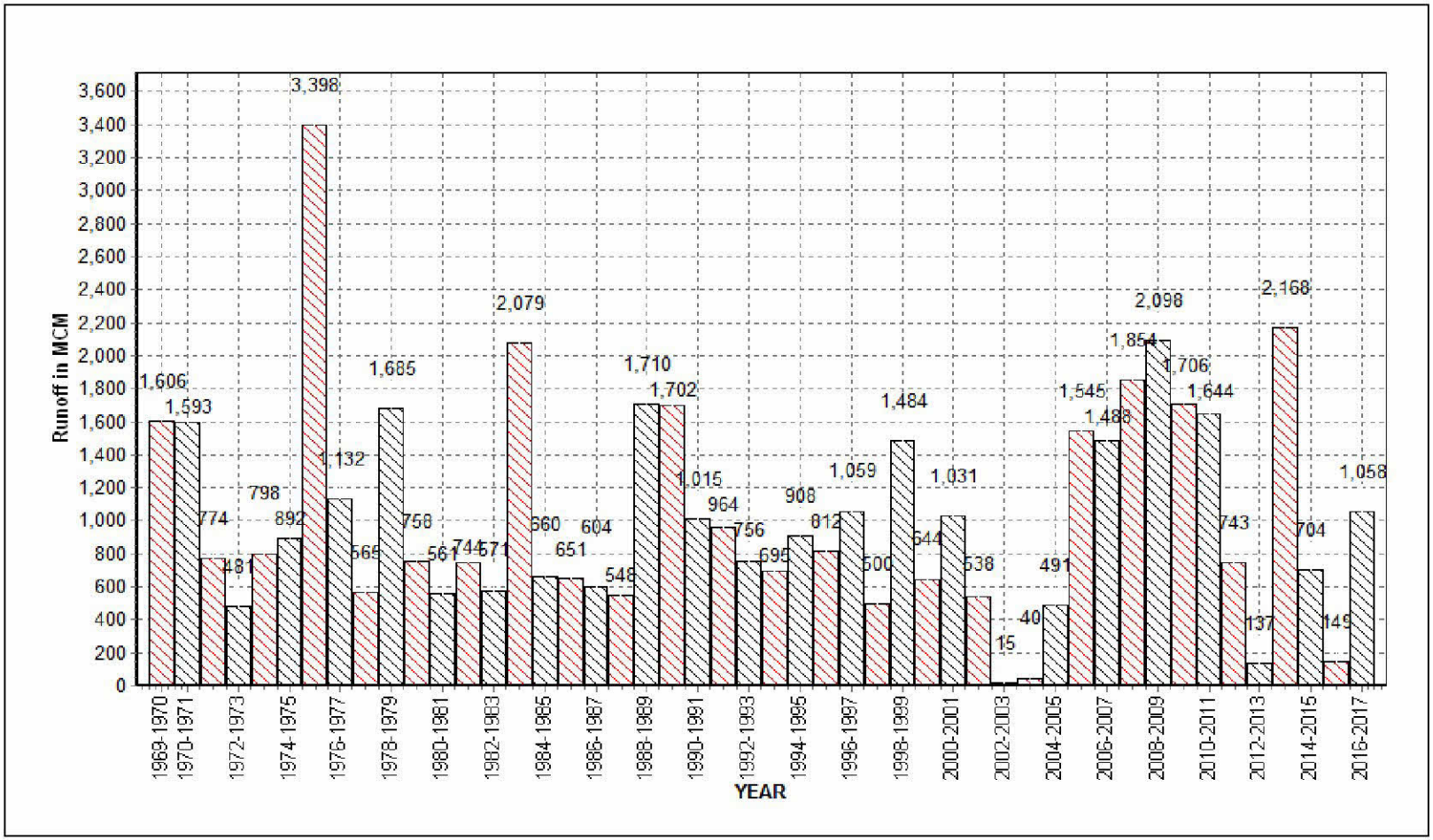
**Local River : Musi** | **Sub-Division : Lower Krishna SD 1, N.S.Dam**



**Annual Runoff Values for the period: 1969 - 2017**

**Station Name : Dameracherla ( AKF00A7)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Musi** **Sub-Division : Lower Krishna SD 1, N.S.Dam**

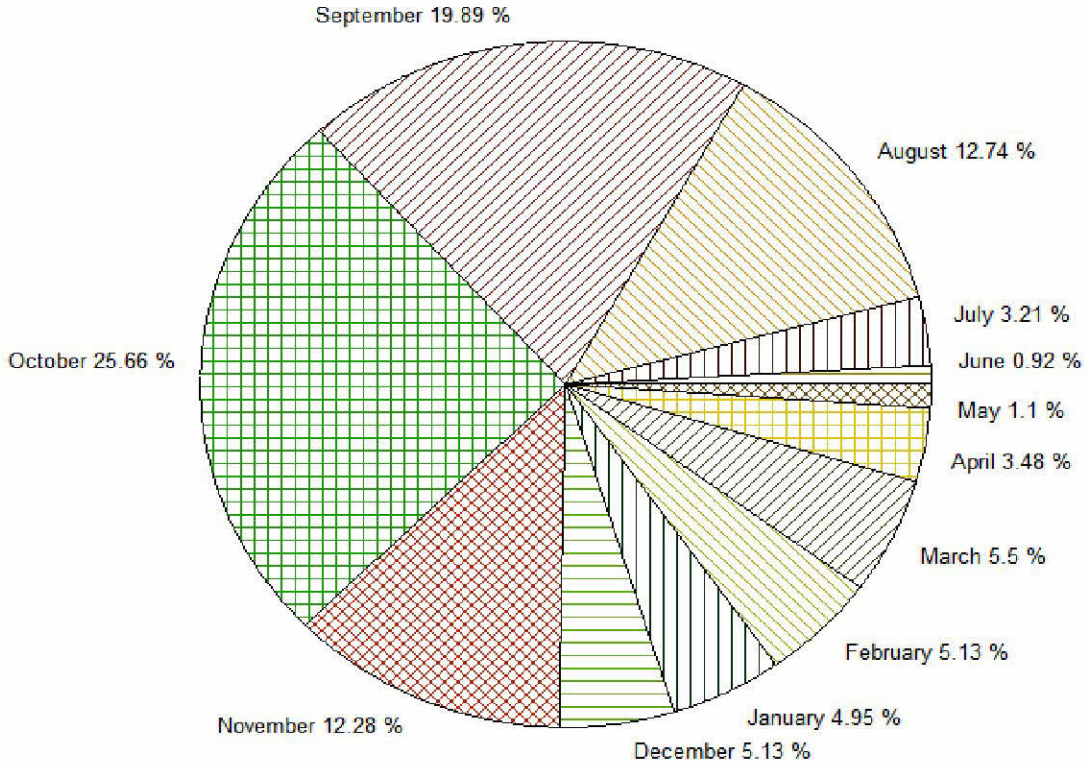



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1969-2016**

**Station Name : Dameracherla ( AKF00A7)**
**Local River : Musi**

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

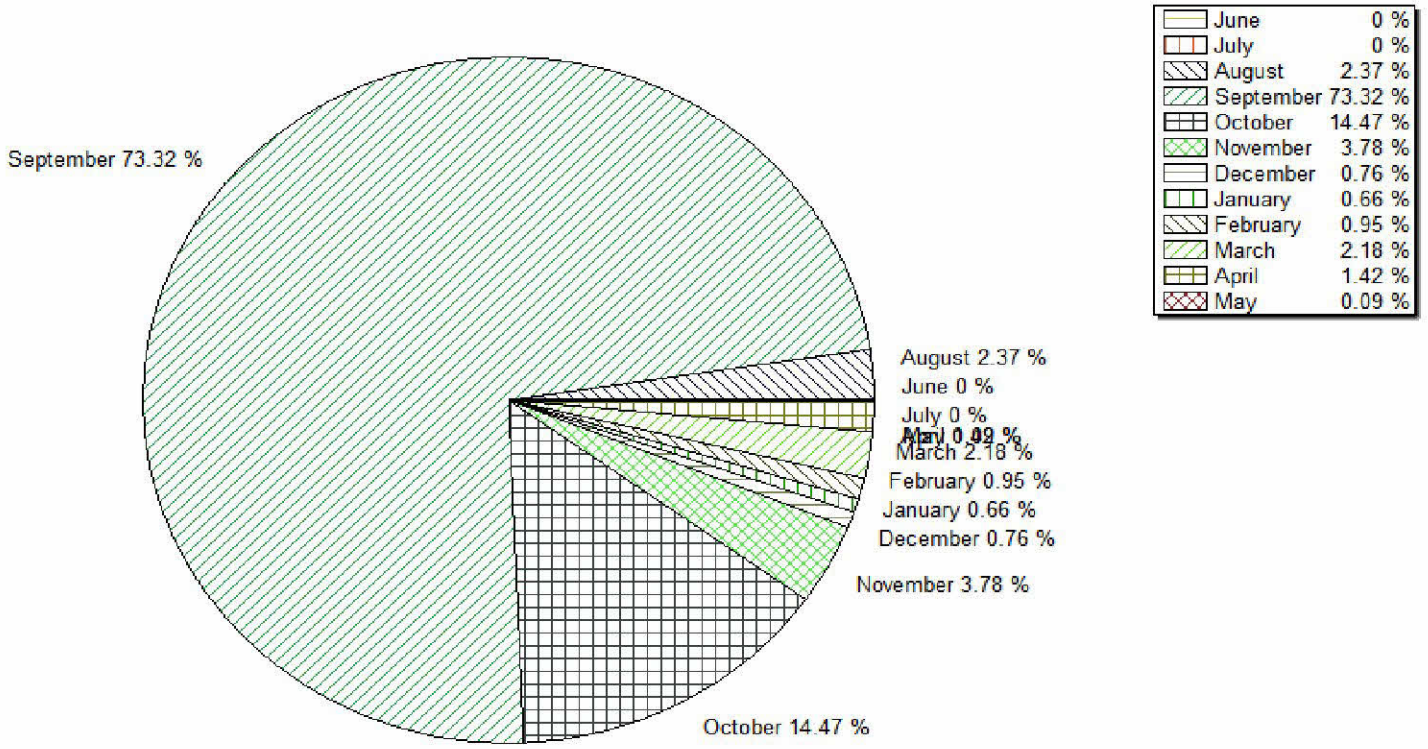



| | |
|---|---|
| June | 0.92 % |
| July | 3.21 % |
| August | 12.74 % |
| September | 19.89 % |
| October | 25.66 % |
| November | 12.28 % |
| December | 5.13 % |
| January | 4.95 % |
| February | 5.13 % |
| March | 5.5 % |
| April | 3.48 % |
| May | 1.1 % |

## Monthly Runoff for the Year : 2016-2017

**Station Name : Dameracherla ( AKF00A7)**
**Local River : Musi**

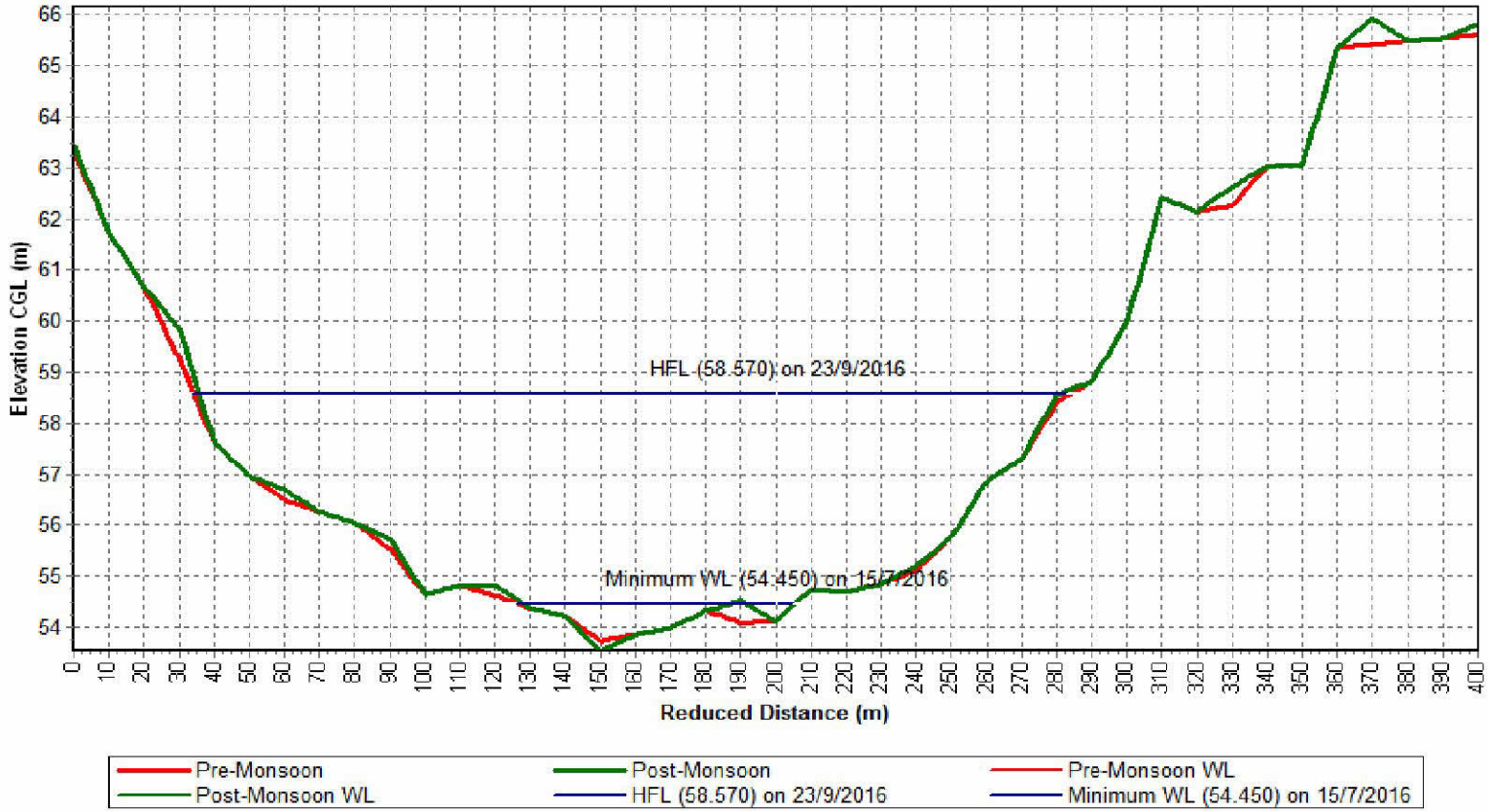
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD 1, N.S.Dam**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Dameracherla ( AKF00A7)** **Division : Lower Krishna Divn., Hyderabad**

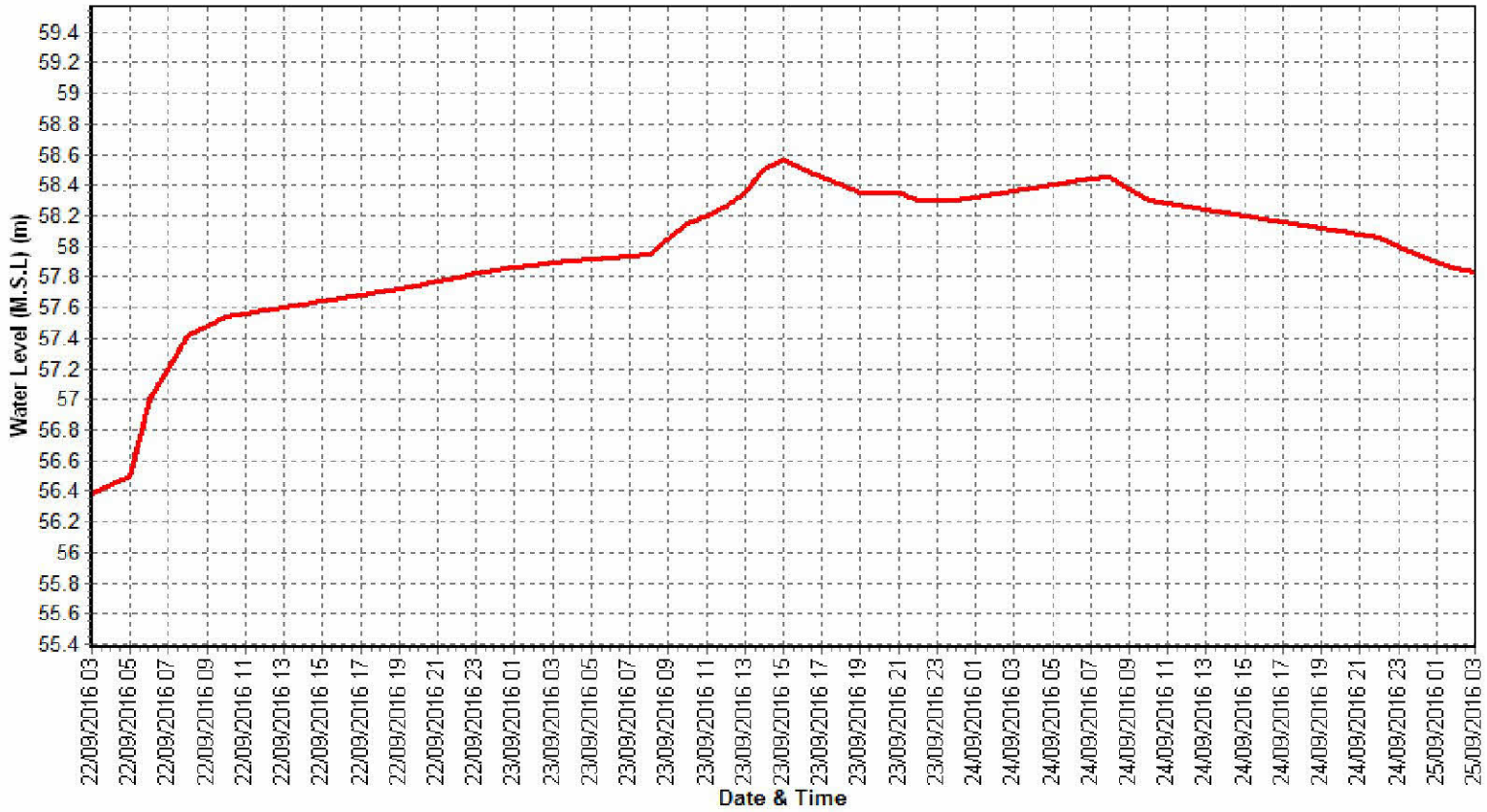
**Local River : Musi** **Sub-Division : Lower Krishna SD 1, N.S.Dam**



**Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017**

**Station Name : Dameracherla ( AKF00A7)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Musi** **Sub-Division : Lower Krishna SD 1, N.S.Dam**

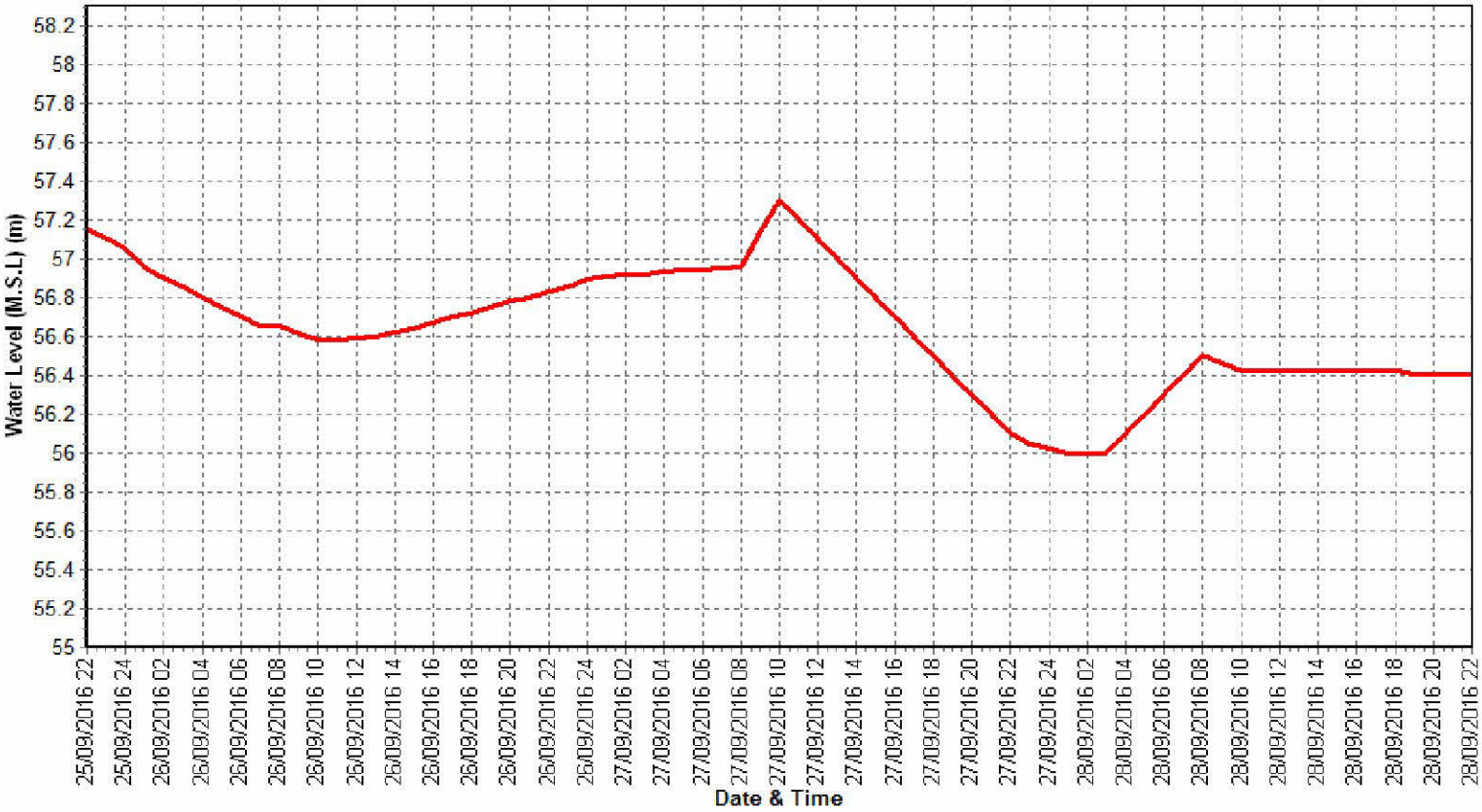



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Dameracherla ( AKF00A7)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Musi** **Sub-Division : Lower Krishna SD 1, N.S.Dam**

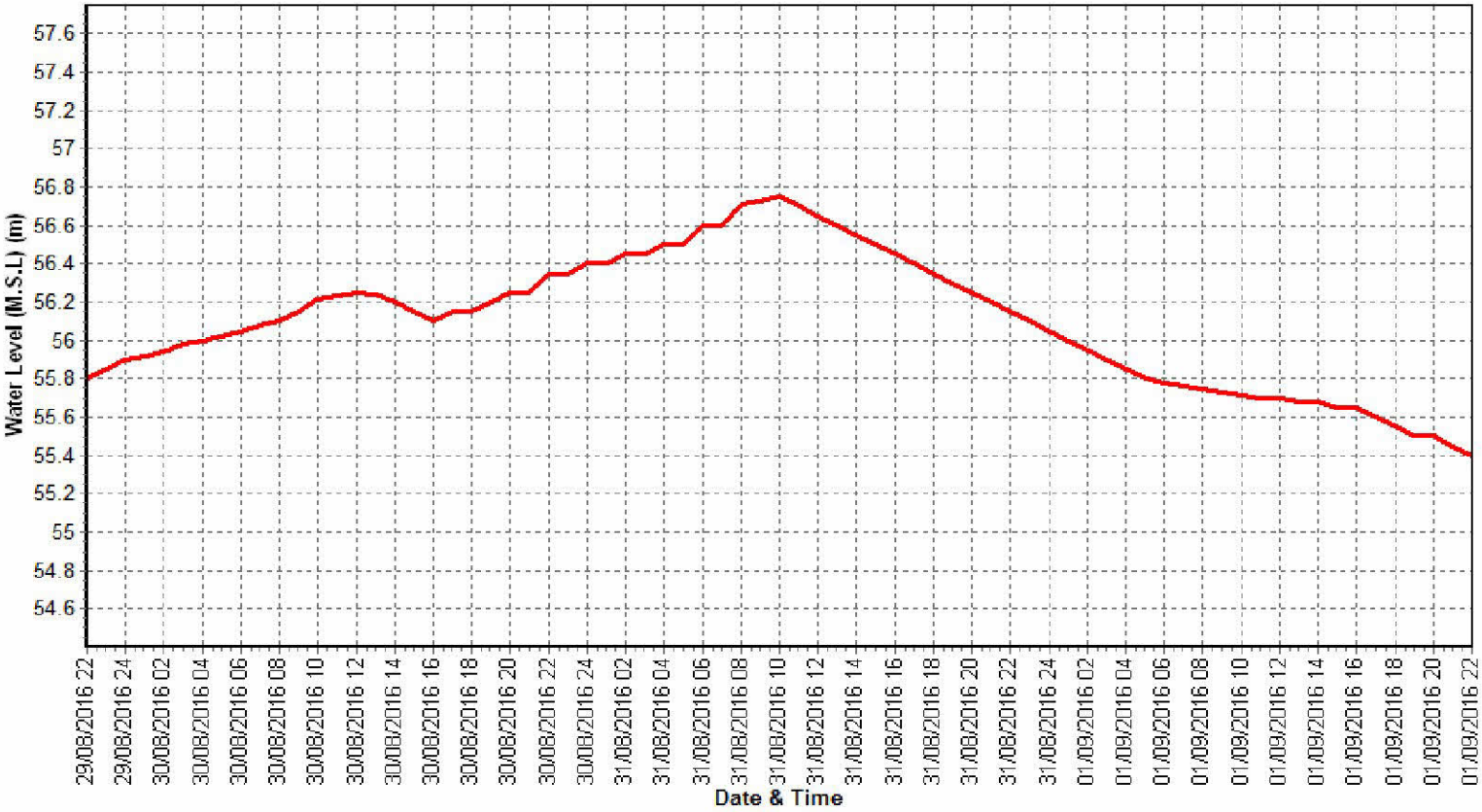



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Dameracherla ( AKF00A7)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Musi** **Sub-Division : Lower Krishna SD 1, N.S.Dam**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : **Halia** | | **Code** | : **AKH00G2** | |
| State | : Telangana | | District | Nalgonda | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Halia | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Halia | |
| Division | : Lower Krishna Divn., Hyderabad | | Sub-Division | : Lower Krishna SD 1, N.S.Dam | |
| Drainage Area | : 3100 Sq. Km. | | Bank | : Left | |
| Latitude | : 16°47'25" | | Longitude | : 79°20'19" | |
| **Zero of Gauge (m)** | : 127.9 (m.s.l)<br>129 (m.s.l) | | 01/06/2002<br>15/02/1984 | - 31/05/2002 | |
| | Opening Date | | Closing Date | | |
| Gauge | : 15/02/1984 | | **HFL During 2016-17** | : **131.10m** | |
| | | | **Corres. Discharge** | : **346.9(Estimated)** | |
| Discharge | : 11/07/1984 | | **Date & Time of occurance** | : **23/09/2016 13.00 hrs.** | |
| Sediment | : | | | | |
| Water Quality | : 01/06/1992 | | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1985-1986 | 65.00 | 130.445 | 19/06/1985 | 0.000 | 129.200 | 15/04/1986 |
| 1986-1987 | 26.00 | 130.260 | 07/11/1986 | 0.000 | 129.175 | 13/05/1987 |
| 1987-1988 | 552.4 | 131.530 | 04/11/1987 | 0.000 | 129.120 | 10/06/1987 |
| 1988-1989 | 161.4 | 130.770 | 20/09/1988 | 0.010 | 129.210 | 02/06/1988 |
| 1989-1990 | 297.7 | 131.120 | 17/07/1989 | 0.040 | 129.265 | 27/04/1990 |
| 1990-1991 | 169.0 | 130.690 | 26/10/1990 | 0.000 | 129.080 | 07/05/1991 |
| 1991-1992 | 2647 | 133.507 | 22/09/1991 | 0.000 | 129.340 | 29/05/1992 |
| 1992-1993 | 19.16 | 130.000 | 27/05/1993 | 0.000 | 129.230 | 10/05/1993 |
| 1993-1994 | 107.7 | 130.550 | 09/10/1993 | 0.040 | 129.260 | 26/06/1993 |
| 1994-1995 | 825.3 | 131.915 | 06/10/1994 | 0.023 | 129.253 | 29/06/1994 |
| 1995-1996 | 130.5 | 130.750 | 19/10/1995 | 0.012 | 129.305 | 18/05/1996 |
| 1996-1997 | 43.16 | 130.410 | 06/09/1996 | 0.003 | 129.290 | 03/06/1996 |
| 1997-1998 | 45.78 | 130.360 | 24/09/1997 | 0.000 | 129.200 | 15/05/1998 |
| 1998-1999 | 419.2 | 131.415 | 15/10/1998 | 0.000 | 129.220 | 09/07/1998 |
| 1999-2000 | 31.20 | 130.405 | 07/09/1999 | 0.002 | 129.160 | 31/05/2000 |
| 2000-2001 | 551.3 | 131.580 | 23/08/2000 | 0.002 | 129.070 | 29/05/2001 |
| 2001-2002 | 600.0 | 131.650 | 01/10/2001 | 0.000 | 129.100 | 13/07/2001 |
| 2002-2003 | 2.049 | 128.340 | 12/08/2002 | 0.000 | | 23/04/2003 |
| 2003-2004 | 144.3 | 129.600 | 24/10/2003 | 0.000 | 127.970 | 20/01/2004 |
| 2004-2005 | 280.3 | 129.650 | 09/10/2004 | 0.000 | 128.080 | 27/07/2004 |
| 2005-2006 | 3383 | 133.000 | 29/10/2005 | 0.000 | | 02/07/2005 |

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** |
| 2006-2007 | 49.94 | 129.300 | 01/11/2006 | 0.000 | 128.000 | 13/07/2006 |
| 2007-2008 | 524.3 | 130.400 | 17/09/2007 | 0.280 | 128.320 | 03/06/2007 |
| 2008-2009 | 535.1 | 130.830 | 30/11/2008 | 0.000 | | 09/07/2008 |
| 2009-2010 | 203.9 | 129.990 | 01/10/2009 | 0.000 | | 18/07/2009 |
| 2010-2011 | 118.8 | 129.980 | 15/09/2010 | 0.099 | 128.100 | 20/06/2010 |
| 2011-2012 | 30.93 | 129.380 | 25/08/2011 | 0.000 | 128.630 | 30/07/2011 |
| 2012-2013 | 27.81 | 129.210 | 03/10/2012 | 0.000 | 128.200 | 24/03/2013 |
| 2013-2014 | 1126 | 132.325 | 25/10/2013 | 0.000 | 128.340 | 08/07/2013 |
| 2014-2015 | 71.70 | 129.490 | 27/10/2014 | 0.000 | | 04/07/2014 |
| 2015-2016 | 31.36 | 129.160 | 15/09/2015 | 0.000 | | 23/03/2016 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Halia ( AKH00G2)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Halia** **Sub-Division : Lower Krishna SD 1, N.S.Dam**

| 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 | 128.450 | 0.607 | 128.530 | 1.052 | 128.310 | 0.000 | 129.545 | 104.7 | 129.120 | 29.35 | 128.630 | 4.403 |
| 2 | 128.490 | 0.737 | 128.510 | 0.790 | 128.280 | 0.000 | 129.080 | 25.03 | 128.990 | 18.69 * | 128.630 | 4.419 |
| 3 | 128.450 | 0.592 | 128.490 | 1.119 * | 128.270 | 0.000 | 128.930 | 12.66 | 128.920 | 13.62 | 128.620 | 3.568 |
| 4 | 128.530 | 1.013 | 128.480 | 0.688 | 128.280 | 0.000 | 128.800 | 9.422 * | 128.880 | 11.27 | 128.600 | 2.976 |
| 5 | 128.510 | 1.406 * | 128.510 | 0.804 | 128.260 | 0.000 | 128.710 | 6.152 * | 128.840 | 9.340 | 128.640 | 4.952 |
| 6 | 128.750 | 4.894 | 128.480 | 0.632 | 128.240 | 0.000 | 128.640 | 3.587 | 128.800 | 7.795 | 128.640 | 4.099 * |
| 7 | 128.740 | 5.224 | 128.450 | 0.645 * | | 0.000 | 128.580 | 2.612 | 128.840 | 9.796 | 128.630 | 4.546 |
| 8 | 128.640 | 3.075 | 128.440 | 0.461 | | 0.000 | 128.500 | 1.121 | 128.850 | 10.93 | 128.640 | 5.000 |
| 9 | 128.560 | 1.234 | 128.420 | 0.437 | | 0.000 | 128.450 | 0.731 | 129.300 | 40.79 * | 128.630 | 4.242 |
| 10 | 128.520 | 0.883 | 128.450 | 0.645 * | | 0.000 | 128.410 | 0.366 | 129.360 | 86.77 | 128.600 | 3.144 |
| 11 | 128.430 | 0.468 | 128.460 | 0.620 | | 0.000 | 128.520 | 1.562 * | 129.200 | 32.70 * | 128.580 | 2.085 |
| 12 | 128.480 | 0.988 * | 128.460 | 0.629 | | 0.000 | 128.830 | 11.16 | 129.060 | 22.91 * | 128.560 | 1.938 |
| 13 | 128.480 | 0.751 | 128.430 | 0.473 | | 0.000 | 129.480 | 57.66 * | 128.920 | 13.52 | 128.570 | 2.469 * |
| 14 | 128.470 | 0.552 | 128.430 | 0.479 | | 0.000 | 129.790 | 106.8 | 128.880 | 11.41 | 128.600 | 3.116 * |
| 15 | 128.525 | 0.908 | 128.400 | 0.333 | | 0.000 | 129.580 | 81.35 | 128.820 | 10.80 | 128.630 | 4.551 |
| 16 | 128.500 | 0.707 | 128.370 | 0.251 | | 0.000 | 129.290 | 74.88 | 128.780 | 8.634 * | 128.640 | 4.896 |
| 17 | 128.470 | 0.574 | 128.350 | 0.032 * | | 0.000 | 129.245 | 56.32 | 128.730 | 5.870 | 128.650 | 5.232 |
| 18 | 128.475 | 0.594 | 128.330 | 0.000 | | 0.000 | 129.050 | 22.28 * | 128.730 | 5.187 | 128.670 | 6.040 |
| 19 | 128.550 | 2.081 * | 128.310 | 0.000 | | 0.000 | 128.860 | 13.06 | 128.710 | 4.232 | 128.645 | 5.168 |
| 20 | 128.530 | 1.054 | 128.290 | 0.000 | | 0.000 | 128.790 | 10.43 | 128.700 | 3.814 | 128.680 | 5.220 * |
| 21 | 128.520 | 1.046 | 128.260 | 0.000 | | 0.000 | 128.830 | 11.78 | 128.650 | 3.121 | 128.700 | 5.118 |
| 22 | 128.480 | 0.671 | 128.280 | 0.000 | | 0.000 | 128.980 | 16.59 | 128.660 | 3.269 | 128.680 | 4.836 |
| 23 | 128.500 | 0.722 | 128.420 | 0.505 | | 0.000 | 130.870 | 291.2 | 128.650 | 4.366 * | 128.700 | 5.401 |
| 24 | 128.480 | 0.620 | 128.430 | 0.458 * | | 0.000 | 129.855 | 112.5 | 128.610 | 3.439 | 128.720 | 6.385 |
| 25 | 128.530 | 1.059 | 128.400 | 0.400 | | 0.000 | 129.560 | 66.12 * | 128.580 | 2.774 | 128.730 | 6.177 |
| 26 | 128.600 | 3.116 * | 128.280 | 0.000 | | 0.000 | 129.365 | 84.82 | 128.580 | 2.678 | 128.725 | 6.540 |
| 27 | 128.540 | 1.141 | 128.340 | 0.000 | | 0.000 | 129.195 | 33.16 | 128.590 | 3.316 | 128.740 | 7.163 * |
| 28 | 128.520 | 0.980 | 128.410 | 0.458 | 128.290 | 0.000 | 129.300 | 58.98 | 128.570 | 2.882 | 128.730 | 6.866 |
| 29 | 128.500 | 0.753 | 128.330 | 0.000 | 128.800 | 8.303 | 129.115 | 25.83 | 128.550 | 2.471 | 128.710 | 5.708 |
| 30 | 128.540 | 1.187 | 128.290 | 0.000 | 128.940 | 13.71 | 129.180 | 33.04 | 128.560 | 2.271 * | 128.700 | 5.362 |
| 31 | | | 128.300 | 0.000 | 128.980 | 16.40 | | | 128.600 | 3.183 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 128.564 | 1.966 | 128.476 | 0.727 | 128.273 | 0.000 | 128.764 | 16.63 | 128.990 | 23.83 | 128.626 | 4.135 |
| II Ten-Daily | 128.491 | 0.868 | 128.383 | 0.282 | | 0.000 | 129.144 | 43.55 | 128.853 | 11.91 | 128.623 | 4.071 |
| III Ten-Daily | 128.521 | 1.129 | 128.340 | 0.166 | 128.753 | 3.492 | 129.425 | 73.39 | 128.600 | 3.070 | 128.713 | 5.956 |
| Monthly | | | | | | | | | | | | |
| Min. | 128.430 | 0.468 | 128.260 | 0.000 | 128.240 | 0.000 | 128.410 | 0.366 | 128.550 | 2.271 | 128.560 | 1.938 |
| Max. | 128.750 | 5.224 | 128.530 | 1.119 | 128.980 | 16.40 | 130.870 | 291.2 | 129.360 | 86.77 | 128.740 | 7.163 |
| Mean | 128.525 | 1.321 | 128.398 | 0.384 | 128.465 | 1.239 | 129.111 | 44.52 | 128.807 | 12.62 | 128.654 | 4.721 |

**Annual Runoff in MCM = 180 Annual Runoff in mm = 58**

**Peak Observed Discharge = 291.2 cumecs on 23/09/2016 Corres. Water Level :130.87 m**

**Lowest Observed Discharge = 0.000 cumecs on 18/07/2016 Corres. Water Level :128.33 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 2016 - 2017

**Station Name : Halia ( AKH00G2)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Halia** **Sub-Division : Lower Krishna SD 1, N.S.Dam**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 128.700 | 5.175 | 128.400 | 0.726 * | 128.400 | 0.708 | 128.410 | 0.692 | 128.340 | 0.000 | 128.340 | 0.000 |
| 2 | 128.690 | 4.694 | 128.410 | 0.788 | 128.410 | 0.849 | 128.400 | 0.637 | 128.320 | 0.000 | 128.330 | 0.000 |
| 3 | 128.700 | 5.153 | 128.420 | 0.906 | 128.410 | 0.841 | 128.400 | 0.651 | 128.330 | 0.000 | 128.320 | 0.000 |
| 4 | 128.680 | 4.911 * | 128.380 | 0.701 | 128.400 | 0.727 | 128.380 | 0.549 | 128.300 | 0.000 | 128.310 | 0.000 |
| 5 | 128.660 | 4.488 | 128.360 | 0.550 | 128.400 | 0.726 * | 128.350 | 0.000 | 128.290 | 0.000 | 128.330 | 0.000 |
| 6 | 128.630 | 4.248 | 128.360 | 0.536 | 128.320 | 0.000 | 128.280 | 0.000 | 128.320 | 0.000 | 128.330 | 0.000 |
| 7 | 128.630 | 4.360 | 128.280 | 0.000 | 128.320 | 0.000 | 128.250 | 0.000 | 128.320 | 0.000 | 128.320 | 0.000 |
| 8 | 128.630 | 4.186 | 128.290 | 0.000 | 128.340 | 0.000 | 128.250 | 0.000 | 128.310 | 0.000 | 128.320 | 0.000 |
| 9 | 128.620 | 3.613 | 128.320 | 0.000 | 128.460 | 1.297 | 128.230 | 0.000 | 128.300 | 0.000 | 128.310 | 0.000 |
| 10 | 128.620 | 3.665 | 128.330 | 0.000 | 128.470 | 1.371 | 128.220 | 0.000 | 128.310 | 0.000 | 128.330 | 0.000 |
| 11 | 128.600 | 3.335 * | 128.340 | 0.000 | 128.470 | 1.394 | 128.220 | 0.000 | 128.310 | 0.000 | 128.320 | 0.000 |
| 12 | 128.600 | 3.335 * | 128.340 | 0.000 | 128.420 | 0.902 * | 128.220 | 0.000 | 128.300 | 0.000 | 128.310 | 0.000 |
| 13 | 128.600 | 3.643 | 128.330 | 0.000 | 128.440 | 0.690 | 128.170 | 0.000 | 128.320 | 0.000 | 128.320 | 0.000 |
| 14 | 128.620 | 3.741 | 128.340 | 0.000 | 128.420 | 0.630 | 128.180 | 0.000 | 128.320 | 0.000 | 128.330 | 0.000 |
| 15 | 128.600 | 3.485 | 128.340 | 0.000 | 128.410 | 0.607 | 128.220 | 0.000 | 128.280 | 0.000 | 128.330 | 0.000 |
| 16 | 128.590 | 3.464 | 128.350 | 0.000 | 128.390 | 0.573 | 128.220 | 0.000 | 128.280 | 0.000 | 128.300 | 0.000 |
| 17 | 128.560 | 3.047 | 128.400 | 0.738 | 128.430 | 0.711 | 128.250 | 0.000 | 128.260 | 0.000 | 128.300 | 0.000 |
| 18 | 128.540 | 2.352 * | 128.400 | 0.732 | 128.410 | 0.615 | 128.280 | 0.000 | 128.270 | 0.000 | 128.320 | 0.000 |
| 19 | 128.490 | 1.745 | 128.390 | 0.684 | 128.480 | 1.541 * | 128.280 | 0.000 | 128.300 | 0.000 | 128.330 | 0.000 |
| 20 | 128.470 | 1.439 | 128.390 | 0.679 | 128.480 | 1.399 | 128.310 | 0.000 | 128.300 | 0.000 | 128.330 | 0.000 |
| 21 | 128.450 | 1.309 | 128.400 | 0.760 | 128.480 | 1.412 | 128.320 | 0.000 | 128.330 | 0.000 | 128.300 | 0.000 |
| 22 | 128.410 | 1.137 | 128.390 | 0.646 * | 128.480 | 1.402 | 128.280 | 0.000 | 128.340 | 0.000 | 128.300 | 0.000 |
| 23 | 128.400 | 1.057 | 128.390 | 0.724 | 128.460 | 1.234 | 128.270 | 0.000 | 128.330 | 0.000 | 128.290 | 0.000 |
| 24 | 128.380 | 0.942 | 128.410 | 0.828 | 128.480 | 1.405 | 128.260 | 0.000 | 128.340 | 0.000 | 128.280 | 0.000 |
| 25 | 128.390 | 0.646 * | 128.430 | 0.916 | 128.470 | 1.272 | 128.280 | 0.000 | 128.340 | 0.000 | 128.270 | 0.000 |
| 26 | 128.390 | 0.795 | 128.390 | 0.646 * | 128.460 | 1.309 * | 128.250 | 0.000 | 128.330 | 0.000 | 128.280 | 0.000 |
| 27 | 128.390 | 0.775 | 128.350 | 0.000 | 128.410 | 0.789 | 128.260 | 0.000 | 128.330 | 0.000 | 128.280 | 0.000 |
| 28 | 128.400 | 0.959 | 128.350 | 0.000 | 128.390 | 0.669 | 128.290 | 0.000 | 128.340 | 0.000 | 128.280 | 0.000 |
| 29 | 128.420 | 1.112 | 128.350 | 0.000 | | | 128.300 | 0.000 | 128.340 | 0.000 | 128.270 | 0.000 |
| 30 | 128.400 | 0.956 | 128.480 | 1.415 | | | 128.300 | 0.000 | 128.340 | 0.000 | 128.260 | 0.000 |
| 31 | 128.400 | 0.930 | 128.450 | 1.082 | | | 128.290 | 0.000 | | | 128.260 | 0.000 |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 128.656 | 4.449 | 128.355 | 0.421 | 128.393 | 0.652 | 128.317 | 0.253 | 128.314 | 0.000 | 128.324 | 0.000 |
| II Ten-Daily | 128.567 | 2.959 | 128.362 | 0.283 | 128.435 | 0.906 | 128.235 | 0.000 | 128.294 | 0.000 | 128.319 | 0.000 |
| III Ten-Daily | 128.403 | 0.965 | 128.399 | 0.638 | 128.454 | 1.187 | 128.282 | 0.000 | 128.336 | 0.000 | 128.279 | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 128.380 | 0.646 | 128.280 | 0.000 | 128.320 | 0.000 | 128.170 | 0.000 | 128.260 | 0.000 | 128.260 | 0.000 |
| Max. | 128.700 | 5.175 | 128.480 | 1.415 | 128.480 | 1.541 | 128.410 | 0.692 | 128.340 | 0.000 | 128.340 | 0.000 |
| Mean | 128.537 | 2.732 | 128.373 | 0.453 | 128.425 | 0.895 | 128.278 | 0.082 | 128.315 | 0 | 128.306 | 0 |

**Peak Computed Discharge = 66.12 cumecs on 25/09/2016** **Corres. Water Level :129.56 m**

**Lowest Computed Discharge = 0.032 cumecs on 17/07/2016** **Corres. Water Level :128.35 m**

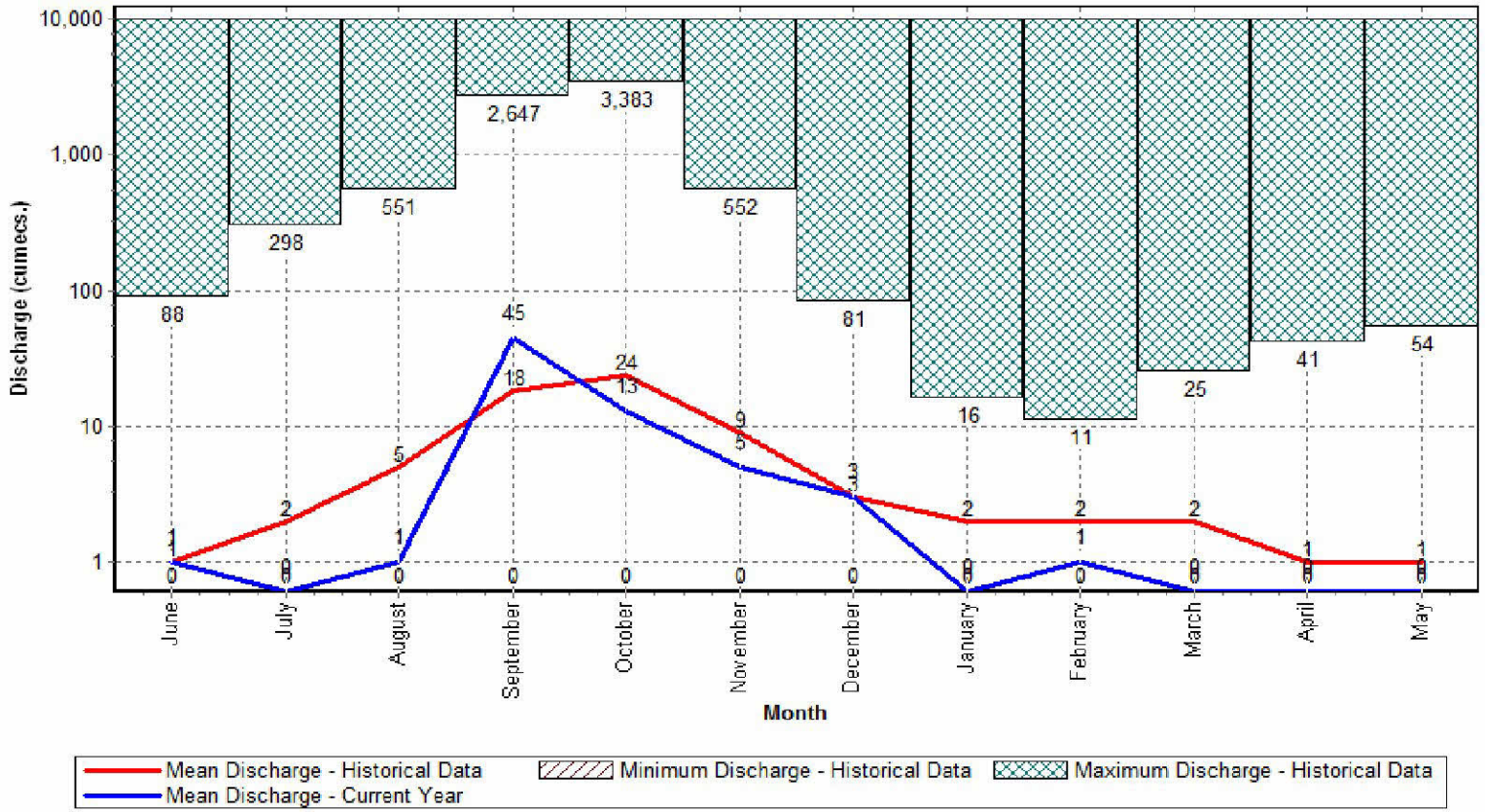
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Halia ( AKH00G2)** | **Data considered : 1985-2017** | **Division : Lower Krishna Divn., Hyderabad**

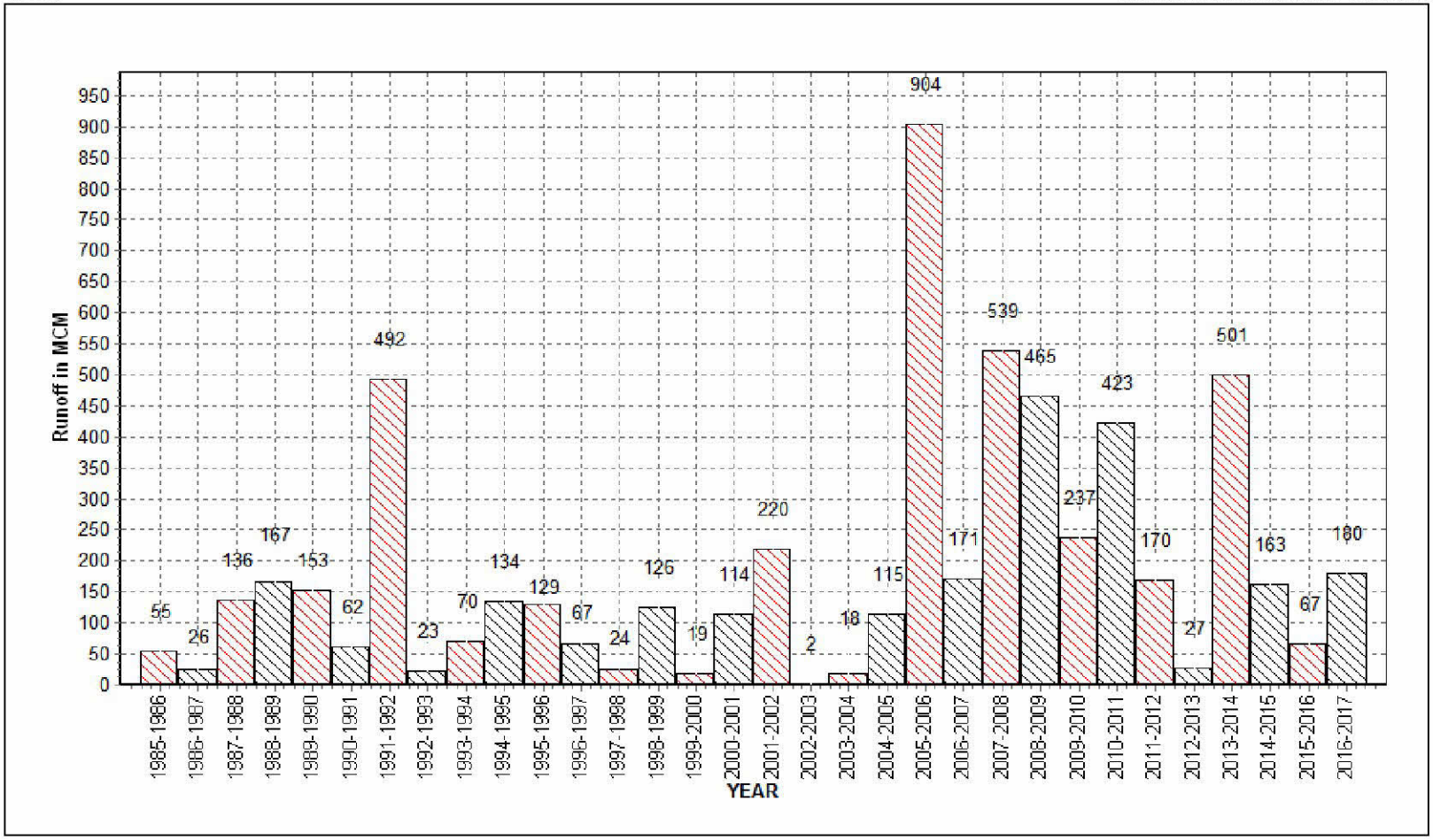
**Local River : Halia** | **Sub-Division : Lower Krishna SD 1, N.S.Dam**



**Annual Runoff Values for the period: 1985 - 2017**

**Station Name : Halia ( AKH00G2)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Halia** **Sub-Division : Lower Krishna SD 1, N.S.Dam**

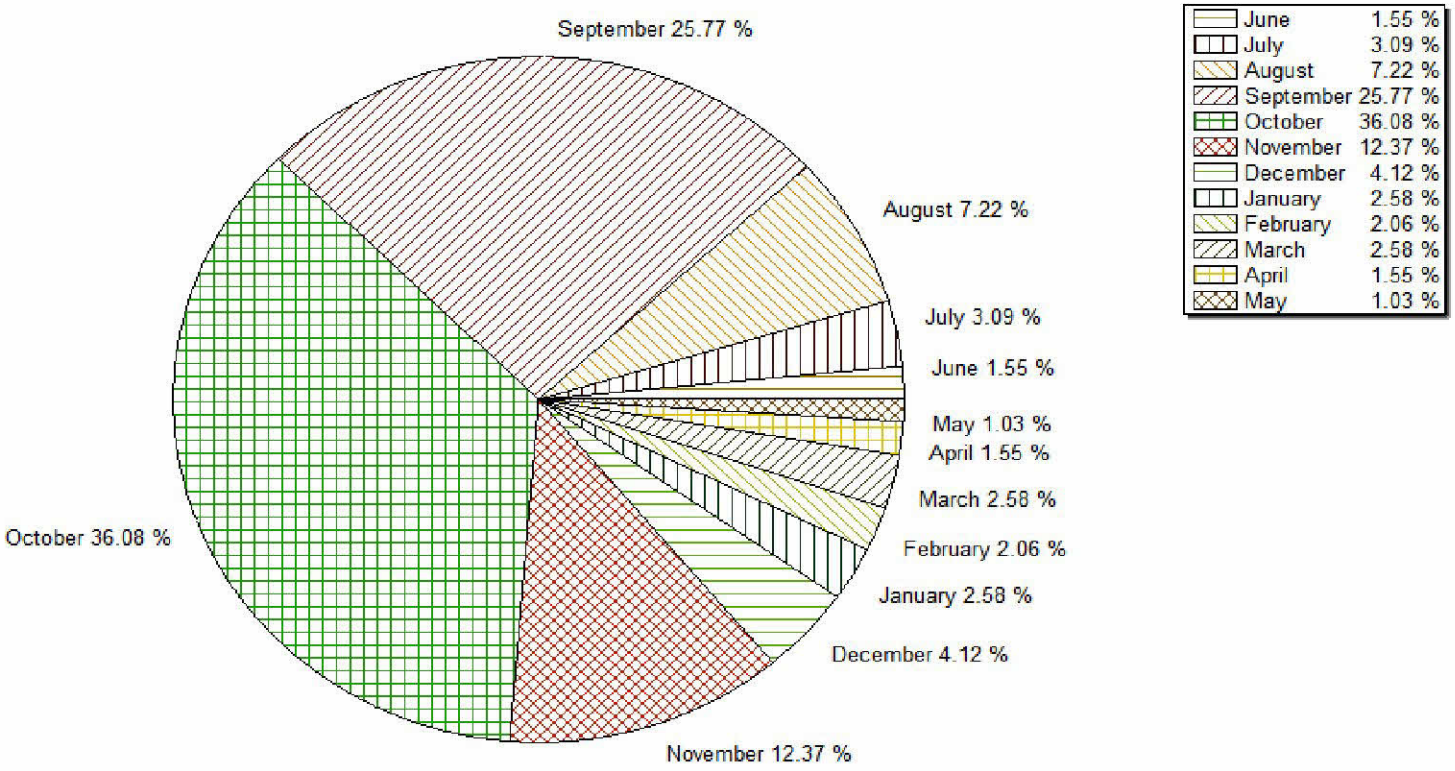



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1985-2016**

**Station Name : Halia ( AKH00G2)**
**Local River : Halia**

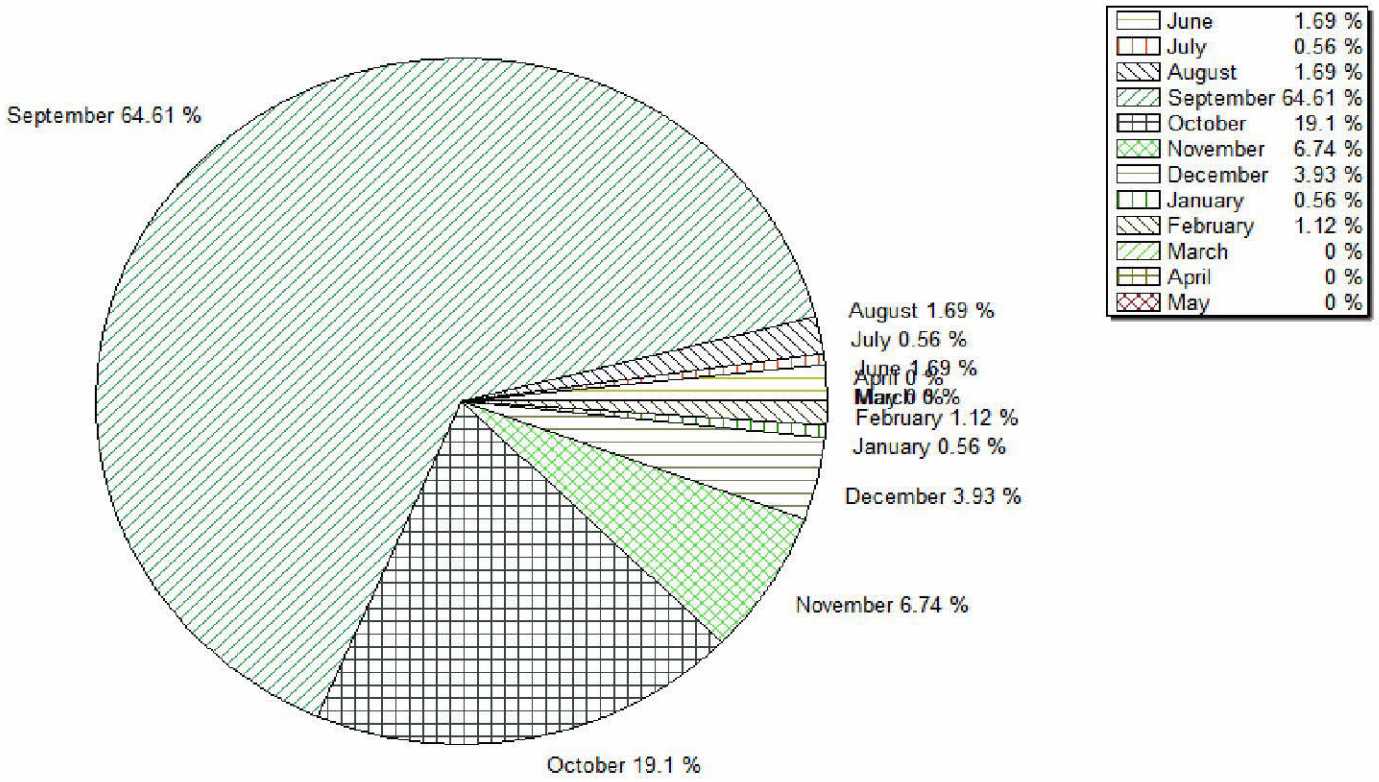
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD 1, N.S.Dam**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Halia ( AKH00G2)**
**Local River : Halia**

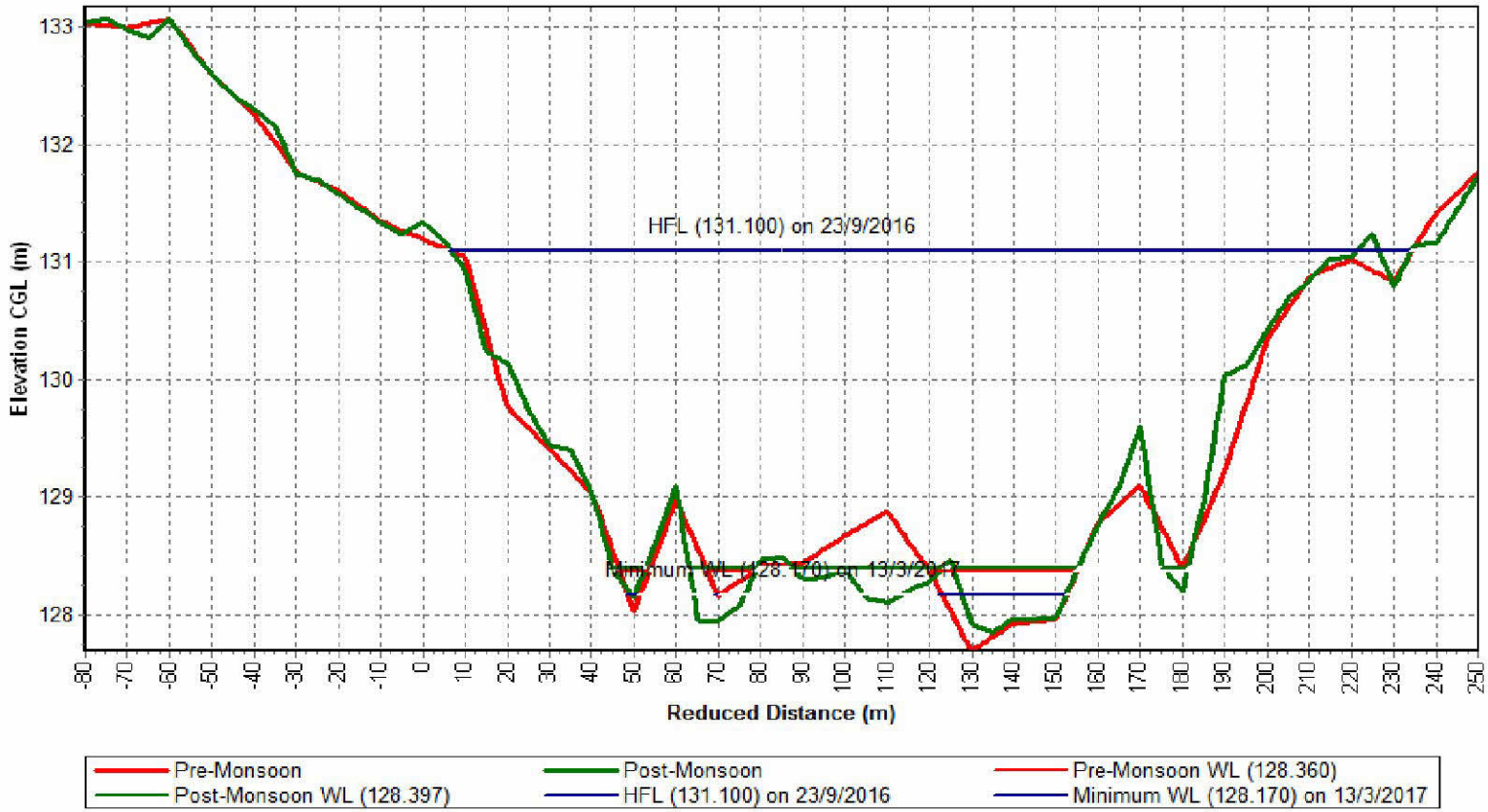
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD 1, N.S.Dam**



## Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017

**Station Name : Halia ( AKH00G2)**
**Local River : Halia**

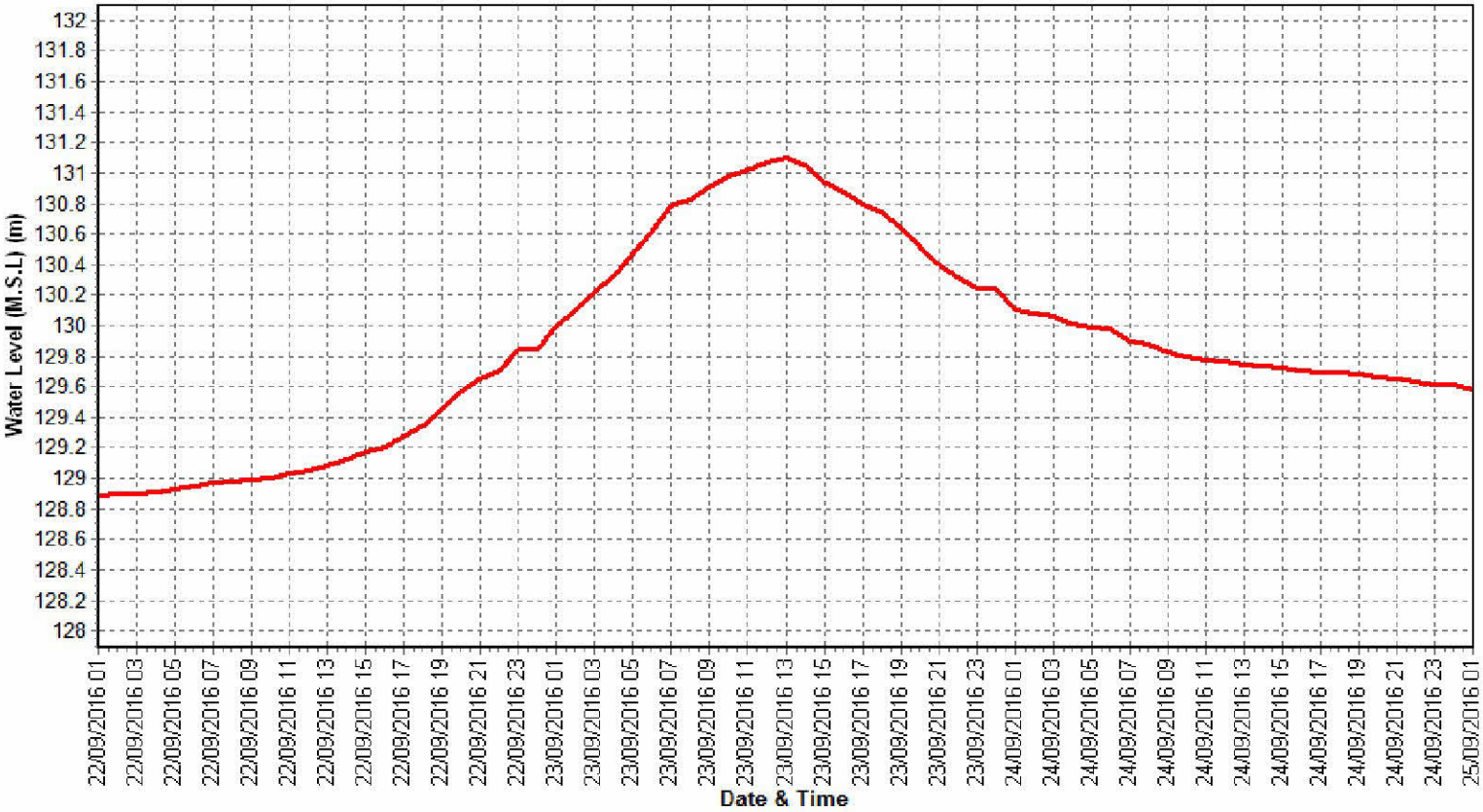
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Krishna SD 1, N.S.Dam**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Halia ( AKH00G2)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Halia** | **Sub-Division : Lower Krishna SD 1, N.S.Dam**

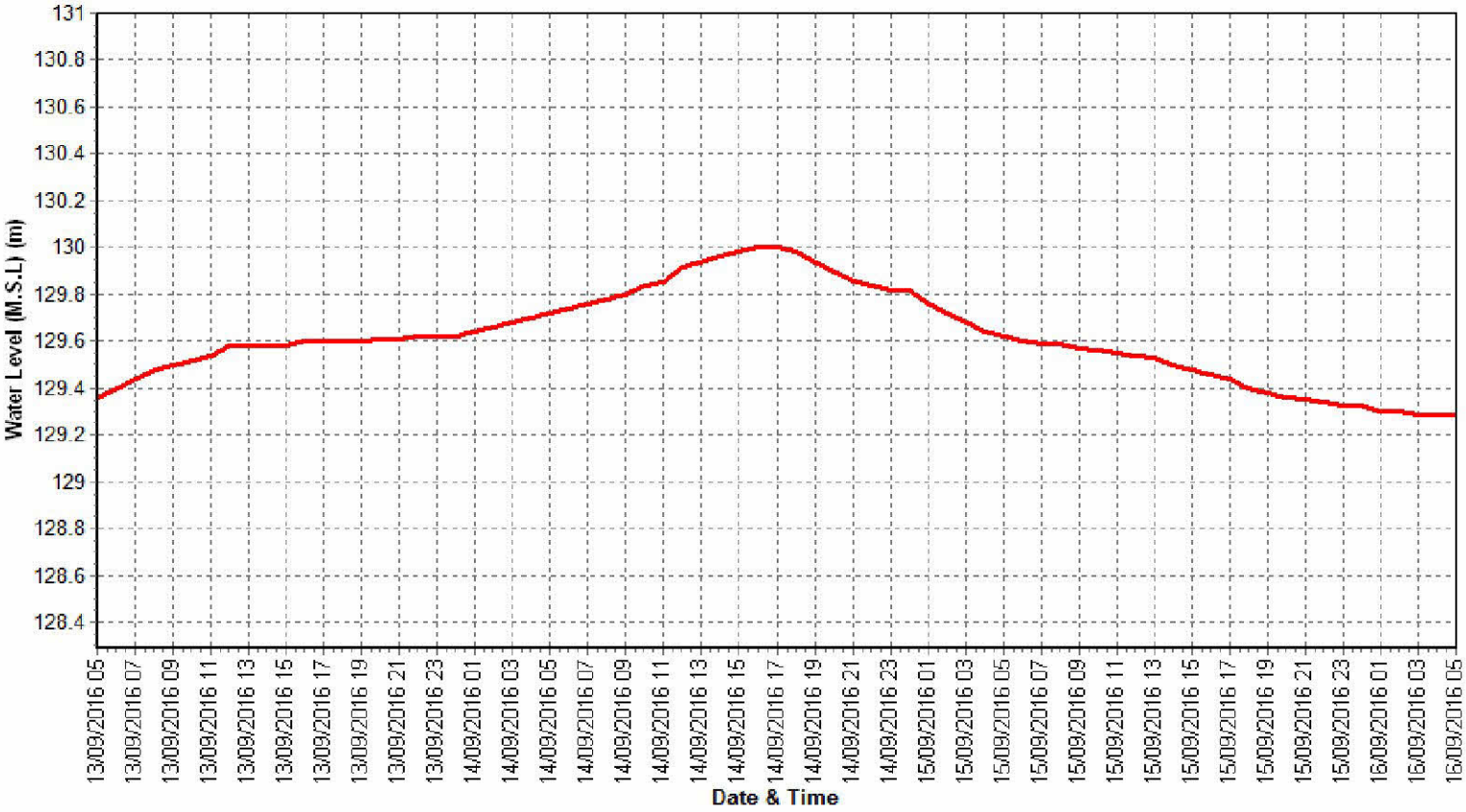



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017

**Station Name : Halia ( AKH00G2)**
**Local River : Halia**

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

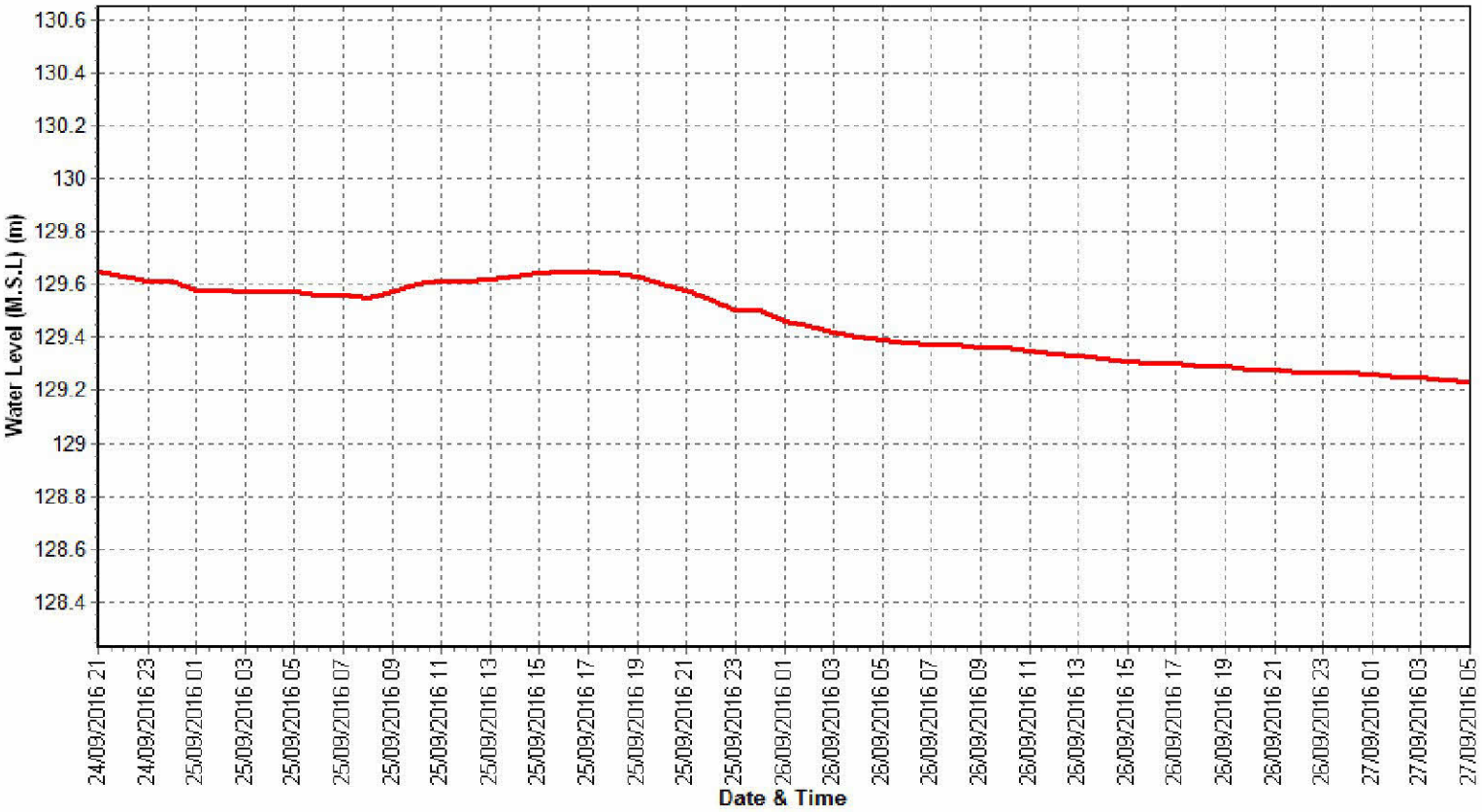



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017

**Station Name : Halia ( AKH00G2)**
**Local River : Halia**

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




Time Span: 72 Hrs

## HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: DODDIPADU.** | | **Code** | **: AKL00B1** | |
| State | : Andhra Pradesh | | District | Kurnool | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Tungabhadra | | Sub Tributary | : HUNDRI | |
| Sub-Sub Tributary | : PAL HANDRI | | Local River | : HUNDRI | |
| Division | : Lower Krishna Divn., Hyderabad | | Sub-Division | : Lower Tungabhadra SD, Kurnool | |
| Drainage Area | : 3240 Sq. Km. | | Bank | : Left | |
| Latitude | : 15°44'24" | | Longitude | : 77°59'35" | |
| **Zero of Gauge (m)** | : 286.383 (m.s.l) | | 18/11/2014 | | |
| | Opening Date | | Closing Date | | |
| Gauge | : 18/11/2014 | | **HFL During 2016-17** | **: 288.753m** | |
| | | | **Corres. Discharge** | **: 83.00(Estimated)** | |
| Discharge | : 18/11/2014 | | **Date & Time of occurance** | **: 15/09/2016 : 15.00 hrs.** | |
| 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** |
| 2015-2016 | 74.81 | 288.693 | 11/09/2015 | 0.000 | | 02/02/2016 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : DODDIPADU. ( AKL00B1)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : HUNDRI** **Sub-Division : Lower Tungabhadra SD, Kurnool**

| 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 | | 0.000 | 287.223 | 0.111 | 287.323 | 12.00 | 287.193 | 2.777 |
| 2 | | 0.000 | | 0.000 | | 0.000 | 287.213 | 0.097 | 287.263 | 10.78 | 287.203 | 3.763 |
| 3 | | 0.000 | | 0.000 | | 0.000 | 287.213 | 0.106 | 287.243 | 8.988 | 287.213 | 4.361 |
| 4 | 287.263 | 0.428 | | 0.000 | | 0.000 | 287.203 | 0.000 | 287.183 | 6.201 | 287.193 | 3.410 |
| 5 | 287.243 | 0.000 | | 0.000 | | 0.000 | 287.203 | 0.000 | 287.153 | 4.146 | 287.163 | 2.478 |
| 6 | | 0.000 | | 0.000 | | 0.000 | 287.213 | 0.109 | 287.113 | 3.660 | 287.163 | 5.894 |
| 7 | | 0.000 | | 0.000 | | 0.000 | 287.203 | 0.000 | 287.103 | 3.258 | 287.153 | 1.803 |
| 8 | | 0.000 | | 0.000 | | 0.000 | 287.203 | 0.000 | 287.143 | 3.764 | 287.143 | 1.129 |
| 9 | | 0.000 | | 0.000 | | 0.000 | 287.193 | 0.000 | 287.163 | 5.894 | 287.143 | 1.100 |
| 10 | | 0.000 | | 0.000 | | 0.000 | 287.183 | 0.000 | 287.183 | 4.929 | 287.133 | 0.924 |
| 11 | | 0.000 | | 0.000 | | 0.000 | 287.193 | 0.000 | 287.263 | 10.78 | 287.113 | 0.561 |
| 12 | | 0.000 | | 0.000 | | 0.000 | 287.203 | 0.000 | 287.243 | 9.641 | 287.103 | 0.482 |
| 13 | | 0.000 | | 0.000 | | 0.000 | 287.213 | 0.000 | 287.213 | 4.311 | 287.093 | 3.436 |
| 14 | | 0.000 | | 0.000 | | 0.000 | 287.293 | 0.847 | 287.193 | 3.062 | 287.093 | 3.673 |
| 15 | | 0.000 | | 0.000 | | 0.000 | 287.428 | 6.000 | 287.183 | 2.565 | 287.093 | 0.456 |
| 16 | | 0.000 | | 0.000 | | 0.000 | 287.723 | 54.34 | 287.163 | 5.894 | 287.103 | 0.501 |
| 17 | | 0.000 | | 0.000 | | 0.000 | 287.453 | 25.88 | 287.143 | 1.526 | 287.123 | 0.547 |
| 18 | | 0.000 | | 0.000 | | 0.000 | 287.393 | 17.01 | 287.203 | 4.410 | 287.143 | 0.913 |
| 19 | | 0.000 | | 0.000 | | 0.000 | 287.293 | 11.08 | 287.163 | 2.346 | 287.143 | 0.952 |
| 20 | | 0.000 | | 0.000 | | 0.000 | 287.253 | 9.737 | 287.173 | 2.475 | 287.173 | 6.292 |
| 21 | | 0.000 | | 0.000 | | 0.000 | 287.223 | 7.733 | 287.183 | 2.385 | 287.173 | 2.024 |
| 22 | | 0.000 | | 0.000 | | 0.000 | 287.283 | 9.258 | 287.193 | 2.469 | 287.153 | 1.903 |
| 23 | | 0.000 | | 0.000 | | 0.000 | 287.303 | 8.528 | 287.193 | 7.148 | 287.143 | 1.435 |
| 24 | | 0.000 | | 0.000 | | 0.000 | 287.263 | 8.290 | 287.173 | 2.505 | 287.163 | 1.980 |
| 25 | | 0.000 | | 0.000 | | 0.000 | 287.273 | 0.000 | 287.153 | 1.926 | 287.173 | 2.043 |
| 26 | | 0.000 | | 0.000 | | 0.000 | 287.283 | 7.587 | 287.143 | 1.573 | 287.193 | 2.666 |
| 27 | | 0.000 | | 0.000 | | 0.000 | 287.253 | 7.175 | 287.133 | 1.605 | 287.183 | 6.710 |
| 28 | | 0.000 | | 0.000 | | 0.000 | 287.243 | 6.881 | 287.173 | 2.591 | 287.163 | 1.795 |
| 29 | | 0.000 | | 0.000 | | 0.000 | 287.253 | 8.791 | 287.183 | 3.300 | 287.143 | 1.260 |
| 30 | | 0.000 | | 0.000 | 287.243 | 8.183 | 287.273 | 10.20 | 287.173 | 6.292 | 287.143 | 1.274 |
| 31 | | | | 0.000 | 287.333 | 2.449 | | | 287.173 | 2.720 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 287.253 | 0.043 | | 0.000 | | 0.000 | 287.205 | 0.042 | 287.187 | 6.361 | 287.170 | 2.764 |
| II Ten-Daily | | 0.000 | | 0.000 | | 0.000 | 287.344 | 12.49 | 287.194 | 4.701 | 287.118 | 1.781 |
| III Ten-Daily | | 0.000 | | 0.000 | 287.288 | 0.967 | 287.265 | 7.444 | 287.170 | 3.138 | 287.163 | 2.309 |
| Monthly | | | | | | | | | | | | |
| Min. | 287.243 | 0.000 | | 0.000 | 287.243 | 0.000 | 287.183 | 0.000 | 287.103 | 1.526 | 287.093 | 0.456 |
| Max. | 287.263 | 0.428 | | 0.000 | 287.333 | 8.183 | 287.723 | 54.34 | 287.323 | 12.00 | 287.213 | 6.710 |
| Mean | 287.253 | 0.014 | | 0 | 287.288 | 0.343 | 287.271 | 6.659 | 287.183 | 4.682 | 287.150 | 2.285 |

**Annual Runoff in MCM = 47 Annual Runoff in mm = 14**

**Peak Observed Discharge = 54.34 cumecs on 16/09/2016 Corres. Water Level :287.723 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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

*Note:Missing values ignored while arriving at Annual Runoff*

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : DODDIPADU. ( AKL00B1)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : HUNDRI** **Sub-Division : Lower Tungabhadra SD, Kurnool**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 287.153 | 1.815 | 287.103 | 3.930 | 287.043 | 0.000 | 286.983 | 0.000 | | 0.000 | | 0.000 |
| 2 | 287.163 | 1.830 | 287.113 | 1.042 | 287.033 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 3 | 287.163 | 1.877 | 287.113 | 1.052 | 287.043 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 4 | 287.163 | 5.894 | 287.103 | 1.016 | 287.033 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 5 | 287.193 | 2.154 | 287.093 | 0.988 | 287.043 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 6 | 287.203 | 2.294 | 287.093 | 0.900 | 287.043 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 7 | 287.193 | 2.141 | 287.093 | 0.892 | 287.053 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 8 | 287.173 | 1.951 | 287.093 | 3.673 | 287.063 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 9 | 287.163 | 1.714 | 287.083 | 0.608 | 287.063 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 10 | 287.163 | 1.537 | 287.073 | 0.491 | 287.073 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 11 | 287.163 | 5.894 | 287.073 | 0.466 | 287.073 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 12 | 287.163 | 5.894 | 287.093 | 0.791 | 287.063 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 13 | 287.163 | 1.899 | 287.123 | 1.178 | 287.063 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 14 | 287.183 | 2.028 | 287.143 | 1.372 | 287.073 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 15 | 287.173 | 2.104 | 287.153 | 5.516 | 287.073 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 16 | 287.183 | 2.421 | 287.103 | 0.993 | 287.063 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 17 | 287.363 | 7.533 | 287.093 | 0.918 | 287.073 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 18 | 287.253 | 10.20 | 287.063 | 0.365 | 287.063 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 19 | 287.173 | 2.351 | 287.053 | 0.282 | 287.043 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 20 | 287.153 | 1.969 | 287.103 | 0.844 | 287.023 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 21 | 287.153 | 1.925 | 287.083 | 0.643 | 287.013 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 22 | 287.153 | 1.880 | 287.053 | 2.847 | 287.003 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 23 | 287.153 | 1.887 | 287.033 | 0.141 | 286.993 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 24 | 287.143 | 1.627 | 287.003 | 0.000 | 286.993 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 25 | 287.143 | 5.159 | 287.003 | 0.000 | 286.993 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 26 | 287.133 | 1.532 | 287.003 | 0.000 | 286.993 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 27 | 287.123 | 1.344 | 287.013 | 0.000 | 286.983 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 28 | 287.123 | 1.335 | 287.023 | 0.000 | 286.983 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 29 | 287.113 | 1.067 | 287.023 | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 30 | 287.113 | 1.029 | 287.023 | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 31 | 287.103 | 1.031 | 287.023 | 0.000 | | | | 0.000 | | | | 0.000 |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 287.173 | 2.321 | 287.096 | 1.459 | 287.049 | 0.000 | 286.983 | 0.000 | | 0.000 | | 0.000 |
| II Ten-Daily | 287.197 | 4.229 | 287.100 | 1.273 | 287.061 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| III Ten-Daily | 287.132 | 1.801 | 287.026 | 0.330 | 286.994 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 287.103 | 1.029 | 287.003 | 0.000 | 286.983 | 0.000 | 286.983 | 0.000 | | 0.000 | | 0.000 |
| Max. | 287.363 | 10.20 | 287.153 | 5.516 | 287.073 | 0.000 | 286.983 | 0.000 | | 0.000 | | 0.000 |
| Mean | 287.166 | 2.752 | 287.072 | 0.998 | 287.038 | 0 | 286.983 | 0 | | 0 | | 0 |

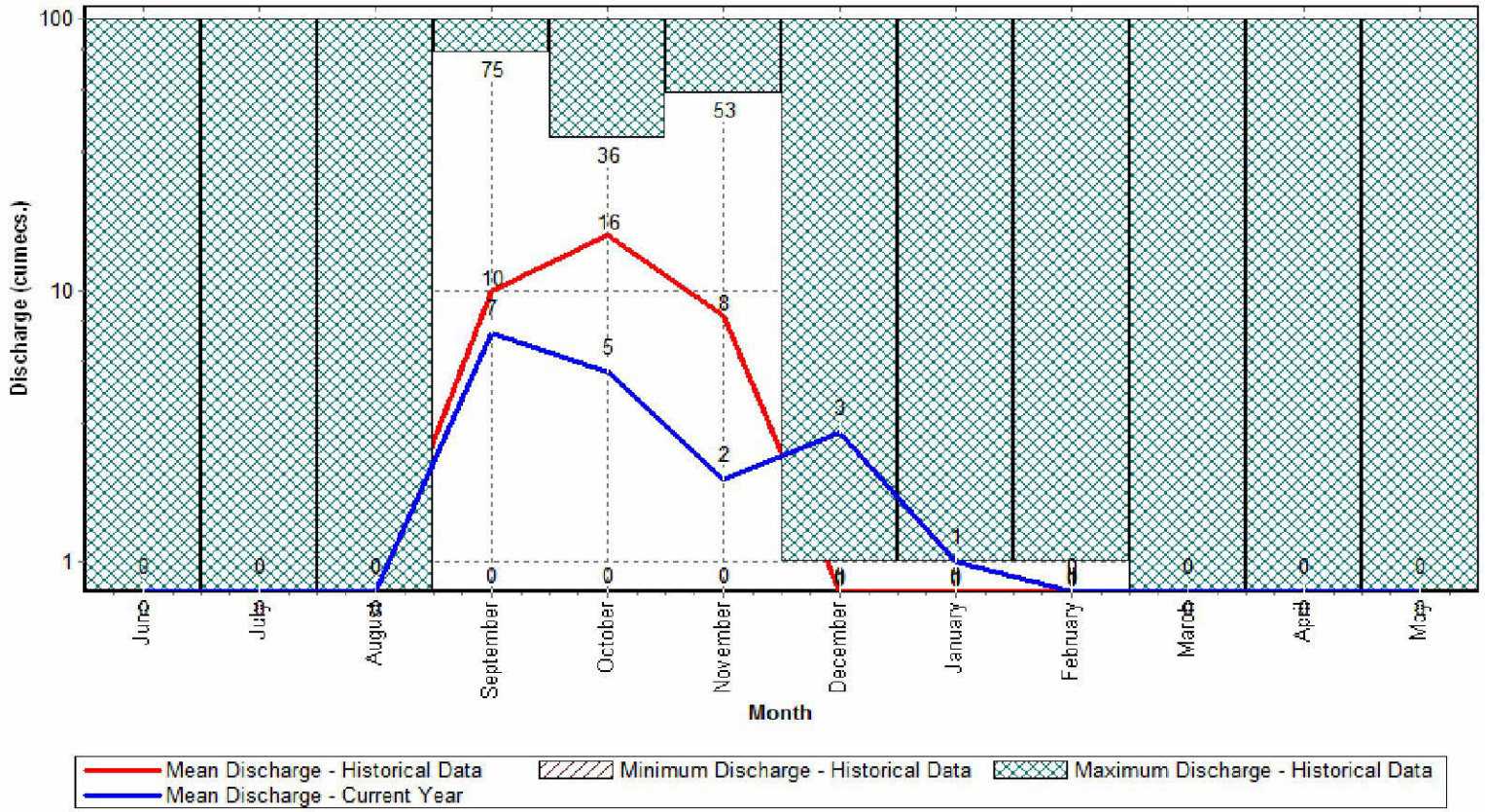
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : DODDIPADU. ( AKL00B1)** | **Data considered : 2015-2017** | **Division : Lower Krishna Divn., Hyderabad**

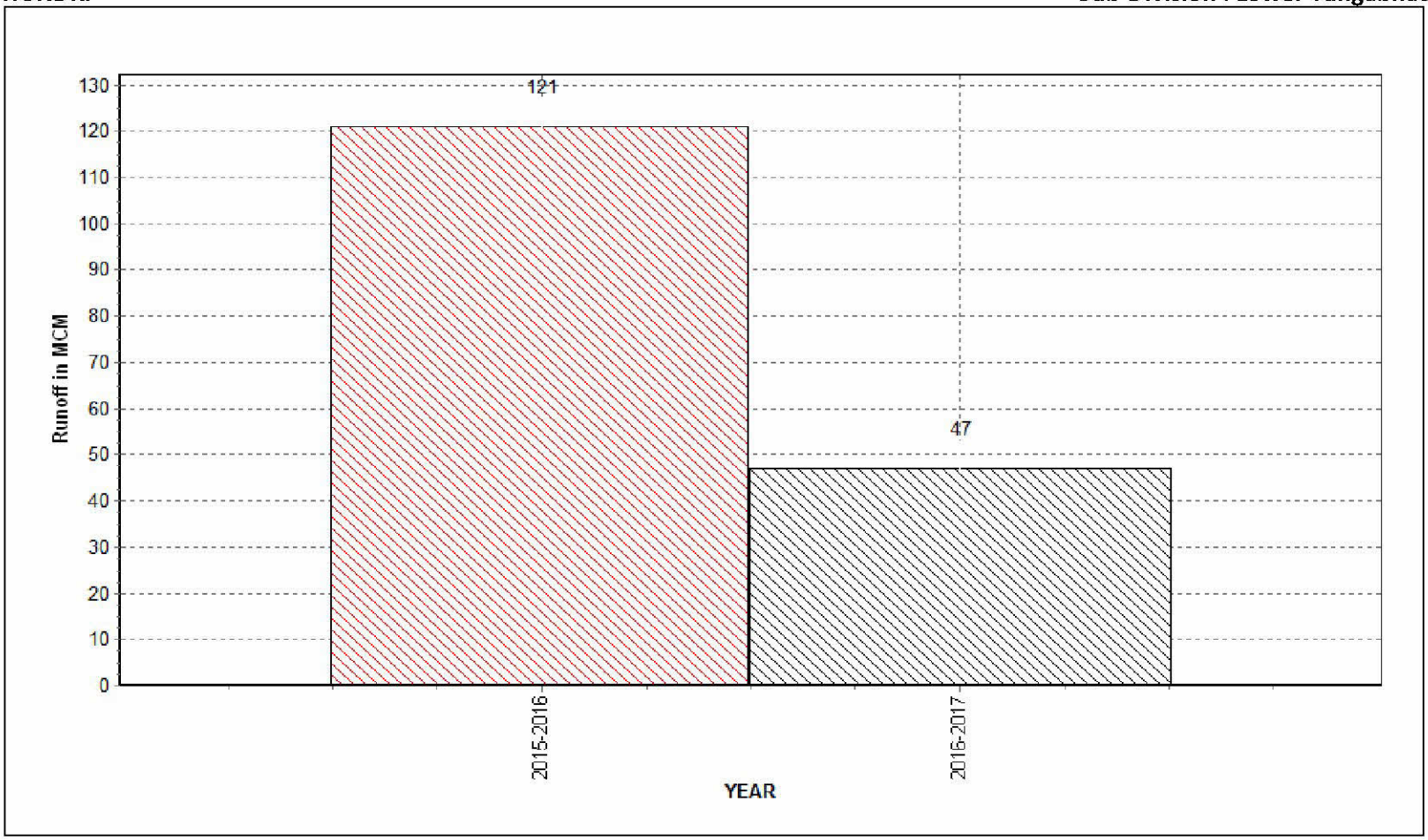
**Local River : HUNDRI** | **Sub-Division : Lower Tungabhadra SD, Kurnool**



**Annual Runoff Values for the period: 2015 - 2017**

**Station Name : DODDIPADU. ( AKL00B1)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : HUNDRI** **Sub-Division : Lower Tungabhadra SD, Kurnool**

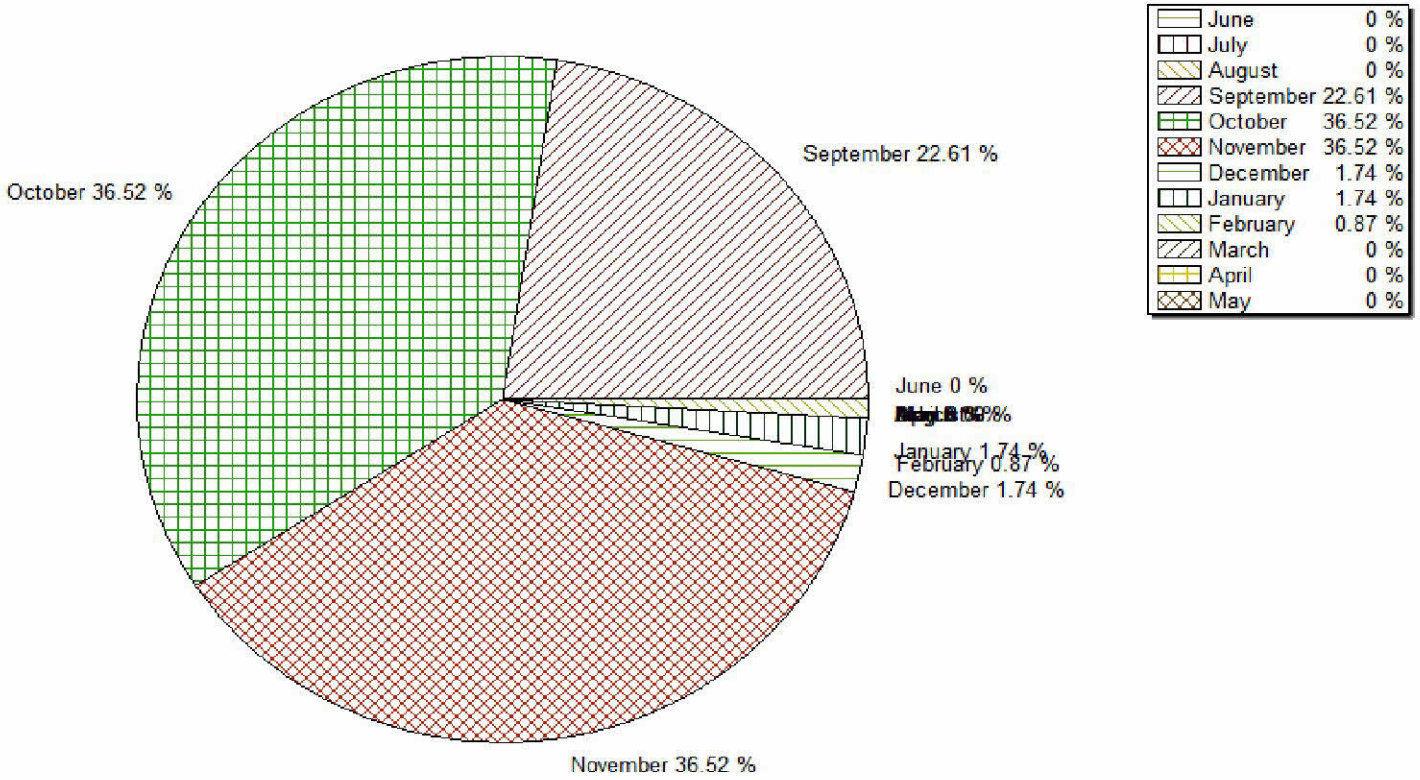



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 2015-2016**

**Station Name : DODDIPADU. ( AKL00B1)**
**Local River : HUNDRI**

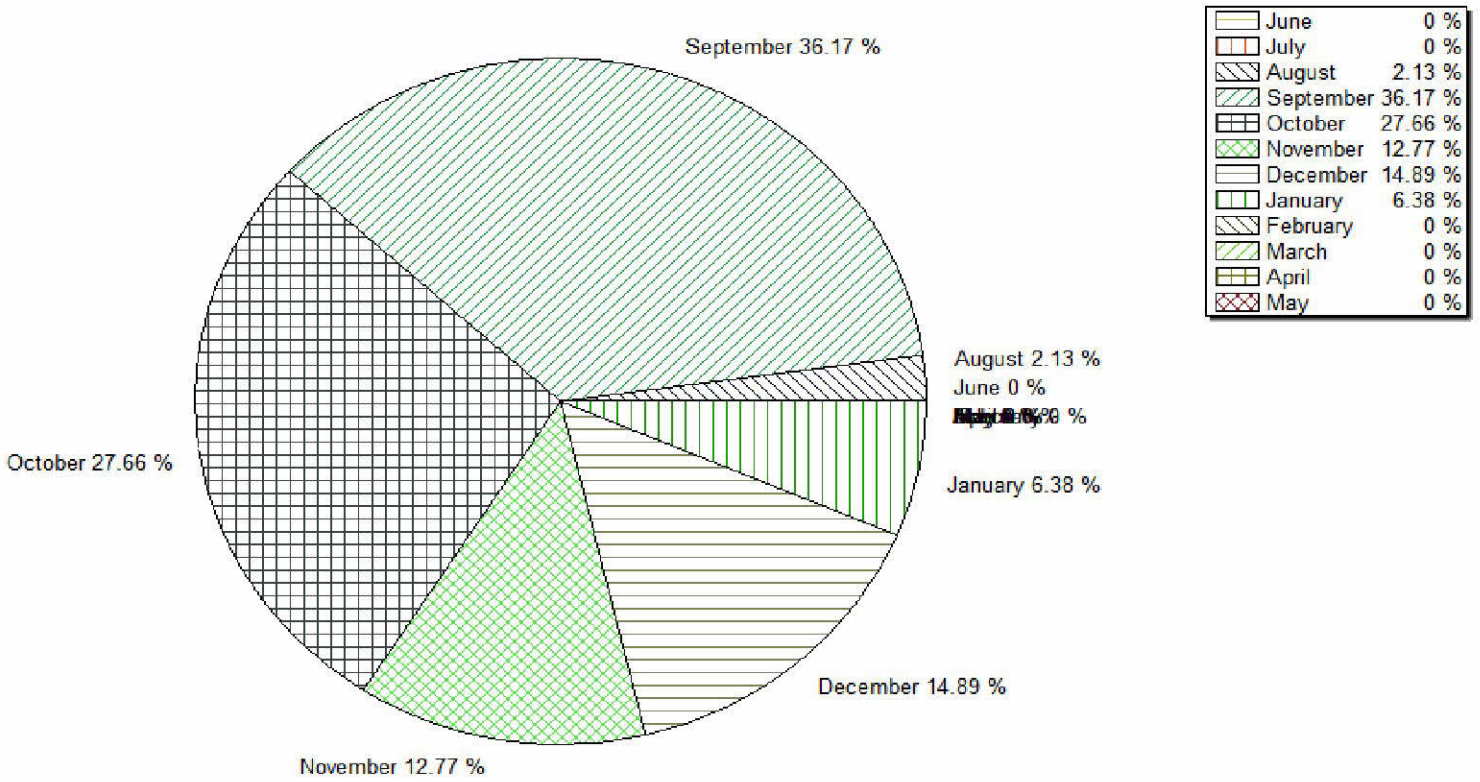
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Tungabhadra SD, Kurnool**



**Monthly Runoff for the Year : 2016-2017**

**Station Name : DODDIPADU. ( AKL00B1)**
**Local River : HUNDRI**

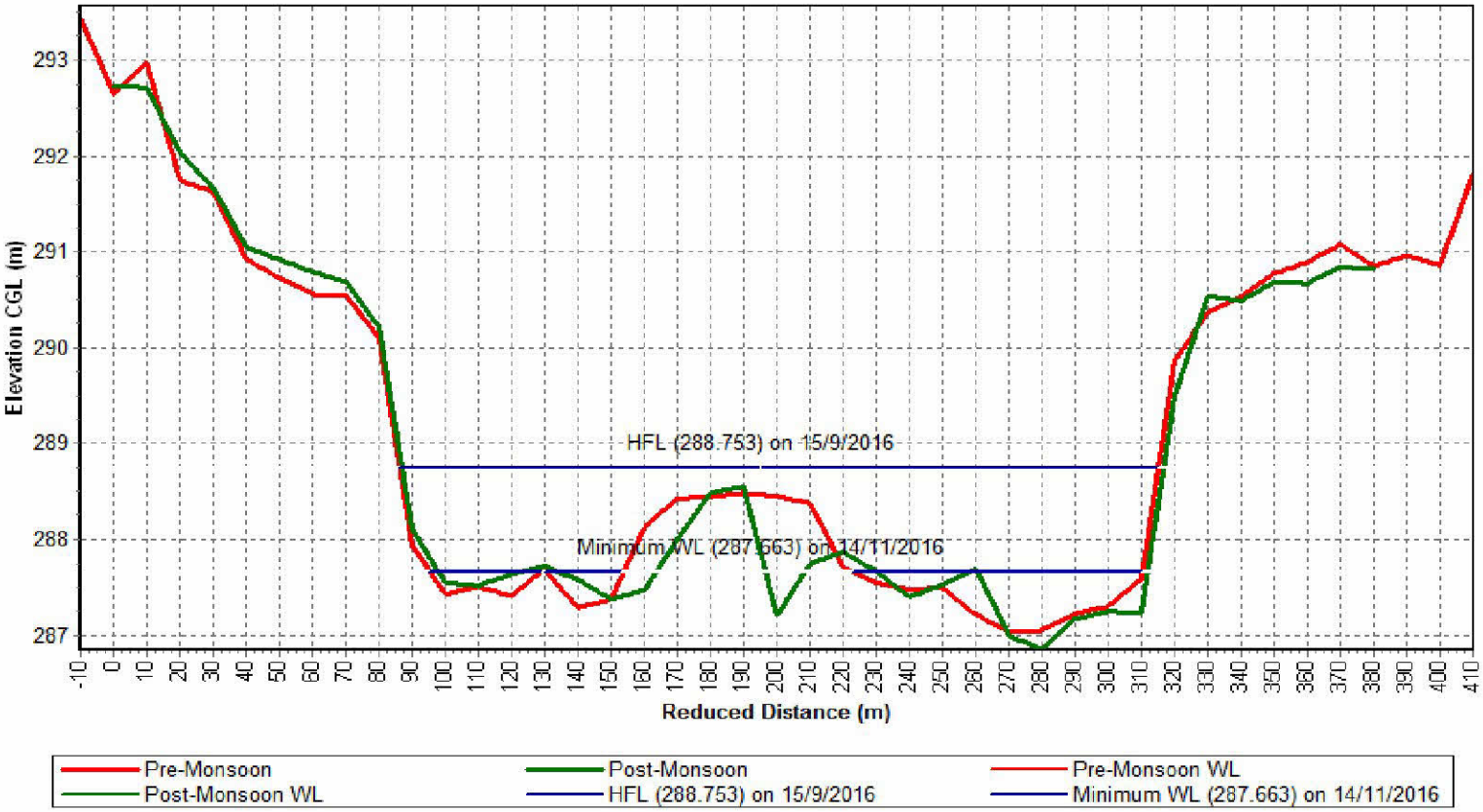
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Tungabhadra SD, Kurnool**



## Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017

**Station Name : DODDIPADU. ( AKL00B1)** | **Division : Lower Krishna Divn., Hyderabad**

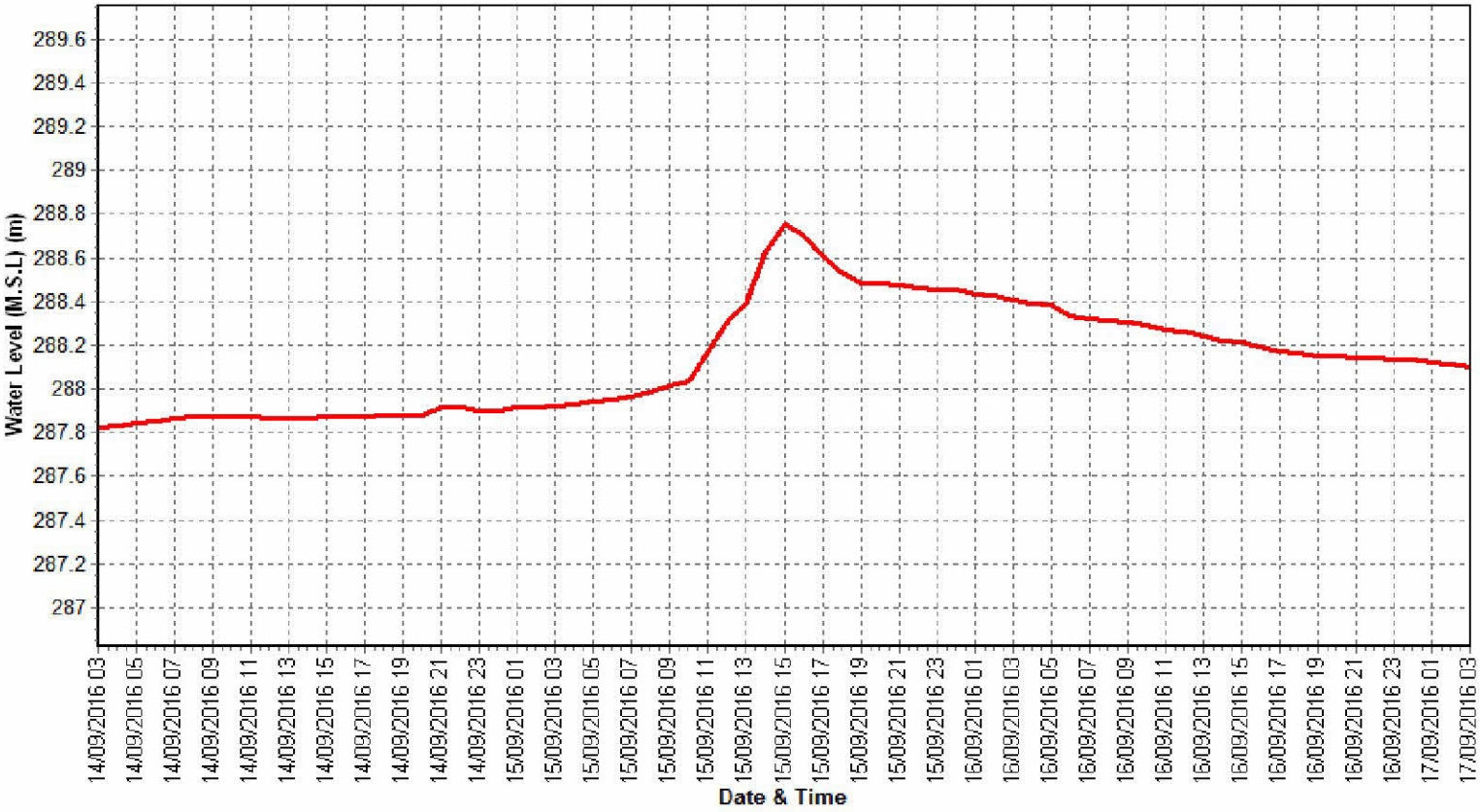
**Local River : HUNDRI** | **Sub-Division : Lower Tungabhadra SD, Kurnool**



**Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017**

**Station Name : DODDIPADU. ( AKL00B1)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : HUNDRI** **Sub-Division : Lower Tungabhadra SD, Kurnool**

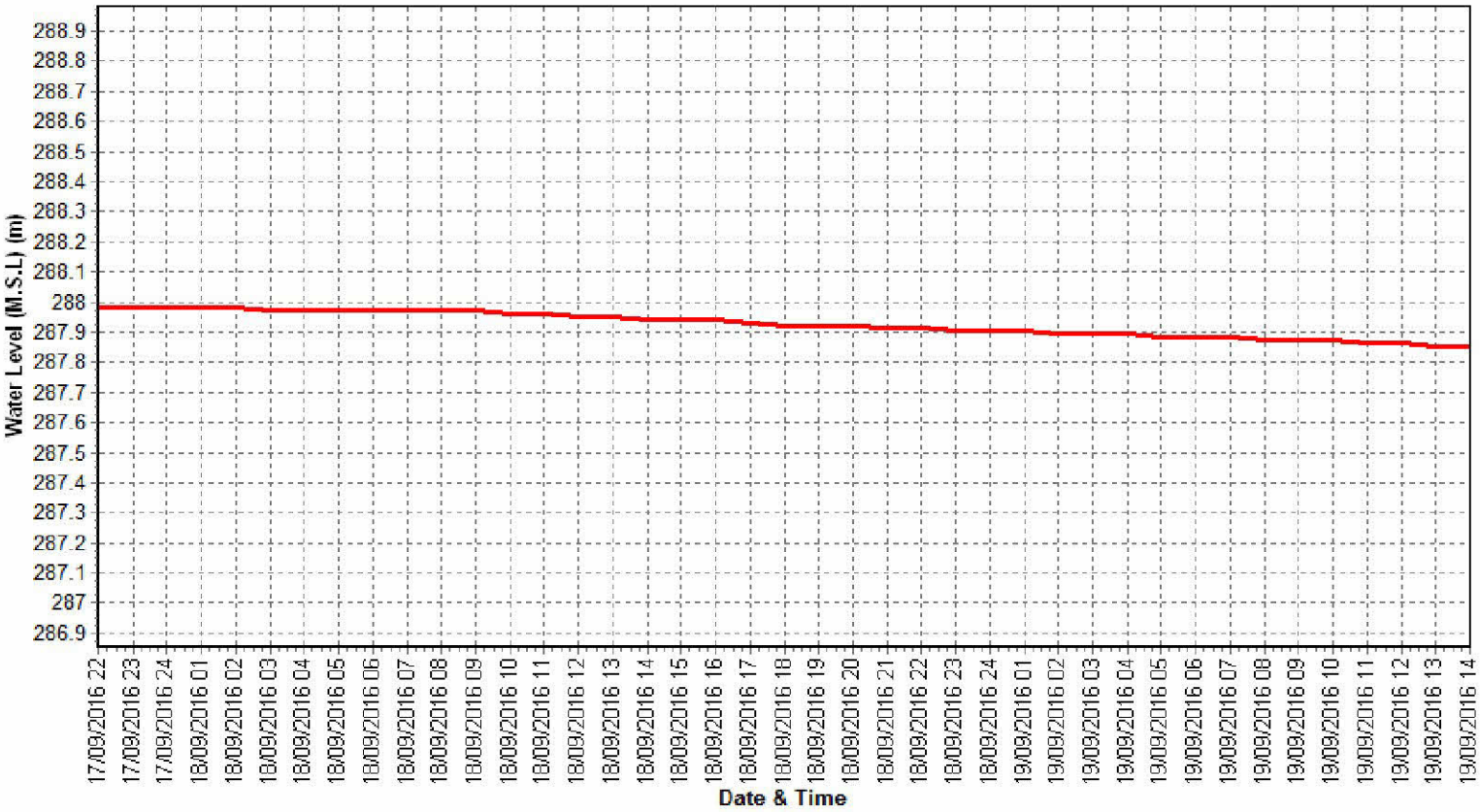



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017

**Station Name : DODDIPADU. ( AKL00B1)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : HUNDRI** | **Sub-Division : Lower Tungabhadra SD, Kurnool**

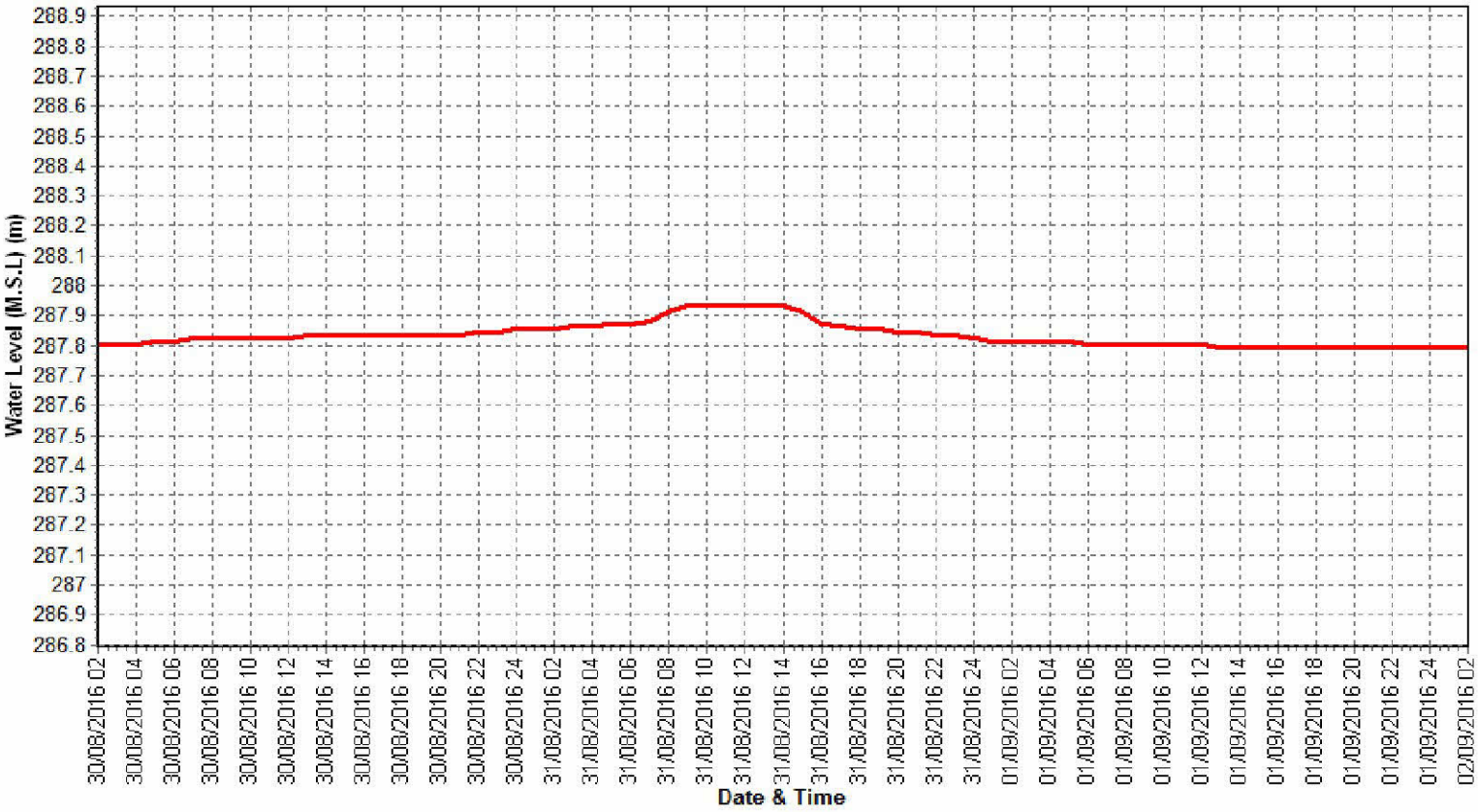



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : DODDIPADU. ( AKL00B1)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : HUNDRI** **Sub-Division : Lower Tungabhadra SD, Kurnool**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Bawapuram** | | **Code** | **: AKL00B8** | |
| State | : Andhra Pradesh | | District | Kurnool | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Tungabhadra | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Tungabhadra | |
| Division | : Lower Krishna Divn., Hyderabad | | Sub-Division | : Lower Tungabhadra SD, Kurnool | |
| Drainage Area | : 67180 Sq. Km. | | Bank | : Right | |
| Latitude | : 15°52'57" | | Longitude | : 77°57'26" | |
| **Zero of Gauge (m)** | : 271.825 (m.s.l)<br>270.485 (m.s.l)<br>270.245 (m.s.l) | | 14/03/1964<br>01/06/1969<br>01/01/1973 | - 31/05/1969<br>- 31/12/1972 | |
| | Opening Date | | Closing Date | | |
| Gauge | : 14/03/1964 | | **HFL During 2016-17** | **: 273.375m** | |
| Discharge | : 01/04/1964 | | **Corres. Discharge** | **: 1536(Estimated)** | |
| Sediment | : 01/06/1965 | | **Date & Time of occurance** | **: 17/09/2016 : 13.00 hrs.** | |
| Water Quality | : 01/01/1972 | | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1965-1966 | 3250 | 277.755 | 25/07/1965 | 1.000 | 272.560 | 23/03/1966 |
| 1966-1967 | 2700 | 277.295 | 25/09/1966 | 1.258 | 272.600 | 07/07/1966 |
| 1967-1968 | 3735 | 278.080 | 06/08/1967 | 1.049 | 272.550 | 11/07/1967 |
| 1968-1969 | 4987 | 278.337 | 09/10/1968 | 2.288 | 272.585 | 15/07/1968 |
| 1969-1970 | 3523 | 276.420 | 06/08/1969 | 2.500 | 271.410 | 15/05/1970 |
| 1970-1971 | 5714 | 277.883 | 21/09/1970 | 4.856 | 271.445 | 05/04/1971 |
| 1971-1972 | 3448 | 276.420 | 15/10/1971 | 4.140 | 271.455 | 09/05/1972 |
| 1972-1973 | 1152 | 274.660 | 19/09/1972 | 1.500 | 271.050 | 20/05/1973 |
| 1973-1974 | 1867 | 275.205 | 19/08/1973 | 1.700 | 271.305 | 11/05/1974 |
| 1974-1975 | 5520 | 277.285 | 28/09/1974 | 3.000 | 271.190 | 04/05/1975 |
| 1975-1976 | 6214 | 277.835 | 19/10/1975 | 3.300 | 271.145 | 03/07/1975 |
| 1976-1977 | 465.8 | 273.198 | 26/08/1976 | 3.000 | 271.105 | 13/10/1976 |
| 1977-1978 | 1864 | 274.945 | 13/10/1977 | 1.800 | 271.045 | 11/07/1977 |
| 1978-1979 | 6723 | 278.160 | 30/09/1978 | 2.100 | 271.055 | 01/07/1978 |
| 1979-1980 | 2149 | 275.445 | 25/09/1979 | 1.500 | 270.915 | 19/07/1979 |
| 1980-1981 | 4779 | 277.075 | 16/08/1980 | 0.800 | 270.990 | 03/05/1981 |
| 1981-1982 | 4345 | 276.885 | 20/09/1981 | 2.400 | 271.055 | 25/07/1981 |
| 1982-1983 | 3998 | 276.590 | 07/08/1982 | 1.600 | 271.015 | 04/05/1983 |
| 1983-1984 | 2772 | 275.905 | 18/08/1983 | 0.700 | 270.915 | 13/07/1983 |
| 1984-1985 | 2944 | 275.815 | 06/08/1984 | 0.400 | 270.905 | 28/04/1985 |
| 1985-1986 | 1156 | 274.165 | 19/08/1985 | 0.100 | 270.885 | 19/04/1986 |

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 | 2858 | 275.585 | 16/08/1986 | 0.000 | 270.865 | 31/03/1987 |
| 1987-1988 | 1423 | 274.390 | 29/06/1987 | 0.170 | 270.835 | 09/06/1987 |
| 1988-1989 | 3455 | 275.975 | 31/08/1988 | 0.000 | | 15/05/1989 |
| 1989-1990 | 2787 | 275.640 | 25/09/1989 | 0.000 | | 02/06/1989 |
| 1990-1991 | 2989 | 275.945 | 18/08/1990 | 0.090 | 270.925 | 05/08/1990 |
| 1991-1992 | 3748 | 276.325 | 01/08/1991 | 0.023 | 270.915 | 21/04/1992 |
| 1992-1993 | 15004 | 280.445 | 19/11/1992 | 0.386 | 270.840 | 06/05/1993 |
| 1993-1994 | 4879 | 276.864 | 11/10/1993 | 1.418 | 270.815 | 09/07/1993 |
| 1994-1995 | 6971 | 278.015 | 19/07/1994 | 0.230 | 270.700 | 01/05/1995 |
| 1995-1996 | 1209 | 273.895 | 31/08/1995 | 0.000 | 270.655 | 28/06/1995 |
| 1996-1997 | 6509 | 277.525 | 03/10/1996 | 0.000 | 270.695 | 02/06/1996 |
| 1997-1998 | 5069 | 276.645 | 10/08/1997 | 0.945 | 270.775 | 24/07/1997 |
| 1998-1999 | 6036 | 276.975 | 15/10/1998 | 0.000 | 270.775 | 22/06/1998 |
| 1999-2000 | 2667 | 275.370 | 01/08/1999 | 0.542 | 270.665 | 01/02/2000 |
| 2000-2001 | 2629 | 275.515 | 11/10/2000 | 1.525 | 270.755 | 12/03/2001 |
| 2001-2002 | 3213 | 275.935 | 08/10/2001 | 0.000 | | 22/05/2002 |
| 2002-2003 | 1268 | 274.295 | 13/10/2002 | 0.000 | 270.545 | 02/03/2003 |
| 2003-2004 | 534.0 | 273.185 | 24/10/2003 | 0.000 | 270.495 | 17/02/2004 |
| 2004-2005 | 1481 | 274.340 | 07/09/2004 | 0.000 | | 03/05/2005 |
| 2005-2006 | 4651 | 276.345 | 06/08/2005 | 0.000 | | 07/07/2005 |
| 2006-2007 | 5667 | 276.945 | 15/08/2006 | 0.000 | 270.395 | 02/04/2007 |
| 2007-2008 | 8101 | 278.395 | 20/09/2007 | 0.666 | 270.395 | 02/03/2008 |
| 2008-2009 | 6397 | 277.305 | 16/08/2008 | 0.000 | 270.275 | 15/05/2009 |
| 2009-2010 | 19986 | 281.585 | 02/10/2009 | 0.632 | 270.515 | 21/03/2010 |
| 2010-2011 | 5494 | 276.675 | 25/08/2010 | 0.585 | 270.505 | 10/08/2010 |
| 2011-2012 | 3774 | 275.590 | 05/09/2011 | 0.017 | 270.295 | 16/04/2012 |
| 2012-2013 | 1898 | 274.120 | 03/11/2012 | 0.000 | 270.225 | 21/05/2013 |
| 2013-2014 | 4755 | 275.755 | 06/08/2013 | 0.000 | 270.295 | 22/03/2014 |
| 2014-2015 | 5830 | 276.105 | 05/08/2014 | 0.000 | 270.265 | 06/07/2014 |
| 2015-2016 | 2081 | 273.955 | 08/09/2015 | 0.000 | 270.275 | 01/08/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Bawapuram ( AKL00B8)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Tungabhadra** **Sub-Division : Lower Tungabhadra SD, Kurnool**

| 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 | 269.435 | 0.000 | 270.345 | 2.806 | 270.575 | 12.72 | 270.435 | 4.213 | 270.715 | 18.33 | 270.255 | 0.000 |
| 2 | 269.425 | 0.000 | 270.385 | 3.617 | 270.485 | 9.082 | 270.345 | 2.821 | 270.525 | 9.563 * | | 0.000 |
| 3 | 269.415 | 0.000 | 270.495 | 8.132 * | 270.635 | 15.62 | 270.325 | 2.419 | 270.425 | 4.225 | 270.225 | 0.000 |
| 4 | 269.445 | 0.000 | 270.505 | 9.022 | 270.635 | 15.22 | 270.325 | 2.489 * | 270.395 | 3.887 | 270.225 | 0.000 |
| 5 | 270.325 | 0.000 | 270.435 | 4.289 | 270.485 | 8.748 | 270.315 | 2.275 * | 270.385 | 3.746 | 270.215 | 0.000 |
| 6 | 270.265 | 0.000 | 270.425 | 4.853 | 270.395 | 3.789 | 270.295 | 2.191 | 270.345 | 2.962 | 270.215 | 0.000 |
| 7 | 270.395 | 3.922 | 270.475 | 7.255 * | 270.355 | 3.205 * | 270.285 | 1.778 | 270.325 | 2.530 | 270.195 | 0.000 |
| 8 | 270.345 | 2.820 | 270.505 | 9.019 | 270.325 | 2.535 | 270.285 | 1.840 | 270.325 | 2.489 * | 270.195 | 0.000 |
| 9 | 270.345 | 2.795 | 270.565 | 13.10 | 270.315 | 2.316 | 270.295 | 2.075 | 270.295 | 1.881 * | 270.195 | 0.000 |
| 10 | 270.345 | 2.876 | 270.565 | 11.70 * | 270.315 | 2.347 | 270.295 | 1.881 * | 270.285 | 2.012 | 270.165 | 0.000 |
| 11 | 270.325 | 2.489 * | 270.485 | 9.034 | 270.315 | 2.322 | 270.295 | 1.881 * | 270.285 | 1.701 * | 270.165 | 0.000 |
| 12 | 270.325 | 2.489 * | 270.415 | 4.127 | 270.325 | 2.509 | 270.325 | 2.584 | 270.295 | 1.881 * | 270.155 | 0.000 |
| 13 | 270.315 | 2.384 | 270.365 | 3.128 | 270.325 | 2.430 | 270.425 | 5.324 * | 270.315 | 2.385 | 270.165 | 0.000 |
| 14 | 270.285 | 1.986 | 270.325 | 2.575 | 270.365 | 3.468 * | 270.495 | 8.995 | 270.315 | 2.354 | 270.185 | 0.000 |
| 15 | 270.285 | 1.947 | 270.305 | 2.383 | 270.365 | 3.468 * | 270.775 | 21.44 | 270.295 | 2.110 | 270.205 | 0.000 |
| 16 | 270.265 | 1.035 | 270.295 | 2.129 | 270.345 | 2.732 | 272.455 | 708.8 | 270.295 | 1.881 * | 270.205 | 0.000 |
| 17 | 270.265 | 1.191 | 270.315 | 2.275 * | 270.315 | 2.325 | 273.105 | 1234 | 270.265 | 0.000 | 270.205 | 0.000 |
| 18 | 270.285 | 1.986 | 270.305 | 2.310 | 270.305 | 2.257 | 271.895 | 351.0 * | 270.265 | 0.000 | 270.205 | 0.000 |
| 19 | 270.575 | 12.27 * | 270.295 | 2.153 | 270.295 | 2.175 | 271.845 | 257.0 | 270.265 | 0.000 | 270.195 | 0.000 |
| 20 | 271.575 | 295.3 | 270.285 | 1.908 | 270.255 | 0.569 | 270.685 | 18.71 | 270.265 | 0.000 | 270.185 | 0.000 |
| 21 | 271.235 | 152.8 | 270.265 | 0.908 | 270.265 | 1.373 * | 271.025 | 64.61 | 270.265 | 0.000 | 270.205 | 0.000 |
| 22 | 270.765 | 19.88 | 270.265 | 0.893 | 270.275 | 1.324 | 270.655 | 16.29 | 270.265 | 0.000 | 270.205 | 0.000 |
| 23 | 271.205 | 126.2 | 270.265 | 0.903 | 270.265 | 0.824 | 270.535 | 11.21 | 270.265 | 0.000 | 270.205 | 0.000 |
| 24 | 270.885 | 40.12 | 270.315 | 2.275 * | 270.265 | 0.859 | 270.615 | 14.45 | 270.255 | 0.000 | 270.215 | 0.000 |
| 25 | 270.505 | 8.997 | 270.575 | 13.01 | 270.265 | 0.906 | 270.645 | 16.78 * | 270.255 | 0.000 | 270.215 | 0.000 |
| 26 | 270.405 | 4.651 * | 270.555 | 11.83 | 270.265 | 0.886 | 270.535 | 10.63 | 270.255 | 0.000 | 270.215 | 0.000 |
| 27 | 270.395 | 3.825 | 270.425 | 4.229 | 270.255 | 0.000 | 270.475 | 8.041 | 270.255 | 0.000 | 270.215 | 0.000 |
| 28 | 270.455 | 9.161 | 270.805 | 11.54 | 270.255 | 0.000 | 270.425 | 4.469 | 270.255 | 0.000 | 270.215 | 0.000 |
| 29 | 270.455 | 4.464 | 271.285 | 162.6 | 270.255 | 0.000 | 270.425 | 4.356 | 270.255 | 0.000 | 270.215 | 0.000 |
| 30 | 270.405 | 3.994 | 270.885 | 39.89 | 270.255 | 0.000 | 270.765 | 21.27 | 270.255 | 0.000 | 270.215 | 0.000 |
| 31 | | | 271.125 | 86.83 * | 270.295 | 0.000 | | | 270.255 | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 269.974 | 1.241 | 270.470 | 7.379 | 270.452 | 7.558 | 270.320 | 2.398 | 270.402 | 5.163 | 270.209 | 0.000 |
| II Ten-Daily | 270.450 | 32.31 | 270.339 | 3.202 | 270.321 | 2.425 | 271.230 | 260.9 | 270.286 | 1.231 | 270.187 | 0.000 |
| III Ten-Daily | 270.671 | 37.41 | 270.615 | 30.44 | 270.265 | 0.561 | 270.610 | 17.21 | 270.258 | 0.000 | 270.212 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 269.415 | 0.000 | 270.265 | 0.893 | 270.255 | 0.000 | 270.285 | 1.778 | 270.255 | 0.000 | 270.155 | 0.000 |
| Max. | 271.575 | 295.3 | 271.285 | 162.6 | 270.635 | 15.62 | 273.105 | 1234 | 270.715 | 18.33 | 270.255 | 0.000 |
| Mean | 270.365 | 23.65 | 270.479 | 14.22 | 270.343 | 3.42 | 270.720 | 93.52 | 270.313 | 2.062 | 270.203 | 0 |

**Annual Runoff in MCM = 356 Annual Runoff in mm = 5**

**Peak Observed Discharge = 1234 cumecs on 17/09/2016 Corres. Water Level :273.105 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016 Corres. Water Level :269.435 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 2016 - 2017

**Station Name : Bawapuram ( AKL00B8)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Tungabhadra** **Sub-Division : Lower Tungabhadra SD, Kurnool**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 270.215 | 0.000 | 270.215 | 0.000 | 269.885 | 0.000 | 269.295 | 0.000 | 268.745 | 0.000 | 268.675 | 0.000 |
| 2 | 270.215 | 0.000 | 270.215 | 0.000 | 269.865 | 0.000 | 269.255 | 0.000 | 268.745 | 0.000 | 268.675 | 0.000 |
| 3 | 270.225 | 0.000 | 270.205 | 0.000 | 269.845 | 0.000 | 269.045 | 0.000 | 268.735 | 0.000 | 268.665 | 0.000 |
| 4 | 270.225 | 0.000 | 270.195 | 0.000 | 269.835 | 0.000 | 269.195 | 0.000 | 268.725 | 0.000 | 268.665 | 0.000 |
| 5 | 270.225 | 0.000 | 270.195 | 0.000 | 269.815 | 0.000 | 269.175 | 0.000 | 268.725 | 0.000 | 268.655 | 0.000 |
| 6 | 270.225 | 0.000 | 270.185 | 0.000 | 269.795 | 0.000 | 269.155 | 0.000 | 268.715 | 0.000 | 268.655 | 0.000 |
| 7 | 270.225 | 0.000 | 270.185 | 0.000 | 269.775 | 0.000 | 269.135 | 0.000 | 268.715 | 0.000 | 268.655 | 0.000 |
| 8 | 270.215 | 0.000 | 270.175 | 0.000 | 269.755 | 0.000 | 269.095 | 0.000 | 268.715 | 0.000 | 268.655 | 0.000 |
| 9 | 270.215 | 0.000 | 270.175 | 0.000 | 269.735 | 0.000 | 269.085 | 0.000 | 268.715 | 0.000 | 268.645 | 0.000 |
| 10 | 270.215 | 0.000 | 270.165 | 0.000 | 269.715 | 0.000 | 269.055 | 0.000 | 268.715 | 0.000 | 268.645 | 0.000 |
| 11 | 270.205 | 0.000 | 270.155 | 0.000 | 269.705 | 0.000 | 269.125 | 0.000 | 268.715 | 0.000 | 268.635 | 0.000 |
| 12 | 270.205 | 0.000 | 270.155 | 0.000 | 269.675 | 0.000 | 269.125 | 0.000 | 268.715 | 0.000 | 268.635 | 0.000 |
| 13 | 270.215 | 0.000 | 270.145 | 0.000 | 269.645 | 0.000 | 268.975 | 0.000 | 268.705 | 0.000 | 268.625 | 0.000 |
| 14 | 270.215 | 0.000 | 270.145 | 0.000 | 269.625 | 0.000 | 268.935 | 0.000 | 268.695 | 0.000 | 268.615 | 0.000 |
| 15 | 270.225 | 0.000 | 270.145 | 0.000 | 269.605 | 0.000 | 268.895 | 0.000 | 268.705 | 0.000 | 268.615 | 0.000 |
| 16 | 270.225 | 0.000 | 270.125 | 0.000 | 269.585 | 0.000 | 268.835 | 0.000 | 268.705 | 0.000 | 268.605 | 0.000 |
| 17 | 270.225 | 0.000 | 270.125 | 0.000 | 269.565 | 0.000 | 268.825 | 0.000 | 268.695 | 0.000 | 268.605 | 0.000 |
| 18 | 270.215 | 0.000 | 270.115 | 0.000 | 269.555 | 0.000 | 268.815 | 0.000 | 268.695 | 0.000 | 268.595 | 0.000 |
| 19 | 270.215 | 0.000 | 270.115 | 0.000 | 269.535 | 0.000 | 268.785 | 0.000 | 268.695 | 0.000 | 268.595 | 0.000 |
| 20 | 270.205 | 0.000 | 270.105 | 0.000 | 269.515 | 0.000 | 268.775 | 0.000 | 268.695 | 0.000 | 268.585 | 0.000 |
| 21 | 270.205 | 0.000 | 270.095 | 0.000 | 269.485 | 0.000 | 268.775 | 0.000 | 268.685 | 0.000 | 268.585 | 0.000 |
| 22 | 270.205 | 0.000 | 270.065 | 0.000 | 269.465 | 0.000 | 268.765 | 0.000 | 268.685 | 0.000 | 268.555 | 0.000 |
| 23 | 270.205 | 0.000 | 270.045 | 0.000 | 269.445 | 0.000 | 268.765 | 0.000 | 268.685 | 0.000 | 268.515 | 0.000 |
| 24 | 270.205 | 0.000 | 270.015 | 0.000 | 269.425 | 0.000 | 268.755 | 0.000 | 268.685 | 0.000 | 268.475 | 0.000 |
| 25 | 270.205 | 0.000 | 269.995 | 0.000 | 269.395 | 0.000 | 268.755 | 0.000 | 268.675 | 0.000 | 268.445 | 0.000 |
| 26 | 270.195 | 0.000 | 269.975 | 0.000 | 269.365 | 0.000 | 268.755 | 0.000 | 268.675 | 0.000 | 268.435 | 0.000 |
| 27 | 270.195 | 0.000 | 269.955 | 0.000 | 269.335 | 0.000 | 268.755 | 0.000 | 268.675 | 0.000 | 268.425 | 0.000 |
| 28 | 270.205 | 0.000 | 269.945 | 0.000 | 269.305 | 0.000 | 268.755 | 0.000 | 268.675 | 0.000 | 268.425 | 0.000 |
| 29 | 270.205 | 0.000 | 269.945 | 0.000 | | | 268.755 | 0.000 | 268.675 | 0.000 | 268.425 | 0.000 |
| 30 | 270.215 | 0.000 | 269.925 | 0.000 | | | 268.745 | 0.000 | 268.675 | 0.000 | 268.405 | 0.000 |
| 31 | 270.215 | 0.000 | 269.915 | 0.000 | | | 268.745 | 0.000 | | | 268.405 | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 270.220 | 0.000 | 270.191 | 0.000 | 269.802 | 0.000 | 269.149 | 0.000 | 268.725 | 0.000 | 268.659 | 0.000 |
| II Ten-Daily | 270.215 | 0.000 | 270.133 | 0.000 | 269.601 | 0.000 | 268.909 | 0.000 | 268.702 | 0.000 | 268.611 | 0.000 |
| III Ten-Daily | 270.205 | 0.000 | 269.989 | 0.000 | 269.402 | 0.000 | 268.757 | 0.000 | 268.679 | 0.000 | 268.463 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 270.195 | 0.000 | 269.915 | 0.000 | 269.305 | 0.000 | 268.745 | 0.000 | 268.675 | 0.000 | 268.405 | 0.000 |
| Max. | 270.225 | 0.000 | 270.215 | 0.000 | 269.885 | 0.000 | 269.295 | 0.000 | 268.745 | 0.000 | 268.675 | 0.000 |
| Mean | 270.213 | 0 | 270.100 | 0 | 269.616 | 0 | 268.932 | 0 | 268.702 | 0 | 268.574 | 0 |

**Peak Computed Discharge = 351.0 cumecs on 18/09/2016** **Corres. Water Level :271.895 m**

**Lowest Computed Discharge = 1.373 cumecs on 21/08/2016** **Corres. Water Level :270.265 m**

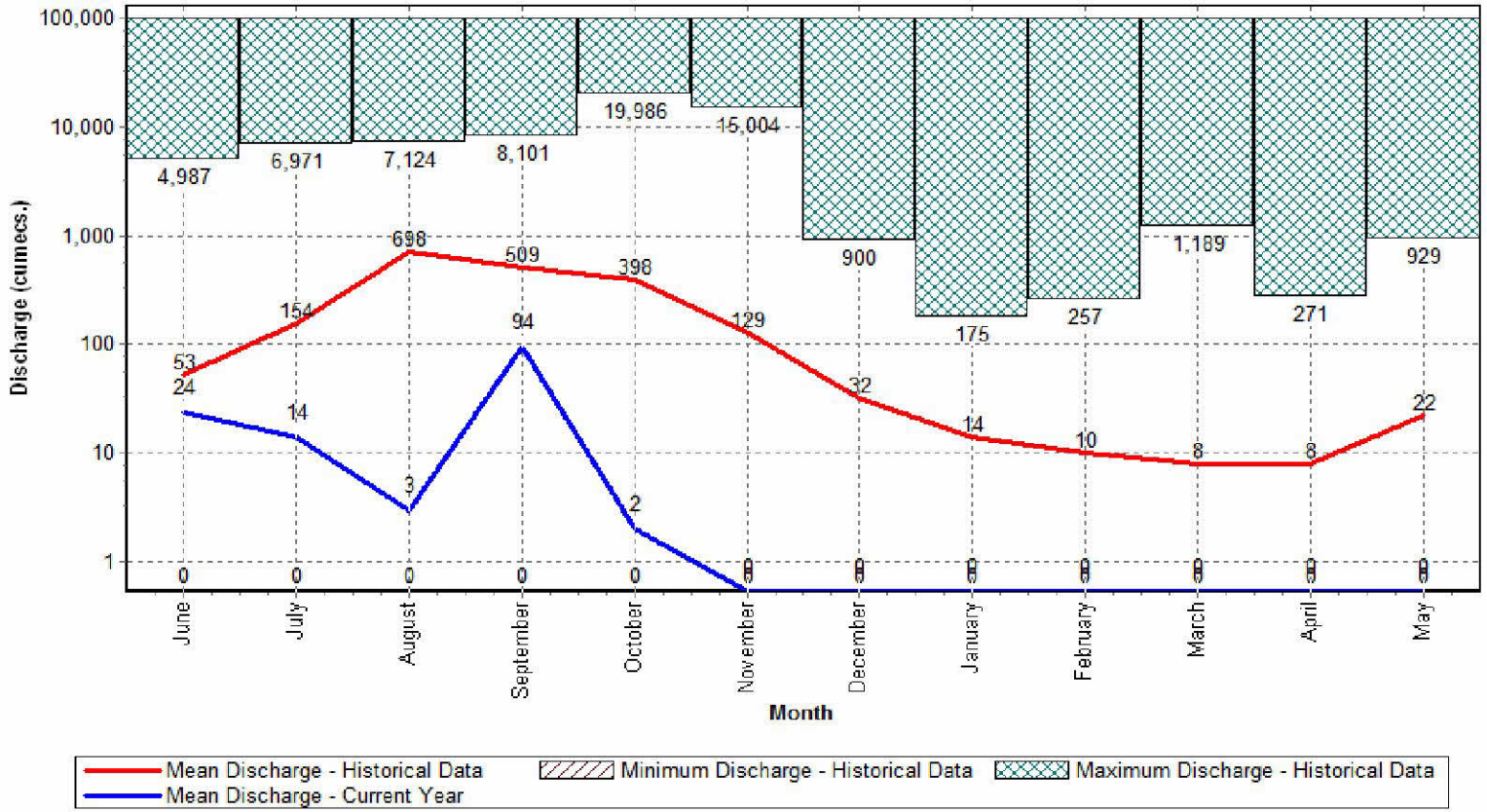
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Bawapuram ( AKL00B8)** | **Data considered : 1965-2017** | **Division : Lower Krishna Divn., Hyderabad**

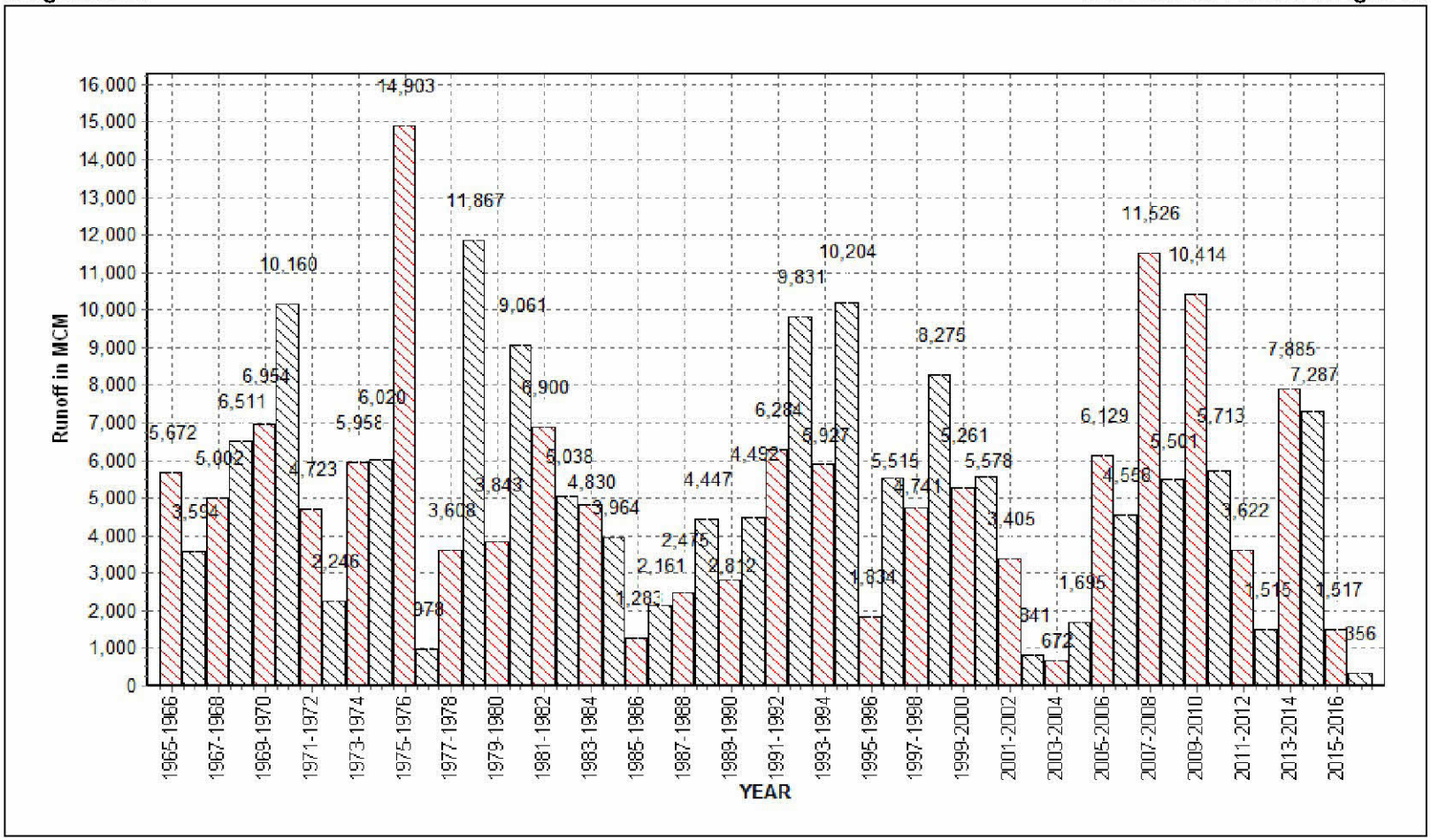
**Local River : Tungabhadra** | **Sub-Division : Lower Tungabhadra SD, Kurnool**



## Annual Runoff Values for the period: 1965 - 2017

**Station Name : Bawapuram ( AKL00B8)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Tungabhadra** | **Sub-Division : Lower Tungabhadra SD, Kurnool**

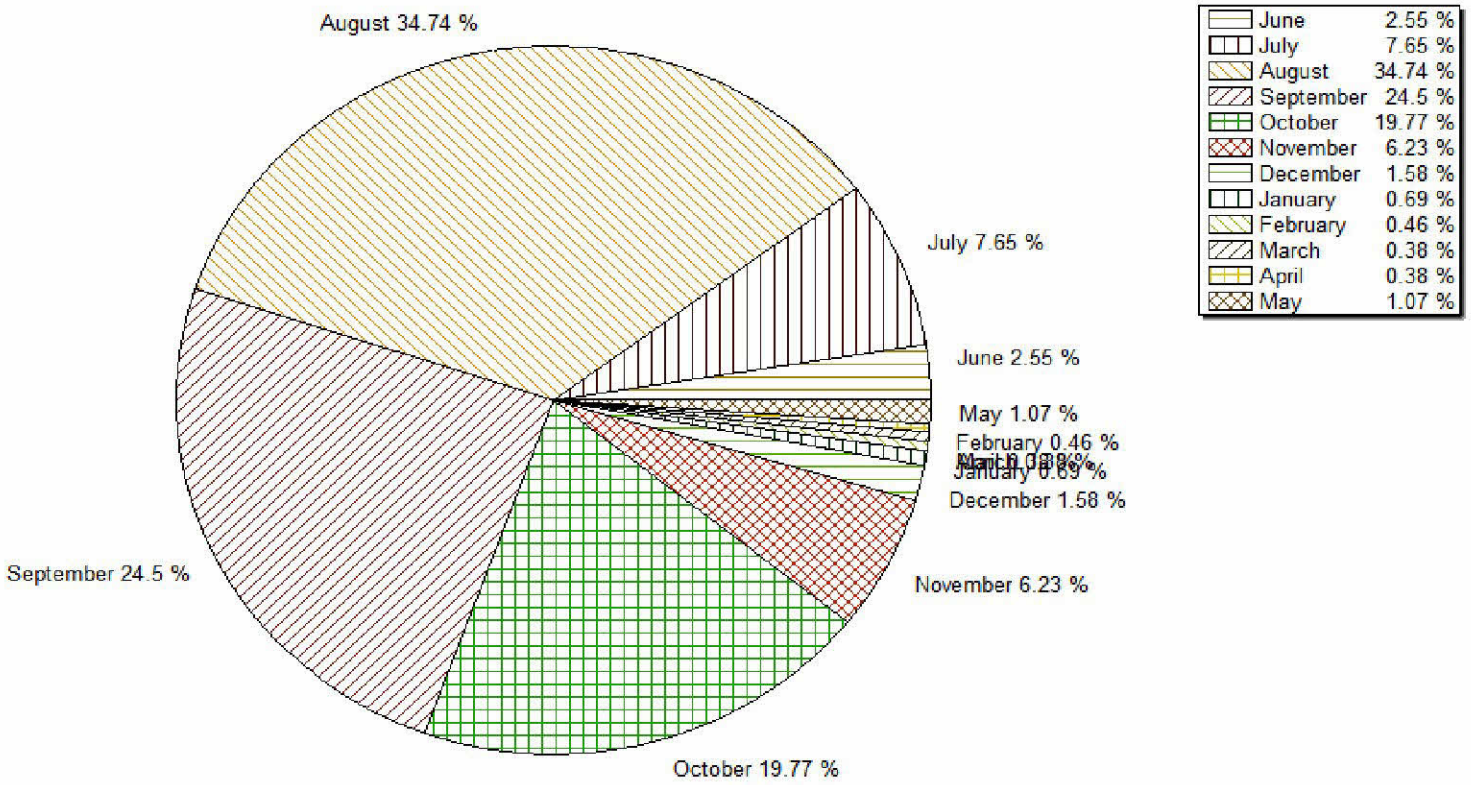



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1965-2016**

**Station Name : Bawapuram ( AKL00B8)**
**Local River : Tungabhadra**

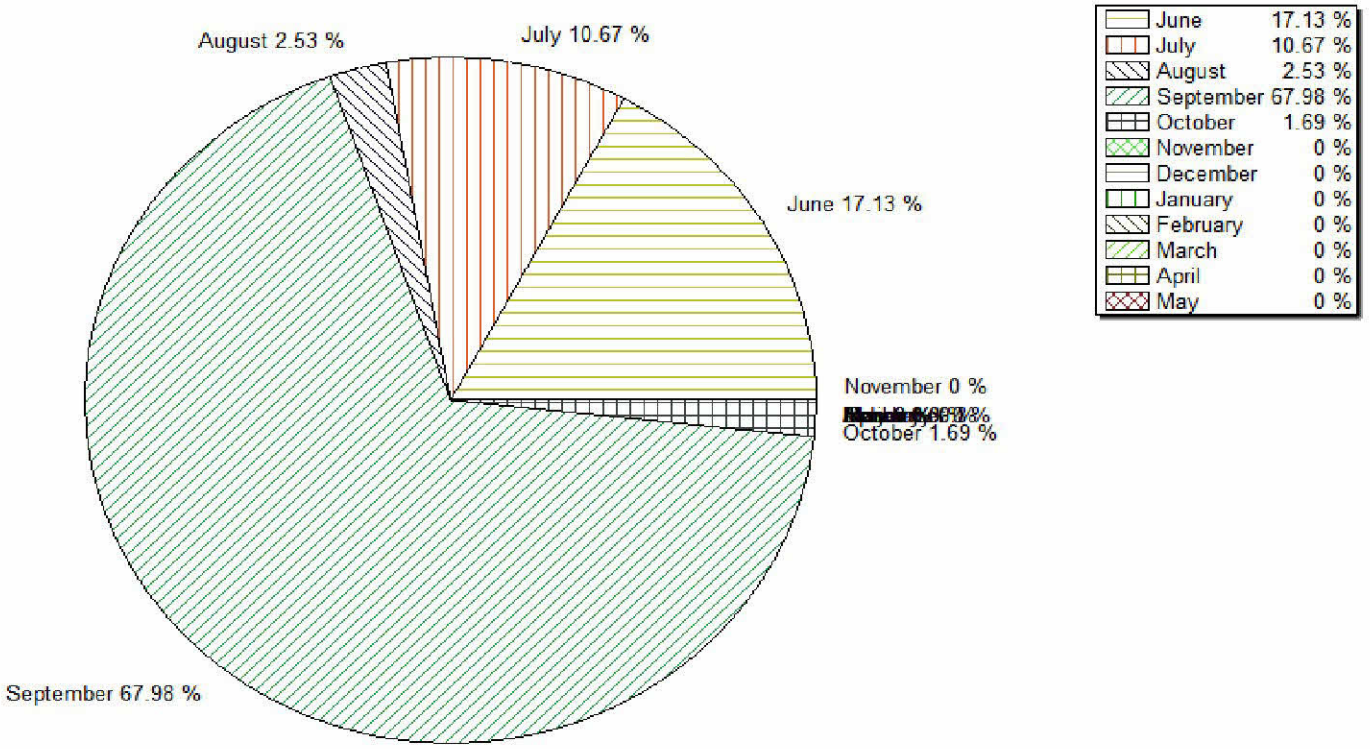
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Tungabhadra SD, Kurnool**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Bawapuram ( AKL00B8)**
**Local River : Tungabhadra**

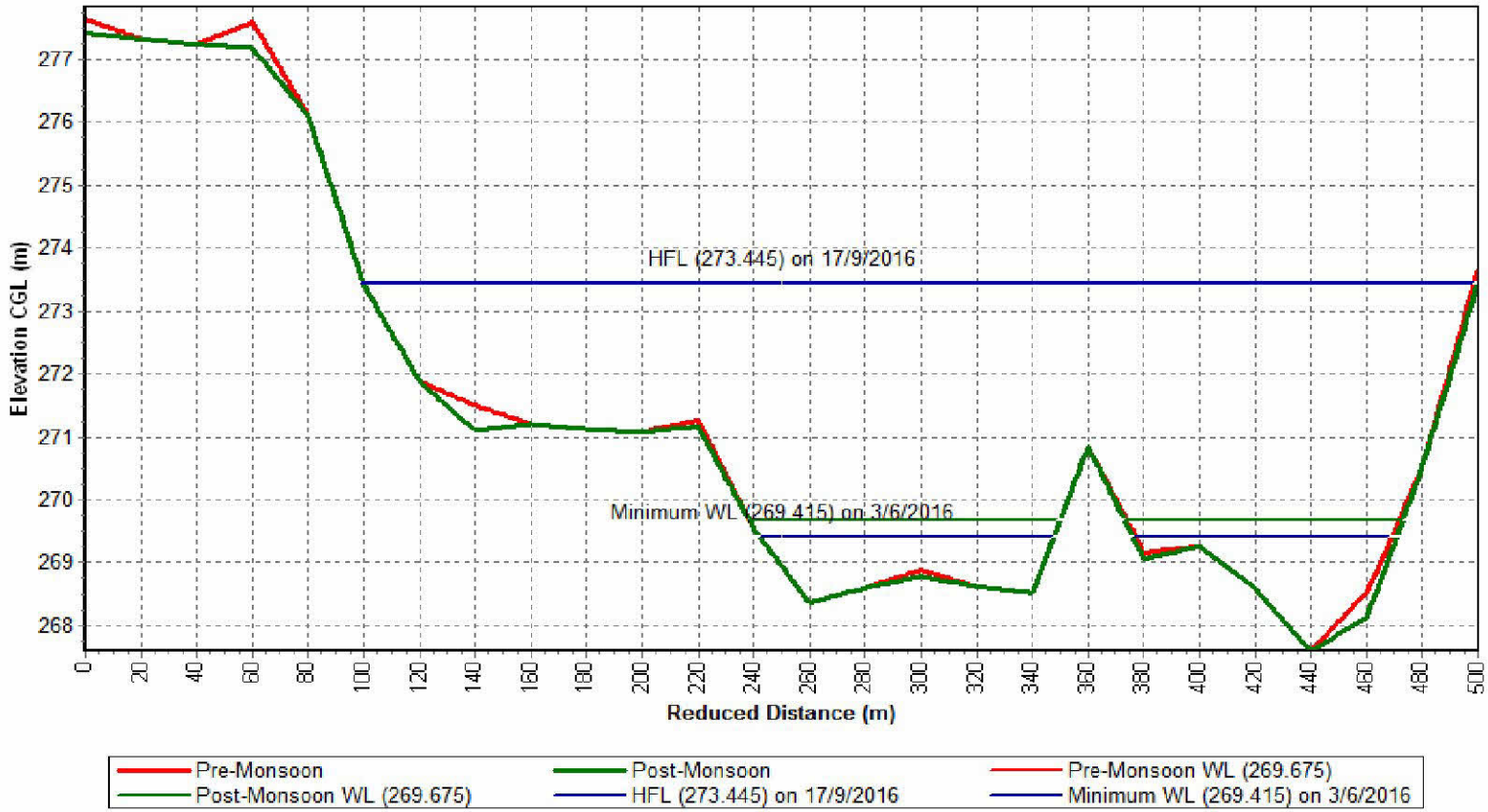
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Tungabhadra SD, Kurnool**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Bawapuram ( AKL00B8)** **Division : Lower Krishna Divn., Hyderabad**

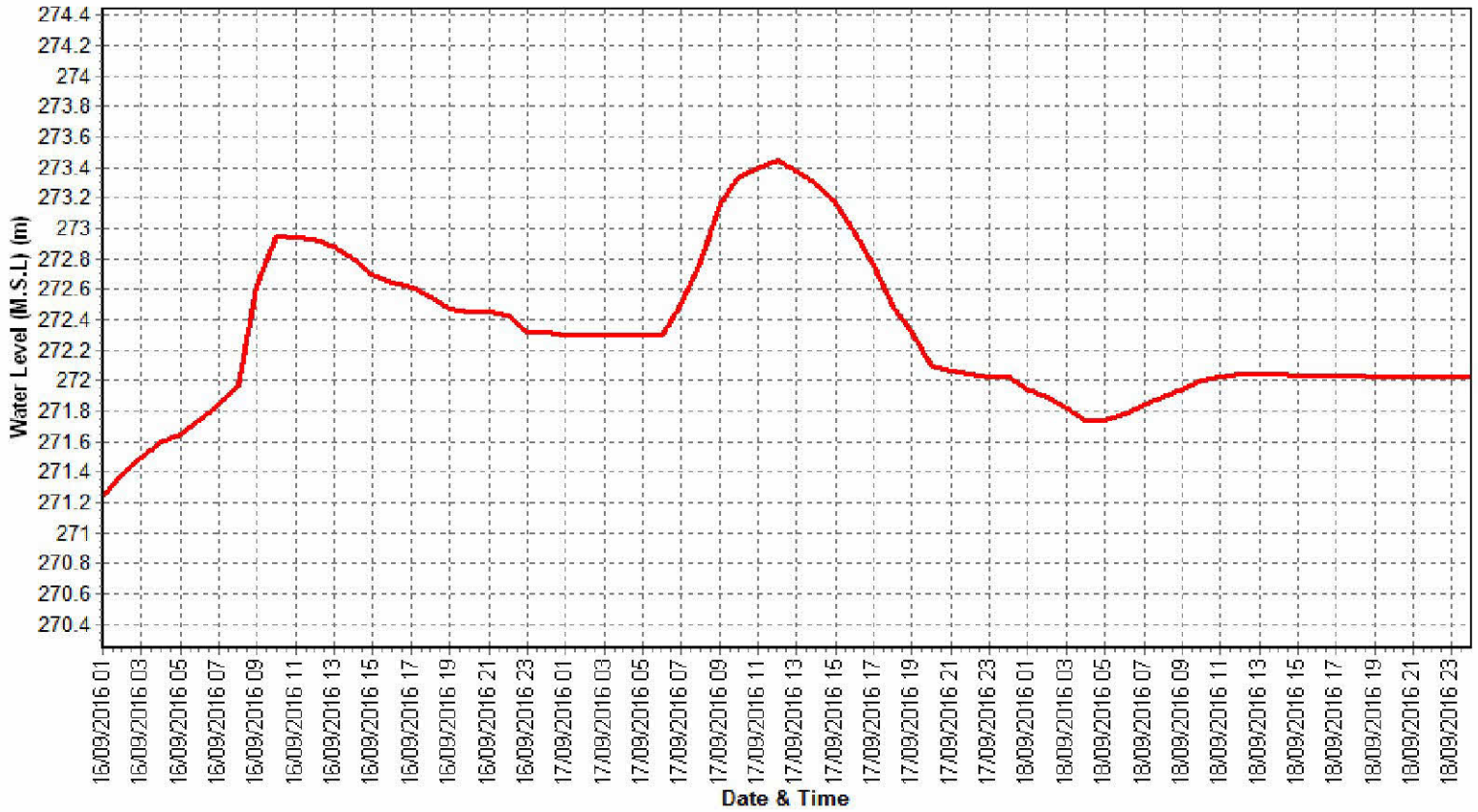
**Local River : Tungabhadra** **Sub-Division : Lower Tungabhadra SD, Kurnool**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Bawapuram ( AKL00B8)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Tungabhadra** | **Sub-Division : Lower Tungabhadra SD, Kurnool**

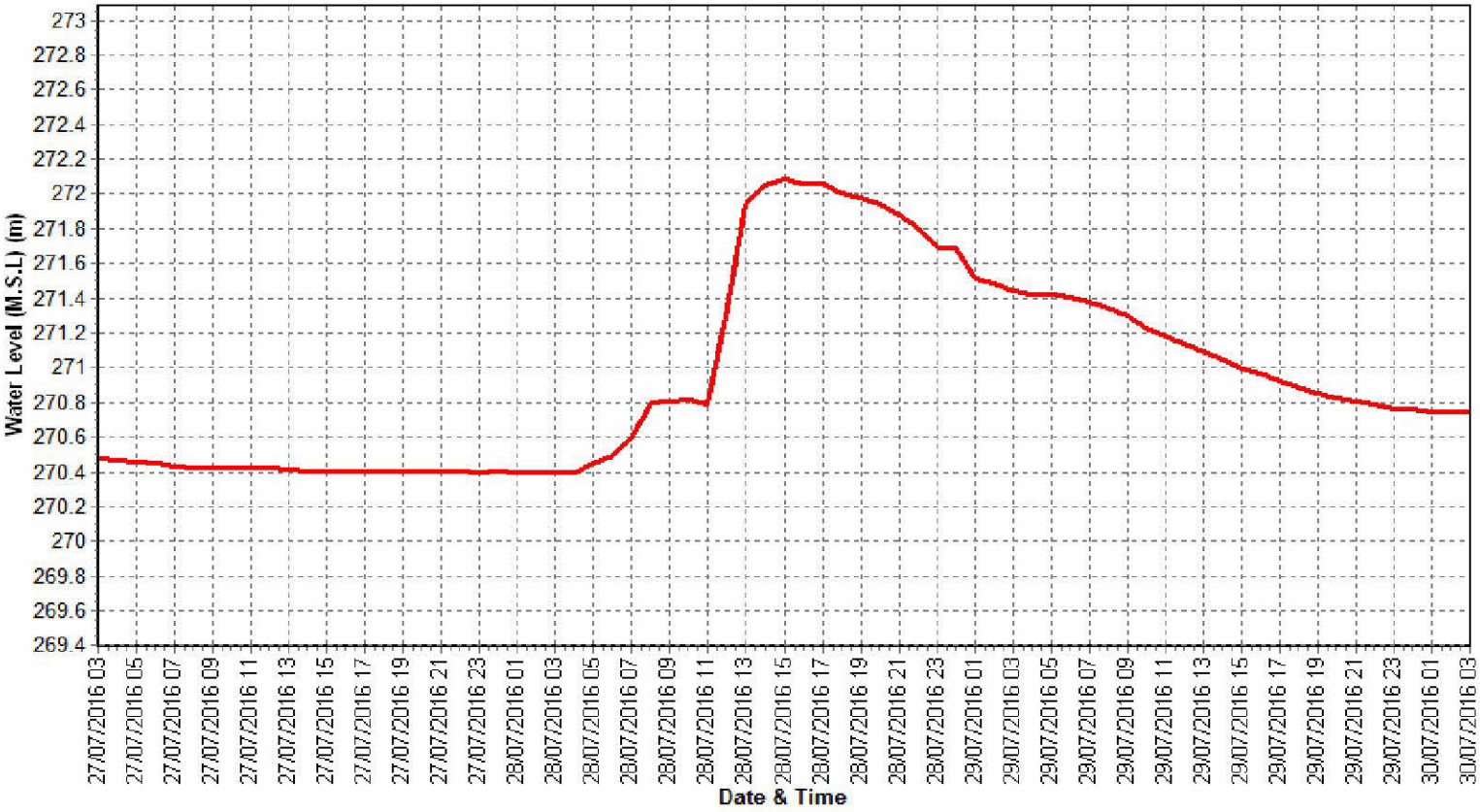



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Bawapuram ( AKL00B8)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Tungabhadra** **Sub-Division : Lower Tungabhadra SD, Kurnool**

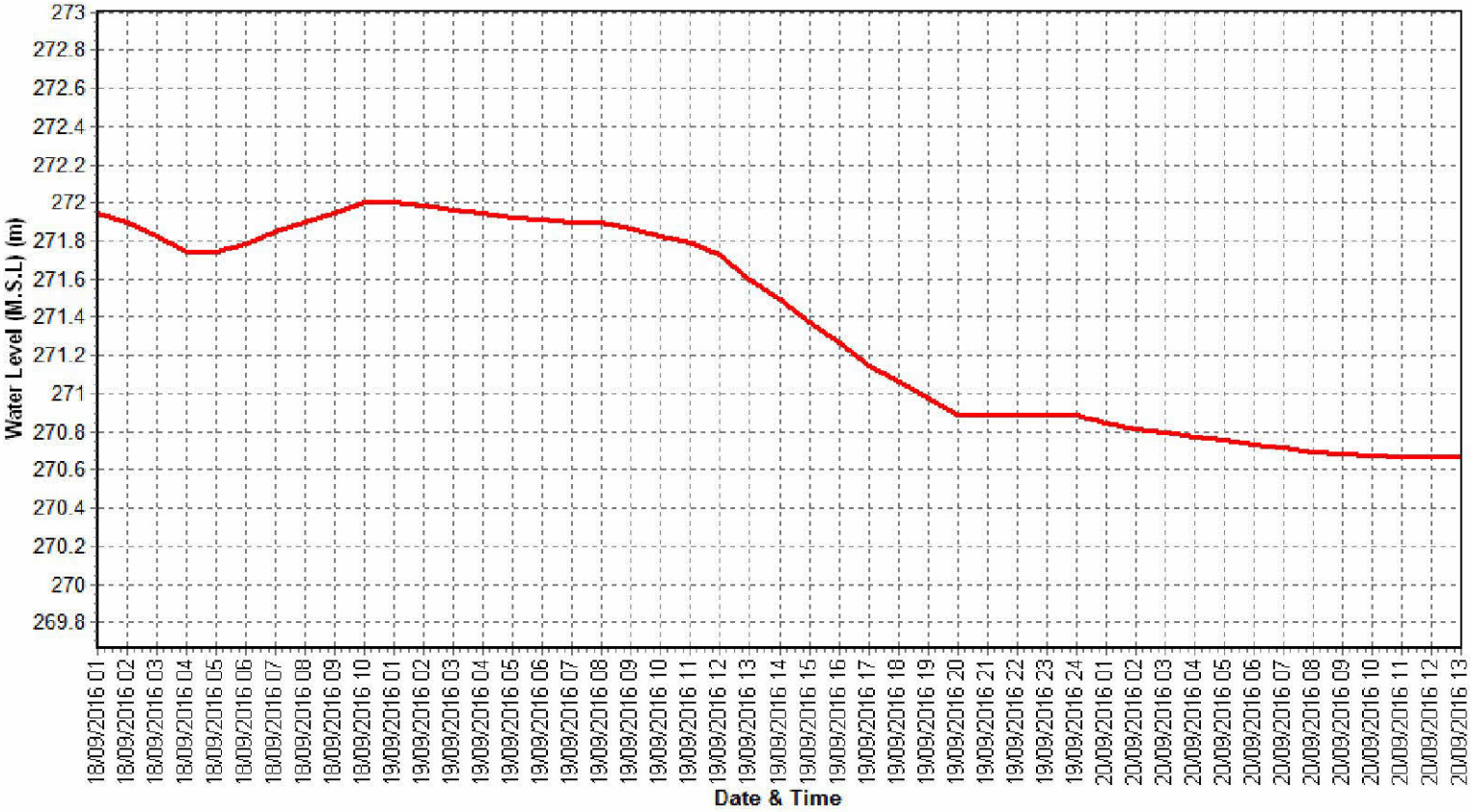



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Bawapuram ( AKL00B8)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Tungabhadra** **Sub-Division : Lower Tungabhadra SD, Kurnool**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | |
|---|---|---|---|
| **Site** | **: Mantralayam** | **Code** | **: AKL00F2** |
| State | : Andhra Pradesh | District | Kurnool |
| Basin | : Krishna | Independent River | : Krishna |
| Tributary | : Tungabhadra | Sub Tributary | : - |
| Sub-Sub Tributary | : - | Local River | : Tungabhadra |
| Division | : Lower Krishna Divn., Hyderabad | Sub-Division | : Lower Tungabhadra SD, Kurnool |
| Drainage Area | : 60630 Sq. Km. | Bank | : Right |
| Latitude | : 15°56'43" | Longitude | : 77°25'38" |
| **Zero of Gauge (m)** | : 308.34 (m.s.l) | 10/03/1972 | - 30/11/1973 |
| | 307.645 (m.s.l) | 01/12/1973 | - 31/05/1975 |
| | 307.5 (m.s.l) | 01/06/1975 | - 31/05/1982 |
| | 306 (m.s.l) | 01/06/1982 | |
| | Opening Date | Closing Date | |
| Gauge | : 10/03/1972 | **HFL During 2016-17** | **: 308.500m** |
| | | **Corres. Discharge** | **: 931.4(Estimated)** |
| Discharge | : 01/06/1972 | **Date & Time of occurance** | **: 16/09/2016 : 18.00 hrs.** |
| Sediment | : 26/07/1977 | | |
| Water Quality | : 01/08/1977 | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1972-1973 | 908.6 | 310.650 | 19/09/1972 | 15.20 | 308.710 | 27/05/1973 |
| 1973-1974 | 2259 | 312.197 | 25/10/1973 | 11.00 | 308.085 | 11/05/1974 |
| 1974-1975 | 5465 | 313.015 | 28/09/1974 | 7.700 | 307.975 | 31/05/1975 |
| 1975-1976 | 4489 | 313.260 | 19/10/1975 | 7.300 | 308.375 | 03/06/1975 |
| 1976-1977 | 568.2 | 309.920 | 22/08/1976 | 13.99 | 308.400 | 01/06/1976 |
| 1977-1978 | 2508 | 311.950 | 12/10/1977 | 19.70 | 308.465 | 06/07/1977 |
| 1978-1979 | 8504 | 314.775 | 30/09/1978 | 8.200 | 308.280 | 31/05/1979 |
| 1979-1980 | 3477 | 312.430 | 13/08/1979 | 4.800 | 308.215 | 31/05/1980 |
| 1980-1981 | 5258 | 313.630 | 08/07/1980 | 4.507 | 308.230 | 31/05/1981 |
| 1981-1982 | 5346 | 313.500 | 19/09/1981 | 4.600 | 308.220 | 02/06/1981 |
| 1982-1983 | 3161 | 311.045 | 06/08/1982 | 3.798 | 306.765 | 31/05/1983 |
| 1983-1984 | 2437 | 310.560 | 18/08/1983 | 2.400 | 306.755 | 07/06/1983 |
| 1984-1985 | 2943 | 310.778 | 10/10/1984 | 3.229 | 306.790 | 09/06/1984 |
| 1985-1986 | 1254 | 309.375 | 19/08/1985 | 2.752 | 306.720 | 31/05/1986 |
| 1986-1987 | 2904 | 310.695 | 15/08/1986 | 1.000 | 306.685 | 11/05/1987 |
| 1987-1988 | 1817 | 309.860 | 28/06/1987 | 0.736 | 306.645 | 17/06/1987 |
| 1988-1989 | 2644 | 310.365 | 16/09/1988 | 0.001 | 306.470 | 31/05/1989 |
| 1989-1990 | 2310 | 310.285 | 25/09/1989 | 0.000 | 306.435 | 02/06/1989 |
| 1990-1991 | 3451 | 310.965 | 18/08/1990 | 2.552 | 306.890 | 25/05/1991 |
| 1991-1992 | 3919 | 311.453 | 31/07/1991 | 10.50 | 307.030 | 27/05/1992 |

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** |
| 1992-1993 | 16540 | 315.710 | 19/11/1992 | 7.040 | 307.024 | 09/07/1992 |
| 1993-1994 | 4208 | 311.382 | 19/10/1993 | 1.610 | 306.530 | 06/07/1993 |
| 1994-1995 | 7793 | 312.910 | 19/07/1994 | 0.981 | 306.300 | 11/05/1995 |
| 1995-1996 | 1198 | 309.200 | 31/08/1995 | 0.000 | 306.270 | 23/05/1996 |
| 1996-1997 | 5592 | 312.235 | 03/10/1996 | 0.000 | 306.280 | 01/06/1996 |
| 1997-1998 | 5186 | 311.810 | 10/08/1997 | 0.000 | 306.260 | 28/07/1997 |
| 1998-1999 | 5421 | 311.535 | 15/10/1998 | 0.000 | 306.230 | 18/06/1998 |
| 1999-2000 | 3522 | 310.980 | 30/07/1999 | 1.501 | 306.340 | 04/07/1999 |
| 2000-2001 | 2826 | 310.585 | 10/10/2000 | 0.270 | 306.290 | 26/07/2000 |
| 2001-2002 | 3796 | 311.330 | 08/10/2001 | 0.000 | | 29/05/2002 |
| 2002-2003 | 1090 | 309.105 | 13/10/2002 | 0.000 | 305.810 | 16/05/2003 |
| 2003-2004 | 663.8 | 308.535 | 24/10/2003 | 0.000 | 305.850 | 26/04/2004 |
| 2004-2005 | 2008 | 309.900 | 17/08/2004 | 0.000 | 305.970 | 18/05/2005 |
| 2005-2006 | 5188 | 311.725 | 15/10/2005 | 0.000 | 305.980 | 13/06/2005 |
| 2006-2007 | 5307 | 312.040 | 15/08/2006 | 0.000 | 306.000 | 25/03/2007 |
| 2007-2008 | 7446 | 313.820 | 19/09/2007 | 0.929 | 306.130 | 25/05/2008 |
| 2008-2009 | 5831 | 312.410 | 16/08/2008 | 0.052 | 306.010 | 15/04/2009 |
| 2009-2010 | 18843 | 318.770 | 02/10/2009 | 0.063 | 305.920 | 22/07/2009 |
| 2010-2011 | 5646 | 312.690 | 25/08/2010 | 0.000 | 306.190 | 11/04/2011 |
| 2011-2012 | 3186 | 311.030 | 05/09/2011 | 0.000 | 306.060 | 18/03/2012 |
| 2012-2013 | 1766 | 309.705 | 05/09/2012 | 0.000 | 305.970 | 08/04/2013 |
| 2013-2014 | 4092 | 311.390 | 06/08/2013 | 0.000 | 306.010 | 11/07/2013 |
| 2014-2015 | 4810 | 312.015 | 05/08/2014 | 0.000 | 305.910 | 04/07/2014 |
| 2015-2016 | 1867 | 310.090 | 08/09/2015 | 0.000 | | 29/02/2016 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Mantralayam ( AKL00F2)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Tungabhadra** **Sub-Division : Lower Tungabhadra SD, Kurnool**

| 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 | 306.380 | 13.82 | 306.900 | 76.35 | 306.570 | 38.47 | 306.575 | 32.45 | 306.020 | 0.000 |
| 2 | 305.970 | 0.000 | 306.350 | 10.25 | 306.830 | 59.55 | 306.770 | 70.87 | 306.510 | 26.20 * | 306.020 | 0.000 |
| 3 | 305.970 | 0.000 | 306.340 | 12.26 * | 306.610 | 36.28 | 307.160 | 121.6 | 306.425 | 18.11 | 306.010 | 0.000 |
| 4 | 306.340 | 38.61 | 306.320 | 8.972 | 306.490 | 31.16 | 307.000 | 96.29 * | 306.390 | 15.73 | | 0.000 |
| 5 | 306.340 | 12.26 * | 306.290 | 7.992 | 306.440 | 20.12 | 306.950 | 86.54 * | 306.340 | 11.05 | 306.440 | 33.24 |
| 6 | 306.820 | 75.10 | 306.280 | 7.751 | 306.390 | 14.87 | 306.910 | 73.49 | 306.275 | 8.051 | 306.610 | 36.92 * |
| 7 | 306.980 | 95.78 | 306.440 | 19.81 * | 306.370 | 14.33 * | 306.760 | 54.78 | 306.215 | 5.044 | 306.560 | 34.60 |
| 8 | 306.690 | 43.75 | 306.320 | 8.889 | 306.340 | 11.24 | 306.720 | 48.23 | 306.170 | 3.626 * | 306.500 | 26.59 |
| 9 | 306.560 | 33.01 | 306.280 | 8.613 * | 306.275 | 8.551 | 306.720 | 45.16 | 306.140 | 0.000 | 306.480 | 24.03 |
| 10 | 306.570 | 32.52 | 306.220 | 5.622 * | 306.220 | 5.086 | 306.780 | 58.68 * | 306.140 | 0.000 | 306.550 | 34.06 |
| 11 | 306.620 | 38.10 * | 306.190 | 5.757 | 306.160 | 0.000 | 306.720 | 50.62 * | 306.140 | 0.000 | 306.500 | 27.29 |
| 12 | 306.520 | 27.19 * | 306.180 | 5.876 | 306.110 | 0.000 | 306.830 | 66.35 | 306.130 | 0.000 | 306.500 | 25.68 |
| 13 | 306.480 | 23.20 | 306.150 | 0.000 | 306.070 | 0.000 | 306.930 | 82.85 * | 306.110 | 0.000 | 306.530 | 28.19 * |
| 14 | 306.420 | 16.85 | 306.140 | 0.000 | 306.050 | 0.000 | 306.870 | 69.44 | 306.100 | 0.000 | 306.600 | 35.77 * |
| 15 | 306.420 | 15.94 | 306.130 | 0.000 | 306.030 | 0.000 | 306.960 | 97.74 | 306.090 | 0.000 | 306.700 | 45.71 |
| 16 | 306.390 | 17.77 | 306.100 | 0.000 | 306.020 | 0.000 | 308.100 | 558.9 | 306.070 | 0.000 | 306.700 | 45.31 |
| 17 | 306.360 | 12.87 | 306.060 | 0.000 | 306.020 | 0.000 | 308.440 | 614.1 | 306.070 | 0.000 | 306.620 | 35.73 |
| 18 | 306.505 | 34.50 | 306.030 | 0.000 | 306.010 | 0.000 | 307.640 | 302.5 * | 306.070 | 0.000 | 306.520 | 22.37 |
| 19 | 307.560 | 148.5 | 306.010 | 35.07 | | 0.000 | 307.185 | 127.1 | 306.060 | 0.000 | 306.450 | 20.12 |
| 20 | 306.840 | 107.5 | 306.180 | 5.409 | 305.860 | 0.000 | 306.780 | 60.08 | 306.050 | 0.000 | 306.420 | 18.15 * |
| 21 | 306.550 | 31.78 | 306.080 | 0.000 | 305.840 | 0.000 | 306.610 | 34.05 | 306.050 | 0.000 | 306.410 | 17.09 |
| 22 | 307.150 | 136.3 | 306.070 | 0.000 | 305.830 | 0.000 | 306.540 | 28.91 | 306.040 | 0.000 | 306.390 | 15.70 |
| 23 | 306.670 | 44.03 | 306.040 | 0.000 | 305.830 | 0.000 | 306.510 | 34.27 | 306.040 | 0.499 * | 306.370 | 15.23 |
| 24 | 306.520 | 35.95 | 306.120 | 0.000 | 305.830 | 0.000 | 306.495 | 33.04 | 306.030 | 0.000 | 306.360 | 13.67 |
| 25 | 306.450 | 16.25 | 306.150 | 0.000 | 305.830 | 0.000 | 306.480 | 23.35 * | 306.030 | 0.000 | 306.350 | 12.28 |
| 26 | 306.400 | 16.57 * | 306.290 | 9.045 | 305.830 | 0.000 | 306.510 | 41.26 | 306.030 | 0.000 | 306.340 | 11.58 |
| 27 | 306.400 | 13.54 | 306.340 | 11.86 | 305.830 | 0.000 | 306.645 | 38.47 | 306.020 | 0.000 | 306.320 | 10.97 * |
| 28 | 306.400 | 14.83 | 306.470 | 25.04 | 305.830 | 0.000 | 306.660 | 70.87 | 306.020 | 0.000 | 306.290 | 8.494 |
| 29 | 306.390 | 13.23 | 307.200 | 157.6 | 305.830 | 0.000 | 306.740 | 121.6 | 306.020 | 0.000 | 306.260 | 6.926 |
| 30 | 306.410 | 23.91 | 306.830 | 68.25 | 305.830 | 0.000 | 306.710 | 96.29 | 306.020 | 0.000 | 306.230 | 5.646 |
| 31 | | | 306.960 | 88.43 * | 305.830 | 0.000 | | | 306.020 | 0.000 | | |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 306.471 | 33.10 | 306.322 | 10.40 | 306.487 | 27.75 | 306.834 | 69.41 | 306.318 | 12.03 | 306.354 | 18.94 |
| II Ten-Daily | 306.612 | 44.24 | 306.117 | 5.211 | 306.037 | 0.000 | 307.245 | 203.0 | 306.089 | 0.000 | 306.554 | 30.43 |
| III Ten-Daily | 306.534 | 34.63 | 306.414 | 32.75 | 305.831 | 0.000 | 306.590 | 52.21 | 306.029 | 0.045 | 306.332 | 11.76 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 305.970 | 0.000 | 306.010 | 0.000 | 305.830 | 0.000 | 306.480 | 23.35 | 306.020 | 0.000 | 306.010 | 0.000 |
| Max. | 307.560 | 148.5 | 307.200 | 157.6 | 306.900 | 76.35 | 308.440 | 614.1 | 306.575 | 32.45 | 306.700 | 45.71 |
| Mean | 306.541 | 37.33 | 306.288 | 16.66 | 306.111 | 8.953 | 306.890 | 108.2 | 306.142 | 3.895 | 306.415 | 20.38 |

**Annual Runoff in MCM = 510 Annual Runoff in mm = 8**

**Peak Observed Discharge = 614.1 cumecs on 17/09/2016 Corres. Water Level :308.44 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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 2016 - 2017

**Station Name : Mantralayam ( AKL00F2)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Tungabhadra** **Sub-Division : Lower Tungabhadra SD, Kurnool**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 306.210 | 5.333 | 306.040 | 0.000 | 305.970 | 0.000 | 305.890 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 |
| 2 | 306.190 | 4.813 | 306.040 | 0.000 | 305.960 | 0.000 | 305.880 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 |
| 3 | 306.180 | 3.861 | 306.030 | 0.000 | 305.960 | 0.000 | 305.880 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 |
| 4 | 306.160 | 0.000 | 306.030 | 0.000 | 305.960 | 0.000 | 305.870 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 |
| 5 | 306.140 | 0.000 | 306.030 | 0.000 | 305.950 | 0.000 | 305.860 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 |
| 6 | 306.130 | 0.000 | 306.030 | 0.000 | 305.950 | 0.000 | 305.850 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 |
| 7 | 306.120 | 0.000 | 306.030 | 0.000 | 305.950 | 0.000 | 305.840 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 |
| 8 | 306.110 | 0.000 | 306.020 | 0.000 | 305.940 | 0.000 | 305.830 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 |
| 9 | 306.100 | 0.000 | 306.020 | 0.000 | 305.940 | 0.000 | 305.810 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 |
| 10 | 306.090 | 0.000 | 306.020 | 0.000 | 305.940 | 0.000 | 305.790 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 |
| 11 | 306.090 | 0.000 | 306.020 | 0.000 | 305.930 | 0.000 | 305.780 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 |
| 12 | 306.080 | 0.000 | 306.020 | 0.000 | 305.930 | 0.000 | 305.760 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 13 | 306.070 | 0.000 | 306.020 | 0.000 | 305.920 | 0.000 | 305.730 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 14 | 306.070 | 0.000 | 306.010 | 0.000 | 305.920 | 0.000 | 305.720 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 15 | 306.060 | 0.000 | 306.010 | 0.000 | 305.910 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 16 | 306.060 | 0.000 | 306.010 | 0.000 | 305.910 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 17 | 306.050 | 0.000 | 306.010 | 0.000 | 305.990 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 18 | 306.050 | 0.000 | 306.010 | 0.000 | 305.990 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 19 | 306.040 | 0.000 | 306.010 | 0.000 | 305.990 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 20 | 306.040 | 0.000 | 306.010 | 0.000 | 305.980 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 21 | 306.040 | 0.000 | 306.010 | 0.000 | 305.970 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 22 | 306.040 | 0.000 | | 0.000 | 305.960 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 23 | 306.040 | 0.000 | | 0.000 | 305.950 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 24 | 306.040 | 0.000 | | 0.000 | 305.940 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 25 | 306.040 | 0.000 | | 0.000 | 305.930 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 26 | 306.040 | 0.000 | 306.010 | 0.000 | 305.920 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 27 | 306.040 | 0.000 | 305.990 | 0.000 | 305.910 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 28 | 306.040 | 0.000 | 305.980 | 0.000 | 305.900 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 29 | 306.040 | 0.000 | 305.980 | 0.000 | | | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 30 | 306.040 | 0.000 | 305.970 | 0.000 | | | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| 31 | 306.040 | 0.000 | 305.970 | 0.000 | | | 305.700 | 0.000 | | | 305.690 | 0.000 |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 306.143 | 1.401 | 306.029 | 0.000 | 305.952 | 0.000 | 305.850 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 |
| II Ten-Daily | 306.061 | 0.000 | 306.013 | 0.000 | 305.947 | 0.000 | 305.719 | 0.000 | 305.691 | 0.000 | 305.690 | 0.000 |
| III Ten-Daily | 306.040 | 0.000 | 305.987 | 0.000 | 305.935 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 306.040 | 0.000 | 305.970 | 0.000 | 305.900 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 | 305.690 | 0.000 |
| Max. | 306.210 | 5.333 | 306.040 | 0.000 | 305.990 | 0.000 | 305.890 | 0.000 | 305.700 | 0.000 | 305.690 | 0.000 |
| Mean | 306.080 | 0.452 | 306.012 | 0 | 305.945 | 0 | 305.755 | 0 | 305.694 | 0 | 305.690 | 0 |

**Peak Computed Discharge = 302.5 cumecs on 18/09/2016** **Corres. Water Level :307.64 m**

**Lowest Computed Discharge = 0.499 cumecs on 23/10/2016** **Corres. Water Level :306.04 m**

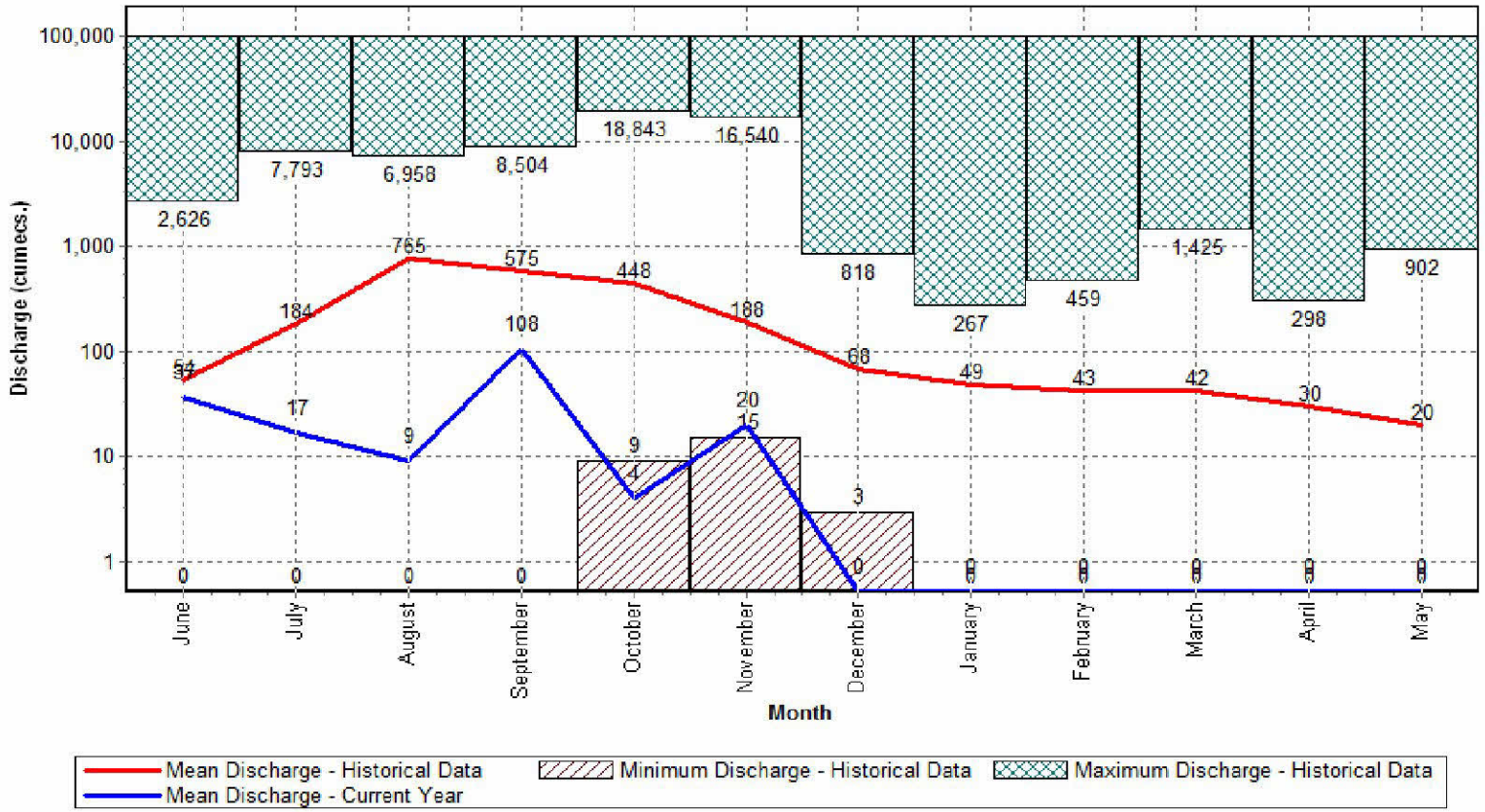
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Mantralayam ( AKL00F2)** | **Data considered : 1972-2017** | **Division : Lower Krishna Divn., Hyderabad**

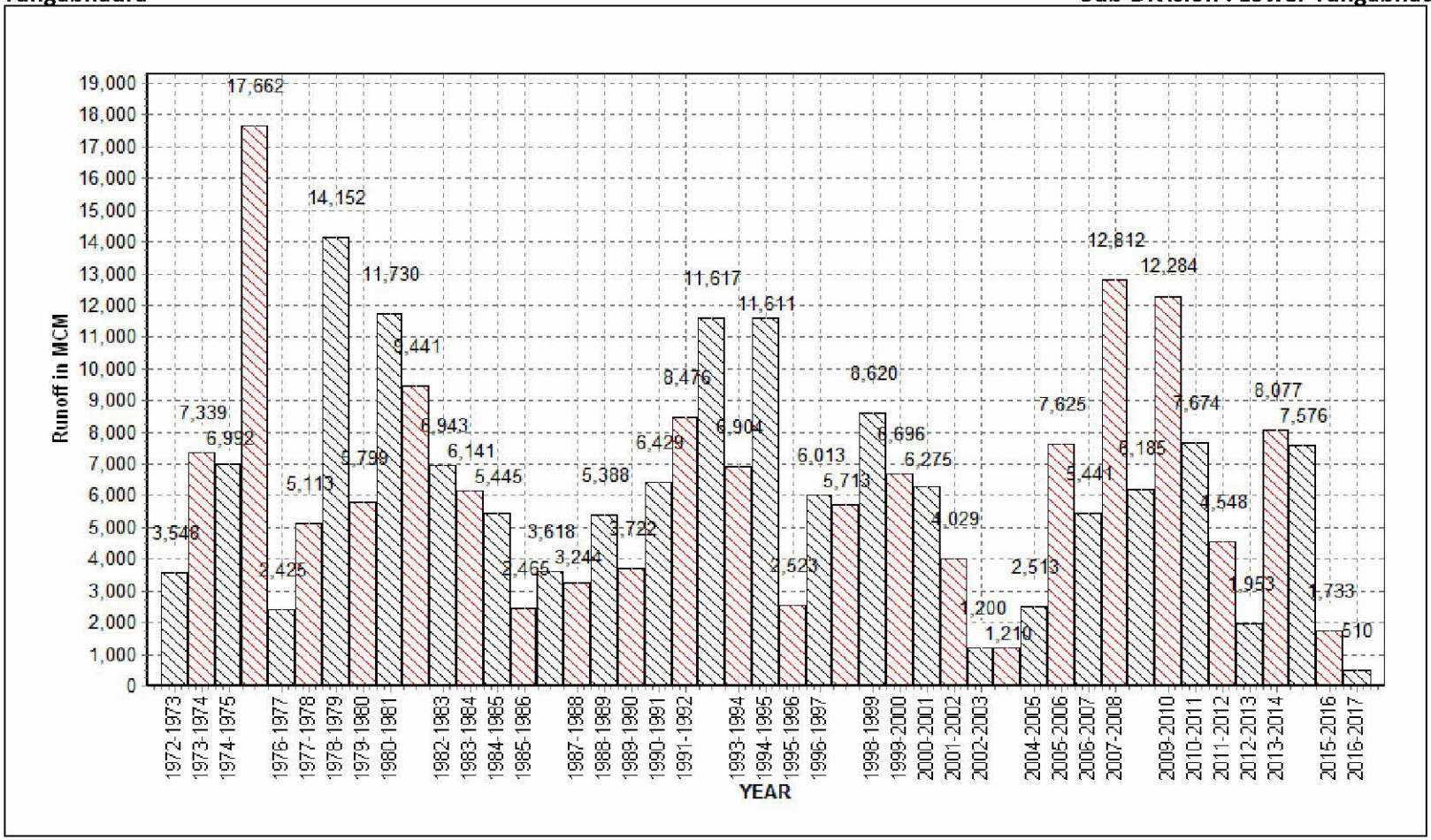
**Local River : Tungabhadra** | **Sub-Division : Lower Tungabhadra SD, Kurnool**



## Annual Runoff Values for the period: 1972 - 2017

**Station Name : Mantralayam ( AKL00F2)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Tungabhadra** | **Sub-Division : Lower Tungabhadra SD, Kurnool**

