

केवल सरकारी उपयोग हेतु

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भारत सरकार/ GOVERNMENT OF INDIA

केन्द्रीय जल आयोग/ CENTRAL WATER COMMISSION



कृष्णा बेसीन / KRISHNA BASIN

वर्ष पुस्तिका (भाग - I)

WATER YEAR BOOK (Vol. I)

निस्सारण वर्ष पुस्तिका/DISCHARGE YEAR BOOK

(जून-2022 - मई-2023)

(JUNE-2022 – MAY-2023)

कृष्णा एवं समन्वय परिमंडल / KRISHNA & CO-ORDINATION CIRCLE

हैदराबाद / HYDERABAD

फ़रवरी-2024

February-2024

प्रस्तावना

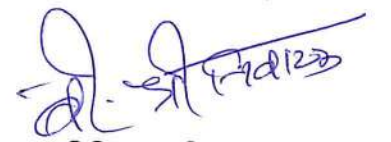
जल, सीमित संसाधन होने के कारण, विवेकपूर्णता से उपयोग करने के लिए उचित योजना अत्यधिक आवश्यक है। योजना के लिए, सांख्यिकता से मान्य आंकड़ा संग्रह प्राथमिक जरूरत है। भारत में सभी नदी क्षेत्रों में जल विज्ञान संबंधी प्रेक्षण स्टेशनों के अच्छे नेटवर्क के माध्यम से इस उद्देश्य को निभाने के लिए केंद्रीय जल आयोग प्रयत्न करता आ रहा है। यह रिपोर्ट कृष्णा नदी क्षेत्र से संबंध रखता है जो चार राज्यों यथा महाराष्ट्र, कर्नाटक, तेलंगाना और आंध्र प्रदेश को सम्मिलित करता है।

कृष्णा नदी क्षेत्र से संबंधित जल वर्ष पुस्तक **2022-23** तीन खंड में तैयार की गयी है। खंड **I**, **II** व **III** क्रमशः प्रवाह डेटा, तलछट डेटा और जल गुणवत्ता डेटा अंतर्विष्ट करता है। वर्ष **2022-23** के लिए अनुभाग खंड **I** में, स्थल अनुसार इतिहास, सामान्य प्रवाह डेटा, जल विज्ञान संबंधी डेटा, प्रतिदिन स्तर-निर्वहन डेटा और नक्शे/मानचित्र को सम्मिलित किया गया है। इसी प्रकार, स्थल अनुसार प्रतिदिन तलछट डेटा खंड **II** में और जल नमूनों की जल गुणवत्ता विश्लेषण खंड **III** में शामिल किया जाता है।

इस जल वर्ष पुस्तक (खंड **I**) में कृष्ण नदी क्षेत्र के **55** स्टेशनों से एकत्रित प्रतिदिन डेटा को समाविष्ट करके प्रकाशित किया गया है जिस में से **37** स्टेशन कृष्ण एवं समन्वय परिमंडल, हैदराबाद के क्षेत्राधिकार में हैं और शेष **18** स्टेशन जल विज्ञान एवं समन्वय परिमंडल, बेंगलुरु क्षेत्राधिकार में हैं। प्रति वर्ष जल वर्ष पुस्तक प्रकाशित की जाती है जिस में माह जून से मई तक का डेटा रहता है। यह डेटा डिजिटल रूप में भी उपलब्ध है और डब्ल्यू.आर.आई.एस. वेबसाइट पर अपलोड किया जायेगा और डेटा विकीर्णन पर दिशानिर्देशों के अनुसार विभिन्न उपयोगकर्ता एजेंसियों की जरूरत के अनुसार भी उपलब्ध करवाया जाएगा।

यह जल वर्ष पुस्तक **2022-23** को प्रकाशित करने में इस कार्यालय और विभिन्न मंडल कार्यालयों यथा ऊपरी कृष्ण मंडल, पुणे, निचली कृष्ण मंडल, हैदराबाद और कावेरी मंडल, बेंगलुरु के अधिकारियों और कर्मचारियों के प्रयासों को अभिस्वीकृत किया जाता है जिन के बिना यह खंड प्रकाशित करना संभव नहीं होता।

हैदराबाद
फ़रवरी 2024


(श्रीनिवासू बैरी)
अधीक्षण अभियंता

PREFACE

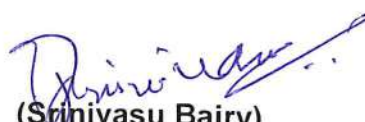
Water, being a limited resource needs to be judiciously utilized for which proper planning is very essential. In order to plan, a statistically valid data bank is a primary requirement. Central Water Commission endeavours to achieve this objective through a good network of Hydrological observation Stations 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 2022-23 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 2022-23 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 55 sites in the Krishna Basin, out of which 37 sites are under the jurisdiction of Krishna and Coordination Circle, Hyderabad and remaining 18 sites are under Hydrological observation & coordination 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 2022-23 are hereby acknowledged, without which, it would not have been possible to bring out this volume.

Hyderabad
February 2024


(Srinivasu Bairy)
Superintending Engineer

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कृष्णा नदी क्षेत्र
दैनिक निर्वहन डेटा (खंड - I)
(जून 2022 - मई 2023)

1. परिचय

1.1 कृष्णा नदी प्रणाली

1.1.1 कृष्णा नदी प्रायद्वीपीय भारत में दूसरी सबसे बड़ी पूर्व-निकासी अंतरराज्यीय नदी है। नदी क्षेत्र पूर्वी रेखांश 73°21' से 81°09' तक और उत्तरी अक्षांश 13°07' से 19°25' के बीच स्थित है, जो महाराष्ट्र, कर्नाटक, तेलंगाना और आंध्र प्रदेश के बड़े क्षेत्रों को कवर करते हुए डेक्कन के पठार में है।

कृष्णा नदी क्षेत्र उत्तर में गोदावरी नदी क्षेत्र से अलग चोटी द्वारा, दक्षिण और पूर्व में पूर्वी घाटों द्वारा तथा पश्चिम में पश्चिमी घाटों द्वारा घिरा हुआ है। नदी क्षेत्र का आकार त्रिकोणीय है जिसका आधार पश्चिमी घाट है तथा शीर्ष विजयवाड़ा है और कृष्णा नदी स्वयं मध्यस्थ बनती हैं। सभी प्रमुख सहायक नदियां पश्चिमी घाट से निकलते हुए हैं और वो कृष्णा नदी में इसकी लंबाई के ऊपरी दो-तिहाई हिस्से में आकर मिलती हैं।

1.1.2 कृष्णा नदी 2,59,439 वर्ग किलोमीटर (भू स्थानिक डेटा सेट के आधार पर) क्षेत्र में बहती है जो कि देश के कुल भौगोलिक क्षेत्र का लगभग 8% है।

जल निकासी क्षेत्र का राज्यवार वितरण नीचे दी गई तालिका में दिखाया गया है।

राज्य का नाम	लम्बाई (कि.मी.)	जल निकासी क्षेत्र (वर्ग कि.मी.)	जल निकासी क्षेत्र %
महाराष्ट्र	306	69,044	26.8
कर्नाटक	483	1,13,622	43.7
तेलंगाना	612	51,388	19.8
आंध्र प्रदेश		25,385	9.8
कुल	1401	2,59,439	100.0

1.1.3 कृष्णा नदी अरब सागर से लगभग 64 किमी दूर महाबलेश्वर के उत्तर में 1337 मीटर की ऊंचाई पर पश्चिमी घाटों में उदित होती है और महाराष्ट्र, कर्नाटक, तेलंगाना और आंध्र प्रदेश राज्यों से होते हुये पश्चिम से पूर्व तक बहती हुये विजयवाड़ा के नीचे की ओर बहाव के साथ बंगाल की खाड़ी में मिल जाती है।

1.1.4 कृष्णा नदी जलमार्ग 1400 किमी लम्बा है जिसमें शामिल होने वाली 13 प्रमुख सहायक नदियां हैं, जिनमें से छह दाएं किनारे की सहायक नदियां हैं और सात बाएं किनारे की सहायक नदियां हैं। घटप्रभा, मलप्रभा और तुंगभद्रा प्रमुख दाएं किनारे की सहायक नदियां हैं जो कुल मिलाकर 35.45% हिस्सेदारी रखते हैं, जबकि भीमा, मुसी और मुन्नरू प्रमुख बाएं किनारे की सहायक नदियां हैं जो कुल

मिलाकर 35.62 % क्षेत्र हिस्सेदारी रखते हैं। सहायक नदियों के स्रोत की ऊंचाई, लंबाई और अपवाह क्षेत्रों की जानकारी नीचे तालिका में दी गई है।

कृष्णा नदी की महत्वपूर्ण सहायक नदियां

स. क्र.	सहायक नदी का नाम	तट	औ. स. त. के ऊपर स्रोत की ऊंचाई (मी.)	लम्बाई (कि.मी.)	अपवाह-क्षेत्र (वर्ग कि.मी.)
1	कोयना	दायाँ	1441	118	4,890
2	पंचगंगा	दायाँ	1020	74	2,575
3	दुधगंगा	दायाँ	870	103	2,350
4	घटप्रभा	दायाँ	884	283	8,829
5	मलप्रभा	दायाँ	793	304	11,549
6	भीमा	बायाँ	945	861	70,614
7	तुंगभद्रा	दायाँ	610	531	71,417
8	दिंडी	बायाँ	718	178	3,490
9	पेददवागु	बायाँ	707	109	2,343
10	हालिया	बायाँ	708	112	3,780
11	मूसी	बायाँ	661	265	11,212
12	पालेरु	बायाँ	515	152	3,263
13	मुन्नेरु	बायाँ	238	195	10,409

1.2 कृष्णा नदी क्षेत्र में बारिश का स्वरूप

कृष्णा नदी क्षेत्र में औसत वार्षिक वर्षा 750 मि.मी. है। वर्ष 2022-23 में कृष्णा नदी बेसिन में तुंगभद्रा उप बेसिन के क्षेत्र में कम वर्षा और अन्य क्षेत्रों औसत वर्षा हुई, जिसके कारण तुंगभद्रा बेसिन के कई साइटों पर कम वार्षिक उपज देखी गई, जबकि अधिकांश अन्य साइटों पर पिछले वर्ष की तुलना में अच्छा प्रदर्शन देखा गया। दक्षिण पश्चिम मॉनसून जून के मध्य में शुरू होता है और अक्टूबर के मध्य तक वापस चला जाता है। मानसून अवधि के दौरान लगभग 90% वार्षिक वर्षा प्राप्त होती है, जिसमें से 70% जुलाई, अगस्त और सितंबर के दौरान होती है।

1.3 कृष्णा नदी क्षेत्र में जल-विज्ञान संबंधी तंत्र

कृष्णा गोदावरी आयोग ने जुलाई 1962 की अपनी रिपोर्ट में कृष्णा बेसिन में कई स्थानों पर स्थायी आधार पर दैनिक बहाव अवलोकन साइटों की एक वैज्ञानिक तरीके से स्थापित करने की सिफारिश की थी। 1973 की अपनी रिपोर्ट में कृष्णा जल विवाद न्यायाधिकरण ने भी कृष्णा बेसिन में अतिरिक्त जल-विज्ञान निरीक्षण केंद्रों की स्थापना की सिफारिश की थी।

केन्द्रीय जल आयोग ने 1963 में कृष्णा बेसिन में जल-विज्ञान अवलोकन शुरू किया। कृष्णा नदी और इसकी सहायक नदियों पर जल-विज्ञान स्थलों की स्थापना की गई और डेटा संग्रहण जारी है। मानसून के मौसम के दौरान, स्टेशन गेज लाइन पर गेज घंटे प्रति घंटा दर्ज की जाता है। गैर मानसून के मौसम के दौरान 0800 घंटे, 1300 घंटे और 1800 घंटे प्रतिदिन तीन बार दर्ज की जाता है।

कृष्णा बेसिन के 55 जल-विज्ञान अवलोकन केंद्रों में से 37, कृष्णा और समन्वय परिमंडल, हैदराबाद के नियंत्रण में हैं और 18 कावेरी मंडल, जल विज्ञानीय प्रेशरण एवं समन्वय परिमंडल, (एच.वो. और सी.सी.), बेंगलुरु के अधीन हैं। कृष्णा और समन्वय परिमंडल के तहत, दो मंडल हैं, यथा ऊपरी कृष्णा मंडल, पुणे ने 16 अवलोकन केंद्रों को और निचली कृष्णा मंडल, हैदराबाद ने 21 अवलोकन केंद्रों को सम्भाले रखा है।

2022-23 के दौरान एकत्रित 55 केंद्रों का दैनिक गेज और निर्वहन डेटा इस खंड में प्रस्तुत किया गया है। गेज और निर्वहन अवलोकन के अलावा, इनमें से कुछ केंद्रों पर तलछट और जल गुणवत्ता निगरानी भी की जाती है। सभी 55 साइटों का वर्ष 2022-23 के लिए जल स्तर और निर्वहन डेटा खंड -1 में प्रस्तुत किया गया है। निलंबित तलछट डेटा (27 साइट) और जल गुणवत्ता डेटा (44 साइट) वर्ष 2022-23 के लिए अनुक्रम II और III में क्रमशः प्रस्तुत किए जाते हैं।

1.4 निरीक्षण तकनीकें

गेज और निर्वहन डेटा के संग्रह के लिए अपनाए गए मानक तरीकों को निम्नलिखित पैरा में संक्षेप में समझाया गया है।

1.4.1 गेज निरीक्षण

नदी के जल स्तर या चरण को औसत समुद्र तल के आधार के ऊपर इसकी ऊंचाई के रूप में मापा जाता है। गैर-अभिलिखित गेज को मैन्युअल रूप से पढ़ कर जल स्तर माप किया जाता है। लंबवत चिह्नित छड़ी की श्रृंखला प्रत्येक साइट पर तीन लड़कों में स्थापित की जाती है। मेट्रिक इकाई अंकन के साथ इनेमल पेन्ट गेज प्लेटें गेज पोस्ट पर स्थापित की जाती हैं ताकि गेज को तीन दशमलव तक पढ़ा जा सके। तीन गेजिंग लाइनों में से, मध्य लाइन को स्टेशन गेज लाइन के रूप में उपयोग किया जाता है और अन्य दो लाइनों की रीडिंग का उपयोग पानी की सतह के ढलान की गणना के लिए किया जाता है।

1.4.2 निर्वहन निरीक्षण

आमतौर पर, रविवार और छुट्टियों के दिनों को छोड़कर सभी दिनों में क्षेत्र-वेग विधि का उपयोग करके लगभग 0800 घंटे पर एक बार निर्वहन अवलोकन किया जाता है।

स्टेशन गेज लाइन पर नदी के गहराई और वेग अवलोकन हेतु IS: 1192-2013 में उल्लेखित विधि अनुसार नदी को 15-25 भागों में विभाजित किया जाता है। नदी के प्रवाह की चौड़ाई

और प्रवाह की स्थिति के आधार पर प्रत्येक खंड का केंद्रीय बिंदु टैग लाइन का उपयोग करके या खंड प्रणाली द्वारा चिह्नित किया जाता है।

मध्य खंड विधि का आमतौर पर पालन किया जाता है और प्रत्येक खंड के मध्य बिंदु पर गहराई और वेग मापा जाता है। वेडिंग राड या गहराई रॉड का उपयोग करके गहराई दर्ज की जाती है, किंतु 3.0 मीटर से अधिक गहराई के लिये साउंडिंग रील या इको साउंडर का उपयोग किया जाता है। असाधारण मामलों में, जहां नदी का नदीतल स्थिर है, अवलोकन अनुभाग में नदी के हालिया ली गई क्रॉस सेक्शन को उपयोग करके गहराई का अनुमान लगाया जाता है।

हराई और वेग अवलोकन कम प्रवाह के दौरान वेडिंग के द्वारा तथा ज्यादा प्रवाह के दौरान नाव के साथ केबल वे द्वारा या आईबी / ओबी इंजन द्वारा किया जाता है। कुछ साइटों पर, पुल का उपयोग करके उस साइट पर उपलब्ध अवलोकन सुविधाओं के माध्यम से डेटा के संग्रह किया जाता है।

IS: 3910-1992 के अनुसार बनाई गई एक कप प्रकार के धारामापी का उपयोग करके IS: 3918-1966 के अनुरूप वेग को मापा जाता है। आमतौर पर धारामापी IS: 6064-1971 के अनुसार निलंबन उपकरण द्वारा प्रत्येक खंड बिंदु पर सतह से कुल गहराई की 0.6 गहराई तक नीचे किया जाता है और जब जल की गहराई 0.3 मीटर से कम होती है, तो वेग पानी की सतह के बिल्कुल नीचे मापा जाता है।

अत्यधिक प्रवाह वेग के दौरान नदी के मध्यम और उच्च स्थलों में, इंजनों वाली नाव का उपयोग किया जाता है। जहां इंजन के बिना FRP नाव का उपयोग किया जाता है उन कुछ स्टेशनों पर नावों के संचालन हेतु केबल वे स्थापित किये गये हैं। जब धारा प्रवाह की स्थिति के कारण नाव को अवलोकन के लिए स्थिर रखना मुश्किल हो जाता है, वहां कभी-कभी वेग मापन सड़क-पुलों से किए जाता हैं, जहां भी संभव होता हैं। जब उपर्युक्त प्रक्रियाओं में से कोई भी संभव नहीं होती है, तो या तो फ्लोट अवलोकन या ढलान-क्षेत्र विधि द्वारा गणना की जाती है।

विभिन्न साइटों पर विभिन्न विधियों द्वारा ली गया डेटा, निर्वहन की गणना करने के लिए निर्धारित मानक रूपों में दर्ज किया जाता है और फिर सतह जल डेटा प्रविष्टि प्रणाली (SWDES) में अंकित करने के लिए उप मंडलीय डेटा केंद्र में प्रेषित किया जाता है। डेटा की सॉफ्ट कॉपी मंडल कार्यालय में जमा की जाती है। मंडल डेटा प्रसंस्करण केंद्र में प्राथमिक सत्यापन के बाद, क्षेत्रीय डेटा प्रसंस्करण केंद्र, परिमंडल कार्यालय में HYMOS सॉफ्टवेयर का उपयोग कर डेटा को संशोधित करके अंतिम रूप दिया जाता है। वर्ष 2016 से लिया गया डेटा को e-SWIS (ऑनलाइन डेटा बेस) में दर्ज किया जा रहा है।

1.4.3 गैर-निरीक्षण दिनों के लिए निर्वहन डेटा की गणना

प्रत्येक सत्र (मानसून या गैर मानसून) के दौरान मापा नदी स्तर और निर्वहन डेटा SWDES से HYMOS में भेजा जाता है। HYMOS में सभी अवलोकन बिंदुओं को वेटेज देकर और ऐसे अवलोकनों को छोड़कर जो असंगत हो, एक स्तर-निर्वहन दर-निर्धारण वक्र तैयार किया जाता

हैं। वर्तमान मौसम के लिए चरण-निर्वहन वक्र को इस तरह से अंतिम रूप दिया गया है कि यह पूर्वाग्रह से मुक्त हो और उपयुक्त परीक्षणों को पास करता हो। पिछले वर्ष के एस-डी वक्र के साथ अध्यारोपित करके तुलना की जाती है और वर्तमान वर्ष के वक्र में यदि कोई परिवर्तन देखा जाता है तो इसके सत्यापन के लिए चरण-क्षेत्र और चरण-वेग आरेखों का उपयोग करके अध्ययन किया जाता है। परिवर्तन की उपयुक्तता के संतोषजनक निष्कर्ष पर, वर्तमान मौसम के चरण-निर्वहन वक्र को अंतिम रूप दिया गया है और गैर-निरीक्षण दिनों के लिए 0800 घंटे बजे पानी के स्तर के लिये दर-निर्धारण वक्र से निर्वहन की गणना की जाती है। अमान्य अवलोकनों के लिए निर्वहन की गणना, चरण-निर्वहन दर-निर्धारण वक्र से की जाती है।

1.5 व्याख्यात्मक & विवेचनात्मक टिप्पणी

1.5.1 इस प्रकाशन में प्रस्तुत डेटा और आलेखी प्रस्तुतिकरणों में निहित जल-विज्ञान मानकों को समझने में सहायता के लिए निम्नलिखित स्पष्टीकरण / व्याख्या दी गयी है।

- i. जल वर्ष, कैलेंडर वर्ष के 1 जून से शुरू होता है और अगले कैलेंडर वर्ष के 31 मई तक चलता है और एक पूर्ण जल-विज्ञान चक्र को पूर्ण करता है।
- ii. दिए गए निर्वहन आंकड़े दैनिक निरीक्षित / अनुमानित प्रवाह होते हैं। गैर-अवलोकन दिनों और अमान्य अवलोकनों के लिए, 0800 घंटों के गेज के लिए निर्वहन का अनुमान लगाया जाता है और प्रति सेकंड घन मीटर (Cumecs) में दर्शाया जाता है।
- iii. गेज का शून्य प्रत्येक साइट के लिए निर्धारित डेटम स्तर का संदर्भ है और बारहमासी नदी के निम्नतम पानी के स्तर से 1 या 2 मीटर कम रखा जाता है। गैर-बारहमासी नदी में, इसे नदी के तल के स्तर से 1 मीटर कम रखा जाता है।
- iv. निर्वहन को निम्न तरीकों से पूर्णांकित किया जाता है :
 - a) 1000 क्यूमेक्स से अधिक होने पर निकटतम पूर्ण पूर्णांक।
 - b) 100-999 क्यूमेक्स के बीच होने पर निकटतम पहला दशमलव मान।
 - c) 10-99 क्यूमेक्स के बीच होने पर निकटतम दूसरा दशमलव मान।
 - d) 10 से कम होने पर निकटतम तीसरा दशमलव मान।
- v. महीने के अधिकतम और न्यूनतम निर्वहन (अवलोकित / गणना) दैनिक निर्वहन से लिया जाता है।
- vi. अपवाह (रन-ऑफ) मिलीमीटर में जल निकासी क्षेत्र पर निर्वहन माप स्टेशन तक पानी की वास्तविक गहराई होती है, जो कि वार्षिक गणित रन-ऑफ के जो समतुल्य होती है, जिसे निम्नलिखित संबंधों का उपयोग करके गणना किया जाता है।

$$\text{अपवाह (मि.मी.)} = \frac{\text{वार्षिक अपवाह (मिलियन क्यूबिक मीटर) \times 1000}}{\text{अपवाह क्षेत्र (वर्ग किमी)}}$$

- vii. रिकॉर्ड पर अधिकतम और सबसे निचला निर्वहन मापने के समय के अनुरूप होता है (निर्वहन मापने का समय आमतौर पर 08.00 घंटे से निर्वहन माप के अंत तक होता है) और पूर्ण अधिकतम और सबसे कम पानी के स्तर के अनुरूप नहीं होता है।

हालांकि, अधिकतम उत्पन्न जल स्तर घटना के दिनांक और समय के साथ इसकी अनुमानित निर्वहन का उल्लेख प्रत्येक साइट की इतिहास पुस्तिका में किया गया है।

गेजिंग साइट का कोड नंबर एक सात-कॉलम वाला अद्वितीय अक्षरांकीय संदर्भ संख्या होती है, जो डेटा बैंकों में प्रवाह डेटा के भंडारण और पुनर्प्राप्ति की सुविधा प्रदान करता है। पहला वर्ण या तो एक अभिन्न नदी बेसिन या एक क्षेत्र है जिसमें कई संगत नदी अपवहन क्षेत्र प्रदर्शित करता है। इसके बाद एक वर्ण होता है, जो एक स्वतंत्र नदी प्रणाली की पहचान करता है, जिसमें समुद्र में एक या एक से अधिक आउटलेट होते हैं या जो किसी अन्य देश में प्रवेश करने के लिए अंतरराष्ट्रीय सीमा पार करते हैं। तीसरे, चौथे और पांचवें वर्ण समुद्र / अंतरराष्ट्रीय सीमा से धारा की ओर बढ़ते क्रमशः पहले, दूसरे और तीसरे अनुक्रम की सहायक नदियों को दर्शाते हैं। छठे और सातवें वर्ण नदी पर निर्धारित गेजिंग साइट का स्थान इंगित करते हैं। रिक्त स्थान, यदि कोई हो तो, शून्य से भरे होते हैं।

1.5.2 चित्रात्मक निरूपण की व्याख्या

आयतचित्र-हाइड्रोग्राफ, पट्टी मानचित्र और एक पाई आरेख आदि; स्वचालित रूप से दर्ज किए गए डेटा के आधार पर सॉफ्टवेयर द्वारा उत्पन्न होते हैं, जिनकी संक्षेप में व्याख्या नीचे दी गयी है।

A. आयतचित्र-हाइड्रोग्राफ : इस आलेखीय निरूपण से पता चलता है (ए) अधिकतम ऐतिहासिक निर्वहन जिसका मतलब है उपलब्ध डेटा की पूरी अवधि में जल वर्ष के प्रत्येक महीने में दिन में उच्चतम निर्वहन कितना है। (बि) इसी प्रकार न्यूनतम ऐतिहासिक निर्वहन का मतलब है उपलब्ध डेटा की पूरी अवधि में जल वर्ष के प्रत्येक महीने में दिन में सबसे कम निर्वहन कितना है। (सि) वर्तमान वर्ष सहित उपलब्ध डेटा की पूरी अवधि के लिए जल वर्ष में प्रत्येक महीने में औसत ऐतिहासिक निर्वहन (डि) वर्तमान वर्ष का औसत निर्वहन का मतलब है कि वर्तमान वर्ष के प्रत्येक माह में दैनिक निर्वहन का औसत मान। इस प्रकार यह ग्राफ एक दिन के अधिकतम न्यूनतम निर्वहन और प्रत्येक वर्ष के लिए प्रत्येक माह के औसत निर्वहन का जिसके लिए डेटा उपलब्ध है निरूपण करता है। तथा इन मानों की तुलना मौजूदा वर्ष के मासिक औसत मानों से करता है।

B. रनऑफ का बार चार्ट: यह निम्नलिखित सूत्रों का उपयोग करते हुए दस लाख घन मीटर (एम.सी.एम.) में मौजूदा वर्ष सहित सभी वर्षों के उपलब्ध आंकड़ों के लिए प्रत्येक जल वर्ष के वार्षिक प्रवाह का सचित्र प्रदर्शन है।

$$\text{दैनिक डिस्चार्ज (घन मीटर प्रति सेकेंड में)} \times 60 \times 60 \times 24 / 1000000 = \text{एम.सी.एम.}$$

में दिन का रनऑफ

दैनिक रनऑफ का योग एक वर्ष में वार्षिक रनऑफ देता है। यह चार्ट उपलब्ध डेटा के सभी वर्षों के लिए साइट पर प्रत्येक वर्ष के वार्षिक रन ऑफ की तुलना करता है।

C. पाई आरेख: मासिक औसत रनऑफ का पाई आरेख वर्ष के प्रत्येक महीने के लिए सालाना रन ऑफ का औसत प्रतिशत दर्शाता है जिसके लिए चालू वर्ष का डेटा भी उपलब्ध हो। इसी तरह वर्तमान वर्ष का पाई आरेख वर्तमान जल वर्ष में प्रत्येक महीने के वार्षिक प्रवाह के प्रतिशत का निरूपित करता है। यह निरूपण किसी विशेष साइट पर वार्षिक उपज में पानी का मासिक योगदान दिखाता है। क्षेत्र में धारा के मार्ग में बारिश गिरने के आधार पर मासिक रन ऑफ एक साइट से दूसरे साइट पर भिन्न हो सकता है।

D. अध्यारोपित अनुप्रस्थ काट: नदी के तल का अनुप्रस्थ काट मानक निर्वहन क्षेत्र के साथ प्रत्येक साइट पर मानसून के पहले और मानसून के बाद दर्ज की जाती है और अनुप्रस्थ काट में परिवर्तन पता करने हेतु इसे अध्यारोपित भी करते हैं।

E. जल स्तर बनाम समय चार्ट: प्रत्येक साइट पर 3 शीर्ष चोटी के बाढ़ का निरूपण इन चार्टों द्वारा किया जाता है। जिसमें प्रत्येक बाढ़ के लिए 72 घंटे (3 दिन) के समय के साथ पानी का स्तर तिथि और समय दिया होता है।

1.6 प्रस्तुति का तरीका

इस खंड में साइट-वार जल-विज्ञान डेटा वृत्तपत्रक प्रवाह तालिका और चित्रमय सारांश प्रस्तुत किए जाते हैं। हाइड्रोलॉजिकल स्टेशनों का अनुक्रमण समुद्र से ऊपर की ओर बढ़ने वाली नदी के साथ या मुख्य नदी / अंतरराष्ट्रीय सीमा के साथ संगम से नदी के स्रोत तक व्यवस्थित किया जाता है। जिसमें मध्यवर्ती सहायक नदियों स्थित साइटों को भी समान रूप से प्राथमिकता दी जाती है।

प्रवाह सारणी निम्नलिखित तथ्य इंगित करती है:

- दैनिक निर्वहन (क्यूमेक्स में)
- दस दैनिक औसत निर्वहन (क्यूमेक्स में)
- मासिक औसत निर्वहन (क्यूमेक्स में)
- मासिक अधिकतम और न्यूनतम निर्वहन (क्यूमेक्स में)
- वार्षिक रन-ऑफ (मि. क्यूमेक्स और मिमी में)

KRISHNA BASIN

DAILY DISCHARGE DATA (VOL - I)

(JUNE 2022 – MAY 2023)

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° 21' to 81° 09' and North latitudes 13° 07' to 19° 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 2022-23 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 various 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. During monsoon

season, gauges are recorded hourly at the station gauge line. During non-monsoon season gauges are recorded thrice daily at 0800 hours, 1300 hours and 1800 hours.

Out of 55 Hydrological observation stations in the Krishna Basin, 37 are under the control of Krishna & Co-Ordination Circle, Hyderabad and 18 are under Hydrological observation, & coordination circle Bangalore. Under the Krishna & Co-Ordination Circle, there are two divisions namely, Upper Krishna Division, (UKD) Pune maintaining 16 observation stations and Lower Krishna Division, (LKD) Hyderabad maintaining 21 observation stations.

The daily gauge and discharge data of 55 stations collected during 2022-23 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 2022-23 of all the 55 sites are presented in Volume-I. Suspended Sediment data (27 sites) and Water Quality data (44 Sites) are presented for the year 2022-23 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 Para's.

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.

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. From June 2016 onwards the observed is being entered in e-SWIS (online database).

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 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 $\times (60 \times 60 \times 24 / 1000000) =$ 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)

HISTORY SHEET

Water Year : 2022-2023

Site : Targaon

Code : TARGAON

State : Maharashtra

District : Satara

Basin : Krishna

Independent River : Krishna

Tributary : Krishna

Sub Tributary :

Sub-Sub Tributary :

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD , Miraj

Drainage Area : 2303 Sq. Km.

Bank : Right

Latitude : 17°31'00"

Longitude : 74°09'00"

Zero of Gauge (m) : 579 (m.s.l)
584 (m.s.l)01-07-2018 - 31-03-2019
01-04-2019

Opening Date

Closing Date

Gauge : 02-07-2018

HFL During 2022-23 : 591.590 m
Corres. Discharge : 639 (Estimated)

Discharge : 07-08-2018

Date & Time of occurrence : 18-10-2022
08:00 Hrs

HFL Recorded so far in m : 594.750 dt 07-08-2019

Corresponding Discharge (cumecs) : 2875*

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2019-2020	2483	594.330	07-08-2019	0.000	584.470	24-05-2020
2020-2021	1136	587.260	15-10-2020	0.000	588.470	08-04-2021
2021-2022	2320	594.210	24-07-2021	0.000	588.400	01-11-2021

Annual Runoff of Krishna at Targaon

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2018-2019	393	0	393	14	0	14
2	2019-2020	2877	30	2907	102	1	103
3	2020-2021	1084	0	1084	38	0	38
4	2021-2022	1306	0	1306	46	0	46
5	2022-2023	1209	0	1209	43	0	43
Average		1374	6	1380	49	0	49

Instantaneous Flood Peak of Krishna at Targaon

Instantaneous Annual Flood Peak					
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2018-19	589.700	19-08-2018	19:00:00	403 *
2	2019-20	594.750	07-08-2019	03:00:00	2875 *
3	2020-21	592.260	15-10-2020	08:00:00	1553 *
4	2021-22	594.470	24-07-2021	03:00:00	2553 *
5	2022-23	591.590	18-10-2022	08:00:00	639 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : Targaon (TARGAON)

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	589.440	0.000	588.410	0.000	588.700	45.01	590.170	271.4	589.015	69.06	588.750	41.33
2	589.500	0.000	588.280	0.000	588.640	35.66	589.105	87.17	588.570	28.22 *	588.700	36.61
3	589.730	0.000	588.250	0.000	588.620	32.61	588.960	71.33	588.730	38.84	588.690	34.83
4	589.700	0.000	588.250	0.000	588.600	30.13	588.720	41.81 *	588.600	26.89	588.640	27.37
5	588.950	0.000	588.340	0.000	588.800	56.84	588.810	50.61	588.730	37.93	588.670	32.13
6	588.310	0.000	588.470	0.000	588.960	71.10	588.850	53.13	588.600	24.22	588.470	20.42 *
7	588.330	0.000	588.490	0.000	588.740	43.79 *	589.200	99.59	589.105	91.87	588.590	26.05
8	588.220	0.000	588.400	0.000	588.925	68.31	589.870	196.4	588.940	62.46	588.420	14.18
9	588.340	0.000	588.420	0.000	589.155	98.05	589.710	185.8	588.920	63.24 *	588.460	13.87
10	588.200	0.000	588.530	0.000	590.320	299.3	590.245	292.7	588.640	28.39	588.590	23.10
11	588.350	0.000	588.750	0.000	590.870	469.2	589.540	151.4 *	588.810	49.27	588.560	23.68
12	588.290	0.000	588.890	59.95	590.810	451.5	589.490	151.2	589.280	113.7	588.220	5.808 *
13	588.250	0.000	588.895	57.05	590.820	459.4	589.530	156.8	589.280	106.0	588.570	28.22 *
14	588.190	0.000	589.380	131.1	590.550	356.9 *	589.770	210.8	589.990	220.1	588.460	13.83
15	588.220	0.000	589.190	101.9	590.700	393.4 *	589.860	215.1	590.210	260.2	588.500	16.93
16	588.230	0.000	589.115	88.17	590.245	288.5	589.900	219.4	589.230	103.4 *	588.180	4.190 *
17	588.440	0.000	589.190	97.76 *	589.720	189.4	590.750	358.4	589.380	107.2	588.480	16.09
18	588.390	0.000	589.040	81.91	589.570	157.2	589.870	210.6 *	591.490	586.4	589.830	0.000
19	588.380	0.000	589.280	117.7	589.615	164.0	589.655	175.9	589.860	200.7	589.900	0.000
20	588.380	0.000	589.255	112.0	589.590	162.9	589.560	158.0	589.710	181.4	589.950	0.000
21	588.310	0.000	588.965	70.46	589.740	186.3 *	589.210	100.4	589.640	162.9	589.880	0.000
22	588.390	0.000	588.810	53.13	589.440	131.2	589.200	96.09	589.530	150.7	589.970	0.000
23	588.450	0.000	588.500	26.19	589.310	118.0	588.985	70.63	589.710	180.9 *	589.960	0.000
24	588.520	0.000	588.640	34.29 *	589.110	89.49	588.960	64.20	589.240	101.3	589.970	0.000
25	588.430	0.000	588.650	36.55	589.215	103.9	589.060	80.37 *	589.110	85.70	589.970	0.000
26	588.420	0.000	588.700	44.72	589.050	77.30	588.980	69.02	589.020	86.89	589.960	0.000
27	588.480	0.000	588.640	35.62	588.780	52.13	588.950	62.15	588.640	33.07	589.970	0.000
28	588.420	0.000	588.580	29.34	588.590	29.90 *	588.765	43.09	589.070	76.56	589.950	0.000
29	588.390	0.000	588.820	56.01	588.685	39.27	588.960	59.96	588.860	45.16	589.890	0.000
30	588.380	0.000	588.880	64.45	588.910	61.85	588.860	48.97	588.790	48.89 *	589.950	0.000
31			588.780	47.85 *	588.430	22.44			588.880	59.28		
Ten-Daily Mean												
I Ten-Daily	588.872	0.000	588.384	0.000	588.946	78.08	589.364	135.0	588.785	47.11	588.598	26.99
II Ten-Daily	588.312	0.000	589.099	84.76	590.249	309.2	589.793	200.8	589.724	192.8	588.865	10.87
III Ten-Daily	588.419	0.000	588.724	45.33	589.024	82.89	588.993	69.49	589.135	93.75	589.947	0.000
Monthly												
Min.	588.190	0.000	588.250	0.000	588.430	22.44	588.720	41.81	588.570	24.22	588.180	0.000
Max.	589.730	0.000	589.380	131.1	590.870	469.2	590.750	358.4	591.490	586.4	589.970	41.33
Mean	588.534	0	588.735	43.42	589.394	154.4	589.383	135.1	589.212	110.7	589.137	12.62

Annual Runoff in MCM = 1209 Annual Runoff in mm = 525

Peak Observed Discharge = 586.4 cumecs on 18-10-2022 Corres. Water Level :591.49 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :589.44 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 2022 - 2023

Station Name : Targaon (TARGAON)

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	589.940	0.000	589.830	0.000	589.810	0.000	589.800	0.000	589.800	0.000	589.630	0.000
2	589.880	0.000	589.810	0.000	589.790	0.000	589.800	0.000	589.800	0.000	589.610	0.000
3	589.930	0.000	589.810	0.000	589.780	0.000	589.790	0.000	589.790	0.000	589.660	0.000
4	589.930	0.000	589.830	0.000	589.790	0.000	589.790	0.000	589.800	0.000	589.640	0.000
5	589.920	0.000	589.820	0.000	589.780	0.000	589.780	0.000	589.740	0.000	589.620	0.000
6	589.910	0.000	589.840	0.000	589.760	0.000	589.800	0.000	589.720	0.000	589.590	0.000
7	589.940	0.000	589.840	0.000	589.760	0.000	589.780	0.000	589.710	0.000	589.530	0.000
8	589.880	0.000	589.830	0.000	589.750	0.000	589.780	0.000	589.700	0.000	589.510	0.000
9	589.880	0.000	589.840	0.000	589.770	0.000	589.790	0.000	589.750	0.000	589.660	0.000
10	589.860	0.000	589.840	0.000	589.800	0.000	589.780	0.000	589.780	0.000	589.820	0.000
11	589.860	0.000	589.850	0.000	589.790	0.000	589.790	0.000	589.800	0.000	589.800	0.000
12	589.870	0.000	589.860	0.000	589.790	0.000	589.790	0.000	589.790	0.000	589.830	0.000
13	589.860	0.000	589.860	0.000	589.800	0.000	589.780	0.000	589.840	0.000	589.830	0.000
14	589.870	0.000	589.830	0.000	589.790	0.000	589.790	0.000	589.830	0.000	589.830	0.000
15	589.910	0.000	589.820	0.000	589.780	0.000	589.780	0.000	589.800	0.000	589.820	0.000
16	589.890	0.000	589.840	0.000	589.760	0.000	589.800	0.000	589.810	0.000	589.770	0.000
17	589.850	0.000	589.840	0.000	589.750	0.000	589.790	0.000	589.680	0.000	589.740	0.000
18	589.850	0.000	589.850	0.000	589.730	0.000	589.810	0.000	589.640	0.000	589.710	0.000
19	589.850	0.000	589.850	0.000	589.720	0.000	589.800	0.000	589.680	0.000	589.710	0.000
20	589.840	0.000	589.850	0.000	589.730	0.000	589.910	0.000	589.720	0.000	589.760	0.000
21	589.830	0.000	589.840	0.000	589.760	0.000	589.850	0.000	589.780	0.000	589.750	0.000
22	589.820	0.000	589.840	0.000	589.750	0.000	589.840	0.000	589.790	0.000	589.670	0.000
23	589.860	0.000	589.850	0.000	589.790	0.000	589.840	0.000	589.780	0.000	589.590	0.000
24	589.850	0.000	589.840	0.000	589.780	0.000	589.830	0.000	589.780	0.000	589.490	0.000
25	589.850	0.000	589.850	0.000	589.800	0.000	589.840	0.000	589.780	0.000	589.480	0.000
26	589.840	0.000	589.850	0.000	589.790	0.000	589.820	0.000	589.780	0.000	588.100	0.000
27	589.830	0.000	589.850	0.000	589.800	0.000	589.810	0.000	589.770	0.000	588.180	0.000
28	589.830	0.000	589.850	0.000	589.790	0.000	589.820	0.000	589.760	0.000	588.300	0.000
29	589.850	0.000	589.850	0.000			589.790	0.000	589.740	0.000	588.200	0.000
30	589.790	0.000	589.840	0.000			589.800	0.000	589.690	0.000	588.160	0.000
31	589.850	0.000	589.840	0.000			589.790	0.000			588.220	0.000
Ten-Daily Mean												
I Ten-Daily	589.907	0.000	589.829	0.000	589.779	0.000	589.789	0.000	589.759	0.000	589.627	0.000
II Ten-Daily	589.865	0.000	589.845	0.000	589.764	0.000	589.804	0.000	589.759	0.000	589.780	0.000
III Ten-Daily	589.836	0.000	589.845	0.000	589.783	0.000	589.821	0.000	589.765	0.000	588.831	0.000
Monthly												
Min.	589.790	0.000	589.810	0.000	589.720	0.000	589.780	0.000	589.640	0.000	588.100	0.000
Max.	589.940	0.000	589.860	0.000	589.810	0.000	589.910	0.000	589.840	0.000	589.830	0.000
Mean	589.868	0	589.840	0	589.775	0	589.805	0	589.761	0	589.394	0

Peak Computed Discharge = 393.4 cumecs on 15-08-2022

Corres. Water Level :590.7 m

Lowest Computed Discharge = 4.190 cumecs on 16-11-2022

Corres. Water Level :588.18 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 : 2022-2023

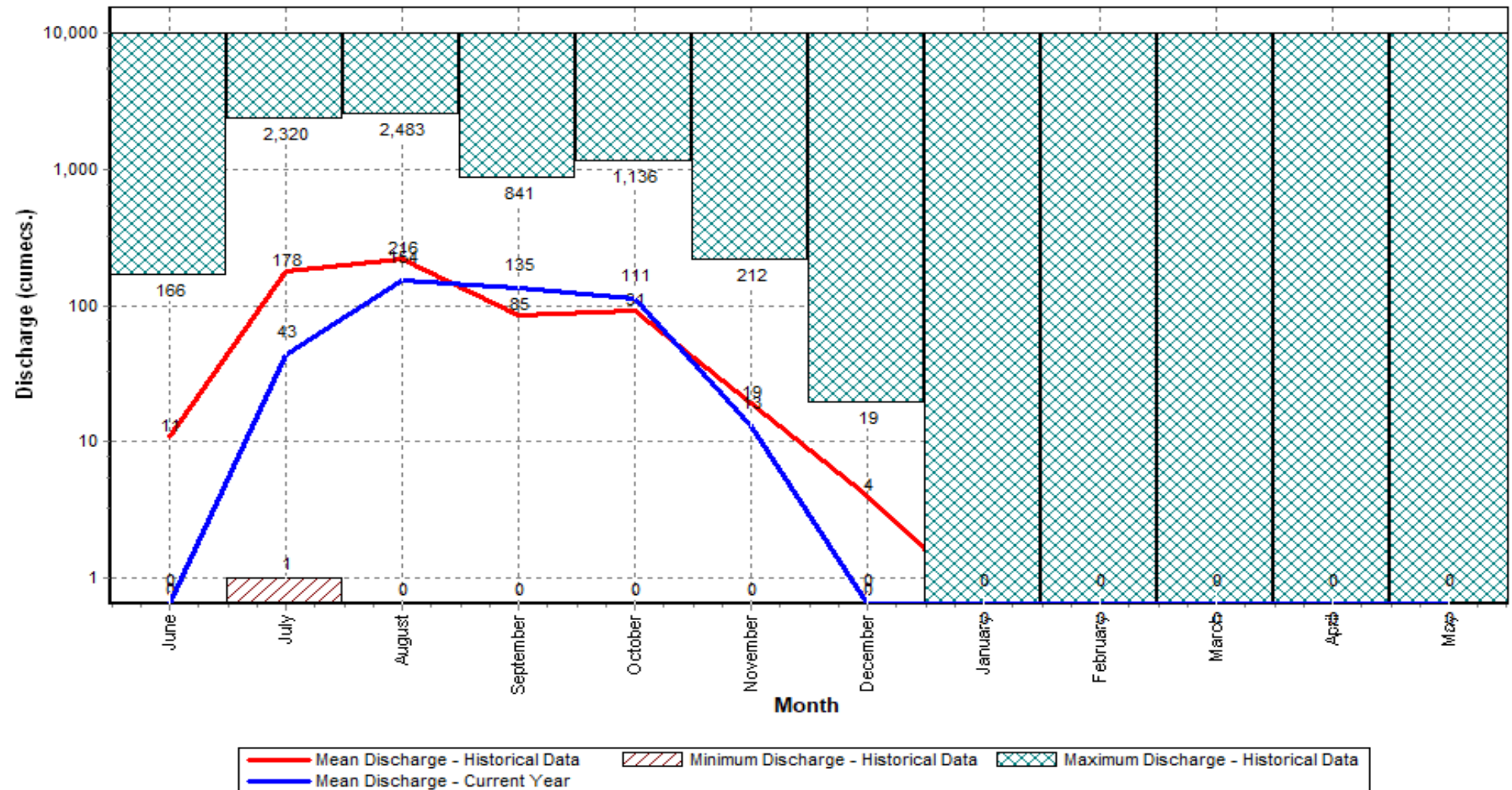
Station Name : Targaon (TARGAON)

Data considered : 2019-2023

Division : Upper Krishna Divn, Pune

Local River : Krishna

Sub-Division : Upper Krishna SD 1, Kolhapur



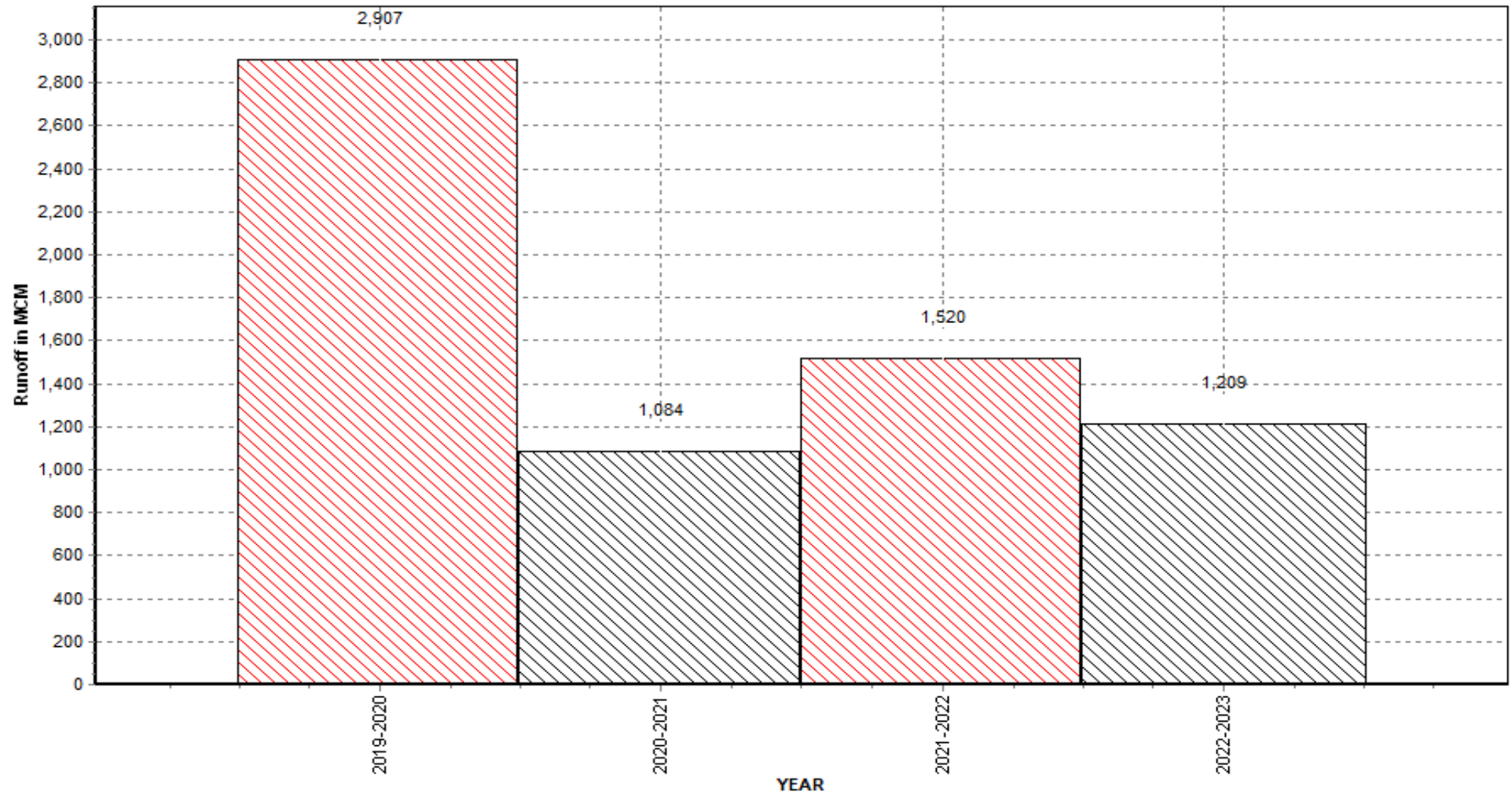
Annual Runoff Values for the period: 2019 - 2023

Station Name : Targaon (TARGAON)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD 1, Kolhapur



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

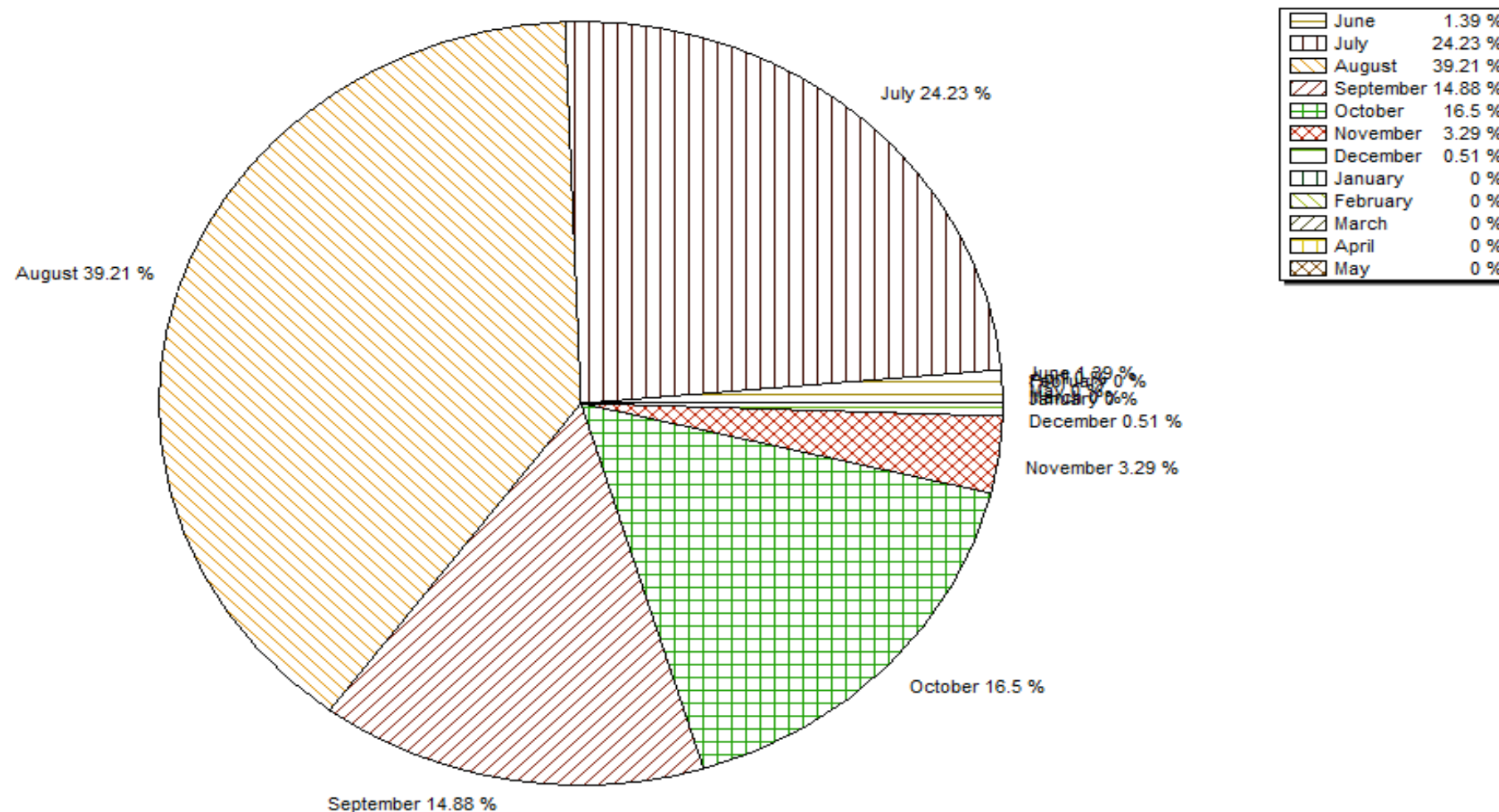
Monthly Average Runoff based on period : 2019-2022

Station Name : Targaon (TARGAON)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD 1, Kolhapur



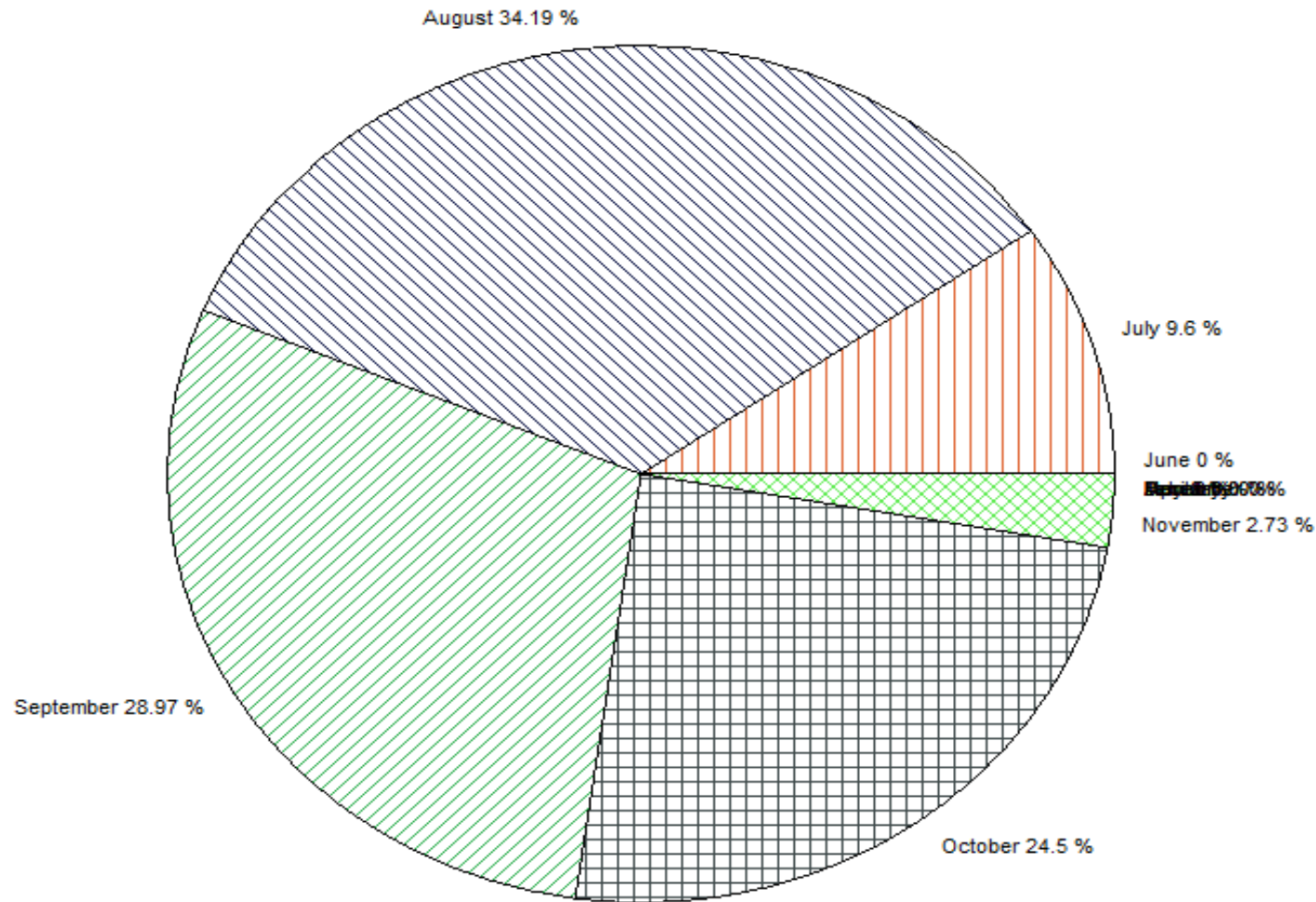
Monthly Runoff for the Year : 2022-2023

Station Name : Targaon (TARGAON)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD 1, Kolhapur



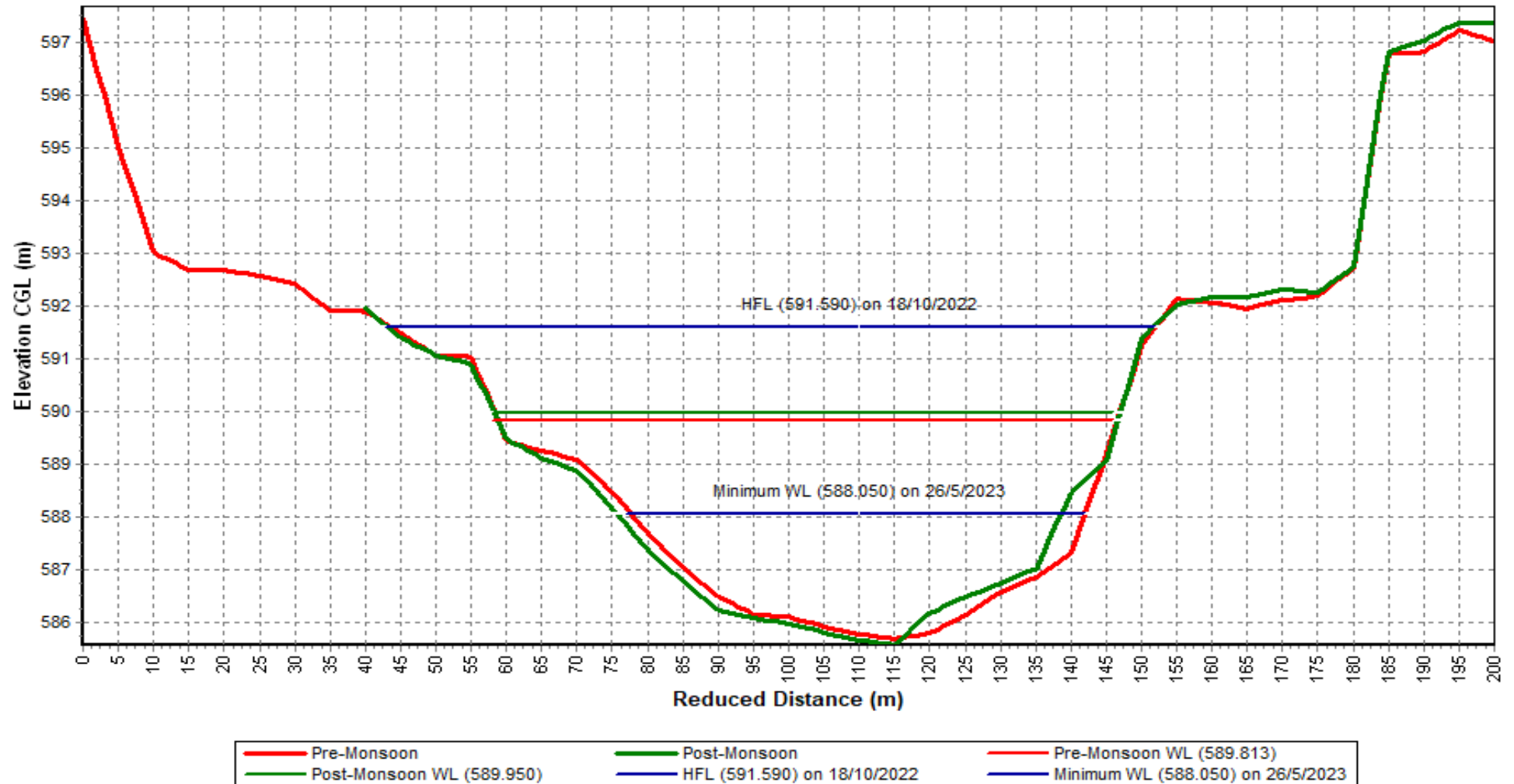
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Targaon (TARGAON)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD 1, Kolhapur



Zero of the Gauge : 584 (m.s.l)

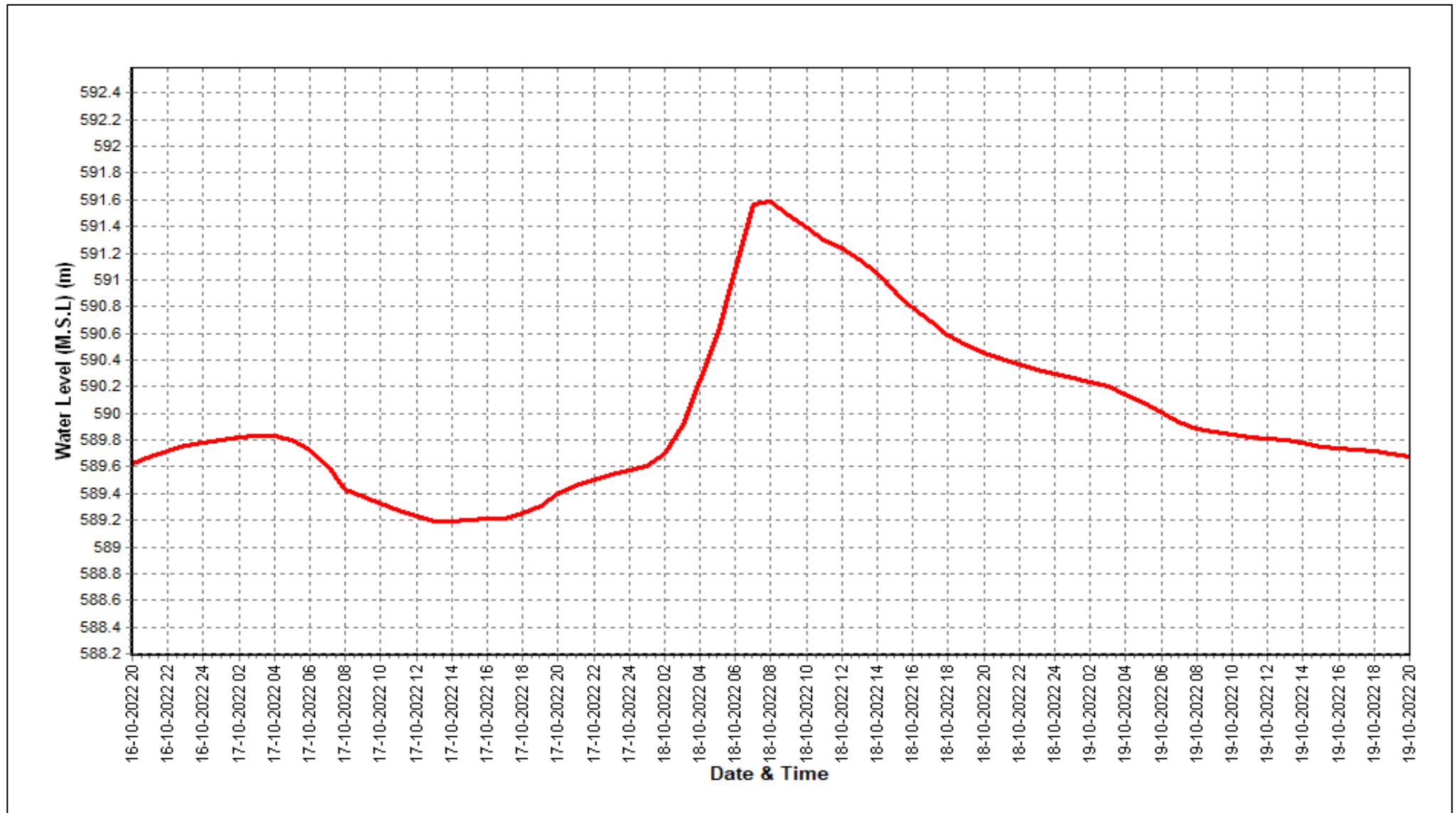
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Targaon (TARGAON)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD 1, Kolhapur



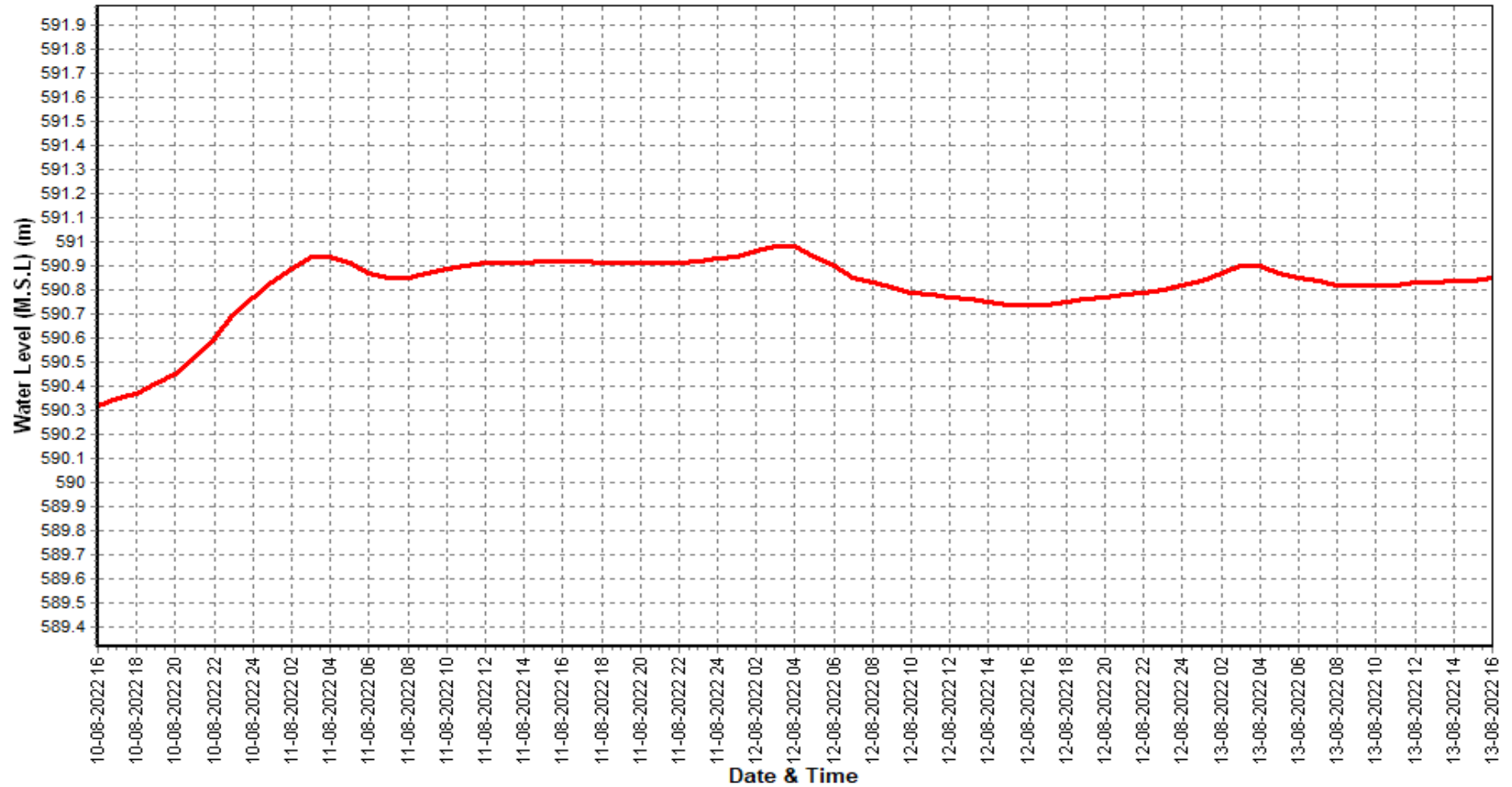
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Targaon (TARGAON)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD 1, Kolhapur



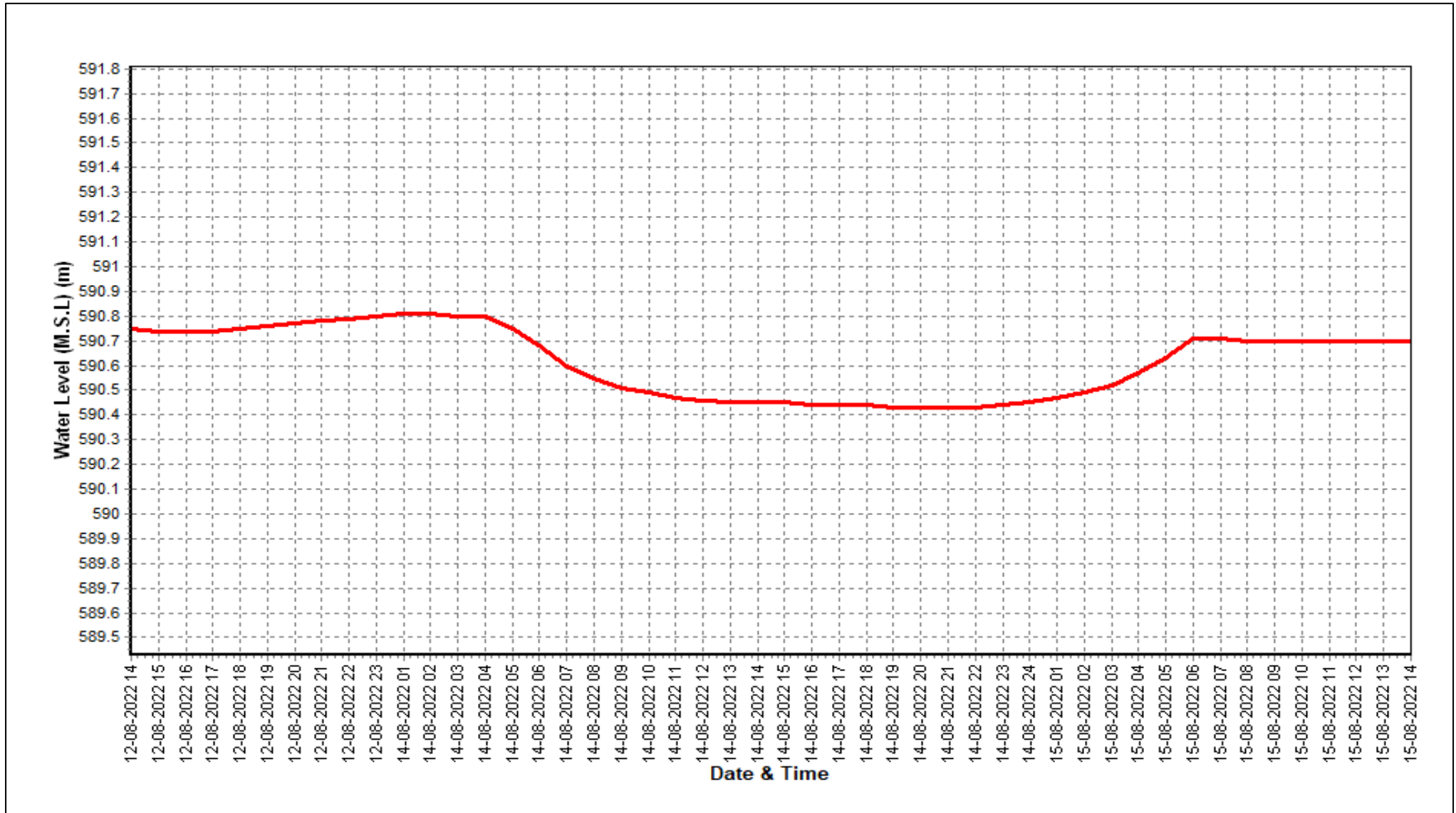
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Targaon (TARGAON)

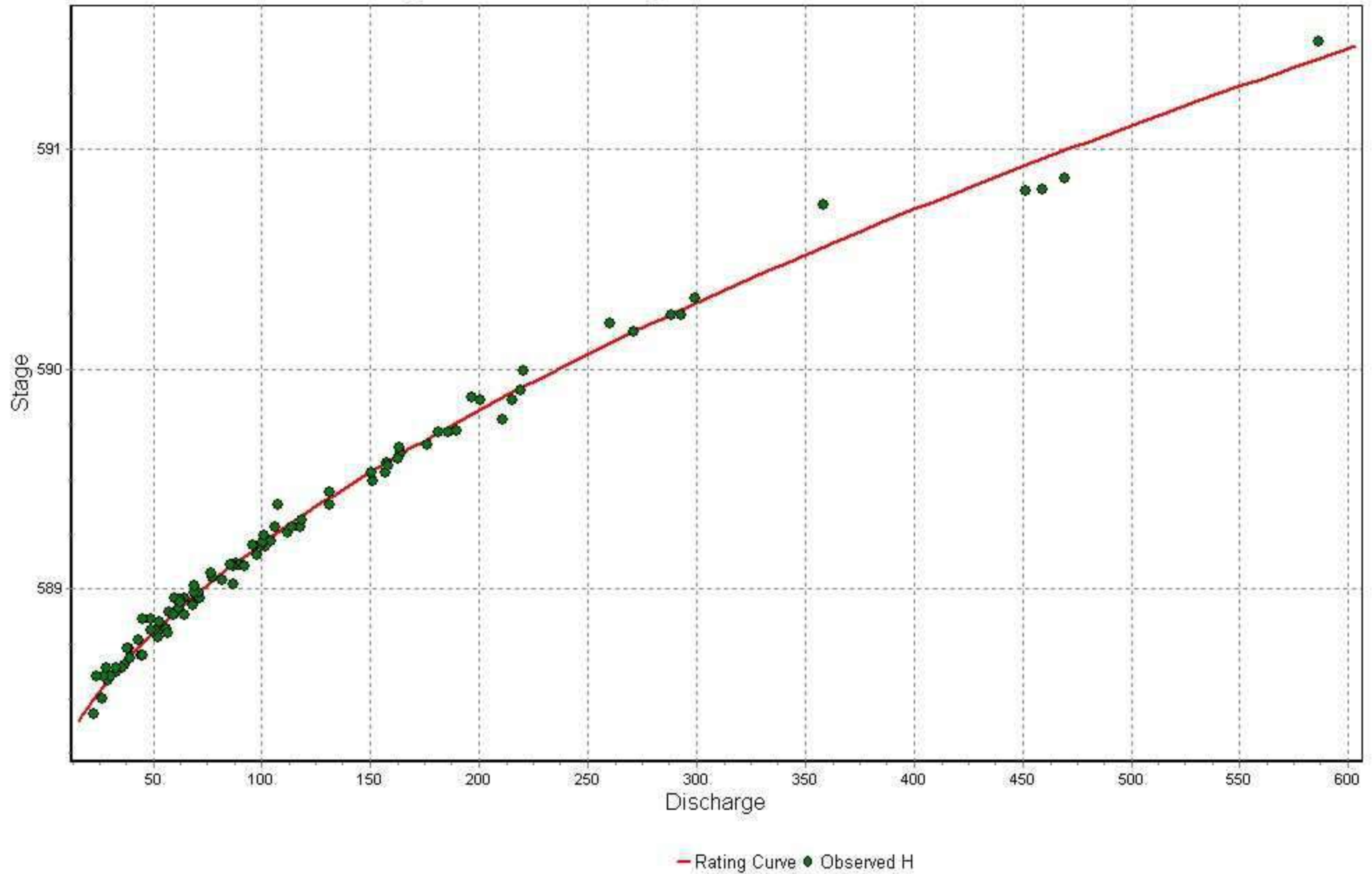
Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD 1, Kolhapur



Rating Curve of Site Targaon 01/06/2022 to 31/10/2022



HISTORY SHEET

Water Year : 2022-2023

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 , Miraj

Drainage Area : 1890 Sq. Km.

Bank : Left

Latitude : 17°16'37"

Longitude : 74°10'15"

Zero of Gauge (m) : 549.962 (m.s.l)
550.937 (m.s.l)
549.437 (m.s.l)

01-08-1963 - 31-03-1964
01-04-1964 - 31-12-1971
01-01-1972

Opening Date

Closing Date

Gauge : 20-08-1963

HFL During 2022-23 : 557.227 m

Discharge : 28-12-1966

Corres. Discharge : 1191 (Estimated)

Sediment : 01-06-1974

Date & Time of : 12-08-2022

occurrence : 07:00 Hrs

Water Quality : 01-06-1974

occurrence : 07:00 Hrs

HFL Recorded so far in m : 567.087 dt 30-07-2006

Corresponding Discharge (cumecs) : 5033*

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

Annual Maximum / Minimum discharge with corresponding water level (mshy)						
Year	Maximum			Minimum		
	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	13-03-1980
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

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

Corresponding Discharge (cumecs) : 5033*

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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	553.077	25-11-2011
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	554.857	19-10-2014
2015-2016	235.7	553.682	25-07-2015	0.000	555.717	21-12-2015
2016-2017	1533	557.807	06-08-2016	0.000	554.847	28-11-2016
2017-2018	1196	557.257	29-08-2017	0.000	552.867	12-11-2017
2018-2019	1653	558.057	31-07-2018	0.000	553.087	23-06-2018
2019-2020	6003	566.727	07-08-2019	0.000	555.937	20-04-2020
2020-2021	1990	560.037	18-08-2020	0.000	556.587	16-04-2021
2021-2022	5276	566.237	24-07-2021	0.000	554.787	09-05-2022

Annual Runoff of Koyna at Warunji

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1965-1966		114	114		4	4
2	1966-1967		60	60		2	2
3	1967-1968	4020	854	4874	142	30	172
4	1968-1969	1409	74	1483	50	3	52
5	1969-1970	3251	107	3358	115	4	119
6	1970-1971	3313	132	3445	117	5	122
7	1971-1972	2623	182	2805	93	6	99
8	1972-1973	1266	187	1452	45	7	51
9	1973-1974	2440	244	2684	86	9	95
10	1974-1975	1694	213	1907	60	8	67
11	1975-1976	2633	239	2872	93	8	101
12	1976-1977	3864	206	4070	137	7	144
13	1977-1978	2391	192	2583	84	7	91
14	1978-1979	2873	144	3017	102	5	107
15	1979-1980	2215	23	2239	78	1	79
16	1980-1981	2967	190	3157	105	7	112
17	1981-1982	1974	184	2158	70	6	76
18	1982-1983	1501	251	1752	53	9	62
19	1983-1984	2119	295	2414	75	10	85
20	1984-1985	1918	392	2310	68	14	82
21	1985-1986	1488	598	2086	53	21	74
22	1986-1987	1757	566	2323	62	20	82
23	1987-1988	1105	424	1529	39	15	54
24	1988-1989	2490	504	2994	88	18	106
25	1989-1990	1523	536	2060	54	19	73
26	1990-1991	3746	815	4561	132	29	161
27	1991-1992	3811	747	4558	135	26	161
28	1992-1993	1864	522	2386	66	18	84
29	1993-1994	2650	765	3415	94	27	121
30	1994-1995	5248	546	5794	185	19	205
31	1995-1996	1288	451	1739	46	16	61
32	1996-1997	1775	524	2299	63	19	81
33	1997-1998	4200	535	4736	148	19	167
34	1998-1999	1862	528	2390	66	19	84
35	1999-2000	2981	519	3500	105	18	124
36	2000-2001	1219	475	1694	43	17	60
37	2001-2002	1160	502	1661	41	18	59
38	2002-2003	1515	506	2021	54	18	71
39	2003-2004	1330	505	1835	47	18	65
40	2004-2005	2838	441	3278	100	16	116
41	2005-2006	6110	383	6493	216	14	229
42	2006-2007	6086	346	6432	215	12	227
43	2007-2008	3947	332	4279	139	12	151
44	2008-2009	2359	314	2673	83	11	94
45	2009-2010	1998	39	2037	71	1	72
46	2010-2011	1958	37	1995	69	1	70
47	2011-2012	3042	0	3042	107	0	107

48	2012-2013	890	0	890	31	0	31
49	2013-2014	2639	0	2639	93	0	93
50	2014-2015	1651	0	1651	58	0	58
51	2015-2016	337	12	349	12	0	12
52	2016-2017	2322	0	2322	82	0	82
53	2017-2018	1697	0	1697	60	0	60
54	2018-2019	3077	0	3077	109	0	109
55	2019-2020	7229	0	7229	255	0	255
56	2020-2021	2258	0	2258	80	0	80
57	2021-2022	2891	0	2891	102	0	102
58	2022-2023	2694	0	2694	95	0	95
Average		2563	289	2763	91	10	98

Instantaneous Flood Peak of Koyna at Warunji

Sl. No.	Year	Instantaneous Annual Flood Peak		Time	Discharge * (Cumecs)
		Peak WL (m) Recorded	Date		
3	1967-1968	564.387	28-07-1967	00:00:00	3427 *
4	1968-1969	557.222	07-08-1968	07:00:00	703 *
5	1969-1970	562.167	01-08-1969	07:00:00	2344 *
6	1970-1971	559.047	21-08-1970	15:00:00	1185 *
7	1971-1972	558.837	31-08-1971	06:00:00	1122 *
8	1972-1973	559.757	08-07-1972	22:00:00	1412 *
9	1973-1974	561.127	08-07-1973	05:00:00	1911 *
10	1974-1975	560.177	05-07-1974	12:00:00	1556 *
11	1975-1976	562.327	10-07-1975	16:00:00	2415 *
12	1976-1977	568.047	07-06-1976	23:00:00	5680 *
13	1977-1978	560.387	04-09-1977	15:00:00	1631 *
14	1978-1979	559.577	02-09-1978	16:00:00	1352 *
15	1979-1980	560.187	07-08-1979	03:00:00	1560 *
16	1980-1981	561.537	06-08-1980	18:00:00	2076 *
17	1981-1982	559.057	10-07-1981	00:00:00	1188 *
18	1982-1983	558.517	29-07-1982	15:00:00	1030 *
19	1983-1984	559.907	17-08-1983	04:00:00	1463 *
20	1984-1985	559.937	18-07-1984	16:00:00	1473 *
21	1985-1986	558.437	02-08-1985	05:00:00	1008 *
22	1986-1987	559.327	30-06-1986	02:00:00	1272 *
23	1987-1988	559.187	08-07-1987	14:00:00	1228 *
24	1988-1989	563.537	03-08-1988	05:00:00	2987 *
25	1989-1990	560.387	25-07-1989	11:00:00	1631 *
26	1990-1991	563.397	18-08-1990	03:00:00	2918 *
27	1991-1992	561.817	28-07-1991	06:00:00	2193 *
28	1992-1993	560.487	14-08-1992	10:00:00	1668 *
29	1993-1994	559.857	19-06-1993	15:00:00	1446 *
30	1994-1995	563.127	03-09-1994	15:00:00	2786 *
31	1995-1996	558.037	20-07-1995	13:00:00	901 *
32	1996-1997	562.227	04-10-1996	11:00:00	2371 *
33	1997-1998	564.697	24-08-1997	07:00:00	3595 *
34	1998-1999	559.207	09-07-1998	03:00:00	1234 *
35	1999-2000	559.947	28-07-1999	07:00:00	1476 *
36	2000-2001	557.007	13-07-2000	21:00:00	656 *
37	2001-2002	557.707	10-07-2001	19:00:00	817 *
38	2002-2003	557.207	07-09-2002	03:00:00	700 *
39	2003-2004	556.137	28-07-2003	00:00:00	486 *
40	2004-2005	563.537	13-08-2004	23:00:00	2987 *
41	2005-2006	565.927	02-08-2005	20:00:00	4304 *
42	2006-2007	567.087	30-07-2006	12:00:00	5033 *
43	2007-2008	562.137	02-07-2007	07:00:00	2331 *
44	2008-2009	561.087	11-08-2008	09:00:00	1895 *
45	2009-2010	557.207	15-07-2009	19:00:00	700 *
46	2010-2011	557.237	27-07-2010	00:00:00	707 *
47	2011-2012	564.457	04-09-2011	11:00:00	3465 *
48	2012-2013	556.687	06-09-2012	04:00:00	590 *

49	2013-2014	560.647	25-07-2013	18:00:00	1727 *
50	2014-2015	558.097	24-07-2014	12:00:00	916 *
51	2015-2016	556.507	25-07-2015	09:00:00	554 *
52	2016-2017	557.837	06-08-2016	06:00:00	850 *
53	2017-2018	557.467	29-08-2017	11:00:00	760 *
54	2018-2019	558.057	23-08-2018	17:00:00	906 *
55	2019-2020	567.067	07-08-2019	21:00:00	5015 *
56	2020-2021	560.937	17-08-2020	20:00:00	1837 *
57	2021-2022	567.987	24-07-2021	05:00:00	5945 *
58	2022-2023	557.227	12-08-2022	07:00:00	1191 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : Warunji (AKZ00A7)

Division : Upper Krishna Divn, Pune

Local River : Koyna

Sub-Division :Upper Krishna SD, 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	554.947	0.000	554.807	0.000	552.527	68.89	553.567	0.000	552.412	45.48	551.957	14.58
2	554.797	0.000	554.887	0.000	552.442	40.56	552.557	65.05	552.257	32.24 *	551.937	14.34
3	555.137	0.000	554.937	0.000	552.417	35.60	553.237	0.000	552.197	28.15	551.897	12.48
4	554.997	0.000	554.687	0.000	552.437	37.78	552.737	0.000	552.162	27.88	551.867	9.147
5	555.117	0.000	555.047	0.000	552.472	42.09	552.337	0.000	552.567	78.25	551.787	10.61
6	555.157	0.000	554.487	0.000	552.847	98.73	552.357	0.000	552.487	57.41	551.777	2.554 *
7	554.777	0.000	554.417	0.000	552.777	87.41 *	552.507	0.000	552.912	106.3	551.777	9.979
8	555.037	0.000	553.762	240.3 #	553.697	228.9	553.182	145.4	553.167	151.2	551.737	9.708
9	554.917	0.000	554.772	450.7 #	555.497	630.7 *	552.722	82.70	552.947	109.6 *	551.757	10.15
10	554.667	0.000	554.327	351.9 *	556.342	841.5	553.047	120.1	552.342	41.34	551.717	9.272
11	554.797	0.000	555.527	668.8	556.292	839.3	553.067	126.4 *	552.157	27.23	552.557	66.07
12	554.697	0.000	555.562	677.9	557.212	1178	552.887	103.3	552.802	97.37	552.517	61.55
13	554.767	0.000	555.182	549.7 #	556.592	927.4	553.547	205.2	553.057	123.8	552.437	49.01 *
14	554.607	0.000	555.347	591.6 #	556.107	799.2 *	555.157	545.5	553.487	186.1	552.547	62.30
15	554.777	0.000	555.272	572.4 #	556.117	802.1 *	555.917	745.1 #	553.672	226.4	552.587	70.57
16	554.577	0.000	555.317	583.9 #	555.977	740.2	555.167	549.3	553.547	202.2 *	552.482	63.85
17	554.687	0.000	555.167	546.0 *	556.127	779.4	556.837	993.1	553.542	200.2	552.237	30.36
18	554.347	0.000	554.532	396.3 #	555.892	738.1 #	556.447	899.6 *	553.717	228.1	552.267	32.44
19	554.127	0.000	554.157	316.7 #	555.752	720.3	554.487	395.9	553.527	198.7 #	552.232	33.56
20	554.117	0.000	554.047	294.6 #	555.777	723.6	553.347	175.5	553.047	123.5 #	552.237	30.54 *
21	554.617	0.000	553.707	230.3 #	556.227	834.1 *	553.042	119.8	553.057	125.0 #	552.197	26.99
22	554.587	0.000	553.482	191.1	554.867	471.6	553.582	219.0	553.027	120.7 #	552.227	31.36
23	554.597	0.000	553.387	160.5	554.337	350.5	553.367	172.6	553.027	120.7 *	552.227	31.14
24	554.857	0.000	553.227	150.2 *	553.667	229.4	553.072	124.5	552.842	95.67	552.217	30.46
25	554.687	0.000	553.552	199.8	553.637	223.7	552.787	88.66 *	552.507	50.22	552.237	32.63
26	554.487	0.000	553.342	159.0	553.257	153.2	552.707	82.80	552.427	45.81	552.257	32.41
27	554.787	0.000	553.317	155.6	552.927	105.9	552.637	74.64	552.337	35.60	552.257	32.24 *
28	554.547	0.000	552.957	100.2	552.797	89.92 *	552.607	71.51	552.352	38.02	552.217	30.31
29	554.657	0.000	553.047	118.3	552.657	78.20	552.537	64.93	552.192	27.87	552.237	32.91
30	554.497	0.000	552.757	90.47	552.552	63.59	552.487	58.45	552.117	21.11 *	552.237	33.42
31			552.647	71.75 *	553.657	221.4 *			552.032	15.33		
Ten-Daily Mean												
I Ten-Daily	554.955	0.000	554.613	104.3	553.346	211.2	552.825	41.32	552.545	67.79	551.821	10.28
II Ten-Daily	554.550	0.000	555.011	519.8	556.184	824.7	554.686	473.9	553.255	161.4	552.410	50.03
III Ten-Daily	554.632	0.000	553.220	147.9	553.689	256.5	552.883	107.7	552.538	63.27	552.231	31.39
Monthly												
Min.	554.117	0.000	552.647	0.000	552.417	35.60	552.337	0.000	552.032	15.33	551.717	2.554
Max.	555.157	0.000	555.562	677.9	557.212	1178	556.837	993.1	553.717	228.1	552.587	70.57
Mean	554.712	0	554.247	253.8	554.383	425.2	553.465	207.6	552.772	96.37	552.154	30.56

Annual Runoff in MCM = 2694 Annual Runoff in mm = 1425

Peak Observed Discharge = 1178 cumecs on 12-08-2022 Corres. Water Level :557.212 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :554.947 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 2022 - 2023

Station Name : Warunji (AKZ00A7)

Division : Upper Krishna Divn, Pune

Local River : Koyna

Sub-Division :Upper Krishna SD, Miraj

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	552.237	0.000	553.417	0.000	552.837	0.000	553.267	0.000	553.307	0.000	553.487	0.000
2	552.247	0.000	553.337	0.000	553.017	0.000	553.137	0.000	553.377	0.000	553.497	0.000
3	552.287	0.000	553.077	0.000	552.487	0.000	553.217	0.000	553.287	0.000	553.787	0.000
4	552.327	0.000	553.137	0.000	552.567	0.000	553.077	0.000	553.367	0.000	553.717	0.000
5	552.237	0.000	552.607	0.000	553.167	0.000	552.777	0.000	553.337	0.000	553.707	0.000
6	552.437	0.000	552.667	0.000	553.227	0.000	553.397	0.000	553.407	0.000	553.737	0.000
7	552.717	0.000	553.327	0.000	553.197	0.000	553.257	0.000	553.357	0.000	553.617	0.000
8	552.737	0.000	553.147	0.000	553.127	0.000	553.127	0.000	553.307	0.000	553.577	0.000
9	552.647	0.000	553.477	0.000	553.267	0.000	553.197	0.000	553.277	0.000	553.307	0.000
10	552.617	0.000	553.197	0.000	553.067	0.000	553.457	0.000	553.327	0.000	553.287	0.000
11	552.457	0.000	553.367	0.000	552.987	0.000	553.537	0.000	553.347	0.000	553.357	0.000
12	552.537	0.000	553.187	0.000	553.237	0.000	553.317	0.000	553.447	0.000	553.407	0.000
13	552.447	0.000	553.267	0.000	553.277	0.000	553.287	0.000	553.477	0.000	553.367	0.000
14	552.637	0.000	553.347	0.000	553.177	0.000	553.237	0.000	553.397	0.000	553.377	0.000
15	553.307	0.000	553.387	0.000	553.137	0.000	553.177	0.000	553.337	0.000	553.437	0.000
16	553.607	0.000	553.297	0.000	553.157	0.000	553.127	0.000	553.557	0.000	553.407	0.000
17	553.947	0.000	553.367	0.000	553.097	0.000	553.287	0.000	553.507	0.000	553.287	0.000
18	553.197	0.000	553.307	0.000	553.177	0.000	553.087	0.000	553.407	0.000	553.237	0.000
19	552.997	0.000	553.287	0.000	553.207	0.000	553.307	0.000	553.457	0.000	553.367	0.000
20	553.217	0.000	552.977	0.000	553.197	0.000	553.137	0.000	553.417	0.000	553.487	0.000
21	553.287	0.000	553.367	0.000	552.867	0.000	553.197	0.000	553.407	0.000	553.287	0.000
22	553.497	0.000	553.497	0.000	553.117	0.000	553.297	0.000	553.477	0.000	553.367	0.000
23	553.237	0.000	553.467	0.000	552.967	0.000	553.267	0.000	553.437	0.000	553.417	0.000
24	552.777	0.000	553.177	0.000	553.177	0.000	553.227	0.000	553.357	0.000	553.487	0.000
25	553.497	0.000	553.067	0.000	553.197	0.000	553.277	0.000	553.377	0.000	553.437	0.000
26	553.347	0.000	553.117	0.000	553.117	0.000	553.307	0.000	553.337	0.000	553.527	0.000
27	553.117	0.000	553.047	0.000	553.257	0.000	553.267	0.000	553.397	0.000	553.367	0.000
28	552.847	0.000	553.157	0.000	553.217	0.000	553.287	0.000	553.517	0.000	553.477	0.000
29	552.817	0.000	552.507	0.000			553.277	0.000	553.717	0.000	553.417	0.000
30	552.967	0.000	552.827	0.000			553.287	0.000	553.557	0.000	553.437	0.000
31	553.227	0.000	552.867	0.000			553.307	0.000			553.747	0.000
Ten-Daily Mean												
I Ten-Daily	552.449	0.000	553.139	0.000	552.996	0.000	553.191	0.000	553.335	0.000	553.572	0.000
II Ten-Daily	553.035	0.000	553.279	0.000	553.165	0.000	553.250	0.000	553.435	0.000	553.373	0.000
III Ten-Daily	553.147	0.000	553.100	0.000	553.115	0.000	553.273	0.000	553.458	0.000	553.452	0.000
Monthly												
Min.	552.237	0.000	552.507	0.000	552.487	0.000	552.777	0.000	553.277	0.000	553.237	0.000
Max.	553.947	0.000	553.497	0.000	553.277	0.000	553.537	0.000	553.717	0.000	553.787	0.000
Mean	552.886	0	553.170	0	553.090	0	553.239	0	553.409	0	553.465	0

Peak Computed Discharge = 899.6 cumecs on 18-09-2022

Corres. Water Level :556.447 m

Lowest Computed Discharge = 2.554 cumecs on 06-11-2022

Corres. Water Level :551.777 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 : 2022-2023

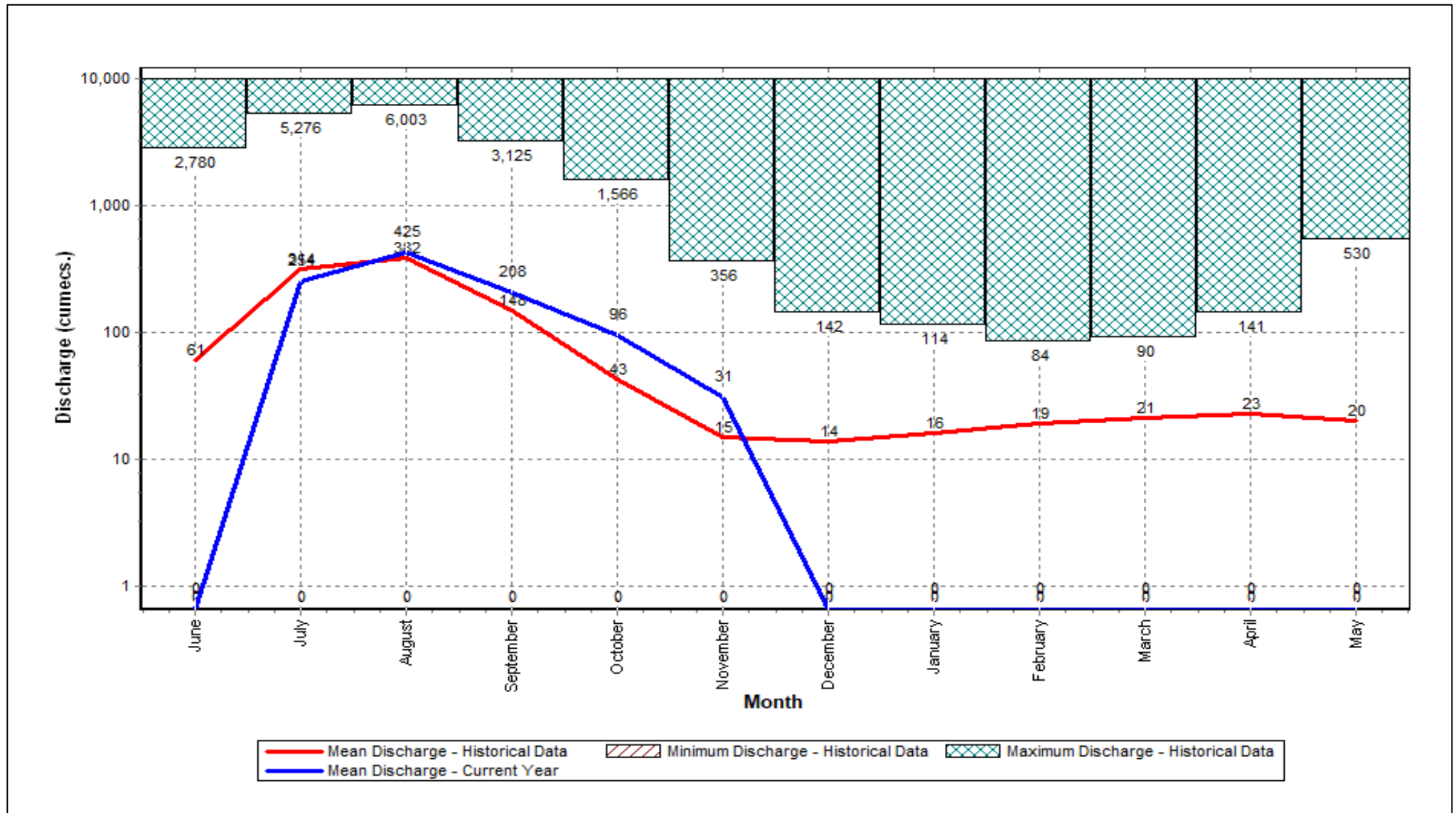
Station Name : Warunji (AKZ00A7)

Data considered : 1967-2023

Division : Upper Krishna Divn, Pune

Local River : Koyna

Sub-Division : Upper Krishna SD, Miraj



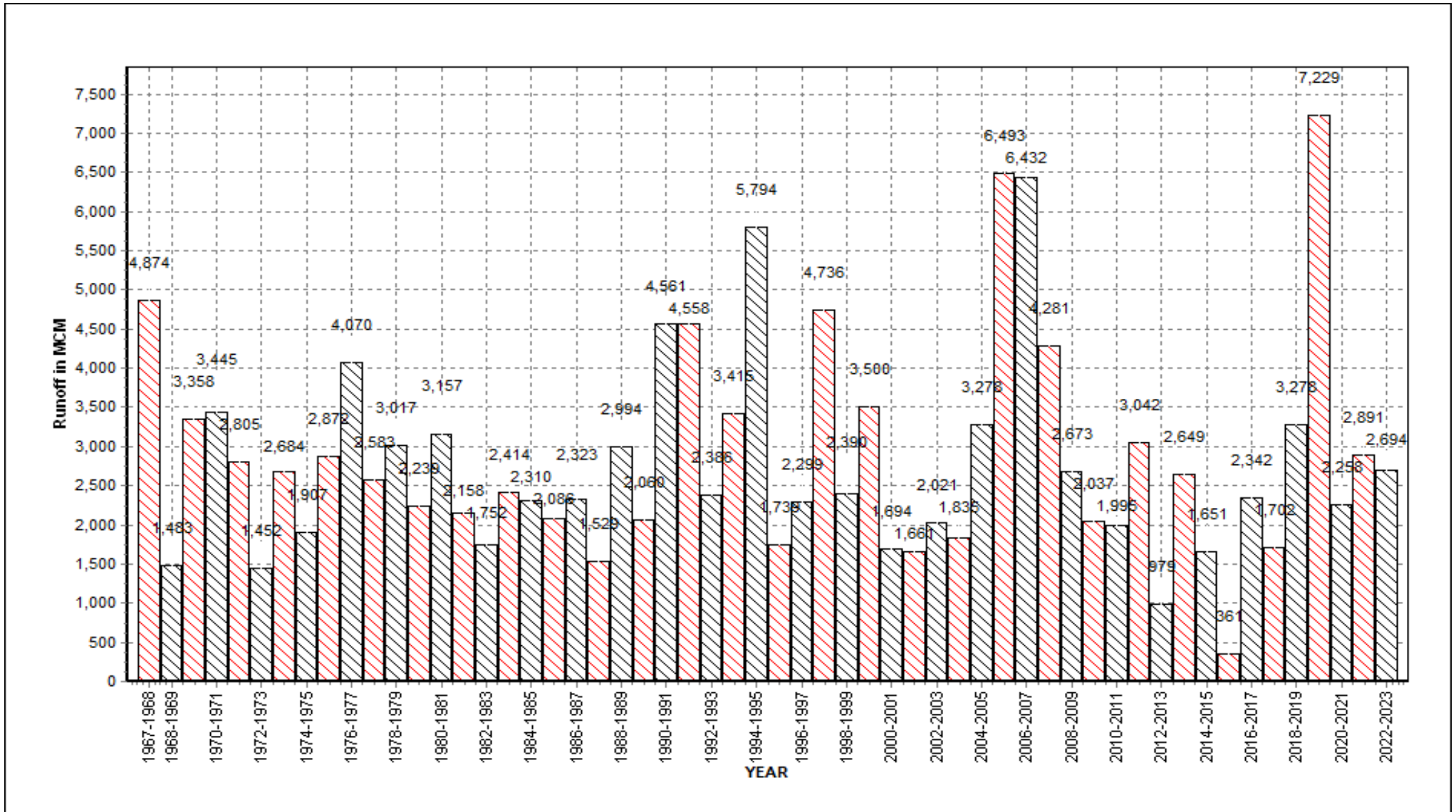
Annual Runoff Values for the period: 1967 - 2023

Station Name : Warunji (AKZ00A7)

Local River : Koyna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



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

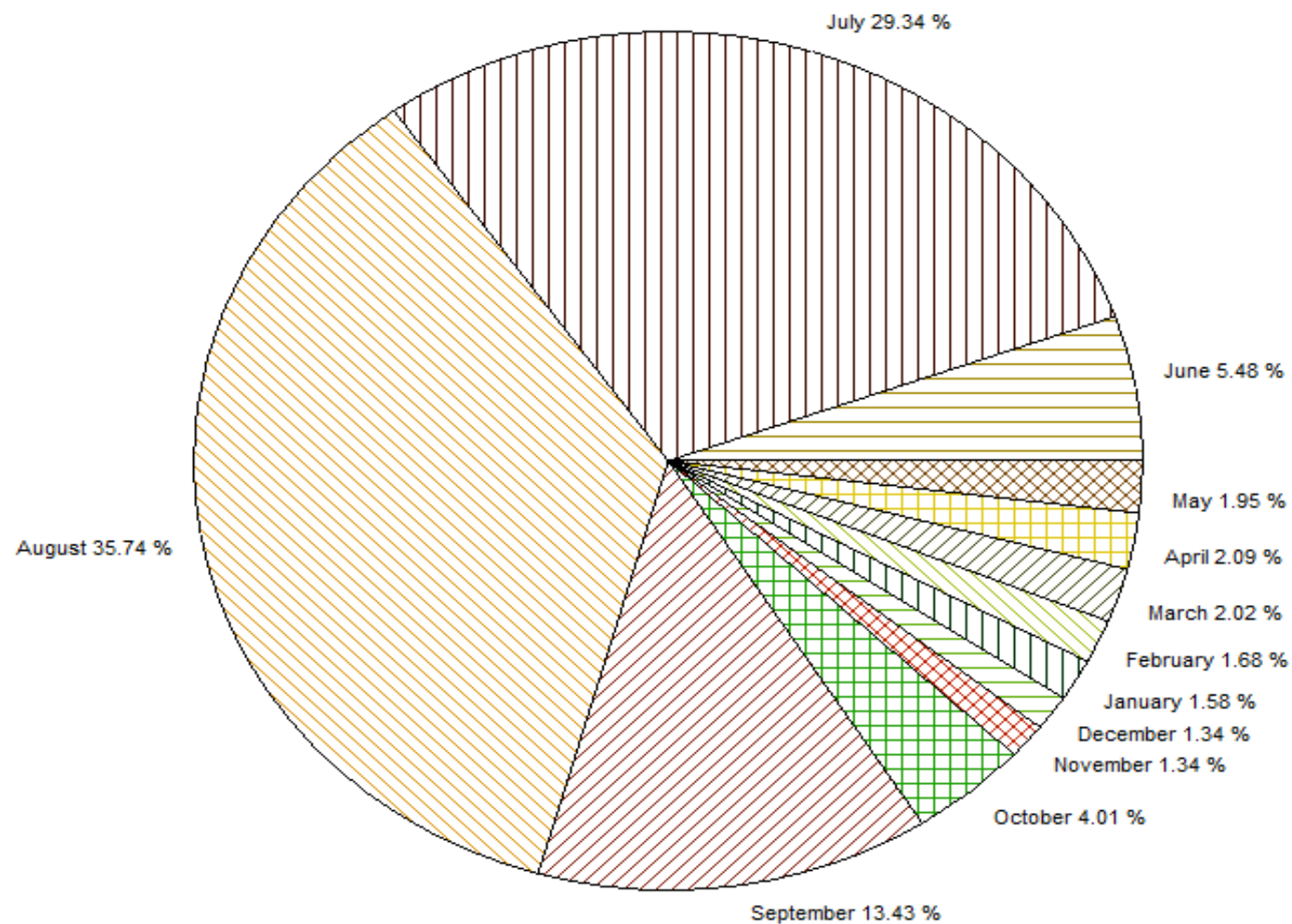
Monthly Average Runoff based on period : 1967-2022

Station Name : Warunji (AKZ00A7)

Local River : Koyna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



June	5.48 %
July	29.34 %
August	35.74 %
September	13.43 %
October	4.01 %
November	1.34 %
December	1.34 %
January	1.58 %
February	1.68 %
March	2.02 %
April	2.09 %
May	1.95 %

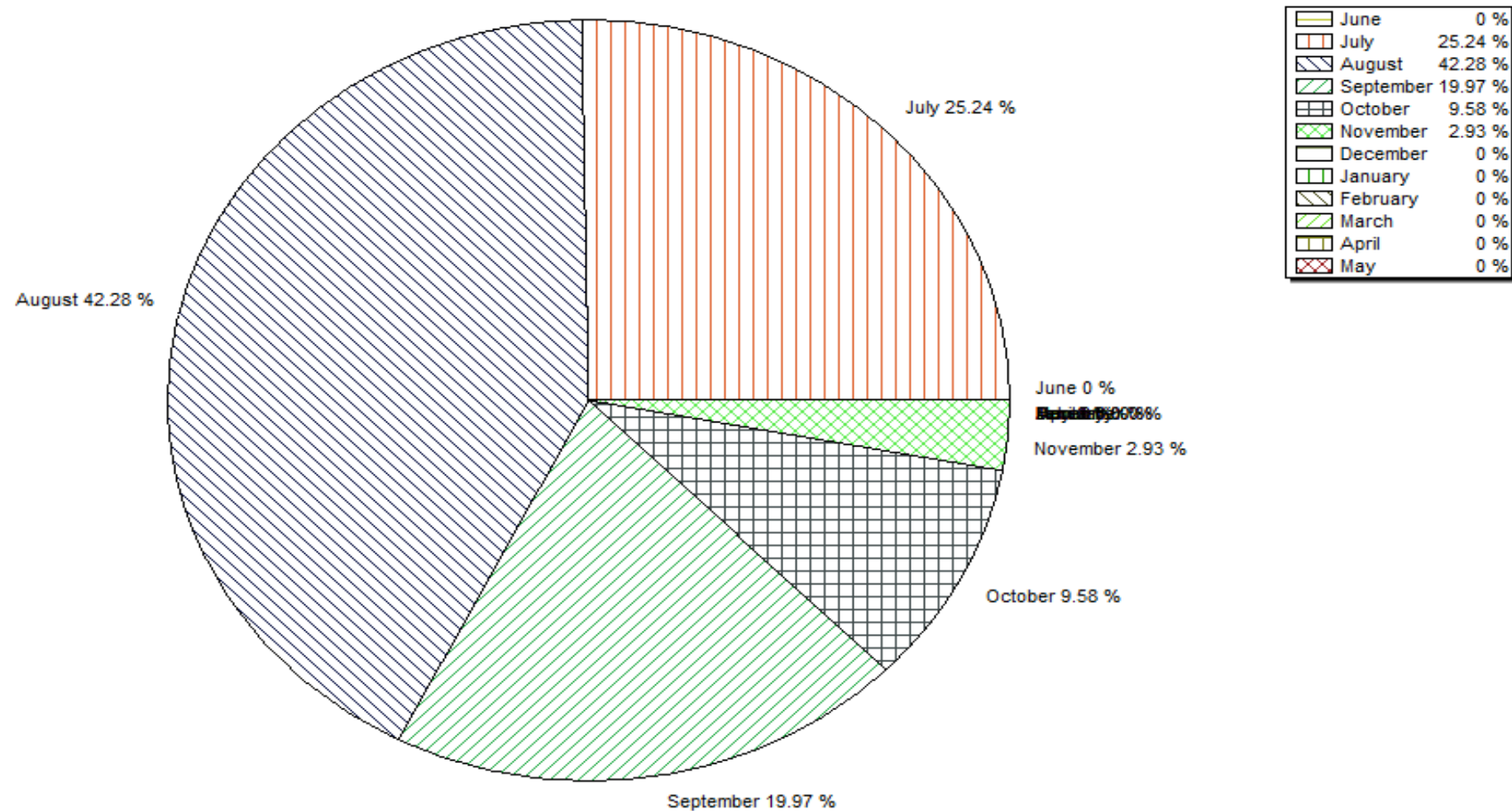
Monthly Runoff for the Year : 2022-2023

Station Name : Warunji (AKZ00A7)

Local River : Koyna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



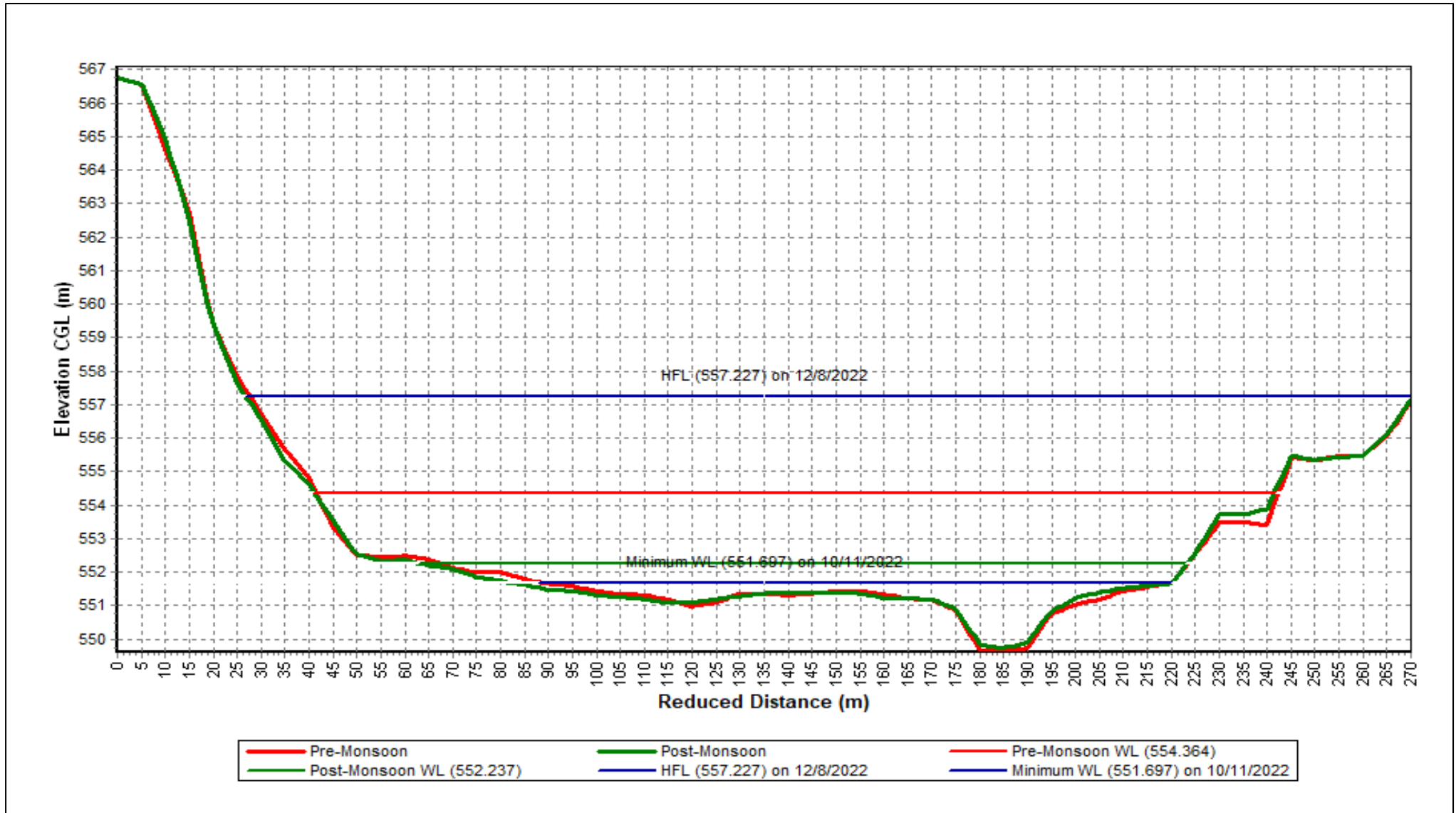
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Warunji (AKZ00A7)

Local River : Koyna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



Zero of the Gauge: 549.437 (m.s.l)

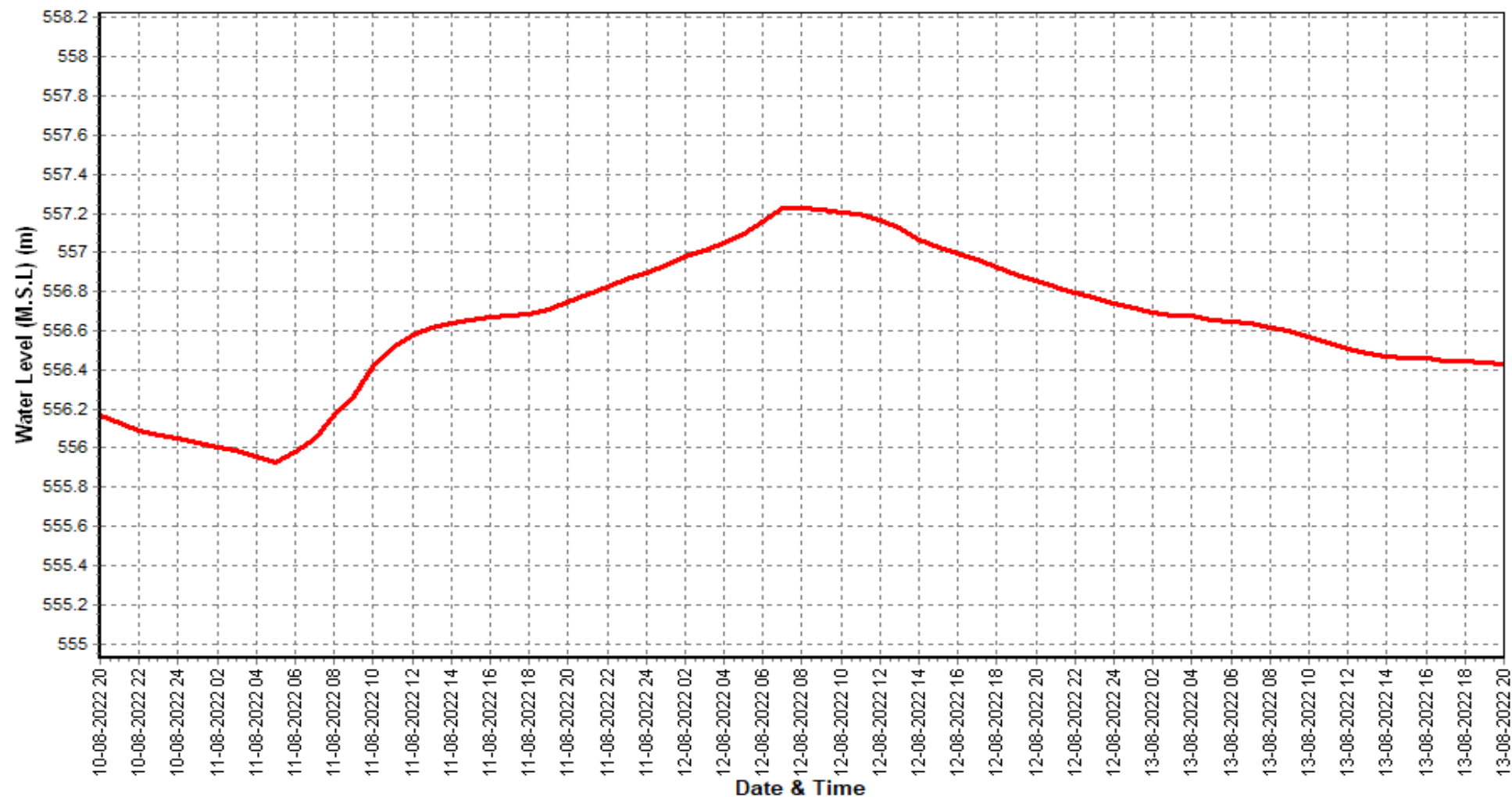
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Warunji (AKZ00A7)

Local River : Koyna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



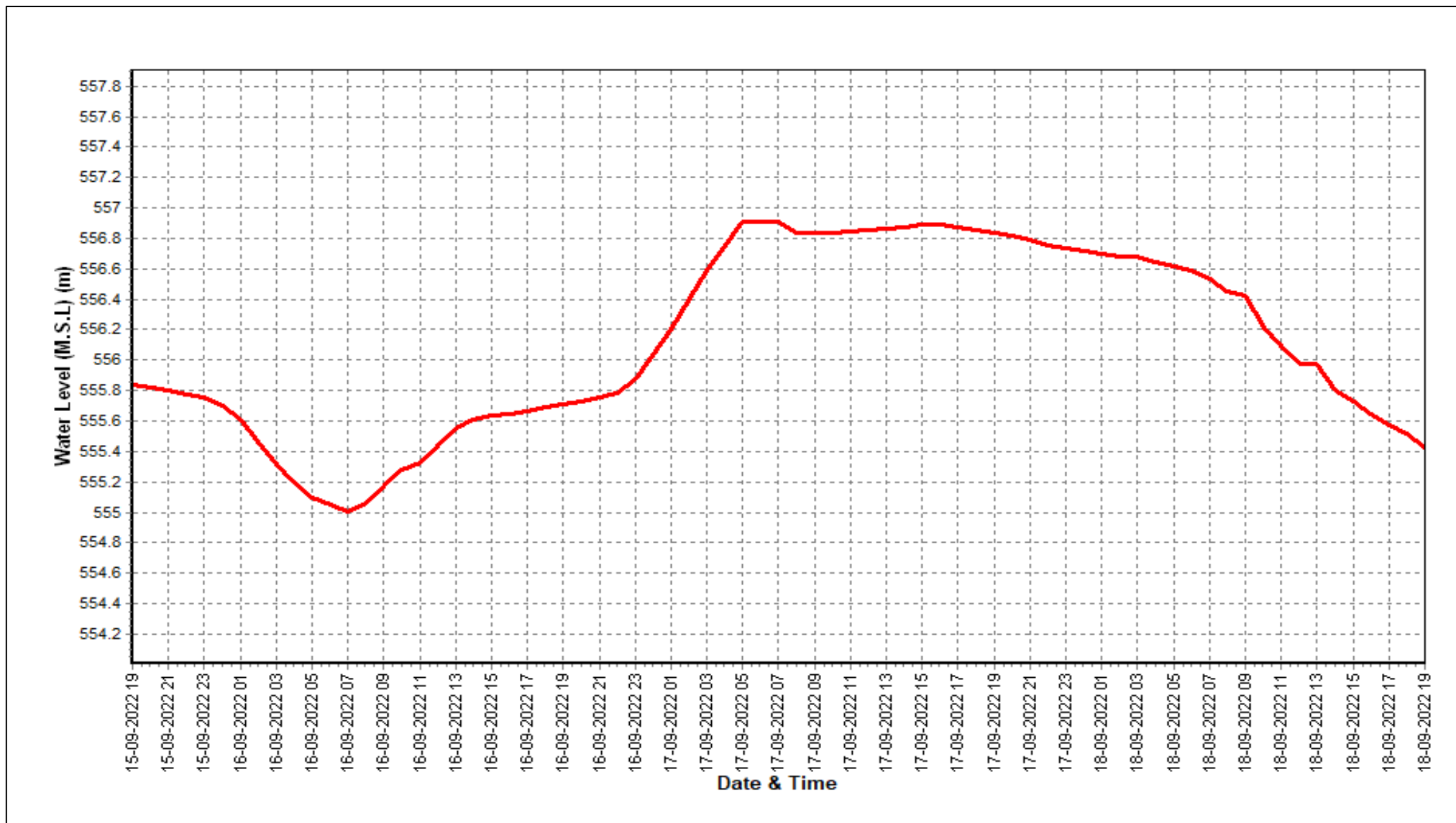
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Warunji (AKZ00A7)

Local River : Koyna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



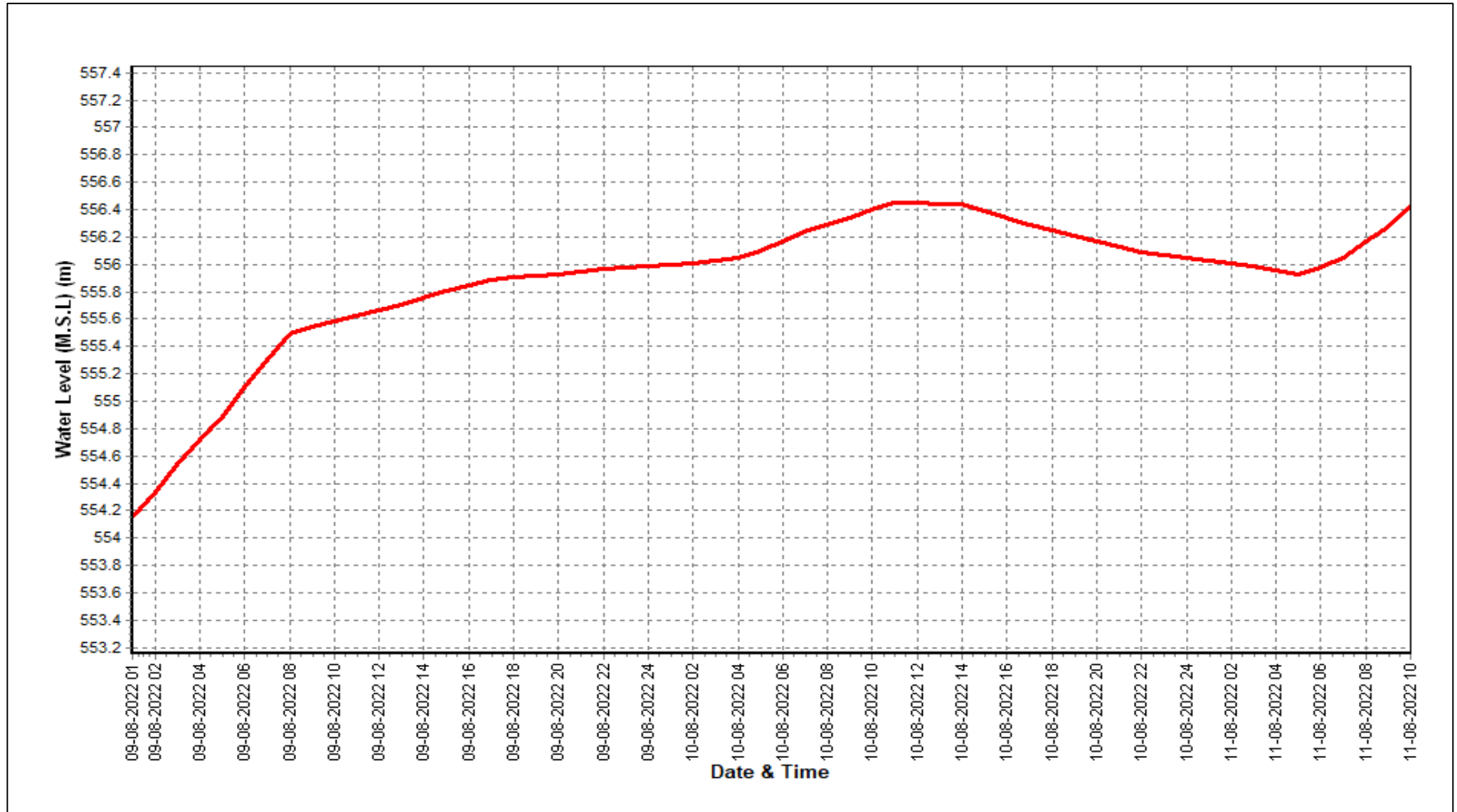
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Warunji (AKZ00A7)

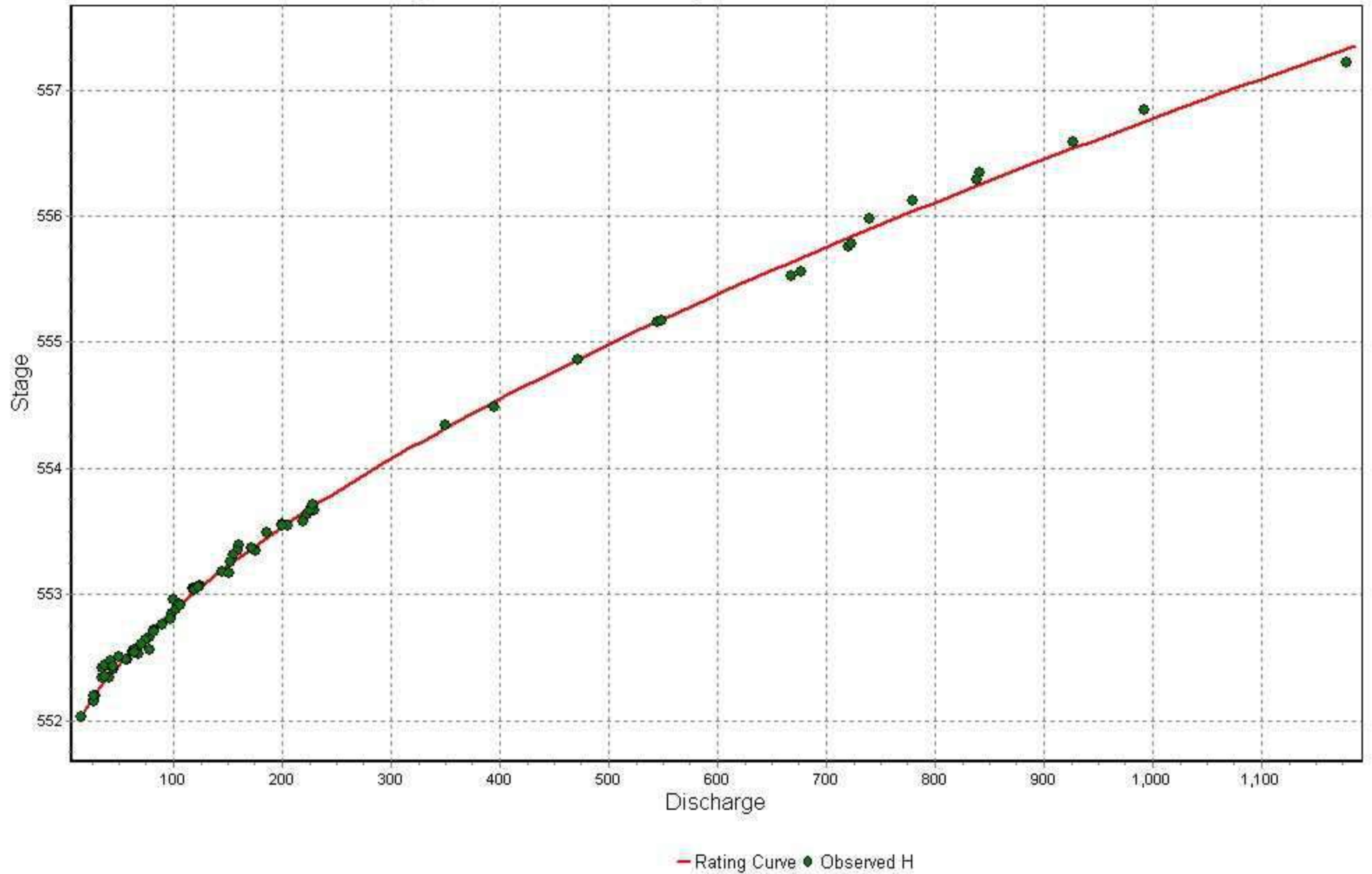
Local River : Koyna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



Rating Curve of Site Warunji 01/06/2022 to 31/10/2022



HISTORY SHEET

Water Year : 2022-2023

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, Miraj

Drainage Area : 5462 Sq. Km.

Bank : Right

Latitude : 17°17'30"

Longitude : 74°11'42"

Zero of Gauge (m) : 549.962 (m.s.l)
549.915 (m.s.l)01-06-1965 - 31-05-2004
01-06-2004

Opening Date

Closing Date

Gauge : 25-12-1964

HFL During 2022-23 : 526.115 m

Discharge : 21-06-1965

Corres. Discharge : 1092 (Estimated)

Sediment : 22-06-1965

Date & Time of

occurrence : 12-08-2022

Water Quality : 01-09-1972

08:00 Hrs

HFL Recorded so far in m : 567.162 dt 07-06-1976

Corresponding Discharge (cumecs) : 7177 *

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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	554.315	25-04-2014
2014-2015	1700	556.805	24-07-2014	0.000	554.115	27-06-2014
2015-2016	1045	555.885	24-06-2015	0.000	553.745	13-11-2015
2016-2017	1262	556.770	06-08-2016	0.000	556.535	09-03-2017
2017-2018	1053	556.565	24-09-2017	0.000	556.855	24-04-2018
2018-2019	1089	556.320	23-08-2018	0.000	556.135	31-03-2019
2019-2020	6139	565.765	07-08-2019	0.000	556.235	21-04-2020
2020-2021	7177	567.162	12-08-2020	0.000	555.315	18-03-2021
2021-2022	6080	565.485	24-07-2021	0.000	554.125	23-10-2021

Annual Runoff of Krishna at Karad

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1965-1966	6541	185	6726	231	7	238
2	1966-1967	3949	88	4037	140	3	143
3	1967-1968	5820	1020	6840	206	36	242
4	1968-1969	2917	82	2999	103	3	106
5	1969-1970	6861	148	7009	242	5	248
6	1970-1971	5173	153	5326	183	5	188
7	1971-1972	4152	204	4356	147	7	154
8	1972-1973	2287	192	2479	81	7	88
9	1973-1974	4786	279	5064	169	10	179
10	1974-1975	3155	182	3337	111	6	118
11	1975-1976	5088	225	5313	180	8	188
12	1976-1977	6765	257	7021	239	9	248
13	1977-1978	4372	306	4678	154	11	165
14	1978-1979	4914	285	5199	174	10	184
15	1979-1980	4528	272	4800	160	10	170
16	1980-1981	5161	331	5492	182	12	194
17	1981-1982	3499	376	3875	124	13	137
18	1982-1983	2401	396	2796	85	14	99
19	1983-1984	3188	415	3603	113	15	127
20	1984-1985	3112	504	3616	110	18	128
21	1985-1986	2264	613	2878	80	22	102
22	1986-1987	2843	625	3468	100	22	123
23	1987-1988	1678	516	2194	59	18	78
24	1988-1989	3566	566	4132	126	20	146
25	1989-1990	2344	580	2925	83	20	103
26	1990-1991	5707	873	6580	202	31	233
27	1991-1992	6220	732	6952	220	26	246
28	1992-1993	2703	534	3238	96	19	114
29	1993-1994	3925	1037	4962	139	37	175
30	1994-1995	9337	649	9986	330	23	353
31	1995-1996	2035	509	2544	72	18	90
32	1996-1997	3222	568	3790	114	20	134
33	1997-1998	6506	672	7178	230	24	254
34	1998-1999	3065	558	3622	108	20	128
35	1999-2000	4661	630	5291	165	22	187
36	2000-2001	1780	606	2386	63	21	84
37	2001-2002	1720	523	2243	61	18	79
38	2002-2003	2091	499	2590	74	18	92
39	2003-2004	1779	544	2323	63	19	82
40	2004-2005	4646	434	5080	164	15	179
41	2005-2006	10046	435	10481	355	15	370
42	2006-2007	10337	488	10824	365	17	382

43	2007-2008	6273	450	6723	222	16	238
44	2008-2009	3367	520	3887	119	18	137
45	2009-2010	3221	168	3389	114	6	120
46	2010-2011	2754	3	2757	97	0	97
47	2011-2012	3742	0	3742	132	0	132
48	2012-2013	1501	0	1501	53	0	53
49	2013-2014	3716	0	3716	131	0	131
50	2014-2015	2309	0	2309	82	0	82
51	2015-2016	970	35	1006	34	1	36
52	2016-2017	2305	0	2305	81	0	81
53	2017-2018	1358	0	1358	48	0	48
54	2018-2019	2449	0	2449	87	0	87
55	2019-2020	8458	0	8458	299	0	299
56	2020-2021	3121	0	3121	110	0	110
57	2021-2022	3181	0	3181	112	0	112
58	2022-2023	2994	0	2994	106	0	106
Average		4015	349	4364	142	12	154

Instantaneous Flood Peak of Krishna at Karad

Sl. No.	Year	Instantaneous Annual Flood Peak		Time	Discharge * (Cumecs)
		Peak WL (m) Recorded	Date		
1	1965-1966	562.657	21-07-1965	00:00:00	4186 *
2	1966-1967	561.042	29-07-1966	21:00:00	3302 *
3	1967-1968	564.112	28-07-1967	02:00:00	5067 *
4	1968-1969	556.682	07-08-1968	14:00:00	1414 *
5	1969-1970	561.682	01-08-1969	09:00:00	3641 *
6	1970-1971	558.242	21-08-1970	12:00:00	2006 *
7	1971-1972	558.097	31-08-1971	09:00:00	1947 *
8	1972-1973	558.762	07-07-1972	22:00:00	2224 *
9	1973-1974	560.442	08-07-1973	07:00:00	2999 *
10	1974-1975	559.377	05-07-1974	13:00:00	2496 *
11	1975-1976	561.442	10-07-1975	17:00:00	3512 *
12	1976-1977	567.162	07-06-1976	03:00:00	7177 *
13	1977-1978	559.912	07-07-1977	15:00:00	2743 *
14	1978-1979	558.402	02-09-1978	16:00:00	2072 *
15	1979-1980	559.462	08-08-1979	18:00:00	2534 *
16	1980-1981	560.562	05-08-1980	21:00:00	3059 *
17	1981-1982	558.632	10-07-1981	02:00:00	2169 *
18	1982-1983	557.392	29-07-1982	16:00:00	1672 *
19	1983-1984	558.982	17-08-1983	06:00:00	2320 *
20	1984-1985	559.082	18-07-1984	20:00:00	2364 *
21	1985-1986	557.317	02-08-1985	07:00:00	1644 *
22	1986-1987	559.062	30-06-1986	02:00:00	2355 *
23	1987-1988	557.472	08-07-1987	14:00:00	1702 *
24	1988-1989	563.212	03-08-1988	05:00:00	4513 *
25	1989-1990	559.722	25-07-1989	13:00:00	2654 *
26	1990-1991	562.312	18-08-1990	12:00:00	3989 *
27	1991-1992	561.147	28-07-1991	07:00:00	3357 *
28	1992-1993	559.772	14-08-1992	10:00:00	2677 *
29	1993-1994	559.402	19-06-1993	15:00:00	2507 *
30	1994-1995	562.252	15-07-1994	13:00:00	3955 *
31	1995-1996	556.892	20-07-1995	15:00:00	1488 *
32	1996-1997	561.512	04-10-1996	13:00:00	3549 *
33	1997-1998	563.922	24-08-1997	08:00:00	4948
34	1998-1999	558.182	09-07-1998	06:00:00	1982 *
35	1999-2000	558.742	28-07-1999	07:00:00	2216 *
36	2000-2001	555.662	12-07-2000	22:00:00	1077 *
37	2001-2002	556.342	09-07-2001	18:00:00	1297 *
38	2002-2003	555.582	07-09-2002	08:00:00	1052
39	2003-2004	554.912	28-07-2003	08:00:00	855
40	2004-2005	562.395	12-08-2004	23:00:00	4036 *
41	2005-2006	565.045	02-08-2005	23:00:00	5675 *
42	2006-2007	566.305	30-07-2006	13:00:00	6548 *
43	2007-2008	561.465	02-07-2007	08:00:00	3524
44	2008-2009	560.115	11-08-2008	09:00:00	2840 *
45	2009-2010	555.775	15-07-2009	11:00:00	1112 *
46	2010-2011	556.195	27-07-2010	01:00:00	1248 *

47	2011-2012	563.485	04-09-2011	11:00:00	4678 *
48	2012-2013	556.235	26-07-2012	02:00:00	1262 *
49	2013-2014	559.235	25-07-2013	15:00:00	2432 *
50	2014-2015	556.865	24-07-2014	10:00:00	1479 *
51	2015-2016	556.345	04-10-2015	07:00:00	1298 *
52	2016-2017	557.085	26-09-2016	18:00:00	1558 *
53	2017-2018	557.545	07-10-2017	12:00:00	1730 *
54	2018-2019	557.245	13-04-2018	13:00:00	1617 *
55	2019-2020	566.145	06-08-2019	19:00:00	6434 *
56	2020-2021	559.505	17-08-2020	19:00:00	2553 *
57	2021-2022	565.485	24-07-2021	08:00:00	6080 *
58	2022-2023	556.115	12-08-2022	08:00:00	1092 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : Karad (AK000X6)

Division : Upper Krishna Divn, Pune

Local River : Krishna

Sub-Division : Upper Krishna SD, 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	554.875	0.000	554.785	0.000	551.615	111.2	553.515	0.000	551.685	132.6	551.235	76.05
2	554.765	0.000	554.895	0.000	551.545	100.9	551.965	159.9	551.415	95.53 *	551.215	73.99
3	555.145	0.000	554.975	0.000	551.555	101.5	553.065	0.000	551.495	102.6	551.145	66.95
4	555.005	0.000	554.645	0.000	551.545	101.0	552.465	0.000	551.365	82.79	551.085	61.13
5	555.095	0.000	555.055	0.000	551.665	114.1	551.965	0.000	551.515	101.6	550.915	45.76
6	555.195	0.000	554.365	0.000	551.935	157.7	551.985	0.000	551.425	86.71	551.025	55.52 *
7	554.735	0.000	554.205	0.000	551.825	145.9 *	552.035	0.000	551.600	101.8	550.875	42.39
8	555.115	0.000	553.625	410.1	552.405	232.5	552.565	239.8	552.005	178.9	550.835	39.12
9	554.925	0.000	554.605	664.4 *	553.715	468.4 *	552.115	185.4	551.965	164.8 *	550.755	32.88
10	554.685	0.000	553.205	368.1 *	555.165	737.2	552.540	233.8	551.430	81.20	550.745	32.13
11	554.805	0.000	554.555	672.4	555.215	765.1	552.375	225.2 *	551.485	85.06	551.145	66.95
12	554.735	0.000	553.685	454.2	556.085	1078	552.265	200.3	551.945	171.0	551.125	64.99
13	554.805	0.000	553.335	376.0	555.540	928.2	552.685	280.0	552.165	214.9	550.925	46.62 *
14	554.615	0.000	553.790	459.5	555.015	763.2 *	553.640	475.6	552.885	304.0	551.345	87.76
15	554.795	0.000	553.535	428.2	554.875	728.9 *	554.265	570.5	552.685	261.1	551.335	86.67
16	554.565	0.000	553.675	448.3	554.680	681.4	553.735	469.5	552.765	289.1 *	551.015	54.60
17	554.935	0.000	553.685	462.3 *	554.665	690.2	555.385	846.3	552.705	312.4	550.755	32.88
18	554.655	0.000	553.125	345.7	554.415	632.4	554.455	629.6 *	552.655	288.5	550.945	48.35
19	554.595	0.000	552.885	321.0	554.220	571.7	553.375	381.8	552.785	297.9	551.040	56.90
20	554.545	0.000	552.855	309.1	554.195	570.1	552.415	250.8	552.495	249.1	551.115	64.02 *
21	554.875	0.000	552.555	265.5	554.395	615.9 *	552.185	200.3	552.235	220.0	551.075	60.18
22	554.845	0.000	552.345	228.8	553.535	438.4	552.465	230.1	552.195	203.5	551.065	59.24
23	554.685	0.000	552.255	202.1	552.875	320.2	552.290	210.5	552.245	205.3 *	551.405	94.40
24	554.965	0.000	552.115	186.1 *	552.535	249.2	552.045	175.2	551.975	170.1	551.420	96.09
25	554.645	0.000	552.315	227.7	552.545	250.1	551.845	148.5 *	551.765	160.6	551.370	90.50
26	554.445	0.000	552.205	199.0	552.325	230.5	551.855	150.6	551.705	151.1	551.450	99.51
27	554.765	0.000	552.165	173.6	551.945	164.2	551.755	141.6	551.545	130.8	551.325	85.58 *
28	554.495	0.000	551.885	155.1	551.845	148.5 *	551.645	131.7	551.565	125.7	551.355	88.85
29	554.635	0.000	552.025	168.5	551.540	110.4	551.615	128.3	551.515	120.4	551.325	85.58
30	554.465	0.000	551.935	157.1	551.615	115.6	551.570	118.2	551.455	100.1 *	551.265	79.18
31			551.745	135.4 *	553.615	448.0 *			551.445	116.7		
Ten-Daily Mean												
I Ten-Daily	554.954	0.000	554.436	144.3	552.297	227.0	552.422	81.90	551.590	112.9	550.983	52.59
II Ten-Daily	554.705	0.000	553.512	427.7	554.891	740.9	553.459	433.0	552.457	247.3	551.075	60.97
III Ten-Daily	554.682	0.000	552.140	190.8	552.615	281.0	551.927	163.5	551.786	154.9	551.306	83.91
Monthly												
Min.	554.445	0.000	551.745	0.000	551.540	100.9	551.570	0.000	551.365	81.20	550.745	32.13
Max.	555.195	0.000	555.055	672.4	556.085	1078	555.385	846.3	552.885	312.4	551.450	99.51
Mean	554.780	0	553.324	252.2	553.247	411.9	552.603	226.1	551.939	171.2	551.121	65.83

Annual Runoff in MCM = 2994 Annual Runoff in mm = 548

Peak Observed Discharge = 1078 cumecs on 12-08-2022 Corres. Water Level :556.085 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :554.875 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 2022 - 2023

Station Name : Karad (AK000X6)

Division : Upper Krishna Divn, Pune

Local River : Krishna

Sub-Division : Upper Krishna SD, Miraj

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	551.915	0.000	553.295	0.000	553.205	0.000	553.275	0.000	553.645	0.000	553.245	0.000
2	551.825	0.000	552.805	0.000	553.285	0.000	553.225	0.000	553.485	0.000	553.475	0.000
3	551.755	0.000	552.645	0.000	552.415	0.000	553.215	0.000	553.365	0.000	553.275	0.000
4	552.335	0.000	553.005	0.000	552.505	0.000	553.195	0.000	553.305	0.000	553.615	0.000
5	552.395	0.000	553.025	0.000	553.195	0.000	553.235	0.000	553.415	0.000	553.635	0.000
6	552.595	0.000	553.175	0.000	552.105	0.000	553.495	0.000	553.545	0.000	553.255	0.000
7	552.665	0.000	553.295	0.000	552.865	0.000	553.455	0.000	553.505	0.000	553.565	0.000
8	552.685	0.000	553.295	0.000	553.155	0.000	553.115	0.000	553.145	0.000	553.175	0.000
9	552.545	0.000	553.035	0.000	553.005	0.000	553.605	0.000	553.275	0.000	553.235	0.000
10	552.145	0.000	553.035	0.000	553.035	0.000	553.125	0.000	553.475	0.000	553.105	0.000
11	552.335	0.000	553.035	0.000	553.275	0.000	553.155	0.000	553.265	0.000	553.205	0.000
12	552.295	0.000	553.385	0.000	553.295	0.000	553.235	0.000	553.295	0.000	553.065	0.000
13	552.415	0.000	553.405	0.000	552.915	0.000	552.975	0.000	553.325	0.000	553.105	0.000
14	553.025	0.000	553.425	0.000	553.085	0.000	553.035	0.000	553.285	0.000	553.495	0.000
15	553.195	0.000	553.185	0.000	552.965	0.000	552.815	0.000	553.465	0.000	553.265	0.000
16	553.675	0.000	553.435	0.000	553.155	0.000	552.995	0.000	553.295	0.000	553.105	0.000
17	553.805	0.000	553.345	0.000	553.125	0.000	552.785	0.000	553.215	0.000	553.135	0.000
18	553.185	0.000	553.325	0.000	553.105	0.000	553.125	0.000	553.285	0.000	553.325	0.000
19	553.175	0.000	553.315	0.000	553.185	0.000	553.185	0.000	553.345	0.000	553.535	0.000
20	553.705	0.000	553.505	0.000	553.265	0.000	552.965	0.000	553.235	0.000	553.005	0.000
21	553.365	0.000	553.575	0.000	553.105	0.000	553.005	0.000	553.455	0.000	553.155	0.000
22	553.155	0.000	553.525	0.000	553.025	0.000	552.985	0.000	553.155	0.000	553.295	0.000
23	553.255	0.000	553.185	0.000	552.955	0.000	552.935	0.000	552.915	0.000	553.455	0.000
24	553.135	0.000	553.285	0.000	552.205	0.000	553.115	0.000	553.295	0.000	553.345	0.000
25	553.445	0.000	552.865	0.000	552.395	0.000	553.425	0.000	553.285	0.000	553.405	0.000
26	553.235	0.000	552.835	0.000	553.075	0.000	553.595	0.000	553.325	0.000	553.055	0.000
27	553.275	0.000	553.255	0.000	553.145	0.000	553.335	0.000	553.295	0.000	553.315	0.000
28	553.145	0.000	552.845	0.000	553.105	0.000	553.395	0.000	553.615	0.000	553.185	0.000
29	552.715	0.000	552.145	0.000			553.405	0.000	553.335	0.000	553.035	0.000
30	553.135	0.000	552.965	0.000			553.385	0.000	553.245	0.000	553.125	0.000
31	553.275	0.000	553.265	0.000			553.415	0.000			553.055	0.000
Ten-Daily Mean												
I Ten-Daily	552.286	0.000	553.061	0.000	552.877	0.000	553.294	0.000	553.416	0.000	553.358	0.000
II Ten-Daily	553.081	0.000	553.336	0.000	553.137	0.000	553.027	0.000	553.301	0.000	553.224	0.000
III Ten-Daily	553.194	0.000	553.068	0.000	552.876	0.000	553.272	0.000	553.292	0.000	553.220	0.000
Monthly												
Min.	551.755	0.000	552.145	0.000	552.105	0.000	552.785	0.000	552.915	0.000	553.005	0.000
Max.	553.805	0.000	553.575	0.000	553.295	0.000	553.605	0.000	553.645	0.000	553.635	0.000
Mean	552.865	0	553.152	0	552.970	0	553.200	0	553.336	0	553.266	0

Peak Computed Discharge = 763.2 cumecs on 14-08-2022

Corres. Water Level :555.015 m

Lowest Computed Discharge = 46.62 cumecs on 13-11-2022

Corres. Water Level :550.925 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 : 2022-2023

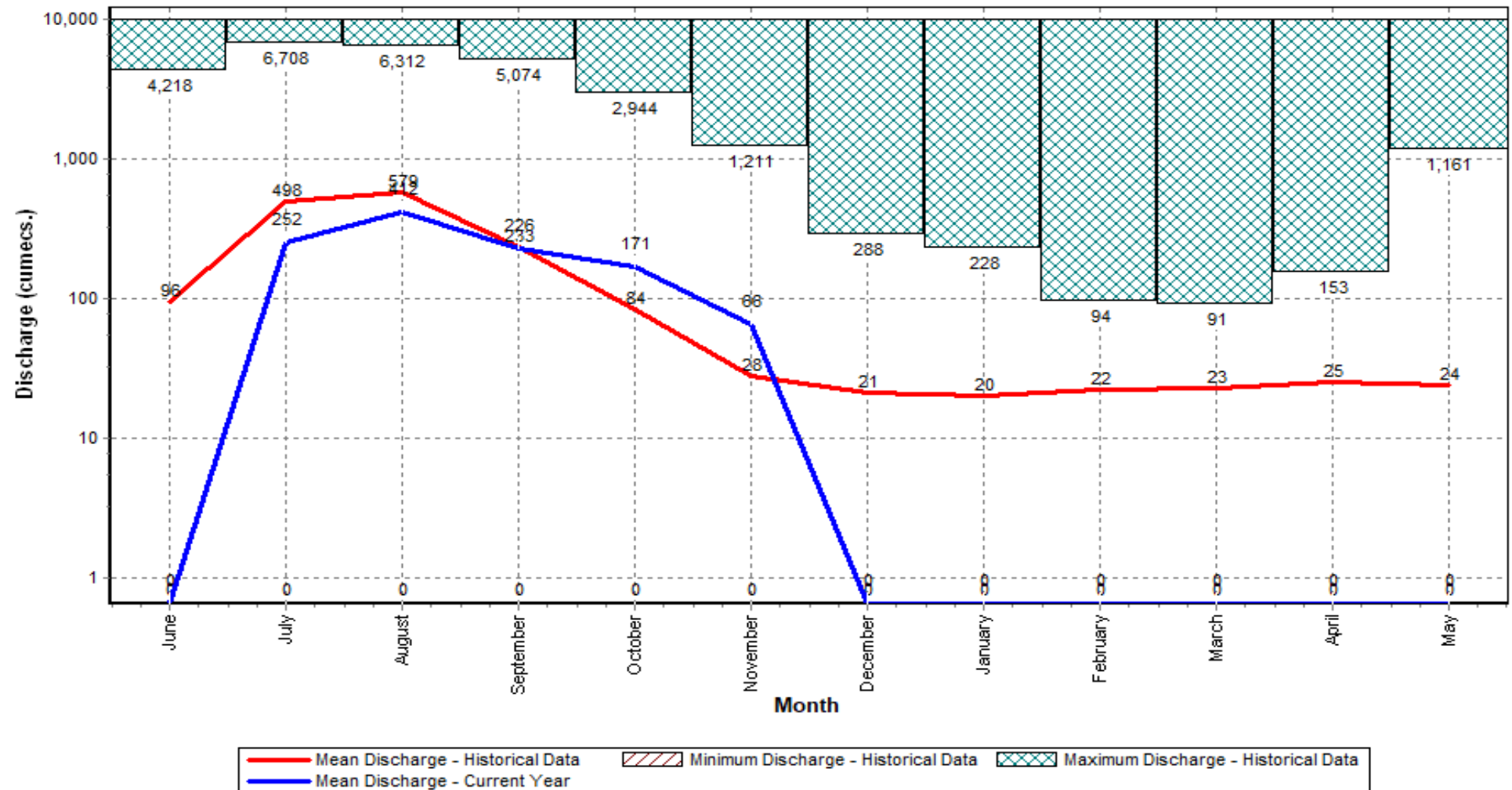
Station Name : Karad (AK000X6)

Data considered : 1965-2023

Division : Upper Krishna Divn, Pune

Local River : Krishna

Sub-Division : Upper Krishna SD, Miraj



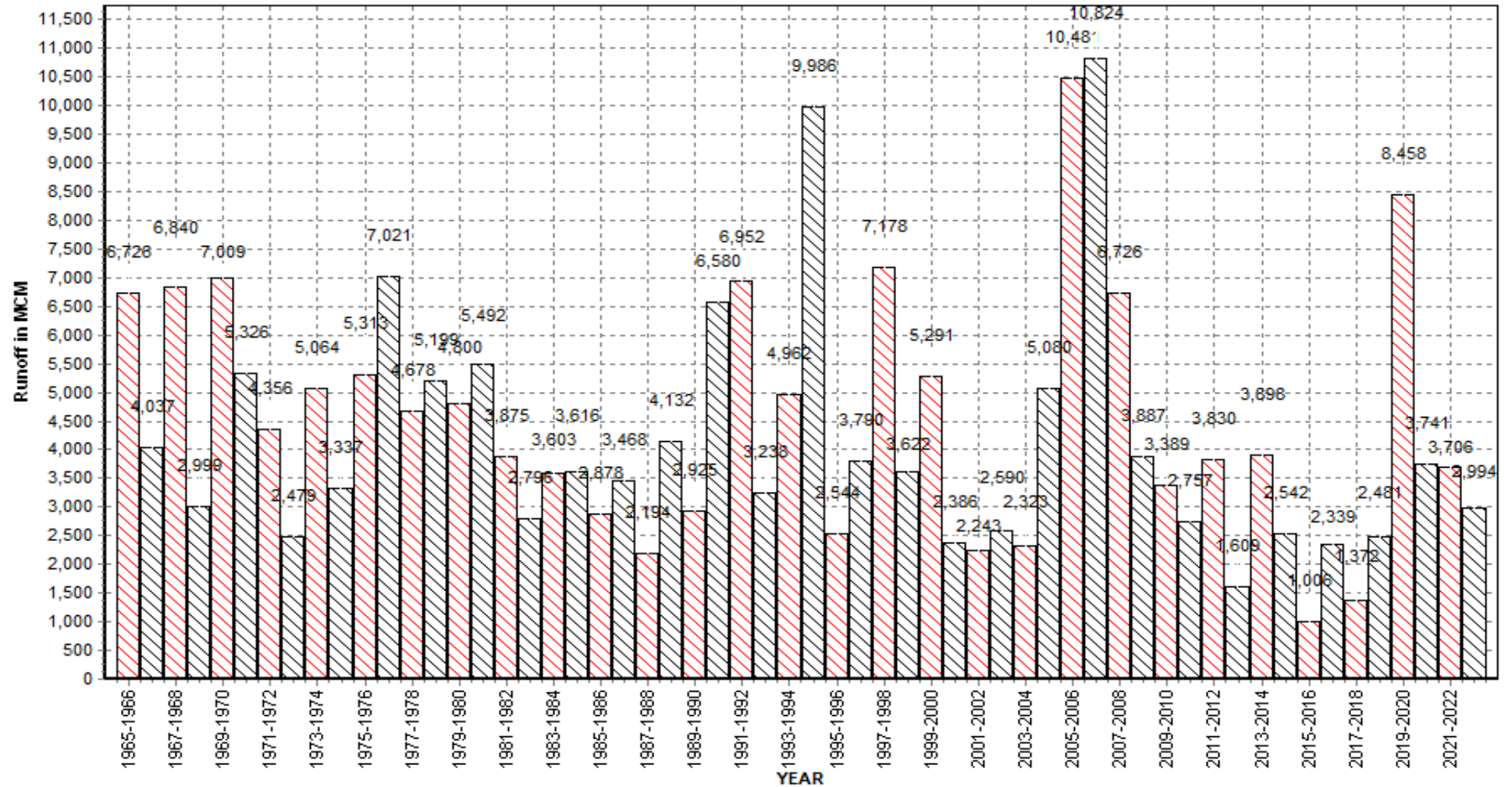
Annual Runoff Values for the period: 1965 - 2023

Station Name : Karad (AK000X6)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



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

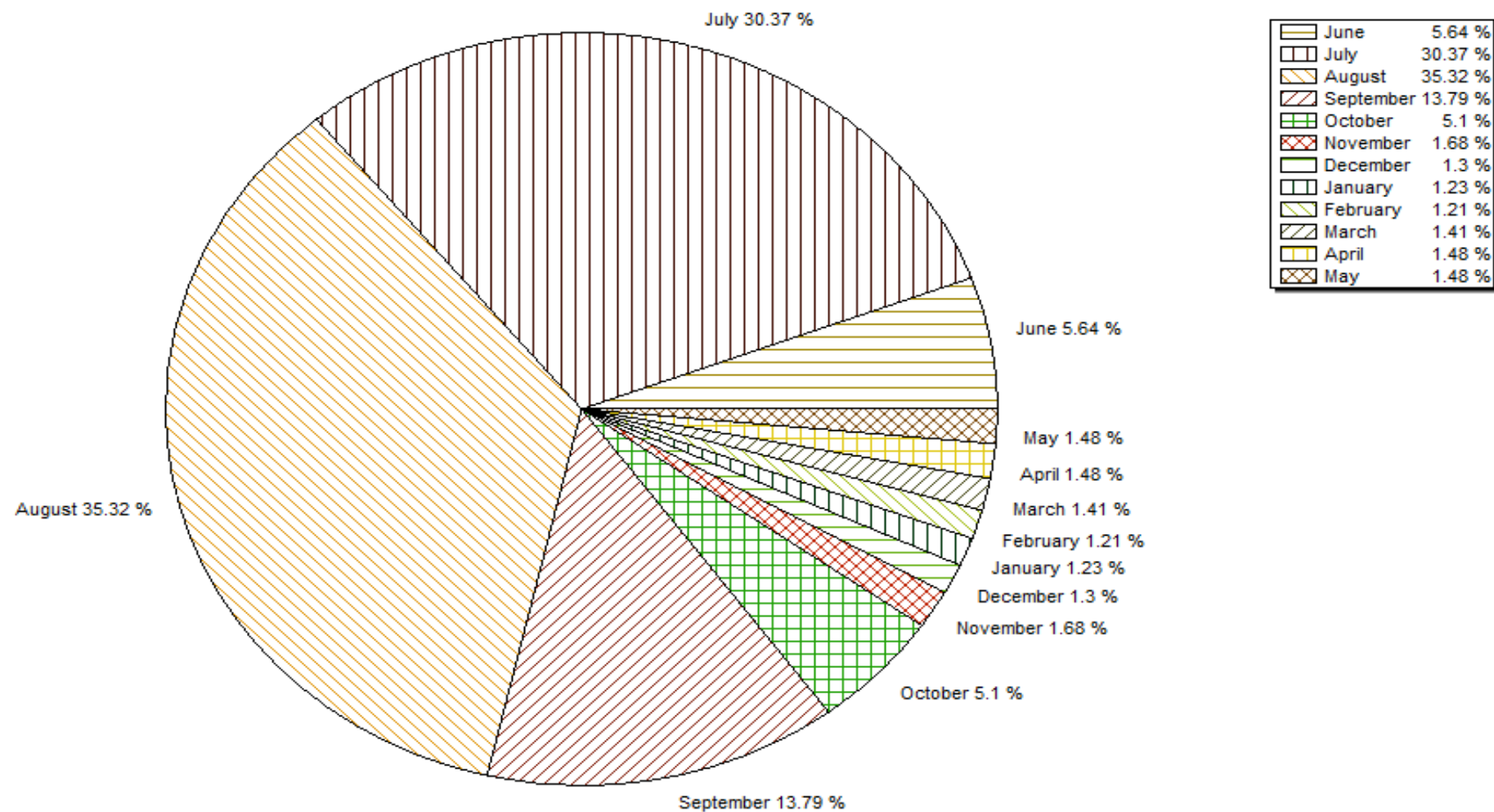
Monthly Average Runoff based on period : 1965-2022

Station Name : Karad (AK000X6)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



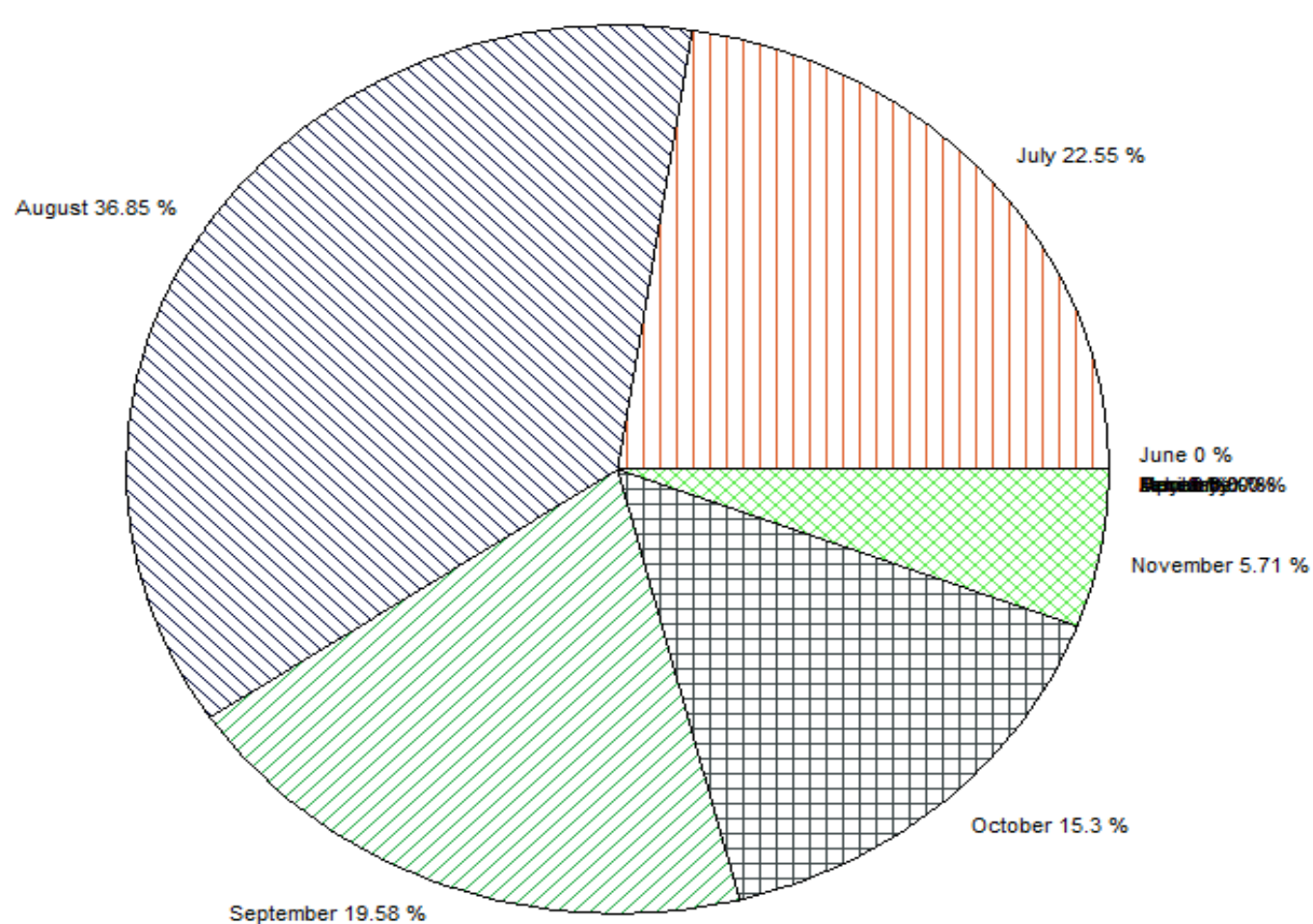
Monthly Runoff for the Year : 2022-2023

Station Name : Karad (AK000X6)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



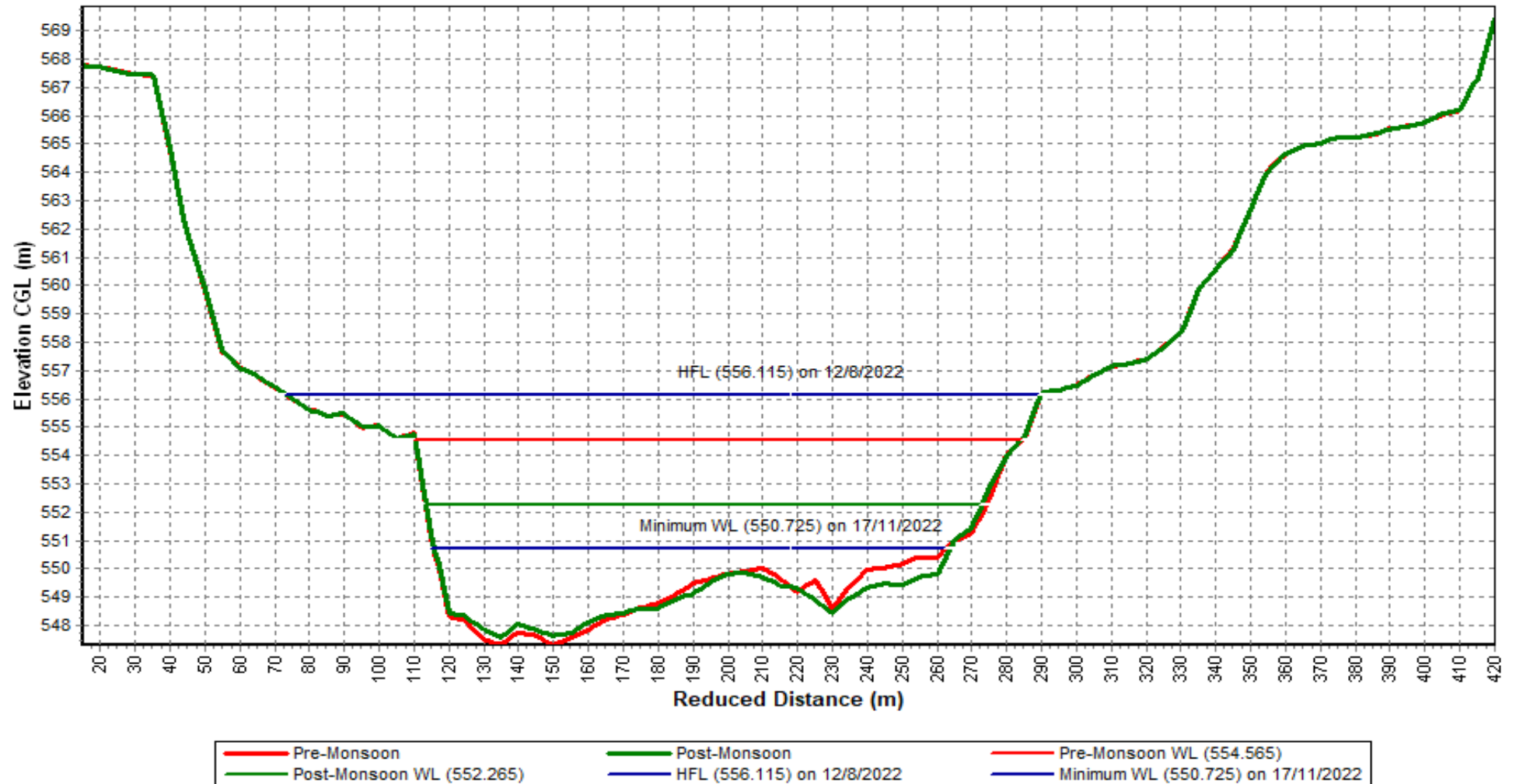
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Karad (AK000X6)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



Zero of the Gauge: 549.915 (m.s.l)

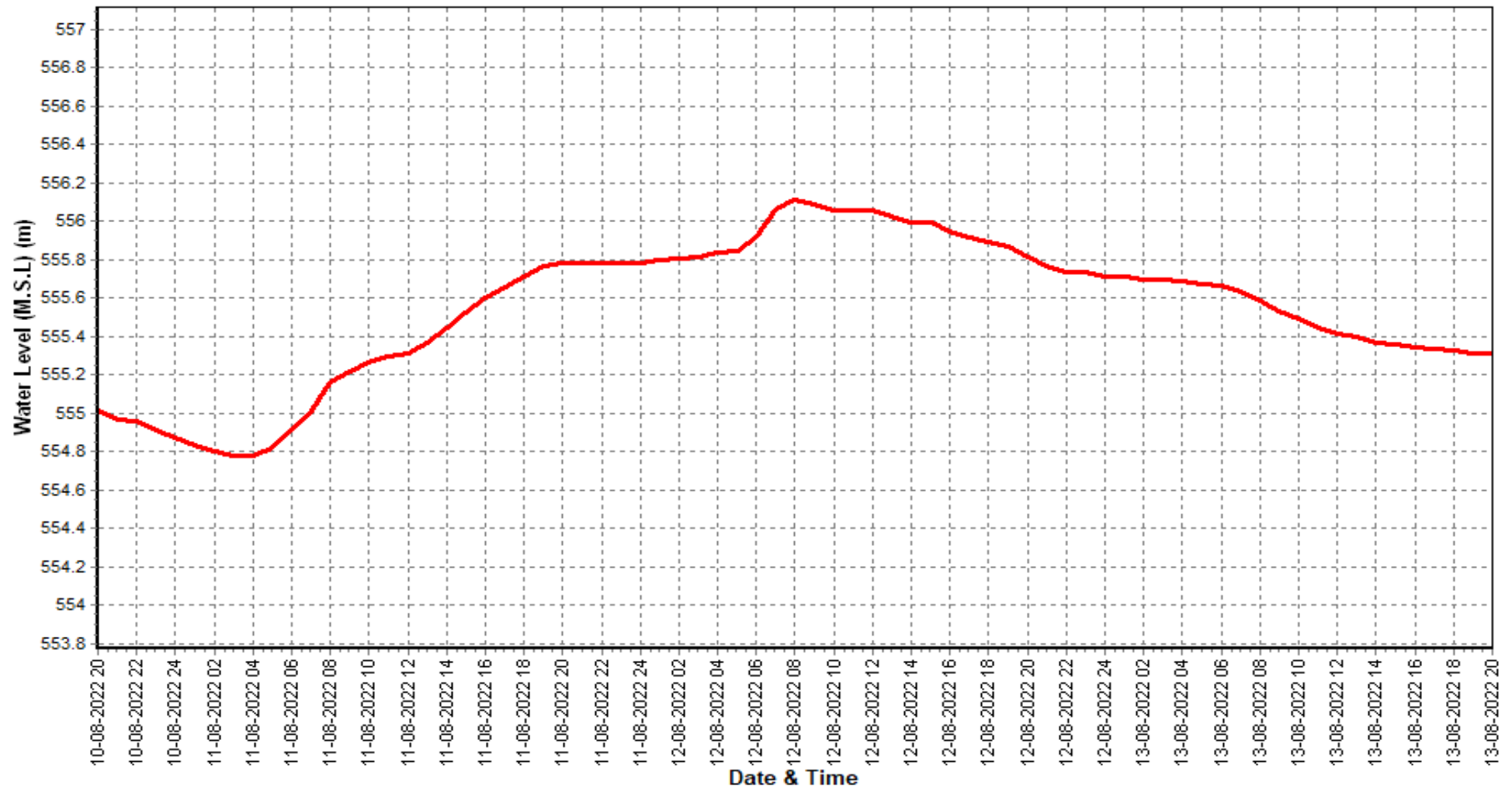
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Karad (AK000X6)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



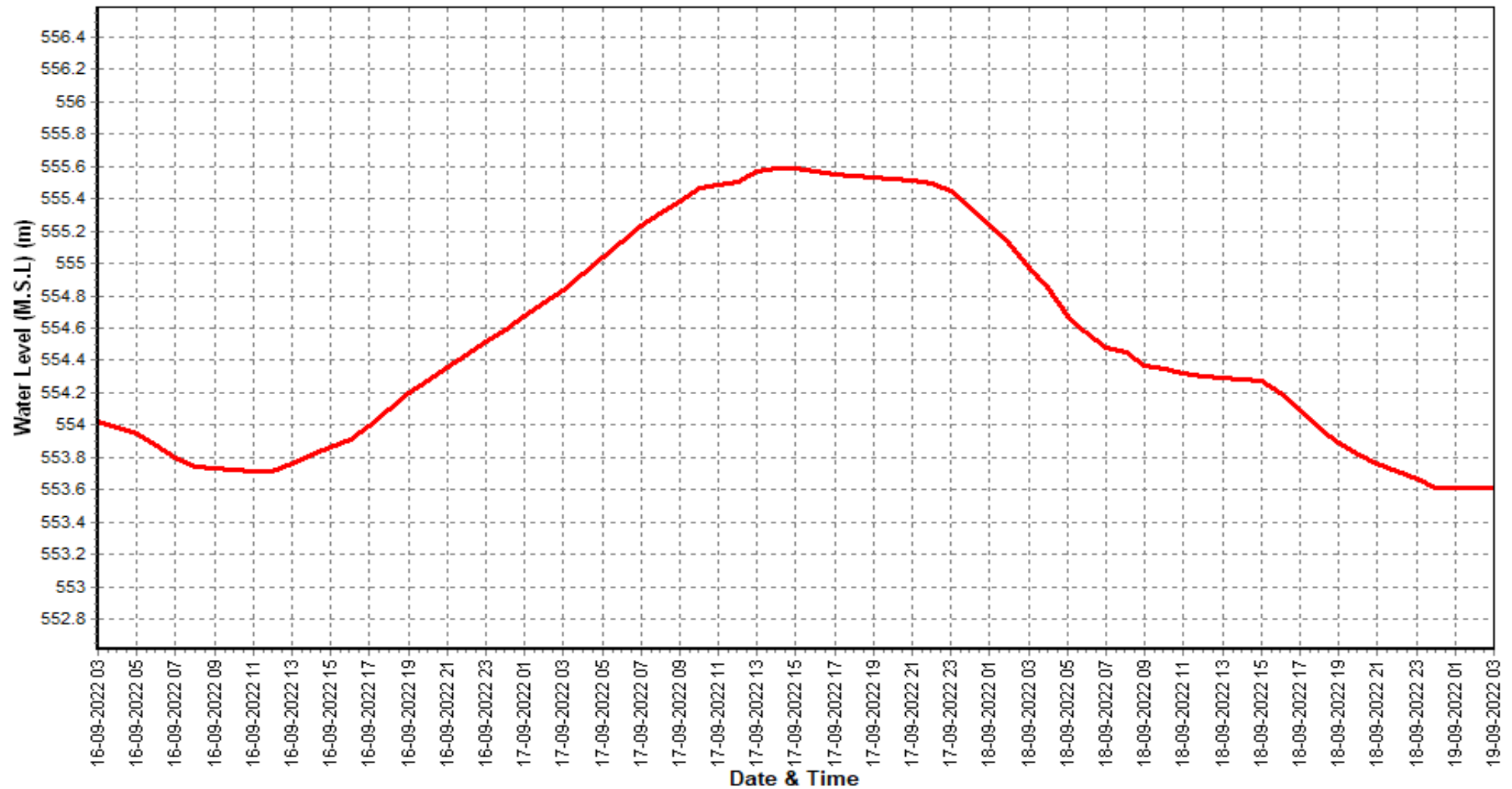
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Karad (AK000X6)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



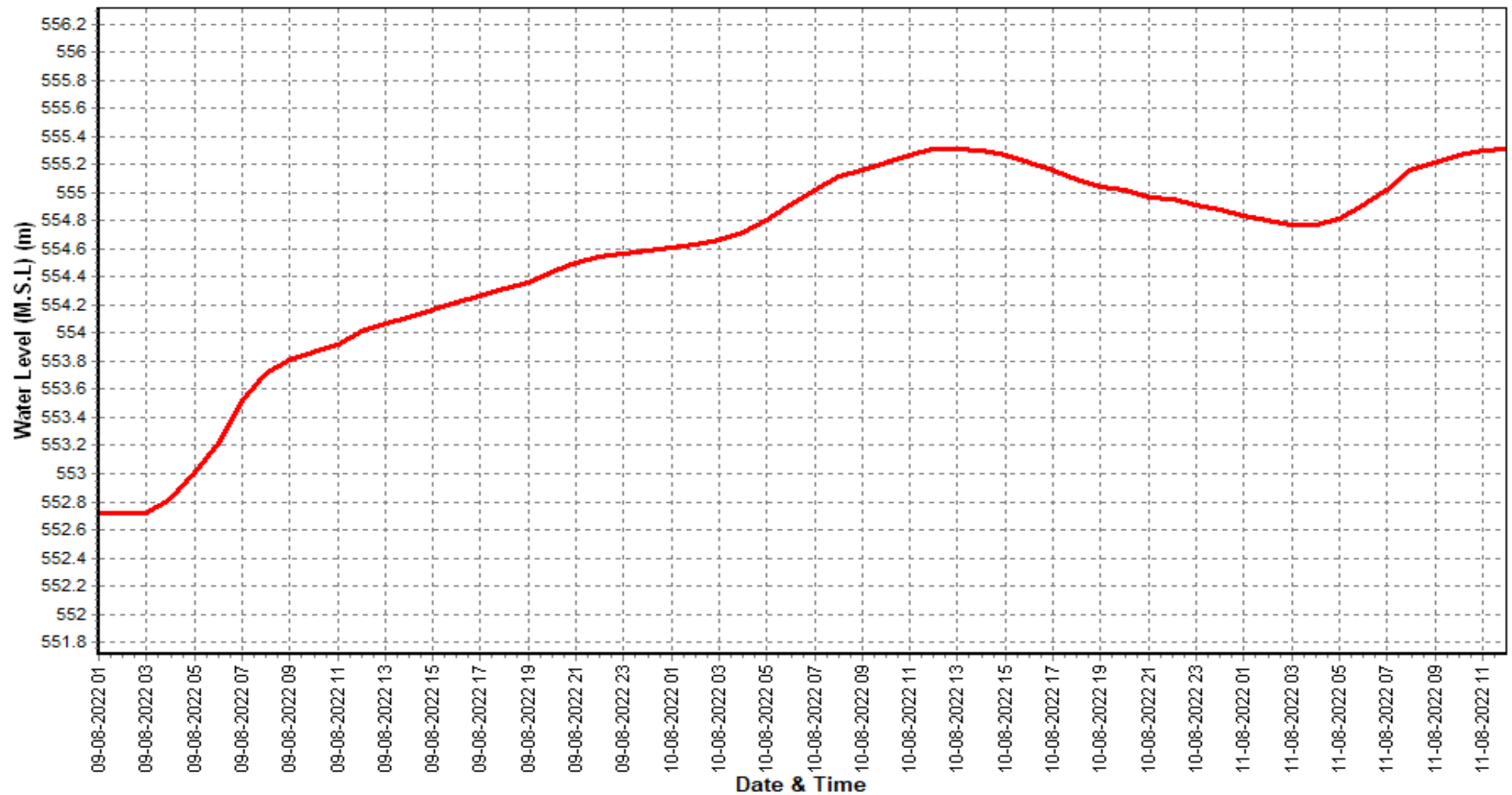
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Karad (AK000X6)

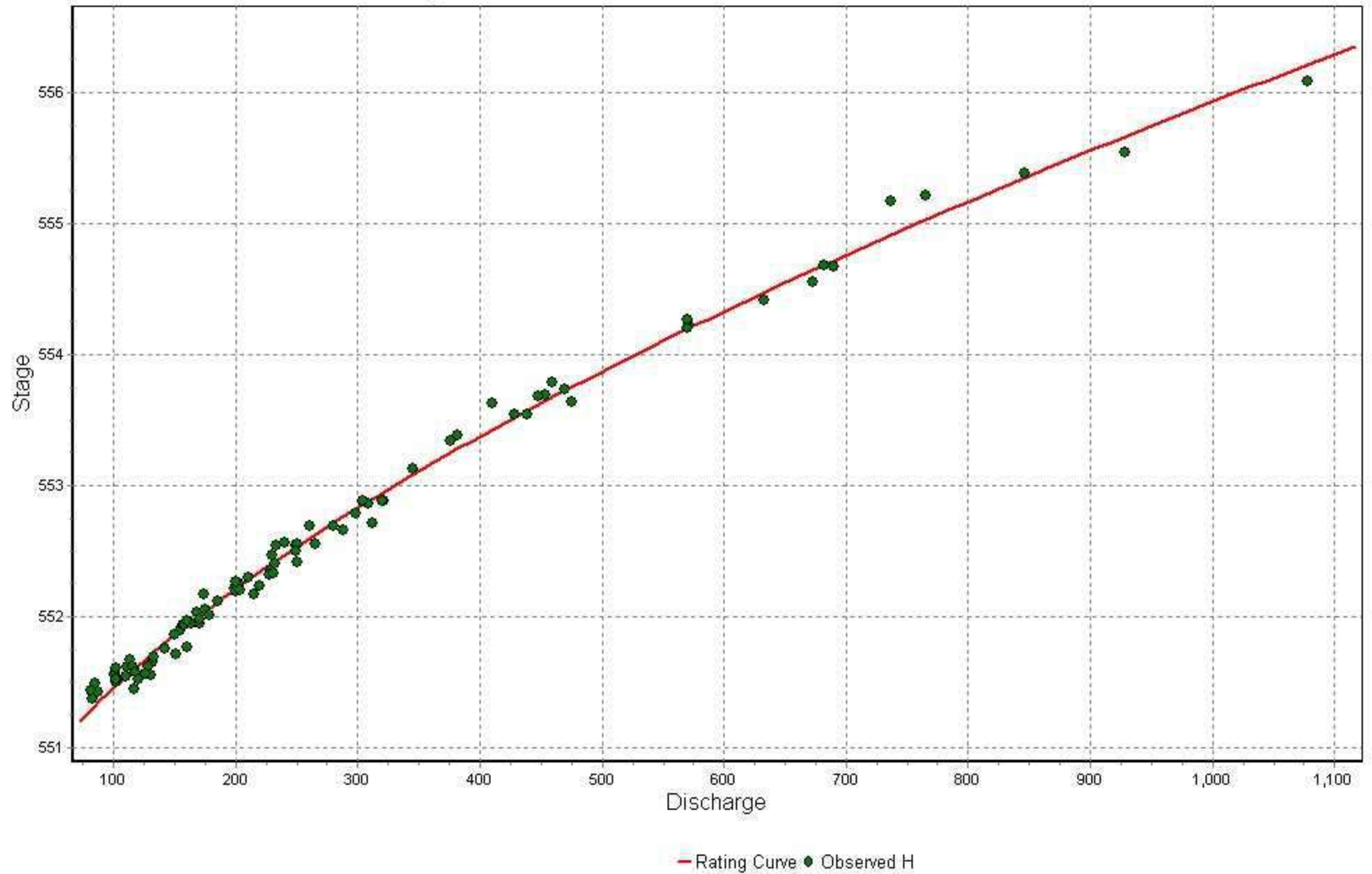
Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



Rating Curve of Site Karad 01/06/2022 to 31/10/2022



HISTORY SHEET

		Water Year	: 2022-2023
Site	: Nandre	Code	: NANDRE
State	: Maharashtra	District	Sangli
Basin	: Krishna	Independent River	: Krishna
Tributary	: Yerala	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Yerala
Division	: Upper Krishna Divn, Pune	Sub-Division	: Upper Krishna SD, Miraj
Drainage Area	: 3038 Sq. Km.	Bank	: Left
Latitude	: 16°56'58"	Longitude	: 74°34'29"
Zero of Gauge (m)	: 526.5 (m.s.l)	18-10-2016	
	Opening Date	Closing Date	
Gauge	: 01-06-2017	HFL During 2022-23	: 540.020 m
		Corres. Discharge	: 906 (Estimated)
Discharge	: 07-08-2018	Date & Time of occurrence	: 13-08-2022 : 07:00 Hrs

HFL Recorded so far in m : 543.55 dt 08-08-2019

Corresponding Discharge (cumecs) : 5745 *

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2019-2020	5690	543.410	08-08-2019	0.000	527.520	24-05-2020
2020-2021	1600	536.610	19-08-2020	0.000	534.830	22-02-2021
2021-2022	67.36	535.770	01-08-2021	0.000	539.280	27-07-2021

Annual Runoff of Yerala at Nandre							
Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2018-2019	26	0	26	1	0	1
2	2019-2020	4491	15	4506	159	1	160
3	2020-2021	1419	0	1419	50	0	50
4	2021-2022	58	0	58	2	0	2
5	2022-2023	631	0	631	22	0	22
Average		1325	3	1328	47	0	47

Instantaneous Flood Peak of Yerala at Nandre

Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2018-2019	532.930	24-08-2018	11:00:00	450 *
2	2019-2020	543.550	08-08-2019	16:00:00	5745 *
3	2020-2021	536.610	19-08-2020	06:00:00	1600 *
4	2021-2022	535.790	01-08-2021	02:00:00	71 *
5	2022-2023	540.020	13-08-2022	07:00:00	906 *

Note: from 2021-2022 Discharge Low due to back water effect of krishna river at temporary section

Stage-Discharge Data for the period 2022 - 2023

Station Name : Nandre (NANDRE)

Division : Upper Krishna Divn, Pune

Local River : Yerala

Sub-Division : Upper Krishna SD, 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	534.730	0.000	534.630	0.000	535.050	6.268	534.890	5.591	535.970	64.81	535.710	36.85
2	534.710	0.000	534.630	0.000	535.260	11.62	534.975	7.884	535.830	38.91 *	535.630	33.54
3	534.710	0.000	534.620	0.000	535.220	11.43	535.640	34.64	535.770	55.19	535.590	32.99
4	534.750	0.000	534.620	0.000	535.280	12.65	535.560	31.69 *	535.730	42.70	535.500	27.43
5	534.790	0.000	534.630	0.000	535.420	57.13	535.440	29.74	535.630	38.54	535.440	26.66
6	534.740	0.000	534.630	0.000	535.850	50.84	535.720	37.25	535.560	33.35	535.400	13.93 *
7	534.800	0.000	534.630	0.000	535.720	12.19 *	535.720	64.13	535.660	45.58	535.360	23.69
8	534.790	0.000	534.610	0.000	535.745	39.11	536.200	105.6	535.780	54.78	535.290	20.35
9	534.750	0.000	534.640	0.000	535.910	47.83	536.350	99.99	535.720	31.27 *	535.250	18.73
10	534.730	0.000	534.640	0.000	537.000	59.44	536.140	76.24	535.650	39.26	535.190	16.96
11	534.760	0.000	534.720	0.000	538.780	48.49	536.090	60.39 *	535.660	40.09	535.150	16.09
12	535.190	0.000	534.810	0.000	539.270	46.77	536.270	104.6	536.120	145.9	535.120	15.43
13	535.010	6.081	536.390	0.000	540.020	39.92	536.230	92.28	537.740	198.7	535.090	14.20 *
14	535.010	5.803	536.400	10.80	539.740	38.15 *	536.450	110.5	537.090	188.4	535.050	13.64
15	534.930	4.811	536.760	13.03	538.870	32.53 *	536.830	107.8	537.510	338.3	534.980	10.40
16	534.870	0.000	536.540	13.99	538.610	29.86	537.110	90.77	538.000	365.4 *	534.970	9.488
17	534.820	0.000	536.590	17.81 *	538.390	29.34	537.000	75.19	537.040	176.2	534.910	8.260
18	534.720	0.000	536.500	16.06	538.090	26.49	538.230	419.6 *	537.340	257.9	534.870	6.707
19	534.700	0.000	535.810	12.15	537.410	24.46	537.160	64.74	537.630	255.3	534.780	6.875
20	534.680	0.000	535.370	11.42	536.790	22.37	535.930	58.05	537.290	207.0	534.720	5.731 *
21	534.690	0.000	535.210	10.02	536.710	18.58 *	535.780	47.15	537.210	225.2	534.780	7.028
22	534.720	0.000	535.140	7.662	536.810	18.07	535.840	56.10	537.320	259.3	534.800	5.862
23	534.680	0.000	535.030	5.551	535.920	17.80	535.810	51.46	537.190	204.4 *	534.820	6.483
24	534.630	0.000	534.940	0.000	535.350	14.01	535.700	45.90	536.720	108.1	534.790	6.807
25	534.630	0.000	534.850	0.000	535.180	12.36	535.640	26.25 *	536.460	103.1	534.760	7.049
26	534.630	0.000	534.850	0.000	535.130	10.06	535.570	33.10	536.320	85.99	534.730	6.157
27	534.640	0.000	534.850	0.000	535.080	8.000	535.475	29.90	536.180	80.64	534.720	5.731 *
28	534.640	0.000	534.820	0.000	534.990	7.474 *	535.450	23.87	536.080	70.72	534.660	4.742
29	534.620	0.000	534.820	0.000	534.890	4.436	535.430	24.87	535.980	61.10	534.610	3.701
30	534.630	0.000	534.850	0.000	534.940	5.203	535.490	75.25	535.880	42.67 *	534.610	3.325
31			534.900	0.000	534.860	5.174			535.780	37.55		
Ten-Daily Mean												
I Ten-Daily	534.750	0.000	534.628	0.000	535.646	30.85	535.664	49.28	535.730	44.44	535.436	25.11
II Ten-Daily	534.869	1.669	535.989	9.525	538.597	33.84	536.730	118.4	537.142	217.3	534.964	10.68
III Ten-Daily	534.651	0.000	534.933	2.112	535.442	11.02	535.619	41.39	536.465	116.3	534.728	5.688
Monthly												
Min.	534.620	0.000	534.610	0.000	534.860	4.436	534.890	5.591	535.560	31.27	534.610	3.325
Max.	535.190	6.081	536.760	17.81	540.020	59.44	538.230	419.6	538.000	365.4	535.710	36.85
Mean	534.757	0.556	535.175	3.822	536.525	24.78	536.004	69.69	536.446	125.7	535.043	13.83

Annual Runoff in MCM = 631 Annual Runoff in mm = 208

Peak Observed Discharge = 338.3 cumecs on 15-10-2022 Corres. Water Level :537.51 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :534.73 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 2022 - 2023

Station Name : Nandre (NANDRE)

Division : Upper Krishna Divn, Pune

Local River : Yerala

Sub-Division : Upper Krishna SD, Miraj

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	534.570	0.000	534.600	0.000	534.530	0.000	534.350	0.000	534.510	0.000	534.300	0.000
2	534.560	0.000	534.600	0.000	534.520	0.000	534.330	0.000	534.520	0.000	534.290	0.000
3	534.570	0.000	534.590	0.000	534.510	0.000	534.330	0.000	534.530	0.000	534.270	0.000
4	534.560	0.000	534.580	0.000	534.500	0.000	534.340	0.000	534.550	0.000	534.280	0.000
5	534.550	0.000	534.600	0.000	534.490	0.000	534.350	0.000	534.540	0.000	534.290	0.000
6	534.540	0.000	534.590	0.000	534.480	0.000	534.360	0.000	534.400	0.000	534.300	0.000
7	534.530	0.000	534.620	0.000	534.450	0.000	534.340	0.000	534.390	0.000	534.310	0.000
8	534.520	0.000	534.660	0.000	534.440	0.000	534.330	0.000	534.410	0.000	534.350	0.000
9	534.510	0.000	534.690	0.000	534.450	0.000	534.320	0.000	534.450	0.000	534.360	0.000
10	534.490	0.000	534.700	0.000	534.450	0.000	534.330	0.000	534.520	0.000	534.340	0.000
11	534.490	0.000	534.710	0.000	534.440	0.000	534.320	0.000	534.550	0.000	534.320	0.000
12	534.490	0.000	534.740	0.000	534.430	0.000	534.310	0.000	534.570	0.000	534.310	0.000
13	534.480	0.000	534.770	0.000	534.440	0.000	534.310	0.000	534.610	0.000	534.330	0.000
14	534.470	0.000	534.760	0.000	534.430	0.000	534.330	0.000	534.640	0.000	534.350	0.000
15	534.460	0.000	534.750	0.000	534.440	0.000	534.330	0.000	534.660	0.000	534.340	0.000
16	534.450	0.000	534.740	0.000	534.450	0.000	534.340	0.000	534.650	0.000	534.400	0.000
17	534.460	0.000	534.710	0.000	534.440	0.000	534.340	0.000	534.640	0.000	534.400	0.000
18	534.470	0.000	534.690	0.000	534.350	0.000	534.330	0.000	534.600	0.000	534.430	0.000
19	534.480	0.000	534.680	0.000	534.330	0.000	534.320	0.000	534.540	0.000	534.400	0.000
20	534.470	0.000	534.670	0.000	534.340	0.000	534.310	0.000	534.560	0.000	534.390	0.000
21	534.460	0.000	534.660	0.000	534.350	0.000	534.330	0.000	534.520	0.000	534.410	0.000
22	534.450	0.000	534.670	0.000	534.340	0.000	534.370	0.000	534.450	0.000	534.400	0.000
23	534.440	0.000	534.680	0.000	534.330	0.000	534.440	0.000	534.420	0.000	534.430	0.000
24	534.450	0.000	534.690	0.000	534.320	0.000	534.470	0.000	534.400	0.000	534.410	0.000
25	534.460	0.000	534.680	0.000	534.330	0.000	534.490	0.000	534.380	0.000	534.410	0.000
26	534.450	0.000	534.660	0.000	534.340	0.000	534.510	0.000	534.370	0.000	534.400	0.000
27	534.440	0.000	534.640	0.000	534.350	0.000	534.500	0.000	534.350	0.000	534.320	0.000
28	534.430	0.000	534.630	0.000	534.360	0.000	534.480	0.000	534.340	0.000	534.300	0.000
29	534.450	0.000	534.610	0.000			534.460	0.000	534.330	0.000	534.310	0.000
30	534.480	0.000	534.580	0.000			534.480	0.000	534.310	0.000	534.360	0.000
31	534.550	0.000	534.560	0.000			534.500	0.000			534.340	0.000
Ten-Daily Mean												
I Ten-Daily	534.540	0.000	534.623	0.000	534.482	0.000	534.338	0.000	534.482	0.000	534.309	0.000
II Ten-Daily	534.472	0.000	534.722	0.000	534.409	0.000	534.324	0.000	534.602	0.000	534.367	0.000
III Ten-Daily	534.460	0.000	534.642	0.000	534.340	0.000	534.457	0.000	534.387	0.000	534.372	0.000
Monthly												
Min.	534.430	0.000	534.560	0.000	534.320	0.000	534.310	0.000	534.310	0.000	534.270	0.000
Max.	534.570	0.000	534.770	0.000	534.530	0.000	534.510	0.000	534.660	0.000	534.430	0.000
Mean	534.490	0	534.662	0	534.415	0	534.376	0	534.490	0	534.350	0

Peak Computed Discharge = 419.6 cumecs on 18-09-2022

Corres. Water Level :538.23 m

Lowest Computed Discharge = 5.731 cumecs on 20-11-2022

Corres. Water Level :534.72 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 : 2022-2023

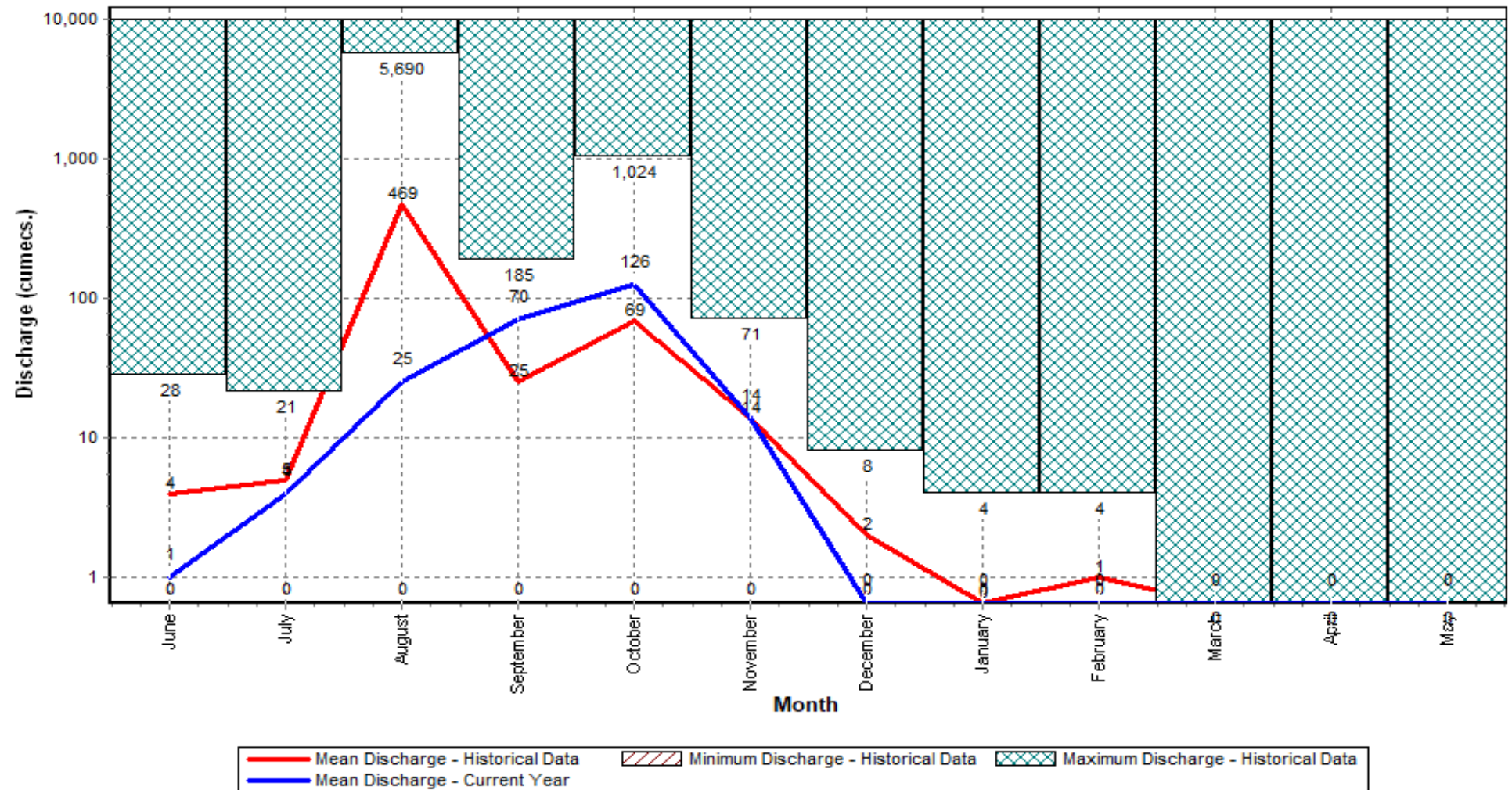
Station Name : Nandre (NANDRE)

Data considered : 2019-2023

Division : Upper Krishna Divn, Pune

Local River : Yerala

Sub-Division : Upper Krishna SD, Miraj



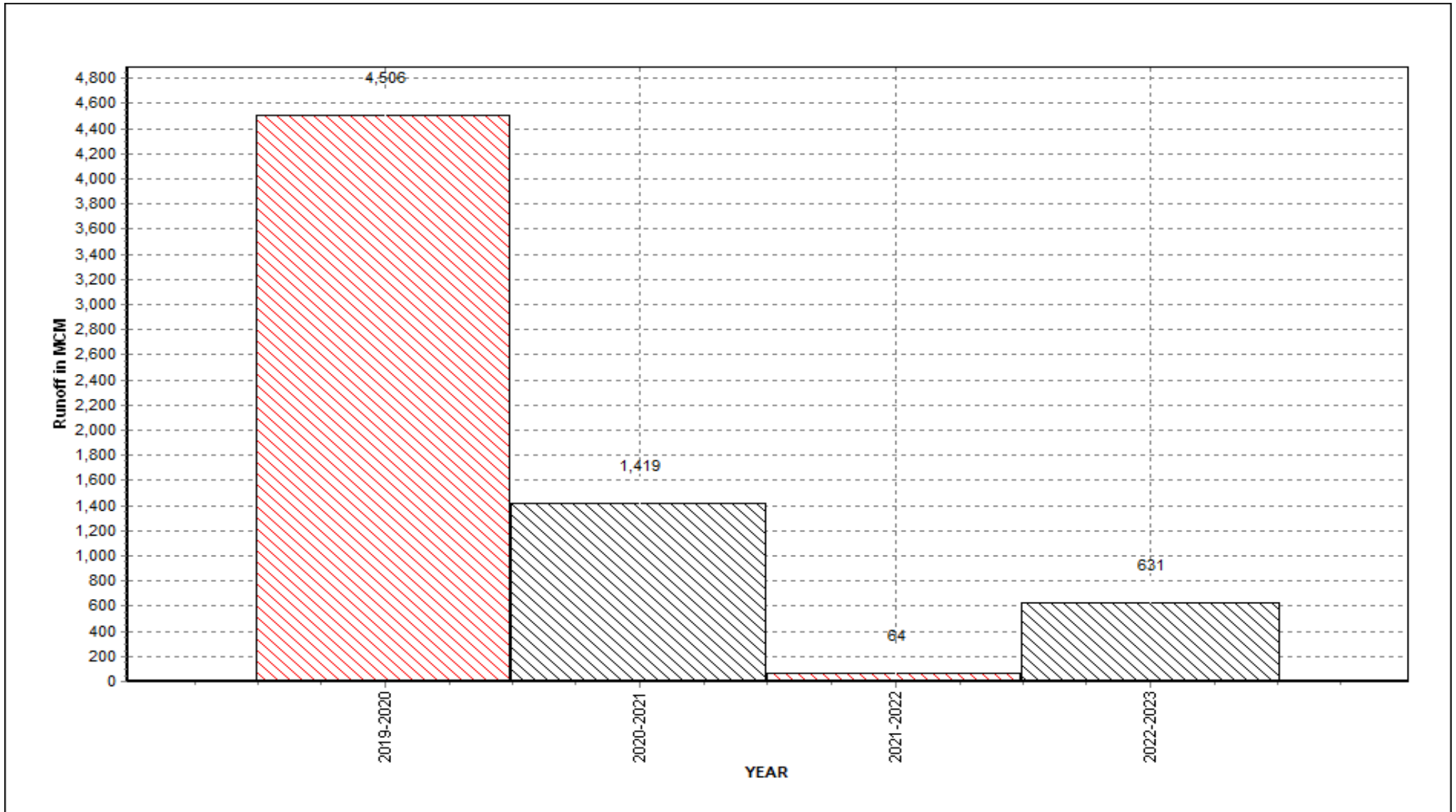
Annual Runoff Values for the period: 2019 - 2023

Station Name : Nandre (NANDRE)

Local River : Yerala

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



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

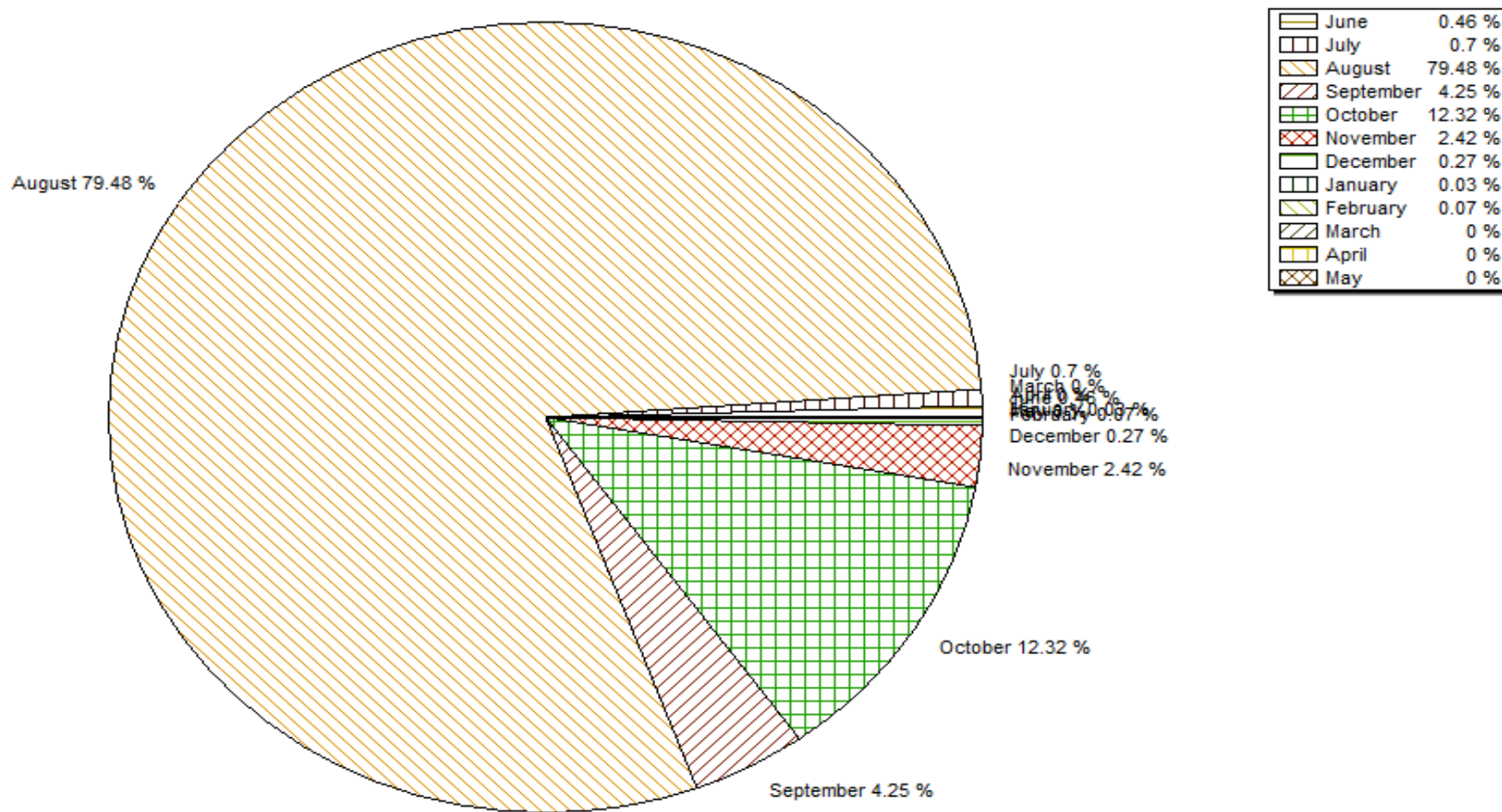
Monthly Average Runoff based on period : 2019-2022

Station Name : Nandre (NANDRE)

Local River : Yerala

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



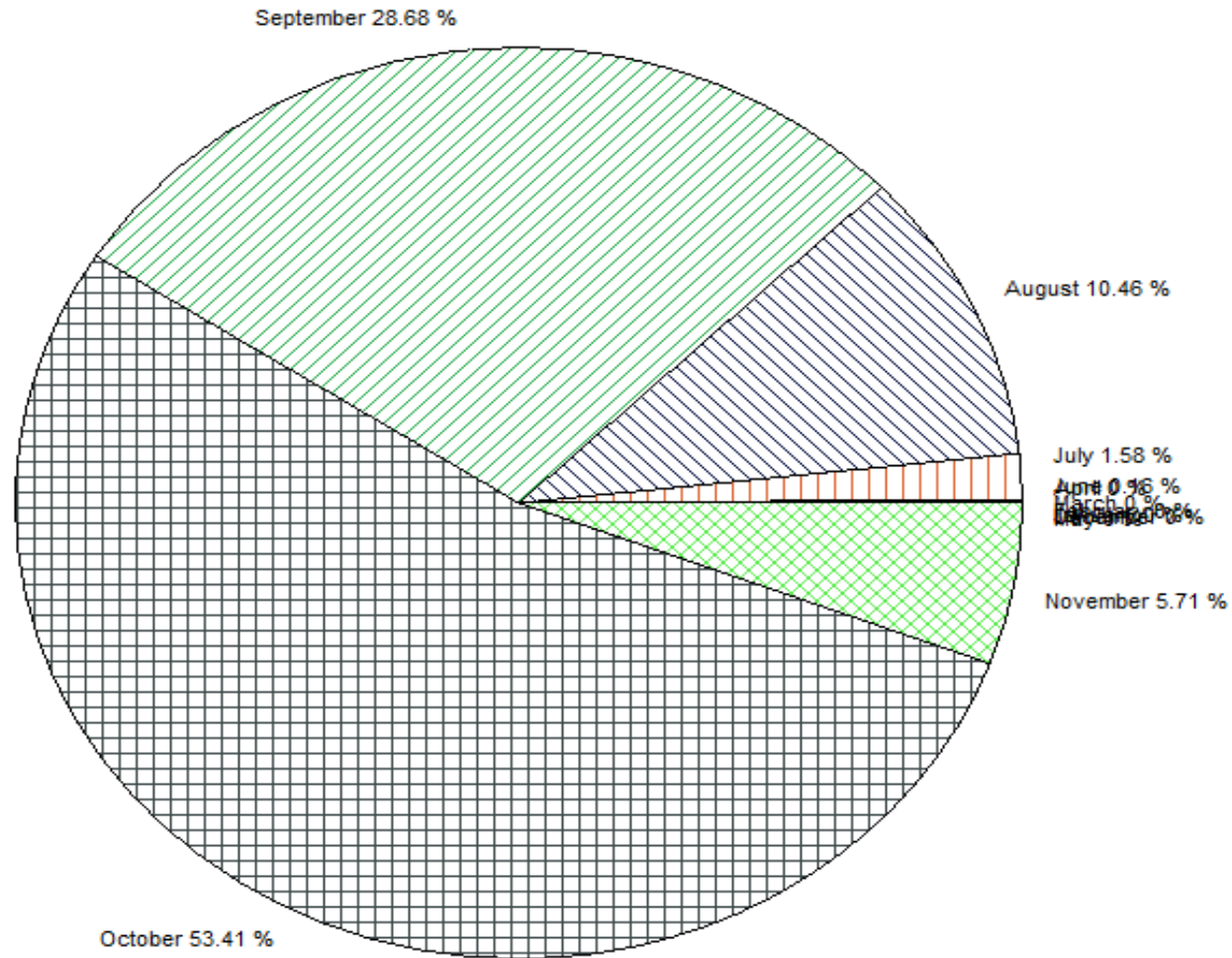
Monthly Runoff for the Year : 2022-2023

Station Name : Nandre (NANDRE)

Local River : Yerala

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



June	0.16 %
July	1.58 %
August	10.46 %
September	28.68 %
October	53.41 %
November	5.71 %
December	0 %
January	0 %
February	0 %
March	0 %
April	0 %
May	0 %

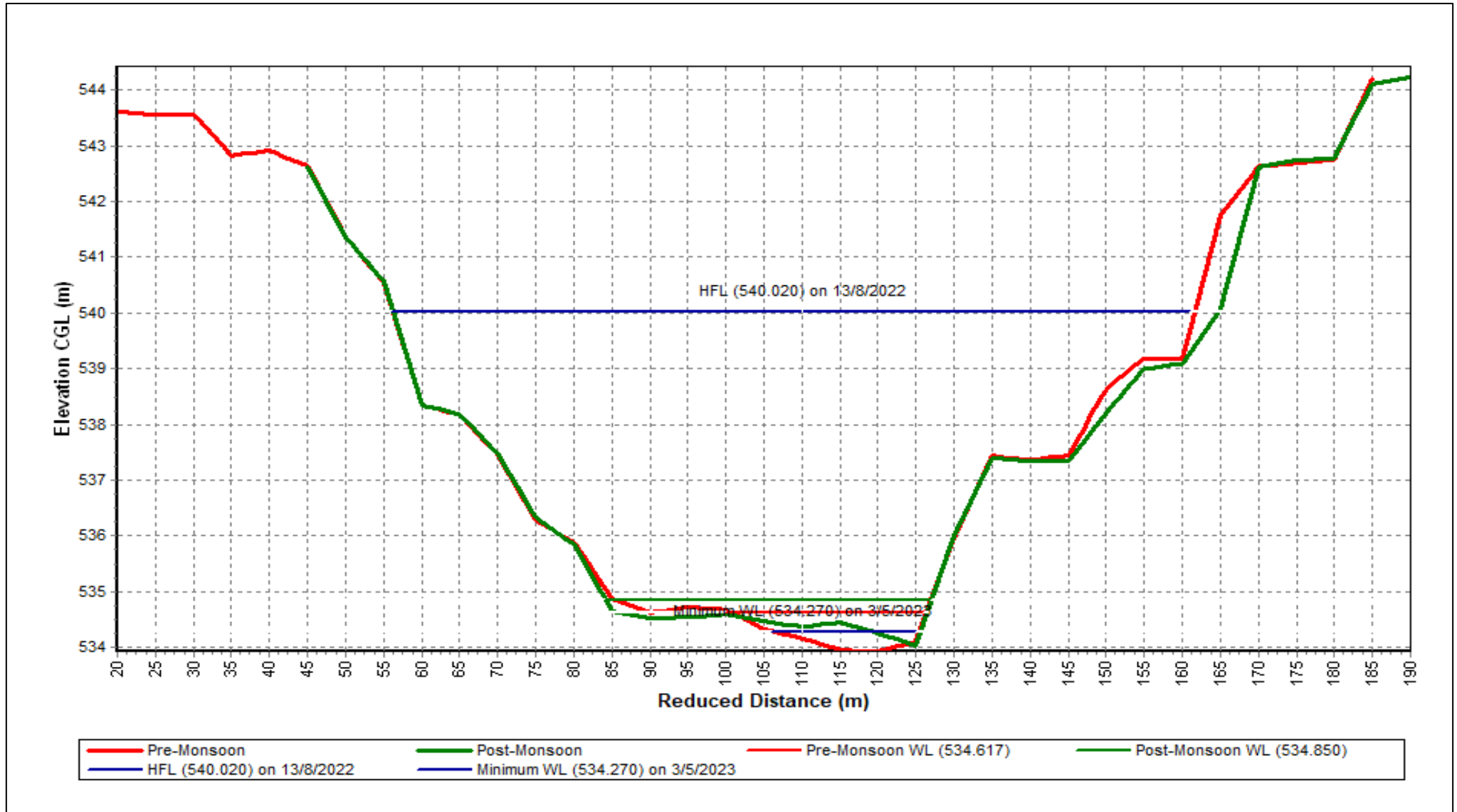
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Nandre (NANDRE)

Local River : Yerala

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD 2, Miraj



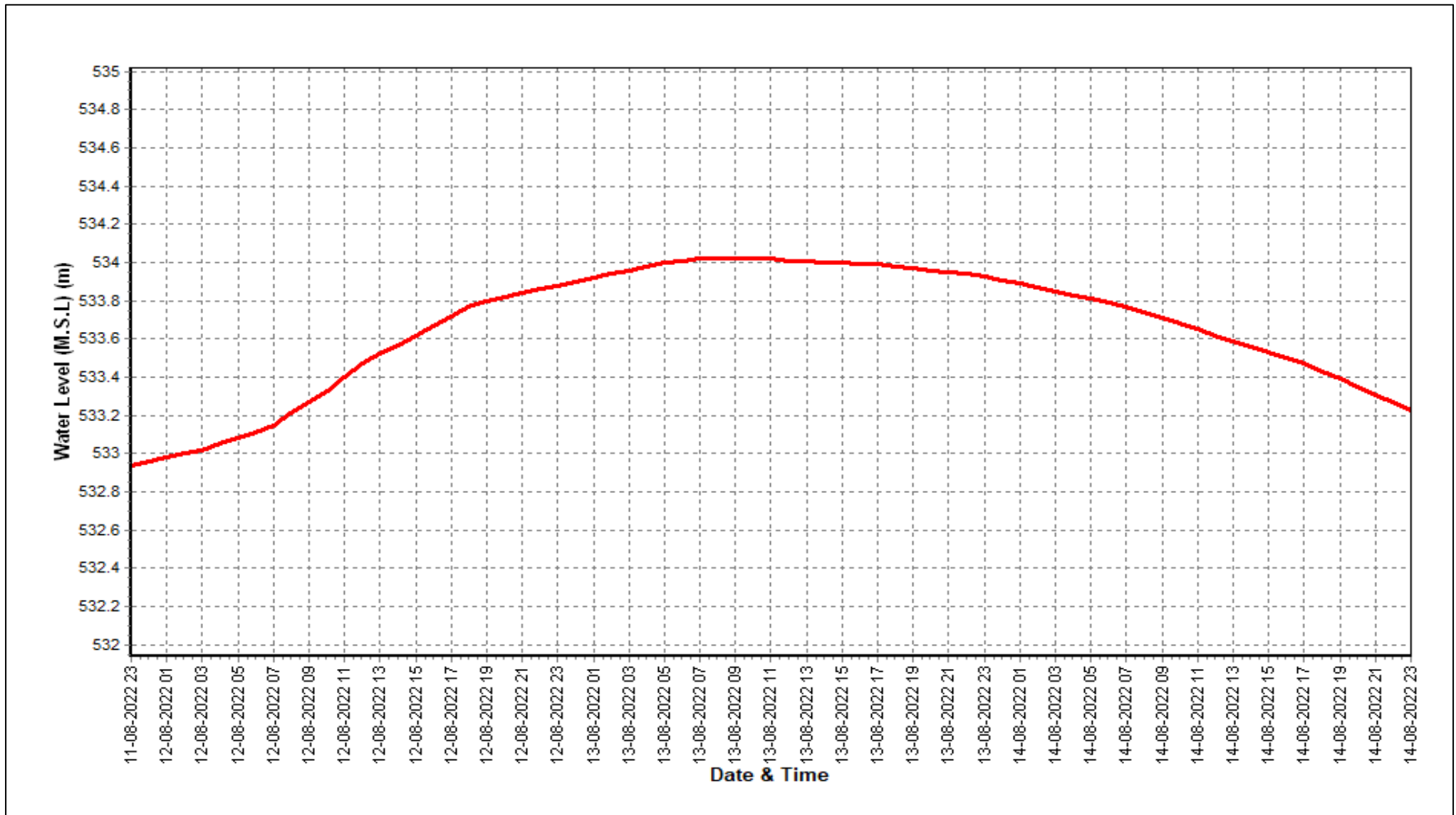
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Nandre (NANDRE)

Local River : Yerala

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



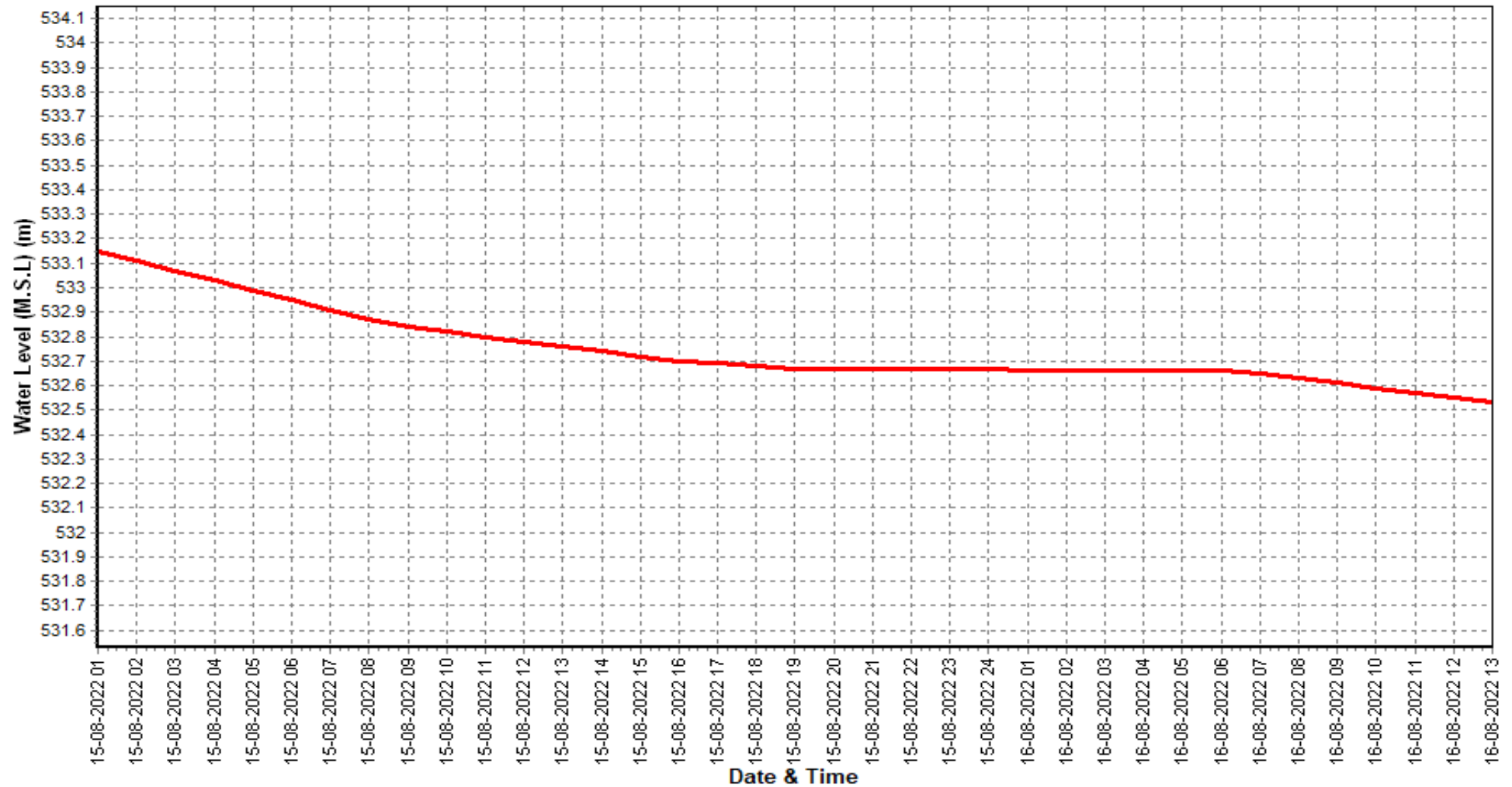
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Nandre (NANDRE)

Local River : Yerala

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



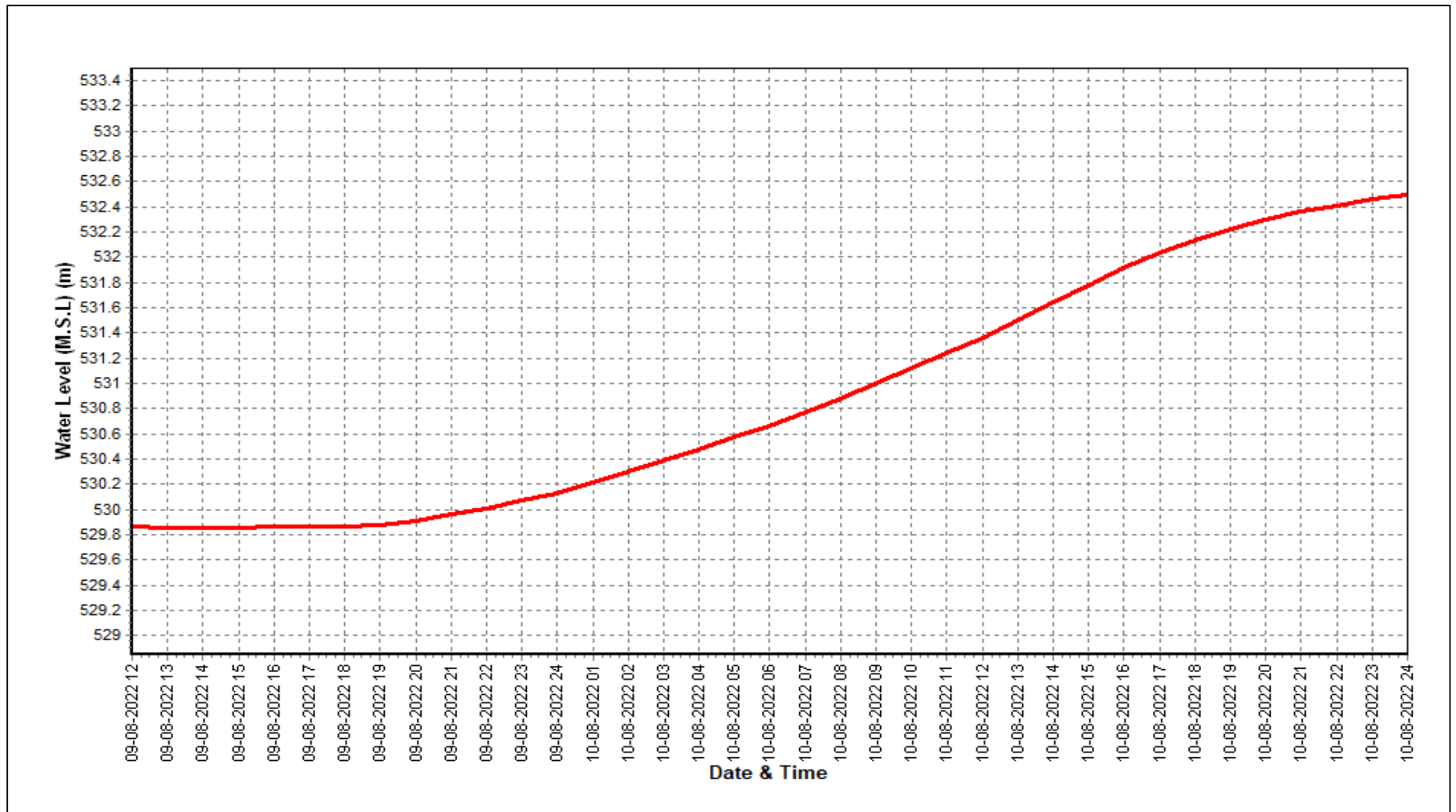
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Nandre (NANDRE)

Local River : Yerala

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



HISTORY SHEET

		Water Year	: 2022-2023
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, Miraj
Drainage Area	: 1948 Sq. Km.	Bank	: Left
Latitude	: 16°51'00"	Longitude	: 74°30'00"
Zero of Gauge (m)	: 529.594 (m.s.l) 528.594 (m.s.l)	01-09-1963 21-04-1966	- 20-04-1966
	Opening Date	Closing Date	
Gauge	: 23-08-1963	HFL During 2022-23	: 540.104 m
Discharge	: 01-12-1964	Corres. Discharge	: 1310 (Estimated)
Sediment	: 26-12-2014	Date & Time of occurrence	: 13-08-2022 : 15:00 Hrs
Water Quality	: 01-09-2014		

HFL Recorded so far in m : 546.994 dt 09-08-2019

Corresponding Discharge (cumecs) : 2417 *

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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	530.594	07-06-2013
2014-2015	1115	540.094	25-07-2014	0.000	532.864	18-11-2014
2015-2016	669.2	536.684	26-06-2015	0.000	532.564	09-06-2015
2016-2017	1660	541.944	13-07-2016	0.000	531.404	16-06-2016
2017-2018	962.7	537.934	22-07-2017	0.000	531.314	21-11-2017
2018-2019	1351	539.994	21-07-2018	0.000	532.294	16-11-2018
2019-2020	2317	546.994	09-08-2019	0.000	531.214	30-11-2019
2020-2021	1569	541.864	19-08-2020	0.000	531.594	14-06-2020
2021-2022	2138	546.004	25-07-2021	0.000	532.484	16-04-2022

Annual Runoff of Varna at Samdoli (Seasonal)							
Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
2	1965-1966		16	16		1	1
3	1966-1967	32	40	72	1	1	3
4	1967-1968	4119	5	4124	146	0	146
5	1968-1969	2030	0	2030	72	0	72
6	1969-1970	3342	0	3342	118	0	118
7	1970-1971	4006	0	4006	142	0	142
8	1971-1972	3178	0	3178	112	0	112
9	1972-1973	1645	0	1645	58	0	58
10	1973-1974	3493	0	3493	123	0	123
11	1974-1975	3154	0	3154	111	0	111
12	1975-1976	4326	1	4328	153	0	153
13	1976-1977	4310	0	4310	152	0	152
14	1977-1978	3333	0	3333	118	0	118
15	1978-1979	4285	0	4285	151	0	151
16	1979-1980	2951	0	2951	104	0	104
17	1980-1981	3711	0	3711	131	0	131
18	1981-1982	3364	0	3364	119	0	119
19	1982-1983	3045	0	3045	108	0	108
20	1983-1984	3781	0	3781	134	0	134
21	1984-1985	2884	0	2884	102	0	102
22	1985-1986	2692	0	2692	95	0	95
23	1986-1987	2130	0	2130	75	0	75
24	1987-1988	1693	0	1693	60	0	60
25	1988-1989	3198	0	3198	113	0	113
26	1989-1990	2685	0	2685	95	0	95
27	1990-1991	3586	0	3586	127	0	127
28	1991-1992	4612	0	4612	163	0	163
29	1992-1993	2490	0	2490	88	0	88
30	1993-1994	3345	0	3345	118	0	118
31	1994-1995	4735	0	4735	167	0	167
32	1995-1996	1502	0	1502	53	0	53
33	1996-1997	2410	0	2410	85	0	85
34	1997-1998	3497	0	3497	124	0	124
35	1998-1999	1791	0	1791	63	0	63
36	1999-2000	2844	0	2844	100	0	100
37	2000-2001	1399	0	1399	49	0	49
38	2001-2002	1520	0	1520	54	0	54
39	2002-2003	1361	0	1361	48	0	48
40	2003-2004	1436	0	1436	51	0	51
41	2004-2005	2708	0	2708	96	0	96
42	2005-2006	5839	0	5839	206	0	206

43	2006-2007	5650	Site downgraded as Seasonal Site from 2006-07	5650	200	Site downgraded as Seasonal Site from 2006-07	200
44	2007-2008	3839		3839	136		136
45	2008-2009	2343		2343	83		83
46	2009-2010	1949		1949	69		69
47	2010-2011	2114		2114	75		75
48	2011-2012	3190		3190	113		113
49	2012-2013	2105		2105	74		74
50	2013-2014	3129		3129	111		111
51	2014-2015	2713		2713	96		96
52	2015-2016	948		948	34		34
53	2016-2017	2744		2744	97		97
54	2017-2018	1975		1975	70		70
55	2018-2019	3277		3278	116		116
56	2019-2020	5728		5728	202		202
57	2020-2021	3359		3359	119		119
58	2021-2022	3491		3491	123		123
59	2022-2023	3185		3185	113		113
Average		2986	2	2921	106	0	103

Instantaneous Flood Peak of Varna at Samdoli

Instantaneous Annual Flood Peak					
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1964-1965	542.944	09-08-1964	18:00:00	1751 *
2	1965-1966	544.084	22-07-1965	14:00:00	1939 *
3	1966-1967	543.409	31-07-1966	00:00:00	1827 *
4	1967-1968	544.354	29-07-1967	15:00:00	1983 *
5	1968-1969	539.789	09-08-1968	05:00:00	1232 *
6	1969-1970	543.379	02-08-1969	13:00:00	1822 *
7	1970-1971	541.434	21-08-1970	10:00:00	1502 *
8	1971-1972	540.639	01-09-1971	18:00:00	1371 *
9	1972-1973	541.119	09-07-1972	00:00:00	1450 *
10	1973-1974	543.334	09-07-1973	13:00:00	1815 *
11	1974-1975	540.394	06-07-1974	19:00:00	1331 *
12	1975-1976	543.594	11-07-1975	18:00:00	1858 *
13	1976-1977	543.504	03-08-1976	23:00:00	1843 *
14	1977-1978	541.354	08-07-1977	19:00:00	1489 *
15	1978-1979	539.614	14-08-1978	12:00:00	1203 *
16	1979-1980	542.414	09-08-1979	08:00:00	1664
17	1980-1981	542.834	05-07-1980	03:00:00	1733 *
18	1981-1982	541.019	09-07-1981	06:00:00	1434 *
19	1982-1983	540.314	30-07-1982	23:00:00	1318 *
20	1983-1984	541.204	17-08-1983	20:00:00	1464 *
21	1984-1985	541.254	20-07-1984	12:00:00	1473 *
22	1985-1986	540.724	03-08-1985	15:00:00	1385 *
23	1986-1987	540.224	11-08-1986	01:00:00	1303 *
24	1987-1988	539.544	09-07-1987	23:00:00	1191 *
25	1988-1989	543.064	04-08-1988	17:00:00	1771 *
26	1989-1990	543.554	26-07-1989	17:00:00	1851 *
27	1990-1991	543.644	19-08-1990	20:00:00	1866 *
28	1991-1992	543.544	29-07-1991	18:00:00	1850 *
29	1992-1993	540.264	15-08-1992	23:00:00	1310 *
30	1993-1994	541.194	05-08-1993	02:00:00	1463 *
31	1994-1995	543.674	16-07-1994	16:00:00	1871 *
32	1995-1996	538.879	21-07-1995	09:00:00	1082 *
33	1996-1997	541.844	05-10-1996	15:00:00	1570 *
34	1997-1998	543.564	27-08-1997	03:00:00	1853 *
35	1998-1999	538.864	10-07-1998	06:00:00	1079 *
36	1999-2000	540.244	23-07-1999	17:00:00	1306 *
37	2000-2001	538.294	14-07-2000	08:00:00	985
38	2001-2002	537.734	10-07-2001	18:00:00	893 *
39	2002-2003	536.874	14-08-2002	06:00:00	752 *
40	2003-2004	537.944	23-06-2003	21:00:00	928 *
41	2004-2005	541.864	14-08-2004	15:00:00	1573 *
42	2005-2006	546.324	05-08-2005	01:00:00	2307 *
43	2006-2007	544.294	01-08-2006	13:00:00	1973 *
44	2007-2008	542.444	02-07-2007	23:00:00	1669 *
45	2008-2009	541.634	14-08-2008	06:00:00	1535 *
46	2009-2010	538.864	17-07-2009	05:00:00	1079 *

47	2010-2011	539.764	29-07-2010	11:00:00	1227 *
48	2011-2012	542.634	05-09-2011	22:00:00	1700 *
49	2012-2013	537.494	06-09-2012	19:00:00	854 *
50	2013-2014	541.794	27-07-2013	13:00:00	1562 *
51	2014-2015	540.514	24-07-2014	18:00:00	1351 *
52	2015-2016	537.284	25-06-2015	13:00:00	819 *
53	2016-2017	542.294	13-07-2016	15:00:00	1644 *
54	2017-2018	537.944	22-07-2017	06:00:00	928 *
55	2018-2019	540.144	20-07-2018	02:00:00	1290 *
56	2019-2020	546.994	09-08-2019	07:00:00	2418 *
57	2020-2021	541.864	19-08-2020	06:00:00	1573 *
58	2021-2022	546.044	25-07-2021	12:00:00	2144 *
59	2022-2023	540.104	13-08-2022	15:00:00	1310 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : Samdoli (Seasonal) (AKX00A7)