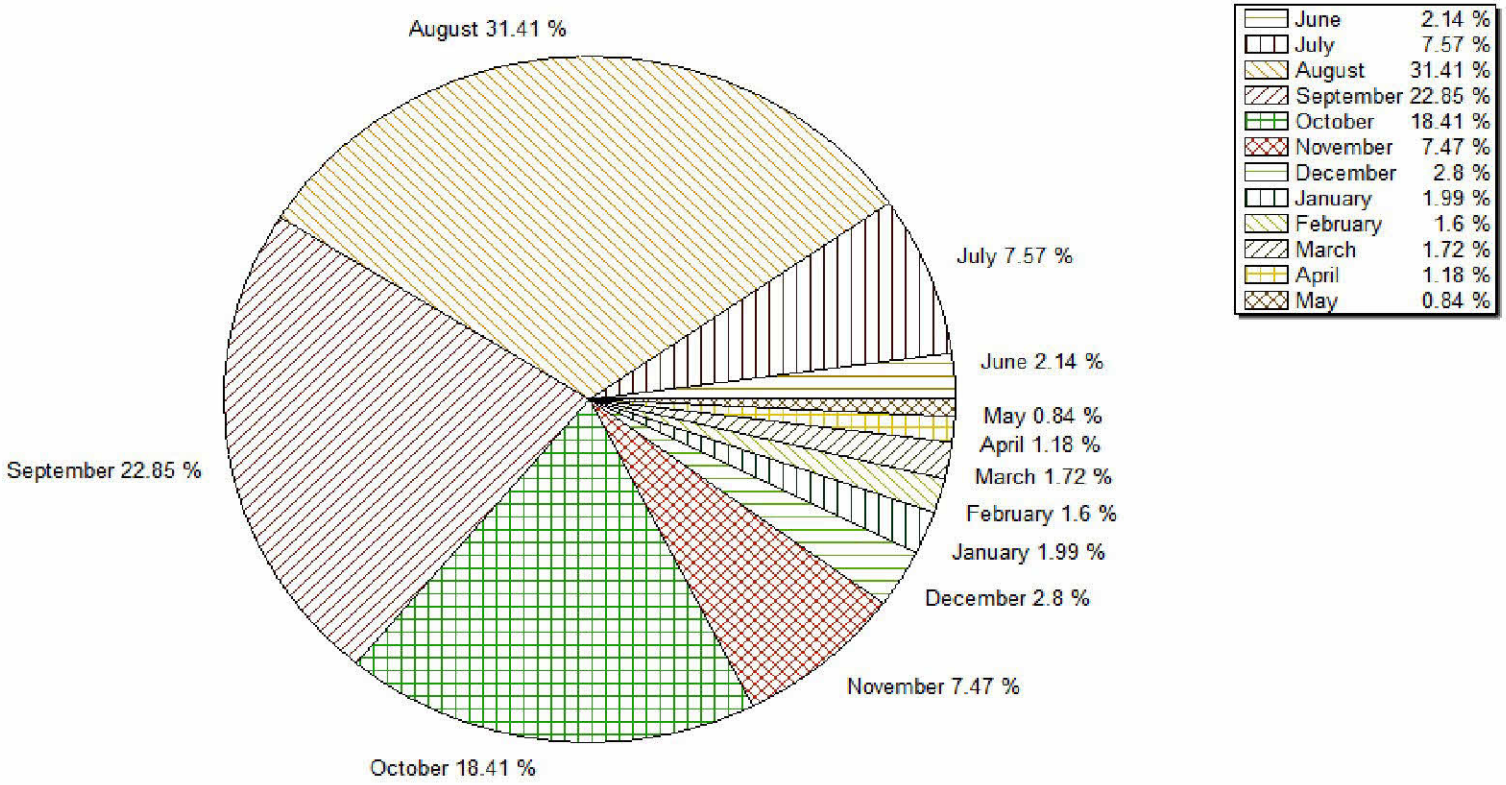



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1972-2016**

**Station Name : Mantralayam ( AKL00F2)**
**Local River : Tungabhadra**

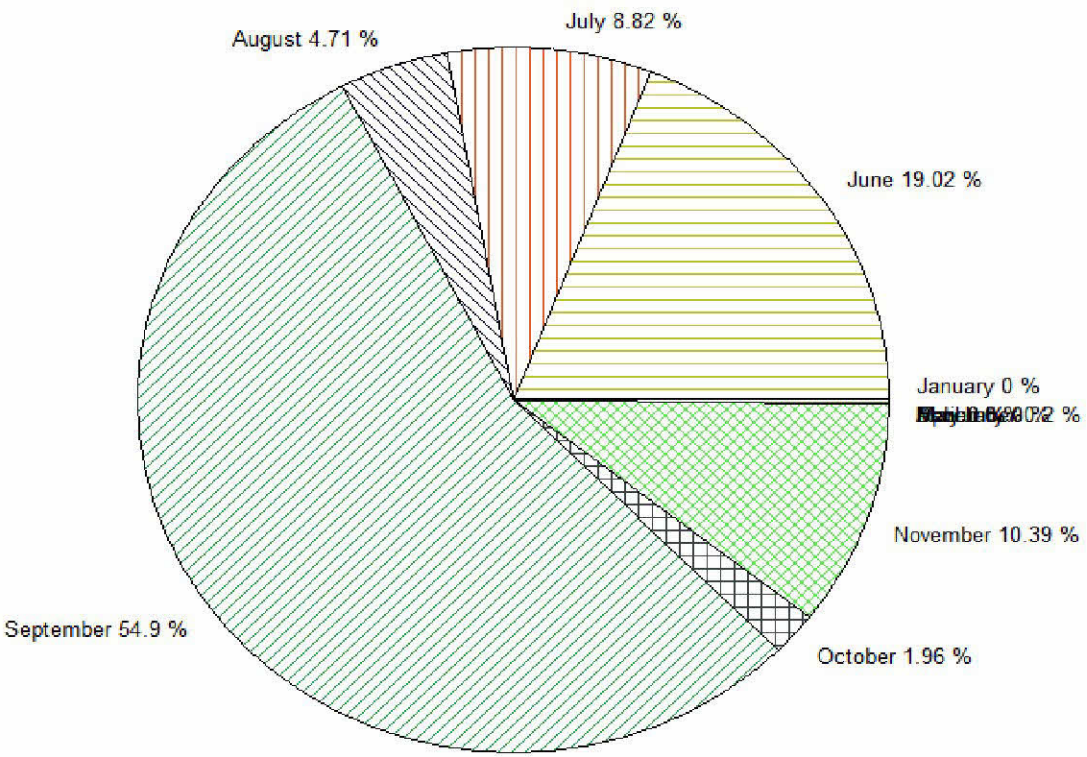
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Tungabhadra SD, Kurnool**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Mantralayam ( AKL00F2)**
**Local River : Tungabhadra**

**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Tungabhadra SD, Kurnool**

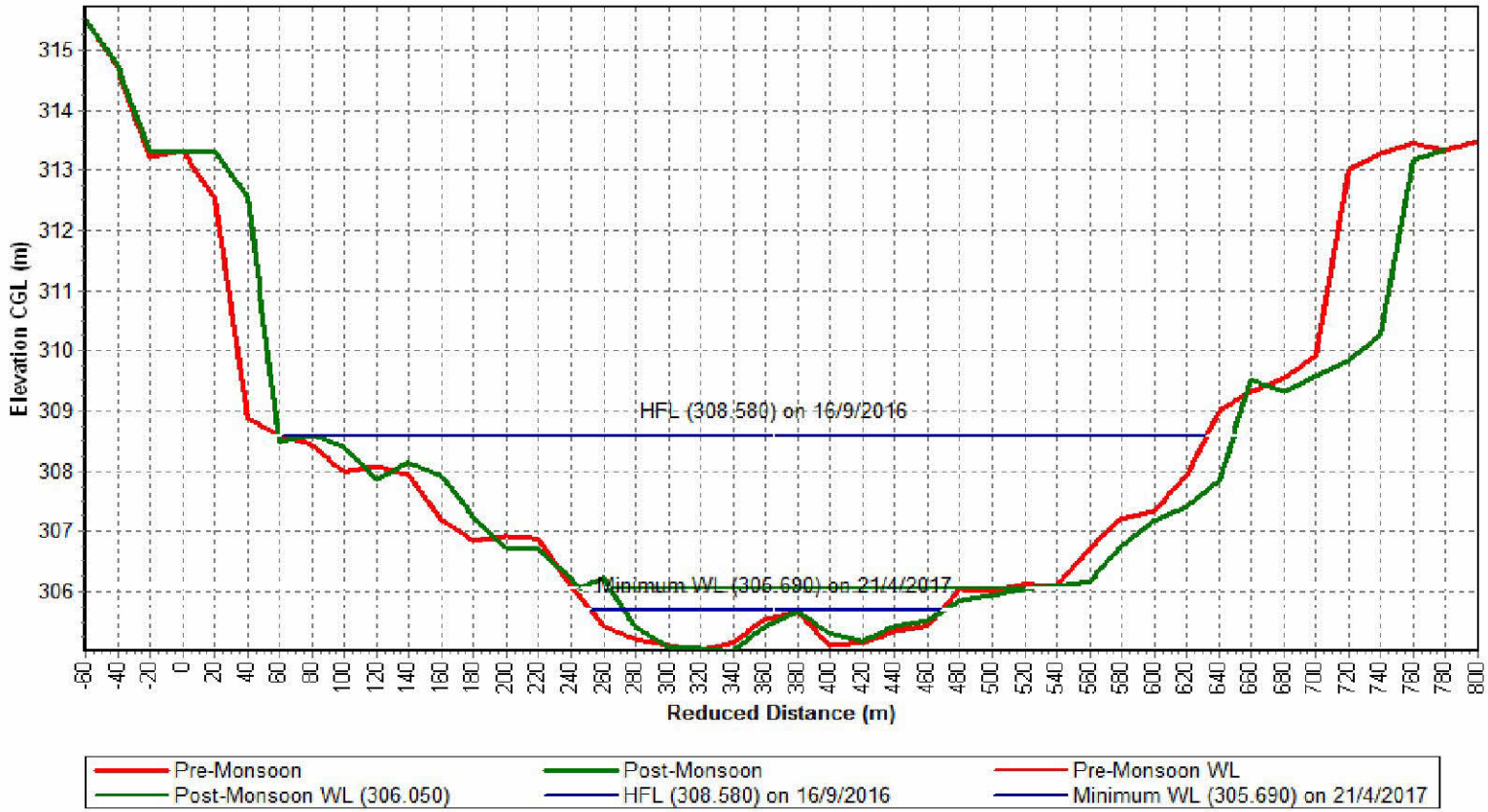



| | |
|---|---|
| June | 19.02 % |
| July | 8.82 % |
| August | 4.71 % |
| September | 54.9 % |
| October | 1.96 % |
| November | 10.39 % |
| December | 0.2 % |
| January | 0 % |
| February | 0 % |
| March | 0 % |
| April | 0 % |
| May | 0 % |

**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Mantralayam ( AKL00F2)** **Division : Lower Krishna Divn., Hyderabad**

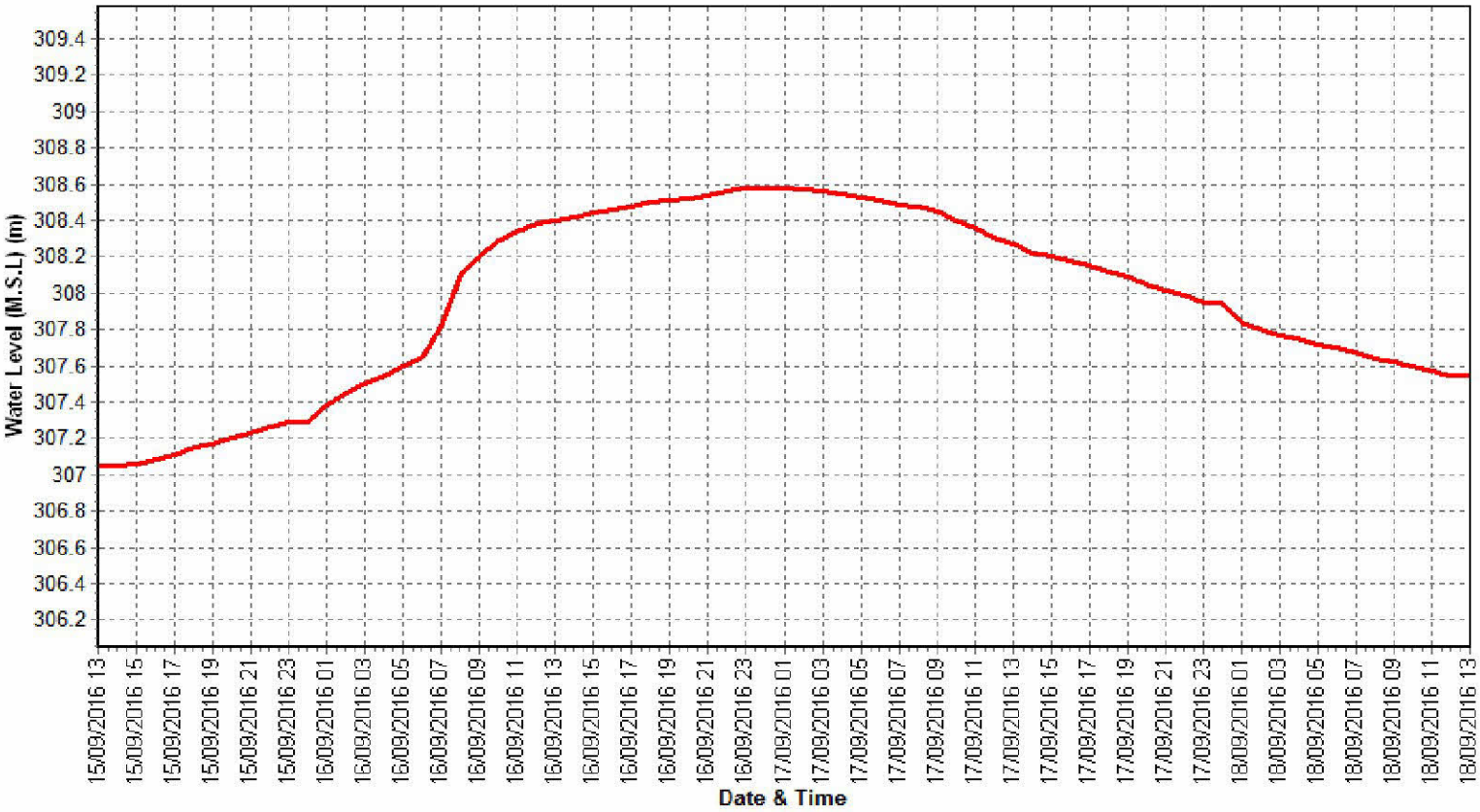
**Local River : Tungabhadra** **Sub-Division : Lower Tungabhadra SD, Kurnool**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Mantralayam ( AKL00F2)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Tungabhadra** | **Sub-Division : Lower Tungabhadra SD, Kurnool**

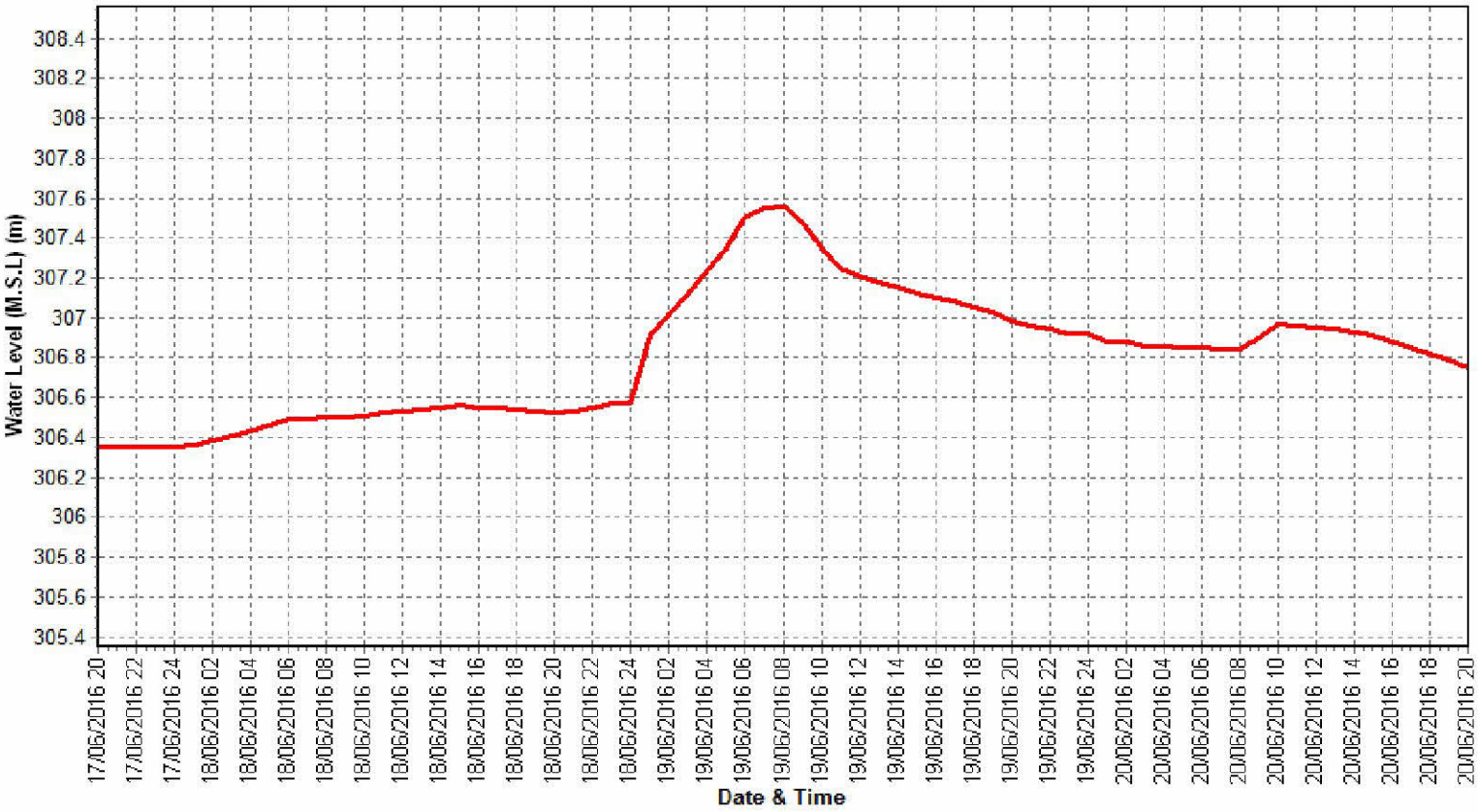



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Mantralayam ( AKL00F2)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Tungabhadra** **Sub-Division : Lower Tungabhadra SD, Kurnool**

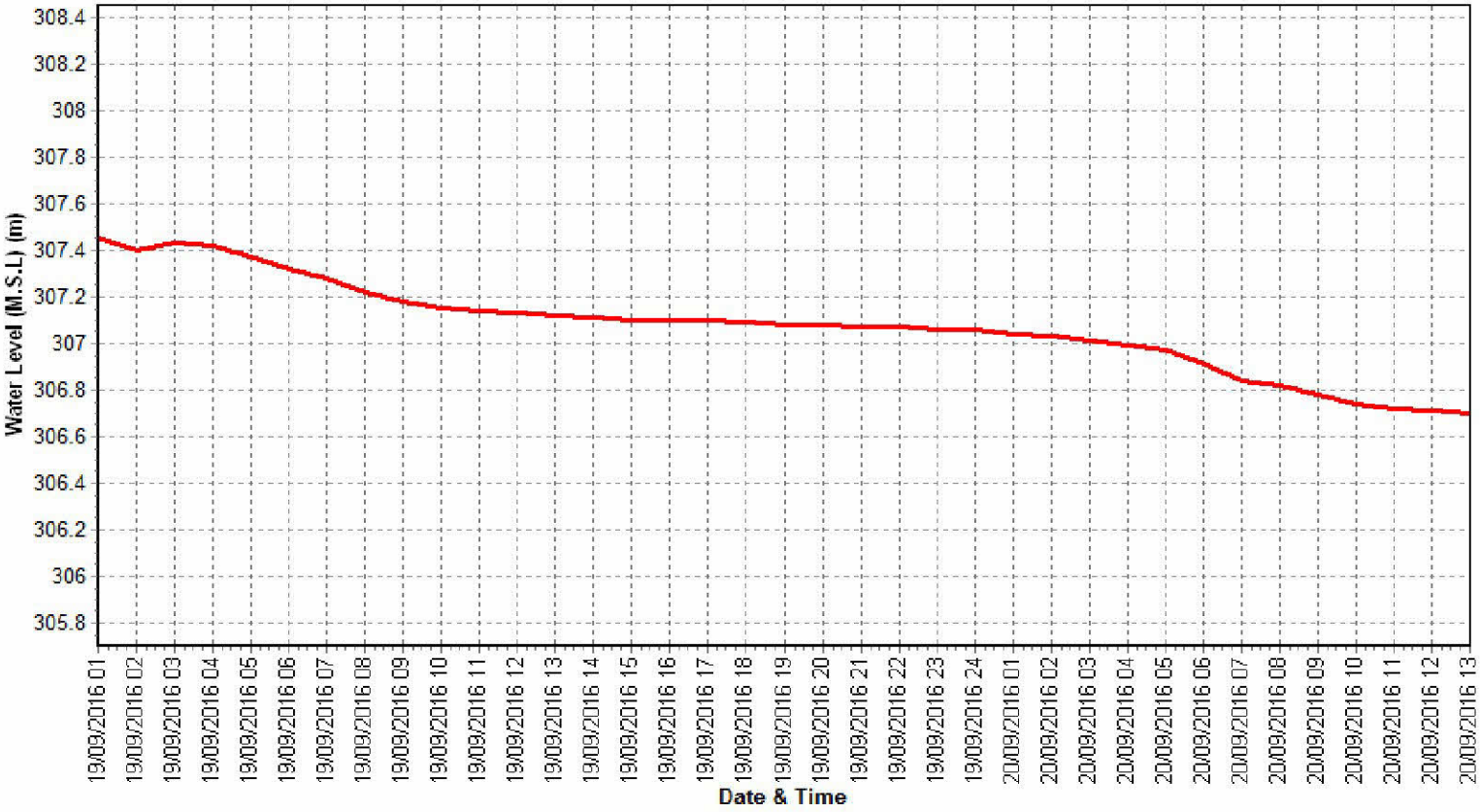



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Mantralayam ( AKL00F2)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Tungabhadra** | **Sub-Division : Lower Tungabhadra SD, Kurnool**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **T Ramapuram (Seasonal)** | **Code** | : | **AKL50A6** |
| State | : | Karnataka | District | | Bellary |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | Tungabhadra | Sub Tributary | : | Hagari |
| Sub-Sub Tributary | : | - | Local River | : | Hagari |
| Division | : | Lower Krishna Divn., Hyderabad | Sub-Division | : | Lower Tungabhadra SD, Kurnool |
| Drainage Area | : | 23500 Sq. Km. | Bank | : | Right |
| Latitude | : | 15°39'40" | Longitude | : | 76°57'56" |
| **Zero of Gauge (m)** | : | 349.368 (m.s.l) | 13/07/1963 | | |
| | | Opening Date | Closing Date | | |
| Gauge | : | 13/07/1963 | **HFL During 2016-17** | : | **350.948m** |
| | | | **Corres. Discharge** | : | **262.9(Estimated)** |
| Discharge | : | 23/08/1964 | **Date & Time of occurance** | : | **03/06/2016 10.00 hrs.** |
| Sediment | : | | | | |
| Water Quality | : | 01/01/1980 | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1966-1967 | 635.0 | 352.283 | 24/09/1966 | 0.200 | 350.253 | 02/06/1966 |
| 1967-1968 | 1022 | 352.966 | 04/10/1967 | 0.500 | 350.388 | 12/05/1968 |
| 1968-1969 | 939.6 | 353.098 | 09/10/1968 | 0.831 | 350.338 | 02/05/1969 |
| 1969-1970 | 506.6 | 352.018 | 21/10/1969 | 1.155 | 350.413 | 03/04/1970 |
| 1970-1971 | 1052 | 353.088 | 20/09/1970 | 0.617 | 350.268 | 15/05/1971 |
| 1971-1972 | 1923 | 353.858 | 14/10/1971 | 0.510 | 350.268 | 26/04/1972 |
| 1972-1973 | 740.0 | 352.508 | 18/09/1972 | 0.090 | 350.283 | 12/05/1973 |
| 1973-1974 | 1400 | 353.518 | 19/09/1973 | 0.000 | 350.228 | 02/06/1973 |
| 1974-1975 | 604.2 | 352.298 | 05/10/1974 | 0.100 | 350.193 | 27/05/1975 |
| 1975-1976 | 1084 | 353.118 | 05/11/1975 | 0.600 | 350.093 | 29/05/1976 |
| 1976-1977 | 156.0 | 351.388 | 22/08/1976 | 0.300 | 350.028 | 10/06/1976 |
| 1977-1978 | 407.8 | 351.928 | 11/10/1977 | 1.000 | 350.153 | 28/04/1978 |
| 1978-1979 | 1451 | 353.483 | 30/09/1978 | 0.200 | 350.153 | 29/05/1979 |
| 1979-1980 | 413.8 | 351.933 | 24/09/1979 | 0.200 | 350.113 | 27/05/1980 |
| 1980-1981 | 357.2 | 351.778 | 30/09/1980 | 0.100 | 350.118 | 16/04/1981 |
| 1981-1982 | 1046 | 353.158 | 12/09/1981 | 1.100 | 350.058 | 24/05/1982 |
| 1982-1983 | 1070 | 353.148 | 07/11/1982 | 0.200 | 350.028 | 08/05/1983 |
| 1983-1984 | 930.0 | 352.868 | 04/10/1983 | 0.100 | 350.018 | 02/06/1983 |
| 1984-1985 | 308.0 | 351.648 | 15/07/1984 | 0.100 | 349.918 | 27/06/1984 |
| 1985-1986 | 144.9 | 351.228 | 29/09/1985 | 0.000 | 350.018 | 19/04/1986 |
| 1986-1987 | 1116 | 352.823 | 19/09/1986 | 0.000 | 349.828 | 28/04/1987 |
| 1987-1988 | 840.5 | 352.898 | 23/10/1987 | 0.000 | | 06/05/1988 |

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 |
| 1988-1989 | 918.1 | 353.043 | 30/08/1988 | 0.000 | | 04/04/1989 |
| 1989-1990 | 1112 | 353.018 | 24/09/1989 | 0.000 | | 24/04/1990 |
| 1990-1991 | 142.0 | 351.358 | 14/10/1990 | 0.235 | 349.903 | 15/04/1991 |
| 1991-1992 | 660.5 | 352.451 | 06/06/1991 | 0.000 | | 09/04/1992 |
| 1992-1993 | 955.4 | 352.958 | 19/11/1992 | 0.536 | 349.818 | 15/05/1993 |
| 1993-1994 | 299.1 | 351.828 | 10/10/1993 | 0.000 | | 21/07/1993 |
| 1994-1995 | 573.5 | 352.398 | 04/10/1994 | 0.000 | | 22/05/1995 |
| 1995-1996 | 591.2 | 352.438 | 30/08/1995 | 0.000 | | 25/04/1996 |
| 1996-1997 | 1573 | 353.748 | 21/10/1996 | 0.000 | | 25/05/1997 |
| 1997-1998 | 209.7 | 351.548 | 13/11/1997 | 0.000 | | 09/06/1997 |
| 1998-1999 | 794.5 | 352.758 | 12/10/1998 | 0.000 | | 04/05/1999 |
| 1999-2000 | 593.1 | 352.413 | 27/09/1999 | 0.000 | | 30/04/2000 |
| 2000-2001 | 1032 | 353.118 | 10/10/2000 | 0.000 | | 01/05/2001 |
| 2001-2002 | 904.7 | 352.963 | 29/09/2001 | 0.000 | | 04/03/2002 |
| 2002-2003 | 290.3 | 351.768 | 15/10/2002 | 0.000 | | 16/04/2003 |
| 2003-2004 | 230.2 | 351.563 | 07/10/2003 | 0.000 | | 20/02/2004 |
| 2004-2005 | 262.6 | 351.483 | 06/09/2004 | 0.000 | | 14/04/2005 |
| 2005-2006 | 878.6 | 352.818 | 06/09/2005 | 0.000 | | 12/07/2005 |
| 2006-2007 | 901.5 | 352.898 | 04/11/2006 | 0.000 | | 27/07/2006 |
| 2007-2008 | 1809 | 354.318 | 19/09/2007 | 0.000 | | 24/07/2007 |
| 2008-2009 | 1433 | 353.458 | 29/08/2008 | 0.000 | 349.648 | 27/06/2008 |
| 2009-2010 | 3192 | 355.948 | 02/10/2009 | 0.000 | | 19/07/2009 |
| 2010-2011 | 981.8 | 352.788 | 24/08/2010 | 0.000 | | 31/07/2010 |
| 2011-2012 | 193.4 | 350.768 | 02/06/2011 | 0.000 | | 12/08/2011 |
| 2012-2013 | 326.4 | 351.143 | 04/09/2012 | 0.000 | | 16/07/2012 |
| 2013-2014 | 488.5 | 351.848 | 04/09/2013 | 0.000 | | 26/07/2013 |
| 2014-2015 | 647.5 | 352.158 | 26/10/2014 | 0.000 | 349.508 | 19/07/2014 |
| 2015-2016 | 1117 | 353.458 | 07/09/2015 | 0.000 | | 07/07/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : T Ramapuram (Seasonal) ( AKL50A6)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Hagari** **Sub-Division : Lower Tungabhadra SD, Kurnool**

| 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 | 349.518 | 8.823 | 349.208 | 2.186 | 349.518 | 10.19 | 349.428 | 7.218 | 349.178 | 1.919 | | 0.000 |
| 2 | 349.388 | 4.464 | 349.168 | 1.952 | 349.388 | 4.312 | 349.378 | 5.578 | | 0.000 | | 0.000 |
| 3 | 350.858 | 243.3 | 349.168 | 1.648 * | 349.378 | 4.174 | 349.208 | 1.945 | | 0.000 | | 0.000 |
| 4 | 350.418 | 83.09 | 349.128 | 1.076 | | 0.000 | 349.148 | 1.362 * | | 0.000 | 349.438 | 8.994 |
| 5 | 350.478 | 80.71 * | 349.103 | 0.506 | | 0.000 | 349.268 | 2.982 | | 0.000 | 349.298 | 4.227 |
| 6 | 350.208 | 40.89 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 349.308 | 4.263 * |
| 7 | 349.798 | 21.06 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 349.343 | 6.055 |
| 8 | 349.708 | 14.62 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 349.388 | 7.237 |
| 9 | 350.038 | 33.19 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 349.428 | 8.435 |
| 10 | 349.668 | 14.58 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 349.383 | 6.605 |
| 11 | 349.568 | 12.17 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 349.338 | 4.894 |
| 12 | 349.518 | 10.03 * | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 349.348 | 5.847 |
| 13 | 349.423 | 6.799 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 349.388 | 6.211 * |
| 14 | 349.363 | 5.564 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 349.388 | 6.211 * |
| 15 | 349.338 | 5.538 | | 0.000 | | 0.000 | 349.908 | 31.92 | | 0.000 | 349.228 | 2.491 |
| 16 | 349.278 | 3.558 | | 0.000 | | 0.000 | 350.373 | 86.85 | | 0.000 | 349.238 | 2.834 |
| 17 | 349.353 | 5.829 | | 0.000 | | 0.000 | 350.153 | 46.04 | | 0.000 | 349.128 | 1.521 |
| 18 | 349.258 | 3.398 | | 0.000 | | 0.000 | 349.868 | 24.82 * | | 0.000 | 349.188 | 2.262 |
| 19 | 349.278 | 3.615 * | | 0.000 | | 0.000 | 349.413 | 5.173 | | 0.000 | 349.288 | 3.850 |
| 20 | 349.658 | 15.07 | | 0.000 | | 0.000 | 349.213 | 2.038 | | 0.000 | 349.288 | 3.826 * |
| 21 | 349.808 | 21.01 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 349.298 | 4.035 |
| 22 | 349.533 | 11.88 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 349.318 | 4.229 |
| 23 | 349.398 | 6.965 | | 0.000 | | 0.000 | 349.533 | 11.37 | | 0.000 | 349.288 | 3.839 |
| 24 | 349.288 | 3.708 | | 0.000 | | 0.000 | 349.508 | 9.028 | | 0.000 | 349.228 | 2.468 |
| 25 | 349.268 | 3.439 | | 0.000 | | 0.000 | 349.578 | 11.93 * | | 0.000 | 349.098 | 0.000 |
| 26 | 349.218 | 2.460 * | | 0.000 | | 0.000 | 349.578 | 12.43 | | 0.000 | | 0.000 |
| 27 | 349.228 | 2.912 | | 0.000 | | 0.000 | 349.448 | 8.359 | | 0.000 | | 0.000 |
| 28 | 349.233 | 3.037 | | 0.000 | | 0.000 | 349.348 | 5.864 | | 0.000 | | 0.000 |
| 29 | 349.208 | 2.234 | 349.928 | 28.48 | | 0.000 | 349.268 | 4.484 | | 0.000 | 349.418 | 6.926 |
| 30 | 349.208 | 2.390 | 350.003 | 33.07 | | 0.000 | 349.348 | 5.054 | | 0.000 | 349.408 | 5.646 |
| 31 | | | 349.758 | 19.12 * | | 0.000 | | | | 0.000 | | |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 350.008 | 54.47 | 349.155 | 0.737 | 349.428 | 1.868 | 349.286 | 1.909 | 349.178 | 0.192 | 349.369 | 4.582 |
| II Ten-Daily | 349.404 | 7.156 | | 0.000 | | 0.000 | 349.821 | 19.68 | | 0.000 | 349.282 | 3.995 |
| III Ten-Daily | 349.339 | 6.003 | 349.896 | 7.333 | | 0.000 | 349.451 | 6.852 | | 0.000 | 349.246 | 2.714 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 349.208 | 2.234 | 349.103 | 0.000 | 349.378 | 0.000 | 349.148 | 0.000 | 349.178 | 0.000 | 349.098 | 0.000 |
| Max. | 350.858 | 243.3 | 350.003 | 33.07 | 349.518 | 10.19 | 350.373 | 86.85 | 349.178 | 1.919 | 349.438 | 8.994 |
| Mean | 349.584 | 22.54 | 349.433 | 2.84 | 349.428 | 0.602 | 349.525 | 9.482 | 349.178 | 0.062 | 349.302 | 3.764 |

**Annual Runoff in MCM = 102 Annual Runoff in mm = 4**

**Peak Observed Discharge = 243.3 cumecs on 03/06/2016 Corres. Water Level :350.858 m**

**Lowest Observed Discharge = 0.000 cumecs on 06/07/2016**

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 2016 - 2017

**Station Name : T Ramapuram (Seasonal) ( AKL50A6)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Hagari** **Sub-Division : Lower Tungabhadra SD, Kurnool**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | | 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 |
| 3 | | 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 |
| 5 | | 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 |
| 7 | | 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 |
| 9 | | 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 |
| 11 | | 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 |
| 13 | | 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 |
| 15 | | 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 |
| 17 | | 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 |
| 19 | | 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 |
| 21 | | 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 |
| 23 | | 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 |
| 25 | | 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 |
| 27 | | 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 |
| 29 | | 0.000 | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 30 | | 0.000 | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 31 | | 0.000 | | 0.000 | | | | 0.000 | | | | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| II Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| III Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Max. | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Mean | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 |

**Peak Computed Discharge = 80.71 cumecs on 05/06/2016** **Corres. Water Level :350.478 m**

**Lowest Computed Discharge = 1.362 cumecs on 04/09/2016** **Corres. Water Level :349.148 m**

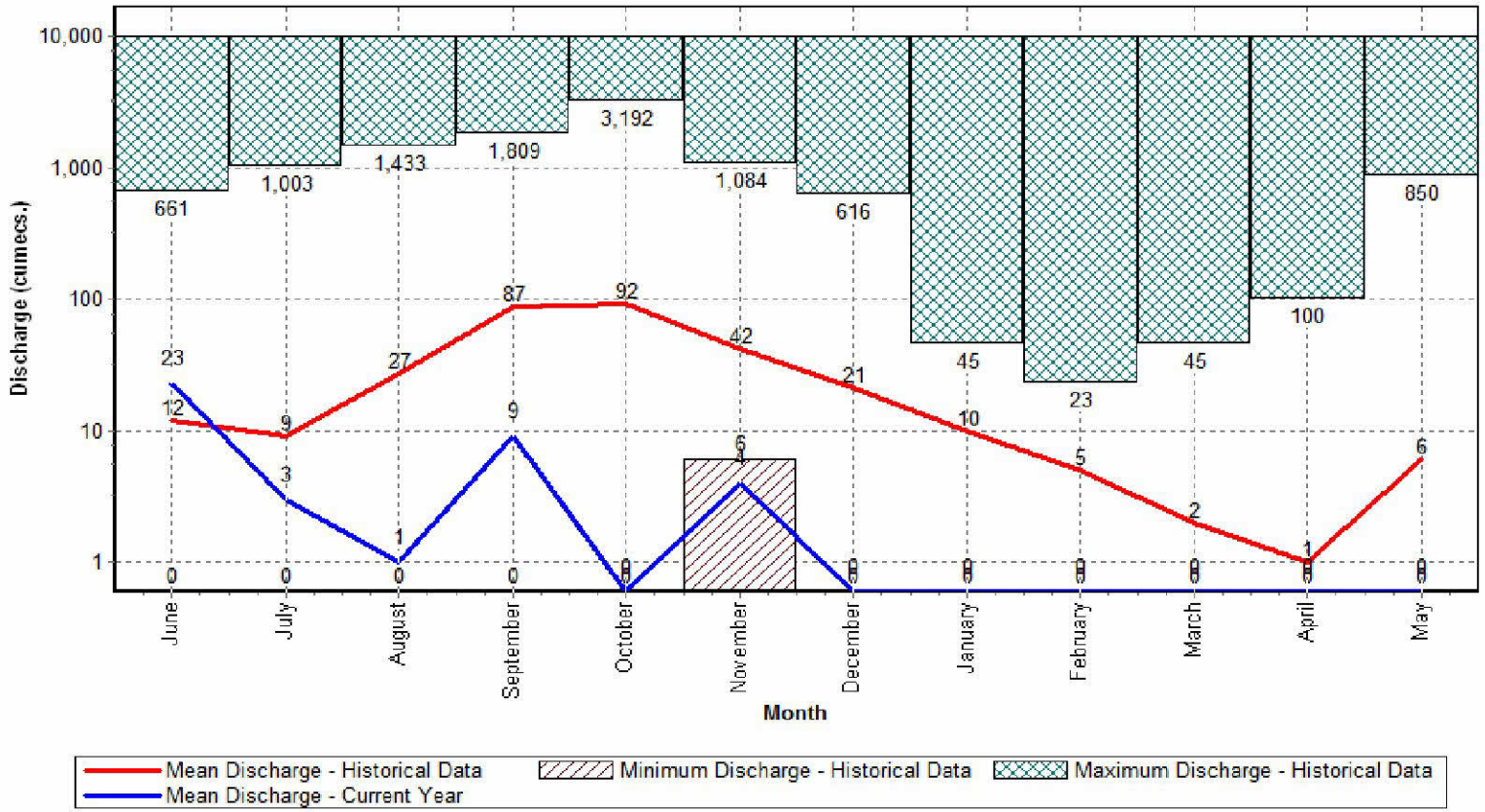
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : T Ramapuram (Seasonal) ( AKL50A6)** **Data considered : 1966-2017** **Division : Lower Krishna Divn., Hyderabad**

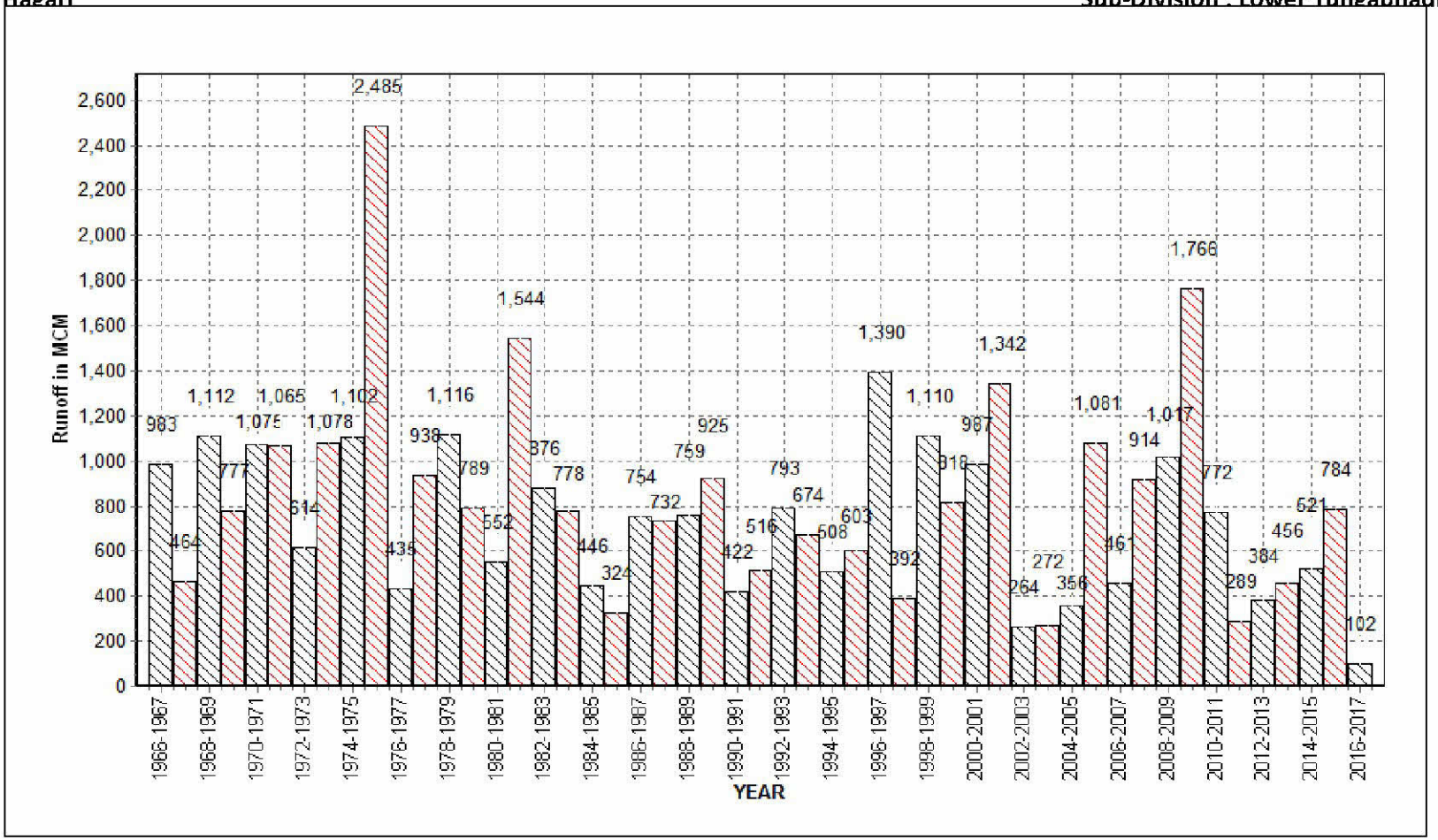
**Local River : Hagari** **Sub-Division : Lower Tungabhadra SD, Kurnool**



**Annual Runoff Values for the period: 1966 - 2017**

**Station Name : T Ramapuram (Seasonal) ( AKL50A6)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Hagari** **Sub-Division : Lower Tungabhadra SD, Kurnool**

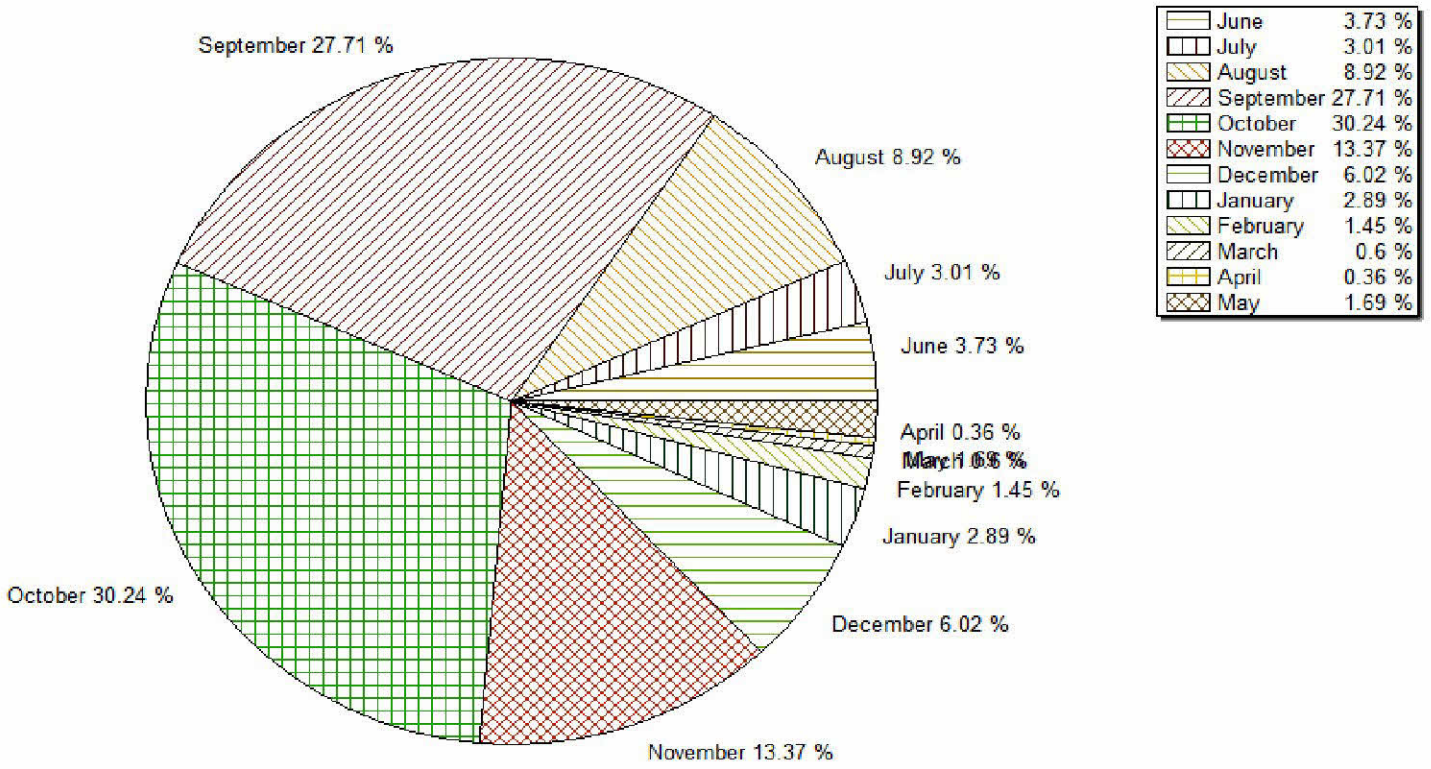



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1966-2016**

**Station Name : T Ramapuram (Seasonal) ( AKL50A6)** **Division : Lower Krishna Divn., Hyderabad**

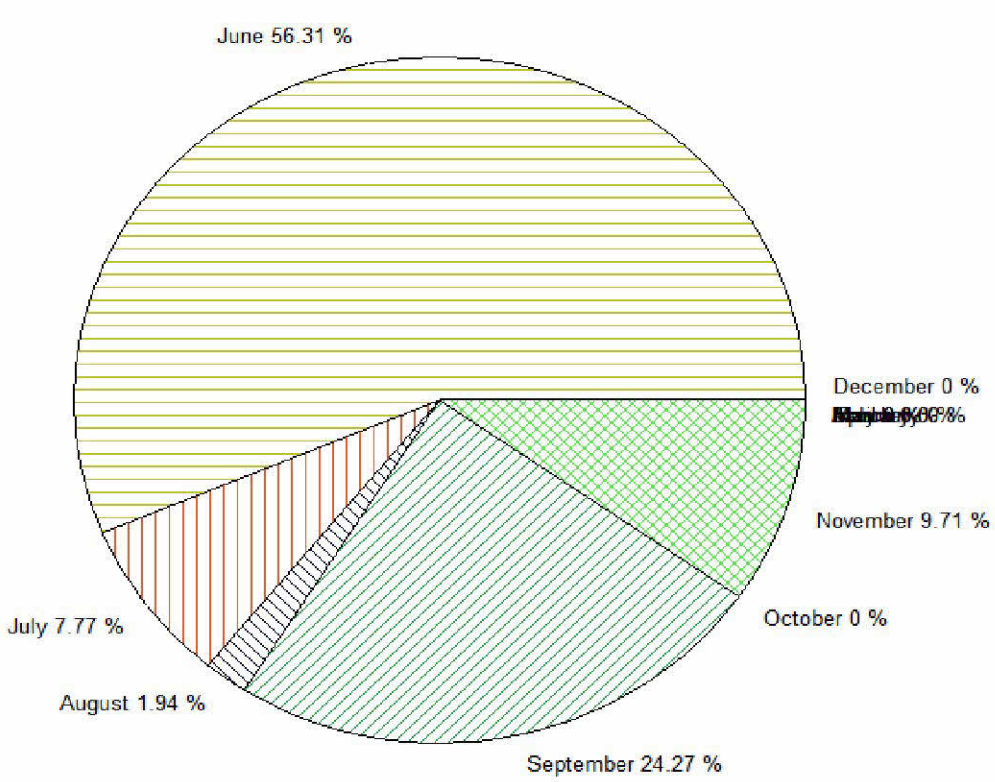
**Local River : Hagari** **Sub-Division : Lower Tungabhadra SD, Kurnool**



## Monthly Runoff for the Year : 2016-2017

**Station Name : T Ramapuram (Seasonal) ( AKL50A6)**
**Local River : Hagari**

**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Lower Tungabhadra SD, Kurnool**

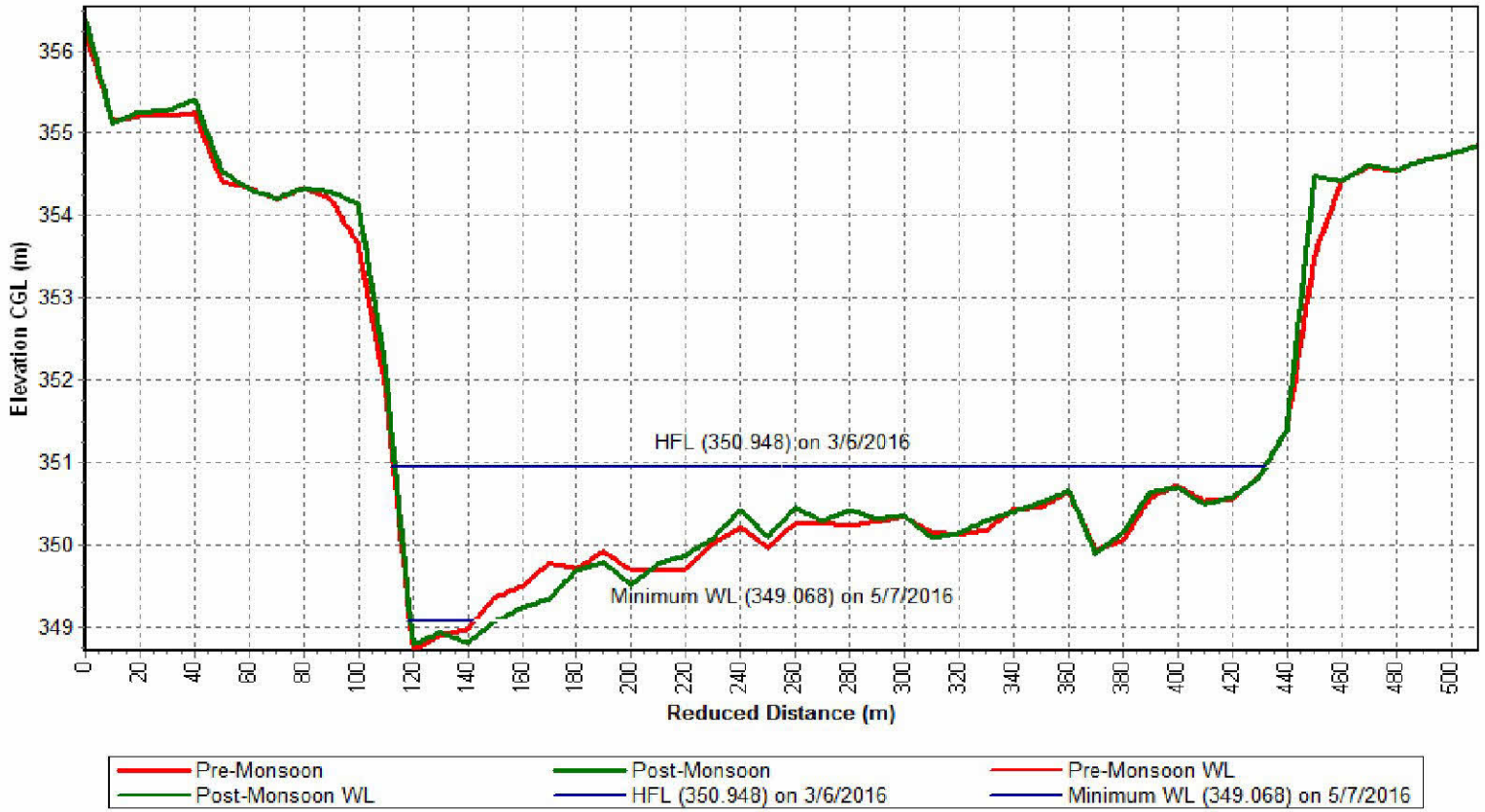



| | |
|---|---|
| June | 56.31 % |
| July | 7.77 % |
| August | 1.94 % |
| September | 24.27 % |
| October | 0 % |
| November | 9.71 % |
| December | 0 % |
| January | 0 % |
| February | 0 % |
| March | 0 % |
| April | 0 % |
| May | 0 % |

**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : T Ramapuram (Seasonal) ( AKL50A6)** **Division : Lower Krishna Divn., Hyderabad**

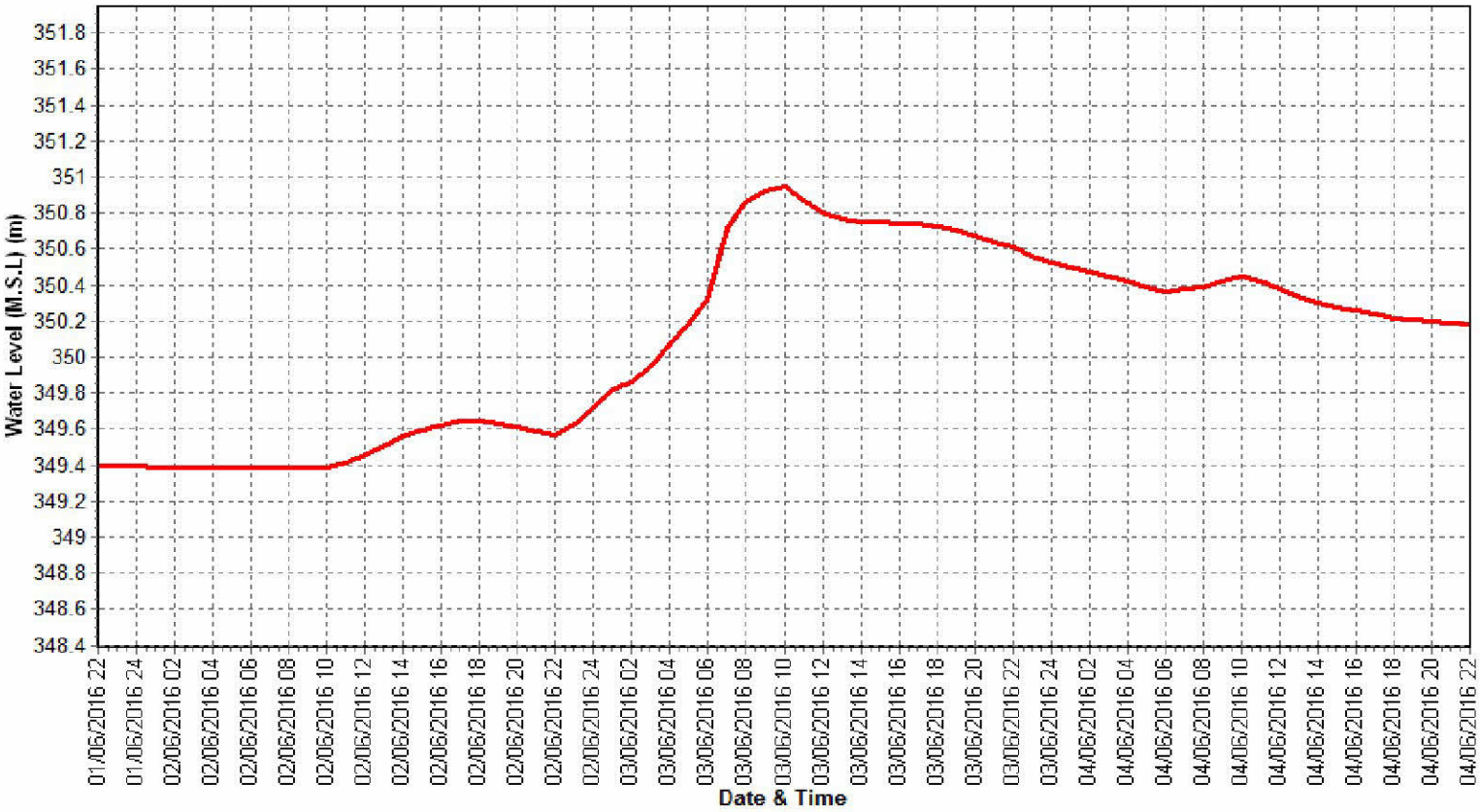
**Local River : Hagari** **Sub-Division : Lower Tungabhadra SD, Kurnool**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : T Ramapuram (Seasonal) ( AKL50A6)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Hagari** | **Sub-Division : Lower Tungabhadra SD, Kurnool**

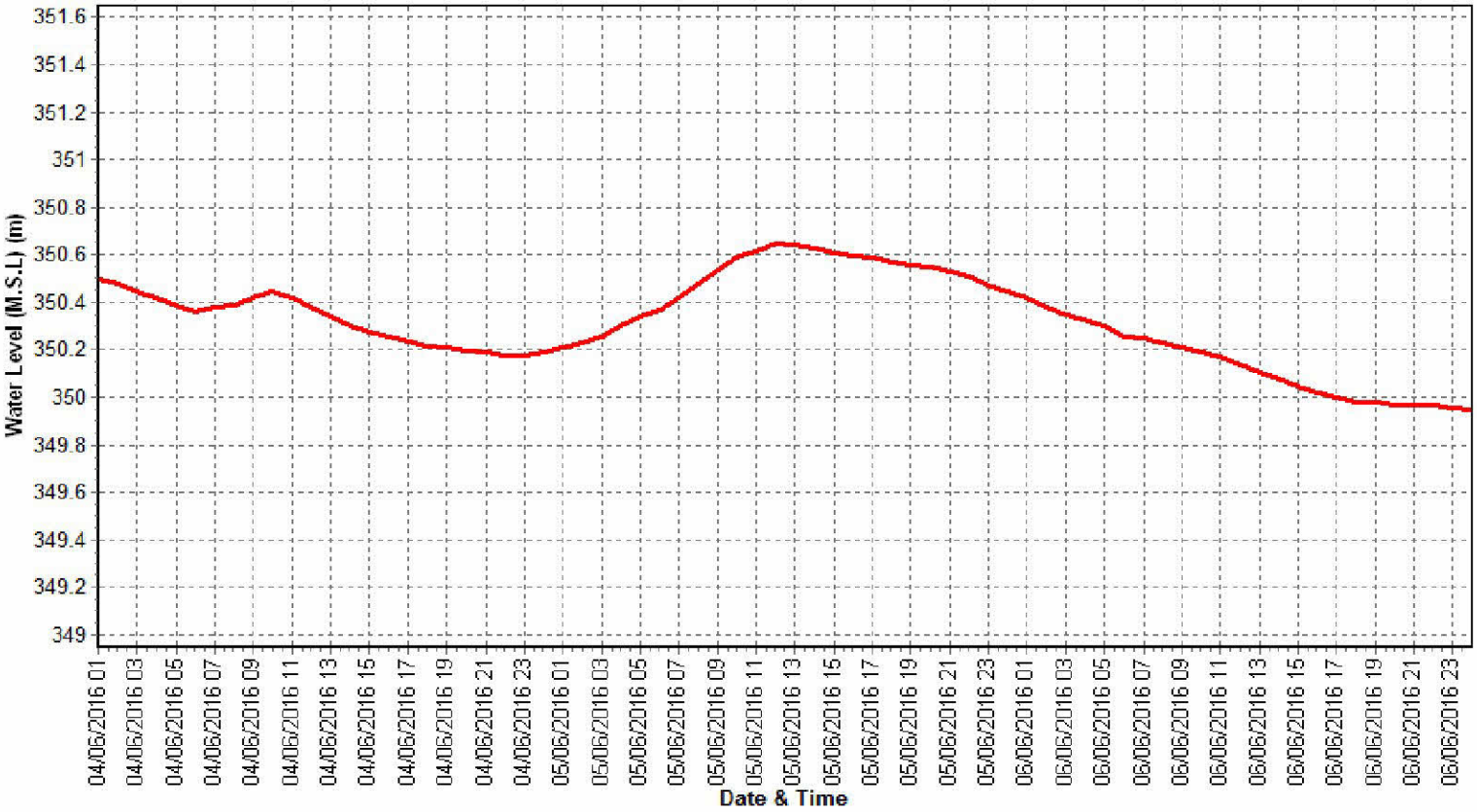



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : T Ramapuram (Seasonal) ( AKL50A6)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Hagari** **Sub-Division : Lower Tungabhadra SD, Kurnool**

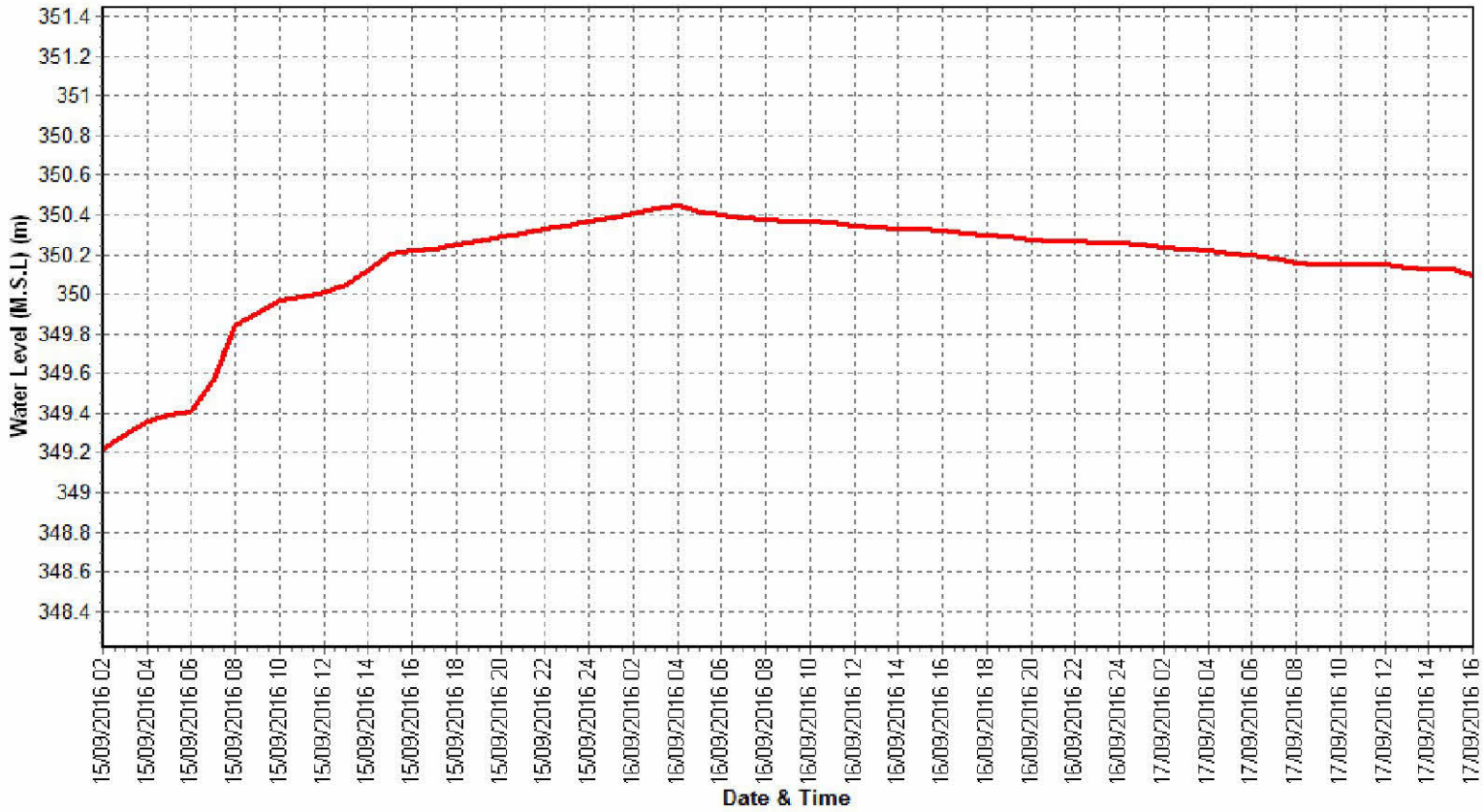



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : T Ramapuram (Seasonal) ( AKL50A6)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Hagari** **Sub-Division : Lower Tungabhadra SD, Kurnool**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **KELLODU** | **Code** | : | **AKL50T9** |
| State | : | Karnataka | District | | Chitradurga |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | Tungabhadra | Sub Tributary | : | |
| Sub-Sub Tributary | : | | Local River | : | Vedavathi |
| Division | : | Cauvery Division, Bangalore | Sub-Division | : | Upper Tunga Subdn, Devangere |
| Drainage Area | : | 4320 Sq. Km. | Bank | : | Left |
| Latitude | : | 13°45'15" | Longitude | : | 76°19'11" |
| **Zero of Gauge (m)** | : | 647.75 (m.s.l) | 01/03/1990 | | |
| | | Opening Date | Closing Date | | |
| Gauge | : | 01/06/1990 | **DRY BED, HENCE THERE IS NO HFL** | | |
| Discharge | : | 11/07/1990 | | | |
| Sediment | : | | | | |
| Water Quality | : | 01/07/1994 | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1991-1992 | 29.82 | 99.965 | 17/09/1991 | 0.000 | | 01/04/1992 |
| 1992-1993 | 576.6 | 102.880 | 17/11/1992 | 0.245 | 98.920 | 15/04/1993 |
| 1993-1994 | 253.0 | 101.867 | 22/10/1993 | 0.000 | 98.930 | 28/03/1994 |
| 1994-1995 | 201.5 | 101.340 | 27/10/1994 | 0.000 | 99.010 | 22/06/1994 |
| 1995-1996 | 78.37 | 99.920 | 23/10/1995 | 0.000 | | 27/02/1996 |
| 1996-1997 | 76.67 | 100.340 | 29/09/1996 | 0.000 | | 31/03/1997 |
| 1997-1998 | 161.8 | 101.250 | 28/11/1997 | 0.000 | | 12/04/1998 |
| 1998-1999 | 42.50 | 99.940 | 24/08/1998 | 0.000 | | 23/03/1999 |
| 1999-2000 | 241.0 | 101.820 | 26/10/1999 | 0.000 | | 12/07/1999 |
| 2000-2001 | 399.2 | 102.600 | 23/10/2000 | 0.000 | 98.615 | 27/01/2001 |
| 2001-2002 | 52.49 | 99.250 | 19/09/2001 | 0.000 | | 14/04/2002 |
| 2002-2003 | 34.74 | 99.580 | 30/10/2002 | 0.000 | | 25/01/2003 |
| 2003-2004 | 30.69 | 99.380 | 04/10/2003 | 0.000 | | 03/07/2003 |
| 2004-2005 | 0.000 | | 10/09/2004 | 0.000 | | 25/01/2005 |
| 2005-2006 | 53.52 | 99.540 | 17/07/2005 | 0.000 | 97.540 | 06/03/2006 |
| 2006-2007 | 2.307 | 649.220 | 03/11/2006 | 0.000 | | 25/12/2006 |
| 2007-2008 | 1.570 | 647.610 | 24/03/2008 | 0.000 | | 20/01/2008 |
| 2008-2009 | 28.18 | 647.910 | 03/09/2008 | 0.000 | | 24/01/2009 |
| 2009-2010 | 117.2 | 648.910 | 23/09/2009 | 0.000 | | 15/03/2010 |
| 2010-2011 | 300.8 | 650.250 | 13/11/2010 | 0.000 | | 25/06/2010 |
| 2011-2012 | 48.55 | 647.825 | 15/10/2011 | 0.000 | 646.300 | 03/12/2011 |
| 2012-2013 | 11.56 | 647.060 | 01/10/2012 | 0.000 | | 23/01/2013 |
| 2013-2014 | 4.716 | 647.290 | 17/09/2013 | 0.000 | | 27/08/2013 |
| 2014-2015 | 128.9 | 649.540 | 27/10/2014 | 0.000 | | 23/03/2015 |
| 2015-2016 | 77.90 | 648.390 | 03/11/2015 | 0.000 | Dry Bed | 01/06/2015 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : KELLODU ( AKL50T9)** **Division : Cauvery Division, Bangalore**

**Local River : Vedavathi** **Sub-Division : Upper Tunga Subdn, Devangere**

| 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 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 2 | | 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 |
| 4 | | 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 |
| 6 | | 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 |
| 8 | | 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 |
| 10 | | 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 |
| 12 | | 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 |
| 14 | | 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 |
| 16 | | 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 |
| 18 | | 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 |
| 20 | | 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 |
| 22 | | 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 |
| 24 | | 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 |
| 26 | | 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 |
| 28 | | 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 |
| 30 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 31 | | | | 0.000 | | 0.000 | | | | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| II Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| III Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Max. | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Mean | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 |

**Annual Runoff in MCM = 0** **Annual Runoff in mm = 0**

**Peak Observed Discharge = 0.000 cumecs on 01/06/2016**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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

*Note:Missing values ignored while arriving at Annual Runoff*

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : KELLODU ( AKL50T9)** **Division : Cauvery Division, Bangalore**

**Local River : Vedavathi** **Sub-Division : Upper Tunga Subdn, Devangere**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | | 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 |
| 3 | | 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 |
| 5 | | 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 |
| 7 | | 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 |
| 9 | | 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 |
| 11 | | 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 |
| 13 | | 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 |
| 15 | | 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 |
| 17 | | 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 |
| 19 | | 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 |
| 21 | | 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 |
| 23 | | 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 |
| 25 | | 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 |
| 27 | | 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 |
| 29 | | 0.000 | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 30 | | 0.000 | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 31 | | 0.000 | | 0.000 | | | | 0.000 | | | | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| II Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| III Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Max. | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Mean | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 |

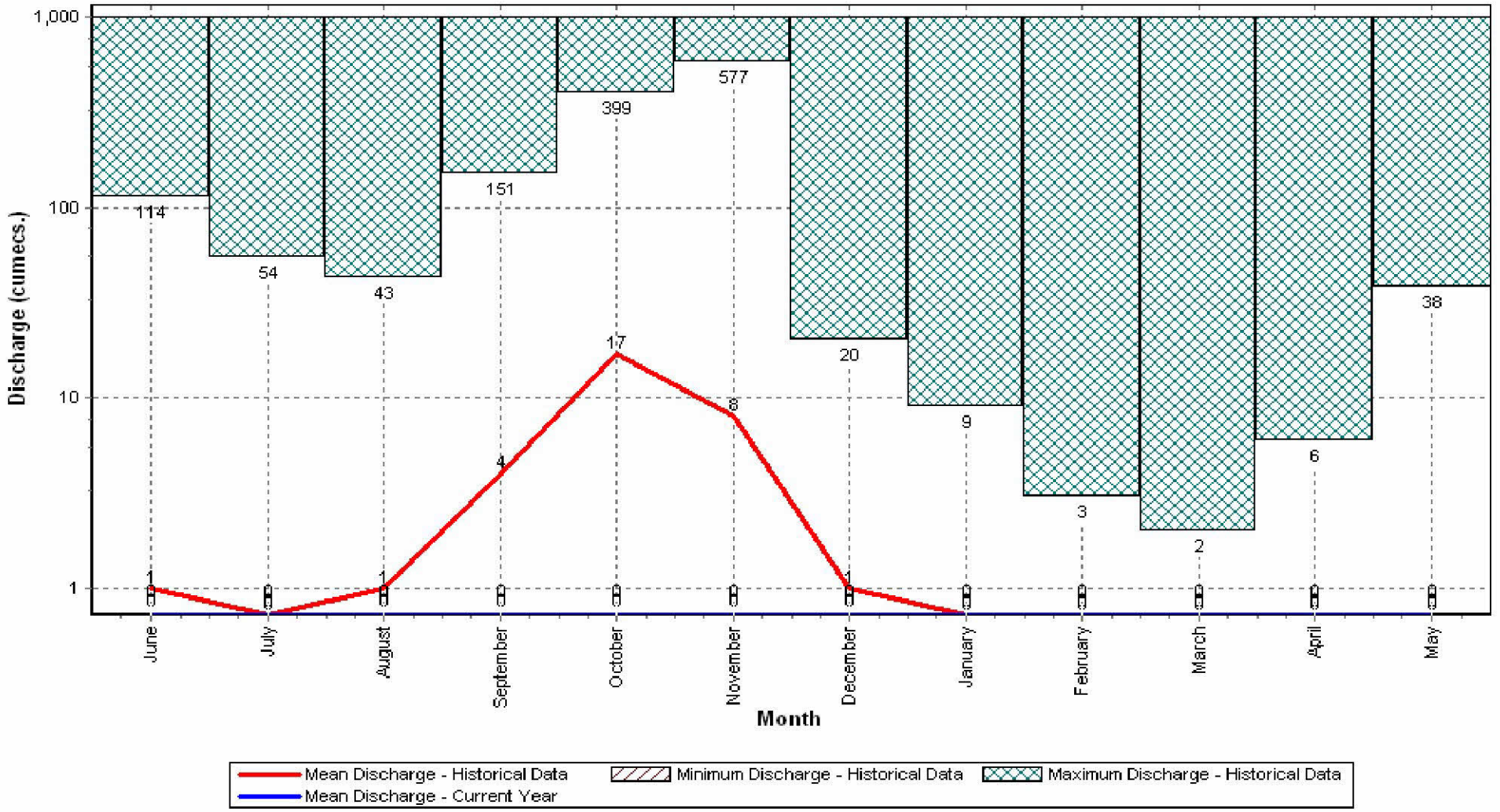
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : KELLODU ( AKL50T9)** | **Data considered : 1991-2017** | **Division : Cauvery Division, Bangalore**

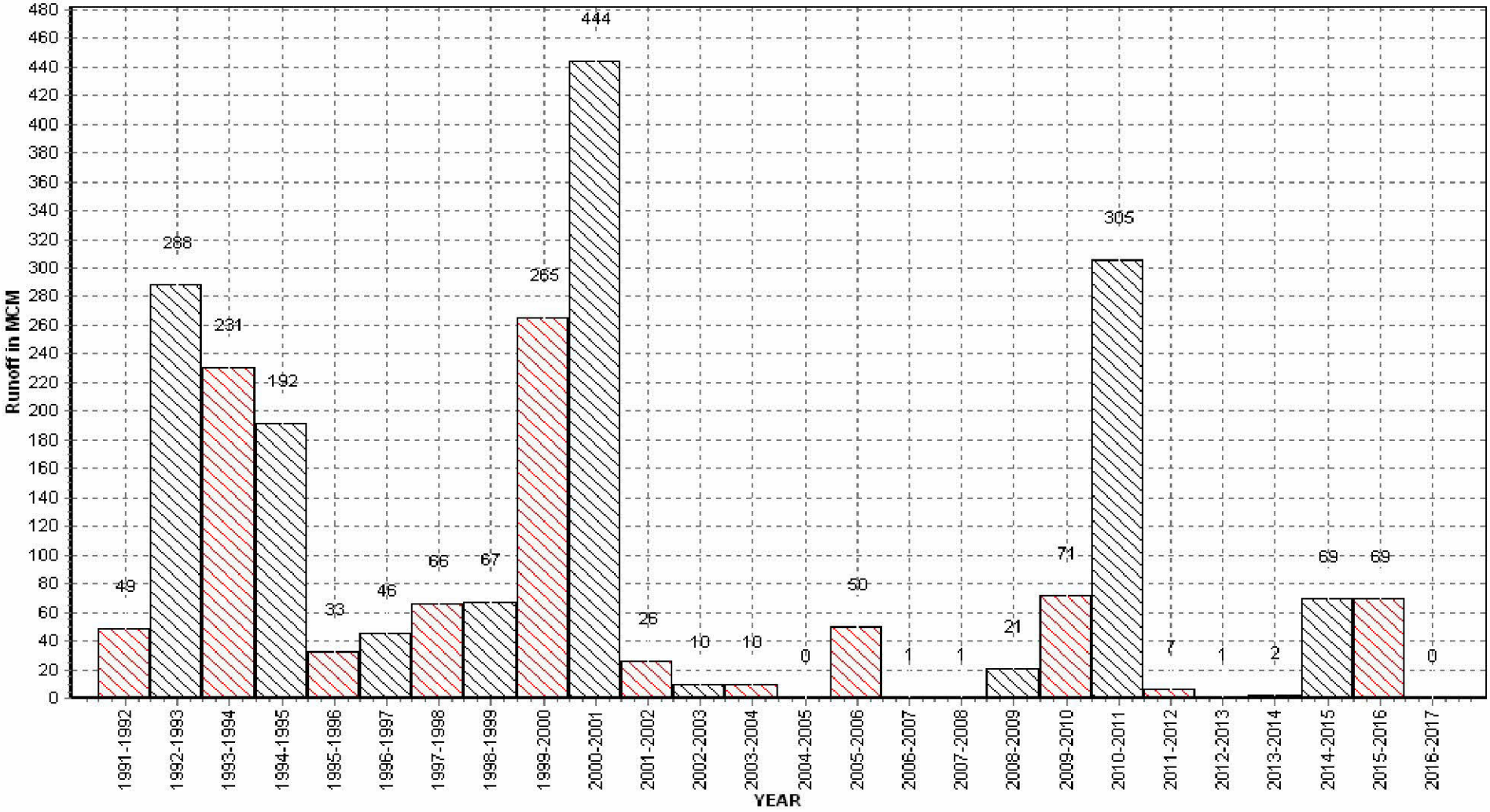
**Local River : Vedavathi** | **Sub-Division : Upper Tunga Subdn, Devangere**



**Annual Runoff Values for the period: 1991 - 2017**

**Station Name : KELLODU ( AKL50T9)**
**Local River : Vedavathi**

**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**

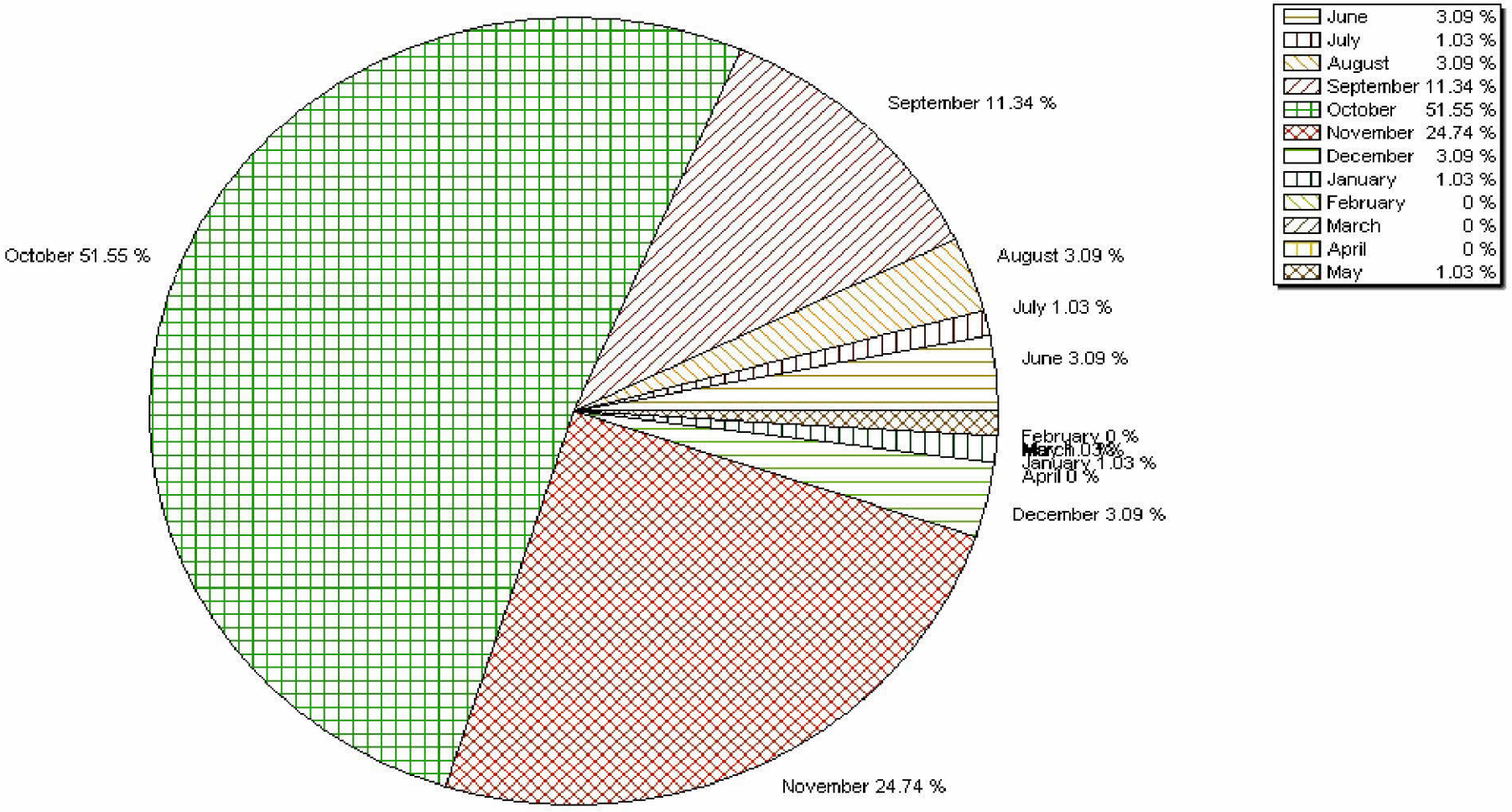



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1991-2016**

**Station Name : KELLODU ( AKL50T9)**
**Local River : Vedavathi**

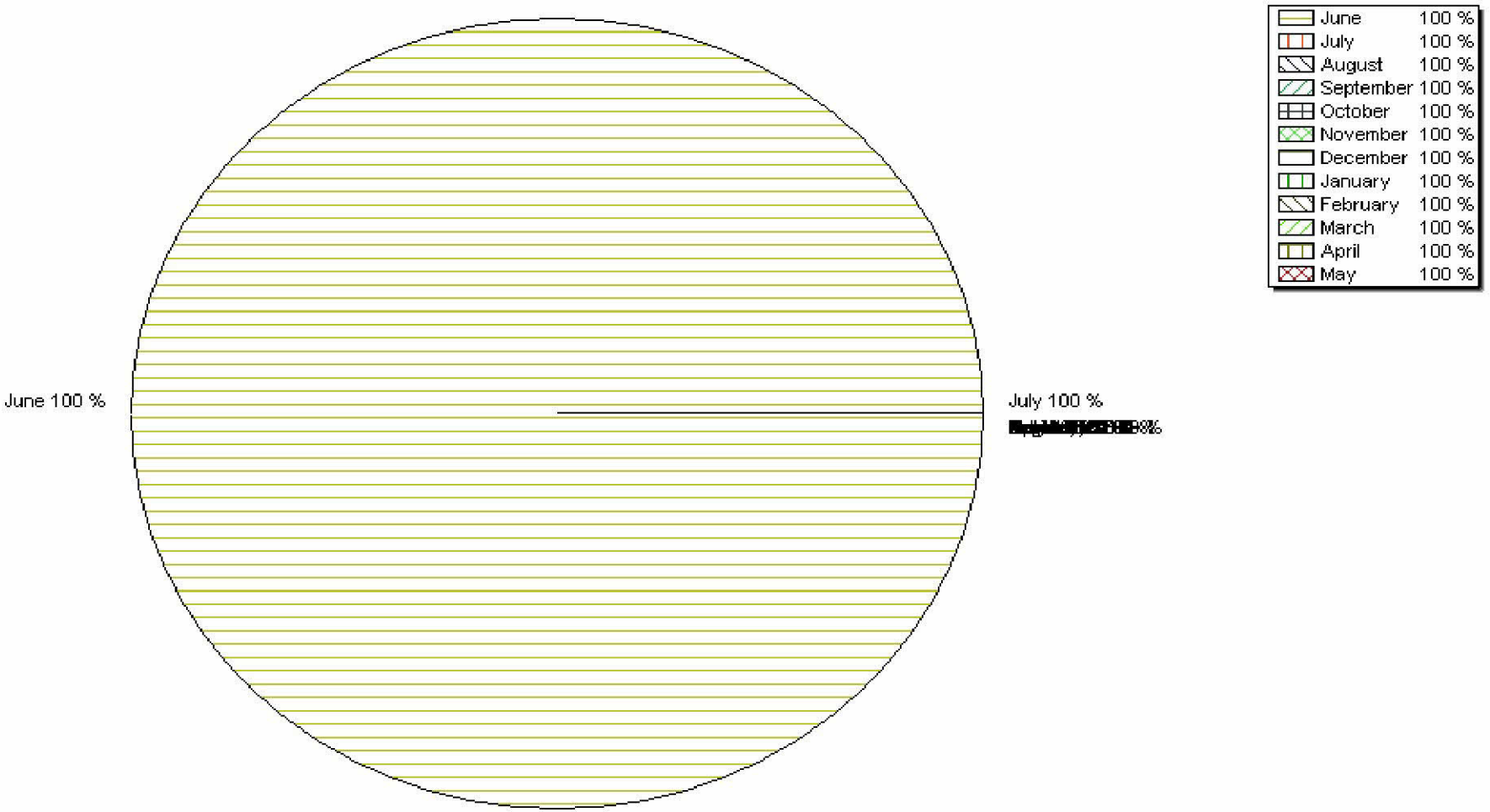
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**



**Monthly Runoff for the Year : 2016-2017**

**Station Name : KELLODU ( AKL50T9)**
**Local River : Vedavathi**

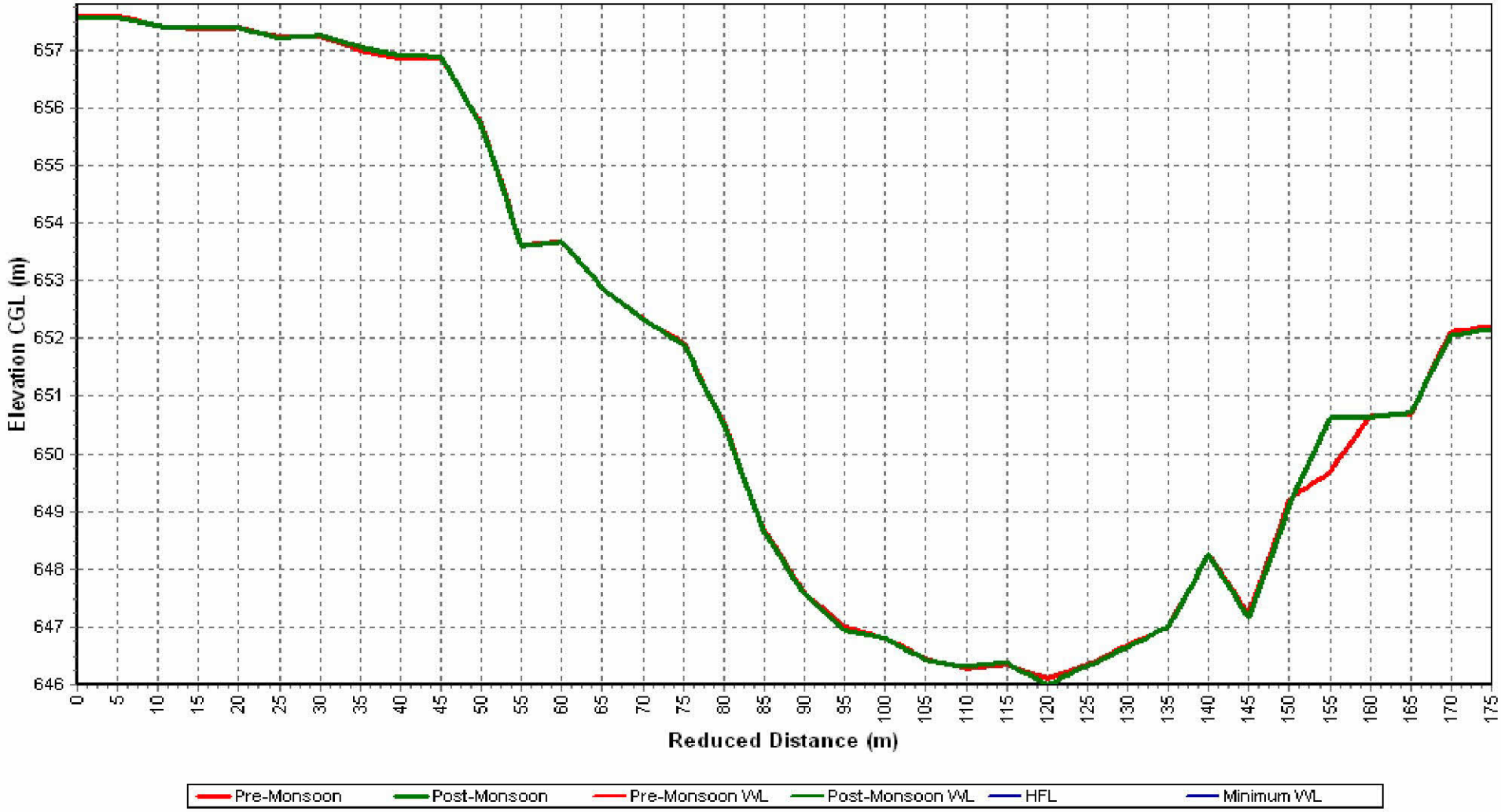
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : KELLODU ( AKL50T9)**
**Local River : Vedavathi**

**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**



# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **HOOVINAHOLE** | **Code** | : | **HOOVINAHOLE** |
| State | : | Karnataka | District | | Chitradurga |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | | Sub Tributary | : | |
| Sub-Sub Tributary | : | | Local River | : | Suvarnamukhi |
| Division | : | Cauvery Division, Bangalore | Sub-Division | : | Upper Tunga SD, Devangere |
| Drainage Area | : | 2585 Sq. Km. | Bank | : | Right |
| Latitude | : | 13°58'57" | Longitude | : | 76°44'57" |
| **Zero of Gauge (m)** | : | 93.5 (m.s.l) | 28/11/1997 | | |
| | | Opening Date | Closing Date | | |
| Gauge | : | 28/11/1997 | **DRY BED, HENCE THERE IS NO HFL** | | |
| Discharge | : | 02/10/2001 | | | |
| Sediment | : | | | | |
| Water Quality | : | 01/06/2008 | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 2002-2003 | 16.39 | 95.100 | 30/10/2002 | 0.000 | 94.240 | 07/12/2002 |
| 2003-2004 | 0.000 | | 05/10/2003 | 0.000 | | 26/01/2004 |
| 2004-2005 | 0.000 | | 04/10/2004 | 0.000 | | 25/01/2005 |
| 2005-2006 | 13.37 | 95.500 | 03/11/2005 | 0.000 | | 06/04/2006 |
| 2006-2007 | 2.576 | 94.860 | 20/06/2006 | 0.000 | | 03/01/2007 |
| 2007-2008 | 5.331 | 94.840 | 10/09/2007 | 0.000 | | 26/01/2008 |
| 2008-2009 | 75.85 | 95.820 | 06/09/2008 | 0.000 | | 17/03/2009 |
| 2009-2010 | 67.38 | 95.580 | 24/09/2009 | 0.000 | 94.450 | 27/12/2009 |
| 2010-2011 | 75.13 | 95.755 | 03/11/2010 | 0.000 | 94.230 | 23/01/2011 |
| 2011-2012 | 0.000 | | 21/02/2012 | 0.000 | | 18/05/2012 |
| 2012-2013 | 0.000 | | 12/07/2012 | 0.000 | | 09/12/2012 |
| 2013-2014 | 43.01 | 95.355 | 13/09/2013 | 0.000 | | 01/10/2013 |
| 2014-2015 | 0.000 | | 17/11/2014 | 0.000 | | 25/01/2015 |
| 2015-2016 | 7.174 | 94.080 | 27/11/2015 | 0.000 | Dry Bed | 01/06/2015 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : HOOVINAHOLE ( HOOVINAHOLE)** **Division : Cauvery Division, Bangalore**

**Local River : Suvarnamukhi** **Sub-Division : Upper Tunga SD, Devangere**

| 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 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 2 | | 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 |
| 4 | | 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 |
| 6 | | 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 |
| 8 | | 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 |
| 10 | | 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 |
| 12 | | 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 |
| 14 | | 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 |
| 16 | | 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 |
| 18 | | 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 |
| 20 | | 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 |
| 22 | | 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 |
| 24 | | 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 |
| 26 | | 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 |
| 28 | | 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 |
| 30 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 31 | | | | 0.000 | | 0.000 | | | | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| II Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| III Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Max. | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Mean | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 |

**Annual Runoff in MCM = 0** **Annual Runoff in mm = 0**

**Peak Observed Discharge = 0.000 cumecs on 01/06/2016**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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

*Note:Missing values ignored while arriving at Annual Runoff*

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : HOOVINAHOLE ( HOOVINAHOLE)** **Division : Cauvery Division, Bangalore**

**Local River : Suvarnamukhi** **Sub-Division : Upper Tunga SD, Devangere**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | | 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 |
| 3 | | 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 |
| 5 | | 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 |
| 7 | | 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 |
| 9 | | 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 |
| 11 | | 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 |
| 13 | | 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 |
| 15 | | 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 |
| 17 | | 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 |
| 19 | | 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 |
| 21 | | 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 |
| 23 | | 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 |
| 25 | | 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 |
| 27 | | 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 |
| 29 | | 0.000 | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 30 | | 0.000 | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 31 | | 0.000 | | 0.000 | | | | 0.000 | | | | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| II Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| III Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Max. | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Mean | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 |

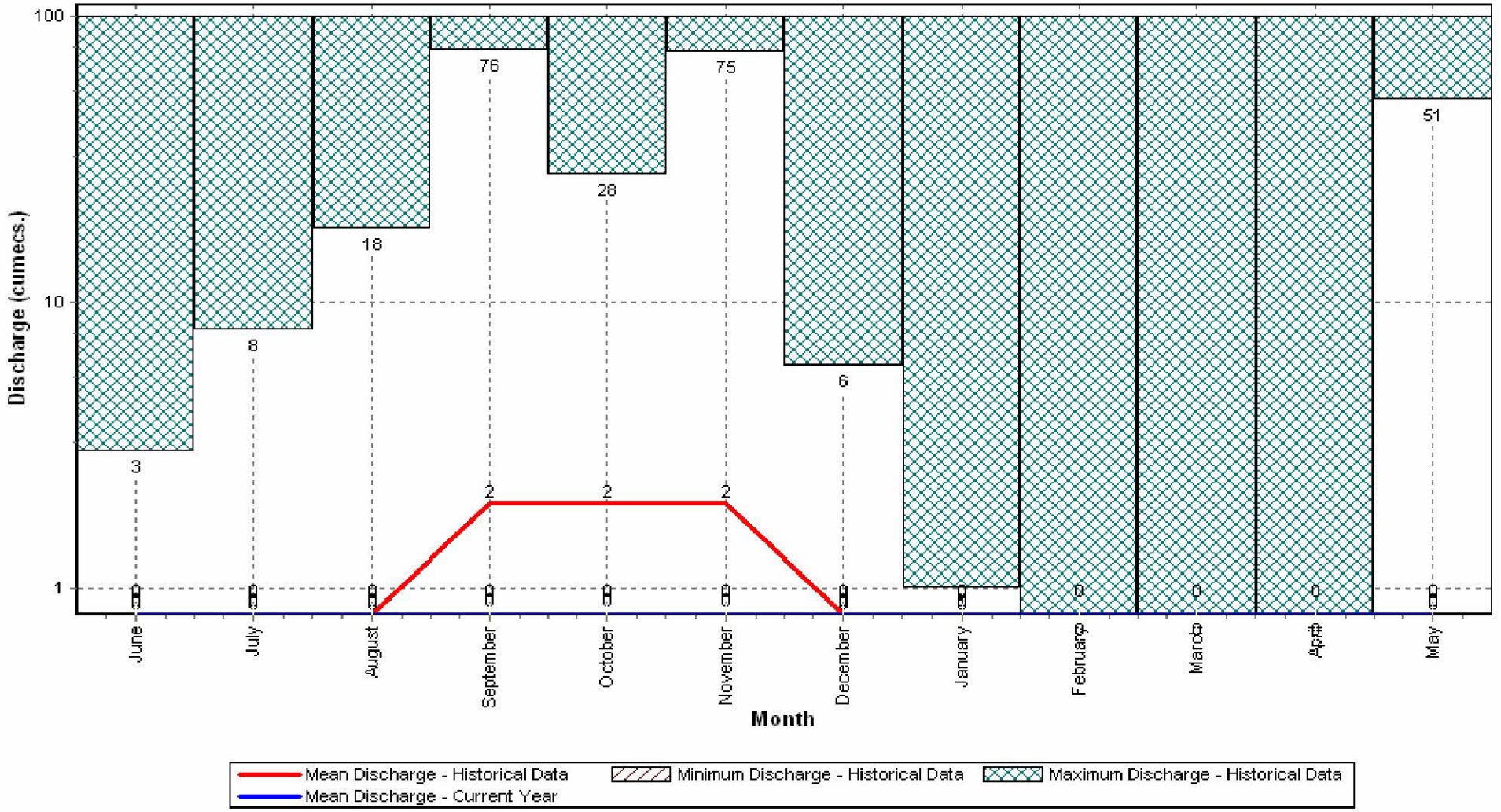
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : HOOVINAHOLE ( HOOVINAHOLE)** **Data considered : 2002-2017** **Division : Cauvery Division, Bangalore**

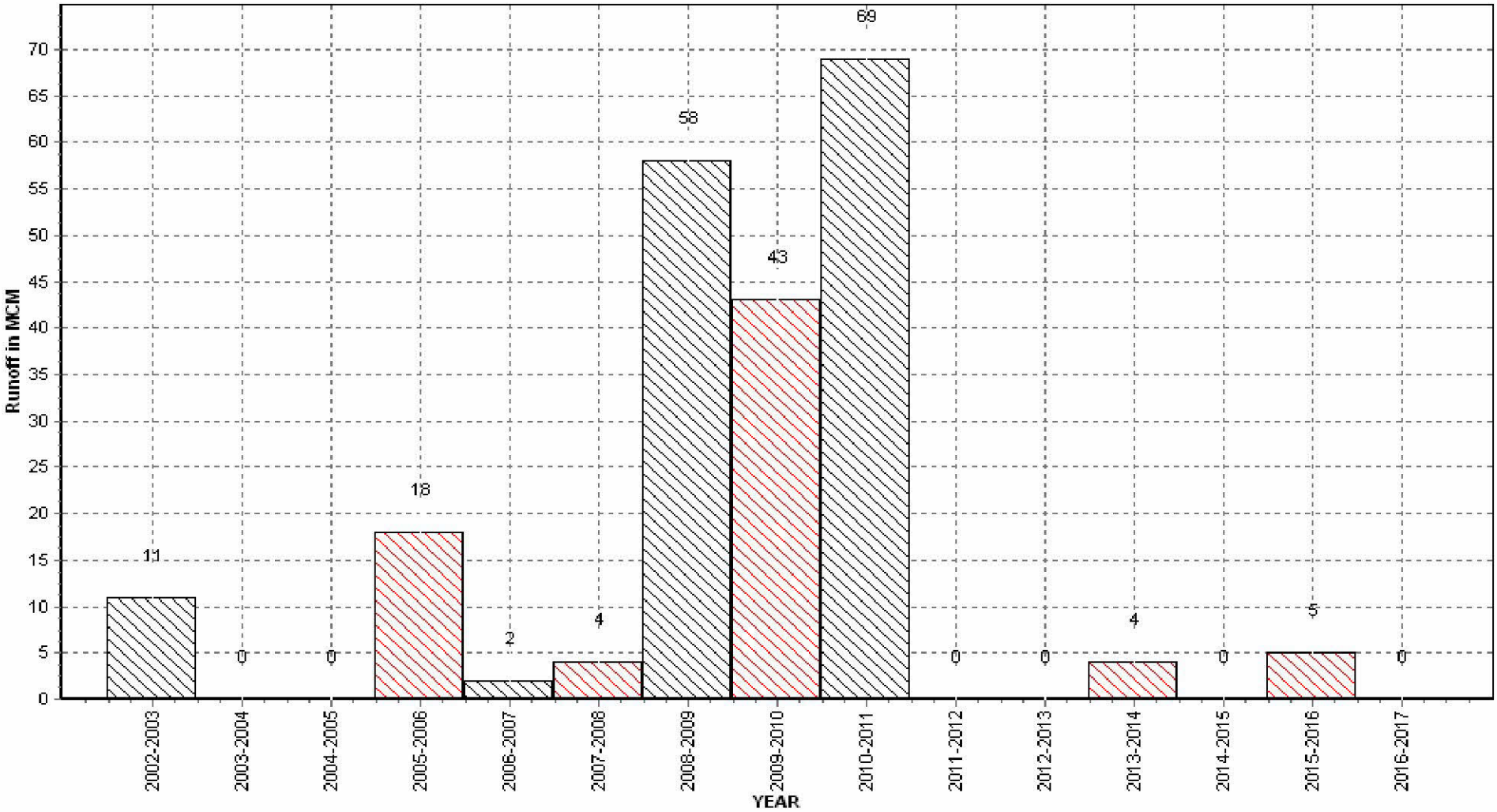
**Local River : Suvarnamukhi** **Sub-Division : Upper Tunga SD, Devangere**



**Annual Runoff Values for the period: 2002 - 2017**

**Station Name : HOOVINAHOLE ( HOOVINAHOLE)**
**Local River : Suvarnamukhi**

**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga SD, Devangere**

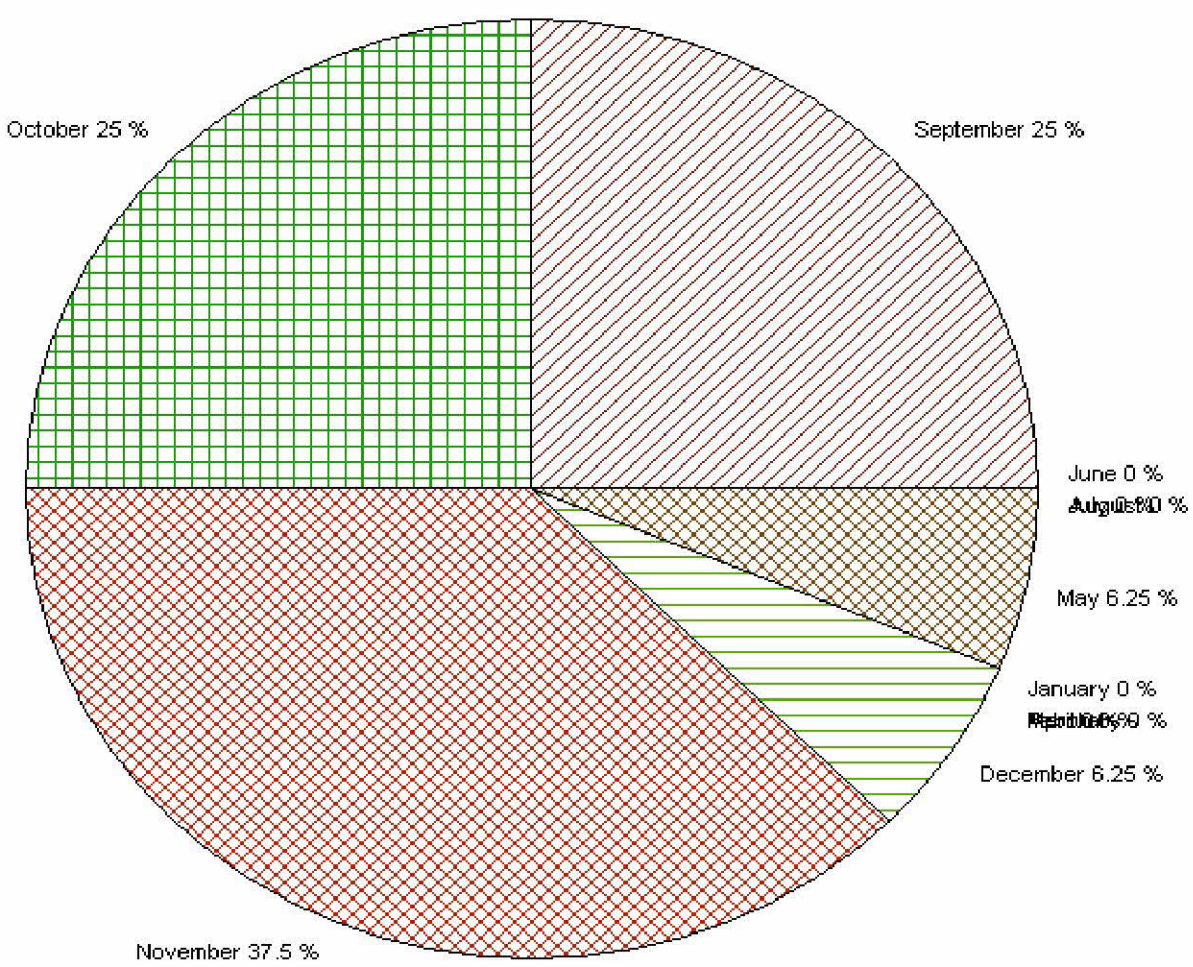



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 2002-2016**

**Station Name : HOOVINAHOLE ( HOOVINAHOLE)**
**Local River : Suvarnamukhi**

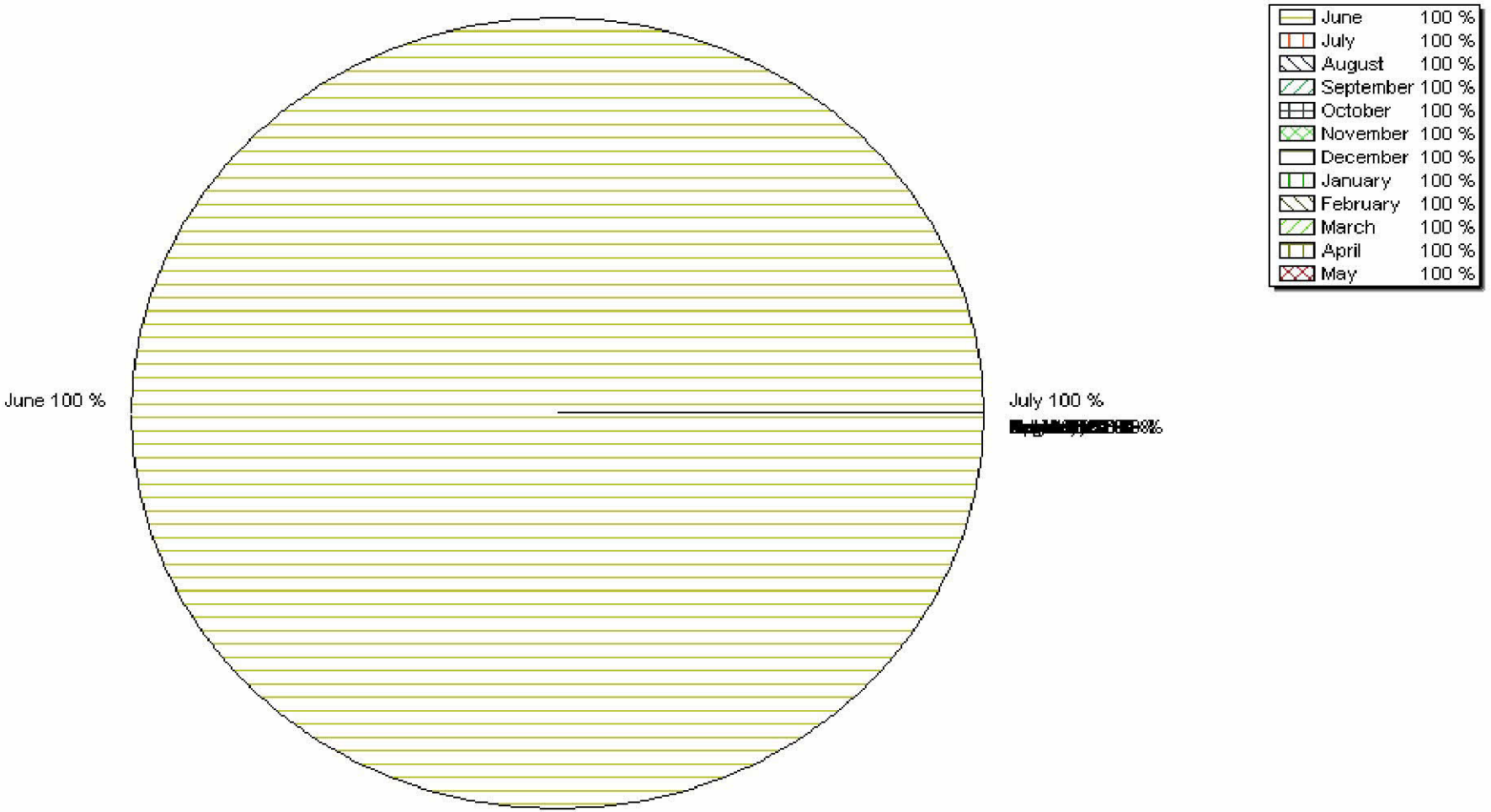
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga SD, Devangere**



**Monthly Runoff for the Year : 2016-2017**

**Station Name : HOOVINAHOLE ( HOOVINAHOLE)**
**Local River : Suvarnamukhi**

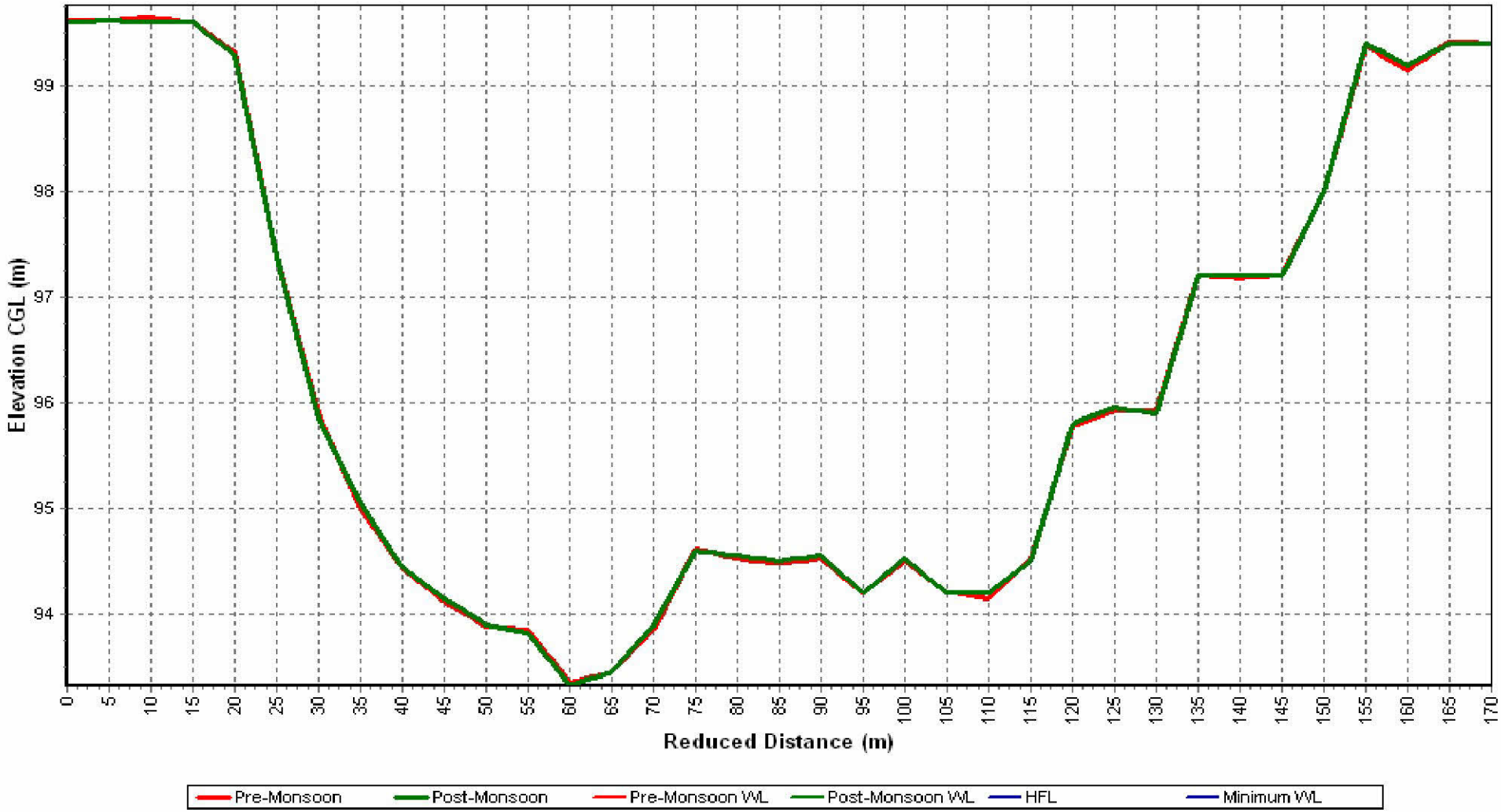
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga SD, Devangere**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : HOOVINAHOLE ( HOOVINAHOLE)** **Division : Cauvery Division, Bangalore**

**Local River : Suvarnamukhi** **Sub-Division : Upper Tunga SD, Devangere**



# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **MAROL** | **Code** | : | **AKLA0C4** |
| State | : | Karnataka | District | | Haveri |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | Tungabhadra | Sub Tributary | : | |
| Sub-Sub Tributary | : | | Local River | : | Varada |
| Division | : | Cauvery Division, Bangalore | Sub-Division | : | Upper Tunga Subdn, Devangere |
| Drainage Area | : | 4901 Sq. Km. | Bank | : | Right |
| Latitude | : | 14°56'20" | Longitude | : | 75°37'05" |
| **Zero of Gauge (m)** | : | 507.551 (m.s.l) | 05/02/1965 | | |
| | | Opening Date | Closing Date | | |
| Gauge | : | 05/02/1965 | **HFL During 2016-17** | : | **511.161m** |
| | | | **Corres. Discharge** | : | **243.23(Estimated)** |
| Discharge | : | 01/02/1966 | **Date & Time of** | : | **07/07/2016** |
| | | | **occurance** | : | **09.00 hrs.** |
| Sediment | : | 16/09/1972 | | | |
| Water Quality | : | 01/02/1973 | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1966-1967 | 185.0 | 511.096 | 03/12/1966 | 0.100 | 508.321 | 14/05/1967 |
| 1967-1968 | 1000 | 515.671 | 05/08/1967 | 0.110 | 508.316 | 04/04/1968 |
| 1968-1969 | 499.0 | 512.721 | 22/07/1968 | 0.000 | | 06/05/1969 |
| 1969-1970 | 895.6 | 514.379 | 26/07/1969 | 0.000 | 508.306 | 22/04/1970 |
| 1970-1971 | 1008 | 514.819 | 23/08/1970 | 0.000 | | 10/04/1971 |
| 1971-1972 | 440.0 | 512.821 | 07/06/1971 | 0.000 | | 10/04/1972 |
| 1972-1973 | 869.8 | 514.844 | 11/07/1972 | 0.000 | | 29/03/1973 |
| 1973-1974 | 588.0 | 513.651 | 11/07/1973 | 0.000 | | 28/02/1974 |
| 1974-1975 | 462.0 | 512.754 | 08/07/1974 | 0.000 | | 27/03/1975 |
| 1975-1976 | 1017 | 514.756 | 12/07/1975 | 0.000 | 508.046 | 25/05/1976 |
| 1976-1977 | 304.1 | 511.961 | 03/08/1976 | 0.000 | 507.711 | 25/03/1977 |
| 1977-1978 | 482.9 | 512.714 | 26/07/1977 | 0.000 | | 14/03/1978 |
| 1978-1979 | 601.6 | 513.581 | 27/09/1978 | 0.000 | | 24/04/1979 |
| 1979-1980 | 799.7 | 514.379 | 12/08/1979 | 0.000 | | 30/03/1980 |
| 1980-1981 | 1525 | 516.751 | 05/07/1980 | 0.000 | | 29/03/1981 |
| 1981-1982 | 588.5 | 513.291 | 21/08/1981 | 0.000 | | 02/03/1982 |
| 1982-1983 | 1430 | 516.881 | 06/08/1982 | 0.000 | 507.851 | 10/04/1983 |
| 1983-1984 | 1010 | 514.871 | 14/08/1983 | 0.000 | | 17/04/1984 |
| 1984-1985 | 752.5 | 513.971 | 03/07/1984 | 0.000 | 508.231 | 27/02/1985 |
| 1985-1986 | 576.9 | 513.156 | 05/08/1985 | 0.000 | 508.301 | 06/02/1986 |
| 1986-1987 | 751.7 | 513.931 | 14/08/1986 | 0.000 | 508.051 | 10/02/1987 |

**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 | 305.5 | 511.531 | 11/07/1987 | 0.000 | 509.551 | 02/02/1988 |
| 1988-1989 | 1180 | 515.511 | 22/07/1988 | 0.000 | | 24/01/1989 |
| 1989-1990 | 644.9 | 513.799 | 27/07/1989 | 0.000 | 509.161 | 25/01/1990 |
| 1990-1991 | 485.0 | 512.854 | 20/08/1990 | 0.000 | | 25/01/1991 |
| 1991-1992 | 1194 | 514.311 | 19/07/1991 | 0.000 | | 28/01/1992 |
| 1992-1993 | 1525 | 517.459 | 18/11/1992 | 0.000 | 508.111 | 17/02/1993 |
| 1993-1994 | 640.5 | 513.406 | 18/10/1993 | 0.000 | | 21/02/1994 |
| 1994-1995 | 1320 | 516.861 | 17/07/1994 | 0.000 | 510.051 | 01/02/1995 |
| 1995-1996 | 476.0 | 512.581 | 23/07/1995 | 0.000 | 509.001 | 26/01/1996 |
| 1996-1997 | 377.8 | 512.156 | 30/07/1996 | 0.000 | 509.991 | 25/01/1997 |
| 1997-1998 | 1191 | 515.861 | 09/08/1997 | 0.000 | 508.621 | 10/02/1998 |
| 1998-1999 | 475.0 | 512.971 | 06/07/1998 | 0.000 | 509.413 | 01/02/1999 |
| 1999-2000 | 1107 | 516.521 | 25/07/1999 | 0.000 | | 29/01/2000 |
| 2000-2001 | 807.5 | 514.821 | 16/07/2000 | 0.000 | 510.261 | 25/01/2001 |
| 2001-2002 | 249.1 | 511.486 | 11/07/2001 | 0.000 | | 25/01/2002 |
| 2002-2003 | 380.9 | 512.306 | 13/08/2002 | 0.000 | | 25/01/2003 |
| 2003-2004 | 315.1 | 511.841 | 06/10/2003 | 0.000 | | 26/01/2004 |
| 2004-2005 | 605.0 | 513.521 | 07/08/2004 | 0.000 | | 25/01/2005 |
| 2005-2006 | 919.6 | 515.361 | 29/07/2005 | 0.000 | | 25/01/2006 |
| 2006-2007 | 780.4 | 514.491 | 14/08/2006 | 0.000 | 508.901 | 25/01/2007 |
| 2007-2008 | 1540 | 517.451 | 09/08/2007 | 0.000 | 508.061 | 04/04/2008 |
| 2008-2009 | 1317 | 516.471 | 15/08/2008 | 0.000 | 509.051 | 25/01/2009 |
| 2009-2010 | 1076 | 515.591 | 19/07/2009 | 0.000 | 510.011 | 25/01/2010 |
| 2010-2011 | 677.5 | 513.951 | 05/10/2010 | 0.000 | | 03/05/2011 |
| 2011-2012 | 700.4 | 514.031 | 05/09/2011 | 0.000 | 508.161 | 24/01/2012 |
| 2012-2013 | 571.6 | 513.316 | 10/08/2012 | 0.000 | 509.771 | 02/12/2012 |
| 2013-2014 | 915.6 | 515.141 | 05/08/2013 | 0.000 | | 29/04/2014 |
| 2014-2015 | 1121 | 515.871 | 04/08/2014 | 0.000 | 510.041 | 26/01/2015 |
| 2015-2016 | 260.2 | 511.301 | 27/06/2015 | 0.000 | 507.701 | 01/06/2015 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : MAROL ( AKLA0C4)** **Division : Cauvery Division, Bangalore**

**Local River : Varada** **Sub-Division : Upper Tunga Subdn, Devangere**

| 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 | 508.451 | 0.000 | 508.661 | 10.51 | 508.821 | 16.92 | 510.891 | 0.000 | 510.421 | 0.000 |
| 2 | | 0.000 | 509.966 | 104.2 | 508.631 | 9.959 | 508.686 | 11.13 | 510.831 | 0.000 | 510.441 | 0.000 |
| 3 | | 0.000 | 510.221 | 126.5 * | 508.766 | 14.85 | 508.541 | 5.978 | 510.831 | 0.000 | 510.471 | 0.000 |
| 4 | | 0.000 | 510.301 | 137.5 | 508.876 | 19.38 | 508.621 | 9.677 * | 510.751 | 0.000 | 510.481 | 0.000 |
| 5 | | 0.000 | 510.356 | 145.2 | 509.321 | 49.13 | 508.581 | 8.308 * | 510.611 | 0.000 | 510.491 | 0.000 |
| 6 | 509.051 | 29.70 | 510.531 | 162.1 | 510.316 | 138.8 | 508.451 | 4.438 | 510.561 | 0.000 | 510.491 | 0.000 |
| 7 | 508.931 | 21.85 | 511.151 | 241.8 * | 510.391 | 145.2 * | 508.501 | 4.644 | 510.551 | 0.000 | 510.491 | 0.000 |
| 8 | 508.251 | 0.000 | 510.926 | 205.5 | 510.476 | 153.2 | 508.391 | 3.954 | 510.531 | 0.000 | 510.471 | 0.000 |
| 9 | 509.126 | 34.41 | 510.756 | 189.9 | 510.501 | 156.8 | | | 510.531 | 0.000 | 510.441 | 0.000 |
| 10 | 508.811 | 18.31 | 510.501 | 157.8 * | 510.361 | 145.5 | 508.401 | 4.118 | 510.531 | 0.000 | 510.401 | 0.000 |
| 11 | 508.556 | 6.314 | 510.101 | 115.8 | 510.206 | 129.3 | 508.461 | 0.000 | 510.521 | 0.000 | 510.361 | 0.000 |
| 12 | 508.231 | 0.000 | 509.651 | 75.17 | 510.056 | 111.1 | 508.311 | 0.000 | 510.531 | 0.000 | 510.301 | 0.000 |
| 13 | 508.191 | 0.000 | 509.401 | 55.47 | 509.921 | 98.62 | 508.301 | 0.000 | 510.541 | 0.000 | 510.241 | 0.000 |
| 14 | 508.171 | 0.000 | 509.501 | 63.44 | 509.711 | 77.26 * | 508.331 | 0.000 | 510.551 | 0.000 | 510.191 | 0.000 |
| 15 | 508.141 | 0.000 | 509.536 | 66.61 | 509.601 | 68.02 * | 508.341 | 0.000 | 510.531 | 0.000 | 510.121 | 0.000 |
| 16 | 508.121 | 0.000 | 509.371 | 53.07 | 509.496 | 63.44 | 508.381 | 0.000 | 510.511 | 0.000 | 510.071 | 0.000 |
| 17 | 508.071 | 0.000 | 509.211 | 39.45 * | 509.241 | 43.93 | 508.401 | 0.000 | 510.501 | 0.000 | 510.001 | 0.000 |
| 18 | 508.101 | 0.000 | 509.006 | 27.62 | 509.151 | 35.93 | 508.431 | 0.000 | 510.501 | 0.000 | 509.911 | 0.000 |
| 19 | 508.111 | 0.000 | 508.886 | 20.40 | 509.066 | 29.54 | 508.501 | 0.000 | 510.481 | 0.000 | 509.821 | 0.000 |
| 20 | 508.411 | 0.000 | 508.796 | 16.60 | 509.031 | 27.47 | 508.751 | 0.000 | 510.471 | 0.000 | 509.741 | 0.000 |
| 21 | 508.251 | 0.000 | 508.746 | 14.39 | 508.971 | 25.27 * | 508.871 | 0.000 | 510.461 | 0.000 | 509.651 | 0.000 |
| 22 | 508.201 | 0.000 | 508.651 | 10.18 | 508.941 | 21.56 | 508.911 | 0.000 | 510.451 | 0.000 | 509.601 | 0.000 |
| 23 | 508.161 | 0.000 | 508.696 | 11.54 | 508.841 | 18.05 | 508.991 | 0.000 | 510.421 | 0.000 | 509.531 | 0.000 |
| 24 | 508.151 | 0.000 | 508.881 | 20.67 * | 508.726 | 13.04 | 509.091 | 0.000 | 510.381 | 0.000 | 509.431 | 0.000 |
| 25 | 508.131 | 0.000 | 509.071 | 30.62 | 508.806 | 16.47 | 509.431 | 0.000 | 510.311 | 0.000 | 509.341 | 0.000 |
| 26 | 508.121 | 0.000 | 509.256 | 44.22 | 508.926 | 20.99 | 509.991 | 0.000 | 510.261 | 0.000 | 509.231 | 0.000 |
| 27 | 508.111 | 0.000 | 509.211 | 42.99 | 508.931 | 21.38 | 510.631 | 0.000 | 510.241 | 0.000 | 509.151 | 0.000 |
| 28 | 508.101 | 0.000 | 509.061 | 29.46 | 508.891 | 21.16 * | 510.991 | 0.000 | 510.271 | 0.000 | 509.071 | 0.000 |
| 29 | 508.101 | 0.000 | 508.871 | 18.79 | 508.771 | 14.89 | 511.031 | 0.000 | 510.301 | 0.000 | 509.001 | 0.000 |
| 30 | 508.101 | 0.000 | 508.766 | 14.71 | 508.771 | 14.76 | 510.991 | 0.000 | 510.361 | 0.000 | 508.941 | 0.000 |
| 31 | | | 508.721 | 13.48 * | 508.821 | 16.91 | | | 510.411 | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 508.834 | 10.43 | 510.316 | 147.0 | 509.630 | 84.33 | 508.555 | 7.686 | 510.662 | 0.000 | 510.460 | 0.000 |
| II Ten-Daily | 508.211 | 0.631 | 509.346 | 53.37 | 509.548 | 68.47 | 508.421 | 0.000 | 510.514 | 0.000 | 510.076 | 0.000 |
| III Ten-Daily | 508.143 | 0.000 | 508.903 | 22.82 | 508.854 | 18.59 | 509.893 | 0.000 | 510.352 | 0.000 | 509.295 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 508.071 | 0.000 | 508.451 | 0.000 | 508.631 | 9.959 | 508.301 | 0.000 | 510.241 | 0.000 | 508.941 | 0.000 |
| Max. | 509.126 | 34.41 | 511.151 | 241.8 | 510.501 | 156.8 | 511.031 | 16.92 | 510.891 | 0.000 | 510.491 | 0.000 |
| Mean | 508.308 | 3.686 | 509.502 | 72.75 | 509.328 | 55.89 | 508.970 | 2.385 | 510.504 | 0 | 509.944 | 0 |

**Annual Runoff in MCM = 360 Annual Runoff in mm = 73**

**Peak Observed Discharge = 205.5 cumecs on 08/07/2016 Corres. Water Level :510.926 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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 2016 - 2017

**Station Name : MAROL ( AKLA0C4)** **Division : Cauvery Division, Bangalore**

**Local River : Varada** **Sub-Division : Upper Tunga Subdn, Devangere**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 508.851 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 2 | 508.701 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 3 | 508.601 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 4 | 508.551 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 5 | 508.501 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 6 | 508.331 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 7 | 508.231 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 8 | 508.151 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 9 | 508.101 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 10 | 508.061 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 11 | 508.051 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 12 | 508.001 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 13 | 507.991 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 14 | 507.901 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 15 | 507.851 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 16 | 507.801 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 17 | 507.771 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 18 | 507.761 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 19 | 507.751 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 20 | 507.651 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 21 | 507.601 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 22 | 507.571 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 23 | 507.561 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 24 | | | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 25 | | | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 26 | | | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 27 | | | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 28 | | | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 29 | | | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 30 | | | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 31 | | | | 0.000 | | | | 0.000 | | | | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 508.408 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| II Ten-Daily | 507.853 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| III Ten-Daily | 507.578 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 507.561 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Max. | 508.851 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Mean | 508.058 | 0 | | 0 | | 0 | | 0 | | 0 | | 0 |

**Peak Computed Discharge = 241.8 cumecs on 07/07/2016** **Corres. Water Level :511.151 m**

**Lowest Computed Discharge = 8.308 cumecs on 05/09/2016** **Corres. Water Level :508.581 m**

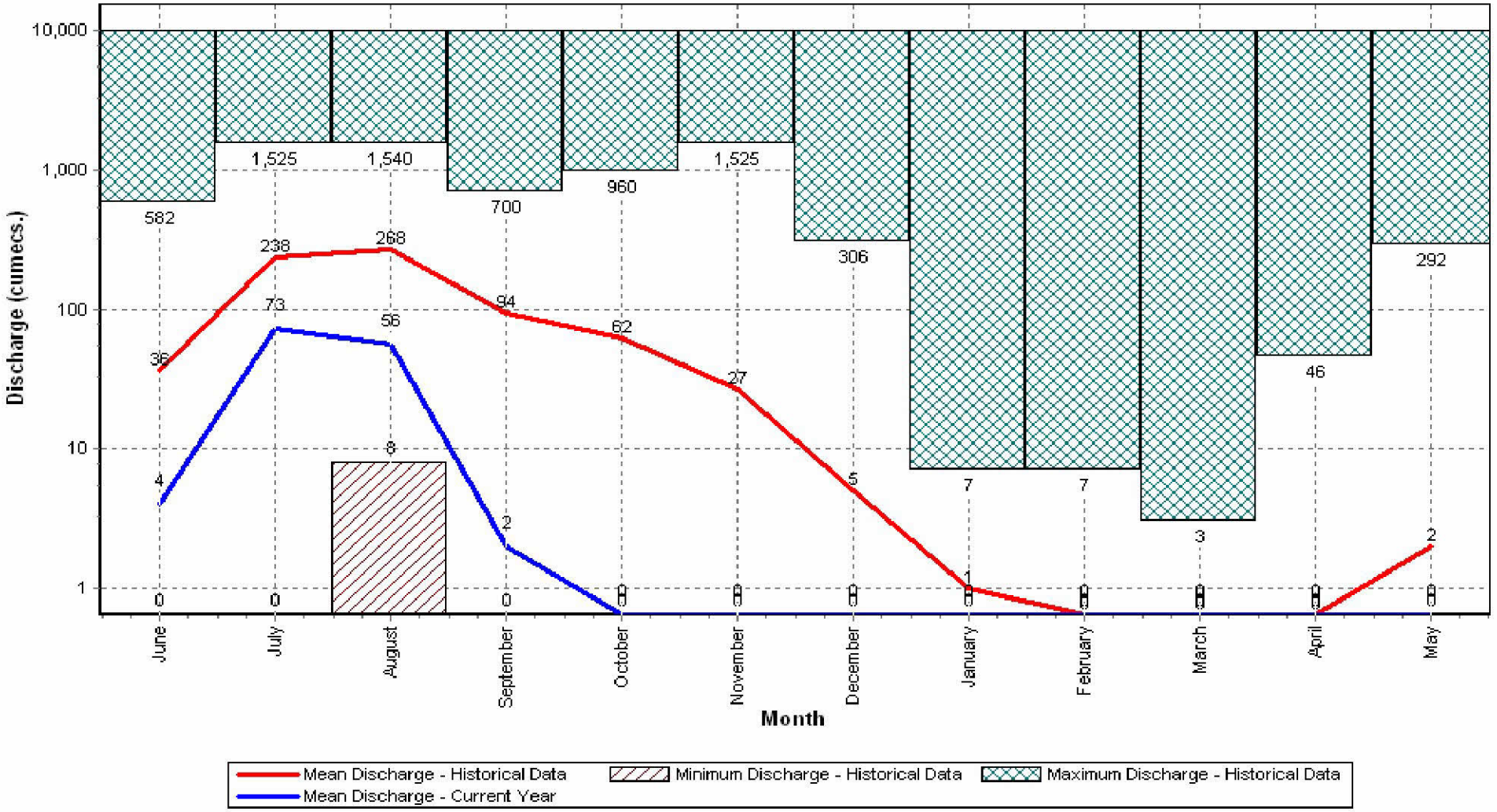
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : MAROL ( AKLA0C4)** | **Data considered : 1966-2017** | **Division : Cauvery Division, Bangalore**

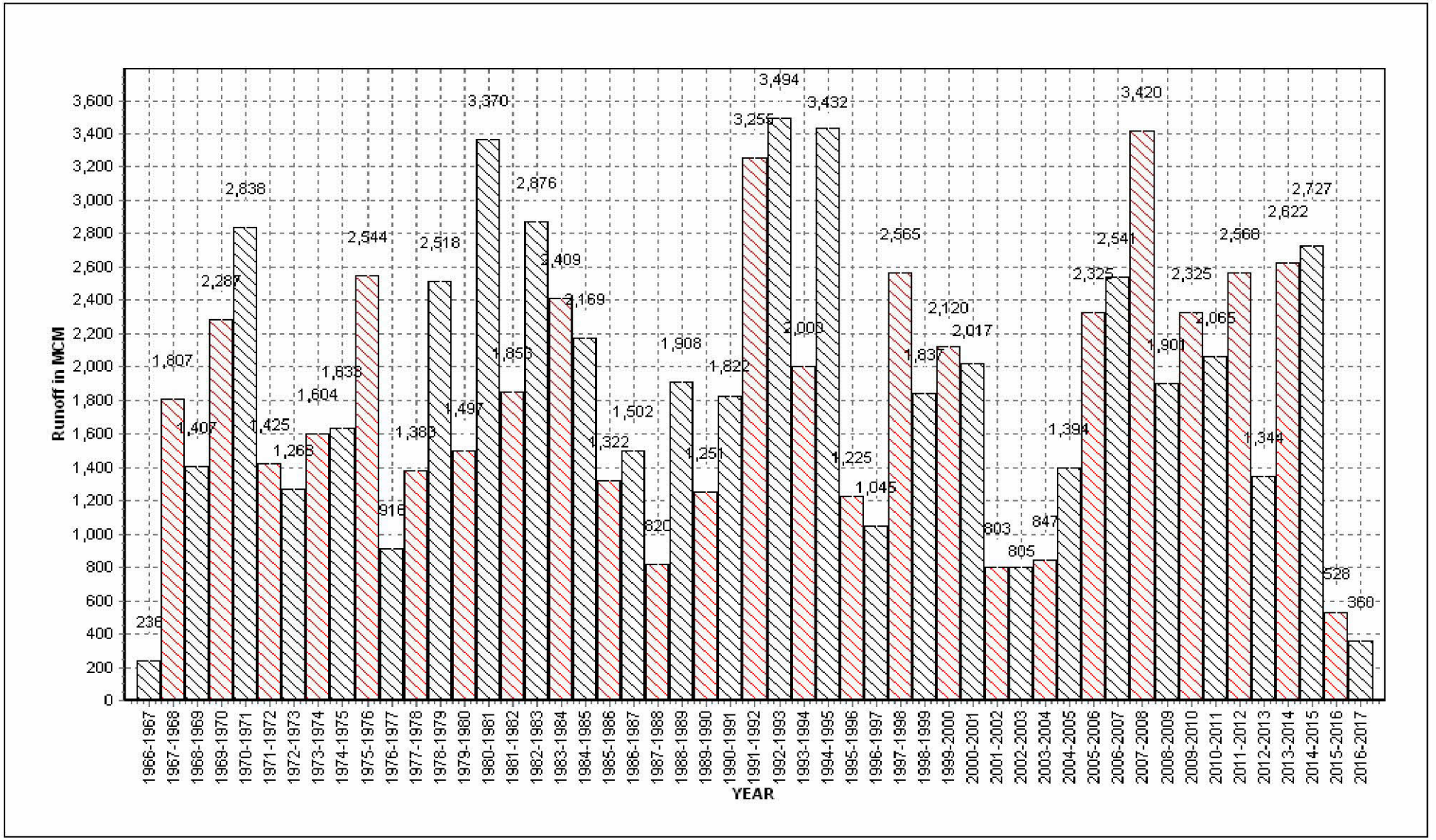
**Local River : Varada** | **Sub-Division : Upper Tunga Subdn, Devangere**



**Annual Runoff Values for the period: 1966 - 2017**

**Station Name : MAROL ( AKLA0C4)**
**Local River : Varada**

**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**

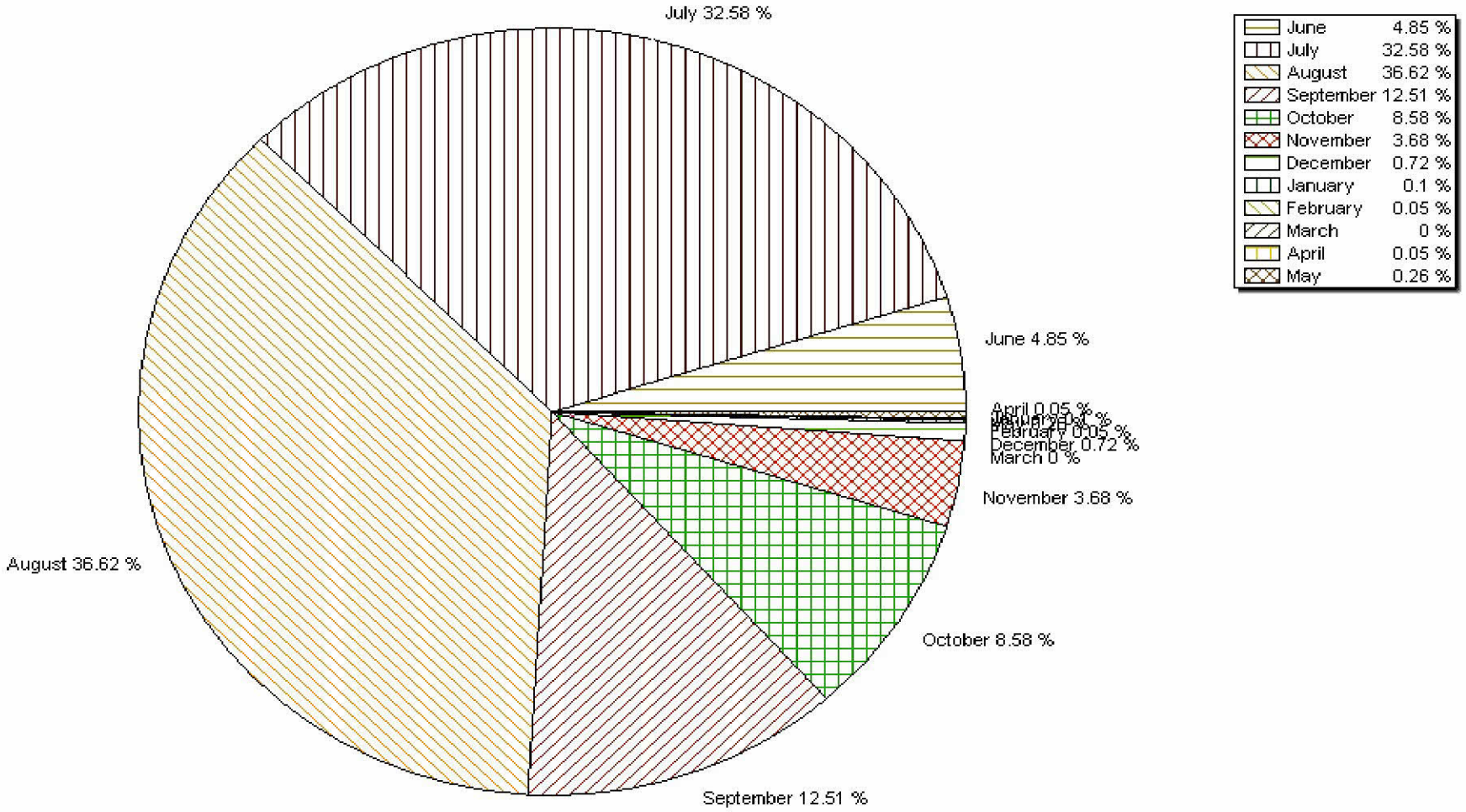



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1966-2016**

**Station Name : MAROL ( AKLA0C4)**
**Local River : Varada**

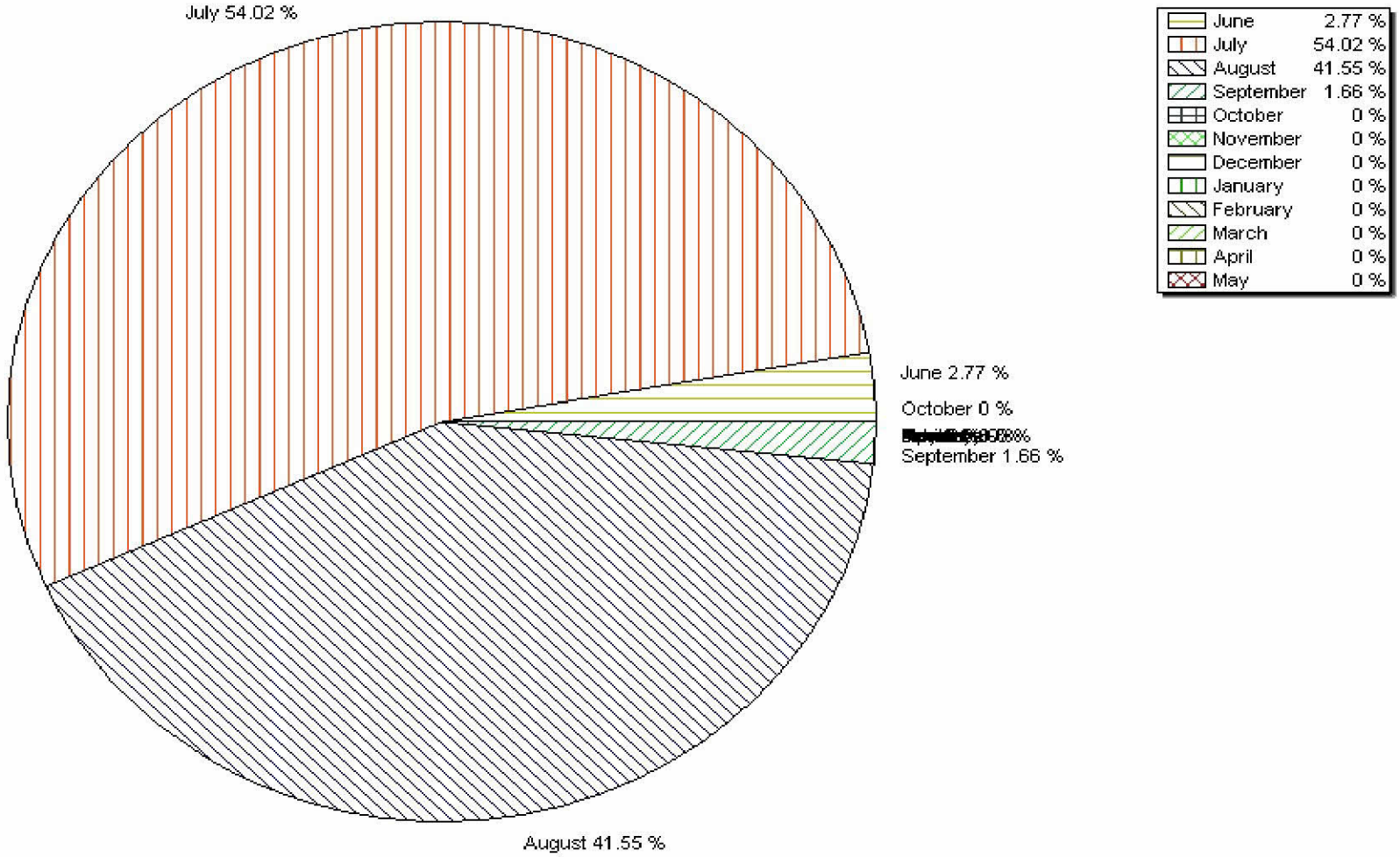
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**



**Monthly Runoff for the Year : 2016-2017**

**Station Name : MAROL ( AKLA0C4)**
**Local River : Varada**

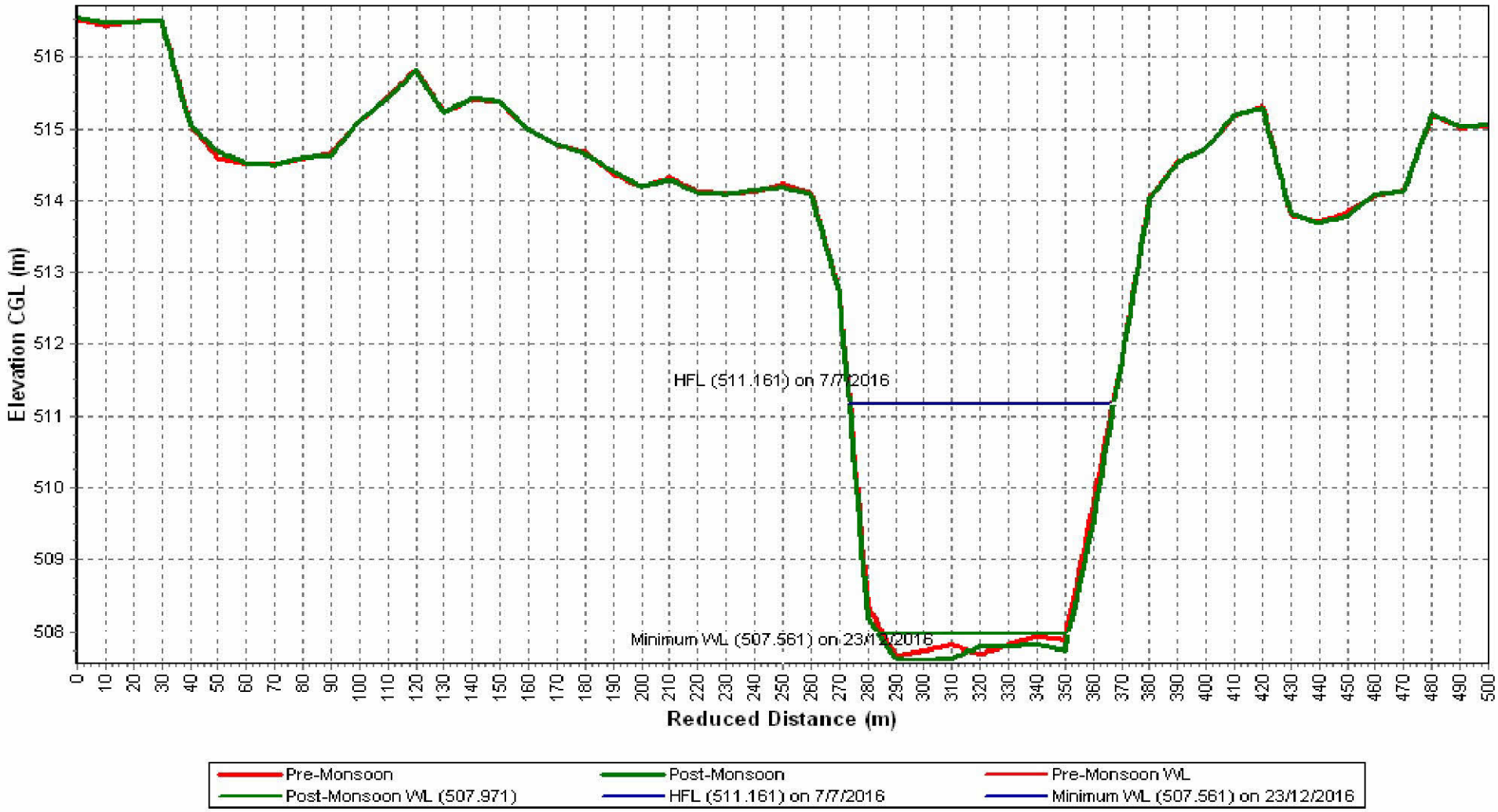
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : MAROL ( AKLA0C4)**
**Local River : Varada**

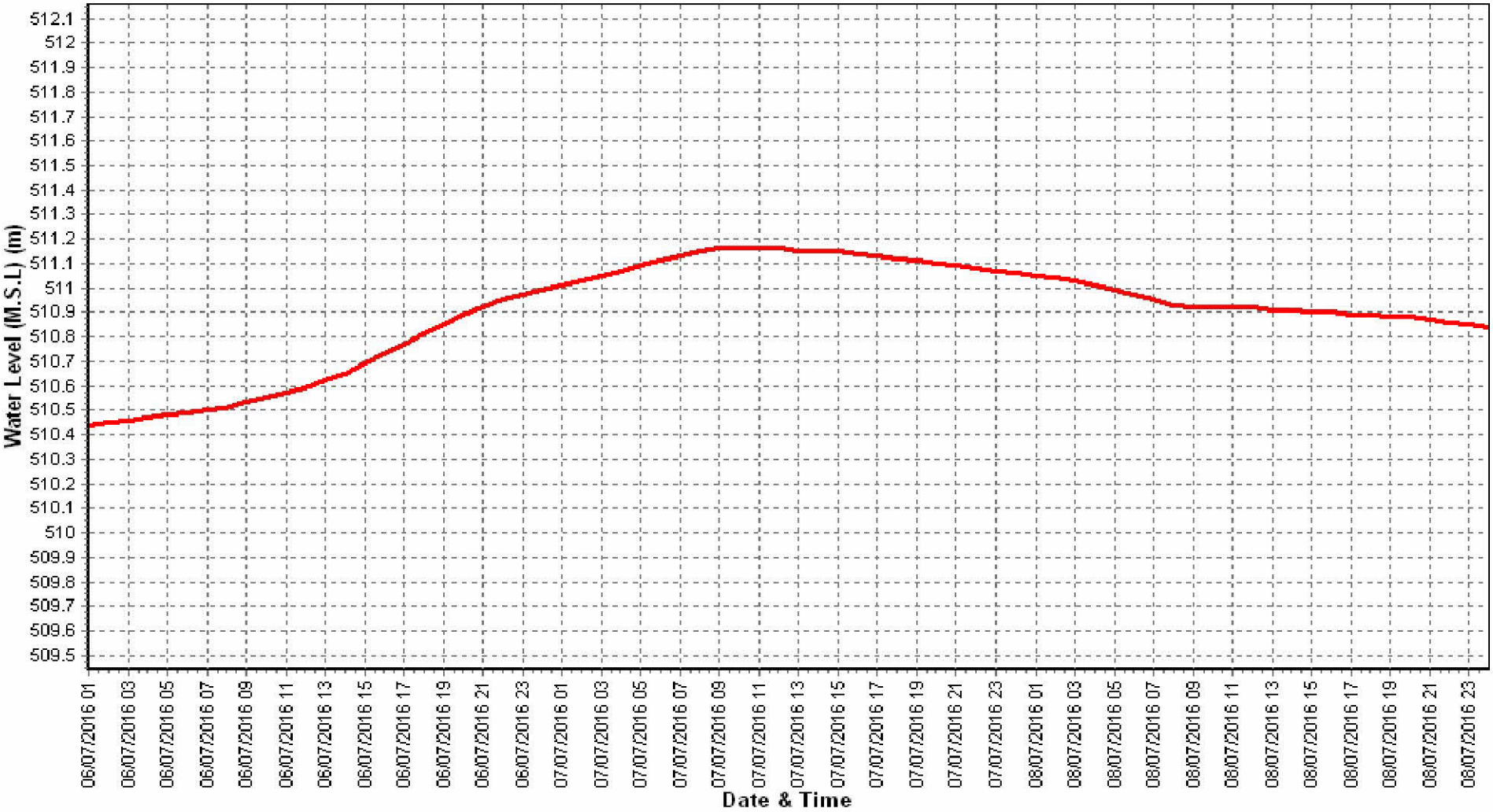
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : MAROL ( AKLA0C4)**
**Local River : Varada**

**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**

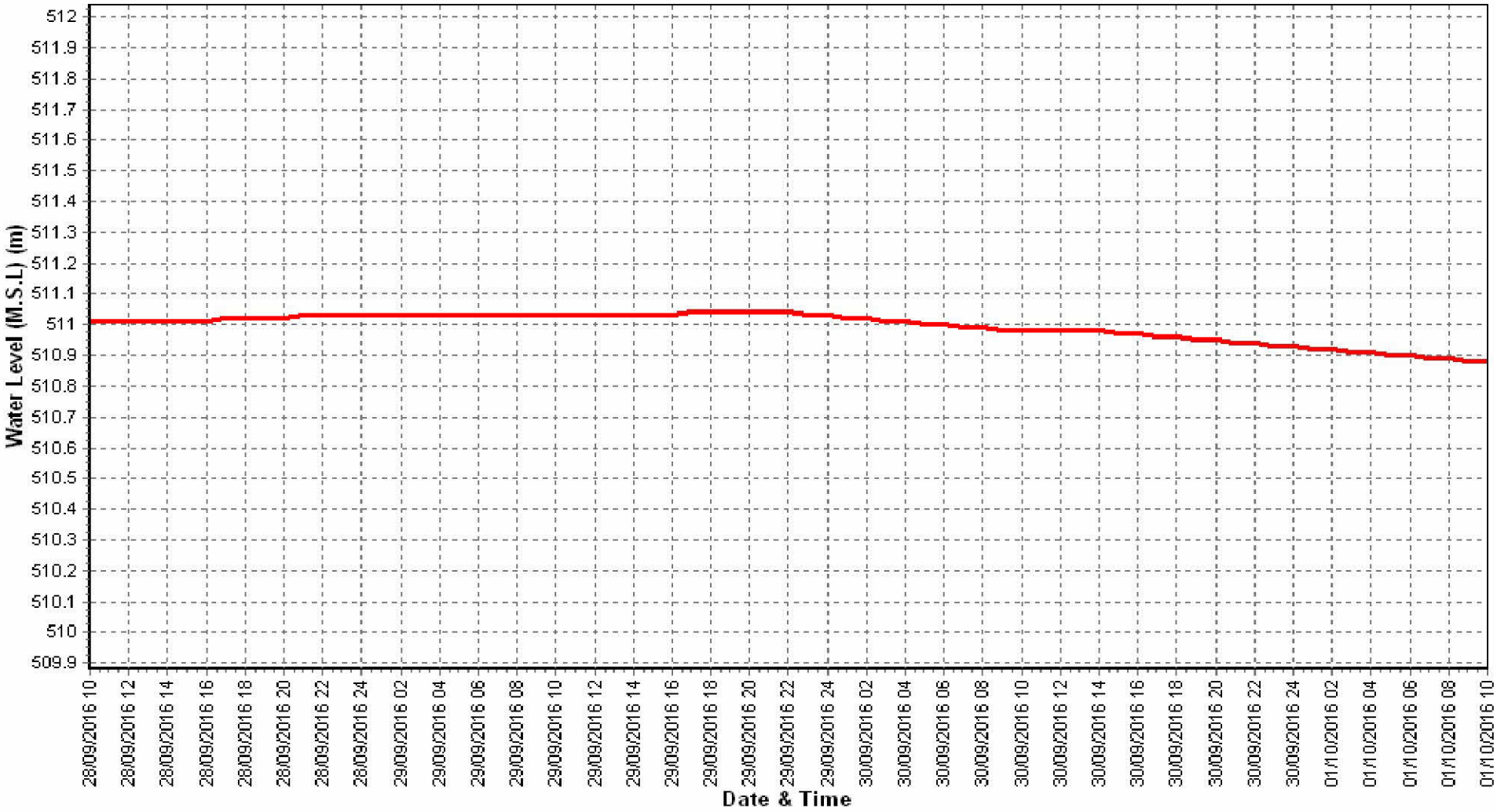



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : MAROL ( AKLA0C4)** **Division : Cauvery Division, Bangalore**

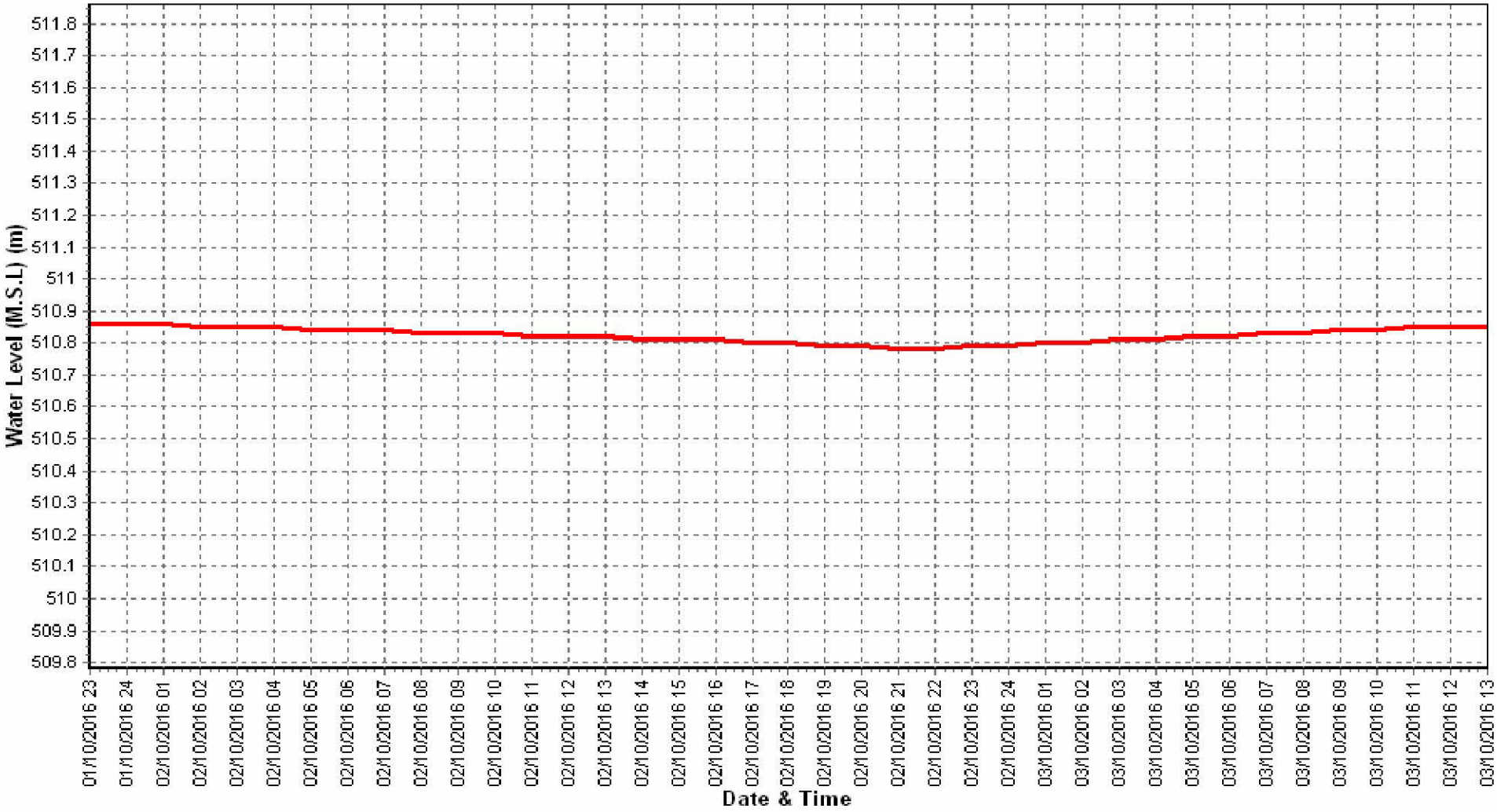
**Local River : Varada** **Sub-Division : Upper Tunga Subdn, Devangere**




Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : MAROL ( AKLA0C4)**
**Division : Cauvery Division, Bangalore**
**Local River : Varada**
**Sub-Division : Upper Tunga Subdn, Devangere**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **HARALAHALLI** | **Code** | : | **AKL00S8** |
| State | : | Karnataka | District | | Haveri |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | Tungabhadra | Sub Tributary | : | |
| Sub-Sub Tributary | : | | Local River | : | Tungabhadra |
| Division | : | Cauvery Division, Bangalore | Sub-Division | : | Upper Tunga Subdn, Devangere |
| Drainage Area | : | 14582 Sq. Km. | Bank | : | Left |
| Latitude | : | 14°49'50" | Longitude | : | 75°40'28" |
| **Zero of Gauge (m)** | : | 507.436 (m.s.l) | 28/03/1964 | | |
| | | Opening Date | Closing Date | | |
| Gauge | : | 28/08/1961 | **HFL During 2016-17** | : | **511.76m** |
| | | | **Corres. Discharge** | : | **1054(Estimated)** |
| Discharge | : | 13/12/1966 | **Date & Time of** | : | **06/07/2016** |
| | | | **occurance** | : | **18.00 hrs.** |
| Sediment | : | 01/11/1972 | | | |
| Water Quality | : | 01/11/1972 | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1967-1968 | 2550 | 514.701 | 29/07/1967 | 15.40 | 507.911 | 09/06/1967 |
| 1968-1969 | 1809 | 513.608 | 21/07/1968 | 21.40 | 507.981 | 19/06/1968 |
| 1969-1970 | 3788 | 515.066 | 24/07/1969 | 25.30 | 508.091 | 18/02/1970 |
| 1970-1971 | 2745 | 514.238 | 24/08/1970 | 31.70 | 508.146 | 01/04/1971 |
| 1971-1972 | 2550 | 514.176 | 22/07/1971 | 26.60 | 508.131 | 30/04/1972 |
| 1972-1973 | 2226 | 513.746 | 09/07/1972 | 5.400 | 507.821 | 13/04/1973 |
| 1973-1974 | 2419 | 514.136 | 10/07/1973 | 15.30 | 507.971 | 27/02/1974 |
| 1974-1975 | 2189 | 513.596 | 27/07/1974 | 15.00 | 508.071 | 23/06/1974 |
| 1975-1976 | 2902 | 514.546 | 12/07/1975 | 22.60 | 508.121 | 10/05/1976 |
| 1976-1977 | 1758 | 512.996 | 24/07/1976 | 3.100 | 507.751 | 22/04/1977 |
| 1977-1978 | 1741 | 513.014 | 26/07/1977 | 10.90 | 507.919 | 13/06/1977 |
| 1978-1979 | 2805 | 514.651 | 19/08/1978 | 16.10 | 507.951 | 06/04/1979 |
| 1979-1980 | 2033 | 514.015 | 04/08/1979 | 15.30 | 507.959 | 17/01/1980 |
| 1980-1981 | 3066 | 515.454 | 04/07/1980 | 14.10 | 507.966 | 23/04/1981 |
| 1981-1982 | 2578 | 514.454 | 20/08/1981 | 11.70 | 507.901 | 16/03/1982 |
| 1982-1983 | 4559 | 516.426 | 04/08/1982 | 8.500 | 507.816 | 11/04/1983 |
| 1983-1984 | 2617 | 514.537 | 24/07/1983 | 9.700 | 507.886 | 07/03/1984 |
| 1984-1985 | 2595 | 514.664 | 20/07/1984 | 7.600 | 507.861 | 11/05/1985 |
| 1985-1986 | 1902 | 513.506 | 28/06/1985 | 0.400 | 507.661 | 03/04/1986 |
| 1986-1987 | 2498 | 514.431 | 11/08/1986 | 2.300 | 507.656 | 20/04/1987 |
| 1987-1988 | 1076 | 511.949 | 28/08/1987 | 0.000 | 507.466 | 13/04/1988 |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| Year | Q (cumecs) | WL (m) | Date | Q (cumecs) | WL (m) | Date |
| 1988-1989 | 2743 | 514.496 | 20/07/1988 | 0.000 | 507.466 | 16/04/1989 |
| 1989-1990 | 2974 | 514.621 | 26/07/1989 | 2.000 | 507.721 | 15/04/1990 |
| 1990-1991 | 2314 | 513.936 | 19/08/1990 | 7.000 | 507.836 | 31/03/1991 |
| 1991-1992 | 3414 | 515.049 | 30/07/1991 | 0.000 | | 26/03/1992 |
| 1992-1993 | 7357 | 518.109 | 18/11/1992 | 3.466 | 507.796 | 06/04/1993 |
| 1993-1994 | 1684 | 513.106 | 17/08/1993 | 7.226 | 507.818 | 03/06/1993 |
| 1994-1995 | 5840 | 517.566 | 17/07/1994 | 3.500 | 507.636 | 13/04/1995 |
| 1995-1996 | 1788 | 513.306 | 03/09/1995 | 2.000 | 507.586 | 10/05/1996 |
| 1996-1997 | 1538 | 512.761 | 25/07/1996 | 6.453 | 507.761 | 21/04/1997 |
| 1997-1998 | 3388 | 515.236 | 09/08/1997 | 2.500 | 507.666 | 22/04/1998 |
| 1998-1999 | 2286 | 513.891 | 15/09/1998 | 3.200 | 507.586 | 18/06/1998 |
| 1999-2000 | 2975 | 514.736 | 20/07/1999 | 7.212 | 507.766 | 24/03/2000 |
| 2000-2001 | 3036 | 514.846 | 15/07/2000 | 5.106 | 507.596 | 31/03/2001 |
| 2001-2002 | 1417 | 512.396 | 10/07/2001 | 0.000 | 507.076 | 07/04/2002 |
| 2002-2003 | 1452 | 512.476 | 19/08/2002 | 0.000 | | 15/03/2003 |
| 2003-2004 | 1375 | 512.276 | 06/10/2003 | 0.000 | 507.186 | 17/02/2004 |
| 2004-2005 | 2993 | 514.736 | 06/08/2004 | 0.000 | | 09/03/2005 |
| 2005-2006 | 3030 | 514.806 | 04/08/2005 | 0.000 | | 21/01/2006 |
| 2006-2007 | 3516 | 515.146 | 14/08/2006 | 0.000 | | 24/03/2007 |
| 2007-2008 | 5239 | 517.276 | 08/08/2007 | 0.000 | | 10/02/2008 |
| 2008-2009 | 4550 | 516.676 | 15/08/2008 | 0.000 | 507.286 | 06/04/2009 |
| 2009-2010 | 3629 | 515.486 | 18/07/2009 | 0.000 | 507.276 | 12/04/2010 |
| 2010-2011 | 1741 | 513.016 | 31/07/2010 | 0.000 | 507.216 | 22/03/2011 |
| 2011-2012 | 2593 | 514.051 | 03/09/2011 | 0.000 | 507.376 | 19/03/2012 |
| 2012-2013 | 2544 | 513.946 | 09/08/2012 | 0.000 | 507.436 | 01/04/2013 |
| 2013-2014 | 3728 | 515.516 | 04/08/2013 | 0.000 | 507.296 | 02/02/2014 |
| 2014-2015 | 3986 | 515.376 | 08/08/2014 | 0.000 | 507.336 | 18/02/2015 |
| 2015-2016 | 1712 | 512.946 | 21/07/2015 | 0.000 | 507.366 | 16/12/2015 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : HARALAHALLI ( AKL00S8)** **Division : Cauvery Division, Bangalore**

**Local River : Tungabhadra** **Sub-Division : Upper Tunga Subdn, Devangere**

| 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 | 507.416 | 0.000 | 510.986 | 760.9 | 508.656 | 132.4 | 508.666 | 134.2 | 508.816 | 157.1 | 507.476 | 10.45 |
| 2 | 507.376 | 0.000 | 509.816 | 372.7 | 508.896 | 169.1 | 508.736 | 144.2 | 508.696 | 143.4 * | 507.476 | 10.58 |
| 3 | 507.356 | 0.000 | 510.286 | 502.7 * | 508.836 | 159.3 | 508.896 | 169.6 | 508.586 | 121.4 | 507.526 | 15.79 |
| 4 | 507.326 | 0.000 | 510.141 | 477.3 | 509.286 | 243.6 | 508.756 | 153.1 * | 508.256 | 85.12 | 507.576 | 20.74 |
| 5 | 507.376 | 0.000 | 510.831 | 698.9 | 508.956 | 176.9 | 508.646 | 135.6 * | 508.096 | 69.28 | 507.636 | 25.46 |
| 6 | 507.886 | 48.17 | 511.411 | 911.6 | 509.656 | 331.5 | 508.486 | 108.0 | 507.956 | 55.80 | 507.636 | 24.13 * |
| 7 | 507.856 | 44.62 | 511.136 | 781.9 * | 510.696 | 629.9 * | 508.486 | 108.6 | 507.946 | 54.70 | 507.586 | 21.46 |
| 8 | 507.846 | 43.68 | 509.801 | 370.7 | 511.121 | 803.8 | 508.366 | 96.53 | 507.856 | 45.72 | 507.566 | 19.83 |
| 9 | 507.766 | 36.98 | 509.906 | 400.2 | 510.741 | 662.5 | 508.326 | 92.26 | 507.816 | 37.46 * | 507.526 | 15.60 |
| 10 | 507.806 | 40.55 | 509.366 | 268.7 * | 509.981 | 425.1 | 508.266 | 86.90 | 507.786 | 38.62 | 507.516 | 14.74 |
| 11 | 508.176 | 77.32 | 509.086 | 203.3 | 509.881 | 390.7 | 508.206 | 76.11 * | 507.806 | 36.64 * | 507.486 | 10.90 |
| 12 | 508.156 | 70.42 * | 509.086 | 203.9 | 509.696 | 334.5 | 508.146 | 74.02 | 507.836 | 39.12 * | 507.476 | 10.50 |
| 13 | 507.946 | 54.45 | 510.716 | 655.3 | 509.536 | 292.2 | 508.056 | 56.67 * | 507.966 | 56.73 | 507.496 | 15.74 * |
| 14 | 507.796 | 39.60 | 510.026 | 433.2 | 509.536 | 306.6 * | 508.026 | 62.32 | 508.046 | 64.62 | 507.576 | 20.32 * |
| 15 | 507.656 | 28.05 | 509.696 | 334.7 | 509.886 | 392.2 * | 508.076 | 67.14 | 508.196 | 79.11 | 507.656 | 27.51 |
| 16 | 507.596 | 21.71 | 509.466 | 274.8 | 509.586 | 305.4 | 508.166 | 76.66 | 508.376 | 97.11 * | 507.706 | 32.64 |
| 17 | 507.476 | 10.72 | 509.186 | 231.3 * | 509.176 | 219.2 | 508.296 | 89.64 | 508.356 | 95.13 | 507.726 | 34.28 |
| 18 | 507.386 | 0.000 | 509.046 | 191.6 | 509.256 | 233.8 | 508.426 | 103.8 * | 508.096 | 69.44 | 507.936 | 53.83 |
| 19 | 507.286 | 0.000 | 508.846 | 162.7 | 509.386 | 262.3 | 508.456 | 106.6 | 507.946 | 54.54 | 507.906 | 50.29 |
| 20 | 507.266 | 0.000 | 508.686 | 137.7 | 509.556 | 297.5 | 508.386 | 98.11 | 507.816 | 41.20 | 507.836 | 39.12 * |
| 21 | 507.226 | 0.000 | 508.776 | 150.1 | 509.256 | 245.5 * | 508.286 | 88.67 | 507.776 | 37.82 | 507.796 | 39.20 |
| 22 | 507.206 | 0.000 | 508.306 | 89.12 | 509.156 | 214.4 | 508.366 | 96.43 | 507.726 | 34.72 | 507.776 | 37.76 |
| 23 | 507.186 | 0.000 | 508.406 | 98.03 | 508.946 | 174.5 | 508.536 | 113.6 | 507.706 | 28.97 * | 507.816 | 41.28 |
| 24 | 507.326 | 0.000 | 508.746 | 151.4 * | 508.726 | 142.8 | 508.536 | 113.5 | 507.706 | 32.62 | 507.816 | 41.32 |
| 25 | 507.316 | 0.000 | 509.046 | 193.2 | 508.846 | 160.7 | 508.616 | 131.0 * | 507.676 | 30.42 | 507.756 | 36.40 |
| 26 | 507.276 | 0.000 | 509.086 | 200.6 | 509.266 | 237.8 | 508.666 | 134.7 | 507.616 | 23.57 | 507.646 | 26.72 |
| 27 | 507.246 | 0.000 | 508.576 | 119.5 | 509.096 | 203.9 | 508.706 | 138.6 | 507.586 | 21.78 | 507.576 | 20.32 * |
| 28 | 507.236 | 0.000 | 508.516 | 111.1 | 508.906 | 178.6 * | 509.186 | 219.4 | 507.536 | 16.43 | 507.506 | 13.89 |
| 29 | 507.216 | 0.000 | 508.556 | 116.3 | 508.806 | 155.9 | 508.936 | 173.6 | 507.576 | 20.32 * | 507.476 | 10.33 |
| 30 | 508.186 | 78.25 | 508.526 | 112.3 | 508.726 | 143.5 | 509.126 | 209.1 | 507.566 | 19.72 * | 507.426 | 12.21 * |
| 31 | | | 508.446 | 106.5 * | 508.656 | 132.6 | | | 507.536 | 16.32 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 507.601 | 21.40 | 510.368 | 554.6 | 509.683 | 373.4 | 508.563 | 122.9 | 508.181 | 80.86 | 507.552 | 17.88 |
| II Ten-Daily | 507.674 | 30.23 | 509.384 | 282.9 | 509.550 | 303.4 | 508.224 | 81.11 | 508.044 | 63.36 | 507.680 | 29.51 |
| III Ten-Daily | 507.342 | 7.825 | 508.635 | 131.7 | 508.944 | 180.9 | 508.696 | 141.9 | 507.637 | 25.70 | 507.659 | 27.94 |
| Monthly | | | | | | | | | | | | |
| Min. | 507.186 | 0.000 | 508.306 | 89.12 | 508.656 | 132.4 | 508.026 | 56.67 | 507.536 | 16.32 | 507.426 | 10.33 |
| Max. | 508.186 | 78.25 | 511.411 | 911.6 | 511.121 | 803.8 | 509.186 | 219.4 | 508.816 | 157.1 | 507.936 | 53.83 |
| Mean | 507.539 | 19.82 | 509.436 | 316.9 | 509.378 | 282.5 | 508.494 | 115.3 | 507.944 | 55.64 | 507.630 | 25.11 |

**Annual Runoff in MCM = 2213** **Annual Runoff in mm = 152**

**Peak Observed Discharge = 911.6 cumecs on 06/07/2016** **Corres. Water Level :511.411 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016** **Corres. Water Level :507.416 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 2016 - 2017

**Station Name : HARALAHALLI ( AKL00S8)** **Division : Cauvery Division, Bangalore**

**Local River : Tungabhadra** **Sub-Division : Upper Tunga Subdn, Devangere**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 507.406 | 7.539 * | | 0.000 | | 0.000 | | 0.000 | 507.656 | 27.34 | | 0.000 |
| 2 | 507.396 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 507.646 | 25.50 * | | 0.000 |
| 3 | 507.376 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 507.596 | 22.09 | | 0.000 |
| 4 | 507.356 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 507.506 | 13.50 | | 0.000 |
| 5 | 507.316 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 507.416 | 0.000 | | 0.000 |
| 6 | 507.286 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 507.336 | 0.000 | | 0.000 |
| 7 | 507.256 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 507.296 | 0.000 | | 0.000 |
| 8 | 507.236 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 507.326 | 0.000 | | 0.000 |
| 9 | 507.206 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 507.276 | 0.000 | | 0.000 |
| 10 | 507.206 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 507.296 | 0.000 | | 0.000 |
| 11 | 507.206 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 507.206 | 0.000 | | 0.000 |
| 12 | 507.206 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 507.136 | 0.000 | | 0.000 |
| 13 | 507.206 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 507.076 | 0.000 | | 0.000 |
| 14 | 507.246 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 507.336 | 0.000 |
| 15 | 507.276 | 0.000 | | 0.000 | 507.576 | 20.16 | | 0.000 | | 0.000 | 507.736 | 33.74 |
| 16 | 507.296 | 0.000 | | 0.000 | 507.546 | 17.25 | | 0.000 | | 0.000 | 507.756 | 36.74 |
| 17 | 507.306 | 0.000 | | 0.000 | 507.556 | 18.21 | | 0.000 | | 0.000 | 507.746 | 35.98 |
| 18 | 507.316 | 0.000 | | 0.000 | 507.556 | 18.60 | | 0.000 | | 0.000 | 507.746 | 35.72 |
| 19 | 507.316 | 0.000 | | 0.000 | 507.556 | 17.46 * | | 0.000 | | 0.000 | 507.736 | 33.23 |
| 20 | 507.306 | 0.000 | | 0.000 | 507.546 | 17.11 | | 0.000 | | 0.000 | 507.716 | 32.09 |
| 21 | 507.286 | 0.000 | | 0.000 | 507.476 | 10.36 | | 0.000 | | 0.000 | 507.636 | 24.53 * |
| 22 | 507.286 | 0.000 | | 0.000 | 507.356 | 0.000 | | 0.000 | | 0.000 | 507.496 | 11.70 |
| 23 | 507.276 | 0.000 | | 0.000 | 507.236 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 24 | 507.256 | 0.000 | | 0.000 | 507.086 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 25 | 507.236 | 0.000 | | 0.000 | 507.036 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 26 | 507.226 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 27 | 507.176 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 28 | 507.146 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 29 | 507.056 | 0.000 | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 30 | 506.926 | 0.000 | | 0.000 | | | 507.566 | 19.33 | | 0.000 | | 0.000 |
| 31 | | | | 0.000 | | | 507.626 | 24.42 | | | | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 507.304 | 0.754 | | 0.000 | | 0.000 | | 0.000 | 507.435 | 8.842 | | 0.000 |
| II Ten-Daily | 507.268 | 0.000 | | 0.000 | 507.556 | 10.88 | | 0.000 | 507.139 | 0.000 | 507.682 | 20.75 |
| III Ten-Daily | 507.187 | 0.000 | | 0.000 | 507.238 | 1.294 | 507.596 | 3.978 | | 0.000 | 507.566 | 3.294 |
| Monthly | | | | | | | | | | | | |
| Min. | 506.926 | 0.000 | | 0.000 | 507.036 | 0.000 | 507.566 | 0.000 | 507.076 | 0.000 | 507.336 | 0.000 |
| Max. | 507.406 | 7.539 | | 0.000 | 507.576 | 20.16 | 507.626 | 24.42 | 507.656 | 27.34 | 507.756 | 36.74 |
| Mean | 507.253 | 0.251 | | 0 | 507.411 | 4.254 | 507.596 | 1.411 | 507.367 | 2.947 | 507.656 | 7.862 |

**Peak Computed Discharge = 781.9 cumecs on 07/07/2016** **Corres. Water Level :511.136 m**

**Lowest Computed Discharge = 7.539 cumecs on 01/12/2016** **Corres. Water Level :507.406 m**

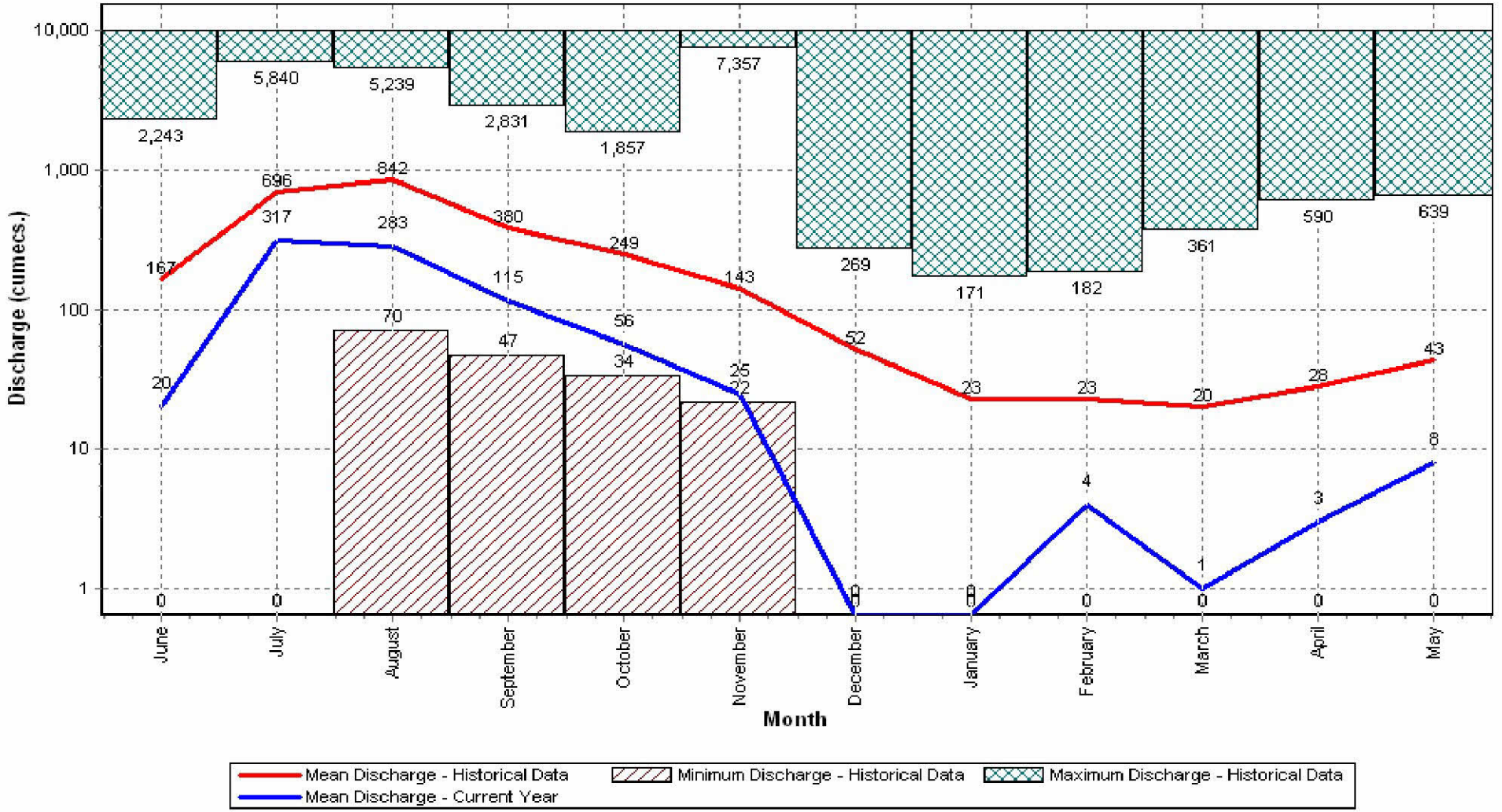
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : HARALAHALLI ( AKL00S8)** | **Data considered : 1967-2017** | **Division : Cauvery Division, Bangalore**

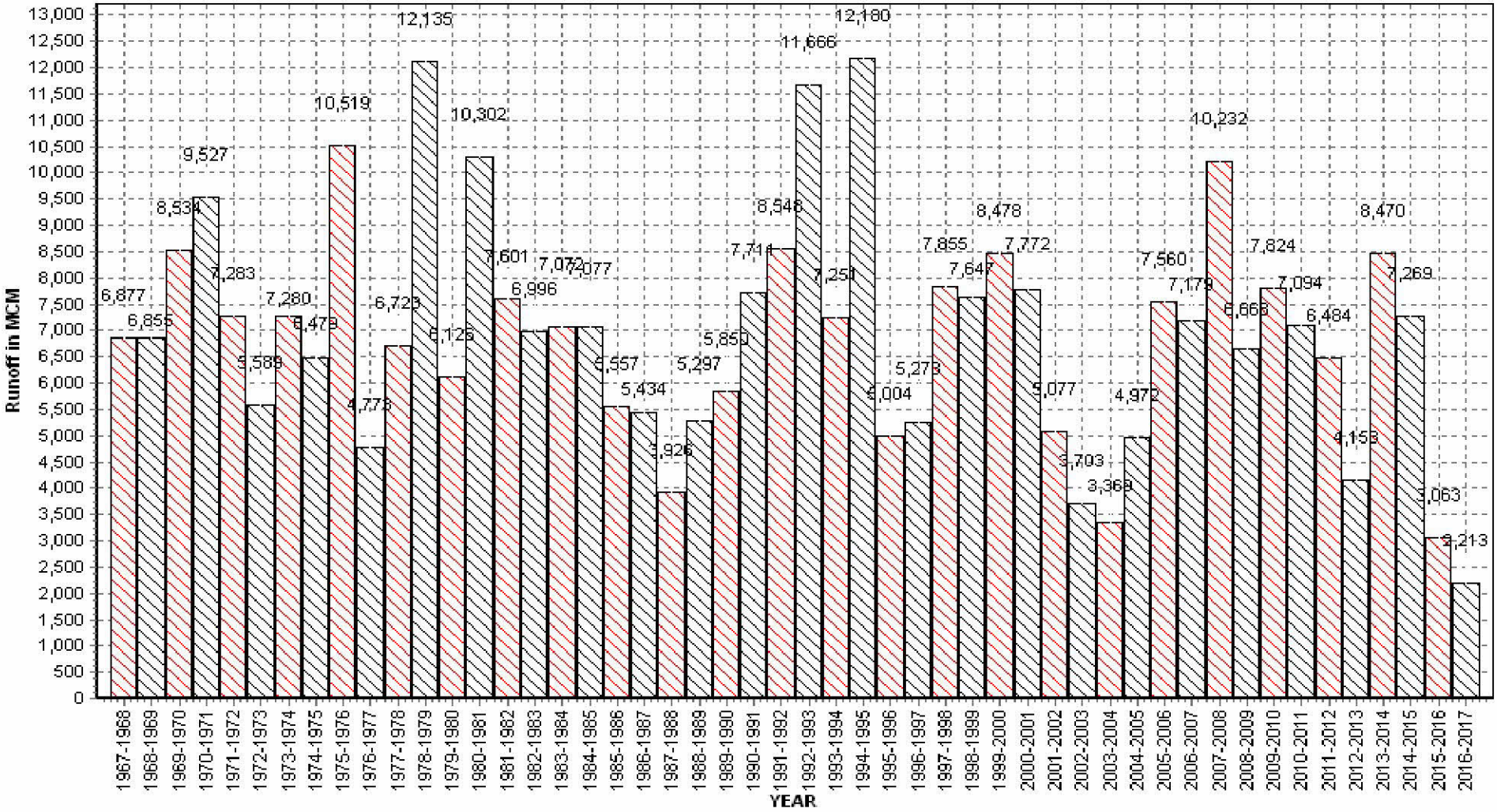
**Local River : Tungabhadra** | **Sub-Division : Upper Tunga Subdn, Devangere**



**Annual Runoff Values for the period: 1967 - 2017**

**Station Name : HARALAHALLI ( AKL00S8)**
**Local River : Tungabhadra**

**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**

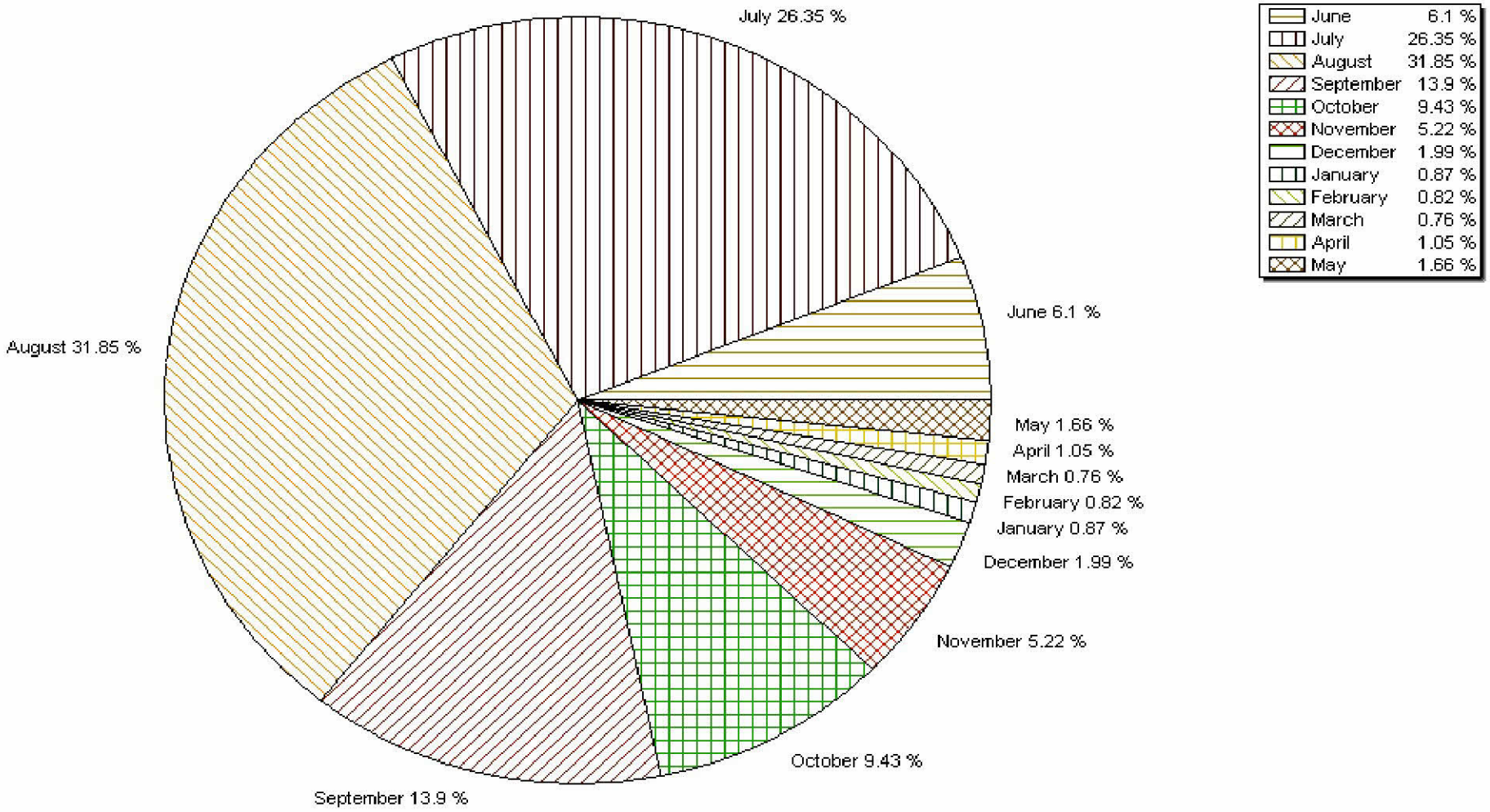



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1967-2016**

**Station Name : HARALAHALLI ( AKL00S8)**
**Local River : Tungabhadra**

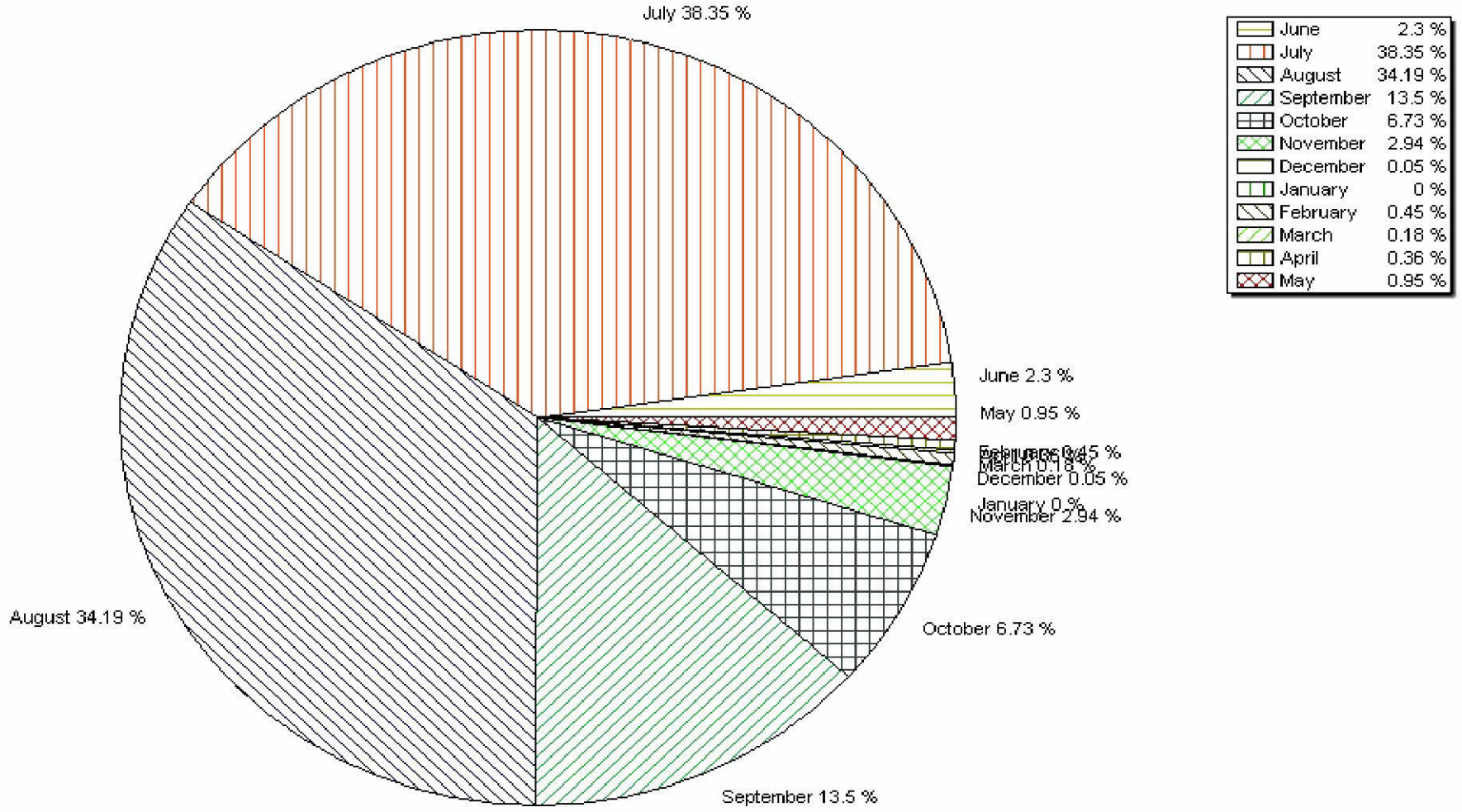
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**



**Monthly Runoff for the Year : 2016-2017**

**Station Name : HARALAHALLI ( AKL00S8)**
**Local River : Tungabhadra**

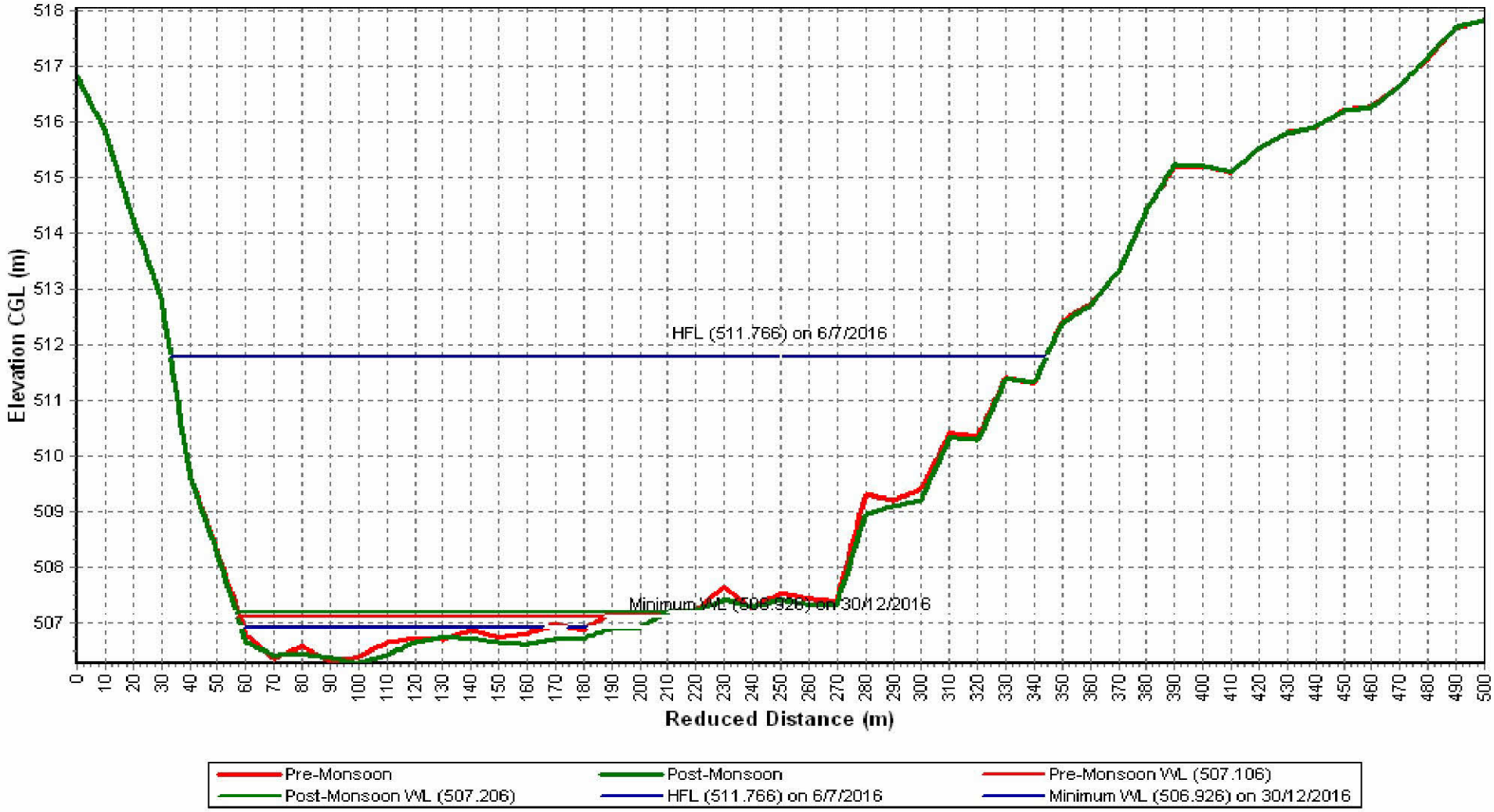
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : HARALAHALLI ( AKL00S8)** **Division : Cauvery Division, Bangalore**

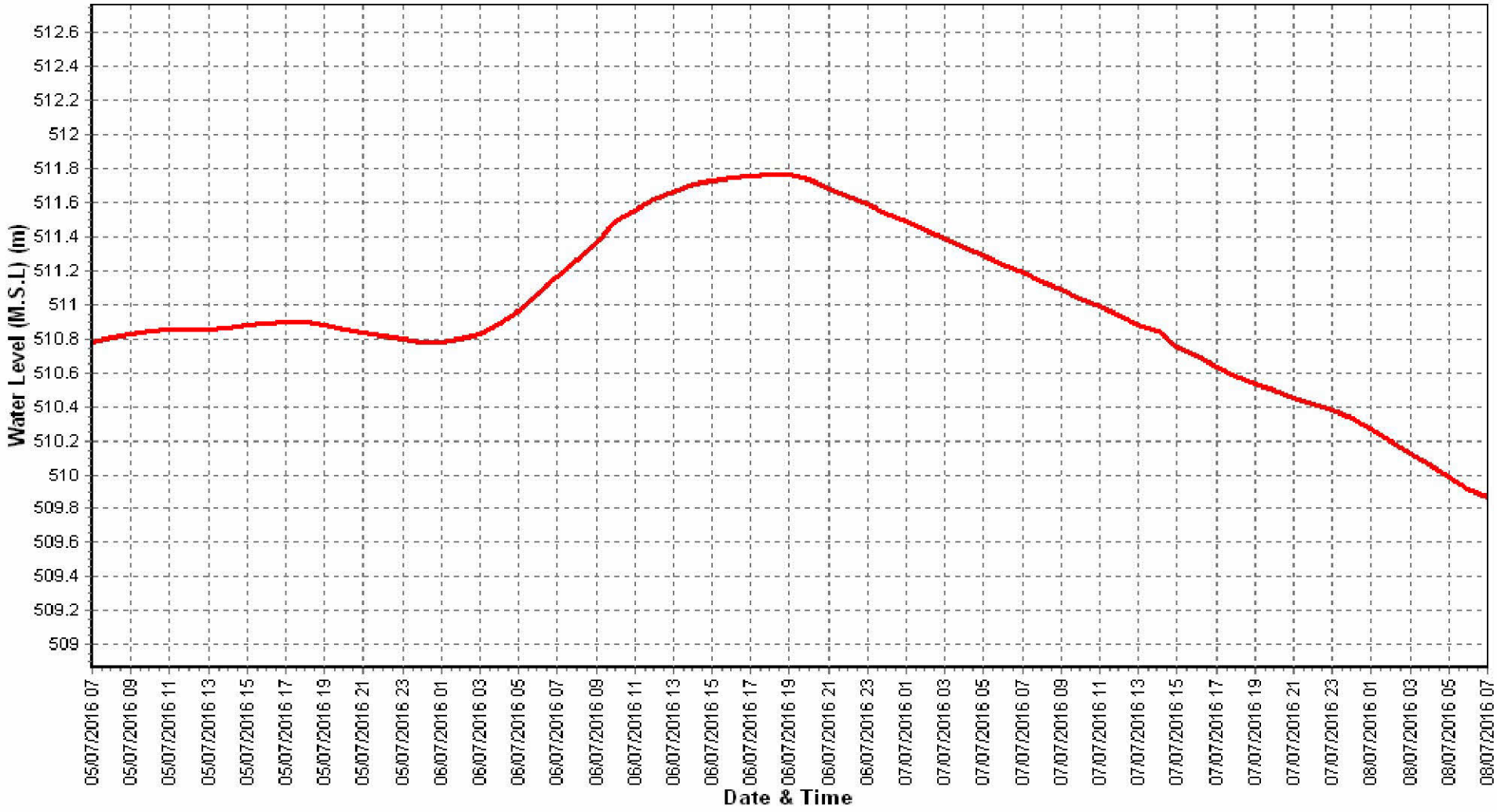
**Local River : Tungabhadra** **Sub-Division : Upper Tunga Subdn, Devangere**



**Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017**

**Station Name : HARALAHALLI ( AKL00S8)** **Division : Cauvery Division, Bangalore**

**Local River : Tungabhadra** **Sub-Division : Upper Tunga Subdn, Devangere**

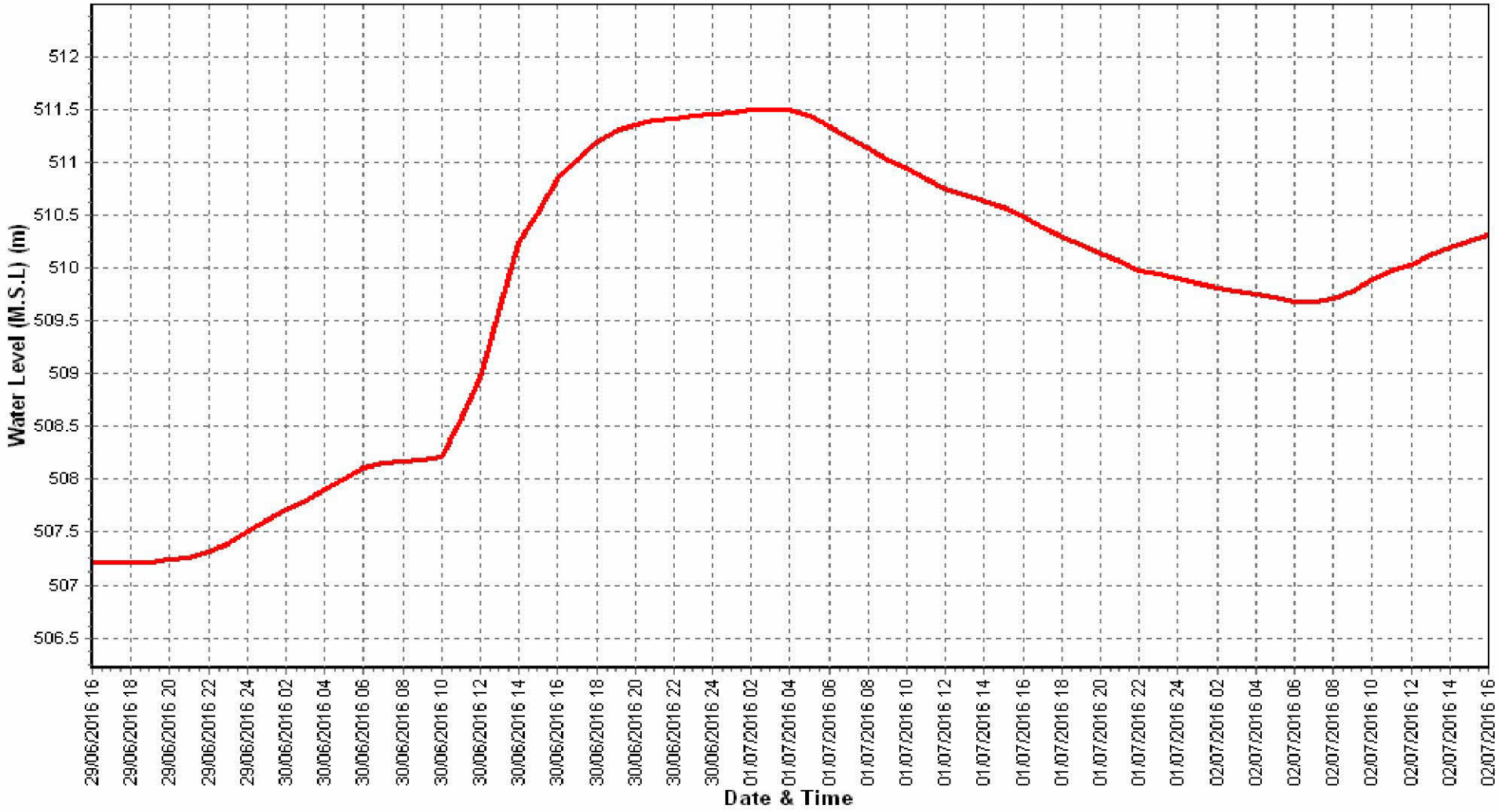



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : HARALAHALLI ( AKL00S8)** **Division : Cauvery Division, Bangalore**

**Local River : Tungabhadra** **Sub-Division : Upper Tunga Subdn, Devangere**

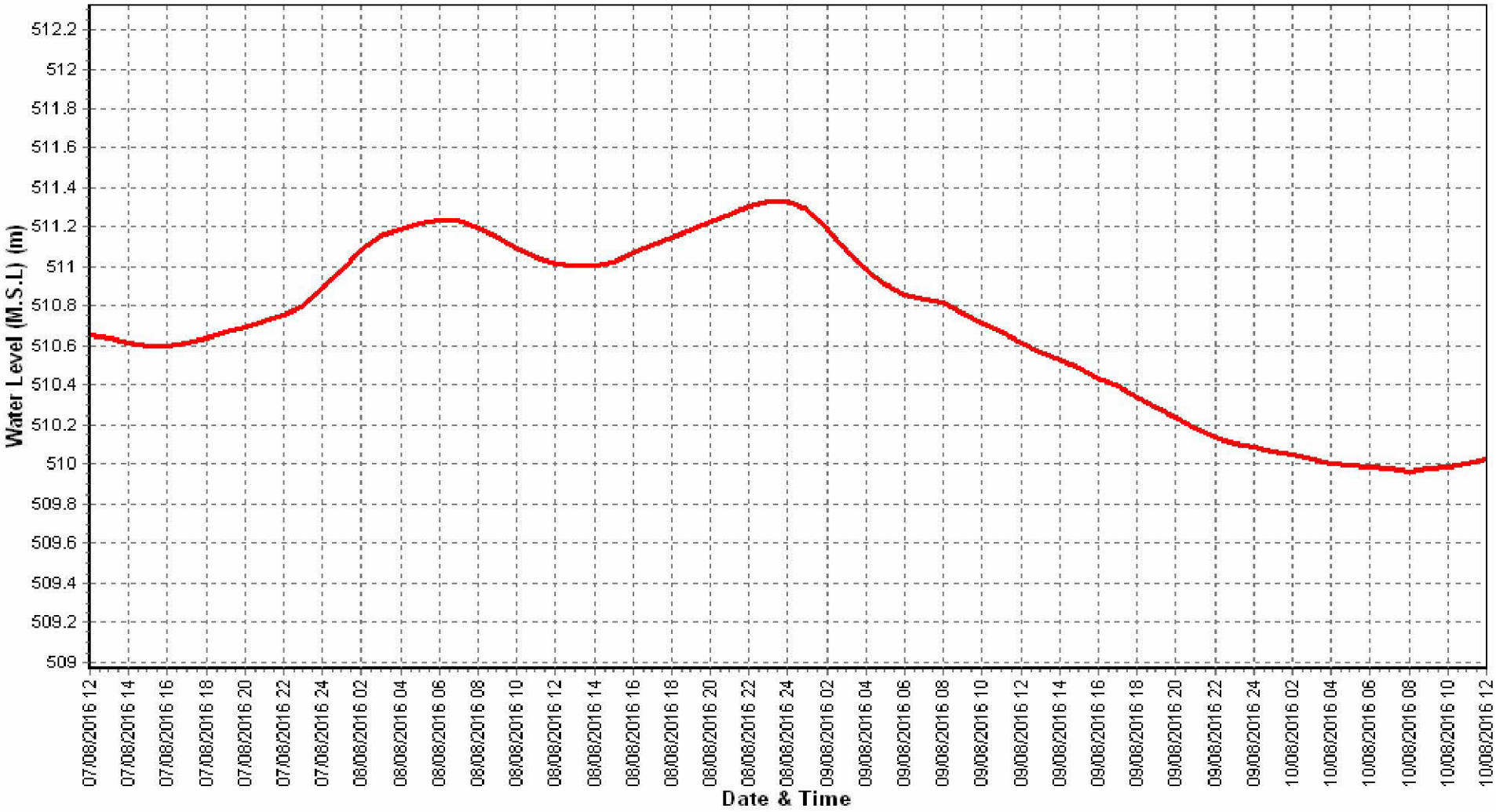



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017

**Station Name : HARALAHALLI ( AKL00S8)** | **Division : Cauvery Division, Bangalore**

**Local River : Tungabhadra** | **Sub-Division : Upper Tunga Subdn, Devangere**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **BYLADAHALLI** | **Code** | : | **AKLB0D3** |
| State | : | Karnataka | District | | Davanagere |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | Tungabhadra | Sub Tributary | : | |
| Sub-Sub Tributary | : | | Local River | : | Haridra |
| Division | : | Cauvery Division, Bangalore | Sub-Division | : | Upper Tunga SD, Devangere |
| Drainage Area | : | 2300 Sq. Km. | Bank | : | Right |
| Latitude | : | 14°26'02" | Longitude | : | 75°46'47" |
| **Zero of Gauge (m)** | : | 530.4 (m.s.l) | 21/03/1985 | | |
| | | Opening Date | Closing Date | | |
| Gauge | : | 21/03/1985 | **HFL During 2016-17** | : | **531.39m** |
| | | | **Corres. Discharge** | : | **23.92(Estimated)** |
| Discharge | : | 11/06/1985 | **Date & Time of** | : | 26/09/2016 |
| | | | **occurance** | : | **16.00 hrs.** |
| Sediment | : | 10/12/1997 | | | |
| 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 | 145.1 | 533.425 | 07/11/1986 | 0.500 | 531.160 | 08/06/1986 |
| 1987-1988 | 154.5 | 533.460 | 02/10/1987 | 0.500 | 530.800 | 07/06/1987 |
| 1988-1989 | 120.1 | 532.985 | 29/08/1988 | 0.200 | 531.060 | 05/03/1989 |
| 1989-1990 | 82.29 | 532.535 | 09/10/1989 | 0.169 | 531.080 | 06/07/1989 |
| 1990-1991 | 88.00 | 532.680 | 11/08/1990 | 0.511 | 531.180 | 12/06/1990 |
| 1991-1992 | 121.1 | 532.965 | 02/08/1991 | 0.000 | 530.878 | 25/02/1992 |
| 1992-1993 | 928.1 | 537.433 | 17/11/1992 | 0.668 | 530.945 | 02/06/1992 |
| 1993-1994 | 229.5 | 533.420 | 16/10/1993 | 0.317 | 530.720 | 03/07/1993 |
| 1994-1995 | 166.6 | 532.940 | 26/10/1994 | 0.325 | 530.750 | 21/12/1994 |
| 1995-1996 | 102.0 | 532.520 | 17/09/1995 | 0.000 | 530.750 | 09/05/1996 |
| 1996-1997 | 241.1 | 533.710 | 21/10/1996 | 0.000 | 530.800 | 08/07/1996 |
| 1997-1998 | 157.5 | 532.960 | 26/10/1997 | 0.000 | 530.700 | 12/05/1998 |
| 1998-1999 | 236.5 | 533.460 | 11/10/1998 | 0.000 | 530.700 | 12/12/1998 |
| 1999-2000 | 224.8 | 533.700 | 05/10/1999 | 0.000 | 530.700 | 07/02/2000 |
| 2000-2001 | 251.0 | 534.020 | 10/10/2000 | 0.000 | 530.620 | 30/01/2001 |
| 2001-2002 | 112.8 | 532.685 | 02/08/2001 | 0.000 | 530.460 | 04/02/2002 |
| 2002-2003 | 116.1 | 533.045 | 16/10/2002 | 0.000 | 530.480 | 06/01/2003 |
| 2003-2004 | 138.8 | 532.920 | 06/10/2003 | 0.000 | 530.580 | 24/01/2004 |
| 2004-2005 | 49.21 | 531.900 | 07/09/2004 | 0.000 | | 27/02/2005 |
| 2005-2006 | 190.1 | 533.460 | 27/07/2005 | 0.000 | | 21/02/2006 |
| 2006-2007 | 179.9 | 533.740 | 04/11/2006 | 0.000 | 530.410 | 31/01/2007 |

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 | 99.30 | 532.580 | 19/09/2007 | 0.000 | | 10/01/2008 |
| 2008-2009 | 104.3 | 532.570 | 06/10/2008 | 0.000 | | 08/02/2009 |
| 2009-2010 | 167.8 | 533.470 | 02/10/2009 | 0.000 | | 12/03/2010 |
| 2010-2011 | 257.3 | 534.040 | 09/11/2010 | 0.000 | 530.030 | 18/03/2011 |
| 2011-2012 | 90.51 | 532.200 | 15/10/2011 | 0.000 | 530.100 | 28/03/2012 |
| 2012-2013 | 339.9 | 534.650 | 02/11/2012 | 0.000 | | 12/02/2013 |
| 2013-2014 | 92.30 | 532.370 | 18/09/2013 | 0.000 | 530.120 | 02/01/2014 |
| 2014-2015 | 243.0 | 534.000 | 28/10/2014 | 0.000 | 530.070 | 20/01/2015 |
| 2015-2016 | 117.3 | 532.680 | 09/09/2015 | 0.000 | 530.090 | 01/06/2015 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : BYLADAHALLI ( AKLB0D3)** **Division : Cauvery Division, Bangalore**

**Local River : Haridra** **Sub-Division : Upper Tunga SD, Devangere**

| 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 | 530.100 | 0.000 | 530.040 | 0.000 | 530.040 | 0.000 | 531.360 | 22.80 | 530.930 | 10.35 |
| 2 | | 0.000 | 530.090 | 0.000 | 530.030 | 0.000 | 530.050 | 0.000 | 531.360 | 20.61 * | 530.940 | 10.59 |
| 3 | | 0.000 | 530.070 | 0.000 | 530.020 | 0.000 | 530.070 | 0.000 | 531.340 | 22.14 | 530.950 | 10.74 |
| 4 | | 0.000 | 530.050 | 0.000 | 530.020 | 0.000 | 530.080 | 0.000 | 531.320 | 21.53 | 530.950 | 10.77 |
| 5 | | 0.000 | 530.050 | 0.000 | 530.030 | 0.000 | 530.080 | 0.000 | 531.290 | 20.55 | 530.930 | 10.36 |
| 6 | | 0.000 | 530.040 | 0.000 | 530.040 | 0.000 | 530.090 | 0.000 | 531.220 | 17.91 | 530.930 | 11.08 * |
| 7 | | 0.000 | 530.050 | 0.000 | 530.040 | 0.000 | 530.080 | 0.000 | 531.130 | 15.21 | 530.940 | 10.56 |
| 8 | | 0.000 | 530.070 | 0.000 | 530.050 | 0.000 | 530.070 | 0.000 | 531.100 | 14.47 | 530.930 | 10.38 |
| 9 | 529.990 | 0.000 | 530.070 | 0.000 | 530.060 | 0.000 | 530.070 | 0.000 | 531.070 | 13.81 * | 530.940 | 10.59 |
| 10 | 530.000 | 0.000 | 530.090 | 0.000 | 530.060 | 0.000 | 530.060 | 0.000 | 531.050 | 13.23 | 530.640 | 5.888 |
| 11 | 529.990 | 0.000 | 530.090 | 0.000 | 530.050 | 0.000 | 530.050 | 0.000 | 531.020 | 12.79 * | 530.500 | 5.293 |
| 12 | 529.990 | 0.000 | 530.080 | 0.000 | 530.030 | 0.000 | 530.040 | 0.000 | 531.000 | 12.40 * | 530.470 | 4.854 |
| 13 | 529.980 | 0.000 | 530.070 | 0.000 | 530.020 | 0.000 | 530.040 | 0.000 | 530.980 | 11.52 | 530.470 | 4.482 * |
| 14 | 529.970 | 0.000 | 530.050 | 0.000 | 530.010 | 0.000 | 530.030 | 0.000 | 530.970 | 11.36 | 530.450 | 4.272 * |
| 15 | 529.980 | 0.000 | 530.040 | 0.000 | 530.000 | 0.000 | 530.040 | 0.000 | 530.960 | 11.18 | 530.450 | 4.671 |
| 16 | 529.970 | 0.000 | 530.030 | 0.000 | 529.980 | 0.000 | 530.060 | 0.000 | 530.970 | 11.82 * | 530.470 | 4.895 |
| 17 | 529.950 | 0.000 | 530.020 | 0.000 | 529.970 | 0.000 | 530.080 | 0.000 | 530.980 | 11.71 | 530.470 | 4.833 |
| 18 | 529.960 | 0.000 | 530.010 | 0.000 | 529.970 | 0.000 | 530.090 | 0.000 | 530.980 | 11.57 | 530.500 | 5.256 |
| 19 | 529.970 | 0.000 | 529.990 | 0.000 | 529.980 | 0.000 | 530.080 | 0.000 | 530.990 | 11.79 | 530.500 | 5.221 |
| 20 | 529.960 | 0.000 | 529.980 | 0.000 | 529.990 | 0.000 | 530.070 | 0.000 | 530.990 | 10.35 | 530.510 | 4.922 * |
| 21 | 529.960 | 0.000 | 529.990 | 0.000 | 530.000 | 0.000 | 530.060 | 0.000 | 530.980 | 11.85 | 530.490 | 5.048 |
| 22 | 529.960 | 0.000 | 530.000 | 0.000 | 530.010 | 0.000 | 530.080 | 0.000 | 530.970 | 11.47 | 530.490 | 5.043 |
| 23 | 529.950 | 0.000 | 530.010 | 0.000 | 530.000 | 0.000 | 530.090 | 0.000 | 530.970 | 11.82 * | 530.500 | 5.202 |
| 24 | 529.940 | 0.000 | 530.020 | 0.000 | 529.980 | 0.000 | 530.140 | 0.000 | 530.960 | 11.20 | 530.500 | 5.214 |
| 25 | 530.100 | 0.000 | 530.030 | 0.000 | 529.970 | 0.000 | 530.680 | 0.000 | 530.960 | 11.19 | 530.490 | 5.103 |
| 26 | 530.140 | 0.000 | 530.030 | 0.000 | 529.970 | 0.000 | 531.380 | 23.65 | 530.950 | 10.90 | 530.470 | 4.816 |
| 27 | 530.140 | 0.000 | 530.040 | 0.000 | 529.980 | 0.000 | 531.360 | 22.77 | 530.950 | 10.84 | 530.440 | 4.168 * |
| 28 | 530.130 | 0.000 | 530.050 | 0.000 | 529.980 | 0.000 | 531.340 | 18.62 | 530.940 | 10.56 | 530.290 | 2.494 |
| 29 | 530.120 | 0.000 | 530.050 | 0.000 | 530.000 | 0.000 | 531.330 | 21.56 | 530.940 | 11.26 * | 530.270 | 2.418 |
| 30 | 530.130 | 0.000 | 530.060 | 0.000 | 530.020 | 0.000 | 531.340 | 21.96 | 530.930 | 11.08 * | 530.240 | 2.100 |
| 31 | | | 530.050 | 0.000 | 530.030 | 0.000 | | | 530.930 | 10.39 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 529.995 | 0.000 | 530.068 | 0.000 | 530.039 | 0.000 | 530.069 | 0.000 | 531.224 | 18.23 | 530.908 | 10.13 |
| II Ten-Daily | 529.972 | 0.000 | 530.036 | 0.000 | 530.000 | 0.000 | 530.058 | 0.000 | 530.984 | 11.65 | 530.479 | 4.870 |
| III Ten-Daily | 530.057 | 0.000 | 530.030 | 0.000 | 529.995 | 0.000 | 530.780 | 10.86 | 530.953 | 11.14 | 530.418 | 4.161 |
| Monthly | | | | | | | | | | | | |
| Min. | 529.940 | 0.000 | 529.980 | 0.000 | 529.970 | 0.000 | 530.030 | 0.000 | 530.930 | 10.35 | 530.240 | 2.100 |
| Max. | 530.140 | 0.000 | 530.100 | 0.000 | 530.060 | 0.000 | 531.380 | 23.65 | 531.360 | 22.80 | 530.950 | 11.08 |
| Mean | 530.013 | 0 | 530.044 | 0 | 530.011 | 0 | 530.302 | 3.619 | 531.050 | 13.59 | 530.602 | 6.387 |

**Annual Runoff in MCM = 65 Annual Runoff in mm = 28**

**Peak Observed Discharge = 23.65 cumecs on 26/09/2016 Corres. Water Level :531.38 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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 2016 - 2017

**Station Name : BYLADAHALLI ( AKLB0D3)** **Division : Cauvery Division, Bangalore**

**Local River : Haridra** **Sub-Division : Upper Tunga SD, Devangere**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 530.230 | 2.063 | 529.980 | 0.000 | 529.920 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 2 | 530.220 | 2.022 | 529.970 | 0.000 | 529.920 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 3 | 530.220 | 2.032 | 529.970 | 0.000 | 529.920 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 4 | 530.200 | 1.728 * | 529.960 | 0.000 | 529.920 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 5 | 530.190 | 1.570 | 529.960 | 0.000 | 529.920 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 6 | 530.190 | 1.572 | 529.960 | 0.000 | 529.910 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 7 | 530.190 | 1.552 | 529.960 | 0.000 | 529.910 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 8 | 530.170 | 1.438 | 529.960 | 0.000 | 529.910 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 9 | 530.160 | 1.346 | 529.960 | 0.000 | 529.910 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 10 | 530.150 | 1.333 | 529.960 | 0.000 | 529.900 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 11 | 530.150 | 1.270 * | 529.960 | 0.000 | 529.900 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 12 | 530.150 | 1.270 * | 529.960 | 0.000 | 529.900 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 13 | 530.150 | 1.295 | 529.960 | 0.000 | 529.890 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 14 | 530.170 | 1.431 | 529.960 | 0.000 | 529.890 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 15 | 530.170 | 1.439 | 529.960 | 0.000 | 529.890 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 16 | 530.170 | 1.454 | 529.960 | 0.000 | 529.870 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 17 | 530.160 | 1.378 | 529.950 | 0.000 | 529.820 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 18 | 530.150 | 1.270 * | 529.950 | 0.000 | 529.820 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 19 | 530.130 | 0.000 | 529.950 | 0.000 | 529.820 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 20 | 530.100 | 0.000 | 529.950 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 21 | 530.080 | 0.000 | 529.940 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 22 | 530.040 | 0.000 | 529.940 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 23 | 530.030 | 0.000 | 529.940 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 24 | 530.020 | 0.000 | 529.930 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 25 | 530.010 | 0.000 | 529.930 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 26 | 530.010 | 0.000 | 529.930 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 27 | 530.010 | 0.000 | 529.930 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 28 | 530.010 | 0.000 | 529.930 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 29 | 530.010 | 0.000 | 529.930 | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 30 | 530.010 | 0.000 | 529.930 | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 31 | 529.990 | 0.000 | 529.930 | 0.000 | | | | 0.000 | | | | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 530.192 | 1.665 | 529.964 | 0.000 | 529.914 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| II Ten-Daily | 530.150 | 1.081 | 529.956 | 0.000 | 529.867 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| III Ten-Daily | 530.020 | 0.000 | 529.933 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 529.990 | 0.000 | 529.930 | 0.000 | 529.820 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Max. | 530.230 | 2.063 | 529.980 | 0.000 | 529.920 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Mean | 530.117 | 0.886 | 529.950 | 0 | 529.892 | 0 | | 0 | | 0 | | 0 |

**Peak Computed Discharge = 20.61 cumecs on 02/10/2016** **Corres. Water Level :531.36 m**

**Lowest Computed Discharge = 1.270 cumecs on 11/12/2016** **Corres. Water Level :530.15 m**

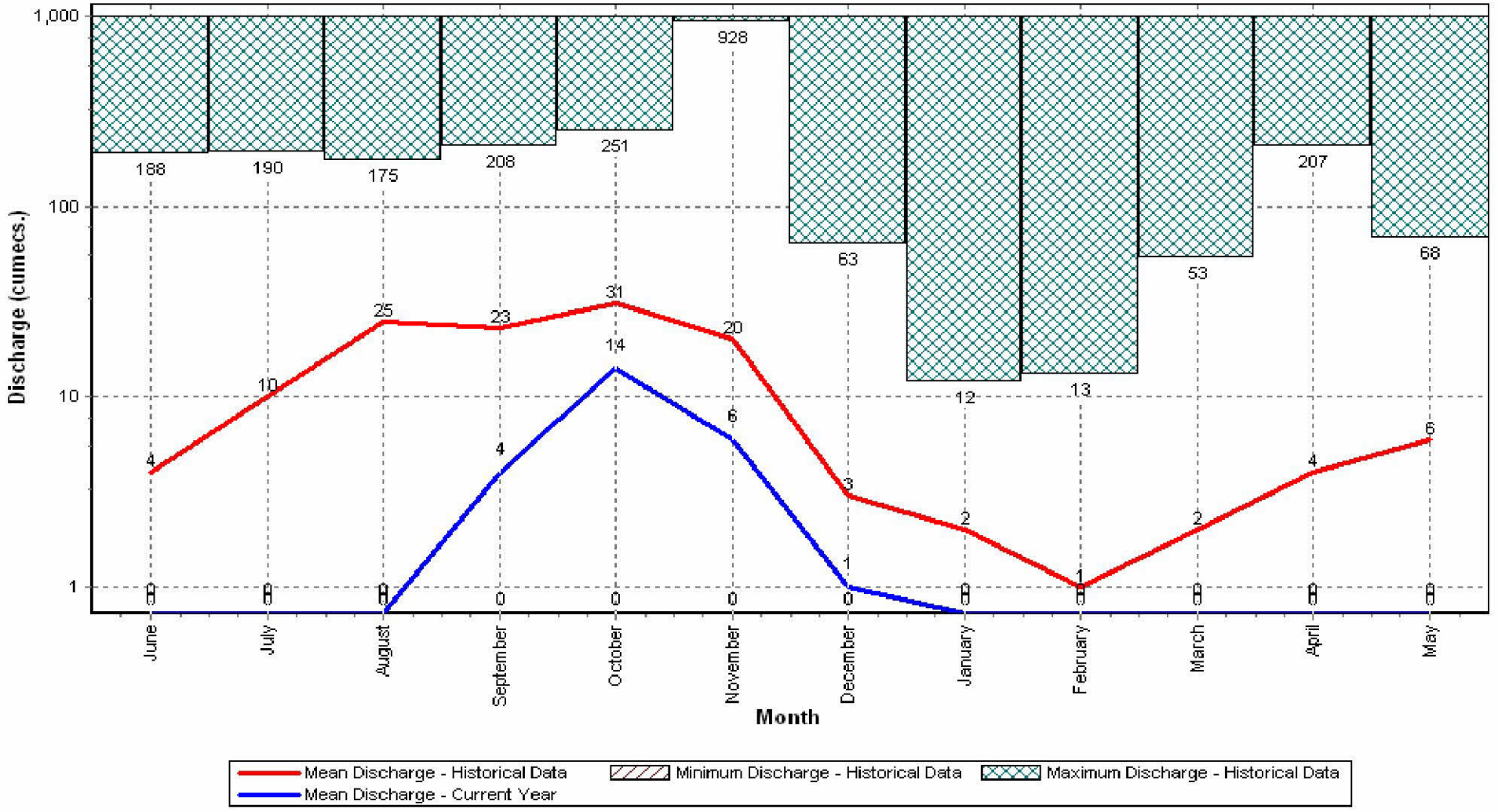
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : BYLADAHALLI ( AKLB0D3)** | **Data considered : 1986-2017** | **Division : Cauvery Division, Bangalore**

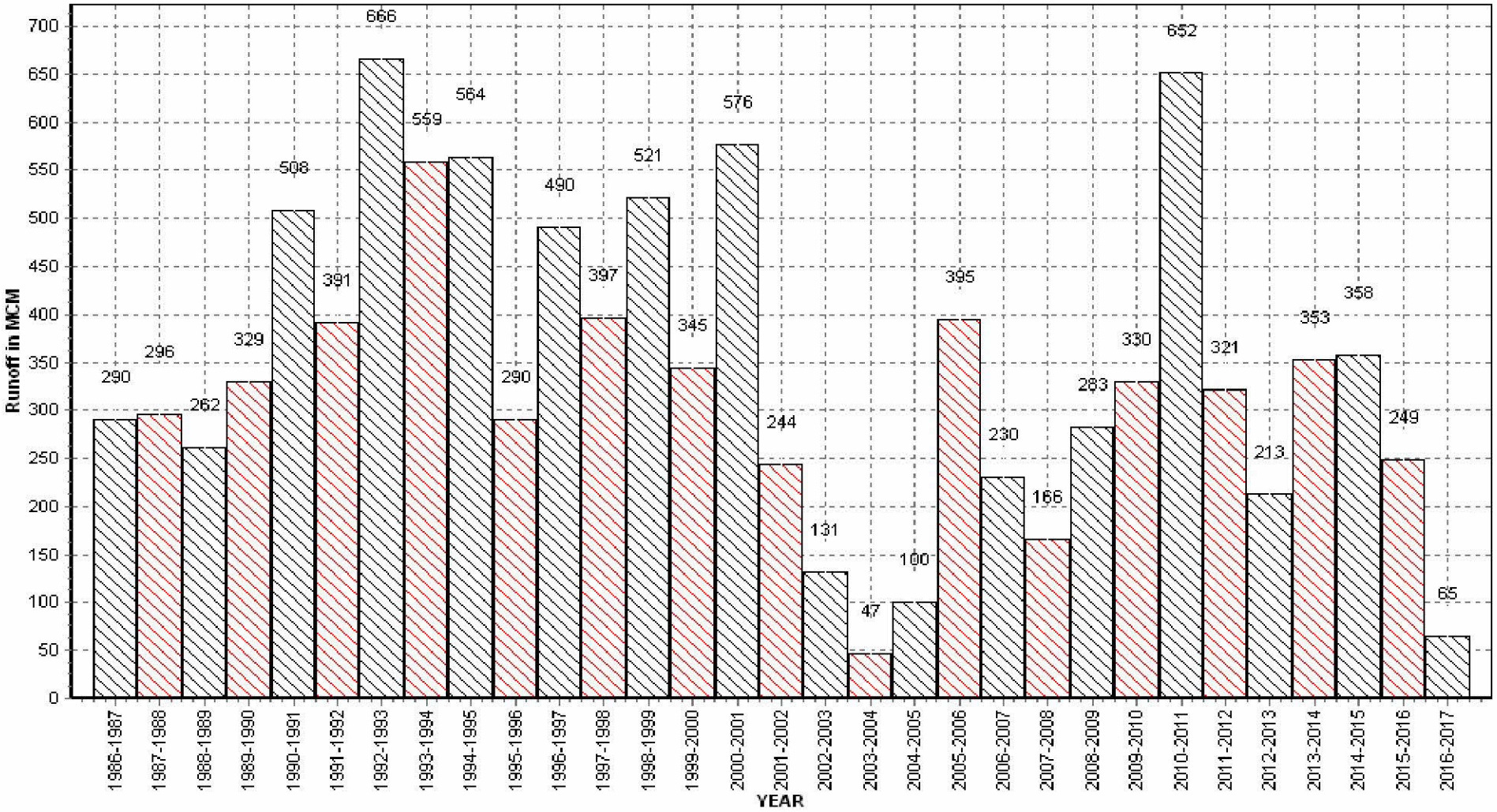
**Local River : Haridra** | **Sub-Division : Upper Tunga SD, Devangere**



**Annual Runoff Values for the period: 1986 - 2017**

**Station Name : BYLADAHALLI ( AKLB0D3)**
**Local River : Haridra**

**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga SD, Devangere**

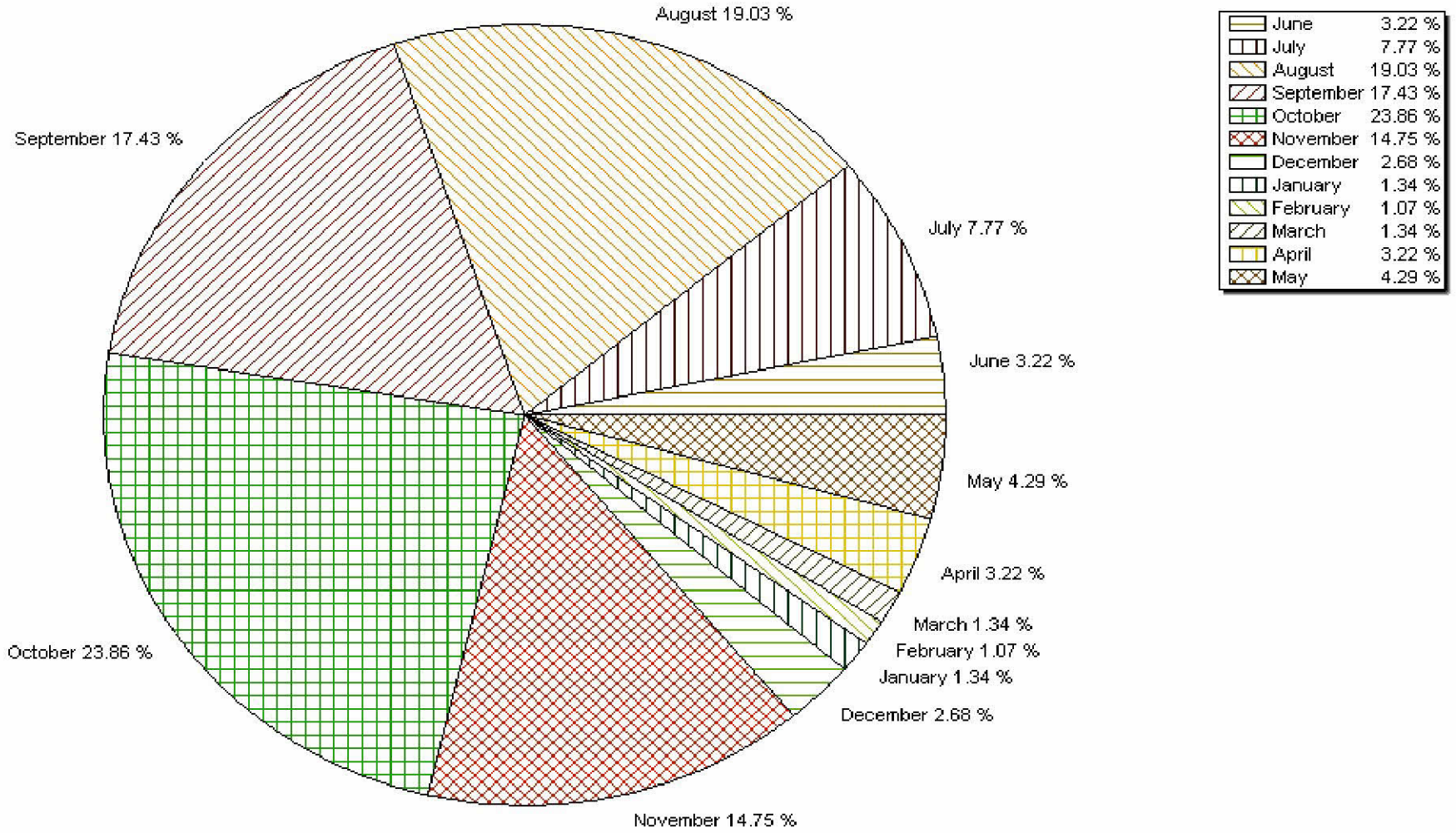



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1986-2016**

**Station Name : BYLADAHALLI ( AKLB0D3)**
**Local River : Haridra**

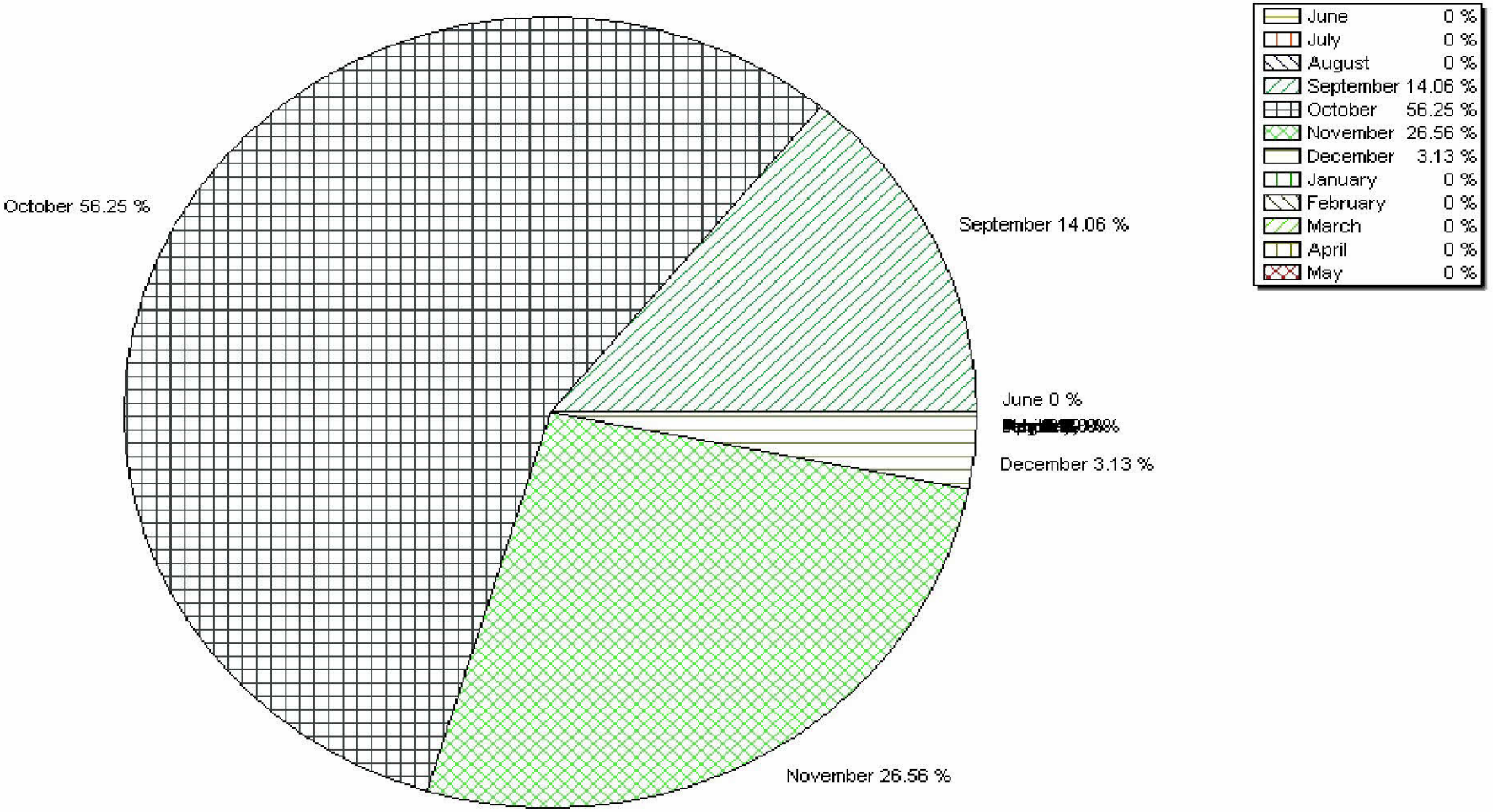
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga SD, Devangere**



**Monthly Runoff for the Year : 2016-2017**

**Station Name : BYLADAHALLI ( AKLB0D3)**
**Local River : Haridra**

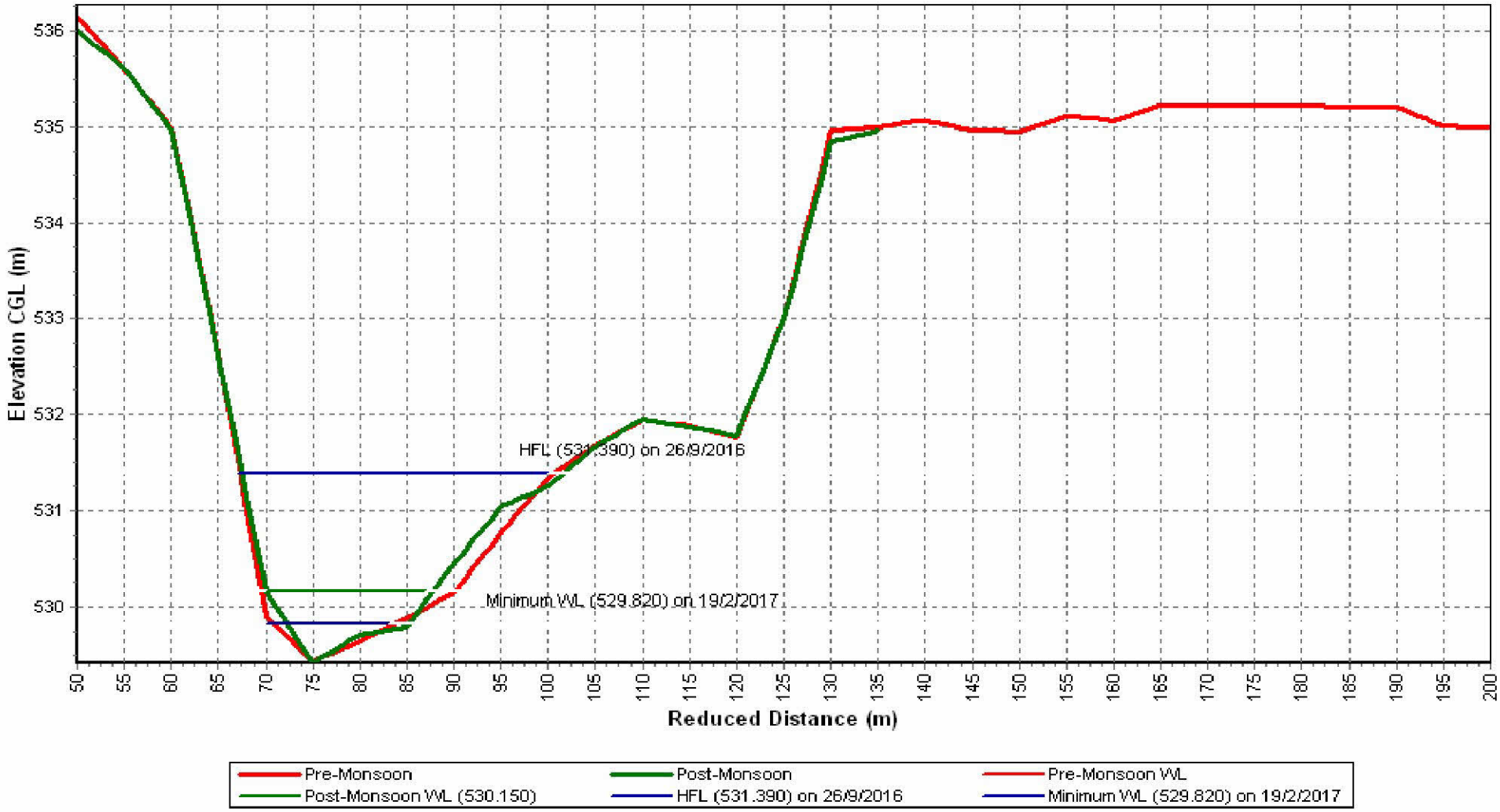
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga SD, Devangere**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : BYLADAHALLI ( AKLB0D3)** **Division : Cauvery Division, Bangalore**

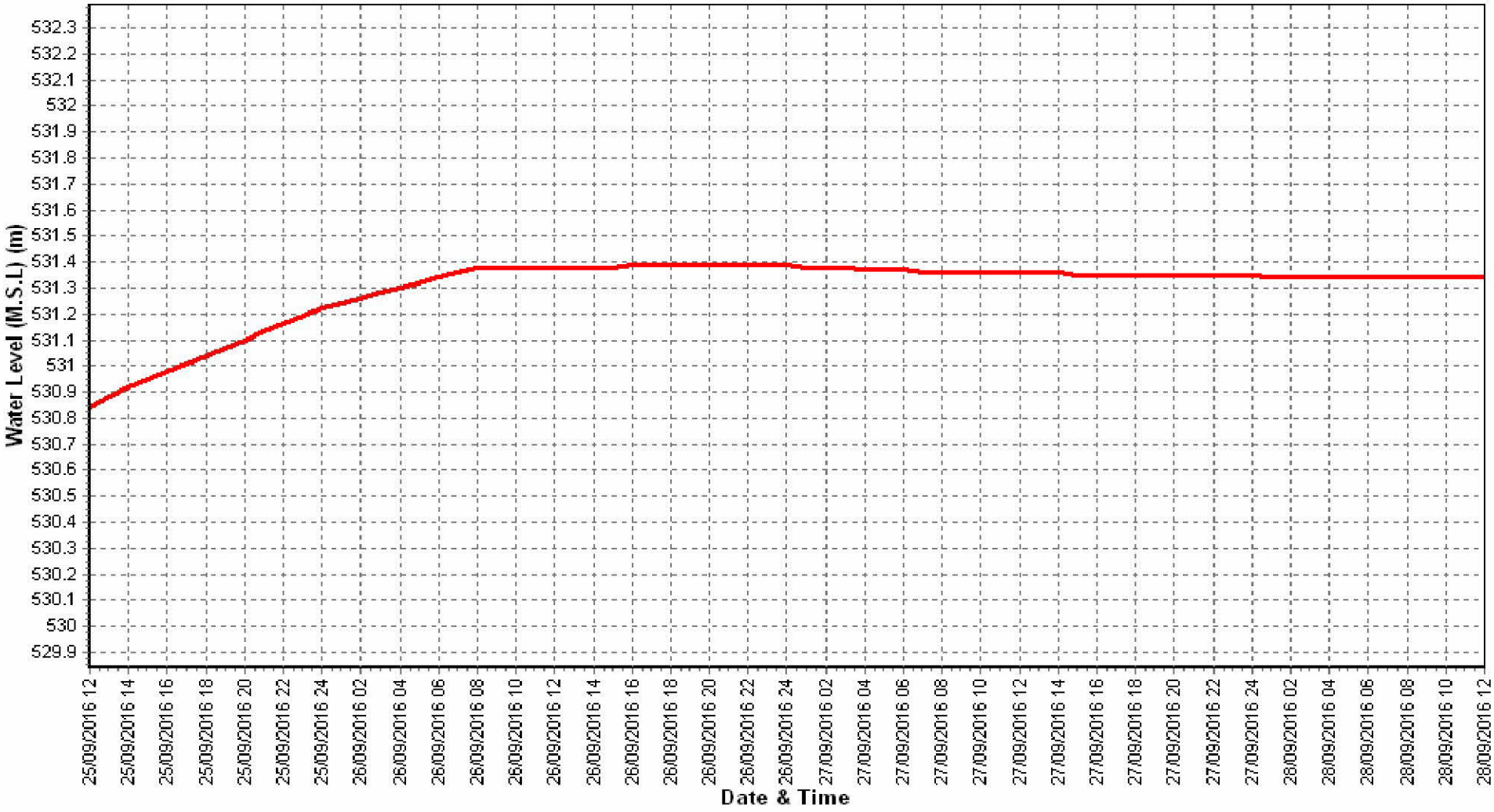
**Local River : Haridra** **Sub-Division : Upper Tunga SD, Devangere**



**Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017**

**Station Name : BYLADAHALLI ( AKLB0D3)** | **Division : Cauvery Division, Bangalore**

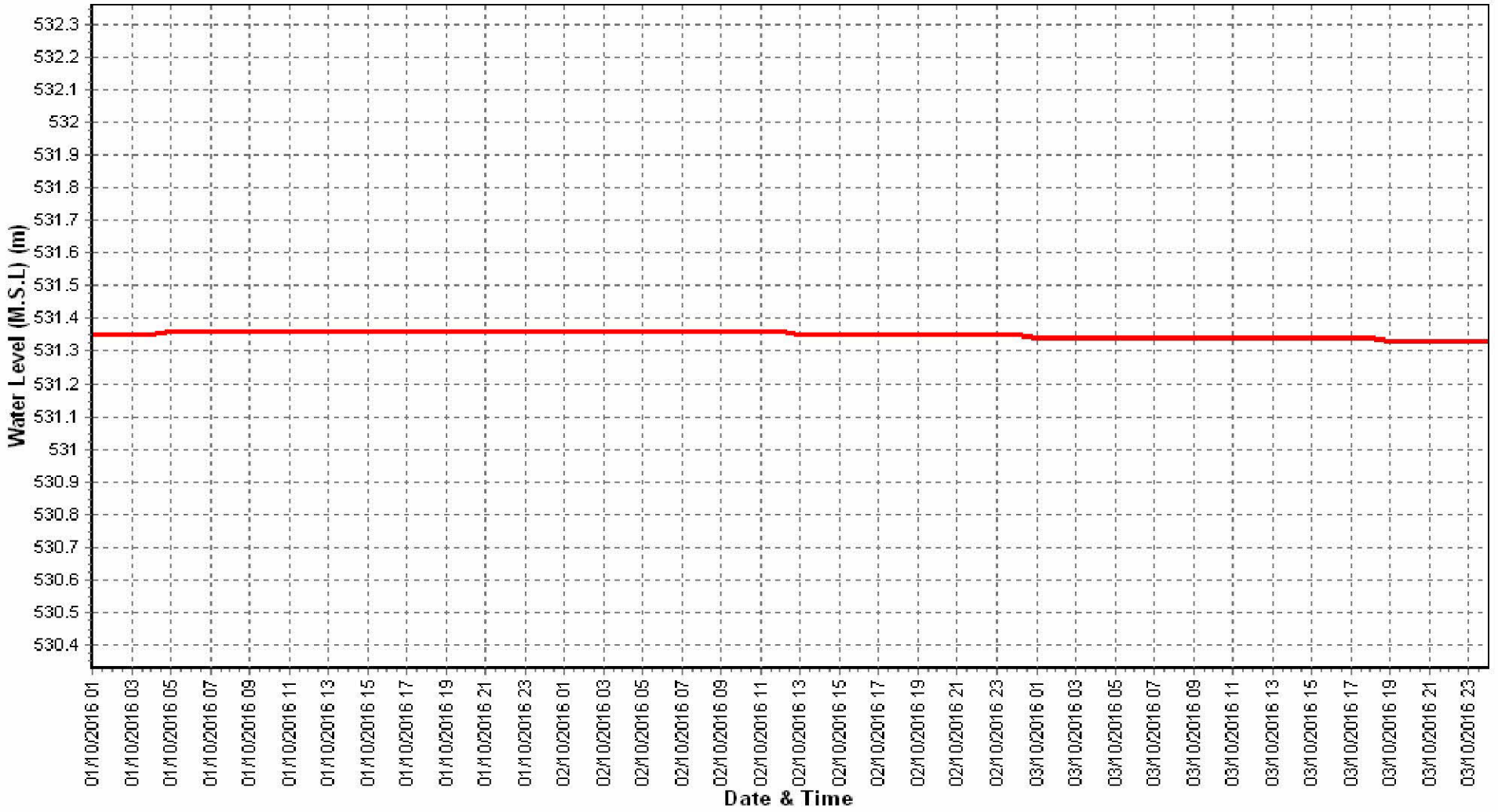
**Local River : Haridra** | **Sub-Division : Upper Tunga SD, Devangere**




Time Span: 72 Hrs

## Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017

**Station Name : BYLADAHALLI ( AKLB0D3)**
**Division : Cauvery Division, Bangalore**
**Local River : Haridra**
**Sub-Division : Upper Tunga SD, Devangere**

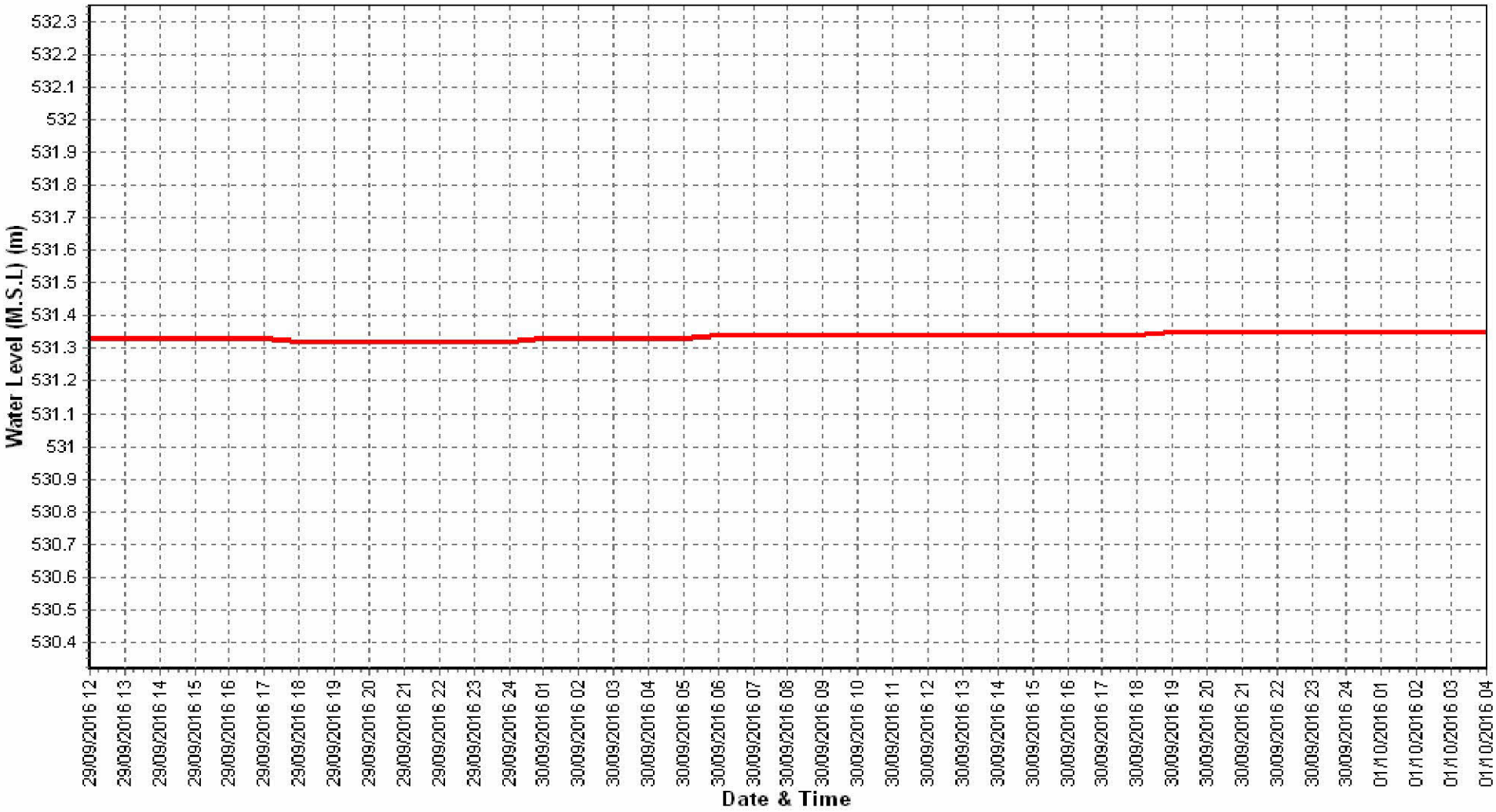



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : BYLADAHALLI ( AKLB0D3)** **Division : Cauvery Division, Bangalore**

**Local River : Haridra** **Sub-Division : Upper Tunga SD, Devangere**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: KUPPELUR** | | **Code** | **: AKLC0B8** | |
| State | : | Karnataka | District | | Haveri |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | Tungabhadra | Sub Tributary | : | |
| Sub-Sub Tributary | : | | Local River | : | Kumudavathi |
| Division | : | Cauvery Division, Bangalore | Sub-Division | : | Upper Tunga SD, Devangere |
| Drainage Area | : | 1850 Sq. Km. | Bank | : | Left |
| Latitude | : | 14°30'00" | Longitude | : | 75°38'02" |
| **Zero of Gauge (m)** | : | 533.4 (m.s.l) | 01/06/1990 | | |
| | | Opening Date | Closing Date | | |
| Gauge | : | 01/06/1990 | **HFL During 2016-17** | : | **535.58m** |
| | | | **Corres. Discharge** | : | **7.021(Observed)** |
| Discharge | : | 21/07/1990 | **Date & Time of** | : | **06/08/2016** |
| | | | **occurance** | : | **08.00 hrs.** |
| Sediment | : | 23/07/2014 | | | |
| Water Quality | : | 01/07/1994 | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1991-1992 | 206.9 | 98.566 | 29/07/1991 | 0.000 | | 18/02/1992 |
| 1992-1993 | 538.3 | 100.919 | 18/11/1992 | 0.000 | 94.157 | 02/05/1993 |
| 1993-1994 | 145.2 | 97.698 | 17/10/1993 | 0.000 | 94.950 | 08/02/1994 |
| 1994-1995 | 430.0 | 100.590 | 17/07/1994 | 0.000 | 93.575 | 11/03/1995 |
| 1995-1996 | 91.85 | 536.770 | 05/09/1995 | 0.000 | | 23/02/1996 |
| 1996-1997 | 48.13 | 536.530 | 31/07/1996 | 0.000 | | 07/03/1997 |
| 1997-1998 | 412.6 | 539.650 | 08/08/1997 | 0.000 | | 06/03/1998 |
| 1998-1999 | 149.4 | 538.060 | 13/10/1998 | 0.000 | 534.965 | 25/02/1999 |
| 1999-2000 | 293.2 | 539.410 | 24/07/1999 | 0.000 | | 17/02/2000 |
| 2000-2001 | 215.7 | 538.830 | 15/07/2000 | 0.000 | | 12/02/2001 |
| 2001-2002 | 29.82 | 536.210 | 30/09/2001 | 0.000 | | 25/01/2002 |
| 2002-2003 | 30.26 | 536.380 | 15/10/2002 | 0.000 | 535.350 | 01/12/2002 |
| 2003-2004 | 173.3 | 538.040 | 04/10/2003 | 0.000 | | 18/06/2003 |
| 2004-2005 | 312.4 | 538.945 | 07/08/2004 | 0.000 | | 23/02/2005 |
| 2005-2006 | 301.7 | 539.670 | 04/08/2005 | 0.000 | 534.500 | 30/01/2006 |
| 2006-2007 | 283.3 | 538.600 | 13/08/2006 | 0.000 | | 30/01/2007 |
| 2007-2008 | 776.3 | 541.840 | 08/08/2007 | 0.000 | 534.840 | 15/01/2008 |
| 2008-2009 | 509.7 | 540.500 | 14/08/2008 | 0.000 | 535.100 | 30/03/2009 |
| 2009-2010 | 394.1 | 540.050 | 18/07/2009 | 0.000 | 535.190 | 30/01/2010 |
| 2010-2011 | 798.2 | 539.970 | 04/10/2010 | 0.000 | 534.640 | 24/06/2010 |
| 2011-2012 | 133.3 | 536.940 | 05/09/2011 | 0.000 | 535.170 | 31/12/2011 |
| 2012-2013 | 64.26 | 536.090 | 03/11/2012 | 0.000 | 534.740 | 25/01/2013 |
| 2013-2014 | 594.4 | 539.370 | 03/08/2013 | 0.000 | 534.720 | 21/01/2014 |
| 2014-2015 | 421.5 | 539.670 | 02/08/2014 | 0.000 | 535.110 | 14/12/2014 |
| 2015-2016 | 34.12 | 535.665 | 21/07/2015 | 0.000 | 534.340 | 01/06/2015 |

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

Stage-Discharge Data for the period 2016 - 2017

Station Name : KUPPELUR ( AKLC0B8) Division : Cauvery Division, Bangalore

Local River : Kumudavathi Sub-Division : Upper Tunga SD, Devangere

| 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 | 534.550 | 0.000 | 535.520 | 4.597 | 535.240 | 3.496 | 534.900 | 0.768 | 535.150 | 0.000 |
| 2 | | 0.000 | 534.570 | 0.000 | 535.450 | 3.748 | 535.250 | 3.610 | 534.930 | 0.824 * | 535.170 | 0.000 |
| 3 | | 0.000 | 534.590 | 0.000 | 535.290 | 2.876 | 535.260 | 3.614 | 534.950 | 0.984 | 535.180 | 0.000 |
| 4 | | 0.000 | 534.610 | 0.000 | 535.300 | 2.879 | 535.240 | 3.130 * | 534.960 | 1.030 | 535.170 | 0.000 |
| 5 | | 0.000 | 534.660 | 0.000 | 535.440 | 4.492 | 535.260 | 3.283 * | 534.970 | 1.051 | 535.160 | 0.000 |
| 6 | 534.560 | 0.000 | 534.680 | 0.000 | 535.580 | 7.021 | 535.280 | 3.750 | 535.010 | 1.204 | 535.150 | 0.000 |
| 7 | 534.530 | 0.000 | 534.710 | 0.000 | 535.530 | 5.649 * | 535.290 | 3.813 | 535.050 | 1.412 | 535.140 | 0.000 |
| 8 | 534.510 | 0.000 | 534.710 | 0.000 | 535.490 | 5.579 | 535.270 | 3.616 | 535.080 | 1.519 | 535.140 | 0.000 |
| 9 | 534.910 | 0.000 | 534.690 | 0.000 | 535.480 | 5.417 | 535.250 | 3.494 | 535.110 | 2.329 * | 535.120 | 0.000 |
| 10 | 534.860 | 0.000 | 534.670 | 0.000 | 535.400 | 3.601 | 535.240 | 3.331 | 535.180 | 3.167 # | 535.120 | 0.000 |
| 11 | 534.690 | 0.000 | 534.650 | 0.000 | 535.330 | 4.346 | 535.250 | 3.206 * | 535.270 | 0.000 | 535.110 | 0.000 |
| 12 | 534.650 | 0.000 | 534.640 | 0.000 | 535.290 | 4.006 | 535.220 | 2.785 | 535.450 | 0.000 | 535.100 | 0.000 |
| 13 | 534.650 | 0.000 | 534.630 | 0.000 | 535.240 | 3.215 | 535.190 | 2.763 * | 535.370 | 0.000 | 535.080 | 0.000 |
| 14 | 534.650 | 0.000 | 534.620 | 0.000 | 535.240 | 3.130 * | 535.480 | 8.627 | 535.330 | 0.000 | 535.050 | 0.000 |
| 15 | 534.640 | 0.000 | 534.620 | 0.000 | 535.270 | 3.361 * | 535.490 | 8.782 | 535.310 | 0.000 | 535.030 | 0.000 |
| 16 | 534.630 | 0.000 | 534.610 | 0.000 | 535.280 | 3.401 | 535.410 | 6.799 | 535.280 | 0.000 | 535.070 | 0.000 |
| 17 | 534.620 | 0.000 | 534.600 | 0.000 | 535.230 | 2.823 | 535.360 | 6.160 | 535.240 | 0.000 | 535.120 | 0.000 |
| 18 | 534.600 | 0.000 | 534.580 | 0.000 | 535.270 | 3.322 | 535.320 | 5.308 * | 535.180 | 0.000 | 535.100 | 0.000 |
| 19 | 534.590 | 0.000 | 534.560 | 0.000 | 535.280 | 3.435 | 535.280 | 4.347 | 535.160 | 0.000 | 535.080 | 0.000 |
| 20 | 534.580 | 0.000 | 534.520 | 0.000 | 535.290 | 3.600 | 535.250 | 4.125 | 535.150 | 0.000 | 535.060 | 0.000 |
| 21 | 534.570 | 0.000 | 534.480 | 0.000 | 535.260 | 3.283 * | 535.260 | 4.233 | 535.140 | 0.000 | 535.050 | 0.000 |
| 22 | 534.570 | 0.000 | 534.470 | 0.000 | 535.210 | 2.421 | 535.310 | 5.798 | 535.150 | 0.000 | 535.020 | 0.000 |
| 23 | 534.560 | 0.000 | 534.590 | 0.000 | 535.180 | 2.202 | 535.330 | 6.025 | 535.160 | 0.000 | 535.000 | 0.000 |
| 24 | 534.550 | 0.000 | 535.290 | 0.000 | 535.220 | 2.736 | 535.270 | 4.550 | 535.140 | 0.000 | 534.970 | 0.000 |
| 25 | 534.530 | 0.000 | 535.380 | 2.857 | 535.190 | 2.227 | 535.140 | 2.670 * | 535.140 | 0.000 | 534.930 | 0.000 |
| 26 | 534.520 | 0.000 | 535.310 | 2.418 | 535.220 | 2.740 | 535.050 | 1.952 | 535.120 | 0.000 | 534.810 | 0.000 |
| 27 | 534.520 | 0.000 | 535.250 | 2.003 | 535.200 | 2.287 | 535.090 | 2.298 | 535.140 | 0.000 | 534.780 | 0.000 |
| 28 | 534.520 | 0.000 | 535.220 | 1.690 | 535.210 | 2.908 * | 535.070 | 2.166 | 535.150 | 0.000 | 534.780 | 0.000 |
| 29 | 534.530 | 0.000 | 535.240 | 1.822 | 535.240 | 3.506 | 534.960 | 0.949 | 535.130 | 0.000 | 534.770 | 0.000 |
| 30 | 534.540 | 0.000 | 535.380 | 3.210 | 535.250 | 3.647 | 534.920 | 0.802 | 535.150 | 0.000 | 534.780 | 0.000 |
| 31 | | | 535.440 | 3.641 * | 535.230 | 3.415 | | | 535.160 | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 534.674 | 0.000 | 534.644 | 0.000 | 535.448 | 4.586 | 535.258 | 3.514 | 535.014 | 1.429 | 535.150 | 0.000 |
| II Ten-Daily | 534.630 | 0.000 | 534.603 | 0.000 | 535.272 | 3.464 | 535.325 | 5.290 | 535.274 | 0.000 | 535.080 | 0.000 |
| III Ten-Daily | 534.541 | 0.000 | 535.095 | 1.604 | 535.219 | 2.852 | 535.140 | 3.144 | 535.144 | 0.000 | 534.889 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 534.510 | 0.000 | 534.470 | 0.000 | 535.180 | 2.202 | 534.920 | 0.802 | 534.900 | 0.000 | 534.770 | 0.000 |
| Max. | 534.910 | 0.000 | 535.440 | 3.641 | 535.580 | 7.021 | 535.490 | 8.782 | 535.450 | 3.167 | 535.180 | 0.000 |
| Mean | 534.603 | 0 | 534.791 | 0.569 | 535.310 | 3.609 | 535.241 | 3.983 | 535.144 | 0.461 | 535.040 | 0 |

**Annual Runoff in MCM = 23 Annual Runoff in mm = 12**

**Peak Observed Discharge = 8.782 cumecs on 15/09/2016 Corres. Water Level :535.49 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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 2016 - 2017

Station Name : KUPPELUR ( AKLC0B8) Division : Cauvery Division, Bangalore

Local River : Kumudavathi Sub-Division : Upper Tunga SD, Devangere

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 534.770 | 0.000 | 534.660 | 0.000 | 533.770 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 2 | 534.740 | 0.000 | 534.640 | 0.000 | 533.690 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 3 | 534.720 | 0.000 | 534.600 | 0.000 | 533.570 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 4 | 534.740 | 0.000 | 534.560 | 0.000 | 533.440 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 5 | 534.760 | 0.000 | 534.540 | 0.000 | 533.350 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 6 | 534.780 | 0.000 | 534.530 | 0.000 | 533.270 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 7 | 534.790 | 0.000 | 534.530 | 0.000 | 533.170 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 8 | 534.790 | 0.000 | 534.530 | 0.000 | 533.090 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 9 | 534.780 | 0.000 | 536.280 | 0.000 | 533.020 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 10 | 534.770 | 0.000 | 534.540 | 0.000 | 532.970 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 11 | 534.770 | 0.000 | 536.260 | 0.000 | 532.920 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 12 | 534.780 | 0.000 | 534.520 | 0.000 | 532.890 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 13 | 534.780 | 0.000 | 534.500 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 14 | 534.790 | 0.000 | 534.500 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 15 | 534.790 | 0.000 | 534.490 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 16 | 534.780 | 0.000 | 534.490 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 17 | 534.770 | 0.000 | 534.470 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 18 | 534.770 | 0.000 | 534.440 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 19 | 534.760 | 0.000 | 534.430 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 20 | 534.750 | 0.000 | 534.410 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 21 | 534.760 | 0.000 | 534.370 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 22 | 534.770 | 0.000 | 534.310 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 23 | 534.760 | 0.000 | 534.250 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 24 | 534.750 | 0.000 | 534.210 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 25 | 534.740 | 0.000 | 534.140 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 26 | 534.730 | 0.000 | 534.070 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 27 | 534.720 | 0.000 | 534.010 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 28 | 534.710 | 0.000 | 533.950 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 29 | 534.690 | 0.000 | 533.920 | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 30 | 534.670 | 0.000 | 533.870 | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 31 | 534.670 | 0.000 | 533.820 | 0.000 | | | | 0.000 | | | | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 534.764 | 0.000 | 534.741 | 0.000 | 533.334 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| II Ten-Daily | 534.774 | 0.000 | 534.651 | 0.000 | 532.905 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| III Ten-Daily | 534.725 | 0.000 | 534.084 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 534.670 | 0.000 | 533.820 | 0.000 | 532.890 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Max. | 534.790 | 0.000 | 536.280 | 0.000 | 533.770 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Mean | 534.753 | 0 | 534.479 | 0 | 533.263 | 0 | | 0 | | 0 | | 0 |

**Peak Computed Discharge = 5.649 cumecs on 07/08/2016 Corres. Water Level :535.53 m**

**Lowest Computed Discharge = 0.824 cumecs on 02/10/2016 Corres. Water Level :534.93 m**

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

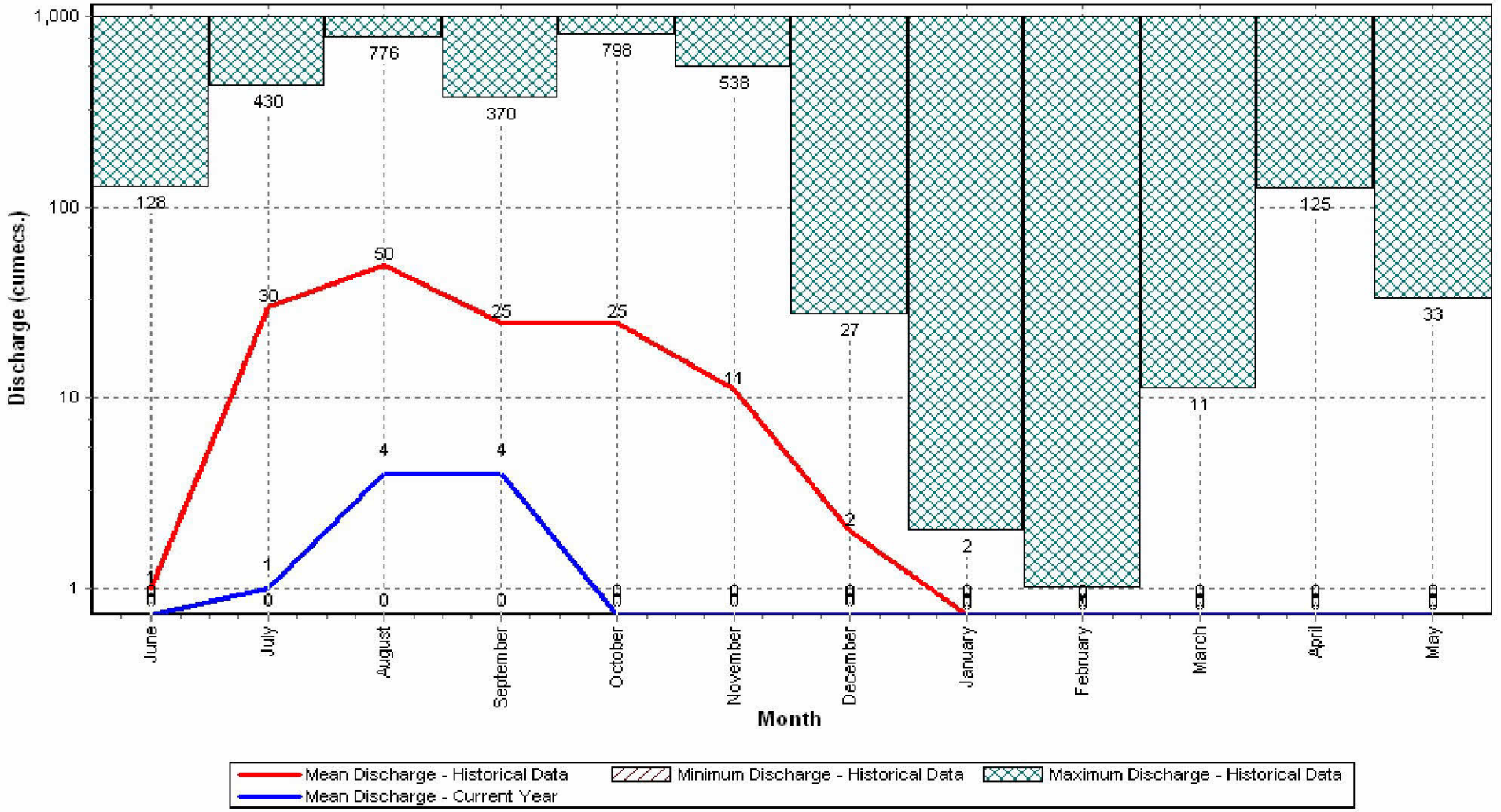
#:Discarded Discharge (values changed as per rating curve)

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : KUPPELUR ( AKLC0B8)** | **Data considered : 1991-2017** | **Division : Cauvery Division, Bangalore**

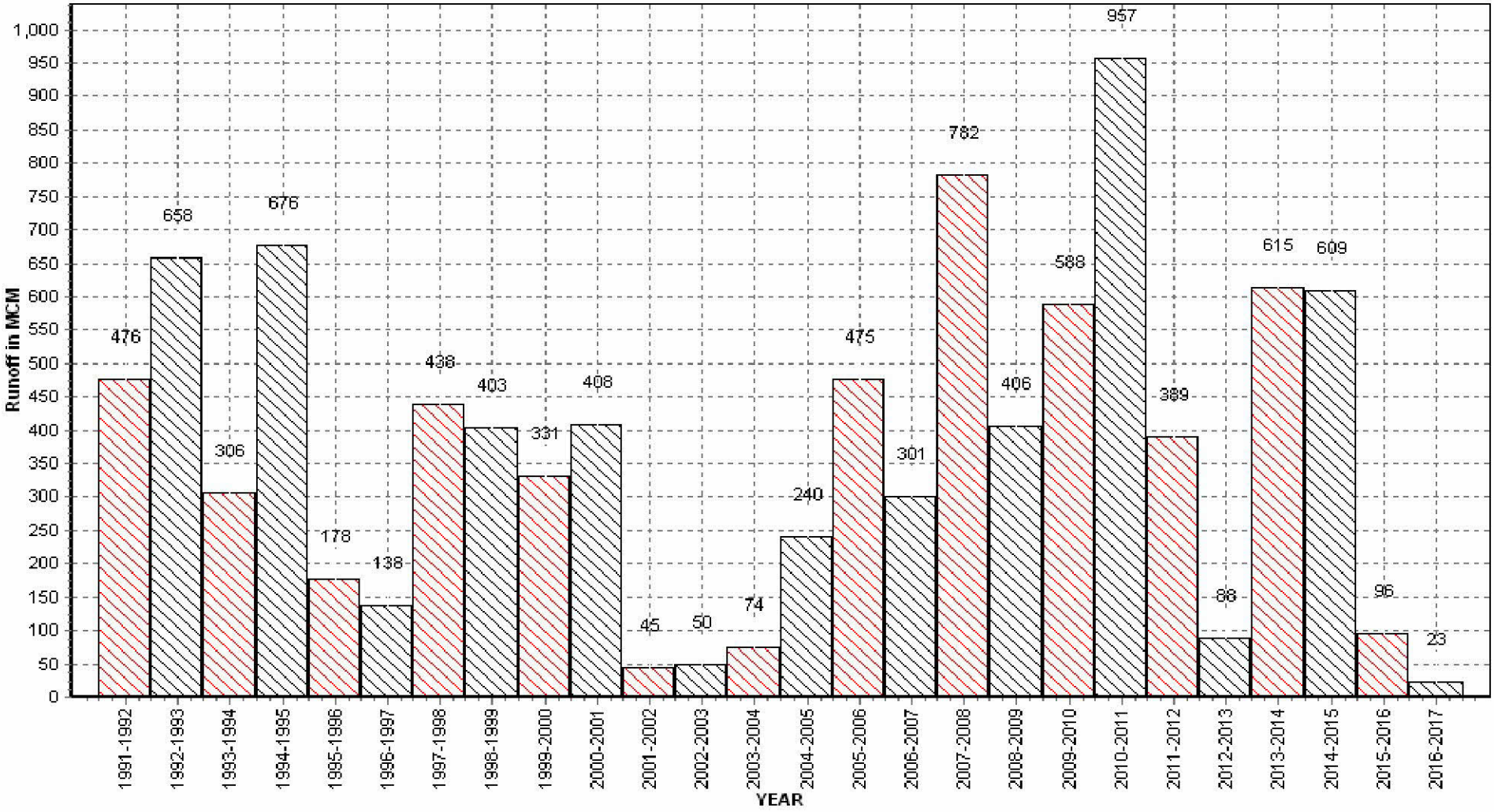
**Local River : Kumudavathi** | **Sub-Division : Upper Tunga SD, Devangere**



**Annual Runoff Values for the period: 1991 - 2017**

**Station Name : KUPPELUR ( AKLC0B8)**
**Local River : Kumudavathi**

**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga SD, Devangere**

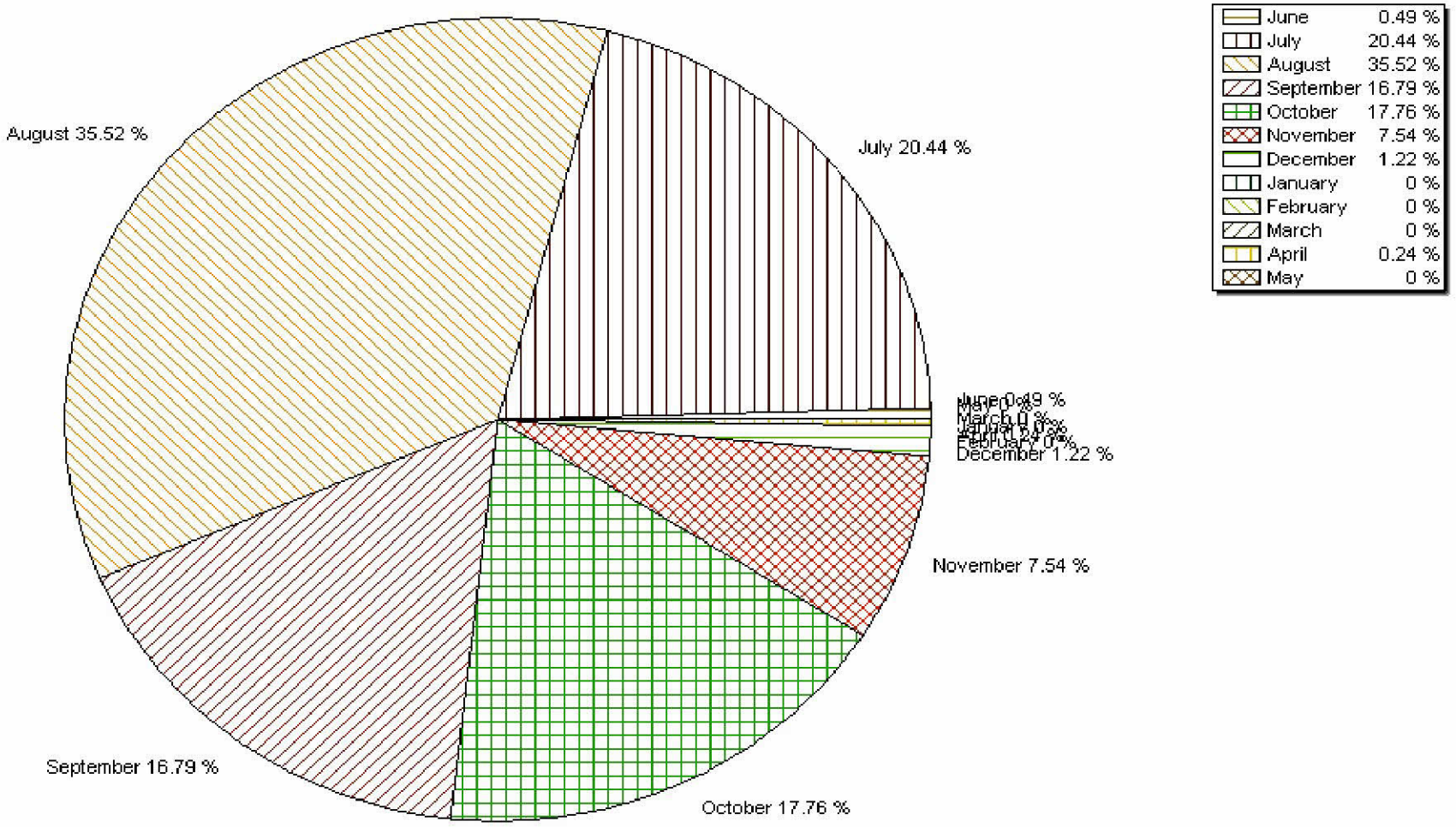



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1991-2016**

**Station Name : KUPPELUR ( AKLC0B8)**
**Local River : Kumudavathi**

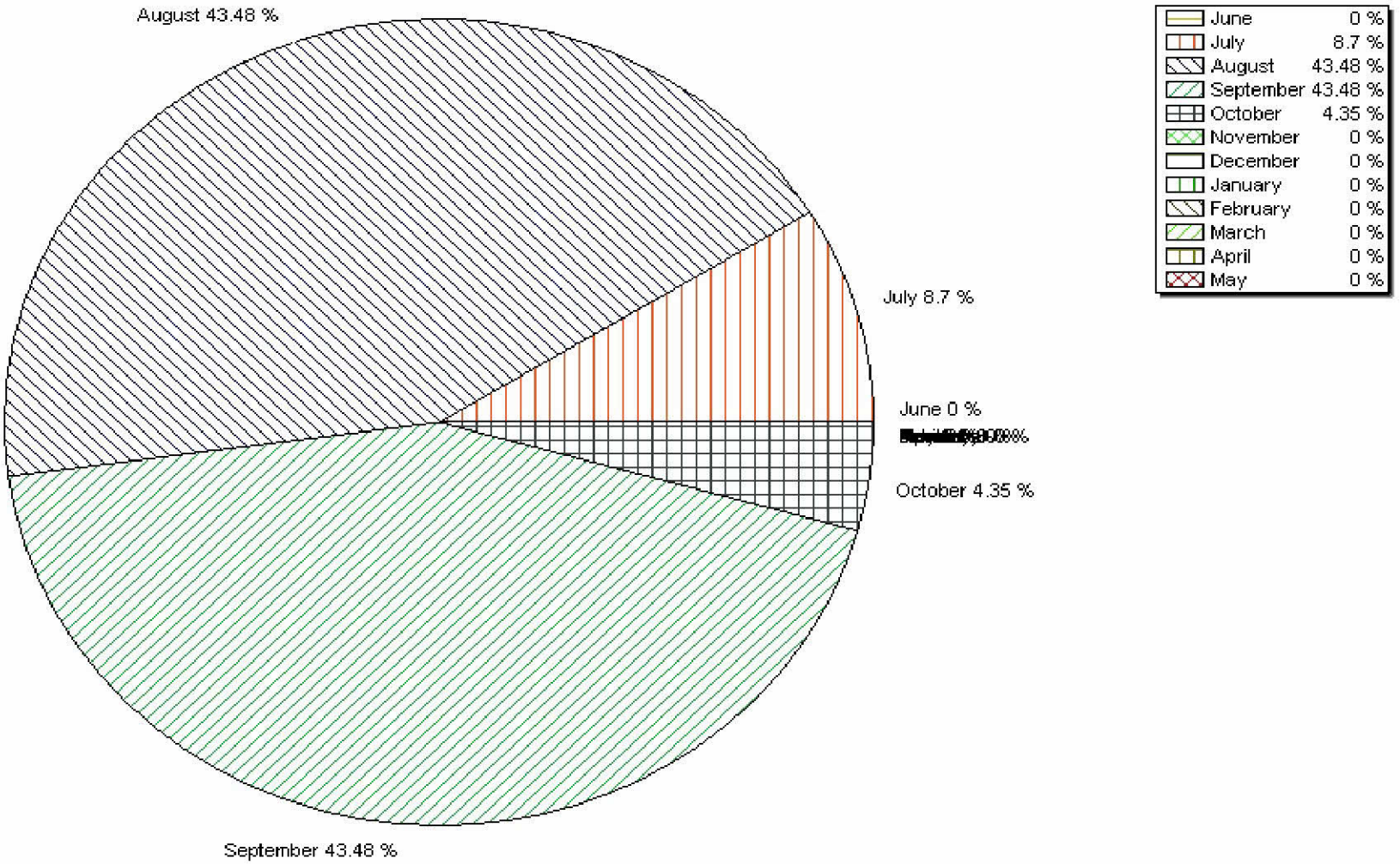
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga SD, Devangere**



**Monthly Runoff for the Year : 2016-2017**

**Station Name : KUPPELUR ( AKLC0B8)**
**Local River : Kumudavathi**

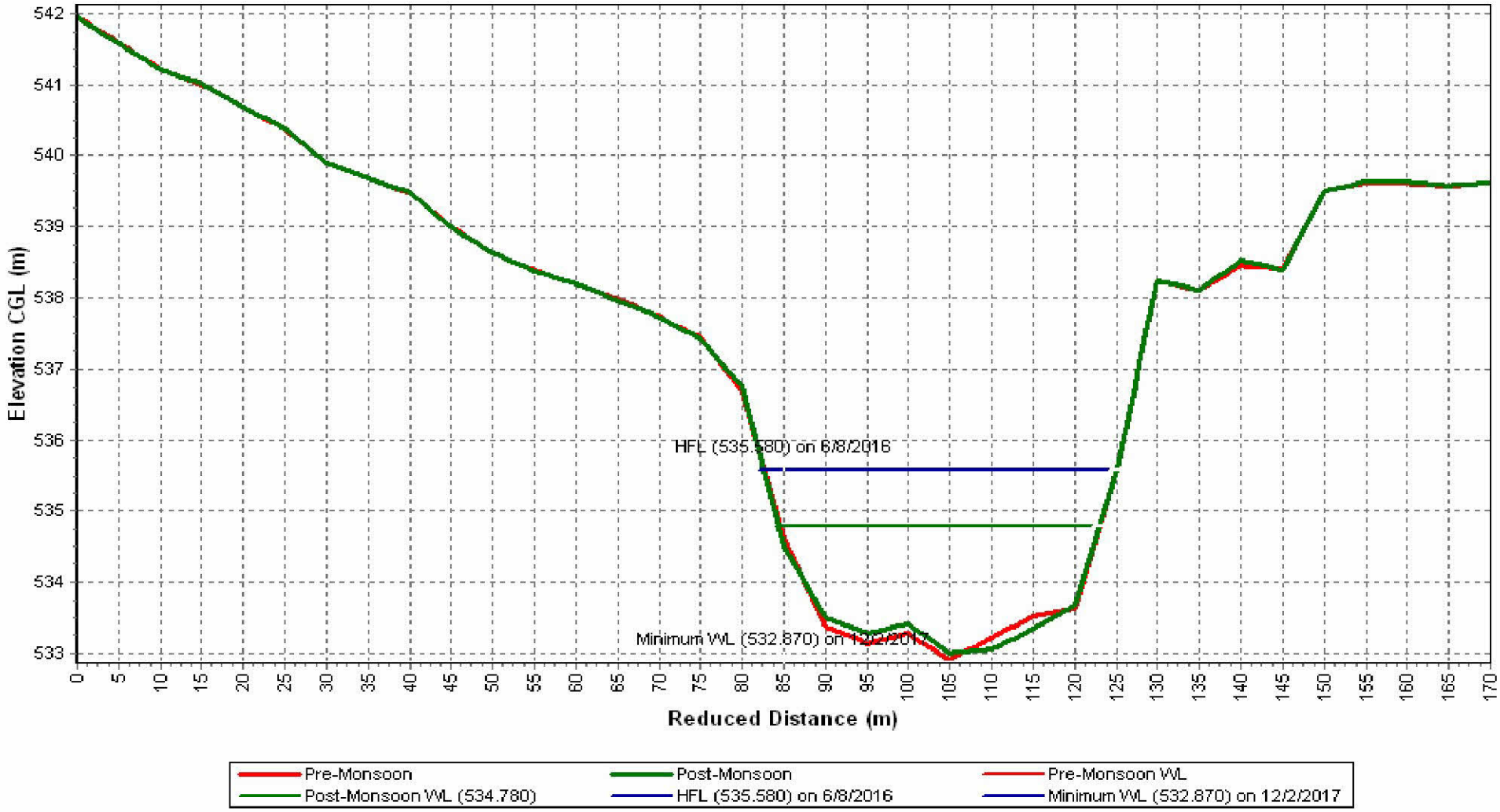
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga SD, Devangere**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : KUPPELUR ( AKLC0B8)** **Division : Cauvery Division, Bangalore**

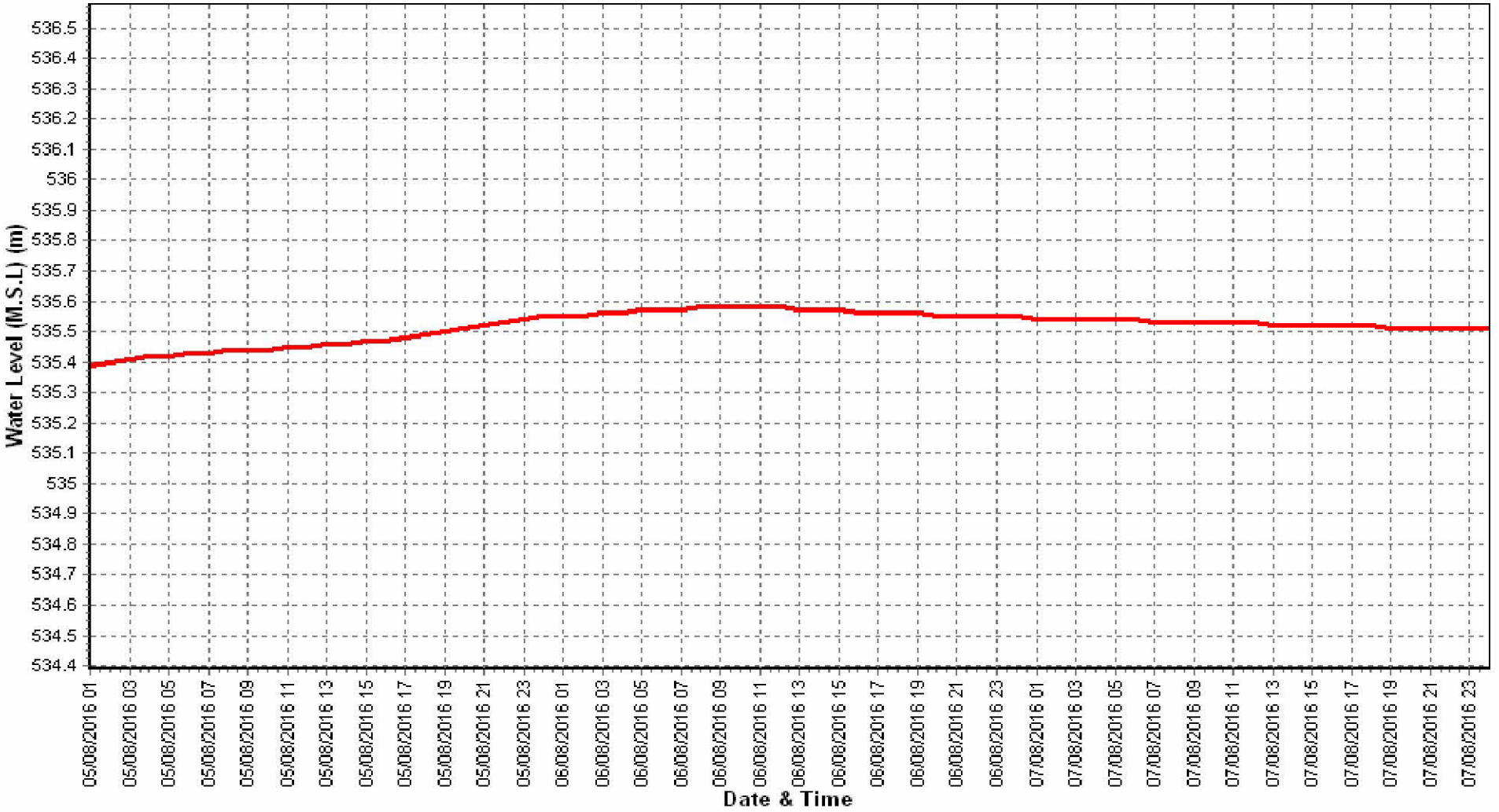
**Local River : Kumudavathi** **Sub-Division : Upper Tunga SD, Devangere**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : KUPPELUR ( AKLC0B8)**
**Local River : Kumudavathi**

**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga SD, Devangere**

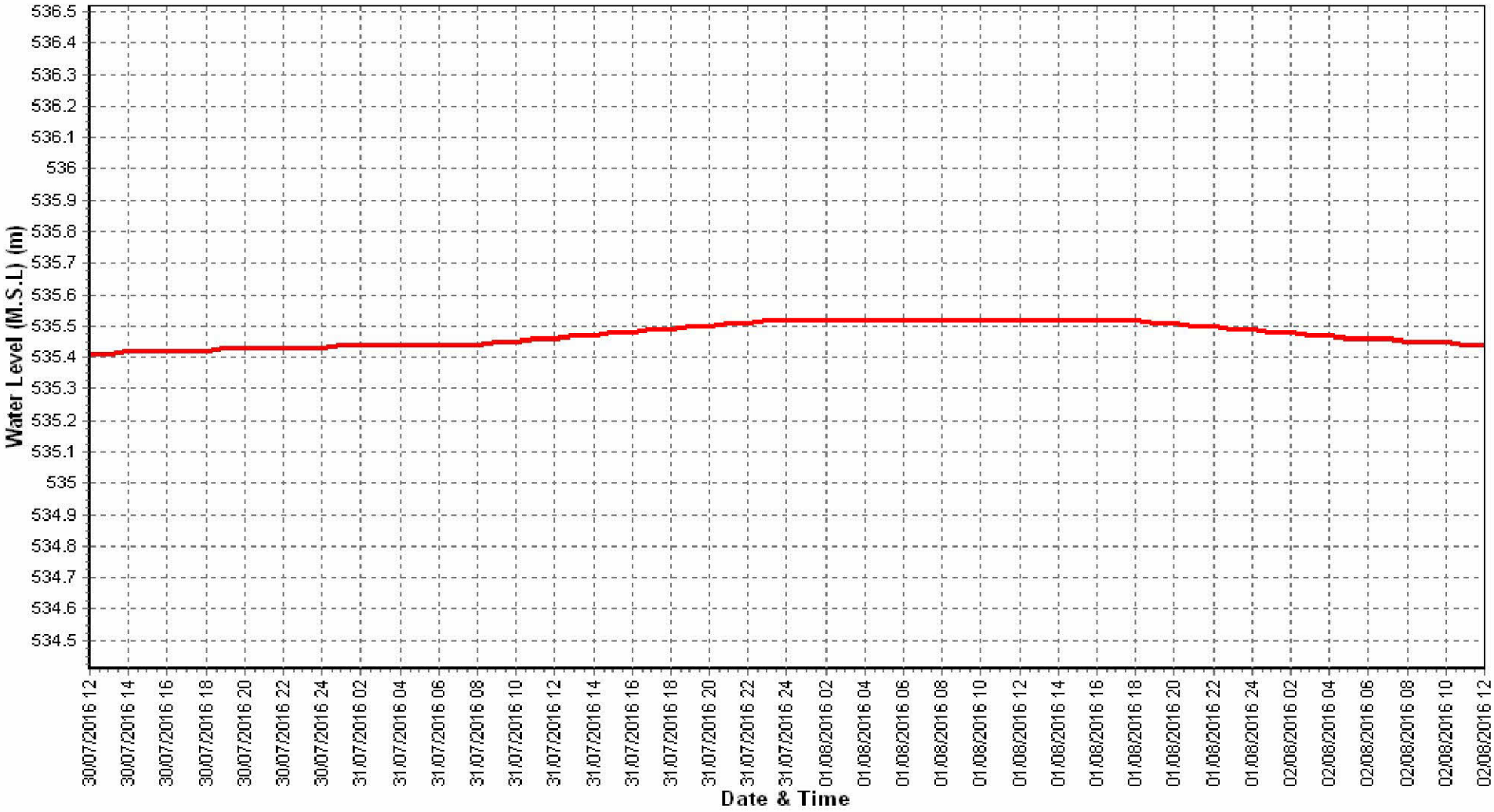



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017

**Station Name : KUPPELUR ( AKLC0B8)** | **Division : Cauvery Division, Bangalore**

**Local River : Kumudavathi** | **Sub-Division : Upper Tunga SD, Devangere**

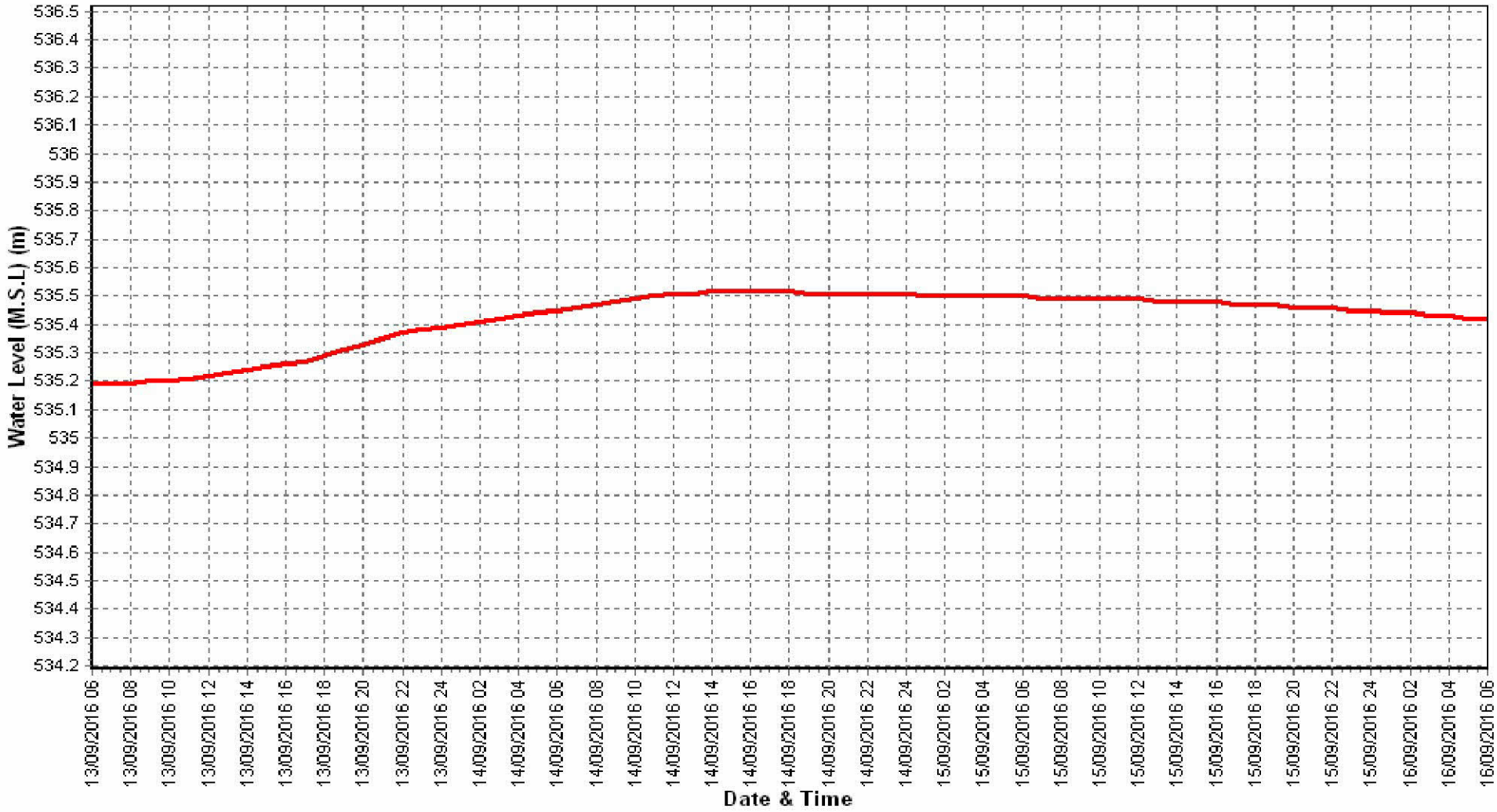



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : KUPPELUR ( AKLC0B8)** **Division : Cauvery Division, Bangalore**

**Local River : Kumudavathi** **Sub-Division : Upper Tunga SD, Devangere**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **HONNALI** | **Code** | : | **AKL00X6** |
| State | : | Karnataka | District | | Davanagere |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | Tungabhadra | Sub Tributary | : | |
| Sub-Sub Tributary | : | | Local River | : | Tungabhadra |
| Division | : | Cauvery Division, Bangalore | Sub-Division | : | Upper Tunga Subdn, Devangere |
| Drainage Area | : | 7075 Sq. Km. | Bank | : | Left |
| Latitude | : | 14°14'14" | Longitude | : | 75°39'45" |
| **Zero of Gauge (m)** | : | 533.9 (m.s.l) | 21/06/1978 | | |
| | | Opening Date | Closing Date | | |
| Gauge | : | 21/06/1978 | **HFL During 2016-17** | : | **542.58m** |
| | | | **Corres. Discharge** | : | **1473(Estimated)** |
| Discharge | : | 06/06/1980 | **Date & Time of** | : | **05/07/2016** |
| | | | **occurance** | : | **23.00 hrs.** |
| Sediment | : | 15/09/1995 | | | |
| 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** |
| 1980-1981 | 3050 | 93.635 | 04/07/1980 | 16.80 | 87.695 | 20/04/1981 |
| 1981-1982 | 2337 | 93.330 | 19/08/1981 | 17.20 | 87.680 | 05/04/1982 |
| 1982-1983 | 4555 | 94.910 | 03/08/1982 | 12.80 | 87.620 | 21/04/1983 |
| 1983-1984 | 2234 | 93.000 | 23/07/1983 | 12.50 | 87.590 | 10/06/1983 |
| 1984-1985 | 3003 | 93.440 | 19/07/1984 | 11.20 | 87.590 | 10/05/1985 |
| 1985-1986 | 1973 | 92.450 | 27/06/1985 | 3.900 | 87.380 | 29/03/1986 |
| 1986-1987 | 2670 | 543.440 | 10/08/1986 | 7.500 | 537.865 | 12/06/1986 |
| 1987-1988 | 1223 | 541.890 | 27/08/1987 | 1.726 | 537.710 | 05/04/1988 |
| 1988-1989 | 2833 | 543.795 | 19/07/1988 | 2.882 | 537.730 | 15/04/1989 |
| 1989-1990 | 2970 | 543.745 | 24/07/1989 | 4.616 | 537.850 | 02/06/1989 |
| 1990-1991 | 2075 | 543.090 | 16/08/1990 | 6.287 | 537.880 | 02/06/1990 |
| 1991-1992 | 3385 | 544.027 | 29/07/1991 | 7.012 | 537.970 | 23/03/1992 |
| 1992-1993 | 3758 | 544.672 | 28/07/1992 | 4.676 | 538.040 | 01/05/1993 |
| 1993-1994 | 1510 | 542.558 | 16/08/1993 | 4.533 | 538.237 | 13/06/1993 |
| 1994-1995 | 6950 | 546.400 | 16/07/1994 | 11.72 | 538.045 | 24/03/1995 |
| 1995-1996 | 1851 | 542.900 | 02/09/1995 | 8.755 | 538.050 | 12/06/1995 |
| 1996-1997 | 1531 | 542.520 | 24/07/1996 | 11.91 | 537.990 | 21/04/1997 |
| 1997-1998 | 3708 | 544.250 | 23/08/1997 | 7.719 | 538.080 | 02/05/1998 |
| 1998-1999 | 2035 | 543.045 | 14/09/1998 | 6.953 | 537.960 | 12/06/1998 |
| 1999-2000 | 3561 | 544.105 | 19/07/1999 | 11.80 | 538.050 | 31/05/2000 |
| 2000-2001 | 2527 | 543.770 | 13/07/2000 | 9.900 | 538.010 | 07/06/2000 |

**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 | 1266 | 542.360 | 09/07/2001 | 4.464 | 537.830 | 23/03/2002 |
| 2002-2003 | 1519 | 542.450 | 18/08/2002 | 0.011 | 537.390 | 26/05/2003 |
| 2003-2004 | 1146 | 541.930 | 24/08/2003 | 0.000 | 537.440 | 23/03/2004 |
| 2004-2005 | 3704 | 544.220 | 27/08/2004 | 5.880 | 537.880 | 17/02/2005 |
| 2005-2006 | 3685 | 544.090 | 17/08/2005 | 5.270 | 537.880 | 11/01/2006 |
| 2006-2007 | 4042 | 544.600 | 13/08/2006 | 3.024 | 537.820 | 13/01/2007 |
| 2007-2008 | 5361 | 546.300 | 07/08/2007 | 3.444 | 537.860 | 14/01/2008 |
| 2008-2009 | 6732 | 545.920 | 14/08/2008 | 0.576 | 537.650 | 08/01/2009 |
| 2009-2010 | 3651 | 544.710 | 17/07/2009 | 10.87 | 538.000 | 29/12/2009 |
| 2010-2011 | 1909 | 542.935 | 29/07/2010 | 15.69 | 538.100 | 19/03/2011 |
| 2011-2012 | 2639 | 543.785 | 02/09/2011 | 4.625 | 537.890 | 09/01/2012 |
| 2012-2013 | 3126 | 544.050 | 08/08/2012 | 3.056 | 537.790 | 17/06/2012 |
| 2013-2014 | 4528 | 544.975 | 03/08/2013 | 11.29 | 537.920 | 08/01/2014 |
| 2014-2015 | 4995 | 545.110 | 07/08/2014 | 11.48 | 537.930 | 20/06/2014 |
| 2015-2016 | 1870 | 543.090 | 20/07/2015 | 12.30 | 537.880 | 15/02/2016 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : HONNALI ( AKL00X6)** **Division : Cauvery Division, Bangalore**

**Local River : Tungabhadra** **Sub-Division : Upper Tunga Subdn, Devangere**

| 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 | 538.050 | 23.84 | 540.210 | 395.9 | 539.840 | 312.8 | 539.620 | 256.0 | 539.440 | 226.9 | 538.360 | 52.60 |
| 2 | 538.050 | 23.59 | 541.120 | 742.1 | 539.740 | 295.3 | 539.710 | 288.6 | 539.370 | 204.6 * | 538.360 | 53.32 |
| 3 | 538.050 | 23.81 | 540.720 | 586.2 * | 540.320 | 422.4 | 539.560 | 239.6 | 538.840 | 116.4 | 538.400 | 61.74 |
| 4 | 538.160 | 31.94 | 541.550 | 942.2 | 539.770 | 302.5 | 539.410 | 212.9 * | 538.870 | 122.4 | 538.400 | 61.98 |
| 5 | 538.060 | 27.09 * | 541.415 | 861.1 | 539.950 | 324.9 | 539.290 | 188.5 * | 538.780 | 103.6 | 538.380 | 55.41 |
| 6 | 538.090 | 28.13 | 541.970 | 1156 | 541.600 | 978.3 | 539.290 | 192.3 | 538.730 | 93.62 | 538.350 | 51.19 * |
| 7 | 538.090 | 28.10 | 540.650 | 561.2 * | 542.200 | 1257 * | 539.060 | 153.6 | 538.710 | 91.05 | 538.310 | 46.15 |
| 8 | 538.090 | 28.50 | 540.890 | 614.9 | 541.875 | 1136 | 539.180 | 181.2 | 538.680 | 87.05 | 538.310 | 46.99 |
| 9 | 538.335 | 48.11 | 540.200 | 387.0 | 540.720 | 534.3 | 539.090 | 159.8 | 538.710 | 92.81 * | 538.280 | 44.00 |
| 10 | 538.390 | 54.95 | 539.960 | 345.4 * | 540.780 | 580.7 | 538.990 | 138.2 | 538.700 | 90.09 | 538.280 | 43.56 |
| 11 | 538.600 | 80.12 | 539.880 | 318.3 | 540.550 | 502.8 | 538.880 | 117.1 * | 538.740 | 96.88 * | 538.340 | 50.88 |
| 12 | 538.410 | 57.21 * | 541.390 | 840.4 | 540.360 | 432.1 | 538.880 | 123.9 | 538.880 | 117.1 * | 538.380 | 55.66 |
| 13 | 538.260 | 41.29 | 540.900 | 613.2 | 540.380 | 462.2 | 538.800 | 105.3 * | 538.810 | 114.1 | 538.400 | 56.18 * |
| 14 | 538.160 | 31.72 | 540.600 | 510.7 | 541.050 | 712.3 * | 538.900 | 128.4 | 539.050 | 151.5 | 538.410 | 57.21 * |
| 15 | 538.160 | 31.29 | 540.360 | 428.8 | 540.530 | 519.6 * | 538.850 | 118.0 | 539.090 | 158.9 | 538.440 | 68.81 |
| 16 | 538.160 | 31.67 | 540.000 | 351.8 | 539.980 | 330.3 | 538.950 | 133.7 | 539.000 | 136.1 * | 538.470 | 72.29 |
| 17 | 538.050 | 23.54 | 539.970 | 348.1 * | 540.235 | 401.4 | 539.030 | 143.1 | 538.840 | 118.9 | 538.660 | 84.45 |
| 18 | 538.050 | 23.59 | 539.820 | 300.7 | 540.280 | 412.8 | 539.140 | 160.3 * | 538.675 | 85.08 | 538.570 | 79.32 |
| 19 | 538.000 | 23.11 * | 539.310 | 195.4 | 540.480 | 463.6 | 539.060 | 153.5 | 538.680 | 85.98 | 538.510 | 73.96 |
| 20 | 538.050 | 23.50 | 539.480 | 231.5 | 540.080 | 350.4 | 539.000 | 140.7 | 538.580 | 81.87 | 538.470 | 63.59 * |
| 21 | 538.140 | 30.57 | 539.080 | 155.9 | 540.000 | 356.4 * | 539.030 | 145.9 | 538.560 | 78.49 | 538.540 | 76.49 |
| 22 | 538.140 | 30.35 | 539.660 | 272.1 | 539.745 | 293.6 | 538.960 | 134.7 | 538.540 | 76.30 | 538.560 | 79.34 |
| 23 | 538.010 | 22.73 | 539.370 | 208.4 | 539.685 | 274.7 | 538.975 | 137.1 | 538.500 | 66.92 * | 538.470 | 72.34 |
| 24 | 538.010 | 22.65 | 539.820 | 308.4 * | 539.720 | 290.3 | 539.350 | 205.3 | 538.410 | 63.03 | 538.400 | 62.39 |
| 25 | 538.010 | 22.71 | 539.810 | 304.9 | 540.290 | 416.2 | 539.330 | 196.5 * | 538.390 | 59.73 | 538.260 | 42.93 |
| 26 | 537.980 | 21.86 * | 539.380 | 213.3 | 540.010 | 338.5 | 539.510 | 230.8 | 538.390 | 59.82 | 538.260 | 42.67 |
| 27 | 537.970 | 18.67 | 539.360 | 208.5 | 539.760 | 299.0 | 540.010 | 337.3 | 538.390 | 59.11 | 538.220 | 39.37 * |
| 28 | 538.910 | 129.3 | 539.440 | 227.8 | 539.620 | 259.4 * | 539.600 | 253.3 | 538.380 | 55.50 | 538.200 | 37.12 |
| 29 | 539.000 | 140.6 | 539.260 | 188.4 | 539.550 | 237.7 | 539.710 | 288.9 | 538.350 | 51.19 * | 538.180 | 34.81 |
| 30 | 542.220 | 1261 | 539.300 | 194.9 | 539.520 | 232.5 | 539.550 | 237.7 | 538.340 | 50.22 * | 538.180 | 34.73 |
| 31 | | | 539.550 | 243.4 * | 539.520 | 232.8 | | | 538.340 | 50.71 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 538.137 | 31.80 | 540.869 | 659.2 | 540.680 | 614.4 | 539.320 | 201.1 | 538.883 | 122.9 | 538.343 | 51.69 |
| II Ten-Daily | 538.190 | 36.70 | 540.171 | 413.9 | 540.393 | 458.7 | 538.949 | 132.4 | 538.835 | 114.6 | 538.465 | 66.23 |
| III Ten-Daily | 538.639 | 170.1 | 539.457 | 229.6 | 539.765 | 293.7 | 539.402 | 216.7 | 538.417 | 61.00 | 538.327 | 52.22 |
| Monthly | | | | | | | | | | | | |
| Min. | 537.970 | 18.67 | 539.080 | 155.9 | 539.520 | 232.5 | 538.800 | 105.3 | 538.340 | 50.22 | 538.180 | 34.73 |
| Max. | 542.220 | 1261 | 541.970 | 1156 | 542.200 | 1257 | 540.010 | 337.3 | 539.440 | 226.9 | 538.660 | 84.45 |
| Mean | 538.322 | 79.52 | 540.143 | 427.6 | 540.263 | 450.4 | 539.224 | 183.4 | 538.702 | 98.26 | 538.378 | 56.72 |

**Annual Runoff in MCM = 3900** **Annual Runoff in mm = 551**

**Peak Observed Discharge = 1261 cumecs on 30/06/2016** **Corres. Water Level :542.22 m**

**Lowest Observed Discharge = 5.295 cumecs on 06/05/2017** **Corres. Water Level :537.48 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 2016 - 2017

**Station Name : HONNALI ( AKL00X6)** **Division : Cauvery Division, Bangalore**

**Local River : Tungabhadra** **Sub-Division : Upper Tunga Subdn, Devangere**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 538.100 | 28.14 | 537.960 | 20.62 * | 537.680 | 7.766 | 537.960 | 19.13 | 538.460 | 70.44 | 537.500 | 5.874 |
| 2 | 538.100 | 28.17 | 537.950 | 18.62 | 537.680 | 7.661 | 537.940 | 17.94 | 538.350 | 50.66 * | 537.500 | 5.838 |
| 3 | 538.100 | 28.22 | 537.910 | 16.89 | 537.680 | 7.651 | 537.870 | 14.54 | 538.270 | 42.68 | 537.500 | 5.814 |
| 4 | 538.030 | 24.93 * | 537.910 | 16.64 | 538.200 | 38.61 | 537.870 | 14.42 | 538.270 | 42.59 | 537.500 | 5.713 |
| 5 | 538.100 | 28.33 | 537.910 | 16.85 | 538.210 | 38.15 * | 537.770 | 11.19 * | 538.270 | 42.05 | 537.480 | 5.324 |
| 6 | 538.140 | 30.58 | 537.910 | 16.77 | 538.335 | 49.56 | 537.740 | 9.964 | 538.270 | 42.15 | 537.480 | 5.295 |
| 7 | 538.140 | 30.40 | 537.910 | 16.72 | 538.450 | 70.02 | 537.740 | 9.953 | 538.120 | 29.20 | 538.340 | 49.17 * |
| 8 | 538.140 | 30.14 | 537.860 | 15.25 * | 538.470 | 73.55 | 537.630 | 7.254 | 538.120 | 29.26 | 538.540 | 76.97 |
| 9 | 538.140 | 30.12 | 537.830 | 14.06 | 538.470 | 73.46 | 537.630 | 7.157 | 537.870 | 15.75 * | 538.570 | 79.48 |
| 10 | 538.140 | 30.19 | 537.830 | 14.19 | 538.480 | 75.70 | 537.630 | 7.114 | 537.870 | 14.50 | 538.570 | 70.78 * |
| 11 | 538.120 | 31.14 * | 537.830 | 14.18 | 538.400 | 63.10 | 537.630 | 7.135 | 537.870 | 14.37 | 538.500 | 72.43 |
| 12 | 538.110 | 30.41 * | 537.830 | 14.40 | 538.430 | 58.72 * | 537.840 | 14.29 * | 537.670 | 9.210 | 538.500 | 72.13 |
| 13 | 538.090 | 27.18 | 537.830 | 14.27 | 538.510 | 73.87 | 537.820 | 14.02 | 537.670 | 9.662 | 538.530 | 74.51 |
| 14 | 538.090 | 27.53 | 537.830 | 14.19 | 538.510 | 74.02 | 537.820 | 14.16 | 537.570 | 6.887 * | 538.520 | 65.71 * |
| 15 | 538.080 | 25.75 | 537.980 | 21.80 * | 538.500 | 72.27 | 537.820 | 13.90 | 537.520 | 6.703 | 538.560 | 78.59 |
| 16 | 538.080 | 28.42 | 537.960 | 19.82 | 538.500 | 72.01 | 537.650 | 8.011 | 537.520 | 5.576 * | 538.530 | 74.02 |
| 17 | 538.080 | 26.03 | 537.960 | 19.60 | 538.500 | 72.38 | 537.650 | 8.179 | 537.510 | 6.161 | 538.530 | 74.41 |
| 18 | 538.100 | 29.69 * | 537.960 | 19.97 | 538.460 | 70.45 | 537.650 | 8.271 | 537.510 | 6.144 | 538.500 | 71.84 |
| 19 | 538.120 | 29.14 | 537.960 | 19.60 | 538.160 | 34.16 * | 537.890 | 16.77 * | 537.510 | 6.218 | 538.300 | 45.49 |
| 20 | 538.120 | 29.06 | 538.020 | 23.63 | 538.020 | 23.72 | 537.880 | 15.04 | 537.500 | 5.875 | 538.300 | 45.09 |
| 21 | 538.120 | 29.00 | 538.020 | 23.53 | 538.020 | 23.43 | 537.880 | 15.20 | 537.700 | 8.669 | 538.240 | 41.14 * |
| 22 | 538.120 | 29.08 | 538.020 | 24.28 * | 538.020 | 23.53 | 537.880 | 14.93 | 537.700 | 8.556 | 538.080 | 26.13 |
| 23 | 538.020 | 23.31 | 537.950 | 18.89 | 538.020 | 23.81 | 538.600 | 81.65 | 537.650 | 9.316 * | 538.080 | 26.37 |
| 24 | 538.020 | 23.66 | 537.910 | 16.81 | 537.940 | 19.48 * | 538.600 | 81.80 | 537.630 | 7.246 | 538.080 | 26.31 |
| 25 | 538.040 | 25.58 * | 537.910 | 16.79 | 537.810 | 13.41 | 538.600 | 81.28 | 537.630 | 7.189 | 538.000 | 21.74 |
| 26 | 538.000 | 21.03 | 537.810 | 12.91 * | 537.800 | 12.47 * | 538.580 | 75.67 * | 537.630 | 7.152 | 538.000 | 21.60 |
| 27 | 538.000 | 21.11 | 537.770 | 10.62 | 537.810 | 13.32 | 538.580 | 79.79 | 537.550 | 6.434 | 538.000 | 21.80 |
| 28 | 538.000 | 21.52 | 537.770 | 10.71 | 537.810 | 13.39 | 538.580 | 79.68 | 537.550 | 6.410 | 537.960 | 22.84 * |
| 29 | 538.000 | 21.40 | 537.720 | 9.230 * | | | 538.520 | 68.60 * | 537.550 | 6.298 | 537.910 | 17.29 |
| 30 | 537.960 | 19.06 | 537.700 | 8.402 | | | 538.540 | 76.57 | 537.520 | 5.576 * | 537.910 | 17.14 |
| 31 | 537.960 | 19.44 | 537.700 | 8.245 | | | 538.570 | 78.43 | | | 537.910 | 17.13 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 538.113 | 28.92 | 537.898 | 16.66 | 538.165 | 44.21 | 537.778 | 11.87 | 538.187 | 37.93 | 537.898 | 31.03 |
| II Ten-Daily | 538.099 | 28.44 | 537.916 | 18.14 | 538.399 | 61.47 | 537.765 | 11.98 | 537.585 | 7.681 | 538.477 | 67.42 |
| III Ten-Daily | 538.022 | 23.11 | 537.844 | 14.58 | 537.904 | 17.85 | 538.448 | 66.69 | 537.611 | 7.284 | 538.016 | 23.59 |
| Monthly | | | | | | | | | | | | |
| Min. | 537.960 | 19.06 | 537.700 | 8.245 | 537.680 | 7.651 | 537.630 | 7.114 | 537.500 | 5.576 | 537.480 | 5.295 |
| Max. | 538.140 | 31.14 | 538.020 | 24.28 | 538.510 | 75.70 | 538.600 | 81.80 | 538.460 | 70.44 | 538.570 | 79.48 |
| Mean | 538.076 | 26.7 | 537.885 | 16.4 | 538.174 | 42.84 | 538.012 | 31.36 | 537.794 | 17.63 | 538.126 | 40.13 |

**Peak Computed Discharge = 1257 cumecs on 07/08/2016** **Corres. Water Level :542.2 m**

**Lowest Computed Discharge = 5.576 cumecs on 16/04/2017** **Corres. Water Level :537.52 m**

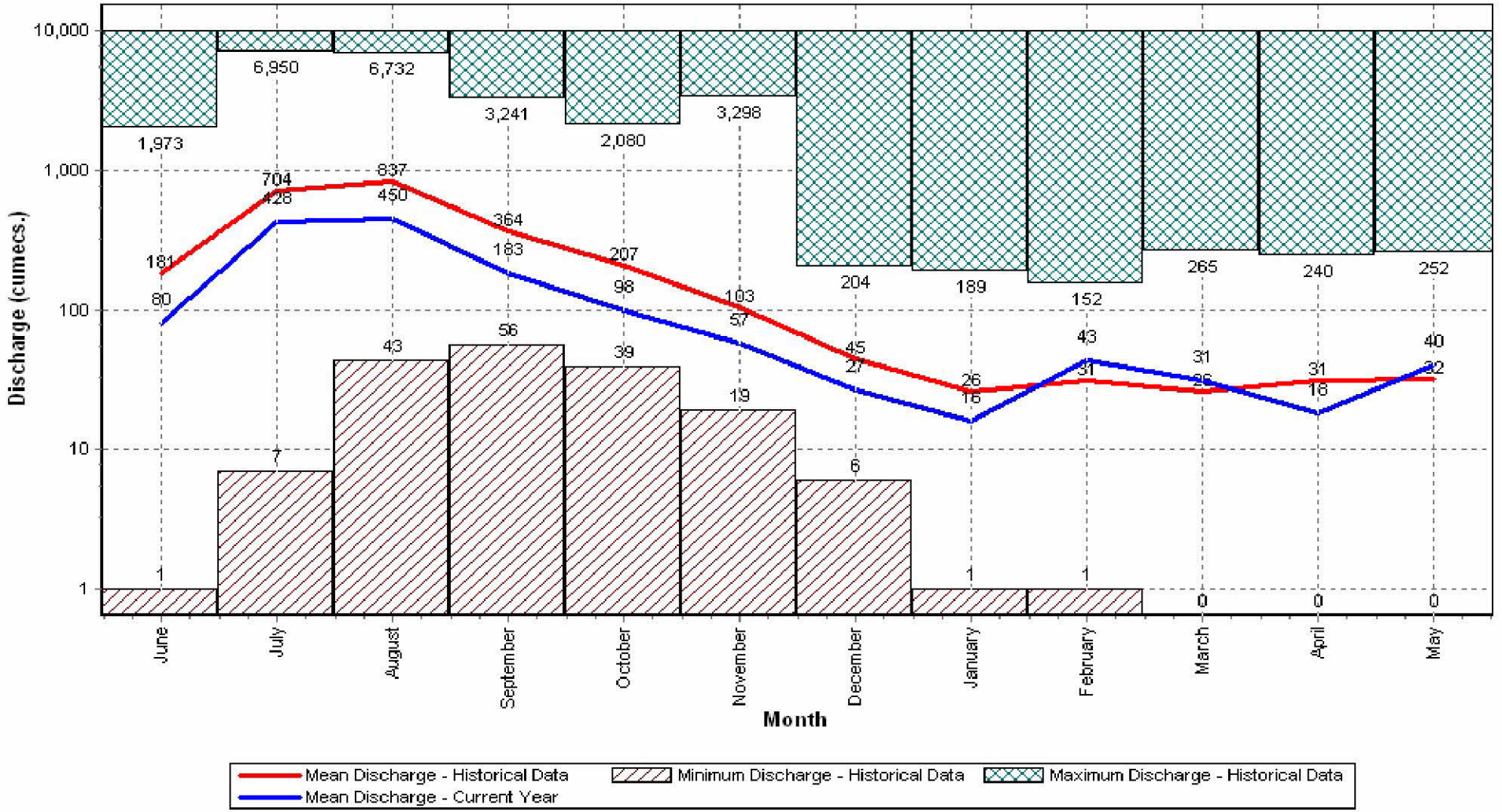
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : HONNALI ( AKL00X6)** | **Data considered : 1980-2017** | **Division : Cauvery Division, Bangalore**

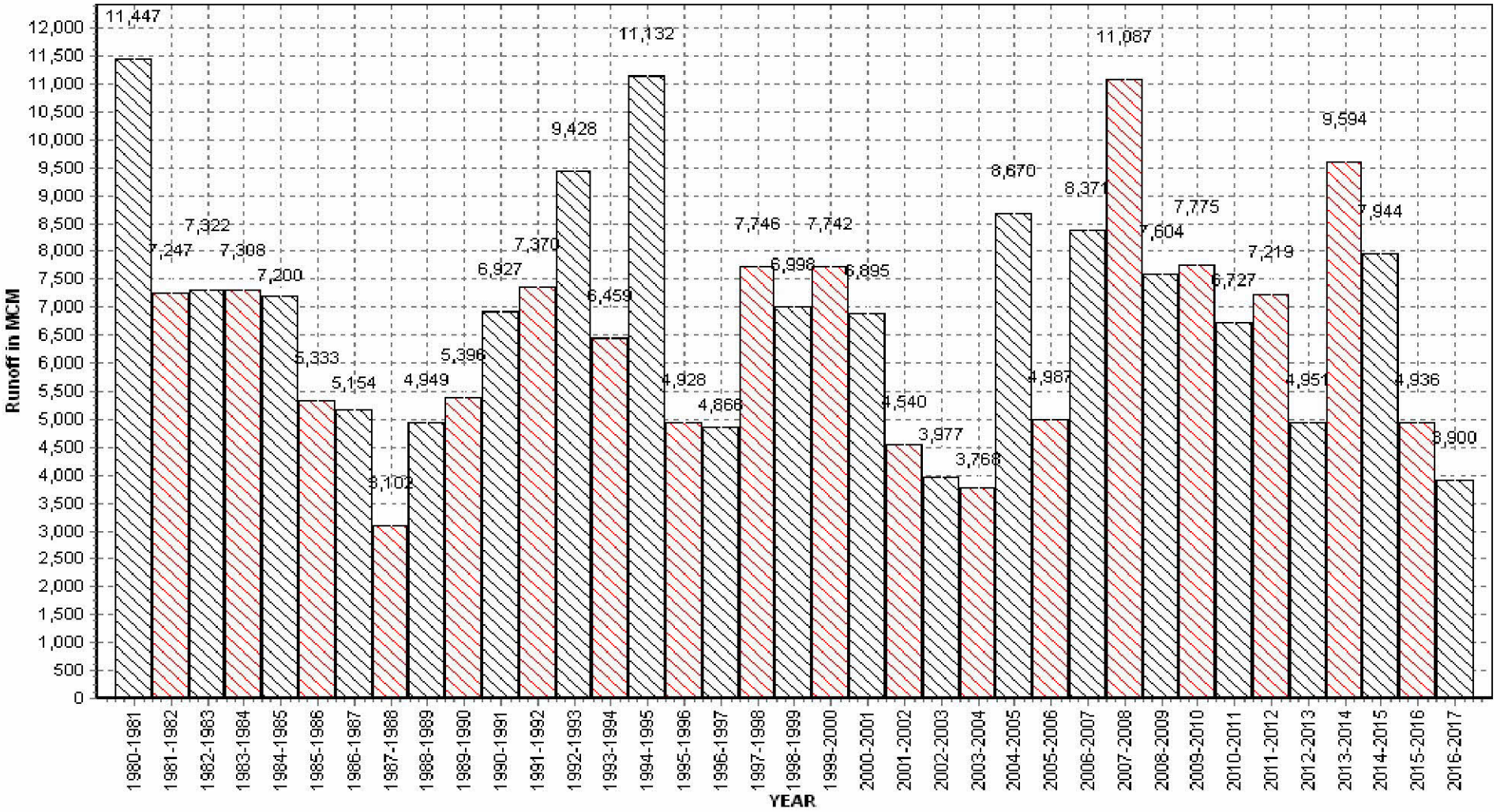
**Local River : Tungabhadra** | **Sub-Division : Upper Tunga Subdn, Devangere**



**Annual Runoff Values for the period: 1980 - 2017**

**Station Name : HONNALI ( AKL00X6)**
**Local River : Tungabhadra**

**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**

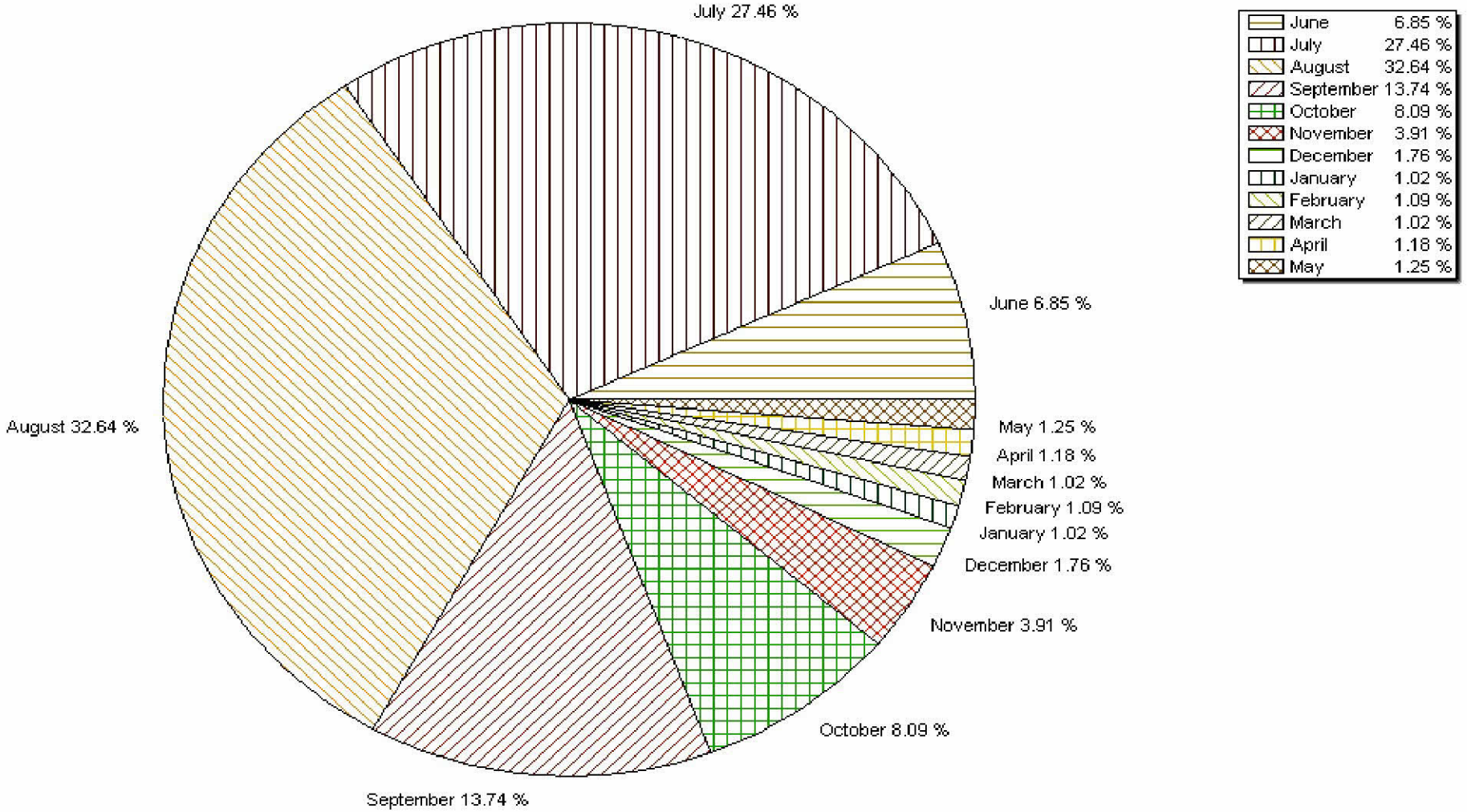



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1980-2016**

**Station Name : HONNALI ( AKL00X6)**
**Local River : Tungabhadra**

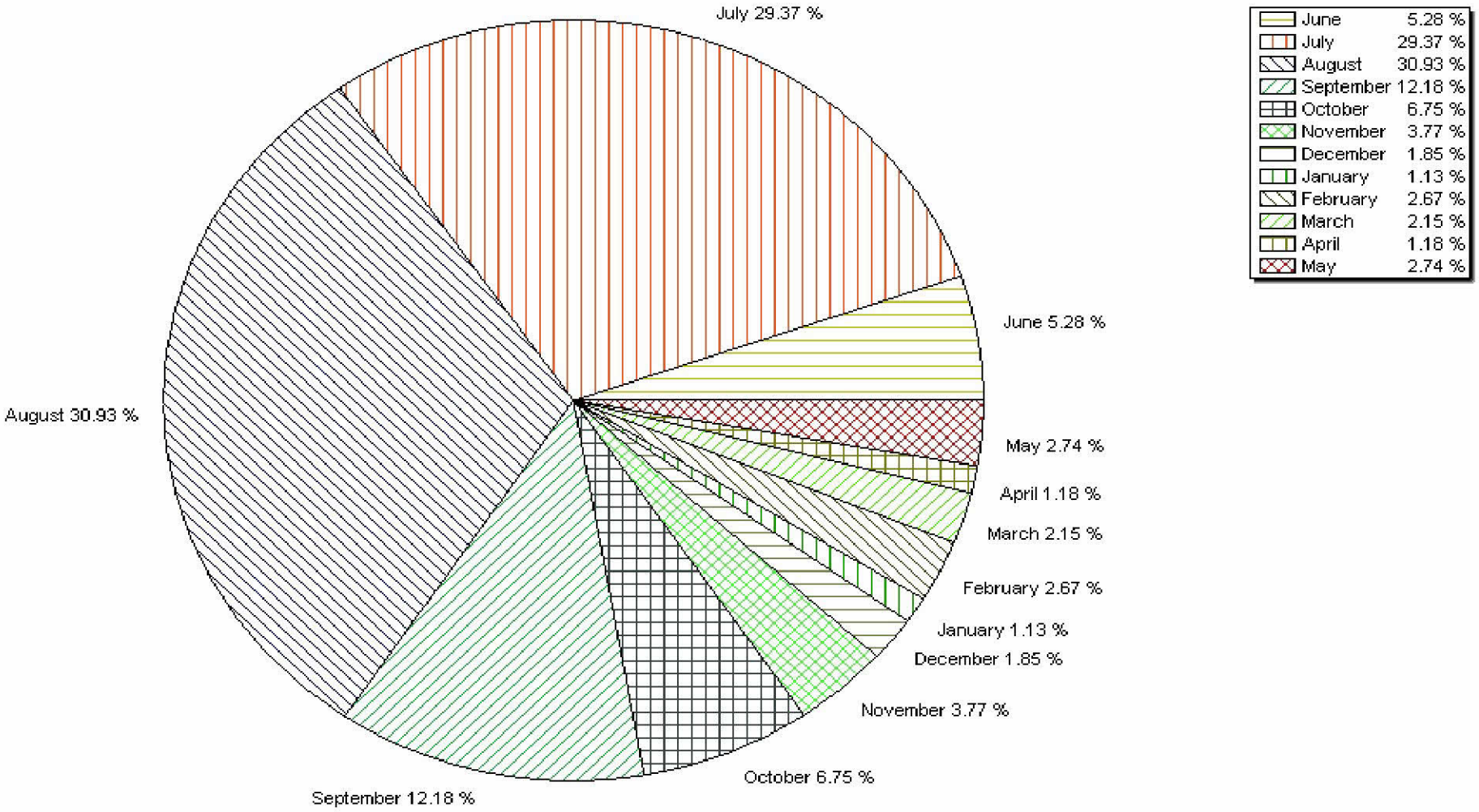
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**



**Monthly Runoff for the Year : 2016-2017**

**Station Name : HONNALI ( AKL00X6)**
**Local River : Tungabhadra**

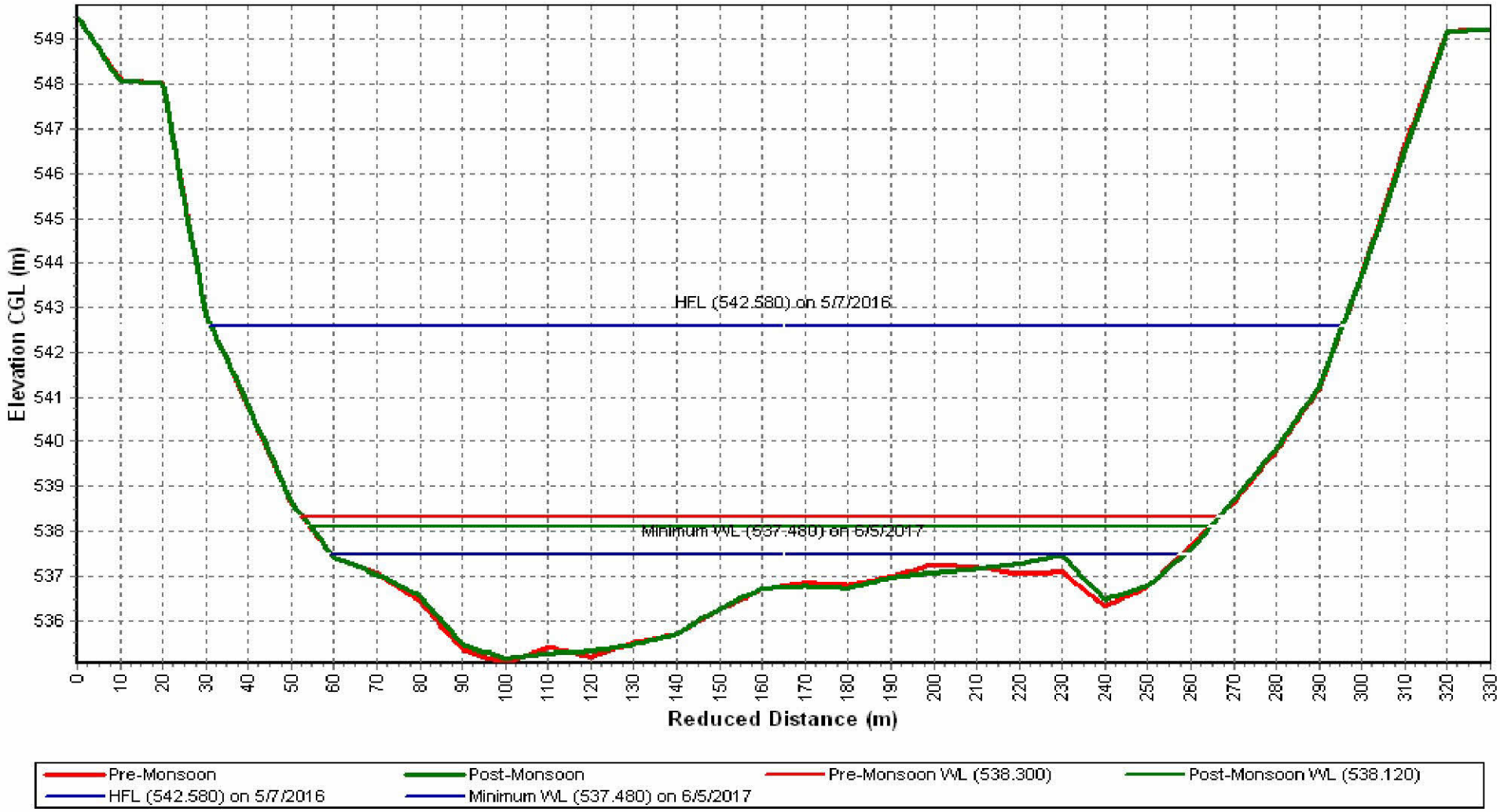
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : HONNALI ( AKL00X6)**
**Local River : Tungabhadra**

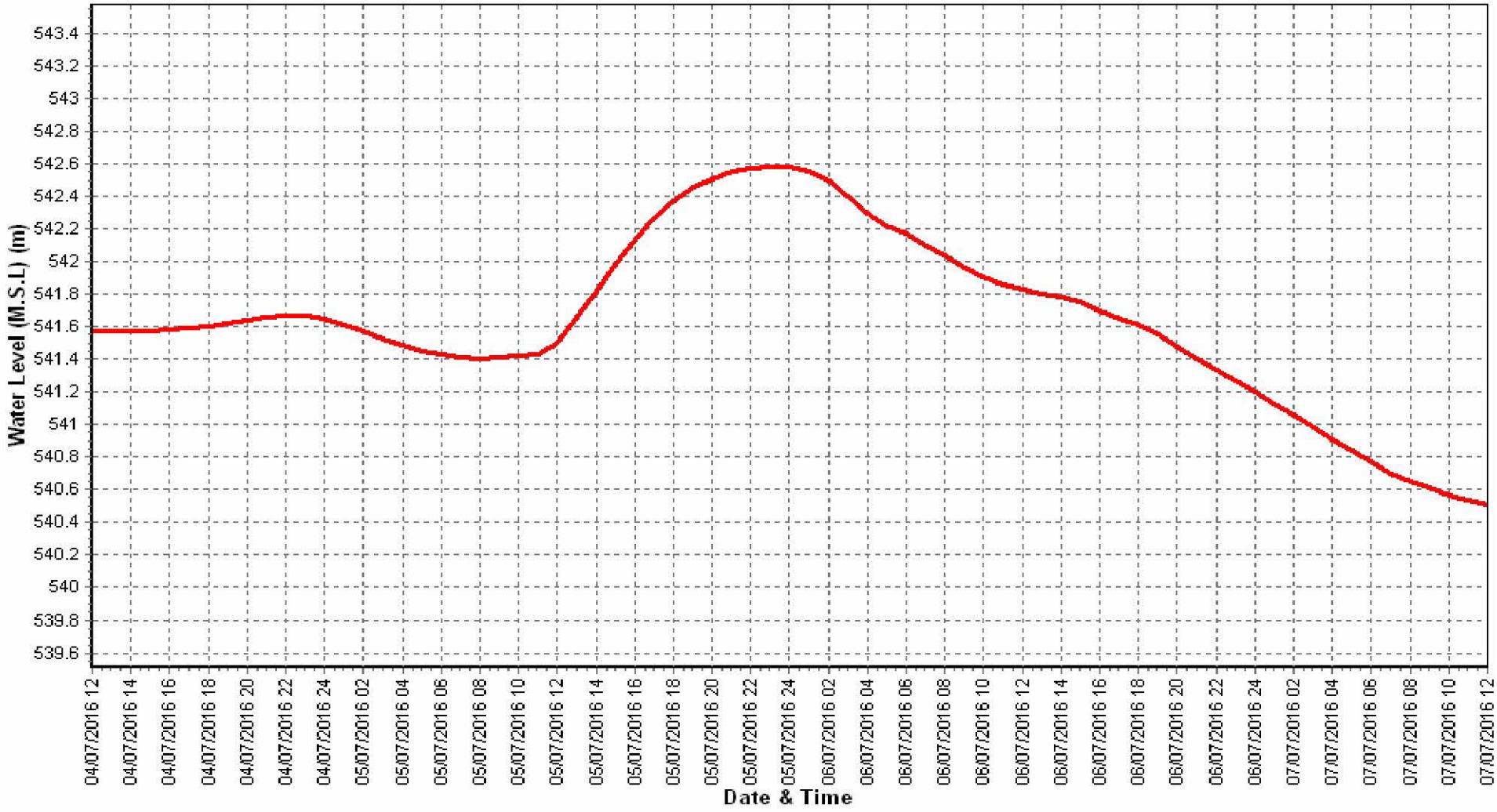
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**



**Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017**

**Station Name : HONNALI ( AKL00X6)** **Division : Cauvery Division, Bangalore**

**Local River : Tungabhadra** **Sub-Division : Upper Tunga Subdn, Devangere**

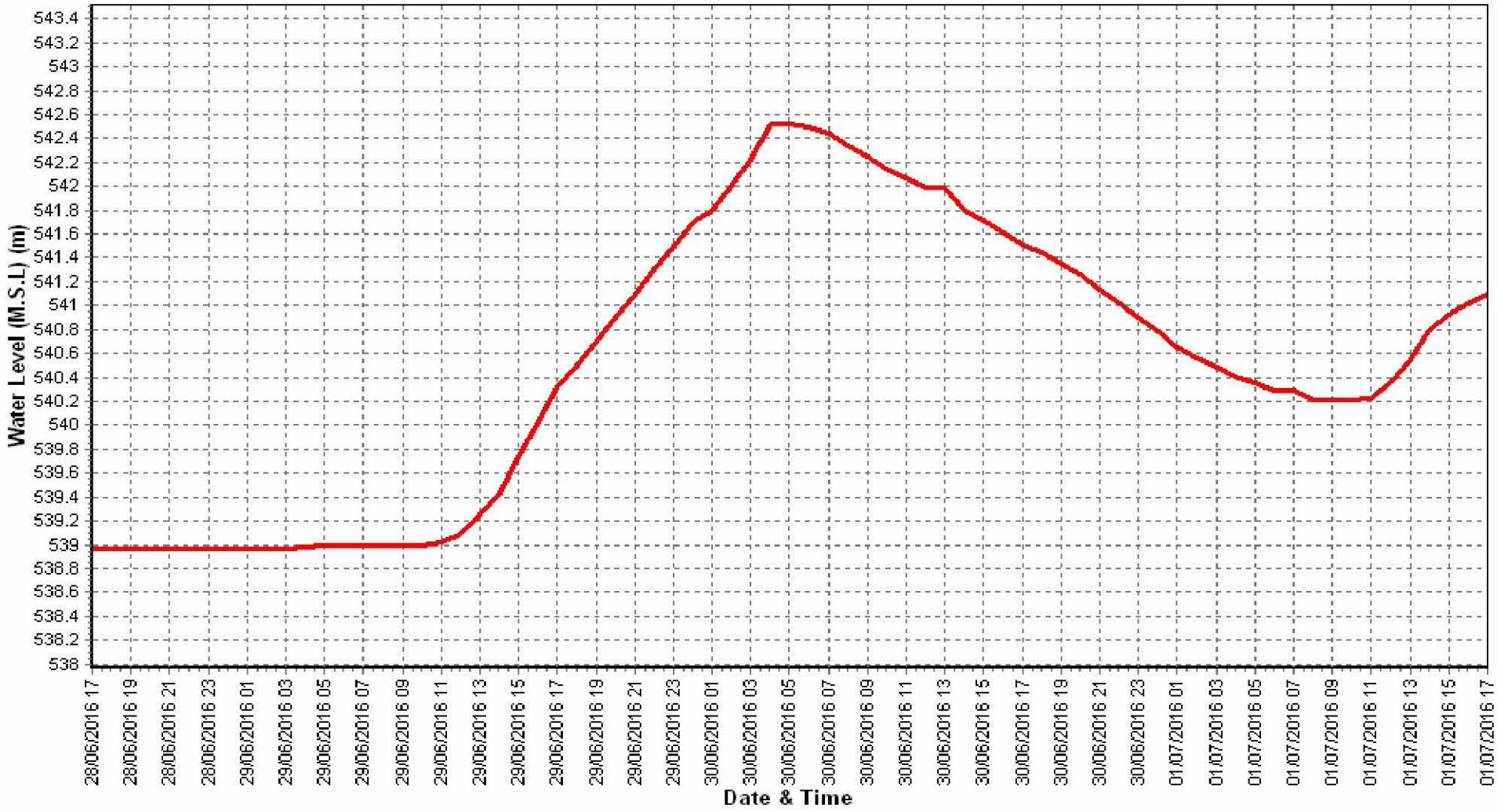



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : HONNALI ( AKL00X6)** **Division : Cauvery Division, Bangalore**

**Local River : Tungabhadra** **Sub-Division : Upper Tunga Subdn, Devangere**

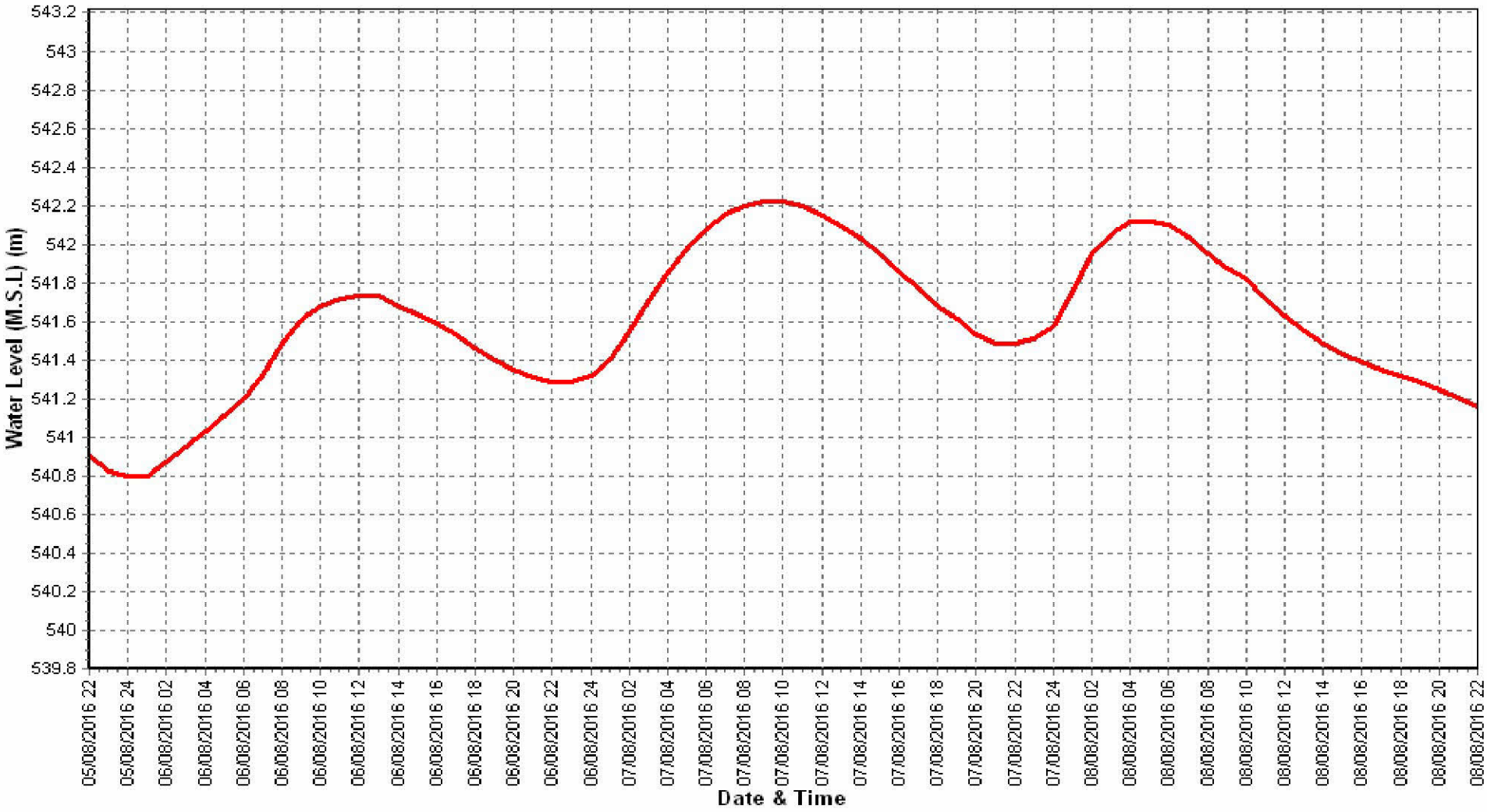



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : HONNALI ( AKL00X6)** **Division : Cauvery Division, Bangalore**

**Local River : Tungabhadra** **Sub-Division : Upper Tunga Subdn, Devangere**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **SHIMOGA** | **Code** | : | **AKLD0C6** |
| State | : | Karnataka | District | | Shimoga |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | Tungabhadra | Sub Tributary | : | |
| Sub-Sub Tributary | : | | Local River | : | Tunga |
| Division | : | Cauvery Division, Bangalore | Sub-Division | : | Upper Tunga Subdn, Devangere |
| Drainage Area | : | 2831 Sq. Km. | Bank | : | Right |
| Latitude | : | 13°55'37" | Longitude | : | 75°35'06" |
| **Zero of Gauge (m)** | : | 556.5 (m.s.l) | 21/06/1971 | | |
| | | Opening Date | Closing Date | | |
| Gauge | : | 21/06/1971 | **HFL During 2016-17** | : | **566.09m** |
| | | | **Corres. Discharge** | : | **1843(Estimated)** |
| Discharge | : | 22/01/1972 | **Date & Time of** | : | **29/06/2016** |
| | | | **occurance** | : | **17.00 hrs.** |
| Sediment | : | 14/09/1972 | | | |
| Water Quality | : | 01/01/1973 | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1972-1973 | 1822 | 562.165 | 08/07/1972 | 1.700 | 557.170 | 09/04/1973 |
| 1973-1974 | 2623 | 562.895 | 09/07/1973 | 1.900 | 557.230 | 17/04/1974 |
| 1974-1975 | 2512 | 562.865 | 26/07/1974 | 1.800 | 557.250 | 26/05/1975 |
| 1975-1976 | 2587 | 563.290 | 11/07/1975 | 1.700 | 557.250 | 31/05/1976 |
| 1976-1977 | 1752 | 562.263 | 23/07/1976 | 1.900 | 557.270 | 01/06/1976 |
| 1977-1978 | 1829 | 561.730 | 25/07/1977 | 0.400 | 557.210 | 31/05/1978 |
| 1978-1979 | 3130 | 563.455 | 26/07/1978 | 0.100 | 557.160 | 04/06/1978 |
| 1979-1980 | 2196 | 562.680 | 03/08/1979 | 0.400 | 557.155 | 10/03/1980 |
| 1980-1981 | 2346 | 563.411 | 03/07/1980 | 0.400 | 557.120 | 25/04/1981 |
| 1981-1982 | 2326 | 562.874 | 19/08/1981 | 0.300 | 557.110 | 18/04/1982 |
| 1982-1983 | 4124 | 564.760 | 03/08/1982 | 0.000 | 557.000 | 03/05/1983 |
| 1983-1984 | 2588 | 563.170 | 23/07/1983 | 0.000 | 557.040 | 10/06/1983 |
| 1984-1985 | 2907 | 563.420 | 19/07/1984 | 0.800 | 557.180 | 06/05/1985 |
| 1985-1986 | 2034 | 562.590 | 27/06/1985 | 0.600 | 557.170 | 29/05/1986 |
| 1986-1987 | 2452 | 562.910 | 10/08/1986 | 0.000 | 557.120 | 04/05/1987 |
| 1987-1988 | 1146 | 561.070 | 09/07/1987 | 0.370 | 557.140 | 02/03/1988 |
| 1988-1989 | 2513 | 563.080 | 19/07/1988 | 0.230 | 557.080 | 31/05/1989 |
| 1989-1990 | 2687 | 563.265 | 25/07/1989 | 0.000 | 557.100 | 14/04/1990 |
| 1990-1991 | 2141 | 562.570 | 18/08/1990 | 0.069 | 557.090 | 18/03/1991 |
| 1991-1992 | 2715 | 563.258 | 28/07/1991 | 0.027 | 557.083 | 03/04/1992 |
| 1992-1993 | 2238 | 562.658 | 27/07/1992 | 0.947 | 557.232 | 02/06/1992 |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| Year | Q (cumecs) | WL (m) | Date | Q (cumecs) | WL (m) | Date |
| 1993-1994 | 1622 | 561.749 | 16/08/1993 | 0.167 | 557.187 | 13/03/1994 |
| 1994-1995 | 3080 | 563.950 | 16/07/1994 | 0.194 | 557.150 | 07/04/1995 |
| 1995-1996 | 1820 | 562.075 | 01/09/1995 | 0.000 | 557.030 | 08/05/1996 |
| 1996-1997 | 1546 | 561.650 | 24/07/1996 | 0.000 | 557.060 | 11/06/1996 |
| 1997-1998 | 2890 | 563.400 | 08/08/1997 | 0.000 | 557.180 | 04/05/1998 |
| 1998-1999 | 1890 | 562.240 | 04/07/1998 | 0.451 | 557.240 | 22/04/1999 |
| 1999-2000 | 3215 | 563.460 | 19/07/1999 | 0.286 | 557.240 | 04/04/2000 |
| 2000-2001 | 3020 | 563.340 | 14/07/2000 | 0.000 | 557.150 | 03/04/2001 |
| 2001-2002 | 1367 | 561.435 | 09/07/2001 | 0.000 | 557.150 | 06/04/2002 |
| 2002-2003 | 1539 | 561.430 | 18/08/2002 | 0.000 | 557.170 | 14/04/2003 |
| 2003-2004 | 1314 | 561.140 | 24/06/2003 | 0.000 | 557.160 | 08/04/2004 |
| 2004-2005 | 2203 | 563.530 | 05/08/2004 | 0.000 | 557.210 | 23/04/2005 |
| 2005-2006 | 2695 | 563.370 | 03/08/2005 | 0.010 | 557.120 | 04/04/2006 |
| 2006-2007 | 2452 | 563.460 | 12/08/2006 | 0.000 | 557.060 | 31/01/2007 |
| 2007-2008 | 2563 | 564.110 | 07/08/2007 | 0.000 | 557.185 | 19/06/2007 |
| 2008-2009 | 3069 | 564.120 | 12/08/2008 | 0.000 | 558.030 | 12/04/2009 |
| 2009-2010 | 3688 | 564.260 | 17/07/2009 | 0.000 | 557.630 | 05/02/2010 |
| 2010-2011 | 2017 | 566.110 | 29/07/2010 | 0.000 | 561.510 | 12/06/2010 |
| 2011-2012 | 2321 | 566.755 | 18/07/2011 | 0.000 | 561.370 | 01/06/2011 |
| 2012-2013 | 3153 | 567.635 | 08/08/2012 | 0.210 | 561.130 | 02/05/2013 |
| 2013-2014 | 2450 | 566.885 | 05/07/2013 | 0.078 | 561.470 | 30/11/2013 |
| 2014-2015 | 2834 | 567.910 | 02/08/2014 | 0.058 | 561.590 | 02/07/2014 |
| 2015-2016 | 2023 | 566.620 | 20/07/2015 | 0.708 | 561.080 | 18/04/2016 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : SHIMOGA ( AKLD0C6)** **Division : Cauvery Division, Bangalore**

**Local River : Tunga** **Sub-Division : Upper Tunga Subdn, Devangere**

| 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 | 561.190 | 1.261 | 564.390 | 909.7 | 563.130 | 319.9 | 562.900 | 190.7 # | 562.920 | 243.9 | 561.900 | 21.39 # |
| 2 | 561.200 | 1.212 | 564.240 | 736.2 | 563.300 | 356.9 | 562.900 | 190.7 | 562.660 | 109.0 * | 561.630 | 6.393 |
| 3 | 561.180 | 1.281 | 564.210 | 791.1 * | 563.140 | 322.7 | 562.880 | 187.9 | 562.680 | 106.1 | 561.590 | 4.793 |
| 4 | 561.160 | 1.188 | 564.800 | 1084 | 563.350 | 384.4 | 562.810 | 153.8 * | 562.660 | 87.36 | 561.540 | 4.640 |
| 5 | 561.170 | 1.210 * | 565.520 | 1394 | 564.200 | 724.2 | 562.820 | 157.0 * | 562.590 | 83.51 | 561.540 | 4.640 |
| 6 | 561.130 | 0.903 | 564.770 | 1069 | 564.500 | 838.6 | 562.710 | 123.7 | 562.550 | 72.53 | 561.540 | 4.818 * |
| 7 | 561.170 | 1.228 | 563.610 | 474.9 * | 564.720 | 1103 * | 562.780 | 137.4 | 562.560 | 73.14 | 561.540 | 4.640 |
| 8 | 561.150 | 1.147 | 563.500 | 404.9 | 564.470 | 826.7 | 562.750 | 129.1 | 562.520 | 67.43 | 561.540 | 4.640 |
| 9 | 561.285 | 2.162 | 563.300 | 412.1 | 564.240 | 739.2 | 562.660 | 87.36 | 562.540 | 77.31 * | 561.920 | 28.12 |
| 10 | 561.300 | 2.318 | 563.330 | 348.3 * | 564.010 | 626.3 | 562.610 | 84.82 | 562.550 | 72.53 | 562.030 | 30.97 |
| 11 | 561.300 | 2.283 | 564.220 | 703.2 | 563.930 | 599.2 | 562.620 | 98.00 * | 562.530 | 74.86 * | 562.040 | 31.28 |
| 12 | 561.240 | 1.707 * | 565.130 | 1304 | 563.860 | 606.2 | 562.590 | 83.51 | 562.540 | 77.31 * | 562.050 | 31.55 |
| 13 | 561.190 | 1.257 | 563.890 | 582.6 | 563.640 | 437.9 | 562.610 | 95.31 * | 562.670 | 103.1 | 562.030 | 29.20 * |
| 14 | 561.130 | 0.908 | 563.650 | 438.0 | 563.820 | 578.9 * | 562.590 | 83.51 | 562.670 | 103.1 | 562.020 | 28.57 * |
| 15 | 561.130 | 0.911 | 563.650 | 438.0 | 563.520 | 432.7 * | 562.610 | 84.82 | 562.610 | 84.83 | 562.020 | 30.77 |
| 16 | 561.130 | 0.933 | 563.330 | 363.9 | 563.460 | 394.2 | 562.630 | 86.14 | 562.540 | 67.11 * | 562.230 | 37.14 |
| 17 | 561.100 | 0.894 | 563.070 | 244.0 * | 563.480 | 399.0 | 562.730 | 127.4 | 562.410 | 41.72 | 561.950 | 29.31 |
| 18 | 561.130 | 0.931 | 562.920 | 243.8 | 563.790 | 582.4 | 562.690 | 117.5 * | 562.450 | 45.64 | 562.090 | 34.59 |
| 19 | 561.090 | 0.734 * | 563.480 | 398.1 | 563.750 | 570.6 | 562.680 | 106.1 | 562.450 | 45.64 | 562.120 | 38.11 |
| 20 | 561.080 | 0.716 | 562.800 | 139.7 | 563.550 | 415.6 | 562.690 | 106.5 | 562.290 | 40.82 | 562.330 | 50.20 * |
| 21 | 561.110 | 0.904 | 562.820 | 146.3 | 563.610 | 474.9 * | 562.630 | 86.14 | 562.350 | 46.79 | 562.160 | 39.54 |
| 22 | 561.130 | 0.951 | 563.020 | 262.2 | 562.930 | 245.7 | 562.670 | 103.1 | 562.190 | 35.39 | 562.130 | 38.47 |
| 23 | 561.180 | 1.328 | 563.470 | 395.4 | 563.050 | 267.8 | 562.880 | 187.9 | 562.000 | 27.32 * | 562.090 | 34.59 |
| 24 | 561.170 | 1.184 | 563.420 | 387.5 * | 563.350 | 385.4 | 562.870 | 188.4 | 562.030 | 32.59 | 562.040 | 31.28 |
| 25 | 561.180 | 1.347 | 562.950 | 249.3 | 563.270 | 350.3 | 562.920 | 190.1 * | 562.040 | 31.32 | 562.100 | 33.66 |
| 26 | 562.670 | 111.8 * | 562.950 | 249.3 | 563.110 | 316.0 | 563.320 | 361.6 | 562.050 | 31.58 | 562.030 | 30.97 |
| 27 | 562.780 | 118.0 | 562.950 | 249.3 | 563.060 | 269.7 | 563.170 | 329.2 | 561.900 | 21.39 # | 562.030 | 29.20 * |
| 28 | 562.790 | 118.6 | 562.880 | 154.7 | 562.990 | 214.7 * | 563.230 | 342.5 | 561.930 | 28.39 | 562.030 | 30.97 |
| 29 | 565.040 | 1317 # | 562.770 | 131.0 | 562.940 | 248.0 | 562.930 | 245.7 | 561.880 | 20.27 * | 561.950 | 29.31 |
| 30 | 564.420 | 878.4 | 562.970 | 253.0 | 562.940 | 248.0 | 562.930 | 245.7 | 561.850 | 18.62 * | 561.930 | 28.39 |
| 31 | | | 563.120 | 263.0 * | 562.930 | 245.7 | | | 561.830 | 21.20 | | |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 561.193 | 1.391 | 564.167 | 762.4 | 563.906 | 624.2 | 562.782 | 144.3 | 562.623 | 99.28 | 561.677 | 11.50 |
| II Ten-Daily | 561.152 | 1.127 | 563.614 | 485.6 | 563.680 | 501.7 | 562.644 | 98.88 | 562.516 | 68.41 | 562.088 | 34.07 |
| III Ten-Daily | 562.347 | 255.0 | 563.029 | 249.2 | 563.107 | 296.9 | 562.955 | 228.0 | 562.005 | 28.62 | 562.049 | 32.64 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 561.080 | 0.716 | 562.770 | 131.0 | 562.930 | 214.7 | 562.590 | 83.51 | 561.830 | 18.62 | 561.540 | 4.640 |
| Max. | 565.040 | 1317 | 565.520 | 1394 | 564.720 | 1103 | 563.320 | 361.6 | 562.920 | 243.9 | 562.330 | 50.20 |
| Mean | 561.564 | 85.82 | 563.585 | 491 | 563.550 | 468.5 | 562.794 | 157.1 | 562.369 | 64.25 | 561.938 | 26.07 |

**Annual Runoff in MCM = 3532 Annual Runoff in mm = 1248**

**Peak Observed Discharge = 1394 cumecs on 05/07/2016 Corres. Water Level :565.52 m**

**Lowest Observed Discharge = 0.000 cumecs on 03/02/2017 Corres. Water Level :561.23 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*

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : SHIMOGA ( AKLD0C6)** **Division : Cauvery Division, Bangalore**

**Local River : Tunga** **Sub-Division : Upper Tunga Subdn, Devangere**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 561.750 | 22.43 | 561.740 | 20.02 * | 561.210 | 0.280 | 561.230 | 0.000 | 561.310 | 0.000 | 561.360 | 0.000 |
| 2 | 561.930 | 28.39 | 561.770 | 19.71 | 561.370 | 1.518 | 561.230 | 0.000 | 561.300 | 0.000 | 561.350 | 0.000 |
| 3 | 561.880 | 27.05 | 561.730 | 18.85 | 561.230 | 0.000 | 561.290 | 0.000 | 561.260 | 0.000 | 561.300 | 0.000 |
| 4 | 561.960 | 28.93 * | 561.720 | 18.64 | 561.160 | 0.000 | 561.230 | 0.000 | 561.220 | 0.000 | 561.330 | 0.000 |
| 5 | 562.020 | 30.77 | 561.670 | 6.918 # | 561.130 | 0.000 | 561.210 | 0.000 | 561.180 | 0.000 | 561.310 | 0.000 |
| 6 | 562.080 | 34.27 | 561.710 | 9.154 | 561.120 | 0.000 | 561.190 | 0.000 | 561.150 | 0.000 | 561.280 | 0.000 |
| 7 | 562.080 | 34.27 | 561.690 | 8.566 | 561.130 | 0.000 | 561.220 | 0.000 | 561.150 | 0.000 | 561.330 | 0.000 |
| 8 | 562.080 | 34.24 | 561.760 | 8.764 * | 561.290 | 0.000 | 561.190 | 0.000 | 561.150 | 0.000 | 561.300 | 0.000 |
| 9 | 562.090 | 34.59 | 561.550 | 3.809 | 561.310 | 0.000 | 561.180 | 0.000 | 561.150 | 0.000 | 561.280 | 0.000 |
| 10 | 562.040 | 33.28 | 561.600 | 5.656 # | 561.320 | 0.000 | 561.160 | 0.000 | 561.150 | 0.000 | 561.280 | 0.000 |
| 11 | 562.030 | 32.15 * | 561.550 | 3.862 | 561.320 | 0.000 | 561.150 | 0.000 | 561.160 | 0.000 | 561.260 | 0.000 |
| 12 | 562.030 | 32.15 * | 561.620 | 6.002 # | 561.320 | 0.000 | 561.130 | 0.000 | 561.140 | 0.000 | 561.390 | 0.000 |
| 13 | 561.980 | 29.47 | 561.420 | 2.941 | 561.320 | 0.000 | 561.120 | 0.000 | 561.150 | 0.000 | 561.340 | 0.000 |
| 14 | 561.990 | 29.77 | 561.300 | 2.132 | 561.320 | 0.000 | 561.130 | 0.000 | 561.170 | 0.000 | 561.300 | 0.000 |
| 15 | 562.060 | 33.62 | 561.350 | 2.299 * | 561.340 | 0.000 | 561.600 | 0.000 | 561.630 | 0.000 | 561.260 | 0.000 |
| 16 | 561.920 | 28.10 | 561.300 | 2.183 | 561.340 | 0.000 | 561.690 | 0.000 | 561.420 | 0.000 | 561.260 | 0.000 |
| 17 | 562.110 | 35.15 | 561.300 | 2.106 | 561.370 | 0.000 | 561.440 | 0.000 | 561.280 | 0.000 | 561.340 | 0.000 |
| 18 | 561.930 | 27.60 * | 561.340 | 2.447 | 561.370 | 0.000 | 561.320 | 0.000 | 561.260 | 0.000 | 561.260 | 0.000 |
| 19 | 562.090 | 34.59 | 561.380 | 2.415 | 561.420 | 0.000 | 561.250 | 0.000 | 561.200 | 0.000 | 561.300 | 0.000 |
| 20 | 562.020 | 30.67 | 561.410 | 2.850 | 561.400 | 0.000 | 561.230 | 0.000 | 561.180 | 0.000 | 561.250 | 0.000 |
| 21 | 561.920 | 28.10 | 561.360 | 2.192 | 561.370 | 0.000 | 561.230 | 0.000 | 561.180 | 0.000 | 561.240 | 0.000 |
| 22 | 561.980 | 29.47 | 561.320 | 2.010 * | 561.370 | 0.000 | 561.240 | 0.000 | 561.190 | 0.000 | 561.200 | 0.000 |
| 23 | 561.980 | 29.47 | 561.280 | 1.750 | 561.370 | 0.000 | 561.260 | 0.000 | 561.200 | 0.000 | 561.170 | 0.000 |
| 24 | 561.920 | 28.10 | 561.250 | 1.106 | 561.390 | 0.000 | 561.390 | 0.000 | 561.210 | 0.000 | 561.250 | 0.000 |
| 25 | 561.950 | 28.48 * | 561.210 | 0.397 | 561.550 | 3.642 | 561.370 | 0.000 | 561.310 | 0.000 | 561.260 | 0.000 |
| 26 | 561.930 | 28.39 | 561.200 | 0.281 * | 561.480 | 0.000 | 561.340 | 0.000 | 561.330 | 0.000 | 561.280 | 0.000 |
| 27 | 561.880 | 27.05 | 561.200 | 0.281 # | 561.370 | 0.000 | 561.320 | 0.000 | 561.300 | 0.000 | 561.240 | 0.000 |
| 28 | 561.840 | 21.44 | 561.200 | 0.281 # | 561.280 | 0.000 | 561.310 | 0.000 | 561.270 | 0.000 | 561.220 | 0.000 |
| 29 | 561.880 | 27.05 | 561.200 | 0.281 | | | 561.320 | 0.000 | 561.260 | 0.000 | 561.190 | 0.000 |
| 30 | 561.930 | 28.39 | 561.180 | 0.173 | | | 561.310 | 0.000 | 561.330 | 0.000 | 561.170 | 0.000 |
| 31 | 561.720 | 18.64 | 561.180 | 0.209 | | | 561.310 | 0.000 | | | 561.160 | 0.000 |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 561.991 | 30.82 | 561.694 | 12.01 | 561.227 | 0.180 | 561.213 | 0.000 | 561.202 | 0.000 | 561.312 | 0.000 |
| II Ten-Daily | 562.016 | 31.33 | 561.397 | 2.924 | 561.352 | 0.000 | 561.306 | 0.000 | 561.259 | 0.000 | 561.296 | 0.000 |
| III Ten-Daily | 561.903 | 26.78 | 561.235 | 0.815 | 561.397 | 0.455 | 561.309 | 0.000 | 561.258 | 0.000 | 561.216 | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 561.720 | 18.64 | 561.180 | 0.173 | 561.120 | 0.000 | 561.120 | 0.000 | 561.140 | 0.000 | 561.160 | 0.000 |
| Max. | 562.110 | 35.15 | 561.770 | 20.02 | 561.550 | 3.642 | 561.690 | 0.000 | 561.630 | 0.000 | 561.390 | 0.000 |
| Mean | 561.968 | 29.55 | 561.435 | 5.106 | 561.320 | 0.194 | 561.277 | 0 | 561.240 | 0 | 561.273 | 0 |

**Peak Computed Discharge = 1103 cumecs on 07/08/2016** **Corres. Water Level :564.72 m**

**Lowest Computed Discharge = 0.281 cumecs on 26/01/2017** **Corres. Water Level :561.2 m**

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

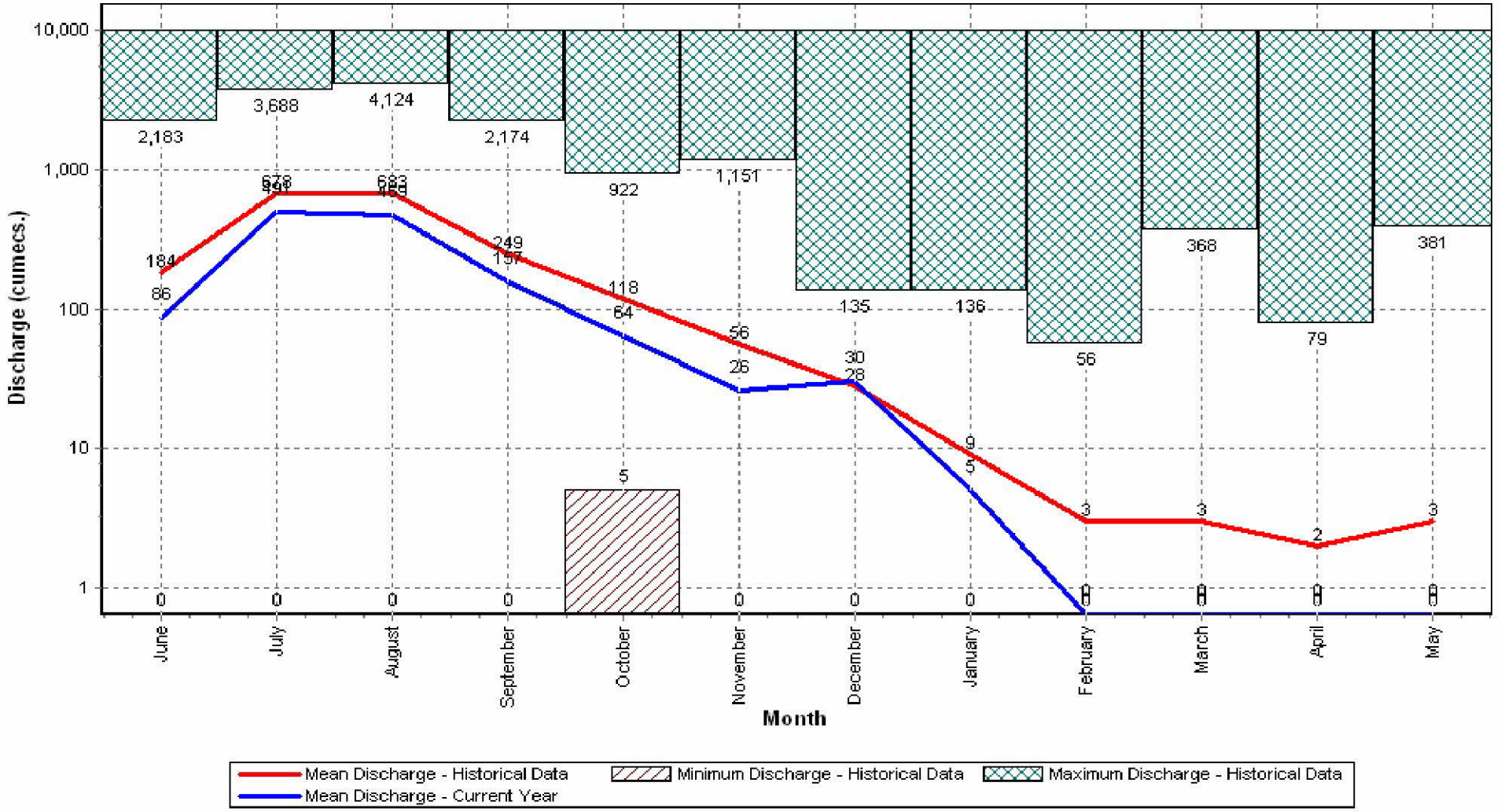
#:Discarded Discharge (values changed as per rating curve)

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : SHIMOGA ( AKLD0C6)** | **Data considered : 1972-2017** | **Division : Cauvery Division, Bangalore**

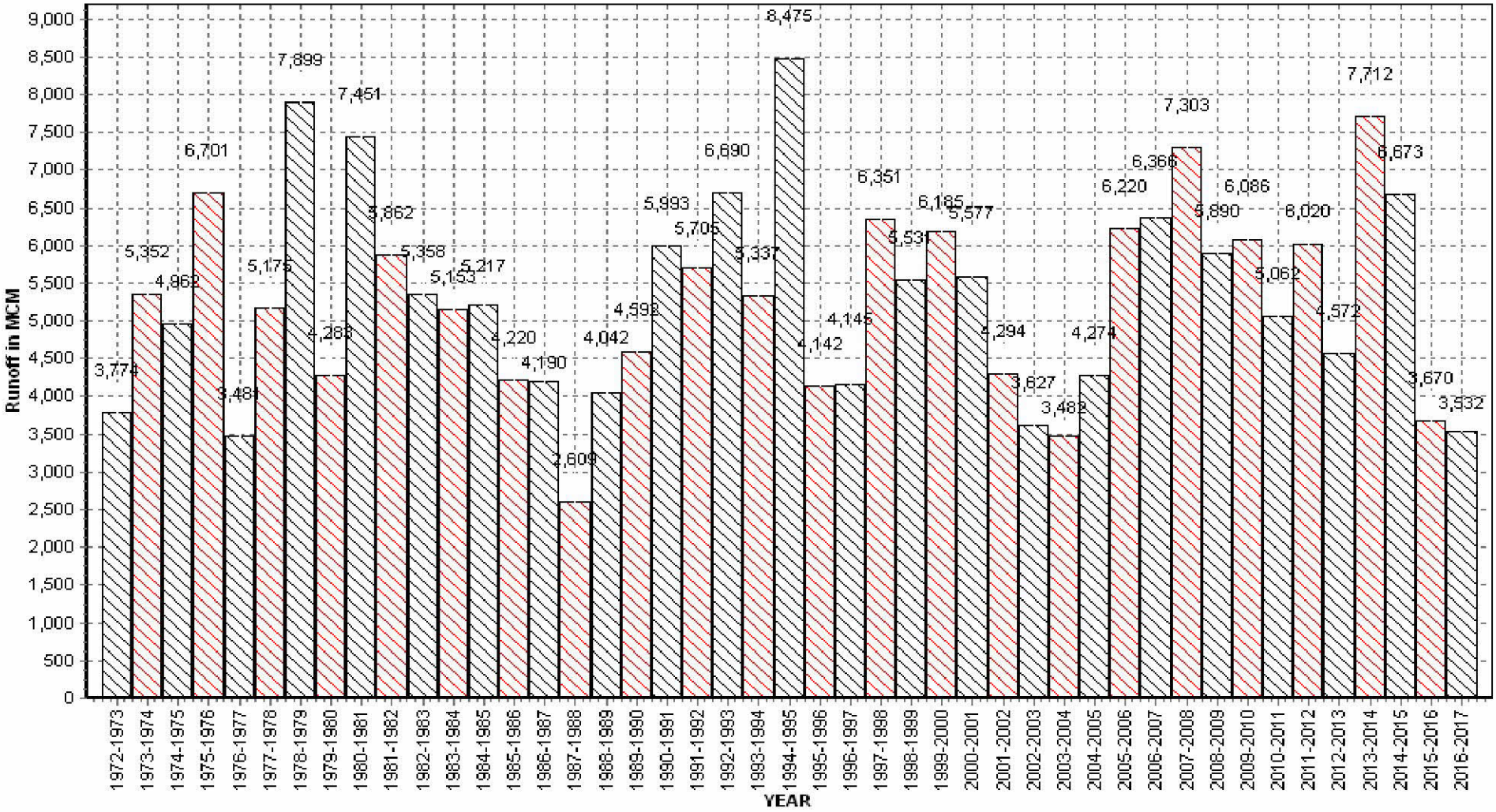
**Local River : Tunga** | **Sub-Division : Upper Tunga Subdn, Devangere**



**Annual Runoff Values for the period: 1972 - 2017**

**Station Name : SHIMOGA ( AKLD0C6)**
**Local River : Tunga**

**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**

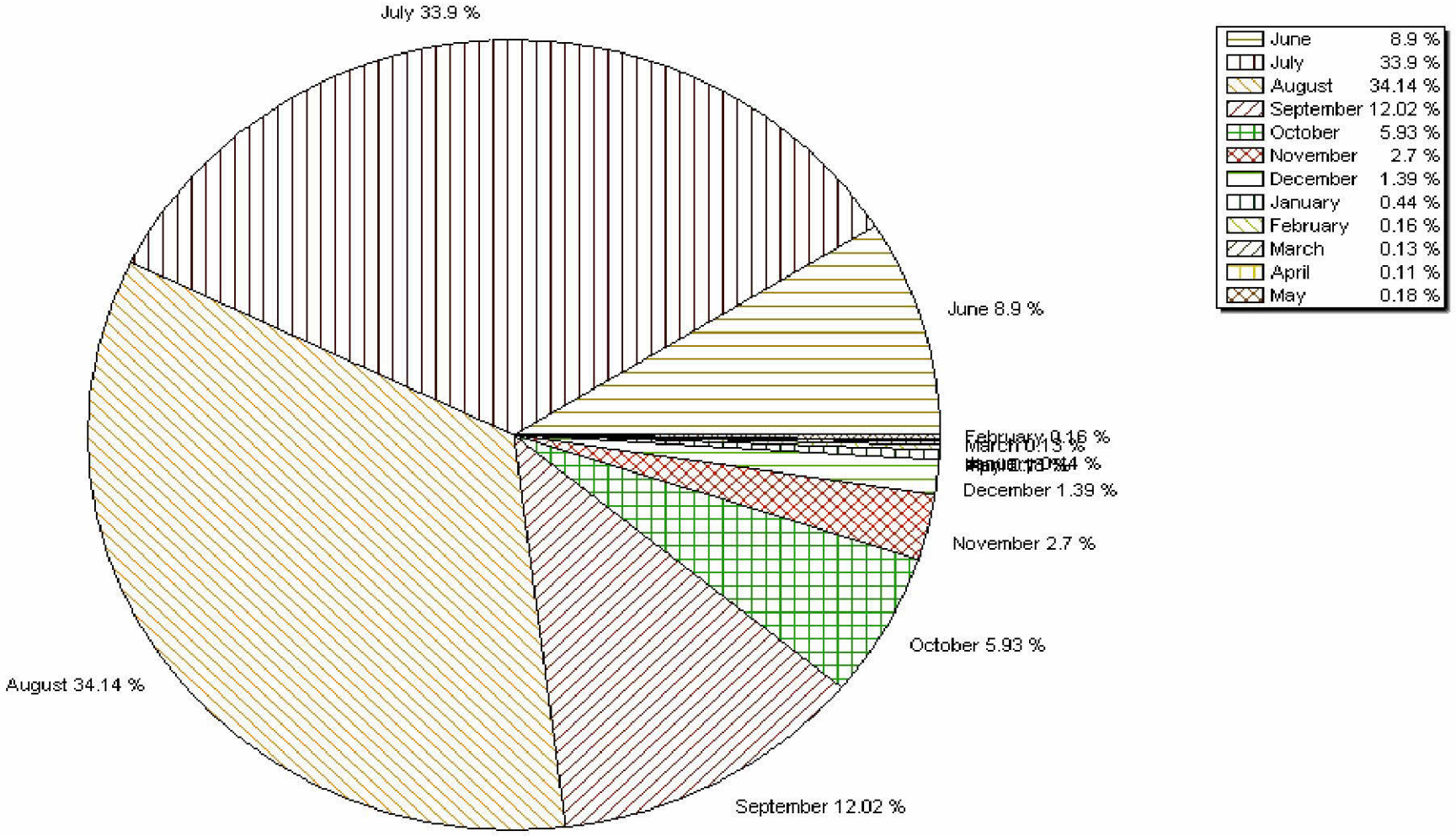



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1972-2016**

**Station Name : SHIMOGA ( AKLD0C6)**
**Local River : Tunga**

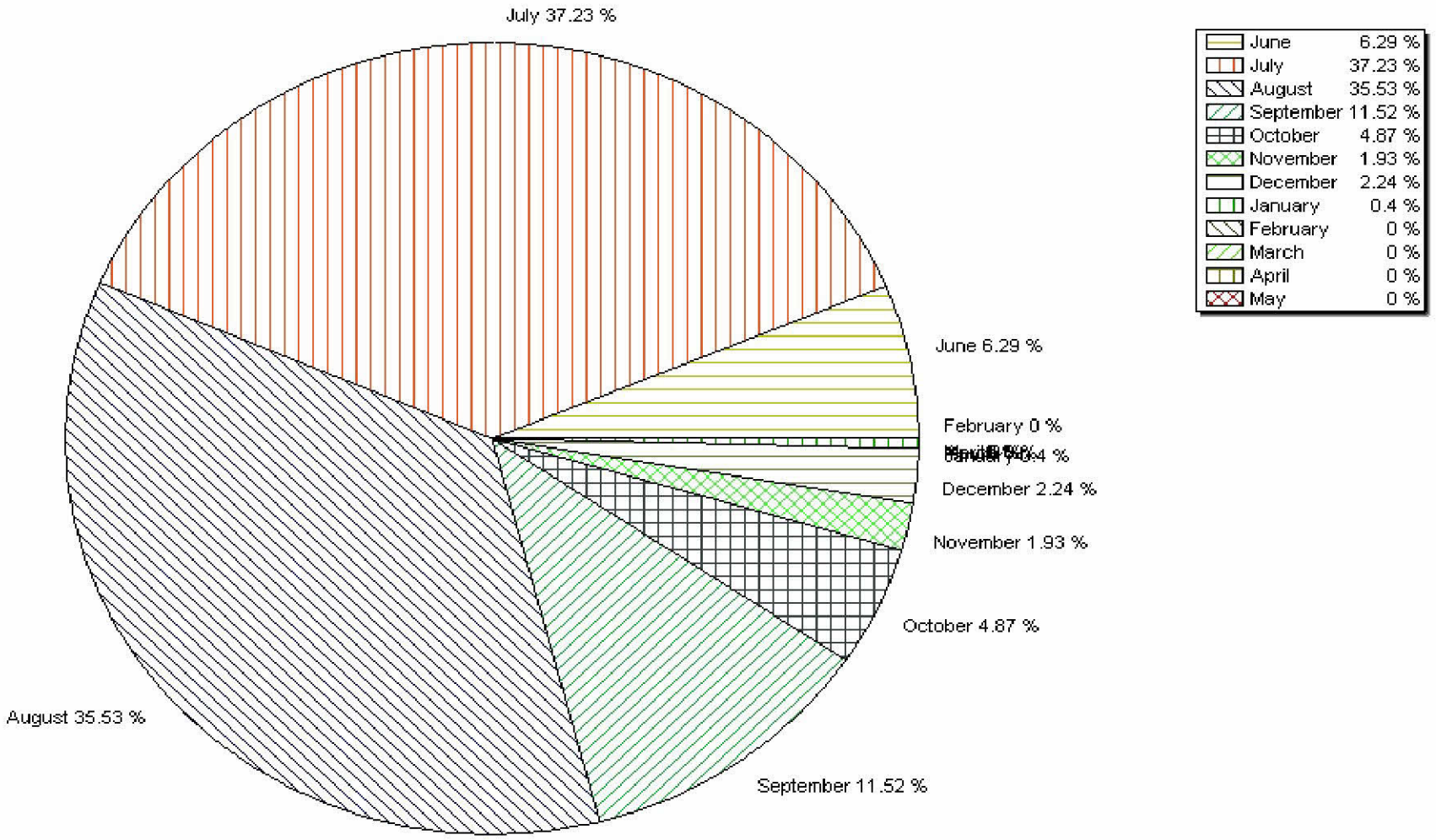
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**



**Monthly Runoff for the Year : 2016-2017**

**Station Name : SHIMOGA ( AKLD0C6)**
**Local River : Tunga**

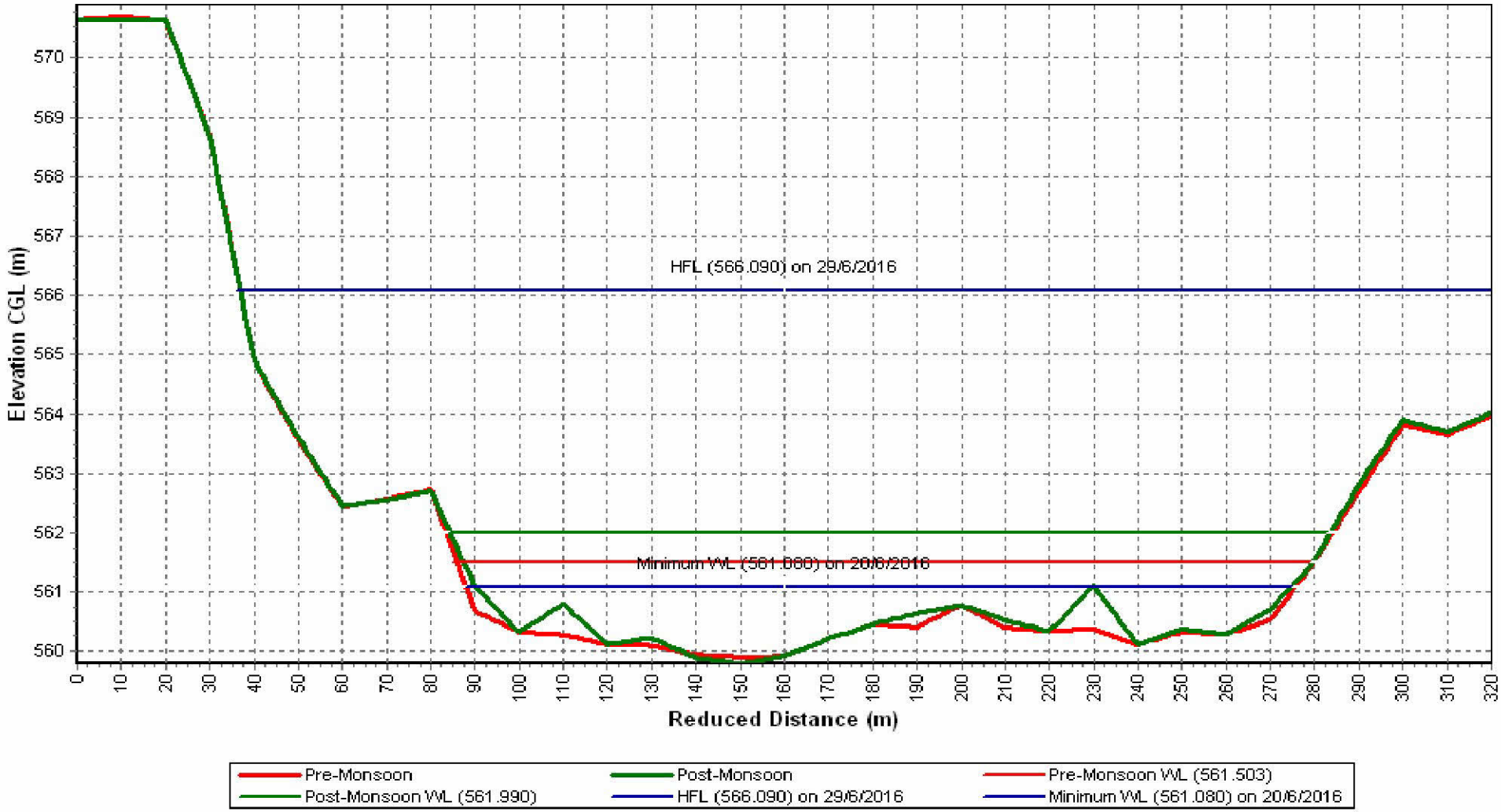
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Devangere**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : SHIMOGA ( AKLD0C6)** **Division : Cauvery Division, Bangalore**