Division : Upper Krishna Divn, Pune

Local River : Varna

Sub-Division : Upper Krishna SD , 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	531.094	0.000	531.234	0.000	532.844	131.5	532.594	114.6	531.664	37.66	531.604	32.50
2	531.044	0.000	531.344	0.000	532.694	124.7	532.454	105.9	531.604	32.50 *	531.554	29.04
3	530.994	0.000	531.464	0.000	532.184	83.42	532.084	71.06	531.604	36.41	531.514	26.35
4	531.094	0.000	531.584	0.000	532.334	87.94	532.004	63.45 *	531.634	37.10	531.484	24.38
5	531.284	0.000	531.804	0.000	532.454	101.3	531.944	52.14	531.574	29.88	531.444	21.81
6	531.404	0.000	533.344	0.000	532.434	99.46	531.824	47.15	531.514	28.19	531.404	19.33 *
7	531.284	0.000	534.604	363.9	532.514	109.7 *	531.744	45.46	531.534	28.96	531.364	16.92
8	531.204	0.000	534.784	376.6	533.154	180.3	531.934	50.65	532.104	72.48	531.324	14.60
9	531.124	0.000	534.734	371.4	538.044	873.0 *	531.794	46.56	532.144	75.47 *	531.284	12.38
10	531.054	0.000	534.734	369.7 *	538.664	968.3	531.724	44.01	531.904	50.42	531.234	9.744
11	530.984	0.000	536.774	675.1	539.484	1108	531.744	42.71 *	531.754	46.06	531.294	12.93
12	530.934	0.000	537.094	722.9	539.724	1165	532.154	74.76	533.554	225.5	531.799	46.91
13	530.944	0.000	537.484	764.5	540.044	1282	533.154	180.9	533.834	276.8	531.844	50.43 *
14	530.984	0.000	537.544	780.1	540.054	1297 *	533.914	282.7	534.144	300.8	531.874	52.81
15	531.044	0.000	537.654	796.0	539.904	1200 *	535.964	543.4	533.344	199.7	531.594	31.80
16	531.104	0.000	537.624	787.0	539.564	1125	536.334	598.9	535.014	407.6 *	531.834	49.64
17	531.124	0.000	537.534	788.5 *	538.734	1018	535.744	511.0	533.754	259.7	531.794	46.52
18	531.074	0.000	537.484	739.6	537.774	818.7	536.634	645.0 *	533.194	186.1	531.964	60.12
19	531.024	0.000	535.784	516.9	536.764	688.5	536.494	623.4	533.784	262.2	532.124	73.72
20	530.994	0.000	535.014	376.4	534.994	374.2	534.504	310.6	533.594	242.0	532.094	71.11 *
21	530.954	0.000	534.224	309.2	534.894	391.2 *	533.174	185.5	532.704	126.2	531.894	54.41
22	530.914	0.000	533.664	234.2	534.834	361.8	532.684	120.1	533.894	270.9	531.654	36.06
23	530.874	0.000	533.424	224.6	534.564	344.6	532.564	109.4	534.414	327.5 *	531.554	29.04
24	530.834	0.000	533.214	182.7 *	534.844	363.7	532.414	97.47	533.094	178.0	531.444	21.81
25	530.794	0.000	533.154	186.6	534.624	351.6	532.304	89.85 *	532.534	107.4	531.384	18.11
26	530.754	0.000	533.294	196.6	533.984	289.8	532.104	70.08	532.274	85.19	531.344	15.75
27	530.774	0.000	533.234	191.3	533.814	273.1	531.964	56.99	532.124	72.12	531.274	11.84 *
28	530.874	0.000	533.064	161.6	533.614	228.4 *	531.884	47.33	531.914	50.13	531.314	14.04
29	530.994	0.000	532.794	130.7	533.464	219.2	531.804	46.76	531.824	47.13	531.324	14.60
30	531.114	0.000	532.934	148.7	533.014	165.7	531.734	43.77	531.744	42.71 *	531.364	16.92
31			532.834	141.8 *	532.674	129.5			531.664	37.90		
Ten-Daily Mean												
I Ten-Daily	531.158	0.000	532.963	148.2	533.732	276.0	532.010	64.10	531.728	42.91	531.421	20.71
II Ten-Daily	531.021	0.000	536.999	694.7	538.704	1001	534.664	381.3	533.597	240.6	531.821	49.60
III Ten-Daily	530.888	0.000	533.258	191.6	534.029	283.5	532.263	86.72	532.562	122.3	531.455	23.26
Monthly												
Min.	530.754	0.000	531.234	0.000	532.184	83.42	531.724	42.71	531.514	28.19	531.234	9.744
Max.	531.404	0.000	537.654	796.0	540.054	1282	536.634	645.0	535.014	407.6	532.124	73.72
Mean	531.022	0	534.370	339.9	535.441	512.4	532.979	177.4	532.627	134.9	531.566	31.19

Annual Runoff in MCM = 3185 Annual Runoff in mm = 1635

Peak Observed Discharge = 1282 cumecs on 13-08-2022 Corres. Water Level :540.044 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :531.094 m

Peak Computed Discharge = 1297 cumecs on 14-08-2022 Corres. Water Level :540.054 m

Lowest Computed Discharge = 11.84 cumecs on 27-11-2022 Corres. Water Level :531.274 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 : 2022-2023

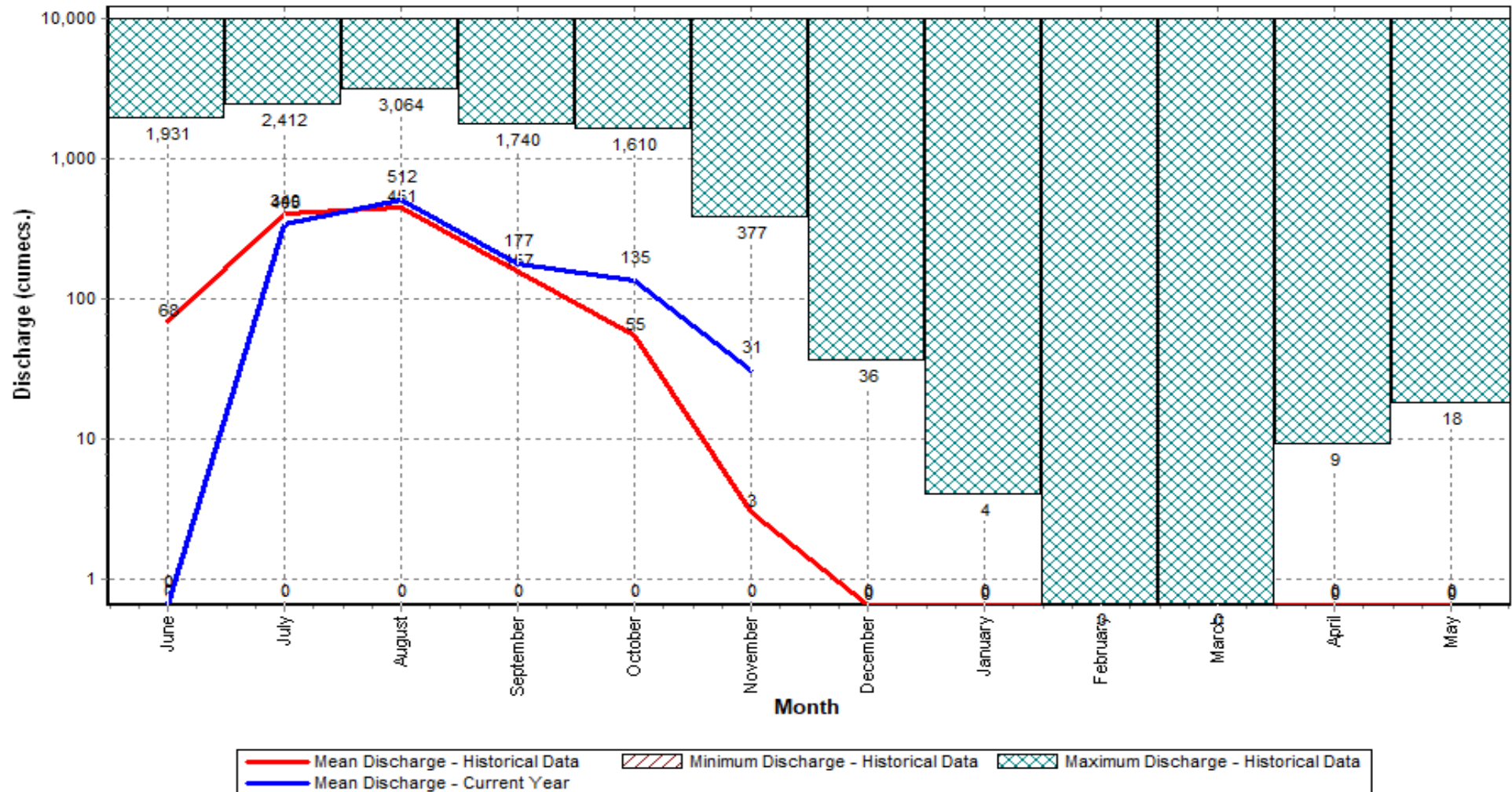
Station Name : Samdoli (Seasonal) (AKX00A7)

Data considered : 1965-2023

Division : Upper Krishna Divn, Pune

Local River : Varna

Sub-Division : Upper Krishna SD, Miraj



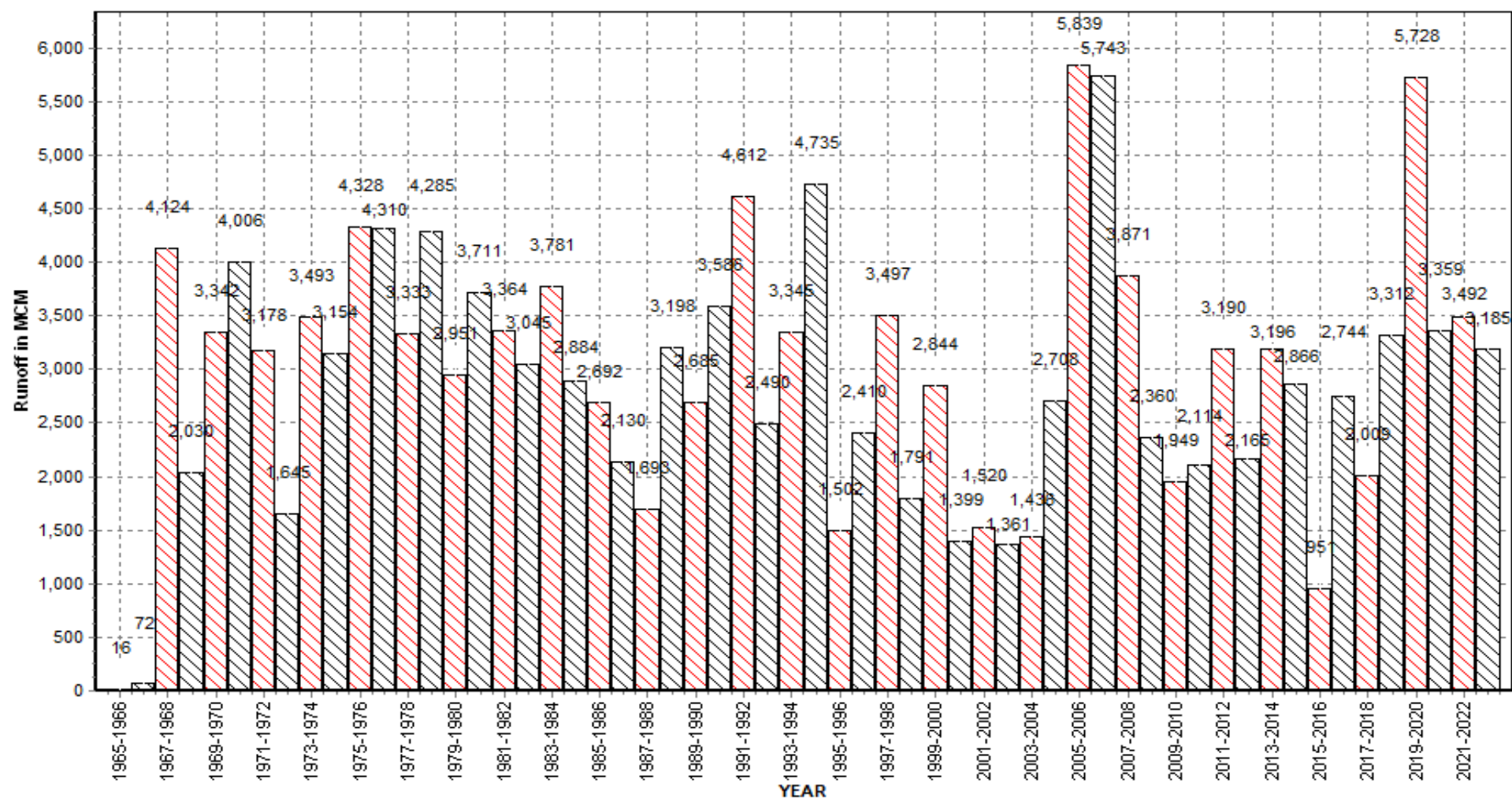
Annual Runoff Values for the period: 1965 - 2023

Station Name : Samdoli (Seasonal) (AKX00A7)

Local River : Varna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



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

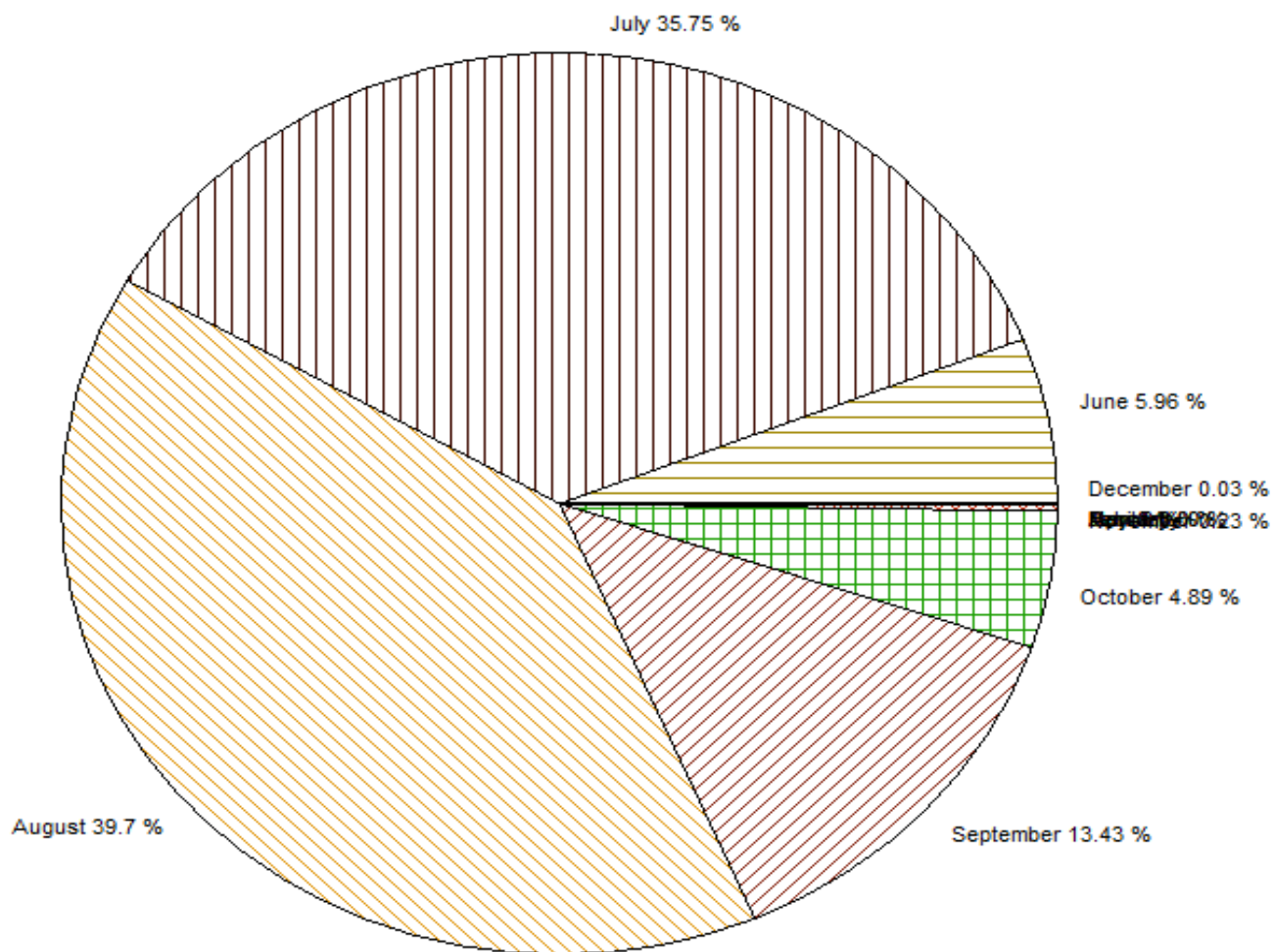
Monthly Average Runoff based on period : 1965-2022

Station Name : Samdoli (Seasonal) (AKX00A7)

Local River : Varna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



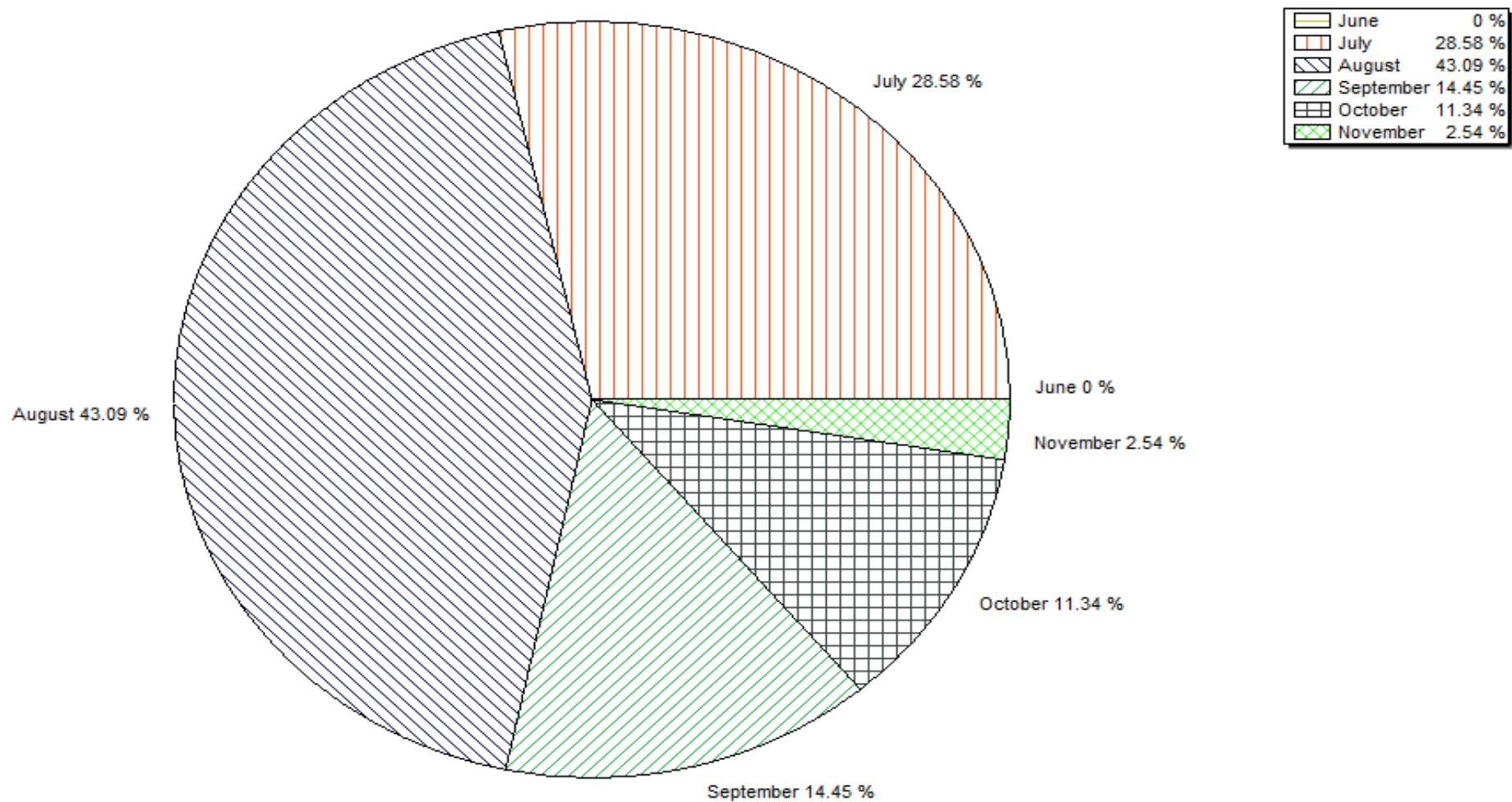
Monthly Runoff for the Year : 2022-2023

Station Name : Samdoli (Seasonal) (AKX00A7)

Local River : Varna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



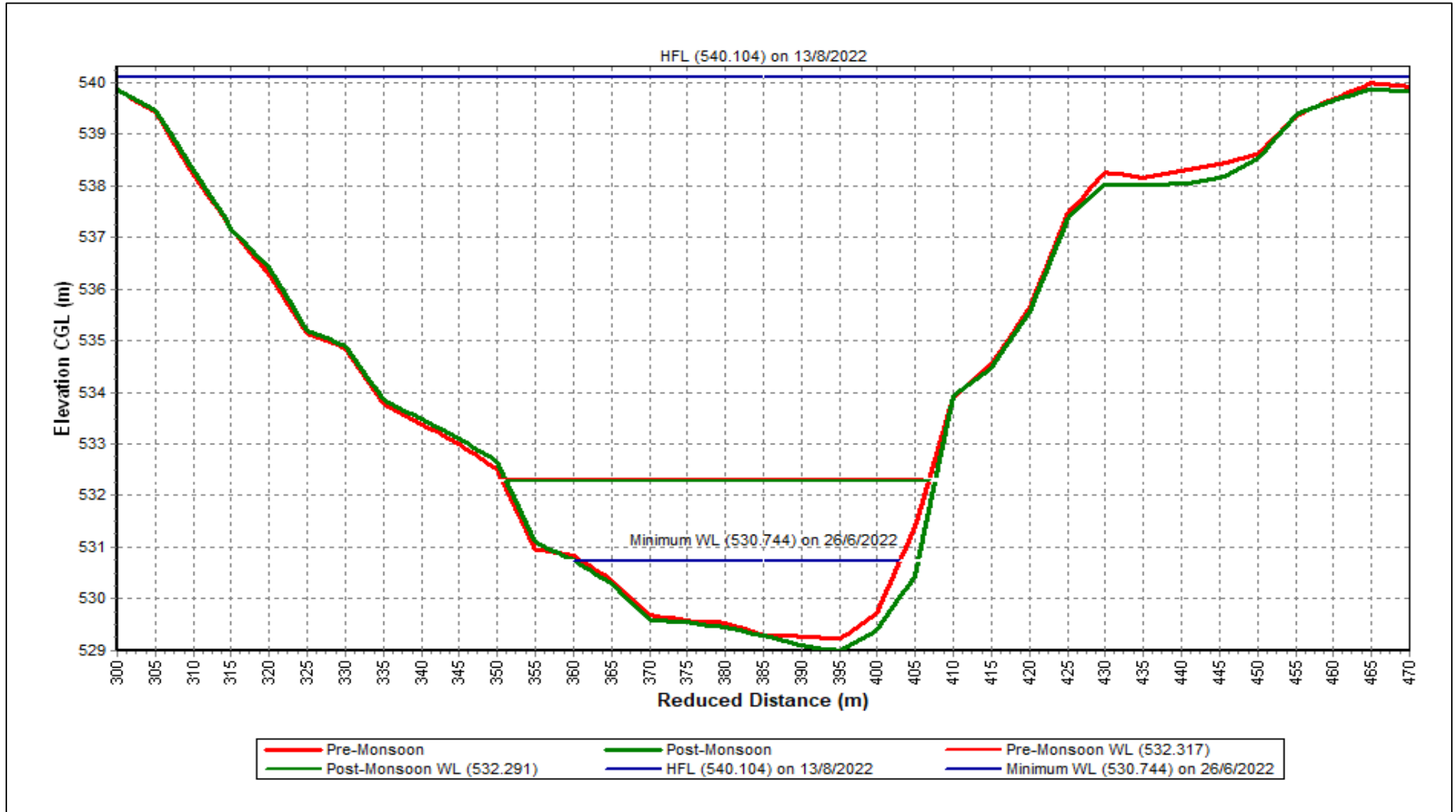
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Samdoli (Seasonal) (AKX00A7)

Local River : Varna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



Zero of the Gauge: 528.594 (m.s.l)

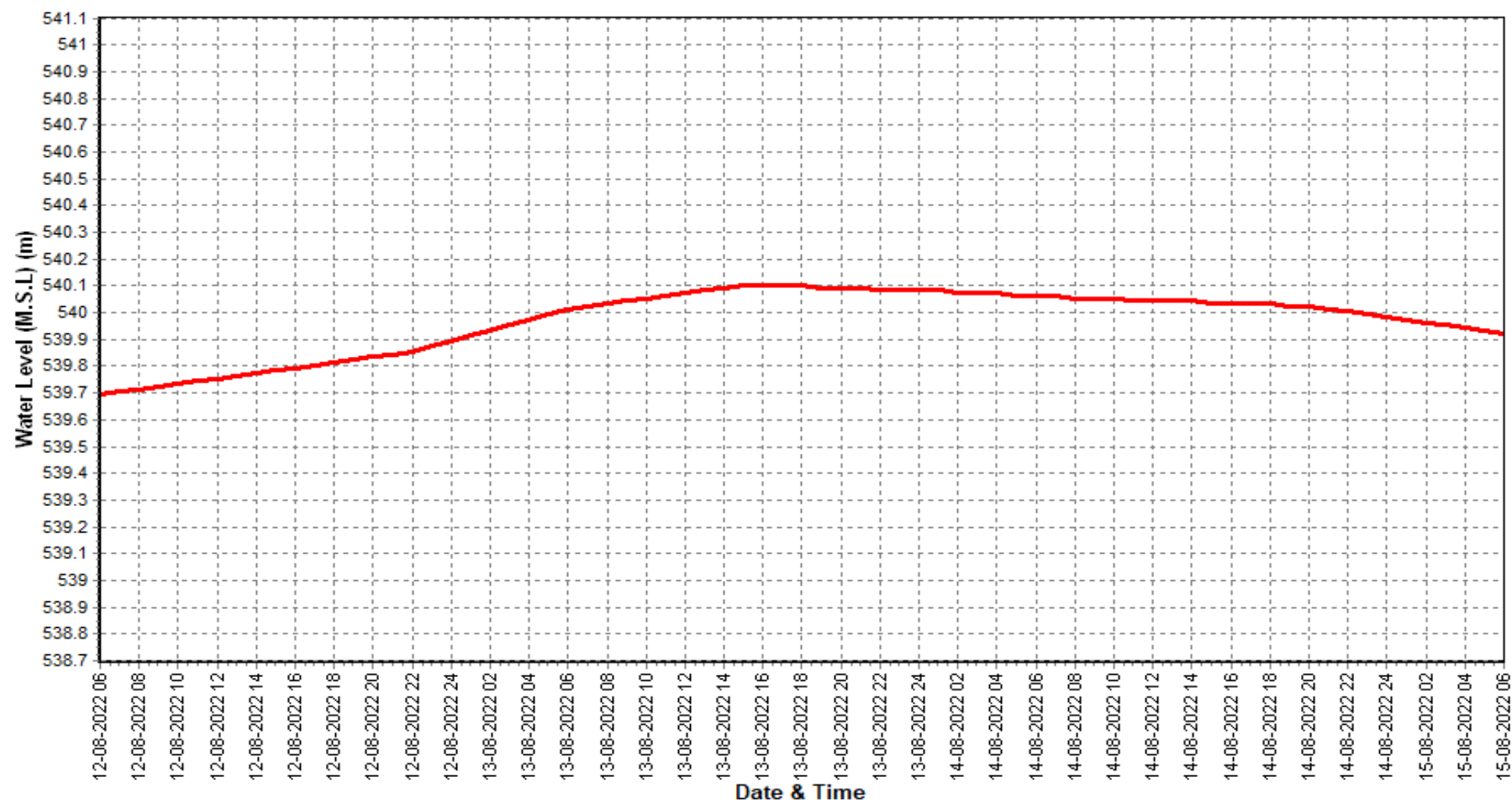
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Samdoli (Seasonal) (AKX00A7)

Local River : Varna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



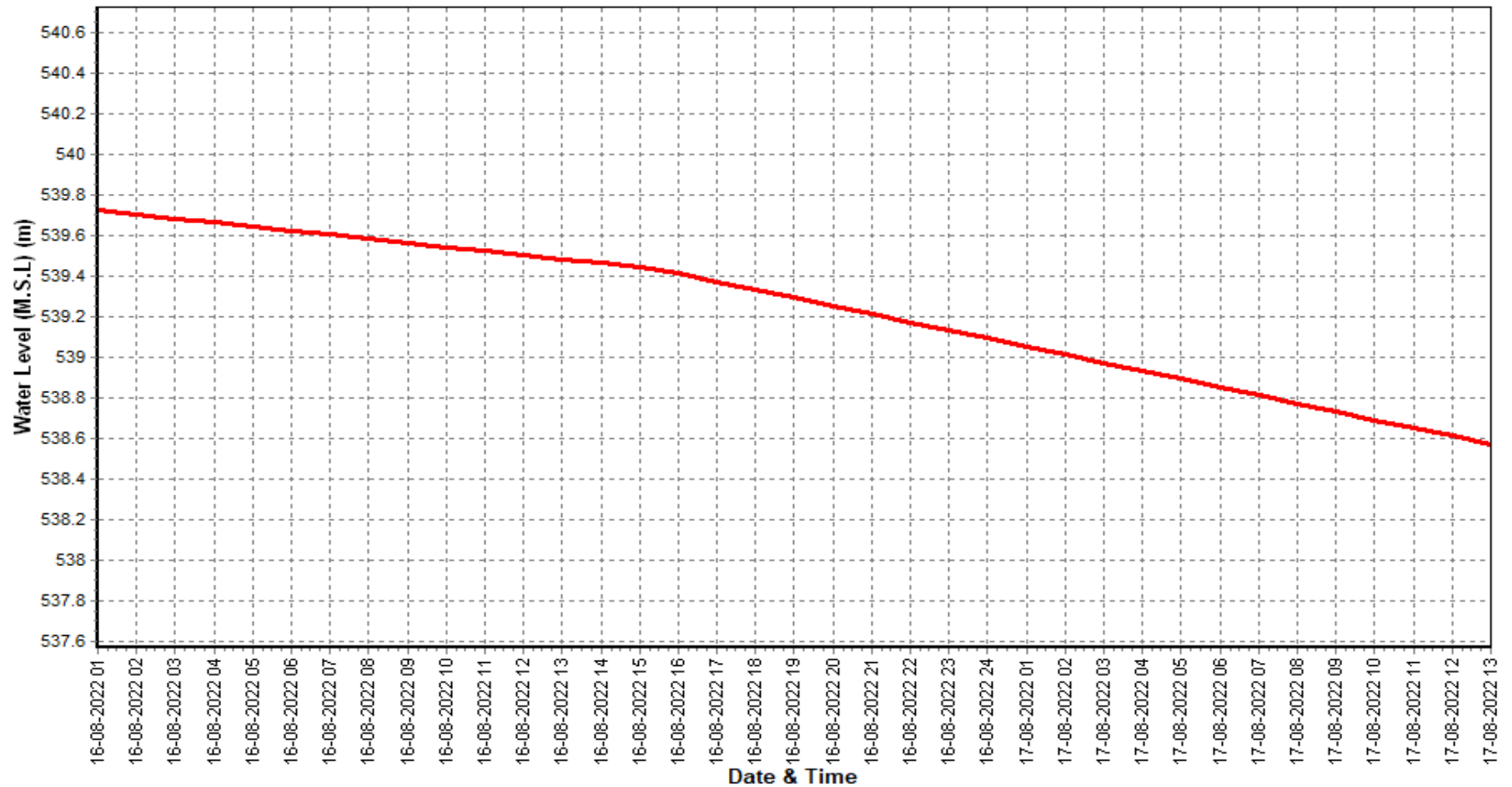
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Samdoli (Seasonal) (AKX00A7)

Local River : Varna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



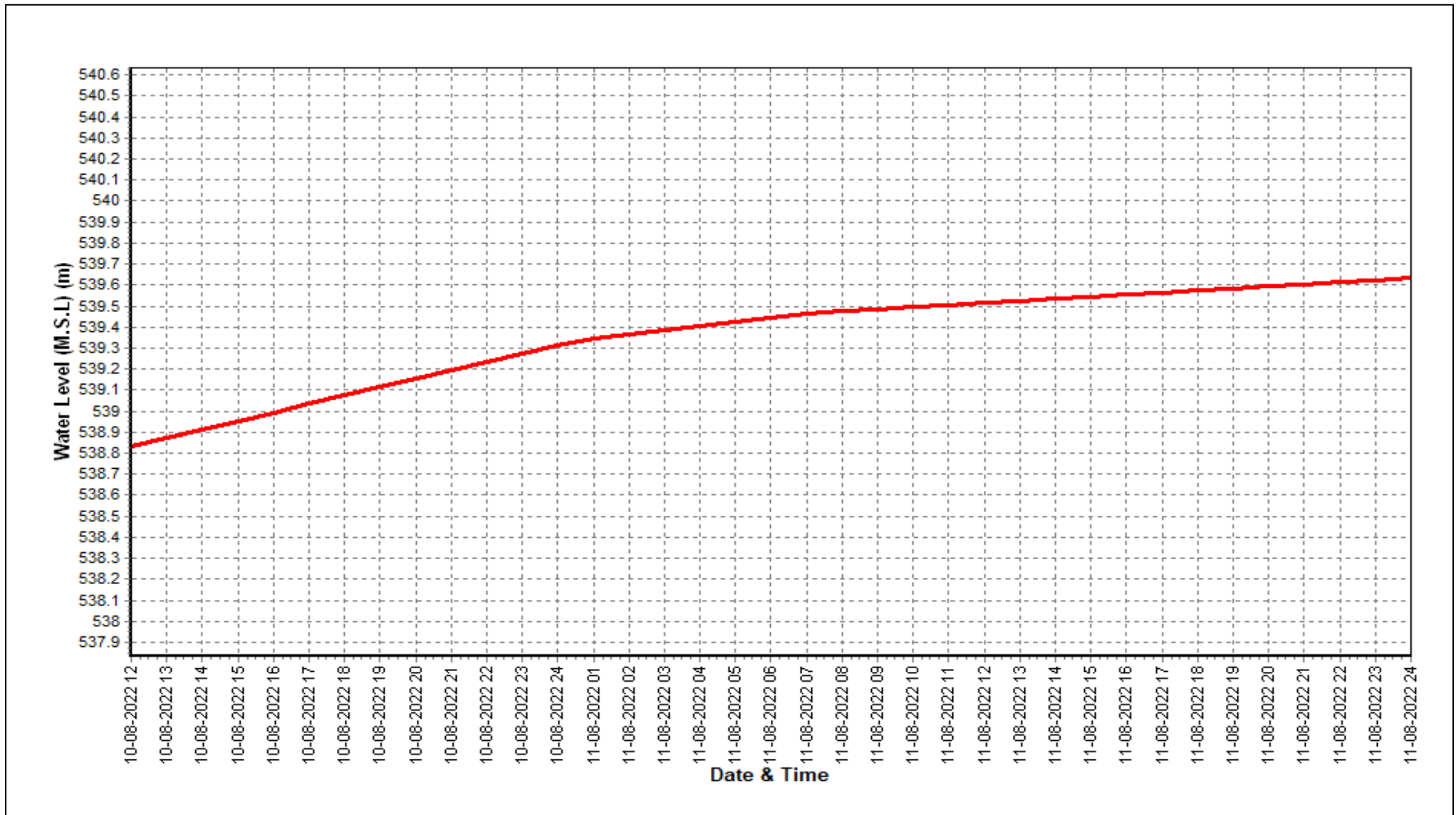
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Samdoli (Seasonal) (AKX00A7)

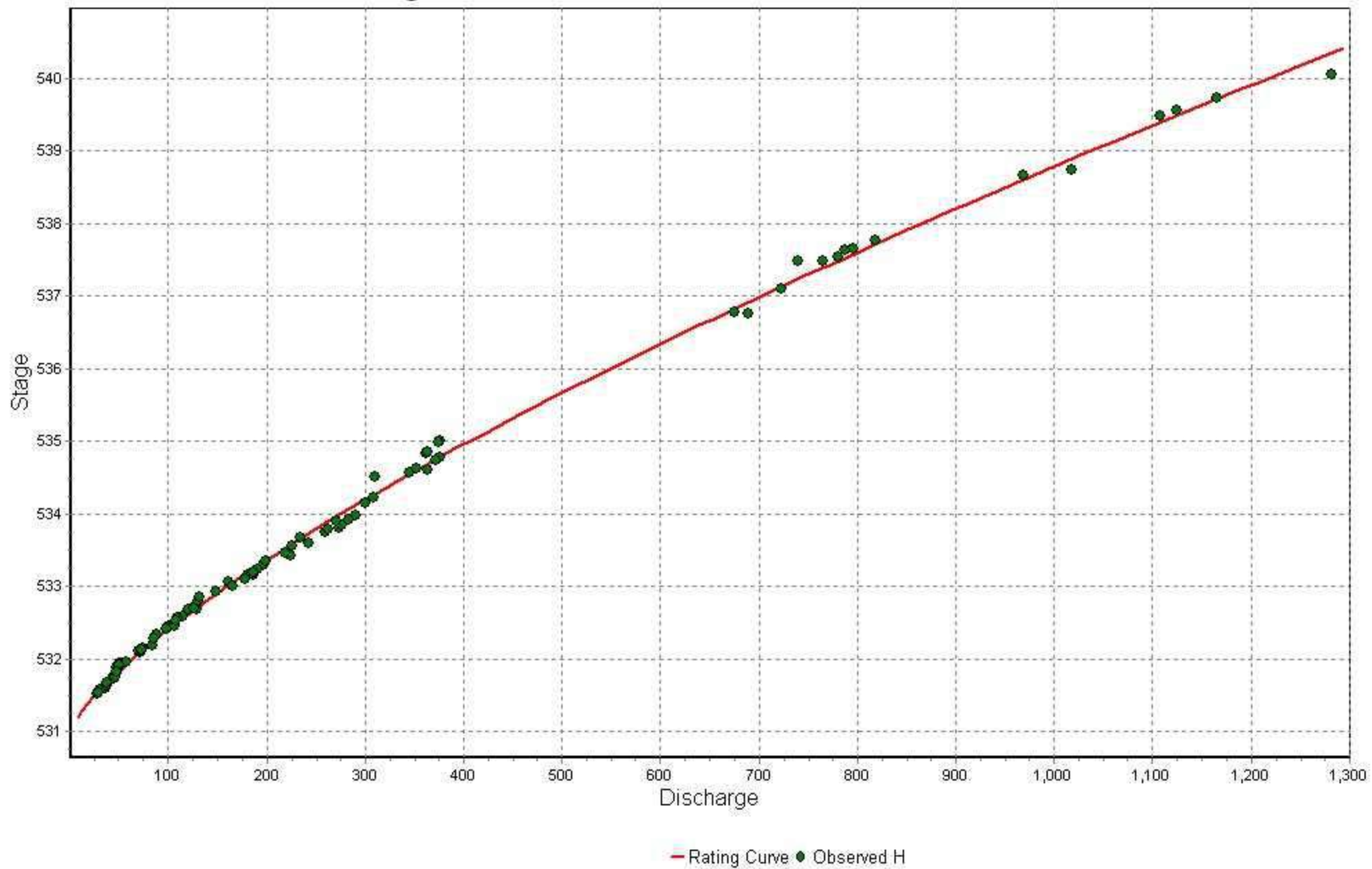
Local River : Varna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



Rating Curve of Site Samdoli 01/06/2022 to 31/10/2022



HISTORY SHEET

Water Year : 2022-2023

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, Miraj

Drainage Area : 12660 Sq. Km.

Bank : Right

Latitude : 16°46'33"

Longitude : 74°38'18"

Zero of Gauge (m) : 523 (m.s.l)
523.225 (m.s.l)01-02-1969 - 31-12-1973
01-01-1974

Opening Date

Closing Date

Gauge : 12-01-1969

HFL During 2022-23 : 536.745 m

Discharge : 12-01-1969

Corres. Discharge : 1766(Observed)

Sediment : 26-12-2014

Date & Time of

occurrence : 13-08-2022

Water Quality : 01-09-2014

: 08:00 Hrs

HFL Recorded so far in m : 543.685 dt 05-08-2005

Corresponding Discharge (cumecs) : 10151*

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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	526.065	12-06-2014
2015-2016	1460	532.365	26-06-2015	0.000	527.295	18-06-2015
2016-2017	4322	537.785	09-08-2016	0.000	527.205	17-11-2016
2017-2018	1824	533.535	22-07-2017	0.000	525.235	11-06-2017
2018-2019	3067	536.335	19-07-2018	0.000	527.375	10-06-2018
2019-2020	5607	544.185	10-08-2019	0.000	526.815	11-06-2019
2020-2021	2476	538.995	19-08-2020	0.000	528.815	08-06-2020
2021-2022	3586	543.925	26-07-2021	0.000	527.355	13-06-2021

Annual Runoff of Krishna at Arjunwad (Seasonal)

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1968-1969		2	2		0	0
2	1969-1970	8907	73	8980	315	3	317
3	1970-1971	10066	70	10136	356	2	358
4	1971-1972	7485	25	7511	265	1	265
5	1972-1973	3914	0	3914	138	0	138
6	1973-1974	8534	0	8534	302	0	302
7	1974-1975	6505	0	6505	230	0	230
8	1975-1976	10790	0	10790	381	0	381
9	1976-1977	10597	0	10597	374	0	374
10	1977-1978	7323	0	7323	259	0	259
11	1978-1979	8838	0	8838	312	0	312
12	1979-1980	8718	47	8765	308	2	310
13	1980-1981	8904	0	8904	315	0	315
14	1981-1982	7654	0	7654	270	0	270
15	1982-1983	5266	0	5266	186	0	186
16	1983-1984	7659	0	7659	271	0	271
17	1984-1985	5964	0	5964	211	0	211
18	1985-1986	4619	0	4619	163	0	163
19	1986-1987	4884	0	4884	173	0	173
20	1987-1988	2703	0	2703	96	0	96
21	1988-1989	7889	0	7889	279	0	279
22	1989-1990	5140	0	5140	182	0	182
23	1990-1991	10048	0	10048	355	0	355
24	1991-1992	11529	0	11529	407	0	407
25	1992-1993	5620	0	5620	199	0	199
26	1993-1994	8295	182	8477	293	6	300
27	1994-1995	15463	0	15463	546	0	546
28	1995-1996	4350	0	4350	154	0	154
29	1996-1997	6273	0	6273	222	0	222
30	1997-1998	10449	0	10449	369	0	369
31	1998-1999	5152	0	5152	182	0	182
32	1999-2000	8115	0	8115	287	0	287
33	2000-2001	2874	0	2874	102	0	102
34	2001-2002	3398	0	3398	120	0	120
35	2002-2003	2946	0	2946	104	0	104
36	2003-2004	2697	0	2697	95	0	95
37	2004-2005	7776	0	7776	275	0	275
38	2005-2006	18332	0	18332	648	0	648
39	2006-2007	17640	Site downgraded as Seasonal Site from 2006-07	17640	623	Site downgraded as Seasonal Site from 2006-07	623
40	2007-2008	9962		9962	352		352
41	2008-2009	5794		5794	205		205
42	2009-2010	4811		4811	170		170
43	2010-2011	5410		5410	191		191
44	2011-2012	7328		7328	259		259
45	2012-2013	4099		4099	145		145
46	2013-2014	7809		7809	276		276
47	2014-2015	5974		5974	211		211

48	2015-2016	1438	Site downgraded as Seasonal Site from 2006-07	1438	51	Site downgraded as Seasonal Site from 2006-07	51
49	2016-2017	7208		7208	255		255
50	2017-2018	3929		3929	139		139
51	2018-2019	7179		7179	254		254
52	2019-2020	14064		14064	497		497
53	2020-2021	5846		5846	207		207
54	2021-2022	6218		6218	220		220
55	2022-2023	6207		6207	219		219
Average		7344	10	7218	260	0	255

Instantaneous Flood Peak of Krishna at Arjunwad

Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1969-1970	540.540	02-08-1969	17:00:00	5629 *
2	1970-1971	538.025	22-08-1970	03:00:00	3434 *
3	1971-1972	537.045	01-09-1971	22:00:00	2816 *
4	1972-1973	537.760	09-07-1972	07:00:00	3254 *
5	1973-1974	540.060	10-07-1973	08:00:00	5143
6	1974-1975	536.665	06-07-1974	12:00:00	2612 *
7	1975-1976	540.505	12-07-1975	01:00:00	5593 *
8	1976-1977	541.120	08-06-1976	09:00:00	6260 *
9	1977-1978	538.035	08-07-1977	17:00:00	3441 *
10	1978-1979	536.665	03-09-1978	23:00:00	2612 *
11	1979-1980	539.775	09-08-1979	11:00:00	4869 *
12	1980-1981	539.895	05-07-1980	08:00:00	4983 *
13	1981-1982	538.315	10-07-1981	08:00:00	3642
14	1982-1983	536.275	15-08-1982	19:00:00	2424 *
15	1983-1984	538.675	18-08-1983	01:00:00	3917 *
16	1984-1985	538.055	20-07-1984	11:00:00	3455 *
17	1985-1986	537.535	03-08-1985	23:00:00	3108 *
18	1986-1987	537.640	14-08-1986	08:00:00	3175 *
19	1987-1988	536.245	09-07-1987	16:00:00	2410
20	1988-1989	539.980	04-08-1988	13:00:00	5065 *
21	1989-1990	540.045	27-07-1989	03:00:00	5128 *
22	1990-1991	540.810	20-08-1990	08:00:00	5917
23	1991-1992	540.530	30-07-1991	02:00:00	5619 *
24	1992-1993	537.555	15-08-1992	18:00:00	3121 *
25	1993-1994	537.345	05-08-1993	00:00:00	2991 *
26	1994-1995	541.225	17-07-1994	01:00:00	6379 *
27	1995-1996	535.725	21-07-1995	13:00:00	2194 *
28	1996-1997	539.505	05-10-1996	19:00:00	4620 *
29	1997-1998	540.995	27-08-1997	05:00:00	6120 *
30	1998-1999	535.715	10-07-1998	08:00:00	2191
31	1999-2000	537.925	29-07-1999	03:00:00	3365 *
32	2000-2001	534.520	14-07-2000	14:00:00	1838 *
33	2001-2002	534.200	10-07-2001	23:00:00	1777 *
34	2002-2003	534.335	14-08-2002	06:00:00	1801 *
35	2003-2004	532.835	29-07-2003	05:00:00	1677 *
36	2004-2005	539.455	14-08-2004	10:00:00	4575 *
37	2005-2006	543.685	05-08-2005	09:00:00	10151 *
38	2006-2007	542.150	12-08-2006	15:00:00	7495 *
39	2007-2008	539.885	03-07-2007	08:00:00	4973 *
40	2008-2009	538.395	15-08-2008	08:00:00	3702
41	2009-2010	535.045	17-07-2009	10:00:00	1968 *
42	2010-2011	536.345	29-07-2010	15:00:00	2456 *
43	2011-2012	540.285	05-09-2011	20:00:00	5367 *

44	2012-2013	533.175	07-09-2012	02:00:00	1677 *
45	2013-2014	538.695	27-07-2013	13:00:00	3933 *
46	2014-2015	536.255	02-08-2014	06:00:00	2415 *
47	2015-2016	532.555	25-06-2015	08:00:00	1688
48	2016-2017	537.975	13-07-2016	16:00:00	3399 *
49	2017-2018	533.615	21-07-2017	18:00:00	1702 *
50	2018-2019	536.395	20-07-2018	16:00:00	2480 *
51	2019-2020	544.275	09-08-2019	02:00:00	5647 *
52	2020-2021	538.995	19-08-2020	08:00:00	2476
53	2021-2022	543.955	26-07-2021	02:00:00	3595 *
54	2022-2023	536.745	13-08-2022	08:00:00	1766

Note :- Discharge Effected from 2019-2020 due to Partially Closing of D/S kt-weir.

Stage-Discharge Data for the period 2022 - 2023

Station Name : Arjunwad (Seasonal) (AK000V4)

Division : Upper Krishna Divn, Pune

Local River : Krishna

Sub-Division : Upper Krishna SD, 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	527.735	0.000	526.725	0.000	529.035	402.6	527.980	204.1	528.165	228.7	528.060	216.4
2	527.405	0.000	526.725	0.000	528.435	323.6	528.600	268.9	528.215	237.2 *	527.935	199.8
3	527.165	0.000	526.745	0.000	528.185	207.5	528.520	270.9	528.175	219.6	527.805	182.9
4	527.485	0.000	527.055	0.000	528.215	225.7	528.335	253.6 *	528.015	206.3	527.655	163.7
5	527.915	0.000	527.325	0.000	528.425	243.5	528.135	202.9	527.945	196.9	527.525	147.4
6	528.065	0.000	528.990	332.7	528.435	237.2	528.095	205.7	527.925	191.4	527.385	130.2 *
7	528.065	0.000	529.755	461.7 #	529.105	363.5 *	528.200	238.1	528.195	231.0	527.315	121.8
8	528.105	0.000	529.900	484.2 #	529.445	354.6	528.785	316.1	529.065	375.3	527.265	115.9
9	527.985	0.000	529.835	474.1 #	531.815	798.4 *	529.570	449.2	529.015	350.3 *	527.185	106.5
10	527.845	0.000	529.975	495.9 *	534.500	1225	529.230	408.0	528.675	302.4	526.865	70.57
11	527.985	0.000	531.625	733.4	535.705	1482	529.365	402.2 *	528.165	228.9	526.705	53.78
12	528.025	0.000	532.675	880.6	536.265	1644	529.720	490.6	529.840	474.8	526.725	55.83
13	528.025	0.000	533.265	1054 #	536.745	1766	530.355	556.0 #	530.525	583.4	527.025	88.17 *
14	527.985	0.000	533.375	1074 #	536.605	1689 *	531.160	687.6 #	530.235	536.9	527.935	199.8
15	527.945	0.000	533.655	1125 #	536.225	1614 *	532.445	907.8 #	530.930	649.5	528.315	250.9
16	527.775	0.000	533.505	1098 #	535.815	1511	532.745	960.8 #	532.195	864.1 *	528.575	287.1
17	527.225	0.000	533.545	1105 *	535.095	1405	532.470	912.2 #	530.115	517.9	528.415	264.7
18	527.225	0.000	533.395	1078 #	534.225	1205	533.375	1074 #	530.315	549.6	528.145	227.8
19	526.855	0.000	532.560	864.1	532.995	1026	532.125	851.9 #	531.250	702.6	528.065	217.0
20	526.475	0.000	531.435	743.7	532.175	888.9	530.545	586.6 #	530.630	600.4	528.075	218.4 *
21	526.225	0.000	530.405	564.0 #	532.015	832.8 *	529.675	449.4 #	530.155	524.2	528.095	221.0
22	526.325	0.000	530.045	506.9 #	532.115	854.7	529.435	459.0	530.415	565.6	528.115	223.7
23	526.775	0.000	529.635	443.2 #	531.135	649.3	529.515	424.9 #	531.355	720.2 *	528.155	229.1
24	526.295	0.000	529.395	406.8 *	530.675	589.5	529.165	383.4	529.865	478.7	528.145	227.8
25	526.615	0.000	529.275	465.4	530.245	524.7	528.765	314.1 *	529.385	405.2	528.145	227.8
26	526.735	0.000	529.615	481.0	530.105	483.2	528.265	277.7	529.105	363.5	528.095	221.0
27	526.745	0.000	529.445	435.5	529.855	444.9	528.365	262.6	528.855	327.0	528.025	0.000
28	526.865	0.000	529.195	398.2	529.395	406.8 *	528.245	237.1	528.595	289.9	528.065	0.000
29	527.075	0.000	528.885	380.8	528.885	328.6	527.975	195.7	528.525	280.0	528.115	0.000
30	526.875	0.000	528.860	375.4	528.420	272.5	527.805	189.2	528.305	249.5 *	528.185	0.000
31			529.015	350.3 *	528.330	241.7			528.165	230.5		
Ten-Daily Mean												
I Ten-Daily	527.777	0.000	528.303	224.9	529.560	438.1	528.545	281.8	528.339	253.9	527.500	145.5
II Ten-Daily	527.552	0.000	532.904	975.6	535.185	1423	531.430	743.0	530.420	570.8	527.798	186.3
III Ten-Daily	526.653	0.000	529.434	437.0	530.107	511.7	528.721	319.3	529.339	403.1	528.114	135.0
Monthly												
Min.	526.225	0.000	526.725	0.000	528.185	207.5	527.805	189.2	527.925	191.4	526.705	0.000
Max.	528.105	0.000	533.655	1125	536.745	1766	533.375	1074	532.195	864.1	528.575	287.1
Mean	527.327	0	530.188	542.3	531.568	781.9	529.565	448	529.365	409.1	527.804	155.6

Annual Runoff in MCM = 6207 Annual Runoff in mm = 490

Peak Observed Discharge = 1766 cumecs on 13-08-2022 Corres. Water Level :536.745 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :527.735 m

Peak Computed Discharge = 1689 cumecs on 14-08-2022 Corres. Water Level :536.605 m

Lowest Computed Discharge = 88.17 cumecs on 13-11-2022 Corres. Water Level :527.025 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 : 2022-2023

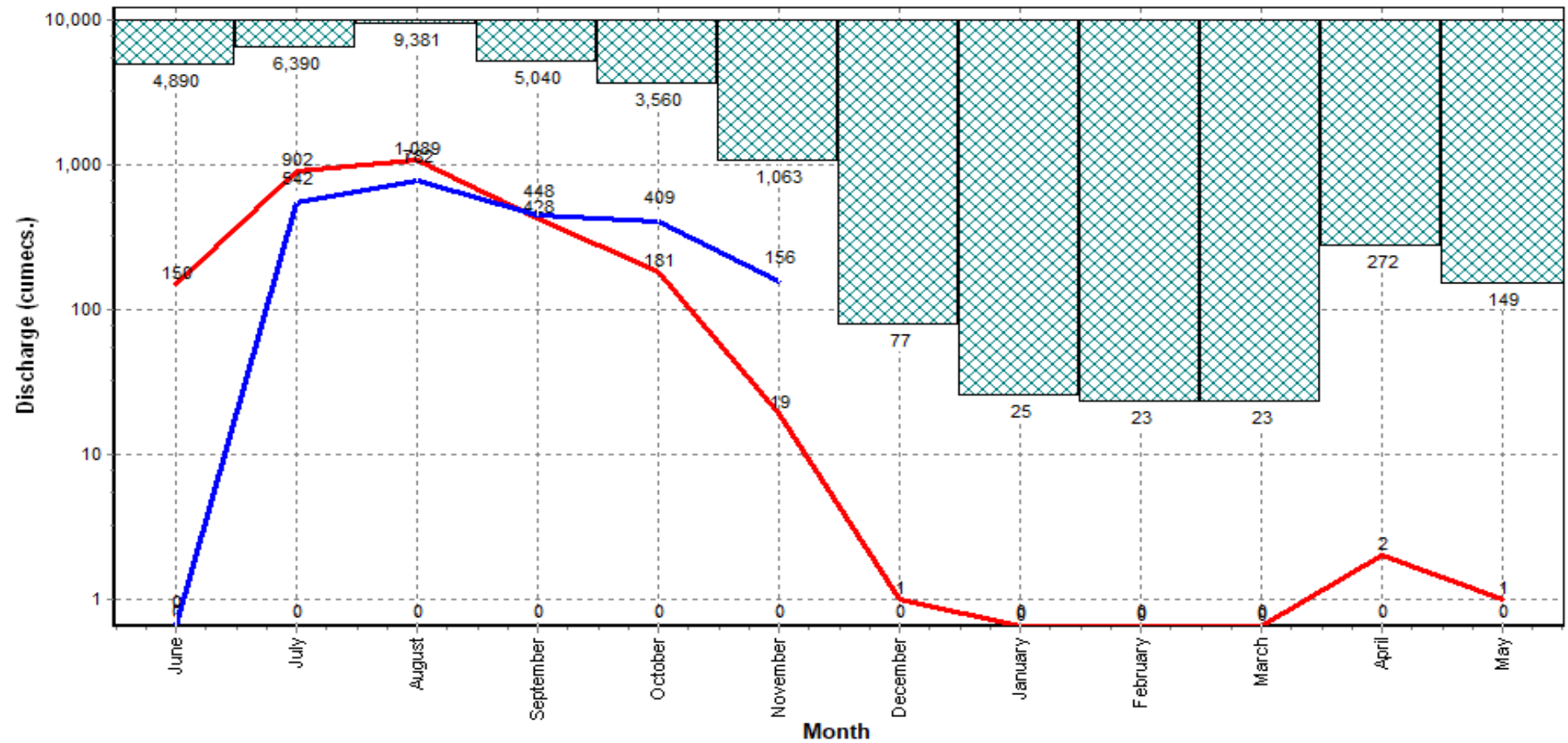
Station Name : Arjunwad (Seasonal) (AK000V4)

Data considered : 1969-2023

Division : Upper Krishna Divn, Pune

Local River : Krishna

Sub-Division : Upper Krishna SD, Miraj



— Mean Discharge - Historical Data
 Minimum Discharge - Historical Data
 Maximum Discharge - Historical Data
— Mean Discharge - Current Year

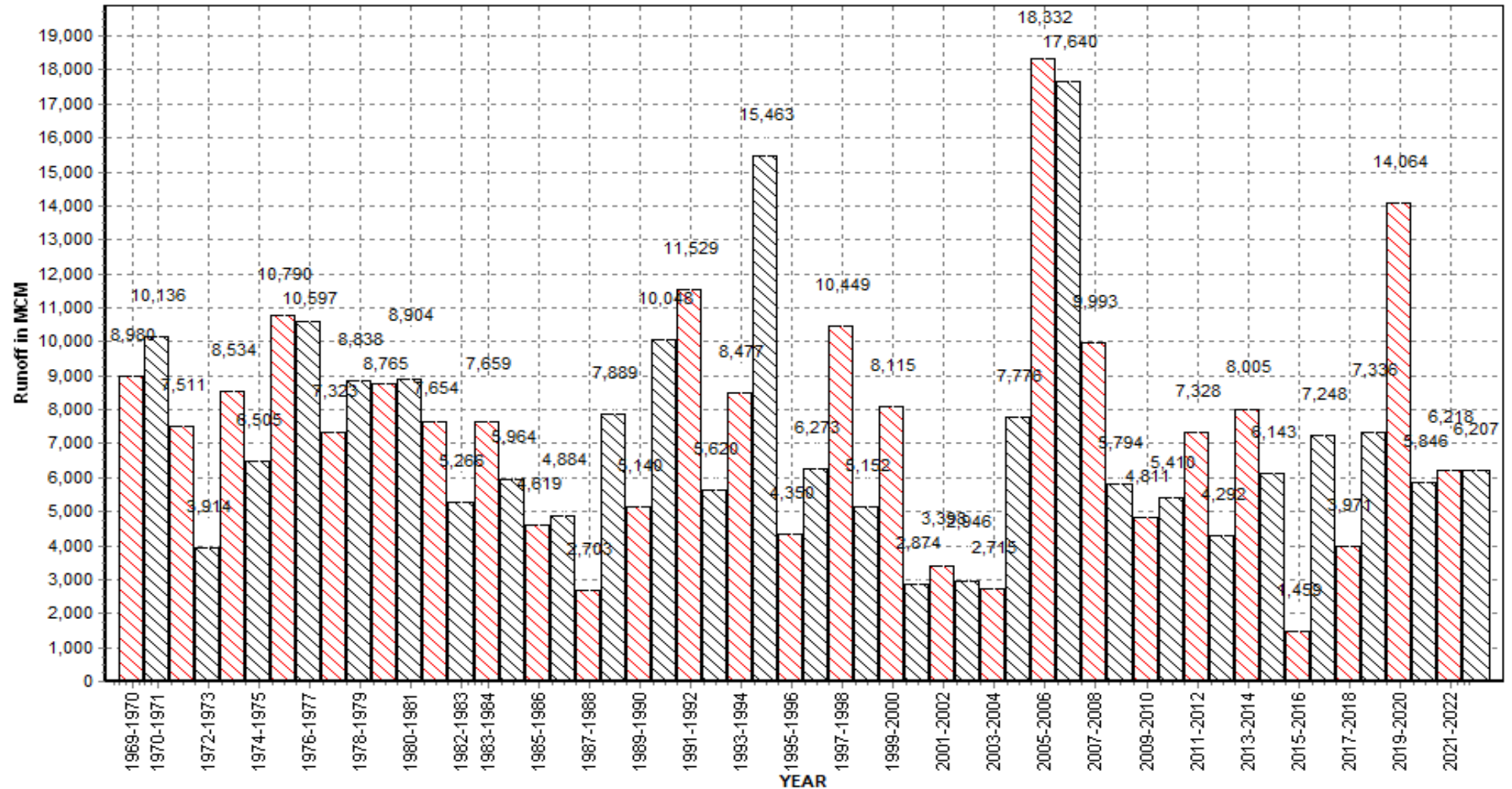
Annual Runoff Values for the period: 1969 - 2023

Station Name : Arjunwad (Seasonal) (AK000V4)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



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

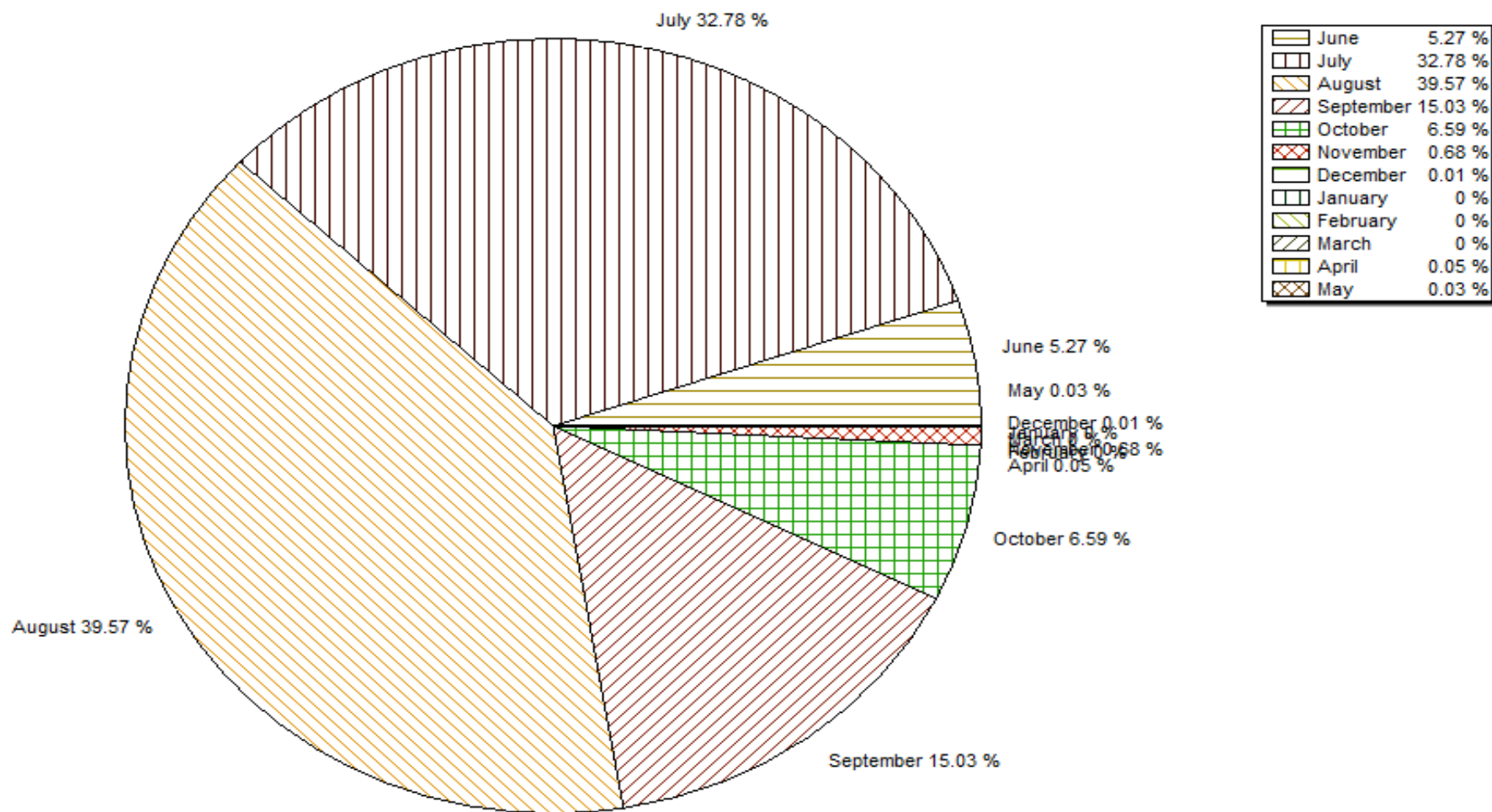
Monthly Average Runoff based on period : 1969-2022

Station Name : Arjunwad (Seasonal) (AK000V4)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



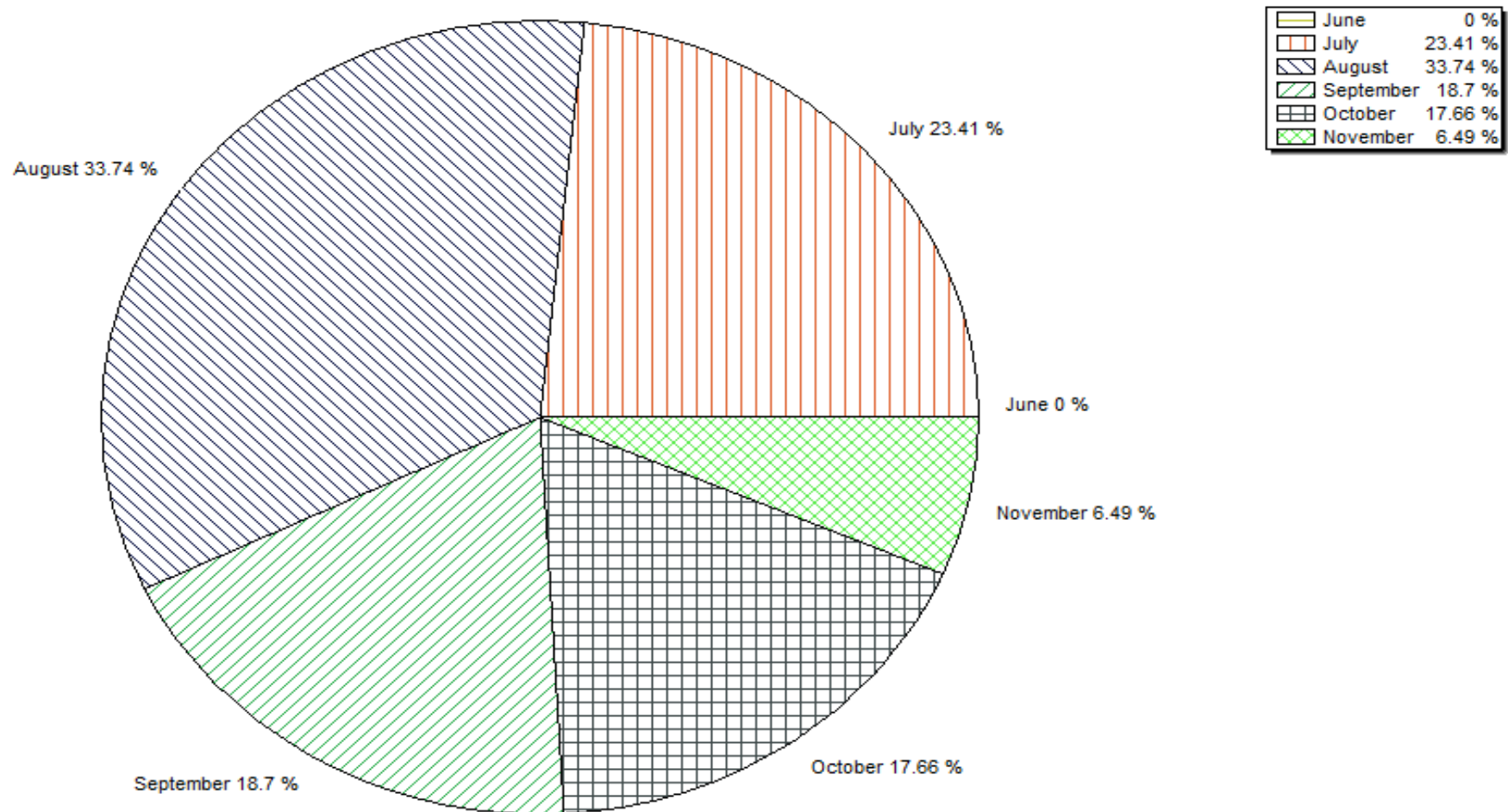
Monthly Runoff for the Year : 2022-2023

Station Name : Arjunwad (Seasonal) (AK000V4)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



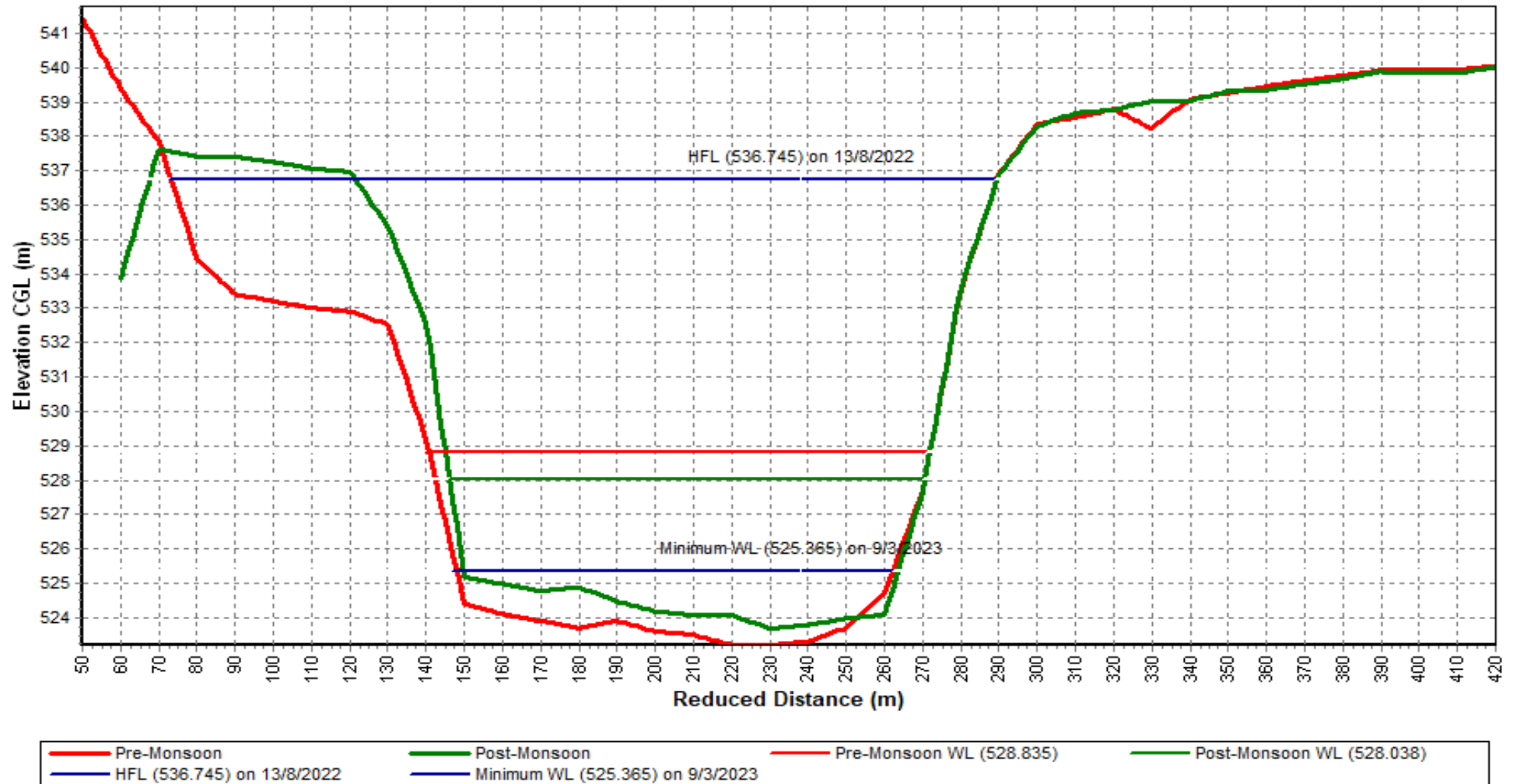
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Arjunwad (Seasonal) (AK000V4)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



Note: Postmonsoon X-Section Difference due to Silting at RD 80 to 220 and RD 330 and Scouring at Rd 60, 260 and also Sugarcane Field is there.
Zero of the Gauge: 523.225 (m.s.l)

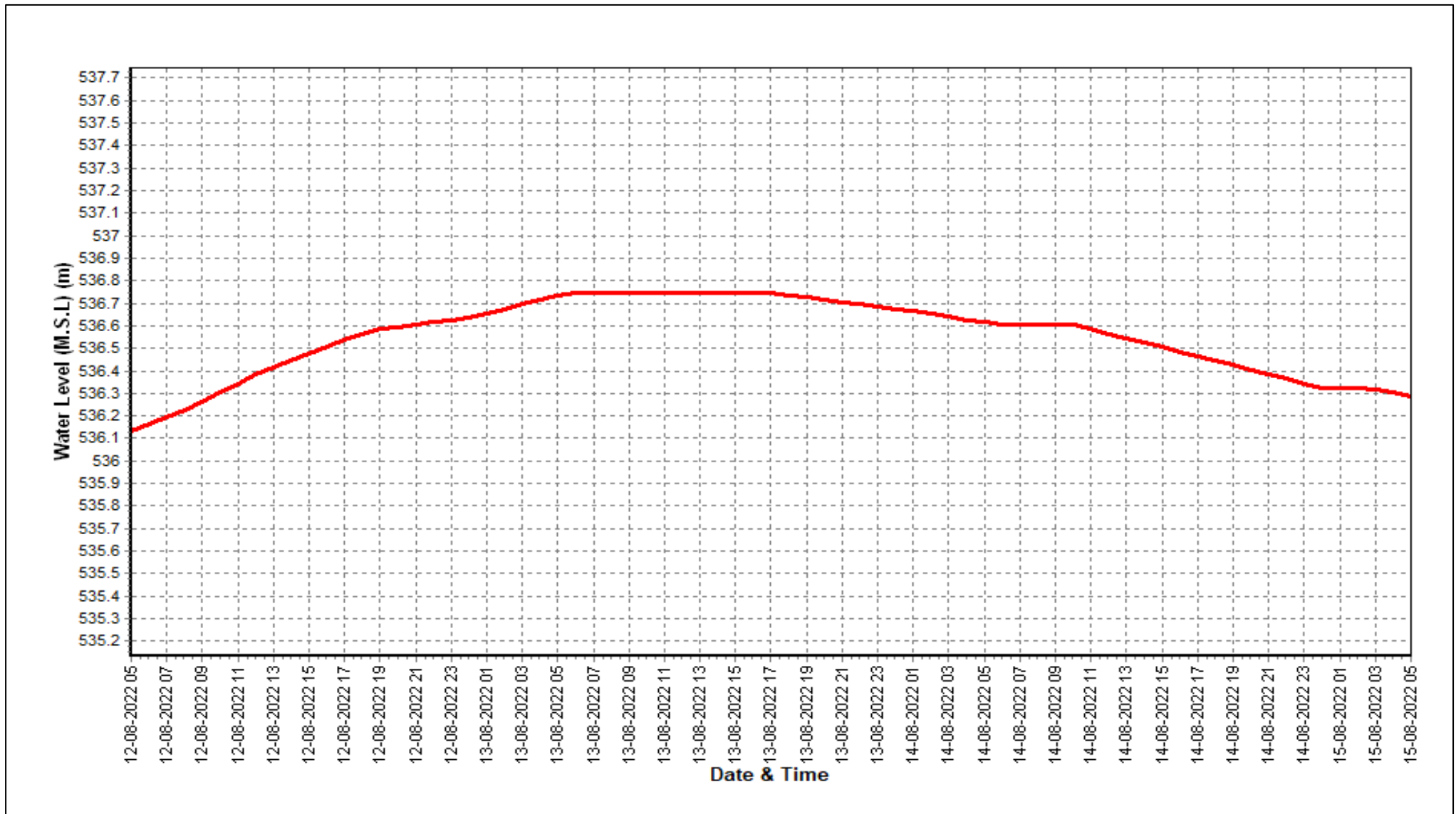
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Arjunwad (Seasonal) (AK000V4)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



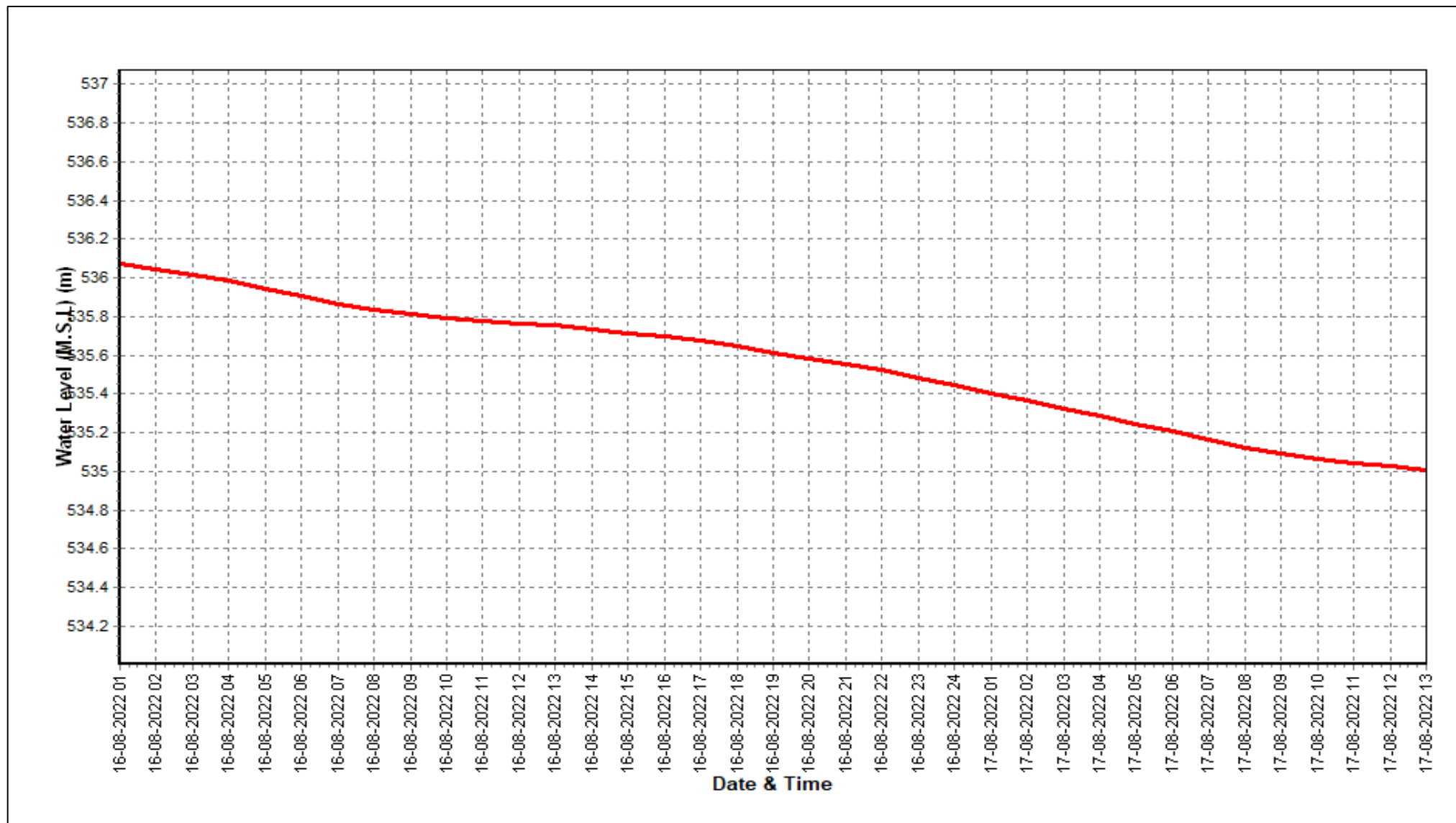
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Arjunwad (Seasonal) (AK000V4)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Divn : Upper Krishna SD, Miraj



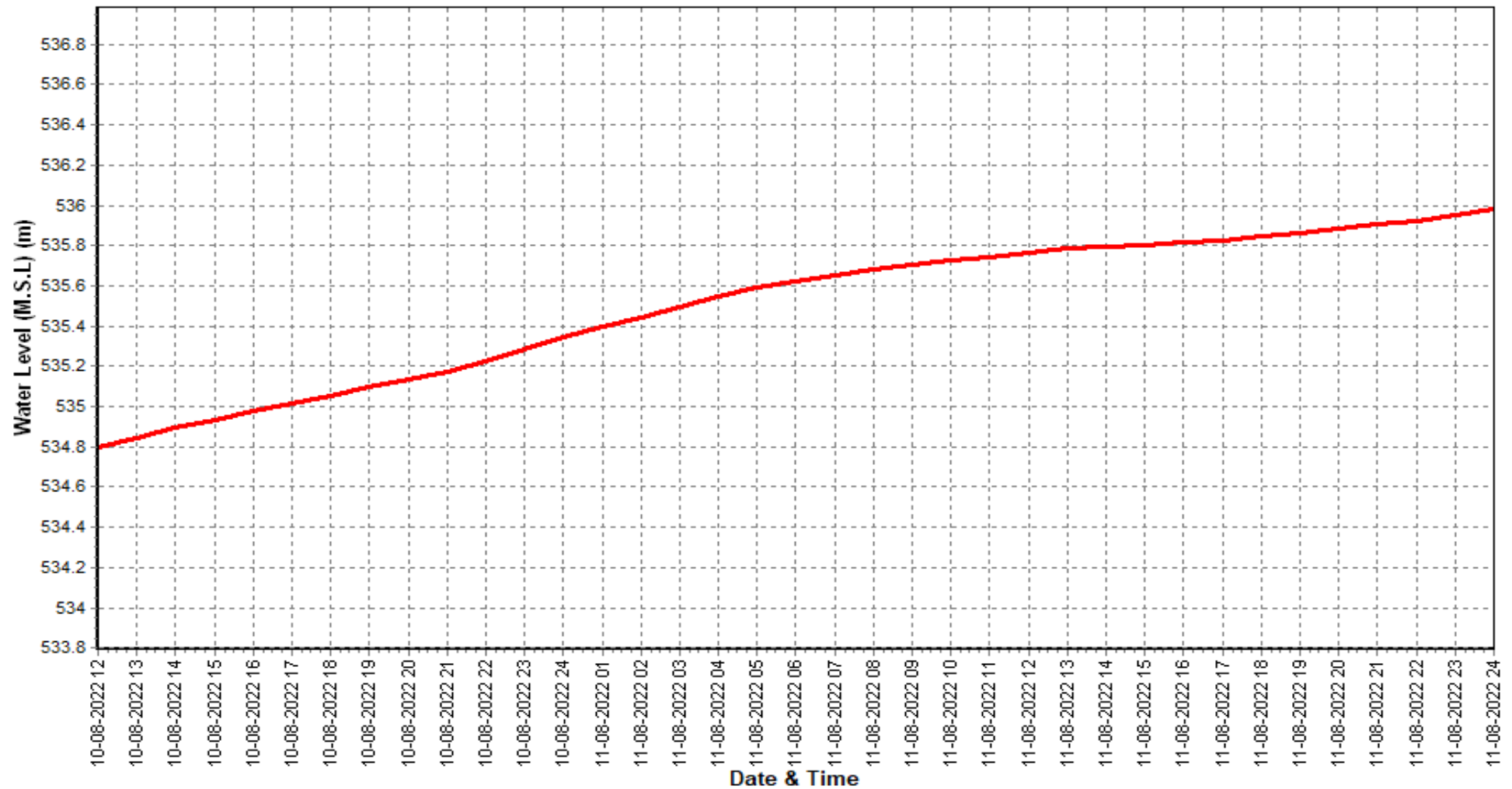
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Arjunwad (Seasonal) (AK000V4)

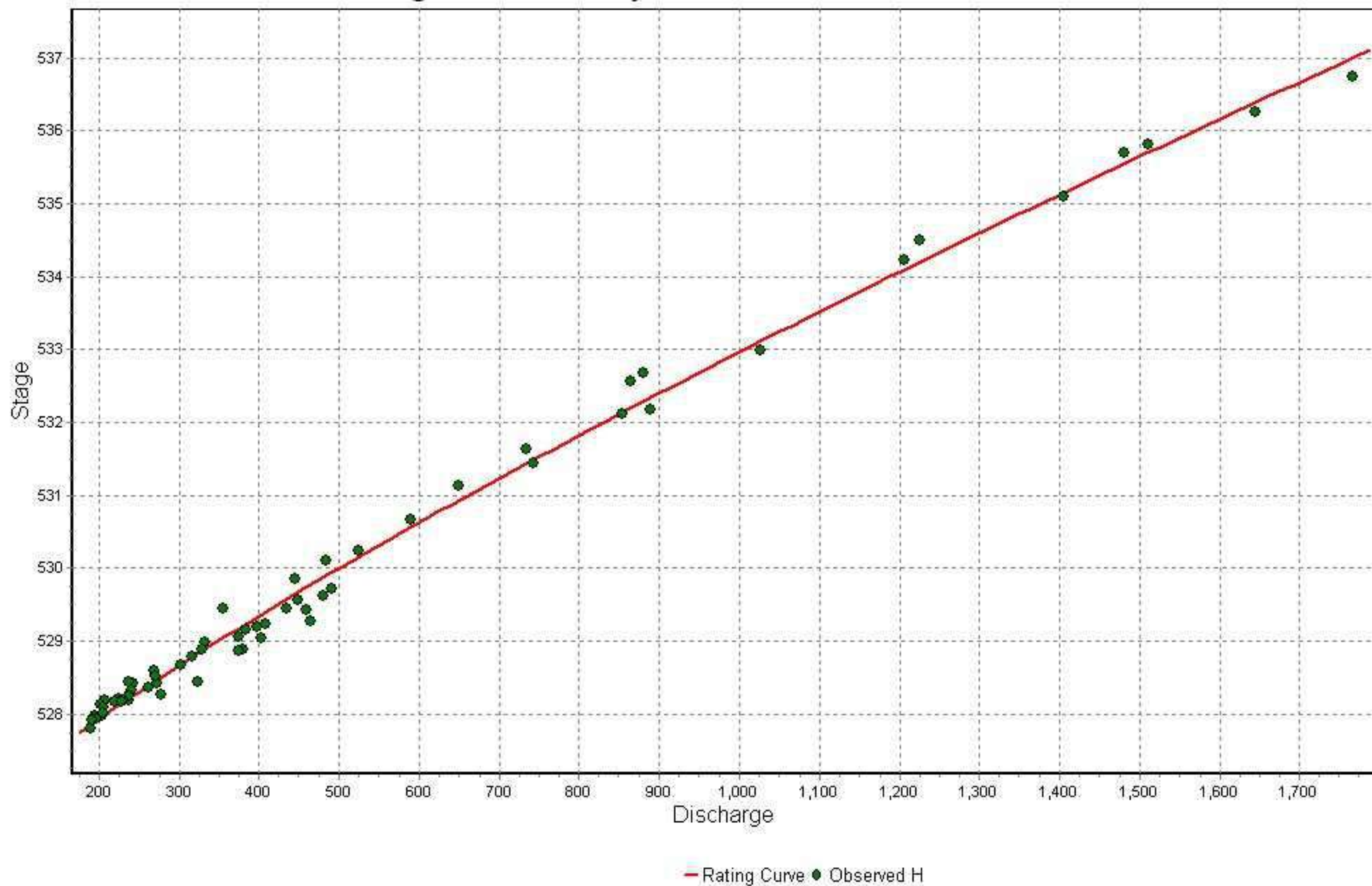
Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Divn : Upper Krishna SD, Miraj



Rating Curve of site arjunwad 01/7/2022 to 12/10/2022



HISTORY SHEET

Water Year : 2022-2023

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, Miraj

Drainage Area : 15190 Sq. Km.

Bank : Right

Latitude : 16°40'57"

Longitude : 74°36'14"

Zero of Gauge (m) : 519.455 (m.s.l)
519.455 (m.s.l)20-05-1972 : 31-12-1989
01-01-1990 : -

Opening Date

Closing Date

Gauge : 21-05-1972

HFL During 2022-23 : 534.825 m

Discharge : 26-05-1972

Corres. Discharge : 4637 (Estimated)

Sediment : 06-08-2003

Date & Time of

occurrence : 13-08-2022

Water Quality : 01-07-2003

HFL Recorded so far in m : 541.205 dt 10-08-2019

Corresponding Discharge (cumecs) : 11020 *

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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
2016-2017	5411	535.105	13-07-2016	0.000	523.175	09-04-2017
2017-2018	3277	532.205	23-07-2017	0.000	524.075	22-05-2018
2018-2019	4254	534.635	20-07-2018	0.000	522.835	24-01-2019
2019-2020	7742	541.205	10-08-2019	0.000	524.455	01-03-2020
2020-2021	4304	536.015	20-08-2020	0.000	523.145	02-04-2021
2021-2022	6964	540.155	26-07-2021	0.000	524.525	14-11-2021

Annual Runoff of Krishna at Kurundwad

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1972-1973	5615	19	5634	198	1	199
2	1973-1974	12587	117	12704	445	4	449
3	1974-1975	9587	30	9616	339	1	340
4	1975-1976	15788	70	15858	558	2	560
5	1976-1977	15622	49	15671	552	2	554
6	1977-1978	13005	244	13248	460	9	468
7	1978-1979	14256	9	14264	504	0	504
8	1979-1980	12693	72	12765	449	3	451
9	1980-1981	14371	0	14371	508	0	508
10	1981-1982	12709	0	12709	449	0	449
11	1982-1983	9301	23	9324	329	1	329
12	1983-1984	11962	0	11962	423	0	423
13	1984-1985	8994	1	8996	318	0	318
14	1985-1986	8372	0	8372	296	0	296
15	1986-1987	7682	0	7682	271	0	271
16	1987-1988	5253	0	5253	186	0	186
17	1988-1989	11698	0	11698	413	0	413
18	1989-1990	7825	0	7825	277	0	277
19	1990-1991	14474	0	14474	511	0	511
20	1991-1992	15352	0	15352	542	0	542
21	1992-1993	8965	0	8965	317	0	317
22	1993-1994	12531	0	12531	443	0	443
23	1994-1995	18785	0	18785	664	0	664
24	1995-1996	5919	0	5919	209	0	209
25	1996-1997	8605	0	8605	304	0	304
26	1997-1998	15382	0	15382	544	0	544
27	1998-1999	8273	0	8273	292	0	292
28	1999-2000	10622	0	10622	375	0	375
29	2000-2001	5348	0	5348	189	0	189
30	2001-2002	6034	0	6034	213	0	213
31	2002-2003	5886	0	5886	208	0	208
32	2003-2004	4706	0	4706	166	0	166
33	2004-2005	10797	0	10797	382	0	382
34	2005-2006	23671	0	23671	836	0	836
35	2006-2007	24683	0	24683	872	0	872
36	2007-2008	16759	0	16759	592	0	592
37	2008-2009	11813	0	11813	417	0	417
38	2009-2010	8346	0	8346	295	0	295
39	2010-2011	9826	0	9826	347	0	347
40	2011-2012	11582	0	11582	409	0	409
41	2012-2013	8574	0	8574	303	0	303
42	2013-2014	12350	0	12350	436	0	436
43	2014-2015	10147	0	10147	359	0	359
44	2015-2016	3440	0	3440	122	0	122
45	2016-2017	10937	0	10937	386	0	386
46	2017-2018	8640	0	8640	305	0	305
47	2018-2019	11876	0	11876	420	0	420

48	2019-2020	21699	0	21699	767	0	767
49	2020-2021	12429	0	12429	439	0	439
50	2021-2022	13384	0	13384	473	0	473
51	2022-2023	13741	0	13741	486	0	486
Average		11429	12	11442	404	0	404

Instantaneous Flood Peak of Krishna at KURUNDWAD

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge* (Cumecs)
1	1972-1973	534.920	09-07-1972	15:00:00	2778 *
2	1973-1974	536.595	10-07-1973	15:00:00	4332 *
3	1974-1975	534.280	07-07-1974	17:00:00	2308 *
4	1975-1976	537.025	12-07-1975	18:00:00	4806 *
5	1976-1977	537.135	04-08-1976	16:00:00	4932 *
6	1977-1978	535.185	09-07-1977	13:00:00	2993 *
7	1978-1979	534.220	19-08-1978	16:00:00	2267 *
8	1979-1980	536.740	10-08-1979	05:00:00	4488 *
9	1980-1981	536.625	08-07-1980	01:00:00	4364 *
10	1981-1982	535.745	10-07-1981	06:00:00	3485 *
11	1982-1983	534.100	15-08-1982	15:00:00	2188 *
12	1983-1984	536.210	18-08-1983	13:00:00	3933 *
13	1984-1985	535.295	21-07-1984	06:00:00	3085 *
14	1985-1986	535.115	04-08-1985	07:00:00	2935 *
15	1986-1987	535.495	14-08-1986	09:00:00	3259 *
16	1987-1988	533.645	10-07-1987	02:00:00	1909 *
17	1988-1989	536.415	05-08-1988	03:00:00	4142 *
18	1989-1990	537.550	27-07-1989	18:00:00	5427 *
19	1990-1991	537.355	20-08-1990	00:00:00	5191 *
20	1991-1992	537.455	31-07-1991	01:00:00	5311 *
21	1992-1993	534.455	16-08-1992	06:00:00	2430 *
22	1993-1994	534.805	05-08-1993	12:00:00	2689 *
23	1994-1995	538.115	18-07-1994	20:00:00	6146 *
24	1995-1996	533.345	21-07-1995	07:00:00	1743 *
25	1996-1997	535.590	06-10-1996	07:00:00	3344 *
26	1997-1998	537.255	28-08-1997	08:00:00	5072
27	1998-1999	533.205	10-07-1998	13:00:00	1671 *
28	1999-2000	535.695	24-07-1999	13:00:00	3439 *
29	2000-2001	533.015	15-07-2000	13:00:00	1579 *
30	2001-2002	532.325	11-07-2001	10:00:00	1294 *
31	2002-2003	533.205	14-08-2002	15:00:00	1671 *
32	2003-2004	530.835	29-07-2003	06:00:00	948 *
33	2004-2005	535.785	15-08-2004	19:00:00	3522 *
34	2005-2006	539.760	05-08-2005	22:00:00	8543 *
35	2006-2007	538.720	13-08-2006	04:00:00	6975 *
36	2007-2008	536.790	03-07-2007	12:00:00	4543 *
37	2008-2009	536.435	16-08-2008	16:00:00	4163 *
38	2009-2010	533.295	19-07-2009	20:00:00	1717 *
39	2010-2011	534.435	30-07-2010	18:00:00	2415 *
40	2011-2012	536.425	06-09-2011	08:00:00	4153
41	2012-2013	531.125	07-09-2012	00:00:00	986 *
42	2013-2014	535.995	29-07-2013	18:00:00	3722 *
43	2014-2015	533.885	02-08-2014	10:00:00	2052 *
44	2015-2016	530.815	26-06-2015	06:00:00	946 *
45	2016-2017	535.575	13-07-2016	07:00:00	3330 *
46	2017-2018	532.255	23-07-2017	20:00:00	1269 *
47	2018-2019	534.675	20-07-2018	19:00:00	2590 *
48	2019-2020	541.205	10-08-2019	05:00:00	11020 *
49	2020-2021	536.015	20-08-2020	08:00:00	4304
50	2021-2022	540.165	26-07-2021	09:00:00	6970 *
51	2022-2023	534.825	13-08-2022	11:00:00	4637 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : Kurundwad (AK000V1)

Division : Upper Krishna Divn, Pune

Local River : Krishna

Sub-Division : Upper Krishna SD, 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	523.155	0.000	522.985	0.000	524.870	521.0	523.955	285.2	524.105	279.4	524.415	387.1 #
2	523.115	0.000	522.985	0.000	524.250	443.7	524.405	365.7	524.445	393.7 *	524.305	363.2 #
3	522.865	0.000	523.355	0.000	524.045	319.8	524.565	427.4	524.265	267.0	524.355	374.0 #
4	522.785	0.000	524.100	320.1 #	523.910	291.4	524.095	319.1 *	524.150	321.3	524.325	367.5 #
5	522.715	0.000	524.260	353.6 #	524.760	421.8	523.965	324.1	523.955	281.9	524.275	356.8 #
6	522.675	0.000	526.825	919.0	524.800	413.2	523.815	298.1	523.955	265.5	524.375	378.3 *
7	522.685	0.000	528.270	1401	525.605	678.1 *	524.085	385.1	524.680	397.5	524.365	376.1 #
8	522.725	0.000	528.625	1667	527.055	1159	524.345	404.0	525.450	592.6	524.315	365.3 #
9	522.665	0.000	528.465	1545	530.145	2238 *	525.005	547.4	525.325	604.5 *	524.325	367.5 #
10	522.595	0.000	528.485	1594 *	532.525	3265	525.265	599.9	524.985	414.3	524.375	378.3 #
11	522.505	0.000	529.875	2082	533.775	4004	525.545	662.1 *	524.520	310.0	524.355	374.0 #
12	522.425	0.000	530.765	2361	534.345	4292	527.445	1243	526.365	846.8	524.275	356.8 #
13	522.705	0.000	531.565	2779	534.805	4608	528.505	1635	527.325	1190	524.375	378.3 *
14	522.875	0.000	531.840	3052	534.825	4437 *	529.415	1910	527.875	1506	524.355	0.000
15	522.815	0.000	532.265	3120	534.435	4234 *	530.515	2351	527.505	1344	524.475	0.000
16	522.515	0.000	532.325	3223	534.225	4118	530.720	2507	529.085	1818 *	524.575	0.000
17	522.455	0.000	532.325	3196 *	533.470	3577	530.115	2407	527.055	1143	524.505	0.000
18	522.355	0.000	532.270	3048	532.555	3280	530.765	2498 *	526.415	1154	524.325	0.000
19	522.235	0.000	531.465	2663	531.185	2521	530.020	2188	527.720	1465	524.405	0.000
20	522.205	0.000	530.065	2091	529.865	2023	527.770	1365	527.035	1138	524.485	0.000
21	522.195	0.000	528.485	1548	529.295	1899 *	526.275	938.4	526.380	964.4	524.535	0.000
22	522.285	0.000	527.075	1080	529.235	1980	525.525	649.2	527.045	1155	524.485	0.000
23	522.335	0.000	526.240	912.8	528.090	1533	525.350	693.8	528.105	1458 *	524.425	0.000
24	522.655	0.000	525.935	768.7 *	527.885	1461	524.955	578.2	526.210	905.3	524.405	0.000
25	522.365	0.000	525.535	645.0	527.545	1279	524.385	380.5 *	525.085	587.8	524.445	0.000
26	522.085	0.000	526.205	825.1	527.225	1056	524.240	366.6	524.725	518.2	524.505	0.000
27	522.125	0.000	526.015	812.2	526.585	845.0	524.355	384.9	524.565	420.7	524.555	0.000
28	522.625	0.000	525.675	696.3	525.875	751.9 *	524.355	357.2	524.620	399.6	524.565	0.000
29	523.125	0.000	525.215	561.3	525.250	574.6	524.075	333.5	524.465	370.7	524.555	0.000
30	523.155	0.000	524.935	551.7	524.535	417.9	523.895	305.7	524.395	382.7 *	524.495	0.000
31			524.915	502.3 *	524.205	319.8			524.345	333.8		
Ten-Daily Mean												
I Ten-Daily	522.798	0.000	525.835	780.0	526.196	975.2	524.350	395.6	524.532	381.7	524.343	371.4
II Ten-Daily	522.509	0.000	531.476	2761	533.349	3709	529.081	1877	527.090	1191	524.413	110.9
III Ten-Daily	522.495	0.000	526.021	809.4	526.884	1102	524.741	498.8	525.449	681.5	524.497	0.000
Monthly												
Min.	522.085	0.000	522.985	0.000	523.910	291.4	523.815	285.2	523.955	265.5	524.275	0.000
Max.	523.155	0.000	532.325	3223	534.825	4608	530.765	2507	529.085	1818	524.575	387.1
Mean	522.601	0	527.721	1430	528.748	1902	526.057	923.7	525.682	749.3	524.418	160.8

Annual Runoff in MCM = 13741 Annual Runoff in mm = 905

Peak Observed Discharge = 4608 cumecs on 13-08-2022 Corres. Water Level :534.805 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :523.155 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 2022 - 2023

Station Name : Kurundwad (AK000V1)

Division : Upper Krishna Divn, Pune

Local River : Krishna

Sub-Division : Upper Krishna SD, Miraj

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	524.555	0.000	524.405	0.000	524.395	0.000	522.895	0.000	521.865	0.000	525.105	0.000
2	524.505	0.000	524.435	0.000	524.355	0.000	522.805	0.000	521.915	0.000	525.035	0.000
3	524.455	0.000	524.515	0.000	524.305	0.000	522.725	0.000	522.045	0.000	524.575	0.000
4	524.475	0.000	524.495	0.000	524.275	0.000	522.635	0.000	522.345	0.000	524.595	0.000
5	524.355	0.000	524.625	0.000	524.275	0.000	522.495	0.000	522.785	0.000	524.335	0.000
6	524.345	0.000	524.565	0.000	524.245	0.000	522.385	0.000	523.385	0.000	524.415	0.000
7	524.315	0.000	524.555	0.000	524.185	0.000	522.295	0.000	523.685	0.000	524.255	0.000
8	524.385	0.000	524.215	0.000	524.165	0.000	522.175	0.000	523.815	0.000	524.225	0.000
9	524.475	0.000	524.105	0.000	524.115	0.000	522.105	0.000	523.855	0.000	524.285	0.000
10	524.535	0.000	524.215	0.000	524.025	0.000	522.025	0.000	523.985	0.000	524.995	0.000
11	524.555	0.000	524.205	0.000	523.965	0.000	521.965	0.000	524.145	0.000	525.065	0.000
12	524.535	0.000	524.215	0.000	523.955	0.000	521.955	0.000	524.215	0.000	525.035	0.000
13	524.485	0.000	524.205	0.000	523.975	0.000	522.075	0.000	524.275	0.000	525.035	0.000
14	524.375	0.000	524.205	0.000	523.985	0.000	522.195	0.000	524.435	0.000	524.475	0.000
15	524.275	0.000	524.215	0.000	523.985	0.000	522.535	0.000	524.625	0.000	525.405	0.000
16	524.265	0.000	524.205	0.000	523.945	0.000	522.795	0.000	524.835	0.000	525.365	0.000
17	524.275	0.000	524.205	0.000	523.905	0.000	522.555	0.000	524.855	0.000	525.335	0.000
18	524.285	0.000	524.195	0.000	523.845	0.000	522.315	0.000	524.995	0.000	525.295	0.000
19	524.335	0.000	524.195	0.000	523.765	0.000	522.295	0.000	525.165	0.000	525.255	0.000
20	524.385	0.000	524.205	0.000	523.655	0.000	522.305	0.000	525.225	0.000	525.175	0.000
21	524.405	0.000	524.185	0.000	523.605	0.000	522.315	0.000	525.215	0.000	524.975	0.000
22	524.425	0.000	524.185	0.000	523.555	0.000	522.365	0.000	525.185	0.000	524.705	0.000
23	524.445	0.000	524.185	0.000	523.485	0.000	522.415	0.000	525.125	0.000	524.405	0.000
24	524.495	0.000	524.365	0.000	523.375	0.000	522.435	0.000	525.035	0.000	524.145	0.000
25	524.525	0.000	524.465	0.000	523.265	0.000	522.335	0.000	524.995	0.000	524.055	0.000
26	524.545	0.000	524.575	0.000	523.155	0.000	522.245	0.000	524.925	0.000	523.725	0.000
27	524.525	0.000	524.595	0.000	523.055	0.000	522.095	0.000	524.875	0.000	523.595	0.000
28	524.405	0.000	524.705	0.000	522.975	0.000	522.035	0.000	524.825	0.000	523.385	0.000
29	524.455	0.000	524.655	0.000			521.945	0.000	524.785	0.000	523.365	0.000
30	524.465	0.000	524.575	0.000			521.915	0.000	524.835	0.000	523.255	0.000
31	524.395	0.000	524.535	0.000			521.875	0.000			523.215	0.000
Ten-Daily Mean												
I Ten-Daily	524.440	0.000	524.413	0.000	524.234	0.000	522.454	0.000	522.968	0.000	524.582	0.000
II Ten-Daily	524.377	0.000	524.205	0.000	523.898	0.000	522.299	0.000	524.677	0.000	525.144	0.000
III Ten-Daily	524.462	0.000	524.457	0.000	523.309	0.000	522.180	0.000	524.980	0.000	523.893	0.000
Monthly												
Min.	524.265	0.000	524.105	0.000	522.975	0.000	521.875	0.000	521.865	0.000	523.215	0.000
Max.	524.555	0.000	524.705	0.000	524.395	0.000	522.895	0.000	525.225	0.000	525.405	0.000
Mean	524.428	0	524.361	0	523.850	0	522.307	0	524.208	0	524.519	0

Peak Computed Discharge = 4437 cumecs on 14-08-2022

Corres. Water Level :534.825 m

Lowest Computed Discharge = 319.1 cumecs on 04-09-2022

Corres. Water Level :524.095 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 : 2022-2023

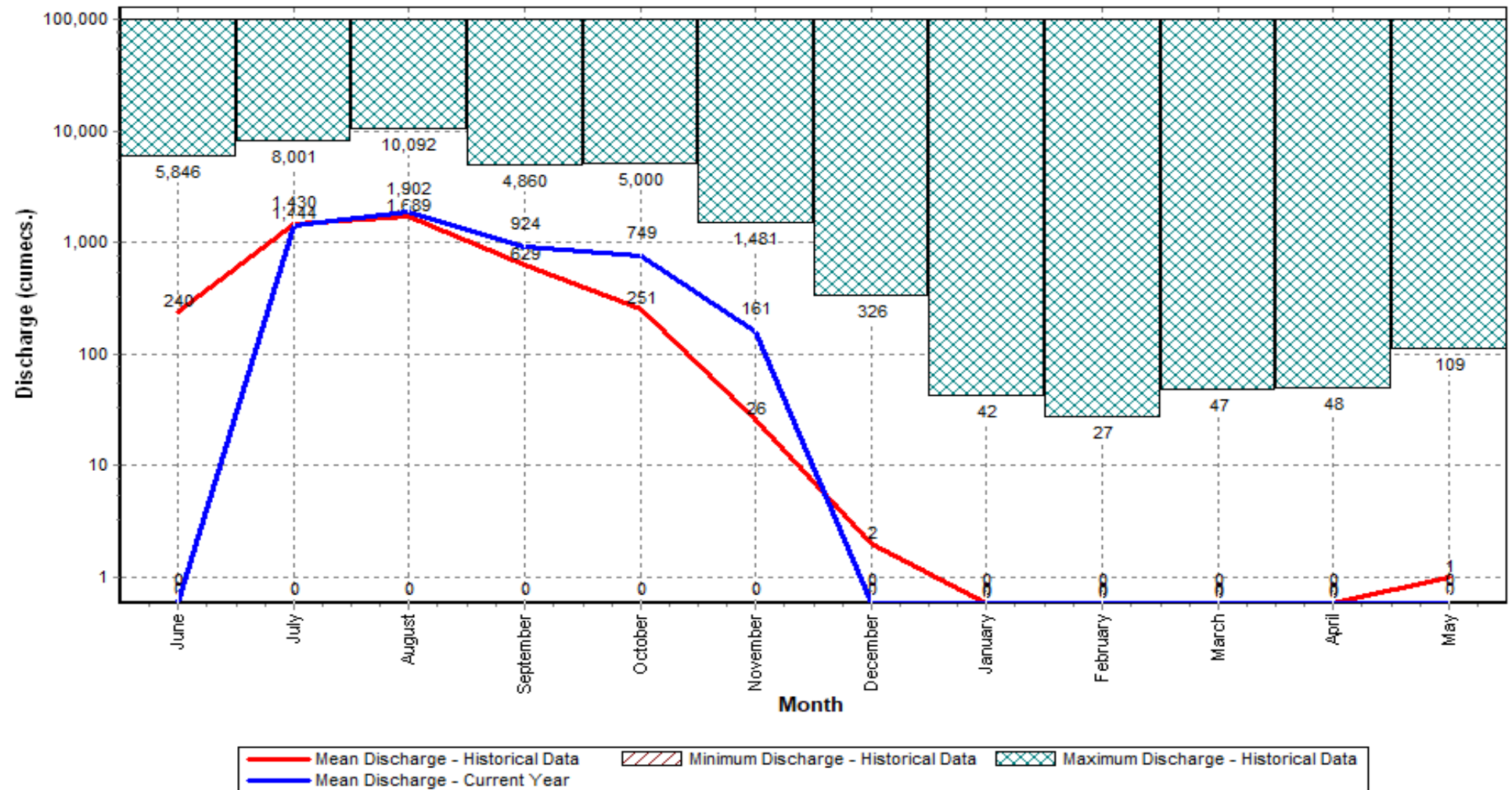
Station Name : Kurundwad (AK000V1)

Data considered : 1972-2023

Division : Upper Krishna Divn, Pune

Local River : Krishna

Sub-Division : Upper Krishna SD, Miraj



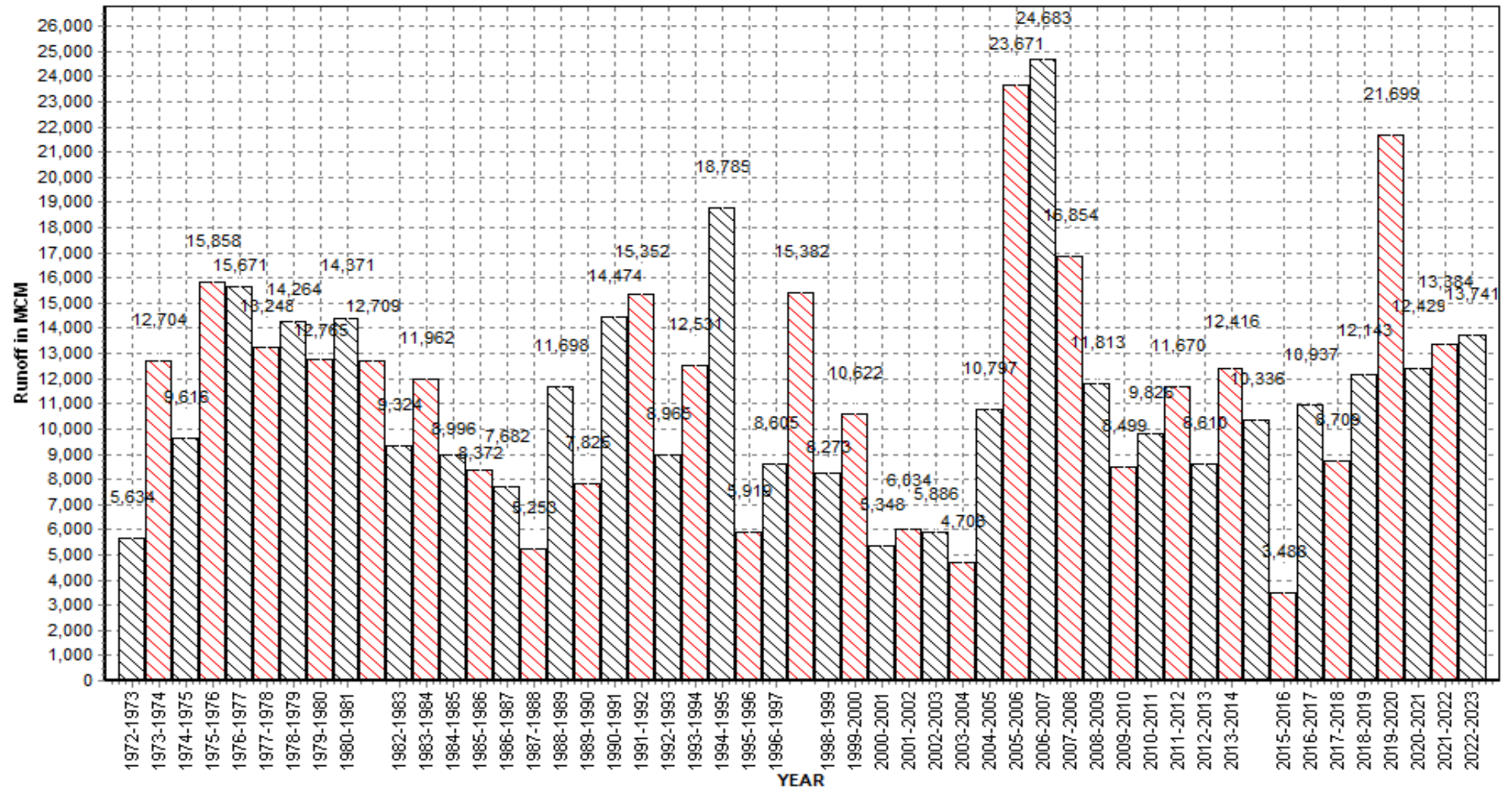
Annual Runoff Values for the period: 1972 - 2023

Station Name : Kurundwad (AK000V1)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



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

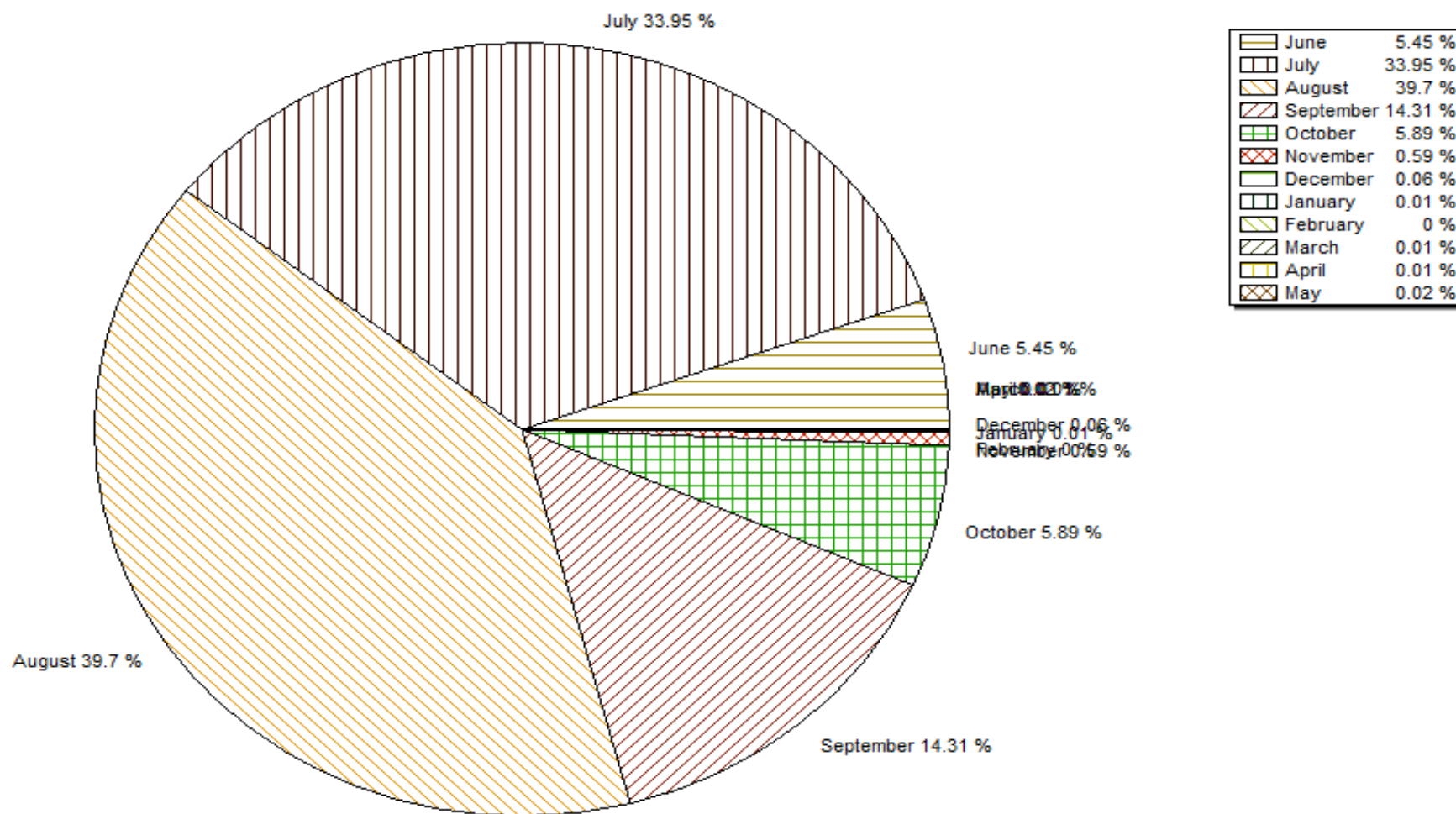
Monthly Average Runoff based on period : 1972-2022

Station Name : Kurundwad (AK000V1)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



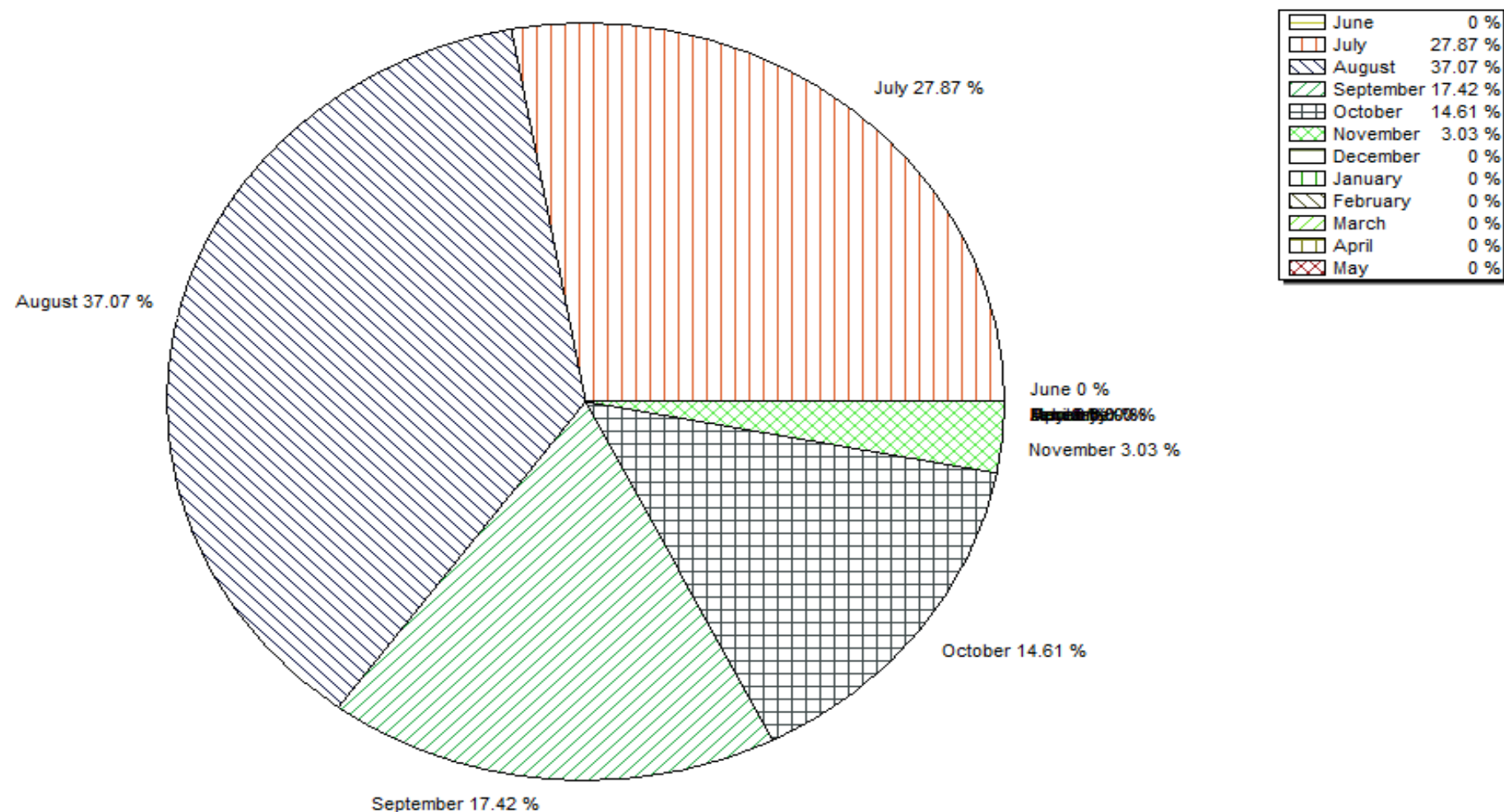
Monthly Runoff for the Year : 2022-2023

Station Name : Kurundwad (AK000V1)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



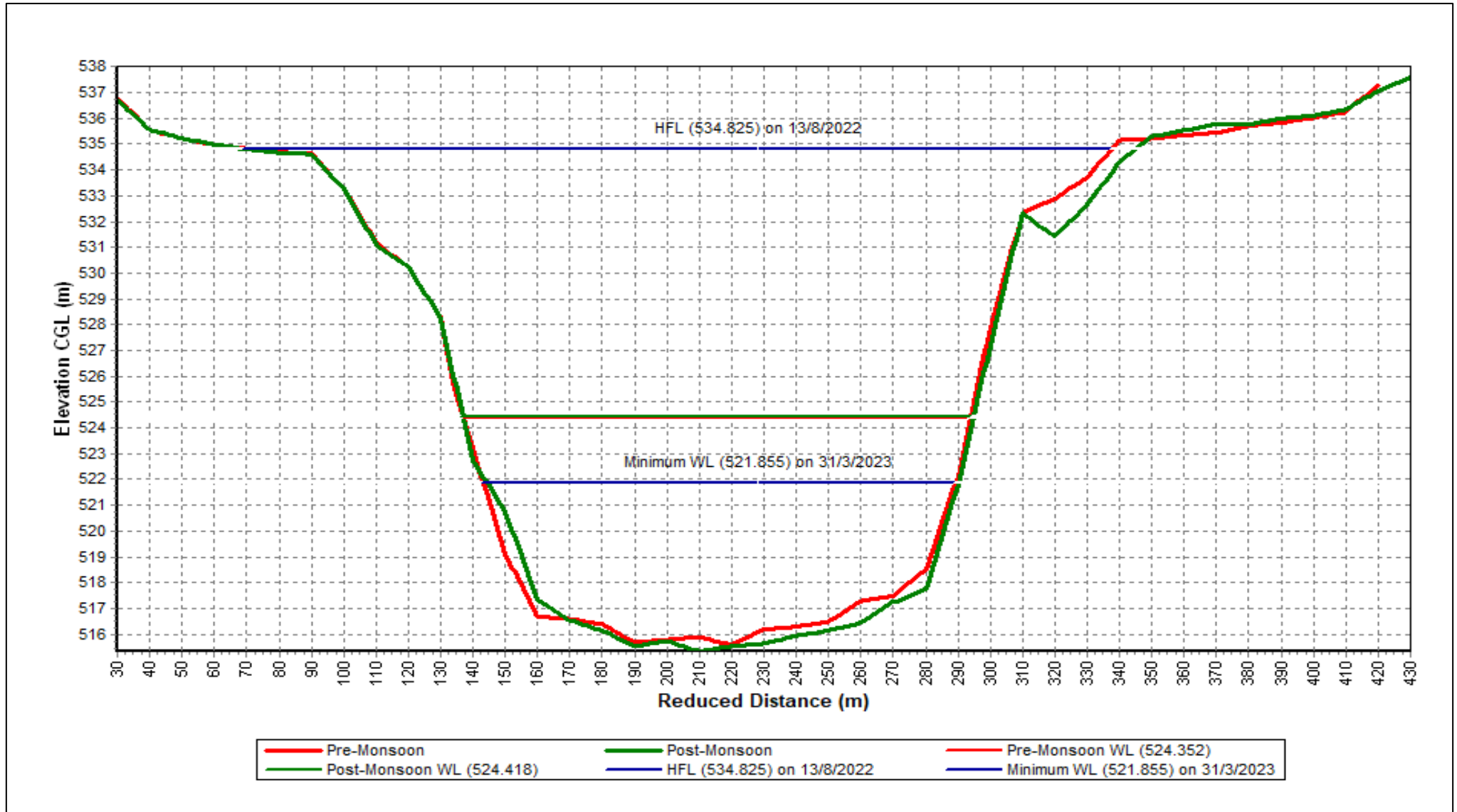
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Kurundwad (AK000V1)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



Note: Postmonsoon X-Section Difference due to Farming Activities.

Zero of the Gauge: 519.455 (m.s.l)

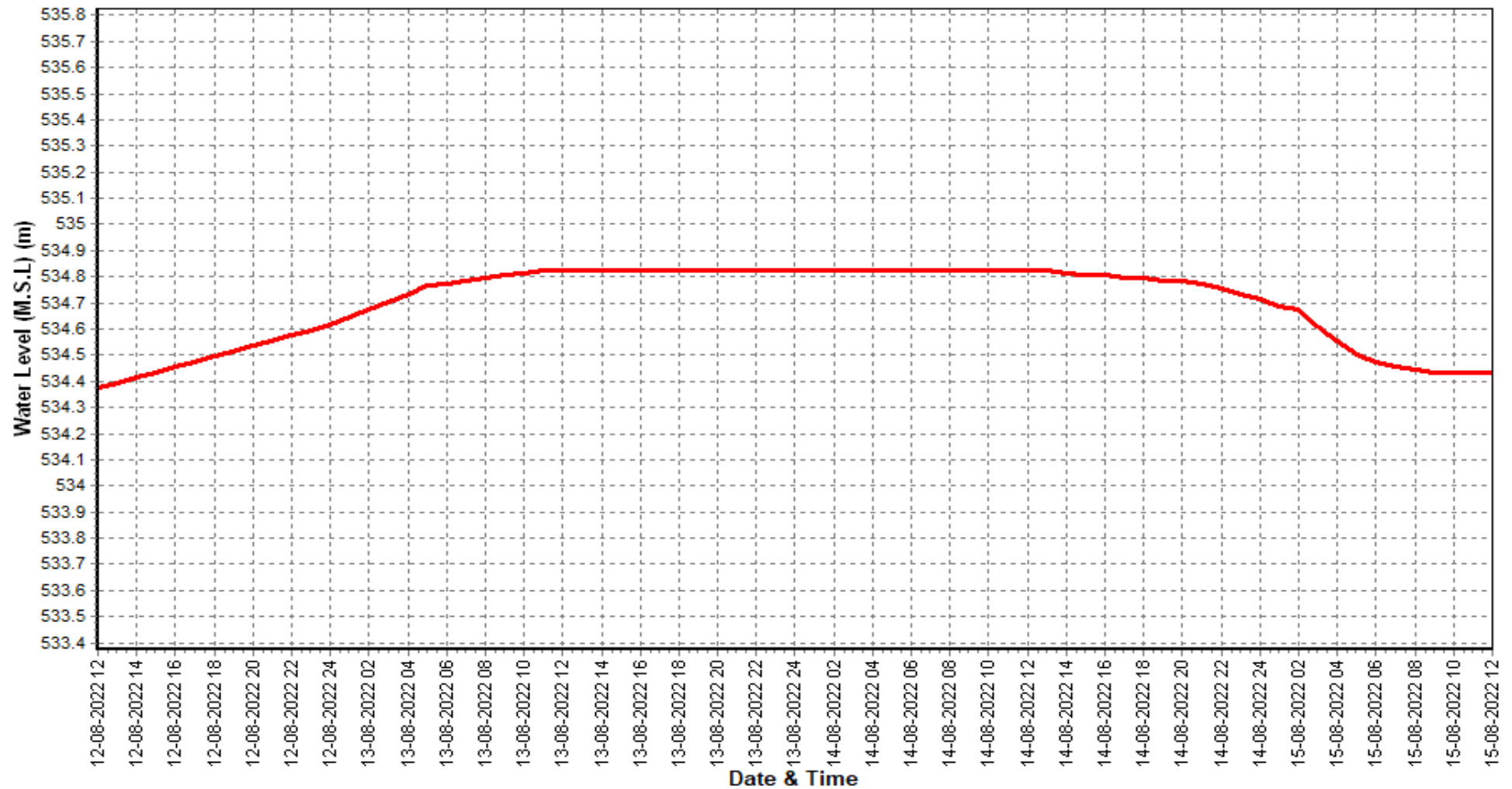
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Kurundwad (AK000V1)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



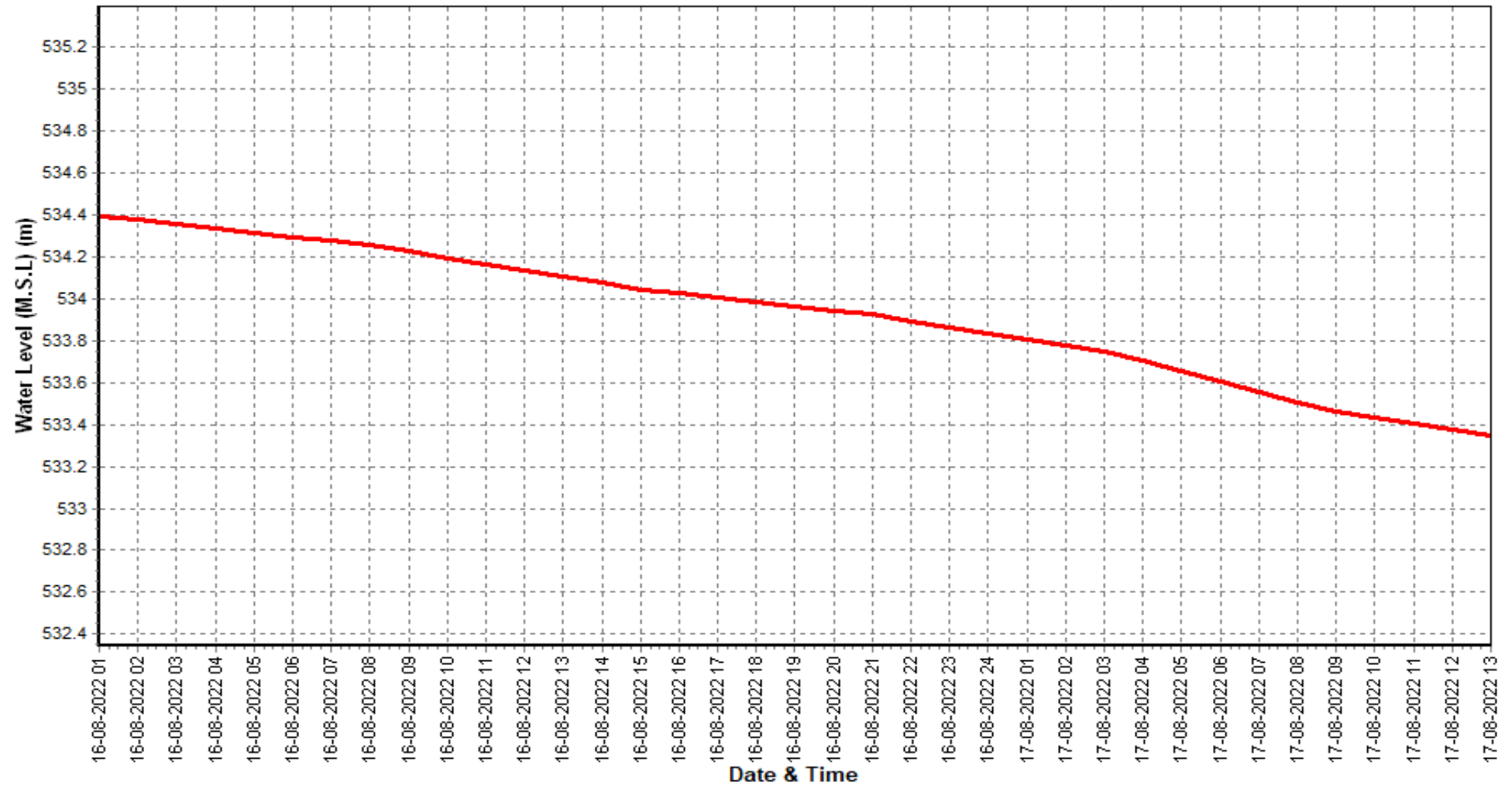
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Kurundwad (AK000V1)

Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



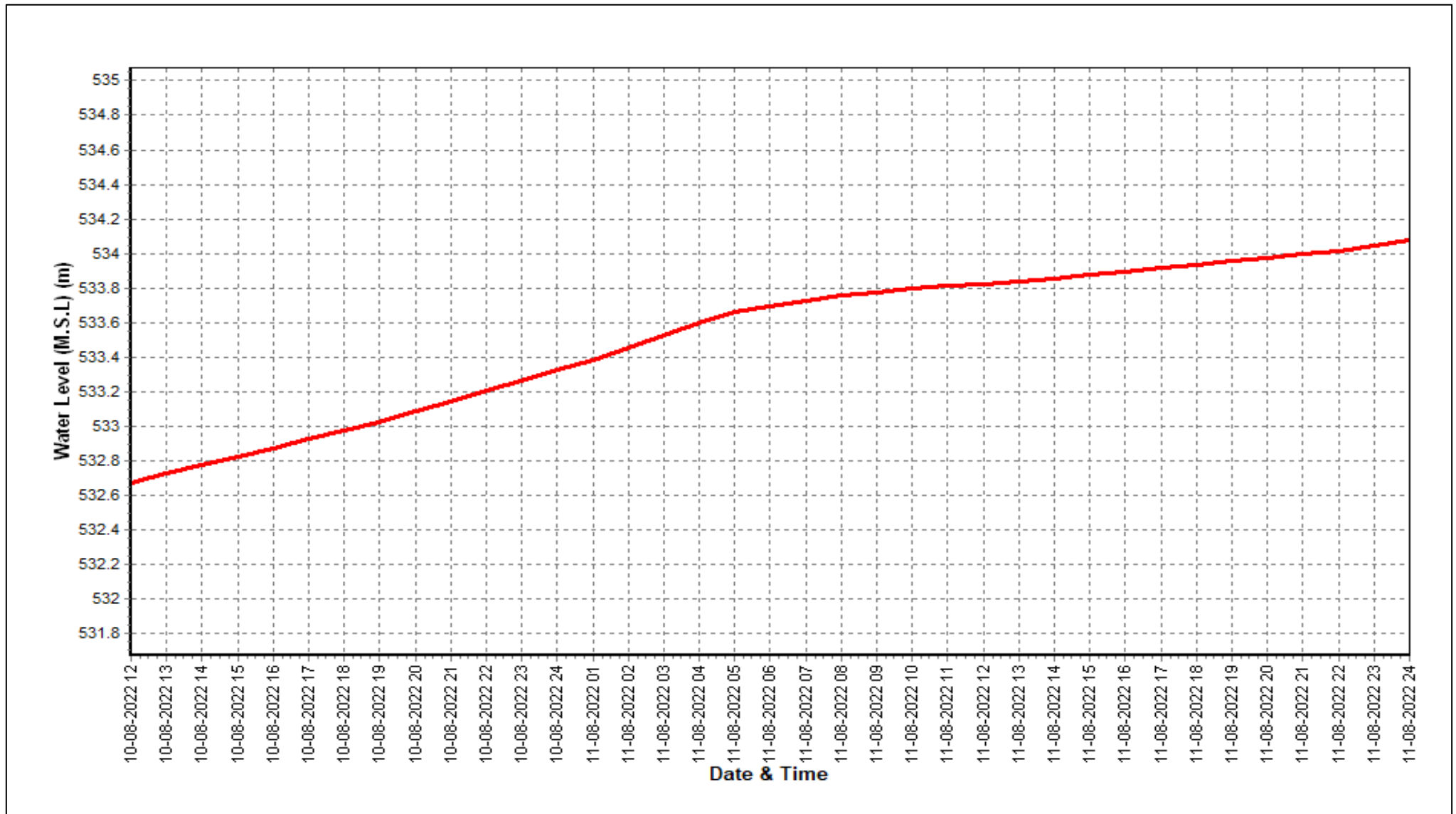
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Kurundwad (AK000V1)

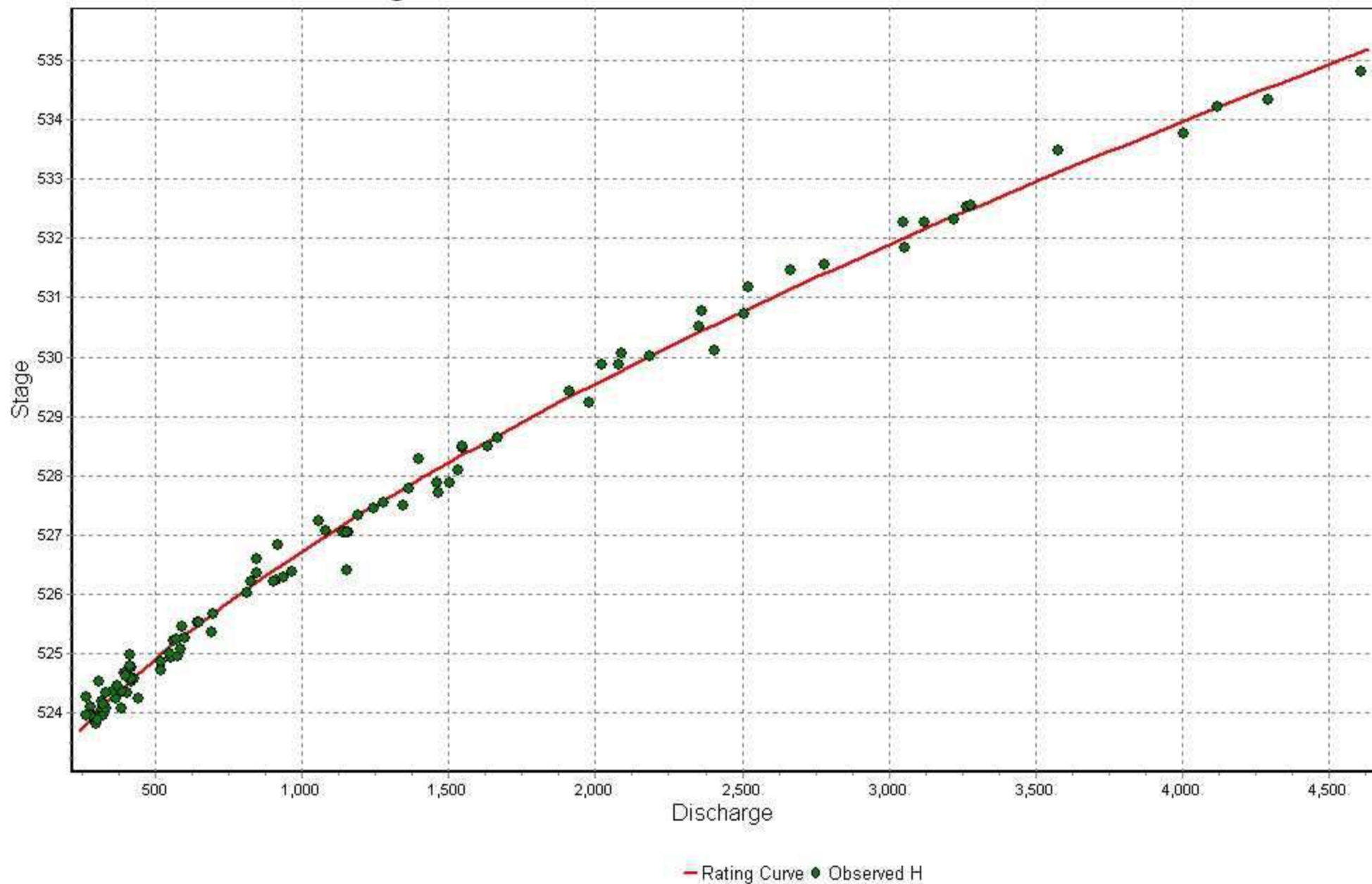
Local River : Krishna

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



Rating Curve of Site Kurundwad 01/06/2022 to 31/10/2022



HISTORY SHEET

Water Year : 2022-2023

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, Miraj

Drainage Area : 2425 Sq. Km.

Bank : Right

Latitude : 16°40'27"

Longitude : 74°34'29"

Zero of Gauge (m) : 520 (m.s.l)
520 (m.s.l)01-01-1979 - 31-12-2010
01-01-2011

Opening Date

Closing Date

Gauge : 01-03-1979

HFL During 2022-23 : 536.280 m

Corres. Discharge : 1843 (Estimated)

Discharge : 22-08-1979

Date & Time of

occurrence : 02:00 Hrs

Water Quality : 01-06-2019

HFL Recorded so far in m : 542.110 dt 10-09-2019

Corresponding Discharge (cumecs) : 4798 *

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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	03-11-2013
2014-2015	1534	535.020	25-07-2014	0.000	524.500	13-11-2014
2015-2016	1286	533.560	26-06-2015	0.000	525.880	10-06-2015
2016-2017	2267	536.950	15-07-2016	0.000	525.530	23-11-2016
2017-2018	1542	534.615	22-07-2017	0.000	525.210	24-06-2017
2018-2019	2072	536.430	20-07-2018	0.000	526.380	23-10-2018
2019-2020	4788	542.100	10-08-2019	0.000	526.180	23-11-2019
2020-2021	2900	536.930	01-08-2020	0.000	526.560	20-11-2020
2021-2022	3563	540.920	26-07-2021	0.000	527.110	15-06-2021

Annual Runoff of Panchganga at Terwad

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1979-1980	529	0	529	19	0	19
2	1980-1981	5290	0	5290	187	0	187
3	1981-1982	4517	0	4517	160	0	160
4	1982-1983	3762	13	3774	133	0	133
5	1983-1984	4812	4	4817	170	0	170
6	1984-1985	4100	7	4108	145	0	145
7	1985-1986	3679	0	3679	130	0	130
8	1986-1987	3412	0	3412	121	0	121
9	1987-1988	2818	0	2818	100	0	100
10	1988-1989	5135	0	5135	181	0	181
11	1989-1990	3971	0	3971	140	0	140
12	1990-1991	5413	0	5413	191	0	191
13	1991-1992	5771	0	5771	204	0	204
14	1992-1993	3207	0	3207	113	0	113
15	1993-1994	4146	0	4146	147	0	147
16	1994-1995	7200	0	7200	254	0	254
17	1995-1996	2263	0	2263	80	0	80
18	1996-1997	3144	0	3144	111	0	111
19	1997-1998	5883	0	5883	208	0	208
20	1998-1999	2916	0	2916	103	0	103
21	1999-2000	3588	0	3588	127	0	127
22	2000-2001	2666	0	2666	94	0	94
23	2001-2002	3179	0	3179	112	0	112
24	2002-2003	3155	0	3155	111	0	111
25	2003-2004	2535	0	2535	90	0	90
26	2004-2005	4302	0	4302	152	0	152
27	2005-2006	8176	0	8176	289	0	289
28	2006-2007	8038	Site downgraded as Seasonal Site from 2006-07	8038	284	Site downgraded as Seasonal Site from 2006-07	284
29	2007-2008	5496		5496	194		194
30	2008-2009	4067		4067	144		144
31	2009-2010	3163		3163	112		112
32	2010-2011	3435		3435	121		121
33	2011-2012	4797		4797	170		170
34	2012-2013	3931		3931	139		139
35	2013-2014	5079		5079	179		179
36	2014-2015	4264		4264	151		151
37	2015-2016	1748		1748	62		62
38	2016-2017	4984		4984	176		176
39	2017-2018	4113		4113	145		145
40	2018-2019	5703		5703	202		202
41	2019-2020	9286		9286	328		328
42	2020-2021	5068		5068	179		179
43	2021-2022	5764		5764	204		204
44	2022-2023	4847		4847	171		171
Average		4394	1	4395	155	0	155

Instantaneous Flood Peak of Panchganga at Terwad

Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1979-1980	537.550	27-09-1979	11:00:00	3137 *
2	1980-1981	537.340	07-08-1980	08:00:00	3054 *
3	1981-1982	536.500	11-07-1981	06:00:00	2746 *
4	1982-1983	535.185	01-08-1982	20:00:00	2337 *
5	1983-1984	536.925	18-08-1983	15:00:00	2897 *
6	1984-1985	535.995	21-07-1984	08:00:00	2578 *
7	1985-1986	535.920	04-08-1985	09:00:00	2555 *
8	1986-1987	536.450	13-08-1986	15:00:00	2729 *
9	1987-1988	534.780	10-07-1987	09:00:00	2230 *
10	1988-1989	537.410	22-07-1988	18:00:00	3082 *
11	1989-1990	538.615	27-07-1989	05:00:00	3592 *
12	1990-1991	537.920	20-08-1990	17:00:00	3288 *
13	1991-1992	538.230	31-07-1991	17:00:00	3421 *
14	1992-1993	535.180	16-08-1992	09:00:00	2336 *
15	1993-1994	535.840	14-07-1993	08:00:00	2530
16	1994-1995	538.740	18-07-1994	18:00:00	3650 *
17	1995-1996	534.800	22-07-1995	16:00:00	2235 *
18	1996-1997	536.280	30-07-1996	16:00:00	2671 *
19	1997-1998	538.400	10-08-1997	09:00:00	3496 *
20	1998-1999	534.680	11-07-1998	16:00:00	2204 *
21	1999-2000	536.720	24-07-1999	16:00:00	2823 *
22	2000-2001	534.830	16-07-2000	16:00:00	2242 *
23	2001-2002	534.400	11-07-2001	15:00:00	2136 *
24	2002-2003	534.900	15-08-2002	16:00:00	2261 *
25	2003-2004	533.620	23-06-2003	08:00:00	1968
26	2004-2005	536.500	08-08-2004	14:00:00	2746 *
27	2005-2006	540.390	06-08-2005	23:00:00	4282 *
28	2006-2007	539.225	13-08-2006	10:00:00	3779 *
29	2007-2008	537.515	03-07-2007	14:00:00	3123 *
30	2008-2009	537.400	15-08-2008	15:00:00	3078 *
31	2009-2010	535.130	19-07-2009	18:00:00	2322 *
32	2010-2011	535.860	30-07-2010	23:00:00	2536 *
33	2011-2012	537.090	06-09-2011	10:00:00	2959 *
34	2012-2013	533.660	02-08-2012	21:00:00	1976 *
35	2013-2014	536.920	29-07-2013	18:00:00	2896 *
36	2014-2015	535.240	25-07-2014	17:00:00	2353 *
37	2015-2016	533.560	26-06-2015	06:00:00	1957 *
38	2016-2017	536.950	15-07-2016	20:00:00	2907 *
39	2017-2018	534.850	22-07-2017	08:00:00	2248 *
40	2018-2019	536.480	21-07-2018	18:00:00	2739 *
41	2019-2020	542.110	10-08-2019	01:00:00	4798 *
42	2020-2021	536.930	20-08-2020	07:00:00	2009
43	2021-2022	540.930	26-07-2021	09:00:00	3567 *
44	2022-2023	536.280	14-08-2022	02:00:00	1843 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : Terwad (Seasonal) (AKW00A7)

Division : Upper Krishna Divn, Pune

Local River : Panchganga

Sub-Division : Upper Krishna SD , 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	525.070	0.000	526.520	72.87	527.405	160.6	527.195	124.7	525.980	61.80	525.780	51.56
2	524.960	0.000	526.910	106.0	527.220	152.7	527.080	121.7	526.360	75.85 *	525.680	47.93
3	524.870	0.000	527.620	149.7 *	526.850	135.2	526.785	115.4	526.330	64.79	525.490	41.49
4	524.840	0.000	528.385	224.9	526.710	131.4	526.950	106.7 *	526.130	73.70	525.470	40.85
5	524.820	0.000	528.640	251.3	527.840	188.3	526.540	104.4	526.000	62.32	525.535	42.97
6	524.490	0.000	532.250	690.8	527.990	206.1	526.270	88.89	525.910	52.68	525.300	35.61 *
7	524.500	0.000	533.020	862.4	529.210	290.1 *	526.960	141.0	527.015	124.0	525.220	33.29
8	524.390	0.000	533.040	885.0	531.720	594.1	526.680	106.6	528.185	209.5	525.110	30.26
9	524.360	0.000	532.840	801.2	533.860	1073 *	526.450	91.27	527.300	128.1 *	525.250	34.15
10	524.300	0.000	533.020	885.6 *	534.400	1157	527.915	192.1	526.990	123.2	525.240	33.86
11	524.210	0.000	533.260	922.7	535.130	1480	527.980	176.7 *	526.515	80.38	525.200	32.73
12	523.990	0.000	533.420	962.7	535.920	1731	531.850	633.6	527.715	180.5	525.000	27.41
13	523.960	0.000	533.760	1039	536.200	1829	532.650	771.0	530.310	396.0	524.750	21.55 *
14	524.410	0.000	533.960	1096	536.280	1743 *	532.980	831.1	529.855	349.4	524.800	22.65
15	524.970	0.000	534.260	1134	536.210	1721 *	533.080	879.8	529.300	295.6	524.880	24.49
16	524.910	0.000	534.500	1185	535.800	1718	532.720	746.2	530.580	459.1 *	524.850	23.79
17	524.590	0.000	534.500	1231 *	535.140	1486	532.395	688.7	528.750	238.6	524.930	25.68
18	524.330	0.000	534.480	1177	534.100	1113	532.450	770.6 *	527.695	180.5	524.980	26.91
19	524.390	0.000	534.050	1074	533.000	830.4	531.470	557.2	528.310	214.8	524.830	23.33
20	524.460	0.000	533.270	939.6	532.110	628.9	529.650	354.8	528.120	208.1	524.840	23.56 *
21	524.550	0.000	531.780	654.6	531.540	606.8 *	528.460	240.3	527.310	128.4	524.830	23.33
22	524.900	0.000	530.370	429.8	531.205	491.8	527.670	186.4	528.290	209.8	524.710	0.000
23	524.930	0.000	529.225	307.2	530.645	424.6	527.020	137.6	529.000	268.3 *	524.605	0.000
24	524.830	0.000	529.140	282.7 *	531.220	519.7	526.550	90.94	527.600	170.3	524.530	0.000
25	524.970	0.000	529.050	261.8	531.165	511.9	526.500	82.58 *	526.660	107.9	524.500	0.000
26	525.070	0.000	529.930	386.0	530.330	431.3	526.490	71.62	526.390	65.79	524.550	0.000
27	525.090	0.000	529.550	349.5	529.600	321.4	526.420	71.46	526.270	62.98	524.570	0.000
28	526.310	69.05	529.140	272.9	528.880	256.3 *	526.300	63.25	526.170	54.67	524.650	0.000
29	527.070	119.9	528.370	220.2	528.140	226.2	526.210	57.90	526.090	50.21	524.700	0.000
30	526.425	85.13	528.160	207.6	527.715	184.5	525.995	56.17	525.890	55.73 *	524.800	0.000
31			527.720	157.0 *	527.260	134.6			525.845	43.19		
Ten-Daily Mean												
I Ten-Daily	524.660	0.000	530.224	493.0	529.320	408.9	526.883	119.3	526.620	97.59	525.408	39.20
II Ten-Daily	524.422	0.000	533.946	1076	534.989	1428	531.723	641.0	528.715	260.3	524.906	25.21
III Ten-Daily	525.414	27.40	529.312	320.8	529.791	373.6	526.761	105.8	526.865	110.7	524.645	2.333
Monthly												
Min.	523.960	0.000	526.520	72.87	526.710	131.4	525.995	56.17	525.845	43.19	524.500	0.000
Max.	527.070	119.9	534.500	1231	536.280	1829	533.080	879.8	530.580	459.1	525.780	51.56
Mean	524.832	9.134	531.101	620	531.316	725.1	528.456	288.7	527.383	154.7	524.986	22.25

Annual Runoff in MCM = 4847 Annual Runoff in mm = 1999

Peak Observed Discharge = 1829 cumecs on 13-08-2022 Corres. Water Level :536.2 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :525.07 m

Peak Computed Discharge = 1743 cumecs on 14-08-2022 Corres. Water Level :536.28 m

Lowest Computed Discharge = 21.55 cumecs on 13-11-2022 Corres. Water Level :524.75 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 : 2022-2023

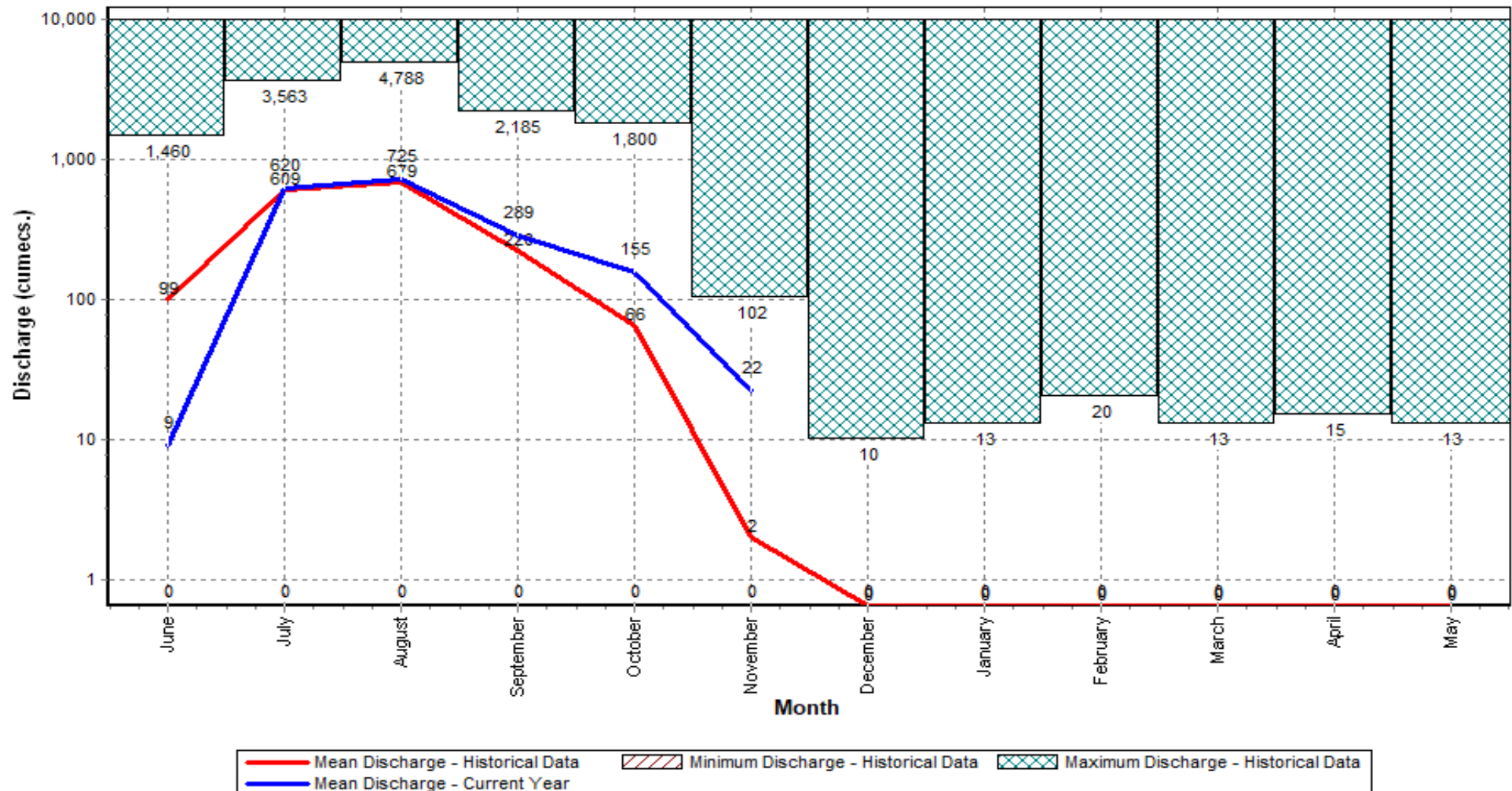
Station Name : Terwad (Seasonal) (AKW00A7)

Data considered : 1980-2023

Division : Upper Krishna Divn, Pune

Local River : Panchganga

Sub-Divn : Upper Krishna SD , Miraj



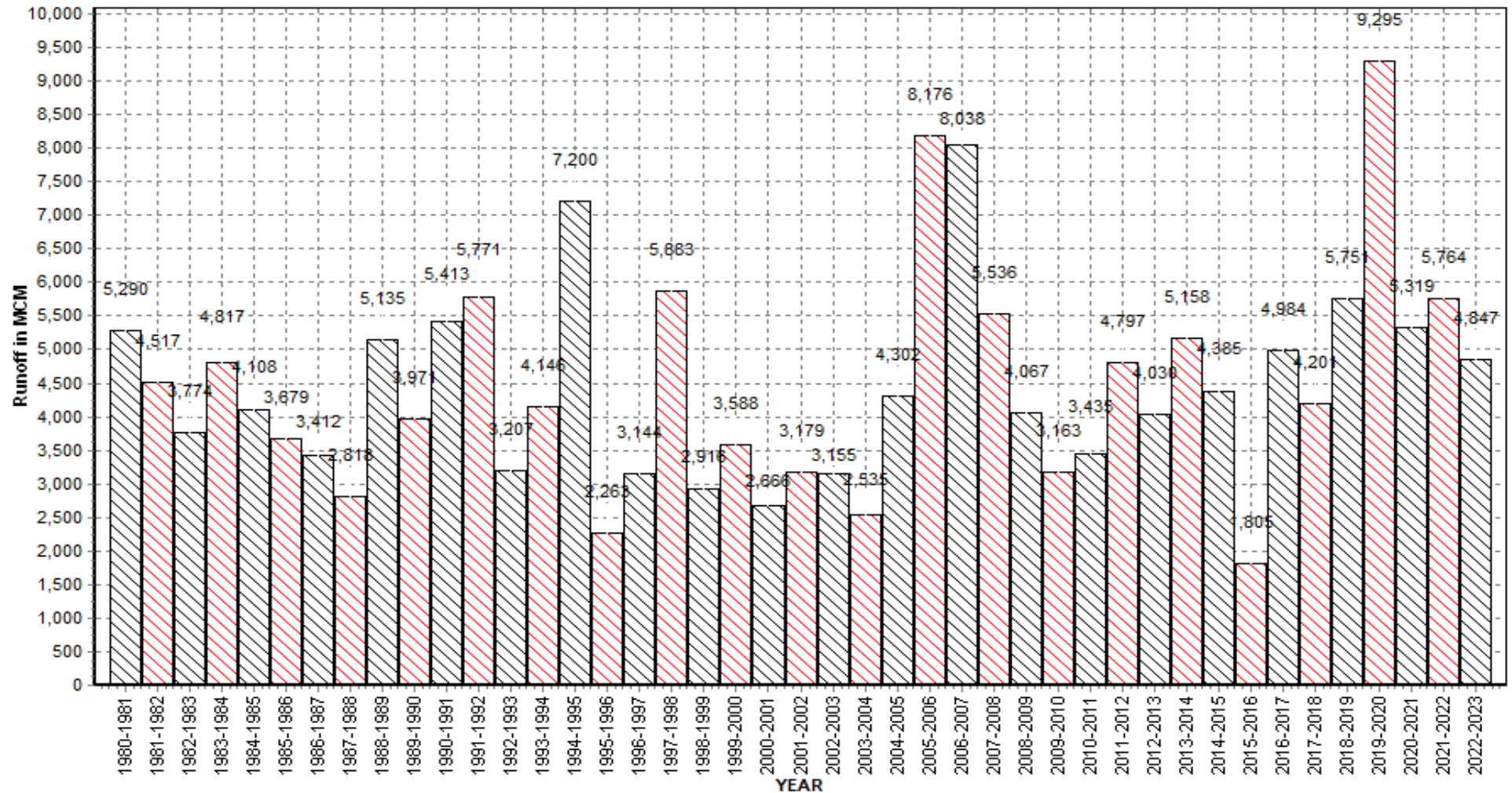
Annual Runoff Values for the period: 1980 - 2023

Station Name : Terwad (Seasonal) (AKW00A7)

Local River : Panchganga

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



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

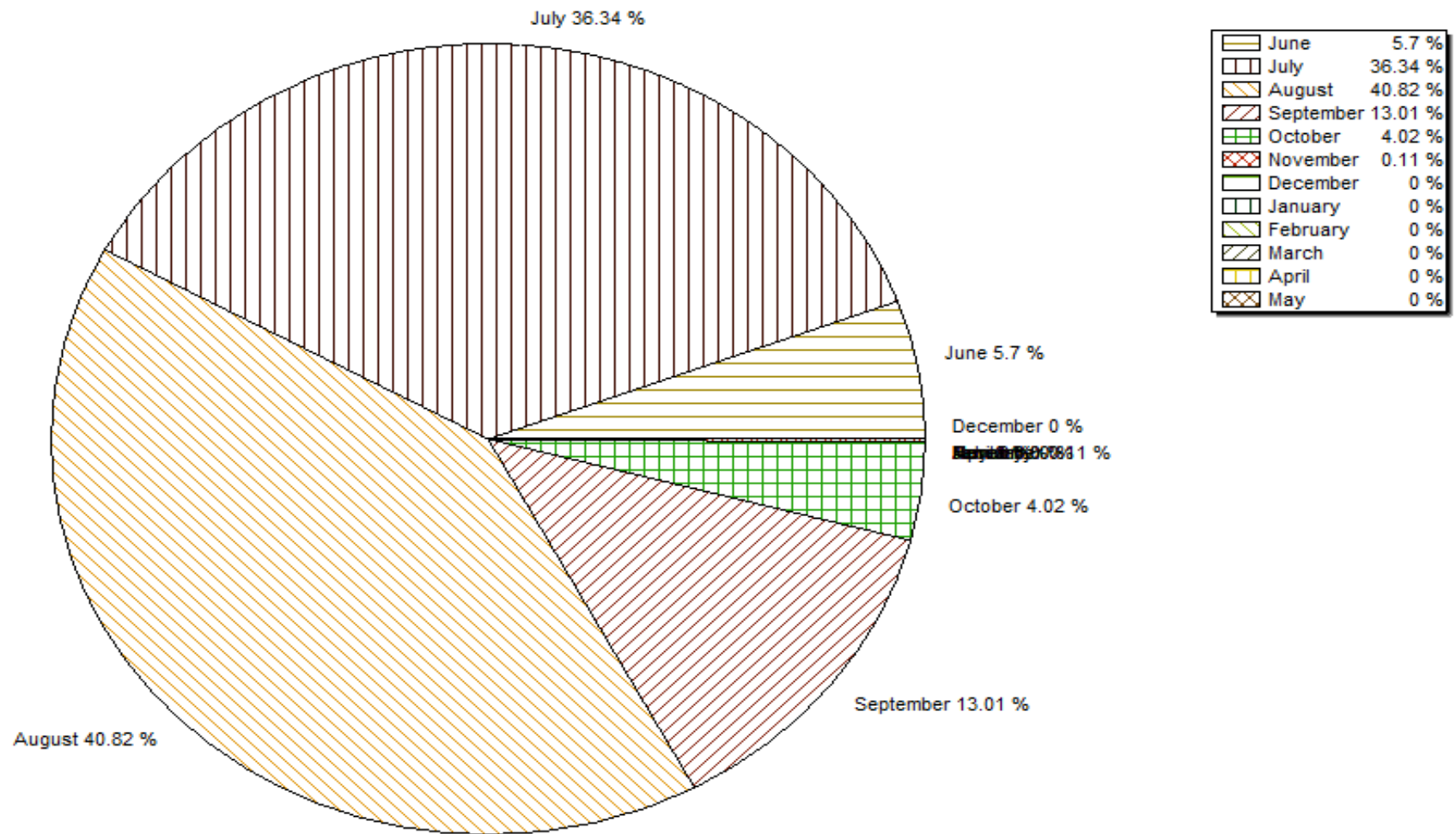
Monthly Average Runoff based on period : 1980-2022

Station Name : Terwad (Seasonal) (AKW00A7)

Local River : Panchganga

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



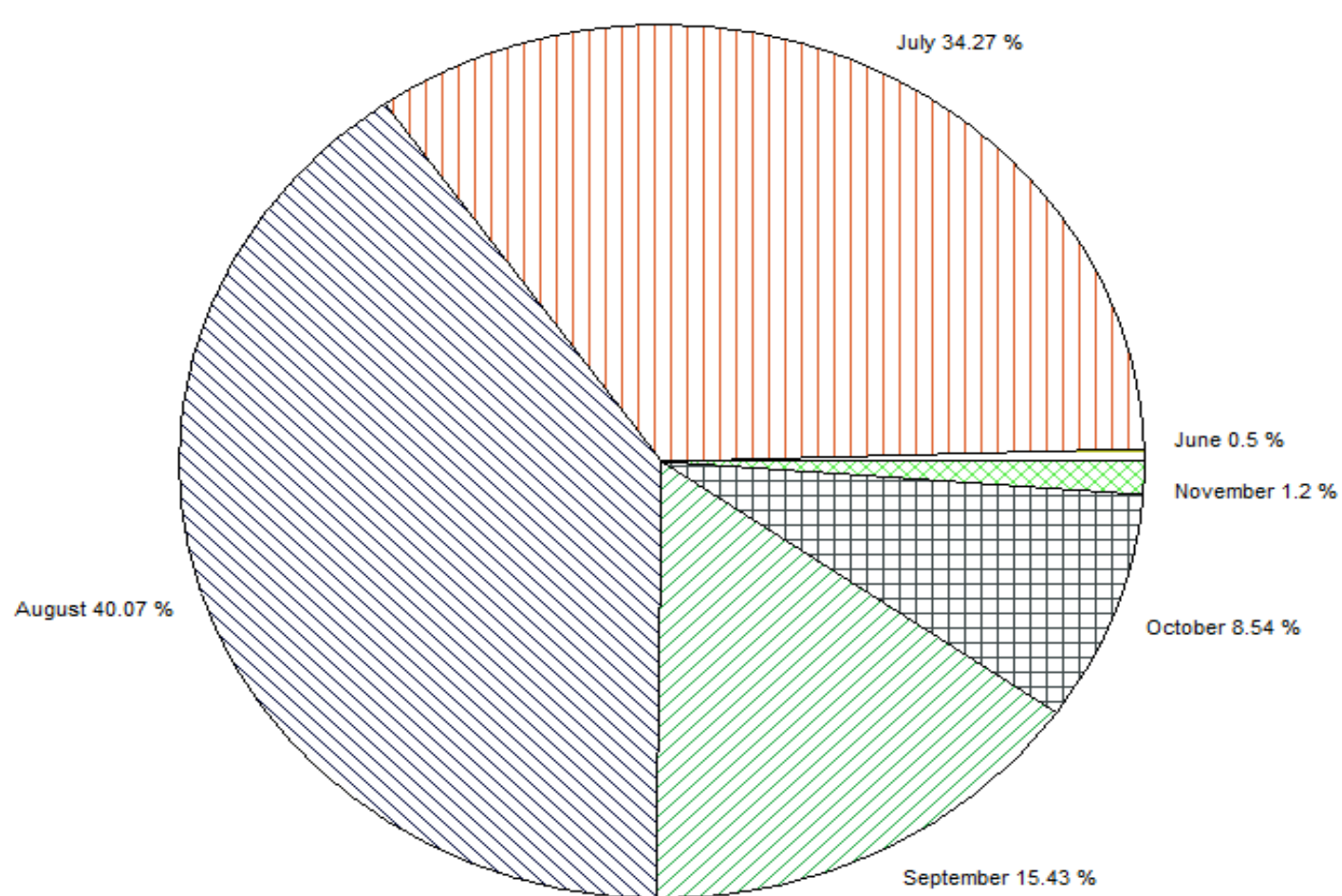
Monthly Runoff for the Year : 2022-2023

Station Name : Terwad (Seasonal) (AKW00A7)

Local River : Panchganga

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



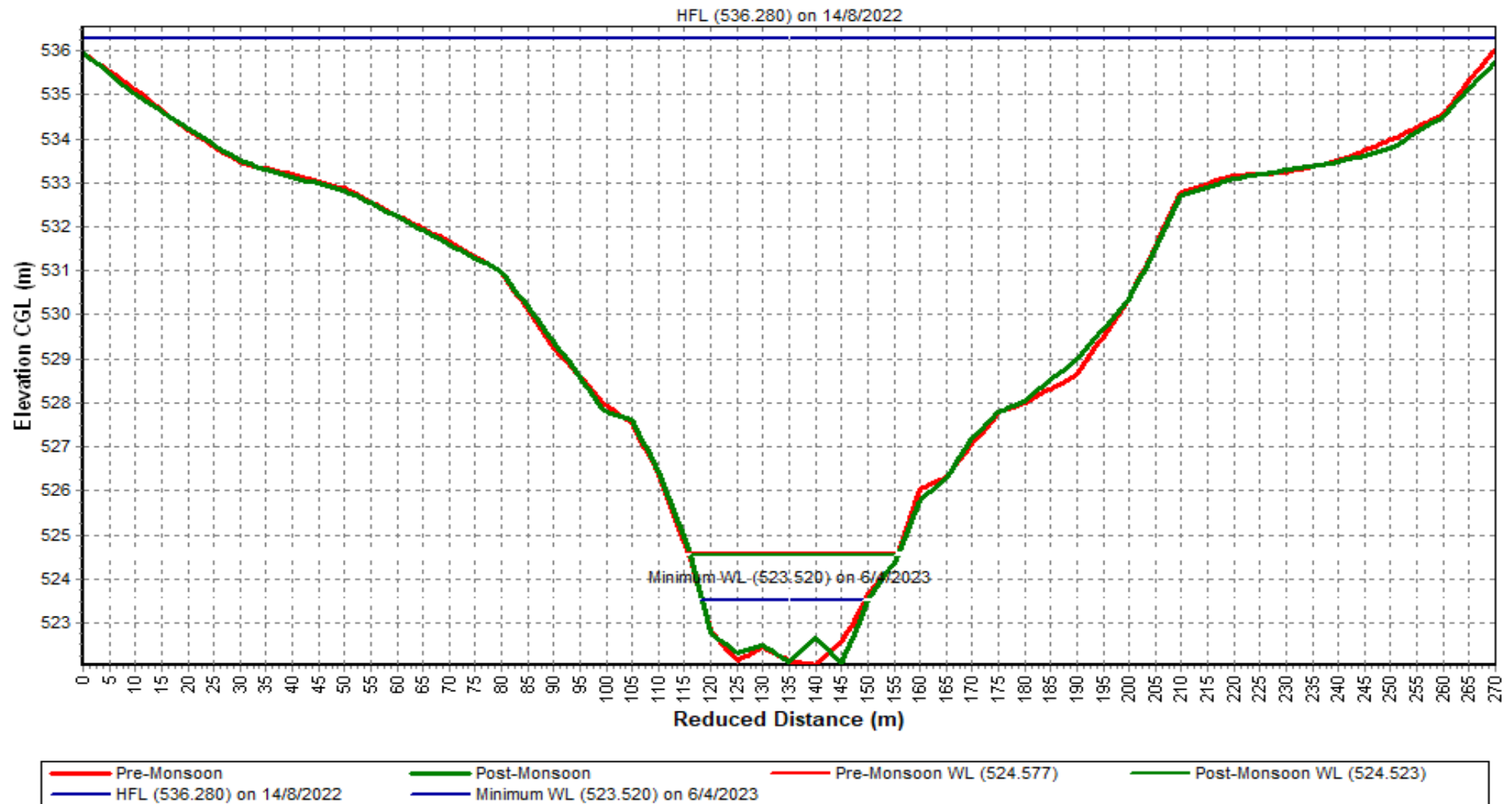
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Terwad (Seasonal) (AKW00A7)

Local River : Panchganga

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



Zero of the Gauge: 520 (m.s.l)

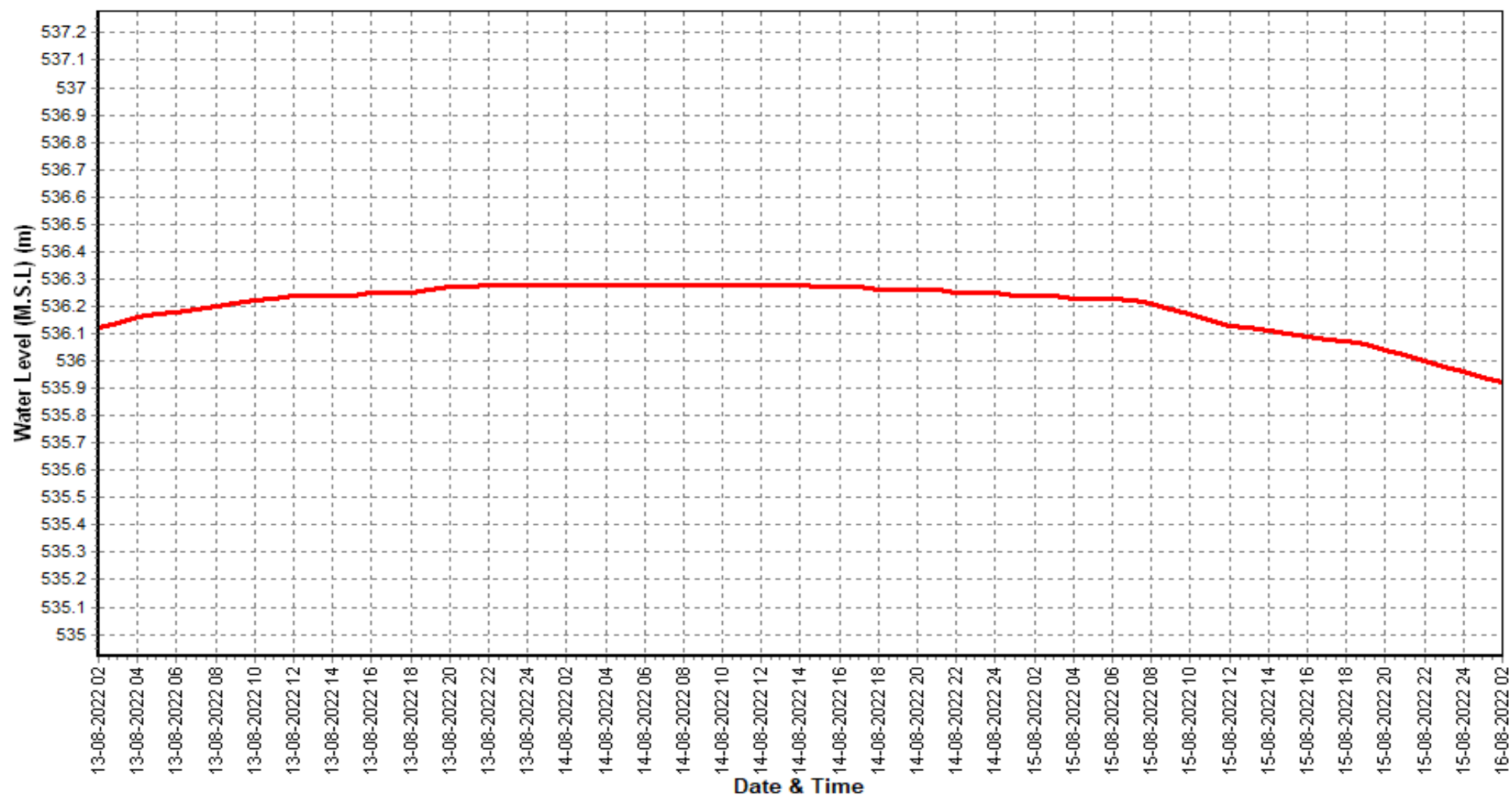
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Terwad (Seasonal) (AKW00A7)

Local River : Panchganga

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



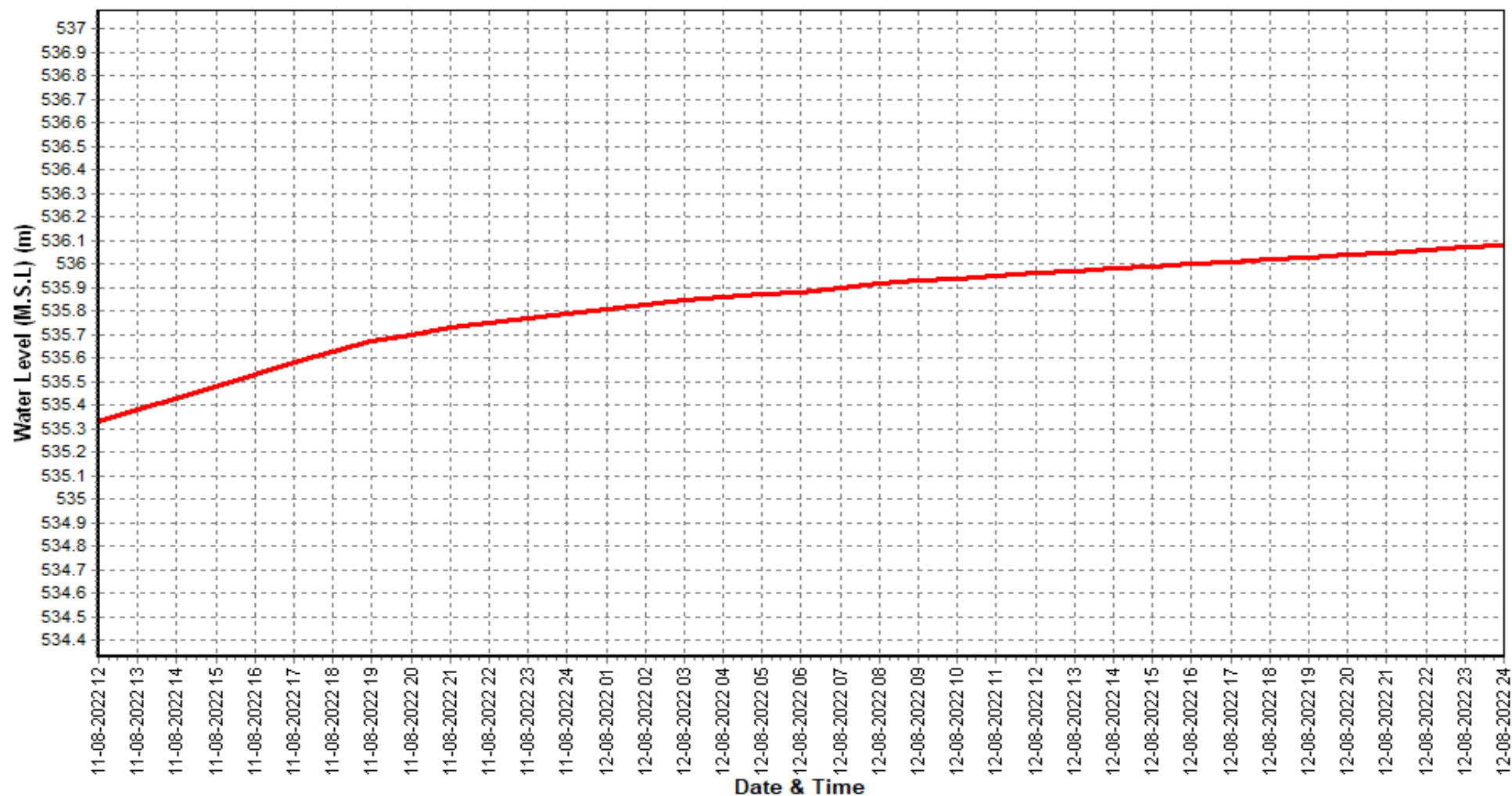
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Terwad (Seasonal) (AKW00A7)

Local River : Panchganga

Division : Upper Krishna Divn, Pune

Sub-Divn : Upper Krishna SD, Miraj



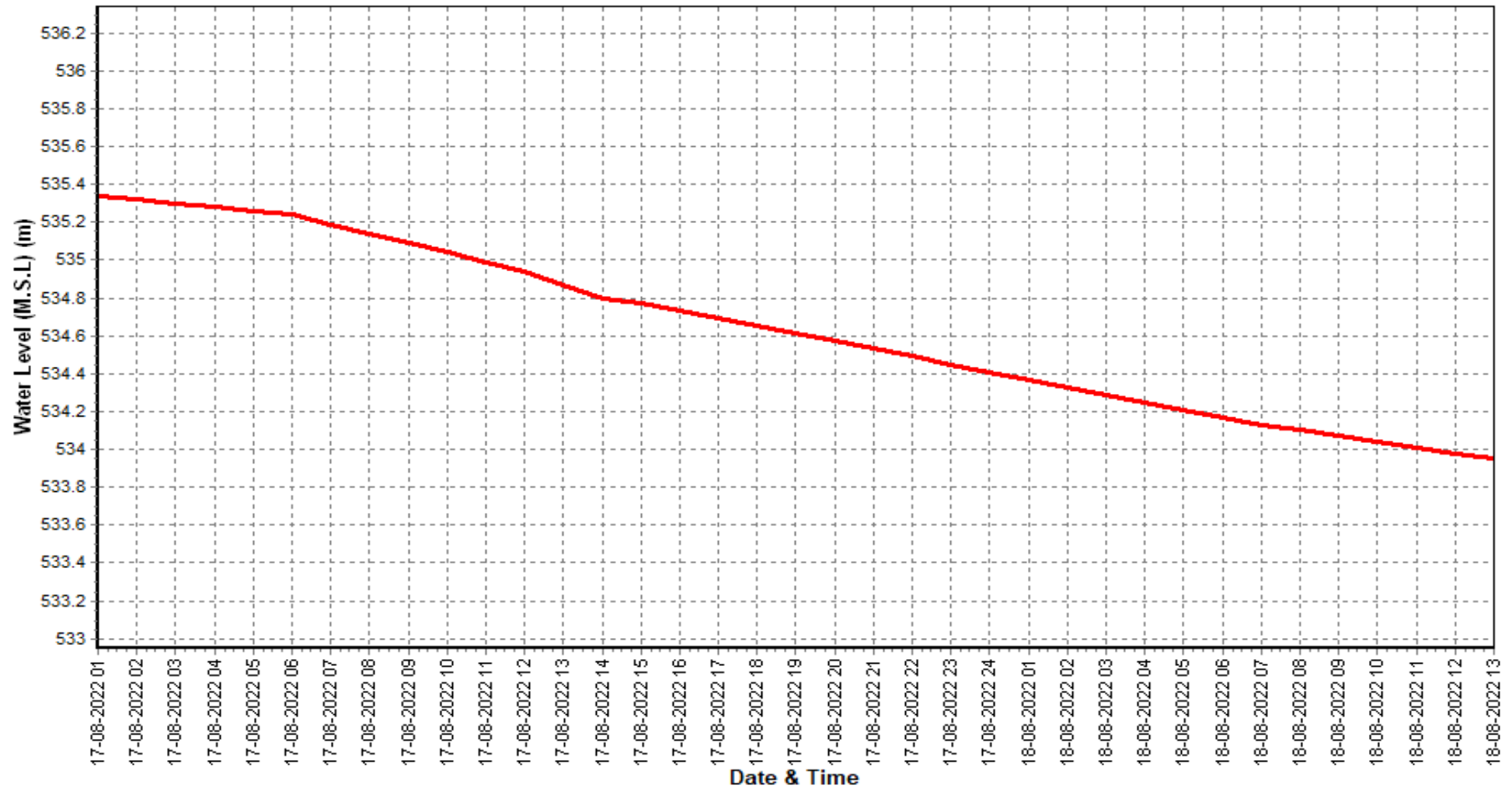
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Terwad (Seasonal) (AKW00A7)

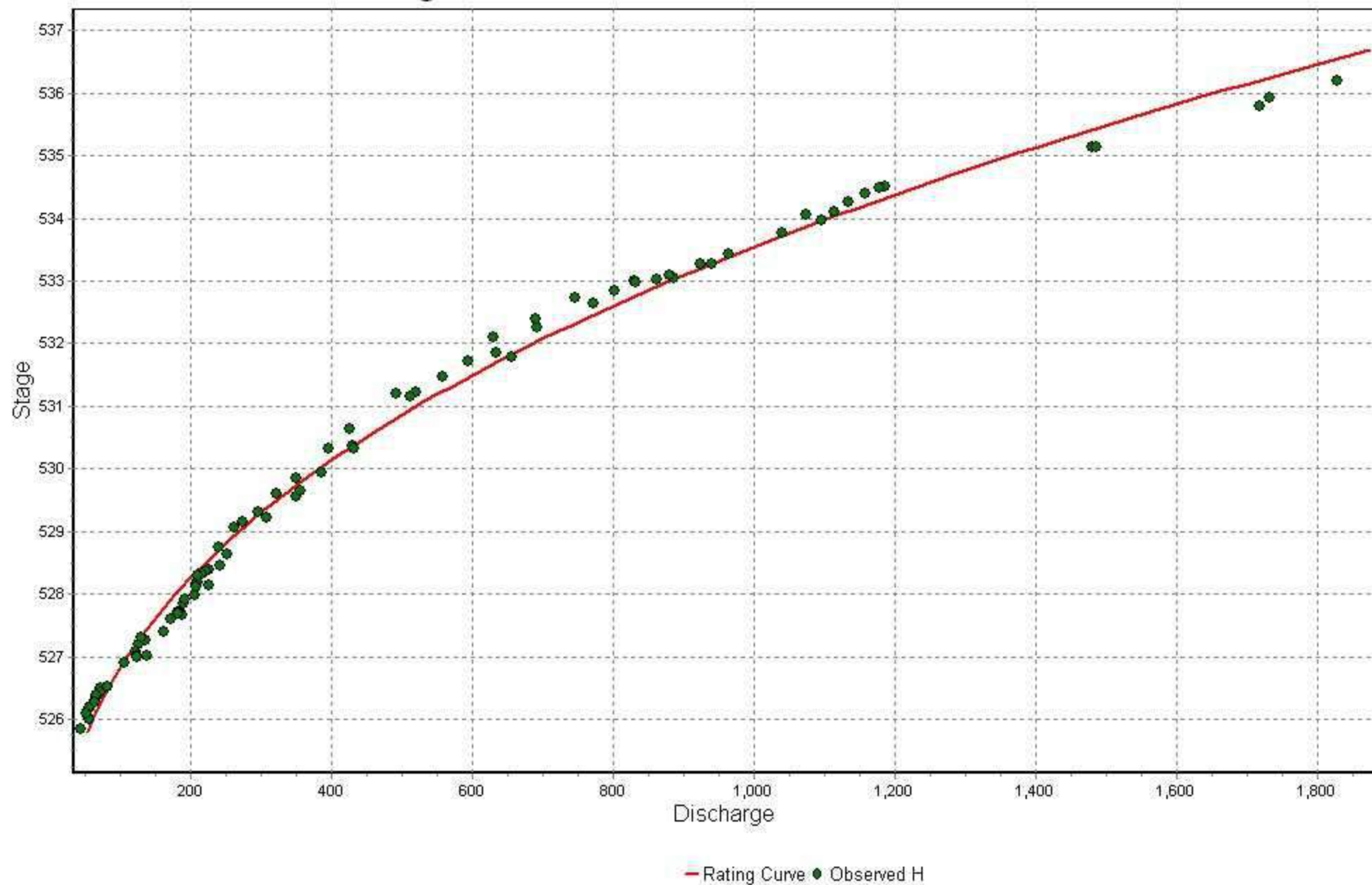
Local River : Panchganga

Division : Upper Krishna Divn, Pune

Sub-Divn : Upper Krishna SD, Miraj



Rating Curve of site Terwad 01/07/2022 to 31/10/2022



HISTORY SHEET

Water Year : 2022-2023

Site : Sadalgi (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 , Miraj

Drainage Area : 2322 Sq. Km.

Bank : Right

Latitude : 16°33'49"

Longitude : 74°31'47"

Zero of Gauge (m) : 522.976 (m.s.l)
 526.16 (m.s.l)
 525.16 (m.s.l)
 525.16 (m.s.l)

01-01-1964 - 04-06-1964
 05-06-1964 - 25-04-1966
 26-04-1966 - 23-06-1969
 24-06-1969

Opening Date

Closing Date

Gauge : 05-06-1964

HFL During 2022-23 : 536.300

Corres. Discharge : 1052 (Estimated)

Discharge : 24-06-1969

Date & Time of
 occurrence : 14-08-2022
 : 05:00 Hrs

HFL Recorded so far in m : 540.580 dt 10-08-2019

Corresponding Discharge (cumecs) : 3215 *

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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
2016-2017	1761	536.920	14-07-2016	0.000	526.130	09-11-2016
2017-2018	716.4	535.235	22-07-2017	0.000	527.590	19-11-2017
2018-2019	876.6	536.120	19-07-2018	0.000	528.750	25-11-2018
2019-2020	1671	540.560	10-08-2019	0.000	528.060	24-11-2019
2020-2021	980.4	536.750	20-08-2020	0.000	529.500	07-06-2020
2021-2022	1486	539.610	25-07-2021	0.000	528.410	03-11-2021

Annual Runoff of Dudhganga at Sadalga (Seasonal)

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1969-1970	2697	0	2697	95	0	95
2	1970-1971	2854	0	2854	101	0	101
3	1971-1972	2293	0	2293	81	0	81
4	1972-1973	1549	8	1556	55	0	55
5	1973-1974	2913	0	2913	103	0	103
6	1974-1975	2586	0	2586	91	0	91
7	1975-1976	3648	0	3648	129	0	129
8	1976-1977	2493	0	2493	88	0	88
9	1977-1978	2557	0	2557	90	0	90
10	1978-1979	3354	0	3354	119	0	119
11	1979-1980	2887	0	2887	102	0	102
12	1980-1981	3475	0	3475	123	0	123
13	1981-1982	3220	0	3220	114	0	114
14	1982-1983	2719	0	2719	96	0	96
15	1983-1984	3900	0	3900	138	0	138
16	1984-1985	2710	0	2710	96	0	96
17	1985-1986	2592	0	2592	92	0	92
18	1986-1987	1987	0	1987	70	0	70
19	1987-1988	1416	0	1416	50	0	50
20	1988-1989	3156	0	3156	112	0	112
21	1989-1990	2250	0	2250	80	0	80
22	1990-1991	3089	0	3089	109	0	109
23	1991-1992	3258	0	3258	115	0	115
24	1992-1993	2147	0	2147	76	0	76
25	1993-1994	2948	0	2948	104	0	104
26	1994-1995	3954	0	3954	140	0	140
27	1995-1996	1648	0	1648	58	0	58
28	1996-1997	2259	0	2259	80	0	80
29	1997-1998	3438	0	3438	121	0	121
30	1998-1999	1868	0	1868	66	0	66
31	1999-2000	2449	0	2449	87	0	87
32	2000-2001	1380	0	1380	49	0	49
33	2001-2002	964	2	966	34	0	34
34	2002-2003	1573	0	1573	56	0	56
35	2003-2004	907	0	907	32	0	32
36	2004-2005	1860	0	1860	66	0	66
37	2005-2006	4918	0	4918	174	0	174
38	2006-2007	4924	Site downgraded as Seasonal Site from 2006-07	4924	174	Site downgraded as Seasonal Site from 2006-07	174
39	2007-2008	2673		2673	94		94
40	2008-2009	2216		2216	78		78
41	2009-2010	1736		1736	61		61
42	2010-2011	2167		2167	77		77
43	2011-2012	2864		2864	101		101
44	2012-2013	1727		1727	61		61
45	2013-2014	2504		2504	88		88
46	2014-2015	1956		1956	69		69
47	2015-2016	783		783	28		28

48	2016-2017	2353	Site downgraded as Seasonal Site from 2006-07	2353	83	Site downgraded as Seasonal Site from 2006-07	83
49	2017-2018	1900		1900	67		67
50	2018-2019	2636		2636	93		93
51	2019-2020	4399		4399	155		155
52	2020-2021	2840		2840	100		100
53	2021-2022	2996		2996	106		106
53	2022-2023	3299		3299	117		117
Average		2591	0	2591	92	0	92

Instantaneous Flood Peak of Dudhganga at Sadalga (Seasonal)

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1964-1965	537.060	10-08-1964	08:00:00	1412 *
2	1965-1966	537.065	01-08-1965	03:00:00	1440 *
3	1966-1967	537.230	31-07-1966	08:00:00	1352 *
4	1967-1968	538.045	30-07-1967	20:00:00	1865 *
5	1968-1969	535.475	09-08-1968	10:00:00	815 *
6	1969-1970	537.040	02-08-1969	19:00:00	1392 *
7	1970-1971	536.910	23-08-1970	15:00:00	1320 *
8	1971-1972	535.900	25-06-1971	23:00:00	1190 *
9	1972-1973	536.260	09-07-1972	05:00:00	1230 *
10	1973-1974	536.760	10-07-1973	01:00:00	1397 *
11	1974-1975	536.490	07-07-1974	11:00:00	1304 *
12	1975-1976	537.550	11-07-1975	06:00:00	1759 *
13	1976-1977	536.860	02-08-1976	22:00:00	1279 *
14	1977-1978	536.600	09-07-1977	10:00:00	1179 *
15	1978-1979	536.360	18-08-1978	21:00:00	1244 *
16	1979-1980	537.340	09-08-1979	14:00:00	1466 *
17	1980-1981	536.905	05-07-1980	02:00:00	1292 *
18	1981-1982	536.845	09-07-1981	05:00:00	1457 *
19	1982-1983	536.510	31-07-1982	06:00:00	1368 *
20	1983-1984	538.950	29-06-1983	06:00:00	2457 *
21	1984-1985	536.550	03-07-1984	08:00:00	1514
22	1985-1986	536.485	03-08-1985	12:00:00	1421 *
23	1986-1987	536.485	11-08-1986	21:00:00	1139 *
24	1987-1988	535.540	09-07-1987	21:00:00	873 *
25	1988-1989	537.300	20-07-1988	08:00:00	1810
26	1989-1990	538.150	25-07-1989	20:00:00	2100 *
27	1990-1991	537.075	19-08-1990	19:00:00	1452 *
28	1991-1992	537.720	30-07-1991	13:00:00	1631 *
29	1992-1993	535.390	20-08-1992	05:00:00	808 *
30	1993-1994	536.630	13-07-1993	08:00:00	1190
31	1994-1995	538.160	17-07-1994	22:00:00	1900 *
32	1995-1996	534.945	04-09-1995	15:00:00	711 *
33	1996-1997	536.560	03-10-1996	06:00:00	1180 *
34	1997-1998	537.640	09-08-1997	02:00:00	1595 *
35	1998-1999	534.980	10-07-1998	08:00:00	710
36	1999-2000	536.980	23-07-1999	11:00:00	1321 *
37	2000-2001	535.580	15-07-2000	01:00:00	859 *
38	2001-2002	534.400	11-07-2001	08:00:00	595
39	2002-2003	535.770	13-08-2002	14:00:00	912 *
40	2003-2004	534.560	23-06-2003	12:00:00	538 *
41	2004-2005	536.500	06-08-2004	21:00:00	1287 *
42	2005-2006	538.900	06-08-2005	09:00:00	2219 *
43	2006-2007	538.410	13-08-2006	02:00:00	1978 *
44	2007-2008	536.700	02-07-2007	11:00:00	1215 *
45	2008-2009	537.860	13-08-2008	18:00:00	1694 *
46	2009-2010	535.820	18-07-2009	04:00:00	926 *

47	2010-2011	536.455	30-07-2010	06:00:00	851 *
48	2011-2012	536.110	06-09-2011	08:00:00	833 *
49	2012-2013	534.080	06-09-2012	15:00:00	560 *
50	2013-2014	536.280	28-07-2013	12:00:00	1069 *
51	2014-2015	535.110	25-07-2014	22:00:00	780 *
52	2015-2016	534.040	26-06-2015	08:00:00	723
53	2016-2017	536.920	14-07-2016	06:00:00	1302 *
54	2017-2018	535.260	22-07-2017	16:00:00	770 *
55	2018-2019	536.120	19-07-2018	13:00:00	1155 *
56	2019-2020	540.580	10-08-2019	12:00:00	3215 *
57	2020-2021	536.760	20-08-2020	09:00:00	984 *
58	2021-2022	539.610	24-07-2021	18:00:00	1486 *
59	2022-2023	536.300	14-08-2022	05:00:00	1052 *

Note :- Discharge is less in 2020-2021 due to partial closure d/s weir .

Stage-Discharge Data for the period 2022 - 2023

Station Name : Sadalgi (Seasonal) (AKV00D3)

Division : Upper Krishna Divn, Pune

Local River : Dudhganga

Sub-Division : Upper Krishna SD , 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	528.400	0.000	529.605	53.71	530.020	73.12	530.910	185.8	529.960	58.73	529.570	0.000
2	528.560	0.000	529.510	47.14	530.250	100.5	530.940	195.1	529.900	70.67 *	529.390	0.000
3	528.640	0.000	529.920	72.29 *	530.075	81.19	530.940	186.8	529.600	36.73	529.310	0.000
4	529.045	25.09	529.870	73.90	531.285	215.5	530.860	159.9 *	529.370	25.75	529.240	0.000
5	528.940	17.50 *	531.130	221.7	530.380	109.7	530.630	150.5	529.365	31.02	529.250	0.000
6	528.795	15.92	532.435	323.6	530.490	135.7	530.940	182.7	529.865	55.72	529.130	0.000
7	528.790	15.95	533.135	403.7	532.620	370.9 *	530.720	167.6	530.160	78.36	528.980	0.000
8	528.725	15.79	533.250	420.7	533.665	464.7	530.680	150.1	530.100	87.44	528.940	0.000
9	528.450	13.52 *	533.250	425.5	535.360	788.7 *	530.550	133.7	530.570	130.7 *	529.000	0.000
10	528.645	16.47	533.810	540.6 *	535.740	839.2	530.570	132.1	530.480	119.5	529.020	0.000
11	528.930	17.35	534.200	555.3	535.870	910.0	530.720	145.6 *	530.505	137.7	528.740	0.000
12	529.130	25.25 *	534.530	634.2	535.930	936.8	534.470	609.0	532.780	392.5 #	528.530	0.000
13	529.005	21.82	535.020	699.1	536.140	986.7	535.020	683.9	533.010	424.3 #	528.510	0.000
14	529.205	19.45	535.340	778.2	536.300	952.4 *	535.060	709.5	531.905	277.6	529.100	0.000
15	528.980	20.34	535.500	816.8	536.180	931.0 *	534.785	718.5	533.265	465.5	529.180	0.000
16	528.970	21.29	535.530	828.2	535.580	844.5	534.075	543.3	532.620	370.9 *	529.140	0.000
17	528.670	15.45	535.480	809.1 *	534.690	643.3	533.395	420.7	531.100	193.4	529.060	0.000
18	528.595	16.15	535.370	785.7	533.885	516.0	532.830	399.4 *	530.930	181.0	528.830	0.000
19	528.530	15.21 *	535.050	709.3	533.185	415.4	532.155	281.5	531.355	222.1	528.940	0.000
20	528.635	16.17	533.910	583.1	532.520	326.9	531.375	220.3	531.475	232.6	528.850	0.000
21	528.825	16.01	532.280	321.7	531.960	285.6 *	530.950	180.0	532.025	285.2	528.800	0.000
22	529.020	21.93	531.180	220.0	531.610	244.1	530.710	155.6	532.945	415.3 #	528.530	0.000
23	529.080	25.43	530.845	173.7	531.410	232.0	530.535	133.8	532.200	315.8 *	528.210	0.000
24	528.945	17.56	530.570	130.7 *	531.630	244.6	530.460	124.9	531.050	189.5	528.290	0.000
25	528.850	14.49	530.650	160.7	531.570	252.5	530.440	118.2 *	530.700	152.3	528.610	0.000
26	528.960	18.52 *	530.670	161.3	531.330	215.9	530.360	106.9	530.565	137.1	528.780	0.000
27	529.735	69.07	530.575	142.2	531.105	196.5	530.385	104.1	530.480	121.6	528.840	0.000
28	529.930	71.70	530.515	136.2	531.080	183.2 *	530.140	86.63	530.435	116.4	528.880	0.000
29	529.610	68.28	530.370	109.1	530.835	178.6	530.060	81.20	530.205	73.79	528.940	0.000
30	529.380	25.70	530.050	78.87	530.720	167.3	529.365	27.72	529.750	58.86 *	528.930	0.000
31			530.610	134.6 *	530.660	149.5			529.620	27.61		
Ten-Daily Mean												
I Ten-Daily	528.699	12.02	531.591	258.3	531.988	317.9	530.774	164.4	529.937	69.46	529.183	0.000
II Ten-Daily	528.865	18.85	534.993	719.9	535.028	746.3	533.388	473.2	531.895	289.8	528.888	0.000
III Ten-Daily	529.234	34.87	530.756	160.8	531.265	213.6	530.341	111.9	530.907	172.1	528.681	0.000
Monthly												
Min.	528.400	0.000	529.510	47.14	530.020	73.12	529.365	27.72	529.365	25.75	528.210	0.000
Max.	529.930	71.70	535.530	828.2	536.300	986.7	535.060	718.5	533.265	465.5	529.570	0.000
Mean	528.932	21.91	532.392	372.6	532.712	419.1	531.501	249.8	530.913	177	528.917	0

Annual Runoff in MCM = 3299 Annual Runoff in mm = 1421

Peak Observed Discharge = 986.7 cumecs on 13-08-2022 Corres. Water Level :536.14 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :528.4 m

Peak Computed Discharge = 952.4 cumecs on 14-08-2022 Corres. Water Level :536.3 m

Lowest Computed Discharge = 13.52 cumecs on 09-06-2022 Corres. Water Level :528.45 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 : 2022-2023

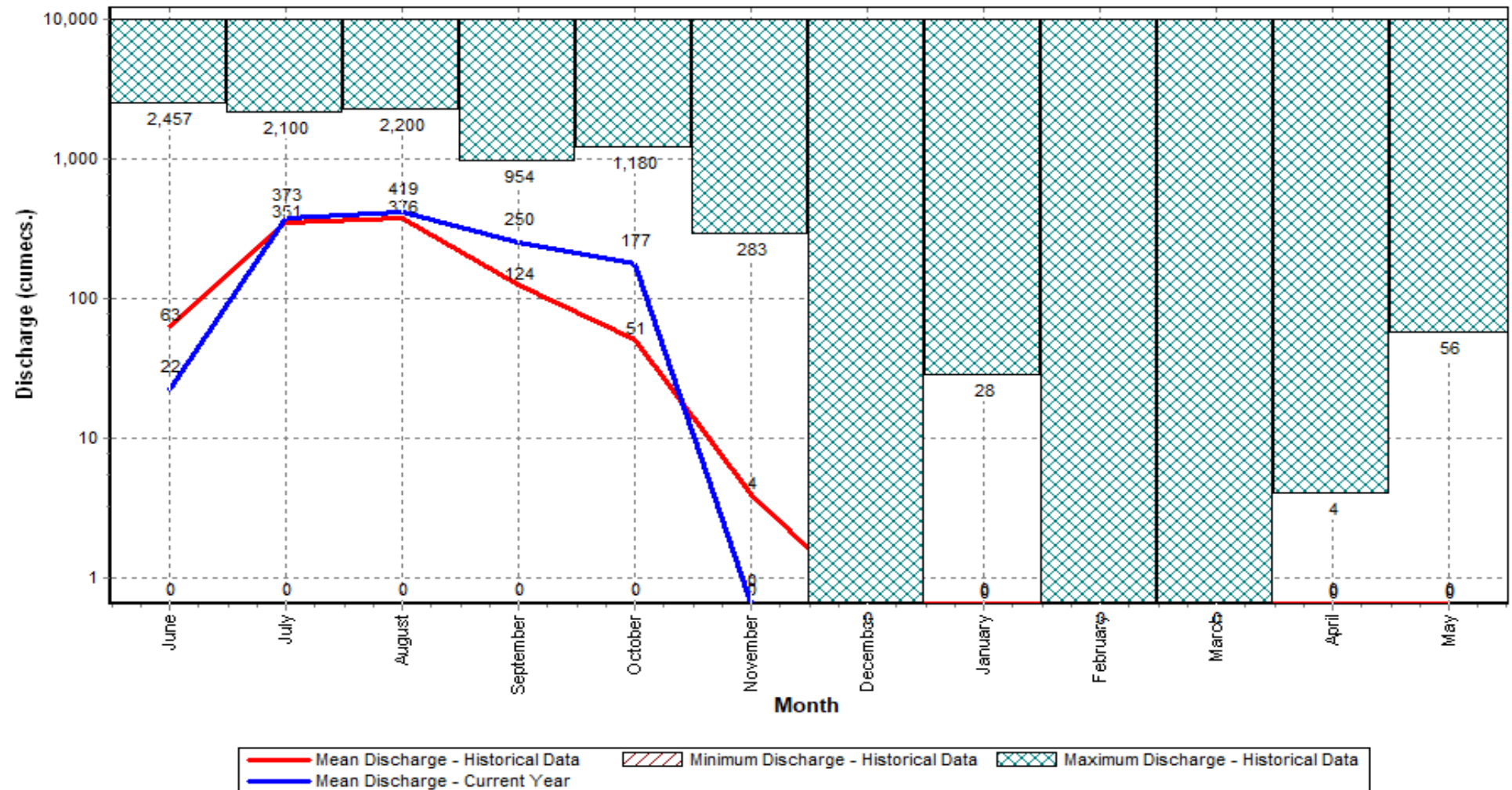
Station Name : Sadalgi (Seasonal) (AKV00D3)

Data considered : 1970-2023

Division : Upper Krishna Divn, Pune

Local River : Dudhganga

Sub-Divn : Upper Krishna SD , Miraj



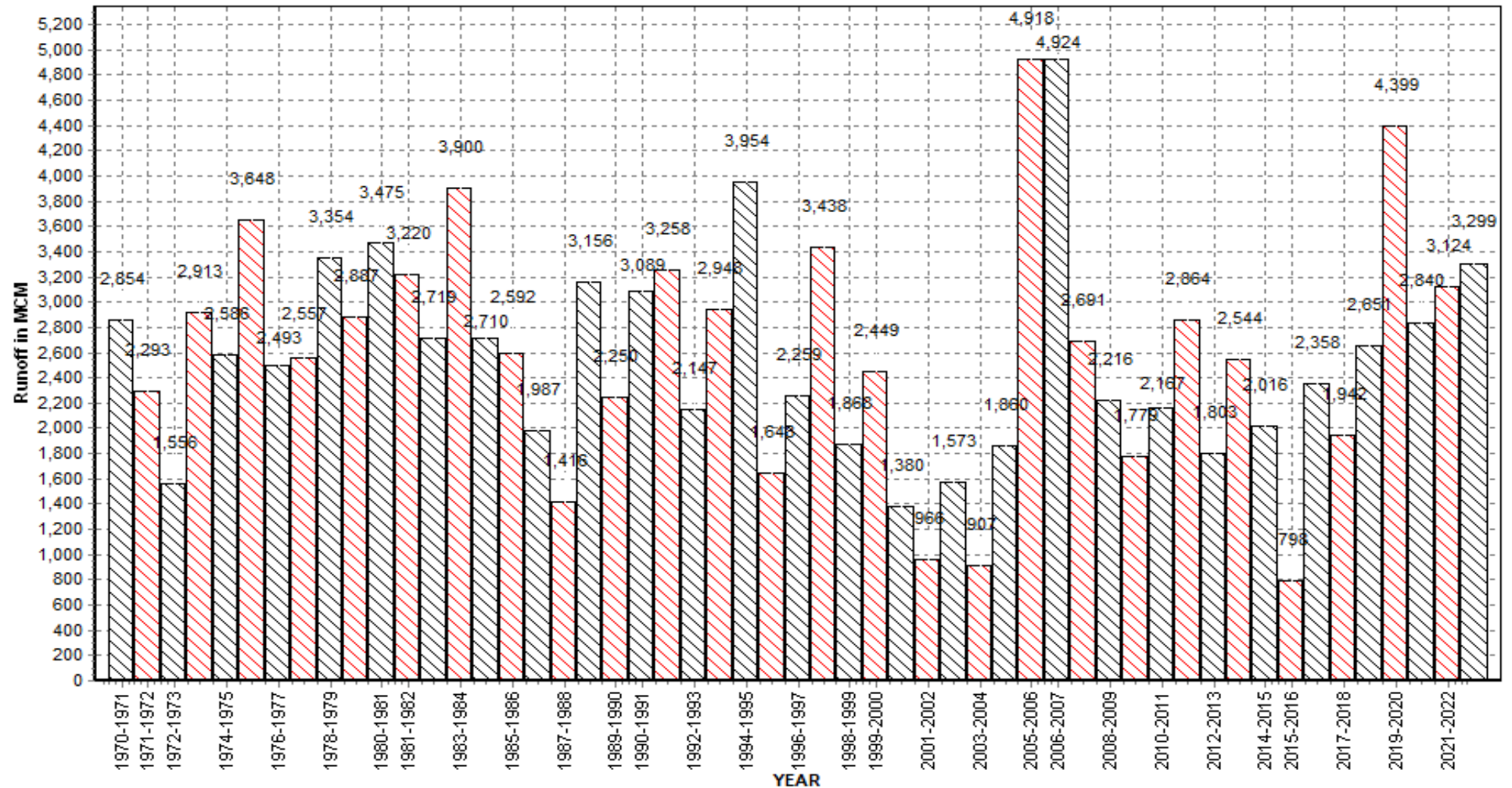
Annual Runoff Values for the period: 1970 - 2023

Station Name : Sadalgi (Seasonal) (AKV00D3)

Local River : Dudhganga

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



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

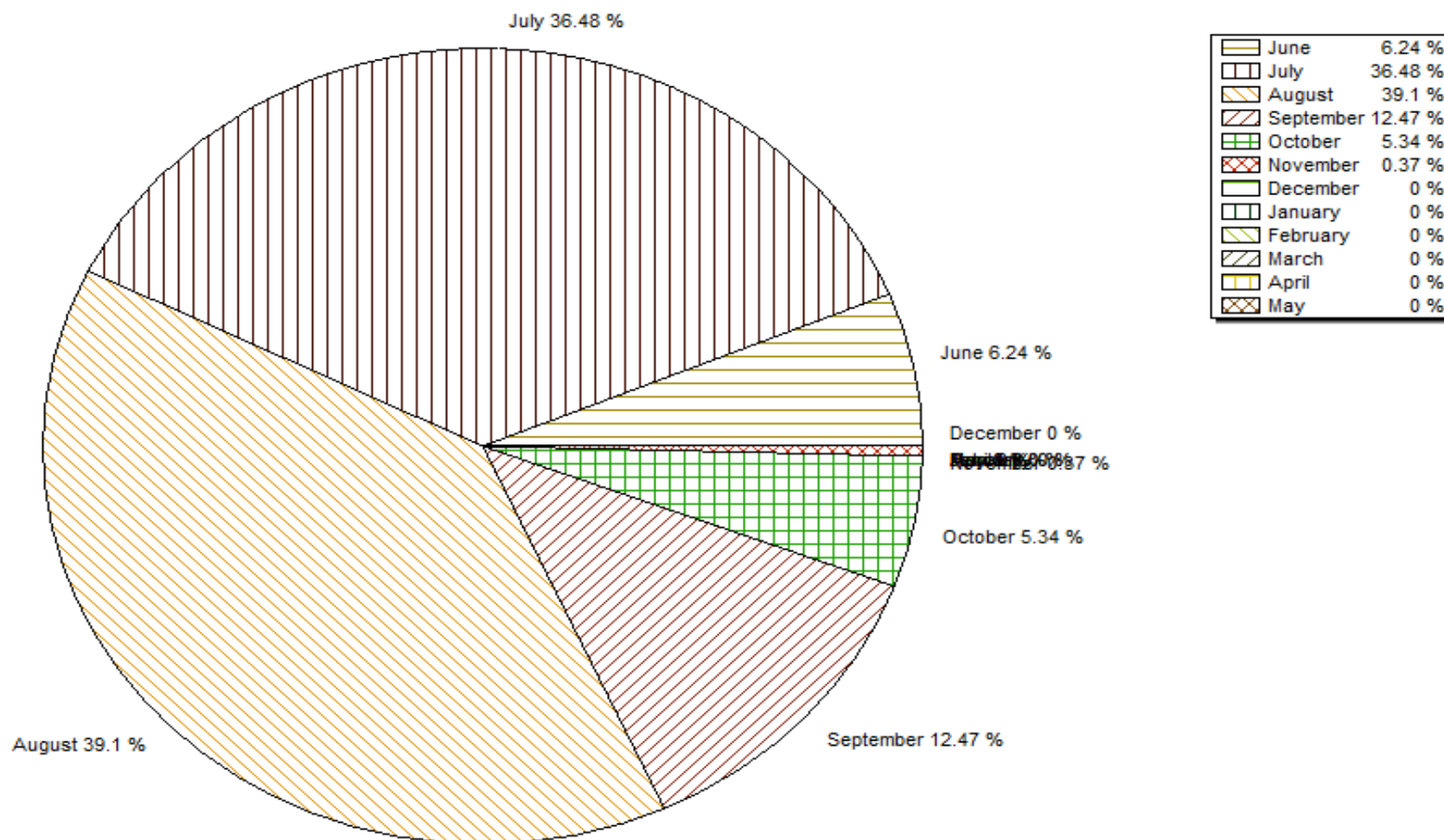
Monthly Average Runoff based on period : 1970-2022

Station Name : Sadalgi (Seasonal) (AKV00D3)

Local River : Dudhganga

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD , Miraj



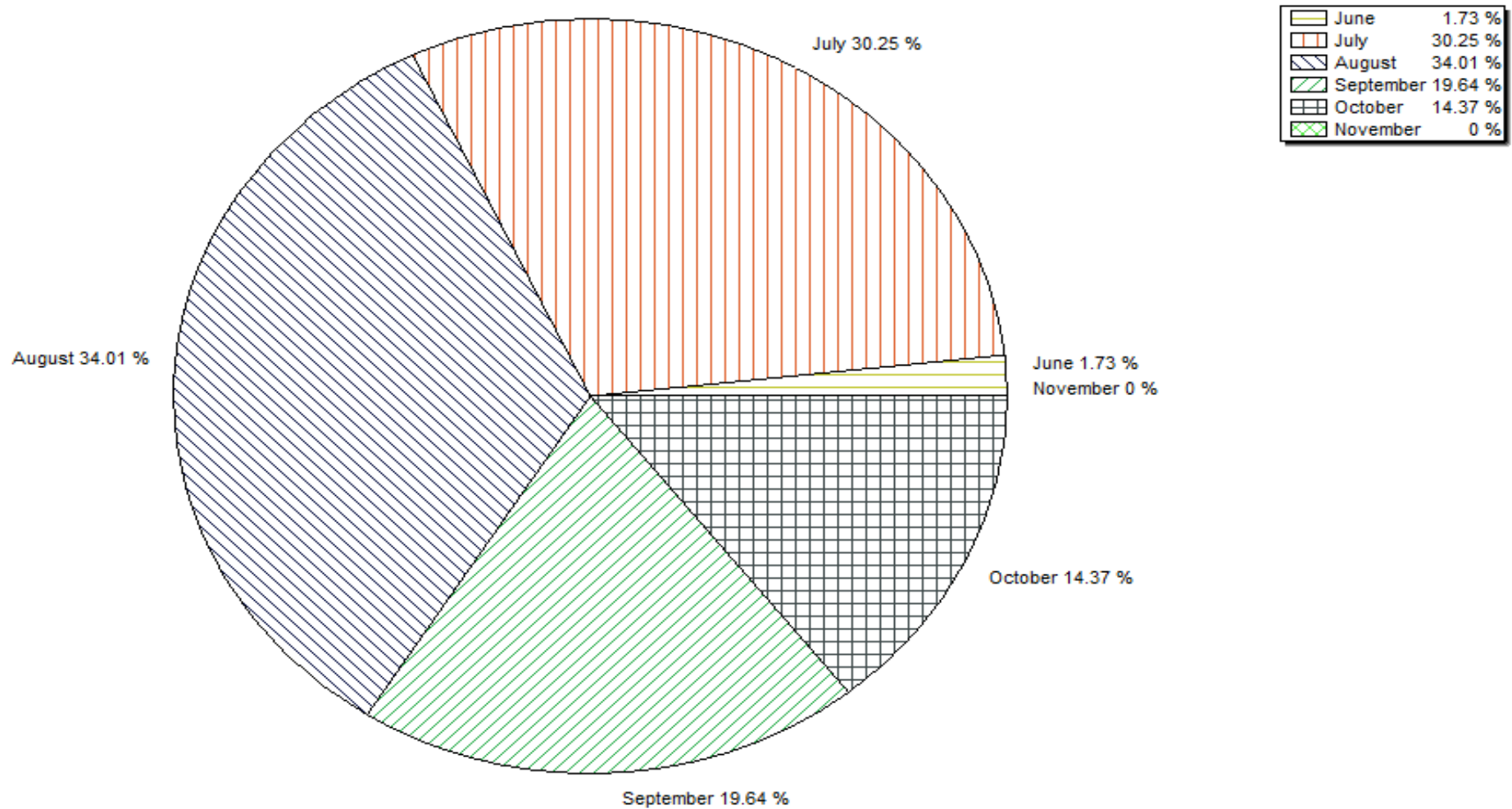
Monthly Runoff for the Year : 2022-2023

Station Name : Sadalgi (Seasonal) (AKV00D3)

Local River : Dudhganga

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



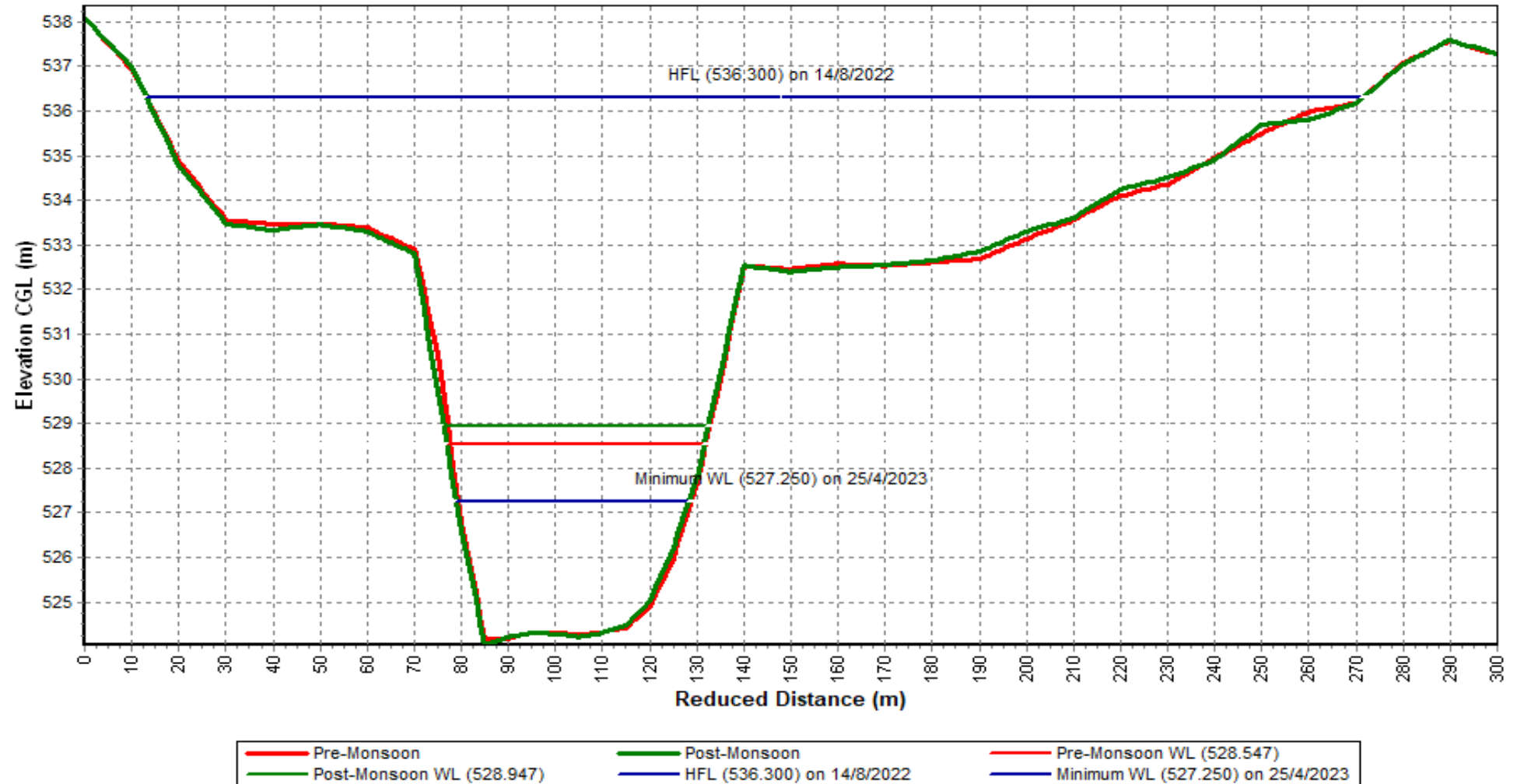
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Sadalgi (Seasonal) (AKV00D3)

Local River : Dudhganga

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



Zero of the Gauge: 525.16 (m.s.l)

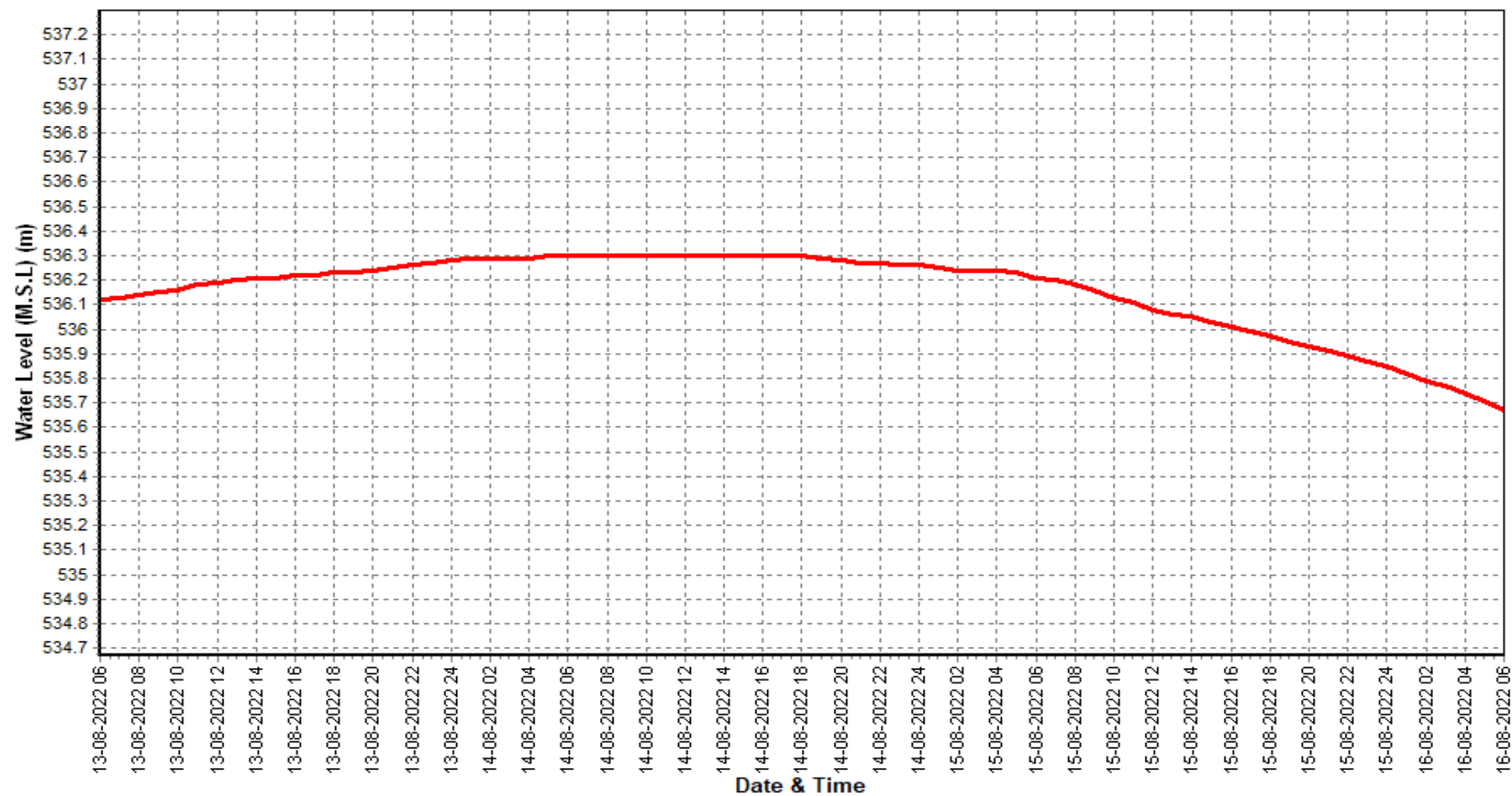
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Sadalgi (Seasonal) (AKV00D3)

Local River : Dudhganga

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Krishna SD, Miraj



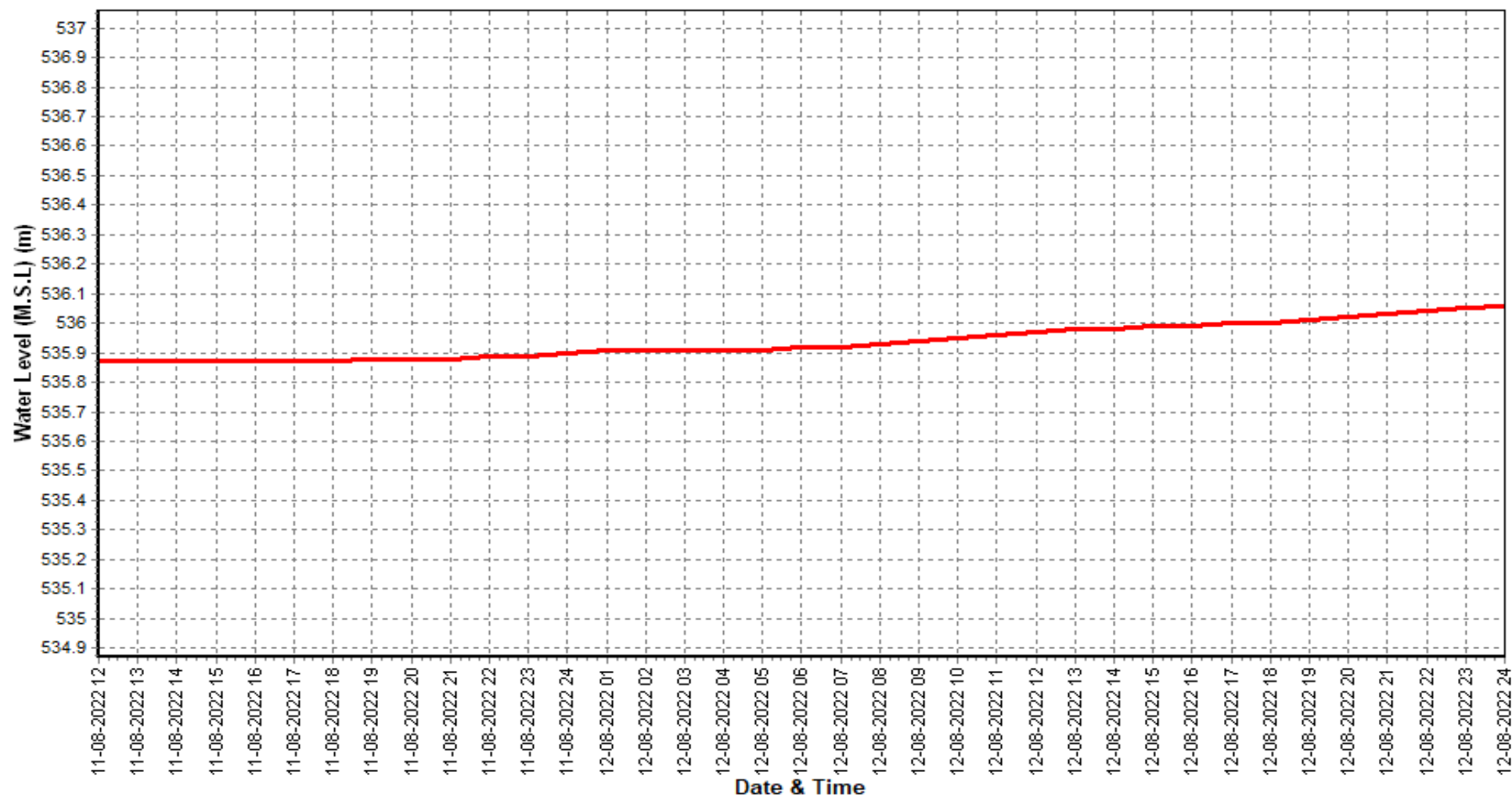
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Sadalgi (Seasonal) (AKV00D3)

Local River : Dudhganga

Division : Upper Krishna Divn, Pune

Sub-Divn : Upper Krishna SD, Miraj



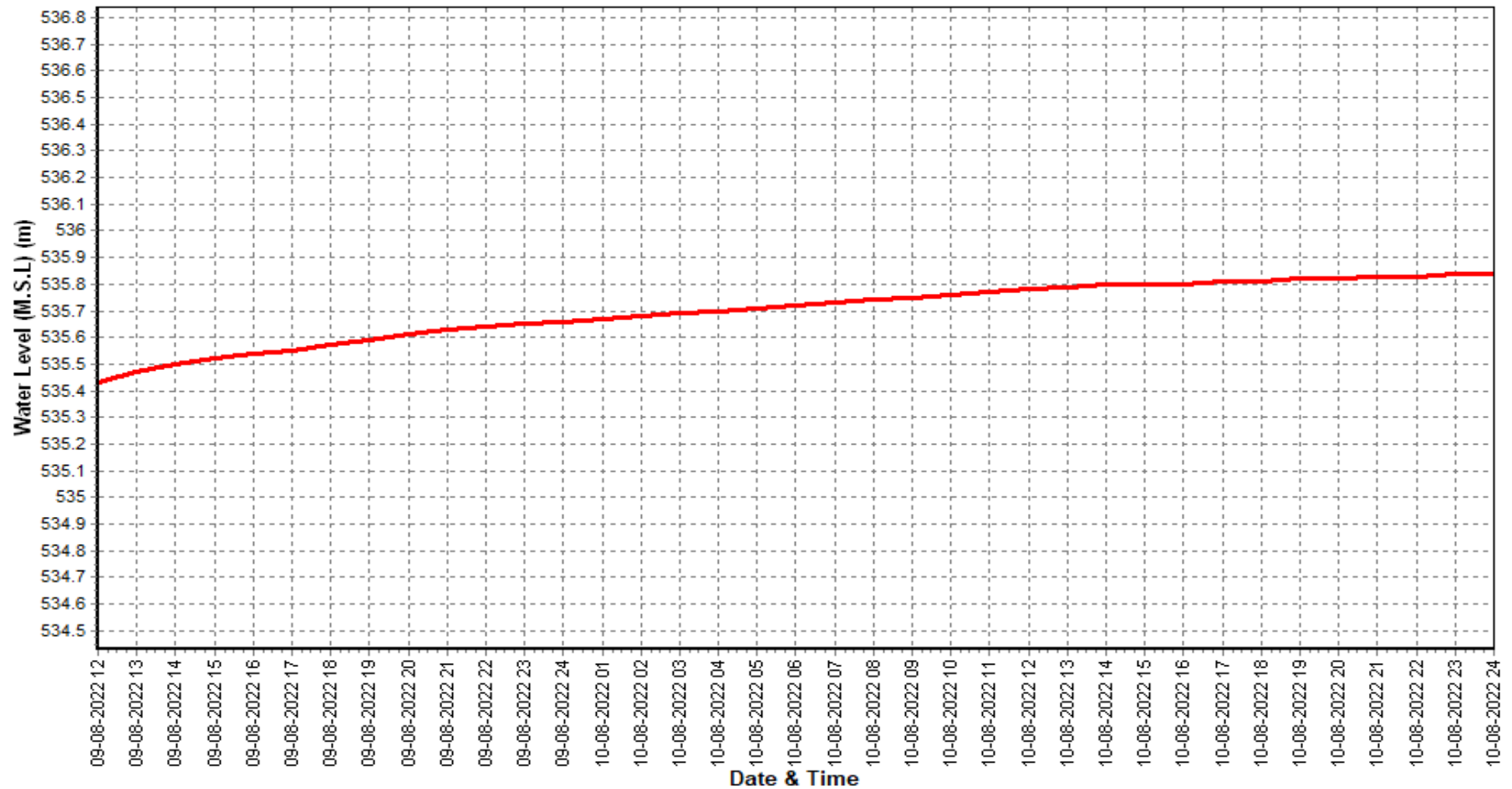
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Sadalgi (Seasonal) (AKV00D3)