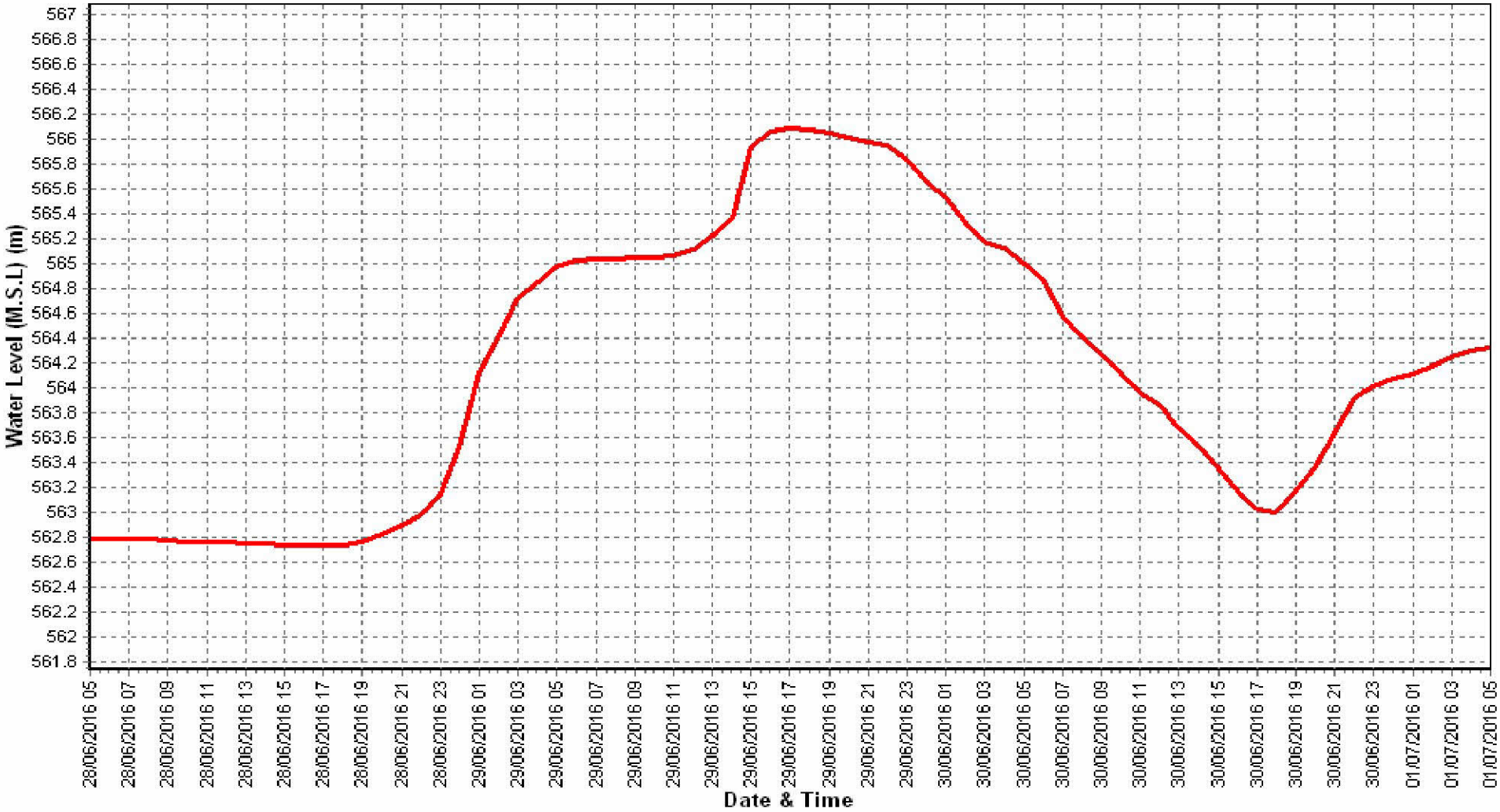
**Local River : Tunga** **Sub-Division : Upper Tunga Subdn, Devangere**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : SHIMOGA ( AKLD0C6)** | **Division : Cauvery Division, Bangalore**

**Local River : Tunga** | **Sub-Division : Upper Tunga Subdn, Devangere**

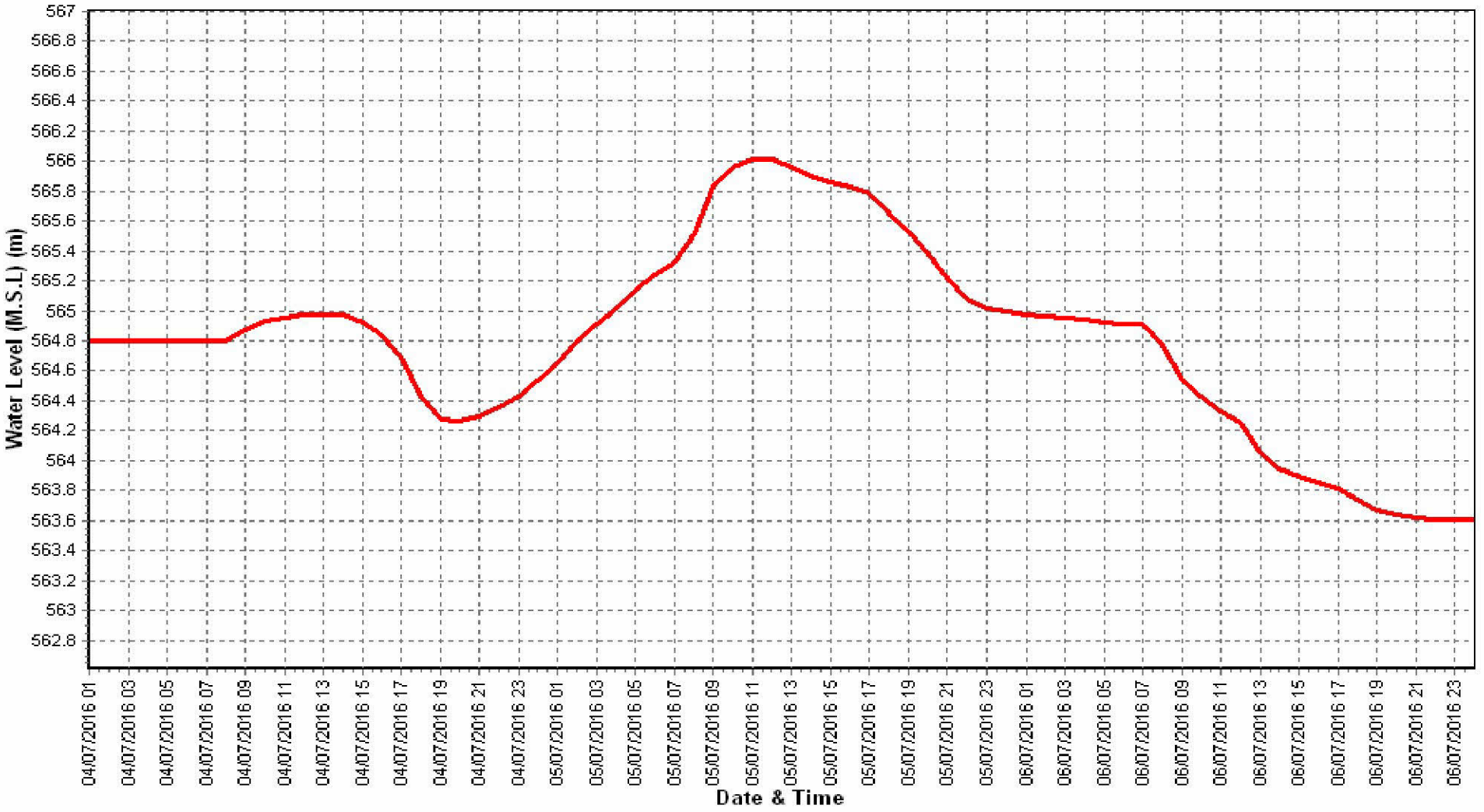



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : SHIMOGA ( AKLD0C6)** **Division : Cauvery Division, Bangalore**

**Local River : Tunga** **Sub-Division : Upper Tunga Subdn, Devangere**

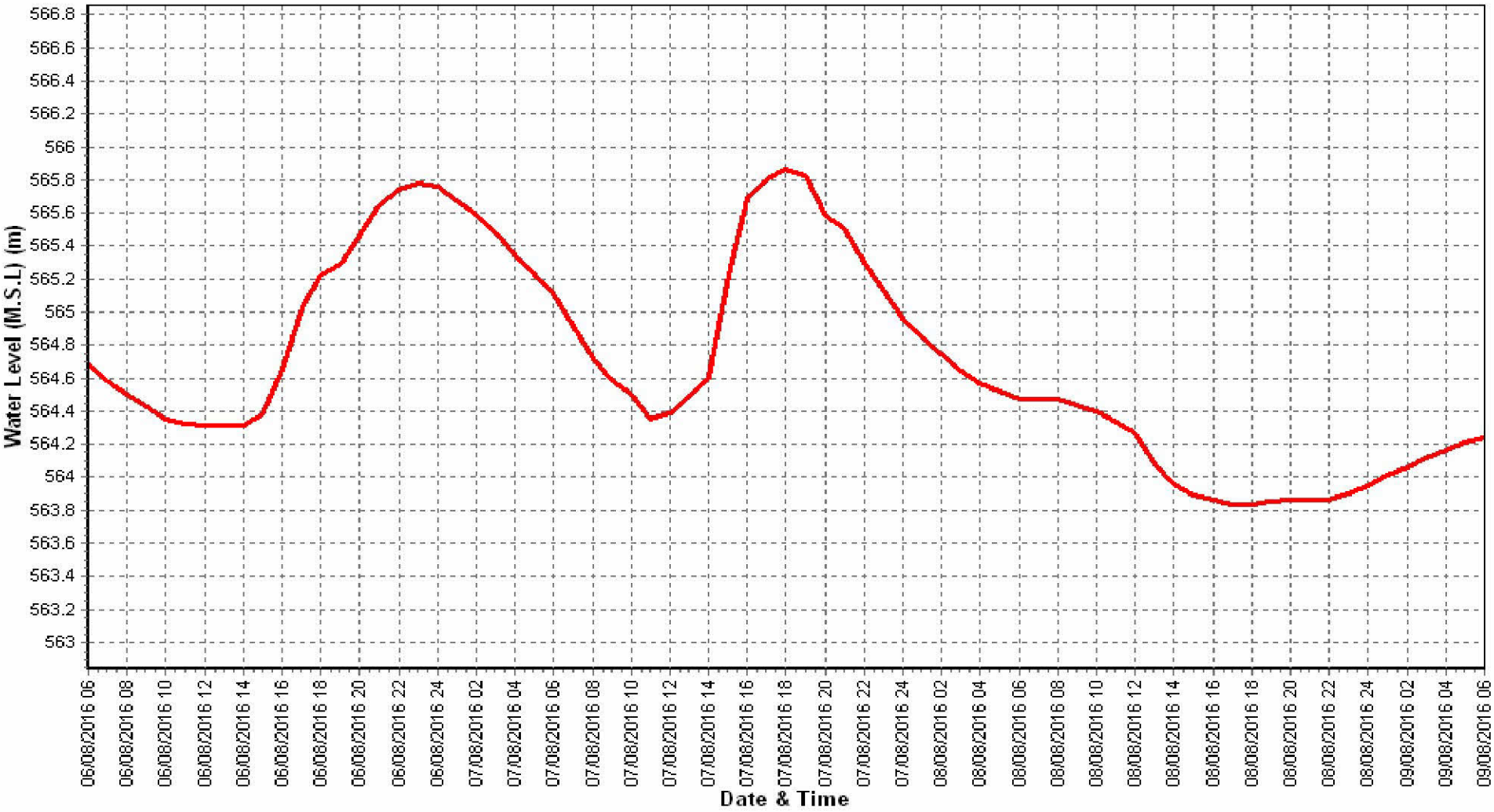



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : SHIMOGA ( AKLD0C6)** **Division : Cauvery Division, Bangalore**

**Local River : Tunga** **Sub-Division : Upper Tunga Subdn, Devangere**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **HOLEHONNUR** | **Code** | : | **AKLE0A4** |
| State | : | Karnataka | District | | Shimoga |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | Tungabhadra | Sub Tributary | : | Bhadra |
| Sub-Sub Tributary | : | - | Local River | : | Bhadra |
| Division | : | Cauvery Division, Bangalore | Sub-Division | : | Upper Tunga Subdn, Davanagere |
| Drainage Area | : | 2990 Sq. Km. | Bank | : | Right |
| Latitude | : | 13°58'34" | Longitude | : | 75°41'07" |
| **Zero of Gauge (m)** | : | 88.5 (m.s.l) | 26/11/1997 | | |
| | | Opening Date | Closing Date | | |
| Gauge | : | 26/11/1997 | **HFL During 2016-17** | : | **556.735m** |
| | | | **Corres. Discharge** | : | **103.1(Observed)** |
| Discharge | : | 01/07/2003 | **Date & Time of** | : | **13/02/2017** |
| | | | **occurance** | : | **08.00 hrs.** |
| Sediment | : | | | | |
| Water Quality | : | 01/07/2003 | | | |

**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 | 19.05 | 89.810 | 03/01/2005 | 0.000 | 89.860 | 08/01/2005 |
| 2005-2006 | 623.5 | 94.580 | 17/08/2005 | 1.620 | 89.450 | 09/01/2006 |
| 2006-2007 | 722.7 | 94.260 | 18/08/2006 | 1.205 | 89.268 | 06/01/2007 |
| 2007-2008 | 1176 | 95.760 | 07/08/2007 | 5.273 | 89.650 | 19/06/2007 |
| 2008-2009 | 1758 | 96.390 | 14/08/2008 | 0.000 | 90.130 | 20/04/2009 |
| 2009-2010 | 1114 | 94.850 | 06/09/2009 | 0.846 | 89.380 | 16/01/2010 |
| 2010-2011 | 629.7 | 559.570 | 05/10/2010 | 4.707 | 555.635 | 20/12/2010 |
| 2011-2012 | 939.0 | 560.870 | 02/09/2011 | 3.811 | 555.495 | 08/01/2012 |
| 2012-2013 | 462.0 | 559.215 | 08/08/2012 | 1.223 | 555.545 | 19/05/2013 |
| 2013-2014 | 1242 | 561.985 | 03/08/2013 | 8.715 | 555.705 | 13/12/2013 |
| 2014-2015 | 963.1 | 561.040 | 06/08/2014 | 6.642 | 555.625 | 30/06/2014 |
| 2015-2016 | 383.7 | 558.405 | 20/07/2015 | 9.460 | 555.735 | 05/01/2016 |

Stage-Discharge Data for the period 2016 - 2017

Station Name : HOLEHONNUR ( AKLE0A4) Division : Cauvery Division, Bangalore

Local River : Bhadra Sub-Division : Upper Tunga Subdn, Davanagere

| 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 | 555.965 | 27.85 | 556.035 | 32.68 | 556.045 | 32.58 | 556.045 | 32.67 | 556.035 | 32.58 | 556.045 | 32.84 |
| 2 | 556.025 | 32.68 | 556.015 | 31.84 | 556.005 | 30.21 | 556.045 | 32.66 | 556.025 | 31.78 * | 556.015 | 31.35 |
| 3 | 556.005 | 31.64 | 555.985 | 28.21 * | 555.975 | 26.94 | 556.025 | 32.11 | 556.005 | 30.93 | 556.005 | 30.69 |
| 4 | 555.965 | 27.82 | 556.045 | 33.30 | 555.965 | 25.69 | 556.055 | 34.57 * | 555.855 | 14.76 | 556.035 | 32.52 |
| 5 | 555.945 | 24.81 * | 556.035 | 32.82 | 555.995 | 28.39 | 556.055 | 34.57 * | 555.865 | 15.21 | 556.045 | 33.21 |
| 6 | 555.935 | 24.68 | 556.035 | 32.51 | 556.015 | 31.57 | 556.035 | 32.81 | 555.850 | 14.69 | 556.015 | 30.87 * |
| 7 | 555.955 | 26.33 | 556.475 | 82.44 * | 556.035 | 32.70 * | 556.015 | 31.27 | 555.845 | 14.58 | 556.025 | 31.73 |
| 8 | 555.965 | 27.71 | 556.405 | 76.46 | 556.045 | 33.29 | 556.005 | 30.83 | 555.865 | 15.27 | 556.025 | 32.19 |
| 9 | 556.045 | 33.35 | 556.045 | 33.08 | 556.035 | 32.23 | 555.975 | 26.64 | 555.895 | 20.80 * | 556.035 | 32.51 |
| 10 | 556.045 | 33.51 | 556.005 | 29.97 * | 556.035 | 32.03 | 556.035 | 32.40 | 555.935 | 24.12 | 556.005 | 30.91 |
| 11 | 556.025 | 32.48 | 555.975 | 28.09 | 556.005 | 30.04 | 556.045 | 33.63 * | 555.995 | 29.09 * | 556.015 | 31.77 |
| 12 | 556.035 | 32.70 * | 556.395 | 75.85 | 555.995 | 27.80 | 556.045 | 33.29 | 556.025 | 31.78 * | 556.025 | 32.34 |
| 13 | 556.005 | 31.08 | 556.035 | 33.17 | 556.045 | 33.11 | 556.035 | 32.70 * | 556.035 | 32.45 | 556.035 | 32.70 * |
| 14 | 556.015 | 31.84 | 555.985 | 28.49 | 556.115 | 40.41 * | 556.015 | 31.65 | 556.045 | 33.05 | 556.015 | 30.87 * |
| 15 | 555.845 | 18.93 | 555.965 | 25.58 | 556.125 | 41.41 * | 556.045 | 33.31 | 556.045 | 33.36 | 556.045 | 33.08 |
| 16 | 555.825 | 14.86 | 555.975 | 27.56 | 556.035 | 32.18 | 556.025 | 32.35 | 556.125 | 41.41 * | 556.045 | 33.03 |
| 17 | 555.855 | 19.49 | 555.935 | 23.98 * | 556.045 | 32.62 | 556.005 | 31.43 | 556.025 | 32.03 | 556.025 | 31.84 |
| 18 | 555.785 | 14.18 | 555.875 | 19.90 | 556.045 | 32.70 | 556.005 | 29.97 * | 556.005 | 31.22 | 556.045 | 32.99 |
| 19 | 555.965 | 26.49 * | 555.825 | 14.68 | 556.035 | 32.01 | 556.035 | 32.82 | 556.035 | 32.58 | 556.045 | 32.86 |
| 20 | 556.015 | 31.24 | 555.805 | 12.54 | 556.025 | 31.89 | 556.015 | 31.80 | 556.015 | 31.73 | 556.045 | 33.63 * |
| 21 | 555.935 | 24.18 | 555.835 | 15.02 | 556.025 | 31.78 * | 556.045 | 32.90 | 556.025 | 32.14 | 556.025 | 31.88 |
| 22 | 555.895 | 21.16 | 555.865 | 18.90 | 556.025 | 31.57 | 556.045 | 33.23 | 556.025 | 32.20 | 556.005 | 31.02 |
| 23 | 555.875 | 20.21 | 555.845 | 15.17 | 556.045 | 32.87 | 556.005 | 31.26 | 556.005 | 29.97 * | 555.975 | 26.36 |
| 24 | 556.040 | 32.70 | 555.845 | 17.07 * | 556.035 | 32.19 | 556.015 | 32.01 | 556.005 | 31.04 | 555.945 | 25.53 |
| 25 | 555.755 | 14.00 | 555.805 | 12.34 | 556.005 | 30.16 | 555.965 | 26.49 * | 556.015 | 31.48 | 555.925 | 24.07 |
| 26 | 555.785 | 12.98 * | 555.775 | 14.51 | 556.005 | 30.07 | 555.935 | 24.10 | 556.045 | 32.85 | 555.935 | 24.40 |
| 27 | 555.765 | 14.18 | 555.795 | 11.99 | 556.045 | 32.89 | 555.965 | 25.57 | 556.025 | 31.89 | 555.895 | 20.80 * |
| 28 | 555.785 | 14.82 | 555.785 | 14.69 | 556.075 | 36.47 * | 555.945 | 24.37 | 556.005 | 30.82 | 555.845 | 15.18 |
| 29 | 556.025 | 32.46 | 555.835 | 15.18 | 556.015 | 31.96 | 556.035 | 33.01 | 556.015 | 30.87 * | 555.795 | 12.10 |
| 30 | 556.045 | 33.46 | 556.565 | 91.79 | 556.005 | 31.55 | 556.045 | 33.34 | 556.025 | 31.78 * | 555.825 | 13.70 |
| 31 | | | 556.505 | 86.45 * | 556.035 | 32.64 | | | 556.035 | 32.60 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 555.985 | 29.04 | 556.108 | 41.33 | 556.015 | 30.56 | 556.029 | 32.05 | 555.917 | 21.47 | 556.025 | 31.88 |
| II Ten-Daily | 555.937 | 25.33 | 555.977 | 28.98 | 556.047 | 33.42 | 556.027 | 32.29 | 556.035 | 32.87 | 556.034 | 32.51 |
| III Ten-Daily | 555.891 | 22.02 | 555.950 | 28.46 | 556.029 | 32.19 | 556.000 | 29.63 | 556.020 | 31.60 | 555.917 | 22.50 |
| Monthly | | | | | | | | | | | | |
| Min. | 555.755 | 12.98 | 555.775 | 11.99 | 555.965 | 25.69 | 555.935 | 24.10 | 555.845 | 14.58 | 555.795 | 12.10 |
| Max. | 556.045 | 33.51 | 556.565 | 91.79 | 556.125 | 41.41 | 556.055 | 34.57 | 556.125 | 41.41 | 556.045 | 33.63 |
| Mean | 555.938 | 25.46 | 556.010 | 32.78 | 556.030 | 32.06 | 556.019 | 31.33 | 555.992 | 28.74 | 555.992 | 28.97 |

**Annual Runoff in MCM = 983 Annual Runoff in mm = 329**

**Peak Observed Discharge = 103.1 cumecs on 13/02/2017 Corres. Water Level :556.735 m**

**Lowest Observed Discharge = 10.98 cumecs on 06/03/2017 Corres. Water Level :555.785 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 2016 - 2017

Station Name : HOLEHONNUR ( AKLE0A4) Division : Cauvery Division, Bangalore

Local River : Bhadra Sub-Division : Upper Tunga Subdn, Davanagere

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 555.875 | 20.19 | 555.835 | 14.67 * | 555.905 | 20.89 | 555.985 | 28.20 | 556.455 | 76.79 | 555.855 | 13.50 |
| 2 | 555.865 | 19.28 | 555.825 | 12.99 | 555.955 | 26.26 | 555.935 | 25.17 | 556.435 | 72.22 * | 555.835 | 13.00 |
| 3 | 555.845 | 14.40 | 555.805 | 12.22 | 556.025 | 32.05 | 555.905 | 20.75 | 556.515 | 82.59 | 555.805 | 12.11 |
| 4 | 555.825 | 13.99 * | 555.815 | 12.26 | 556.035 | 33.01 | 555.805 | 12.49 | 556.045 | 33.66 | 555.825 | 12.66 |
| 5 | 555.805 | 12.15 | 555.835 | 14.16 | 556.045 | 31.23 * | 555.805 | 12.68 * | 556.045 | 33.81 | 556.015 | 31.37 |
| 6 | 555.835 | 14.01 | 555.825 | 12.74 | 556.045 | 33.84 | 555.785 | 10.98 | 556.035 | 33.39 | 556.045 | 33.05 |
| 7 | 555.845 | 14.47 | 555.805 | 11.94 | 556.015 | 32.00 | 555.965 | 26.42 | 555.945 | 25.60 | 556.395 | 67.48 * |
| 8 | 555.805 | 12.17 | 555.815 | 13.33 * | 556.555 | 86.01 | 555.905 | 20.97 | 555.965 | 26.27 | 556.655 | 93.84 |
| 9 | 555.795 | 11.75 | 555.815 | 12.37 | 556.585 | 88.45 | 555.855 | 19.22 | 555.955 | 23.60 * | 556.635 | 92.41 |
| 10 | 555.795 | 11.83 | 555.825 | 12.55 | 556.655 | 95.46 | 555.875 | 20.28 | 555.955 | 25.93 | 556.635 | 97.59 * |
| 11 | 555.835 | 14.67 * | 555.955 | 25.43 | 556.665 | 95.67 | 555.885 | 20.70 | 556.015 | 32.27 | 556.675 | 96.90 |
| 12 | 555.855 | 16.05 * | 555.975 | 26.11 | 556.685 | 104.3 * | 555.895 | 18.94 * | 555.935 | 24.90 | 556.625 | 91.84 |
| 13 | 555.855 | 14.76 | 555.945 | 26.00 | 556.735 | 103.1 | 555.915 | 21.31 | 555.805 | 12.41 | 556.685 | 97.99 |
| 14 | 555.815 | 12.49 | 555.915 | 20.96 | 556.705 | 99.91 | 555.955 | 26.09 | 555.805 | 12.68 * | 556.645 | 98.93 * |
| 15 | 555.825 | 12.70 | 555.895 | 18.94 * | 556.575 | 86.53 | 555.865 | 19.31 | 555.835 | 13.03 | 556.705 | 99.07 |
| 16 | 555.835 | 14.18 | 555.875 | 20.55 | 556.555 | 85.30 | 555.825 | 12.76 | 555.855 | 16.05 * | 556.565 | 85.70 |
| 17 | 555.815 | 12.55 | 555.885 | 21.02 | 556.565 | 85.66 | 555.805 | 12.37 | 555.845 | 13.29 | 556.595 | 89.77 |
| 18 | 555.805 | 12.68 * | 555.905 | 20.17 | 556.045 | 33.41 | 555.855 | 19.05 | 555.815 | 12.65 | 556.045 | 33.21 |
| 19 | 555.825 | 12.72 | 555.875 | 20.20 | 556.025 | 29.47 * | 555.885 | 18.20 * | 555.805 | 12.26 | 556.045 | 32.75 |
| 20 | 555.835 | 14.19 | 555.895 | 19.97 | 555.975 | 27.27 | 555.865 | 19.33 | 555.845 | 13.26 | 556.035 | 32.11 |
| 21 | 555.875 | 20.35 | 555.905 | 20.69 | 555.985 | 27.92 | 555.935 | 24.91 | 555.875 | 19.09 | 556.015 | 28.60 * |
| 22 | 555.825 | 13.95 | 555.925 | 21.22 * | 555.965 | 27.34 | 556.675 | 96.40 | 555.825 | 12.89 | 556.015 | 30.83 |
| 23 | 555.805 | 12.08 | 555.945 | 25.72 | 555.905 | 20.96 | 556.705 | 99.89 | 555.815 | 13.33 * | 555.965 | 25.59 |
| 24 | 555.815 | 12.61 | 555.895 | 19.65 | 555.825 | 13.99 * | 556.635 | 91.40 | 555.805 | 12.06 | 555.935 | 24.54 |
| 25 | 555.825 | 13.99 * | 555.825 | 12.77 | 555.825 | 12.97 | 556.665 | 94.39 | 555.855 | 13.50 | 555.925 | 24.25 |
| 26 | 555.835 | 14.26 | 555.825 | 13.99 * | 555.845 | 15.35 * | 556.655 | 100.3 * | 555.835 | 13.15 | 555.845 | 13.61 |
| 27 | 555.825 | 12.66 | 555.805 | 12.64 | 555.865 | 19.92 | 556.585 | 88.56 | 555.805 | 11.68 | 555.875 | 15.64 |
| 28 | 555.805 | 11.87 | 555.785 | 11.03 | 555.915 | 21.24 | 556.675 | 95.13 | 555.815 | 12.06 | 555.865 | 16.75 * |
| 29 | 555.815 | 12.48 | 555.795 | 12.04 * | | | 556.695 | 105.7 * | 555.845 | 13.11 | 555.855 | 13.85 |
| 30 | 555.835 | 14.22 | 555.805 | 12.79 | | | 556.715 | 99.13 | 555.845 | 15.35 * | 555.815 | 12.55 |
| 31 | 555.815 | 12.62 | 555.825 | 12.87 | | | 556.695 | 97.55 | | | 555.845 | 13.58 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 555.829 | 14.42 | 555.820 | 12.92 | 556.182 | 47.92 | 555.882 | 19.72 | 556.135 | 43.39 | 556.170 | 46.70 |
| II Ten-Daily | 555.830 | 13.70 | 555.912 | 21.94 | 556.453 | 75.06 | 555.875 | 18.81 | 555.856 | 16.28 | 556.462 | 75.83 |
| III Ten-Daily | 555.825 | 13.74 | 555.849 | 15.95 | 555.891 | 19.96 | 556.603 | 90.30 | 555.832 | 13.62 | 555.905 | 19.98 |
| Monthly | | | | | | | | | | | | |
| Min. | 555.795 | 11.75 | 555.785 | 11.03 | 555.825 | 12.97 | 555.785 | 10.98 | 555.805 | 11.68 | 555.805 | 12.11 |
| Max. | 555.875 | 20.35 | 555.975 | 26.11 | 556.735 | 104.3 | 556.715 | 105.7 | 556.515 | 82.59 | 556.705 | 99.07 |
| Mean | 555.828 | 13.95 | 555.860 | 16.9 | 556.196 | 49.62 | 556.136 | 44.47 | 555.941 | 24.43 | 556.170 | 46.61 |

**Peak Computed Discharge = 105.7 cumecs on 29/03/2017 Corres. Water Level :556.695 m**

**Lowest Computed Discharge = 12.04 cumecs on 29/01/2017 Corres. Water Level :555.795 m**

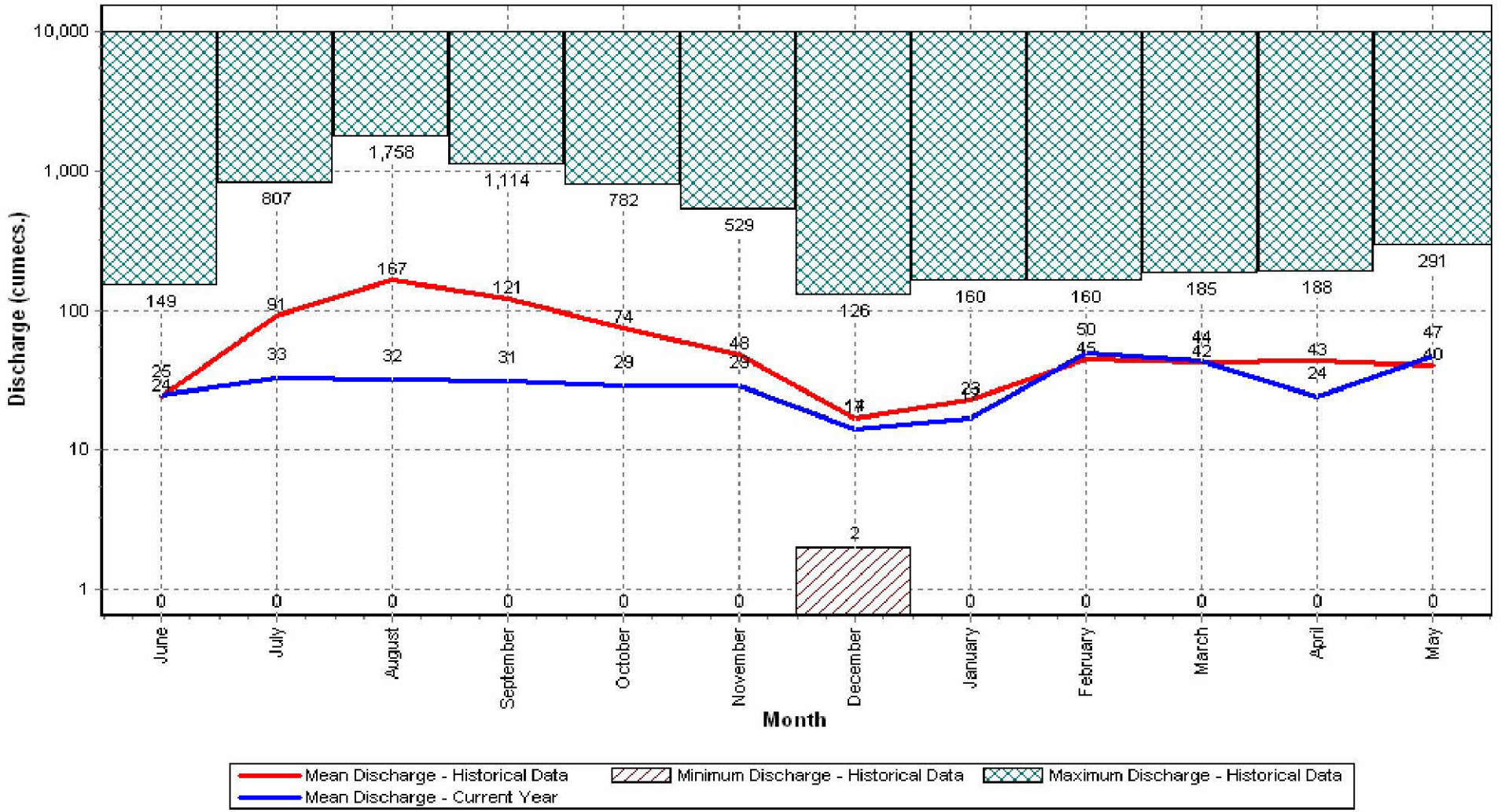
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

## HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017

**Station Name : HOLEHONNUR ( AKLE0A4)** | **Data considered : 2004-2017** | **Division : Cauvery Division, Bangalore**

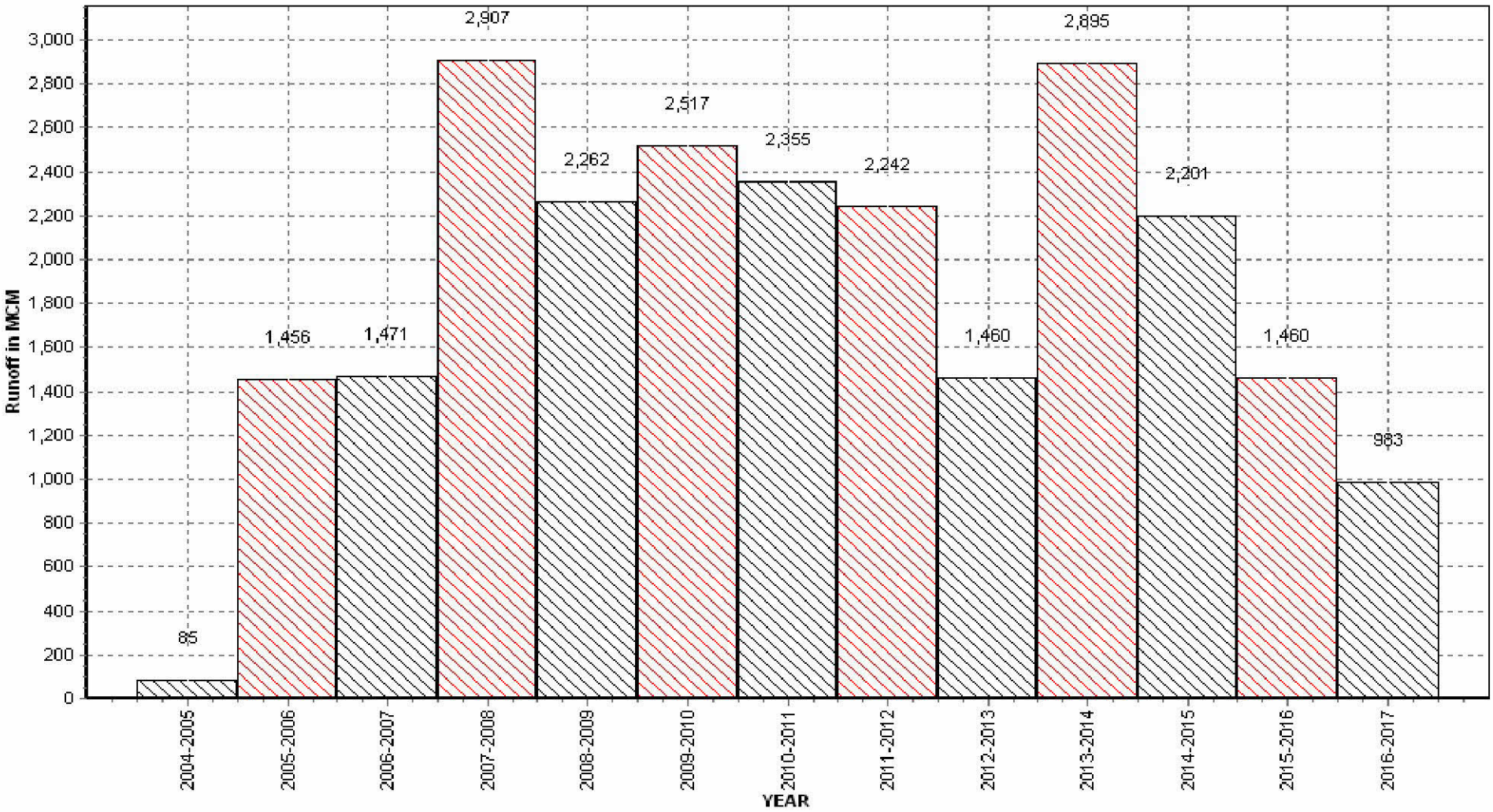
**Local River : Bhadra** | **Sub-Division : Upper Tunga Subdn, Davanagere**



**Annual Runoff Values for the period: 2004 - 2017**

**Station Name : HOLEHONNUR ( AKLE0A4)**
**Local River : Bhadra**

**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Davanagere**

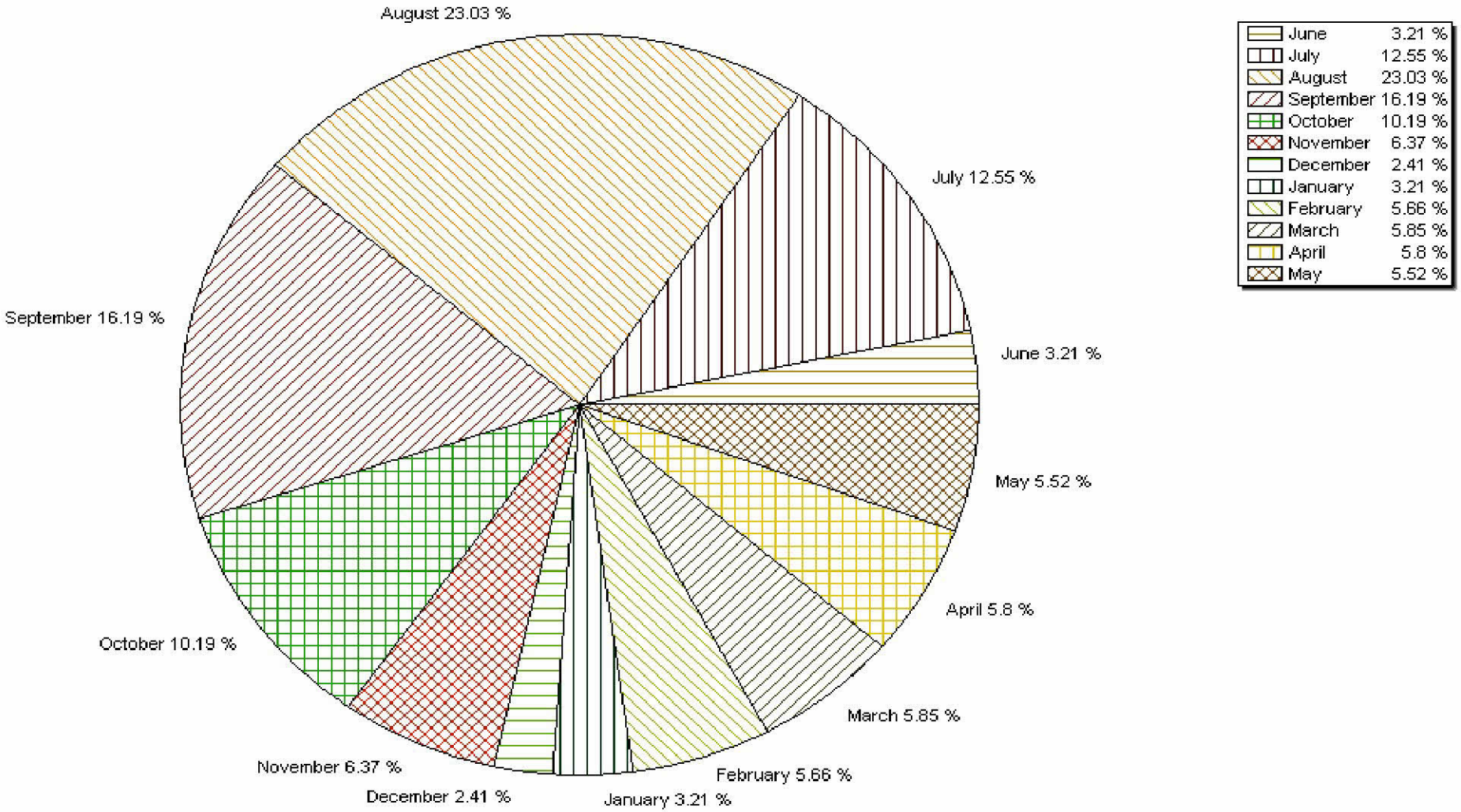



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 2004-2016**

**Station Name : HOLEHONNUR ( AKLE0A4)**
**Local River : Bhadra**

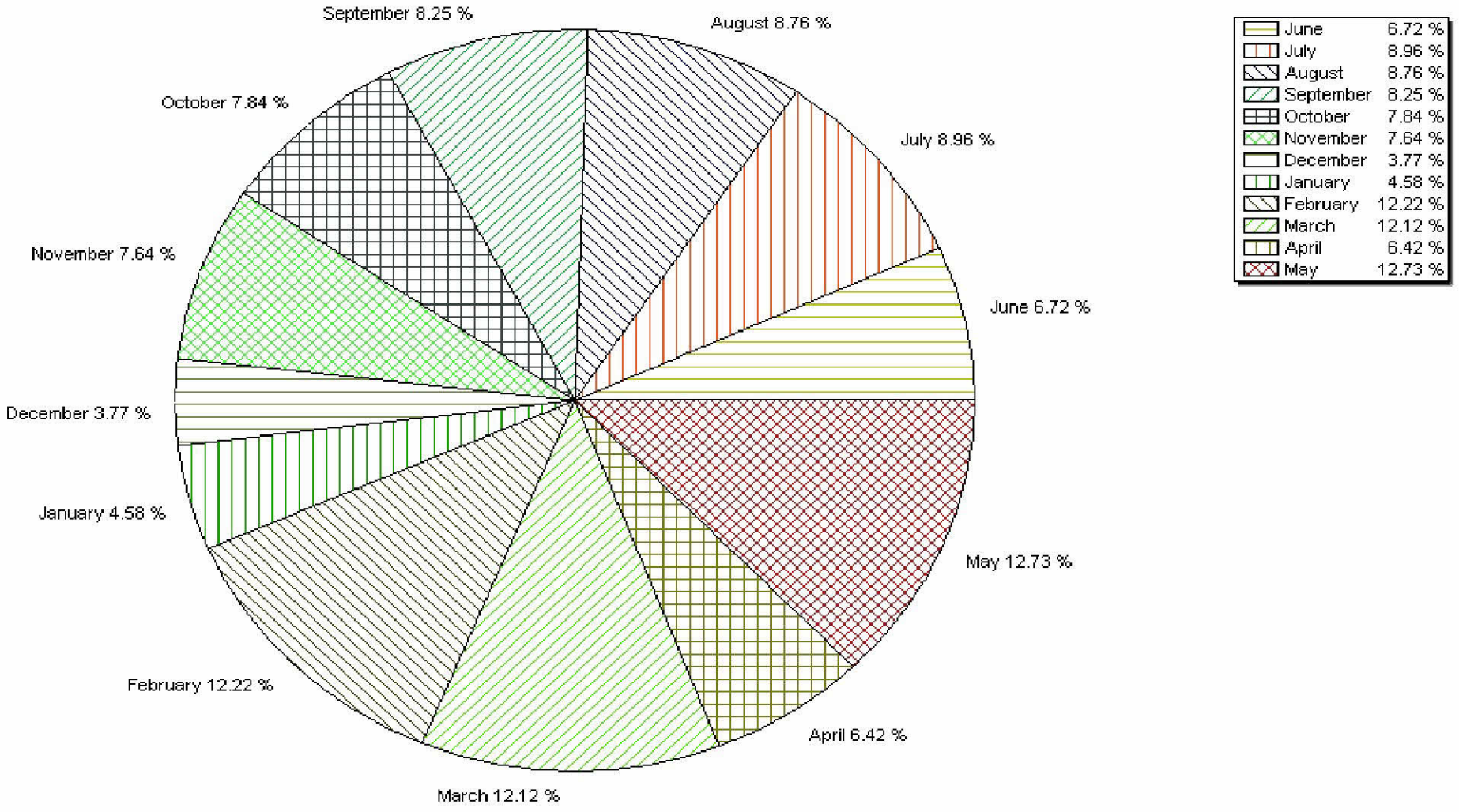
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Davanagere**



**Monthly Runoff for the Year : 2016-2017**

**Station Name : HOLEHONNUR ( AKLE0A4)**
**Local River : Bhadra**

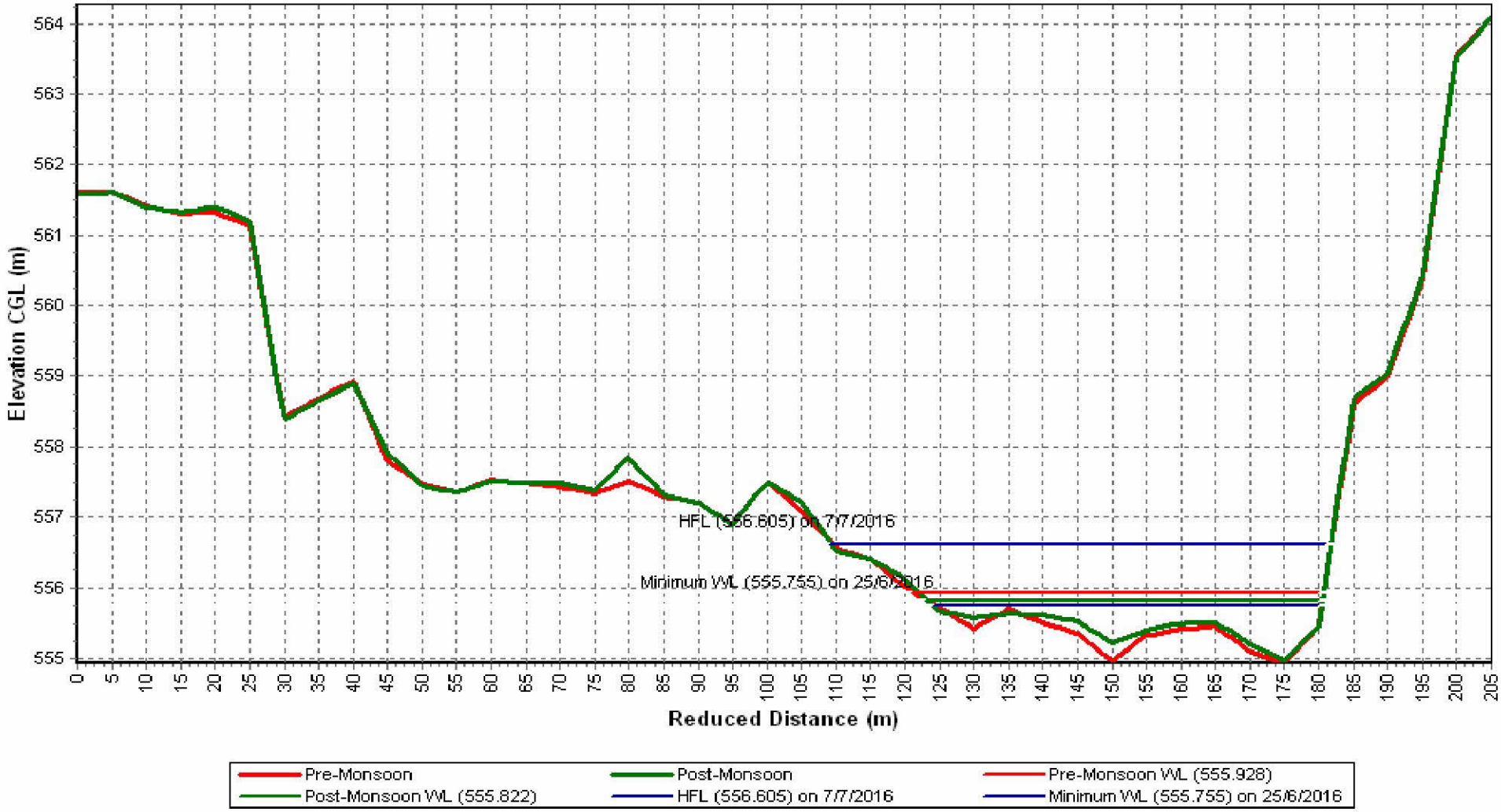
**Division : Cauvery Division, Bangalore**
**Sub-Division : Upper Tunga Subdn, Davanagere**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

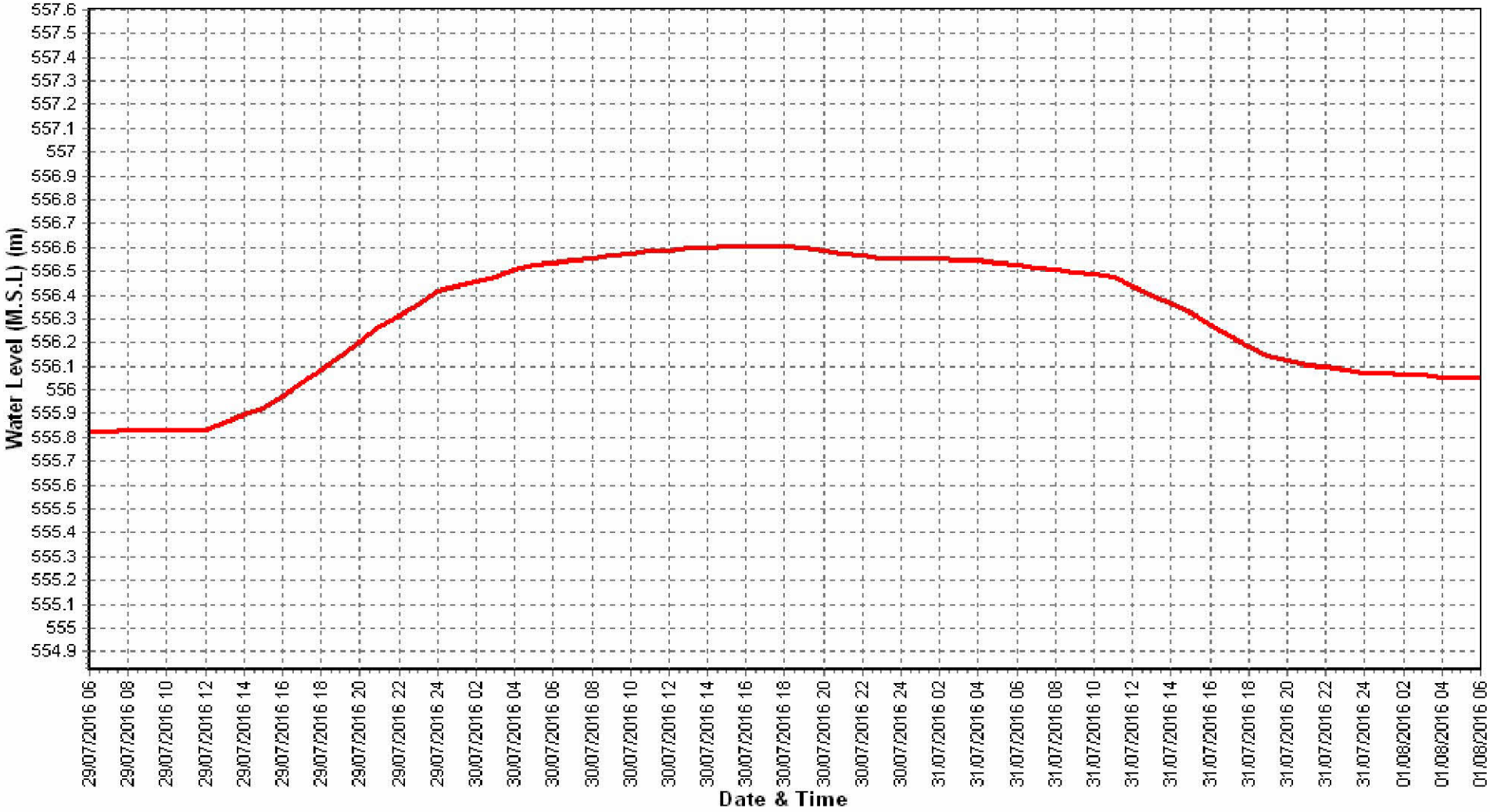
**Station Name : HOLEHONNUR ( AKLE0A4)** **Division : Cauvery Division, Bangalore**

**Local River : Bhadra** **Sub-Division : Upper Tunga Subdn, Davanagere**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : HOLEHONNUR ( AKLE0A4)**
**Division : Cauvery Division, Bangalore**
**Local River : Bhadra**
**Sub-Division : Upper Tunga Subdn, Davanagere**

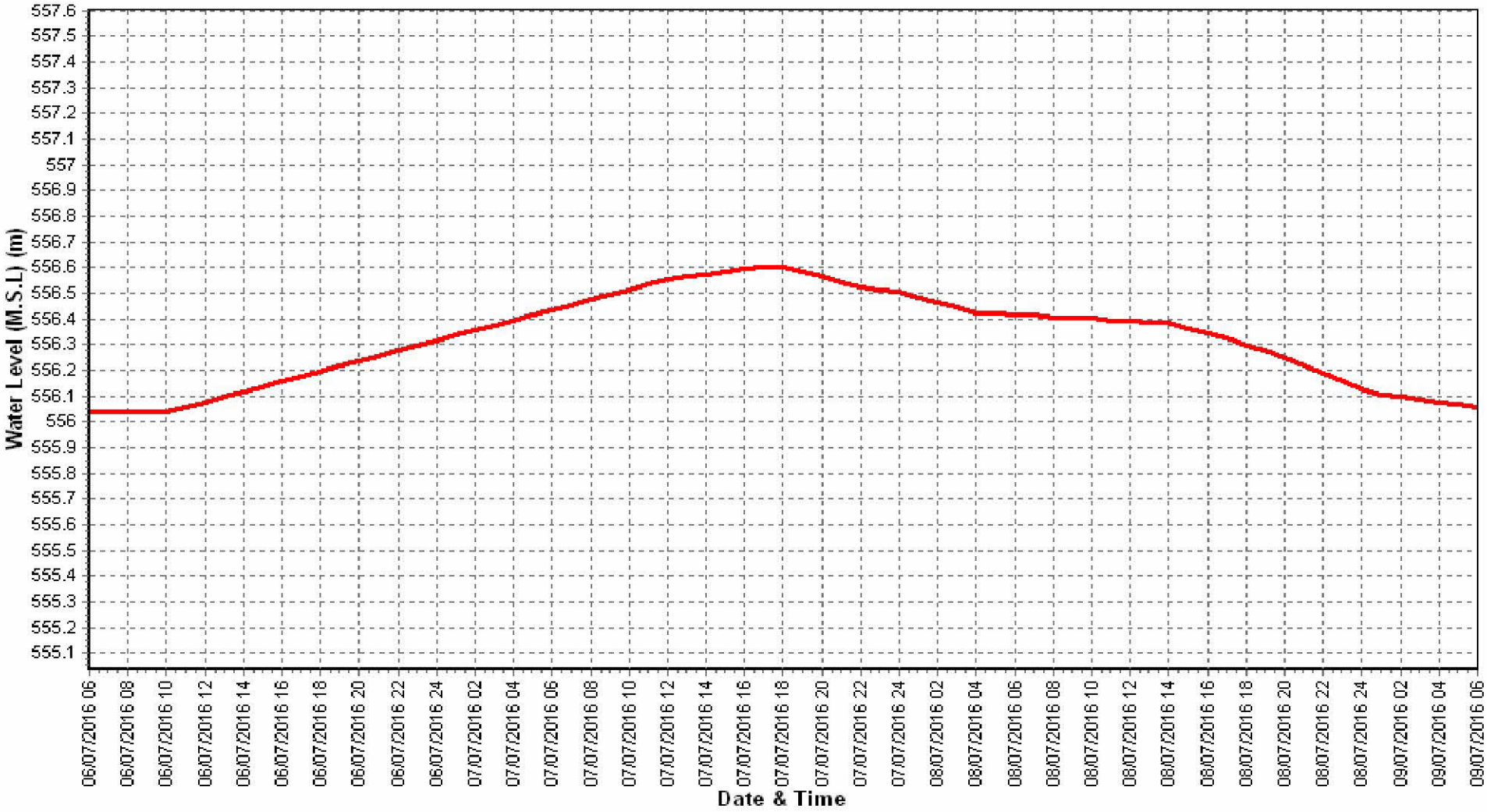



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017

**Station Name : HOLEHONNUR ( AKLE0A4)** | **Division : Cauvery Division, Bangalore**

**Local River : Bhadra** | **Sub-Division : Upper Tunga Subdn, Davanagere**

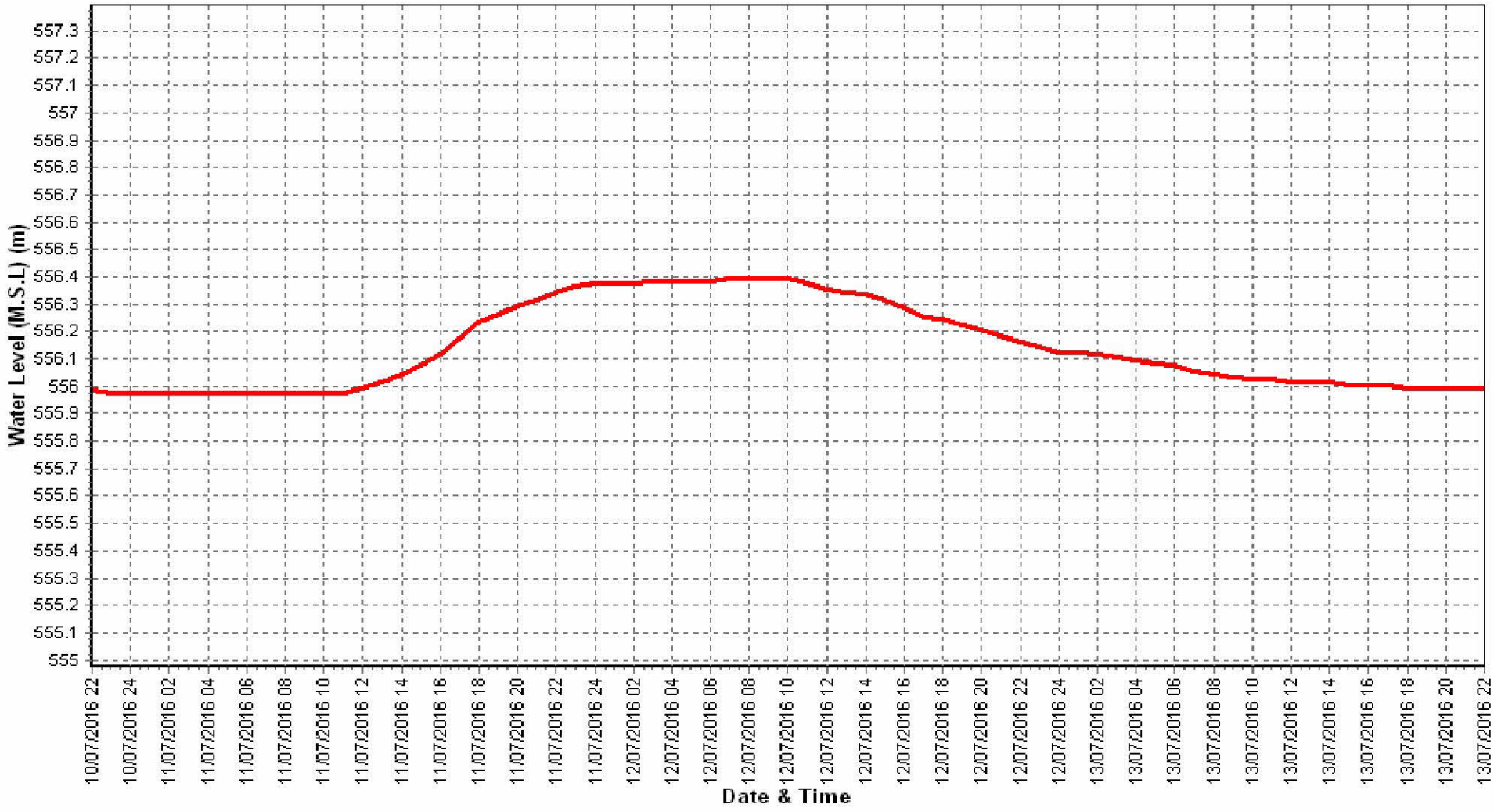



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : HOLEHONNUR ( AKLE0A4)** **Division : Cauvery Division, Bangalore**

**Local River : Bhadra** **Sub-Division : Upper Tunga Subdn, Davanagere**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Yadgir** | | **Code** | **: AKP00B6** | |
| State | : Karnataka | | District | Yadgir | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Bhima | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Bhima | |
| Division | : Lower Krishna Divn., Hyderabad | | Sub-Division | : Middle Krishna SD 2 , Kurnool | |
| Drainage Area | : 69863 Sq. Km. | | Bank | : Left | |
| Latitude | : 16°44'15" | | Longitude | : 77°07'31" | |
| **Zero of Gauge (m)** | : 350.503 (m.s.l) | | 01/01/1960 | | |
| | Opening Date | | Closing Date | | |
| Gauge | : 05/09/1963 | | **HFL During 2016-17** | **: 357.683m** | |
| | | | **Corres. Discharge** | **: 2717(Estimated)** | |
| Discharge | : 11/11/1964 | | **Date & Time of occurance** | **: 25/09/2016 : 05.00 hrs.** | |
| Sediment | : 01/06/1965 | | | | |
| Water Quality | : 01/01/1972 | | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1965-1966 | 4909 | 357.798 | 21/09/1965 | 0.456 | 350.703 | 23/04/1966 |
| 1966-1967 | 3607 | 356.745 | 03/08/1966 | 0.665 | 350.713 | 02/05/1967 |
| 1967-1968 | 7780 | 359.763 | 03/08/1967 | 0.000 | 350.678 | 03/06/1967 |
| 1968-1969 | 3405 | 356.785 | 02/10/1968 | 0.400 | 350.668 | 11/05/1969 |
| 1969-1970 | 10255 | 361.873 | 07/09/1969 | 0.530 | 350.623 | 16/05/1970 |
| 1970-1971 | 4903 | 359.033 | 21/09/1970 | 0.940 | 350.693 | 15/05/1971 |
| 1971-1972 | 4349 | 357.480 | 28/09/1971 | 0.000 | 350.513 | 03/05/1972 |
| 1972-1973 | 2796 | 356.513 | 13/07/1972 | 0.000 | 350.048 | 21/04/1973 |
| 1973-1974 | 4719 | 357.528 | 29/10/1973 | 0.000 | | 08/06/1973 |
| 1974-1975 | 4408 | 357.813 | 24/10/1974 | 5.400 | 350.918 | 13/05/1975 |
| 1975-1976 | 5769 | 359.203 | 11/10/1975 | 0.600 | 350.663 | 31/05/1976 |
| 1976-1977 | 6098 | 359.031 | 07/08/1976 | 0.500 | 350.528 | 27/04/1977 |
| 1977-1978 | 2149 | 355.393 | 13/08/1977 | 1.800 | 350.748 | 07/06/1977 |
| 1978-1979 | 5033 | 357.828 | 22/08/1978 | 1.000 | 350.668 | 13/05/1979 |
| 1979-1980 | 9479 | 360.333 | 29/09/1979 | 0.600 | 350.728 | 28/05/1980 |
| 1980-1981 | 2600 | 356.453 | 09/07/1980 | 0.200 | 350.473 | 12/05/1981 |
| 1981-1982 | 6940 | 359.708 | 24/09/1981 | 4.100 | 350.813 | 01/05/1982 |
| 1982-1983 | 2006 | 355.253 | 23/08/1982 | 0.000 | 350.423 | 26/05/1983 |
| 1983-1984 | 6986 | 359.633 | 25/09/1983 | 0.000 | 350.393 | 01/06/1983 |
| 1984-1985 | 4213 | 357.583 | 12/10/1984 | 3.500 | 350.863 | 02/06/1984 |
| 1985-1986 | 2247 | 355.523 | 07/08/1985 | 0.000 | 350.513 | 23/04/1986 |
| 1986-1987 | 2297 | 355.698 | 14/08/1986 | 0.000 | | 23/04/1987 |

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 |
| 1987-1988 | 1619 | 354.878 | 16/08/1987 | 0.000 | | 17/06/1987 |
| 1988-1989 | 6579 | 359.293 | 21/09/1988 | 0.113 | 350.568 | 01/06/1988 |
| 1989-1990 | 8487 | 359.968 | 29/09/1989 | 0.000 | | 29/04/1990 |
| 1990-1991 | 6041 | 358.888 | 17/08/1990 | 1.000 | 350.753 | 12/05/1991 |
| 1991-1992 | 3691 | 356.899 | 01/08/1991 | 0.000 | | 14/04/1992 |
| 1992-1993 | 2519 | 356.005 | 02/09/1992 | 0.000 | | 15/05/1993 |
| 1993-1994 | 2133 | 355.885 | 21/10/1993 | 0.000 | | 12/05/1994 |
| 1994-1995 | 5178 | 358.523 | 20/07/1994 | 0.000 | | 24/04/1995 |
| 1995-1996 | 1301 | 354.633 | 18/10/1995 | 0.000 | | 24/04/1996 |
| 1996-1997 | 4112 | 357.518 | 08/10/1996 | 0.000 | | 29/05/1997 |
| 1997-1998 | 6164 | 359.083 | 30/08/1997 | 0.000 | 350.803 | 06/04/1998 |
| 1998-1999 | 10057 | 361.543 | 16/10/1998 | 0.000 | 350.773 | 13/05/1999 |
| 1999-2000 | 1645 | 354.818 | 03/08/1999 | 0.000 | 350.593 | 06/05/2000 |
| 2000-2001 | 1538 | 354.743 | 31/08/2000 | 0.000 | 351.833 | 28/03/2001 |
| 2001-2002 | 2468 | 355.708 | 11/10/2001 | 0.000 | 352.193 | 15/03/2002 |
| 2002-2003 | 681.6 | 353.538 | 17/10/2002 | 0.000 | 351.333 | 09/01/2003 |
| 2003-2004 | 1370 | 354.403 | 24/08/2003 | 0.000 | 350.793 | 06/05/2004 |
| 2004-2005 | 869.6 | 353.953 | 05/10/2004 | 0.000 | 352.103 | 14/02/2005 |
| 2005-2006 | 7899 | 359.703 | 09/08/2005 | 0.000 | 352.353 | 12/02/2006 |
| 2006-2007 | 9807 | 360.343 | 16/08/2006 | 0.000 | 352.053 | 25/01/2007 |
| 2007-2008 | 3177 | 356.613 | 23/09/2007 | 0.000 | 352.193 | 25/01/2008 |
| 2008-2009 | 3189 | 356.563 | 13/09/2008 | 0.000 | 351.443 | 25/01/2009 |
| 2009-2010 | 7980 | 359.733 | 04/10/2009 | 0.000 | 352.023 | 01/04/2010 |
| 2010-2011 | 3013 | 356.403 | 26/08/2010 | 0.000 | 352.173 | 27/02/2011 |
| 2011-2012 | 4939 | 357.253 | 08/09/2011 | 0.000 | 351.923 | 21/01/2012 |
| 2012-2013 | 415.5 | 352.803 | 05/09/2012 | 0.000 | 350.533 | 19/03/2013 |
| 2013-2014 | 3306 | 357.483 | 22/09/2013 | 0.000 | 351.173 | 25/02/2014 |
| 2014-2015 | 2084 | 355.293 | 02/09/2014 | 0.000 | 352.043 | 29/12/2014 |
| 2015-2016 | 297.0 | 352.383 | 18/09/2015 | 0.000 | 350.123 | 10/04/2016 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Yadgir ( AKP00B6)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Bhima** **Sub-Division : Middle Krishna SD 2 , Kurnool**

| 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 | 350.203 | 0.000 | 350.743 | 0.000 | 353.703 | 839.9 | 351.183 | 45.80 | 352.968 | 486.9 | 350.853 | 8.876 |
| 2 | 350.213 | 0.000 | 350.743 | 0.000 | 352.253 | 284.0 | 352.503 | 340.9 | 353.723 | 827.9 * | 350.853 | 8.947 |
| 3 | 350.223 | 0.000 | 350.743 | 0.000 | 352.203 | 277.8 | 352.273 | 299.4 | 353.023 | 510.3 | 350.903 | 12.57 |
| 4 | 350.233 | 0.000 | 350.723 | 0.000 | 352.223 | 290.0 | 351.753 | 152.6 * | 353.043 | 523.6 | 351.053 | 34.53 |
| 5 | 350.233 | 0.000 | 350.713 | 0.000 | 351.823 | 163.3 | 351.603 | 120.3 * | 355.333 | 1577 | 351.053 | 34.06 |
| 6 | 350.233 | 0.000 | 350.703 | 0.000 | 351.443 | 93.72 | 351.263 | 64.29 | 355.463 | 1638 | 351.053 | 30.68 * |
| 7 | 350.233 | 0.000 | 350.703 | 0.000 | 351.493 | 98.66 * | 351.583 | 115.4 | 355.503 | 1658 | 351.053 | 33.94 |
| 8 | 350.233 | 0.000 | 350.683 | 0.000 | 352.343 | 310.4 | 351.583 | 117.1 | 355.363 | 1607 * | 351.083 | 38.57 |
| 9 | 350.233 | 0.000 | 350.643 | 0.000 | 350.933 | 20.03 | 351.563 | 113.2 | 355.123 | 1494 * | 351.083 | 41.13 |
| 10 | 350.223 | 0.000 | 350.603 | 0.000 | 352.848 | 437.8 | 351.563 | 112.2 * | 354.503 | 1243 | 351.103 | 42.51 |
| 11 | 350.223 | 0.000 | 350.563 | 0.000 | 353.588 | 785.6 | 351.463 | 93.06 * | 353.453 | 710.5 * | 351.113 | 43.58 |
| 12 | 350.213 | 0.000 | 350.563 | 0.000 | 353.053 | 527.9 | 351.303 | 67.05 | 353.333 | 660.6 * | 351.113 | 38.06 * |
| 13 | 350.203 | 0.000 | 350.543 | 0.000 | 352.853 | 476.3 * | 351.273 | 60.76 * | 352.518 | 312.3 | 351.113 | 38.06 * |
| 14 | 350.193 | 0.000 | 350.523 | 0.000 | 352.703 | 423.8 * | 351.263 | 62.39 | 352.703 | 397.0 | 351.113 | 38.06 * |
| 15 | 350.183 | 0.000 | 350.513 | 0.000 | 352.663 | 410.2 * | 351.703 | 143.9 | 352.703 | 399.6 | 351.113 | 44.41 |
| 16 | 350.173 | 0.000 | 350.493 | 0.000 | 352.223 | 291.8 | 355.013 | 1444 | 352.583 | 383.6 * | 351.113 | 43.34 |
| 17 | 350.173 | 0.000 | 350.463 | 0.000 | 352.203 | 278.8 | 353.283 | 673.5 | 352.323 | 294.1 | 351.183 | 51.45 |
| 18 | 350.163 | 0.000 | 350.443 | 0.000 | 352.363 | 312.4 | 352.693 | 420.4 * | 351.653 | 124.2 | 351.183 | 51.10 |
| 19 | 350.213 | 0.000 | 350.323 | 0.000 | 352.223 | 281.5 | 352.328 | 306.6 | 351.643 | 122.8 | 351.183 | 50.92 |
| 20 | 350.303 | 0.000 | 350.643 | 0.000 | 351.938 | 189.9 | 352.883 | 464.1 | 351.623 | 120.4 | 351.183 | 47.46 * |
| 21 | 350.383 | 0.000 | 350.823 | 0.000 | 352.103 | 239.6 * | 351.693 | 139.2 | 351.653 | 124.7 | 350.773 | 0.000 |
| 22 | 350.573 | 0.000 | 352.688 | 403.0 | 351.713 | 151.7 | 354.338 | 1098 | 351.653 | 121.6 | 350.753 | 0.000 |
| 23 | 350.733 | 0.000 | 353.553 | 784.4 | 351.713 | 155.2 | 354.003 | 974.3 | 351.653 | 130.7 * | 350.733 | 0.000 |
| 24 | 350.923 | 0.000 | 353.053 | 550.1 * | 351.583 | 119.2 | 356.283 | 2066 | 351.653 | 122.6 | 350.703 | 0.000 |
| 25 | 350.983 | 0.000 | 351.613 | 127.4 | 351.543 | 109.6 | 357.523 | 2640 * | 351.653 | 125.2 | 350.703 | 0.000 |
| 26 | 351.013 | 0.000 | 350.893 | 18.86 | 351.543 | 105.9 | 355.973 | 1901 | 351.653 | 123.6 | 350.703 | 0.000 |
| 27 | 350.953 | 0.000 | 350.843 | 6.447 | 351.543 | 104.2 | 355.453 | 1633 | 351.653 | 124.8 | 350.713 | 0.000 |
| 28 | 350.823 | 0.000 | 350.823 | 0.000 | 351.473 | 94.91 * | 355.323 | 1568 | 351.603 | 117.2 | 350.723 | 0.000 |
| 29 | 350.703 | 0.000 | 351.203 | 45.42 | 351.373 | 80.37 | 355.133 | 1502 | 351.603 | 114.7 | 350.743 | 0.000 |
| 30 | 350.703 | 0.000 | 353.888 | 934.2 | 351.373 | 78.75 | 354.258 | 1065 | 351.333 | 70.36 * | 350.753 | 0.000 |
| 31 | | | 351.843 | 173.5 * | 351.303 | 66.89 | | | 350.883 | 11.26 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 350.226 | 0.000 | 350.700 | 0.000 | 352.126 | 281.6 | 351.687 | 148.1 | 354.404 | 1156 | 351.009 | 28.58 |
| II Ten-Daily | 350.204 | 0.000 | 350.507 | 0.000 | 352.581 | 397.8 | 352.321 | 373.6 | 352.454 | 352.5 | 351.141 | 44.64 |
| III Ten-Daily | 350.779 | 0.000 | 351.929 | 276.7 | 351.569 | 118.8 | 354.998 | 1459 | 351.545 | 107.9 | 350.730 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 350.163 | 0.000 | 350.323 | 0.000 | 350.933 | 20.03 | 351.183 | 45.80 | 350.883 | 11.26 | 350.703 | 0.000 |
| Max. | 351.013 | 0.000 | 353.888 | 934.2 | 353.703 | 839.9 | 357.523 | 2640 | 355.503 | 1658 | 351.183 | 51.45 |
| Mean | 350.403 | 0 | 351.074 | 98.17 | 352.075 | 261.3 | 353.002 | 660.1 | 352.760 | 525 | 350.960 | 24.41 |

**Annual Runoff in MCM = 4143 Annual Runoff in mm = 59**

**Peak Observed Discharge = 2066 cumecs on 24/09/2016 Corres. Water Level :356.283 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016 Corres. Water Level :350.203 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 2016 - 2017

**Station Name : Yadgir ( AKP00B6)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Bhima** **Sub-Division : Middle Krishna SD 2 , Kurnool**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 350.753 | 0.000 | 352.123 | 0.000 | 351.113 | 0.000 | 351.923 | 0.000 | 350.783 | 0.000 | 351.033 | 0.000 |
| 2 | 350.753 | 0.000 | 352.123 | 0.000 | 351.313 | 0.000 | 351.903 | 0.000 | 350.763 | 0.000 | 351.043 | 0.000 |
| 3 | 350.753 | 0.000 | 352.123 | 0.000 | 351.543 | 0.000 | 351.883 | 0.000 | 350.763 | 0.000 | 351.063 | 0.000 |
| 4 | 350.763 | 0.000 | 352.123 | 0.000 | 351.703 | 0.000 | 351.853 | 0.000 | 350.753 | 0.000 | 351.103 | 0.000 |
| 5 | 350.763 | 0.000 | 352.123 | 0.000 | 351.823 | 0.000 | 351.853 | 0.000 | 350.733 | 0.000 | 351.743 | 0.000 |
| 6 | 350.763 | 0.000 | 352.123 | 0.000 | 351.883 | 0.000 | 351.843 | 0.000 | 350.703 | 0.000 | 352.033 | 0.000 |
| 7 | 350.763 | 0.000 | 352.123 | 0.000 | 351.903 | 0.000 | 351.823 | 0.000 | 350.673 | 0.000 | 352.083 | 0.000 |
| 8 | 350.763 | 0.000 | 352.013 | 0.000 | 351.903 | 0.000 | 351.793 | 0.000 | 350.673 | 0.000 | 352.083 | 0.000 |
| 9 | 350.763 | 0.000 | 351.563 | 0.000 | 351.903 | 0.000 | 351.763 | 0.000 | 350.673 | 0.000 | 352.123 | 0.000 |
| 10 | 351.103 | 0.000 | 351.553 | 0.000 | 351.903 | 0.000 | 351.713 | 0.000 | 350.673 | 0.000 | 352.143 | 0.000 |
| 11 | 351.503 | 0.000 | 351.543 | 0.000 | 351.873 | 0.000 | 351.653 | 0.000 | 350.663 | 0.000 | 352.143 | 0.000 |
| 12 | 351.983 | 0.000 | 351.443 | 0.000 | 351.833 | 0.000 | 351.563 | 0.000 | 350.663 | 0.000 | 352.143 | 0.000 |
| 13 | 352.483 | 0.000 | 351.213 | 0.000 | 351.783 | 0.000 | 351.423 | 0.000 | 350.663 | 0.000 | 352.143 | 0.000 |
| 14 | 352.473 | 0.000 | 351.073 | 0.000 | 351.753 | 0.000 | 351.393 | 0.000 | 350.653 | 0.000 | 352.143 | 0.000 |
| 15 | 352.453 | 0.000 | 351.003 | 0.000 | 351.663 | 0.000 | 351.363 | 0.000 | 350.653 | 0.000 | 352.143 | 0.000 |
| 16 | 352.413 | 0.000 | 350.903 | 0.000 | 351.593 | 0.000 | 351.333 | 0.000 | 350.653 | 0.000 | 352.143 | 0.000 |
| 17 | 352.353 | 0.000 | 350.833 | 0.000 | 351.523 | 0.000 | 351.303 | 0.000 | 350.653 | 0.000 | 352.113 | 0.000 |
| 18 | 352.163 | 0.000 | 350.783 | 0.000 | 351.483 | 0.000 | 351.303 | 0.000 | 350.653 | 0.000 | 352.023 | 0.000 |
| 19 | 352.003 | 0.000 | 350.753 | 0.000 | 351.443 | 0.000 | 351.263 | 0.000 | 350.643 | 0.000 | 351.953 | 0.000 |
| 20 | 351.953 | 0.000 | 350.713 | 0.000 | 351.393 | 0.000 | 351.183 | 0.000 | 350.683 | 0.000 | 351.863 | 0.000 |
| 21 | 351.933 | 0.000 | 350.683 | 0.000 | 351.323 | 0.000 | 351.173 | 0.000 | 350.753 | 0.000 | 351.753 | 0.000 |
| 22 | 351.923 | 0.000 | 350.663 | 0.000 | 351.283 | 0.000 | 351.153 | 0.000 | 350.803 | 0.000 | 351.633 | 0.000 |
| 23 | 351.923 | 0.000 | 350.663 | 0.000 | 351.473 | 0.000 | 351.133 | 0.000 | 350.883 | 0.000 | 351.583 | 0.000 |
| 24 | 351.943 | 0.000 | 350.683 | 0.000 | 351.623 | 0.000 | 351.113 | 0.000 | 350.933 | 0.000 | 351.503 | 0.000 |
| 25 | 351.943 | 0.000 | 350.713 | 0.000 | 351.883 | 0.000 | 351.103 | 0.000 | 350.953 | 0.000 | 351.433 | 0.000 |
| 26 | 351.903 | 0.000 | 350.743 | 0.000 | 352.033 | 0.000 | 351.093 | 0.000 | 350.963 | 0.000 | 351.413 | 0.000 |
| 27 | 351.863 | 0.000 | 350.773 | 0.000 | 352.083 | 0.000 | 351.093 | 0.000 | 351.003 | 0.000 | 351.363 | 0.000 |
| 28 | 351.823 | 0.000 | 350.803 | 0.000 | 352.133 | 0.000 | 351.073 | 0.000 | 351.033 | 0.000 | 351.343 | 0.000 |
| 29 | 351.903 | 0.000 | 350.853 | 0.000 | | | 350.993 | 0.000 | 351.033 | 0.000 | 351.303 | 0.000 |
| 30 | 351.983 | 0.000 | 350.903 | 0.000 | | | 350.913 | 0.000 | 351.033 | 0.000 | 351.293 | 0.000 |
| 31 | 352.083 | 0.000 | 350.933 | 0.000 | | | 350.823 | 0.000 | | | 351.233 | 0.000 |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 350.794 | 0.000 | 351.999 | 0.000 | 351.699 | 0.000 | 351.835 | 0.000 | 350.719 | 0.000 | 351.645 | 0.000 |
| II Ten-Daily | 352.178 | 0.000 | 351.026 | 0.000 | 351.634 | 0.000 | 351.378 | 0.000 | 350.658 | 0.000 | 352.081 | 0.000 |
| III Ten-Daily | 351.929 | 0.000 | 350.765 | 0.000 | 351.729 | 0.000 | 351.060 | 0.000 | 350.939 | 0.000 | 351.441 | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 350.753 | 0.000 | 350.663 | 0.000 | 351.113 | 0.000 | 350.823 | 0.000 | 350.643 | 0.000 | 351.033 | 0.000 |
| Max. | 352.483 | 0.000 | 352.123 | 0.000 | 352.133 | 0.000 | 351.923 | 0.000 | 351.033 | 0.000 | 352.143 | 0.000 |
| Mean | 351.643 | 0 | 351.247 | 0 | 351.684 | 0 | 351.413 | 0 | 350.772 | 0 | 351.713 | 0 |

**Peak Computed Discharge = 2640 cumecs on 25/09/2016** **Corres. Water Level :357.523 m**

**Lowest Computed Discharge = 30.68 cumecs on 06/11/2016** **Corres. Water Level :351.053 m**

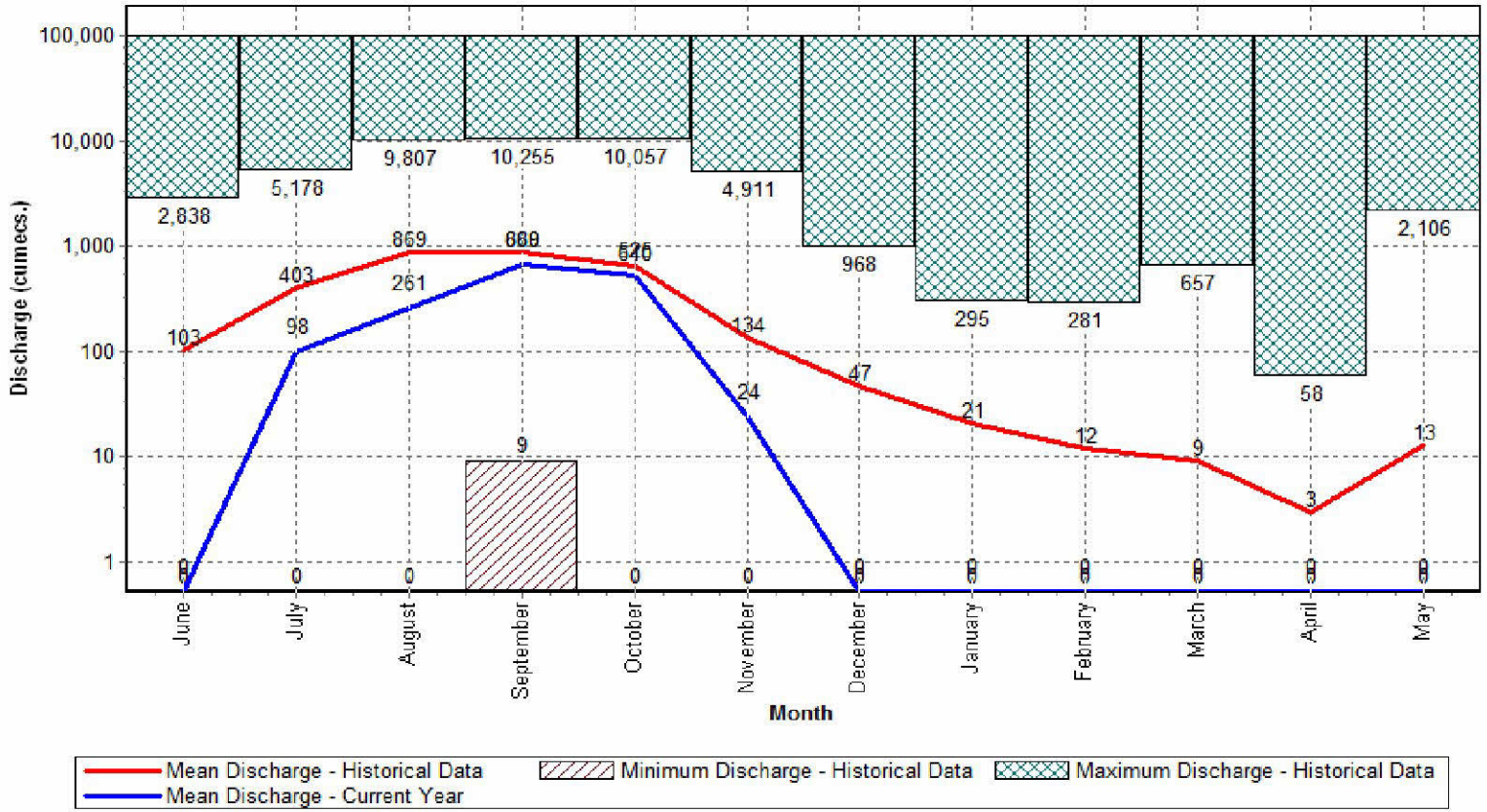
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Yadgir ( AKP00B6)** | **Data considered : 1965-2017** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Bhima** | **Sub-Division : Middle Krishna SD 2 , Kurnool**



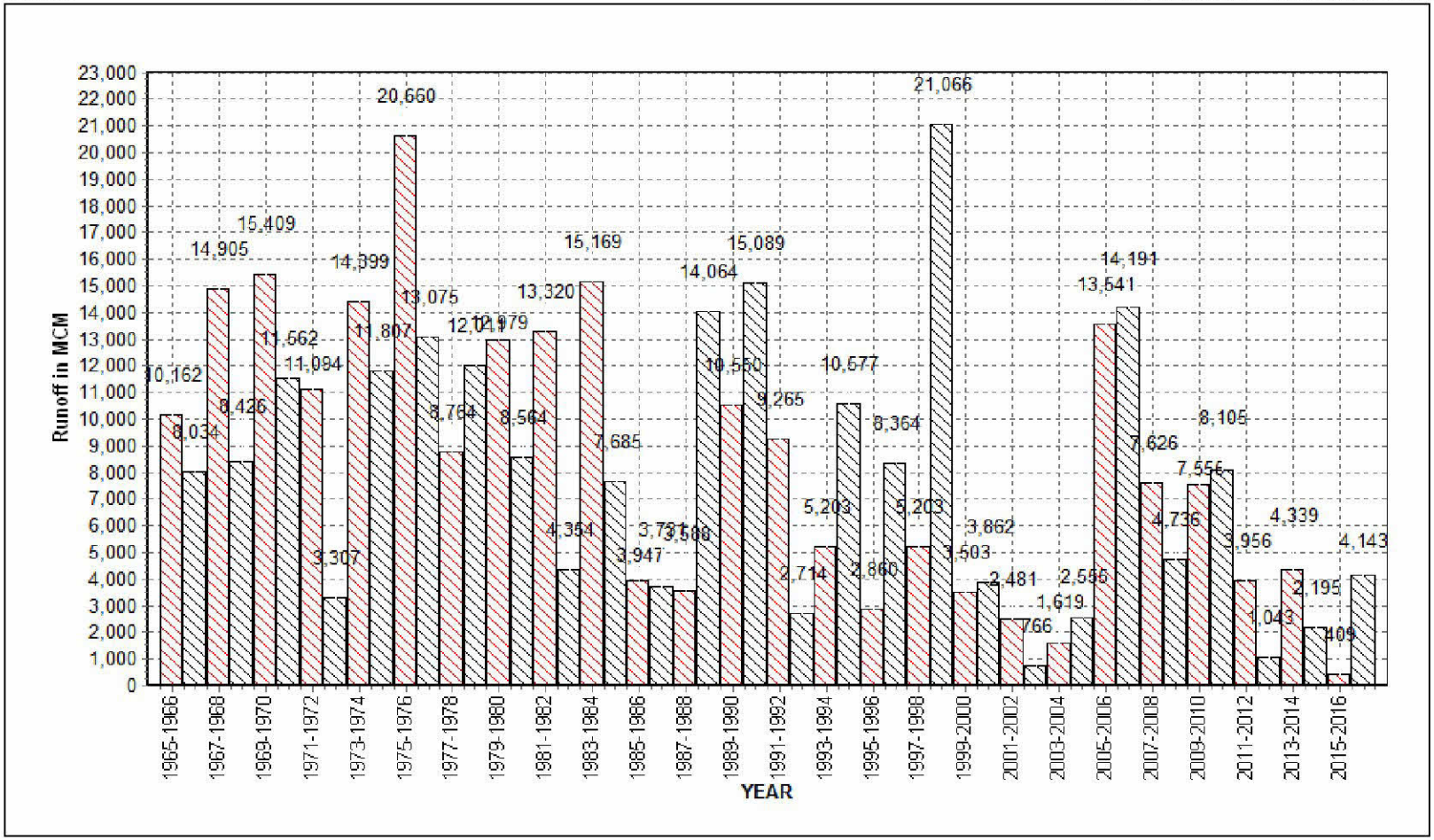
## Annual Runoff Values for the period: 1965 - 2017

**Station Name : Yadgir ( AKP00B6)**

**Local River : Bhima**

**Division : Lower Krishna Divn., Hyderabad**

**Sub-Division : Middle Krishna SD 2 , Kurnool**

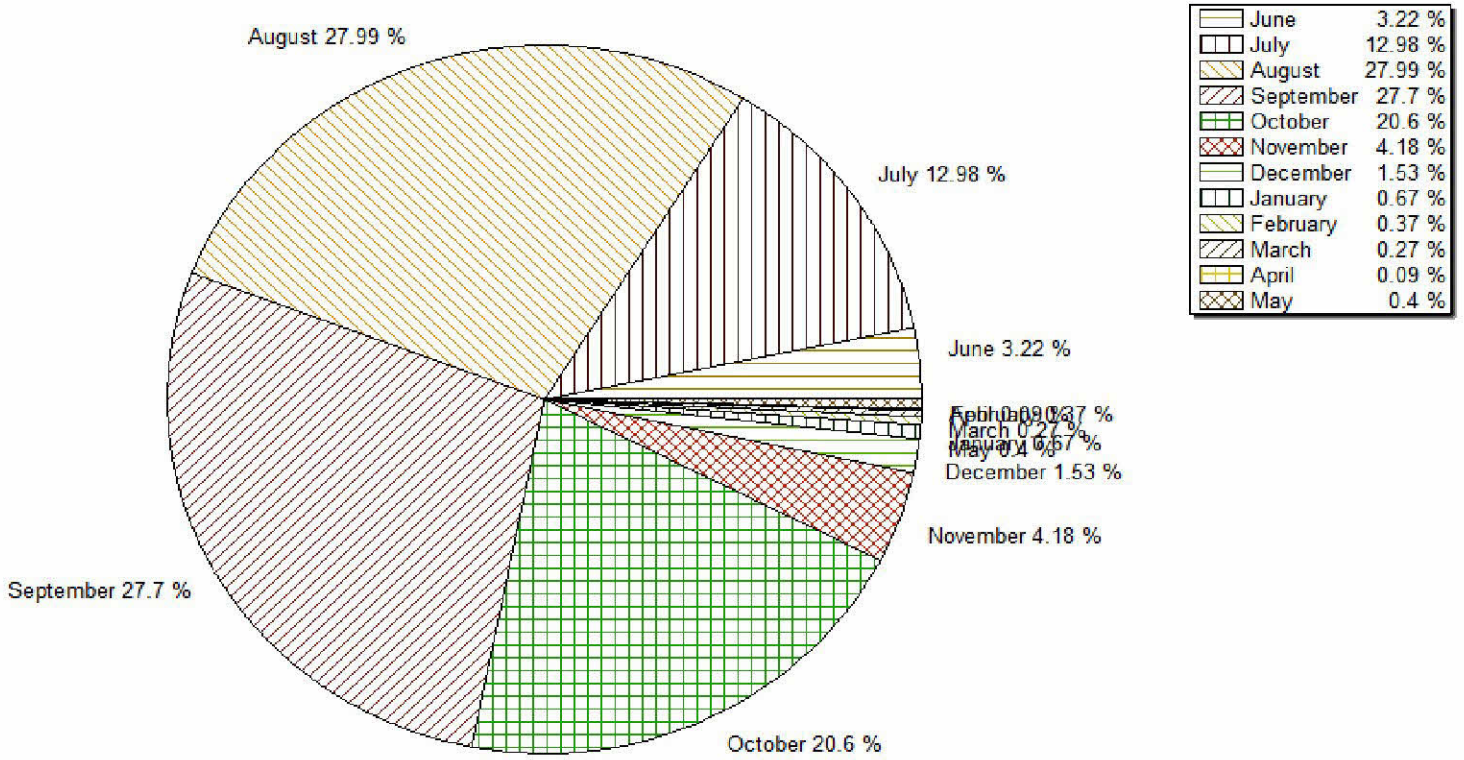



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1965-2016**

**Station Name : Yadgir ( AKP00B6)**
**Local River : Bhima**

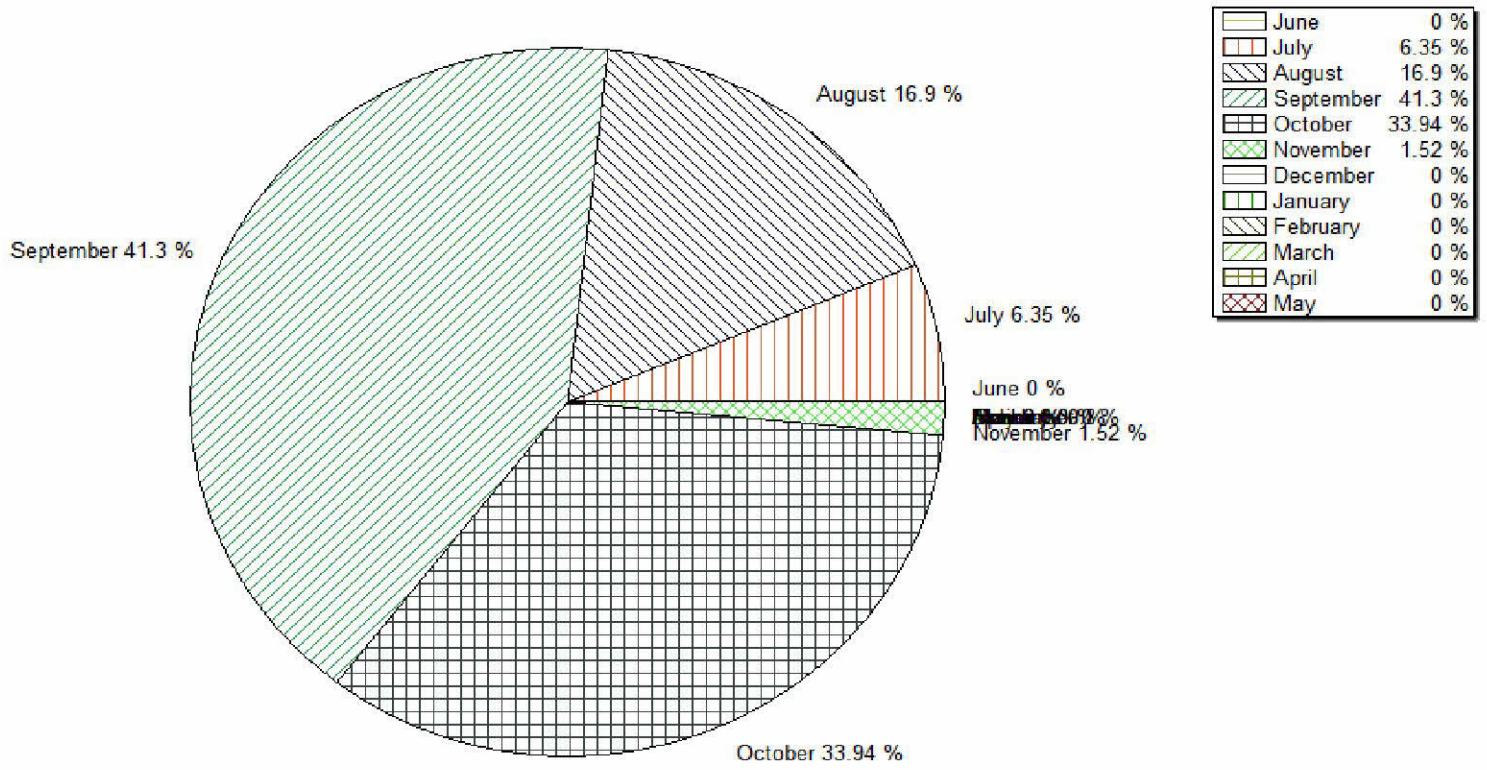
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Middle Krishna SD 2 , Kurnool**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Yadgir ( AKP00B6)**
**Local River : Bhima**

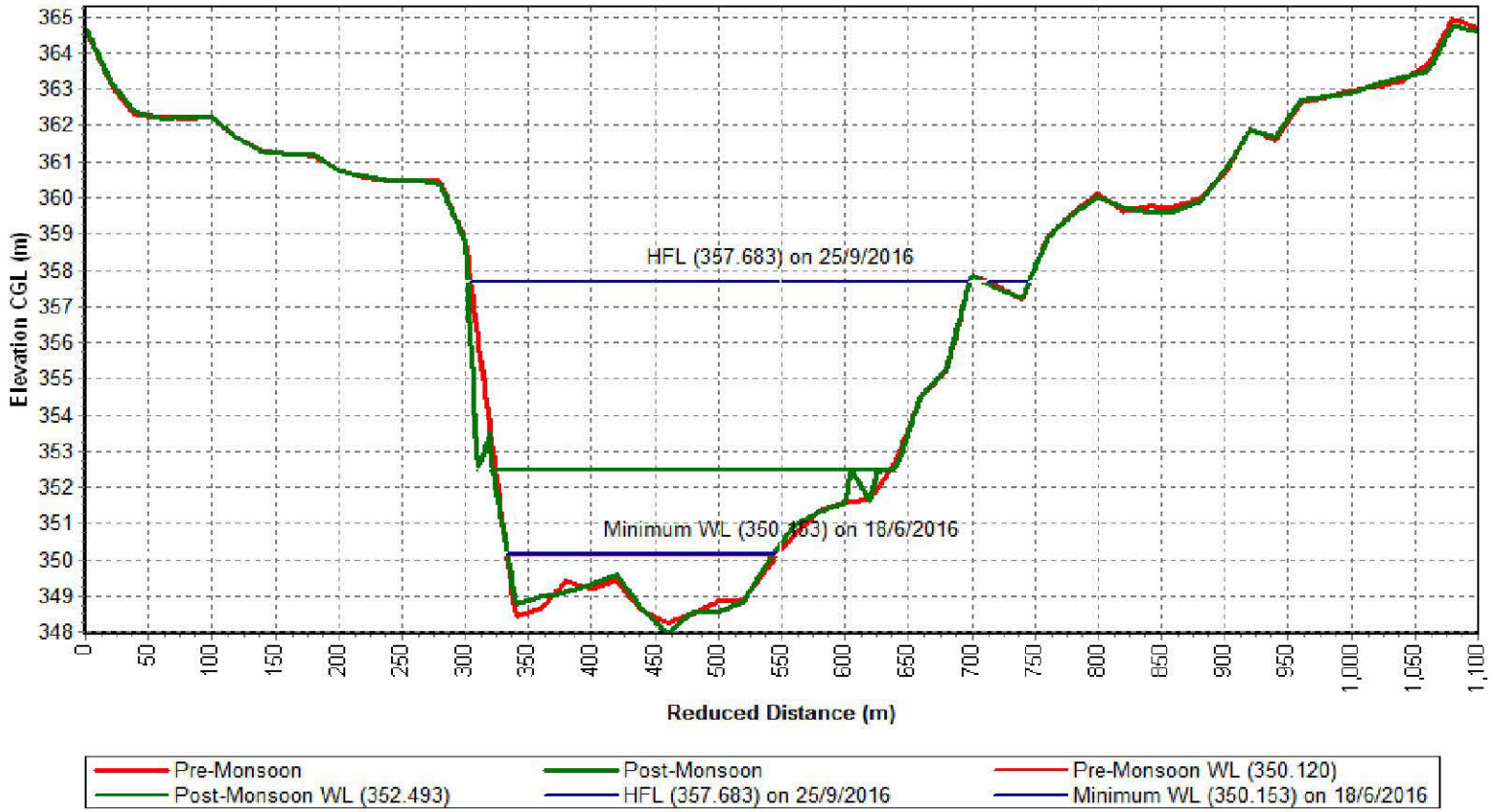
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Middle Krishna SD 2 , Kurnool**



## Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017

**Station Name : Yadgir ( AKP00B6)**
**Local River : Bhima**

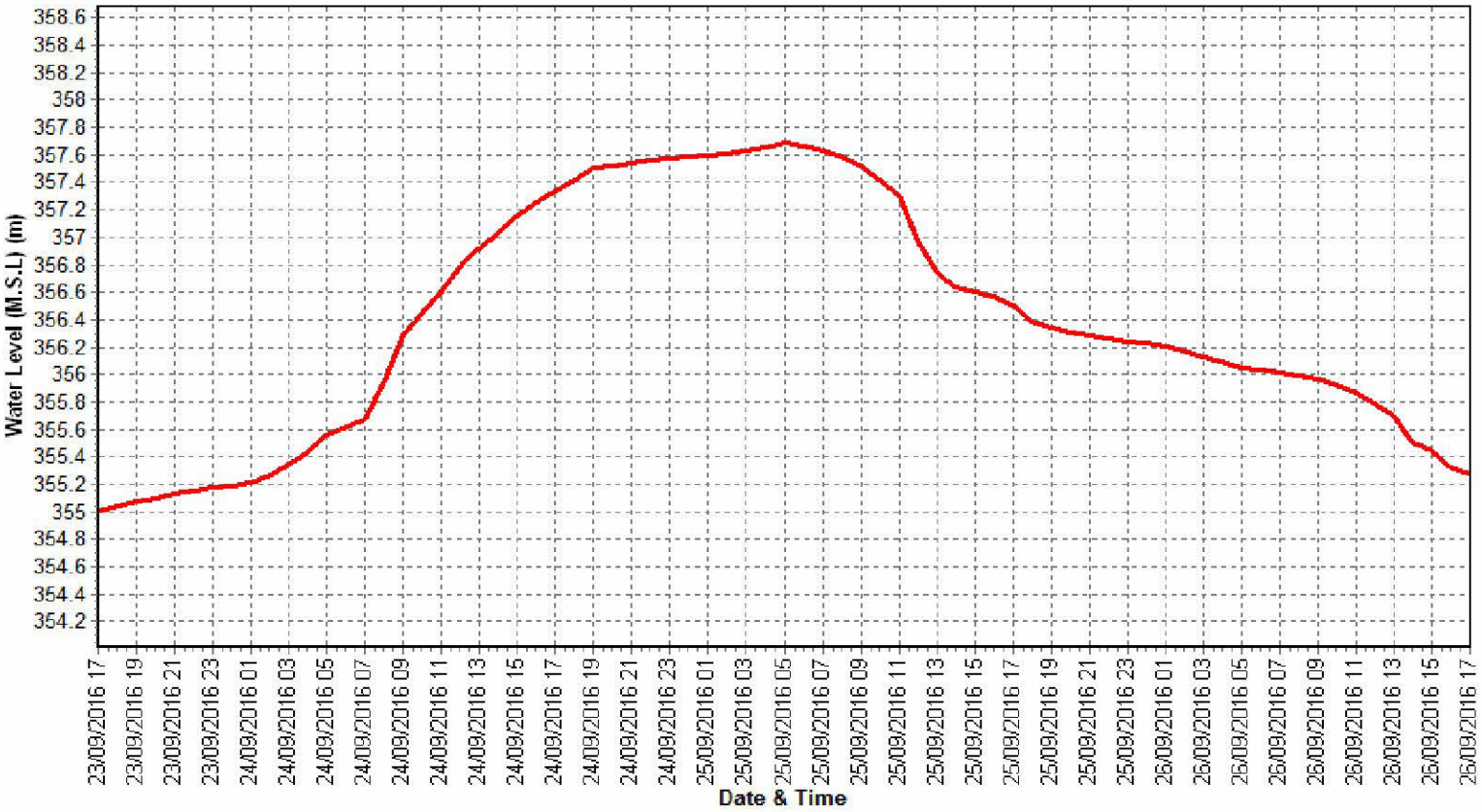
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Middle Krishna SD 2 , Kurnool**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Yadgir ( AKP00B6)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Bhima** | **Sub-Division : Middle Krishna SD 2 , Kurnool**

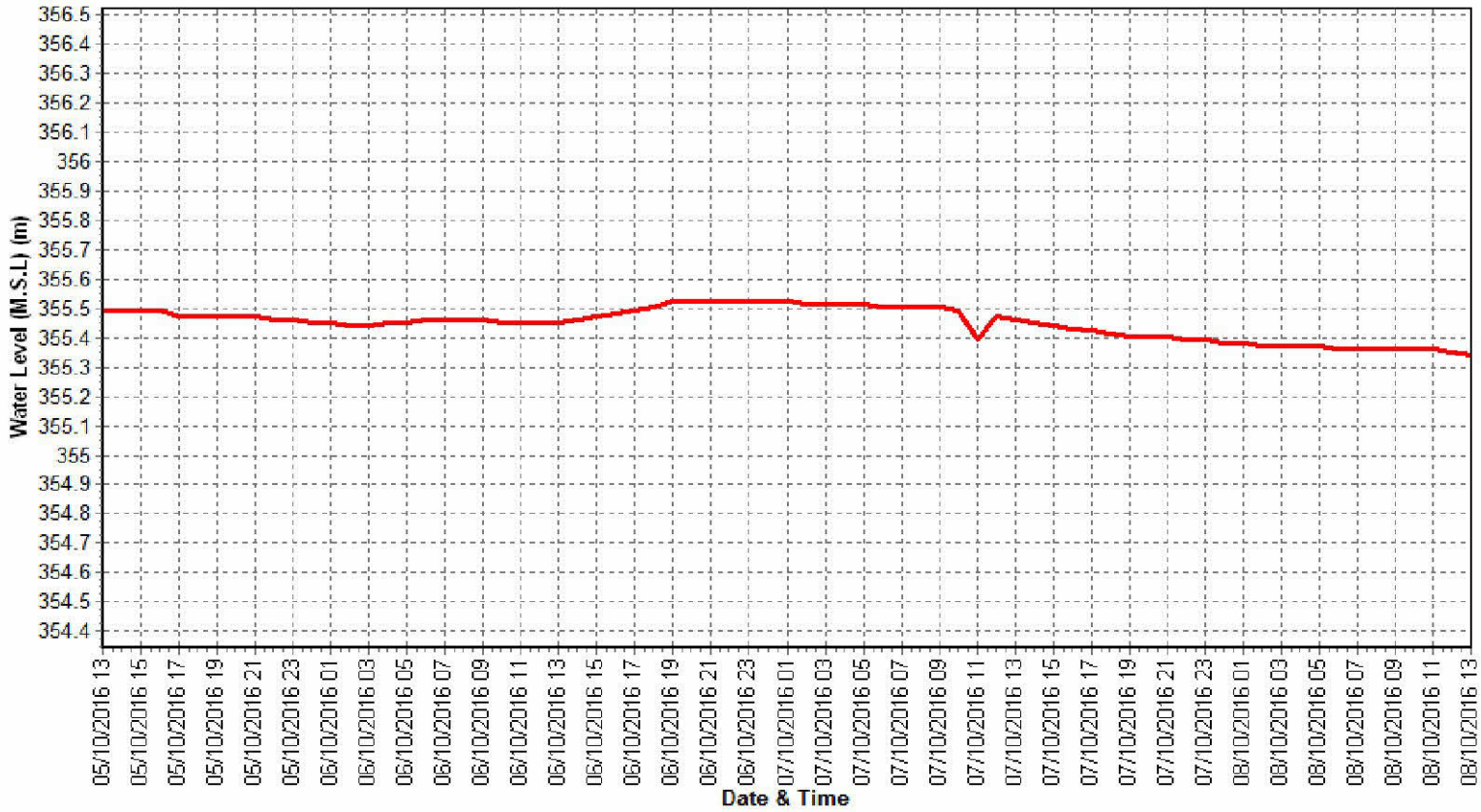



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017

**Station Name : Yadgir ( AKP00B6)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Bhima** | **Sub-Division : Middle Krishna SD 2 , Kurnool**

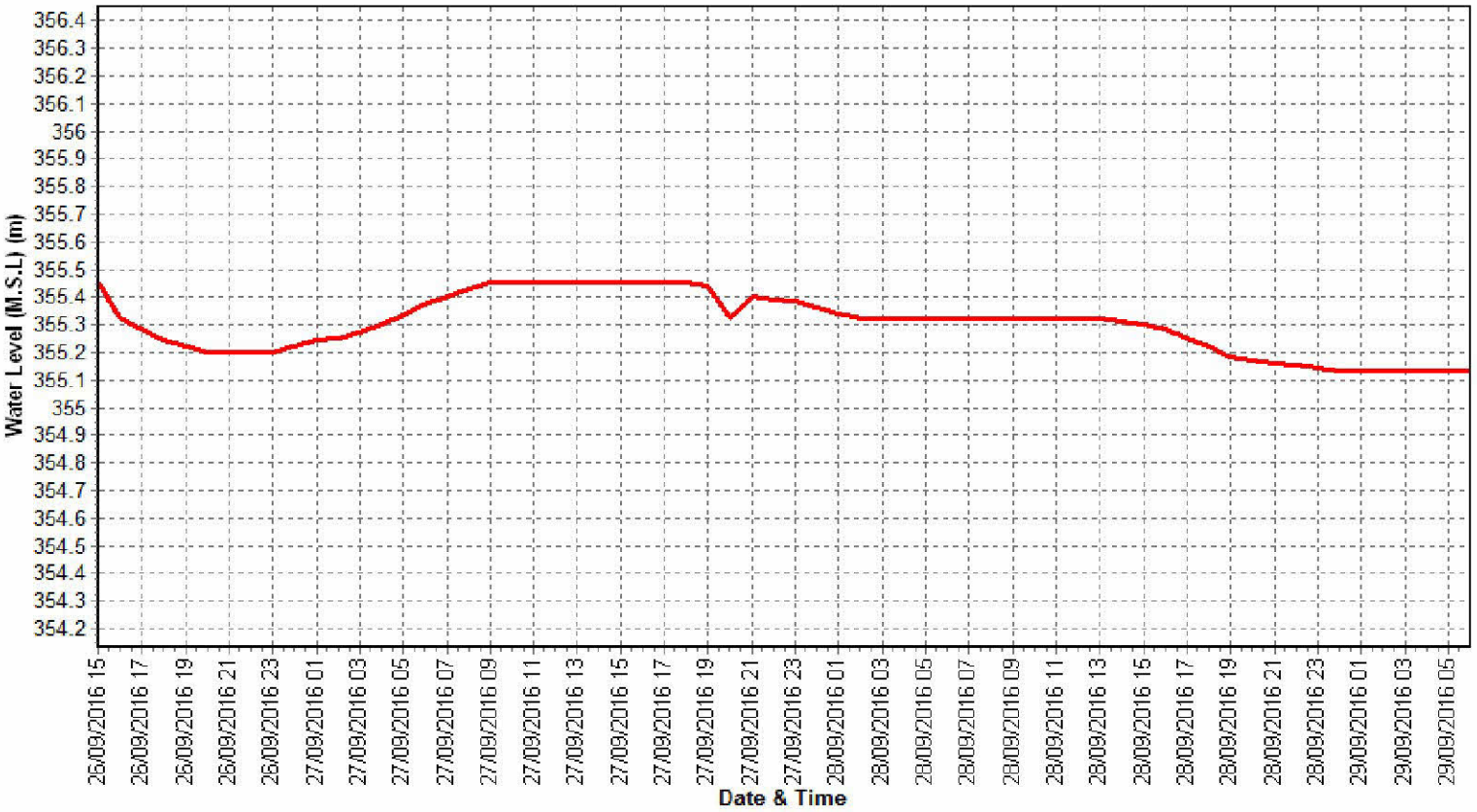



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017

**Station Name : Yadgir ( AKP00B6)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Bhima** | **Sub-Division : Middle Krishna SD 2 , Kurnool**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Malkhed** | | **Code** | **: AKP10E1** | |
| State | : Karnataka | | District | Gulbarga | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Bhima | | Sub Tributary | : Kagna | |
| Sub-Sub Tributary | : - | | Local River | : Kagna | |
| Division | : Lower Krishna Divn., Hyderabad | | Sub-Division | : Middle Krishna SD 2 , Kurnool | |
| Drainage Area | : 7650 Sq. Km. | | Bank | : Left | |
| Latitude | : 17°12'12" | | Longitude | : 77°09'23" | |
| **Zero of Gauge (m)** | : 390 (m.s.l) | | 15/08/1990 | | |
| | Opening Date | | Closing Date | | |
| Gauge | : 29/09/1989 | | **HFL During 2016-17** | **: 401.010m** | |
| | | | **Corres. Discharge** | **: 4209(Estimated)** | |
| Discharge | : 15/08/1990 | | **Date & Time of occurance** | **: 24/09/2016 : 04.00 hrs.** | |
| Sediment | : 08/09/1992 | | | | |
| Water Quality | : 01/06/1992 | | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1991-1992 | 979.2 | 396.154 | 09/07/1991 | 0.050 | 392.450 | 17/04/1992 |
| 1992-1993 | 1176 | 396.118 | 02/09/1992 | 0.000 | | 01/05/1993 |
| 1993-1994 | 611.3 | 395.019 | 22/09/1993 | 0.000 | | 21/05/1994 |
| 1994-1995 | 274.7 | 393.990 | 06/10/1994 | 0.000 | | 21/04/1995 |
| 1995-1996 | 1101 | 396.530 | 17/10/1995 | 0.000 | | 18/06/1995 |
| 1996-1997 | 959.3 | 396.285 | 17/09/1996 | 0.109 | 392.150 | 01/06/1996 |
| 1997-1998 | 148.2 | 393.600 | 27/09/1997 | 0.000 | | 18/05/1998 |
| 1998-1999 | 2215 | 398.270 | 15/10/1998 | 0.000 | | 11/06/1998 |
| 1999-2000 | 414.3 | 394.600 | 03/08/1999 | 0.063 | 392.140 | 24/05/2000 |
| 2000-2001 | 1577 | 396.975 | 24/08/2000 | 0.157 | 391.995 | 31/05/2001 |
| 2001-2002 | 1228 | 396.460 | 01/10/2001 | 0.152 | 391.990 | 04/06/2001 |
| 2002-2003 | 438.9 | 394.660 | 16/10/2002 | 0.000 | | 07/05/2003 |
| 2003-2004 | 711.3 | 395.440 | 23/08/2003 | 0.000 | | 18/03/2004 |
| 2004-2005 | 152.9 | 393.750 | 06/10/2004 | 0.000 | 392.430 | 03/03/2005 |
| 2005-2006 | 843.5 | 396.290 | 10/09/2005 | 0.000 | 392.520 | 06/07/2005 |
| 2006-2007 | 32.93 | 393.980 | 28/09/2006 | 0.000 | 392.740 | 15/05/2007 |
| 2007-2008 | 922.7 | 396.450 | 20/09/2007 | 0.000 | 392.820 | 02/06/2007 |
| 2008-2009 | 1499 | 397.450 | 10/08/2008 | 0.000 | 392.700 | 15/07/2008 |
| 2009-2010 | 1254 | 397.500 | 03/09/2009 | 0.000 | 392.790 | 04/07/2009 |
| 2010-2011 | 1269 | 397.580 | 26/08/2010 | 0.536 | 392.800 | 13/06/2010 |
| 2011-2012 | 1500 | 397.200 | 31/07/2011 | 0.732 | 392.680 | 18/03/2012 |
| 2012-2013 | 550.0 | 395.600 | 04/09/2012 | 0.781 | 392.710 | 03/06/2012 |
| 2013-2014 | 1188 | 397.400 | 20/09/2013 | 0.457 | 392.740 | 04/03/2014 |
| 2014-2015 | 1320 | 397.720 | 01/09/2014 | 0.070 | 392.720 | 12/06/2014 |
| 2015-2016 | 120.7 | 393.850 | 15/09/2015 | 0.488 | 392.700 | 01/11/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Malkhed ( AKP10E1)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Kagna** **Sub-Division : Middle Krishna SD 2 , Kurnool**

| 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 | 392.510 | 0.435 | 392.920 | 6.244 | 394.540 | 265.4 | 395.260 | 458.8 | 394.450 | 213.1 | 393.320 | 62.44 |
| 2 | 392.510 | 0.431 | 392.925 | 6.375 | 394.360 | 189.2 | 393.830 | 120.4 | 394.860 | 343.6 * | 393.310 | 61.60 |
| 3 | 392.510 | 0.446 | 392.820 | 8.324 * | 393.860 | 121.9 | 393.750 | 110.5 | 394.360 | 199.9 | 393.310 | 61.60 |
| 4 | 392.510 | 0.432 | 392.850 | 5.078 | 393.650 | 97.89 | 393.990 | 150.6 * | 393.950 | 143.4 | 393.350 | 64.98 |
| 5 | 392.510 | 0.388 * | 392.820 | 3.010 | 393.700 | 103.6 | 393.530 | 81.28 * | 393.880 | 133.6 | 393.300 | 60.79 |
| 6 | 392.510 | 0.434 | 392.750 | 2.367 | 393.670 | 112.0 | 393.360 | 58.32 | 393.800 | 123.2 | 393.290 | 51.73 * |
| 7 | 392.530 | 0.541 | 392.670 | 2.919 * | 393.510 | 78.77 * | 393.300 | 59.40 | 393.750 | 116.6 | 393.330 | 63.29 |
| 8 | 392.860 | 6.121 | 392.630 | 1.950 | 393.400 | 61.42 | 393.270 | 57.03 | 393.780 | 120.7 | 393.340 | 64.15 |
| 9 | 393.900 | 126.6 | 392.640 | 2.024 | 393.330 | 55.56 | 393.260 | 56.21 | 393.910 | 136.9 * | 393.320 | 62.44 |
| 10 | 393.400 | 57.72 | 392.630 | 2.010 * | 393.300 | 53.05 | 393.250 | 55.22 | 395.510 | 534.6 | 393.310 | 61.60 |
| 11 | 393.550 | 92.66 | 392.630 | 1.943 | 393.270 | 50.76 | 393.080 | 26.75 * | 394.320 | 214.1 * | 393.310 | 61.60 |
| 12 | 393.200 | 39.81 * | 392.600 | 1.416 | 393.260 | 50.00 | 393.250 | 55.22 | 393.850 | 127.1 * | 393.300 | 60.79 |
| 13 | 393.040 | 7.554 | 392.600 | 1.525 | 393.260 | 50.00 | 393.260 | 47.55 * | 393.870 | 132.7 | 393.320 | 56.12 * |
| 14 | 392.800 | 3.561 | 392.600 | 1.479 | 393.260 | 47.55 * | 393.370 | 65.00 | 393.800 | 123.2 | 393.310 | 54.63 * |
| 15 | 392.750 | 1.188 | 392.570 | 1.412 | 393.250 | 46.20 * | 397.400 | 1305 | 393.650 | 105.5 | 393.300 | 60.79 |
| 16 | 392.620 | 1.254 | 392.570 | 1.284 | 393.250 | 49.02 | 395.960 | 664.7 | 393.650 | 97.22 * | 393.320 | 62.44 |
| 17 | 392.550 | 0.373 | 392.550 | 0.762 * | 393.270 | 50.76 | 394.660 | 300.7 | 393.540 | 93.22 | 393.290 | 59.93 |
| 18 | 392.660 | 1.219 | 392.590 | 1.419 | 393.290 | 52.30 | 394.220 | 193.6 * | 393.620 | 102.4 | 393.280 | 58.58 |
| 19 | 392.650 | 2.439 * | 392.590 | 1.483 | 393.300 | 53.07 | 394.340 | 194.7 | 393.610 | 101.1 | 393.270 | 57.54 |
| 20 | 393.125 | 11.29 | 392.650 | 2.474 | 393.000 | 11.17 | 394.360 | 197.8 | 393.600 | 99.99 | 393.280 | 50.31 * |
| 21 | 393.600 | 90.61 | 397.660 | 1384 | 393.000 | 19.71 * | 395.460 | 522.4 | 393.600 | 99.99 | 393.260 | 56.74 |
| 22 | 393.045 | 17.67 | 396.530 | 943.2 | 393.000 | 10.93 | 395.370 | 499.3 | 393.700 | 112.5 | 393.100 | 10.88 |
| 23 | 392.890 | 5.828 | 394.500 | 218.0 | 392.970 | 7.645 | 398.530 | 1970 | 393.660 | 98.61 * | 392.960 | 10.49 |
| 24 | 392.850 | 5.200 | 394.020 | 155.9 * | 392.960 | 7.433 | 400.650 | 2611 # | 393.550 | 94.28 | 393.030 | 10.81 |
| 25 | 392.860 | 5.218 | 393.550 | 92.69 | 392.960 | 7.430 | 398.180 | 1869 * | 393.460 | 73.04 | 393.090 | 11.45 |
| 26 | 393.190 | 38.60 * | 393.800 | 114.4 | 392.960 | 7.432 | 396.800 | 1091 | 393.450 | 72.16 | 392.990 | 7.337 |
| 27 | 393.040 | 17.65 | 395.020 | 397.0 | 392.930 | 6.686 | 395.610 | 561.3 | 393.690 | 110.3 | 392.830 | 8.808 * |
| 28 | 393.040 | 17.20 | 394.180 | 164.3 | 392.920 | 13.93 * | 395.050 | 416.7 | 393.420 | 70.22 | 392.790 | 3.775 |
| 29 | 393.320 | 51.41 | 395.430 | 494.8 | 392.910 | 6.197 | 394.250 | 183.7 | 393.450 | 72.16 | 392.780 | 3.741 |
| 30 | 393.160 | 23.91 | 394.240 | 172.8 | 392.910 | 6.129 | 394.150 | 170.2 | 393.470 | 73.87 * | 392.790 | 3.875 |
| 31 | | | 396.250 | 826.7 * | 392.930 | 6.324 | | | 393.350 | 63.22 | | |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 392.775 | 19.35 | 392.765 | 4.030 | 393.732 | 113.9 | 393.680 | 120.8 | 394.225 | 206.5 | 393.318 | 61.46 |
| II Ten-Daily | 392.894 | 16.14 | 392.595 | 1.520 | 393.241 | 46.08 | 394.390 | 305.1 | 393.751 | 119.6 | 393.298 | 58.27 |
| III Ten-Daily | 393.100 | 27.33 | 395.016 | 451.2 | 392.950 | 9.077 | 396.405 | 989.5 | 393.527 | 85.49 | 392.962 | 12.79 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 392.510 | 0.373 | 392.550 | 0.762 | 392.910 | 6.129 | 393.080 | 26.75 | 393.350 | 63.22 | 392.780 | 3.741 |
| Max. | 393.900 | 126.6 | 397.660 | 1384 | 394.540 | 265.4 | 400.650 | 2611 | 395.510 | 534.6 | 393.350 | 64.98 |
| Mean | 392.923 | 20.94 | 393.509 | 161.9 | 393.296 | 54.82 | 394.825 | 471.8 | 393.825 | 135.6 | 393.193 | 44.18 |

**Annual Runoff in MCM = 2386 Annual Runoff in mm = 312**

**Peak Observed Discharge = 2611 cumecs on 24/09/2016 Corres. Water Level :400.65 m**

**Lowest Observed Discharge = 0.373 cumecs on 17/06/2016 Corres. Water Level :392.55 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 2016 - 2017

**Station Name : Malkhed ( AKP10E1)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Kagna** **Sub-Division : Middle Krishna SD 2 , Kurnool**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 392.790 | 3.682 | 392.970 | 8.551 * | 392.840 | 3.499 | 392.810 | 2.114 | 392.770 | 1.314 | 392.760 | 0.636 |
| 2 | 392.740 | 3.736 | 392.960 | 4.917 | 392.840 | 3.464 | 392.810 | 2.122 | 392.780 | 3.082 * | 392.760 | 0.638 |
| 3 | 393.030 | 9.155 | 392.930 | 4.813 | 392.850 | 3.740 | 392.810 | 2.135 | 392.780 | 1.303 | 392.760 | 0.626 |
| 4 | 393.040 | 11.68 * | 392.930 | 4.911 | 392.850 | 3.730 | 392.810 | 2.148 | 392.780 | 1.328 | 392.760 | 0.651 |
| 5 | 393.020 | 8.782 | 392.930 | 4.848 | 392.850 | 4.583 * | 392.800 | 3.450 * | 392.780 | 3.082 * | 392.770 | 0.746 |
| 6 | 393.050 | 10.47 | 392.890 | 3.869 | 392.830 | 3.240 | 392.800 | 2.120 | 392.780 | 1.335 | 392.770 | 0.661 |
| 7 | 393.010 | 8.037 | 392.860 | 3.419 | 392.830 | 3.207 | 392.800 | 2.124 | 392.780 | 1.265 | 392.770 | 2.917 * |
| 8 | 393.010 | 8.246 | 392.850 | 4.583 * | 392.830 | 3.113 | 392.790 | 2.073 | 392.770 | 1.317 | 392.760 | 0.614 |
| 9 | 392.890 | 5.010 | 392.850 | 3.413 | 392.820 | 2.994 | 392.780 | 2.042 | 392.760 | 2.764 * | 392.760 | 0.614 |
| 10 | 393.020 | 8.415 | 392.850 | 3.523 | 392.820 | 2.985 | 392.780 | 1.585 | 392.760 | 0.607 | 392.760 | 2.764 * |
| 11 | 393.060 | 12.68 * | 392.850 | 3.385 | 392.820 | 2.978 | 392.780 | 1.606 | 392.760 | 0.608 | 392.760 | 0.614 |
| 12 | 393.050 | 12.17 * | 392.860 | 3.511 | 392.830 | 4.093 * | 392.770 | 2.917 * | 392.760 | 0.602 | 392.760 | 0.601 |
| 13 | 393.060 | 9.514 | 392.850 | 3.418 | 392.890 | 4.753 | 392.780 | 1.551 | 392.760 | 0.607 | 392.770 | 0.655 |
| 14 | 392.990 | 8.568 | 392.850 | 3.423 | 392.800 | 2.829 | 392.780 | 1.564 | 392.760 | 2.764 * | 392.760 | 2.764 * |
| 15 | 393.000 | 9.089 | 392.870 | 5.122 * | 392.690 | 1.657 | 392.790 | 1.611 | 392.760 | 0.604 | 392.770 | 0.651 |
| 16 | 393.000 | 8.973 | 392.870 | 3.677 | 392.660 | 1.050 | 392.790 | 1.674 | 392.760 | 2.764 * | 392.760 | 0.603 |
| 17 | 393.020 | 9.053 | 392.940 | 5.082 | 392.660 | 1.253 | 392.780 | 1.600 | 392.760 | 0.607 | 392.760 | 0.677 |
| 18 | 393.000 | 9.818 * | 392.940 | 5.103 | 392.650 | 1.256 | 392.790 | 1.640 | 392.760 | 0.607 | 392.760 | 0.680 |
| 19 | 392.990 | 8.274 | 392.940 | 4.995 | 392.650 | 1.885 * | 392.800 | 3.450 * | 392.760 | 0.696 | 392.760 | 0.662 |
| 20 | 392.980 | 8.136 | 392.930 | 4.822 | 392.620 | 1.036 | 392.820 | 2.018 | 392.750 | 0.585 | 392.770 | 0.677 |
| 21 | 392.980 | 7.990 | 392.930 | 4.791 | 392.640 | 1.202 | 392.820 | 2.030 | 392.760 | 0.607 | 392.770 | 2.917 * |
| 22 | 392.950 | 4.923 | 393.150 | 17.81 * | 392.740 | 1.238 | 392.810 | 1.969 | 392.760 | 0.607 | 392.760 | 0.633 |
| 23 | 392.950 | 4.921 | 392.950 | 5.311 | 392.750 | 1.347 | 392.800 | 1.675 | 392.770 | 2.917 * | 392.760 | 0.637 |
| 24 | 392.930 | 4.543 | 392.930 | 4.827 | 392.750 | 1.331 | 392.800 | 1.686 | 392.760 | 0.609 | 392.750 | 0.618 |
| 25 | 392.920 | 6.684 * | 392.910 | 4.525 | 392.740 | 1.318 | 392.790 | 1.654 | 392.750 | 0.584 | 392.750 | 0.582 |
| 26 | 392.920 | 4.424 | 392.890 | 5.710 * | 392.740 | 2.494 * | 392.790 | 3.260 * | 392.750 | 0.585 | 392.750 | 0.582 |
| 27 | 392.950 | 4.475 | 392.860 | 3.854 | 392.790 | 2.028 | 392.790 | 1.600 | 392.760 | 0.602 | 392.750 | 0.582 |
| 28 | 392.930 | 4.337 | 392.860 | 3.863 | 392.800 | 2.039 | 392.780 | 1.595 | 392.750 | 0.502 | 392.760 | 2.764 * |
| 29 | 392.930 | 4.333 | 392.830 | 4.093 * | | | 392.770 | 2.917 * | 392.770 | 0.622 | 392.760 | 0.641 |
| 30 | 392.960 | 4.979 | 392.850 | 3.690 | | | 392.770 | 1.271 | 392.770 | 2.917 * | 392.740 | 0.525 |
| 31 | 392.960 | 4.943 | 392.840 | 3.267 | | | 392.770 | 1.285 | | | 392.690 | 2.033 * |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 392.960 | 7.721 | 392.902 | 4.685 | 392.836 | 3.456 | 392.799 | 2.191 | 392.774 | 1.740 | 392.763 | 1.087 |
| II Ten-Daily | 393.015 | 9.628 | 392.890 | 4.254 | 392.727 | 2.279 | 392.788 | 1.963 | 392.759 | 1.044 | 392.763 | 0.858 |
| III Ten-Daily | 392.944 | 5.141 | 392.909 | 5.612 | 392.744 | 1.625 | 392.790 | 1.904 | 392.760 | 1.055 | 392.749 | 1.138 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 392.740 | 3.682 | 392.830 | 3.267 | 392.620 | 1.036 | 392.770 | 1.271 | 392.750 | 0.502 | 392.690 | 0.525 |
| Max. | 393.060 | 12.68 | 393.150 | 17.81 | 392.890 | 4.753 | 392.820 | 3.450 | 392.780 | 3.082 | 392.770 | 2.917 |
| Mean | 392.972 | 7.421 | 392.901 | 4.875 | 392.771 | 2.512 | 392.792 | 2.016 | 392.764 | 1.28 | 392.758 | 1.031 |

**Peak Computed Discharge = 1869 cumecs on 25/09/2016** **Corres. Water Level :398.18 m**

**Lowest Computed Discharge = 0.388 cumecs on 05/06/2016** **Corres. Water Level :392.51 m**

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

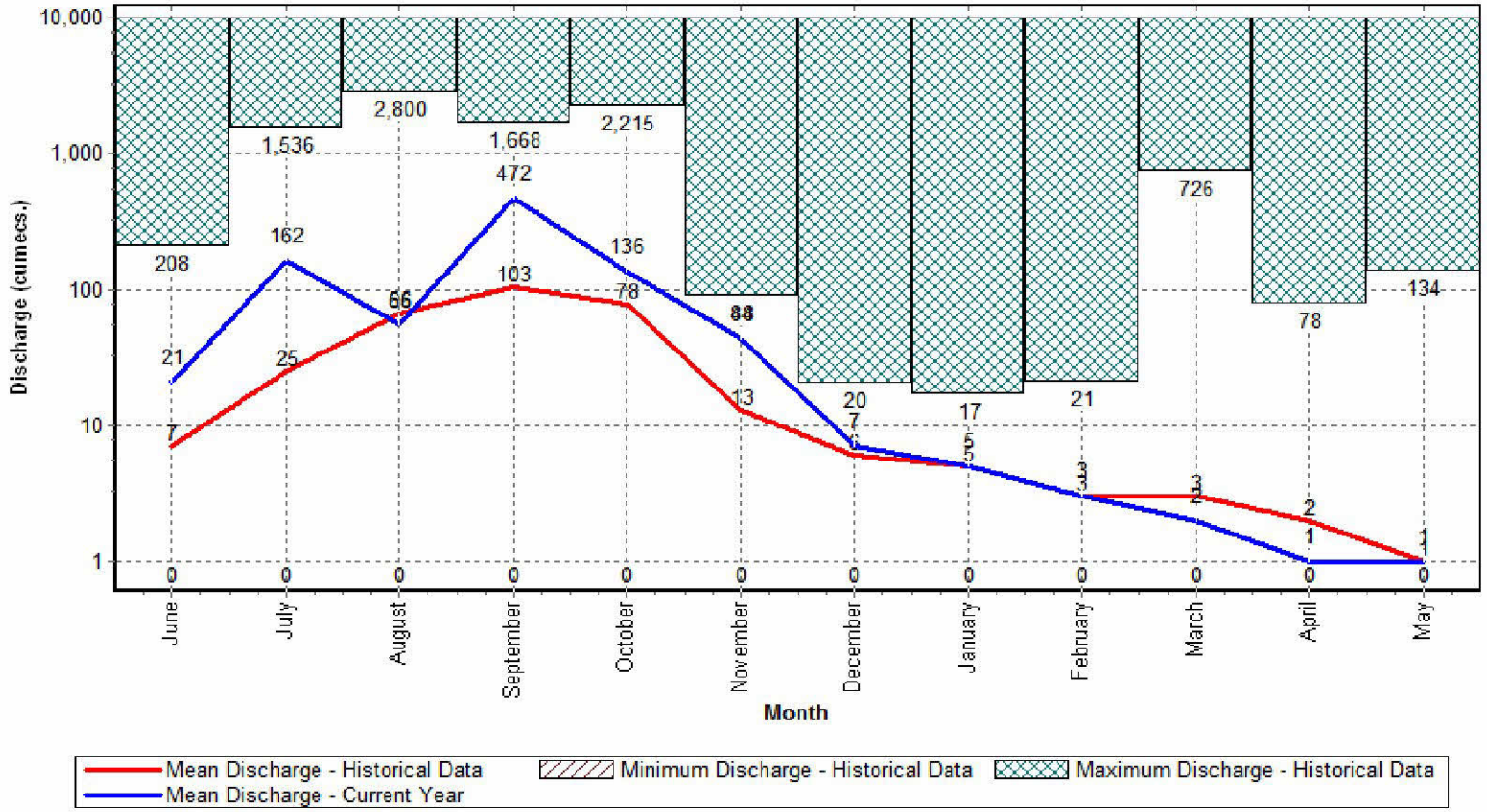
#:Discarded Discharge (values changed as per rating curve)

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Malkhed ( AKP10E1)** | **Data considered : 1991-2017** | **Division : Lower Krishna Divn., Hyderabad**

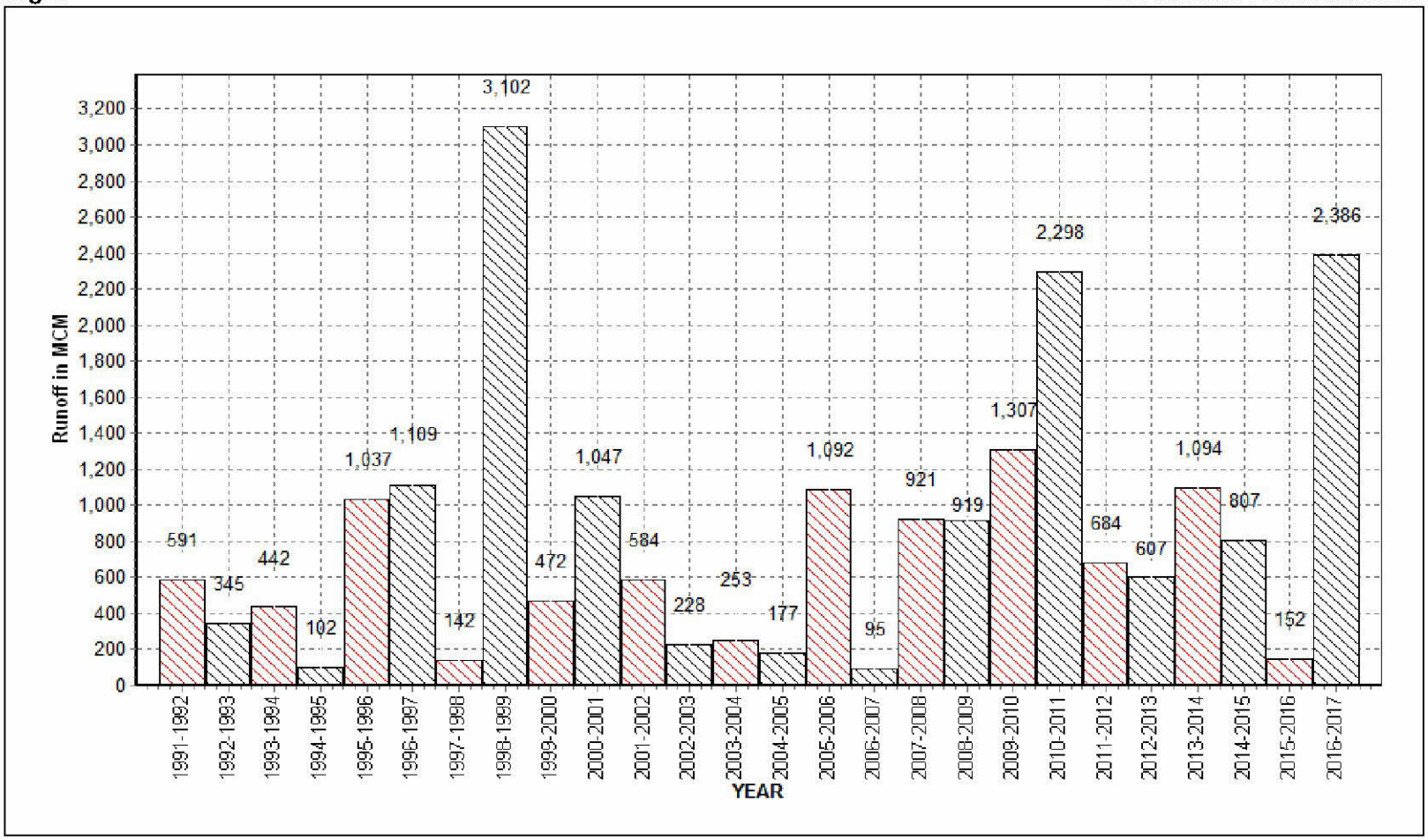
**Local River : Kagna** | **Sub-Division : Middle Krishna SD 2 , Kurnool**



**Annual Runoff Values for the period: 1991 - 2017**

**Station Name : Malkhed ( AKP10E1)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Kagna** **Sub-Division : Middle Krishna SD 2 , Kurnool**

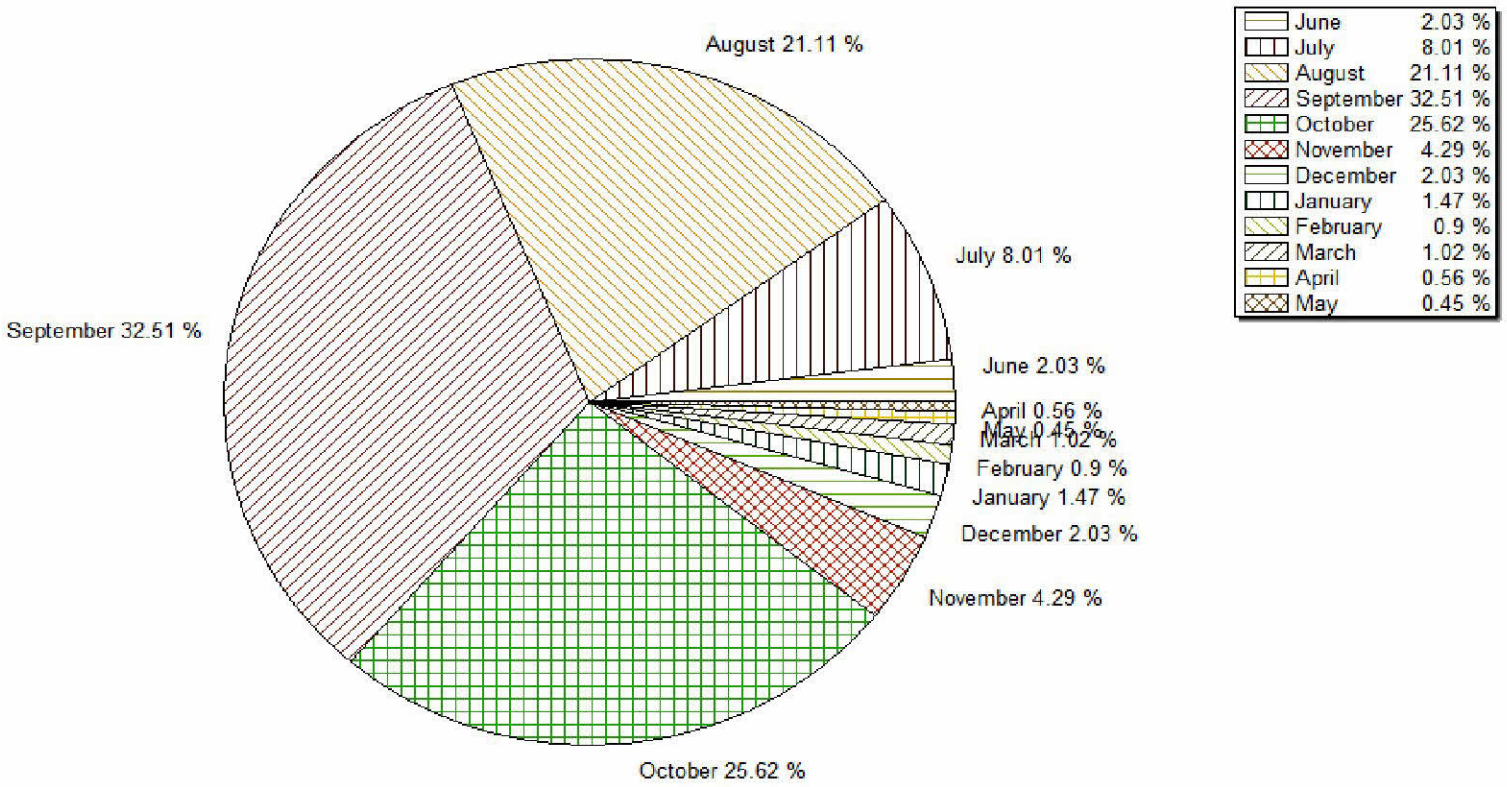



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1991-2016**

**Station Name : Malkhed ( AKP10E1)**
**Local River : Kagna**

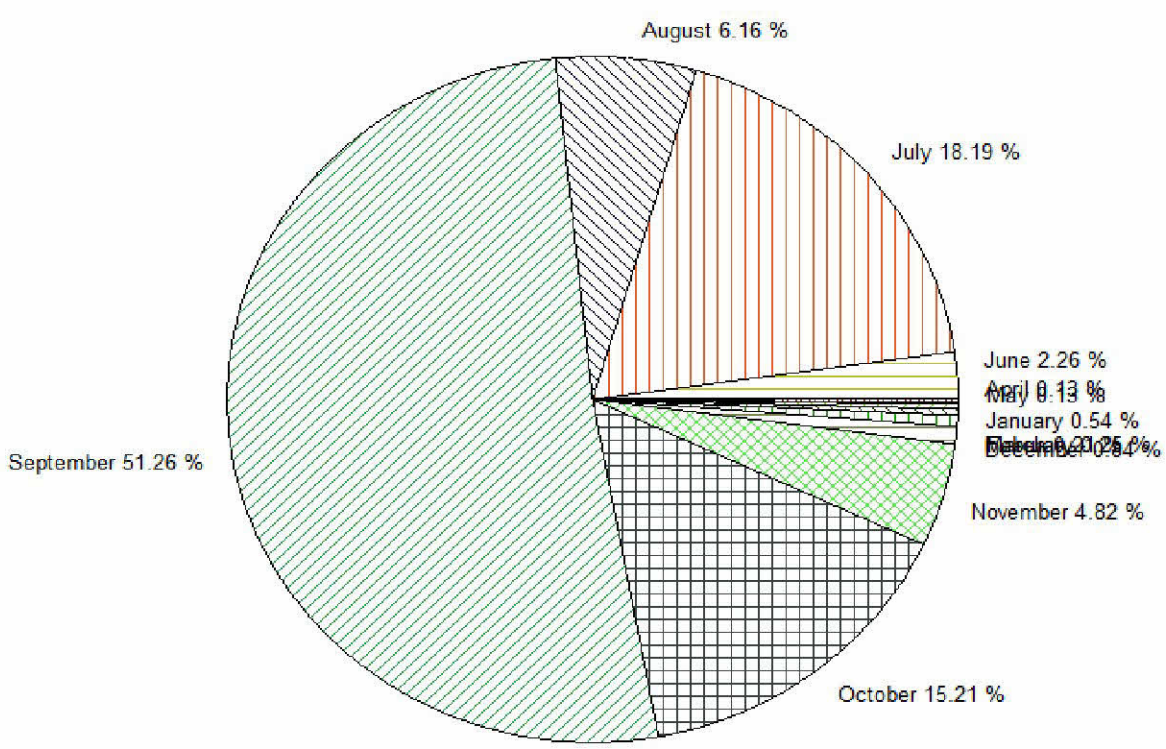
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Middle Krishna SD 2 , Kurnool**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Malkhed ( AKP10E1)**
**Local River : Kagna**

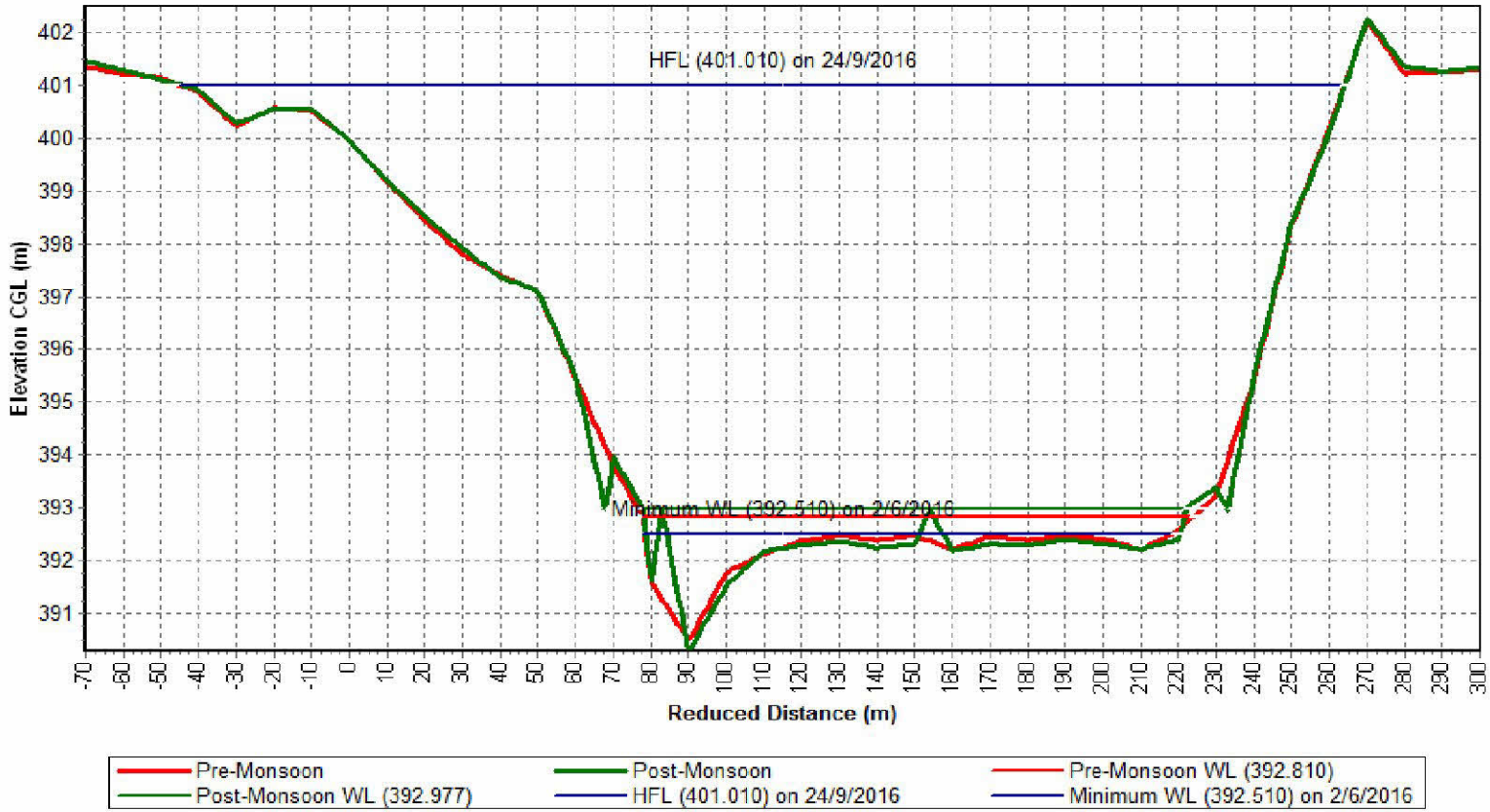
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Middle Krishna SD 2 , Kurnool**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Malkhed ( AKP10E1)** **Division : Lower Krishna Divn., Hyderabad**

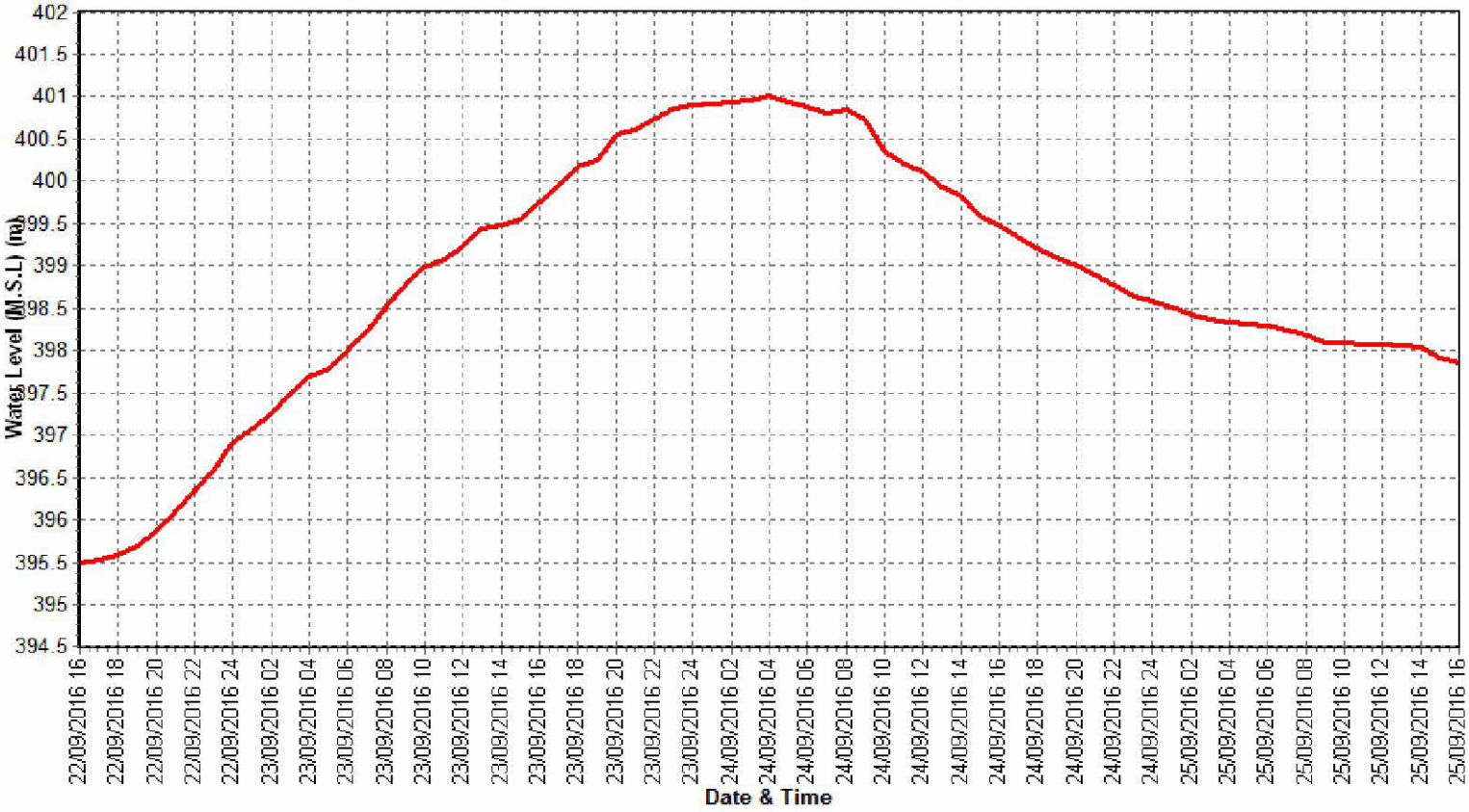
**Local River : Kagna** **Sub-Division : Middle Krishna SD 2 , Kurnool**



**Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017**

**Station Name : Malkhed ( AKP10E1)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Kagna** **Sub-Division : Middle Krishna SD 2 , Kurnool**

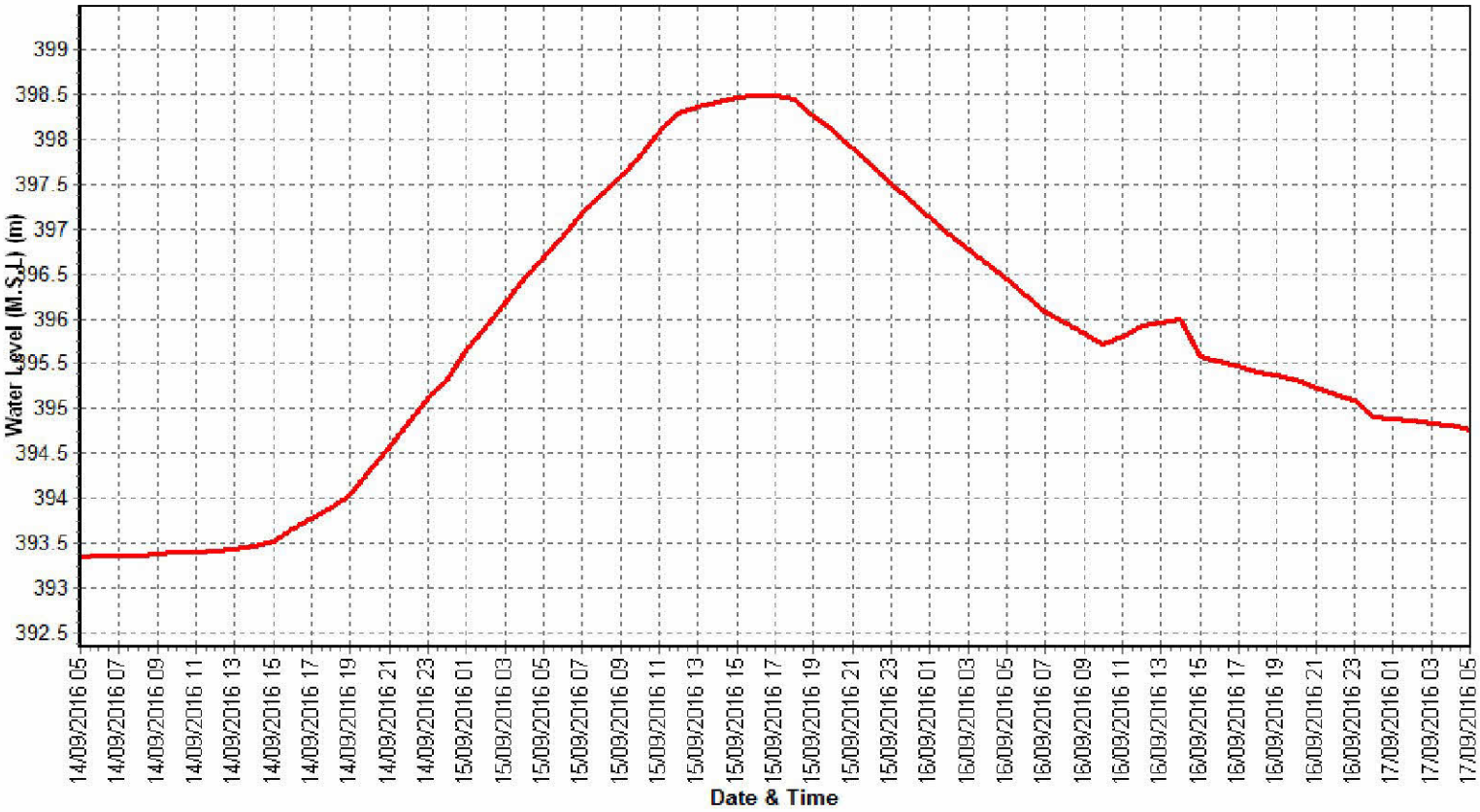



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017

**Station Name : Malkhed ( AKP10E1)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Kagna** | **Sub-Division : Middle Krishna SD 2 , Kurnool**

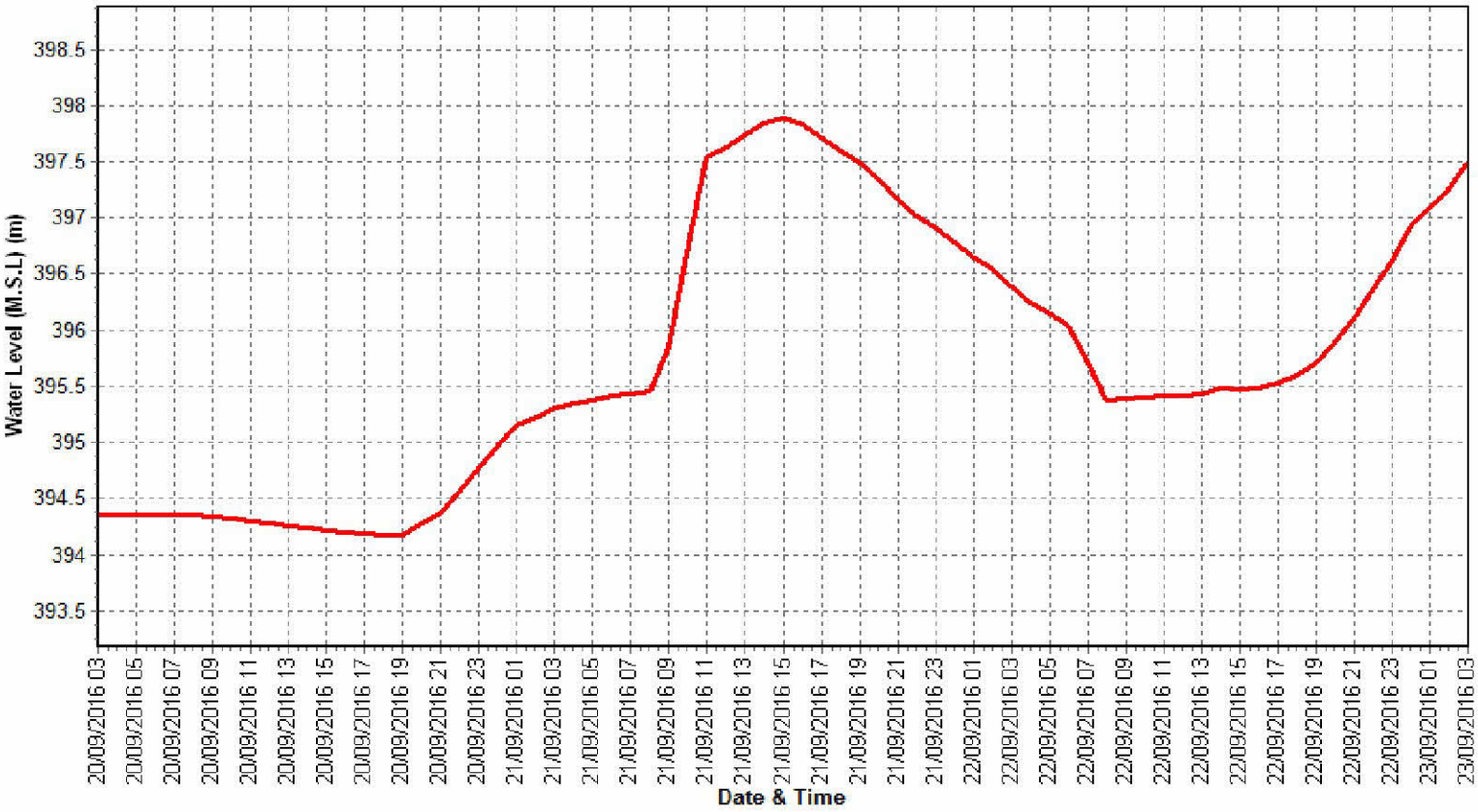



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Malkhed ( AKP10E1)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Kagna** **Sub-Division : Middle Krishna SD 2 , Kurnool**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **Wadakbal** | **Code** | : | **AKP60C4** |
| State | : | Maharashtra | District | | Sholapur |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | Bhima | Sub Tributary | : | Sina |
| Sub-Sub Tributary | : | - | Local River | : | Sina |
| Division | : | Upper Krishna Divn, Pune | Sub-Division | : | Bhima SD, Sholapur |
| Drainage Area | : | 12092 Sq. Km. | Bank | : | Right |
| Latitude | : | 17°32'03" | Longitude | : | 75°53'06" |
| **Zero of Gauge (m)** | : | 418.883 (m.s.l)<br>418.383 (m.s.l)<br>416.883 (m.s.l)<br>417 (m.s.l) | 19/07/1963<br>01/11/1966<br>01/06/1969<br>01/06/2011 | - | 31/10/1966<br>31/05/1969<br>31/05/2011 |
| | | Opening Date | Closing Date | | |
| | | | **HFL During 2016-17** | : | **425.850m** |
| Gauge | : | 19/07/1963 | **Corres. Discharge** | : | **1039.9(Estimated)** |
| | | | **Date & Time of** | : | **04/10/2016** |
| Discharge | : | 06/08/1964 | **occurance** | : | **18.00 hrs.** |
| Sediment | : | 01/06/1965 | 31/05/2006 | | |
| Water Quality | : | 01/09/1972 | 31/05/2006 | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1965-1966 | 1480 | 425.303 | 05/05/1966 | 0.040 | 418.898 | 27/03/1966 |
| 1966-1967 | 2025 | 426.693 | 15/11/1966 | 0.030 | 418.933 | 19/05/1967 |
| 1967-1968 | 1733 | 425.793 | 28/09/1967 | 0.000 | 418.848 | 13/06/1967 |
| 1968-1969 | 762.3 | 423.603 | 02/10/1968 | 0.000 | | 30/04/1969 |
| 1969-1970 | 2488 | 426.783 | 05/09/1969 | 0.000 | 418.508 | 02/06/1969 |
| 1970-1971 | 3070 | 427.753 | 19/09/1970 | 0.100 | 418.728 | 03/05/1971 |
| 1971-1972 | 1495 | 425.603 | 26/09/1971 | 0.000 | 418.803 | 13/05/1972 |
| 1972-1973 | 201.2 | 421.263 | 08/09/1972 | 0.000 | | 03/02/1973 |
| 1973-1974 | 934.7 | 424.141 | 20/09/1973 | 0.000 | 418.888 | 08/05/1974 |
| 1974-1975 | 731.1 | 423.573 | 23/10/1974 | 0.000 | 418.873 | 06/05/1975 |
| 1975-1976 | 1330 | 425.343 | 10/10/1975 | 0.000 | 418.763 | 15/05/1976 |
| 1976-1977 | 359.5 | 422.176 | 26/08/1976 | 0.000 | 418.633 | 27/03/1977 |
| 1977-1978 | 882.1 | 424.435 | 24/11/1977 | 0.000 | 418.618 | 20/04/1978 |
| 1978-1979 | 1156 | 425.128 | 12/06/1978 | 0.000 | 418.473 | 30/04/1979 |
| 1979-1980 | 1671 | 426.388 | 27/09/1979 | 0.000 | 418.543 | 01/07/1979 |
| 1980-1981 | 1051 | 424.938 | 22/08/1980 | 0.000 | 418.553 | 05/04/1981 |
| 1981-1982 | 912.9 | 424.718 | 22/09/1981 | 0.000 | 418.453 | 09/03/1982 |
| 1982-1983 | 209.7 | 421.720 | 23/09/1982 | 0.000 | 418.733 | 25/01/1983 |
| 1983-1984 | 2439 | 427.709 | 24/09/1983 | 0.000 | 418.673 | 15/04/1984 |
| 1984-1985 | 1169 | 425.977 | 10/10/1984 | 0.000 | 418.583 | 05/02/1985 |

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 |
| 1985-1986 | 562.0 | 423.611 | 06/10/1985 | 0.000 | | 10/01/1986 |
| 1986-1987 | 539.2 | 423.298 | 23/09/1986 | 0.000 | 418.753 | 10/01/1987 |
| 1987-1988 | 591.5 | 423.791 | 19/10/1987 | 0.000 | 418.583 | 03/03/1988 |
| 1988-1989 | 1571 | 427.148 | 17/09/1988 | 0.000 | 418.663 | 28/01/1989 |
| 1989-1990 | 2746 | 428.538 | 29/09/1989 | 0.000 | 418.633 | 29/01/1990 |
| 1990-1991 | 821.7 | 424.946 | 17/08/1990 | 0.000 | | 03/03/1991 |
| 1991-1992 | 570.6 | 423.210 | 09/06/1991 | 0.000 | 418.383 | 26/01/1992 |
| 1992-1993 | 142.1 | 421.007 | 03/09/1992 | 0.000 | | 25/01/1993 |
| 1993-1994 | 558.8 | 423.854 | 15/10/1993 | 0.000 | 419.383 | 29/01/1994 |
| 1994-1995 | 20.00 | 419.963 | 16/10/1994 | 0.000 | 419.763 | 25/01/1995 |
| 1995-1996 | 321.8 | 422.508 | 14/09/1995 | 0.000 | 418.513 | 26/01/1996 |
| 1996-1997 | 631.0 | 424.653 | 13/09/1996 | 0.000 | 419.883 | 25/01/1997 |
| 1997-1998 | 325.2 | 422.508 | 28/10/1997 | 0.000 | 419.463 | 25/01/1998 |
| 1998-1999 | 2302 | 428.033 | 29/09/1998 | 0.000 | 419.083 | 15/02/1999 |
| 1999-2000 | 156.9 | 421.483 | 17/06/1999 | 0.000 | | 24/11/1999 |
| 2000-2001 | 936.0 | 426.278 | 28/08/2000 | 0.000 | 418.643 | 23/01/2001 |
| 2001-2002 | 522.1 | 424.533 | 09/10/2001 | 0.000 | | 25/01/2002 |
| 2002-2003 | 73.17 | 420.498 | 03/08/2002 | 0.000 | 418.723 | 24/01/2003 |
| 2003-2004 | 8.000 | 419.218 | 28/12/2003 | 0.000 | | 27/01/2004 |
| 2004-2005 | 200.4 | 421.978 | 06/06/2004 | 0.000 | | 25/01/2005 |
| 2005-2006 | 480.0 | 423.488 | 10/09/2005 | 0.000 | 419.313 | 22/01/2006 |
| 2006-2007 | 488.6 | 423.683 | 24/09/2006 | 0.000 | 418.763 | 21/01/2007 |
| 2007-2008 | 565.6 | 423.668 | 21/09/2007 | 0.000 | 418.783 | 16/01/2008 |
| 2008-2009 | 1159 | 426.543 | 15/09/2008 | 0.000 | | 07/01/2009 |
| 2009-2010 | 381.3 | 422.933 | 05/10/2009 | 0.000 | | 15/04/2010 |
| 2010-2011 | 1213 | 426.423 | 29/08/2010 | 0.000 | 419.763 | 01/05/2011 |
| 2011-2012 | 64.69 | 420.155 | 22/08/2011 | 0.000 | | 19/01/2012 |
| 2012-2013 | 60.76 | 420.280 | 07/10/2012 | 0.000 | | 14/06/2012 |
| 2013-2014 | 421.5 | 422.760 | 21/09/2013 | 0.000 | | 23/05/2014 |
| 2014-2015 | 120.9 | 420.740 | 31/08/2014 | 0.000 | | 03/07/2014 |
| 2015-2016 | 21.03 | 419.345 | 11/09/2015 | 0.000 | | 13/11/2015 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Wadakbal ( AKP60C4)** **Division : Upper Krishna Divn, Pune**

**Local River : Sina** **Sub-Division : Bhima SD, Sholapur**

| 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 | 419.255 | 10.34 | 418.500 | 0.000 | 419.510 | 20.22 * | 419.040 | 0.000 |
| 2 | | 0.000 | | 0.000 | 419.015 | 5.535 | | 0.000 | 419.760 | 31.89 * | 418.870 | 0.000 |
| 3 | | 0.000 | | 0.000 | 418.930 | 2.802 | | 0.000 | 425.100 | 684.0 | 418.740 | 0.000 |
| 4 | | 0.000 | | 0.000 | 418.890 | 2.398 | | 0.000 | 425.565 | 970.6 | 418.670 | 0.000 |
| 5 | | 0.000 | | 0.000 | 418.840 | 0.000 | | 0.000 | 425.180 | 793.2 | 418.560 | 0.000 |
| 6 | | 0.000 | | 0.000 | 418.820 | 0.000 | | 0.000 | 424.900 | 762.5 | 418.530 | 0.000 |
| 7 | | 0.000 | | 0.000 | 418.800 | 0.000 | | 0.000 | 421.985 | 245.5 | 418.510 | 0.000 |
| 8 | | 0.000 | | 0.000 | 418.780 | 0.000 | | 0.000 | 421.405 | 184.2 | | 0.000 |
| 9 | | 0.000 | | 0.000 | 418.760 | 0.000 | | 0.000 | 420.820 | 109.8 * | | 0.000 |
| 10 | | 0.000 | | 0.000 | 418.740 | 0.000 | | 0.000 | 420.845 | 125.4 | | 0.000 |
| 11 | | 0.000 | | 0.000 | 418.720 | 0.000 | | 0.000 | 420.960 | 123.5 * | | 0.000 |
| 12 | | 0.000 | | 0.000 | 418.690 | 0.000 | | 0.000 | 420.650 | 94.24 * | | 0.000 |
| 13 | | 0.000 | | 0.000 | 418.660 | 0.000 | | 0.000 | 420.125 | 59.62 | | 0.000 |
| 14 | | 0.000 | | 0.000 | 418.650 | 0.000 | | 0.000 | 419.820 | 36.64 | | 0.000 |
| 15 | | 0.000 | | 0.000 | 418.630 | 0.000 | | 0.000 | 419.640 | 26.85 | | 0.000 |
| 16 | | 0.000 | | 0.000 | 418.620 | 0.000 | 418.960 | 3.767 * | 419.620 | 25.04 * | | 0.000 |
| 17 | | 0.000 | | 0.000 | 418.660 | 0.000 | 419.155 | 8.210 | 419.640 | 26.84 | | 0.000 |
| 18 | | 0.000 | | 0.000 | 418.650 | 0.000 | 419.080 | 6.264 * | 419.500 | 20.85 | | 0.000 |
| 19 | | 0.000 | | 0.000 | 418.630 | 0.000 | 418.890 | 2.626 | 419.830 | 29.57 | | 0.000 |
| 20 | | 0.000 | | 0.000 | 418.620 | 0.000 | 418.865 | 2.375 | 419.768 | 16.14 | | 0.000 |
| 21 | | 0.000 | | 0.000 | 418.620 | 0.000 | 418.880 | 2.693 | 419.585 | 6.481 | | 0.000 |
| 22 | | 0.000 | 420.095 | 42.58 | 418.600 | 0.000 | 418.870 | 2.303 * | 419.575 | 4.546 | | 0.000 |
| 23 | | 0.000 | 419.485 | 18.86 | 418.590 | 0.000 | 418.980 | 4.141 * | 419.480 | 0.000 | | 0.000 |
| 24 | | 0.000 | 419.100 | 6.849 | 418.590 | 0.000 | 419.090 | 6.500 * | 419.550 | 0.000 | | 0.000 |
| 25 | | 0.000 | 418.895 | 2.567 | 418.590 | 0.000 | 419.350 | 14.12 * | 419.720 | 0.000 | | 0.000 |
| 26 | | 0.000 | 418.820 | 0.000 | 418.620 | 0.000 | 421.490 | 175.9 | 419.710 | 0.000 | | 0.000 |
| 27 | | 0.000 | 418.760 | 0.000 | 418.600 | 0.000 | 421.750 | 211.4 | 419.590 | 0.000 | | 0.000 |
| 28 | | 0.000 | 418.790 | 0.000 | 418.580 | 0.000 | 420.525 | 83.14 | 419.460 | 0.000 | | 0.000 |
| 29 | | 0.000 | 418.770 | 0.000 | 418.570 | 0.000 | 419.990 | 44.91 * | 419.360 | 0.000 | | 0.000 |
| 30 | | 0.000 | 418.770 | 0.000 | 418.560 | 0.000 | 419.660 | 26.91 * | 419.200 | 0.000 | | 0.000 |
| 31 | | | 418.970 | 4.000 | 418.540 | 0.000 | | | 419.120 | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | | 0.000 | 418.883 | 2.107 | 418.500 | 0.000 | 422.507 | 392.7 | 418.703 | 0.000 |
| II Ten-Daily | | 0.000 | | 0.000 | 418.653 | 0.000 | 418.990 | 2.324 | 419.955 | 45.93 | | 0.000 |
| III Ten-Daily | | 0.000 | 419.046 | 6.805 | 418.587 | 0.000 | 419.858 | 57.20 | 419.486 | 1.002 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | | 0.000 | 418.760 | 0.000 | 418.540 | 0.000 | 418.500 | 0.000 | 419.120 | 0.000 | 418.510 | 0.000 |
| Max. | | 0.000 | 420.095 | 42.58 | 419.255 | 10.34 | 421.750 | 211.4 | 425.565 | 970.6 | 419.040 | 0.000 |
| Mean | | 0 | 419.046 | 2.415 | 418.704 | 0.68 | 419.502 | 19.84 | 420.612 | 141.9 | 418.703 | 0 |

**Annual Runoff in MCM = 445 Annual Runoff in mm = 37**

**Peak Observed Discharge = 970.6 cumecs on 04/10/2016 Corres. Water Level :425.565 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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 2016 - 2017

**Station Name : Wadakbal ( AKP60C4)** **Division : Upper Krishna Divn, Pune**

**Local River : Sina** **Sub-Division : Bhima SD, Sholapur**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 418.810 | 0.000 | | 0.000 |
| 2 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 419.060 | 0.000 | | 0.000 |
| 3 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 418.850 | 0.000 | | 0.000 |
| 4 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 418.580 | 0.000 | | 0.000 |
| 5 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 418.550 | 0.000 | | 0.000 |
| 6 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 418.520 | 0.000 | | 0.000 |
| 7 | | 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 |
| 9 | | 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 |
| 11 | | 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 |
| 13 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 418.970 | 0.000 |
| 14 | | 0.000 | 419.200 | 9.375 * | | 0.000 | | 0.000 | | 0.000 | 419.030 | 5.149 * |
| 15 | | 0.000 | 419.240 | 10.55 * | | 0.000 | | 0.000 | | 0.000 | 419.050 | 5.582 * |
| 16 | | 0.000 | 419.210 | 9.662 * | | 0.000 | | 0.000 | | 0.000 | 418.920 | 5.871 |
| 17 | | 0.000 | 418.690 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 418.620 | 0.000 |
| 18 | | 0.000 | 418.600 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 418.590 | 0.000 |
| 19 | | 0.000 | 418.600 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 418.550 | 0.000 |
| 20 | | 0.000 | 418.590 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 418.520 | 0.000 |
| 21 | | 0.000 | 418.580 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 22 | | 0.000 | 418.560 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 23 | | 0.000 | 418.540 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 24 | | 0.000 | 418.530 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 25 | | 0.000 | 418.520 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 26 | | 0.000 | 418.510 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 27 | | 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 |
| 29 | | 0.000 | | 0.000 | | | 418.850 | 0.000 | | 0.000 | | 0.000 |
| 30 | | 0.000 | | 0.000 | | | 419.040 | 5.363 * | | 0.000 | | 0.000 |
| 31 | | 0.000 | | 0.000 | | | 419.080 | 6.264 * | | | | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 418.728 | 0.000 | | 0.000 |
| II Ten-Daily | | 0.000 | 418.876 | 2.958 | | 0.000 | | 0.000 | | 0.000 | 418.781 | 1.660 |
| III Ten-Daily | | 0.000 | 418.540 | 0.000 | | 0.000 | 418.990 | 1.057 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | | 0.000 | 418.510 | 0.000 | | 0.000 | 418.850 | 0.000 | 418.520 | 0.000 | 418.520 | 0.000 |
| Max. | | 0.000 | 419.240 | 10.55 | | 0.000 | 419.080 | 6.264 | 419.060 | 0.000 | 419.050 | 5.871 |
| Mean | | 0 | 418.721 | 0.954 | | 0 | 418.990 | 0.375 | 418.728 | 0 | 418.781 | 0.536 |

**Peak Computed Discharge = 123.5 cumecs on 11/10/2016** **Corres. Water Level :420.96 m**

**Lowest Computed Discharge = 2.303 cumecs on 22/09/2016** **Corres. Water Level :418.87 m**

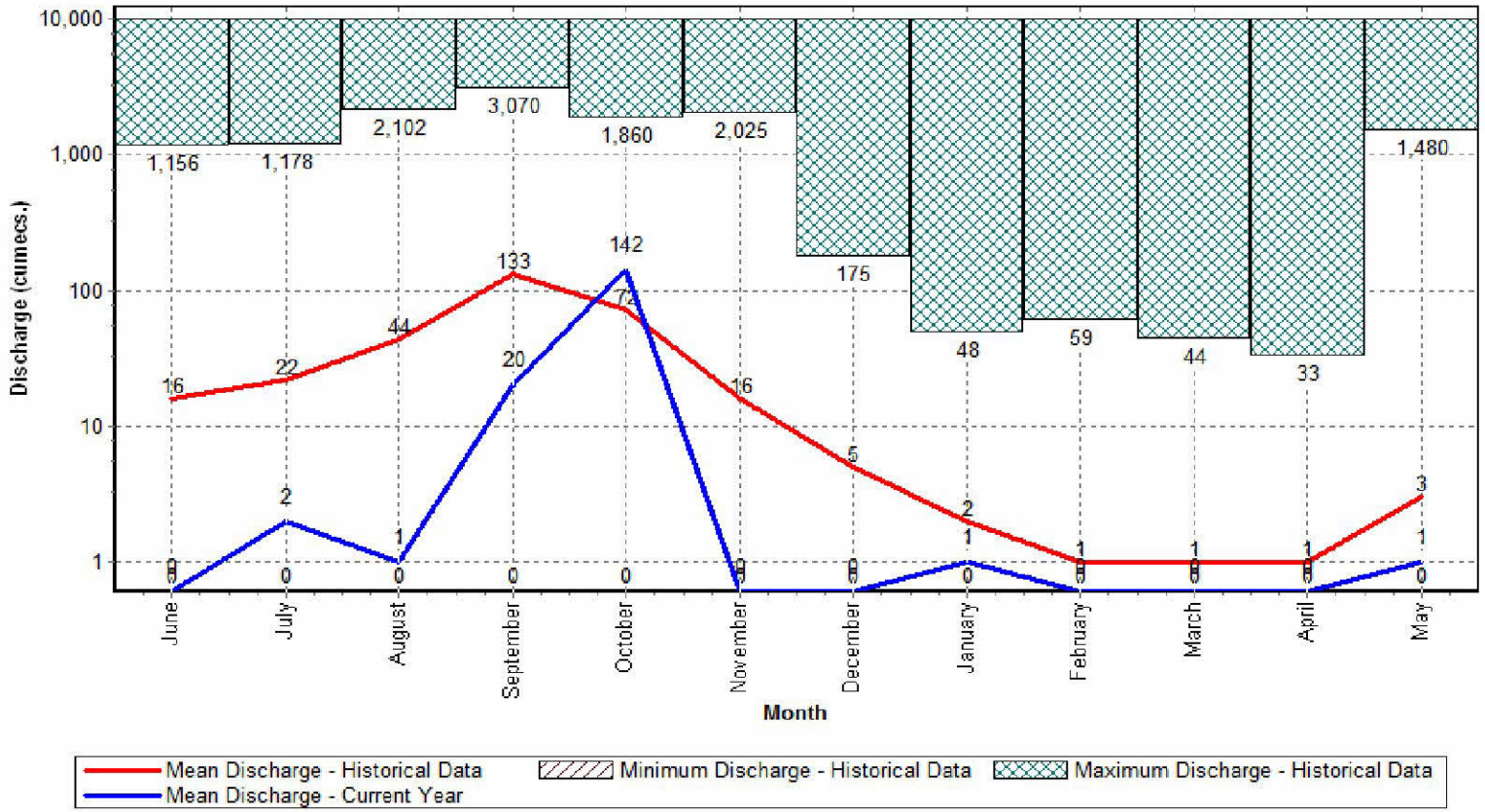
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Wadakbal ( AKP60C4)** | **Data considered : 1965-2017** | **Division : Upper Krishna Divn, Pune**

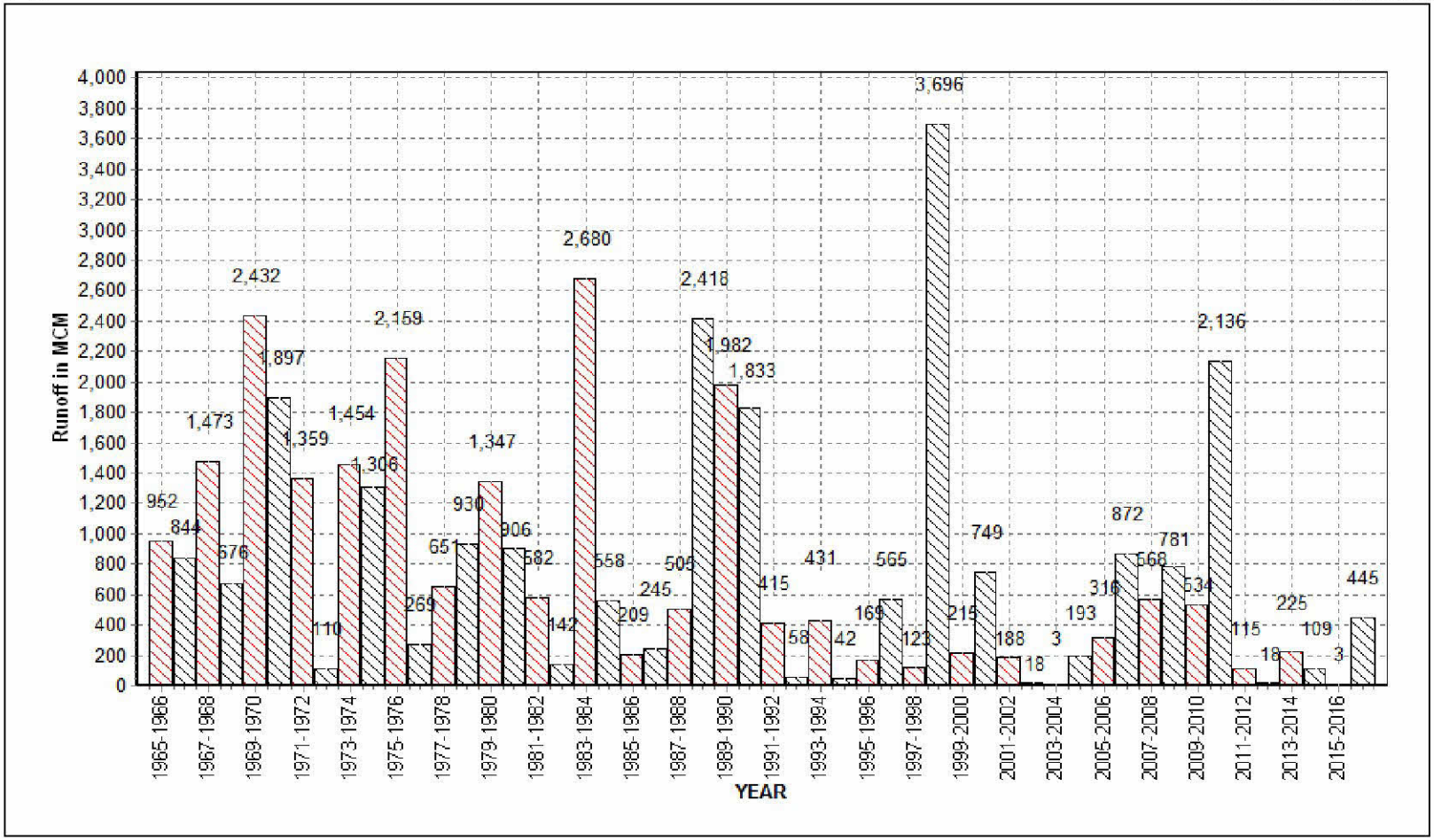
**Local River : Sina** | **Sub-Division : Bhima SD, Sholapur**



**Annual Runoff Values for the period: 1965 - 2017**

**Station Name : Wadakbal ( AKP60C4)** **Division : Upper Krishna Divn, Pune**

**Local River : Sina** **Sub-Division : Bhima SD, Sholapur**

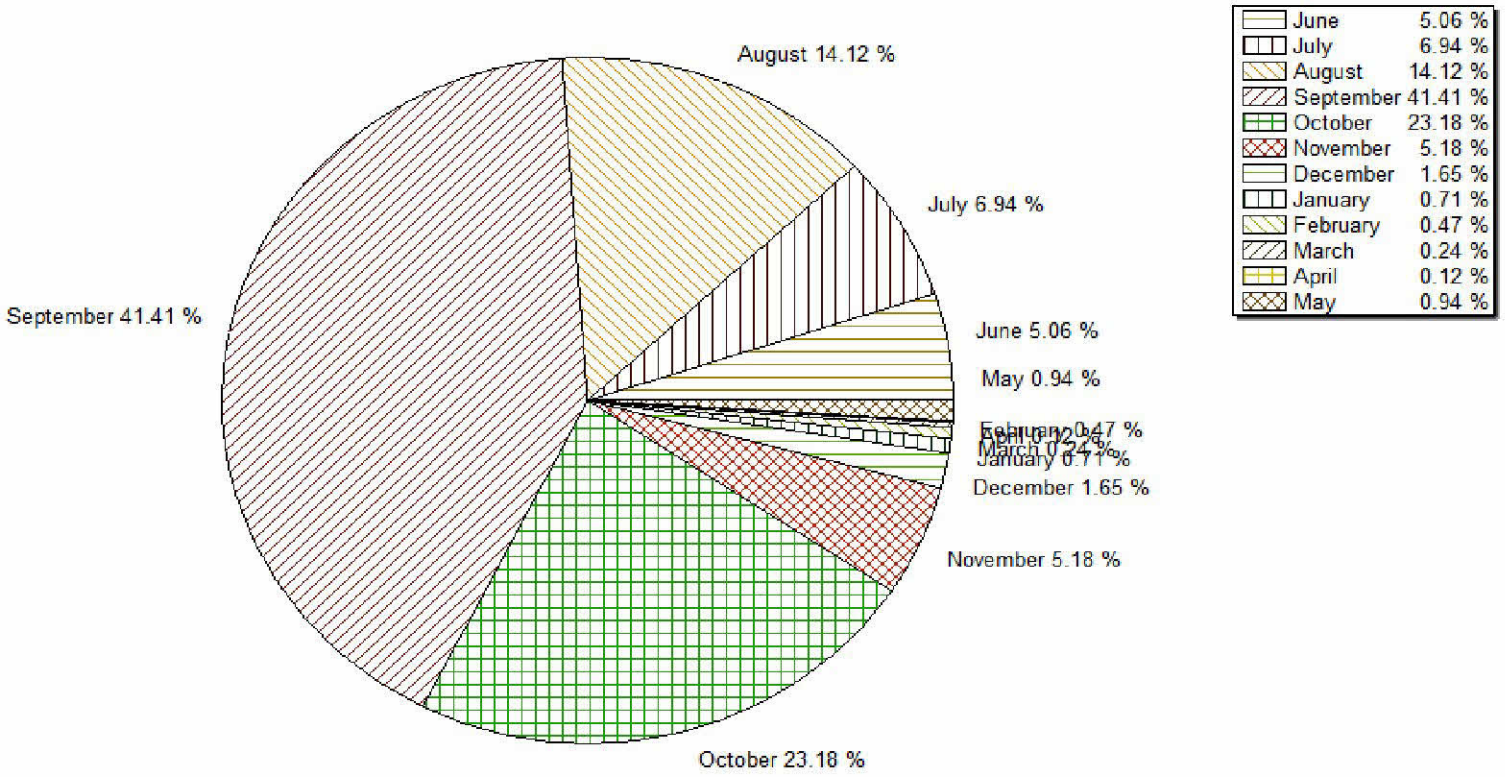



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1965-2016**

**Station Name : Wadakbal ( AKP60C4)**
**Local River : Sina**

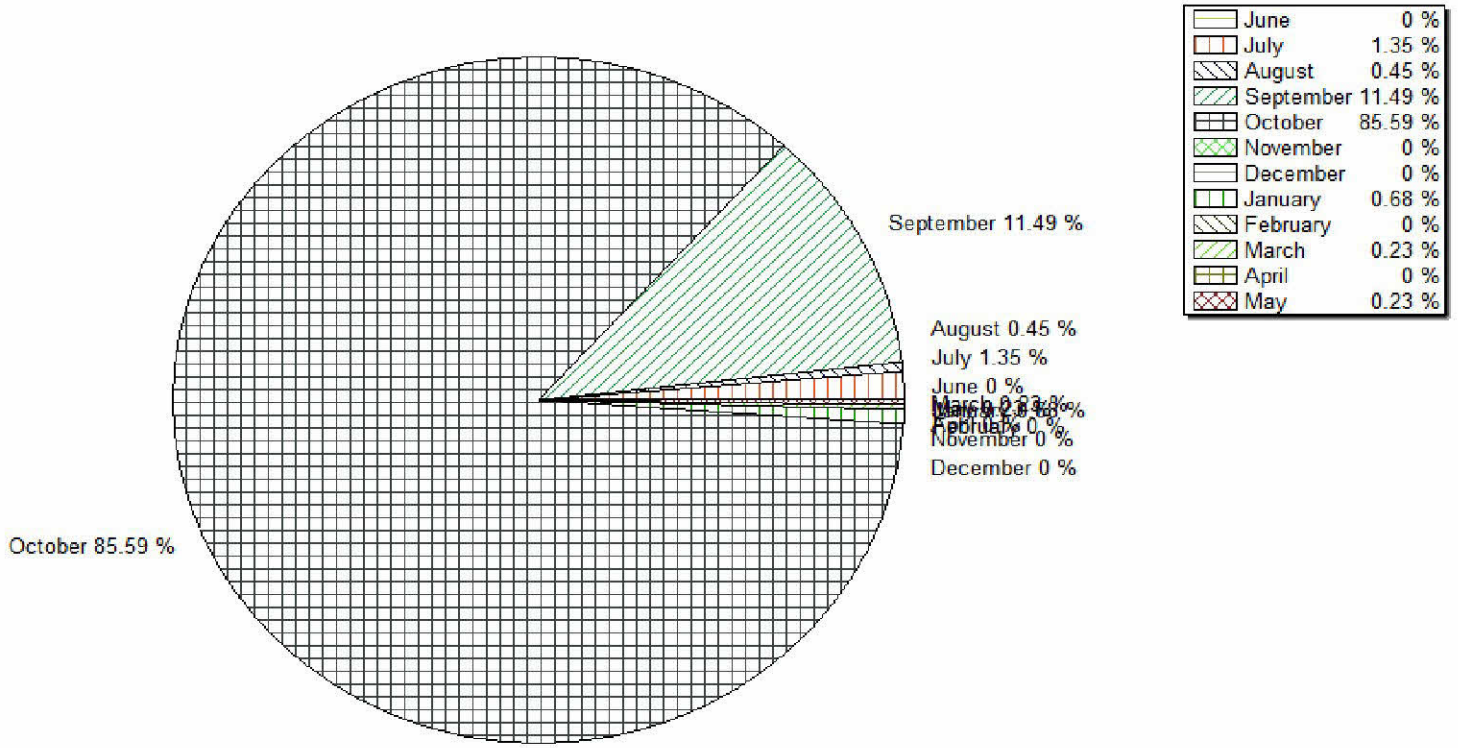
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Bhima SD, Sholapur**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Wadakbal ( AKP60C4)**
**Local River : Sina**

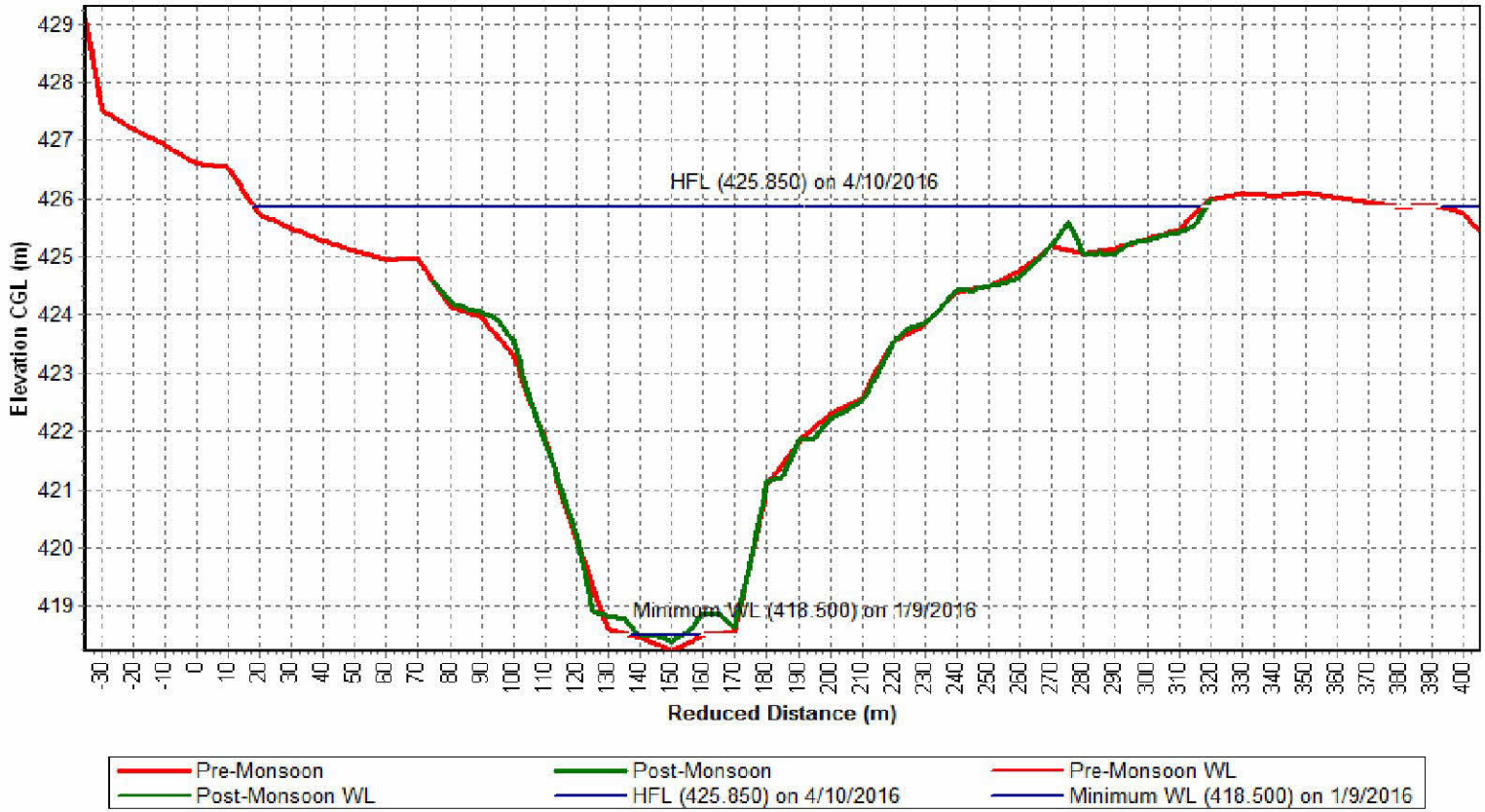
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Bhima SD, Sholapur**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Wadakbal ( AKP60C4)** **Division : Upper Krishna Divn, Pune**