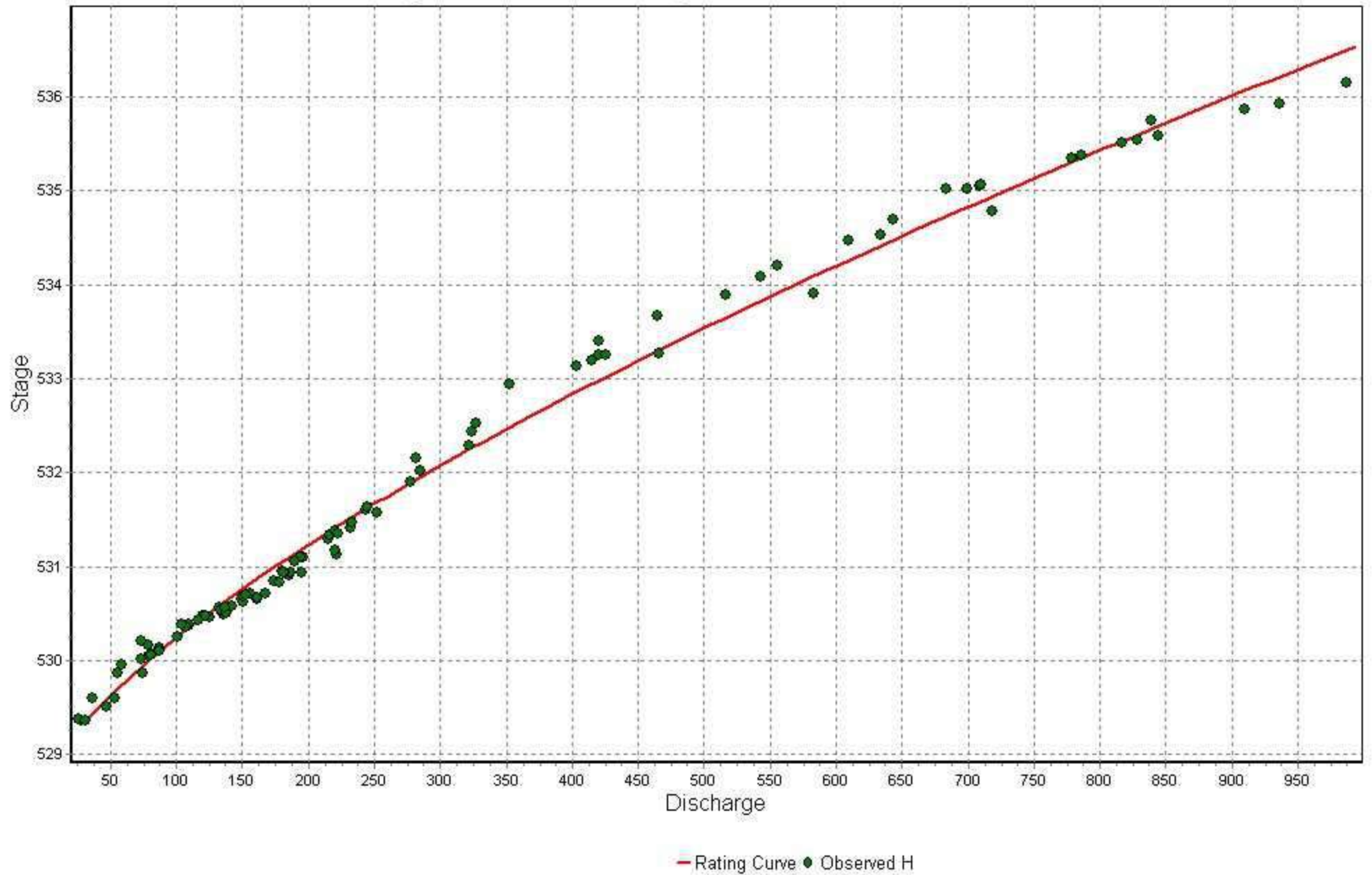
Local River : Dudhganga

Division : Upper Krishna Divn, Pune

Sub-Divn : Upper Krishna SD, Miraj



Rating Curve of Site Sadalga 01/07/2022 to 31/10/2022



HISTORY SHEET

Water Year : 2022-2023

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) : 536.004 (m.s.l)
536 (m.s.l)20-03-1971 - 31-08-2003
01-09-2003

Opening Date

Closing Date

Gauge : 21-03-1971

Discharge : 14-07-1971

Sediment : 27-12-2014

Water Quality : 01-09-2014

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	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	4000	552.004	08-07-1994	0.000	539.054	12-02-1995
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	539.880	01-06-2014
2015-2016	342.6	541.180	25-06-2015	0.000	539.830	22-06-2015
2016-2017	515.0	542.370	14-07-2016	0.000	539.680	11-06-2016
2017-2018	414.8	541.960	23-07-2017	0.000	538.800	16-11-2017
2018-2019	854.4	543.920	19-08-2018	0.000	539.750	09-06-2018
2019-2020	4912	550.320	11-08-2019	0.000	538.750	26-01-2020
2020-2021	1687	546.200	19-08-2020	0.000	538.750	04-02-2021
2021-2022	1438	548.880	25-07-2021	0.000	539.000	11-02-2022

Annual Runoff of Krishna at Gokagfalls

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1971-1972	1502	1	1503	53	0	53
2	1972-1973	1905	1	1906	67	0	67
3	1973-1974	2799	0	2799	99	0	99
4	1974-1975	2818	11	2829	100	0	100
5	1975-1976	3427	31	3458	121	1	122
6	1976-1977	2150	24	2174	76	1	77
7	1977-1978	2079	102	2181	73	4	77
8	1978-1979	2639	57	2696	93	2	95
9	1979-1980	2170	107	2277	77	4	80
10	1980-1981	3228	84	3312	114	3	117
11	1981-1982	2323	119	2441	82	4	86
12	1982-1983	1988	129	2117	70	5	75
13	1983-1984	3410	143	3553	121	5	126
14	1984-1985	1256	141	1398	44	5	49
15	1985-1986	873	145	1017	31	5	36
16	1986-1987	747	147	894	26	5	32
17	1987-1988	365	133	498	13	5	18
18	1988-1989	2142	129	2271	76	5	80
19	1989-1990	1178	52	1230	42	2	43
20	1990-1991	1410	112	1522	50	4	54
21	1991-1992	2103	16	2119	74	1	75
22	1992-1993	1290	0	1290	46	0	46
23	1993-1994	1703	11	1714	60	0	61
24	1994-1995	4280	20	4300	151	1	152
25	1995-1996	581	19	600	21	1	21
26	1996-1997	780	54	834	28	2	29
27	1997-1998	3042	79	3121	107	3	110
28	1998-1999	857	70	927	30	2	33
29	1999-2000	1948	85	2033	69	3	72
30	2000-2001	847	63	910	30	2	32
31	2001-2002	517	3	520	18	0	18
32	2002-2003	569	0	569	20	0	20
33	2003-2004	354	0	354	13	0	13
34	2004-2005	770	0	770	27	0	27
35	2005-2006	3999	0	3999	141	0	141
36	2006-2007	3087	Site Converted as Seasonal Site from june 2006	3087	109	Site Converted as Seasonal Site from june 2006	109
37	2007-2008	2239		2239	79		79
38	2008-2009	1428		1428	50		50
39	2009-2010	1233		1233	44		44
40	2010-2011	1389		1389	49		49
41	2011-2012	2376		2376	84		84
42	2012-2013	851		851	30		30
43	2013-2014	1746		1746	62		62
44	2014-2015	894		894	32		32
45	2015-2016	726		726	26		26
46	2016-2017	840		840	30		30
47	2017-2018	463		463	16		16
48	2018-2019	1306		1306	46		46
49	2019-2020	4044		4044	143		143
50	2020-2021	2502		2502	88		88
51	2021-2022	1179	107	1286	42	4	45
52	2022-2023	2261	3	2264	80	0	80
Average		1781	60	1823	63	2.11	64.43

Instantaneous Flood Peak of Krishna at Gokak falls					
Sl. No.	Year	Instantaneous Annual Flood Peak		Time	Discharge * (Cumecs)
		Peak WL (m) Recorded	Date		
1	1971-1972	543.319	21-07-1971	18:00:00	1042 *
2	1972-1973	544.389	08-07-1972	08:00:00	1571
3	1973-1974	543.884	09-07-1973	08:00:00	1318 *
4	1974-1975	544.404	07-07-1974	00:00:00	1579 *
5	1975-1976	545.614	11-07-1975	04:00:00	2210 *
6	1976-1977	543.884	02-08-1976	11:00:00	1318 *
7	1977-1978	543.244	27-07-1977	07:00:00	1006 *
8	1978-1979	544.264	18-08-1978	13:00:00	1508 *
9	1979-1980	545.489	10-08-1979	05:00:00	2143 *
10	1980-1981	544.264	07-08-1980	09:00:00	1508 *
11	1981-1982	542.954	04-08-1981	06:00:00	868 *
12	1982-1983	544.154	17-08-1982	10:00:00	1453 *
13	1983-1984	546.254	28-06-1983	22:00:00	2558 *
14	1984-1985	542.404	03-07-1984	06:00:00	611 *
15	1985-1986	542.334	03-08-1985	00:00:00	579 *
16	1986-1987	541.594	12-08-1986	05:00:00	246 *
17	1987-1988	541.154	10-07-1987	00:00:00	54 *
18	1988-1989	544.814	06-08-1988	09:00:00	1789 *
19	1989-1990	544.324	25-07-1989	20:00:00	1538 *
20	1990-1991	543.444	19-08-1990	15:00:00	1103 *
21	1991-1992	544.084	16-08-1991	11:00:00	1418 *
22	1992-1993	542.954	23-08-1992	07:00:00	868 *
23	1993-1994	544.354	14-08-1993	11:00:00	1554 *
24	1994-1995	546.564	16-07-1994	11:00:00	2730 *
25	1995-1996	541.354	22-07-1995	08:00:00	140
26	1996-1997	542.454	21-10-1996	12:00:00	634 *
27	1997-1998	546.244	07-08-1997	18:00:00	2552 *
28	1998-1999	541.554	03-07-1998	09:00:00	228 *
29	1999-2000	544.924	23-07-1999	01:00:00	1846 *
30	2000-2001	542.034	14-07-2000	18:00:00	442 *
31	2001-2002	541.484	10-07-2001	17:00:00	197 *
32	2002-2003	541.504	13-08-2002	21:00:00	206 *
33	2003-2004	540.704	23-06-2003	09:00:00	121 *
34	2004-2005	542.670	05-08-2004	14:00:00	734 *
35	2005-2006	546.880	23-09-2005	14:00:00	2907 *
36	2006-2007	545.390	13-08-2006	00:00:00	2091 *
37	2007-2008	545.870	08-08-2007	09:00:00	2348 *
38	2008-2009	544.060	13-08-2008	10:00:00	1406 *
39	2009-2010	543.210	03-10-2009	17:00:00	990 *
40	2010-2011	542.660	27-07-2010	17:00:00	730 *
41	2011-2012	544.880	04-09-2011	19:00:00	1823 *
42	2012-2013	541.645	05-08-2012	18:00:00	268 *

Sl. No.	Year	Instantaneous Annual Flood Peak		Time	Discharge * (Cumecs)
		Peak WL (m) Recorded	Date		
43	2013-2014	542.860	04-08-2013	16:00:00	823 *
44	2014-2015	542.320	01-08-2014	17:00:00	572 *
45	2015-2016	541.250	25-06-2015	18:00:00	95 *
46	2016-2017	542.380	14-07-2016	07:00:00	600 *
47	2017-2018	542.070	22-07-2017	13:00:00	458 *
48	2018-2019	543.940	19-08-2018	10:00:00	1346 *
49	2019-2020	550.350	11-08-2019	11:00:00	4920 *
50	2020-2021	546.310	18-08-2020	18:00:00	2589 *
51	2021-2022	548.900	25-07-2021	10:00:00	4097 *
52	2022-2023	545.490	14-08-2022	07:00:00	1610 *

Stage-Discharge Data for the period 2022 - 2023

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	538.540	0.000	538.820	0.000	538.860	28.18 #	538.900	30.69 #	538.540	51.95	538.560	12.96 #
2	538.510	0.000	539.310	73.46	538.720	20.22 #	539.160	44.65	538.550	46.95 *	538.560	12.96 #
3	538.550	0.000	539.770	112.4 *	538.650	19.39	540.320	189.1	538.520	47.38	538.580	15.90
4	538.490	0.000	539.580	91.92	538.530	11.41 #	539.570	86.82 *	538.700	51.44	538.600	16.86 #
5	538.450	0.000	539.860	113.2	538.560	12.64 #	539.010	31.92	538.620	49.05 *	538.600	16.86 #
6	538.490	0.000	539.500	75.37	538.840	25.67	539.160	44.65	538.540	52.37	538.610	17.92 *
7	538.540	0.000	540.230	171.3 #	539.720	103.0 *	539.190	46.44	538.660	53.78	538.600	16.86 #
8	538.500	0.000	539.830	111.4	540.720	263.1	539.560	79.15	539.230	53.07	538.650	22.52 *
9	538.580	0.000	540.060	164.3	542.110	524.5 *	540.150	162.5	539.070	49.03 *	538.620	19.02 #
10	538.500	0.000	540.610	227.8 *	541.980	478.9	540.140	164.2	539.010	47.63	538.550	13.56
11	538.480	0.000	540.780	271.9	542.600	630.1	540.280	174.4 *	539.520	78.97	538.560	12.14
12	538.500	0.000	540.440	210.8	543.380	825.8	544.020	1083	539.300	59.95	538.550	12.24
13	538.470	0.000	540.900	289.2	544.990	1360	545.130	1462	539.660	95.12	538.550	12.07 *
14	538.470	0.000	541.060	314.3	545.490	1610 *	545.020	1415	539.250	53.78	538.560	11.33
15	538.500	0.000	541.370	361.4	542.960	745.3 *	544.360	1196	540.060	156.7	538.550	10.13 #
16	538.440	0.000	541.710	426.4	542.030	487.3	542.950	747.7	540.380	193.9 *	538.550	10.30
17	538.450	0.000	541.760	439.8 *	541.480	382.6	541.410	373.3	539.940	137.4	538.550	10.13 #
18	538.540	0.000	542.010	489.4	540.620	236.4	542.030	505.6 *	539.580	91.92	538.550	10.13 #
19	538.460	0.000	541.360	361.4	540.480	215.7	541.500	387.6	539.940	137.4	538.550	10.13 #
20	538.410	0.000	540.210	174.8	540.420	205.7	540.200	175.8	540.000	154.3	538.560	10.17 *
21	538.490	0.000	539.790	103.8	540.100	149.5 *	539.650	94.24	540.830	286.8	538.550	9.955
22	538.500	0.000	539.380	60.55	540.100	157.0	539.530	77.13	540.400	226.6	538.640	10.58
23	538.540	0.000	538.860	26.79	539.940	137.4	539.250	53.78	539.960	138.9 *	538.600	10.55
24	538.590	0.000	538.680	18.72 *	539.850	115.8	538.870	57.99	539.500	87.66 *	538.590	9.894
25	538.590	0.000	538.560	14.86	539.900	119.9	538.680	50.87 *	539.050	49.94	538.550	10.13 #
26	538.600	0.000	538.930	32.62 #	539.850	115.8	538.580	45.16	538.930	43.86	538.600	10.32 #
27	538.560	0.000	539.310	73.46	539.640	89.92	538.550	44.50	538.890	35.72 #	538.620	10.40 #
28	538.840	0.000	539.050	49.94	539.350	65.47 *	538.520	46.01	538.810	30.08	538.600	10.47
29	539.110	0.000	539.010	38.07 #	539.290	59.75	538.560	42.85	538.750	27.27	538.800	11.24
30	538.990	0.000	538.850	27.57 #	539.090	41.64	538.610	42.92	538.550	15.61 *	538.830	11.15
31			538.600	14.38 *	538.970	35.29 *			538.550	17.44		
Ten-Daily Mean												
I Ten-Daily	538.515	0.000	539.757	114.1	539.669	148.7	539.516	88.01	538.744	50.26	538.593	16.54
II Ten-Daily	538.472	0.000	541.160	334.0	542.445	669.9	542.690	752.1	539.763	116.0	538.553	10.88
III Ten-Daily	538.681	0.000	539.002	41.89	539.644	98.87	538.880	55.54	539.293	87.26	538.638	10.47
Monthly												
Min.	538.410	0.000	538.560	0.000	538.530	11.41	538.520	30.69	538.520	15.61	538.550	9.894
Max.	539.110	0.000	542.010	489.4	545.490	1610	545.130	1462	540.830	286.8	538.830	22.52
Mean	538.556	0	539.942	159.4	540.555	299.1	540.362	298.5	539.267	84.58	538.595	12.63

Annual Runoff in MCM = 2264 Annual Runoff in mm = 817

Peak Observed Discharge = 1462 cumecs on 13-09-2022 Corres. Water Level :545.13 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :538.54 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 2022 - 2023

Station Name : Gokak Falls (Seasonal) (AKT00P9)

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	538.780	10.99	538.680	0.000	538.540	0.000	538.430	0.000	538.370	0.000	538.650	0.000
2	538.750	10.92	538.720	0.000	538.510	0.000	538.580	0.000	538.350	0.000	538.670	0.000
3	538.750	10.78	538.740	0.000	538.500	0.000	538.760	0.000	539.840	0.000	540.020	0.000
4	538.770	0.000	538.780	0.000	538.500	0.000	538.820	0.000	539.830	0.000	539.950	0.000
5	538.750	0.000	538.780	0.000	538.500	0.000	538.850	0.000	539.820	0.000	539.900	0.000
6	538.740	0.000	538.800	0.000	538.520	0.000	538.840	0.000	539.810	0.000	539.910	0.000
7	538.740	0.000	538.790	0.000	538.560	0.000	538.800	0.000	539.730	0.000	539.850	0.000
8	538.520	0.000	538.800	0.000	538.560	0.000	538.780	0.000	538.670	0.000	538.980	0.000
9	538.500	0.000	538.810	0.000	538.650	0.000	538.800	0.000	538.600	0.000	538.620	0.000
10	538.500	0.000	538.760	0.000	538.680	0.000	538.810	0.000	538.600	0.000	538.620	0.000
11	538.500	0.000	538.710	0.000	538.680	0.000	538.830	0.000	538.550	0.000	538.610	0.000
12	538.520	0.000	538.700	0.000	538.690	0.000	538.830	0.000	538.540	0.000	538.710	0.000
13	538.540	0.000	538.690	0.000	538.700	0.000	538.830	0.000	538.650	0.000	538.690	0.000
14	538.550	0.000	538.690	0.000	538.700	0.000	538.820	0.000	538.660	0.000	538.670	0.000
15	538.500	0.000	538.680	0.000	538.520	0.000	538.810	0.000	538.660	0.000	538.650	0.000
16	538.500	0.000	538.680	0.000	538.440	0.000	538.850	0.000	538.660	0.000	538.630	0.000
17	538.510	0.000	538.680	0.000	538.440	0.000	538.910	0.000	538.640	0.000	538.550	0.000
18	538.510	0.000	538.670	0.000	538.570	0.000	538.890	0.000	538.640	0.000	538.450	0.000
19	538.500	0.000	538.670	0.000	538.640	0.000	538.870	0.000	538.630	0.000	538.420	0.000
20	538.560	0.000	538.650	0.000	538.640	0.000	538.870	0.000	538.620	0.000	538.380	0.000
21	538.550	0.000	538.650	0.000	538.650	0.000	538.770	0.000	538.550	0.000	538.350	0.000
22	538.550	0.000	538.650	0.000	538.630	0.000	538.750	0.000	538.520	0.000	538.330	0.000
23	538.560	0.000	538.640	0.000	538.600	0.000	538.740	0.000	538.550	0.000	538.340	0.000
24	538.560	0.000	538.600	0.000	538.600	0.000	538.640	0.000	538.750	0.000	538.300	0.000
25	538.570	0.000	538.580	0.000	538.600	0.000	538.630	0.000	538.750	0.000	538.660	0.000
26	538.560	0.000	538.560	0.000	538.620	0.000	538.610	0.000	538.750	0.000	538.640	0.000
27	538.600	0.000	538.560	0.000	538.600	0.000	538.600	0.000	538.740	0.000	538.690	0.000
28	538.640	0.000	538.560	0.000	538.530	0.000	538.490	0.000	538.750	0.000	538.760	0.000
29	538.670	0.000	538.550	0.000			538.480	0.000	538.750	0.000	538.740	0.000
30	538.680	0.000	538.550	0.000			538.490	0.000	538.720	0.000	538.750	0.000
31	538.690	0.000	538.540	0.000			538.500	0.000			538.780	0.000
Ten-Daily Mean												
I Ten-Daily	538.680	3.269	538.766	0.000	538.552	0.000	538.747	0.000	539.162	0.000	539.317	0.000
II Ten-Daily	538.519	0.000	538.682	0.000	538.602	0.000	538.851	0.000	538.625	0.000	538.576	0.000
III Ten-Daily	538.603	0.000	538.585	0.000	538.604	0.000	538.609	0.000	538.683	0.000	538.576	0.000
Monthly												
Min.	538.500	0.000	538.540	0.000	538.440	0.000	538.430	0.000	538.350	0.000	538.300	0.000
Max.	538.780	10.99	538.810	0.000	538.700	0.000	538.910	0.000	539.840	0.000	540.020	0.000
Mean	538.601	1.054	538.675	0	538.585	0	538.732	0	538.823	0	538.815	0

Peak Computed Discharge = 1610 cumecs on 14-08-2022

Corres. Water Level :545.49 m

Lowest Computed Discharge = 10.17 cumecs on 20-11-2022

Corres. Water Level :538.56 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

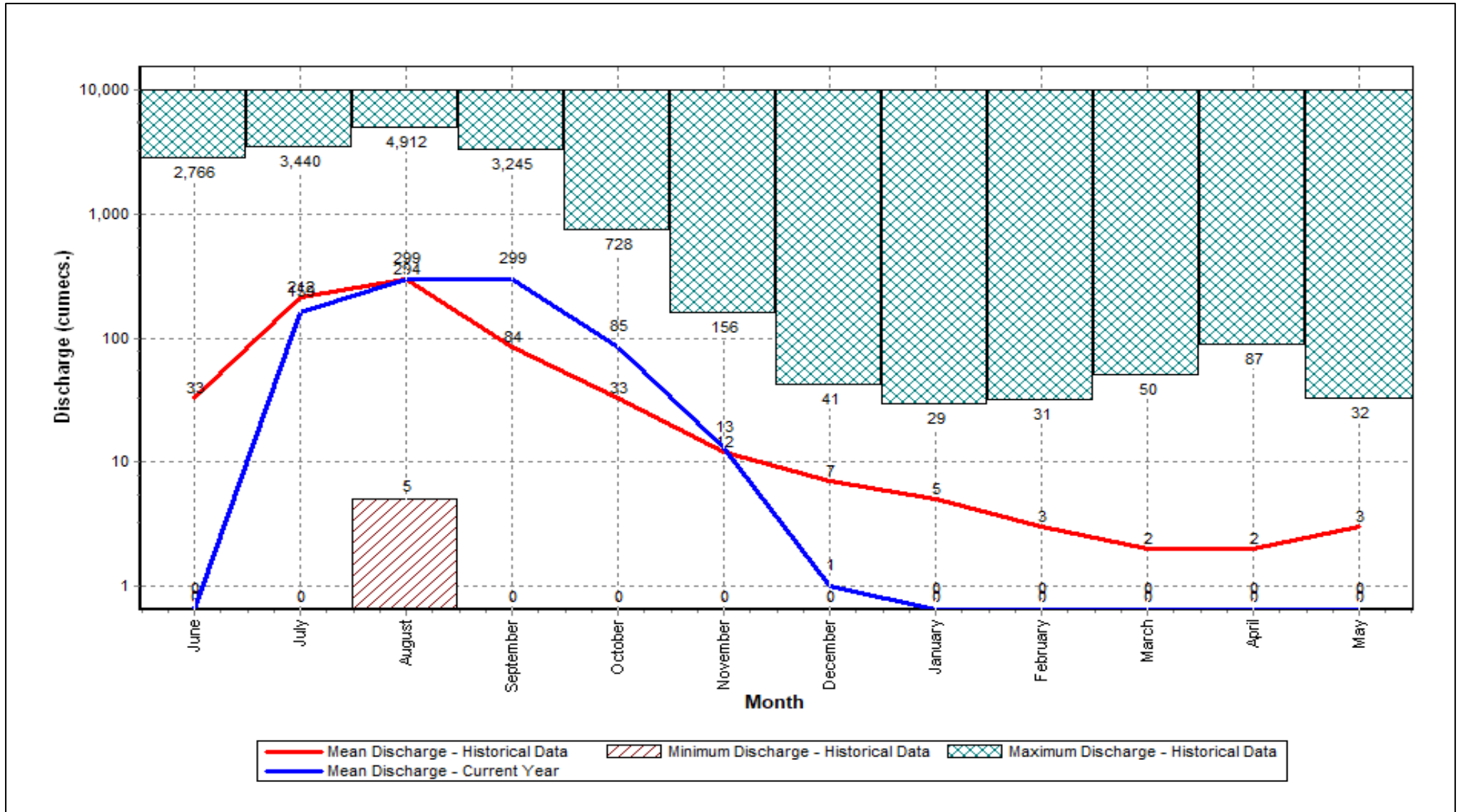
Station Name : Gokak Falls (Seasonal) (AKT00P9)

Data considered : 1972-2023

Division : Upper Krishna Divn, Pune

Local River : Ghataprabha

Sub-Division : Middle Krishna SD 1, Bagalkot



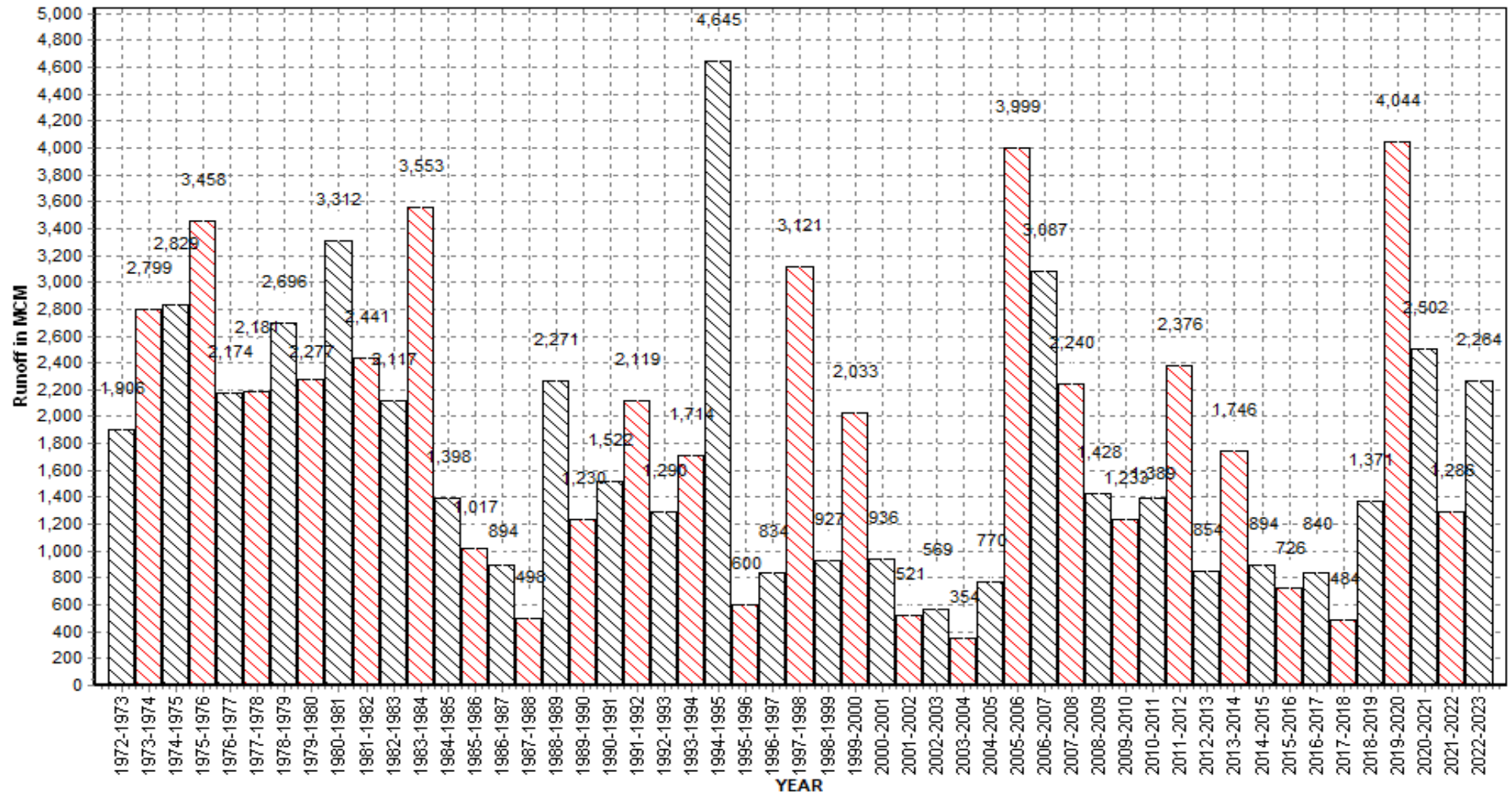
Annual Runoff Values for the period: 1972 - 2023

Station Name : Gokak Falls (Seasonal) (AKT00P9)

Local River : Ghataprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



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

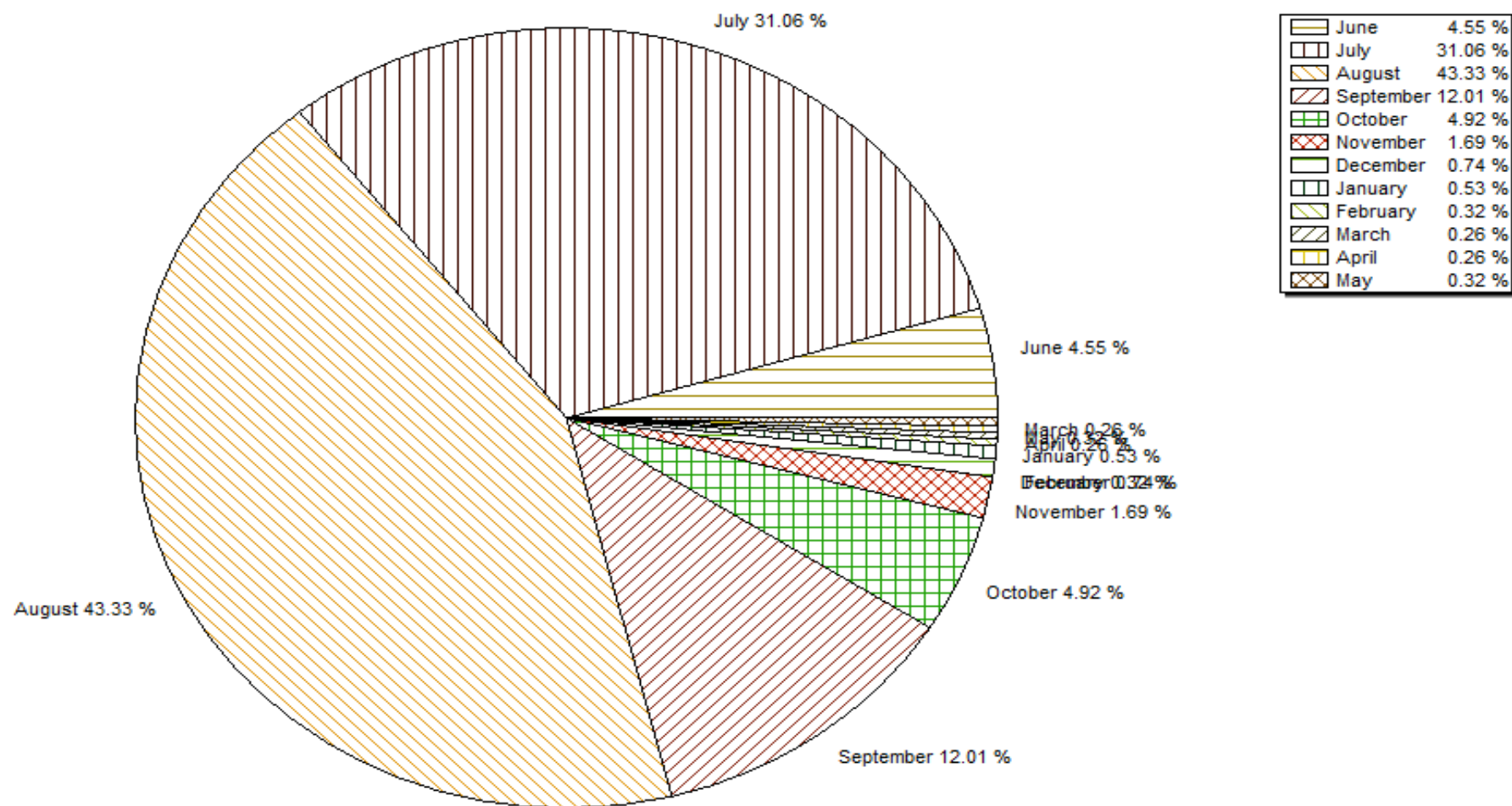
Monthly Average Runoff based on period : 1972-2022

Station Name : Gokak Falls (Seasonal) (AKT00P9)

Local River : Ghataprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



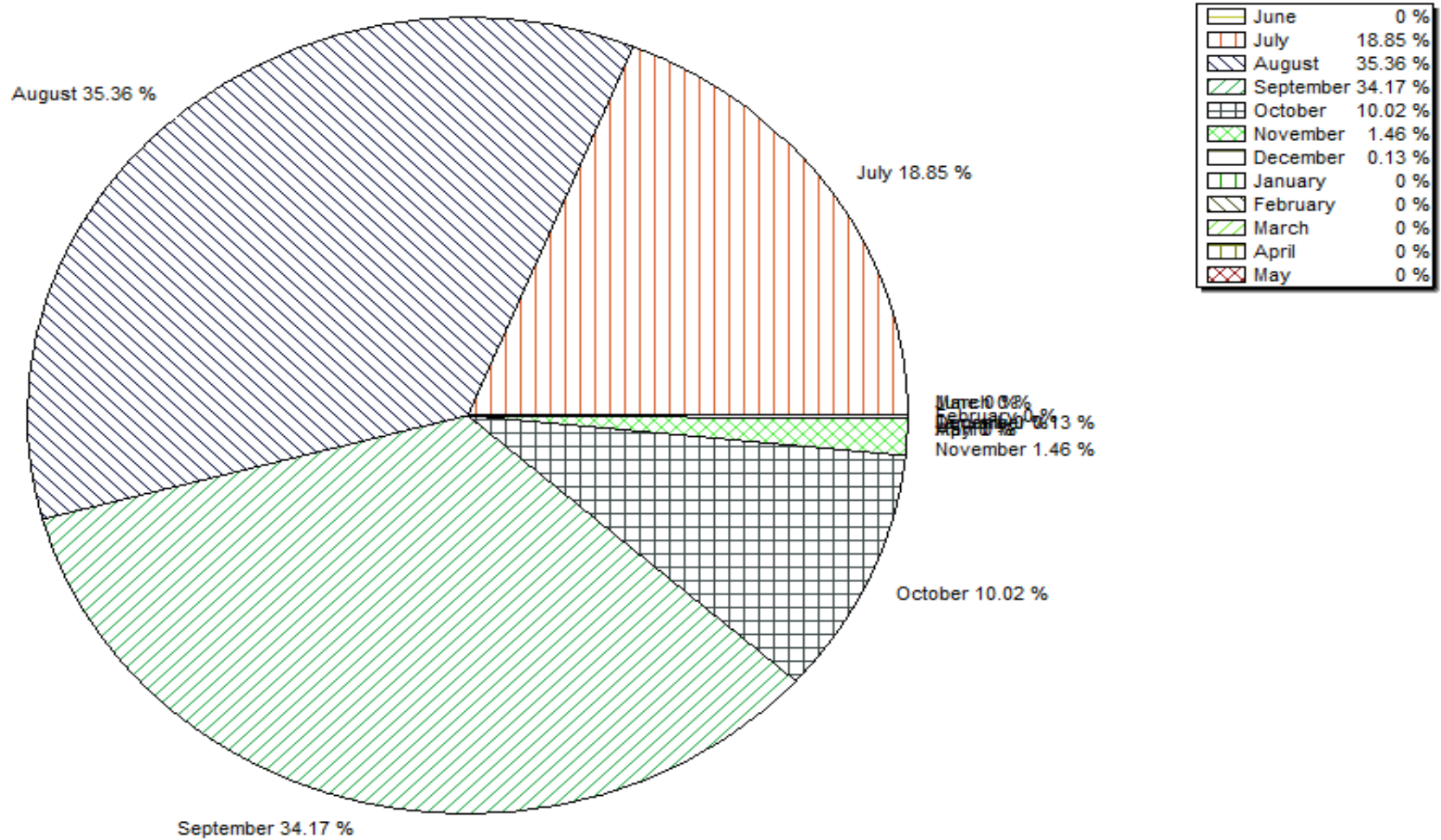
Monthly Runoff for the Year : 2022-2023

Station Name : Gokak Falls (Seasonal) (AKT00P9)

Local River : Ghataprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



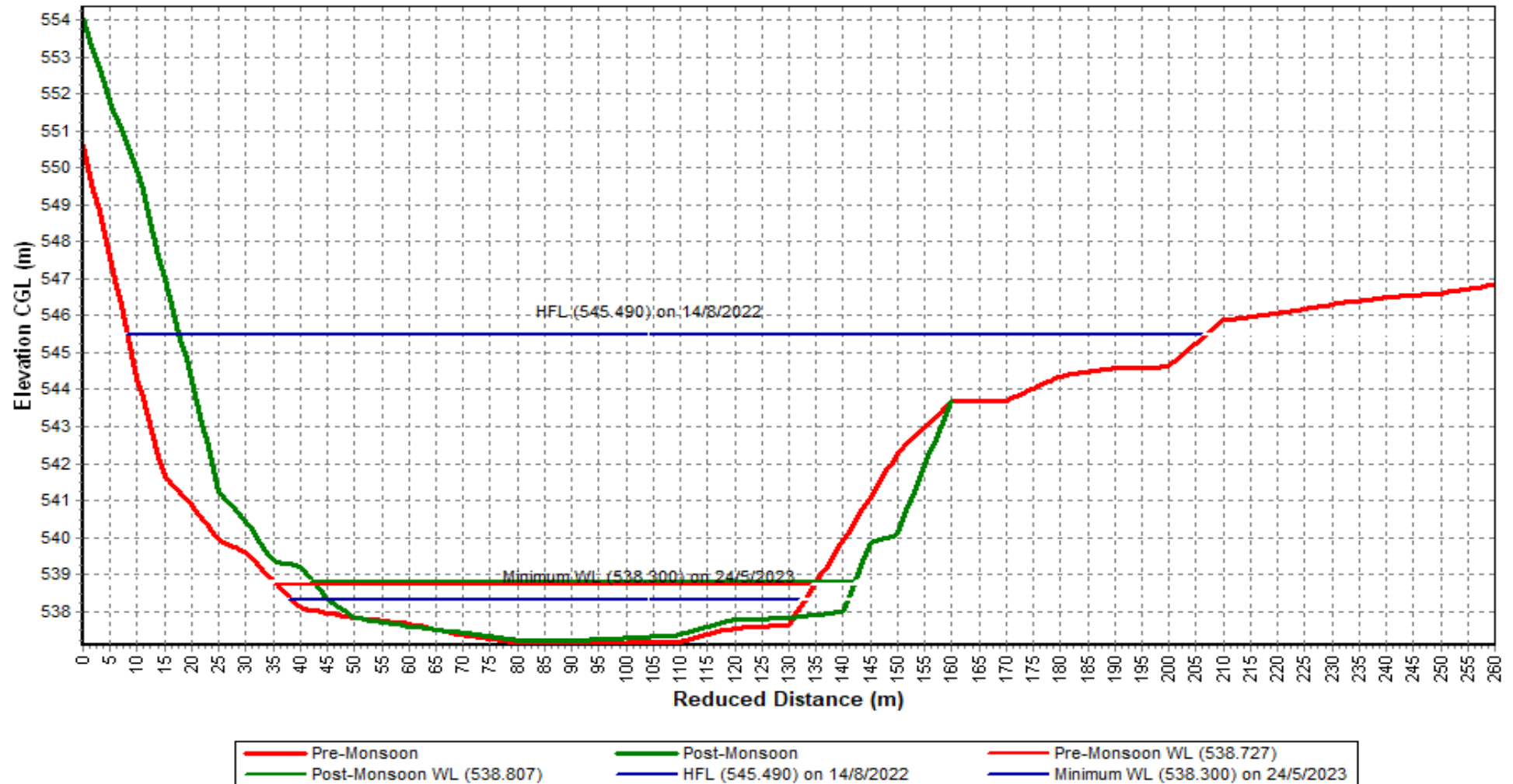
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Gokak Falls (Seasonal) (AKT00P9)

Local River : Ghataprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



Zero of the Gauge: 536 (m.s.l)

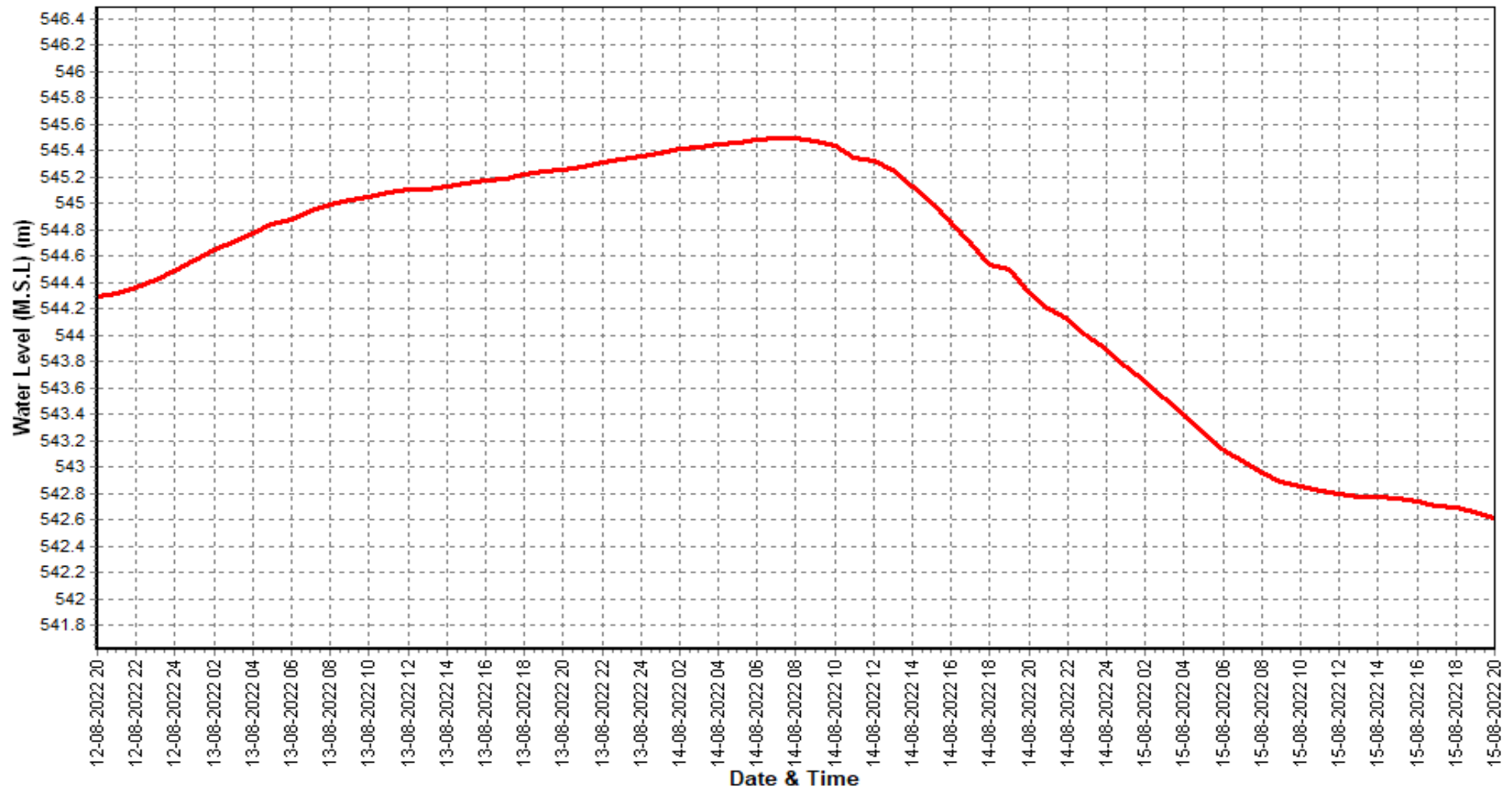
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Gokak Falls (Seasonal) (AKT00P9)

Local River : Ghataprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



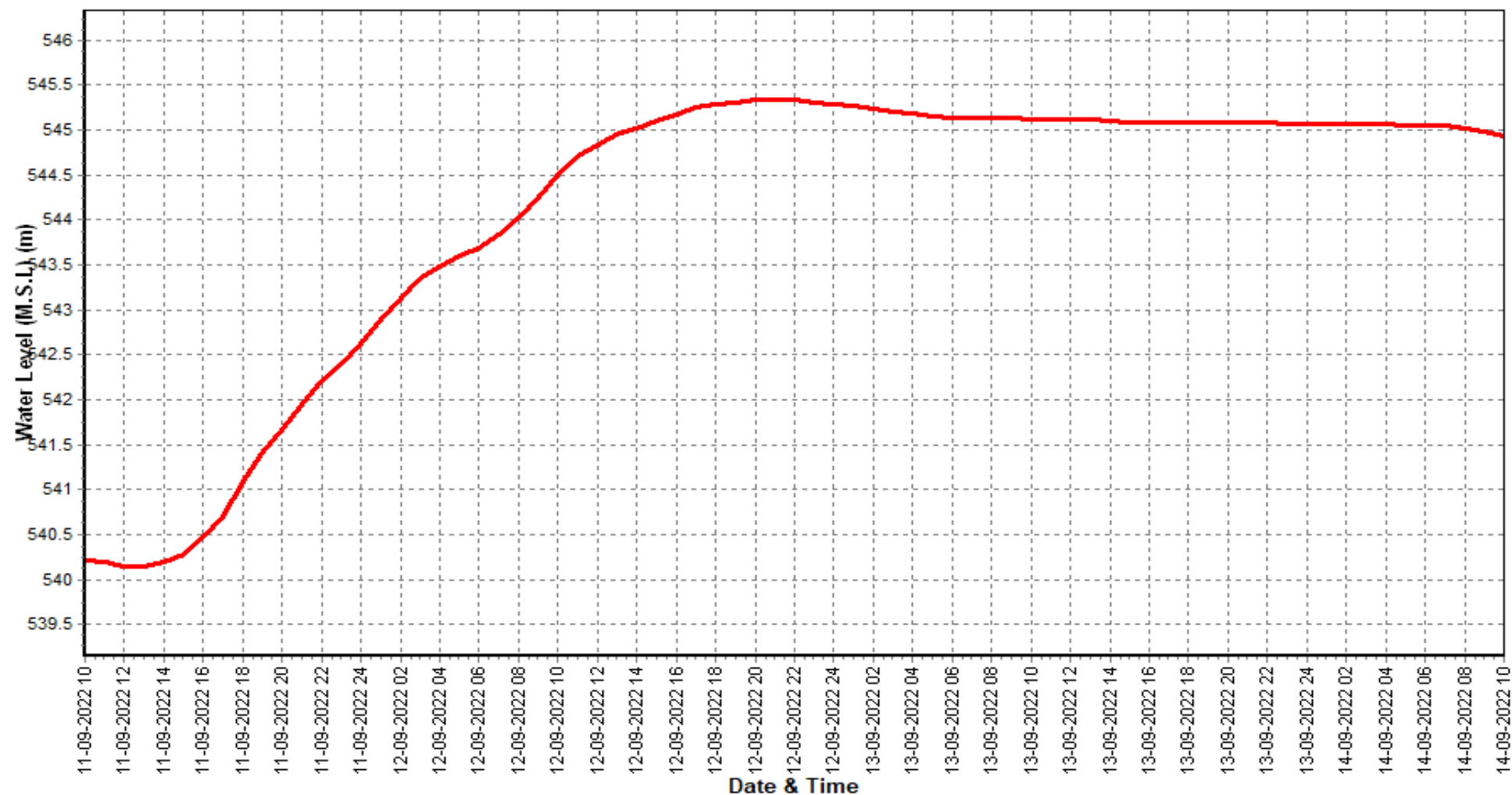
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Gokak Falls (Seasonal) (AKT00P9)

Local River : Ghataprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



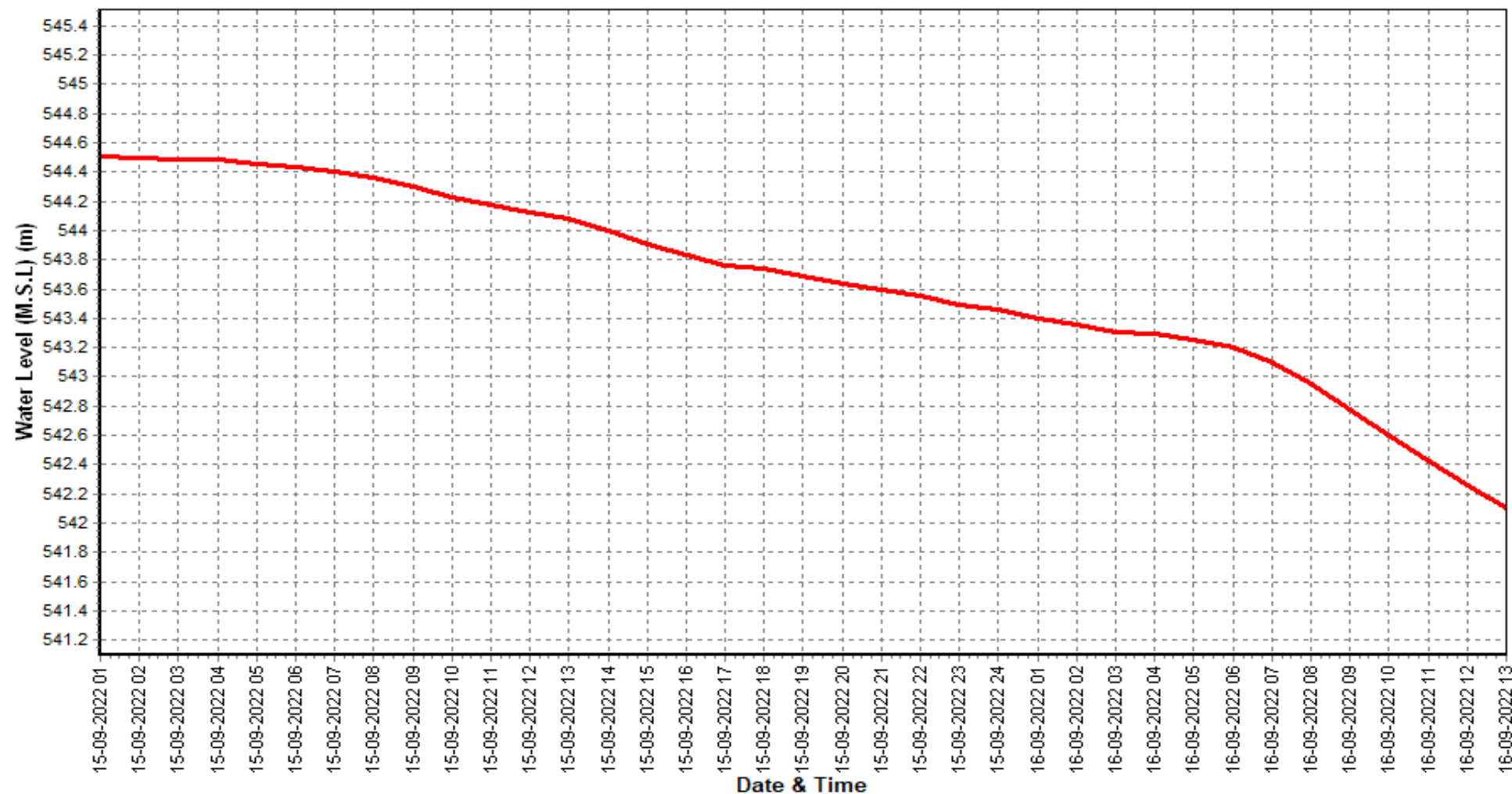
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Gokak Falls (Seasonal) (AKT00P9)

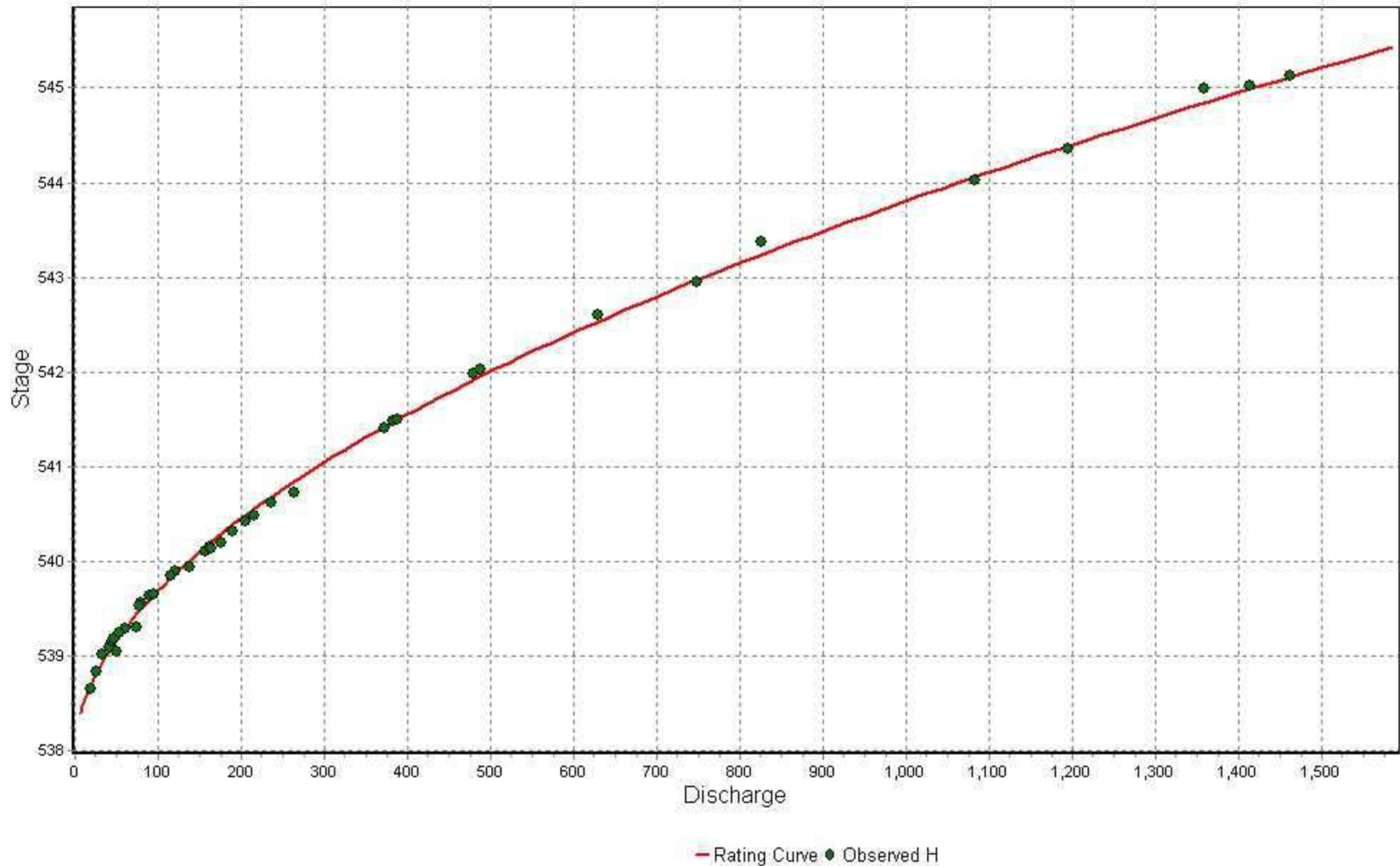
Local River : Ghataprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



S-D curve of site Gakak falls for the period from 26.07.2022 to 23.09.2022
Range:- 538.40 to 545.50, $a = -538.00(f)$, $b = 1.869$, $c = 37.36$, $OSE = 7.664$ (No. of data= 41)



HISTORY SHEET

Water Year : 2022-2023

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)

13-07-1998 - 31-05-2007

530 (m.s.l)

01-06-2007 - 27-11-2014

530 (m.s.l)

28-11-2014

Opening Date

Closing Date

Gauge : 13-07-2000

Discharge : 25-07-2000

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)

Year	Maximum			Minimum		
	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
2016-2017	275.9	535.830	01-06-2016	0.000		25-01-2017
2017-2018	275.5	535.365	23-07-2017	0.000	531.850	10-08-2017
2018-2019	509.2	538.100	20-08-2018	0.000	533.580	26-01-2019
2019-2020	1600	544.660	09-08-2019	0.000	530.580	03-01-2020
2020-2021	2402	541.320	20-08-2020	0.000	534.760	15-05-2021
2021-2022	1652	543.370	26-07-2021	0.000	530.220	20-01-2022

Annual Runoff of Krishna at Mudhol

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2000-2001	751	69	820	27	2	29
2	2001-2002	705	44	749	25	2	26
3	2002-2003	532	44	576	19	2	20
4	2003-2004	334	28	363	12	1	13
5	2004-2005	1048	0	1048	37	0	37
6	2005-2006	4082	52	4134	144	2	146
7	2006-2007	3299	38	3336	117	1	118
8	2007-2008	Gauge and Discharge observation suspended on 31/05/2007. Gauge observation restarted on 28-11-2014. Discharge restarted on 16-09-2015					
9	2008-2009						
10	2009-2010						
11	2010-2011						
12	2011-2012						
13	2012-2013						
14	2013-2014						
15	2014-2015						
16	2015-2016	49	0	49	2	0	2
17	2016-2017	342	0	342	12	0	12
18	2017-2018	387		387	14	0	14
19	2018-2019	1072	14	1086	38	1	38
20	2019-2020	3406	77	3484	120	3	123
21	2020-2021	2837	17	2854	100	1	101
22	2021-2022	1985	124	2109	70	4	75
23	2022-2023	2121	63	2184	75	2	77
Average		1488	39	1524	53	1	54

Instantaneous Flood Peak of Krishna at Mudhol					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2000-2001	537.480	16-07-2000	17:00:00	458 *
2	2001-2002	536.860	07-10-2001	14:00:00	414 *
3	2002-2003	536.770	15-08-2002	03:00:00	419 *
4	2003-2004	535.070	24-06-2003	05:00:00	350 *
5	2004-2005	538.410	08-08-2004	07:00:00	643 *
6	2005-2006	542.350	06-08-2005	00:00:00	1060 *
7	2006-2007	541.430	14-08-2006	15:00:00	900 *
8	2015-2016	538.23	23-09-2015	07:00:00	533 *
9	2016-2017	535.830	15-07-2016	09:00:00	480 *
10	2017-2018	535.390	23-07-2017	09:00:00	405 *
11	2018-2019	538.250	20-08-2018	18:00:00	550 *
12	2019-2020	544.66	09-08-2019	12:00:00	1600 *
13	2020-2021	541.38	20-08-2020	13:00:00	900 *
14	2021-2022	543.370	26-07-2021	07:00:00	1271 *
15	2022-2023	540.200	16-09-2022	02:00:00	854 *

Stage-Discharge Data for the period 2022 - 2023

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	534.730	0.000	530.810	5.945 #		532.660	76.17	532.400	65.46	532.450	75.42	531.570	42.60
2	534.570	0.000	530.730	4.564 #		532.040	47.47	534.100	166.1	532.670	82.77 *	531.480	33.38
3	534.590	0.000	531.680	31.44 *		531.810	37.55	535.190	248.5	532.790	110.0	531.450	35.80
4	534.010	0.000	532.100	50.54		531.880	41.05	534.770	226.4 *	532.780	113.8	531.380	24.23
5	534.090	0.000	532.170	54.19		531.790	37.21	533.670	138.3	532.540	75.94 *	531.320	24.99
6	533.960	0.000	532.650	76.17		531.760	36.69	532.750	81.47	532.450	73.50	531.240	22.30 *
7	532.900	0.000	532.540	69.84		532.260	62.10 *	534.700	208.5	534.630	257.5	531.170	20.83
8	532.710	0.000	532.920	88.60		533.650	135.2	533.930	156.3	533.820	157.0	531.100	16.78 *
9	532.340	0.000	532.800	82.03		535.370	278.3 *	534.320	190.5 *	533.280	118.1 *	531.080	17.25
10	532.300	0.000	533.220	114.4 *		536.580	382.6	535.080	237.8	532.680	99.83	531.050	16.17
11	532.220	0.000	534.020	160.8		537.150	460.7	534.560	209.3 *	533.150	121.0	530.870	6.785
12	532.190	0.000	534.020	160.8		537.460	504.5	534.980	228.2	534.950	237.5	530.720	6.314
13	530.680	3.789 #	534.240	174.6		538.010	586.8	538.260	590.0 #	535.750	309.0	530.640	4.642 *
14	530.760	5.062 #	534.400	186.5		538.790	657.8 *	539.380	736.9 #	534.450	210.1	530.620	4.941
15	530.360	0.501	534.870	222.4		539.480	750.7 *	540.100	838.7 *	534.500	240.2	531.040	14.69 #
16	530.280	0.131 #	535.230	250.6		539.640	773.1 *	540.200	853.3 *	535.760	314.4 *	531.050	0.000
17	530.200	0.000	535.600	299.4 *		538.940	677.6 #	539.810	797.1 *	534.450	215.3	530.900	0.000
18	530.100	0.000	536.010	326.0		536.710	397.2	538.490	619.0 *	533.980	202.1	530.710	0.000
19	530.180	0.000	536.020	326.2		534.700	211.8	536.920	433.1 #	534.050	234.2	530.680	0.000
20	530.220	0.000	534.630	202.2		534.040	160.8	535.040	272.3	534.290	211.6	531.000	0.000
21	530.300	0.158	533.610	133.4		533.820	153.9 *	533.780	161.0	534.480	212.2	532.200	7.914 #
22	530.290	0.155	533.090	100.3		533.690	142.1	533.160	126.6	534.800	243.2	532.470	21.30
23	530.240	0.000	532.220	56.14		533.440	124.3	532.740	100.9	534.560	209.3 *	532.560	26.07
24	530.240	0.000	531.900	46.10 *		533.200	109.6	532.430	74.85	533.820	153.9 *	532.570	26.38
25	530.250	0.000	531.690	34.27		533.110	101.3	532.190	58.83 *	533.160	125.9	532.510	20.24
26	530.230	0.000	531.650	32.26		533.080	100.1	531.980	49.47 #	532.450	322.1	532.520	20.87
27	530.250	0.000	531.890	41.22		532.810	82.03	531.910	50.99	532.280	63.25	532.600	28.97 *
28	530.490	1.876	532.090	50.41		532.540	75.94 *	531.910	52.16	532.120	55.53	532.640	34.40
29	530.400	0.816	532.100	50.93		532.480	69.21	531.760	44.80	531.900	46.76	532.640	32.84
30	531.200	15.05 #	531.900	41.57		532.500	69.80	531.875	48.86	531.720	38.88 *	532.650	33.68
31			532.060	52.95 *		532.320	64.96 *			531.600	42.87		
Ten-Daily Mean													
I Ten-Daily	533.620	0.000	532.162	57.77		532.980	113.4	534.091	171.9	533.009	116.4	531.284	25.43
II Ten-Daily	530.719	0.948	534.904	231.0		537.492	518.1	537.774	557.8	534.533	229.5	530.823	3.737
III Ten-Daily	530.389	1.805	532.200	58.14		532.999	99.40	532.373	76.84	532.990	137.6	532.536	25.27
Monthly													
Min.	530.100	0.000	530.730	4.564		531.760	36.69	531.760	44.80	531.600	38.88	530.620	0.000
Max.	534.730	15.05	536.020	326.2		539.640	773.1	540.200	853.3	535.760	322.1	532.650	42.60
Mean	531.576	0.918	533.060	113.8		534.442	239	534.746	268.9	533.494	160.4	531.548	18.14

Annual Runoff in MCM = 2184 Annual Runoff in mm = 324

Peak Observed Discharge = 736.9 cumecs on 14-09-2022 Corres. Water Level :539.38 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :534.73 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 2022 - 2023

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	532.660	35.53	532.380	16.26 *	534.600	17.11 #	532.780	0.000	532.700	0.000	530.190	0.000
2	532.630	33.52	532.430	18.65	534.650	17.65 #	532.640	0.000	532.350	0.000	530.190	0.000
3	532.640	34.64	532.420	18.63	534.710	20.74	532.480	0.000	532.180	0.000	530.000	0.000
4	532.600	28.97 *	532.420	19.56	534.710	20.85	532.310	0.000	531.960	0.000	530.000	0.000
5	532.630	27.35	532.430	19.29	534.760	18.88 *	532.160	0.000	535.200	0.000	534.380	0.000
6	532.490	17.89	532.450	19.49	534.740	19.62	532.020	0.000	535.300	0.000	535.350	0.000
7	532.280	11.33	532.450	19.53	534.740	19.34	531.880	0.000	535.230	0.000	535.280	0.000
8	532.115	4.339	532.500	7.222 *	534.720	18.89	531.750	0.000	534.990	0.000	534.930	0.000
9	532.110	4.788	532.480	6.974 #	535.230	24.60 #	531.540	0.000	534.450	0.000	534.140	0.000
10	532.120	4.703	532.830	11.82 #	534.870	15.14	531.340	0.000	534.120	0.000	533.720	0.000
11	532.100	4.252 *	532.750	11.08	534.270	12.74	531.200	0.000	533.830	0.000	533.520	0.000
12	532.080	3.814	532.730	10.39	535.170	23.83 *	531.060	0.000	533.580	0.000	533.450	0.000
13	532.080	4.053	532.730	10.42	535.120	23.19 #	530.940	0.000	533.310	0.000	533.150	0.000
14	532.080	3.258	532.700	9.314	534.750	0.000	530.840	0.000	533.090	0.000	532.940	0.000
15	532.030	2.205	532.350	5.453 *	534.710	0.000	532.800	0.000	532.880	0.000	532.780	0.000
16	532.000	1.470 #	532.110	3.083	534.580	0.000	534.610	0.000	532.650	0.000	532.620	0.000
17	531.930	0.000	531.910	0.000	534.440	0.000	535.270	0.000	532.430	0.000	532.470	0.000
18	531.900	0.000	531.780	0.000	534.370	0.000	535.220	0.000	532.220	0.000	532.280	0.000
19	531.900	0.000	531.730	0.000	534.200	0.000	535.200	0.000	532.000	0.000	532.000	0.000
20	531.860	0.000	531.690	0.000	534.050	0.000	534.700	0.000	531.810	0.000	531.760	0.000
21	531.780	0.000	531.730	0.000	533.900	0.000	534.930	0.000	531.620	0.000	531.500	0.000
22	531.990	0.000	531.580	0.000	533.760	0.000	534.850	0.000	531.370	0.000	531.250	0.000
23	532.110	4.559	531.500	0.000	533.640	0.000	534.800	0.000	531.100	0.000	531.050	0.000
24	532.080	3.619 #	531.420	0.000	533.520	0.000	534.710	0.000	530.960	0.000	530.900	0.000
25	531.970	0.000	531.260	0.000	533.400	0.000	534.520	0.000	530.700	0.000	530.750	0.000
26	531.860	0.000	531.160	0.000	533.260	0.000	534.380	0.000	530.590	0.000	530.600	0.000
27	531.780	0.000	531.080	0.000	533.060	0.000	534.110	0.000	530.320	0.000	530.500	0.000
28	531.730	0.000	531.030	0.000	532.920	0.000	533.800	0.000	530.250	0.000	530.250	0.000
29	531.700	0.000	530.900	0.000			533.500	0.000	530.220	0.000	530.120	0.000
30	532.330	13.74 #	530.870	0.000			533.220	0.000	530.200	0.000	530.080	0.000
31	532.350	18.97	533.270	5.908			532.910	0.000			530.080	0.000
Ten-Daily Mean												
I Ten-Daily	532.427	20.31	532.479	15.74	534.773	19.28	532.090	0.000	533.848	0.000	532.818	0.000
II Ten-Daily	531.996	1.905	532.248	4.975	534.566	5.976	533.184	0.000	532.780	0.000	532.697	0.000
III Ten-Daily	531.971	3.717	531.436	0.537	533.433	0.000	534.157	0.000	530.733	0.000	530.644	0.000
Monthly												
Min.	531.700	0.000	530.870	0.000	532.920	0.000	530.840	0.000	530.200	0.000	530.000	0.000
Max.	532.660	35.53	533.270	19.56	535.230	24.60	535.270	0.000	535.300	0.000	535.350	0.000
Mean	532.126	8.484	532.034	6.873	534.316	9.02	533.176	0	532.454	0	532.007	0

Peak Computed Discharge = 853.3 cumecs on 16-09-2022

Corres. Water Level :540.2 m

Lowest Computed Discharge = 4.252 cumecs on 11-12-2022

Corres. Water Level :532.1 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

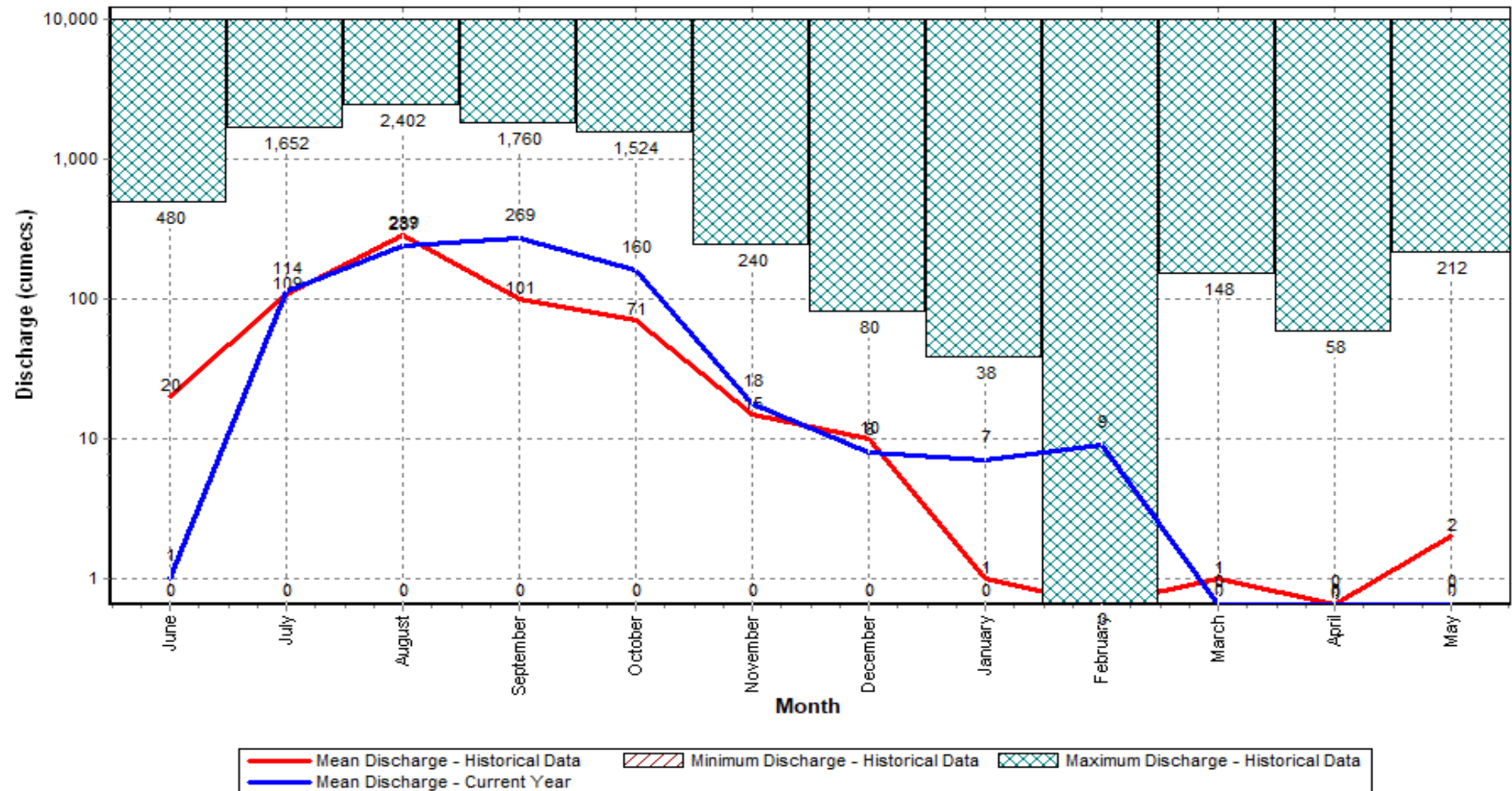
Station Name : Mudhol (MUDHOL)

Data considered : 2001-2023

Division : Upper Krishna Divn, Pune

Local River : Ghataprabha

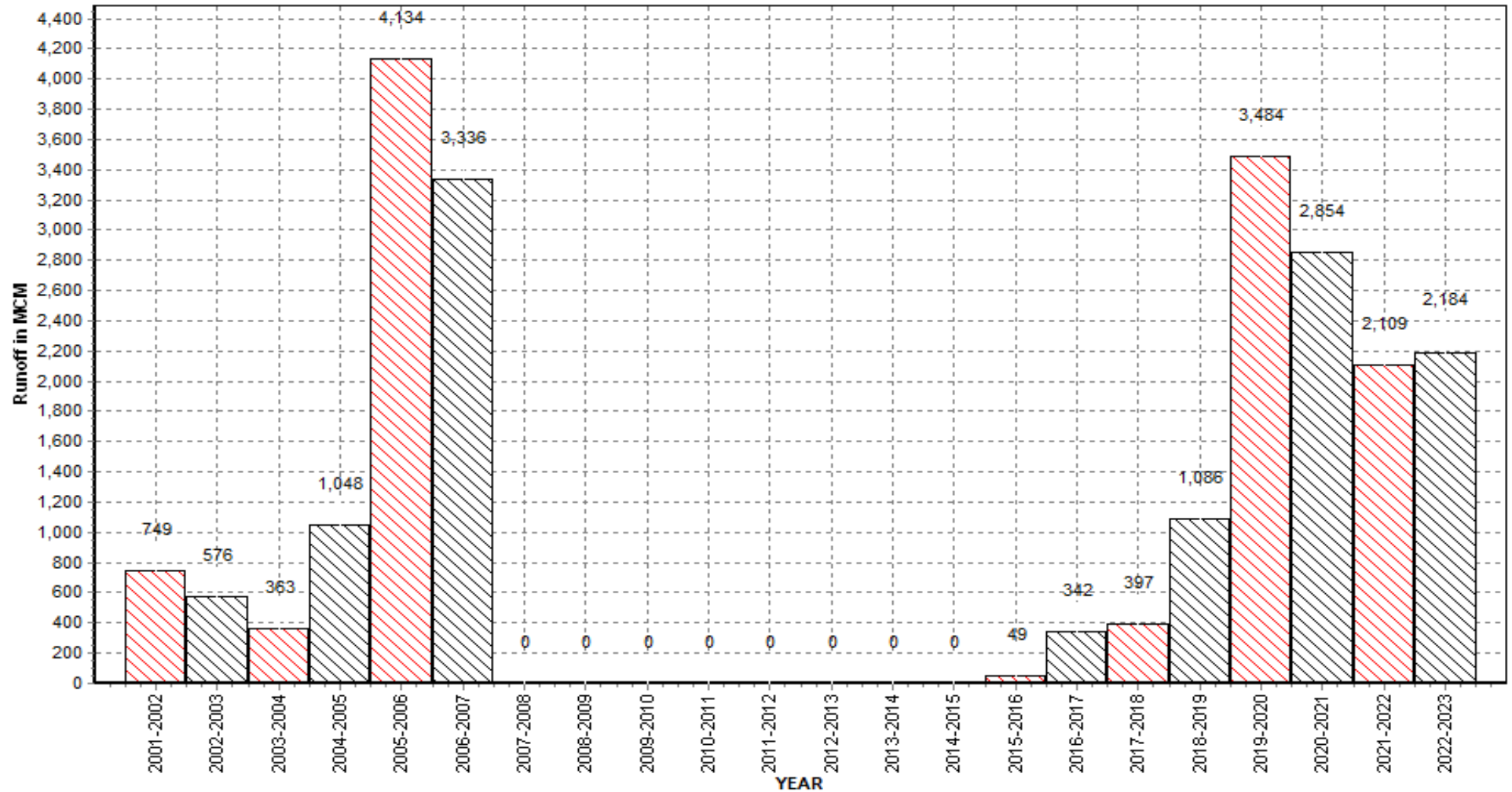
Sub-Division : Middle Krishna SD 1, Bagalkot



Annual Runoff Values for the period: 2001 - 2023

Station Name : Mudhol (MUDHOL)
Local River : Ghataprabha

Division : Upper Krishna Divn, Pune
Sub-Division : Middle Krishna SD 1, Bagalkot



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

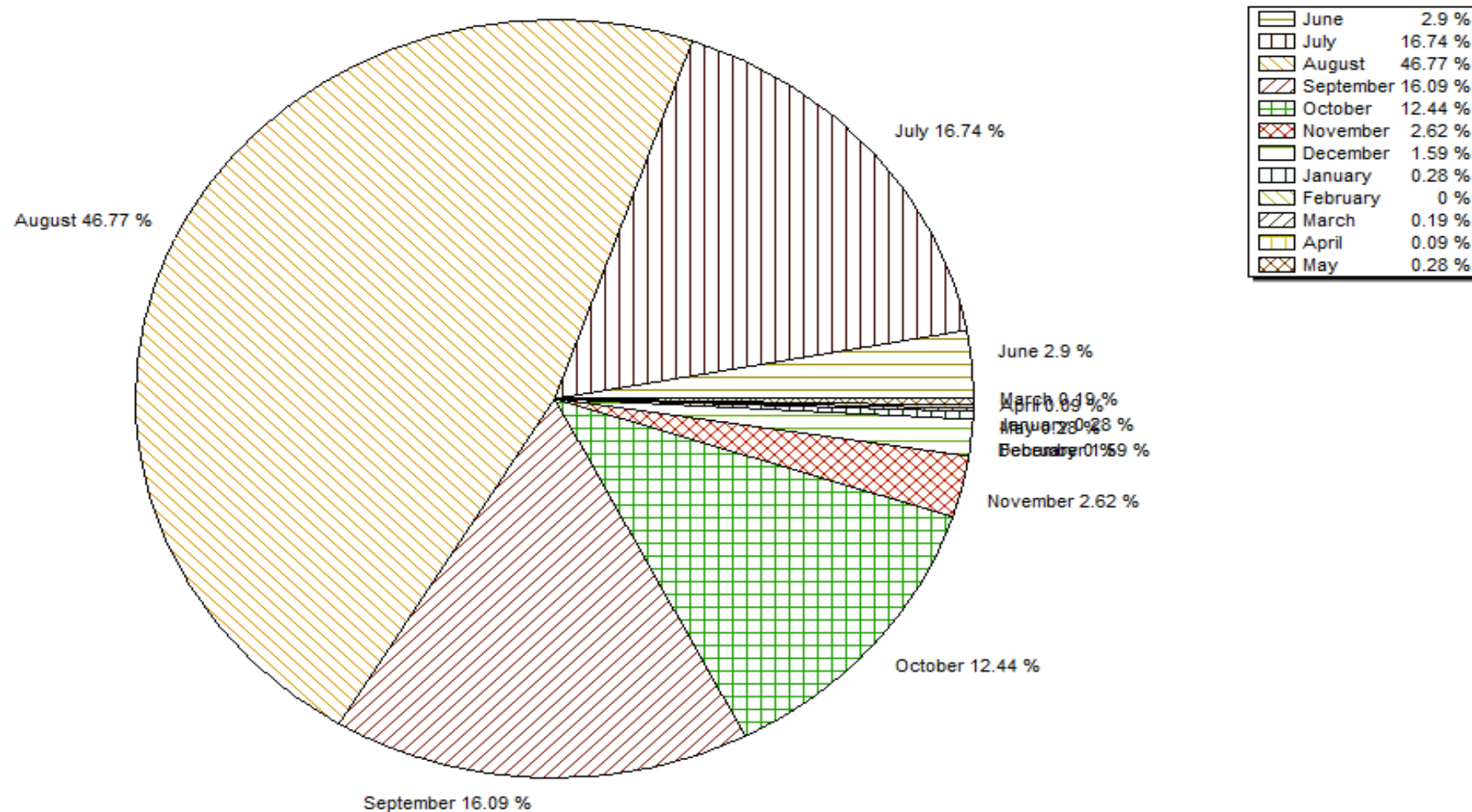
Monthly Average Runoff based on period : 2001-2022

Station Name : Mudhol (MUDHOL)

Local River : Ghataprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



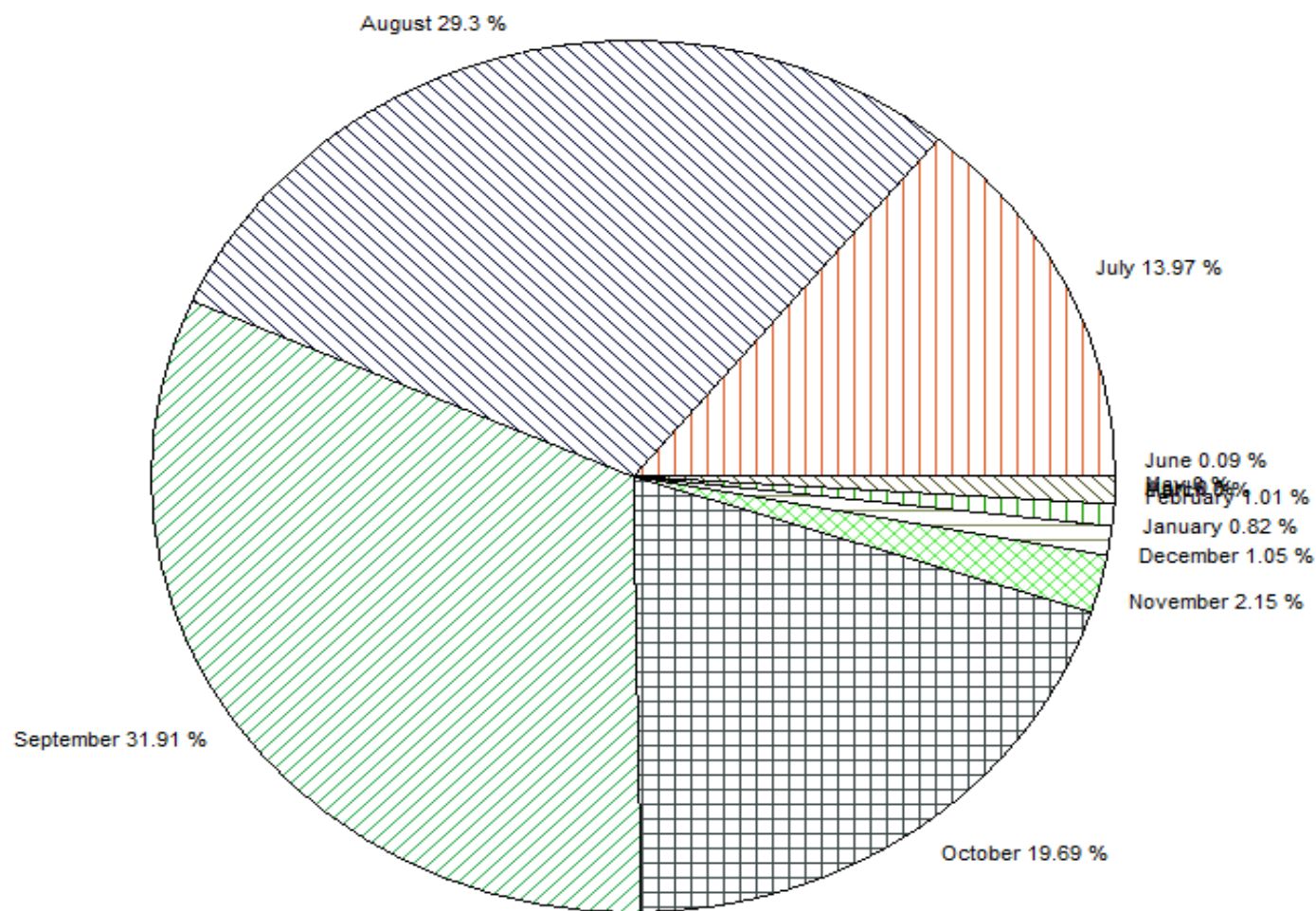
Monthly Runoff for the Year : 2022-2023

Station Name : Mudhol (MUDHOL)

Local River : Ghataprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



June	0.09 %
July	13.97 %
August	29.3 %
September	31.91 %
October	19.69 %
November	2.15 %
December	1.05 %
January	0.82 %
February	1.01 %
March	0 %
April	0 %
May	0 %

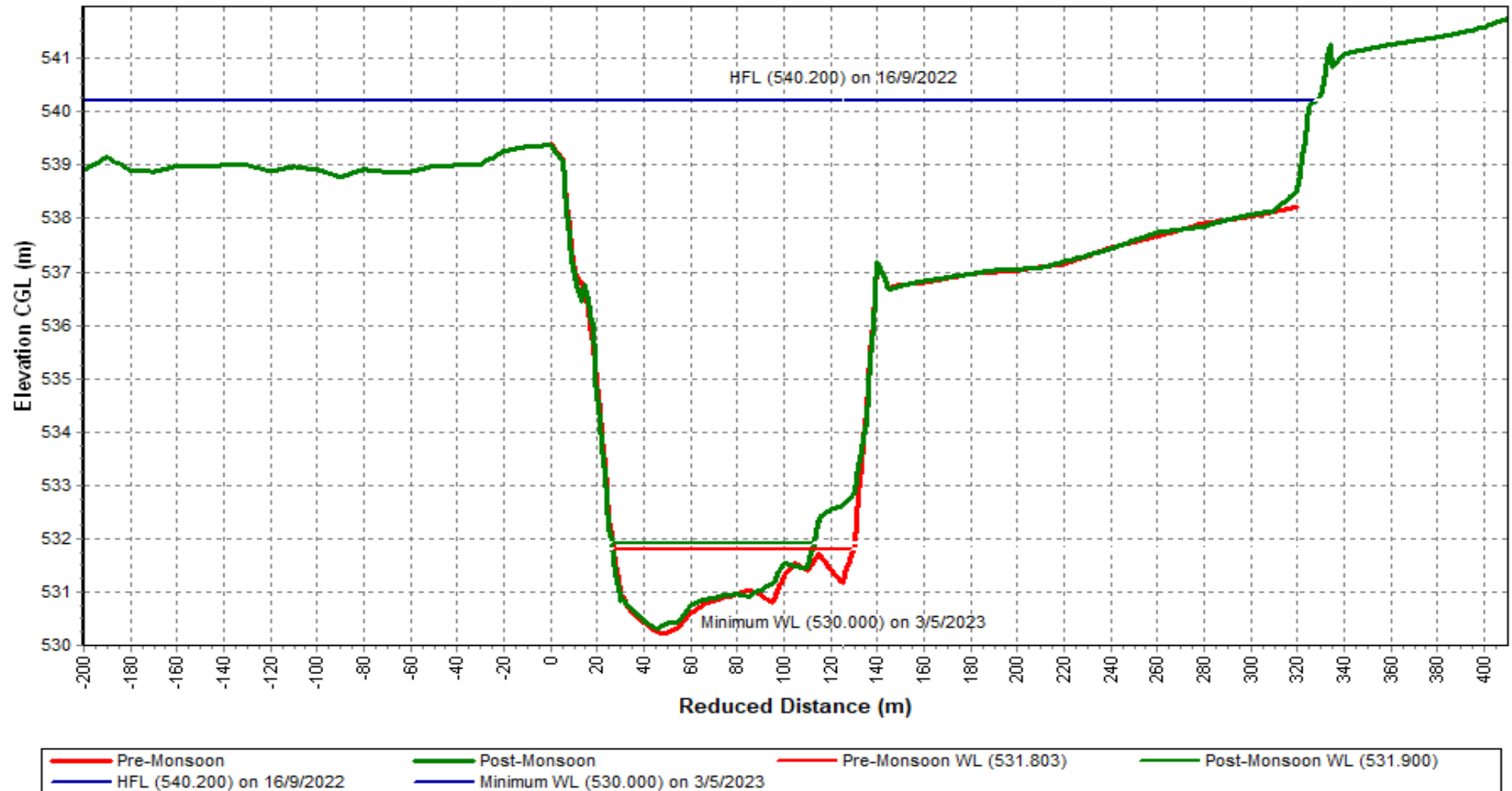
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Mudhol (MUDHOL)

Local River : Ghataprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



Zero of the Gauge: 530 (m.s.l)

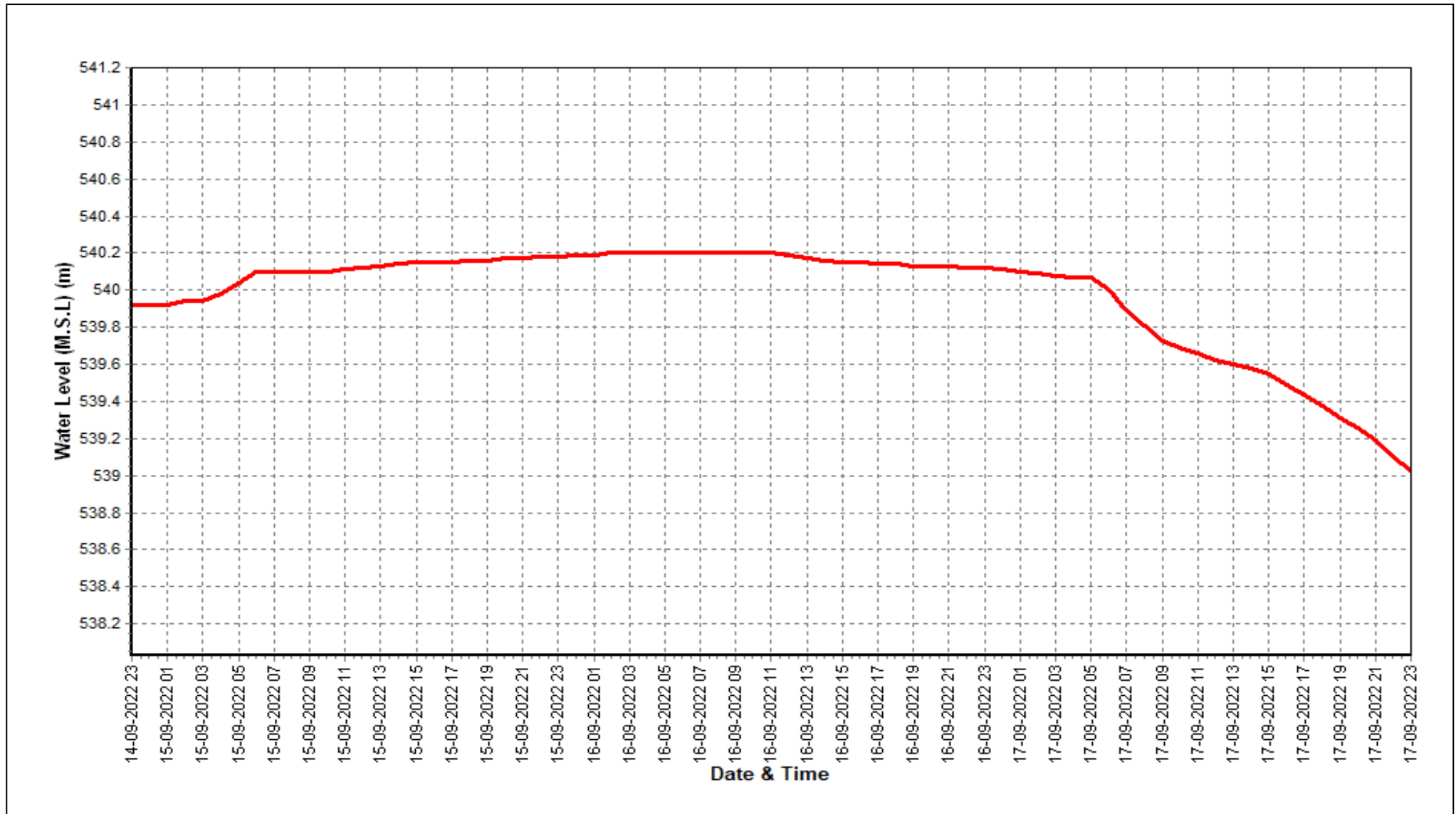
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Mudhol (MUDHOL)

Local River : Ghataprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



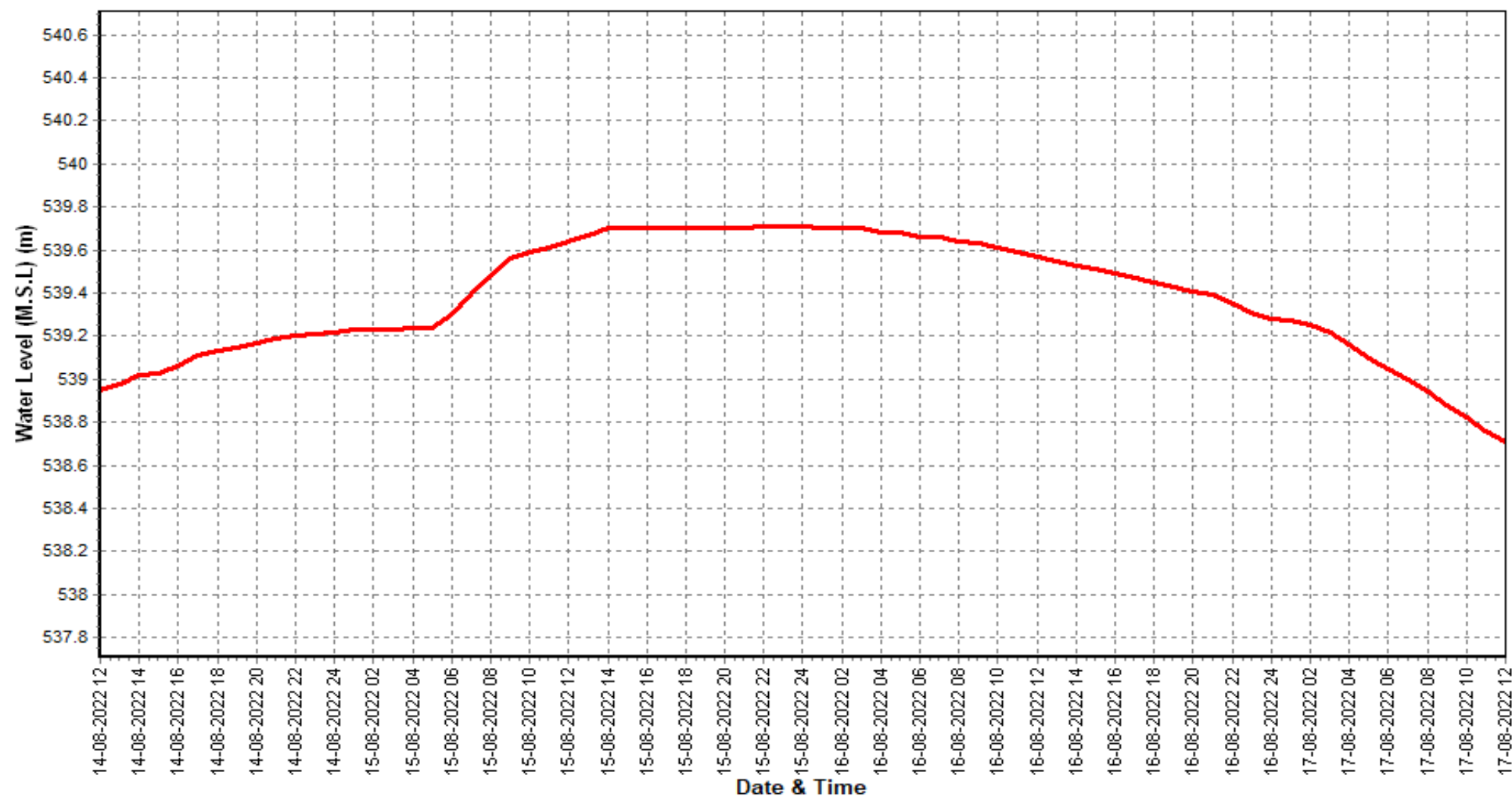
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Mudhol (MUDHOL)

Local River : Ghataprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



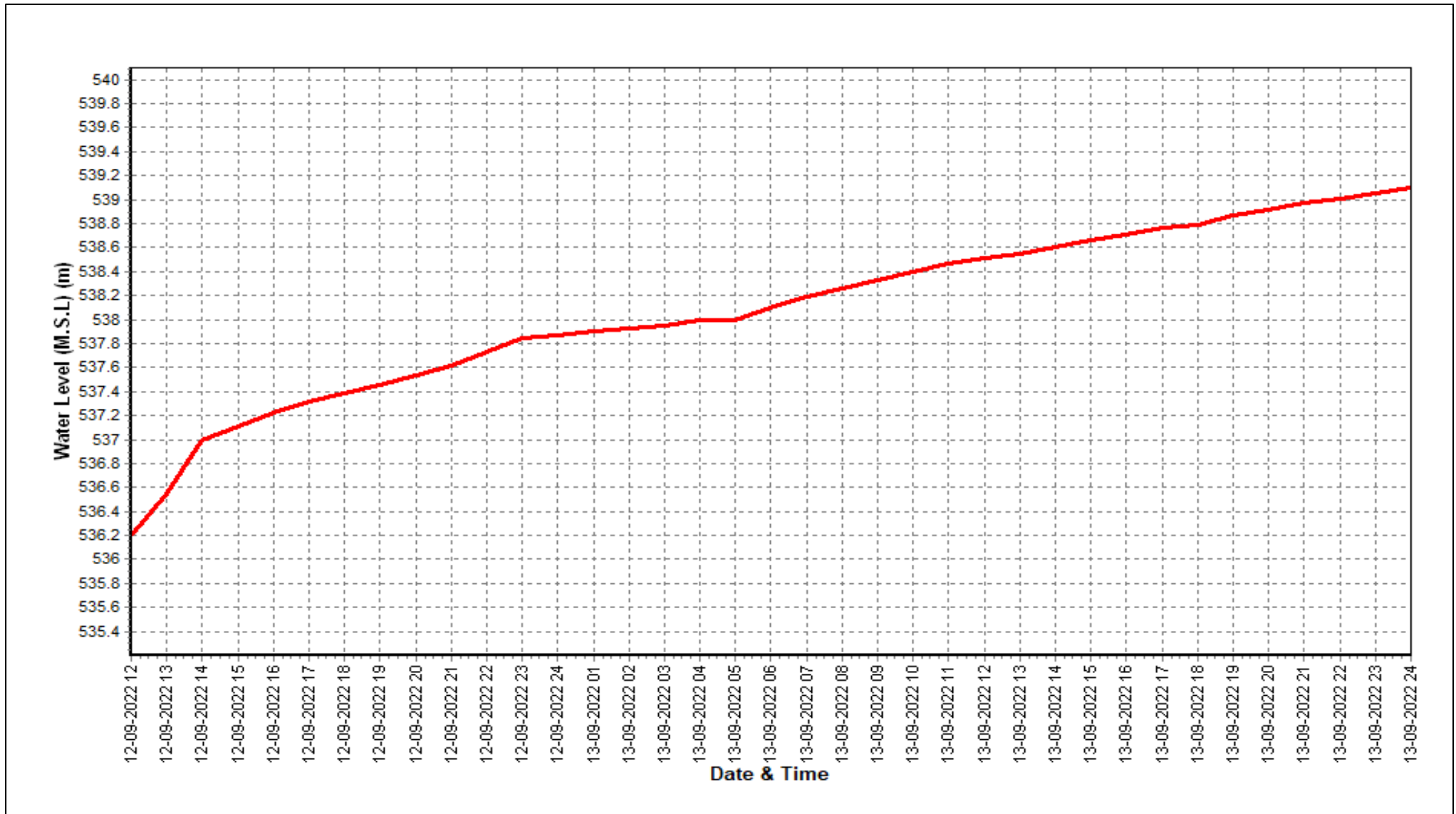
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Mudhol (MUDHOL)

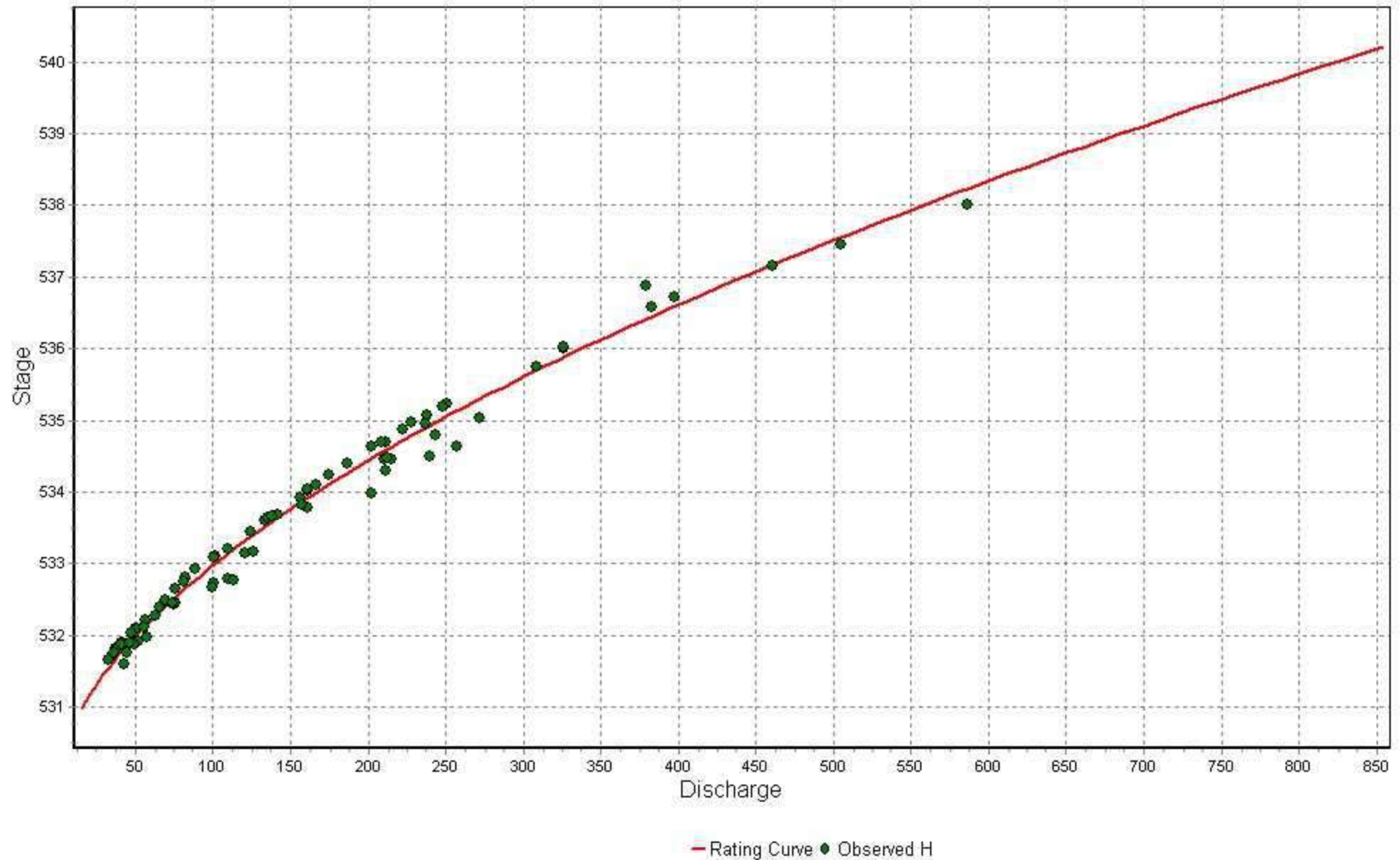
Local River : Ghataprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



S-D curve of site Mudhol for the period from 08.07.2022 to 31.10.2022
Range:- 530.99 to 540.30, $a = -529.95(f)$, $b = 1.759$, $c = 14.24$, $OSE = 9.723$ (No. of data= 84)



HISTORY SHEET

Water Year : 2022-2023

Site : Chalachguda (Seasonal)

Code : AKS00H1

State : Karnataka

District : Vijayapuri

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)
522 (m.s.l)01-06-1982 - 31-05-2010
01-06-2010

Opening Date

Closing Date

Gauge : 01-06-1982

Discharge : 01-06-1982

Sediment : 01-06-1982

Water Quality : 01-06-1982

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	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	523.610	04-08-2011
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
2016-2017	77.52	527.950	20-06-2016	0.000	523.120	30-10-2016
2017-2018	753.4	529.130	16-10-2017	0.000		02-08-2017
2018-2019	271.8	528.570	04-06-2018	0.000	525.320	08-10-2018
2019-2020	2724	536.200	10-08-2019	0.000	523.200	04-07-2019
2020-2021	1077	532.920	19-08-2020	0.000	523.500	18-07-2020
2021-2022	1142	531.400	26-07-2021	0.000	526.400	10-05-2022

Annual Runoff of Malaprabha at Cholahguda

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1982-1983	1297	199	1496	46	7	53
2	1983-1984	1042	220	1262	37	8	45
3	1984-1985	516	197	713	18	7	25
4	1985-1986	245	88	333	9	3	12
5	1986-1987	679	51	730	24	2	26
6	1987-1988	628	48	676	22	2	24
7	1988-1989	710	175	885	25	6	31
8	1989-1990	599	64	663	21	2	23
9	1990-1991	241	63	304	9	2	11
10	1991-1992	1387	211	1598	49	7	56
11	1992-1993	861	195	1056	30	7	37
12	1993-1994	848	157	1005	30	6	36
13	1994-1995	1045	268	1313	37	9	46
14	1995-1996	745	124	868	26	4	31
15	1996-1997	1072	221	1293	38	8	46
16	1997-1998	734	252	986	26	9	35
17	1998-1999	904	163	1067	32	6	38
18	1999-2000	642	250	893	23	9	32
19	2000-2001	837	170	1006	30	6	36
20	2001-2002	427	63	490	15	2	17
21	2002-2003	318	47	365	11	2	13
22	2003-2004	200	105	305	7	4	11
23	2004-2005	561	84	645	20	3	23
24	2005-2006	789	233	1022	28	8	36
25	2006-2007	784	Site Converted as seasonal Site from June 2006	784	28	Site Converted as seasonal Site from June 2006	28
26	2007-2008	1596		1596	56		56
27	2008-2009	352		352	12		12
28	2009-2010	1347		1347	48		48
29	2010-2011	533		533	19		19
30	2011-2012	392		392	14		14
31	2012-2013	64		64	2		2
32	2013-2014	287		287	10		10
33	2014-2015	305		305	11		11
34	2015-2016	266		266	9		9
35	2016-2017	55		55	2		2
36	2017-2018	696		696	25		25
37	2018-2019	150		150	5		5
38	2019-2020	2275	205	2480	80	7	88
38	2020-2021	1362	791	2153	48	28	76
39	2021-2022	1190	301	1491	42	11	53
40	2022-2023	2155	267	2422	76	9	86
Average		759	179	886	27	6	31

Instantaneous Flood Peak of Malaprabha at Chalachguda					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1982-1983	530.580	06-11-1982	10:00:00	1099 *
2	1983-1984	528.240	18-08-1983	12:00:00	423 *
3	1984-1985	528.800	24-10-1984	06:00:00	585 *
4	1985-1986	526.990	31-05-1986	23:00:00	63 *
5	1986-1987	530.150	24-09-1986	12:00:00	974 *
6	1987-1988	530.000	07-08-1987	10:00:00	931 *
7	1988-1989	529.380	18-09-1988	08:00:00	752 *
8	1989-1990	531.520	20-09-1989	12:00:00	1370 *
9	1990-1991	527.400	23-05-1991	13:00:00	181 *
10	1991-1992	533.805	29-06-1991	03:00:00	2029 *
11	1992-1993	535.600	18-11-1992	07:00:00	2547 *
12	1993-1994	534.230	19-10-1993	09:00:00	2152 *
13	1994-1995	528.550	03-09-1994	06:00:00	513 *
14	1995-1996	528.950	26-09-1995	13:00:00	628 *
15	1996-1997	531.150	03-10-1996	15:00:00	1263 *
16	1997-1998	532.930	23-09-1997	12:00:00	1777 *
17	1998-1999	530.590	16-10-1998	06:00:00	1101 *
18	1999-2000	529.100	15-10-1999	07:00:00	671 *
19	2000-2001	529.700	19-09-2000	20:00:00	845 *
20	2001-2002	528.900	24-09-2001	07:00:00	614 *
21	2002-2003	529.200	03-08-2002	01:00:00	700 *
22	2003-2004	530.140	08-10-2003	11:00:00	972 *
23	2004-2005	530.345	13-07-2004	08:00:00	1031
24	2005-2006	529.020	26-09-2005	10:00:00	648 *
25	2006-2007	528.520	15-08-2006	12:00:00	504 *
26	2007-2008	535.650	20-09-2007	22:00:00	2562 *
27	2008-2009	528.350	06-09-2008	06:00:00	455 *
28	2009-2010	536.840	02-10-2009	09:00:00	2905 *
29	2010-2011	531.450	09-11-2010	12:00:00	1350 *
30	2011-2012	527.480	11-09-2011	14:00:00	204 *
31	2012-2013	525.850	28-09-2012	00:00:00	90 *
32	2013-2014	528.390	03-09-2013	11:00:00	467 *
33	2014-2015	527.990	07-06-2014	12:00:00	351 *
34	2015-2016	527.820	18-09-2015	06:00:00	302 *
35	2016-2017	528.000	20-06-2016	06:00:00	354 *
36	2017-2018	529.340	16-10-2017	15:00:00	741 *
37	2018-2019	528.600	04-06-2018	11:00:00	527 *
38	2019-2020	537.200	10-08-2019	20:00:00	3009 *
39	2020-2021	532.960	19-08-2020	15:00:00	1785 *
40	2021-2022	531.450	26-07-2021	06:00:00	1349 *
41	2022-2023	534.680	07-09-2022	22:00:00	2143 *

Stage-Discharge Data for the period 2022 - 2023

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	524.500	8.914 *	524.155	11.08	525.730	78.20	527.750	337.5	527.960	368.1	524.760	16.95 #
2	524.540	9.161 *	524.030	8.695	526.450	162.3	529.015	446.2	529.150	537.4 *	524.900	24.12 #
3	524.530	9.099 *	523.950	7.691 *	525.650	88.41 #	529.550	615.4 *	529.200	658.8	524.950	27.02 #
4	524.530	23.47 *	523.930	7.239 #	526.890	196.8	529.450	595.4 *	525.900	107.2 #	524.990	37.52
5	524.800	10.84 *	523.890	6.370 #	525.830	101.7 #	528.320	340.8	526.350	145.9 *	525.050	28.67
6	525.020	12.35 #	524.090	10.41	527.090	181.6	527.575	321.2	525.530	85.83	525.010	30.72 *
7	525.120	13.07 #	524.240	13.04	527.470	270.7 *	534.250	1975 *	527.900	343.5	524.980	26.97
8	524.670	9.986 #	524.115	12.58	525.450	66.40	533.550	1719 *	529.165	594.5	524.750	16.46 *
9	524.450	9.346	524.400	23.33	525.190	58.90 *	529.400	585.5 #	527.300	249.1 *	524.940	27.92
10	524.450	7.737	524.570	26.34 *	525.190	65.48	528.225	427.1	526.400	182.5	524.940	26.81
11	523.960	6.807	524.350	23.71	525.230	58.23	526.900	202.0 *	526.490	159.2 #	524.940	28.64
12	523.950	5.805 *	524.375	23.10	525.490	58.67	526.050	112.8	528.620	442.7 #	524.920	26.24
13	523.920	5.021	524.310	17.48 #	525.350	58.04	526.575	173.3	530.920	843.1	524.920	25.26 *
14	523.930	5.362	524.540	32.28	526.280	139.4 *	527.315	275.6	529.700	763.8	524.930	27.13
15	523.930	5.302	524.550	25.61 #	526.550	165.2 *	529.300	571.3	527.750	380.3	524.930	26.62
16	524.680	10.05 #	525.195	43.66	527.230	182.2	529.000	511.9	527.620	290.6 *	524.930	27.52
17	523.975	6.733	525.170	51.74 *	526.840	169.6	528.415	402.4	527.050	192.7	525.000	33.10
18	524.280	7.603 #	525.300	53.84	525.820	101.0 #	527.180	234.4 *	527.380	209.5	525.000	33.96
19	524.350	8.011 *	525.290	54.71	525.250	61.18	526.050	104.5	527.490	287.5	525.000	31.95
20	525.720	73.24	525.070	48.58	525.220	61.24	526.025	122.7	528.390	385.4	525.000	30.08 *
21	524.340	18.43 #	524.500	22.68	525.200	59.47 *	526.080	121.9 #	528.070	365.6	525.000	31.69
22	524.250	15.77	524.340	19.74	525.200	61.44	525.120	69.93	527.380	211.8	525.010	35.46
23	524.090	9.893	524.310	19.22	524.550	28.66	525.020	48.14	525.900	107.2 *	525.020	37.96
24	524.200	14.17 #	524.250	15.64 *	524.450	24.55	525.020	50.96	526.290	140.3 *	525.250	48.02 *
25	524.020	9.232	524.200	16.13	524.430	25.13	524.980	47.54 *	526.150	160.7	525.050	36.65
26	524.010	9.105 *	524.180	14.94	524.430	23.89 #	524.980	47.54 #	526.220	134.0 #	525.040	37.13
27	523.995	8.495	524.170	12.83	525.020	56.21	524.950	32.24	525.310	72.59	525.000	30.08 *
28	523.975	8.185	524.195	15.55	524.950	46.03 *	525.540	73.33	525.200	52.85	525.040	36.68
29	523.950	7.469	527.825	350.5	524.450	26.44	525.250	62.38 #	524.780	45.03	525.100	39.01
30	523.950	6.304	526.870	205.1	525.360	80.33	525.700	92.00 #	524.750	36.59 *	525.120	40.37
31			526.090	122.7 *	527.510	275.9 *			524.750	40.49		
Ten-Daily Mean												
I Ten-Daily	524.661	11.40	524.137	12.68	526.094	127.0	529.708	736.3	527.485	327.3	524.927	26.32
II Ten-Daily	524.270	13.39	524.815	37.47	525.926	105.5	527.281	271.1	528.141	395.5	524.957	29.05
III Ten-Daily	524.078	10.71	524.994	74.10	525.050	64.37	525.264	64.60	525.891	124.3	525.063	37.30
Monthly												
Min.	523.920	5.021	523.890	6.370	524.430	23.89	524.950	32.24	524.750	36.59	524.750	16.46
Max.	525.720	73.24	527.825	350.5	527.510	275.9	534.250	1975	530.920	843.1	525.250	48.02
Mean	524.336	11.83	524.660	42.47	525.669	97.85	527.418	357.3	527.131	277.3	524.982	30.89

Annual Runoff in MCM = 2423 Annual Runoff in mm = 258

Peak Observed Discharge = 843.1 cumecs on 13-10-2022 Corres. Water Level :530.92 m

Lowest Observed Discharge = 0.000 cumecs on 07-03-2023 Corres. Water Level :525.04 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 2022 - 2023

Station Name : Cholachguda (Seasonal) (AKS00H1)

Division : Upper Krishna Divn, Pune

Local River : Malaprabha

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	525.200	42.37	525.000	30.08 *	525.060	31.14	525.250	21.17	525.210	0.000	525.350	0.000
2	525.200	40.29	525.000	35.51	525.090	32.47	525.240	19.51	525.070	0.000	525.350	0.000
3	525.180	38.57	525.000	33.66	525.080	32.65	525.230	18.46	524.970	0.000	525.350	0.000
4	525.190	43.31 *	525.050	33.38	525.080	31.60	525.240	21.44 #	524.840	0.000	525.260	0.000
5	525.190	39.73	525.040	31.44	524.870	22.47 *	525.200	19.66 *	524.710	0.000	525.230	0.000
6	525.100	36.41	525.030	35.00	524.990	25.67	525.130	16.08	524.580	0.000	525.220	0.000
7	525.100	36.76	525.030	33.64	524.990	25.47	525.040	0.000	524.480	0.000	525.200	0.000
8	525.100	35.62	525.600	80.54 *	524.900	19.39	525.000	0.000	525.880	0.000	525.410	0.000
9	525.060	30.94	525.100	40.69	524.950	24.65	525.000	0.000	526.000	0.000	525.500	0.000
10	524.950	28.04	525.060	35.63	524.950	23.54	525.090	0.000	526.100	0.000	525.480	0.000
11	524.900	24.12 *	525.100	37.49	524.900	20.90	525.000	0.000	526.150	0.000	525.500	0.000
12	524.950	31.06	525.070	44.81	524.960	27.62 *	525.960	0.000	526.170	0.000	525.480	0.000
13	525.250	47.83	525.090	44.27	525.000	25.02	526.100	0.000	526.170	0.000	525.450	0.000
14	525.200	46.92	525.070	43.72	524.970	25.64	526.070	0.000	526.210	0.000	525.450	0.000
15	525.350	60.98	524.960	27.62 *	524.850	19.79	526.060	0.000	526.250	0.000	525.450	0.000
16	525.320	68.97	524.900	18.97	524.850	19.64	526.070	0.000	526.250	0.000	525.450	0.000
17	525.300	50.85	524.910	23.93	525.180	34.58	526.060	0.000	526.230	0.000	525.450	0.000
18	525.250	48.02 *	524.940	29.10	525.200	33.78	526.010	0.000	526.050	0.000	525.440	0.000
19	525.220	44.36	524.950	26.57	525.210	20.10 *	526.050	0.000	526.000	0.000	525.400	0.000
20	525.150	39.46	524.870	19.98	525.220	20.54 #	526.000	0.000	525.920	0.000	525.240	0.000
21	525.200	44.84	524.690	16.02	525.230	25.49	525.980	0.000	525.800	0.000	525.180	0.000
22	525.210	44.12	524.660	12.59 *	525.250	21.89 #	525.970	0.000	525.700	0.000	525.110	0.000
23	525.200	43.51	525.050	29.06	525.130	16.70 #	525.950	0.000	525.550	0.000	525.060	0.000
24	525.240	45.98	525.000	24.14	525.240	26.07	525.930	0.000	525.450	0.000	525.000	0.000
25	525.270	49.64 *	524.980	26.90	525.260	22.35 #	525.900	0.000	525.450	0.000	525.600	0.000
26	525.200	44.25	525.030	32.01 *	525.280	23.29 *	525.860	0.000	525.380	0.000	525.600	0.000
27	525.100	41.04	525.030	26.57	525.290	22.47	525.830	0.000	525.380	0.000	525.600	0.000
28	525.030	32.01 #	525.060	31.29	525.260	21.47	525.730	0.000	525.350	0.000	525.600	0.000
29	525.060	37.62	525.050	33.32 *			525.590	0.000	525.350	0.000	525.600	0.000
30	525.050	32.86	525.050	30.07			525.460	0.000	525.350	0.000	525.600	0.000
31	524.900	30.45	525.060	33.14			525.320	0.000			525.650	0.000
Ten-Daily Mean												
I Ten-Daily	525.127	37.20	525.091	38.96	524.996	26.90	525.142	11.63	525.184	0.000	525.335	0.000
II Ten-Daily	525.189	46.26	524.986	31.65	525.034	24.76	525.938	0.000	526.140	0.000	525.431	0.000
III Ten-Daily	525.133	40.58	524.969	26.83	525.243	22.47	525.774	0.000	525.476	0.000	525.418	0.000
Monthly												
Min.	524.900	24.12	524.660	12.59	524.850	16.70	525.000	0.000	524.480	0.000	525.000	0.000
Max.	525.350	68.97	525.600	80.54	525.290	34.58	526.100	21.44	526.250	0.000	525.650	0.000
Mean	525.149	41.32	525.014	32.3	525.080	24.87	525.623	3.752	525.600	0	525.396	0

Peak Computed Discharge = 1975 cumecs on 07-09-2022

Corres. Water Level :534.25 m

Lowest Computed Discharge = 5.805 cumecs on 12-06-2022

Corres. Water Level :523.95 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

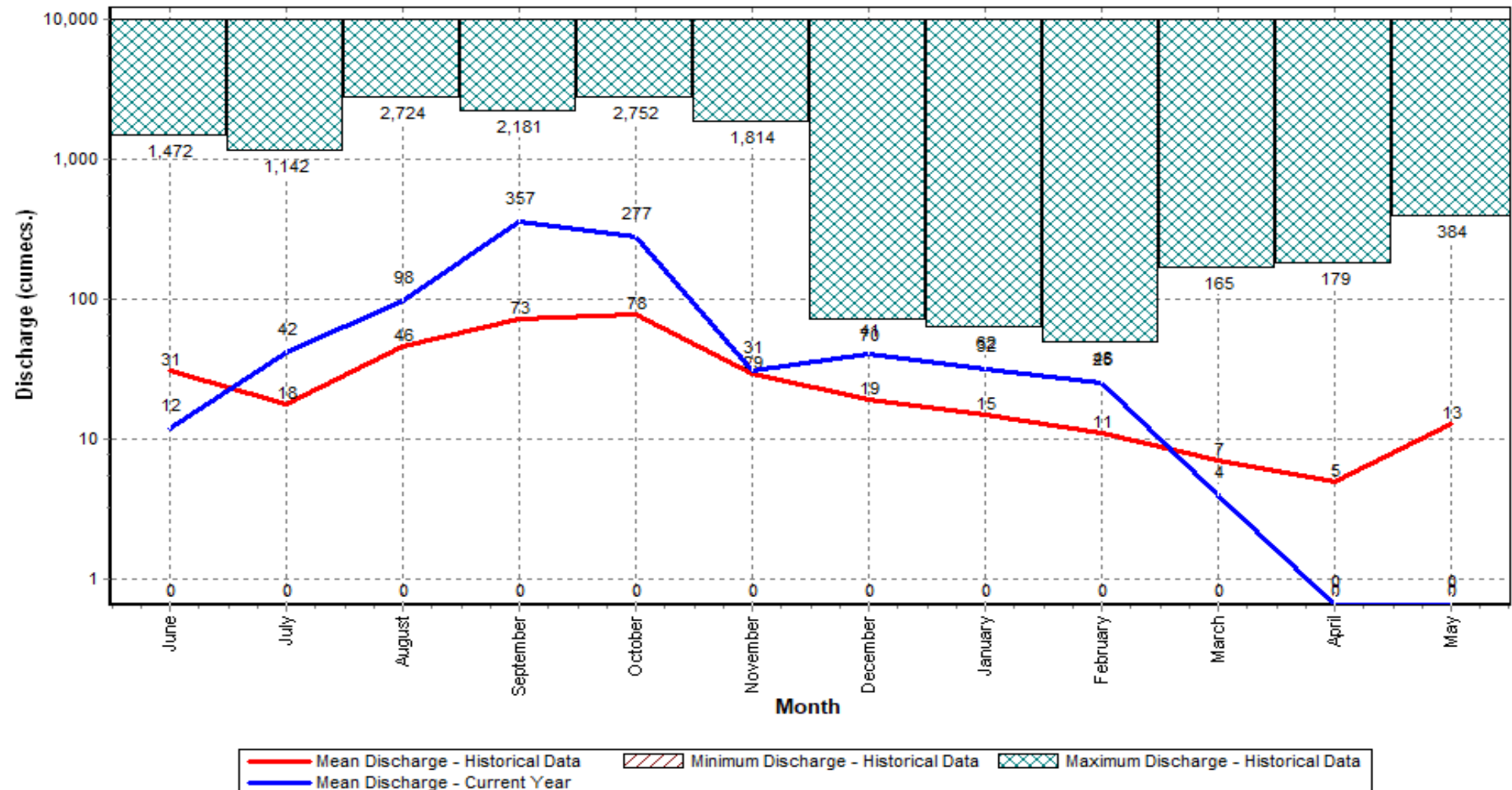
Station Name : Cholachguda (Seasonal) (AKS00H1)

Data considered : 1982-2023

Division : Upper Krishna Divn, Pune

Local River : Malaprabha

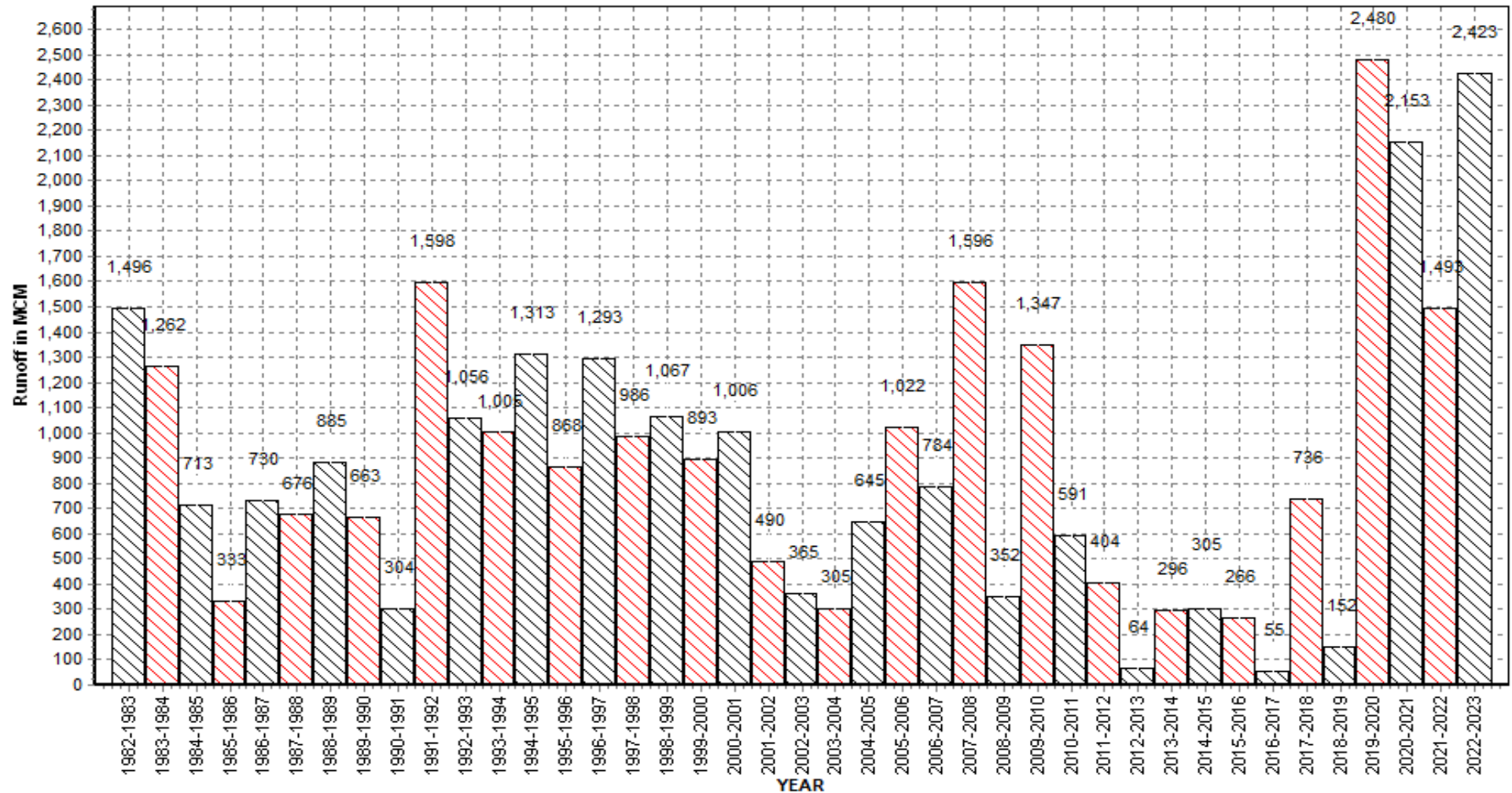
Sub-Division : Middle Krishna SD 1, Bagalkot



Annual Runoff Values for the period: 1982 - 2023

Station Name : Cholachguda (Seasonal) (AKS00H1)
Local River : Malaprabha

Division : Upper Krishna Divn, Pune
Sub-Division : Middle Krishna SD 1, Bagalkot



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

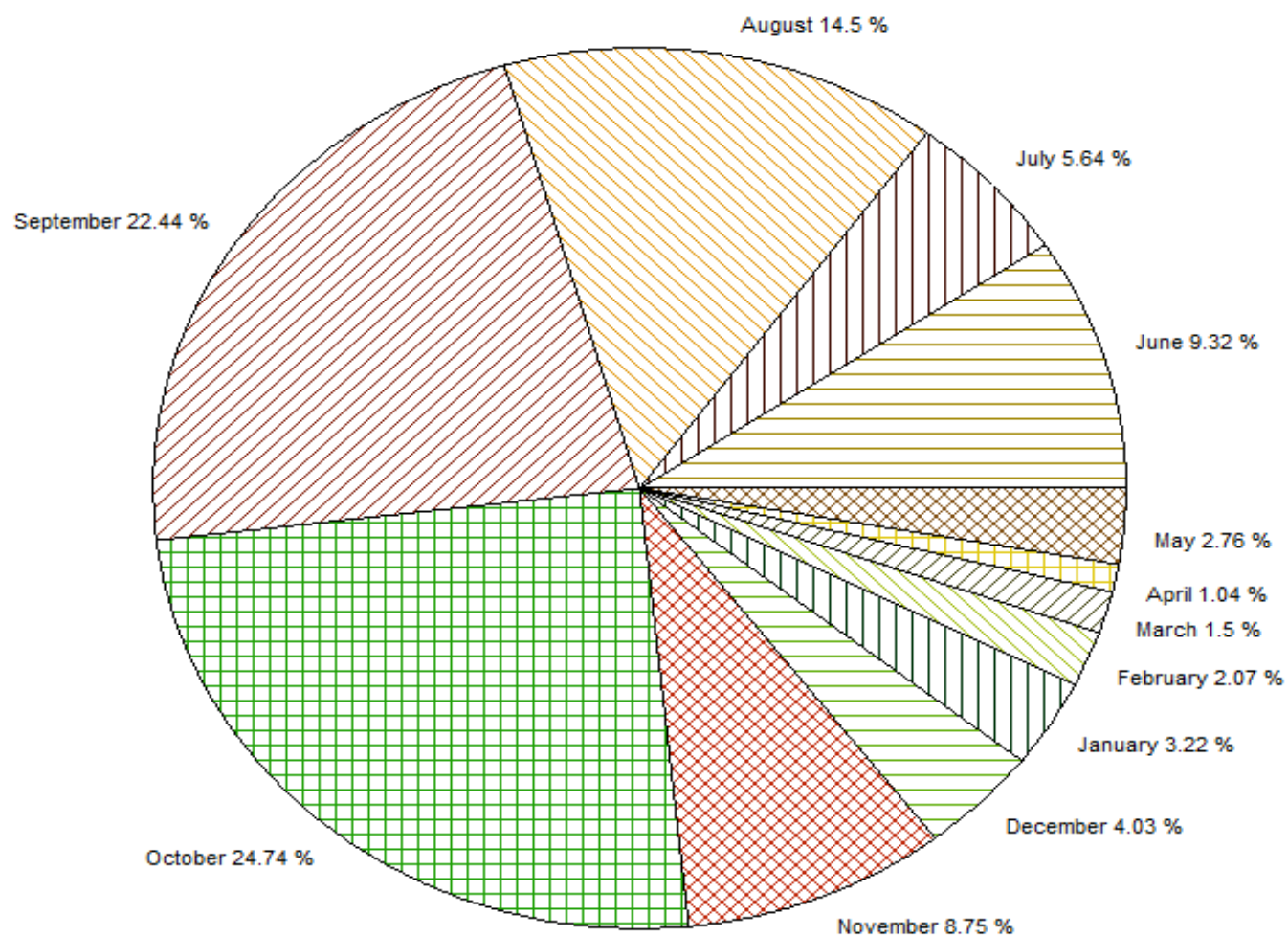
Monthly Average Runoff based on period : 1982-2022

Station Name : Chalachguda (Seasonal) (AKS00H1)

Local River : Malaprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



June	9.32 %
July	5.64 %
August	14.5 %
September	22.44 %
October	24.74 %
November	8.75 %
December	4.03 %
January	3.22 %
February	2.07 %
March	1.5 %
April	1.04 %
May	2.76 %

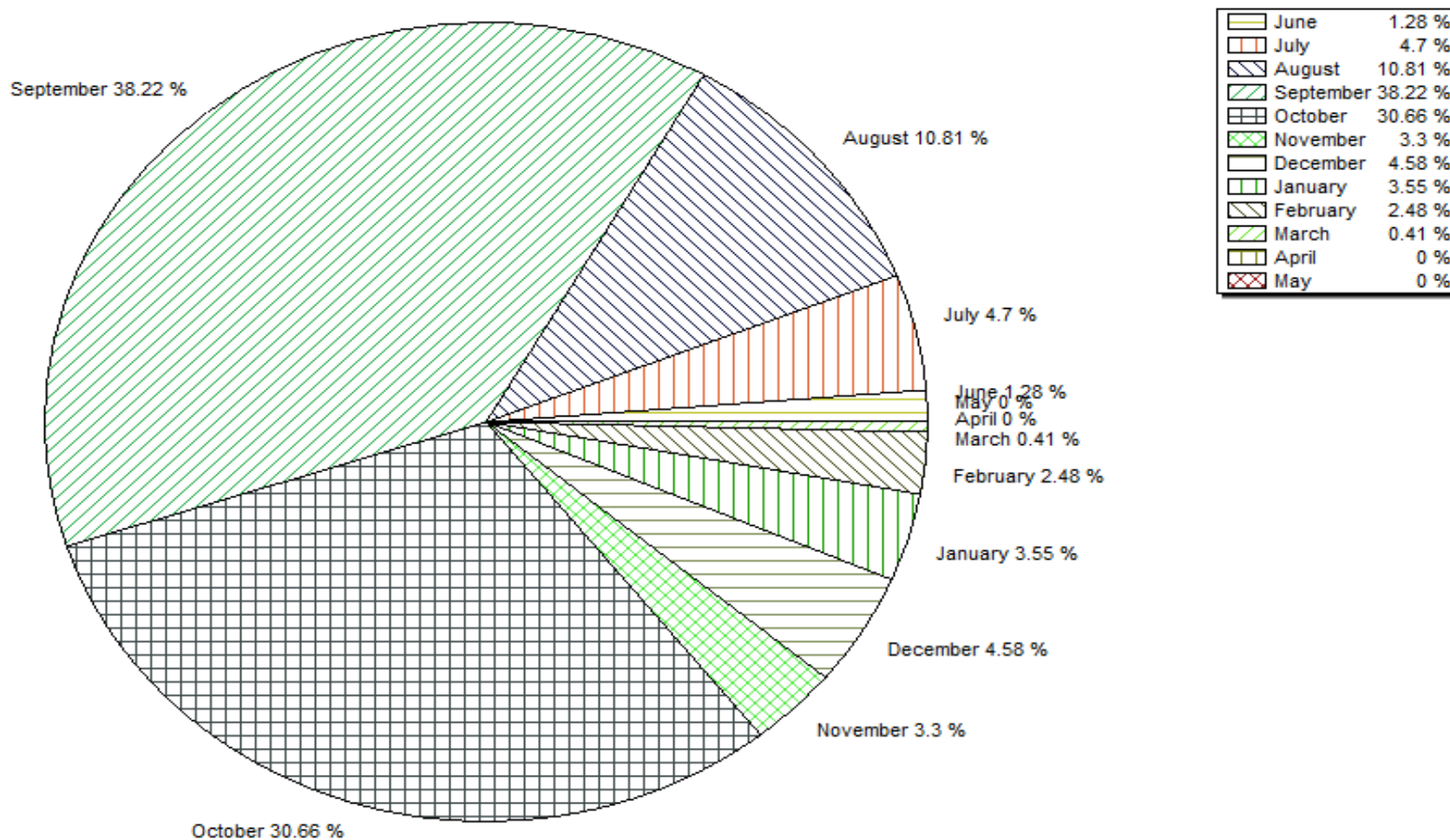
Monthly Runoff for the Year : 2022-2023

Station Name : Chalachguda (Seasonal) (AKS00H1)

Local River : Malaprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



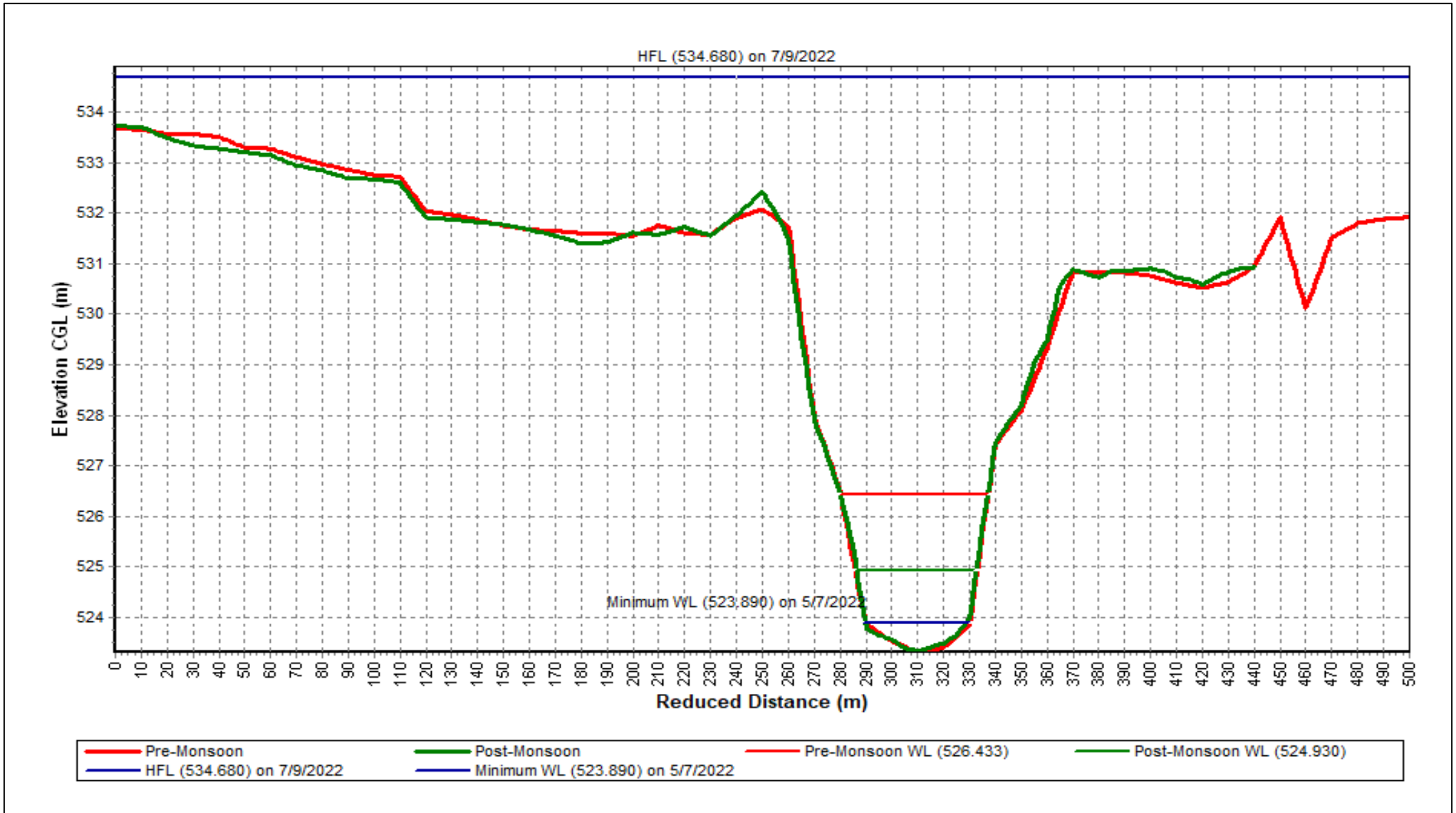
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Cholachguda (Seasonal) (AKS00H1)

Local River : Malaprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



Zero of the Gauge: 522 (m.s.l)

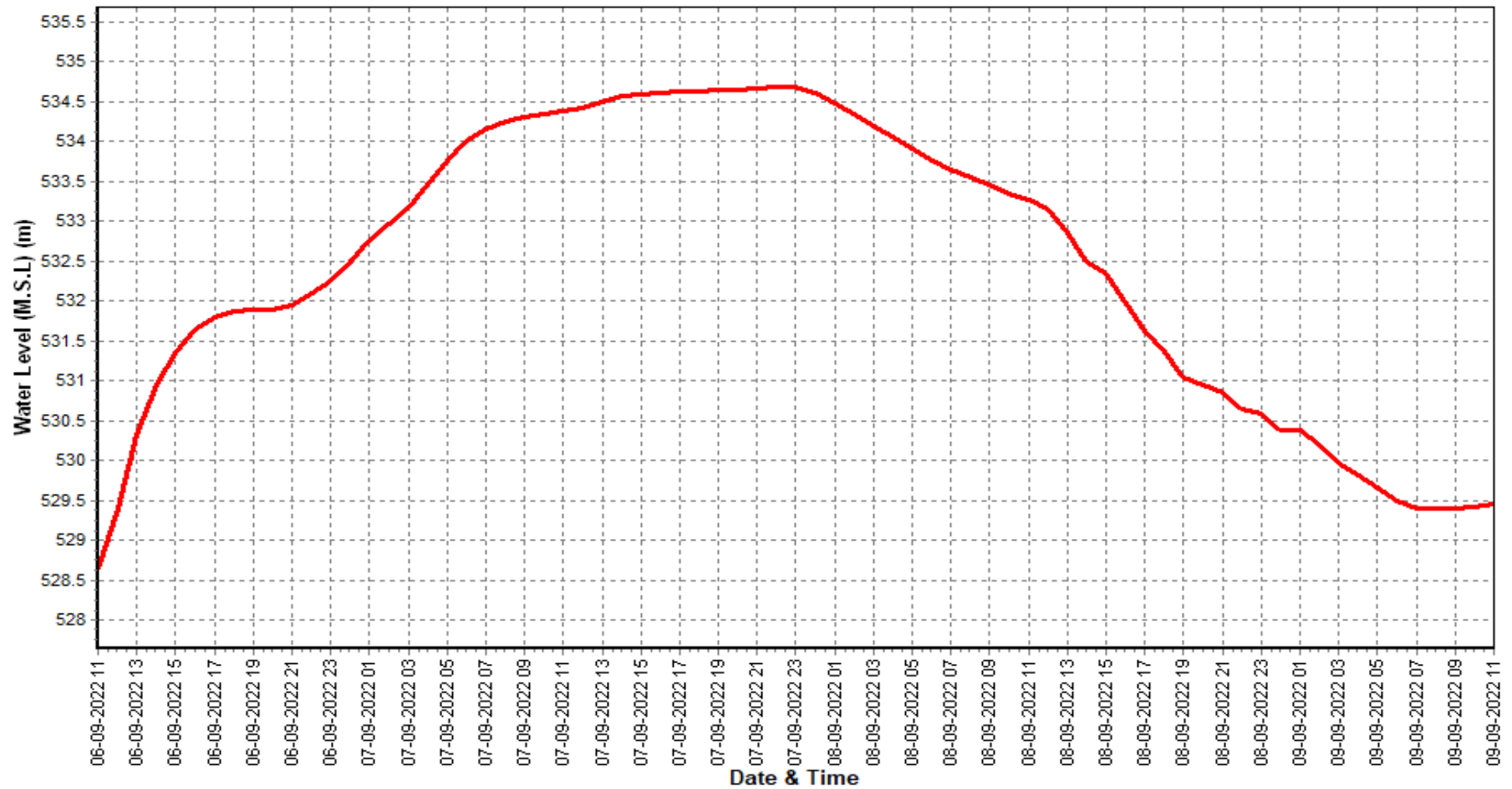
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Chalachguda (Seasonal) (AKS00H1)

Local River : Malaprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



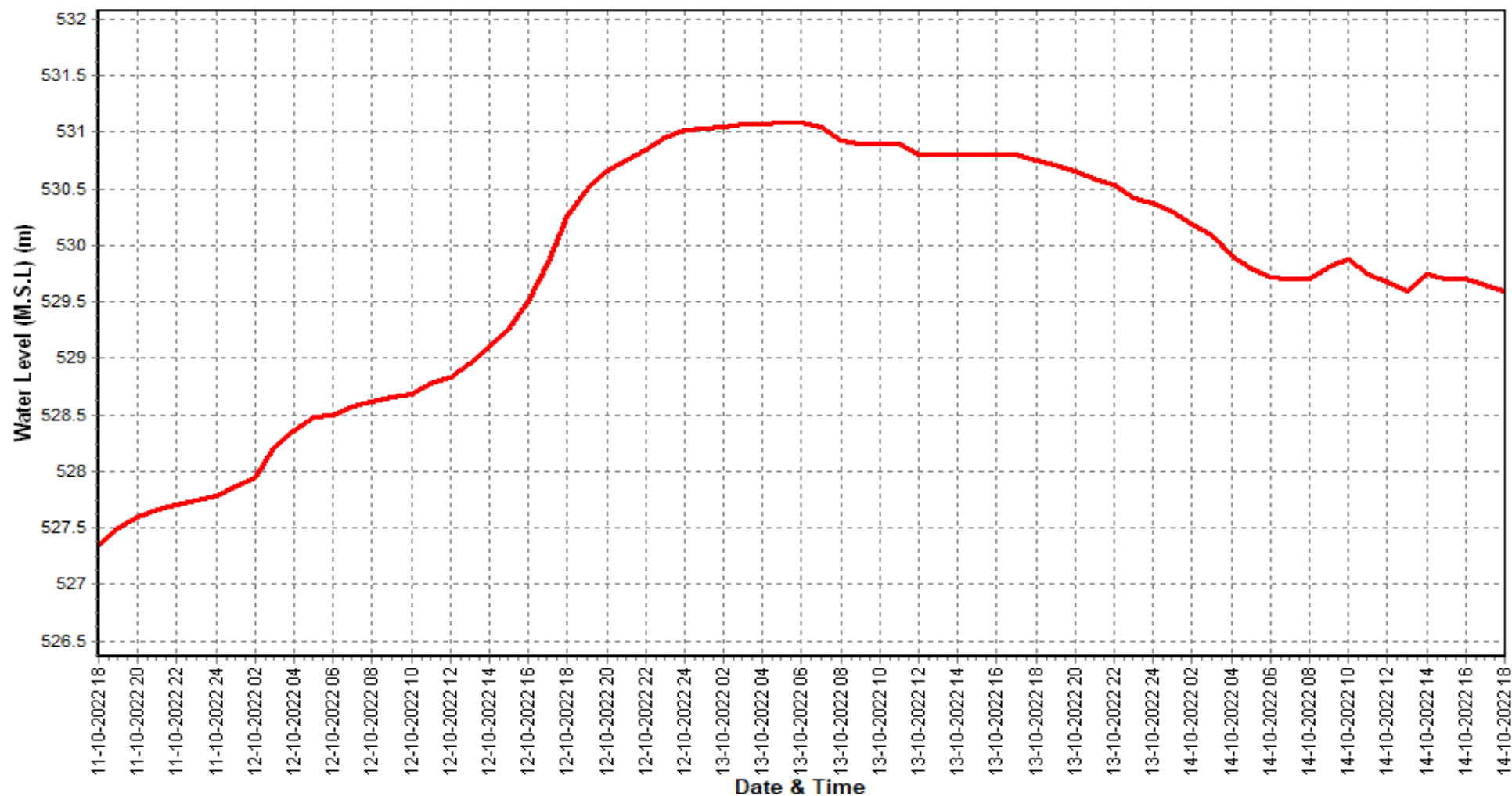
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Chalachguda (Seasonal) (AKS00H1)

Local River : Malaprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



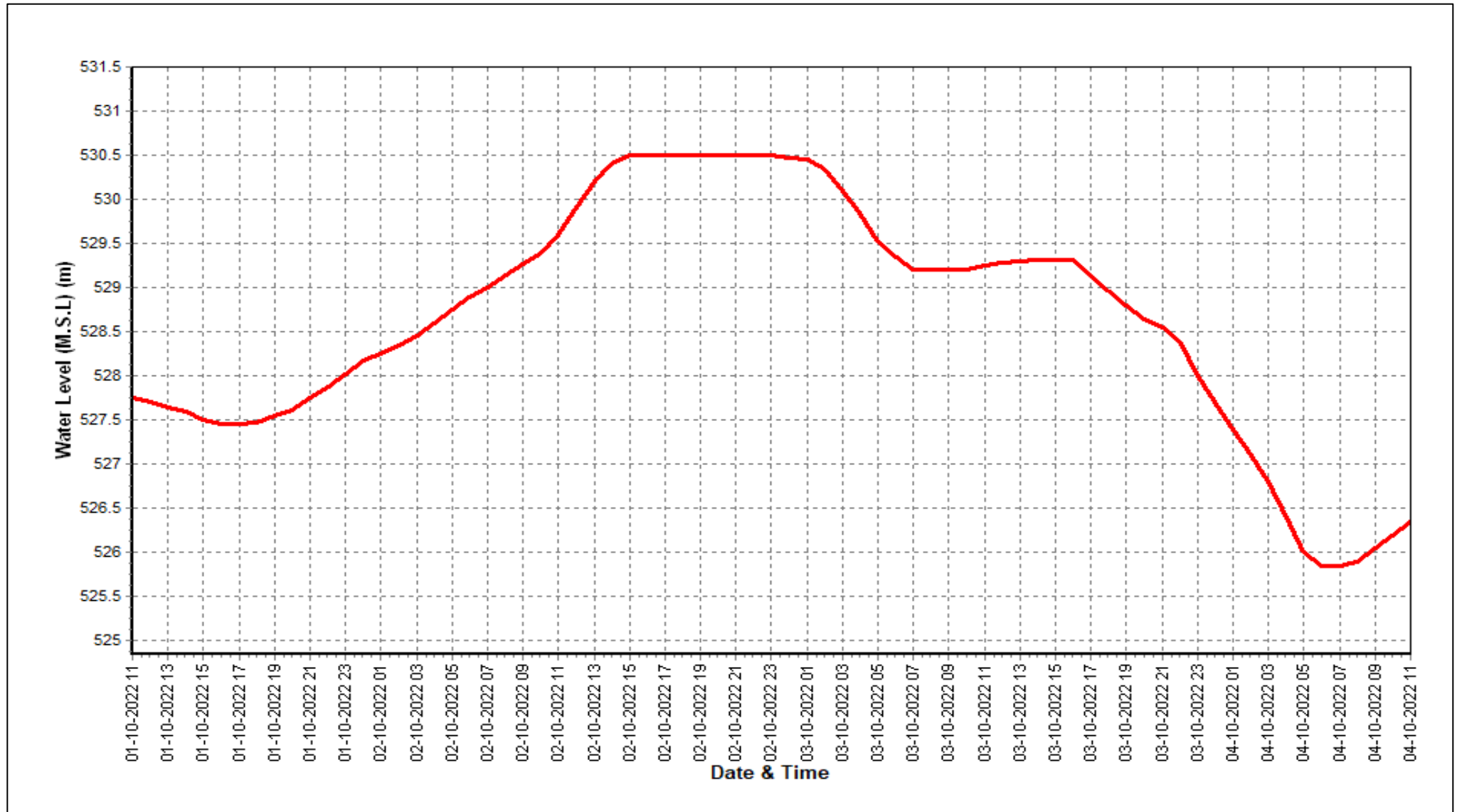
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Chalachguda (Seasonal) (AKS00H1)

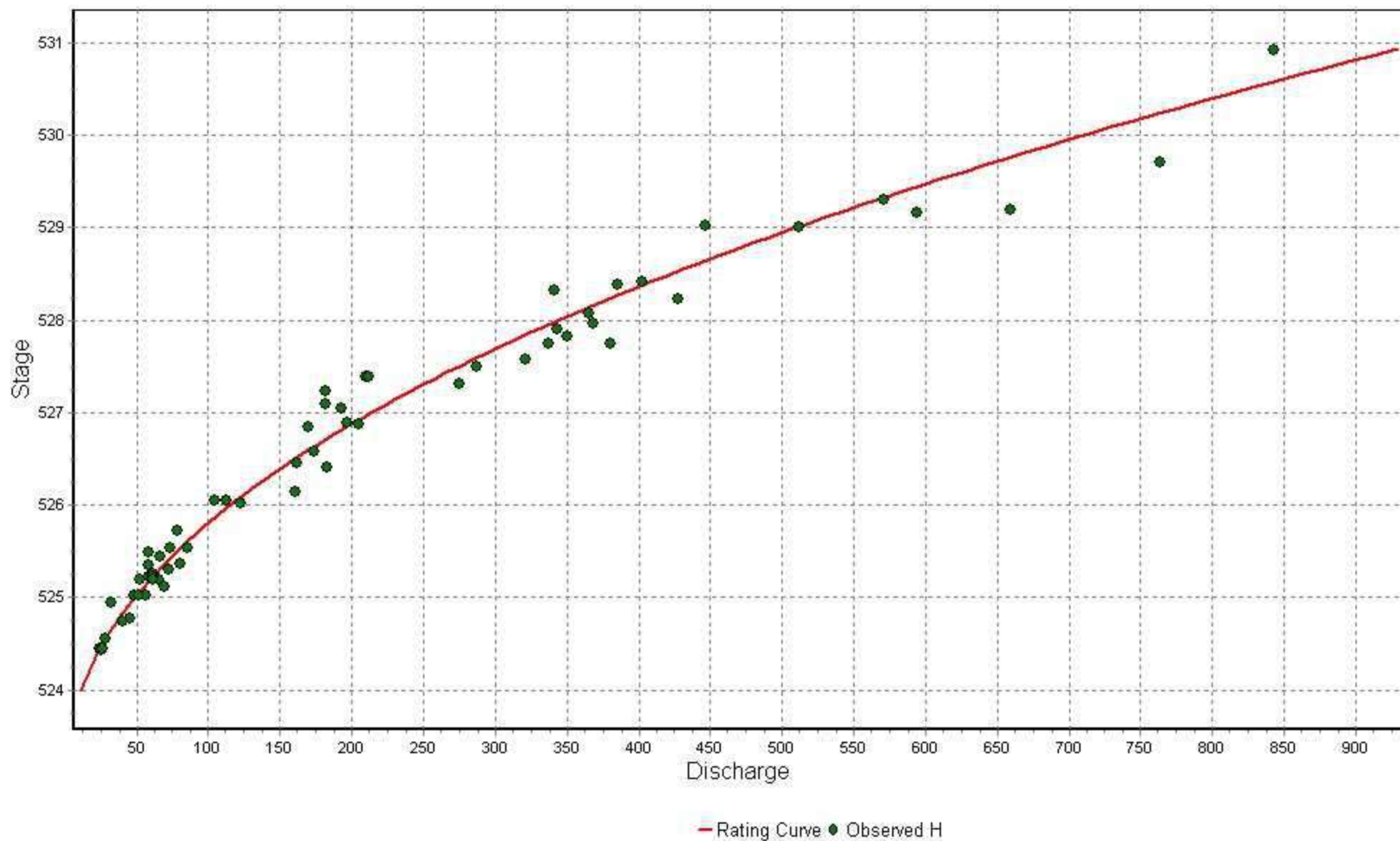
Local River : Malaprabha

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



S-D curve of site Chalachguda for the period from 29.07.2022 to 31.10.2022
Range:- 524.00 to 531.000, a= -522.96, b= 2.166, c= 10.37, OSE= 13.303 (No. of data= 60)



HISTORY SHEET

Water Year : 2022-2023

Site : Talikot (Seasonal) Code : AKQ00E2

State : Karnataka District : Vijayapuri

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) 21-03-1990 - 31-05-2010
 496 (m.s.l) 01-06-2010

Opening Date Closing Date

Gauge : 07-06-1990

Discharge : 21-09-1995

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

Year	Maximum			Minimum		
	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	645.0	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
2016-2017	60.00	499.030	31-07-2016	0.000		03-10-2016

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2017-2018	104.3	499.950	12-10-2017	0.000		05-08-2017
2018-2019	52.30	499.375	18-09-2018	0.000	497.320	19-08-2018
2019-2020	1184	501.860	20-10-2019	0.000	496.000	19-08-2019
2020-2021	1165	502.210	02-10-2020	0.000	497.340	25-01-2021
2021-2022	158.8	499.970	29-08-2021	0.000	497.220	01-05-2022

Annual Runoff of Don at Talikot (Seasonal)

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1995-1996	72	0	72	3	0	3
2	1996-1997	335	2	337	12	0	12
3	1997-1998	119	11	130	4	0	5
4	1998-1999	655	40	695	23	1	25
5	1999-2000	141	2	143	5	0	5
6	2000-2001	321	5	326	11	0	12
7	2001-2002	415	0	415	15	0	15
8	2002-2003	169	0	169	6	0	6
9	2003-2004	33	3	36	1	0	1
10	2004-2005	118	10	129	4	0	5
11	2005-2006	101	19	120	4	1	4
12	2006-2007	173	Site converted as Seasonal site from June 2006 to 2020	173	6	Site converted as Seasonal site from June 2006 to 2020	6
13	2007-2008	264		264	9		9
14	2008-2009	172		172	6		6
15	2009-2010	704		704	25		25
16	2010-2011	163		163	6		6
17	2011-2012	41		41	1		1
18	2012-2013	53		53	2		2
19	2013-2014	115		115	4		4
20	2014-2015	170		170	6		6
21	2015-2016	167		167	6		6
22	2016-2017	12		12	0		0
23	2017-2018	123		123	4		4
24	2018-2019	10		10	0		0
25	2019-2020	414		414	15		15
26	2020-2021	439		439	16		8
27	2021-2022	123	15	138	4	1	4
28	2022-2023	234	221	255	8	8	1
Average		209	25	214	7	1	7

Instantaneous Flood Peak of Krishna at Talikot					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1995-1996	53.340	12-10-1995	18:00:00	235 *
2	1996-1997	55.280	12-09-1996	07:00:00	725 *
3	1997-1998	54.040	28-10-1997	18:00:00	361 *
4	1998-1999	55.160	14-10-1998	06:00:00	682 *
5	1999-2000	53.730	12-06-1999	18:00:00	298 *
6	2000-2001	55.300	30-09-2000	19:00:00	732 *
7	2001-2002	56.010	09-10-2001	20:00:00	1023 *
8	2002-2003	53.760	13-10-2002	13:00:00	304 *
9	2003-2004	52.800	03-10-2003	13:00:00	176 *
10	2004-2005	52.475	05-10-2004	16:00:00	158 *
11	2005-2006	53.840	08-09-2005	15:00:00	319 *
12	2006-2007	54.070	20-06-2006	16:00:00	368 *
13	2007-2008	56.450	24-06-2007	21:00:00	1233 *
14	2008-2009	54.060	26-08-2008	13:00:00	365 *
15	2009-2010	56.660	01-10-2009	12:00:00	1341 *
16	2010-2011	501.575	26-08-2010	16:00:00	866 *
17	2011-2012	498.800	21-08-2011	08:00:00	78
18	2012-2013	500.200	07-10-2012	15:00:00	185 *
19	2013-2014	499.585	20-09-2013	08:00:00	36
20	2014-2015	501.330	28-08-2014	18:00:00	709 *
21	2015-2016	501.430	05-10-2015	23:00:00	771 *
22	2016-2017	499.200	31-07-2016	14:00:00	60 *
23	2017-2018	499.990	08-09-2017	21:00:00	123 *
24	2018-2019	499.900	18-09-2018	15:00:00	100 *
25	2019-2020	501.860	20-10-2019	08:00:00	1067 *
26	2020-2021	502.210	15-10-2020	15:00:00	1165 *
27	2021-2022	500.160	29-08-2021	02:00:00	172 *
28	2022-2023	502.180	06-08-2022	11:00:00	335 *

Stage-Discharge Data for the period 2022 - 2023

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	497.320	0.783 #		497.395	1.434	499.600	80.78	497.640	2.846	497.690	6.849	497.440	2.809 #
2	497.310	0.712 #		497.290	0.476	498.320	25.23 #	500.460	69.65 #	499.110	35.35 *	497.450	3.801
3	497.360	1.101 #		497.320	0.783 *	500.720	194.0	497.780	6.252	498.380	18.54	497.450	3.481
4	497.360	1.101 #		497.290	0.461	499.320	83.62	497.770	7.799 *	498.950	32.11	497.440	2.809 #
5	497.270	0.463 *		497.300	0.723	499.290	80.75	497.760	5.948	498.330	17.34 *	497.430	3.407
6	497.160	0.055 #		497.270	0.459	502.100	325.6 *	497.920	9.886 #	498.110	14.69	497.430	2.670 *
7	497.250	0.359 #		497.190	0.711	501.480	259.9 *	498.260	15.31 #	497.940	8.497	497.420	2.536 #
8	498.300	24.91 *		497.170	0.595	500.450	163.8 #	499.115	34.88	497.860	9.185	497.420	2.536 *
9	497.950	11.55		497.190	0.720	498.850	50.90 *	499.700	44.94	497.830	8.744 *	497.400	2.275 #
10	498.045	16.04		497.260	1.241 *	497.900	10.12 #	499.140	34.53	497.820	6.914	497.400	2.275 #
11	497.745	6.641		497.180	0.500	497.820	7.897	499.450	40.90 *	497.950	9.095	497.450	3.242
12	497.670	5.458 *		497.140	0.497	497.800	7.622	500.220	62.28 #	498.350	17.35	497.450	3.183
13	497.450	2.031		497.160	0.557	497.780	7.369	498.380	17.43 #	498.110	15.38	497.430	2.670 *
14	497.400	1.330		497.160	0.623	497.770	6.555 *	498.360	17.07 *	499.210	38.30	497.430	3.047
15	497.360	1.204		497.160	0.618	497.720	5.818 *	497.880	10.79	498.840	34.35	497.430	2.788
16	497.370	1.269		497.350	2.386	497.640	3.611 #	497.760	7.667 #	498.580	22.52 *	497.430	2.731
17	497.360	0.952		497.370	2.270 *	497.630	3.413 #	497.690	6.747	498.400	18.63	497.450	3.233
18	497.360	1.211		497.440	3.361	497.590	2.880	497.540	4.992 *	497.970	10.85	497.450	3.103
19	497.490	2.517 *		497.485	3.725	497.580	2.702	497.450	4.782	497.980	10.73	497.450	3.048
20	497.320	0.970		497.410	2.572	497.550	1.570	497.430	3.470	498.350	16.74	497.450	2.951 *
21	497.320	0.951		497.350	2.208	497.540	1.617 *	497.410	4.498	500.520	80.58 #	497.430	2.852
22	497.290	0.516		497.300	1.559	497.530	1.470	497.390	3.719	498.360	18.19	497.440	3.133
23	497.320	0.981		497.450	3.253	497.550	1.583	497.380	3.196	497.980	11.06 *	497.450	3.112
24	497.290	0.482		497.410	2.713 *	497.590	2.101 #	497.370	3.410	497.960	10.74 *	497.450	3.232
25	497.420	1.682		497.360	2.188	497.620	2.415	497.360	3.153 *	497.910	8.125	497.450	3.028
26	497.380	1.281 *		497.300	1.454	497.590	2.101 #	497.350	2.653	497.600	6.098	497.450	3.085
27	497.340	0.783		497.300	1.464	497.680	3.518	497.350	2.529	497.570	6.174	497.450	2.951 *
28	497.425	1.724		497.430	2.938	498.120	10.81 *	497.465	4.988	497.550	5.014	497.430	2.694
29	497.360	1.146		497.420	2.724	497.950	6.951	497.640	6.282	497.500	4.702	497.430	2.718
30	497.320	0.961		497.495	3.584	497.920	6.619	497.865	9.622	497.490	4.374 *	497.430	2.687
31				500.200	143.0 *	498.020	8.681 *			497.460	4.588		
Ten-Daily Mean													
I Ten-Daily	497.532	5.707		497.267	0.760	499.803	127.5	498.555	23.20	498.202	15.82	497.428	2.860
II Ten-Daily	497.452	2.358		497.285	1.711	497.688	4.944	498.216	17.61	498.374	19.40	497.442	3.000
III Ten-Daily	497.346	1.051		497.638	15.19	497.737	4.351	497.458	4.405	497.991	14.51	497.441	2.949
Monthly													
Min.	497.160	0.055		497.140	0.459	497.530	1.470	497.350	2.529	497.460	4.374	497.400	2.275
Max.	498.300	24.91		500.200	143.0	502.100	325.6	500.460	69.65	500.520	80.58	497.450	3.801
Mean	497.444	3.039		497.405	6.187	498.388	44.26	498.076	15.07	498.183	16.51	497.437	2.936

Annual Runoff in MCM = 255 Annual Runoff in mm = 102

Peak Observed Discharge = 194.0 cumecs on 03-08-2022 Corres. Water Level :500.72 m

Lowest Observed Discharge = 0.055 cumecs on 06-06-2022 Corres. Water Level :497.16 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2022 - 2023

Station Name : Talikot (Seasonal) (AKQ00E2)

Division : Upper Krishna Divn, Pune

Local River : Don

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	497.410	2.240	497.340	1.577 *	497.340	1.663	497.290	1.078	497.340	1.653	497.160	0.232
2	497.410	2.718	497.340	1.498	497.340	1.634	497.310	1.099	497.340	1.577 *	497.180	0.327
3	497.410	2.186	497.340	1.513	497.340	1.629	497.310	1.098	497.340	1.674	497.180	0.313
4	497.410	2.404 *	497.340	1.503	497.340	1.653	497.260	0.702	497.310	1.275 *	497.160	0.247
5	497.400	2.091	497.320	1.147	497.330	1.473 *	497.250	0.765 *	497.220	0.676	497.160	0.239 *
6	497.400	1.962	497.310	1.147	497.310	1.138	497.230	0.596	497.220	0.685	497.160	0.240
7	497.400	2.157	497.310	1.123	497.310	1.275 #	497.230	0.606	497.220	0.558 *	497.160	0.239 *
8	497.450	3.350	497.310	1.275 *	497.310	1.088	497.240	0.700	497.240	0.799	497.160	0.238
9	497.450	3.227	497.310	1.120	497.310	1.079	497.270	0.707	497.240	0.692 *	497.160	0.241
10	497.450	3.458	497.310	1.085	497.310	1.070	497.310	1.165	497.220	0.682	497.160	0.250
11	497.450	2.951 *	497.310	1.092	497.270	0.818	497.280	0.839	497.220	0.633	497.160	0.239
12	497.460	3.750	497.310	1.044	497.270	0.921 *	497.280	1.004 *	497.210	0.585	497.160	0.247
13	497.460	3.823	497.310	1.095	497.270	0.921 #	497.240	0.686	497.210	0.525	497.180	0.352
14	497.460	3.661	497.340	1.346	497.270	1.053	497.240	0.644	497.170	0.299	497.180	0.331 *
15	497.460	3.528	497.370	1.911 *	497.260	0.736	497.240	0.692 #	497.170	0.334	497.180	0.366
16	497.460	3.469	497.500	3.989	497.240	0.697	497.230	0.543	497.170	0.283 *	497.210	0.545
17	497.450	3.191	497.500	4.196	497.240	0.708	497.220	0.524	497.160	0.300	497.190	0.348
18	497.450	2.951 *	497.480	3.834	497.290	1.091 *	497.220	0.520	497.160	0.262	497.180	0.355
19	497.410	2.409	497.470	3.497	497.290	1.091 *	497.220	0.558 *	497.160	0.283	497.160	0.245
20	497.410	2.359	497.470	3.338	497.290	1.045	497.230	0.591	497.160	0.269	497.160	0.263
21	497.410	2.394	497.500	4.055	497.290	1.017	497.240	0.663	497.160	0.280	497.210	0.495 *
22	497.370	1.513	497.500	3.712 *	497.290	0.989	497.260	0.841 *	497.160	0.239 *	497.180	0.337
23	497.370	1.523	497.500	3.811	497.280	1.005	497.240	0.656	497.160	0.239 *	497.180	0.335
24	497.370	1.430	497.500	3.828	497.280	1.053	497.240	0.662	497.160	0.244	497.210	0.492
25	497.370	1.911 *	497.450	2.991	497.280	0.974	497.280	1.145	497.160	0.238	497.340	1.557
26	497.370	1.452	497.410	2.404 *	497.280	1.004 *	497.280	1.004 *	497.160	0.229	497.350	1.551
27	497.340	1.655	497.380	2.065	497.270	0.807	497.280	1.004 #	497.160	0.233	497.350	1.623
28	497.340	1.608	497.380	1.875	497.260	0.720	497.340	1.660	497.160	0.239	497.550	4.557 *
29	497.340	1.573	497.370	1.911 *			497.310	1.236	497.160	0.225	497.470	3.289
30	497.340	1.523	497.350	1.427			497.310	1.170	497.160	0.239 *	497.380	2.017
31	497.340	1.436	497.340	1.721			497.390	1.892			497.350	1.615
Ten-Daily Mean												
I Ten-Daily	497.419	2.579	497.323	1.299	497.324	1.370	497.270	0.852	497.269	1.027	497.164	0.257
II Ten-Daily	497.447	3.209	497.406	2.534	497.269	0.908	497.240	0.660	497.179	0.377	497.176	0.329
III Ten-Daily	497.360	1.638	497.425	2.709	497.279	0.946	497.288	1.085	497.160	0.240	497.325	1.624
Monthly												
Min.	497.340	1.430	497.310	1.044	497.240	0.697	497.220	0.520	497.160	0.225	497.160	0.232
Max.	497.460	3.823	497.500	4.196	497.340	1.663	497.390	1.892	497.340	1.674	497.550	4.557
Mean	497.407	2.449	497.386	2.198	497.291	1.084	497.267	0.873	497.203	0.548	497.225	0.765

Peak Computed Discharge = 325.6 cumecs on 06-08-2022

Corres. Water Level :502.1 m

Lowest Computed Discharge = 0.239 cumecs on 22-04-2023

Corres. Water Level :497.16 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

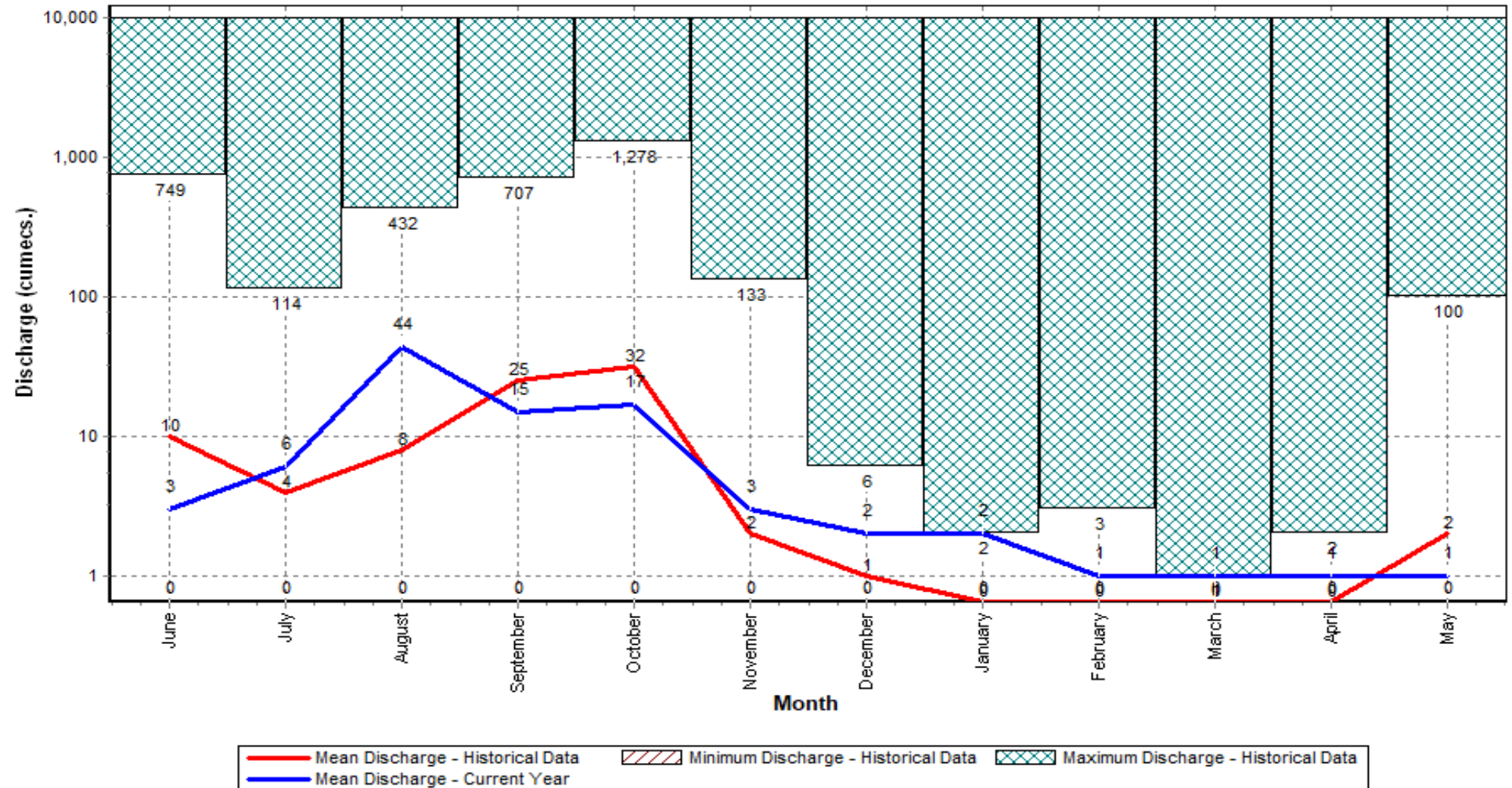
Station Name : Talikot (Seasonal) (AKQ00E2)

Data considered : 1996-2023

Division : Upper Krishna Divn, Pune

Local River : Don

Sub-Division : Middle Krishna SD 1, Bagalkot



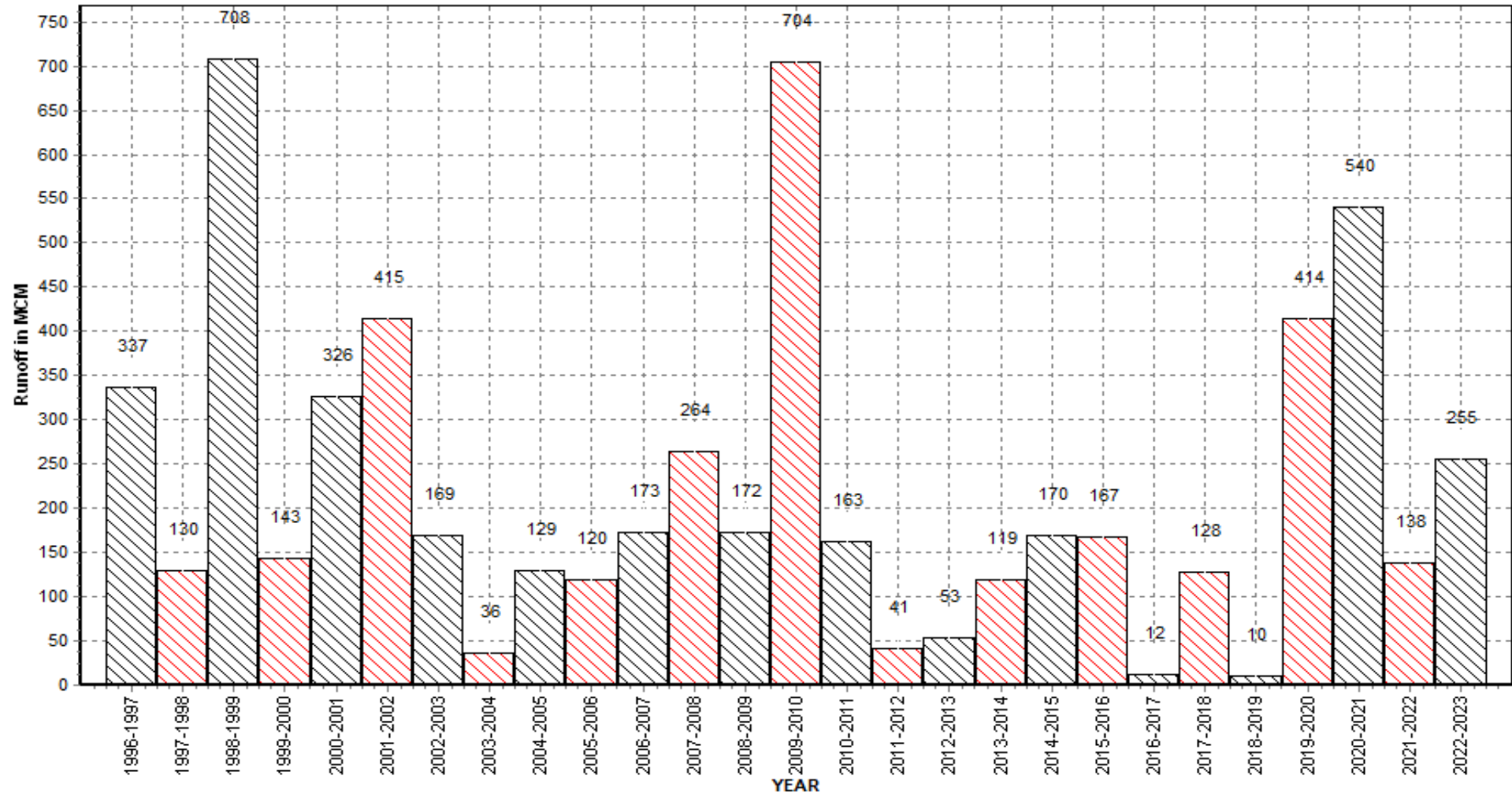
Annual Runoff Values for the period: 1996 - 2023

Station Name : Talikot (Seasonal) (AKQ00E2)

Local River : Don

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



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

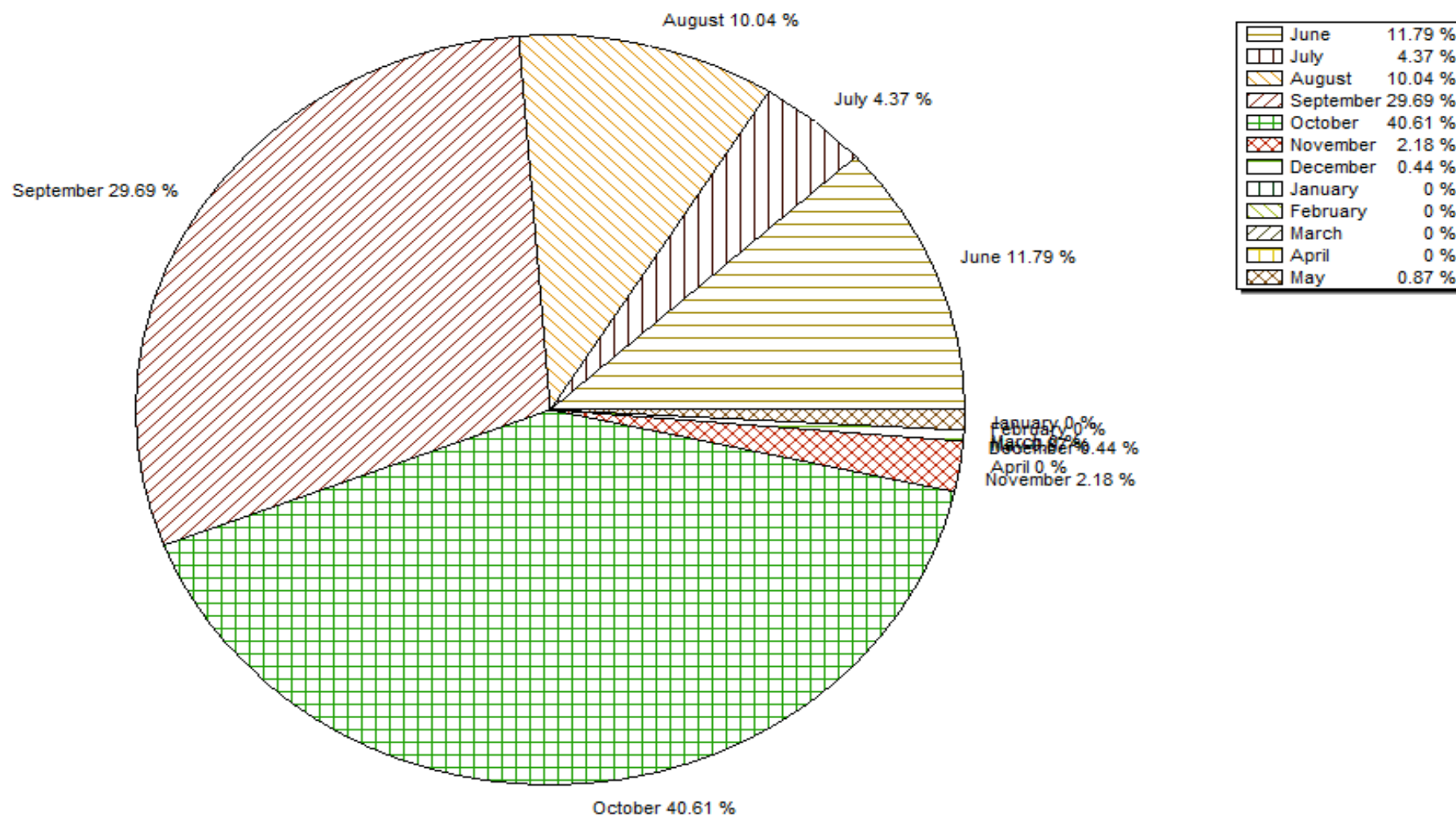
Monthly Average Runoff based on period : 1996-2022

Station Name : Talikot (Seasonal) (AKQ00E2)

Local River : Don

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



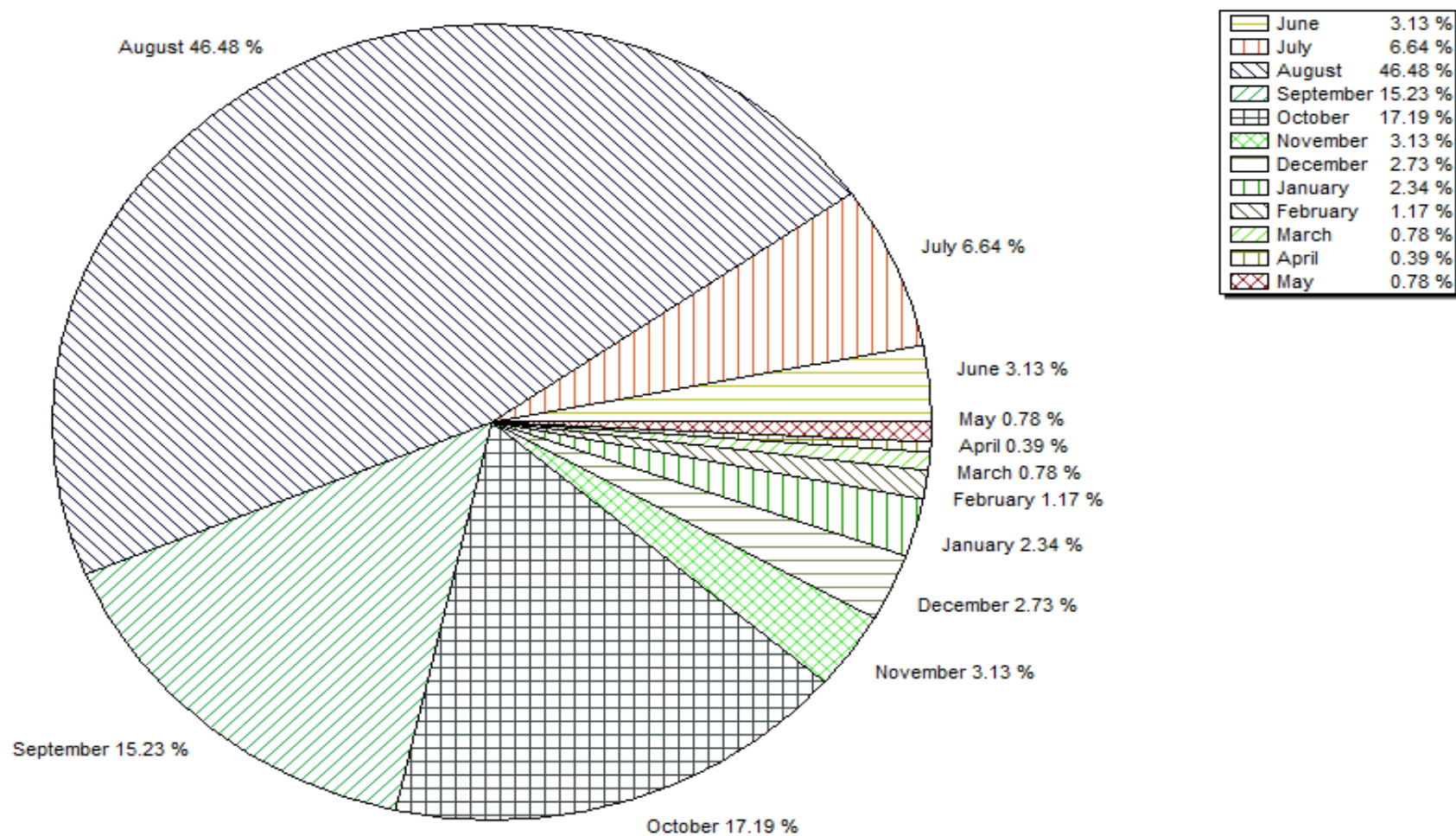
Monthly Runoff for the Year : 2022-2023

Station Name : Talikot (Seasonal) (AKQ00E2)

Local River : Don

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



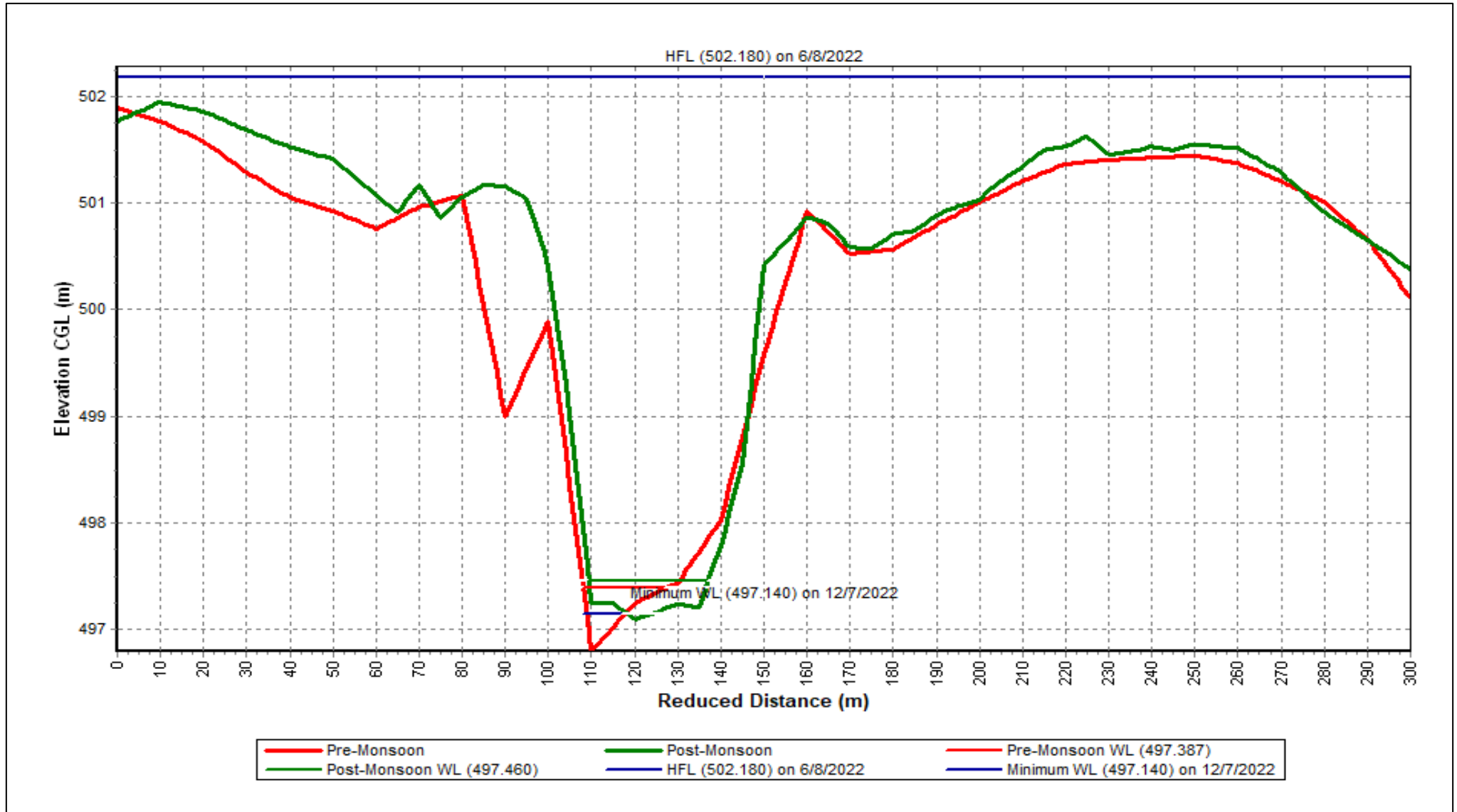
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Talikot (Seasonal) (AKQ00E2)

Local River : Don

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



Zero of the Gauge : 496 (m.s.l)

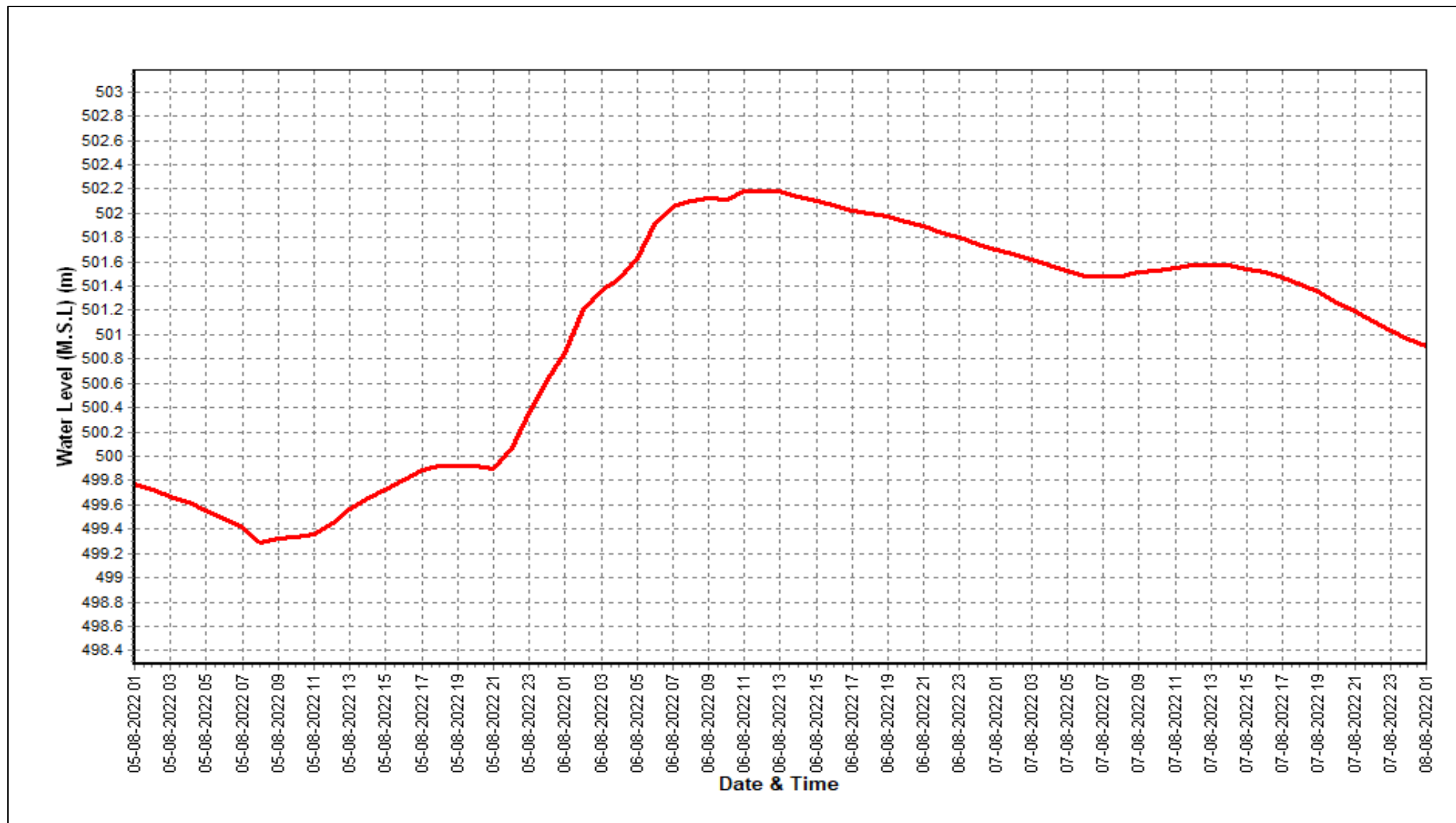
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Talikot (Seasonal) (AKQ00E2)

Local River : Don

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



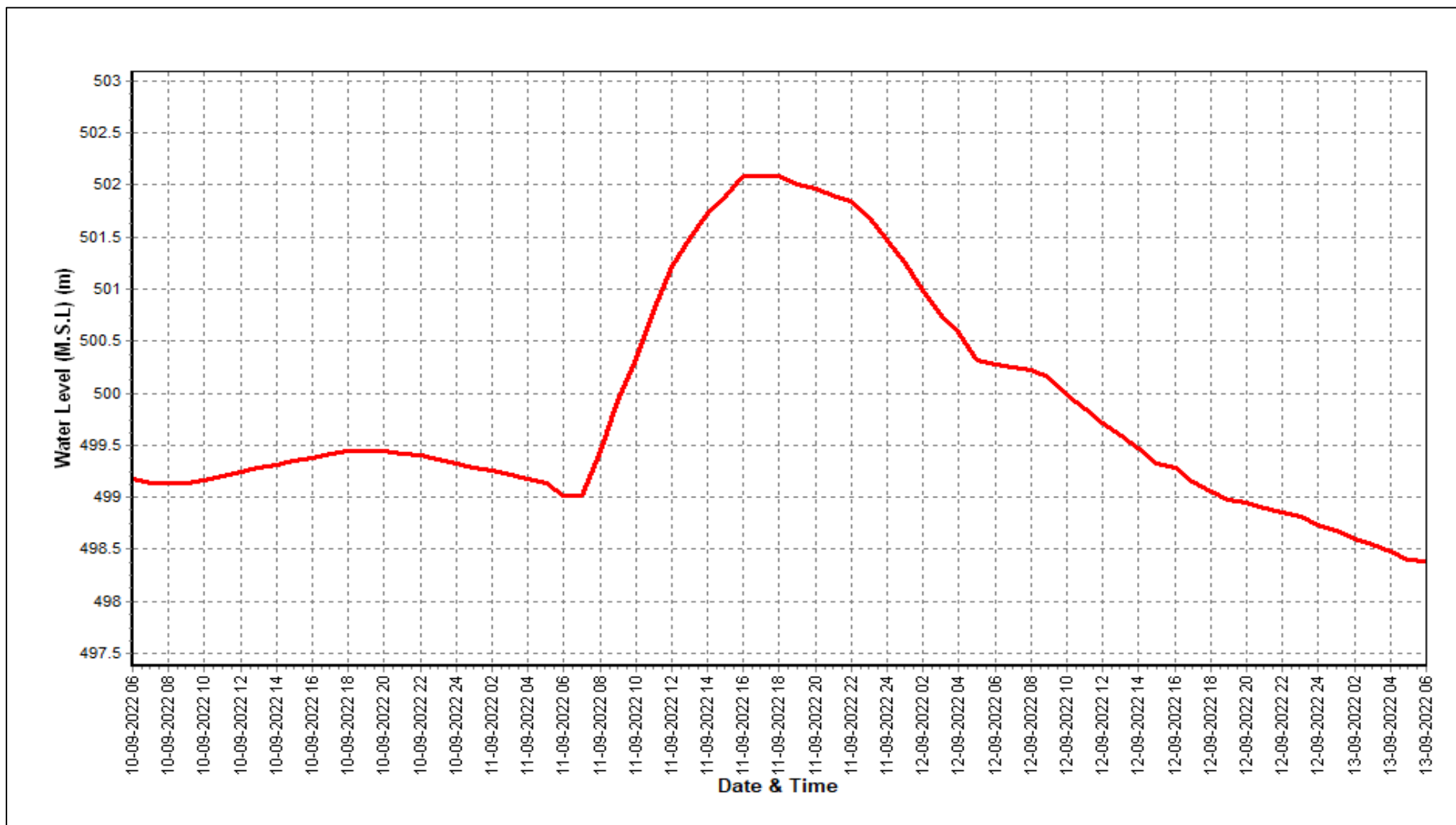
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Talikot (Seasonal) (AKQ00E2)

Local River : Don

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



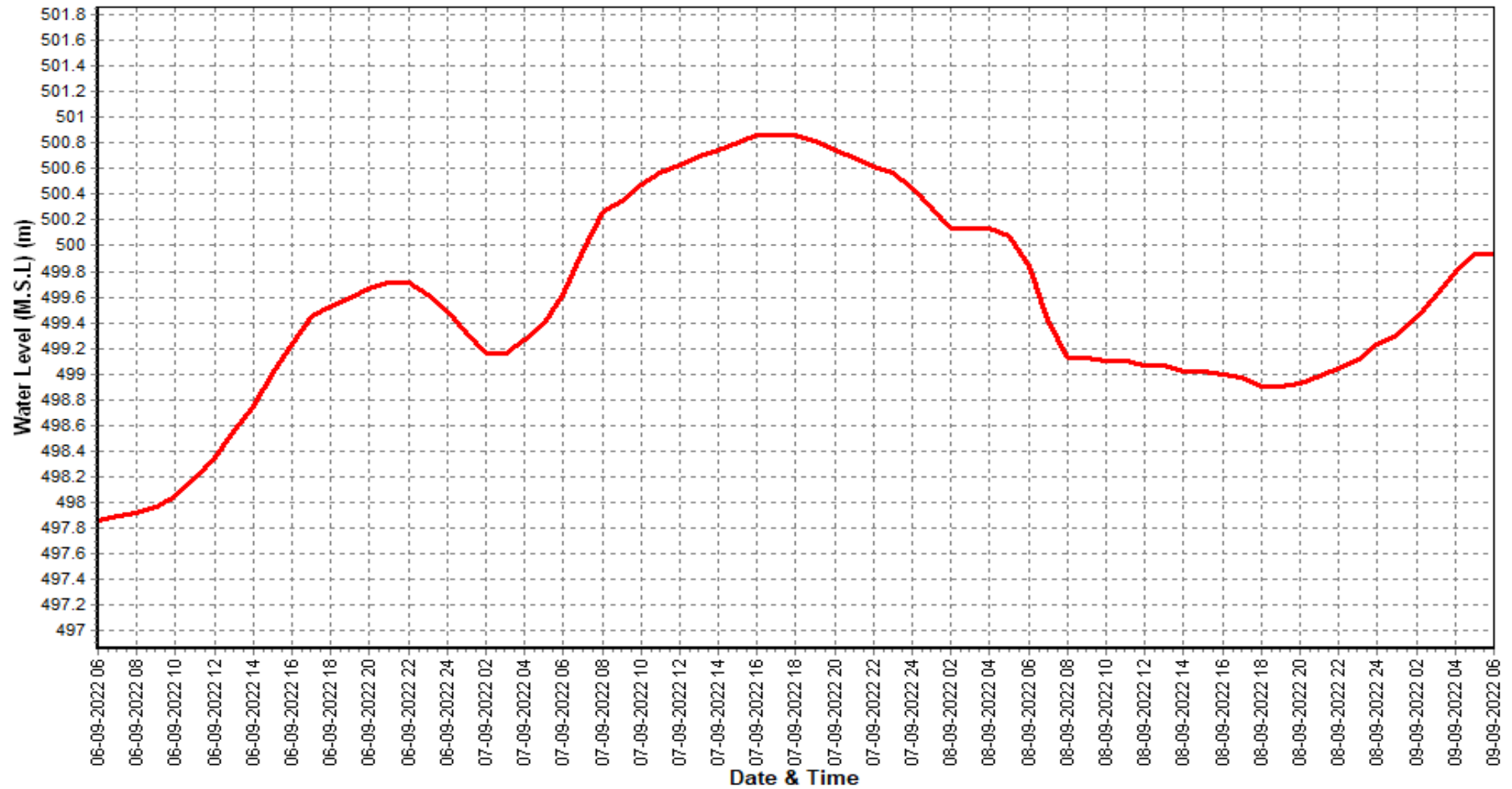
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Talikot (Seasonal) (AKQ00E2)

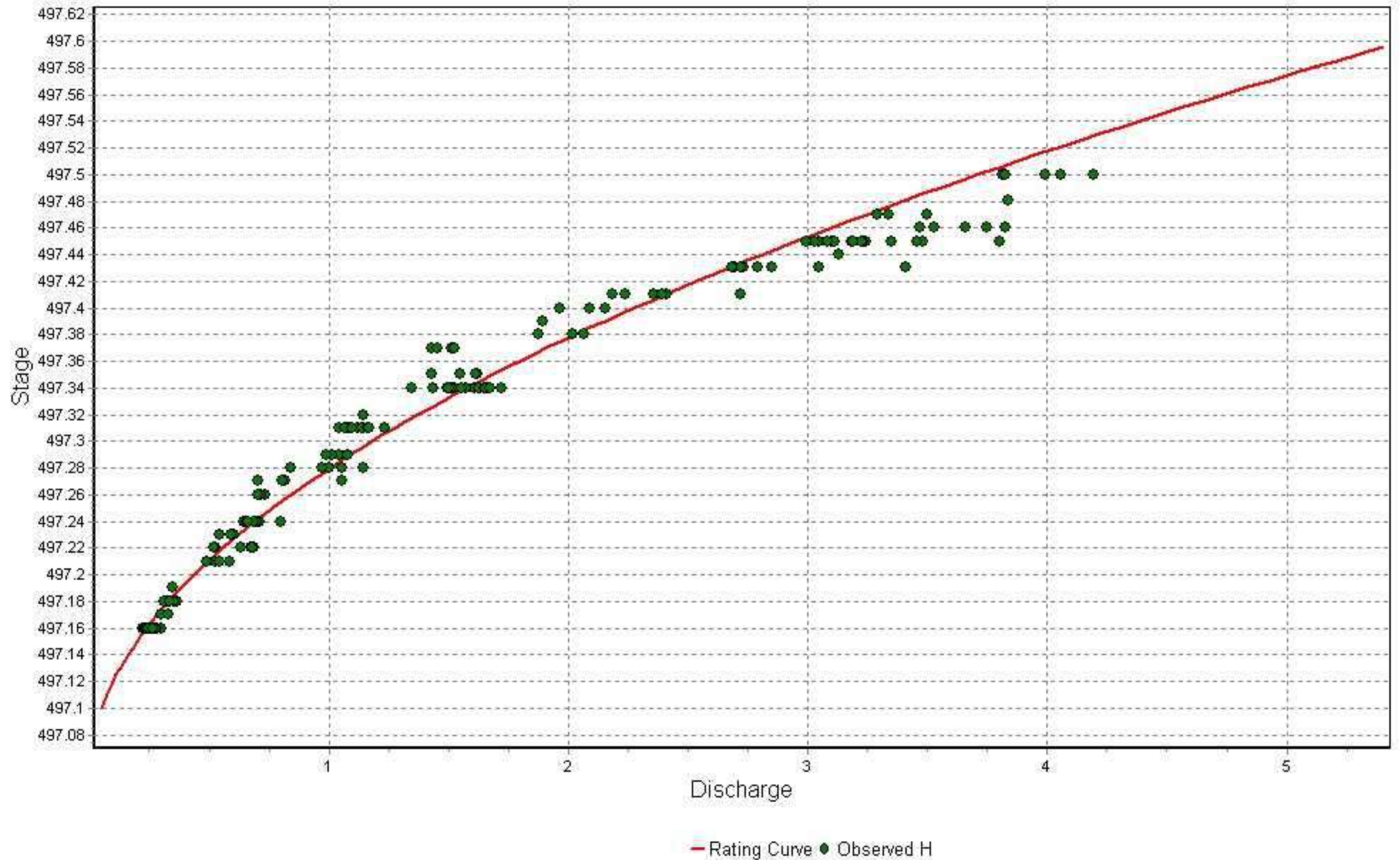
Local River : Don

Division : Upper Krishna Divn, Pune

Sub-Division : Middle Krishna SD 1, Bagalkot



S-D curve of site Talikot for the period from 01.11.2022 to 31.05.2023
Range:- 497.10 to 497.60, a= -497.05(f), b=1.948, c= 17.58, OSE= 11.054 (No. of data= 165)



HISTORY SHEET

Water Year : 2022-2023

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)
342.24 (m.s.l)01-02-1976 - 31-05-1981
01-06-1981

Opening Date

Closing Date

Gauge : 01-02-1976

HFL During 2022-23 : 353.220 m
Corres. Discharge : 6980 (Estimated)

Discharge : 01-02-1976

Date & Time of
occurrence : 14-08-2022
: 08:00 Hrs

Sediment : 01-06-1976

Water Quality : 01-02-1976

HFL Recorded so far in m : 358.550 dt 11-08-2019

Corresponding Discharge (cumecs) : 15654 *

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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	345.230	24-03-2016
2016-2017	7054	353.230	11-08-2016	0.000	345.310	16-05-2017
2017-2018	4237	351.320	16-10-2017	0.000	345.310	11-06-2017
2018-2019	5556	352.510	24-07-2018	0.000	345.350	04-01-2019
2019-2020	17722	358.550	02-10-2019	0.000	345.110	02-06-2019
2020-2021	8461	354.150	21-08-2020	0.000	345.690	24-12-2020
2021-2022	8972	355.860	31-07-2021	4.664	345.320	03-01-2022

Annual Runoff of Krishna at Huvinhedigi							
Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1975-1976		209	209	0	7	7
2	1976-1977	21720	462	22181	767	16	784
3	1977-1978	18932	907	19839	669	32	701
4	1978-1979	21395	392	21787	756	14	770
5	1979-1980	20765	737	21502	734	26	760
6	1980-1981	23442	362	23804	828	13	841
7	1981-1982	23055	595	23650	815	21	836
8	1982-1983	16675	724	17399	589	26	615
9	1983-1984	22211	694	22905	785	25	809
10	1984-1985	14325	397	14722	506	14	520
11	1985-1986	11097	275	11372	392	10	402
12	1986-1987	10227	216	10444	361	8	369
13	1987-1988	9185	355	9540	325	13	337
14	1988-1989	20319	386	20705	718	14	732
15	1989-1990	13439	554	13993	475	20	494
16	1990-1991	18675	503	19178	660	18	678
17	1991-1992	23993	412	24405	848	15	862
18	1992-1993	12676	685	13361	448	24	472
19	1993-1994	18579	1594	20173	657	56	713
20	1994-1995	31454	626	32080	1111	22	1134
21	1995-1996	9493	363	9855	335	13	348
22	1996-1997	13597	570	14166	480	20	501
23	1997-1998	21439	626	22065	758	22	780
24	1998-1999	15964	636	16600	564	22	587
25	1999-2000	16569	562	17131	585	20	605
26	2000-2001	7368	689	8056	260	24	285
27	2001-2002	7243	720	7963	256	25	281
28	2002-2003	3833	859	4692	135	30	166
29	2003-2004	2439	1093	3532	86	39	125
30	2004-2005	9321	958	10279	329	34	363
31	2005-2006	25654	923	26578	907	33	939
32	2006-2007	25856	939	26794	914	33	947
33	2007-2008	20848	846	21694	737	30	767
34	2008-2009	10759	806	11564	380	28	409
35	2009-2010	11348	1158	12505	401	41	442
36	2010-2011	9657	869	10526	341	31	372
37	2011-2012	13622	511	14134	481	18	499
38	2012-2013	4728	423	5151	167	15	182
39	2013-2014	11674	496	12171	413	18	430
40	2014-2015	10483	396	10880	370	14	384
41	2015-2016	982	177	1158	35	6	41
42	2016-2017	7948	195	8143	281	7	288
43	2017-2018	5907	118	6025	209	4	213
44	2018-2019	11032	167	11199	390	6	396
45	2019-2020	33820	348	34169	1195	12	1207
46	2020-2021	20527	181	20708	725	6	732
47	2021-2022	15556	501	16058	550	18	567
48	2022-2023	20878	447	21325	738	16	754
Average		15334	576	15591	531	20	551

Instantaneous Flood Peak of Krishna at Huvinhedgi

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
2	1976-1977	350.758	07-08-1976	13:00:00	8742 *
3	1977-1978	349.528	30-07-1977	17:00:00	6312 *
4	1978-1979	349.888	21-08-1978	14:00:00	6174 *
5	1979-1980	351.353	14-08-1979	09:00:00	8830 *
6	1980-1981	350.678	09-07-1980	15:00:00	7912 *
7	1981-1982	352.980	13-07-1981	19:00:00	7245 *
8	1982-1983	352.740	19-08-1982	22:00:00	6025 *
9	1983-1984	353.970	19-08-1983	13:00:00	7749 *
10	1984-1985	353.230	23-07-1984	14:00:00	6692 *
11	1985-1986	352.570	06-08-1985	06:00:00	5800 *
12	1986-1987	352.690	14-08-1986	23:00:00	5959 *
13	1987-1988	351.990	11-07-1987	11:00:00	5057 *
14	1988-1989	353.840	09-08-1988	10:00:00	7559 *
15	1989-1990	354.060	30-07-1989	13:00:00	7882 *
16	1990-1991	353.520	24-08-1990	20:00:00	7099 *
17	1991-1992	354.100	03-08-1991	10:00:00	7941 *
18	1992-1993	352.210	19-08-1992	06:00:00	5334 *
19	1993-1994	353.750	20-10-1993	21:00:00	7428 *
20	1994-1995	355.120	21-07-1994	02:00:00	9514 *
21	1995-1996	351.680	26-07-1995	09:00:00	4675 *
22	1996-1997	353.160	08-10-1996	06:00:00	6595 *
23	1997-1998	354.350	12-08-1997	09:00:00	8316 *
24	1998-1999	352.810	15-10-1998	11:00:00	6119 *
25	1999-2000	353.790	28-07-1999	09:00:00	7486 *
26	2000-2001	352.420	17-07-2000	15:00:00	5604 *
27	2001-2002	352.540	08-10-2001	01:00:00	5761 *
28	2002-2003	351.900	15-08-2002	18:00:00	4945 *
29	2003-2004	348.880	02-08-2003	17:00:00	1712 *
30	2004-2005	353.220	11-08-2004	07:00:00	6678 *
31	2005-2006	356.350	08-08-2005	03:00:00	11565 *
32	2006-2007	355.320	17-08-2006	12:00:00	9836 *
33	2007-2008	353.950	10-08-2007	05:00:00	7720 *
34	2008-2009	354.290	20-08-2008	08:00:00	8225 *
35	2009-2010	358.420	02-10-2009	14:00:00	15398 *
36	2010-2011	354.270	31-07-2010	10:00:00	8195 *
37	2011-2012	354.770	08-09-2011	08:00:00	8961 *
38	2012-2013	351.380	06-09-2012	13:00:00	4316 *
39	2013-2014	353.970	30-07-2013	12:00:00	7749 *
40	2014-2015	351.720	05-08-2014	16:00:00	4724 *
41	2015-2016	348.270	11-09-2015	20:00:00	1182 *
42	2016-2017	354.130	05-08-2016	09:00:00	7986 *
43	2017-2018	352.020	16-10-2017	14:00:00	5094 *
44	2018-2019	352.570	24-07-2018	13:00:00	5800 *
45	2019-2020	358.550	11-08-2019	14:00:00	15655 *
46	2020-2021	354.230	21-08-2020	14:00:00	8135 *
47	2021-2022	355.860	31-07-2021	08:00:00	8972 *
48	2022-2023	353.220	14-08-2022	13:00:00	6980 *

Note :- 1982-1983 onwards Discharge Curve is Different due to change of Zero of the gauge

Stage-Discharge Data for the period 2022 - 2023

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	345.480	15.67	345.430	10.86	347.410	573.0	347.600	681.1	347.370	595.8	346.690	298.9
2	346.350	138.5	345.500	12.27	347.390	642.4	348.580	1673	347.830	898.2 *	346.710	307.4
3	346.070	70.73	345.410	9.863 *	348.780	1568	348.080	1113	348.830	1933	346.690	300.4
4	345.730	30.35	345.360	7.017	348.510	1476	348.610	1455 *	348.340	1368	346.270	173.4
5	345.630	22.45 *	345.310	5.650	347.410	620.0	348.780	1834	347.390	637.7 *	346.130	126.3
6	345.510	15.76	345.280	4.891	347.240	518.1	347.190	503.2	346.580	251.5	346.200	141.4 *
7	345.660	21.22	345.290	6.049	347.240	558.0 *	350.070	3065	346.890	430.4	346.070	115.0
8	345.800	34.69	345.290	5.637	347.240	508.6	351.970	5264	348.360	1401	345.950	79.30 *
9	345.700	29.79	345.330	6.379	350.340	3097 *	350.380	3131	348.540	1400 *	345.930	79.13
10	345.720	28.12	345.340	7.122 *	351.420	4758	349.170	1873	348.350	1215	345.900	70.60
11	345.970	57.52	345.340	7.456	352.650	6091	349.650	2377 *	348.750	1762	345.870	62.12
12	345.760	33.12 *	345.340	8.191	352.590	6004	349.400	2212	347.810	830.7	345.870	62.84 *
13	345.570	15.47	350.470	2954	353.110	6807	351.190	4028	351.080	4109	345.870	62.84 *
14	345.490	13.85	351.160	3687	353.110	6771	351.650	5086	352.580	5944	345.900	72.50
15	345.430	10.11	351.170	3728	352.980	6484	352.100	5260	351.940	5226	345.900	68.64
16	345.390	8.639	351.190	3746	351.590	4725	352.170	5381	348.240	1176 *	345.900	70.35
17	345.740	29.32	352.010	5180 *	351.010	3965	350.940	3612	350.720	3592	345.900	69.56
18	345.720	29.09	351.825	5055	351.310	4408	351.410	4377 *	350.020	2650	345.890	72.14
19	345.690	27.05 *	350.640	3001	350.640	3557	351.070	4056	347.480	684.4	345.890	73.53
20	345.480	15.67	350.225	2663	350.640	3573	350.330	3250	347.840	967.6	345.890	66.79 *
21	345.410	9.454	349.370	1778	349.740	2466 *	347.730	789.3	350.310	3189	345.890	72.56
22	345.370	8.663	348.680	1511	348.650	1769	348.600	1434	348.560	1430	345.990	88.16
23	345.480	18.79	349.140	1738	349.180	2065	346.900	408.9	348.990	1769 *	345.890	75.94
24	345.530	17.47	347.420	654.2 *	349.260	1980	346.710	305.7	351.130	4023 *	345.890	70.93
25	345.480	16.40	346.510	205.3	348.990	1853	346.110	117.2 *	347.620	678.4	345.880	75.69
26	345.440	11.21 *	346.430	171.0	347.940	1050	345.930	72.92	346.920	404.5	345.880	77.66
27	345.380	9.419	345.990	73.37	348.650	1575	346.100	102.2	347.050	526.5	345.740	39.78 *
28	345.350	7.284	347.140	408.9	349.470	2203 *	346.140	129.9	346.740	335.0	345.670	29.34 #
29	345.340	8.071	347.240	459.0	348.200	1165	346.250	150.1	346.570	256.6	345.670	29.34 #
30	345.440	12.00	347.650	699.7	348.010	1041	346.510	218.7	346.490	232.7 *	345.640	30.65
31			348.140	1105 *	347.970	989.3 *			346.650	264.5		
Ten-Daily Mean												
I Ten-Daily	345.765	40.72	345.354	7.574	348.298	1432	349.043	2059	347.848	1013	346.254	169.2
II Ten-Daily	345.624	23.98	349.937	3003	351.963	5239	350.991	3964	349.646	2694	345.888	68.13
III Ten-Daily	345.422	11.88	347.610	800.3	348.733	1651	346.698	372.9	347.912	1192	345.814	59.01
Monthly												
Min.	345.340	7.284	345.280	4.891	347.240	508.6	345.930	72.92	346.490	232.7	345.640	29.34
Max.	346.350	138.5	352.010	5180	353.110	6807	352.170	5381	352.580	5944	346.710	307.4
Mean	345.604	25.53	347.633	1255	349.635	2737	348.911	2132	348.451	1619	345.985	98.77

Annual Runoff in MCM = 21325 Annual Runoff in mm = 387

Peak Observed Discharge = 6807 cumecs on 13-08-2022 Corres. Water Level :353.11 m

Lowest Observed Discharge = 2.967 cumecs on 06-01-2023 Corres. Water Level :345.19 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 2022 - 2023

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	345.620	35.31	345.400	14.18 *	345.330	9.647	345.570	27.96	345.790	53.98	345.690	45.50
2	345.620	35.31	345.330	8.056	345.500	22.45	345.700	40.90	345.720	48.64 *	345.945	90.26
3	345.640	39.90	345.375	10.57	345.590	31.78	345.660	39.93	345.620	34.67	345.990	96.54
4	345.660	40.35 *	345.300	7.247	345.690	48.08	345.690	46.39	345.540	26.37 *	345.820	62.99
5	345.680	46.65	345.220	3.788	345.730	50.11 *	345.720	48.64 *	345.420	16.66	345.650	39.06 *
6	345.710	48.26	345.190	2.967	345.770	56.21	345.730	50.58	345.380	12.92	345.560	27.25
7	345.680	44.57	345.190	4.152	345.790	60.29	345.740	51.84	345.360	11.47 *	345.490	21.52 *
8	345.680	43.40	345.320	9.080 *	345.780	54.73	345.740	51.60	345.320	9.080 *	345.420	15.59
9	345.680	42.30	345.420	14.30	345.750	51.64	345.740	51.60	345.290	7.494 *	345.690	45.41
10	345.590	31.78 *	345.400	16.19	345.720	48.60	345.710	47.20	345.440	19.19	345.620	35.31 *
11	345.590	31.78 *	345.590	36.74	345.810	62.76 *	345.610	34.11 *	345.530	25.35	345.540	25.46
12	345.550	27.40	345.690	44.39	345.810	62.76 *	345.530	25.35 *	345.590	31.78	345.470	17.89
13	345.520	24.36	345.650	39.06	345.880	77.72	345.510	26.27	345.630	36.35	345.470	19.74 *
14	345.590	31.78	345.800	61.09 *	345.660	37.80	345.430	15.70	345.600	32.94 *	345.390	13.47 *
15	345.590	29.15	345.840	67.93 *	345.600	32.77	345.410	12.60	345.530	25.54	345.340	10.01
16	345.625	35.75	345.860	71.11	345.540	25.50	345.330	7.723	345.490	21.52 *	345.300	8.434
17	345.640	36.77	345.810	60.12	345.470	18.63	345.300	9.234	345.440	16.70	345.290	7.699
18	345.630	36.54 *	345.750	50.48	345.410	13.63	345.310	9.257	345.420	15.54	345.290	7.185
19	345.650	40.76	345.690	44.39	345.390	13.47 *	345.350	10.84 *	345.350	10.84	345.280	6.868
20	345.650	41.39	345.770	60.61	345.270	8.217	345.310	6.969	345.360	12.45	345.270	6.024
21	345.665	41.53	345.750	57.76	345.280	6.084	345.360	11.75	345.330	9.735	345.260	6.080 *
22	345.680	43.94	345.670	41.67 *	345.240	7.403	345.360	11.47 *	345.340	10.23 *	345.250	5.269
23	345.680	45.76	345.620	36.54	345.220	6.152	345.460	15.55	345.340	10.23 *	345.250	5.332
24	345.700	48.09	345.520	24.36	345.190	4.893	345.520	22.41	345.320	9.221	345.240	5.042
25	345.720	48.64 *	345.510	23.39	345.230	4.912	345.660	34.62	345.300	8.569	345.230	4.438
26	345.720	51.47	345.490	21.52 *	345.240	5.230 *	345.630	36.54 *	345.320	9.291	345.220	5.052
27	345.700	45.78 #	345.410	17.48	345.410	14.10	345.700	42.15	345.340	10.23	345.220	4.673
28	345.640	37.79 #	345.430	16.85	345.480	21.85	345.720	43.58	345.360	12.64	345.210	4.090 *
29	345.550	27.40 #	345.390	13.47 *			345.780	50.80	345.410	14.78	345.210	4.194
30	345.515	22.44	345.370	14.85			345.790	59.45 *	345.480	20.62 *	345.210	3.787
31	345.440	16.13	345.340	10.23			345.790	55.70			345.220	4.276
Ten-Daily Mean												
I Ten-Daily	345.656	40.78	345.314	9.054	345.665	43.35	345.700	45.67	345.488	24.05	345.688	47.94
II Ten-Daily	345.603	33.57	345.745	53.59	345.584	35.33	345.409	15.81	345.494	22.90	345.364	12.28
III Ten-Daily	345.637	39.00	345.500	25.29	345.286	8.828	345.615	34.91	345.354	11.56	345.229	4.748
Monthly												
Min.	345.440	16.13	345.190	2.967	345.190	4.893	345.300	6.969	345.290	7.494	345.210	3.787
Max.	345.720	51.47	345.860	71.11	345.880	77.72	345.790	59.45	345.790	53.98	345.990	96.54
Mean	345.632	37.82	345.519	29.18	345.528	30.62	345.576	32.22	345.445	19.5	345.420	21.11

Peak Computed Discharge = 5180 cumecs on 17-07-2022

Corres. Water Level :352.01 m

Lowest Computed Discharge = 4.090 cumecs on 28-05-2023

Corres. Water Level :345.21 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

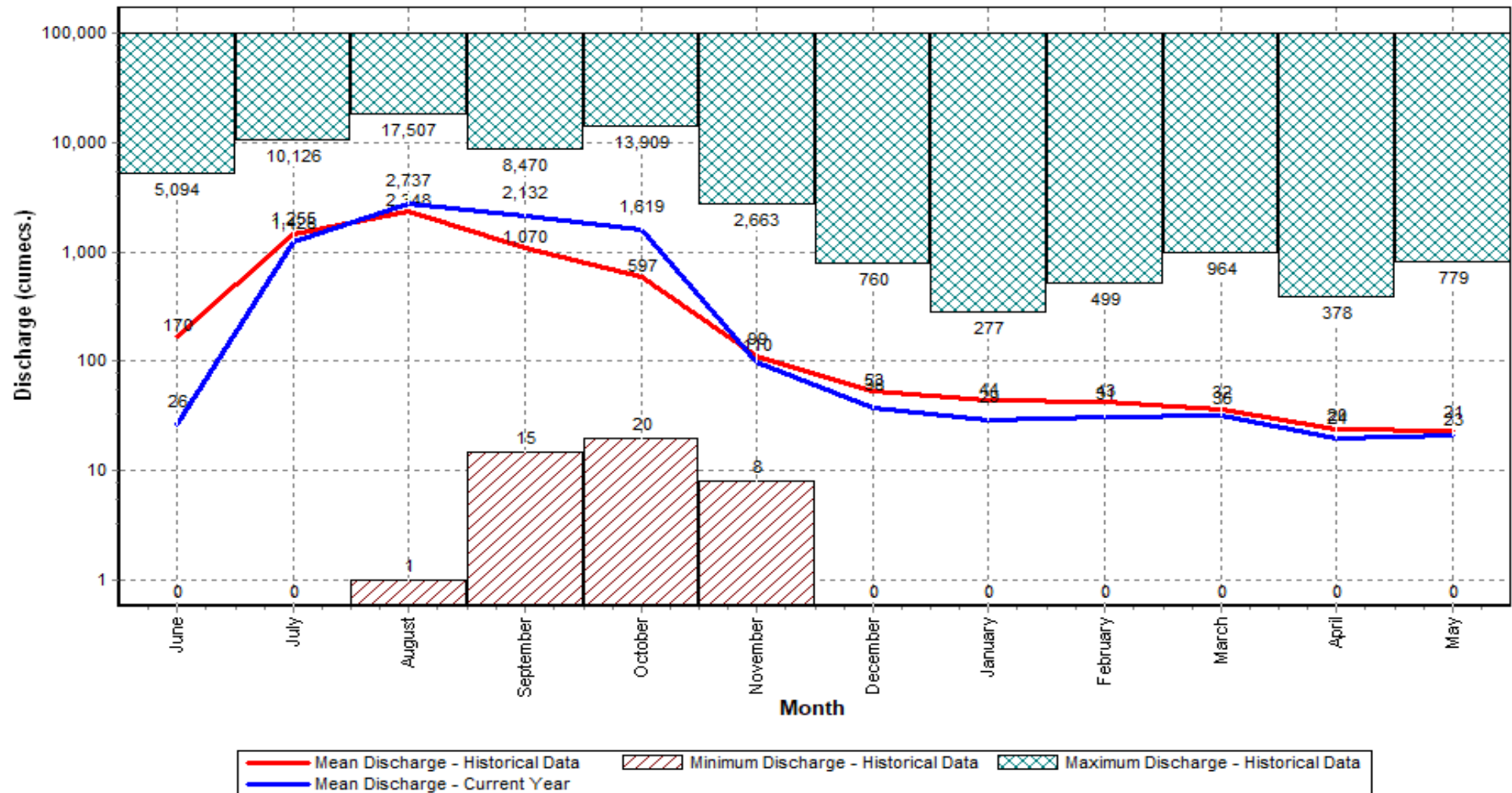
Station Name : Huvinhedigi (AK000N2)

Data considered : 1976-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

Sub-Division : Middle Krishna SD 2 , Kurnool



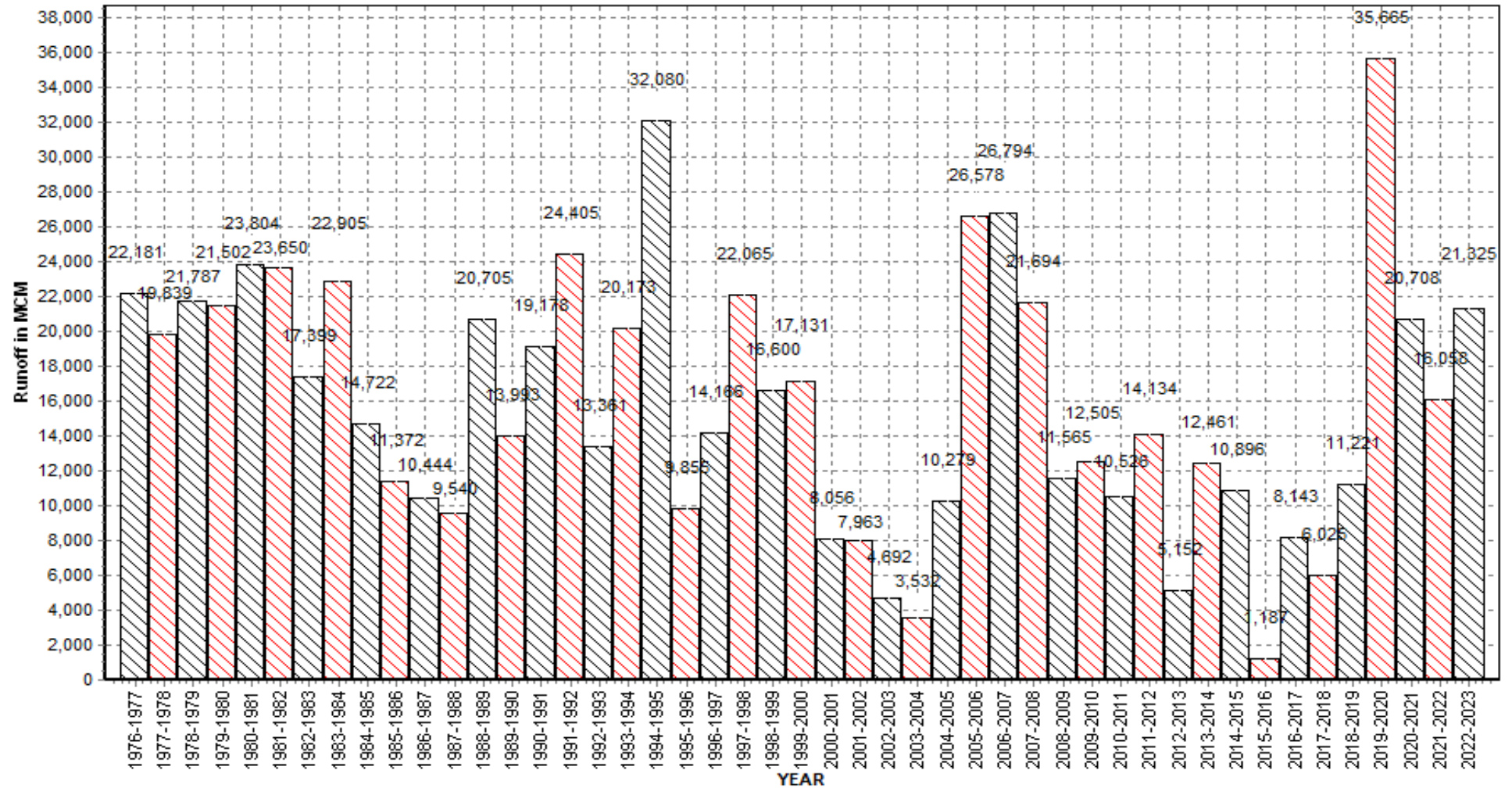
Annual Runoff Values for the period: 1976 - 2023

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

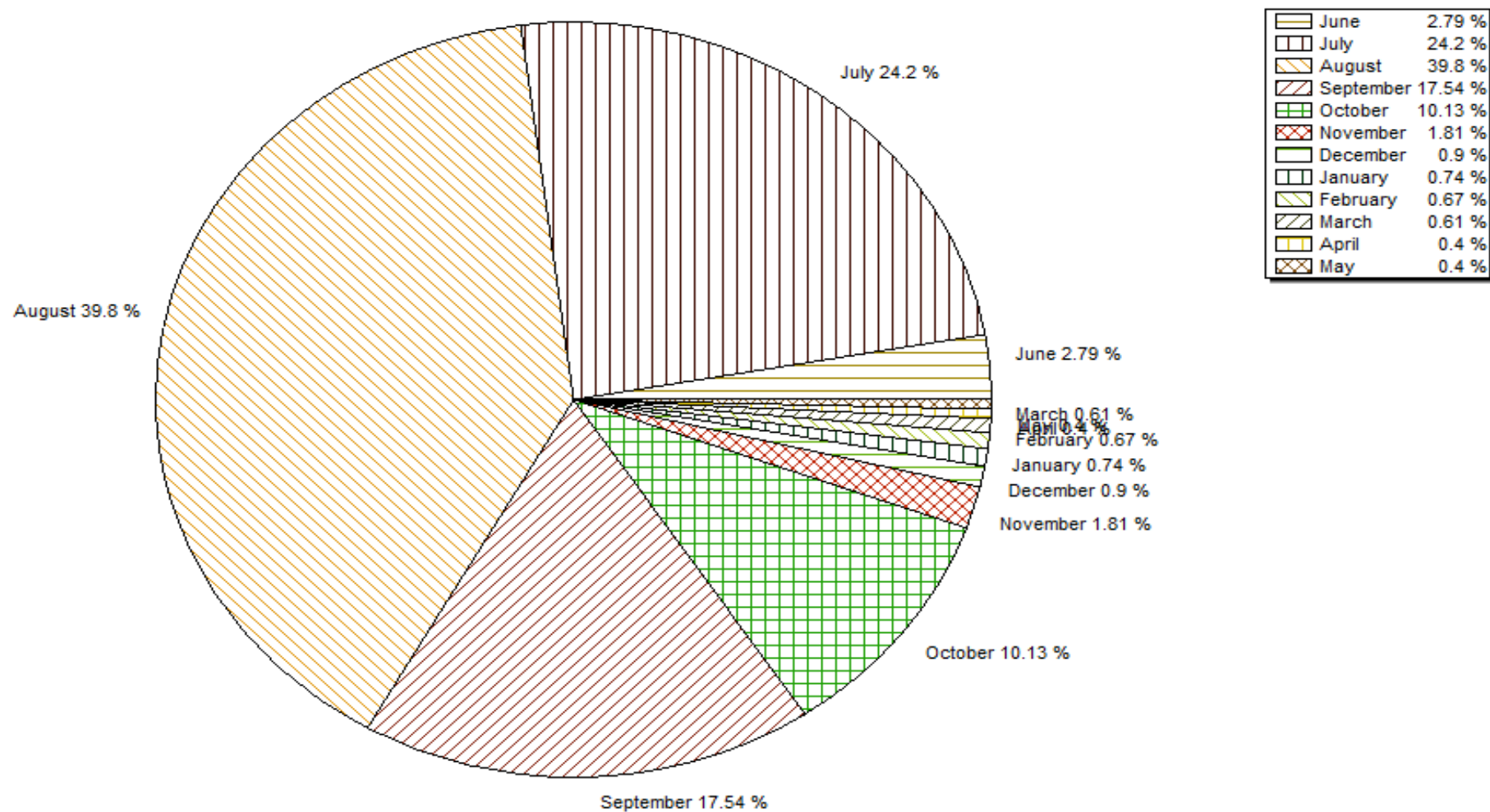
Monthly Average Runoff based on period : 1976-2022

Station Name : Huvinhedigi (AK000N2)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



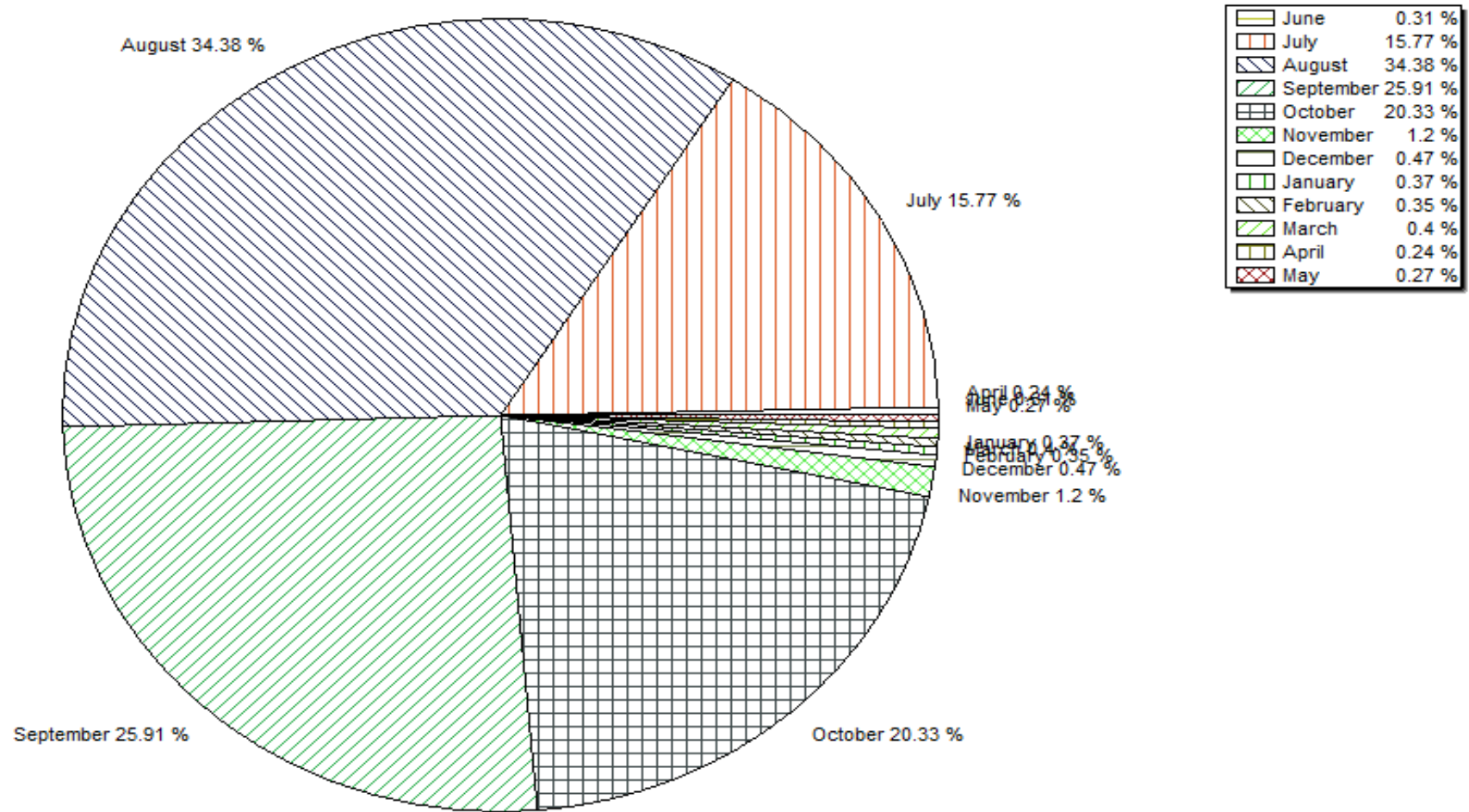
Monthly Runoff for the Year : 2022-2023

Station Name : Huvinhedigi (AK000N2)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



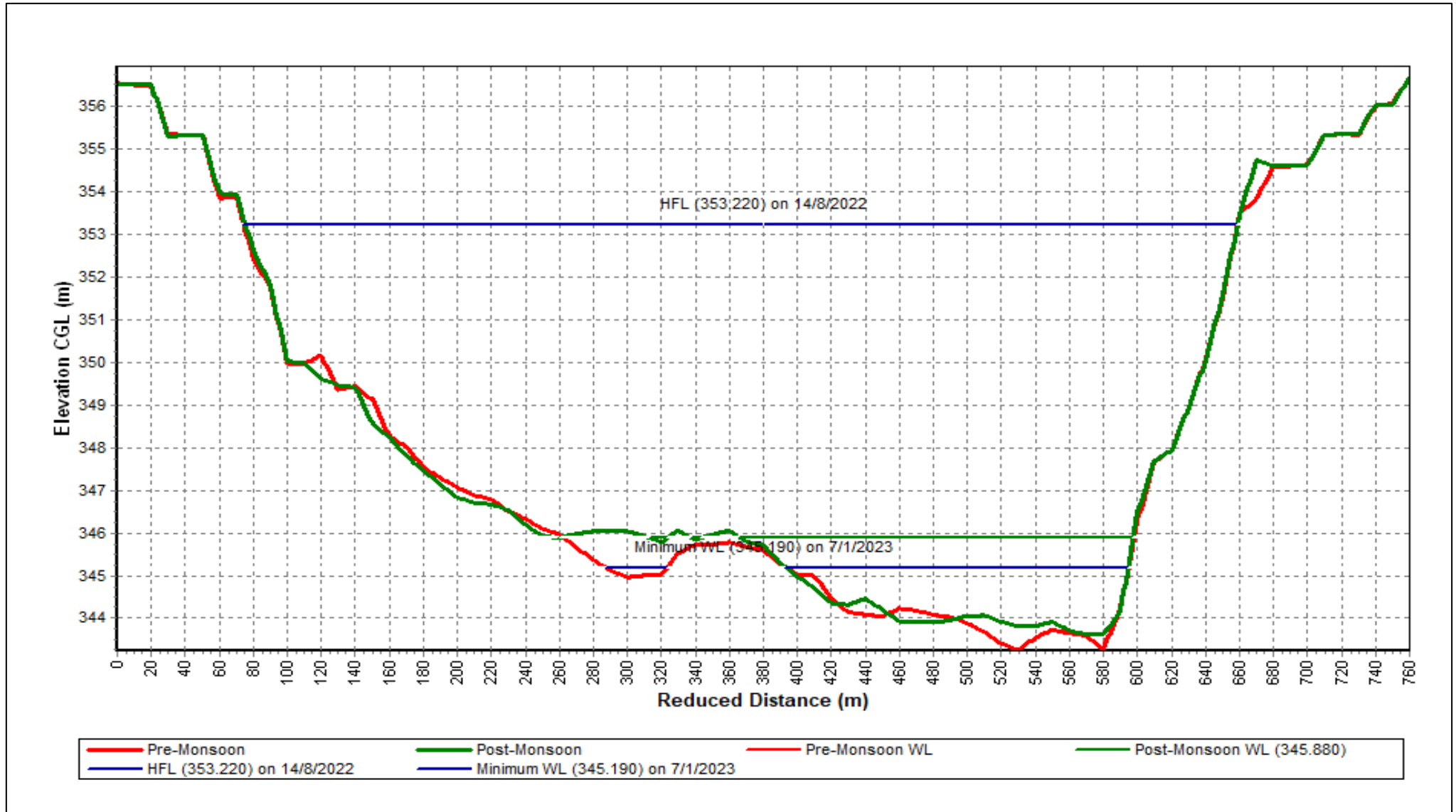
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Huvinhedigi (AK000N2)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



Zero of the Gauge: 342.24 (m.s.l)

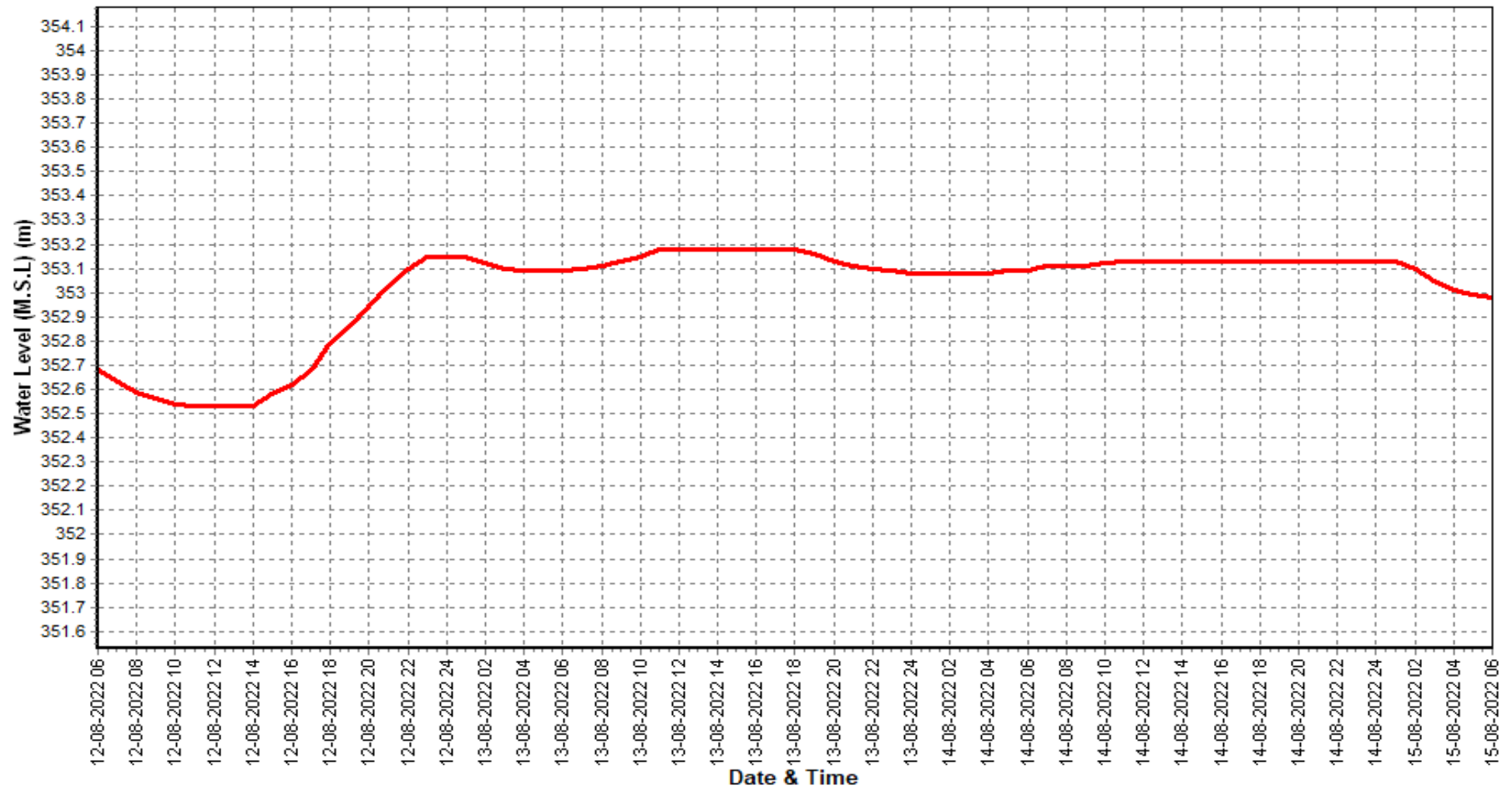
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Huvinhedigi (AK000N2)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



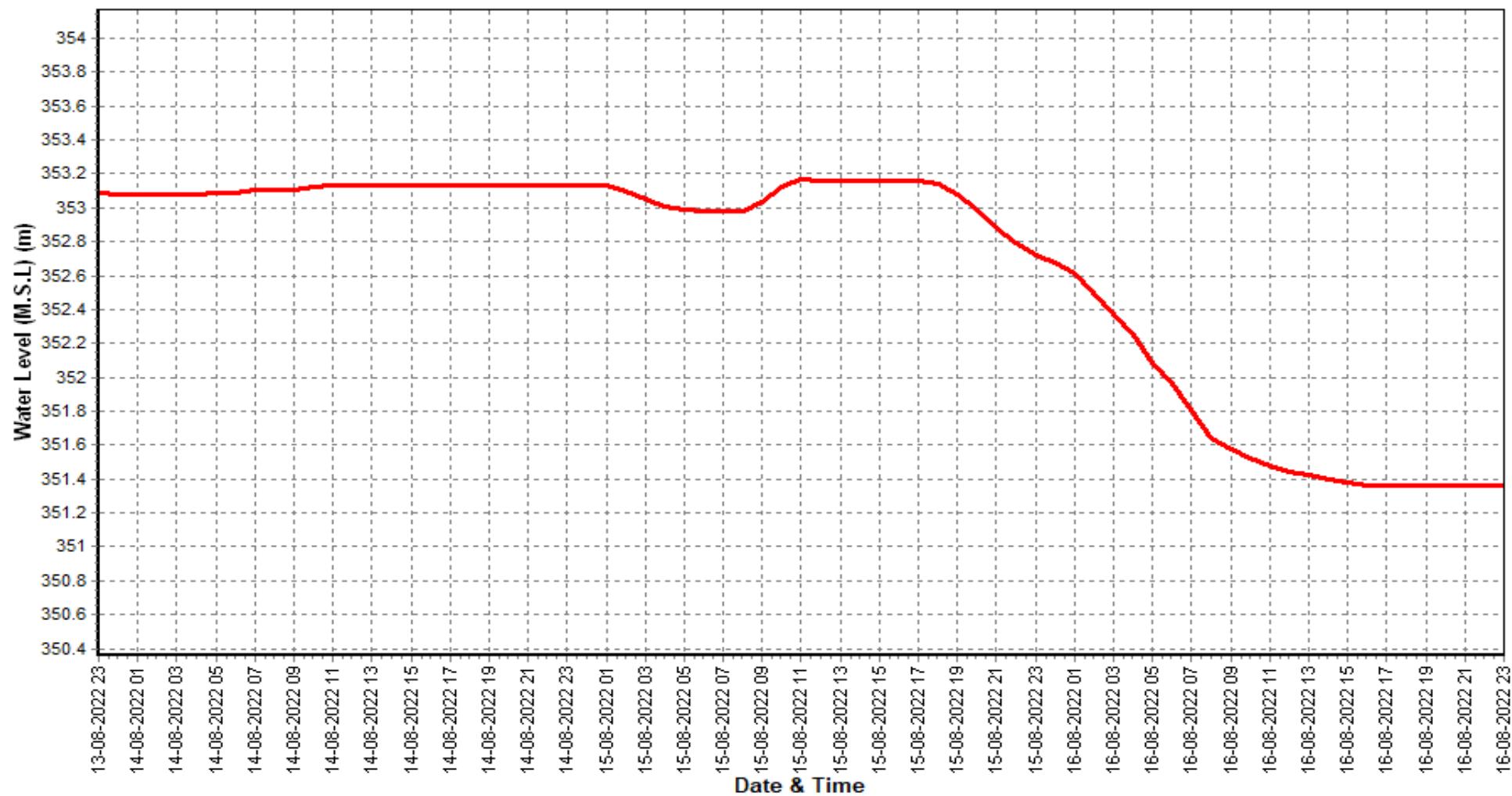
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Huvinhedigi (AK000N2)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



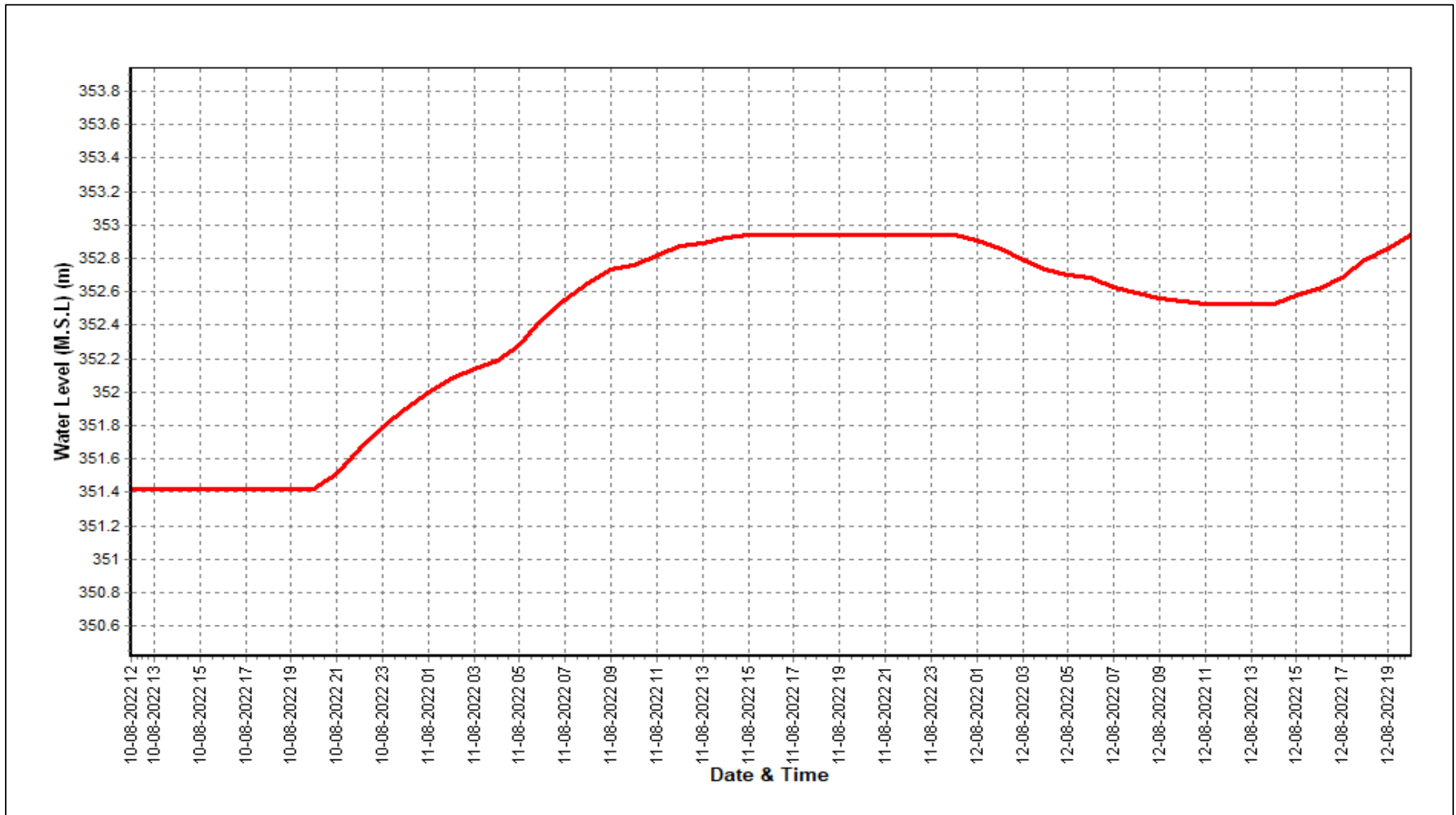
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Huvinhedigi (AK000N2)

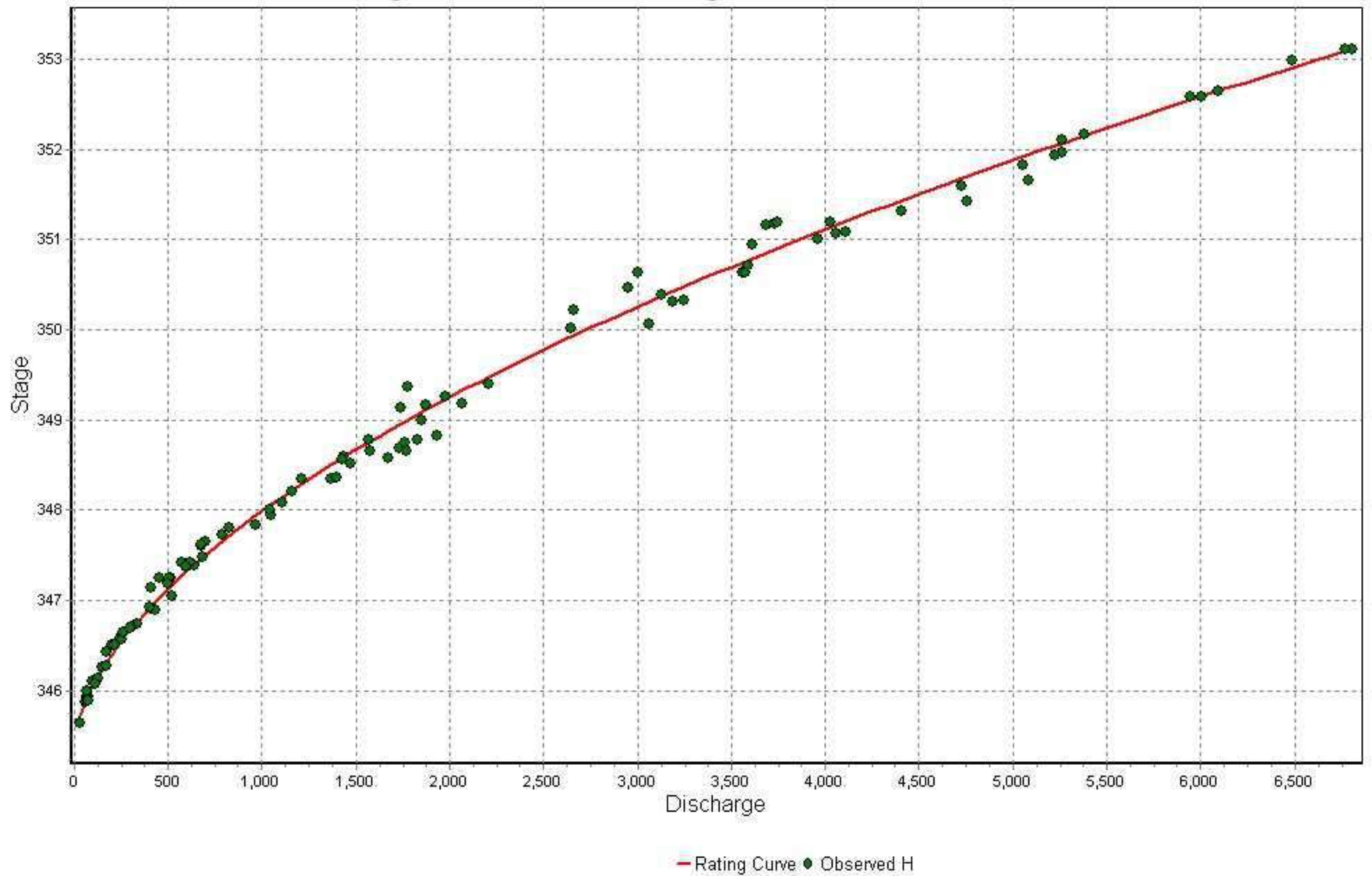
Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



Rating Curve of site Huvinhedgi 13/07/2022 to 30/11/2022



HISTORY SHEET

Water Year : 2022-2023

Site : SUDDAKAL

Code : SUDDAKALLU

State : Andhra Pradesh

District : Mahbubnagar

Basin : Krishna

Independent River : Krishna

Tributary : Dindi

Sub Tributary :

Sub-Sub Tributary :

Local River : Dindi

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool

Drainage Area : 2700 Sq. Km.

Bank : Left

Latitude : 16°34'22"

Longitude : 78°25'24"

Zero of Gauge (m) : 95.5 (m.s.l)
427.5 (m.s.l)01-06-2016 - 31-05-2018
01-06-2018

Opening Date

Closing Date

Gauge : 20-11-2014

HFL During 2022-23 : 429.86 m

Discharge : 20-11-2014

Corres. Discharge : 15 (Estimated)

Sediment : 20-11-2014

Date & Time of

occurrence : 07-10-2022

Water Quality : 01-06-2022

: 08:00 Hrs

HFL Recorded so far in m : 430.360 dt 16-09-2020

Corresponding Discharge (cumecs) : 572 *

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2016-2017	0.000		04-10-2016	0.000		25-01-2017
2017-2018	38.17	98.400	15-10-2017	0.000		23-01-2018
2018-2019	0.000		29-04-2019	0.000		22-05-2019
2019-2020	12.46	428.895	25-09-2019	0.000		14-12-2019
2020-2021	554.8	430.130	16-09-2020	0.000		02-02-2021
2021-2022	0.000	429.410	16-03-2022	0.000		26-06-2021

Annual Runoff of Dindi at Suddakallu

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2017-2018	33	0	33	1	0	1
2	2018-2019	0	0	0	0	0	0
3	2019-2020	12	0	12	0	0	0
4	2020-2021	143	0	143	5	0	5
5	2021-2022	0	0	0	0	0	0
6	2022-2023	51	0	51	2	0	2
Average		40	0	40	1	0	1

Instantaneous Flood Peak of Dindi at Suddakallu

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2017-2018	98.670	15-10-2017	18:00:00	38 *
2	2018-2019	Dry Bed			
3	2019-2020	428.725	25-09-2019	01:00:00	46 *
4	2020-2021	430.160	16-09-2020	17:00:00	572 *
5	2021-2022	Dry Bed			
6	2022-2023	429.97	07-10-2022	20:00:00	15 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : SUDDAKAL (SUDDAKALLU)

Division : Lower Krishna Divn., Hyderabad

Local River : Dindi

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	Dry Bed	0.000	429.490	0.000	429.640	2.335	429.740	8.210	429.950	11.63	429.670	5.721
2		0.000	429.490	0.000	429.610	0.000	429.670	5.729	429.950	11.50 *	429.690	7.338
3		0.000	429.480	0.000	429.600	0.000	429.690	7.345	429.800	9.439	429.670	5.721
4		0.000	429.480	0.000	429.640	3.743	429.650	3.200 *	429.710	8.212	429.620	0.000
5		0.000	429.480	0.000	429.760	8.529	429.700	7.758	429.670	5.700 *	429.610	0.000
6		0.000	429.650	2.660	429.730	7.520	429.910	11.00	429.680	3.917	429.600	0.000
7		0.000	429.610	2.087	429.670	3.500 *	429.820	9.324	429.820	9.332	429.600	0.000
8		0.000	429.720	6.942	429.680	3.917	429.740	8.263	429.860	15.00 *	429.590	0.000
9		0.000	429.700	6.721	430.010	13.50 *	429.820	9.324	429.850	10.00 *	429.590	0.000
10		0.000	429.670	3.500 *	429.970	11.94	429.730	7.920	429.740	8.614	429.580	0.000
11		0.000	429.630	2.421	429.820	9.332	429.730	8.000 *	429.700	7.761	429.580	0.000
12		0.000	429.620	2.049	429.730	7.520	429.970	11.99	429.670	5.721	429.590	0.000
13		0.000	429.630	2.317	429.680	3.917	429.820	9.324	429.710	8.212	429.590	0.000
14		0.000	429.620	1.908	429.630	3.000 *	429.740	8.210	429.950	11.63	429.600	0.000
15		0.000	429.610	0.000	429.630	3.000 *	429.710	7.802	429.950	11.63	429.600	0.000
16	429.670	5.708	429.590	0.000	429.620	0.000	429.690	7.338	429.920	11.00 *	429.600	0.000
17	429.660	3.184	429.580	0.000	429.620	0.000	429.670	5.729	429.800	9.439	429.600	0.000
18	429.580	0.000	429.590	0.000	429.620	0.000	429.650	4.000 *	429.740	8.614	429.590	0.000
19	429.570	0.000	429.590	0.000	429.660	3.214	429.620	0.000	429.700	7.761	429.590	0.000
20	429.580	0.000	429.580	0.000	429.640	3.512	429.620	0.000	429.740	8.614	429.590	0.000
21	429.570	0.000	429.580	0.000	429.630	3.000 *	429.610	0.000	429.710	8.212	429.600	0.000
22	429.550	0.000	429.570	0.000	429.630	2.021	429.620	0.000	429.700	7.758	429.600	0.000
23	429.530	0.000	429.570	0.000	429.620	0.000	429.610	0.000	429.680	6.500 *	429.600	0.000
24	429.520	0.000	429.570	0.000	429.610	0.000	429.610	0.000	429.660	6.100 *	429.600	0.000
25	429.510	0.000	429.560	0.000	429.600	0.000	429.610	0.000	429.650	1.980	429.590	0.000
26	429.500	0.000	429.560	0.000	429.610	0.000	429.600	0.000	429.640	1.692	429.590	0.000
27	429.490	0.000	429.590	0.000	429.700	7.761	429.610	0.000	429.630	1.282	429.580	0.000
28	429.490	0.000	429.700	7.761	429.730	8.500 *	429.620	0.000	429.620	0.000	429.580	0.000
29	429.500	0.000	429.630	2.339	429.770	9.027	429.710	7.802	429.610	0.000	429.580	0.000
30	429.500	0.000	429.660	3.242	429.740	8.614	429.820	9.324	429.620	1.000 *	429.590	0.000
31			429.650	3.200 *	429.970	12.00 *			429.650	1.975		
<u>Ten-Daily Mean</u>												
I Ten-Daily	Dry Bed	0.000	429.577	2.191	429.731	5.498	429.747	7.807	429.823	9.335	429.622	1.878
II Ten-Daily	429.612	0.889	429.604	0.869	429.665	3.350	429.722	6.239	429.788	9.039	429.593	0.000
III Ten-Daily	429.516	0.000	429.604	1.504	429.692	4.629	429.642	1.713	429.652	3.318	429.591	0.000
<u>Monthly</u>												
Min.	429.490	0.000	429.480	0.000	429.600	0.000	429.600	0.000	429.610	0.000	429.580	0.000
Max.	429.670	5.708	429.720	7.761	430.010	13.50	429.970	11.99	430.060	15.00	429.690	7.338
Mean	429.548	0.296	429.595	1.521	429.696	4.497	429.704	5.253	429.751	7.104	429.602	0.626

Annual Runoff in MCM = 51 Annual Runoff in mm = 19

Peak Observed Discharge = 11.99 cumecs on 12-09-2022 Corres. Water Level :429.97 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022

Stage-Discharge Data for the period 2022 - 2023

Station Name : SUDDAKAL (SUDDAKALLU)

Division : Lower Krishna Divn., Hyderabad

Local River : Dindi

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	429.600	0.000	429.570	0.000	429.570	0.000	429.540	0.000	429.290	0.000	428.730	0.000
2	429.600	0.000	429.580	0.000	429.570	0.000	429.540	0.000	429.270	0.000	428.720	0.000
3	429.600	0.000	429.580	0.000	429.570	0.000	429.540	0.000	429.250	0.000	428.720	0.000
4	429.600	0.000	429.590	0.000	429.570	0.000	429.540	0.000	429.230	0.000	428.710	0.000
5	429.600	0.000	429.590	0.000	429.570	0.000	429.530	0.000	429.210	0.000	428.700	0.000
6	429.600	0.000	429.580	0.000	429.570	0.000	429.530	0.000	429.190	0.000	428.700	0.000
7	429.600	0.000	429.580	0.000	429.570	0.000	429.520	0.000	429.170	0.000	428.710	0.000
8	429.600	0.000	429.580	0.000	429.570	0.000	429.490	0.000	429.150	0.000	428.720	0.000
9	429.600	0.000	429.590	0.000	429.570	0.000	429.480	0.000	429.130	0.000	428.720	0.000
10	429.600	0.000	429.590	0.000	429.570	0.000	429.470	0.000	429.100	0.000	428.730	0.000
11	429.590	0.000	429.580	0.000	429.560	0.000	429.470	0.000	429.060	0.000	428.710	0.000
12	429.590	0.000	429.580	0.000	429.560	0.000	429.460	0.000	429.030	0.000	428.710	0.000
13	429.590	0.000	429.580	0.000	429.560	0.000	429.460	0.000	429.000	0.000	428.700	0.000
14	429.590	0.000	429.570	0.000	429.560	0.000	429.440	0.000	428.980	0.000	428.700	0.000
15	429.590	0.000	429.570	0.000	429.560	0.000	429.430	0.000	428.960	0.000	428.690	0.000
16	429.590	0.000	429.570	0.000	429.560	0.000	429.420	0.000	428.950	0.000	428.690	0.000
17	429.590	0.000	429.560	0.000	429.560	0.000	429.390	0.000	428.930	0.000	428.680	0.000
18	429.590	0.000	429.560	0.000	429.560	0.000	429.370	0.000	428.920	0.000	428.670	0.000
19	429.590	0.000	429.560	0.000	429.560	0.000	429.380	0.000	428.900	0.000	428.670	0.000
20	429.590	0.000	429.560	0.000	429.560	0.000	429.390	0.000	428.880	0.000	428.660	0.000
21	429.600	0.000	429.570	0.000	429.550	0.000	429.400	0.000	428.860	0.000	428.670	0.000
22	429.600	0.000	429.570	0.000	429.550	0.000	429.390	0.000	428.850	0.000	428.700	0.000
23	429.600	0.000	429.570	0.000	429.550	0.000	429.380	0.000	428.840	0.000	428.720	0.000
24	429.600	0.000	429.570	0.000	429.550	0.000	429.380	0.000	428.830	0.000	428.740	0.000
25	429.590	0.000	429.570	0.000	429.550	0.000	429.370	0.000	428.820	0.000	428.740	0.000
26	429.590	0.000	429.570	0.000	429.550	0.000	429.360	0.000	428.810	0.000	428.760	0.000
27	429.580	0.000	429.560	0.000	429.550	0.000	429.350	0.000	428.800	0.000	428.750	0.000
28	429.570	0.000	429.560	0.000	429.550	0.000	429.340	0.000	428.780	0.000	428.760	0.000
29	429.570	0.000	429.560	0.000			429.330	0.000	428.750	0.000	428.770	0.000
30	429.560	0.000	429.560	0.000			429.320	0.000	428.740	0.000	428.770	0.000
31	429.560	0.000	429.560	0.000			429.310	0.000			428.780	0.000
<u>Ten-Daily Mean</u>												
I Ten-Daily	429.600	0.000	429.583	0.000	429.570	0.000	429.518	0.000	429.199	0.000	428.716	0.000
II Ten-Daily	429.590	0.000	429.569	0.000	429.560	0.000	429.421	0.000	428.961	0.000	428.688	0.000
III Ten-Daily	429.584	0.000	429.565	0.000	429.550	0.000	429.357	0.000	428.808	0.000	428.742	0.000
<u>Monthly</u>												
Min.	429.560	0.000	429.560	0.000	429.550	0.000	429.310	0.000	428.740	0.000	428.660	0.000
Max.	429.600	0.000	429.590	0.000	429.570	0.000	429.540	0.000	429.290	0.000	428.780	0.000
Mean	429.591	0	429.572	0	429.561	0	429.430	0	428.989	0	428.716	0

Peak Computed Discharge = 15.00 cumecs on 08-10-2022

Corres. Water Level :430.06 m

Lowest Computed Discharge = 1.000 cumecs on 30-10-2022

Corres. Water Level :429.62 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 : 2022-2023

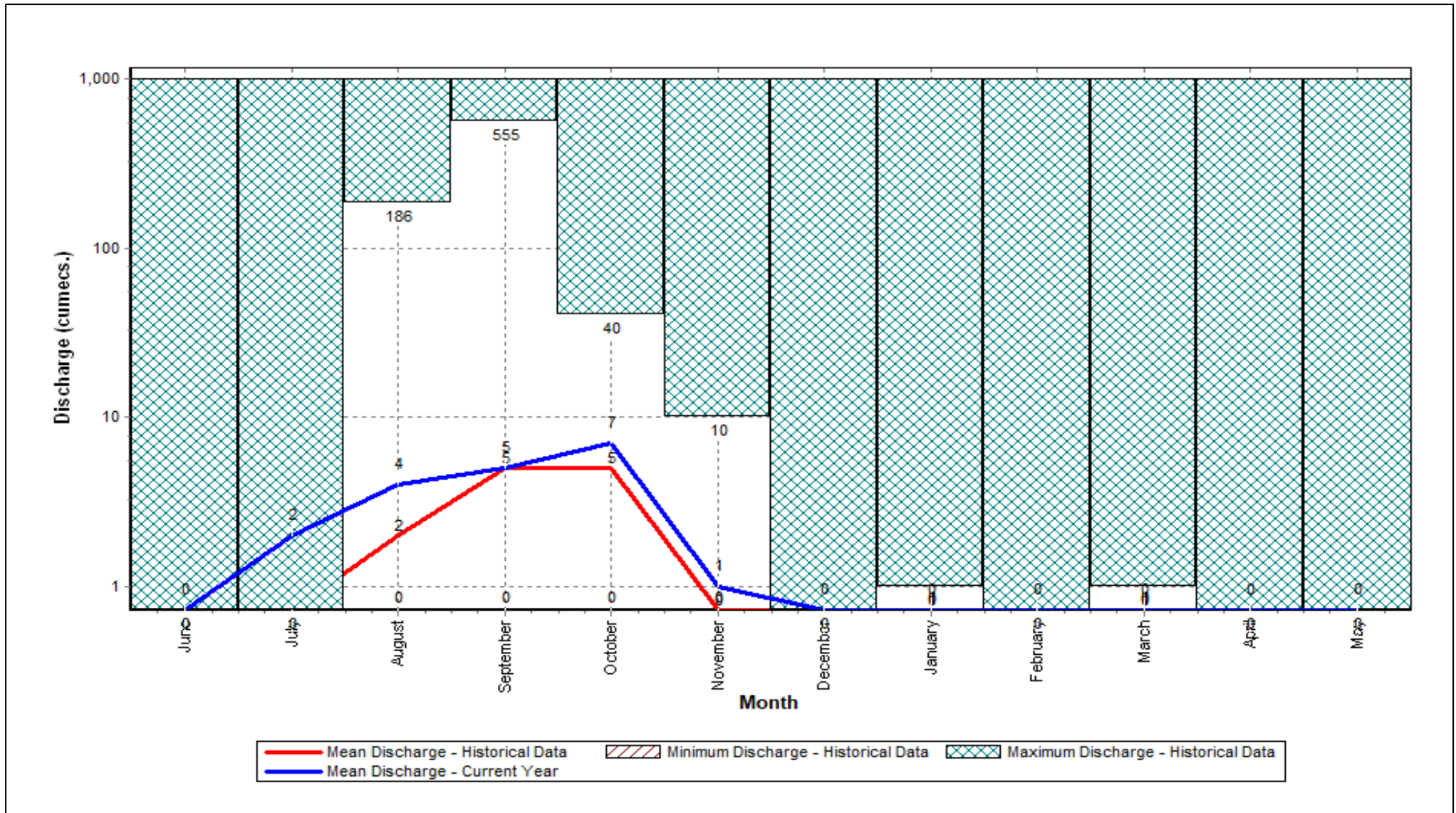
Station Name : SUDDAKAL (SUDDAKALLU)

Data considered : 2016-2023

Division : Lower Krishna Divn., Hyderabad

Local River :Dindi

Sub-Division : Middle Krishna SD 2 , Kurnool



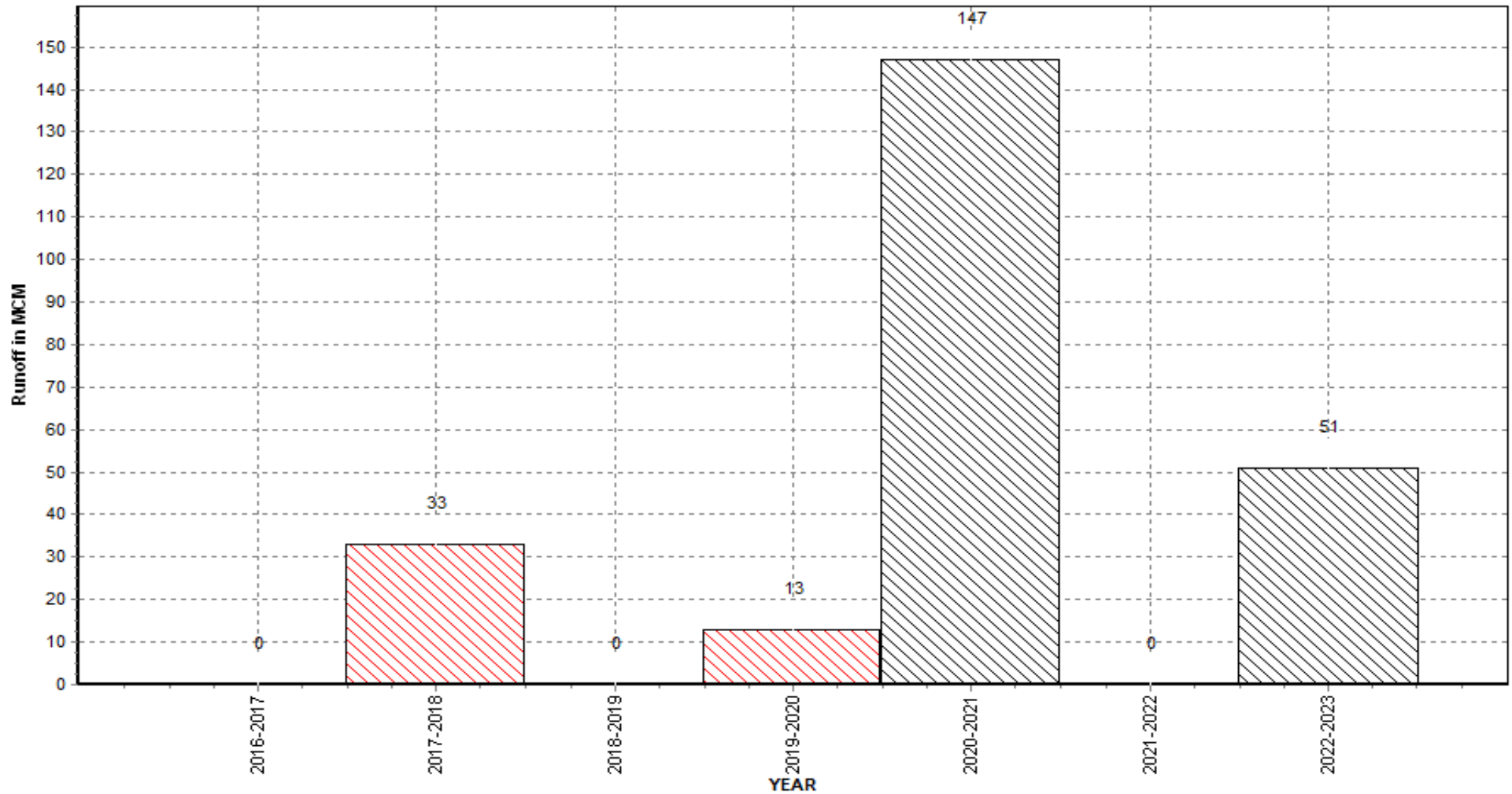
Annual Runoff Values for the period: 2016 - 2023

Station Name : SUDDAKAL (SUDDAKALLU)

Local River :Dindi

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool

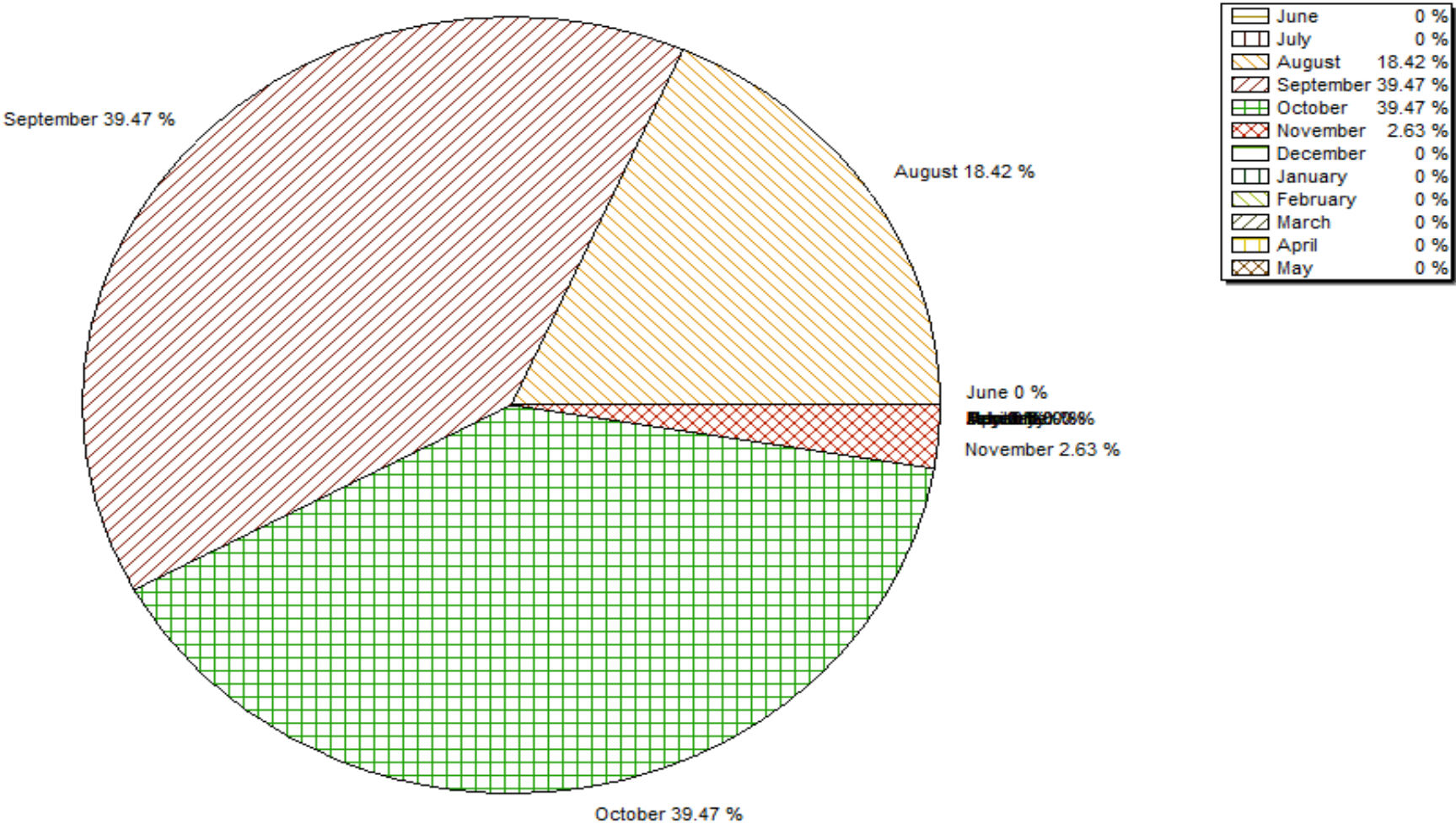


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 2016-2022

Station Name : SUDDAKAL (SUDDAKALLU)
Local River : Dindi

Division : Lower Krishna Divn., Hyderabad
Sub-Division : Middle Krishna SD 2 , Kurnool



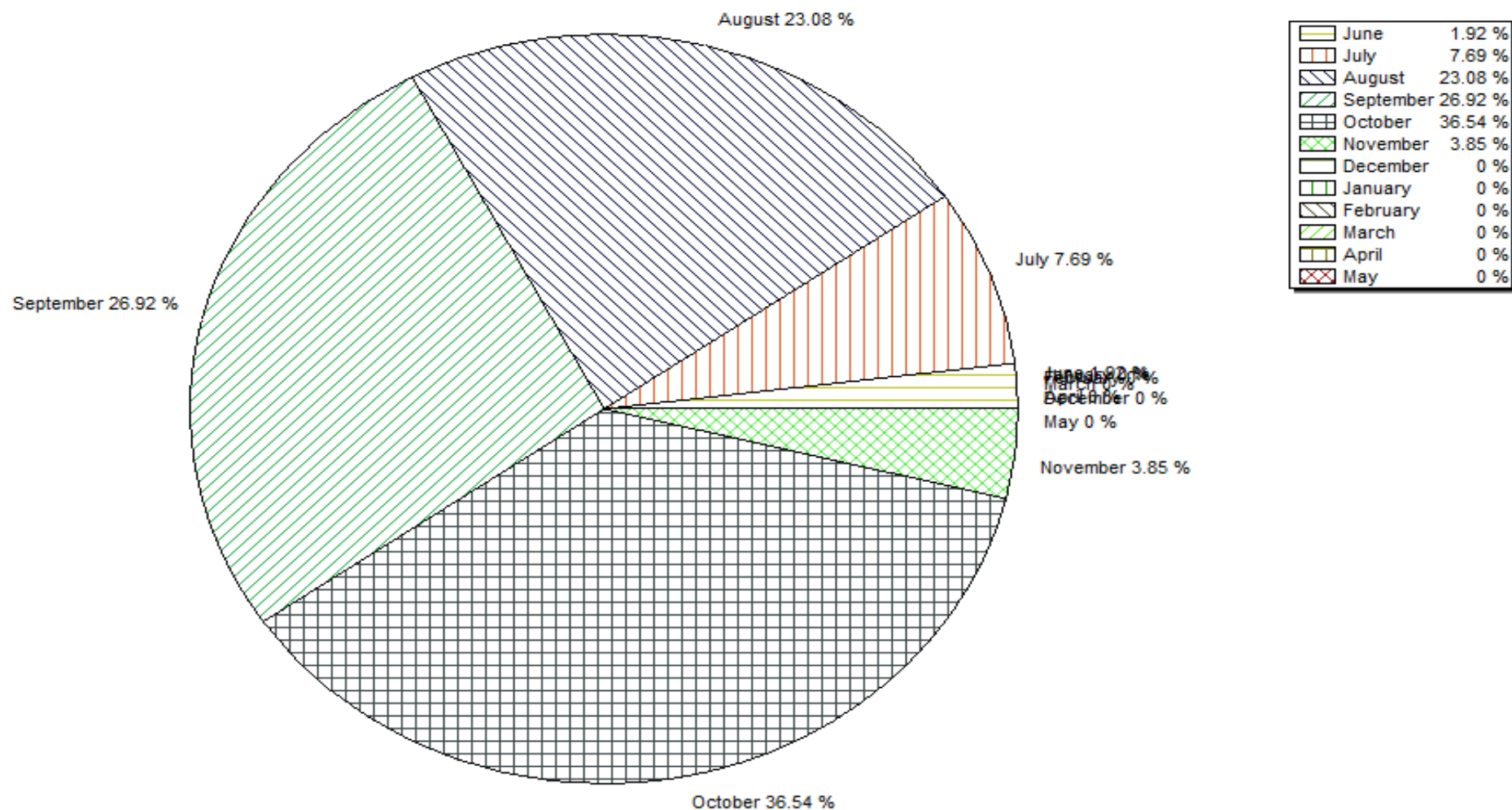
Monthly Runoff for the Year : 2022-2023

Station Name : SUDDAKAL (SUDDAKALLU)

Local River : Dindi

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



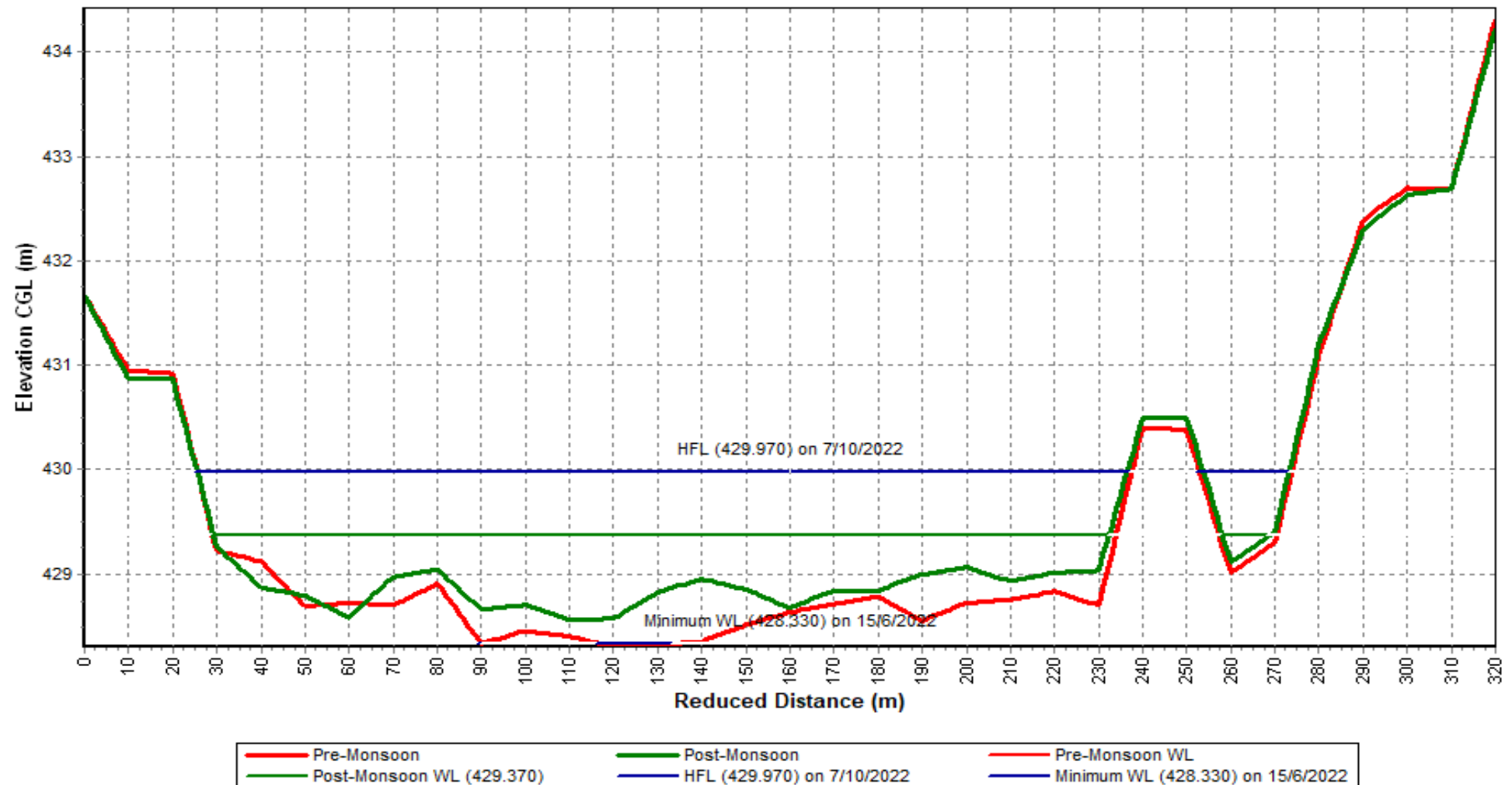
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : SUDDAKAL (SUDDAKALLU)

Local River : Dindi

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



Remarks :Cross Section Deviation due to Sandy Bed X section was not Stable.

Zero of the Gauge: 427.5 (m.s.l)

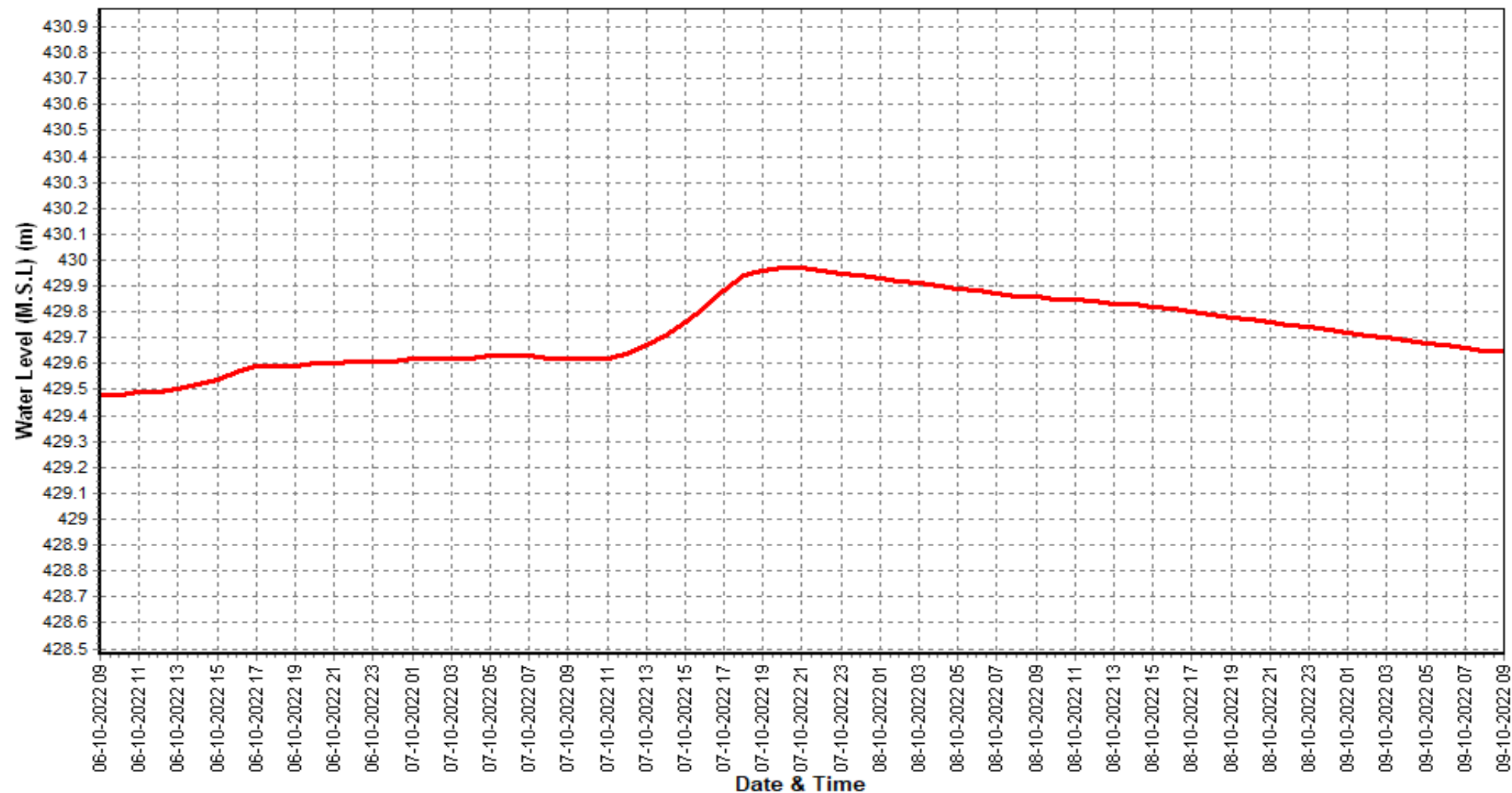
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : SUDDAKAL (SUDDAKALLU)

Local River:Dindi

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



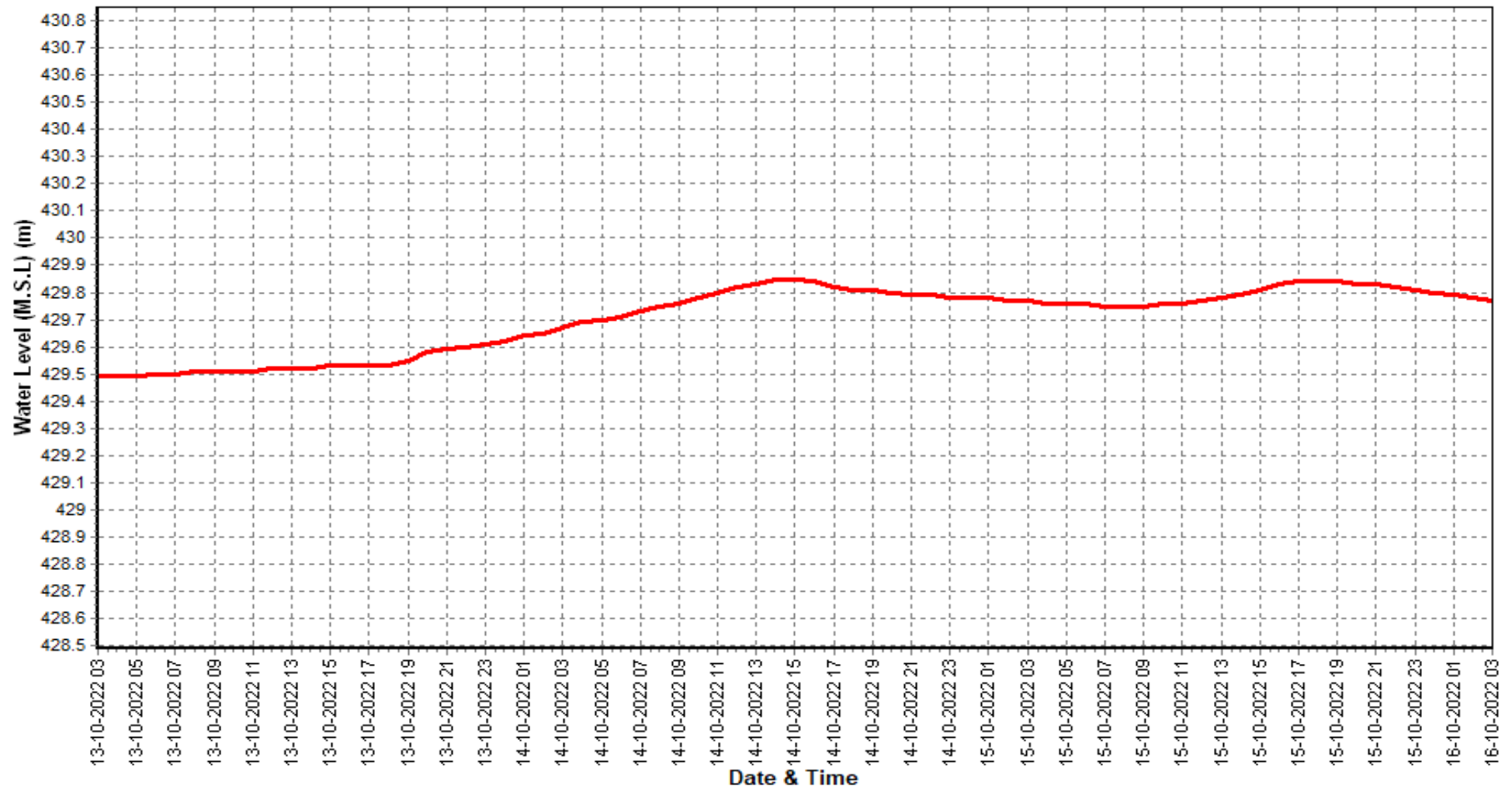
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name :SUDDAKAL(SUDDAKALLU)

Local River:Dindi

Division : Lower Krishna Divn., Hyderabad

Sub-Disn : Middle Krishna SD 2 , Kurnool



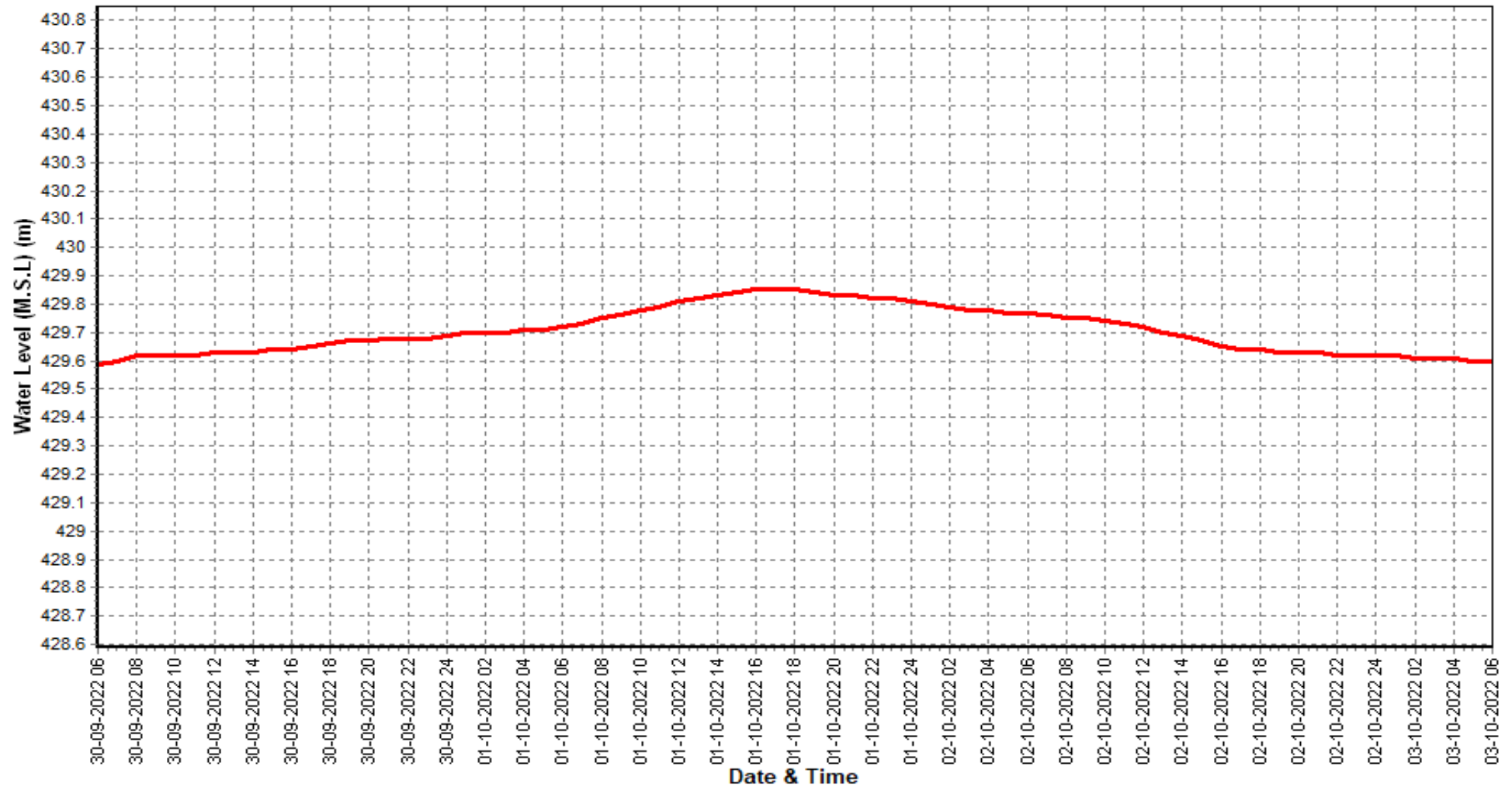
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : SUDDAKAL (SUDDAKALLU)

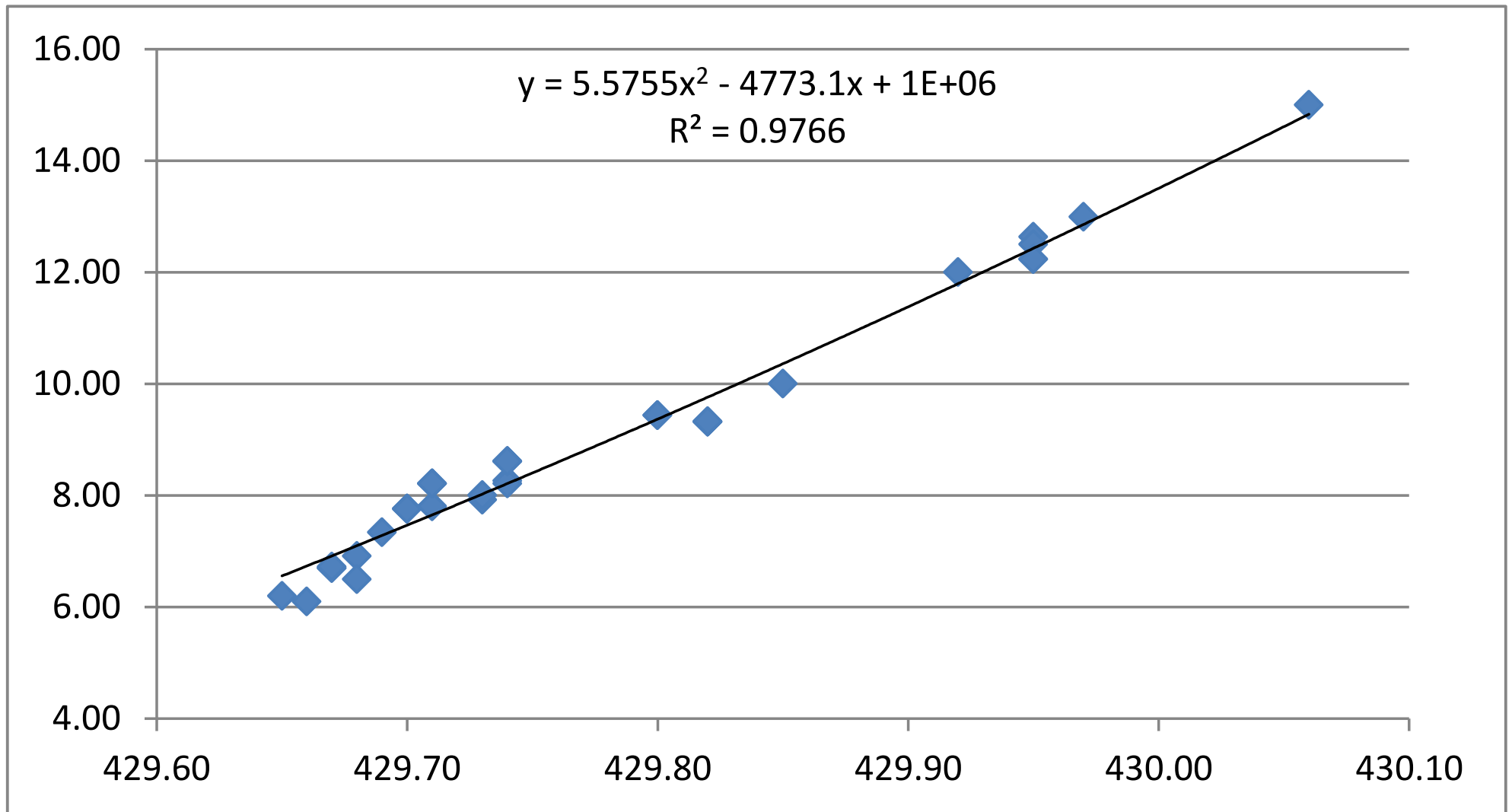
Local River:Dindi

Division : Lower Krishna Divn., Hyderabad

Sub-Dvsn : Middle Krishna SD 2 , Kurnool



Suddakallu 2022-23



HISTORY SHEET

Water Year : 2022-2023

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 : Upper Bhima SD, Pune

Drainage Area : 6307 Sq. Km.

Bank : Right

Latitude : 18°32'00"

Longitude : 74°22'00"

Zero of Gauge (m) : 85 (m.s.l)
503.5 (m.s.l)11-12-1986 - 30-11-2020
01-12-2020

Opening Date

Closing Date

Gauge : 26-06-1986

HFL During 2022-23 : 513.620 m

Corres. Discharge : 2900 (Estimated)

Discharge : 02-09-2015

Date & Time of

occurrence : 17-09-2022

Water Quality : 01-06-2019

HFL Recorded so far in m : 97.220 dt 06-08-2019

Corresponding Discharge (cumecs) : 3847 *

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2016-2017	3267	93.570	06-08-2016	0.000	89.250	04-01-2017
2017-2018	1821	92.200	23-07-2017	0.000	89.220	25-01-2018
2018-2019	3400	92.920	17-07-2018	0.000	87.870	14-04-2019
2019-2020	3650	97.080	06-08-2019	0.000	88.120	16-12-2019
2020-2021	903.9	90.960	16-08-2020	0.000	509.495	12-01-2021
2021-2022	1887	511.880	24-07-2021	0.000	509.400	04-05-2022

Annual Runoff of Bhima at Paragaon

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2015-2016	376	54	430	13	2	15
2	2016-2017	2815	0	2815	99	0	99
3	2017-2018	3427	0	3427	121	0	121
4	2018-2019	2610	0	2610	92	0	92
5	2019-2020	6181	0	6181	218	0	218
6	2020-2021	2617	0	2617	92	0	92
7	2021-2022	1794	0	1794	63	0	63
8	2022-2023	4629	0	4629	164	0	164
Average		3056	7	3063	109	0	108

Instantaneous Flood Peak of Bhima at Paragaon

Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2015-2016	90.430	19-09-2015	15:00:00	961 *
2	2016-2017	94.100	06-08-2016	11:00:00	3368 *
3	2017-2018	92.200	23-07-2017	08:00:00	1821 *
4	2018-2019	92.920	17-07-2018	15:00:00	3420 *
5	2019-2020	97.220	06-08-2019	11:00:00	3847 *
6	2020-2021	92.950	15-10-2020	18:00:00	1903 *
7	2021-2022	512.380	24-07-2021	01:00:00	2098 *
8	2022-2023	513.620	17-09-2022	12:00:00	2900 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : Paragaon (AKP00V9)

Division : Upper Krishna Divn, Pune

Local River : Bhima

Sub-Division : Upper Bhima SD, Pune

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	507.400	0.000	506.970	0.000	507.600	133.7	507.730	160.2	507.780	164.4	507.390	94.91
2	507.080	0.000	506.960	0.000	507.480	113.5	508.130	254.8	507.980	202.8 *	507.340	83.22
3	506.790	0.000	507.040	0.000	507.390	93.86	508.100	248.6	507.800	172.6	507.280	75.03
4	506.700	0.000	506.950	0.000	507.350	85.01	507.870	180.7 *	507.700	148.4	507.250	72.86
5	506.560	0.000	506.940	0.000	507.790	170.0	507.800	172.6	507.630	137.0 *	507.280	74.20
6	506.500	0.000	506.980	0.000	507.720	155.4	507.550	125.0	507.510	115.1	507.245	79.03 *
7	506.540	0.000	507.160	0.000	507.720	152.7 *	508.450	321.9	507.550	121.9	507.100	61.19
8	506.490	0.000	508.300	294.1	507.790	169.5	508.520	335.2	507.620	137.6	507.070	57.78 *
9	506.690	0.000	508.580	347.4	507.820	171.1 *	509.750	710.4	507.490	114.1 *	507.040	54.46
10	506.900	0.000	509.170	518.1 *	508.900	431.2	509.570	639.1	507.400	96.42	506.970	47.08
11	506.800	0.000	509.160	499.5	510.100	840.5	508.690	374.1 *	507.510	114.7	506.940	44.08
12	507.260	0.000	510.610	1049	511.920	1775	509.400	575.1	507.730	161.1	506.950	45.07
13	506.970	0.000	511.660	1551	511.360	1425	508.950	444.0	507.960	214.2	506.960	46.07 *
14	507.020	0.000	512.800	2350	511.300	1426 *	508.980	455.7	507.900	198.9	507.000	0.000
15	506.970	0.000	511.230	1349	510.770	1159 *	510.500	1016	508.000	224.8	507.050	0.000
16	506.930	0.000	510.660	1077	510.200	883.8	509.800	726.9	508.550	336.3 *	507.100	0.000
17	506.880	0.000	509.880	772.3 *	510.160	866.7	513.350	2724	507.980	221.5	507.040	0.000
18	506.830	0.000	509.800	725.4	510.400	985.4	510.790	1169 *	509.200	519.6	507.000	0.000
19	506.820	0.000	509.170	503.1	509.650	684.6 *	509.850	745.1	509.400	581.6	507.050	0.000
20	506.780	0.000	509.190	509.4	509.040	467.3	509.150	497.8	508.830	411.8	507.060	0.000
21	506.840	0.000	509.120	484.8	509.980	812.0 *	508.970	451.1	509.110	486.0	507.040	0.000
22	506.840	0.000	508.720	382.3	509.220	519.6	508.550	340.0	508.610	349.2	507.050	0.000
23	506.810	0.000	508.430	316.8	509.280	540.1	508.170	265.6	508.170	243.7 *	507.010	0.000
24	506.960	0.000	508.140	237.0 *	509.100	483.5	508.090	248.6	508.110	230.4 *	507.010	0.000
25	506.990	0.000	508.640	358.9	509.940	787.2	507.870	180.7 *	508.030	234.0	506.950	0.000
26	507.040	0.000	508.760	390.6	509.130	491.1	508.060	241.8	507.900	198.4	506.820	0.000
27	507.160	0.000	508.340	299.6	508.620	351.4	507.890	194.7	507.820	176.7	506.950	0.000
28	507.180	0.000	508.170	263.8	508.000	206.9 *	507.780	166.5	507.690	151.6	506.900	0.000
29	507.140	0.000	508.030	234.7	507.700	149.3	507.890	194.3	507.550	124.2	506.850	0.000
30	507.080	0.000	507.850	184.0	507.540	124.3	507.780	166.3	507.450	108.0 *	506.780	0.000
31			507.780	163.6 *	507.370	96.16 *			507.450	104.1		
Ten-Daily Mean												
I Ten-Daily	506.765	0.000	507.505	116.0	507.756	167.6	508.347	314.9	507.646	141.0	507.197	69.98
II Ten-Daily	506.926	0.000	510.416	1039	510.490	1051	509.946	872.7	508.306	298.5	507.015	13.52
III Ten-Daily	507.004	0.000	508.362	301.5	508.716	414.7	508.105	245.0	507.990	218.7	506.936	0.000
Monthly												
Min.	506.490	0.000	506.940	0.000	507.350	85.01	507.550	125.0	507.400	96.42	506.780	0.000
Max.	507.400	0.000	512.800	2350	511.920	1775	513.350	2724	509.400	581.6	507.390	94.91
Mean	506.898	0	508.748	479.4	508.979	540.4	508.799	477.5	507.981	219.4	507.049	27.83

Annual Runoff in MCM = 4629 Annual Runoff in mm = 734

Peak Observed Discharge = 2724 cumecs on 17-09-2022 Corres. Water Level :513.35 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :507.4 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 2022 - 2023

Station Name : Paragaon (AKP00V9)

Division : Upper Krishna Divn, Pune

Local River : Bhima

Sub-Division : Upper Bhima SD, Pune

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	506.800	0.000	508.980	0.000	508.980	0.000	508.960	0.000	508.790	0.000	508.790	0.000
2	506.790	0.000	509.040	0.000	509.000	0.000	508.950	0.000	508.760	0.000	508.800	0.000
3	506.810	0.000	509.100	0.000	508.970	0.000	508.960	0.000	508.740	0.000	508.710	0.000
4	506.820	0.000	509.030	0.000	509.020	0.000	509.020	0.000	508.710	0.000	508.580	0.000
5	506.820	0.000	509.130	0.000	509.040	0.000	509.000	0.000	508.730	0.000	508.490	0.000
6	506.840	0.000	509.170	0.000	508.990	0.000	508.990	0.000	508.740	0.000	508.460	0.000
7	506.860	0.000	509.150	0.000	509.000	0.000	508.980	0.000	508.690	0.000	508.420	0.000
8	506.860	0.000	509.200	0.000	508.990	0.000	509.000	0.000	508.490	0.000	508.410	0.000
9	506.810	0.000	509.120	0.000	508.990	0.000	509.000	0.000	508.410	0.000	508.380	0.000
10	506.850	0.000	509.160	0.000	508.980	0.000	508.940	0.000	508.620	0.000	508.350	0.000
11	506.880	0.000	509.100	0.000	508.950	0.000	508.910	0.000	508.770	0.000	508.300	0.000
12	506.830	0.000	509.070	0.000	508.990	0.000	508.890	0.000	508.890	0.000	508.320	0.000
13	506.840	0.000	509.060	0.000	508.980	0.000	508.940	0.000	509.130	0.000	508.350	0.000
14	506.600	0.000	509.040	0.000	508.950	0.000	508.940	0.000	509.290	0.000	508.360	0.000
15	506.550	0.000	509.090	0.000	509.010	0.000	509.020	0.000	509.300	0.000	508.330	0.000
16	506.670	0.000	509.100	0.000	509.010	0.000	508.990	0.000	509.360	0.000	508.300	0.000
17	507.550	0.000	509.080	0.000	509.000	0.000	509.000	0.000	509.280	0.000	508.290	0.000
18	507.990	0.000	509.080	0.000	508.980	0.000	508.990	0.000	509.100	0.000	508.240	0.000
19	508.000	0.000	509.010	0.000	509.010	0.000	508.970	0.000	508.960	0.000	508.200	0.000
20	507.900	0.000	509.030	0.000	508.980	0.000	508.980	0.000	508.910	0.000	508.170	0.000
21	508.260	0.000	509.040	0.000	508.950	0.000	508.960	0.000	508.880	0.000	508.140	0.000
22	508.670	0.000	509.070	0.000	508.960	0.000	508.930	0.000	508.880	0.000	508.000	0.000
23	508.720	0.000	509.100	0.000	508.950	0.000	508.890	0.000	508.850	0.000	507.880	0.000
24	508.700	0.000	509.060	0.000	508.970	0.000	508.920	0.000	508.840	0.000	507.810	0.000
25	508.750	0.000	509.090	0.000	508.900	0.000	508.890	0.000	508.860	0.000	507.700	0.000
26	508.760	0.000	509.070	0.000	508.910	0.000	508.850	0.000	508.870	0.000	507.640	0.000
27	508.800	0.000	509.080	0.000	508.920	0.000	508.890	0.000	508.850	0.000	507.540	0.000
28	508.740	0.000	509.050	0.000	508.890	0.000	508.850	0.000	508.810	0.000	507.450	0.000
29	508.950	0.000	509.010	0.000			508.900	0.000	508.820	0.000	507.420	0.000
30	509.010	0.000	509.000	0.000			508.880	0.000	508.830	0.000	507.400	0.000
31	509.020	0.000	508.990	0.000			508.860	0.000			507.390	0.000
<u>Ten-Daily Mean</u>												
I Ten-Daily	506.826	0.000	509.108	0.000	508.996	0.000	508.980	0.000	508.668	0.000	508.539	0.000
II Ten-Daily	507.181	0.000	509.066	0.000	508.986	0.000	508.963	0.000	509.099	0.000	508.286	0.000
III Ten-Daily	508.762	0.000	509.051	0.000	508.931	0.000	508.893	0.000	508.849	0.000	507.670	0.000
<u>Monthly</u>												
Min.	506.550	0.000	508.980	0.000	508.890	0.000	508.850	0.000	508.410	0.000	507.390	0.000
Max.	509.020	0.000	509.200	0.000	509.040	0.000	509.020	0.000	509.360	0.000	508.800	0.000
Mean	507.627	0	509.074	0	508.974	0	508.944	0	508.872	0	508.149	0

Peak Computed Discharge = 1426 cumecs on 14-08-2022

Corres. Water Level :511.3 m

Lowest Computed Discharge = 46.07 cumecs on 13-11-2022

Corres. Water Level :506.96 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 : 2022-2023

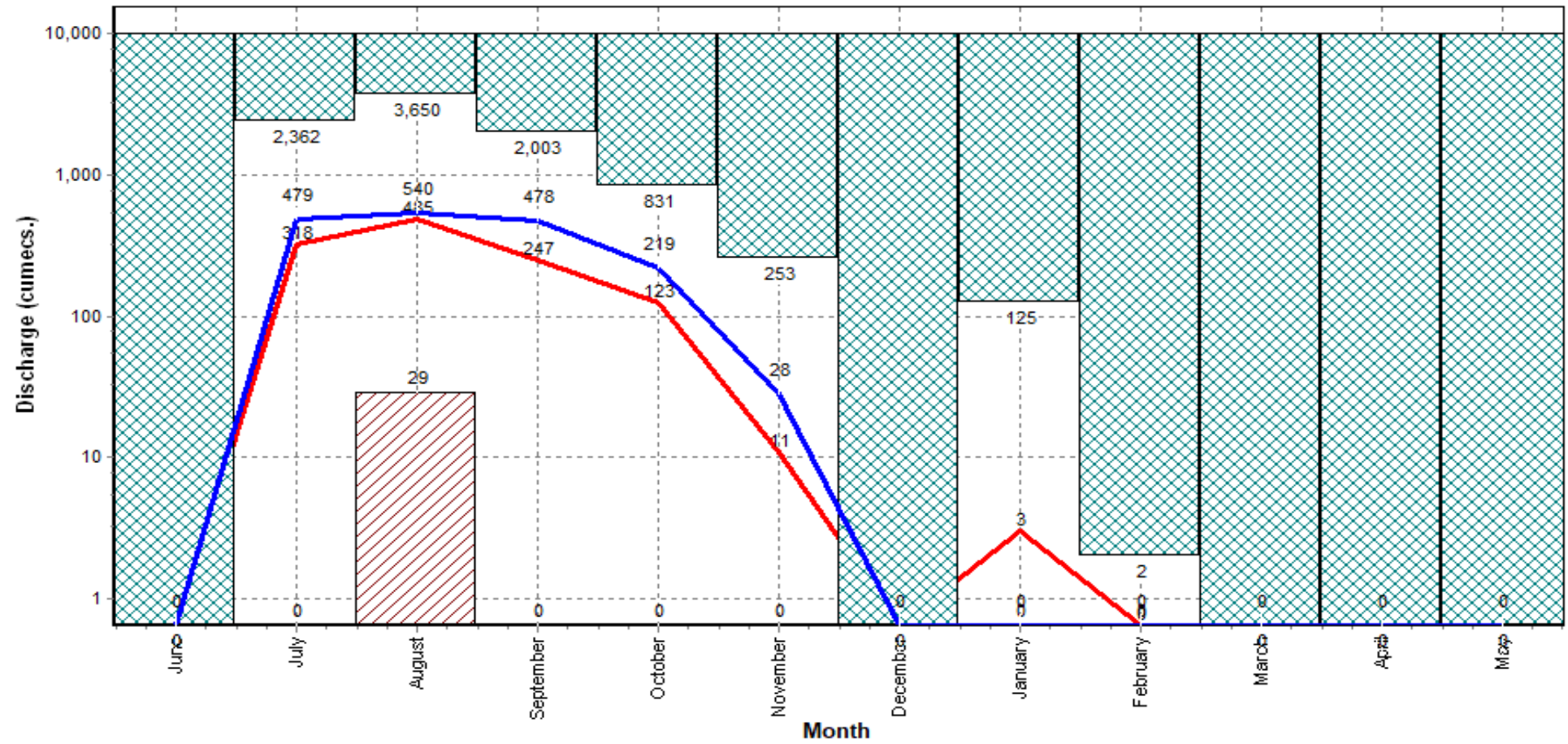
Station Name : Paragaon (AKP00V9)

Data considered : 2016-2023

Division : Upper Krishna Divn, Pune

Local River : Bhima

Sub-Division : Upper Bhima SD, Pune



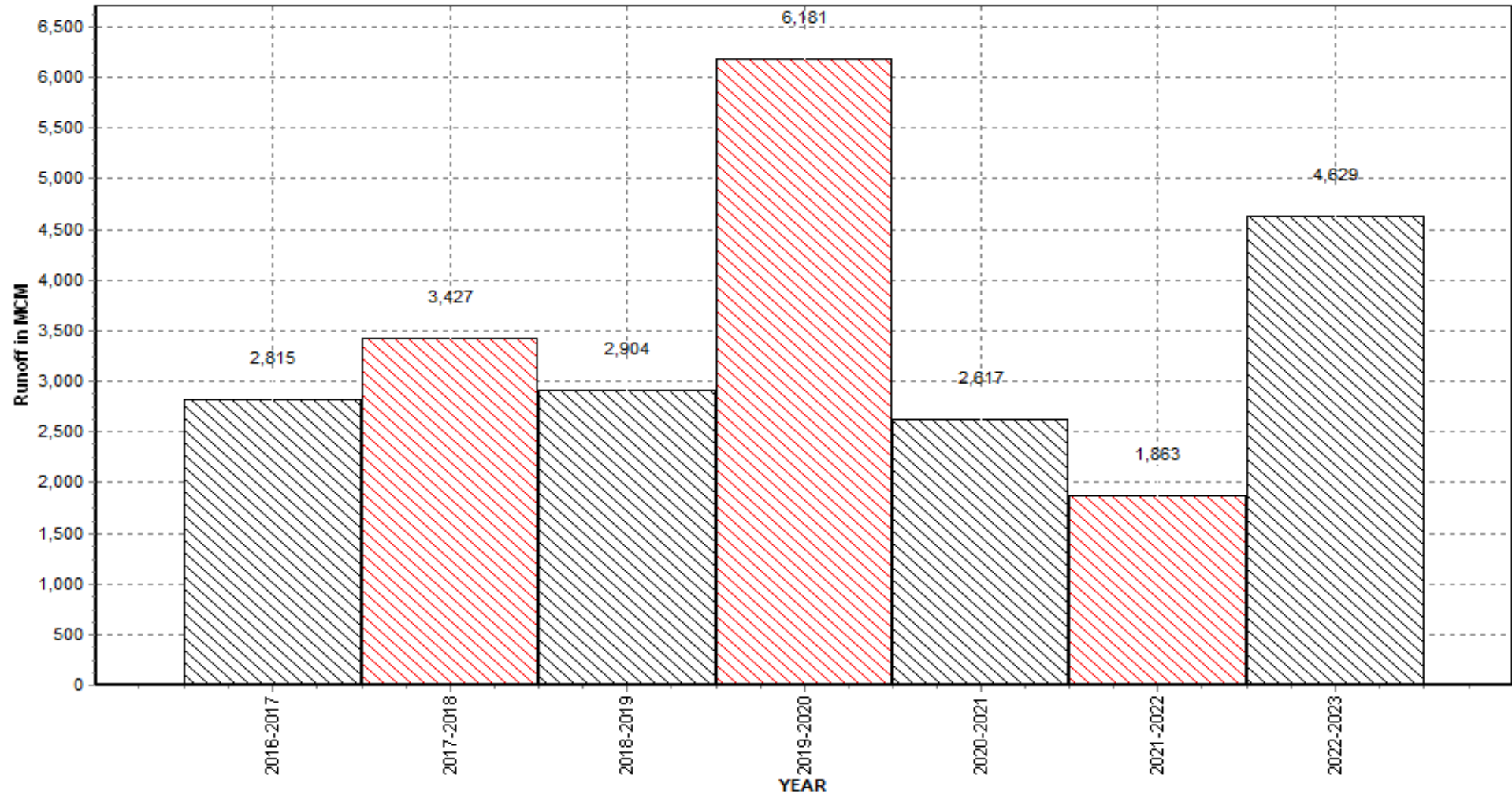
Annual Runoff Values for the period: 2016 - 2023

Station Name : Paragaon (AKP00V9)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD, Pune



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

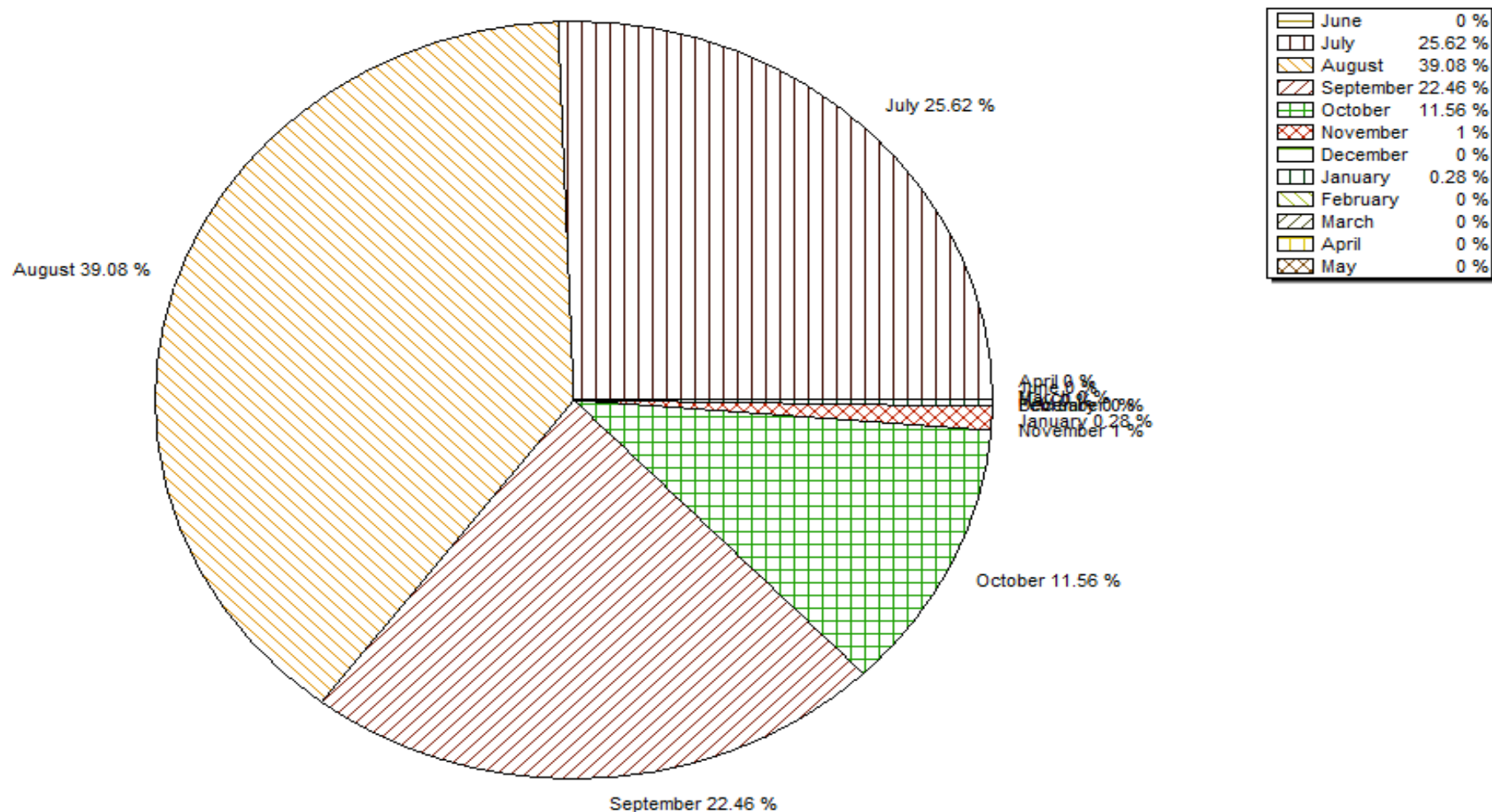
Monthly Average Runoff based on period : 2016-2022

Station Name : Paragaon (AKP00V9)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD, Pune



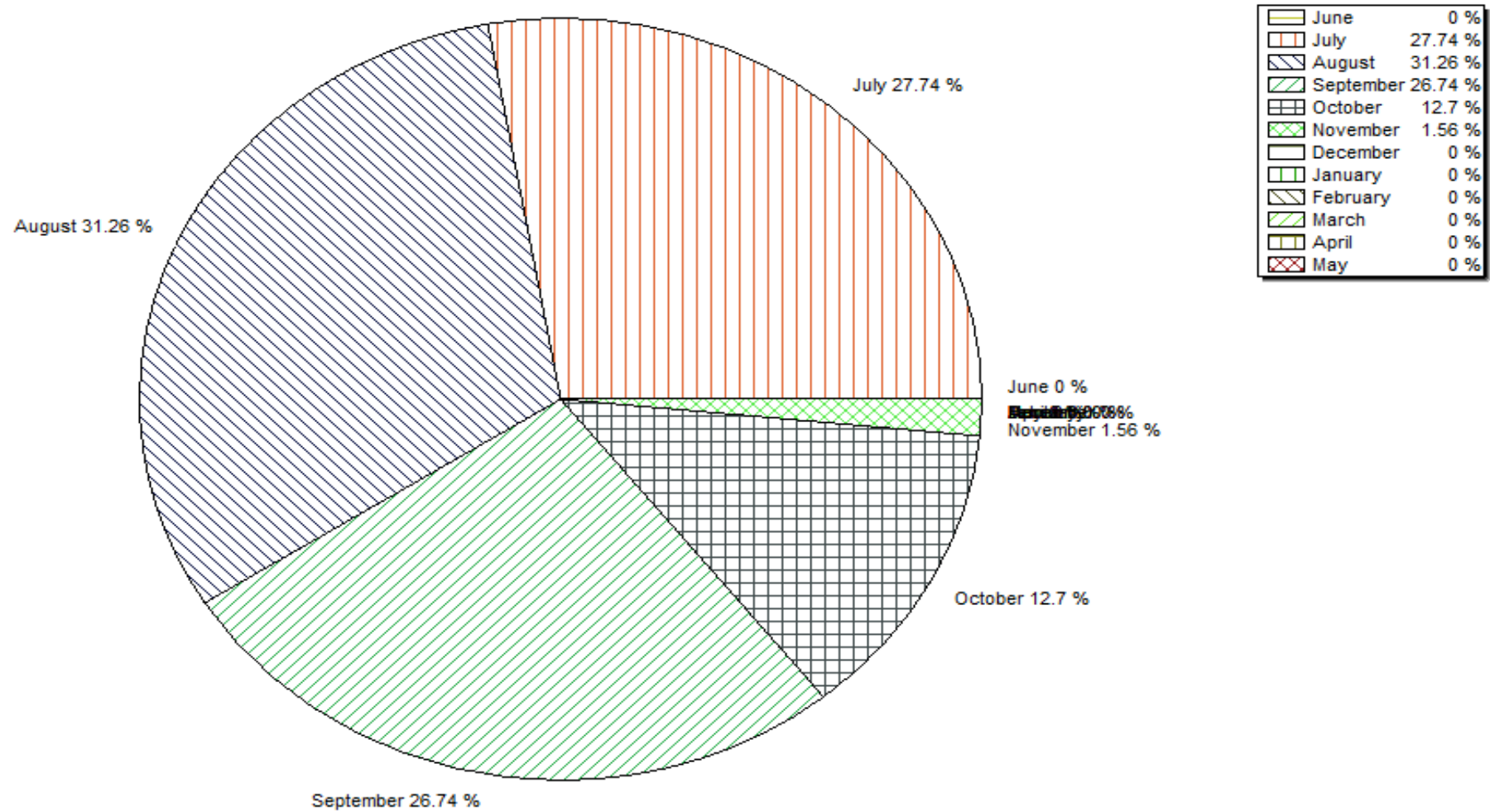
Monthly Runoff for the Year : 2022-2023

Station Name : Paragaon (AKP00V9)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD, Pune



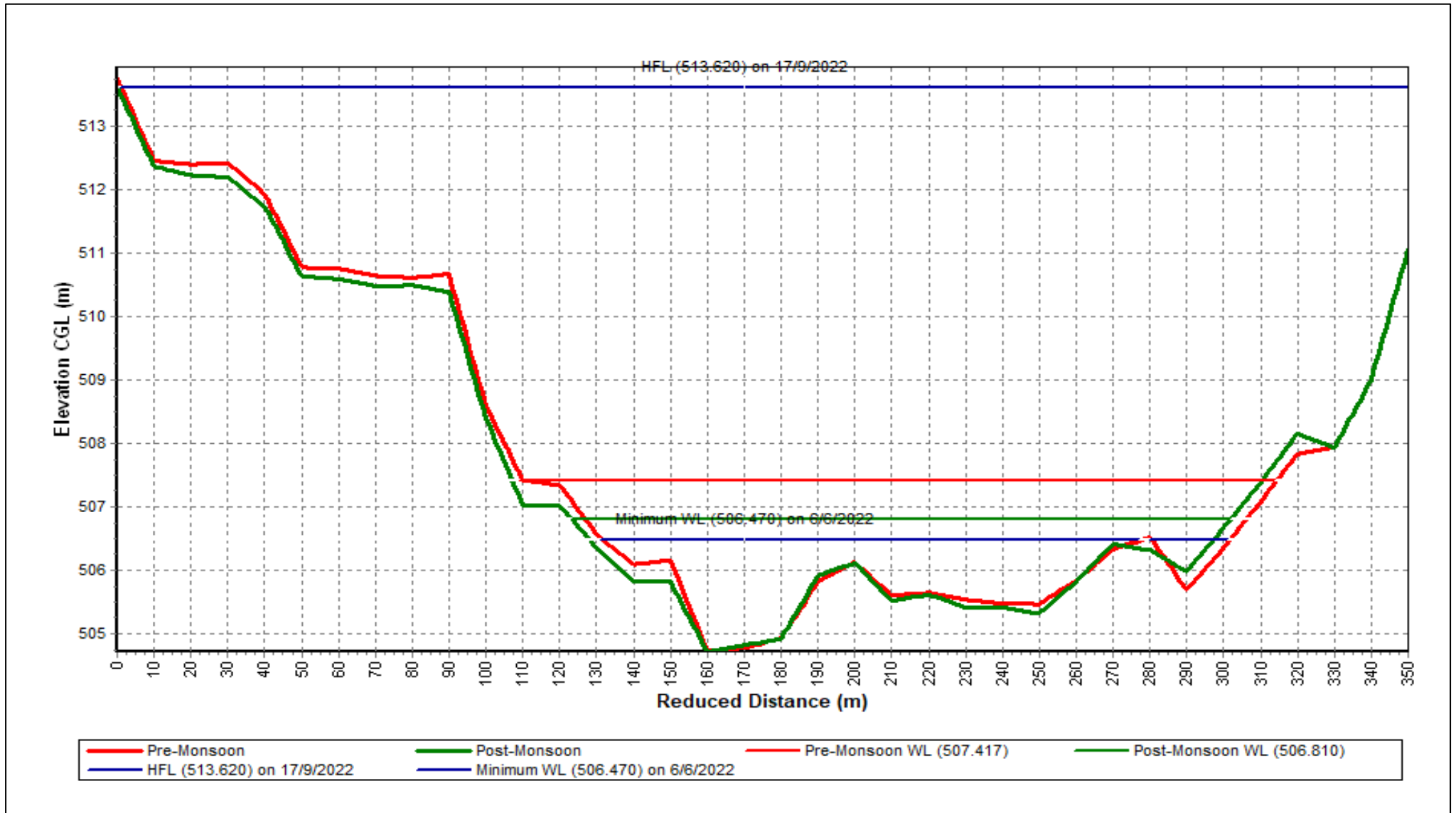
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Paragaon (AKP00V9)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD, Pune



Zero of the Gauge: 503.5 (m.s.l)

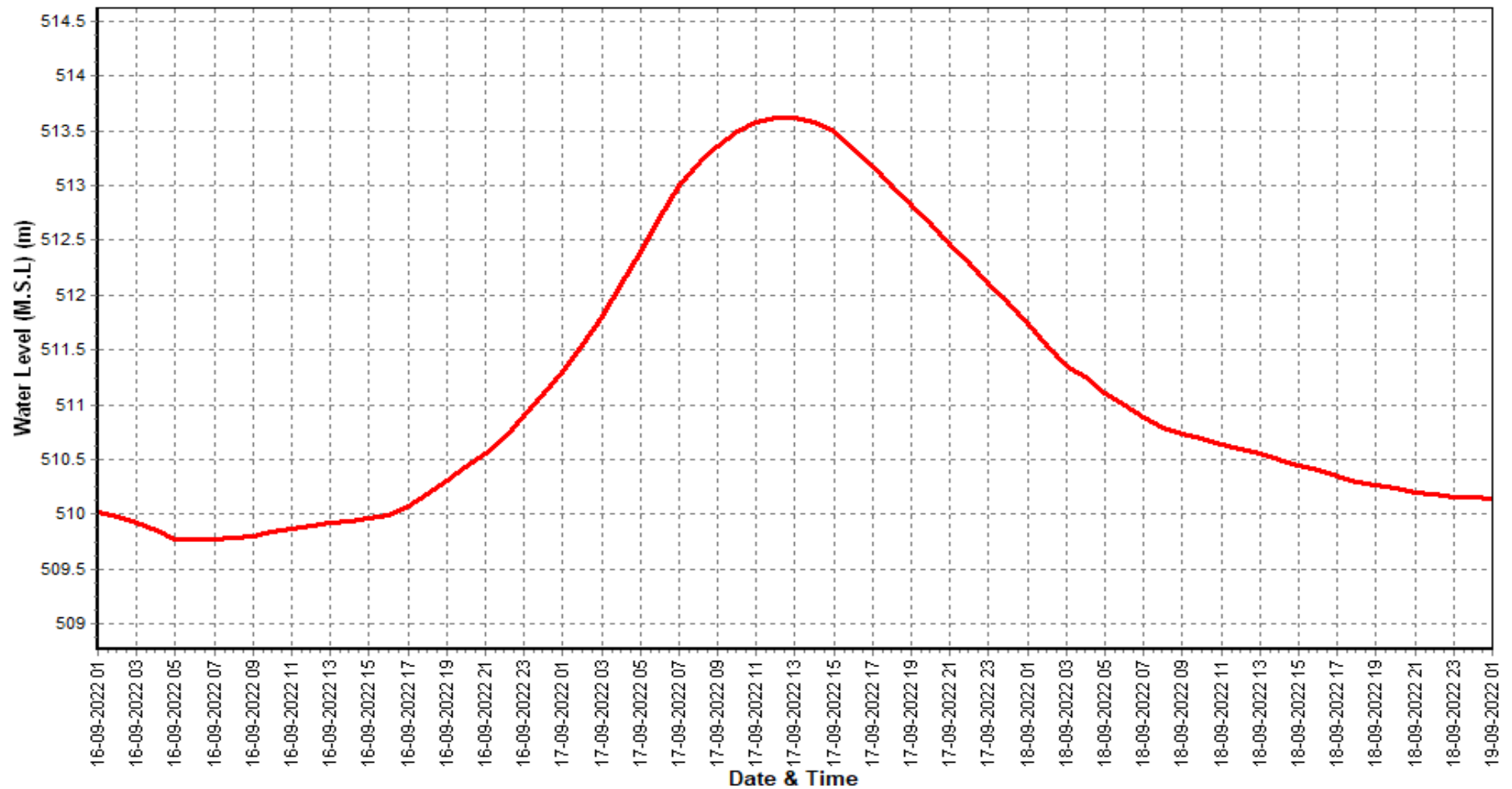
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Paragaon (AKP00V9)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD, Pune



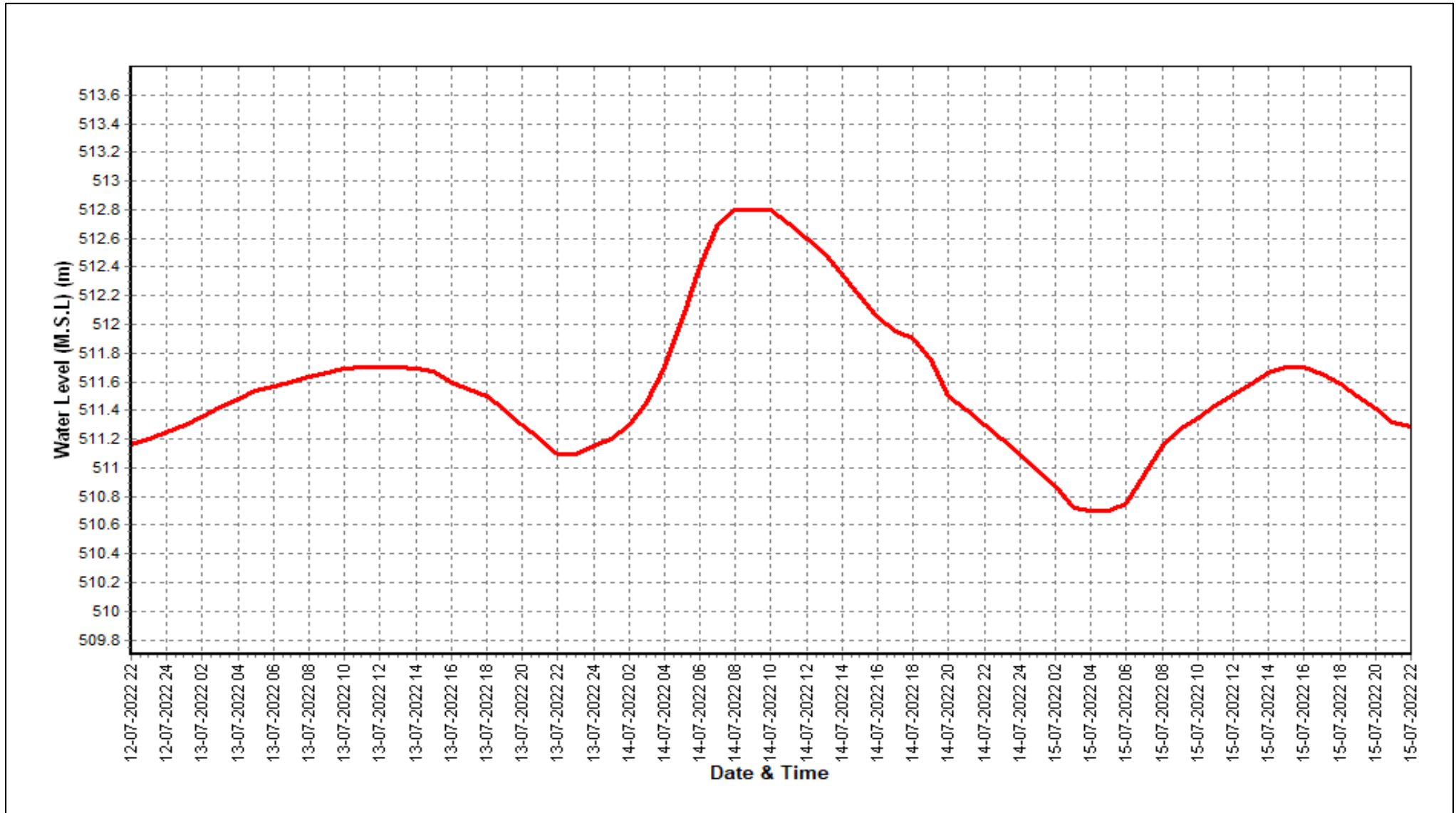
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Paragaon (AKP00V9)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD, Pune



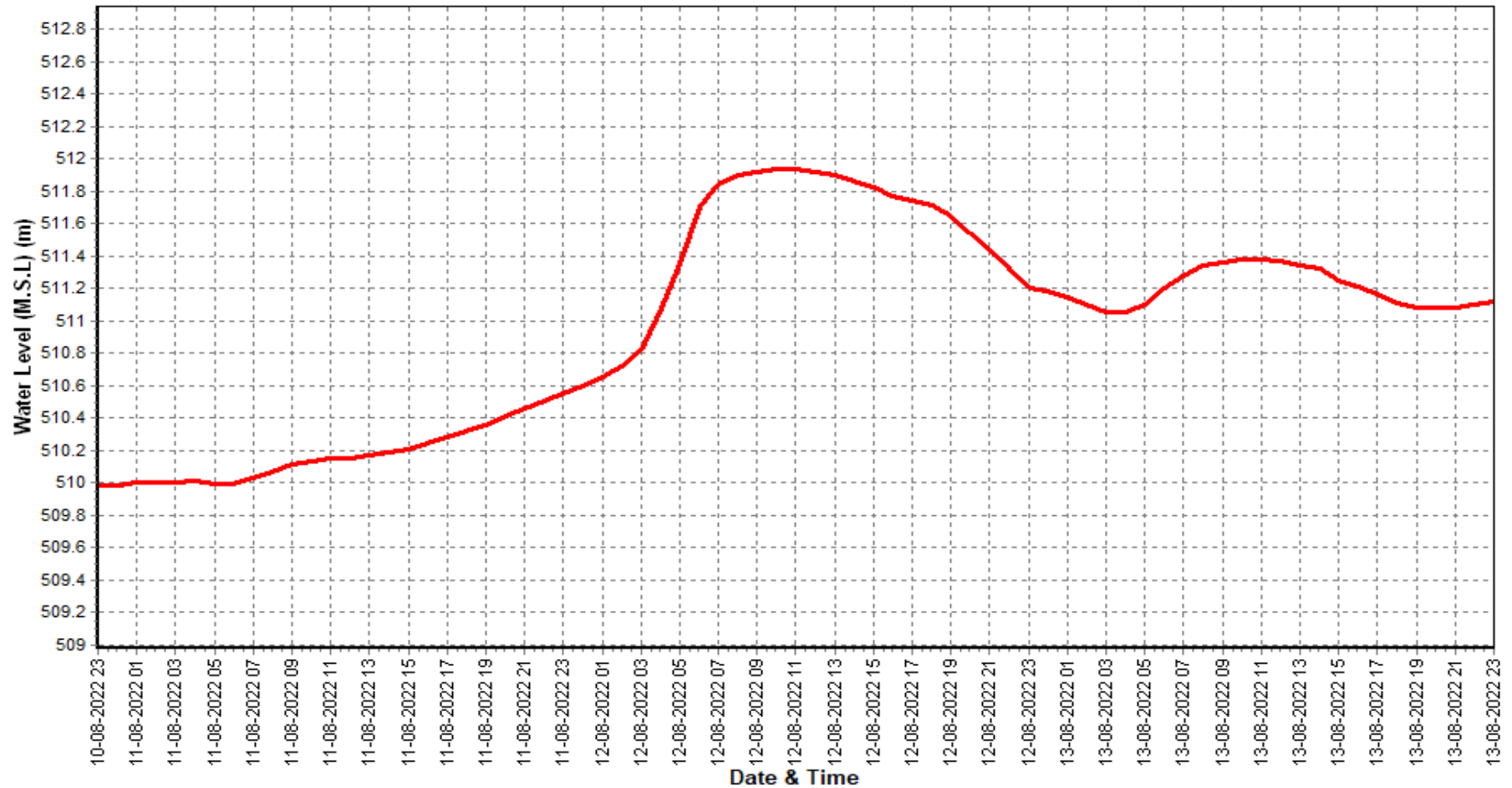
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Paragaon (AKP00V9)

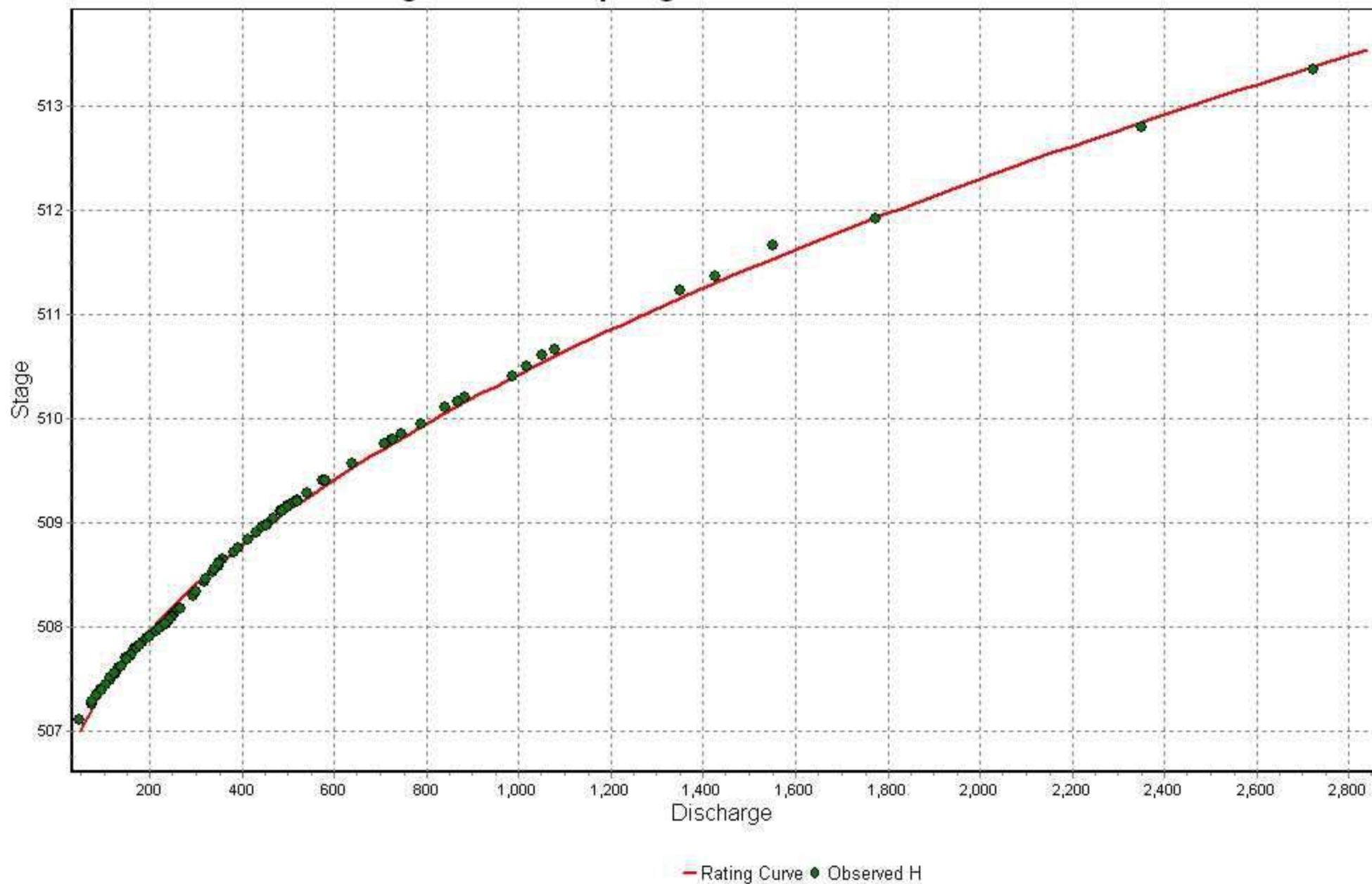
Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD,Pune



Rating Curve of Site paragaon 01/06/2022 to 30/11/2022



HISTORY SHEET

		Water Year	: 2022-2023
Site	: Mirawadi	Code	: MIRAWADI
State	: Maharashtra	District	Pune
Basin	: Krishna	Independent River	: Krishna
Tributary	: Bhima	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: MulaMutta
Division	: Upper Krishna Divn, Pune	Sub-Division	: Upper Bhima SD,Pune
Drainage Area	: 2640 Sq. Km.	Bank	: Left
Latitude	: 18°32'02"	Longitude	: 74°10'32"
Zero of Gauge (m)	: 508.5 (m.s.l) 510 (m.s.l)	01-05-2017 01-12-2020	- 30-11-2020
	Opening Date	Closing Date	
Gauge	: 16-06-2018	HFL During 2022-23	: 519.180 m
		Corres. Discharge	: 1750 (Estimated)
Discharge	: 16-06-2018	Date & Time of occurrence	: 17-09-2021 : 10:00 Hrs
Water Quality	: 03-07-2019		

HFL Recorded so far in m : 521.680 dt 06-08-2019

Corresponding Discharge (cumecs) : 4507*

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2019-2020	4478	521.640	06-08-2019	0.000	514.410	05-02-2020
2020-2021	1156	516.240	15-10-2020	0.000	515.310	30-12-2020
2021-2022	1669	518.890	23-07-2021	0.000	514.930	28-06-2021

Annual Runoff of MulaMutta at Mirawadi

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2018-2019	1358	0	1358	48	0	48
2	2019-2020	5003	0	5003	177	0	177
3	2020-2021	2001	0	2001	71	0	71
4	2021-2022	1584	0	1584	56	0	56
5	2022-2023	2564	0	2564	91	0	91
Average		2502	0	2502	88	0	88

Instantaneous Flood Peak of MulaMutta at Mirawadi

Sl. No.	Year	Instantaneous Annual Flood Peak		Time	Discharge * (Cumecs)
		Peak WL (m) Recorded	Date		
1	2018-2019	516.950	18-08-2018	10:00:00	1626 *
2	2019-2020	521.680	06-08-2019	10:00:00	4507 *
3	2020-2021	516.300	15-10-2020	11:00:00	1188 *
4	2021-2022	518.900	23-07-2021	10:00:00	1889 *
5	2022-2023	519.180	17-09-2022	10:00:00	1750 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : Mirawadi (MIRAWADI)

Division : Upper Krishna Divn, Pune

Local River : MulaMutta

Sub-Division : Upper Bhima SD,Pune

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	513.700	0.000	513.210	0.000	513.680	68.94	513.730	75.91 #	513.930	123.5	513.540	59.01
2	513.470	0.000	513.260	0.000	513.640	62.08	513.900	99.92 #	513.930	104.4 *	513.560	59.07
3	513.350	0.000	513.340	0.000	513.630	59.00	513.775	98.64	513.640	68.22	513.460	51.01
4	513.210	0.000	513.370	0.000	513.640	54.54	513.660	66.75 *	513.640	66.19	513.460	43.09 #
5	513.110	0.000	513.270	0.000	514.120	139.2	513.690	85.27	513.620	61.72 *	513.450	45.98
6	512.980	0.000	513.210	0.000	513.880	99.87	513.540	52.09 #	513.660	68.16	513.440	38.82 *
7	512.910	0.000	513.570	0.000	513.800	85.50 *	513.770	81.34 #	513.650	66.25	513.420	41.28 #
8	512.860	0.000	513.940	105.9 #	513.850	86.67	514.350	202.9	513.620	62.05	513.420	38.82 *
9	512.890	0.000	514.140	136.7	513.900	99.92 *	514.700	242.5 #	513.600	59.26 *	513.410	37.78 #
10	513.040	0.000	515.120	334.5 *	515.050	356.5	514.790	231.5	513.560	51.54	513.400	32.36
11	513.150	0.000	514.745	206.4	515.450	439.7	514.480	198.8 *	513.800	99.31	513.360	27.39
12	513.080	0.000	516.535	662.2	517.110	960.5	515.020	351.6	513.900	118.5	513.370	31.41
13	513.010	0.000	517.780	1137	516.690	719.7	514.520	207.1	513.850	104.2	513.350	31.77 *
14	512.940	0.000	518.440	1355	516.680	763.3 *	514.990	342.3	513.730	89.31	513.420	36.20
15	513.040	0.000	516.725	759.7	516.340	659.1 *	516.060	593.5	514.025	125.8	513.410	35.19
16	513.140	0.000	516.070	565.7	515.750	472.3	515.690	505.4	514.600	222.2 *	513.370	32.25
17	513.110	0.000	515.460	416.8 *	515.740	519.6	519.170	1696	513.890	109.6	513.370	32.99
18	513.100	0.000	515.145	366.0	515.680	505.8	516.200	617.8 *	514.490	208.5	513.350	30.22
19	513.080	0.000	514.980	325.0	515.590	449.9 *	516.090	604.6	514.710	237.9	513.370	33.33
20	513.050	0.000	514.710	220.8	514.950	305.4	515.050	353.7	514.790	239.8	513.390	35.74 *
21	513.140	0.000	514.470	157.8	515.180	348.5 *	514.790	239.6	514.600	208.6	513.320	30.25
22	513.150	0.000	514.310	131.7	514.760	278.6	514.160	138.6	514.200	147.9 #	513.260	30.15
23	513.150	0.000	514.270	125.3	515.090	327.6 #	514.100	132.7	513.920	102.9 *	513.270	29.83
24	513.260	0.000	514.250	156.6 *	514.855	317.5	513.920	107.0	513.820	88.32 *	513.250	28.01
25	513.270	0.000	514.550	184.1	515.750	519.3	513.600	59.26 *	513.800	85.50 #	513.220	26.12
26	513.360	0.000	514.230	129.4	514.800	263.4 #	514.000	119.4	513.740	77.26	513.270	30.02
27	513.300	0.000	514.090	110.4	514.245	155.8	513.890	106.7	513.640	64.22 #	513.220	20.12 *
28	513.270	0.000	514.300	149.0	513.910	101.4 *	513.610	80.30	513.620	61.72 #	513.340	32.19
29	513.220	0.000	514.090	129.5 #	513.620	68.10	513.810	84.62 #	513.620	68.28	513.350	35.84
30	513.270	0.000	513.920	91.00	513.580	60.81	513.640	68.62	513.600	59.26 *	513.390	36.50
31			513.820	88.32 *	513.540	52.09 *			513.600	59.58		
Ten-Daily Mean												
I Ten-Daily	513.152	0.000	513.643	57.71	513.919	111.2	513.991	123.7	513.685	73.13	513.456	44.72
II Ten-Daily	513.070	0.000	516.059	601.5	515.998	579.5	515.727	547.1	514.179	155.5	513.376	32.65
III Ten-Daily	513.239	0.000	514.209	132.1	514.485	226.6	513.952	113.7	513.833	93.05	513.289	29.91
Monthly												
Min.	512.860	0.000	513.210	0.000	513.540	52.09	513.540	52.09	513.560	51.54	513.220	20.12
Max.	513.700	0.000	518.440	1355	517.110	960.5	519.170	1696	514.790	239.8	513.560	59.07
Mean	513.154	0	514.623	259.5	514.790	303.2	514.557	261.5	513.897	106.8	513.374	35.76

Annual Runoff in MCM = 2564 Annual Runoff in mm = 971

Peak Observed Discharge = 1696 cumecs on 17-09-2022 Corres. Water Level :519.17 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :513.7 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 2022 - 2023

Station Name : Mirawadi (MIRAWADI)

Division : Upper Krishna Divn, Pune

Local River : MulaMutta

Sub-Division : Upper Bhima SD,Pune

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	513.490	0.000	515.620	0.000	515.540	0.000	515.090	0.000	515.090	0.000	515.110	0.000
2	513.560	0.000	515.630	0.000	515.550	0.000	515.110	0.000	515.080	0.000	515.120	0.000
3	513.600	0.000	515.600	0.000	515.520	0.000	515.060	0.000	515.160	0.000	515.130	0.000
4	513.500	0.000	515.610	0.000	515.530	0.000	515.060	0.000	515.140	0.000	515.060	0.000
5	513.490	0.000	515.590	0.000	515.540	0.000	515.070	0.000	515.150	0.000	515.010	0.000
6	513.580	0.000	515.600	0.000	515.560	0.000	515.140	0.000	515.140	0.000	515.000	0.000
7	513.600	0.000	515.590	0.000	515.570	0.000	515.130	0.000	515.080	0.000	514.990	0.000
8	513.590	0.000	515.580	0.000	515.560	0.000	515.120	0.000	515.070	0.000	515.040	0.000
9	513.930	0.000	515.630	0.000	515.550	0.000	515.110	0.000	515.070	0.000	515.030	0.000
10	514.000	0.000	515.610	0.000	515.560	0.000	515.060	0.000	515.150	0.000	515.040	0.000
11	514.070	0.000	515.620	0.000	515.560	0.000	515.080	0.000	515.150	0.000	515.040	0.000
12	514.720	0.000	515.600	0.000	515.550	0.000	515.090	0.000	515.150	0.000	515.010	0.000
13	515.610	0.000	515.580	0.000	515.570	0.000	515.160	0.000	515.140	0.000	515.010	0.000
14	515.620	0.000	515.570	0.000	515.560	0.000	515.140	0.000	515.120	0.000	515.000	0.000
15	515.620	0.000	515.580	0.000	515.560	0.000	515.130	0.000	515.140	0.000	515.050	0.000
16	515.590	0.000	515.590	0.000	515.570	0.000	515.130	0.000	515.140	0.000	515.040	0.000
17	515.610	0.000	515.590	0.000	515.520	0.000	515.070	0.000	515.160	0.000	515.030	0.000
18	515.610	0.000	515.600	0.000	515.530	0.000	515.140	0.000	515.160	0.000	515.030	0.000
19	515.640	0.000	515.610	0.000	515.540	0.000	515.120	0.000	515.140	0.000	515.020	0.000
20	515.630	0.000	515.580	0.000	515.500	0.000	515.160	0.000	515.140	0.000	515.030	0.000
21	515.620	0.000	515.540	0.000	515.360	0.000	515.140	0.000	515.140	0.000	515.020	0.000
22	515.610	0.000	515.570	0.000	515.300	0.000	515.140	0.000	515.120	0.000	515.060	0.000
23	515.580	0.000	515.610	0.000	515.090	0.000	515.150	0.000	515.120	0.000	515.050	0.000
24	515.570	0.000	515.590	0.000	515.080	0.000	515.100	0.000	515.110	0.000	515.050	0.000
25	515.580	0.000	515.600	0.000	515.090	0.000	515.110	0.000	515.120	0.000	515.040	0.000
26	515.600	0.000	515.580	0.000	515.130	0.000	515.110	0.000	515.110	0.000	515.030	0.000
27	515.590	0.000	515.590	0.000	515.140	0.000	515.150	0.000	515.110	0.000	515.030	0.000
28	515.600	0.000	515.580	0.000	515.100	0.000	515.160	0.000	515.120	0.000	515.040	0.000
29	515.590	0.000	515.570	0.000			515.150	0.000	515.120	0.000	515.060	0.000
30	515.580	0.000	515.560	0.000			515.140	0.000	515.110	0.000	514.910	0.000
31	515.590	0.000	515.540	0.000			515.080	0.000			514.590	0.000
Ten-Daily Mean												
I Ten-Daily	513.634	0.000	515.606	0.000	515.548	0.000	515.095	0.000	515.113	0.000	515.053	0.000
II Ten-Daily	515.372	0.000	515.592	0.000	515.546	0.000	515.122	0.000	515.144	0.000	515.026	0.000
III Ten-Daily	515.592	0.000	515.575	0.000	515.161	0.000	515.130	0.000	515.118	0.000	514.989	0.000
Monthly												
Min.	513.490	0.000	515.540	0.000	515.080	0.000	515.060	0.000	515.070	0.000	514.590	0.000
Max.	515.640	0.000	515.630	0.000	515.570	0.000	515.160	0.000	515.160	0.000	515.130	0.000
Mean	514.889	0	515.591	0	515.437	0	515.116	0	515.125	0	515.022	0

Peak Computed Discharge = 763.3 cumecs on 14-08-2022

Corres. Water Level :516.68 m

Lowest Computed Discharge = 20.12 cumecs on 27-11-2022

Corres. Water Level :513.22 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

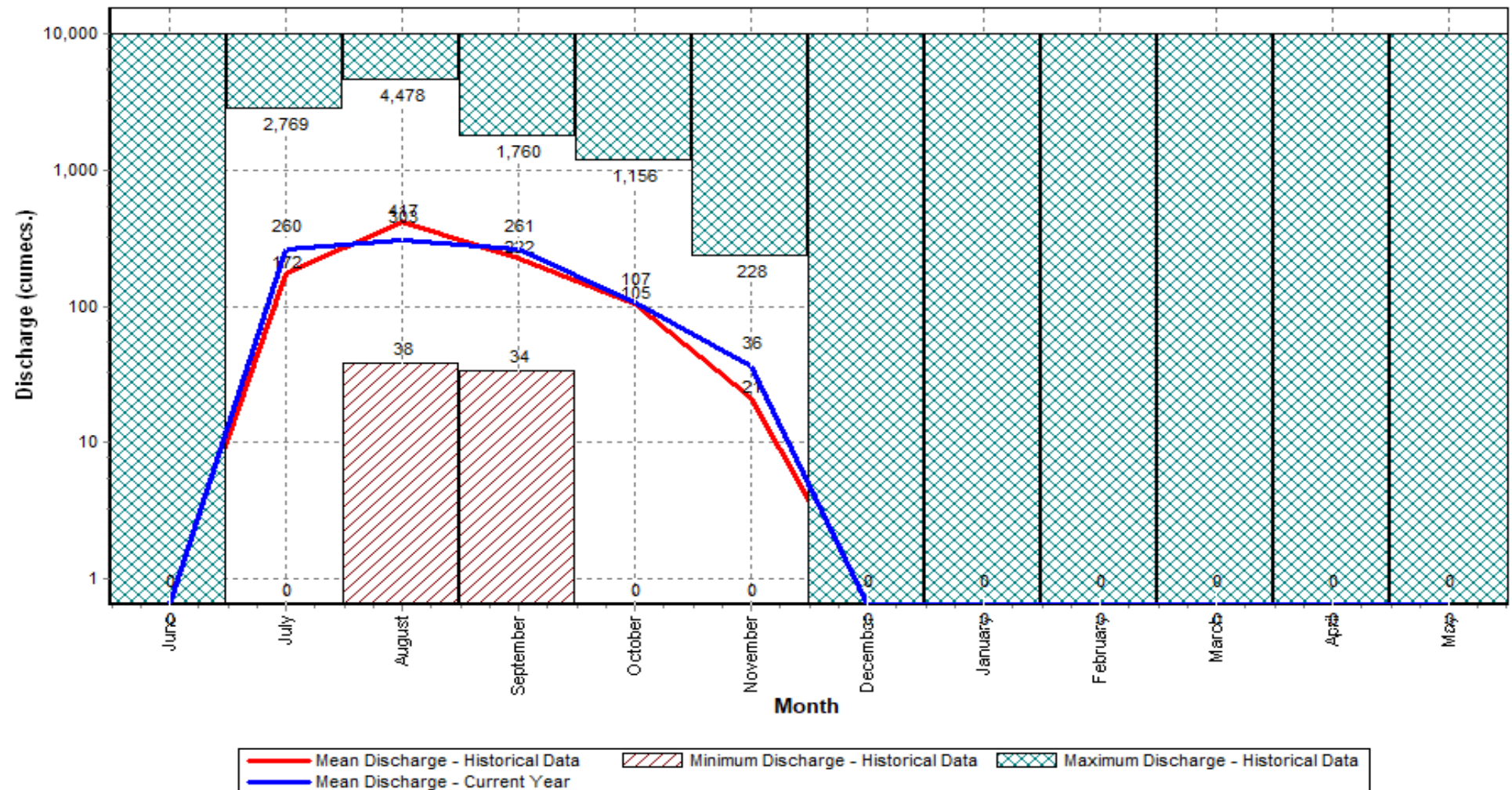
Station Name : Mirawadi (MIRAWADI)

Data considered : 2019-2023

Division : Upper Krishna Divn, Pune

Local River : MulaMutta

Sub-Division : Upper Bhima SD,Pune



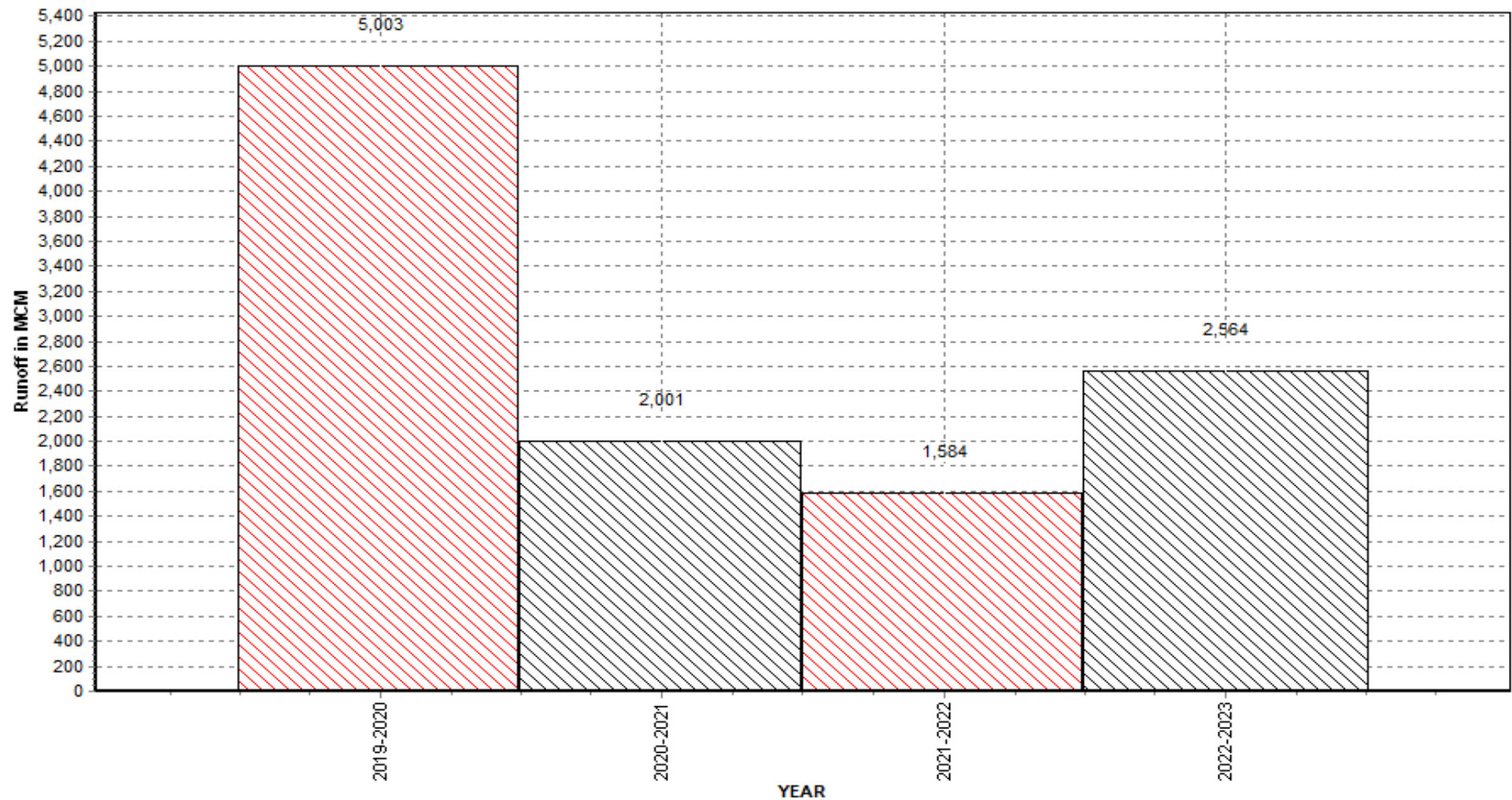
Annual Runoff Values for the period: 2019 - 2023

Station Name : Mirawadi (MIRAWADI)

Local River : MulaMutta

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD,Pune



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

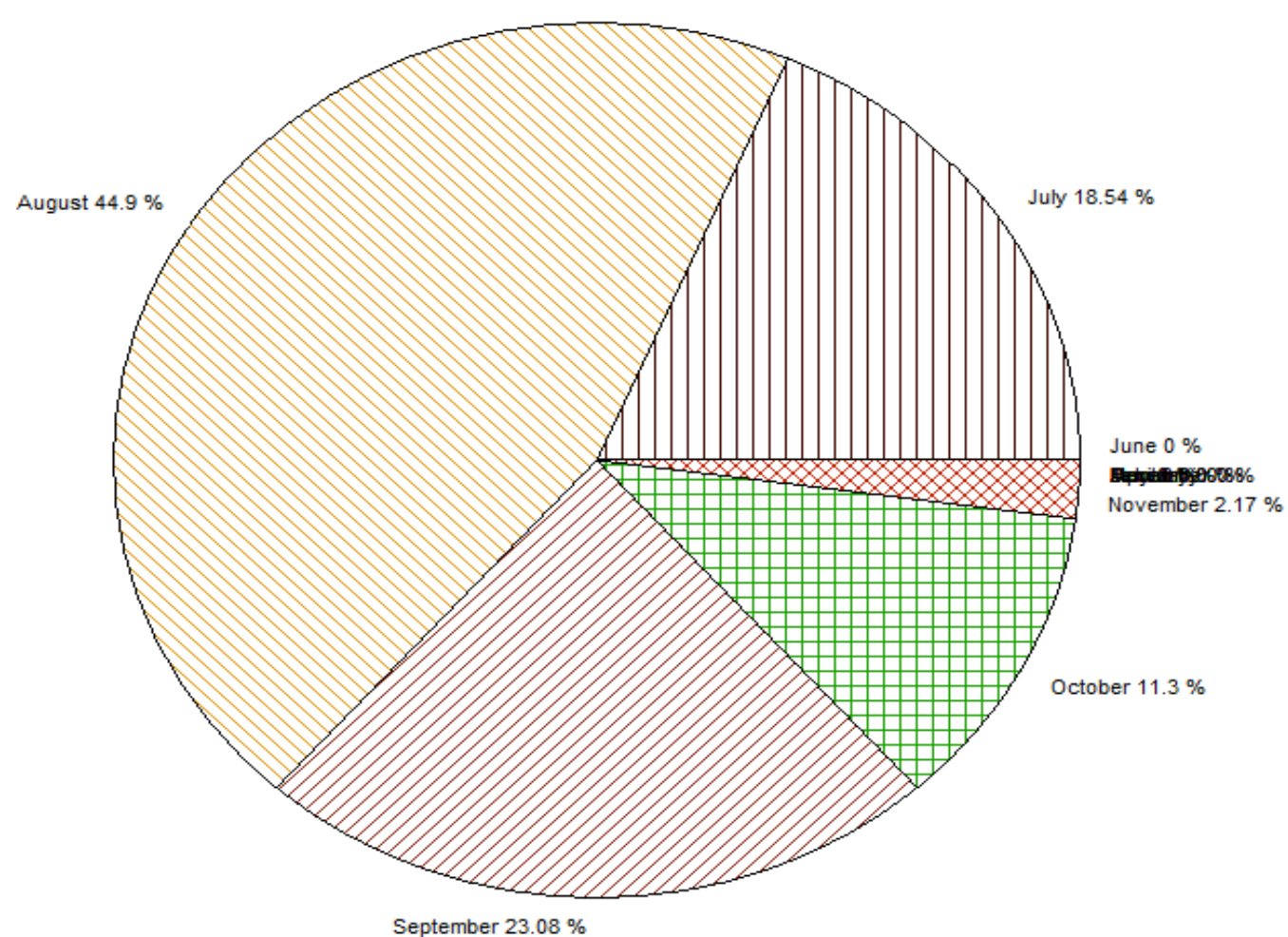
Monthly Average Runoff based on period : 2019-2022

Station Name : Mirawadi (MIRAWADI)

Local River : MulaMutta

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD,Pune



June	0 %
July	18.54 %
August	44.9 %
September	23.08 %
October	11.3 %
November	2.17 %
December	0 %
January	0 %
February	0 %
March	0 %
April	0 %
May	0 %

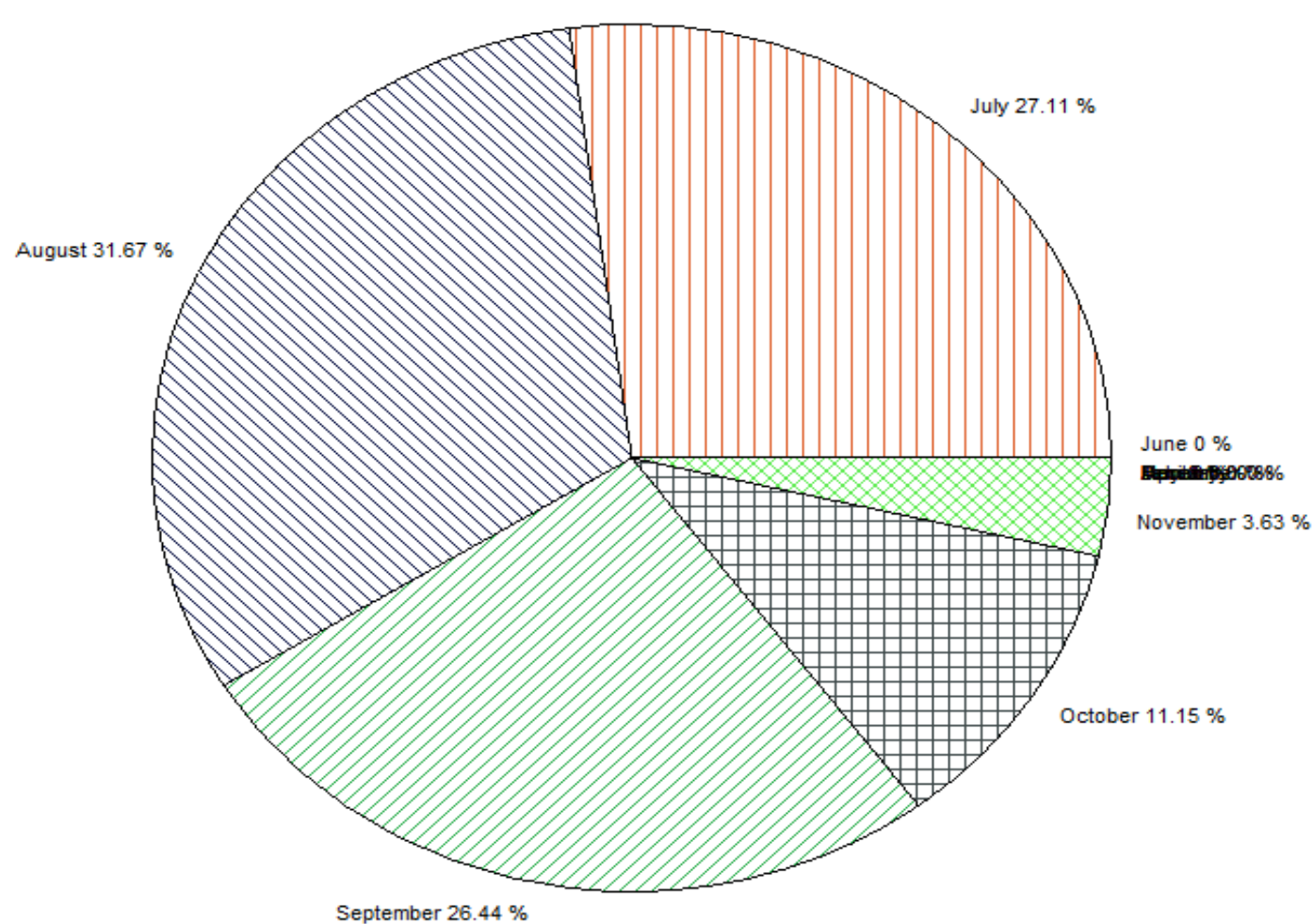
Monthly Runoff for the Year : 2022-2023

Station Name : Mirawadi (MIRAWADI)

Local River : MulaMutta

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD,Pune



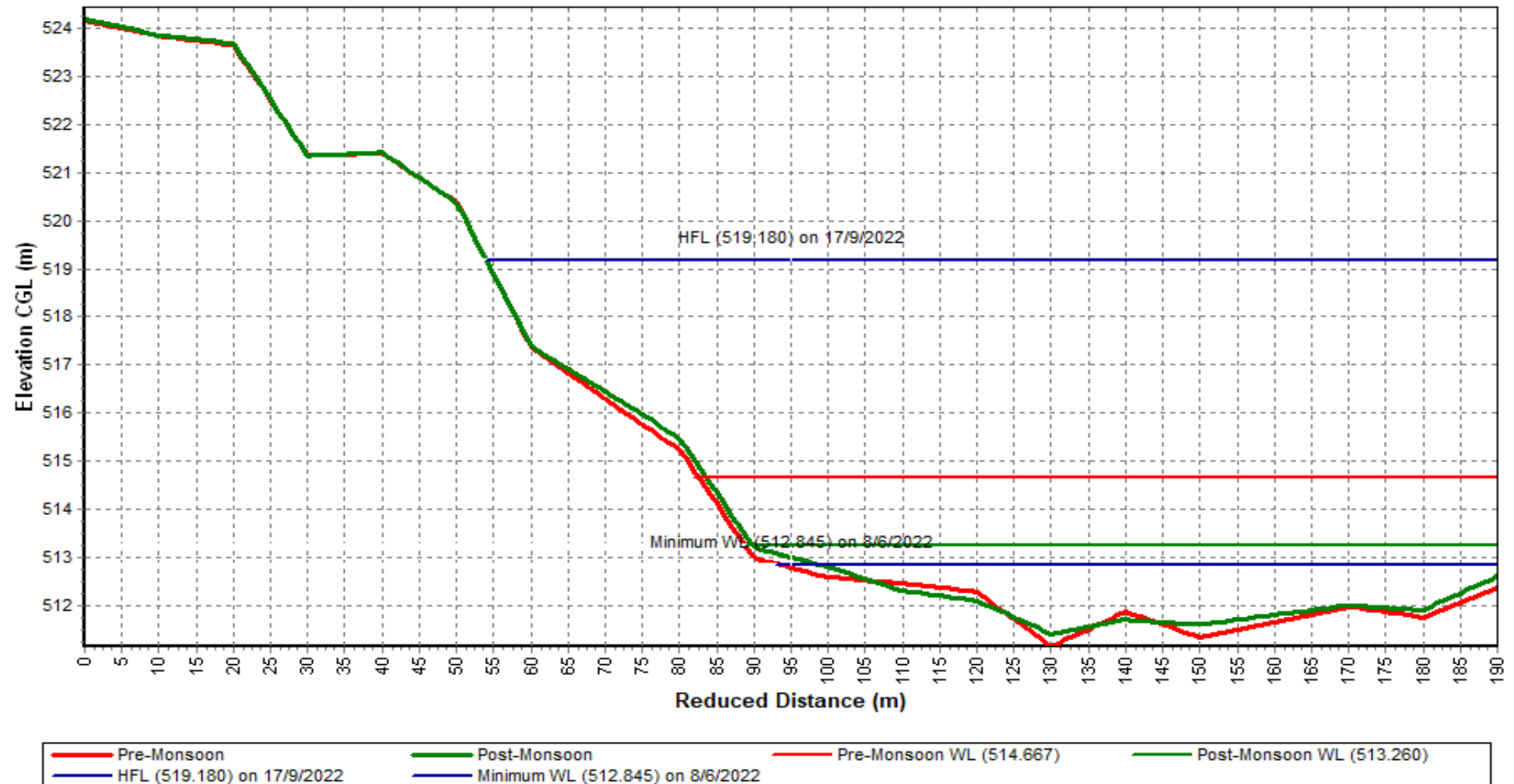
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Mirawadi (MIRAWADI)

Local River : MulaMutta

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD,Pune



Zero of the Gauge: 510 (m.s.l)

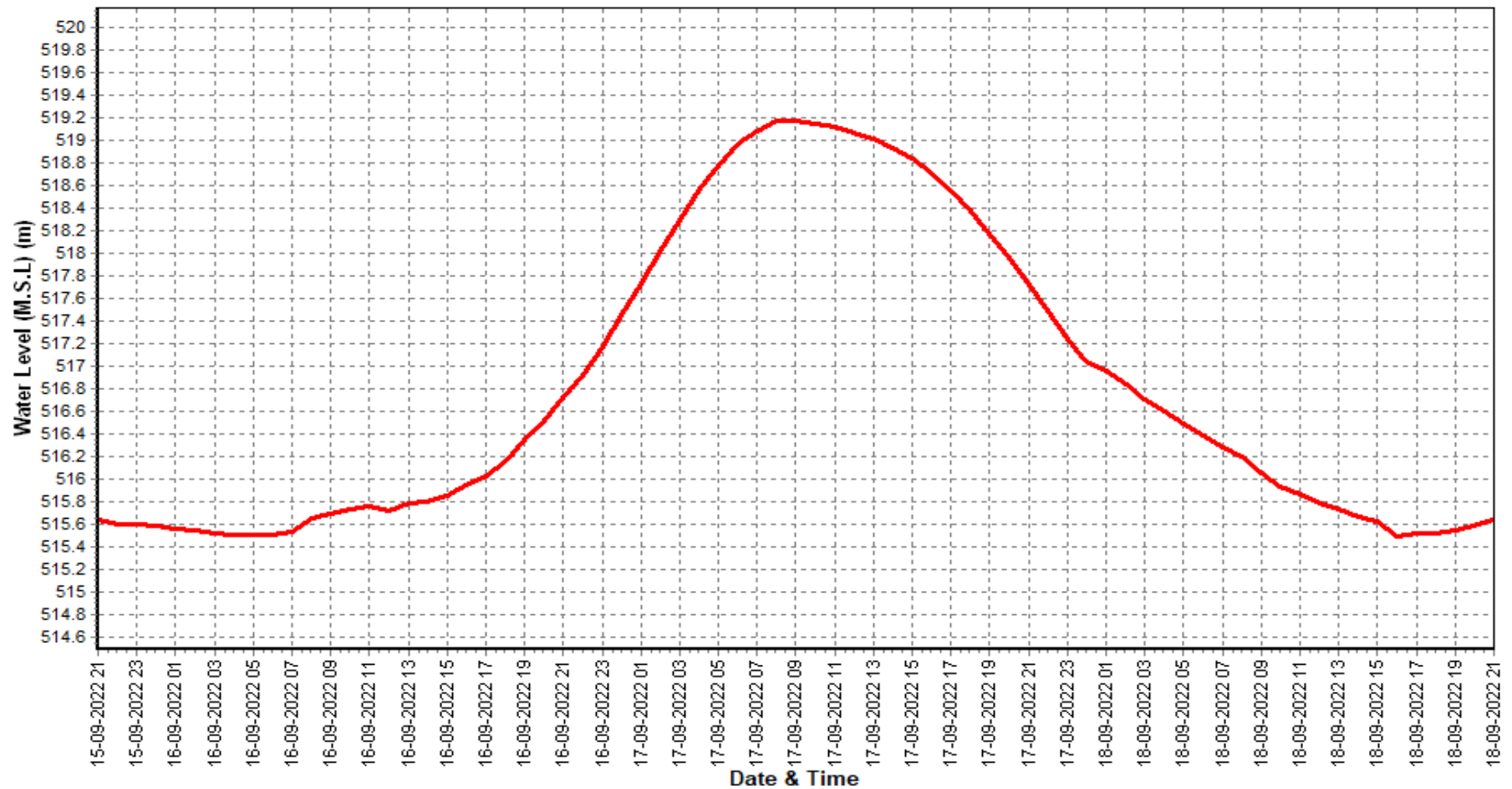
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Mirawadi (MIRAWADI)

Local River : MulaMutta

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD,Pune



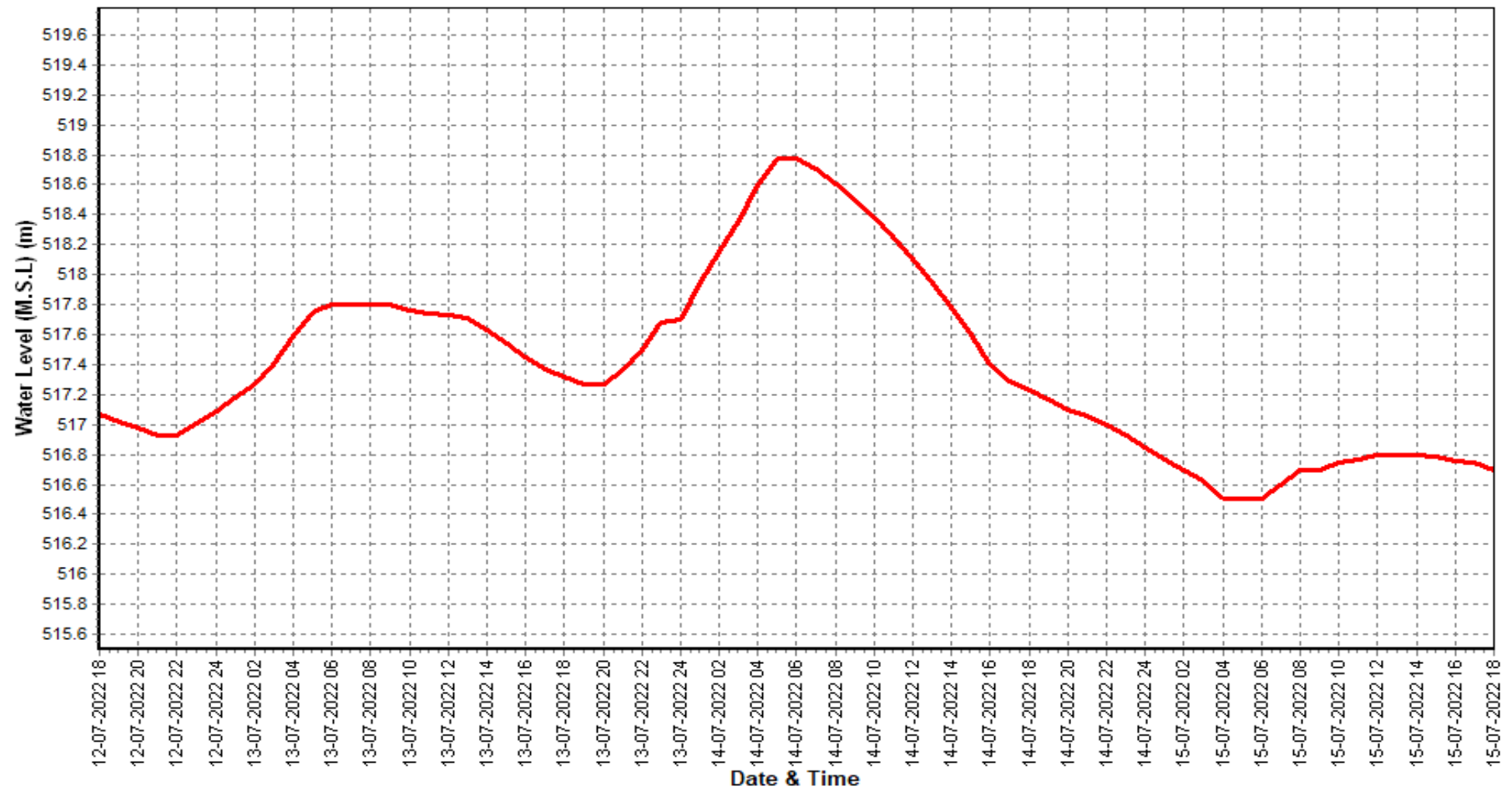
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Mirawadi (MIRAWADI)

Local River : MulaMutta

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD,Pune



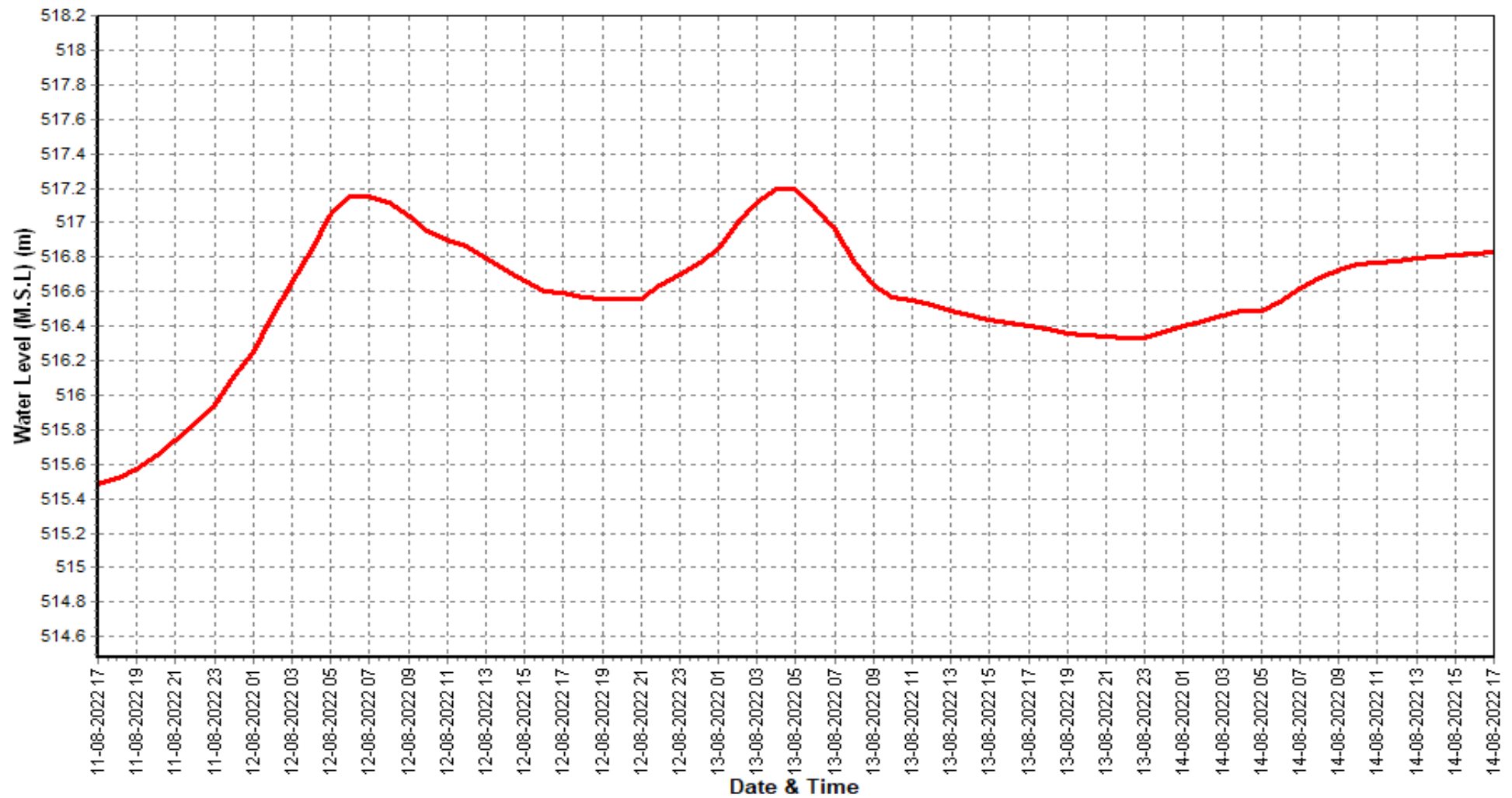
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Mirawadi (MIRAWADI)

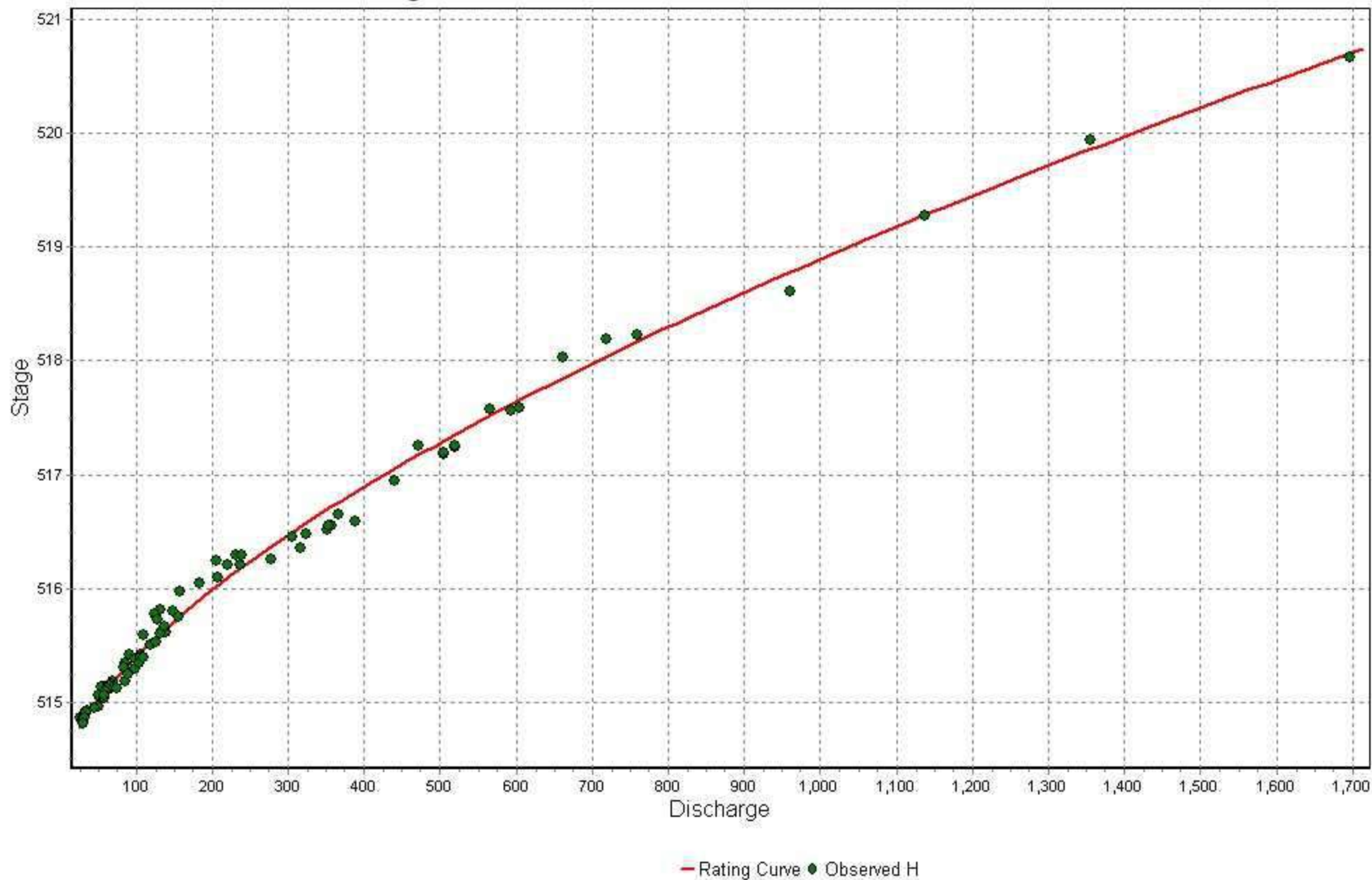
Local River : MulaMutta

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD,Pune



Rating Curve of site Mirawadi 01/06/2022 to 30/11/2022



HISTORY SHEET

Water Year : 2022-2023

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 : Upper Bhima SD, Pune

Drainage Area : 2205 Sq. Km.

Bank : Right

Latitude : 18°40'01"

Longitude : 74°00'08"

Zero of Gauge (m) : 81 (m.s.l)
537 (m.s.l)05-07-1986 - 31-05-2010
01-06-2010

Opening Date

Closing Date

Gauge : 05-07-1986

HFL During 2022-23 : 543.930 m

Corres. Discharge : 664 (Estimated)

Discharge : 21-07-1992

Date & Time of

occurrence : 07:00 Hrs

Water Quality : 02-08-1993

HFL Recorded so far in m : 93.950 dt 23-08-1997 (Zero of Gauge change w.e.f 01/06/2010)

Corresponding Discharge (cumecs) : 4405*

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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	540.480	10-07-2013
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
2016-2017	763.8	543.580	04-08-2016	0.000	540.260	10-10-2016
2017-2018	913.6	543.780	22-07-2017	0.000	540.145	13-11-2017
2018-2019	557.7	543.015	17-07-2018	0.000	540.230	25-06-2018
2019-2020	1661	545.885	05-08-2019	0.000	539.780	02-06-2019
2020-2021	414.0	542.525	15-10-2020	0.000	540.310	31-10-2020
2021-2022	650.1	544.005	24-07-2021	0.000	543.260	21-11-2021

Annual Runoff of Bhima at Phulgaon

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1992-1993	1161	0	1161	41	0	41
2	1993-1994	1358	0	1358	48	0	48
3	1994-1995	2703	0	2703	96	0	96
4	1995-1996	859	0	859	30	0	30
5	1996-1997	1478	0	1478	52	0	52
6	1997-1998	1952	0	1952	69	0	69
7	1998-1999	1284	0	1284	45	0	45
8	1999-2000	957	0	957	34	0	34
9	2000-2001	539	0	539	19	0	19
10	2001-2002	610	0	610	22	0	22
11	2002-2003	964	0	964	34	0	34
12	2003-2004	674	0	674	24	0	24
13	2004-2005	1224	0	1224	43	0	43
14	2005-2006	2801	0	2801	99	0	99
15	2006-2007	2720	Site downgraded as Seasonal Site from 2006-07	2720	96	Site downgraded as Seasonal Site from 2006-07	96
16	2007-2008	964		964	34		34
17	2008-2009	1106		1106	39		39
18	2009-2010	620		620	22		22
19	2010-2011	359		359	13		13
20	2011-2012	890		890	31		31
21	2012-2013	470		470	17		17
22	2013-2014	2672		2672	94		94
23	2014-2015	1170		1170	41		41
24	2015-2016	255		255	9		9
25	2016-2017	1041		1041	37		37
26	2017-2018	1459		1459	52		52
27	2018-2019	902		902	32		32
28	2019-2020	2122		2122	75		75
29	2020-2021	628		628	22		22
30	2021-2022	651		651	23		23
31	2022-2023	1202		1202	42		42
Average		1219	0	1219	43	0	43

Instantaneous Flood Peak of Bhima at Phulgaon

Sl. No.	Year	Instantaneous Annual Flood Peak		Time	Discharge * (Cumecs)
		Peak WL (m) Recorded	Date		
1	1992-1993	87.480	13-08-1992	20:00:00	1355 *
2	1993-1994	88.800	13-07-1993	19:00:00	1952 *
3	1994-1995	90.950	14-07-1994	18:00:00	2951 *
4	1995-1996	87.780	03-09-1995	10:00:00	1489 *
5	1996-1997	88.650	03-10-1996	03:00:00	1883 *
6	1997-1998	93.950	23-08-1997	17:00:00	4405 *
7	1998-1999	86.320	11-11-1998	08:00:00	841 *
8	1999-2000	86.900	25-02-1999	08:00:00	1097 *
9	2000-2001	86.270	14-07-2000	01:00:00	819 *
10	2001-2002	86.500	08-10-2001	12:00:00	920 *
11	2002-2003	86.700	07-08-2002	23:00:00	1008 *
12	2003-2004	88.890	28-07-2003	08:00:00	1993 *
13	2004-2005	88.350	03-08-2004	11:00:00	1747 *
14	2005-2006	91.755	27-07-2005	17:00:00	3335 *
15	2006-2007	90.970	06-08-2006	20:00:00	2961 *
16	2007-2008	87.300	08-08-2007	08:00:00	1274 *
17	2008-2009	90.100	11-08-2008	20:00:00	2552 *
18	2009-2010	87.400	06-10-2009	16:00:00	1319 *
19	2010-2011	542.300	20-10-2010	08:00:00	345 *
20	2011-2012	546.000	04-09-2011	00:00:00	1721 *
21	2012-2013	542.670	03-10-2012	08:00:00	413 *
22	2013-2014	543.850	17-06-2013	01:00:00	915 *
23	2014-2015	544.330	05-08-2014	13:00:00	1055 *
24	2015-2016	543.950	19-09-2015	10:00:00	935 *
25	2016-2017	543.950	04-08-2016	11:00:00	935 *
26	2017-2018	544.955	22-07-2017	22:00:00	1213 *
27	2018-2019	543.100	21-08-2018	12:00:00	621 *
28	2019-2020	547.655	04-08-2019	18:00:00	2150 *
29	2020-2021	543.330	04-06-2020	15:00:00	672 *
30	2021-2022	544.030	24-07-2021	08:00:00	781 *
31	2022-2023	543.930	17-09-2022	07:00:00	664 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : Phulgaon (Seasonal) (AKP00X5)

Division : Upper Krishna Divn, Pune

Local River : Bhima

Sub-Division : Upper Bhima SD, Pune

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	541.390	0.000	539.990	0.000	540.405	29.25	540.340	24.01	540.355	25.09	540.280	0.000
2	541.290	0.000	539.940	0.000	540.350	24.72	541.000	92.08	540.500	39.58 *	540.100	0.000
3	540.910	0.000	539.940	7.287 *	540.290	20.96	540.700	60.57	540.400	29.57	539.990	0.000
4	540.600	0.000	539.960	0.000	540.250	19.80	540.570	47.18 *	540.330	23.10	540.520	0.000
5	539.830	0.000	540.020	0.000	540.335	23.06	540.365	25.53	540.320	21.92 *	540.940	0.000
6	539.650	0.000	540.080	0.000	540.415	30.15	540.310	22.41	540.295	20.69	541.150	0.000 *
7	539.620	0.000	540.940	89.73	540.340	23.73 *	540.530	35.60	540.180	15.52	541.320	0.000
8	539.900	0.000	541.080	115.7	540.450	32.83	541.750	217.5 #	540.160	14.37	542.350	0.000
9	539.870	0.000	541.130	120.4	540.680	59.85 *	542.275	329.2	540.150	8.357 *	542.580	0.000
10	540.040	0.000	542.290	315.0 *	542.435	350.1	541.285	144.2	540.120	12.55	542.710	0.000
11	540.030	0.000	541.510	185.0	542.615	377.7	541.050	108.0 *	540.280	20.75	542.780	0.000
12	539.990	0.000	543.015	476.0	543.040	486.1	540.440	31.90	540.700	0.000	542.840	0.000
13	540.010	0.000	542.535	358.4	542.745	400.2	540.920	89.91	540.780	0.000	542.930	0.000 *
14	540.030	0.000	543.465	574.2	542.470	349.6 *	541.580	184.3	540.800	0.000	542.990	0.000
15	540.020	0.000	543.680	587.6	542.360	328.3 *	541.550	180.8	540.820	0.000	543.040	0.000
16	540.000	0.000	542.585	368.9	542.250	321.1	541.340	148.8	540.940	0.000	543.090	0.000
17	540.020	0.000	542.200	298.0 *	542.610	376.2	543.875	638.3	540.740	0.000	543.090	0.000
18	539.990	0.000	541.625	209.7	541.550	183.0	543.400	543.7 *	541.090	0.000	543.140	0.000
19	539.960	0.000	542.130	291.0	541.530	180.8 *	541.260	144.6	541.180	0.000	542.800	0.000
20	539.980	0.000	542.170	294.9	541.150	125.1	541.110	115.5	542.280	0.000	542.700	0.000 *
21	539.970	0.000	541.365	150.1	541.190	128.1 *	540.860	77.48	541.470	0.000	542.680	0.000
22	539.990	0.000	541.005	100.5	541.020	98.09	540.720	62.99	541.280	0.000	542.660	0.000
23	540.020	0.000	541.030	105.6	540.830	75.51	540.680	59.22	541.140	0.000	542.650	0.000
24	540.090	0.000	541.010	102.4 *	541.140	121.4	540.650	58.51	541.020	0.000	542.440	0.000
25	540.230	0.000	541.345	150.1	541.210	140.7	540.610	51.69 *	541.060	0.000	542.380	0.000
26	540.280	0.000	541.125	119.6	541.065	106.0	540.560	42.09	541.120	0.000	542.350	0.000
27	540.280	0.000	540.975	95.45	541.010	99.14	540.375	26.11	540.840	0.000	542.320	0.000 *
28	540.300	0.000	540.820	75.46	540.950	94.21 *	540.320	23.05	540.730	0.000	542.280	0.000
29	540.100	0.000	540.685	59.04	540.550	41.96	540.480	34.08	540.560	0.000	542.440	0.000
30	540.020	0.000	540.630	49.39	540.335	23.82	540.400	29.49	540.500	0.000	542.430	0.000
31			540.580	48.30 *	540.270	17.57 *			540.440	0.000		
Ten-Daily Mean												
I Ten-Daily	540.310	0.000	540.537	64.80	540.595	61.44	540.913	99.83	540.281	21.07	541.194	0.000
II Ten-Daily	540.003	0.000	542.492	364.4	542.232	312.8	541.652	218.6	540.961	2.075	542.940	0.000
III Ten-Daily	540.128	0.000	540.961	96.00	540.870	86.05	540.565	46.47	540.924	0.000	542.463	0.000
Monthly												
Min.	539.620	0.000	539.940	0.000	540.250	17.57	540.310	22.41	540.120	0.000	539.990	0.000
Max.	541.390	0.000	543.680	587.6	543.040	486.1	543.875	638.3	542.280	39.58	543.140	0.000
Mean	540.147	0	541.318	172.5	541.221	151.3	541.044	121.6	540.728	7.468	542.199	0

Annual Runoff in MCM = 1202 Annual Runoff in mm = 545

Peak Observed Discharge = 638.3 cumecs on 17-09-2022 Corres. Water Level :543.875 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :541.39 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 2022 - 2023

Station Name : Phulgaon (Seasonal) (AKP00X5)

Division : Upper Krishna Divn, Pune

Local River : Bhima

Sub-Division : Upper Bhima SD, Pune

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	542.420	0.000	542.860	0.000	543.080	0.000	542.790	0.000	543.315	0.000	542.170	0.000
2	542.500	0.000	542.860	0.000	543.060	0.000	542.790	0.000	543.330	0.000	542.050	0.000
3	542.570	0.000	542.860	0.000	543.000	0.000	542.790	0.000	543.330	0.000	541.840	0.000
4	542.750	0.000	542.860	0.000	542.990	0.000	542.790	0.000	543.330	0.000	541.730	0.000
5	542.740	0.000	542.870	0.000	543.000	0.000	542.790	0.000	543.330	0.000	541.690	0.000
6	542.750	0.000	542.860	0.000	542.990	0.000	542.790	0.000	543.330	0.000	541.650	0.000
7	542.750	0.000	542.860	0.000	542.990	0.000	542.790	0.000	543.330	0.000	541.560	0.000
8	542.860	0.000	542.860	0.000	542.970	0.000	542.880	0.000	543.340	0.000	541.300	0.000
9	542.990	0.000	542.870	0.000	542.960	0.000	542.880	0.000	543.330	0.000	541.260	0.000
10	542.980	0.000	542.920	0.000	542.950	0.000	542.960	0.000	543.325	0.000	541.250	0.000
11	542.960	0.000	542.920	0.000	542.915	0.000	542.990	0.000	543.330	0.000	541.230	0.000
12	542.940	0.000	542.970	0.000	542.910	0.000	542.990	0.000	543.325	0.000	541.210	0.000
13	543.010	0.000	542.970	0.000	542.920	0.000	542.960	0.000	543.280	0.000	541.060	0.000
14	543.040	0.000	542.970	0.000	542.930	0.000	542.940	0.000	543.335	0.000	540.990	0.000
15	543.140	0.000	542.930	0.000	543.210	0.000	542.930	0.000	543.330	0.000	540.800	0.000
16	542.910	0.000	542.920	0.000	543.350	0.000	542.920	0.000	543.270	0.000	540.740	0.000
17	542.870	0.000	542.910	0.000	543.350	0.000	542.940	0.000	543.155	0.000	540.720	0.000
18	542.850	0.000	542.910	0.000	543.330	0.000	542.950	0.000	542.960	0.000	540.570	0.000
19	543.190	0.000	543.125	0.000	543.320	0.000	542.930	0.000	542.870	0.000	541.440	0.000
20	543.250	0.000	543.090	0.000	543.295	0.000	542.890	0.000	542.810	0.000	541.620	0.000
21	543.250	0.000	543.050	0.000	543.060	0.000	542.870	0.000	542.790	0.000	541.510	0.000
22	543.240	0.000	543.000	0.000	542.960	0.000	542.860	0.000	542.760	0.000	541.320	0.000
23	543.240	0.000	542.910	0.000	542.890	0.000	542.840	0.000	542.730	0.000	541.300	0.000
24	543.100	0.000	542.950	0.000	542.890	0.000	542.840	0.000	542.680	0.000	541.300	0.000
25	542.950	0.000	542.940	0.000	542.820	0.000	542.840	0.000	542.630	0.000	541.270	0.000
26	542.910	0.000	542.930	0.000	542.820	0.000	542.800	0.000	542.580	0.000	541.320	0.000
27	542.900	0.000	542.950	0.000	542.790	0.000	542.790	0.000	542.520	0.000	541.260	0.000
28	542.890	0.000	543.050	0.000	542.790	0.000	542.760	0.000	542.470	0.000	541.310	0.000
29	542.870	0.000	543.150	0.000			542.730	0.000	542.400	0.000	541.070	0.000
30	542.850	0.000	543.160	0.000			543.295	0.000	542.270	0.000	540.720	0.000
31	542.860	0.000	543.120	0.000			543.315	0.000			540.550	0.000
Ten-Daily Mean												
I Ten-Daily	542.731	0.000	542.868	0.000	542.999	0.000	542.825	0.000	543.329	0.000	541.650	0.000
II Ten-Daily	543.016	0.000	542.971	0.000	543.153	0.000	542.944	0.000	543.167	0.000	541.038	0.000
III Ten-Daily	543.005	0.000	543.019	0.000	542.878	0.000	542.904	0.000	542.583	0.000	541.175	0.000
Monthly												
Min.	542.420	0.000	542.860	0.000	542.790	0.000	542.730	0.000	542.270	0.000	540.550	0.000
Max.	543.250	0.000	543.160	0.000	543.350	0.000	543.315	0.000	543.340	0.000	542.170	0.000
Mean	542.920	0	542.955	0	543.019	0	542.891	0	543.026	0	541.284	0

Peak Computed Discharge = 543.7 cumecs on 18-09-2022

Corres. Water Level :543.4 m

Lowest Computed Discharge = 0.000 cumecs on 06-11-2022

Corres. Water Level :541.15 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

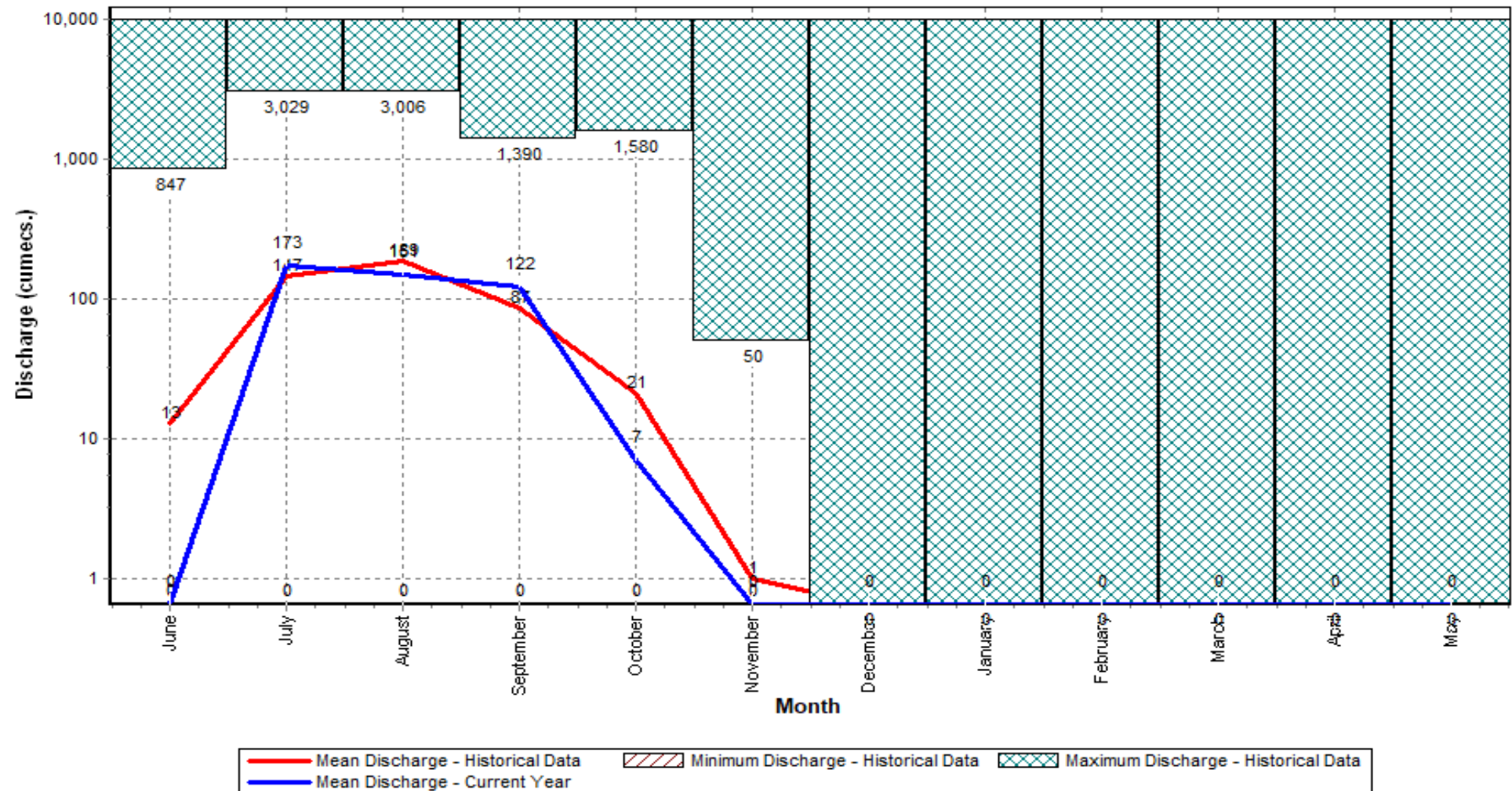
Station Name : Phulgaon (Seasonal) (AKP00X5)

Data considered : 1992-2023

Division : Upper Krishna Divn, Pune

Local River : Bhima

Sub-Division : Upper Bhima SD, Pune



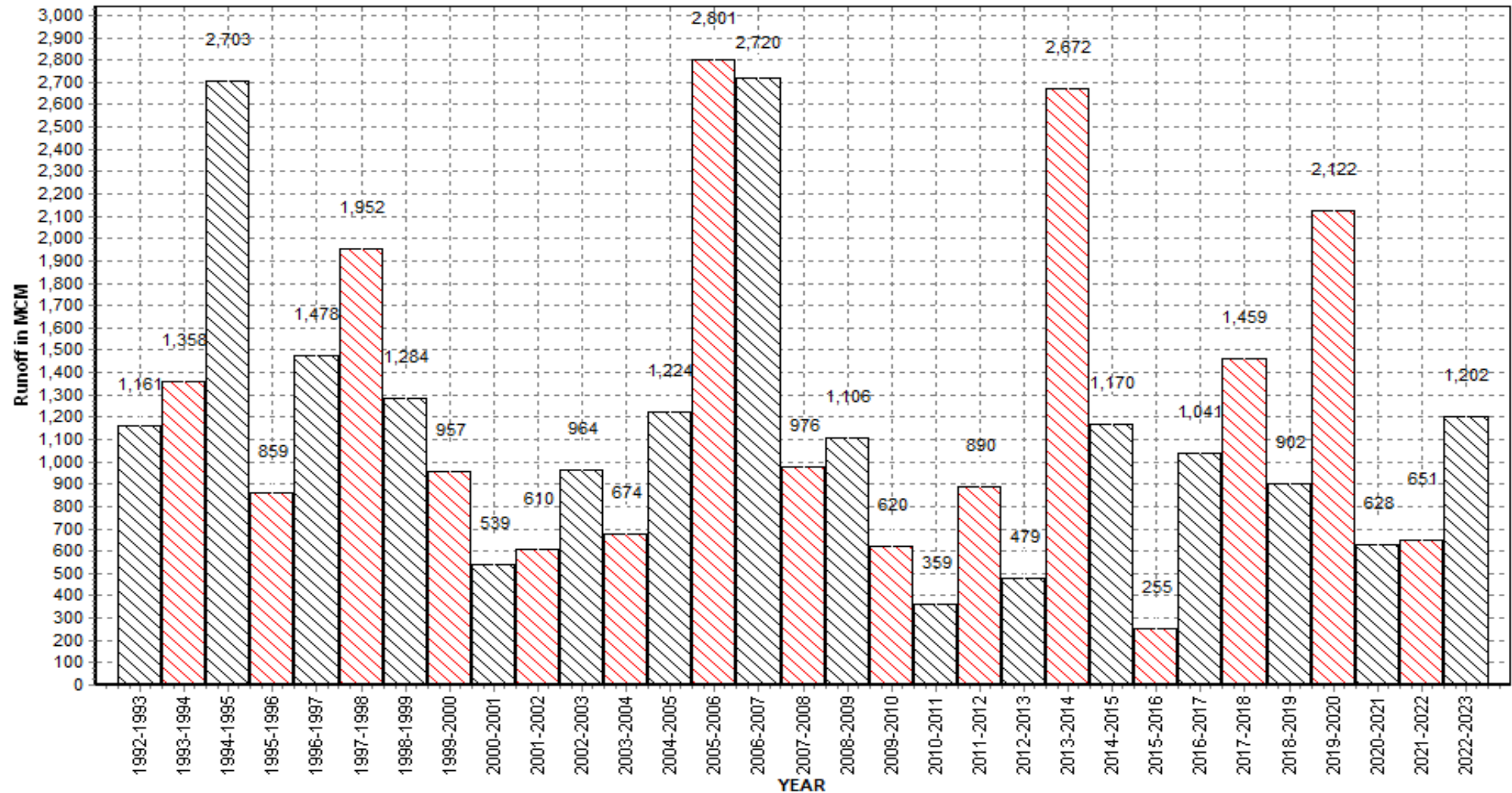
Annual Runoff Values for the period: 1992 - 2023

Station Name : Phulgaon (Seasonal) (AKP00X5)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD, Pune



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

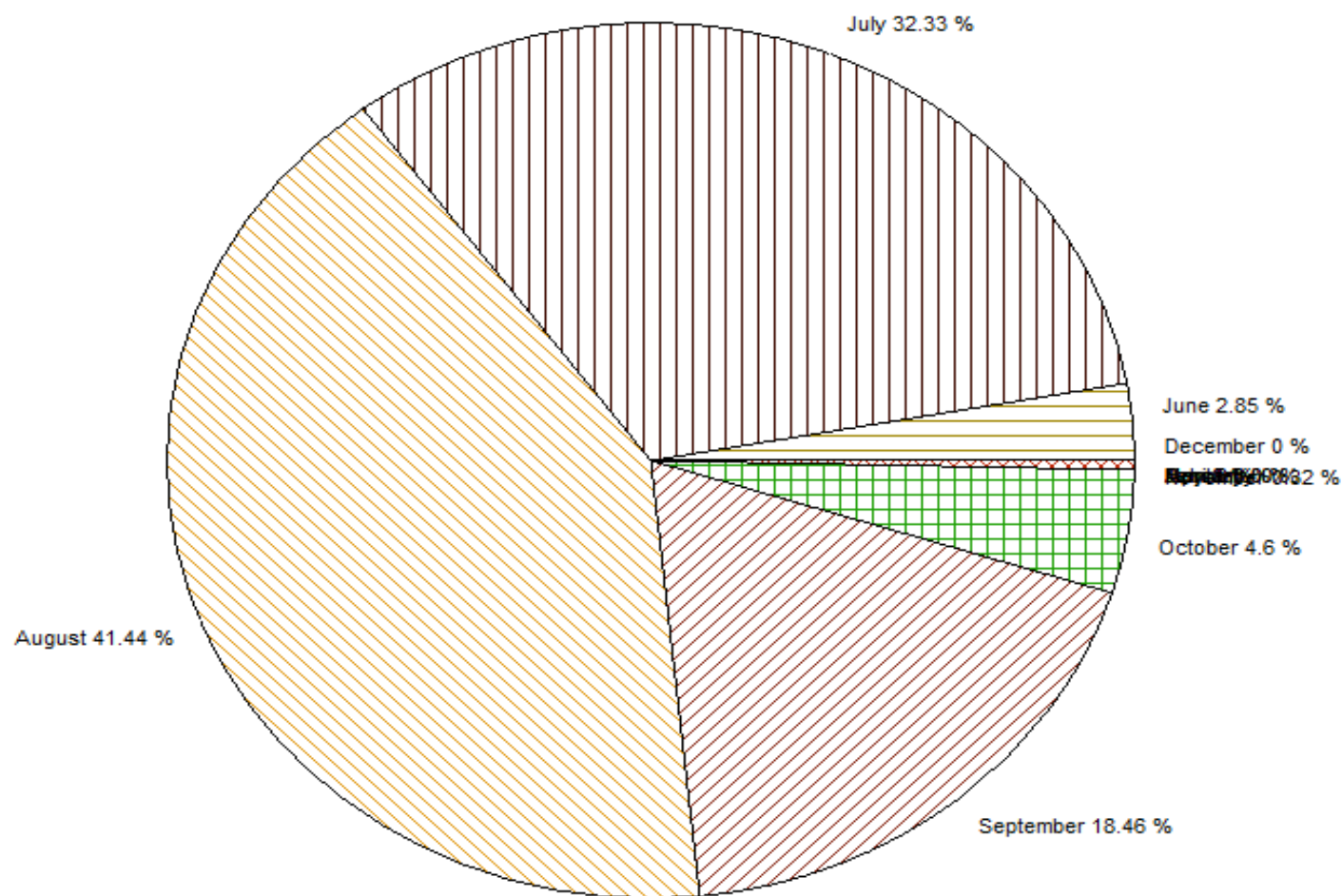
Monthly Average Runoff based on period : 1992-2022

Station Name : Phulgaon (Seasonal) (AKP00X5)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD, Pune



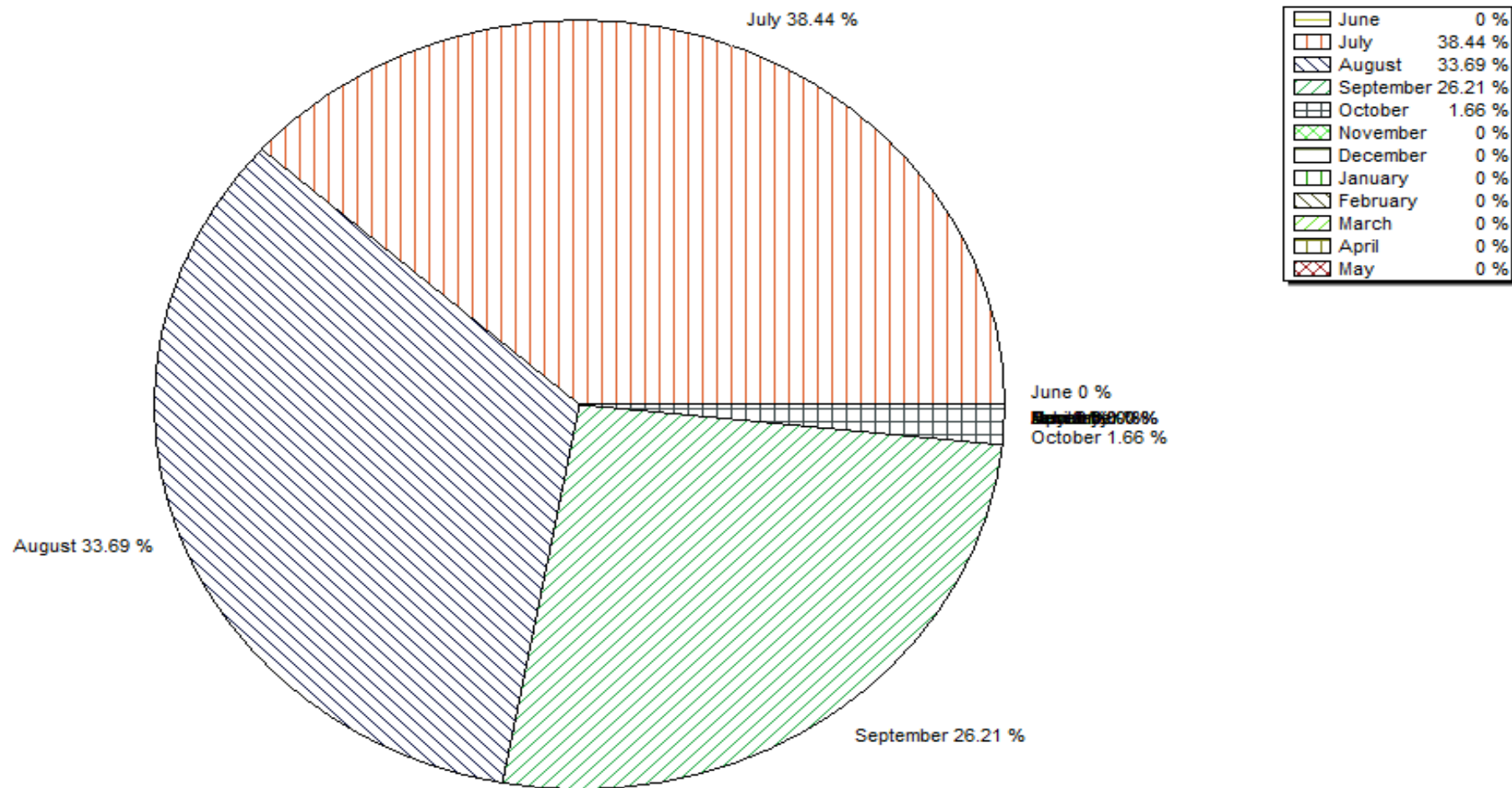
Monthly Runoff for the Year : 2022-2023

Station Name : Phulgaon (Seasonal) (AKP00X5)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD, Pune



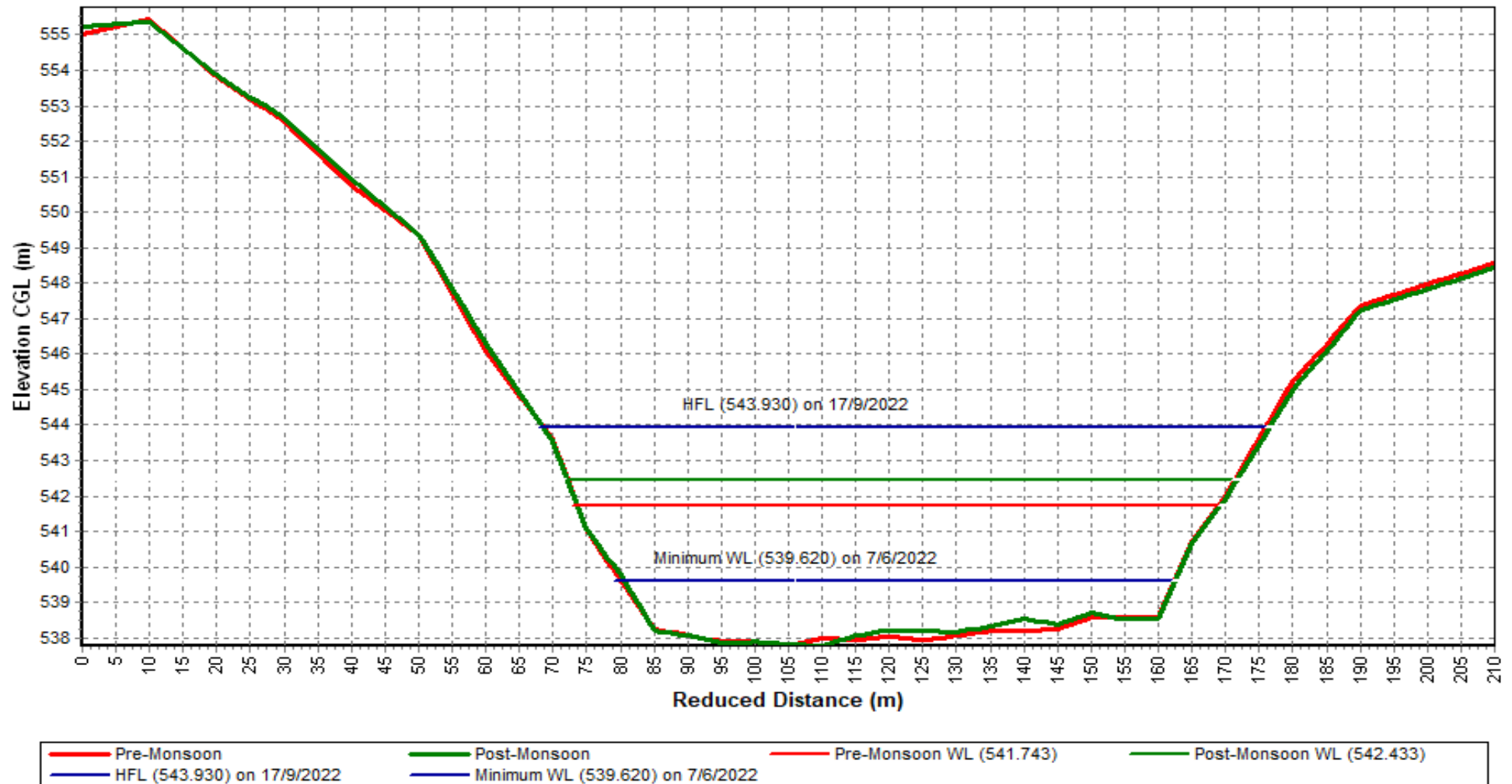
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Phulgaon (Seasonal) (AKP00X5)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD, Pune



Zero of the Gauge: 537 (m.s.l)

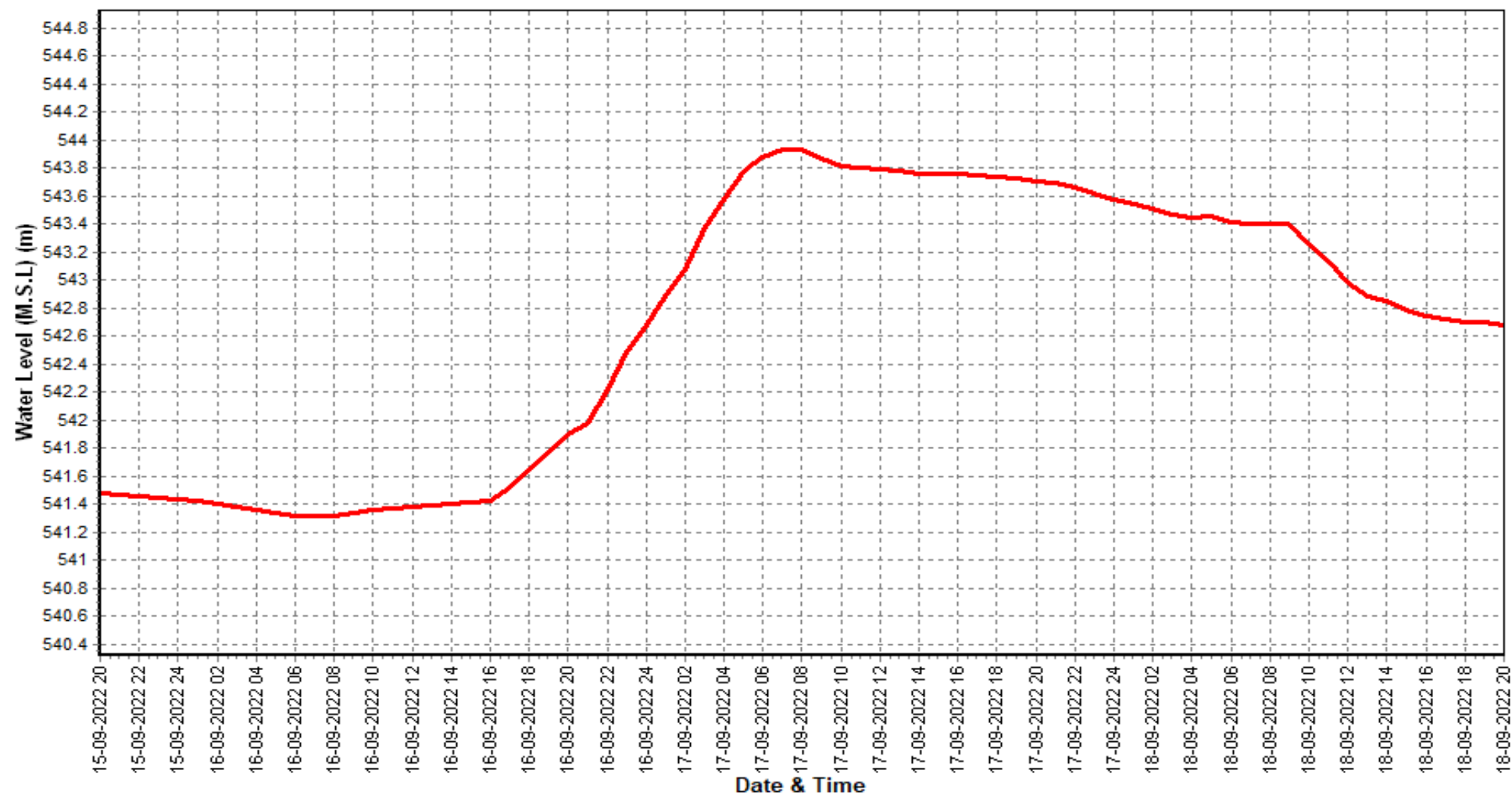
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Phulgaon (Seasonal) (AKP00X5)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Upper Bhima SD, Pune



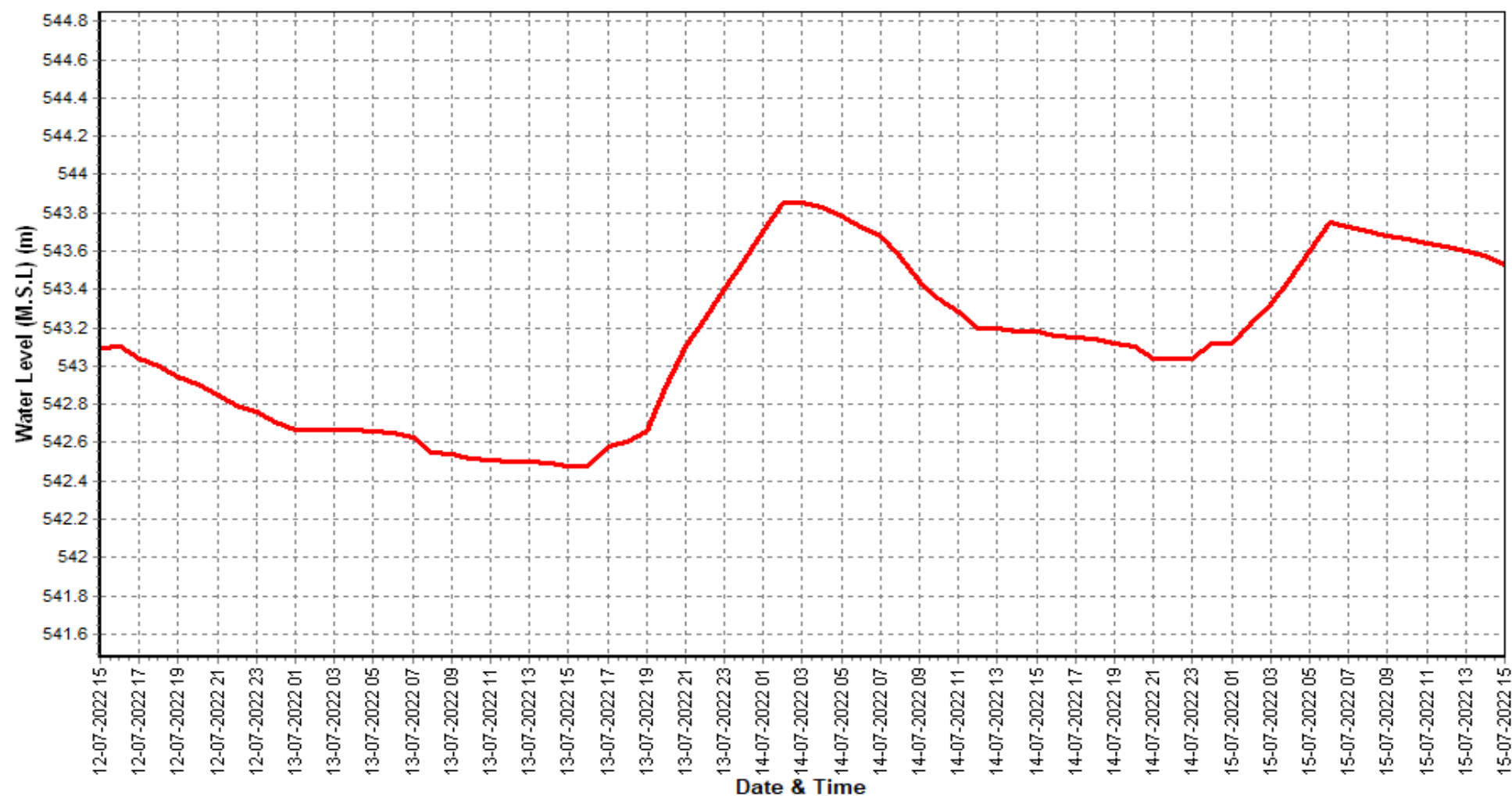
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Phulgaon (Seasonal) (AKP00X5)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : UBSD, Pune



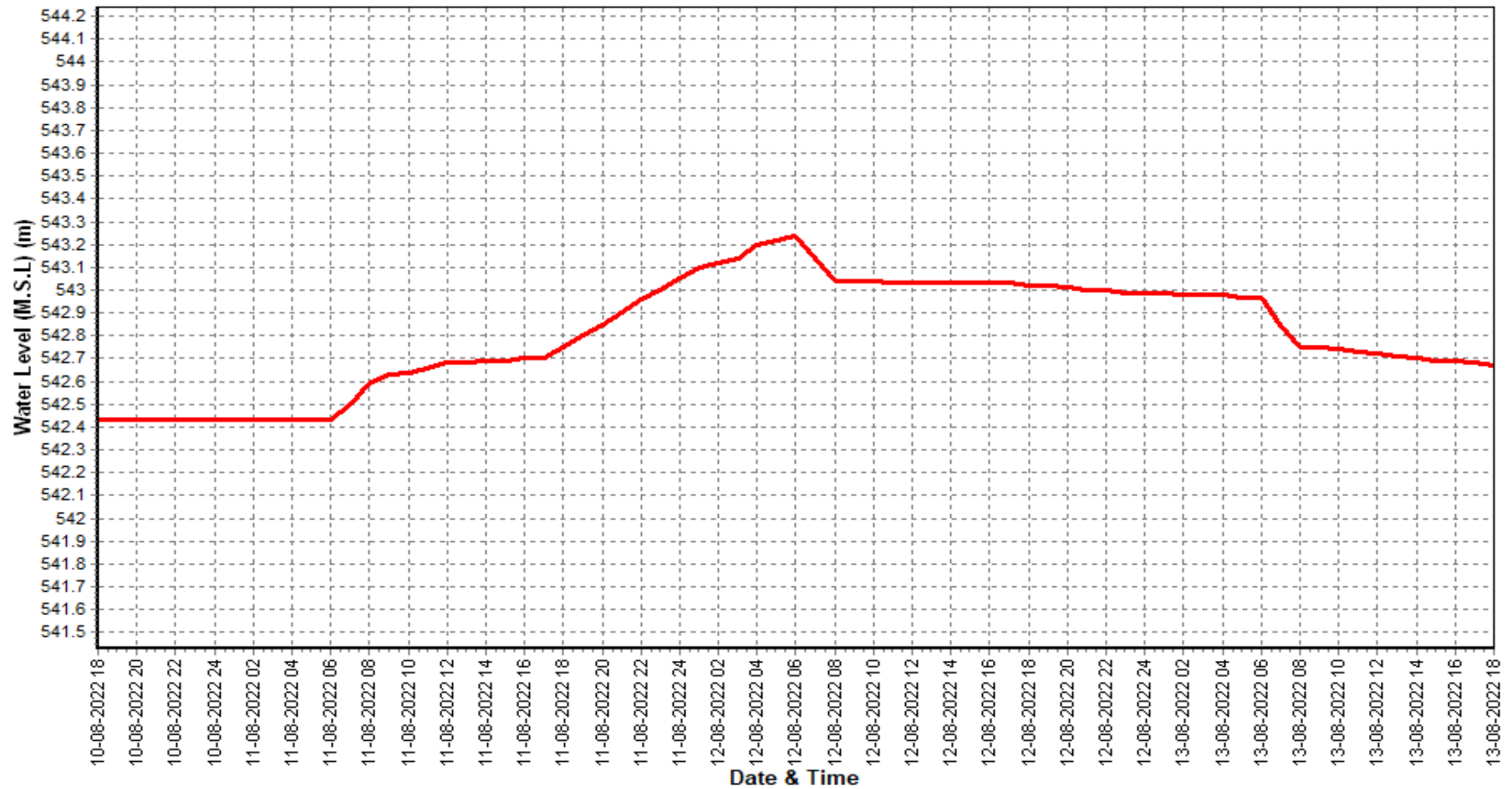
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Phulgaon (Seasonal) (AKP00X5)

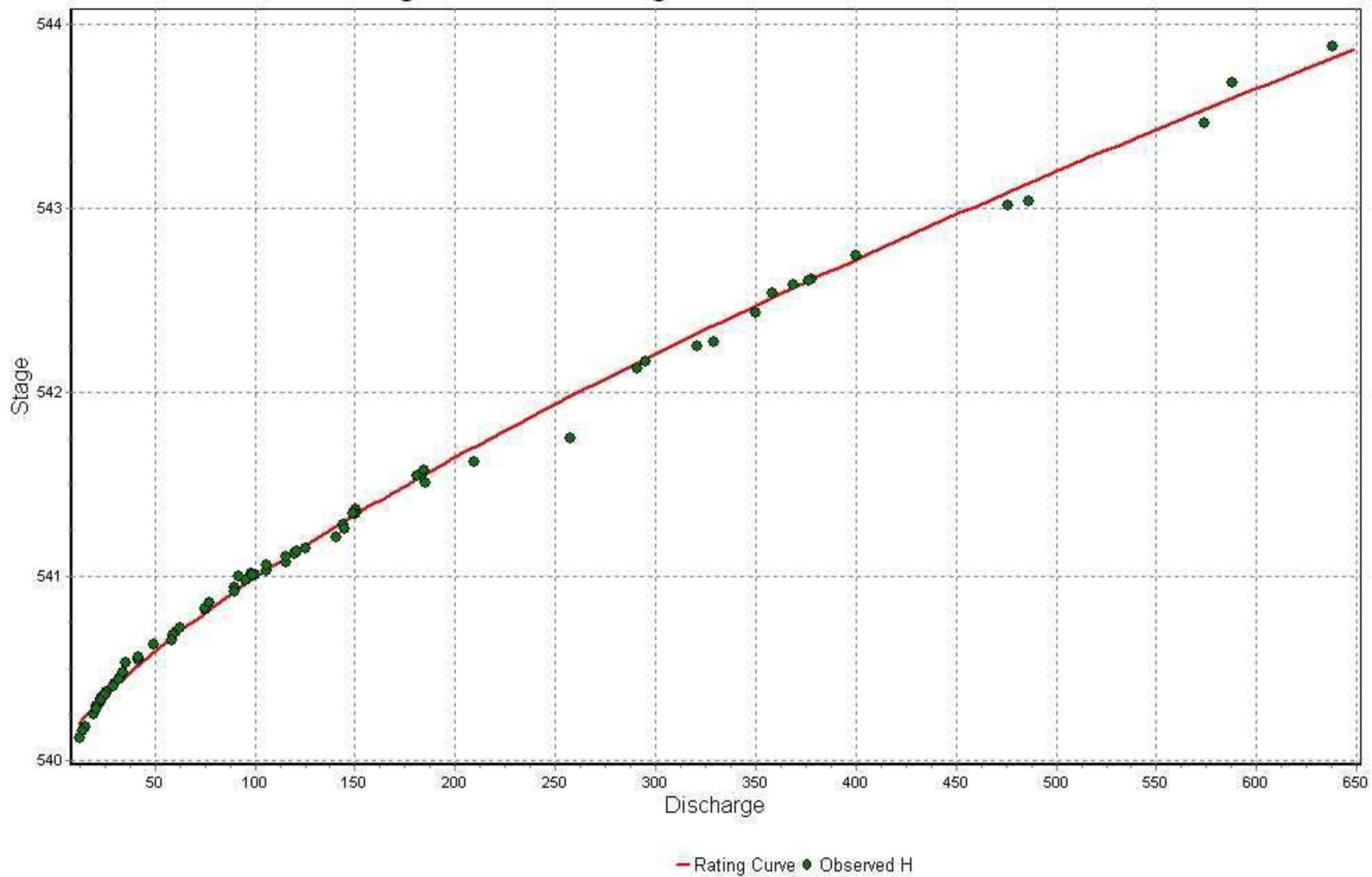
Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : UBSD, Pune



Rating Curve of site Phulgaon 01/06/2022 to 30/11/2022



HISTORY SHEET

Water Year : 2022-2023

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 : Lower 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)
466.128 (m.s.l)25-08-1963 - 31-05-2003
01-06-2003

Opening Date

Closing Date

Gauge : 25-08-1963

HFL During 2022-23 : 474.178 m

Discharge : 16-08-1965

Corres. Discharge : 2078 (Estimated)

Sediment : 01-06-1966

Date & Time of

occurrence : 18-10-2022

Water Quality : 01-09-1972

: 00:00 Hrs

HFL Recorded so far in m : 477.808 dt 15-10-2020

Corresponding Discharge (cumecs) : 4341*

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

Year	Maximum			Minimum		
	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	2330	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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	468.208	22-12-2013
2014-2015	260.0	470.508	07-09-2014	0.000		25-01-2015
2015-2016	0.000	468.898	18-09-2015	0.000		24-06-2015
2016-2017	1143	472.608	05-08-2016	0.000		08-12-2016
2017-2018	694.0	471.508	15-09-2017	0.000	467.613	28-01-2018
2018-2019	507.2	471.168	23-08-2018	0.000		25-01-2019
2019-2020	2437	475.163	06-08-2019	0.000	468.398	23-12-2019
2020-2021	2951	476.428	15-10-2020	0.000		13-04-2021
2021-2022	514.0	470.668	25-07-2021	0.000	466.128	27-04-2022

Annual Runoff of Nira at Sarati

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1965-1966	1232	293	1525	44	10	54
2	1966-1967	826	87	913	29	3	32
3	1967-1968	1445	194	1639	51	7	58
4	1968-1969	721	64	785	25	2	28
5	1969-1970	2197	80	2277	78	3	80
6	1970-1971	1074	109	1183	38	4	42
7	1971-1972	1142	54	1196	40	2	42
8	1972-1973	377	4	381	13	0	13
9	1973-1974	1529	102	1631	54	4	58
10	1974-1975	1359	102	1462	48	4	52
11	1975-1976	1752	99	1852	62	4	65
12	1976-1977	2111	53	2164	75	2	76
13	1977-1978	1466	133	1599	52	5	57
14	1978-1979	1384	55	1439	49	2	51
15	1979-1980	2192	79	2270	77	3	80
16	1980-1981	1902	43	1945	67	2	69
17	1981-1982	2245	39	2283	79	1	81
18	1982-1983	474	22	496	17	1	18
19	1983-1984	1244	33	1278	44	1	45
20	1984-1985	919	12	931	32	0	33
21	1985-1986	414	0	414	15	0	15
22	1986-1987	497	6	504	18	0	18
23	1987-1988	172	31	202	6	1	7
24	1988-1989	1725	0	1725	61	0	61
25	1989-1990	863	0	863	30	0	30
26	1990-1991	1702	10	1712	60	0	61
27	1991-1992	1656	0	1656	59	0	59
28	1992-1993	806	0	806	28	0	28
29	1993-1994	1083	115	1198	38	4	42
30	1994-1995	3603	1	3603	127	0	127
31	1995-1996	192	0	192	7	0	7
32	1996-1997	1210	0	1210	43	0	43
33	1997-1998	1259	0	1259	44	0	44
34	1998-1999	1819	0	1819	64	0	64
35	1999-2000	960	0	960	34	0	34
36	2000-2001	7	0	7	0	0	0
37	2001-2002	133	0	133	5	0	5
38	2002-2003	72	0	72	3	0	3
39	2003-2004	7	7	14	0	0	0
40	2004-2005	991	0	991	35	0	35
41	2005-2006	2600	0	2600	92	0	92
42	2006-2007	3050	18	3068	108	1	108
43	2007-2008	1865	0	1865	66	0	66
44	2008-2009	748	0	748	26	0	26
45	2009-2010	1326	68	1394	47	2	49
46	2010-2011	1026	20	1046	36	1	37
47	2011-2012	678	0	678	24	0	24

48	2012-2013	36	0	36	1	0	1
49	2013-2014	1170	0	1170	41	0	41
50	2014-2015	250	0	250	9	0	9
51	2015-2016	0	0	0	0	0	0
52	2016-2017	644	0	644	23	0	23
53	2017-2018	618	0	618	22	0	22
54	2018-2019	550	0	550	19	0	19
55	2019-2020	2878	0	2878	102	0	102
56	2020-2021	2632	0	2632	93	0	93
57	2021-2022	529	0	529	19	0	19
58	2022-2023	2155	0	2155	76	0	76
Average		1199	33	1232	42	1	44

Instantaneous Flood Peak of Krishna at Sarati

Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1965-1966	473.428	04-05-1966	00:00:00	1882 *
2	1966-1967	474.843	14-11-1966	08:00:00	2645 *
3	1967-1968	475.708	28-07-1967	12:00:00	3180 *
4	1968-1969	472.798	01-10-1968	17:00:00	1587 *
5	1969-1970	475.188	31-08-1969	14:00:00	2852 *
6	1970-1971	472.238	30-08-1970	04:00:00	1349 *
7	1971-1972	473.893	25-09-1971	12:00:00	2117 *
8	1972-1973	472.218	09-07-1972	06:00:00	1341 *
9	1973-1974	473.018	09-07-1973	07:00:00	1687 *
10	1974-1975	473.323	24-10-1974	13:00:00	1831 *
11	1975-1976	473.458	16-08-1975	18:00:00	1897 *
12	1976-1977	476.788	02-08-1976	18:00:00	3921 *
13	1977-1978	472.208	23-11-1977	07:00:00	1337 *
14	1978-1979	472.113	30-08-1978	21:00:00	1298 *
15	1979-1980	476.328	26-09-1979	15:00:00	3595 *
16	1980-1981	474.658	04-08-1980	02:00:00	2537 *
17	1981-1982	474.338	21-09-1981	07:00:00	2357 *
18	1982-1983	471.768	16-08-1982	17:00:00	1165 *
19	1983-1984	475.858	16-08-1983	16:00:00	3278 *
20	1984-1985	471.788	05-07-1984	20:00:00	1173 *
21	1985-1986	472.888	03-08-1985	08:00:00	1628 *
22	1986-1987	471.708	30-06-1986	20:00:00	1143 *
23	1987-1988	471.308	18-10-1987	06:00:00	1001 *
24	1988-1989	474.298	03-08-1988	22:00:00	2334 *
25	1989-1990	472.778	26-07-1989	14:00:00	1579 *
26	1990-1991	473.628	17-08-1990	20:00:00	1981 *
27	1991-1992	473.608	28-07-1991	06:00:00	1971 *
28	1992-1993	473.428	18-08-1992	08:00:00	1882 *
29	1993-1994	472.128	18-10-1993	21:00:00	1304 *
30	1994-1995	474.353	30-06-1994	21:00:00	2365 *
31	1995-1996	471.028	24-07-1995	03:00:00	908 *
32	1996-1997	475.128	05-10-1996	02:00:00	2815 *
33	1997-1998	475.538	24-08-1997	17:00:00	3070 *
34	1998-1999	473.228	15-10-1998	18:00:00	1786 *
35	1999-2000	471.298	21-07-1999	18:00:00	997 *
36	2000-2001	468.868	09-06-2000	08:00:00	374 *
37	2001-2002	470.148	14-10-2001	15:00:00	651 *
38	2002-2003	471.368	17-10-2002	20:00:00	1021 *
39	2003-2004	469.118	18-05-2004	08:00:00	419 *
40	2004-2005	473.378	13-08-2004	02:00:00	1516 *
41	2005-2006	474.078	03-08-2005	07:00:00	1862 *
42	2006-2007	474.598	08-08-2006	18:00:00	2134 *
43	2007-2008	472.628	09-08-2007	00:00:00	1169 *
44	2008-2009	472.488	09-09-2008	14:00:00	1107 *
45	2009-2010	473.498	04-10-2009	15:00:00	1573 *
46	2010-2011	472.128	01-10-2010	21:00:00	952 *

47	2011-2012	474.328	04-09-2011	15:00:00	1991 *
48	2012-2013	469.158	13-09-2012	07:00:00	94 *
49	2013-2014	472.688	19-09-2013	01:00:00	1196 *
50	2014-2015	470.998	06-09-2014	20:00:00	503 *
51	2015-2016	469.028	24-06-2015	14:00:00	0 *
52	2016-2017	473.028	05-08-2016	04:00:00	1351 *
53	2017-2018	471.588	15-09-2017	10:00:00	730 *
54	2018-2019	471.628	23-08-2018	17:00:00	746 *
55	2019-2020	475.478	06-08-2019	22:00:00	2621 *
56	2020-2021	477.808	15-10-2020	22:00:00	4341 *
57	2021-2022	471.238	14-09-2021	23:00:00	571 *
58	2022-2023	474.178	18-10-2022	00:00:00	2078 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : Sarati (AKPA0C2)

Division : Upper Krishna Divn, Pune

Local River : Nira

Sub-Division :Lower 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	Dry Bed	0.000	468.028	0.000	468.608	49.61	468.058	0.000	468.998	112.7	468.898	68.98
2		0.000	468.058	0.000	468.498	40.96	469.153	140.4	468.898	89.04 *	468.668	43.30
3		0.000	468.248	0.000	468.428	26.19	468.858	91.51	468.678	55.31	468.598	47.86
4		0.000	468.268	16.38	468.463	36.16	468.763	69.38 *	468.538	45.64	468.598	47.87
5		0.000	468.208	12.12	468.818	89.44	468.728	65.61	468.458	36.16	468.608	48.41
6		0.000	468.208	12.19	468.948	101.0	469.318	175.0	468.403	24.56	468.628	51.80 *
7		0.000	468.228	12.58	468.768	70.07 *	468.858	87.46	468.423	25.41	468.578	46.54
8		0.000	468.333	19.25	468.618	49.58	470.668	478.7	468.638	53.19	468.428	26.35
9		0.000	468.283	17.14	468.568	44.69 *	470.678	480.5	468.778	71.47 *	468.558	0.000
10		0.000	468.188	10.48 *	468.608	48.36	470.613	458.0	468.798	88.56	467.928	0.000
11		0.000	468.173	9.419	471.138	677.6	469.938	302.9 *	468.788	87.37	468.068	0.000
12		0.000	468.628	52.58	471.113	656.4	469.698	241.4	469.143	138.3	468.158	0.000
13		0.000	468.378	21.35	471.698	879.2	469.808	278.4	470.298	371.6	468.158	0.000
14		0.000	468.498	41.06	471.668	867.9 *	469.708	244.6	470.088	359.1	468.158	0.000
15		0.000	468.408	24.81	471.678	871.8 *	470.678	480.5	469.678	243.3	468.158	0.000
16		0.000	468.478	37.35	469.558	217.7	470.563	429.3	470.438	441.1 *	468.028	0.000
17		0.000	469.408	180.8 *	471.533	818.9	471.928	996.6	469.758	265.5	467.818	0.000
18		0.000	469.898	297.5	470.348	397.1	470.688	518.1 *	470.483	397.3	467.768	0.000
19		0.000	469.328	173.3	470.328	408.9 *	469.933	309.7	472.903	1450	467.728	0.000
20		0.000	469.258	162.8	470.308	374.2	470.038	335.3	470.568	434.8	467.708	0.000
21		0.000	468.608	48.81	469.978	313.1 *	469.668	240.7	470.923	535.5	467.668	0.000
22	467.288	0.000	468.578	44.44	470.278	364.4	469.158	141.1	470.168	343.5	467.668	0.000
23	467.978	0.000	468.578	44.46	469.318	170.9	469.058	125.2	470.478	453.1 *	467.668	0.000
24	468.028	0.000	468.418	28.86 *	469.268	165.8	469.048	122.9	469.858	282.8 *	467.668	0.000
25	468.008	0.000	468.263	16.24	469.258	161.4	468.988	103.3 *	469.608	229.1	467.668	0.000
26	468.018	0.000	468.188	10.21	470.358	403.8	469.028	117.0	469.278	166.5	467.668	0.000
27	468.008	0.000	468.213	12.93	468.938	111.0	468.888	90.82	469.088	127.6	467.668	0.000
28	467.988	0.000	468.318	17.17	468.488	35.89 *	468.638	53.44	469.188	148.7	467.668	0.000
29	467.973	0.000	468.378	21.43	468.273	16.10	468.578	46.43	469.068	122.4	467.668	0.000
30	467.968	0.000	468.418	25.33	468.208	12.19	468.653	56.46	468.848	81.52 *	467.668	0.000
31			468.658	55.53 *	468.058	3.698 *			468.898	91.45		
<u>Ten-Daily Mean</u>												
I Ten-Daily	Drybed	0.000	468.205	10.02	468.632	55.61	469.369	204.6	468.661	60.20	468.549	38.11
II Ten-Daily		0.000	468.845	100.1	470.937	617.0	470.298	413.7	470.215	418.8	467.975	0.000
III Ten-Daily	467.917	0.000	468.420	29.58	469.129	159.9	468.970	109.7	469.582	234.7	467.668	0.000
<u>Monthly</u>												
Min.	467.288	0.000	468.028	0.000	468.058	3.698	468.058	0.000	468.403	24.56	467.668	0.000
Max.	468.028	0.000	469.898	297.5	471.698	879.2	471.928	996.6	472.903	1450	468.898	68.98
Mean	467.917	0	468.488	46.01	469.552	273.7	469.546	242.7	469.489	237.8	468.064	12.7

Annual Runoff in MCM = 2155 Annual Runoff in mm = 299

Peak Observed Discharge = 1450 cumecs on 19-10-2022 Corres. Water Level :472.903 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022

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 2022 - 2023

Station Name : Sarati (AKPA0C2)

Division : Upper Krishna Divn, Pune

Local River : Nira

Sub-Division :Lower Bhima SD, Sholapur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	467.668	0.000	468.258	0.000	468.208	0.000	467.528	0.000	467.528	0.000	467.388	0.000
2	467.668	0.000	468.538	0.000	468.178	0.000	467.528	0.000	467.528	0.000	467.358	0.000
3	467.658	0.000	468.718	0.000	468.148	0.000	467.528	0.000	467.523	0.000	467.328	0.000
4	467.638	0.000	468.888	0.000	468.118	0.000	467.528	0.000	467.508	0.000	467.298	0.000
5	467.628	0.000	469.098	0.000	468.078	0.000	467.528	0.000	467.493	0.000	467.278	0.000
6	467.618	0.000	469.148	0.000	468.038	0.000	467.528	0.000	467.468	0.000	467.278	0.000
7	467.618	0.000	469.158	0.000	467.998	0.000	467.528	0.000	467.448	0.000	467.278	0.000
8	467.608	0.000	469.158	0.000	467.968	0.000	467.528	0.000	467.448	0.000	467.268	0.000
9	467.608	0.000	469.158	0.000	467.938	0.000	467.528	0.000	467.568	0.000	Dry Bed	0.000
10	467.608	0.000	469.158	0.000	467.908	0.000	467.528	0.000	467.588	0.000		0.000
11	467.608	0.000	469.158	0.000	467.878	0.000	467.528	0.000	467.588	0.000		0.000
12	467.608	0.000	469.148	0.000	467.848	0.000	467.528	0.000	467.588	0.000		0.000
13	467.608	0.000	469.138	0.000	467.808	0.000	467.528	0.000	467.588	0.000		0.000
14	467.608	0.000	469.128	0.000	467.768	0.000	467.528	0.000	467.588	0.000		0.000
15	467.608	0.000	469.018	0.000	467.728	0.000	467.528	0.000	467.588	0.000		0.000
16	467.608	0.000	468.888	0.000	467.688	0.000	467.528	0.000	467.568	0.000		0.000
17	467.608	0.000	468.828	0.000	467.658	0.000	467.528	0.000	467.548	0.000		0.000
18	467.608	0.000	468.758	0.000	467.618	0.000	467.528	0.000	467.538	0.000		0.000
19	467.608	0.000	468.718	0.000	467.588	0.000	467.528	0.000	467.528	0.000		0.000
20	467.608	0.000	468.658	0.000	467.558	0.000	467.528	0.000	467.518	0.000		0.000
21	467.608	0.000	468.618	0.000	467.528	0.000	467.528	0.000	467.508	0.000		0.000
22	467.608	0.000	468.568	0.000	467.528	0.000	467.528	0.000	467.498	0.000		0.000
23	467.608	0.000	468.528	0.000	467.528	0.000	467.528	0.000	467.488	0.000		0.000
24	467.608	0.000	468.478	0.000	467.528	0.000	467.528	0.000	467.478	0.000		0.000
25	467.608	0.000	468.438	0.000	467.528	0.000	467.528	0.000	467.468	0.000		0.000
26	467.608	0.000	468.408	0.000	467.528	0.000	467.528	0.000	467.458	0.000		0.000
27	467.608	0.000	468.378	0.000	467.528	0.000	467.528	0.000	467.448	0.000		0.000
28	467.608	0.000	468.348	0.000	467.528	0.000	467.528	0.000	467.438	0.000		0.000
29	467.628	0.000	468.308	0.000			467.528	0.000	467.428	0.000		0.000
30	467.628	0.000	468.278	0.000			467.528	0.000	467.418	0.000		0.000
31	467.958	0.000	468.238	0.000			467.528	0.000				0.000
Ten-Daily Mean												
I Ten-Daily	467.632	0.000	468.928	0.000	468.058	0.000	467.528	0.000	467.510	0.000	467.309	0.000
II Ten-Daily	467.608	0.000	468.944	0.000	467.714	0.000	467.528	0.000	467.564	0.000	Drybed	0.000
III Ten-Daily	467.643	0.000	468.417	0.000	467.528	0.000	467.528	0.000	467.463	0.000		0.000
Monthly												
Min.	467.608	0.000	468.238	0.000	467.528	0.000	467.528	0.000	467.418	0.000	467.268	0.000
Max.	467.958	0.000	469.158	0.000	468.208	0.000	467.528	0.000	467.588	0.000	467.388	0.000
Mean	467.628	0	468.752	0	467.784	0	467.528	0	467.512	0	467.309	0

Peak Computed Discharge = 871.8 cumecs on 15-08-2022

Corres. Water Level :471.678 m

Lowest Computed Discharge = 3.698 cumecs on 31-08-2022

Corres. Water Level :468.058 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 : 2022-2023

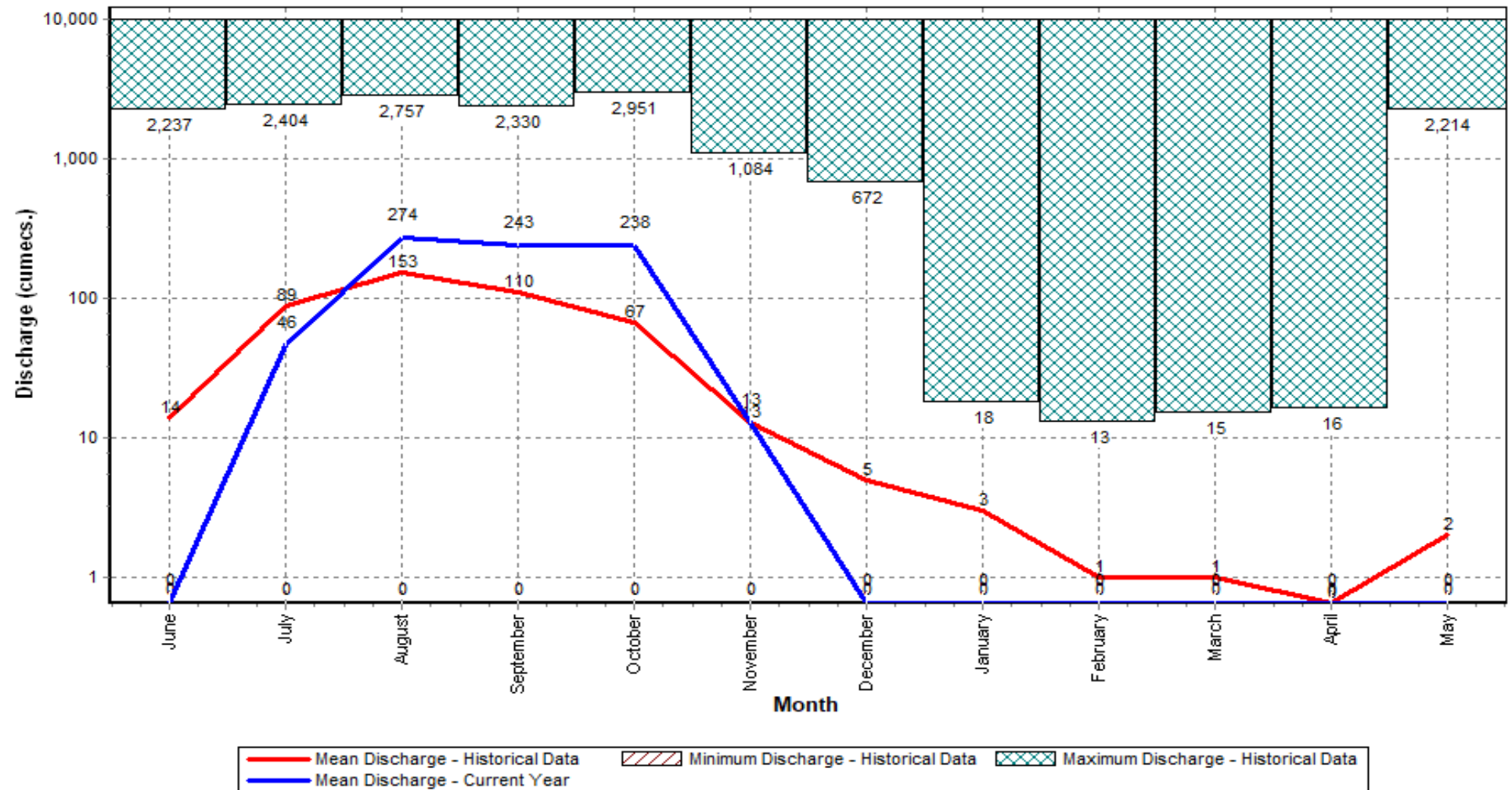
Station Name : Sarati (AKPA0C2)