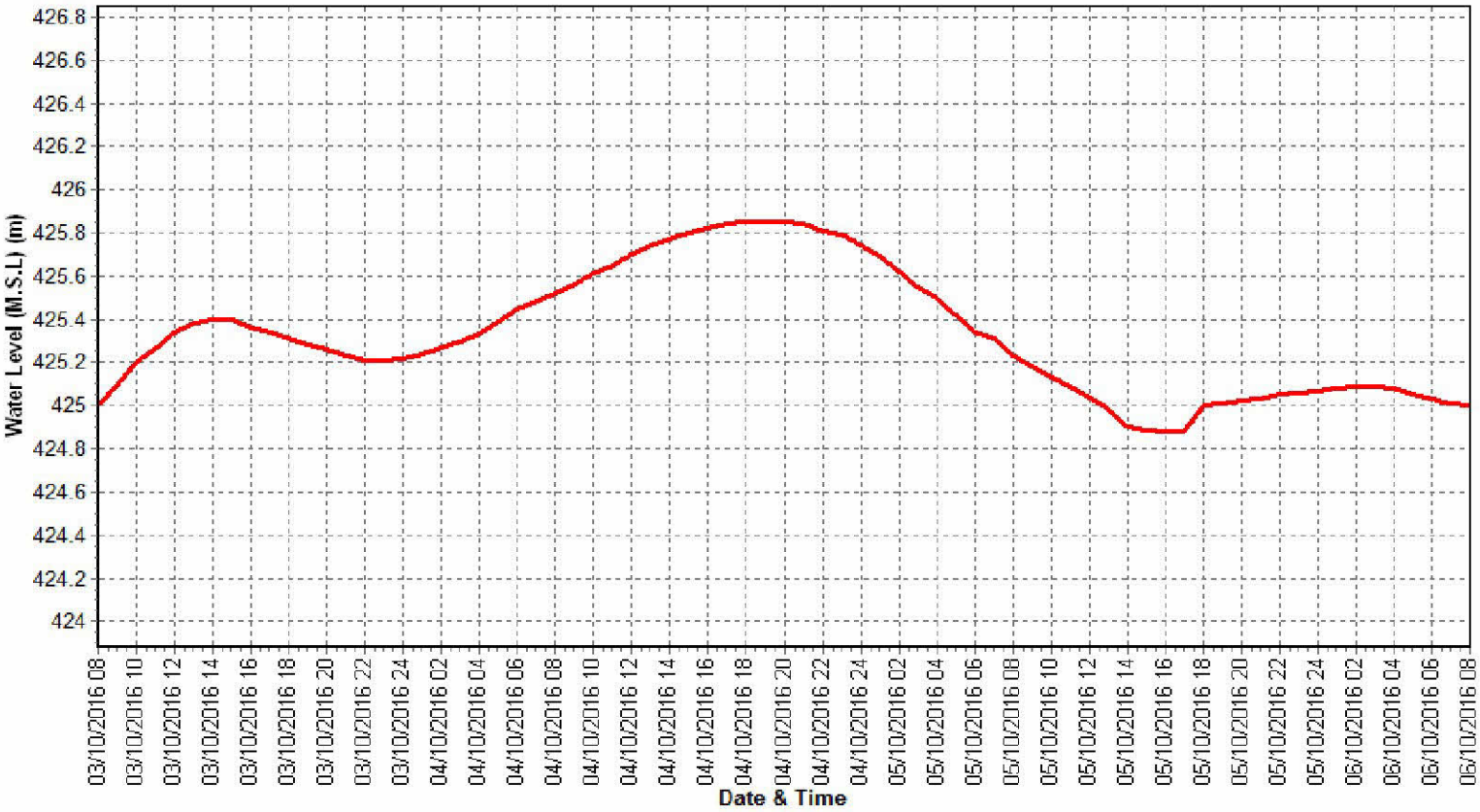
**Local River : Sina** **Sub-Division : Bhima SD, Sholapur**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Wadakbal ( AKP60C4)** | **Division : Upper Krishna Divn, Pune**

**Local River : Sina** | **Sub-Division : Bhima SD, Sholapur**

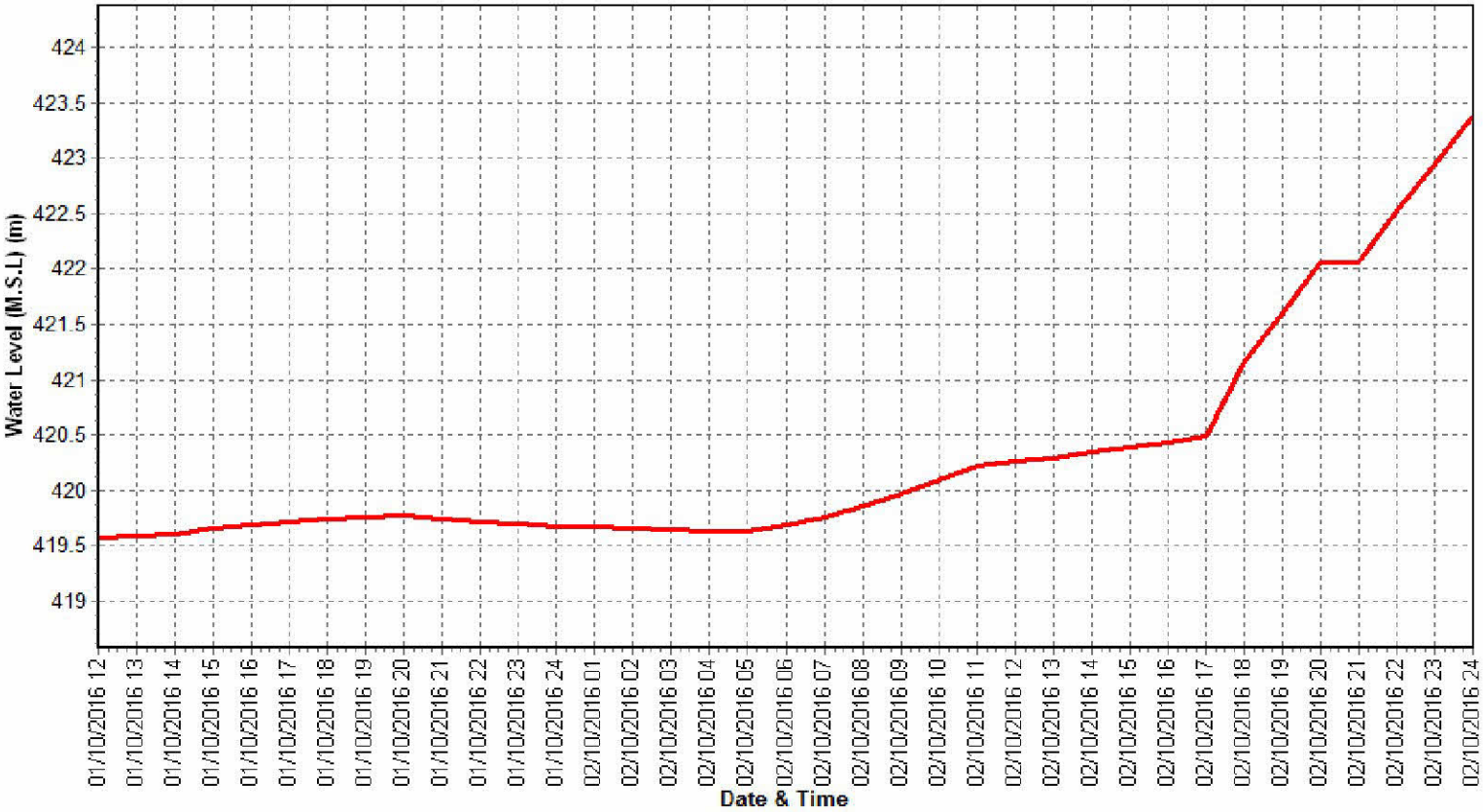



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Wadakbal ( AKP60C4)** **Division : Upper Krishna Divn, Pune**

**Local River : Sina** **Sub-Division : Bhima SD, Sholapur**

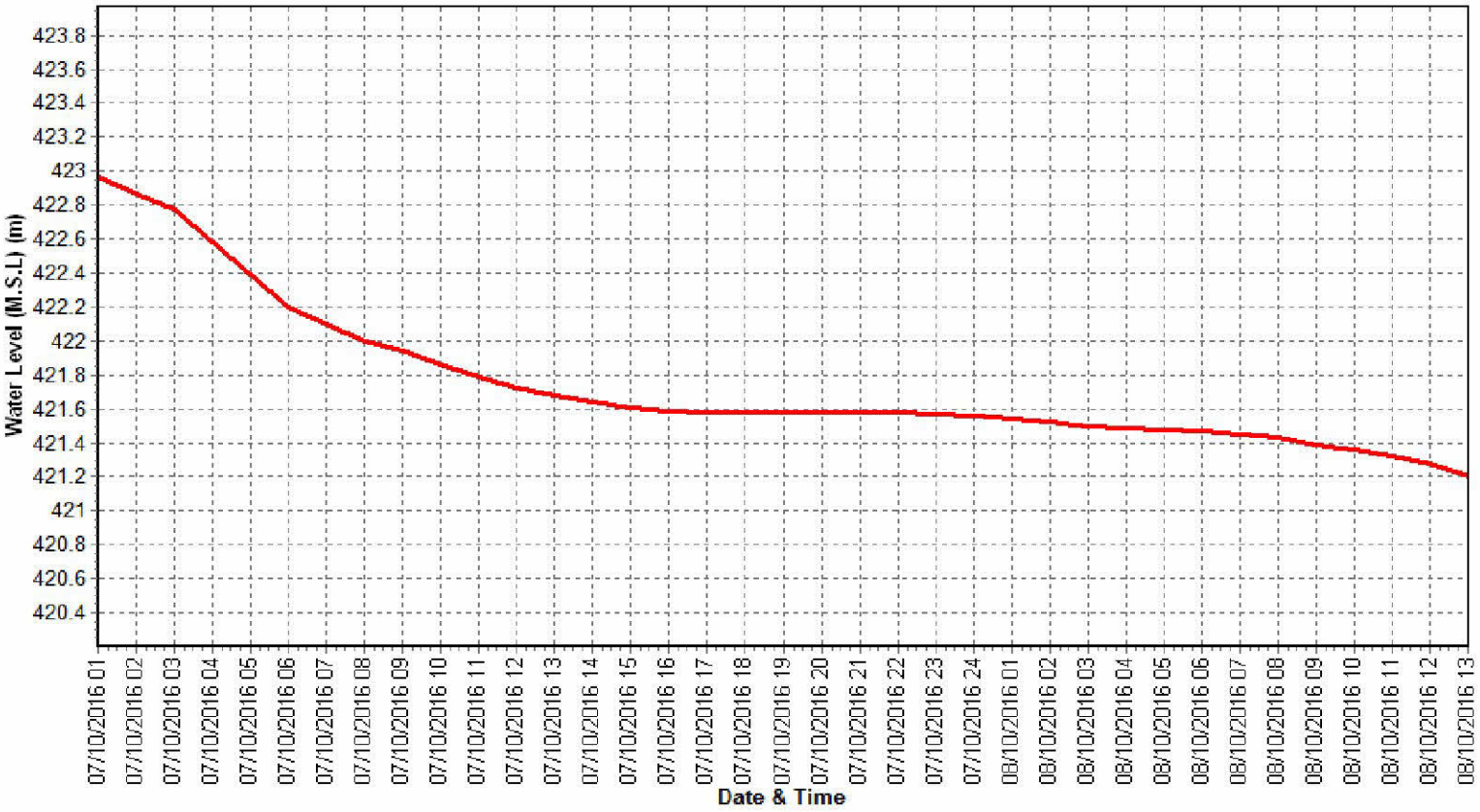



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017

**Station Name : Wadakbal ( AKP60C4)** **Division : Upper Krishna Divn, Pune**

**Local River : Sina** **Sub-Division : Bhima SD, Sholapur**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Takli** | | **Code** | **: AKP00K4** | |
| State | : Maharashtra | | District | Sholapur | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Bhima | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Bhima | |
| Division | : Upper Krishna Divn, Pune | | Sub-Division | : Bhima SD, Sholapur | |
| Drainage Area | : 33916 Sq. Km. | | Bank | : Left | |
| Latitude | : 17°24'51" | | Longitude | : 75°50'52" | |
| **Zero of Gauge (m)** | : 410.778 (m.s.l)<br>409.278 (m.s.l)<br>408 (m.s.l) | | 20/07/1963<br>25/06/1969<br>01/06/2011 | - 24/06/1969<br>- 31/05/2011 | |
| | Opening Date | | Closing Date | | |
| Gauge | : 01/06/1965 | | **HFL During 2016-17** | **: 415.060m** | |
| Discharge | : 01/06/1965 | | **Corres. Discharge** | **: 927.8(Estimated)** | |
| Sediment | : 01/12/1966 | | **Date & Time of occurance** | **: 08/08/2016 : 15.00 hrs.** | |
| Water Quality | : 01/09/1972 | | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1965-1966 | 4240 | 420.038 | 02/08/1965 | 0.400 | 411.223 | 02/05/1966 |
| 1966-1967 | 3898 | 418.868 | 01/08/1966 | 0.600 | 411.048 | 25/04/1967 |
| 1967-1968 | 8333 | 422.753 | 31/07/1967 | 0.700 | 411.183 | 24/05/1968 |
| 1968-1969 | 2480 | 417.869 | 09/08/1968 | 0.000 | 411.953 | 21/05/1969 |
| 1969-1970 | 5511 | 421.123 | 04/08/1969 | 0.100 | 411.163 | 05/05/1970 |
| 1970-1971 | 2244 | 416.738 | 20/09/1970 | 0.000 | | 01/05/1971 |
| 1971-1972 | 4357 | 419.588 | 02/09/1971 | 0.000 | | 04/05/1972 |
| 1972-1973 | 3351 | 418.808 | 11/07/1972 | 0.000 | 410.913 | 27/03/1973 |
| 1973-1974 | 3655 | 418.593 | 11/07/1973 | 0.000 | 411.133 | 31/03/1974 |
| 1974-1975 | 3030 | 418.013 | 24/09/1974 | 6.000 | 411.053 | 29/04/1975 |
| 1975-1976 | 4150 | 418.773 | 17/08/1975 | 0.000 | 410.408 | 19/05/1976 |
| 1976-1977 | 8296 | 422.094 | 05/08/1976 | 0.000 | 412.026 | 18/04/1977 |
| 1977-1978 | 1943 | 416.621 | 31/07/1977 | 1.300 | 411.028 | 05/04/1978 |
| 1978-1979 | 2164 | 417.273 | 04/09/1978 | 0.000 | 410.108 | 24/04/1979 |
| 1979-1980 | 8700 | 422.843 | 27/09/1979 | 0.000 | 411.125 | 31/05/1980 |
| 1980-1981 | 3285 | 419.032 | 06/08/1980 | 0.000 | 411.658 | 07/04/1981 |
| 1981-1982 | 4960 | 420.483 | 12/07/1981 | 0.000 | 411.718 | 02/04/1982 |
| 1982-1983 | 2036 | 416.975 | 25/08/1982 | 0.000 | 411.308 | 21/04/1983 |
| 1983-1984 | 6691 | 421.942 | 19/08/1983 | 2.200 | 411.113 | 15/06/1983 |
| 1984-1985 | 2910 | 418.323 | 22/07/1984 | 0.000 | 411.508 | 06/06/1984 |
| 1985-1986 | 2373 | 417.488 | 05/08/1985 | 0.000 | 411.333 | 26/01/1986 |

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 | 2740 | 417.443 | 12/08/1986 | 0.000 | 411.403 | 05/01/1987 |
| 1987-1988 | 821.4 | 414.296 | 19/10/1987 | 0.000 | 411.428 | 22/03/1988 |
| 1988-1989 | 4005 | 420.358 | 19/09/1988 | 0.000 | 411.993 | 12/03/1989 |
| 1989-1990 | 4887 | 420.318 | 29/09/1989 | 0.000 | 411.728 | 08/04/1990 |
| 1990-1991 | 3934 | 419.588 | 19/08/1990 | 0.000 | 411.878 | 01/04/1991 |
| 1991-1992 | 4261 | 419.723 | 30/07/1991 | 0.000 | 411.291 | 20/10/1991 |
| 1992-1993 | 1624 | 416.201 | 08/09/1992 | 0.000 | 411.308 | 05/02/1993 |
| 1993-1994 | 2344 | 417.617 | 19/10/1993 | 0.000 | 411.608 | 10/04/1994 |
| 1994-1995 | 7698 | 422.453 | 18/07/1994 | 0.000 | 411.068 | 25/01/1995 |
| 1995-1996 | 232.7 | 412.418 | 01/07/1995 | 0.000 | 411.203 | 26/01/1996 |
| 1996-1997 | 5211 | 420.393 | 06/10/1996 | 0.000 | 411.318 | 20/02/1997 |
| 1997-1998 | 8120 | 423.293 | 28/08/1997 | 0.000 | 411.643 | 22/03/1998 |
| 1998-1999 | 5458 | 420.738 | 14/10/1998 | 0.000 | 411.538 | 30/03/1999 |
| 1999-2000 | 1050 | 414.558 | 01/08/1999 | 0.000 | 410.898 | 03/03/2000 |
| 2000-2001 | 148.6 | 412.238 | 30/09/2000 | 0.000 | | 22/01/2001 |
| 2001-2002 | 1412 | 415.098 | 08/10/2001 | 0.000 | | 25/01/2002 |
| 2002-2003 | 188.9 | 412.698 | 19/10/2002 | 0.000 | 409.878 | 16/01/2003 |
| 2003-2004 | 23.78 | 411.178 | 12/07/2003 | 0.000 | 411.473 | 26/01/2004 |
| 2004-2005 | 1054 | 414.563 | 15/08/2004 | 0.000 | 410.938 | 25/01/2005 |
| 2005-2006 | 7103 | 419.428 | 30/07/2005 | 0.000 | 410.873 | 25/01/2006 |
| 2006-2007 | 7672 | 423.653 | 12/08/2006 | 0.000 | 414.328 | 25/01/2007 |
| 2007-2008 | 2303 | 417.313 | 21/09/2007 | 0.000 | 412.978 | 26/01/2008 |
| 2008-2009 | 2412 | 417.878 | 22/09/2008 | 0.000 | 414.038 | 25/01/2009 |
| 2009-2010 | 3669 | 419.693 | 04/10/2009 | 0.000 | 413.798 | 25/01/2010 |
| 2010-2011 | 1375 | 415.188 | 07/10/2010 | 0.000 | 413.658 | 25/01/2011 |
| 2011-2012 | 4219 | 419.275 | 06/09/2011 | 0.000 | 411.885 | 24/02/2012 |
| 2012-2013 | 0.000 | 413.070 | 05/04/2013 | 0.000 | 411.220 | 07/06/2012 |
| 2013-2014 | 3399 | 418.570 | 21/09/2013 | 0.000 | 410.530 | 26/05/2014 |
| 2014-2015 | 1084 | 415.160 | 08/09/2014 | 0.000 | 410.430 | 05/01/2015 |
| 2015-2016 | 0.000 | 412.845 | 05/06/2015 | 0.000 | 411.325 | 26/09/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Takli ( AKP00K4)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**

| 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 | 410.440 | 0.000 | 412.210 | 0.000 | 414.210 | 0.000 | 411.930 | 0.000 | 413.130 | 112.8 * | 412.965 | 0.000 |
| 2 | 410.325 | 0.000 | 412.150 | 0.000 | 414.265 | 0.000 | 411.825 | 0.000 | 413.055 | 96.22 * | 412.860 | 0.000 |
| 3 | 410.220 | 0.000 | 412.060 | 0.000 | 414.210 | 0.000 | 411.720 | 0.000 | 413.210 | 128.7 | 412.760 | 0.000 |
| 4 | 410.550 | 0.000 | 411.945 | 0.000 | 414.165 | 0.000 | 411.625 | 0.000 | 413.110 | 102.0 | 412.635 | 0.000 |
| 5 | 410.960 | 0.000 | 411.825 | 0.000 | 413.730 | 0.000 | 411.515 | 0.000 | 414.500 | 577.2 | 412.515 | 0.000 |
| 6 | 411.140 | 0.000 | 411.730 | 0.000 | 413.290 | 0.000 | 411.420 | 0.000 | 414.700 | 669.6 | 412.405 | 0.000 |
| 7 | 411.240 | 0.000 | 411.630 | 0.000 | 414.290 | 516.5 * | 411.315 | 0.000 | 413.940 | 425.0 | 412.560 | 0.000 |
| 8 | 411.315 | 0.000 | 411.555 | 0.000 | 414.975 | 927.6 | 411.195 | 0.000 | 413.950 | 434.6 | 412.500 | 0.000 |
| 9 | 411.320 | 0.000 | 411.460 | 0.000 | 414.675 | 686.9 | 411.070 | 0.000 | 413.325 | 161.6 * | 412.495 | 0.000 |
| 10 | 411.275 | 0.000 | 411.340 | 0.000 | 414.095 | 393.4 | 410.935 | 0.000 | 413.210 | 121.2 | 412.900 | 0.000 |
| 11 | 411.640 | 0.000 | 411.280 | 0.000 | 414.020 | 398.8 * | 410.750 | 0.000 | 412.990 | 82.82 * | 413.090 | 0.000 |
| 12 | 411.845 | 0.000 | 411.210 | 0.000 | 413.780 | 306.0 * | 410.615 | 0.000 | 413.800 | 313.3 * | 413.055 | 0.000 |
| 13 | 411.870 | 0.000 | 411.090 | 0.000 | 413.370 | 174.0 * | 410.535 | 0.000 | 413.965 | 230.7 | 412.975 | 0.000 |
| 14 | 411.830 | 0.000 | 410.980 | 0.000 | 413.940 | 366.6 * | 410.580 | 0.000 | 413.530 | 0.000 | 412.870 | 0.000 |
| 15 | 411.735 | 0.000 | 410.865 | 0.000 | 414.100 | 393.8 | 410.685 | 0.000 | 414.460 | 0.000 | 412.760 | 0.000 |
| 16 | 411.800 | 0.000 | 410.745 | 0.000 | 413.730 | 161.7 | 410.720 | 0.000 | 414.330 | 0.000 | 412.680 | 0.000 |
| 17 | 411.815 | 0.000 | 410.820 | 0.000 | 413.450 | 103.9 | 411.120 | 0.000 | 414.445 | 0.000 | 412.570 | 0.000 |
| 18 | 411.770 | 0.000 | 412.610 | 0.000 | 413.280 | 149.6 * | 411.385 | 0.000 | 414.280 | 0.000 | 412.465 | 0.000 |
| 19 | 411.760 | 0.000 | 414.280 | 0.000 | 413.360 | 171.2 * | 411.505 | 0.000 | 414.230 | 0.000 | 412.380 | 0.000 |
| 20 | 411.790 | 0.000 | 414.165 | 0.000 | 413.290 | 152.3 * | 411.625 | 0.000 | 414.125 | 0.000 | 412.270 | 0.000 |
| 21 | 411.990 | 0.000 | 414.110 | 0.000 | 413.240 | 0.000 | 411.810 | 0.000 | 414.025 | 0.000 | 412.220 | 0.000 |
| 22 | 412.250 | 0.000 | 414.020 | 0.000 | 413.090 | 0.000 | 411.965 | 0.000 | 413.935 | 0.000 | 412.530 | 0.000 |
| 23 | 412.435 | 0.000 | 414.005 | 0.000 | 412.900 | 0.000 | 412.160 | 0.000 | 413.860 | 0.000 | 412.780 | 0.000 |
| 24 | 412.535 | 0.000 | 413.970 | 0.000 | 412.760 | 0.000 | 412.420 | 0.000 | 413.800 | 0.000 | 412.845 | 0.000 |
| 25 | 412.560 | 0.000 | 413.920 | 0.000 | 412.630 | 0.000 | 413.405 | 183.9 * | 413.685 | 0.000 | 412.820 | 0.000 |
| 26 | 412.560 | 0.000 | 413.895 | 0.000 | 412.515 | 0.000 | 413.600 | 337.6 | 413.565 | 0.000 | 412.755 | 0.000 |
| 27 | 412.495 | 0.000 | 413.880 | 0.000 | 412.425 | 0.000 | 413.450 | 229.2 | 413.455 | 0.000 | 412.660 | 0.000 |
| 28 | 412.425 | 0.000 | 413.860 | 0.000 | 412.320 | 0.000 | 413.180 | 125.2 | 413.360 | 0.000 | 412.565 | 0.000 |
| 29 | 412.355 | 0.000 | 413.840 | 0.000 | 412.200 | 0.000 | 413.120 | 110.5 * | 413.255 | 0.000 | 412.445 | 0.000 |
| 30 | 412.280 | 0.000 | 413.930 | 0.000 | 412.125 | 0.000 | 412.970 | 78.88 * | 413.180 | 0.000 | 412.355 | 0.000 |
| 31 | | | 414.185 | 0.000 | 412.005 | 0.000 | | | 413.075 | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 410.878 | 0.000 | 411.790 | 0.000 | 414.191 | 252.4 | 411.455 | 0.000 | 413.613 | 282.9 | 412.659 | 0.000 |
| II Ten-Daily | 411.785 | 0.000 | 411.805 | 0.000 | 413.632 | 237.8 | 410.952 | 0.000 | 414.016 | 62.68 | 412.712 | 0.000 |
| III Ten-Daily | 412.389 | 0.000 | 413.965 | 0.000 | 412.565 | 0.000 | 412.808 | 106.5 | 413.563 | 0.000 | 412.598 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 410.220 | 0.000 | 410.745 | 0.000 | 412.005 | 0.000 | 410.535 | 0.000 | 412.990 | 0.000 | 412.220 | 0.000 |
| Max. | 412.560 | 0.000 | 414.280 | 0.000 | 414.975 | 927.6 | 413.600 | 337.6 | 414.700 | 669.6 | 413.090 | 0.000 |
| Mean | 411.684 | 0 | 412.567 | 0 | 413.433 | 158.1 | 411.738 | 35.51 | 413.725 | 111.5 | 412.656 | 0 |

**Annual Runoff in MCM = 814 Annual Runoff in mm = 24**

**Peak Observed Discharge = 927.6 cumecs on 08/08/2016 Corres. Water Level :414.975 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016 Corres. Water Level :410.44 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 2016 - 2017

**Station Name : Takli ( AKP00K4)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 412.240 | 0.000 | 410.600 | 0.000 | 413.010 | 0.000 | 411.520 | 0.000 | 412.530 | 0.000 | 411.110 | 0.000 |
| 2 | 412.160 | 0.000 | 411.560 | 0.000 | 412.910 | 0.000 | 411.370 | 0.000 | 412.580 | 0.000 | 410.950 | 0.000 |
| 3 | 412.040 | 0.000 | 412.580 | 0.000 | 412.780 | 0.000 | 411.240 | 0.000 | 412.620 | 0.000 | 410.820 | 0.000 |
| 4 | 412.030 | 0.000 | 413.160 | 0.000 | 412.680 | 0.000 | 411.060 | 0.000 | 412.560 | 0.000 | 410.690 | 0.000 |
| 5 | 412.000 | 0.000 | 414.630 | 0.000 | 412.590 | 0.000 | 410.900 | 0.000 | 412.450 | 0.000 | 410.570 | 0.000 |
| 6 | 411.960 | 0.000 | 414.620 | 0.000 | 412.480 | 0.000 | 410.750 | 0.000 | 412.310 | 0.000 | 410.420 | 0.000 |
| 7 | 411.860 | 0.000 | 414.490 | 0.000 | 412.380 | 0.000 | 410.590 | 0.000 | 412.210 | 0.000 | 410.300 | 0.000 |
| 8 | 412.100 | 0.000 | 414.390 | 0.000 | 412.280 | 0.000 | 410.470 | 0.000 | 412.220 | 0.000 | 410.180 | 0.000 |
| 9 | 412.240 | 0.000 | 414.260 | 0.000 | 412.190 | 0.000 | 410.300 | 0.000 | 412.060 | 0.000 | 410.050 | 0.000 |
| 10 | 412.340 | 0.000 | 414.150 | 0.000 | 412.060 | 0.000 | 410.190 | 0.000 | 412.000 | 0.000 | 409.900 | 0.000 |
| 11 | 412.370 | 0.000 | 414.070 | 0.000 | 412.200 | 0.000 | 410.050 | 0.000 | 411.860 | 0.000 | 409.780 | 0.000 |
| 12 | 412.370 | 0.000 | 413.960 | 0.000 | 412.220 | 0.000 | 409.910 | 0.000 | 412.250 | 0.000 | 409.650 | 0.000 |
| 13 | 412.330 | 0.000 | 413.850 | 0.000 | 412.285 | 0.000 | 409.770 | 0.000 | 412.620 | 0.000 | 409.530 | 0.000 |
| 14 | 412.290 | 0.000 | 413.750 | 0.000 | 412.130 | 0.000 | 409.640 | 0.000 | 412.720 | 0.000 | 409.390 | 0.000 |
| 15 | 412.240 | 0.000 | 413.600 | 0.000 | 412.310 | 0.000 | 409.490 | 0.000 | 412.680 | 0.000 | 409.280 | 0.000 |
| 16 | 412.200 | 0.000 | 413.500 | 0.000 | 412.460 | 0.000 | 409.390 | 0.000 | 412.590 | 0.000 | 409.200 | 0.000 |
| 17 | 412.160 | 0.000 | 413.400 | 0.000 | 412.500 | 0.000 | 409.640 | 0.000 | 412.480 | 0.000 | 412.060 | 0.000 |
| 18 | 412.080 | 0.000 | 413.320 | 0.000 | 412.470 | 0.000 | 411.830 | 0.000 | 412.580 | 0.000 | 414.700 | 0.000 |
| 19 | 411.990 | 0.000 | 413.280 | 0.000 | 412.400 | 0.000 | 413.630 | 0.000 | 412.670 | 0.000 | 414.930 | 0.000 |
| 20 | 411.890 | 0.000 | 413.250 | 0.000 | 412.430 | 0.000 | 414.210 | 0.000 | 412.620 | 0.000 | 414.780 | 0.000 |
| 21 | 411.770 | 0.000 | 413.240 | 0.000 | 412.420 | 0.000 | 414.290 | 0.000 | 412.520 | 0.000 | 414.610 | 0.000 |
| 22 | 411.680 | 0.000 | 413.140 | 0.000 | 412.370 | 0.000 | 414.200 | 0.000 | 412.410 | 0.000 | 414.510 | 0.000 |
| 23 | 411.570 | 0.000 | 413.050 | 0.000 | 412.270 | 0.000 | 414.060 | 0.000 | 412.280 | 0.000 | 414.420 | 0.000 |
| 24 | 411.500 | 0.000 | 413.010 | 0.000 | 412.200 | 0.000 | 413.940 | 0.000 | 412.180 | 0.000 | 414.280 | 0.000 |
| 25 | 411.370 | 0.000 | 412.980 | 0.000 | 412.080 | 0.000 | 413.800 | 0.000 | 412.030 | 0.000 | 414.130 | 0.000 |
| 26 | 411.270 | 0.000 | 412.900 | 0.000 | 411.930 | 0.000 | 413.690 | 0.000 | 411.860 | 0.000 | 413.980 | 0.000 |
| 27 | 411.160 | 0.000 | 412.820 | 0.000 | 411.810 | 0.000 | 413.260 | 0.000 | 411.700 | 0.000 | 413.820 | 0.000 |
| 28 | 411.040 | 0.000 | 412.710 | 0.000 | 411.680 | 0.000 | 413.130 | 0.000 | 411.560 | 0.000 | 413.660 | 0.000 |
| 29 | 410.900 | 0.000 | 413.000 | 0.000 | | | 412.960 | 0.000 | 411.410 | 0.000 | 413.450 | 0.000 |
| 30 | 410.790 | 0.000 | 413.120 | 0.000 | | | 412.820 | 0.000 | 411.270 | 0.000 | 413.300 | 0.000 |
| 31 | 410.670 | 0.000 | 413.110 | 0.000 | | | 412.680 | 0.000 | | | 413.490 | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 412.097 | 0.000 | 413.444 | 0.000 | 412.536 | 0.000 | 410.839 | 0.000 | 412.354 | 0.000 | 410.499 | 0.000 |
| II Ten-Daily | 412.192 | 0.000 | 413.598 | 0.000 | 412.340 | 0.000 | 410.756 | 0.000 | 412.507 | 0.000 | 411.330 | 0.000 |
| III Ten-Daily | 411.247 | 0.000 | 413.007 | 0.000 | 412.095 | 0.000 | 413.530 | 0.000 | 411.922 | 0.000 | 413.968 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 410.670 | 0.000 | 410.600 | 0.000 | 411.680 | 0.000 | 409.390 | 0.000 | 411.270 | 0.000 | 409.200 | 0.000 |
| Max. | 412.370 | 0.000 | 414.630 | 0.000 | 413.010 | 0.000 | 414.290 | 0.000 | 412.720 | 0.000 | 414.930 | 0.000 |
| Mean | 411.826 | 0 | 413.339 | 0 | 412.340 | 0 | 411.767 | 0 | 412.261 | 0 | 411.998 | 0 |

**Peak Computed Discharge = 516.5 cumecs on 07/08/2016** **Corres. Water Level :414.29 m**

**Lowest Computed Discharge = 78.88 cumecs on 30/09/2016** **Corres. Water Level :412.97 m**

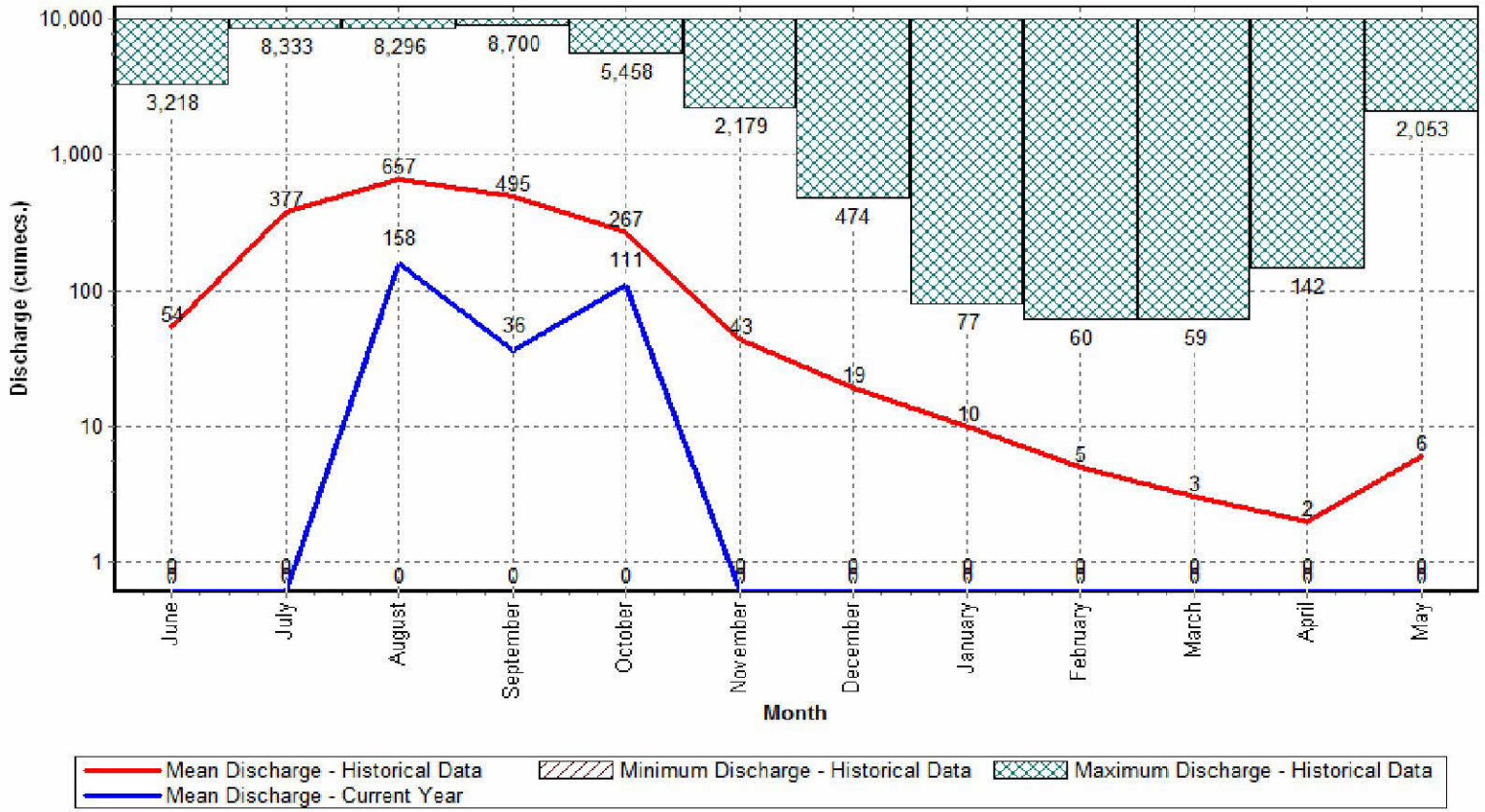
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Takli ( AKP00K4)** | **Data considered : 1965-2017** | **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** | **Sub-Division : Bhima SD, Sholapur**



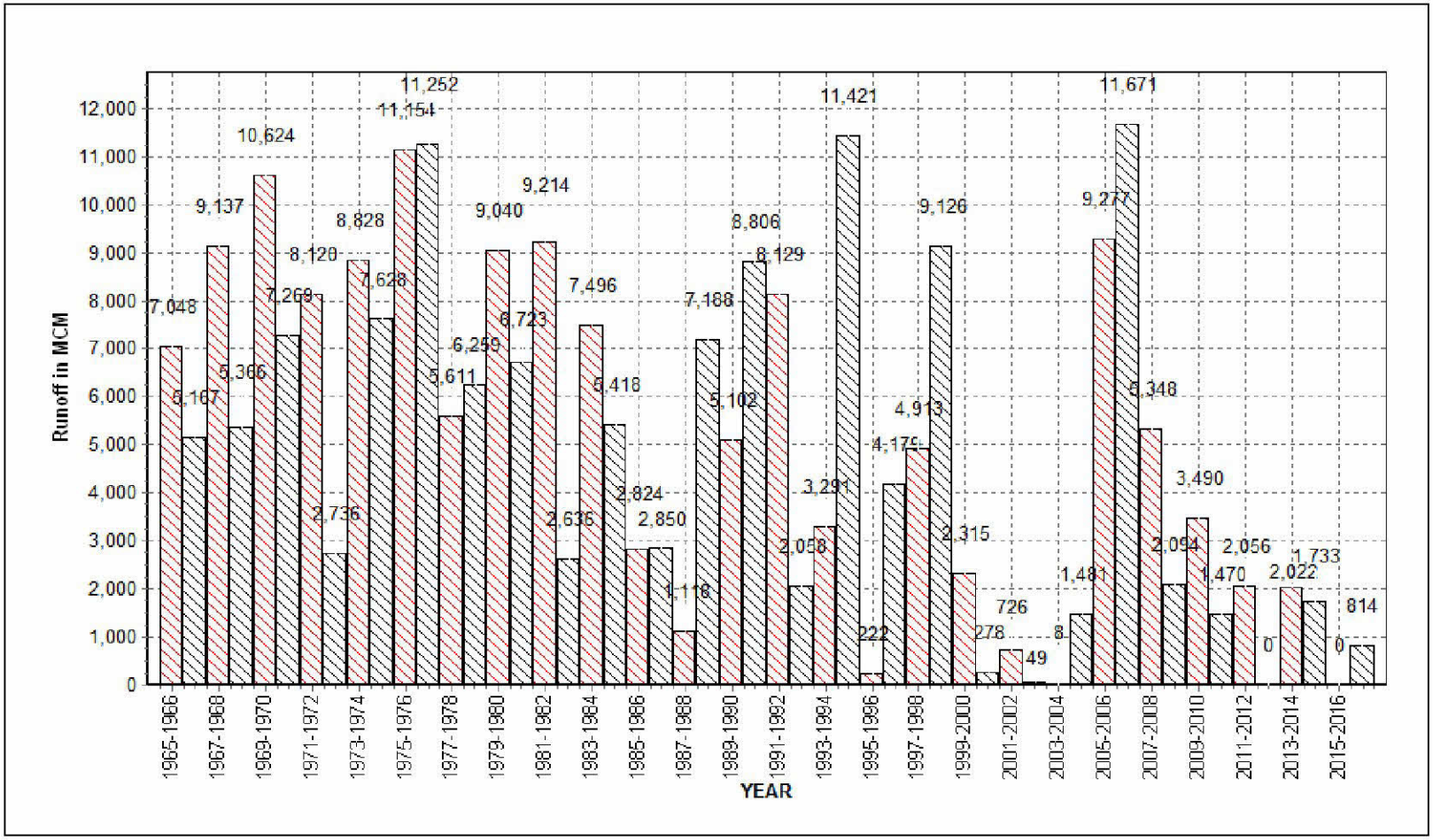
**Annual Runoff Values for the period: 1965 - 2017**

**Station Name : Takli ( AKP00K4)**

**Local River : Bhima**

**Division : Upper Krishna Divn, Pune**

**Sub-Division : Bhima SD, Sholapur**

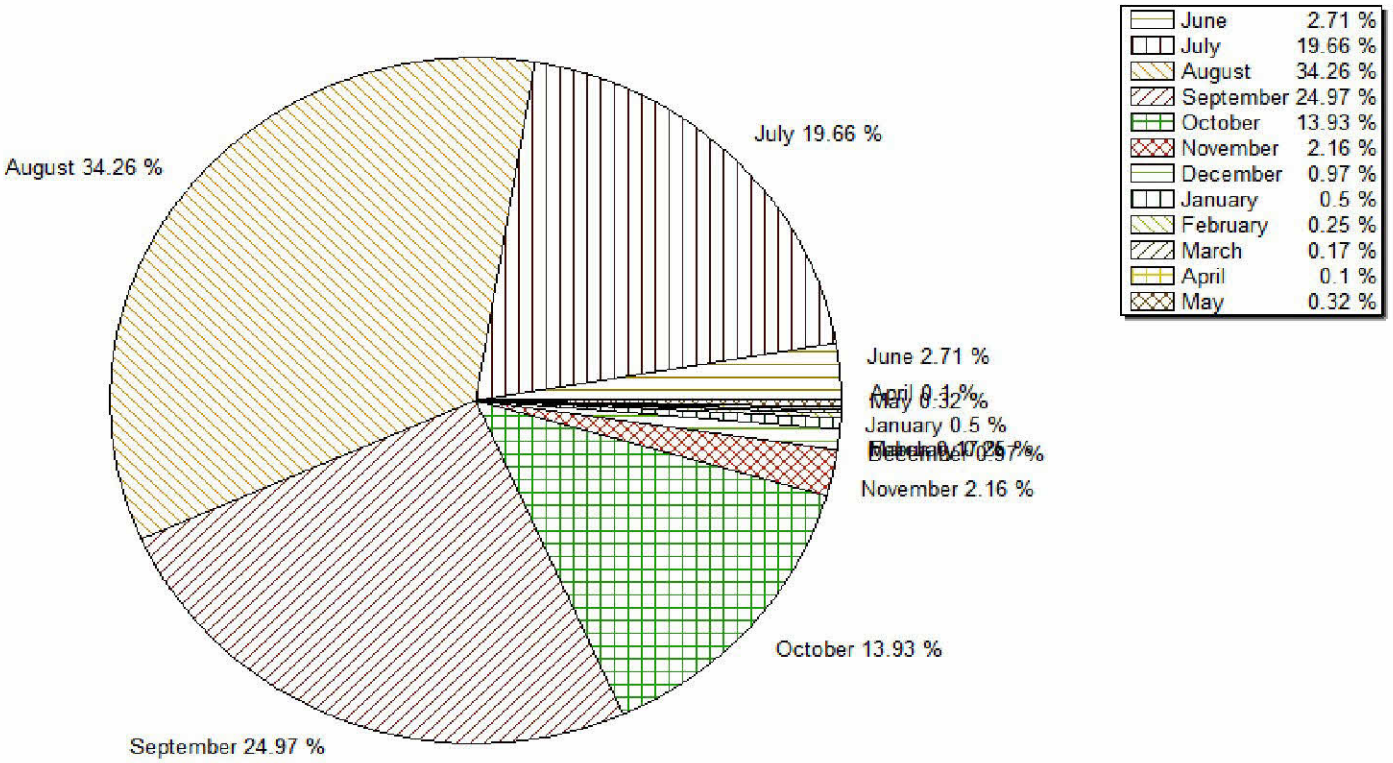



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1965-2016**

**Station Name : Takli ( AKP00K4)**
**Local River : Bhima**

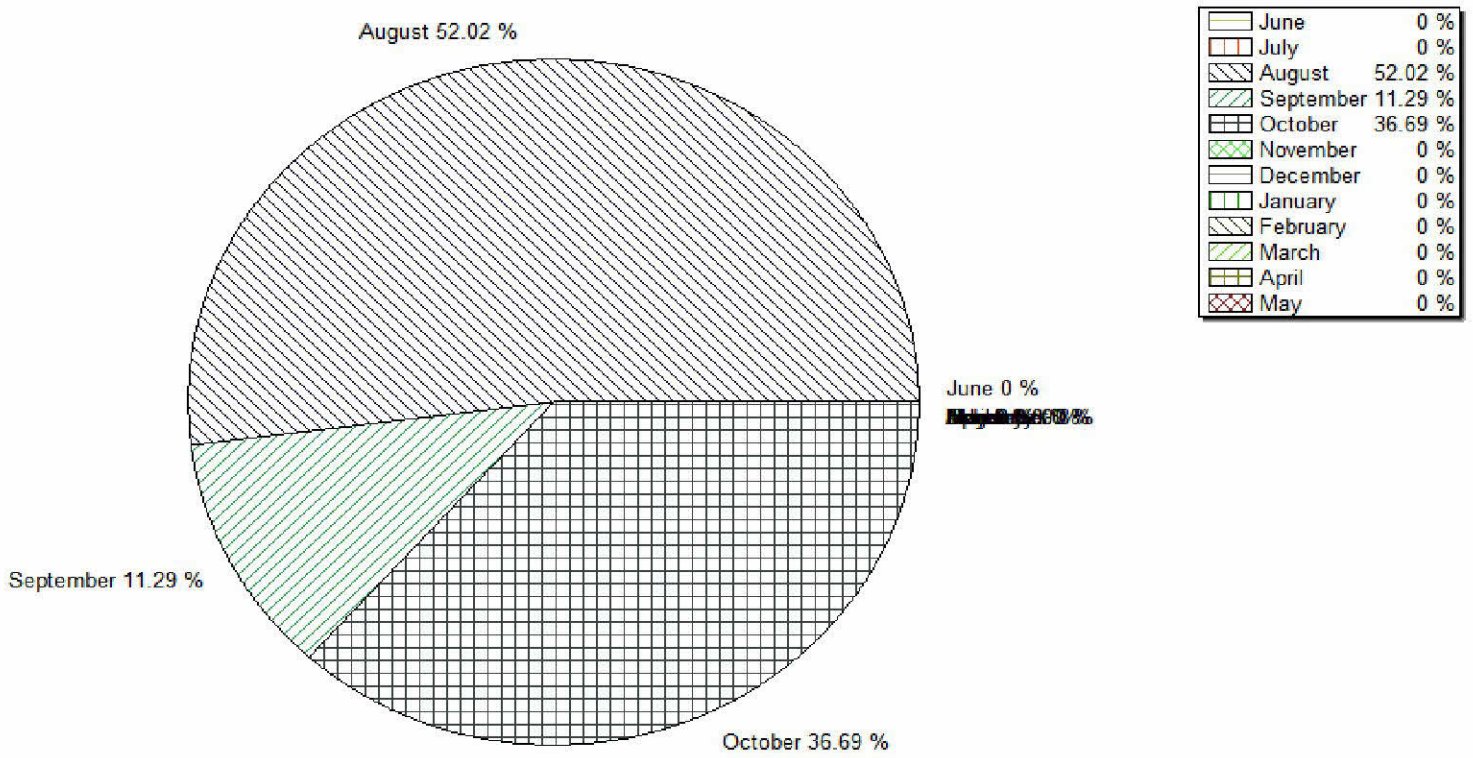
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Bhima SD, Sholapur**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Takli ( AKP00K4)**
**Local River : Bhima**

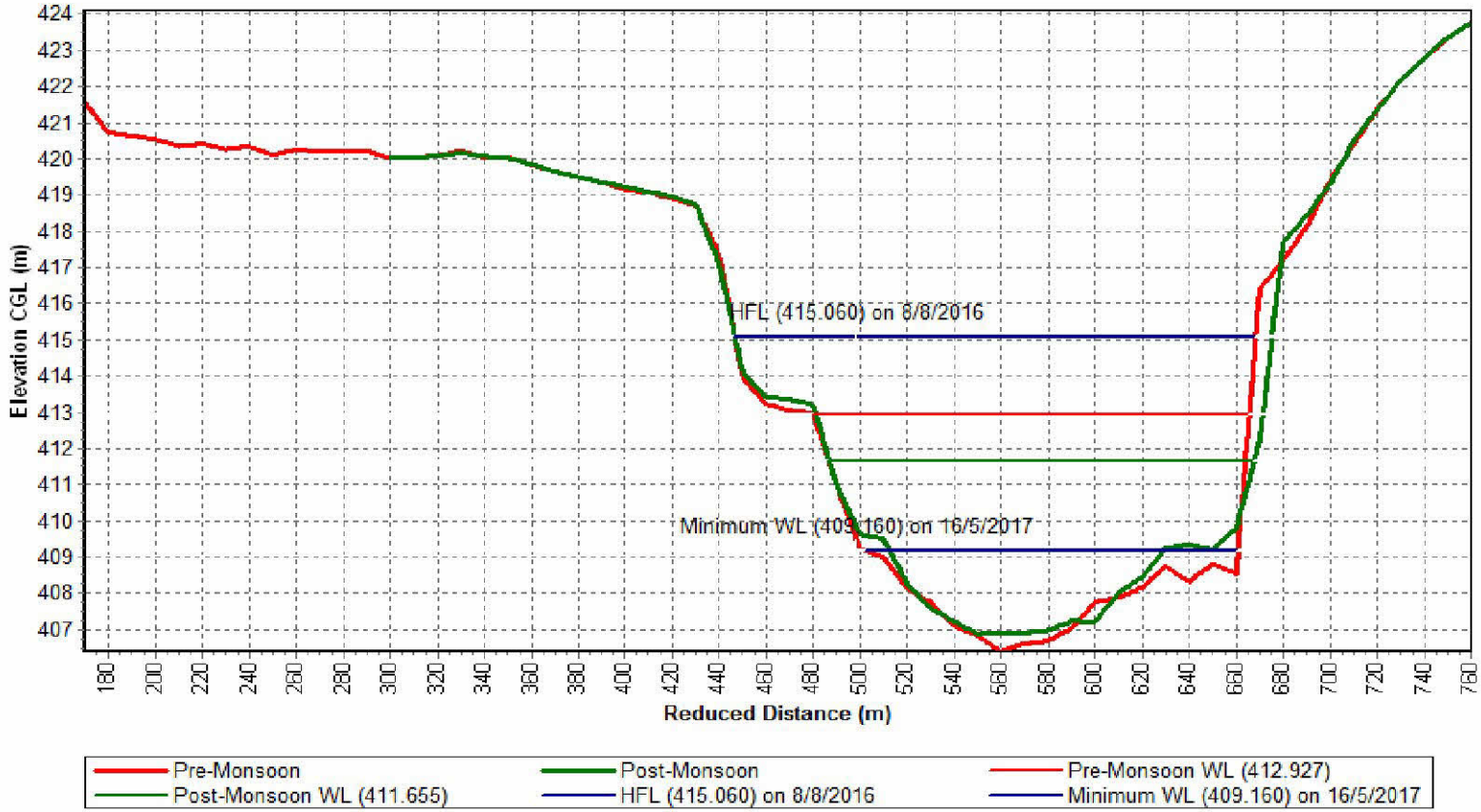
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Bhima SD, Sholapur**



## Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017

**Station Name : Takli ( AKP00K4)**
**Local River : Bhima**

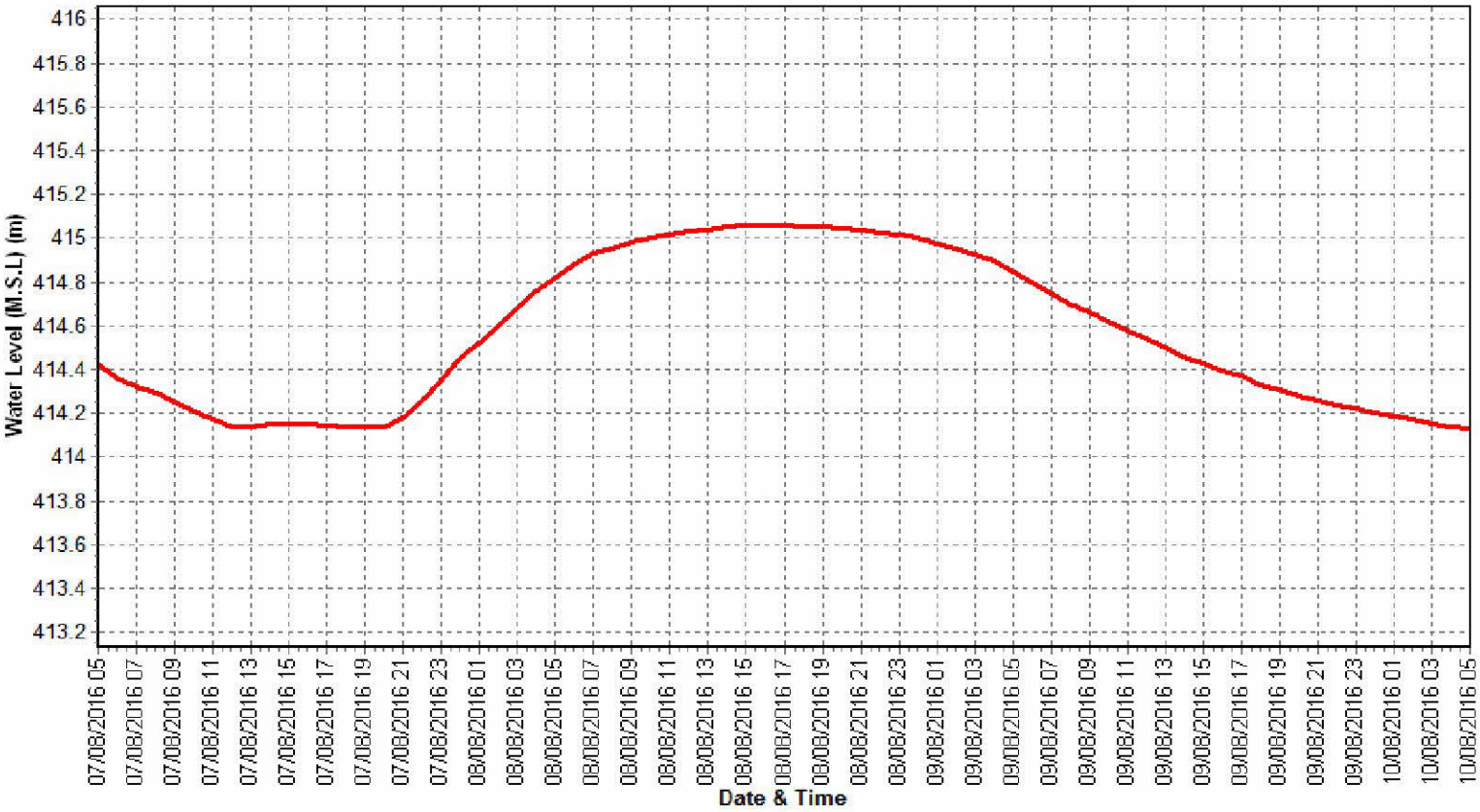
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Bhima SD, Sholapur**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Takli ( AKP00K4)** | **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** | **Sub-Division : Bhima SD, Sholapur**

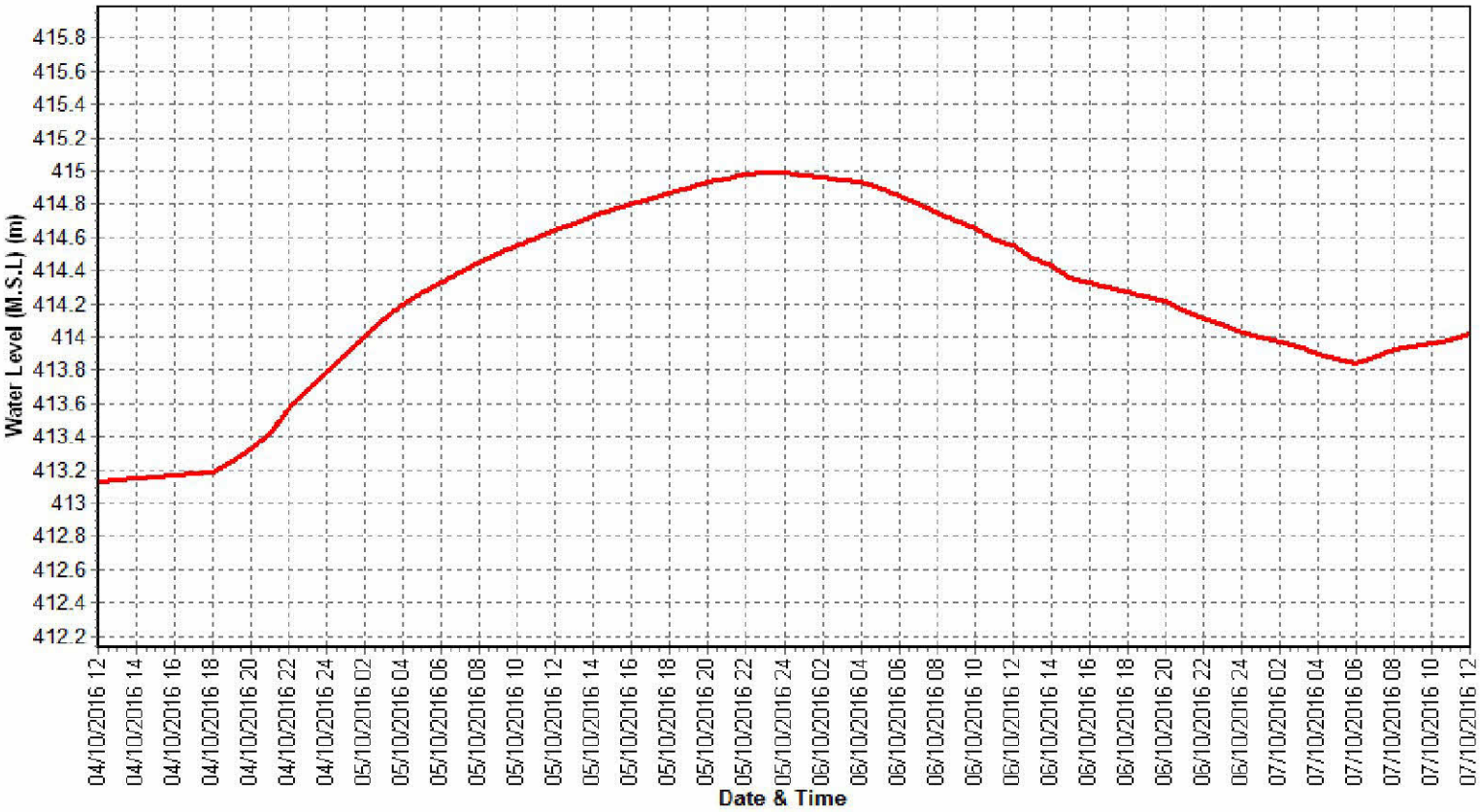



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Takli ( AKP00K4)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**

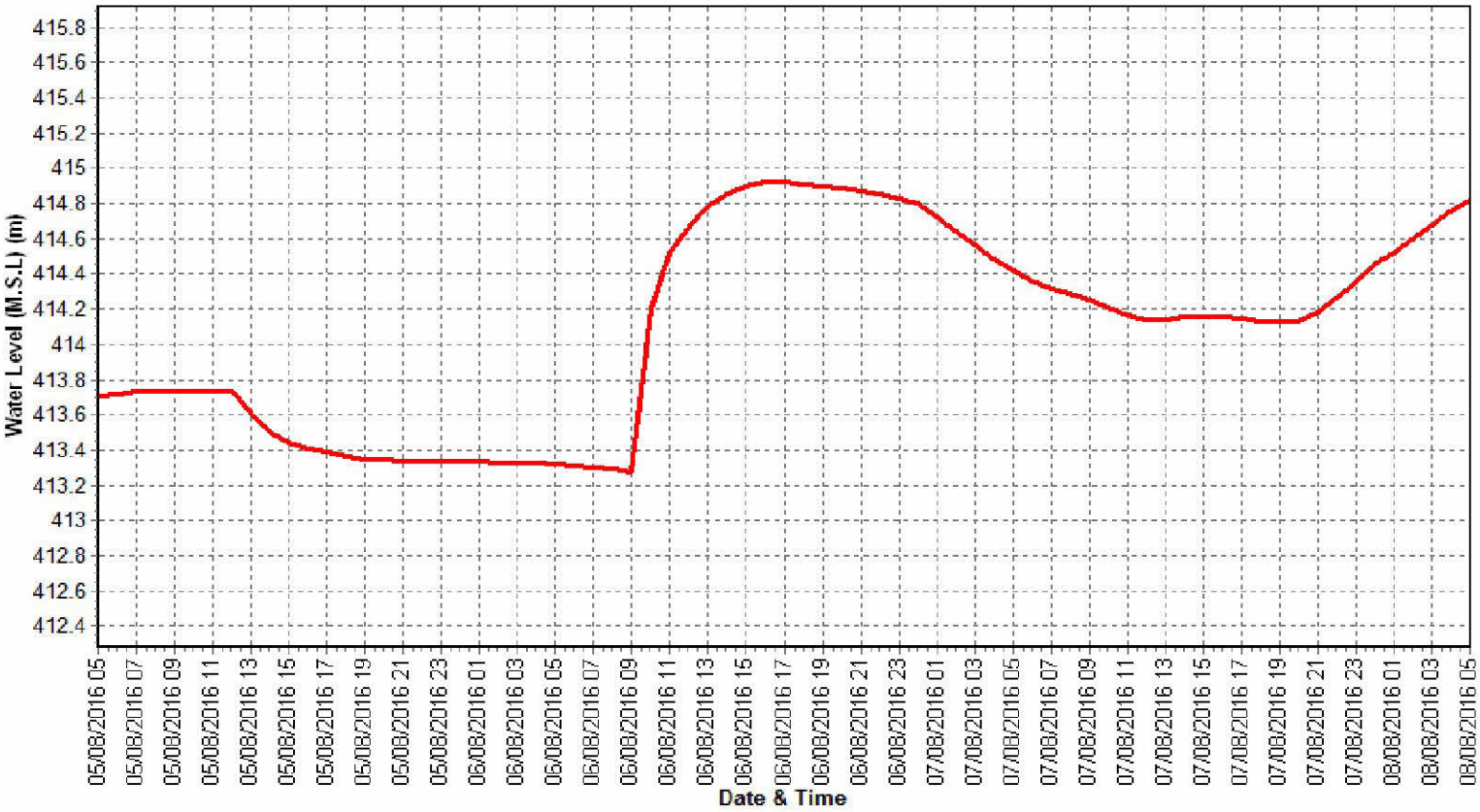



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017

**Station Name : Takli ( AKP00K4)** | **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** | **Sub-Division : Bhima SD, Sholapur**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Narasingpur** | | **Code** | **: AKP00Q4** | |
| State | : Maharashtra | | District | Sholapur | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Bhima | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Bhima | |
| Division | : Upper Krishna Divn, Pune | | Sub-Division | : Bhima SD, Sholapur | |
| Drainage Area | : 22856 Sq. Km. | | Bank | : Right | |
| Latitude | : 17°58'17" | | Longitude | : 75°08'21" | |
| **Zero of Gauge (m)** | : 448.243 (m.s.l) | | 01/06/1964 | | |
| | Opening Date | | Closing Date | | |
| Gauge | : 01/06/1965 | | **HFL During 2016-17** | **: 452.323m** | |
| | | | **Corres. Discharge** | **: 1432.2(Estimated)** | |
| Discharge | : 22/02/1966 | | **Date & Time of occurance** | **: 05/08/2016 : 08.00 hrs.** | |
| 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** |
| 1967-1968 | 6620 | 461.498 | 30/07/1967 | 1.200 | 448.563 | 27/04/1968 |
| 1968-1969 | 3394 | 455.986 | 08/08/1968 | 0.100 | 448.398 | 09/05/1969 |
| 1969-1970 | 5988 | 459.908 | 02/08/1969 | 0.300 | 448.453 | 21/04/1970 |
| 1970-1971 | 2112 | 454.238 | 22/08/1970 | 0.200 | 448.333 | 29/04/1971 |
| 1971-1972 | 5241 | 457.618 | 31/08/1971 | 0.400 | 448.763 | 04/05/1972 |
| 1972-1973 | 4350 | 457.196 | 10/07/1972 | 0.000 | 448.443 | 16/03/1973 |
| 1973-1974 | 4255 | 457.156 | 10/07/1973 | 2.000 | 448.743 | 26/06/1973 |
| 1974-1975 | 1601 | 453.528 | 26/10/1974 | 4.100 | 448.503 | 22/06/1974 |
| 1975-1976 | 3967 | 457.244 | 16/08/1975 | 0.700 | 448.368 | 15/05/1976 |
| 1976-1977 | 6677 | 460.218 | 03/08/1976 | 0.100 | 448.573 | 07/04/1977 |
| 1977-1978 | 2422 | 454.326 | 30/07/1977 | 1.700 | 448.458 | 30/03/1978 |
| 1978-1979 | 2470 | 455.200 | 03/09/1978 | 0.000 | 448.213 | 19/04/1979 |
| 1979-1980 | 3593 | 457.108 | 12/08/1979 | 0.700 | 448.658 | 17/03/1980 |
| 1980-1981 | 3590 | 456.872 | 06/07/1980 | 1.200 | 448.850 | 01/03/1981 |
| 1981-1982 | 6990 | 459.693 | 11/07/1981 | 0.500 | 448.843 | 03/03/1982 |
| 1982-1983 | 2665 | 454.821 | 24/08/1982 | 0.600 | 448.583 | 04/03/1983 |
| 1983-1984 | 7602 | 460.181 | 17/08/1983 | 2.100 | 448.723 | 10/06/1983 |
| 1984-1985 | 3220 | 456.458 | 20/07/1984 | 2.000 | 449.053 | 27/11/1984 |
| 1985-1986 | 2509 | 455.381 | 03/08/1985 | 0.500 | 449.043 | 25/10/1985 |
| 1986-1987 | 2478 | 455.318 | 11/08/1986 | 0.000 | 448.738 | 26/02/1987 |
| 1987-1988 | 726.2 | 451.763 | 18/10/1987 | 0.000 | 448.838 | 19/03/1988 |
| 1988-1989 | 3192 | 456.256 | 18/09/1988 | 0.000 | 448.878 | 02/03/1989 |

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 |
| 1989-1990 | 2998 | 455.941 | 28/07/1989 | 0.000 | 449.103 | 23/01/1990 |
| 1990-1991 | 4225 | 457.066 | 18/08/1990 | 0.000 | 448.983 | 19/03/1991 |
| 1991-1992 | 3860 | 457.632 | 29/07/1991 | 0.000 | 449.148 | 26/01/1992 |
| 1992-1993 | 1824 | 453.862 | 07/09/1992 | 0.000 | 448.988 | 25/01/1993 |
| 1993-1994 | 2392 | 454.510 | 30/07/1993 | 0.000 | | 25/03/1994 |
| 1994-1995 | 7290 | 461.433 | 16/07/1994 | 0.000 | 449.128 | 25/01/1995 |
| 1995-1996 | 515.1 | 450.913 | 24/07/1995 | 0.000 | 448.853 | 26/01/1996 |
| 1996-1997 | 4560 | 457.473 | 05/10/1996 | 0.000 | 448.843 | 25/01/1997 |
| 1997-1998 | 7450 | 462.043 | 26/08/1997 | 0.000 | 449.393 | 25/01/1998 |
| 1998-1999 | 3446 | 456.593 | 13/10/1998 | 0.000 | 449.433 | 25/01/1999 |
| 1999-2000 | 1581 | 452.963 | 30/07/1999 | 0.000 | 449.143 | 28/11/1999 |
| 2000-2001 | 152.2 | 450.323 | 28/11/2000 | 0.000 | 448.813 | 30/12/2000 |
| 2001-2002 | 350.0 | 450.693 | 26/03/2002 | 0.000 | 448.533 | 16/01/2002 |
| 2002-2003 | 450.0 | 451.213 | 17/10/2002 | 0.000 | 448.833 | 07/01/2003 |
| 2003-2004 | 148.4 | 450.408 | 22/12/2003 | 0.000 | | 15/01/2004 |
| 2004-2005 | 1606 | 453.598 | 13/08/2004 | 0.000 | 448.463 | 09/12/2004 |
| 2005-2006 | 7109 | 461.793 | 04/08/2005 | 0.000 | 448.933 | 07/01/2006 |
| 2006-2007 | 8863 | 462.383 | 10/08/2006 | 0.000 | 448.973 | 06/01/2007 |
| 2007-2008 | 2533 | 454.713 | 10/08/2007 | 0.000 | 449.113 | 20/01/2008 |
| 2008-2009 | 2853 | 455.643 | 21/09/2008 | 0.000 | 448.883 | 14/01/2009 |
| 2009-2010 | 1627 | 453.493 | 18/11/2009 | 0.000 | 449.423 | 11/12/2009 |
| 2010-2011 | 1321 | 452.903 | 01/10/2010 | 0.000 | 449.243 | 18/01/2011 |
| 2011-2012 | 5098 | 457.733 | 05/09/2011 | 0.000 | 449.843 | 25/02/2012 |
| 2012-2013 | 128.9 | 450.110 | 20/08/2012 | 0.000 | 449.560 | 28/08/2012 |
| 2013-2014 | 3725 | 456.081 | 20/09/2013 | 0.000 | 448.618 | 26/05/2014 |
| 2014-2015 | 1493 | 451.943 | 07/09/2014 | 0.000 | 449.303 | 10/07/2014 |
| 2015-2016 | 119.3 | 450.043 | 20/07/2015 | 0.000 | 448.658 | 24/11/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Narasingpur ( AKP00Q4)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**

| 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 | | 0.000 | 448.303 | 0.000 | 449.273 | 95.01 | 448.313 | 0.000 |
| 2 | | 0.000 | | 0.000 | | 0.000 | 448.223 | 0.000 | 449.093 | 97.53 * | 448.238 | 0.000 |
| 3 | | 0.000 | | 0.000 | | 0.000 | 448.128 | 0.000 | 449.393 | 142.9 * | 448.158 | 0.000 |
| 4 | | 0.000 | | 0.000 | | 0.000 | 447.993 | 0.000 | 450.943 | 600.5 * | 448.103 | 0.000 |
| 5 | | 0.000 | | 0.000 | 452.323 | 1432 * | 447.903 | 0.000 | 450.058 | 259.9 | 448.068 | 0.000 |
| 6 | | 0.000 | | 0.000 | 449.558 | 182.2 | 447.823 | 0.000 | 450.693 | 478.2 | 448.028 | 0.000 |
| 7 | | 0.000 | | 0.000 | 451.753 | 1302 | 447.713 | 0.000 | 450.048 | 255.5 | 447.968 | 0.000 |
| 8 | | 0.000 | | 0.000 | 450.623 | 522.6 | 447.643 | 0.000 | 449.673 | 167.2 | 447.903 | 0.000 |
| 9 | | 0.000 | | 0.000 | 449.993 | 315.3 | 447.583 | 0.000 | 449.433 | 149.8 * | 447.848 | 0.000 |
| 10 | | 0.000 | 449.583 | 177.8 * | 449.593 | 204.1 | 447.553 | 0.000 | 449.496 | 106.7 | 447.798 | 0.000 |
| 11 | | 0.000 | 449.583 | 177.8 * | 448.633 | 48.58 | 447.523 | 0.000 | 450.593 | 459.2 * | 447.738 | 0.000 |
| 12 | | 0.000 | 449.583 | 186.4 | 450.033 | 239.1 | | 0.000 | 449.593 | 179.8 * | 447.678 | 0.000 |
| 13 | | 0.000 | 449.473 | 170.2 | 450.093 | 298.2 * | | 0.000 | 449.488 | 57.88 | 447.618 | 0.000 |
| 14 | | 0.000 | 449.311 | 133.2 | 449.643 | 189.9 * | | 0.000 | 449.293 | 35.40 | 447.598 | 0.000 |
| 15 | | 0.000 | 449.186 | 116.8 | 449.013 | 87.30 * | | 0.000 | 449.243 | 0.000 | 447.573 | 0.000 |
| 16 | | 0.000 | 448.883 | 70.95 | 448.993 | 84.85 * | | 0.000 | 449.293 | 0.000 | | 0.000 |
| 17 | | 0.000 | 448.183 | 0.000 | 448.993 | 84.85 * | | 0.000 | 449.313 | 0.000 | | 0.000 |
| 18 | | 0.000 | 447.643 | 0.000 | 448.388 | 29.24 | | 0.000 | 449.183 | 0.000 | | 0.000 |
| 19 | | 0.000 | 447.438 | 0.000 | 448.093 | 0.000 | | 0.000 | 449.063 | 0.000 | | 0.000 |
| 20 | | 0.000 | | 0.000 | 447.893 | 0.000 | | 0.000 | 448.993 | 0.000 | | 0.000 |
| 21 | | 0.000 | | 0.000 | 448.593 | 45.01 * | 449.413 | 146.3 * | 448.943 | 0.000 | | 0.000 |
| 22 | | 0.000 | | 0.000 | 448.043 | 0.000 | 449.593 | 158.2 | 448.823 | 0.000 | | 0.000 |
| 23 | | 0.000 | | 0.000 | 447.918 | 0.000 | 449.583 | 155.6 | 448.733 | 0.000 | | 0.000 |
| 24 | | 0.000 | | 0.000 | 447.798 | 0.000 | 450.538 | 410.2 | 448.658 | 0.000 | | 0.000 |
| 25 | | 0.000 | | 0.000 | 447.678 | 4.288 * | 449.963 | 263.6 * | 448.628 | 0.000 | | 0.000 |
| 26 | | 0.000 | | 0.000 | 448.823 | 65.89 * | 449.663 | 194.1 * | 448.603 | 0.000 | | 0.000 |
| 27 | | 0.000 | | 0.000 | 448.473 | 36.11 * | 449.253 | 120.3 * | 448.568 | 0.000 | | 0.000 |
| 28 | | 0.000 | | 0.000 | 448.513 | 38.93 * | 449.093 | 97.53 * | 448.533 | 0.000 | | 0.000 |
| 29 | | 0.000 | | 0.000 | 448.133 | 0.000 | 449.183 | 93.66 | 448.503 | 0.000 | | 0.000 |
| 30 | | 0.000 | | 0.000 | 448.233 | 0.000 | 449.333 | 107.5 | 448.428 | 0.000 | | 0.000 |
| 31 | | | | 0.000 | 448.218 | 0.000 | | | 448.368 | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | 449.583 | 17.78 | 450.641 | 395.8 | 447.887 | 0.000 | 449.810 | 235.3 | 448.043 | 0.000 |
| II Ten-Daily | | 0.000 | 448.809 | 85.54 | 448.977 | 106.2 | 447.523 | 0.000 | 449.406 | 73.23 | 447.641 | 0.000 |
| III Ten-Daily | | 0.000 | | 0.000 | 448.220 | 17.29 | 449.562 | 174.7 | 448.617 | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | | 0.000 | 447.438 | 0.000 | 447.678 | 0.000 | 447.523 | 0.000 | 448.368 | 0.000 | 447.573 | 0.000 |
| Max. | | 0.000 | 449.583 | 186.4 | 452.323 | 1432 | 450.538 | 410.2 | 450.943 | 600.5 | 448.313 | 0.000 |
| Mean | | 0 | 448.887 | 33.33 | 449.039 | 168.1 | 448.667 | 58.23 | 449.256 | 99.53 | 447.909 | 0 |

**Annual Runoff in MCM = 1333 Annual Runoff in mm = 58**

**Peak Observed Discharge = 1302 cumecs on 07/08/2016 Corres. Water Level :451.753 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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 2016 - 2017

**Station Name : Narasingpur ( AKP00Q4)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | | 0.000 | 448.793 | 0.000 | 447.823 | 0.000 | | 0.000 | 448.518 | 0.000 | | 0.000 |
| 2 | | 0.000 | 448.733 | 0.000 | 447.813 | 0.000 | | 0.000 | 448.393 | 0.000 | | 0.000 |
| 3 | | 0.000 | 448.683 | 0.000 | 447.803 | 0.000 | | 0.000 | 448.313 | 0.000 | | 0.000 |
| 4 | | 0.000 | 448.743 | 0.000 | 447.763 | 0.000 | | 0.000 | 448.253 | 0.000 | | 0.000 |
| 5 | | 0.000 | 448.753 | 0.000 | 447.693 | 0.000 | | 0.000 | 448.083 | 0.000 | | 0.000 |
| 6 | | 0.000 | 448.553 | 0.000 | 447.593 | 0.000 | | 0.000 | 448.033 | 0.000 | | 0.000 |
| 7 | | 0.000 | 448.533 | 0.000 | | 0.000 | 449.443 | 159.7 * | 447.993 | 0.000 | | 0.000 |
| 8 | | 0.000 | 448.523 | 0.000 | | 0.000 | 449.463 | 163.1 * | 447.943 | 0.000 | | 0.000 |
| 9 | | 0.000 | 448.493 | 0.000 | | 0.000 | 449.463 | 163.1 * | 447.883 | 0.000 | | 0.000 |
| 10 | | 0.000 | 448.493 | 0.000 | | 0.000 | 449.463 | 163.1 * | 447.813 | 0.000 | 448.093 | 0.000 |
| 11 | | 0.000 | 448.473 | 0.000 | | 0.000 | 449.463 | 163.1 * | 447.763 | 0.000 | 449.803 | 227.1 |
| 12 | | 0.000 | 448.473 | 0.000 | | 0.000 | 449.463 | 163.1 * | 447.663 | 0.000 | 449.783 | 222.7 |
| 13 | | 0.000 | 448.473 | 0.000 | | 0.000 | 449.463 | 163.1 * | | 0.000 | 449.783 | 222.0 |
| 14 | | 0.000 | 448.443 | 0.000 | | 0.000 | 449.463 | 163.1 * | | 0.000 | 449.783 | 222.7 * |
| 15 | | 0.000 | 448.423 | 0.000 | | 0.000 | 449.343 | 143.6 * | | 0.000 | 449.473 | 164.8 * |
| 16 | | 0.000 | 448.413 | 0.000 | | 0.000 | 449.043 | 0.000 | | 0.000 | 449.443 | 156.9 |
| 17 | | 0.000 | 448.393 | 0.000 | | 0.000 | 448.893 | 0.000 | | 0.000 | 449.443 | 159.7 * |
| 18 | | 0.000 | 448.388 | 0.000 | | 0.000 | 448.843 | 0.000 | | 0.000 | 449.443 | 159.7 * |
| 19 | | 0.000 | 448.373 | 0.000 | | 0.000 | 449.233 | 0.000 | | 0.000 | 449.443 | 159.7 * |
| 20 | | 0.000 | 448.363 | 0.000 | | 0.000 | 449.043 | 0.000 | | 0.000 | 448.993 | 95.36 * |
| 21 | | 0.000 | 448.343 | 0.000 | | 0.000 | 448.903 | 0.000 | | 0.000 | 448.893 | 83.76 * |
| 22 | | 0.000 | 448.323 | 0.000 | | 0.000 | 448.753 | 0.000 | | 0.000 | 448.663 | 0.000 |
| 23 | | 0.000 | 448.313 | 0.000 | | 0.000 | 448.493 | 0.000 | | 0.000 | 448.533 | 0.000 |
| 24 | 448.280 | 0.000 | 448.303 | 0.000 | | 0.000 | 448.418 | 0.000 | | 0.000 | 448.413 | 0.000 |
| 25 | 449.470 | 164.8 * | 448.273 | 0.000 | | 0.000 | 448.383 | 0.000 | | 0.000 | 448.293 | 0.000 |
| 26 | 449.460 | 167.3 | 448.213 | 0.000 | | 0.000 | 449.233 | 0.000 | | 0.000 | 448.193 | 0.000 |
| 27 | 449.460 | 164.3 | 448.143 | 0.000 | | 0.000 | 449.233 | 0.000 | | 0.000 | 448.043 | 0.000 |
| 28 | 449.460 | 161.8 | 448.063 | 0.000 | | 0.000 | 449.183 | 0.000 | | 0.000 | 447.893 | 0.000 |
| 29 | 449.460 | 163.1 * | 447.943 | 0.000 | | | 449.073 | 0.000 | | 0.000 | 447.733 | 0.000 |
| 30 | 449.180 | 120.1 * | 447.873 | 0.000 | | | 448.843 | 0.000 | | 0.000 | | 0.000 |
| 31 | 448.980 | 94.16 * | 447.843 | 0.000 | | | 448.653 | 0.000 | | | | 0.000 |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | 448.630 | 0.000 | 447.748 | 0.000 | 449.458 | 64.90 | 448.122 | 0.000 | 448.093 | 0.000 |
| II Ten-Daily | | 0.000 | 448.422 | 0.000 | | 0.000 | 449.225 | 79.60 | 447.713 | 0.000 | 449.539 | 179.1 |
| III Ten-Daily | 449.219 | 94.13 | 448.148 | 0.000 | | 0.000 | 448.833 | 0.000 | | 0.000 | 448.295 | 7.614 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 448.280 | 0.000 | 447.843 | 0.000 | 447.593 | 0.000 | 448.383 | 0.000 | 447.663 | 0.000 | 447.733 | 0.000 |
| Max. | 449.470 | 167.3 | 448.793 | 0.000 | 447.823 | 0.000 | 449.463 | 163.1 | 448.518 | 0.000 | 449.803 | 227.1 |
| Mean | 449.219 | 33.4 | 448.392 | 0 | 447.748 | 0 | 449.090 | 46.61 | 448.054 | 0 | 448.907 | 60.47 |

**Peak Computed Discharge = 1432 cumecs on 05/08/2016** **Corres. Water Level :452.323 m**

**Lowest Computed Discharge = 4.288 cumecs on 25/08/2016** **Corres. Water Level :447.678 m**

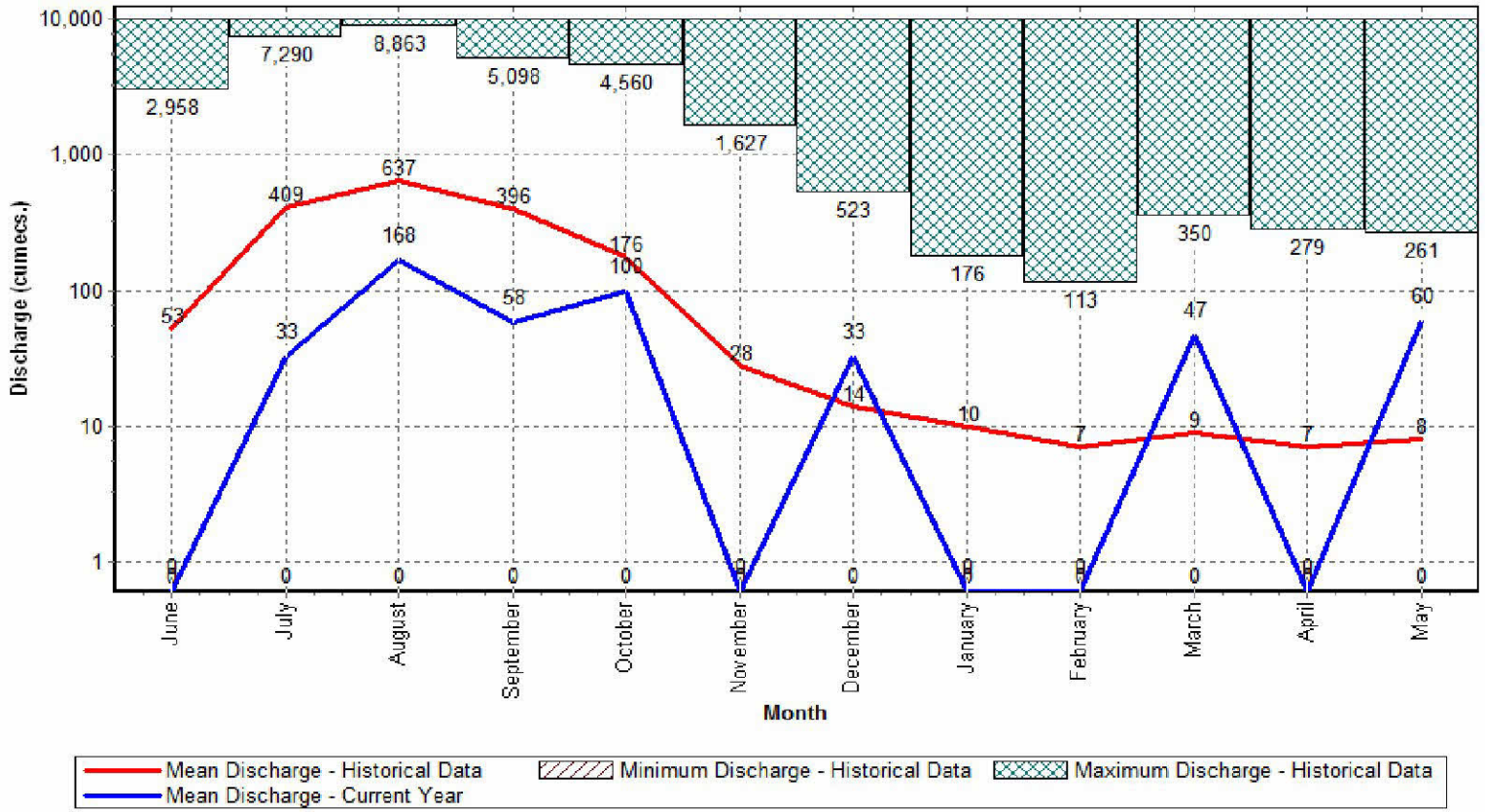
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Narasingpur ( AKP00Q4)** | **Data considered : 1967-2017** | **Division : Upper Krishna Divn, Pune**

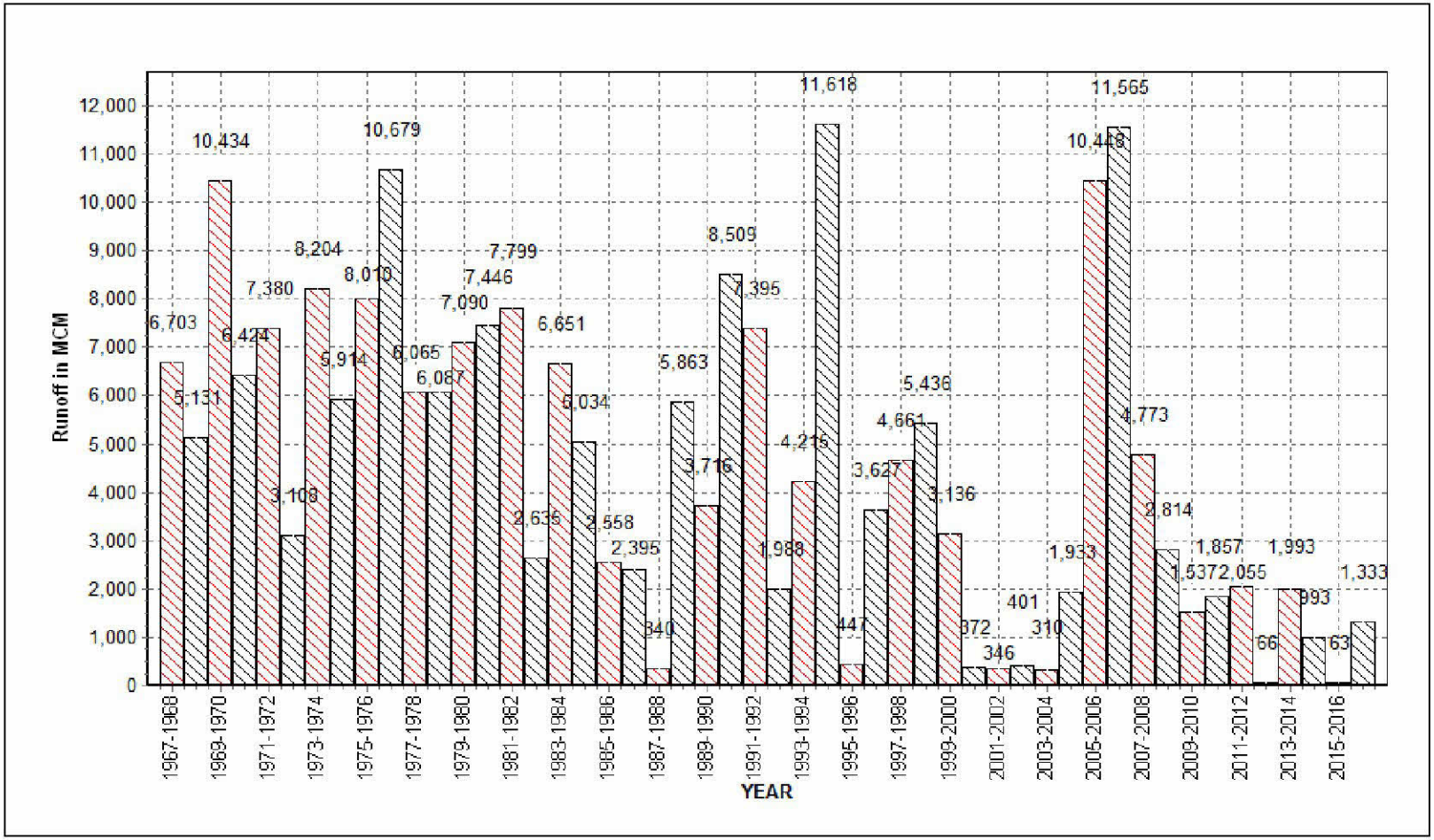
**Local River : Bhima** | **Sub-Division : Bhima SD, Sholapur**



## Annual Runoff Values for the period: 1967 - 2017

**Station Name : Narasingpur ( AKP00Q4)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**

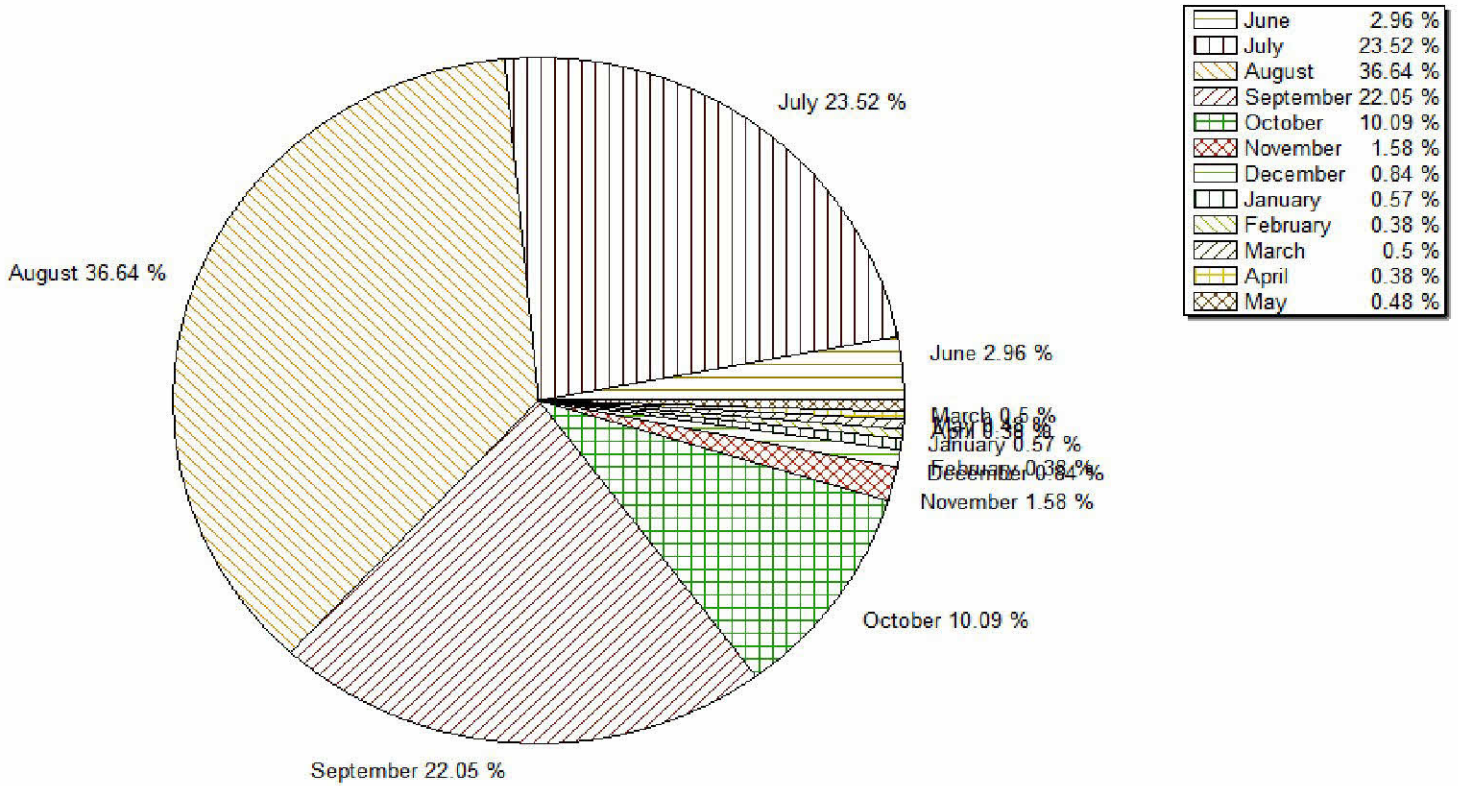



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1967-2016**

**Station Name : Narasingpur ( AKP00Q4)**
**Local River : Bhima**

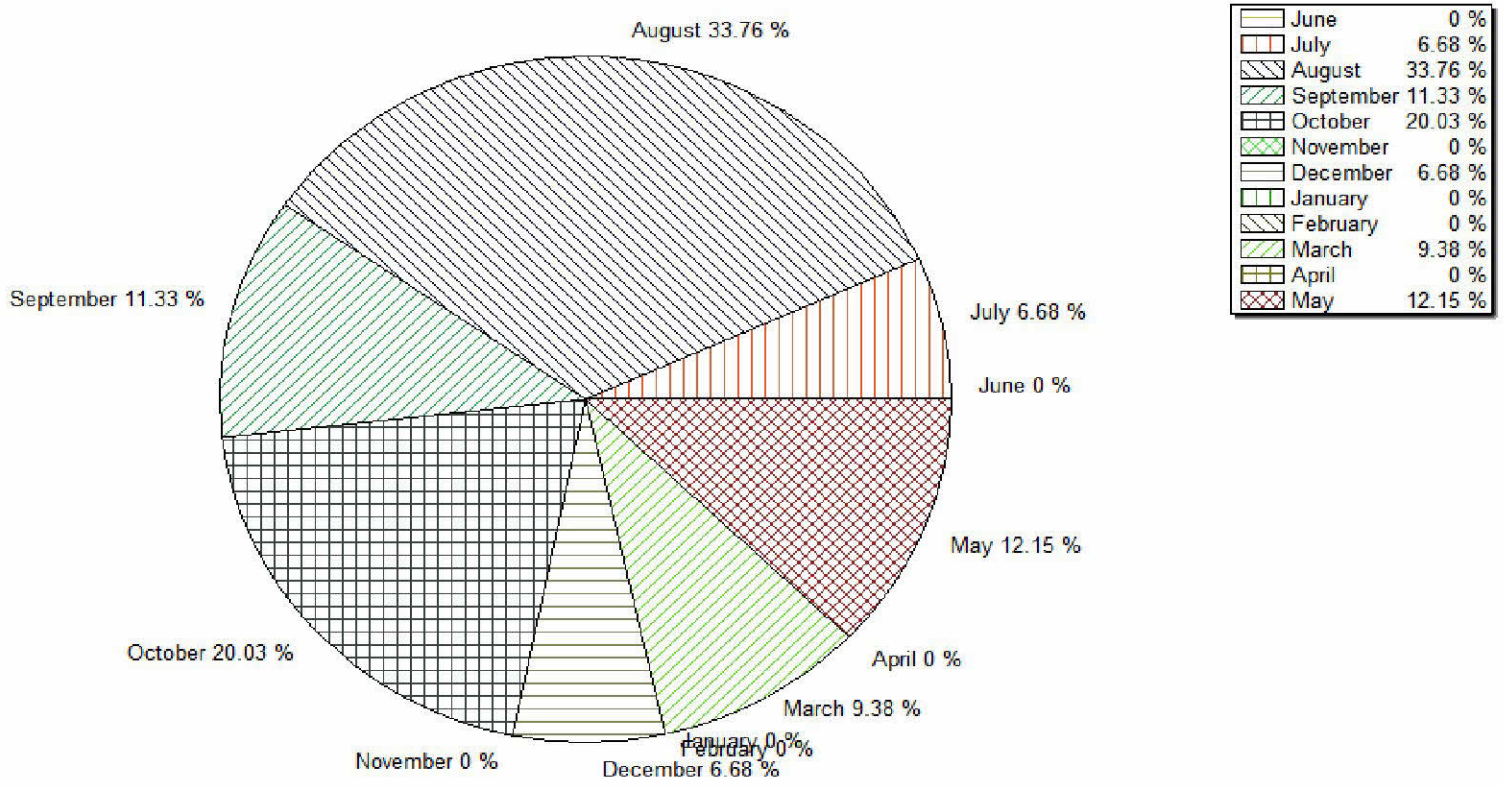
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Bhima SD, Sholapur**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Narasingpur ( AKP00Q4)**
**Local River : Bhima**

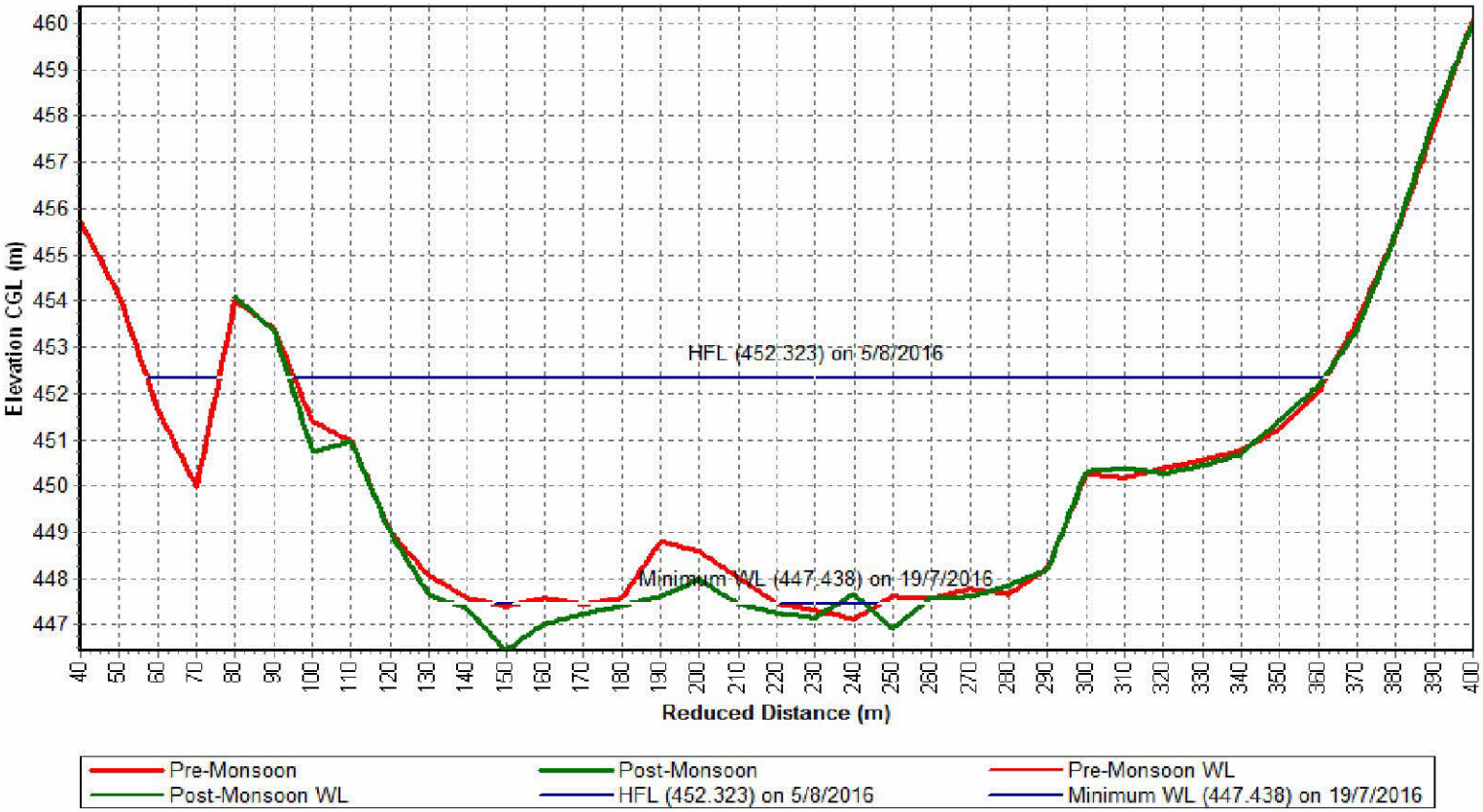
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Bhima SD, Sholapur**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Narasingpur ( AKP00Q4)** **Division : Upper Krishna Divn, Pune**

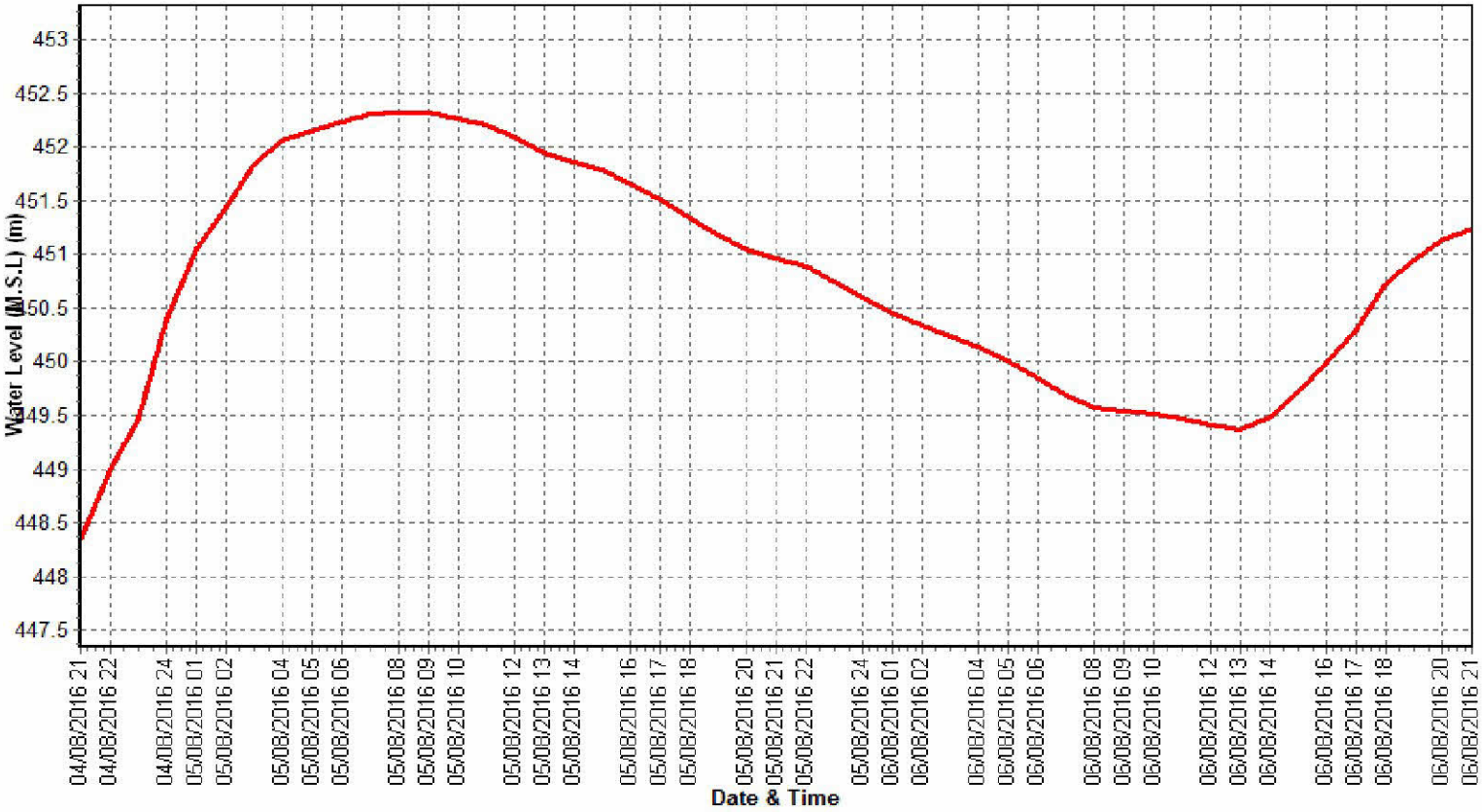
**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Narasingpur ( AKP00Q4)** | **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** | **Sub-Division : Bhima SD, Sholapur**

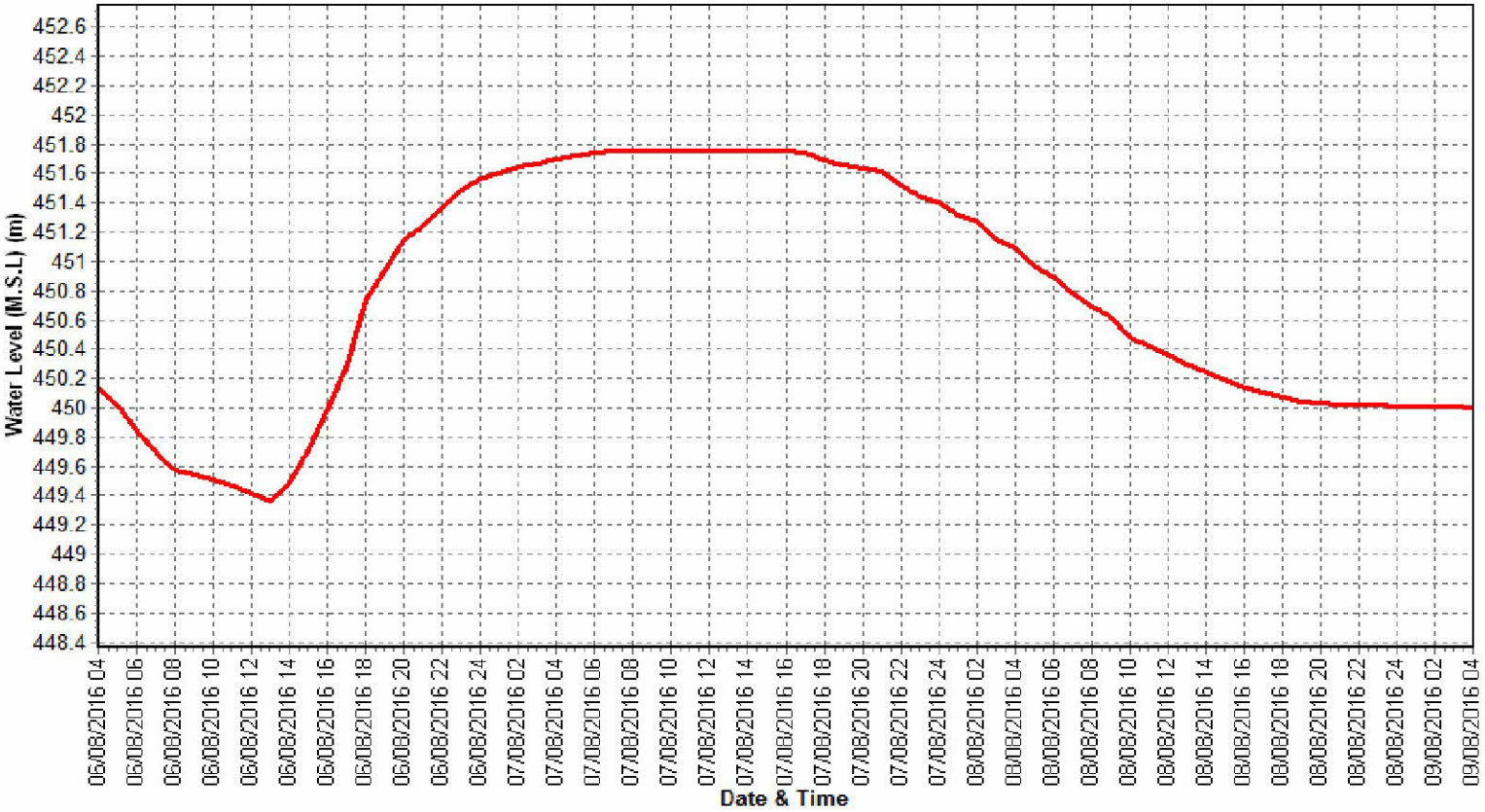



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Narasingpur ( AKP00Q4)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**

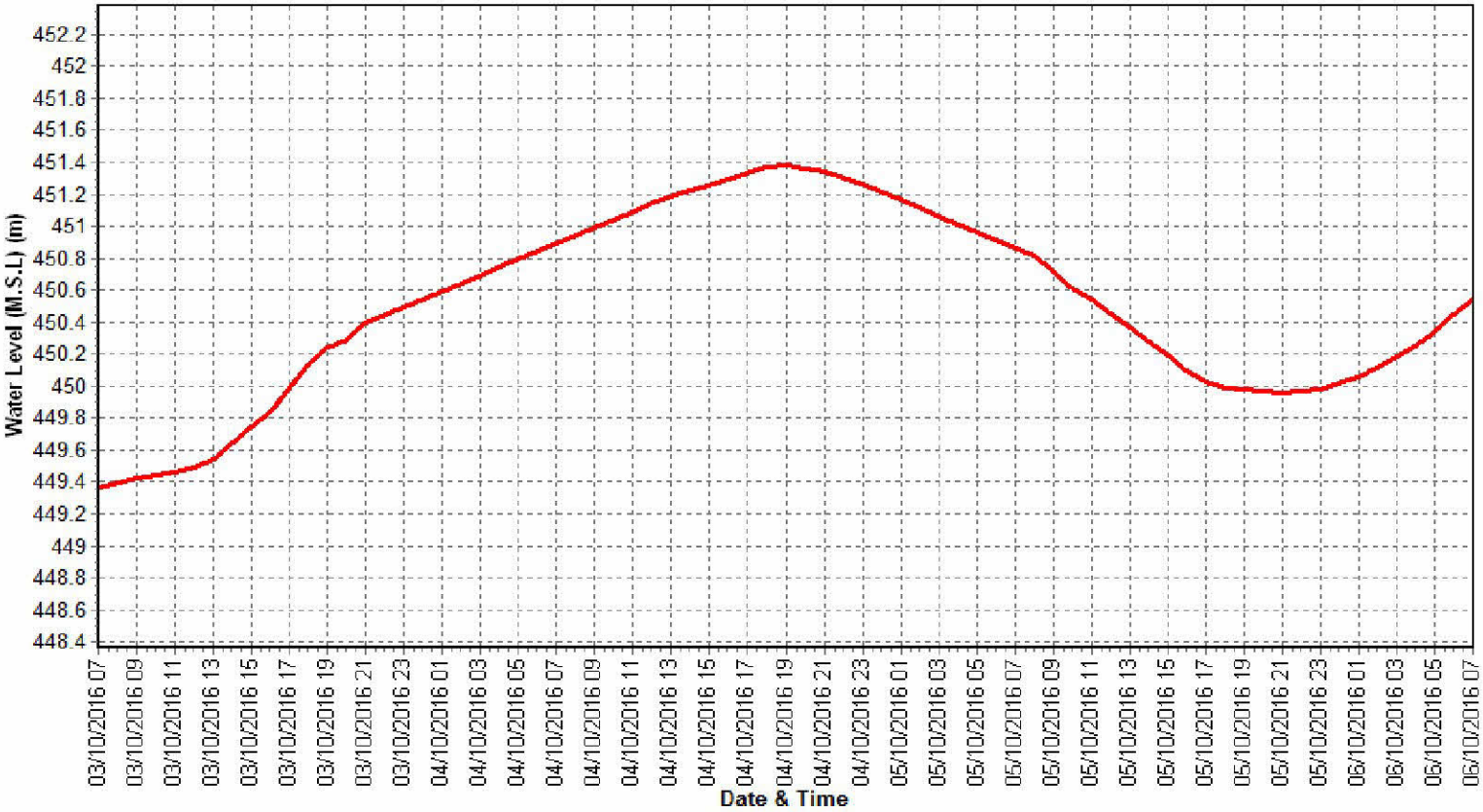



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Narasingpur ( AKP00Q4)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Sarati** | | **Code** | **: AKPA0C2** | |
| State | : Maharashtra | | District | Pune | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Bhima | | Sub Tributary | : Nira | |
| Sub-Sub Tributary | : - | | Local River | : Nira | |
| Division | : Upper Krishna Divn, Pune | | Sub-Division | : Bhima SD, Sholapur | |
| Drainage Area | : 7200 Sq. Km. | | Bank | : Left | |
| Latitude | : 17°54'43" | | Longitude | : 75°00'27" | |
| **Zero of Gauge (m)** | : 468.128 (m.s.l)<br>466.128 (m.s.l) | | 25/08/1963<br>01/06/2003 | - 31/05/2003 | |
| | Opening Date | | Closing Date | | |
| Gauge | : 01/06/1965 | | **HFL During 2016-17** | **: 473.028m** | |
| Discharge | : 01/06/1965 | | **Corres. Discharge** | **: 1297(Estimated)** | |
| Sediment | : 01/06/1966 | | **Date & Time of occurance** | **: 05/08/2016 : 04.00 hrs.** | |
| Water Quality | : 01/09/1972 | | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1965-1966 | 2214 | 474.843 | 04/05/1966 | 0.644 | 468.608 | 30/03/1966 |
| 1966-1967 | 1084 | 472.848 | 14/11/1966 | 0.500 | 468.718 | 22/04/1967 |
| 1967-1968 | 2404 | 475.678 | 28/07/1967 | 0.925 | 468.753 | 07/06/1967 |
| 1968-1969 | 696.2 | 471.803 | 01/10/1968 | 0.000 | 468.333 | 10/05/1969 |
| 1969-1970 | 2254 | 475.008 | 31/08/1969 | 0.100 | 468.343 | 02/06/1969 |
| 1970-1971 | 772.7 | 471.968 | 30/08/1970 | 0.000 | 468.293 | 03/05/1971 |
| 1971-1972 | 1355 | 473.388 | 25/09/1971 | 0.000 | 468.368 | 18/04/1972 |
| 1972-1973 | 918.9 | 472.183 | 09/07/1972 | 0.000 | 468.248 | 10/04/1973 |
| 1973-1974 | 1104 | 472.963 | 09/07/1973 | 0.000 | 468.218 | 20/06/1973 |
| 1974-1975 | 1278 | 473.011 | 24/10/1974 | 0.100 | 468.308 | 13/04/1975 |
| 1975-1976 | 1426 | 473.174 | 16/08/1975 | 0.100 | 468.338 | 06/05/1976 |
| 1976-1977 | 2757 | 476.089 | 02/08/1976 | 0.000 | 468.268 | 16/04/1977 |
| 1977-1978 | 958.7 | 472.128 | 23/11/1977 | 0.000 | 468.453 | 25/04/1978 |
| 1978-1979 | 929.6 | 472.086 | 30/08/1978 | 0.000 | 468.433 | 25/04/1979 |
| 1979-1980 | 2930 | 475.178 | 26/09/1979 | 0.000 | 468.393 | 23/05/1980 |
| 1980-1981 | 1908 | 474.112 | 04/08/1980 | 0.000 | 468.388 | 02/05/1981 |
| 1981-1982 | 2120 | 474.338 | 21/09/1981 | 0.000 | 468.328 | 16/04/1982 |
| 1982-1983 | 490.0 | 470.958 | 16/08/1982 | 0.000 | 468.283 | 02/04/1983 |
| 1983-1984 | 2410 | 475.276 | 16/08/1983 | 0.000 | 468.438 | 17/04/1984 |
| 1984-1985 | 565.3 | 471.128 | 05/07/1984 | 0.000 | 468.283 | 31/03/1985 |
| 1985-1986 | 1240 | 472.888 | 03/08/1985 | 0.000 | 468.433 | 25/01/1986 |

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 | 507.9 | 471.011 | 30/06/1986 | 0.000 | 468.388 | 28/01/1987 |
| 1987-1988 | 502.0 | 471.163 | 18/10/1987 | 0.000 | 468.423 | 06/02/1988 |
| 1988-1989 | 1671 | 473.218 | 03/08/1988 | 0.000 | 468.458 | 25/01/1989 |
| 1989-1990 | 976.4 | 471.923 | 26/07/1989 | 0.000 | 468.433 | 25/01/1990 |
| 1990-1991 | 1733 | 473.468 | 17/08/1990 | 0.000 | 468.508 | 12/03/1991 |
| 1991-1992 | 1008 | 472.663 | 28/07/1991 | 0.000 | 468.298 | 26/01/1992 |
| 1992-1993 | 1219 | 473.040 | 18/08/1992 | 0.000 | | 25/01/1993 |
| 1993-1994 | 831.3 | 471.555 | 18/10/1993 | 0.000 | 468.413 | 15/03/1994 |
| 1994-1995 | 2237 | 474.173 | 30/06/1994 | 0.000 | 468.468 | 26/01/1995 |
| 1995-1996 | 251.1 | 470.443 | 24/07/1995 | 0.000 | | 26/01/1996 |
| 1996-1997 | 2046 | 474.346 | 05/10/1996 | 0.000 | 468.718 | 25/01/1997 |
| 1997-1998 | 2165 | 474.628 | 24/08/1997 | 0.000 | 468.438 | 25/01/1998 |
| 1998-1999 | 1000 | 472.638 | 15/10/1998 | 0.000 | 468.268 | 25/01/1999 |
| 1999-2000 | 476.0 | 471.058 | 21/07/1999 | 0.000 | | 26/01/2000 |
| 2000-2001 | 10.00 | 468.868 | 09/06/2000 | 0.000 | | 25/01/2001 |
| 2001-2002 | 225.0 | 469.828 | 14/10/2001 | 0.000 | | 25/01/2002 |
| 2002-2003 | 194.6 | 469.878 | 17/10/2002 | 0.000 | | 25/01/2003 |
| 2003-2004 | 57.59 | 469.188 | 18/05/2004 | 0.000 | | 16/01/2004 |
| 2004-2005 | 1368 | 472.883 | 13/08/2004 | 0.000 | | 25/01/2005 |
| 2005-2006 | 2073 | 474.078 | 03/08/2005 | 0.000 | 468.138 | 25/01/2006 |
| 2006-2007 | 2103 | 474.078 | 08/08/2006 | 0.000 | 468.148 | 19/02/2007 |
| 2007-2008 | 1341 | 472.578 | 09/08/2007 | 0.000 | 468.138 | 26/01/2008 |
| 2008-2009 | 918.5 | 471.678 | 09/09/2008 | 0.000 | 468.158 | 25/01/2009 |
| 2009-2010 | 1207 | 472.378 | 04/10/2009 | 0.000 | 468.108 | 07/11/2009 |
| 2010-2011 | 613.5 | 470.953 | 01/10/2010 | 0.000 | 468.213 | 19/04/2011 |
| 2011-2012 | 1699 | 473.628 | 04/09/2011 | 0.000 | 468.218 | 11/02/2012 |
| 2012-2013 | 93.53 | 469.158 | 13/09/2012 | 0.000 | | 19/06/2012 |
| 2013-2014 | 1318 | 472.348 | 19/09/2013 | 0.000 | 467.638 | 11/05/2014 |
| 2014-2015 | 120.8 | 470.508 | 07/09/2014 | 0.000 | | 25/01/2015 |
| 2015-2016 | 0.000 | 468.898 | 18/09/2015 | 0.000 | | 24/06/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Sarati ( AKPA0C2)** **Division : Upper Krishna Divn, Pune**

**Local River : Nira** **Sub-Division : Bhima SD, Sholapur**

| 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 | | 0.000 | 468.418 | 56.08 | 468.558 | 44.49 | | 0.000 |
| 2 | | 0.000 | | 0.000 | | 0.000 | 468.303 | 0.000 | 468.598 | 51.63 * | | 0.000 |
| 3 | | 0.000 | | 0.000 | | 0.000 | 468.088 | 0.000 | 469.108 | 133.9 * | | 0.000 |
| 4 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 469.438 | 204.0 * | | 0.000 |
| 5 | | 0.000 | | 0.000 | 472.608 | 1143 * | | 0.000 | 468.908 | 98.49 * | | 0.000 |
| 6 | | 0.000 | | 0.000 | 469.413 | 198.0 | | 0.000 | 468.893 | 104.9 | | 0.000 |
| 7 | | 0.000 | | 0.000 | 472.218 | 821.5 | | 0.000 | 468.803 | 81.64 | | 0.000 |
| 8 | | 0.000 | | 0.000 | 470.828 | 559.7 * | | 0.000 | 468.908 | 98.49 * | | 0.000 |
| 9 | | 0.000 | | 0.000 | 470.143 | 371.3 * | | 0.000 | 468.668 | 61.28 * | | 0.000 |
| 10 | | 0.000 | | 0.000 | 469.338 | 182.8 * | | 0.000 | 468.628 | 55.69 * | | 0.000 |
| 11 | | 0.000 | | 0.000 | 468.583 | 38.03 | | 0.000 | 468.598 | 51.63 * | | 0.000 |
| 12 | | 0.000 | | 0.000 | 470.128 | 367.5 * | | 0.000 | 468.583 | 49.64 * | | 0.000 |
| 13 | | 0.000 | | 0.000 | 470.808 | 553.7 | | 0.000 | 468.513 | 35.12 | | 0.000 |
| 14 | | 0.000 | | 0.000 | 469.378 | 191.2 * | | 0.000 | 468.433 | 21.18 | | 0.000 |
| 15 | | 0.000 | | 0.000 | 468.998 | 114.0 * | | 0.000 | 468.323 | 17.62 | | 0.000 |
| 16 | | 0.000 | | 0.000 | 469.028 | 119.3 * | | 0.000 | | 0.000 | | 0.000 |
| 17 | | 0.000 | | 0.000 | 469.028 | 119.3 * | | 0.000 | | 0.000 | | 0.000 |
| 18 | | 0.000 | | 0.000 | 468.388 | 29.76 | | 0.000 | | 0.000 | | 0.000 |
| 19 | | 0.000 | | 0.000 | 468.143 | 6.029 | | 0.000 | | 0.000 | | 0.000 |
| 20 | | 0.000 | | 0.000 | 467.973 | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 21 | | 0.000 | | 0.000 | 468.638 | 0.000 | 469.948 | 322.1 * | | 0.000 | | 0.000 |
| 22 | | 0.000 | | 0.000 | 467.978 | 0.000 | 469.308 | 229.1 | | 0.000 | | 0.000 |
| 23 | | 0.000 | | 0.000 | 467.588 | 0.000 | 469.113 | 182.6 | | 0.000 | | 0.000 |
| 24 | | 0.000 | | 0.000 | | 0.000 | 469.653 | 0.000 | | 0.000 | | 0.000 |
| 25 | | 0.000 | | 0.000 | | 0.000 | 469.368 | 189.0 * | | 0.000 | | 0.000 |
| 26 | | 0.000 | | 0.000 | 468.708 | 56.52 | 469.133 | 138.6 * | | 0.000 | | 0.000 |
| 27 | | 0.000 | | 0.000 | 468.753 | 86.88 | 468.843 | 87.81 * | | 0.000 | | 0.000 |
| 28 | | 0.000 | | 0.000 | 468.398 | 27.47 * | 468.718 | 68.51 * | | 0.000 | | 0.000 |
| 29 | | 0.000 | | 0.000 | 468.458 | 34.16 * | 468.708 | 0.000 | | 0.000 | | 0.000 |
| 30 | | 0.000 | | 0.000 | 468.388 | 26.41 * | 468.628 | 0.000 | | 0.000 | | 0.000 |
| 31 | | | | 0.000 | 468.363 | 23.82 * | | | | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | | 0.000 | 470.758 | 327.6 | 468.270 | 5.608 | 468.851 | 93.46 | | 0.000 |
| II Ten-Daily | | 0.000 | | 0.000 | 469.046 | 153.9 | | 0.000 | 468.490 | 17.52 | | 0.000 |
| III Ten-Daily | | 0.000 | | 0.000 | 468.364 | 23.21 | 469.142 | 121.8 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | | 0.000 | | 0.000 | 467.588 | 0.000 | 468.088 | 0.000 | 468.323 | 0.000 | | 0.000 |
| Max. | | 0.000 | | 0.000 | 472.608 | 1143 | 469.948 | 322.1 | 469.438 | 204.0 | | 0.000 |
| Mean | | 0 | | 0 | 469.211 | 163.5 | 468.941 | 42.46 | 468.731 | 35.8 | | 0 |

**Annual Runoff in MCM = 644 Annual Runoff in mm = 89**

**Peak Observed Discharge = 821.5 cumecs on 07/08/2016 Corres. Water Level :472.218 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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 2016 - 2017

**Station Name : Sarati ( AKPA0C2)** **Division : Upper Krishna Divn, Pune**

**Local River : Nira** **Sub-Division : Bhima SD, Sholapur**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | | 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 |
| 3 | | 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 |
| 5 | | 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 |
| 7 | | 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 |
| 9 | | 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 |
| 11 | | 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 |
| 13 | | 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 |
| 15 | | 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 |
| 17 | | 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 |
| 19 | | 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 |
| 21 | | 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 |
| 23 | | 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 |
| 25 | | 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 |
| 27 | | 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 |
| 29 | | 0.000 | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 30 | | 0.000 | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 31 | | 0.000 | | 0.000 | | | | 0.000 | | | | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| II Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| III Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Max. | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Mean | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 |

**Peak Computed Discharge = 1143 cumecs on 05/08/2016** **Corres. Water Level :472.608 m**

**Lowest Computed Discharge = 23.82 cumecs on 31/08/2016** **Corres. Water Level :468.363 m**

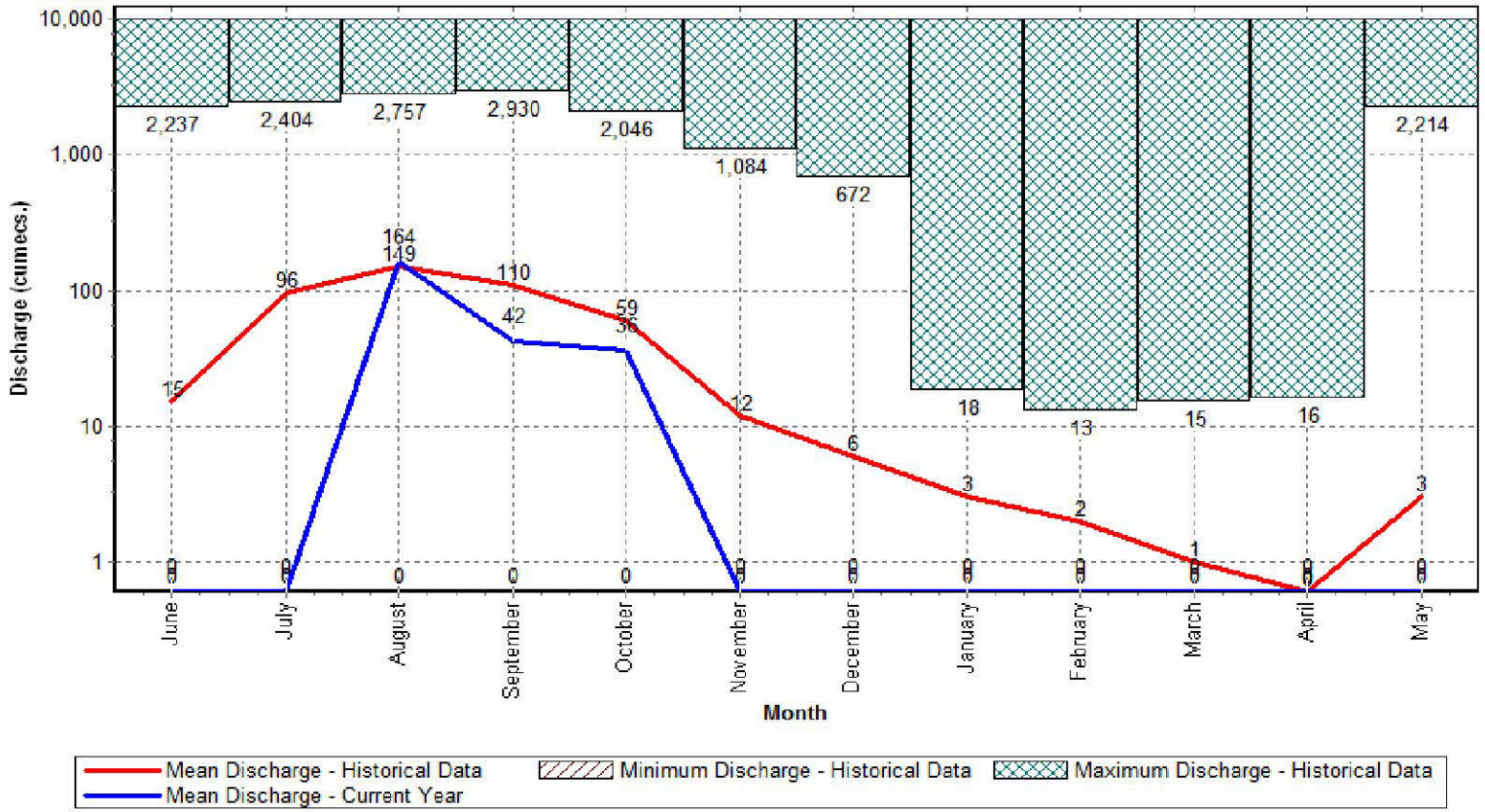
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Sarati ( AKPA0C2)** | **Data considered : 1965-2017** | **Division : Upper Krishna Divn, Pune**

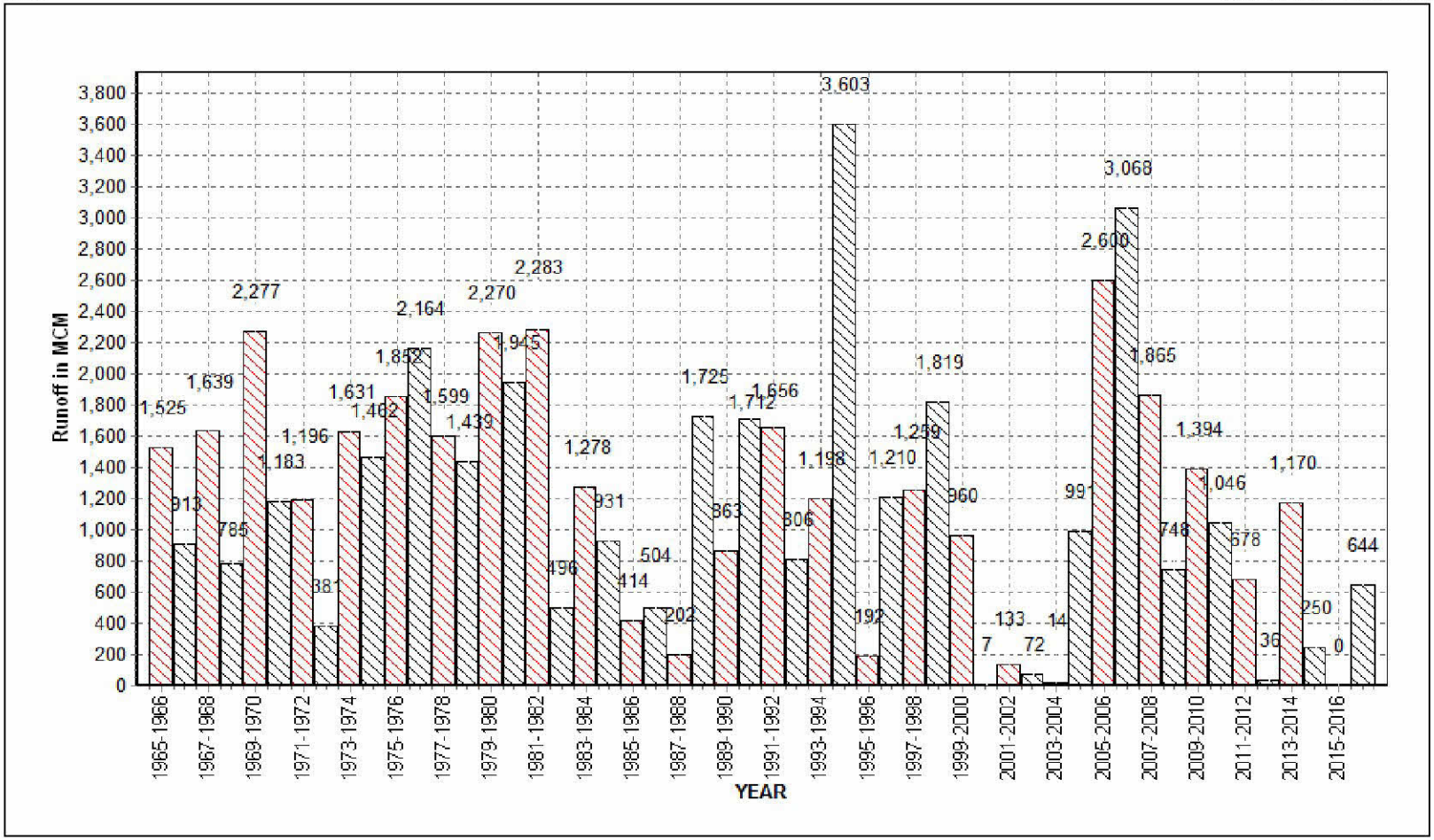
**Local River : Nira** | **Sub-Division : Bhima SD, Sholapur**



**Annual Runoff Values for the period: 1965 - 2017**

**Station Name : Sarati ( AKPA0C2)** **Division : Upper Krishna Divn, Pune**

**Local River : Nira** **Sub-Division : Bhima SD, Sholapur**

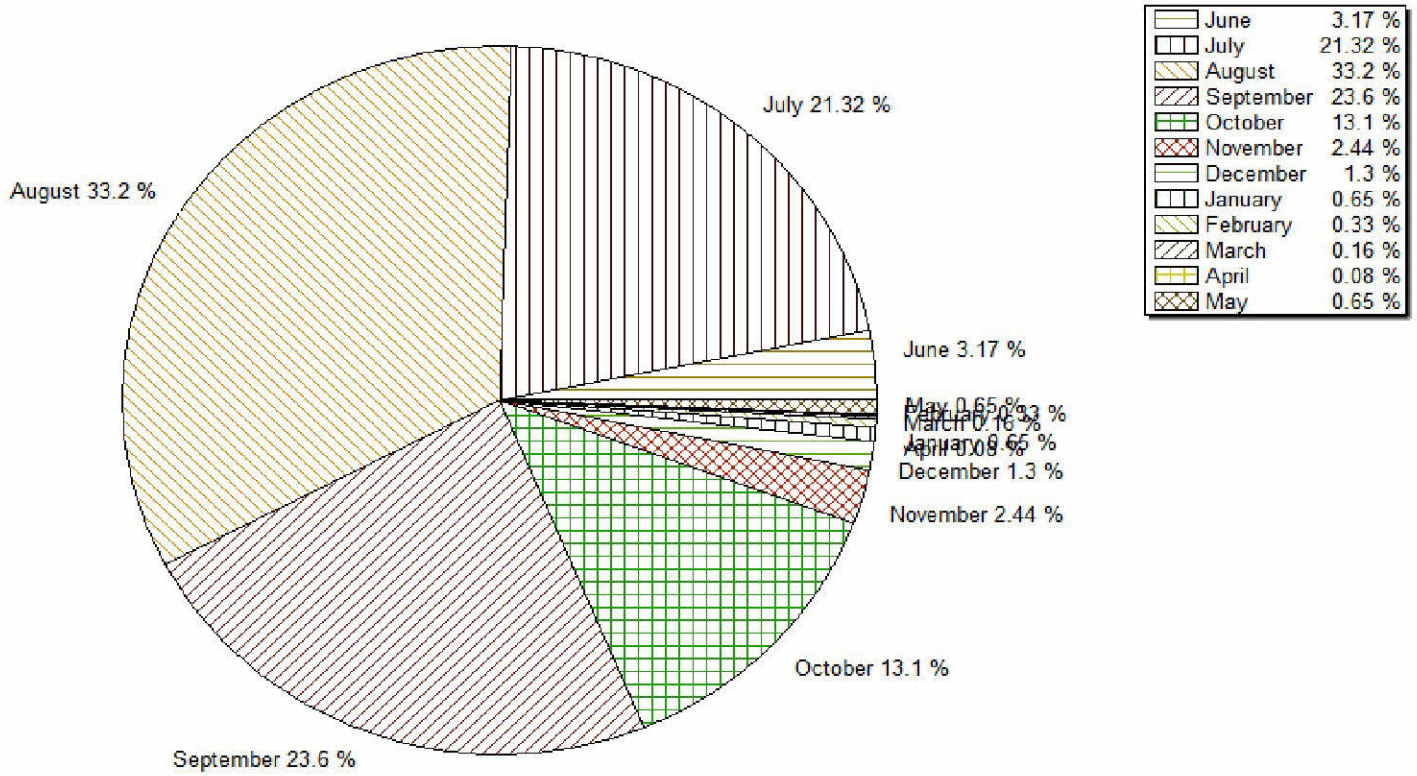



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1965-2016**

**Station Name : Sarati ( AKPA0C2)**
**Local River : Nira**

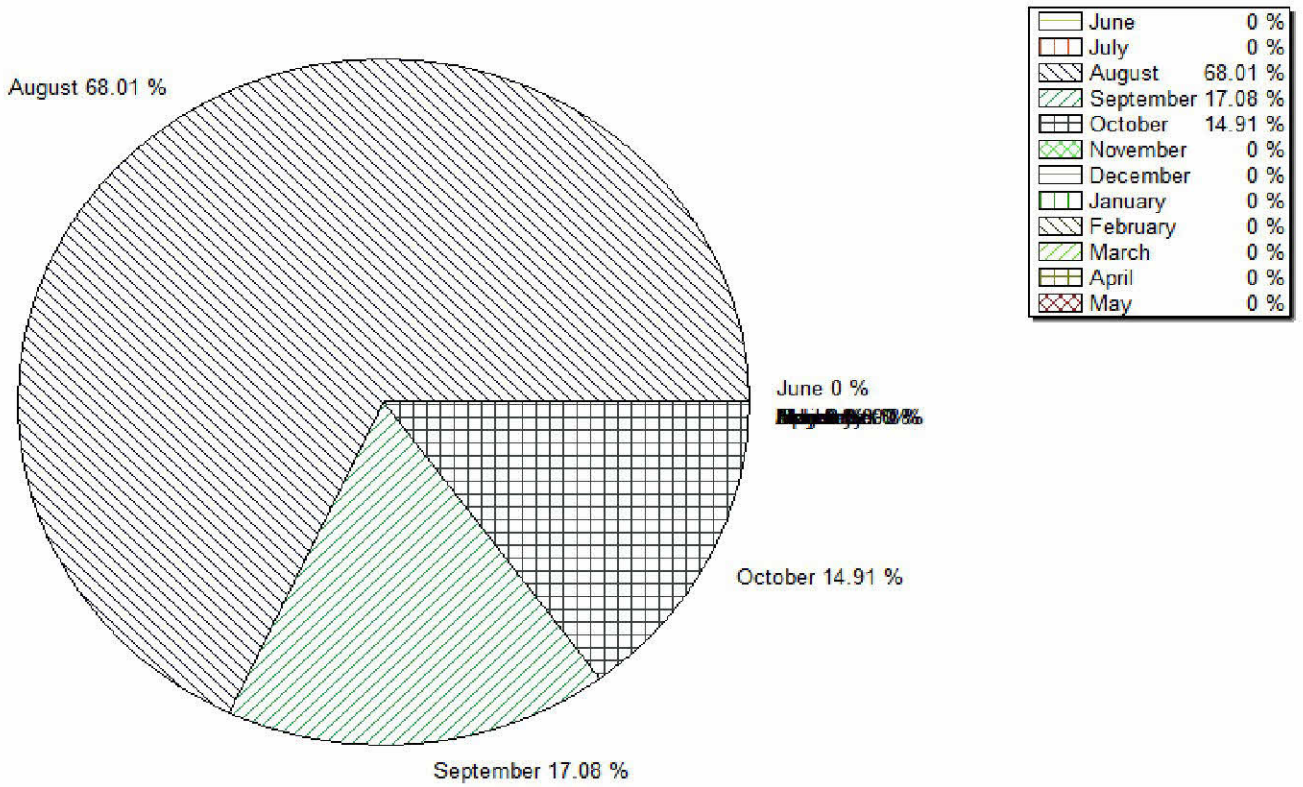
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Bhima SD, Sholapur**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Sarati ( AKPA0C2)**
**Local River : Nira**

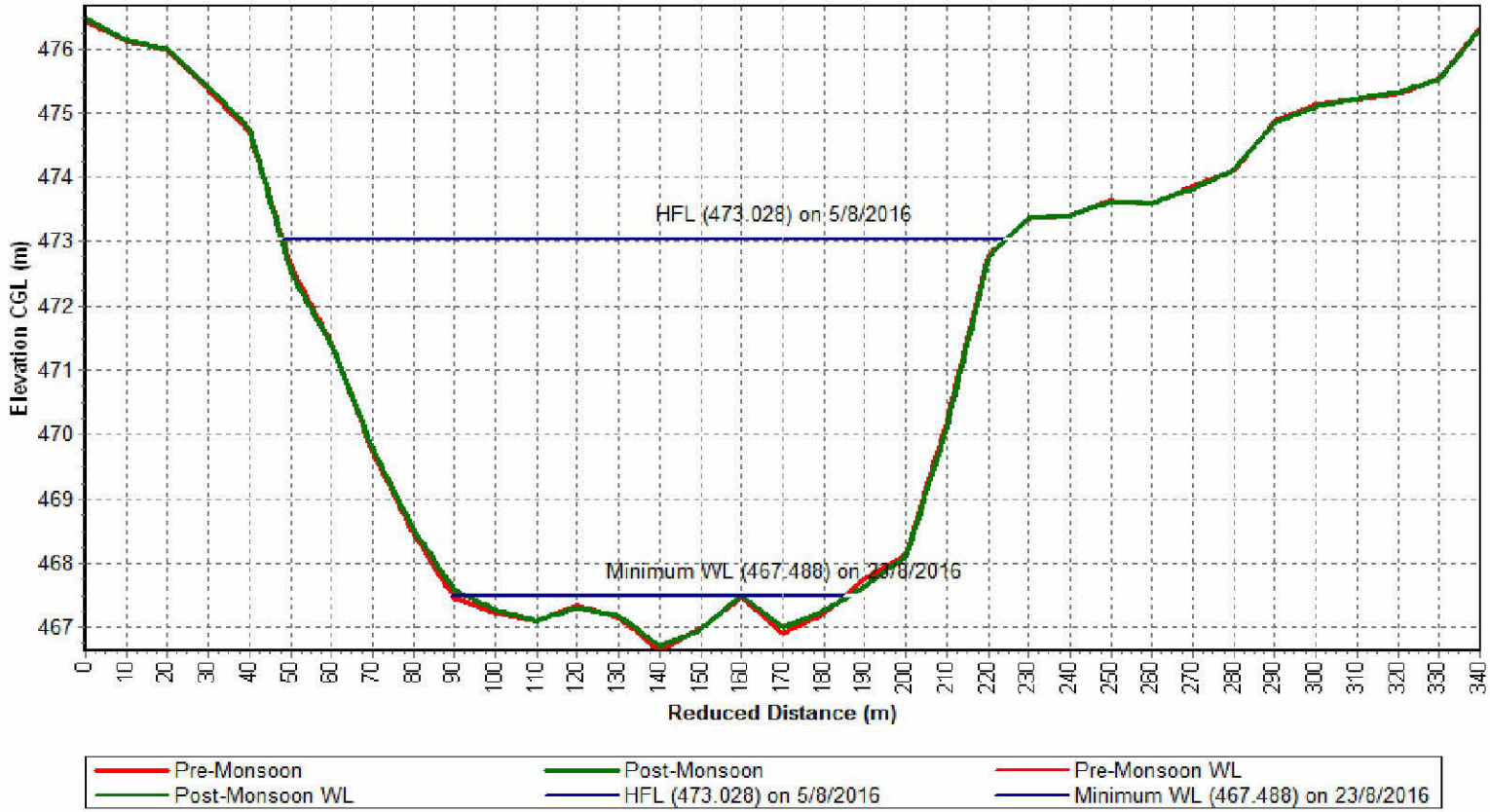
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Bhima SD, Sholapur**



## Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017

**Station Name : Sarati ( AKPA0C2)** **Division : Upper Krishna Divn, Pune**

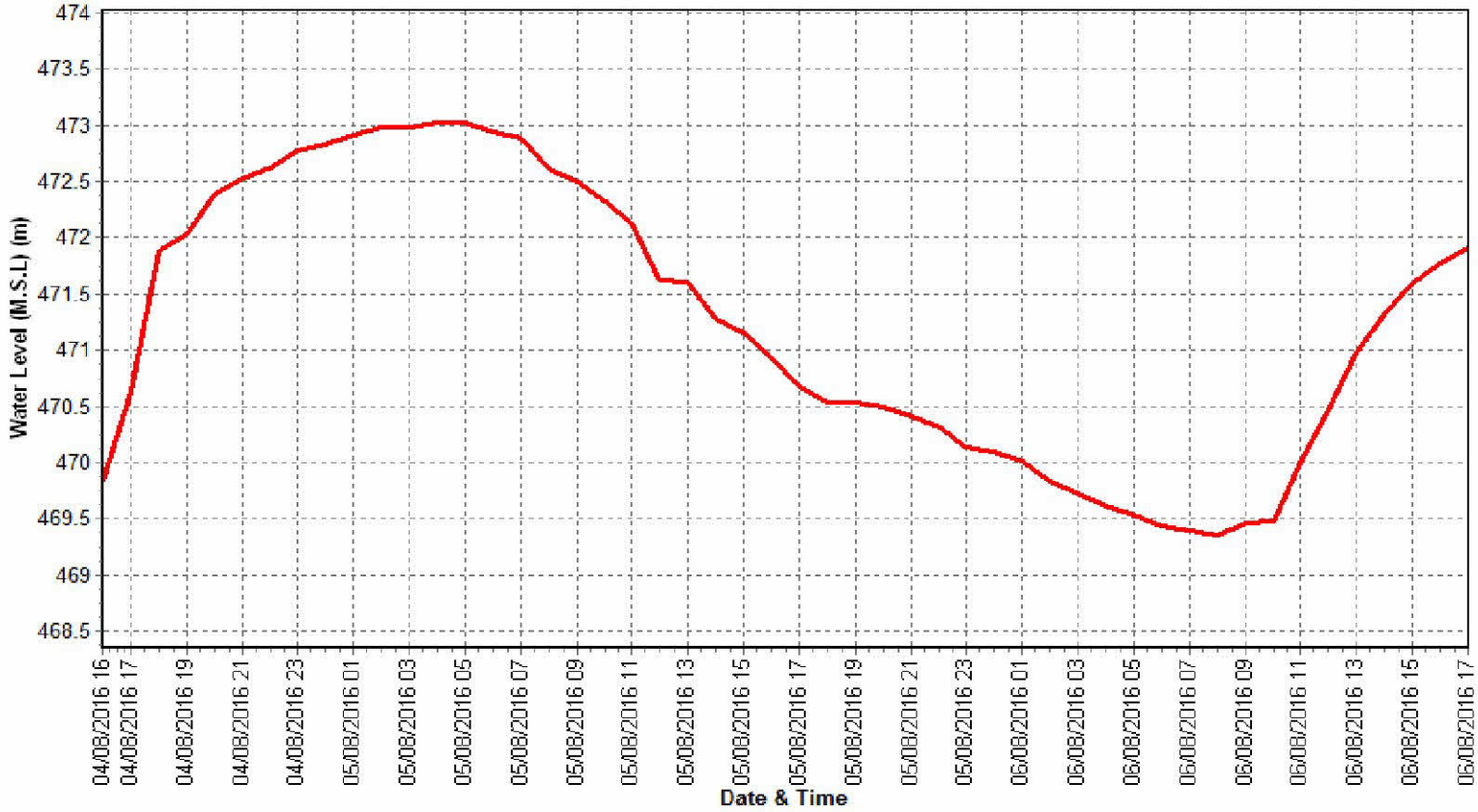
**Local River : Nira** **Sub-Division : Bhima SD, Sholapur**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Sarati ( AKPA0C2)**
**Local River : Nira**

**Division : Upper Krishna Divn, Pune**
**Sub-Division : Bhima SD, Sholapur**

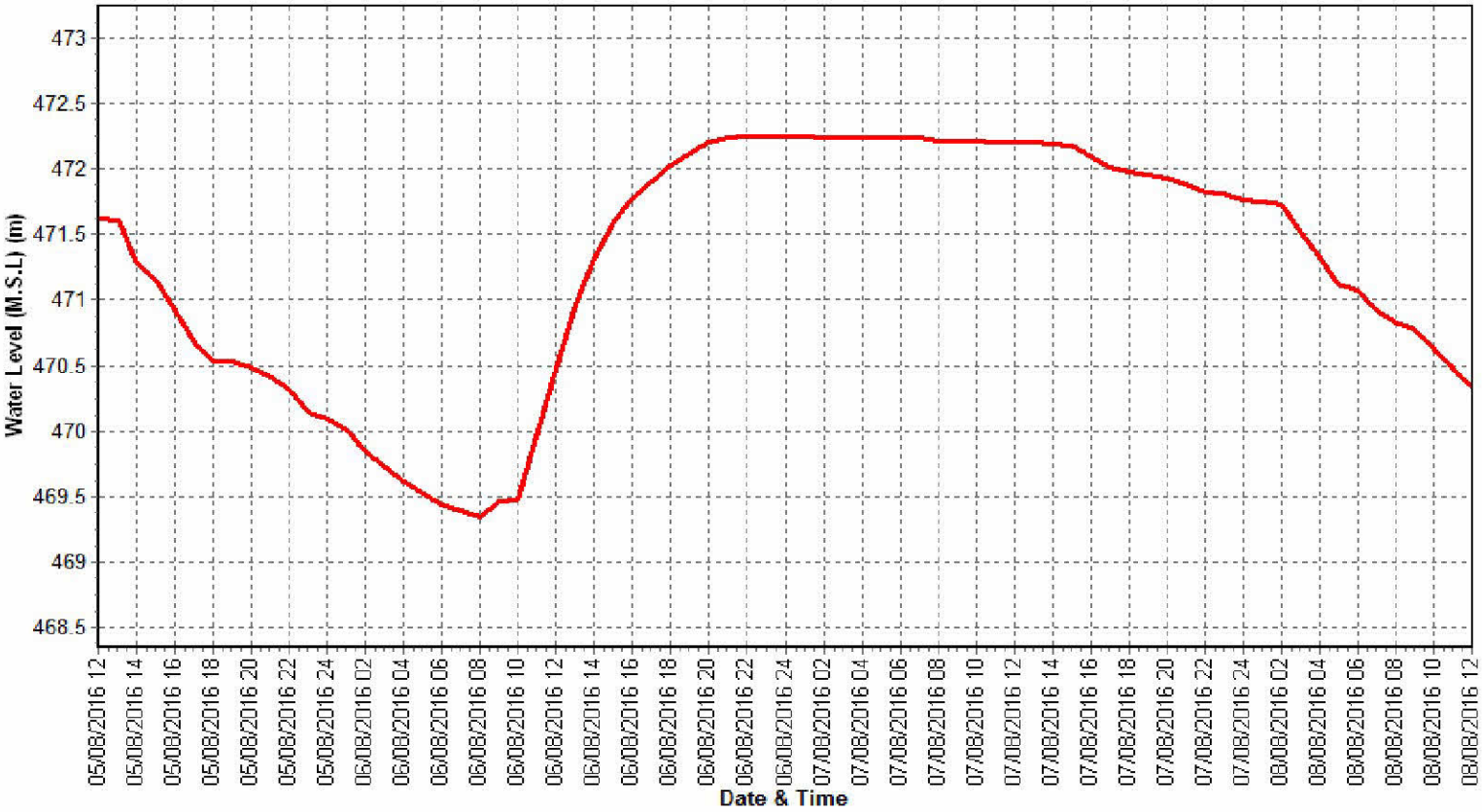



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Sarati ( AKPA0C2)** **Division : Upper Krishna Divn, Pune**

**Local River : Nira** **Sub-Division : Bhima SD, Sholapur**

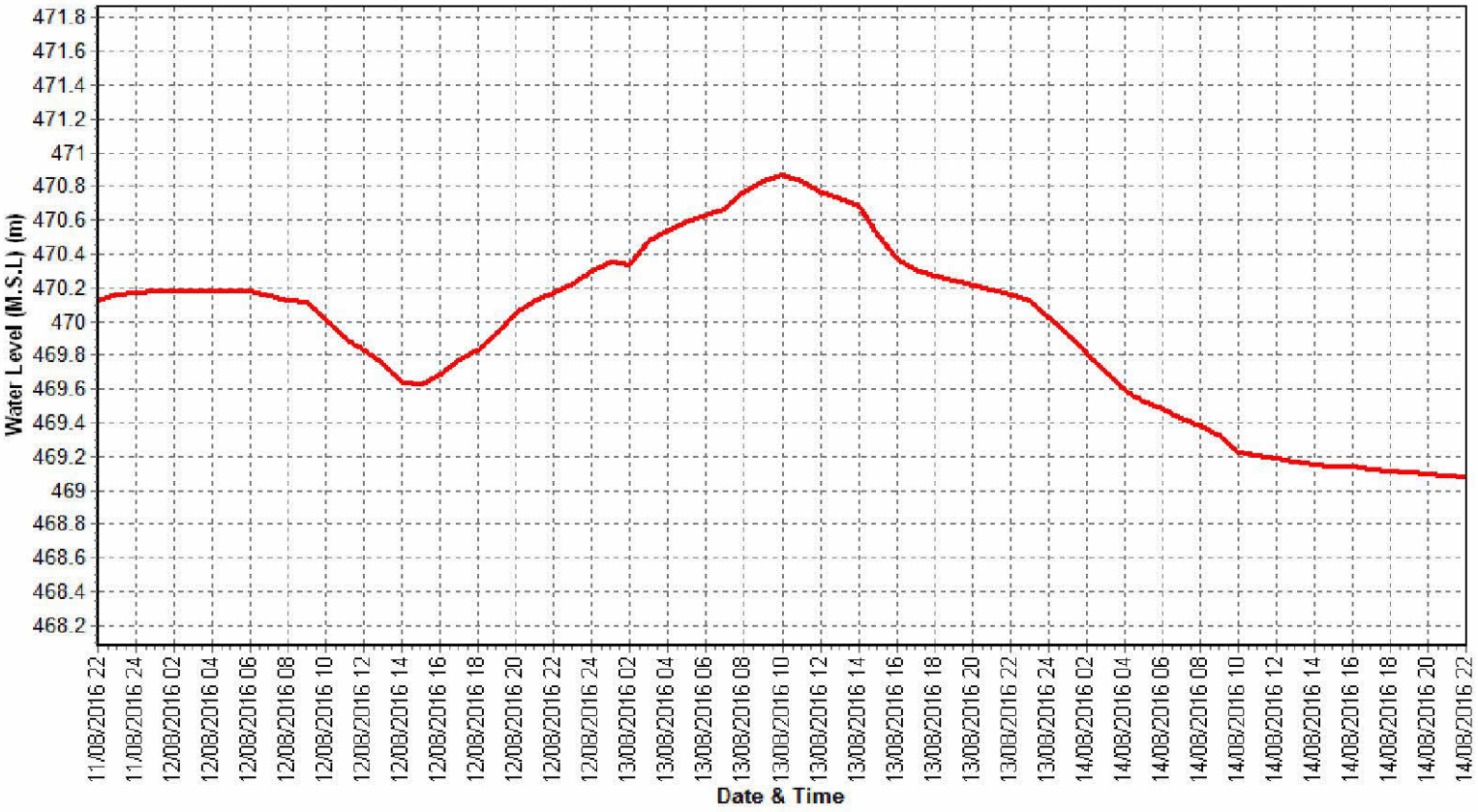



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017

**Station Name : Sarati ( AKPA0C2)** | **Division : Upper Krishna Divn, Pune**

**Local River : Nira** | **Sub-Division : Bhima SD, Sholapur**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

**Site : Phulgaon (Seasonal)** **Code : AKP00X5**

| | | | | | |
|---|---|---|---|---|---|
| State | : | Maharashtra | District | | Pune |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | Bhima | Sub Tributary | : | - |
| Sub-Sub Tributary | : | - | Local River | : | Bhima |
| Division | : | Upper Krishna Divn, Pune | Sub-Division | : | Bhima SD, Sholapur |
| Drainage Area | : | 2205 Sq. Km. | Bank | : | Right |
| Latitude | : | 18°40'01" | Longitude | : | 74°00'08" |
| **Zero of Gauge (m)** | : | 81 (m.s.l)<br>537 (m.s.l) | 05/07/1986<br>01/06/2010 | - | 31/05/2010 |
| | | Opening Date | Closing Date | | |
| Gauge | : | 06/06/1986 | **HFL During 2016-17** | : | **543.950m** |
| | | | **Corres. Discharge** | : | **862.932(Estimated)** |
| Discharge | : | 20/06/1992 | **Date & Time of occurance** | : | **04/08/2016 11.00 hrs.** |
| Sediment | : | | | | |
| Water Quality | : | 02/08/1993 | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1992-1993 | 1022 | 86.829 | 14/08/1992 | 0.000 | 82.435 | 25/01/1993 |
| 1993-1994 | 710.4 | 85.868 | 13/07/1993 | 0.000 | 82.380 | 02/02/1994 |
| 1994-1995 | 2965 | 89.880 | 14/07/1994 | 0.000 | 82.370 | 31/01/1995 |
| 1995-1996 | 1390 | 87.600 | 03/09/1995 | 0.000 | 84.910 | 26/01/1996 |
| 1996-1997 | 1580 | 87.880 | 03/10/1996 | 0.000 | 85.590 | 25/01/1997 |
| 1997-1998 | 3006 | 90.300 | 23/08/1997 | 0.000 | 85.250 | 25/01/1998 |
| 1998-1999 | 402.0 | 85.250 | 09/07/1998 | 0.000 | 84.400 | 25/01/1999 |
| 1999-2000 | 465.0 | 85.560 | 17/07/1999 | 0.000 | 85.830 | 26/01/2000 |
| 2000-2001 | 519.6 | 85.680 | 14/07/2000 | 0.000 | 85.670 | 25/01/2001 |
| 2001-2002 | 387.6 | 84.980 | 17/08/2001 | 0.000 | 85.500 | 25/01/2002 |
| 2002-2003 | 724.0 | 86.350 | 27/06/2002 | 0.000 | 84.950 | 25/01/2003 |
| 2003-2004 | 2196 | 88.890 | 28/07/2003 | 0.000 | 85.520 | 26/01/2004 |
| 2004-2005 | 2297 | 88.180 | 12/08/2004 | 0.000 | 84.380 | 25/01/2005 |
| 2005-2006 | 3029 | 91.475 | 27/07/2005 | 0.000 | 85.180 | 25/01/2006 |
| 2006-2007 | 2212 | 90.080 | 09/08/2006 | 0.000 | 86.065 | 04/11/2006 |
| 2007-2008 | 1256 | 87.225 | 08/08/2007 | 0.000 | 83.220 | 17/09/2007 |
| 2008-2009 | 1725 | 87.950 | 11/08/2008 | 0.000 | 85.080 | 18/10/2008 |
| 2009-2010 | 459.9 | 85.285 | 16/07/2009 | 0.000 | 86.110 | 23/10/2009 |
| 2010-2011 | 442.9 | 541.750 | 01/09/2010 | 0.000 | 539.190 | 07/10/2010 |
| 2011-2012 | 1735 | 545.000 | 30/08/2011 | 0.000 | 540.060 | 04/11/2011 |
| 2012-2013 | 300.8 | 542.200 | 05/09/2012 | 0.000 | 542.180 | 12/11/2012 |
| 2013-2014 | 1271 | 543.450 | 25/07/2013 | 0.000 | 540.390 | 01/10/2013 |
| 2014-2015 | 1101 | 543.950 | 05/08/2014 | 0.000 | 541.655 | 09/11/2014 |
| 2015-2016 | 310.8 | 541.950 | 24/06/2015 | 0.000 | 542.070 | 24/11/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Phulgaon (Seasonal) ( AKP00X5)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**

| 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 | 540.525 | 0.000 | 539.915 | 6.000 | 540.565 | 56.42 * | 540.305 | 13.53 * | 540.345 | 19.49 * | 542.300 | 0.000 |
| 2 | 540.535 | 0.000 | 539.945 | 6.500 | 541.443 | 221.7 | 540.345 | 19.49 * | 540.920 | 124.5 * | 542.305 | 0.000 |
| 3 | 540.565 | 0.000 | 540.320 | 15.73 * | 542.020 | 369.1 * | 540.285 | 10.69 * | 540.640 | 70.11 * | 542.305 | 0.000 |
| 4 | 540.535 | 0.000 | 541.880 | 336.0 * | 543.580 | 763.8 * | 540.255 | 6.630 * | 540.633 | 66.23 | 542.305 | 0.000 |
| 5 | 540.625 | 0.000 | 541.750 | 305.7 * | 542.305 | 411.9 | 540.370 | 23.37 * | 540.525 | 49.31 * | 542.300 | 0.000 |
| 6 | 540.400 | 0.000 | 540.965 | 133.7 * | 543.370 | 708.3 * | 540.205 | 0.805 * | 540.460 | 38.09 * | 542.300 | 0.000 |
| 7 | 540.140 | 0.000 | 540.650 | 71.97 * | 543.080 | 632.8 * | 540.125 | 0.805 * | 540.465 | 38.94 * | 542.295 | 0.000 |
| 8 | 540.045 | 0.000 | 540.525 | 49.31 * | 542.250 | 455.6 | 540.105 | 0.800 * | 540.380 | 0.000 | 542.295 | 0.000 |
| 9 | 540.075 | 0.000 | 540.525 | 49.31 * | 541.580 | 266.8 * | 540.225 | 2.932 * | 540.305 | 0.000 | 542.345 | 0.000 |
| 10 | 540.025 | 0.000 | 541.200 | 182.9 * | 541.350 | 215.4 * | 540.165 | 0.800 * | 540.260 | 0.000 | 542.316 | 0.000 |
| 11 | 540.025 | 0.000 | 541.745 | 233.1 | 542.045 | 375.1 * | 540.080 | 0.800 * | 540.245 | 0.000 | 542.185 | 0.000 |
| 12 | 539.935 | 0.000 | 541.720 | 298.8 * | 542.145 | 399.1 * | 539.985 | 0.800 * | 540.185 | 0.000 | 541.920 | 0.000 |
| 13 | 539.885 | 0.000 | 541.545 | 258.9 * | 541.260 | 195.8 * | 539.940 | 0.800 * | 540.125 | 0.000 | 541.690 | 0.000 |
| 14 | 539.845 | 0.000 | 541.330 | 211.1 * | 542.100 | 388.2 * | 539.895 | 0.800 * | 540.110 | 0.000 | 541.545 | 0.000 |
| 15 | 539.845 | 0.000 | 540.858 | 115.0 | 540.845 | 109.5 * | 539.930 | 0.800 * | 540.045 | 0.000 | 541.415 | 0.000 |
| 16 | 539.825 | 0.000 | 540.645 | 71.04 * | 540.775 | 95.77 * | 540.090 | 13.00 * | 540.110 | 0.000 | 541.310 | 0.000 |
| 17 | 539.845 | 0.000 | 540.510 | 46.68 * | 540.580 | 59.12 * | 540.170 | 13.17 * | 540.580 | 0.000 | 541.220 | 0.000 |
| 18 | 539.840 | 0.000 | 540.428 | 34.90 | 540.483 | 47.12 | 541.880 | 336.0 * | 541.010 | 0.000 | 541.165 | 0.000 |
| 19 | 539.835 | 0.000 | 540.835 | 107.5 * | 540.565 | 57.37 | 541.975 | 354.0 | 541.300 | 0.000 | 541.220 | 0.000 |
| 20 | 539.865 | 0.000 | 540.805 | 101.6 * | 540.505 | 45.81 * | 541.290 | 202.3 * | 541.520 | 0.000 | 541.440 | 0.000 |
| 21 | 539.925 | 0.000 | 540.655 | 72.90 * | 540.355 | 21.03 * | 541.810 | 319.7 * | 541.680 | 0.000 | 541.530 | 0.000 |
| 22 | 539.905 | 0.000 | 540.543 | 57.94 | 540.275 | 9.302 * | 541.000 | 140.9 * | 541.750 | 0.000 | 541.565 | 0.000 |
| 23 | 539.860 | 0.000 | 540.405 | 28.97 * | 540.310 | 14.26 * | 541.170 | 176.5 * | 541.685 | 0.000 | 541.560 | 0.000 |
| 24 | 539.855 | 0.000 | 540.425 | 32.24 * | 540.570 | 57.32 * | 541.115 | 164.8 * | 541.580 | 0.000 | 541.520 | 0.000 |
| 25 | 539.875 | 0.000 | 540.365 | 18.79 | 541.410 | 228.7 * | 540.745 | 89.96 * | 541.450 | 0.000 | 541.570 | 0.000 |
| 26 | 539.890 | 0.000 | 540.265 | 7.950 * | 540.790 | 98.69 * | 540.595 | 59.16 | 541.320 | 0.000 | 541.690 | 0.000 |
| 27 | 539.945 | 0.000 | 540.205 | 7.000 * | 540.555 | 54.63 * | 540.530 | 50.19 * | 541.180 | 0.000 | 541.800 | 0.000 |
| 28 | 539.905 | 0.000 | 540.185 | 6.900 * | 540.860 | 112.5 * | 540.570 | 57.32 * | 541.090 | 0.000 | 541.830 | 0.000 |
| 29 | 539.925 | 0.000 | 540.175 | 6.800 * | 540.575 | 58.22 * | 540.450 | 36.40 * | 540.965 | 0.000 | 541.850 | 0.000 |
| 30 | 539.930 | 0.000 | 540.195 | 7.000 * | 540.508 | 46.13 | 540.405 | 28.97 * | 540.850 | 0.000 | 541.860 | 0.000 |
| 31 | | | 540.420 | 31.42 * | 540.425 | 32.24 * | | | 541.500 | 0.000 | | |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 540.347 | 0.000 | 540.768 | 115.7 | 542.154 | 410.2 | 540.239 | 7.986 | 540.493 | 40.67 | 542.307 | 0.000 |
| II Ten-Daily | 539.875 | 0.000 | 541.042 | 147.9 | 541.130 | 177.3 | 540.523 | 92.25 | 540.523 | 0.000 | 541.511 | 0.000 |
| III Ten-Daily | 539.901 | 0.000 | 540.349 | 25.26 | 540.603 | 66.64 | 540.839 | 112.4 | 541.368 | 0.000 | 541.677 | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 539.825 | 0.000 | 539.915 | 6.000 | 540.275 | 9.302 | 539.895 | 0.800 | 540.045 | 0.000 | 541.165 | 0.000 |
| Max. | 540.625 | 0.000 | 541.880 | 336.0 | 543.580 | 763.8 | 541.975 | 354.0 | 541.750 | 124.5 | 542.345 | 0.000 |
| Mean | 540.041 | 0 | 540.708 | 93.99 | 541.273 | 213.2 | 540.534 | 70.87 | 540.813 | 13.12 | 541.832 | 0 |

**Annual Runoff in MCM = 1041 Annual Runoff in mm = 472**

**Peak Observed Discharge = 455.6 cumecs on 08/08/2016 Corres. Water Level :542.25 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016 Corres. Water Level :540.525 m**

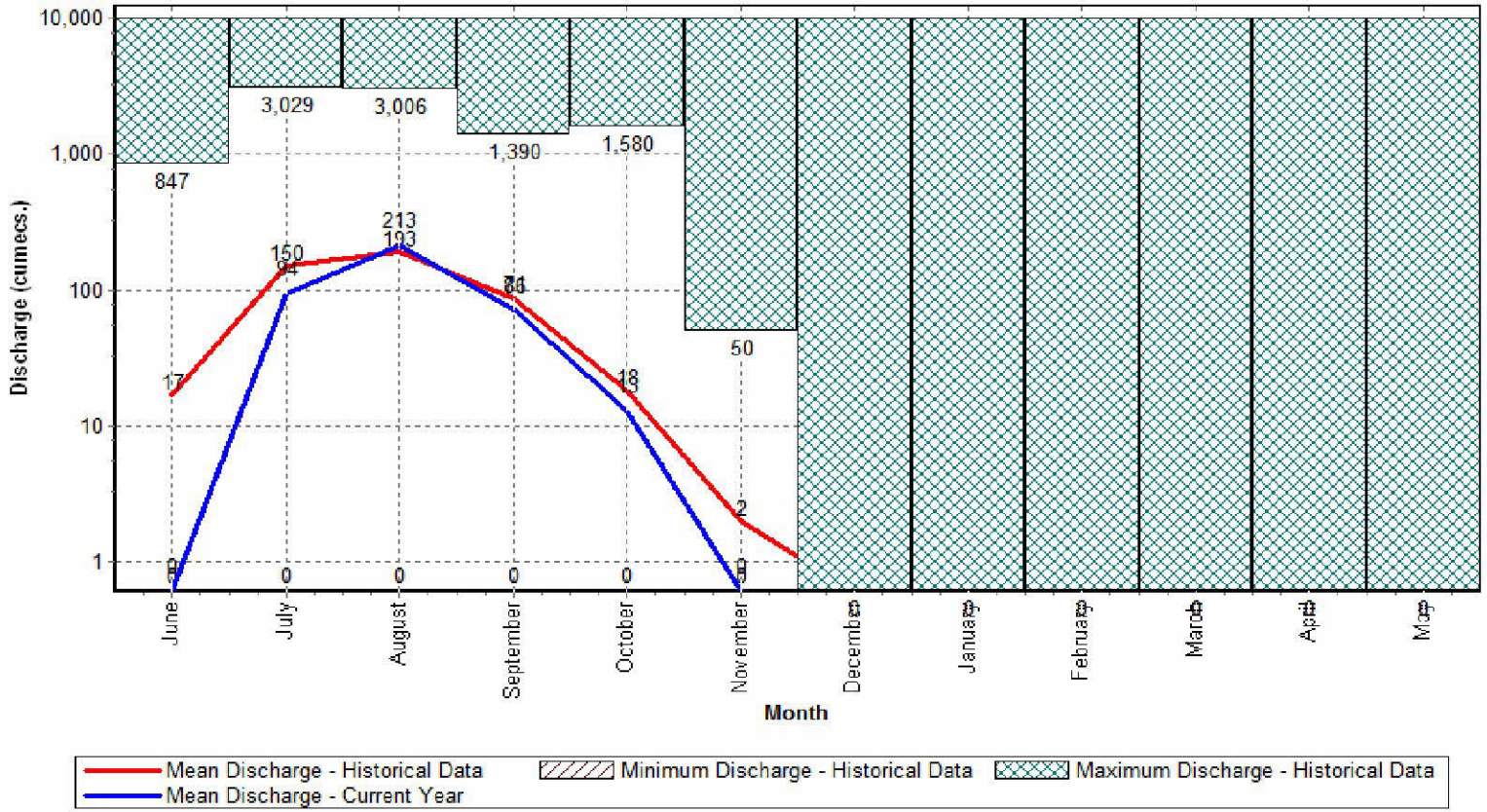
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Phulgaon (Seasonal) ( AKP00X5)** **Data considered : 1992-2017** **Division : Upper Krishna Divn, Pune**

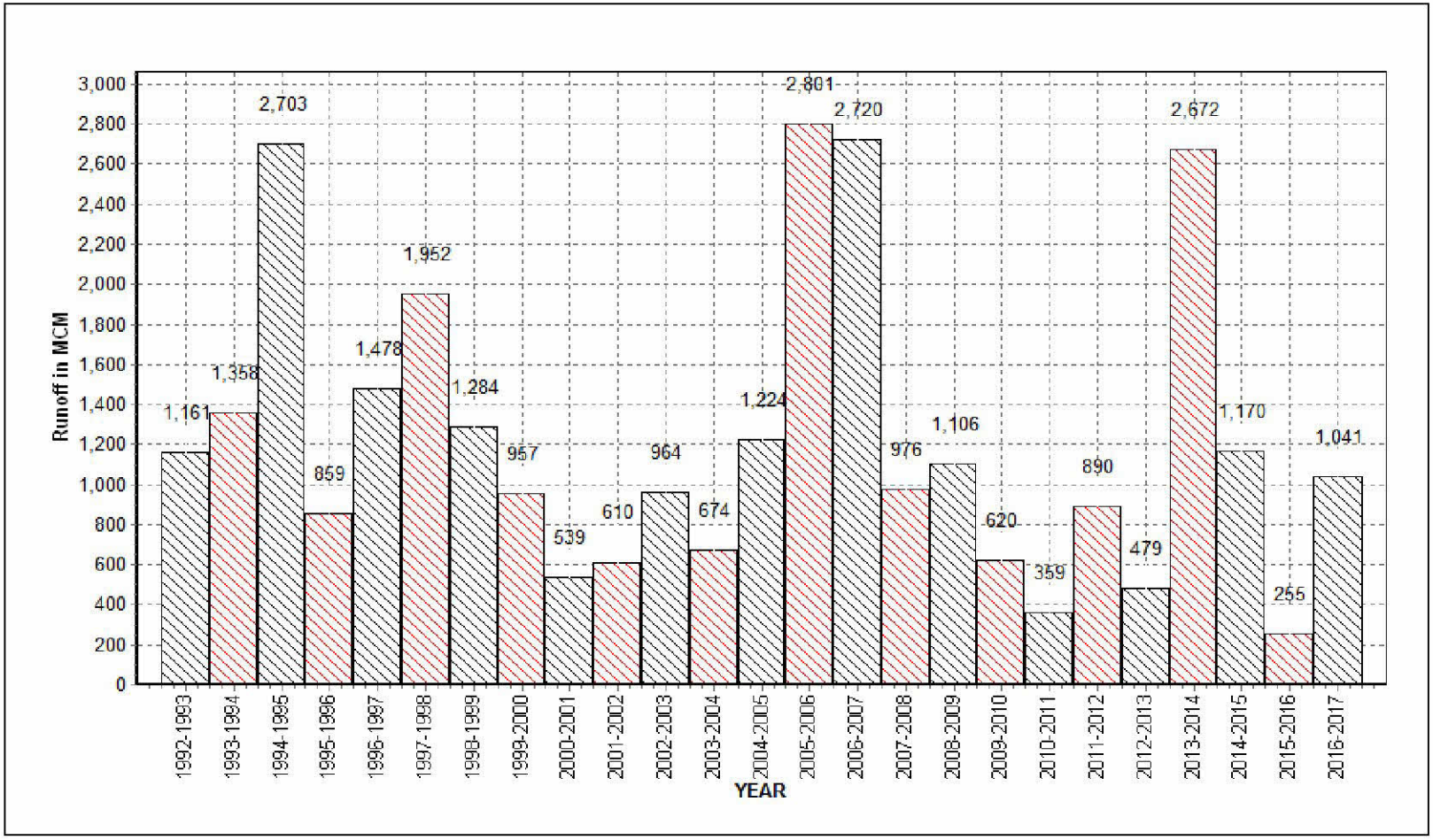
**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**



**Annual Runoff Values for the period: 1992 - 2017**

**Station Name : Phulgaon (Seasonal) ( AKP00X5)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**

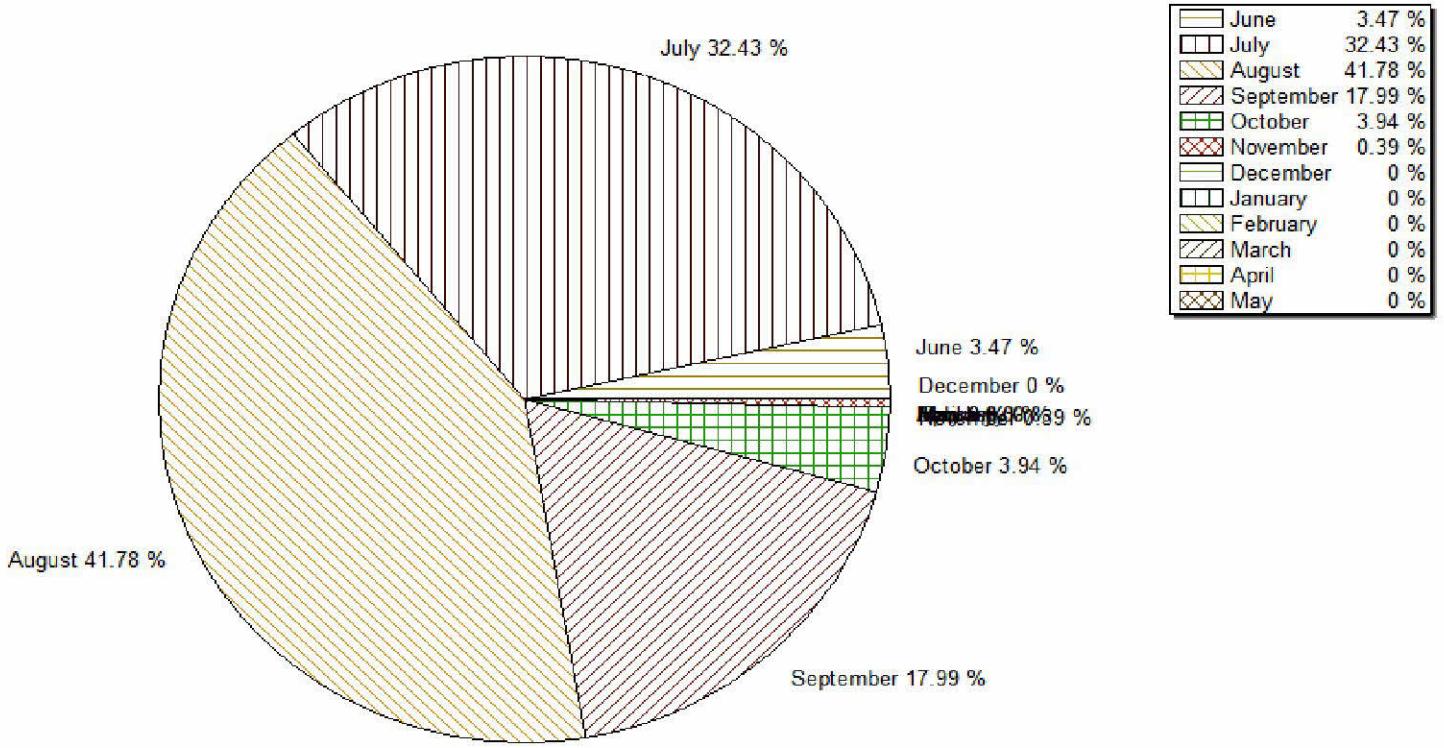



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1992-2016**

**Station Name : Phulgaon (Seasonal) ( AKP00X5)**
**Local River : Bhima**

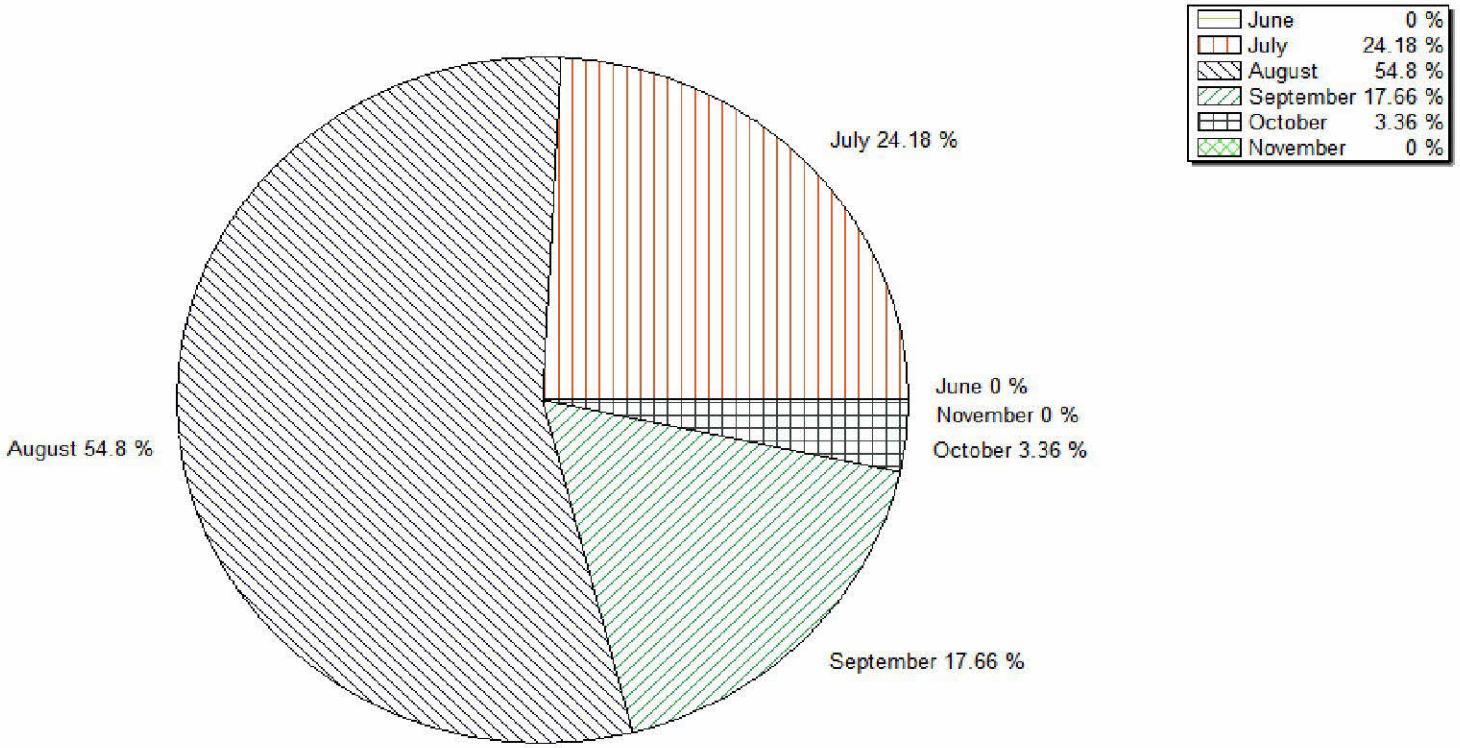
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Bhima SD, Sholapur**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Phulgaon (Seasonal) ( AKP00X5)**
**Local River : Bhima**

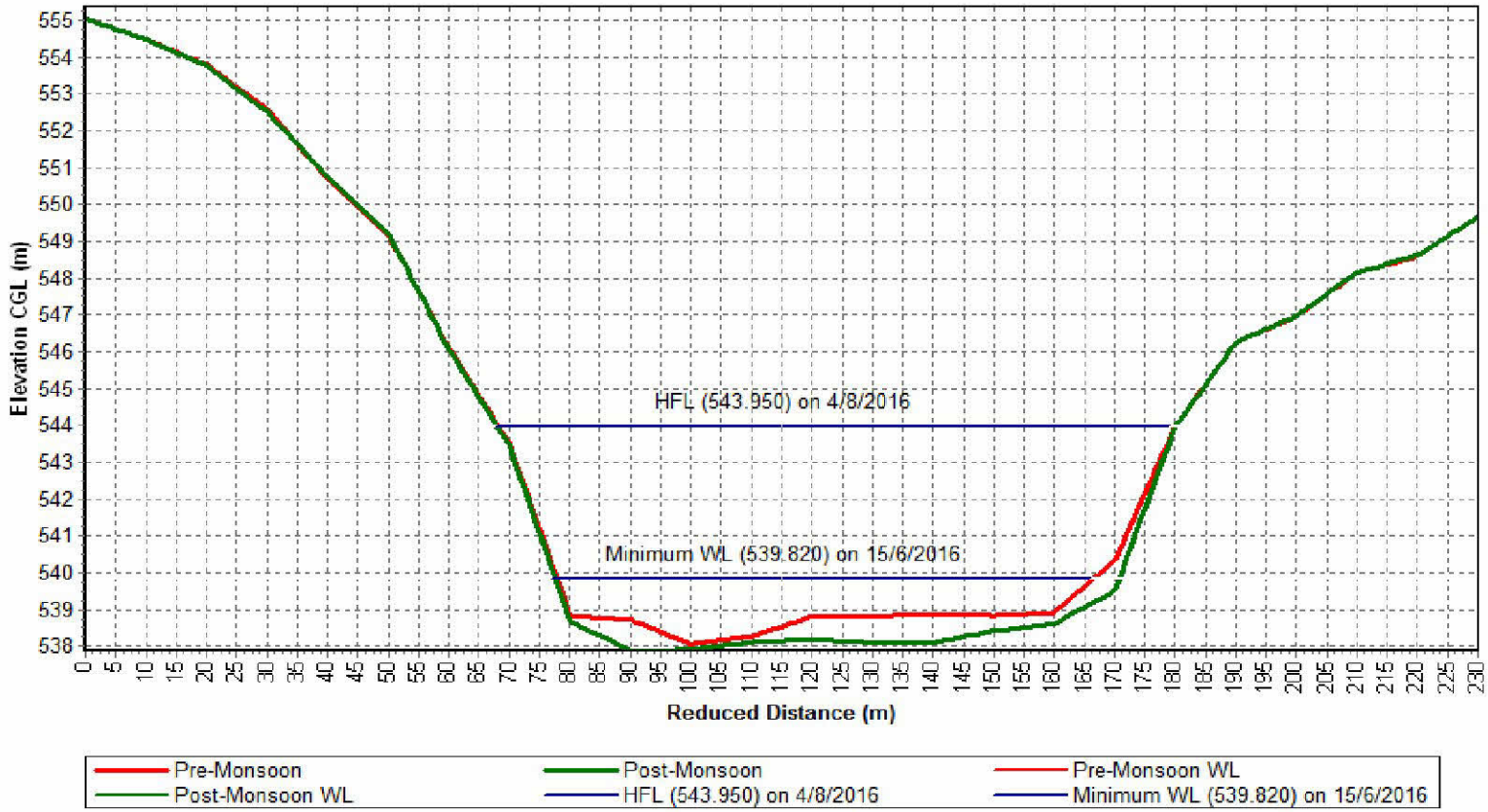
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Bhima SD, Sholapur**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Phulgaon (Seasonal) ( AKP00X5)** **Division : Upper Krishna Divn, Pune**

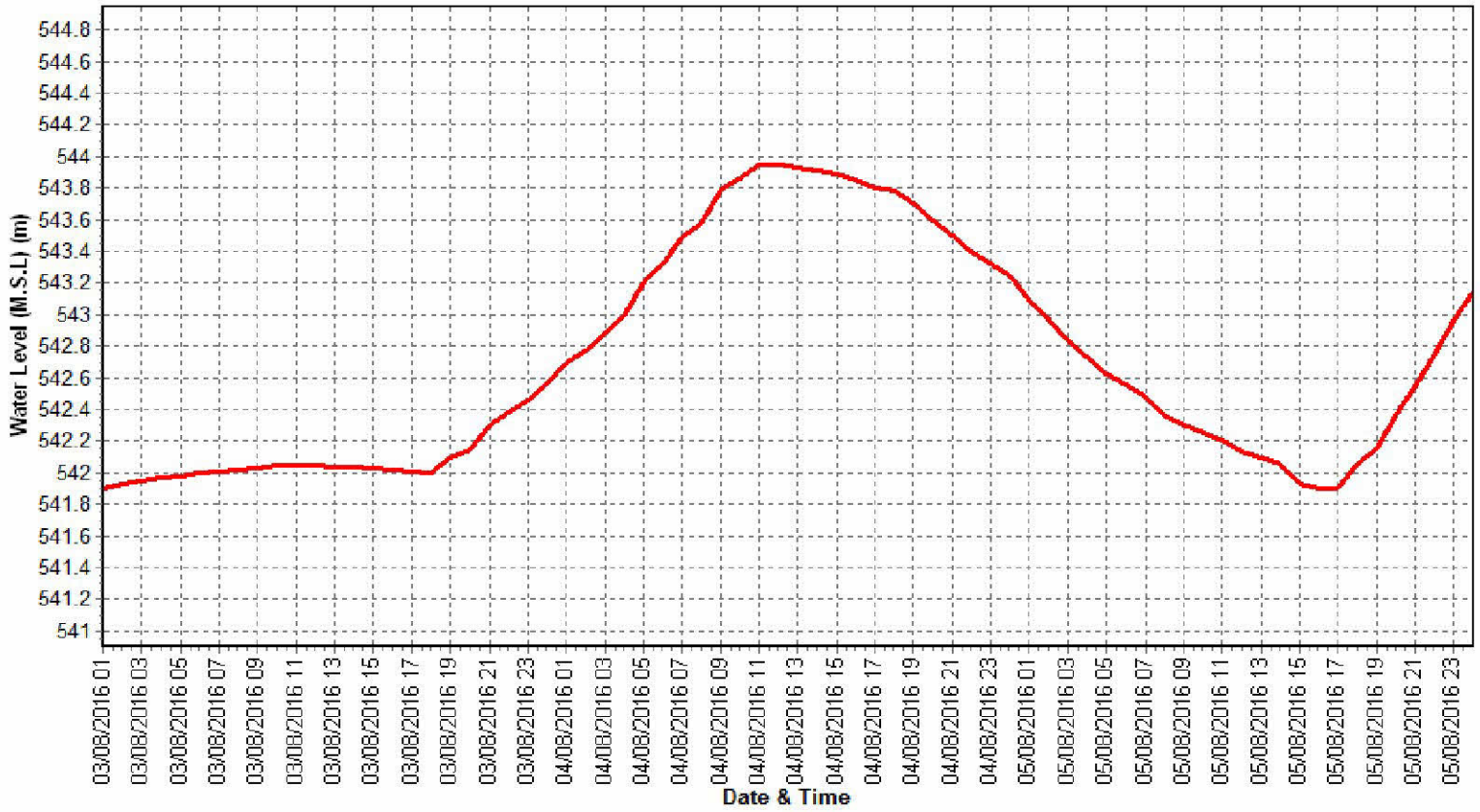
**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Phulgaon (Seasonal) ( AKP00X5)** | **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** | **Sub-Division : Bhima SD, Sholapur**

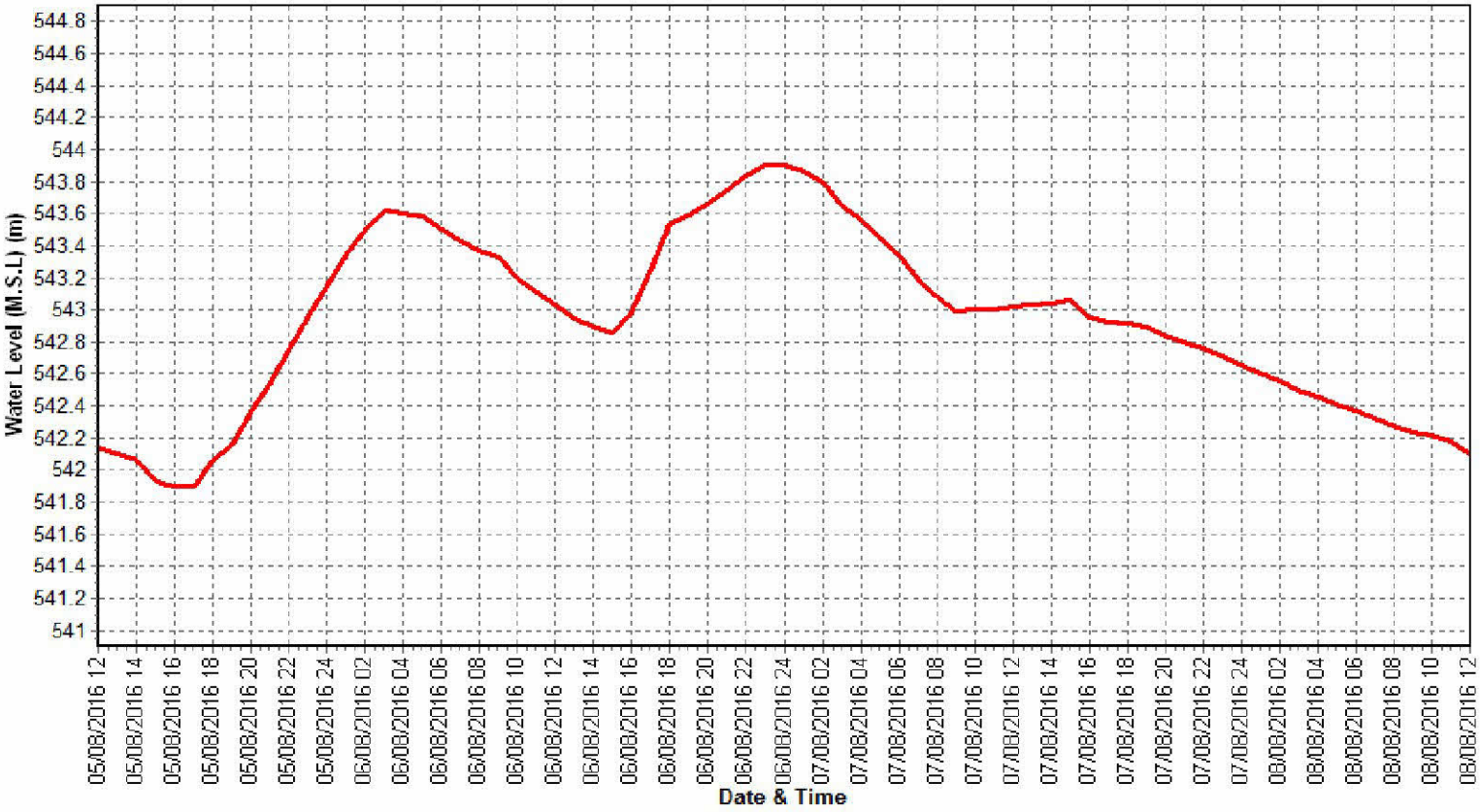



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Phulgaon (Seasonal) ( AKP00X5)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**

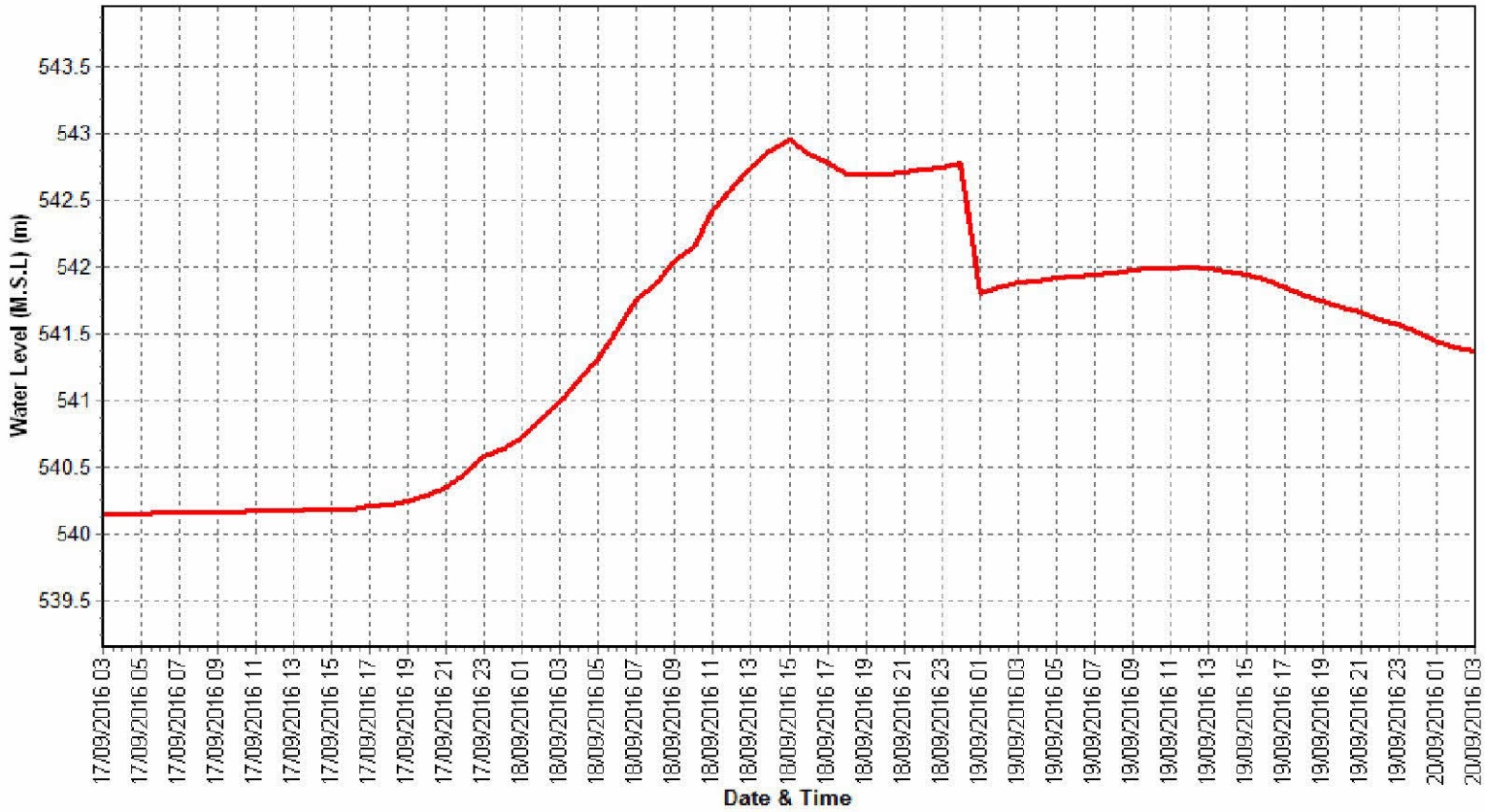



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Phulgaon (Seasonal) ( AKP00X5)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**