Data considered : 1965-2023

Division : Upper Krishna Divn, Pune

Local River : Nira

Sub-Division : Lower Bhima SD, Sholapur



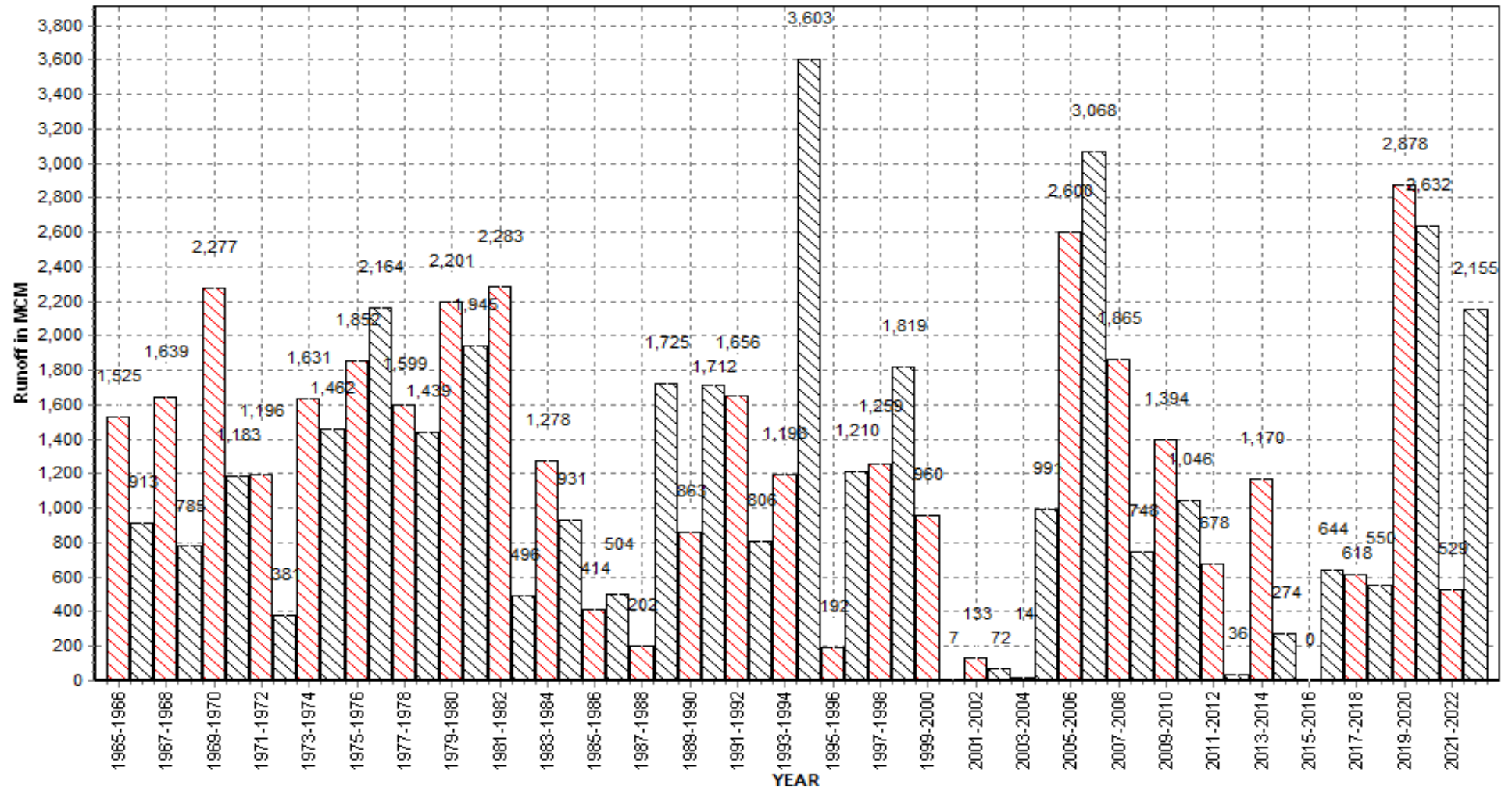
Annual Runoff Values for the period: 1965 - 2023

Station Name : Sarati (AKPA0C2)

Local River : Nira

Division : Upper Krishna Divn, Pune

Sub-Division :Lower Bhima SD, Sholapur



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

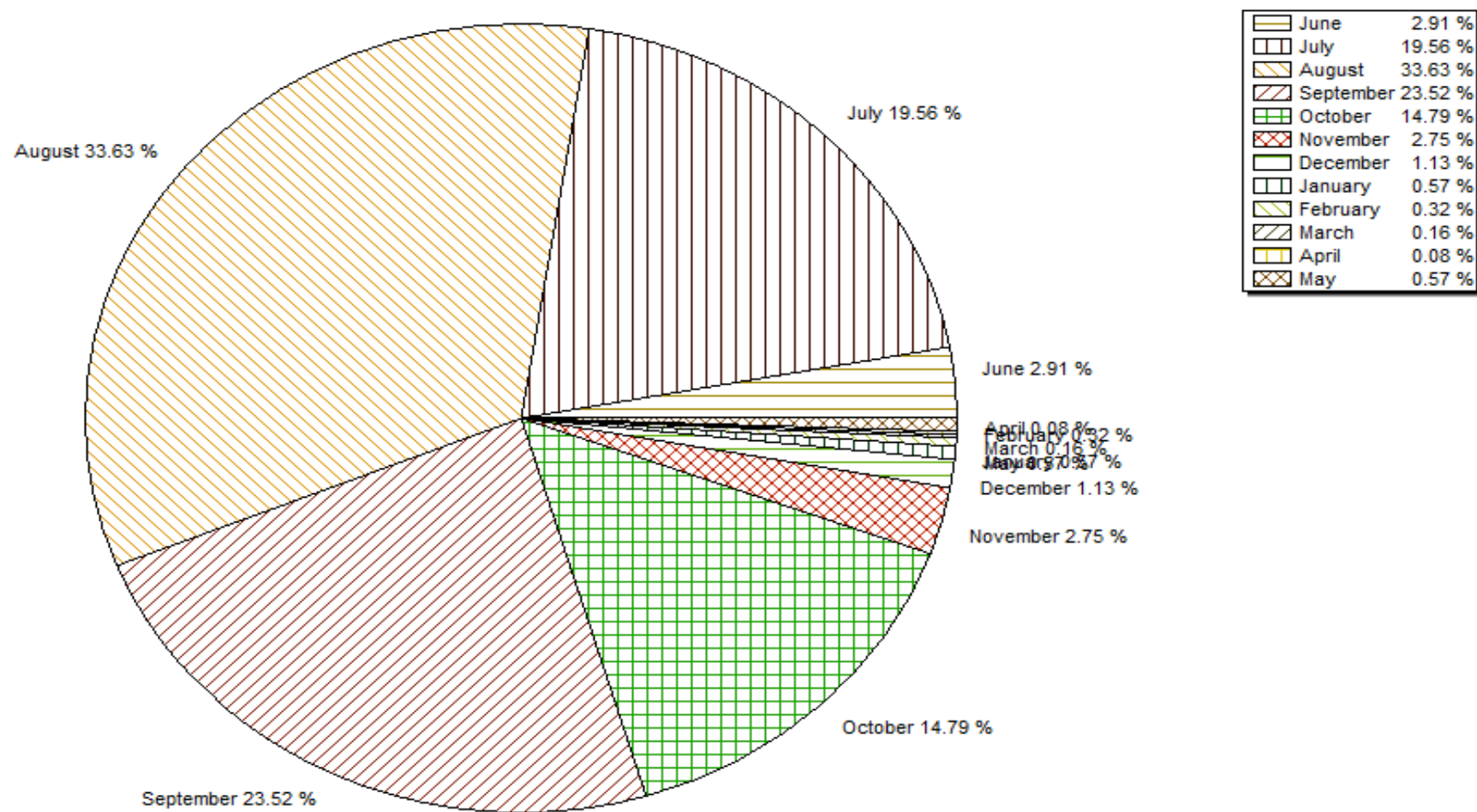
Monthly Average Runoff based on period : 1965-2022

Station Name : Sarati (AKPA0C2)

Local River : Nira

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



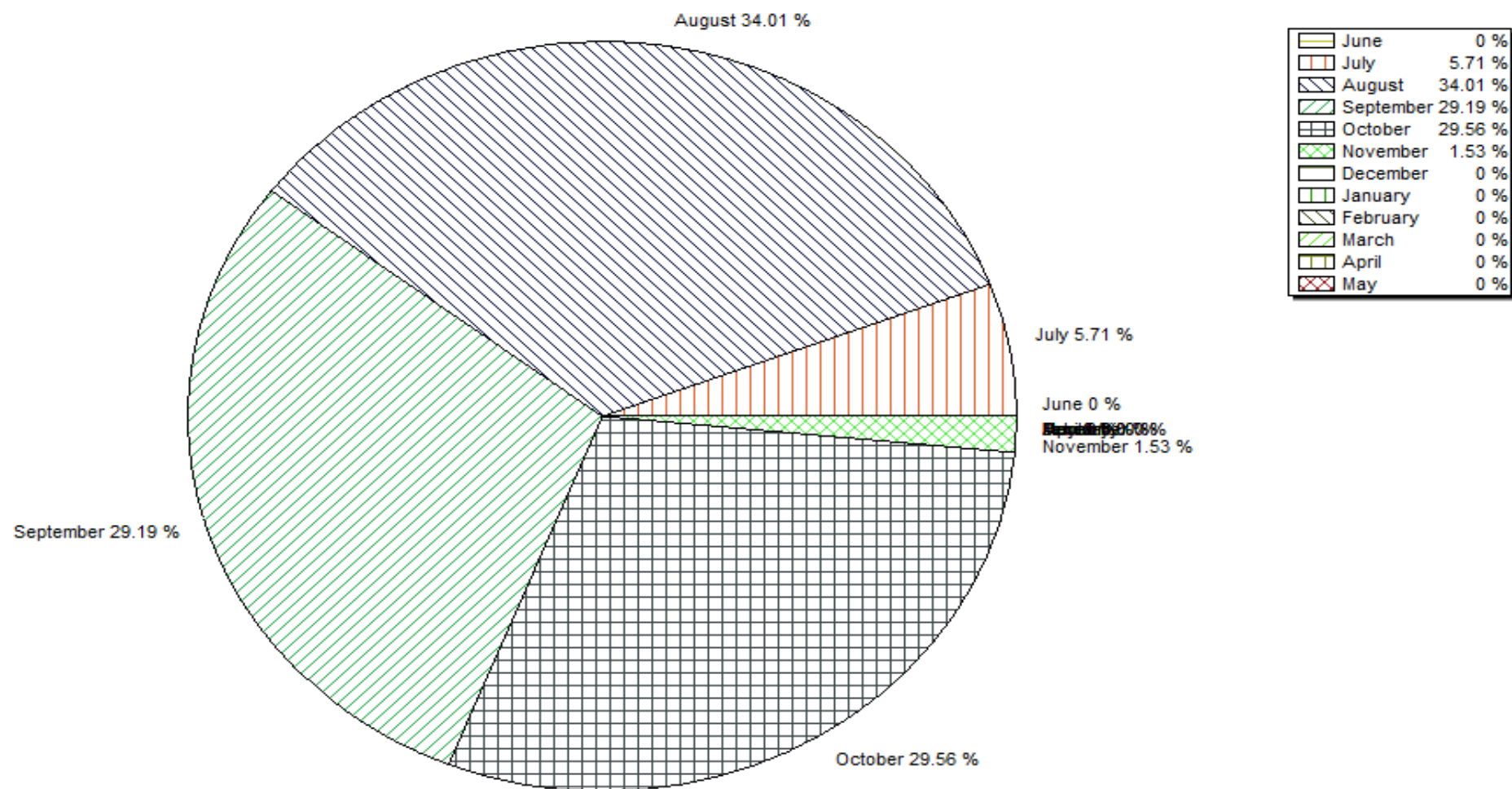
Monthly Runoff for the Year : 2022-2023

Station Name : Sarati (AKPA0C2)

Local River : Nira

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



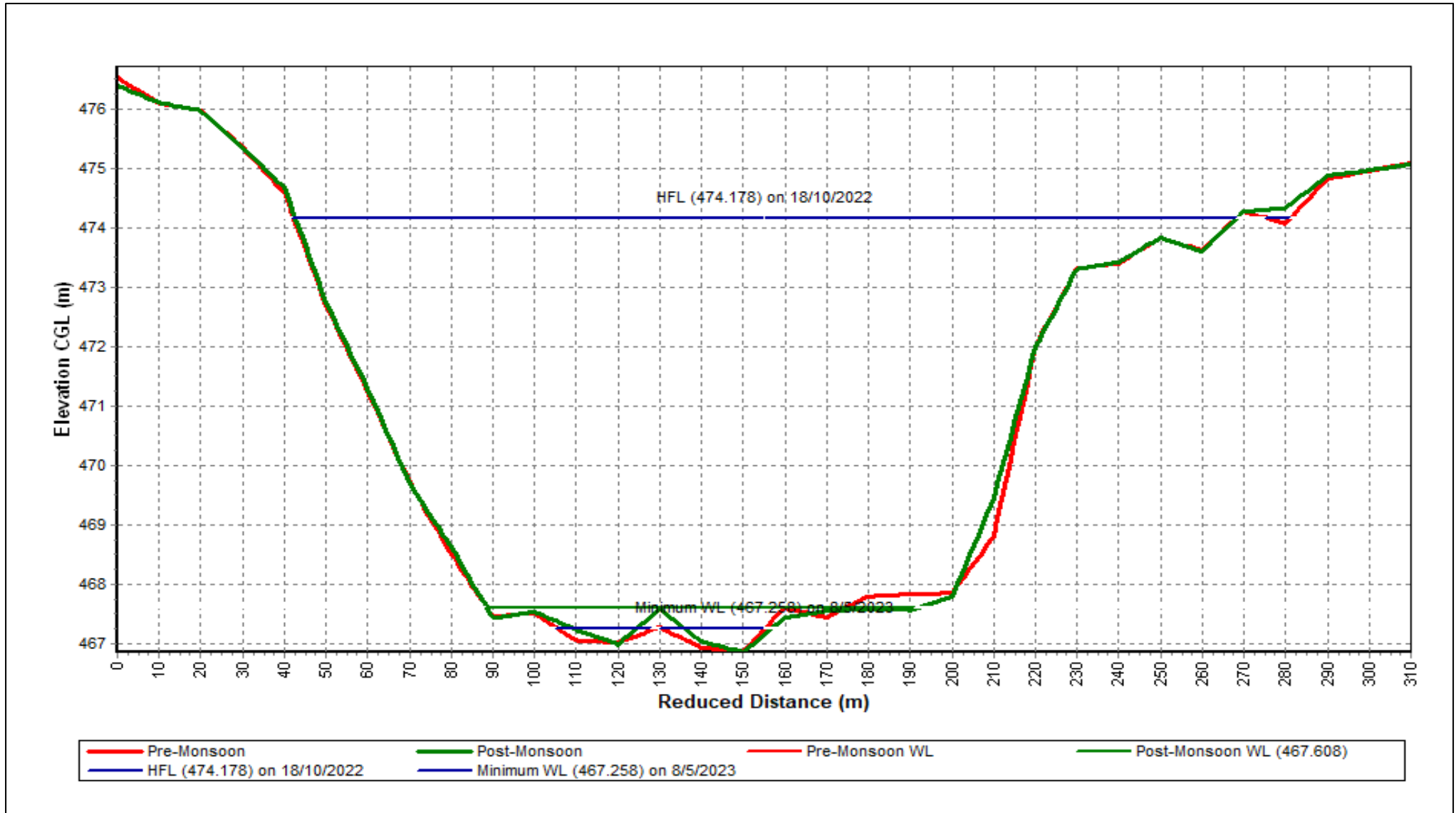
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Sarati (AKPA0C2)

Local River : Nira

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



Zero of the Gauge: 466.128 (m.s.l)

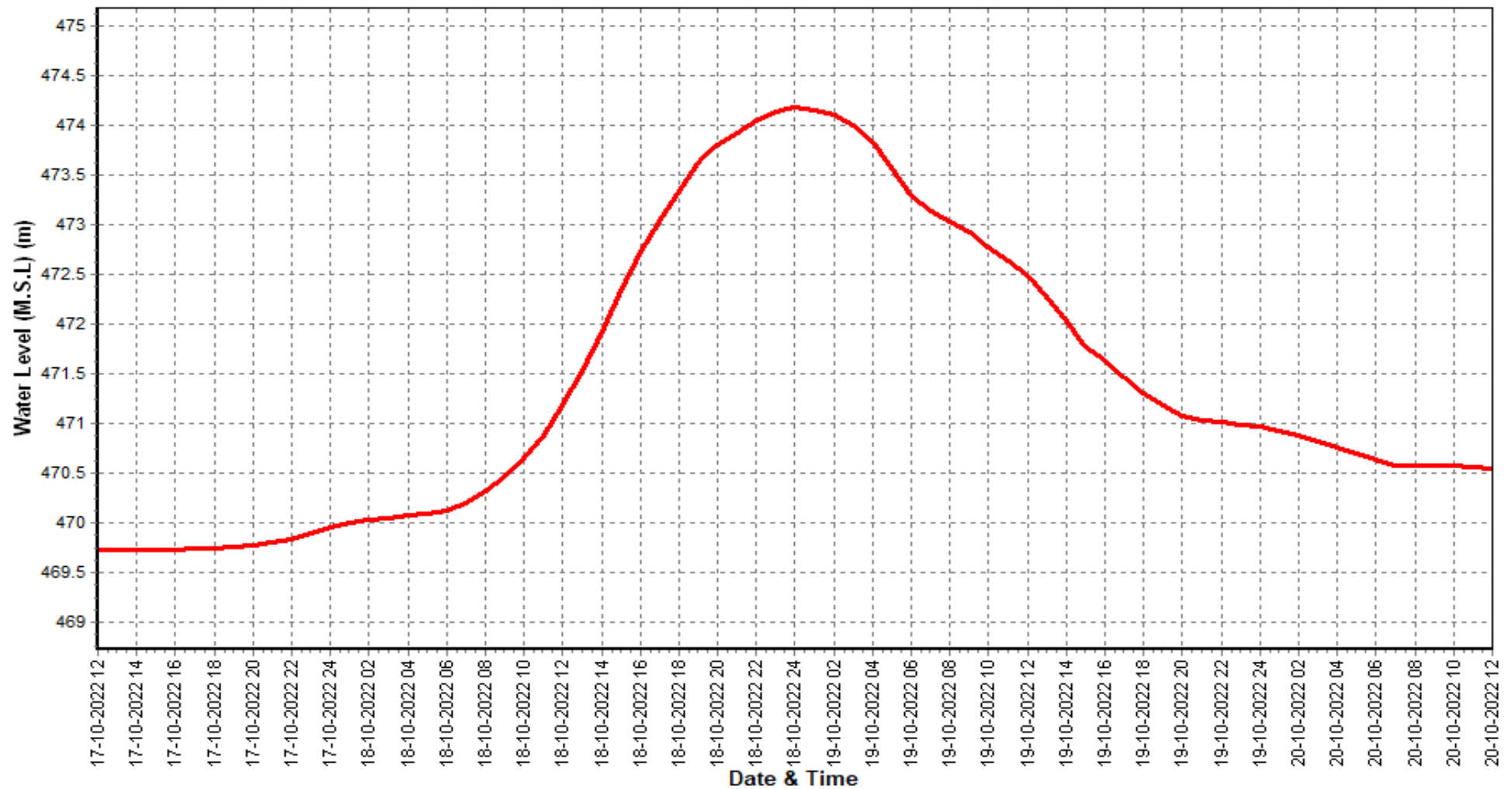
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Sarati (AKPA0C2)

Local River : Nira

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



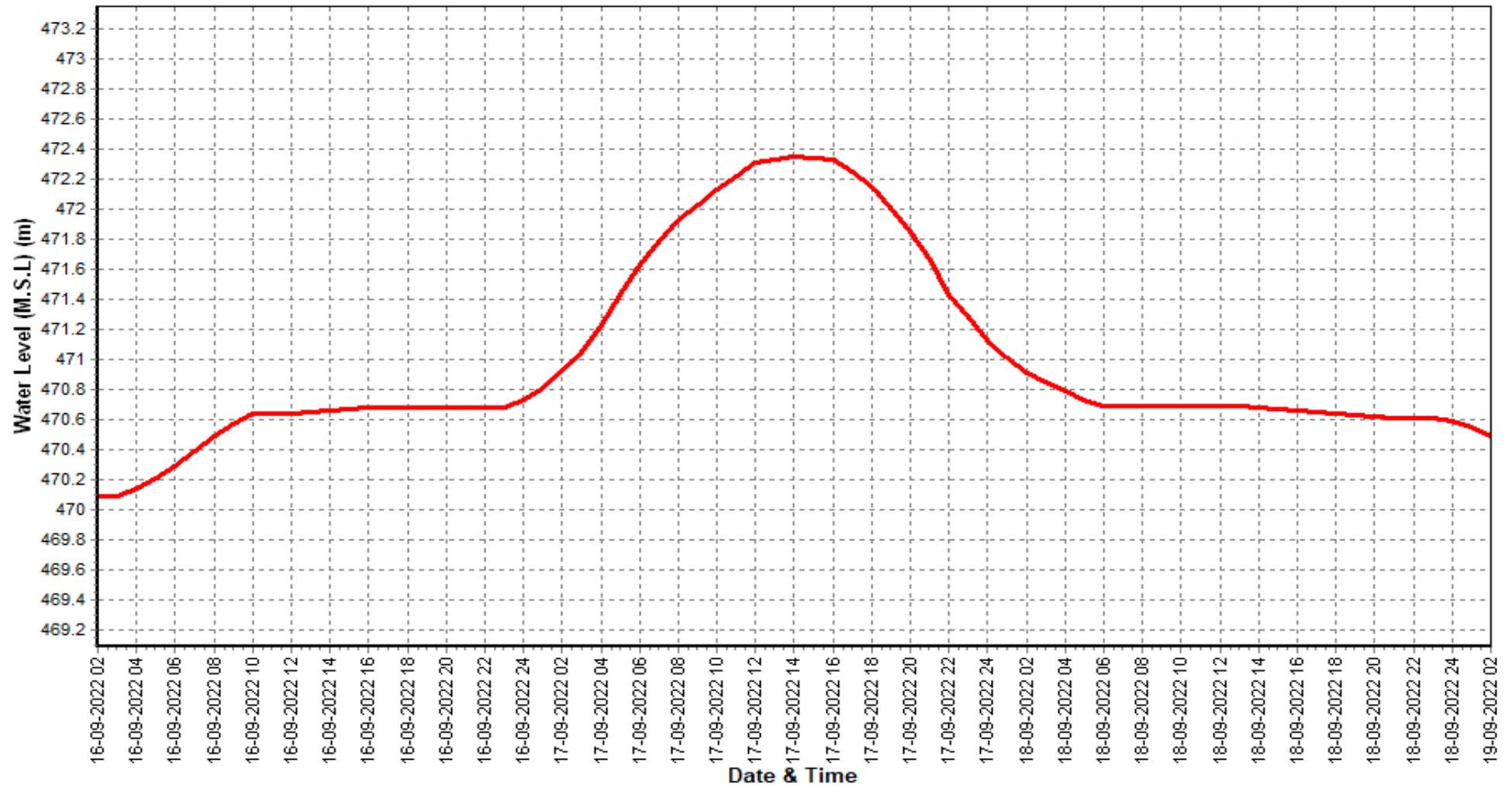
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Sarati (AKPA0C2)

Local River : Nira

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



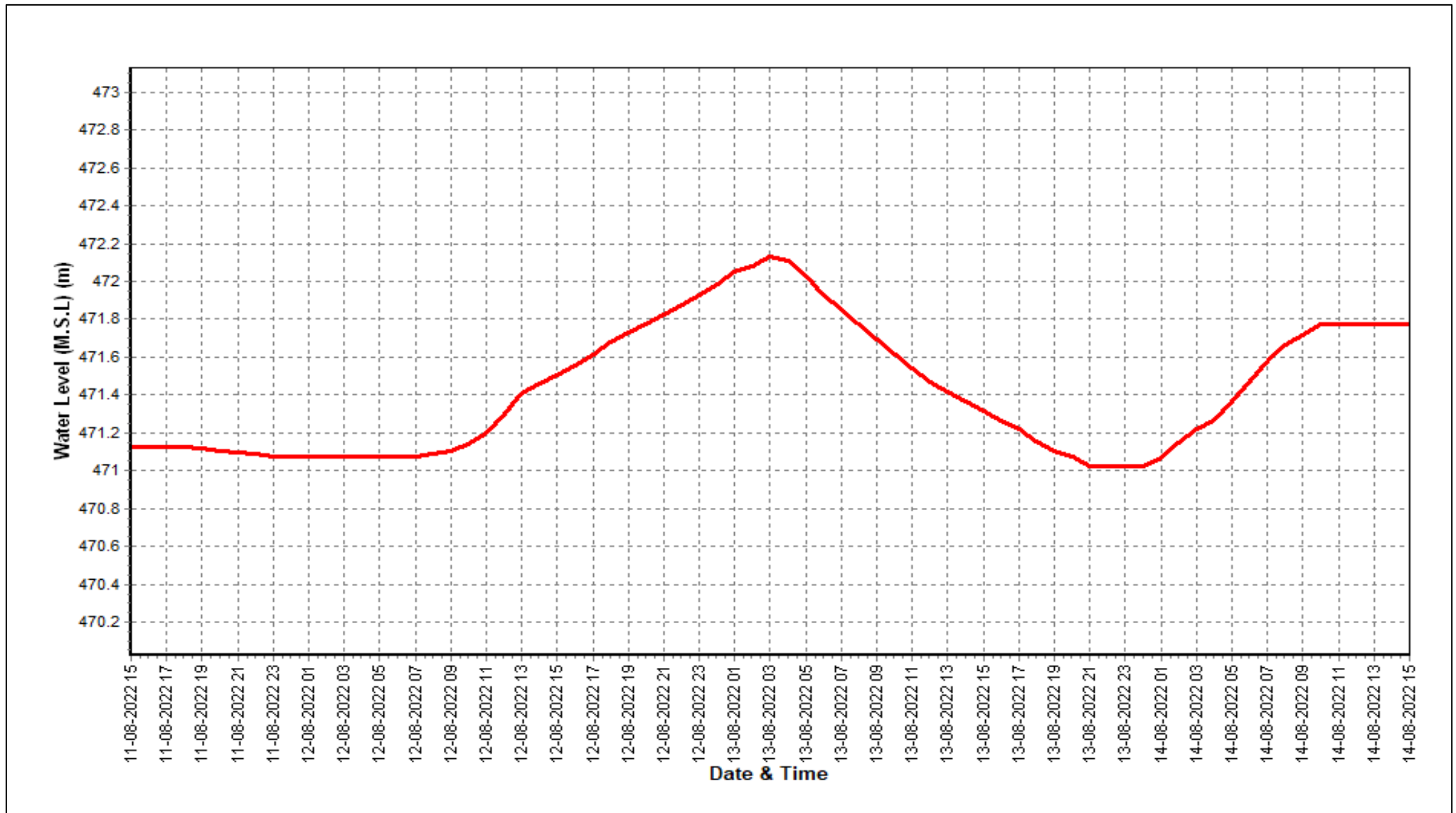
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Sarati (AKPA0C2)

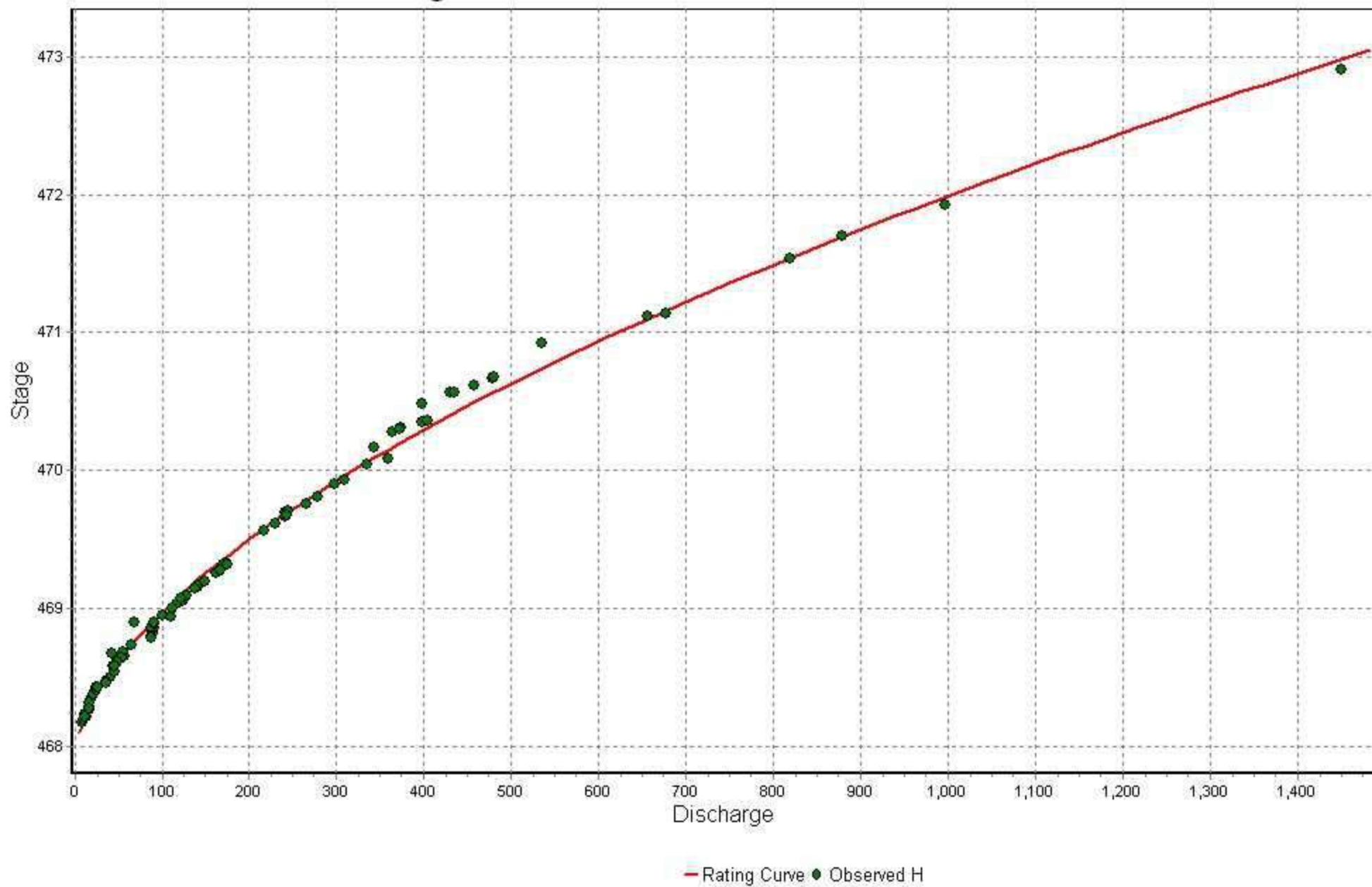
Local River : Nira

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



Rating Curve of site Sarati 01/06/2022 to 30/11/2022



HISTORY SHEET

Water Year : 2022-2023

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 : Lower 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 : 01-06-1964

HFL During 2022-23 : 456.043 m

Corres. Discharge : 4099 (Estimated)

Discharge : 22-02-1966

Date & Time of

occurrence : 09:00 Hrs

HFL Recorded so far in m : 462.393 dt 10-08-2006

Corresponding Discharge (cumecs) : 8010 *

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1967-1968	7050	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	4790	457.731	01-09-1971	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	5810	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	6680	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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1967-1968	7050	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
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
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	449.423	02-01-2014
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
2016-2017	1432	452.323	05-08-2016	0.000	448.313	23-01-2017
2017-2018	2629	454.403	15-09-2017	0.000		16-12-2017
2018-2019	1042	451.733	28-08-2018	0.000	448.233	14-01-2019
2019-2020	7730	461.323	07-08-2019	0.000	449.563	17-02-2020
2020-2021	9017	461.693	15-10-2020	0.000	448.793	14-03-2021
2021-2022	1117	451.668	11-10-2021	0.000	448.028	12-07-2021

Annual Runoff of Bhmia at Narsingpur

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1966-1967		110	110		4	4
2	1967-1968	6443	260	6703	228	9	237
3	1968-1969	5032	98	5131	178	3	181
4	1969-1970	10301	133	10434	364	5	369
5	1970-1971	6263	161	6424	221	6	227
6	1971-1972	7265	115	7380	257	4	261
7	1972-1973	3059	49	3108	108	2	110
8	1973-1974	8010	194	8204	283	7	290
9	1974-1975	5581	333	5914	197	12	209
10	1975-1976	7731	280	8010	273	10	283
11	1976-1977	10466	213	10679	370	8	377
12	1977-1978	5356	709	6065	189	25	214
13	1978-1979	5923	163	6087	209	6	215
14	1979-1980	6627	463	7090	234	16	251
15	1980-1981	7307	140	7446	258	5	263
16	1981-1982	7596	202	7799	268	7	276
17	1982-1983	2520	115	2635	89	4	93
18	1983-1984	6407	244	6651	226	9	235
19	1984-1985	4791	242	5034	169	9	178
20	1985-1986	2400	158	2558	85	6	90
21	1986-1987	2383	12	2395	84	0	85
22	1987-1988	289	51	340	10	2	12
23	1988-1989	5854	10	5863	207	0	207
24	1989-1990	3713	3	3716	131	0	131
25	1990-1991	8495	14	8509	300	0	301
26	1991-1992	7395	0	7395	261	0	261
27	1992-1993	1988	0	1988	70	0	70
28	1993-1994	4083	132	4215	144	5	149
29	1994-1995	11618	0	11618	411	0	411
30	1995-1996	447	0	447	16	0	16
31	1996-1997	3627	0	3627	128	0	128
32	1997-1998	4661	0	4661	165	0	165
33	1998-1999	5436	0	5436	192	0	192
34	1999-2000	3049	87	3136	108	3	111
35	2000-2001	130	243	372	5	9	13
36	2001-2002	221	125	346	8	4	12
37	2002-2003	205	196	401	7	7	14
38	2003-2004	106	204	310	4	7	11
39	2004-2005	1573	360	1933	56	13	68
40	2005-2006	10141	307	10448	358	11	369
41	2006-2007	11393	172	11565	403	6	409
42	2007-2008	4562	211	4773	161	7	169
43	2008-2009	2449	365	2814	87	13	99

44	2009-2010	1380	157	1537	49	6	54
45	2010-2011	1772	85	1857	63	3	66
46	2011-2012	2055	0	2055	73	0	73
47	2012-2013	65	0	65	2	0	2
48	2013-2014	1964	0	1964	69	0	69
49	2014-2015	993	0	993	35	0	35
50	2015-2016	10	53	63	0	2	2
51	2016-2017	957	376	1333	34	13	47
52	2017-2018	3102	167	3269	110	6	116
53	2018-2019	1017	157	1173	36	6	41
54	2019-2020	7670	0	7670	271	0	271
55	2020-2021	5817	0	5817	206	0	206
56	2021-2022	793	0	793	28	0	28
57	2022-2023	7868	0	7868	278	0	278
Average		4435	138	4495	157	5	159

Instantaneous Flood Peak of Bhima at Narsingpur

Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1966-1967	457.238	04-12-1966	18:00:00	4016 *
2	1967-1968	461.588	30-07-1967	03:00:00	7324 *
3	1968-1969	456.078	08-08-1968	06:00:00	3246 *
4	1969-1970	459.393	02-08-1969	06:00:00	5572 *
5	1970-1971	454.433	22-08-1970	11:00:00	2235 *
6	1971-1972	457.859	31-08-1971	23:00:00	4448 *
7	1972-1973	457.208	10-07-1972	10:00:00	3996 *
8	1973-1974	457.173	10-07-1973	09:00:00	3972 *
9	1974-1975	454.248	26-10-1974	18:00:00	2127 *
10	1975-1976	457.263	16-08-1975	10:00:00	4033 *
11	1976-1977	461.118	03-08-1976	00:00:00	6935 *
12	1977-1978	454.543	30-07-1977	01:00:00	2300 *
13	1978-1979	455.273	03-09-1978	03:00:00	2739 *
14	1979-1980	457.923	12-08-1979	21:00:00	4493 *
15	1980-1981	457.773	06-07-1980	22:00:00	4387 *
16	1981-1982	459.708	11-07-1981	07:00:00	5813 *
17	1982-1983	455.348	24-08-1982	00:00:00	2786 *
18	1983-1984	460.713	17-08-1983	19:00:00	6606 *
19	1984-1985	456.458	20-07-1984	08:00:00	3493
20	1985-1986	455.663	03-08-1985	14:00:00	2982 *
21	1986-1987	455.318	11-08-1986	06:00:00	2767 *
22	1987-1988	451.768	18-10-1987	09:00:00	799 *
23	1988-1989	456.773	18-09-1988	02:00:00	3702 *
24	1989-1990	456.273	28-07-1989	02:00:00	3372 *
25	1990-1991	457.653	18-08-1990	23:00:00	4303 *
26	1991-1992	458.023	29-07-1991	13:00:00	4564 *
27	1992-1993	454.863	07-09-1992	06:00:00	2490 *
28	1993-1994	454.743	30-07-1993	21:00:00	2418 *
29	1994-1995	461.433	16-07-1994	19:00:00	7195 *
30	1995-1996	451.223	24-07-1995	22:00:00	536 *
31	1996-1997	458.113	05-10-1996	06:00:00	4628 *
32	1997-1998	462.163	26-08-1997	00:00:00	7811 *
33	1998-1999	457.163	13-10-1998	02:00:00	3965 *
34	1999-2000	453.018	30-07-1999	05:00:00	1441 *
35	2000-2001	450.383	28-11-2000	18:00:00	151 *
36	2001-2002	451.043	26-03-2002	16:00:00	451 *
37	2002-2003	451.213	17-10-2002	08:00:00	531
38	2003-2004	450.723	22-12-2003	21:00:00	304 *
39	2004-2005	453.603	13-08-2004	10:00:00	1761 *
40	2005-2006	461.923	04-08-2005	02:00:00	7607 *
41	2006-2007	462.393	10-08-2006	11:00:00	8010 *
42	2007-2008	455.093	10-08-2007	15:00:00	2629 *

Sl. No.	Year	Instantaneous Annual Flood Peak		Time	Discharge * (Cumecs)
		Peak WL (m) Recorded	Date		
43	2008-2009	455.883	21-09-2008	00:00:00	3121 *
44	2009-2010	453.493	18-11-2009	08:00:00	1700 *
45	2010-2011	452.923	01-10-2010	09:00:00	1391 *
46	2011-2012	457.943	05-09-2011	14:00:00	4507 *
47	2012-2013	451.483	20-08-2012	08:00:00	660 *
48	2013-2014	456.118	20-09-2013	09:00:00	3272 *
49	2014-2015	451.943	07-09-2014	07:00:00	885 *
50	2015-2016	451.073	20-07-2015	08:00:00	465
51	2016-2017	452.323	05-08-2016	08:00:00	1077 *
52	2017-2018	454.933	15-09-2017	22:00:00	2532 *
53	2018-2019	451.733	28-08-2018	08:00:00	782 *
54	2019-2020	461.353	07-08-2019	08:00:00	7129 *
55	2020-2021	461.833	07-08-2020	08:00:00	7564 *
56	2021-2022	451.763	11-10-2021	16:00:00	1155 *
57	2022-2023	456.043	18-09-2022	09:00:00	4099 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : Narasingpur (AKP00Q4)

Division : Upper Krishna Divn, Pune

Local River : Bhima

Sub-Division :Lower 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	447.788	0.000	448.343	30.69	448.543	62.98	448.163	13.62	450.313	521.3	449.308	209.7
2	447.773	0.000	448.393	42.24	448.453	47.09	448.783	105.5	449.873	393.2 *	449.053	162.4
3	447.743	0.000	448.453	47.39 *	448.383	41.30	448.823	112.0	449.413	242.3	448.813	115.0
4	447.723	0.000	448.443	45.54	448.363	36.18	448.823	111.4 *	449.053	164.8	448.523	58.42
5	447.693	0.000	448.483	50.57	448.753	103.2	449.143	172.7	448.733	102.2	448.513	58.25
6	447.673	0.000	448.453	45.99	448.993	145.6	450.103	462.2	448.253	23.94	448.528	58.62 *
7	447.653	0.000	448.453	48.02	448.733	93.92 *	450.353	559.8	450.463	570.9	448.573	71.13
8	447.633	0.000	448.473	50.79	448.623	74.51	452.003	1376	451.143	926.9	448.823	0.000
9	447.628	0.000	448.493	53.28	448.538	60.19 *	454.063	2569	449.873	393.2 *	448.863	0.000
10	447.628	0.000	448.493	53.26 *	448.593	69.10 *	453.733	2397	449.053	163.1	448.733	0.000
11	447.623	0.000	448.313	28.57	450.793	713.3	452.643	1678 *	449.443	245.9	448.673	0.000
12	447.623	0.000	448.288	27.31	451.883	1305	452.653	1876	451.693	1201	448.623	0.000
13	447.623	0.000	448.343	34.54	453.583	2381	452.833	1995	451.433	1037	448.693	0.000
14	447.623	0.000	448.498	54.14	454.273	2734 *	451.923	1342	452.413	1673	448.753	0.000
15	447.618	0.000	448.393	41.85	454.573	2950 *	451.103	896.2	451.423	1032	449.093	0.000
16	447.618	0.000	448.493	53.97	453.563	2311	451.963	1353	451.713	1170 *	449.043	0.000
17	447.618	0.000	448.913	130.1 *	453.783	2442	455.323	3478	451.023	874.3	448.933	0.000
18	447.618	0.000	450.033	399.0	453.043	2040	456.033	4091 *	451.383	1028	448.753	0.000
19	447.618	0.000	449.133	168.5	452.973	1876 *	454.503	2784	455.803	3662	448.633	0.000
20	447.613	0.000	449.133	167.4	451.948	1344	452.513	1744	453.043	2064	448.563	0.000
21	447.613	0.000	448.643	77.03	451.393	1012 *	451.773	1242	452.393	1689	448.543	0.000
22	447.613	0.000	448.483	50.09	451.253	969.5	450.293	512.6	452.683	1870	448.528	0.000
23	449.313	209.6	448.493	53.60	450.898	755.7	450.183	466.5	452.683	1702 *	448.493	0.000
24	449.293	204.8	448.403	40.43 *	450.843	731.8	449.243	201.3	450.593	658.2 *	448.473	0.000
25	449.293	203.1	448.278	26.80	450.883	779.5 *	449.143	182.7 *	450.353	549.0	448.443	0.000
26	449.293	220.8 *	448.163	13.60	451.283	963.6	449.673	305.2	450.463	584.5	448.433	0.000
27	449.293	204.5	448.138	12.60	450.223	490.0	449.953	416.5	450.383	562.7	448.413	0.000
28	448.528	56.12	448.343	29.99	449.823	376.8 *	450.203	499.5	449.663	302.0	448.393	0.000
29	448.333	30.38	448.328	29.17	448.683	78.23	450.123	452.1	449.633	292.4	448.363	0.000
30	448.343	30.93	448.273	26.57	448.553	63.36	450.123	450.2	449.513	281.6 *	448.298	0.000
31			448.623	74.16 *	448.253	24.05			449.493	258.5		
Ten-Daily Mean												
I Ten-Daily	447.694	0.000	448.448	46.78	448.597	73.40	450.399	787.9	449.617	350.2	448.773	73.34
II Ten-Daily	447.619	0.000	448.754	110.5	453.042	2010	453.149	2124	451.937	1399	448.776	0.000
III Ten-Daily	448.691	116.0	448.379	39.46	450.190	567.7	450.071	472.9	450.714	795.4	448.438	0.000
Monthly												
Min.	447.613	0.000	448.138	12.60	448.253	24.05	448.163	13.62	448.253	23.94	448.298	0.000
Max.	449.313	220.8	450.033	399.0	454.573	2950	456.033	4091	455.803	3662	449.308	209.7
Mean	448.001	38.67	448.522	64.75	450.596	873.4	451.206	1128	450.755	846.4	448.662	24.45

Annual Runoff in MCM = 7868 Annual Runoff in mm = 344

Peak Observed Discharge = 3662 cumecs on 19-10-2022 Corres. Water Level :455.803 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :447.788 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 2022 - 2023

Station Name : Narasingpur (AKP00Q4)

Division : Upper Krishna Divn, Pune

Local River : Bhima

Sub-Division :Lower Bhima SD, Sholapur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	448.283	0.000	447.838	0.000	449.493	0.000	447.893	0.000	449.253	0.000	448.333	0.000
2	448.273	0.000	447.833	0.000	449.493	0.000	447.873	0.000	449.163	0.000	448.333	0.000
3	448.253	0.000	447.823	0.000	449.493	0.000	447.853	0.000	448.833	0.000	448.328	0.000
4	448.223	0.000	447.818	0.000	449.493	0.000	447.833	0.000	448.613	0.000	448.328	0.000
5	448.193	0.000	447.813	0.000	449.443	0.000	447.813	0.000	448.543	0.000	448.328	0.000
6	448.168	0.000	447.808	0.000	449.243	0.000	447.803	0.000	448.513	0.000	448.323	0.000
7	448.143	0.000	447.803	0.000	449.243	0.000	447.793	0.000	448.483	0.000	448.323	0.000
8	448.123	0.000	447.798	0.000	449.243	0.000	447.788	0.000	448.463	0.000	448.323	0.000
9	448.108	0.000	447.793	0.000	448.993	0.000	447.783	0.000	448.443	0.000	448.323	0.000
10	448.078	0.000	447.788	0.000	448.883	0.000	447.778	0.000	448.423	0.000	448.323	0.000
11	448.038	0.000	447.783	0.000	448.773	0.000	447.773	0.000	448.413	0.000	448.313	0.000
12	447.993	0.000	447.778	0.000	448.693	0.000	447.763	0.000	448.383	0.000	448.313	0.000
13	447.968	0.000	447.773	0.000	448.623	0.000	447.753	0.000	448.363	0.000	449.743	0.000
14	447.948	0.000	447.768	0.000	448.563	0.000	447.738	0.000	448.343	0.000	449.843	0.000
15	447.938	0.000	447.763	0.000	448.533	0.000	447.723	0.000	448.333	0.000	449.843	0.000
16	447.923	0.000	447.758	0.000	448.488	0.000	447.713	0.000	448.333	0.000	449.843	0.000
17	447.913	0.000	447.753	0.000	448.413	0.000	447.708	0.000	448.333	0.000	449.843	0.000
18	447.893	0.000	447.748	0.000	448.368	0.000	447.698	0.000	448.333	0.000	449.843	0.000
19	447.883	0.000	447.748	0.000	448.333	0.000	447.688	0.000	448.333	0.000	449.843	0.000
20	447.883	0.000	447.743	0.000	448.298	0.000	447.688	0.000	448.333	0.000	449.843	0.000
21	447.878	0.000	447.738	0.000	448.273	0.000	449.543	0.000	448.333	0.000	449.238	0.000
22	447.878	0.000	447.733	0.000	448.193	0.000	449.843	0.000	448.333	0.000	448.783	0.000
23	447.873	0.000	447.728	0.000	448.123	0.000	449.843	0.000	448.333	0.000	448.673	0.000
24	447.868	0.000	447.723	0.000	448.073	0.000	449.843	0.000	448.333	0.000	448.623	0.000
25	447.868	0.000	447.723	0.000	448.033	0.000	449.843	0.000	448.333	0.000	448.543	0.000
26	447.868	0.000	449.493	0.000	447.993	0.000	449.843	0.000	448.333	0.000	448.383	0.000
27	447.863	0.000	449.493	0.000	447.953	0.000	449.843	0.000	448.333	0.000	448.263	0.000
28	447.858	0.000	449.493	0.000	447.923	0.000	449.843	0.000	448.333	0.000	448.178	0.000
29	447.853	0.000	449.493	0.000			449.843	0.000	448.333	0.000	448.123	0.000
30	447.848	0.000	449.493	0.000			449.843	0.000	448.333	0.000	448.083	0.000
31	447.843	0.000	449.493	0.000			449.643	0.000			448.038	0.000
Ten-Daily Mean												
I Ten-Daily	448.185	0.000	447.812	0.000	449.302	0.000	447.821	0.000	448.673	0.000	448.326	0.000
II Ten-Daily	447.938	0.000	447.762	0.000	448.508	0.000	447.725	0.000	448.350	0.000	449.527	0.000
III Ten-Daily	447.863	0.000	448.691	0.000	448.071	0.000	449.798	0.000	448.333	0.000	448.448	0.000
Monthly												
Min.	447.843	0.000	447.723	0.000	447.923	0.000	447.688	0.000	448.333	0.000	448.038	0.000
Max.	448.283	0.000	449.493	0.000	449.493	0.000	449.843	0.000	449.253	0.000	449.843	0.000
Mean	447.991	0	448.108	0	448.667	0	448.491	0	448.452	0	448.757	0

Peak Computed Discharge = 4091 cumecs on 18-09-2022

Corres. Water Level :456.033 m

Lowest Computed Discharge = 40.43 cumecs on 24-07-2022

Corres. Water Level :448.403 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 : 2022-2023

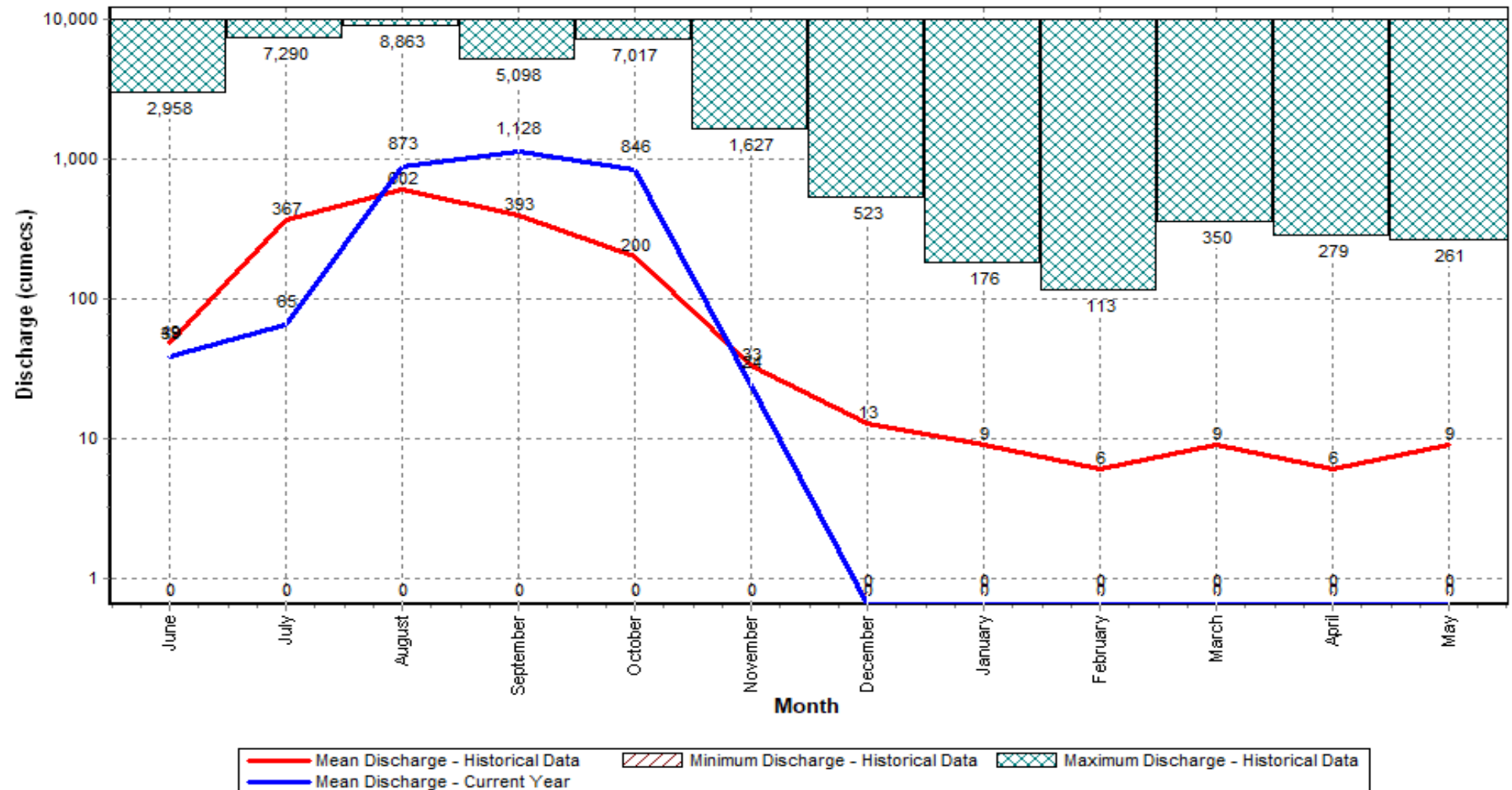
Station Name : Narasingpur (AKP00Q4)

Data considered : 1967-2023

Division : Upper Krishna Divn, Pune

Local River : Bhima

Sub-Division : Lower Bhima SD, Sholapur



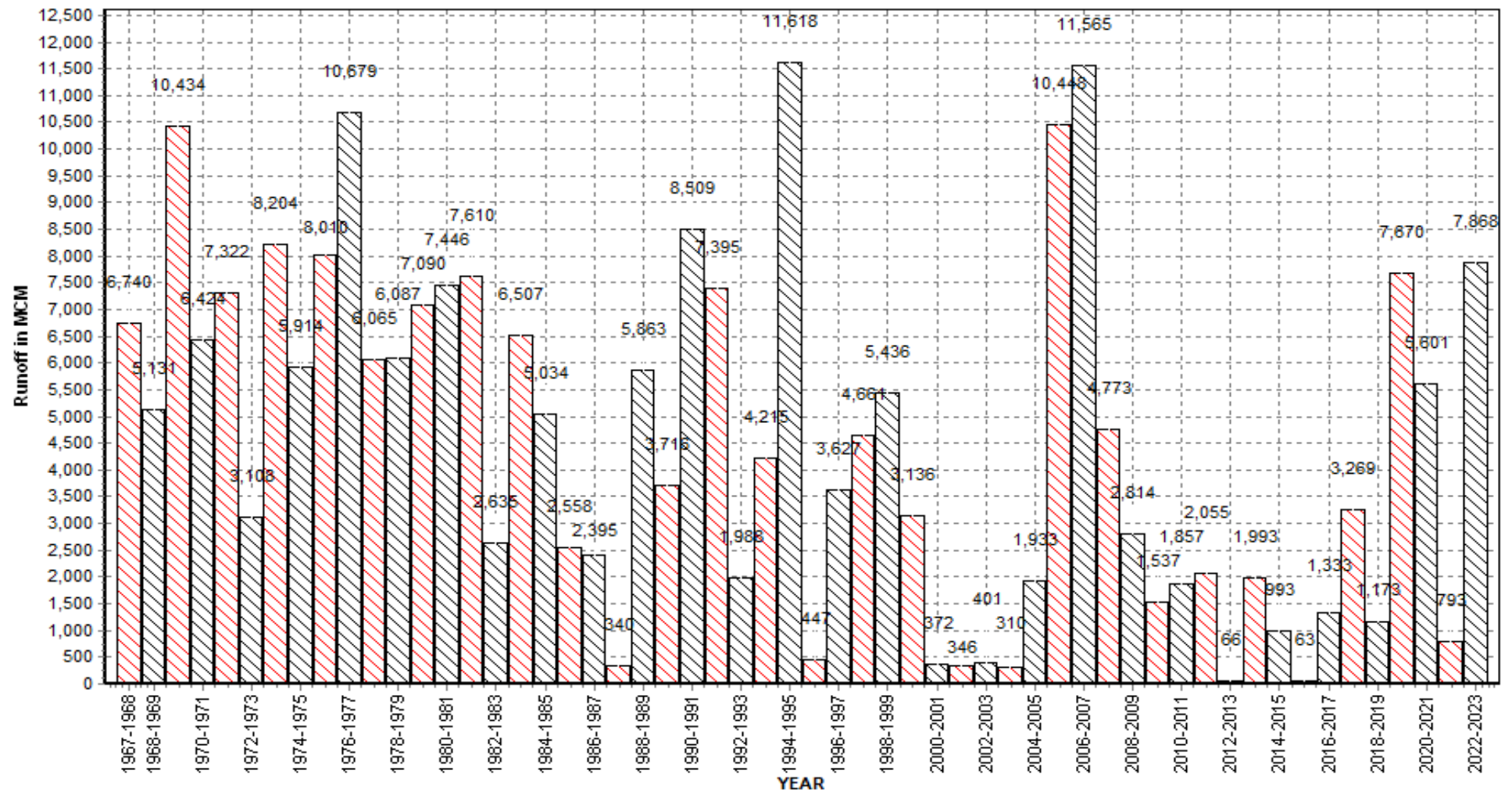
Annual Runoff Values for the period: 1967 - 2023

Station Name : Narasingpur (AKP00Q4)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



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

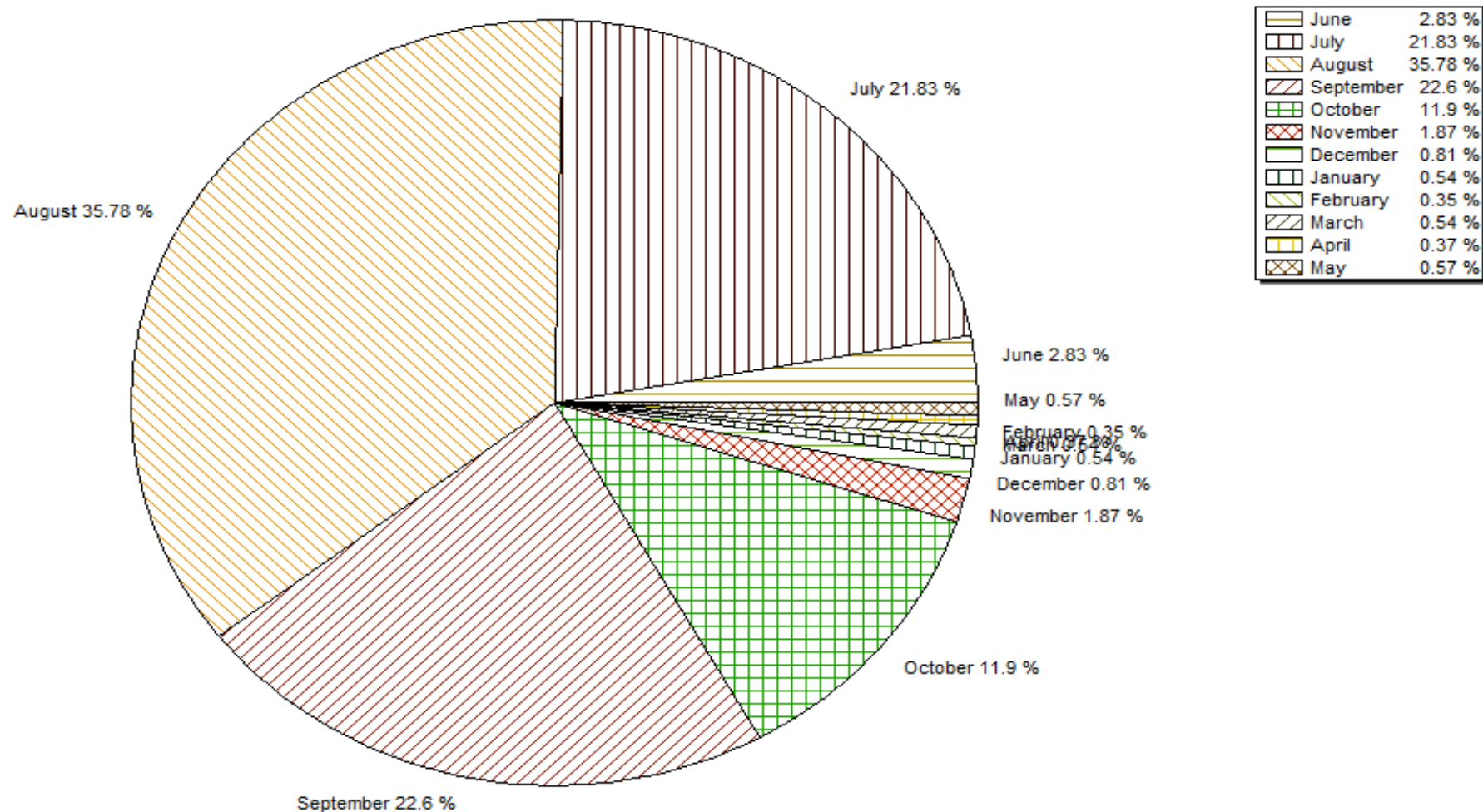
Monthly Average Runoff based on period : 1967-2022

Station Name : Narasingpur (AKP00Q4)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



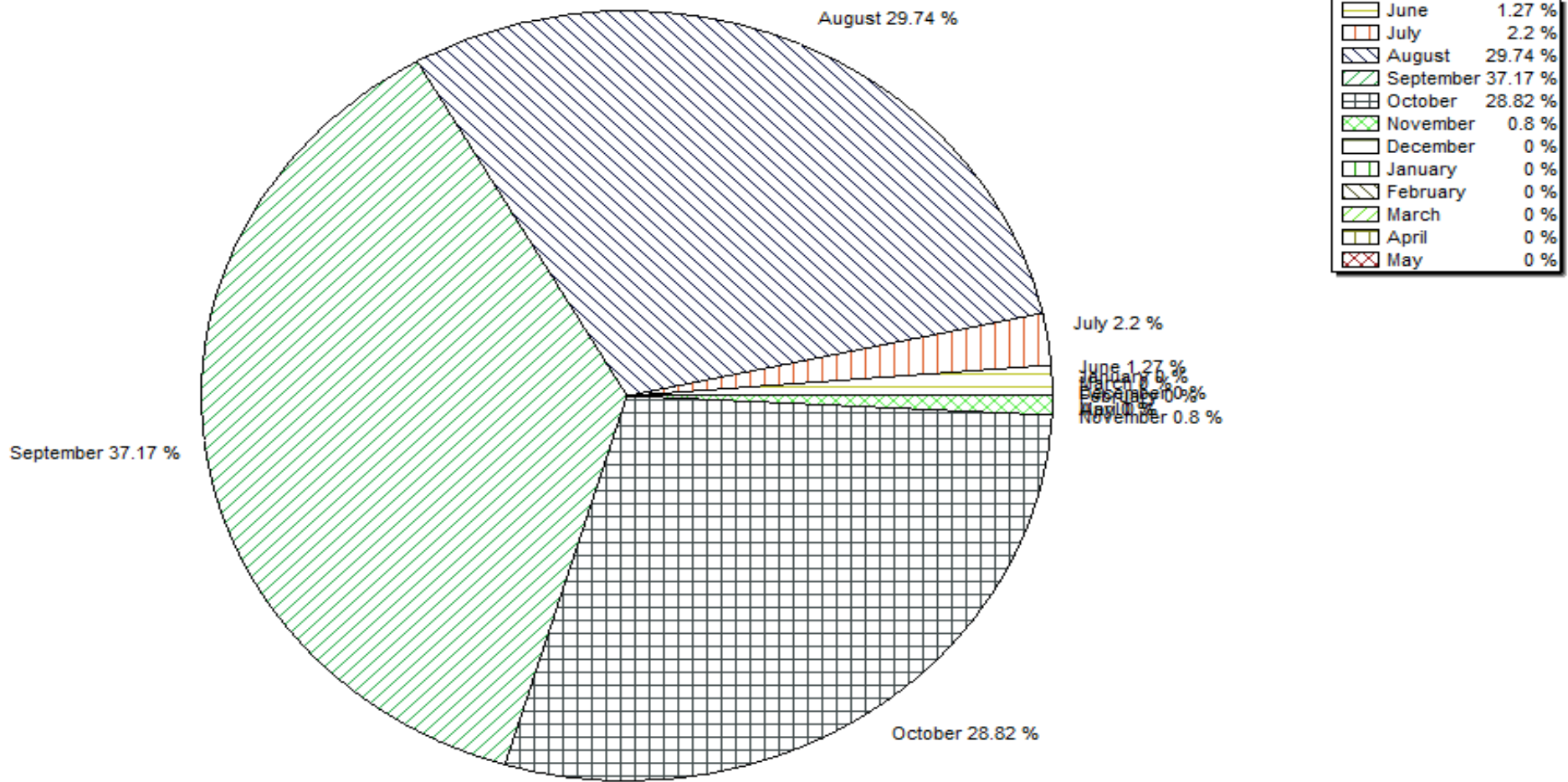
Monthly Runoff for the Year : 2022-2023

Station Name : Narasingpur (AKP00Q4)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



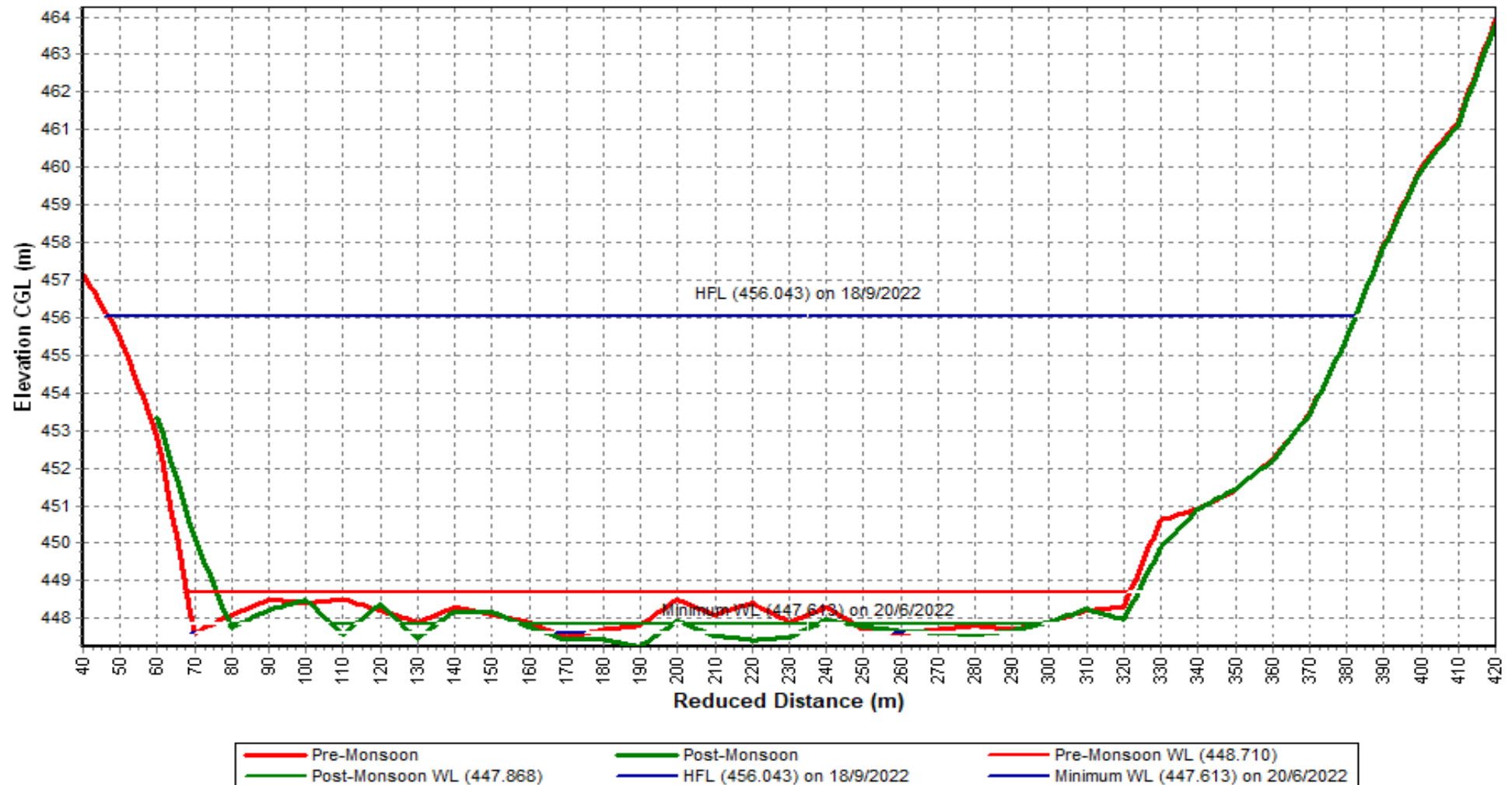
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Narasingpur (AKP00Q4)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



Zero of the Gauge: 448.243 (m.s.l)

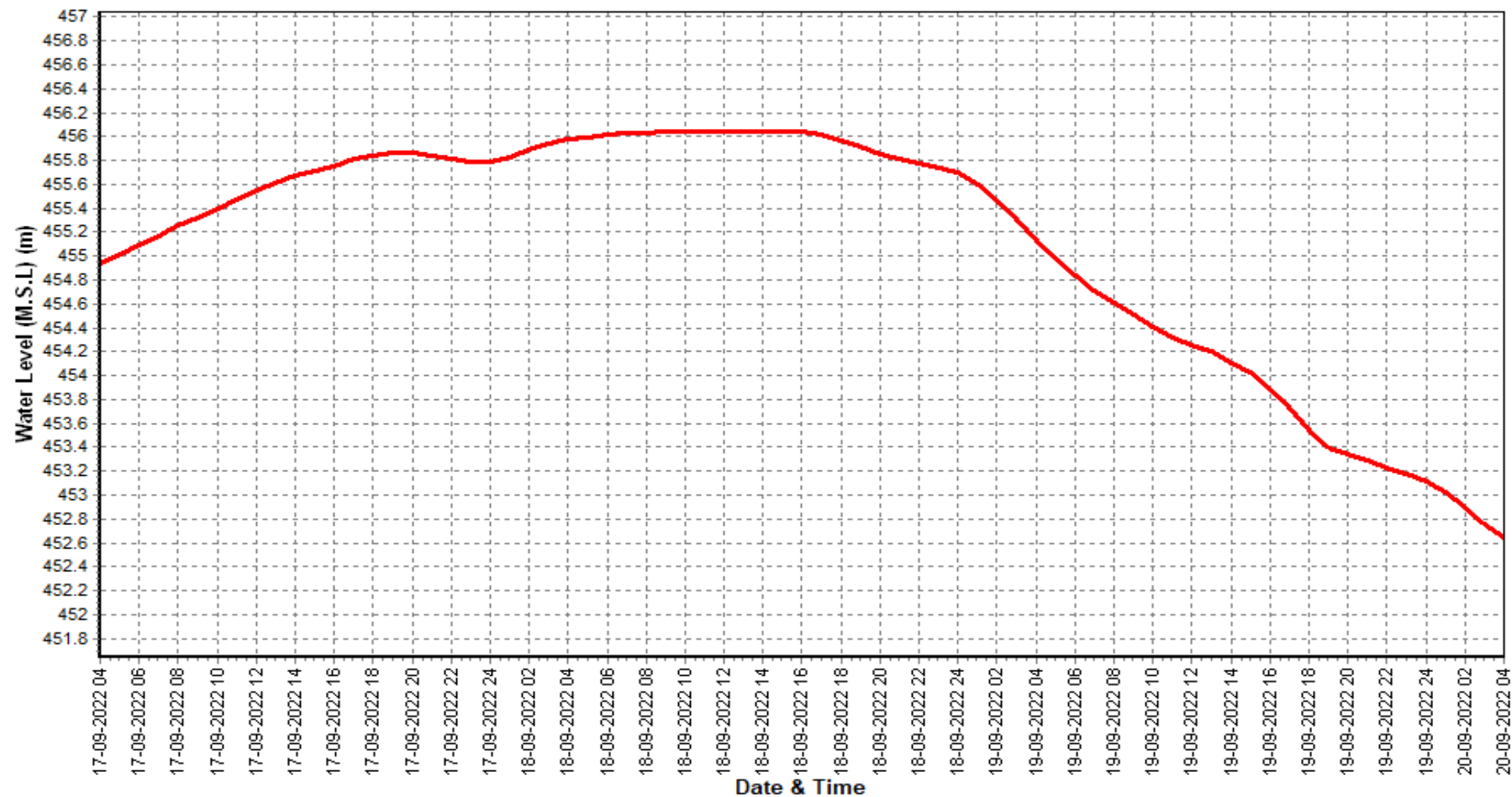
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Narasingpur (AKP00Q4)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



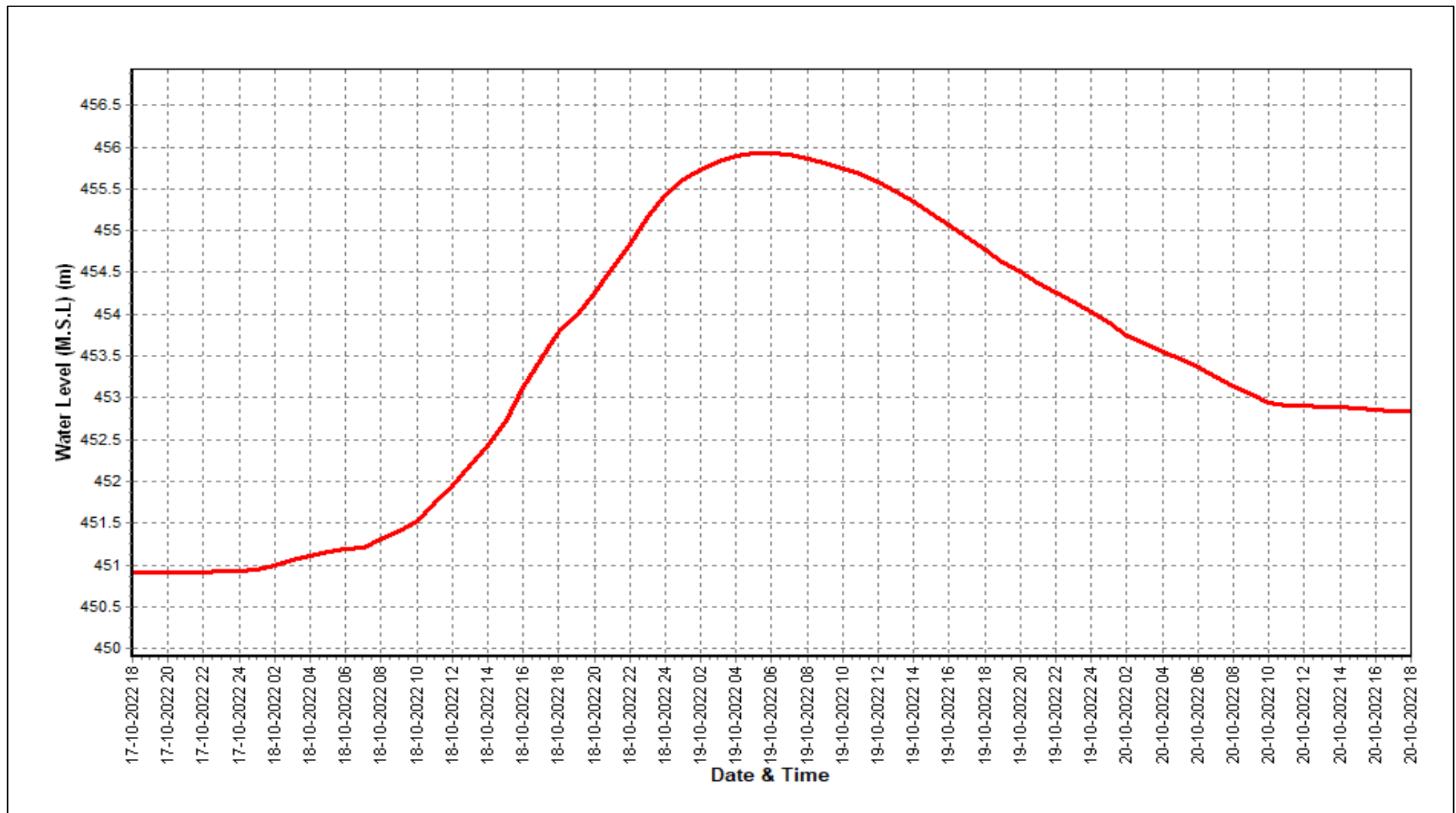
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Narasingpur (AKP00Q4)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



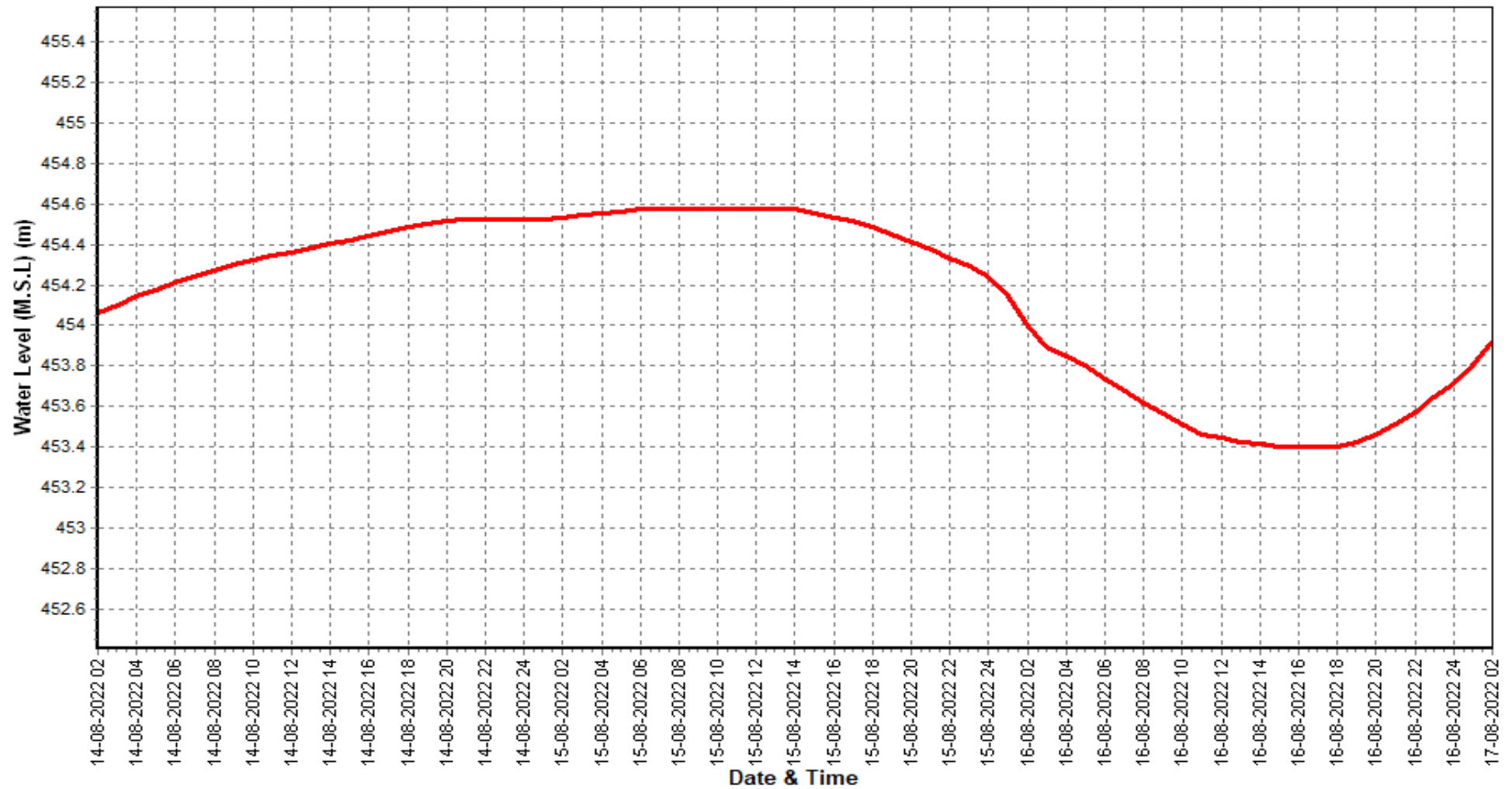
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Narasingpur (AKP00Q4)

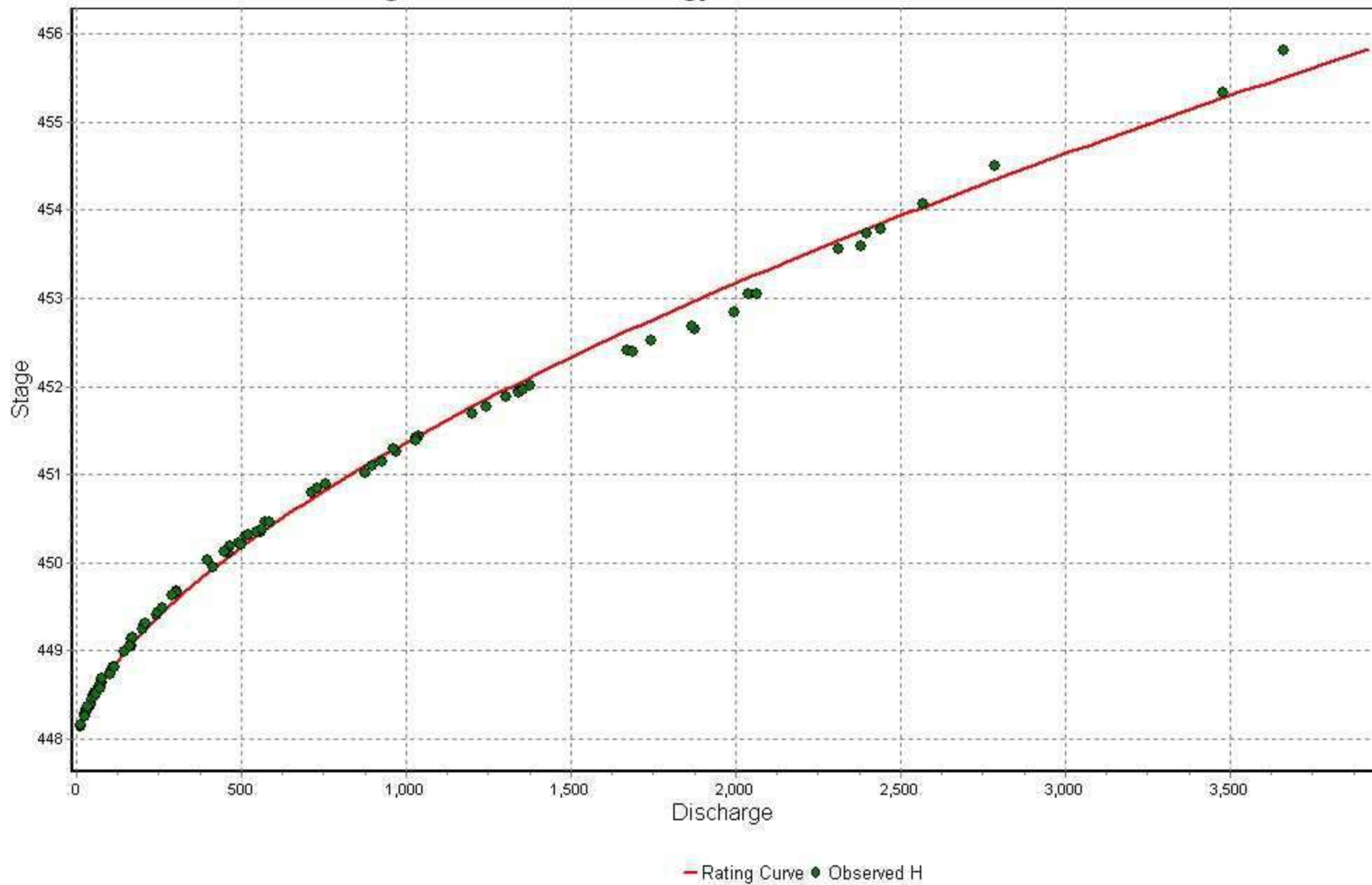
Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



Rating Curve of Site Narasingpur 01/06/2022 to 30/11/2022



HISTORY SHEET

Water Year : 2022-2023

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 : Lower 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)
409.278 (m.s.l)
408 (m.s.l)20-07-1963 - 24-06-1969
25-06-1969 - 31-05-2011
01-06-2011

Opening Date

Closing Date

Gauge : 14-07-1965

HFL During 2022-23 : 418.620 m
Corres. Discharge : 3540 (Estimated)

Discharge : 10-08-1965

Date & Time of occurrence : 20-10-2022
: 10:00 Hrs

Sediment : 01-12-1966

Water Quality : 01-09-1972

HFL Recorded so far in m : 424.500 dt 17-10-2020

Corresponding Discharge (cumecs) : 10360 *

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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	411.978	14-03-1989
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	6944	422.558	05-08-2005	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	412.870	27-12-2013
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
2016-2017	927.6	414.975	08-08-2016	0.000	412.980	25-01-2017
2017-2018	2076	417.545	16-09-2017	0.000	410.040	25-01-2018
2018-2019	872.2	415.005	29-08-2018	0.000	414.710	25-01-2019
2019-2020	6086	421.565	09-08-2019	0.000	414.010	20-12-2019
2020-2021	10220	424.440	17-10-2020	0.000	411.940	14-05-2021
2021-2022	986.0	415.050	01-06-2021	0.000	413.720	18-06-2021

Annual Runoff of Bhima at Takli

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1965-1966	6577	471	7048	232	17	249
2	1966-1967	5009	158	5167	177	6	183
3	1967-1968	8733	404	9137	309	14	323
4	1968-1969	5225	141	5366	185	5	190
5	1969-1970	10442	182	10624	369	6	375
6	1970-1971	7040	228	7269	249	8	257
7	1971-1972	7974	145	8120	282	5	287
8	1972-1973	2719	17	2736	96	1	97
9	1973-1974	8591	237	8828	304	8	312
10	1974-1975	7258	370	7628	256	13	270
11	1975-1976	10813	341	11154	382	12	394
12	1976-1977	11016	236	11252	389	8	398
13	1977-1978	4893	719	5611	173	25	198
14	1978-1979	6029	231	6259	213	8	221
15	1979-1980	8500	539	9040	300	19	319
16	1980-1981	6598	125	6723	233	4	238
17	1981-1982	8997	217	9214	318	8	326
18	1982-1983	2552	85	2636	90	3	93
19	1983-1984	7267	229	7496	257	8	265
20	1984-1985	5189	229	5418	183	8	191
21	1985-1986	2819	6	2824	100	0	100
22	1986-1987	2830	21	2850	100	1	101
23	1987-1988	1003	115	1118	35	4	39
24	1988-1989	7118	69	7188	252	2	254
25	1989-1990	5009	93	5102	177	3	180
26	1990-1991	8773	33	8806	310	1	311
27	1991-1992	8037	92	8129	284	3	287
28	1992-1993	2042	16	2058	72	1	73
29	1993-1994	3151	140	3291	111	5	116
30	1994-1995	11421	0	11421	404	0	404
31	1995-1996	222	0	222	8	0	8
32	1996-1997	4157	23	4179	147	1	148
33	1997-1998	4844	69	4913	171	2	174
34	1998-1999	9071	55	9126	321	2	322
35	1999-2000	2303	12	2315	81	0	82
36	2000-2001	253	26	278	9	1	10
37	2001-2002	726	0	726	26	0	26
38	2002-2003	42	7	49	1	0	2
39	2003-2004	8	0	8	0	0	0
40	2004-2005	1481	0	1481	52	0	52
41	2005-2006	9277	0	9277	328	0	328
42	2006-2007	11671	0	11671	412	0	412
43	2007-2008	5348	0	5348	189	0	189
44	2008-2009	2094	0	2094	74	0	74
45	2009-2010	3490	0	3490	123	0	123
46	2010-2011	1470	0	1470	52	0	52
47	2011-2012	2056	0	2056	73	0	73

48	2012-2013	0	0	0	0	0	0
49	2013-2014	2022	0	2022	71	0	71
50	2014-2015	1733	0	1733	61	0	61
51	2015-2016	0	0	0	0	0	0
52	2016-2017	814	0	814	29	0	29
53	2017-2018	2868	0	2868	101	0	101
54	2018-2019	626	0	626	22	0	22
55	2019-2020	7385	0	7385	261	0	261
56	2020-2021	7450	0	7450	263	0	263
57	2021-2022	1141	0	1141	40	0	40
58	2022-2023	6957	0	6957	246	0	246
Average		4882	105	4986	172	4	176

Instantaneous Flood Peak of Bhima at Takli

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1965-1966	420.173	02-08-1965	02:00:00	4340 *
2	1966-1967	419.008	01-08-1966	18:00:00	3957 *
3	1967-1968	423.113	31-07-1967	08:00:00	8623 *
4	1968-1969	417.988	09-08-1968	21:00:00	2499 *
5	1969-1970	421.163	04-08-1969	18:00:00	5529 *
6	1970-1971	417.378	20-09-1970	22:00:00	2592 *
7	1971-1972	419.618	02-09-1971	13:00:00	4422 *
8	1972-1973	418.858	11-07-1972	13:00:00	3742 *
9	1973-1974	418.643	11-07-1973	14:00:00	3659 *
10	1974-1975	418.023	24-09-1974	20:00:00	3065 *
11	1975-1976	419.618	17-08-1975	22:00:00	4422 *
12	1976-1977	422.108	05-08-1976	12:00:00	8173 *
13	1977-1978	416.678	31-07-1977	02:00:00	2128 *
14	1978-1979	417.343	04-09-1978	03:00:00	2567 *
15	1979-1980	423.078	27-09-1979	15:00:00	8782 *
16	1980-1981	419.083	06-08-1980	07:00:00	3937 *
17	1981-1982	421.348	12-07-1981	00:00:00	6195 *
18	1982-1983	417.233	25-08-1982	11:00:00	2492 *
19	1983-1984	422.028	19-08-1983	18:00:00	6978 *
20	1984-1985	418.398	22-07-1984	22:00:00	3360 *
21	1985-1986	417.558	05-08-1985	01:00:00	2719 *
22	1986-1987	417.443	12-08-1986	07:00:00	2638 *
23	1987-1988	414.458	19-10-1987	17:00:00	996 *
24	1988-1989	420.593	19-09-1988	21:00:00	5382 *
25	1989-1990	420.548	29-09-1989	16:00:00	5336 *
26	1990-1991	419.618	19-08-1990	21:00:00	4422 *
27	1991-1992	419.928	30-07-1991	16:00:00	4716 *
28	1992-1993	416.423	08-09-1992	11:00:00	1972 *
29	1993-1994	417.638	19-10-1993	13:00:00	2777 *
30	1994-1995	422.548	18-07-1994	15:00:00	7609 *
31	1995-1996	412.593	01-07-1995	23:00:00	445 *
32	1996-1997	420.398	06-10-1996	10:00:00	5182 *
33	1997-1998	423.308	28-08-1997	11:00:00	8583 *
34	1998-1999	421.078	14-10-1998	03:00:00	5897 *
35	1999-2000	414.808	01-08-1999	06:00:00	1140 *
36	2000-2001	412.698	30-09-2000	05:00:00	466 *
37	2001-2002	415.998	08-10-2001	19:00:00	1726 *
38	2002-2003	413.928	19-10-2002	14:00:00	802 *
39	2003-2004	413.778	12-07-2003	19:00:00	753 *
40	2004-2005	414.728	15-08-2004	01:00:00	1106 *
41	2005-2006	423.103	30-07-2005	14:00:00	8314 *
42	2006-2007	423.718	12-08-2006	16:00:00	9133 *
43	2007-2008	417.368	21-09-2007	13:00:00	2585 *
44	2008-2009	418.328	22-09-2008	22:00:00	3304 *
45	2009-2010	420.068	04-10-2009	03:00:00	4853 *
46	2010-2011	415.268	07-10-2010	08:00:00	1349

47	2011-2012	419.560	06-09-2011	18:00:00	3665 *
48	2012-2013	415.140	07-06-2012	15:00:00	553 *
49	2013-2014	418.640	21-09-2013	14:00:00	2846 *
50	2014-2015	415.170	08-09-2014	11:00:00	567 *
51	2015-2016	414.730	26-09-2015	13:00:00	369 *
52	2016-2017	415.060	08-08-2016	15:00:00	515 *
53	2017-2018	418.040	16-09-2017	22:00:00	2360 *
54	2018-2019	415.080	29-08-2018	08:00:00	525
55	2019-2020	421.570	09-08-2019	10:00:00	5769 *
56	2021-2022	424.500	17-10-2020	12:00:00	10360 *
57	2021-2022	415.110	01-06-2021	07:00:00	986 *
58	2022-2023	418.620	20-10-2022	10:00:00	3540 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : Takli (AKP00K4)

Division : Upper Krishna Divn, Pune

Local River : Bhima

Sub-Division : Lower 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	413.340	0.000	414.980	0.000	412.460	0.000	412.670	0.000	413.595	500.9	413.300	268.5
2	413.300	0.000	414.930	0.000	412.590	0.000	412.630	0.000	413.710	477.6 *	413.250	295.0 *
3	413.250	0.000	414.900	0.000	412.650	0.000	412.570	0.000	413.500	418.4	413.075	200.3
4	413.110	0.000	414.880	0.000	412.600	0.000	412.730	0.000	413.310	330.9	412.940	172.0
5	412.950	0.000	414.910	0.000	412.610	0.000	412.850	145.0	413.150	250.9	412.840	136.5
6	412.800	0.000	414.970	0.000	412.600	0.000	412.890	147.3	412.960	194.5	412.640	0.000
7	412.640	0.000	414.990	0.000	412.710	0.000	413.300	344.8	412.855	136.0	412.530	0.000
8	412.720	0.000	414.990	0.000	412.860	0.000	413.860	668.4	413.150	254.1	412.460	0.000
9	412.790	0.000	415.030	0.000	412.850	0.000	414.865	1241	414.790	996.1 *	412.400	0.000
10	412.820	0.000	415.050	0.000	412.810	0.000	416.860	2043	413.650	519.3	412.280	0.000
11	412.790	0.000	415.050	0.000	412.780	0.000	416.660	2121 *	413.220	305.9	412.170	0.000
12	412.700	0.000	415.050	0.000	413.700	514.7	415.975	1498	413.190	282.9	412.020	0.000
13	412.800	0.000	415.030	0.000	414.655	987.4	415.550	1452	415.390	1249	412.220	0.000
14	412.810	0.000	414.660	0.000	416.130	1777 *	415.940	1598	415.250	1110	413.050	0.000
15	412.770	0.000	414.490	0.000	416.820	2228 *	415.140	1187	415.645	1304	413.290	0.000
16	412.720	0.000	414.050	0.000	417.110	2272	414.290	864.6	415.270	1260 *	413.250	0.000
17	412.620	0.000	413.480	0.000	416.460	1851	415.130	1315	415.390	1206	413.160	0.000
18	412.590	0.000	413.010	0.000	416.440	1634	417.840	2949 *	415.135	1081	413.200	0.000
19	412.550	0.000	413.260	409.0	416.010	1702 *	418.570	3482	415.495	1364	413.180	0.000
20	412.480	0.000	413.140	320.8	415.830	1388	417.525	2391	418.585	3506	413.100	0.000
21	412.410	0.000	412.990	223.8	415.050	1137 *	415.635	1320	417.200	2018	412.950	0.000
22	412.350	0.000	412.925	164.1	414.780	747.5	414.725	1017	416.190	1526	412.870	0.000
23	412.320	0.000	412.750	113.9	414.160	721.2	414.180	690.6	416.250	1853 *	412.750	0.000
24	412.280	0.000	412.600	89.50 *	414.195	716.3	413.500	471.5	415.850	1603 *	412.720	0.000
25	412.220	0.000	412.590	72.28	414.010	643.2	413.350	332.4 *	414.300	810.0	412.720	0.000
26	412.140	0.000	412.580	60.91	414.120	724.9	413.130	310.5	413.930	639.3	412.710	0.000
27	412.800	0.000	412.550	0.000	414.205	813.0	413.105	299.6	413.950	669.7	412.670	0.000
28	415.140	0.000	412.460	0.000	413.980	596.4 *	413.375	385.6	413.880	589.3	412.610	0.000
29	415.080	0.000	412.440	0.000	413.395	358.4	413.640	491.8	413.630	446.0	412.580	0.000
30	414.990	0.000	412.420	0.000	413.070	198.4	413.565	471.3	413.450	371.2 *	412.540	0.000
31			412.450	0.000	412.740	138.8			413.340	333.7		
Ten-Daily Mean												
I Ten-Daily	412.972	0.000	414.963	0.000	412.674	0.000	413.523	458.9	413.467	407.9	412.771	107.2
II Ten-Daily	412.683	0.000	414.122	72.98	415.593	1435	416.262	1886	415.257	1267	412.864	0.000
III Ten-Daily	413.173	0.000	412.614	65.87	413.973	617.7	413.820	579.0	414.725	987.2	412.712	0.000
Monthly												
Min.	412.140	0.000	412.420	0.000	412.460	0.000	412.570	0.000	412.855	136.0	412.020	0.000
Max.	415.140	0.000	415.050	409.0	417.110	2272	418.570	3482	418.585	3506	413.300	295.0
Mean	412.943	0	413.858	46.91	414.077	682.2	414.535	974.6	414.491	890.6	412.783	35.74

Annual Runoff in MCM = 6957 Annual Runoff in mm = 205

Peak Observed Discharge = 3506 cumecs on 20-10-2022 Corres. Water Level :418.585 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :413.34 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 2022 - 2023

Station Name : Takli (AKP00K4)

Division : Upper Krishna Divn, Pune

Local River : Bhima

Sub-Division : Lower Bhima SD, Sholapur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	412.430	0.000	412.240	0.000	411.400	0.000	412.000	0.000	414.970	0.000	413.120	0.000
2	412.330	0.000	412.150	0.000	411.250	0.000	411.900	0.000	414.860	0.000	413.100	0.000
3	412.220	0.000	412.090	0.000	411.150	0.000	412.000	0.000	414.650	0.000	412.980	0.000
4	412.110	0.000	412.180	0.000	414.800	0.000	412.140	0.000	414.480	0.000	413.050	0.000
5	412.000	0.000	412.220	0.000	414.850	0.000	412.150	0.000	414.340	0.000	413.170	0.000
6	411.900	0.000	412.190	0.000	414.800	0.000	412.100	0.000	414.000	0.000	413.130	0.000
7	412.300	0.000	412.220	0.000	414.850	0.000	412.000	0.000	413.850	0.000	413.050	0.000
8	412.500	0.000	412.450	0.000	414.900	0.000	411.920	0.000	413.950	0.000	412.850	0.000
9	412.530	0.000	412.460	0.000	414.750	0.000	411.850	0.000	413.950	0.000	412.720	0.000
10	412.580	0.000	412.460	0.000	414.600	0.000	411.780	0.000	413.820	0.000	412.650	0.000
11	412.560	0.000	412.440	0.000	414.350	0.000	411.800	0.000	413.700	0.000	412.580	0.000
12	412.550	0.000	412.530	0.000	414.100	0.000	411.980	0.000	413.500	0.000	412.500	0.000
13	412.540	0.000	412.570	0.000	413.950	0.000	412.050	0.000	413.470	0.000	412.400	0.000
14	412.480	0.000	412.550	0.000	413.810	0.000	411.990	0.000	413.500	0.000	412.250	0.000
15	412.470	0.000	412.500	0.000	413.700	0.000	411.900	0.000	413.530	0.000	412.100	0.000
16	412.400	0.000	412.400	0.000	413.600	0.000	412.050	0.000	413.400	0.000	412.000	0.000
17	412.300	0.000	412.280	0.000	413.500	0.000	412.250	0.000	413.250	0.000	411.850	0.000
18	412.200	0.000	412.150	0.000	413.350	0.000	412.300	0.000	413.200	0.000	411.730	0.000
19	412.120	0.000	412.250	0.000	413.150	0.000	412.250	0.000	413.150	0.000	411.660	0.000
20	412.200	0.000	412.330	0.000	412.950	0.000	412.130	0.000	413.100	0.000	413.880	0.000
21	412.270	0.000	412.350	0.000	412.750	0.000	412.000	0.000	413.080	0.000	415.020	0.000
22	412.330	0.000	412.300	0.000	412.700	0.000	411.900	0.000	413.140	0.000	415.050	0.000
23	412.370	0.000	412.210	0.000	412.600	0.000	411.780	0.000	413.100	0.000	414.970	0.000
24	412.340	0.000	412.100	0.000	412.500	0.000	411.650	0.000	413.020	0.000	414.780	0.000
25	412.280	0.000	412.000	0.000	412.350	0.000	411.570	0.000	412.870	0.000	414.700	0.000
26	412.210	0.000	411.900	0.000	412.250	0.000	411.490	0.000	412.730	0.000	414.580	0.000
27	412.180	0.000	411.780	0.000	412.220	0.000	411.400	0.000	412.680	0.000	414.450	0.000
28	412.420	0.000	411.700	0.000	412.120	0.000	411.350	0.000	413.050	0.000	414.270	0.000
29	412.440	0.000	411.570	0.000			414.950	0.000	413.200	0.000	414.150	0.000
30	412.370	0.000	411.500	0.000			414.980	0.000	413.200	0.000	414.000	0.000
31	412.300	0.000	411.440	0.000			415.150	0.000			413.850	0.000
Ten-Daily Mean												
I Ten-Daily	412.290	0.000	412.266	0.000	413.735	0.000	411.984	0.000	414.287	0.000	412.982	0.000
II Ten-Daily	412.382	0.000	412.400	0.000	413.646	0.000	412.070	0.000	413.380	0.000	412.295	0.000
III Ten-Daily	412.319	0.000	411.895	0.000	412.436	0.000	412.565	0.000	413.007	0.000	414.529	0.000
Monthly												
Min.	411.900	0.000	411.440	0.000	411.150	0.000	411.350	0.000	412.680	0.000	411.660	0.000
Max.	412.580	0.000	412.570	0.000	414.900	0.000	415.150	0.000	414.970	0.000	415.050	0.000
Mean	412.330	0	412.178	0	413.332	0	412.218	0	413.558	0	413.309	0

Peak Computed Discharge = 2949 cumecs on 18-09-2022

Corres. Water Level :417.84 m

Lowest Computed Discharge = 89.50 cumecs on 24-07-2022

Corres. Water Level :412.6 m

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

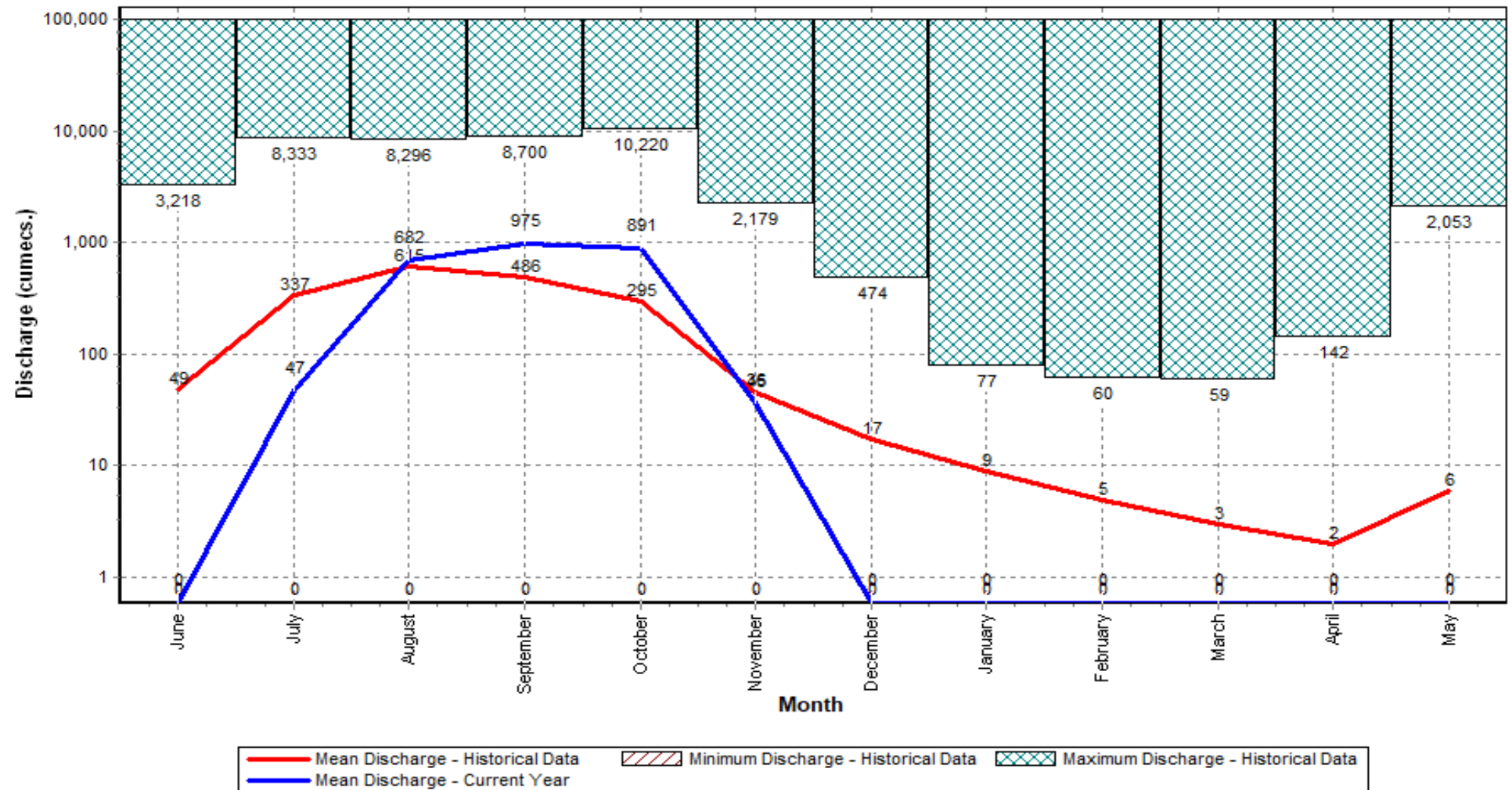
Station Name : Takli (AKP00K4)

Data considered : 1965-2023

Division : Upper Krishna Divn, Pune

Local River : Bhima

Sub-Division : Lower Bhima SD, Sholapur



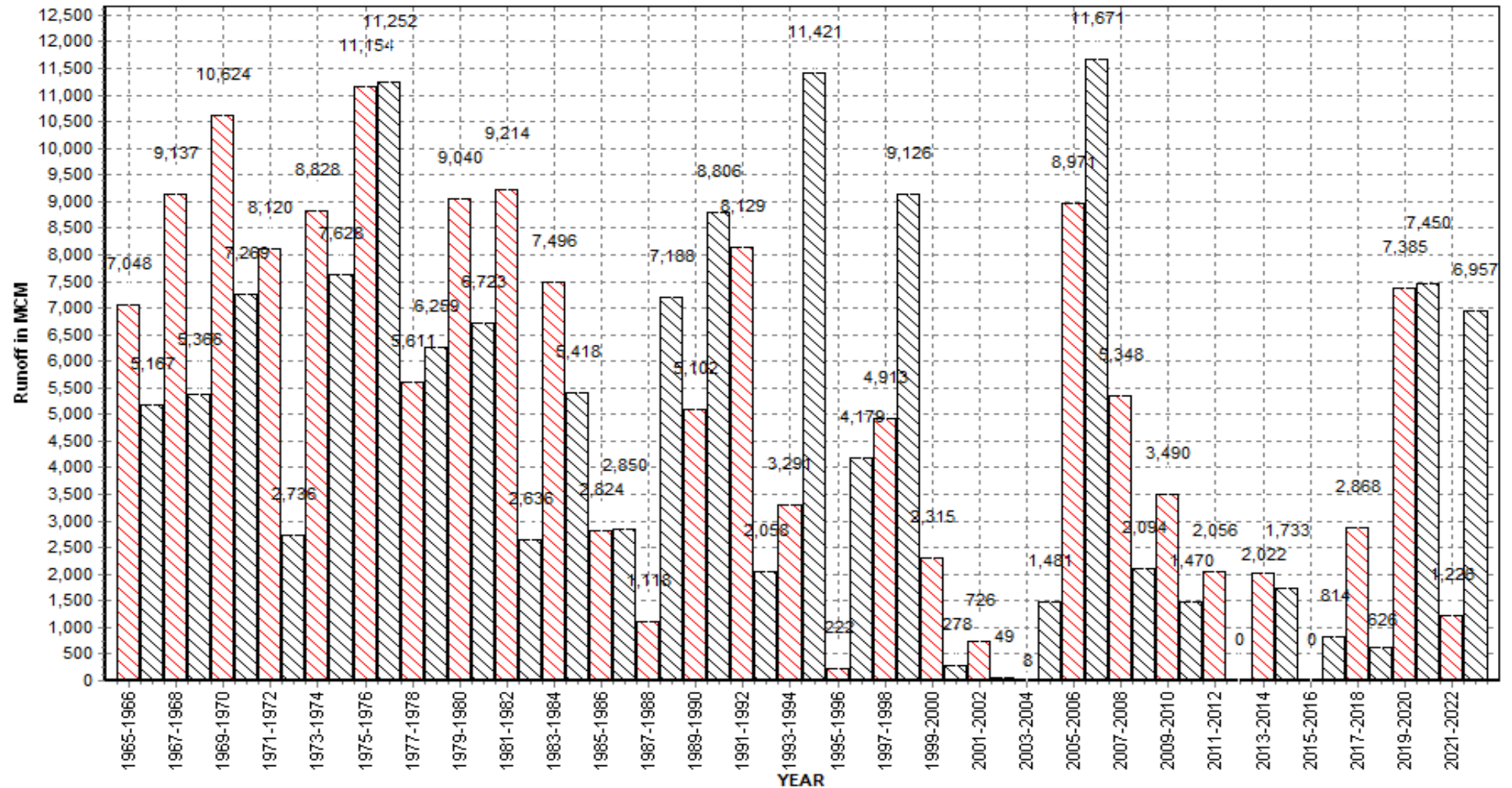
Annual Runoff Values for the period: 1965 - 2023

Station Name : Takli (AKP00K4)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



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

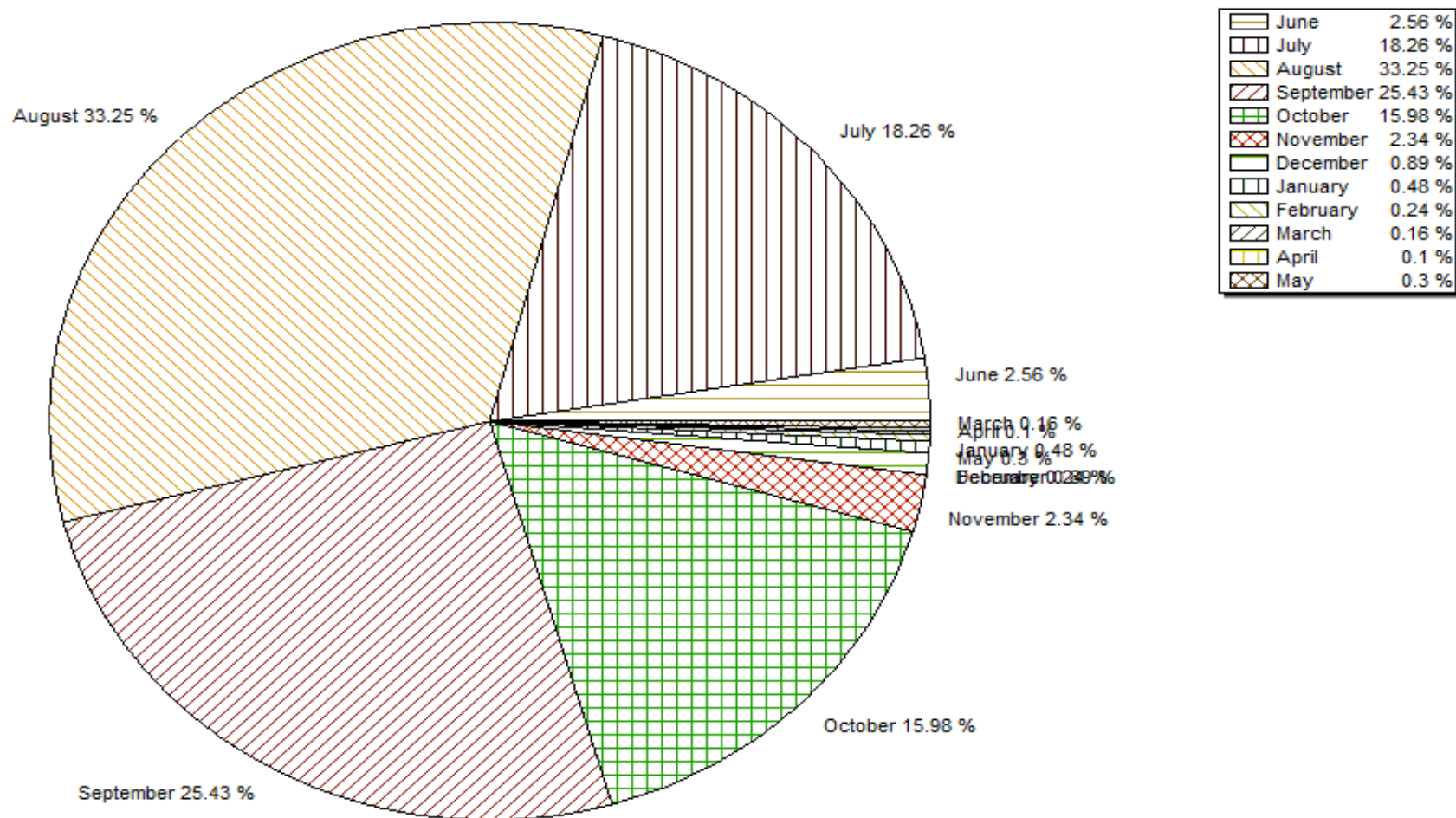
Monthly Average Runoff based on period : 1965-2022

Station Name : Takli (AKP00K4)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



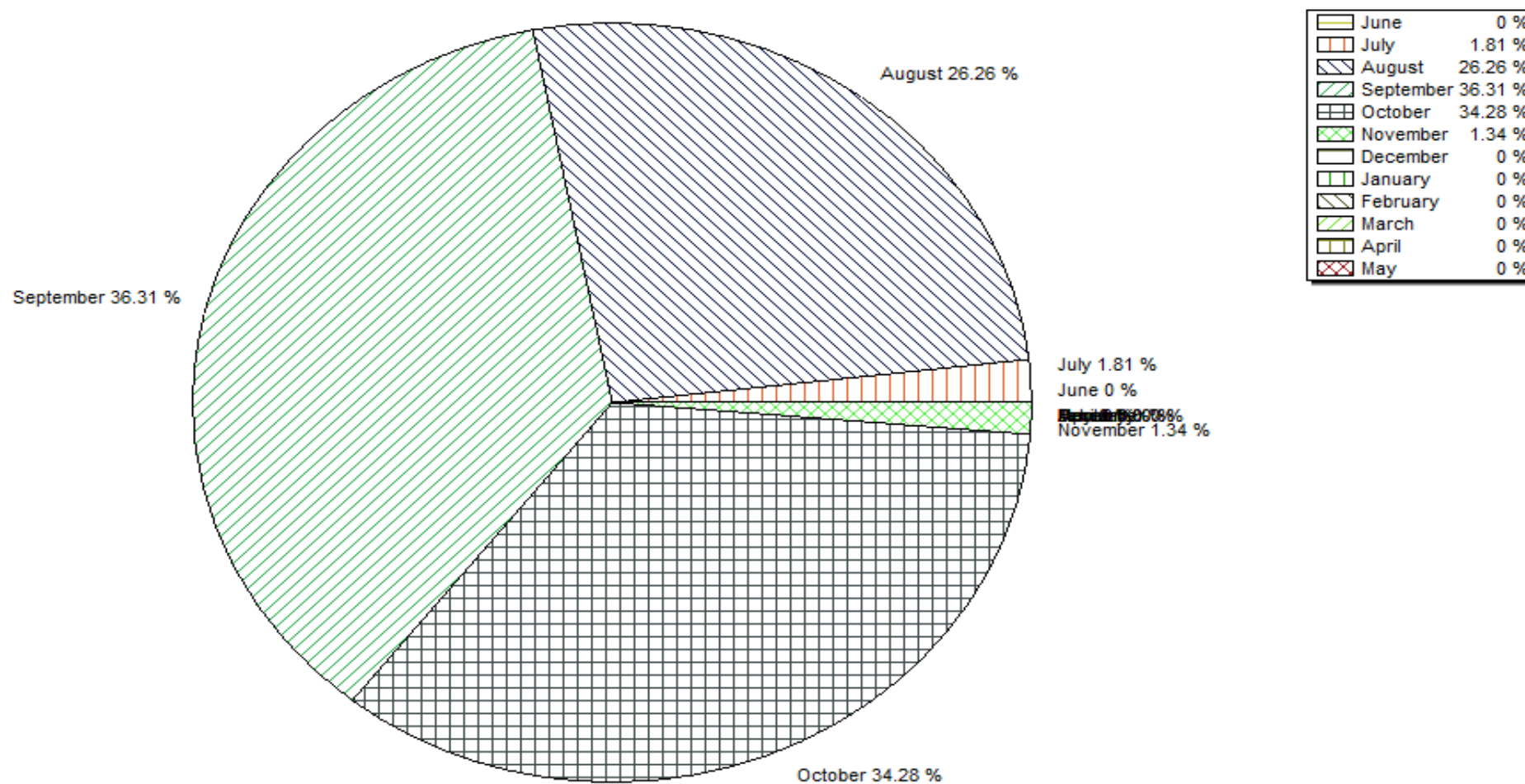
Monthly Runoff for the Year : 2022-2023

Station Name : Takli (AKP00K4)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



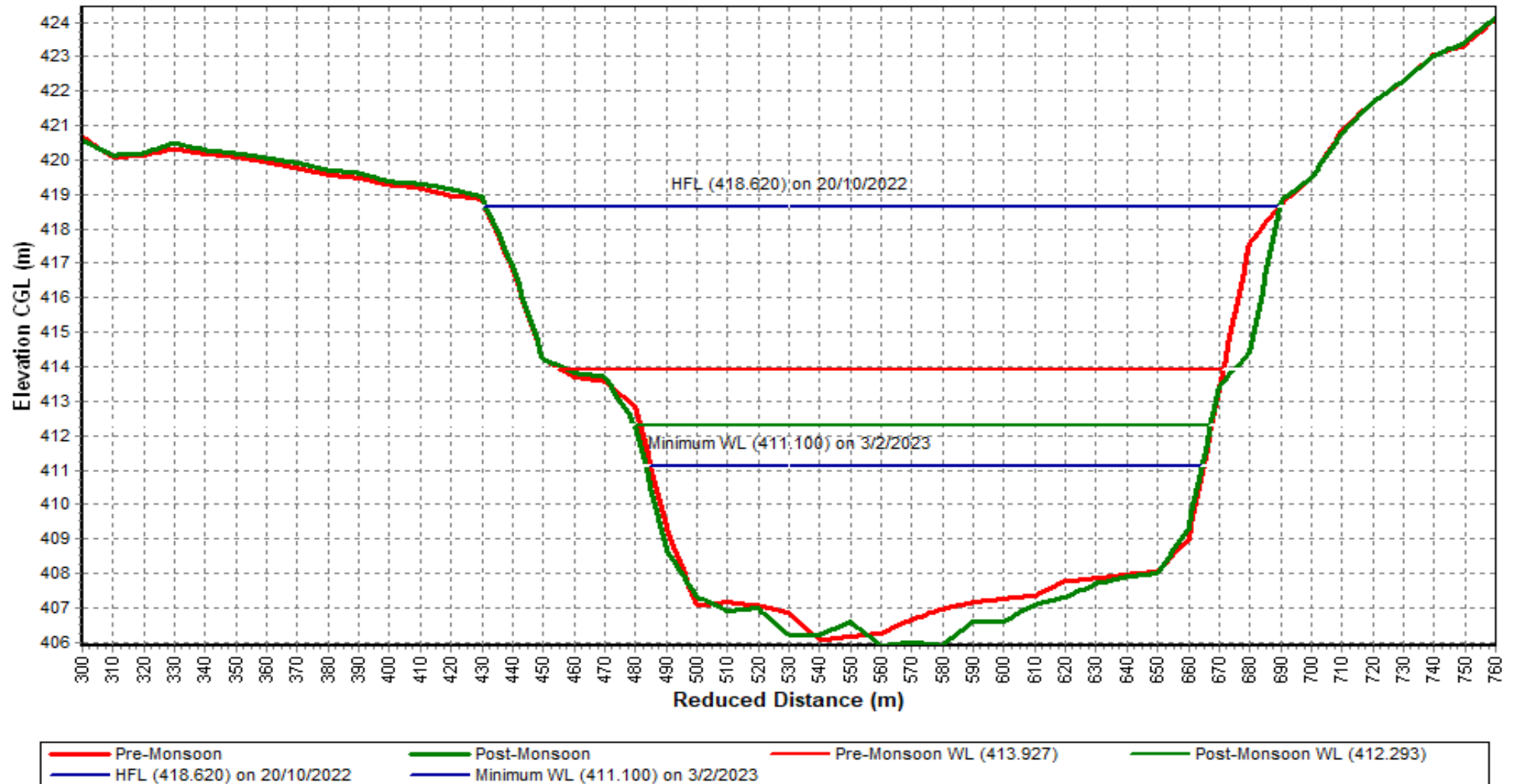
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Takli (AKP00K4)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



Zero of the Gauge: 408 (m.s.l)

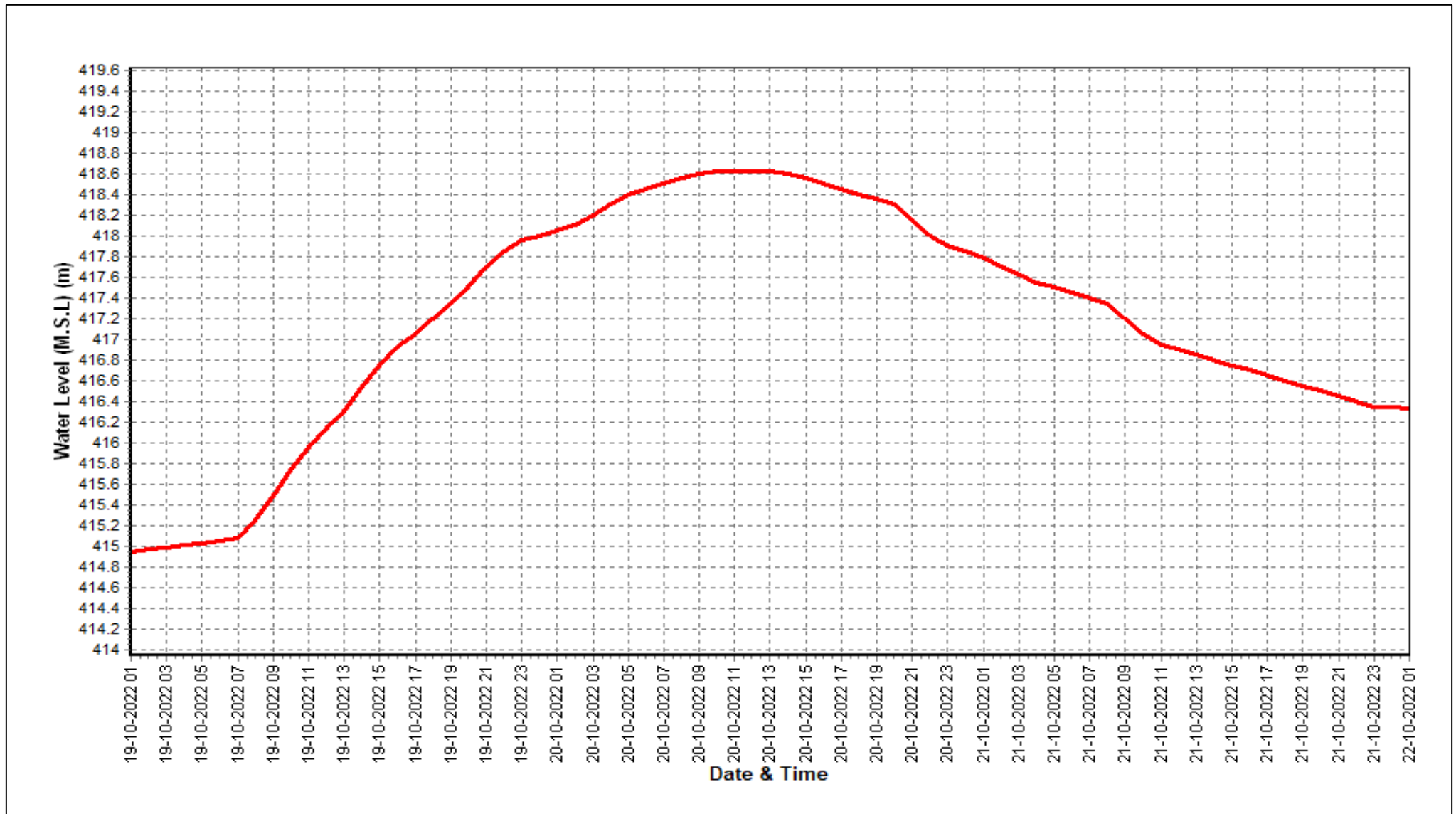
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Takli (AKP00K4)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



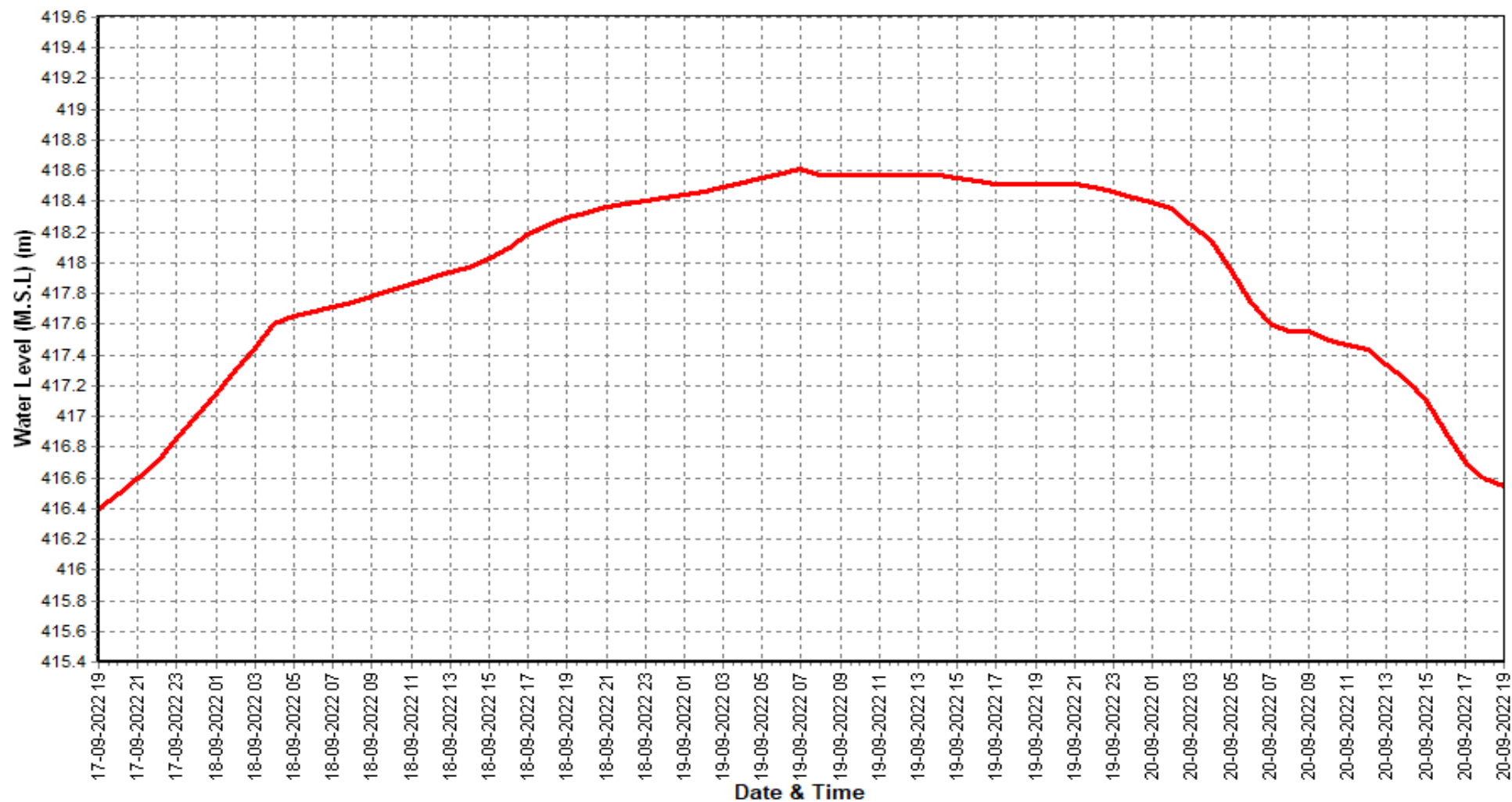
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Takli (AKP00K4)

Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



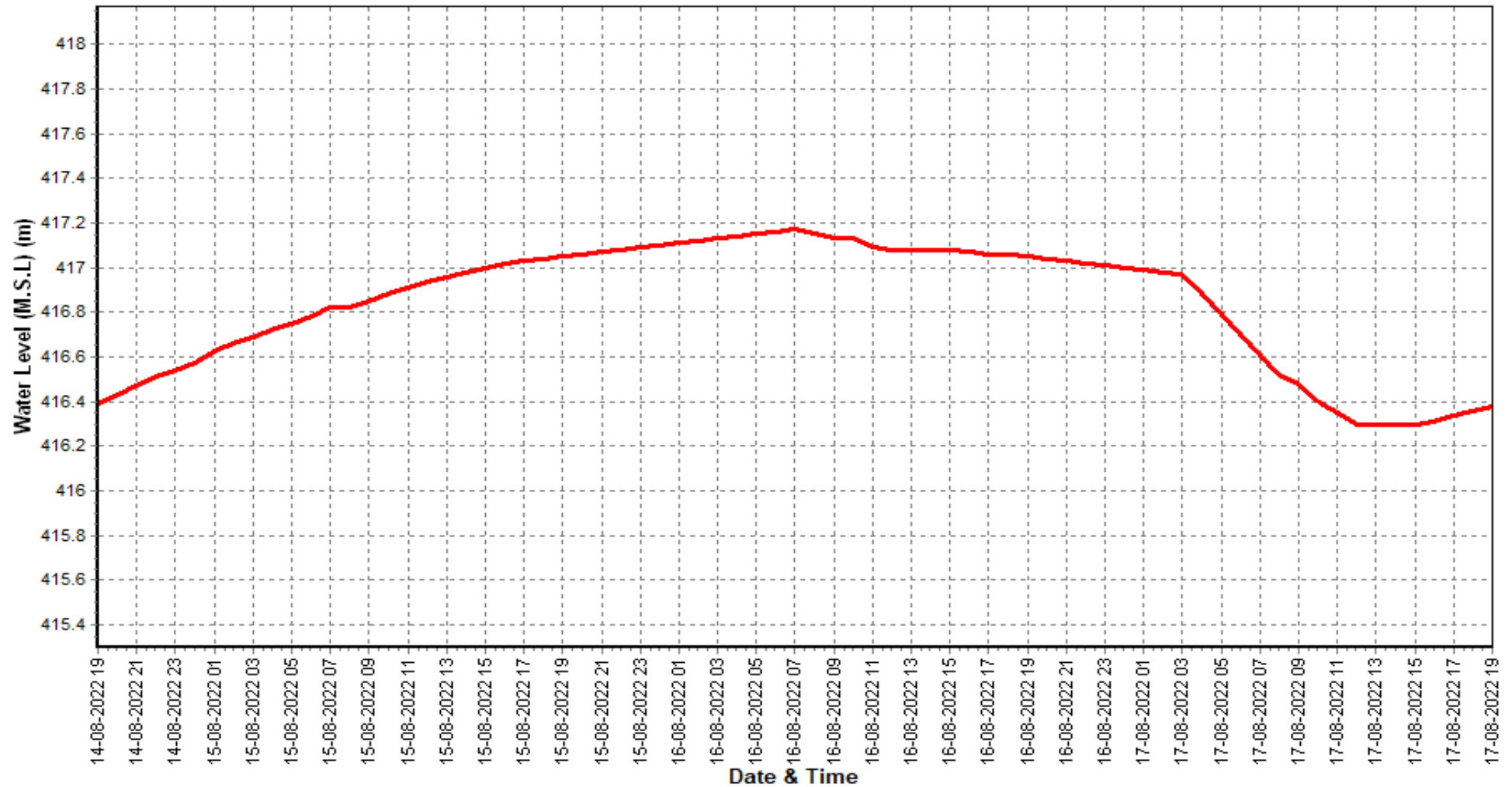
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Takli (AKP00K4)

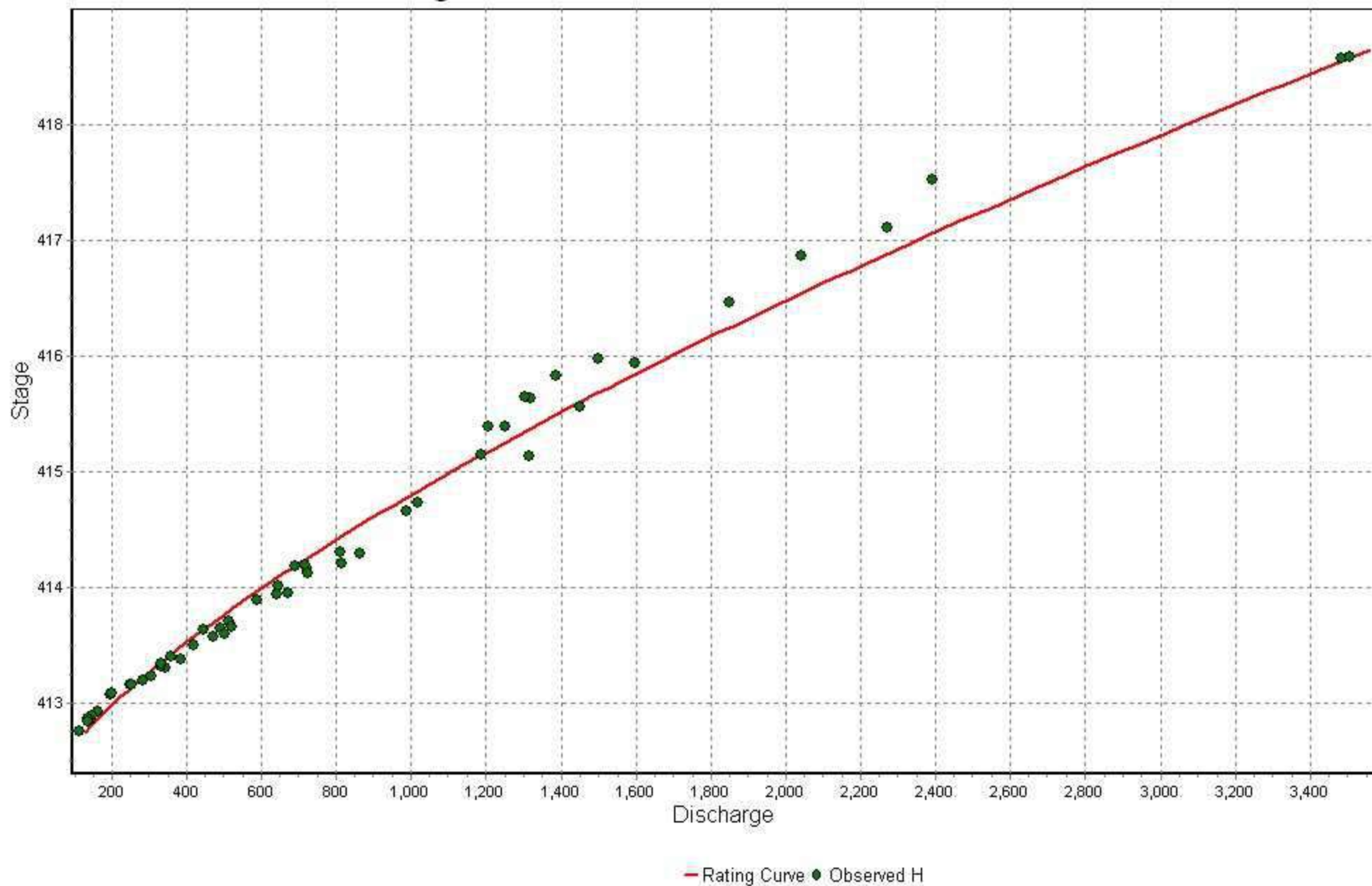
Local River : Bhima

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



Rating Curve of Site Takli 01/06/2022 to 30/11/2022



HISTORY SHEET

Water Year : 2022-2023

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 : Lower 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)
 418.383 (m.s.l)
 416.883 (m.s.l)
 417 (m.s.l)

19-07-1963 - 31-10-1966
 01-11-1966 - 31-05-1969
 01-06-1969 - 31-05-2011
 01-06-2011

Opening Date

Closing Date

Gauge : 19-07-1963

HFL During 2022-23 : 425.100 m
 Corres. Discharge : 958 (Estimated)

Discharge : 06-08-1964

Date & Time of
 occurrence : 16-10-2022
 : 20:00 Hrs

Sediment : 01-06-1965

31-05-2006

Water Quality : 01-09-1972

HFL Recorded so far in m : 429.33 dt 16-10-2020

Corresponding Discharge (cumecs) : 3327 *

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

Year	Maximum			Minimum		
	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	2102	426.543	24-08-1969	0.000	418.508	02-06-1969
1970-1971	2440	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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	1530	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		01-02-2014
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
2016-2017	970.6	425.565	04-10-2016	0.000	418.540	23-01-2017
2017-2018	820.2	424.660	24-09-2017	0.000	418.830	15-11-2017
2018-2019	26.35	419.620	18-08-2018	0.000		20-05-2019
2019-2020	424.0	423.365	22-10-2019	0.000		07-08-2019
2020-2021	3327	429.330	16-10-2020	0.000		04-05-2021
2021-2022	240.3	421.810	26-09-2021	0.000		13-06-2021

Annual Runoff of Sina at Wadakbal

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1965-1966	760	192	952	27	7	34
2	1966-1967	801	43	844	28	2	30
3	1967-1968	1347	126	1473	48	4	52
4	1968-1969	658	18	676	23	1	24
5	1969-1970	2378	55	2432	84	2	86
6	1970-1971	1844	54	1897	65	2	67
7	1971-1972	1333	26	1359	47	1	48
8	1972-1973	110	0	110	4	0	4
9	1973-1974	1411	43	1454	50	2	51
10	1974-1975	1255	51	1306	44	2	46
11	1975-1976	2060	99	2159	73	4	76
12	1976-1977	266	3	269	9	0	10
13	1977-1978	460	191	651	16	7	23
14	1978-1979	905	25	930	32	1	33
15	1979-1980	1179	168	1347	42	6	48
16	1980-1981	878	28	906	31	1	32
17	1981-1982	575	7	582	20	0	21
18	1982-1983	142	0	142	5	0	5
19	1983-1984	2646	34	2680	94	1	95
20	1984-1985	555	4	558	20	0	20
21	1985-1986	206	3	209	7	0	7
22	1986-1987	240	5	245	8	0	9
23	1987-1988	486	19	505	17	1	18
24	1988-1989	2416	2	2418	85	0	85
25	1989-1990	1936	46	1982	68	2	70
26	1990-1991	1826	7	1833	65	0	65
27	1991-1992	415	0	415	15	0	15
28	1992-1993	58	0	58	2	0	2
29	1993-1994	417	14	431	15	0	15
30	1994-1995	42	0	42	1	0	1
31	1995-1996	169	0	169	6	0	6
32	1996-1997	565	0	565	20	0	20
33	1997-1998	123	0	123	4	0	4
34	1998-1999	3691	5	3696	130	0	131
35	1999-2000	199	16	215	7	1	8
36	2000-2001	743	6	749	26	0	26
37	2001-2002	188	0	188	7	0	7
38	2002-2003	15	3	18	1	0	1
39	2003-2004	1	2	3	0	0	0
40	2004-2005	193	0	193	7	0	7
41	2005-2006	311	5	316	11	0	11
42	2006-2007	868	4	872	31	0	31
43	2007-2008	550	18	568	19	1	20
44	2008-2009	686	95	781	24	3	28

45	2009-2010	344	189	534	12	7	19
46	2010-2011	2035	101	2136	72	4	75
47	2011-2012	112	2	115	4	0	4
48	2012-2013	17	1	18	1	0	1
49	2013-2014	222	3	225	8	0	8
50	2014-2015	100	7	108	4	0	4
51	2015-2016	3	0	3	0	0	0
52	2016-2017	440	5	445	16	0	16
53	2017-2018	985	4	989	35	0	35
54	2018-2019	16	4	21	1	0	1
55	2019-2020	218	5	223	8	0	8
56	2020-2021	1005	0	1005	36	0	36
57	2021-2022	329	0	329	12	0	12
58	2022-2023	1422	0	1422	50	0	50
Average		779	30	808	28	1	29

Instantaneous Flood Peak of Sina at Wadakbal

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1965-1966	426.533	21-08-1965	22:00:00	1480 *
2	1966-1967	427.413	15-11-1966	13:00:00	2025 *
3	1967-1968	425.783	28-09-1967	08:00:00	1733 *
4	1968-1969	424.463	02-10-1968	01:00:00	762 *
5	1969-1970	427.353	05-09-1969	21:00:00	2108 *
6	1970-1971	427.913	19-09-1970	12:00:00	2424 *
7	1971-1972	427.003	27-09-1971	00:00:00	1922 *
8	1972-1973	421.548	08-09-1972	06:00:00	190 *
9	1973-1974	424.233	20-09-1973	14:00:00	769 *
10	1974-1975	424.958	03-08-1974	21:00:00	1016 *
11	1975-1976	425.828	11-10-1975	01:00:00	1364 *
12	1976-1977	422.933	25-06-1976	01:00:00	422 *
13	1977-1978	425.043	24-11-1977	18:00:00	1048 *
14	1978-1979	425.638	13-06-1978	00:00:00	1283 *
15	1979-1980	426.598	27-09-1979	16:00:00	1718 *
16	1980-1981	425.108	22-08-1980	16:00:00	1072 *
17	1981-1982	424.803	22-09-1981	14:00:00	960 *
18	1982-1983	421.783	23-09-1982	06:00:00	219 *
19	1983-1984	427.828	24-09-1983	13:00:00	2375 *
20	1984-1985	426.463	10-10-1984	16:00:00	1653 *
21	1985-1986	423.663	06-10-1985	15:00:00	602 *
22	1986-1987	423.373	23-09-1986	10:00:00	526 *
23	1987-1988	424.403	19-10-1987	20:00:00	823 *
24	1988-1989	427.838	19-09-1988	00:00:00	2381 *
25	1989-1990	428.563	29-09-1989	08:00:00	2820
26	1990-1991	425.283	11-08-1990	01:00:00	1140 *
27	1991-1992	424.363	09-06-1991	15:00:00	810 *
28	1992-1993	421.593	03-09-1992	15:00:00	195 *
29	1993-1994	425.133	16-10-1993	03:00:00	1082 *
30	1994-1995	420.483	12-01-1994	13:00:00	107 *
31	1995-1996	423.583	15-10-1995	23:00:00	580 *
32	1996-1997	424.983	13-09-1996	18:00:00	1025 *
33	1997-1998	422.533	28-10-1997	08:00:00	341 *
34	1998-1999	428.043	29-09-1998	09:00:00	2501 *
35	1999-2000	421.723	17-06-1999	05:00:00	211 *
36	2000-2001	426.383	28-08-2000	12:00:00	1615 *
37	2001-2002	425.683	09-10-2001	00:00:00	1302 *
38	2002-2003	421.853	03-08-2002	03:00:00	229 *
39	2003-2004	419.693	20-01-2003	08:00:00	100
40	2004-2005	421.978	06-06-2004	08:00:00	247 *
41	2005-2006	423.508	10-09-2005	10:00:00	560 *
42	2006-2007	423.698	24-09-2006	06:00:00	611 *
43	2007-2008	423.748	21-09-2007	11:00:00	625 *
44	2008-2009	426.903	14-09-2008	23:00:00	1871 *
45	2009-2010	423.173	04-10-2009	22:00:00	477 *

46	2010-2011	426.793	14-08-2010	18:00:00	1815 *
47	2011-2012	420.520	21-08-2011	23:00:00	109 *
48	2012-2013	421.260	07-10-2012	18:00:00	159 *
49	2013-2014	423.100	21-09-2013	02:00:00	460 *
50	2014-2015	422.350	30-08-2014	12:00:00	307 *
51	2015-2016	420.110	14-02-2015	08:00:00	98 *
52	2016-2017	425.850	04-10-2016	18:00:00	1374 *
53	2017-2018	424.750	24-09-2017	03:00:00	941 *
54	2018-2019	419.970	26-01-2018	13:00:00	97 *
55	2019-2020	423.800	22-10-2019	03:00:00	640 *
56	2020-2021	429.330	16-10-2020	08:00:00	3327 *
57	2021-2022	425.310	06-09-2021	21:00:00	1026 *
58	2022-2023	425.100	16-10-2022	20:00:00	958 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : Wadakbal (AKP60C4)

Division : Upper Krishna Divn, Pune

Local River : Sina

Sub-Division : Lower 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	419.150	0.000	418.910	0.000	419.820	31.95	419.815	30.88	421.355	182.5	420.450	90.74
2	419.050	0.000	418.900	0.000	419.670	24.72	419.825	32.48	421.090	140.4 *	420.750	105.2 *
3	418.930	0.000	418.900	0.000	419.710	26.25	420.405	66.97	421.020	145.7	420.840	116.5
4	418.890	0.000	418.900	0.000	419.715	27.34	420.200	59.25 *	420.850	122.7	420.450	88.02
5	418.850	0.000	418.950	0.000	420.680	98.61	420.220	58.12	420.400	79.80	420.388	78.03
6	418.830	0.000	418.920	0.000	420.695	106.1	420.200	57.35	420.533	84.82	420.300	66.60 *
7	418.810	0.000	418.910	0.000	420.130	54.36 *	420.318	64.50	420.360	74.31	420.123	51.64
8	418.810	0.000	418.920	0.000	420.103	45.29	420.648	96.35	422.920	484.6	419.800	34.23 *
9	418.800	0.000	418.960	0.000	420.290	65.85 *	421.745	212.5	423.210	479.3 *	420.000	41.58
10	418.800	0.000	419.120	0.000	420.298	55.61	422.830	454.5	421.640	240.2	420.030	43.53
11	418.790	0.000	419.070	0.000	420.470	62.88	421.540	195.0 *	421.360	193.5	419.985	40.70
12	418.790	0.000	419.010	0.000	420.198	50.99	421.165	130.4	422.070	271.2 #	419.695	24.41
13	418.830	0.000	419.090	0.000	420.215	52.09	420.918	112.3	424.260	724.7 *	419.200	9.698 *
14	418.860	0.000	419.250	0.000	420.240	62.13 *	421.085	145.3	423.425	556.0	419.250	11.56
15	418.900	0.000	419.210	0.000	420.240	62.13 *	420.990	128.7	424.675	827.6	419.240	11.06
16	418.920	0.000	419.120	0.000	420.290	56.73	420.778	107.9 #	425.100	0.000 *	419.190	10.32
17	418.910	0.000	419.530	0.000	420.300	63.10	420.653	109.5	423.435	533.4	419.180	9.709
18	418.900	0.000	419.370	18.45	420.283	62.47	420.550	86.93 *	424.330	743.0 *	419.160	9.452
19	418.890	0.000	419.350	16.82	420.210	59.96 *	420.445	73.52	422.800	443.4	419.120	8.617
20	418.890	0.000	419.300	12.16	420.150	47.68	420.298	61.95	424.050	655.4	419.120	7.582 *
21	418.880	0.000	419.278	12.06	420.060	49.69 *	420.180	55.96	423.240	500.7	419.120	8.393
22	418.950	0.000	419.230	10.42	420.000	44.97	420.270	70.78	424.120	689.0 *	419.105	7.635
23	418.970	0.000	419.200	9.937	419.985	43.85	420.618	91.11	424.180	704.2 *	419.050	0.000
24	418.950	0.000	419.180	9.143 *	419.925	39.56	420.313	73.76	422.660	371.3 *	419.050	0.000
25	418.940	0.000	419.120	7.501	419.860	33.02	420.190	58.53 *	421.940	262.3	419.040	0.000
26	418.930	0.000	419.080	7.275	419.820	30.89	419.920	45.80	421.460	210.8	419.030	0.000
27	418.920	0.000	419.030	6.613	419.770	29.59	420.443	89.67	421.325	179.7	419.030	0.000
28	418.920	0.000	419.020	5.834	419.740	31.08 *	422.350	338.6	421.203	174.3	419.020	0.000
29	418.910	0.000	419.020	5.680	419.760	29.23	421.530	193.7 #	420.970	128.4	419.010	0.000
30	418.910	0.000	419.020	0.000	419.720	27.17	421.475	200.4	420.940	124.2 *	419.000	0.000
31			419.780	0.000	419.740	27.18			420.900	123.2		
Ten-Daily Mean												
I Ten-Daily	418.892	0.000	418.939	0.000	420.111	53.61	420.621	113.3	421.338	203.4	420.313	71.61
II Ten-Daily	418.868	0.000	419.230	4.743	420.259	58.02	420.842	115.1	423.551	494.8	419.314	14.31
III Ten-Daily	418.928	0.000	419.178	6.769	419.853	35.11	420.729	121.8	422.085	315.3	419.046	1.603
Monthly												
Min.	418.790	0.000	418.900	0.000	419.670	24.72	419.815	30.88	420.360	0.000	419.000	0.000
Max.	419.150	0.000	419.780	18.45	420.695	106.1	422.830	454.5	425.100	827.6	420.840	116.5
Mean	418.896	0	419.118	3.932	420.067	48.47	420.730	116.8	422.317	337.1	419.557	29.17

Annual Runoff in MCM = 1422 Annual Runoff in mm = 118

Peak Observed Discharge = 827.6 cumecs on 15-10-2022 Corres. Water Level :424.675 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :419.15 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2022 - 2023

Station Name : Wadakbal (AKP60C4)

Division : Upper Krishna Divn, Pune

Local River : Sina

Sub-Division : Lower Bhima SD, Sholapur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	418.980	0.000	418.990	0.000	419.040	0.000	418.900	0.000	418.820	0.000	418.850	0.000
2	418.960	0.000	418.990	0.000	419.040	0.000	418.900	0.000	418.850	0.000	418.850	0.000
3	418.960	0.000	418.980	0.000	419.010	0.000	418.890	0.000	419.500	0.000	418.840	0.000
4	418.950	0.000	418.970	0.000	418.990	0.000	418.890	0.000	419.580	0.000	418.850	0.000
5	418.950	0.000	418.960	0.000	418.980	0.000	418.880	0.000	419.630	0.000	418.860	0.000
6	418.940	0.000	419.240	0.000	418.970	0.000	418.880	0.000	419.620	0.000	418.850	0.000
7	418.930	0.000	419.700	0.000	418.960	0.000	418.880	0.000	419.640	0.000	418.860	0.000
8	418.940	0.000	419.580	0.000	418.950	0.000	418.870	0.000	419.650	0.000	418.870	0.000
9	418.960	0.000	419.660	0.000	418.960	0.000	418.870	0.000	419.950	0.000	418.880	0.000
10	418.970	0.000	419.560	0.000	418.970	0.000	418.860	0.000	419.800	0.000	418.900	0.000
11	418.970	0.000	419.640	0.000	418.980	0.000	418.860	0.000	419.520	0.000	419.110	0.000
12	418.970	0.000	419.390	0.000	418.960	0.000	418.850	0.000	419.270	0.000	419.220	0.000
13	418.960	0.000	419.310	0.000	418.960	0.000	418.850	0.000	419.160	0.000	419.200	0.000
14	418.980	0.000	419.190	0.000	418.950	0.000	418.850	0.000	419.050	0.000	419.140	0.000
15	418.990	0.000	419.300	0.000	418.960	0.000	418.850	0.000	418.980	0.000	419.130	0.000
16	419.000	0.000	419.330	0.000	418.960	0.000	418.850	0.000	418.950	0.000	419.060	0.000
17	419.010	0.000	419.550	0.000	418.990	0.000	418.860	0.000	418.920	0.000	418.980	0.000
18	419.010	0.000	419.380	0.000	418.980	0.000	418.860	0.000	418.900	0.000	418.920	0.000
19	419.010	0.000	419.230	0.000	418.970	0.000	418.850	0.000	418.870	0.000	418.860	0.000
20	419.000	0.000	419.180	0.000	418.960	0.000	418.870	0.000	418.860	0.000	418.840	0.000
21	419.000	0.000	419.150	0.000	418.940	0.000	418.880	0.000	418.860	0.000	418.810	0.000
22	419.020	0.000	419.140	0.000	418.930	0.000	418.890	0.000	418.850	0.000	418.780	0.000
23	419.020	0.000	419.120	0.000	418.930	0.000	418.880	0.000	418.840	0.000	418.760	0.000
24	419.010	0.000	419.100	0.000	418.920	0.000	418.850	0.000	418.840	0.000	418.780	0.000
25	419.000	0.000	419.090	0.000	418.920	0.000	418.840	0.000	418.830	0.000	418.800	0.000
26	419.000	0.000	419.070	0.000	418.920	0.000	418.840	0.000	418.830	0.000	418.810	0.000
27	418.990	0.000	419.060	0.000	418.910	0.000	418.830	0.000	418.830	0.000	418.800	0.000
28	418.980	0.000	419.050	0.000	418.910	0.000	418.830	0.000	418.820	0.000	418.770	0.000
29	418.970	0.000	419.030	0.000			418.820	0.000	418.870	0.000	418.750	0.000
30	418.980	0.000	419.010	0.000			418.820	0.000	418.860	0.000	418.750	0.000
31	418.990	0.000	419.020	0.000			418.820	0.000			418.720	0.000
Ten-Daily Mean												
I Ten-Daily	418.954	0.000	419.263	0.000	418.987	0.000	418.882	0.000	419.504	0.000	418.861	0.000
II Ten-Daily	418.990	0.000	419.350	0.000	418.967	0.000	418.855	0.000	419.048	0.000	419.046	0.000
III Ten-Daily	418.996	0.000	419.076	0.000	418.922	0.000	418.845	0.000	418.843	0.000	418.775	0.000
Monthly												
Min.	418.930	0.000	418.960	0.000	418.910	0.000	418.820	0.000	418.820	0.000	418.720	0.000
Max.	419.020	0.000	419.700	0.000	419.040	0.000	418.900	0.000	419.950	0.000	419.220	0.000
Mean	418.981	0	419.225	0	418.961	0	418.860	0	419.132	0	418.890	0

Peak Computed Discharge = 743.0 cumecs on 18-10-2022

Corres. Water Level :424.33 m

Lowest Computed Discharge = 0.000 cumecs on 16-10-2022

Corres. Water Level :425.1 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

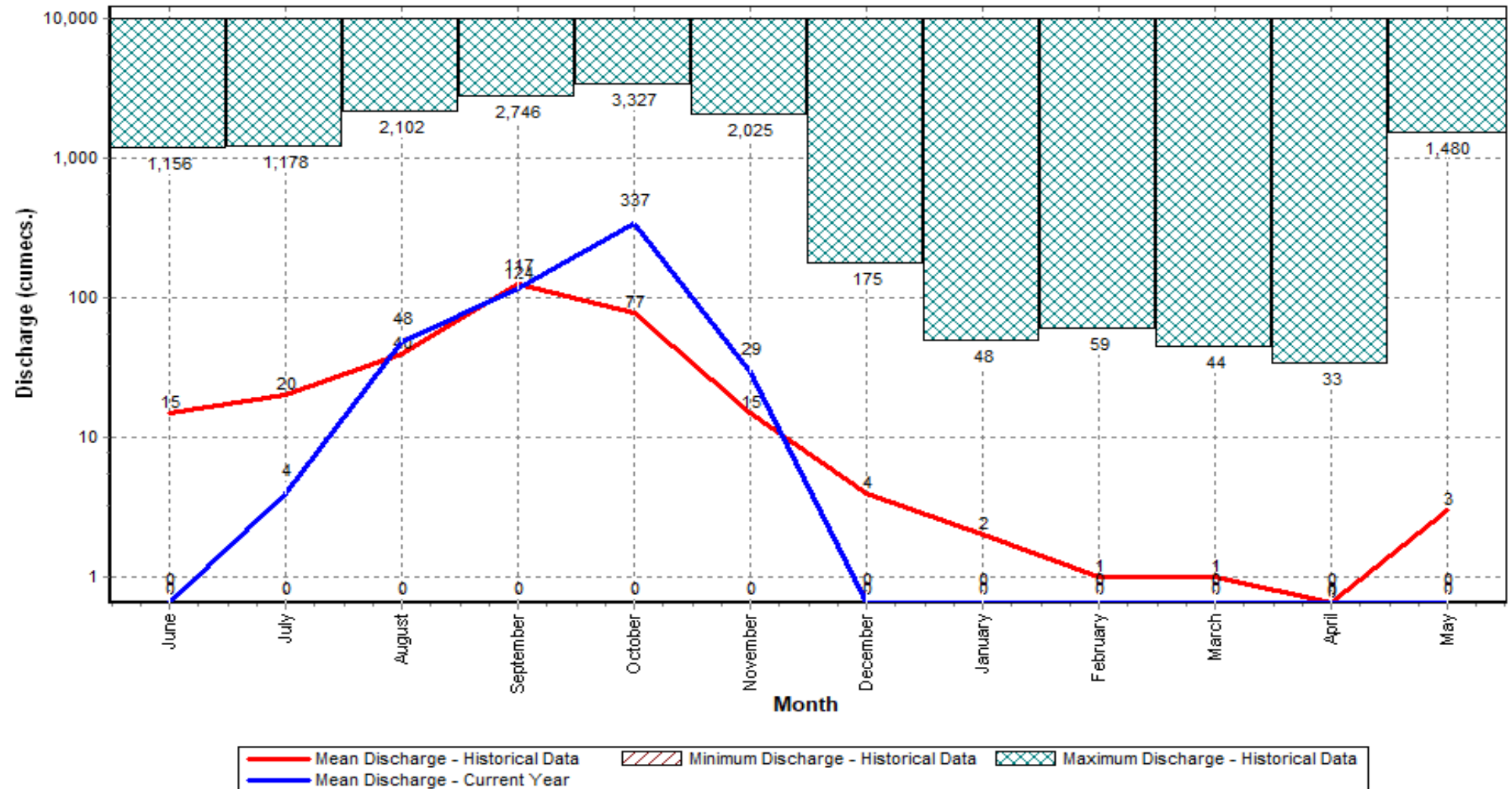
Station Name : Wadakbal (AKP60C4)

Data considered : 1965-2023

Division : Upper Krishna Divn, Pune

Local River : Sina

Sub-Division : Lower Bhima SD, Sholapur



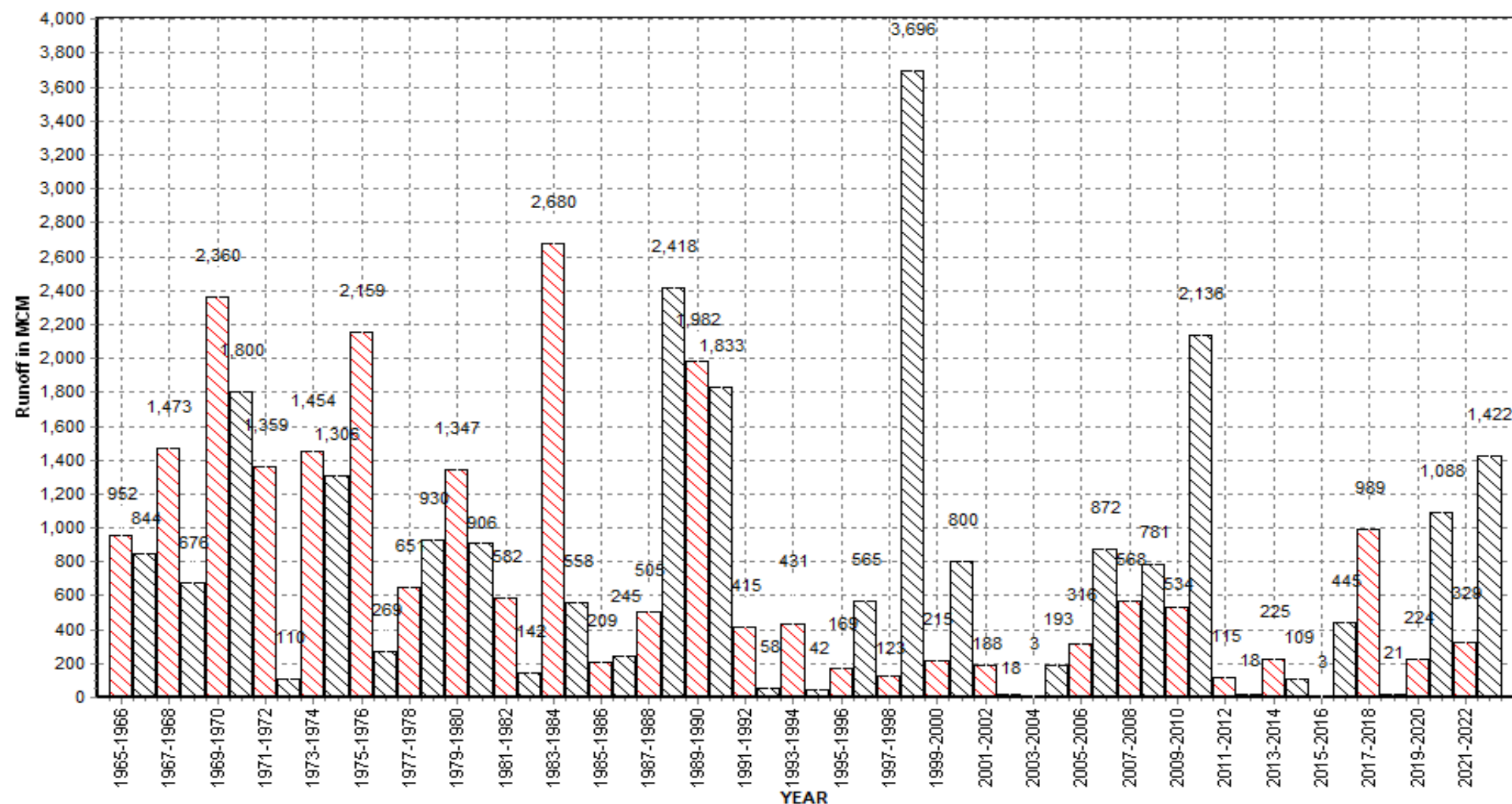
Annual Runoff Values for the period: 1965 - 2023

Station Name : Wadakbal (AKP60C4)

Local River : Sina

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



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

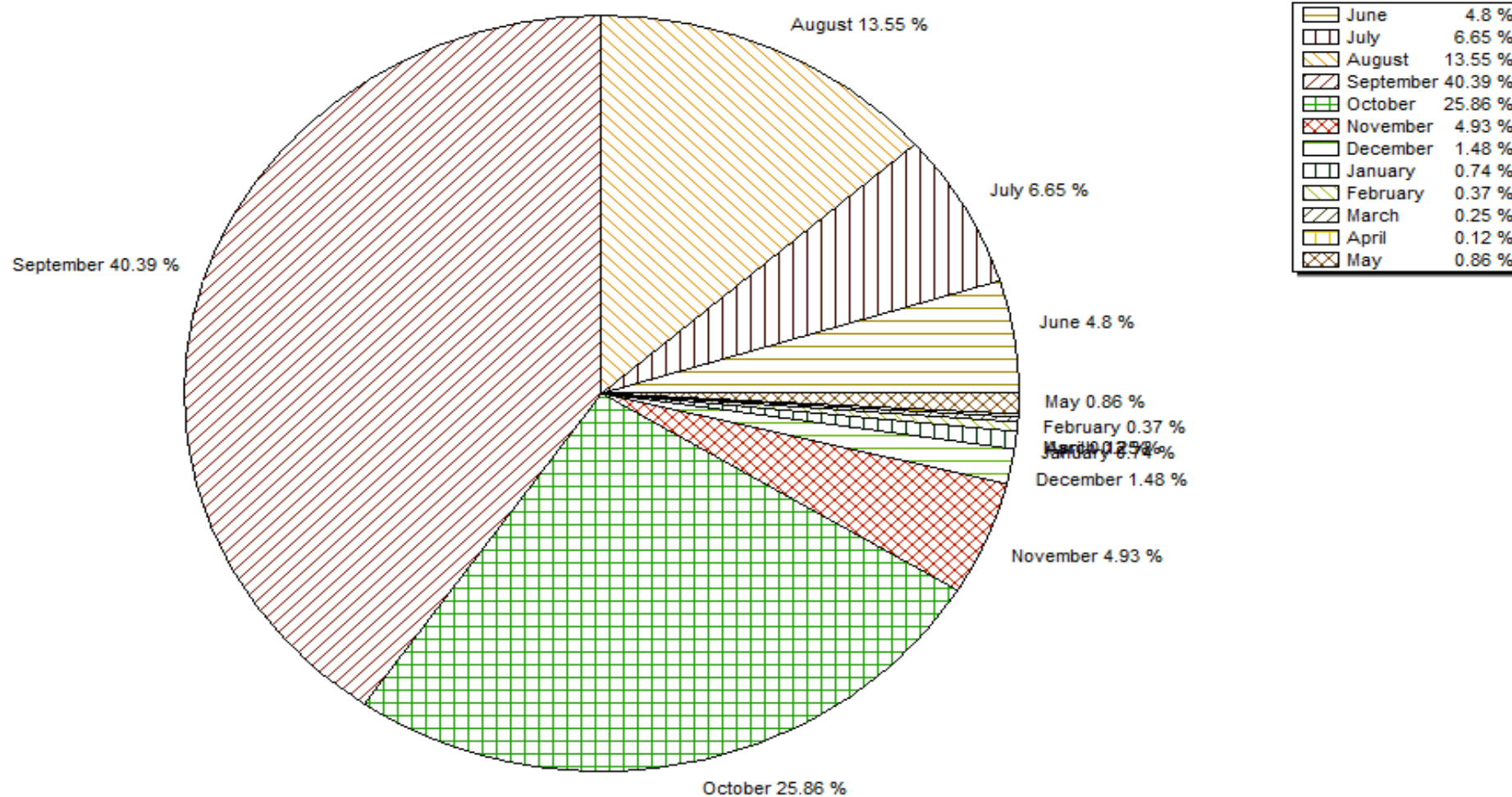
Monthly Average Runoff based on period : 1965-2022

Station Name : Wadakbal (AKP60C4)

Local River : Sina

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



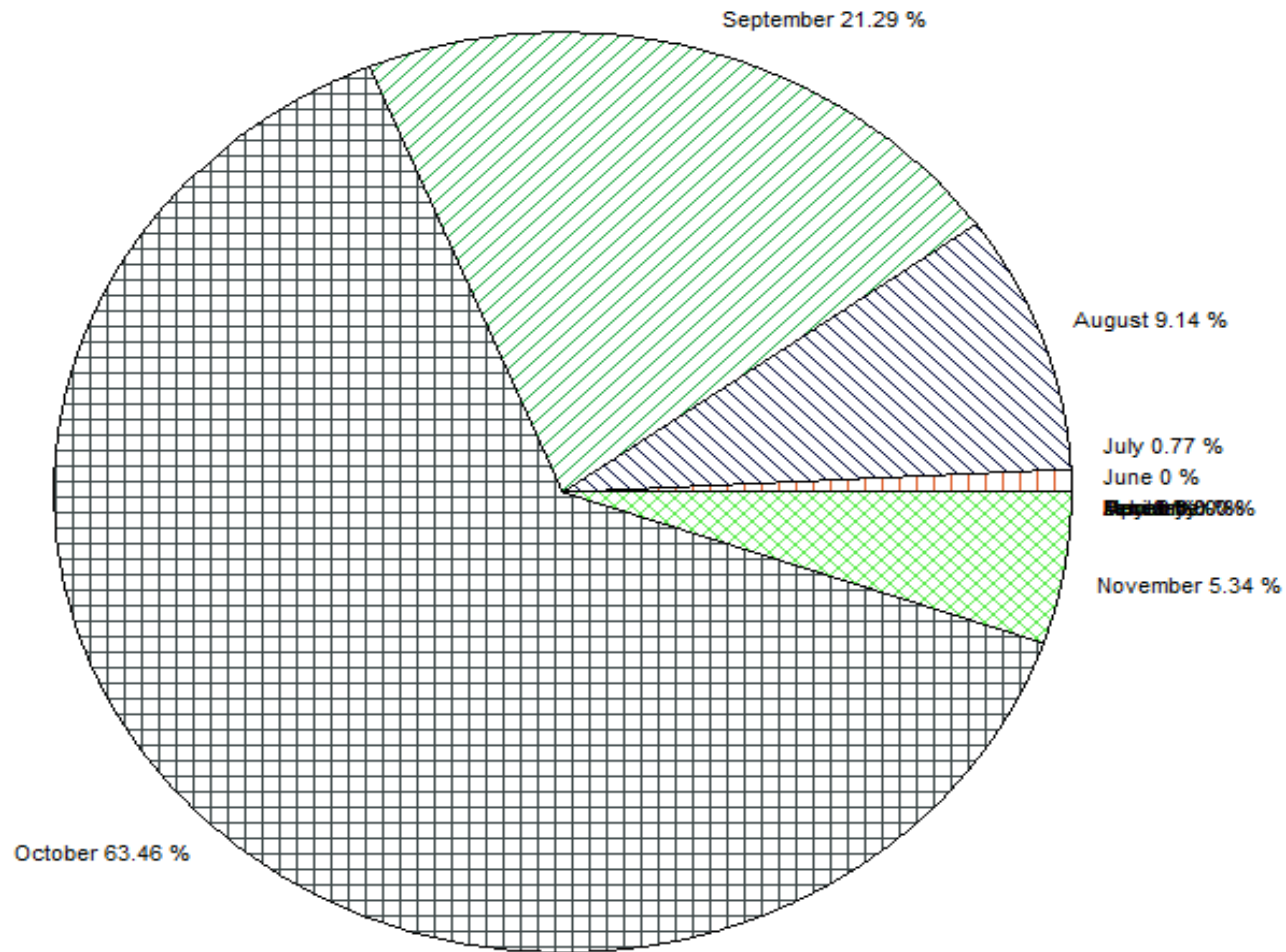
Monthly Runoff for the Year : 2022-2023

Station Name : Wadakbal (AKP60C4)

Local River : Sina

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



June	0 %
July	0.77 %
August	9.14 %
September	21.29 %
October	63.46 %
November	5.34 %
December	0 %
January	0 %
February	0 %
March	0 %
April	0 %
May	0 %

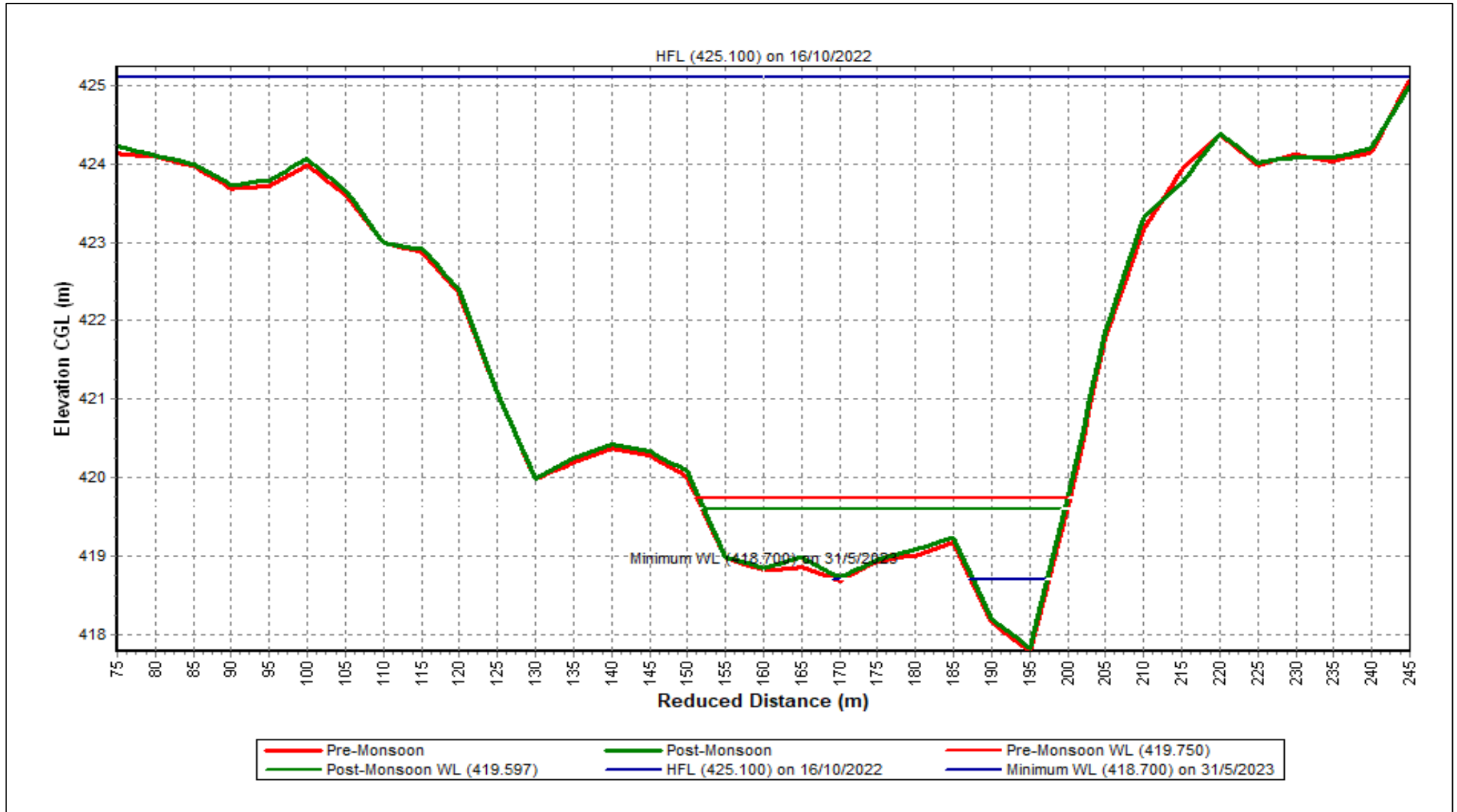
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Wadakbal (AKP60C4)

Local River : Sina

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



Zero of the Gauge : 417 (m.s.l)

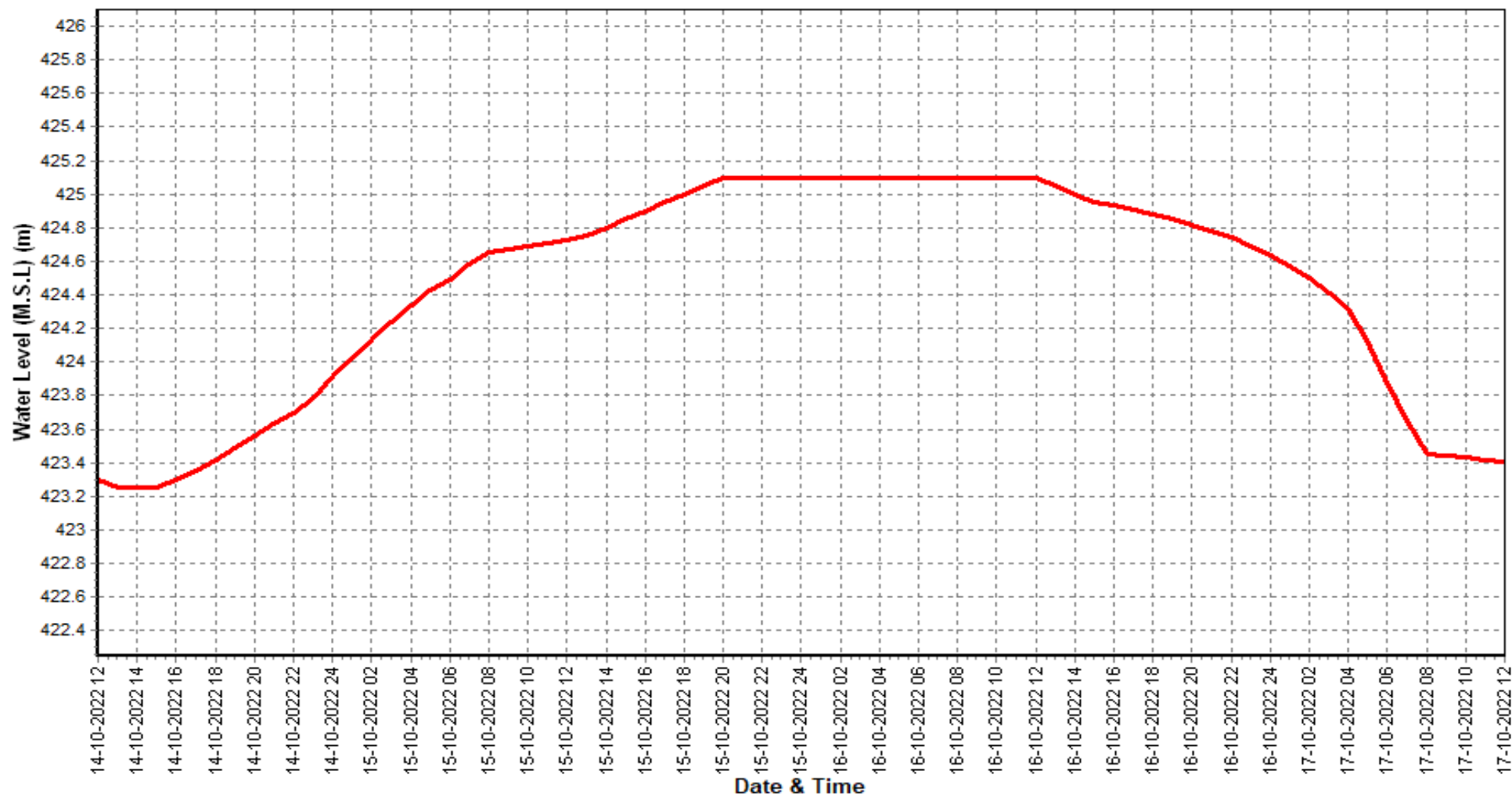
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Wadakbal (AKP60C4)

Local River : Sina

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



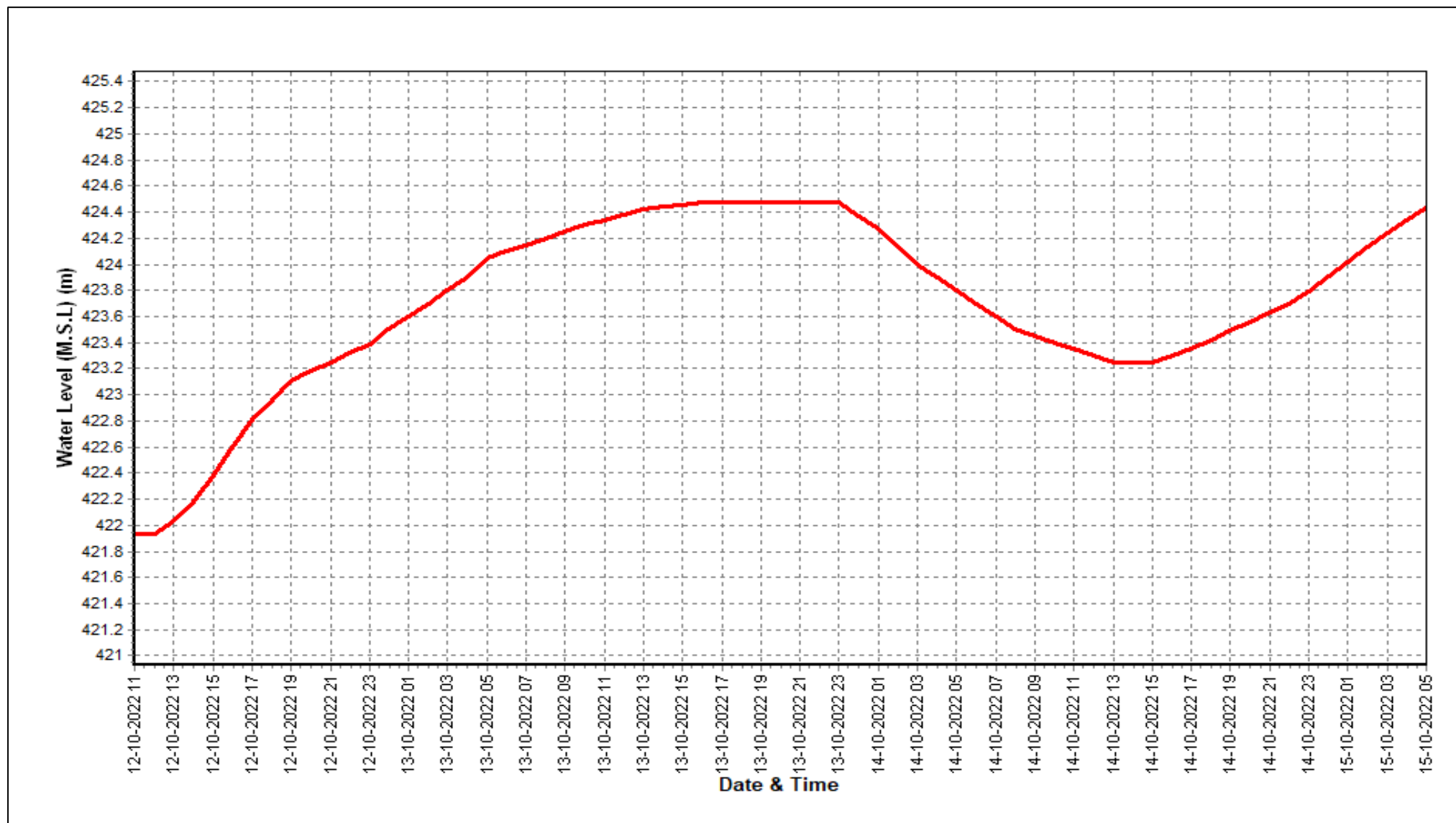
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Wadakbal (AKP60C4)

Local River : Sina

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



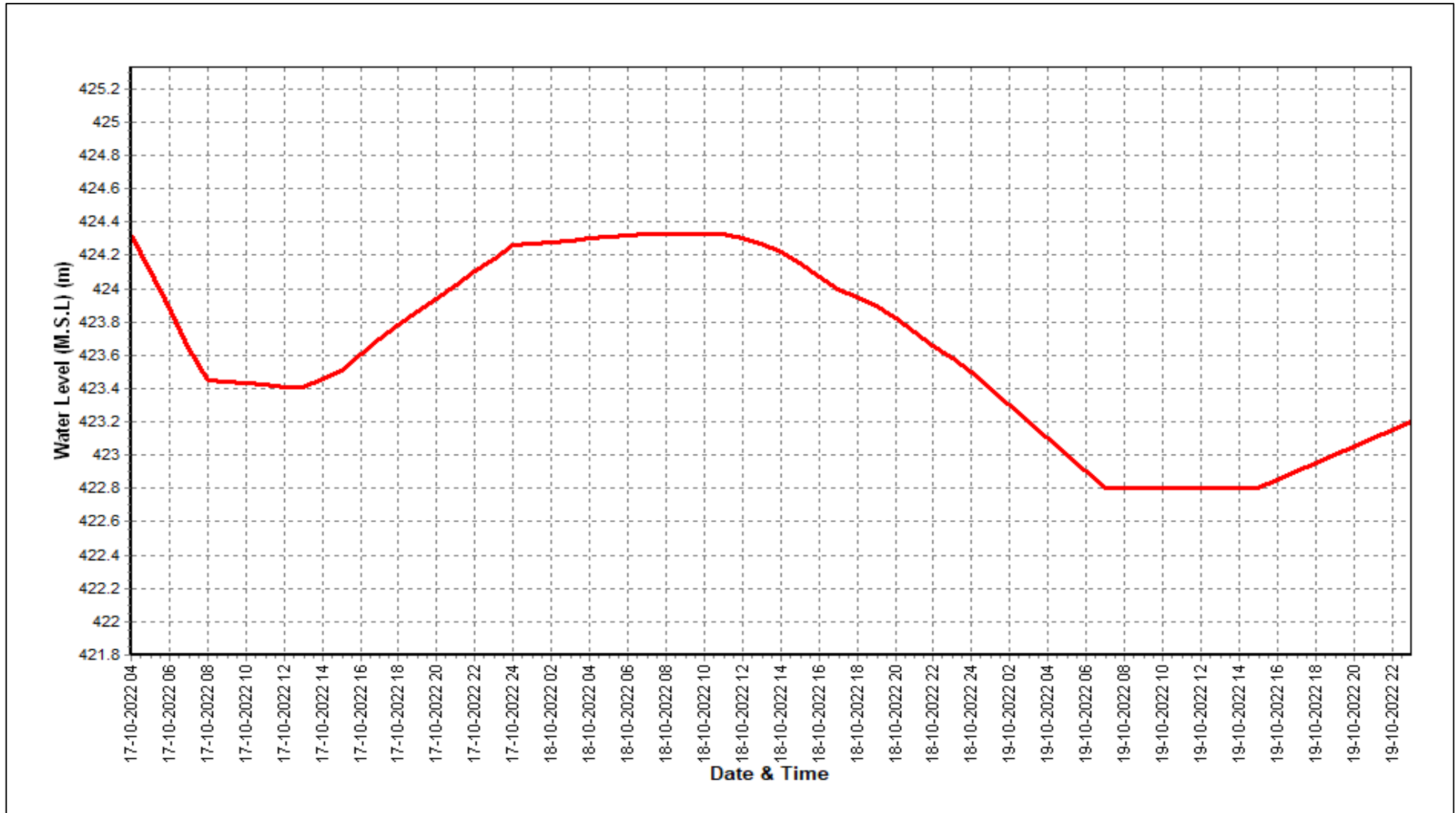
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Wadakbal (AKP60C4)

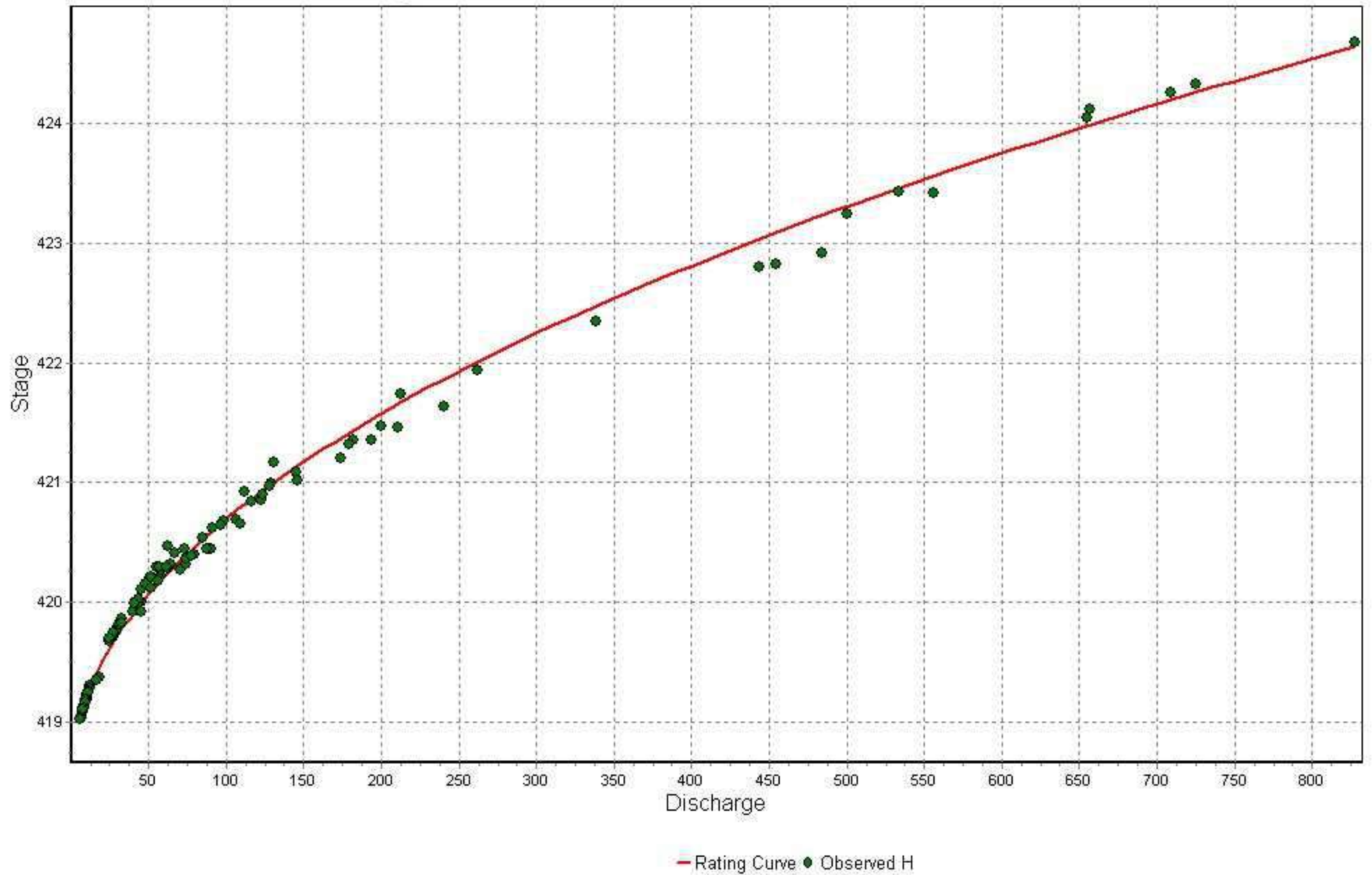
Local River : Sina

Division : Upper Krishna Divn, Pune

Sub-Division : Lower Bhima SD, Sholapur



Rating Curve of Site Wadakbal 01/06/2022 to 30/11/2022



HISTORY SHEET

		Water Year	: 2022-2023
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) 390 (m.s.l) 390 (m.s.l)	15-08-1990 01-01-1999 01-01-2006	- 31-12-1998 - 31-12-2005
	Opening Date	Closing Date	
Gauge	: 30-09-1989	HFL During 2022-23	: 397.51 m
		Corres. Discharge	: 1358 (Estimated)
Discharge	: 15-08-1990	Date & Time of occurrence	: 27-07-2022 : 01:00 Hrs
Sediment	: 08-09-1992		
Water Quality	: 01-06-1992		

HFL Recorded so far in m : 403.190 dt 15-10-2020

Corresponding Discharge (cumecs) : 4395 *

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

Year	Maximum			Minimum		
	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	810.0	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	1668	397.455	22-09-1998	0.000		11-06-1998
1999-2000	414.3	394.600	03-08-1999	0.063	392.140	24-05-2000
2000-2001	1100	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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	06-07-2014
2015-2016	120.7	393.850	15-09-2015	0.488	392.700	01-11-2015
2016-2017	2611	400.650	24-09-2016	0.373	392.550	17-06-2016
2017-2018	911.6	396.500	10-10-2017	0.000	392.690	02-06-2017
2018-2019	139.2	393.810	12-08-2018	0.000	392.680	01-03-2019
2019-2020	128.6	393.920	15-10-2019	0.000	392.500	22-07-2019
2020-2021	4228	402.950	15-10-2020	0.000	392.790	10-05-2021
2021-2022	1375	397.950	06-09-2021	10.17	392.770	12-05-2022

Annual Runoff of Kagna at Malkhed

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1990-1991	1610	76	1685	57	3	60
2	1991-1992	579	12	591	20	0	21
3	1992-1993	331	14	345	12	0	12
4	1993-1994	416	26	442	15	1	16
5	1994-1995	98	4	102	3	0	4
6	1995-1996	987	50	1037	35	2	37
7	1996-1997	1046	63	1109	37	2	39
8	1997-1998	125	17	142	4	1	5
9	1998-1999	3031	71	3102	107	3	110
10	1999-2000	449	24	472	16	1	17
11	2000-2001	1013	34	1047	36	1	37
12	2001-2002	542	42	584	19	1	21
13	2002-2003	208	21	228	7	1	8
14	2003-2004	218	35	253	8	1	9
15	2004-2005	149	28	177	5	1	6
16	2005-2006	1058	33	1092	37	1	39
17	2006-2007	69	27	95	2	1	3
18	2007-2008	729	192	921	26	7	33
19	2008-2009	818	101	919	29	4	32
20	2009-2010	1207	100	1307	43	4	46
21	2010-2011	2182	114	2297	77	4	81
22	2011-2012	653	31	684	23	1	24
23	2012-2013	564	43	607	20	2	21
24	2013-2014	980	101	1081	35	4	38
25	2014-2015	740	66	806	26	2	28
26	2015-2016	94	57	151	3	2	5
27	2016-2017	2335	50	2386	83	2	84
28	2017-2018	950	30	979	34	1	35
29	2018-2019	154	5	160	5	0	6
30	2019-2020	379	11	390	13	0	14
31	2020-2021	2875	1	2876	102	0	102
32	2021-2022	2618	278	2896	93	10	102
33	2022-2023	3228	184	3412	114	7	121
Average		983	59	1042	35	2	37

Instantaneous Flood Peak of Kagna at Malkhed

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1990-1991	400.910	16-08-1990	02:00:00	3590 *
2	1991-1992	397.060	09-07-1991	10:00:00	1315 *
3	1992-1993	399.910	01-09-1992	21:00:00	2840 *
4	1993-1994	396.680	22-09-1993	10:00:00	1149 *
5	1994-1995	394.120	06-10-1994	12:00:00	275 *
6	1995-1996	396.530	17-10-1995	14:00:00	1101 *
7	1996-1997	396.940	16-09-1996	23:00:00	1262 *
8	1997-1998	394.310	27-09-1997	21:00:00	306 *
9	1998-1999	399.810	21-09-1998	23:00:00	2778 *
10	1999-2000	395.450	02-08-1999	22:00:00	670 *
11	2000-2001	398.080	24-08-2000	07:00:00	1805 *
12	2001-2002	397.010	01-10-2001	14:00:00	1293 *
13	2002-2003	394.690	16-10-2002	10:00:00	439 *
14	2003-2004	397.440	23-08-2003	16:00:00	1491 *
15	2004-2005	394.110	06-10-2004	13:00:00	251 *
16	2005-2006	396.360	08-09-2005	13:00:00	1016 *
17	2006-2007	394.000	28-09-2006	06:00:00	221 *
18	2007-2008	396.500	20-09-2007	06:00:00	1073 *
19	2008-2009	397.710	10-08-2008	11:00:00	1620 *
20	2009-2010	398.980	03-10-2009	15:00:00	2289 *
21	2010-2011	398.700	25-08-2010	23:00:00	2133 *
22	2011-2012	397.480	31-07-2011	11:00:00	1510 *
23	2012-2013	395.640	04-09-2012	07:00:00	738 *
24	2013-2014	398.190	20-09-2013	11:00:00	1862 *
25	2014-2015	398.420	31-08-2014	23:00:00	1935 *
26	2015-2016	393.910	28-09-2015	18:00:00	180 *
27	2016-2017	401.010	24-09-2016	04:00:00	4209 *
28	2017-2018	396.850	10-10-2017	15:00:00	1098 *
29	2018-2019	393.920	12-08-2018	16:00:00	139 *
30	2019-2020	393.94	15-10-2019	00:00:00	130 *
31	2020-2021	403.19	15-10-2020	01:00:00	4395 *
32	2021-2022	399.750	05-09-2021	17:00:00	2479 *
33	2022-2023	397.510	27-07-2022	01:00:00	1358 *

Stage-Discharge Data for the period 2022 - 2023

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	392.810	2.430	393.080	39.58	395.110	392.9	394.060	153.9	395.110	392.9	393.690	106.5
2	392.810	2.413	393.060	38.43	394.920	351.4	394.520	270.7	394.650	275.6 *	393.690	106.5
3	392.810	2.435	393.110	40.60 *	395.180	409.1	394.520	270.7	394.450	210.3	393.680	105.4
4	392.810	2.442	393.080	39.58	396.760	1027	394.610	266.6 *	394.260	181.8	393.680	105.4
5	392.810	2.450 *	393.190	45.55	395.830	574.7	394.910	349.2	393.870	128.4 *	393.680	105.4
6	392.810	2.450	393.250	50.24	395.940	601.2	394.450	210.3	393.720	110.4	393.660	98.82 *
7	392.810	2.450	393.350	56.72	394.970	353.5 *	394.360	196.7	397.480	1296	393.610	97.62
8	393.120	42.27	393.330	52.54	394.810	328.4	394.410	204.8	395.830	572.7	393.610	92.39 *
9	393.310	53.73	394.020	140.2	395.830	615.5 *	396.410	888.4	395.010	364.0 *	393.610	97.62
10	393.110	41.58	394.650	275.6 *	396.410	897.3	395.940	601.0	394.450	210.3	393.610	97.62
11	392.860	2.815	394.650	284.4	395.360	450.6	395.650	554.2 *	395.110	392.9	393.350	62.23
12	392.850	2.800 *	394.090	148.8	394.700	306.3	395.110	392.9	394.810	328.4	393.350	62.23
13	392.860	2.828	394.570	269.2	394.650	296.8	395.180	409.1	394.520	270.7	393.350	62.64 *
14	392.900	4.842	395.200	415.3	394.600	264.3 *	394.810	328.4	394.450	210.3	393.350	62.23
15	392.860	2.774	394.890	346.2	394.690	284.8 *	394.920	351.4	395.180	409.0	393.320	59.63
16	392.915	6.049	394.520	271.7	394.260	181.8	394.650	295.7	395.670	560.8 *	393.320	59.63
17	392.810	2.426	394.090	163.9 *	394.650	296.8	394.260	181.1	395.360	450.6	393.320	59.63
18	393.110	41.58	393.760	114.8	394.650	296.8	394.210	185.2 *	394.920	351.4	393.320	59.63
19	392.830	2.600 *	394.090	157.3	394.450	210.3	394.240	179.3	394.490	265.4	393.320	59.63
20	392.820	2.577	394.360	196.7	394.260	181.8	394.260	181.8	394.700	305.2	393.320	59.61 *
21	392.820	2.577	394.260	181.8	394.130	170.9 *	394.210	174.9	394.520	270.7	393.320	59.63
22	393.310	53.73	394.090	157.3	394.520	271.7	394.360	196.7	394.350	195.5	393.310	58.97
23	392.850	2.729	393.760	114.8	394.700	306.3	394.130	162.8	394.350	211.9 *	393.300	57.71
24	392.820	2.551	394.150	174.4 *	394.360	196.7	393.910	134.3	394.580	259.9 *	393.300	57.71
25	392.820	2.551	394.770	321.0	394.090	157.3	393.910	134.5 *	394.360	196.7	393.220	51.01
26	392.820	2.550 *	395.020	374.3	394.260	181.8	393.910	134.3	394.130	162.8	393.220	51.01
27	392.810	2.438	396.410	877.0	394.650	296.8	394.130	162.8	393.850	126.8	393.220	50.07 *
28	392.850	2.692	394.770	321.0	394.510	244.7 *	394.520	271.7	393.700	107.8	393.220	51.01
29	392.850	2.706	394.810	328.3	394.360	196.7	394.360	196.7	393.700	107.8	393.190	51.58
30	392.850	2.746	394.910	350.4	394.390	201.4	394.520	270.7	393.740	109.6 *	393.190	51.58
31			395.090	385.4 *	394.090	163.9 *			393.690	106.8		
Ten-Daily Mean												
I Ten-Daily	392.921	15.46	393.412	77.90	395.576	555.1	394.819	341.2	394.883	374.3	393.652	101.3
II Ten-Daily	392.882	7.130	394.422	236.8	394.627	277.0	394.729	305.9	394.921	354.5	393.332	60.71
III Ten-Daily	392.880	7.727	394.731	326.0	394.369	217.1	394.196	183.9	394.088	168.8	393.249	54.03
Monthly												
Min.	392.810	2.413	393.060	38.43	394.090	157.3	393.910	134.3	393.690	106.8	393.190	50.07
Max.	393.310	53.73	396.410	877.0	396.760	1027	396.410	888.4	397.480	1296	393.690	106.5
Mean	392.894	10.11	394.206	217.2	394.842	345.5	394.581	277	394.613	295	393.411	72.02

Annual Runoff in MCM = 3412 Annual Runoff in mm = 446

Peak Observed Discharge = 1296 cumecs on 07-10-2022 Corres. Water Level :397.48 m

Lowest Observed Discharge = 2.413 cumecs on 02-06-2022 Corres. Water Level :392.81 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 2022 - 2023

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	393.190	51.95	393.060	10.87 *	393.000	7.381	392.900	5.312	392.860	3.916	392.840	3.017
2	393.060	12.32	393.060	10.88	393.000	7.405	392.890	4.593	392.860	3.900 *	392.840	2.999
3	393.060	12.27	393.060	10.84	393.000	7.373	392.890	4.584	392.860	3.918	392.970	6.568
4	393.060	12.30 *	393.020	7.940	392.990	7.179	392.890	4.579	392.860	3.900 *	392.930	5.971
5	393.060	12.25	393.020	7.869	392.990	7.180 *	392.890	4.560 *	392.860	3.915	392.920	5.620 *
6	393.190	51.95	393.120	50.35	392.990	7.158	392.890	4.575	392.860	3.917	392.900	5.432
7	393.150	49.76	393.120	50.35	392.990	7.149	392.890	4.587	392.860	3.900 *	392.900	5.400 *
8	392.900	6.204	393.100	49.10 *	392.990	7.113	392.890	4.566	392.860	3.914	392.890	5.022
9	392.900	5.919	393.100	49.11	392.990	7.144	392.890	4.573	392.860	3.900 *	392.860	4.014
10	393.060	12.17	393.100	49.11	392.990	7.130	392.890	4.568	392.860	3.917	392.860	4.010
11	393.080	13.00 *	393.100	49.11	392.990	7.130	392.890	4.660	392.860	3.914	392.860	4.008
12	393.150	49.41	393.060	46.58	392.990	7.180 *	392.890	4.560 *	392.860	3.917	392.860	4.008
13	393.150	52.56	393.060	10.66	392.990	7.105	392.890	4.571	392.870	4.358	392.860	4.008
14	393.150	52.56	393.060	10.56	392.900	5.310	392.890	4.570	392.870	4.350 *	392.860	4.000 *
15	393.120	50.93	393.020	8.250 *	392.900	5.306	392.890	4.571	392.870	4.362	392.860	4.013
16	392.880	4.756	392.990	7.160	392.900	5.299	392.890	4.568	392.860	3.910 *	392.860	4.007
17	392.880	4.734	393.000	7.518	392.900	5.301	392.880	4.247	392.850	3.349	392.860	4.007
18	392.900	6.200 *	393.000	7.461	392.900	5.302	392.880	4.243	392.850	3.348	392.860	4.014
19	393.060	12.11	393.000	7.450	392.900	5.300 *	392.880	4.300 *	392.840	3.015	392.860	4.010
20	393.060	12.07	393.000	7.441	392.900	5.296	392.880	4.239	392.840	3.019	392.860	4.001
21	393.120	50.93	393.000	46.14	392.900	5.306	392.880	4.240	392.840	3.015	392.860	4.000 *
22	393.120	50.93	393.000	46.10 *	392.900	5.304	392.950	6.500 *	392.840	3.000 *	392.860	4.009
23	393.120	50.93	393.000	7.421	393.010	8.066	392.990	7.213	392.840	3.000 *	392.860	4.004
24	393.110	49.83	393.000	7.431	393.010	8.052	392.970	6.680	392.840	3.017	392.840	2.990
25	393.110	49.83 *	393.000	7.371	392.900	5.304	392.970	6.682	392.840	3.014	392.840	2.993
26	393.110	49.83	393.020	8.250 *	392.900	5.300 *	392.930	6.200 *	392.840	3.008	392.840	2.990
27	393.110	49.83	393.020	8.254	392.900	5.310	392.890	4.753	392.840	2.997	392.840	2.980
28	393.100	49.11	393.020	8.267	392.900	5.305	392.890	4.725	392.840	3.003	392.840	3.000 *
29	393.080	47.88	393.020	8.250 *			392.890	4.740	392.840	3.001	392.840	2.988
30	393.060	11.01	393.020	8.158			392.880	4.650	392.840	3.000 *	392.840	2.975
31	393.060	10.92	393.000	7.410			392.860	3.917			392.840	2.986
Ten-Daily Mean												
I Ten-Daily	393.063	22.71	393.076	29.64	392.993	7.221	392.891	4.650	392.860	3.910	392.891	4.805
II Ten-Daily	393.043	25.83	393.029	16.22	392.927	5.853	392.886	4.453	392.857	3.754	392.860	4.007
III Ten-Daily	393.100	42.82	393.009	14.82	392.927	5.993	392.918	5.565	392.840	3.005	392.845	3.265
Monthly												
Min.	392.880	4.734	392.990	7.160	392.900	5.296	392.860	3.917	392.840	2.997	392.840	2.975
Max.	393.190	52.56	393.120	50.35	393.010	8.066	392.990	7.213	392.870	4.362	392.970	6.568
Mean	393.070	30.85	393.037	20.05	392.951	6.382	392.899	4.889	392.852	3.556	392.865	4.001

Peak Computed Discharge = 615.5 cumecs on 09-08-2022

Corres. Water Level :395.83 m

Lowest Computed Discharge = 2.450 cumecs on 05-06-2022

Corres. Water Level :392.81 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 : 2022-2023

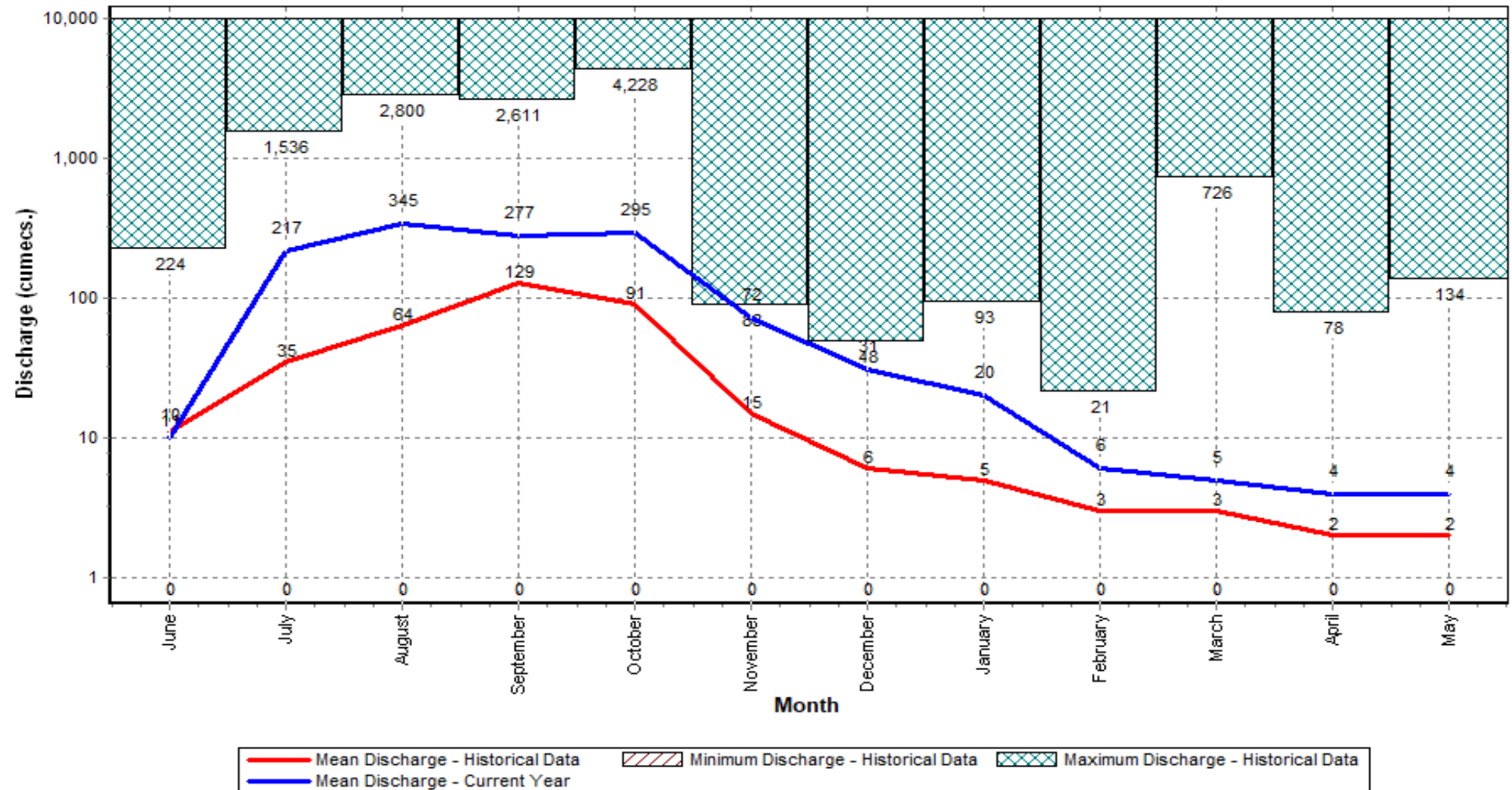
Station Name : Malkhed (AKP10E1)

Data considered : 1991-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Kagna

Sub-Division : Middle Krishna SD 2 , Kurnool



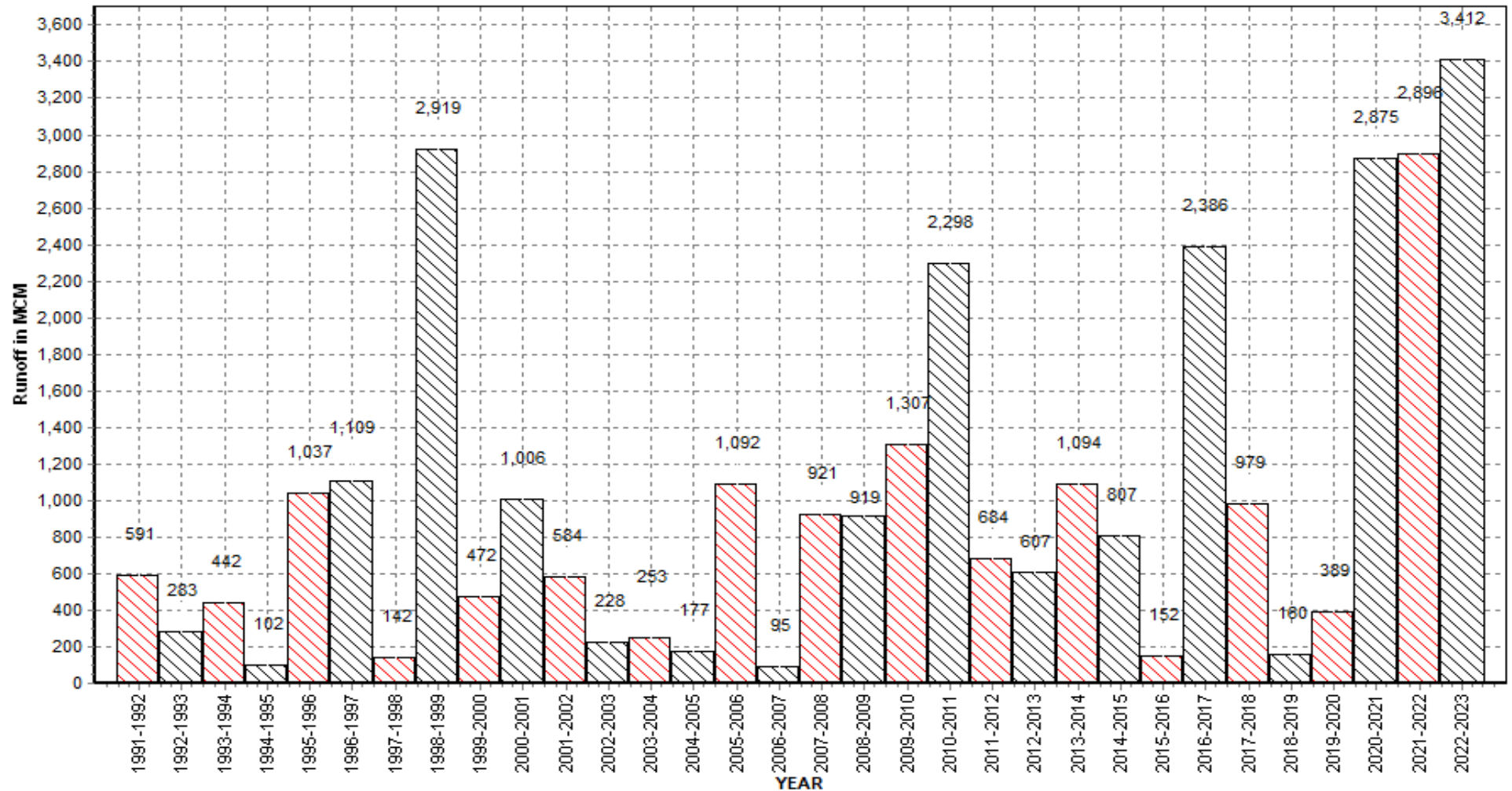
Annual Runoff Values for the period: 1991 - 2023

Station Name : Malkhed (AKP10E1)

Local River : Kagna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



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

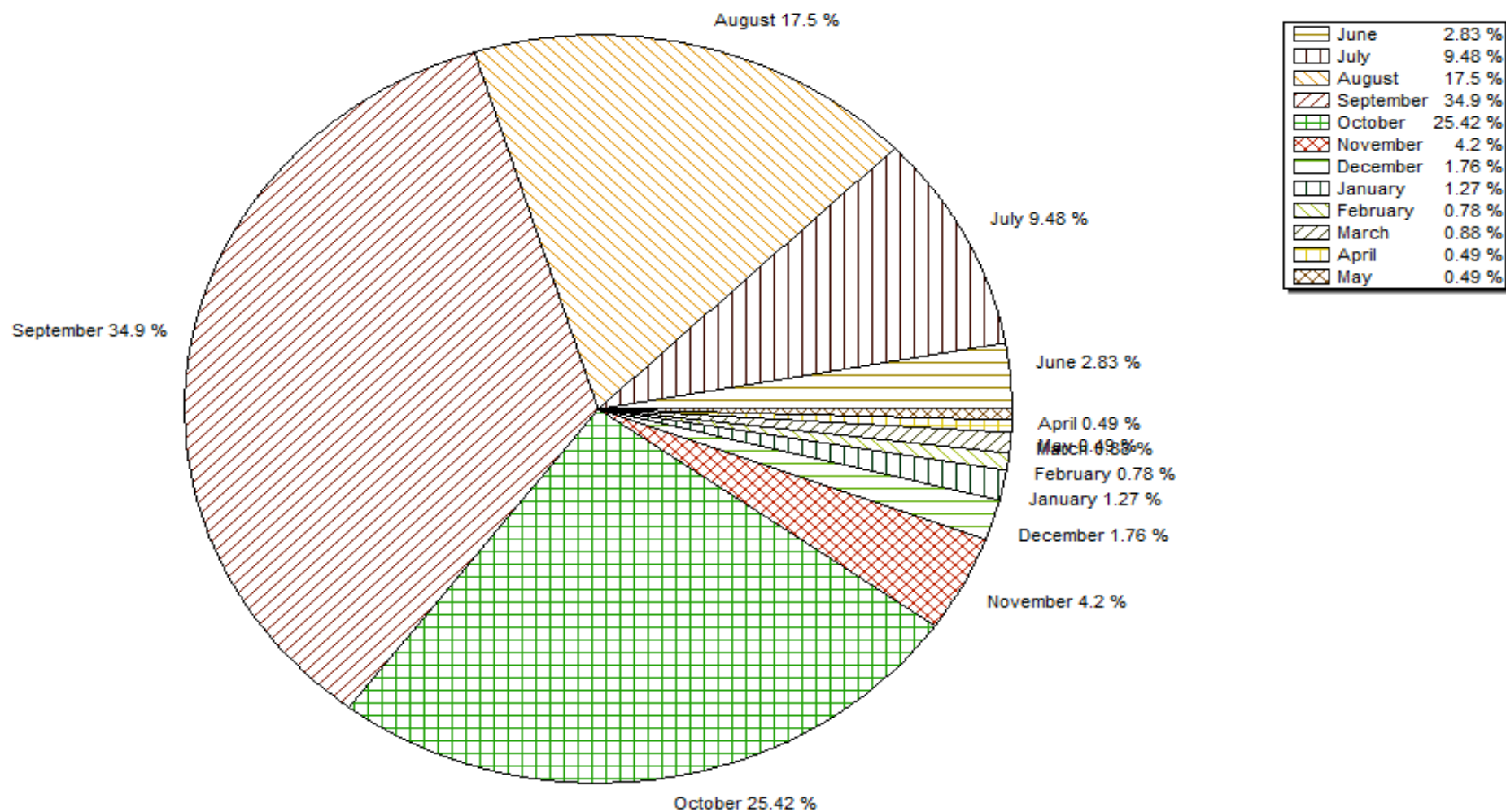
Monthly Average Runoff based on period : 1991-2022

Station Name : Malkhed (AKP10E1)

Local River : Kagna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



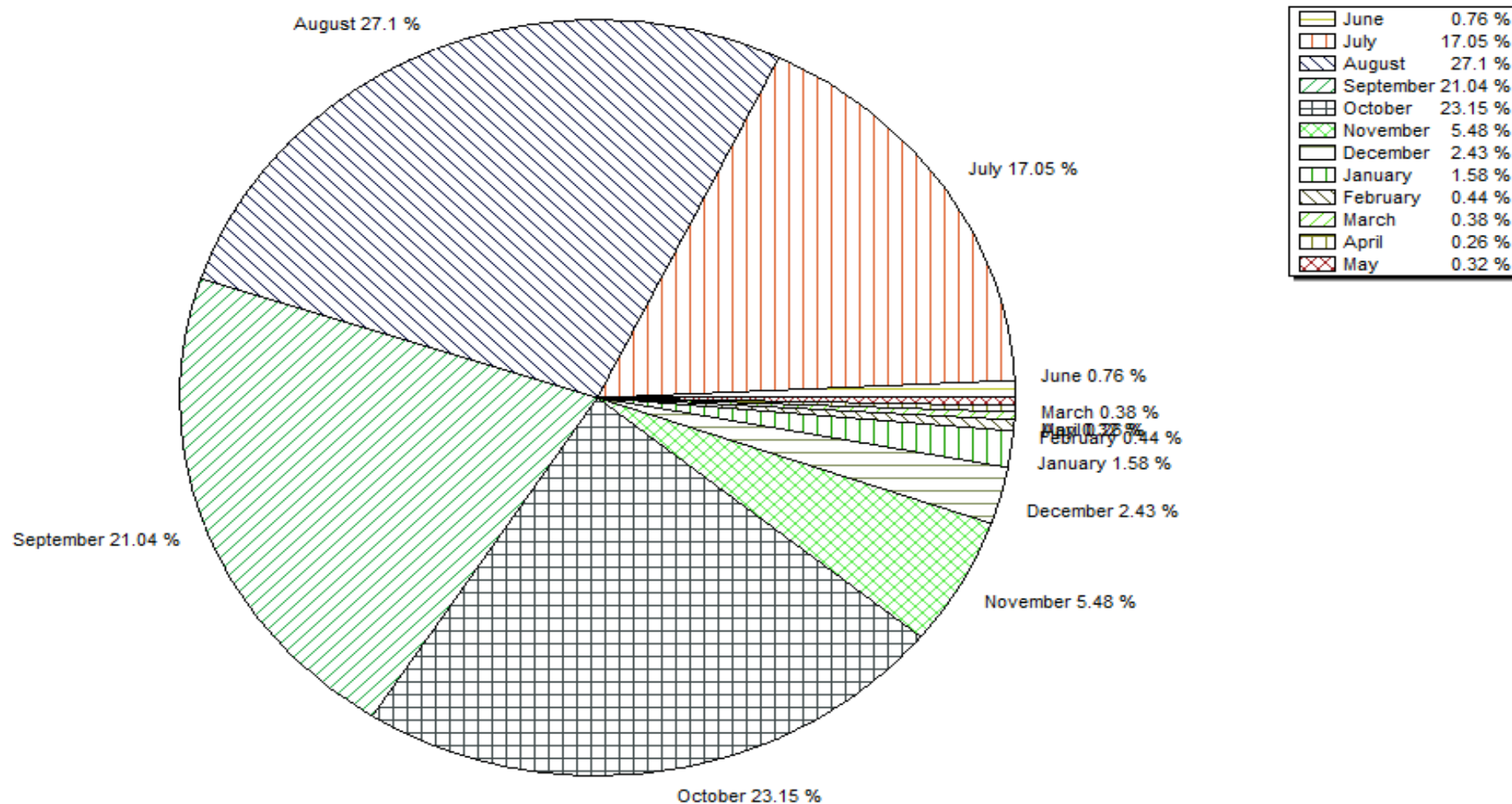
Monthly Runoff for the Year : 2022-2023

Station Name : Malkhed (AKP10E1)

Local River : Kagna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



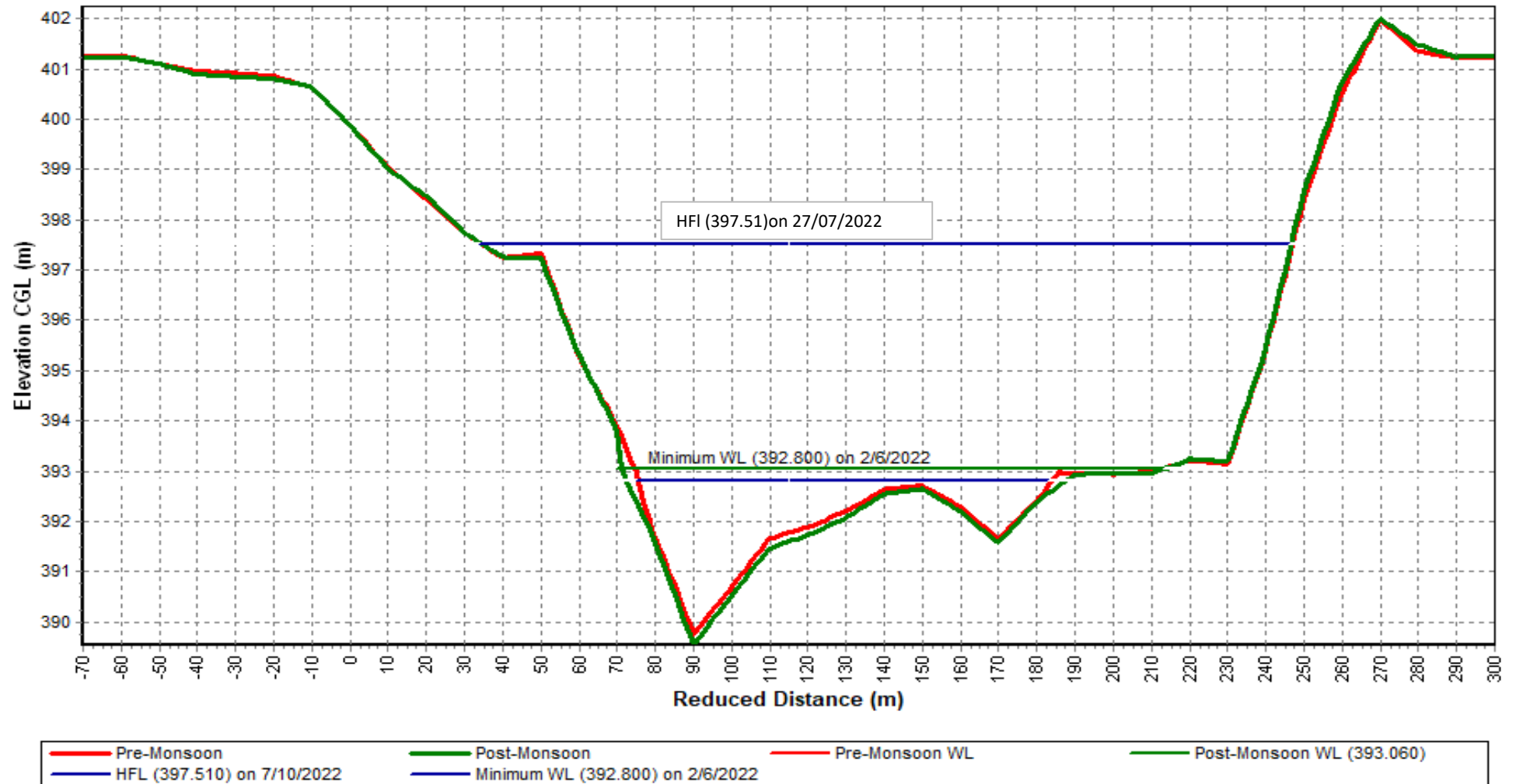
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Malkhed (AKP10E1)

Local River : Kagna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



Zero of the Gauge : 390 (m.s.l)

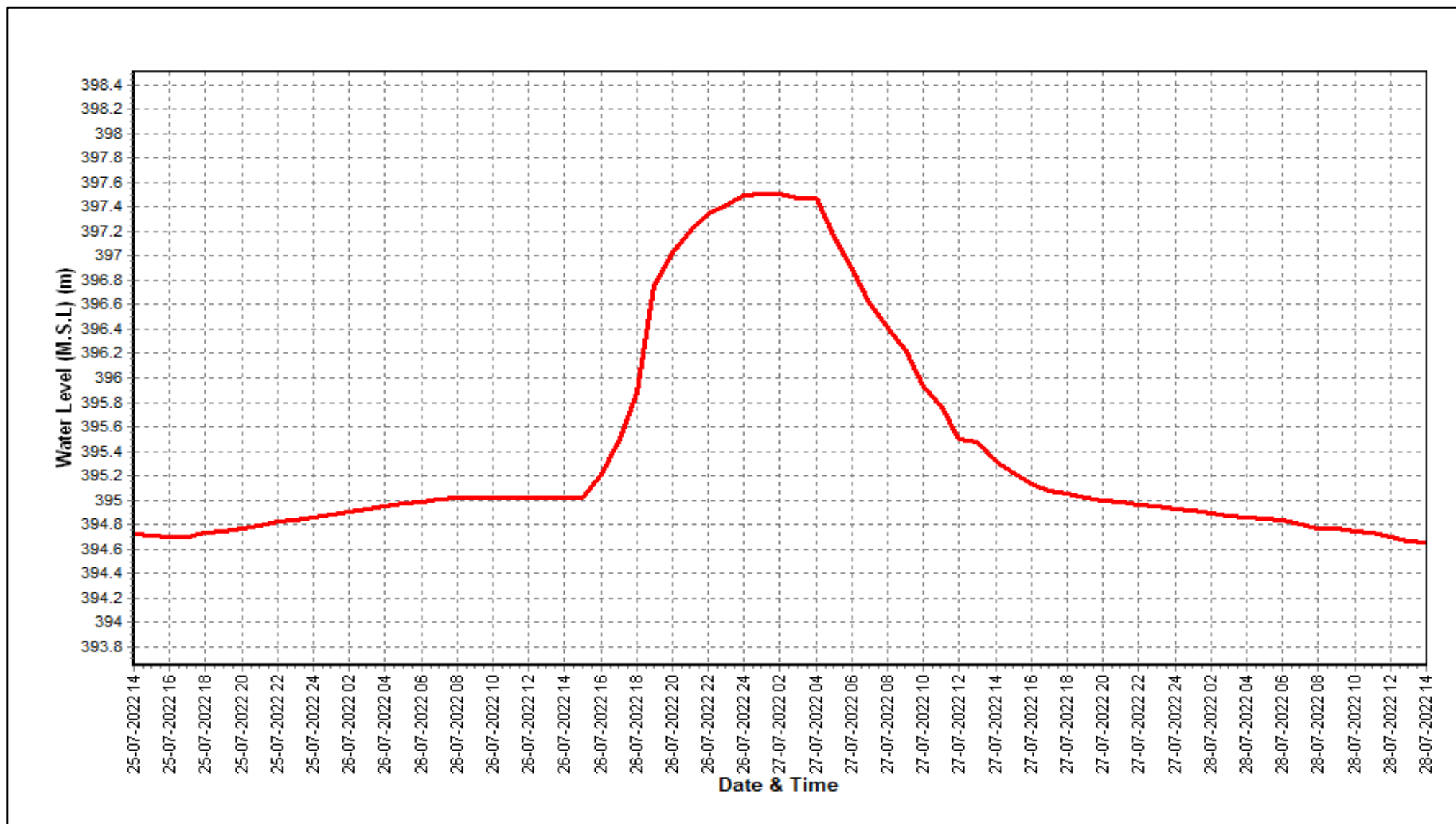
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Malkhed (AKP10E1)

Local River : Kagna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



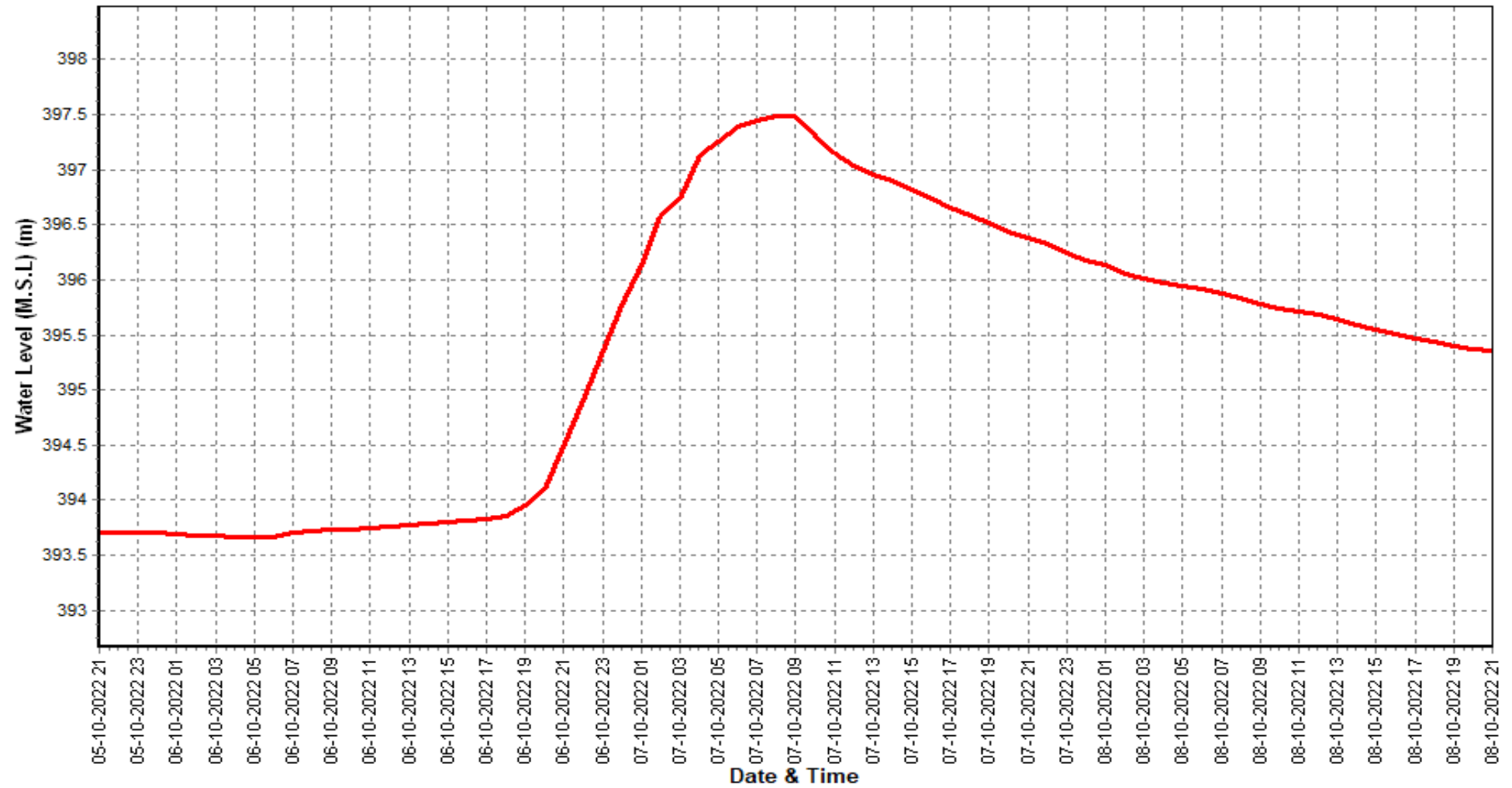
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Malkhed (AKP10E1)

Local River : Kagna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



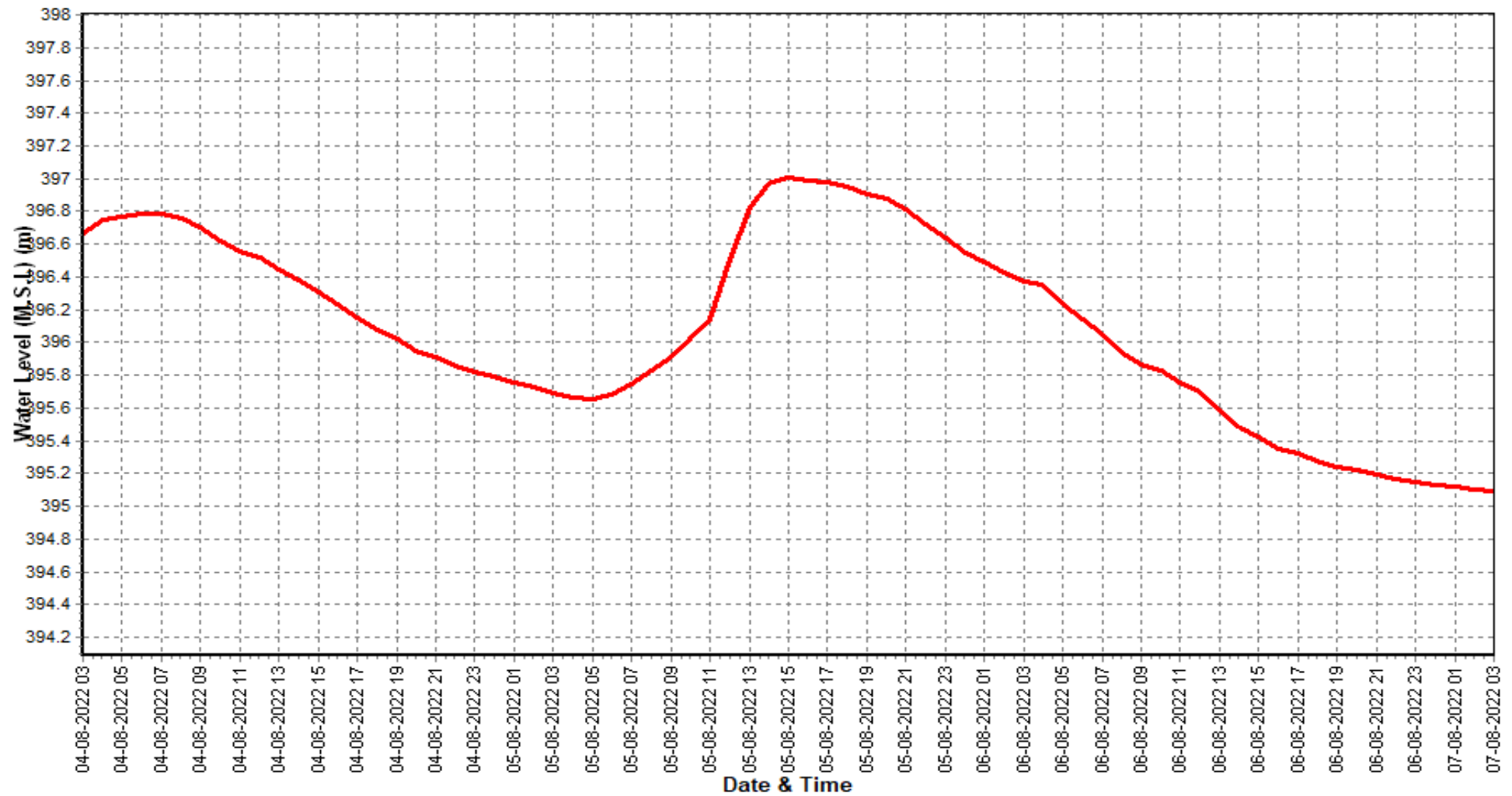
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Malkhed (AKP10E1)

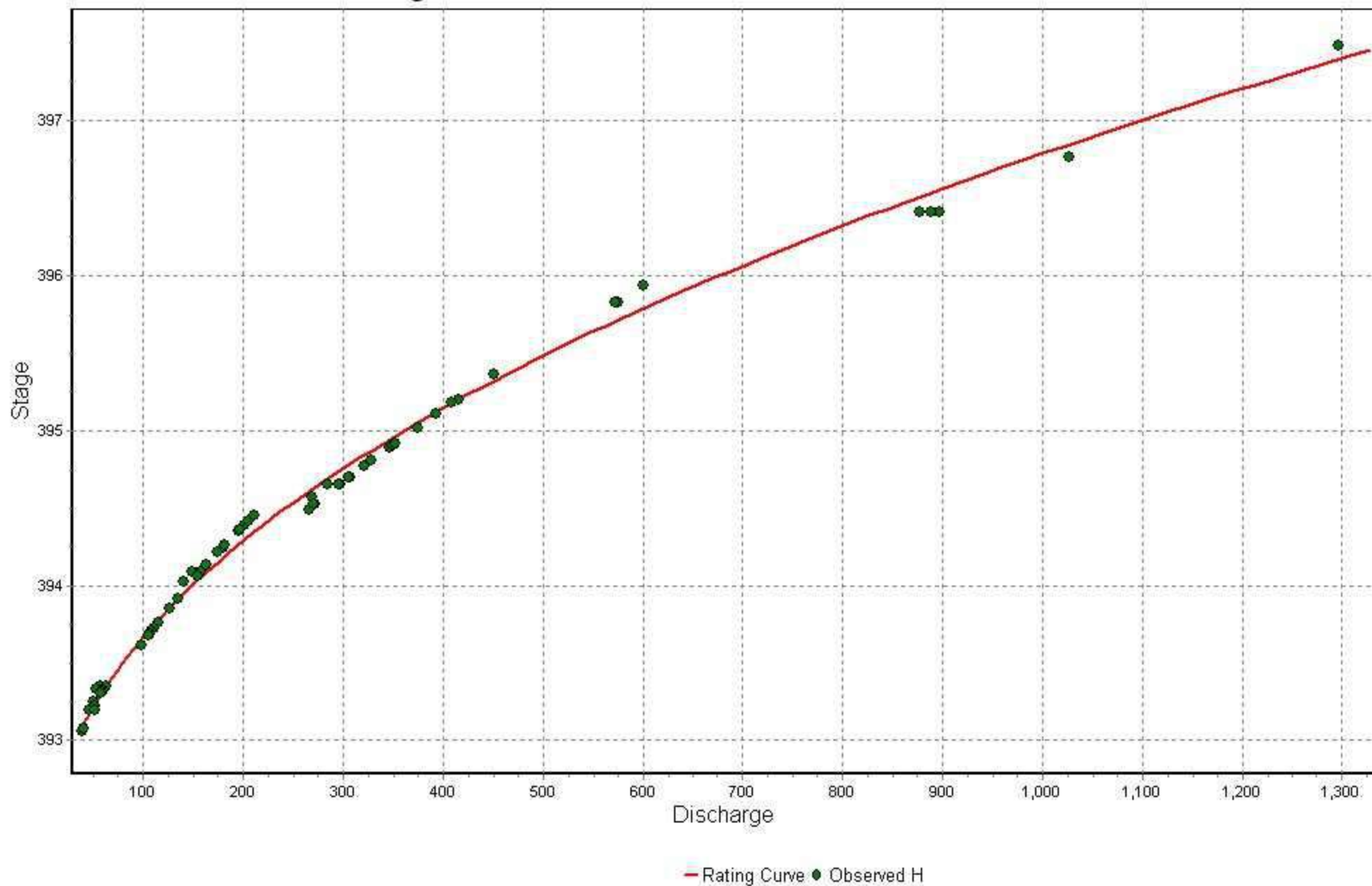
Local River : Kagna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



Rating Curve of Site Malkhed 01/06/2022 to 30/11/2022



HISTORY SHEET

Water Year : 2022-2023

Site : Yadgir

Code : AKP00B6

State : Karnataka

District : Gulbarga

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)
 350.503 (m.s.l)
 350.503 (m.s.l)
 350.503 (m.s.l)

01-01-1960 - 10-11-1964
 11-11-1964 - 31-12-1998
 01-01-1999 - 31-12-2005
 01-01-2006 -

Opening Date

Closing Date

Gauge : 05-09-1963

HFL During 2022-23 : 358.253 m

Corres. Discharge : 5659 (Estimated)

Discharge : 11-11-1964

Date & Time of

occurrence : 04:00 Hrs

Sediment : 01-06-1965

Water Quality : 01-01-1972

HFL Recorded so far in m : 362.023 dt 16-10-2020

Corresponding Discharge (cumecs) : 12779*

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
1987-1988	1619	354.878	16-08-1987	0.000		15-06-1987
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	351.333	27-04-2012
2012-2013	415.5	352.803	05-09-2012	0.000	350.393	24-03-2013
2013-2014	4050	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
2016-2017	4100	357.523	25-09-2016	0.000	350.713	25-01-2017
2017-2018	3414	356.803	19-09-2017	0.000	352.013	26-02-2018
2018-2019	1140	354.308	31-08-2018	0.000	351.103	17-12-2018
2019-2020	6136	358.123	10-08-2019	0.000	351.343	24-04-2020
2020-2021	12353	362.003	16-10-2020	0.000	350.803	17-06-2020
2021-2022	4255	357.303	29-09-2021	0.000	351.373	27-03-2022

Annual Runoff of Bhima at Yadgir

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1965-1966	9509	653	10162	336	23	359
2	1966-1967	7762	272	8034	274	10	284
3	1967-1968	14211	694	14905	502	25	527
4	1968-1969	8198	229	8426	290	8	298
5	1969-1970	15058	351	15409	532	12	544
6	1970-1971	11301	261	11562	399	9	409
7	1971-1972	10840	253	11094	383	9	392
8	1972-1973	3290	17	3307	116	1	117
9	1973-1974	13988	411	14399	494	15	509
10	1974-1975	11173	634	11807	395	22	417
11	1975-1976	19829	831	20660	701	29	730
12	1976-1977	12771	304	13075	451	11	462
13	1977-1978	7450	1314	8764	263	46	310
14	1978-1979	11529	481	12011	407	17	424
15	1979-1980	11867	1111	12979	419	39	459
16	1980-1981	8329	234	8564	294	8	303
17	1981-1982	12795	525	13320	452	19	471
18	1982-1983	4223	131	4354	149	5	154
19	1983-1984	14827	342	15169	524	12	536
20	1984-1985	7437	248	7685	263	9	272
21	1985-1986	3881	67	3947	137	2	139
22	1986-1987	3678	52	3731	130	2	132
23	1987-1988	3286	303	3588	116	11	127
24	1988-1989	13834	230	14064	489	8	497
25	1989-1990	10238	312	10550	362	11	373
26	1990-1991	14777	313	15089	522	11	533
27	1991-1992	9201	64	9265	325	2	327
28	1992-1993	2669	44	2714	94	2	96
29	1993-1994	4845	357	5203	171	13	184
30	1994-1995	10491	86	10577	371	3	374
31	1995-1996	2761	99	2860	98	4	101
32	1996-1997	8206	158	8364	290	6	296
33	1997-1998	5068	136	5203	179	5	184
34	1998-1999	20729	337	21066	732	12	744
35	1999-2000	3381	122	3503	119	4	124
36	2000-2001	3634	228	3862	128	8	136
37	2001-2002	2421	60	2481	86	2	88
38	2002-2003	724	43	766	26	2	27
39	2003-2004	896	723	1619	32	26	57
40	2004-2005	2473	82	2555	87	3	90
41	2005-2006	13485	55	13541	477	2	478
42	2006-2007	14191	0	14191	501	0	501
43	2007-2008	7322	303	7626	259	11	269
44	2008-2009	4736	0	4736	167	0	167
45	2009-2010	7290	262	7553	258	9	267
46	2010-2011	7835	218	8053	277	8	285
47	2011-2012	3892	64	3956	138	2	140

48	2012-2013	995	48	1043	35	2	37
49	2013-2014	4237	91	4328	150	3	153
50	2014-2015	2195	0	2195	78	0	78
51	2015-2016	401	0	401	14	0	14
52	2016-2017	4143	0	4143	146	0	146
53	2017-2018	6713	0	6713	237	0	237
54	2018-2019	1052	0	1052	37	0	37
55	2019-2020	10476	0	10476	370	0	370
56	2020-2021	18971	146	19117	670	5	676
57	2021-2022	6890	0	6890	243	0	243
58	2021-2022	15449	0	15449	546	0	546
Average		8170	247	8416	289	9	297

Instantaneous Flood Peak of Bhima at Yadgir

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1965-1966	357.823	21-09-1965	08:00:00	4909 *
2	1966-1967	356.753	03-08-1966	09:00:00	3607 *
3	1967-1968	359.808	03-08-1967	13:00:00	7780 *
4	1968-1969	356.863	02-10-1968	06:00:00	3501 *
5	1969-1970	361.913	07-09-1969	11:00:00	10609 *
6	1970-1971	359.053	21-09-1970	10:00:00	6338 *
7	1971-1972	357.508	28-09-1971	06:00:00	4349 *
8	1972-1973	356.583	13-07-1972	09:00:00	3194 *
9	1973-1974	357.548	29-10-1973	09:00:00	4719 *
10	1974-1975	357.843	24-10-1974	07:00:00	4674 *
11	1975-1976	359.213	11-10-1975	08:00:00	5769 *
12	1976-1977	359.053	07-08-1976	14:00:00	6338 *
13	1977-1978	355.443	18-06-1977	08:00:00	2149
14	1978-1979	357.838	22-08-1978	06:00:00	5033 *
15	1979-1980	360.583	30-09-1979	00:00:00	8479 *
16	1980-1981	356.573	10-08-1980	18:00:00	3183 *
17	1981-1982	359.733	24-09-1981	03:00:00	7378 *
18	1982-1983	355.313	27-08-1982	12:00:00	2006 *
19	1983-1984	359.633	25-09-1983	09:00:00	6986 *
20	1984-1985	357.603	12-10-1984	12:00:00	4372 *
21	1985-1986	355.583	06-08-1985	22:00:00	2247 *
22	1986-1987	355.713	14-08-1986	03:00:00	2322 *
23	1987-1988	354.983	16-08-1987	14:00:00	1686 *
24	1988-1989	359.288	21-09-1988	13:00:00	6579 *
25	1989-1990	360.403	28-09-1989	23:00:00	8487 *
26	1990-1991	358.943	16-08-1990	21:00:00	6177 *
27	1991-1992	356.943	01-08-1991	11:00:00	3691 *
28	1992-1993	357.263	02-09-1992	18:00:00	3961 *
29	1993-1994	355.983	21-10-1993	08:00:00	2580
30	1994-1995	358.583	20-07-1994	15:00:00	5664 *
31	1995-1996	354.663	18-10-1995	06:00:00	1434 *
32	1996-1997	357.543	08-10-1996	06:00:00	4298 *
33	1997-1998	359.253	30-08-1997	21:00:00	6636 *
34	1998-1999	361.643	16-10-1998	18:00:00	10699 *
35	1999-2000	355.083	03-08-1999	15:00:00	1768 *
36	2000-2001	355.253	24-08-2000	22:00:00	1911 *
37	2001-2002	356.103	10-10-2001	19:00:00	2698 *
38	2002-2003	353.543	17-10-2002	08:00:00	684 *
39	2003-2004	354.543	24-08-2003	12:00:00	1370 *
40	2004-2005	354.013	17-08-2004	14:00:00	974 *
41	2005-2006	359.723	09-08-2005	09:00:00	7899 *
42	2006-2007	360.383	15-08-2006	18:00:00	8250 *
43	2007-2008	356.623	23-09-2007	02:00:00	3237 *
44	2008-2009	356.623	13-09-2008	15:00:00	3237 *
45	2009-2010	360.003	03-10-2009	19:00:00	7980 *
46	2010-2011	356.463	26-08-2010	14:00:00	3066 *

47	2011-2012	357.403	08-09-2011	15:00:00	4939 *
48	2012-2013	352.803	05-09-2012	08:00:00	416 *
49	2013-2014	357.753	21-09-2013	21:00:00	4560 *
50	2014-2015	355.733	02-09-2014	00:00:00	2380 *
51	2015-2016	352.743	18-09-2015	06:00:00	380 *
52	2016-2017	357.683	25-09-2016	05:00:00	4368 *
53	2017-2018	356.943	19-09-2017	04:00:00	3607 *
54	2018-2019	354.443	31-08-2018	17:00:00	1205 *
55	2019-2020	358.983	12-08-2019	04:00:00	6150 *
56	2020-2021	362.023	16-10-2020	03:00:00	12779 *
57	2021-2022	357.723	29-09-2021	11:00:00	4515 *
58	2022-2023	358.253	23-10-2022	04:00:00	5659 *

Stage-Discharge Data for the period 2022 - 2023

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	351.063	0.000	351.303	0.000	353.603	749.3	353.133	559.0	354.443	1246	353.603	749.4
2	351.153	0.000	351.283	0.000	353.683	767.4	353.203	586.9	354.223	1111 *	353.543	724.5
3	351.213	0.000	351.333	0.000	353.973	949.4	353.083	540.7	354.353	1193	353.483	687.9
4	351.263	0.000	351.353	0.000	354.643	1408	353.303	626.5 *	354.073	1007	353.373	654.4
5	351.243	0.000	351.643	131.5	354.663	1414	352.703	405.8	353.783	858.1 *	353.303	626.3
6	351.213	0.000	352.323	285.9	354.813	1530	353.303	626.2	353.513	712.4	353.193	579.7 *
7	351.213	0.000	352.243	269.2	354.153	1068 *	354.073	972.9	353.973	948.4	352.963	495.7
8	351.263	0.000	352.203	257.9	354.113	1034	354.233	1113	354.683	1429	352.953	485.2 *
9	351.273	0.000	352.123	235.5	354.573	1342 *	355.333	1966	354.153	1068 *	352.913	478.7
10	351.263	0.000	352.113	231.6 *	354.853	1561	356.273	2902	354.683	1429	352.963	495.7
11	351.263	0.000	352.483	334.0	354.663	1414	356.633	3300 *	355.103	1766	352.623	379.3
12	351.233	0.000	352.963	496.7	354.113	1034	357.353	4214	354.573	1350	352.583	359.3 *
13	351.203	0.000	352.753	421.7	353.683	767.3	356.953	3692	354.233	1113	352.533	344.0 *
14	351.213	0.000	352.293	277.9	354.423	1240 *	356.253	2876	354.733	1452	352.483	334.7
15	351.263	0.000	353.063	519.9	355.193	1820 *	355.673	2277	356.163	2779	352.123	230.5
16	351.273	0.000	352.793	430.0	355.783	2387	355.783	2390	356.073	2660 *	351.863	0.000
17	351.273	0.000	352.173	246.0 *	356.273	2899	355.193	1840	356.693	3373	351.783	0.000
18	351.313	0.000	352.623	379.3	356.473	3116	354.803	1509 *	356.143	2754	351.763	0.000
19	351.353	0.000	352.793	430.0	356.163	2776	355.393	2012	356.163	2779	351.763	0.000
20	351.343	0.000	352.583	366.6	355.883	2481	356.633	3306	355.783	2390	351.753	0.000
21	351.363	0.000	352.743	419.1	355.703	2283 *	357.033	3794	356.633	3306	351.753	0.000
22	351.353	0.000	353.133	559.0	355.103	1767	356.183	2799	357.833	4881	351.733	0.000
23	351.313	0.000	353.203	586.9	354.663	1414	355.193	1840	357.173	4000 *	351.743	0.000
24	351.293	0.000	353.053	523.3 *	354.333	1182	354.573	1350	356.473	3108 *	351.763	0.000
25	351.263	0.000	353.203	586.9	354.293	1150	354.073	1020 *	356.273	2902	351.773	0.000
26	351.293	0.000	353.303	625.2	354.233	1114	353.603	751.3	355.783	2390	351.773	0.000
27	351.323	0.000	353.303	625.2	354.663	1414	353.373	654.4	354.603	1370	351.783	0.000
28	351.353	0.000	353.543	724.5	355.143	1778 *	353.193	582.9	353.973	948.4	351.823	0.000
29	351.373	0.000	352.703	410.6	354.813	1530	353.373	654.4	353.923	914.5	351.863	0.000
30	351.333	0.000	353.053	528.8	354.683	1428	354.573	1350	354.153	1068 *	351.733	0.000
31			354.193	1093 *	353.633	780.9 *			353.683	769.2		
Ten-Daily Mean												
I Ten-Daily	351.216	0.000	351.792	141.2	354.307	1182	353.864	1030	354.188	1100	353.229	597.7
II Ten-Daily	351.273	0.000	352.652	390.2	355.265	1993	356.067	2741	355.566	2242	352.127	164.8
III Ten-Daily	351.326	0.000	353.221	607.5	354.660	1440	354.517	1480	355.500	2332	351.774	0.000
Monthly												
Min.	351.063	0.000	351.283	0.000	353.603	749.3	352.703	405.8	353.513	712.4	351.733	0.000
Max.	351.373	0.000	354.193	1093	356.473	3116	357.353	4214	357.833	4881	353.603	749.4
Mean	351.272	0	352.577	387	354.741	1535	354.816	1750	355.098	1906	352.377	254.2

Annual Runoff in MCM = 15449 Annual Runoff in mm = 221

Peak Observed Discharge = 4881 cumecs on 22-10-2022 Corres. Water Level :357.833 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :351.063 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 2022 - 2023

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	351.623	0.000	351.653	0.000	350.963	0.000	351.193	0.000	351.463	0.000	351.283	0.000
2	351.553	0.000	351.253	0.000	350.963	0.000	351.313	0.000	351.483	0.000	351.193	0.000
3	351.493	0.000	351.253	0.000	351.033	0.000	351.353	0.000	351.363	0.000	351.133	0.000
4	351.443	0.000	351.053	0.000	351.113	0.000	351.313	0.000	351.303	0.000	351.073	0.000
5	351.383	0.000	351.013	0.000	351.133	0.000	351.213	0.000	351.163	0.000	351.013	0.000
6	351.343	0.000	350.903	0.000	351.133	0.000	351.023	0.000	351.263	0.000	350.943	0.000
7	351.223	0.000	352.223	0.000	351.133	0.000	350.963	0.000	351.103	0.000	350.893	0.000
8	351.153	0.000	352.163	0.000	351.153	0.000	350.963	0.000	350.993	0.000	350.853	0.000
9	351.153	0.000	352.093	0.000	351.543	0.000	350.963	0.000	350.953	0.000	350.853	0.000
10	351.143	0.000	351.983	0.000	351.753	0.000	351.223	0.000	350.953	0.000	350.813	0.000
11	351.073	0.000	351.943	0.000	351.853	0.000	351.363	0.000	351.113	0.000	350.813	0.000
12	350.993	0.000	351.613	0.000	351.713	0.000	351.333	0.000	351.343	0.000	350.813	0.000
13	350.903	0.000	351.553	0.000	351.413	0.000	351.293	0.000	351.353	0.000	350.813	0.000
14	351.153	0.000	351.463	0.000	351.273	0.000	351.213	0.000	351.293	0.000	351.323	0.000
15	351.323	0.000	351.743	0.000	351.163	0.000	351.053	0.000	351.243	0.000	351.993	0.000
16	351.303	0.000	351.823	0.000	350.993	0.000	350.943	0.000	351.183	0.000	351.893	0.000
17	351.353	0.000	351.893	0.000	351.223	0.000	351.043	0.000	351.093	0.000	351.813	0.000
18	351.443	0.000	351.913	0.000	351.753	0.000	351.253	0.000	350.923	0.000	351.753	0.000
19	351.593	0.000	351.913	0.000	351.553	0.000	351.543	0.000	350.853	0.000	351.453	0.000
20	351.613	0.000	351.863	0.000	351.453	0.000	351.883	0.000	350.873	0.000	351.363	0.000
21	351.573	0.000	351.743	0.000	351.383	0.000	351.893	0.000	350.853	0.000	351.313	0.000
22	351.453	0.000	351.563	0.000	351.143	0.000	351.673	0.000	351.213	0.000	351.243	0.000
23	351.203	0.000	351.353	0.000	350.903	0.000	351.463	0.000	351.603	0.000	351.193	0.000
24	351.103	0.000	351.503	0.000	350.903	0.000	351.293	0.000	351.843	0.000	351.163	0.000
25	351.063	0.000	352.063	0.000	350.783	0.000	351.163	0.000	351.883	0.000	351.143	0.000
26	350.903	0.000	351.683	0.000	350.873	0.000	351.043	0.000	352.183	0.000	351.133	0.000
27	351.423	0.000	351.443	0.000	351.023	0.000	350.943	0.000	351.853	0.000	351.123	0.000
28	352.083	0.000	351.323	0.000	351.103	0.000	350.943	0.000	351.523	0.000	351.103	0.000
29	352.133	0.000	351.233	0.000			350.893	0.000	351.453	0.000	351.083	0.000
30	352.233	0.000	351.093	0.000			351.013	0.000	351.363	0.000	351.073	0.000
31	352.113	0.000	350.943	0.000			351.223	0.000			351.073	0.000
Ten-Daily Mean												
I Ten-Daily	351.351	0.000	351.559	0.000	351.192	0.000	351.152	0.000	351.204	0.000	351.005	0.000
II Ten-Daily	351.275	0.000	351.772	0.000	351.439	0.000	351.292	0.000	351.127	0.000	351.403	0.000
III Ten-Daily	351.571	0.000	351.449	0.000	351.014	0.000	351.231	0.000	351.577	0.000	351.149	0.000
Monthly												
Min.	350.903	0.000	350.903	0.000	350.783	0.000	350.893	0.000	350.853	0.000	350.813	0.000
Max.	352.233	0.000	352.223	0.000	351.853	0.000	351.893	0.000	352.183	0.000	351.993	0.000
Mean	351.405	0	351.589	0	351.229	0	351.225	0	351.303	0	351.185	0

Peak Computed Discharge = 4000 cumecs on 23-10-2022

Corres. Water Level :357.173 m

Lowest Computed Discharge = 231.6 cumecs on 10-07-2022

Corres. Water Level :352.113 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 : 2022-2023

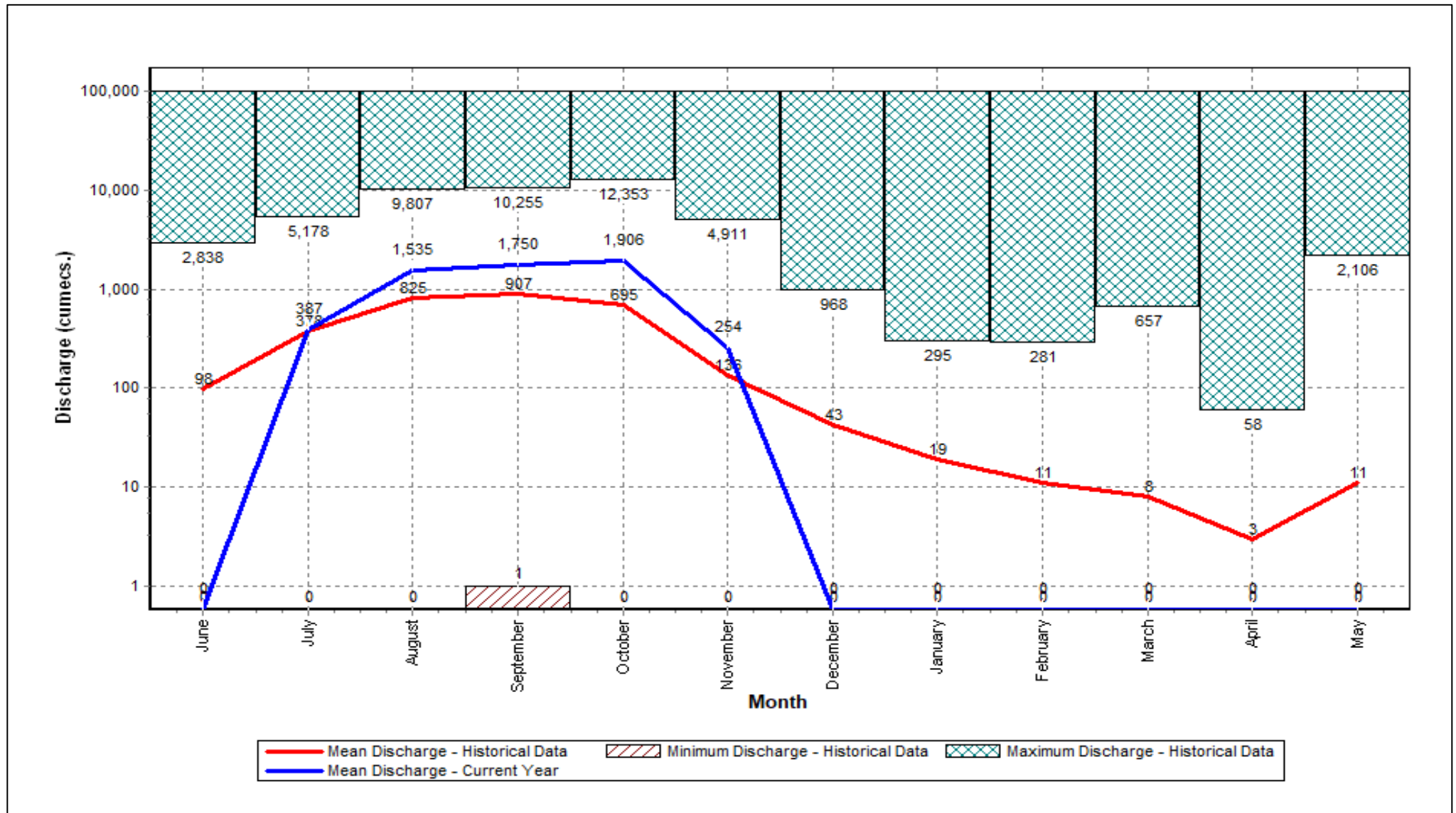
Station Name : Yadgir (AKP00B6)

Data considered : 1965-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Bhima

Sub-Division : Middle Krishna SD 2 , Kurnool



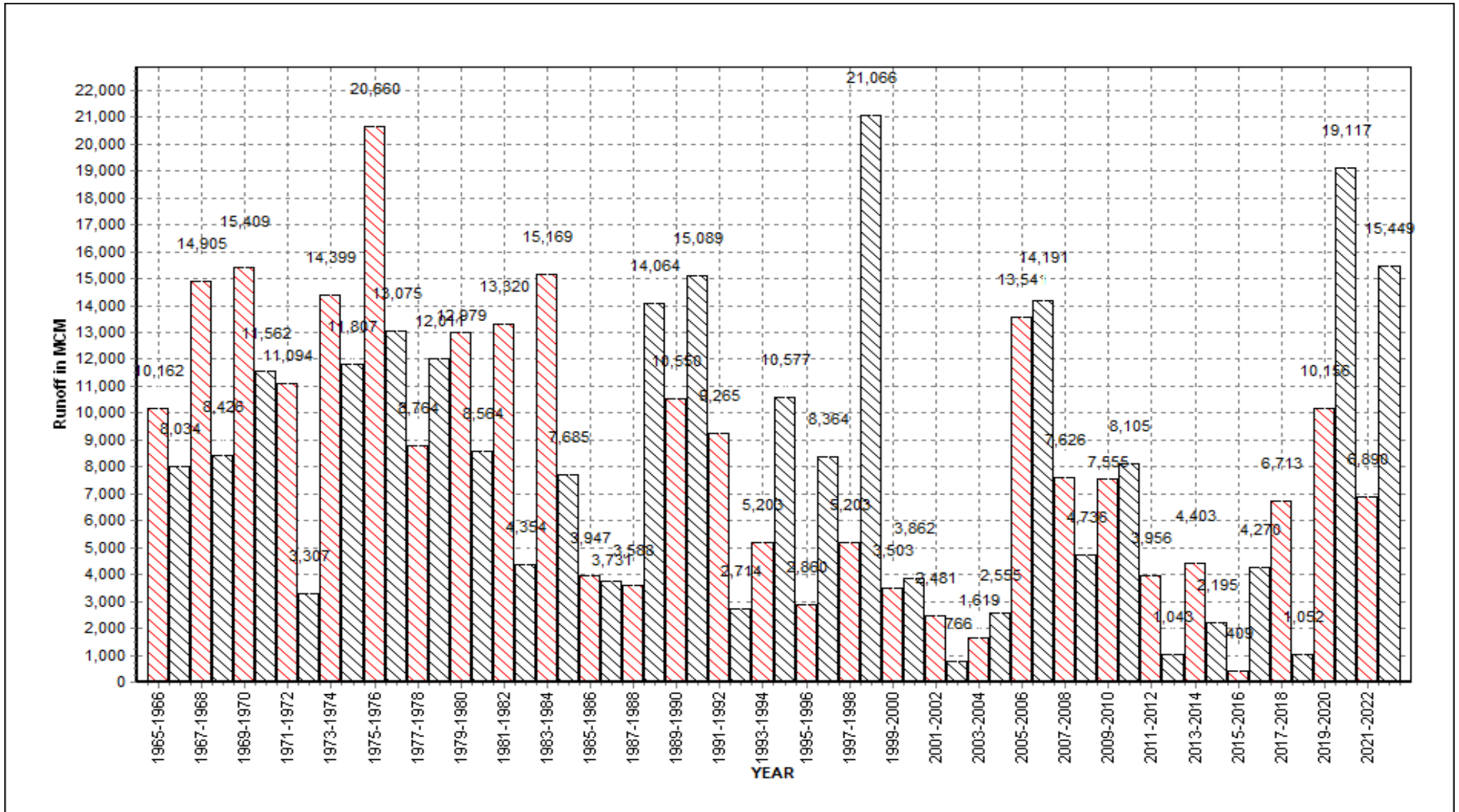
Annual Runoff Values for the period: 1965 - 2023

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

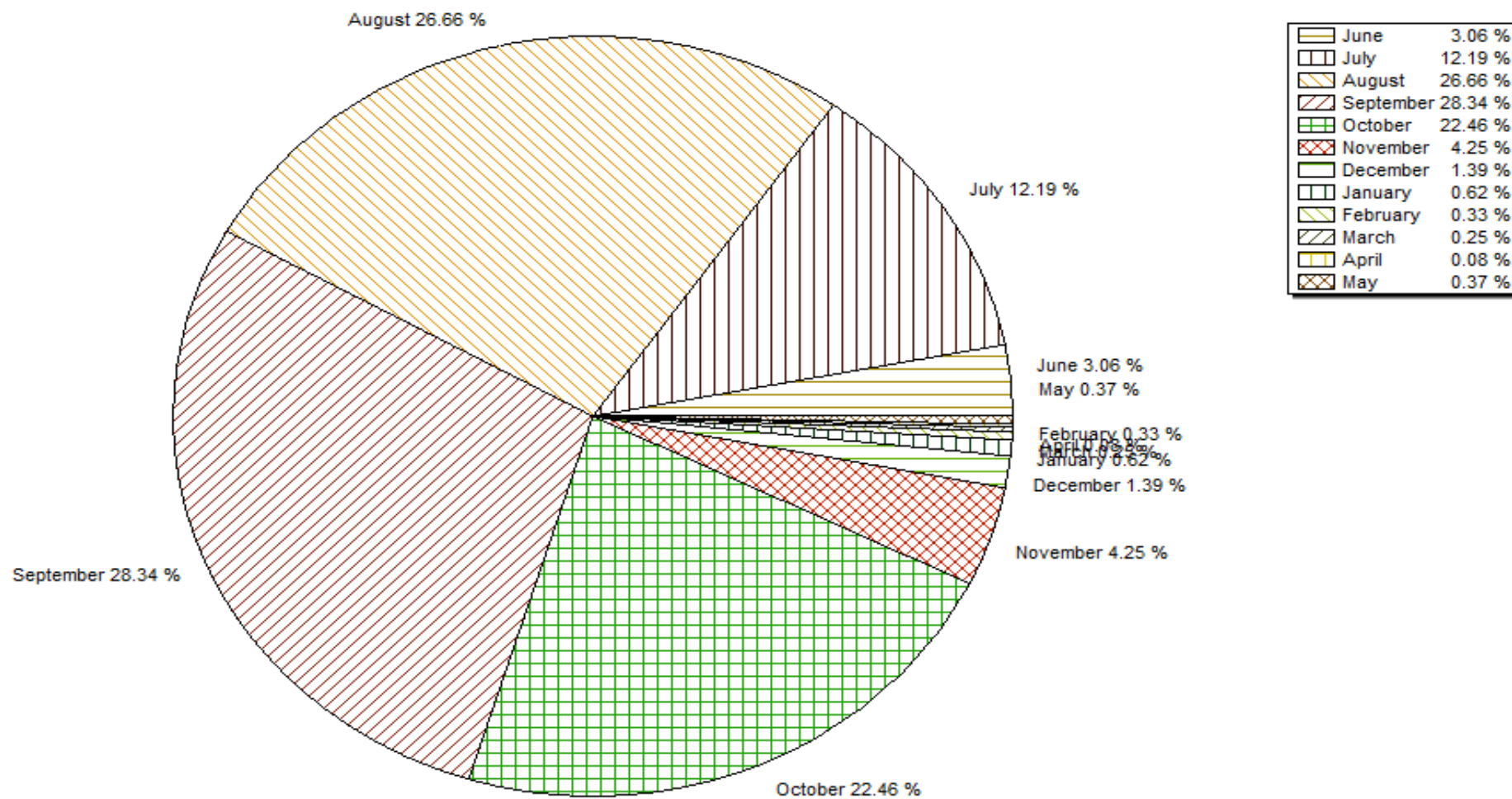
Monthly Average Runoff based on period : 1965-2022

Station Name : Yadgir (AKP00B6)

Local River : Bhima

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



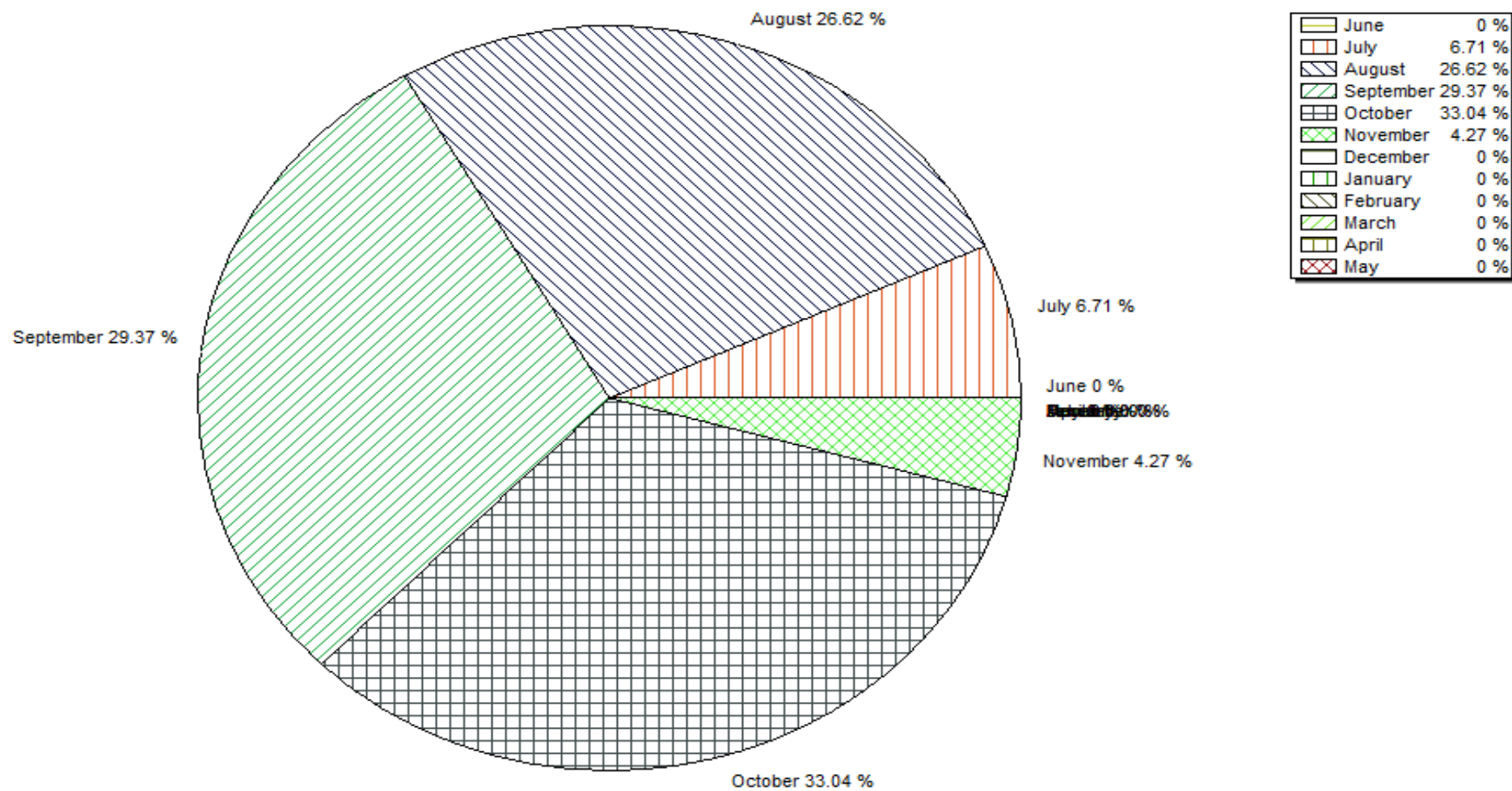
Monthly Runoff for the Year : 2022-2023

Station Name : Yadgir (AKP00B6)

Local River : Bhima

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



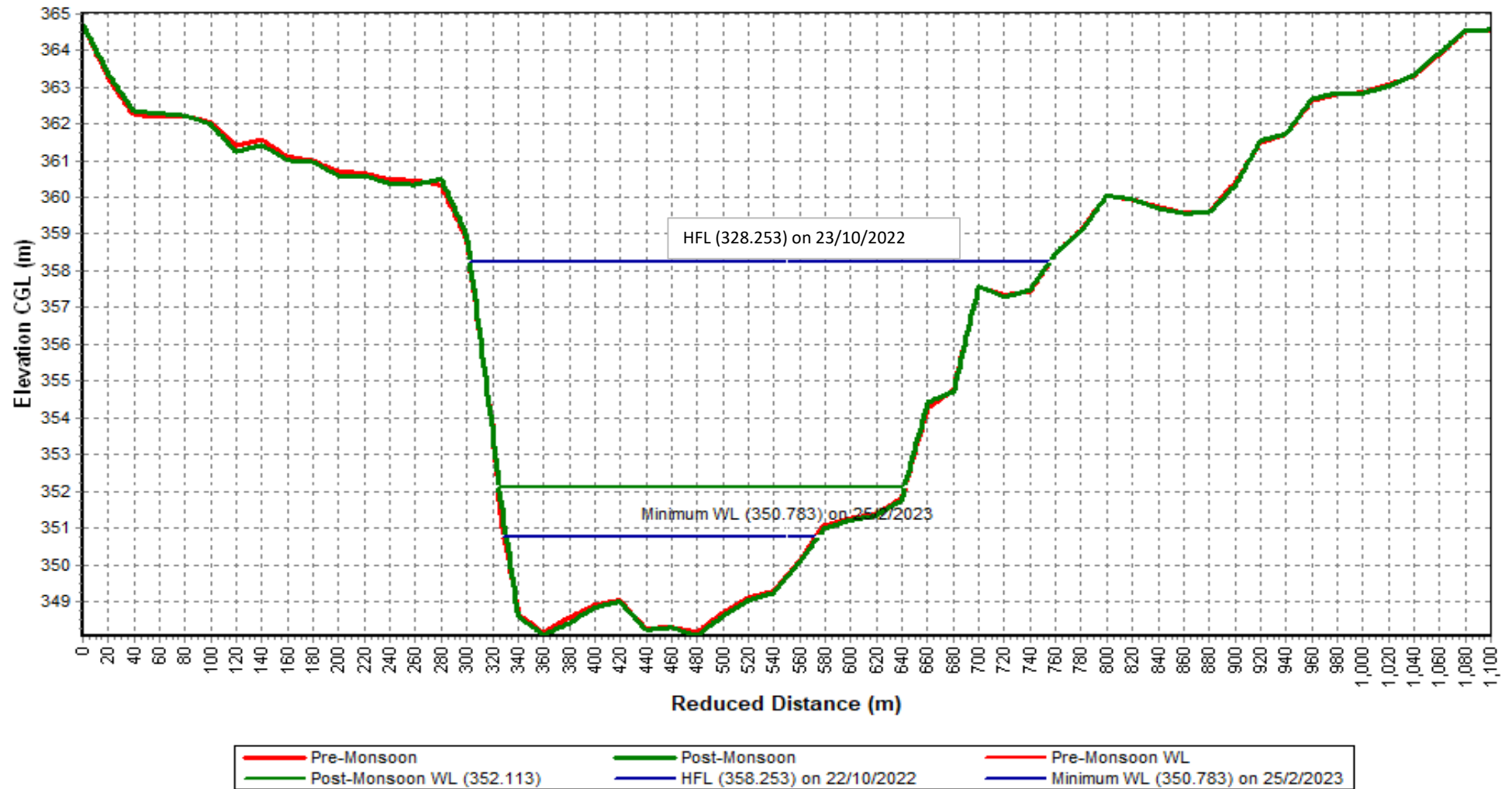
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Yadgir (AKP00B6)

Local River : Bhima

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



Zero of the Gauge : 350.503 (m.s.l)

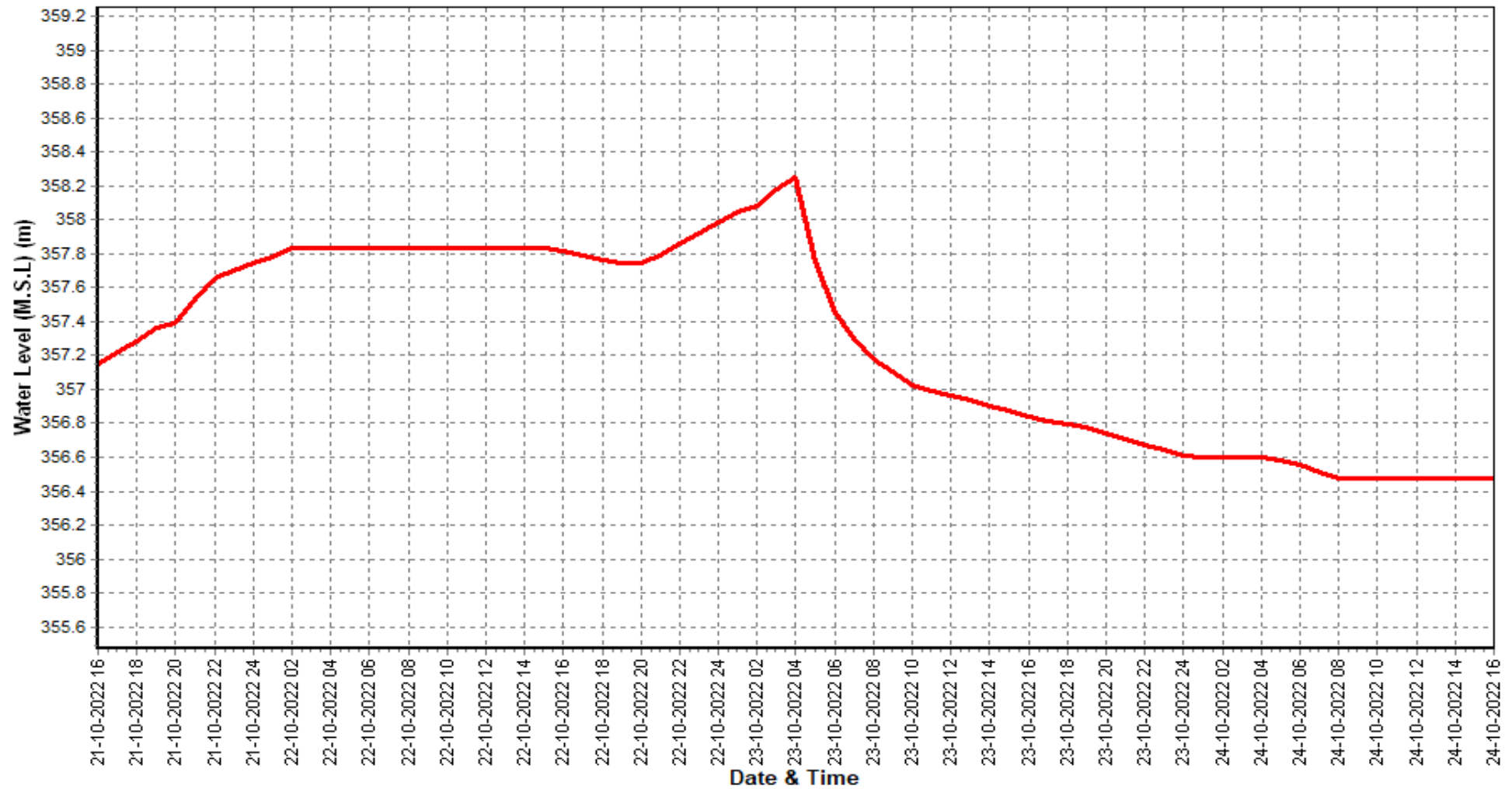
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Yadgir (AKP00B6)

Local River : Bhima

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



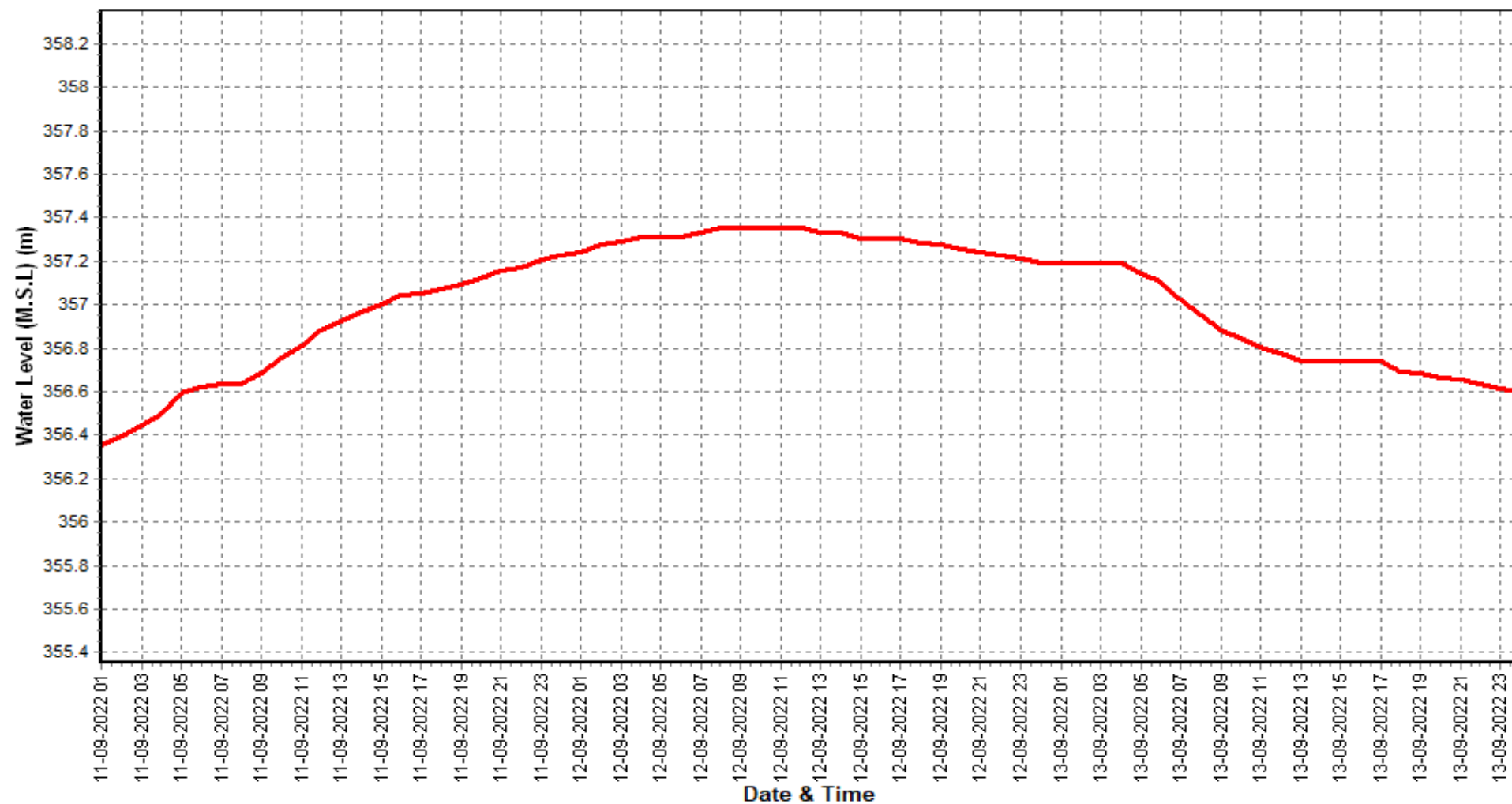
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Yadgir (AKP00B6)

Local River : Bhima

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



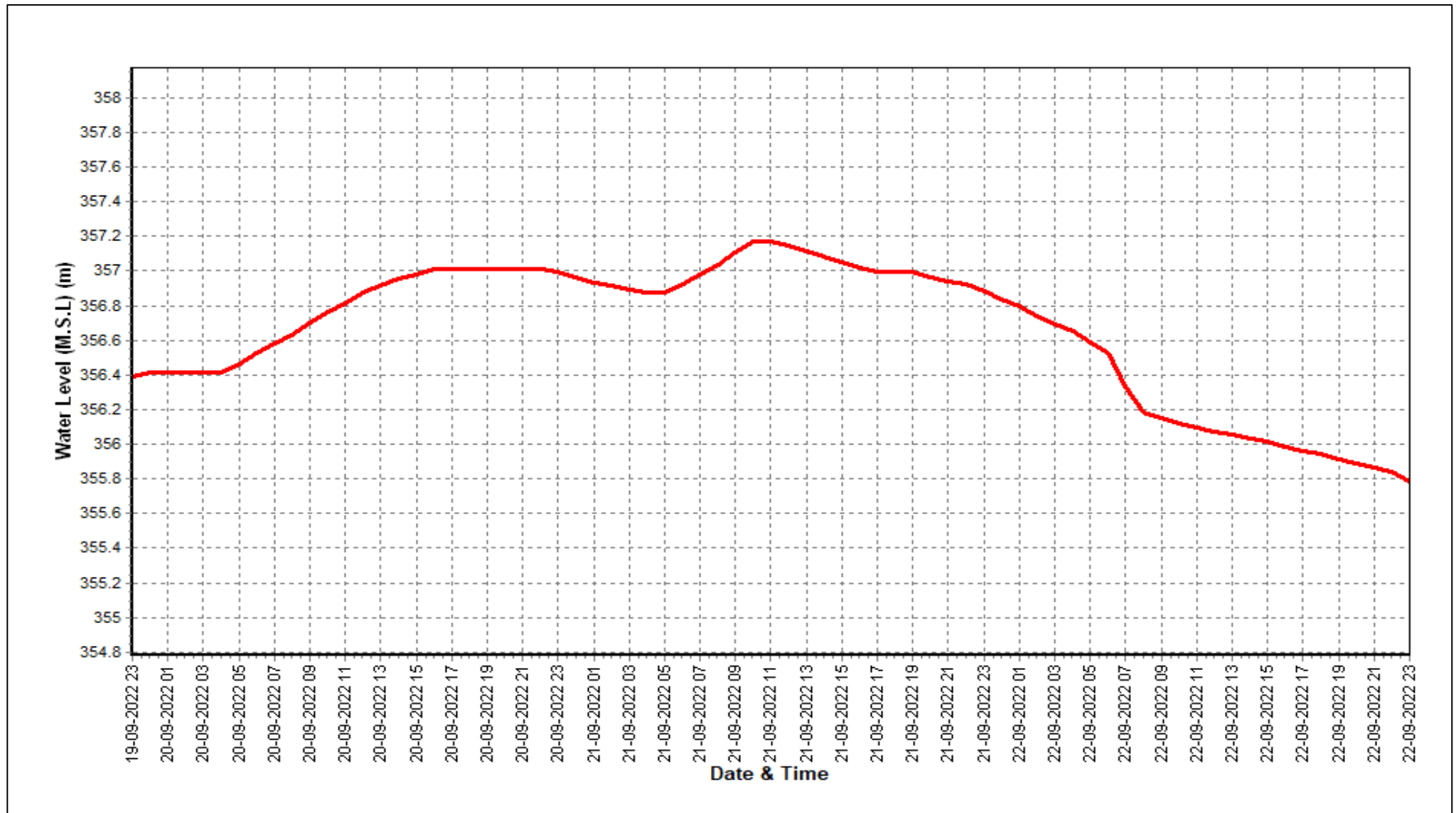
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Yadgir (AKP00B6)

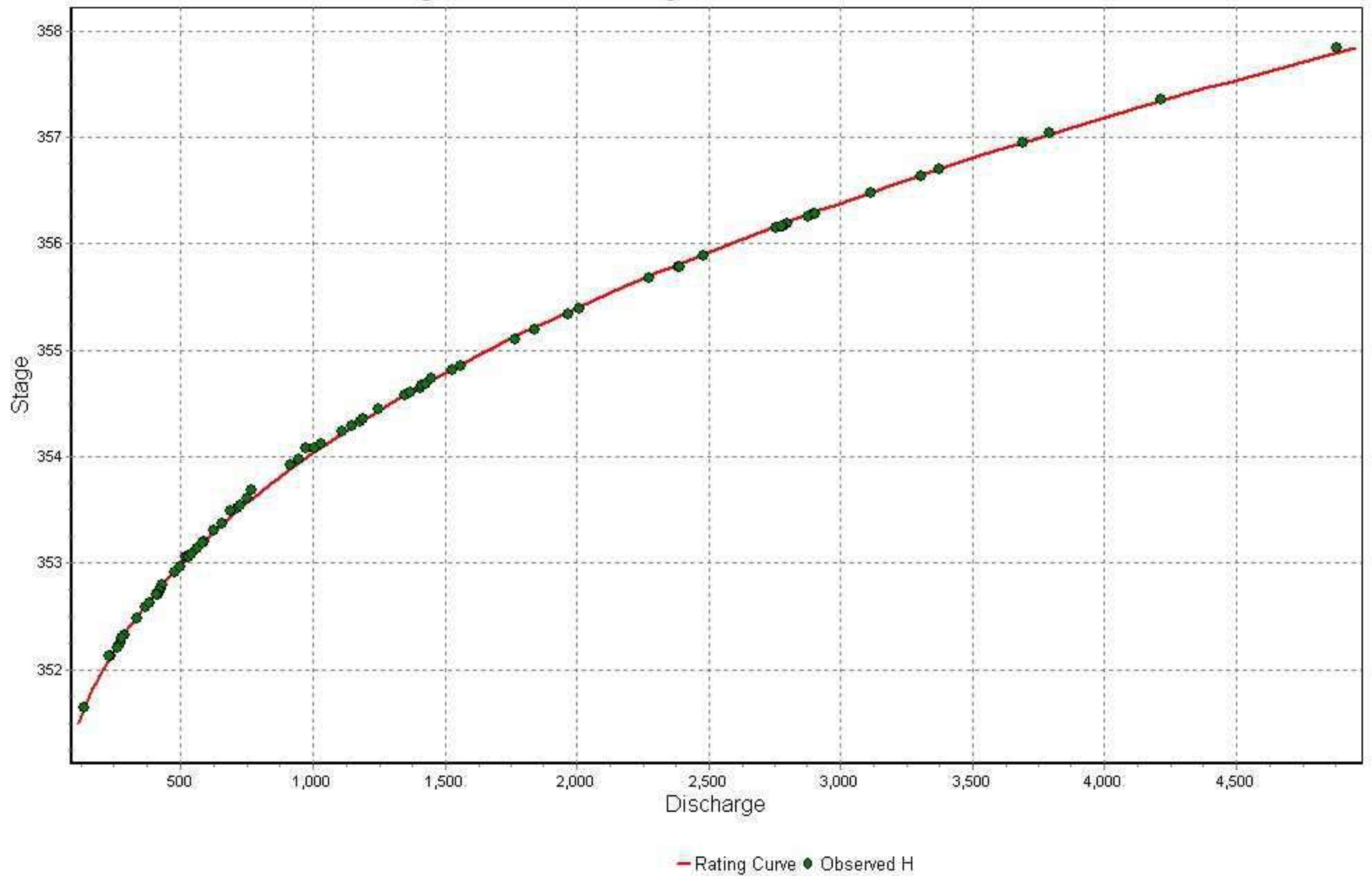
Local River : Bhima

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Middle Krishna SD 2 , Kurnool



Rating Curve of site Yadgir 01/06/2022 to 30/11/2022



HISTORY SHEET

Water Year : 2022-2023

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) : 552.725 (m.s.l)

01-06-2010

Opening Date

Closing Date

Gauge : 26-11-1997

Discharge : 01-07-2003

Water Quality : 01-07-2003

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2004-2005	19.05	89.810	03-01-2005	0.000	89.970	08-02-2005
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
2016-2017	105.7	556.695	29-03-2017	10.98	555.785	06-03-2017
2017-2018	174.5	557.085	25-03-2018	9.252	555.755	04-11-2017
2018-2019	1479	562.640	15-08-2018	3.559	555.560	19-12-2018
2019-2020	901.2	560.605	10-08-2019	11.29	555.675	04-01-2020
2020-2021	743.6	560.220	21-09-2020	9.890	555.710	04-01-2021
2021-2022	976.2	560.925	08-08-2021	7.374	555.635	11-06-2021

Annual Runoff of Krishna at Holehonnur

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2003-2004	2	5	6	0	0	0
2	2004-2005	29	56	85	1	2	3
3	2005-2006	1002	453	1456	35	16	51
4	2006-2007	979	492	1471	35	17	52
5	2007-2008	2271	636	2907	80	22	103
6	2008-2009	1423	840	2262	50	30	80
7	2009-2010	1737	780	2517	61	28	89
8	2010-2011	1163	1192	2355	41	42	83
9	2011-2012	1424	818	2242	50	29	79
10	2012-2013	676	783	1460	24	28	52
11	2013-2014	2074	820	2895	73	29	102
12	2014-2015	1630	571	2201	58	20	78
13	2015-2016	795	665	1460	28	24	52
14	2016-2017	398	585	983	14	21	35
15	2017-2018	254	590	844	9	21	30
16	2018-2019	2127	623	2750	75	22	97
17	2019-2020	1992	858	2850	70	30	101
18	2020-2021	1134	695	1829	40	25	65
19	2021-2022	1621	1021	2642	57	36	93
20	2022-2023	2851	981	3832	101	35	135
Average		1279	673	1952	45	24	69

Instantaneous Flood Peak of Krishna at Holehonnuru					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2003-2004	93.410	04-10-2003	13:00:00	460 *
2	2004-2005	93.560	05-08-2004	08:00:00	505 *
3	2005-2006	94.680	17-08-2005	18:00:00	912 *
4	2006-2007	95.480	17-08-2006	21:00:00	1277 *
5	2007-2008	95.850	06-08-2007	16:00:00	1467 *
6	2008-2009	96.390	14-08-2008	08:00:00	1768 *
7	2009-2010	94.850	06-09-2009	08:00:00	984
8	2010-2011	559.725	05-10-2010	18:00:00	629 *
9	2011-2012	560.895	02-09-2011	10:00:00	925 *
10	2012-2013	559.215	08-08-2012	07:00:00	516 *
11	2013-2014	562.215	02-08-2013	10:00:00	1320 *
12	2014-2015	561.525	06-08-2014	21:00:00	1106 *
13	2015-2016	558.665	20-07-2015	18:00:00	405 *
14	2016-2017	556.635	04-03-2016	13:00:00	93 *
15	2017-2018	556.735	13-02-2017	08:00:00	105
16	2018-2019	562.820	15-08-2018	13:00:00	1523 *
17	2019-2020	561.065	10-08-2019	01:00:00	972 *
18	2020-2021	560.435	21-09-2020	14:00:00	802 *
19	2021-2022	560.955	08-08-2021	10:00:00	1026 *
20	2022-2023	562.435	09-08-2022	16:00:00	1340 *

Stage-Discharge Data for the period 2022 - 2023

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	555.935	28.82	555.895	24.98	557.005	123.6	558.205	275.6	556.285	62.77	556.315	65.08
2	555.915	25.88	555.905	25.72	557.385	161.6	558.365	306.0	556.335	56.51 *	556.275	62.57
3	555.915	25.53	555.995	32.63 *	557.515	174.4	558.645	361.1	556.385	70.61	556.705	97.38
4	555.915	26.15	556.645	92.14	557.085	131.3	558.695	371.0 *	556.645	92.18	556.535	83.06
5	555.925	28.46 *	556.975	121.3	558.125	261.4	557.535	176.6	556.625	81.42 *	556.505	80.74
6	555.925	26.45	557.215	143.7	559.435	530.7	558.165	268.5	556.625	90.53	556.435	76.25 *
7	556.035	31.95	557.655	188.7	561.255	975.5 *	559.005	437.2	556.585	87.22	556.415	73.46
8	556.055	32.78	558.265	287.1	560.905	872.2	558.205	275.6	556.355	68.27	556.405	73.31 *
9	556.045	32.50	558.315	296.2	561.865	1157 *	558.105	255.9	556.685	87.08 *	556.205	54.17
10	556.035	32.27	557.835	227.8 *	561.025	901.4	558.565	345.9	556.775	103.2	556.205	56.90
11	556.005	30.58	557.985	225.2	560.335	735.7	557.855	230.8 *	556.835	108.4	556.215	57.43
12	555.875	25.64 *	558.365	307.2	559.595	565.8	557.605	175.6	557.035	126.8	556.305	64.26
13	555.885	24.51	558.475	329.7	559.975	651.9	557.765	200.7	556.875	112.2	556.305	63.88 *
14	555.885	24.90	558.645	361.1	559.965	638.5 *	558.075	250.3	557.745	196.1	556.335	66.59
15	555.875	23.32	560.405	752.5	558.655	363.7 *	558.125	259.3	558.445	320.7	556.295	63.52
16	555.875	24.09	561.325	976.8	558.435	320.4	557.905	222.2	558.125	272.6 *	556.295	62.19
17	555.865	23.08	561.245	972.6 *	557.645	187.9	556.955	119.2	557.925	224.3	556.265	61.19
18	555.865	23.22	560.635	806.4	556.995	123.1	556.945	113.6 *	557.665	184.5	556.235	59.07
19	555.865	25.09 *	560.775	841.7	556.935	117.7	556.995	123.1	556.955	119.2	556.225	58.17
20	555.875	23.77	559.235	487.1	556.945	118.6	556.985	122.0	556.955	119.2	556.225	56.78 *
21	555.875	23.75	557.635	186.8	556.945	113.6 *	556.985	122.0	557.045	127.5	556.215	57.45
22	555.885	24.00	556.855	110.7	556.955	119.2	556.995	123.1	557.025	125.7	556.215	57.45
23	555.905	25.60	556.895	114.0	556.995	123.1	556.985	122.0	556.785	96.90 *	556.235	59.07
24	555.905	25.70	556.875	106.1 *	557.225	144.9	556.915	116.1	556.755	93.91 *	556.295	63.52
25	555.915	25.83	557.025	125.6	557.915	223.8	556.395	61.32 *	556.615	89.69	556.295	63.52
26	555.905	25.62 *	557.735	197.6	558.225	279.2	556.365	68.96	556.605	88.87	556.285	62.82
27	555.915	25.69	558.585	349.4	558.695	371.6	556.215	57.43	556.565	85.56	556.275	61.18 *
28	555.905	25.62	559.055	447.2	557.985	250.5 *	556.245	59.76	556.325	65.91	556.255	60.46
29	555.895	25.03	557.815	206.3	557.905	222.5	556.235	58.94	556.295	63.57	556.255	60.46
30	555.895	25.01	557.195	141.5	557.265	149.0	556.235	58.94	556.285	52.62 *	556.245	59.79
31			557.005	120.2 *	558.095	267.8 *			556.285	62.77		
Ten-Daily Mean												
I Ten-Daily	555.970	29.08	557.070	144.0	559.160	528.9	558.349	307.3	556.530	79.97	556.400	72.29
II Ten-Daily	555.887	24.82	559.709	606.0	558.548	382.3	557.521	181.7	557.456	178.4	556.270	61.31
III Ten-Daily	555.901	25.41	557.516	191.4	557.655	205.9	556.557	84.86	556.599	86.65	556.257	60.57
Monthly												
Min.	555.865	23.08	555.895	24.98	556.935	113.6	556.215	57.43	556.285	52.62	556.205	54.17
Max.	556.055	32.78	561.325	976.8	561.865	1157	559.005	437.2	558.445	320.7	556.705	97.38
Mean	555.919	26.44	558.080	309.9	558.429	367	557.476	191.3	556.853	114.1	556.309	64.72

Annual Runoff in MCM = 3832 Annual Runoff in mm = 1282

Peak Observed Discharge = 976.8 cumecs on 16-07-2022 Corres. Water Level :561.325 m

Lowest Observed Discharge = 23.08 cumecs on 17-06-2022 Corres. Water Level :555.865 m

Stage-Discharge Data for the period 2022 - 2023

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	556.235	68.20	555.855	29.05 *	556.595	91.06	556.305	67.09	556.175	56.99	556.795	108.0
2	556.235	59.07	555.865	31.82	556.525	85.10	556.195	58.49	556.175	52.54 *	556.795	108.0
3	556.225	58.17	555.875	32.16	556.545	86.71	556.135	53.99	556.155	55.47	556.705	100.2
4	556.225	56.78 *	555.865	30.67	556.595	91.06	556.105	51.69	556.155	50.89 *	556.575	89.40
5	556.215	57.45	555.845	30.70	556.655	99.48 *	556.125	48.45 *	556.165	56.28	556.495	82.30 *
6	556.055	35.74	555.865	31.88	556.695	99.46	556.175	57.07	556.165	56.28	556.475	81.11
7	555.995	31.08	555.865	33.03	556.675	97.49	556.165	56.38	556.175	52.54 *	556.545	87.50 *
8	555.995	30.68	555.965	36.40 *	556.485	81.98	556.165	56.38	556.185	57.73	556.565	88.52
9	555.975	28.33	555.925	33.15	556.305	67.09	556.236	61.70	556.185	53.37 *	556.565	88.52
10	555.975	28.59	555.925	33.22	556.305	67.09	556.235	61.70	556.185	57.73	556.635	94.21
11	556.035	41.47 *	555.945	33.90	556.275	64.62	556.265	63.90	556.175	56.99	556.745	103.7
12	556.035	32.48	556.015	40.08	556.275	61.18 *	556.275	61.18 *	556.175	56.99	556.365	72.16
13	556.045	33.14	556.015	39.97	556.275	64.62	557.045	131.3	556.185	57.73	556.365	72.16
14	556.045	32.72	556.005	39.26	556.315	67.79	557.035	130.3	556.185	53.37 *	556.305	63.88 *
15	556.025	31.13	556.005	39.26 *	556.295	66.16	556.975	124.9	556.175	56.99	556.205	59.36
16	556.015	30.85	556.025	41.53	556.285	65.45	557.005	127.6	556.175	52.54 *	556.205	59.36
17	556.015	30.54	556.285	65.50	556.285	65.45	556.975	124.9	556.175	56.99	556.175	56.99
18	556.015	39.99 *	556.355	71.40	556.275	64.72	556.975	124.9	556.155	55.47	556.165	56.28
19	556.005	30.21	556.355	71.40	556.275	61.18 *	557.015	143.6 *	556.165	56.28	556.165	56.28
20	555.995	29.28	556.325	68.55	556.265	64.01	557.015	128.5	556.165	56.28	556.155	55.54
21	555.985	32.51	556.325	68.55	556.265	64.01	556.875	115.8	556.255	63.17	556.155	50.89 *
22	556.025	35.62	556.385	71.38 *	556.305	67.09	556.495	82.30 *	556.265	60.29 *	556.105	51.79
23	556.025	35.40	556.455	79.51	556.305	67.09	556.395	74.56	556.265	60.29 *	556.185	57.73
24	556.015	35.10	556.415	73.24	556.295	66.16	556.395	74.56	556.235	61.70	556.405	75.50
25	556.015	39.99 *	556.345	70.22	556.295	66.16	556.365	71.50	556.235	61.70	556.405	75.51
26	555.985	32.27	556.345	67.58 *	556.275	61.18 *	556.275	61.18 *	556.205	59.36	556.195	58.62
27	555.965	31.58	556.335	69.28	556.265	64.01	556.205	59.36	556.295	66.24	555.985	35.93
28	555.965	31.92	556.465	80.34	556.265	64.01	556.205	59.36	556.675	97.70	555.985	37.82 *
29	555.875	32.10	556.535	86.45 *			556.155	55.54	556.765	105.4	555.995	36.80
30	555.875	32.18	556.575	89.53			556.155	55.54	556.725	107.5 *	555.995	37.08
31	555.855	31.67	556.575	89.53			556.185	57.73			555.975	36.00
Ten-Daily Mean												
I Ten-Daily	556.113	45.41	555.885	32.21	556.538	86.65	556.184	57.29	556.172	54.98	556.615	92.78
II Ten-Daily	556.023	33.18	556.133	51.09	556.282	64.52	556.858	116.1	556.173	55.96	556.285	65.58
III Ten-Daily	555.962	33.67	556.432	76.87	556.284	64.96	556.337	69.76	556.392	74.34	556.126	50.33
Monthly												
Min.	555.855	28.33	555.845	29.05	556.265	61.18	556.105	48.45	556.155	50.89	555.975	35.93
Max.	556.235	68.20	556.575	89.53	556.695	99.48	557.045	143.6	556.765	107.5	556.795	108.0
Mean	556.031	37.3	556.159	54.15	556.374	72.55	556.456	80.69	556.246	61.76	556.335	68.94

Peak Computed Discharge = 1157 cumecs on 09-08-2022

Corres. Water Level :561.865 m

Lowest Computed Discharge = 25.09 cumecs on 19-06-2022

Corres. Water Level :555.865 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 : 2022-2023

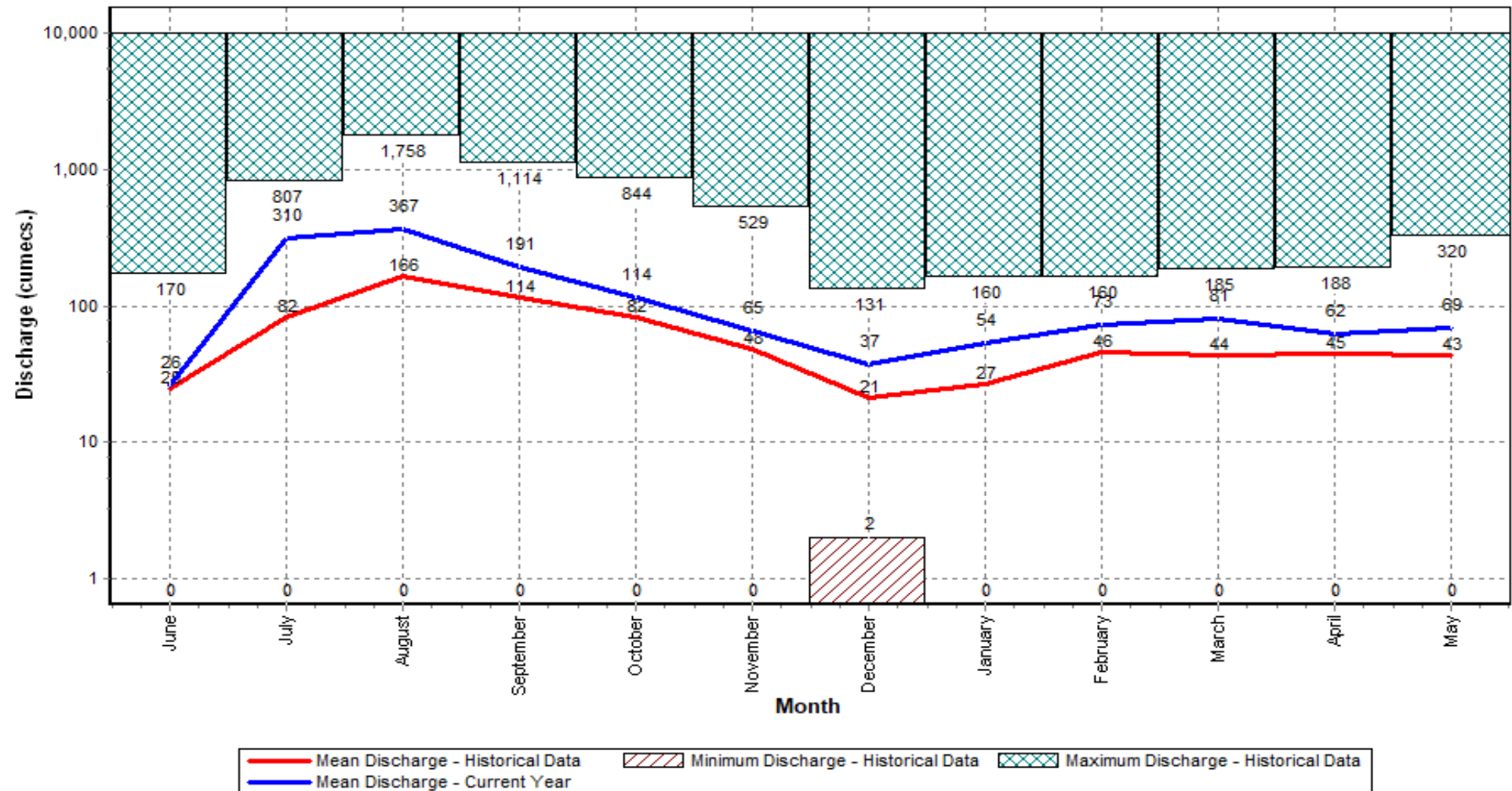
Station Name : HOLEHONNUR (AKLE0A4)

Data considered : 2004-2023

Division : Cauvery Division, Bangalore

Local River : Bhadra

Sub-Division : Upper Tunga Subdn, Davanagere



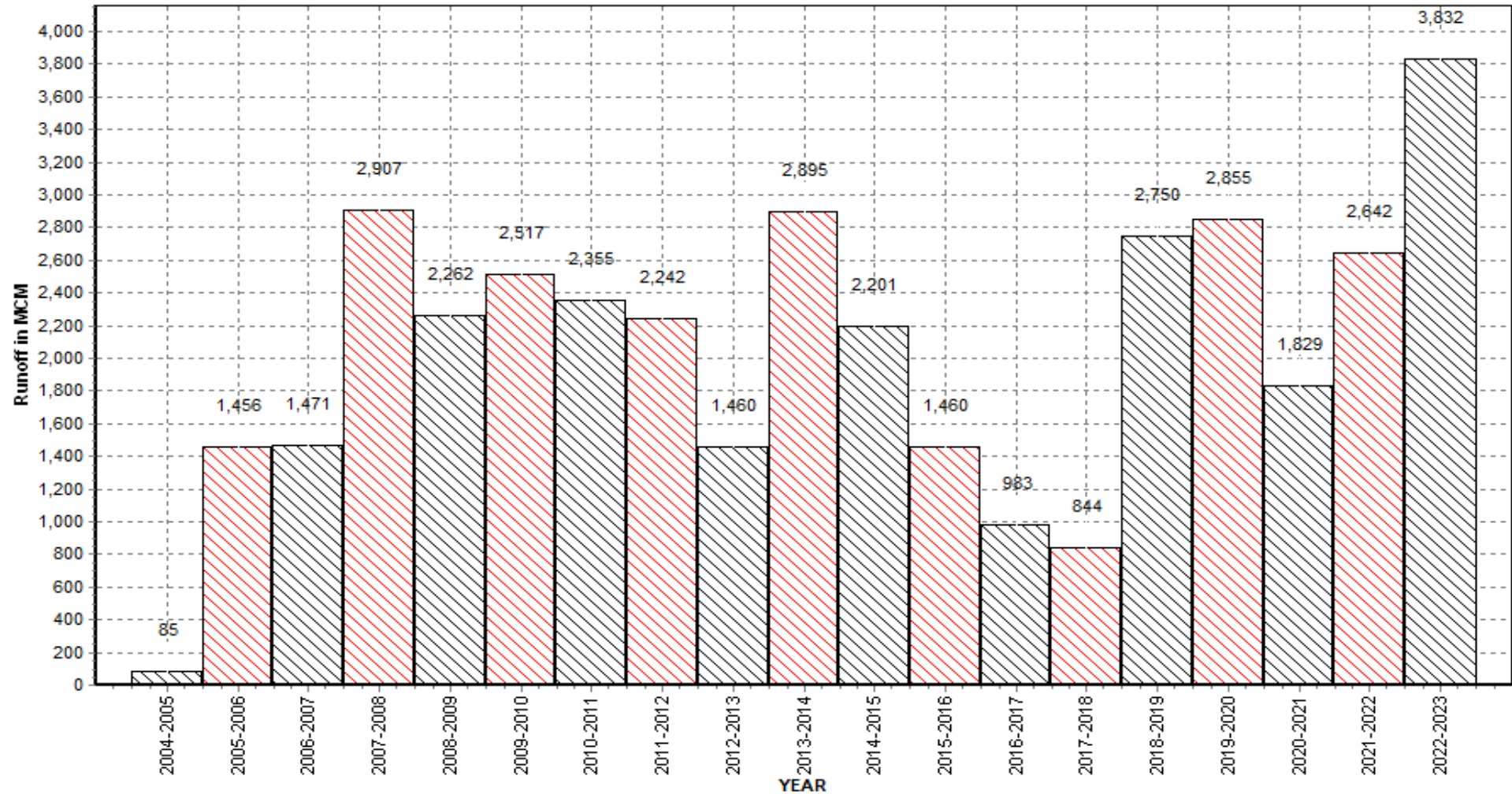
Annual Runoff Values for the period: 2004 - 2023

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

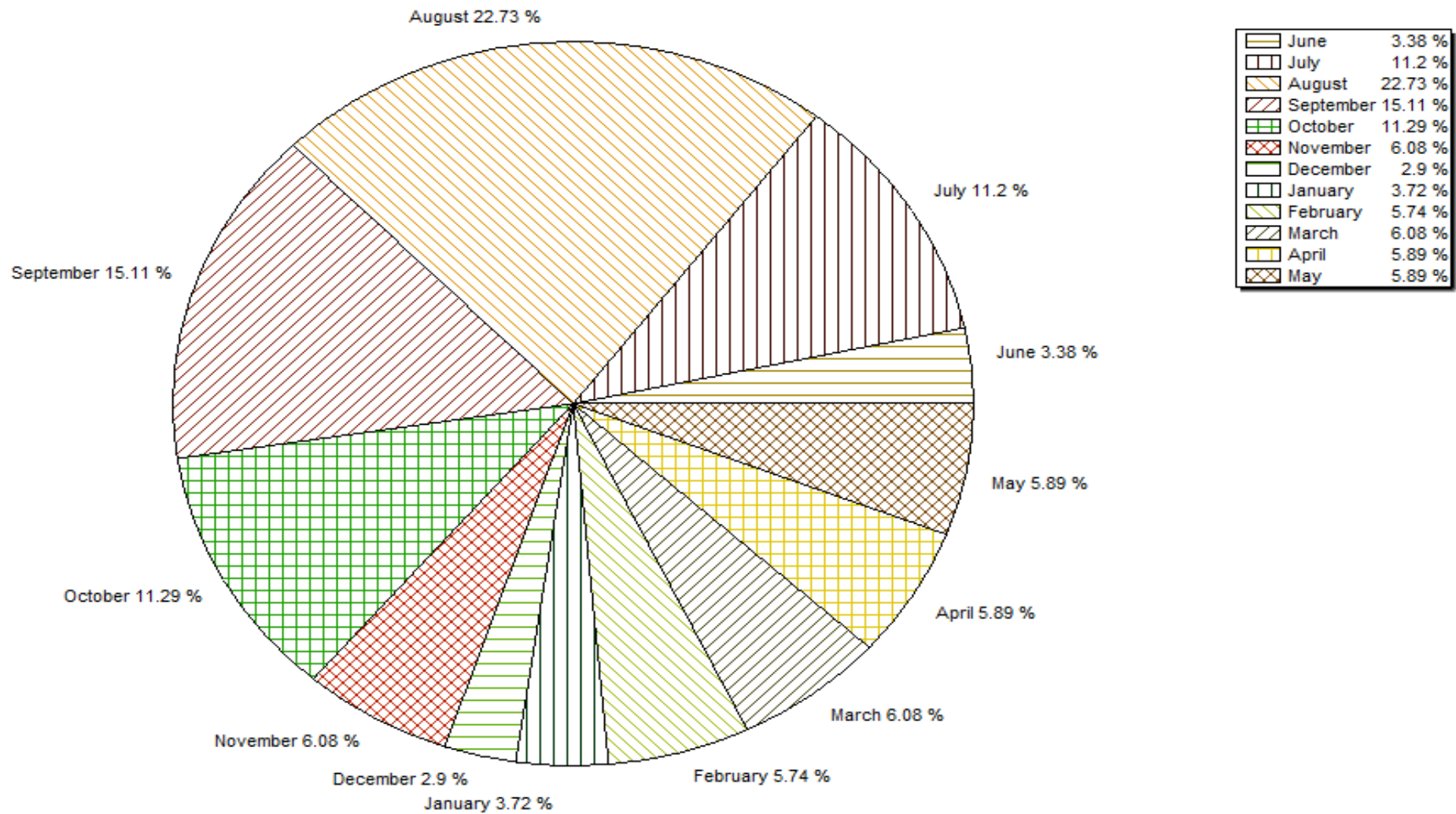
Monthly Average Runoff based on period : 2004-2022

Station Name : HOLEHONNUR (AKLE0A4)

Local River : Bhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Davanagere



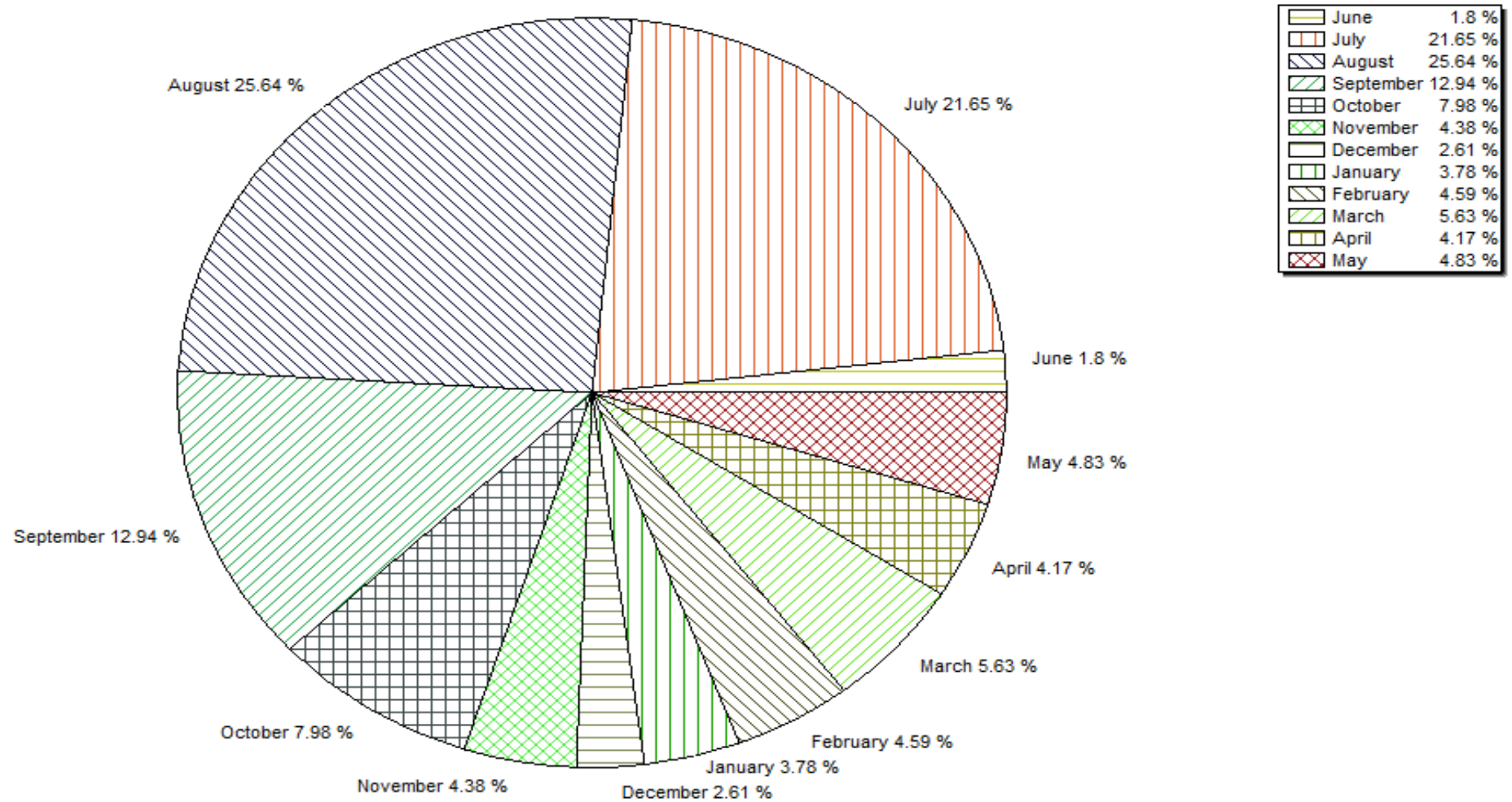
Monthly Runoff for the Year : 2022-2023

Station Name : HOLEHONNUR (AKLE0A4)

Local River : Bhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Davanagere



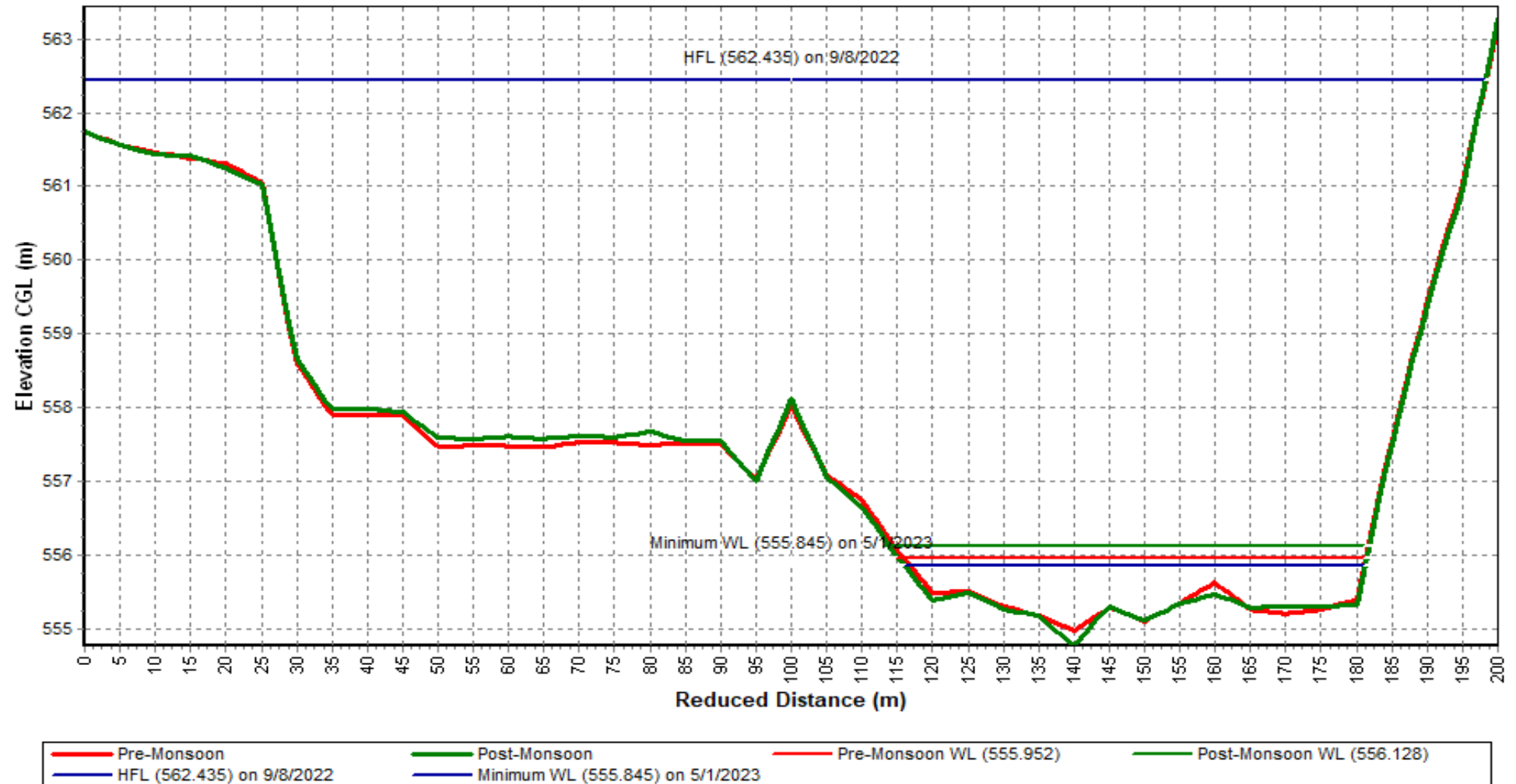
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : HOLEHONNUR (AKLE0A4)

Local River : Bhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Davanagere



Zero of the Gauge: 552.725 (m.s.l)

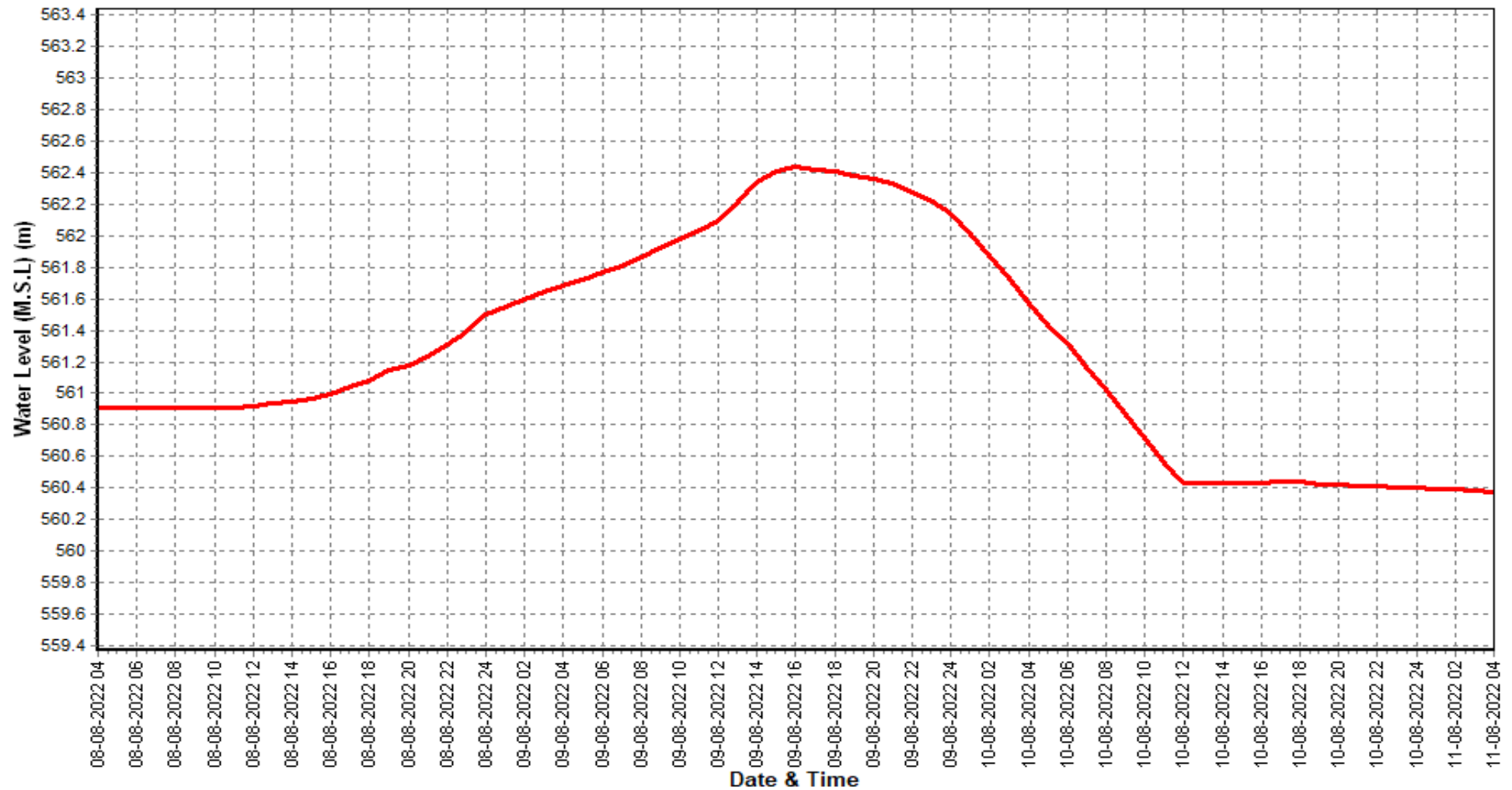
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : HOLEHONNUR (AKLE0A4)

Local River : Bhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Davanagere



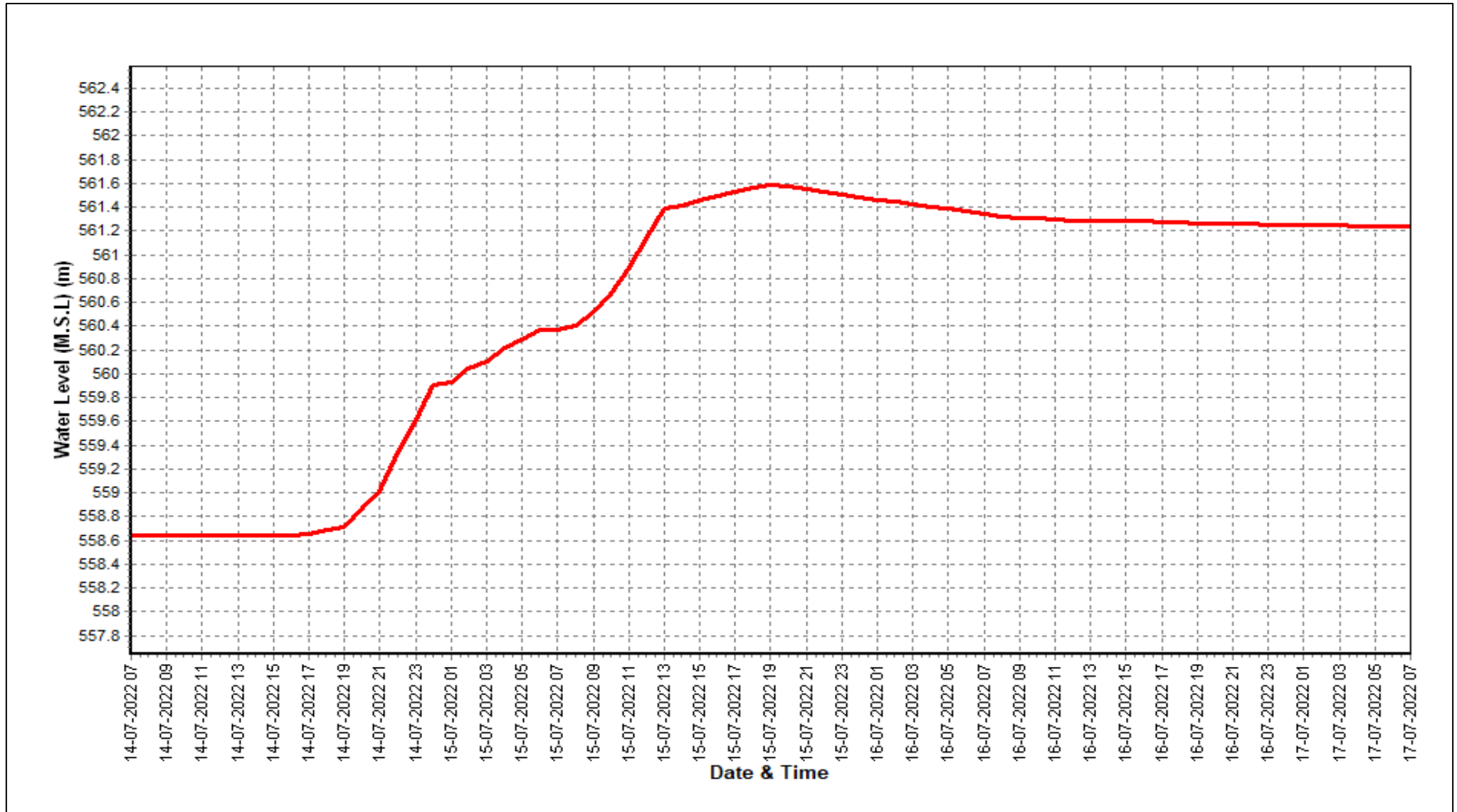
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : HOLEHONNUR (AKLE0A4)

Local River : Bhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Davanagere



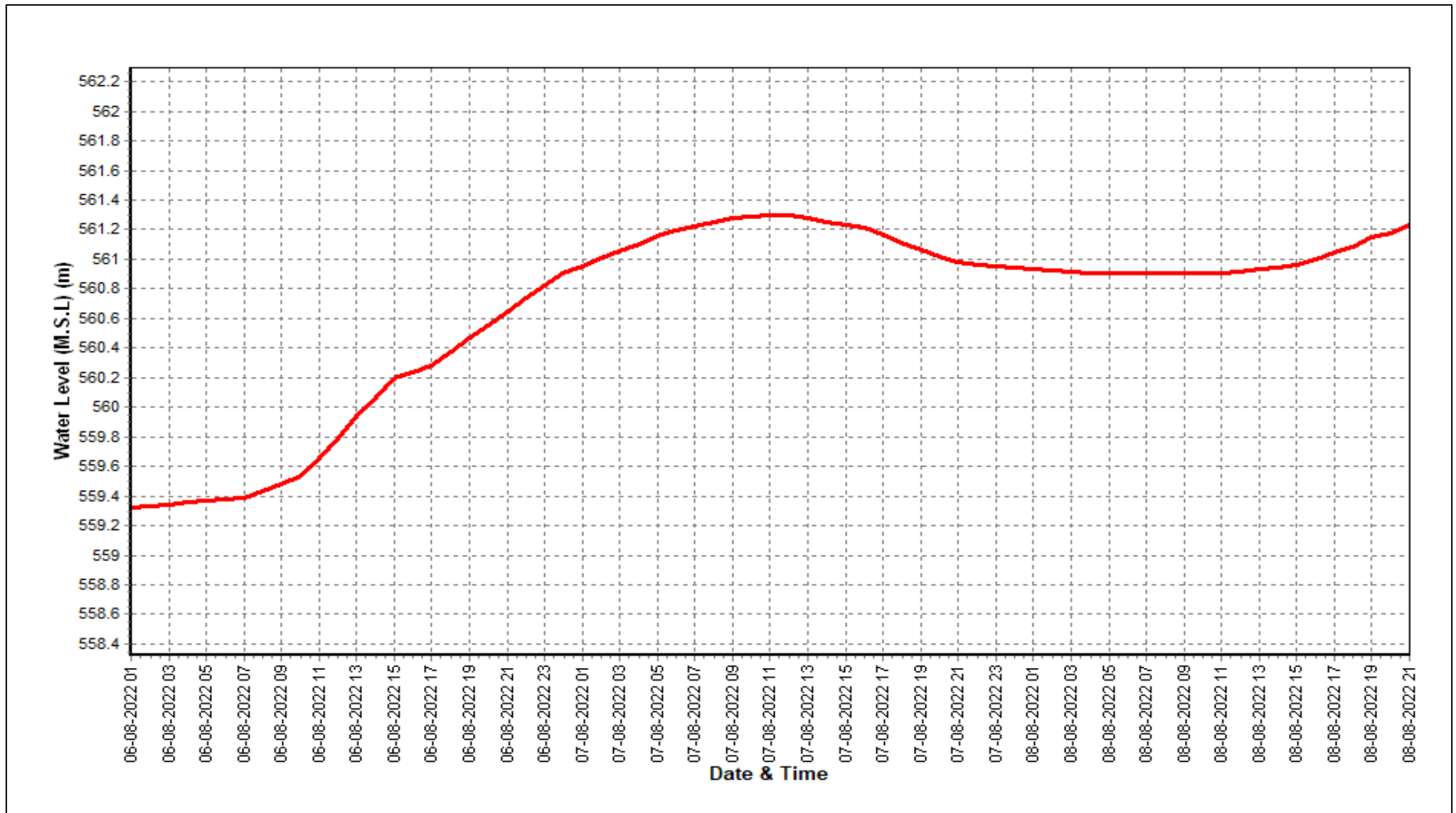
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : HOLEHONNUR (AKLE0A4)

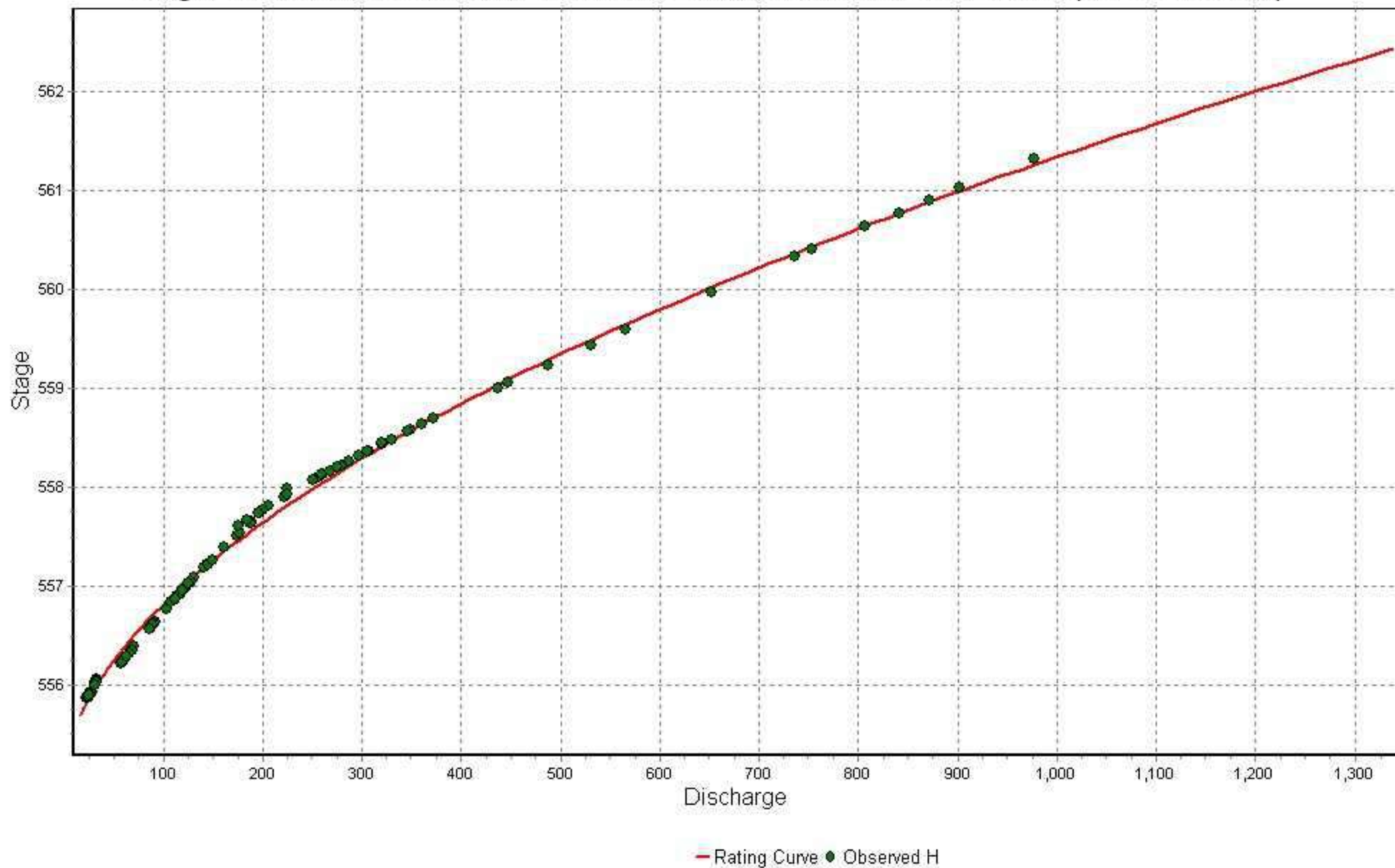
Local River : Bhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Davanagere



S-D curve of Holehonnur for the period from 01.06.2022 to 31.10.2022
Range:- 555.700 to 562.500, a= -555.025, b=1.827, c= 34.510, OSE= 8.026 (No. of data 126)



HISTORY SHEET

Water Year : 2022-2023

Site : LAKKAVALLI

Code : LAKKAVALLI

State : Karnataka

District : Shimoga

Basin : Krishna

Independent River : Krishna

Tributary : Tungabhadra

Sub Tributary :

Sub-Sub Tributary :

Local River : Bhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere

Drainage Area : 1975 Sq. Km.

Bank : Right

Latitude : 13°42'22"

Longitude : 75°38'42"

Zero of Gauge (m) : 85 (m.s.l)
603 (m.s.l)11-07-2016 - 29-02-2020
01-03-2020

Opening Date

Closing Date

Gauge : 11-07-2016

Discharge : 13-12-2018

Water Quality : 01-05-2019

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2019-2020	642.6	90.920	27-10-2019	3.156	86.810	30-06-2019
2020-2021	699.4	610.780	21-09-2020	0.000	604.020	20-05-2021
2021-2022	729.5	609.600	08-08-2021	0.000	604.030	30-06-2021

Annual Runoff of Krishna at Iakkavalli

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2018-2019		44	44	0	2	2
2	2019-2020	1047	332	1379	37	12	49
3	2020-2021	285	139	424	10	5	15
4	2021-2022	571	254	826	20	9	29
5	2022-2023	2077	252	2329	73	9	82
Average		995	204	1000	28	7	35

Instantaneous Flood Peak of Krishna at Lakkavalli					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2018-2019	87.990	24-01-2018	13:00:00	159 *
2	2019-2020	92.080	05-09-2019	15:00:00	834 *
3	2020-2021	612.870	21-09-2020	03:00:00	1056 *
4	2021-2022	609.620	07-08-2021	19:00:00	740 *
5	2022-2023	613.140	15-07-2022	15:00:00	1973 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : LAKKAVALLI (LAKKAVALLI)

Division : Cauvery Division, Bangalore

Local River : Bhadra

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	605.380	6.568	605.380	6.576	606.450	78.47	606.920	148.9	605.440	7.885	605.430	7.876
2	605.380	6.564	605.380	6.584	606.480	82.65	606.920	148.9	605.440	8.205 *	605.430	7.944
3	605.380	6.571	605.380	6.168 *	606.520	93.17	608.560	447.3	605.440	7.947	605.430	7.830
4	605.380	6.560	605.380	6.578	606.520	93.17	606.760	114.0 *	605.440	7.957	605.430	7.965
5	605.380	6.168 *	605.380	6.571	609.110	568.5	606.860	140.5	605.440	8.205 *	605.430	7.809
6	605.390	6.992	605.380	6.577	610.200	872.5	606.860	140.5	605.440	7.892	605.430	7.988 *
7	605.380	6.578	605.380	6.584	610.160	846.5 *	606.860	140.5	605.440	7.859	605.430	7.940
8	605.380	6.575	605.420	7.626	610.580	995.9	607.300	204.4	605.440	7.963	605.430	7.988 *
9	605.380	6.581	605.420	7.634	612.480	1687 *	606.920	148.9	605.440	8.205 *	605.430	7.884
10	605.380	6.582	605.420	7.496 *	609.110	568.5	606.920	148.9	605.440	7.885	605.430	7.907
11	605.380	6.579	605.420	7.643	608.820	504.2	606.920	134.1 *	606.100	36.77	605.430	7.923
12	605.380	6.168 *	605.450	7.946	609.650	693.3	606.920	148.9	606.100	36.77	605.430	7.944
13	605.380	6.579	605.450	7.976	609.580	677.1	606.920	148.9	607.340	212.1	605.430	7.988 *
14	605.380	6.591	606.100	36.81	608.980	522.4 *	606.920	148.9	607.340	212.1	605.430	7.921
15	605.380	6.573	612.650	1750	607.300	188.0 *	606.920	148.9	607.400	222.6	605.430	7.853
16	605.380	6.582	612.580	1718	607.300	204.4	606.460	79.52	607.420	206.7 *	605.430	7.821
17	605.380	6.480	611.960	1476 *	606.100	36.81	606.460	79.52	607.300	204.5	605.430	7.888
18	605.380	6.168 *	609.000	539.1	606.270	52.22	606.250	59.98 *	607.300	204.5	605.430	7.827
19	605.380	6.578	609.820	848.0	606.270	52.22	606.250	50.38	607.300	204.5	605.430	7.824
20	605.380	6.584	607.300	204.4	606.270	52.22	606.250	50.38	606.260	51.35	605.430	7.988 *
21	605.380	6.584	606.280	56.86	606.270	61.80 *	606.250	50.38	606.200	44.95	605.430	7.929
22	605.380	6.579	606.280	56.86	606.270	52.22	606.250	50.38	606.200	44.95	605.430	7.963
23	605.380	6.587	606.100	36.81	606.270	52.22	606.250	50.44	606.200	55.54 *	605.430	7.868
24	605.380	6.571	606.050	43.18 *	607.300	204.2	605.450	8.571 #	606.200	55.54 *	605.430	7.929
25	605.380	6.587	606.050	32.35	607.300	204.4	605.440	8.205 *	606.200	44.95	605.430	7.848
26	605.380	6.168 *	607.440	228.5	607.540	252.8	605.440	7.836	606.200	44.95	605.430	7.868
27	605.380	6.573	608.300	390.5	606.570	101.0	605.440	7.928	605.430	7.809	605.420	7.714 *
28	605.380	6.583	609.200	592.1	606.570	92.02 *	605.440	8.138	605.430	7.840	605.420	7.790
29	605.380	6.577	606.480	82.61	606.370	68.61	605.440	7.887	605.430	7.877	605.420	7.795
30	605.380	6.580	606.350	65.37	606.920	148.9	605.440	7.978	605.430	7.847 *	605.420	7.575
31			606.350	69.31 *	606.920	134.1 *			605.430	7.853		
Ten-Daily Mean												
I Ten-Daily	605.381	6.574	605.392	6.839	608.761	588.6	607.088	178.3	605.440	8.000	605.430	7.913
II Ten-Daily	605.380	6.488	608.573	659.6	607.654	298.3	606.627	104.9	606.986	159.2	605.430	7.898
III Ten-Daily	605.380	6.539	606.807	150.4	606.755	124.7	605.684	20.77	605.850	30.01	605.426	7.828
Monthly												
Min.	605.380	6.168	605.380	6.168	606.100	36.81	605.440	7.836	605.430	7.809	605.420	7.575
Max.	605.390	6.992	612.650	1750	612.480	1687	608.560	447.3	607.420	222.6	605.430	7.988
Mean	605.380	6.534	606.920	268.3	607.692	330.4	606.466	101.3	606.084	64.58	605.429	7.88

Annual Runoff in MCM = 2328 Annual Runoff in mm = 1179

Peak Observed Discharge = 1750 cumecs on 15-07-2022 Corres. Water Level :612.65 m

Lowest Observed Discharge = 5.485 cumecs on 31-05-2023 Corres. Water Level :605.31 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2022 - 2023

Station Name : LAKKAVALLI (LAKKAVALLI)

Division : Cauvery Division, Bangalore

Local River : Bhadra

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	605.420	7.627	605.420	7.714 *	606.340	61.00	605.310	6.143	605.410	7.484	606.140	36.08
2	605.420	7.724	605.420	7.729	606.340	61.00	605.410	6.566	605.410	7.445 *	606.140	36.08
3	605.420	7.711	605.420	7.735	606.340	61.00	605.410	6.572	605.410	7.478	606.140	36.08
4	605.420	7.714 *	605.420	7.680	606.340	61.00	605.410	6.580	605.410	7.445 *	606.070	32.99
5	605.420	7.658	605.420	7.653	606.340	56.24 *	605.410	7.445 *	605.410	7.482	606.070	36.92 *
6	605.420	7.677	605.420	7.633	606.340	61.00	605.410	6.669	605.410	7.470	606.070	32.99
7	605.420	7.609	605.700	15.99	606.340	61.00	605.410	6.690	605.410	7.445 *	606.070	36.92 *
8	605.420	7.687	605.420	7.714 *	605.430	7.879	605.410	6.674	605.410	7.447	606.070	32.99
9	605.420	7.634	605.420	7.676	605.430	7.929	605.410	6.664	605.410	7.445 *	606.070	32.99
10	605.420	7.652	605.420	7.699	605.430	7.890	605.410	6.680	605.410	7.458	606.070	32.99
11	605.420	7.714 *	605.420	7.710	605.430	7.904	605.410	6.662	605.410	7.497	606.070	32.99
12	605.420	7.663	605.420	7.730	605.430	7.988 *	606.310	53.87 *	605.410	7.489	605.430	7.744
13	605.420	7.587	605.420	7.626	605.430	7.587	606.760	117.2	605.410	7.461	605.430	7.830
14	605.420	7.610	605.420	7.675	605.430	7.866	606.760	117.2	605.410	7.445 *	605.430	7.988 *
15	605.420	7.634	605.420	7.714 *	605.430	7.699	606.080	34.09	605.410	7.487	605.430	7.835
16	605.420	7.646	605.420	7.652	605.430	7.902	606.390	64.15	605.410	7.445 *	605.410	7.447
17	605.420	7.690	605.420	7.679	605.430	7.911	606.390	64.15	605.400	7.369	605.410	7.467
18	605.420	7.714 *	605.420	7.663	605.430	7.950	606.390	64.15	605.400	7.365	605.410	7.457
19	605.420	7.614	605.420	7.690	605.430	7.988 *	606.390	60.30 *	605.400	7.357	605.410	7.459
20	605.420	7.685	605.420	7.626	605.430	7.893	606.390	64.15	605.400	7.341	605.410	7.461
21	605.420	7.672	605.420	7.704	605.430	7.860	606.100	35.89	605.400	7.351	605.410	7.445 *
22	605.420	7.640	605.420	7.714 *	605.310	5.911	605.410	7.445 *	605.390	6.923 *	605.410	7.466
23	605.420	7.705	605.420	7.709	605.310	6.078	605.410	7.468	605.390	6.923 *	605.410	7.484
24	605.420	7.711	605.420	7.689	605.310	6.120	605.410	7.509	605.390	7.010	605.410	7.482
25	605.420	7.714 *	605.420	7.666	605.310	6.168	605.410	7.489	605.390	7.024	605.410	7.564
26	605.420	7.679	605.420	7.714 *	605.310	5.036 *	605.410	7.445 *	605.390	7.030	605.410	7.454
27	605.420	7.696	605.420	7.656	605.310	6.110	605.410	7.506	606.460	75.01	605.410	7.479
28	605.420	7.679	605.920	27.10	605.310	6.169	605.410	7.517	606.460	75.01	605.410	7.445 *
29	605.420	7.624	605.960	30.29 *			605.410	7.496	606.140	36.08	605.310	5.607
30	605.420	7.694	605.960	30.74			605.410	7.493	606.140	41.51 *	605.310	5.687
31	605.420	7.643	605.960	30.74			605.410	7.466			605.310	5.485
Ten-Daily Mean												
I Ten-Daily	605.420	7.669	605.448	8.522	606.067	44.59	605.400	6.668	605.410	7.460	606.091	34.71
II Ten-Daily	605.420	7.656	605.420	7.676	605.430	7.869	606.327	64.60	605.406	7.426	605.484	10.17
III Ten-Daily	605.420	7.678	605.613	15.70	605.325	6.182	605.473	10.07	605.755	26.99	605.383	6.964
Monthly												
Min.	605.420	7.587	605.420	7.626	605.310	5.036	605.310	6.143	605.390	6.923	605.310	5.485
Max.	605.420	7.724	605.960	30.74	606.340	61.00	606.760	117.2	606.460	75.01	606.140	36.92
Mean	605.420	7.668	605.497	10.8	605.628	20.5	605.725	26.56	605.524	13.96	605.644	16.95

Peak Computed Discharge = 1687 cumecs on 09-08-2022

Corres. Water Level :612.48 m

Lowest Computed Discharge = 5.036 cumecs on 26-02-2023

Corres. Water Level :605.31 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

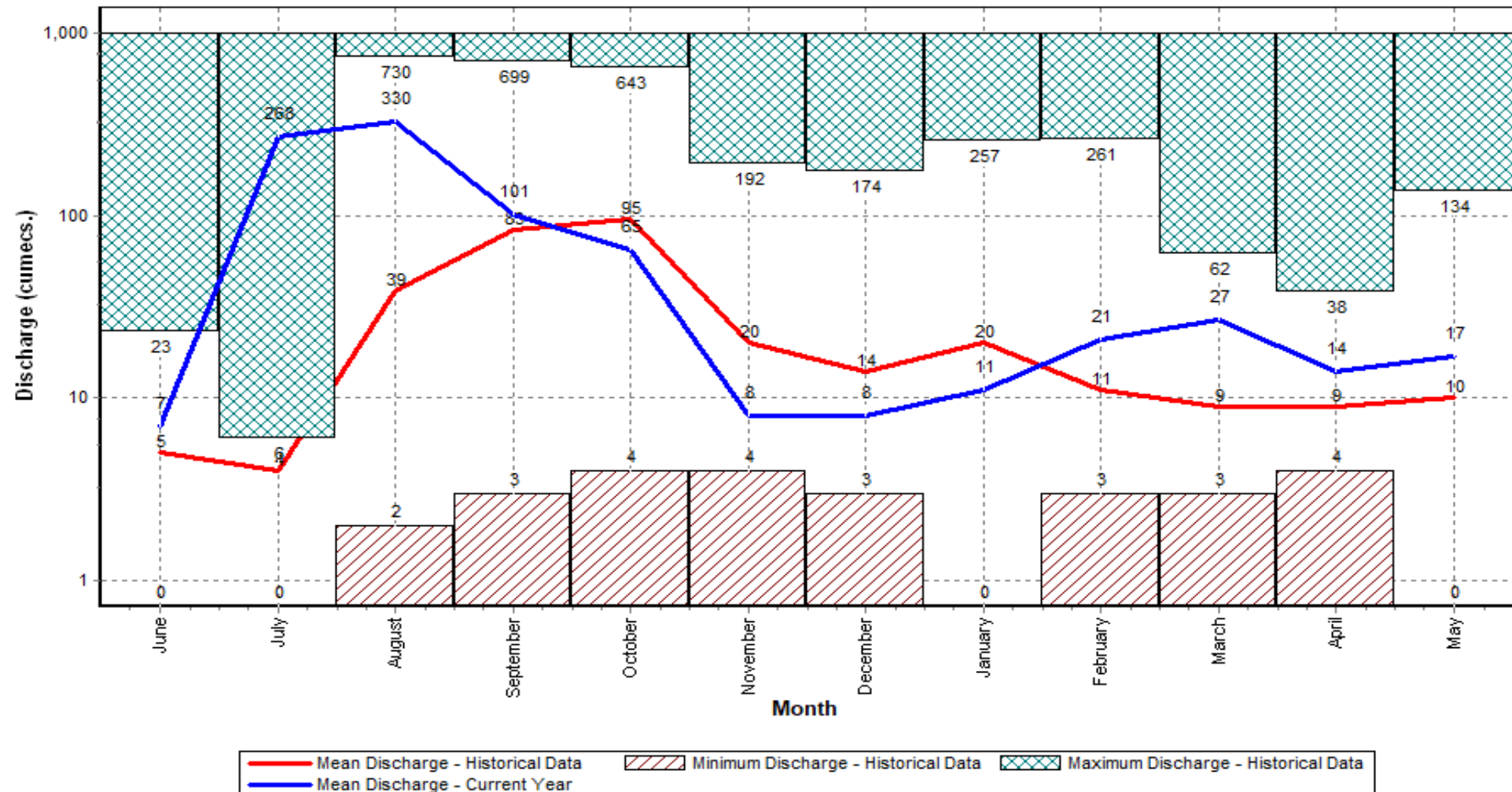
Station Name : LAKKAVALLI (LAKKAVALLI)

Data considered : 2019-2023

Division : Cauvery Division, Bangalore

Local River : Bhadra

Sub-Division : Upper Tunga SD, Devangere



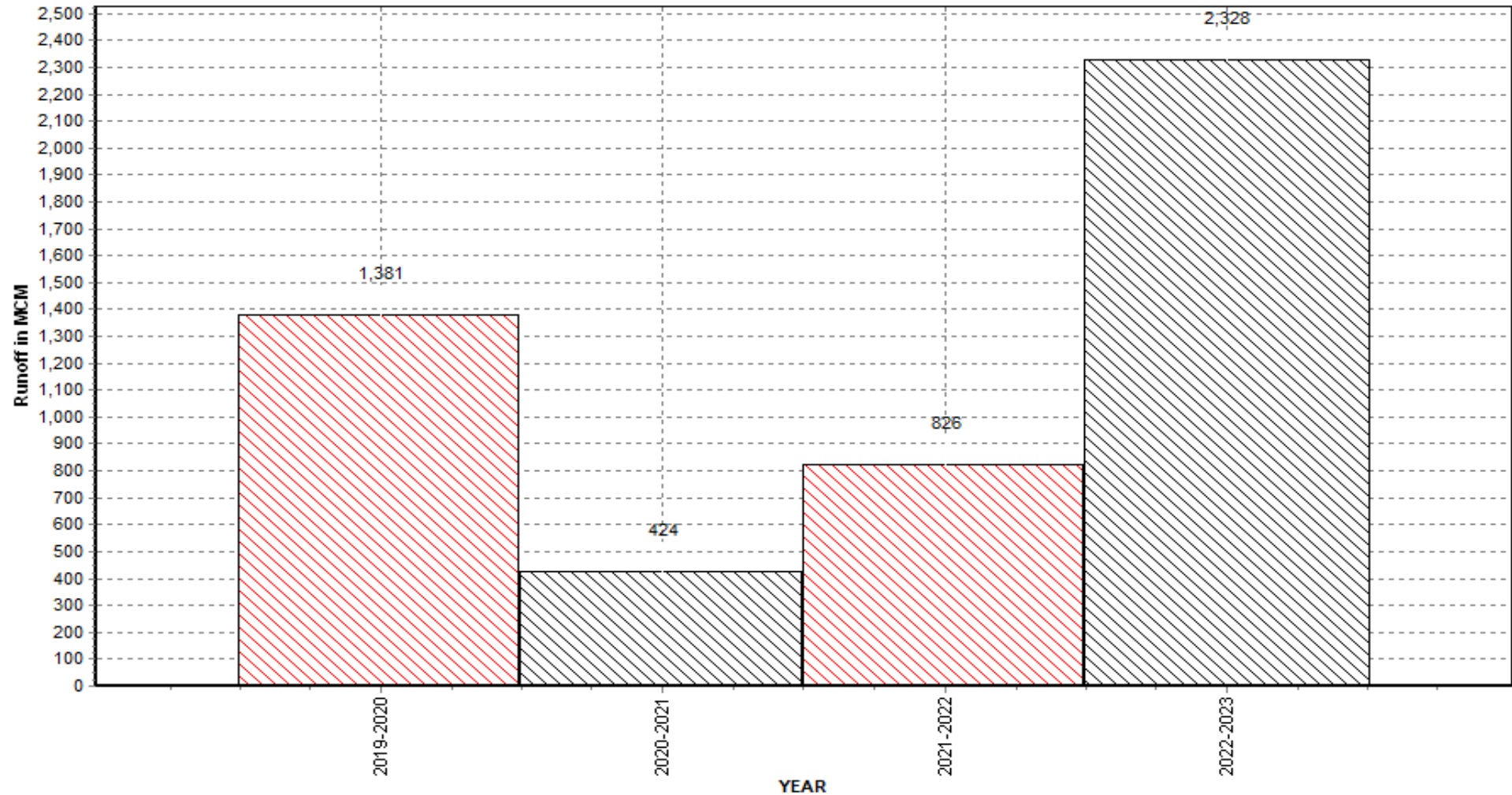
Annual Runoff Values for the period: 2019 - 2023

Station Name : LAKKAVALLI (LAKKAVALLI)

Local River : Bhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



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

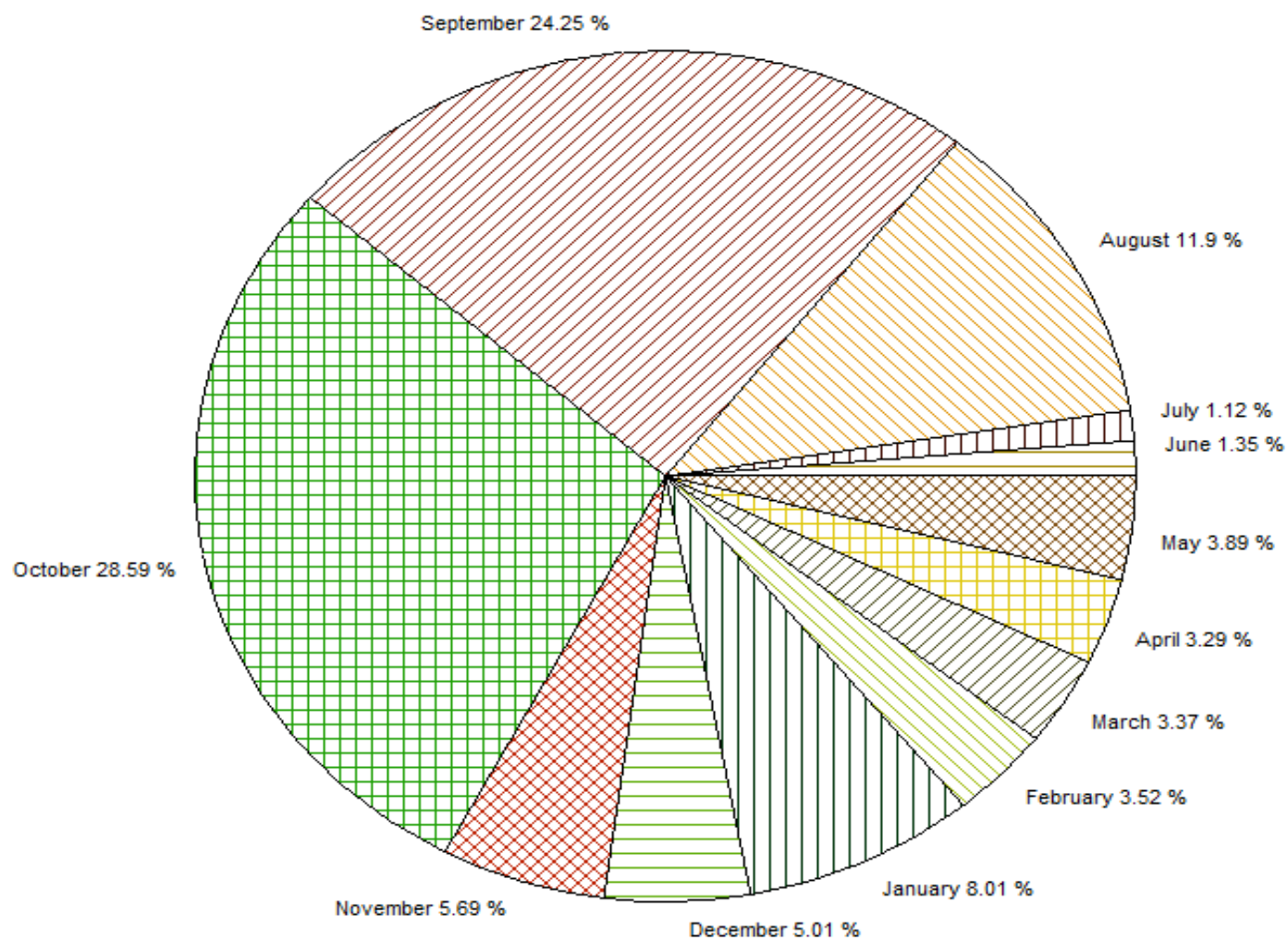
Monthly Average Runoff based on period : 2019-2022

Station Name : LAKKAVALLI (LAKKAVALLI)

Local River : Bhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



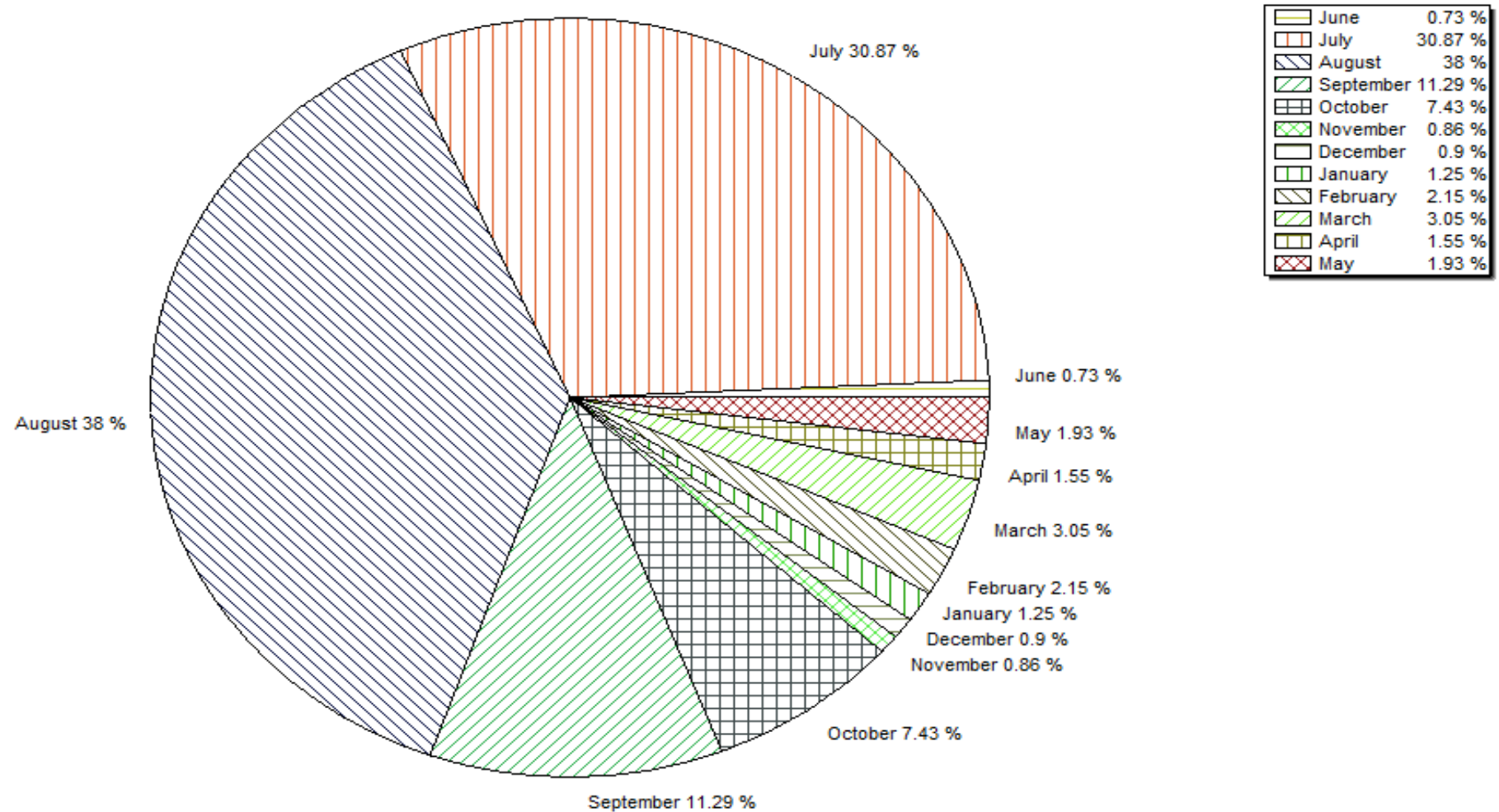
Monthly Runoff for the Year : 2022-2023

Station Name : LAKKAVALLI (LAKKAVALLI)

Local River : Bhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



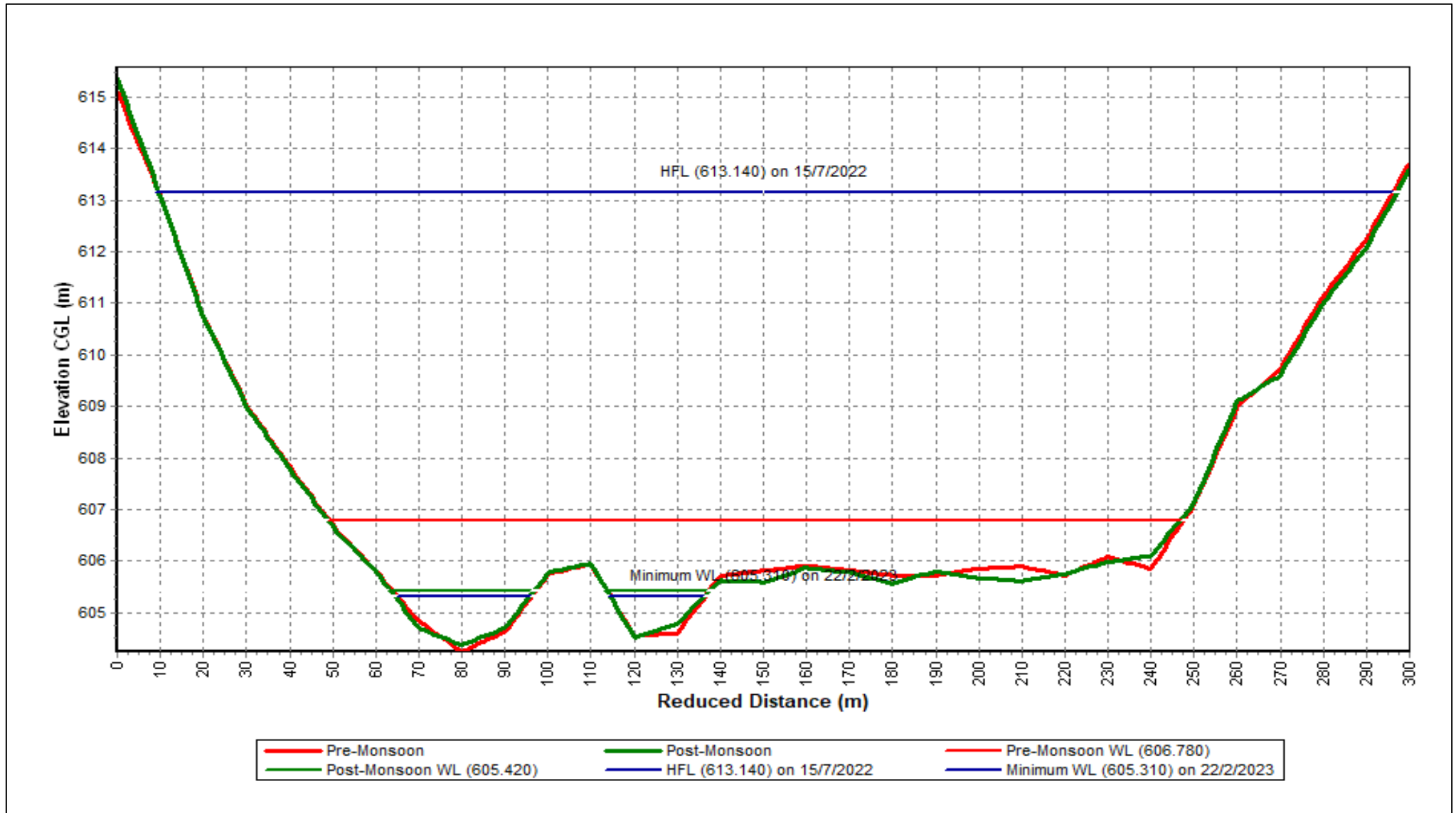
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : LAKKAVALLI (LAKKAVALLI)

Local River : Bhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



Zero of the Gauge:603 (m.s.l)

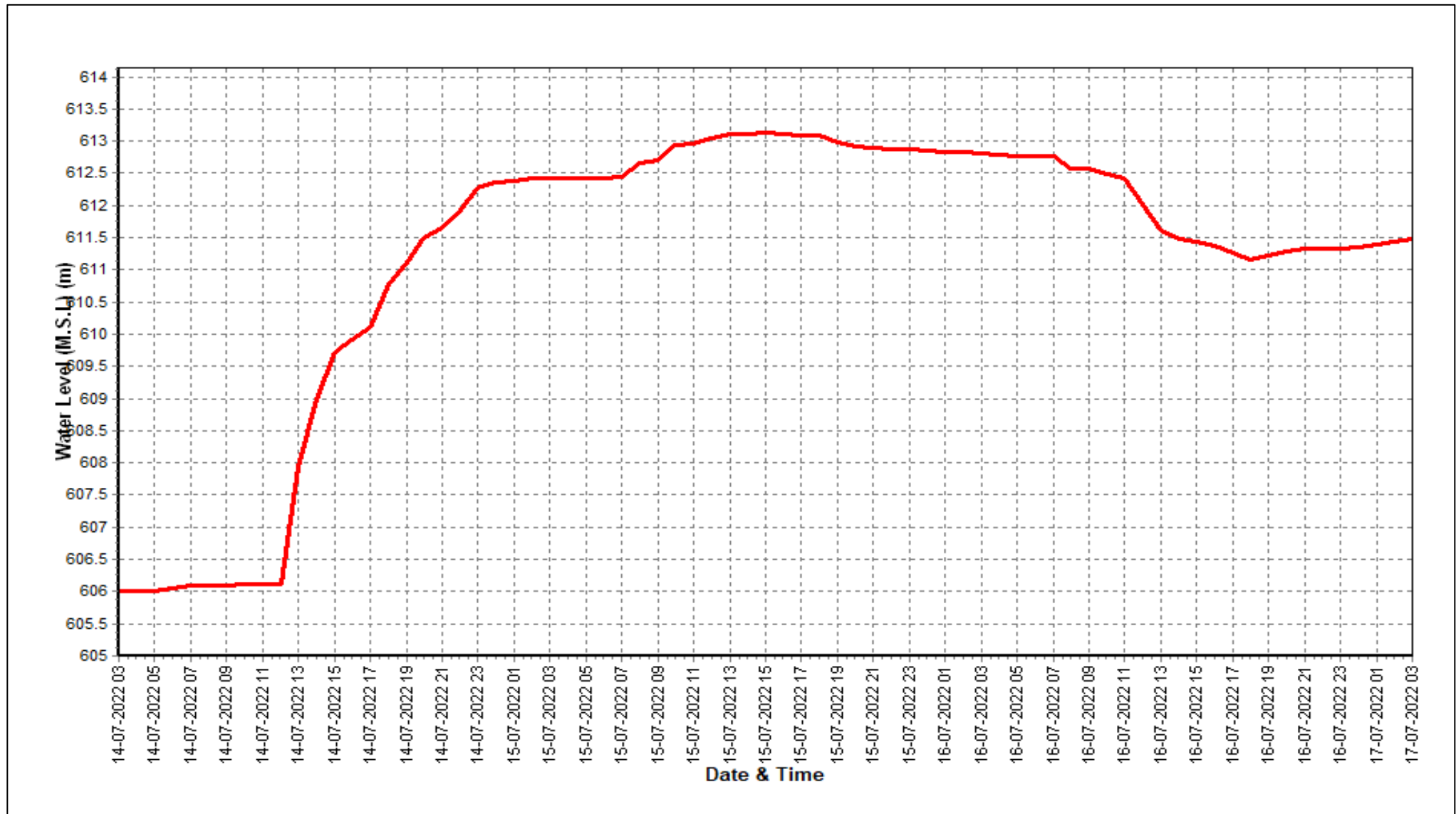
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : LAKKAVALLI (LAKKAVALLI)

Local River : Bhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



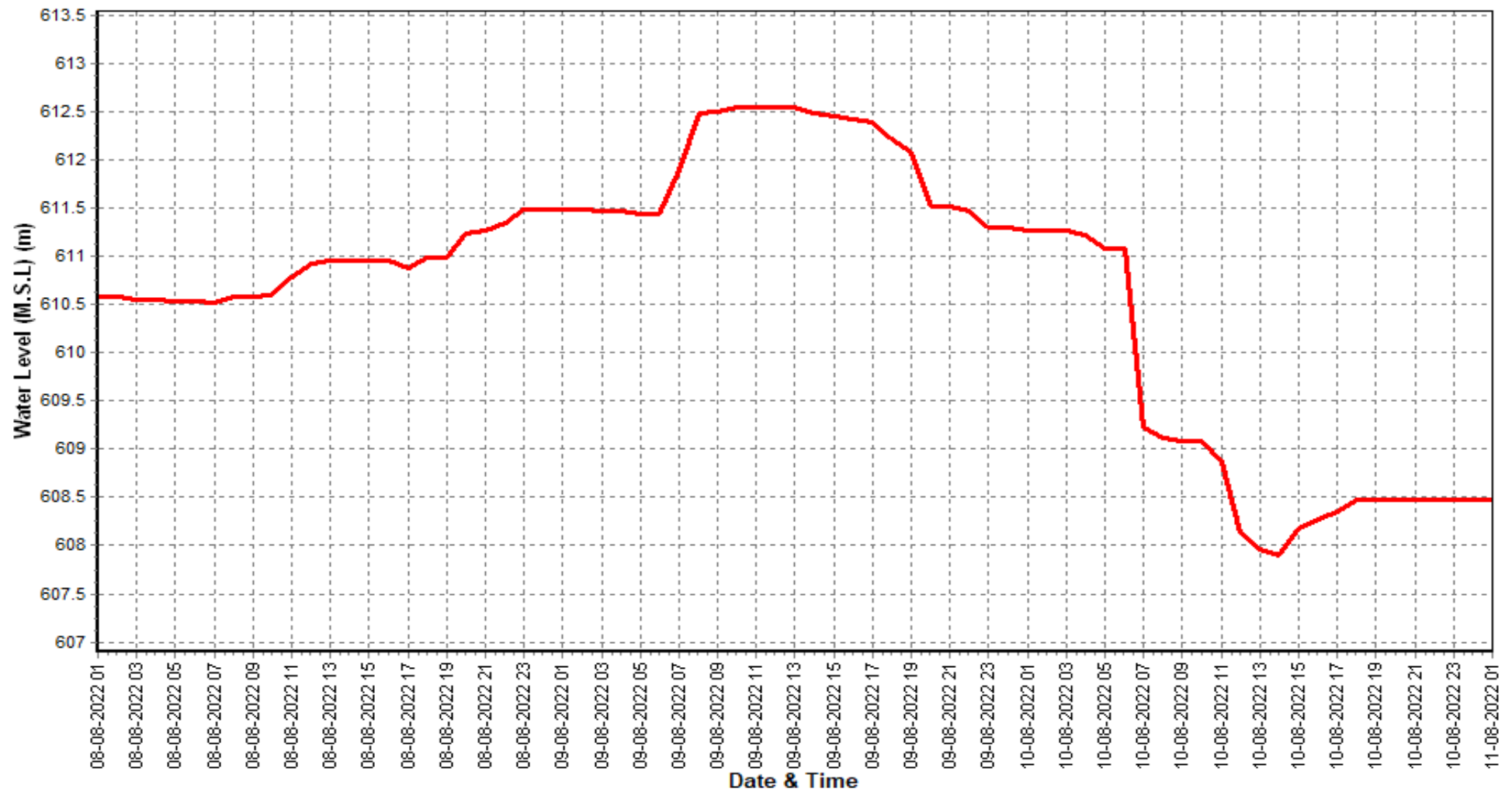
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : LAKKAVALLI (LAKKAVALLI)

Local River : Bhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



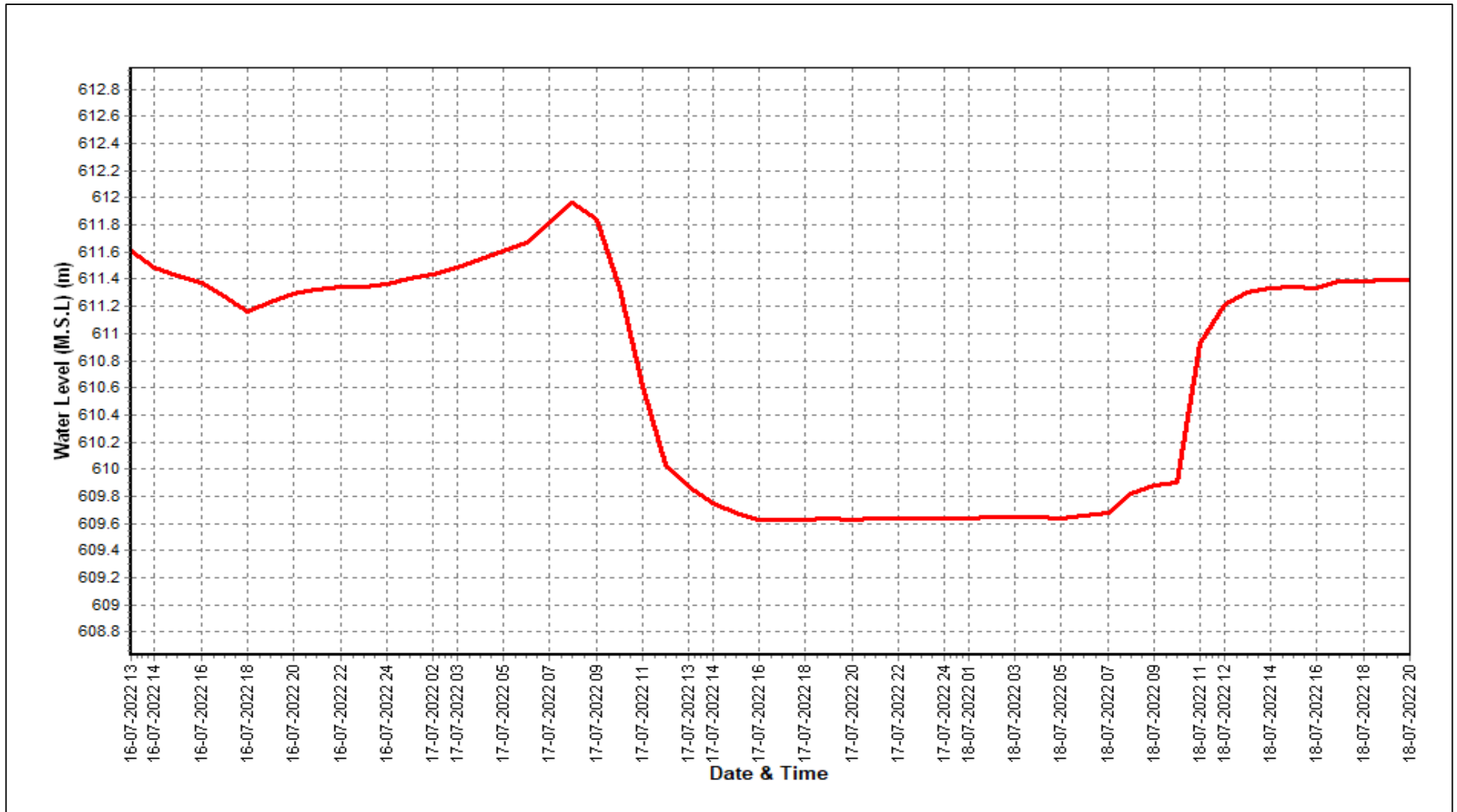
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : LAKKAVALLI (LAKKAVALLI)

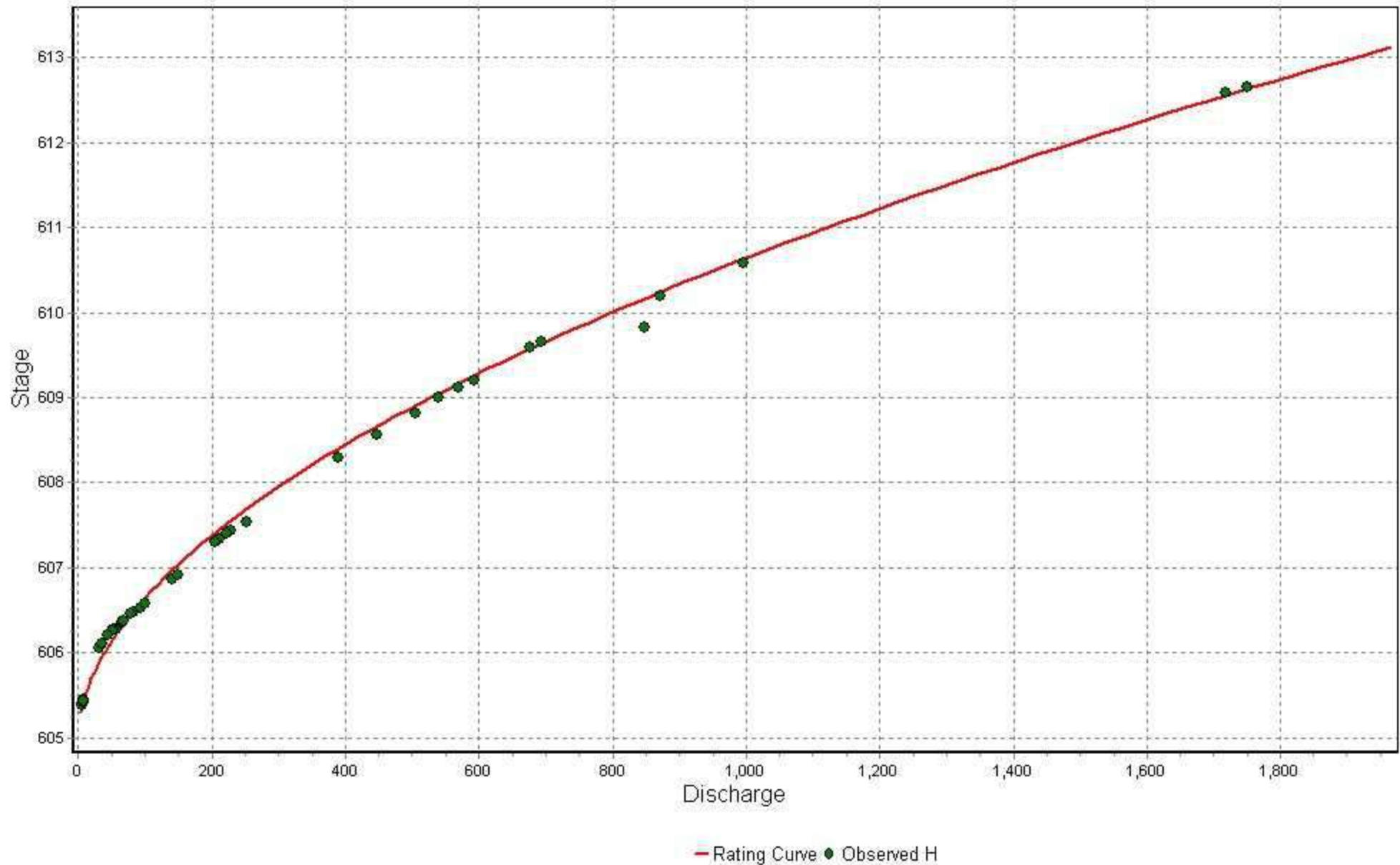
Local River : Bhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



S-D curve of site Lakkavalli for the period from 01.06.2022 to 31.10.2022
Range:- 605.300 to 612.200, a= -605.020, b=1.851, c= 40.89, OSE= 9.931 (No. of data 125)



HISTORY SHEET

Water Year : 2022-2023

Site : HARIHARAPURA

Code : HARIHARAPURA

State : Karnataka

District : Chikmagalur

Basin : Krishna

Independent River : Krishna

Tributary : Tungabhadra

Sub Tributary :

Sub-Sub Tributary :

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere

Drainage Area : 663 Sq. Km.

Bank : Left

Latitude : 13°31'20"

Longitude : 75°18'12"

Zero of Gauge (m) : 837 (m.s.l)
609.5 (m.s.l)29-10-2014 - 31-08-2019
01-09-2019

Opening Date

Closing Date

Gauge : 29-10-2014

Discharge : 14-12-2018

Water Quality : 01-05-2019

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2019-2020	1338	846.680	10-08-2019	6.844	611.920	19-04-2020
2020-2021	934.2	619.530	07-08-2020	7.790	611.710	10-04-2021
2021-2022	636.2	617.000	23-07-2021	7.277	611.590	19-03-2022

Annual Runoff of Krishna at Hariharapura

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2018-2019		249	249	0	9	9
2	2019-2020	1633	394	2027	58	14	72
3	2020-2021	1721	313	2033	61	11	72
4	2021-2022	2151	404	2556	76	14	90
5	2022-2023	3101	171	3272	110	6	116
Average		2151	306	2028	61	11	72

Instantaneous Flood Peak of Krishna at Hariharapura					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2018-2019	840.610	12-11-2018	08:00:00	128 *
2	2019-2020	847.200	10-08-2019	18:00:00	1439 *
3	2020-2021	619.820	07-08-2020	15:00:00	988 *
4	2021-2022	617.950	24-07-2021	15:00:00	836 *
5	2022-2023	618.220	10-07-2022	18:00:00	1050 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : HARIHARAPURA (HARIHARAPURA)

Division : Cauvery Division, Bangalore

Local River : Tunga

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	611.760	17.45	614.210	230.4	613.600	150.4	614.440	269.1	612.925	95.56	612.510	54.52
2	611.740	16.40	615.050	326.1	613.615	154.1	614.000	208.3	613.020	98.19 *	612.510	54.62
3	611.740	16.35	614.950	338.2 *	613.575	148.6	613.730	163.2	612.830	87.64	612.550	59.18
4	611.730	15.85	616.080	494.8	613.475	138.7	613.650	161.0 *	612.740	78.87	612.520	57.15
5	611.730	17.22 *	616.350	620.7	615.280	353.0	613.530	147.1	612.710	72.83 *	612.510	54.47
6	611.730	15.85	616.145	540.1	617.500	900.7	613.650	156.5	612.700	74.55	612.510	52.07 *
7	611.720	15.20	617.750	930.1	616.080	543.5 *	613.600	152.1	612.660	70.53	612.510	54.97
8	611.720	15.15	617.600	910.2	616.650	688.6	613.960	204.9	612.930	96.42	612.500	50.25 *
9	611.710	14.30	616.750	700.6	617.280	813.1 *	613.860	172.4	612.790	79.02 *	612.500	50.23
10	611.720	15.20	617.800	946.4 *	615.940	486.2	613.860	172.3	612.750	79.29	612.500	49.92
11	611.720	15.15	617.250	775.1	615.750	461.1	614.330	245.8 *	612.700	74.60	612.500	49.86
12	611.740	17.60 *	617.750	930.1	616.860	725.3	614.800	310.0	612.650	74.42	612.500	49.78
13	611.760	17.40	617.050	742.2	615.450	424.1	614.200	230.1	612.730	78.15	612.500	50.25 *
14	611.800	19.41	617.800	939.9	614.500	269.7 *	614.270	241.3	613.235	121.0	612.500	49.67
15	611.960	27.00	617.900	950.6	614.380	252.7 *	613.975	206.4	612.930	96.58	612.500	49.73
16	611.860	23.54	617.500	900.4	614.245	236.3	613.795	168.7	612.830	82.21 *	612.500	48.86
17	611.795	19.50	617.600	893.9 *	614.055	211.6	613.700	160.8	612.700	75.79	612.500	49.62
18	611.795	19.45	616.210	554.7	613.885	173.9	613.620	157.7 *	613.010	102.4	612.500	49.05
19	611.780	19.15 *	615.750	458.5	613.800	168.4	613.540	149.0	612.850	90.26	612.470	43.55
20	611.900	26.00	614.695	296.9	613.810	169.5	613.395	134.9	612.870	92.22	612.470	44.92 *
21	611.970	30.00	614.690	283.4	614.000	202.5 *	613.300	126.3	613.030	98.65	612.460	43.53
22	612.535	69.91	614.160	224.8	614.530	280.1	613.270	123.9	612.840	89.95	612.460	42.98
23	612.640	76.53	614.040	211.5	615.260	352.1	613.190	116.9	612.670	69.83 *	612.460	42.63
24	612.420	58.74	613.980	200.0 *	614.540	281.4	613.210	118.9	612.610	65.44 *	612.480	43.89
25	612.580	75.12	613.890	175.3	614.505	275.8	613.200	114.6 *	612.600	66.00	612.480	43.97
26	612.940	91.29 *	614.020	209.2	614.500	276.6	613.020	103.5	612.560	60.91	612.450	40.70
27	613.940	192.0	613.990	205.4	613.840	171.1	612.950	96.64	612.540	59.35	612.440	39.80 *
28	613.050	103.4	614.075	214.1	613.850	184.2 *	612.920	95.47	612.530	58.35	612.430	38.70
29	613.940	191.9	613.635	155.4	613.830	169.8	612.910	94.14	612.520	57.24	612.470	43.46
30	614.140	209.3	613.995	206.2	613.735	166.8	612.840	87.35	612.520	59.12 *	612.450	41.63
31			613.740	171.3 *	613.850	184.2 *			612.520	57.14		
Ten-Daily Mean												
I Ten-Daily	611.730	15.90	616.268	603.8	615.299	437.7	613.828	180.7	612.806	83.29	612.512	53.74
II Ten-Daily	611.811	20.42	616.951	744.2	614.673	309.3	613.963	200.5	612.851	88.77	612.494	48.53
III Ten-Daily	612.878	98.04	614.020	205.1	614.222	231.3	613.081	107.8	612.631	67.45	612.458	42.13
Monthly												
Min.	611.710	14.30	613.635	155.4	613.475	138.7	612.840	87.35	612.520	57.14	612.430	38.70
Max.	614.140	209.3	617.900	950.6	617.500	900.7	614.800	310.0	613.235	121.0	612.550	59.18
Mean	612.139	44.79	615.690	507.6	614.715	323	613.624	163	612.758	79.44	612.488	48.13

Annual Runoff in MCM = 3272 Annual Runoff in mm = 4936

Peak Observed Discharge = 950.6 cumecs on 15-07-2022 Corres. Water Level :617.9 m

Lowest Observed Discharge = 0.000 cumecs on 25-05-2023 Corres. Water Level :611.5 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 2022 - 2023

Station Name : HARIHARAPURA (HARIHARAPURA)

Division : Cauvery Division, Bangalore

Local River : Tunga

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	612.440	39.04	612.340	24.33 *	611.790	7.101	611.730	4.543	611.710	3.730	611.450	1.352
2	612.430	37.92	612.340	24.62	611.790	7.065	611.730	4.506	611.720	4.096 *	611.440	1.153
3	612.430	37.87	612.340	24.70	611.790	7.122	611.730	4.556	611.720	4.161	611.440	1.126
4	612.420	36.50 *	612.340	24.65	611.790	7.074	611.730	4.504	611.720	4.096 *	611.440	1.109
5	612.410	35.25	612.340	24.93	611.790	6.812 *	611.730	4.550 *	611.720	4.125	611.430	1.018
6	612.400	34.11	612.340	24.70	611.780	6.805	611.720	4.114	611.720	4.102	611.430	0.981
7	612.380	31.51	612.330	22.83	611.780	6.782	611.720	4.102	611.720	4.096 *	611.430	1.167 *
8	612.350	26.13	612.330	22.92 *	611.780	6.703	611.720	4.081	611.730	4.488	611.430	1.018
9	612.350	26.06	612.330	22.57	611.780	6.694	611.720	4.098	611.730	4.550 *	611.500	1.571
10	612.340	24.50	612.320	21.15	611.780	6.688	611.720	4.137	611.730	4.465	611.500	1.601
11	612.340	24.33 *	612.320	21.07	611.780	6.675	611.720	4.103	611.720	4.152	611.620	1.700
12	612.500	50.31	612.320	20.95	611.780	6.639 *	611.710	3.667 *	611.720	4.125	611.700	2.162 #
13	612.500	50.25	612.320	20.85	611.780	6.719	611.710	3.709	611.720	4.101	611.620	1.690
14	612.560	59.87	612.320	20.99	611.770	6.340	611.710	3.764	611.720	4.152	611.700	2.162 *
15	612.500	50.17	612.310	20.20 *	611.770	6.292	611.710	3.725	611.710	3.752	611.720	2.245 #
16	612.440	39.27	612.310	19.60	611.770	6.267	611.710	3.695	611.710	3.667 *	611.720	2.245 #
17	612.440	38.81	612.310	19.53	611.760	5.959	611.710	3.730	611.710	3.750	611.630	1.900
18	612.440	39.80 *	612.310	19.65	611.760	5.907	611.720	4.154	611.710	3.723	611.590	1.655
19	612.380	31.14	612.230	16.79	611.760	6.299 *	611.720	4.096 *	611.710	3.703	611.500	1.573
20	612.370	30.28	612.120	12.83	611.750	5.408	611.720	4.161	611.700	3.151	611.480	1.405
21	612.350	26.14	612.030	10.95	611.750	5.394	611.720	4.186	611.700	3.127	611.450	1.232 *
22	612.350	26.06	611.920	9.271 *	611.750	5.383	611.720	4.096 *	611.700	3.257 *	611.450	1.352
23	612.350	25.86	611.800	7.730	611.750	5.384	611.720	4.161	611.700	3.257 *	611.450	1.332
24	612.350	25.95	611.800	7.167	611.740	4.977	611.720	4.137	611.700	3.100	611.530	1.702
25	612.350	25.75 *	611.800	7.805	611.740	4.930	611.720	4.113	611.700	3.071	611.500	0.000
26	612.350	26.04	611.800	6.988 *	611.740	5.026 *	611.720	4.096 *	611.640	2.045	611.400	0.000
27	612.350	26.14	611.800	7.746	611.740	4.897	611.720	4.141	611.630	1.810	611.360	0.000
28	612.350	26.00	611.800	7.751	611.740	4.856	611.710	3.427	611.620	1.660	611.350	0.000
29	612.350	26.10	611.800	6.988 *			611.710	3.742	611.450	1.352	611.350	0.000
30	612.350	26.18	611.800	7.699			611.710	3.734	611.450	1.232 *	611.350	0.000
31	612.340	24.70	611.790	7.183			611.710	3.752			611.380	0.000
Ten-Daily Mean												
I Ten-Daily	612.395	32.89	612.335	23.74	611.785	6.885	611.725	4.319	611.722	4.191	611.449	1.210
II Ten-Daily	612.447	41.42	612.287	19.25	611.768	6.251	611.714	3.880	611.713	3.828	611.628	1.874
III Ten-Daily	612.349	25.90	611.831	7.934	611.744	5.106	611.716	3.962	611.629	2.391	611.415	0.511
Monthly												
Min.	612.340	24.33	611.790	6.988	611.740	4.856	611.710	3.427	611.450	1.232	611.350	0.000
Max.	612.560	59.87	612.340	24.93	611.790	7.122	611.730	4.556	611.730	4.550	611.720	2.245
Mean	612.396	33.16	612.141	16.68	611.767	6.15	611.718	4.051	611.688	3.47	611.495	1.176

Peak Computed Discharge = 946.4 cumecs on 10-07-2022

Corres. Water Level :617.8 m

Lowest Computed Discharge = 1.167 cumecs on 07-05-2023

Corres. Water Level :611.43 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 : 2022-2023

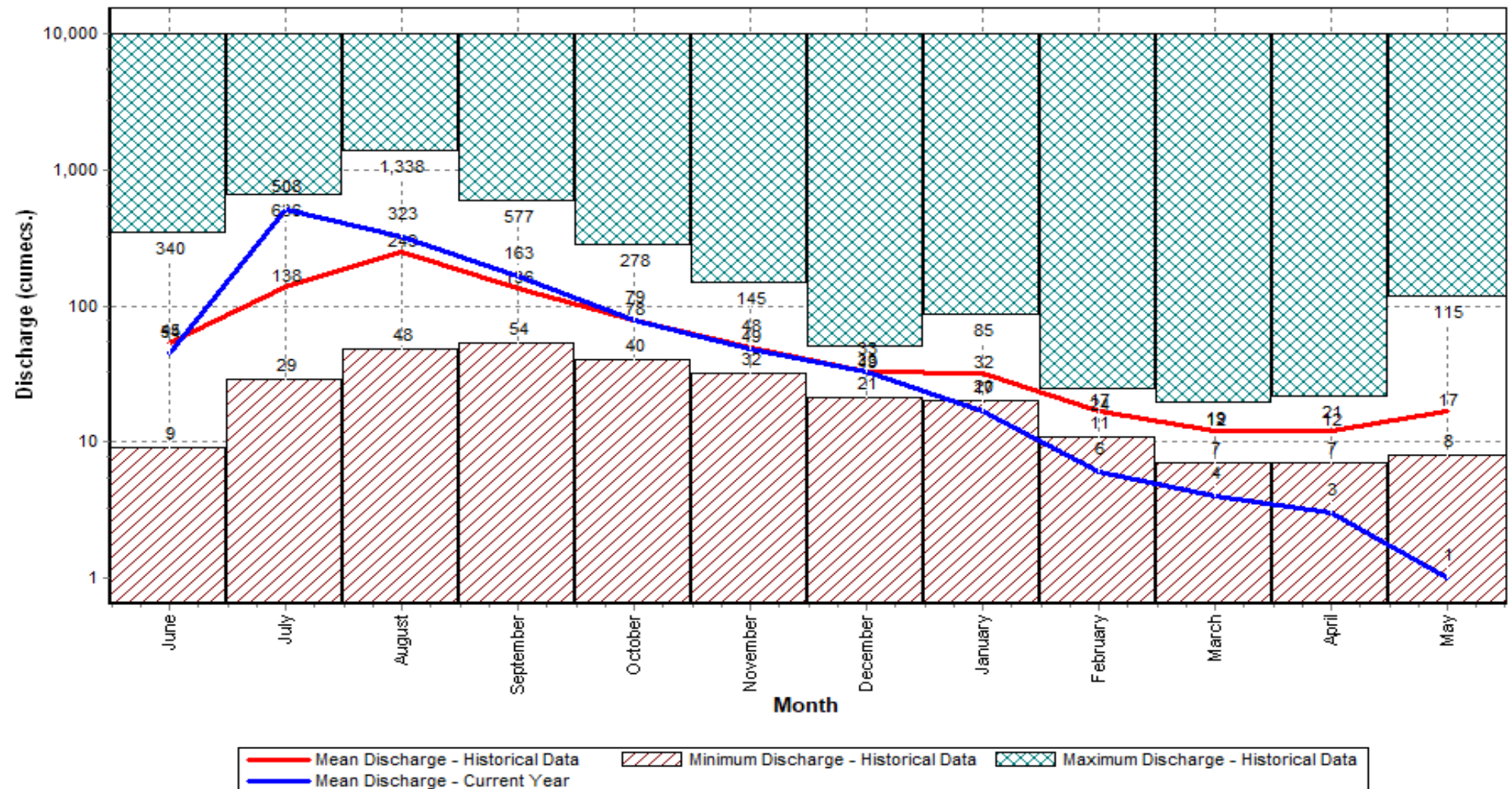
Station Name : HARIHARAPURA (HARIHARAPURA)

Data considered : 2019-2023

Division : Cauvery Division, Bangalore

Local River : Tunga

Sub-Division : Upper Tunga SD, Devangere



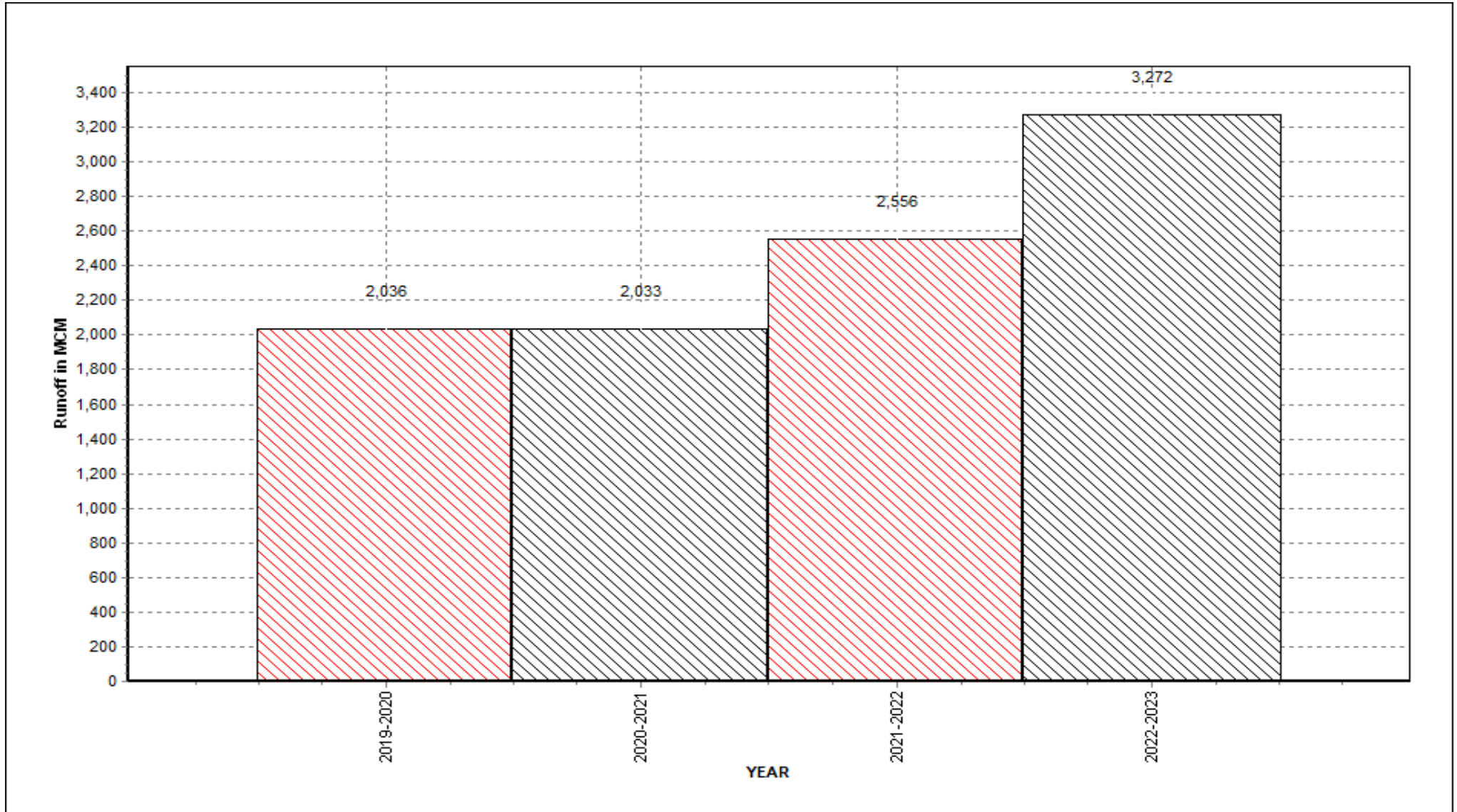
Annual Runoff Values for the period: 2019 - 2023

Station Name : HARIHARAPURA (HARIHARAPURA)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



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

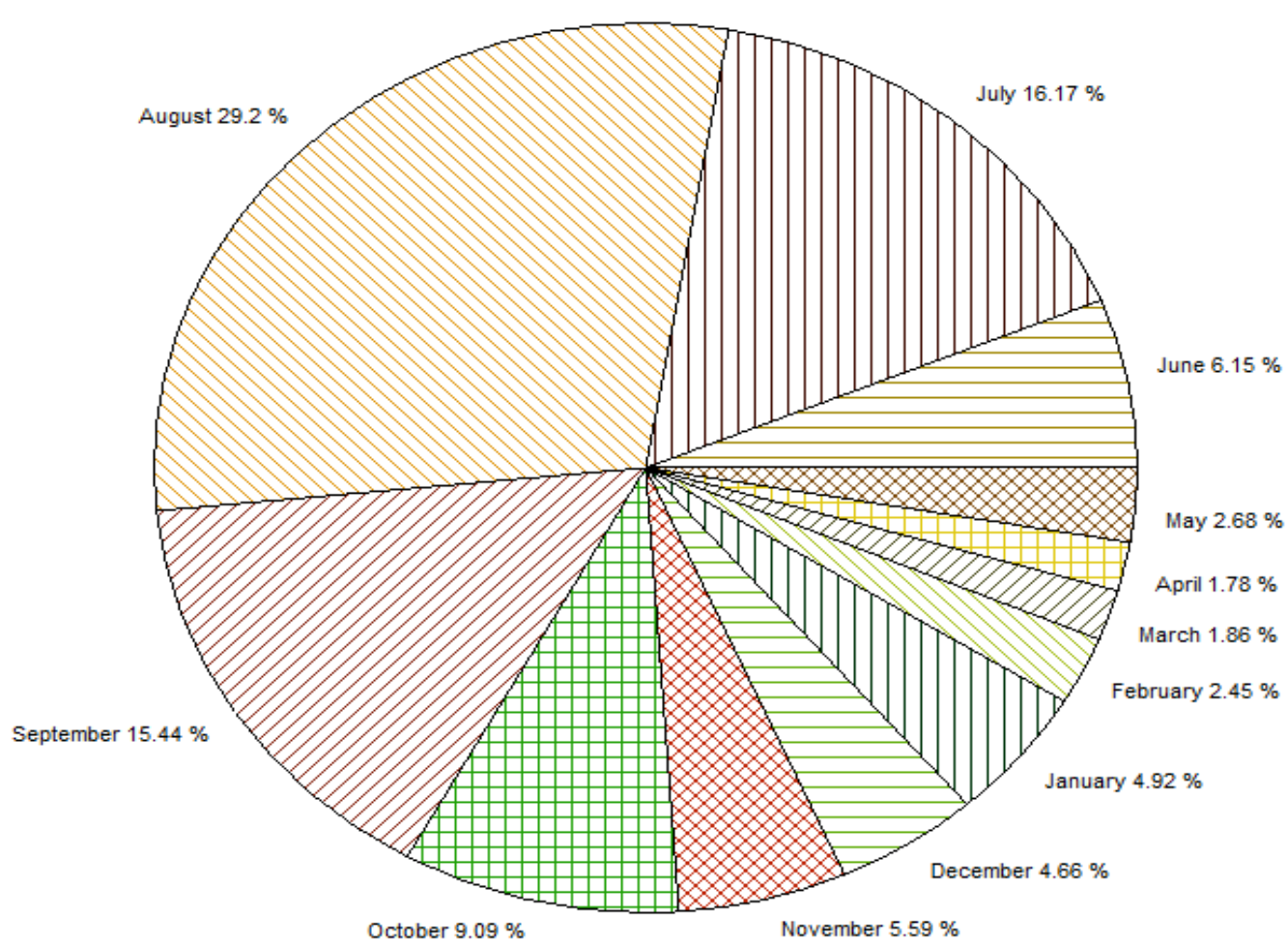
Monthly Average Runoff based on period : 2019-2022

Station Name : HARIHARAPURA (HARIHARAPURA)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



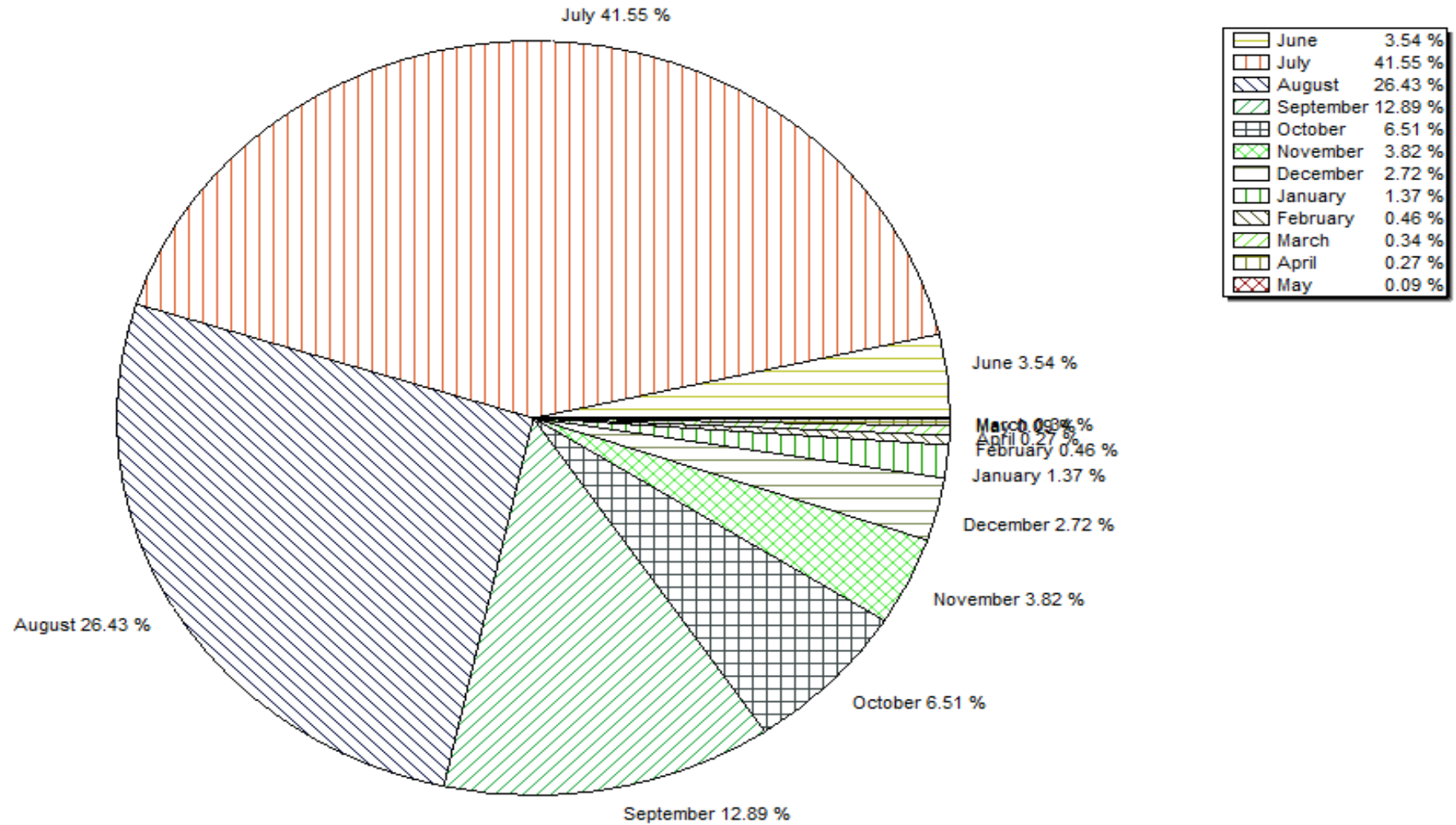
Monthly Runoff for the Year : 2022-2023

Station Name : HARIHARAPURA (HARIHARAPURA)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



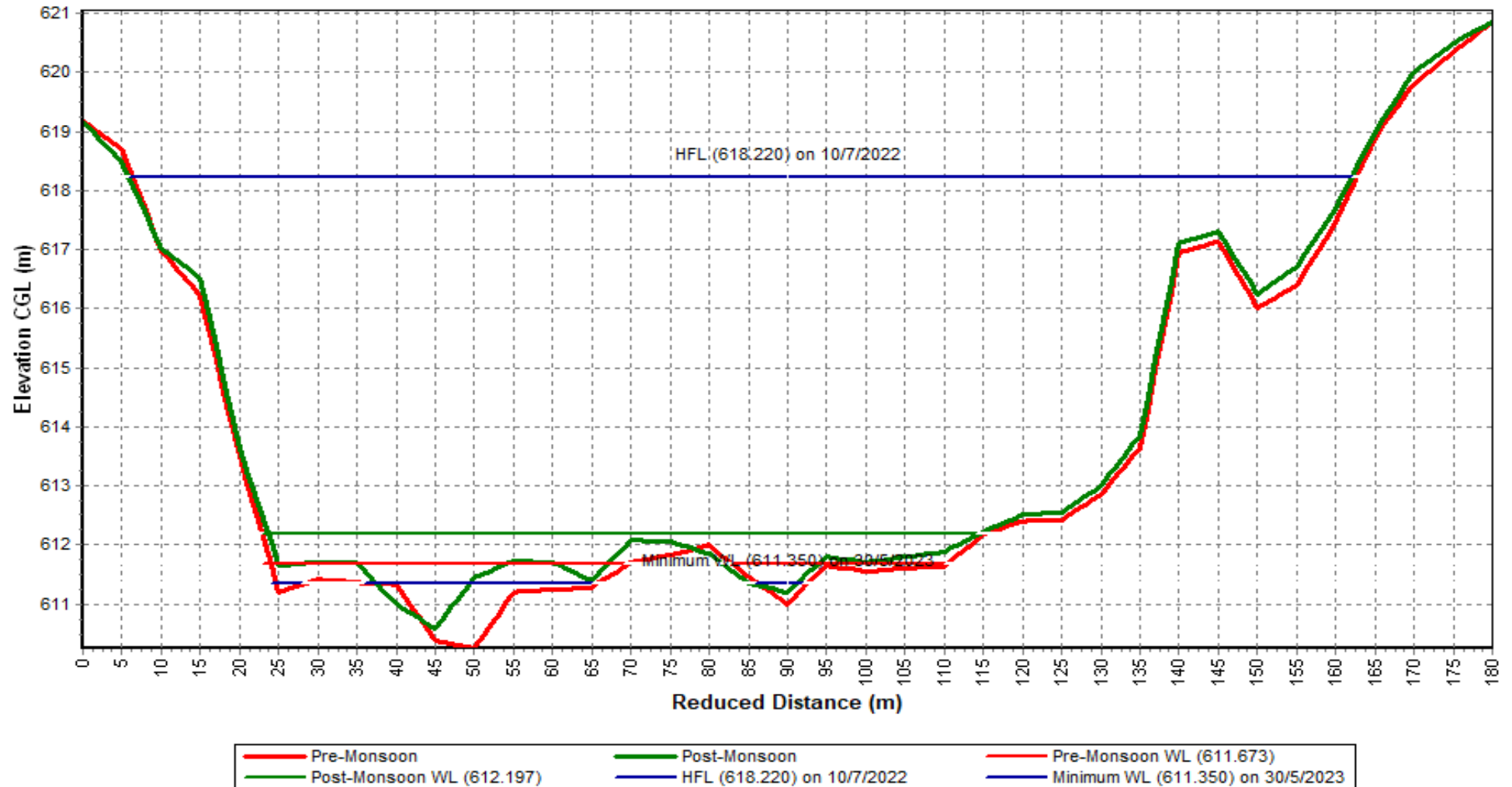
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : HARIHARAPURA (HARIHARAPURA)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



Zero of the Gauge: 609.5 (m.s.l)

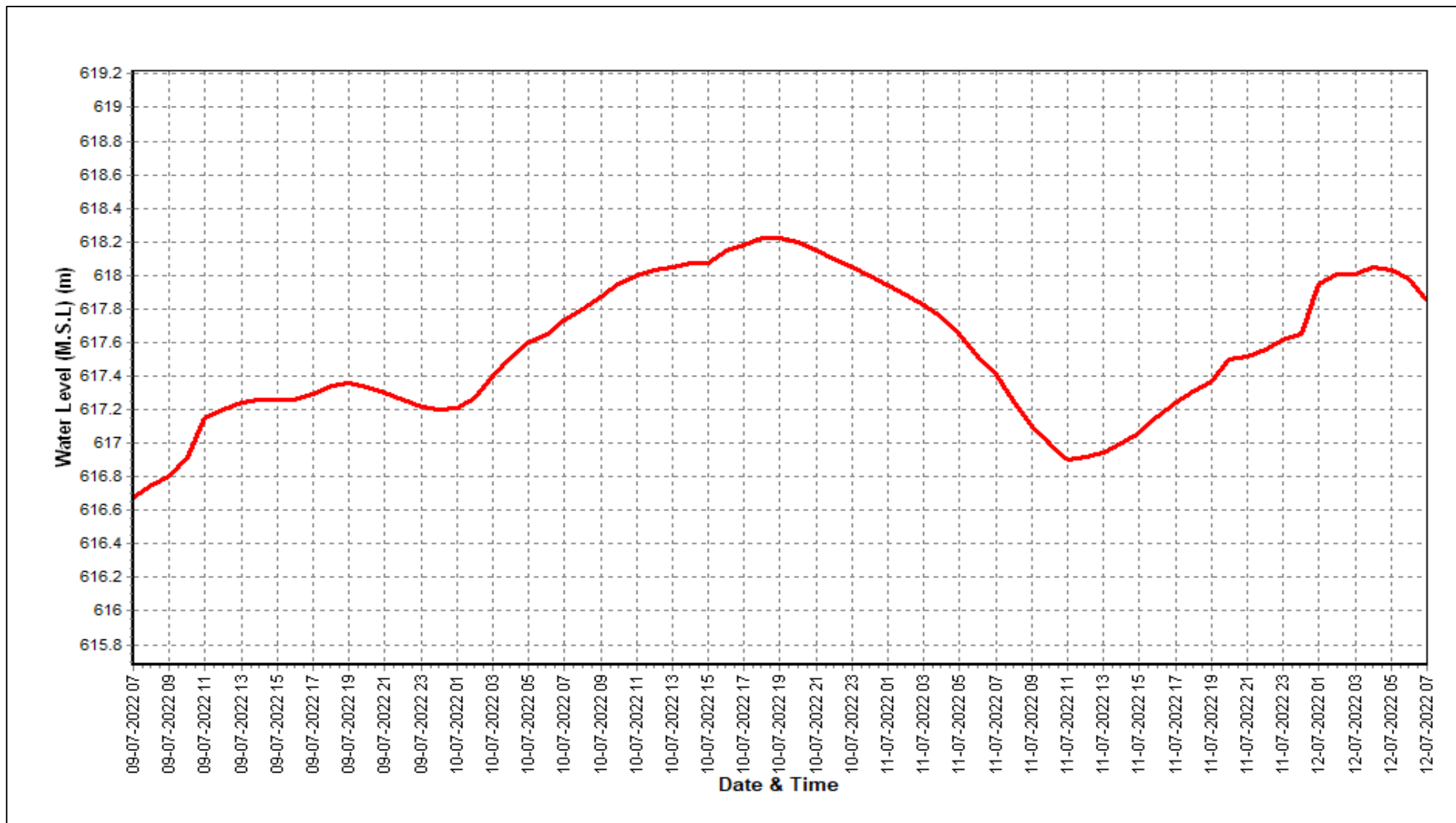
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : HARIHARAPURA (HARIHARAPURA)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



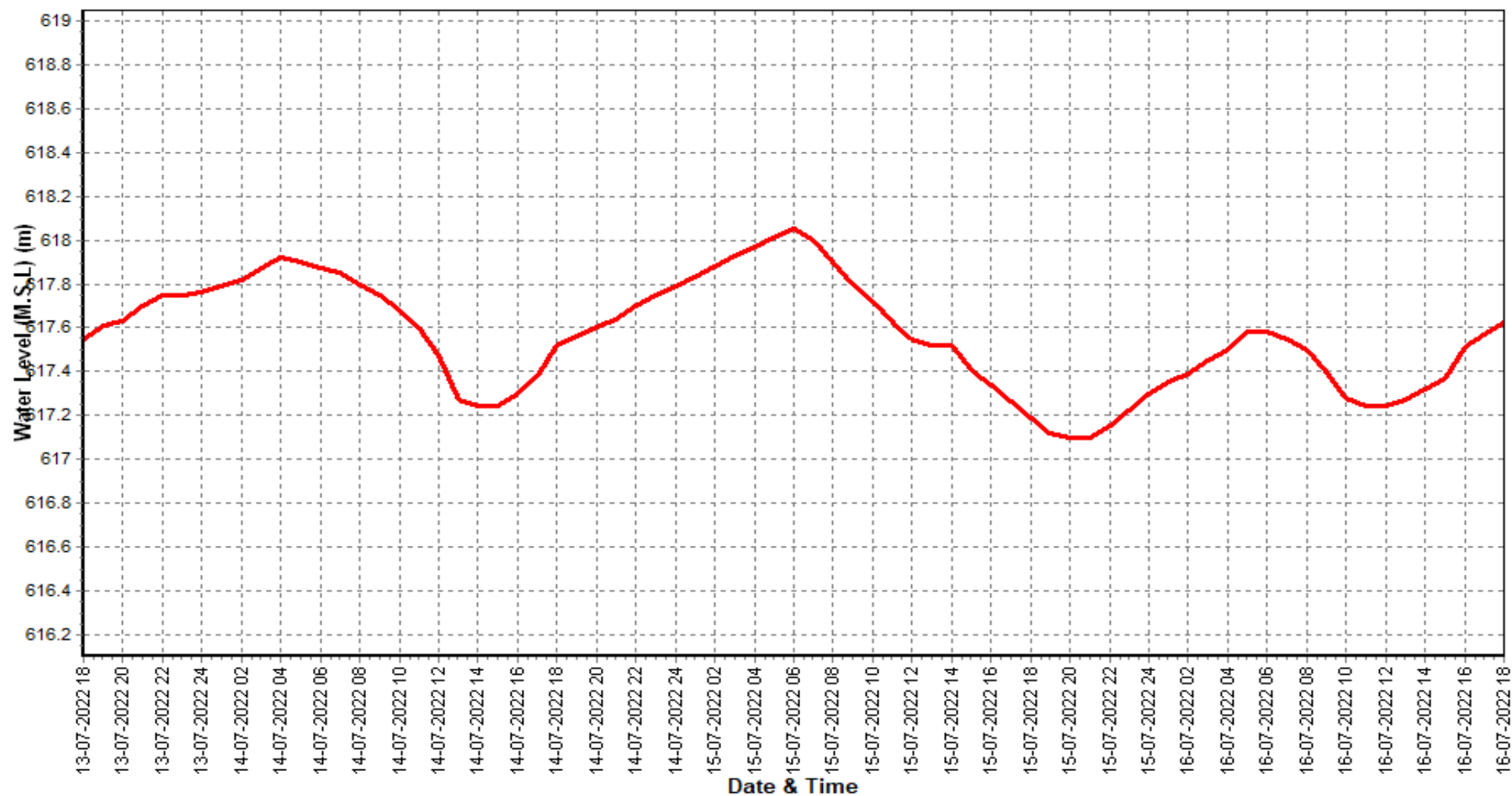
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : HARIHARAPURA (HARIHARAPURA)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



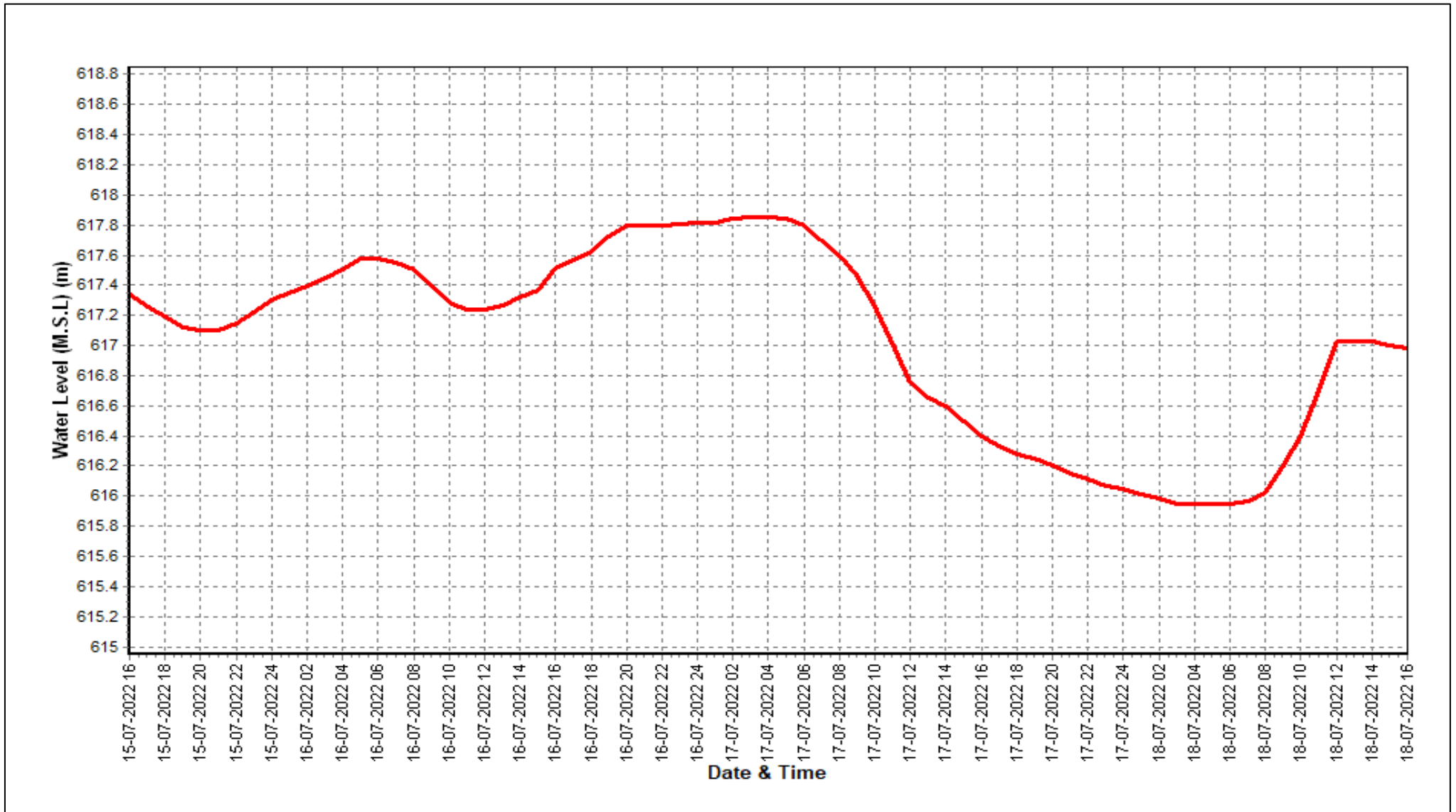
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : HARIHARAPURA (HARIHARAPURA)

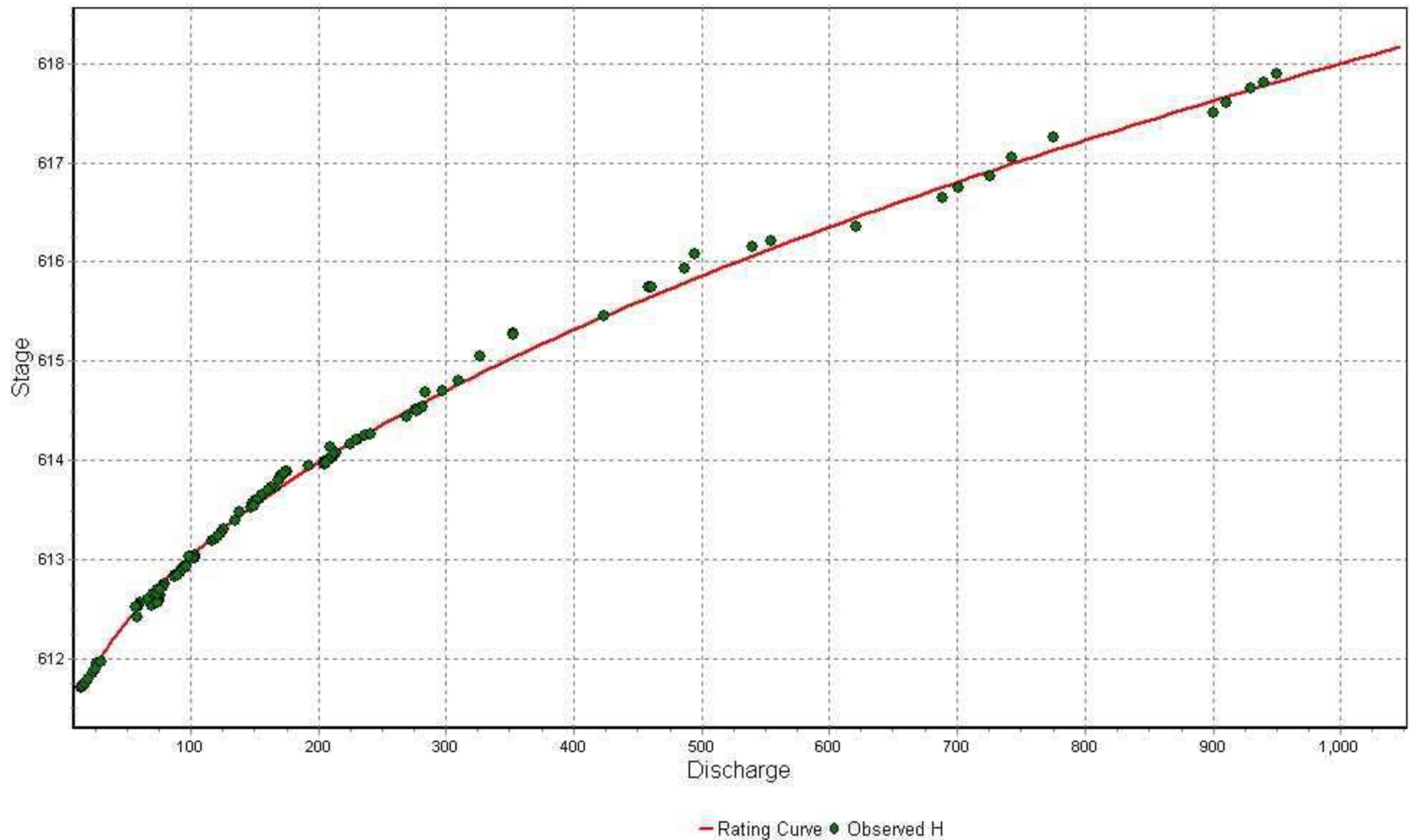
Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



S-D curve of site Hariharpura for the period from 01.06.2022 to 31.10.2022
Range:- 611.700 to 618.230, a= -610.830, b=1.957, c= 21.18, OSE= 5.886 (No. of data 126)



HISTORY SHEET

Water Year : 2022-2023

Site : AIRANI

Code : AIRANI

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 SD, Devangere

Drainage Area : 7075 Sq. Km.

Bank : Left

Latitude : 14°36'21"

Longitude : 75°48'15"

Zero of Gauge (m) : 83 (m.s.l)
514 (m.s.l)24-10-2016 - 29-02-2020
01-03-2020

Opening Date

Closing Date

Gauge : 24-10-2016

Discharge : 28-12-2018

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2019-2020	5488	96.030	11-08-2019	0.333	86.130	14-06-2019
2020-2021	2966	524.280	22-09-2020	5.830	517.410	02-06-2020
2021-2022	3363	525.300	25-07-2021	9.840	517.100	12-06-2021

Annual Runoff of Krishna at Airani

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2018-2019		174	174	0	6	6
2	2019-2020	8622	1491	10113	305	53	357
3	2020-2021	5283	516	5799	187	18	205
4	2021-2022	6359	1150	7509	225	41	265
5	2022-2023	8774	508	9282	310	18	328
Average		7259	768	6575	205	27	232

Instantaneous Flood Peak of Krishna at Airani					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2018-2019	87.450	19-11-2018	18:00:00	262*
2	2019-2020	96.03	10-08-2019	12:00:00	5488*
3	2020-2021	524.380	22-09-2020	00:00:00	3025*
4	2021-2022	525.520	24-07-2021	22:00:00	3502*
5	2022-2023	525.600	10-08-2022	06:00:00	3305*

Stage-Discharge Data for the period 2022 - 2023

Station Name : AIRANI (AIRANI)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

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	517.550	19.97	518.350	170.5	519.900	527.1	520.900	846.9	518.600	220.7	518.050	110.0
2	517.550	19.97	518.900	289.8	519.550	448.6	521.200	956.5	518.950	277.1 *	518.000	99.87
3	517.550	19.97	519.000	289.7 *	521.300	989.1	521.400	1027	519.400	408.4	518.000	99.87
4	517.500	14.96	520.000	561.3	520.950	861.0	521.100	982.4 *	519.250	367.9	518.100	119.5
5	517.500	17.09 *	520.350	659.7	520.250	636.2	520.100	588.9	519.150	328.7 *	518.300	159.4
6	517.500	14.96	521.650	1158	521.350	1015	520.450	690.0	518.950	301.8	518.250	159.4 *
7	517.550	19.97	522.000	1315	523.350	2017 *	520.750	800.1	519.200	354.9	518.150	129.6
8	517.650	39.83	522.650	1692	523.600	2282	520.850	833.6	519.050	320.8	518.100	120.9 *
9	517.700	44.99	522.250	1449	524.500	2645 *	520.100	588.9	518.750	228.7 *	518.050	110.0
10	517.550	19.97	522.400	1548 *	525.600	3301 #	520.450	690.0	518.850	273.8	518.000	99.87
11	517.550	19.97	521.950	1291	523.400	2140	520.000	582.1 *	519.850	514.5	517.950	89.58
12	517.500	17.09 *	522.550	1607	522.950	1900	519.950	540.4	520.300	640.2	517.950	89.70
13	517.500	14.91	522.650	1692	523.050	1923	520.700	769.7	519.550	446.3	517.950	88.16 *
14	517.450	12.81 #	522.800	1750	522.500	1595 *	520.400	671.0	519.500	416.3	517.950	89.58
15	517.450	12.81 #	523.450	2181	521.900	1319 *	520.500	702.1	519.550	446.3	517.950	89.58
16	517.400	9.008 #	525.000	3100	520.750	800.1	520.150	601.4	520.050	598.6 *	517.950	89.58
17	517.500	14.96	524.500	2645 *	520.300	640.2	519.600	450.3	519.850	514.5	517.900	80.04
18	517.500	14.96	524.300	2712	519.950	540.4	519.400	397.7 *	519.750	490.4	517.900	80.04
19	517.500	17.09 *	523.450	2168	519.500	416.3	519.350	390.5	519.600	450.3	517.900	80.04
20	517.550	19.97	522.850	1776	519.500	416.3	519.350	390.5	519.600	450.3	517.900	78.46 *
21	517.600	29.98	521.000	884.3	519.400	397.7 *	519.150	341.9	519.500	416.3	517.900	80.04
22	517.550	19.97	520.200	617.0	519.350	390.5	519.200	354.9	519.300	378.8	517.850	70.00
23	517.500	14.96	519.900	530.7	519.850	514.5	519.000	310.9	519.000	289.7 *	517.850	70.00
24	517.500	14.96	519.600	456.3 *	520.200	617.0	519.000	310.9	518.900	264.7 *	517.850	70.00
25	517.500	14.96	519.450	417.9	520.550	718.7	518.850	252.5 *	518.700	247.0	517.850	70.00
26	517.700	38.30 *	519.850	517.1	520.300	634.9	518.600	220.8	518.550	209.8	517.800	59.85
27	517.900	79.85	519.800	493.8	521.300	989.1	518.650	228.7	518.500	199.3	517.800	60.85 *
28	517.900	79.85	520.200	617.0	520.450	736.6 *	518.600	220.8	518.350	170.3	517.800	59.85
29	518.300	159.4	521.200	956.5	520.750	800.1	518.450	189.3	518.200	140.7	517.850	70.00
30	518.100	119.5	520.250	636.2	520.300	634.9	518.400	179.7	518.100	96.91 *	517.850	70.00
31			520.350	701.1 *	522.150	1432 *			518.100	119.5		
Ten-Daily Mean												
I Ten-Daily	517.560	23.17	520.755	913.4	522.035	1472	520.730	800.4	519.015	308.3	518.100	120.8
II Ten-Daily	517.490	15.36	523.350	2092	521.380	1169	519.940	549.6	519.760	496.8	517.930	85.48
III Ten-Daily	517.755	57.18	520.164	620.7	520.418	715.1	518.790	261.0	518.655	230.3	517.840	68.06
Monthly												
Min.	517.400	9.008	518.350	170.5	519.350	390.5	518.400	179.7	518.100	96.91	517.800	59.85
Max.	518.300	159.4	525.000	3100	525.600	3301	521.400	1027	520.300	640.2	518.300	159.4
Mean	517.602	31.9	521.382	1190	521.250	1106	519.820	537	519.127	341.4	517.957	91.46

Annual Runoff in MCM = 9282 Annual Runoff in mm = 1312

Peak Observed Discharge = 3301 cumecs on 10-08-2022 Corres. Water Level :525.6 m

Lowest Observed Discharge = 9.008 cumecs on 16-06-2022 Corres. Water Level :517.4 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 2022 - 2023

Station Name : AIRANI (AIRANI)

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

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	517.800	59.85	517.500	15.11 *	517.550	20.02	517.300	27.72	517.200	20.44	517.800	59.78
2	517.750	49.94	517.500	14.93	517.550	20.02	517.250	24.02	517.200	19.80 *	517.800	59.78
3	517.700	44.99	517.450	40.84	517.600	29.87	517.300	27.68	517.150	14.43	517.800	59.78
4	517.700	44.62 *	517.400	36.52	517.600	29.87	517.300	27.77	517.150	16.97 *	517.750	50.17
5	517.700	44.99	517.350	34.15	517.650	38.33 *	517.300	28.14 *	517.150	14.42	517.650	34.24 *
6	517.700	44.99	517.300	27.80	517.650	39.81	517.250	24.28	517.150	14.40	517.550	20.56 #
7	517.650	40.06	517.300	27.78	517.600	29.87	517.250	24.03	517.150	16.97 *	517.550	22.56 *
8	517.650	40.06	517.300	28.74 *	517.600	29.87	517.250	24.00	517.150	14.42	517.600	26.95 #
9	517.650	40.05	517.300	27.03	517.600	29.87	517.200	20.42	517.150	16.97 *	517.650	39.81
10	517.600	30.03	517.350	34.16	517.550	20.02	517.200	20.44	517.150	14.43	517.750	50.17
11	517.600	27.00 *	517.400	36.57	517.500	14.88	517.200	20.42	517.200	20.47	517.800	59.78
12	517.550	19.90	517.350	34.12	517.500	14.50 *	517.200	20.31 *	517.200	20.43	517.850	69.90
13	517.550	19.97	517.350	34.15	517.500	14.88	517.200	20.37	517.200	20.43	517.850	69.91
14	517.800	59.85	517.350	34.17	517.500	14.88	517.250	24.03	517.200	19.80 *	517.750	51.45 *
15	517.900	80.33	517.350	32.65 *	517.450	40.84	517.900	79.57	517.200	20.37	517.650	39.81
16	517.900	80.04	517.400	36.51	517.400	36.46	517.950	89.89	517.200	19.80 *	517.550	20.03
17	517.900	80.04	517.400	36.45	517.350	34.10	517.850	69.90	517.200	20.81	517.500	14.89
18	517.850	71.89 *	517.450	40.85	517.300	27.80	517.850	69.90	517.200	20.47	517.500	14.89
19	517.800	59.85	517.450	40.82	517.300	28.14 *	517.900	78.20 *	517.250	24.01	517.500	14.89
20	517.700	44.99	517.450	40.84	517.350	34.15	517.900	79.57	517.250	23.99	517.500	14.89
21	517.700	44.99	517.400	36.46	517.350	34.17	517.850	69.90	517.200	20.46	517.500	15.03 *
22	517.650	40.06	517.400	36.79 *	517.350	32.47 *	517.850	72.93 *	517.200	19.80 *	517.500	14.89
23	517.600	30.03	517.400	36.57	517.300	27.74	517.800	59.78	517.250	22.83 *	517.500	14.89
24	517.550	19.90	517.450	40.87	517.300	27.72	517.600	49.07 #	517.300	27.76	517.500	14.89
25	517.550	20.63 *	517.450	40.84	517.300	27.74	517.500	40.69 #	517.300	27.71	517.500	14.89
26	517.550	19.90	517.400	36.79 *	517.300	28.14 *	517.400	33.01 *	517.300	27.77	517.550	20.03
27	517.500	14.93	517.400	36.51	517.300	27.80	517.350	34.17	517.300	27.71	517.550	20.03
28	517.500	14.93	517.500	14.93	517.300	27.79	517.300	27.75	517.250	24.03	517.550	20.56 *
29	517.500	14.93	517.500	14.50 *			517.300	27.76	517.250	24.05	517.500	14.89
30	517.500	14.93	517.500	14.88			517.250	24.04	517.600	49.07 *	517.500	14.89
31	517.500	14.88	517.550	19.90			517.200	20.42			517.500	14.89
Ten-Daily Mean												
I Ten-Daily	517.690	43.96	517.375	28.71	517.595	28.76	517.260	24.85	517.160	16.33	517.690	42.38
II Ten-Daily	517.755	54.39	517.395	36.71	517.415	26.06	517.620	55.22	517.210	21.06	517.645	37.04
III Ten-Daily	517.555	22.74	517.450	29.91	517.313	29.20	517.491	41.77	517.295	27.12	517.514	16.35
Monthly												
Min.	517.500	14.88	517.300	14.50	517.300	14.50	517.200	20.31	517.150	14.40	517.500	14.89
Max.	517.900	80.33	517.550	40.87	517.650	40.84	517.950	89.89	517.600	49.07	517.850	69.91
Mean	517.663	39.79	517.408	31.72	517.450	27.92	517.458	40.65	517.222	21.5	517.613	31.42

Peak Computed Discharge = 2645 cumecs on 17-07-2022

Corres. Water Level :524.5 m

Lowest Computed Discharge = 14.50 cumecs on 29-01-2023

Corres. Water Level :517.5 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 : 2022-2023

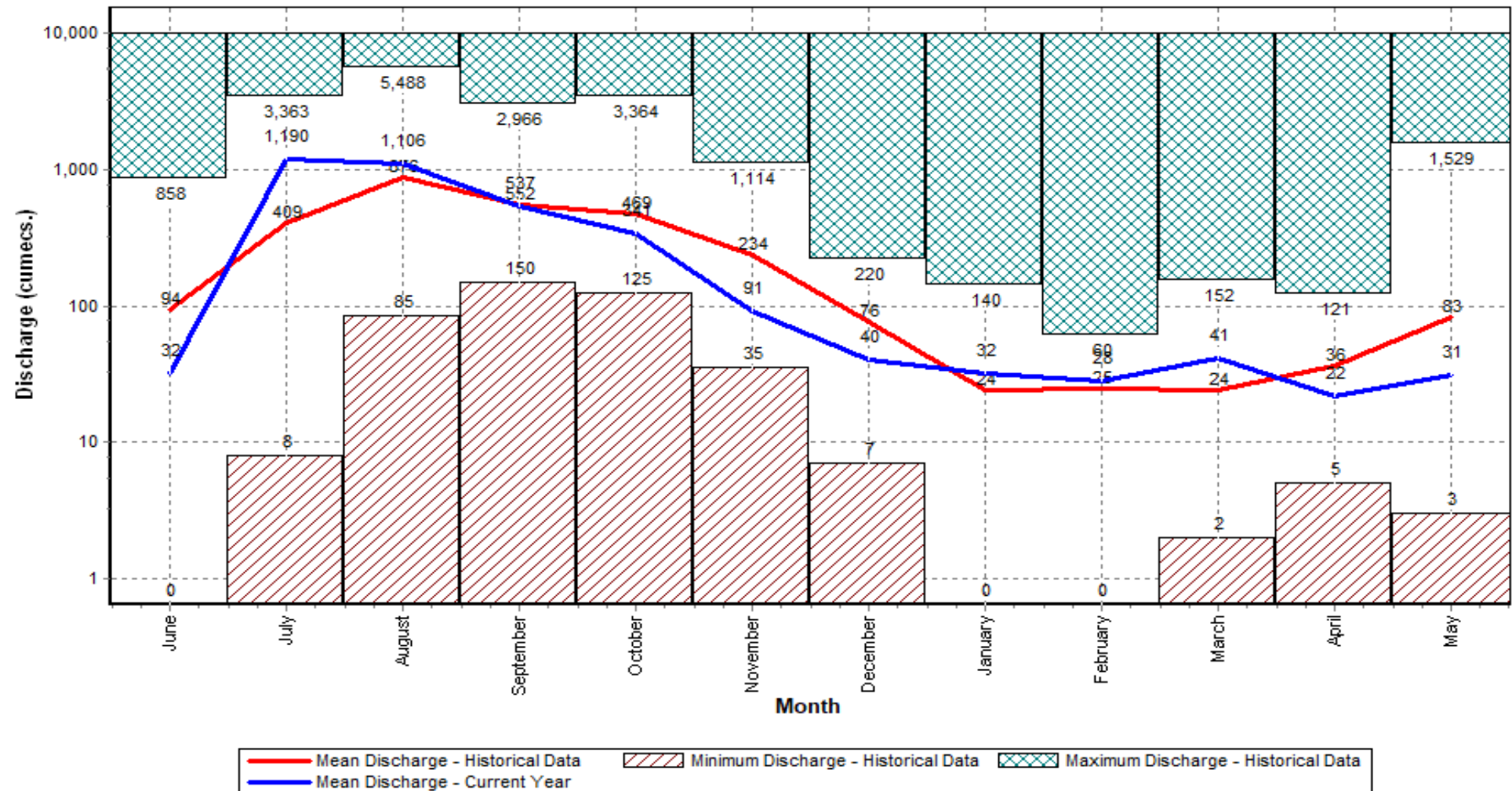
Station Name : AIRANI (AIRANI)

Data considered : 2019-2023

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

Sub-Division : Upper Tunga SD, Devangere



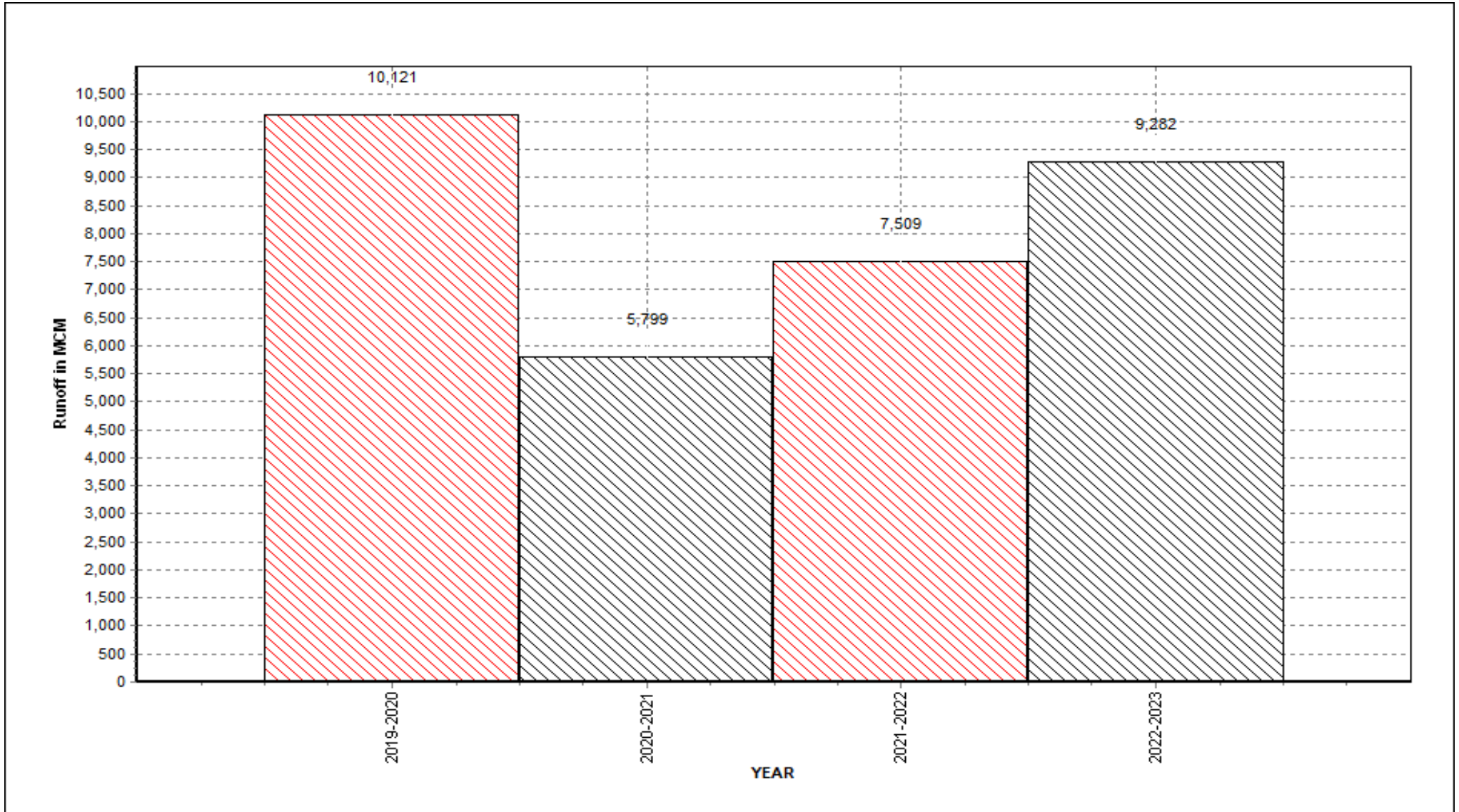
Annual Runoff Values for the period: 2019 - 2023

Station Name : AIRANI (AIRANI)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



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

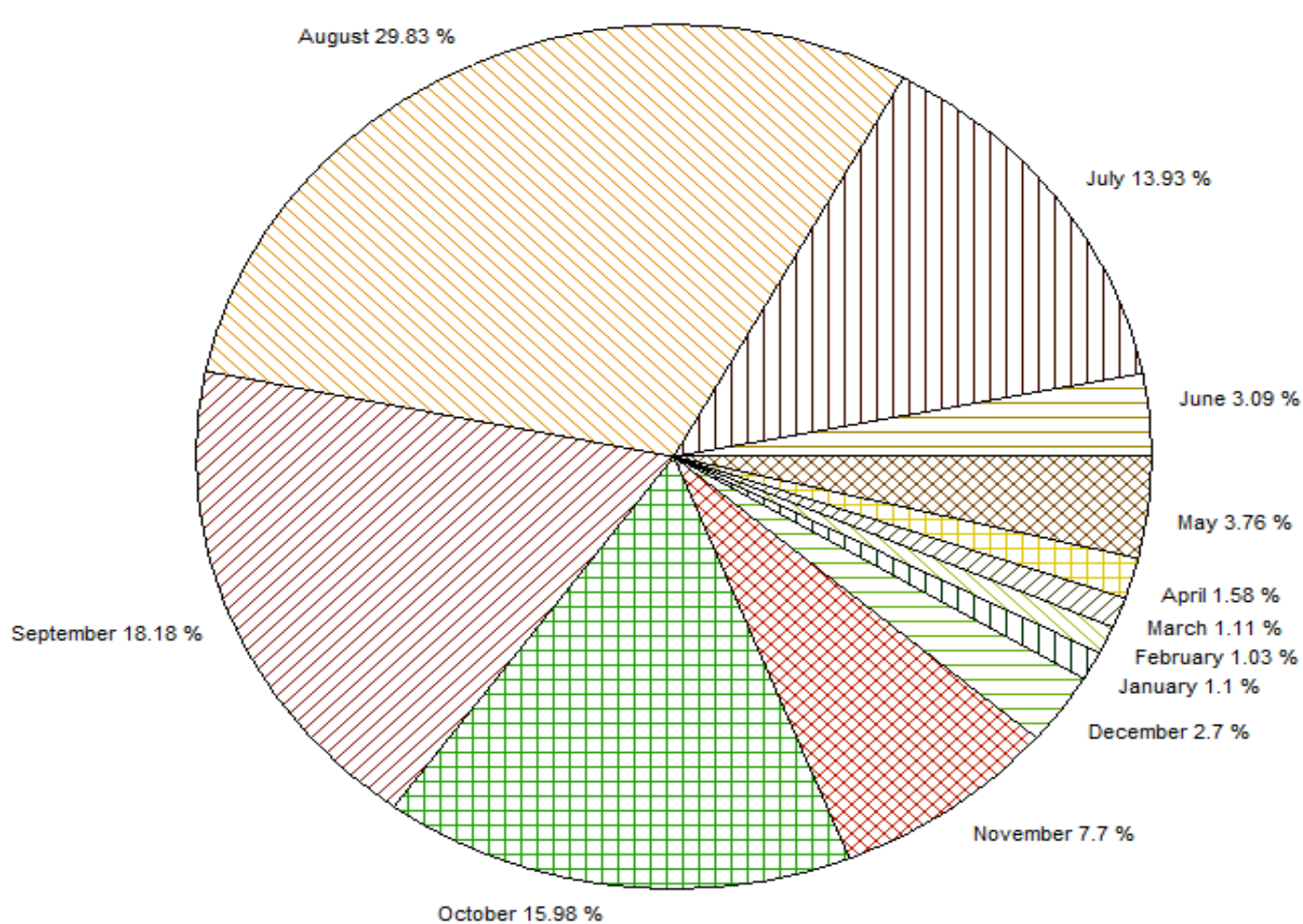
Monthly Average Runoff based on period : 2019-2022

Station Name : AIRANI (AIRANI)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere

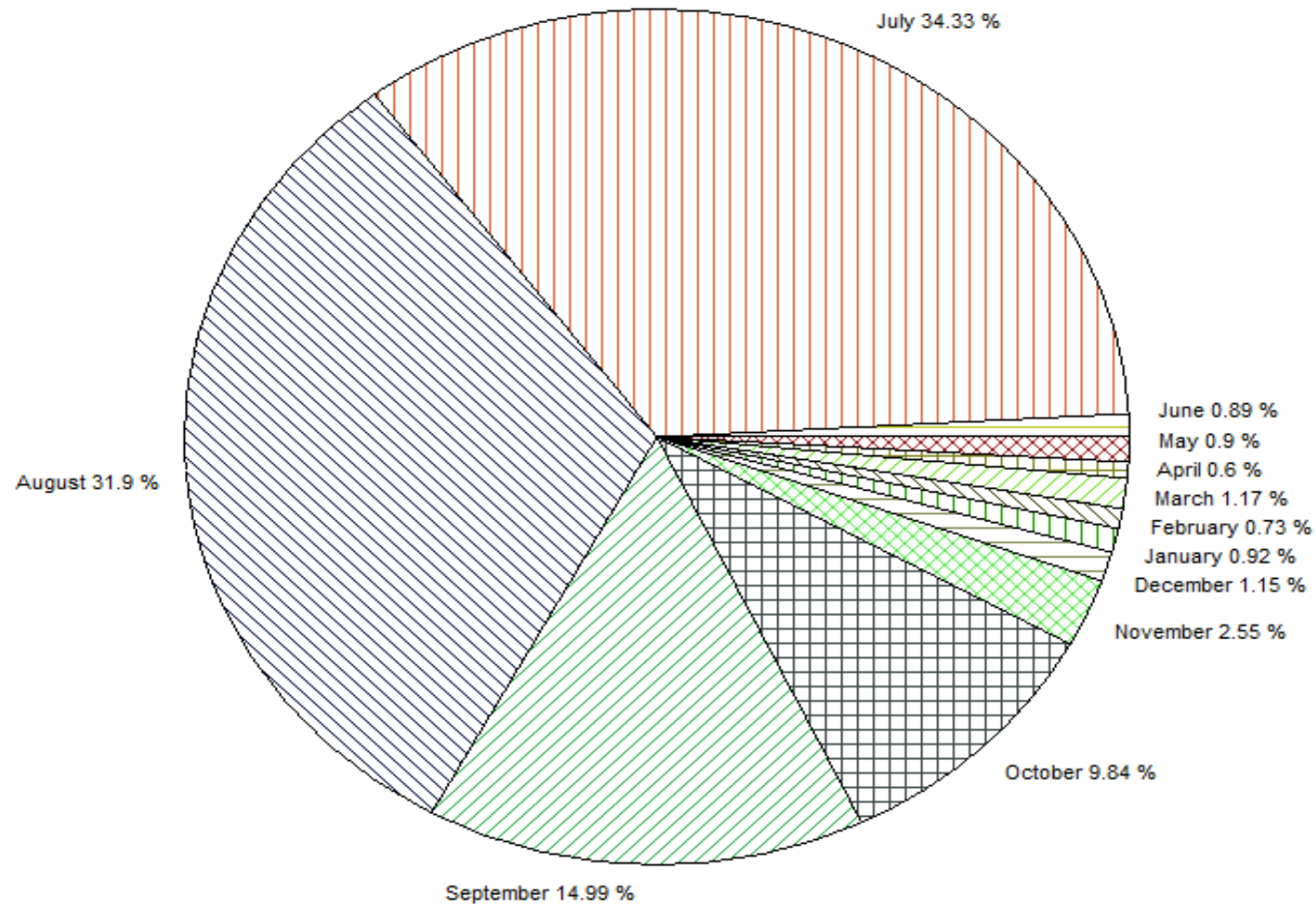


June	3.09 %
July	13.93 %
August	29.83 %
September	18.18 %
October	15.98 %
November	7.7 %
December	2.7 %
January	1.1 %
February	1.03 %
March	1.11 %
April	1.58 %
May	3.76 %

Monthly Runoff for the Year : 2022-2023

Station Name : AIRANI (AIRANI)
Local River : Tungabhadra

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



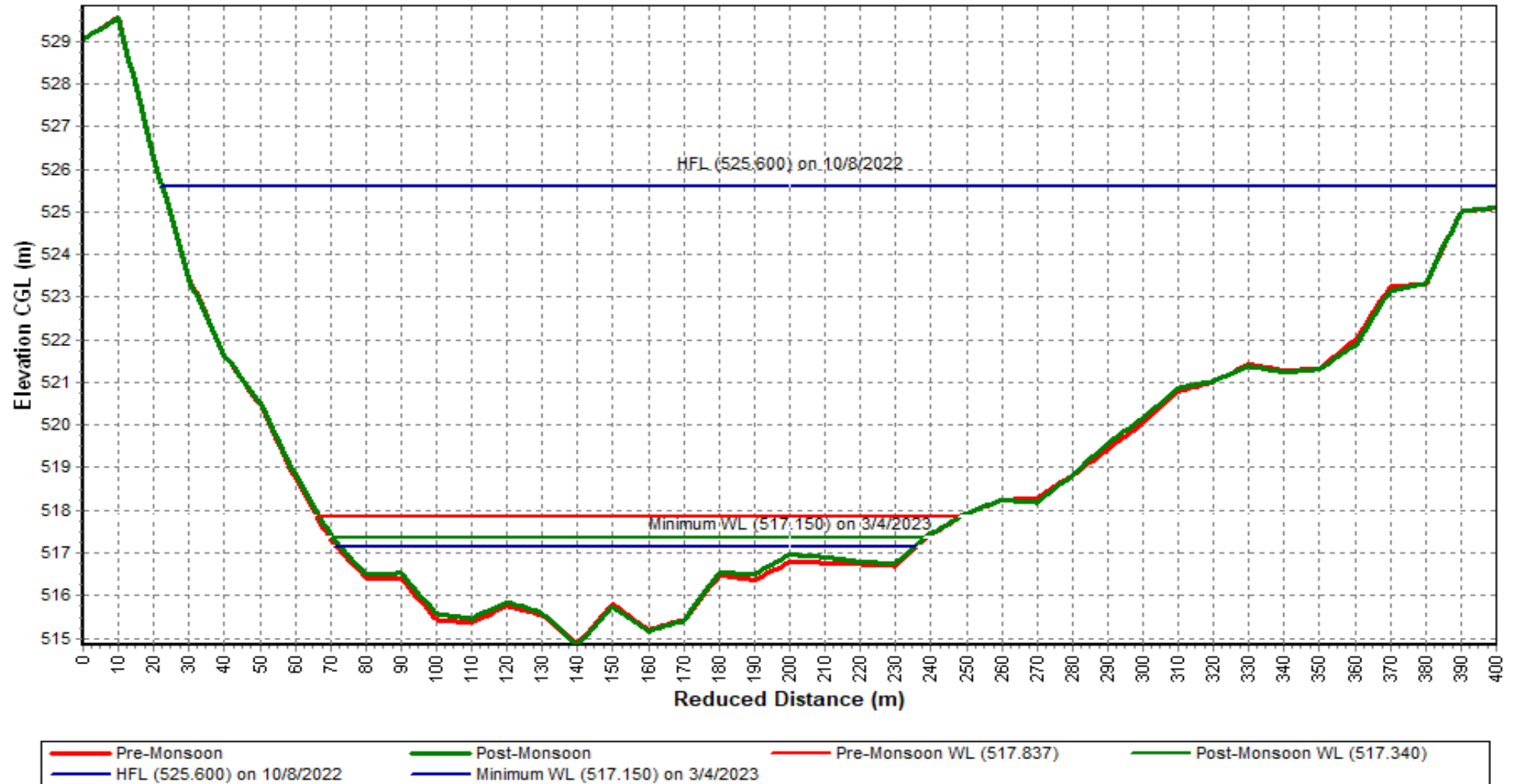
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : AIRANI (AIRANI)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



Zero of the Gauge: 514 (m.s.l)

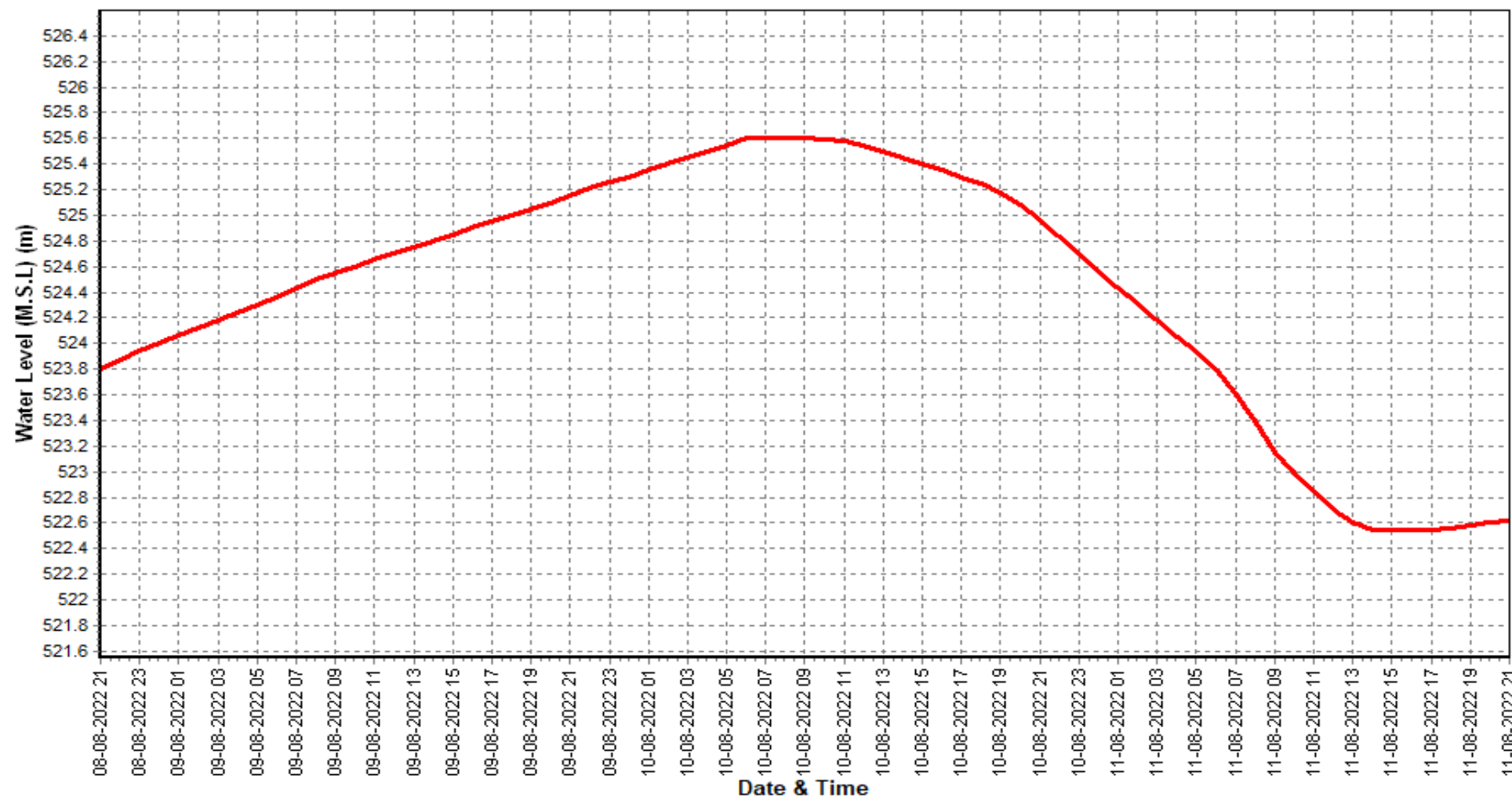
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : AIRANI (AIRANI)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



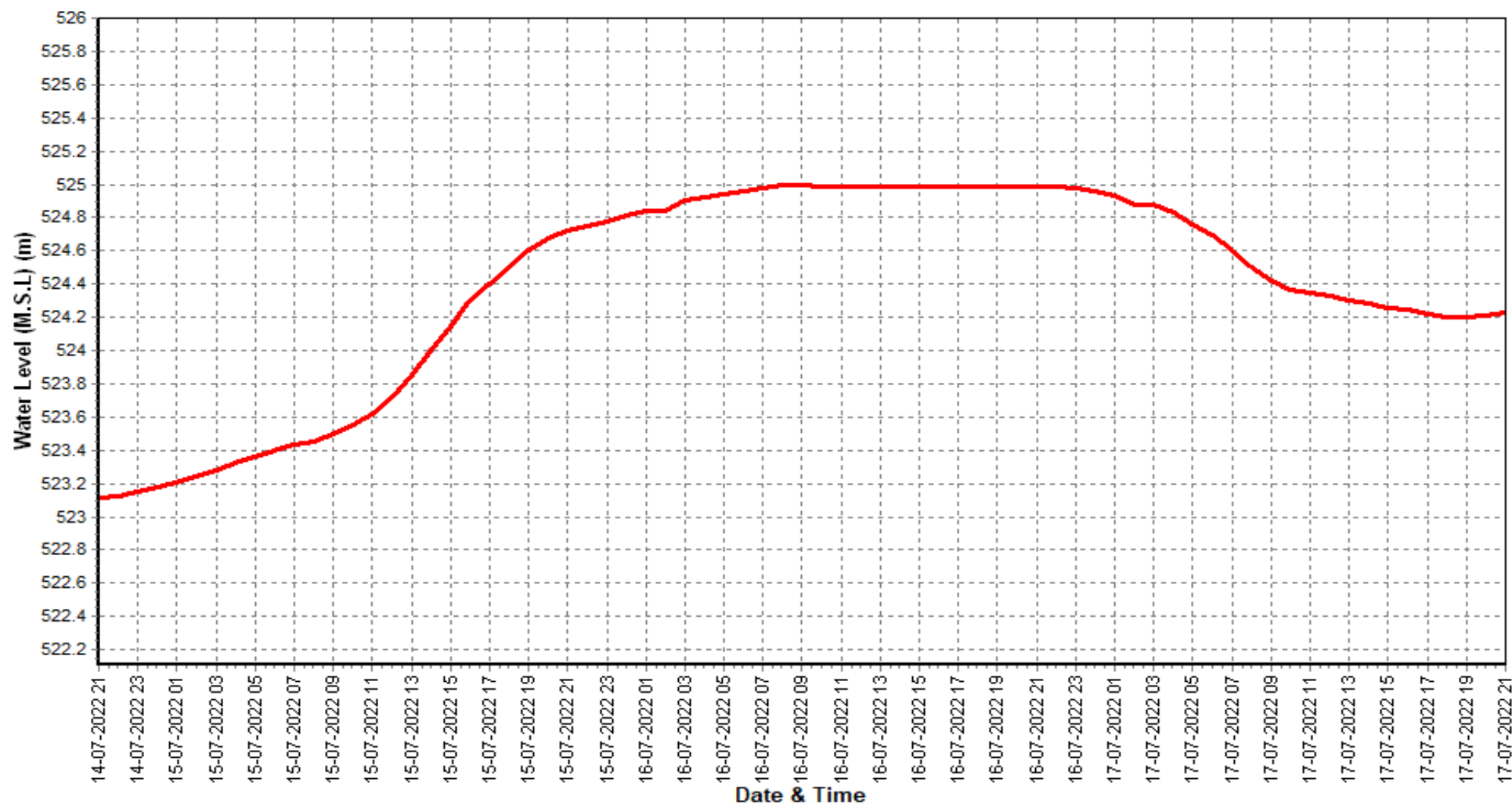
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : AIRANI (AIRANI)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



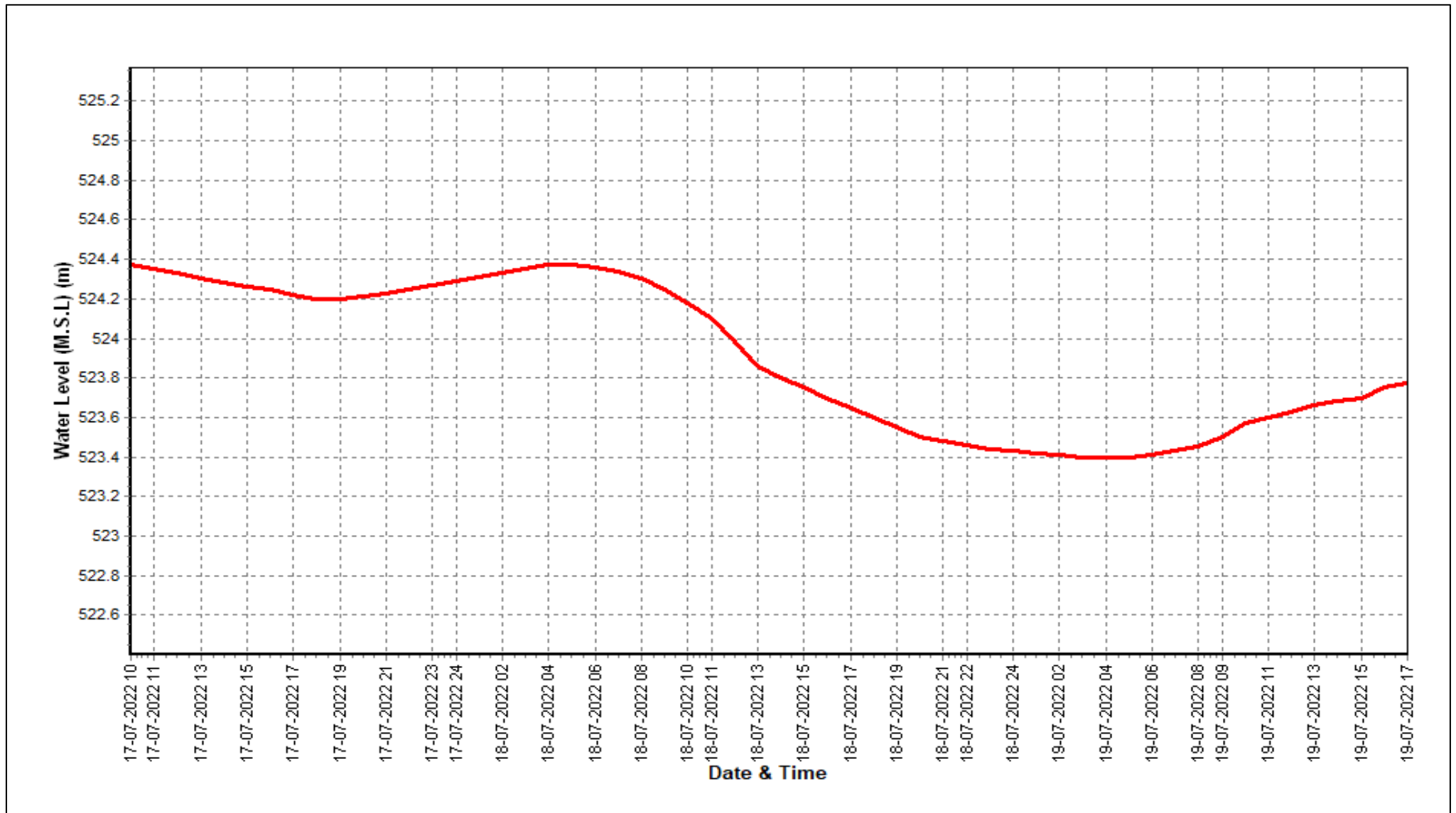
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : AIRANI (AIRANI)

Local River : Tungabhadra

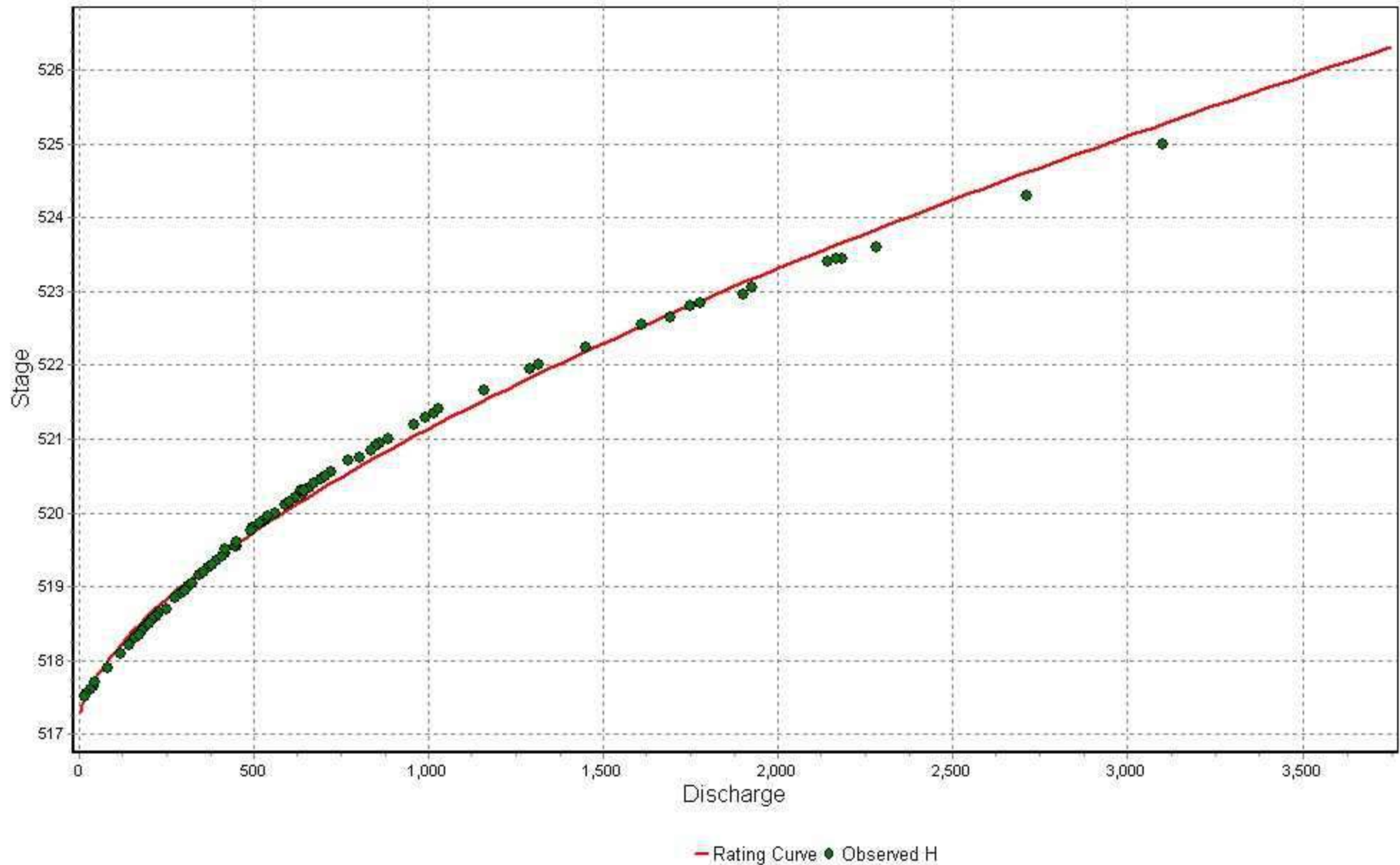
Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



S-D curve of site Airani for the period from 01.06.2022 to 31.10.2022

Range:- 517.300 to 526.400, $a = -517.200(f)$, $b = 1.580$, $c = 114.500$, $OSE = 9.351$ (No. of data 122)



HISTORY SHEET

Water Year : 2022-2023

Site : MAHISHI

Code : MAHISHI

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 SD, Devangere

Drainage Area : 1406 Sq. Km.