Time Span: 72 Hrs

## HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **Paragaon** | **Code** | : | **AKP00V9** |
| State | : | Maharashtra | District | | Pune |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | Bhima | Sub Tributary | : | - |
| Sub-Sub Tributary | : | - | Local River | : | Bhima |
| Division | : | Upper Krishna Divn, Pune | Sub-Division | : | Bhima SD, Sholapur |
| Drainage Area | : | 6251 Sq. Km. | Bank | : | |
| Latitude | : | 18°33'30" | Longitude | : | 74°22'30" |
| **Zero of Gauge (m)** | : | 85 (m.s.l) | 01/06/2015 | | |
| | | Opening Date | Closing Date | | |
| Gauge | : | 28/11/2014 | **HFL During 2016-17** | : | **94.10m** |
| | | | **Corres. Discharge** | : | **3736.3(Estimated)** |
| Discharge | : | 02/09/2015 | **Date & Time of occurance** | : | **06/08/2016 11.00 hrs.** |
| 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** |

**Gauge observation suspended on 1997 Daischarge observation suspended on 30-9-1996.**
**Gauge observation restarted on 28-11-2014. discharge observation restarted on 02/09/2015**

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Paragaon ( AKP00V9)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**

| 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 | 86.120 | 0.000 | 86.520 | 0.000 | 87.450 | 90.39 * | 87.505 | 108.1 | 87.590 | 113.8 * | 86.630 | 0.000 |
| 2 | 86.170 | 0.000 | 86.660 | 0.000 | 88.120 | 225.2 * | 87.310 | 69.52 * | 87.700 | 134.0 * | 86.750 | 0.000 |
| 3 | 86.100 | 0.000 | 86.510 | 0.000 | 89.350 | 616.1 * | 87.220 | 56.50 | 88.315 | 285.7 | 86.720 | 0.000 |
| 4 | 86.050 | 0.000 | 86.630 | 0.000 | 92.100 | 2121 * | 87.200 | 54.94 * | 88.100 | 231.1 | 86.740 | 0.000 |
| 5 | 85.970 | 0.000 | 89.710 | 764.4 * | 91.400 | 1658 * | 87.130 | 46.51 * | 87.950 | 196.2 | 86.750 | 0.000 |
| 6 | 86.270 | 0.000 | 89.100 | 522.0 * | 93.570 | 3267 * | 87.200 | 54.94 * | 87.820 | 174.6 | 86.750 | 0.000 |
| 7 | 86.350 | 0.000 | 88.420 | 303.7 * | 91.520 | 1733 * | 87.170 | 42.29 | 87.750 | 153.6 | 86.760 | 0.000 |
| 8 | 86.240 | 0.000 | 87.830 | 159.8 * | 90.560 | 1174 * | 87.000 | 31.26 | 87.670 | 134.9 | 86.650 | 0.000 |
| 9 | 86.060 | 0.000 | 87.550 | 106.9 * | 90.210 | 995.1 * | 86.950 | 25.43 | 87.570 | 110.3 * | 86.580 | 0.000 |
| 10 | 86.100 | 0.000 | 87.750 | 143.7 * | 89.570 | 704.9 * | 86.900 | 22.43 | 87.540 | 106.0 | 86.560 | 0.000 |
| 11 | 86.310 | 0.000 | 88.520 | 332.3 * | 89.880 | 839.6 * | 86.980 | 30.69 * | 87.600 | 115.6 * | 86.680 | 0.000 |
| 12 | 86.390 | 0.000 | 89.300 | 596.7 * | 90.100 | 944.5 | 86.950 | 27.90 * | 87.540 | 105.2 * | 86.900 | 0.000 |
| 13 | 86.370 | 0.000 | 89.400 | 635.8 * | 89.505 | 670.0 | 86.950 | 27.90 * | 87.440 | 79.09 | 86.810 | 0.000 |
| 14 | 86.180 | 0.000 | 89.440 | 651.7 * | 88.890 | 448.7 * | 86.900 | 19.91 | 87.180 | 45.74 | 86.720 | 0.000 |
| 15 | 86.150 | 0.000 | 88.770 | 409.1 * | 88.600 | 356.1 * | 87.005 | 36.66 | 87.090 | 41.86 | 86.690 | 0.000 |
| 16 | 86.000 | 0.000 | 88.220 | 250.1 * | 88.180 | 240.0 * | 87.205 | 63.72 | 86.990 | 31.65 * | 86.710 | 0.000 |
| 17 | 86.110 | 0.000 | 87.910 | 176.8 * | 87.860 | 166.1 * | 87.670 | 128.3 * | 86.950 | 25.19 | 86.580 | 0.000 |
| 18 | 86.130 | 0.000 | 87.670 | 128.3 * | 87.675 | 127.6 | 87.450 | 90.39 * | 86.920 | 23.42 | 86.550 | 0.000 |
| 19 | 86.080 | 0.000 | 87.560 | 108.6 * | 87.540 | 97.78 | 89.720 | 768.7 * | 86.900 | 22.43 | 86.750 | 0.000 |
| 20 | 85.970 | 0.000 | 88.000 | 196.9 * | 87.550 | 110.6 | 89.450 | 644.9 | 86.860 | 19.81 | 86.820 | 0.000 |
| 21 | 85.950 | 0.000 | 88.150 | 232.5 * | 87.560 | 108.6 * | 88.970 | 511.2 | 86.880 | 20.61 | 87.050 | 0.000 |
| 22 | 86.260 | 0.000 | 87.870 | 168.2 * | 87.570 | 110.3 * | 89.250 | 559.7 | 86.840 | 19.32 | 87.430 | 0.000 |
| 23 | 86.380 | 0.000 | 87.740 | 141.7 * | 87.500 | 98.46 * | 88.810 | 422.1 * | 86.820 | 17.26 * | 87.590 | 0.000 |
| 24 | 86.410 | 0.000 | 87.660 | 126.5 * | 87.550 | 106.9 * | 88.640 | 368.2 * | 86.820 | 17.87 | 87.700 | 0.000 |
| 25 | 86.330 | 0.000 | 87.560 | 108.6 * | 88.070 | 213.1 * | 88.390 | 295.3 * | 86.730 | 14.95 | 87.600 | 0.000 |
| 26 | 86.250 | 0.000 | 87.360 | 76.67 * | 88.485 | 322.7 | 87.900 | 176.1 | 86.730 | 13.80 | 87.570 | 0.000 |
| 27 | 86.320 | 0.000 | 87.320 | 70.92 * | 87.930 | 197.4 | 88.020 | 204.1 | 86.680 | 0.000 | 87.550 | 0.000 |
| 28 | 86.350 | 0.000 | 87.240 | 60.05 * | 87.655 | 124.5 | 88.170 | 245.2 | 86.630 | 0.000 | 87.640 | 0.000 |
| 29 | 86.400 | 0.000 | 87.080 | 40.89 * | 87.810 | 136.8 | 87.840 | 161.9 * | 86.630 | 0.000 | 87.750 | 0.000 |
| 30 | 86.450 | 0.000 | 87.110 | 44.22 * | 87.768 | 135.8 | 87.660 | 126.5 * | 86.660 | 0.000 | 87.750 | 0.000 |
| 31 | | | 87.200 | 54.94 * | 87.800 | 152.7 | | | 86.630 | 0.000 | | |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 86.143 | 0.000 | 87.668 | 200.0 | 90.385 | 1258 | 87.159 | 51.18 | 87.800 | 164.0 | 86.689 | 0.000 |
| II Ten-Daily | 86.169 | 0.000 | 88.479 | 348.6 | 88.578 | 400.1 | 87.628 | 183.9 | 87.147 | 50.99 | 86.721 | 0.000 |
| III Ten-Daily | 86.310 | 0.000 | 87.481 | 102.3 | 87.791 | 155.2 | 88.365 | 307.0 | 86.732 | 9.438 | 87.563 | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 85.950 | 0.000 | 86.510 | 0.000 | 87.450 | 90.39 | 86.900 | 19.91 | 86.630 | 0.000 | 86.550 | 0.000 |
| Max. | 86.450 | 0.000 | 89.710 | 764.4 | 93.570 | 3267 | 89.720 | 768.7 | 88.315 | 285.7 | 87.750 | 0.000 |
| Mean | 86.207 | 0 | 87.863 | 213.3 | 88.882 | 590.1 | 87.717 | 180.7 | 87.210 | 72.71 | 86.991 | 0 |

**Annual Runoff in MCM = 2815 Annual Runoff in mm = 450**

**Peak Observed Discharge = 944.5 cumecs on 12/08/2016 Corres. Water Level :90.1 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016 Corres. Water Level :86.12 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 2016 - 2017

**Station Name : Paragaon ( AKP00V9)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 87.730 | 0.000 | 89.250 | 0.000 | 89.220 | 0.000 | 89.200 | 0.000 | 88.880 | 0.000 | 88.580 | 0.000 |
| 2 | 88.180 | 0.000 | 89.240 | 0.000 | 89.200 | 0.000 | 89.200 | 0.000 | 88.880 | 0.000 | 88.590 | 0.000 |
| 3 | 88.380 | 0.000 | 89.250 | 0.000 | 89.220 | 0.000 | 89.200 | 0.000 | 88.800 | 0.000 | 88.600 | 0.000 |
| 4 | 88.380 | 0.000 | 89.250 | 0.000 | 89.220 | 0.000 | 89.210 | 0.000 | 88.780 | 0.000 | 88.620 | 0.000 |
| 5 | 88.320 | 0.000 | 89.245 | 0.000 | 89.210 | 0.000 | 89.200 | 0.000 | 88.750 | 0.000 | 88.600 | 0.000 |
| 6 | 88.200 | 0.000 | 89.240 | 0.000 | 89.200 | 0.000 | 89.200 | 0.000 | 88.740 | 0.000 | 88.580 | 0.000 |
| 7 | 88.160 | 0.000 | 89.240 | 0.000 | 89.190 | 0.000 | 89.250 | 0.000 | 88.750 | 0.000 | 88.560 | 0.000 |
| 8 | 88.200 | 0.000 | 89.230 | 0.000 | 89.180 | 0.000 | 89.250 | 0.000 | 88.760 | 0.000 | 88.620 | 0.000 |
| 9 | 88.360 | 0.000 | 89.270 | 0.000 | 89.210 | 0.000 | 89.240 | 0.000 | 88.750 | 0.000 | 88.610 | 0.000 |
| 10 | 88.470 | 0.000 | 89.260 | 0.000 | 89.210 | 0.000 | 89.280 | 0.000 | 88.720 | 0.000 | 88.600 | 0.000 |
| 11 | 88.500 | 0.000 | 89.240 | 0.000 | 89.200 | 0.000 | 89.260 | 0.000 | 88.700 | 0.000 | 88.600 | 0.000 |
| 12 | 89.000 | 0.000 | 89.220 | 0.000 | 89.130 | 0.000 | 89.270 | 0.000 | 88.720 | 0.000 | 88.580 | 0.000 |
| 13 | 89.100 | 0.000 | 89.250 | 0.000 | 89.110 | 0.000 | 89.260 | 0.000 | 88.710 | 0.000 | 88.570 | 0.000 |
| 14 | 89.200 | 0.000 | 89.250 | 0.000 | 89.060 | 0.000 | 89.250 | 0.000 | 88.670 | 0.000 | 88.560 | 0.000 |
| 15 | 89.220 | 0.000 | 89.240 | 0.000 | 89.000 | 0.000 | 89.250 | 0.000 | 88.660 | 0.000 | 88.590 | 0.000 |
| 16 | 89.250 | 0.000 | 89.230 | 0.000 | 88.970 | 0.000 | 89.240 | 0.000 | 88.650 | 0.000 | 88.600 | 0.000 |
| 17 | 89.450 | 0.000 | 89.220 | 0.000 | 88.950 | 0.000 | 89.220 | 0.000 | 88.750 | 0.000 | 88.500 | 0.000 |
| 18 | 89.500 | 0.000 | 89.270 | 0.000 | 88.900 | 0.000 | 89.180 | 0.000 | 88.830 | 0.000 | 88.400 | 0.000 |
| 19 | 89.540 | 0.000 | 89.270 | 0.000 | 88.880 | 0.000 | 89.190 | 0.000 | 88.920 | 0.000 | 88.380 | 0.000 |
| 20 | 89.300 | 0.000 | 89.260 | 0.000 | 88.850 | 0.000 | 89.200 | 0.000 | 88.870 | 0.000 | 88.200 | 0.000 |
| 21 | 89.230 | 0.000 | 89.250 | 0.000 | 88.850 | 0.000 | 89.200 | 0.000 | 88.850 | 0.000 | 88.000 | 0.000 |
| 22 | 89.200 | 0.000 | 89.230 | 0.000 | 88.850 | 0.000 | 89.220 | 0.000 | 88.850 | 0.000 | 87.950 | 0.000 |
| 23 | 89.220 | 0.000 | 89.220 | 0.000 | 88.820 | 0.000 | 89.150 | 0.000 | 88.850 | 0.000 | 87.900 | 0.000 |
| 24 | 89.250 | 0.000 | 89.240 | 0.000 | 88.810 | 0.000 | 89.100 | 0.000 | 88.840 | 0.000 | 87.850 | 0.000 |
| 25 | 89.235 | 0.000 | 89.230 | 0.000 | 88.800 | 0.000 | 89.100 | 0.000 | 88.700 | 0.000 | 87.800 | 0.000 |
| 26 | 89.220 | 0.000 | 89.230 | 0.000 | 88.980 | 0.000 | 89.090 | 0.000 | 88.700 | 0.000 | 87.750 | 0.000 |
| 27 | 89.240 | 0.000 | 89.230 | 0.000 | 89.110 | 0.000 | 89.090 | 0.000 | 88.680 | 0.000 | 87.720 | 0.000 |
| 28 | 89.230 | 0.000 | 89.220 | 0.000 | 89.200 | 0.000 | 89.090 | 0.000 | 88.660 | 0.000 | 87.420 | 0.000 |
| 29 | 89.220 | 0.000 | 89.220 | 0.000 | | | 89.000 | 0.000 | 88.630 | 0.000 | 87.300 | 0.000 |
| 30 | 89.220 | 0.000 | 89.220 | 0.000 | | | 88.960 | 0.000 | 88.600 | 0.000 | 87.200 | 0.000 |
| 31 | 89.260 | 0.000 | 89.210 | 0.000 | | | 88.930 | 0.000 | | | 87.100 | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 88.238 | 0.000 | 89.247 | 0.000 | 89.206 | 0.000 | 89.223 | 0.000 | 88.781 | 0.000 | 88.596 | 0.000 |
| II Ten-Daily | 89.206 | 0.000 | 89.245 | 0.000 | 89.005 | 0.000 | 89.232 | 0.000 | 88.748 | 0.000 | 88.498 | 0.000 |
| III Ten-Daily | 89.230 | 0.000 | 89.227 | 0.000 | 88.927 | 0.000 | 89.085 | 0.000 | 88.736 | 0.000 | 87.635 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 87.730 | 0.000 | 89.210 | 0.000 | 88.800 | 0.000 | 88.930 | 0.000 | 88.600 | 0.000 | 87.100 | 0.000 |
| Max. | 89.540 | 0.000 | 89.270 | 0.000 | 89.220 | 0.000 | 89.280 | 0.000 | 88.920 | 0.000 | 88.620 | 0.000 |
| Mean | 88.902 | 0 | 89.240 | 0 | 89.055 | 0 | 89.177 | 0 | 88.755 | 0 | 88.224 | 0 |

**Peak Computed Discharge = 3267 cumecs on 06/08/2016** **Corres. Water Level :93.57 m**

**Lowest Computed Discharge = 17.26 cumecs on 23/10/2016** **Corres. Water Level :86.82 m**

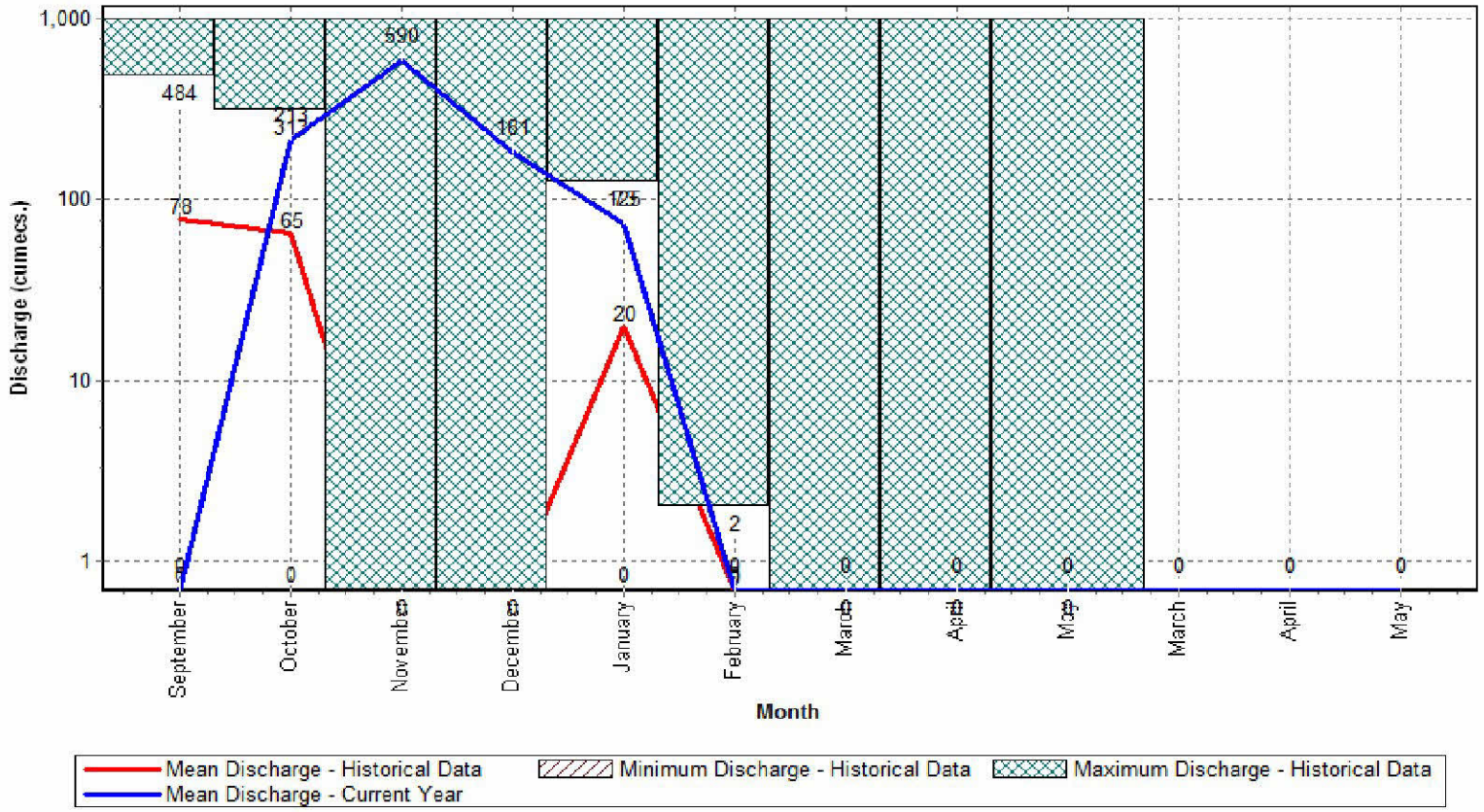
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Paragaon ( AKP00V9)** | **Data considered : 2016-2017** | **Division : Upper Krishna Divn, Pune**

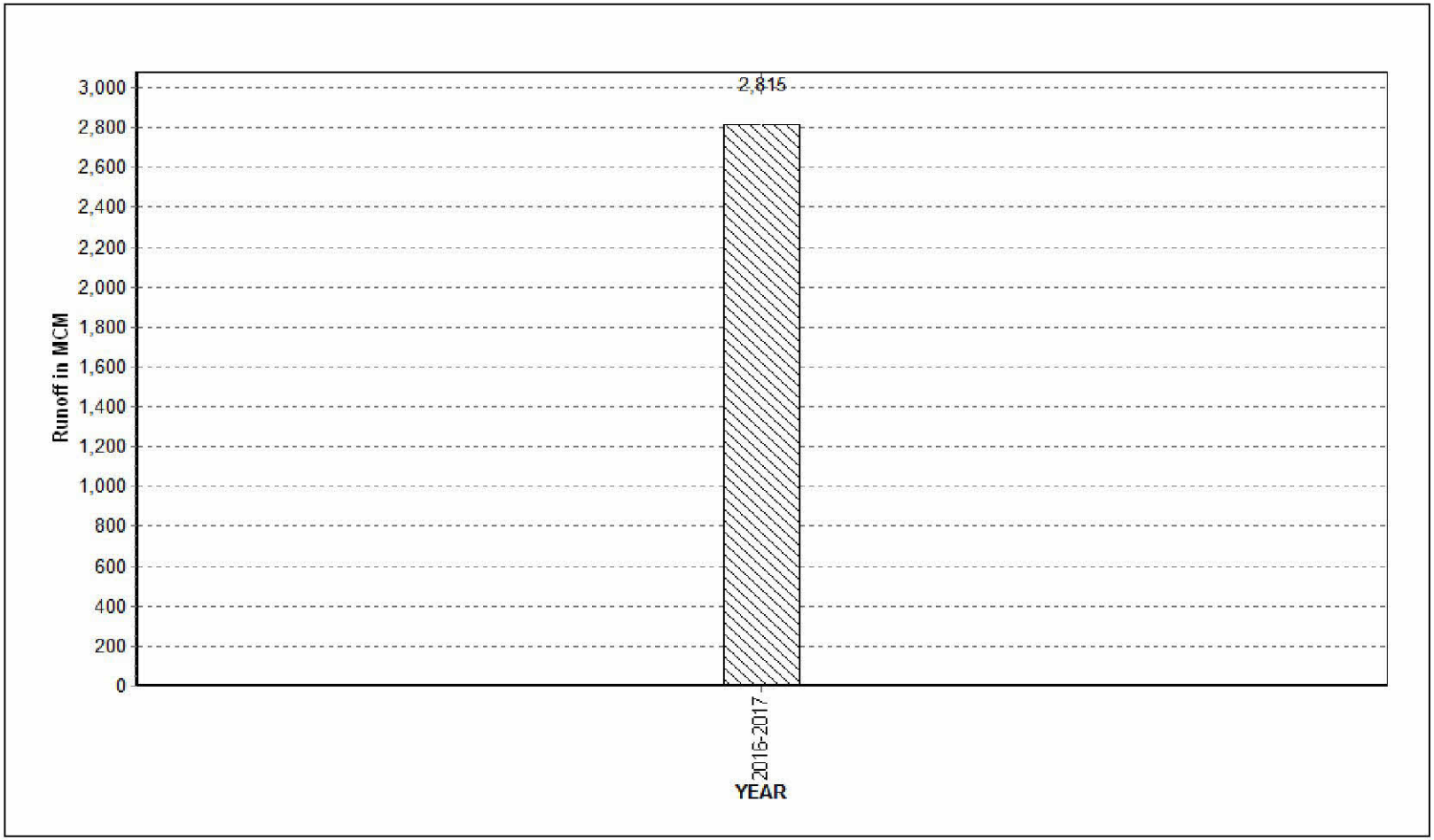
**Local River : Bhima** | **Sub-Division : Bhima SD, Sholapur**



## Annual Runoff Values for the period: 2016 - 2017

**Station Name : Paragaon ( AKP00V9)** | **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** | **Sub-Division : Bhima SD, Sholapur**

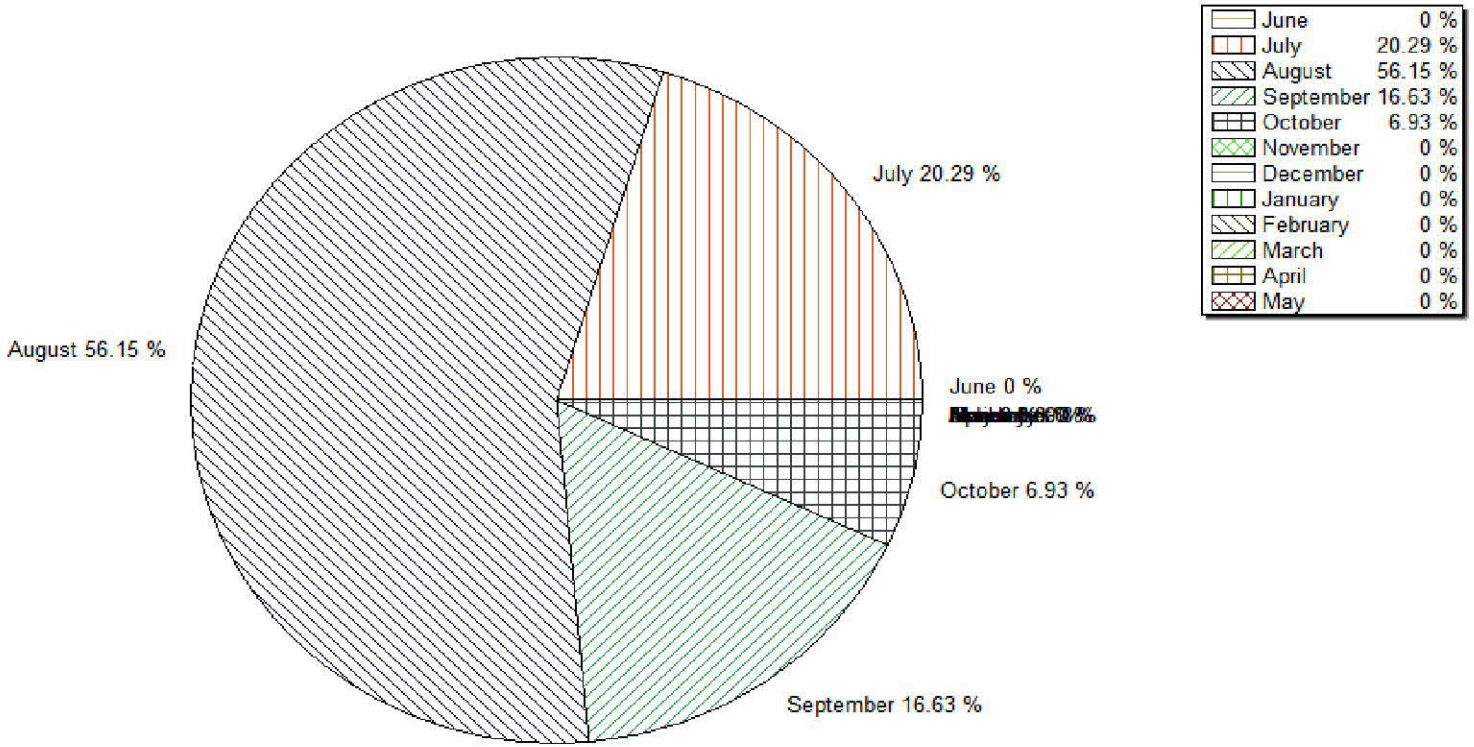



*Note: Missing values have not been considered while arriving at Annual Runoff*

## Monthly Runoff for the Year : 2016-2017

**Station Name : Paragaon ( AKP00V9)**
**Local River : Bhima**

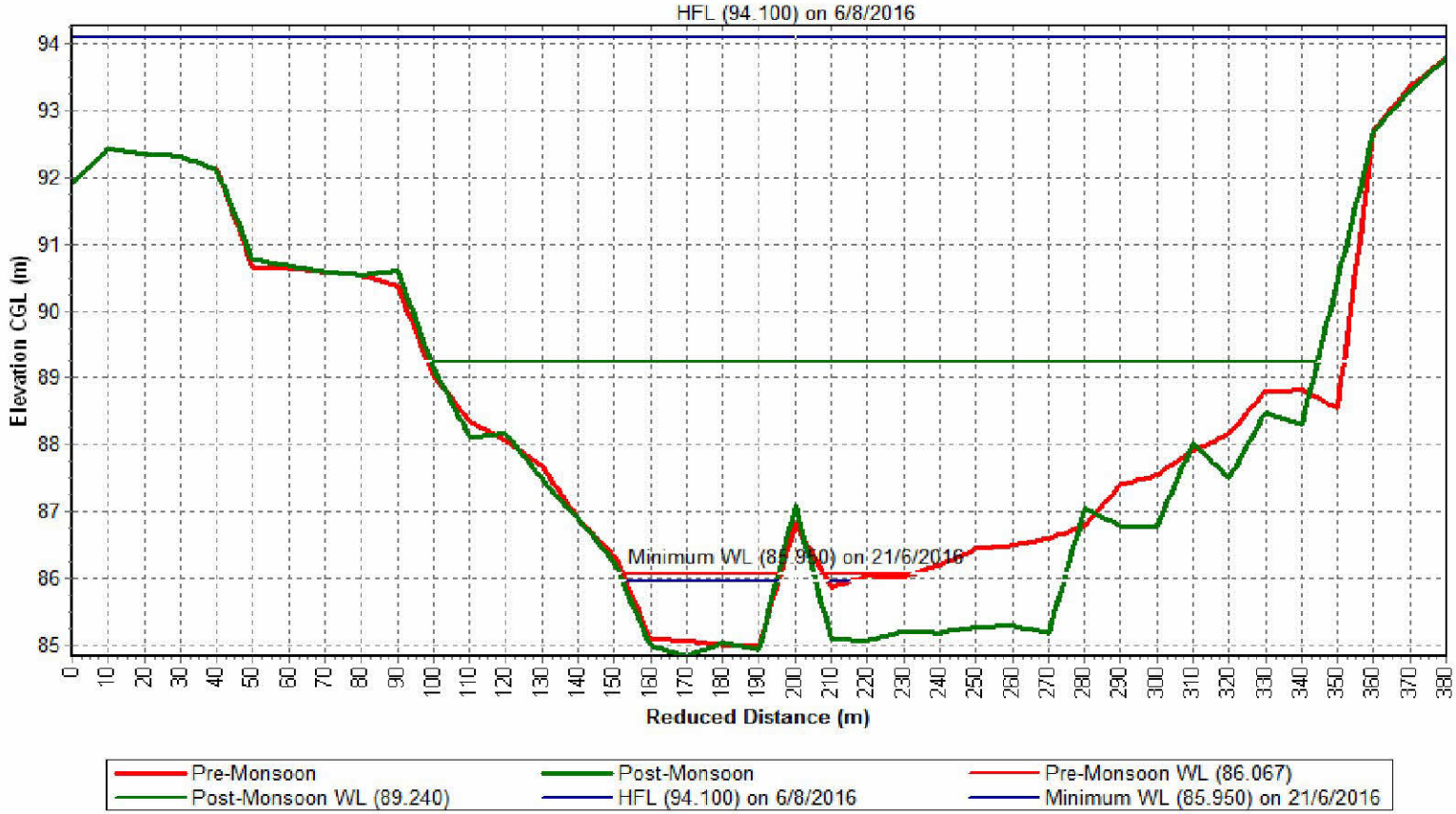
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Bhima SD, Sholapur**



## Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017

**Station Name : Paragaon ( AKP00V9)** **Division : Upper Krishna Divn, Pune**

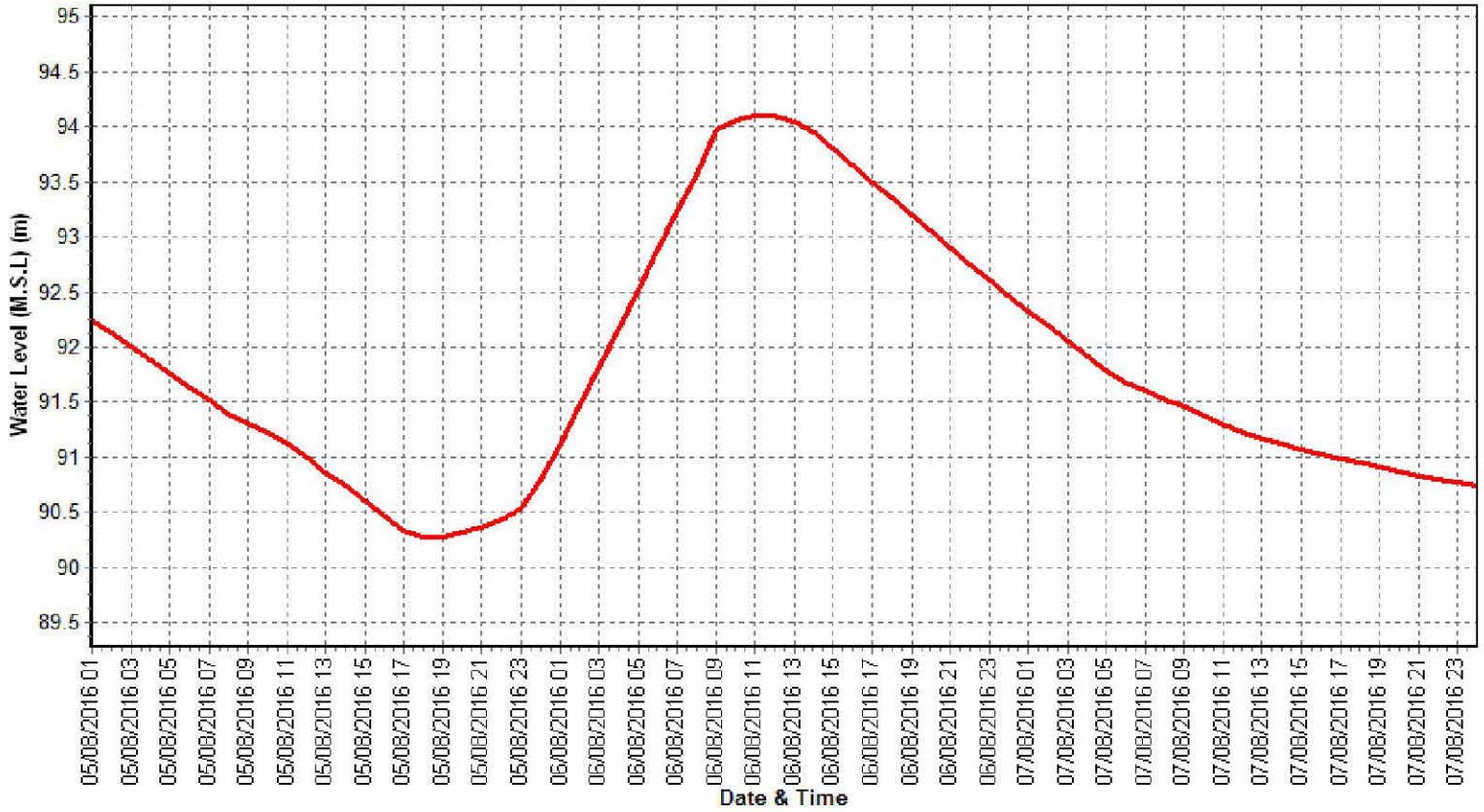
**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Paragaon ( AKP00V9)** | **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** | **Sub-Division : Bhima SD, Sholapur**

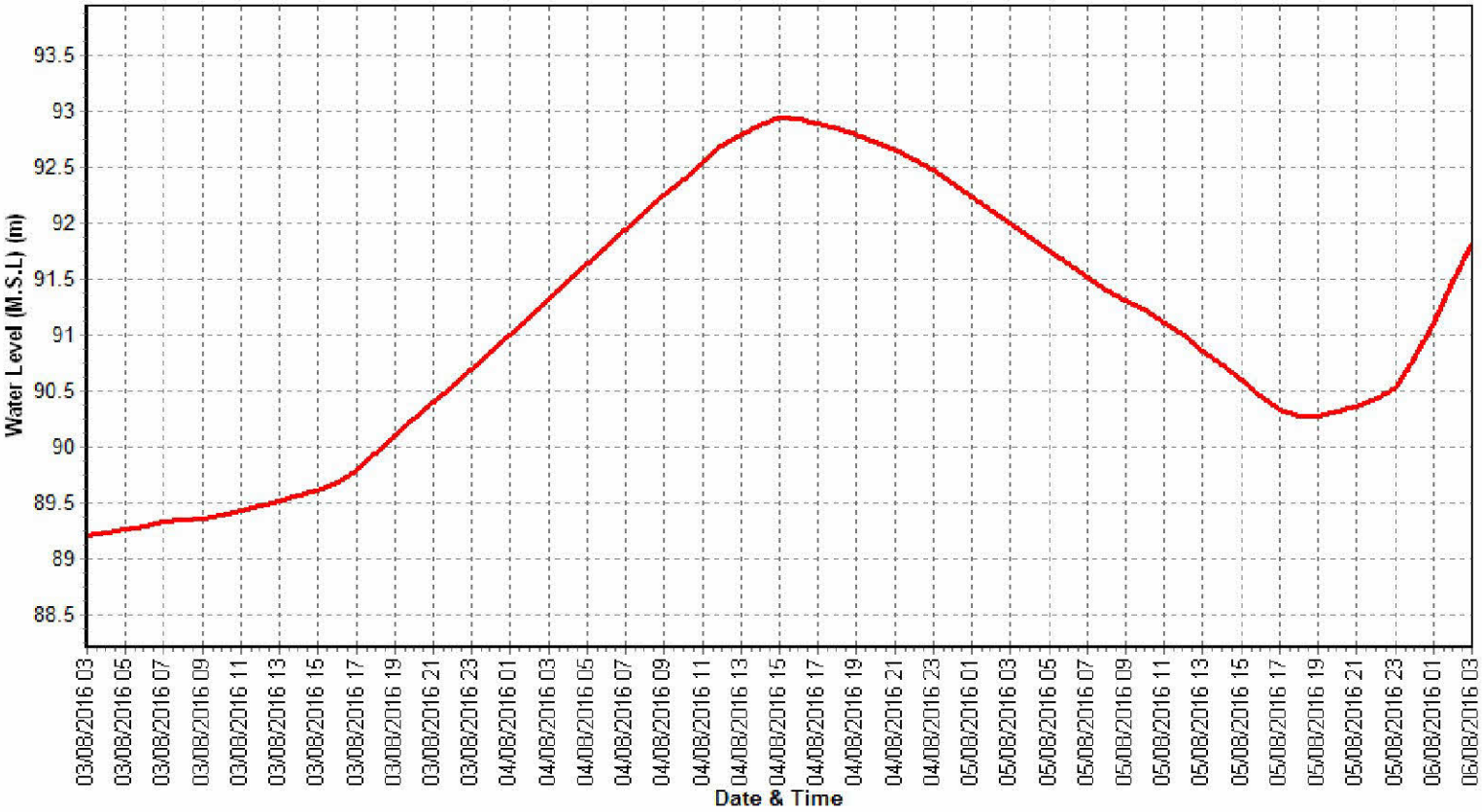



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Paragaon ( AKP00V9)** **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** **Sub-Division : Bhima SD, Sholapur**

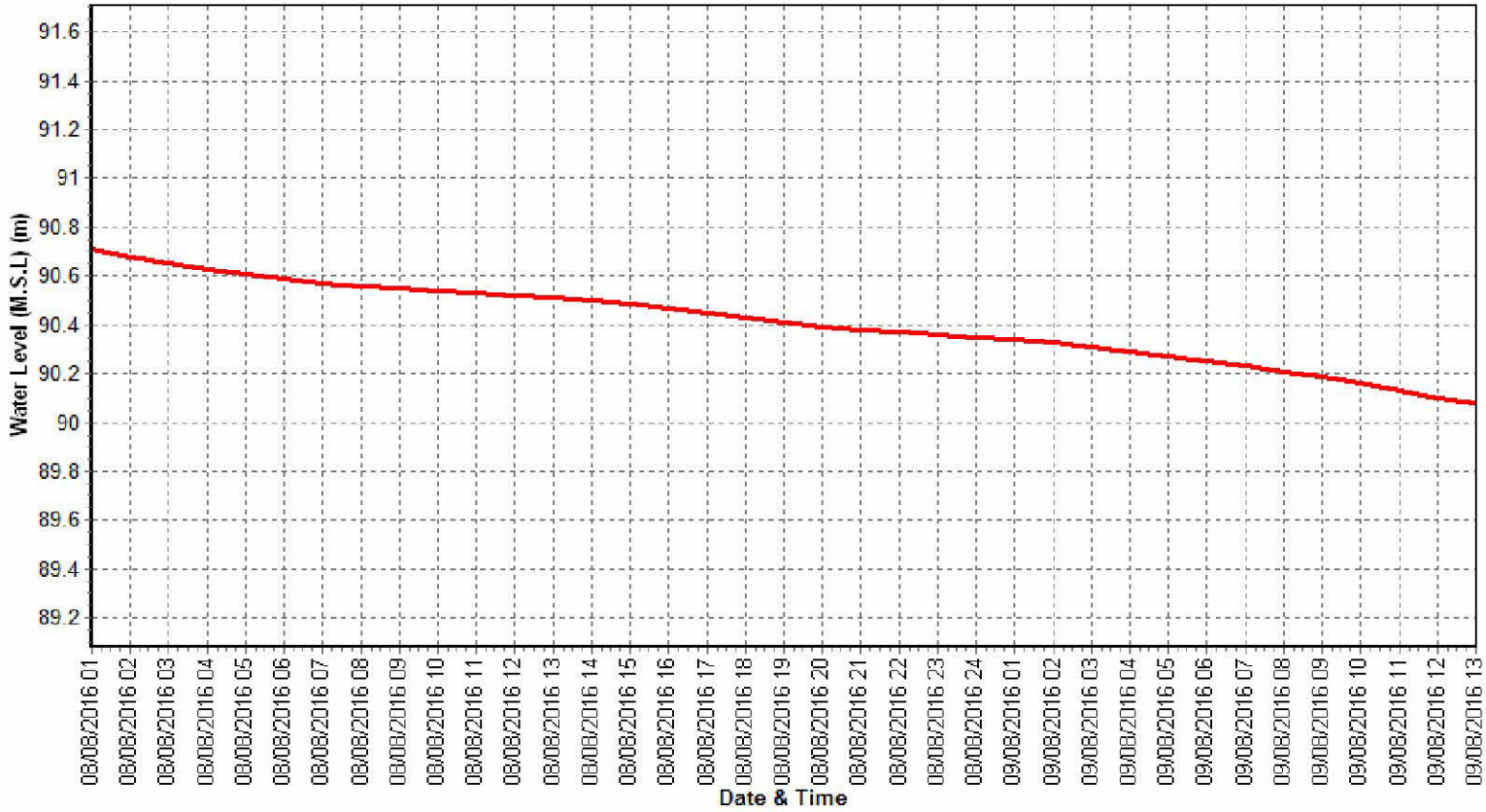



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017

**Station Name : Paragaon ( AKP00V9)** | **Division : Upper Krishna Divn, Pune**

**Local River : Bhima** | **Sub-Division : Bhima SD, Sholapur**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **Huvinhedigi** | **Code** | : | **AK000N2** |
| State | : | Karnataka | District | | Raichur |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | - | Sub Tributary | : | - |
| Sub-Sub Tributary | : | - | Local River | : | Krishna |
| Division | : | Lower Krishna Divn., Hyderabad | Sub-Division | : | Middle Krishna SD 2 , Kurnool |
| Drainage Area | : | 55150 Sq. Km. | Bank | : | Right |
| Latitude | : | 16°29'25" | Longitude | : | 76°55'23" |
| **Zero of Gauge (m)** | : | 339.008 (m.s.l)<br>342.24 (m.s.l) | 01/02/1976<br>01/06/1981 | - | 31/05/1981 |
| | | Opening Date | Closing Date | | |
| Gauge | : | 01/02/1976 | **HFL During 2016-17** | : | **354.130m** |
| | | | **Corres. Discharge** | : | **8638(Estimated)** |
| Discharge | : | 01/02/1976 | **Date & Time of occurance** | : | **05/08/2016 09.00 hrs.** |
| Sediment | : | 01/06/1976 | | | |
| Water Quality | : | 01/02/1976 | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1976-1977 | 8742 | 350.758 | 07/08/1976 | 4.600 | 342.151 | 21/04/1977 |
| 1977-1978 | 6312 | 349.493 | 31/07/1977 | 6.200 | 342.248 | 06/04/1978 |
| 1978-1979 | 6174 | 349.833 | 21/08/1978 | 0.776 | 341.968 | 13/05/1979 |
| 1979-1980 | 8830 | 351.353 | 15/08/1979 | 1.500 | 341.993 | 04/06/1979 |
| 1980-1981 | 7912 | 350.651 | 09/07/1980 | 0.100 | 342.343 | 05/05/1981 |
| 1981-1982 | 7245 | 352.949 | 13/07/1981 | 6.500 | 345.670 | 01/06/1981 |
| 1982-1983 | 6505 | 352.700 | 19/08/1982 | 1.210 | 345.500 | 08/05/1983 |
| 1983-1984 | 9510 | 353.860 | 02/07/1983 | 5.900 | 345.620 | 14/06/1983 |
| 1984-1985 | 6601 | 352.940 | 23/07/1984 | 13.40 | 345.790 | 29/05/1985 |
| 1985-1986 | 5487 | 352.570 | 06/08/1985 | 8.500 | 345.800 | 10/05/1986 |
| 1986-1987 | 5225 | 352.670 | 16/08/1986 | 5.500 | 345.745 | 02/05/1987 |
| 1987-1988 | 4741 | 351.975 | 11/07/1987 | 5.000 | 345.740 | 15/06/1987 |
| 1988-1989 | 8935 | 353.790 | 09/08/1988 | 7.236 | 345.740 | 29/05/1989 |
| 1989-1990 | 7764 | 353.865 | 30/07/1989 | 8.064 | 345.760 | 01/06/1989 |
| 1990-1991 | 7752 | 353.460 | 23/08/1990 | 9.147 | 345.870 | 12/05/1991 |
| 1991-1992 | 8748 | 354.040 | 03/08/1991 | 7.884 | 346.030 | 24/05/1992 |
| 1992-1993 | 4415 | 352.055 | 18/08/1992 | 0.855 | 345.770 | 16/05/1993 |
| 1993-1994 | 5411 | 352.660 | 20/10/1993 | 13.65 | 345.988 | 03/06/1993 |
| 1994-1995 | 10126 | 355.120 | 21/07/1994 | 3.003 | 345.750 | 11/05/1995 |
| 1995-1996 | 3911 | 351.385 | 25/07/1995 | 1.847 | 345.660 | 11/05/1996 |
| 1996-1997 | 5342 | 352.870 | 08/10/1996 | 6.111 | 345.760 | 31/05/1997 |

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 | 8910 | 354.290 | 12/08/1997 | 3.343 | 345.650 | 24/05/1998 |
| 1998-1999 | 5464 | 352.810 | 15/10/1998 | 8.130 | 345.800 | 09/05/1999 |
| 1999-2000 | 7267 | 353.785 | 28/07/1999 | 4.176 | 345.760 | 21/05/2000 |
| 2000-2001 | 4831 | 352.400 | 17/07/2000 | 2.091 | 345.680 | 27/05/2001 |
| 2001-2002 | 4254 | 351.970 | 09/10/2001 | 1.130 | 345.650 | 15/07/2001 |
| 2002-2003 | 3916 | 351.770 | 16/08/2002 | 2.087 | 345.700 | 09/07/2002 |
| 2003-2004 | 1369 | 348.440 | 02/08/2003 | 7.423 | 345.890 | 04/06/2003 |
| 2004-2005 | 5307 | 353.195 | 09/08/2004 | 5.675 | 345.910 | 23/07/2004 |
| 2005-2006 | 10459 | 356.350 | 08/08/2005 | 9.191 | 345.980 | 04/05/2006 |
| 2006-2007 | 9193 | 355.260 | 17/08/2006 | 5.940 | 345.670 | 10/05/2007 |
| 2007-2008 | 7772 | 353.950 | 10/08/2007 | 6.255 | 345.630 | 18/05/2008 |
| 2008-2009 | 8300 | 354.290 | 20/08/2008 | 3.201 | 345.550 | 20/07/2008 |
| 2009-2010 | 13909 | 357.840 | 02/10/2009 | 3.073 | 345.560 | 05/06/2009 |
| 2010-2011 | 8097 | 354.240 | 31/07/2010 | 10.38 | 345.610 | 15/05/2011 |
| 2011-2012 | 8470 | 354.770 | 08/09/2011 | 0.460 | 345.210 | 04/04/2012 |
| 2012-2013 | 4313 | 351.340 | 06/09/2012 | 0.276 | 345.320 | 19/03/2013 |
| 2013-2014 | 6962 | 353.360 | 28/07/2013 | 1.669 | 345.250 | 07/07/2013 |
| 2014-2015 | 4783 | 351.710 | 05/08/2014 | 0.924 | 345.300 | 27/07/2014 |
| 2015-2016 | 714.8 | 348.060 | 12/09/2015 | 0.000 | 344.910 | 30/03/2016 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Huvinhedigi ( AK000N2)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Middle Krishna SD 2 , Kurnool**

| 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 | 345.230 | 0.000 | 345.380 | 1.502 | 347.050 | 319.8 | 347.110 | 316.7 | 346.820 | 239.8 | 345.990 | 25.61 |
| 2 | 345.230 | 0.000 | 345.330 | 0.993 | 347.010 | 313.1 | 346.960 | 254.6 | 346.720 | 183.8 * | 345.990 | 24.96 |
| 3 | 345.230 | 0.000 | 345.290 | 0.700 * | 348.490 | 1237 | 346.830 | 224.8 | 346.790 | 245.0 | 345.990 | 25.56 * |
| 4 | 345.230 | 0.000 | 345.305 | 0.717 | 351.500 | 4357 | 346.370 | 89.21 * | 346.650 | 183.6 | 345.990 | 25.56 * |
| 5 | 345.230 | 0.000 | 345.330 | 0.971 | 354.130 | 7031 | 346.010 | 27.92 * | 346.580 | 161.9 | 345.990 | 24.82 |
| 6 | 345.230 | 0.000 | 345.270 | 0.477 | 352.540 | 6101 | 346.080 | 36.67 | 346.530 | 156.1 | 345.990 | 25.56 * |
| 7 | 345.230 | 0.000 | 345.260 | 0.480 * | 351.860 | 4451 | 346.070 | 34.27 | 346.550 | 133.5 * | 345.990 | 24.40 |
| 8 | 345.230 | 0.000 | 345.210 | 0.000 | 352.290 | 5712 | 345.990 | 24.72 | 346.380 | 117.4 | 345.990 | 24.18 |
| 9 | 345.230 | 0.000 | 345.180 | 0.000 | 352.650 | 6277 | 345.900 | 15.02 | 346.170 | 50.73 * | 345.990 | 23.85 |
| 10 | 345.230 | 0.000 | 345.180 | 0.000 | 353.020 | 6878 | 345.900 | 15.28 | 346.090 | 64.00 | 345.990 | 23.45 |
| 11 | 345.230 | 0.000 | 345.180 | 0.000 | 353.230 | 7054 * | 345.900 | 16.26 * | 346.080 | 37.03 * | 345.990 | 23.96 |
| 12 | 345.230 | 0.000 | 345.180 | 0.000 | 352.490 | 5422 | 346.150 | 49.59 | 346.060 | 34.29 * | 345.990 | 23.10 |
| 13 | 345.230 | 0.000 | 345.160 | 0.000 | 349.890 | 2010 | 346.250 | 64.78 * | 346.080 | 59.52 | 345.990 | 25.56 * |
| 14 | 345.230 | 0.000 | 345.100 | 0.000 | 349.660 | 2479 | 346.150 | 48.47 | 346.110 | 69.36 | 345.990 | 25.56 * |
| 15 | 345.305 | 0.694 | 344.980 | 0.000 | 348.390 | 901.9 | 346.530 | 133.7 | 346.090 | 62.48 | 345.990 | 25.02 |
| 16 | 345.420 | 1.802 | 344.880 | 0.000 | 347.320 | 367.9 | 347.370 | 425.8 | 346.090 | 38.44 * | 345.990 | 25.33 |
| 17 | 345.420 | 1.784 | 344.620 | 0.000 | 346.890 | 237.5 | 347.200 | 320.6 | 346.090 | 62.22 | 345.990 | 24.88 |
| 18 | 345.380 | 1.344 | 344.620 | 0.000 | 347.400 | 406.8 | 346.610 | 150.3 * | 346.090 | 65.19 | 345.990 | 25.11 |
| 19 | 345.290 | 0.700 * | 349.320 | 2556 # | 347.030 | 313.8 | 346.320 | 78.50 | 346.090 | 64.57 | 345.990 | 24.63 |
| 20 | 345.430 | 1.942 | 348.650 | 1212 | 346.830 | 232.3 | 346.150 | 43.21 | 346.090 | 63.09 | 345.990 | 25.56 * |
| 21 | 345.430 | 1.856 | 347.170 | 340.0 | 347.450 | 496.3 * | 346.060 | 43.10 | 346.090 | 63.97 | 345.990 | 24.46 |
| 22 | 345.800 | 30.99 | 346.610 | 183.1 | 347.290 | 395.2 | 348.195 | 1050 | 346.000 | 26.72 * | 345.990 | 25.20 |
| 23 | 345.680 | 18.25 | 346.045 | 50.82 | 346.820 | 220.3 | 347.700 | 610.9 | 346.010 | 27.92 * | 345.990 | 25.56 * |
| 24 | 345.490 | 6.583 | 345.840 | 11.26 * | 346.810 | 216.8 | 349.235 | 1925 | 345.990 | 25.46 | 345.990 | 25.56 * |
| 25 | 345.490 | 6.300 | 347.720 | 713.3 | 346.810 | 218.6 | 349.235 | 1820 | 345.990 | 24.61 | 345.990 | 25.56 * |
| 26 | 345.460 | 2.050 * | 347.700 | 669.5 | 346.760 | 216.3 | 349.610 | 2092 | 345.990 | 24.17 | 345.990 | 24.74 |
| 27 | 345.440 | 2.005 | 347.870 | 806.2 | 346.860 | 244.4 | 349.780 | 2327 * | 345.990 | 24.70 | 345.990 | 25.56 * |
| 28 | 345.440 | 1.911 | 348.110 | 951.2 | 348.010 | 812.3 * | 348.900 | 1386 | 345.990 | 25.28 | 345.990 | 24.46 |
| 29 | 345.440 | 1.817 | 347.330 | 349.6 | 347.120 | 335.9 | 347.430 | 443.3 | 345.990 | 25.53 | 345.990 | 23.88 |
| 30 | 345.440 | 1.880 | 347.300 | 336.2 | 346.960 | 258.1 | 347.180 | 357.1 | 345.990 | 25.56 * | 345.990 | 23.64 |
| 31 | | | 347.140 | 344.3 * | 347.040 | 284.3 | | | 345.990 | 24.85 | | |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 345.230 | 0.000 | 345.273 | 0.584 | 351.054 | 4268 | 346.322 | 103.9 | 346.528 | 153.6 | 345.990 | 24.79 |
| II Ten-Daily | 345.316 | 0.827 | 345.769 | 376.8 | 348.913 | 1942 | 346.463 | 133.1 | 346.087 | 55.62 | 345.990 | 24.87 |
| III Ten-Daily | 345.511 | 7.364 | 347.167 | 432.3 | 347.085 | 336.2 | 348.332 | 1205 | 346.002 | 28.98 | 345.990 | 24.86 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 345.230 | 0.000 | 344.620 | 0.000 | 346.760 | 216.3 | 345.900 | 15.02 | 345.990 | 24.17 | 345.990 | 23.10 |
| Max. | 345.800 | 30.99 | 349.320 | 2556 | 354.130 | 7054 | 349.780 | 2327 | 346.820 | 245.0 | 345.990 | 25.61 |
| Mean | 345.352 | 2.73 | 346.105 | 275.1 | 348.955 | 2123 | 347.039 | 480.8 | 346.199 | 77.77 | 345.990 | 24.84 |

**Annual Runoff in MCM = 8143 Annual Runoff in mm = 147**

**Peak Observed Discharge = 7031 cumecs on 05/08/2016 Corres. Water Level :354.13 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016 Corres. Water Level :345.23 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*

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Huvinhedigi ( AK000N2)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Middle Krishna SD 2 , Kurnool**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 345.990 | 24.11 | 346.010 | 30.08 * | 345.710 | 8.010 | 345.450 | 0.000 | 345.700 | 10.86 | 345.310 | 0.000 |
| 2 | 345.970 | 26.31 * | 346.030 | 30.07 | 345.710 | 10.54 * | 345.420 | 0.000 | 345.700 | 10.01 * | 345.310 | 0.000 |
| 3 | 346.040 | 33.93 * | 346.030 | 0.700 | 345.710 | 7.711 | 345.400 | 0.000 | 345.700 | 9.906 | 345.310 | 0.000 |
| 4 | 346.080 | 39.52 * | 346.030 | 33.62 | 345.710 | 7.361 | 345.370 | 0.000 | 345.700 | 9.330 | 345.310 | 0.000 |
| 5 | 346.090 | 45.03 | 345.900 | 16.31 | 345.710 | 10.54 * | 345.340 | 0.000 | 345.700 | 10.01 * | 345.310 | 0.000 |
| 6 | 346.100 | 56.72 | 345.840 | 14.78 | 345.710 | 10.54 * | 345.310 | 0.000 | 345.700 | 9.086 | 345.310 | 0.000 |
| 7 | 346.000 | 29.18 | 345.800 | 0.480 | 345.710 | 10.54 * | 345.280 | 0.000 | 345.700 | 9.461 | 345.310 | 0.000 |
| 8 | 346.000 | 28.77 | 345.760 | 13.29 * | 345.710 | 10.54 * | 345.240 | 0.000 | 345.700 | 9.756 | 345.310 | 0.000 |
| 9 | 346.000 | 28.24 | 345.730 | 6.759 | 345.710 | 10.54 * | 345.420 | 0.000 | 345.700 | 10.01 * | 345.310 | 0.000 |
| 10 | 346.000 | 29.03 | 345.730 | 6.940 | 345.710 | 10.54 * | 345.710 | 11.91 | 345.700 | 9.955 | 345.310 | 0.000 |
| 11 | 346.000 | 28.87 * | 345.730 | 6.452 | 345.730 | 11.62 * | 345.710 | 10.73 | 345.700 | 10.12 | 345.310 | 0.000 |
| 12 | 346.000 | 28.87 * | 345.730 | 6.271 | 345.770 | 13.86 * | 345.740 | 12.17 * | 345.280 | 0.000 | 345.310 | 0.000 |
| 13 | 345.990 | 26.91 | 345.730 | 7.007 | 345.870 | 23.22 | 345.760 | 13.29 * | 346.640 | 188.0 | 345.310 | 0.000 |
| 14 | 345.990 | 0.000 | 345.730 | 6.638 | 345.910 | 22.38 * | 345.780 | 14.44 * | 346.350 | 93.22 * | 345.310 | 0.000 |
| 15 | 345.890 | 21.11 * | 345.730 | 11.62 * | 345.920 | 23.03 * | 345.780 | 14.44 * | 346.050 | 48.17 | 345.310 | 0.000 |
| 16 | 345.800 | 18.56 | 345.730 | 6.412 | 345.930 | 23.68 * | 345.730 | 11.62 * | 345.910 | 22.38 * | 345.310 | 0.000 |
| 17 | 345.800 | 18.18 | 345.730 | 6.191 | 345.950 | 24.99 * | 345.700 | 10.01 * | 345.740 | 12.60 | 345.310 | 0.000 |
| 18 | 345.780 | 14.44 * | 345.730 | 6.898 | 345.950 | 24.99 * | 345.700 | 10.23 | 345.840 | 21.57 | 345.310 | 0.000 |
| 19 | 345.750 | 0.700 | 345.920 | 23.33 | 345.940 | 0.700 * | 345.700 | 0.700 * | 345.650 | 0.700 | 345.310 | 0.000 |
| 20 | 345.750 | 14.59 | 345.980 | 28.01 | 345.900 | 21.74 * | 345.700 | 9.947 | 345.490 | 0.000 | 345.310 | 0.000 |
| 21 | 345.720 | 11.08 * | 345.990 | 28.89 | 345.840 | 18.00 * | 345.700 | 9.550 | 345.440 | 0.000 | 345.310 | 0.000 |
| 22 | 345.650 | 5.018 | 345.990 | 27.69 * | 345.760 | 13.29 * | 345.700 | 10.04 | 345.440 | 0.000 | 345.310 | 0.000 |
| 23 | 345.650 | 5.227 | 345.980 | 27.43 | 345.720 | 11.08 * | 345.700 | 9.736 | 345.420 | 0.000 | 345.310 | 0.000 |
| 24 | 345.650 | 7.455 * | 345.980 | 27.78 | 345.710 | 10.54 * | 345.700 | 10.68 | 345.380 | 0.000 | 345.310 | 0.000 |
| 25 | 345.660 | 7.951 * | 346.050 | 34.83 | 345.700 | 10.01 * | 345.700 | 9.880 | 345.360 | 0.000 | 345.310 | 0.000 |
| 26 | 345.750 | 2.050 | 346.040 | 33.93 * | 345.680 | 2.050 * | 345.700 | 2.050 * | 345.340 | 2.050 | 345.310 | 0.000 |
| 27 | 345.780 | 16.80 | 345.940 | 24.50 | 345.650 | 7.455 * | 345.700 | 9.203 | 345.320 | 0.000 | 345.310 | 0.000 |
| 28 | 345.850 | 17.16 | 345.875 | 20.15 | 345.530 | 0.000 | 345.700 | 9.752 | 345.310 | 0.000 | 345.310 | 0.000 |
| 29 | 345.875 | 17.37 | 345.780 | 14.44 * | | | 345.700 | 10.01 * | 345.310 | 0.000 | 345.310 | 0.000 |
| 30 | 345.980 | 24.99 | 345.710 | 7.816 | | | 345.700 | 10.19 | 345.310 | 0.000 | 345.310 | 0.000 |
| 31 | 345.990 | 28.28 * | 345.710 | 7.562 | | | 345.700 | 10.64 | | | 345.310 | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 346.027 | 34.08 | 345.886 | 15.30 | 345.710 | 9.686 | 345.394 | 1.191 | 345.700 | 9.838 | 345.310 | 0.000 |
| II Ten-Daily | 345.875 | 17.22 | 345.774 | 10.88 | 345.887 | 19.02 | 345.730 | 10.76 | 345.865 | 39.67 | 345.310 | 0.000 |
| III Ten-Daily | 345.778 | 13.04 | 345.913 | 23.18 | 345.699 | 9.053 | 345.700 | 9.248 | 345.363 | 0.205 | 345.310 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 345.650 | 0.000 | 345.710 | 0.480 | 345.530 | 0.000 | 345.240 | 0.000 | 345.280 | 0.000 | 345.310 | 0.000 |
| Max. | 346.100 | 56.72 | 346.050 | 34.83 | 345.950 | 24.99 | 345.780 | 14.44 | 346.640 | 188.0 | 345.310 | 0.000 |
| Mean | 345.890 | 21.18 | 345.860 | 16.67 | 345.770 | 12.84 | 345.611 | 7.136 | 345.643 | 16.57 | 345.310 | 0 |

**Peak Computed Discharge = 7054 cumecs on 11/08/2016** **Corres. Water Level :353.23 m**

**Lowest Computed Discharge = 0.480 cumecs on 07/07/2016** **Corres. Water Level :345.26 m**

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

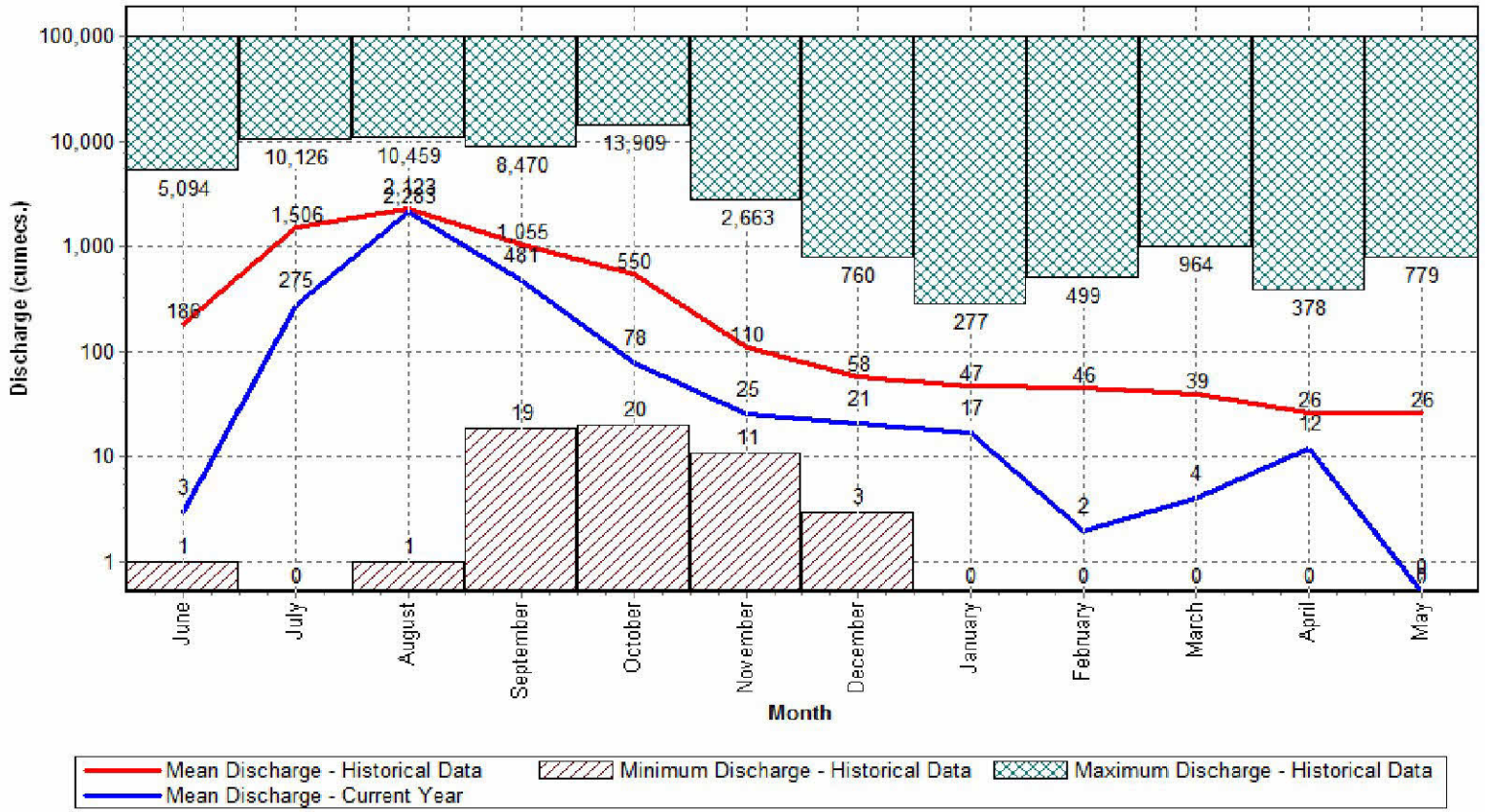
#:Discarded Discharge (values changed as per rating curve)

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Huvinhedigi ( AK000N2)** | **Data considered : 1976-2017** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** | **Sub-Division : Middle Krishna SD 2 , Kurnool**



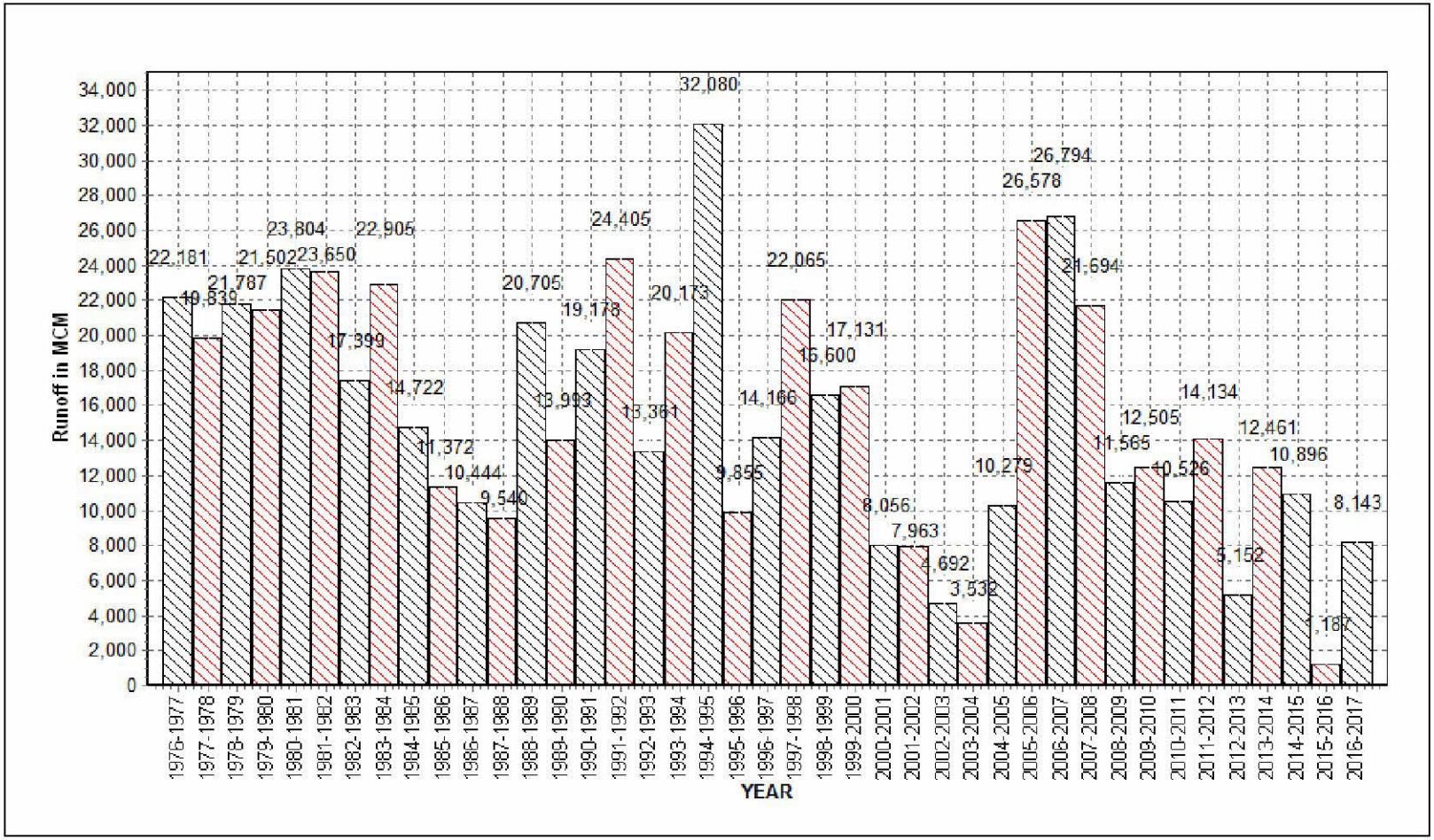
## Annual Runoff Values for the period: 1976 - 2017

**Station Name : Huvinhedigi ( AK000N2)**

**Local River : Krishna**

**Division : Lower Krishna Divn., Hyderabad**

**Sub-Division : Middle Krishna SD 2 , Kurnool**

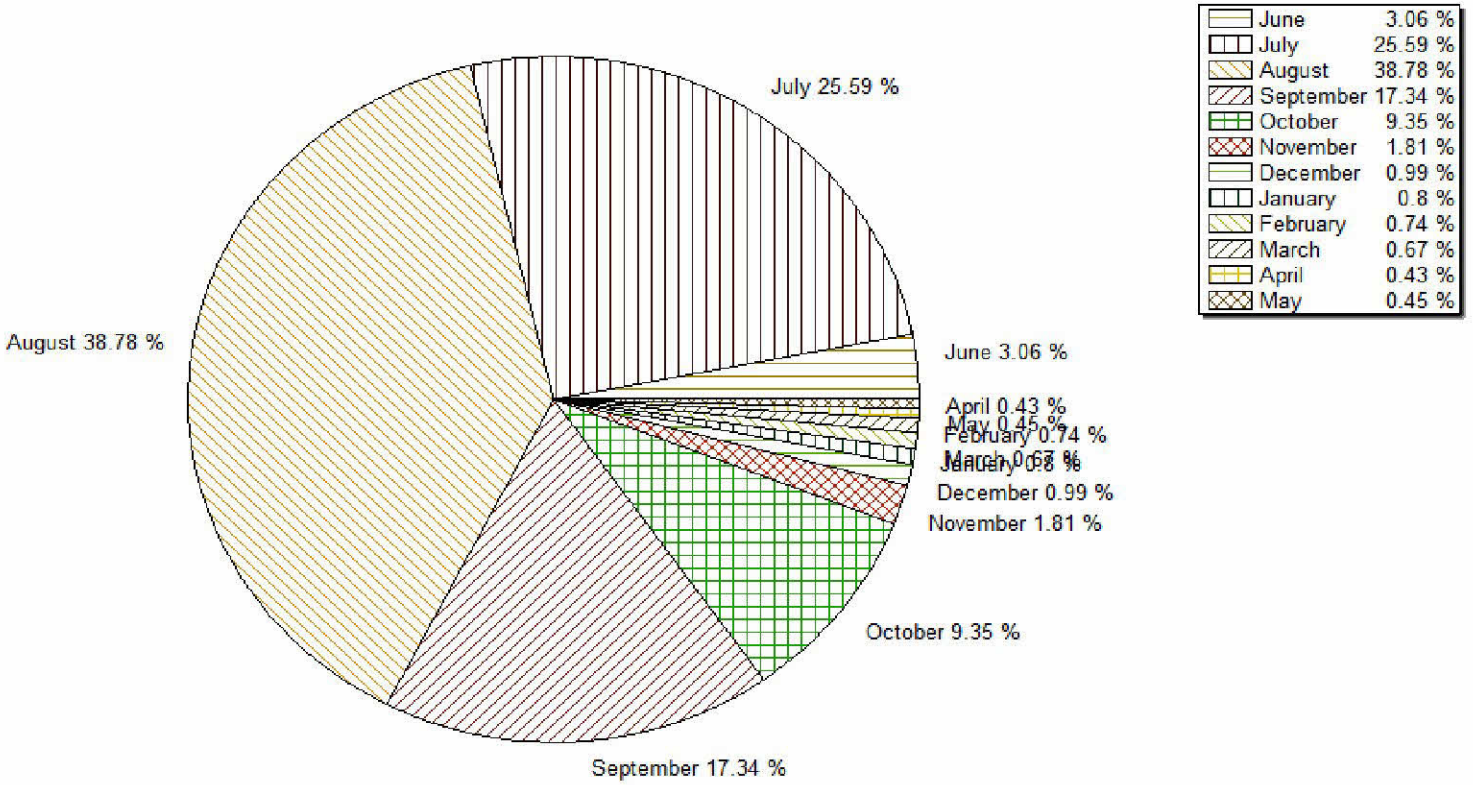



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1976-2016**

**Station Name : Huvinhedigi ( AK000N2)**
**Local River : Krishna**

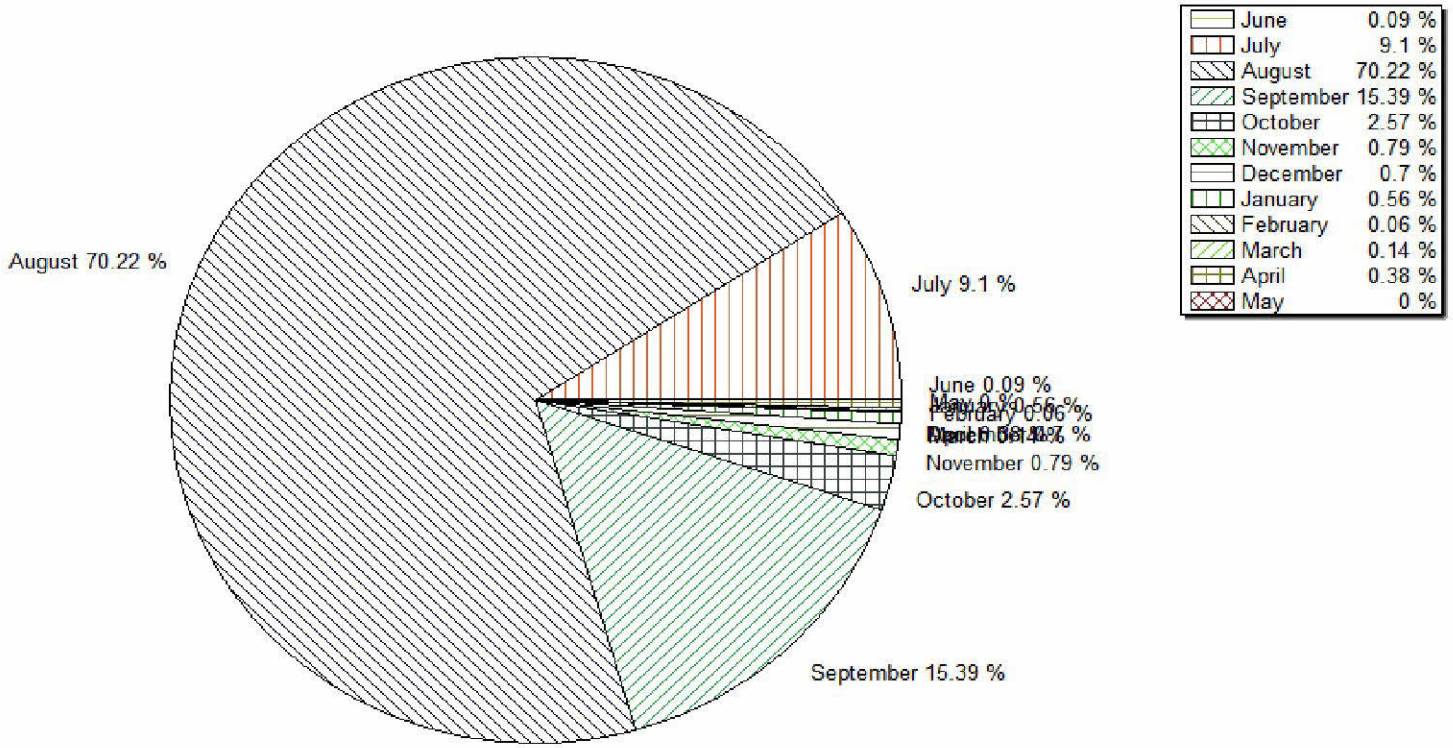
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Middle Krishna SD 2 , Kurnool**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Huvinhedigi ( AK000N2)**
**Local River : Krishna**

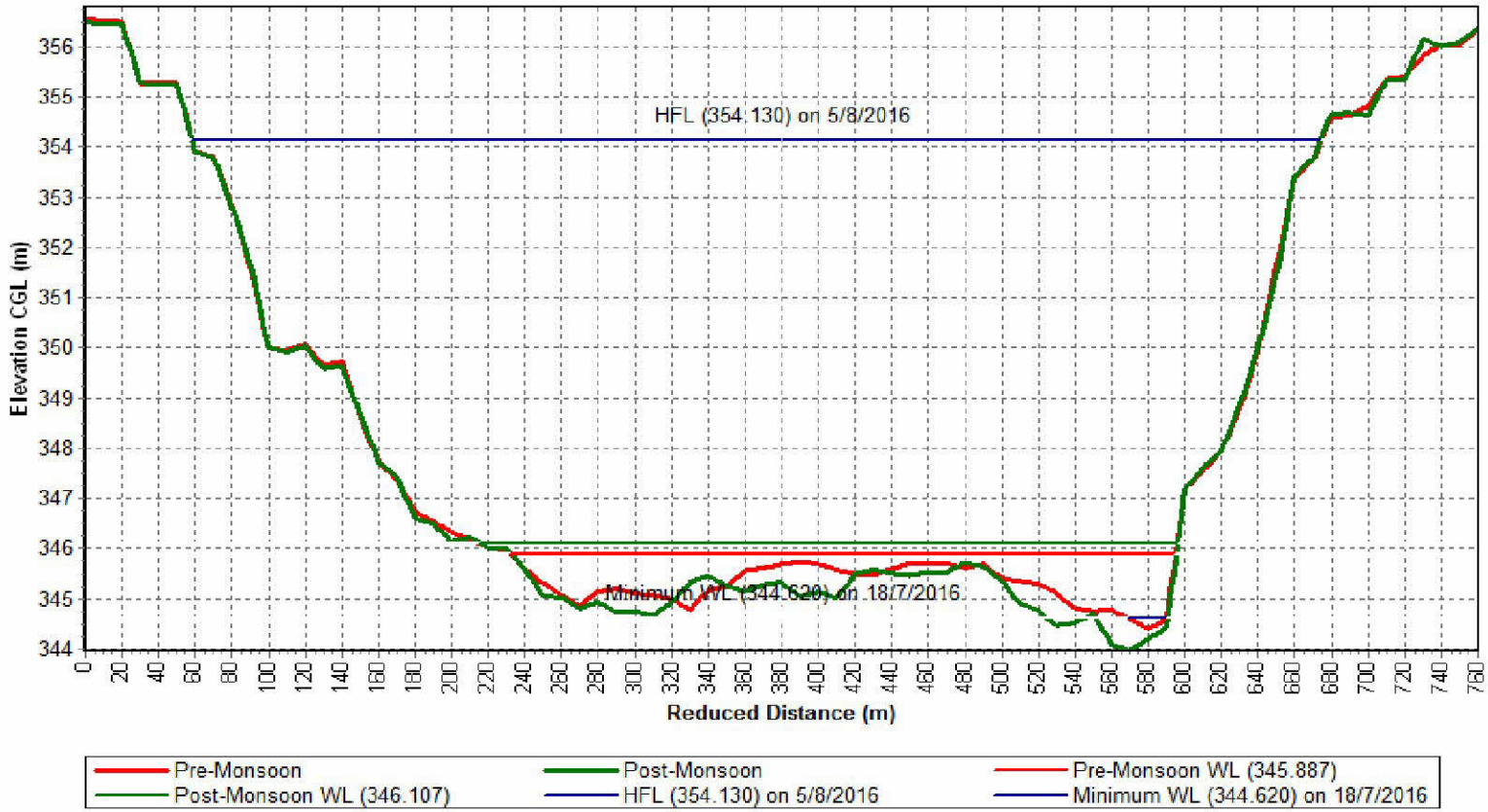
**Division : Lower Krishna Divn., Hyderabad**
**Sub-Division : Middle Krishna SD 2 , Kurnool**



## Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017

**Station Name : Huvinhedigi ( AK000N2)** | **Division : Lower Krishna Divn., Hyderabad**

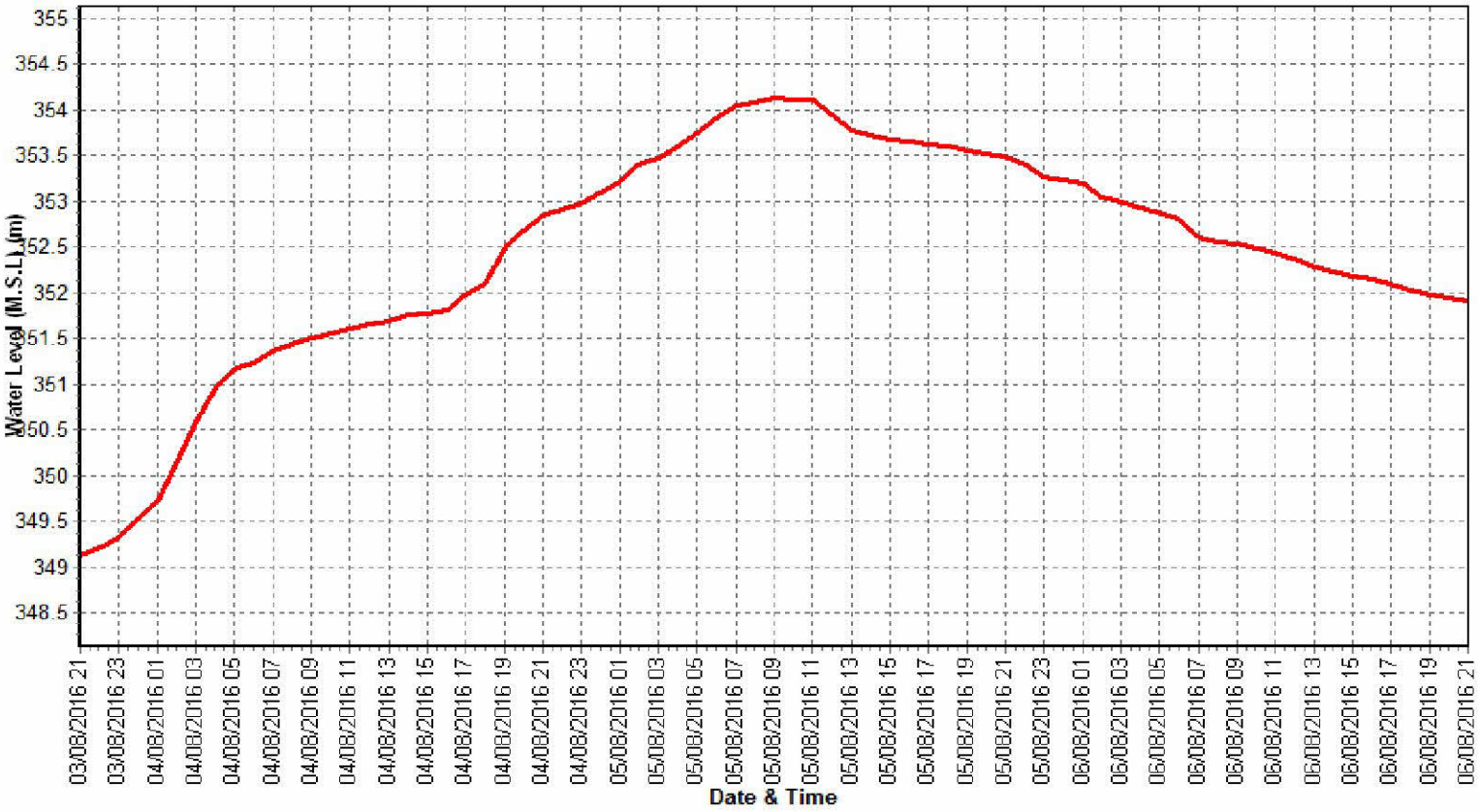
**Local River : Krishna** | **Sub-Division : Middle Krishna SD 2 , Kurnool**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Huvinhedigi ( AK000N2)** | **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** | **Sub-Division : Middle Krishna SD 2 , Kurnool**

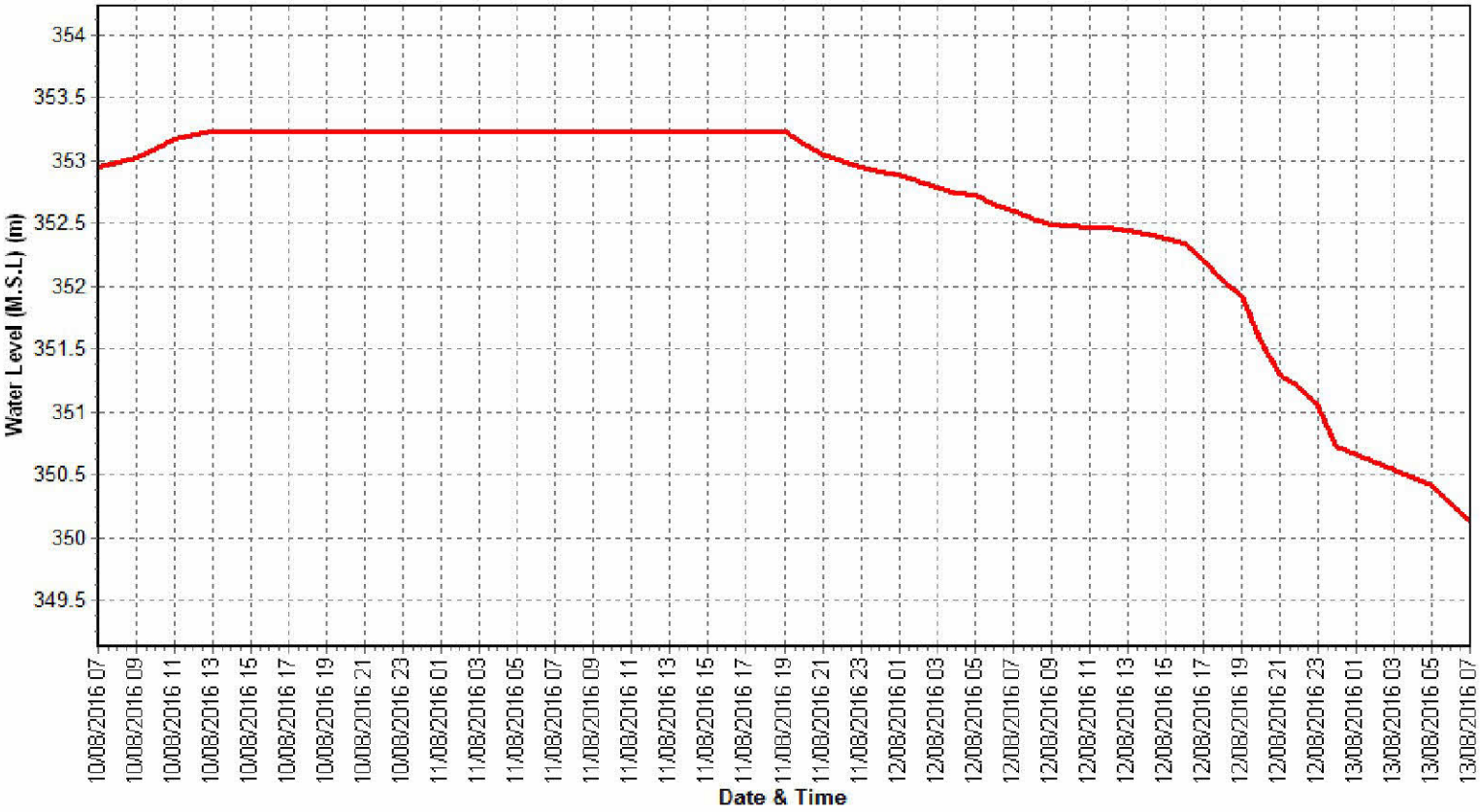



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Huvinhedigi ( AK000N2)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Middle Krishna SD 2 , Kurnool**

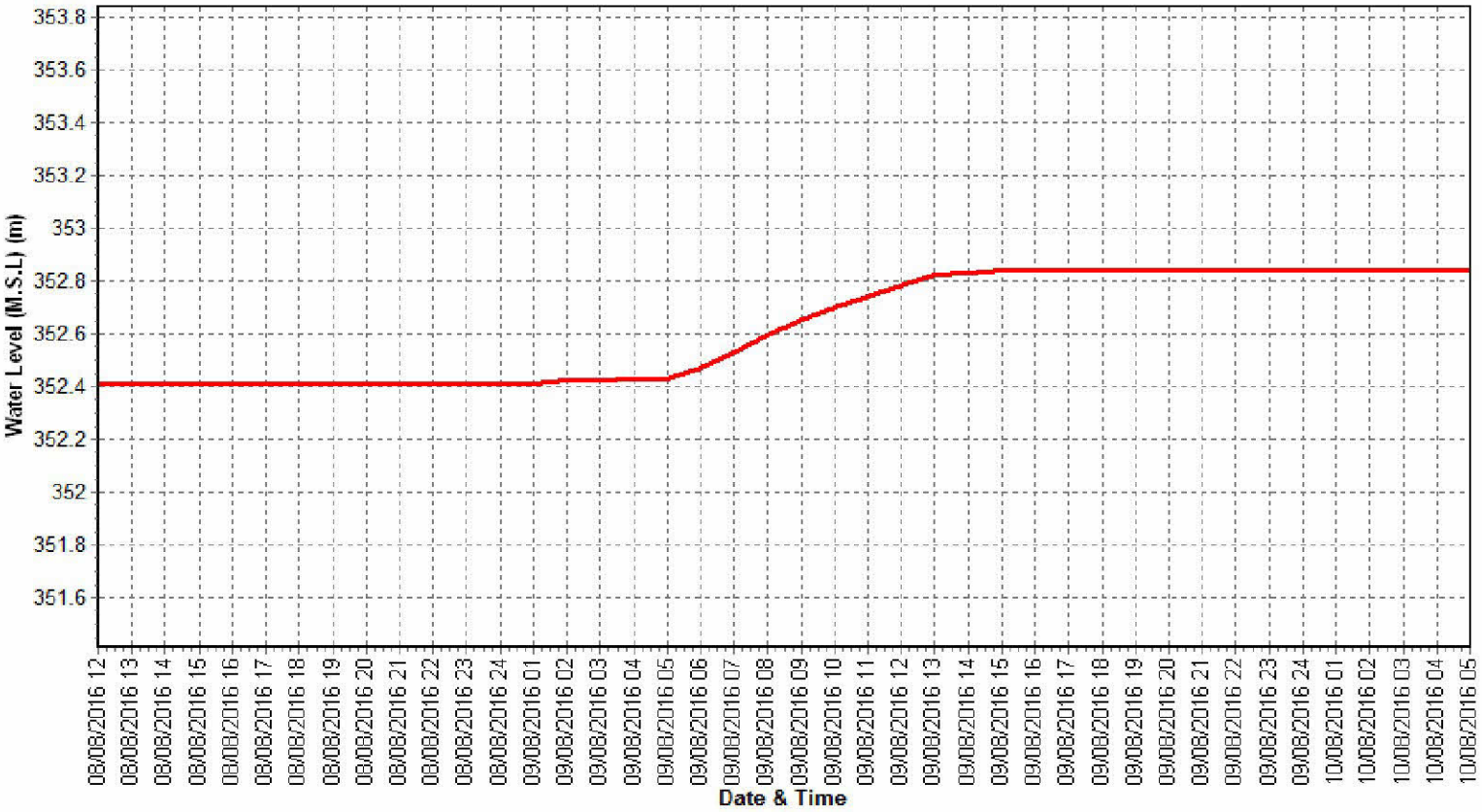



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Huvinhedigi ( AK000N2)** **Division : Lower Krishna Divn., Hyderabad**

**Local River : Krishna** **Sub-Division : Middle Krishna SD 2 , Kurnool**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Talikot (Seasonal)** | | **Code** | **: AKQ00E2** | |
| State | : Karnataka | | District | Bijapur | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Don | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Don | |
| Division | : Upper Krishna Divn, Pune | | Sub-Division | : Middle Krishna SD 1, Bagalkot | |
| Drainage Area | : 2486 Sq. Km. | | Bank | : Left | |
| Latitude | : 16°29'01" | | Longitude | : 76°17'03" | |
| **Zero of Gauge (m)** | : 48 (m.s.l)<br>496 (m.s.l) | | 21/03/1990<br>01/06/2010 | - 31/05/2010 | |
| | Opening Date | | Closing Date | | |
| Gauge | : 07/06/1990 | | **HFL During 2016-17** | **: 499.20m** | |
| | | | **Corres. Discharge** | **: 74.456(Estimated)** | |
| Discharge | : 21/09/1995 | | **Date & Time of occurance** | **: 31/07/2016 : 14.00 hrs.** | |
| 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** |
| 1996-1997 | 375.7 | 54.995 | 12/09/1996 | 0.000 | 50.095 | 31/03/1997 |
| 1997-1998 | 182.0 | 52.940 | 28/10/1997 | 0.000 | 50.150 | 30/04/1998 |
| 1998-1999 | 486.0 | 55.055 | 14/10/1998 | 0.000 | 50.365 | 18/07/1998 |
| 1999-2000 | 141.0 | 52.380 | 12/06/1999 | 0.000 | 50.130 | 23/03/2000 |
| 2000-2001 | 457.4 | 54.695 | 30/09/2000 | 0.000 | 50.130 | 01/03/2001 |
| 2001-2002 | 631.9 | 55.020 | 09/10/2001 | 0.000 | 50.050 | 25/01/2002 |
| 2002-2003 | 446.9 | 53.710 | 13/10/2002 | 0.000 | 50.130 | 25/01/2003 |
| 2003-2004 | 158.8 | 52.650 | 03/10/2003 | 0.000 | 50.185 | 22/01/2004 |
| 2004-2005 | 143.9 | 52.315 | 05/10/2004 | 0.000 | | 10/01/2005 |
| 2005-2006 | 190.7 | 53.140 | 08/09/2005 | 0.000 | 50.295 | 22/01/2006 |
| 2006-2007 | 234.7 | 53.180 | 20/06/2006 | 0.000 | 50.300 | 28/08/2006 |
| 2007-2008 | 748.5 | 55.290 | 24/06/2007 | 0.000 | 50.310 | 17/08/2007 |
| 2008-2009 | 337.8 | 53.820 | 26/08/2008 | 0.000 | 50.180 | 23/07/2008 |
| 2009-2010 | 1278 | 56.520 | 01/10/2009 | 0.390 | 50.260 | 07/06/2009 |
| 2010-2011 | 432.0 | 501.215 | 26/08/2010 | 0.000 | 497.720 | 10/06/2010 |
| 2011-2012 | 78.36 | 498.800 | 21/08/2011 | 0.000 | 497.070 | 26/06/2011 |
| 2012-2013 | 98.94 | 499.000 | 07/10/2012 | 0.000 | 496.990 | 05/07/2012 |
| 2013-2014 | 115.7 | 499.585 | 20/09/2013 | 0.000 | 497.230 | 21/07/2013 |
| 2014-2015 | 234.1 | 500.600 | 28/08/2014 | 0.000 | 497.360 | 31/07/2014 |
| 2015-2016 | 182.5 | 501.200 | 11/09/2015 | 0.000 | 497.370 | 27/06/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Talikot (Seasonal) ( AKQ00E2)** **Division : Upper Krishna Divn, Pune**

**Local River : Don** **Sub-Division : Middle Krishna SD 1, Bagalkot**

| 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 | 497.900 | 7.722 * | 497.750 | 5.068 | | 0.000 | | 0.000 |
| 2 | | 0.000 | | 0.000 | 497.510 | 2.219 * | 497.640 | 3.572 * | | 0.000 | | 0.000 |
| 3 | | 0.000 | | 0.000 | 497.240 | 0.000 | 497.320 | 0.930 * | | 0.000 | | 0.000 |
| 4 | | 0.000 | | 0.000 | 497.070 | 0.000 | 497.240 | 0.000 | | 0.000 | | 0.000 |
| 5 | | 0.000 | | 0.000 | 497.040 | 0.000 | 497.215 | 0.000 | | 0.000 | | 0.000 |
| 6 | | 0.000 | | 0.000 | 497.040 | 0.000 | 497.200 | 0.000 | | 0.000 | | 0.000 |
| 7 | | 0.000 | | 0.000 | 497.040 | 0.000 | 497.185 | 0.000 | | 0.000 | | 0.000 |
| 8 | | 0.000 | | 0.000 | 497.030 | 0.000 | 497.150 | 0.000 | | 0.000 | | 0.000 |
| 9 | | 0.000 | | 0.000 | | 0.000 | 497.075 | 0.000 | | 0.000 | | 0.000 |
| 10 | | 0.000 | | 0.000 | | 0.000 | 497.030 | 0.000 | | 0.000 | | 0.000 |
| 11 | | 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 |
| 13 | | 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 |
| 15 | | 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 |
| 17 | | 0.000 | | 0.000 | | 0.000 | 497.410 | 1.449 * | | 0.000 | | 0.000 |
| 18 | | 0.000 | | 0.000 | | 0.000 | 497.250 | 0.625 * | | 0.000 | | 0.000 |
| 19 | | 0.000 | | 0.000 | | 0.000 | 497.100 | 0.210 * | | 0.000 | | 0.000 |
| 20 | 497.060 | 0.000 | | 0.000 | | 0.000 | 497.750 | 5.073 * | | 0.000 | | 0.000 |
| 21 | 497.145 | 0.000 | | 0.000 | | 0.000 | 497.560 | 2.689 * | | 0.000 | | 0.000 |
| 22 | 497.340 | 0.000 | | 0.000 | | 0.000 | 497.400 | 1.384 * | | 0.000 | | 0.000 |
| 23 | 497.340 | 0.000 | | 0.000 | | 0.000 | 497.245 | 0.000 | | 0.000 | | 0.000 |
| 24 | 497.315 | 0.000 | | 0.000 | | 0.000 | 497.090 | 0.000 | | 0.000 | | 0.000 |
| 25 | 497.290 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 26 | 497.275 | 0.000 | 497.060 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 27 | 497.260 | 0.000 | 497.590 | 3.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 28 | 497.190 | 0.000 | 497.540 | 3.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 29 | 497.120 | 0.000 | 497.960 | 9.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 30 | 497.025 | 0.000 | 498.080 | 17.00 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| 31 | | | 499.030 | 60.00 | 498.340 | 20.41 * | | | | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | | 0.000 | 497.234 | 0.994 | 497.280 | 0.957 | | 0.000 | | 0.000 |
| II Ten-Daily | 497.060 | 0.000 | | 0.000 | | 0.000 | 497.378 | 0.736 | | 0.000 | | 0.000 |
| III Ten-Daily | 497.230 | 0.000 | 497.877 | 8.364 | 498.340 | 1.855 | 497.324 | 0.407 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 497.025 | 0.000 | 497.060 | 0.000 | 497.030 | 0.000 | 497.030 | 0.000 | | 0.000 | | 0.000 |
| Max. | 497.340 | 0.000 | 499.030 | 60.00 | 498.340 | 20.41 | 497.750 | 5.073 | | 0.000 | | 0.000 |
| Mean | 497.215 | 0 | 497.877 | 2.968 | 497.357 | 0.979 | 497.312 | 0.7 | | 0 | | 0 |

**Annual Runoff in MCM = 12 Annual Runoff in mm = 5**

**Peak Observed Discharge = 60.00 cumecs on 31/07/2016 Corres. Water Level :499.03 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

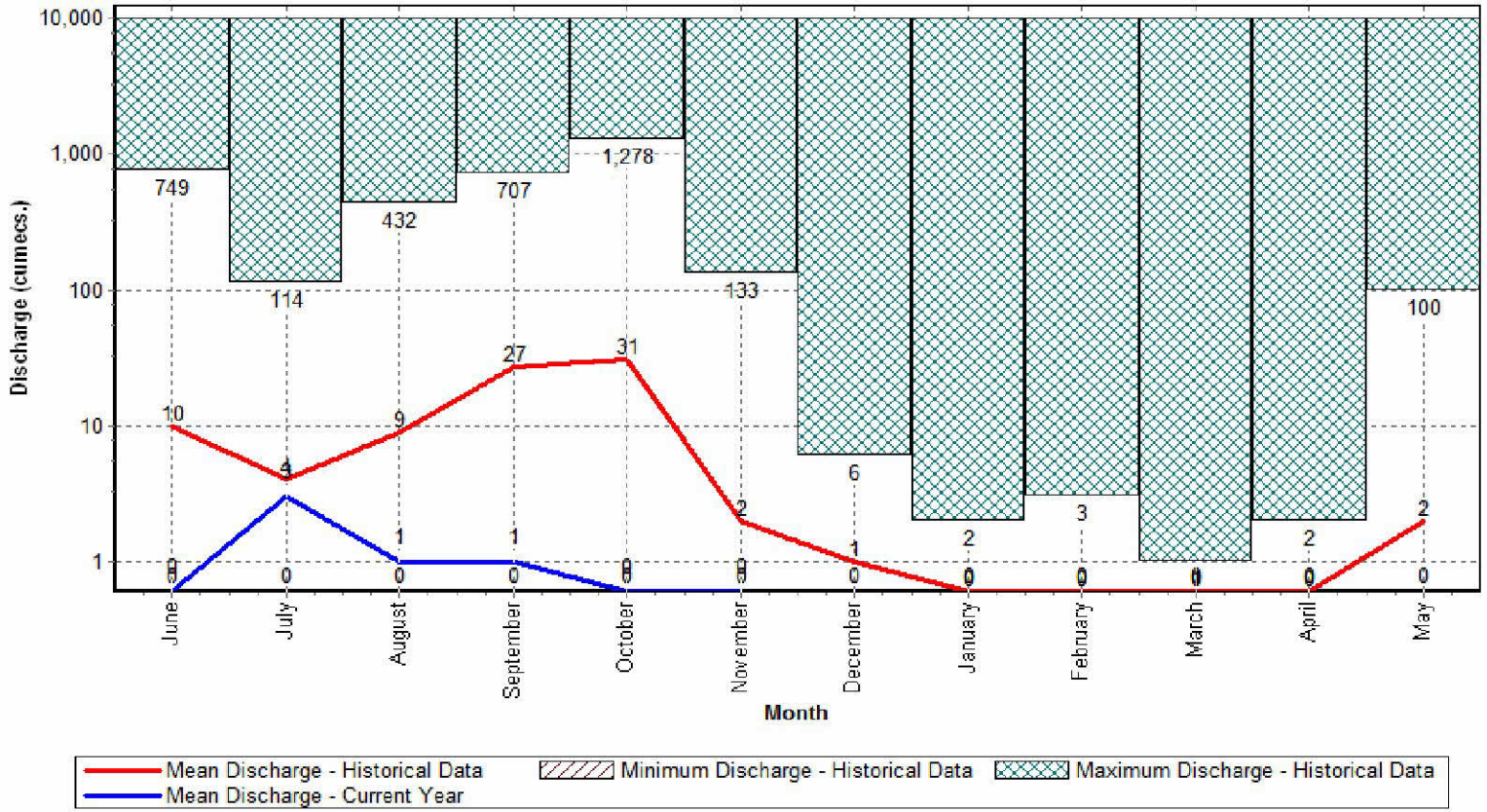
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Talikot (Seasonal) ( AKQ00E2)** **Data considered : 1996-2017** **Division : Upper Krishna Divn, Pune**

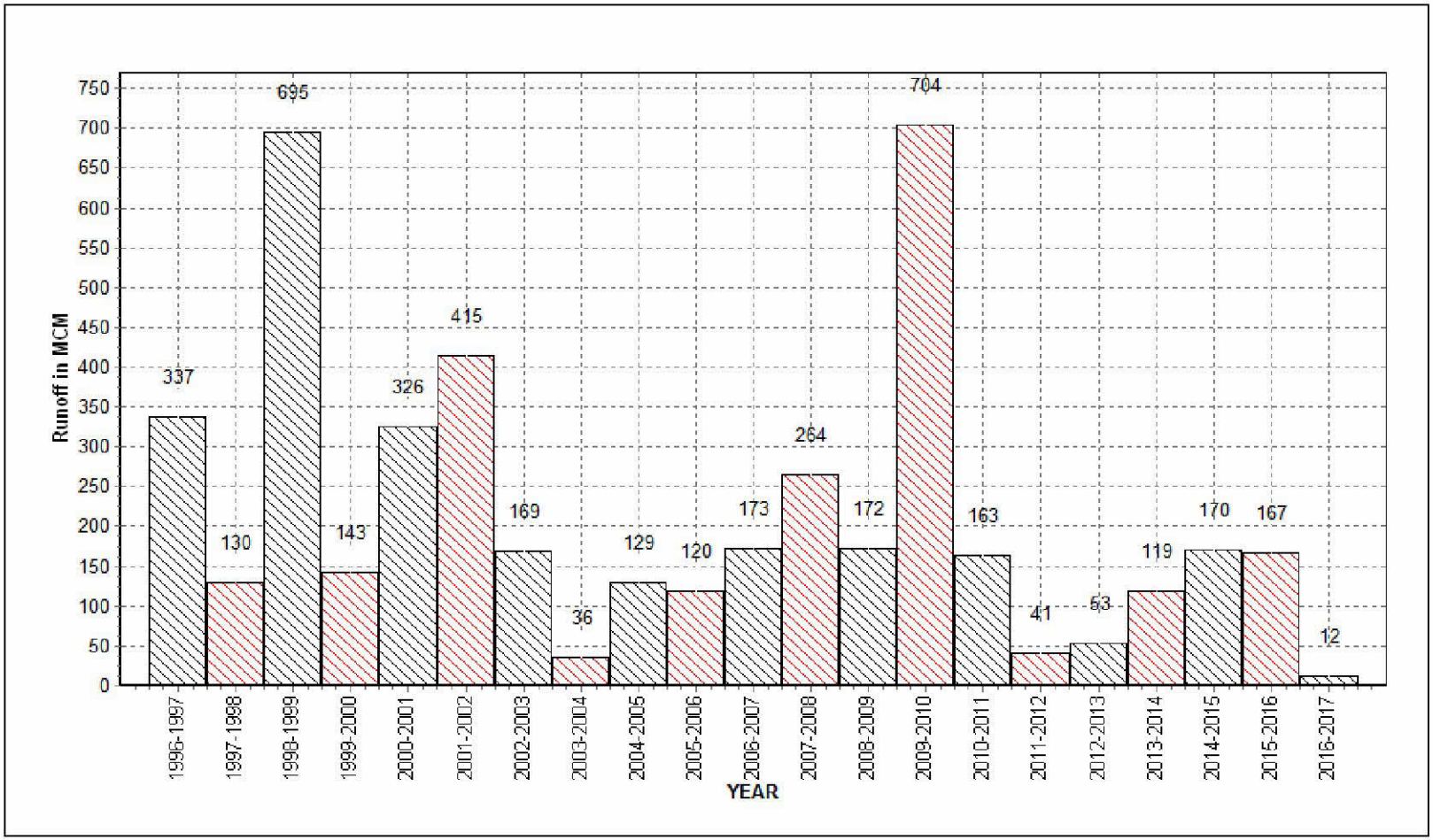
**Local River : Don** **Sub-Division : Middle Krishna SD 1, Bagalkot**


10,000
1,000
100
10
1
Discharge (cumecs.)
749
114
432
707
1,278
133
6
2
3
2
100
2
10
4
9
27
31
2
1
0
1
1
0
0
0

**Annual Runoff Values for the period: 1996 - 2017**

**Station Name : Talikot (Seasonal) ( AKQ00E2)** **Division : Upper Krishna Divn, Pune**

**Local River : Don** **Sub-Division : Middle Krishna SD 1, Bagalkot**

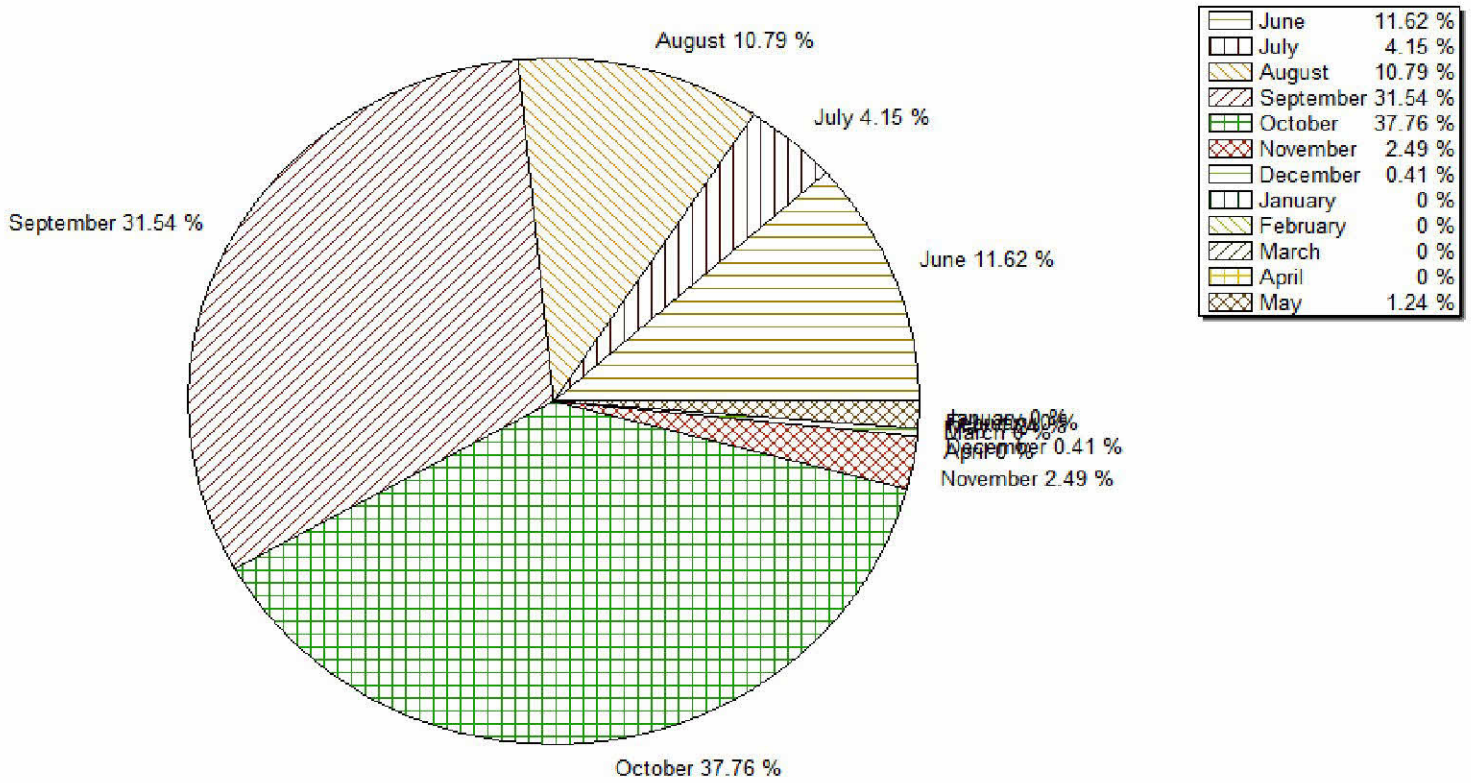



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1996-2016**

**Station Name : Talikot (Seasonal) ( AKQ00E2)**
**Local River : Don**

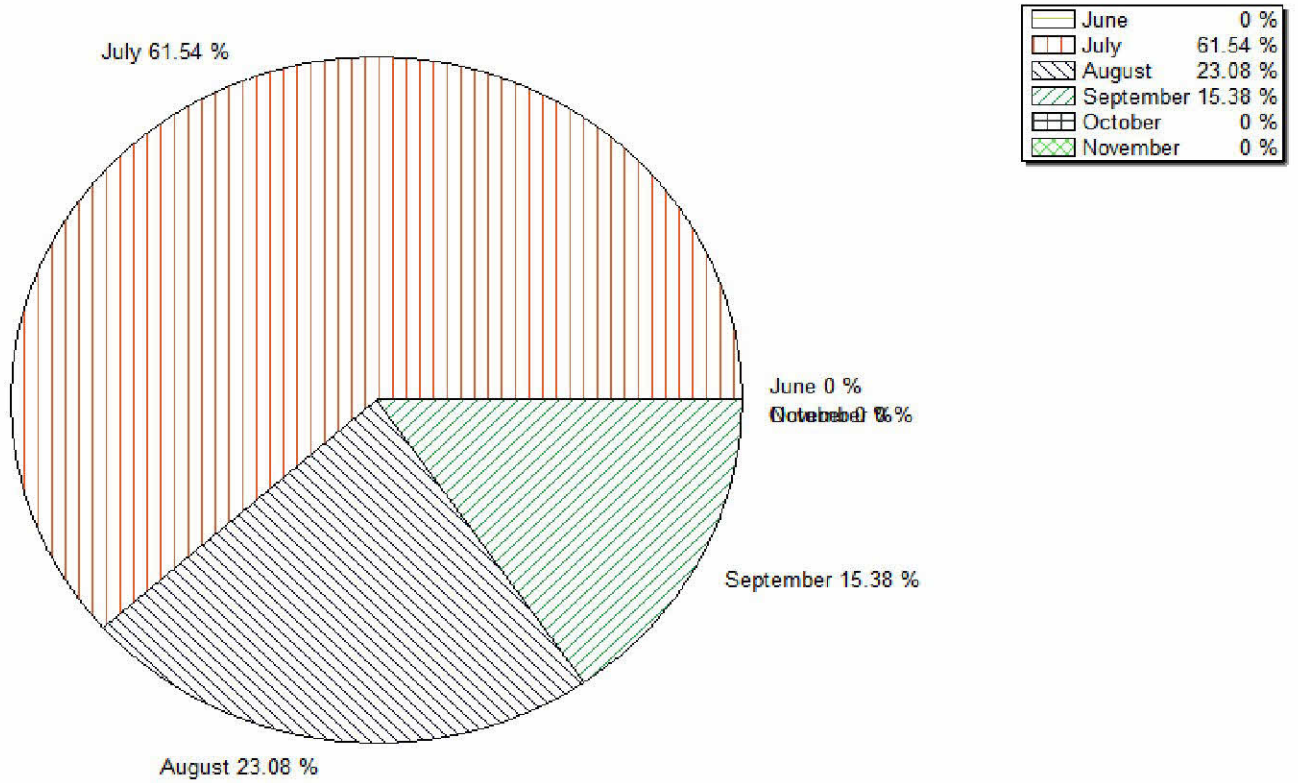
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Middle Krishna SD 1, Bagalkot**



**Monthly Runoff for the Year : 2016-2017**

**Station Name : Talikot (Seasonal) ( AKQ00E2)**
**Local River : Don**

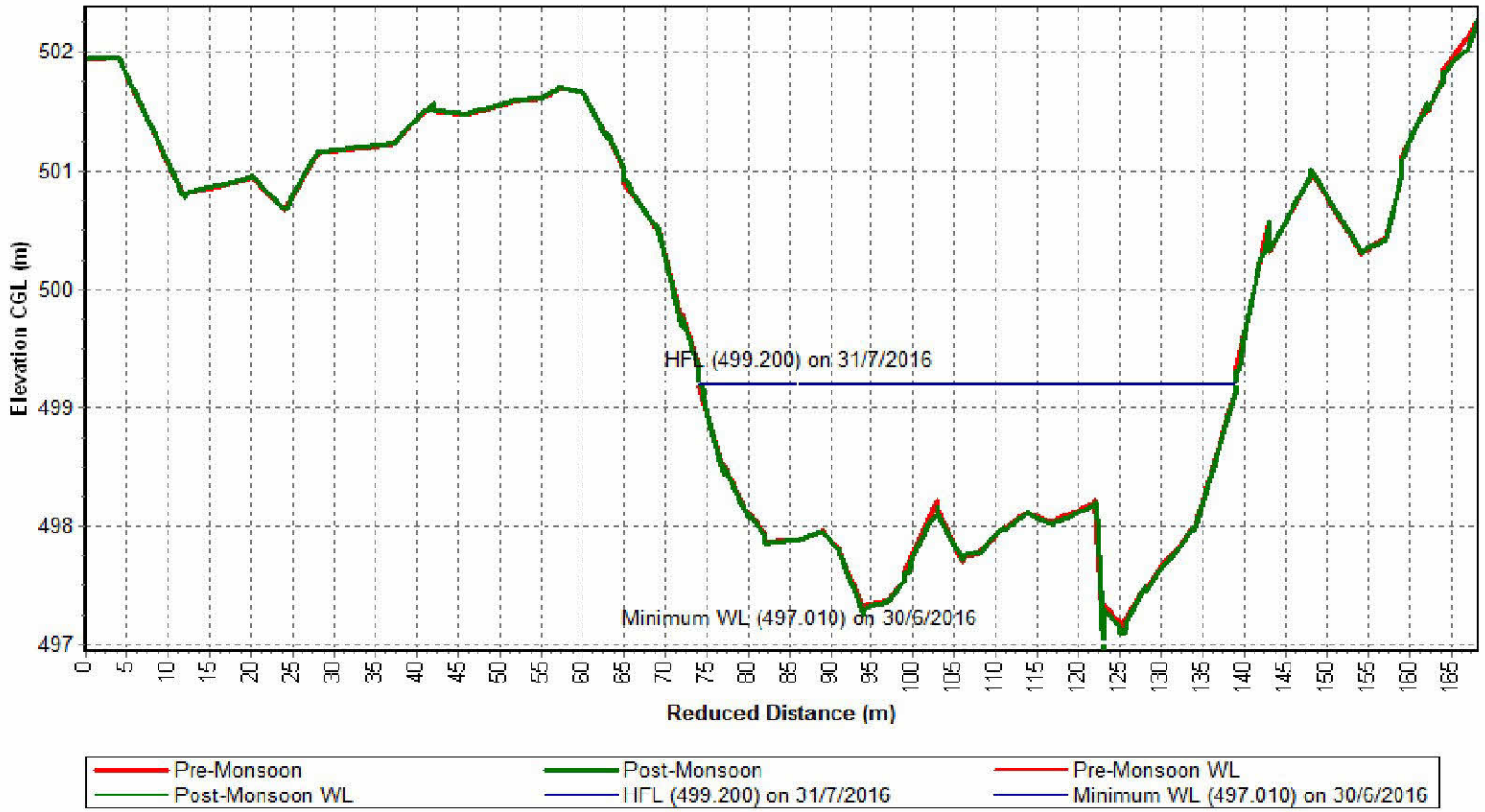
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Middle Krishna SD 1, Bagalkot**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Talikot (Seasonal) ( AKQ00E2)** **Division : Upper Krishna Divn, Pune**

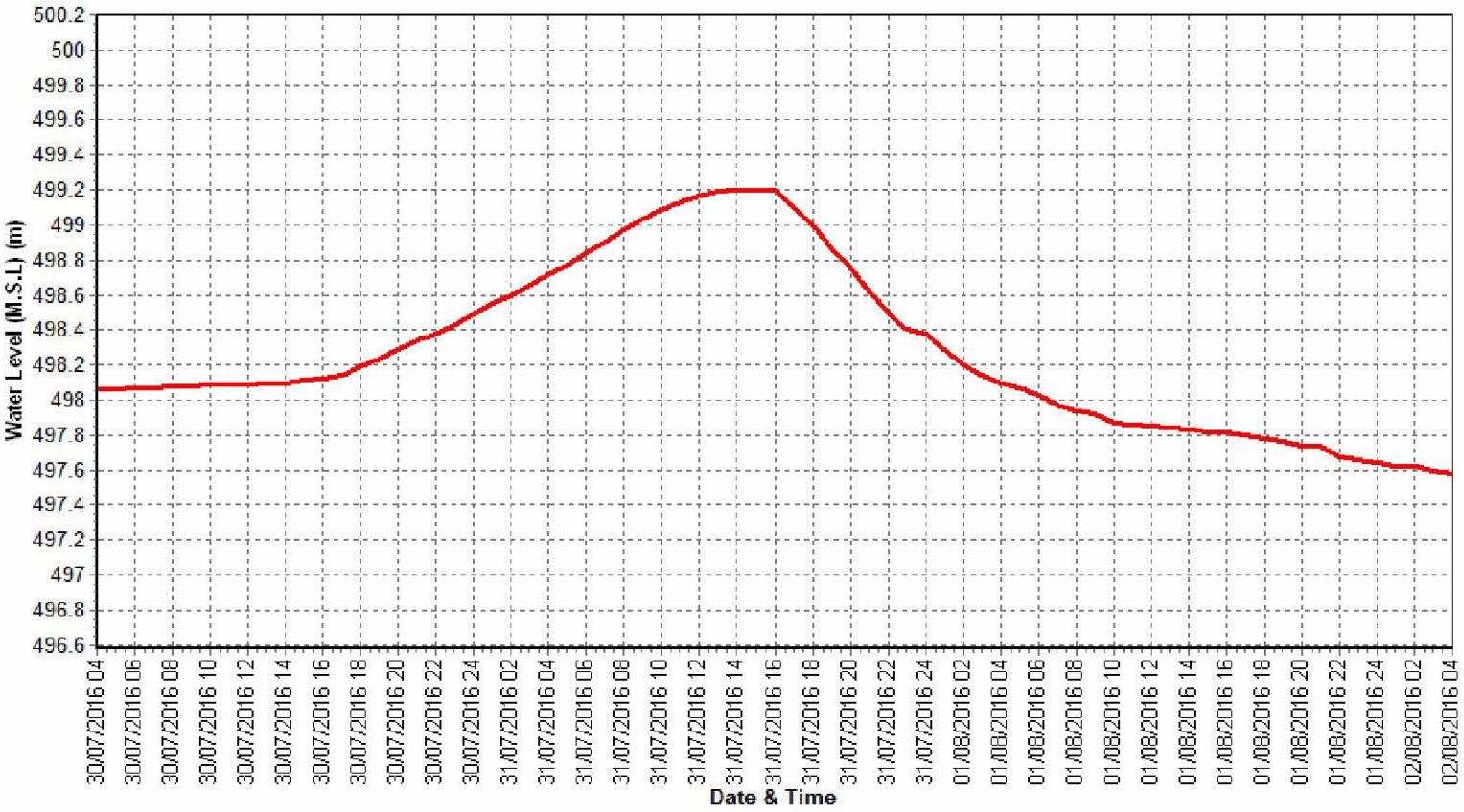
**Local River : Don** **Sub-Division : Middle Krishna SD 1, Bagalkot**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Talikot (Seasonal) ( AKQ00E2)** | **Division : Upper Krishna Divn, Pune**

**Local River : Don** | **Sub-Division : Middle Krishna SD 1, Bagalkot**

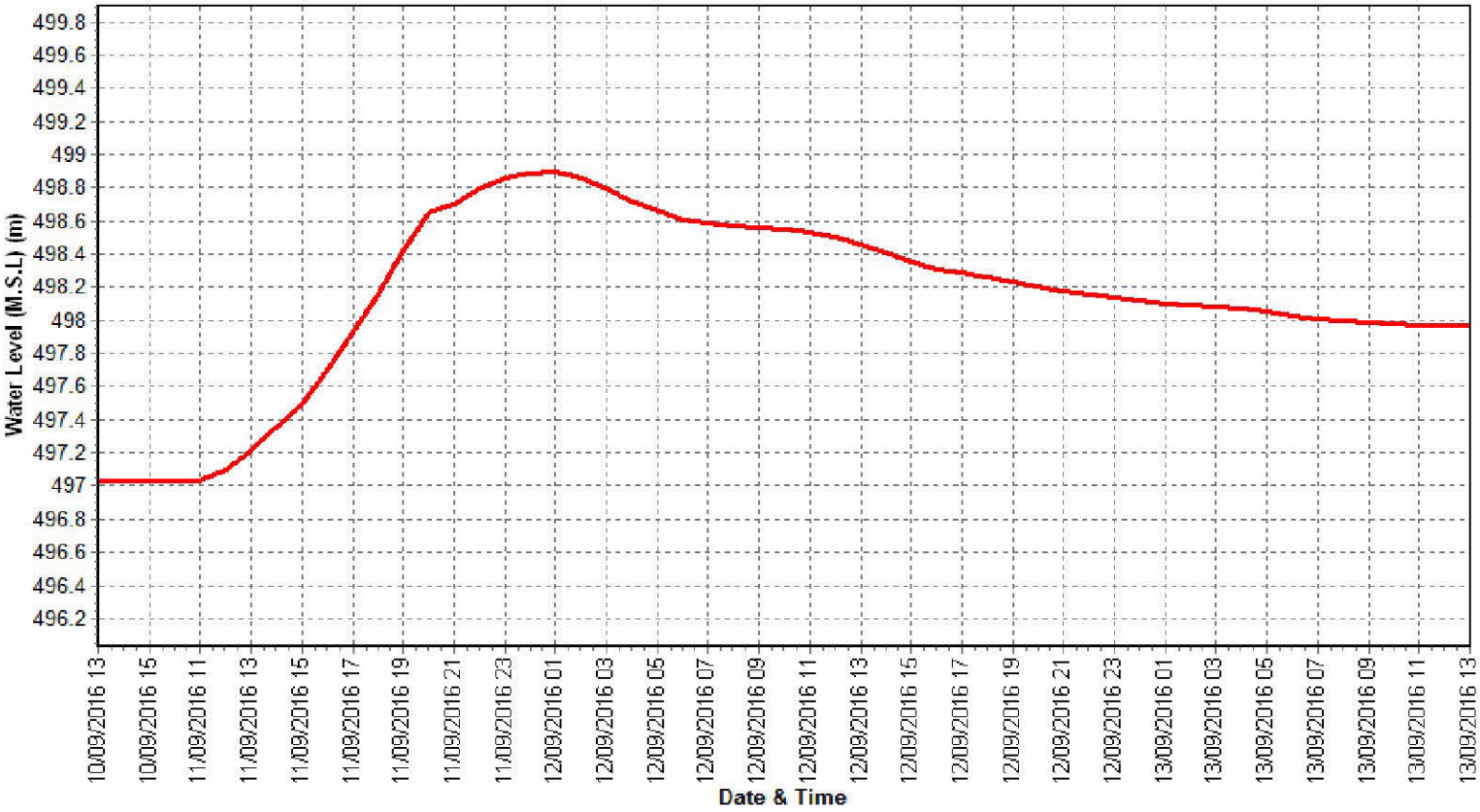



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Talikot (Seasonal) ( AKQ00E2)** **Division : Upper Krishna Divn, Pune**

**Local River : Don** **Sub-Division : Middle Krishna SD 1, Bagalkot**

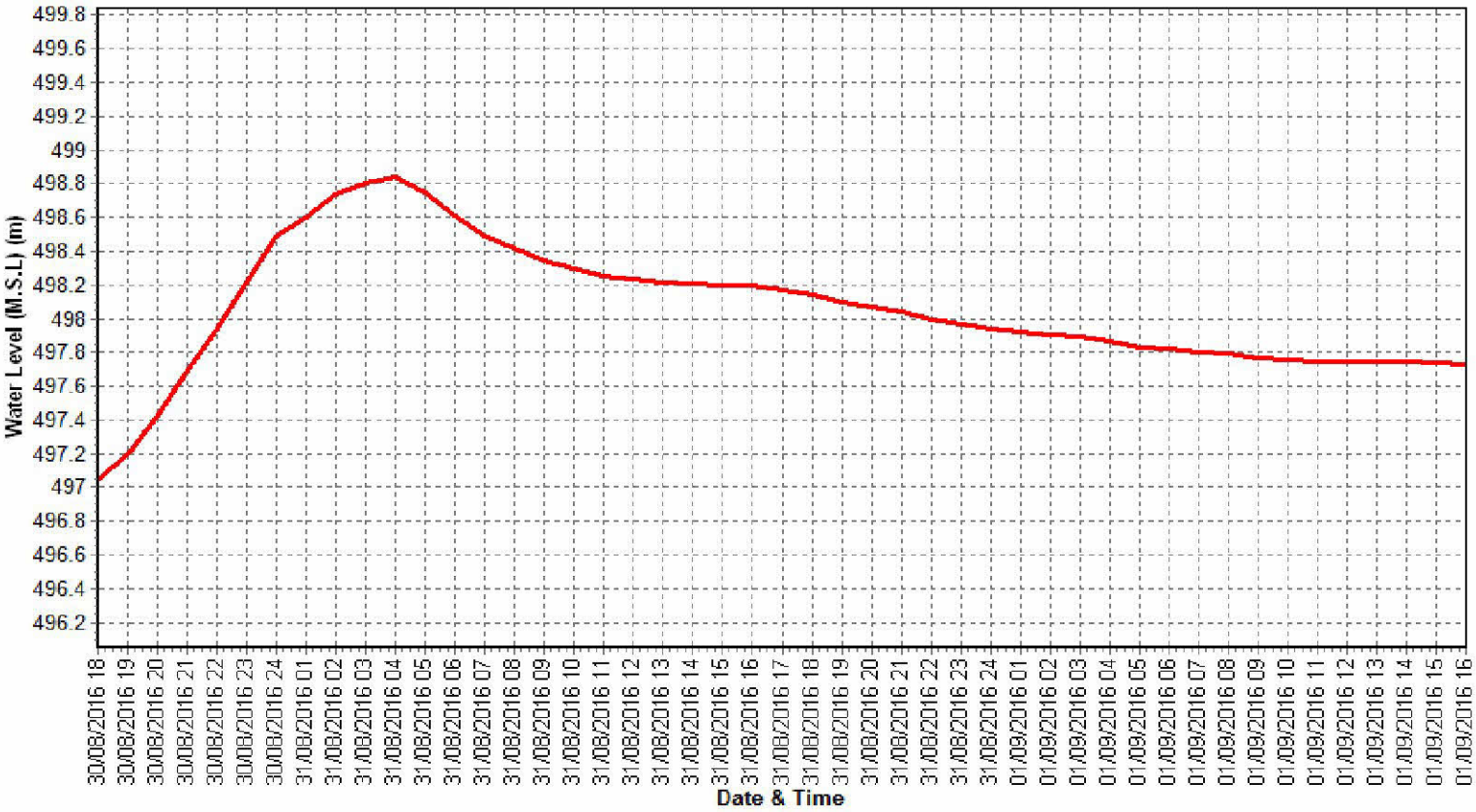



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017

**Station Name : Talikot (Seasonal) ( AKQ00E2)** | **Division : Upper Krishna Divn, Pune**

**Local River : Don** | **Sub-Division : Middle Krishna SD 1, Bagalkot**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Cholachguda (Seasonal)** | | **Code** | **: AKS00H1** | |
| State | : Karnataka | | District | Bijapur | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Malaprabha | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Malaprabha | |
| Division | : Upper Krishna Divn, Pune | | Sub-Division | : Middle Krishna SD 1, Bagalkot | |
| Drainage Area | : 9373 Sq. Km. | | Bank | : Left | |
| Latitude | : 15°52'43" | | Longitude | : 75°43'16" | |
| **Zero of Gauge (m)** | : 522.5 (m.s.l)<br>522 (m.s.l) | | 01/06/1982<br>01/06/2010 | - 31/05/2010 | |
| | Opening Date | | Closing Date | | |
| Gauge | : 01/06/1982 | | **HFL During 2016-17** | **: 528.000m** | |
| | | | **Corres. Discharge** | **: 78.442(Estimated)** | |
| Discharge | : 01/06/1982 | | **Date & Time of occurance** | **: 20/06/2016 : 06.00 hrs.** | |
| Sediment | : 01/06/1982 | | | | |
| Water Quality | : 01/06/1982 | | | | |

**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 | 987.2 | 530.410 | 06/11/1982 | 2.300 | 523.820 | 15/04/1983 |
| 1983-1984 | 577.3 | 528.150 | 18/08/1983 | 1.400 | 523.765 | 02/06/1983 |
| 1984-1985 | 600.0 | 528.310 | 24/10/1984 | 1.700 | 523.800 | 27/06/1984 |
| 1985-1986 | 356.5 | 527.500 | 31/05/1986 | 0.000 | | 07/03/1986 |
| 1986-1987 | 685.7 | 529.375 | 24/09/1986 | 0.000 | | 14/03/1987 |
| 1987-1988 | 812.9 | 529.900 | 07/08/1987 | 0.000 | | 08/03/1988 |
| 1988-1989 | 878.2 | 529.380 | 18/09/1988 | 0.000 | 523.740 | 27/07/1988 |
| 1989-1990 | 1298 | 531.155 | 20/09/1989 | 0.000 | | 11/02/1990 |
| 1990-1991 | 145.5 | 526.250 | 23/05/1991 | 0.000 | | 10/05/1991 |
| 1991-1992 | 1472 | 531.637 | 29/06/1991 | 0.000 | 523.670 | 27/04/1992 |
| 1992-1993 | 1814 | 535.600 | 18/11/1992 | 0.000 | 523.820 | 10/05/1993 |
| 1993-1994 | 1625 | 533.289 | 19/10/1993 | 0.000 | | 13/05/1994 |
| 1994-1995 | 499.6 | 528.400 | 03/09/1994 | 0.000 | 523.610 | 01/07/1994 |
| 1995-1996 | 572.8 | 528.865 | 26/09/1995 | 0.000 | | 13/05/1996 |
| 1996-1997 | 1240 | 530.700 | 03/10/1996 | 0.000 | 523.600 | 26/07/1996 |
| 1997-1998 | 1360 | 530.800 | 23/09/1997 | 0.000 | | 23/07/1997 |
| 1998-1999 | 1173 | 530.590 | 16/10/1998 | 0.000 | | 17/04/1999 |
| 1999-2000 | 582.0 | 529.100 | 15/10/1999 | 0.000 | | 01/04/2000 |
| 2000-2001 | 571.2 | 529.000 | 19/09/2000 | 0.000 | 523.530 | 24/03/2001 |
| 2001-2002 | 530.3 | 528.900 | 24/09/2001 | 0.000 | 523.590 | 27/02/2002 |
| 2002-2003 | 413.4 | 528.150 | 03/08/2002 | 0.000 | | 06/04/2003 |

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** |
| 2003-2004 | 747.0 | 529.780 | 08/10/2003 | 0.000 | 523.630 | 11/12/2003 |
| 2004-2005 | 934.5 | 530.345 | 13/07/2004 | 0.000 | 523.585 | 31/01/2005 |
| 2005-2006 | 553.8 | 529.010 | 26/09/2005 | 0.000 | 523.660 | 27/03/2006 |
| 2006-2007 | 452.8 | 528.475 | 15/08/2006 | 0.000 | 523.500 | 20/07/2006 |
| 2007-2008 | 2181 | 534.300 | 20/09/2007 | 0.000 | 523.650 | 21/06/2007 |
| 2008-2009 | 356.7 | 527.900 | 06/09/2008 | 0.000 | 523.540 | 01/08/2008 |
| 2009-2010 | 2752 | 536.610 | 02/10/2009 | 0.000 | 523.620 | 09/08/2009 |
| 2010-2011 | 1023 | 531.000 | 09/11/2010 | 0.000 | 523.605 | 08/07/2010 |
| 2011-2012 | 232.9 | 527.260 | 11/09/2011 | 0.000 | 523.540 | 25/07/2011 |
| 2012-2013 | 88.68 | 525.720 | 28/09/2012 | 0.000 | | 02/11/2012 |
| 2013-2014 | 254.9 | 528.210 | 03/09/2013 | 0.000 | 523.640 | 09/08/2013 |
| 2014-2015 | 189.8 | 527.870 | 07/06/2014 | 0.000 | 523.580 | 24/07/2014 |
| 2015-2016 | 167.5 | 527.520 | 18/09/2015 | 0.000 | 524.840 | 24/08/2015 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Cholachguda (Seasonal) ( AKS00H1)** **Division : Upper Krishna Divn, Pune**

**Local River : Malaprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**

| 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 | 524.630 | 18.78 * | 523.230 | 0.000 | 523.400 | 0.000 | 523.940 | 7.907 | 524.410 | 0.000 | 523.120 | 0.000 |
| 2 | 524.530 | 17.12 * | 523.200 | 0.000 | 523.330 | 0.000 | 523.785 | 4.119 | 524.610 | 0.000 | 523.000 | 0.000 |
| 3 | 524.440 | 15.63 * | 523.200 | 0.000 | 523.320 | 0.000 | 523.950 | 8.228 | 524.430 | 0.000 | | 0.000 |
| 4 | 523.880 | 6.646 * | 523.200 | 0.000 | 523.220 | 0.000 | 523.810 | 5.566 * | 524.300 | 0.000 | | 0.000 |
| 5 | 525.500 | 33.60 * | 523.200 | 0.000 | 523.220 | 0.000 | 523.500 | 0.000 | 524.210 | 0.000 | | 0.000 |
| 6 | 523.860 | 6.336 * | 523.150 | 0.000 | 523.220 | 0.000 | 523.800 | 4.218 | 524.110 | 0.000 | | 0.000 |
| 7 | 523.800 | 5.413 * | 523.150 | 0.000 | 523.200 | 0.000 | 524.040 | 9.158 * | 523.930 | 0.000 | | 0.000 |
| 8 | 525.200 | 28.43 * | 523.150 | 0.000 | 523.200 | 0.000 | 524.620 | 18.61 * | 523.890 | 0.000 | | 0.000 |
| 9 | 525.130 | 27.23 * | 523.140 | 0.000 | 523.200 | 0.000 | 524.720 | 20.28 * | 523.710 | 0.000 | | 0.000 |
| 10 | 525.720 | 37.43 * | 523.100 | 0.000 | 523.200 | 0.000 | 524.680 | 19.61 * | 523.670 | 0.000 | | 0.000 |
| 11 | 525.720 | 37.43 * | 523.100 | 0.000 | 523.200 | 0.000 | 524.740 | 20.62 * | 523.670 | 0.000 | | 0.000 |
| 12 | 525.130 | 27.23 * | 523.100 | 0.000 | 523.200 | 0.000 | 524.660 | 19.28 * | 523.580 | 0.000 | | 0.000 |
| 13 | 523.500 | 1.016 * | 523.100 | 0.000 | 523.200 | 0.000 | 524.260 | 12.69 * | 523.410 | 0.000 | | 0.000 |
| 14 | 523.380 | 0.000 | 523.100 | 0.000 | 523.190 | 0.000 | 523.730 | 4.350 * | 524.480 | 0.000 | | 0.000 |
| 15 | 523.360 | 0.000 | 523.100 | 0.000 | 523.180 | 0.000 | 523.590 | 0.000 | 524.340 | 0.000 | | 0.000 |
| 16 | 523.330 | 0.000 | 523.100 | 0.000 | 523.180 | 0.000 | 523.590 | 0.000 | 524.250 | 0.000 | | 0.000 |
| 17 | 523.240 | 0.000 | 523.060 | 0.000 | 523.180 | 0.000 | 523.570 | 0.000 | 524.000 | 0.000 | | 0.000 |
| 18 | 523.200 | 0.000 | 523.040 | 0.000 | 523.160 | 0.000 | 523.500 | 0.000 | 523.780 | 0.000 | | 0.000 |
| 19 | 525.950 | 41.47 * | 523.040 | 0.000 | 523.140 | 0.000 | 523.480 | 0.000 | 523.780 | 0.000 | | 0.000 |
| 20 | 527.950 | 77.52 * | 523.040 | 0.000 | 523.110 | 0.000 | 523.480 | 0.000 | 523.740 | 0.000 | | 0.000 |
| 21 | 524.480 | 16.29 * | 523.040 | 0.000 | 523.070 | 0.000 | 523.440 | 0.000 | 523.540 | 0.000 | | 0.000 |
| 22 | 525.490 | 33.43 * | 523.040 | 0.000 | 523.000 | 0.000 | 523.370 | 0.000 | 523.540 | 0.000 | | 0.000 |
| 23 | 524.190 | 11.56 * | 523.040 | 0.000 | | 0.000 | 523.350 | 0.000 | 523.460 | 0.000 | | 0.000 |
| 24 | 523.605 | 3.144 | 523.040 | 0.000 | | 0.000 | 523.280 | 0.000 | 523.360 | 0.000 | | 0.000 |
| 25 | 523.500 | 0.830 | 523.040 | 0.000 | | 0.000 | 523.280 | 0.000 | 523.190 | 0.000 | | 0.000 |
| 26 | 523.450 | 0.000 | 523.080 | 0.000 | | 0.000 | 523.280 | 0.000 | 523.190 | 0.000 | | 0.000 |
| 27 | 523.390 | 0.000 | 523.250 | 0.000 | | 0.000 | 523.670 | 0.000 | 523.120 | 0.000 | | 0.000 |
| 28 | 523.250 | 0.000 | 523.250 | 0.000 | 524.480 | 16.78 * | 524.140 | 0.000 | 523.120 | 0.000 | | 0.000 |
| 29 | 523.250 | 0.000 | 523.650 | 3.579 | 523.833 | 4.723 | 524.720 | 0.000 | 523.120 | 0.000 | | 0.000 |
| 30 | 523.230 | 0.000 | 523.570 | 1.995 * | 523.650 | 3.634 | 524.410 | 0.000 | 523.120 | 0.000 | | 0.000 |
| 31 | | | 523.420 | 0.000 | 523.685 | 3.930 | | | 523.120 | 0.000 | | |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 524.669 | 19.66 | 523.172 | 0.000 | 523.251 | 0.000 | 524.085 | 9.771 | 524.127 | 0.000 | 523.060 | 0.000 |
| II Ten-Daily | 524.476 | 18.47 | 523.078 | 0.000 | 523.174 | 0.000 | 523.860 | 5.694 | 523.903 | 0.000 | | 0.000 |
| III Ten-Daily | 523.784 | 6.525 | 523.220 | 0.507 | 523.620 | 2.642 | 523.694 | 0.000 | 523.262 | 0.000 | | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 523.200 | 0.000 | 523.040 | 0.000 | 523.000 | 0.000 | 523.280 | 0.000 | 523.120 | 0.000 | 523.000 | 0.000 |
| Max. | 527.950 | 77.52 | 523.650 | 3.579 | 524.480 | 16.78 | 524.740 | 20.62 | 524.610 | 0.000 | 523.120 | 0.000 |
| Mean | 524.310 | 14.88 | 523.159 | 0.18 | 523.306 | 0.938 | 523.880 | 5.155 | 523.748 | 0 | 523.060 | 0 |

**Annual Runoff in MCM = 55 Annual Runoff in mm = 6**

**Peak Observed Discharge = 8.228 cumecs on 03/09/2016 Corres. Water Level :523.95 m**

**Lowest Observed Discharge = 0.000 cumecs on 14/06/2016 Corres. Water Level :523.38 m**

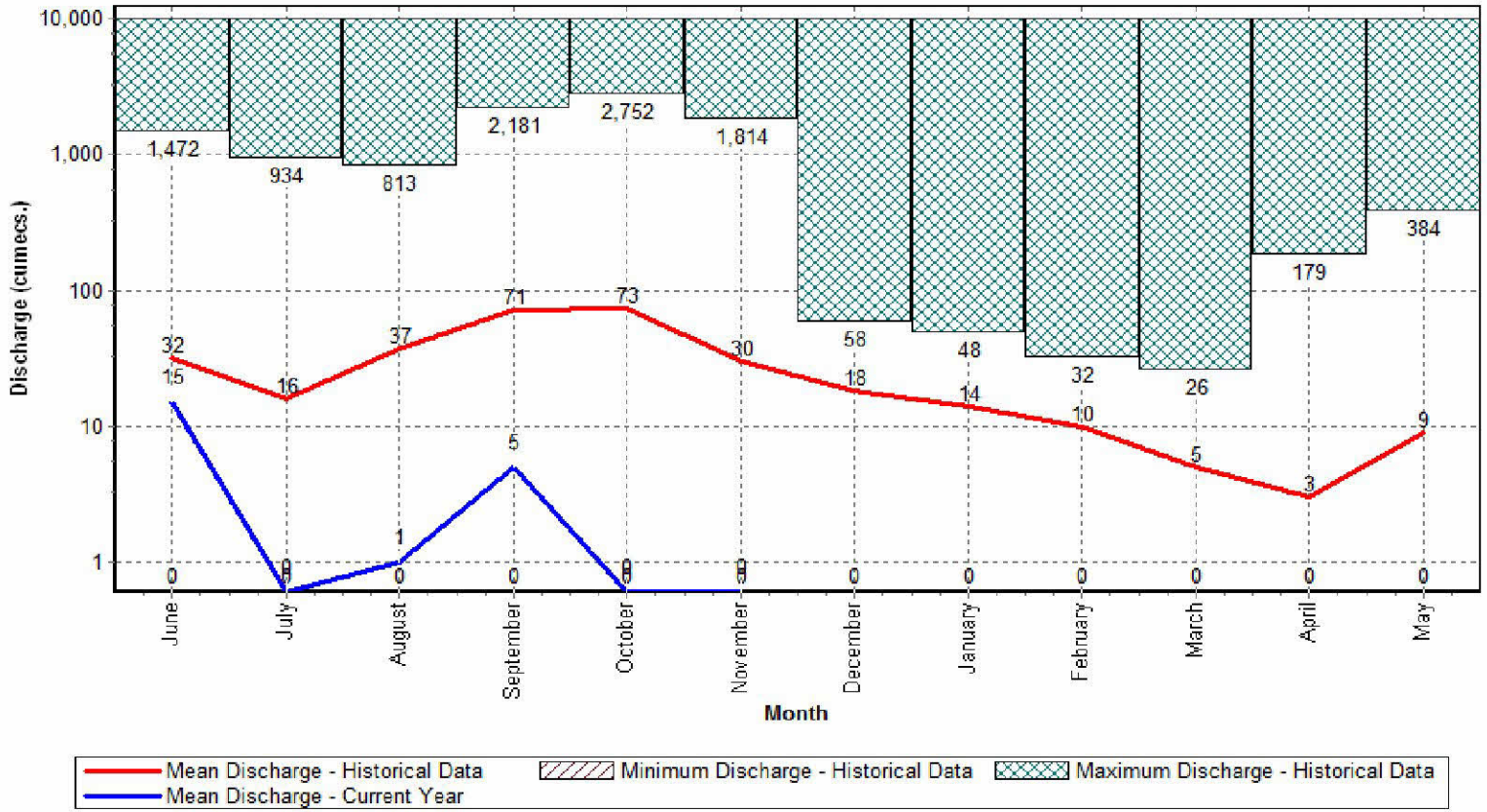
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Cholachguda (Seasonal) ( AKS00H1)** **Data considered : 1982-2017** **Division : Upper Krishna Divn, Pune**

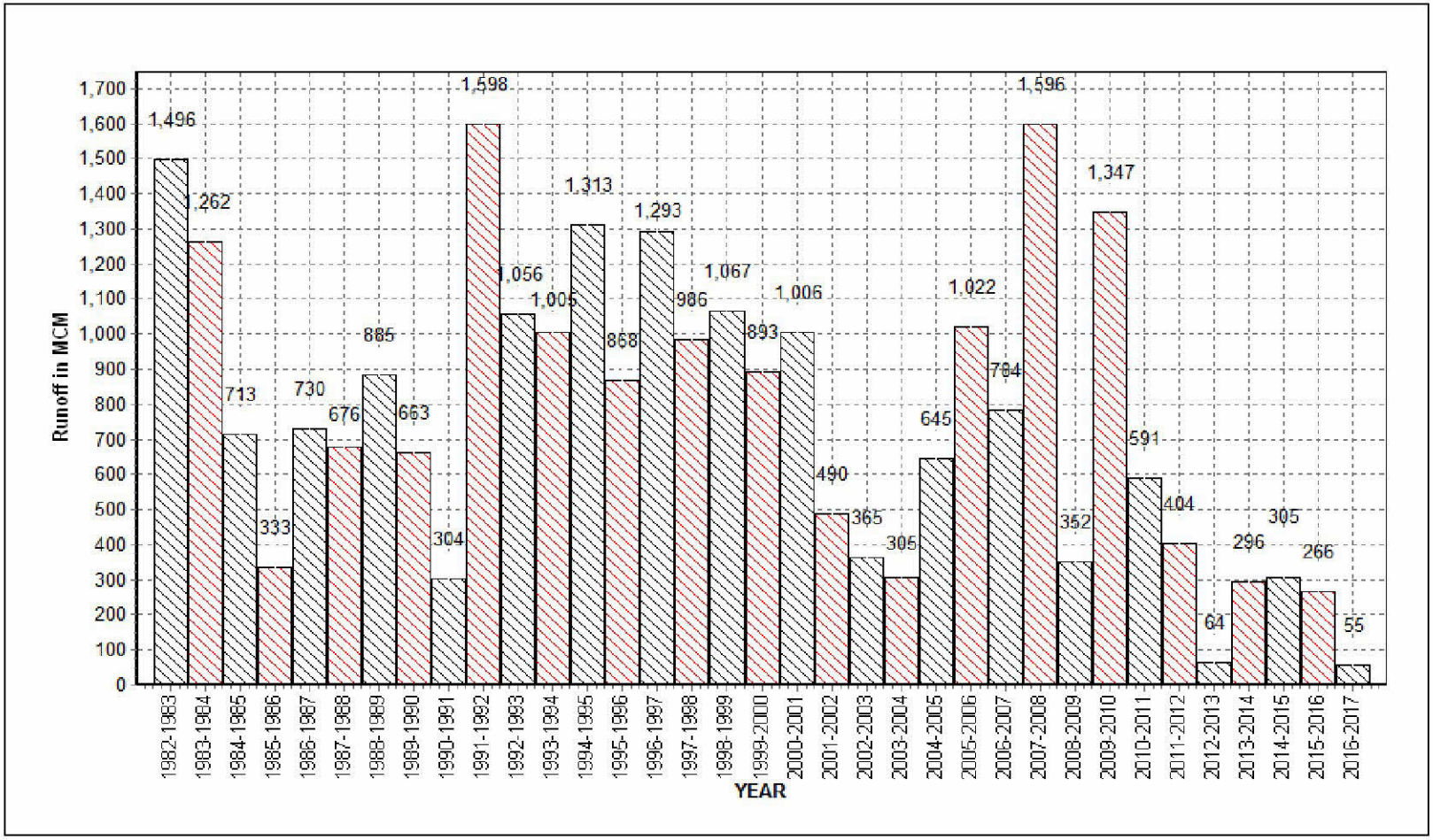
**Local River : Malaprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**



**Annual Runoff Values for the period: 1982 - 2017**

**Station Name : Cholachguda (Seasonal) ( AKS00H1)** **Division : Upper Krishna Divn, Pune**

**Local River : Malaprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**




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

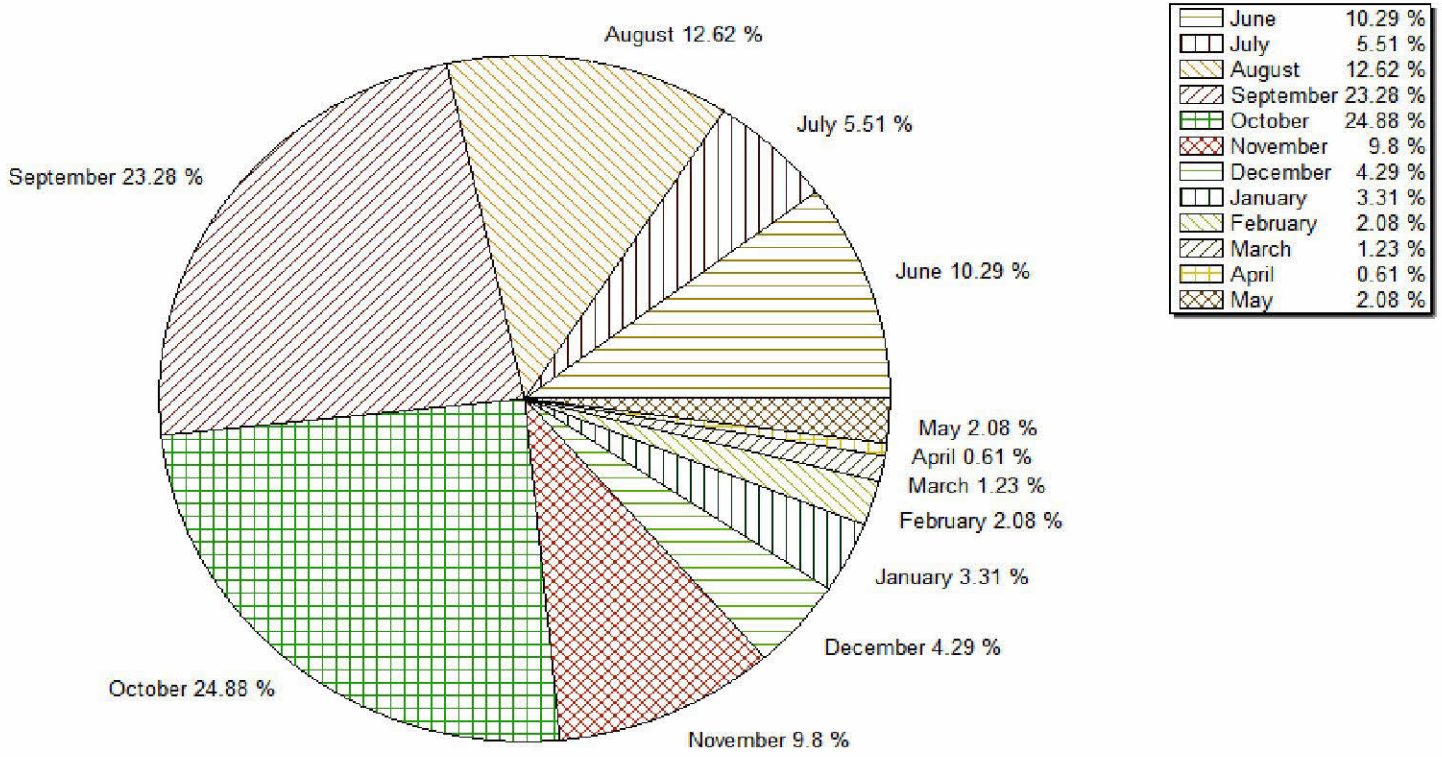
**Monthly Average Runoff based on period : 1982-2016**

**Station Name : Cholachguda (Seasonal) ( AKS00H1)**

**Local River : Malaprabha**

**Division : Upper Krishna Divn, Pune**

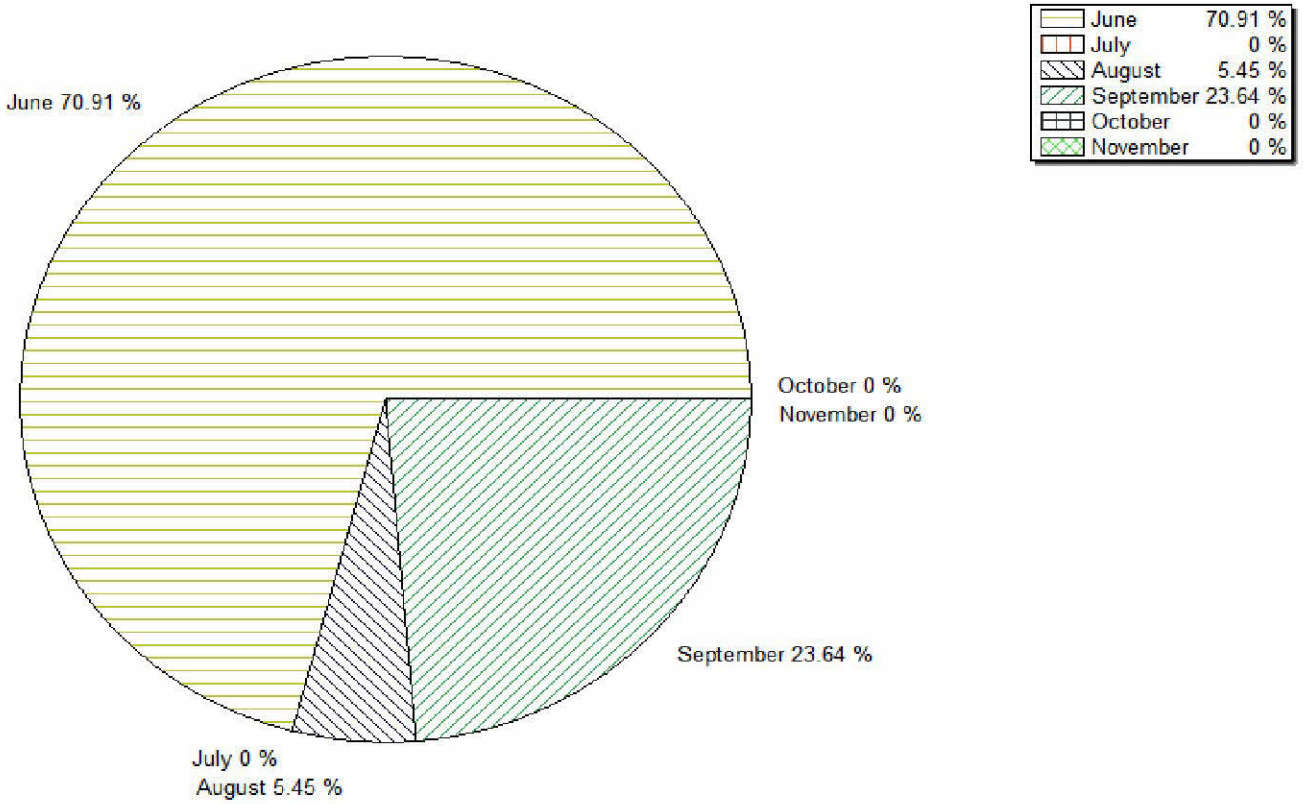
**Sub-Division : Middle Krishna SD 1, Bagalkot**



**Monthly Runoff for the Year : 2016-2017**

**Station Name : Cholachguda (Seasonal) ( AKS00H1)**
**Local River : Malaprabha**

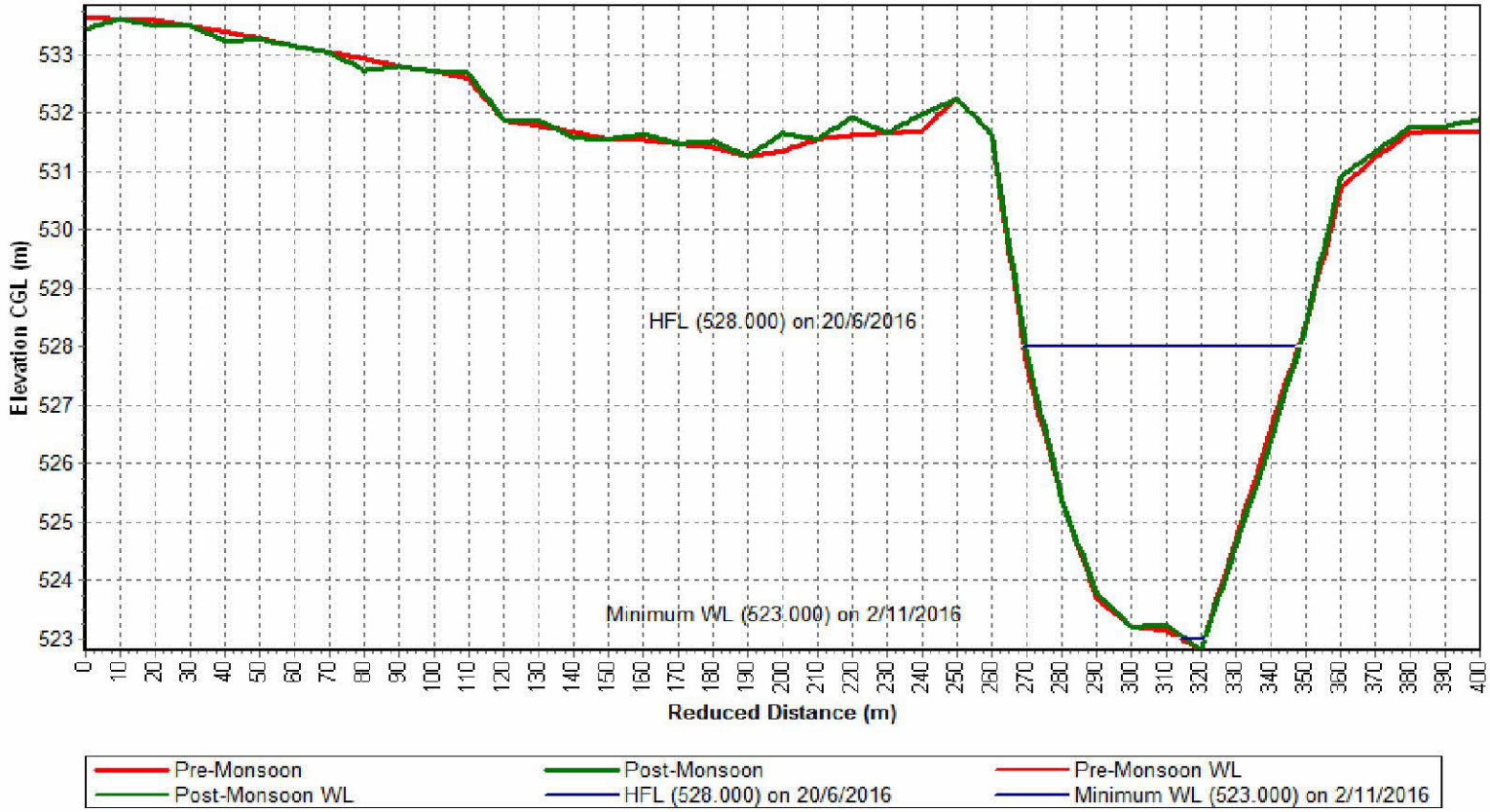
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Middle Krishna SD 1, Bagalkot**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Cholachguda (Seasonal) ( AKS00H1)** **Division : Upper Krishna Divn, Pune**

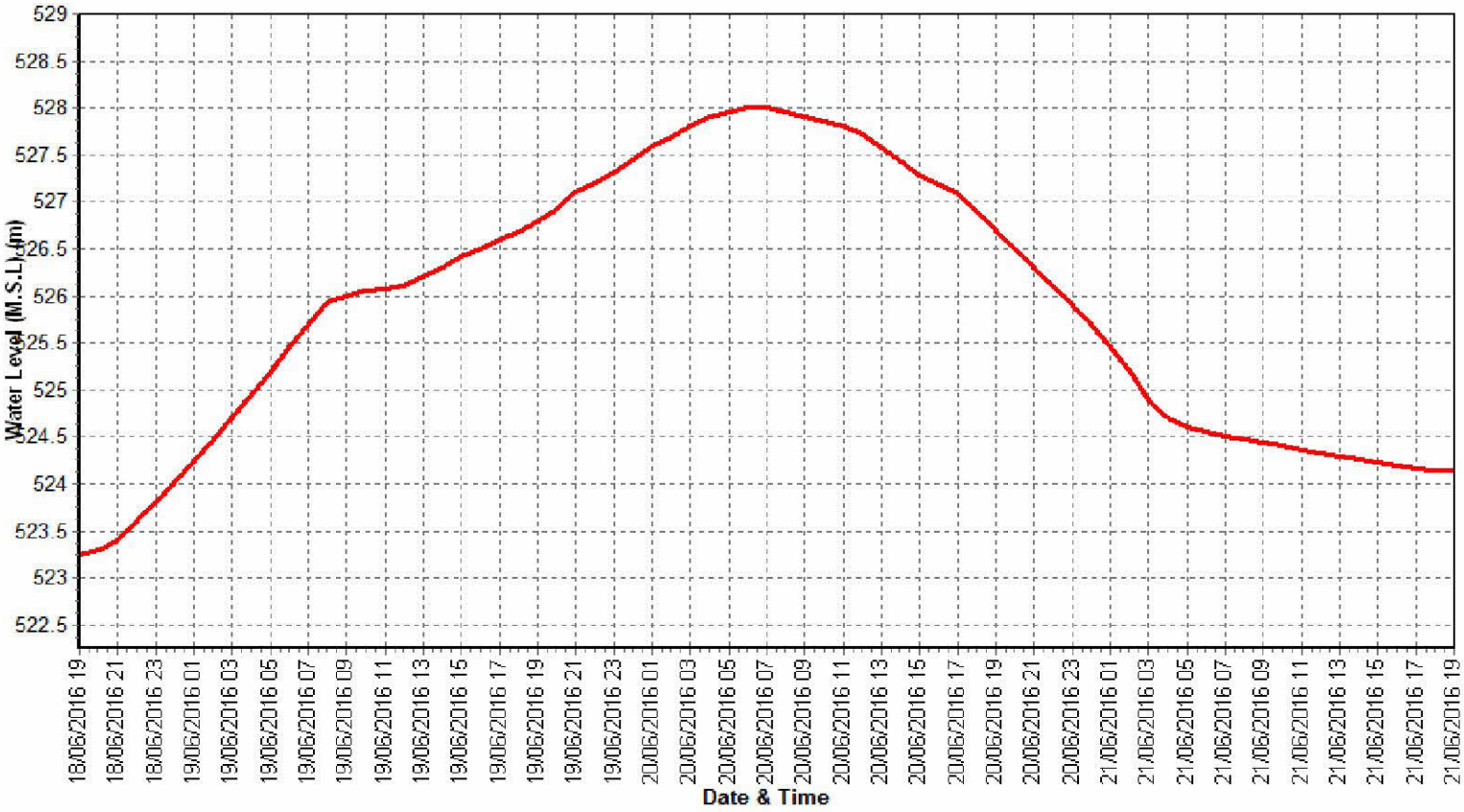
**Local River : Malaprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**



**Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017**

**Station Name : Cholachguda (Seasonal) ( AKS00H1)** **Division : Upper Krishna Divn, Pune**

**Local River : Malaprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**

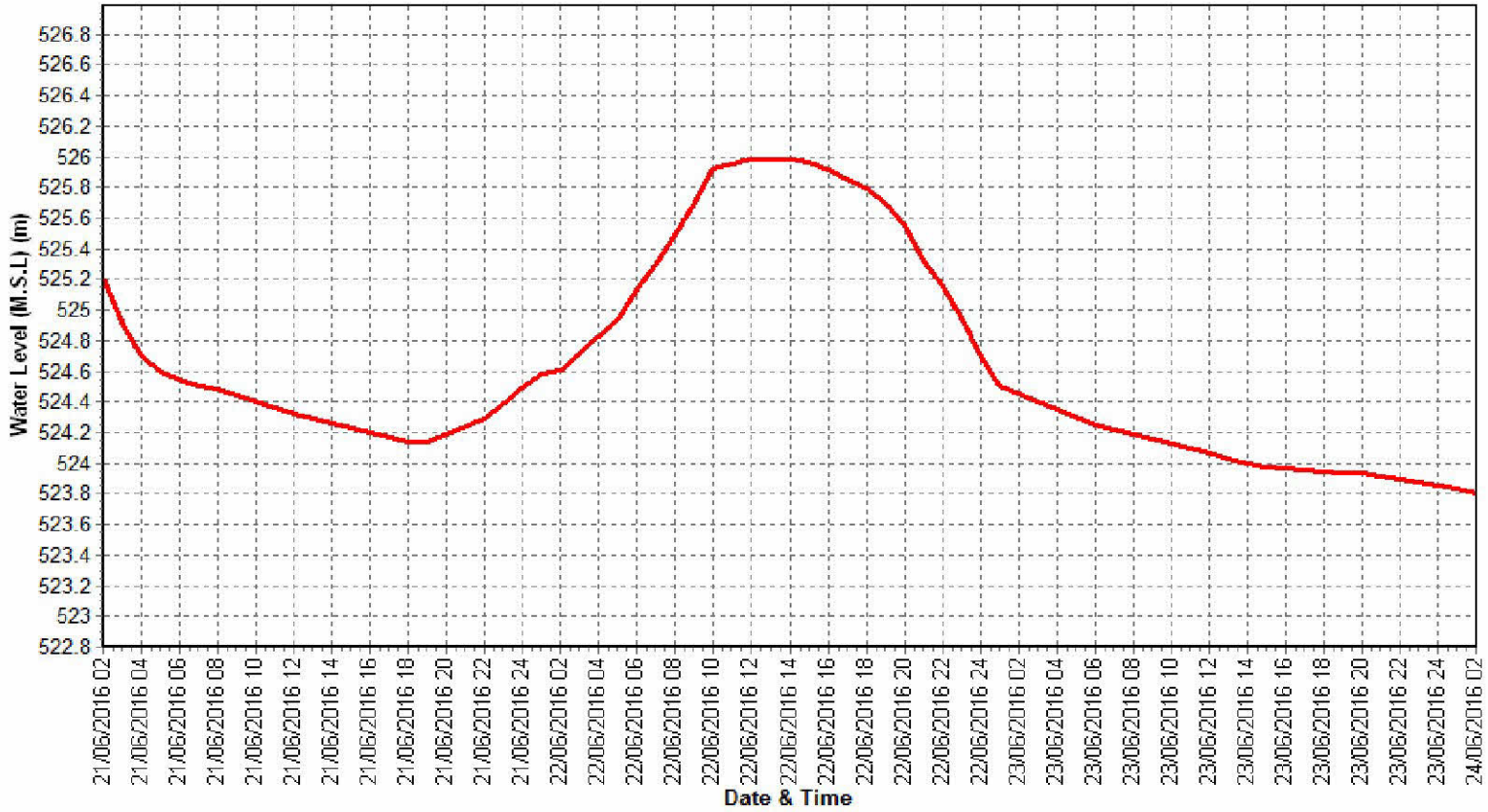



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Cholachguda (Seasonal) ( AKS00H1)** **Division : Upper Krishna Divn, Pune**

**Local River : Malaprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**

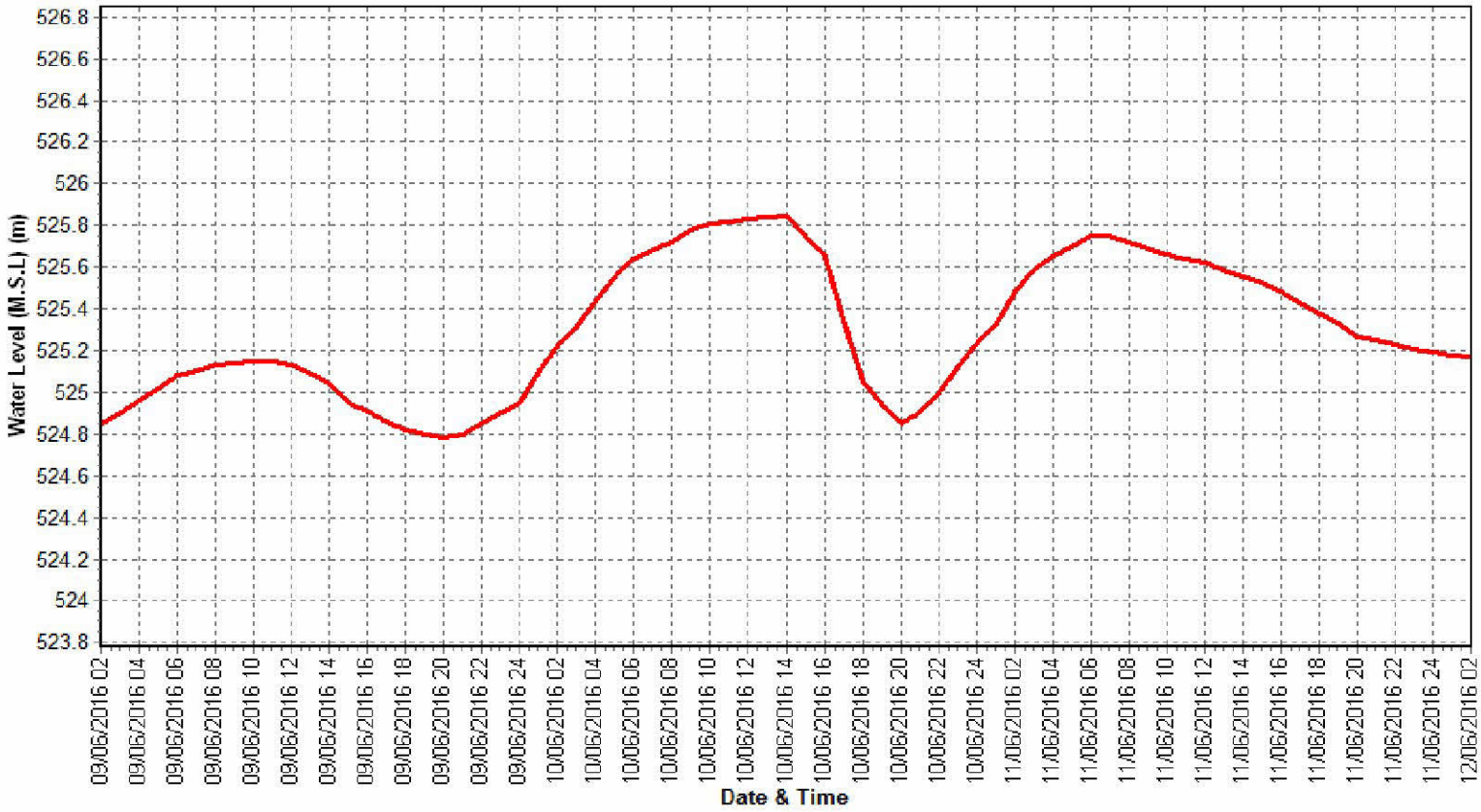



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Cholachguda (Seasonal) ( AKS00H1)** **Division : Upper Krishna Divn, Pune**

**Local River : Malaprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**




Time Span: 72 Hrs

## HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **Mudhol** | **Code** | : | **MUDHOL** |
| State | : | Karnataka | District | | Bagalkot |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | Ghataprabha | Sub Tributary | : | - |
| Sub-Sub Tributary | : | - | Local River | : | Ghataprabha |
| Division | : | Upper Krishna Divn, Pune | Sub-Division | : | Middle Krishna SD 1, Bagalkot |
| Drainage Area | : | 6734 Sq. Km. | Bank | : | Right |
| Latitude | : | 16°19'00" | Longitude | : | 75°12'00" |
| **Zero of Gauge (m)** | : | 530 (m.s.l)<br>530 (m.s.l) | 15/09/2015<br>13/07/1998 | - | 31/05/2007 |
| | | Opening Date | Closing Date | | |
| Gauge | : | 13/07/2000 | HFL During 2016-17 | : | 535.830m |
| | | | Corres. Discharge | : | 275.9(Estimated) |
| Discharge | : | 25/07/2000 | Date & Time of occurance | : | 15/07/2016<br>09.00 hrs. |
| Sediment | : | 08/09/2003 | 31/05/2006 | | |
| Water Quality | : | 01/11/2000 | 31/05/2006 | | |

**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 | 414.1 | 526.650 | 07/10/2001 | 0.000 | 522.980 | 03/03/2002 |
| 2002-2003 | 418.8 | 526.750 | 15/08/2002 | 0.000 | 523.810 | 05/02/2003 |
| 2003-2004 | 213.9 | 525.053 | 24/06/2003 | 0.000 | 522.045 | 23/01/2004 |
| 2004-2005 | 643.4 | 528.410 | 08/08/2004 | 0.000 | 524.790 | 25/01/2005 |
| 2005-2006 | 2100 | 532.340 | 06/08/2005 | 0.000 | 524.030 | 24/02/2006 |
| 2006-2007 | 1418 | 531.395 | 14/08/2006 | 0.000 | 525.100 | 20/02/2007 |
| 2015-2016 | 533.5 | 533.470 | 23/09/2015 | 0.000 | | 02/04/2016 |

**Gauge and Discharge observations suspended on 31-05-2007.**

**Gauge observation restarted on 28-11-2014. Discharge restarted on 16-09-2015.**

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Mudhol ( MUDHOL)** **Division : Upper Krishna Divn, Pune**

**Local River : Ghataprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**

| 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 | 530.830 | 0.000 | 530.980 | 0.000 | 532.310 | 0.000 | | 0.000 |
| 2 | | 0.000 | | 0.000 | 530.780 | 0.000 | 530.920 | 0.000 | 532.300 | 0.000 | | 0.000 |
| 3 | | 0.000 | | 0.000 | 530.765 | 0.000 | 530.820 | 0.000 | 532.300 | 0.000 | | 0.000 |
| 4 | | 0.000 | | 0.000 | 532.500 | 0.000 | 530.580 | 0.000 | 532.230 | 0.000 | | 0.000 |
| 5 | | 0.000 | | 0.000 | 534.515 | 231.0 | | 0.000 | 532.200 | 0.000 | | 0.000 |
| 6 | | 0.000 | 531.540 | 0.000 | 534.990 | 244.0 * | | 0.000 | 532.100 | 0.000 | | 0.000 |
| 7 | | 0.000 | 532.490 | 0.000 | 534.900 | 240.7 * | | 0.000 | 532.000 | 0.000 | | 0.000 |
| 8 | | 0.000 | 531.120 | 0.000 | 535.500 | 262.0 * | | 0.000 | 532.180 | 0.000 | | 0.000 |
| 9 | | 0.000 | 530.810 | 0.000 | 535.250 | 246.6 | | 0.000 | 532.000 | 0.000 | | 0.000 |
| 10 | | 0.000 | | 0.000 | 534.480 | 224.6 * | | 0.000 | 532.000 | 0.000 | | 0.000 |
| 11 | | 0.000 | | 0.000 | 534.000 | 205.1 * | | 0.000 | 531.910 | 0.000 | | 0.000 |
| 12 | | 0.000 | 533.700 | 192.2 * | 533.790 | 196.1 * | | 0.000 | 531.810 | 0.000 | | 0.000 |
| 13 | | 0.000 | 535.000 | 237.5 | 533.220 | 170.6 * | | 0.000 | 532.180 | 0.000 | | 0.000 |
| 14 | | 0.000 | 535.610 | 265.7 * | 532.850 | 153.1 * | | 0.000 | 533.000 | 0.000 | | 0.000 |
| 15 | | 0.000 | 535.825 | 272.6 * | 532.650 | 143.3 * | | 0.000 | 531.800 | 0.000 | | 0.000 |
| 16 | | 0.000 | 534.100 | 209.2 * | 532.100 | 0.000 | | 0.000 | 532.140 | 0.000 | | 0.000 |
| 17 | | 0.000 | 532.100 | 0.000 | 531.885 | 0.000 | 530.300 | 0.000 | 532.380 | 0.000 | | 0.000 |
| 18 | | 0.000 | 530.420 | 0.000 | 531.810 | 0.000 | 530.310 | 0.000 | 532.220 | 0.000 | | 0.000 |
| 19 | | 0.000 | 530.610 | 0.000 | 531.360 | 0.000 | 530.300 | 0.000 | 531.900 | 0.000 | | 0.000 |
| 20 | | 0.000 | 530.560 | 0.000 | 530.980 | 0.000 | 530.410 | 0.000 | 531.700 | 0.000 | | 0.000 |
| 21 | | 0.000 | 530.500 | 0.000 | 530.910 | 0.000 | 530.420 | 0.000 | 531.550 | 0.000 | 532.380 | 0.000 |
| 22 | | 0.000 | 530.410 | 0.000 | 530.450 | 0.000 | 530.330 | 0.000 | 531.230 | 0.000 | 535.370 | 0.000 |
| 23 | | 0.000 | 530.355 | 0.000 | 530.370 | 0.000 | 532.340 | 0.000 | 531.030 | 0.000 | 535.160 | 0.000 |
| 24 | | 0.000 | 530.440 | 0.000 | 530.300 | 0.000 | 532.280 | 0.000 | 530.790 | 0.000 | 534.690 | 0.000 |
| 25 | | 0.000 | 530.450 | 0.000 | 532.200 | 0.000 | 532.590 | 0.000 | 530.720 | 0.000 | 534.910 | 0.000 |
| 26 | | 0.000 | 530.410 | 0.000 | 532.400 | 0.000 | 532.780 | 0.000 | | 0.000 | 534.980 | 0.000 |
| 27 | | 0.000 | 530.375 | 0.000 | 532.290 | 0.000 | 533.700 | 192.2 * | | 0.000 | 535.070 | 0.000 |
| 28 | | 0.000 | 530.320 | 0.000 | 532.060 | 0.000 | 532.830 | 0.000 | | 0.000 | 535.060 | 0.000 |
| 29 | | 0.000 | 530.285 | 0.000 | 531.820 | 0.000 | 532.610 | 0.000 | | 0.000 | 535.010 | 0.000 |
| 30 | | 0.000 | 530.345 | 0.000 | 531.410 | 0.000 | 532.500 | 0.000 | | 0.000 | 535.010 | 0.000 |
| 31 | | | 530.590 | 0.000 | 531.160 | 0.000 | | | | 0.000 | | |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | 531.490 | 0.000 | 533.451 | 144.9 | 530.825 | 0.000 | 532.162 | 0.000 | | 0.000 |
| II Ten-Daily | | 0.000 | 533.103 | 117.7 | 532.464 | 86.82 | 530.330 | 0.000 | 532.104 | 0.000 | | 0.000 |
| III Ten-Daily | | 0.000 | 530.407 | 0.000 | 531.397 | 0.000 | 532.238 | 19.22 | 531.064 | 0.000 | 534.764 | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | | 0.000 | 530.285 | 0.000 | 530.300 | 0.000 | 530.300 | 0.000 | 530.720 | 0.000 | 532.380 | 0.000 |
| Max. | | 0.000 | 535.825 | 272.6 | 535.500 | 262.0 | 533.700 | 192.2 | 533.000 | 0.000 | 535.370 | 0.000 |
| Mean | | 0 | 531.599 | 37.97 | 532.404 | 74.75 | 531.500 | 6.407 | 531.919 | 0 | 534.764 | 0 |

**Annual Runoff in MCM = 319 Annual Runoff in mm = 47**

**Peak Observed Discharge = 246.6 cumecs on 09/08/2016 Corres. Water Level :535.25 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016**

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 2016 - 2017

**Station Name : Mudhol ( MUDHOL)** **Division : Upper Krishna Divn, Pune**

**Local River : Ghataprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | | 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 |
| 3 | | 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 |
| 5 | | 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 |
| 7 | | 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 |
| 9 | | 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 |
| 11 | | 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 |
| 13 | | 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 |
| 15 | | 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 |
| 17 | | 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 |
| 19 | | 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 |
| 21 | | 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 |
| 23 | | 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 |
| 25 | | 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 |
| 27 | | 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 |
| 29 | | 0.000 | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 30 | | 0.000 | | 0.000 | | | | 0.000 | | 0.000 | | 0.000 |
| 31 | | 0.000 | | 0.000 | | | | 0.000 | | | | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| II Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| III Ten-Daily | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Max. | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 |
| Mean | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 |

**Peak Computed Discharge = 272.6 cumecs on 15/07/2016** **Corres. Water Level :535.825 m**

**Lowest Computed Discharge = 143.3 cumecs on 15/08/2016** **Corres. Water Level :532.65 m**

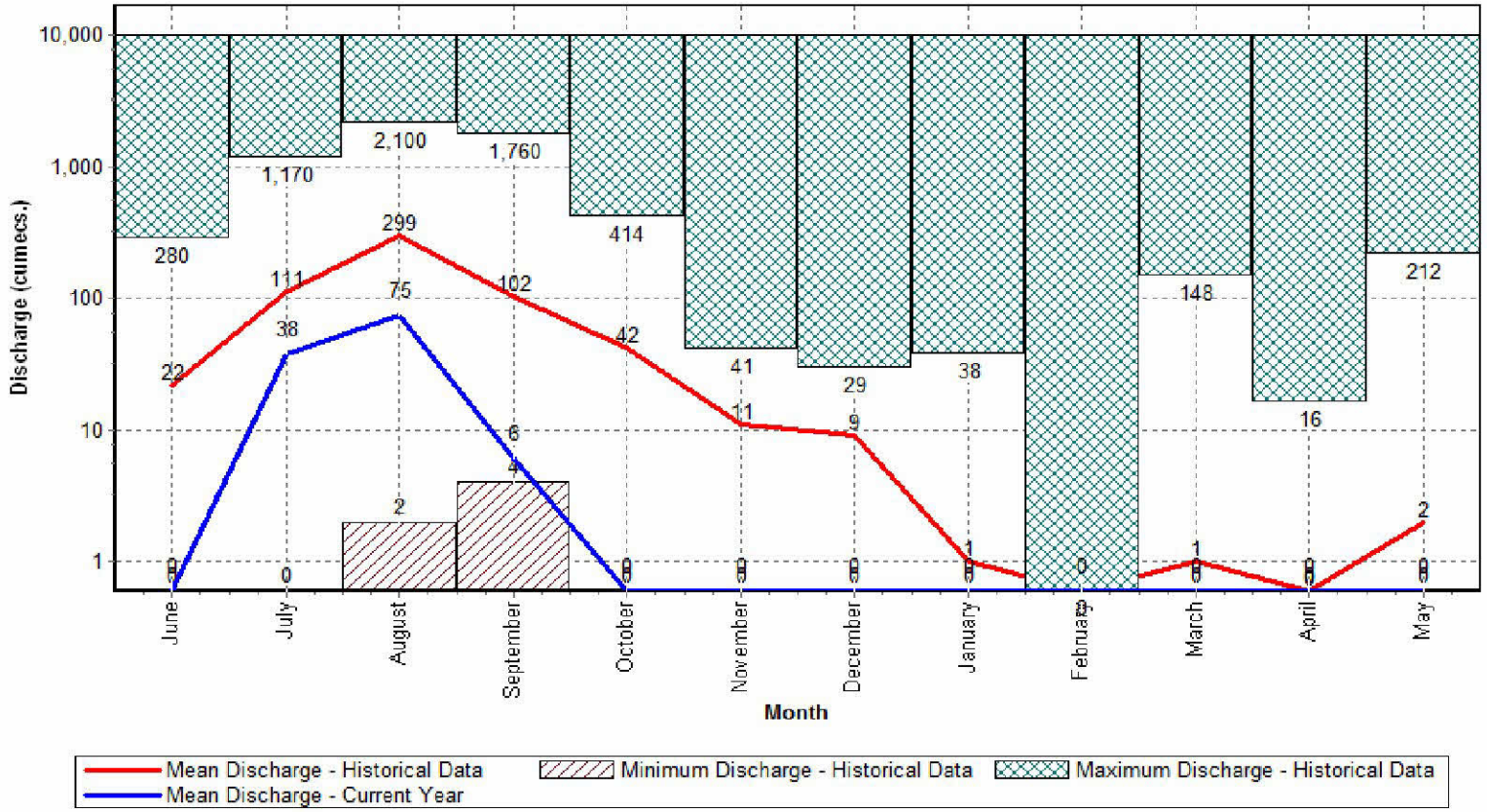
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Mudhol ( MUDHOL)** | **Data considered : 2001-2017** | **Division : Upper Krishna Divn, Pune**

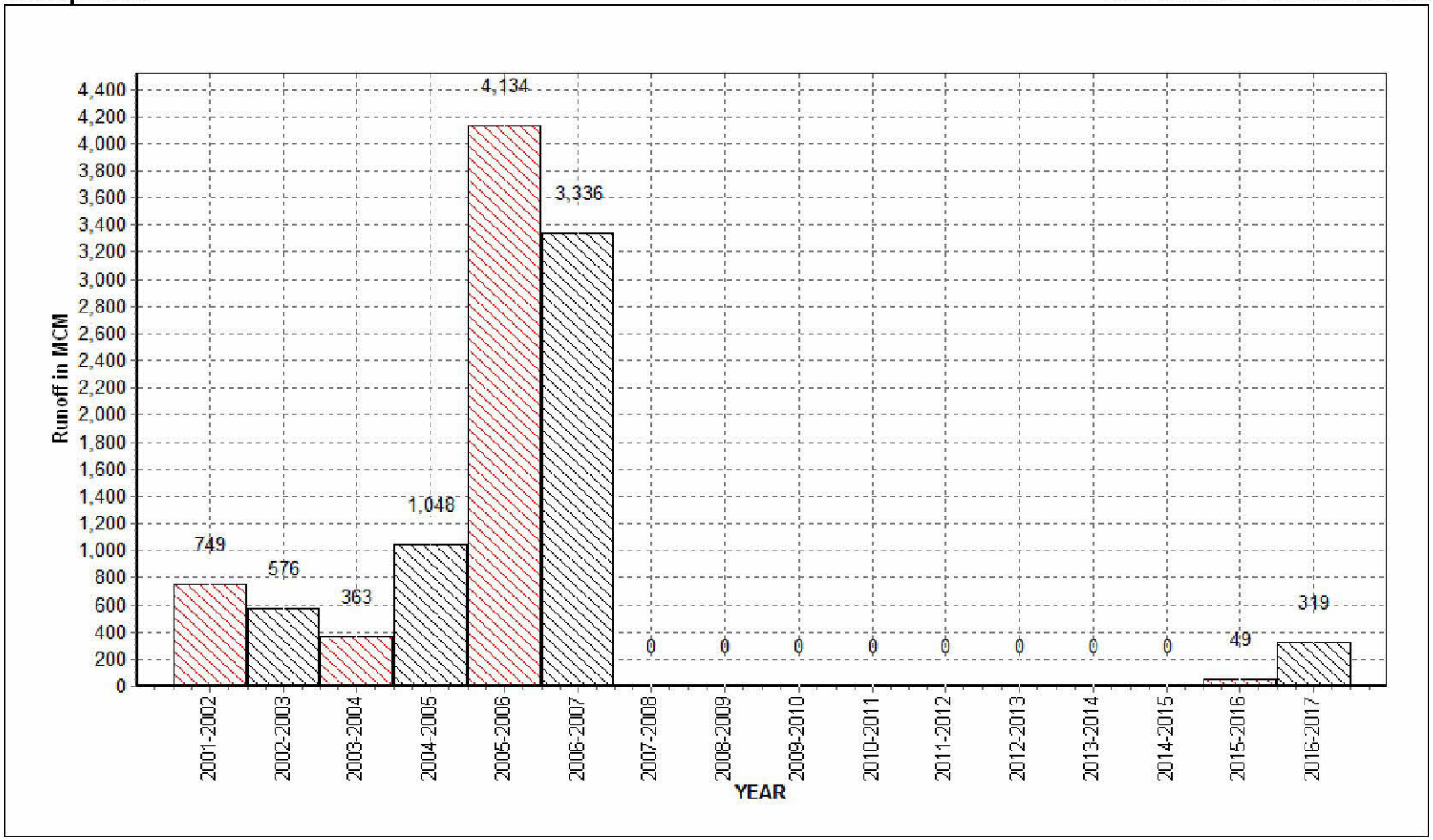
**Local River : Ghataprabha** | **Sub-Division : Middle Krishna SD 1, Bagalkot**



**Annual Runoff Values for the period: 2001 - 2017**

**Station Name : Mudhol ( MUDHOL)** **Division : Upper Krishna Divn, Pune**

**Local River : Ghataprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**

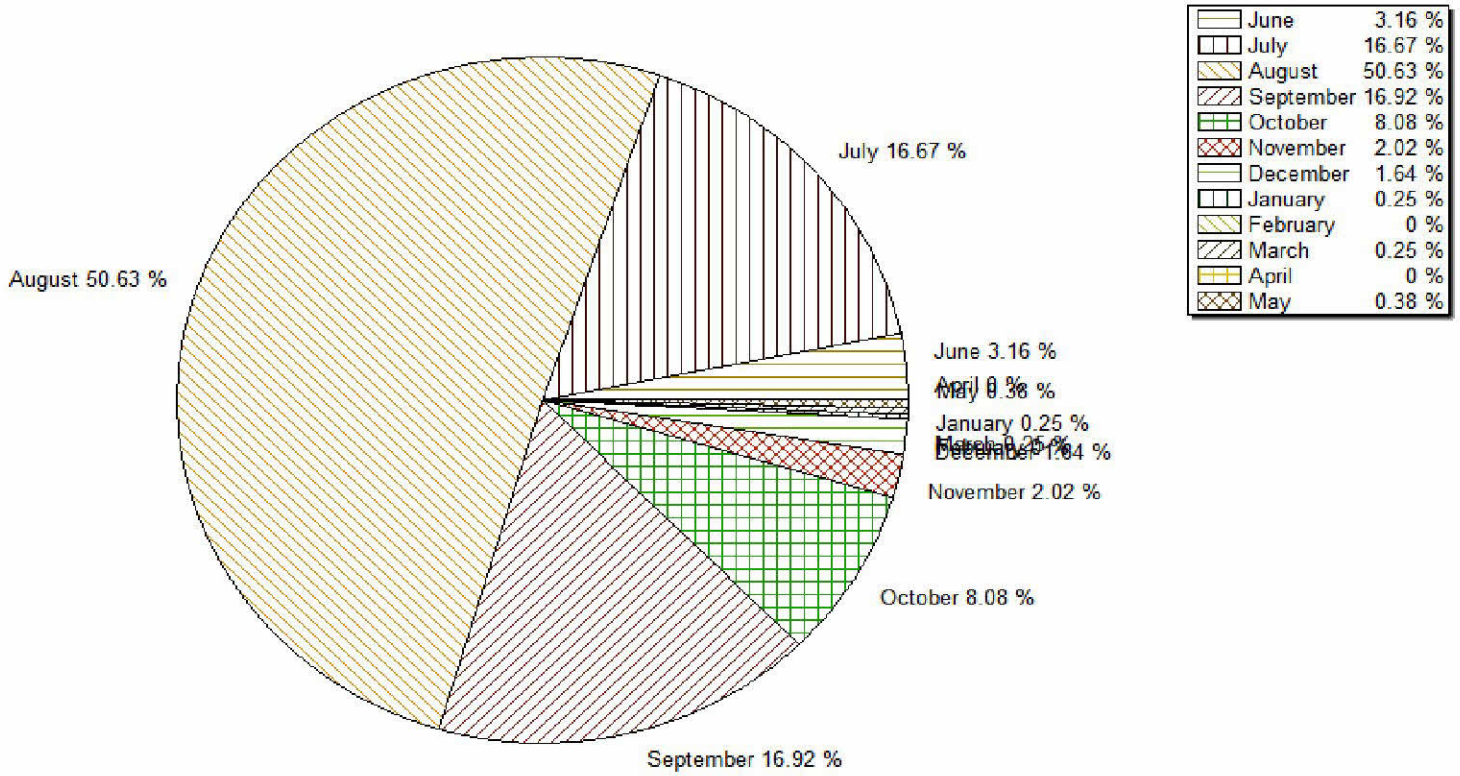



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 2001-2016**

**Station Name : Mudhol ( MUDHOL)**
**Local River : Ghataprabha**

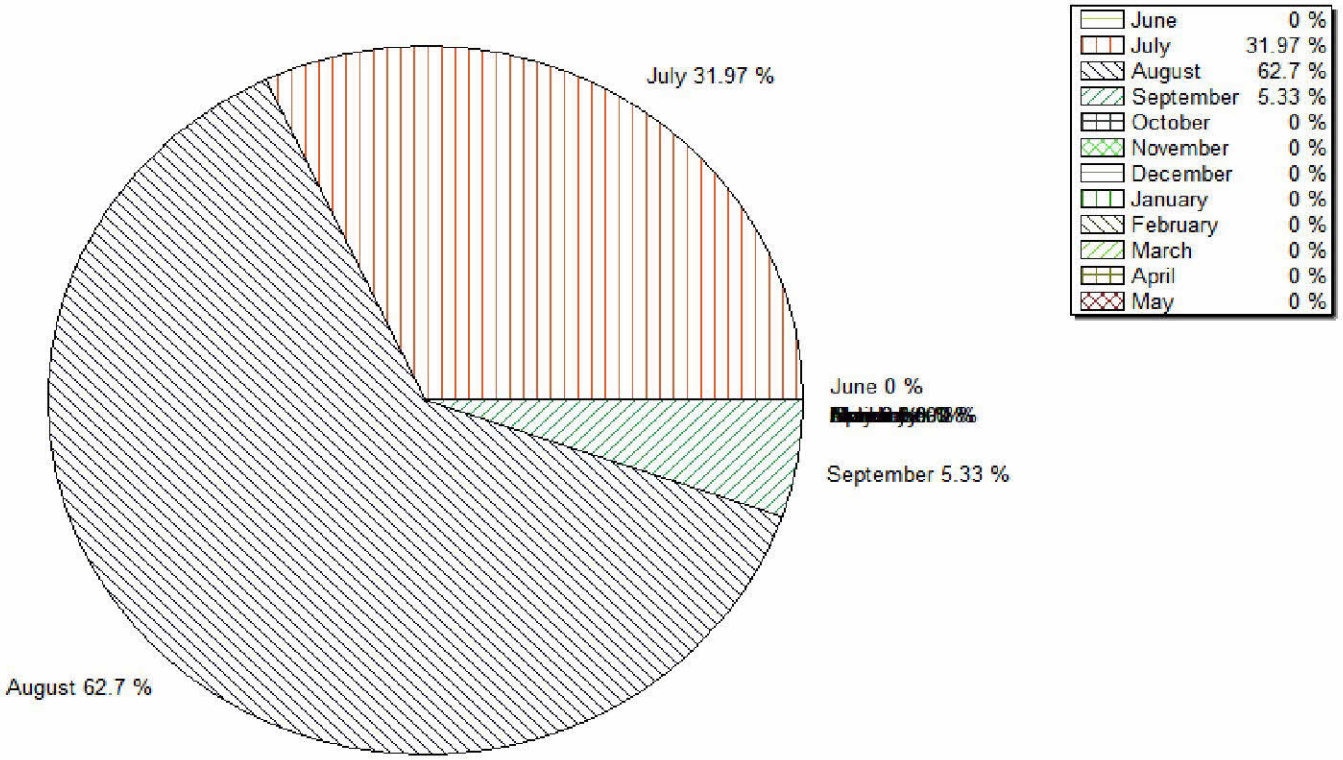
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Middle Krishna SD 1, Bagalkot**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Mudhol ( MUDHOL)**
**Local River : Ghataprabha**