Bank : Left

Latitude : 13°41'50"

Longitude : 75°20'08"

Zero of Gauge (m) : 807 (m.s.l)
585 (m.s.l)29-10-2014 - 31-08-2019
01-09-2019

Opening Date

Closing Date

Gauge : 29-10-2014

Discharge : 21-12-2018

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2019-2020	3195	818.980	10-08-2019	0.000		10-06-2019
2020-2021	1900	595.200	07-08-2020	0.000	587.220	22-04-2021
2021-2022	2068	595.980	24-07-2021	0.000	587.300	09-06-2021

Annual Runoff of Krishna at Mahishi

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2018-2019		66	66	0	2	2
2	2019-2020	5136	753	5889	181	27	208
3	2020-2021	4439	491	4930	157	17	174
4	2021-2022	4597	490	5087	162	17	180
5	2022-2023	5859	171	6030	207	6	213
Average		5008	394	4400	142	14	155

Instantaneous Flood Peak of Krishna at mahishi					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2018-2019	810.580	12-11-2018	08:00:00	195*
2	2019-2020	818.980	10-08-2019	08:00:00	3195*
3	2020-2021	595.600	08-08-2020	21:00:00	1956*
4	2021-2022	596.650	24-07-2021	01:00:00	2360*
5	2022-2023	595.010	14-07-2022	14:00:00	1990*

Stage-Discharge Data for the period 2022 - 2023

Station Name : MAHISHI (MAHISHI)

Division : Cauvery Division, Bangalore

Local River : Tunga

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	587.660	8.761 #	590.850	608.7	589.430	268.4	590.540	533.3	588.790	136.7	588.390	72.69
2	587.700	11.41 #	591.080	675.6	589.670	322.2	590.600	548.9	588.990	178.9 *	588.380	71.04
3	587.690	13.56	591.320	721.9 *	589.630	313.1	589.860	366.3	588.900	157.5	588.380	71.04
4	587.720	14.28	591.440	773.3	589.390	259.7	589.830	345.8 *	588.730	125.6	588.360	61.24
5	587.710	12.11 *	593.520	1357	590.500	523.2	589.640	315.5	588.700	130.5 *	588.360	61.24
6	587.720	14.45	593.950	1582	592.050	911.7	589.570	299.6	588.680	116.4	588.350	66.27 *
7	587.720	14.45	594.280	1700	592.770	1169 *	589.400	261.9	588.670	114.7	588.340	59.96
8	587.710	14.23	593.900	1564	593.220	1328	589.740	338.4	589.190	216.7	588.340	65.09 *
9	587.700	13.95	593.550	1441	594.010	1605 *	589.530	290.5	589.100	198.6 *	588.280	55.09
10	587.700	13.94	593.870	1553 *	593.440	1407	589.690	326.7	589.050	187.2	588.260	53.41
11	587.690	13.56	594.020	1607	592.000	935.7	590.030	390.8 *	588.850	147.9	588.250	52.55
12	587.690	10.73 *	594.600	1817	593.350	1373	591.120	686.4	588.780	134.8	588.240	51.76
13	587.720	13.76	593.610	1464	591.610	819.5	590.320	477.7	588.650	111.2	588.240	53.85 *
14	587.840	19.43	594.950	1948	591.090	658.0 *	590.450	510.5	588.800	138.5	588.230	50.90
15	587.990	32.85	594.800	1894	590.500	503.4 *	590.210	450.5	589.090	195.8	588.230	50.90
16	587.910	27.61	593.940	1577	590.270	465.3	590.000	399.5	588.960	137.7 *	588.220	50.11
17	587.880	25.80	594.400	1751 *	590.080	418.9	589.690	326.7	588.930	163.5	588.220	50.11
18	587.920	28.27	593.350	1373	589.820	356.9	589.650	307.0 *	589.090	195.8	588.200	48.49
19	587.880	25.94 *	592.030	945.4	589.690	326.7	589.570	299.6	589.040	185.2	588.190	47.66
20	587.840	19.45	591.610	819.5	589.540	293.0	589.390	259.8	588.990	175.2	588.190	48.64 *
21	587.850	19.62	590.310	475.0	589.660	309.1 *	589.360	253.0	589.180	214.5	588.180	46.66
22	588.230	50.95	590.400	497.2	589.990	397.2	589.260	231.2	588.910	159.5	588.180	46.66
23	588.120	42.15	589.990	397.2	590.920	632.5	589.150	208.1	588.770	141.7 *	588.170	46.06
24	588.350	60.68	589.790	337.1 *	590.600	548.9	589.090	195.8	588.710	132.1 *	588.170	46.06
25	588.590	101.6	589.840	361.6	590.720	579.7	589.100	198.6 *	588.660	112.9	588.280	55.10
26	588.810	148.2 *	590.130	430.9	590.350	485.4	589.020	181.1	588.490	87.13	588.240	51.76
27	588.900	157.5	589.870	368.6	590.000	399.5	588.980	173.2	588.460	82.69	588.220	51.73 *
28	589.010	180.3	589.940	385.2	589.670	311.3 *	588.900	157.5	588.440	79.85	588.200	48.49
29	589.540	296.8	589.750	340.6	589.630	313.1	588.850	147.9	588.420	76.95	588.180	47.63 #
30	590.640	558.9	589.490	281.7	589.640	315.5	588.810	140.4	588.410	87.49 *	588.180	46.66
31			589.600	296.5 *	589.660	309.1 *			588.400	74.12		
Ten-Daily Mean												
I Ten-Daily	587.703	13.12	592.776	1198	591.411	810.7	589.840	362.7	588.880	156.3	588.344	63.71
II Ten-Daily	587.836	21.74	593.731	1519	590.795	615.0	590.043	410.8	588.918	158.6	588.221	50.50
III Ten-Daily	588.804	161.7	589.919	379.2	590.076	418.3	589.052	188.7	588.623	113.5	588.200	48.68
Monthly												
Min.	587.660	8.761	589.490	281.7	589.390	259.7	588.810	140.4	588.400	74.12	588.170	46.06
Max.	590.640	558.9	594.950	1948	594.010	1605	591.120	686.4	589.190	216.7	588.390	72.69
Mean	588.114	65.51	592.070	1011	590.739	608.3	589.645	320.7	588.801	141.8	588.255	54.3

Annual Runoff in MCM = 6031 Annual Runoff in mm = 4289

Peak Observed Discharge = 1948 cumecs on 14-07-2022 Corres. Water Level :594.95 m

Lowest Observed Discharge = 0.000 cumecs on 18-03-2023 Corres. Water Level :587.09 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 2022 - 2023

Station Name : MAHISHI (MAHISHI)

Division : Cauvery Division, Bangalore

Local River : Tunga

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	588.170	46.06	587.900	23.78 *	587.730	12.08	587.320	4.594	Dry Bed						
2	588.170	46.06	587.890	26.33	587.730	12.00	587.320	4.594							
3	588.130	42.89	587.890	26.33	587.720	11.72	587.290	1.463							
4	588.090	39.04 *	587.890	26.33	587.700	11.59	587.290	1.257							
5	588.080	39.09	587.890	26.33	587.600	10.34 *	587.290	1.269 *							
6	588.070	38.36	587.860	24.55	587.630	10.80	587.280	1.227	587.080	0.000	Dry Bed				
7	588.070	38.39	587.840	23.38	587.610	10.68	587.280	1.204	Dry Bed						
8	588.060	37.66	587.830	19.13 *	587.590	10.59	587.280	1.182							
9	588.060	37.66	587.790	20.55	587.580	10.50	587.270	1.158							
10	588.050	36.95	587.800	21.11	587.580	10.46	587.270	1.140							
11	588.150	44.67 *	587.800	21.11	587.570	10.32	587.210	0.914	587.080	0.000			Dry Bed		
12	588.260	53.38	587.800	21.11	587.570	9.589 *	587.180	0.868 *	Dry Bed						
13	588.260	53.38	587.790	20.55	587.540	8.344	587.150	0.805							
14	588.200	48.37	587.790	20.55	587.490	7.531	587.130	0.778							
15	588.200	48.37	587.790	16.70 *	587.460	6.622	587.130	0.739	587.080	0.000			Dry Bed		
16	588.190	47.60	587.780	12.96	587.450	6.459	587.110	0.669							
17	588.150	44.35	587.770	12.55	587.440	6.262	587.110	0.565							
18	588.150	44.67 *	587.770	12.49	587.440	6.262	587.090	0.000							
19	588.100	40.59	587.770	12.45	587.410	6.000 *	587.080	0.000							
20	588.060	37.66	587.760	12.33	587.390	5.406	587.080	0.000							
21	588.020	34.84	587.760	12.37	587.390	5.406	587.080	0.000							
22	588.020	34.84	587.760	15.00 *	587.380	5.301	587.080	0.000							
23	588.000	33.45	587.750	12.26	587.380	5.301	587.070	0.000							
24	588.000	33.45	587.750	12.20	587.360	4.918	587.070	0.000							
25	587.950	27.42 *	587.750	12.26	587.350	4.874	587.070	0.000							
26	587.910	27.56	587.750	14.45 *	587.350	4.839 *	587.070	0.000							
27	587.910	27.56	587.740	12.22	587.340	4.836	587.070	0.000							
28	587.910	27.56	587.740	13.21	587.340	4.836	587.070	0.000							
29	587.900	26.94	587.740	13.91 *			587.060	0.000							
30	587.900	26.94	587.740	12.15			587.060	0.000							
31	587.900	26.94	587.730	12.08			587.060	0.000			587.240	0.000			
Ten-Daily Mean															
I Ten-Daily	588.095	40.22	587.858	23.78	587.647	11.08	587.289	1.909	587.080	0.000					
II Ten-Daily	588.172	46.31	587.782	16.28	587.476	7.279	587.127	0.534	587.080	0.000	587.302	0.000			
III Ten-Daily	587.947	29.77	587.746	12.92	587.361	5.039	587.069	0.000			587.220	0.000			
Monthly															
Min.	587.900	26.94	587.730	12.08	587.340	4.836	587.060	0.000	587.080	0.000	587.200	0.000			
Max.	588.260	53.38	587.900	26.33	587.730	12.08	587.320	4.594	587.080	0.000	587.360	0.000			
Mean	588.067	38.48	587.794	17.51	587.504	7.995	587.159	0.788	587.080	0	587.242	0			

Peak Computed Discharge = 1751 cumecs on 17-07-2022

Corres. Water Level :594.4 m

Lowest Computed Discharge = 0.868 cumecs on 12-03-2023

Corres. Water Level :587.18 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 : 2022-2023

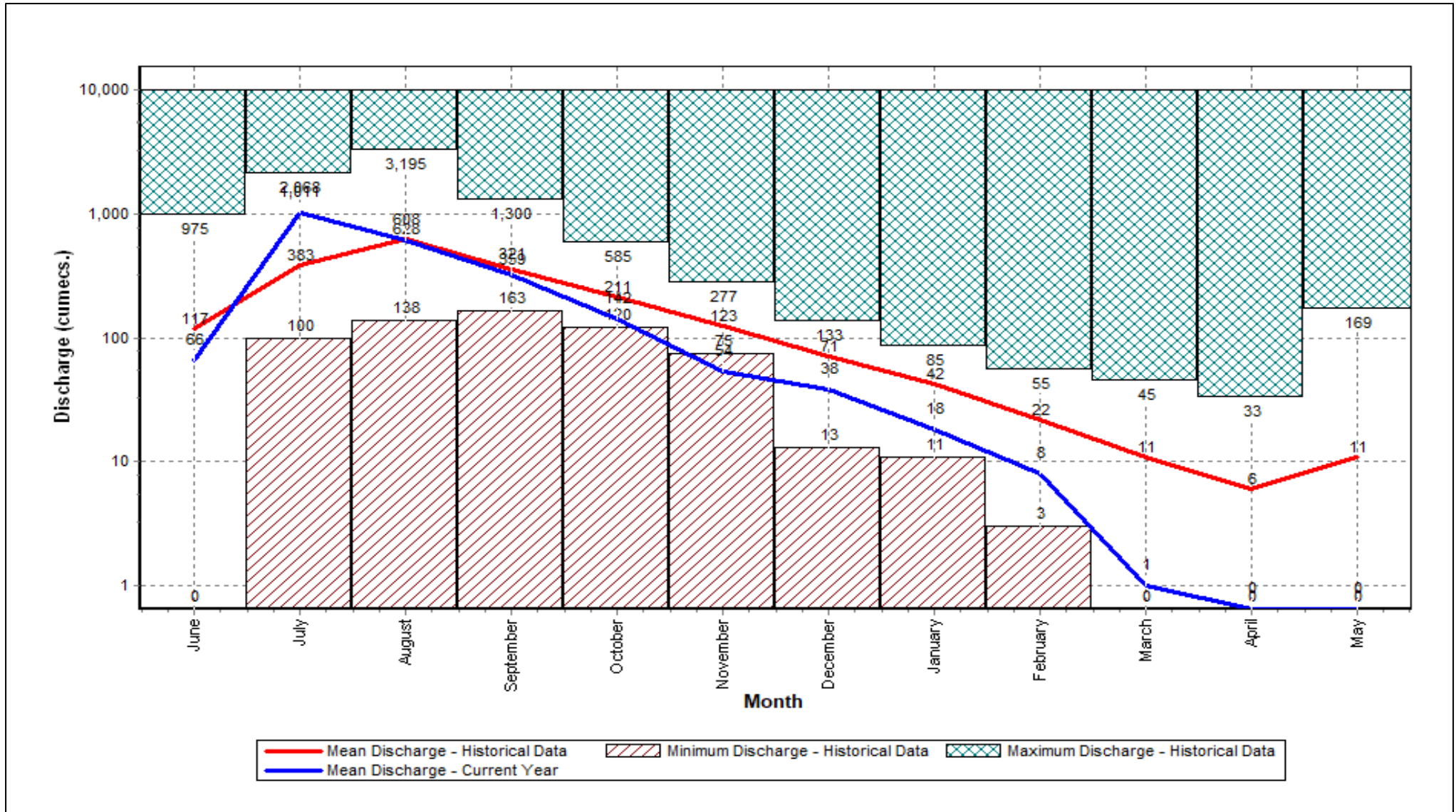
Station Name : MAHISHI (MAHISHI)

Data considered : 2019-2023

Division : Cauvery Division, Bangalore

Local River : Tunga

Sub-Division : Upper Tunga SD, Devangere



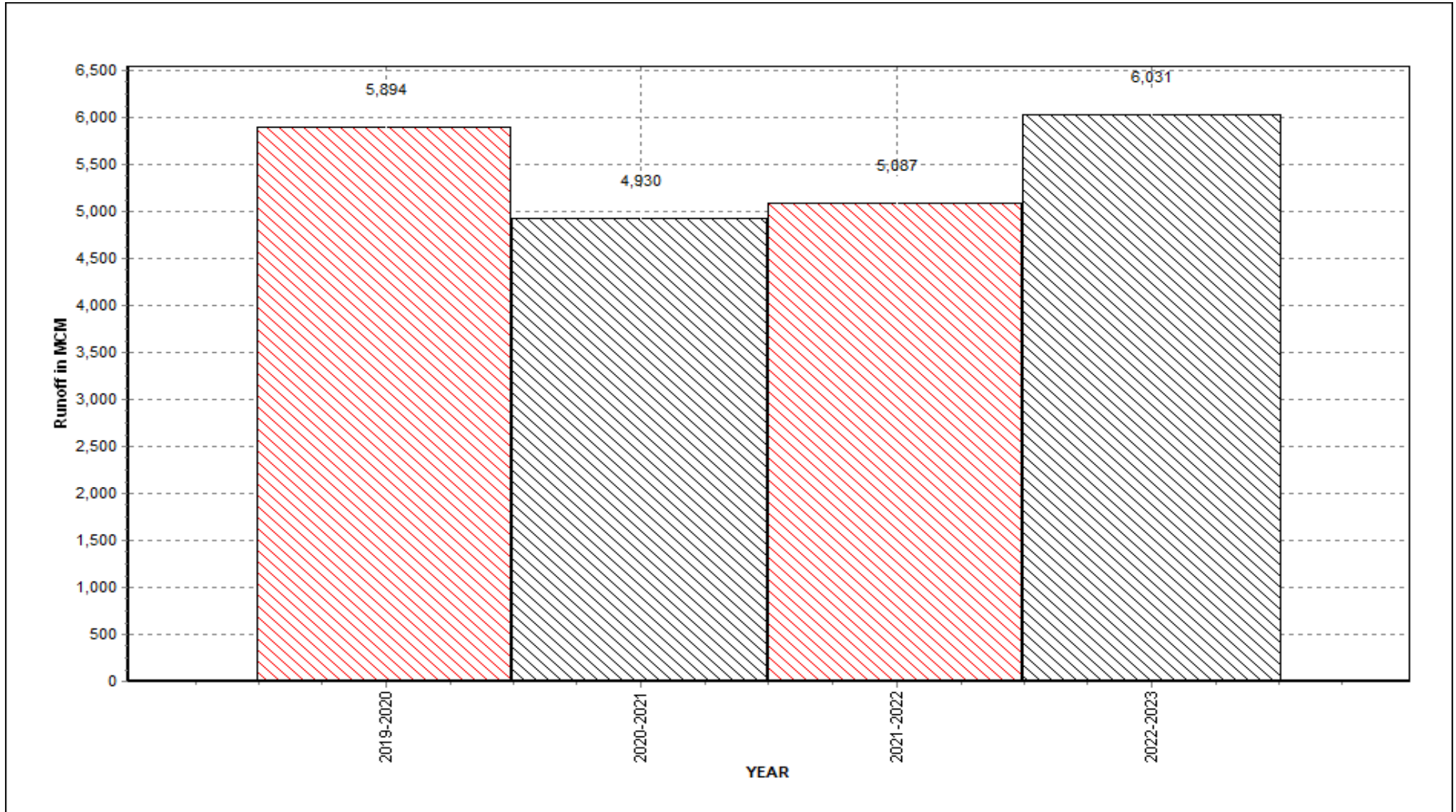
Annual Runoff Values for the period: 2019 - 2023

Station Name : MAHISHI (MAHISHI)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



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

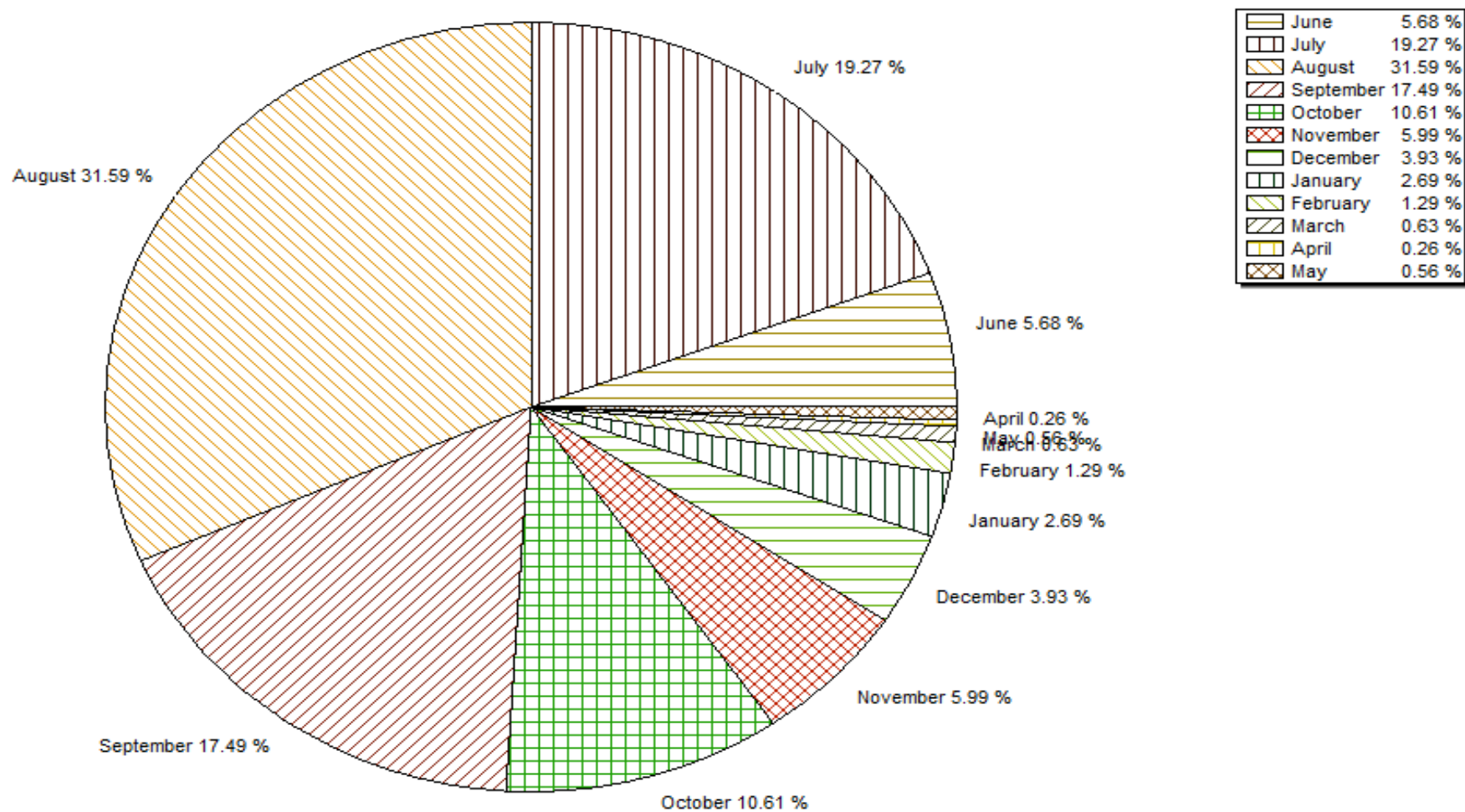
Monthly Average Runoff based on period : 2019-2022

Station Name : MAHISHI (MAHISHI)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



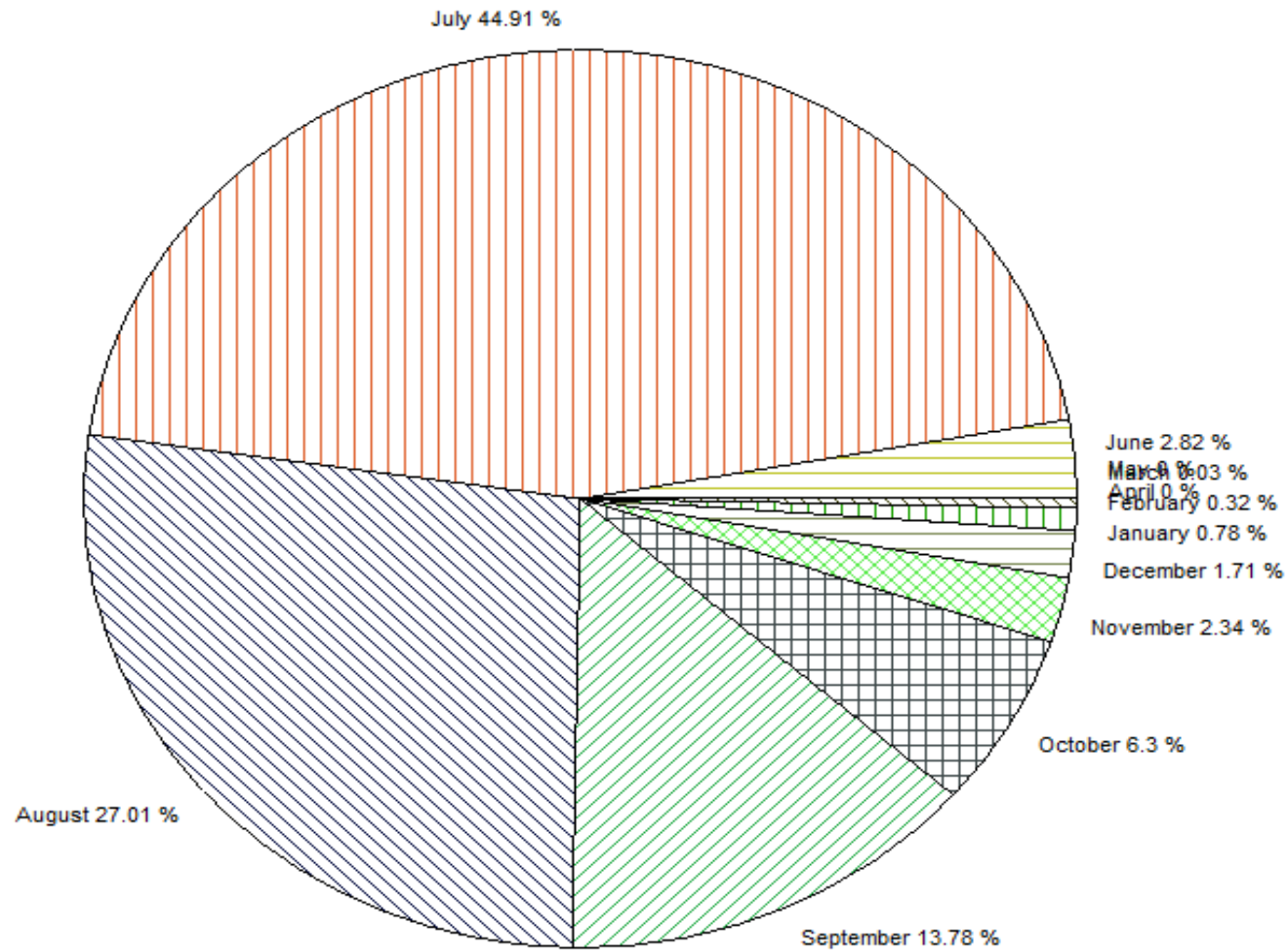
Monthly Runoff for the Year : 2022-2023

Station Name : MAHISHI (MAHISHI)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



June	2.82 %
July	44.91 %
August	27.01 %
September	13.78 %
October	6.3 %
November	2.34 %
December	1.71 %
January	0.78 %
February	0.32 %
March	0.03 %
April	0 %
May	0 %

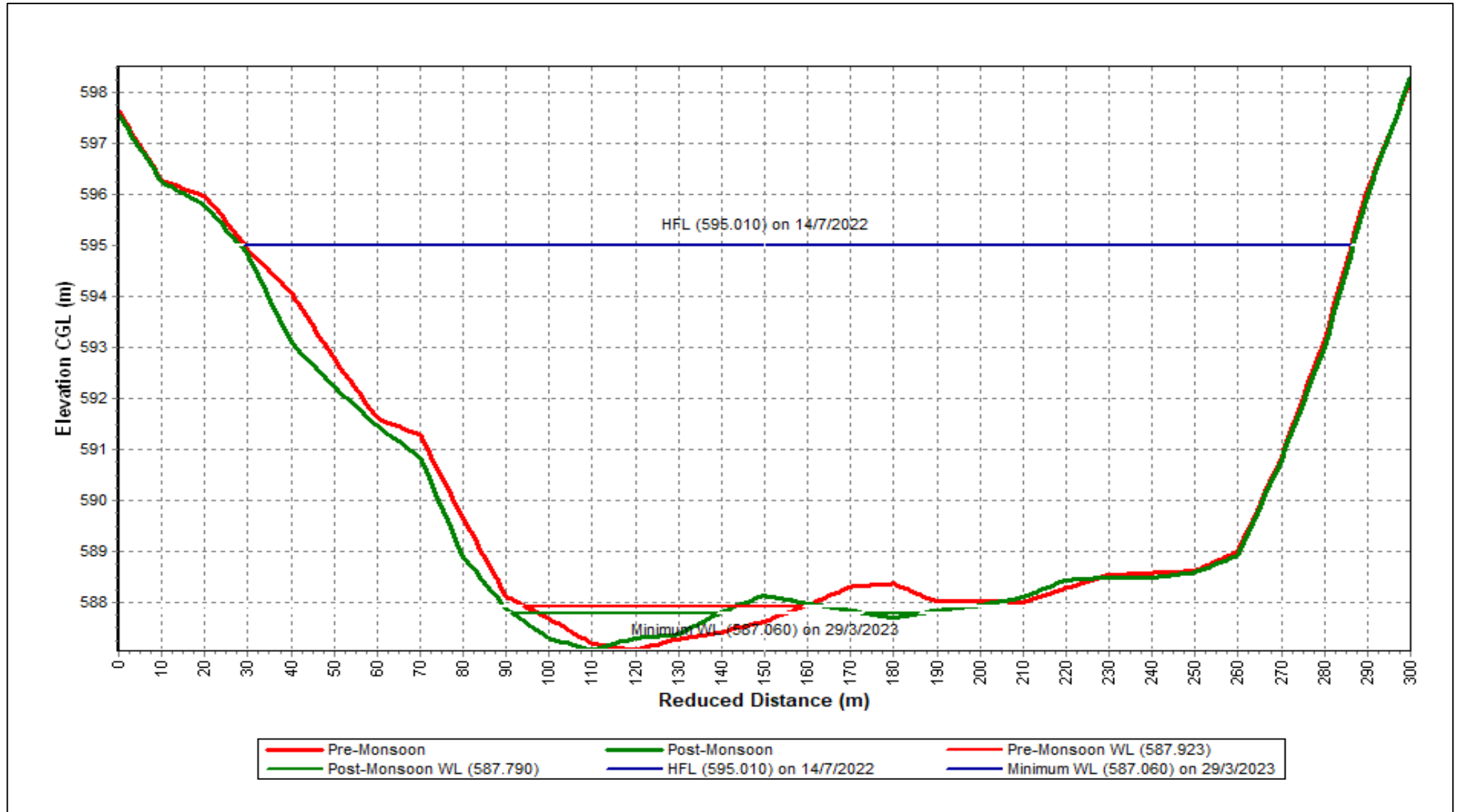
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : MAHISHI (MAHISHI)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



Zero of the Gauge:585 (m.s.l)

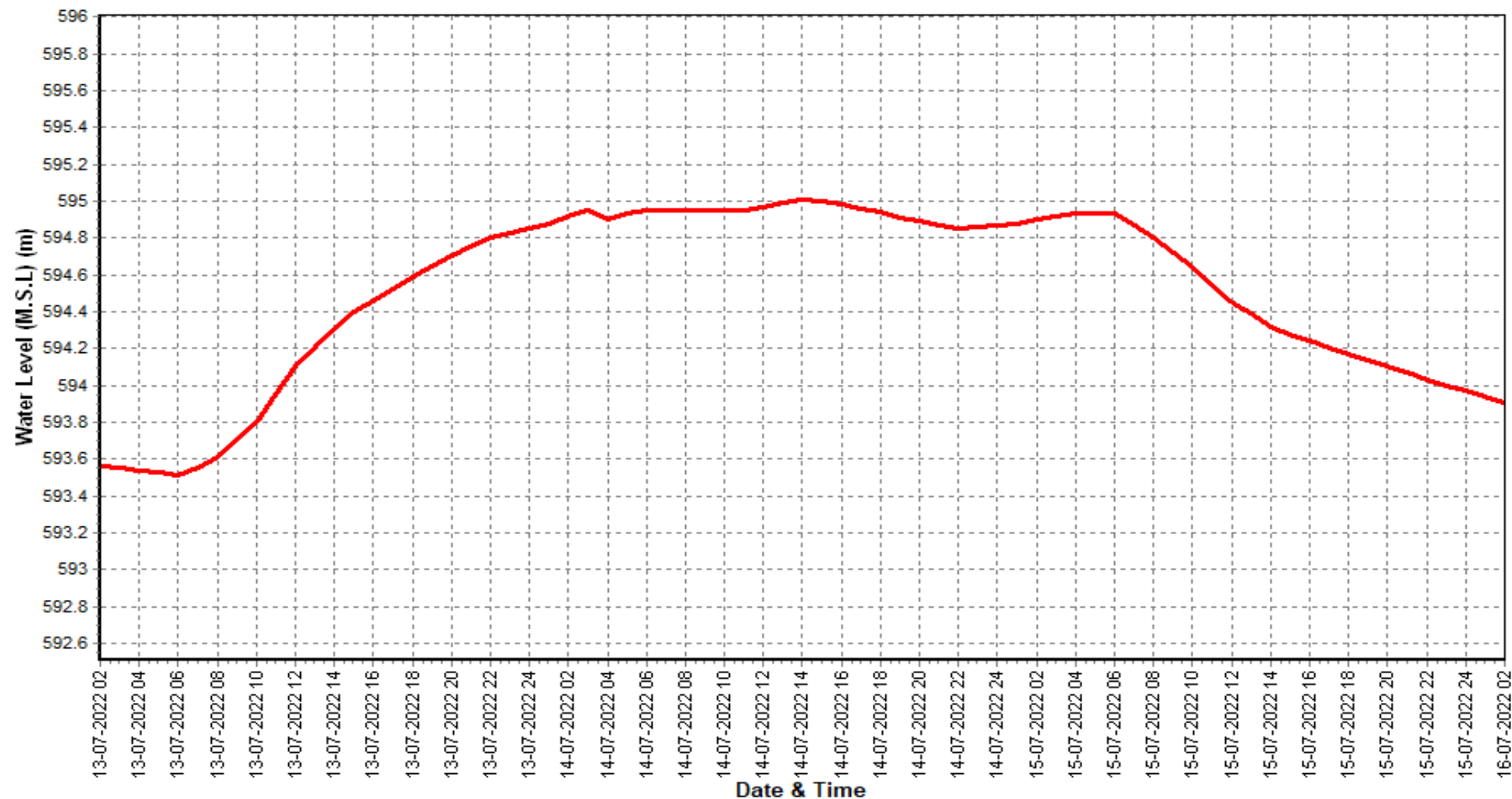
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : MAHISHI (MAHISHI)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



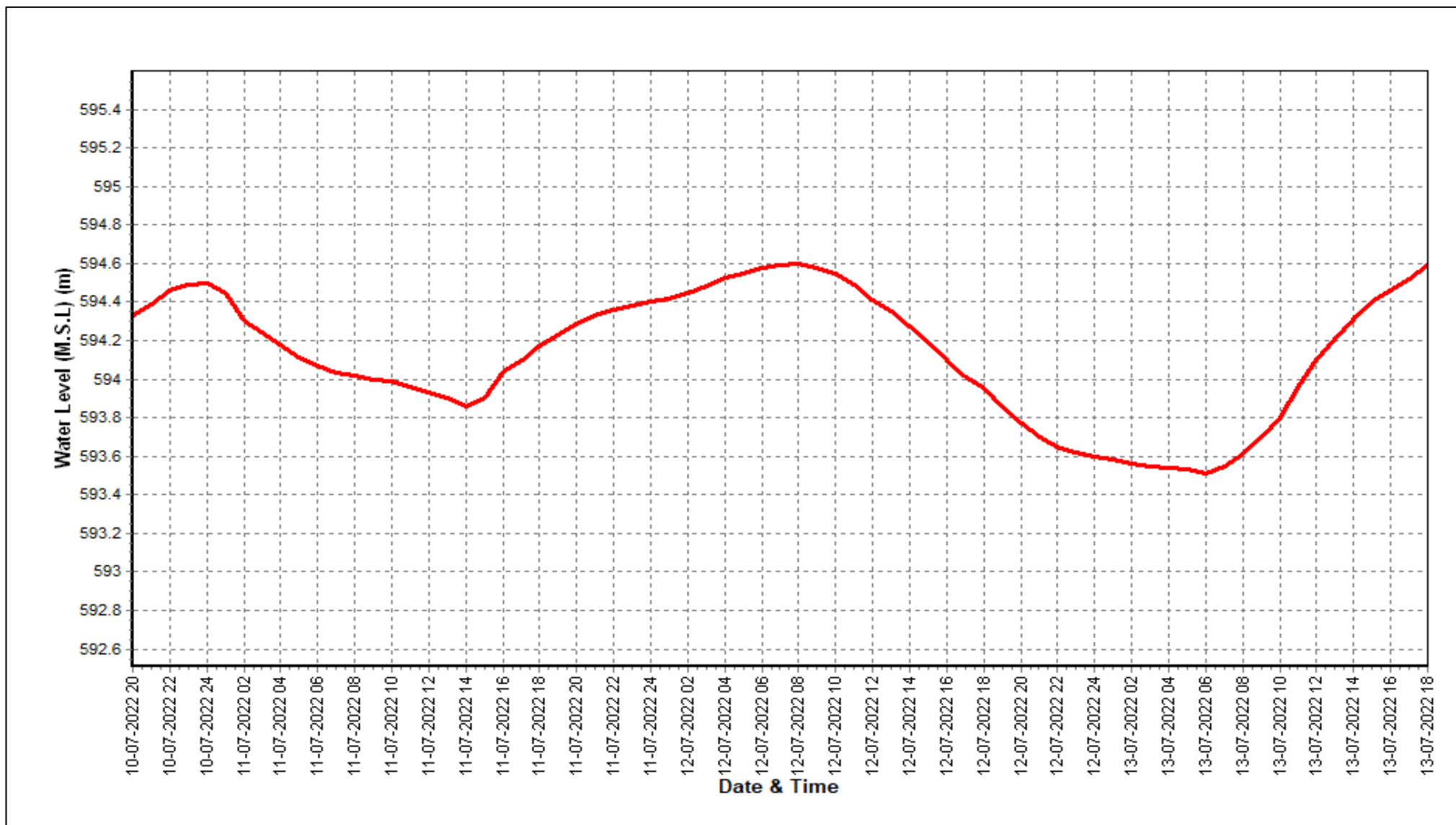
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : MAHISHI (MAHISHI)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



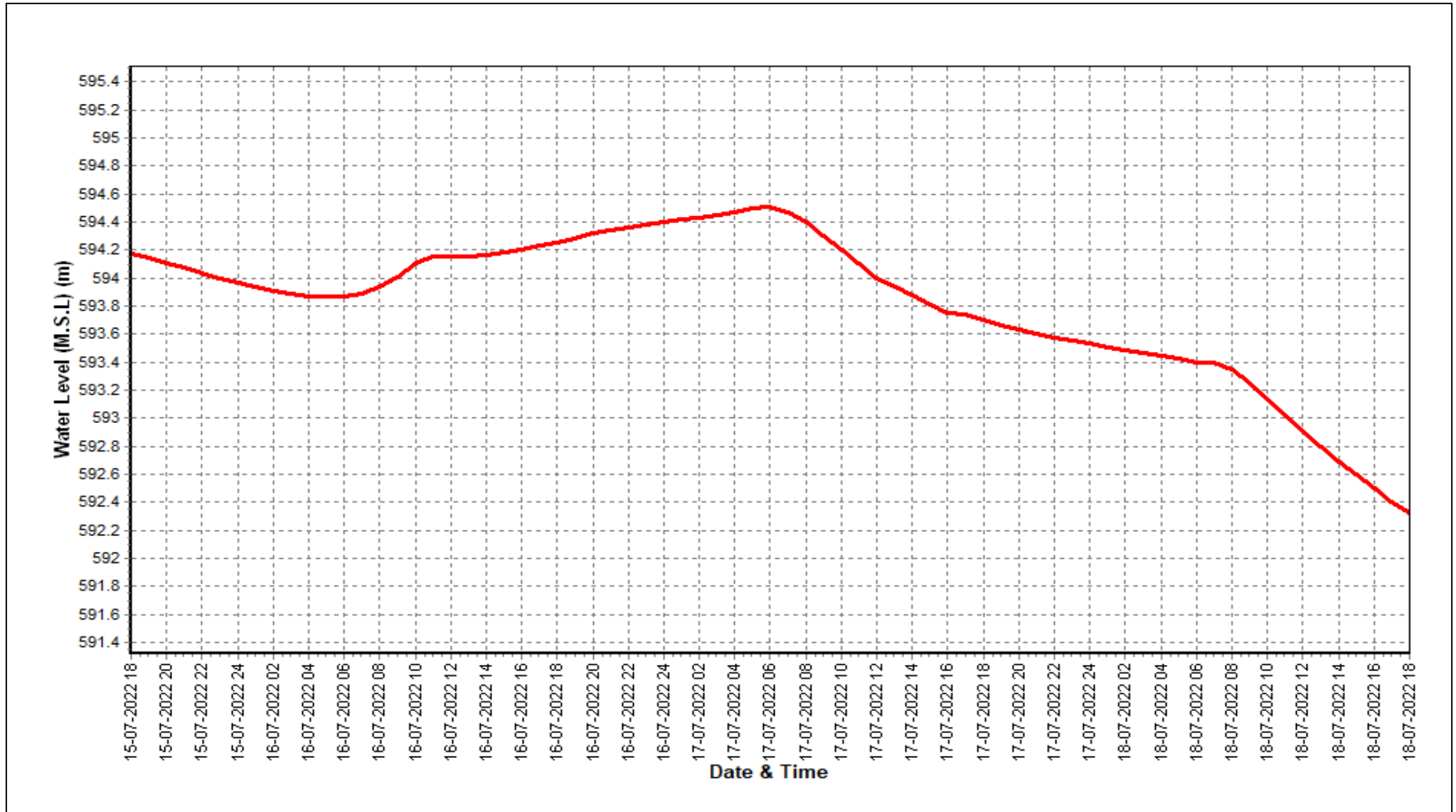
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : MAHISHI (MAHISHI)

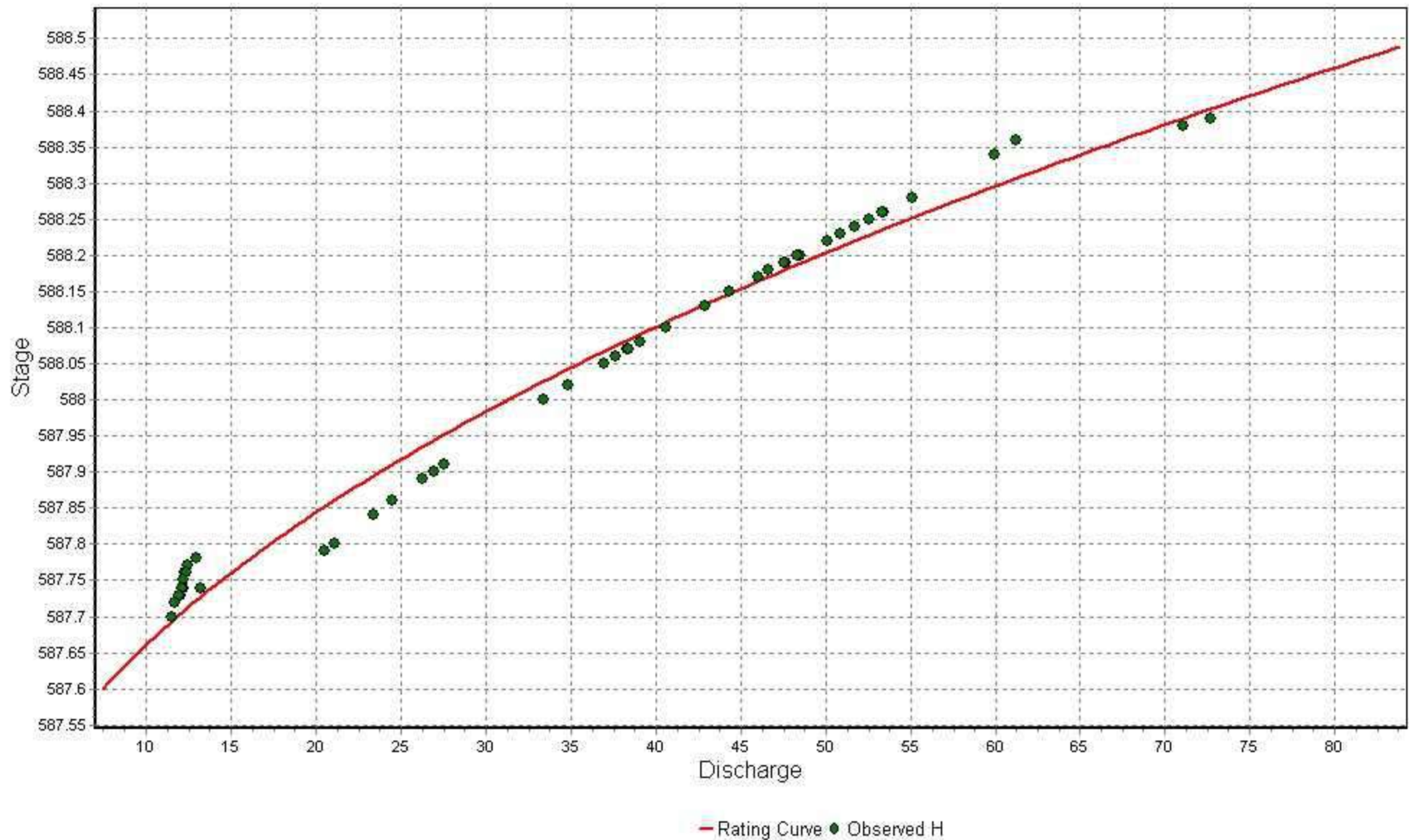
Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



S-D curve of site Mahishi for the period from 01.11.2022 to 04.02.2023
Range:- 587.600 to 588.500, a= -587.530, b=2.065, c= 49.66, OSE= 11.053 (No. of data 79)



HISTORY SHEET

Water Year : 2022-2023

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) : 558.33 (m.s.l)

01-06-2010

Opening Date

Closing Date

Gauge : 21-06-1971

Discharge : 22-01-1972

Sediment : 14-09-1972

Water Quality : 01-01-1973

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

Year	Maximum			Minimum		
	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	557.245	27-04-1974
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	557.285	22-04-1977
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	557.130	06-06-1978
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	557.030	09-05-1983
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	07-05-1985
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	557.110	09-05-1987
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	557.080	02-04-1992
1992-1993	2238	562.658	27-07-1992	0.947	557.232	02-06-1992
1993-1994	1622	561.749	16-08-1993	0.167	557.187	13-03-1994

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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	557.070	14-04-1996
1996-1997	1546	561.650	24-07-1996	0.000	557.070	10-06-1996
1997-1998	2890	563.400	08-08-1997	0.000	557.130	30-04-1998
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	02-04-2001
2001-2002	1367	561.435	09-07-2001	0.000	557.150	08-04-2002
2002-2003	1539	561.430	18-08-2002	0.000	557.170	18-04-2003
2003-2004	1314	561.140	24-06-2003	0.000	557.280	13-06-2003
2004-2005	2203	563.530	05-08-2004	0.000	557.340	18-04-2005
2005-2006	2695	563.370	03-08-2005	0.010	557.120	06-04-2006
2006-2007	2452	563.460	12-08-2006	0.000	557.070	30-01-2007
2007-2008	2563	564.110	07-08-2007	0.000	557.190	16-06-2007
2008-2009	3069	564.120	12-08-2008	0.000	558.280	25-05-2009
2009-2010	3688	564.260	17-07-2009	0.000	557.670	30-04-2010
2010-2011	2017	566.110	29-07-2010	0.000	561.770	30-01-2011
2011-2012	2321	566.755	18-07-2011	0.000	561.460	04-06-2011
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
2016-2017	1394	565.520	05-07-2016	0.000	561.330	26-04-2017
2017-2018	1625	565.750	20-07-2017	0.000	561.470	01-03-2018
2018-2019	3607	568.180	15-08-2018	0.000	561.670	10-01-2019
2019-2020	4195	570.140	10-08-2019	0.000	561.400	15-03-2020
2020-2021	2551	567.370	09-08-2020	0.000	561.640	05-05-2021
2021-2022	3476	568.900	24-07-2021	0.000	561.480	08-03-2022

Annual Runoff of Krishna at Shimoga

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1971-1972		53	53	0	2	2
2	1972-1973	3552	222	3774	126	8	133
3	1973-1974	5164	187	5352	182	7	189
4	1974-1975	4766	196	4962	168	7	175
5	1975-1976	6349	352	6701	224	12	237
6	1976-1977	3261	220	3481	115	8	123
7	1977-1978	4851	325	5175	171	11	183
8	1978-1979	7561	338	7899	267	12	279
9	1979-1980	4000	283	4283	141	10	151
10	1980-1981	7136	315	7451	252	11	263
11	1981-1982	5620	242	5862	199	9	207
12	1982-1983	5172	186	5358	183	7	189
13	1983-1984	4771	382	5153	169	13	182
14	1984-1985	5007	210	5217	177	7	184
15	1985-1986	4021	199	4220	142	7	149
16	1986-1987	3950	240	4190	140	8	148
17	1987-1988	2350	258	2609	83	9	92
18	1988-1989	3912	130	4042	138	5	143
19	1989-1990	4424	167	4592	156	6	162
20	1990-1991	5730	263	5993	202	9	212
21	1991-1992	5504	201	5705	195	7	202
22	1992-1993	5954	735	6690	210	26	236
23	1993-1994	4982	355	5337	176	13	189
24	1994-1995	8166	308	8475	289	11	299
25	1995-1996	3987	154	4142	141	5	146
26	1996-1997	3958	187	4145	140	7	146
27	1997-1998	5960	391	6351	211	14	224
28	1998-1999	5102	430	5531	180	15	195
29	1999-2000	5910	275	6185	209	10	219
30	2000-2001	5381	196	5577	190	7	197
31	2001-2002	4138	155	4294	146	5	152
32	2002-2003	3430	186	3615	121	7	128
33	2003-2004	3376	106	3482	119	4	123
34	2004-2005	4137	137	4274	146	5	151
35	2005-2006	5896	324	6220	208	11	220
36	2006-2007	6105	261	6366	216	9	225
37	2007-2008	6770	533	7303	239	19	258
38	2008-2009	5625	265	5890	199	9	208
39	2009-2010	5838	248	6086	206	9	215
40	2010-2011	4678	385	5062	165	14	179
41	2011-2012	5747	273	6020	203	10	213
42	2012-2013	4320	252	4572	153	9	162
43	2013-2014	7403	309	7712	262	11	273
44	2014-2015	6369	304	6673	225	11	236
45	2015-2016	3389	281	3670	120	10	130
46	2016-2017	3372	161	3532	119	6	125
47	2017-2018	3550	198	3748	125	7	132

48	2018-2019	8090	167	8257	286	6	292
49	2019-2020	7090	555	7645	251	20	270
50	2020-2021	5823	259	6082	206	9	215
52	2021-2022	6267	200	6467	221	7	229
54	2022-2023	6629	116	6745	234	4	238
Average		5187	263	5350	180	9	189

Instantaneous Flood Peak of Krishna at Shimoga					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1972-1973	564.000	08-07-1972	09:00:00	3247 *
2	1973-1974	565.030	09-07-1973	00:00:00	4069 *
3	1974-1975	564.880	26-07-1974	18:00:00	3945 *
4	1975-1976	565.120	11-07-1975	16:00:00	4144 *
5	1976-1977	564.155	23-07-1976	14:00:00	3366 *
6	1977-1978	563.595	25-07-1977	05:00:00	2942 *
7	1978-1979	565.405	26-07-1978	05:00:00	4386 *
8	1979-1980	564.520	03-08-1979	07:00:00	3653 *
9	1980-1981	565.400	03-07-1980	20:00:00	4382 *
10	1981-1982	564.840	19-08-1981	18:00:00	3912 *
11	1982-1983	566.870	03-08-1982	06:00:00	5713 *
12	1983-1984	565.180	23-07-1983	15:00:00	4195 *
13	1984-1985	565.280	19-07-1984	07:00:00	4279 *
14	1985-1986	564.500	27-06-1985	13:00:00	3637 *
15	1986-1987	564.750	10-08-1986	11:00:00	3839 *
16	1987-1988	563.060	09-07-1987	15:00:00	2557 *
17	1988-1989	564.930	19-07-1988	03:00:00	3986 *
18	1989-1990	563.300	25-07-1989	05:00:00	2728 *
19	1990-1991	562.595	18-08-1990	12:00:00	2238 *
20	1991-1992	563.700	28-07-1991	00:00:00	3020 *
21	1992-1993	563.010	27-07-1992	17:00:00	2522 *
22	1993-1994	561.870	16-08-1993	08:00:00	1768
23	1994-1995	564.450	16-07-1994	19:00:00	3597 *
24	1995-1996	562.180	01-09-1995	20:00:00	1965 *
25	1996-1997	561.770	24-07-1996	00:00:00	1706 *
26	1997-1998	563.560	08-08-1997	15:00:00	2917 *
27	1998-1999	562.370	04-07-1998	15:00:00	2088 *
28	1999-2000	563.640	19-07-1999	21:00:00	2976 *
29	2000-2001	563.340	14-07-2000	08:00:00	2756 *
30	2001-2002	561.660	09-07-2001	22:00:00	1639 *
31	2002-2003	561.690	18-08-2002	23:00:00	1657 *
32	2003-2004	561.200	24-06-2003	21:00:00	1365 *
33	2004-2005	563.530	05-08-2004	07:00:00	2895 *
34	2005-2006	563.440	03-08-2005	21:00:00	2829 *
35	2006-2007	563.760	12-08-2006	15:00:00	3065 *
36	2007-2008	564.180	07-08-2007	23:00:00	3385 *
37	2008-2009	564.160	12-08-2008	13:00:00	3370 *
38	2009-2010	564.280	17-07-2009	10:00:00	3463 *
39	2010-2011	566.430	29-07-2010	10:00:00	2167 *
40	2011-2012	566.930	18-07-2011	15:00:00	2516 *
41	2012-2013	567.840	08-08-2012	12:00:00	3152 *
42	2013-2014	567.890	05-07-2013	13:00:00	3187 *

Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
43	2014-2015	567.950	02-08-2014	04:00:00	3229 *
44	2015-2016	567.330	20-07-2015	13:00:00	2796 *
45	2016-2017	566.090	05-07-2016	17:00:00	1930 *
46	2017-2018	565.780	20-07-2017	21:00:00	1714 *
47	2018-2019	568.430	15-08-2018	12:00:00	3564 *
48	2019-2020	570.180	10-08-2019	06:00:00	4785 *
49	2020-2021	567.150	07-08-2020	14:00:00	2670 *
50	2021-2022	568.900	24-07-2021	07:00:00	3476
51	2022-2023	567.840	09-08-2022	18:00:00	3265 *

Note:- Discharge Effected from 2010 due to K.T Weir from 1 Km above to SG Line

Stage-Discharge Data for the period 2022 - 2023

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	561.610	0.000	563.460	270.9	563.160	182.2	564.030	595.7	562.870	105.0	562.130	10.05
2	562.060	0.000	563.500	278.8	563.610	365.8	563.800	463.3	562.800	86.46 *	562.370	20.80
3	562.080	0.000	564.740	864.2 *	563.390	257.6	563.280	268.2	562.850	100.3	562.460	25.78
4	562.100	0.000	565.080	1201	563.190	186.5	563.280	243.4 *	562.830	90.80	562.590	45.06
5	562.100	0.000	566.250	1878	563.560	336.7	564.010	585.4	562.840	94.77 *	562.585	44.47
6	562.100	0.000	566.390	1966	564.990	1154	563.160	182.0	562.990	129.0	562.550	36.91 *
7	562.090	0.000	566.540	2063	566.020	1771 *	563.955	549.5	562.800	81.04	562.520	33.74
8	562.030	0.000	566.630	2123	566.230	1865	563.140	173.6	562.980	125.9	562.460	28.64 *
9	561.700	0.000	566.610	2109	567.160	2886 *	563.280	221.8	562.830	92.66 *	562.410	22.08
10	561.430	0.000	566.350	2063 *	566.330	1928	563.245	201.0	562.800	81.61	562.280	14.83
11	561.380	0.020 *	566.890	2296	565.690	1539	563.710	383.1 *	562.880	102.5	562.170	10.45
12	561.880	0.000 *	566.720	2182	565.960	1698	564.560	891.2	562.850	94.99	562.270	14.07
13	561.970	0.000 *	566.680	2155	565.280	1308	563.850	490.4	562.810	84.93	562.390	23.00 *
14	561.960	0.000 *	567.070	2420	564.500	733.0 *	563.990	572.0	562.810	84.93	562.380	20.94
15	561.970	0.000 *	567.310	2590	563.950	476.3 *	563.560	336.7	562.990	129.0	562.370	20.07
16	561.980	0.000 *	566.810	2243	563.880	507.5	563.360	248.4	562.990	129.0 *	562.530	35.73
17	562.050	0.000 *	566.910	2615 *	563.410	261.3	563.530	316.5	562.870	99.85	562.480	27.57
18	562.070	0.000 *	565.960	1698	563.350	243.2	563.160	210.6 *	562.870	99.85	562.470	27.02
19	562.070	0.000 *	565.820	1615	563.280	221.8	563.240	201.0	562.910	110.5	562.390	21.98
20	562.100	0.000 *	564.430	884.2	563.290	223.4	563.100	166.2	562.900	107.3	562.420	25.33 *
21	561.980	0.000 *	564.090	638.2	563.280	243.4 *	563.120	171.5	562.820	87.69	562.180	10.68
22		0.000 *	563.980	565.7	563.780	457.4	563.060	153.4	562.820	88.02	562.110	8.412
23	562.430	65.15 #	563.860	501.2	564.180	671.0	563.010	138.3	562.770	80.48 *	562.120	8.734
24	562.220	39.67 #	563.630	354.5 *	564.100	641.7	562.930	119.0	562.690	65.49 *	562.100	8.331
25	562.720	112.0 #	563.880	507.5	563.780	457.4	562.960	121.8 *	562.670	60.49	562.340	20.03
26	562.750	117.7 *	563.400	259.3	564.080	634.6	562.910	116.6	562.620	52.44	562.430	23.57
27	562.950	158.5	563.370	253.7	563.710	410.5	562.860	102.5	562.610	50.03	562.440	26.95 *
28	562.860	115.6	563.980	565.7	563.580	337.2 *	562.830	95.71	562.570	42.39	562.440	24.16
29	562.970	161.3	563.530	316.5	563.580	341.5	562.820	92.30	562.540	37.58	562.440	24.16
30	563.520	282.7	563.370	253.7	565.230	1281	562.820	92.30	562.530	39.91 *	562.440	24.16
31			563.330	257.9 *	563.180	215.9 *			562.290	14.93		
Ten-Daily Mean												
I Ten-Daily	561.930	0.000	565.555	1482	564.764	1093	563.518	348.4	562.859	98.75	562.436	28.23
II Ten-Daily	561.943	0.002	566.460	2070	564.259	721.2	563.606	381.6	562.888	104.3	562.387	22.61
III Ten-Daily	562.711	105.3	563.675	406.7	563.862	517.4	562.932	120.3	562.630	56.31	562.304	17.92
Monthly												
Min.	561.380	0.000	563.330	253.7	563.160	182.2	562.820	92.30	562.290	14.93	562.100	8.331
Max.	563.520	282.7	567.310	2615	567.160	2886	564.560	891.2	562.990	129.0	562.590	45.06
Mean	562.177	35.09	565.180	1290	564.281	768.9	563.352	283.4	562.787	85.48	562.376	22.92

Annual Runoff in MCM = 6744 Annual Runoff in mm = 2382

Peak Observed Discharge = 2590 cumecs on 15-07-2022 Corres. Water Level :567.31 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :561.61 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 2022 - 2023

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	562.550	42.63	562.370	18.75 *	562.220	7.297	561.800	0.000	561.890	0.000	562.030	0.000
2	562.530	37.54	562.120	7.880	562.470	10.21	561.780	0.000	561.880	0.000	562.100	0.000
3	562.530	37.54	562.130	9.118	562.050	6.049	561.730	0.000	561.880	0.000	562.190	0.000
4	562.530	34.97 *	562.220	11.86	561.690	0.000	561.830	0.000	561.890	0.000	562.220	0.000
5	562.530	37.54	562.220	11.86	561.620	0.000	561.800	0.000	561.870	0.000	562.160	0.000
6	562.520	35.53	562.210	11.70	561.630	0.000	561.770	0.000	561.880	0.000	562.100	0.000
7	562.520	35.53	562.190	9.914	561.630	0.000	561.700	0.000	561.880	0.000	562.000	0.000
8	561.720	3.200 *	562.270	14.12 *	561.650	0.000	561.680	0.000	561.910	0.000	561.940	0.000
9	562.180	9.780	562.340	18.28	561.670	0.000	561.690	0.000	562.020	0.000	561.950	0.000
10	562.440	22.11	562.280	14.88	561.700	0.000	561.690	0.000	562.110	0.000	561.970	0.000
11	562.580	39.93 *	562.280	14.88	561.700	0.000	561.750	0.000	562.140	0.000	561.990	0.000
12	562.580	46.92	562.280	14.88	561.800	0.000	561.750	0.000	562.160	0.000	562.020	0.000
13	562.710	67.49	562.190	9.914	561.850	0.000	561.780	0.000	562.190	0.000	562.050	0.000
14	562.740	71.05	562.210	11.70	561.730	0.000	561.810	0.000	562.150	0.000	562.100	0.000
15	562.740	71.05	562.210	11.70 *	561.680	0.000	561.810	0.000	562.100	0.000	562.010	0.000
16	562.710	67.49	562.060	7.010	561.590	0.000	561.730	0.000	562.060	0.000	561.940	0.000
17	562.650	60.16	561.670	0.000	562.370	9.182	561.860	0.000	562.020	0.000	561.910	0.000
18	562.580	39.93 *	561.660	0.000	561.740	0.000	561.730	0.000	561.960	0.000	561.880	0.000
19	562.580	46.92	561.760	0.000	561.630	0.000	561.950	0.000	561.920	0.000	561.880	0.000
20	562.470	24.92	561.770	0.000	561.520	0.000	562.140	0.000	561.870	0.000	561.850	0.000
21	562.470	24.92	561.850	0.000	561.490	0.000	562.170	0.000	561.830	0.000	561.840	0.000
22	562.470	24.92	562.060	0.000	561.470	0.000	562.240	0.000	561.830	0.000	561.870	0.000
23	562.470	24.92	561.650	0.000	561.630	0.000	562.280	0.000	561.830	0.000	561.850	0.000
24	562.460	23.60	561.500	0.000	561.790	0.000	562.290	0.000	561.830	0.000	561.830	0.000
25	562.430	26.14 *	562.520	10.74	561.990	0.000	562.170	0.000	561.830	0.000	561.830	0.000
26	562.430	21.58	562.500	10.50 *	561.810	0.000	562.090	0.000	561.820	0.000	561.810	0.000
27	562.430	21.58	562.500	10.52	561.770	0.000	562.060	0.000	561.850	0.000	561.770	0.000
28	562.430	21.58	561.950	0.000	561.640	0.000	562.020	0.000	561.890	0.000	561.760	0.000
29	562.340	18.28	561.580	0.000			561.980	0.000	561.960	0.000	561.740	0.000
30	562.340	18.28	561.520	0.000			561.940	0.000	562.020	0.000	561.760	0.000
31	562.340	18.28	561.520	0.000			561.900	0.000			561.760	0.000
<u>Ten-Daily Mean</u>												
I Ten-Daily	562.405	29.64	562.235	12.84	561.833	2.356	561.747	0.000	561.921	0.000	562.066	0.000
II Ten-Daily	562.634	53.58	562.009	7.008	561.761	0.918	561.831	0.000	562.057	0.000	561.963	0.000
III Ten-Daily	562.419	22.19	561.923	2.887	561.699	0.000	562.104	0.000	561.869	0.000	561.802	0.000
<u>Monthly</u>												
Min.	561.720	3.200	561.500	0.000	561.470	0.000	561.680	0.000	561.820	0.000	561.740	0.000
Max.	562.740	71.05	562.520	18.75	562.470	10.21	562.290	0.000	562.190	0.000	562.220	0.000
Mean	562.484	34.72	562.051	7.426	561.769	1.169	561.901	0	561.949	0	561.939	0

Peak Computed Discharge = 2886 cumecs on 09-08-2022

Corres. Water Level :567.16 m

Lowest Computed Discharge = 0.000 cumecs on 12-06-2022

Corres. Water Level :561.88 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 : 2022-2023

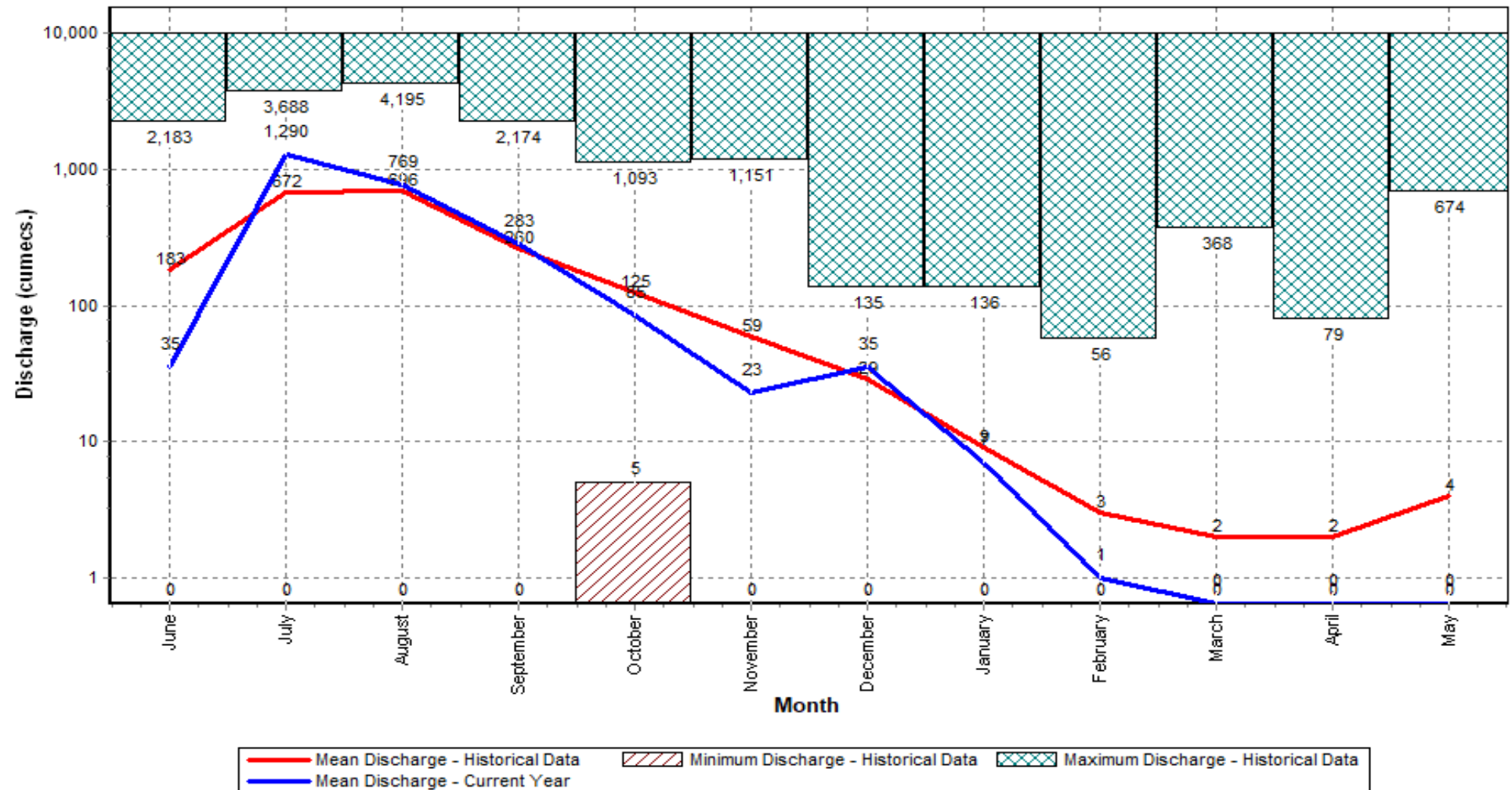
Station Name : SHIMOGA (AKLD0C6)

Data considered : 1972-2023

Division : Cauvery Division, Bangalore

Local River : Tunga

Sub-Division : Upper Tunga Subdn, Devangere



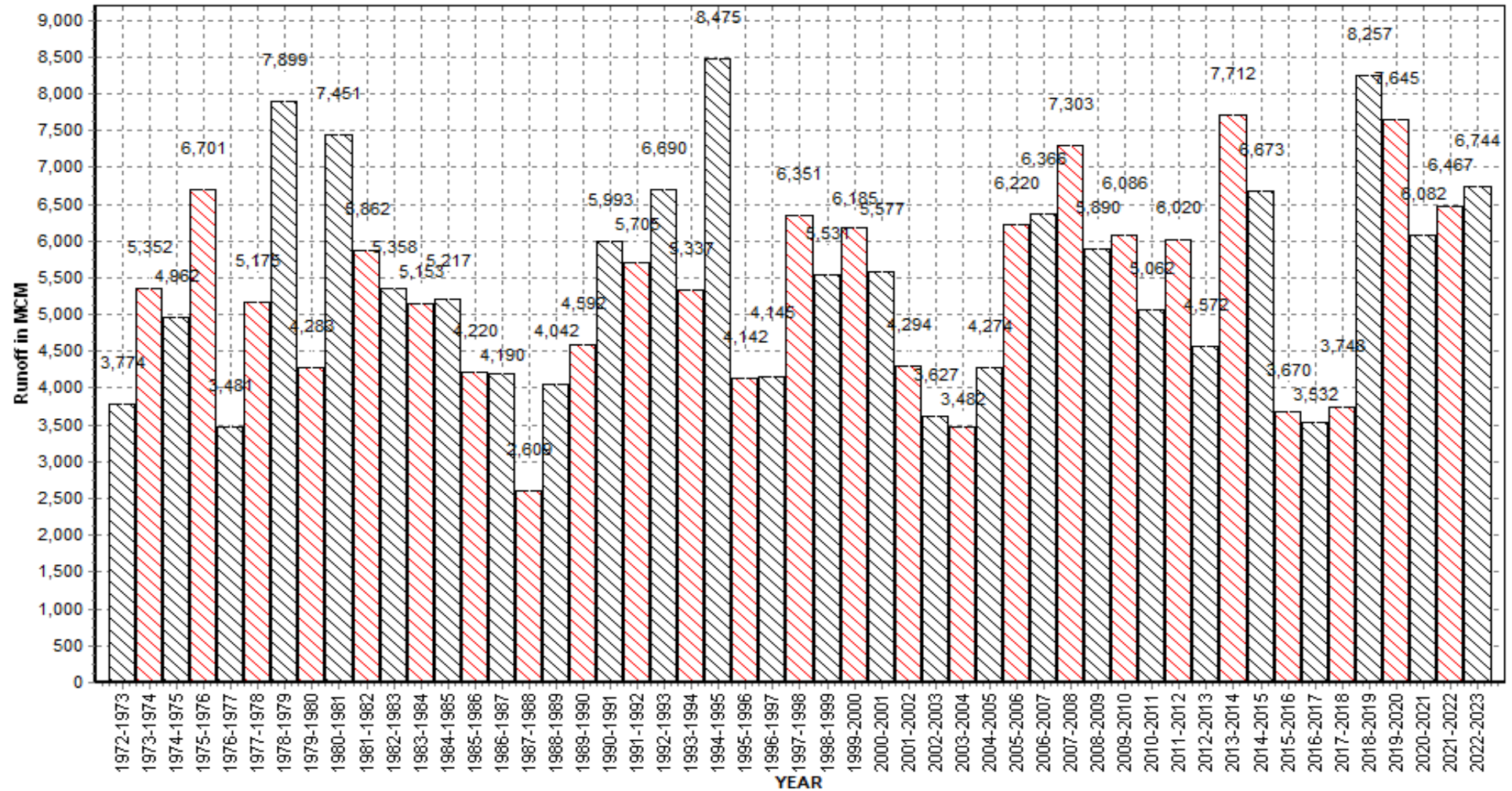
Annual Runoff Values for the period: 1972 - 2023

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

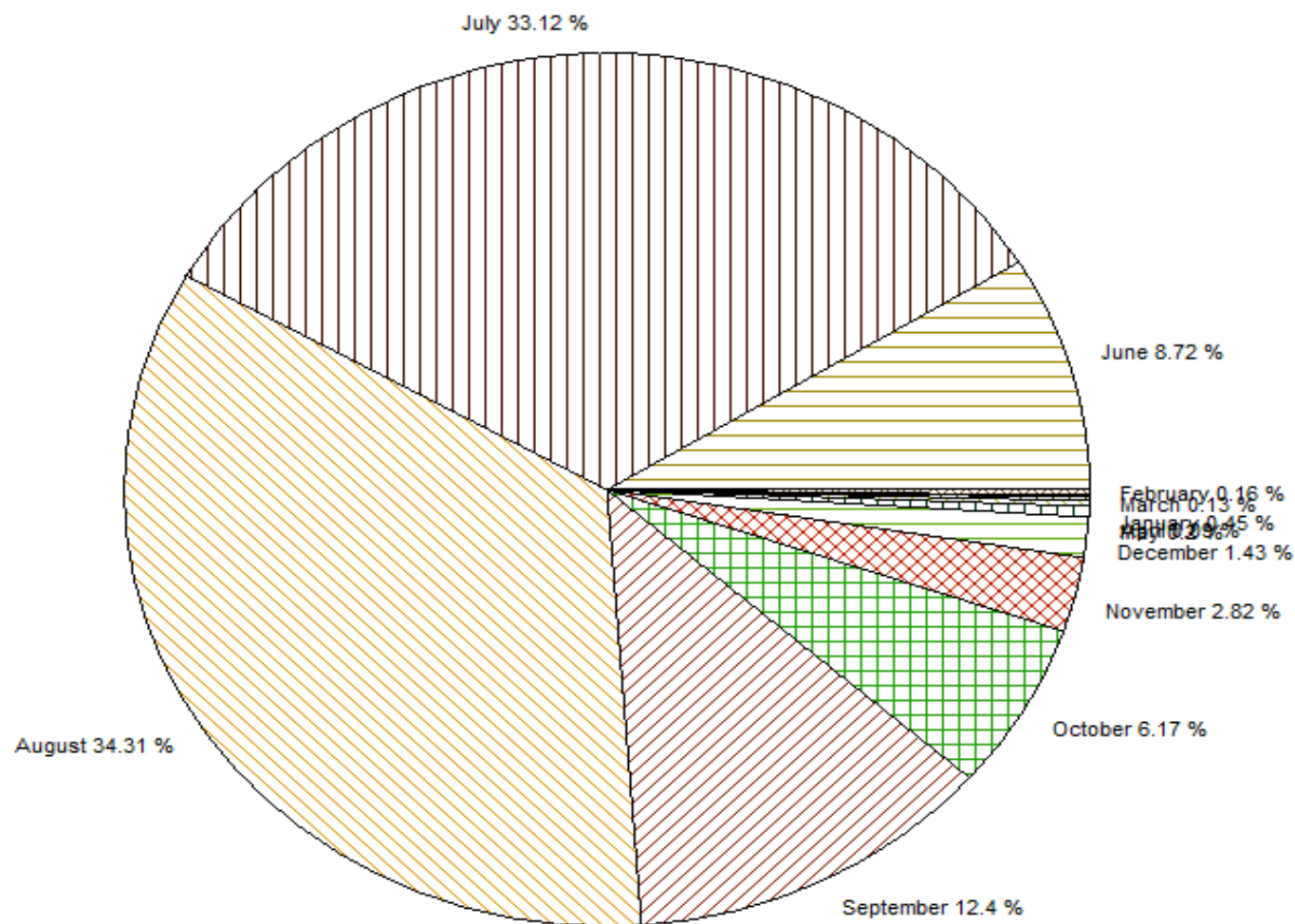
Monthly Average Runoff based on period : 1972-2022

Station Name : SHIMOGA (AKLD0C6)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



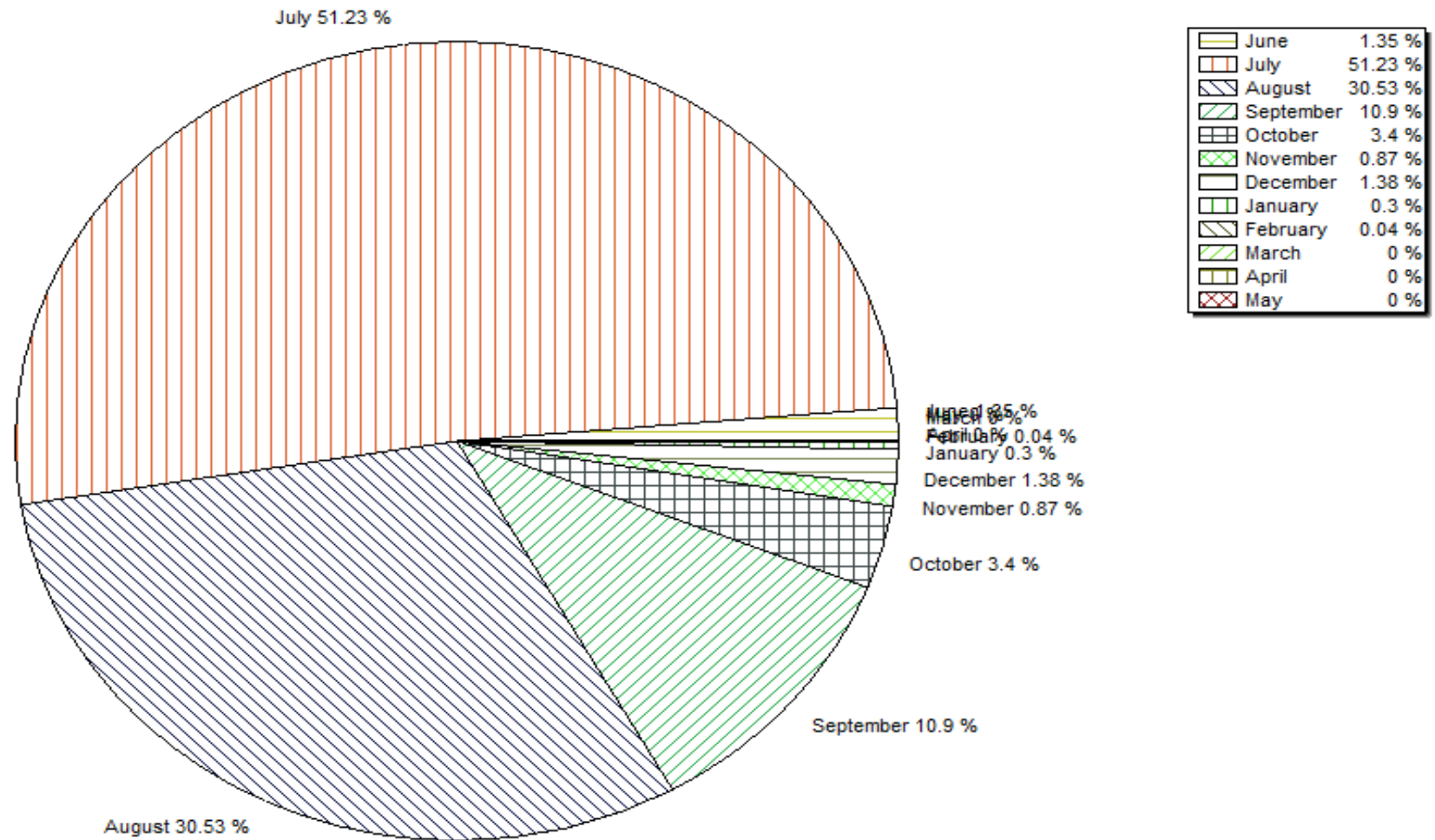
Monthly Runoff for the Year : 2022-2023

Station Name : SHIMOGA (AKLD0C6)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



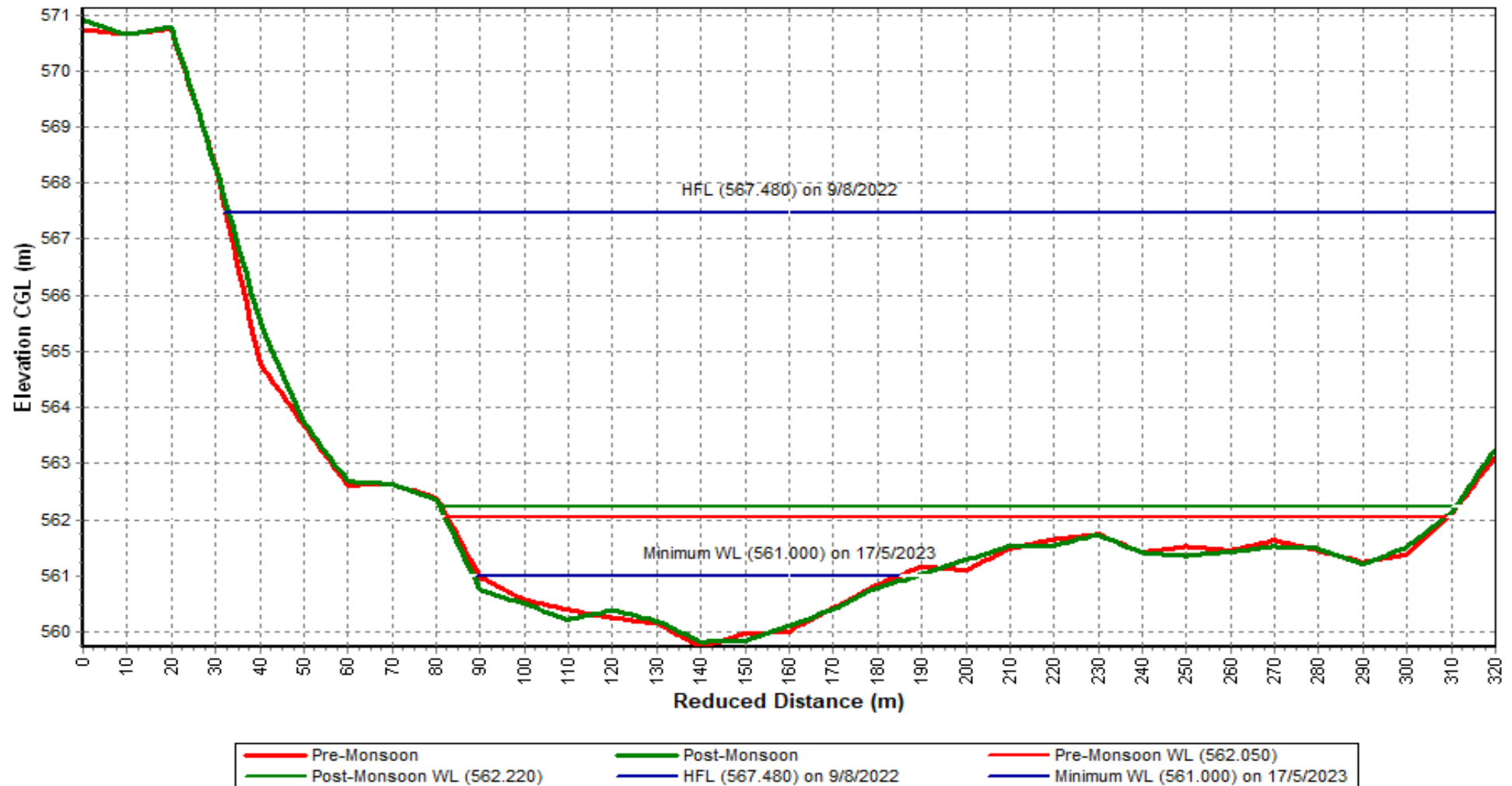
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : SHIMOGA (AKLD0C6)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



Zero of the Gauge: 558.33 (m.s.l)

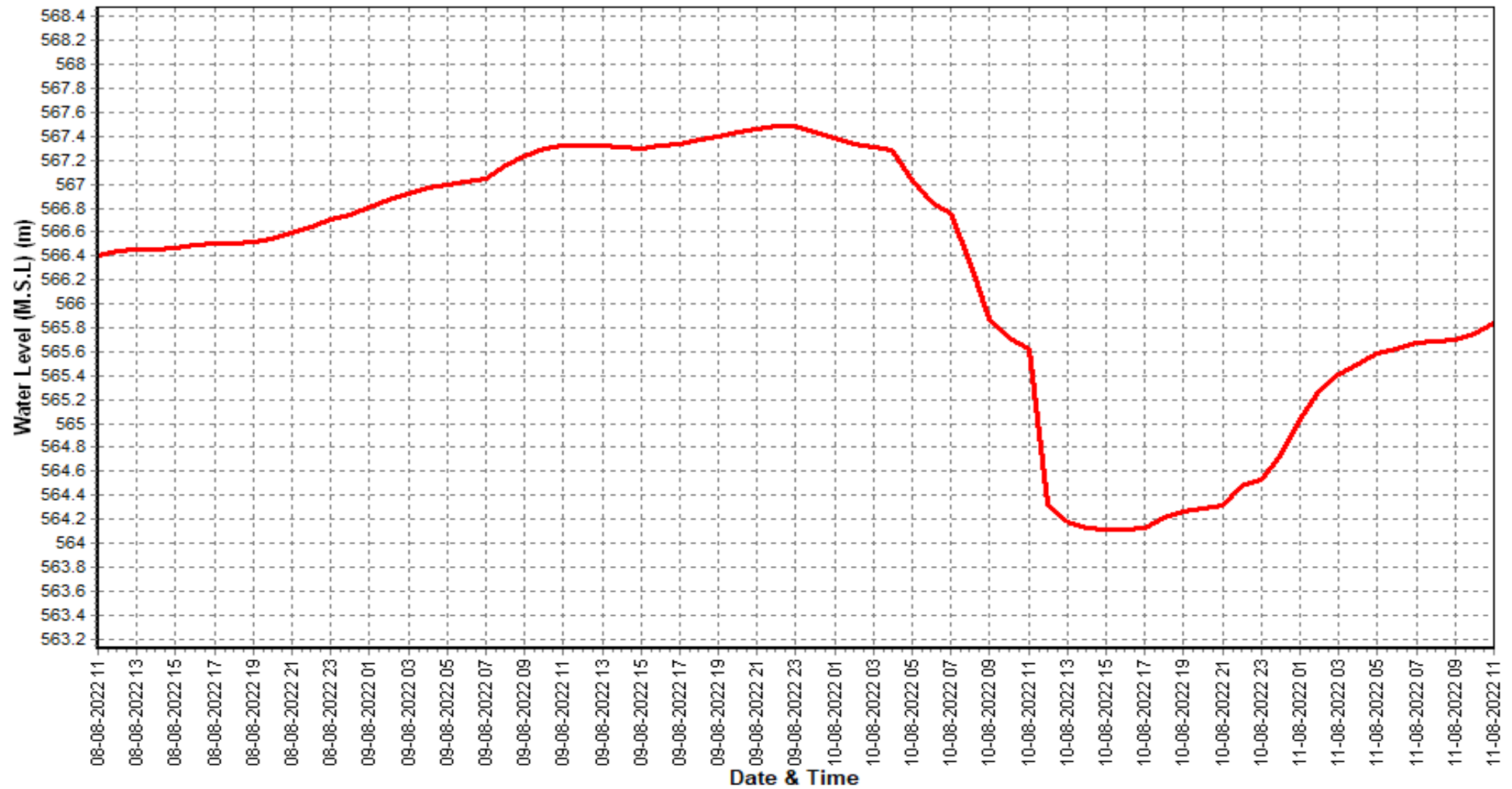
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : SHIMOGA (AKLD0C6)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



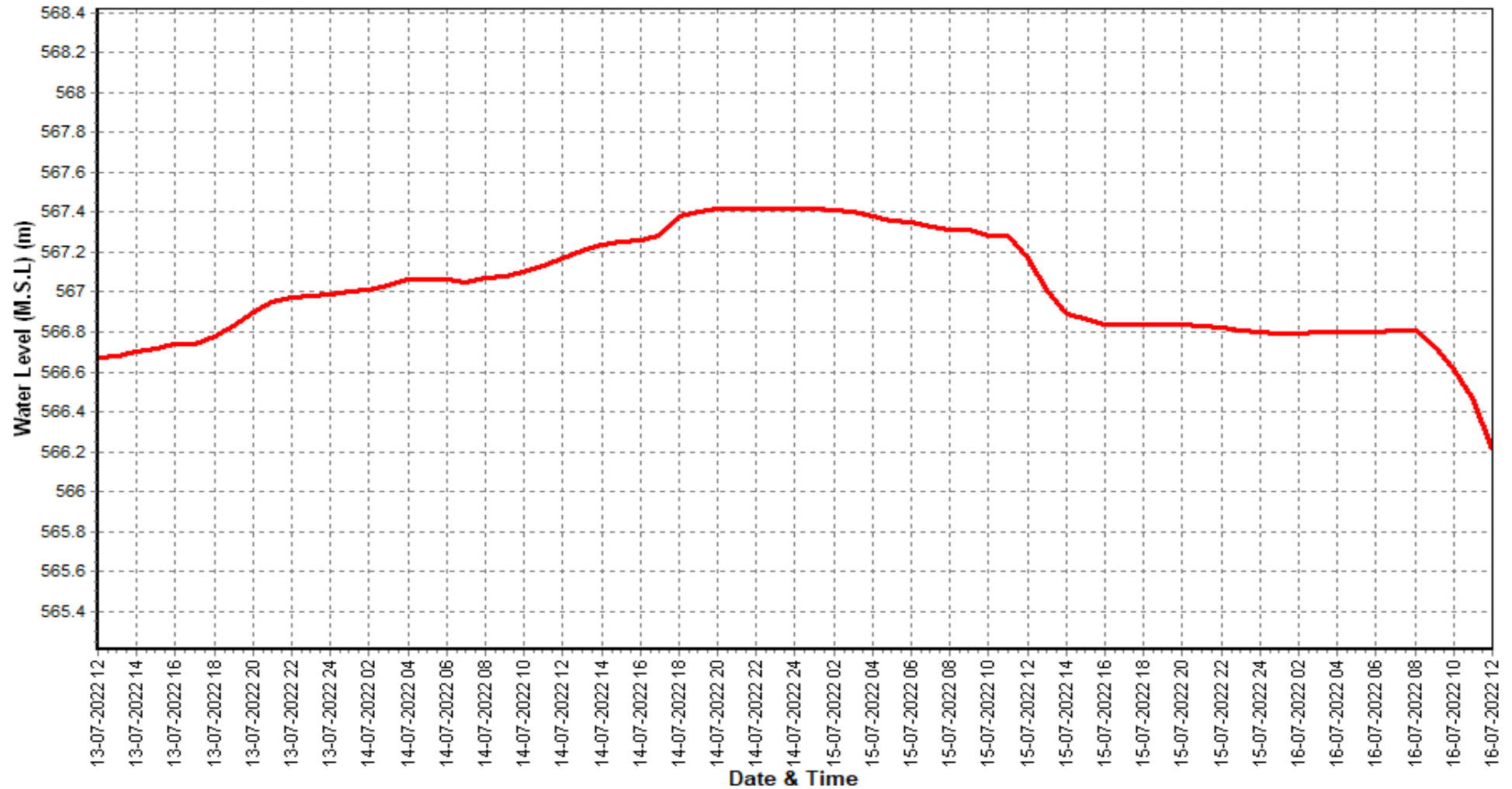
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : SHIMOGA (AKLD0C6)

Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



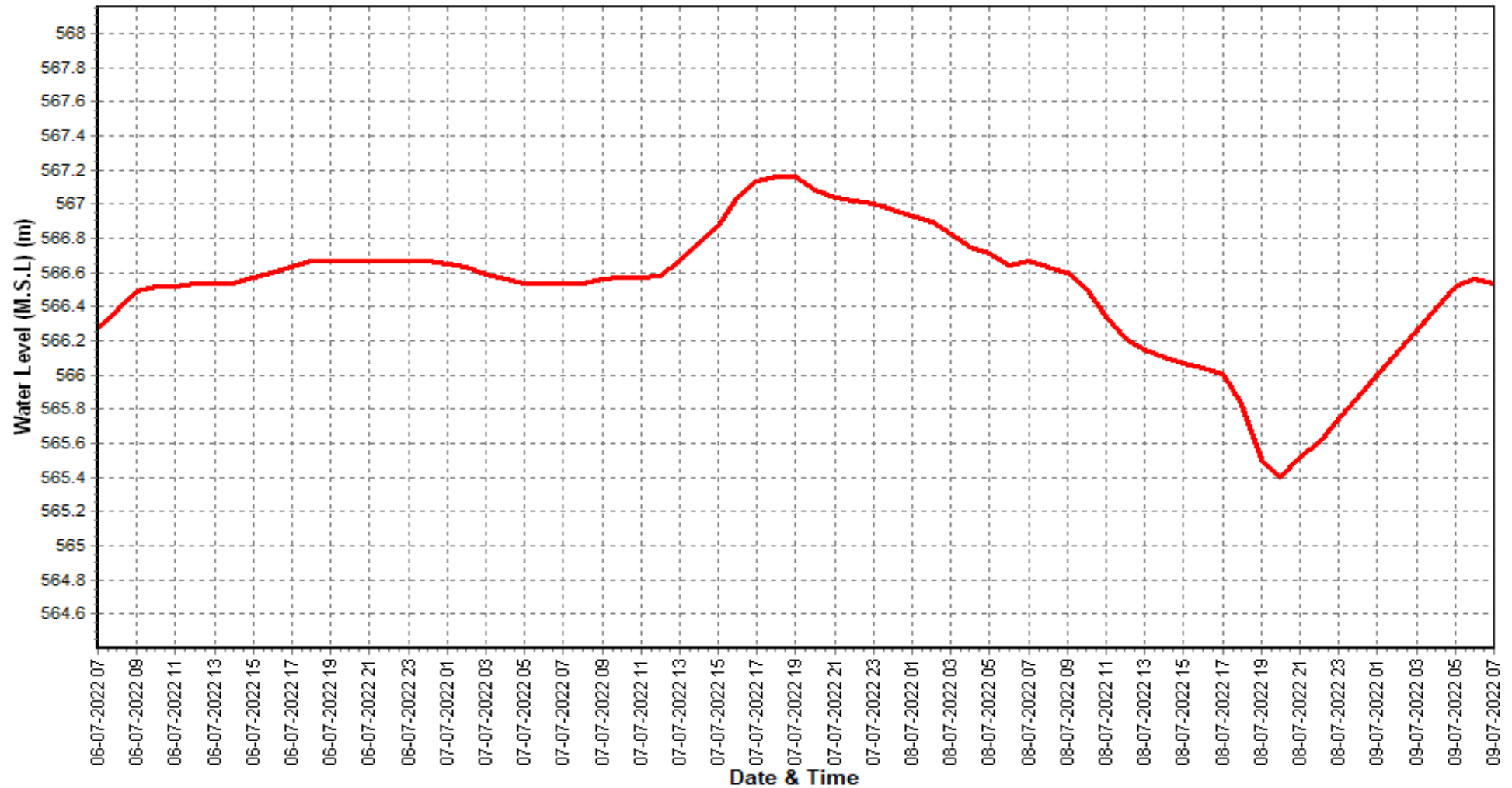
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : SHIMOGA (AKLD0C6)

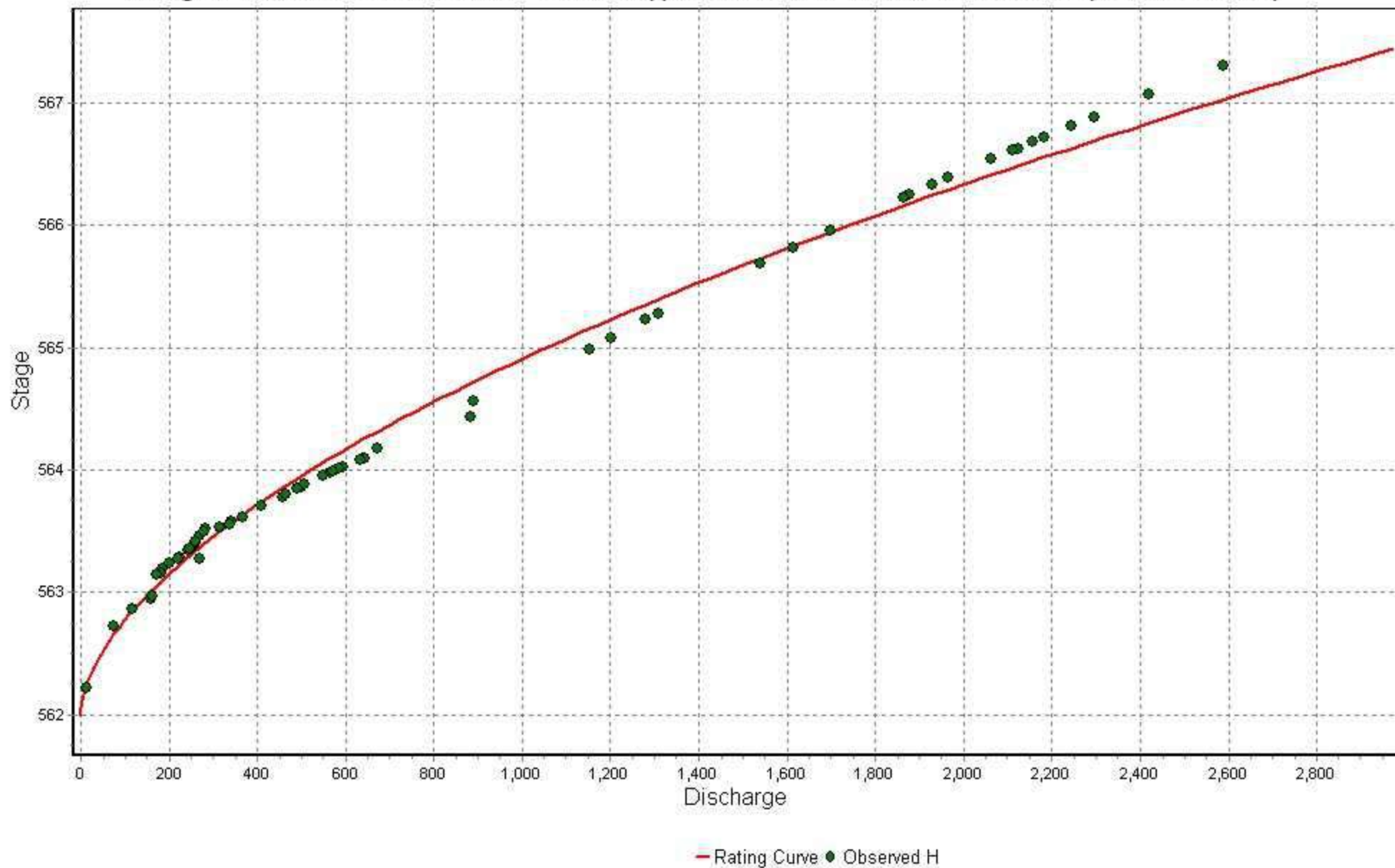
Local River : Tunga

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



S-D curve of site Shimoga for the period from 01.06.2022 to 19.09.2022
Range:- 562.000 to 567.500, a= -562.000(f), b=1.739, c= 155.9, OSE= 8.906 (No. of data 72)



HISTORY SHEET

Water Year : 2022-2023

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 : 01-06-1980

Discharge : 21-06-1980

Sediment : 15-09-1995

Water Quality : 02-06-1986

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1980-1981	3050	93.640	04-07-1980	16.80	87.690	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	537.870	12-06-1986
1987-1988	1223	541.890	27-08-1987	1.730	537.710	05-04-1988
1988-1989	2833	543.790	19-07-1988	2.880	537.730	15-04-1989
1989-1990	2970	543.750	24-07-1989	4.620	537.850	02-06-1989
1990-1991	2075	543.090	16-08-1990	6.290	537.880	02-06-1990
1991-1992	3385	544.030	29-07-1991	7.010	537.970	23-03-1992
1992-1993	3758	544.670	28-07-1992	4.680	538.040	01-05-1993
1993-1994	1510	542.560	16-08-1993	4.530	538.240	13-06-1993
1994-1995	6950	546.400	16-07-1994	11.72	538.040	24-03-1995
1995-1996	1851	542.900	02-09-1995	8.760	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	7.720	538.080	02-05-1998
1998-1999	2035	543.040	14-09-1998	6.950	537.960	12-06-1998
1999-2000	3561	544.110	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
2001-2002	1266	542.360	09-07-2001	4.460	537.830	23-03-2002

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2002-2003	1519	542.450	18-08-2002	0.010	537.410	24-05-2003
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	18-02-2005
2005-2006	3685	544.090	17-08-2005	5.270	537.880	11-01-2006
2006-2007	4042	544.600	13-08-2006	3.020	537.820	13-01-2007
2007-2008	5361	546.300	07-08-2007	3.440	537.860	14-01-2008
2008-2009	6732	545.920	14-08-2008	0.580	537.650	08-01-2009
2009-2010	3651	544.710	17-07-2009	10.87	538.000	29-12-2009
2010-2011	1909	542.930	29-07-2010	15.69	538.100	19-03-2011
2011-2012	2639	543.780	02-09-2011	4.630	537.890	10-01-2012
2012-2013	3126	544.050	08-08-2012	3.060	537.790	17-06-2012
2013-2014	4528	544.980	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
2016-2017	1261	542.220	30-06-2016	5.300	537.480	06-05-2017
2017-2018	1361	542.340	21-07-2017	13.55	537.840	07-06-2017
2018-2019	5170	546.250	15-08-2018	18.40	537.950	31-05-2019
2019-2020	5870	545.730	10-08-2019	4.645	537.580	07-06-2019
2020-2021	3444	544.600	21-09-2020	13.76	537.950	03-02-2021
2021-2022	4632	545.240	24-07-2021	12.64	537.800	03-06-2021

Annual Runoff of Krishna at Honnali

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1980-1981	10378	1069	11447	367	38	404
2	1981-1982	6374	873	7247	225	31	256
3	1982-1983	6581	741	7322	233	26	259
4	1983-1984	6374	934	7308	225	33	258
5	1984-1985	6504	697	7200	230	25	254
6	1985-1986	4879	454	5333	172	16	188
7	1986-1987	4558	596	5154	161	21	182
8	1987-1988	2671	431	3102	94	15	110
9	1988-1989	4468	481	4949	158	17	175
10	1989-1990	4944	452	5396	175	16	191
11	1990-1991	6277	649	6927	222	23	245
12	1991-1992	6728	642	7370	238	23	260
13	1992-1993	7783	1644	9428	275	58	333
14	1993-1994	5709	750	6459	202	27	228
15	1994-1995	10387	745	11132	367	26	393
16	1995-1996	4319	610	4928	153	22	174
17	1996-1997	4341	525	4866	153	19	172
18	1997-1998	6873	873	7746	243	31	274
19	1998-1999	5958	1040	6998	211	37	247
20	1999-2000	6825	917	7742	241	32	274
21	2000-2001	5981	913	6895	211	32	244
22	2001-2002	4024	517	4540	142	18	160
23	2002-2003	3545	432	3977	125	15	141
24	2003-2004	3374	394	3768	119	14	133
25	2004-2005	7985	686	8670	282	24	306
26	2005-2006	4145	841	4987	146	30	176
27	2006-2007	7536	835	8371	266	29	296
28	2007-2008	9995	1092	11087	353	39	392
29	2008-2009	6949	655	7604	246	23	269
30	2009-2010	6881	893	7775	243	32	275
31	2010-2011	5327	1401	6727	188	49	238
32	2011-2012	6486	734	7219	229	26	255
33	2012-2013	4334	617	4951	153	22	175
34	2013-2014	8791	803	9594	311	28	339
35	2014-2015	7064	880	7944	250	31	281
36	2015-2016	4049	887	4936	143	31	174
37	2016-2017	3296	603	3900	116	21	138
38	2017-2018	3139	712	3851	111	25	136
39	2018-2019	8965	715	9680	317	25	342
40	2019-2020	7920	1259	9178	280	44	324
41	2020-2021	6198	628	6825	219	22	241
42	2021-2022	7378	1431	8809	261	51	311
43	2022-2023	10235	1010	11245	362	36	397
Average		6198	792	6990	219	28	247

Instantaneous Flood Peak of Krishna at Honnali					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1980-1981	93.635	04-07-1980	16:00:00	3050 *
2	1981-1982	93.33	19-08-1981	08:00:00	2337
3	1982-1983	94.91	03-08-1982	11:00:00	4555 *
4	1983-1984	93	23-07-1983	23:00:00	2234 *
5	1984-1985	93.44	19-07-1984	15:00:00	3003 *
6	1985-1986	92.45	27-06-1985	23:00:00	1973 *
7	1986-1987	543.540	10-08-1986	17:00:00	2317 *
8	1987-1988	541.980	27-08-1987	22:00:00	658 *
9	1988-1989	543.810	19-07-1988	08:00:00	2646
10	1989-1990	543.850	24-07-1989	17:00:00	2696 *
11	1990-1991	543.200	16-08-1990	22:00:00	1920 *
12	1991-1992	544.200	29-07-1991	06:00:00	3143 *
13	1992-1993	545.080	28-07-1992	06:00:00	4360 *
14	1993-1994	542.620	16-08-1993	18:00:00	1289 *
15	1994-1995	546.470	16-07-1994	11:00:00	6550 *
16	1995-1996	542.900	02-09-1995	08:00:00	1586 *
17	1996-1997	542.550	24-07-1996	12:00:00	1216 *
18	1997-1998	544.400	23-08-1997	11:00:00	3408 *
19	1998-1999	543.790	14-09-1998	15:00:00	2621 *
20	1999-2000	544.150	19-07-1999	06:00:00	3078 *
21	2000-2001	543.970	13-07-2000	16:00:00	2847 *
22	2001-2002	542.360	09-07-2001	08:00:00	1024
23	2002-2003	542.450	18-08-2002	05:00:00	1114 *
24	2003-2004	541.940	24-08-2003	21:00:00	621 *
25	2004-2005	544.280	27-08-2004	11:00:00	3248 *
26	2005-2006	544.120	17-08-2005	11:00:00	3039 *
27	2006-2007	544.610	13-08-2006	02:00:00	3694 *
28	2007-2008	546.300	07-08-2007	08:00:00	6265
29	2008-2009	545.920	14-08-2008	05:00:00	5644 *
30	2009-2010	544.750	17-07-2009	10:00:00	3888 *
31	2010-2011	543.010	29-07-2010	21:00:00	1707 *
32	2011-2012	544.130	02-09-2011	16:00:00	3052 *
33	2012-2013	544.050	08-08-2012	07:00:00	2949 *
34	2013-2014	545.110	03-08-2013	17:00:00	4404 *
35	2014-2015	545.240	07-08-2014	04:00:00	4595 *
36	2015-2016	543.670	20-07-2015	21:00:00	2474 *
37	2016-2017	542.580	30-06-2016	23:00:00	1247 *
38	2017-2018	542.360	21-07-2017	15:00:00	1024 *
39	2018-2019	546.320	15-08-2018	12:00:00	6298 *
40	2019-2020	546.250	10-08-2019	17:00:00	6182 *
41	2020-2021	545.010	21-09-2020	15:00:00	4258 *
42	2021-2022	545.270	24-07-2021	09:00:00	4562 *
43	2022-2023	545.540	09-08-2022	22:00:00	4612 *

Stage-Discharge Data for the period 2022 - 2023

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	538.300	40.32	539.990	355.9	540.430	548.9	541.420	843.2	539.380	212.2	538.900	142.8
2	538.300	41.93	540.120	393.1	540.960	714.9	541.660	1038	539.380	200.5 *	538.660	110.6
3	538.350	43.63	540.410	477.0 *	541.220	758.8	541.650	1033	539.310	181.1	538.660	92.75
4	538.410	62.71	540.970	739.5	540.700	607.6	541.480	926.6 *	539.600	238.6	539.080	145.3
5	538.410	58.17 *	542.200	1292	541.610	986.2	540.740	635.7	539.680	266.6 *	539.010	138.5
6	538.430	65.02	542.720	1616	542.800	1650	541.190	774.0	539.600	238.6	539.010	140.2 *
7	538.500	73.94	543.230	1926	544.220	2986 *	541.590	1009	539.600	238.6	538.980	136.8
8	538.580	83.40	543.550	2274	544.020	2730	541.520	984.1	539.600	238.6	538.840	125.3 *
9	538.450	68.52	542.620	1540	544.930	3761 *	540.900	720.2	539.500	225.6 *	538.840	125.0
10	538.390	62.21	543.050	1933 *	545.120	4108	541.310	811.3	539.600	238.6	538.780	120.1
11	538.270	52.57	542.880	1720	542.200	1292	540.930	673.4 *	539.990	355.9	538.680	112.2
12	538.160	37.04 *	543.290	2082	543.530	2261	540.700	627.2	540.240	413.4	538.680	112.2
13	538.120	32.74	543.410	2196	543.290	2082	541.650	1033	539.990	355.9	538.680	111.9 *
14	538.150	36.53	543.580	2289	542.820	1758 *	541.280	802.5	540.120	393.1	538.780	120.1
15	538.260	40.06	544.950	3887	542.100	1272 *	541.420	843.2	540.120	393.1	538.780	120.1
16	538.260	40.06	545.190	4213	541.660	1003	541.190	778.7	540.930	673.4 *	538.700	113.8
17	538.260	40.06	544.370	3141 *	541.050	726.2	540.610	605.2	540.610	586.3	538.700	113.8
18	538.260	40.06	543.720	2423	540.520	565.9	540.300	440.6 *	540.410	544.2	538.700	113.8
19	538.360	53.48 *	544.200	2840	540.370	436.5	540.300	423.7	539.990	355.9	538.680	112.2
20	538.380	61.19	542.070	1199	540.240	413.4	540.240	413.4	540.300	423.7	538.680	111.9 *
21	538.310	42.66	541.190	753.5	540.300	440.6 *	540.120	393.1	539.990	355.9	538.680	112.2
22	538.310	42.66	540.960	714.9	540.410	544.2	540.120	393.1	539.990	355.9	538.680	112.2
23	538.290	41.77	540.610	586.3	540.740	617.6	539.990	355.9	539.650	259.5 *	538.650	109.8
24	538.360	43.96	540.450	490.7 *	541.340	792.1	539.990	355.9	539.650	259.5 *	538.650	109.8
25	538.500	73.94	540.800	630.8	541.310	785.0	539.990	347.1 *	539.380	209.9	538.570	103.9
26	539.000	132.4 *	540.800	630.8	541.420	815.9	539.600	238.6	539.300	200.9	538.570	103.9
27	538.950	136.2	541.280	776.5	541.830	1059	539.600	238.6	539.230	192.8	538.680	111.9 *
28	539.310	181.1	541.330	791.8	541.130	759.9 *	539.600	238.6	539.230	192.8	538.700	113.8
29	539.310	181.1	541.240	765.3	541.220	758.8	539.380	212.2	539.010	152.4	538.680	112.2
30	539.380	212.2	540.790	650.7	540.960	714.9	539.380	212.2	538.900	117.3 *	538.680	112.2
31			541.110	750.9 *	541.940	1177 *			538.900	142.8		
Ten-Daily Mean												
I Ten-Daily	538.412	59.99	541.886	1255	542.601	1885	541.346	877.5	539.525	227.9	538.876	127.7
II Ten-Daily	538.248	43.38	543.766	2599	541.778	1181	540.862	664.0	540.270	449.5	538.706	114.2
III Ten-Daily	538.772	108.8	540.960	685.7	541.145	769.5	539.777	298.5	539.385	221.8	538.654	110.2
Monthly												
Min.	538.120	32.74	539.990	355.9	540.240	413.4	539.380	212.2	538.900	117.3	538.570	92.75
Max.	539.380	212.2	545.190	4213	545.120	4108	541.660	1038	540.930	673.4	539.080	145.3
Mean	538.477	70.73	542.164	1486	541.819	1262	540.662	613.4	539.715	297.2	538.745	117.4

Annual Runoff in MCM = 11245 Annual Runoff in mm = 1589

Peak Observed Discharge = 4213 cumecs on 16-07-2022 Corres. Water Level :545.19 m

Lowest Observed Discharge = 17.01 cumecs on 29-05-2023 Corres. Water Level :538 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 2022 - 2023

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	538.680	112.2	538.400	84.16 *	538.400	88.74	538.240	31.71	538.210	30.92	538.800	96.17
2	538.650	109.8	538.400	88.11	538.400	88.74	538.270	32.56	538.180	27.96 *	538.800	96.17
3	538.600	106.2	538.250	59.49	538.550	99.53	538.240	31.71	538.180	30.14	538.800	96.17
4	538.600	105.5 *	538.250	59.49	538.550	99.53	538.240	31.71	538.180	27.96 *	538.700	89.99
5	538.600	106.2	538.250	59.49	538.500	58.09 *	538.240	32.82 *	538.180	30.14	538.600	69.60 *
6	538.600	106.2	538.250	59.49	538.500	47.92	538.240	31.71	538.180	30.14	538.560	71.99
7	538.570	103.9	538.250	59.49	538.500	47.92	538.240	31.71	538.180	27.96 *	538.560	68.88 *
8	538.570	103.9	538.210	55.62 *	538.500	47.92	538.240	31.71	538.180	30.14	538.560	71.99
9	538.570	103.9	538.210	57.51	538.500	47.92	538.210	30.92	538.180	27.96 *	538.700	89.99
10	538.570	103.9	538.210	57.51	538.450	42.45	538.210	30.92	538.180	30.14	538.700	89.99
11	538.600	105.5 *	538.210	57.51	538.450	42.45	538.210	30.92	538.210	30.92	538.800	96.17
12	538.600	106.2	538.210	55.65	538.450	52.71 *	538.250	33.67 *	538.210	30.92	538.730	90.94
13	538.780	120.1	538.240	57.08	538.450	42.45	538.250	39.98	538.210	30.92	538.730	90.94
14	538.780	120.1	538.240	57.08	538.450	42.45	539.100	143.2	538.210	30.35 *	538.780	92.77 *
15	538.980	136.8	538.240	59.78 *	538.450	42.45	539.030	137.5	538.210	30.92	538.730	90.94
16	538.980	136.8	538.210	55.65	538.450	42.45	538.960	131.7	538.180	27.96 *	538.600	82.01
17	538.840	125.0	538.210	55.65	538.450	42.45	538.960	131.7	538.180	30.14	538.450	59.85
18	538.840	125.3 *	538.210	55.65	538.400	40.74	539.030	137.5	538.180	30.14	538.450	59.85
19	538.840	125.0	538.210	55.65	538.400	57.58 *	539.000	125.3 *	538.180	30.14	538.450	59.85
20	538.780	120.2 *	538.240	57.08	538.400	40.74	539.000	134.9	538.180	30.14	538.450	59.85
21	538.700	113.8	538.210	55.65	538.400	40.74	539.000	134.9	538.180	30.14	538.350	42.69 *
22	538.700	113.8	538.210	55.62 *	538.400	40.74	539.000	125.3 *	538.180	27.96 *	538.160	27.00
23	538.570	103.9	538.210	55.65	538.400	40.74	538.500	64.99	538.200	29.54 *	538.160	27.00
24	538.570	103.9	538.210	55.65	538.270	32.56	538.500	64.99	538.240	31.71	538.160	27.00
25	538.570	103.2 *	538.210	55.65	538.270	32.56	538.300	42.01	538.240	31.71	538.160	27.00
26	538.570	103.9	538.210	55.62 *	538.240	32.82 *	538.300	38.05 *	538.240	31.71	538.160	27.00
27	538.570	103.9	538.210	55.65	538.240	31.71	538.300	42.01	538.240	31.71	538.160	27.00
28	538.450	94.02	538.400	88.74	538.240	31.71	538.240	31.71	538.240	31.71	538.160	26.42 *
29	538.450	94.02	538.400	84.16 *			538.240	31.71	538.700	89.99	538.000	17.01
30	538.450	94.02	538.400	88.74			538.210	30.92	538.800	95.54 *	538.000	17.01
31	538.450	94.02	538.400	88.74			538.210	30.92			538.000	17.01
Ten-Daily Mean												
I Ten-Daily	538.601	106.2	538.268	64.04	538.485	66.87	538.237	31.75	538.183	29.34	538.678	84.09
II Ten-Daily	538.802	122.1	538.222	56.68	538.435	44.65	538.779	104.6	538.195	30.25	538.617	78.32
III Ten-Daily	538.550	102.0	538.279	67.26	538.307	35.45	538.436	57.95	538.326	43.17	538.134	25.65
Monthly												
Min.	538.450	94.02	538.210	55.62	538.240	31.71	538.210	30.92	538.180	27.96	538.000	17.01
Max.	538.980	136.8	538.400	88.74	538.550	99.53	539.100	143.2	538.800	95.54	538.800	96.17
Mean	538.648	109.8	538.257	62.81	538.416	49.96	538.483	64.56	538.235	34.26	538.465	61.49

Peak Computed Discharge = 3761 cumecs on 09-08-2022

Corres. Water Level :544.93 m

Lowest Computed Discharge = 26.42 cumecs on 28-05-2023

Corres. Water Level :538.16 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 : 2022-2023

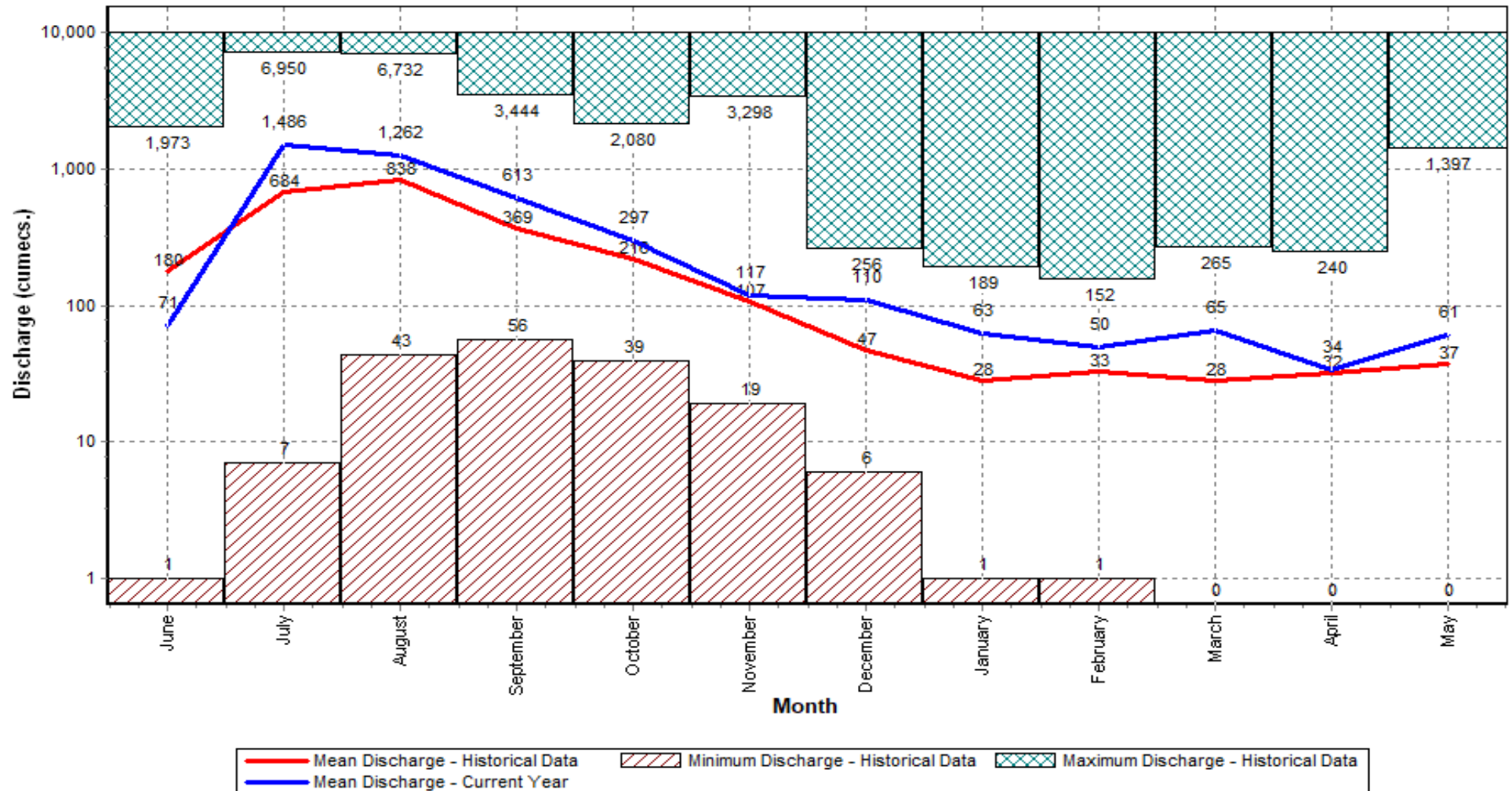
Station Name : HONNALI (AKL00X6)

Data considered : 1980-2023

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

Sub-Division : Upper Tunga Subdn, Devangere



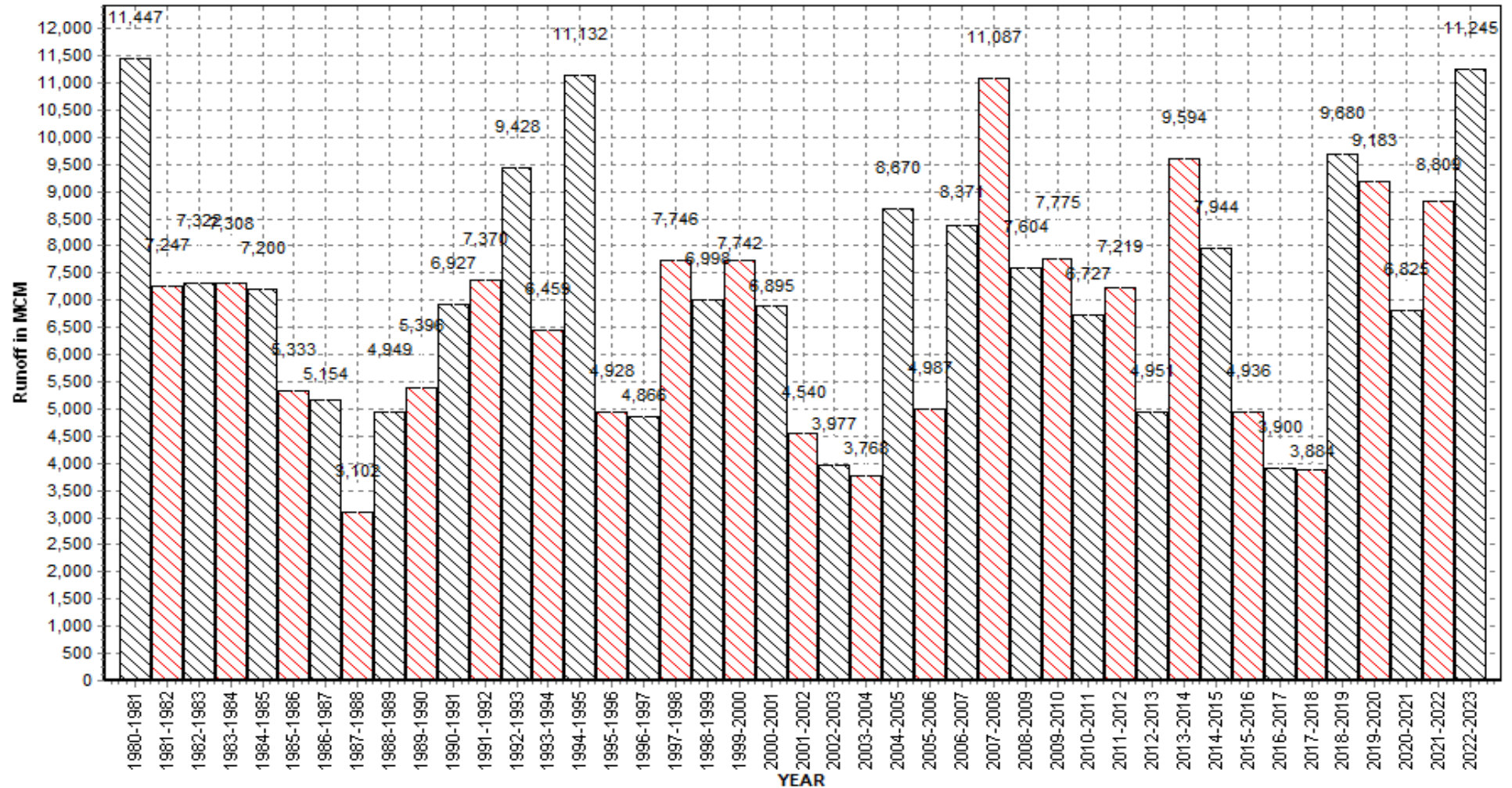
Annual Runoff Values for the period: 1980 - 2023

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

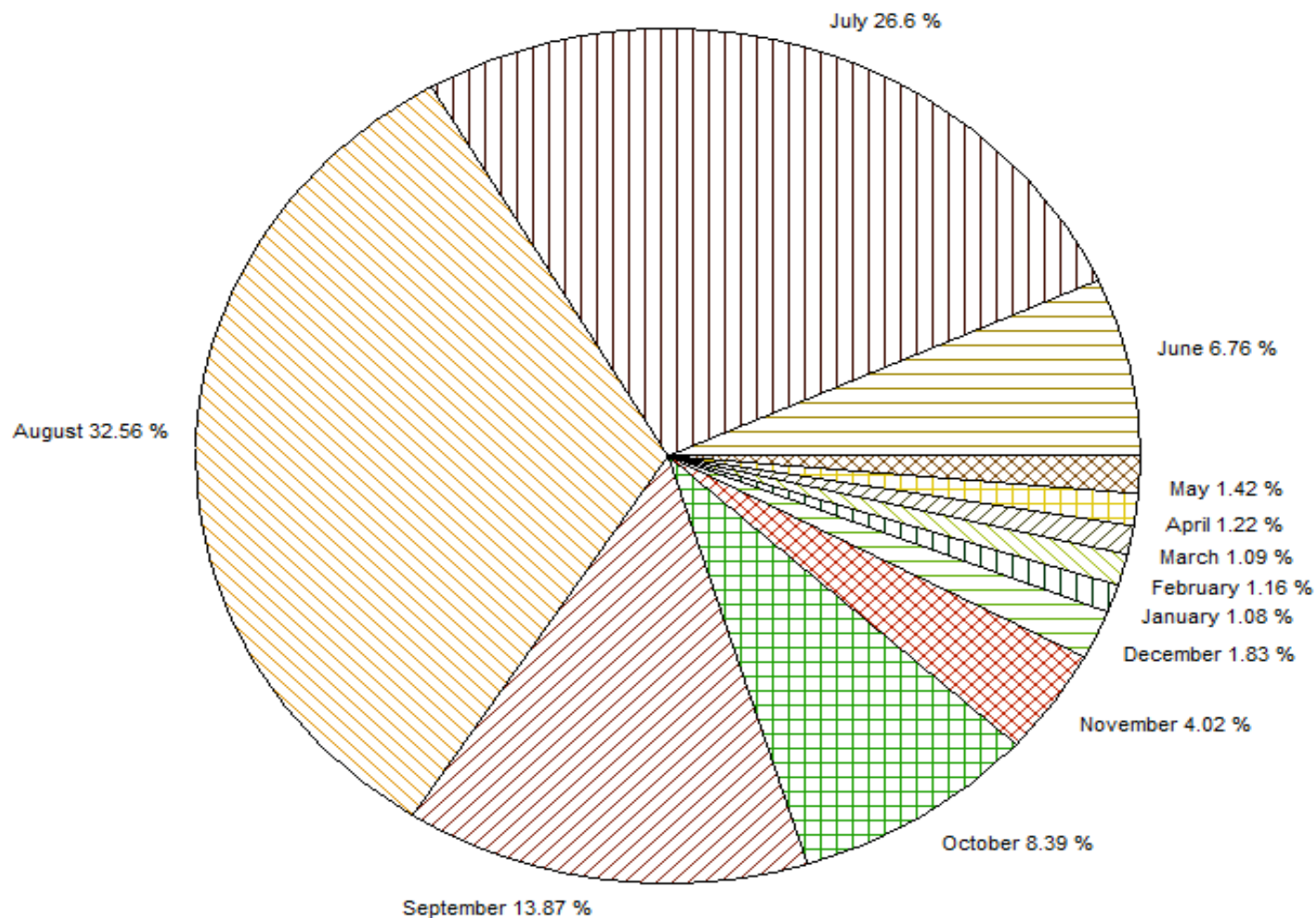
Monthly Average Runoff based on period : 1980-2022

Station Name : HONNALI (AKL00X6)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



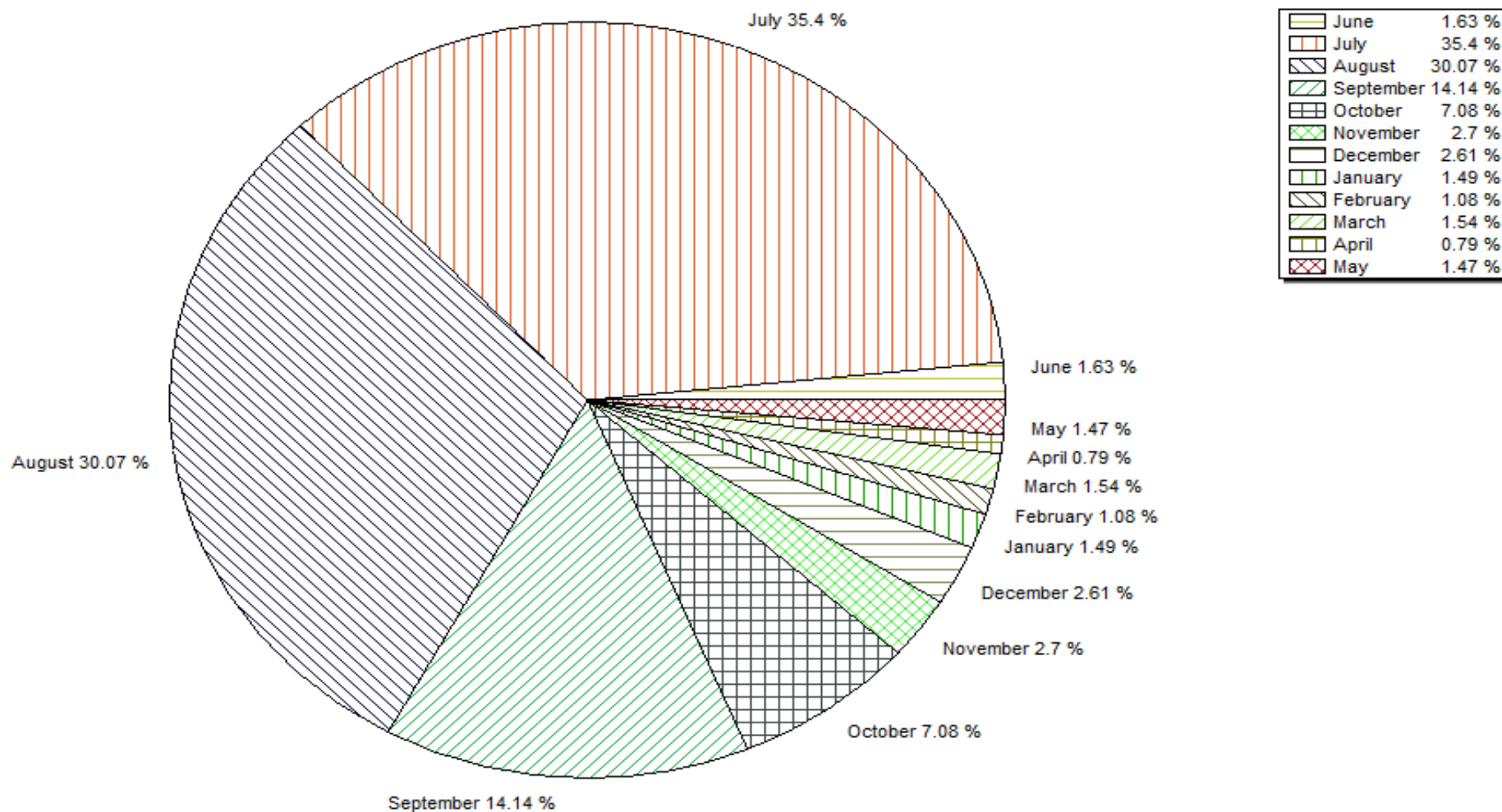
Monthly Runoff for the Year : 2022-2023

Station Name : HONNALI (AKL00X6)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



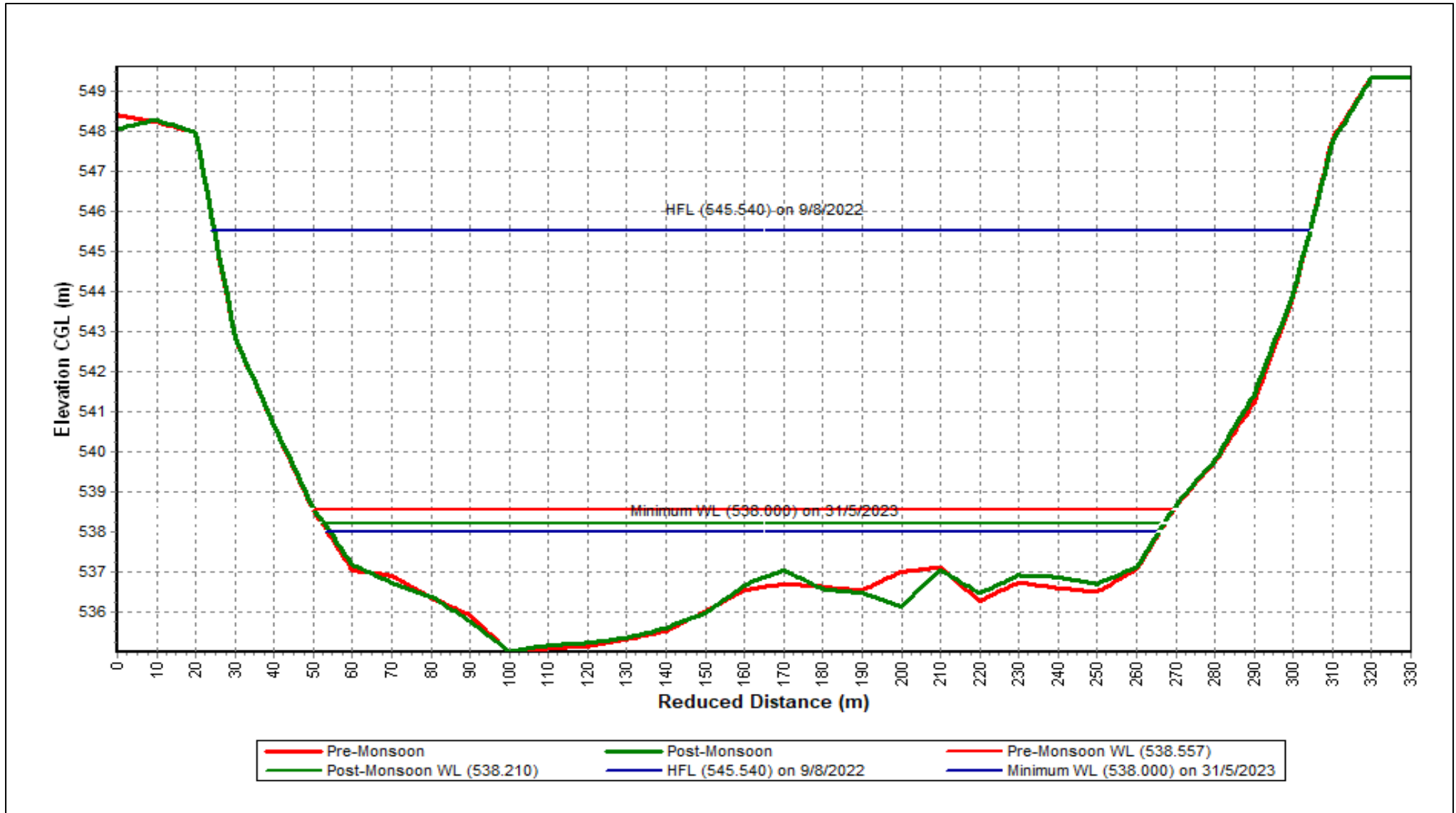
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : HONNALI (AKL00X6)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



Zero of the Gauge: 533.9 (m.s.l)

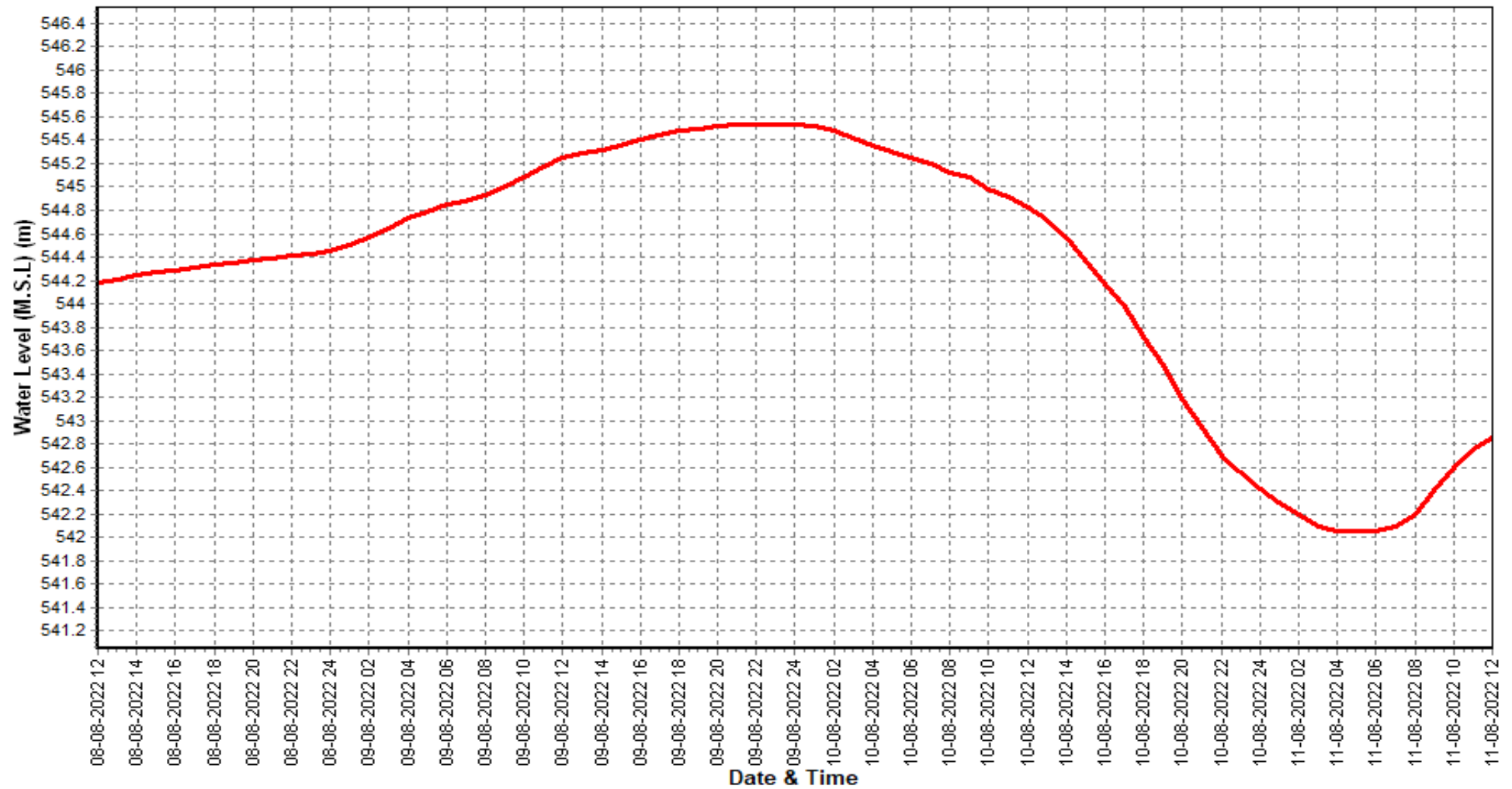
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : HONNALI (AKL00X6)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



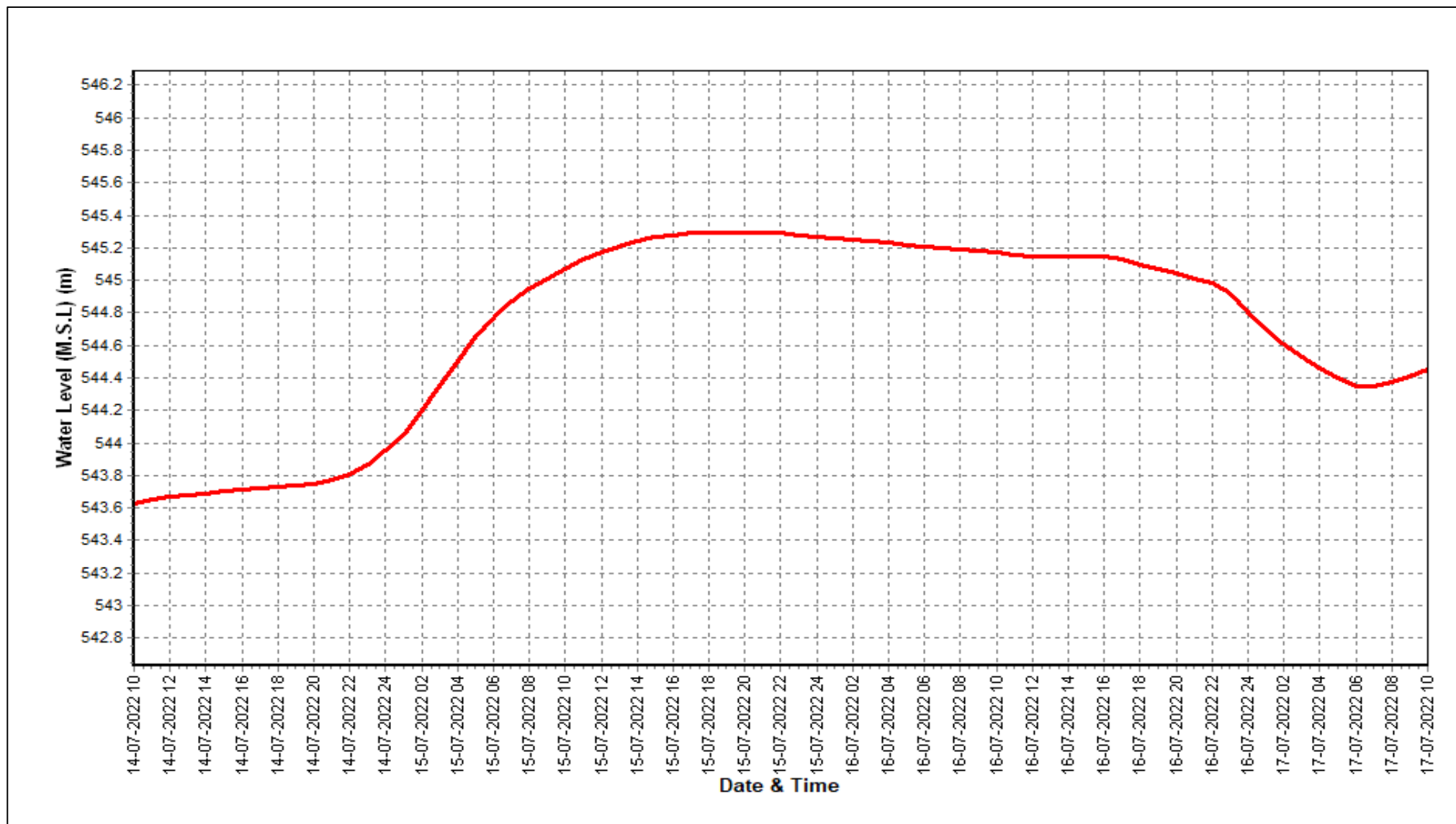
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : HONNALI (AKL00X6)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



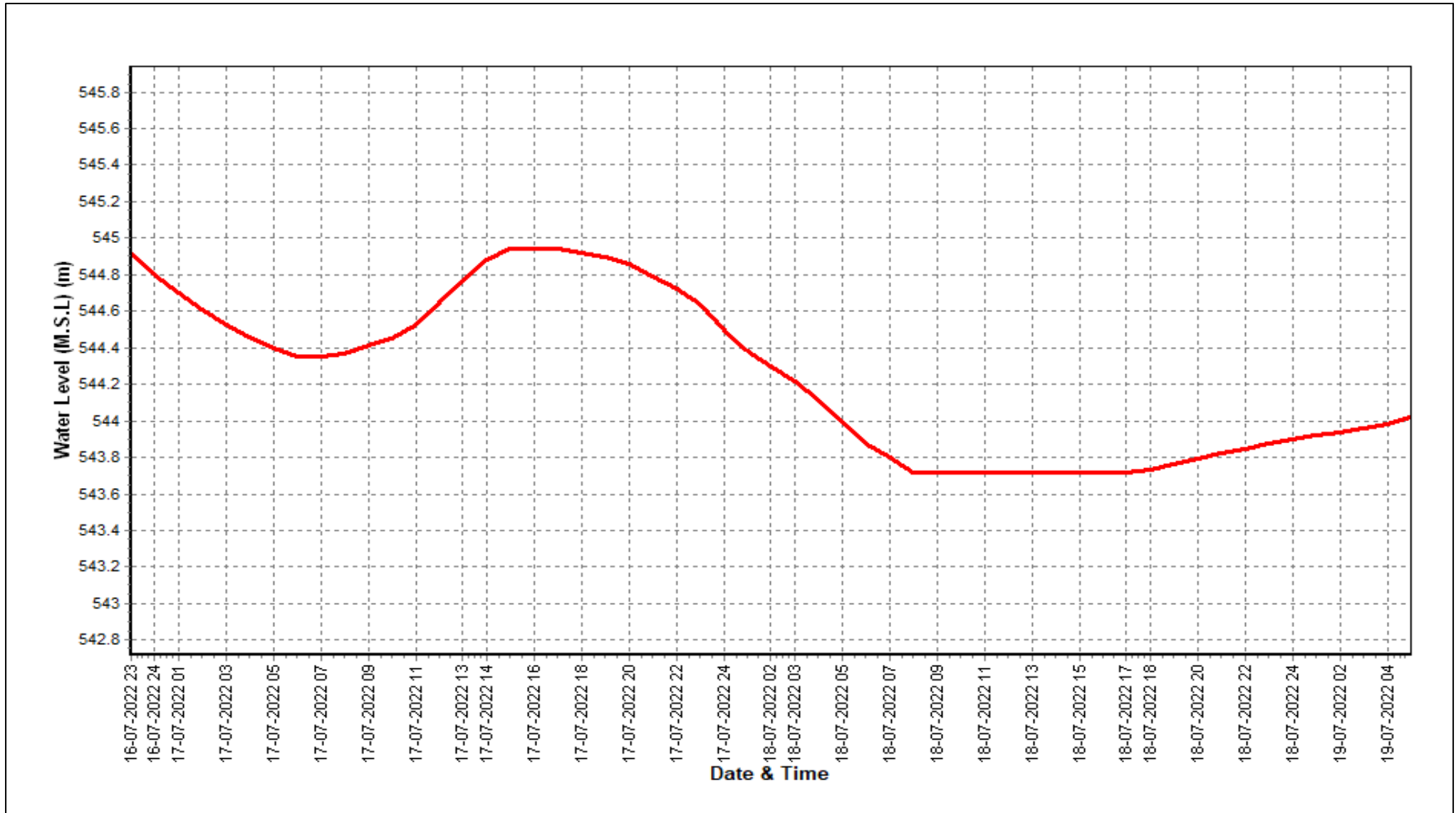
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : HONNALI (AKL00X6)

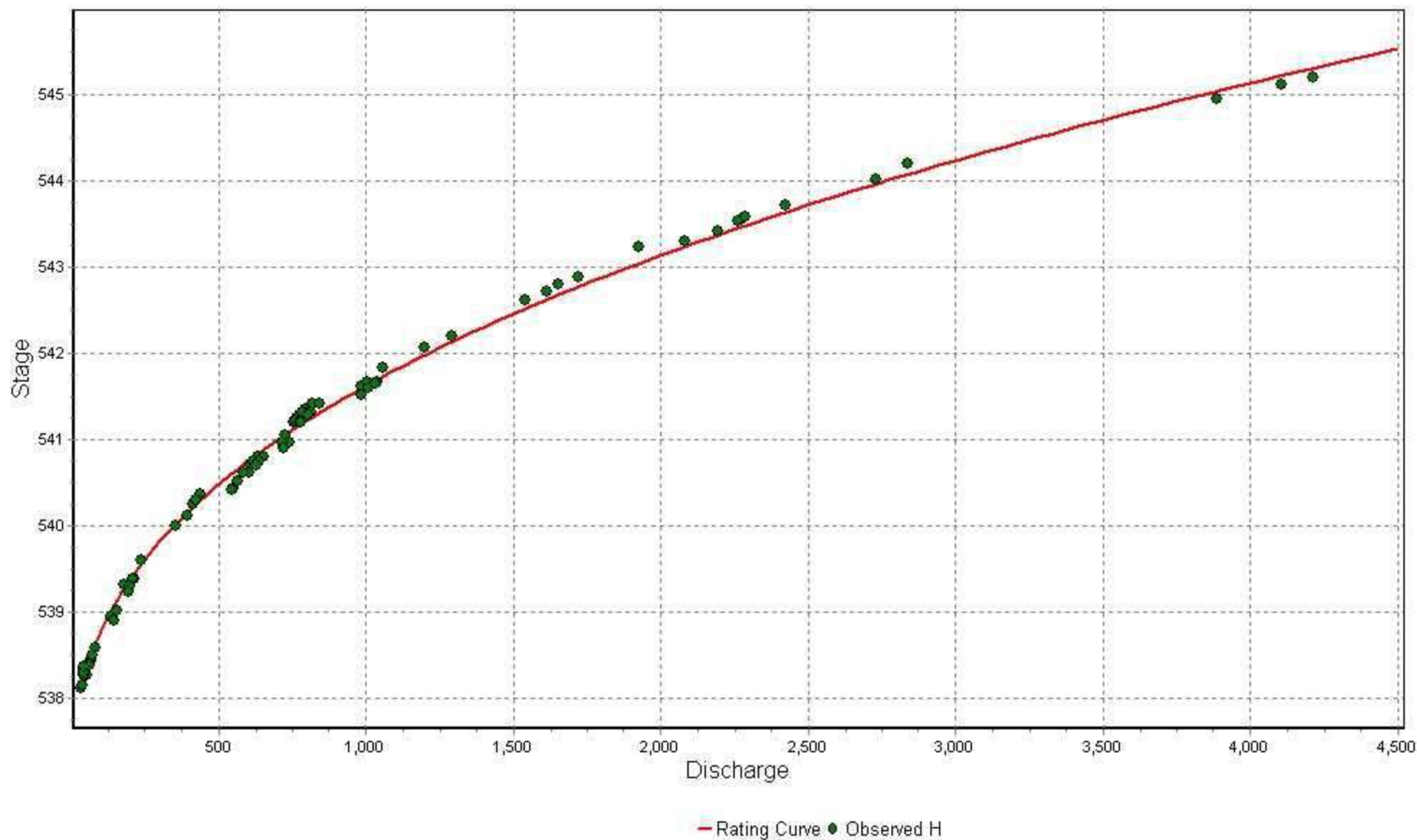
Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



S-D curve of site Honnali for the period from 01.06.2022 to 31.10.2022
Range:- 538.100 to 545.600, a= -536.899, b=2.495, c= 20.780, OSE= 7.292 (No. of data 126)



HISTORY SHEET

Water Year : 2022-2023

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) : 531.67 (m.s.l)

01-06-2010

Opening Date

Closing Date

Gauge : 01-06-1990

Discharge : 24-07-1990

Sediment : 23-07-2014

Water Quality : 01-07-1994

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1991-1992	206.9	98.566	29-07-1991	0.000		25-03-1992
1992-1993	538.3	100.919	18-11-1992	0.000	95.285	17-05-1993
1993-1994	145.2	97.698	17-10-1993	0.000		27-05-1994
1994-1995	430.0	100.590	17-07-1994	0.000		21-06-1994
1995-1996	91.85	536.770	05-09-1995	0.000		29-02-1996
1996-1997	48.13	536.530	31-07-1996	0.000	534.330	18-05-1997
1997-1998	412.6	539.650	08-08-1997	0.000	534.480	28-01-1998
1998-1999	149.4	538.060	13-10-1998	0.000	535.260	06-02-1999
1999-2000	293.2	539.410	24-07-1999	0.000		11-04-2000
2000-2001	215.7	538.830	15-07-2000	0.000		23-01-2001
2001-2002	29.82	536.210	30-09-2001	0.000		17-03-2002
2002-2003	30.26	536.380	15-10-2002	0.000		22-02-2003
2003-2004	173.3	538.040	04-10-2003	0.000	535.020	07-05-2004
2004-2005	312.4	538.945	07-08-2004	0.000		29-03-2005
2005-2006	301.7	539.670	04-08-2005	0.000		07-07-2005
2006-2007	283.3	538.600	13-08-2006	0.000		22-05-2007
2007-2008	776.3	541.840	08-08-2007	0.000	535.120	11-05-2008
2008-2009	509.7	540.500	14-08-2008	0.000	534.760	18-03-2009
2009-2010	394.1	540.050	18-07-2009	0.000	535.330	20-05-2010
2010-2011	798.2	539.970	04-10-2010	0.000	534.550	04-02-2011
2011-2012	133.3	536.940	05-09-2011	0.000	534.530	12-03-2012
2012-2013	64.26	536.090	03-11-2012	0.000	534.240	17-02-2013

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2013-2014	594.4	539.370	03-08-2013	0.000		14-03-2014
2014-2015	421.5	539.670	02-08-2014	0.000	535.110	01-01-2015
2015-2016	34.12	535.665	21-07-2015	0.000	534.500	07-06-2015
2016-2017	8.782	535.490	15-09-2016	0.000		22-04-2017
2017-2018	0.000	0.000	12-06-2017	0.000	0.000	17-02-2018
2018-2019	300.0	538.010	16-08-2018	0.000	533.270	05-03-2019
2019-2020	647.8	540.330	12-08-2019	0.000		06-03-2020
2020-2021	211.4	537.420	08-08-2020	0.000	534.830	25-01-2021
2021-2022	871.0	540.470	25-07-2021	0.000	534.410	16-04-2022

Annual Runoff of Krishna at Kuppelur

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1990-1991	150	15	165	5	1	6
2	1991-1992	457	19	476	16	1	17
3	1992-1993	413	245	658	15	9	23
4	1993-1994	262	44	306	9	2	11
5	1994-1995	635	41	676	22	1	24
6	1995-1996	164	14	178	6	1	6
7	1996-1997	121	16	138	4	1	5
8	1997-1998	408	29	438	14	1	15
9	1998-1999	359	44	403	13	2	14
10	1999-2000	310	21	331	11	1	12
11	2000-2001	391	18	408	14	1	14
12	2001-2002	45	0	45	2	0	2
13	2002-2003	37	13	50	1	0	2
14	2003-2004	70	4	74	2	0	3
15	2004-2005	236	3	240	8	0	8
16	2005-2006	460	15	475	16	1	17
17	2006-2007	280	21	301	10	1	11
18	2007-2008	751	30	782	27	1	28
19	2008-2009	389	17	406	14	1	14
20	2009-2010	565	23	588	20	1	21
21	2010-2011	805	152	957	28	5	34
22	2011-2012	317	72	389	11	3	14
23	2012-2013	70	18	88	2	1	3
24	2013-2014	607	8	615	21	0	22
25	2014-2015	582	27	609	21	1	22
26	2015-2016	96	0	96	3	0	3
27	2016-2017	23	0	23	1	0	1
28	2017-2018	0	0	0	0	0	0
29	2018-2019	234	1	235	8	0	8
30	2019-2020	741	79	820	26	3	29
31	2020-2021	489	0	489	17	0	17
32	2021-2022	972	135	1107	34	5	39
33	2022-2023	1422	17	1439	50	1	51
Average		390	35	424	14	1	15

Instantaneous Flood Peak of Krishna at Kuppeluru					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1990-1991	97.09	19-08-1990	13:00:00	90 *
2	1991-1992	98.890	29-07-1991	19:00:00	244 *
3	1992-1993	101.030	18-11-1992	21:00:00	557 *
4	1993-1994	97.810	17-10-1993	07:00:00	140 *
5	1994-1995	101.210	17-07-1994	18:00:00	589 *
6	1995-1996	536.780	05-09-1995	07:00:00	96 *
7	1996-1997	536.900	26-09-1996	00:00:00	105 *
8	1997-1998	539.840	08-08-1997	14:00:00	434 *
9	1998-1999	538.110	13-10-1998	12:00:00	214 *
10	1999-2000	539.430	24-07-1999	10:00:00	375 *
11	2000-2001	538.840	16-07-2000	08:00:00	297 *
12	2001-2002	536.210	01-10-2001	08:00:00	60 *
13	2002-2003	536.540	15-10-2002	13:00:00	80 *
14	2003-2004	538.130	04-10-2003	08:00:00	216 *
15	2004-2005	539.040	06-08-2004	20:00:00	323 *
16	2005-2006	539.740	04-08-2005	05:00:00	419 *
17	2006-2007	539.120	13-08-2006	17:00:00	333 *
18	2007-2008	541.900	08-08-2007	00:00:00	798 *
19	2008-2009	540.760	14-08-2008	18:00:00	583 *
20	2009-2010	540.180	17-07-2009	20:00:00	487 *
21	2010-2011	540.090	04-10-2010	11:00:00	473 *
22	2011-2012	536.950	05-09-2011	13:00:00	109 *
23	2012-2013	536.090	03-11-2012	08:00:00	53
24	2013-2014	539.390	03-08-2013	06:00:00	369 *
25	2014-2015	539.670	02-08-2014	04:00:00	409 *
26	2015-2016	535.970	05-11-2015	08:00:00	47 *
27	2016-2017	535.580	06-08-2016	08:00:00	30 *
28	2017-2018	536.290	29-09-2017	14:00:00	65 *
29	2018-2019	538.020	16-08-2018	08:00:00	204 *
30	2019-2020	540.470	11-08-2019	20:00:00	534 *
31	2020-2021	537.480	09-08-2020	05:00:00	152 *
32	2021-2022	540.890	24-07-2021	22:00:00	952 *
33	2022-2023	539.620	11-08-2020	05:00:00	516 *

Stage-Discharge Data for the period 2022 - 2023

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	535.080	10.03	534.960	6.254	535.990	63.01	537.470	202.8	535.560	38.15	535.400	31.28
2	535.070	9.474	535.040	7.965	535.970	62.67	538.350	328.5 *	535.590	37.96 *	535.400	29.96
3	535.050	8.102	535.090	10.75 *	536.470	118.1	538.400	335.4 *	535.620	41.73	535.520	36.81
4	535.050	8.165	535.130	11.37	538.990	420.5 *	537.670	239.7 *	535.600	39.37	535.570	38.36
5	535.050	9.111 *	535.150	12.31	538.370	331.2 *	536.920	151.8	535.590	37.96 *	535.610	39.73
6	535.030	7.653	535.390	31.06	537.230	189.7	536.300	88.18	535.700	50.37	535.640	42.45 *
7	535.030	7.526	535.850	56.46	537.130	176.3 *	536.250	86.04	535.820	54.32	535.570	38.27
8	535.430	32.70	536.270	92.99	538.200	308.1 *	536.320	91.33	535.920	61.65	535.550	38.08 *
9	535.470	35.60	536.600	113.9	539.170	447.8 *	536.280	88.06	535.870	57.68 *	535.510	36.47
10	535.450	34.55	536.850	146.2 *	539.150	444.7 *	536.250	85.73	535.850	59.62	535.470	35.37
11	535.450	34.03	536.450	103.0	539.470	494.5 *	536.220	86.05 *	535.770	51.52	535.440	34.59
12	535.430	28.04 *	536.350	92.68	539.000	422.0 *	536.190	83.83	536.120	73.08	535.420	32.78
13	535.420	32.44	536.620	126.4	538.600	363.5 *	536.120	72.97	536.070	69.02	535.410	31.68 *
14	535.350	29.41	539.100	437.1 *	538.570	359.2 *	536.090	70.70	536.070	69.46	535.400	31.74
15	535.180	13.51	538.930	411.6 *	538.530	353.6 *	536.030	68.70	536.000	66.66	535.360	28.58
16	535.120	11.75	538.730	382.2 *	537.000	166.4	535.960	60.22	535.950	65.38 *	535.360	28.59
17	535.110	11.26	538.690	376.4 *	536.800	143.4	535.920	57.89	535.900	60.06	535.380	34.88
18	535.110	11.20	538.810	393.8 *	536.320	91.44	535.890	59.19 *	535.840	58.21	535.460	30.30
19	535.100	11.17 *	538.630	367.8 *	536.270	87.92	535.860	56.58	535.790	53.39	535.520	36.71
20	535.070	9.050	538.560	357.8 *	536.190	83.78	535.790	53.58	535.790	53.86	535.500	35.74 *
21	535.050	8.712	537.180	183.8	536.140	79.23 *	535.700	50.39	536.090	71.46	535.480	35.76
22	535.050	8.635	536.970	163.4	536.080	71.20	535.650	43.39	536.130	73.38	535.470	35.47
23	535.050	8.349	536.520	112.6	536.040	66.87	535.640	42.86	536.130	78.39 *	535.450	34.48
24	535.030	7.285	536.270	90.42 *	536.000	64.61	535.620	41.56	536.100	75.89 *	535.450	34.55
25	535.010	6.959	536.090	70.64	536.250	88.48	535.610	39.27 *	536.070	69.25	535.490	35.83
26	535.010	7.569 *	536.070	69.37	536.070	69.72	535.600	39.52	535.940	62.35	535.530	36.82
27	534.990	6.687	536.020	65.84	536.020	66.31	535.570	38.69	535.500	36.44	535.510	36.20 *
28	534.990	6.760	535.950	59.68	536.100	75.89 *	535.550	37.70	535.450	35.17	535.500	36.02
29	534.970	6.567	536.050	67.88	536.200	84.93	535.550	37.56	535.430	33.25	535.390	29.72
30	534.960	6.310	536.020	65.69	536.280	88.51	535.520	36.54	535.430	28.04 *	535.360	28.67
31			536.010	68.56 *	536.200	84.33 *			535.410	32.09		
Ten-Daily Mean												
I Ten-Daily	535.171	16.29	535.633	48.93	537.667	256.2	537.021	169.8	535.712	47.88	535.524	36.68
II Ten-Daily	535.234	19.19	538.087	304.9	537.675	256.6	536.007	66.97	535.930	62.06	535.425	32.56
III Ten-Daily	535.011	7.383	536.286	92.53	536.126	76.37	535.601	40.75	535.789	54.16	535.463	34.35
Monthly												
Min.	534.960	6.310	534.960	6.254	535.970	62.67	535.520	36.54	535.410	28.04	535.360	28.58
Max.	535.470	35.60	539.100	437.1	539.470	494.5	538.400	335.4	536.130	78.39	535.640	42.45
Mean	535.139	14.29	536.656	147	537.123	192.5	536.210	92.49	535.810	54.68	535.471	34.53

Annual Runoff in MCM = 1438 Annual Runoff in mm = 778

Peak Observed Discharge = 202.8 cumecs on 01-09-2022 Corres. Water Level :537.47 m

Lowest Observed Discharge = 0.000 cumecs on 22-12-2022 Corres. Water Level :534.63 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 2022 - 2023

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	535.360	28.96	534.970	0.000	534.580	0.000	534.350	0.000	533.350	0.000	Dry Bed	
2	535.340	26.94	534.960	0.000	534.570	0.000	534.340	0.000	533.250	0.000		
3	535.230	13.66	534.960	0.000	534.550	0.000	534.340	0.000	533.180	0.000		
4	535.120	10.55 *	534.950	0.000	534.530	0.000	534.320	0.000	533.070	0.000		
5	535.100	11.63	534.940	0.000	534.520	0.000	534.320	0.000	533.020	0.000		
6	535.050	9.767	534.940	0.000	534.510	0.000	534.310	0.000	532.950	0.000		
7	535.020	8.525	534.930	0.000	534.510	0.000	534.300	0.000	532.850	0.000		
8	535.000	8.078	534.920	0.000	534.500	0.000	534.290	0.000	532.750	0.000		
9	534.970	7.244	534.920	0.000	534.490	0.000	534.270	0.000	532.700	0.000		
10	534.950	6.939	534.920	0.000	534.480	0.000	534.260	0.000	532.650	0.000		
11	534.940	7.404 *	534.920	0.000	534.470	0.000	534.250	0.000	532.620	0.000		
12	534.920	6.471	534.920	0.000	534.450	0.000	534.250	0.000	532.570	0.000		
13	534.900	6.423	534.910	0.000	534.430	0.000	534.240	0.000	532.510	0.000		
14	534.850	5.520	534.910	0.000	534.420	0.000	534.230	0.000	532.470	0.000		
15	534.730	4.625	534.910	0.000	534.410	0.000	534.230	0.000	532.420	0.000		
16	534.700	4.206	534.910	0.000	534.410	0.000	534.220	0.000	532.350	0.000		
17	534.770	5.298	534.900	0.000	534.380	0.000	534.210	0.000	532.300	0.000		
18	534.800	5.345 *	534.900	0.000	534.330	0.000	534.200	0.000	532.250	0.000		
19	534.760	5.023	534.900	0.000	534.310	0.000	534.190	0.000	Dry Bed			
20	534.720	4.327	534.890	0.000	534.280	0.000	534.160	0.000				
21	534.690	4.086	534.890	0.000	534.270	0.000	534.100	0.000				
22	534.630	0.000	534.880	0.000	534.250	0.000	534.030	0.000			533.300	0.000
23	534.680	0.000	534.880	0.000	534.240	0.000	533.970	0.000			533.260	0.000
24	534.820	0.000	534.880	0.000	534.230	0.000	533.920	0.000			533.250	0.000
25	535.090	0.000	534.870	0.000	534.270	0.000	533.810	0.000			533.240	0.000
26	535.070	0.000	534.870	0.000	534.370	0.000	533.720	0.000			533.240	0.000
27	535.050	0.000	534.820	0.000	534.360	0.000	533.650	0.000			533.220	0.000
28	535.040	0.000	534.770	0.000	534.350	0.000	533.570	0.000			533.210	0.000
29	535.020	0.000	534.720	0.000			533.520	0.000			533.200	0.000
30	535.000	0.000	534.650	0.000			533.470	0.000		533.200	0.000	
31	534.980	0.000	534.620	0.000			533.420	0.000		533.200	0.000	
Ten-Daily Mean												
I Ten-Daily	535.114	13.23	534.941	0.000	534.524	0.000	534.310	0.000	532.977	0.000		
II Ten-Daily	534.809	5.464	534.907	0.000	534.389	0.000	534.218	0.000	532.436	0.000		
III Ten-Daily	534.915	0.371	534.805	0.000	534.292	0.000	533.744	0.000			533.232	0.000
Monthly												
Min.	534.630	0.000	534.620	0.000	534.230	0.000	533.420	0.000	532.250	0.000	533.200	0.000
Max.	535.360	28.96	534.970	0.000	534.580	0.000	534.350	0.000	533.350	0.000	533.300	0.000
Mean	534.945	6.162	534.882	0	534.410	0	534.079	0	532.737	0	533.232	0

Peak Computed Discharge = 494.5 cumecs on 11-08-2022

Corres. Water Level :539.47 m

Lowest Computed Discharge = 5.345 cumecs on 18-12-2022

Corres. Water Level :534.8 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 : 2022-2023

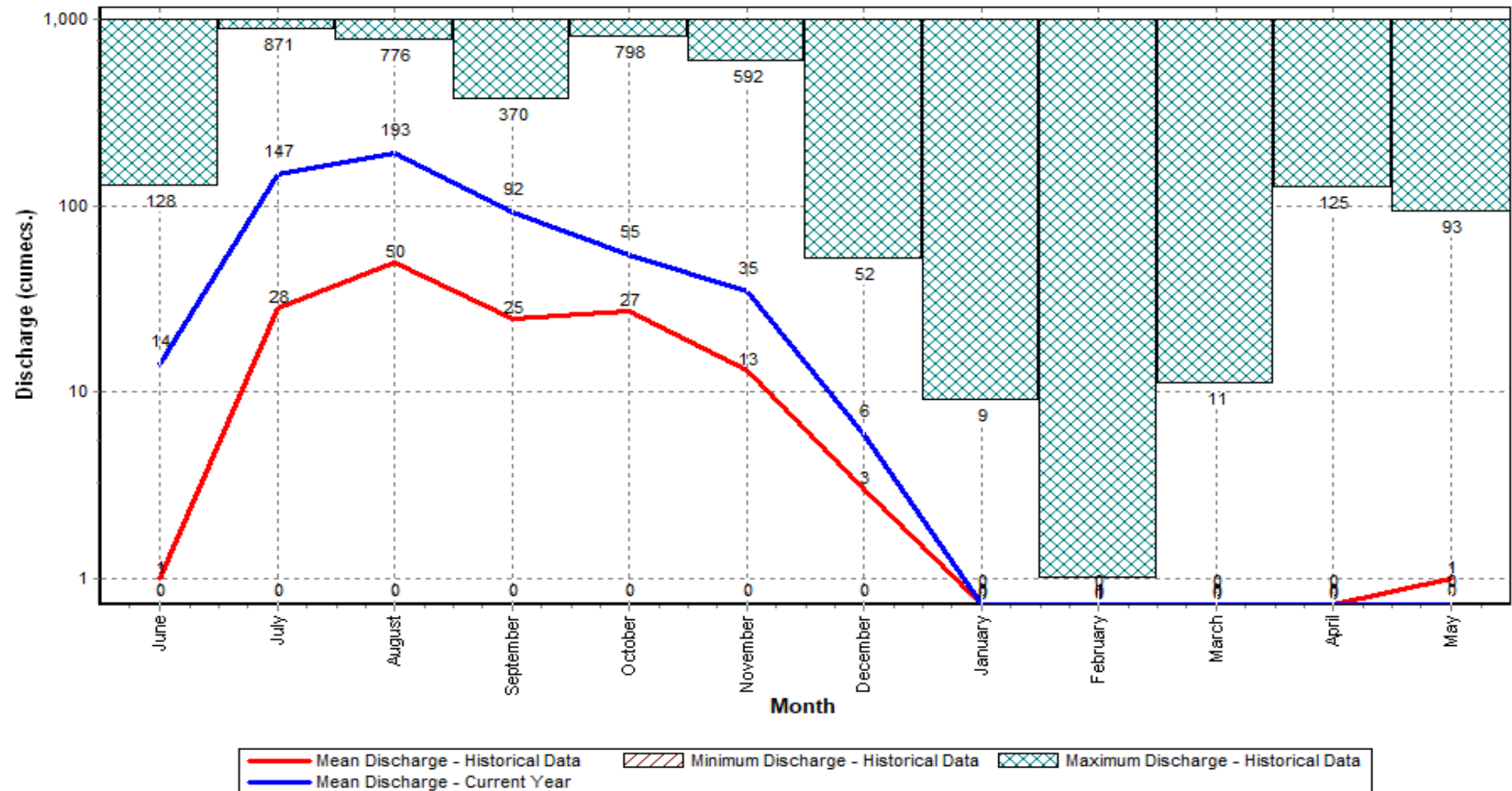
Station Name : KUPPELUR (AKLC0B8)

Data considered : 1991-2023

Division : Cauvery Division, Bangalore

Local River : Kumudavathi

Sub-Division : Upper Tunga SD, Devangere



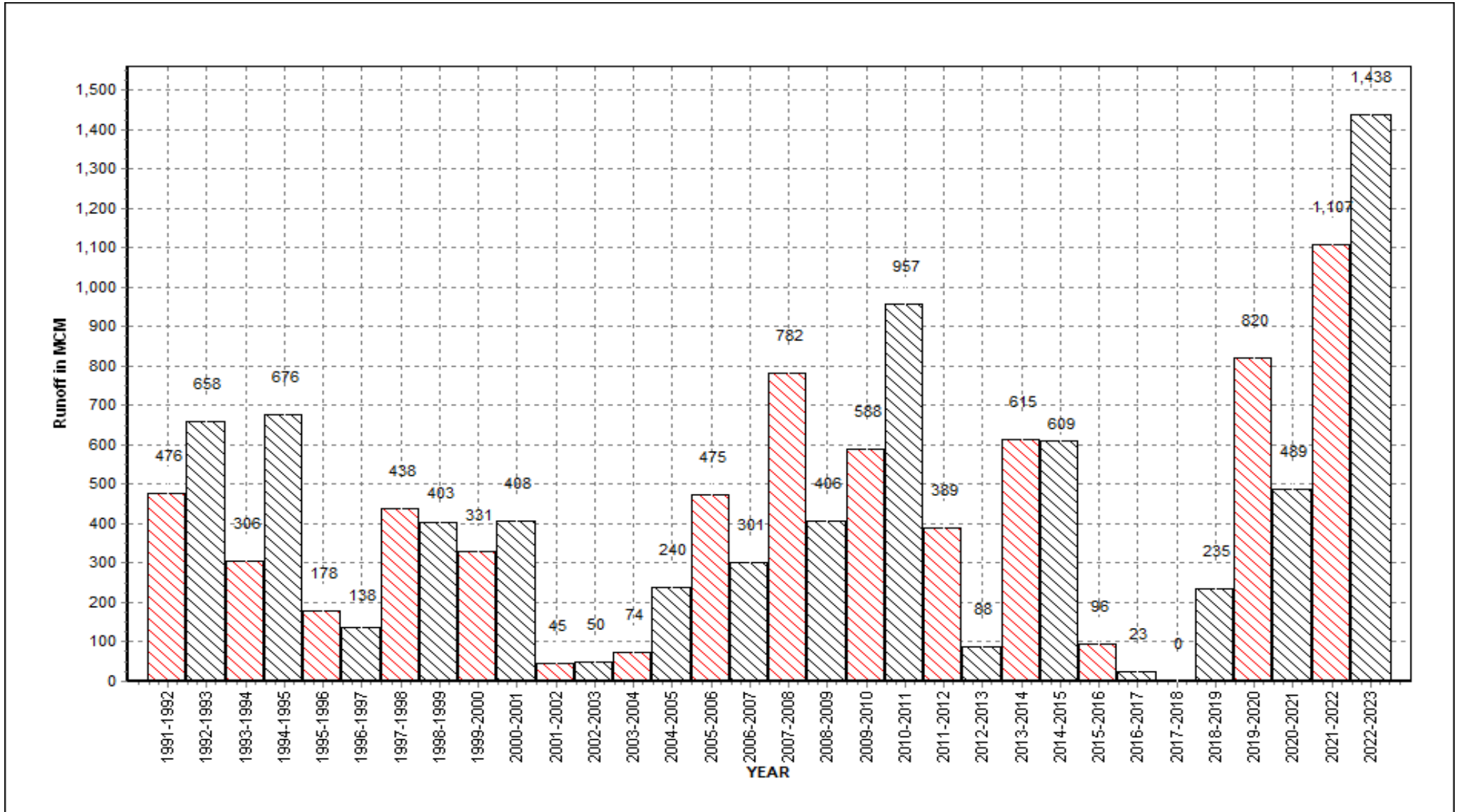
Annual Runoff Values for the period: 1991 - 2023

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

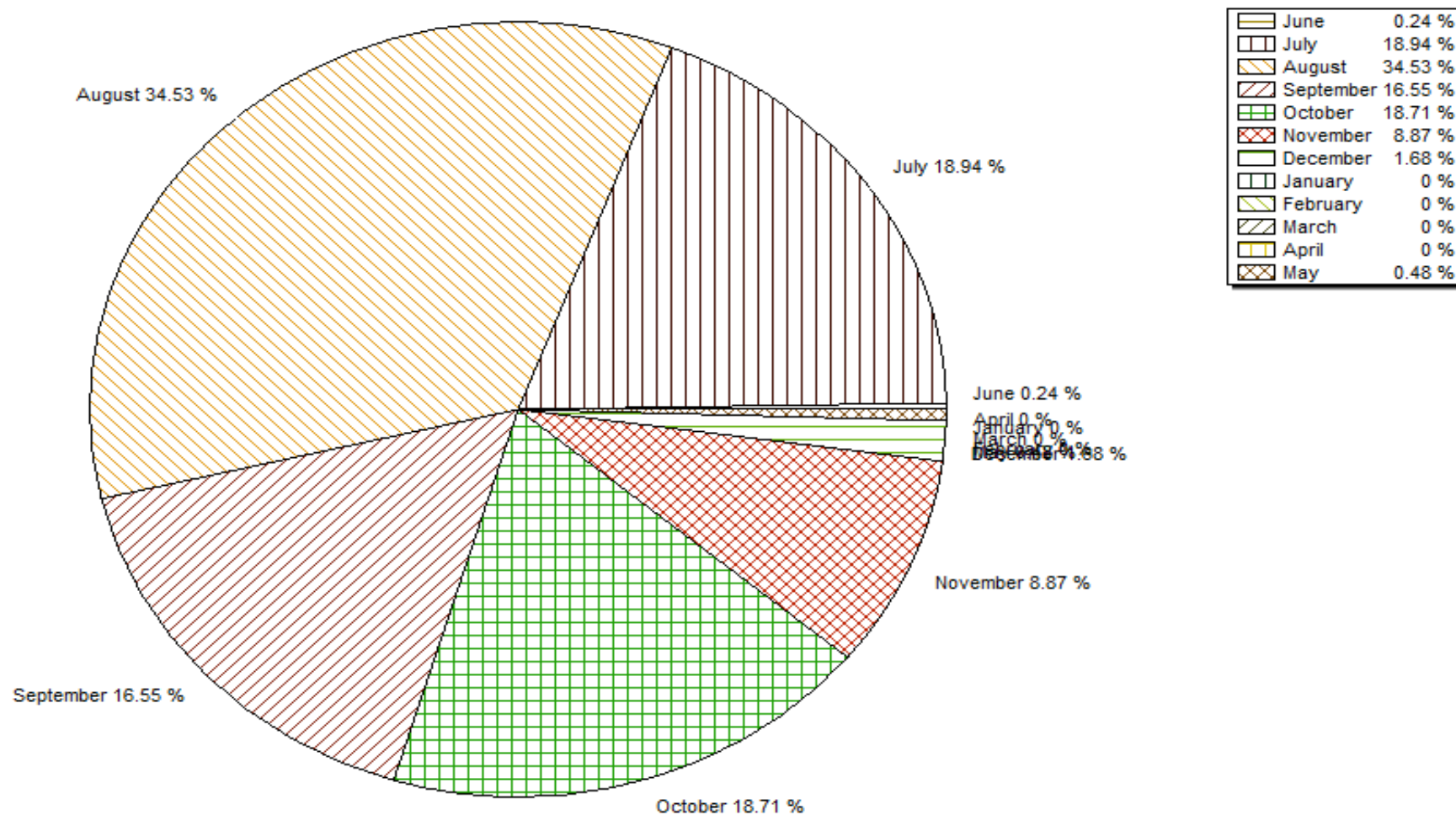
Monthly Average Runoff based on period : 1991-2022

Station Name : KUPPELUR (AKLC0B8)

Local River : Kumudavathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



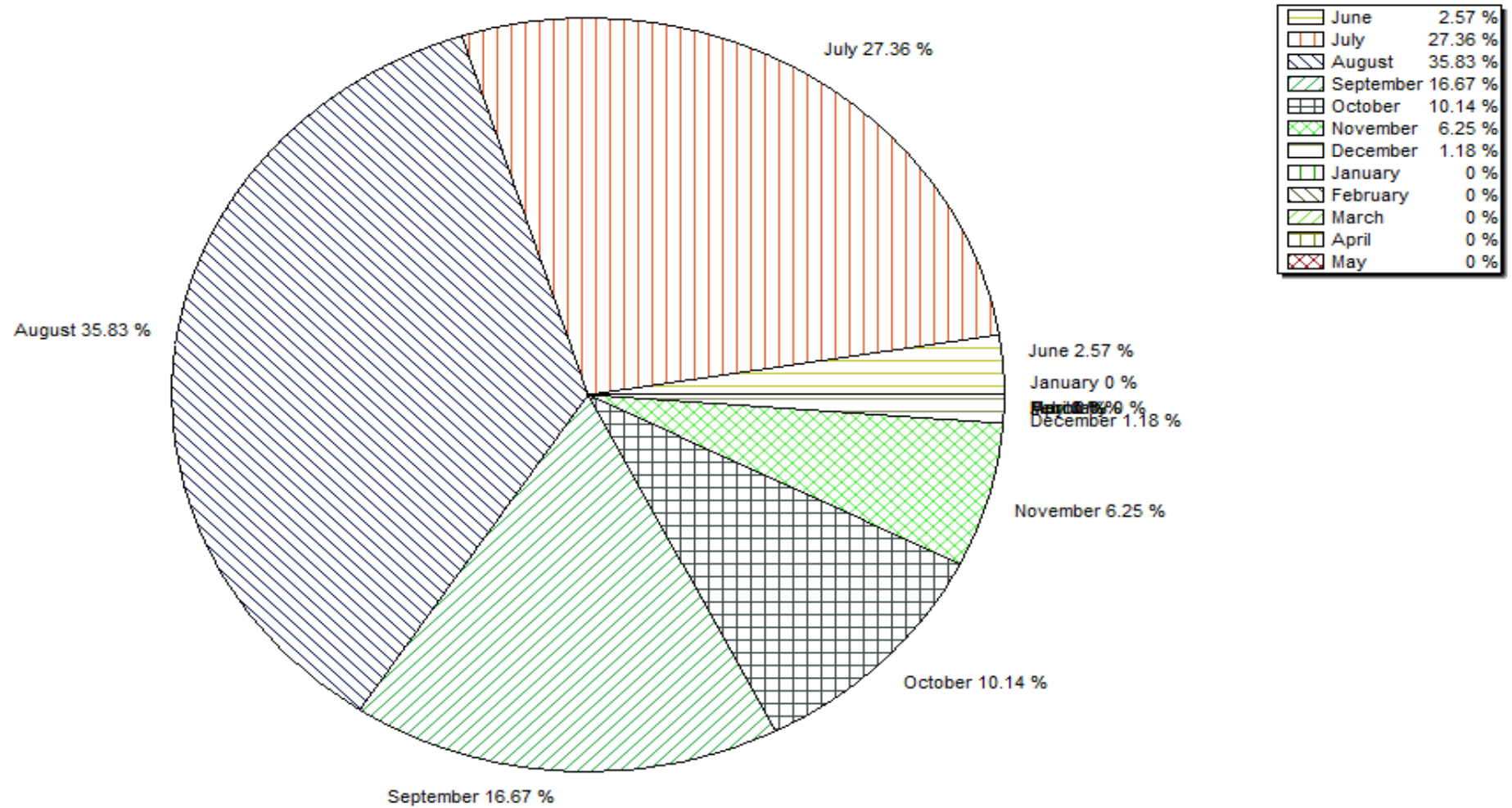
Monthly Runoff for the Year : 2022-2023

Station Name : KUPPELUR (AKLC0B8)

Local River : Kumudavathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



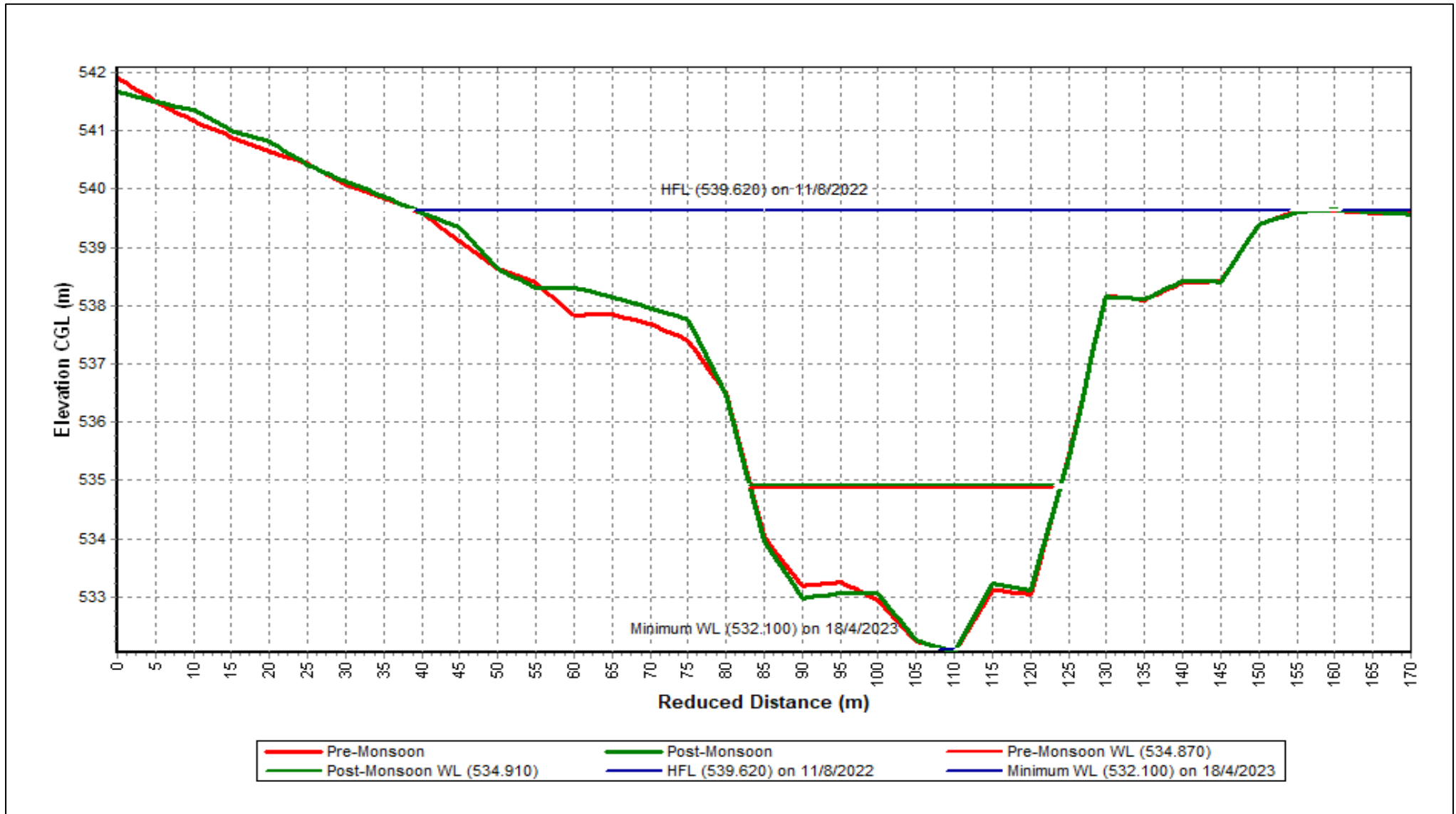
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : KUPPELUR (AKLC0B8)

Local River : Kumudavathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



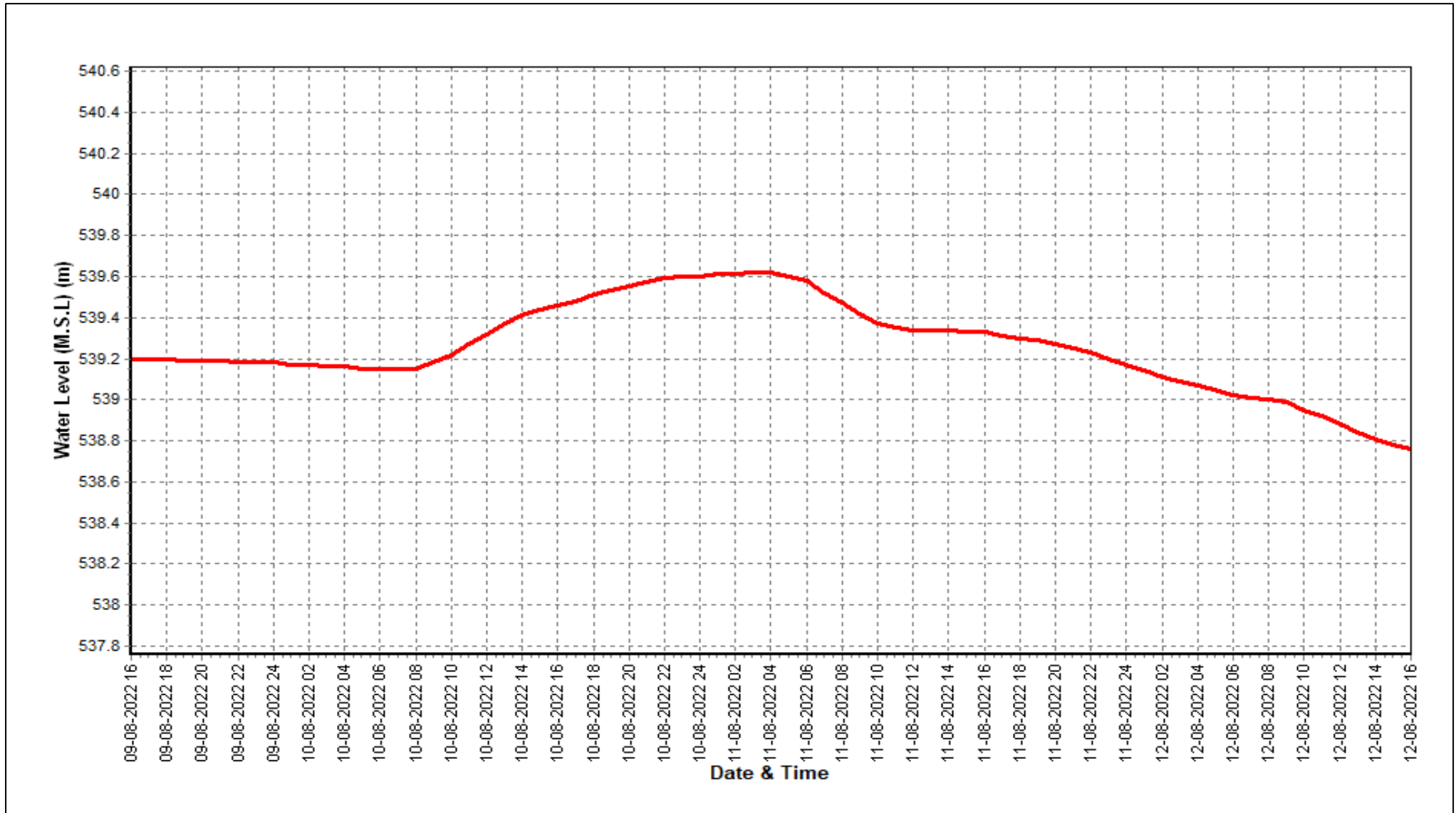
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : KUPPELUR (AKLC0B8)

Local River : Kumudavathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



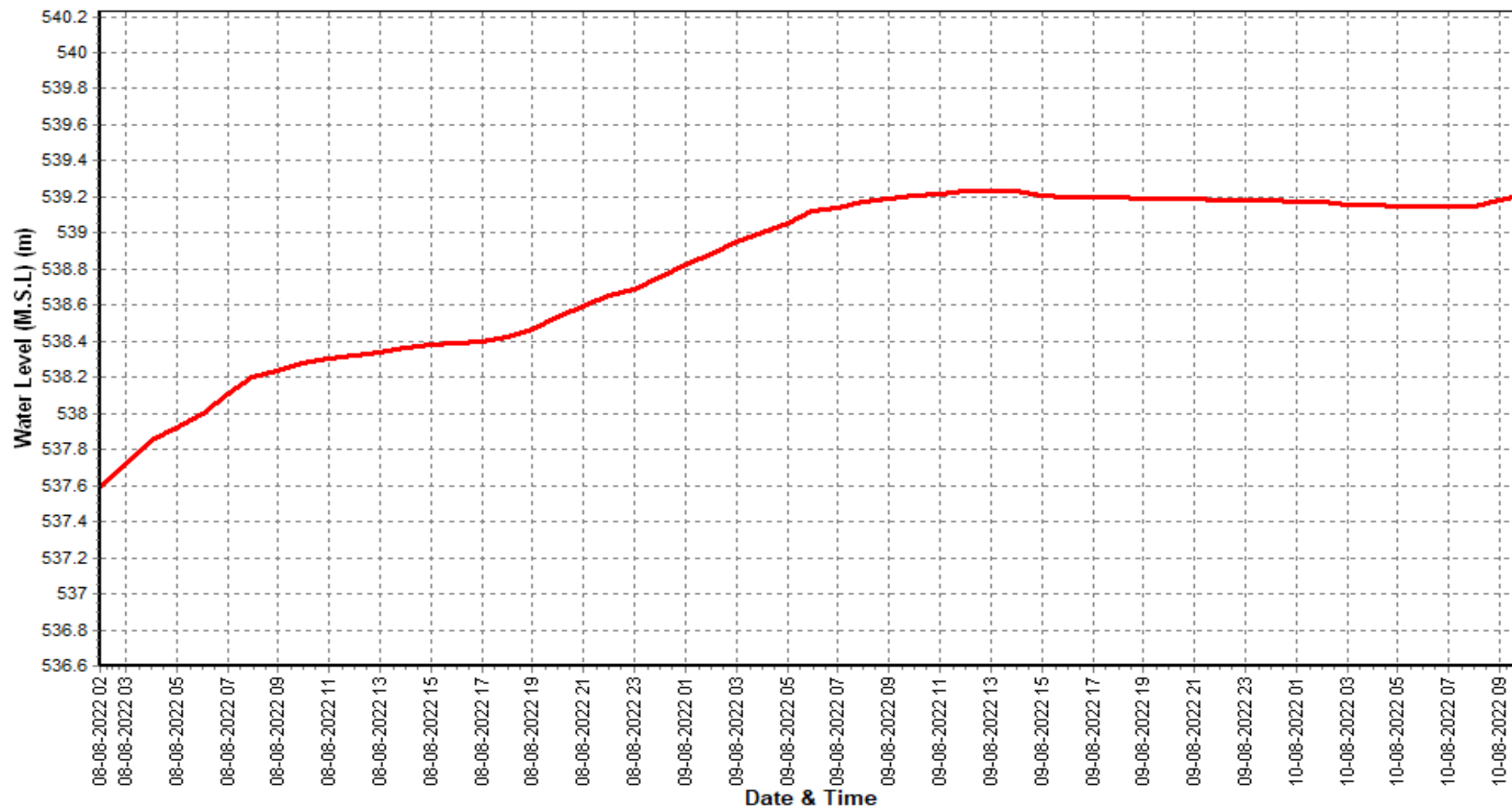
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : KUPPELUR (AKLC0B8)

Local River : Kumudavathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



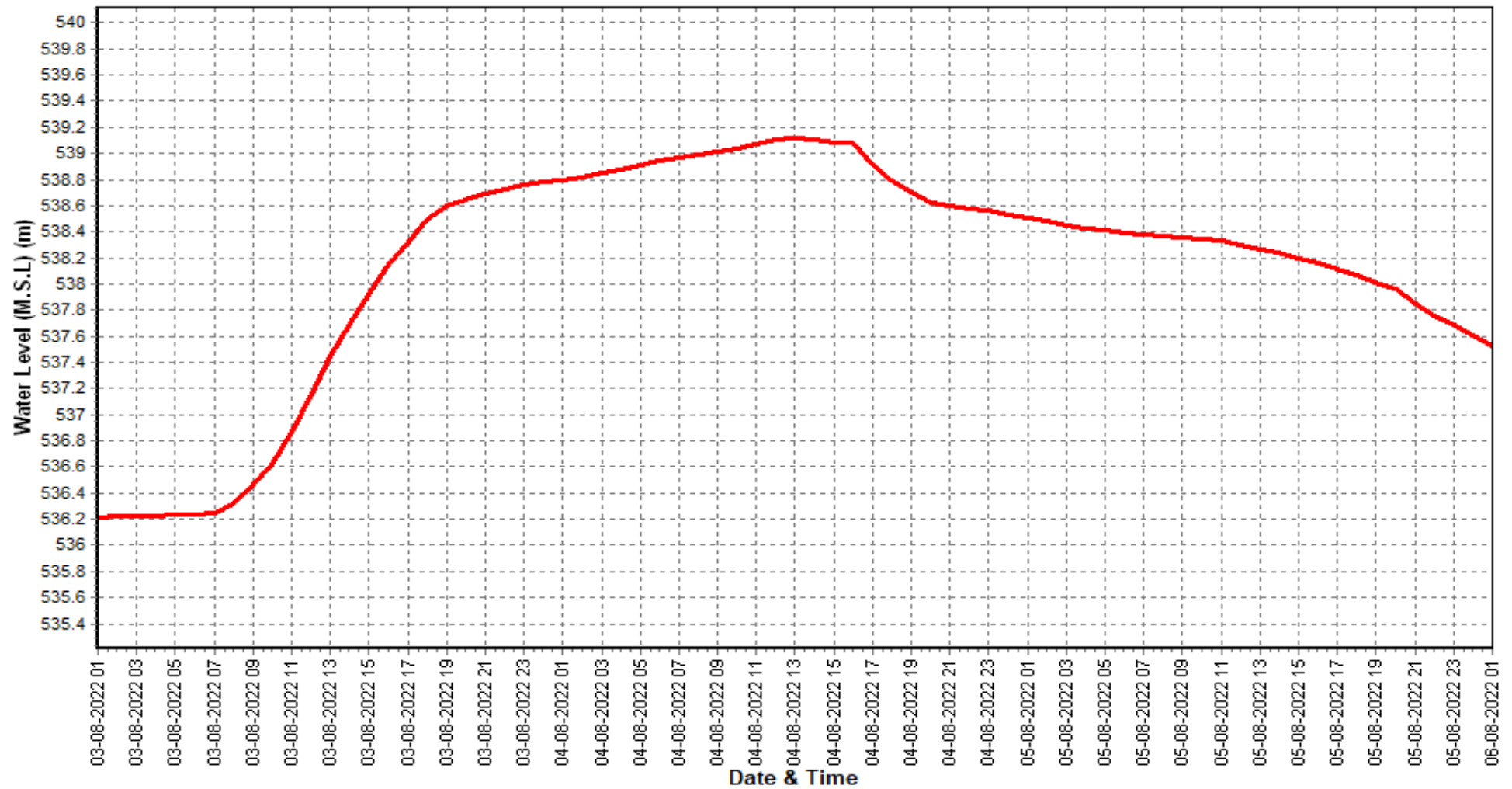
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : KUPPELUR (AKLC0B8)

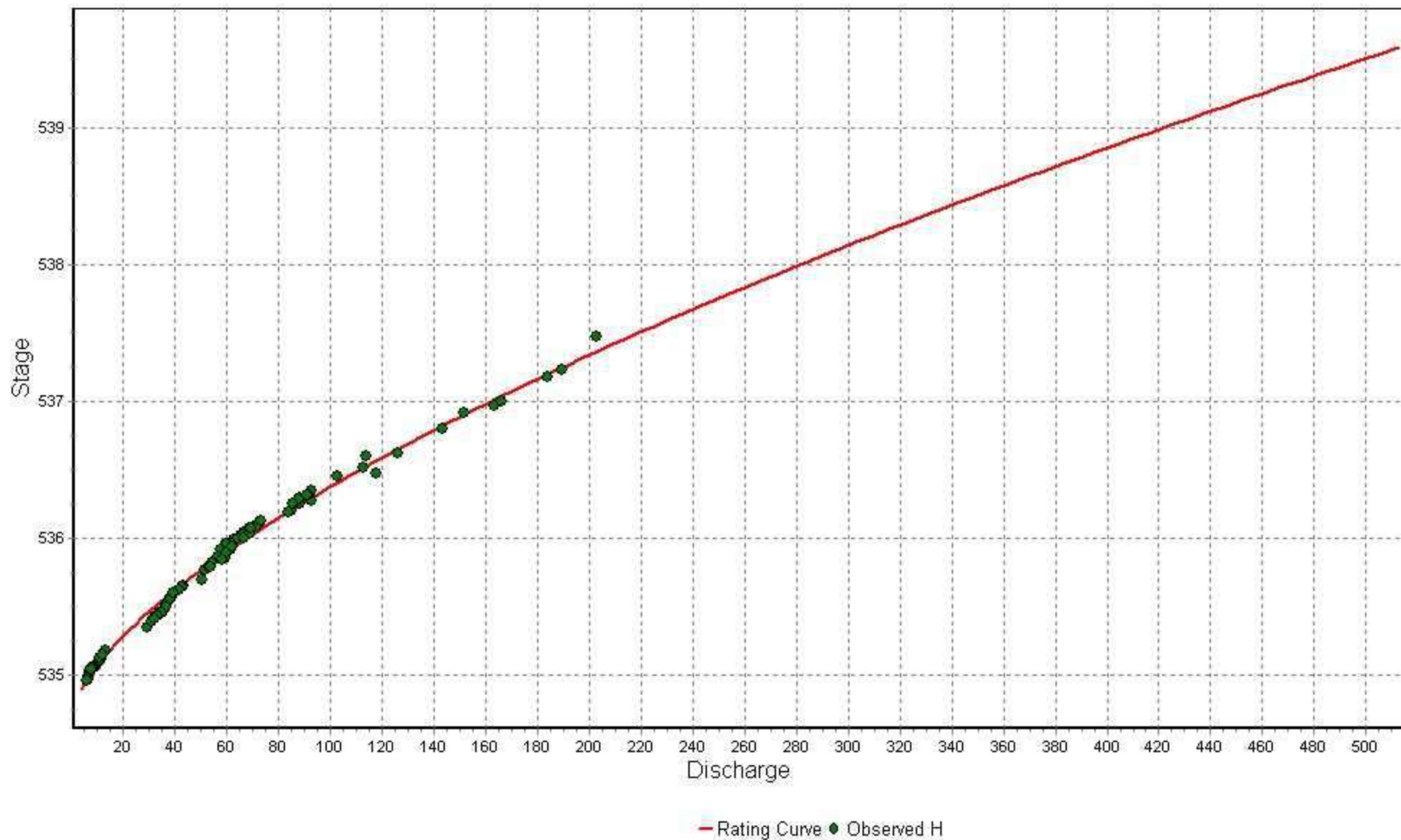
Local River : Kumudavathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



S-D curve of site Kuppelur for the period from 01.06.2022 to 31.10.2022
Range:- 534.900 to 539.630, a= -534.700, b= 1.529, c= 1.529, OSE= 7.963 (No. of data 111)



HISTORY SHEET

Water Year : 2022-2023

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) : 528.4 (m.s.l)

01-06-2010

Opening Date

Closing Date

Gauge : 21-03-1985

Discharge : 11-06-1985

Sediment : 10-12-1997

Water Quality : 02-06-1986

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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	530.840	15-03-1992
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	530.690	03-01-1996
1996-1997	241.1	533.710	21-10-1996	0.000	530.800	05-07-1996
1997-1998	157.5	532.960	26-10-1997	0.000	530.800	21-06-1997
1998-1999	236.5	533.460	11-10-1998	0.000	530.700	13-12-1998
1999-2000	224.8	533.700	05-10-1999	0.000	530.600	31-12-1999
2000-2001	251.0	534.020	10-10-2000	0.000	530.620	08-02-2001
2001-2002	112.8	532.685	02-08-2001	0.000	530.580	05-12-2001
2002-2003	116.1	533.045	16-10-2002	0.000		19-03-2003
2003-2004	138.8	532.920	06-10-2003	0.000		29-03-2004
2004-2005	49.21	531.900	07-09-2004	0.000		21-06-2004
2005-2006	190.1	533.460	27-07-2005	0.000		10-02-2006
2006-2007	179.9	533.740	04-11-2006	0.000		24-03-2007
2007-2008	99.30	532.580	19-09-2007	0.000		03-02-2008
2008-2009	104.3	532.570	06-10-2008	0.000	530.230	03-01-2009

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2009-2010	167.8	533.470	02-10-2009	0.000		16-04-2010
2010-2011	257.3	534.040	09-11-2010	0.000	529.930	01-03-2011
2011-2012	90.51	532.200	15-10-2011	0.000	529.870	06-02-2012
2012-2013	339.9	534.650	02-11-2012	0.000		31-01-2013
2013-2014	92.30	532.370	18-09-2013	0.000	530.080	27-02-2014
2014-2015	243.0	534.000	28-10-2014	0.000	530.060	22-01-2015
2015-2016	117.3	532.680	09-09-2015	0.000		07-04-2016
2016-2017	23.65	531.380	26-09-2016	0.000		07-03-2017
2017-2018	178.2	533.320	04-10-2017	0.000		08-04-2018
2018-2019	69.61	532.190	21-11-2018	0.000	530.090	13-06-2018
2019-2020	372.4	534.820	22-10-2019	0.000	530.080	23-04-2020
2020-2021	170.4	533.180	09-09-2020	0.000	530.100	28-03-2021
2021-2022	263.5	534.700	21-05-2022	0.000	530.140	19-06-2021

Annual Runoff of Krishna at Byaladahalli

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1985-1986	202	67	268	7	2	9
2	1986-1987	153	137	290	5	5	10
3	1987-1988	208	88	296	7	3	10
4	1988-1989	169	92	262	6	3	9
5	1989-1990	178	151	329	6	5	12
6	1990-1991	247	261	508	9	9	18
7	1991-1992	357	34	391	13	1	14
8	1992-1993	355	310	666	13	11	24
9	1993-1994	411	148	559	15	5	20
10	1994-1995	439	125	564	16	4	20
11	1995-1996	203	87	290	7	3	10
12	1996-1997	372	118	490	13	4	17
13	1997-1998	264	133	397	9	5	14
14	1998-1999	379	142	521	13	5	18
15	1999-2000	283	62	345	10	2	12
16	2000-2001	435	141	576	15	5	20
17	2001-2002	212	32	244	7	1	9
18	2002-2003	92	39	131	3	1	5
19	2003-2004	43	4	47	2	0	2
20	2004-2005	87	13	100	3	0	4
21	2005-2006	309	86	395	11	3	14
22	2006-2007	127	103	230	4	4	8
23	2007-2008	126	39	166	4	1	6
24	2008-2009	220	63	283	8	2	10
25	2009-2010	283	47	330	10	2	12
26	2010-2011	395	258	652	14	9	23
27	2011-2012	244	76	321	9	3	11
28	2012-2013	124	89	213	4	3	8
29	2013-2014	327	26	353	12	1	12
30	2014-2015	274	84	358	10	3	13
31	2015-2016	198	51	249	7	2	9
32	2016-2017	46	19	65	2	1	2
33	2017-2018	98	0	98	3	0	3
34	2018-2019	146	67	212	5	2	8
35	2019-2020	175	80	255	6	3	9
36	2020-2021	282	34	316	10	1	11
37	2021-2022	287	151	438	10	5	15
38	2022-2023	448	16	465	16	1	16
Average		242	91	333	9	3	12

Instantaneous Flood Peak of Krishna at Byladahalli					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1985-1986	533.505	30-09-1985	22:00:00	148 *
2	1986-1987	533.640	06-11-1986	23:00:00	203 *
3	1987-1988	533.460	02-10-1987	08:00:00	155 *
4	1988-1989	532.990	29-08-1988	09:00:00	136 *
5	1989-1990	532.670	08-10-1989	18:00:00	109 *
6	1990-1991	532.700	11-08-1990	10:00:00	112 *
7	1991-1992	533.090	02-08-1991	14:00:00	145 *
8	1992-1993	538.450	17-11-1992	12:00:00	1215 *
9	1993-1994	533.500	16-10-1993	05:00:00	230 *
10	1994-1995	533.090	04-10-1994	18:00:00	167 *
11	1995-1996	532.690	17-09-1995	18:00:00	111 *
12	1996-1997	533.740	21-10-1996	12:00:00	241 *
13	1997-1998	532.960	26-10-1997	08:00:00	158 *
14	1998-1999	533.600	11-10-1998	17:00:00	237 *
15	1999-2000	533.700	05-10-1999	08:00:00	225 *
16	2000-2001	534.550	09-10-2000	18:00:00	325 *
17	2001-2002	533.940	15-04-2001	18:00:00	240 *
18	2002-2003	533.270	15-10-2002	18:00:00	163 *
19	2003-2004	533.340	06-10-2003	08:00:00	170 *
20	2004-2005	531.920	07-09-2004	15:00:00	62 *
21	2005-2006	534.000	17-07-2005	23:00:00	247 *
22	2006-2007	533.900	03-11-2006	21:00:00	234 *
23	2007-2008	532.580	19-09-2007	08:00:00	99 *
24	2008-2009	532.580	06-10-2008	08:00:00	104 *
25	2009-2010	533.470	02-10-2009	07:00:00	168 *
26	2010-2011	534.040	09-11-2010	08:00:00	257 *
27	2011-2012	532.210	15-10-2011	10:00:00	91 *
28	2012-2013	534.930	02-11-2012	18:00:00	385 *
29	2013-2014	532.390	18-09-2013	17:00:00	92 *
30	2014-2015	534.310	28-10-2014	18:00:00	307 *
31	2015-2016	532.680	09-09-2015	08:00:00	115
32	2016-2017	531.390	26-09-2016	16:00:00	52 *
33	2017-2018	533.390	04-10-2017	17:00:00	176 *
34	2018-2019	532.290	19-10-2018	16:00:00	90 *
35	2019-2020	534.850	22-10-2019	11:00:00	365 *
35	2020-2021	533.750	09-09-2020	23:00:00	221 *
36	2021-2022	531.610	21-11-2021	08:00:00	42 *
37	2022-2023	533.110	04-08-2022	11:00:00	142 *

Stage-Discharge Data for the period 2022 - 2023

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	530.540	4.841	530.510	4.343	532.250	77.88	532.160	64.19	531.330	25.32	531.160	18.46
2	530.530	4.558	530.510	4.337	531.740	46.05	532.250	77.73	531.380	27.50 *	531.160	18.44
3	530.520	4.429	530.500	4.274 *	532.080	61.54	532.250	77.70	531.480	35.00	531.180	19.49
4	530.540	4.821	530.520	4.449	532.720	129.3	532.330	83.91 *	531.680	41.98	531.300	17.65 #
5	530.520	4.550 *	530.520	4.460	532.160	64.10	532.280	80.45	531.740	44.61 *	531.330	18.24 #
6	530.520	4.403	530.560	5.216	532.250	77.68	532.160	64.16	531.740	46.15	531.330	18.24 *
7	530.540	4.775	530.590	5.737	532.290	80.77 *	532.180	66.21	531.860	54.31	531.300	17.65 #
8	530.530	4.491	530.600	5.869	532.720	128.8	532.250	77.63	531.860	54.12	531.300	17.65 *
9	530.510	4.229	530.700	7.591	532.580	105.1 *	532.180	66.17	531.780	46.83 *	531.200	20.11
10	530.510	4.197	530.710	7.693 *	532.160	63.94	532.080	60.66	531.680	42.23	531.160	18.42
11	530.500	4.061	530.720	7.854	532.080	61.20	532.050	63.43 *	531.740	44.85	531.100	16.18
12	530.500	4.274 *	530.740	8.342	531.740	47.62	531.860	54.39	532.080	60.62	531.080	15.53
13	530.500	4.037	530.740	8.391	531.480	35.35	531.740	45.99	532.160	64.27	531.010	12.46 *
14	530.510	4.165	530.720	7.877	531.440	30.02 *	531.680	41.58	532.180	66.19	531.000	13.06
15	530.520	4.316	530.730	8.128	531.420	29.16 *	531.480	35.09	532.160	66.95	531.000	13.07
16	530.500	4.016	530.760	8.907	531.360	26.66	531.360	26.74	531.870	52.03 *	530.980	12.60
17	530.510	4.139	530.790	9.316 *	531.340	25.79	531.350	26.24	531.740	46.16	530.920	11.12
18	530.500	4.017	530.920	13.04	531.330	25.40	531.380	27.50 *	531.860	53.95	530.860	9.872
19	530.520	4.550 *	531.050	17.36	531.300	24.14	531.380	27.72	532.070	59.90	530.860	9.875
20	530.560	5.046	531.070	18.21	531.300	24.11	531.420	30.58	532.250	77.64	530.830	9.682 *
21	530.580	5.248	531.050	17.39	531.320	25.12 *	531.380	27.77	532.180	66.15	530.790	8.565
22	530.700	7.359	530.960	14.24	531.330	25.34	531.360	26.77	532.070	60.06	530.790	8.560
23	530.700	7.396	530.920	13.06	531.340	25.73	531.340	25.70	531.880	52.63 *	530.790	8.553
24	530.590	5.648	530.860	10.89 *	531.340	25.65	531.330	25.26	531.800	47.95 *	530.780	8.344
25	530.580	5.482	530.840	11.01	531.360	26.78	531.310	24.73 *	531.740	46.25	530.780	8.374
26	530.580	5.470 *	530.830	10.79	531.360	26.71	531.280	23.18	531.470	34.56	530.780	8.323
27	530.560	5.221	530.830	10.81	531.380	28.01	531.230	21.22	531.380	28.77	530.720	8.157 *
28	530.550	5.065	530.840	11.08	531.430	29.59 *	531.230	21.32	531.330	25.22	530.700	6.903
29	530.540	4.940	531.090	19.28	531.480	35.35	531.280	23.20	531.300	23.90	530.700	6.906
30	530.520	4.474	531.440	33.18	531.740	46.13	531.300	24.13	531.250	22.49 *	530.700	6.923
31			531.930	55.68 *	531.850	50.84 *			531.200	20.08		
Ten-Daily Mean												
I Ten-Daily	530.526	4.529	530.572	5.397	532.295	83.51	532.212	71.88	531.653	41.81	531.242	18.44
II Ten-Daily	530.512	4.262	530.824	10.74	531.479	32.95	531.570	37.93	532.011	59.26	530.964	12.34
III Ten-Daily	530.590	5.630	531.054	18.86	531.448	31.39	531.304	24.33	531.600	38.91	530.753	7.961
Monthly												
Min.	530.500	4.016	530.500	4.274	531.300	24.11	531.230	21.22	531.200	20.08	530.700	6.903
Max.	530.700	7.396	531.930	55.68	532.720	129.3	532.330	83.91	532.250	77.64	531.330	20.11
Mean	530.543	4.807	530.824	11.9	531.731	48.7	531.695	44.71	531.750	46.41	530.986	12.91

Annual Runoff in MCM = 465 Annual Runoff in mm = 202

Peak Observed Discharge = 129.3 cumecs on 04-08-2022 Corres. Water Level :532.72 m

Lowest Observed Discharge = 0.000 cumecs on 03-01-2023 Corres. Water Level :530.13 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2022 - 2023

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	530.700	6.916	530.280	3.358 *	530.110	0.000	530.060	0.000	530.090	0.000	530.060	0.000
2	530.690	6.783	530.260	3.476	530.110	0.000	530.060	0.000	530.090	0.000	530.080	0.000
3	530.690	6.787	530.130	0.000	530.110	0.000	530.060	0.000	530.090	0.000	530.090	0.000
4	530.690	7.764 *	529.970	0.000	530.120	0.000	530.050	0.000	530.080	0.000	530.090	0.000
5	530.700	6.941	529.980	0.000	530.120	0.000	530.050	0.000	530.080	0.000	530.100	0.000
6	530.700	6.934	529.980	0.000	530.120	0.000	530.050	0.000	530.070	0.000	530.100	0.000
7	530.700	6.942	529.990	0.000	530.120	0.000	530.050	0.000	530.070	0.000	530.110	0.000
8	530.690	6.772	529.980	0.000	530.110	0.000	530.060	0.000	530.070	0.000	530.110	0.000
9	530.690	6.793	530.000	0.000	530.110	0.000	530.060	0.000	530.060	0.000	530.110	0.000
10	530.690	6.744	530.000	0.000	530.090	0.000	530.060	0.000	530.060	0.000	530.130	0.000
11	530.680	7.635 *	530.040	0.000	530.090	0.000	530.070	0.000	530.060	0.000	530.130	0.000
12	530.680	6.558	530.080	0.000	530.090	0.000	530.070	0.000	530.060	0.000	530.130	0.000
13	530.680	6.529	530.090	0.000	530.080	0.000	530.070	0.000	530.050	0.000	530.130	0.000
14	530.680	6.577	530.090	0.000	530.080	0.000	530.070	0.000	530.050	0.000	530.130	0.000
15	530.680	6.546	530.090	0.000	530.080	0.000	530.060	0.000	530.050	0.000	530.120	0.000
16	530.670	6.395	530.090	0.000	530.070	0.000	530.060	0.000	530.060	0.000	530.120	0.000
17	530.670	6.401	530.100	0.000	530.070	0.000	530.060	0.000	530.060	0.000	530.120	0.000
18	530.560	6.171 *	530.100	0.000	530.070	0.000	530.050	0.000	530.060	0.000	530.110	0.000
19	530.420	5.233	530.110	0.000	530.070	0.000	530.050	0.000	530.080	0.000	530.110	0.000
20	530.410	5.175	530.110	0.000	530.060	0.000	530.050	0.000	530.090	0.000	530.110	0.000
21	530.410	5.143	530.110	0.000	530.070	0.000	530.060	0.000	530.100	0.000	530.110	0.000
22	530.400	5.040	530.100	0.000	530.070	0.000	530.070	0.000	530.100	0.000	530.120	0.000
23	530.380	4.847	530.100	0.000	530.070	0.000	530.070	0.000	530.100	0.000	530.130	0.000
24	530.380	4.800	530.100	0.000	530.080	0.000	530.080	0.000	530.090	0.000	530.130	0.000
25	530.380	4.266 *	530.090	0.000	530.080	0.000	530.100	0.000	530.090	0.000	530.130	0.000
26	530.370	4.691	530.090	0.000	530.080	0.000	530.100	0.000	530.090	0.000	530.130	0.000
27	530.370	4.658	530.090	0.000	530.080	0.000	530.110	0.000	530.080	0.000	530.130	0.000
28	530.340	4.297	530.080	0.000	530.070	0.000	530.110	0.000	530.070	0.000	530.120	0.000
29	530.320	4.068	530.080	0.000			530.110	0.000	530.070	0.000	530.120	0.000
30	530.310	4.002	530.090	0.000			530.100	0.000	530.060	0.000	530.120	0.000
31	530.300	3.872	530.100	0.000			530.100	0.000			530.130	0.000
Ten-Daily Mean												
I Ten-Daily	530.694	6.938	530.057	0.683	530.112	0.000	530.056	0.000	530.076	0.000	530.098	0.000
II Ten-Daily	530.613	6.322	530.090	0.000	530.076	0.000	530.061	0.000	530.062	0.000	530.121	0.000
III Ten-Daily	530.360	4.517	530.094	0.000	530.075	0.000	530.092	0.000	530.085	0.000	530.125	0.000
Monthly												
Min.	530.300	3.872	529.970	0.000	530.060	0.000	530.050	0.000	530.050	0.000	530.060	0.000
Max.	530.700	7.764	530.280	3.476	530.120	0.000	530.110	0.000	530.100	0.000	530.130	0.000
Mean	530.549	5.88	530.081	0.22	530.089	0	530.070	0	530.074	0	530.115	0

Peak Computed Discharge = 105.1 cumecs on 09-08-2022

Corres. Water Level :532.58 m

Lowest Computed Discharge = 3.358 cumecs on 01-01-2023

Corres. Water Level :530.28 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

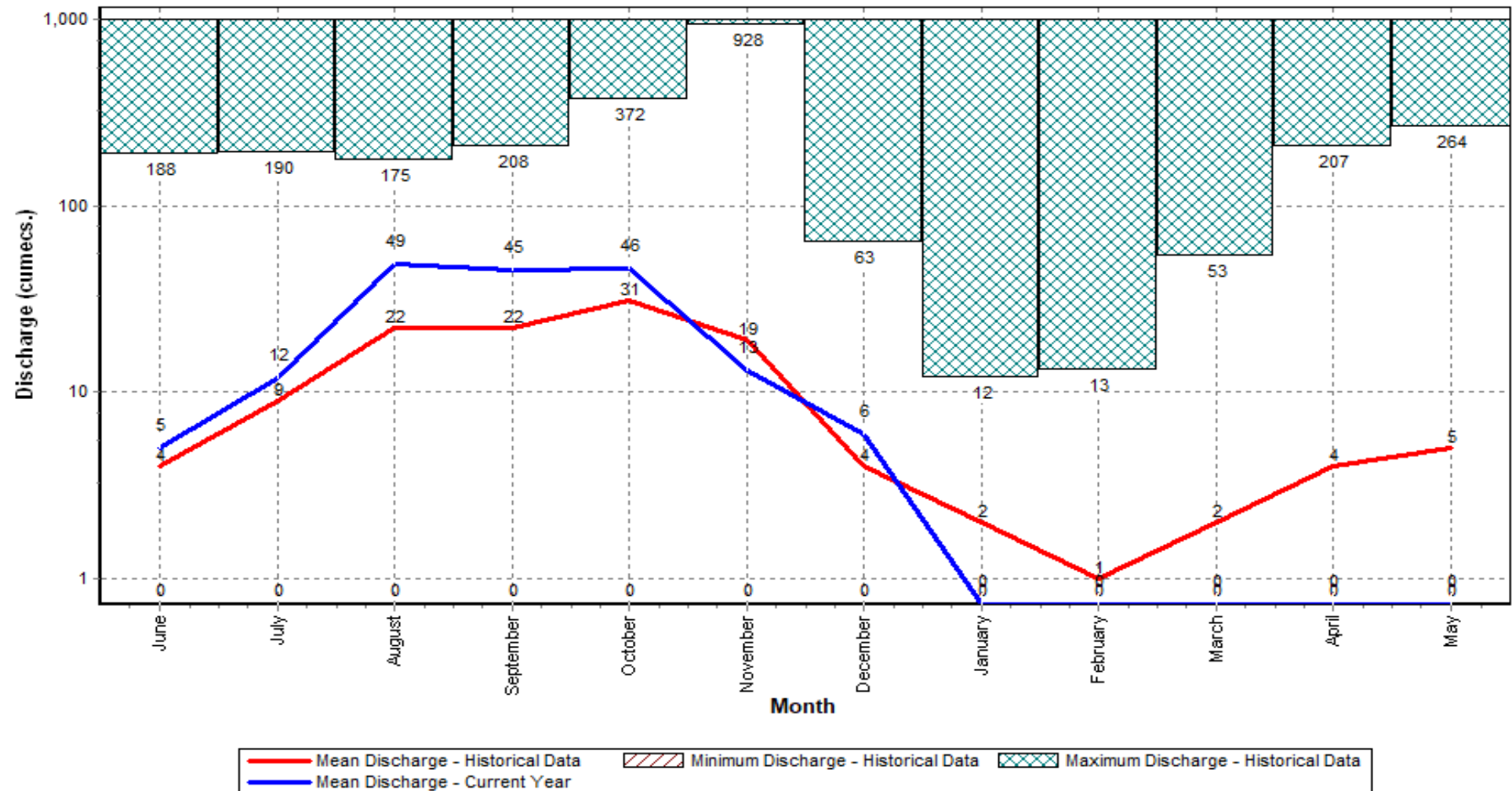
Station Name : BYLADAHALLI (AKLB0D3)