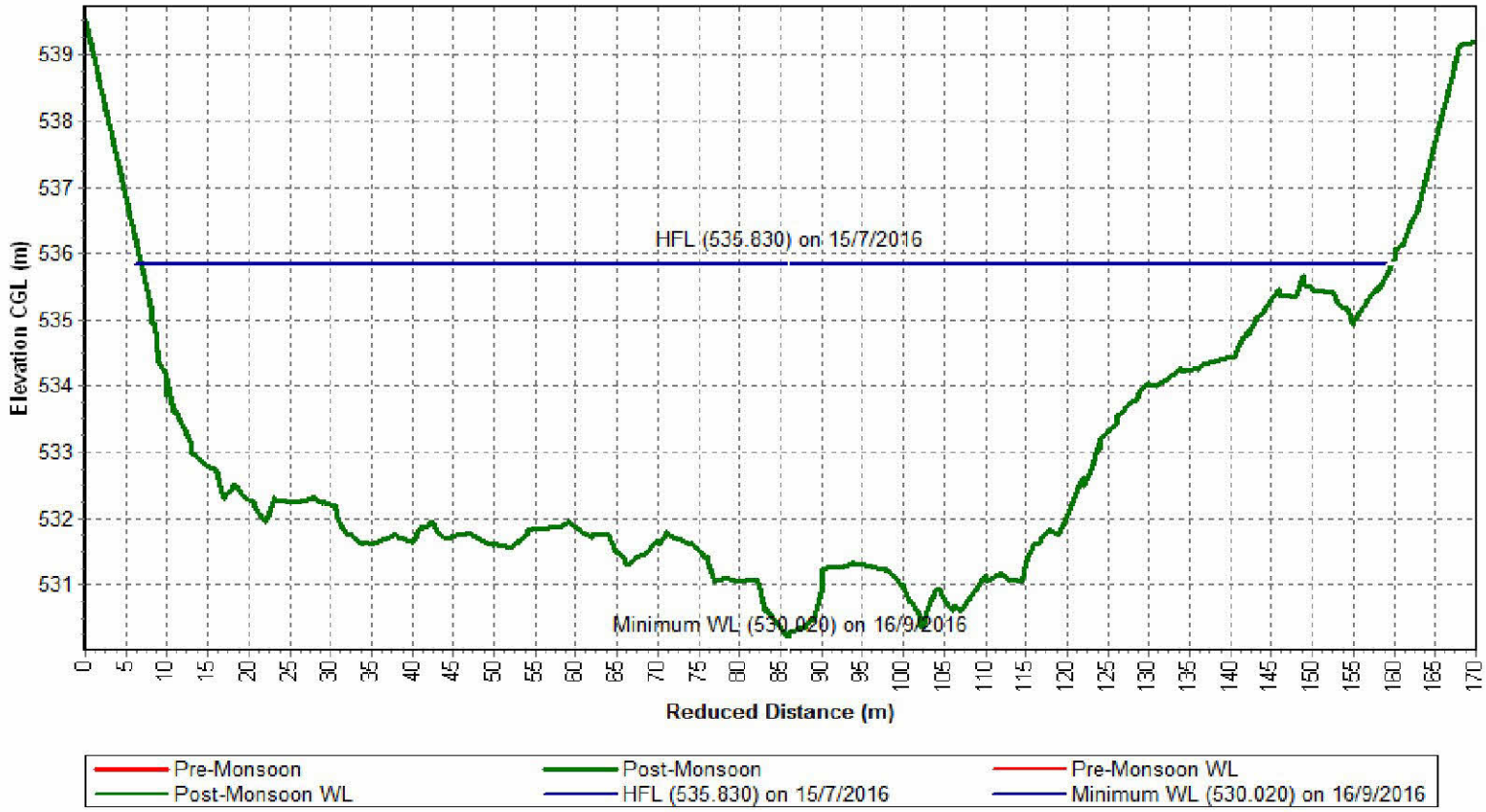
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Middle Krishna SD 1, Bagalkot**



## Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017

**Station Name : Mudhol ( MUDHOL)** | **Division : Upper Krishna Divn, Pune**

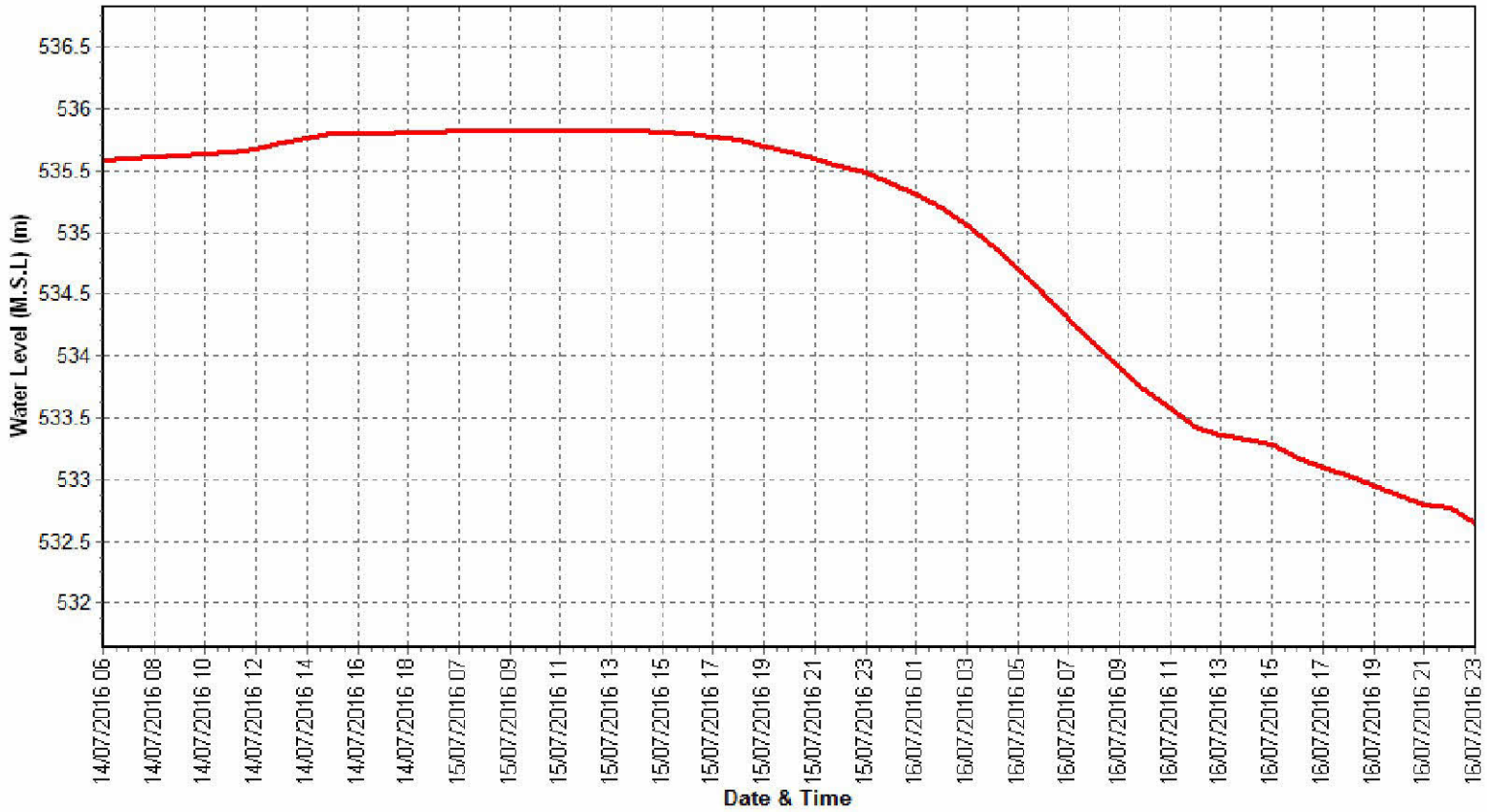
**Local River : Ghataprabha** | **Sub-Division : Middle Krishna SD 1, Bagalkot**



**Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017**

**Station Name : Mudhol ( MUDHOL)** **Division : Upper Krishna Divn, Pune**

**Local River : Ghataprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**

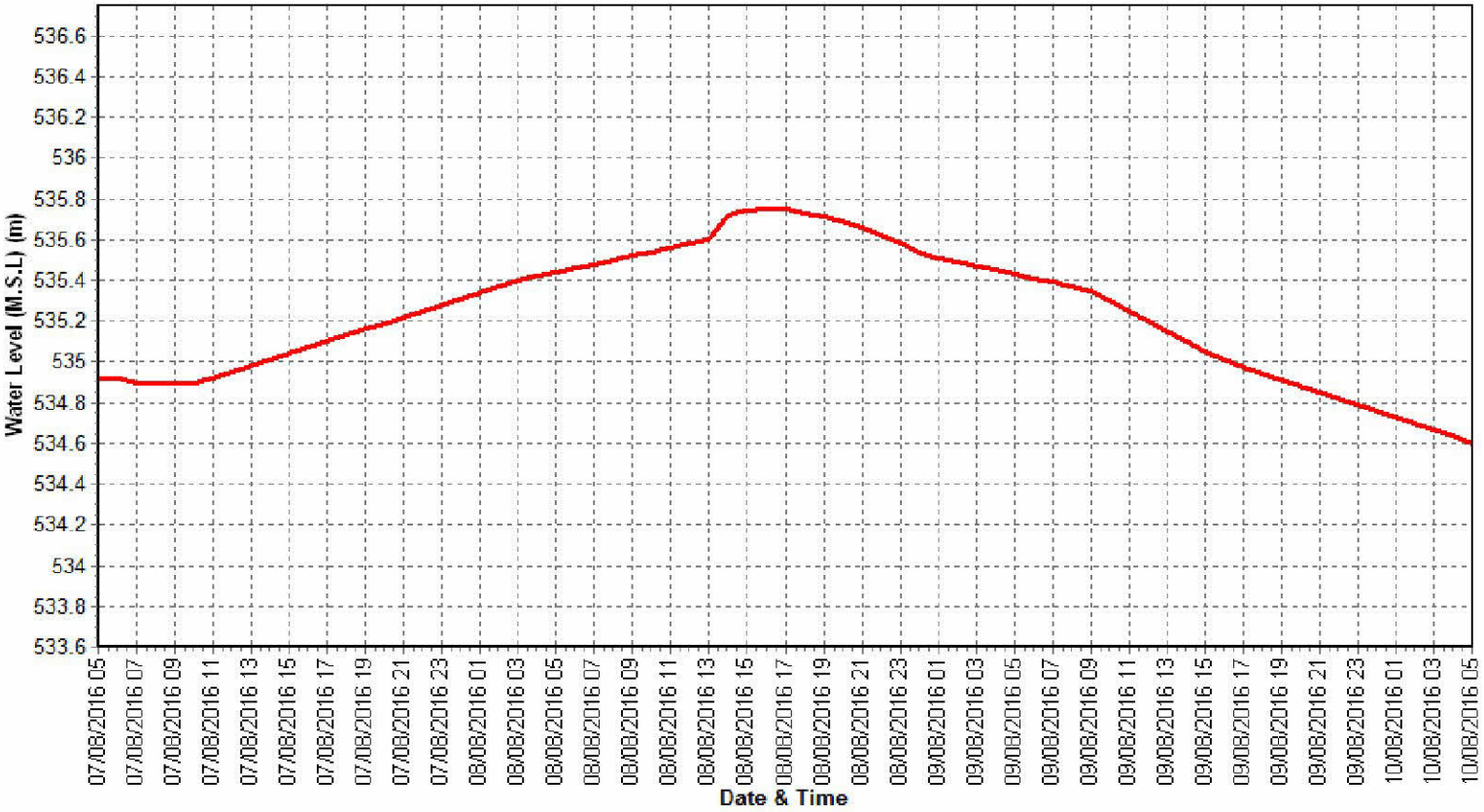



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017

**Station Name : Mudhol ( MUDHOL)** | **Division : Upper Krishna Divn, Pune**

**Local River : Ghataprabha** | **Sub-Division : Middle Krishna SD 1, Bagalkot**

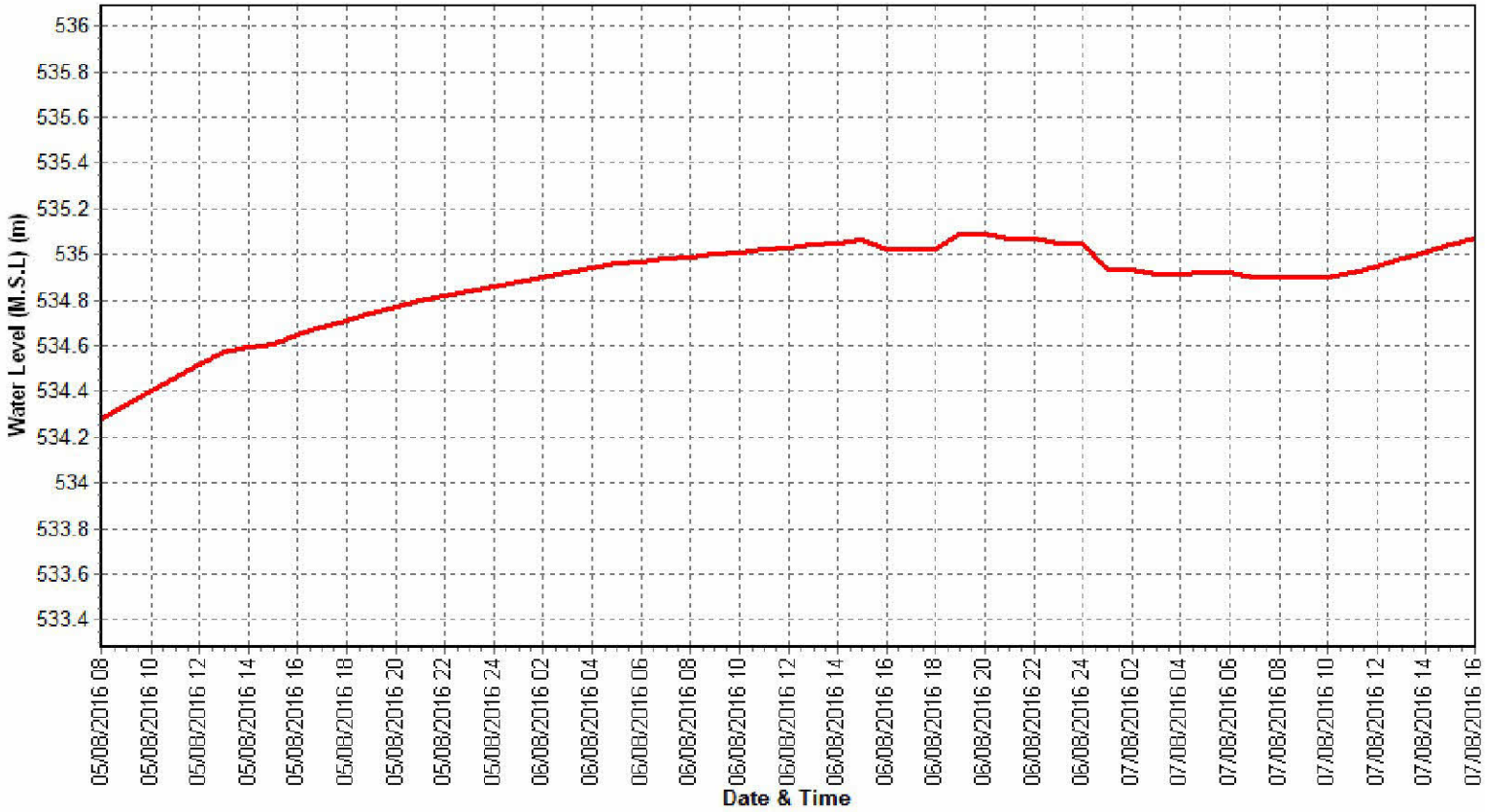



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Mudhol ( MUDHOL)** **Division : Upper Krishna Divn, Pune**

**Local River : Ghataprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Gokak Falls (Seasonal)** | | **Code** | **: AKT00P9** | |
| State | : Karnataka | | District | Belgaum | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Ghataprabha | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Ghataprabha | |
| Division | : Upper Krishna Divn, Pune | | Sub-Division | : Middle Krishna SD 1, Bagalkot | |
| Drainage Area | : 2770 Sq. Km. | | Bank | : Right | |
| Latitude | : 16°11'24" | | Longitude | : 74°47'29" | |
| **Zero of Gauge (m)** | : 536 (m.s.l)<br>536.004 (m.s.l) | | 01/09/2003<br>20/03/1971 | - 31/08/2003 | |
| | Opening Date | | Closing Date | | |
| Gauge | : 21/03/1971 | | | | |
| Discharge | : 14/07/1971 | | **HFL During 2016-17**<br>**Corres. Discharge** | **: 542.380m**<br>**: 554.08(Estimated)** | |
| Sediment | : 27/12/2014 | | **Date & Time of occurance** | **: 14/07/2016 07.00 hrs.** | |
| Water Quality | : 01/09/2014 | | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1972-1973 | 2271 | 544.389 | 08/07/1972 | 0.000 | 538.559 | 14/02/1973 |
| 1973-1974 | 1922 | 543.884 | 09/07/1973 | 0.000 | 538.570 | 26/01/1974 |
| 1974-1975 | 2150 | 544.254 | 07/07/1974 | 0.000 | 538.469 | 30/03/1975 |
| 1975-1976 | 3106 | 545.474 | 11/07/1975 | 0.000 | 538.604 | 24/04/1976 |
| 1976-1977 | 1702 | 543.879 | 02/08/1976 | 0.000 | 538.414 | 22/04/1977 |
| 1977-1978 | 1195 | 543.244 | 27/07/1977 | 0.000 | 538.604 | 13/06/1977 |
| 1978-1979 | 1915 | 544.194 | 18/08/1978 | 0.200 | 538.554 | 13/03/1979 |
| 1979-1980 | 3147 | 545.364 | 10/08/1979 | 0.300 | 538.794 | 05/06/1979 |
| 1980-1981 | 1725 | 544.249 | 07/08/1980 | 1.100 | 538.784 | 25/05/1981 |
| 1981-1982 | 1109 | 542.933 | 04/08/1981 | 3.000 | 538.734 | 12/06/1981 |
| 1982-1983 | 1669 | 543.969 | 15/08/1982 | 5.800 | 539.024 | 13/05/1983 |
| 1983-1984 | 2766 | 546.099 | 29/06/1983 | 5.400 | 539.024 | 17/04/1984 |
| 1984-1985 | 708.9 | 542.394 | 03/07/1984 | 2.300 | 538.894 | 02/05/1985 |
| 1985-1986 | 716.2 | 542.234 | 03/08/1985 | 1.300 | 538.779 | 17/06/1985 |
| 1986-1987 | 439.8 | 541.574 | 12/08/1986 | 5.600 | 539.004 | 12/10/1986 |
| 1987-1988 | 269.8 | 540.904 | 09/07/1987 | 1.244 | 538.724 | 16/03/1988 |
| 1988-1989 | 2064 | 544.809 | 06/08/1988 | 0.000 | 539.079 | 22/02/1989 |
| 1989-1990 | 1455 | 543.979 | 26/07/1989 | 0.000 | 539.084 | 24/03/1990 |
| 1990-1991 | 1073 | 543.279 | 19/08/1990 | 0.000 | 539.054 | 13/03/1991 |
| 1991-1992 | 1351 | 543.833 | 16/08/1991 | 0.000 | 539.094 | 05/02/1992 |
| 1992-1993 | 871.4 | 542.954 | 23/08/1992 | 0.000 | 539.034 | 24/01/1993 |

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** |
| 1993-1994 | 1444 | 544.160 | 14/08/1993 | 0.000 | 539.094 | 31/01/1994 |
| 1994-1995 | 3440 | 546.514 | 16/07/1994 | 0.000 | 539.044 | 11/02/1995 |
| 1995-1996 | 395.2 | 541.304 | 21/07/1995 | 0.000 | 539.104 | 10/01/1996 |
| 1996-1997 | 728.4 | 542.304 | 21/10/1996 | 0.000 | 539.084 | 10/03/1997 |
| 1997-1998 | 3375 | 546.154 | 08/08/1997 | 0.000 | 539.044 | 27/03/1998 |
| 1998-1999 | 404.0 | 541.549 | 03/07/1998 | 0.000 | 539.154 | 09/03/1999 |
| 1999-2000 | 1323 | 544.864 | 23/07/1999 | 0.000 | 539.144 | 12/02/2000 |
| 2000-2001 | 483.4 | 541.942 | 15/07/2000 | 0.000 | 539.004 | 12/03/2001 |
| 2001-2002 | 332.7 | 541.221 | 11/07/2001 | 0.000 | 539.074 | 02/02/2002 |
| 2002-2003 | 475.3 | 541.474 | 13/08/2002 | 0.000 | 538.924 | 30/01/2003 |
| 2003-2004 | 210.4 | 540.504 | 23/06/2003 | 0.000 | 538.610 | 26/01/2004 |
| 2004-2005 | 558.7 | 542.602 | 05/08/2004 | 0.000 | 538.950 | 25/01/2005 |
| 2005-2006 | 3245 | 546.400 | 23/09/2005 | 0.000 | 538.910 | 25/01/2006 |
| 2006-2007 | 1703 | 545.250 | 13/08/2006 | 6.340 | 538.610 | 20/06/2006 |
| 2007-2008 | 1991 | 545.820 | 08/08/2007 | 0.000 | 538.590 | 18/06/2007 |
| 2008-2009 | 1013 | 544.030 | 13/08/2008 | 0.000 | 538.820 | 12/06/2008 |
| 2009-2010 | 677.4 | 542.930 | 04/10/2009 | 0.000 | 539.045 | 30/06/2009 |
| 2010-2011 | 498.5 | 542.605 | 30/07/2010 | 0.000 | 539.410 | 15/06/2010 |
| 2011-2012 | 1123 | 544.650 | 04/09/2011 | 0.000 | 539.835 | 08/06/2011 |
| 2012-2013 | 328.6 | 541.620 | 05/08/2012 | 0.000 | 539.820 | 28/06/2012 |
| 2013-2014 | 621.3 | 542.660 | 04/08/2013 | 0.000 | 539.800 | 07/05/2014 |
| 2014-2015 | 451.6 | 542.130 | 01/08/2014 | 0.000 | 539.715 | 18/06/2014 |
| 2015-2016 | 342.6 | 541.180 | 25/06/2015 | 0.000 | 539.830 | 22/06/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Gokak Falls (Seasonal) ( AKT00P9)** **Division : Upper Krishna Divn, Pune**

**Local River : Ghataprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**

| 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 | 539.220 | 0.000 | 539.060 | 0.000 | 539.250 | 9.615 | 539.285 | 13.14 | 539.309 | 13.14 | 539.235 | 0.000 |
| 2 | 539.180 | 0.000 | 539.380 | 0.000 | 539.233 | 11.48 | 539.360 | 18.32 | 539.360 | 16.78 * | 539.260 | 0.000 |
| 3 | 539.180 | 0.000 | 539.560 | 0.000 | 539.600 | 109.8 | 539.360 | 17.57 | 539.178 | 11.98 | 539.200 | 0.000 |
| 4 | 539.120 | 0.000 | 540.020 | 0.000 | 541.140 | 366.5 | 539.355 | 29.72 * | 539.314 | 13.45 | 539.200 | 0.000 |
| 5 | 539.070 | 0.000 | 539.985 | 140.7 | 541.760 | 426.3 | 539.335 | 16.14 | 539.340 | 17.11 | 539.075 | 0.000 |
| 6 | 539.040 | 0.000 | 540.280 | 187.8 * | 541.545 | 397.7 | 539.330 | 16.65 | 539.345 | 17.16 | 539.085 | 0.000 |
| 7 | 539.010 | 0.000 | 539.935 | 131.9 | 542.050 | 496.2 * | 539.355 | 17.16 | 539.350 | 17.73 | 539.175 | 0.000 |
| 8 | 539.030 | 0.000 | 539.870 | 124.6 | 541.780 | 436.6 | 539.330 | 15.65 | 539.354 | 14.80 | 539.290 | 0.000 |
| 9 | 538.980 | 0.000 | 539.448 | 21.87 | 541.210 | 380.3 | 539.330 | 14.98 | 539.340 | 16.01 * | 539.280 | 0.000 |
| 10 | 539.810 | 0.000 | 539.430 | 42.33 * | 540.665 | 274.6 | 539.370 | 17.11 | 539.340 | 15.26 | 539.260 | 0.000 |
| 11 | 539.680 | 0.000 | 541.390 | 391.9 | 540.780 | 297.9 | 539.330 | 25.53 * | 539.345 | 16.20 * | 539.870 | 0.000 |
| 12 | 539.360 | 0.000 | 541.907 | 448.5 | 540.475 | 251.8 | 539.384 | 18.38 | 539.310 | 14.89 * | 539.895 | 0.000 |
| 13 | 539.310 | 0.000 | 542.330 | 510.4 | 540.190 | 220.2 | 539.270 | 15.52 * | 539.358 | 16.28 | 539.890 | 0.000 |
| 14 | 539.250 | 0.000 | 542.370 | 515.0 | 540.115 | 159.3 * | 539.050 | 13.47 | 539.360 | 17.11 | 539.905 | 0.000 |
| 15 | 539.300 | 0.000 | 540.930 | 315.6 | 539.820 | 118.7 | 539.170 | 13.45 | 539.348 | 15.79 | 539.890 | 0.000 |
| 16 | 539.225 | 0.000 | 539.900 | 125.9 | 539.630 | 113.0 | 539.149 | 12.39 | 539.340 | 16.01 * | 539.890 | 0.000 |
| 17 | 539.180 | 0.000 | 539.530 | 59.25 * | 539.455 | 21.20 | 539.135 | 11.95 | 539.333 | 14.80 | 539.440 | 0.000 |
| 18 | 539.120 | 0.000 | 539.277 | 16.01 | 539.349 | 16.59 | 539.140 | 12.00 * | 539.330 | 15.26 | 539.920 | 0.000 |
| 19 | 539.115 | 0.000 | 539.245 | 12.95 | 539.270 | 17.83 | 539.805 | 115.1 | 539.332 | 12.49 | 539.900 | 0.000 |
| 20 | 539.030 | 0.000 | 539.237 | 9.961 | 539.243 | 15.80 | 539.423 | 20.40 | 539.333 | 18.72 | 539.840 | 0.000 |
| 21 | 538.955 | 0.000 | 539.280 | 17.94 | 539.260 | 13.87 * | 539.270 | 14.50 | 539.104 | 8.676 | 539.940 | 0.000 |
| 22 | 539.040 | 0.000 | 539.270 | 20.03 | 539.250 | 16.45 | 539.258 | 13.83 | 539.099 | 7.197 | 539.890 | 0.000 |
| 23 | 539.070 | 0.000 | 539.440 | 22.23 | 539.068 | 10.11 | 539.140 | 11.98 | 539.110 | 8.524 * | 539.420 | 0.000 |
| 24 | 539.030 | 0.000 | 539.540 | 60.95 * | 539.835 | 120.9 | 539.225 | 11.50 | 539.105 | 8.921 | 539.950 | 0.000 |
| 25 | 539.180 | 0.000 | 539.570 | 103.9 | 540.115 | 209.5 | 539.390 | 35.60 * | 539.090 | 8.181 | 539.890 | 0.000 |
| 26 | 539.220 | 0.000 | 539.543 | 99.82 | 540.030 | 193.9 | 539.825 | 117.8 | 539.180 | 9.377 | 539.910 | 0.000 |
| 27 | 539.190 | 0.000 | 539.297 | 14.02 | 539.880 | 127.7 | 539.678 | 106.6 | 539.068 | 7.197 | 539.920 | 0.000 |
| 28 | 539.180 | 0.000 | 539.230 | 11.43 | 539.760 | 98.42 * | 539.418 | 21.20 | 539.035 | 6.660 | 539.900 | 0.000 |
| 29 | 539.140 | 0.000 | 539.284 | 16.57 | 539.555 | 102.9 | 539.463 | 22.81 | 539.058 | 7.346 | 539.910 | 0.000 |
| 30 | 539.030 | 0.000 | 539.260 | 15.41 | 539.413 | 20.40 | 539.418 | 20.40 | 539.080 | 7.733 * | 539.830 | 0.000 |
| 31 | | | 539.255 | 13.04 * | 539.358 | 16.65 | | | 539.030 | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 539.164 | 0.000 | 539.697 | 64.93 | 540.823 | 290.9 | 539.341 | 17.64 | 539.323 | 15.34 | 539.206 | 0.000 |
| II Ten-Daily | 539.257 | 0.000 | 540.611 | 240.6 | 539.833 | 123.2 | 539.286 | 25.82 | 539.339 | 15.75 | 539.844 | 0.000 |
| III Ten-Daily | 539.104 | 0.000 | 539.361 | 35.94 | 539.593 | 84.62 | 539.408 | 37.62 | 539.087 | 7.256 | 539.856 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 538.955 | 0.000 | 539.060 | 0.000 | 539.068 | 9.615 | 539.050 | 11.50 | 539.030 | 0.000 | 539.075 | 0.000 |
| Max. | 539.810 | 0.000 | 542.370 | 515.0 | 542.050 | 496.2 | 539.825 | 117.8 | 539.360 | 18.72 | 539.950 | 0.000 |
| Mean | 539.175 | 0 | 539.873 | 111.3 | 540.067 | 163.6 | 539.345 | 27.03 | 539.244 | 12.6 | 539.635 | 0 |

**Annual Runoff in MCM = 840 Annual Runoff in mm = 303**

**Peak Observed Discharge = 515.0 cumecs on 14/07/2016 Corres. Water Level :542.37 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016 Corres. Water Level :539.22 m**

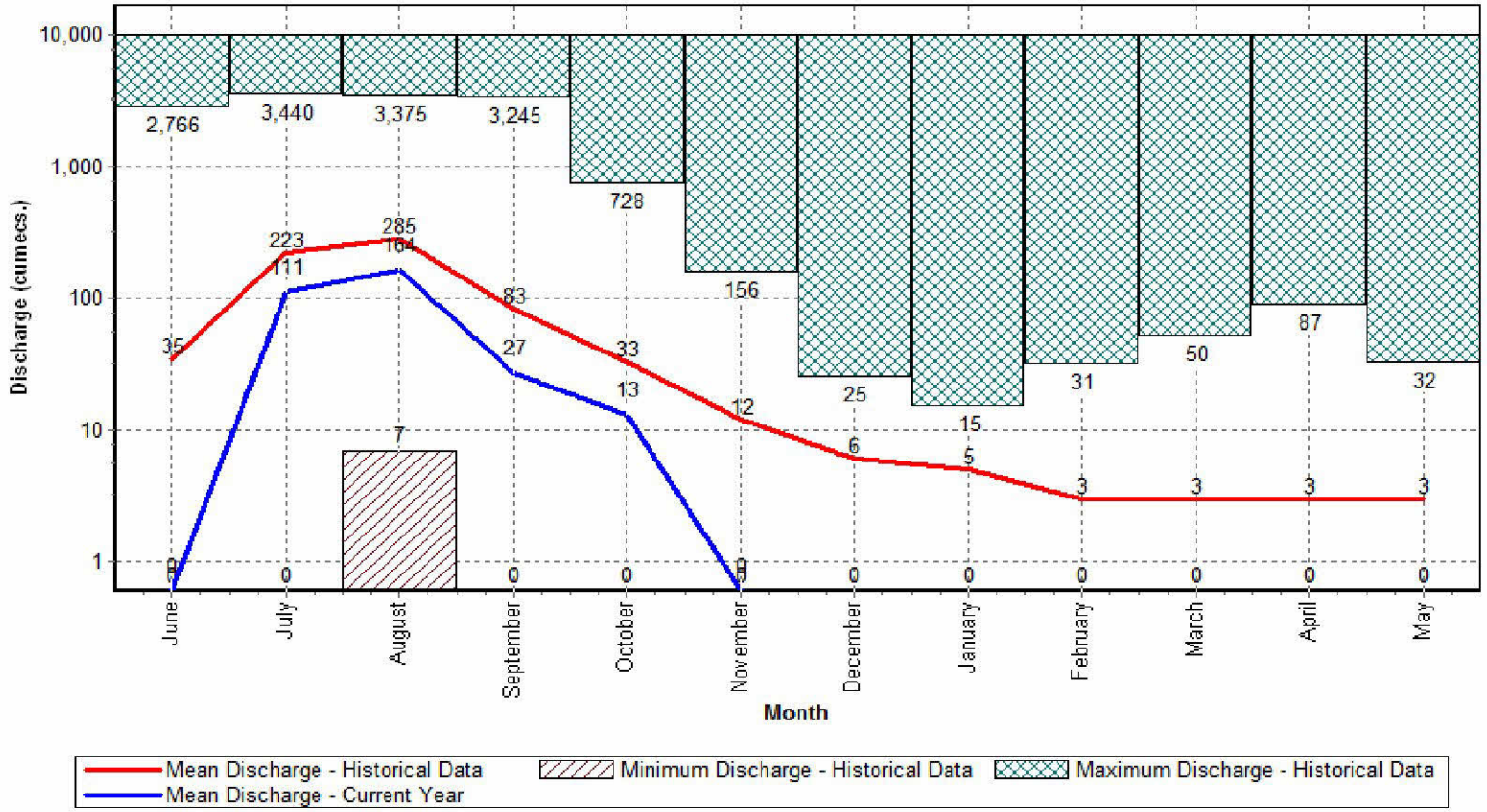
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Gokak Falls (Seasonal) ( AKT00P9)** **Data considered : 1972-2017** **Division : Upper Krishna Divn, Pune**

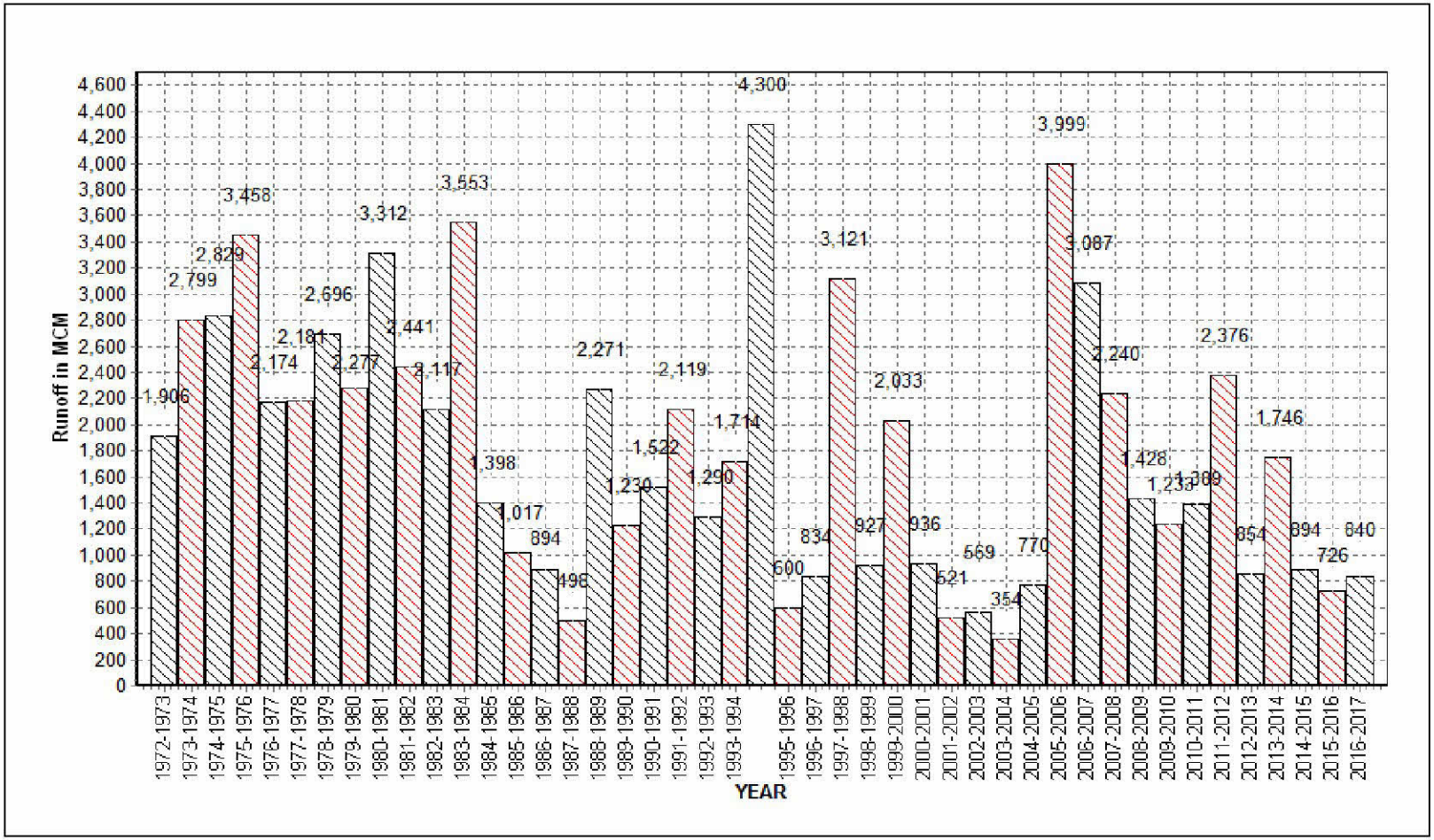
**Local River : Ghataprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**



**Annual Runoff Values for the period: 1972 - 2017**

**Station Name : Gokak Falls (Seasonal) ( AKT00P9)** **Division : Upper Krishna Divn, Pune**

**Local River : Ghataprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**




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

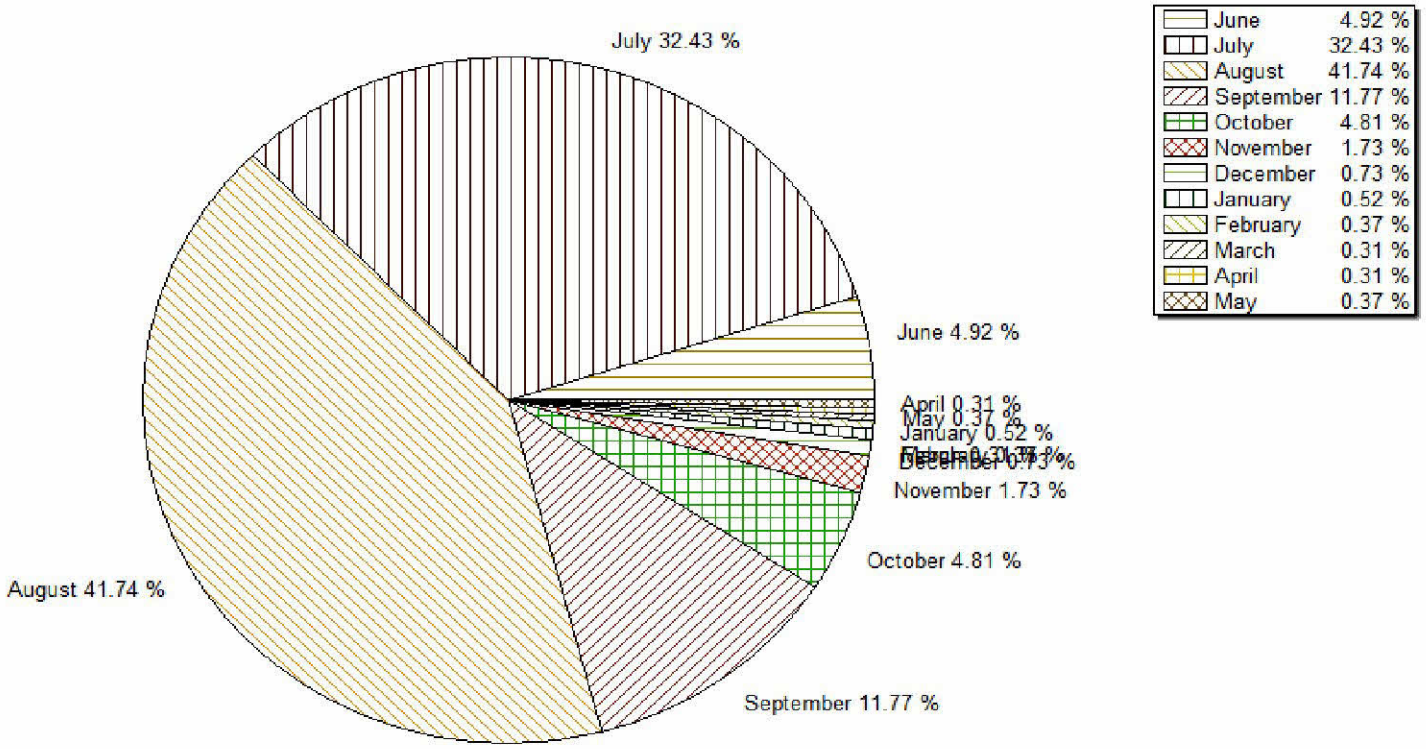
**Monthly Average Runoff based on period : 1972-2016**

**Station Name : Gokak Falls (Seasonal) ( AKT00P9)**

**Local River : Ghataprabha**

**Division : Upper Krishna Divn, Pune**

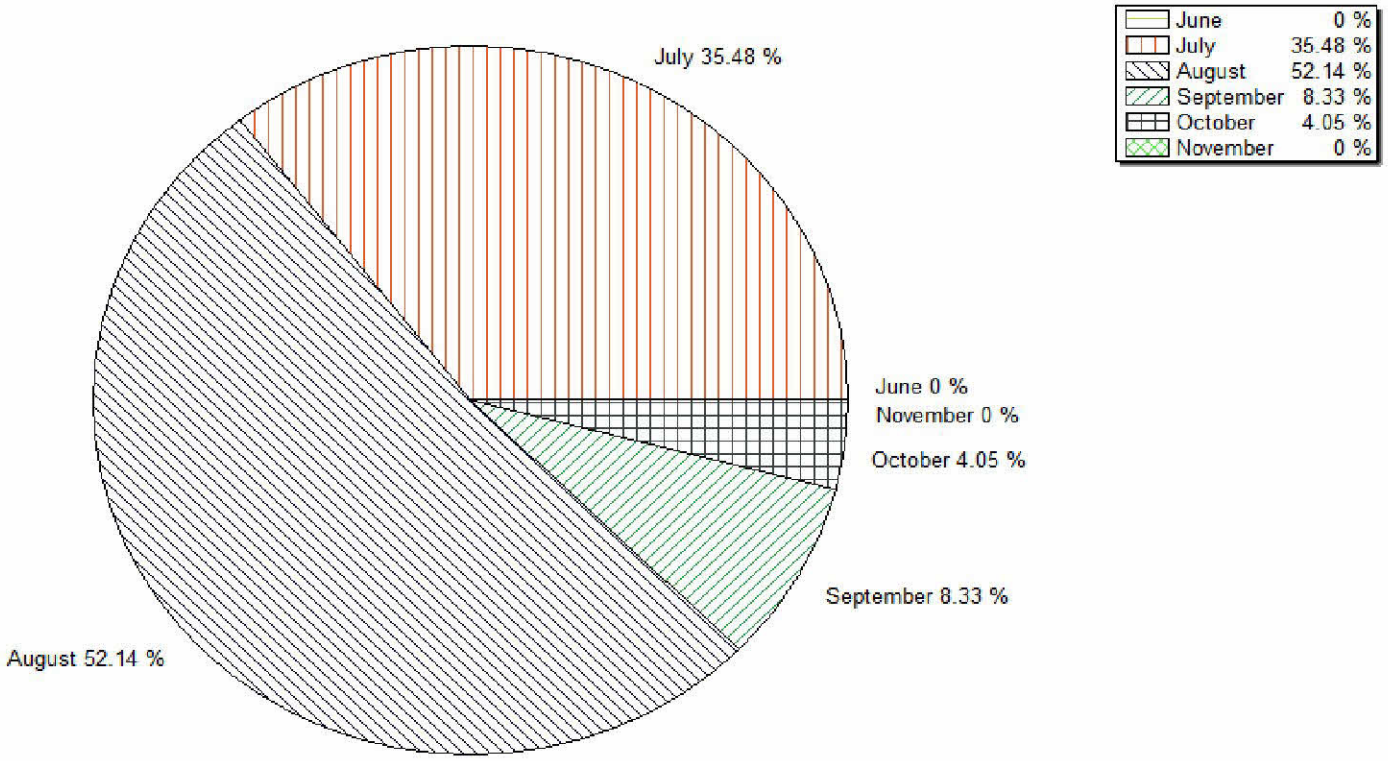
**Sub-Division : Middle Krishna SD 1, Bagalkot**



**Monthly Runoff for the Year : 2016-2017**

**Station Name : Gokak Falls (Seasonal) ( AKT00P9)**
**Local River : Ghataprabha**

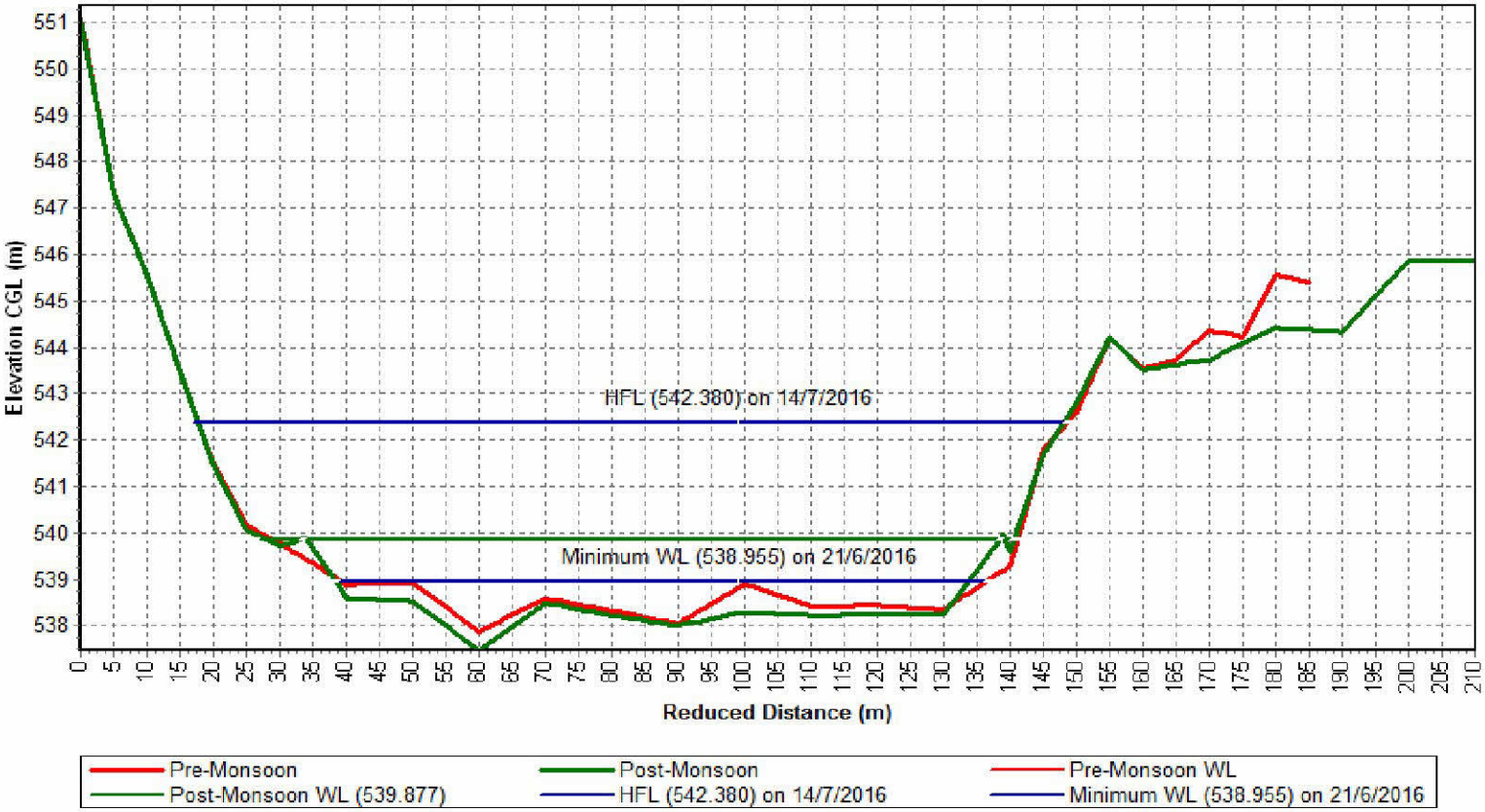
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Middle Krishna SD 1, Bagalkot**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Gokak Falls (Seasonal) ( AKT00P9)** **Division : Upper Krishna Divn, Pune**

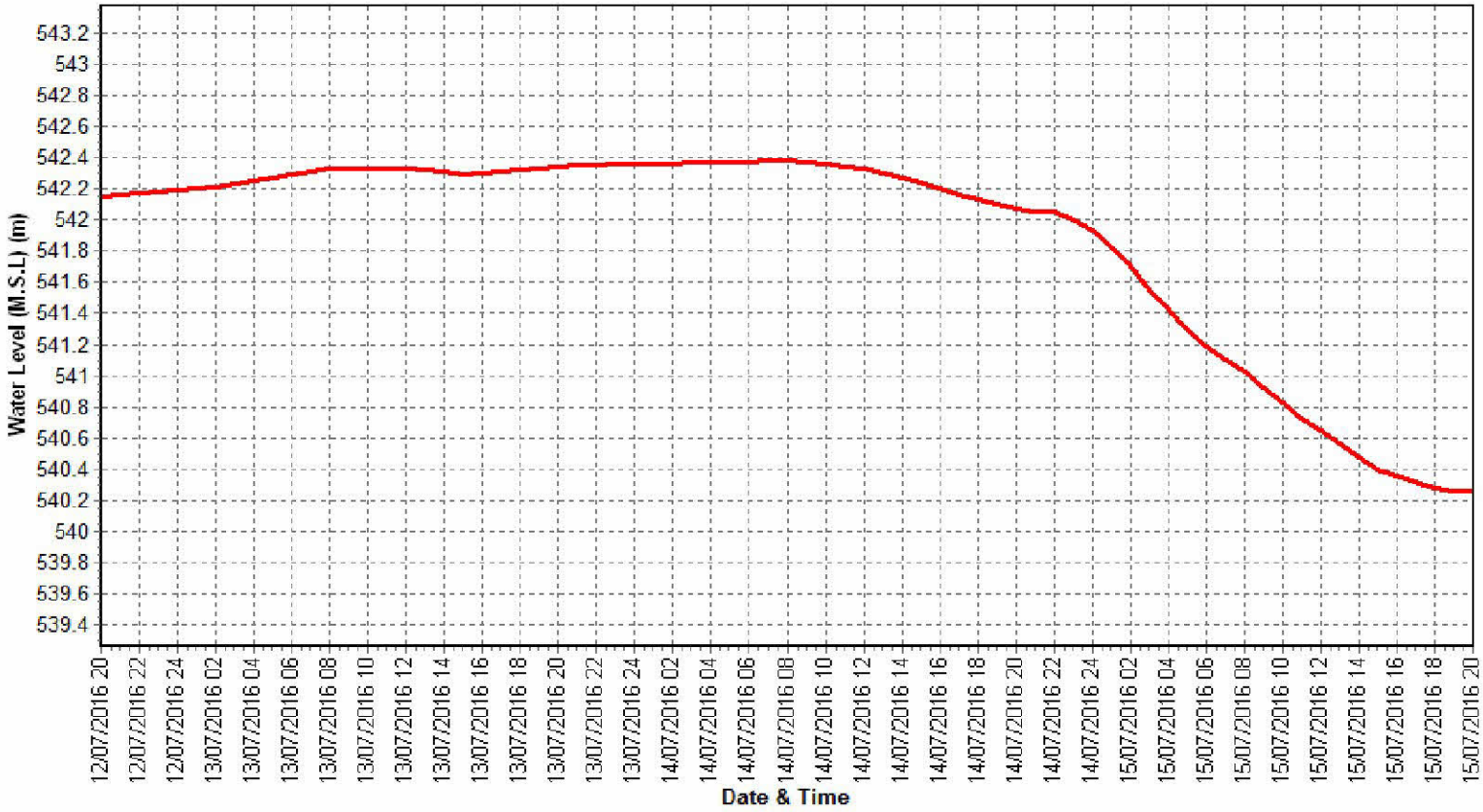
**Local River : Ghataprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**



**Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017**

**Station Name : Gokak Falls (Seasonal) ( AKT00P9)** **Division : Upper Krishna Divn, Pune**

**Local River : Ghataprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**

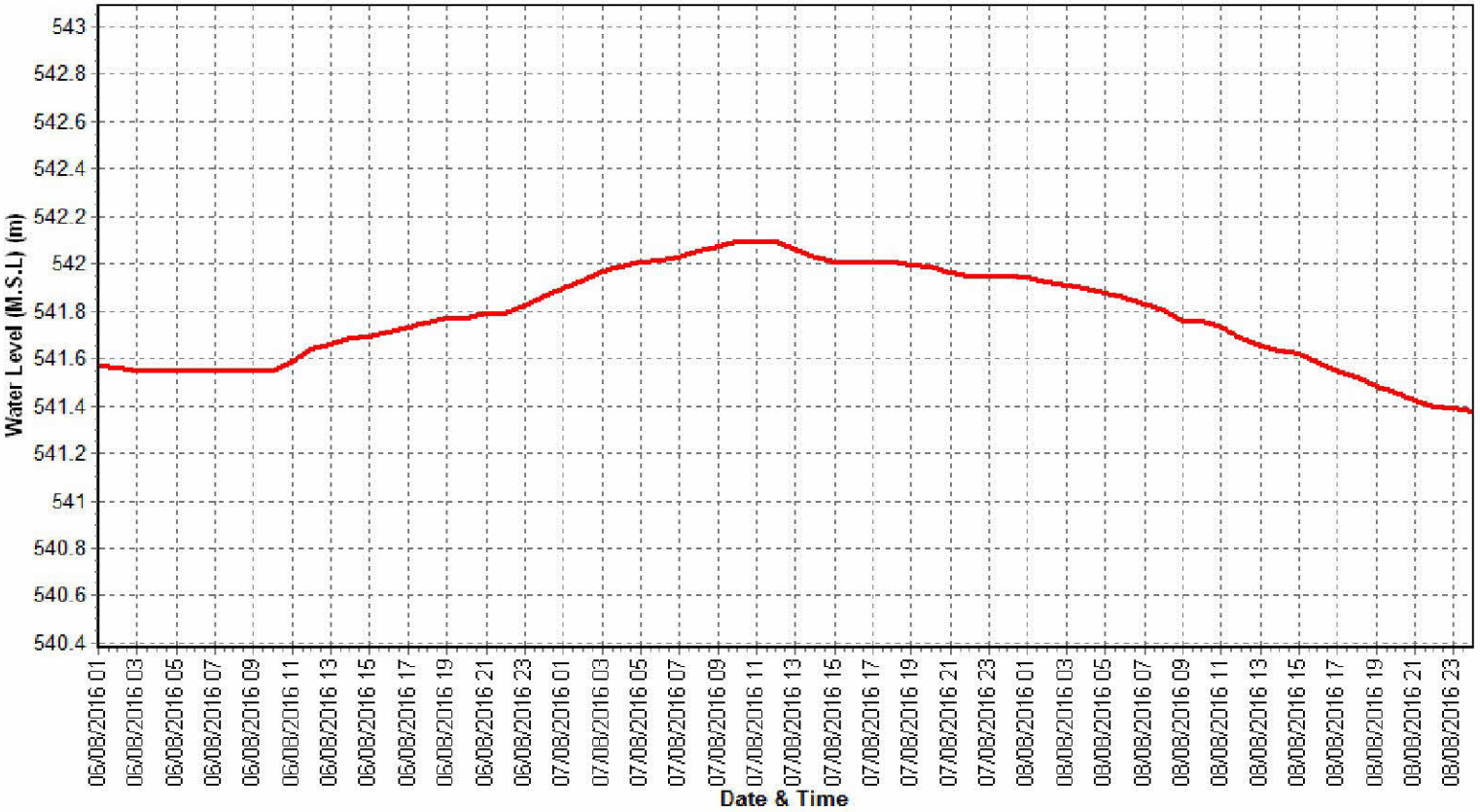



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Gokak Falls (Seasonal) ( AKT00P9)** **Division : Upper Krishna Divn, Pune**

**Local River : Ghataprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**

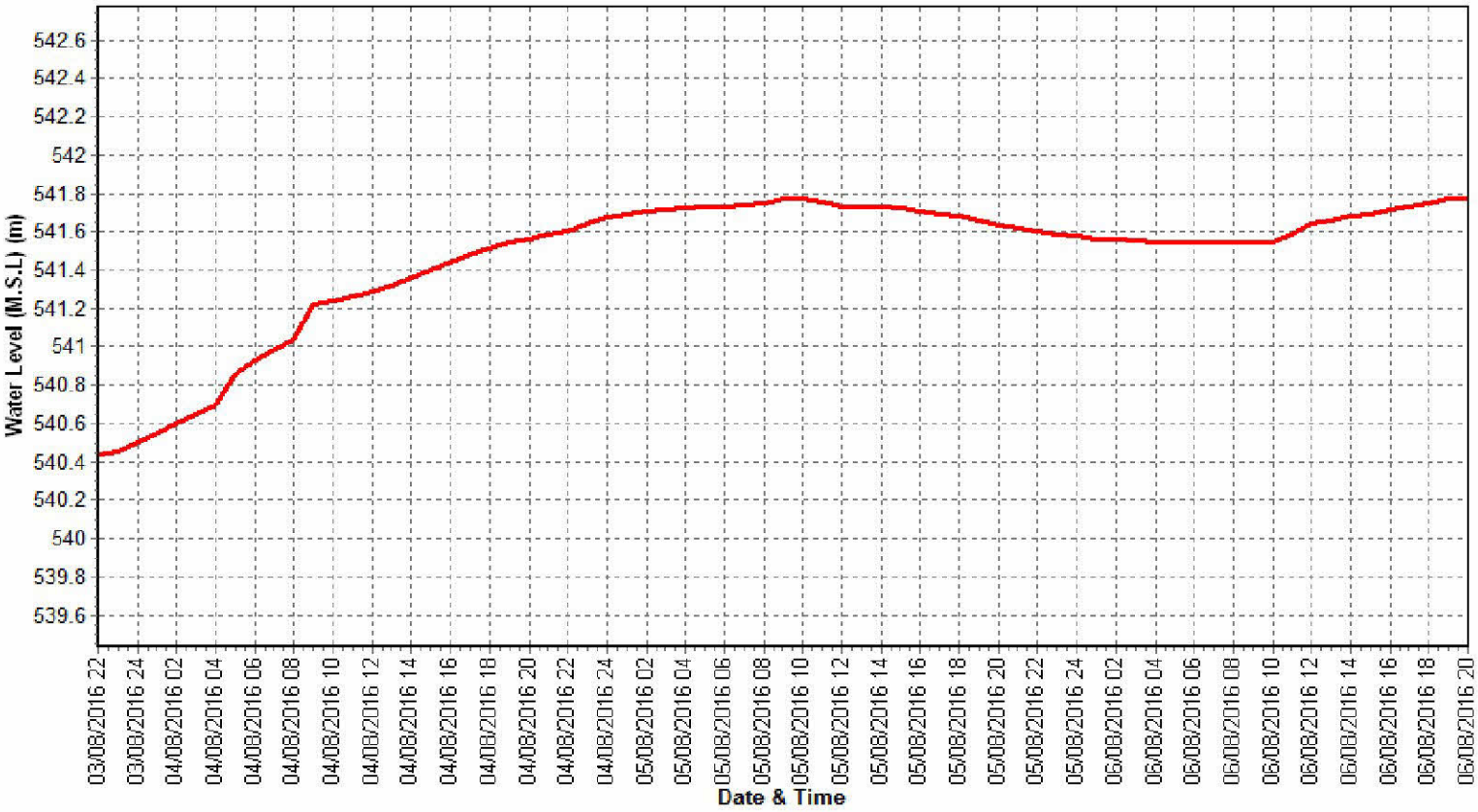



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Gokak Falls (Seasonal) ( AKT00P9)** **Division : Upper Krishna Divn, Pune**

**Local River : Ghataprabha** **Sub-Division : Middle Krishna SD 1, Bagalkot**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Sadalga (Seasonal)** | | **Code** | **: AKV00D3** | |
| State | : Karnataka | | District | Belgaum | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Dudhganga | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Dudhganga | |
| Division | : Upper Krishna Divn, Pune | | Sub-Division | : Upper Krishna SD 2, Miraj | |
| Drainage Area | : 2322 Sq. Km. | | Bank | : Right | |
| Latitude | : 16°33'44" | | Longitude | : 74°31'42" | |
| **Zero of Gauge (m)** | : 522.976 (m.s.l)<br>526.16 (m.s.l)<br>525.16 (m.s.l) | | 01/01/1964<br>05/06/1964<br>26/04/1966 | - 04/06/1964<br>- 25/04/1966 | |
| | Opening Date | | Closing Date | | |
| Gauge | : 05/06/1964 | | **HFL During 2016-17** | **: 536.920m** | |
| | | | **Corres. Discharge** | **: 1761(Observed)** | |
| Discharge | : 24/06/1969 | | **Date & Time of occurance** | **: 14/07/2016 : 08.00 hrs.** | |
| 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** |
| 1970-1971 | 1320 | 536.850 | 23/08/1970 | 0.000 | 527.230 | 25/01/1971 |
| 1971-1972 | 1190 | 535.888 | 26/06/1971 | 0.000 | 526.030 | 26/01/1972 |
| 1972-1973 | 1230 | 536.245 | 09/07/1972 | 0.000 | | 23/01/1973 |
| 1973-1974 | 1397 | 536.760 | 10/07/1973 | 0.000 | 527.550 | 25/01/1974 |
| 1974-1975 | 1304 | 536.483 | 07/07/1974 | 0.000 | 526.700 | 25/01/1975 |
| 1975-1976 | 1759 | 537.550 | 11/07/1975 | 0.000 | 529.515 | 26/01/1976 |
| 1976-1977 | 1103 | 536.804 | 02/08/1976 | 0.000 | 527.985 | 24/01/1977 |
| 1977-1978 | 1129 | 536.597 | 09/07/1977 | 0.000 | 529.595 | 25/01/1978 |
| 1978-1979 | 1244 | 536.317 | 18/08/1978 | 0.000 | 528.125 | 25/01/1979 |
| 1979-1980 | 1429 | 537.285 | 12/08/1979 | 0.000 | 529.000 | 26/01/1980 |
| 1980-1981 | 1103 | 536.612 | 09/07/1980 | 0.000 | | 25/01/1981 |
| 1981-1982 | 1457 | 536.833 | 09/07/1981 | 0.000 | 527.750 | 25/01/1982 |
| 1982-1983 | 1368 | 536.510 | 31/07/1982 | 0.000 | 526.660 | 25/01/1983 |
| 1983-1984 | 2457 | 538.950 | 29/06/1983 | 0.000 | | 26/01/1984 |
| 1984-1985 | 1514 | 536.026 | 19/07/1984 | 0.000 | | 25/01/1985 |
| 1985-1986 | 1421 | 536.472 | 03/08/1985 | 0.000 | | 25/01/1986 |
| 1986-1987 | 1048 | 536.425 | 11/08/1986 | 0.000 | | 25/01/1987 |
| 1987-1988 | 872.6 | 535.430 | 09/07/1987 | 0.000 | | 26/01/1988 |
| 1988-1989 | 1810 | 537.300 | 20/07/1988 | 0.000 | | 25/01/1989 |
| 1989-1990 | 2100 | 538.055 | 26/07/1989 | 0.000 | 527.635 | 25/01/1990 |
| 1990-1991 | 1452 | 537.058 | 19/08/1990 | 0.000 | 529.425 | 09/03/1991 |

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 |
| 1991-1992 | 1379 | 537.707 | 30/07/1991 | 0.000 | 529.925 | 26/01/1992 |
| 1992-1993 | 773.1 | 535.365 | 20/08/1992 | 0.000 | 531.210 | 25/01/1993 |
| 1993-1994 | 1058 | 536.630 | 13/07/1993 | 0.000 | 531.500 | 25/01/1994 |
| 1994-1995 | 1900 | 538.150 | 18/07/1994 | 0.000 | 531.450 | 25/01/1995 |
| 1995-1996 | 710.9 | 534.900 | 04/09/1995 | 0.000 | 528.760 | 26/01/1996 |
| 1996-1997 | 1180 | 536.480 | 03/10/1996 | 0.000 | 530.470 | 25/01/1997 |
| 1997-1998 | 1350 | 537.640 | 09/08/1997 | 0.000 | 530.380 | 25/01/1998 |
| 1998-1999 | 673.9 | 534.980 | 10/07/1998 | 0.000 | 529.920 | 25/01/1999 |
| 1999-2000 | 1135 | 536.960 | 23/07/1999 | 0.000 | 529.010 | 26/01/2000 |
| 2000-2001 | 853.5 | 535.565 | 15/07/2000 | 0.000 | 530.980 | 25/01/2001 |
| 2001-2002 | 594.6 | 534.400 | 11/07/2001 | 0.000 | 528.450 | 25/01/2002 |
| 2002-2003 | 827.9 | 535.750 | 13/08/2002 | 0.000 | 529.940 | 25/01/2003 |
| 2003-2004 | 537.7 | 534.560 | 23/06/2003 | 0.000 | 530.490 | 26/01/2004 |
| 2004-2005 | 1287 | 536.450 | 07/08/2004 | 0.000 | 530.415 | 25/01/2005 |
| 2005-2006 | 2200 | 538.890 | 06/08/2005 | 0.000 | 530.285 | 25/01/2006 |
| 2006-2007 | 1978 | 538.410 | 13/08/2006 | 0.000 | 528.375 | 01/11/2006 |
| 2007-2008 | 891.2 | 536.685 | 02/07/2007 | 0.000 | 530.190 | 13/11/2007 |
| 2008-2009 | 1013 | 537.840 | 14/08/2008 | 0.000 | 528.260 | 07/11/2008 |
| 2009-2010 | 762.6 | 535.810 | 18/07/2009 | 0.000 | 529.795 | 25/11/2009 |
| 2010-2011 | 850.9 | 536.455 | 30/07/2010 | 0.000 | 528.750 | 26/11/2010 |
| 2011-2012 | 832.5 | 536.110 | 06/09/2011 | 0.000 | 527.680 | 04/11/2011 |
| 2012-2013 | 559.5 | 534.028 | 06/09/2012 | 0.000 | 528.250 | 12/11/2012 |
| 2013-2014 | 847.3 | 536.270 | 29/07/2013 | 0.000 | 528.385 | 02/11/2013 |
| 2014-2015 | 710.5 | 535.040 | 26/07/2014 | 0.000 | 527.580 | 12/11/2014 |
| 2015-2016 | 555.4 | 534.040 | 26/06/2015 | 0.000 | 528.600 | 25/11/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Sadalga (Seasonal) ( AKV00D3)** **Division : Upper Krishna Divn, Pune**

**Local River : Dudhganga** **Sub-Division : Upper Krishna SD 2, Miraj**

| 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 | 525.580 | 0.000 | 528.470 | 63.34 * | 529.160 | 104.4 | 528.555 | 71.78 | 528.685 | 73.74 | 527.725 | 0.000 |
| 2 | 525.380 | 0.000 | 528.445 | 64.20 | 530.435 | 209.5 | 528.510 | 55.03 | 528.490 | 64.30 * | 527.300 | 0.000 |
| 3 | 525.310 | 0.000 | 530.060 | 166.9 * | 532.475 | 399.7 | 528.448 | 57.86 | 528.160 | 42.03 | 527.115 | 0.000 |
| 4 | 525.185 | 0.000 | 530.490 | 205.1 | 533.470 | 520.8 | 528.385 | 59.37 * | 528.105 | 44.64 | 526.945 | 0.000 |
| 5 | 525.200 | 0.000 | 531.010 | 260.2 | 534.370 | 633.2 | 528.310 | 55.99 * | 528.240 | 51.40 | 526.770 | 0.000 |
| 6 | 525.170 | 0.000 | 531.360 | 296.7 * | 535.260 | 716.4 | 528.250 | 58.14 | 528.225 | 52.29 * | 526.600 | 0.000 |
| 7 | | 0.000 | 530.330 | 190.1 | 535.660 | 1065 * | 528.135 | 44.92 | 527.890 | 39.13 * | 526.425 | 0.000 |
| 8 | | 0.000 | 529.320 | 123.5 | 535.750 | 829.0 | 528.055 | 43.91 | 527.780 | 35.29 * | 526.275 | 0.000 |
| 9 | | 0.000 | 529.000 | 107.0 | 535.460 | 748.5 | 527.960 | 37.16 | 527.690 | 32.31 * | 526.130 | 0.000 |
| 10 | 528.480 | 0.000 | 531.900 | 363.6 * | 534.810 | 669.7 | 527.850 | 35.15 | 527.653 | 16.46 | 526.080 | 0.000 |
| 11 | 527.590 | 0.000 | 534.020 | 732.7 | 534.010 | 572.8 | 527.760 | 34.61 * | 528.750 | 77.50 * | 525.880 | 0.000 |
| 12 | 527.420 | 0.000 | 535.905 | 1370 | 533.160 | 468.8 | 527.658 | 20.46 | 529.140 | 100.0 * | 525.855 | 0.000 |
| 13 | 527.360 | 0.000 | 536.710 | 1682 | 531.820 | 328.7 | 527.590 | 29.18 * | 528.950 | 90.77 | 525.590 | 0.000 |
| 14 | 527.335 | 0.000 | 536.920 | 1761 | 530.710 | 226.4 * | 527.570 | 15.97 | 528.383 | 55.64 | 525.455 | 0.000 |
| 15 | 527.270 | 0.000 | 536.730 | 1690 | 530.010 | 162.7 * | 527.598 | 13.12 | 528.248 | 41.27 | 525.320 | 0.000 |
| 16 | 527.180 | 0.000 | 535.890 | 1373 | 529.640 | 147.5 | 527.678 | 18.25 | 528.100 | 47.12 * | 527.720 | 0.000 |
| 17 | 527.050 | 0.000 | 533.690 | 644.2 * | 529.468 | 124.6 | 527.710 | 20.19 | 528.015 | 27.27 | 527.990 | 0.000 |
| 18 | 526.805 | 0.000 | 530.600 | 214.3 | 529.250 | 110.0 | 528.340 | 57.33 * | 527.915 | 24.69 | 528.120 | 0.000 |
| 19 | 526.610 | 0.000 | 529.465 | 120.4 | 529.113 | 104.6 | 528.695 | 76.96 | 527.800 | 19.54 | 528.020 | 0.000 |
| 20 | 526.360 | 0.000 | 529.395 | 124.6 | 528.955 | 91.82 | 528.670 | 71.87 | 527.743 | 16.82 | 527.980 | 0.000 |
| 21 | 526.200 | 0.000 | 529.915 | 167.5 | 528.790 | 79.66 * | 528.655 | 61.00 | 527.635 | 2.240 | 527.895 | 0.000 |
| 22 | 526.045 | 0.000 | 529.750 | 156.4 | 528.845 | 90.50 | 528.595 | 66.68 | 527.610 | 7.334 | 527.995 | 0.000 |
| 23 | 525.875 | 0.000 | 529.980 | 170.9 | 528.955 | 91.13 | 528.600 | 75.00 | 527.550 | 27.98 * | 527.810 | 0.000 |
| 24 | 525.740 | 0.000 | 529.890 | 153.0 * | 529.150 | 109.7 | 529.300 | 122.9 | 527.320 | 0.000 | 527.630 | 0.000 |
| 25 | 525.600 | 0.000 | 529.830 | 159.6 | 529.235 | 123.1 | 530.920 | 247.9 * | 527.043 | 0.000 | 527.485 | 0.000 |
| 26 | 525.485 | 0.000 | 529.780 | 157.3 | 529.230 | 123.0 | 532.425 | 383.4 | 527.400 | 0.000 | 527.530 | 0.000 |
| 27 | 525.350 | 0.000 | 529.370 | 118.4 | 529.033 | 98.64 | 531.960 | 346.1 | 527.420 | 0.000 | 527.530 | 0.000 |
| 28 | 525.990 | 0.000 | 529.168 | 105.0 | 528.890 | 85.20 * | 529.770 | 162.9 | 527.700 | 0.000 | 527.430 | 0.000 |
| 29 | 527.100 | 0.000 | 529.195 | 107.6 | 528.790 | 82.63 | 529.270 | 117.6 | 527.855 | 0.000 | 527.300 | 0.000 |
| 30 | 527.530 | 0.000 | 528.995 | 94.63 | 528.728 | 73.79 | 528.888 | 90.41 | 527.670 | 0.000 | 527.350 | 0.000 |
| 31 | | | 528.885 | 84.92 * | 528.638 | 69.46 | | | 527.760 | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 525.758 | 0.000 | 530.038 | 184.1 | 533.685 | 589.6 | 528.246 | 51.93 | 528.092 | 45.16 | 526.737 | 0.000 |
| II Ten-Daily | 527.098 | 0.000 | 533.932 | 971.1 | 530.613 | 233.8 | 527.927 | 35.79 | 528.304 | 50.06 | 526.793 | 0.000 |
| III Ten-Daily | 526.091 | 0.000 | 529.523 | 134.1 | 528.935 | 93.35 | 529.838 | 167.4 | 527.542 | 3.414 | 527.596 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 525.170 | 0.000 | 528.445 | 63.34 | 528.638 | 69.46 | 527.570 | 13.12 | 527.042 | 0.000 | 525.320 | 0.000 |
| Max. | 528.480 | 0.000 | 536.920 | 1761 | 535.750 | 1065 | 532.425 | 383.4 | 529.140 | 100.0 | 528.120 | 0.000 |
| Mean | 526.378 | 0 | 531.112 | 420.2 | 531.009 | 298.7 | 528.670 | 85.04 | 527.965 | 31.93 | 527.042 | 0 |

**Annual Runoff in MCM = 2237 Annual Runoff in mm = 961**

**Peak Observed Discharge = 1761 cumecs on 14/07/2016 Corres. Water Level :536.92 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016 Corres. Water Level :525.58 m**

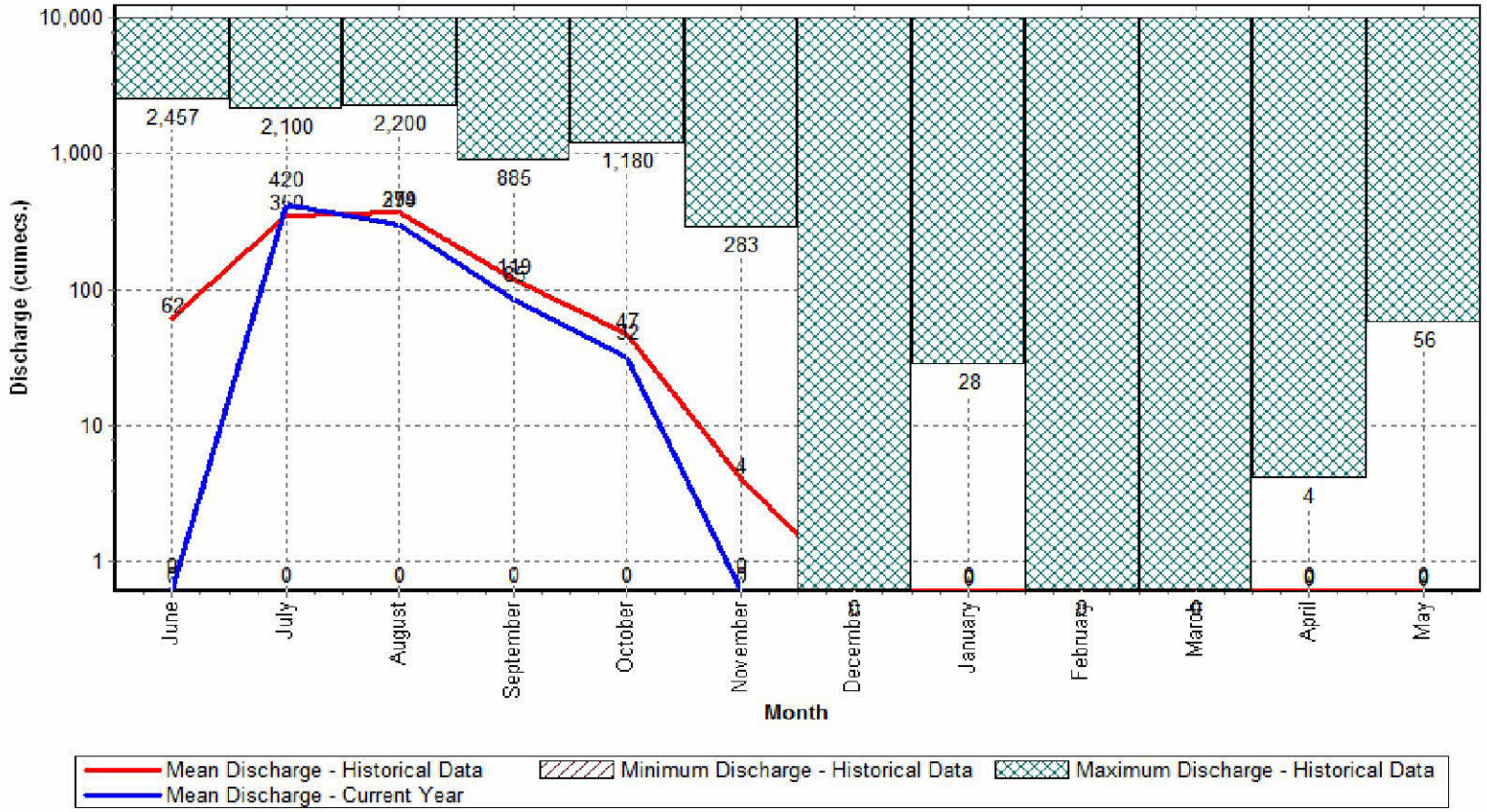
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Sadalga (Seasonal) ( AKV00D3)** **Data considered : 1970-2017** **Division : Upper Krishna Divn, Pune**

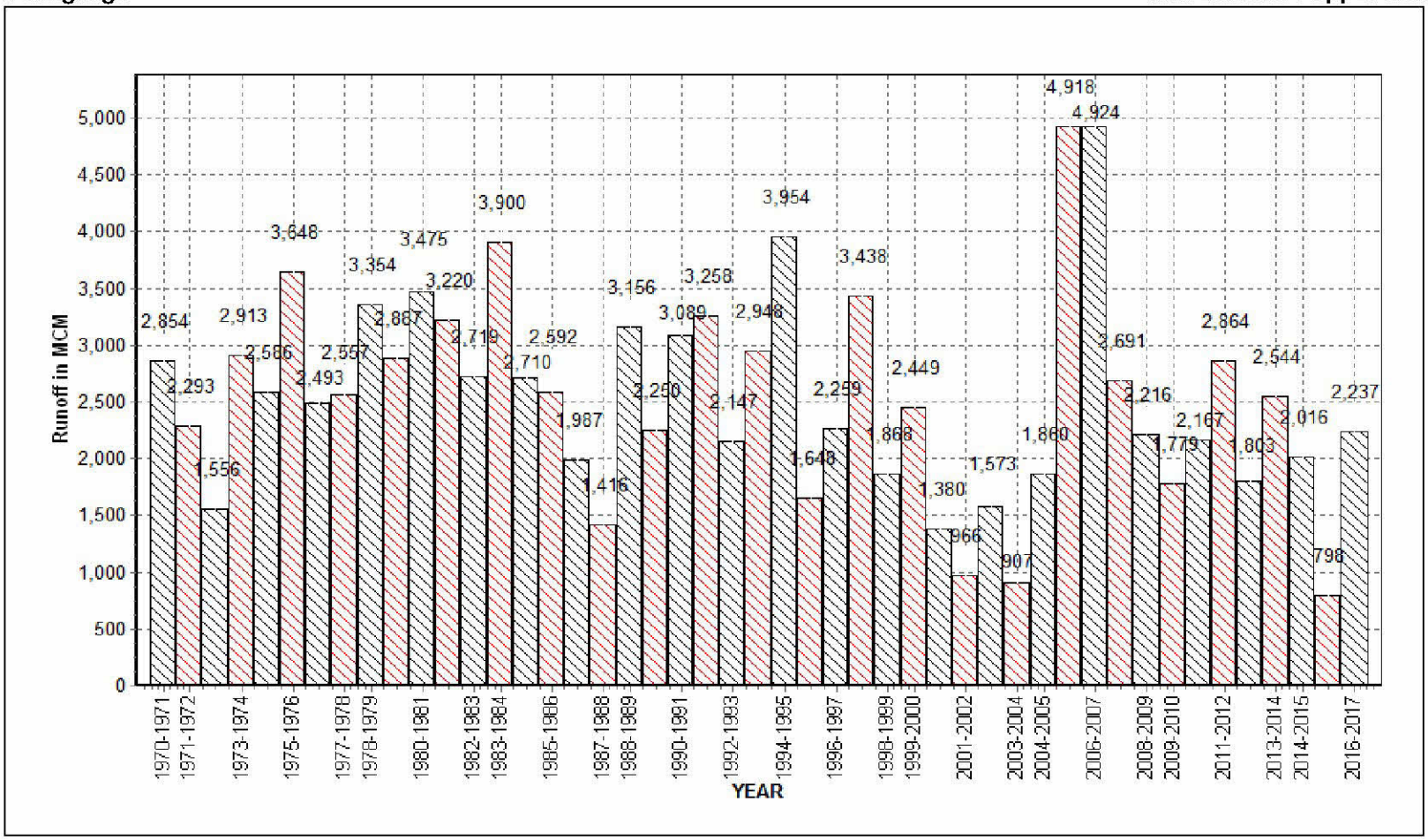
**Local River : Dudhganga** **Sub-Division : Upper Krishna SD 2, Miraj**



**Annual Runoff Values for the period: 1970 - 2017**

**Station Name : Sadalga (Seasonal) ( AKV00D3)** **Division : Upper Krishna Divn, Pune**

**Local River : Dudhganga** **Sub-Division : Upper Krishna SD 2, Miraj**

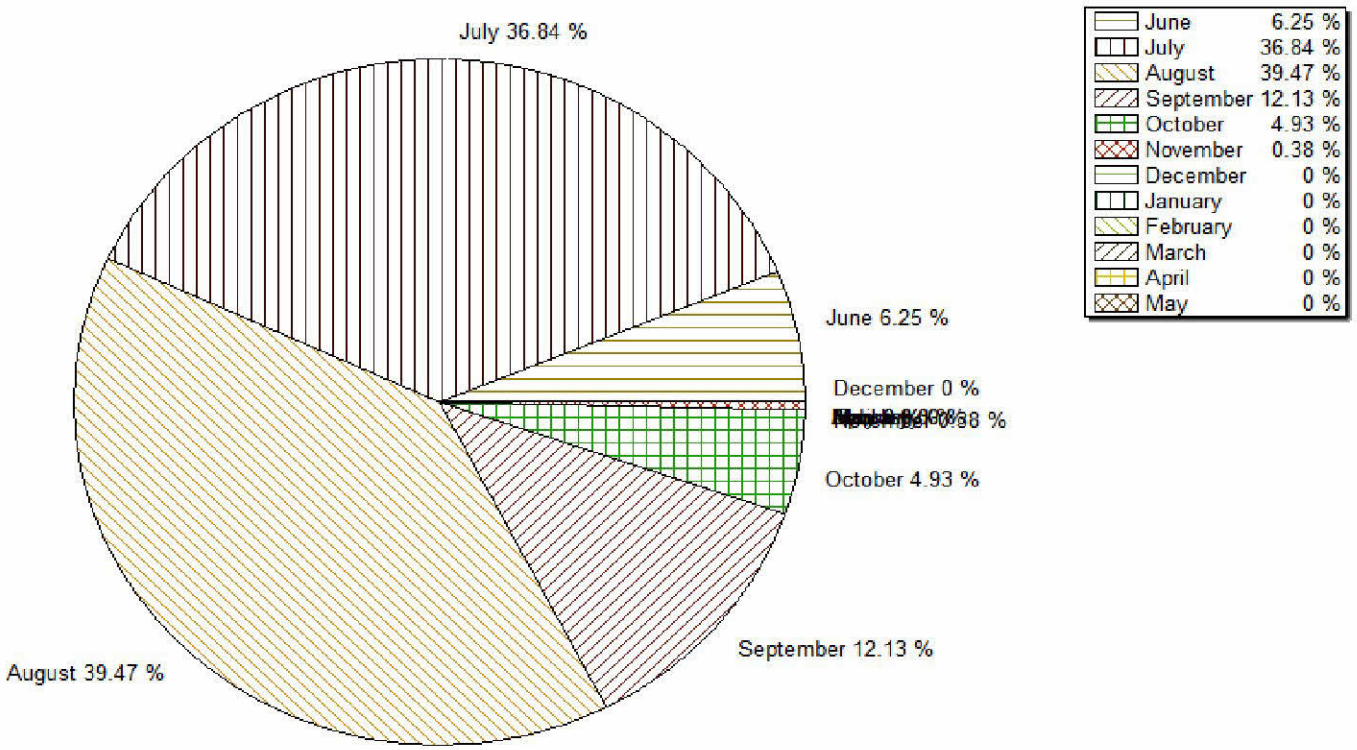



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1970-2016**

**Station Name : Sadalga (Seasonal) ( AKV00D3)**
**Local River : Dudhganga**

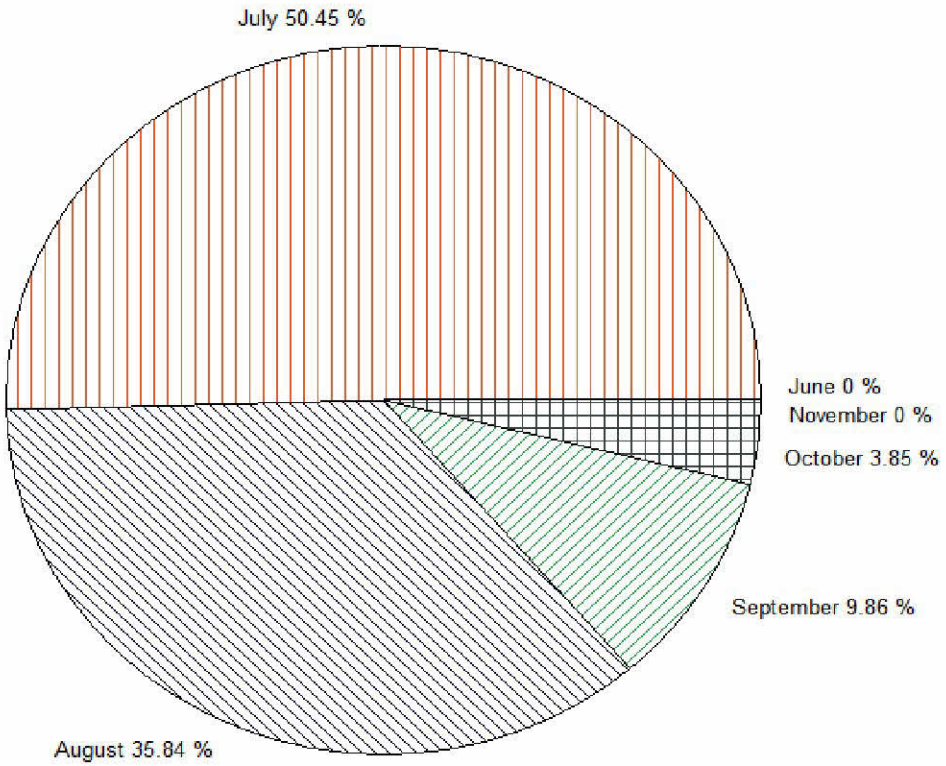
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Upper Krishna SD 2, Miraj**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Sadalga (Seasonal) ( AKV00D3)**
**Local River : Dudhganga**

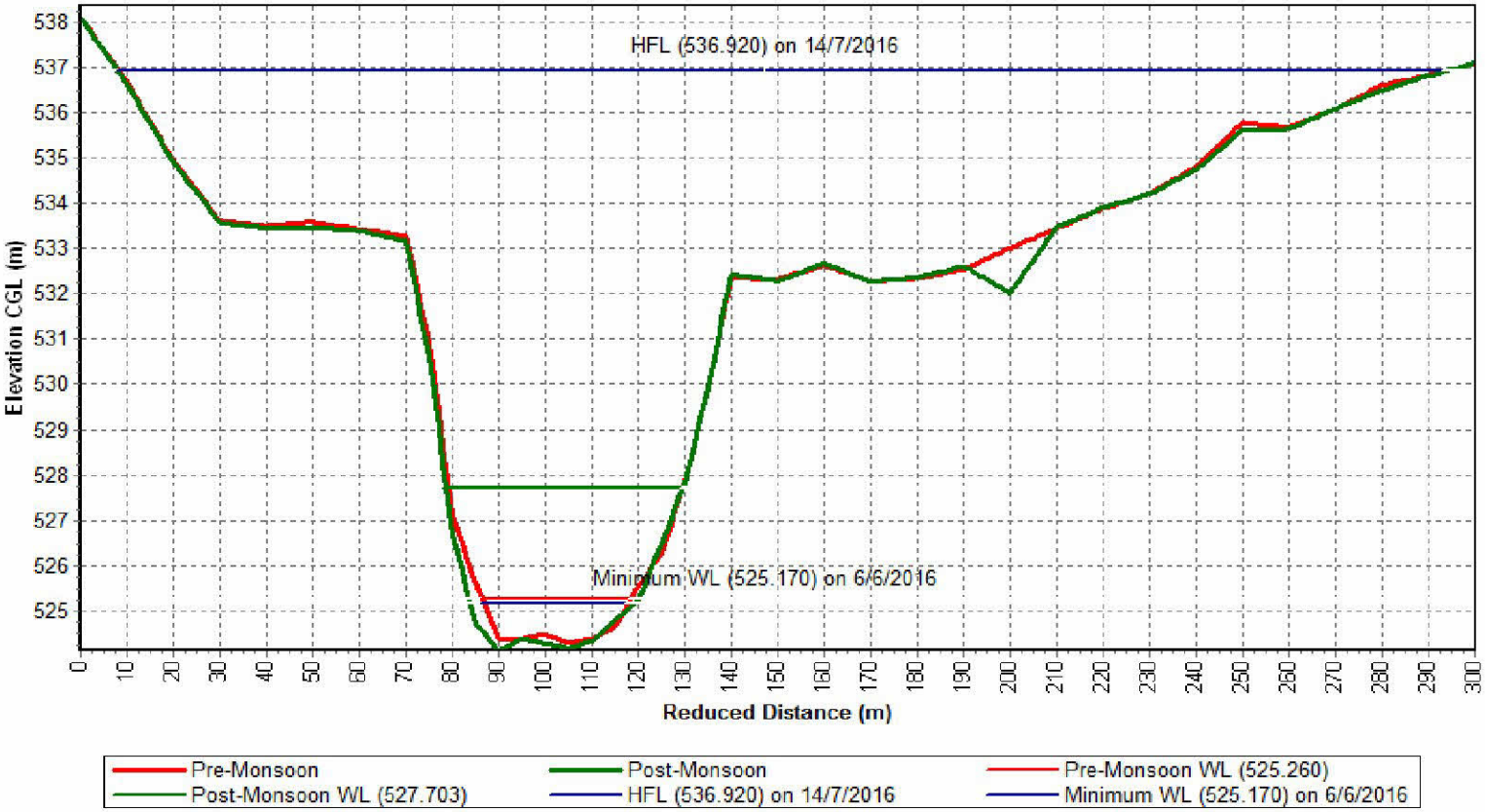
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Upper Krishna SD 2, Miraj**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Sadalga (Seasonal) ( AKV00D3)** **Division : Upper Krishna Divn, Pune**

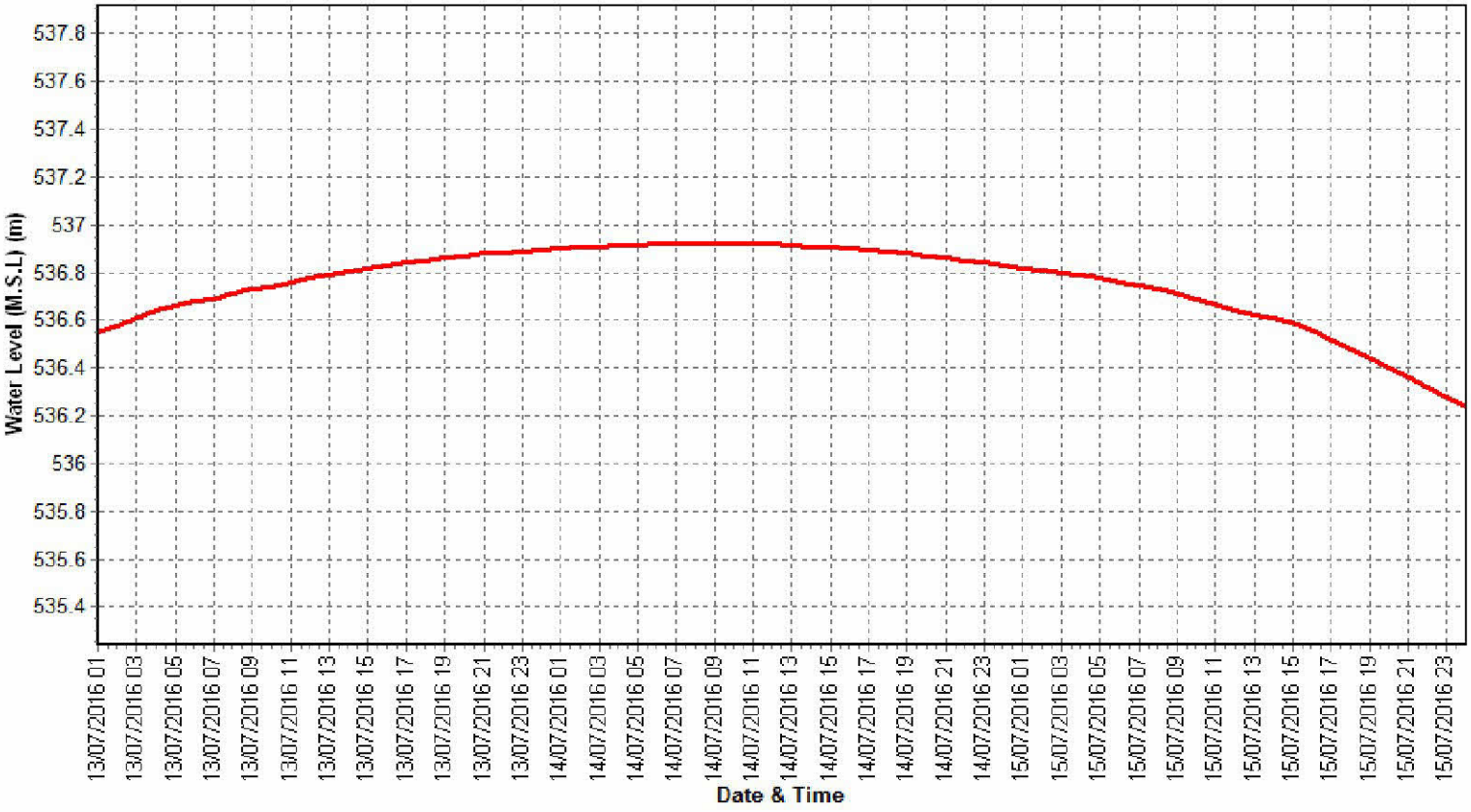
**Local River : Dudhganga** **Sub-Division : Upper Krishna SD 2, Miraj**



**Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017**

**Station Name : Sadalga (Seasonal) ( AKV00D3)** **Division : Upper Krishna Divn, Pune**

**Local River : Dudhganga** **Sub-Division : Upper Krishna SD 2, Miraj**

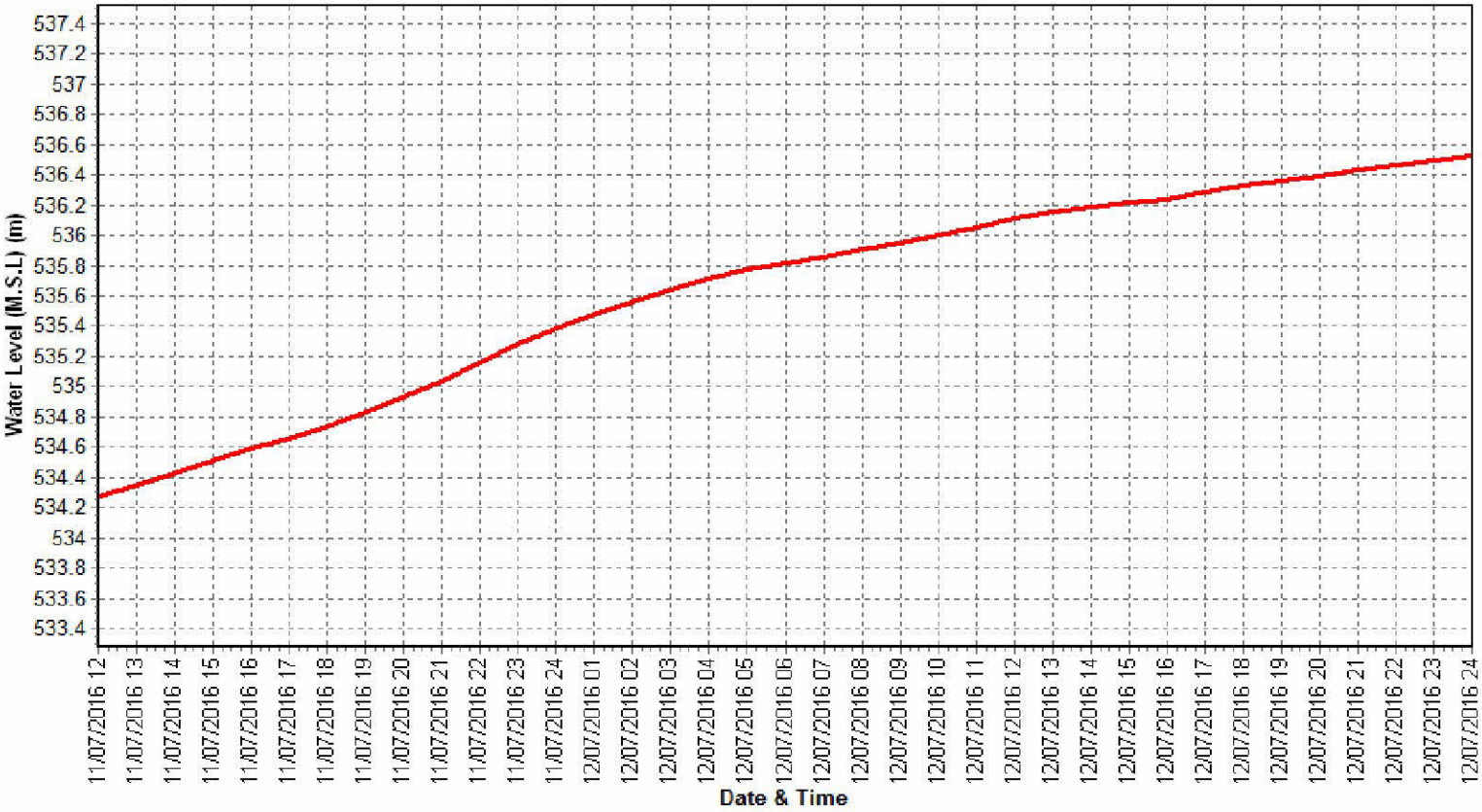



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Sadalga (Seasonal) ( AKV00D3)** **Division : Upper Krishna Divn, Pune**

**Local River : Dudhganga** **Sub-Division : Upper Krishna SD 2, Miraj**

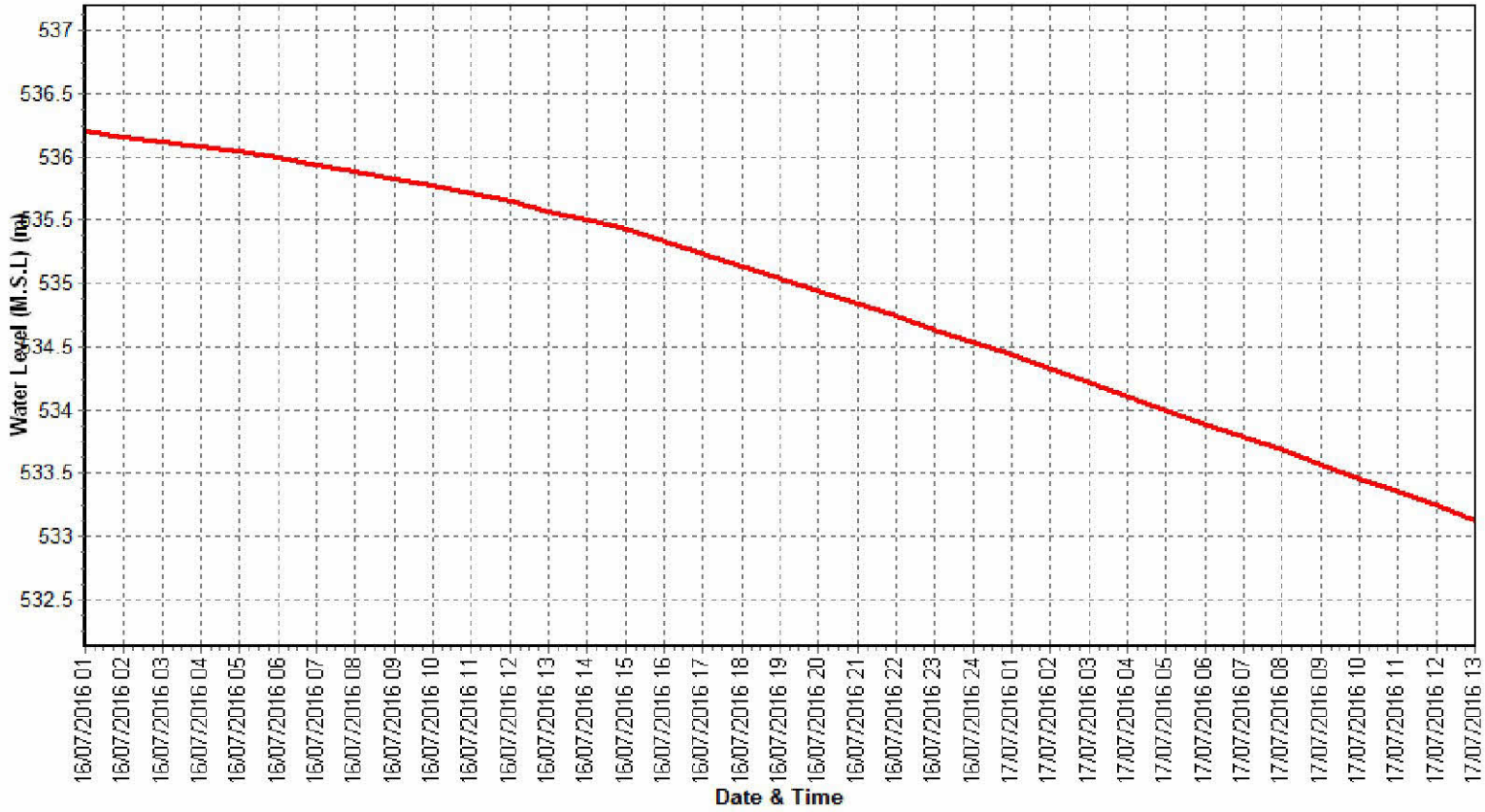



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Sadalga (Seasonal) ( AKV00D3)** **Division : Upper Krishna Divn, Pune**

**Local River : Dudhganga** **Sub-Division : Upper Krishna SD 2, Miraj**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Terwad (Seasonal)** | | **Code** | **: AKW00A7** | |
| State | : Maharashtra | | District | Kolhapur | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Panchganga | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Panchganga | |
| Division | : Upper Krishna Divn, Pune | | Sub-Division | : Upper Krishna SD 2, Miraj | |
| Drainage Area | : 2425 Sq. Km. | | Bank | : Right | |
| Latitude | : 16°40'31" | | Longitude | : 74°34'30" | |
| **Zero of Gauge (m)** | : 520 (m.s.l) | | 01/01/1979 | | |
| | Opening Date | | Closing Date | | |
| Gauge | : 01/03/1979 | | **HFL During 2016-17** | **: 536.950m** | |
| | | | **Corres. Discharge** | **: 2267(Estimated)** | |
| Discharge | : 22/08/1979 | | **Date & Time of occurance** | **: 15/07/2016 08.00 hrs.** | |
| 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 | 1918 | 536.925 | 07/08/1980 | 0.000 | 524.800 | 25/01/1981 |
| 1981-1982 | 1790 | 536.500 | 11/07/1981 | 0.000 | 524.800 | 25/01/1982 |
| 1982-1983 | 1431 | 535.135 | 01/08/1982 | 0.000 | 523.875 | 12/01/1983 |
| 1983-1984 | 1545 | 536.875 | 18/08/1983 | 0.000 | 524.525 | 25/01/1984 |
| 1984-1985 | 1795 | 535.995 | 21/07/1984 | 0.000 | 524.725 | 15/11/1984 |
| 1985-1986 | 1570 | 535.910 | 04/08/1985 | 0.000 | 524.310 | 25/01/1986 |
| 1986-1987 | 2050 | 536.450 | 13/08/1986 | 0.000 | 523.410 | 25/01/1987 |
| 1987-1988 | 1392 | 534.725 | 10/07/1987 | 0.000 | 522.510 | 26/01/1988 |
| 1988-1989 | 2080 | 537.370 | 22/07/1988 | 0.000 | 523.725 | 04/02/1989 |
| 1989-1990 | 2205 | 538.545 | 27/07/1989 | 0.000 | 522.145 | 25/01/1990 |
| 1990-1991 | 2250 | 537.760 | 20/08/1990 | 0.000 | 525.680 | 25/01/1991 |
| 1991-1992 | 2553 | 538.230 | 31/07/1991 | 0.000 | 525.810 | 26/01/1992 |
| 1992-1993 | 1306 | 535.136 | 16/08/1992 | 0.000 | 523.810 | 25/01/1993 |
| 1993-1994 | 1447 | 535.748 | 14/07/1993 | 0.000 | 525.120 | 25/01/1994 |
| 1994-1995 | 2680 | 538.600 | 17/07/1994 | 0.000 | 526.020 | 25/01/1995 |
| 1995-1996 | 1170 | 534.740 | 22/07/1995 | 0.000 | 523.310 | 26/01/1996 |
| 1996-1997 | 1900 | 536.180 | 30/07/1996 | 0.000 | 523.440 | 25/01/1997 |
| 1997-1998 | 3590 | 538.395 | 10/08/1997 | 0.000 | 524.880 | 25/01/1998 |
| 1998-1999 | 1051 | 534.330 | 11/07/1998 | 0.000 | 524.340 | 25/01/1999 |
| 1999-2000 | 1540 | 536.700 | 24/07/1999 | 0.000 | 524.290 | 26/01/2000 |
| 2000-2001 | 890.0 | 534.780 | 16/07/2000 | 0.000 | 524.100 | 25/01/2001 |
| 2001-2002 | 1150 | 534.360 | 11/07/2001 | 0.000 | 524.600 | 25/01/2002 |

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** |
| 2002-2003 | 1443 | 534.850 | 14/08/2002 | 0.000 | 524.400 | 25/01/2003 |
| 2003-2004 | 725.3 | 532.640 | 23/06/2003 | 0.000 | 524.600 | 26/01/2004 |
| 2004-2005 | 1832 | 536.500 | 08/08/2004 | 0.000 | 524.600 | 25/01/2005 |
| 2005-2006 | 3340 | 540.390 | 06/08/2005 | 0.000 | 524.080 | 25/01/2006 |
| 2006-2007 | 2797 | 539.215 | 13/08/2006 | 0.000 | 525.220 | 30/10/2006 |
| 2007-2008 | 1821 | 537.470 | 03/07/2007 | 0.000 | 525.050 | 12/11/2007 |
| 2008-2009 | 1952 | 537.390 | 15/08/2008 | 0.000 | 524.550 | 31/10/2008 |
| 2009-2010 | 1345 | 535.100 | 19/07/2009 | 0.000 | 526.420 | 22/11/2009 |
| 2010-2011 | 1464 | 535.860 | 30/07/2010 | 0.000 | 525.440 | 01/06/2010 |
| 2011-2012 | 1721 | 537.060 | 06/09/2011 | 0.000 | 524.420 | 20/11/2011 |
| 2012-2013 | 1011 | 533.420 | 02/08/2012 | 0.000 | 524.350 | 20/11/2012 |
| 2013-2014 | 1854 | 536.920 | 29/07/2013 | 0.000 | 525.060 | 02/11/2013 |
| 2014-2015 | 1534 | 535.020 | 25/07/2014 | 0.000 | 525.680 | 17/11/2014 |
| 2015-2016 | 1286 | 533.560 | 26/06/2015 | 0.000 | 525.820 | 05/06/2015 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Terwad (Seasonal) ( AKW00A7)** **Division : Upper Krishna Divn, Pune**

**Local River : Panchganga** **Sub-Division : Upper Krishna SD 2, Miraj**

| 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 | 527.560 | 164.3 | 528.520 | 282.4 | 527.390 | 176.0 | 526.870 | 125.4 * | 524.220 | 0.000 |
| 2 | | 0.000 | 528.700 | 260.2 | 530.600 | 505.4 | 527.350 | 200.4 | 526.360 | 89.53 * | 524.200 | 0.000 |
| 3 | | 0.000 | 529.700 | 393.6 * | 533.000 | 1084 | 527.260 | 164.6 | 526.330 | 96.61 | 524.330 | 0.000 |
| 4 | | 0.000 | 531.440 | 676.4 | 533.780 | 1275 | 527.240 | 154.1 * | 526.220 | 92.22 | 524.640 | 0.000 |
| 5 | | 0.000 | 531.480 | 619.1 | 534.570 | 1468 | 527.100 | 143.0 * | 526.040 | 75.72 | 524.980 | 0.000 |
| 6 | | 0.005 | 531.580 | 705.8 * | 535.200 | 1659 | 526.910 | 128.4 * | 525.990 | 68.75 | 524.850 | 0.000 |
| 7 | 523.950 | 0.000 | 531.060 | 573.3 | 536.050 | 1937 * | 526.690 | 116.8 | 525.900 | 62.64 | 524.780 | 0.000 |
| 8 | 524.920 | 0.000 | 529.680 | 377.9 | 536.400 | 2062 * | 526.530 | 108.3 | 525.700 | 56.02 | 524.720 | 0.000 |
| 9 | 524.780 | 0.000 | 528.640 | 258.4 | 536.790 | 2207 * | 526.320 | 98.74 | 525.650 | 47.37 * | 524.590 | 0.000 |
| 10 | 525.160 | 0.000 | 530.820 | 561.5 * | 536.730 | 2184 * | 526.060 | 77.29 | 525.460 | 49.70 | 524.490 | 0.000 |
| 11 | 525.500 | 0.000 | 533.480 | 1278 | 535.990 | 1924 | 526.020 | 68.14 * | 527.130 | 145.3 * | 524.410 | 0.000 |
| 12 | 525.650 | 0.000 | 535.200 | 1617 | 534.800 | 1521 | 525.900 | 68.15 | 526.960 | 132.2 * | 524.380 | 0.000 |
| 13 | 524.870 | 0.000 | 536.140 | 1958 | 533.500 | 1282 | 525.740 | 52.17 * | 527.020 | 138.6 | 524.360 | 0.000 |
| 14 | 524.870 | 0.000 | 536.900 | 2248 * | 532.380 | 877.5 * | 525.335 | 34.02 | 526.560 | 112.8 | 524.330 | 0.000 |
| 15 | 524.700 | 0.000 | 536.950 | 2267 * | 531.400 | 670.0 * | 525.460 | 26.54 | 526.140 | 76.97 | 524.350 | 0.000 |
| 16 | 524.540 | 0.000 | 536.330 | 2037 * | 530.330 | 448.7 | 525.960 | 68.52 | 525.980 | 65.76 * | 524.440 | 0.000 |
| 17 | 524.660 | 0.000 | 535.650 | 1799 * | 529.600 | 383.6 | 525.810 | 58.79 | 525.700 | 51.55 | 524.760 | 0.000 |
| 18 | 524.560 | 0.000 | 533.300 | 1249 | 529.090 | 319.9 | 526.650 | 109.4 * | 525.580 | 45.75 | 524.410 | 0.000 |
| 19 | 524.600 | 0.000 | 530.760 | 505.2 | 528.610 | 271.2 | 529.230 | 341.8 * | 525.490 | 38.99 | 525.900 | 0.000 |
| 20 | 524.300 | 0.000 | 529.720 | 428.6 | 528.980 | 298.7 | 531.120 | 435.3 | 525.320 | 25.19 | 525.820 | 0.000 |
| 21 | 524.220 | 0.000 | 529.780 | 444.4 | 528.540 | 270.7 * | 530.430 | 404.3 | 525.130 | 18.76 | 525.710 | 0.000 |
| 22 | 524.170 | 0.000 | 530.140 | 468.4 | 528.130 | 234.1 | 529.110 | 326.1 | 524.990 | 12.89 | 525.650 | 0.000 |
| 23 | 524.060 | 0.000 | 529.780 | 422.7 | 528.960 | 320.9 | 529.180 | 283.6 | 524.840 | 12.57 * | 525.530 | 0.000 |
| 24 | 524.140 | 0.000 | 529.810 | 406.1 * | 529.570 | 372.6 | 529.770 | 408.5 | 525.070 | 0.000 | 525.400 | 0.000 |
| 25 | 524.060 | 0.000 | 529.870 | 427.6 | 529.880 | 427.6 | 530.720 | 543.9 * | 524.690 | 0.000 | 525.400 | 0.000 |
| 26 | 524.210 | 0.000 | 529.550 | 388.9 | 529.630 | 400.6 | 531.920 | 718.7 | 524.460 | 0.000 | 524.930 | 0.000 |
| 27 | 524.540 | 0.000 | 528.930 | 312.0 | 529.030 | 313.1 | 530.630 | 439.6 | 524.310 | 0.000 | 524.800 | 0.000 |
| 28 | 525.020 | 0.000 | 528.450 | 238.3 | 528.510 | 267.8 * | 528.860 | 270.8 | 524.270 | 0.000 | 524.510 | 0.000 |
| 29 | 525.780 | 0.000 | 528.320 | 232.6 | 528.080 | 232.6 | 527.940 | 214.0 * | 524.250 | 0.000 | 524.620 | 0.000 |
| 30 | 526.580 | 0.000 | 528.280 | 229.2 | 527.810 | 200.1 | 527.210 | 151.7 * | 524.240 | 0.000 | 524.520 | 0.000 |
| 31 | | | 528.070 | 225.8 * | 527.520 | 181.3 | | | 524.180 | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 524.703 | 0.000 | 530.066 | 459.0 | 534.164 | 1466 | 526.885 | 136.8 | 526.052 | 76.40 | 524.580 | 0.000 |
| II Ten-Daily | 524.825 | 0.000 | 534.443 | 1539 | 531.468 | 799.6 | 526.723 | 126.3 | 526.188 | 83.31 | 524.716 | 0.000 |
| III Ten-Daily | 524.678 | 0.000 | 529.180 | 345.1 | 528.696 | 292.9 | 529.577 | 376.1 | 524.585 | 4.020 | 525.107 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 523.950 | 0.000 | 527.560 | 164.3 | 527.520 | 181.3 | 525.335 | 26.54 | 524.180 | 0.000 | 524.200 | 0.000 |
| Max. | 526.580 | 0.000 | 536.950 | 2267 | 536.790 | 2207 | 531.920 | 718.7 | 527.130 | 145.3 | 525.900 | 0.000 |
| Mean | 524.743 | 0 | 531.164 | 766.9 | 531.354 | 834.9 | 527.728 | 213.1 | 525.575 | 52.95 | 524.801 | 0 |

**Annual Runoff in MCM = 4984 Annual Runoff in mm = 2055**

**Peak Observed Discharge = 1958 cumecs on 13/07/2016 Corres. Water Level :536.14 m**

**Lowest Observed Discharge = 0.000 cumecs on 07/06/2016 Corres. Water Level :523.95 m**

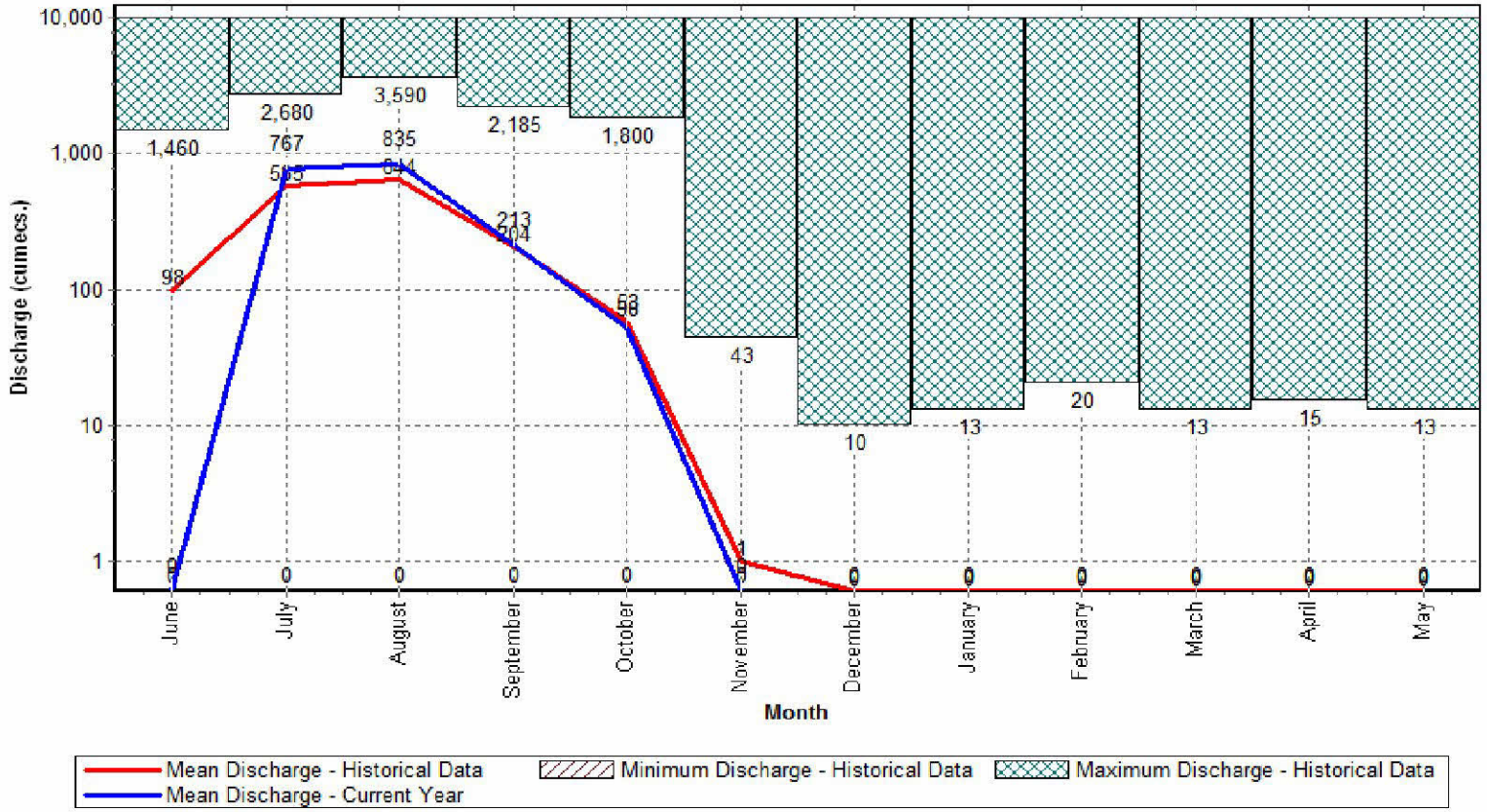
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Terwad (Seasonal) ( AKW00A7)** **Data considered : 1980-2017** **Division : Upper Krishna Divn, Pune**

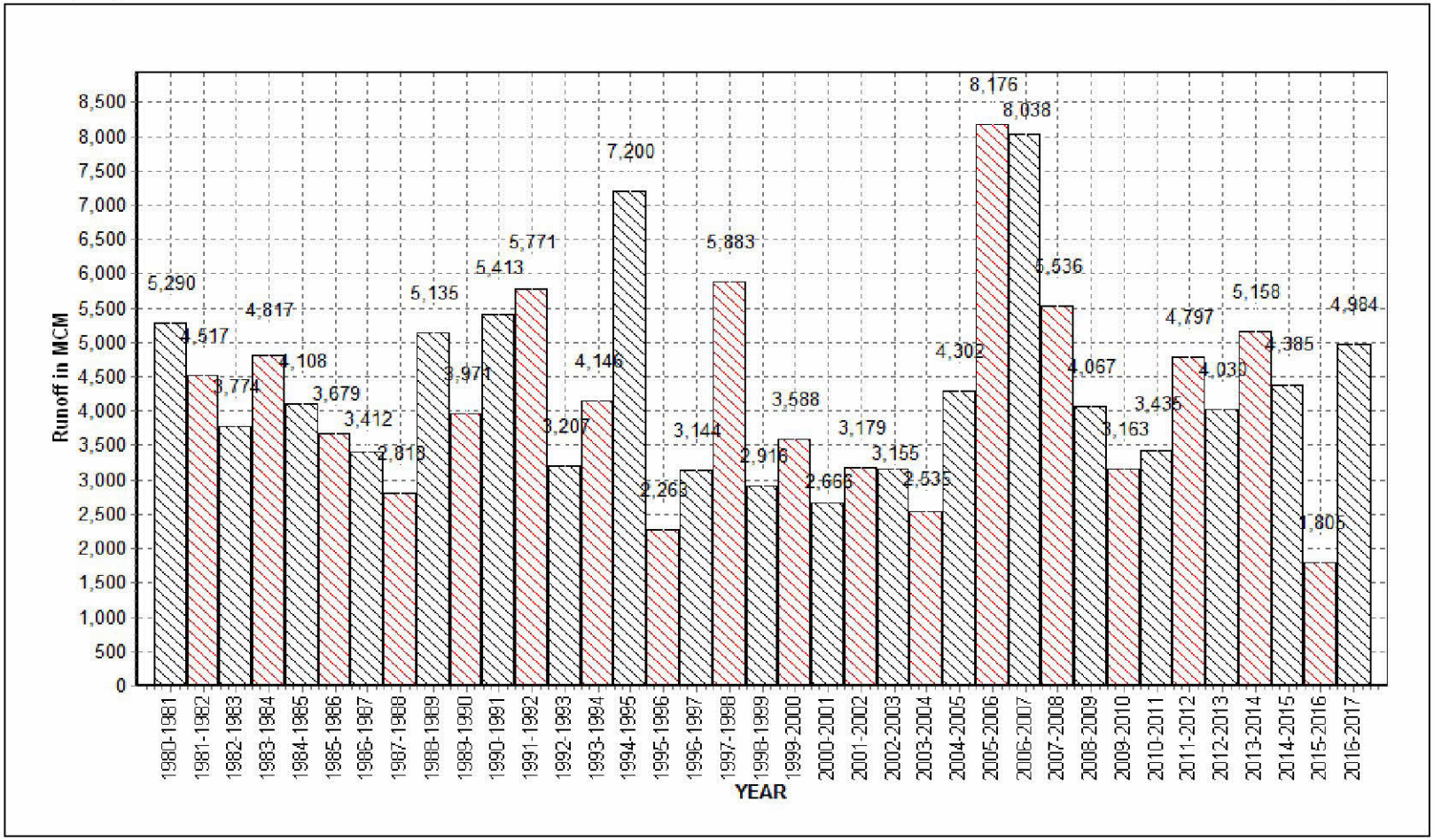
**Local River : Panchganga** **Sub-Division : Upper Krishna SD 2, Miraj**



**Annual Runoff Values for the period: 1980 - 2017**

**Station Name : Terwad (Seasonal) ( AKW00A7)** **Division : Upper Krishna Divn, Pune**

**Local River : Panchganga** **Sub-Division : Upper Krishna SD 2, Miraj**

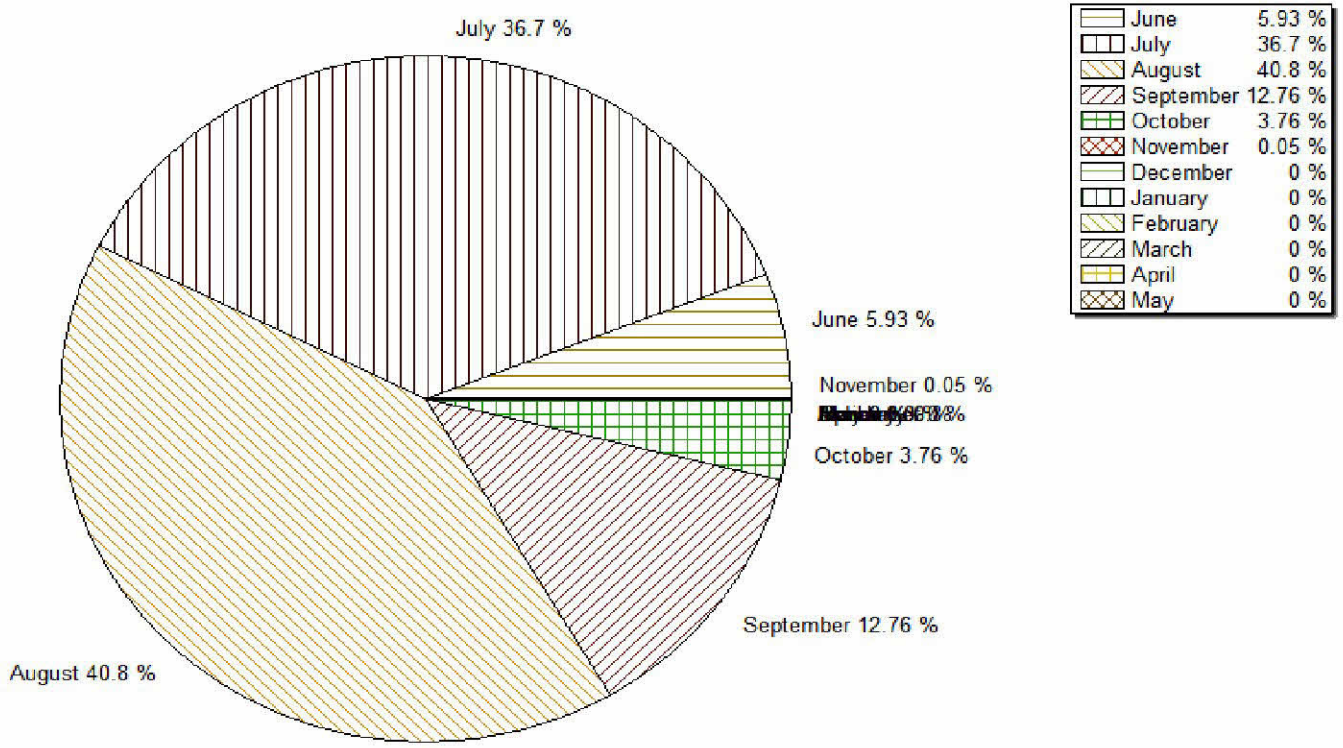



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1980-2016**

**Station Name : Terwad (Seasonal) ( AKW00A7)**
**Local River : Panchganga**

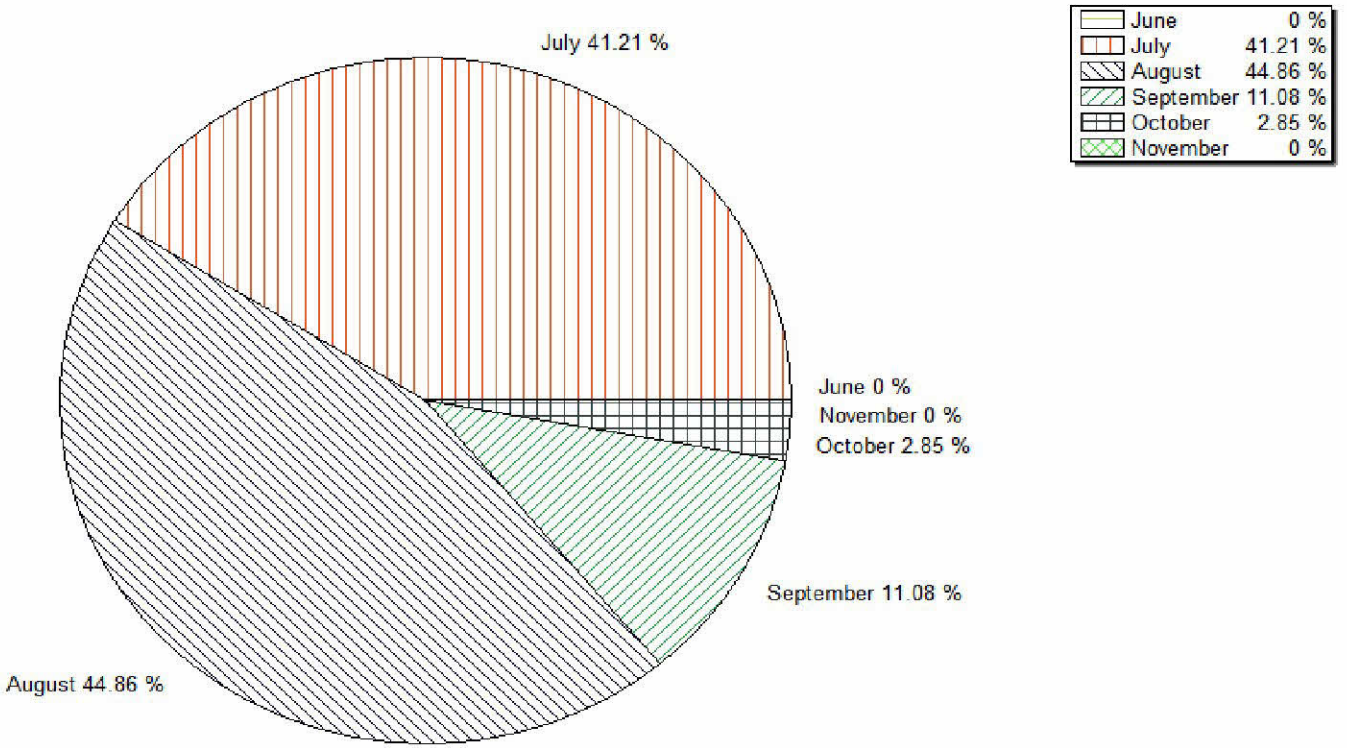
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Upper Krishna SD 2, Miraj**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Terwad (Seasonal) ( AKW00A7)**
**Local River : Panchganga**

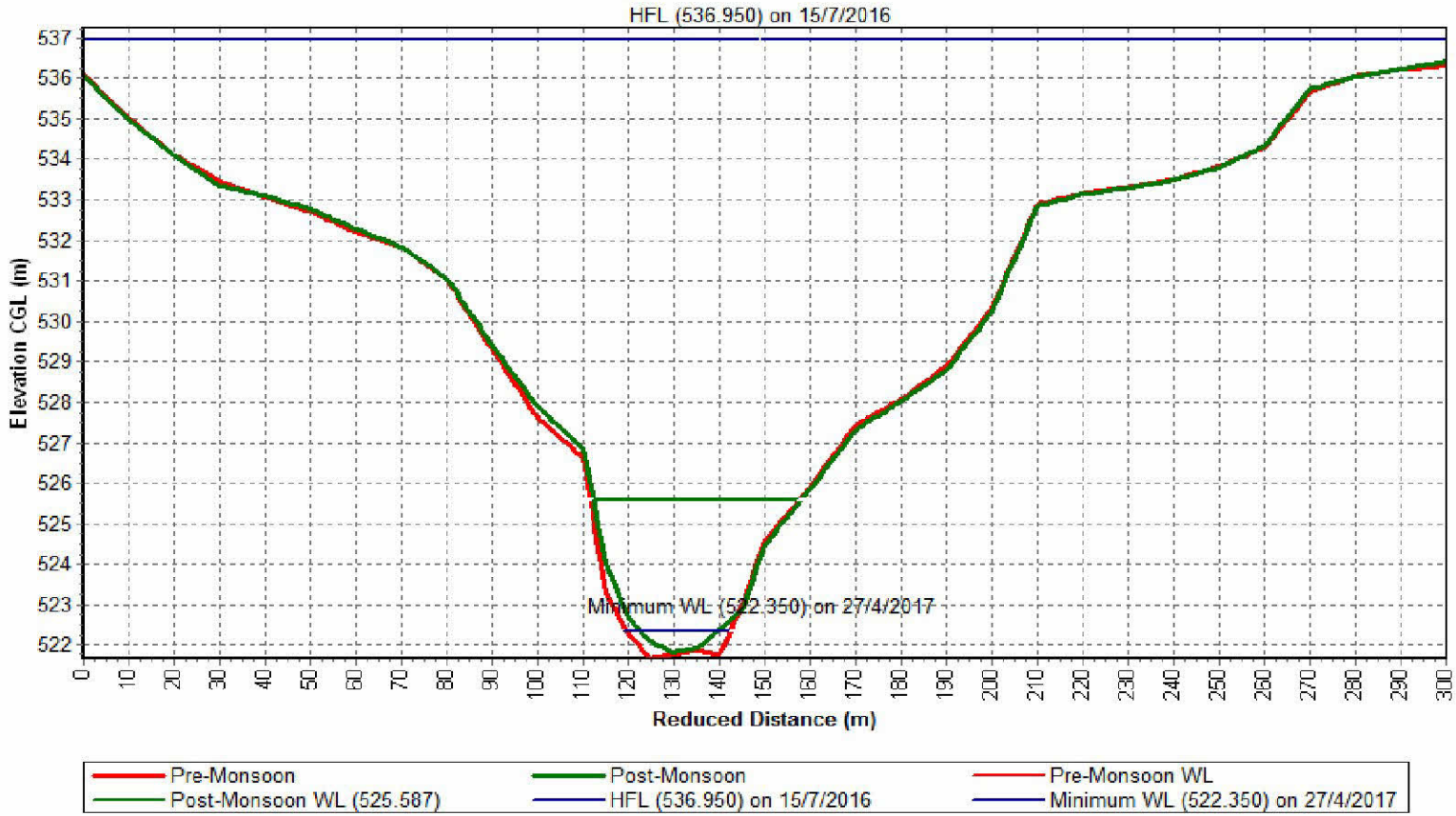
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Upper Krishna SD 2, Miraj**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Terwad (Seasonal) ( AKW00A7)** **Division : Upper Krishna Divn, Pune**

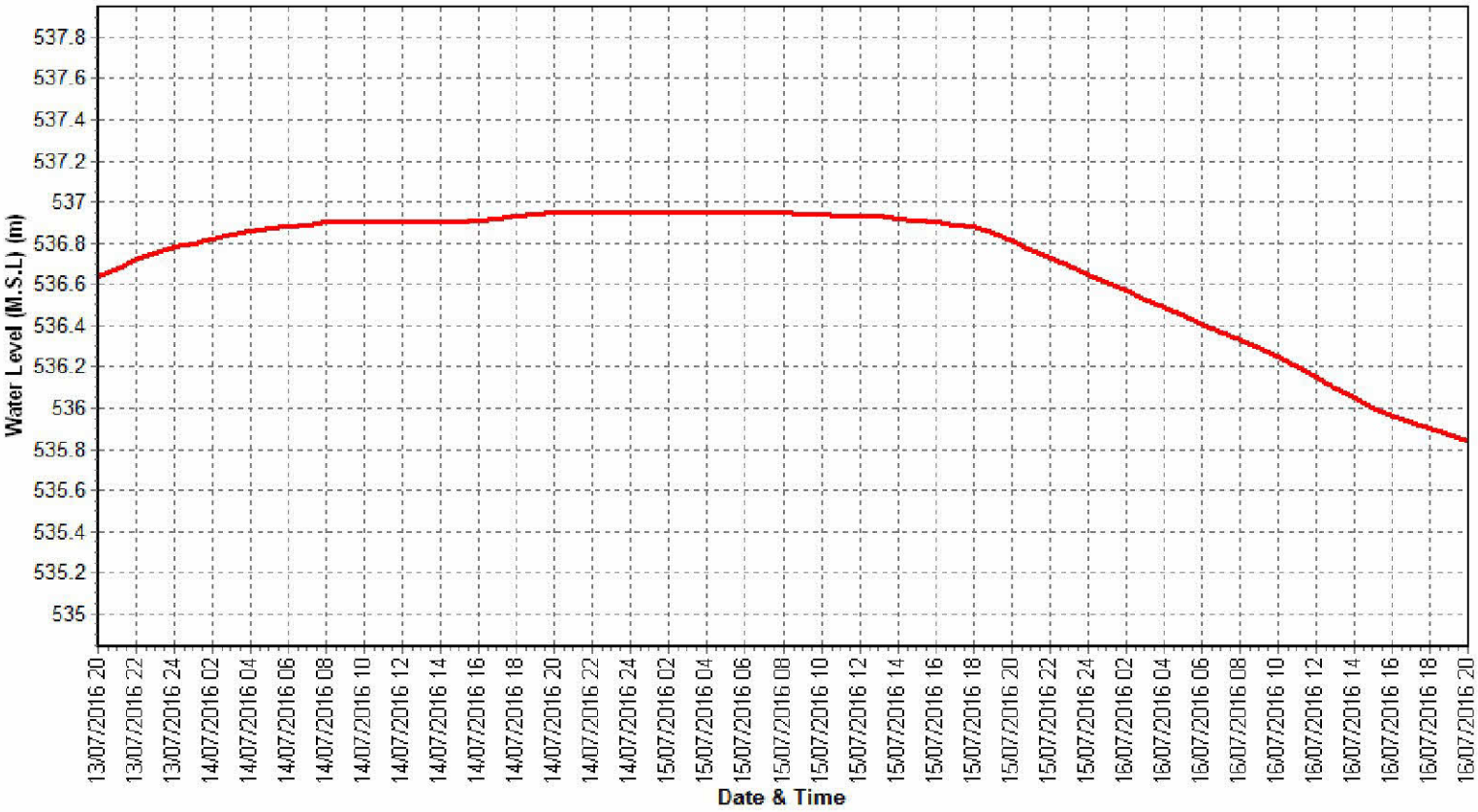
**Local River : Panchganga** **Sub-Division : Upper Krishna SD 2, Miraj**



**Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017**

**Station Name : Terwad (Seasonal) ( AKW00A7)** **Division : Upper Krishna Divn, Pune**

**Local River : Panchganga** **Sub-Division : Upper Krishna SD 2, Miraj**

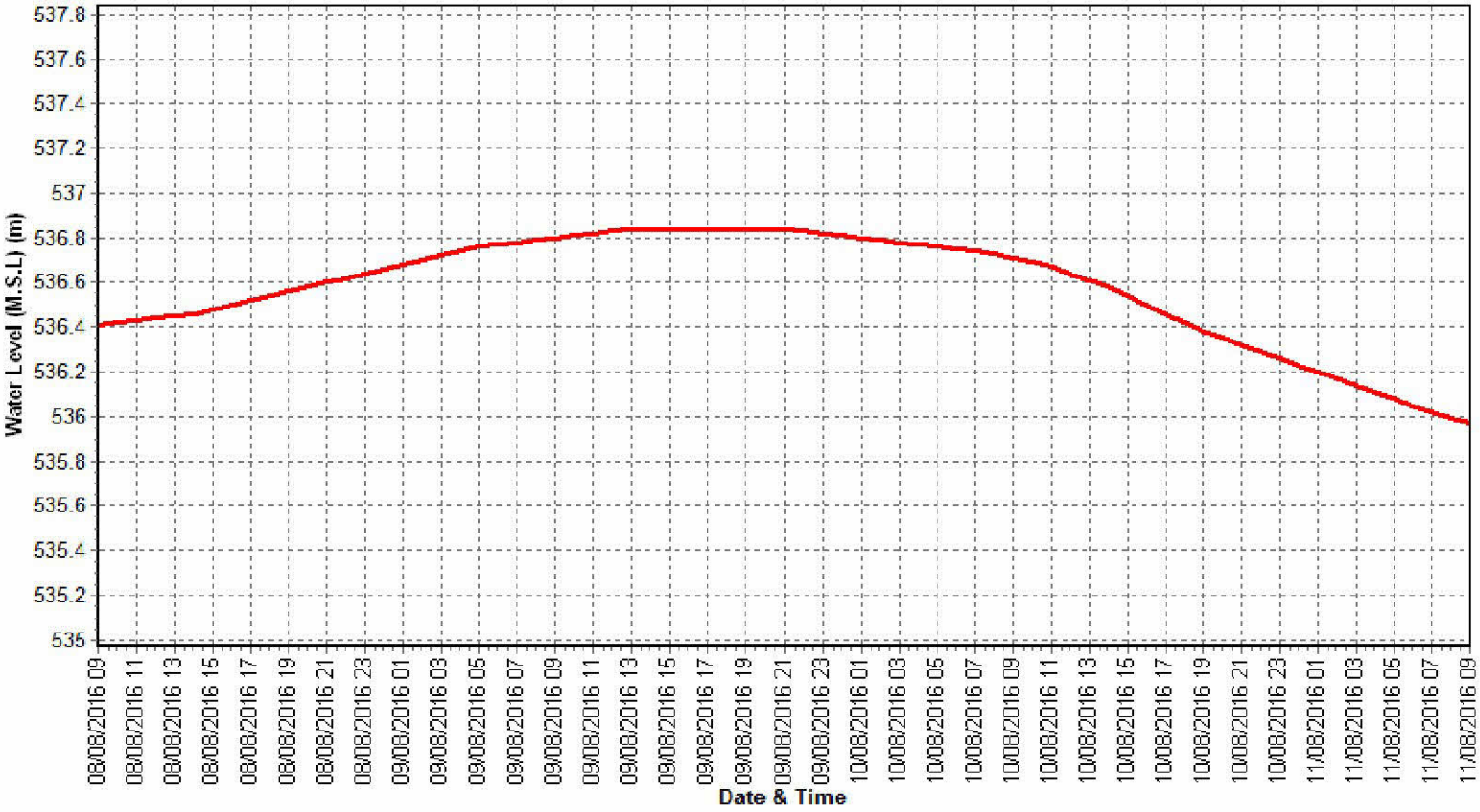



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Terwad (Seasonal) ( AKW00A7)** **Division : Upper Krishna Divn, Pune**

**Local River : Panchganga** **Sub-Division : Upper Krishna SD 2, Miraj**

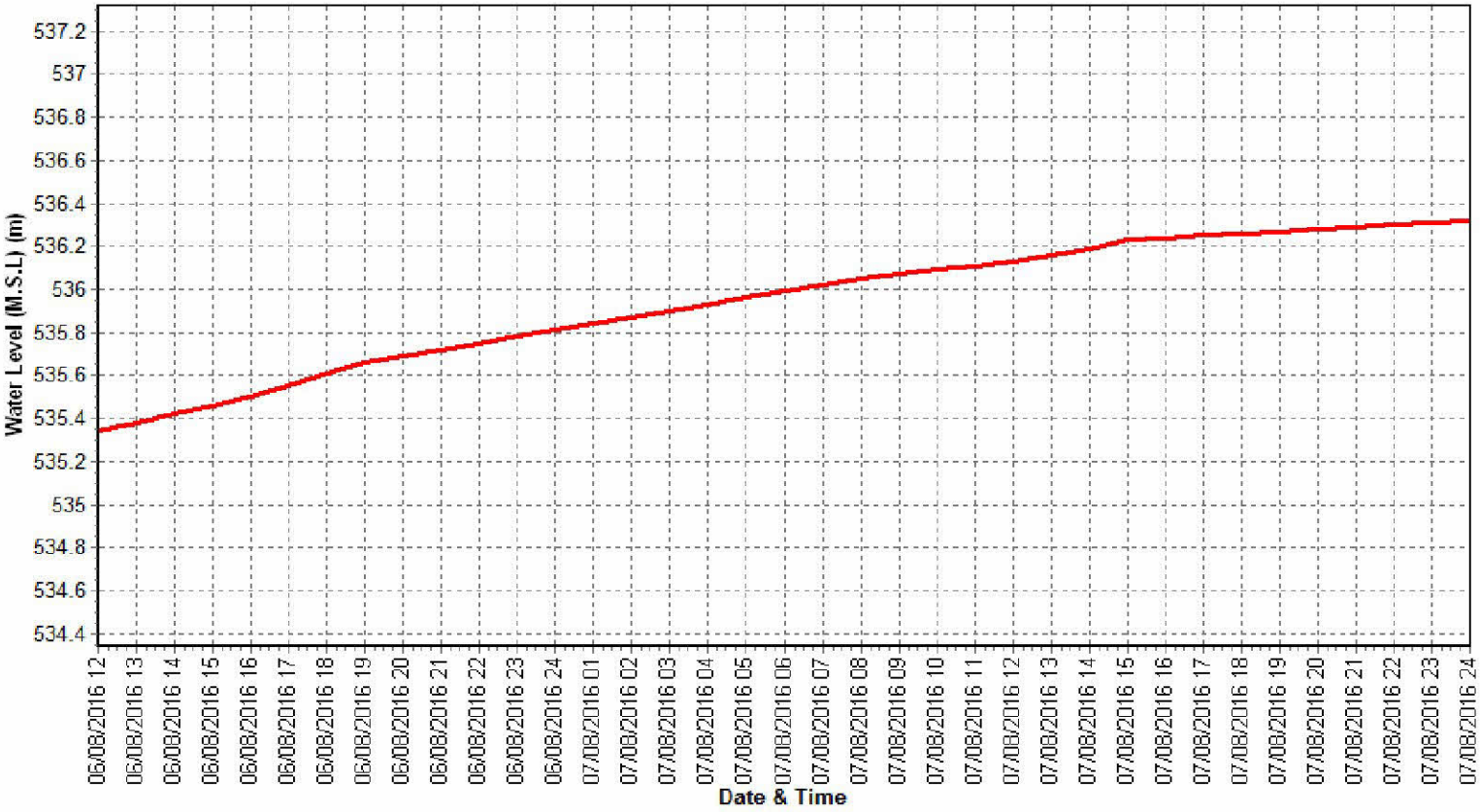



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Terwad (Seasonal) ( AKW00A7)** **Division : Upper Krishna Divn, Pune**

**Local River : Panchganga** **Sub-Division : Upper Krishna SD 2, Miraj**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **Kurundwad** | **Code** | : | **AK000V1** |
| State | : | Maharashtra | District | | Kolhapur |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | - | Sub Tributary | : | - |
| Sub-Sub Tributary | : | - | Local River | : | Krishna |
| Division | : | Upper Krishna Divn, Pune | Sub-Division | : | Upper Krishna SD 2, Miraj |
| Drainage Area | : | 15190 Sq. Km. | Bank | : | Right |
| Latitude | : | 16°41'01" | Longitude | : | 74°36'11" |
| **Zero of Gauge (m)** | : | 519.455 (m.s.l) | 20/05/1972 | | |

| | | Opening Date | Closing Date | | |
|---|---|---|---|---|---|
| Gauge | : | 21/05/1972 | **HFL During 2016-17** | : | **535.575m** |
| | | | **Corres. Discharge** | : | **5212(Observed)** |
| Discharge | : | 26/06/1972 | **Date & Time of occurance** | : | **14/07/2016 07.00 hrs.** |
| Sediment | : | 06/08/2003 | | | |
| Water Quality | : | 01/07/2003 | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1972-1973 | 4239 | 535.390 | 09/07/1972 | 0.000 | 520.505 | 12/01/1973 |
| 1973-1974 | 5659 | 537.115 | 10/07/1973 | 0.000 | 521.745 | 06/02/1974 |
| 1974-1975 | 3436 | 534.220 | 07/07/1974 | 0.000 | 521.280 | 09/02/1975 |
| 1975-1976 | 5781 | 536.935 | 12/07/1975 | 0.000 | 521.505 | 11/02/1976 |
| 1976-1977 | 6854 | 537.090 | 04/08/1976 | 0.000 | 520.875 | 18/02/1977 |
| 1977-1978 | 4953 | 535.172 | 09/07/1977 | 0.000 | 520.515 | 15/03/1978 |
| 1978-1979 | 3584 | 534.200 | 19/08/1978 | 0.000 | 520.675 | 01/02/1979 |
| 1979-1980 | 6070 | 536.740 | 10/08/1979 | 0.000 | 522.240 | 16/02/1980 |
| 1980-1981 | 5175 | 535.951 | 08/07/1980 | 0.000 | 523.645 | 25/01/1981 |
| 1981-1982 | 5166 | 535.572 | 10/07/1981 | 0.000 | 522.775 | 25/01/1982 |
| 1982-1983 | 3438 | 533.616 | 15/08/1982 | 0.000 | 521.360 | 16/01/1983 |
| 1983-1984 | 5111 | 536.198 | 18/08/1983 | 0.000 | 522.135 | 26/01/1984 |
| 1984-1985 | 4427 | 535.270 | 21/07/1984 | 0.000 | 522.580 | 23/01/1985 |
| 1985-1986 | 4414 | 535.115 | 04/08/1985 | 0.000 | 524.445 | 25/01/1986 |
| 1986-1987 | 4587 | 535.495 | 14/08/1986 | 0.000 | 524.545 | 25/01/1987 |
| 1987-1988 | 3290 | 533.593 | 10/07/1987 | 0.000 | 522.525 | 26/01/1988 |
| 1988-1989 | 4870 | 536.415 | 05/08/1988 | 0.000 | 524.705 | 25/01/1989 |
| 1989-1990 | 6000 | 537.500 | 27/07/1989 | 0.000 | 523.585 | 25/01/1990 |
| 1990-1991 | 5760 | 537.265 | 20/08/1990 | 0.000 | 525.785 | 25/01/1991 |
| 1991-1992 | 6322 | 537.363 | 31/07/1991 | 0.000 | 525.965 | 26/01/1992 |
| 1992-1993 | 3919 | 534.455 | 16/08/1992 | 0.000 | 525.215 | 25/01/1993 |

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 |
| 1993-1994 | 4051 | 534.775 | 05/08/1993 | 0.000 | 525.655 | 25/01/1994 |
| 1994-1995 | 5730 | 538.065 | 18/07/1994 | 0.000 | 525.185 | 25/01/1995 |
| 1995-1996 | 2796 | 533.025 | 21/07/1995 | 0.000 | 524.705 | 26/01/1996 |
| 1996-1997 | 5000 | 535.590 | 06/10/1996 | 0.000 | 523.715 | 25/01/1997 |
| 1997-1998 | 6800 | 537.255 | 28/08/1997 | 0.000 | 524.935 | 25/01/1998 |
| 1998-1999 | 3000 | 533.165 | 10/07/1998 | 0.000 | 524.545 | 25/01/1999 |
| 1999-2000 | 3725 | 535.685 | 24/07/1999 | 0.000 | 522.955 | 26/01/2000 |
| 2000-2001 | 2853 | 532.990 | 15/07/2000 | 0.000 | 524.005 | 25/01/2001 |
| 2001-2002 | 2594 | 532.315 | 11/07/2001 | 0.000 | 523.360 | 25/01/2002 |
| 2002-2003 | 3014 | 533.128 | 14/08/2002 | 0.000 | 522.970 | 25/01/2003 |
| 2003-2004 | 2275 | 530.805 | 29/07/2003 | 0.000 | 524.905 | 26/01/2004 |
| 2004-2005 | 4650 | 535.665 | 15/08/2004 | 0.000 | 523.685 | 25/01/2005 |
| 2005-2006 | 10092 | 539.750 | 06/08/2005 | 0.000 | 523.005 | 25/01/2006 |
| 2006-2007 | 8819 | 538.720 | 13/08/2006 | 0.000 | 524.515 | 25/01/2007 |
| 2007-2008 | 5673 | 536.765 | 03/07/2007 | 0.000 | 523.085 | 25/01/2008 |
| 2008-2009 | 5743 | 536.395 | 16/08/2008 | 0.000 | 523.785 | 25/01/2009 |
| 2009-2010 | 3782 | 533.165 | 19/07/2009 | 0.000 | 524.615 | 25/01/2010 |
| 2010-2011 | 3847 | 534.395 | 30/07/2010 | 0.000 | 524.525 | 25/01/2011 |
| 2011-2012 | 4534 | 536.425 | 06/09/2011 | 0.000 | 522.475 | 23/02/2012 |
| 2012-2013 | 2681 | 531.110 | 07/09/2012 | 0.000 | 523.320 | 20/04/2013 |
| 2013-2014 | 5466 | 535.965 | 29/07/2013 | 0.000 | 524.305 | 24/11/2013 |
| 2014-2015 | 4197 | 533.870 | 02/08/2014 | 0.000 | 524.705 | 11/01/2015 |
| 2015-2016 | 2522 | 530.790 | 26/06/2015 | 0.000 | 523.225 | 18/07/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Kurundwad ( AK000V1)** **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** **Sub-Division : Upper Krishna SD 2, Miraj**

| 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 | 521.735 | 0.000 | 523.190 | 221.7 | 524.475 | 527.9 | 523.640 | 290.5 | 525.020 | 221.8 | 523.995 | 0.000 |
| 2 | 522.465 | 0.000 | 523.745 | 502.5 | 525.800 | 866.3 | 523.585 | 239.9 | 524.765 | 542.5 * | 523.985 | 0.000 |
| 3 | 522.725 | 0.000 | 524.675 | 523.6 * | 529.505 | 1887 | 523.820 | 149.2 | 524.730 | 221.9 | 523.915 | 0.000 |
| 4 | 523.055 | 0.000 | 525.660 | 974.4 | 531.810 | 3021 | 524.295 | 447.6 * | 524.840 | 194.8 | 523.885 | 0.000 |
| 5 | 523.635 | 0.000 | 526.365 | 1089 | 532.765 | 3236 | 524.285 | 445.7 * | 524.715 | 161.6 | 523.805 | 0.000 |
| 6 | 523.715 | 0.000 | 526.905 | 1082 * | 533.615 | 3560 | 524.295 | 144.8 | 524.750 | 139.7 | 523.725 | 0.000 |
| 7 | 523.445 | 0.000 | 526.770 | 1181 | 534.855 | 4576 * | 524.520 | 128.0 | 524.955 | 201.7 | 523.655 | 0.000 |
| 8 | 523.535 | 0.000 | 525.440 | 752.6 | 535.395 | 4782 | 524.675 | 121.4 | 524.885 | 568.1 * | 523.585 | 0.000 |
| 9 | 523.545 | 0.000 | 524.815 | 553.1 * | 535.565 | 4983 | 524.685 | 58.77 | 524.715 | 532.0 * | 523.535 | 0.000 |
| 10 | 523.685 | 0.000 | 525.495 | 706.9 * | 535.375 | 4684 | 524.595 | 507.2 * | 524.505 | 488.9 * | 523.495 | 0.000 |
| 11 | 523.795 | 0.000 | 530.505 | 2555 | 534.795 | 4186 | 524.495 | 486.9 * | 525.355 | 673.7 * | 523.475 | 0.000 |
| 12 | 523.935 | 0.000 | 533.885 | 4276 | 533.435 | 3450 | 524.535 | 0.000 | 524.975 | 587.6 * | 523.455 | 0.000 |
| 13 | 523.635 | 0.000 | 535.105 | 5411 | 531.605 | 2871 * | 524.575 | 0.000 | 524.865 | 563.8 * | 523.455 | 0.000 |
| 14 | 523.475 | 0.000 | 535.575 | 5212 | 529.455 | 1952 * | 524.635 | 0.000 | 524.715 | 149.8 | 523.445 | 0.000 |
| 15 | 523.385 | 0.000 | 535.295 | 4900 | 528.125 | 1468 * | 524.595 | 0.000 | 524.610 | 102.5 | 523.435 | 0.000 |
| 16 | 523.235 | 0.000 | 534.195 | 3976 | 527.055 | 1127 * | 524.575 | 0.000 | 524.705 | 529.9 * | 523.435 | 0.000 |
| 17 | 523.095 | 0.000 | 532.535 | 3320 * | 526.395 | 937.8 * | 524.775 | 0.000 | 524.665 | 0.000 | 523.475 | 0.000 |
| 18 | 522.985 | 0.000 | 529.415 | 1792 | 525.855 | 846.0 | 524.925 | 0.000 | 524.555 | 0.000 | 523.555 | 0.000 |
| 19 | 522.855 | 0.000 | 526.800 | 1083 | 525.280 | 608.7 | 527.585 | 1252 | 524.480 | 0.000 | 523.635 | 0.000 |
| 20 | 522.805 | 0.000 | 525.890 | 872.8 | 525.255 | 669.3 | 529.130 | 1835 | 524.505 | 0.000 | 523.725 | 0.000 |
| 21 | 522.345 | 0.000 | 525.785 | 843.7 | 524.655 | 519.5 * | 528.160 | 1331 | 524.525 | 0.000 | 523.735 | 0.000 |
| 22 | 521.695 | 0.000 | 525.930 | 897.8 | 524.445 | 560.0 | 525.745 | 686.2 | 524.515 | 0.000 | 523.835 | 0.000 |
| 23 | 521.535 | 0.000 | 525.700 | 797.6 | 525.200 | 658.8 | 527.755 | 1480 | 524.495 | 0.000 | 523.895 | 0.000 |
| 24 | 521.415 | 0.000 | 525.665 | 748.1 * | 525.235 | 635.4 | 528.575 | 1650 | 524.425 | 0.000 | 523.925 | 0.000 |
| 25 | 521.295 | 0.000 | 525.750 | 792.1 | 525.390 | 694.0 | 528.235 | 1506 * | 524.375 | 0.000 | 523.945 | 0.000 |
| 26 | 521.175 | 0.000 | 525.485 | 705.7 | 525.265 | 683.6 | 528.390 | 1403 | 524.295 | 0.000 | 523.955 | 0.000 |
| 27 | 521.065 | 0.000 | 525.190 | 617.6 | 524.880 | 563.4 | 526.670 | 882.3 | 524.215 | 0.000 | 523.935 | 0.000 |
| 28 | 521.585 | 0.000 | 524.515 | 508.4 | 524.485 | 484.9 * | 525.330 | 515.3 | 524.145 | 0.000 | 523.925 | 0.000 |
| 29 | 522.305 | 0.000 | 524.300 | 447.7 | 524.265 | 448.1 | 524.600 | 439.9 | 524.075 | 0.000 | 523.875 | 0.000 |
| 30 | 522.645 | 0.000 | 524.240 | 448.9 | 524.020 | 345.6 | 525.100 | 302.3 | 524.015 | 0.000 | 523.865 | 0.000 |
| 31 | | | 524.225 | 434.3 * | 523.975 | 340.4 | | | 524.005 | 0.000 | | |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 523.154 | 0.000 | 525.306 | 758.7 | 531.916 | 3212 | 524.240 | 253.3 | 524.788 | 327.3 | 523.758 | 0.000 |
| II Ten-Daily | 523.320 | 0.000 | 531.920 | 3340 | 528.725 | 1811 | 525.382 | 357.4 | 524.743 | 260.7 | 523.509 | 0.000 |
| III Ten-Daily | 521.706 | 0.000 | 525.162 | 658.4 | 524.711 | 539.4 | 526.856 | 1020 | 524.281 | 0.000 | 523.889 | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 521.065 | 0.000 | 523.190 | 221.7 | 523.975 | 340.4 | 523.585 | 0.000 | 524.005 | 0.000 | 523.435 | 0.000 |
| Max. | 523.935 | 0.000 | 535.575 | 5411 | 535.565 | 4983 | 529.130 | 1835 | 525.355 | 673.7 | 523.995 | 0.000 |
| Mean | 522.727 | 0 | 527.389 | 1556 | 528.330 | 1812 | 525.493 | 543.4 | 524.593 | 189.7 | 523.719 | 0 |

**Annual Runoff in MCM = 10937 Annual Runoff in mm = 720**

**Peak Observed Discharge = 5411 cumecs on 13/07/2016 Corres. Water Level :535.105 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016 Corres. Water Level :521.735 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 2016 - 2017

**Station Name : Kurundwad ( AK000V1)** **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** **Sub-Division : Upper Krishna SD 2, Miraj**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 523.855 | 0.000 | 523.585 | 0.000 | 522.215 | 0.000 | 521.415 | 0.000 | 523.165 | 0.000 | 523.255 | 0.000 |
| 2 | 523.875 | 0.000 | 523.555 | 0.000 | 522.145 | 0.000 | 521.335 | 0.000 | 523.235 | 0.000 | 523.185 | 0.000 |
| 3 | 523.855 | 0.000 | 523.535 | 0.000 | 522.065 | 0.000 | 521.345 | 0.000 | 523.245 | 0.000 | 523.085 | 0.000 |
| 4 | 523.835 | 0.000 | 523.535 | 0.000 | 521.975 | 0.000 | 521.445 | 0.000 | 523.315 | 0.000 | 522.985 | 0.000 |
| 5 | 523.815 | 0.000 | 523.515 | 0.000 | 521.875 | 0.000 | 521.555 | 0.000 | 523.355 | 0.000 | 522.965 | 0.000 |
| 6 | 523.815 | 0.000 | 523.475 | 0.000 | 521.785 | 0.000 | 521.615 | 0.000 | 523.335 | 0.000 | 523.315 | 0.000 |
| 7 | 523.795 | 0.000 | 523.425 | 0.000 | 521.685 | 0.000 | 521.875 | 0.000 | 523.295 | 0.000 | 523.715 | 0.000 |
| 8 | 523.775 | 0.000 | 523.285 | 0.000 | 521.575 | 0.000 | 521.795 | 0.000 | 523.245 | 0.000 | 523.925 | 0.000 |
| 9 | 523.755 | 0.000 | 523.315 | 0.000 | 521.565 | 0.000 | 522.355 | 0.000 | 523.175 | 0.000 | 523.865 | 0.000 |
| 10 | 523.735 | 0.000 | 523.285 | 0.000 | 521.715 | 0.000 | 522.765 | 0.000 | 523.105 | 0.000 | 523.715 | 0.000 |
| 11 | 523.705 | 0.000 | 523.245 | 0.000 | 521.835 | 0.000 | 523.015 | 0.000 | 523.065 | 0.000 | 523.675 | 0.000 |
| 12 | 523.695 | 0.000 | 523.195 | 0.000 | 521.905 | 0.000 | 523.215 | 0.000 | 523.005 | 0.000 | 523.565 | 0.000 |
| 13 | 523.675 | 0.000 | 523.175 | 0.000 | 521.895 | 0.000 | 523.245 | 0.000 | 522.925 | 0.000 | 523.525 | 0.000 |
| 14 | 523.685 | 0.000 | 523.135 | 0.000 | 521.905 | 0.000 | 523.265 | 0.000 | 523.025 | 0.000 | 523.435 | 0.000 |
| 15 | 523.695 | 0.000 | 523.125 | 0.000 | 521.945 | 0.000 | 523.335 | 0.000 | 523.525 | 0.000 | 523.325 | 0.000 |
| 16 | 523.745 | 0.000 | 523.085 | 0.000 | 522.035 | 0.000 | 523.355 | 0.000 | 523.225 | 0.000 | 523.315 | 0.000 |
| 17 | 523.755 | 0.000 | 523.045 | 0.000 | 522.105 | 0.000 | 523.465 | 0.000 | 523.075 | 0.000 | 523.265 | 0.000 |
| 18 | 523.765 | 0.000 | 523.085 | 0.000 | 522.065 | 0.000 | 523.345 | 0.000 | 522.955 | 0.000 | 523.315 | 0.000 |
| 19 | 523.715 | 0.000 | 522.925 | 0.000 | 521.985 | 0.000 | 523.335 | 0.000 | 523.135 | 0.000 | 523.335 | 0.000 |
| 20 | 523.775 | 0.000 | 522.855 | 0.000 | 521.925 | 0.000 | 523.285 | 0.000 | 523.355 | 0.000 | 523.305 | 0.000 |
| 21 | 523.805 | 0.000 | 522.835 | 0.000 | 521.915 | 0.000 | 523.375 | 0.000 | 523.425 | 0.000 | 523.195 | 0.000 |
| 22 | 523.815 | 0.000 | 522.785 | 0.000 | 521.865 | 0.000 | 523.545 | 0.000 | 523.315 | 0.000 | 523.215 | 0.000 |
| 23 | 523.825 | 0.000 | 522.725 | 0.000 | 521.865 | 0.000 | 523.595 | 0.000 | 523.345 | 0.000 | 523.305 | 0.000 |
| 24 | 523.795 | 0.000 | 522.705 | 0.000 | 521.855 | 0.000 | 523.575 | 0.000 | 523.345 | 0.000 | 523.305 | 0.000 |
| 25 | 523.775 | 0.000 | 522.635 | 0.000 | 521.795 | 0.000 | 523.485 | 0.000 | 523.285 | 0.000 | 523.135 | 0.000 |
| 26 | 523.725 | 0.000 | 522.555 | 0.000 | 521.755 | 0.000 | 523.395 | 0.000 | 523.255 | 0.000 | 523.255 | 0.000 |
| 27 | 523.705 | 0.000 | 522.515 | 0.000 | 521.745 | 0.000 | 523.295 | 0.000 | 523.285 | 0.000 | 523.595 | 0.000 |
| 28 | 523.685 | 0.000 | 522.455 | 0.000 | 521.495 | 0.000 | 523.235 | 0.000 | 523.085 | 0.000 | 523.475 | 0.000 |
| 29 | 523.665 | 0.000 | 522.395 | 0.000 | | | 523.175 | 0.000 | 523.025 | 0.000 | 523.155 | 0.000 |
| 30 | 523.625 | 0.000 | 522.355 | 0.000 | | | 523.135 | 0.000 | 523.275 | 0.000 | 523.115 | 0.000 |
| 31 | 523.595 | 0.000 | 522.305 | 0.000 | | | 523.135 | 0.000 | | | 523.235 | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 523.811 | 0.000 | 523.451 | 0.000 | 521.860 | 0.000 | 521.750 | 0.000 | 523.247 | 0.000 | 523.401 | 0.000 |
| II Ten-Daily | 523.721 | 0.000 | 523.087 | 0.000 | 521.960 | 0.000 | 523.286 | 0.000 | 523.129 | 0.000 | 523.406 | 0.000 |
| III Ten-Daily | 523.729 | 0.000 | 522.570 | 0.000 | 521.786 | 0.000 | 523.359 | 0.000 | 523.264 | 0.000 | 523.271 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 523.595 | 0.000 | 522.305 | 0.000 | 521.495 | 0.000 | 521.335 | 0.000 | 522.925 | 0.000 | 522.965 | 0.000 |
| Max. | 523.875 | 0.000 | 523.585 | 0.000 | 522.215 | 0.000 | 523.595 | 0.000 | 523.525 | 0.000 | 523.925 | 0.000 |
| Mean | 523.753 | 0 | 523.021 | 0 | 521.875 | 0 | 522.816 | 0 | 523.213 | 0 | 523.357 | 0 |

**Peak Computed Discharge = 4576 cumecs on 07/08/2016** **Corres. Water Level :534.855 m**

**Lowest Computed Discharge = 434.3 cumecs on 31/07/2016** **Corres. Water Level :524.225 m**

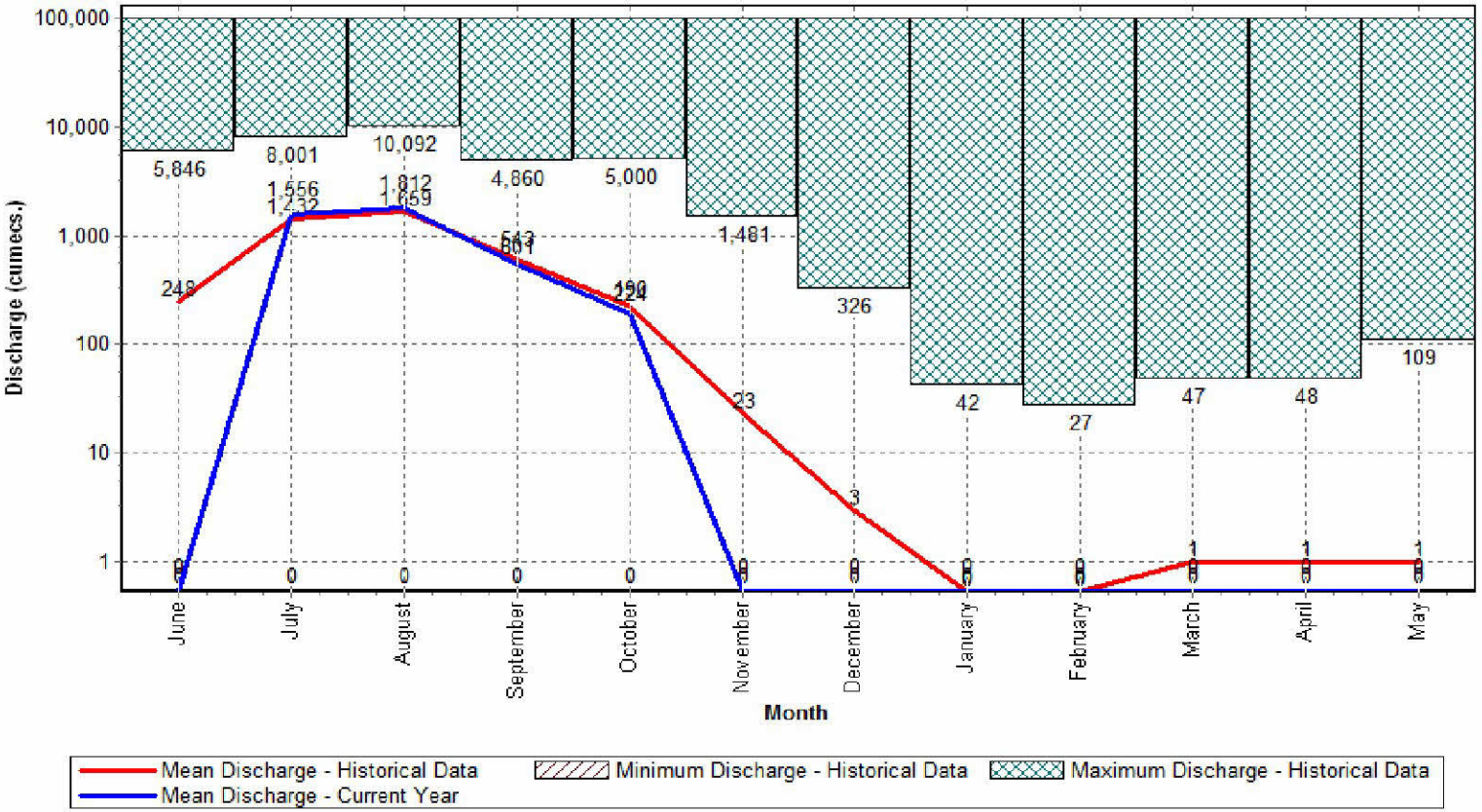
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Kurundwad ( AK000V1)** | **Data considered : 1972-2017** | **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** | **Sub-Division : Upper Krishna SD 2, Miraj**



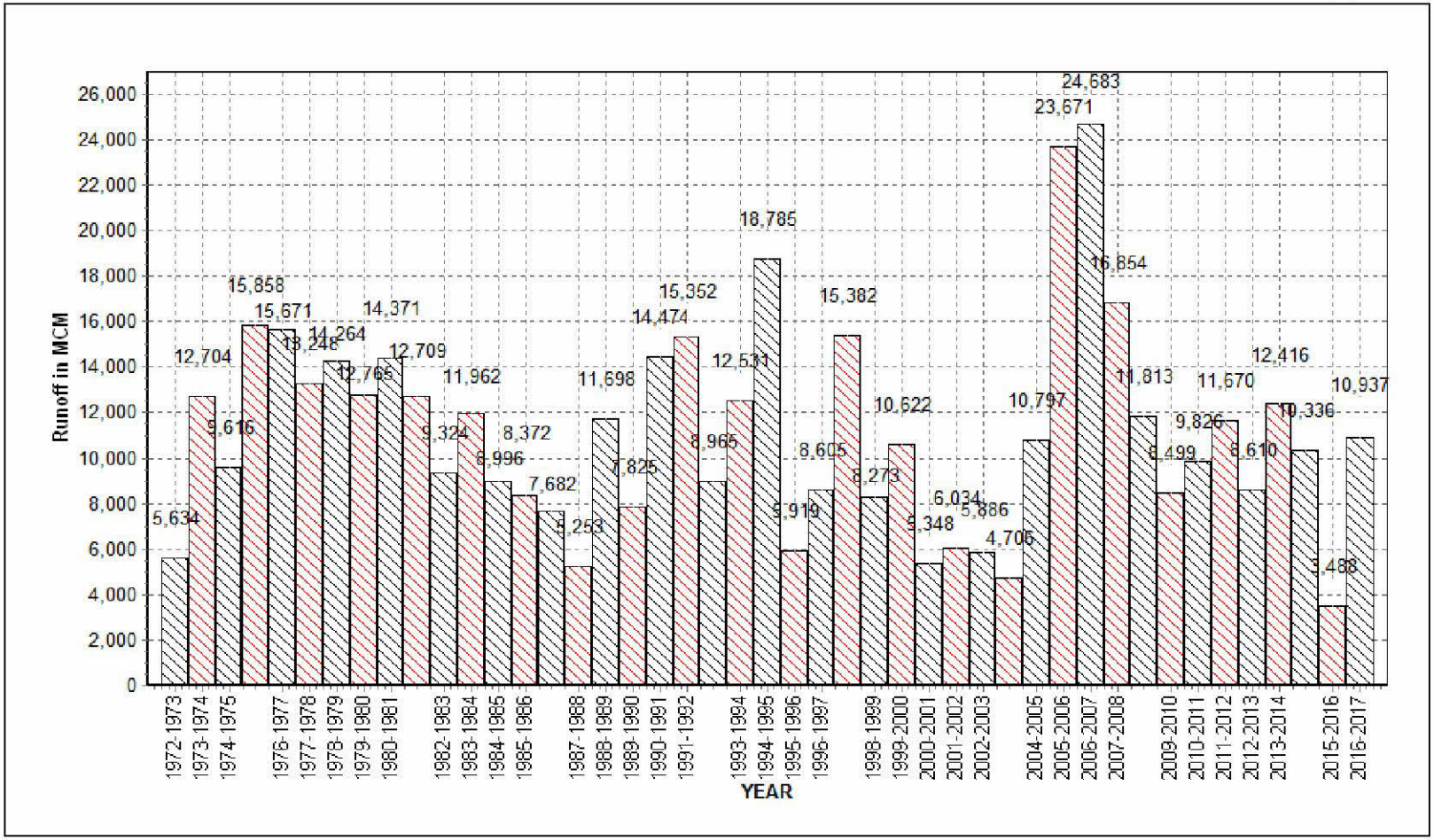
## Annual Runoff Values for the period: 1972 - 2017

**Station Name : Kurundwad ( AK000V1)**

**Local River : Krishna**

**Division : Upper Krishna Divn, Pune**

**Sub-Division : Upper Krishna SD 2, Miraj**

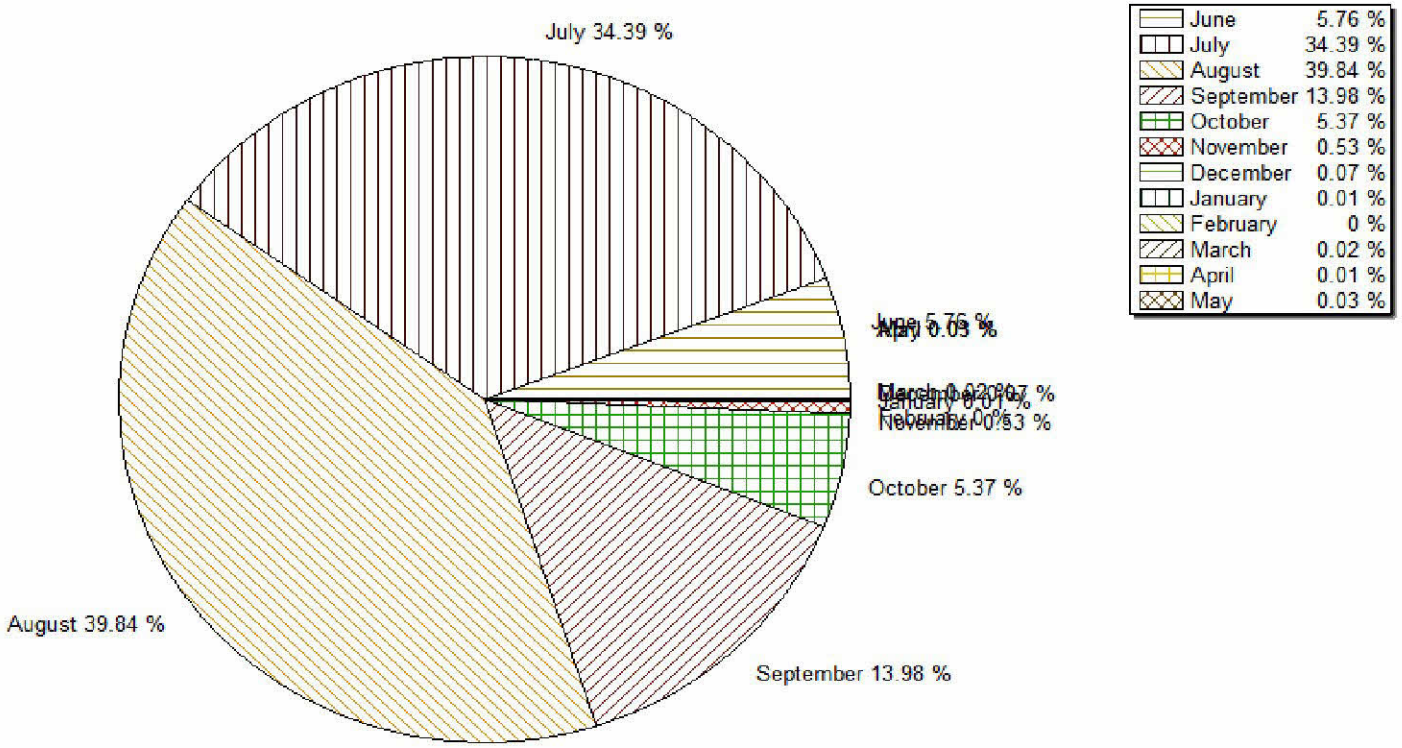



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1972-2016**

**Station Name : Kurundwad ( AK000V1)**
**Local River : Krishna**

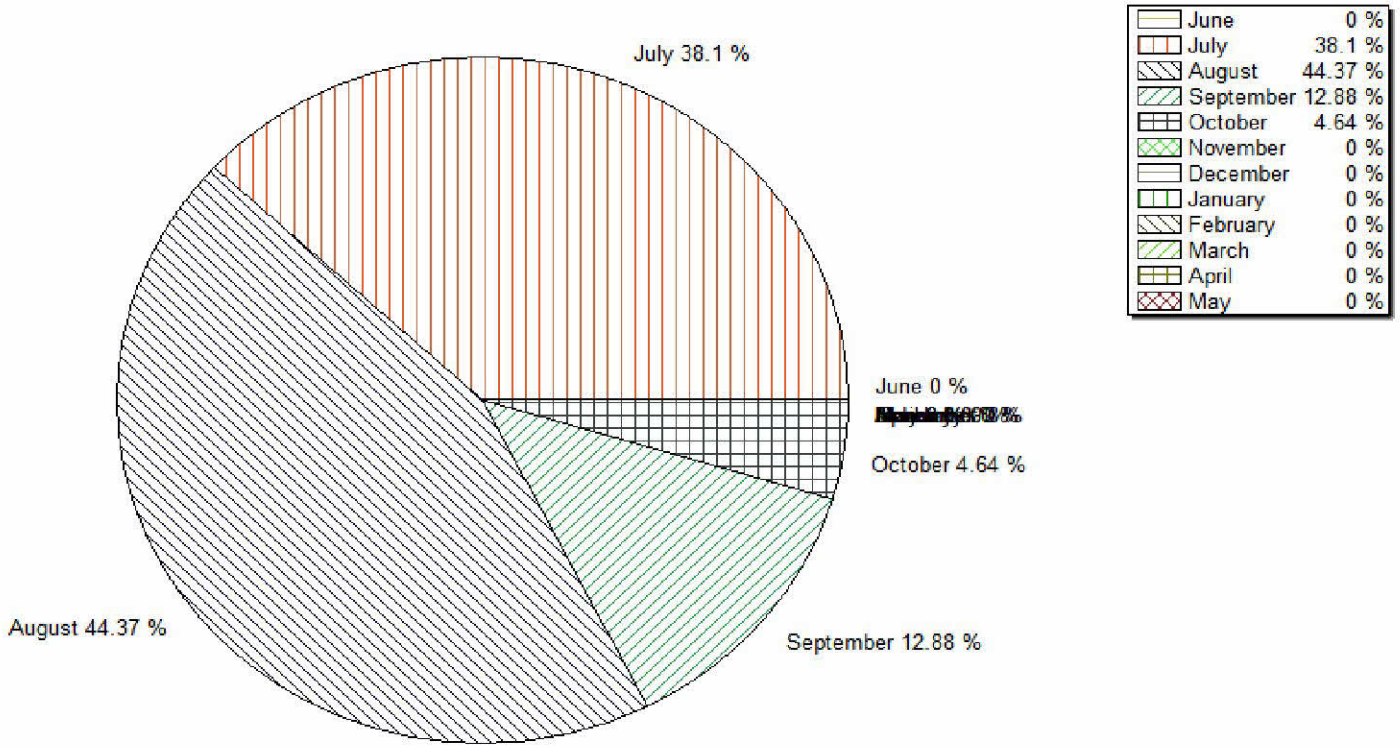
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Upper Krishna SD 2, Miraj**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Kurundwad ( AK000V1)**
**Local River : Krishna**

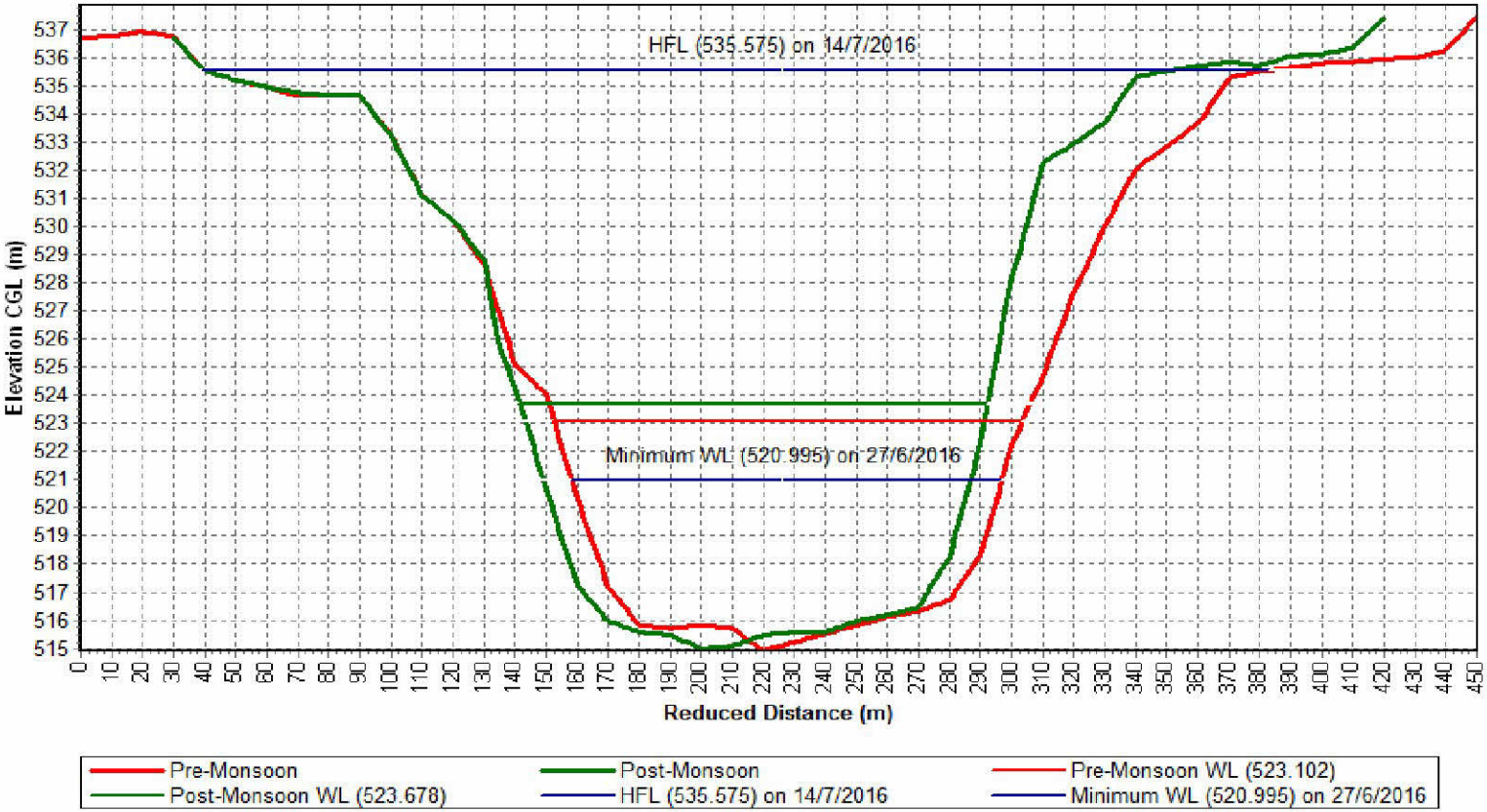
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Upper Krishna SD 2, Miraj**



## Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017

**Station Name : Kurundwad ( AK000V1)** | **Division : Upper Krishna Divn, Pune**

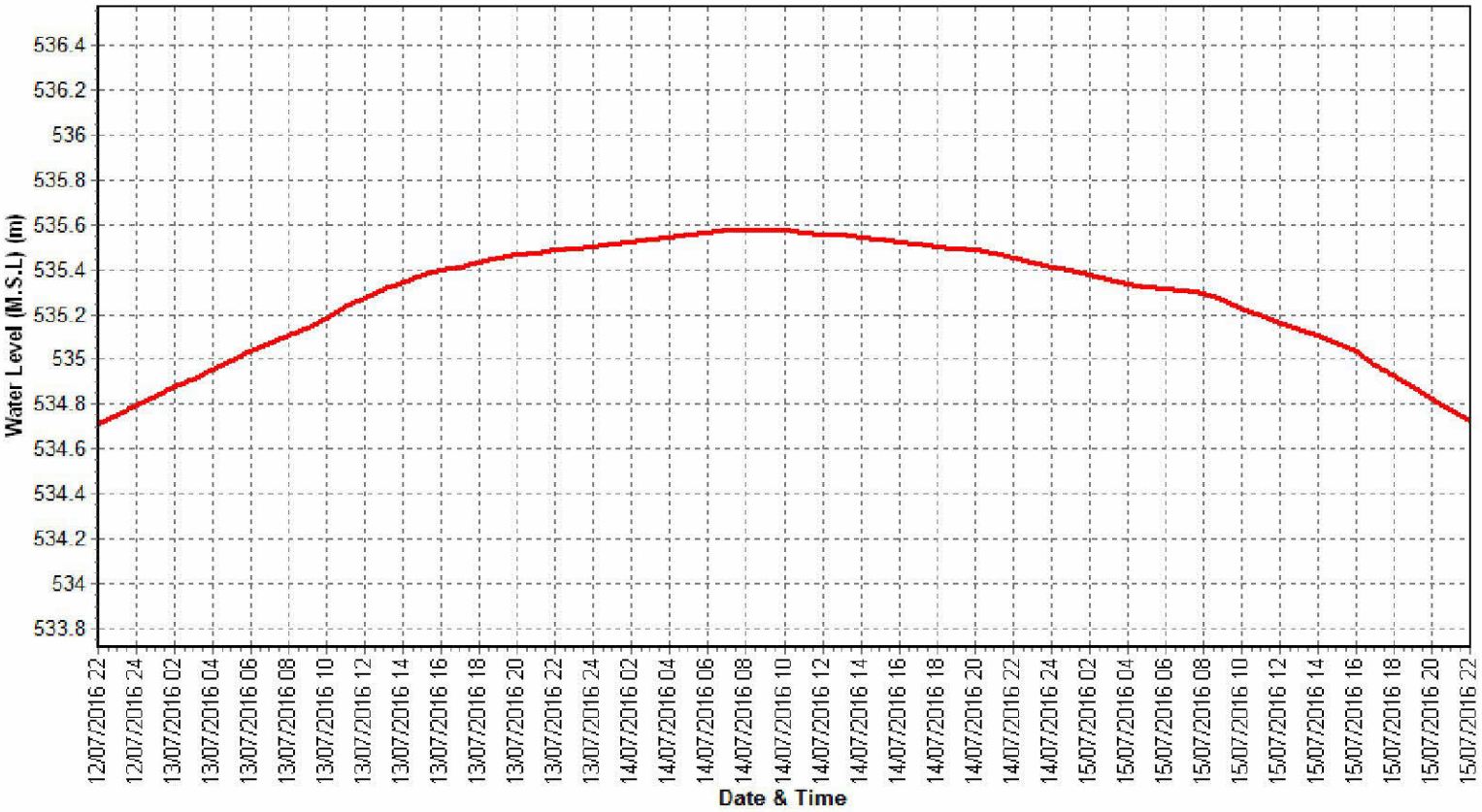
**Local River : Krishna** | **Sub-Division : Upper Krishna SD 2, Miraj**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Kurundwad ( AK000V1)** | **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** | **Sub-Division : Upper Krishna SD 2, Miraj**

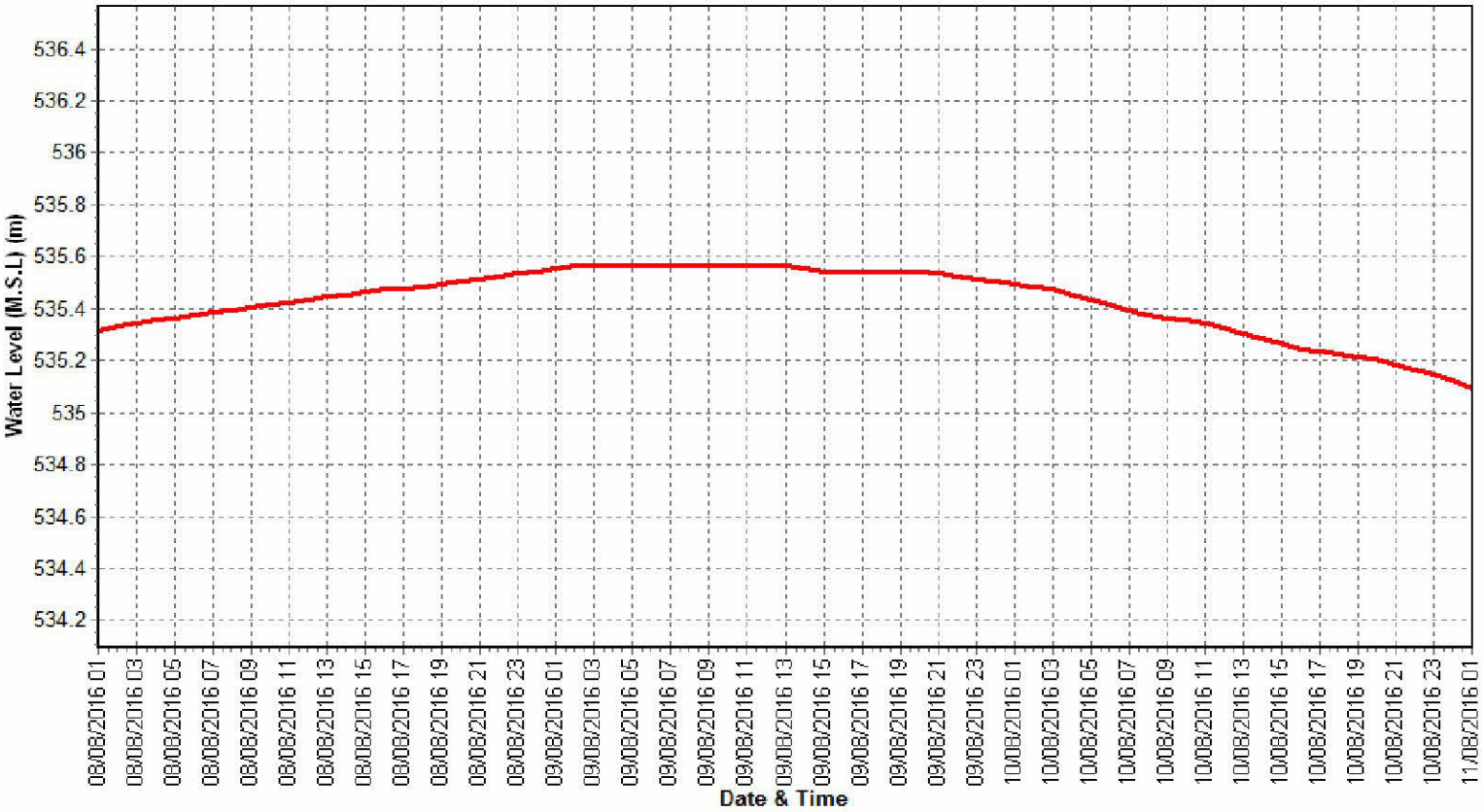



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Kurundwad ( AK000V1)** **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** **Sub-Division : Upper Krishna SD 2, Miraj**

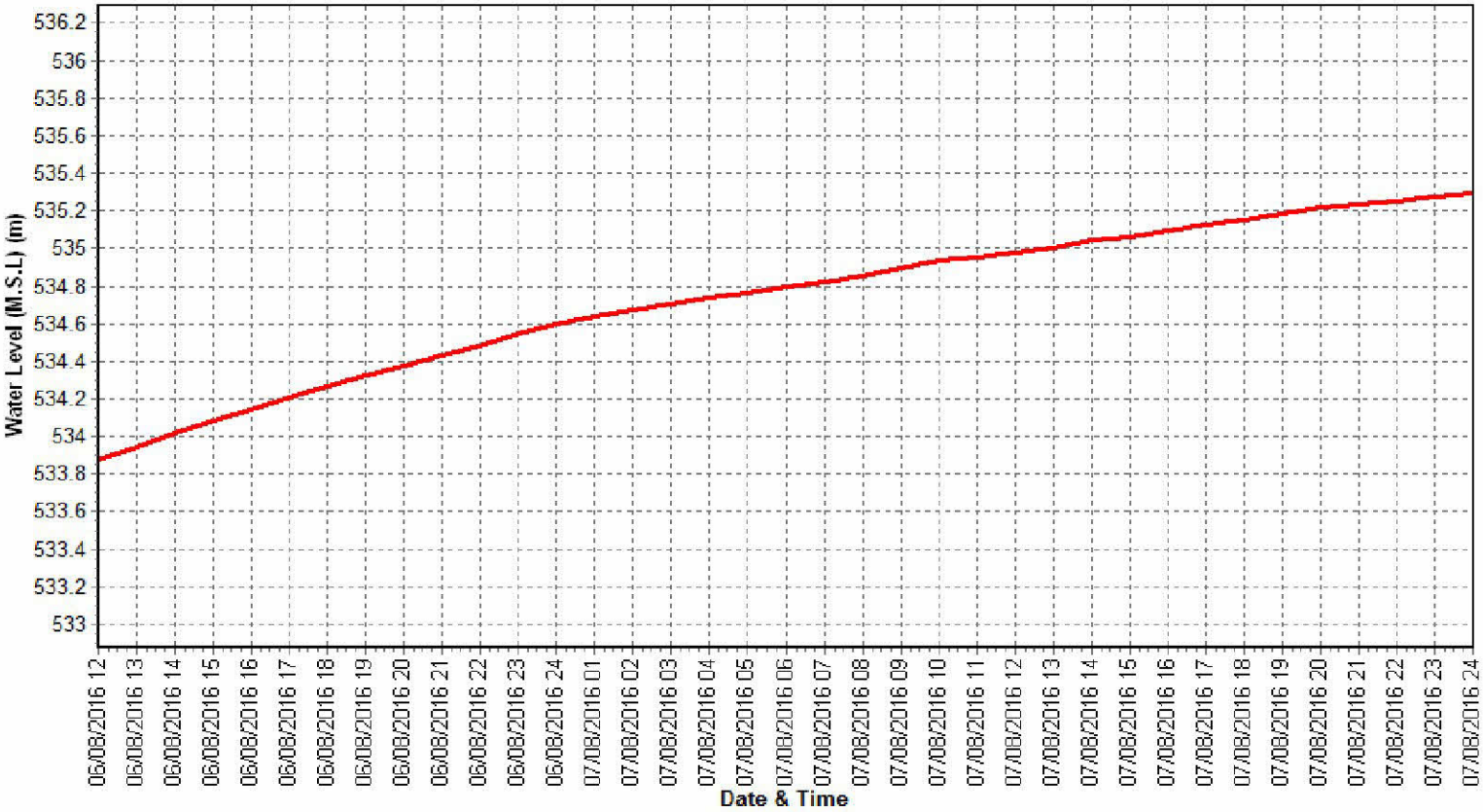



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017

**Station Name : Kurundwad ( AK000V1)** | **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** | **Sub-Division : Upper Krishna SD 2, Miraj**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Arjunwad (Seasonal)** | | **Code** | **: AK000V4** | |
| State | : Maharashtra | | District | Kolhapur | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : - | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Krishna | |
| Division | : Upper Krishna Divn, Pune | | Sub-Division | : Upper Krishna SD 2, Miraj | |
| Drainage Area | : 12660 Sq. Km. | | Bank | : Right | |
| Latitude | : 16°46'51" | | Longitude | : 74°37'59" | |
| **Zero of Gauge (m)** | : 523 (m.s.l)<br>523.225 (m.s.l) | | 01/02/1969<br>01/01/1974 | - 31/12/1973 | |
| | Opening Date | | Closing Date | | |
| Gauge | : 12/01/1969 | | **HFL During 2016-17** | **: 537.975m** | |
| | | | **Corres. Discharge** | **: 4363(Estimated)** | |
| Discharge | : 12/01/1969 | | **Date & Time of occurance** | **: 13/07/2016 : 16.00 hrs.** | |
| Sediment | : 26/12/2014 | | | | |
| Water Quality | : 01/09/2014 | | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1969-1970 | 3850 | 540.395 | 02/08/1969 | 0.000 | 525.245 | 04/03/1970 |
| 1970-1971 | 5079 | 538.000 | 22/08/1970 | 0.000 | 525.070 | 02/02/1971 |
| 1971-1972 | 2936 | 536.843 | 01/09/1971 | 0.000 | 525.610 | 14/01/1972 |
| 1972-1973 | 3989 | 537.760 | 09/07/1972 | 0.000 | 525.620 | 25/01/1973 |
| 1973-1974 | 4950 | 539.870 | 10/07/1973 | 0.000 | 527.205 | 25/01/1974 |
| 1974-1975 | 2469 | 536.403 | 07/07/1974 | 0.000 | 526.675 | 25/01/1975 |
| 1975-1976 | 5270 | 540.460 | 12/07/1975 | 0.000 | 527.575 | 26/01/1976 |
| 1976-1977 | 4890 | 541.070 | 08/06/1976 | 0.000 | 527.325 | 25/01/1977 |
| 1977-1978 | 3460 | 537.817 | 08/07/1977 | 0.000 | 527.595 | 12/11/1977 |
| 1978-1979 | 2579 | 536.321 | 03/09/1978 | 0.000 | 527.135 | 25/01/1979 |
| 1979-1980 | 4904 | 539.767 | 09/08/1979 | 0.000 | 525.175 | 09/02/1980 |
| 1980-1981 | 3800 | 539.895 | 05/07/1980 | 0.000 | 527.265 | 25/01/1981 |
| 1981-1982 | 3362 | 538.195 | 10/07/1981 | 0.000 | 527.945 | 25/01/1982 |
| 1982-1983 | 2241 | 536.213 | 16/08/1982 | 0.000 | 526.835 | 25/01/1983 |
| 1983-1984 | 3345 | 538.615 | 18/08/1983 | 0.000 | 527.125 | 26/01/1984 |
| 1984-1985 | 3284 | 538.045 | 20/07/1984 | 0.000 | 526.465 | 25/01/1985 |
| 1985-1986 | 3085 | 537.449 | 04/08/1985 | 0.000 | 527.545 | 25/01/1986 |
| 1986-1987 | 2868 | 537.640 | 14/08/1986 | 0.000 | 526.910 | 25/01/1987 |
| 1987-1988 | 2351 | 536.205 | 09/07/1987 | 0.000 | 525.205 | 26/01/1988 |
| 1988-1989 | 4997 | 539.895 | 04/08/1988 | 0.000 | 528.025 | 25/01/1989 |
| 1989-1990 | 4954 | 539.735 | 26/07/1989 | 0.000 | 527.945 | 25/01/1990 |

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 |
| 1990-1991 | 6500 | 540.795 | 20/08/1990 | 0.000 | 527.975 | 25/01/1991 |
| 1991-1992 | 5938 | 540.416 | 30/07/1991 | 0.000 | 527.755 | 26/01/1992 |
| 1992-1993 | 2928 | 537.316 | 15/08/1992 | 0.000 | 527.325 | 25/01/1993 |
| 1993-1994 | 2843 | 537.060 | 05/08/1993 | 0.000 | 527.585 | 18/01/1994 |
| 1994-1995 | 6300 | 541.175 | 17/07/1994 | 0.000 | 527.265 | 25/01/1995 |
| 1995-1996 | 2550 | 535.670 | 21/07/1995 | 0.000 | 526.225 | 26/01/1996 |
| 1996-1997 | 3560 | 539.125 | 05/10/1996 | 0.000 | 524.635 | 25/01/1997 |
| 1997-1998 | 4780 | 540.995 | 27/08/1997 | 0.000 | 527.525 | 25/01/1998 |
| 1998-1999 | 2411 | 535.618 | 10/07/1998 | 0.000 | 526.375 | 25/01/1999 |
| 1999-2000 | 3193 | 537.773 | 28/07/1999 | 0.000 | 526.535 | 26/01/2000 |
| 2000-2001 | 1747 | 534.482 | 14/07/2000 | 0.000 | 526.785 | 25/01/2001 |
| 2001-2002 | 1764 | 533.590 | 10/07/2001 | 0.000 | 527.085 | 25/01/2002 |
| 2002-2003 | 1514 | 533.705 | 15/08/2002 | 0.000 | 526.515 | 25/01/2003 |
| 2003-2004 | 1333 | 532.785 | 29/07/2003 | 0.000 | 527.275 | 25/01/2004 |
| 2004-2005 | 4211 | 539.455 | 14/08/2004 | 0.000 | 526.925 | 25/01/2005 |
| 2005-2006 | 9381 | 543.680 | 05/08/2005 | 0.000 | 526.520 | 25/01/2006 |
| 2006-2007 | 7505 | 542.125 | 12/08/2006 | 0.000 | 527.490 | 17/11/2006 |
| 2007-2008 | 3943 | 539.885 | 03/07/2007 | 0.000 | 526.125 | 12/11/2007 |
| 2008-2009 | 3357 | 538.345 | 15/08/2008 | 0.000 | 526.075 | 08/11/2008 |
| 2009-2010 | 2048 | 533.925 | 25/07/2009 | 0.000 | 529.320 | 22/11/2009 |
| 2010-2011 | 2587 | 536.275 | 29/07/2010 | 0.000 | 529.465 | 10/11/2010 |
| 2011-2012 | 4097 | 539.935 | 06/09/2011 | 0.000 | 527.815 | 09/11/2011 |
| 2012-2013 | 1614 | 533.130 | 07/09/2012 | 0.000 | 527.190 | 27/11/2012 |
| 2013-2014 | 3741 | 538.655 | 28/07/2013 | 0.000 | 527.055 | 03/11/2013 |
| 2014-2015 | 2606 | 536.255 | 02/08/2014 | 0.000 | 526.355 | 13/07/2014 |
| 2015-2016 | 1460 | 532.365 | 26/06/2015 | 0.000 | 527.295 | 18/06/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Arjunwad (Seasonal) ( AK000V4)** **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** **Sub-Division : Upper Krishna SD 2, Miraj**

| 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 | 526.575 | 0.000 | 526.850 | 131.5 | 528.095 | 250.2 | 527.015 | 101.9 | 528.245 | 132.7 | 526.985 | 0.000 |
| 2 | 526.425 | 0.000 | 527.315 | 140.3 * | 529.050 | 484.2 | 527.000 | 82.62 | 528.115 | 265.9 * | 526.915 | 0.000 |
| 3 | 526.365 | 0.000 | 527.465 | 161.1 * | 531.675 | 1080 | 526.680 | 71.72 | 528.105 | 129.5 | 526.755 | 0.000 |
| 4 | 526.365 | 0.000 | 528.170 | 330.1 | 533.945 | 2155 | 526.945 | 94.57 * | 528.295 | 149.8 | 526.565 | 0.000 |
| 5 | 526.675 | 0.000 | 528.735 | 387.4 * | 534.705 | 2326 | 526.975 | 97.98 * | 528.180 | 129.2 | 526.425 | 0.000 |
| 6 | 526.885 | 0.000 | 529.485 | 561.2 * | 535.825 | 3147 | 526.985 | 81.77 | 528.325 | 152.3 | 526.385 | 0.000 |
| 7 | 526.855 | 0.000 | 529.435 | 633.2 | 537.415 | 4016 * | 526.995 | 82.45 | 528.460 | 215.9 | 526.205 | 0.000 |
| 8 | 526.845 | 0.000 | 528.165 | 337.3 | 537.795 | 4321 | 526.855 | 61.50 | 528.445 | 211.3 | 526.645 | 0.000 |
| 9 | 526.965 | 0.000 | 527.955 | 237.9 * | 537.785 | 4322 | 526.380 | 37.06 | 528.095 | 262.3 * | 527.035 | 0.000 |
| 10 | 527.155 | 0.000 | 528.545 | 348.0 * | 537.385 | 4093 | 526.425 | 38.33 | 528.045 | 136.1 | 527.015 | 0.000 |
| 11 | 527.335 | 0.000 | 532.595 | 1416 | 536.625 | 3400 | 526.095 | 21.62 * | 528.455 | 330.0 * | 527.025 | 0.000 |
| 12 | 527.615 | 0.000 | 536.525 | 3330 | 534.965 | 2572 | 525.895 | 0.000 | 528.285 | 297.2 * | 527.165 | 0.000 |
| 13 | 527.075 | 0.000 | 537.755 | 4304 | 533.175 | 1816 * | 525.895 | 0.000 | 528.075 | 132.5 | 527.135 | 0.000 |
| 14 | 526.905 | 0.000 | 537.585 | 4207 | 531.505 | 1169 * | 525.855 | 0.000 | 527.880 | 108.9 | 527.075 | 0.000 |
| 15 | 526.845 | 0.000 | 536.505 | 3336 | 530.575 | 864.3 * | 526.110 | 0.000 | 527.695 | 69.42 | 527.105 | 0.000 |
| 16 | 526.585 | 0.000 | 534.725 | 2437 | 529.990 | 685.8 | 526.845 | 0.000 | 527.375 | 0.000 | 527.155 | 0.000 |
| 17 | 526.385 | 0.000 | 532.875 | 1691 * | 529.490 | 499.6 | 527.435 | 0.000 | 527.195 | 0.000 | 527.205 | 0.000 |
| 18 | 526.135 | 0.000 | 530.315 | 599.2 | 529.075 | 443.1 | 527.825 | 0.000 | 527.060 | 0.000 | 527.215 | 0.000 |
| 19 | 525.865 | 0.000 | 529.285 | 532.7 | 528.810 | 407.8 | 531.255 | 1139 | 526.905 | 0.000 | 527.205 | 0.000 |
| 20 | 525.515 | 0.000 | 529.005 | 458.9 | 528.670 | 360.5 | 532.405 | 1660 | 526.725 | 0.000 | 527.155 | 0.000 |
| 21 | 525.415 | 0.000 | 528.885 | 435.8 | 528.105 | 264.1 * | 530.925 | 842.9 | 526.565 | 0.000 | 527.175 | 0.000 |
| 22 | 525.205 | 0.000 | 528.830 | 424.9 | 528.745 | 377.4 | 529.230 | 360.6 | 526.435 | 0.000 | 527.195 | 0.000 |
| 23 | 525.045 | 0.000 | 528.615 | 379.8 | 528.625 | 359.5 | 531.685 | 1243 | 526.285 | 0.000 | 527.185 | 0.000 |
| 24 | 524.925 | 0.000 | 528.655 | 370.6 * | 528.375 | 289.4 | 532.155 | 1369 | 526.115 | 0.000 | 527.125 | 0.000 |
| 25 | 524.825 | 0.000 | 528.665 | 389.2 | 528.340 | 281.4 | 531.585 | 1197 * | 525.945 | 0.000 | 527.095 | 0.000 |
| 26 | 524.745 | 0.000 | 528.425 | 348.4 | 528.205 | 301.5 | 530.580 | 599.4 | 525.745 | 0.000 | 527.045 | 0.000 |
| 27 | 524.725 | 0.000 | 528.125 | 303.7 | 528.005 | 257.7 | 529.270 | 358.6 | 525.535 | 0.000 | 527.035 | 0.000 |
| 28 | 524.665 | 0.000 | 527.845 | 267.7 | 527.895 | 227.8 * | 528.965 | 253.5 | 525.405 | 0.000 | 526.995 | 0.000 |
| 29 | 525.365 | 0.000 | 527.680 | 240.1 | 527.800 | 200.1 | 528.775 | 222.3 | 525.925 | 0.000 | 527.005 | 0.000 |
| 30 | 525.765 | 0.000 | 527.720 | 201.6 | 527.535 | 165.5 | 528.685 | 202.2 | 526.835 | 0.000 | 527.015 | 0.000 |
| 31 | | | 527.805 | 213.0 * | 527.595 | 195.6 | | | 527.025 | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 526.711 | 0.000 | 528.212 | 326.8 | 534.368 | 2619 | 526.826 | 74.99 | 528.231 | 178.5 | 526.693 | 0.000 |
| II Ten-Daily | 526.626 | 0.000 | 533.717 | 2231 | 531.288 | 1222 | 527.562 | 282.0 | 527.565 | 93.81 | 527.144 | 0.000 |
| III Ten-Daily | 525.068 | 0.000 | 528.295 | 325.0 | 528.111 | 265.5 | 530.185 | 664.8 | 526.165 | 0.000 | 527.087 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 524.665 | 0.000 | 526.850 | 131.5 | 527.535 | 165.5 | 525.855 | 0.000 | 525.405 | 0.000 | 526.205 | 0.000 |
| Max. | 527.615 | 0.000 | 537.755 | 4304 | 537.795 | 4322 | 532.405 | 1660 | 528.460 | 330.0 | 527.215 | 0.000 |
| Mean | 526.135 | 0 | 530.017 | 940.4 | 531.154 | 1333 | 528.191 | 340.6 | 527.283 | 87.84 | 526.975 | 0 |

**Annual Runoff in MCM = 7248 Annual Runoff in mm = 569**

**Peak Observed Discharge = 4322 cumecs on 09/08/2016 Corres. Water Level :537.785 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016 Corres. Water Level :526.575 m**

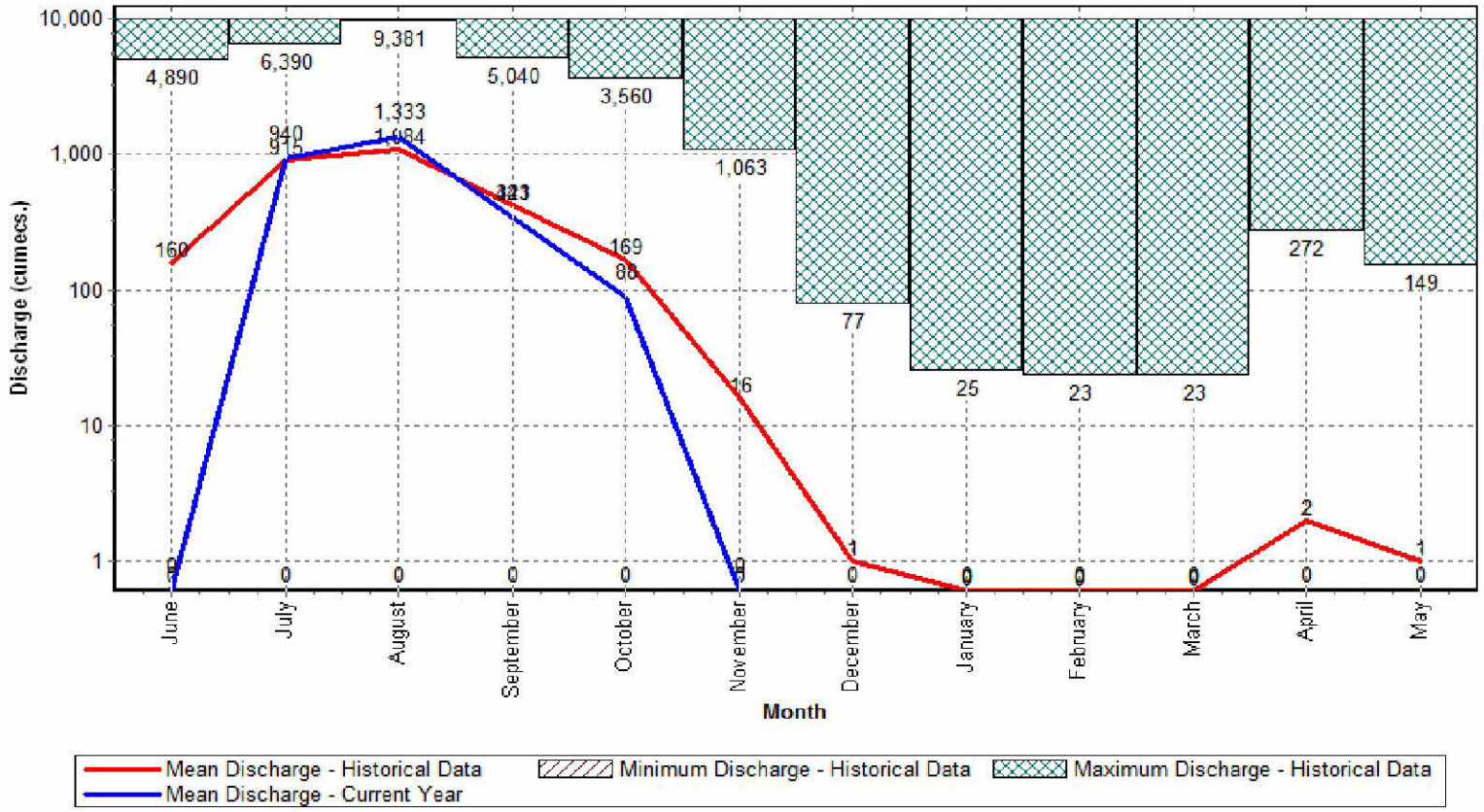
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Arjunwad (Seasonal) ( AK000V4)** **Data considered : 1969-2017** **Division : Upper Krishna Divn, Pune**

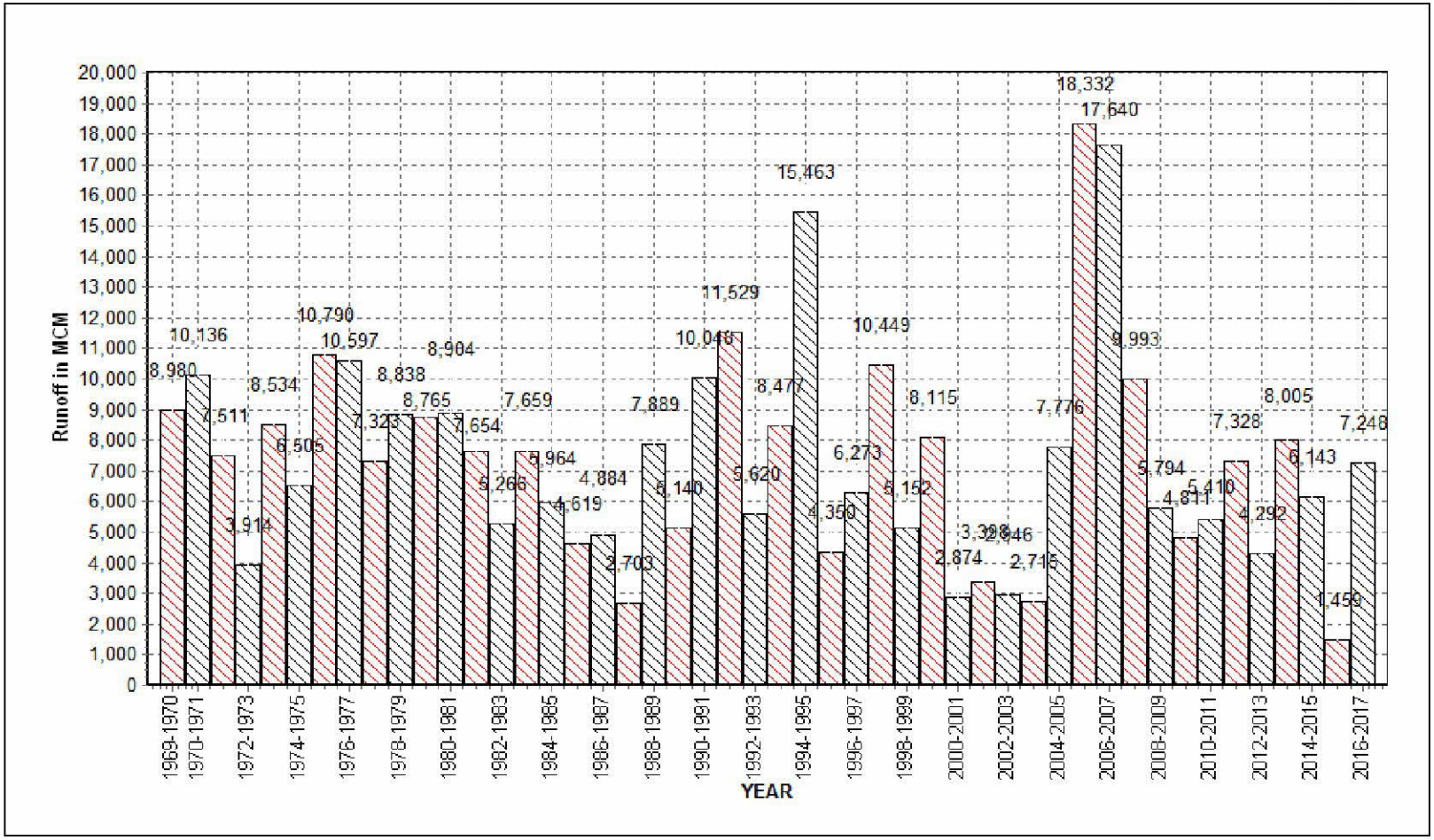
**Local River : Krishna** **Sub-Division : Upper Krishna SD 2, Miraj**



**Annual Runoff Values for the period: 1969 - 2017**

**Station Name : Arjunwad (Seasonal) ( AK000V4)** **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** **Sub-Division : Upper Krishna SD 2, Miraj**




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

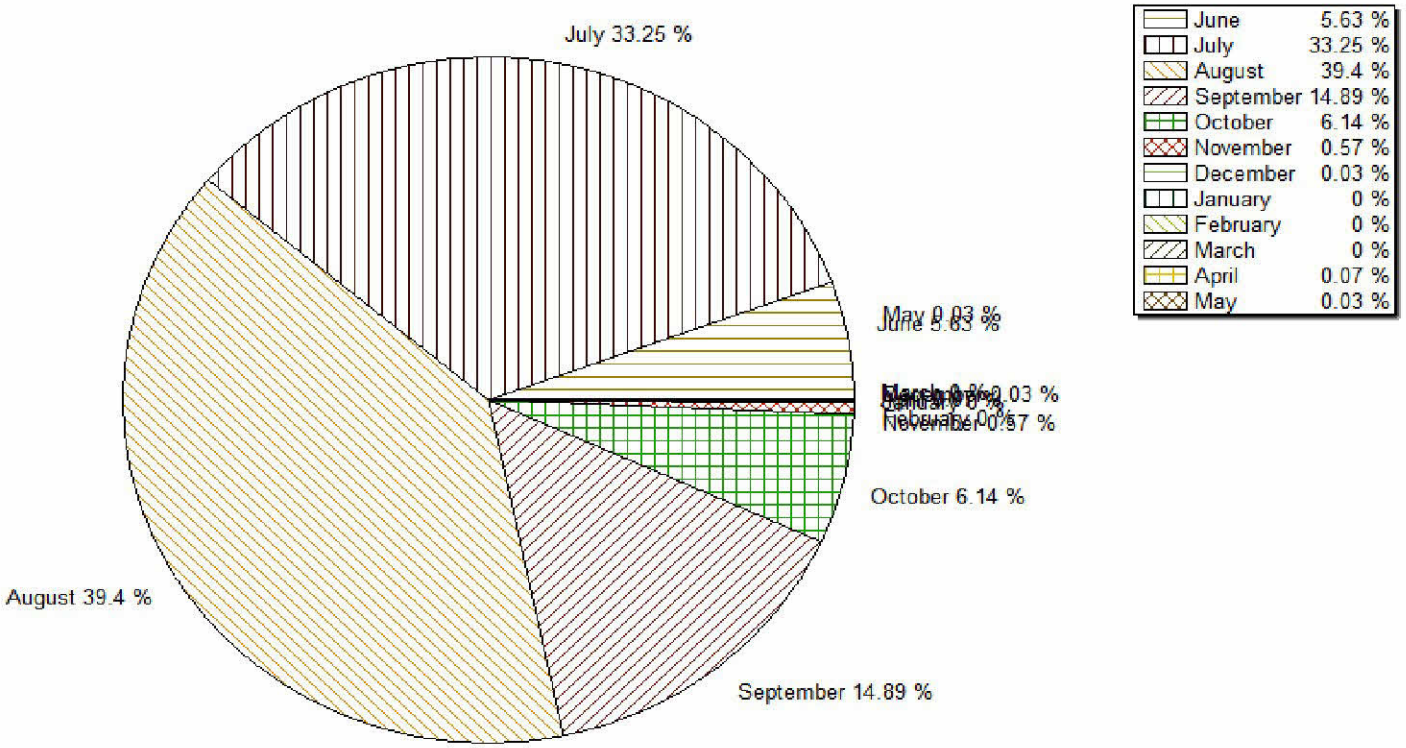
**Monthly Average Runoff based on period : 1969-2016**

**Station Name : Arjunwad (Seasonal) ( AK000V4)**

**Local River : Krishna**

**Division : Upper Krishna Divn, Pune**

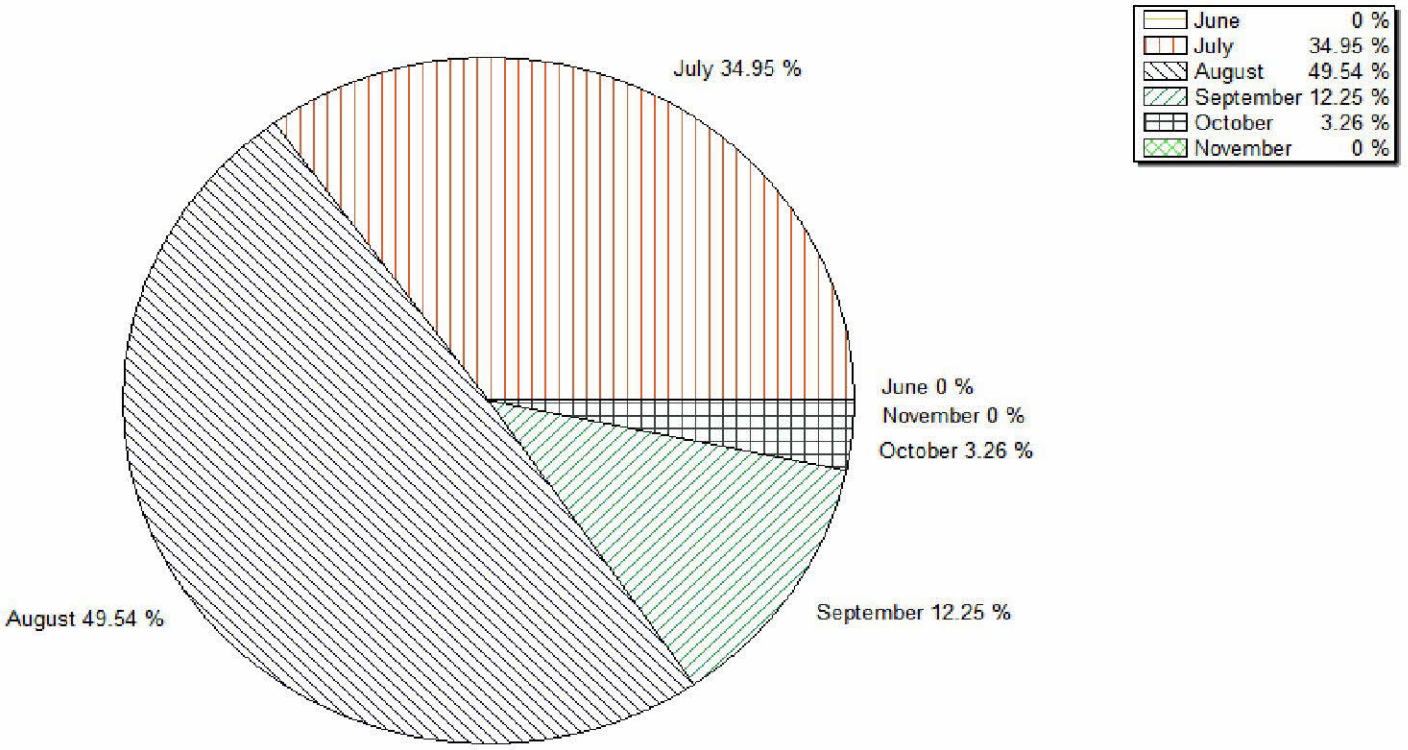
**Sub-Division : Upper Krishna SD 2, Miraj**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Arjunwad (Seasonal) ( AK000V4)**
**Local River : Krishna**

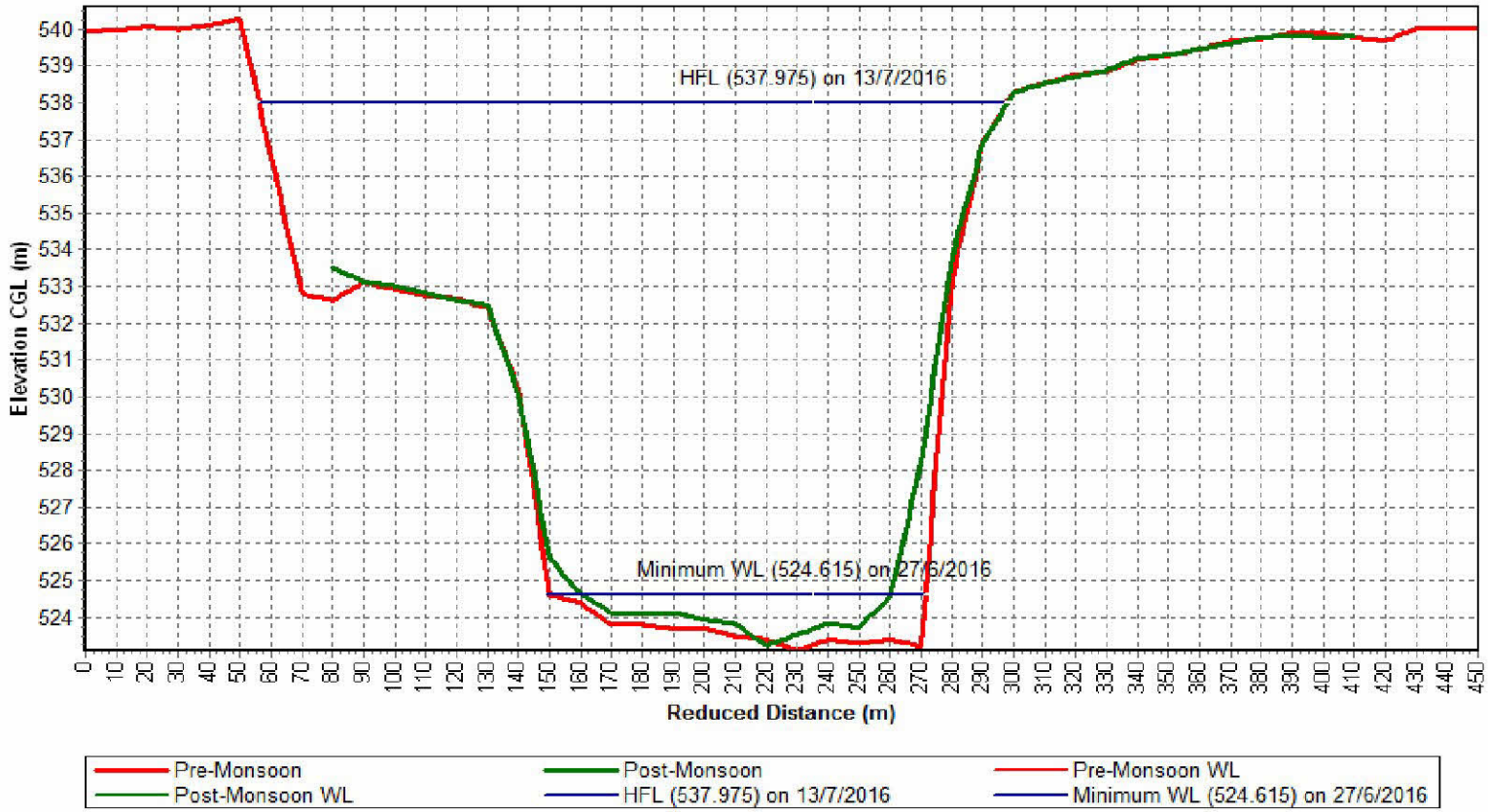
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Upper Krishna SD 2, Miraj**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Arjunwad (Seasonal) ( AK000V4)** **Division : Upper Krishna Divn, Pune**

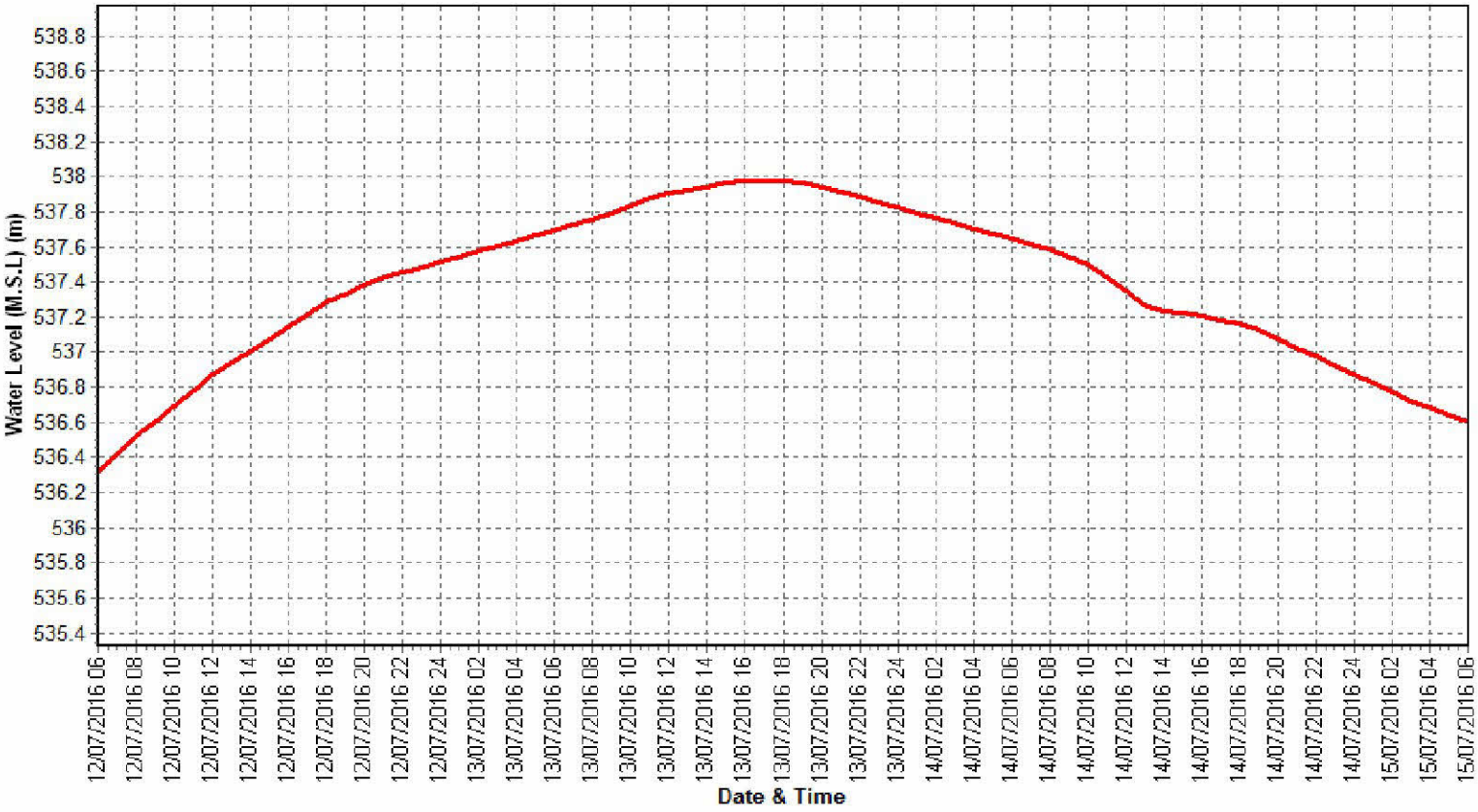
**Local River : Krishna** **Sub-Division : Upper Krishna SD 2, Miraj**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Arjunwad (Seasonal) ( AK000V4)** | **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** | **Sub-Division : Upper Krishna SD 2, Miraj**

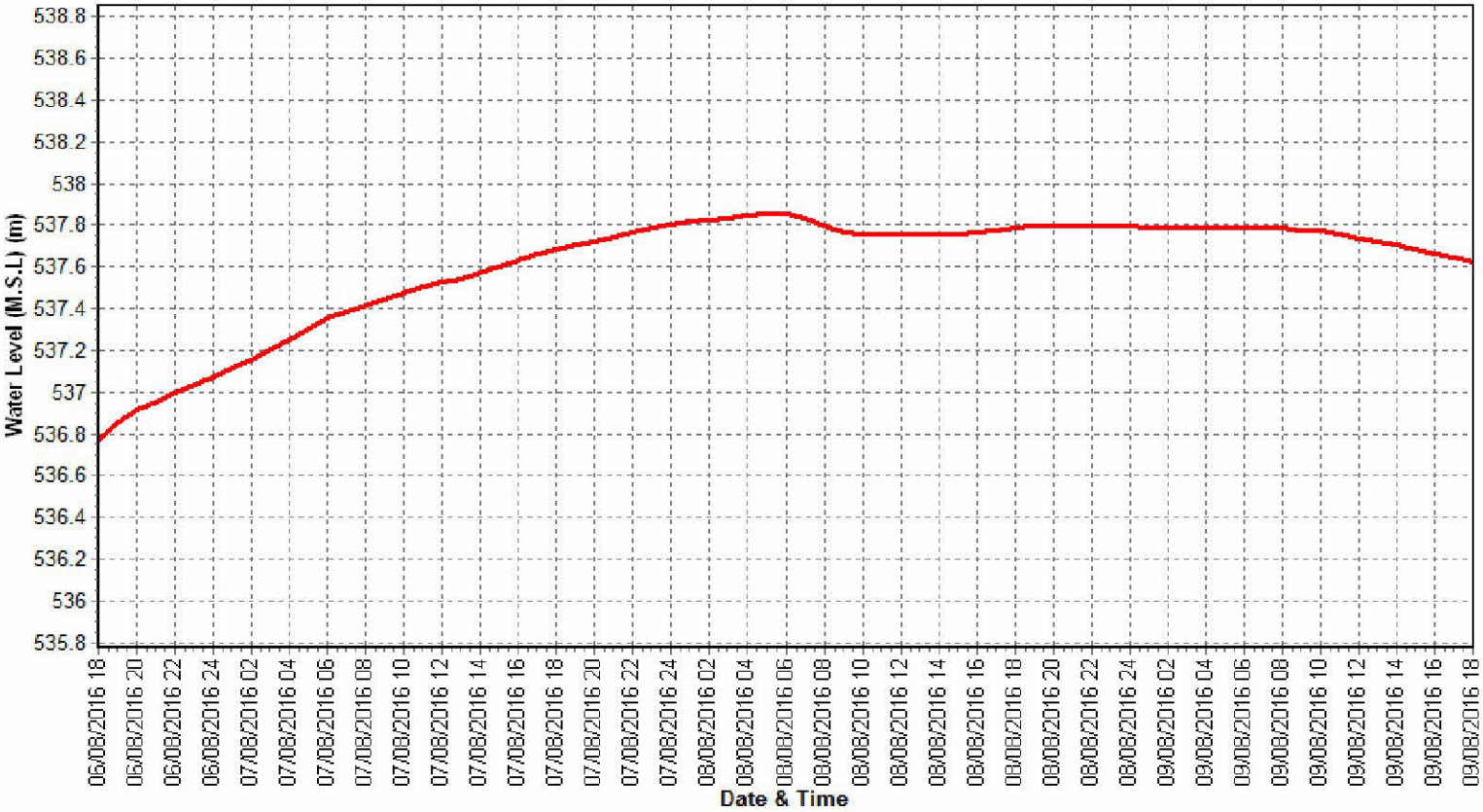



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Arjunwad (Seasonal) ( AK000V4)** **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** **Sub-Division : Upper Krishna SD 2, Miraj**

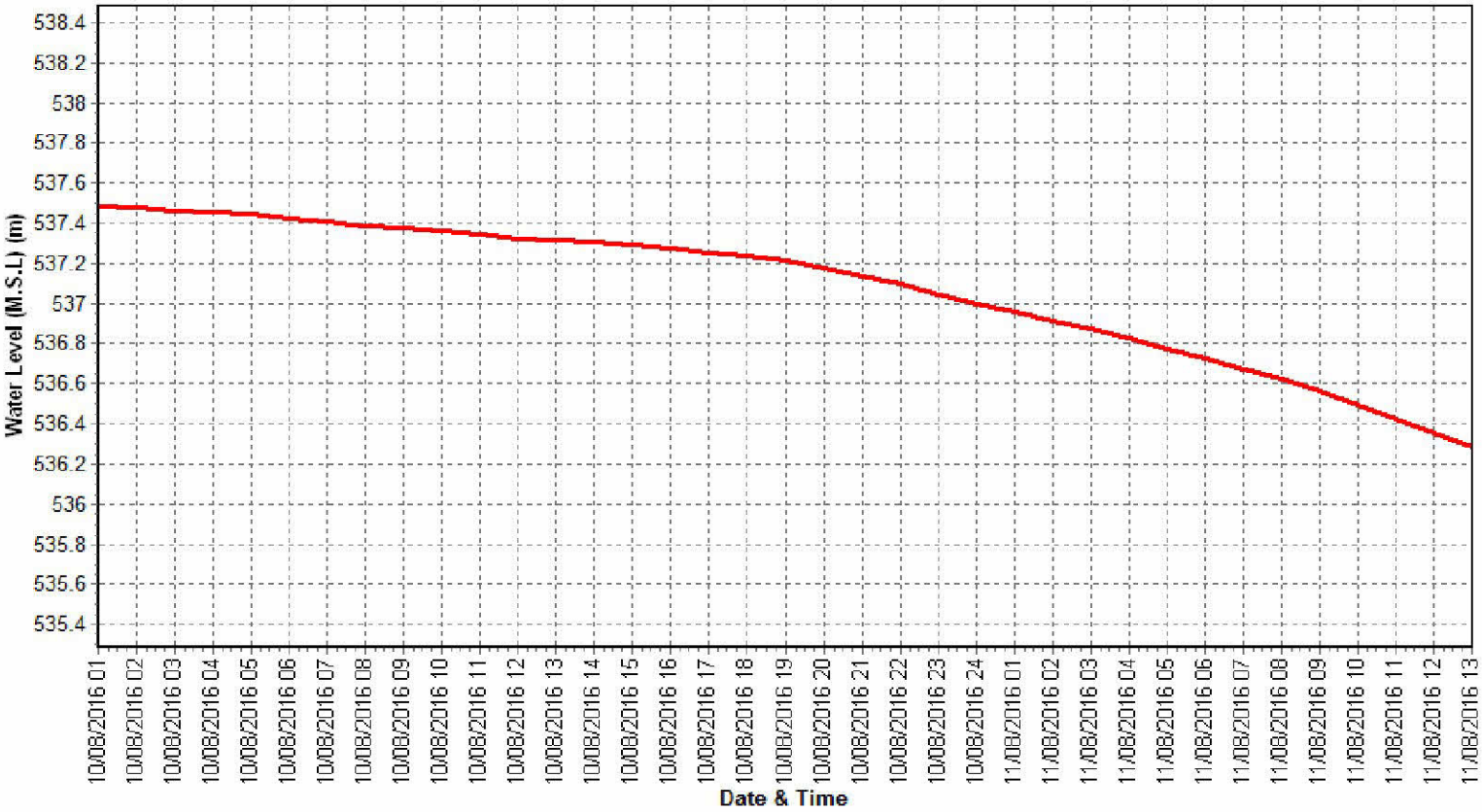



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Arjunwad (Seasonal) ( AK000V4)** **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** **Sub-Division : Upper Krishna SD 2, Miraj**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Samdoli (Seasonal)** | | **Code** | **: AKX00A7** | |
| State | : Maharashtra | | District | Sangli | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Varna | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Varna | |
| Division | : Upper Krishna Divn, Pune | | Sub-Division | : Upper Krishna SD 2, Miraj | |
| Drainage Area | : 1948 Sq. Km. | | Bank | : Left | |
| Latitude | : 16°51'18" | | Longitude | : 74°29'50" | |
| **Zero of Gauge (m)** | : 529.594 (m.s.l)<br>528.594 (m.s.l) | | 01/09/1963<br>21/04/1966 | - 20/04/1966 | |
| | Opening Date | | Closing Date | | |
| Gauge | : 23/08/1963 | | **HFL During 2016-17** | **: 542.294m** | |
| | | | **Corres. Discharge** | **: 1698(Estimated)** | |
| Discharge | : 01/12/1964 | | **Date & Time of occurance** | **: 13/07/2016 : 15.00 hrs.** | |
| Sediment | : 26/12/2014 | | | | |
| Water Quality | : 01/09/2014 | | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1965-1966 | 17.90 | 530.649 | 11/05/1966 | 0.000 | 529.529 | 11/03/1966 |
| 1966-1967 | 36.20 | 531.134 | 05/12/1966 | 0.000 | 529.509 | 05/04/1967 |
| 1967-1968 | 2000 | 544.224 | 29/07/1967 | 0.000 | 529.499 | 13/02/1968 |
| 1968-1969 | 1068 | 539.704 | 03/08/1968 | 0.000 | 529.334 | 31/01/1969 |
| 1969-1970 | 1650 | 543.294 | 02/08/1969 | 0.000 | 529.524 | 25/01/1970 |
| 1970-1971 | 1555 | 541.294 | 22/08/1970 | 0.000 | 529.524 | 25/01/1971 |
| 1971-1972 | 1220 | 540.334 | 26/06/1971 | 0.000 | | 26/01/1972 |
| 1972-1973 | 1219 | 540.974 | 09/07/1972 | 0.000 | | 25/01/1973 |
| 1973-1974 | 2250 | 543.279 | 09/07/1973 | 0.000 | 531.754 | 25/01/1974 |
| 1974-1975 | 1528 | 540.264 | 07/07/1974 | 0.000 | 530.124 | 25/01/1975 |
| 1975-1976 | 2050 | 543.414 | 12/07/1975 | 0.000 | 529.734 | 02/02/1976 |
| 1976-1977 | 2007 | 543.322 | 03/08/1976 | 0.000 | 529.794 | 25/01/1977 |
| 1977-1978 | 1548 | 541.003 | 09/07/1977 | 0.000 | 533.529 | 25/01/1978 |
| 1978-1979 | 1418 | 539.592 | 14/08/1978 | 0.000 | 531.894 | 25/01/1979 |
| 1979-1980 | 1436 | 542.219 | 08/08/1979 | 0.000 | 533.429 | 26/01/1980 |
| 1980-1981 | 1747 | 542.485 | 04/07/1980 | 0.000 | 529.704 | 25/01/1981 |
| 1981-1982 | 1741 | 541.014 | 09/07/1981 | 0.000 | 532.254 | 25/01/1982 |
| 1982-1983 | 1472 | 540.077 | 31/07/1982 | 0.000 | 531.114 | 25/01/1983 |
| 1983-1984 | 1682 | 540.527 | 30/06/1983 | 0.000 | 530.414 | 26/01/1984 |
| 1984-1985 | 1715 | 541.232 | 20/07/1984 | 0.000 | | 25/01/1985 |
| 1985-1986 | 1530 | 540.689 | 03/08/1985 | 0.000 | 531.704 | 25/01/1986 |

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 | 1347 | 540.091 | 10/08/1986 | 0.000 | 532.274 | 25/01/1987 |
| 1987-1988 | 1080 | 539.199 | 09/07/1987 | 0.000 | | 26/01/1988 |
| 1988-1989 | 2025 | 542.854 | 04/08/1988 | 0.000 | 530.264 | 25/01/1989 |
| 1989-1990 | 2412 | 543.424 | 27/07/1989 | 0.000 | 533.724 | 25/01/1990 |
| 1990-1991 | 1675 | 543.514 | 20/08/1990 | 0.000 | 534.444 | 25/01/1991 |
| 1991-1992 | 2081 | 543.418 | 30/07/1991 | 0.000 | 532.004 | 26/01/1992 |
| 1992-1993 | 1178 | 540.031 | 16/08/1992 | 0.000 | 533.494 | 25/01/1993 |
| 1993-1994 | 1463 | 540.953 | 05/08/1993 | 0.000 | 533.174 | 25/01/1994 |
| 1994-1995 | 2235 | 543.654 | 17/07/1994 | 0.000 | 534.194 | 25/01/1995 |
| 1995-1996 | 869.0 | 538.019 | 04/09/1995 | 0.000 | 532.719 | 26/01/1996 |
| 1996-1997 | 1610 | 541.614 | 05/10/1996 | 0.000 | 531.064 | 25/01/1997 |
| 1997-1998 | 1710 | 543.564 | 27/08/1997 | 0.000 | 533.534 | 25/01/1998 |
| 1998-1999 | 897.5 | 538.712 | 10/07/1998 | 0.000 | 532.544 | 25/01/1999 |
| 1999-2000 | 1199 | 540.169 | 24/07/1999 | 0.000 | 532.714 | 26/01/2000 |
| 2000-2001 | 1001 | 538.294 | 14/07/2000 | 0.000 | 531.824 | 25/01/2001 |
| 2001-2002 | 637.2 | 537.339 | 10/07/2001 | 0.000 | 532.954 | 25/01/2002 |
| 2002-2003 | 694.6 | 536.819 | 14/08/2002 | 0.000 | 532.484 | 25/01/2003 |
| 2003-2004 | 772.1 | 536.829 | 23/06/2003 | 0.000 | | 26/01/2004 |
| 2004-2005 | 1341 | 541.831 | 14/08/2004 | 0.000 | 532.584 | 25/01/2005 |
| 2005-2006 | 3064 | 546.324 | 05/08/2005 | 0.000 | 533.144 | 25/01/2006 |
| 2006-2007 | 2010 | 544.274 | 12/08/2006 | 0.000 | 532.454 | 14/11/2006 |
| 2007-2008 | 1569 | 542.394 | 03/07/2007 | 0.000 | 532.554 | 10/11/2007 |
| 2008-2009 | 1403 | 541.634 | 14/08/2008 | 0.000 | 532.214 | 10/11/2008 |
| 2009-2010 | 1141 | 538.844 | 17/07/2009 | 0.000 | 532.354 | 26/11/2009 |
| 2010-2011 | 1145 | 538.844 | 27/07/2010 | 0.000 | 532.794 | 13/11/2010 |
| 2011-2012 | 1592 | 542.414 | 06/09/2011 | 0.000 | 532.434 | 27/10/2011 |
| 2012-2013 | 688.9 | 537.190 | 06/09/2012 | 0.000 | 531.850 | 17/11/2012 |
| 2013-2014 | 1483 | 541.744 | 27/07/2013 | 0.000 | 531.774 | 15/06/2013 |
| 2014-2015 | 1115 | 540.094 | 25/07/2014 | 0.000 | 532.434 | 28/11/2014 |
| 2015-2016 | 669.2 | 536.684 | 26/06/2015 | 0.000 | 532.564 | 09/06/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Samdoli (Seasonal) ( AKX00A7)** **Division : Upper Krishna Divn, Pune**

**Local River : Varna** **Sub-Division : Upper Krishna SD 2, Miraj**

| 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 | 532.444 | 0.000 | 531.674 | 0.000 | 532.394 | 111.7 | 532.194 | 89.86 | 532.074 | 86.40 | 531.994 | 0.000 |
| 2 | 532.264 | 0.000 | 532.274 | 110.3 | 534.399 | 326.9 | 531.899 | 78.60 | 531.944 | 63.05 * | 531.714 | 0.000 |
| 3 | 532.254 | 0.000 | 532.744 | 144.3 * | 536.844 | 691.7 | 531.914 | 77.91 | 531.994 | 72.30 | 531.494 | 0.000 |
| 4 | 532.224 | 0.000 | 533.924 | 287.8 | 537.774 | 759.4 | 531.914 | 60.30 * | 531.969 | 71.25 | 531.264 | 0.000 |
| 5 | 532.404 | 0.000 | 533.774 | 281.1 | 538.384 | 875.1 | 532.014 | 69.57 * | 531.914 | 59.65 | 531.329 | 0.000 |
| 6 | 532.304 | 0.000 | 534.029 | 297.3 * | 539.634 | 1173 | 531.924 | 65.17 | 531.894 | 56.47 | 531.259 | 0.000 |
| 7 | 532.239 | 0.000 | 533.564 | 248.2 | 540.854 | 1351 * | 531.864 | 55.44 | 531.894 | 54.71 | 531.784 | 0.000 |
| 8 | 532.194 | 0.000 | 532.704 | 142.4 | 541.324 | 1364 | 531.854 | 46.97 | 531.764 | 49.44 | 532.204 | 0.000 |
| 9 | 532.174 | 0.000 | 532.384 | 118.2 | 541.314 | 1356 | 531.669 | 39.30 | 531.634 | 35.98 * | 532.194 | 0.000 |
| 10 | 532.259 | 0.000 | 534.894 | 411.4 * | 540.694 | 1290 | 531.584 | 34.14 | 531.784 | 42.56 | 532.074 | 0.000 |
| 11 | 532.329 | 0.000 | 538.614 | 931.7 | 539.694 | 1143 | 531.524 | 27.22 * | 531.924 | 61.21 * | 532.089 | 0.000 |
| 12 | 532.224 | 0.000 | 540.794 | 1392 | 537.994 | 865.3 | 531.504 | 29.03 | 531.829 | 52.65 * | 532.194 | 0.000 |
| 13 | 531.934 | 0.000 | 541.944 | 1660 | 535.844 | 463.8 | 531.549 | 29.16 * | 531.889 | 52.60 | 532.094 | 0.000 |
| 14 | 531.614 | 0.000 | 541.734 | 1516 | 534.814 | 400.6 * | 531.544 | 28.15 | 531.819 | 44.48 | 532.049 | 0.000 |
| 15 | 531.534 | 0.000 | 540.064 | 1259 | 534.494 | 357.7 * | 531.614 | 29.75 | 531.689 | 41.26 | 532.139 | 0.000 |
| 16 | 531.404 | 0.000 | 536.484 | 541.8 | 533.974 | 296.8 | 531.824 | 45.04 | 531.644 | 36.80 * | 532.254 | 0.000 |
| 17 | 531.369 | 0.000 | 533.994 | 292.8 * | 533.564 | 249.5 | 531.944 | 60.96 | 531.554 | 28.56 | 532.224 | 0.000 |
| 18 | 531.024 | 0.000 | 533.204 | 194.8 | 533.024 | 196.5 | 532.594 | 128.0 * | 531.409 | 12.71 | 532.219 | 0.000 |
| 19 | 530.714 | 0.000 | 533.304 | 204.1 | 533.044 | 189.4 | 534.744 | 407.4 | 531.284 | 0.000 | 532.129 | 0.000 |
| 20 | 530.554 | 0.000 | 533.054 | 185.8 | 533.004 | 184.9 | 535.484 | 504.3 | 531.174 | 0.000 | 532.164 | 0.000 |
| 21 | 530.494 | 0.000 | 532.984 | 174.2 | 532.774 | 147.6 * | 533.389 | 196.4 | 531.099 | 0.000 | 532.174 | 0.000 |
| 22 | 530.404 | 0.000 | 533.014 | 175.4 | 532.644 | 124.4 | 532.824 | 141.2 | 531.014 | 0.000 | 532.204 | 0.000 |
| 23 | 530.304 | 0.000 | 532.924 | 167.6 | 532.914 | 163.1 * | 534.014 | 294.8 | 530.814 | 0.000 | 532.124 | 0.000 |
| 24 | 530.234 | 0.000 | 532.964 | 168.8 * | 532.974 | 179.9 | 534.504 | 391.5 | 530.574 | 0.000 | 532.059 | 0.000 |
| 25 | 530.104 | 0.000 | 532.874 | 157.9 | 532.944 | 171.6 | 534.204 | 319.7 * | 530.334 | 0.000 | 531.994 | 0.000 |
| 26 | 530.554 | 0.000 | 532.619 | 123.5 | 532.814 | 136.9 | 534.644 | 389.9 | 529.934 | 0.000 | 531.909 | 0.000 |
| 27 | 530.904 | 0.000 | 532.324 | 103.8 | 532.494 | 113.5 | 532.804 | 150.9 * | 529.834 | 0.000 | 531.894 | 0.000 |
| 28 | 531.014 | 0.000 | 532.144 | 85.31 | 532.434 | 111.2 * | 532.534 | 116.0 | 531.994 | 0.000 | 531.824 | 0.000 |
| 29 | 531.179 | 0.000 | 532.089 | 82.63 | 532.324 | 101.7 | 532.534 | 113.9 | 532.164 | 0.000 | 531.984 | 0.000 |
| 30 | 531.444 | 0.000 | 532.144 | 85.61 | 532.254 | 96.64 | 532.329 | 101.9 | 532.274 | 0.000 | 531.899 | 0.000 |
| 31 | | | 532.144 | 82.01 * | 532.259 | 94.90 | | | 532.014 | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 532.276 | 0.000 | 533.196 | 204.1 | 538.361 | 930.0 | 531.883 | 61.72 | 531.887 | 59.18 | 531.731 | 0.000 |
| II Ten-Daily | 531.470 | 0.000 | 537.319 | 817.8 | 534.945 | 434.7 | 532.432 | 128.9 | 531.621 | 33.03 | 532.155 | 0.000 |
| III Ten-Daily | 530.664 | 0.000 | 532.566 | 127.9 | 532.621 | 131.0 | 533.378 | 221.6 | 531.095 | 0.000 | 532.006 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 530.104 | 0.000 | 531.674 | 0.000 | 532.254 | 94.90 | 531.504 | 27.22 | 529.834 | 0.000 | 531.259 | 0.000 |
| Max. | 532.444 | 0.000 | 541.944 | 1660 | 541.324 | 1364 | 535.484 | 504.3 | 532.274 | 86.40 | 532.254 | 0.000 |
| Mean | 531.470 | 0 | 534.303 | 375 | 535.222 | 486.7 | 532.565 | 137.4 | 531.520 | 29.74 | 531.964 | 0 |

**Annual Runoff in MCM = 2744 Annual Runoff in mm = 1409**

**Peak Observed Discharge = 1660 cumecs on 13/07/2016 Corres. Water Level :541.944 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016 Corres. Water Level :532.444 m**

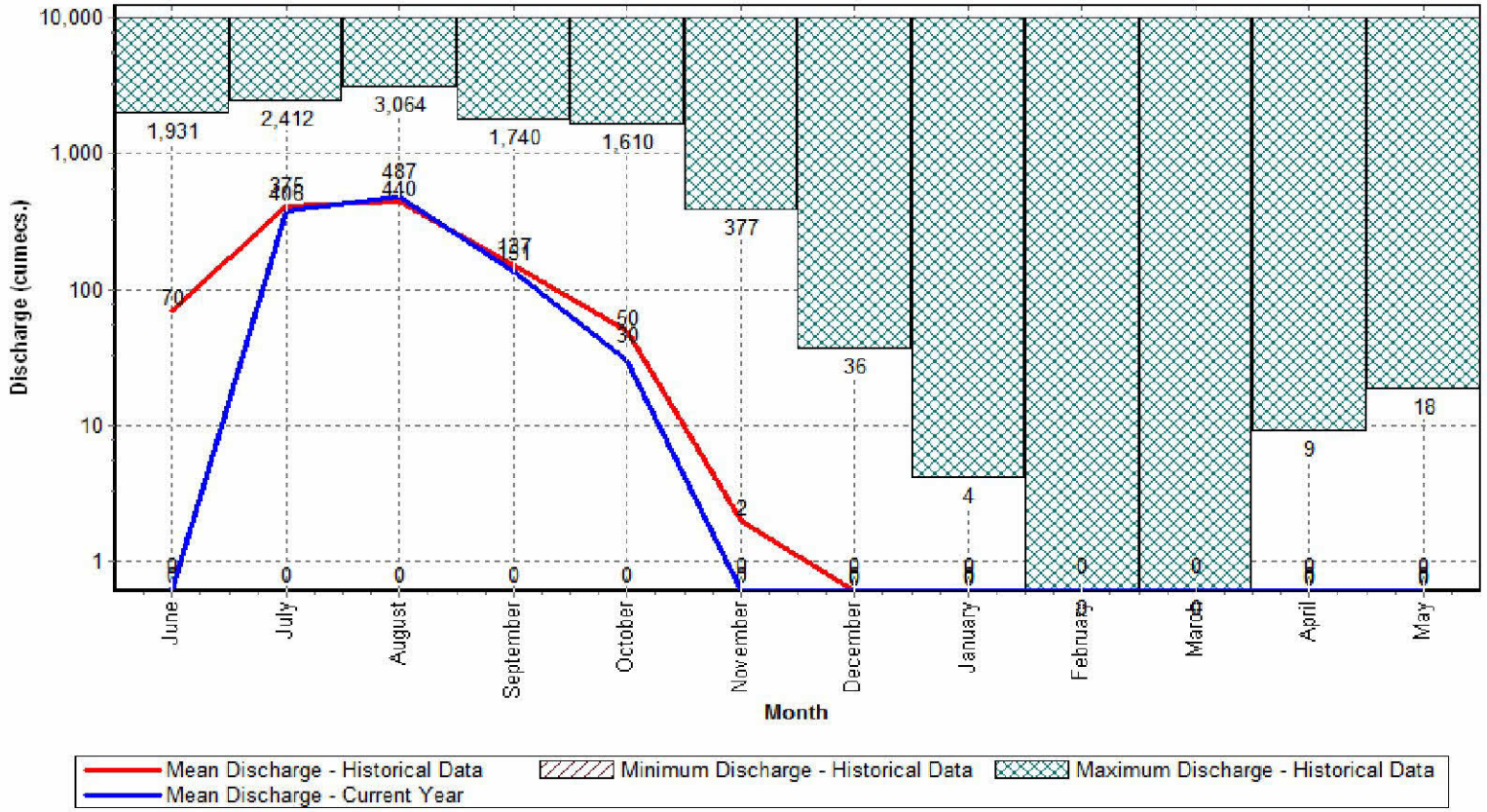
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Samdoli (Seasonal) ( AKX00A7)** **Data considered : 1965-2017** **Division : Upper Krishna Divn, Pune**

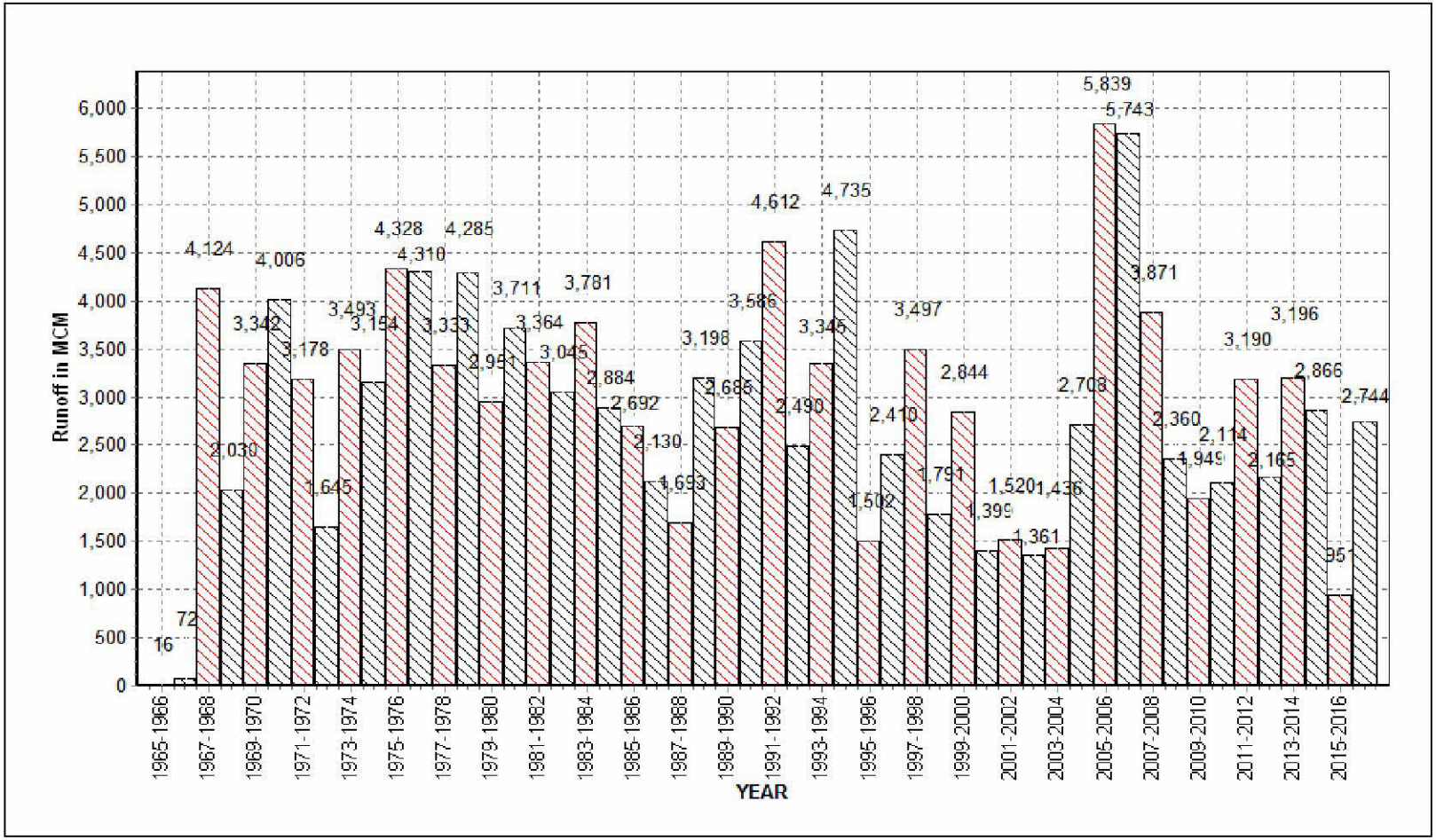
**Local River : Varna** **Sub-Division : Upper Krishna SD 2, Miraj**



**Annual Runoff Values for the period: 1965 - 2017**

**Station Name : Samdoli (Seasonal) ( AKX00A7)** **Division : Upper Krishna Divn, Pune**

**Local River : Varna** **Sub-Division : Upper Krishna SD 2, Miraj**

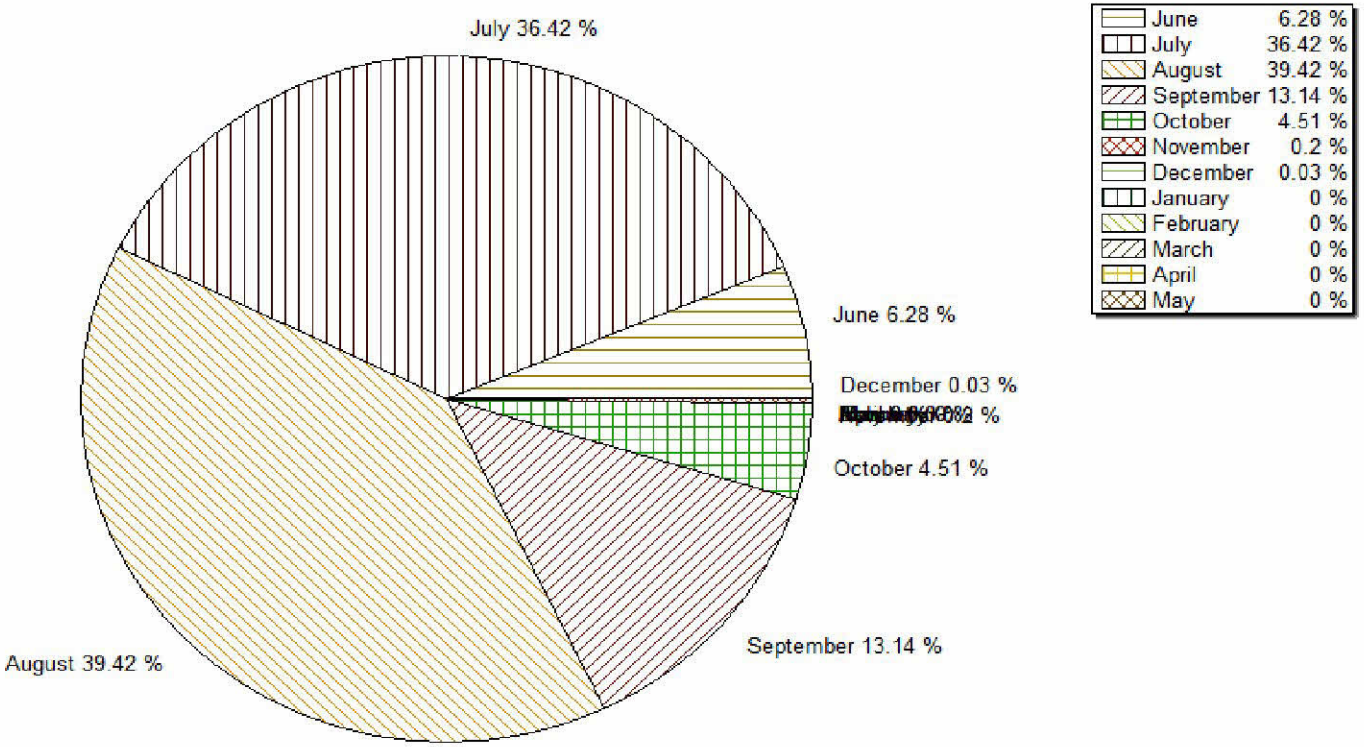



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1965-2016**

**Station Name : Samdoli (Seasonal) ( AKX00A7)**
**Local River : Varna**

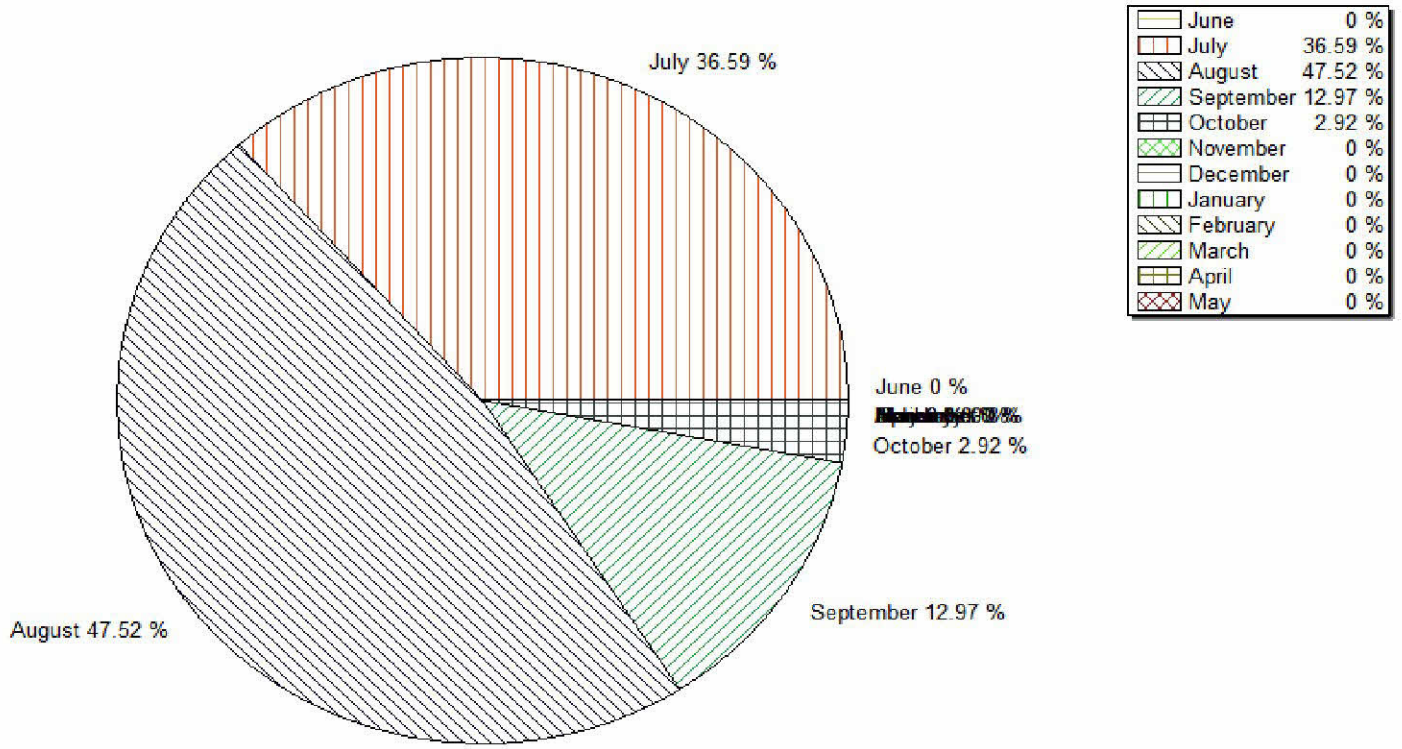
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Upper Krishna SD 2, Miraj**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Samdoli (Seasonal) ( AKX00A7)**
**Local River : Varna**

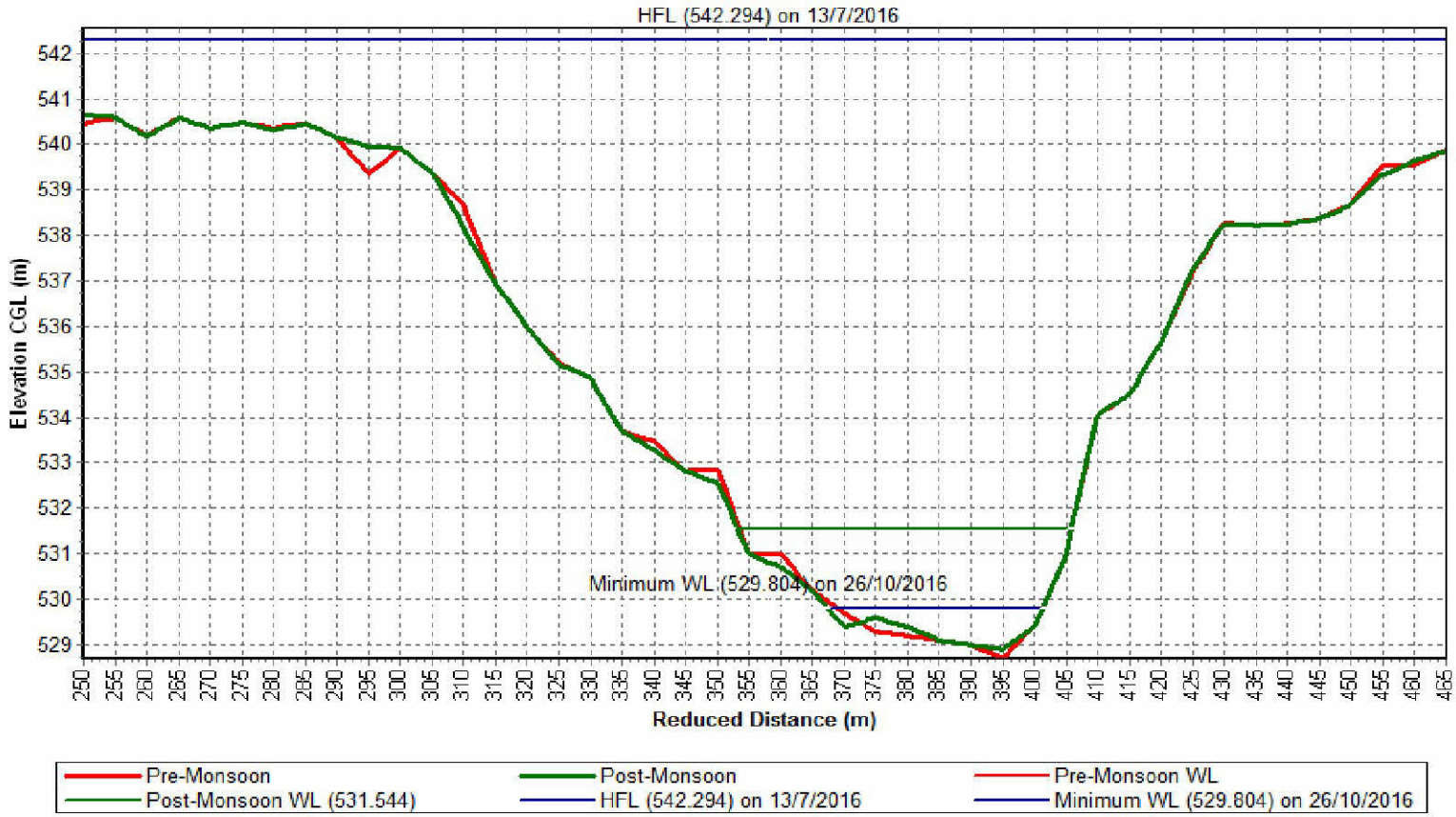
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Upper Krishna SD 2, Miraj**



**Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017**

**Station Name : Samdoli (Seasonal) ( AKX00A7)** **Division : Upper Krishna Divn, Pune**

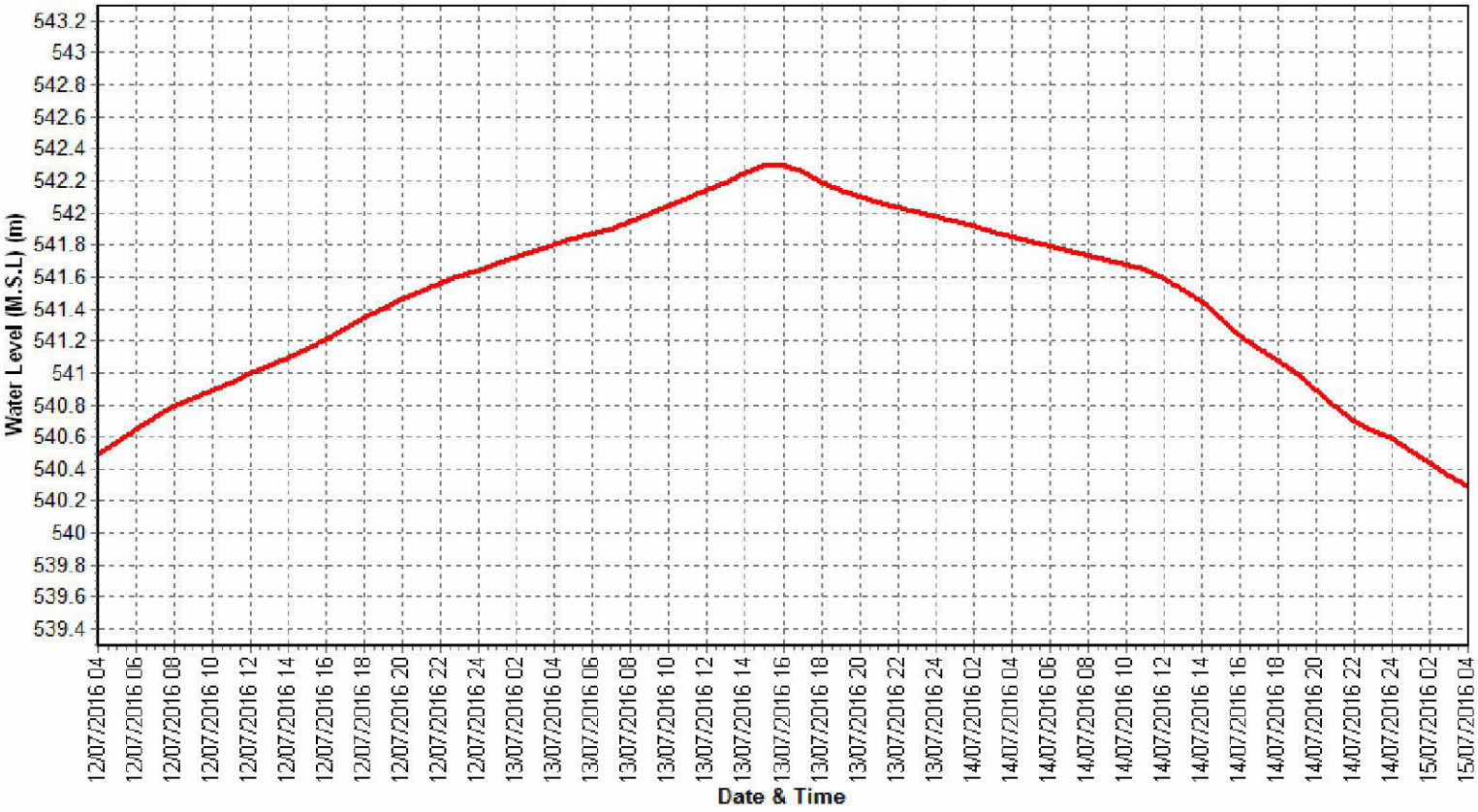
**Local River : Varna** **Sub-Division : Upper Krishna SD 2, Miraj**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Samdoli (Seasonal) ( AKX00A7)** | **Division : Upper Krishna Divn, Pune**

**Local River : Varna** | **Sub-Division : Upper Krishna SD 2, Miraj**

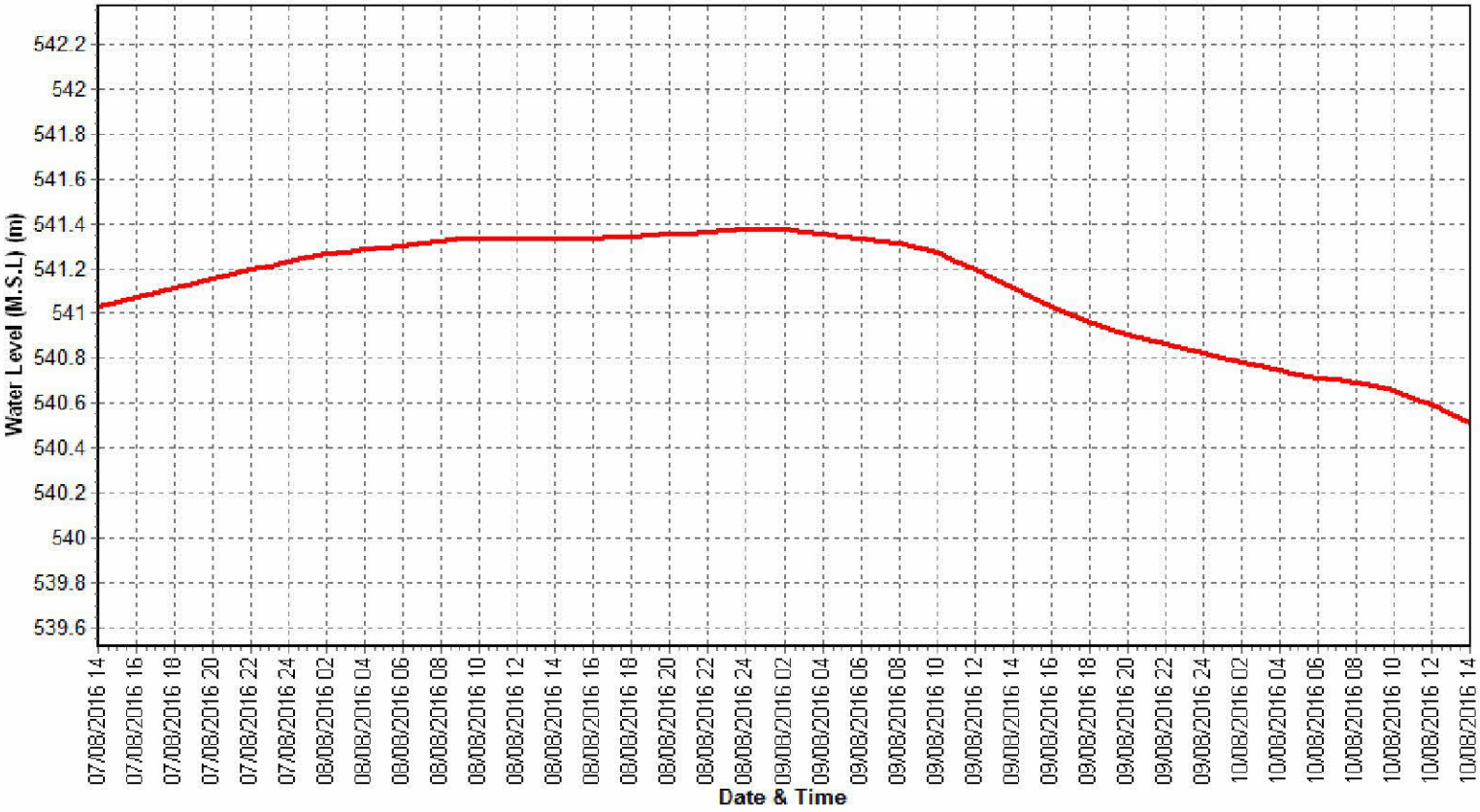



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Samdoli (Seasonal) ( AKX00A7)** **Division : Upper Krishna Divn, Pune**

**Local River : Varna** **Sub-Division : Upper Krishna SD 2, Miraj**

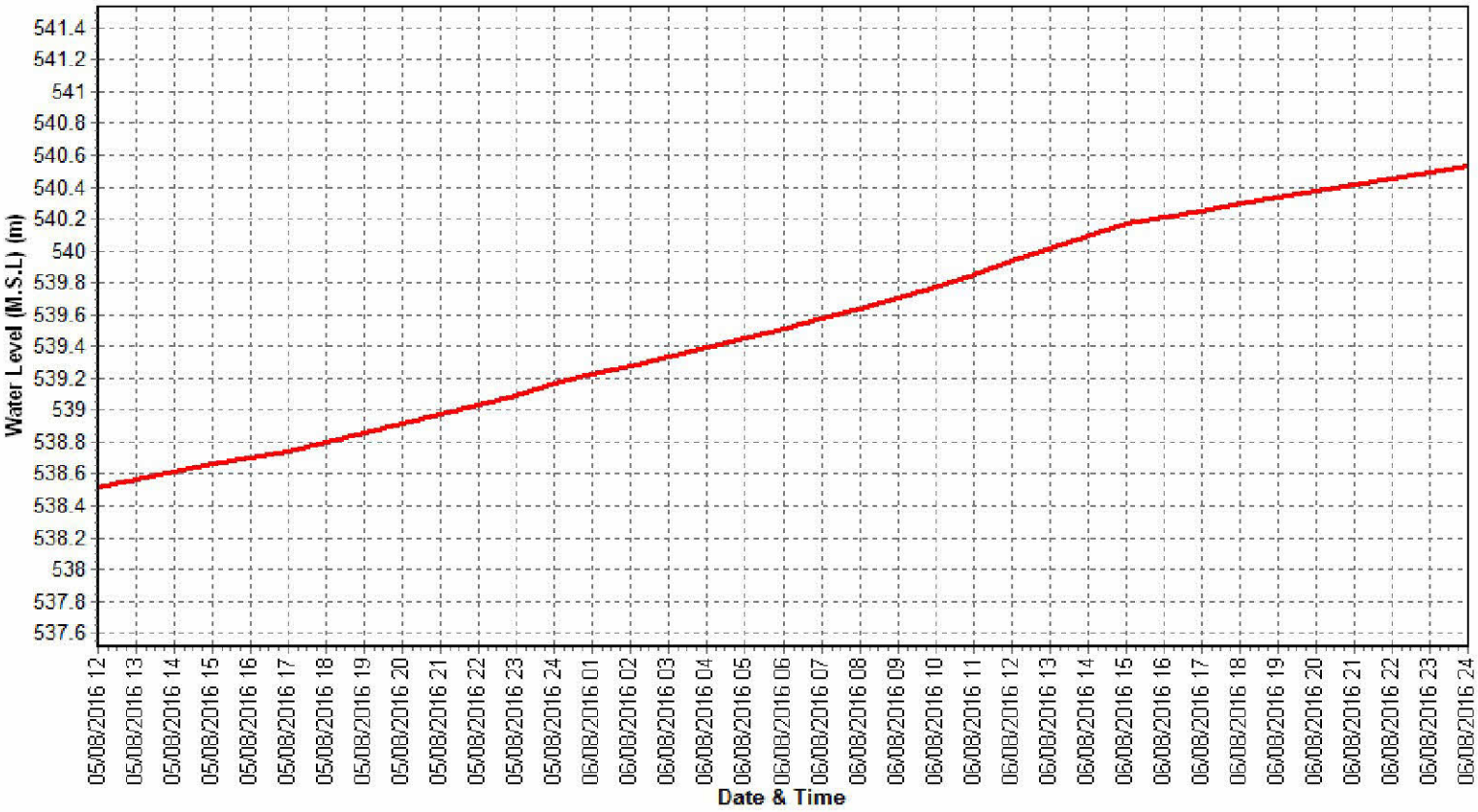



Time Span: 72 Hrs

**Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017**

**Station Name : Samdoli (Seasonal) ( AKX00A7)** **Division : Upper Krishna Divn, Pune**

**Local River : Varna** **Sub-Division : Upper Krishna SD 2, Miraj**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | : | **Karad** | **Code** | : | **AK000X6** |
| State | : | Maharashtra | District | | Satara |
| Basin | : | Krishna | Independent River | : | Krishna |
| Tributary | : | - | Sub Tributary | : | - |
| Sub-Sub Tributary | : | - | Local River | : | Krishna |
| Division | : | Upper Krishna Divn, Pune | Sub-Division | : | Upper Krishna SD 1, Kolhapur |
| Drainage Area | : | 5462 Sq. Km. | Bank | : | Right |
| Latitude | : | 17°17'40" | Longitude | : | 74°11'25" |
| **Zero of Gauge (m)** | : | 549.962 (m.s.l)<br>549.915 (m.s.l) | 01/06/1965<br>01/06/2004 | - | 31/05/2004 |
| | | Opening Date | Closing Date | | |
| Gauge | : | 25/12/1964 | **HFL During 2016-17** | : | **557.095m** |
| | | | **Corres. Discharge** | : | **1351(Estimated)** |
| Discharge | : | 21/06/1965 | **Date & Time of occurance** | : | **29/03/2017 18.00 hrs.** |
| Sediment | : | 22/06/1965 | | | |
| Water Quality | : | 01/09/1972 | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1965-1966 | 4760 | 561.837 | 21/07/1965 | 0.000 | 550.162 | 08/06/1965 |
| 1966-1967 | 2673 | 559.067 | 29/07/1966 | 0.010 | 550.232 | 06/05/1967 |
| 1967-1968 | 4482 | 562.997 | 28/07/1967 | 0.020 | 550.152 | 09/06/1967 |
| 1968-1969 | 1527 | 556.640 | 08/08/1968 | 0.010 | 550.092 | 30/05/1969 |
| 1969-1970 | 4267 | 561.672 | 01/08/1969 | 0.200 | 550.242 | 09/05/1970 |
| 1970-1971 | 2428 | 558.245 | 21/08/1970 | 0.100 | 550.352 | 20/04/1971 |
| 1971-1972 | 2156 | 558.002 | 31/08/1971 | 0.000 | 550.162 | 23/05/1972 |
| 1972-1973 | 2190 | 557.982 | 08/07/1972 | 0.000 | 549.987 | 12/03/1973 |
| 1973-1974 | 3051 | 560.362 | 08/07/1973 | 0.000 | 549.882 | 02/06/1973 |
| 1974-1975 | 3101 | 559.360 | 05/07/1974 | 0.000 | 550.157 | 24/03/1975 |
| 1975-1976 | 3231 | 560.117 | 10/07/1975 | 0.000 | 550.012 | 21/05/1976 |
| 1976-1977 | 4562 | 561.735 | 02/08/1976 | 0.000 | 550.127 | 15/04/1977 |
| 1977-1978 | 3422 | 559.898 | 07/07/1977 | 0.000 | 550.102 | 16/03/1978 |
| 1978-1979 | 2187 | 558.292 | 27/08/1978 | 0.200 | 550.052 | 30/01/1979 |
| 1979-1980 | 2435 | 559.402 | 07/08/1979 | 0.000 | 550.142 | 14/05/1980 |
| 1980-1981 | 2848 | 560.077 | 06/08/1980 | 0.000 | 550.187 | 08/05/1981 |
| 1981-1982 | 1942 | 558.142 | 10/07/1981 | 0.000 | 550.192 | 01/06/1981 |
| 1982-1983 | 1261 | 556.727 | 14/08/1982 | 0.000 | 550.182 | 23/03/1983 |
| 1983-1984 | 1931 | 558.778 | 17/08/1983 | 0.000 | 550.127 | 19/12/1983 |
| 1984-1985 | 1797 | 558.250 | 19/07/1984 | 0.000 | 550.152 | 04/03/1985 |
| 1985-1986 | 1363 | 557.239 | 02/08/1985 | 0.000 | 550.202 | 27/03/1986 |

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 | 1801 | 558.287 | 30/06/1986 | 0.000 | 550.272 | 27/12/1986 |
| 1987-1988 | 1323 | 556.722 | 08/07/1987 | 0.000 | 550.132 | 23/02/1988 |
| 1988-1989 | 3205 | 562.912 | 03/08/1988 | 0.000 | 550.152 | 12/01/1989 |
| 1989-1990 | 2904 | 559.587 | 25/07/1989 | 0.000 | 550.072 | 19/01/1990 |
| 1990-1991 | 4361 | 562.212 | 18/08/1990 | 0.000 | 550.012 | 22/04/1991 |
| 1991-1992 | 3350 | 560.942 | 28/07/1991 | 0.000 | 550.192 | 14/11/1991 |
| 1992-1993 | 2127 | 559.757 | 14/08/1992 | 0.000 | 550.042 | 25/12/1992 |
| 1993-1994 | 1812 | 558.702 | 19/06/1993 | 0.692 | 550.032 | 01/06/1993 |
| 1994-1995 | 3915 | 562.127 | 15/07/1994 | 0.000 | 550.002 | 27/01/1995 |
| 1995-1996 | 1356 | 556.577 | 20/07/1995 | 0.000 | 550.037 | 09/07/1995 |
| 1996-1997 | 2944 | 559.997 | 04/10/1996 | 0.000 | 549.892 | 02/06/1996 |
| 1997-1998 | 5954 | 563.922 | 24/08/1997 | 0.000 | | 12/03/1998 |
| 1998-1999 | 1541 | 557.627 | 09/07/1998 | 0.000 | 549.932 | 06/01/1999 |
| 1999-2000 | 2111 | 558.697 | 28/07/1999 | 0.000 | 549.842 | 18/04/2000 |
| 2000-2001 | 774.1 | 555.172 | 13/07/2000 | 0.000 | 549.912 | 12/12/2000 |
| 2001-2002 | 911.2 | 555.117 | 10/07/2001 | 0.000 | 549.912 | 08/02/2002 |
| 2002-2003 | 1121 | 555.432 | 13/08/2002 | 0.000 | 549.922 | 18/01/2003 |
| 2003-2004 | 936.5 | 554.912 | 28/07/2003 | 0.000 | 549.912 | 21/01/2004 |
| 2004-2005 | 4163 | 561.745 | 13/08/2004 | 0.000 | 549.795 | 19/04/2005 |
| 2005-2006 | 6312 | 564.815 | 03/08/2005 | 0.000 | 549.825 | 02/04/2006 |
| 2006-2007 | 6708 | 566.075 | 30/07/2006 | 0.000 | 549.865 | 01/03/2007 |
| 2007-2008 | 3868 | 561.425 | 02/07/2007 | 0.000 | 549.825 | 02/01/2008 |
| 2008-2009 | 2884 | 560.115 | 11/08/2008 | 4.620 | 549.815 | 01/03/2009 |
| 2009-2010 | 1258 | 555.755 | 15/07/2009 | 0.000 | 552.855 | 28/02/2010 |
| 2010-2011 | 1189 | 555.790 | 27/07/2010 | 0.000 | 553.515 | 29/01/2011 |
| 2011-2012 | 5074 | 563.375 | 04/09/2011 | 0.000 | 553.995 | 03/02/2012 |
| 2012-2013 | 993.4 | 555.520 | 26/07/2012 | 0.000 | 555.460 | 08/04/2013 |
| 2013-2014 | 2507 | 558.930 | 26/07/2013 | 0.000 | 555.435 | 10/01/2014 |
| 2014-2015 | 1700 | 556.805 | 24/07/2014 | 0.000 | 554.265 | 08/07/2014 |
| 2015-2016 | 1045 | 555.885 | 24/06/2015 | 0.000 | 555.875 | 18/12/2015 |

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Karad ( AK000X6)** **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** **Sub-Division : Upper Krishna SD 1, Kolhapur**

| 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 | 556.055 | 0.000 | 552.615 | 0.000 | 551.725 | 112.5 | 555.865 | 0.000 | 556.865 | 0.000 | 556.025 | 0.000 |
| 2 | 555.995 | 0.000 | 551.565 | 0.000 | 553.500 | 435.3 | 555.815 | 0.000 | 556.815 | 0.000 | 555.865 | 0.000 |
| 3 | 556.060 | 0.000 | 554.145 | 0.000 | 554.605 | 619.6 | 556.155 | 0.000 | 556.865 | 0.000 | 556.285 | 0.000 |
| 4 | 556.085 | 0.000 | 552.920 | 334.7 | 555.205 | 769.9 | 555.985 | 0.000 | 556.595 | 0.000 | 556.375 | 0.000 |
| 5 | 555.965 | 0.000 | 554.335 | 499.9 | 554.715 | 663.2 | 556.205 | 0.000 | 556.615 | 0.000 | 556.125 | 0.000 |
| 6 | 555.935 | 0.000 | 554.055 | 447.9 | 556.770 | 1262 | 556.265 | 0.000 | 556.325 | 0.000 | 556.035 | 0.000 |
| 7 | 555.805 | 0.000 | 552.675 | 280.5 * | 556.795 | 1247 * | 555.925 | 0.000 | 556.935 | 0.000 | 555.985 | 0.000 |
| 8 | 555.205 | 0.000 | 553.165 | 345.3 | 556.255 | 1064 | 556.065 | 0.000 | 556.425 | 0.000 | 556.255 | 0.000 |
| 9 | 554.735 | 0.000 | 552.295 | 275.1 | 555.705 | 868.2 | 555.175 | 0.000 | 556.465 | 0.000 | 556.405 | 0.000 |
| 10 | 555.015 | 0.000 | 555.195 | 773.7 * | 555.750 | 882.7 | 554.285 | 0.000 | 556.545 | 0.000 | 556.315 | 0.000 |
| 11 | 555.195 | 0.000 | 556.120 | 1065 | 554.130 | 484.2 | 554.275 | 0.000 | 556.675 | 0.000 | 556.245 | 0.000 |
| 12 | 555.015 | 0.000 | 555.700 | 925.9 | 553.850 | 451.2 | 554.055 | 0.000 | 556.575 | 0.000 | 556.335 | 0.000 |
| 13 | 554.665 | 0.000 | 555.810 | 955.8 | 553.610 | 450.7 | 554.615 | 0.000 | 556.555 | 0.000 | 556.665 | 0.000 |
| 14 | 554.485 | 0.000 | 553.755 | 445.8 | 553.265 | 370.4 * | 554.115 | 0.000 | 556.395 | 0.000 | 556.675 | 0.000 |
| 15 | 554.615 | 0.000 | 552.965 | 346.5 | 552.925 | 316.8 * | 554.125 | 0.000 | 556.475 | 0.000 | 556.475 | 0.000 |
| 16 | 554.575 | 0.000 | 552.615 | 289.5 | 552.665 | 311.3 | 554.175 | 0.000 | 556.575 | 0.000 | 556.565 | 0.000 |
| 17 | 554.515 | 0.000 | 552.375 | 240.4 * | 552.490 | 275.9 | 555.845 | 0.000 | 556.485 | 0.000 | 556.585 | 0.000 |
| 18 | 554.315 | 0.000 | 552.450 | 277.5 | 552.400 | 270.1 | 555.565 | 0.000 | 556.505 | 0.000 | 556.255 | 0.000 |
| 19 | 554.065 | 0.000 | 552.350 | 250.6 | 552.440 | 274.0 | 556.230 | 1027 | 556.445 | 0.000 | 555.765 | 0.000 |
| 20 | 553.775 | 0.000 | 552.365 | 266.4 | 554.545 | 0.000 | 555.535 | 778.2 | 556.195 | 0.000 | 555.345 | 0.000 |
| 21 | 554.105 | 0.000 | 552.335 | 263.6 | 556.155 | 0.000 | 555.745 | 0.000 | 556.045 | 0.000 | 554.885 | 0.000 |
| 22 | 554.115 | 0.000 | 552.175 | 253.4 | 552.225 | 239.2 | 556.120 | 1011 | 555.995 | 0.000 | 554.825 | 0.000 |
| 23 | 553.945 | 0.000 | 552.185 | 255.6 | 552.165 | 225.8 | 556.635 | 1135 | 556.705 | 0.000 | 554.745 | 0.000 |
| 24 | 553.705 | 0.000 | 552.235 | 222.8 * | 552.155 | 222.0 | 555.965 | 0.000 | 556.835 | 0.000 | 554.595 | 0.000 |
| 25 | 551.495 | 0.000 | 551.735 | 175.3 | 552.015 | 209.8 | 556.165 | 0.000 | 556.715 | 0.000 | 554.505 | 0.000 |
| 26 | 551.165 | 0.000 | 551.575 | 114.5 | 551.980 | 207.5 | 556.715 | 0.000 | 556.565 | 0.000 | 554.175 | 0.000 |
| 27 | 551.665 | 0.000 | 551.480 | 113.2 | 551.965 | 203.9 | 556.515 | 0.000 | 556.275 | 0.000 | 554.395 | 0.000 |
| 28 | 552.715 | 0.000 | 551.370 | 113.0 | 551.945 | 189.0 * | 556.955 | 0.000 | 556.205 | 0.000 | 554.935 | 0.000 |
| 29 | 552.965 | 0.000 | 551.435 | 106.9 | 551.935 | 203.6 | 556.255 | 0.000 | 555.895 | 0.000 | 553.765 | 0.000 |
| 30 | 552.745 | 0.000 | 551.435 | 110.3 | 553.255 | 0.000 | 556.705 | 0.000 | 555.795 | 0.000 | 552.515 | 0.000 |
| 31 | | | 551.605 | 153.5 * | 555.225 | 0.000 | | | 555.955 | 0.000 | | |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 555.685 | 0.000 | 553.296 | 295.7 | 555.102 | 792.5 | 555.774 | 0.000 | 556.645 | 0.000 | 556.167 | 0.000 |
| II Ten-Daily | 554.522 | 0.000 | 553.651 | 506.3 | 553.232 | 320.5 | 554.854 | 180.5 | 556.488 | 0.000 | 556.291 | 0.000 |
| III Ten-Daily | 552.862 | 0.000 | 551.779 | 171.1 | 552.820 | 154.6 | 556.377 | 214.6 | 556.271 | 0.000 | 554.334 | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 551.165 | 0.000 | 551.370 | 0.000 | 551.725 | 0.000 | 554.055 | 0.000 | 555.795 | 0.000 | 552.515 | 0.000 |
| Max. | 556.085 | 0.000 | 556.120 | 1065 | 556.795 | 1262 | 556.955 | 1135 | 556.935 | 0.000 | 556.675 | 0.000 |
| Mean | 554.357 | 0 | 552.872 | 319.4 | 553.689 | 413.9 | 555.668 | 131.7 | 556.462 | 0 | 555.597 | 0 |

**Annual Runoff in MCM = 2339 Annual Runoff in mm = 422**

**Peak Observed Discharge = 1262 cumecs on 06/08/2016 Corres. Water Level :556.77 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016 Corres. Water Level :556.055 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 2016 - 2017

**Station Name : Karad ( AK000X6)** **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** **Sub-Division : Upper Krishna SD 1, Kolhapur**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 553.675 | 0.000 | 554.855 | 0.000 | 556.255 | 0.000 | 556.385 | 0.000 | 556.715 | 0.000 | 556.375 | 0.000 |
| 2 | 553.845 | 0.000 | 554.875 | 0.000 | 556.485 | 0.000 | 556.305 | 0.000 | 556.745 | 0.000 | 556.525 | 0.000 |
| 3 | 553.745 | 0.000 | 554.145 | 0.000 | 556.885 | 0.000 | 556.485 | 0.000 | 556.765 | 0.000 | 556.705 | 0.000 |
| 4 | 554.565 | 0.000 | 553.385 | 0.000 | 556.835 | 0.000 | 556.595 | 0.000 | 556.775 | 0.000 | 556.735 | 0.000 |
| 5 | 555.005 | 0.000 | 553.915 | 0.000 | 556.765 | 0.000 | 556.535 | 0.000 | 556.675 | 0.000 | 556.365 | 0.000 |
| 6 | 554.875 | 0.000 | 554.685 | 0.000 | 556.535 | 0.000 | 556.465 | 0.000 | 556.565 | 0.000 | 556.375 | 0.000 |
| 7 | 554.585 | 0.000 | 555.155 | 0.000 | 556.415 | 0.000 | 556.475 | 0.000 | 556.575 | 0.000 | 556.345 | 0.000 |
| 8 | 555.175 | 0.000 | 554.915 | 0.000 | 556.285 | 0.000 | 556.675 | 0.000 | 556.745 | 0.000 | 556.485 | 0.000 |
| 9 | 555.405 | 0.000 | 554.685 | 0.000 | 556.235 | 0.000 | 556.535 | 0.000 | 556.735 | 0.000 | 556.685 | 0.000 |
| 10 | 555.185 | 0.000 | 554.355 | 0.000 | 556.355 | 0.000 | 556.485 | 0.000 | 556.615 | 0.000 | 556.695 | 0.000 |
| 11 | 555.495 | 0.000 | 554.085 | 0.000 | 556.545 | 0.000 | 556.585 | 0.000 | 556.635 | 0.000 | 556.455 | 0.000 |
| 12 | 555.365 | 0.000 | 554.075 | 0.000 | 556.765 | 0.000 | 556.475 | 0.000 | 556.735 | 0.000 | 556.695 | 0.000 |
| 13 | 555.645 | 0.000 | 554.115 | 0.000 | 556.835 | 0.000 | 556.325 | 0.000 | 556.275 | 0.000 | 556.675 | 0.000 |
| 14 | 555.525 | 0.000 | 554.045 | 0.000 | 556.695 | 0.000 | 556.595 | 0.000 | 556.415 | 0.000 | 556.735 | 0.000 |
| 15 | 555.335 | 0.000 | 554.065 | 0.000 | 556.535 | 0.000 | 556.755 | 0.000 | 556.275 | 0.000 | 556.785 | 0.000 |
| 16 | 555.205 | 0.000 | 555.215 | 0.000 | 556.915 | 0.000 | 556.695 | 0.000 | 556.485 | 0.000 | 556.765 | 0.000 |
| 17 | 555.085 | 0.000 | 556.395 | 0.000 | 556.735 | 0.000 | 556.555 | 0.000 | 556.415 | 0.000 | 556.775 | 0.000 |
| 18 | 555.015 | 0.000 | 556.255 | 0.000 | 556.715 | 0.000 | 556.485 | 0.000 | 556.635 | 0.000 | 556.685 | 0.000 |
| 19 | 554.995 | 0.000 | 556.175 | 0.000 | 556.615 | 0.000 | 556.455 | 0.000 | 556.455 | 0.000 | 556.615 | 0.000 |
| 20 | 554.865 | 0.000 | 556.175 | 0.000 | 556.375 | 0.000 | 556.295 | 0.000 | 556.535 | 0.000 | 556.515 | 0.000 |
| 21 | 555.075 | 0.000 | 556.275 | 0.000 | 556.755 | 0.000 | 556.495 | 0.000 | 556.695 | 0.000 | 555.675 | 0.000 |
| 22 | 555.035 | 0.000 | 556.245 | 0.000 | 556.735 | 0.000 | 556.485 | 0.000 | 556.375 | 0.000 | 554.885 | 0.000 |
| 23 | 555.345 | 0.000 | 556.145 | 0.000 | 556.445 | 0.000 | 556.405 | 0.000 | 556.495 | 0.000 | 554.815 | 0.000 |
| 24 | 555.085 | 0.000 | 556.515 | 0.000 | 555.845 | 0.000 | 556.455 | 0.000 | 556.395 | 0.000 | 555.205 | 0.000 |
| 25 | 555.415 | 0.000 | 556.635 | 0.000 | 556.195 | 0.000 | 556.495 | 0.000 | 556.745 | 0.000 | 555.275 | 0.000 |
| 26 | 555.275 | 0.000 | 556.665 | 0.000 | 556.395 | 0.000 | 556.525 | 0.000 | 556.345 | 0.000 | 554.545 | 0.000 |
| 27 | 555.495 | 0.000 | 556.525 | 0.000 | 556.515 | 0.000 | 556.555 | 0.000 | 556.375 | 0.000 | 554.255 | 0.000 |
| 28 | 555.675 | 0.000 | 556.315 | 0.000 | 556.445 | 0.000 | 556.745 | 0.000 | 556.335 | 0.000 | 553.985 | 0.000 |
| 29 | 555.255 | 0.000 | 556.345 | 0.000 | | | 556.995 | 0.000 | 556.405 | 0.000 | 553.825 | 0.000 |
| 30 | 555.215 | 0.000 | 556.345 | 0.000 | | | 556.645 | 0.000 | 556.435 | 0.000 | 554.035 | 0.000 |
| 31 | 555.075 | 0.000 | 556.285 | 0.000 | | | 556.505 | 0.000 | | | 554.825 | 0.000 |
| **Ten-Daily Mean** | | | | | | | | | | | | |
| I Ten-Daily | 554.606 | 0.000 | 554.497 | 0.000 | 556.505 | 0.000 | 556.494 | 0.000 | 556.691 | 0.000 | 556.529 | 0.000 |
| II Ten-Daily | 555.253 | 0.000 | 555.060 | 0.000 | 556.673 | 0.000 | 556.522 | 0.000 | 556.486 | 0.000 | 556.670 | 0.000 |
| III Ten-Daily | 555.268 | 0.000 | 556.390 | 0.000 | 556.416 | 0.000 | 556.573 | 0.000 | 556.460 | 0.000 | 554.666 | 0.000 |
| **Monthly** | | | | | | | | | | | | |
| Min. | 553.675 | 0.000 | 553.385 | 0.000 | 555.845 | 0.000 | 556.295 | 0.000 | 556.275 | 0.000 | 553.825 | 0.000 |
| Max. | 555.675 | 0.000 | 556.665 | 0.000 | 556.915 | 0.000 | 556.995 | 0.000 | 556.775 | 0.000 | 556.785 | 0.000 |
| Mean | 555.049 | 0 | 555.350 | 0 | 556.540 | 0 | 556.531 | 0 | 556.546 | 0 | 555.913 | 0 |

**Peak Computed Discharge = 1247 cumecs on 07/08/2016** **Corres. Water Level :556.795 m**

**Lowest Computed Discharge = 153.5 cumecs on 31/07/2016** **Corres. Water Level :551.605 m**

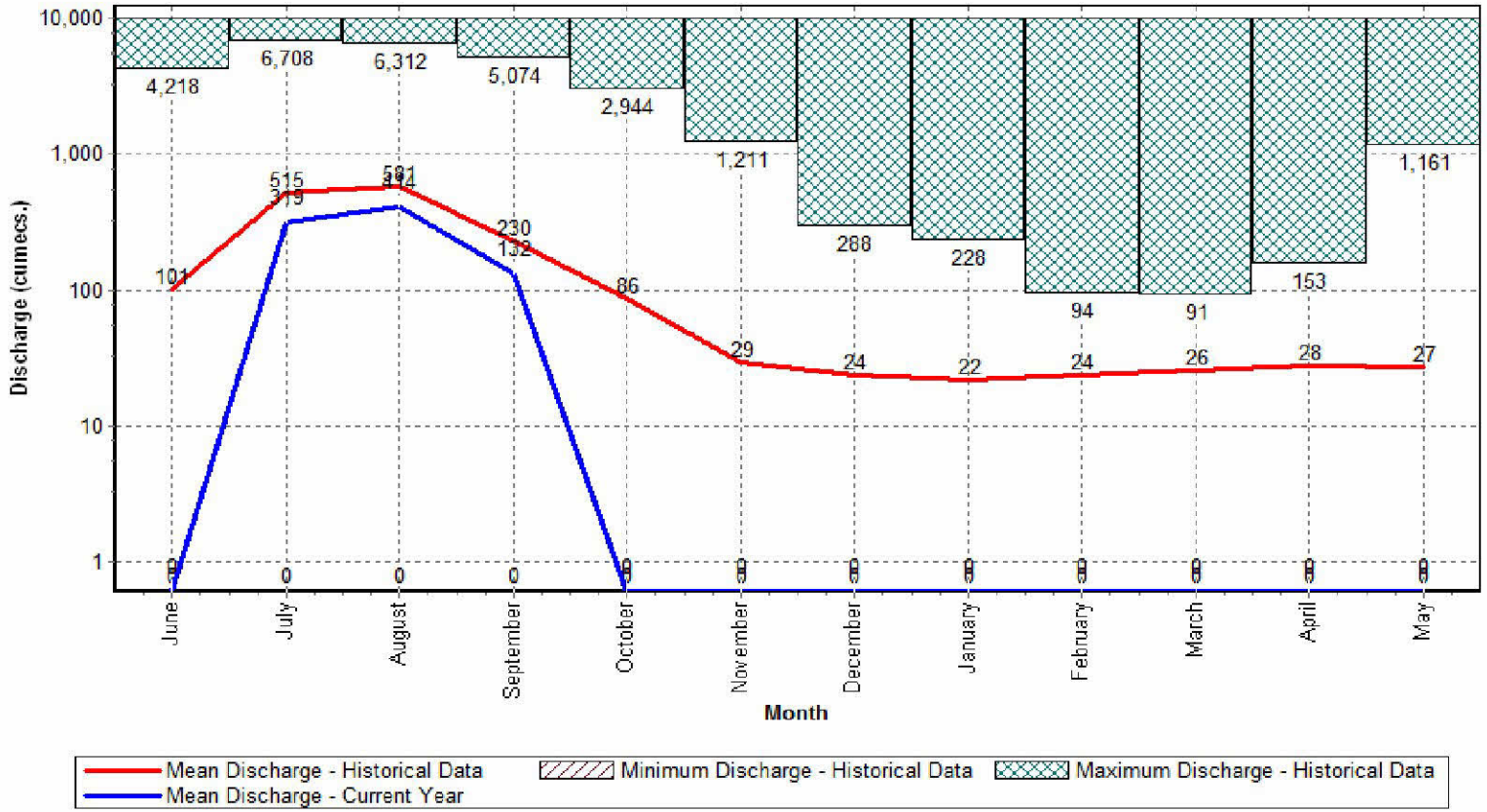
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Karad ( AK000X6)** | **Data considered : 1965-2017** | **Division : Upper Krishna Divn, Pune**

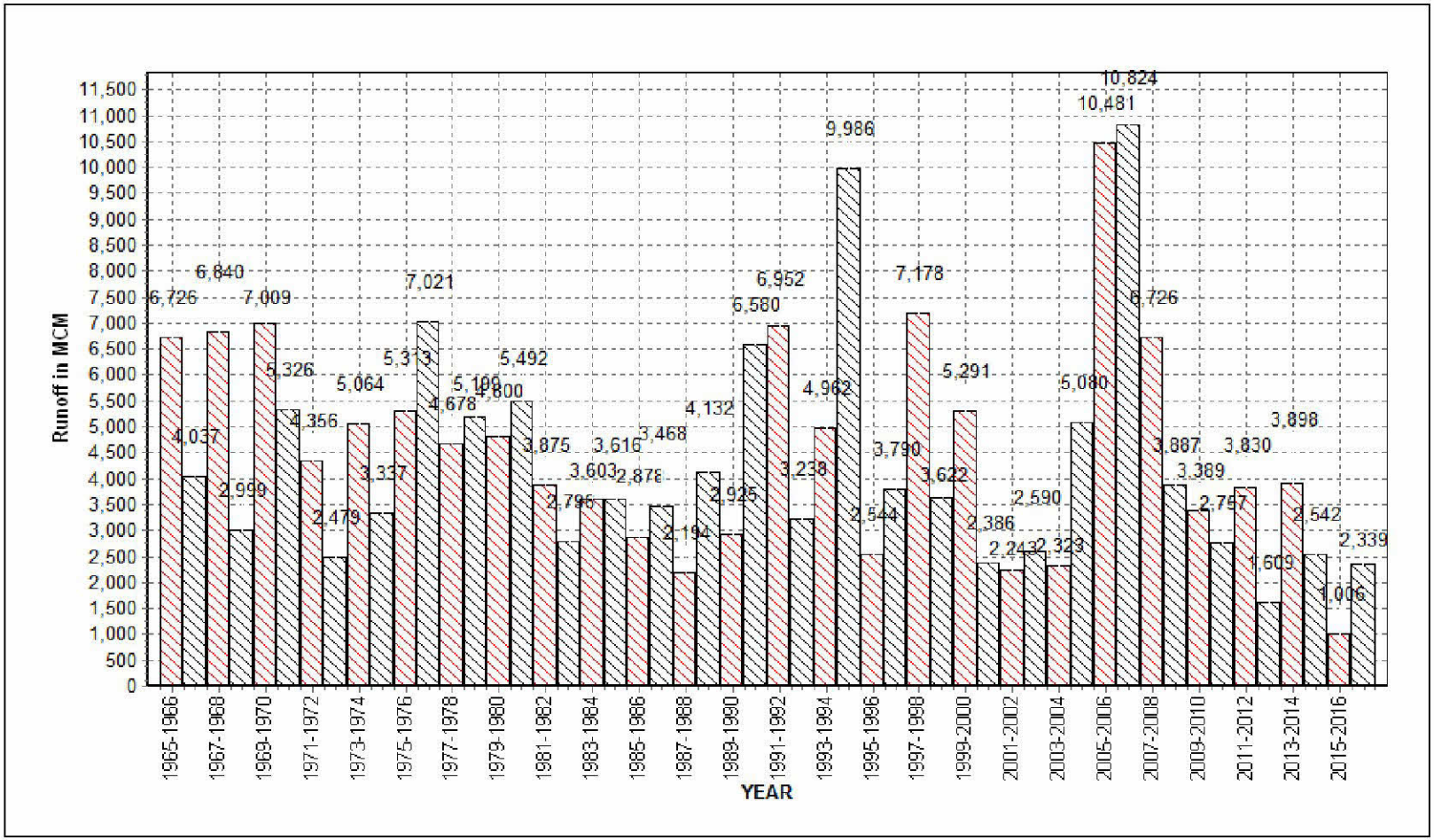
**Local River : Krishna** | **Sub-Division : Upper Krishna SD 1, Kolhapur**



**Annual Runoff Values for the period: 1965 - 2017**

**Station Name : Karad ( AK000X6)** **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** **Sub-Division : Upper Krishna SD 1, Kolhapur**

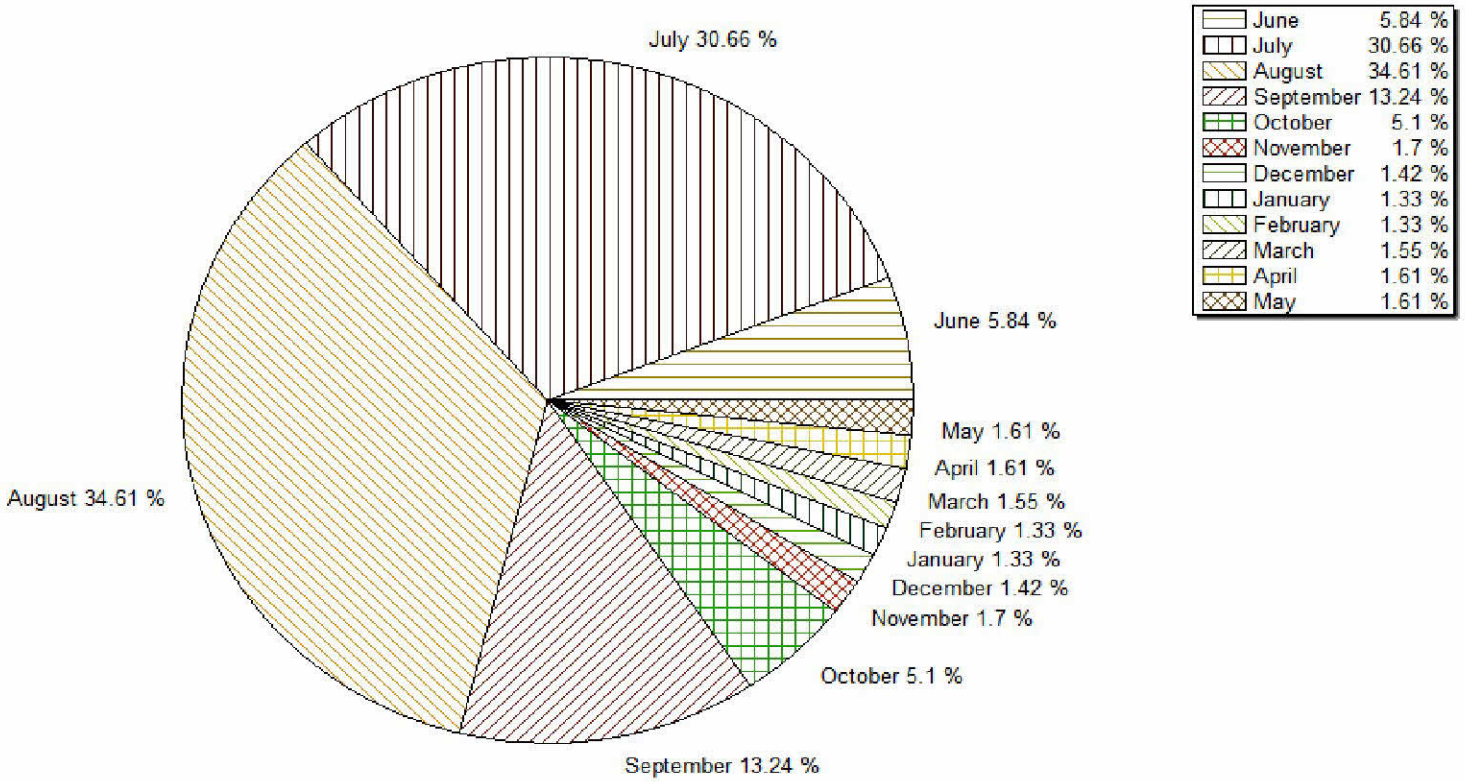



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1965-2016**

**Station Name : Karad ( AK000X6)**
**Local River : Krishna**

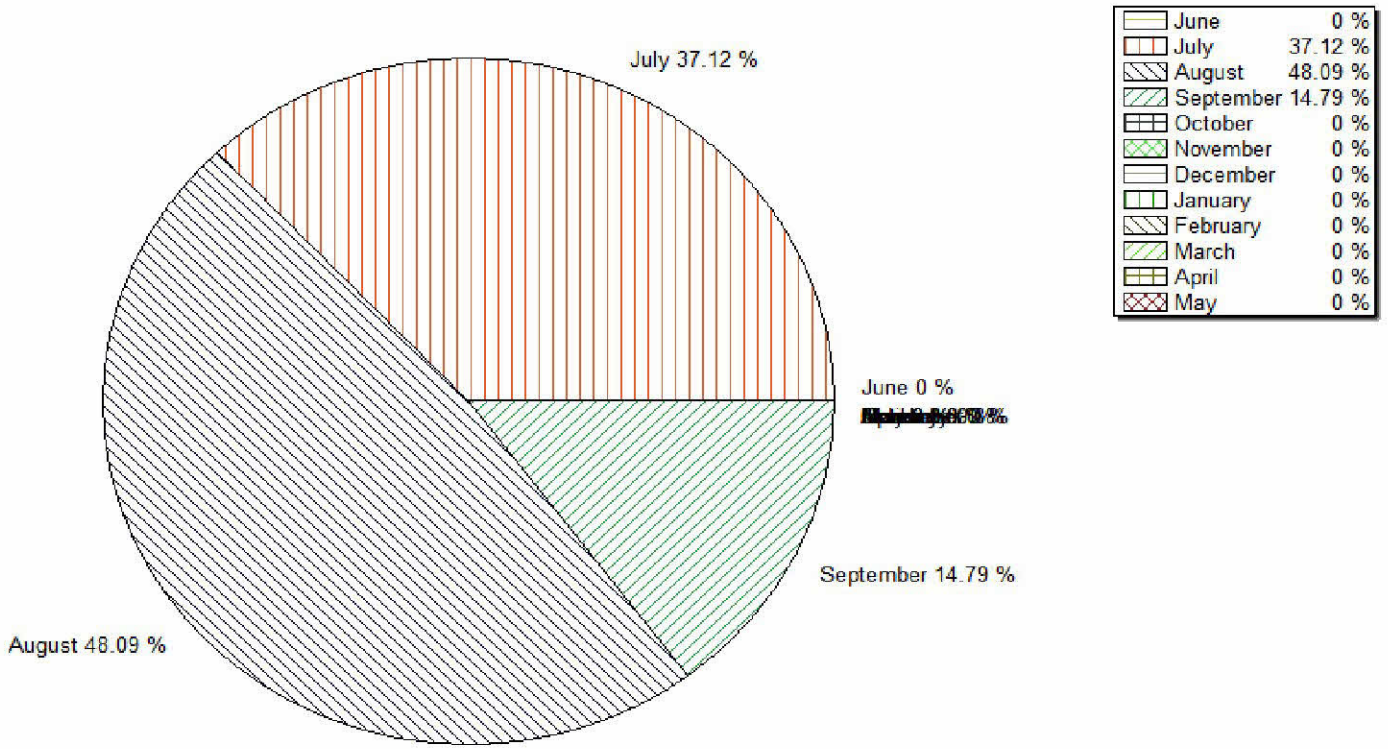
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Upper Krishna SD 1, Kolhapur**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Karad ( AK000X6)**
**Local River : Krishna**

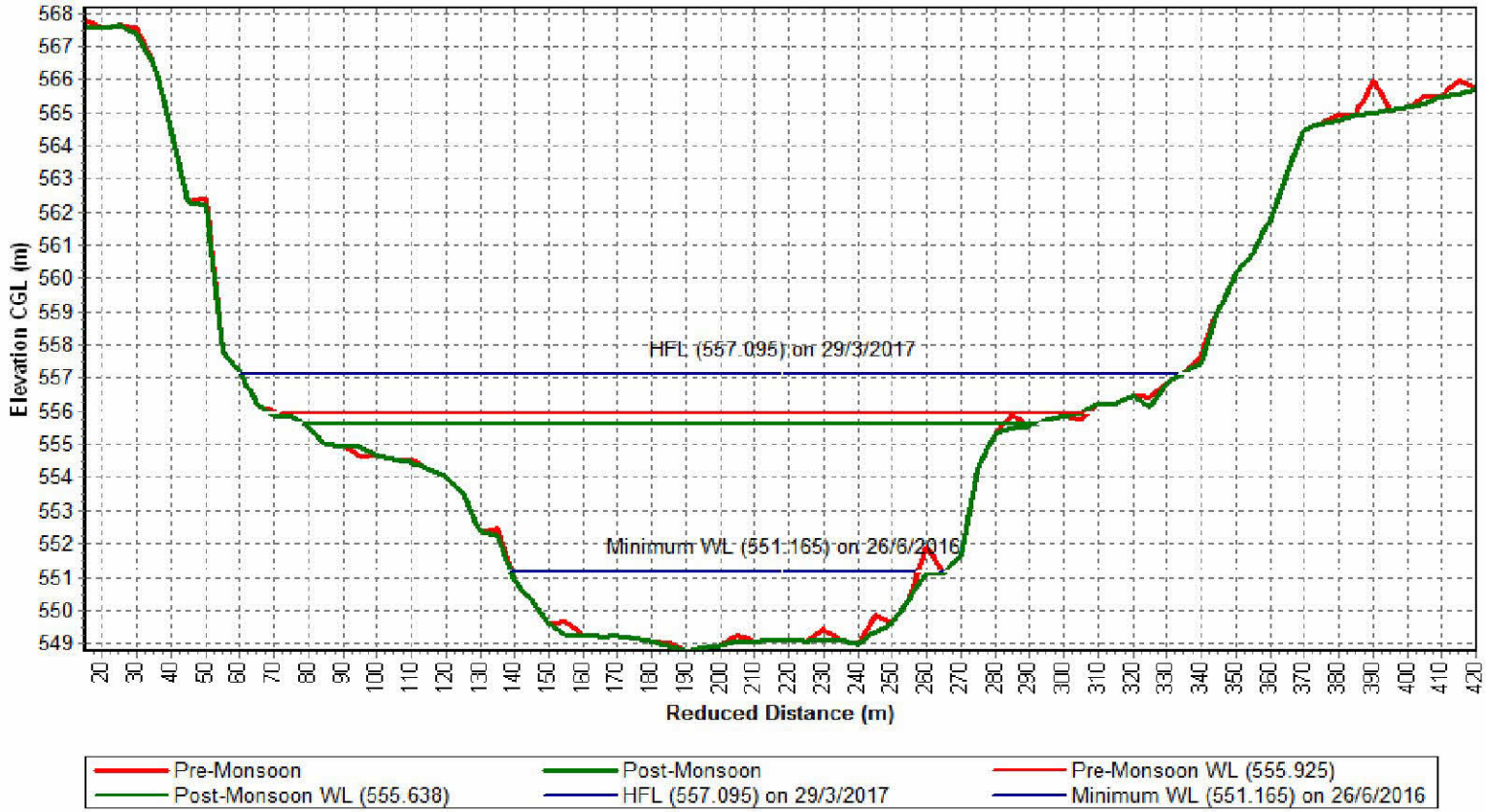
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Upper Krishna SD 1, Kolhapur**



## Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017

**Station Name : Karad ( AK000X6)** **Division : Upper Krishna Divn, Pune**

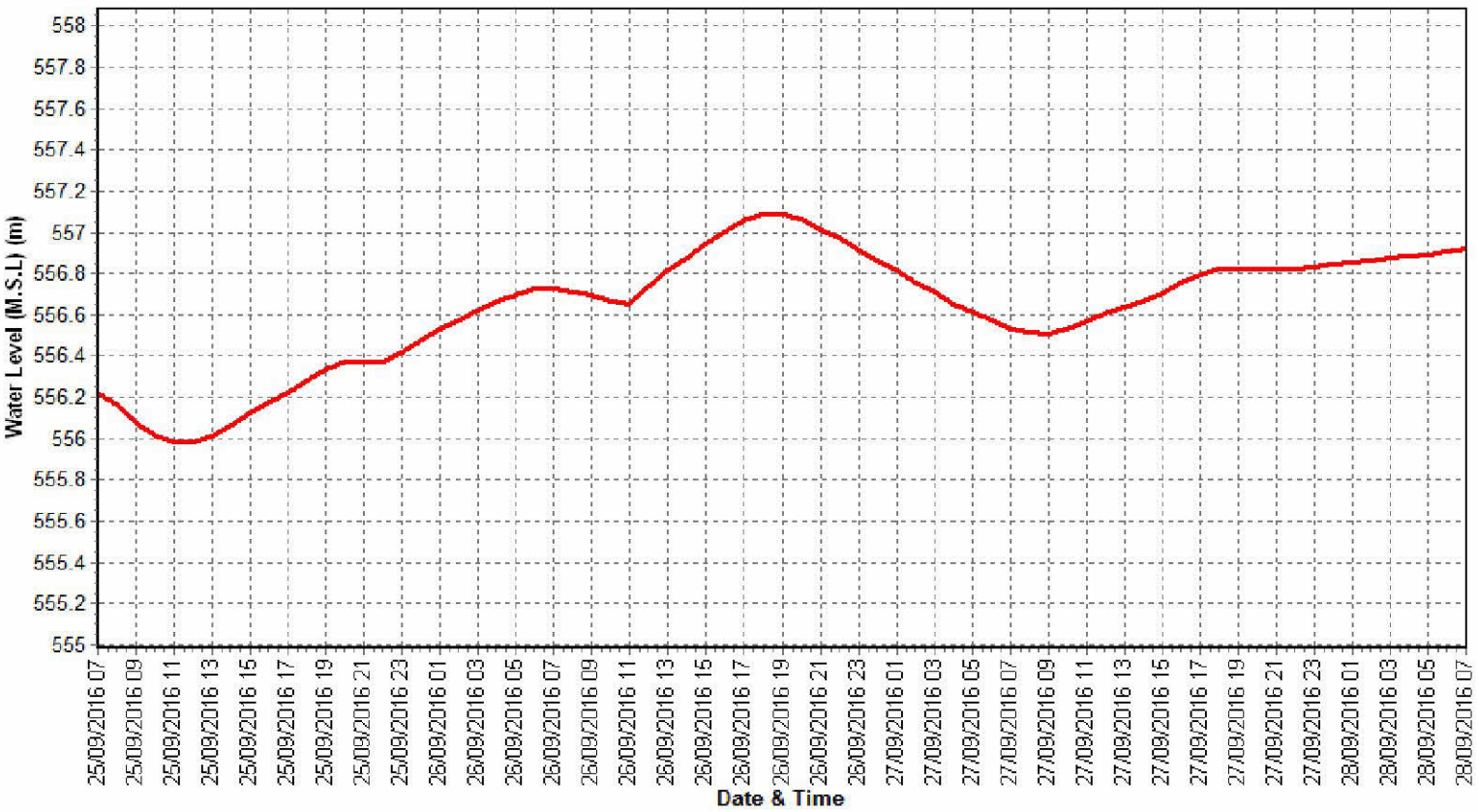
**Local River : Krishna** **Sub-Division : Upper Krishna SD 1, Kolhapur**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Karad ( AK000X6)** | **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** | **Sub-Division : Upper Krishna SD 1, Kolhapur**

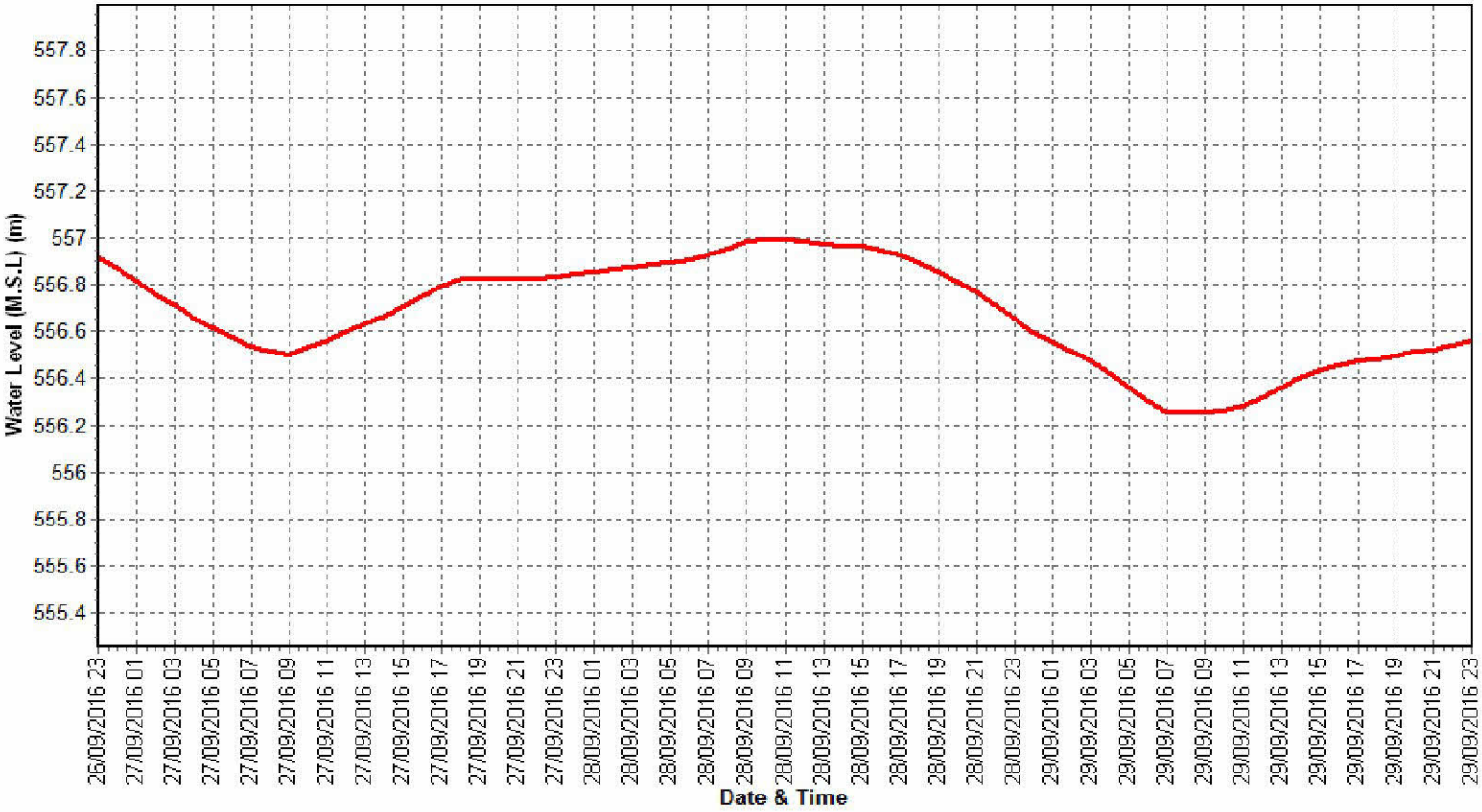



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017

**Station Name : Karad ( AK000X6)** | **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** | **Sub-Division : Upper Krishna SD 1, Kolhapur**

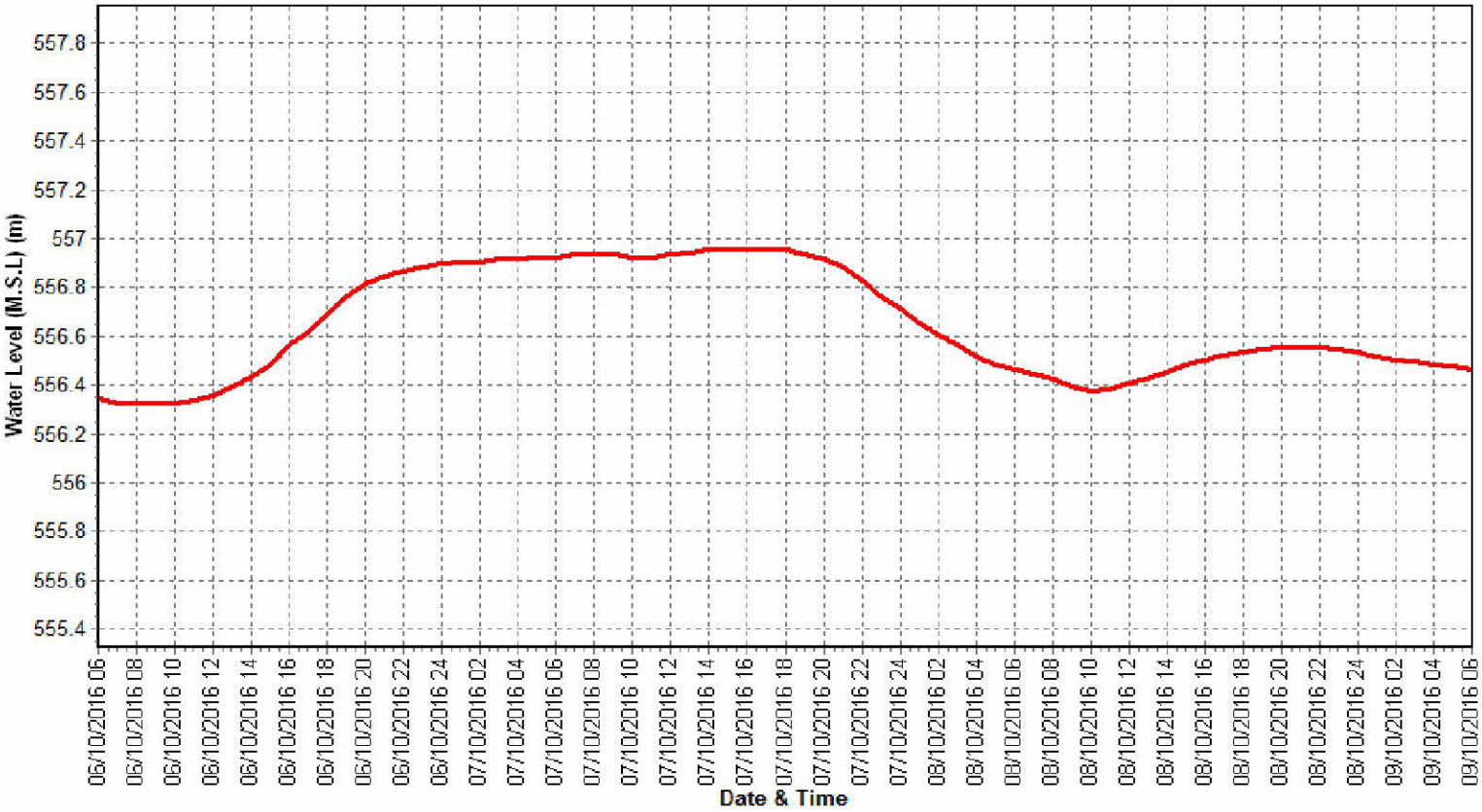



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017

**Station Name : Karad ( AK000X6)** | **Division : Upper Krishna Divn, Pune**

**Local River : Krishna** | **Sub-Division : Upper Krishna SD 1, Kolhapur**




Time Span: 72 Hrs

# HISTORY SHEET

**Water Year : 2016-2017**

| | | | | | |
|---|---|---|---|---|---|
| **Site** | **: Warunji** | | **Code** | **: AKZ00A7** | |
| State | : Maharashtra | | District | Satara | |
| Basin | : Krishna | | Independent River | : Krishna | |
| Tributary | : Koyna | | Sub Tributary | : - | |
| Sub-Sub Tributary | : - | | Local River | : Koyna | |
| Division | : Upper Krishna Divn, Pune | | Sub-Division | : Upper Krishna SD 1, Kolhapur | |
| Drainage Area | : 1890 Sq. Km. | | Bank | : Left | |
| Latitude | : 17°16'20" | | Longitude | : 74°09'54" | |
| **Zero of Gauge (m)** | : 549.962 (m.s.l)<br>550.937 (m.s.l)<br>549.437 (m.s.l) | | 01/08/1963<br>01/04/1964<br>01/01/1972 | - 31/03/1964<br>- 31/12/1971 | |
| | Opening Date | | Closing Date | | |
| Gauge | : 20/08/1963 | | **HFL During 2016-17** | **: 557.837m** | |
| Discharge | : 01/01/1966 | | **Corres. Discharge** | **: 1444(Estimated)** | |
| Sediment | : 01/06/1974 | | **Date & Time of occurance** | **: 07/08/2016 08.00 hrs.** | |
| Water Quality | : 01/06/1974 | | | | |

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

| | Maximum | | | Minimum | | |
|---|---|---|---|---|---|---|
| **Year** | **Q (cumecs)** | **WL (m)** | **Date** | **Q (cumecs)** | **WL (m)** | **Date** |
| 1967-1968 | 3830 | 563.617 | 28/07/1967 | 0.000 | 551.082 | 08/06/1967 |
| 1968-1969 | 757.4 | 557.117 | 07/08/1968 | 0.000 | 550.972 | 29/03/1969 |
| 1969-1970 | 1605 | 561.977 | 01/08/1969 | 0.100 | 550.862 | 23/05/1970 |
| 1970-1971 | 1492 | 558.977 | 21/08/1970 | 0.100 | 550.762 | 22/04/1971 |
| 1971-1972 | 1386 | 558.792 | 31/08/1971 | 0.000 | 550.747 | 21/04/1972 |
| 1972-1973 | 1523 | 558.687 | 08/07/1972 | 0.000 | 550.637 | 27/02/1973 |
| 1973-1974 | 1900 | 560.902 | 08/07/1973 | 0.000 | 550.752 | 05/04/1974 |
| 1974-1975 | 1583 | 559.897 | 05/07/1974 | 0.000 | 550.767 | 22/03/1975 |
| 1975-1976 | 1681 | 560.927 | 10/07/1975 | 0.000 | 550.712 | 18/05/1976 |
| 1976-1977 | 2780 | 563.480 | 07/06/1976 | 0.000 | 550.737 | 23/02/1977 |
| 1977-1978 | 1610 | 559.749 | 04/09/1977 | 0.000 | 550.797 | 10/05/1978 |
| 1978-1979 | 1576 | 559.436 | 02/09/1978 | 0.000 | 550.907 | 05/03/1979 |
| 1979-1980 | 1317 | 560.087 | 07/08/1979 | 0.000 | 550.870 | 09/03/1980 |
| 1980-1981 | 1868 | 561.004 | 06/08/1980 | 0.000 | 550.960 | 31/01/1981 |
| 1981-1982 | 1262 | 558.537 | 10/07/1981 | 0.000 | 550.867 | 23/06/1981 |
| 1982-1983 | 1156 | 558.512 | 29/07/1982 | 0.000 | 550.877 | 05/03/1983 |
| 1983-1984 | 1493 | 559.782 | 17/08/1983 | 0.000 | 551.097 | 01/01/1984 |
| 1984-1985 | 1334 | 559.057 | 18/07/1984 | 0.000 | 550.947 | 30/12/1984 |
| 1985-1986 | 1054 | 558.322 | 02/08/1985 | 0.000 | 550.957 | 12/02/1986 |
| 1986-1987 | 1284 | 558.882 | 30/06/1986 | 0.000 | 551.057 | 26/01/1987 |
| 1987-1988 | 1073 | 557.987 | 08/07/1987 | 0.000 | 550.677 | 24/01/1988 |

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 |
| 1988-1989 | 2590 | 563.237 | 03/08/1988 | 0.000 | 550.907 | 28/01/1989 |
| 1989-1990 | 1600 | 560.307 | 25/07/1989 | 0.000 | 550.977 | 14/01/1990 |
| 1990-1991 | 2530 | 563.227 | 18/08/1990 | 0.000 | 551.097 | 06/04/1991 |
| 1991-1992 | 1800 | 561.419 | 28/07/1991 | 0.000 | 551.124 | 07/12/1991 |
| 1992-1993 | 1238 | 559.912 | 14/08/1992 | 0.000 | 550.807 | 28/03/1993 |
| 1993-1994 | 1023 | 558.942 | 19/06/1993 | 0.000 | 551.125 | 12/06/1993 |
| 1994-1995 | 2675 | 563.077 | 03/09/1994 | 0.000 | 551.197 | 09/05/1995 |
| 1995-1996 | 772.1 | 557.627 | 20/07/1995 | 0.000 | 551.007 | 11/07/1995 |
| 1996-1997 | 1566 | 561.507 | 04/10/1996 | 0.000 | 550.947 | 09/05/1997 |
| 1997-1998 | 3529 | 564.697 | 24/08/1997 | 0.000 | 550.897 | 09/01/1998 |
| 1998-1999 | 828.0 | 558.457 | 09/07/1998 | 0.000 | 550.807 | 01/04/1999 |
| 1999-2000 | 1397 | 559.922 | 28/07/1999 | 0.000 | 551.067 | 28/02/2000 |
| 2000-2001 | 676.7 | 556.317 | 13/07/2000 | 0.421 | 550.927 | 12/12/2000 |
| 2001-2002 | 623.3 | 556.107 | 10/07/2001 | 0.000 | 550.917 | 10/01/2002 |
| 2002-2003 | 830.3 | 556.917 | 07/09/2002 | 0.000 | 550.807 | 28/04/2003 |
| 2003-2004 | 626.7 | 556.022 | 28/07/2003 | 0.000 | 550.777 | 10/03/2004 |
| 2004-2005 | 2716 | 563.077 | 13/08/2004 | 0.000 | 550.822 | 20/03/2005 |
| 2005-2006 | 4641 | 565.732 | 02/08/2005 | 0.000 | 550.977 | 15/05/2006 |
| 2006-2007 | 4973 | 566.937 | 30/07/2006 | 1.480 | 550.857 | 06/01/2007 |
| 2007-2008 | 2243 | 562.137 | 02/07/2007 | 0.000 | 550.947 | 22/06/2007 |
| 2008-2009 | 1887 | 561.067 | 11/08/2008 | 0.000 | 551.077 | 26/03/2009 |
| 2009-2010 | 712.5 | 557.157 | 15/07/2009 | 0.000 | 551.727 | 16/02/2010 |
| 2010-2011 | 769.8 | 556.897 | 27/07/2010 | 0.000 | 553.657 | 08/02/2011 |
| 2011-2012 | 3125 | 564.337 | 04/09/2011 | 0.000 | 553.397 | 26/12/2011 |
| 2012-2013 | 723.6 | 556.440 | 06/09/2012 | 0.000 | 555.950 | 24/05/2013 |
| 2013-2014 | 1925 | 560.417 | 25/07/2013 | 0.000 | 552.637 | 14/05/2014 |
| 2014-2015 | 1047 | 558.037 | 24/07/2014 | 0.000 | 555.347 | 03/03/2015 |
| 2015-2016 | 235.7 | 553.682 | 25/07/2015 | 0.000 | 555.717 | 21/12/2015 |

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

## Stage-Discharge Data for the period 2016 - 2017

**Station Name : Warunji ( AKZ00A7)** **Division : Upper Krishna Divn, Pune**

**Local River : Koyna** **Sub-Division : Upper Krishna SD 1, Kolhapur**

| 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 | 556.097 | 0.000 | 552.502 | 88.69 | 553.217 | 188.1 | 555.757 | 0.000 | 556.867 | 0.000 | 556.057 | 0.000 |
| 2 | 555.947 | 0.000 | 552.197 | 0.000 | 554.932 | 458.7 | 555.837 | 0.000 | 556.837 | 0.000 | 555.907 | 0.000 |
| 3 | 556.067 | 0.000 | 554.207 | 335.8 * | 556.062 | 749.7 | 556.187 | 0.000 | 556.887 | 0.000 | 556.317 | 0.000 |
| 4 | 556.137 | 0.000 | 553.122 | 178.1 | 556.237 | 834.2 | 556.037 | 0.000 | 556.647 | 0.000 | 556.407 | 0.000 |
| 5 | 555.997 | 0.000 | 554.767 | 423.3 | 555.847 | 716.8 | 556.257 | 0.000 | 556.507 | 0.000 | 556.147 | 0.000 |
| 6 | 555.897 | 0.000 | 554.622 | 399.7 | 557.807 | 1533 | 556.317 | 0.000 | 556.417 | 0.000 | 556.067 | 0.000 |
| 7 | 555.777 | 0.000 | 553.287 | 186.2 * | 557.837 | 1444 * | 555.957 | 0.000 | 556.967 | 0.000 | 556.017 | 0.000 |
| 8 | 555.127 | 0.000 | 553.167 | 178.2 | 557.472 | 1163 | 556.097 | 0.000 | 556.457 | 0.000 | 556.277 | 0.000 |
| 9 | 554.917 | 0.000 | 552.897 | 115.8 | 556.887 | 1028 | 555.107 | 0.000 | 556.527 | 0.000 | 556.437 | 0.000 |
| 10 | 554.937 | 0.000 | 555.157 | 513.9 * | 556.947 | 1041 | 554.097 | 0.000 | 556.617 | 0.000 | 556.347 | 0.000 |
| 11 | 555.047 | 0.000 | 557.497 | 1372 | 555.417 | 530.1 | 554.097 | 0.000 | 556.667 | 0.000 | 556.267 | 0.000 |
| 12 | 554.917 | 0.000 | 557.102 | 1063 | 555.107 | 469.8 | 553.937 | 0.000 | 556.587 | 0.000 | 556.377 | 0.000 |
| 13 | 554.717 | 0.000 | 557.072 | 1053 | 554.447 | 373.2 | 554.487 | 0.000 | 556.587 | 0.000 | 556.647 | 0.000 |
| 14 | 554.517 | 0.000 | 555.052 | 459.8 | 554.077 | 313.2 * | 554.097 | 0.000 | 556.427 | 0.000 | 556.657 | 0.000 |
| 15 | 554.677 | 0.000 | 554.057 | 314.0 | 553.637 | 240.1 * | 554.137 | 0.000 | 556.507 | 0.000 | 556.517 | 0.000 |
| 16 | 554.637 | 0.000 | 553.562 | 246.6 | 553.267 | 201.4 | 554.137 | 0.000 | 556.587 | 0.000 | 556.587 | 0.000 |
| 17 | 554.587 | 0.000 | 553.217 | 175.9 * | 553.077 | 160.6 | 555.837 | 0.000 | 556.517 | 0.000 | 556.617 | 0.000 |
| 18 | 554.317 | 0.000 | 553.302 | 192.7 | 552.967 | 140.9 | 556.217 | 0.000 | 556.527 | 0.000 | 556.287 | 0.000 |
| 19 | 554.057 | 0.000 | 553.302 | 196.0 | 553.037 | 154.6 | 557.297 | 1229 | 556.467 | 0.000 | 555.767 | 0.000 |
| 20 | 553.907 | 0.000 | 553.317 | 205.1 | 554.417 | 0.000 | 556.337 | 982.6 | 556.227 | 0.000 | 555.307 | 0.000 |
| 21 | 554.167 | 0.000 | 553.257 | 190.5 | 556.217 | 0.000 | 555.607 | 0.000 | 556.057 | 0.000 | 554.777 | 0.000 |
| 22 | 554.157 | 0.000 | 553.062 | 156.8 | 552.857 | 131.7 | 556.872 | 1123 | 556.037 | 0.000 | 554.707 | 0.000 |
| 23 | 553.977 | 0.000 | 553.172 | 178.7 | 552.767 | 115.0 | 557.717 | 1346 | 556.687 | 0.000 | 554.617 | 0.000 |
| 24 | 553.677 | 0.000 | 553.177 | 170.1 * | 552.842 | 131.4 | 556.527 | 0.000 | 556.847 | 0.000 | 554.457 | 0.000 |
| 25 | 551.737 | 0.000 | 553.122 | 173.1 | 552.817 | 123.6 | 556.387 | 0.000 | 556.737 | 0.000 | 554.367 | 0.000 |
| 26 | 551.487 | 0.000 | 552.937 | 134.1 | 552.742 | 107.7 | 556.737 | 0.000 | 556.597 | 0.000 | 554.077 | 0.000 |
| 27 | 551.707 | 0.000 | 552.787 | 106.0 | 552.707 | 101.4 | 556.537 | 0.000 | 556.317 | 0.000 | 554.267 | 0.000 |
| 28 | 552.627 | 0.000 | 552.707 | 99.43 | 552.667 | 101.4 * | 556.977 | 0.000 | 556.237 | 0.000 | 554.847 | 0.000 |
| 29 | 552.842 | 107.4 | 552.942 | 135.4 | 552.647 | 93.75 | 556.337 | 0.000 | 555.927 | 0.000 | 553.557 | 0.000 |
| 30 | 552.667 | 104.0 | 552.847 | 116.3 | 553.397 | 0.000 | 556.757 | 0.000 | 555.867 | 0.000 | 552.497 | 0.000 |
| 31 | | | 553.217 | 175.9 * | 555.207 | 0.000 | | | 556.017 | 0.000 | | |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 555.690 | 0.000 | 553.592 | 242.0 | 556.325 | 915.7 | 555.765 | 0.000 | 556.673 | 0.000 | 556.198 | 0.000 |
| II Ten-Daily | 554.538 | 0.000 | 554.748 | 527.8 | 553.945 | 258.4 | 555.058 | 221.2 | 556.510 | 0.000 | 556.303 | 0.000 |
| III Ten-Daily | 552.904 | 21.13 | 553.021 | 148.8 | 553.352 | 82.36 | 556.646 | 247.0 | 556.302 | 0.000 | 554.217 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 551.487 | 0.000 | 552.197 | 0.000 | 552.647 | 0.000 | 553.937 | 0.000 | 555.867 | 0.000 | 552.497 | 0.000 |
| Max. | 556.137 | 107.4 | 557.497 | 1372 | 557.837 | 1533 | 557.717 | 1346 | 556.967 | 0.000 | 556.657 | 0.000 |
| Mean | 554.378 | 7.045 | 553.762 | 301.1 | 554.502 | 407.9 | 555.823 | 156 | 556.489 | 0 | 555.573 | 0 |

**Annual Runoff in MCM = 2342** **Annual Runoff in mm = 1228**

**Peak Observed Discharge = 1533 cumecs on 06/08/2016** **Corres. Water Level :557.807 m**

**Lowest Observed Discharge = 0.000 cumecs on 01/06/2016** **Corres. Water Level :556.097 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 2016 - 2017

**Station Name : Warunji ( AKZ00A7)** **Division : Upper Krishna Divn, Pune**

**Local River : Koyna** **Sub-Division : Upper Krishna SD 1, Kolhapur**

| Day | Dec | | Jan | | Feb | | Mar | | Apr | | May | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W.L | Q | WL | Q | WL | Q | WL | Q | WL | Q | WL | Q |
| 1 | 553.387 | 0.000 | 554.897 | 0.000 | 556.307 | 0.000 | 556.427 | 0.000 | 556.737 | 0.000 | 556.357 | 0.000 |
| 2 | 553.537 | 0.000 | 554.767 | 0.000 | 556.507 | 0.000 | 556.347 | 0.000 | 556.807 | 0.000 | 556.547 | 0.000 |
| 3 | 553.497 | 0.000 | 553.837 | 0.000 | 556.837 | 0.000 | 556.507 | 0.000 | 556.777 | 0.000 | 556.727 | 0.000 |
| 4 | 554.457 | 0.000 | 553.217 | 0.000 | 556.867 | 0.000 | 556.627 | 0.000 | 556.697 | 0.000 | 556.747 | 0.000 |
| 5 | 554.947 | 0.000 | 553.727 | 0.000 | 556.767 | 0.000 | 556.537 | 0.000 | 556.697 | 0.000 | 556.397 | 0.000 |
| 6 | 554.737 | 0.000 | 554.777 | 0.000 | 556.547 | 0.000 | 556.527 | 0.000 | 556.587 | 0.000 | 556.417 | 0.000 |
| 7 | 554.477 | 0.000 | 555.087 | 0.000 | 556.437 | 0.000 | 556.487 | 0.000 | 556.587 | 0.000 | 556.407 | 0.000 |
| 8 | 555.107 | 0.000 | 554.937 | 0.000 | 556.317 | 0.000 | 556.707 | 0.000 | 556.767 | 0.000 | 556.537 | 0.000 |
| 9 | 555.217 | 0.000 | 554.657 | 0.000 | 556.277 | 0.000 | 556.547 | 0.000 | 556.747 | 0.000 | 556.717 | 0.000 |
| 10 | 555.197 | 0.000 | 554.307 | 0.000 | 556.407 | 0.000 | 556.507 | 0.000 | 556.627 | 0.000 | 556.587 | 0.000 |
| 11 | 555.347 | 0.000 | 553.987 | 0.000 | 556.577 | 0.000 | 556.647 | 0.000 | 556.657 | 0.000 | 556.487 | 0.000 |
| 12 | 555.237 | 0.000 | 554.027 | 0.000 | 556.797 | 0.000 | 556.507 | 0.000 | 556.757 | 0.000 | 556.727 | 0.000 |
| 13 | 555.457 | 0.000 | 554.037 | 0.000 | 556.837 | 0.000 | 556.437 | 0.000 | 556.207 | 0.000 | 556.687 | 0.000 |
| 14 | 555.447 | 0.000 | 553.987 | 0.000 | 556.687 | 0.000 | 556.617 | 0.000 | 556.397 | 0.000 | 556.747 | 0.000 |
| 15 | 555.247 | 0.000 | 554.037 | 0.000 | 556.567 | 0.000 | 556.817 | 0.000 | 556.287 | 0.000 | 556.797 | 0.000 |
| 16 | 555.137 | 0.000 | 555.127 | 0.000 | 556.867 | 0.000 | 556.737 | 0.000 | 556.477 | 0.000 | 556.767 | 0.000 |
| 17 | 555.007 | 0.000 | 556.467 | 0.000 | 556.777 | 0.000 | 556.617 | 0.000 | 556.457 | 0.000 | 556.747 | 0.000 |
| 18 | 554.937 | 0.000 | 556.297 | 0.000 | 556.787 | 0.000 | 556.527 | 0.000 | 556.677 | 0.000 | 556.687 | 0.000 |
| 19 | 554.887 | 0.000 | 556.237 | 0.000 | 556.637 | 0.000 | 556.467 | 0.000 | 556.497 | 0.000 | 556.657 | 0.000 |
| 20 | 554.817 | 0.000 | 556.217 | 0.000 | 556.417 | 0.000 | 556.327 | 0.000 | 556.567 | 0.000 | 556.547 | 0.000 |
| 21 | 555.007 | 0.000 | 556.307 | 0.000 | 556.807 | 0.000 | 556.467 | 0.000 | 556.727 | 0.000 | 555.257 | 0.000 |
| 22 | 554.957 | 0.000 | 556.277 | 0.000 | 556.787 | 0.000 | 556.507 | 0.000 | 556.437 | 0.000 | 554.737 | 0.000 |
| 23 | 555.287 | 0.000 | 556.177 | 0.000 | 556.467 | 0.000 | 556.447 | 0.000 | 556.577 | 0.000 | 554.637 | 0.000 |
| 24 | 554.957 | 0.000 | 556.557 | 0.000 | 555.907 | 0.000 | 556.477 | 0.000 | 556.447 | 0.000 | 555.087 | 0.000 |
| 25 | 555.377 | 0.000 | 556.667 | 0.000 | 556.237 | 0.000 | 556.517 | 0.000 | 556.737 | 0.000 | 555.047 | 0.000 |
| 26 | 555.197 | 0.000 | 556.687 | 0.000 | 556.417 | 0.000 | 556.567 | 0.000 | 556.387 | 0.000 | 554.347 | 0.000 |
| 27 | 555.417 | 0.000 | 556.537 | 0.000 | 556.547 | 0.000 | 556.507 | 0.000 | 556.417 | 0.000 | 554.007 | 0.000 |
| 28 | 555.597 | 0.000 | 556.357 | 0.000 | 556.477 | 0.000 | 556.717 | 0.000 | 556.407 | 0.000 | 553.767 | 0.000 |
| 29 | 555.177 | 0.000 | 556.377 | 0.000 | | | 557.037 | 0.000 | 556.447 | 0.000 | 553.567 | 0.000 |
| 30 | 555.137 | 0.000 | 556.377 | 0.000 | | | 556.737 | 0.000 | 556.467 | 0.000 | 553.777 | 0.000 |
| 31 | 554.947 | 0.000 | 556.327 | 0.000 | | | 556.537 | 0.000 | | | 554.617 | 0.000 |
| Ten-Daily Mean | | | | | | | | | | | | |
| I Ten-Daily | 554.456 | 0.000 | 554.421 | 0.000 | 556.527 | 0.000 | 556.522 | 0.000 | 556.703 | 0.000 | 556.544 | 0.000 |
| II Ten-Daily | 555.152 | 0.000 | 555.042 | 0.000 | 556.695 | 0.000 | 556.570 | 0.000 | 556.498 | 0.000 | 556.685 | 0.000 |
| III Ten-Daily | 555.187 | 0.000 | 556.422 | 0.000 | 556.456 | 0.000 | 556.593 | 0.000 | 556.505 | 0.000 | 554.441 | 0.000 |
| Monthly | | | | | | | | | | | | |
| Min. | 553.387 | 0.000 | 553.217 | 0.000 | 555.907 | 0.000 | 556.327 | 0.000 | 556.207 | 0.000 | 553.567 | 0.000 |
| Max. | 555.597 | 0.000 | 556.687 | 0.000 | 556.867 | 0.000 | 557.037 | 0.000 | 556.807 | 0.000 | 556.797 | 0.000 |
| Mean | 554.940 | 0 | 555.332 | 0 | 556.567 | 0 | 556.563 | 0 | 556.569 | 0 | 555.843 | 0 |

**Peak Computed Discharge = 1444 cumecs on 07/08/2016** **Corres. Water Level :557.837 m**

**Lowest Computed Discharge = 101.4 cumecs on 28/08/2016** **Corres. Water Level :552.667 m**

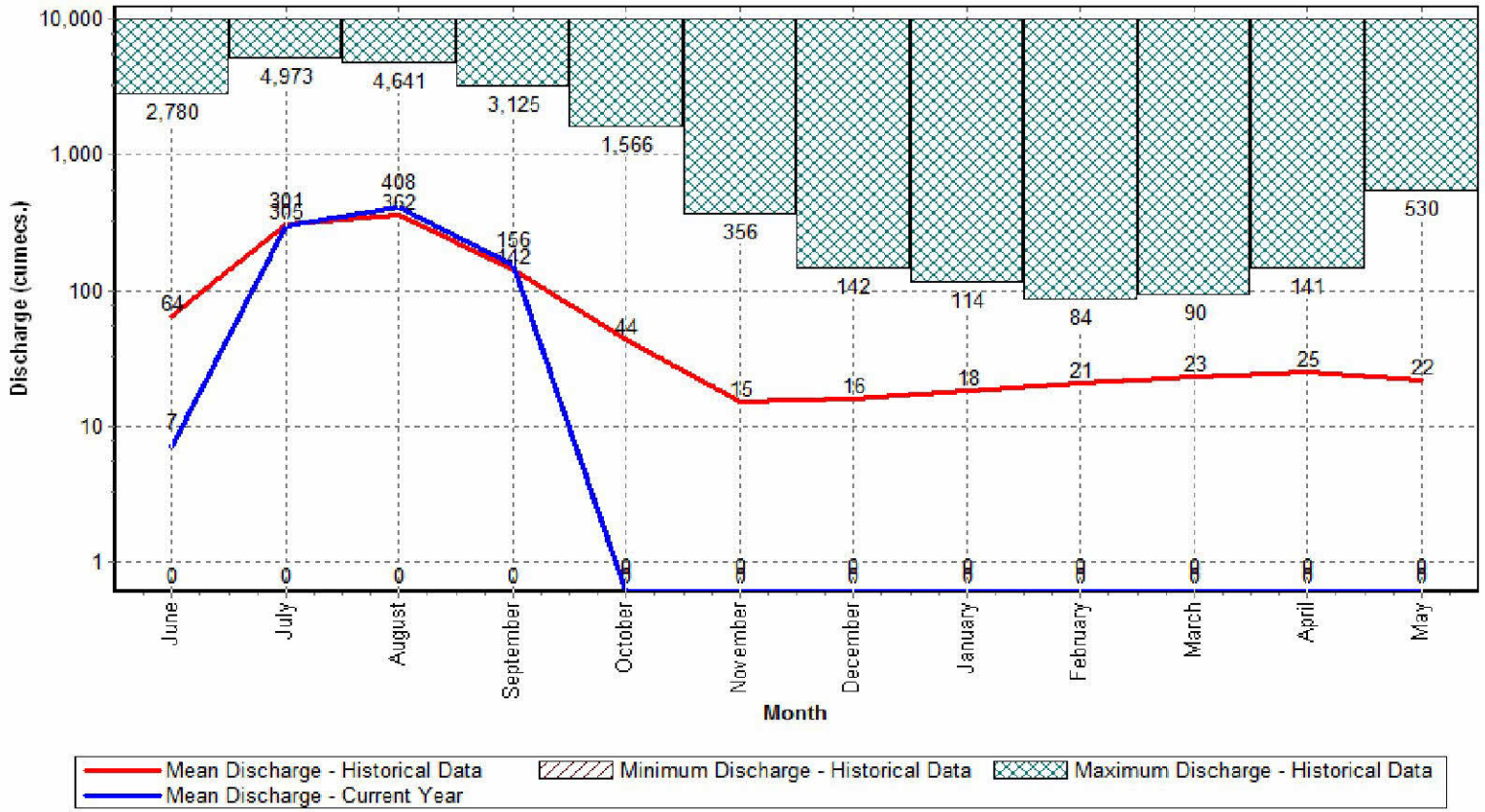
Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

*Note:Missing values ignored while arriving at Annual Runoff*

**HISTOGRAM - HYDROGRAPH for Water Year : 2016-2017**

**Station Name : Warunji ( AKZ00A7)** | **Data considered : 1967-2017** | **Division : Upper Krishna Divn, Pune**

**Local River : Koyna** | **Sub-Division : Upper Krishna SD 1, Kolhapur**



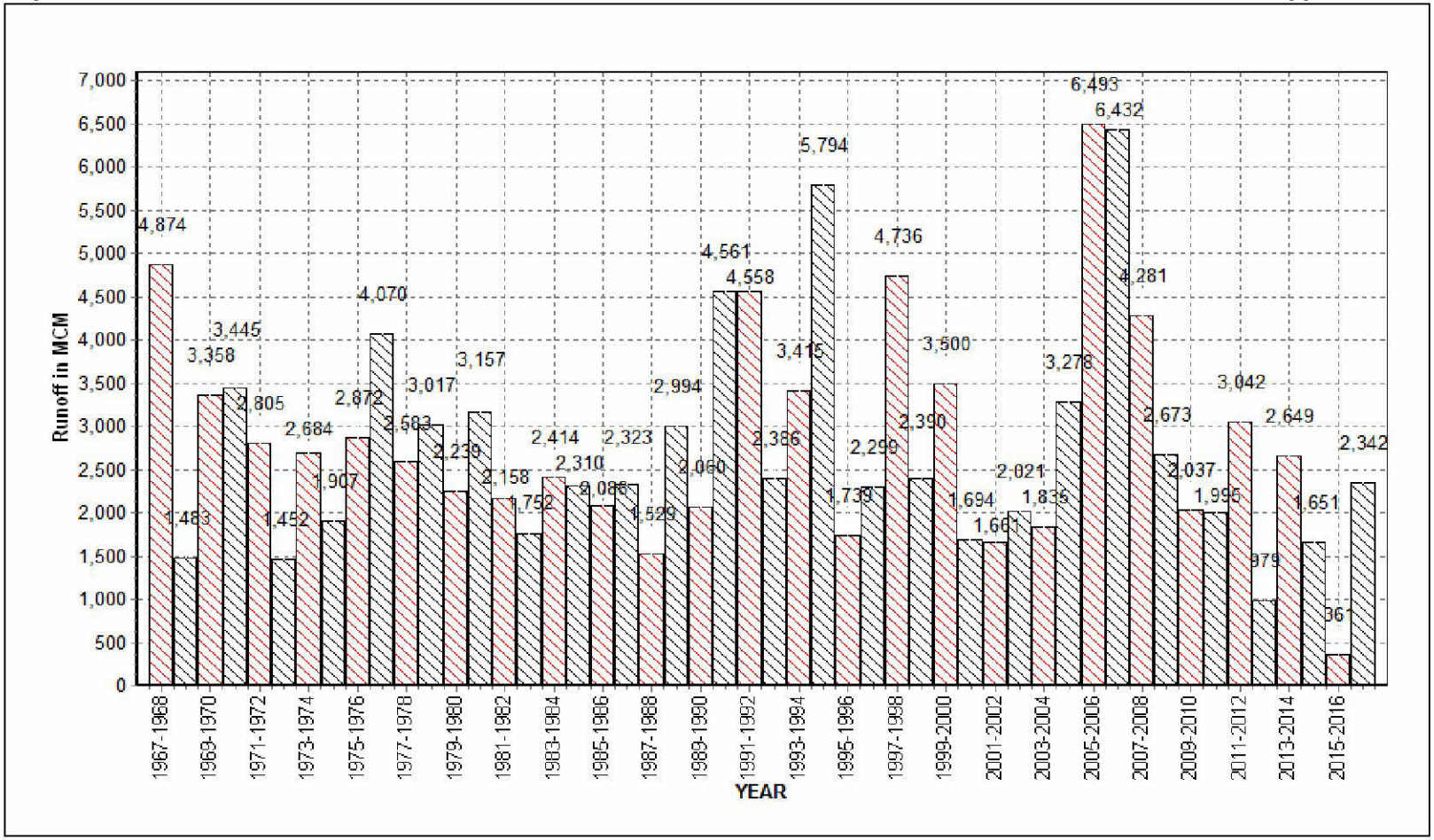
**Annual Runoff Values for the period: 1967 - 2017**

**Station Name : Warunji ( AKZ00A7)**

**Local River : Koyna**

**Division : Upper Krishna Divn, Pune**

**Sub-Division : Upper Krishna SD 1, Kolhapur**

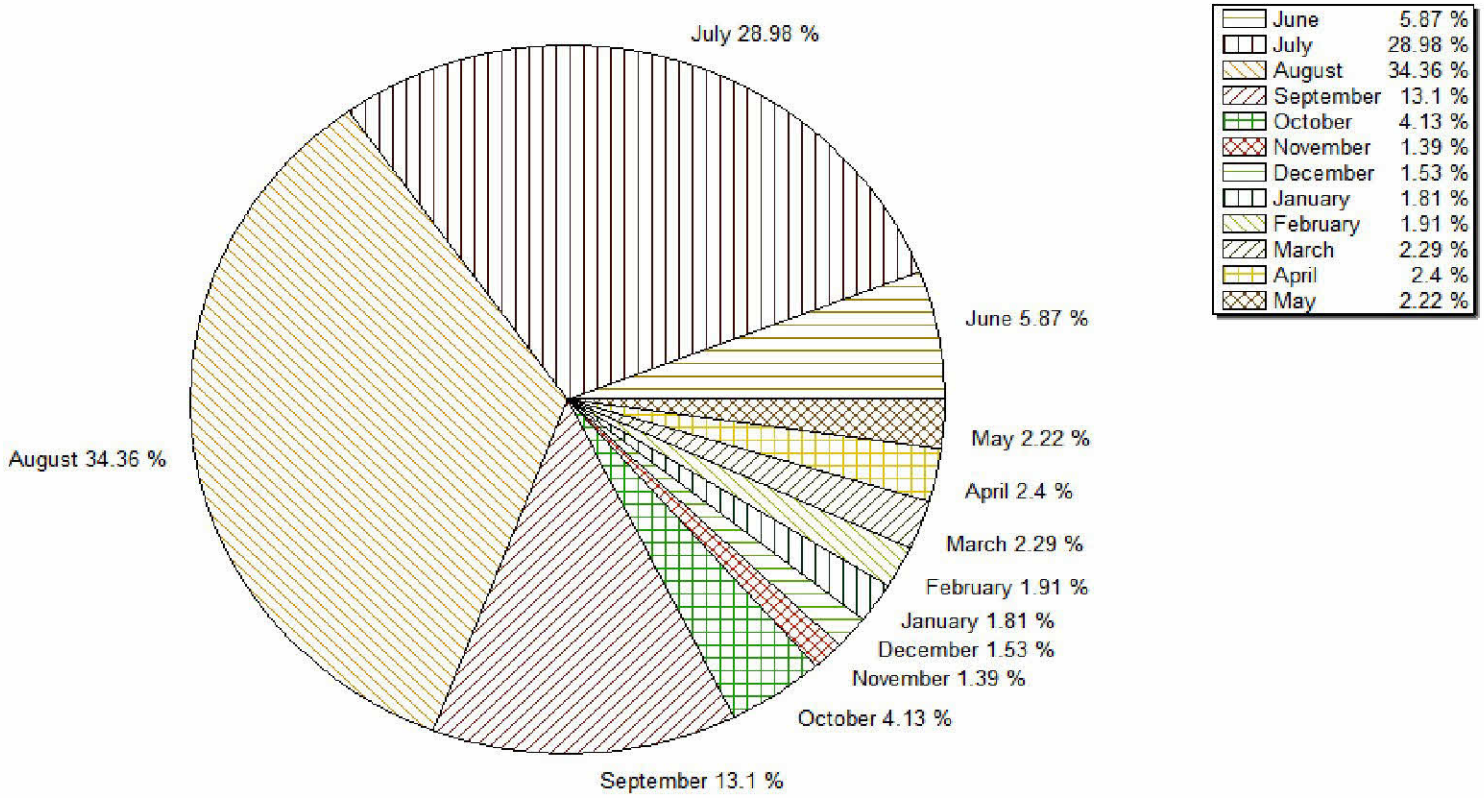



*Note: Missing values have not been considered while arriving at Annual Runoff*

**Monthly Average Runoff based on period : 1967-2016**

**Station Name : Warunji ( AKZ00A7)**
**Local River : Koyna**

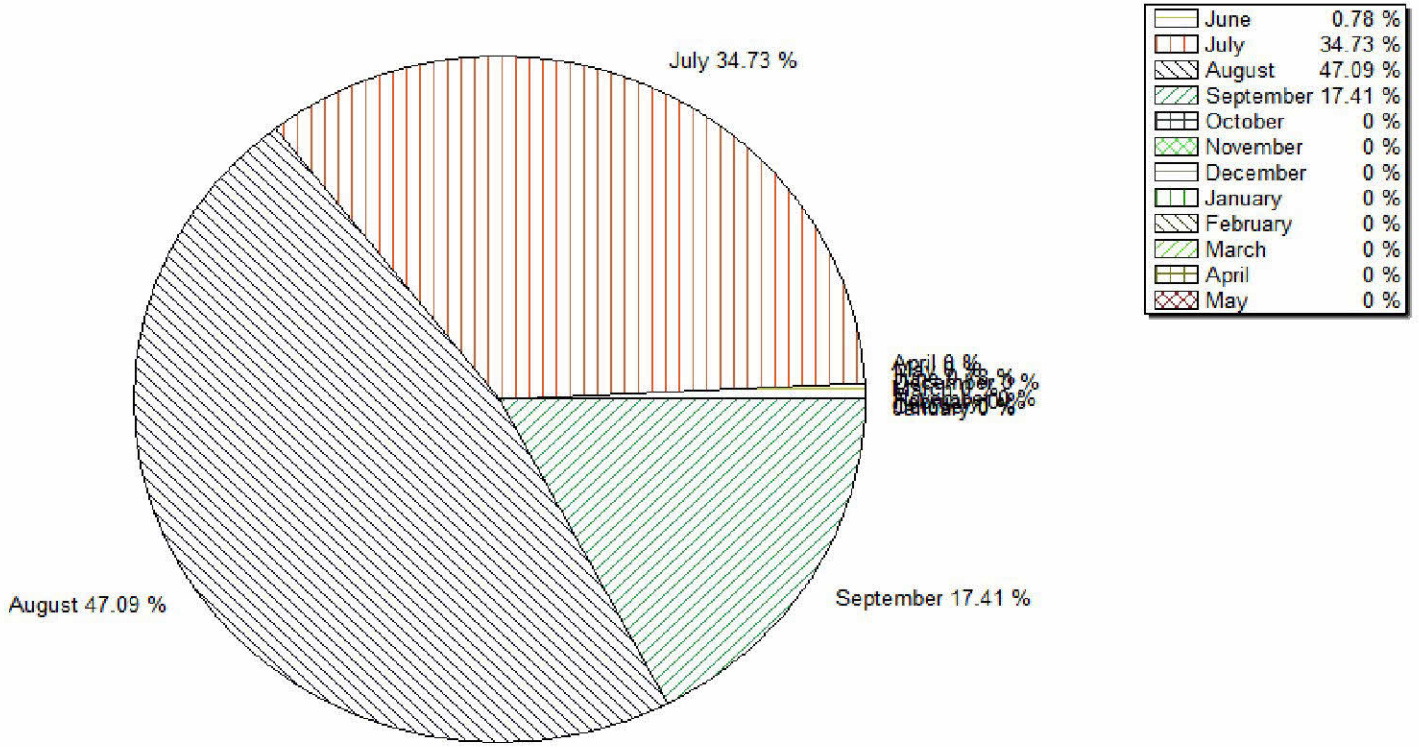
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Upper Krishna SD 1, Kolhapur**



## Monthly Runoff for the Year : 2016-2017

**Station Name : Warunji ( AKZ00A7)**
**Local River : Koyna**

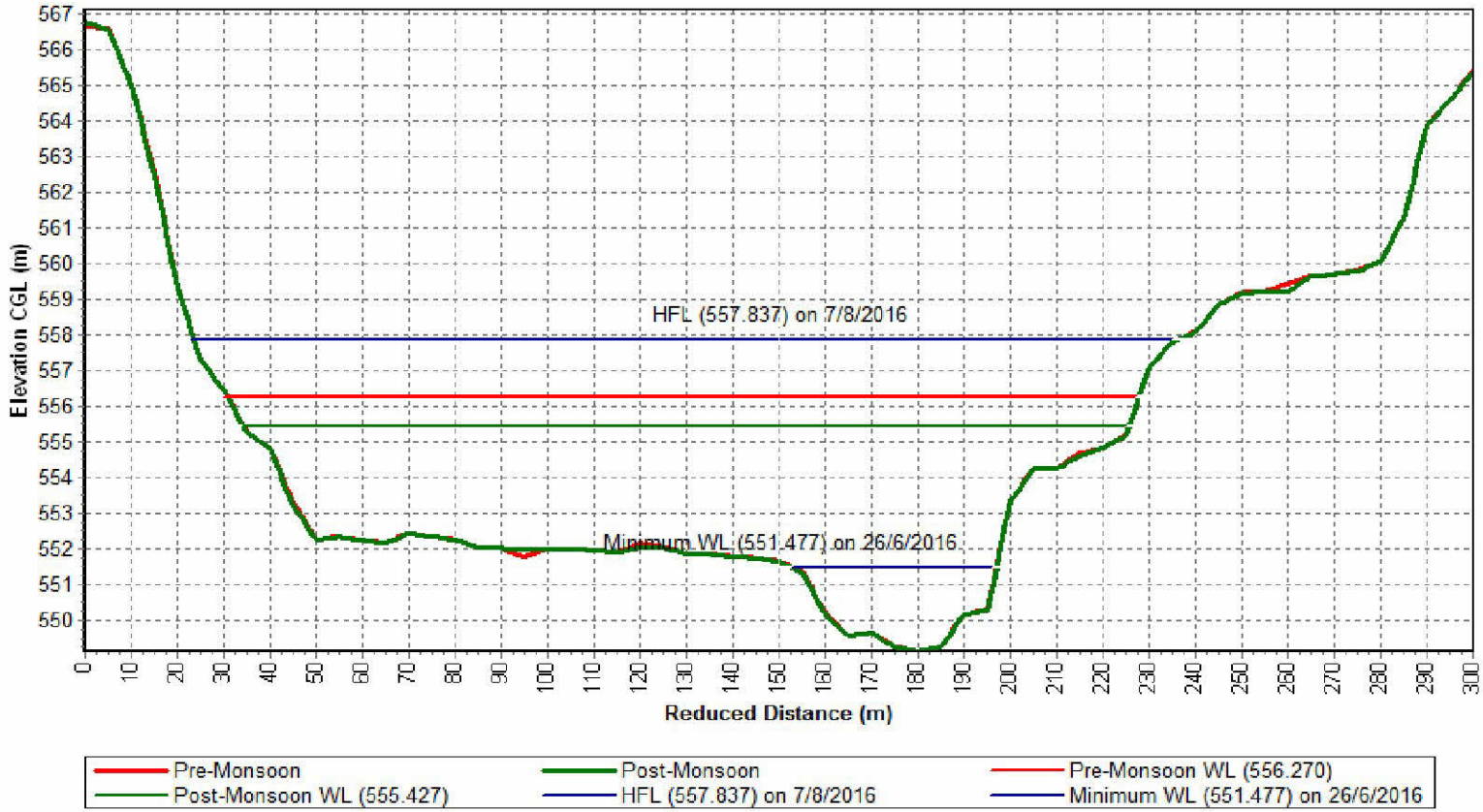
**Division : Upper Krishna Divn, Pune**
**Sub-Division : Upper Krishna SD 1, Kolhapur**



## Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2016-2017

**Station Name : Warunji ( AKZ00A7)** **Division : Upper Krishna Divn, Pune**

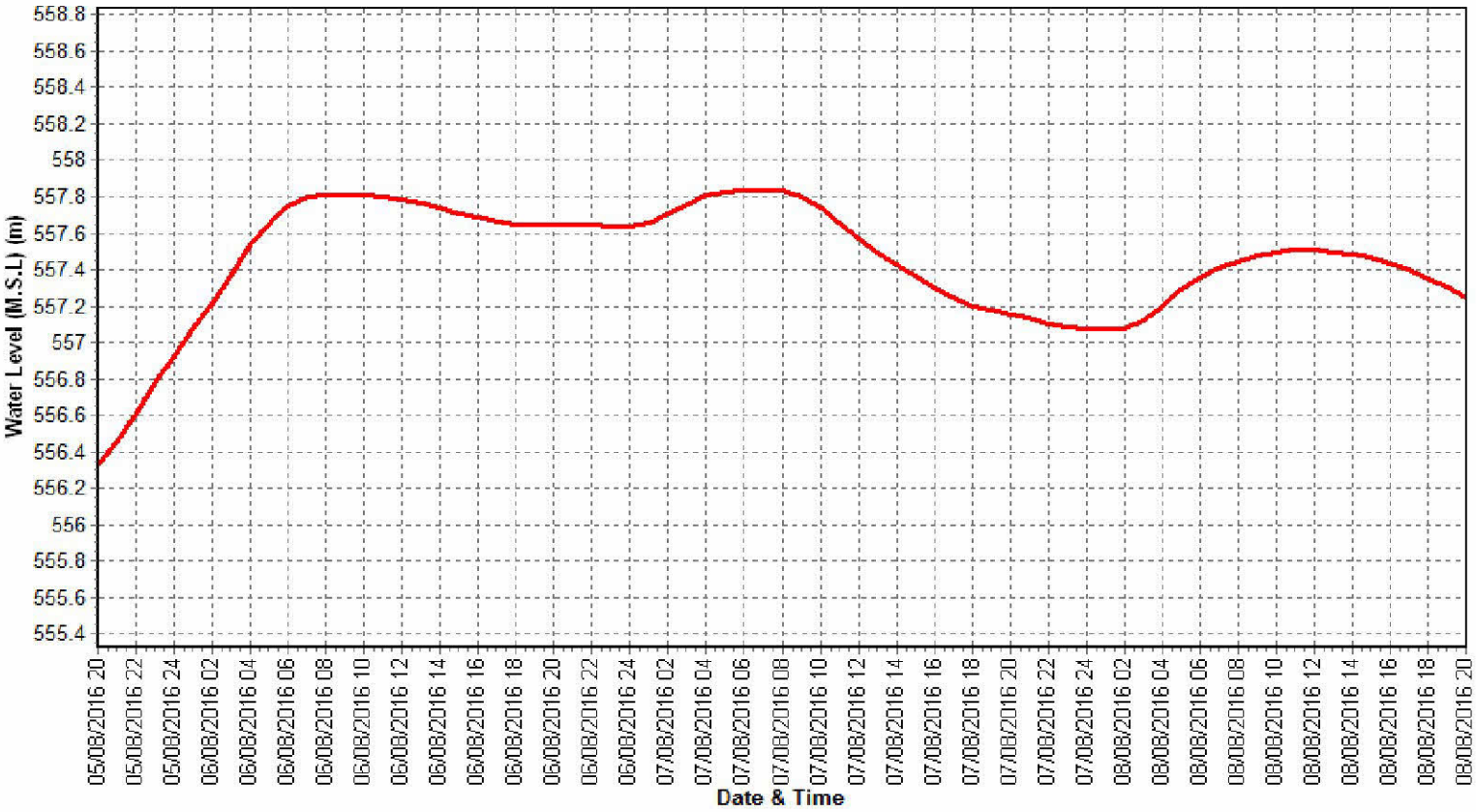
**Local River : Koyna** **Sub-Division : Upper Krishna SD 1, Kolhapur**



## Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2016-2017

**Station Name : Warunji ( AKZ00A7)** | **Division : Upper Krishna Divn, Pune**

**Local River : Koyna** | **Sub-Division : Upper Krishna SD 1, Kolhapur**

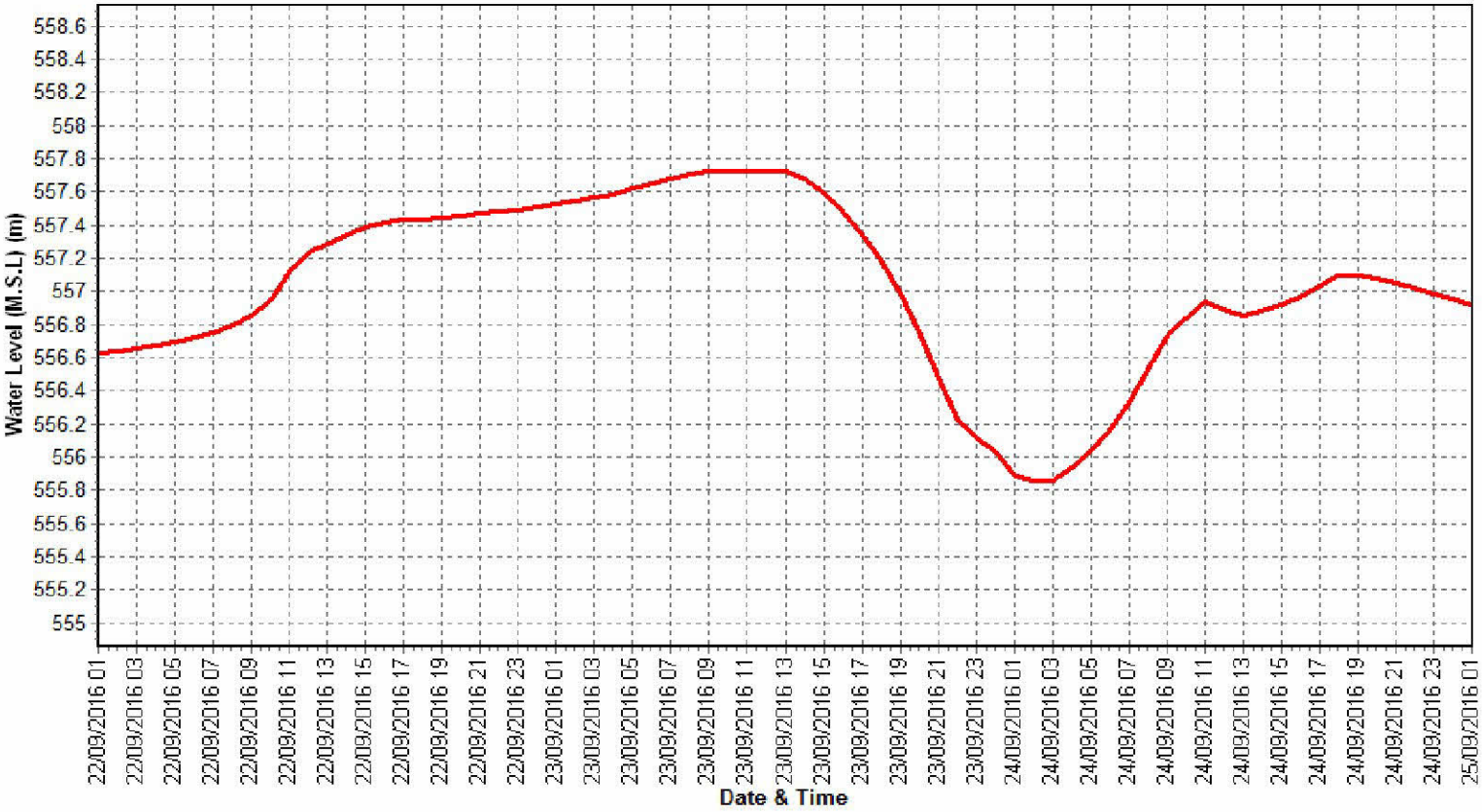



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2016-2017

**Station Name : Warunji ( AKZ00A7)** | **Division : Upper Krishna Divn, Pune**

**Local River : Koyna** | **Sub-Division : Upper Krishna SD 1, Kolhapur**

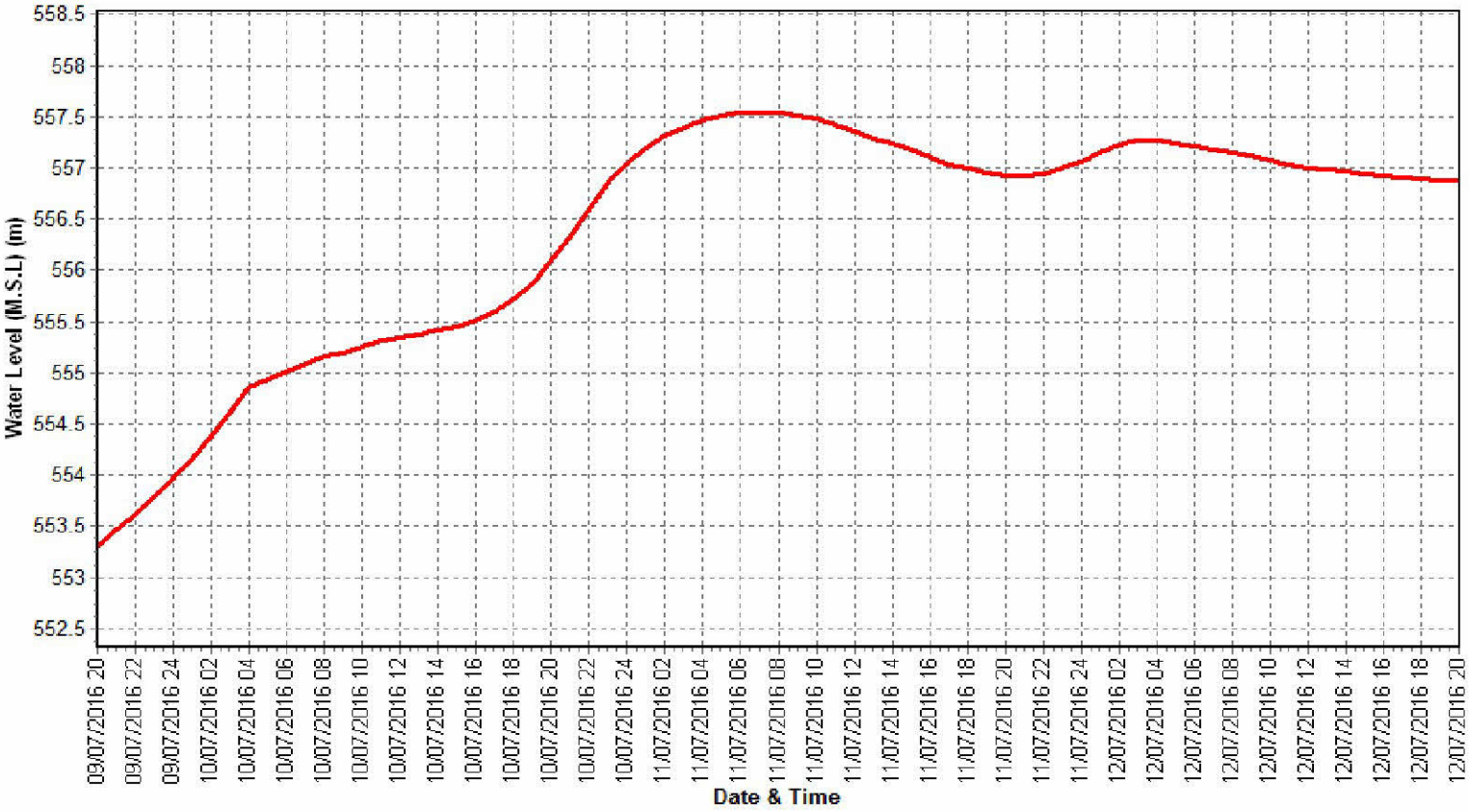



Time Span: 72 Hrs

## Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2016-2017

**Station Name : Warunji ( AKZ00A7)** | **Division : Upper Krishna Divn, Pune**

**Local River : Koyna** | **Sub-Division : Upper Krishna SD 1, Kolhapur**




Time Span: 72 Hrs