Data considered : 1987-2023

Division : Cauvery Division, Bangalore

Local River : Haridra

Sub-Division : Upper Tunga SD, Devangere



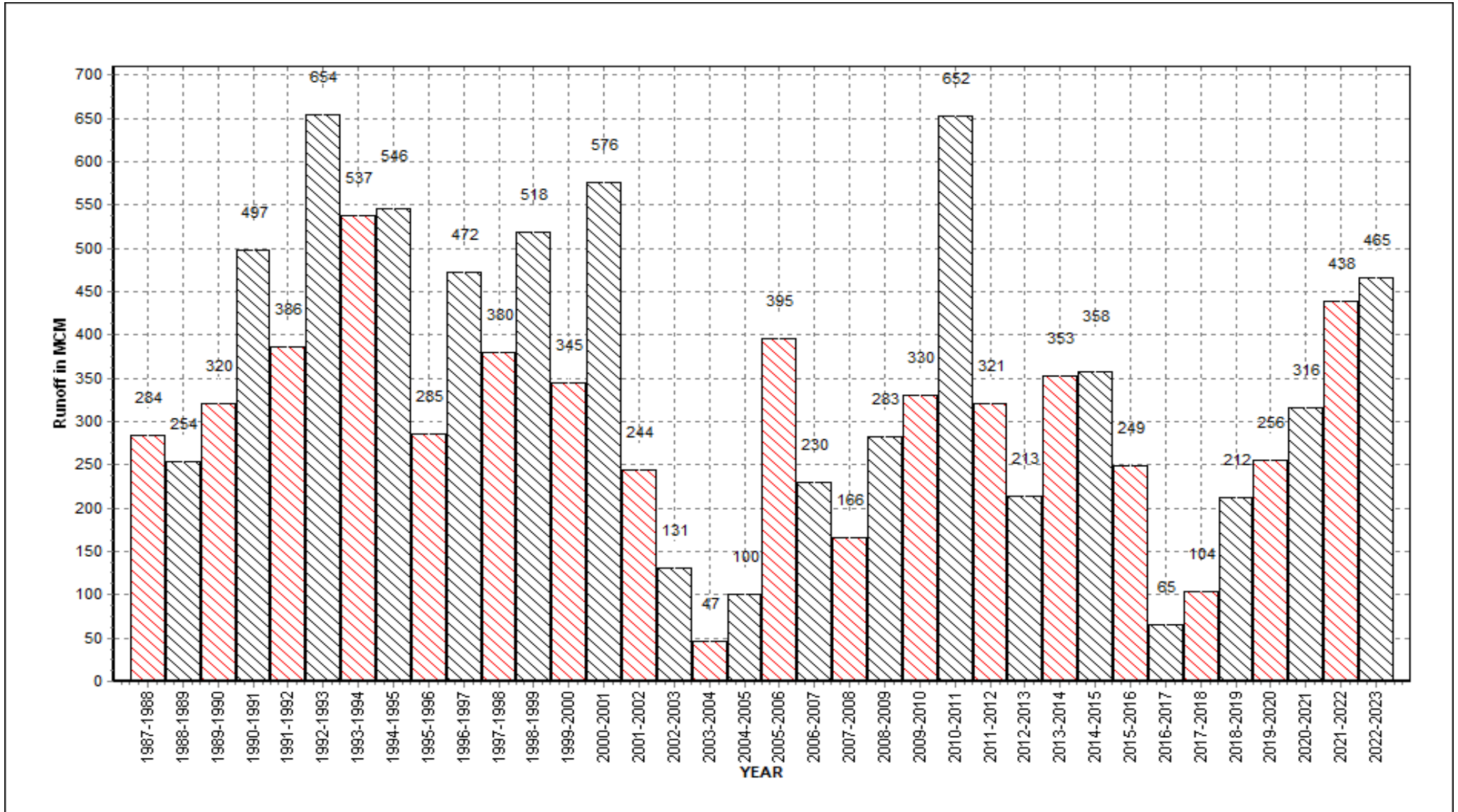
Annual Runoff Values for the period: 1987 - 2023

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

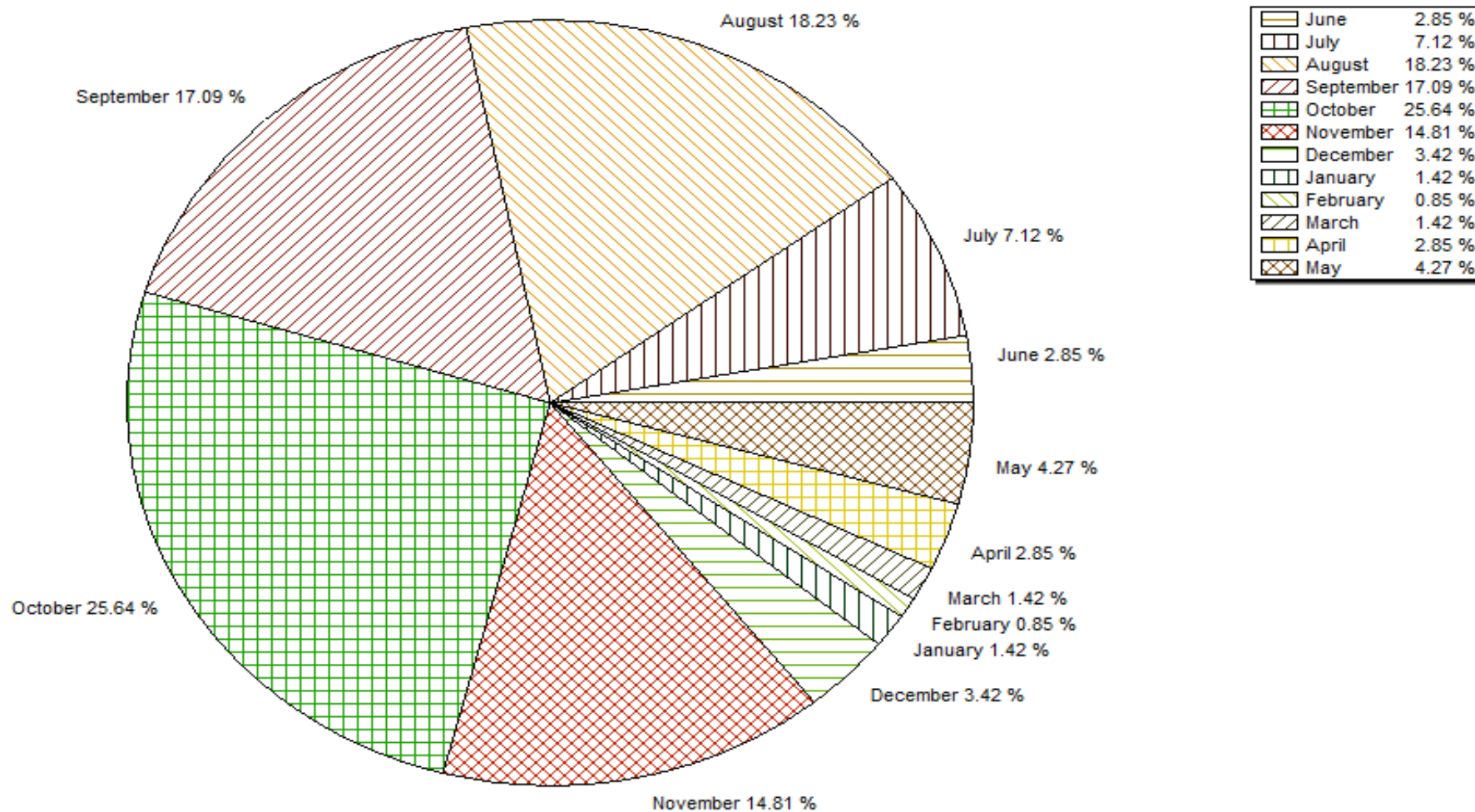
Monthly Average Runoff based on period : 1987-2022

Station Name : BYLADAHALLI (AKLB0D3)

Local River : Haridra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



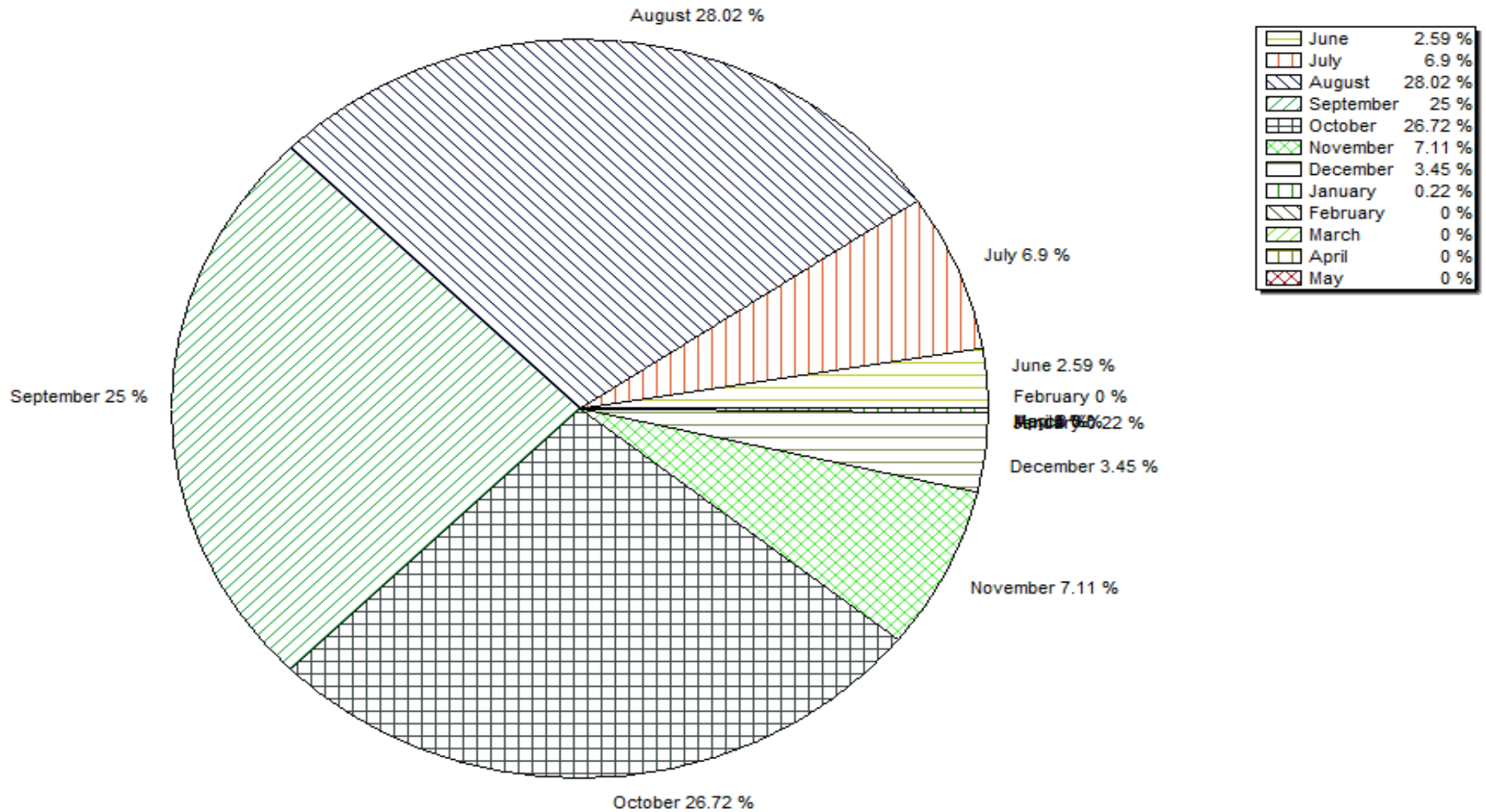
Monthly Runoff for the Year : 2022-2023

Station Name : BYLADAHALLI (AKLB0D3)

Local River : Haridra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



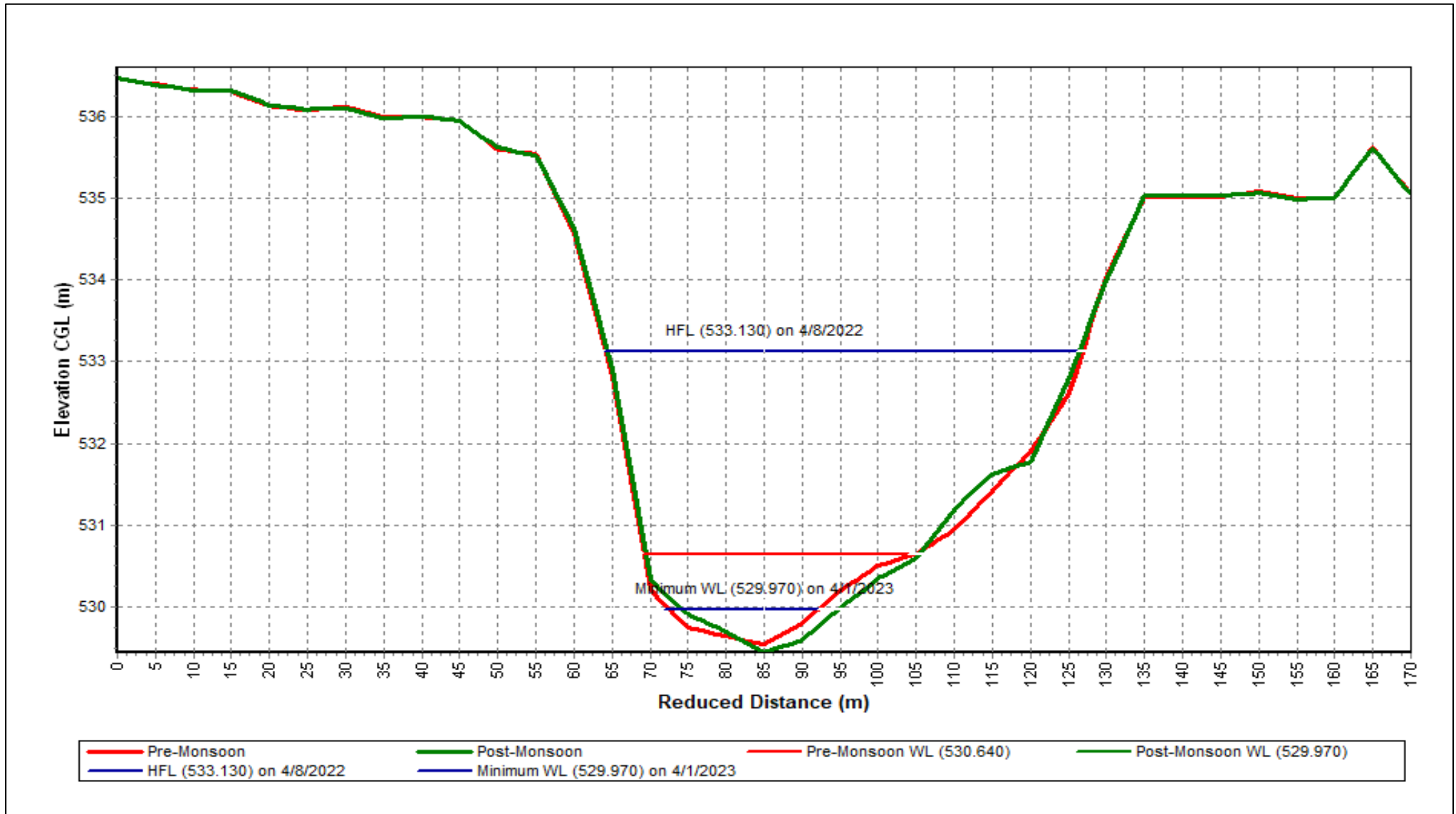
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : BYLADAHALLI (AKLB0D3)

Local River : Haridra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



Zero of the Gauge: 528.4 (m.s.l)

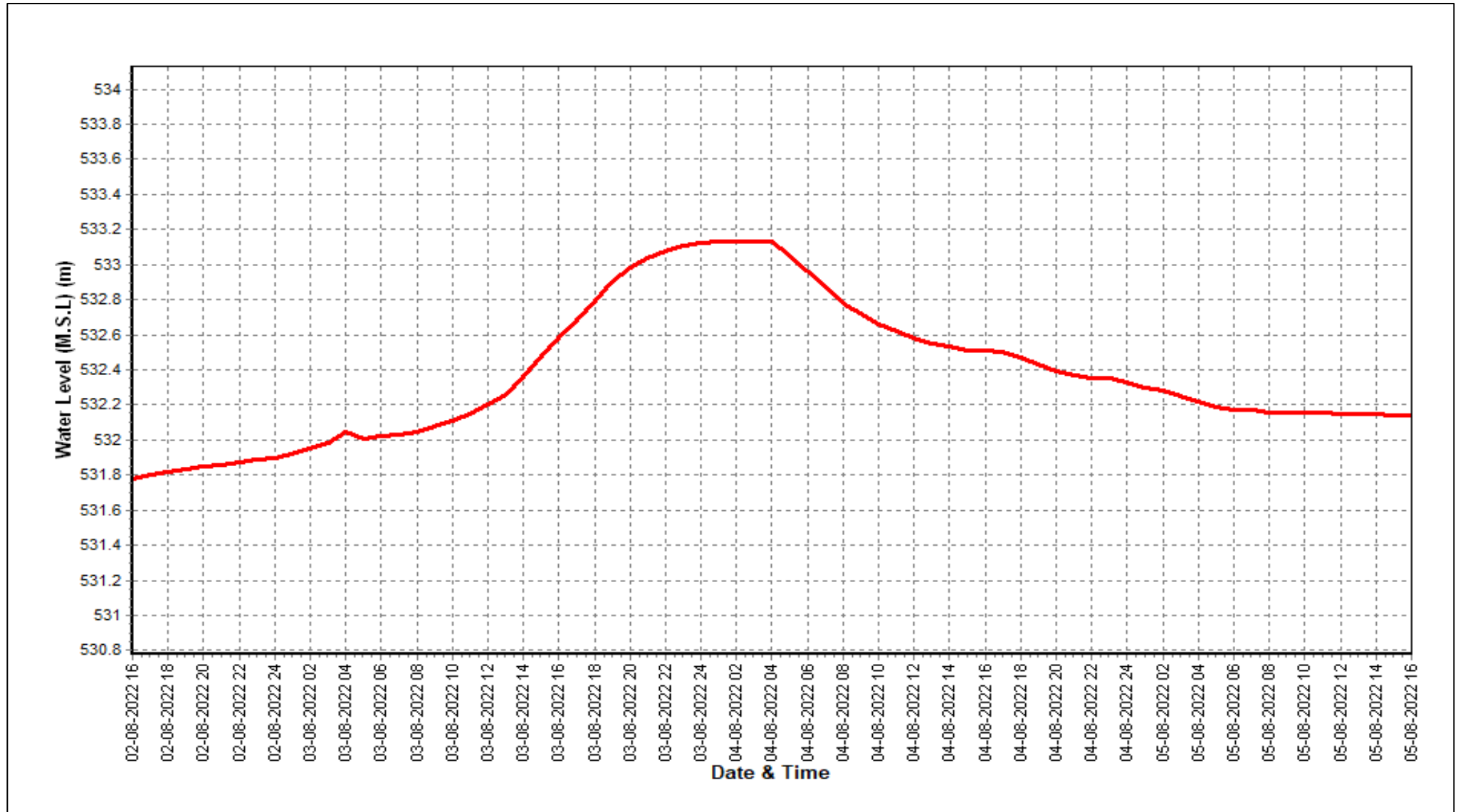
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : BYLADAHALLI (AKLB0D3)

Local River : Haridra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



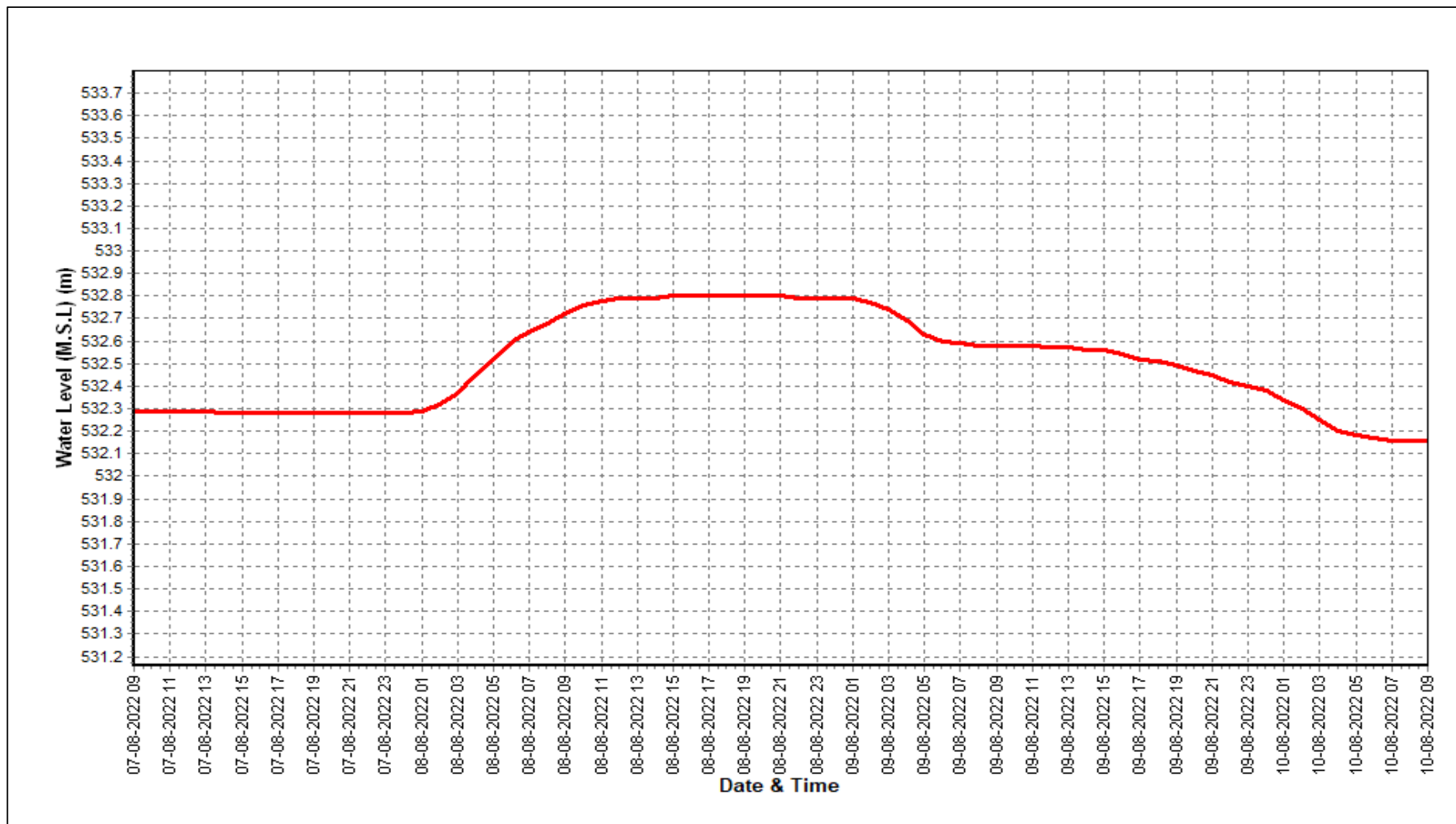
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : BYLADAHALLI (AKLB0D3)

Local River : Haridra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



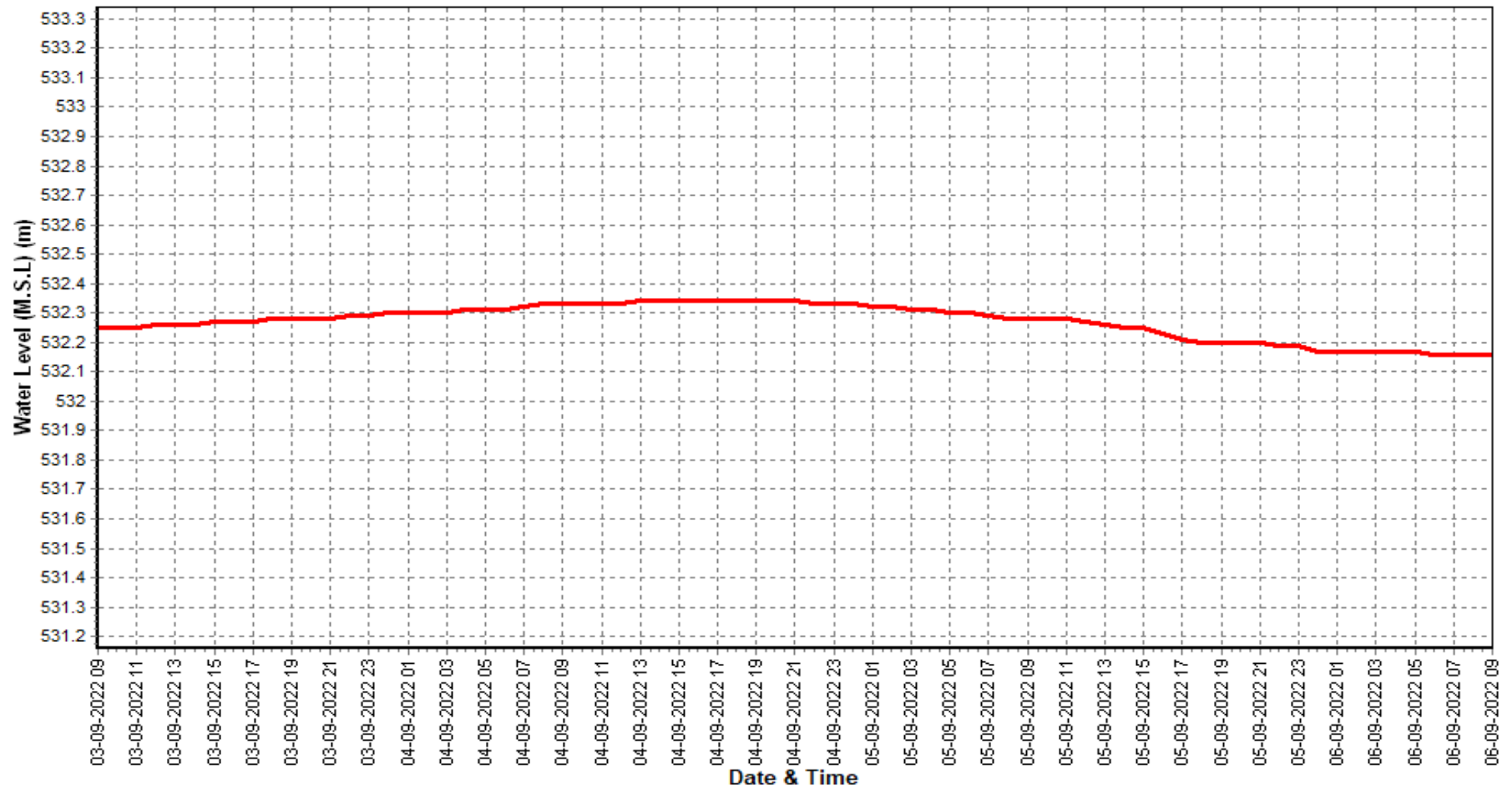
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : BYLADAHALLI (AKLB0D3)

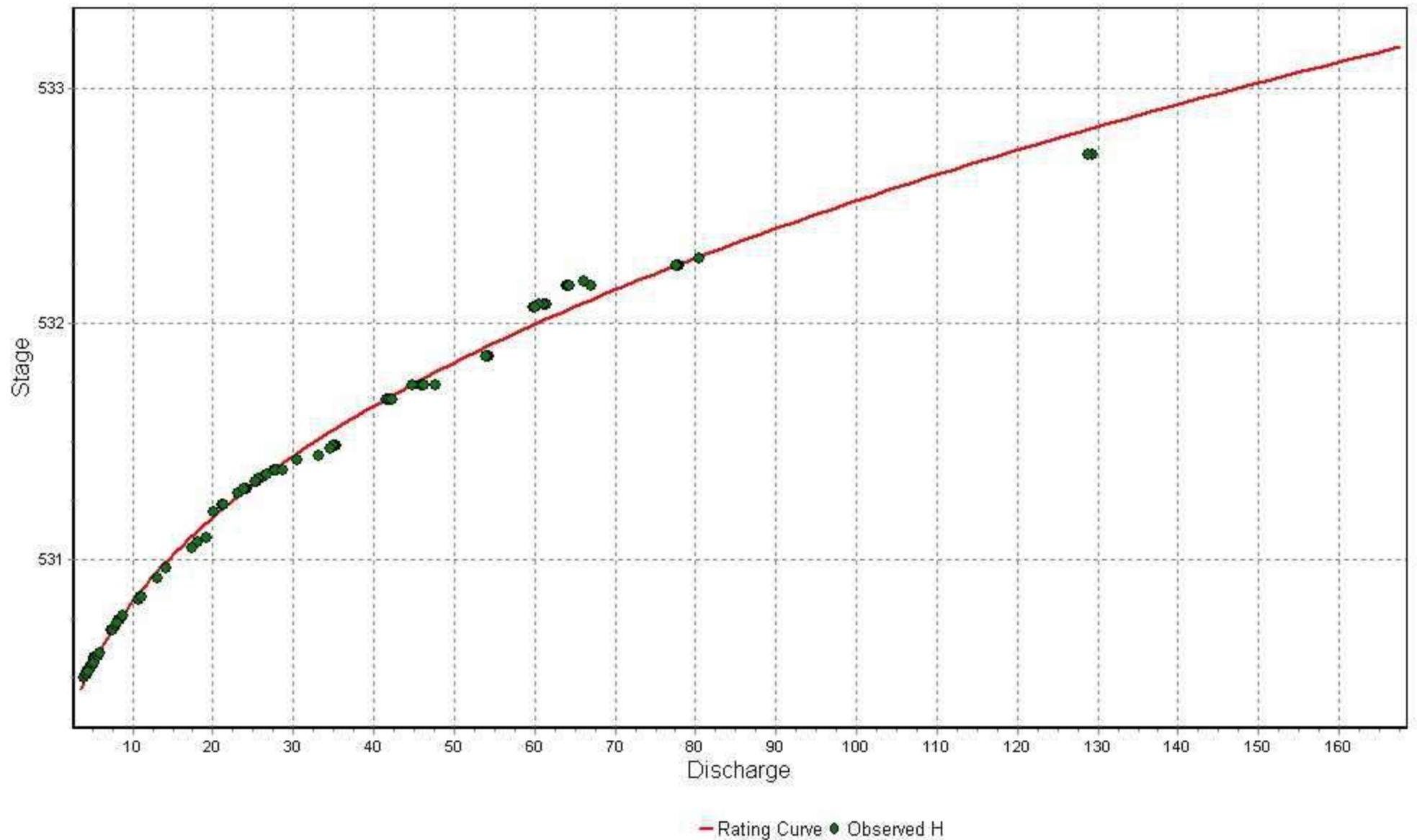
Local River : Haridra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



S-D curve of site Byladahalli for the period from 01.06.2022 to 31.10.2022
Range:- 530.450 to 533.200, a= -529.720, b=2.465, c=7.887, OSE= 5.187 (No. of data 126)



HISTORY SHEET

Water Year : 2022-2023

Site : KALMANE **Code : KALMANE**

State : Karnataka District : Shimoga

Basin : Krishna Independent River : Krishna

Tributary : Tungabhadra Sub Tributary :

Sub-Sub Tributary : Local River : Malathi

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

Drainage Area : 256 Sq. Km. Bank : Left

Latitude : 13°39'07" Longitude : 75°10'45"

Zero of Gauge (m) : 710 (m.s.l)
603 (m.s.l) 25-08-2016 - 31-08-2019
01-09-2019

Opening Date Closing Date

Gauge : 25-08-2016

Discharge : 17-12-2018

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2019-2020	412.6	719.400	06-08-2019	0.000	713.580	04-06-2019
2020-2021	516.7	612.300	08-08-2020	0.000	605.130	27-04-2021
2021-2022	582.2	611.270	23-07-2021	0.000	605.170	09-06-2021

Annual Runoff of Krishna at Kalmene

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2018-2019		21	21	0	1	1
2	2019-2020	573	71	644	20	3	23
3	2020-2021	876	93	970	31	3	34
4	2021-2022	1233	99	1332	44	3	47
5	2022-2023	1195	14	1209	42	0	43
Average		969	60	835	27	2	30

Instantaneous Flood Peak of Krishna at Kalmane					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2018-2019	714.210	23-11-2018	08:00:00	28 *
2	2019-2020	719.940	06-08-2019	18:00:00	449 *
3	2020-2021	612.700	07-08-2020	17:00:00	573 *
4	2021-2022	611.640	23-07-2021	16:00:00	661 *
5	2022-2023	611.270	14-07-2022	14:00:00	528 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : KALMANE (KALMANE)

Division : Cauvery Division, Bangalore

Local River : Malathi

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	605.630	4.985	607.200	72.53	606.700	40.97	607.160	70.15	606.310	22.40	605.960	6.971
2	605.630	4.965	608.925	204.5	607.050	63.49	606.855	50.04	606.460	29.27 *	605.950	6.728
3	605.650	5.306	607.030	56.90 *	606.800	48.79	606.510	28.78	606.350	22.63	606.020	8.686
4	605.660	5.615	609.030	209.7	606.600	36.83	606.470	29.68 *	606.250	19.37	605.990	7.791
5	605.650	5.398 *	610.350	353.8	607.205	72.80	606.540	29.44	606.230	20.63 *	605.960	7.087
6	605.650	5.508	610.715	446.7	610.015	299.0	606.620	36.05	606.220	18.11	605.940	5.338 *
7	605.600	5.085	610.880	497.1	609.890	324.3 *	606.670	38.36	606.270	20.43	605.940	6.416
8	605.600	5.025	610.815	475.1	610.385	360.1	606.660	37.99	606.260	20.07	605.930	5.147 *
9	605.580	4.770	610.430	371.9	610.380	391.0 *	606.880	50.09	606.240	20.97 *	605.920	5.474
10	605.590	4.874	610.550	415.6 *	609.570	252.4	606.920	54.83	606.300	21.95	605.910	4.796
11	605.620	5.283	610.445	384.5	609.235	221.3	607.240	69.27 *	606.230	18.57	605.900	4.512
12	605.650	5.398 *	610.595	432.1	609.375	239.8	607.810	110.2	606.170	13.20	605.900	4.531
13	605.680	5.983	610.645	437.7	608.770	182.4	607.795	107.1	606.140	13.17	605.890	4.425 *
14	605.790	8.036	611.140	544.4	607.840	111.1 *	607.580	94.58	606.220	18.14	605.900	4.537
15	605.770	7.584	611.055	522.5	607.120	62.06 *	607.690	104.6	606.220	18.21	605.890	4.123
16	605.720	6.943	610.460	390.6	607.180	71.39	607.410	83.96	606.220	20.29 *	605.890	4.130
17	605.740	7.234	610.680	434.9 *	607.025	59.64	607.120	68.30	606.210	17.64	605.880	3.940
18	605.720	6.606	609.325	238.4	606.880	50.54	606.970	53.57 *	606.285	21.21	605.880	3.984
19	605.700	6.334 *	608.825	201.7	606.830	49.78	606.870	49.57	606.300	21.96	605.870	3.863
20	605.740	7.406	607.620	97.74	606.750	43.47	606.765	43.92	606.190	15.21	605.870	4.088 *
21	605.800	9.366	607.515	90.71	606.880	48.78 *	606.620	37.12	606.230	18.63	605.860	3.822
22	606.060	15.13	607.220	74.88	607.580	94.70	606.520	29.44	606.210	17.60	605.850	3.631
23	606.090	16.31	607.030	63.92	607.905	118.5	606.500	27.89	606.170	14.83 *	605.850	3.613
24	606.050	14.21	607.060	58.59 *	607.620	97.95	606.570	32.21	606.140	13.44 *	605.870	3.877
25	606.580	31.71	607.300	80.25	607.110	67.78	606.570	33.92 *	606.120	12.03	605.900	4.683
26	606.510	31.34 *	607.065	67.84	606.970	61.11	606.480	26.55	606.090	10.57	605.900	4.664
27	606.780	43.40	606.905	56.45	606.830	49.49	606.380	24.39	606.010	8.418	605.900	4.600 *
28	606.920	51.07	606.945	60.39	606.550	33.05 *	606.330	22.68	606.000	7.981	605.880	3.958
29	607.530	92.61	606.770	44.58	606.680	38.74	606.300	22.16	605.990	7.644	605.880	4.012
30	607.160	71.24	606.830	49.91	606.880	50.06	606.280	20.88	605.980	7.261 *	605.860	3.785
31			607.000	55.22 *	606.920	50.88 *			605.970	7.098		
Ten-Daily Mean												
I Ten-Daily	605.624	5.153	609.593	310.4	608.460	189.0	606.728	42.54	606.289	21.58	605.952	6.443
II Ten-Daily	605.713	6.681	610.079	368.5	607.701	109.1	607.325	78.50	606.218	17.76	605.887	4.213
III Ten-Daily	606.548	37.64	607.058	63.89	607.084	64.64	606.455	27.72	606.083	11.41	605.875	4.065
Monthly												
Min.	605.580	4.770	606.770	44.58	606.550	33.05	606.280	20.88	605.970	7.098	605.850	3.613
Max.	607.530	92.61	611.140	544.4	610.385	391.0	607.810	110.2	606.460	29.27	606.020	8.686
Mean	605.962	16.49	608.850	241.7	607.727	119.1	606.836	49.59	606.193	16.74	605.905	4.907

Annual Runoff in MCM = 1209 Annual Runoff in mm = 4724

Peak Observed Discharge = 544.4 cumecs on 14-07-2022 Corres. Water Level :611.14 m

Lowest Observed Discharge = 0.047 cumecs on 15-02-2023 Corres. Water Level :605.35 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2022 - 2023

Station Name : KALMANE (KALMANE)

Division : Cauvery Division, Bangalore

Local River : Malathi

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	605.850	3.623	605.730	2.160 *	605.500	0.508	Dry Bed										
2	605.850	3.638	605.730	1.979	605.490	0.449											
3	605.830	3.354	605.730	1.994	605.470	0.312											
4	605.820	3.315 *	605.720	1.893	605.460	0.312											
5	605.820	3.189	605.710	1.774	605.460	0.275 *											
6	605.810	2.985	605.710	1.780	605.450	0.258											
7	605.800	2.884	605.710	1.760	605.450	0.261											
8	605.800	2.924	605.700	1.839 *	605.450	0.263											
9	605.790	2.862	605.690	1.559	605.430	0.193											
10	605.790	2.865	605.680	1.527	605.420	0.152											
11	605.790	2.897 *	605.680	1.552	605.420	0.150											
12	605.930	6.077	605.670	1.460	605.410	0.140 *											
13	605.970	7.033	605.670	1.465	605.390	0.104											
14	606.310	15.57 #	605.660	1.317	605.380	0.088											
15	606.020	8.717	605.660	1.458 *	605.350	0.047											
16	605.910	5.170	605.650	1.238	605.310	0.012 *											
17	605.870	3.900	605.640	1.243	605.260	0.000 *											
18	605.850	3.767 *	605.630	1.116	605.260	0.000 *											
19	605.830	3.429	605.630	1.092	605.260	0.000 *											
20	605.820	3.354	605.620	1.029	605.250	0.000 *											
21	605.810	3.281	605.620	1.037	605.240	0.000 *											
22	605.810	3.274	605.620	1.129 *	605.240	0.000 *											
23	605.790	2.968	605.610	0.944	Dry Bed												
24	605.780	2.775	605.600	0.878													
25	605.770	2.637 *	605.600	0.893													
26	605.770	2.644	605.590	0.914 *													
27	605.770	2.666	605.590	0.823													
28	605.770	2.673	605.570	0.792													
29	605.760	2.370	605.550	0.669 *													
30	605.750	2.203	605.520	0.621													
31	605.740	2.115	605.500	0.494													
Ten-Daily Mean																	
I Ten-Daily	605.816	3.164	605.711	1.826	605.458	0.298											
II Ten-Daily	605.930	5.991	605.651	1.297	605.329	0.054											
III Ten-Daily	605.775	2.691	605.579	0.836	605.240	0.000											
Monthly																	
Min.	605.740	2.115	605.500	0.494	605.240	0.000											
Max.	606.310	15.57	605.730	2.160	605.500	0.508											
Mean	605.838	3.908	605.645	1.304	605.380	0.16											

Peak Computed Discharge = 434.9 cumecs on 17-07-2022

Corres. Water Level :610.68 m

Lowest Computed Discharge = 0.000 cumecs on 20-02-2023

Corres. Water Level :605.25 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 : 2022-2023

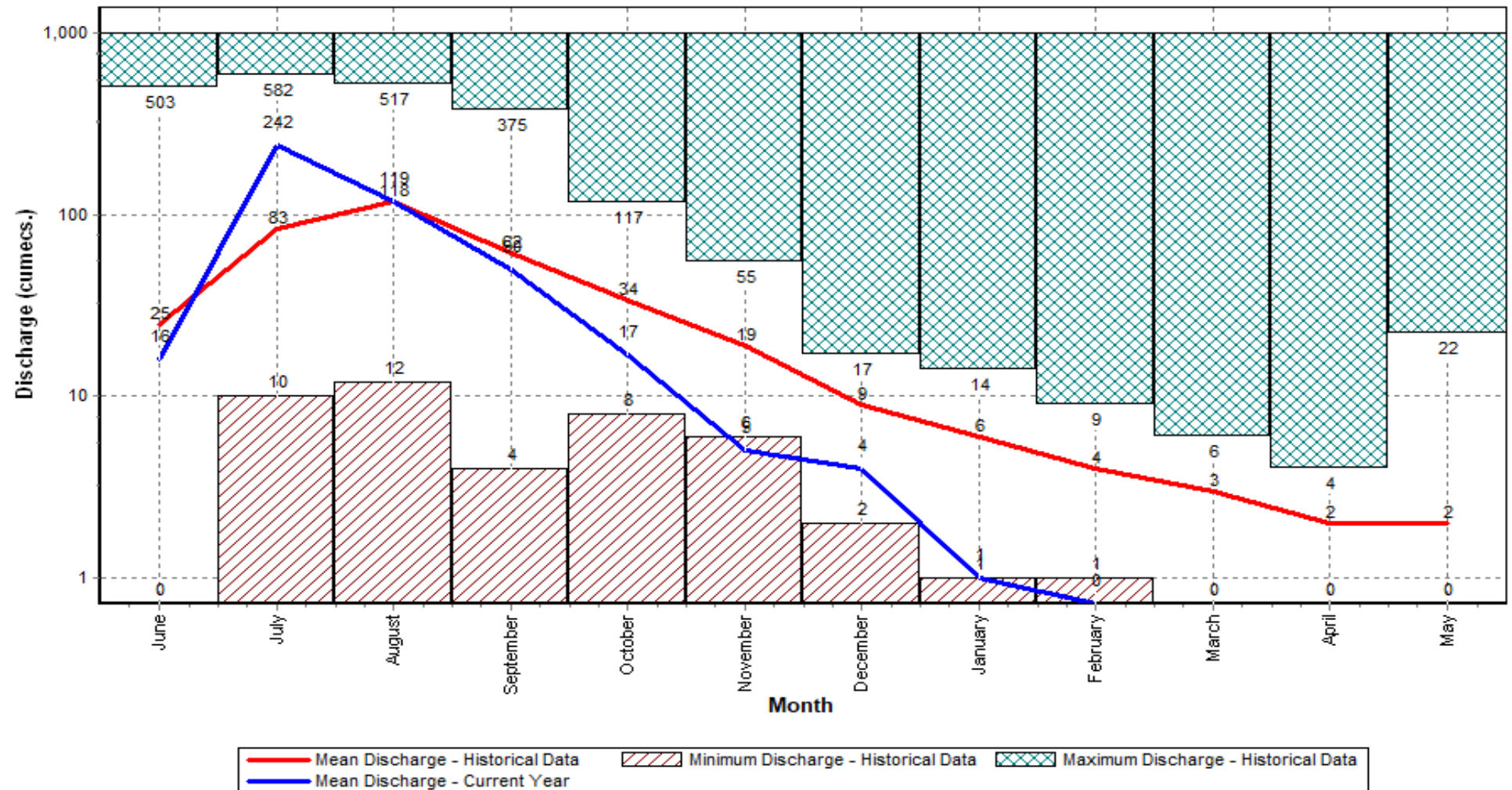
Station Name : KALMANE (KALMANE)

Data considered : 2019-2023

Division : Cauvery Division, Bangalore

Local River : Malathi

Sub-Division : Upper Tunga SD, Devangere



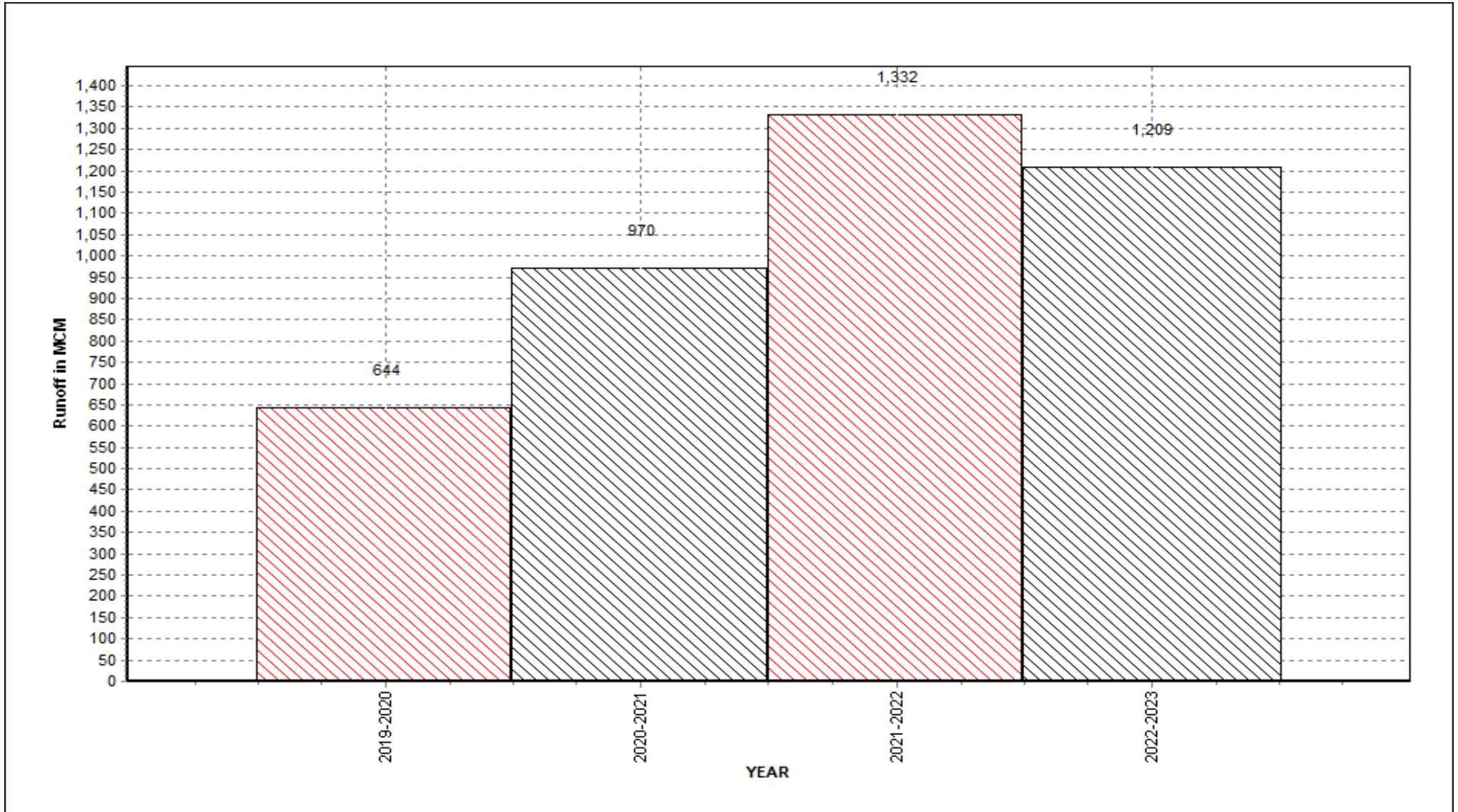
Annual Runoff Values for the period: 2019 - 2023

Station Name : KALMANE (KALMANE)

Local River : Malathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



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

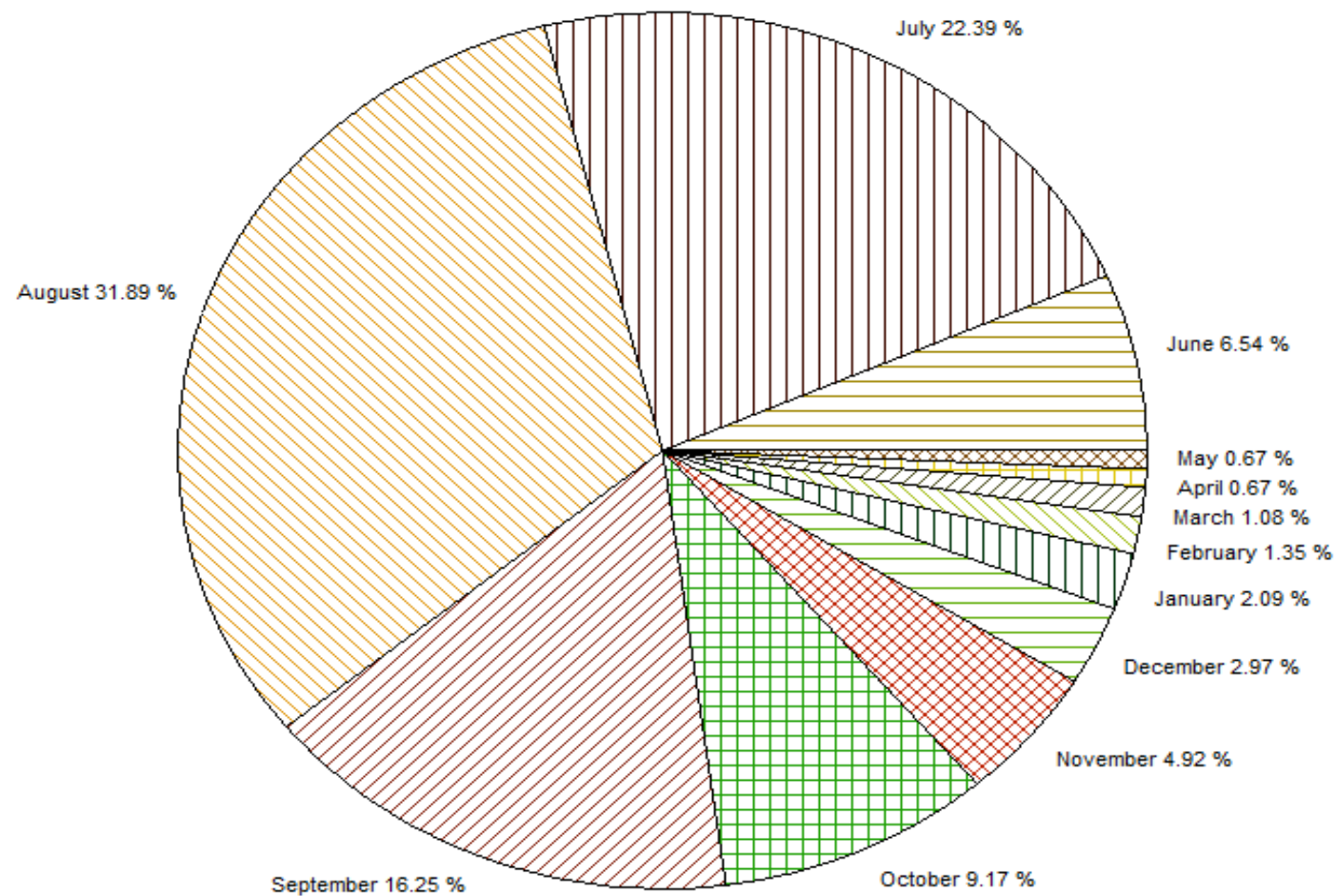
Monthly Average Runoff based on period : 2019-2022

Station Name : KALMANE (KALMANE)

Local River : Malathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



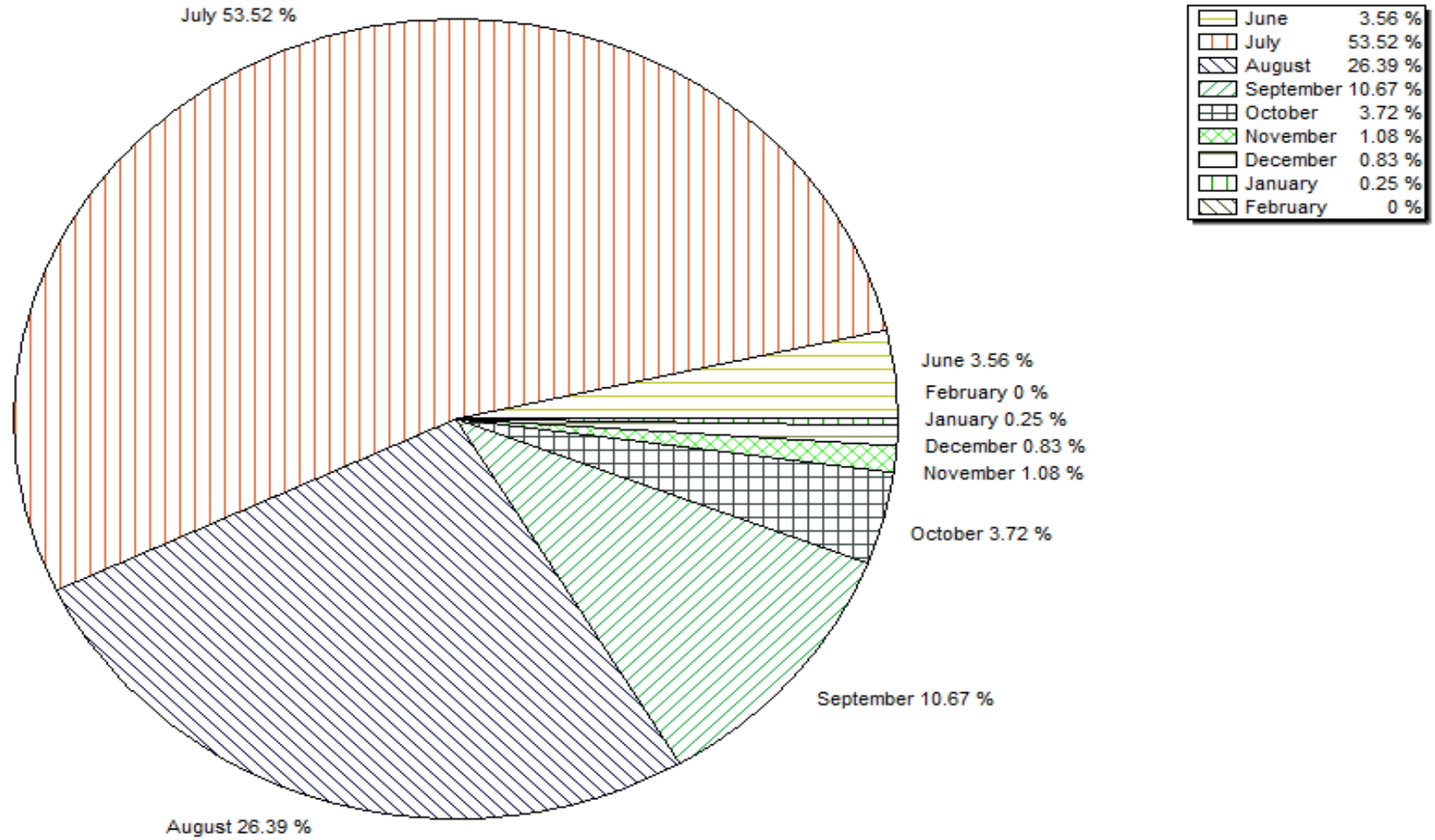
Monthly Runoff for the Year : 2022-2023

Station Name : KALMANE (KALMANE)

Local River : Malathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



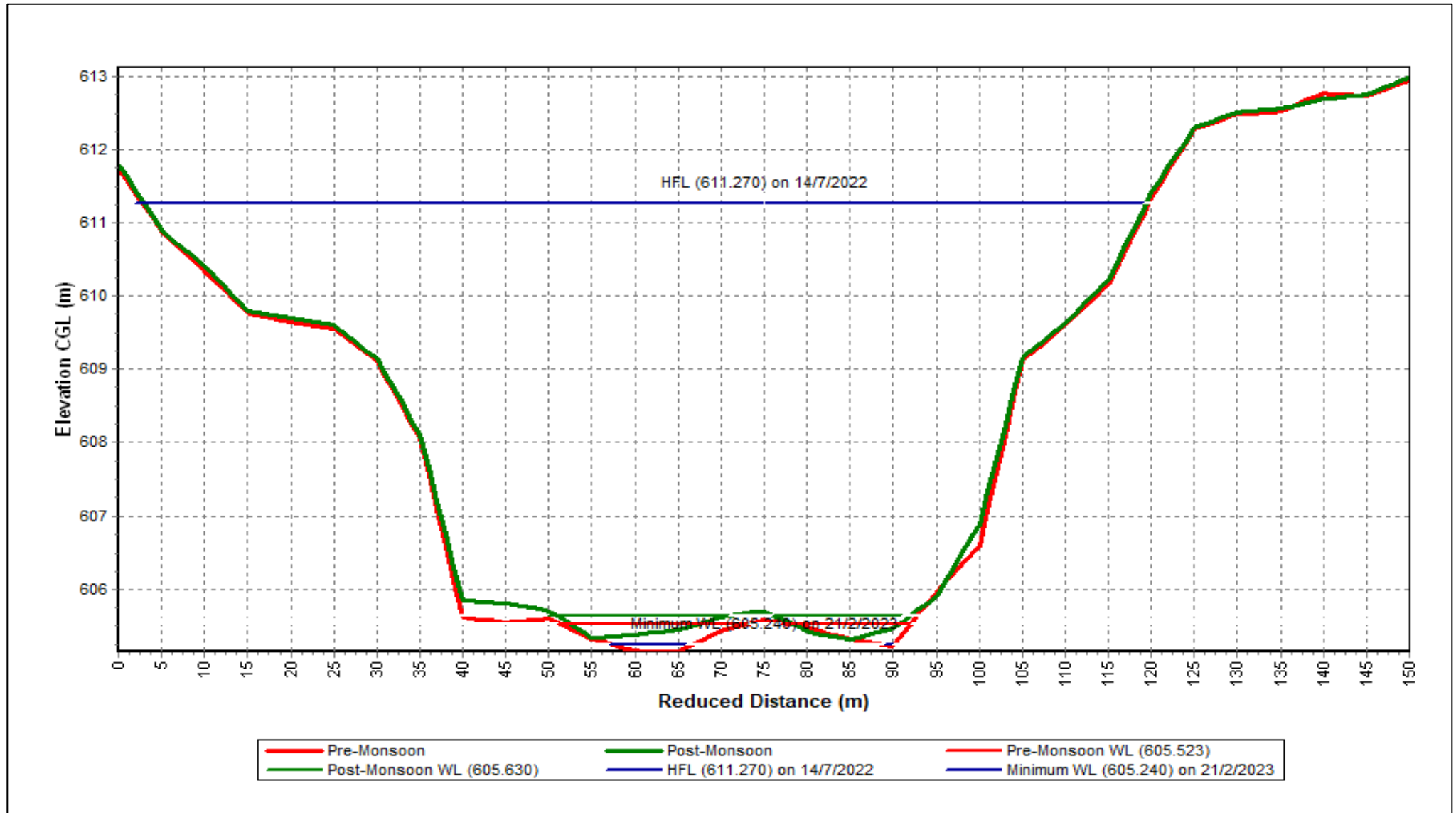
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : KALMANE (KALMANE)

Local River : Malathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



Zero of the Gauge: 603 (m.s.l)

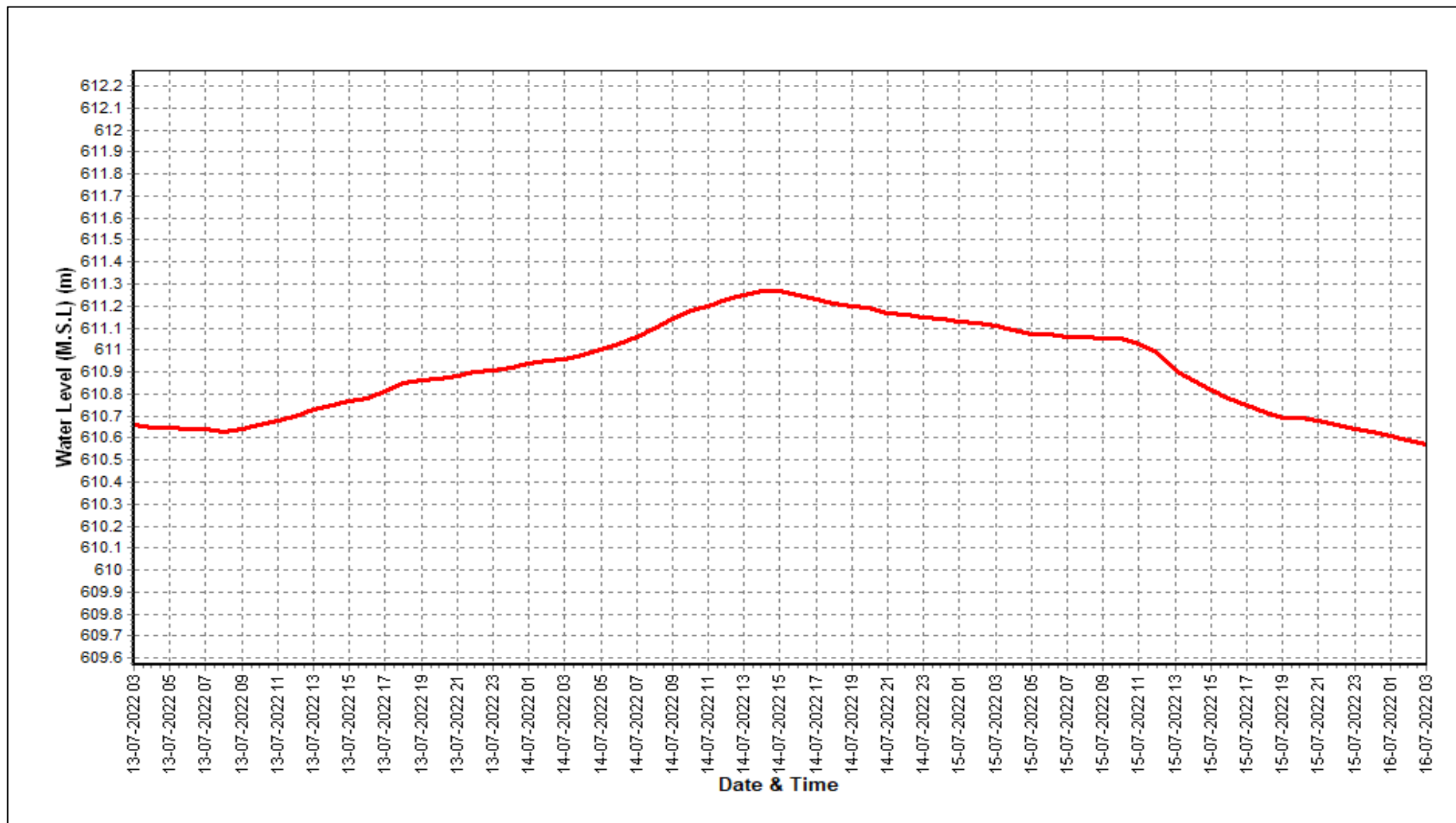
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : KALMANE (KALMANE)

Local River : Malathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



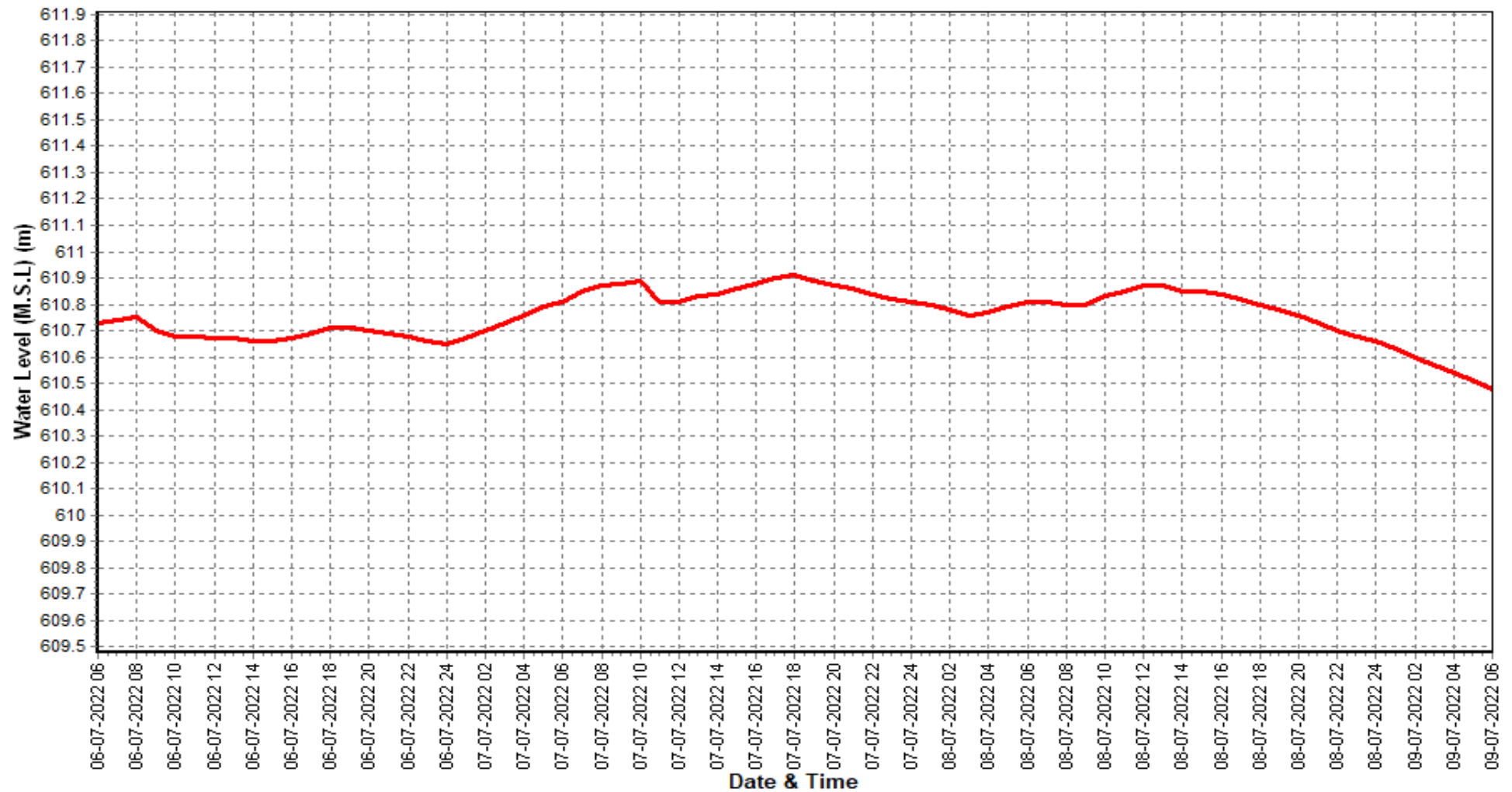
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : KALMANE (KALMANE)

Local River : Malathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



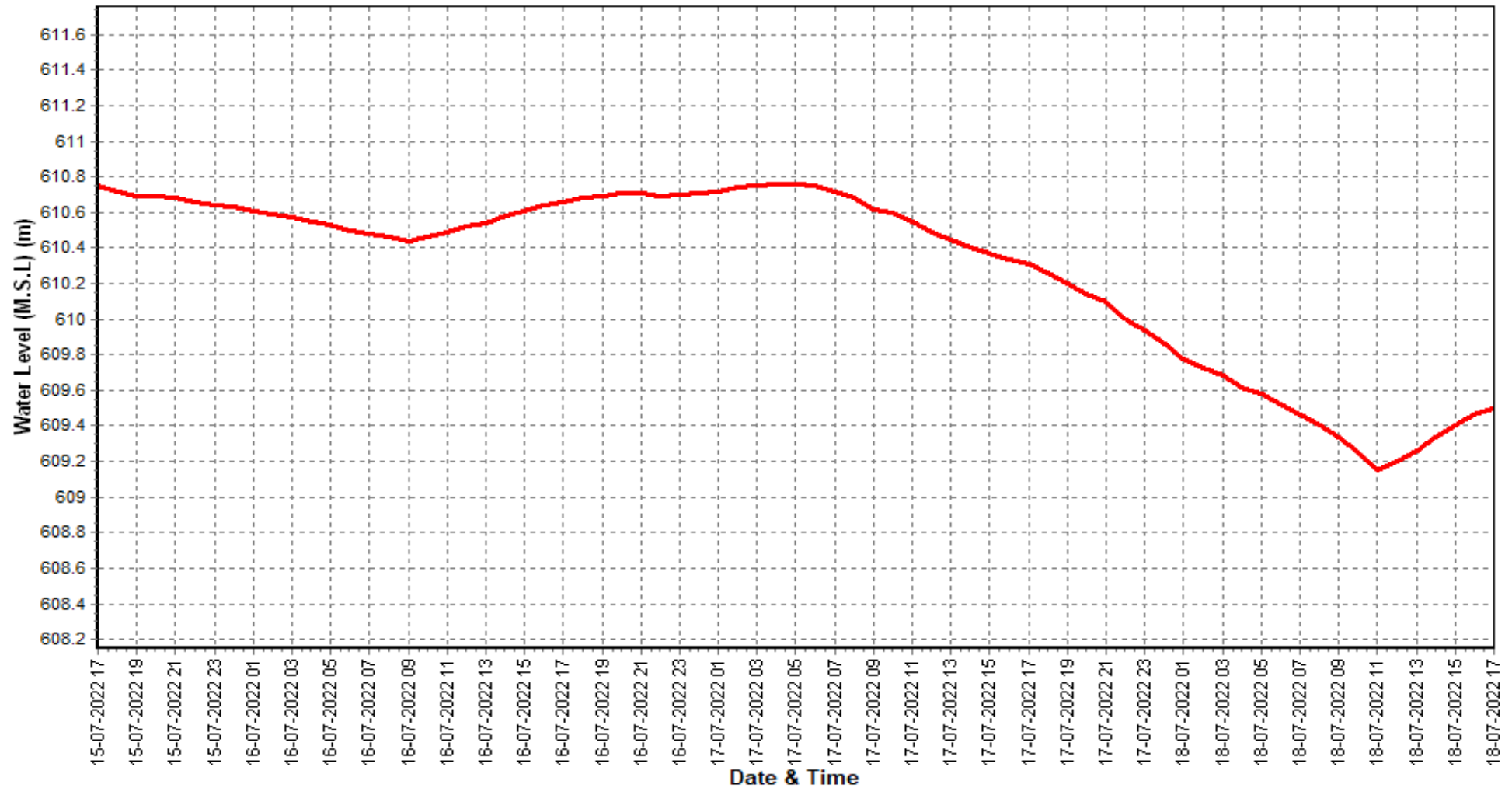
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : KALMANE (KALMANE)

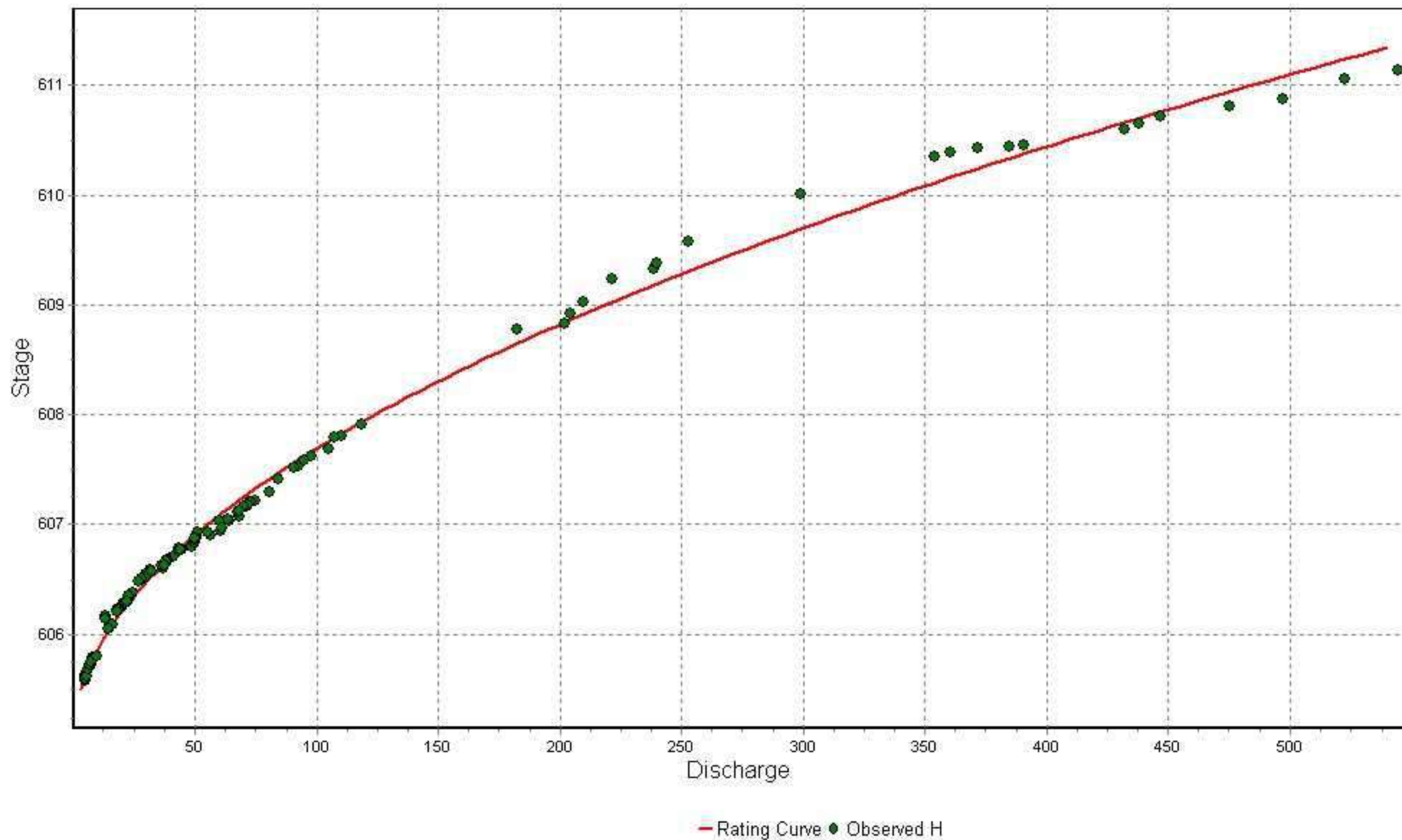
Local River : Malathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



S-D curve of site Kalmane for the period from 01.06.2022 to 19.10.2022
Range:- 605.500 to 611.400, a= -605.070, b= 1.934, c= 15.49, OSE= 8.007 (No. of data 117)



HISTORY SHEET

Water Year : 2022-2023

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 : 11-08-1965

Discharge : 13-12-1966

Sediment : 01-11-1972

Water Quality : 01-11-1972

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1967-1968	2550	514.700	29-07-1967	15.40	507.910	09-06-1967
1968-1969	1809	513.610	21-07-1968	21.40	507.980	19-06-1968
1969-1970	3788	515.070	24-07-1969	25.30	508.090	18-02-1970
1970-1971	2745	514.240	24-08-1970	31.70	508.150	01-04-1971
1971-1972	2550	514.180	22-07-1971	26.60	508.130	30-04-1972
1972-1973	2226	513.750	09-07-1972	5.400	507.820	13-04-1973
1973-1974	2419	514.140	10-07-1973	15.30	507.970	27-02-1974
1974-1975	2189	513.600	27-07-1974	15.00	508.070	23-06-1974
1975-1976	2902	514.550	12-07-1975	22.60	508.120	10-05-1976
1976-1977	1758	513.000	24-07-1976	3.100	507.750	22-04-1977
1977-1978	1741	513.010	26-07-1977	10.90	507.920	13-06-1977
1978-1979	2805	514.650	19-08-1978	16.10	507.950	06-04-1979
1979-1980	2033	514.010	04-08-1979	15.30	507.960	17-01-1980
1980-1981	3066	515.450	04-07-1980	14.10	507.970	23-04-1981
1981-1982	2578	514.450	20-08-1981	11.70	507.900	16-03-1982
1982-1983	4559	516.430	04-08-1982	8.500	507.820	11-04-1983
1983-1984	2617	514.540	24-07-1983	9.700	507.890	07-03-1984
1984-1985	2595	514.660	20-07-1984	7.600	507.860	11-05-1985
1985-1986	1902	513.510	28-06-1985	0.400	507.660	03-04-1986
1986-1987	2498	514.430	11-08-1986	2.300	507.660	20-04-1987
1987-1988	1076	511.950	28-08-1987	0.000	507.470	13-04-1988

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1988-1989	2743	514.500	20-07-1988	0.000	507.470	16-04-1989
1989-1990	2974	514.620	26-07-1989	2.000	507.720	15-04-1990
1990-1991	2314	513.940	19-08-1990	7.000	507.840	31-03-1991
1991-1992	3414	515.050	30-07-1991	0.000		26-03-1992
1992-1993	7357	518.110	18-11-1992	3.470	507.800	06-04-1993
1993-1994	1684	513.110	17-08-1993	7.230	507.820	03-06-1993
1994-1995	5840	517.570	17-07-1994	3.500	507.640	13-04-1995
1995-1996	1788	513.310	03-09-1995	2.000	507.590	10-05-1996
1996-1997	1538	512.760	25-07-1996	6.450	507.760	21-04-1997
1997-1998	3388	515.240	09-08-1997	2.500	507.670	22-04-1998
1998-1999	2286	513.890	15-09-1998	3.200	507.590	18-06-1998
1999-2000	2975	514.740	20-07-1999	7.210	507.770	24-03-2000
2000-2001	3036	514.850	15-07-2000	5.110	507.600	31-03-2001
2001-2002	1417	512.400	10-07-2001	0.000	507.080	07-04-2002
2002-2003	1452	512.480	19-08-2002	0.000		15-03-2003
2003-2004	1375	512.280	06-10-2003	0.000	507.190	17-02-2004
2004-2005	2993	514.740	06-08-2004	0.000		09-03-2005
2005-2006	3030	514.810	04-08-2005	0.000		21-01-2006
2006-2007	3516	515.150	14-08-2006	0.000		24-03-2007
2007-2008	5239	517.280	08-08-2007	0.000		10-02-2008
2008-2009	4550	516.680	15-08-2008	0.000	507.290	06-04-2009
2009-2010	3629	515.490	18-07-2009	0.000	507.280	12-04-2010
2010-2011	1741	513.020	31-07-2010	0.000	507.220	22-03-2011
2011-2012	2593	514.050	03-09-2011	0.000	507.350	30-03-2012
2012-2013	2544	513.950	09-08-2012	0.000		17-02-2013
2013-2014	3728	515.520	04-08-2013	0.000	507.300	03-02-2014
2014-2015	3986	515.380	08-08-2014	0.000	507.340	23-03-2015
2015-2016	1712	512.950	21-07-2015	0.000		10-02-2016
2016-2017	911.6	511.410	06-07-2016	0.000		24-01-2017
2017-2018	1002	511.640	21-07-2017	0.000	0.000	15-01-2018
2018-2019	6048	516.240	16-08-2018	0.000	506.140	21-01-2019
2019-2020	5691	516.796	11-08-2019	0.000	506.996	23-02-2020
2020-2021	2771	514.190	22-09-2020	0.000	506.910	08-02-2021
2021-2022	4391	515.706	25-07-2021	0.000	507.116	11-03-2022

Annual Runoff of Krishna at Harlahalli

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1966-1967		506	506	0	18	18
2	1967-1968	5990	887	6877	212	31	243
3	1968-1969	5623	1232	6855	199	44	242
4	1969-1970	7211	1323	8534	255	47	302
5	1970-1971	8131	1396	9527	287	49	337
6	1971-1972	5948	1336	7283	210	47	257
7	1972-1973	4703	886	5589	166	31	197
8	1973-1974	6379	901	7280	225	32	257
9	1974-1975	5582	897	6479	197	32	229
10	1975-1976	9038	1481	10519	319	52	372
11	1976-1977	3921	852	4773	139	30	169
12	1977-1978	5685	1039	6723	201	37	238
13	1978-1979	10854	1281	12135	384	45	429
14	1979-1980	4869	1257	6126	172	44	216
15	1980-1981	9233	1069	10302	326	38	364
16	1981-1982	6702	899	7601	237	32	269
17	1982-1983	6213	782	6996	220	28	247
18	1983-1984	6041	1031	7072	213	36	250
19	1984-1985	6362	715	7077	225	25	250
20	1985-1986	5085	472	5557	180	17	196
21	1986-1987	4628	805	5434	164	28	192
22	1987-1988	3287	638	3926	116	23	139
23	1988-1989	4761	536	5297	168	19	187
24	1989-1990	5246	604	5850	185	21	207
25	1990-1991	6811	900	7711	241	32	272
26	1991-1992	7885	663	8548	279	23	302
27	1992-1993	8754	2912	11666	309	103	412
28	1993-1994	6418	833	7251	227	29	256
29	1994-1995	11378	803	12180	402	28	430
30	1995-1996	4433	571	5004	157	20	177
31	1996-1997	4667	606	5273	165	21	186
32	1997-1998	6922	933	7855	245	33	278
33	1998-1999	6674	973	7647	236	34	270
34	1999-2000	7568	910	8478	267	32	300
35	2000-2001	6828	944	7772	241	33	275
36	2001-2002	4541	536	5077	160	19	179
37	2002-2003	3307	396	3703	117	14	131
38	2003-2004	3138	231	3369	111	8	119
39	2004-2005	4692	280	4972	166	10	176
40	2005-2006	6904	656	7560	244	23	267
41	2006-2007	6496	683	7179	230	24	254
42	2007-2008	9341	891	10232	330	31	362
43	2008-2009	6112	556	6668	216	20	236
44	2009-2010	6921	902	7824	245	32	276
45	2010-2011	5559	1535	7094	196	54	251
46	2011-2012	5851	633	6484	207	22	229
47	2012-2013	3651	502	4153	129	18	147

48	2013-2014	7998	472	8470	283	17	299
49	2014-2015	6779	490	7269	240	17	257
50	2015-2016	2771	293	3063	98	10	108
51	2016-2017	2105	109	2213	74	4	78
52	2017-2018	2287	147	2433	81	5	86
53	2018-2019	7190	154	7345	254	5	260
54	2019-2020	6814	605	7419	241	21	262
55	2020-2021	4574	254	4827	162	9	171
56	2021-2022	5944	860	6804	210	30	240
57	2022-2023	9281	252	9533	328	9	337
Average		6109	795	6796	212	28	240

Instantaneous Flood Peak of Krishna at Harlahalli					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1966-1967	513.696	01-08-1966	02:00:00	1518 *
2	1967-1968	514.706	29-07-1967	09:00:00	2314 *
3	1968-1969	513.741	21-07-1968	04:00:00	1550 *
4	1969-1970	515.066	24-07-1969	09:00:00	2637 *
5	1970-1971	514.476	24-08-1970	08:00:00	2118 *
6	1971-1972	514.326	23-07-1971	00:00:00	1995 *
7	1972-1973	513.901	10-07-1972	00:00:00	1666 *
8	1973-1974	514.151	10-07-1973	11:00:00	1856 *
9	1974-1975	514.016	28-07-1974	00:00:00	1752 *
10	1975-1976	514.736	12-07-1975	19:00:00	2340 *
11	1976-1977	513.251	24-07-1976	18:00:00	1219 *
12	1977-1978	513.016	26-07-1977	06:00:00	1074 *
13	1978-1979	514.856	27-07-1978	22:00:00	2446 *
14	1979-1980	514.016	04-08-1979	09:00:00	1752 *
15	1980-1981	515.506	04-07-1980	21:00:00	3060 *
16	1981-1982	514.561	19-08-1981	22:00:00	2189 *
17	1982-1983	516.471	04-08-1982	12:00:00	4098 *
18	1983-1984	514.701	24-07-1983	16:00:00	2309 *
19	1984-1985	514.686	20-07-1984	12:00:00	2296 *
20	1985-1986	513.636	28-06-1985	15:00:00	1476 *
21	1986-1987	514.456	11-08-1986	14:00:00	2101 *
22	1987-1988	512.096	10-07-1987	19:00:00	592 *
23	1988-1989	514.506	20-07-1988	08:00:00	2143 *
24	1989-1990	514.636	26-07-1989	04:00:00	2253 *
25	1990-1991	513.956	19-08-1990	12:00:00	1707 *
26	1991-1992	515.220	30-07-1991	06:00:00	2782 *
27	1992-1993	518.109	10-11-1992	17:00:00	6188 *
28	1993-1994	513.140	17-08-1993	15:00:00	1150 *
29	1994-1995	517.666	17-07-1994	12:00:00	5590 *
30	1995-1996	513.436	03-09-1995	00:00:00	1339 *
31	1996-1997	512.776	25-07-1996	08:00:00	935 *
32	1997-1998	515.326	09-08-1997	15:00:00	2883 *
33	1998-1999	513.956	15-09-1998	12:00:00	1707 *
34	1999-2000	514.736	20-07-1999	08:00:00	2340 *
35	2000-2001	514.866	15-07-2000	10:00:00	2455 *
36	2001-2002	512.396	10-07-2001	08:00:00	735 *
37	2002-2003	512.496	19-08-2002	05:00:00	785 *
38	2003-2004	512.276	06-10-2003	07:00:00	676 *
39	2004-2005	514.736	06-08-2004	08:00:00	2340 *
40	2005-2006	514.896	04-08-2005	21:00:00	2482 *
41	2006-2007	515.186	14-08-2006	06:00:00	2749 *
42	2007-2008	517.436	08-08-2007	16:00:00	5285 *

Sl. No.	Year	Instantaneous Annual Flood Peak		Time	Discharge * (Cumecs)
		Peak WL (m) Recorded	Date		
43	2008-2009	516.696	15-08-2008	05:00:00	4361 *
44	2009-2010	515.496	18-07-2009	10:00:00	3050 *
45	2010-2011	513.016	30-07-2010	23:00:00	1074 *
46	2011-2012	514.086	03-09-2011	11:00:00	1806 *
47	2012-2013	513.956	09-08-2012	02:00:00	1707 *
48	2013-2014	515.596	03-08-2013	23:00:00	3151 *
49	2014-2015	515.496	08-08-2014	00:00:00	3050 *
50	2015-2016	513.016	21-07-2015	12:00:00	1074 *
51	2016-2017	511.766	06-07-2016	18:00:00	453 *
52	2017-2018	511.676	21-07-2017	18:00:00	418 *
53	2018-2019	516.240	16-08-2018	08:00:00	3836 *
54	2019-2020	516.895	11-08-2019	12:00:00	4602 *
55	2020-2021	514.186	22-09-2020	08:00:00	2771 *
56	2021-2022	515.706	25-07-2021	09:00:00	4391 *
57	2022-2023	515.676	10-08-2022	17:00:00	4310 *

Stage-Discharge Data for the period 2022 - 2023

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	507.806	40.82	508.336	95.84	510.476	569.5	511.426	928.2	509.006	188.3	508.326	93.98
2	507.746	36.55	508.956	179.0	509.846	382.2	512.076	1228	509.146	210.6 *	508.236	84.14
3	507.786	39.71	509.156	212.5 *	511.796	1089	512.516	1454	509.756	354.0	508.236	84.14
4	507.696	32.65	509.816	372.8	511.536	972.2	511.666	1067 *	509.516	291.6	508.276	88.32
5	507.626	27.95 *	510.366	540.1	510.836	690.8	510.806	681.4	509.436	270.6 *	508.526	114.1
6	507.606	23.39	511.756	1068	511.596	999.9	510.316	522.9	509.216	230.7	508.566	154.8 *
7	507.636	26.68	512.126	1256	513.126	1961 *	511.596	999.9	509.306	249.5	508.456	106.3
8	507.766	38.00	512.746	1608	514.016	2654	511.636	1020	509.436	275.5	508.346	111.3 *
9	507.876	48.00	512.946	1748	514.366	2987 *	510.656	628.7	509.026	188.4 *	508.276	88.32
10	507.806	40.82	512.736	1691 *	515.486	4263	510.806	681.4	508.986	183.9	508.236	84.14
11	507.726	34.59	512.566	1489	514.716	3347	510.536	584.8 *	509.516	291.6	508.186	79.13
12	507.676	30.90 *	512.746	1608	513.106	1861	510.116	464.0	510.936	734.0	508.186	79.13
13	507.606	23.39	512.946	1750	513.516	2171	510.756	660.6	510.036	438.3	508.136	77.27 *
14	507.526	22.56 #	513.106	1861	513.056	1911 *	510.906	721.3	509.736	347.8	508.136	73.70
15	507.506	21.56 #	513.576	2214	512.506	1542 *	510.856	702.4	510.016	432.1	508.126	72.80
16	507.466	19.65 #	515.306	4032	511.216	844.8	510.656	628.7	510.226	481.7 *	508.186	79.13
17	507.546	17.51	515.366	4008 *	510.966	745.3	510.286	515.2	510.166	478.0	508.136	73.70
18	507.636	26.68	514.816	3450	510.426	556.0	509.746	344.8 *	510.216	492.1	508.086	68.67
19	507.606	26.81 *	513.886	2519	509.916	402.3	509.646	325.0	509.886	392.2	508.086	68.67
20	507.586	21.29	514.016	2654	509.696	337.1	509.516	291.6	510.016	432.1	508.086	70.18 *
21	507.616	24.60	511.776	1079	509.726	339.7 *	509.426	273.5	509.956	413.1	508.086	68.67
22	507.756	37.14	510.546	594.3	509.596	312.5	509.346	256.5	509.686	334.7	508.046	64.47
23	507.706	33.17	510.346	532.7	509.916	402.3	509.286	244.9	509.336	248.9 *	508.016	61.55
24	507.666	29.58	509.836	368.4 *	510.216	492.1	509.176	222.9	509.186	218.4 *	508.046	64.47
25	507.626	25.52	509.696	337.1	510.886	713.5	509.136	208.7 *	509.006	188.3	508.016	61.55
26	507.656	29.70 *	510.016	432.1	510.616	614.4	509.006	188.3	508.896	170.0	507.986	58.32
27	507.806	40.82	509.936	407.4	511.436	933.8	508.896	170.0	508.736	144.8	507.946	52.39 *
28	508.096	70.68	510.486	574.4	510.986	756.4 *	508.896	170.0	508.646	132.4	507.946	54.27
29	508.186	79.71	511.336	893.7	511.316	882.7	508.766	151.3	508.556	118.5	507.986	58.32
30	508.476	109.4	510.656	628.7	510.806	681.4	508.686	138.6	508.386	93.72 *	508.016	61.55
31			510.846	700.2 *	511.656	1062 *			508.326	93.98		
Ten-Daily Mean												
I Ten-Daily	507.735	35.46	510.894	877.1	512.308	1657	511.350	921.2	509.283	244.3	508.348	101.0
II Ten-Daily	507.588	24.49	513.833	2559	511.912	1372	510.302	523.9	510.075	452.0	508.135	74.24
III Ten-Daily	507.859	48.03	510.498	595.3	510.651	653.7	509.062	202.5	508.974	196.1	508.009	60.55
Monthly												
Min.	507.466	17.51	508.336	95.84	509.596	312.5	508.686	138.6	508.326	93.72	507.946	52.39
Max.	508.476	109.4	515.366	4032	515.486	4263	512.516	1454	510.936	734.0	508.566	154.8
Mean	507.727	35.99	511.702	1320	511.592	1209	510.238	549.2	509.429	294.2	508.164	78.58

Annual Runoff in MCM = 9532 Annual Runoff in mm = 654

Peak Observed Discharge = 4263 cumecs on 10-08-2022 Corres. Water Level :515.486 m

Lowest Observed Discharge = 0.000 cumecs on 04-01-2023 Corres. Water Level :507.406 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 2022 - 2023

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	507.986	58.32	507.506	14.70 *	507.636	26.67	507.086	0.000	507.126	0.000	507.666	29.76
2	507.946	54.27	507.506	13.12	507.636	26.67	507.086	0.000	507.096	0.000	507.866	46.90
3	507.916	51.35	507.476	10.08	507.646	27.67	507.056	0.000	507.056	0.000	507.866	46.90
4	507.916	48.95 *	507.406	0.000	507.646	27.67	507.056	0.000	507.036	0.000	507.836	43.79
5	507.886	48.43	507.336	0.000	507.636	23.11 *	507.036	0.000	506.986	0.000	507.786	35.60 *
6	507.886	48.43	507.306	0.000	507.636	26.67	507.036	0.000	506.976	0.000	507.666	29.76
7	507.826	42.32	507.296	0.000	507.666	29.76	507.026	0.000	506.966	0.000	507.586	19.62 *
8	507.786	39.00	507.286	0.000	507.666	29.76	507.016	0.000	506.956	0.000	507.636	26.67
9	507.786	39.00	507.286	0.000	507.616	24.53	507.016	0.000	506.956	0.000	507.666	29.76
10	507.736	35.21	507.246	0.000	507.616	24.53	507.006	0.000	506.946	0.000	507.826	39.45 *
11	507.656	24.60 *	507.226	0.000	507.546	17.35	506.986	0.000	506.946	0.000	507.866	46.90
12	507.576	20.26	507.256	0.000	507.516	15.27 *	506.986	0.000	506.946	0.000	507.946	54.58
13	507.536	16.17	507.336	0.000	507.486	11.20	506.976	0.000	507.016	0.000	508.036	63.73
14	507.536	16.17	507.306	0.000	507.476	10.09	506.976	0.000	507.036	0.000	507.966	54.75 *
15	507.946	54.27	507.276	0.000	507.386	0.000	506.966	0.000	507.036	0.000	507.836	43.81
16	508.046	64.47	507.276	0.000	507.346	0.000	508.186	78.97	507.056	0.000	507.666	29.77
17	508.186	79.13	507.256	0.000	507.306	0.000	508.176	78.07	507.086	0.000	507.556	18.43
18	508.086	70.18 *	507.336	0.000	507.286	0.000	507.866	46.90	507.086	0.000	507.476	10.43
19	507.996	59.56	507.386	0.000	507.276	0.000	508.006	59.65 *	507.076	0.000	507.416	0.000
20	507.886	48.43	507.386	0.000	507.246	0.000	508.036	63.73	507.056	0.000	507.386	0.000
21	507.816	41.19	507.396	0.000	507.186	0.000	507.946	54.58	507.056	0.000	507.376	0.000
22	507.786	39.00	507.426	0.000	507.166	0.000	507.936	51.23 *	507.046	0.000	507.366	0.000
23	507.726	34.23	507.476	10.09	507.136	0.000	507.946	54.58	507.056	0.000	507.356	0.000
24	507.636	26.23	507.476	10.09	507.136	0.000	507.866	46.90	507.046	0.000	507.346	0.000
25	507.626	22.39 *	507.476	10.09	507.126	0.000	507.556	18.42	507.086	0.000	507.386	0.000
26	507.636	26.23	507.456	0.000	507.116	0.000	507.486	0.000	507.096	0.000	507.476	10.43
27	507.576	20.26	507.396	0.000	507.116	0.000	507.336	0.000	507.136	0.000	507.576	20.54
28	507.536	16.17	507.386	0.000	507.096	0.000	507.266	0.000	507.136	0.000	507.616	21.68 *
29	507.516	14.13	507.386	0.000			507.236	0.000	507.136	0.000	507.516	14.46
30	507.516	14.13	507.486	11.20			507.186	0.000	507.156	0.000	507.476	10.43
31	507.516	14.13	507.636	26.67			507.146	0.000			507.416	0.000
Ten-Daily Mean												
I Ten-Daily	507.867	46.53	507.365	3.790	507.640	26.71	507.042	0.000	507.010	0.000	507.740	34.82
II Ten-Daily	507.845	45.32	507.304	0.000	507.387	5.392	507.516	32.73	507.034	0.000	507.715	32.24
III Ten-Daily	507.626	24.37	507.454	6.196	507.135	0.000	507.537	20.52	507.095	0.000	507.446	7.050
Monthly												
Min.	507.516	14.13	507.226	0.000	507.096	0.000	506.966	0.000	506.946	0.000	507.346	0.000
Max.	508.186	79.13	507.636	26.67	507.666	29.76	508.186	78.97	507.156	0.000	508.036	63.73
Mean	507.774	38.28	507.377	3.421	507.405	11.46	507.371	17.84	507.046	0	507.628	24.13

Peak Computed Discharge = 4008 cumecs on 17-07-2022

Corres. Water Level :515.366 m

Lowest Computed Discharge = 14.70 cumecs on 01-01-2023

Corres. Water Level :507.506 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 : 2022-2023

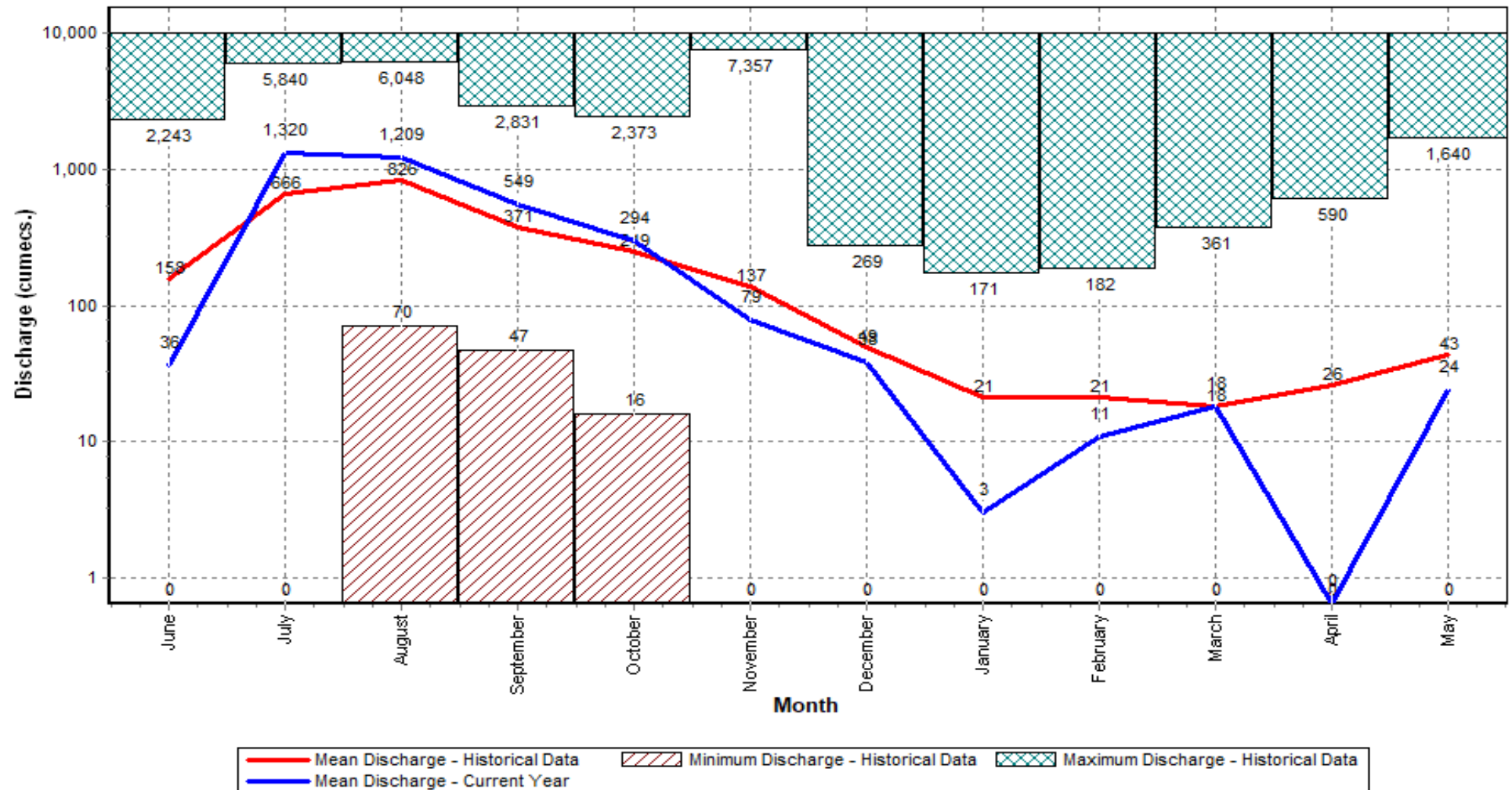
Station Name : HARALAHALLI (AKL00S8)

Data considered : 1967-2023

Division : Cauvery Division, Bangalore

Local River : Tungabhadra

Sub-Division : Upper Tunga Subdn, Devangere



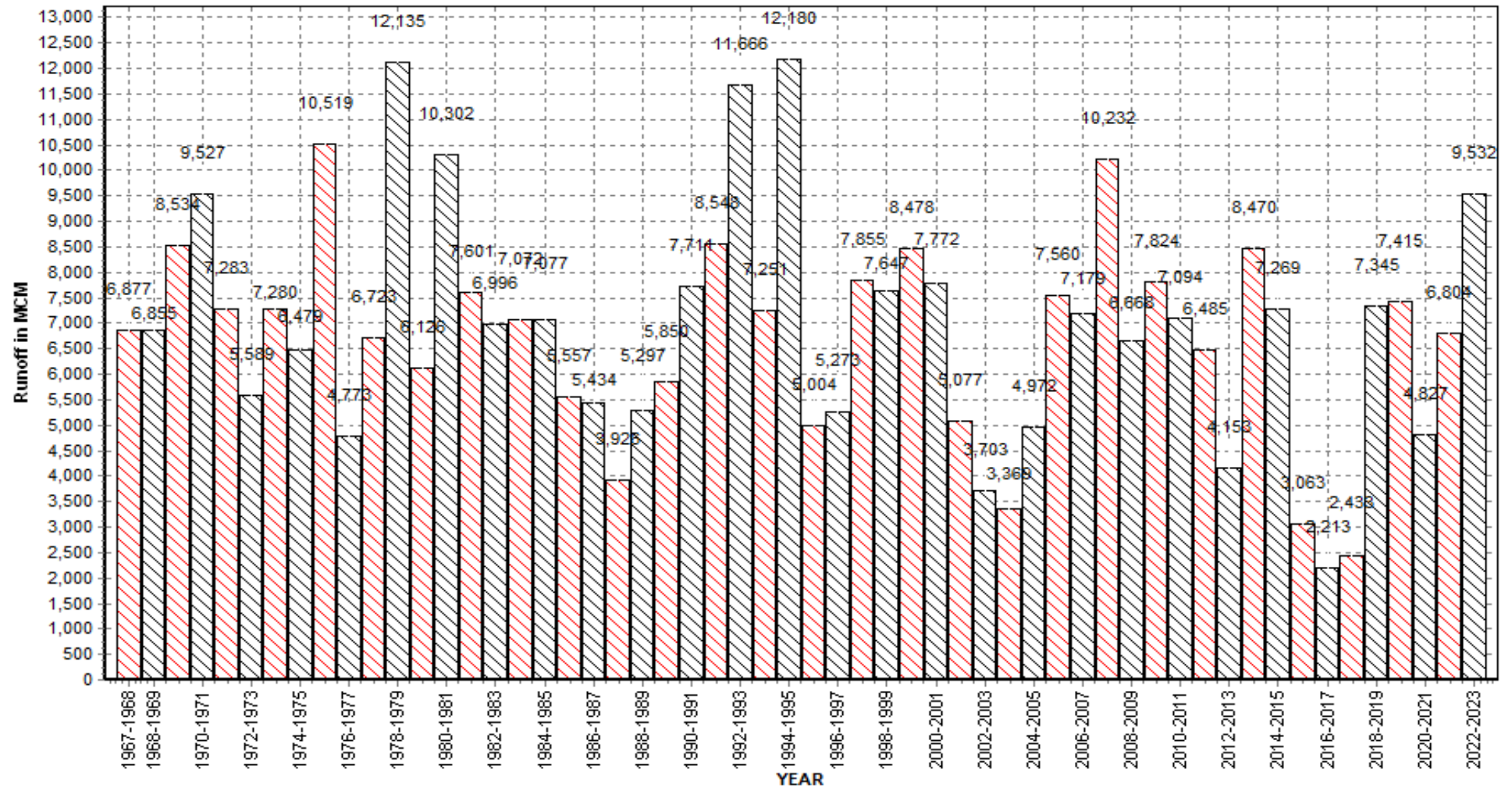
Annual Runoff Values for the period: 1967 - 2023

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

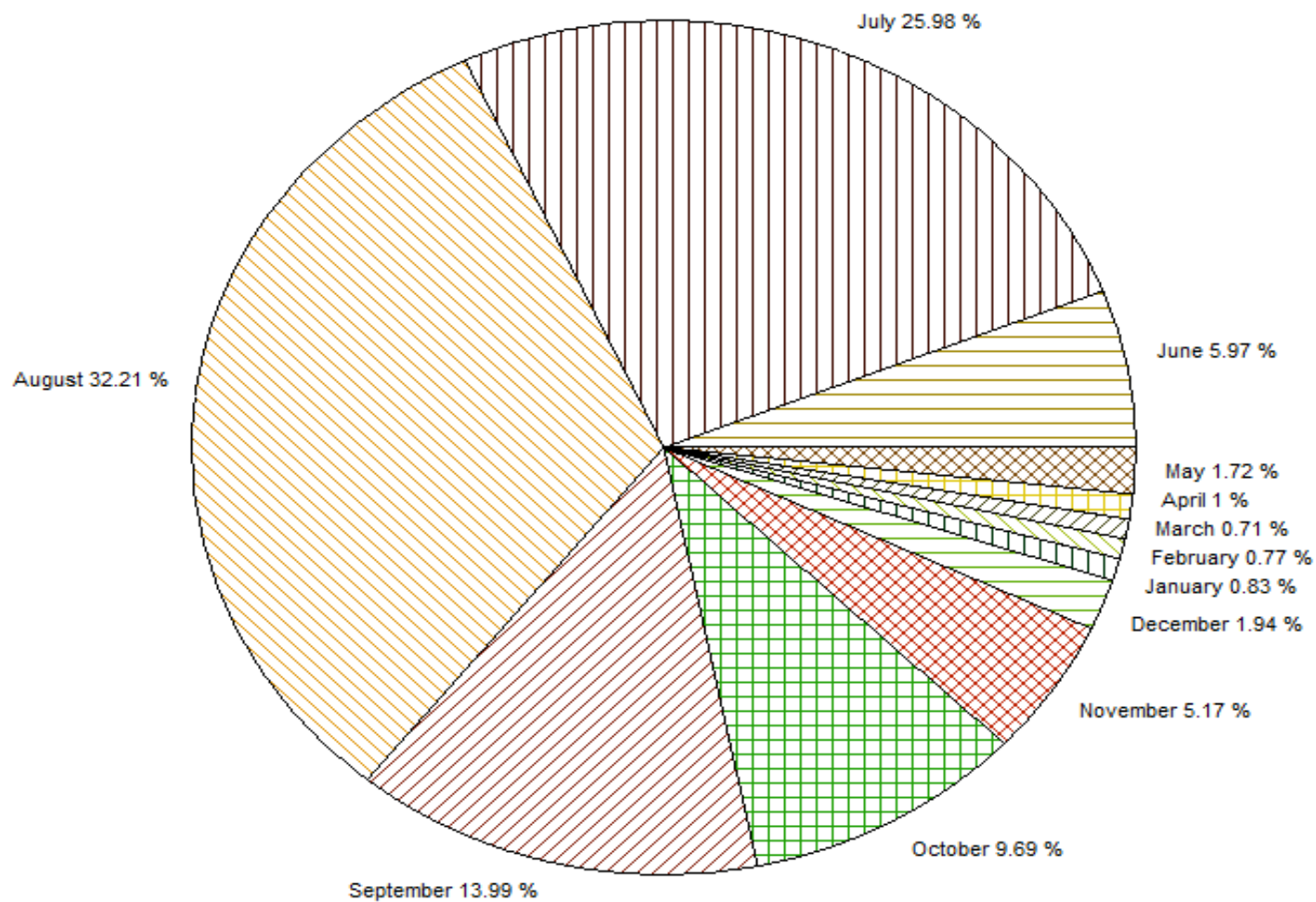
Monthly Average Runoff based on period : 1967-2022

Station Name : HARALAHALLI (AKL00S8)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



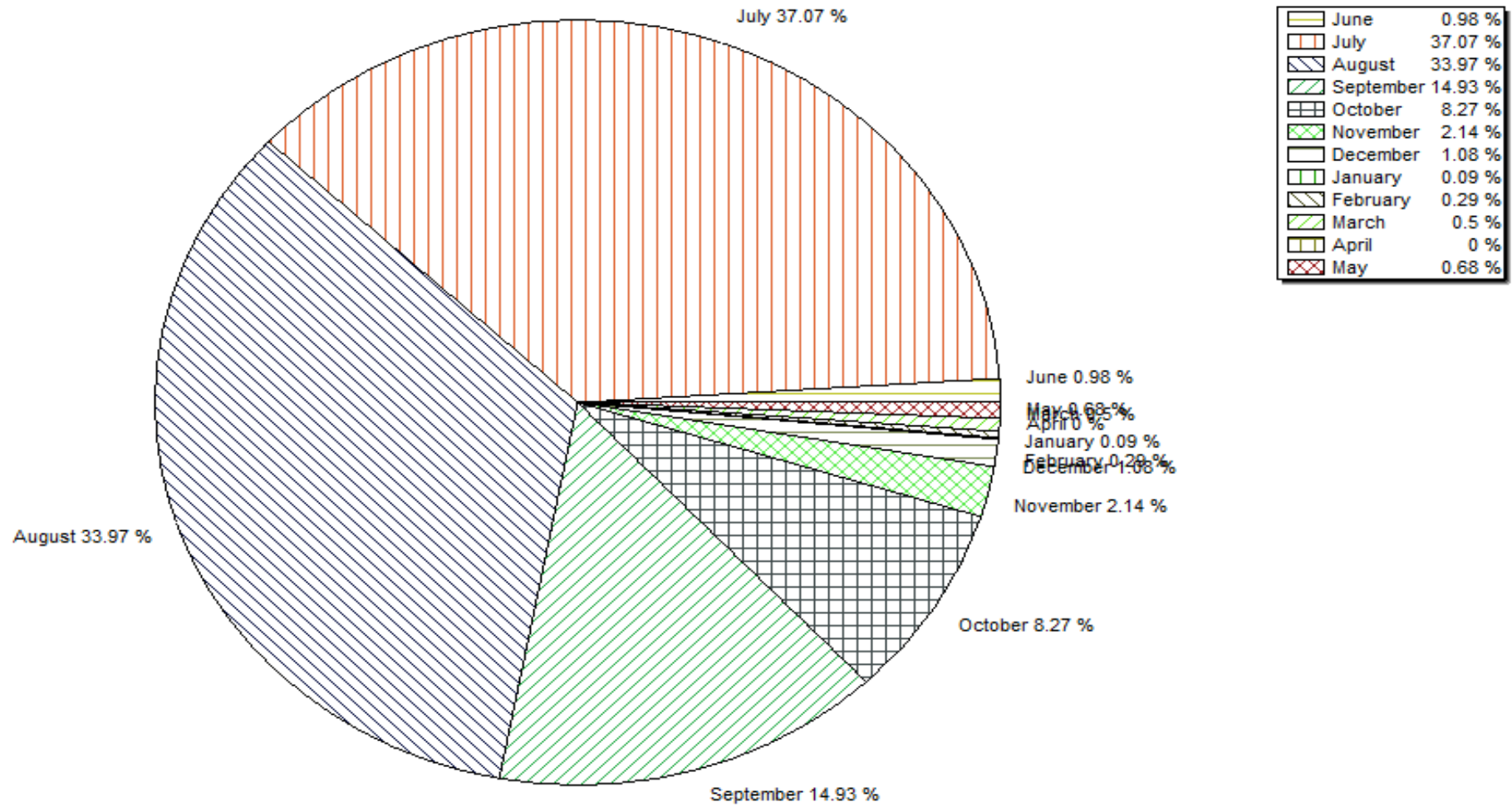
Monthly Runoff for the Year : 2022-2023

Station Name : HARALAHALLI (AKL00S8)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



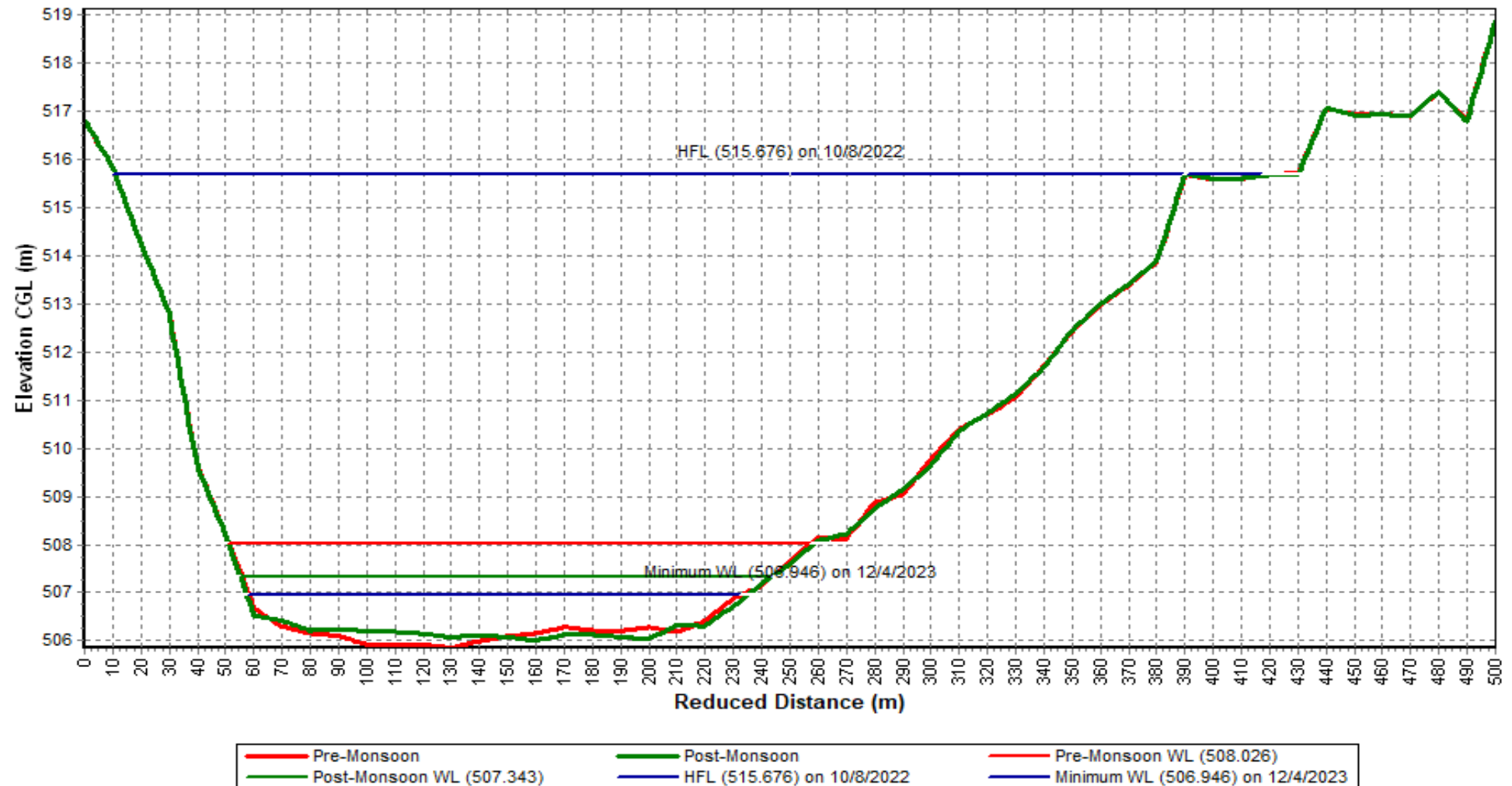
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : HARALAHALLI (AKL00S8)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



Zero of the Gauge: 507.436 (m.s.l)

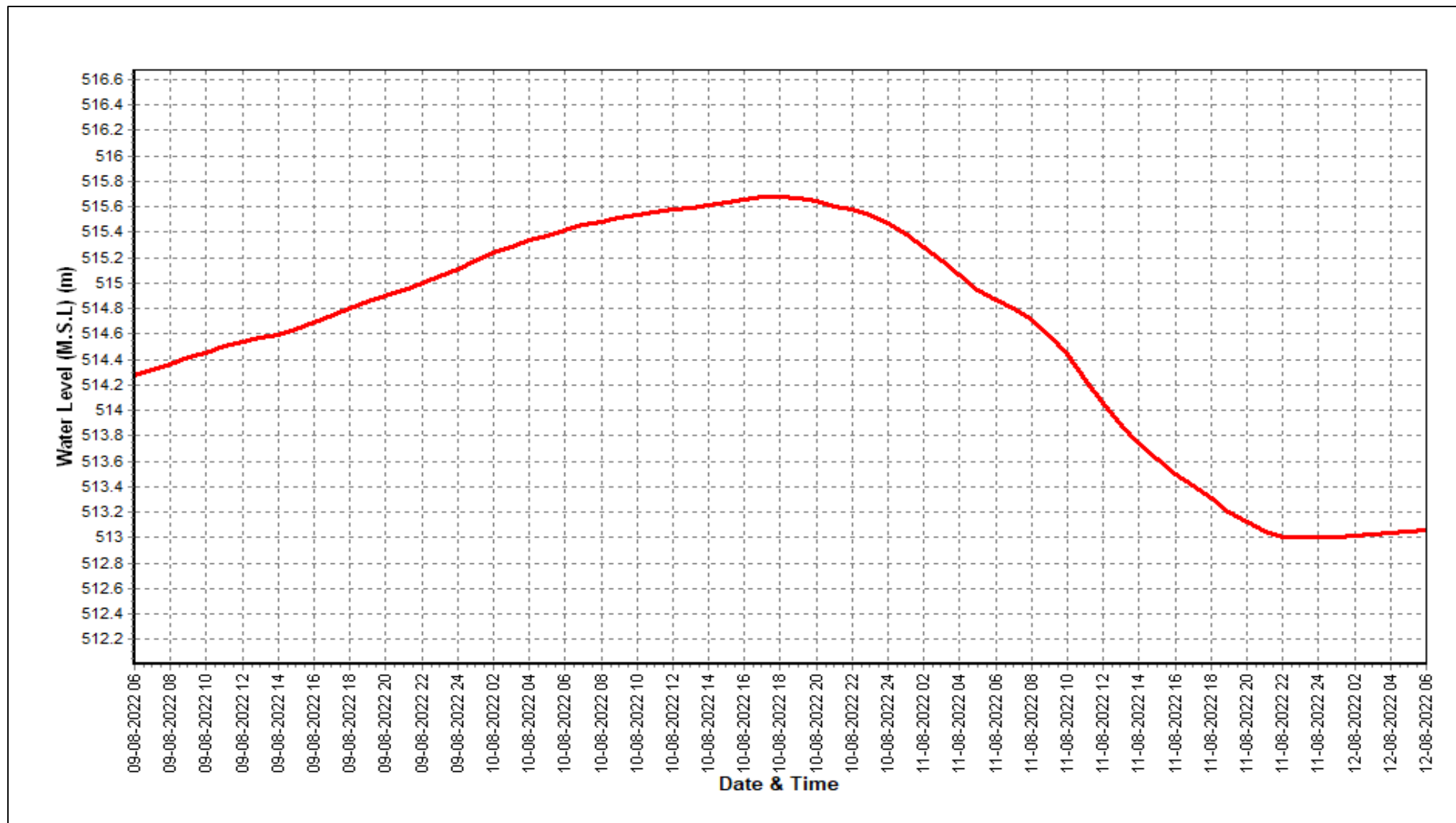
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : HARALAHALLI (AKL00S8)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



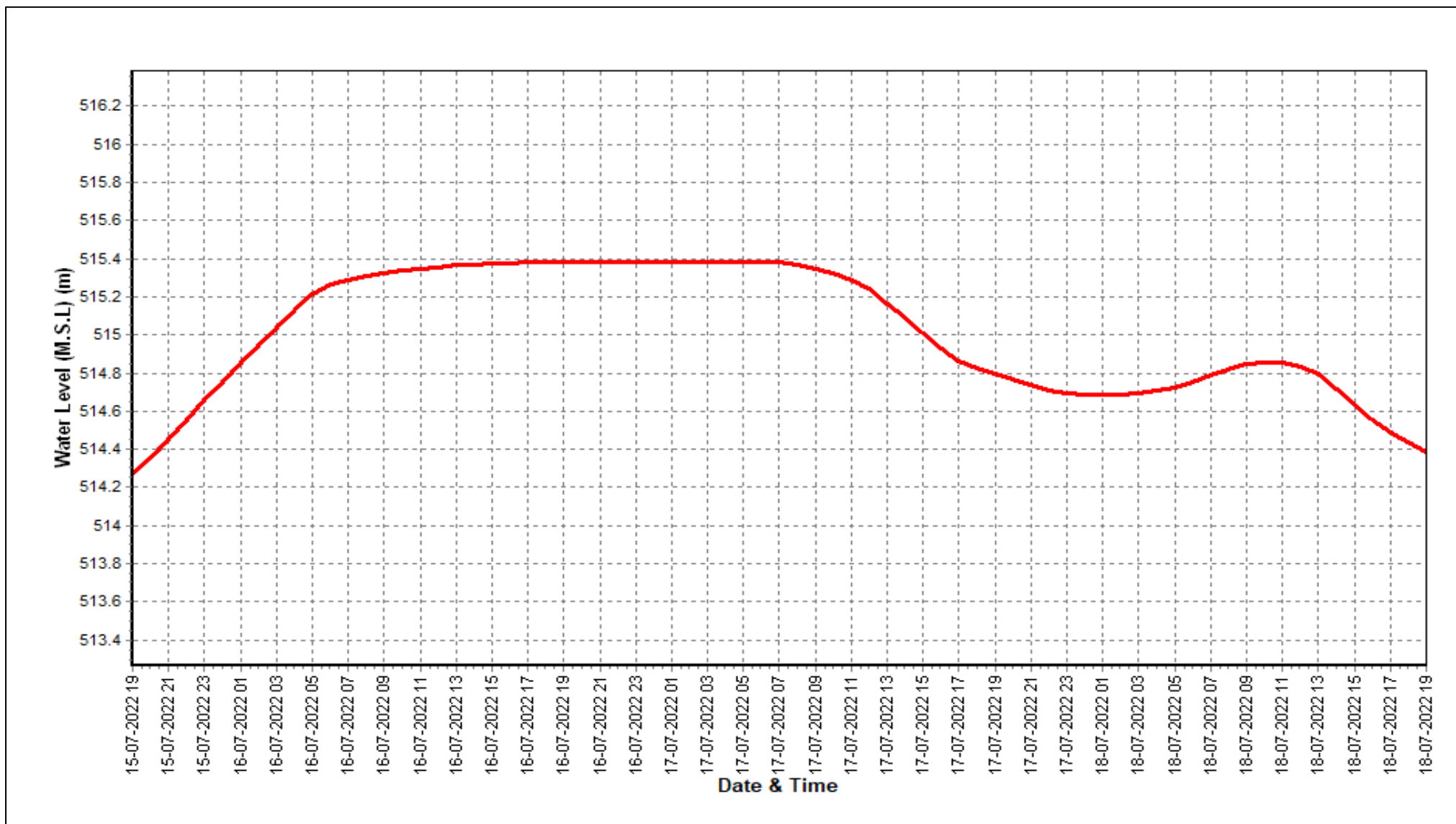
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : HARALAHALLI (AKL00S8)

Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



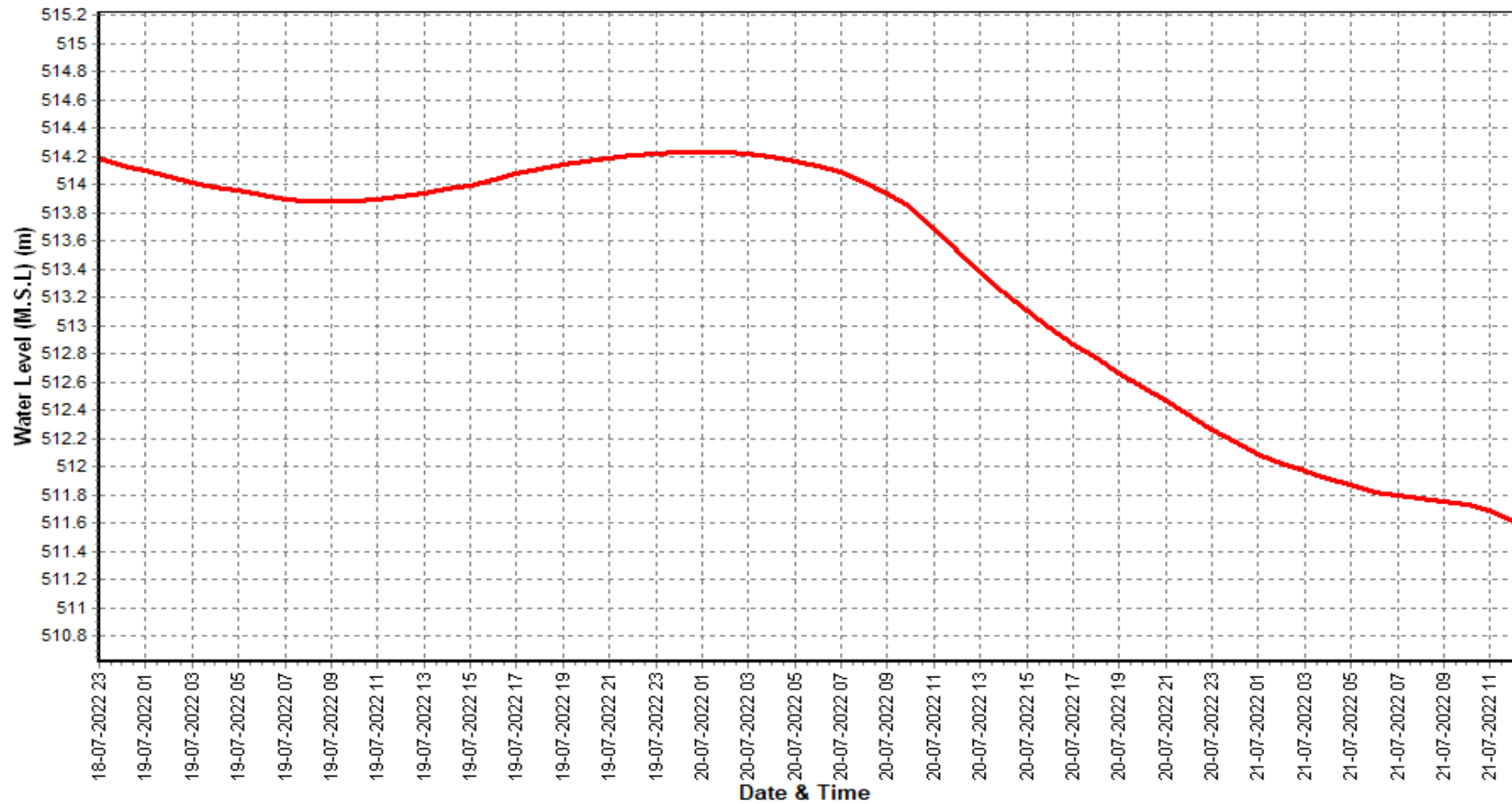
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : HARALAHALLI (AKL00S8)

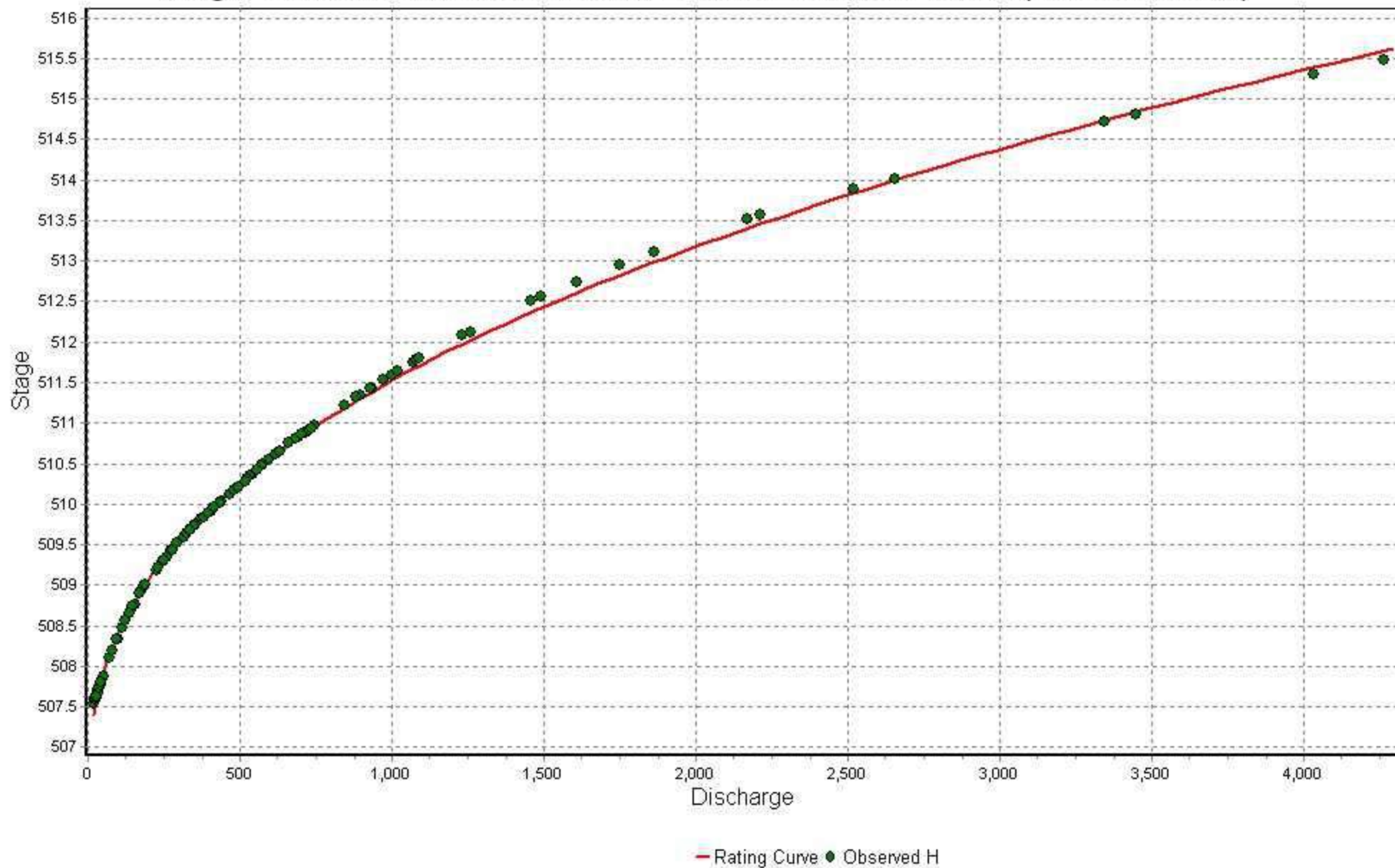
Local River : Tungabhadra

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



S-D curve of site Haralahalli for the period from 01.06.2022 to 31.10.2022
Range:- 507.40 to 517.70,a= -506.417,b= 2.480,c=17.46,OSE= 4.878(No. of data= 123)



HISTORY SHEET

Water Year : 2022-2023

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

Discharge : 01-02-1966

Sediment : 16-09-1972

Water Quality : 01-02-1973

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1966-1967	185.0	511.100	03-12-1966	0.100	508.320	14-05-1967
1967-1968	1000	515.670	05-08-1967	0.110	508.320	04-04-1968
1968-1969	499.0	512.720	22-07-1968	0.000		06-05-1969
1969-1970	895.6	514.380	26-07-1969	0.000	508.310	22-04-1970
1970-1971	1008	514.820	23-08-1970	0.000		10-04-1971
1971-1972	440.0	512.820	07-06-1971	0.000		10-04-1972
1972-1973	869.8	514.840	11-07-1972	0.000		29-03-1973
1973-1974	588.0	513.650	11-07-1973	0.000		28-02-1974
1974-1975	462.0	512.750	08-07-1974	0.000		27-03-1975
1975-1976	1017	514.760	12-07-1975	0.000	508.050	25-05-1976
1976-1977	304.1	511.960	03-08-1976	0.000	507.710	25-03-1977
1977-1978	482.9	512.710	26-07-1977	0.000		14-03-1978
1978-1979	601.6	513.580	27-09-1978	0.000		24-04-1979
1979-1980	799.7	514.380	12-08-1979	0.000		30-03-1980
1980-1981	1525	516.750	05-07-1980	0.000		29-03-1981
1981-1982	588.5	513.290	21-08-1981	0.000		02-03-1982
1982-1983	1430	516.880	06-08-1982	0.000	507.850	10-04-1983
1983-1984	1010	514.870	14-08-1983	0.000		17-04-1984
1984-1985	752.5	513.970	03-07-1984	0.000	508.230	27-02-1985
1985-1986	576.9	513.160	05-08-1985	0.000	508.300	06-02-1986
1986-1987	751.7	513.930	14-08-1986	0.000	508.050	10-02-1987

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1987-1988	305.5	511.530	11-07-1987	0.000	509.550	02-02-1988
1988-1989	1180	515.510	22-07-1988	0.000		24-01-1989
1989-1990	644.9	513.800	27-07-1989	0.000	509.160	25-01-1990
1990-1991	485.0	512.850	20-08-1990	0.000		25-01-1991
1991-1992	1194	514.310	19-07-1991	0.000		28-01-1992
1992-1993	1525	517.460	18-11-1992	0.000	508.110	17-02-1993
1993-1994	640.5	513.410	18-10-1993	0.000		21-02-1994
1994-1995	1320	516.860	17-07-1994	0.000	510.050	01-02-1995
1995-1996	476.0	512.580	23-07-1995	0.000	509.000	26-01-1996
1996-1997	377.8	512.160	30-07-1996	0.000	509.990	25-01-1997
1997-1998	1191	515.860	09-08-1997	0.000	508.620	10-02-1998
1998-1999	475.0	512.970	06-07-1998	0.000	509.410	01-02-1999
1999-2000	1107	516.520	25-07-1999	0.000		29-01-2000
2000-2001	807.5	514.820	16-07-2000	0.000	510.260	25-01-2001
2001-2002	249.1	511.490	11-07-2001	0.000		25-01-2002
2002-2003	380.9	512.310	13-08-2002	0.000		25-01-2003
2003-2004	315.1	511.840	06-10-2003	0.000		26-01-2004
2004-2005	605.0	513.520	07-08-2004	0.000		25-01-2005
2005-2006	919.6	515.360	29-07-2005	0.000		25-01-2006
2006-2007	780.4	514.490	14-08-2006	0.000	508.900	25-01-2007
2007-2008	1540	517.450	09-08-2007	0.000	508.200	01-02-2008
2008-2009	1317	516.470	15-08-2008	0.000	509.050	25-01-2009
2009-2010	1076	515.590	19-07-2009	0.000	510.010	25-01-2010
2010-2011	677.5	513.950	05-10-2010	0.000		18-02-2011
2011-2012	700.4	514.030	05-09-2011	0.000		11-02-2012
2012-2013	571.6	513.320	10-08-2012	0.000	509.770	02-12-2012
2013-2014	915.6	515.140	05-08-2013	0.000		25-01-2014
2014-2015	1121	515.870	04-08-2014	0.000	510.060	25-01-2015
2015-2016	260.2	511.300	27-06-2015	0.000		26-01-2016
2016-2017	241.8	511.150	07-07-2016	0.000		28-01-2017
2017-2018	381.2	511.680	23-07-2017	0.000	507.550	25-01-2018
2018-2019	1025	514.700	16-08-2018	0.000		25-01-2019
2019-2020	1659	518.071	11-08-2019	0.000		26-01-2020
2020-2021	716.0	514.060	10-08-2020	0.000	509.600	17-05-2021
2021-2022	1324	516.911	26-07-2021	0.000	509.301	19-02-2022

Annual Runoff of Varada at Marol

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1966-1967	34	202	236	1	7	8
2	1967-1968	1742	65	1807	62	2	64
3	1968-1969	1364	43	1407	48	2	50
4	1969-1970	2150	137	2287	76	5	81
5	1970-1971	2752	86	2838	97	3	100
6	1971-1972	1366	58	1425	48	2	50
7	1972-1973	1228	40	1268	43	1	45
8	1973-1974	1565	39	1604	55	1	57
9	1974-1975	1574	59	1633	56	2	58
10	1975-1976	2274	270	2544	80	10	90
11	1976-1977	789	127	916	28	4	32
12	1977-1978	1289	94	1383	46	3	49
13	1978-1979	2344	174	2518	83	6	89
14	1979-1980	1349	149	1497	48	5	53
15	1980-1981	3300	70	3370	117	2	119
16	1981-1982	1773	80	1853	63	3	65
17	1982-1983	2780	95	2876	98	3	102
18	1983-1984	2320	89	2409	82	3	85
19	1984-1985	2126	44	2169	75	2	77
20	1985-1986	1308	14	1322	46	0	47
21	1986-1987	1371	130	1502	48	5	53
22	1987-1988	777	42	820	27	1	29
23	1988-1989	1897	12	1908	67	0	67
24	1989-1990	1249	1	1251	44	0	44
25	1990-1991	1784	38	1822	63	1	64
26	1991-1992	3222	33	3255	114	1	115
27	1992-1993	2664	830	3494	94	29	123
28	1993-1994	1795	206	2000	63	7	71
29	1994-1995	3360	72	3432	119	3	121
30	1995-1996	1207	18	1225	43	1	43
31	1996-1997	1022	22	1045	36	1	37
32	1997-1998	2433	132	2565	86	5	91
33	1998-1999	1745	92	1837	62	3	65
34	1999-2000	2068	52	2120	73	2	75
35	2000-2001	1986	31	2017	70	1	71
36	2001-2002	803	0	803	28	0	28
37	2002-2003	805	0	805	28	0	28
38	2003-2004	839	8	847	30	0	30
39	2004-2005	1394	0	1394	49	0	49
40	2005-2006	2290	35	2325	81	1	82
41	2006-2007	2526	15	2541	89	1	90
42	2007-2008	3220	200	3420	114	7	121
43	2008-2009	1901	0	1901	67	0	67
44	2009-2010	2325	0	2325	82	0	82
45	2010-2011	1801	265	2065	64	9	73
46	2011-2012	2434	134	2568	86	5	91
47	2012-2013	1274	70	1344	45	2	47

48	2013-2014	2526	96	2622	89	3	93
49	2014-2015	2634	93	2727	93	3	96
50	2015-2016	528	0	528	19	0	19
51	2016-2017	360	0	360	13	0	13
52	2017-2018	688	0	688	24	0	24
53	2018-2019	1585	0	1585	56	0	56
54	2019-2020	3133	101	3234	111	4	114
55	2020-2021	1720	0	1720	61	0	61
56	2021-2022	1998	344	2342	71	12	83
57	2022-2023	3574	26	3600	126	1	127
Average		1831	88	1919	65	3	68

Instantaneous Flood Peak of Varada at Marol					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1966-1967	514.516	31-07-1966	18:00:00	763 *
2	1967-1968	515.721	05-08-1967	12:00:00	1033 *
3	1968-1969	512.726	22-07-1968	19:00:00	417 *
4	1969-1970	514.381	26-07-1969	09:00:00	735 *
5	1970-1971	514.856	23-08-1970	00:00:00	836 *
6	1971-1972	512.901	22-07-1971	23:00:00	448 *
7	1972-1973	514.891	10-07-1972	22:00:00	844 *
8	1973-1974	513.651	11-07-1973	07:00:00	588 *
9	1974-1975	512.786	08-07-1974	00:00:00	428 *
10	1975-1976	514.816	12-07-1975	20:00:00	828 *
11	1976-1977	512.006	03-08-1976	11:00:00	297 *
12	1977-1978	512.716	26-07-1977	19:00:00	416 *
13	1978-1979	514.011	15-07-1978	23:00:00	659 *
14	1979-1980	514.381	12-08-1979	07:00:00	735 *
15	1980-1981	516.796	04-07-1980	21:00:00	1298 *
16	1981-1982	513.356	20-08-1981	12:00:00	532 *
17	1982-1983	516.911	06-08-1982	00:00:00	1328 *
18	1983-1984	514.946	14-08-1983	20:00:00	856 *
19	1984-1985	513.971	03-07-1984	08:00:00	651 *
20	1985-1986	513.161	04-08-1985	23:00:00	495 *
21	1986-1987	513.931	14-08-1986	08:00:00	643 *
22	1987-1988	511.661	10-07-1987	21:00:00	242 *
23	1988-1989	515.561	22-07-1988	00:00:00	995 *
24	1989-1990	513.831	27-07-1989	15:00:00	623 *
25	1990-1991	512.854	13-08-1990	03:00:00	440 *
26	1991-1992	514.336	19-07-1991	10:00:00	725 *
27	1992-1993	517.601	18-11-1992	16:00:00	1512 *
28	1993-1994	513.771	18-10-1993	10:00:00	611 *
29	1994-1995	516.921	17-07-1994	14:00:00	1331 *
30	1995-1996	512.671	22-07-1995	21:00:00	408 *
31	1996-1997	512.276	25-07-1996	15:00:00	341 *
32	1997-1998	515.931	09-08-1997	15:00:00	1083 *
33	1998-1999	512.981	06-07-1998	15:00:00	463 *
34	1999-2000	516.521	25-07-1999	07:00:00	1228 *
35	2000-2001	514.821	16-07-2000	08:00:00	829 *
36	2001-2002	511.486	11-07-2001	08:00:00	216 *
37	2002-2003	512.371	12-08-2002	08:00:00	356
38	2003-2004	511.971	06-10-2003	18:00:00	291 *
39	2004-2005	513.521	07-08-2004	05:00:00	563 *
40	2005-2006	515.391	29-07-2005	01:00:00	956 *
41	2006-2007	514.541	14-08-2006	12:00:00	768 *
42	2007-2008	517.451	09-08-2007	04:00:00	1472 *

Sl. No.	Year	Instantaneous Annual Flood Peak		Time	Discharge * (Cumecs)
		Peak WL (m) Recorded	Date		
43	2008-2009	516.481	15-08-2008	09:00:00	1218 *
44	2009-2010	515.591	19-07-2009	08:00:00	1002 *
45	2010-2011	513.981	05-10-2010	12:00:00	653 *
46	2011-2012	514.031	05-09-2011	06:00:00	663 *
47	2012-2013	513.401	09-08-2012	15:00:00	540 *
48	2013-2014	515.211	04-08-2013	16:00:00	915 *
49	2014-2015	515.911	03-08-2014	18:00:00	1078 *
50	2015-2016	511.301	26-06-2015	18:00:00	189 *
51	2016-2017	511.161	07-07-2016	09:00:00	168 *
52	2017-2018	511.821	22-07-2017	10:00:00	267 *
53	2018-2019	514.721	16-08-2018	10:00:00	807 *
54	2019-2020	518.171	10-08-2019	20:00:00	1672 *
55	2020-2021	514.171	09-08-2020	10:00:00	735 *
56	2021-2022	516.921	26-07-2021	09:00:00	1340 *
57	2022-2023	515.911	19-07-2022	02:00:00	1190 *

Stage-Discharge Data for the period 2022 - 2023

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	508.561	6.085	508.451	0.000	510.311	138.8	513.781	656.6	509.861	94.01	509.181	38.23
2	508.521	4.483	508.551	5.575	510.391	146.8	513.701	641.0	510.151	117.6 *	509.141	35.21
3	508.441	0.000	508.781	16.14 *	512.251	394.1	513.911	685.5	509.811	89.48	509.101	32.36
4	508.421	0.000	509.301	48.92	512.601	442.7	512.571	455.7 *	509.731	82.98	509.051	28.66
5	508.441	0.000	509.551	68.89	512.481	426.0	511.681	314.4	509.901	93.54 *	509.011	25.53
6	508.381	0.000	511.231	250.0	511.911	346.7	511.451	281.5	509.811	89.48	508.991	26.05 *
7	508.291	0.000	512.231	390.4	512.461	436.5 *	513.651	631.3	510.321	140.0	508.851	18.45
8	508.311	0.000	513.061	520.8	513.701	641.0	512.791	473.5	509.911	98.03	508.811	15.93 *
9	508.341	0.000	513.491	602.9	514.271	794.0 *	511.741	322.6	509.701	75.98 *	508.701	12.33
10	508.271	0.000	513.611	653.6 *	515.051	912.4	511.131	236.1	509.611	73.47	508.751	14.41
11	508.251	0.000	513.491	602.9	515.411	1062 *	511.171	237.8 *	510.701	182.3	508.701	12.33
12	508.221	0.000	513.261	557.8	514.931	890.6	511.381	272.0	510.381	145.9	508.601	8.287
13	508.211	0.000	513.591	622.9	514.661	835.1	511.911	346.7	510.381	145.9	508.631	8.435 *
14	508.191	0.000	513.921	687.5	514.311	802.9 *	512.051	367.1	510.021	109.4	508.601	8.287
15	508.191	0.000	514.431	792.5	513.891	711.8 *	511.881	341.8	510.171	124.3	508.551	5.671
16	508.201	0.000	515.171	1003 *	513.371	578.4	511.581	299.9	510.191	121.6 *	508.511	4.013
17	508.191	0.000	515.771	1154 *	512.961	501.4	511.061	225.8	510.011	108.1	508.451	3.086
18	508.161	0.000	515.831	1169 *	512.491	427.5	510.851	196.4 *	510.431	151.7	508.331	0.000
19	508.361	0.000	515.911	1190 *	511.961	352.9	510.631	172.8	510.701	182.3	508.271	0.000
20	508.271	0.000	515.851	1175 *	511.571	298.0	510.401	147.8	510.591	168.1	508.251	0.000
21	508.221	0.000	515.111	925.3	510.861	197.6 *	510.221	129.3	510.431	151.7	508.551	0.000
22	508.201	0.000	514.031	707.1	510.521	160.5	510.041	111.5	510.771	190.7	508.751	0.000
23	508.191	0.000	512.961	501.4	510.421	150.2	509.921	98.97	510.771	186.6 *	508.891	0.000
24	508.201	0.000	512.391	424.5 *	510.651	176.1	509.851	93.09	510.261	128.8 *	509.061	0.000
25	508.211	0.000	511.851	338.9	510.841	199.8	509.781	82.82 *	509.801	88.68	509.291	0.000
26	508.271	0.000	511.381	272.0	510.921	209.6	509.791	87.99	509.551	68.58	509.591	0.000
27	508.451	0.000	510.981	215.2	510.801	195.0	509.711	80.50	509.421	57.24	509.831	0.000
28	508.451	0.000	510.751	188.3	511.361	264.0 *	509.591	72.00	509.331	50.44	509.971	0.000
29	508.331	0.000	510.701	182.3	511.911	346.7	509.481	62.64	509.261	44.38	510.071	0.000
30	508.381	0.000	510.551	163.7	512.871	486.9	509.451	60.69	509.231	40.87 *	510.151	0.000
31			510.391	142.7 *	513.451	621.2 *			509.221	41.15		
Ten-Daily Mean												
I Ten-Daily	508.398	1.057	510.826	255.7	512.543	467.9	512.641	469.8	509.881	95.45	508.959	24.72
II Ten-Daily	508.225	0.000	514.723	895.5	513.556	646.1	511.292	260.8	510.358	143.9	508.490	5.011
III Ten-Daily	508.291	0.000	511.918	369.2	511.328	273.4	509.784	87.95	509.823	95.38	509.416	0.000
Monthly												
Min.	508.161	0.000	508.451	0.000	510.311	138.8	509.451	60.69	509.221	40.87	508.251	0.000
Max.	508.561	6.085	515.911	1190	515.411	1062	513.911	685.5	510.771	190.7	510.151	38.23
Mean	508.305	0.352	512.471	502.4	512.439	456.4	511.239	272.9	510.014	111.1	508.955	9.909

Annual Runoff in MCM = 3599 Annual Runoff in mm = 734

Peak Observed Discharge = 925.3 cumecs on 21-07-2022 Corres. Water Level :515.111 m

Lowest Observed Discharge = 0.000 cumecs on 03-06-2022 Corres. Water Level :508.441 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 2022 - 2023

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	510.201	0.000	510.301	0.000	509.581	0.000	508.651	0.000	Dry Bed		Dry Bed			
2	510.211	0.000	510.261	0.000	509.561	0.000	508.551	0.000						
3	510.241	0.000	510.231	0.000	509.541	0.000	508.431	0.000						
4	510.251	0.000	510.211	0.000	509.521	0.000	508.311	0.000						
5	510.231	0.000	510.201	0.000	509.501	0.000	508.191	0.000						
6	510.231	0.000	510.191	0.000	509.481	0.000	508.071	0.000						
7	510.221	0.000	510.181	0.000	509.461	0.000	507.941	0.000						
8	510.201	0.000	510.171	0.000	509.431	0.000	507.801	0.000						
9	510.191	0.000	510.161	0.000	509.401	0.000	507.651	0.000						
10	510.191	0.000	510.161	0.000	509.361	0.000	Dry Bed							
11	510.181	0.000	510.141	0.000	509.321	0.000								
12	510.171	0.000	510.121	0.000	509.391	0.000								
13	510.201	0.000	510.111	0.000	509.251	0.000								
14	510.251	0.000	510.101	0.000	509.221	0.000								
15	510.301	0.000	510.091	0.000	509.201	0.000								
16	510.321	0.000	510.061	0.000	509.171	0.000								
17	510.321	0.000	510.031	0.000	509.151	0.000								
18	510.331	0.000	510.001	0.000	509.121	0.000								
19	510.341	0.000	509.981	0.000	509.101	0.000								
20	510.311	0.000	509.951	0.000	509.071	0.000								
21	510.301	0.000	509.921	0.000	509.051	0.000								
22	510.301	0.000	509.901	0.000	509.021	0.000								
23	510.311	0.000	509.871	0.000	508.991	0.000								
24	510.321	0.000	509.851	0.000	508.971	0.000								
25	510.331	0.000	509.831	0.000	508.951	0.000								
26	510.341	0.000	509.801	0.000	508.891	0.000								
27	510.351	0.000	509.761	0.000	508.811	0.000								
28	510.351	0.000	509.731	0.000	508.731	0.000								
29	510.341	0.000	509.701	0.000										
30	510.341	0.000	509.651	0.000										
31	510.321	0.000	509.611	0.000										
Ten-Daily Mean														
I Ten-Daily	510.217	0.000	510.207	0.000	509.484	0.000	508.178	0.000						
II Ten-Daily	510.273	0.000	510.059	0.000	509.200	0.000								
III Ten-Daily	510.328	0.000	509.785	0.000	508.927	0.000								
Monthly														
Min.	510.171	0.000	509.611	0.000	508.731	0.000	507.651	0.000						
Max.	510.351	0.000	510.301	0.000	509.581	0.000	508.651	0.000						
Mean	510.275	0	510.009	0	509.223	0	508.178	0						

Peak Computed Discharge = 1190 cumecs on 19-07-2022

Corres. Water Level :515.911 m

Lowest Computed Discharge = 8.435 cumecs on 13-11-2022

Corres. Water Level :508.631 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 : 2022-2023

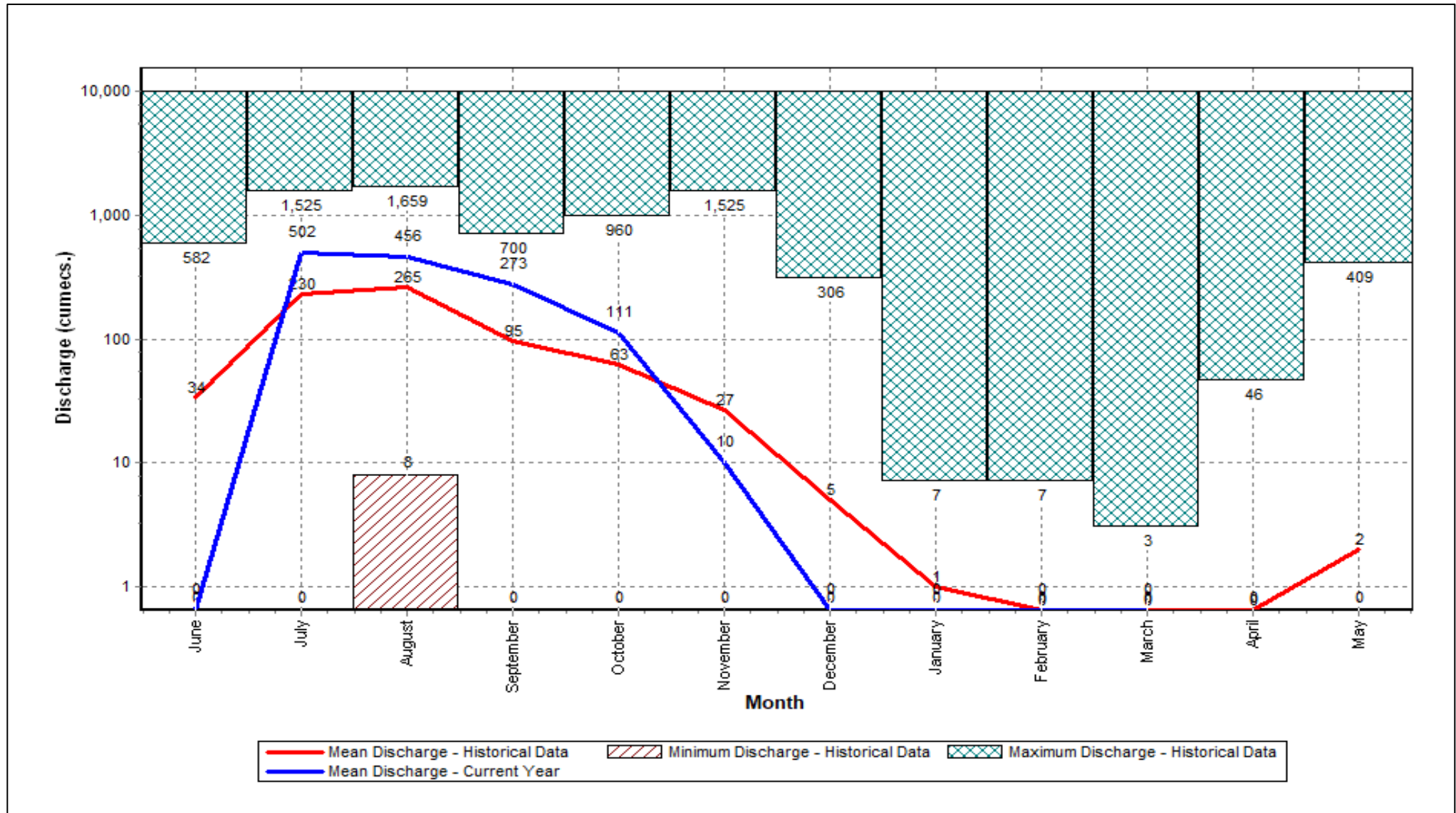
Station Name : MAROL (AKLA0C4)

Data considered : 1966-2023

Division : Cauvery Division, Bangalore

Local River : Varada

Sub-Division : Upper Tunga Subdn, Devangere



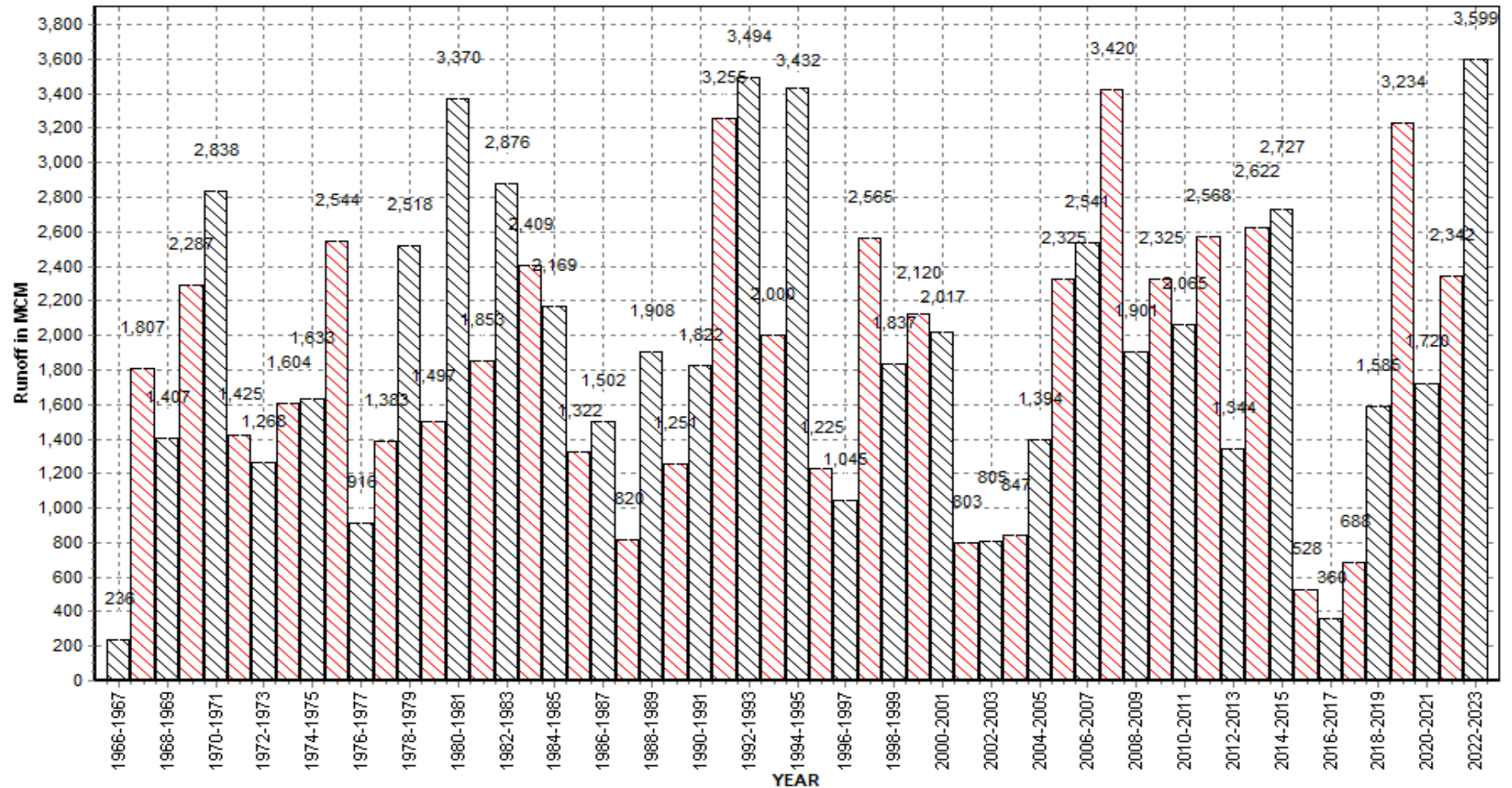
Annual Runoff Values for the period: 1966 - 2023

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

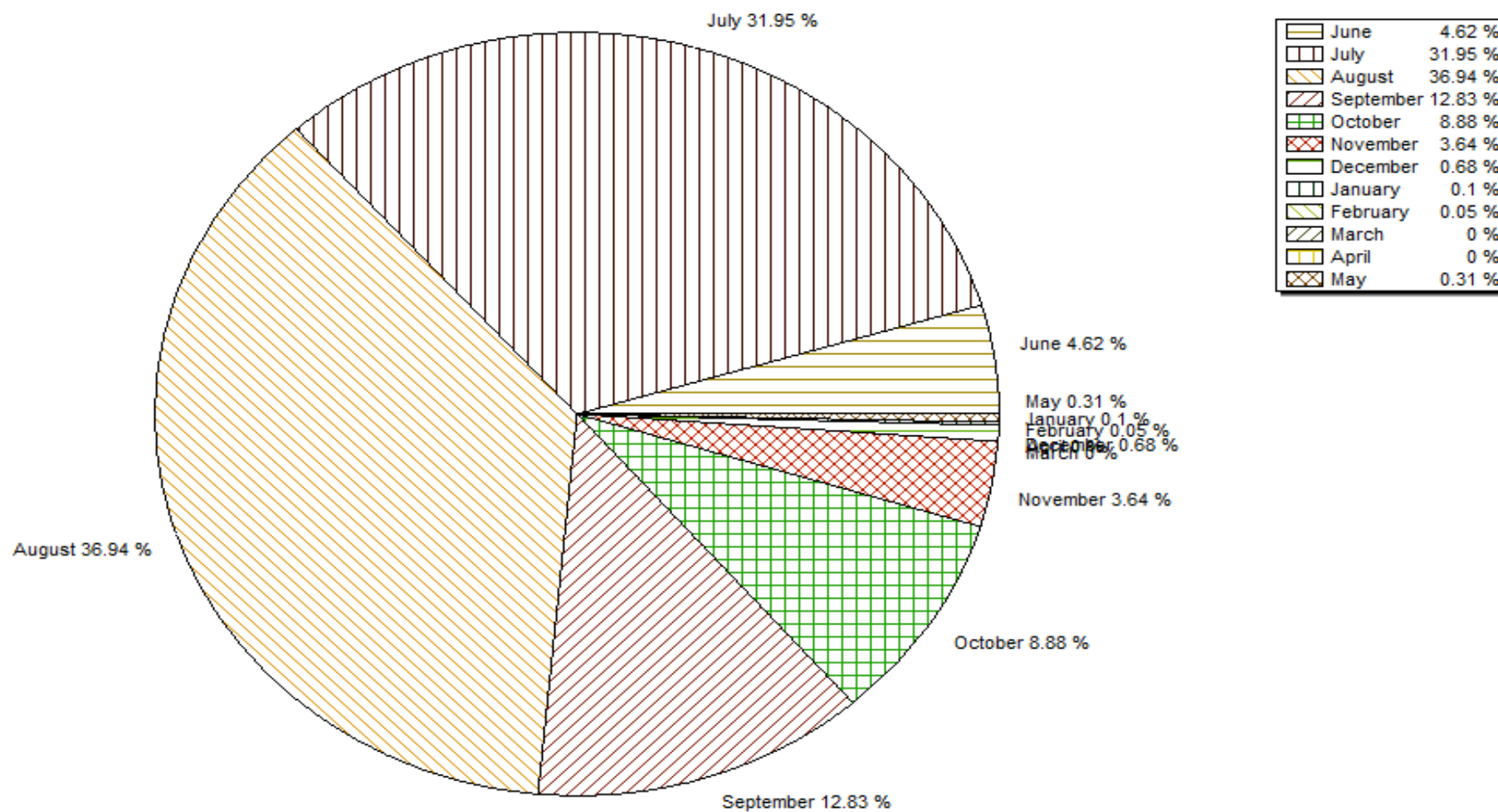
Monthly Average Runoff based on period : 1966-2022

Station Name : MAROL (AKLA0C4)

Local River : Varada

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



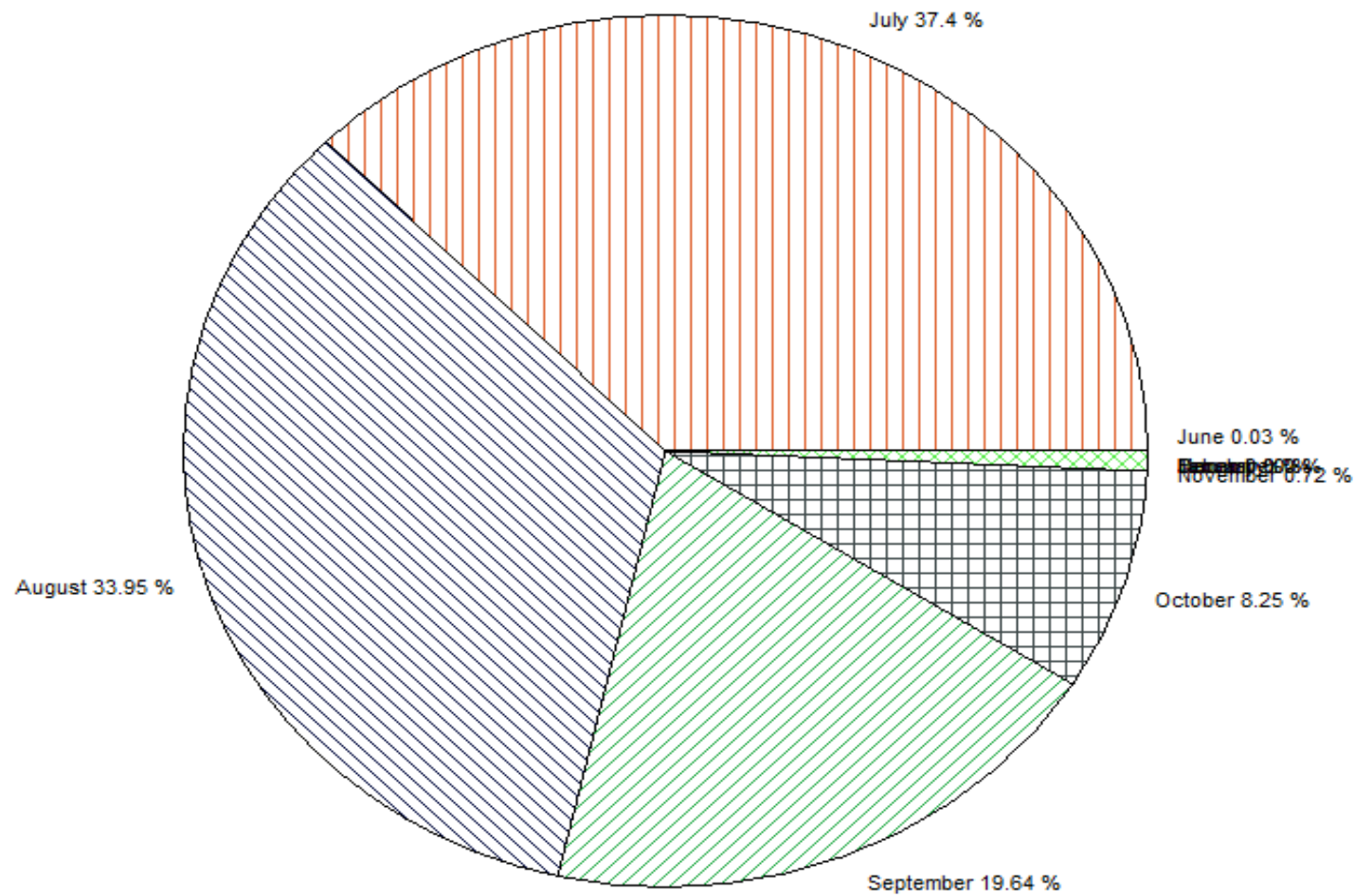
Monthly Runoff for the Year : 2022-2023

Station Name : MAROL (AKLA0C4)

Local River : Varada

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



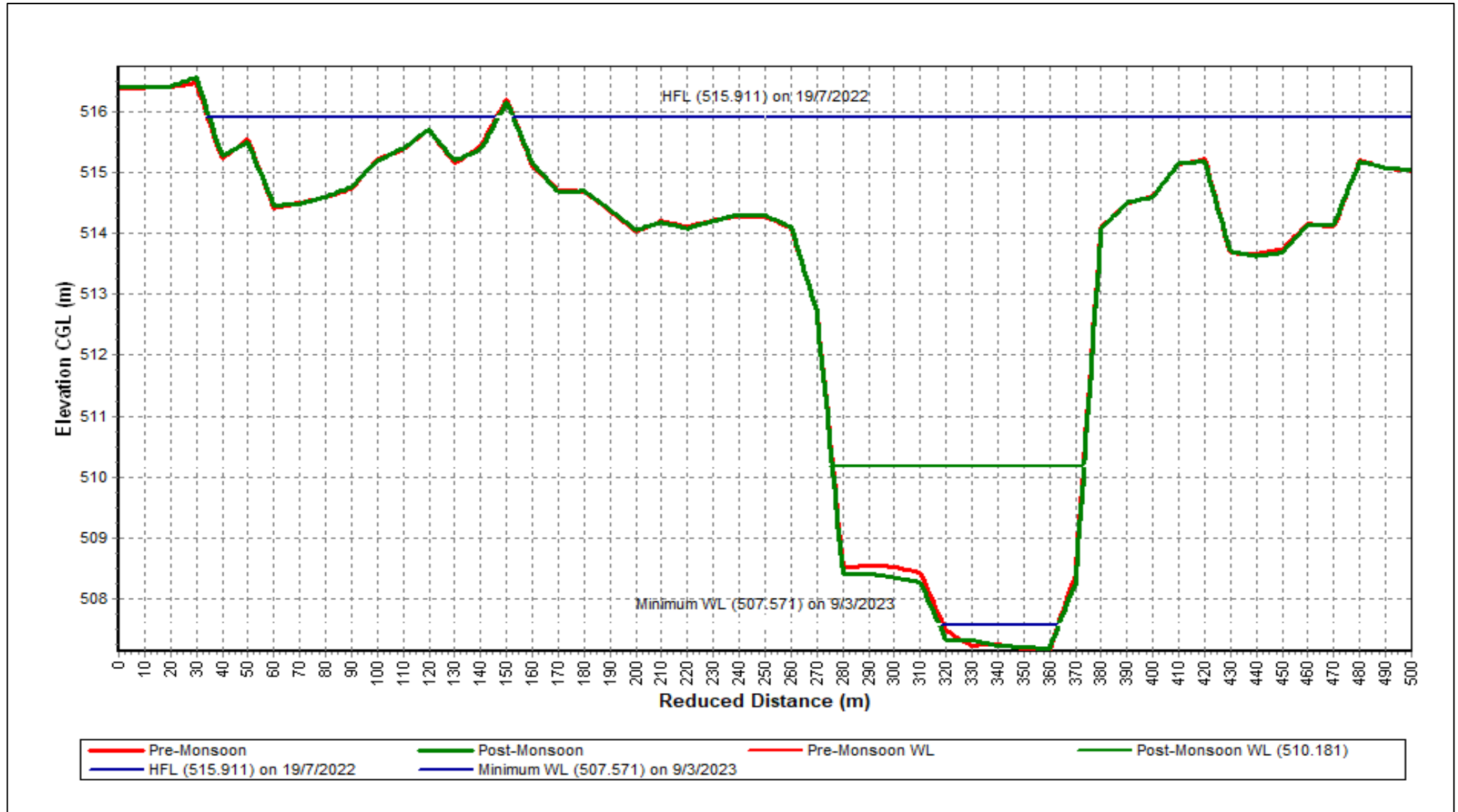
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : MAROL (AKLA0C4)

Local River : Varada

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



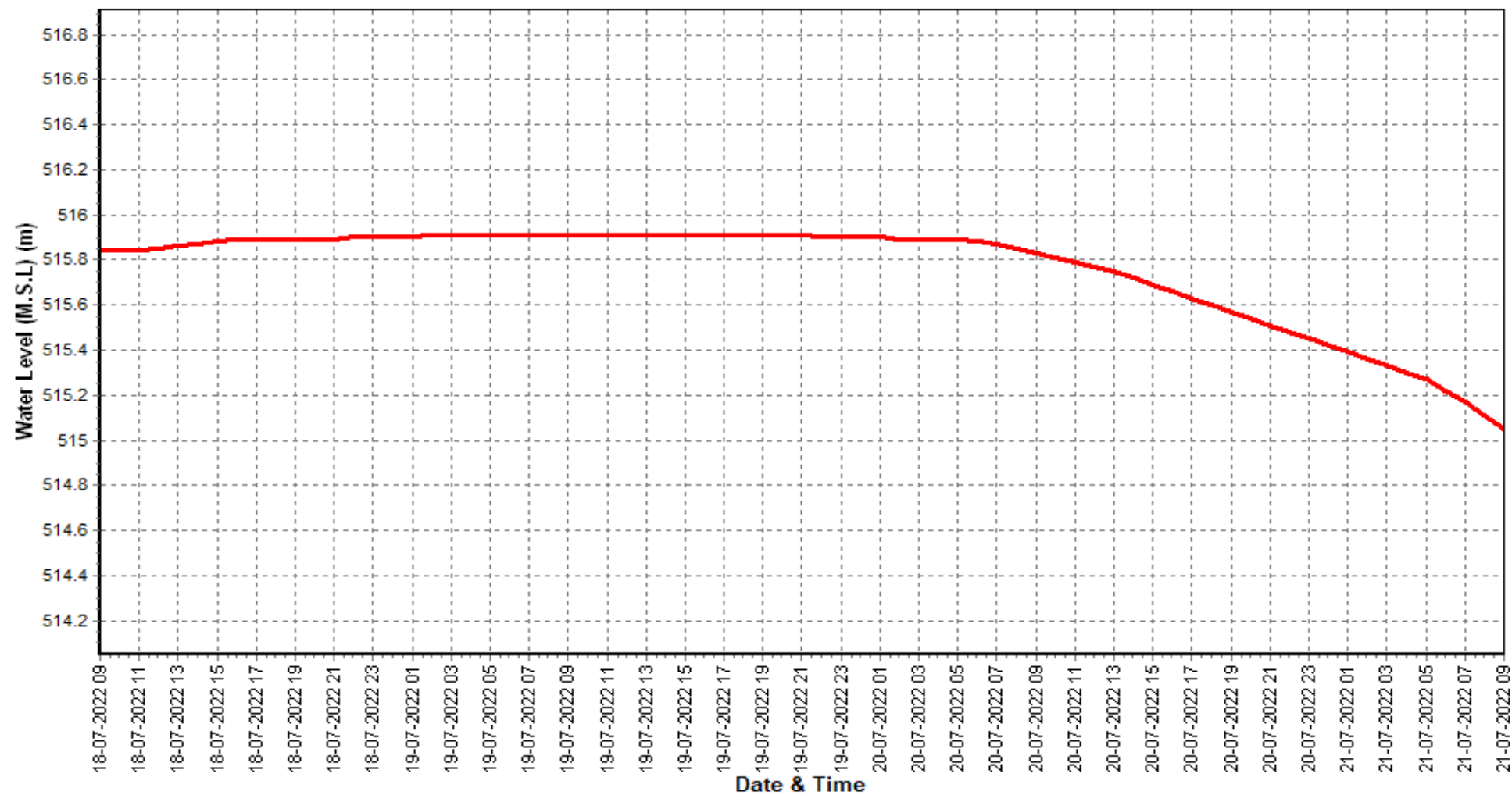
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : MAROL (AKLA0C4)

Local River : Varada

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



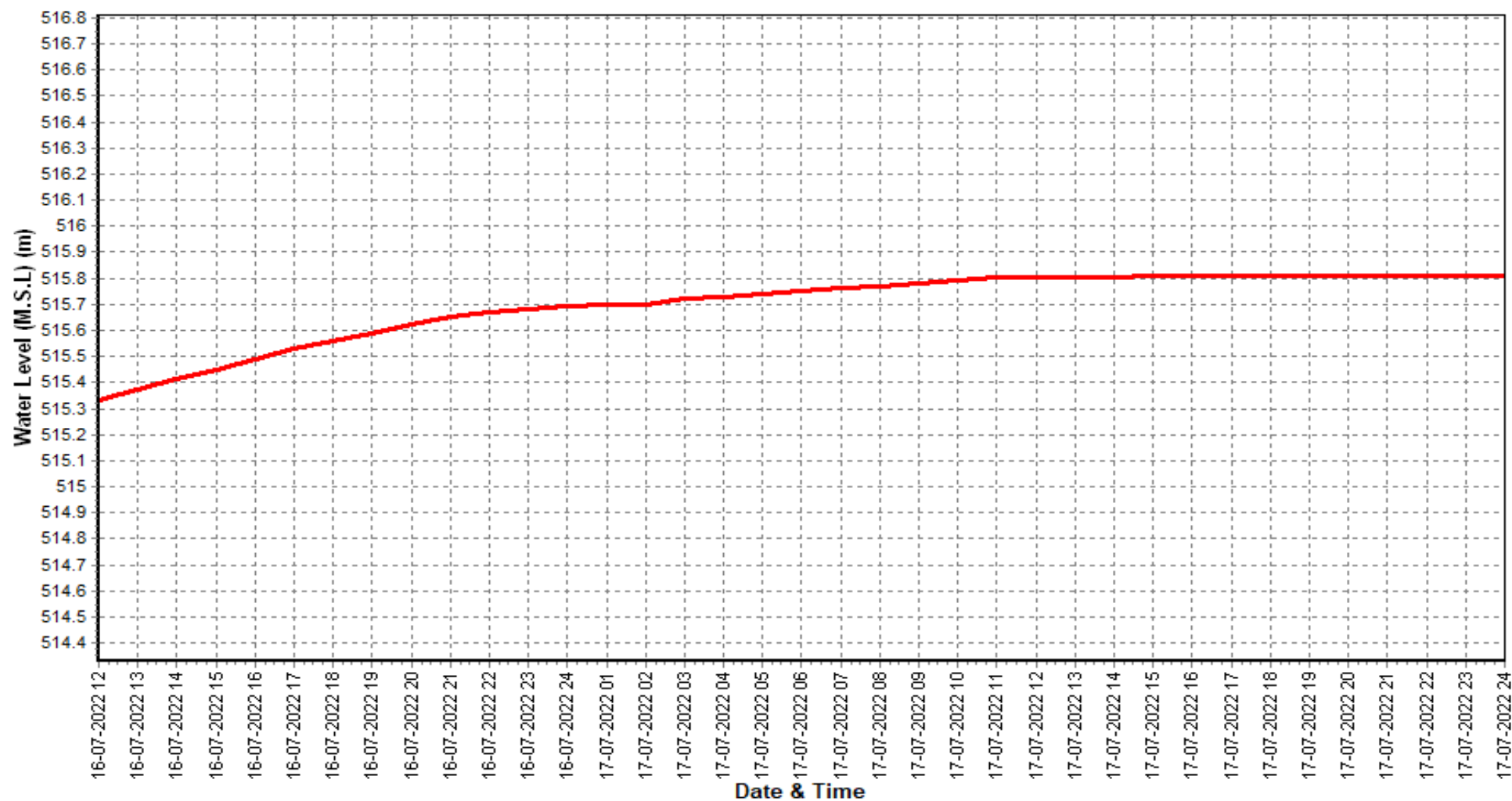
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : MAROL (AKLA0C4)

Local River : Varada

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



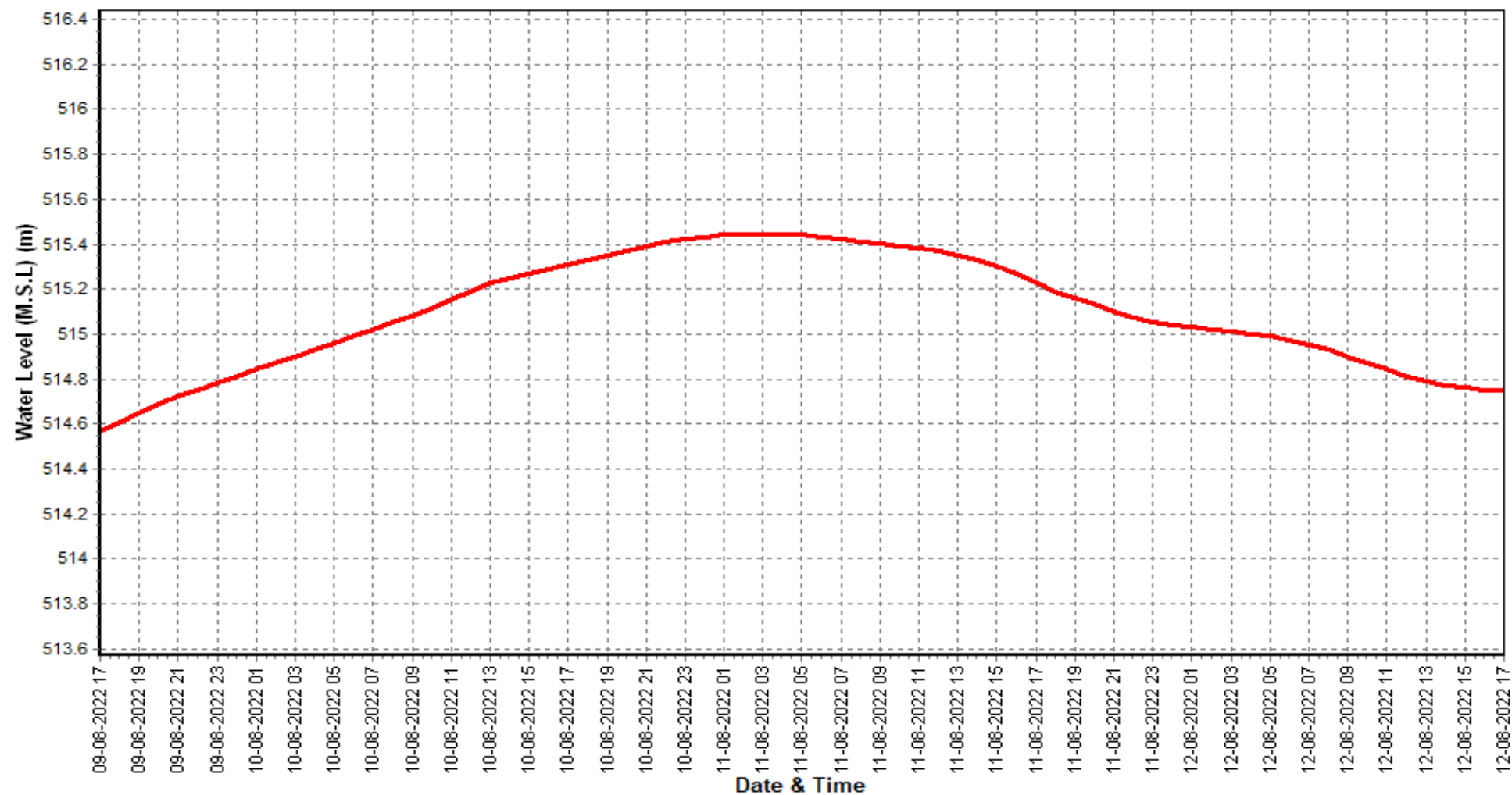
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : MAROL (AKLA0C4)

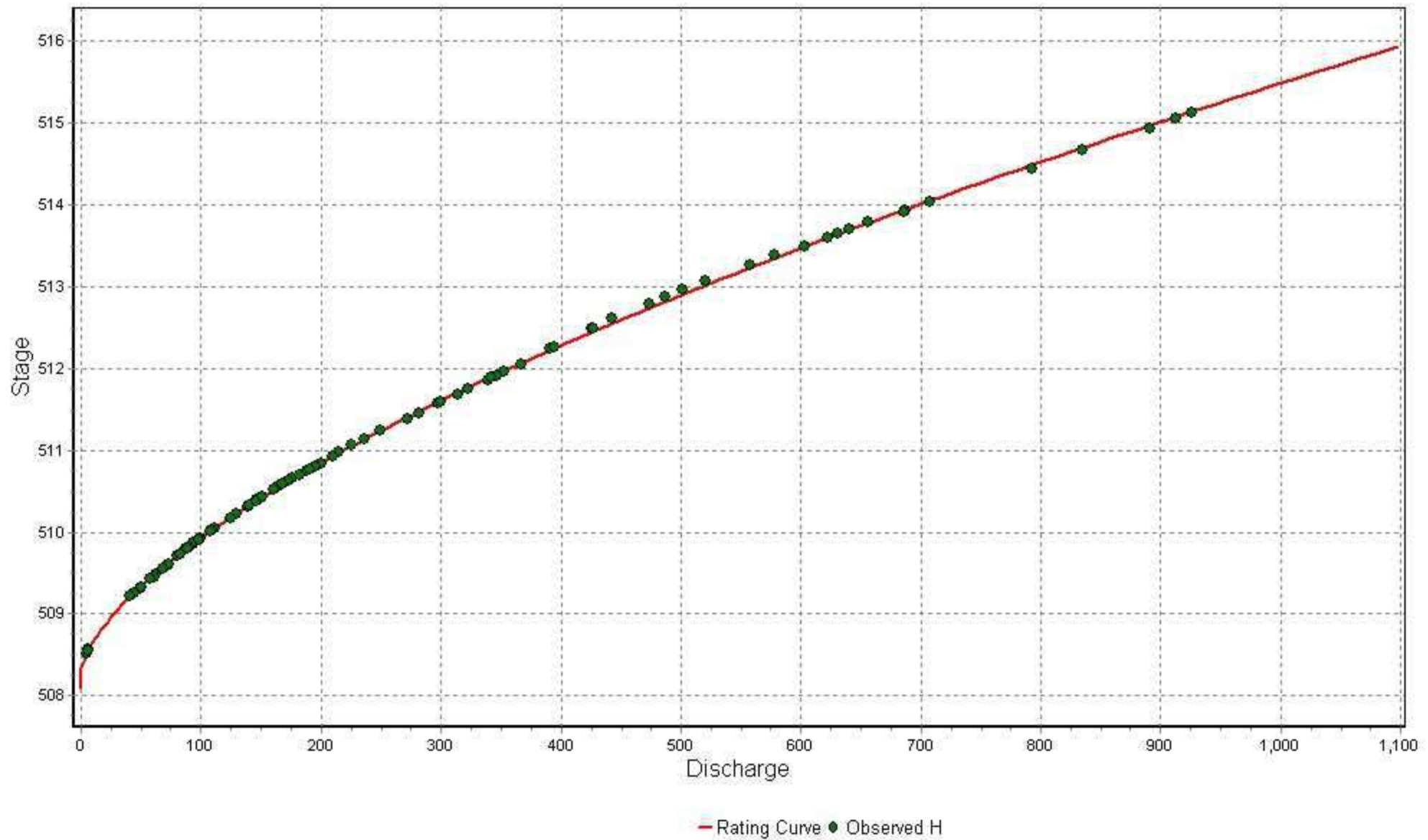
Local River : Varada

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



S-D curve of site Marol for the period from 01.06.2022 to 31.10.2022
Range:- 508.100 to 516.000, a= -508.291, b=1.555, c=46.61, OSE= 1.300 (No. of data 96)



HISTORY SHEET

Water Year : 2022-2023

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

Discharge : 02-10-2001

Water Quality : 01-06-2008

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2002-2003	16.39	95.100	15-10-2002	0.000		07-06-2002
2003-2004	0.000		20-12-2003	0.000		29-03-2004
2004-2005	0.000		16-11-2004	0.000		29-03-2005
2005-2006	13.37	95.500	03-11-2005	0.000		27-06-2005
2006-2007	2.576	94.860	20-06-2006	0.000		29-03-2007
2007-2008	5.331	94.840	10-09-2007	0.000		10-06-2007
2008-2009	75.85	95.820	06-09-2008	0.000		17-01-2009
2009-2010	67.38	95.580	24-09-2009	0.000	94.450	16-01-2010
2010-2011	75.13	95.755	03-11-2010	0.000	94.210	27-05-2011
2011-2012	0.000		11-05-2012	0.000		24-05-2012
2012-2013	0.000		14-12-2012	0.000		17-03-2013
2013-2014	43.01	95.355	13-09-2013	0.000		12-02-2014
2014-2015	0.000		14-12-2014	0.000		04-03-2015
2015-2016	7.174	94.080	27-11-2015	0.000		09-02-2016
2016-2017	0.000		13-10-2016	0.000		20-03-2017
2017-2018	16.50	94.950	15-10-2017	0.000	0.000	13-03-2018
2019-2020	0.000		27-09-2019	0.000		18-01-2020
2020-2021	0.000		04-10-2020	0.000		25-01-2021
2021-2022	12.38	94.850	22-11-2021	0.000		24-05-2022

Annual Runoff of Krishna at Hoovinhole

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2001-2002	0	0	0	0	0	0
2	2002-2003	9	2	11	0	0	0
3	2003-2004	0	0	0	0	0	0
4	2004-2005	0	0	0	0	0	0
5	2005-2006	7	11	18	0	0	1
6	2006-2007	1	1	2	0	0	0
7	2007-2008	3	1	4	0	0	0
8	2008-2009	44	14	58	2	0	2
9	2009-2010	38	5	43	1	0	2
10	2010-2011	14	55	69	1	2	2
11	2011-2012	0	0	0	0	0	0
12	2012-2013	0	0	0	0	0	0
13	2013-2014	4	0	4	0	0	0
14	2014-2015	0	0	0	0	0	0
15	2015-2016	0	5	5	0	0	0
16	2016-2017	0	0	0	0	0	0
17	2017-2018	8	0	8	0	0	0
18	2018-2019	0	0	0	0	0	0
19	2019-2020	0	0	0	0	0	0
20	2020-2021	0	0	0	0	0	0
21	2021-2022	4	5	9	0	0	0
22	2022-2023	245	27	272	9	1	10
Average		17	6	23	1	0	1

Instantaneous Flood Peak of Krishna at Huvinhole					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2001-2002	95.920	02-10-2001	14:00:00	102*
2	2002-2003	95.130	30-10-2002	18:00:00	16*
3	2003-2004	Dry Bed			
4	2004-2005				
5	2005-2006	95.600	03-11-2005	13:00:00	70*
6	2006-2007	94.860	20-06-2006	08:00:00	24
7	2007-2008	94.910	10-09-2007	06:00:00	26*
8	2008-2009	96.140	06-09-2008	13:00:00	127*
9	2009-2010	95.580	24-09-2009	06:00:00	69*
10	2010-2011	95.760	03-11-2010	07:00:00	85*
11	2011-2012	Dry Bed			
12	2012-2013				
13	2013-2014	95.360	13-09-2013	09:00:00	51*
14	2014-2015	Dry Bed			
15	2015-2016	94.080	27-11-2015	08:00:00	7*
16	2016-2017	Dry Bed			
17	2017-2018	94.980	15-10-2017	09:00:00	30*
18	2019-2020	Dry Bed			
19	2020-2021				
20	2021-2022	95.160	21-11-2021	13:00:00	41*
21	2022-2023	97.780	06-09-2022	10:00:00	235*

Stage-Discharge Data for the period 2022 - 2023

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	93.830	0.000	93.850	0.000	93.820	0.000	96.460	96.95	94.560	6.984	94.550	6.991
2	93.810	0.000	93.850	0.000	95.710	49.65	95.820	56.02	94.540	6.736 *	94.490	6.551
3	93.760	0.000	93.850	0.000	95.680	48.13	95.480	37.07	94.750	10.62	94.450	5.982
4	93.690	0.000	93.850	0.000	95.620	45.31	95.390	32.30 *	94.750	10.48	94.370	4.987
5	93.720	0.000	93.850	0.000	95.540	41.51	95.360	30.54	94.680	9.509 *	94.500	6.490
6	94.050	0.965 #	93.850	0.000	95.480	38.79	97.640	184.9	94.610	7.895	94.430	5.673 *
7	94.190	2.029 #	93.840	0.000	95.450	34.93 *	97.180	150.0	94.540	6.980	94.420	5.513
8	94.110	1.368 #	93.840	0.000	95.400	35.48	96.900	127.9	94.490	6.499	94.420	5.559 *
9	94.010	0.740 #	93.840	0.000	95.360	31.02 *	96.450	98.03	94.480	5.708 *	94.410	5.506
10	93.950	0.000	93.840	0.000	95.330	32.44	95.650	47.04	94.480	6.497	94.380	5.003
11	93.950	0.000	93.840	0.000	95.300	31.17	95.200	24.70 *	94.530	6.735	94.320	4.501
12	93.950	0.000	93.840	0.000	95.260	25.81	95.030	18.01	94.760	10.47	94.300	4.255
13	93.950	0.000	93.830	0.000	95.210	24.06	94.950	18.69	95.330	29.92	94.300	4.272 *
14	93.950	0.000	93.830	0.000	95.160	23.25 *	94.880	14.06	95.870	59.05	94.300	4.255
15	93.940	0.000	93.830	0.000	95.130	22.16 *	94.800	11.52	95.850	57.51	94.300	4.255
16	93.910	0.000	93.830	0.000	95.060	19.29	94.760	10.47	95.770	50.96 *	94.290	4.257
17	93.890	0.000	93.820	0.000	95.000	17.49	94.840	12.00	95.710	49.53	94.280	3.995
18	93.890	0.000	93.820	0.000	94.930	15.82 *	94.790	12.07 *	95.650	44.93	94.270	3.996
19	93.890	0.000	93.810	0.000	94.880	14.42 *	94.760	10.47	95.580	42.52	94.270	3.996
20	93.890	0.000	93.800	0.000	94.830	13.08 *	94.730	9.993	95.590	43.05	94.260	11.26 *
21	93.890	0.000	93.800	0.000	94.780	11.82 *	94.700	8.990	95.600	43.47	94.260	11.20
22	93.890	0.000	93.790	0.000	94.740	10.86 *	94.660	8.729	95.540	40.45	94.250	10.91
23	93.890	0.000	93.790	0.000	94.700	9.949 *	94.650	9.440	95.490	36.75 *	94.240	10.55
24	93.890	0.000	93.790	0.000	94.590	7.665 *	94.630	8.490	95.440	34.48 *	94.220	9.493
25	93.890	0.000	93.740	0.000	94.470	5.546 *	94.620	8.255 *	95.390	33.02	94.210	9.493
26	93.870	0.000	93.730	0.000	94.350	3.801 *	94.610	8.000	95.310	29.01	94.270	11.65 #
27	93.890	0.000	93.730	0.000	94.250	2.622 *	94.600	8.003	95.210	25.00	94.280	12.05 *
28	93.870	0.000	93.730	0.000	94.240	2.517 *	94.590	7.503	95.100	20.48	94.260	11.20
29	93.860	0.000	93.730	0.000	94.900	14.97	94.570	7.251	94.940	15.52	94.250	10.95
30	93.850	0.000	93.820	0.000	95.350	30.60	94.560	6.984	94.820	12.82 *	94.250	10.92
31			93.820	0.000	96.390	91.94 *			94.670	9.018		
Ten-Daily Mean												
I Ten-Daily	93.912	0.510	93.846	0.000	95.339	35.73	96.233	86.07	94.588	7.791	94.442	5.826
II Ten-Daily	93.921	0.000	93.825	0.000	95.076	20.65	94.874	14.20	95.464	39.47	94.289	4.904
III Ten-Daily	93.881	0.000	93.770	0.000	94.796	17.48	94.619	8.164	95.228	27.28	94.249	10.84
Monthly												
Min.	93.690	0.000	93.730	0.000	93.820	0.000	94.560	6.984	94.480	5.708	94.210	3.995
Max.	94.190	2.029	93.850	0.000	96.390	91.94	97.640	184.9	95.870	59.05	94.550	12.05
Mean	93.905	0.17	93.812	0	95.062	24.39	95.242	36.15	95.098	24.92	94.327	7.191

Annual Runoff in MCM = 272 Annual Runoff in mm = 105

Peak Observed Discharge = 184.9 cumecs on 06-09-2022 Corres. Water Level :97.64 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :93.83 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 2022 - 2023

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	94.230	10.24	94.070	4.263 *	94.010	2.551	93.820	0.000	93.650	0.000	93.450	0.000
2	94.210	9.509	94.050	3.552	94.010	2.607	93.820	0.000	93.650	0.000	93.450	0.000
3	94.200	8.887	94.040	3.293	94.000	2.410	93.840	0.000	93.630	0.000	93.450	0.000
4	94.200	9.031 *	93.980	1.596	94.000	2.427	93.840	0.000	93.630	0.000	93.460	0.000
5	94.200	8.857	93.950	1.295	94.000	2.260 *	93.840	0.000	93.630	0.000	93.460	0.000
6	94.180	8.305	93.930	0.800	93.970	1.260	93.830	0.000	93.610	0.000	93.460	0.000
7	94.160	7.733	93.930	0.804	93.940	1.049	93.820	0.000	93.600	0.000	93.470	0.000
8	94.160	7.733	93.930	0.937 *	93.920	0.885	93.820	0.000	93.580	0.000	93.460	0.000
9	94.140	7.050	93.930	0.801	93.920	0.892	93.800	0.000	93.580	0.000	93.460	0.000
10	94.140	7.048	93.930	0.806	93.920	0.894	93.790	0.000	93.570	0.000	93.450	0.000
11	94.170	8.007 *	93.930	0.801	93.920	0.886	93.780	0.000	93.570	0.000	93.450	0.000
12	94.280	3.983	93.920	0.765	93.920	0.800 *	93.760	0.000	93.570	0.000	93.450	0.000
13	94.350	4.999	93.920	0.765	93.910	0.844	93.750	0.000	93.570	0.000	93.450	0.000
14	94.380	5.252	93.940	0.866	93.910	0.837	93.750	0.000	93.570	0.000	93.460	0.000
15	94.410	5.497	93.930	0.937 *	93.900	0.672	93.750	0.000	93.550	0.000	93.460	0.000
16	94.410	5.497	93.920	0.769	93.880	0.000	93.750	0.000	93.550	0.000	93.460	0.000
17	94.390	5.266	93.910	0.698	93.870	0.000	93.740	0.000	93.550	0.000	93.470	0.000
18	94.350	4.817 *	93.910	0.688	93.870	0.000	93.740	0.000	93.540	0.000	93.480	0.000
19	94.330	4.498	93.950	1.314	93.860	0.000	93.730	0.000	93.530	0.000	93.480	0.000
20	94.300	4.269	93.960	1.376	93.860	0.000	93.730	0.000	93.530	0.000	93.480	0.000
21	94.280	14.90 #	93.960	1.388	93.860	0.000	93.730	0.000	93.510	0.000	93.480	0.000
22	94.250	11.76	94.050	3.618 *	93.840	0.000	93.730	0.000	93.500	0.000	93.490	0.000
23	94.230	10.93	94.050	3.614	93.840	0.000	93.720	0.000	93.500	0.000	93.490	0.000
24	94.200	9.951	94.040	3.319	93.840	0.000	93.720	0.000	93.500	0.000	93.490	0.000
25	94.180	8.926 *	94.030	3.142	93.830	0.000	93.710	0.000	93.480	0.000	93.480	0.000
26	94.140	8.060	94.030	3.031 *	93.830	0.000	93.710	0.000	93.470	0.000	93.480	0.000
27	94.130	7.729	94.020	2.746	93.830	0.000	93.680	0.000	93.470	0.000	93.480	0.000
28	94.120	7.364	94.020	2.737	93.820	0.000	93.670	0.000	93.470	0.000	93.480	0.000
29	94.110	6.926	94.020	2.760 *			93.670	0.000	93.450	0.000	93.480	0.000
30	94.100	4.709	94.010	2.548			93.670	0.000	93.450	0.000	93.480	0.000
31	94.090	4.307	94.010	2.454			93.660	0.000			93.480	0.000
<u>Ten-Daily Mean</u>												
I Ten-Daily	94.182	8.440	93.974	1.815	93.969	1.724	93.822	0.000	93.613	0.000	93.457	0.000
II Ten-Daily	94.337	5.209	93.929	0.898	93.890	0.404	93.748	0.000	93.553	0.000	93.464	0.000
III Ten-Daily	94.166	8.688	94.022	2.851	93.836	0.000	93.697	0.000	93.480	0.000	93.483	0.000
<u>Monthly</u>												
Min.	94.090	3.983	93.910	0.688	93.820	0.000	93.660	0.000	93.450	0.000	93.450	0.000
Max.	94.410	14.90	94.070	4.263	94.010	2.607	93.840	0.000	93.650	0.000	93.490	0.000
Mean	94.226	7.485	93.976	1.887	93.903	0.76	93.754	0	93.549	0	93.468	0

Peak Computed Discharge = 91.94 cumecs on 31-08-2022

Corres. Water Level :96.39 m

Lowest Computed Discharge = 0.800 cumecs on 12-02-2023

Corres. Water Level :93.92 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 : 2022-2023

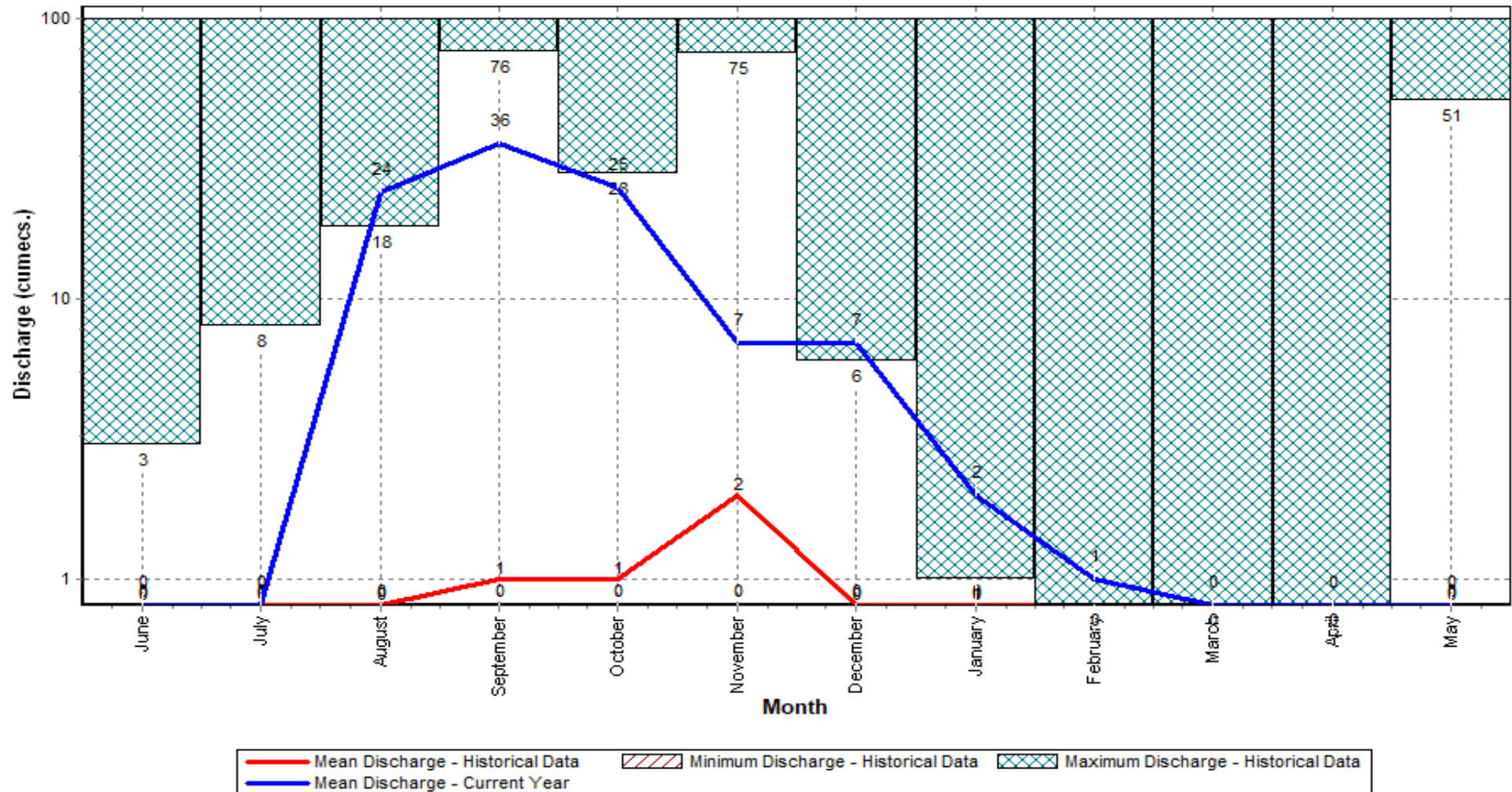
Station Name : HOOVINAHOLE (HOOVINAHOLE)

Data considered : 2002-2023

Division : Cauvery Division, Bangalore

Local River : Suvarnamukhi

Sub-Division : Upper Tunga SD, Devangere



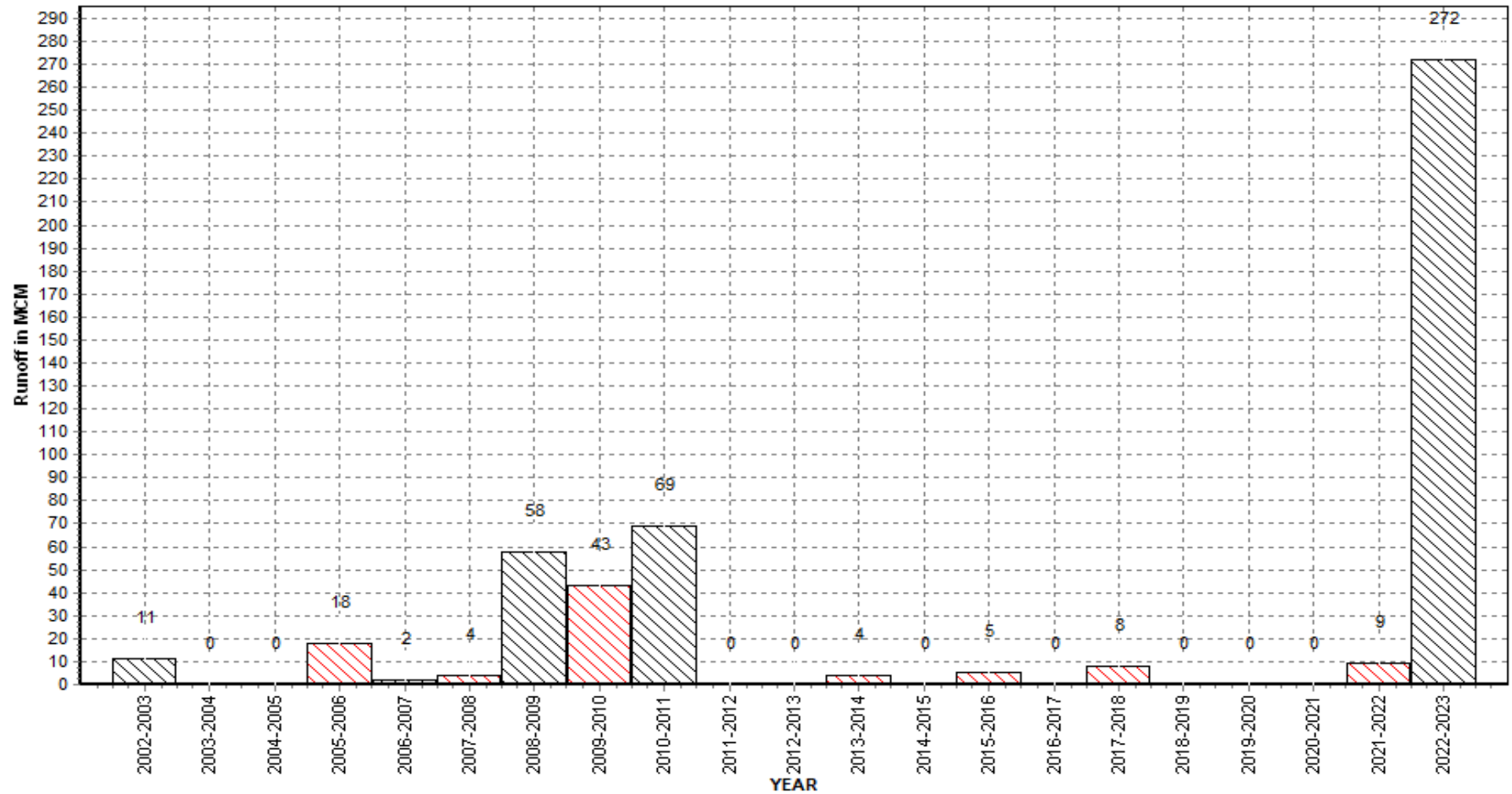
Annual Runoff Values for the period: 2002 - 2023

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

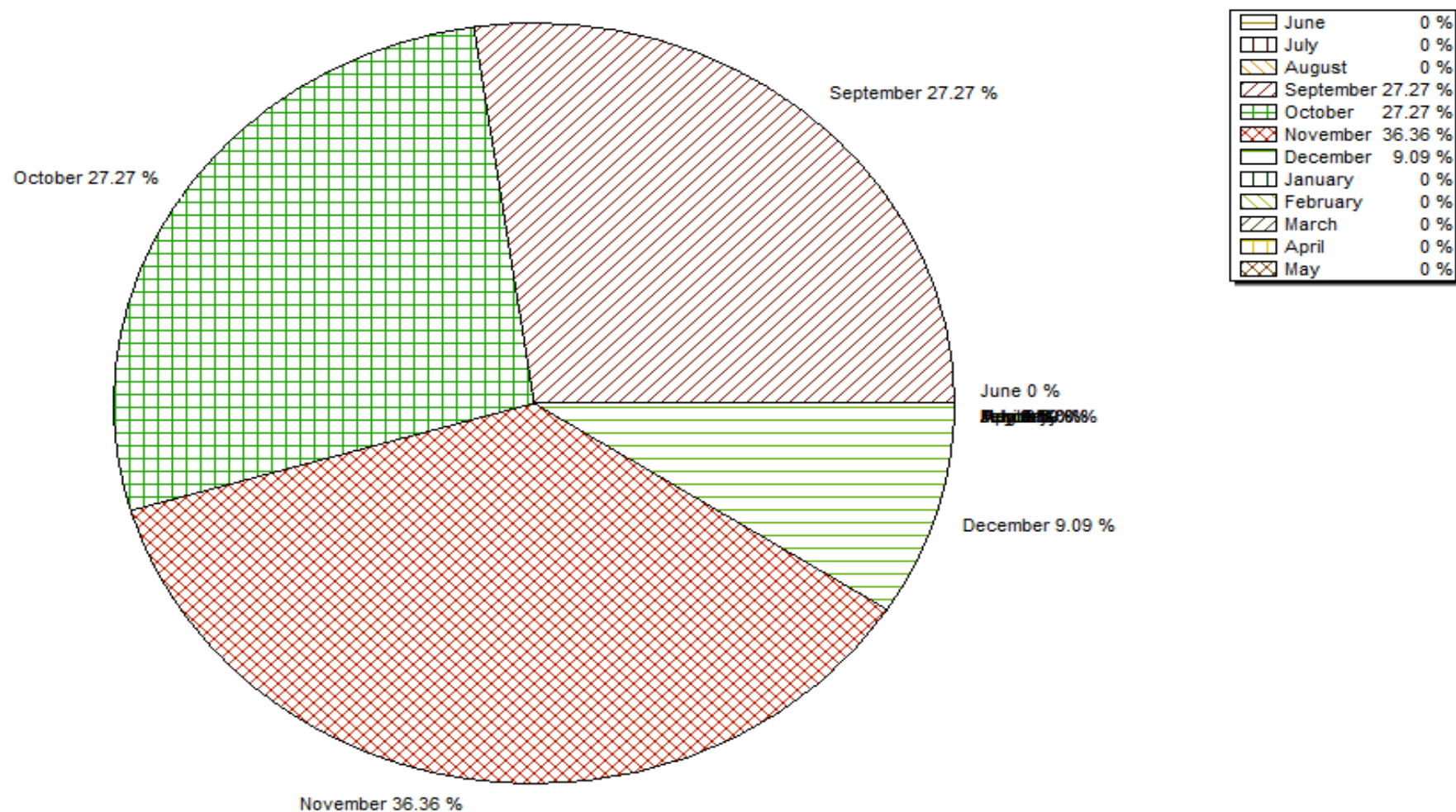
Monthly Average Runoff based on period : 2002-2022

Station Name : HOOVINAHOLE (HOOVINAHOLE)

Local River : Suvarnamukhi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



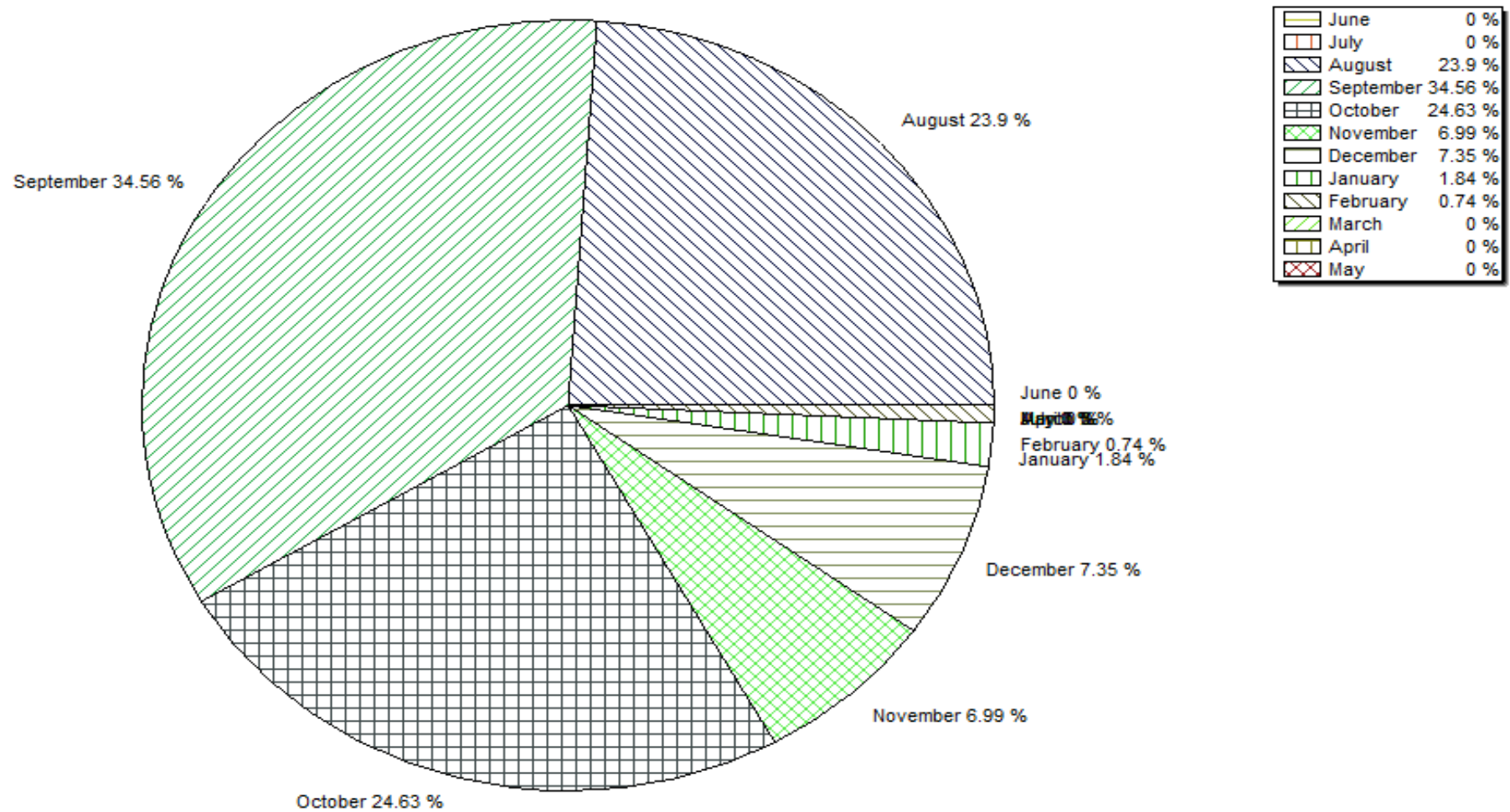
Monthly Runoff for the Year : 2022-2023

Station Name : HOOVINAHOLE (HOOVINAHOLE)

Local River : Suvarnamukhi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



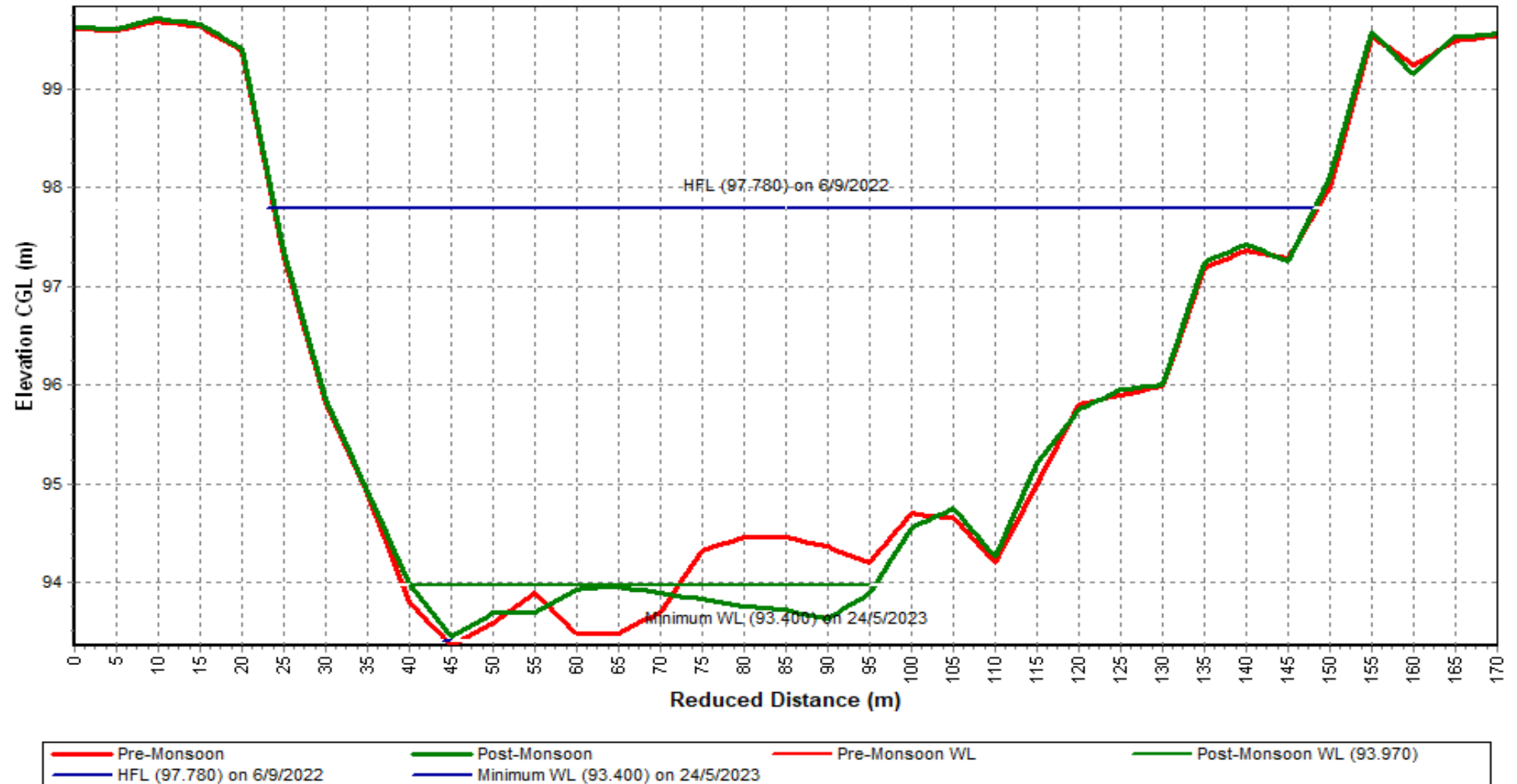
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : HOOVINAHOLE (HOOVINAHOLE)

Local River : Suvarnamukhi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



Zero of the Gauge: 93.5 (m.s.l)

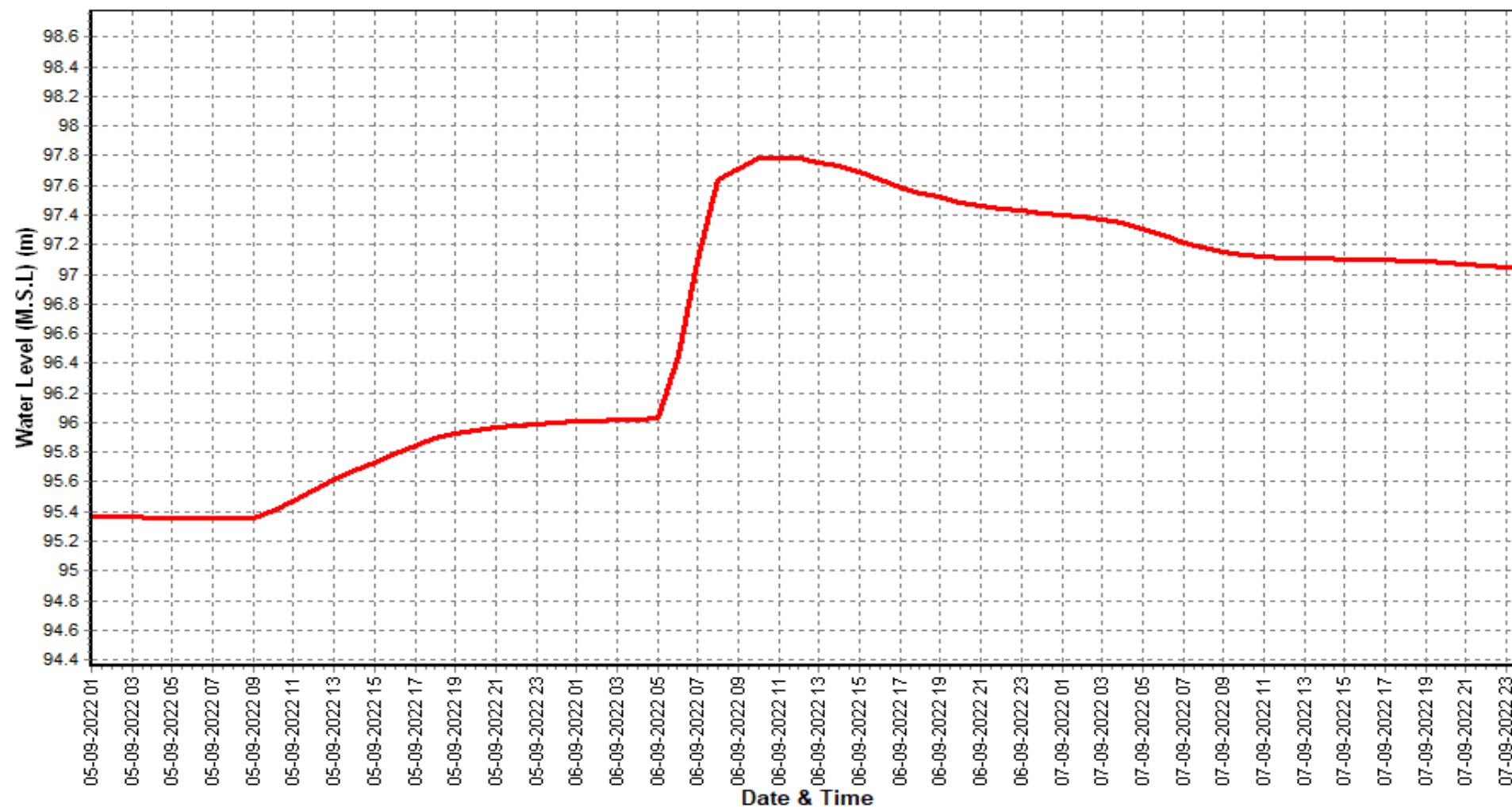
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : HOOVINAHOLE (HOOVINAHOLE)

Local River : Suvarnamukhi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



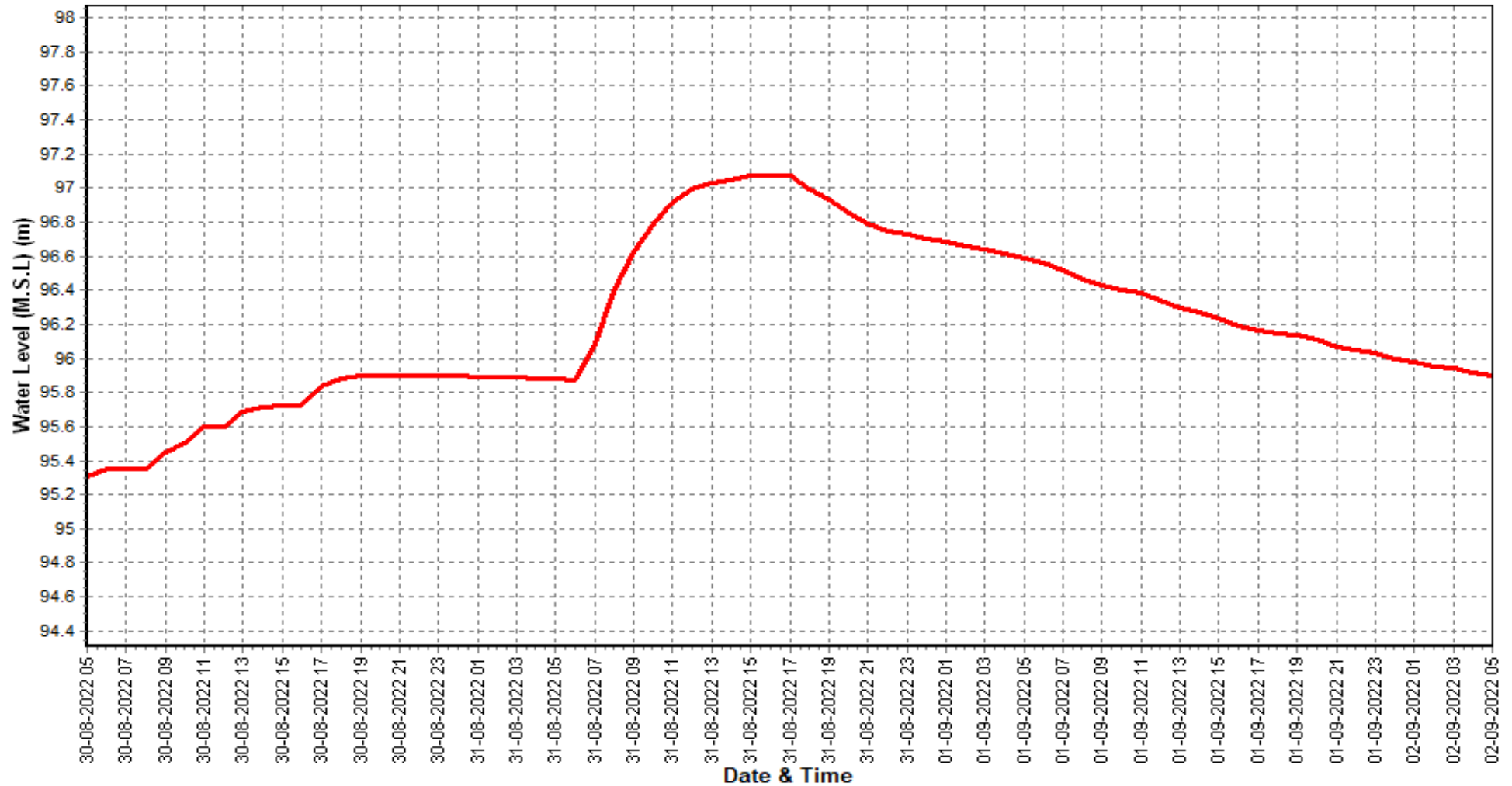
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : HOOVINAHOLE (HOOVINAHOLE)

Local River : Suvarnamukhi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



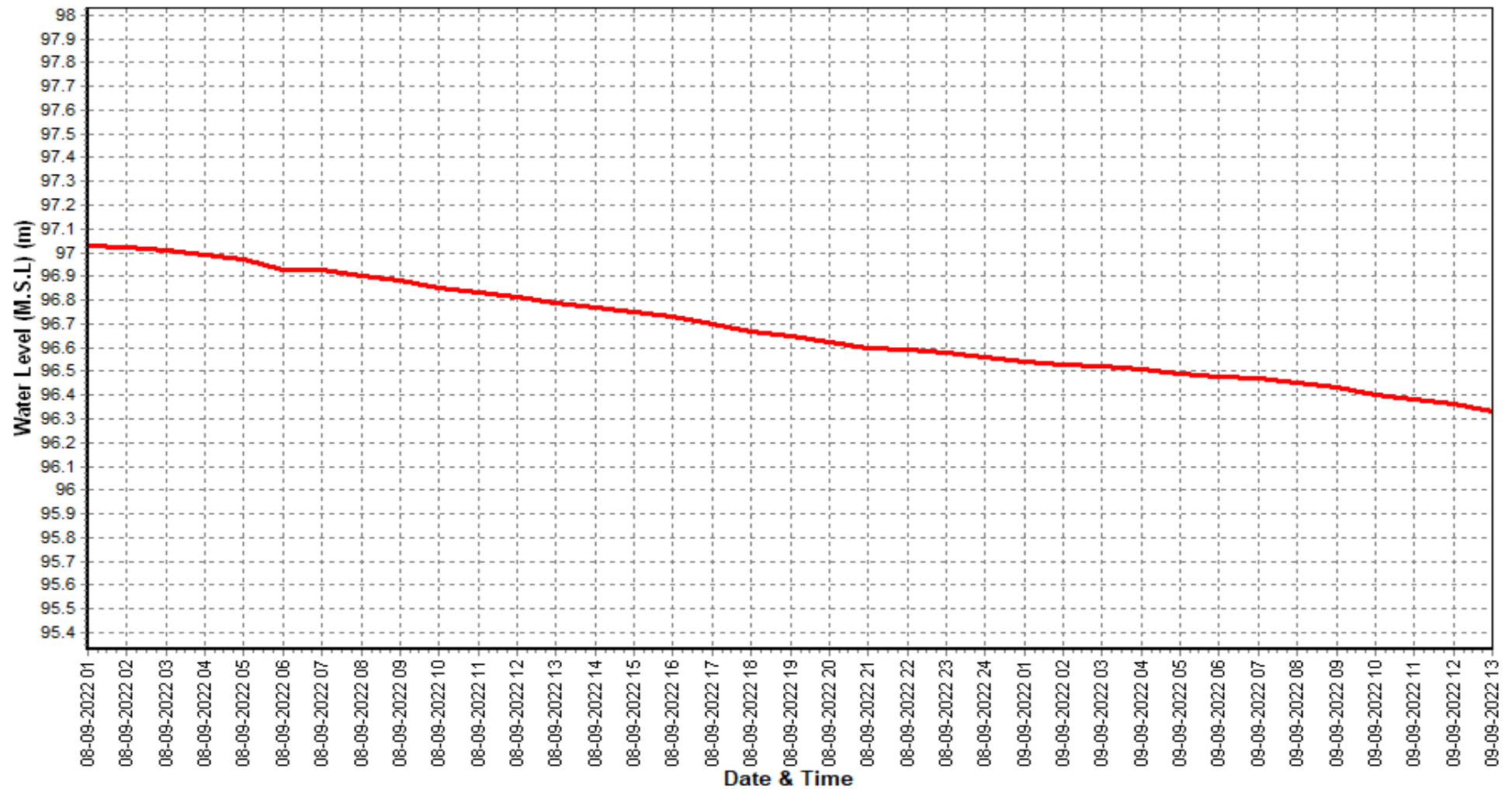
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : HOOVINAHOLE (HOOVINAHOLE)

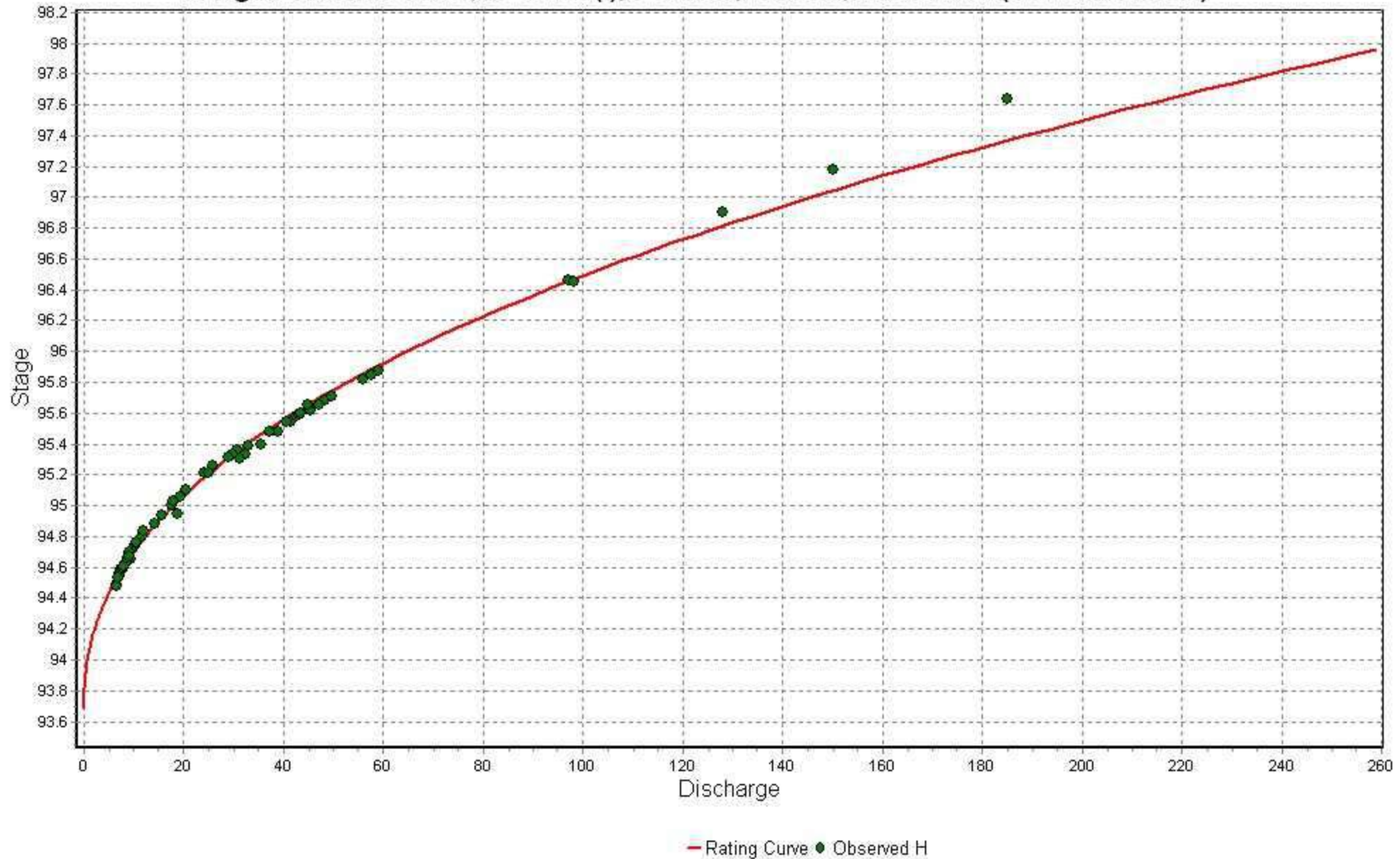
Local River : Suvarnamukhi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga SD, Devangere



S-D curve of site Hoovinahole for the period from 01.06.2022 to 31.10.2022
Range:- 93.69 to 98.00,a= -93.69(f),b= 2.261,c=9.728,OSE= 5.872(No. of data= 62)



HISTORY SHEET

Water Year : 2022-2023

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) : 644.75 (m.s.l)

01-06-2010

Opening Date

Closing Date

Gauge : 01-06-1990

Discharge : 11-07-1990

Water Quality : 01-07-1994

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1991-1992	29.82	99.970	17-09-1991	0.000		01-04-1992
1992-1993	576.6	102.880	17-11-1992	0.250	98.920	15-04-1993
1993-1994	253.0	101.870	22-10-1993	0.000	98.920	27-03-1994
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	98.610	27-01-2001
2001-2002	52.49	99.250	19-09-2001	0.000		11-04-2002
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		21-01-2004
2004-2005	0.000		04-10-2004	0.000		25-01-2005
2005-2006	53.52	99.540	17-07-2005	0.000	97.540	06-03-2006
2006-2007	2.310	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	646.720	26-03-2011
2011-2012	48.55	647.830	15-10-2011	0.000		26-01-2012
2012-2013	11.56	647.060	01-10-2012	0.000		25-01-2013

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2013-2014	4.720	647.290	17-09-2013	0.000		25-01-2014
2014-2015	128.9	649.540	27-10-2014	0.000	646.100	09-12-2014
2015-2016	77.90	648.390	03-11-2015	0.000	646.310	11-01-2016
2016-2017	0.000		04-10-2016	0.000		25-01-2017
2017-2018	299.0	650.570	01-07-2017	0.000	0.000	25-01-2018
2018-2019	6.060	647.100	20-08-2018	0.000		25-01-2019
2019-2020	1118	653.060	22-10-2019	0.000		10-05-2020
2020-2021	84.28	649.090	07-05-2021	0.000	646.390	13-03-2021
2021-2022	108.2	650.160	20-11-2021	0.000	649.630	11-04-2022

Annual Runoff of Vedavathi at Kellodu

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1990-1991	10	5	15	0	0	1
2	1991-1992	36	13	49	1	0	2
3	1992-1993	131	157	288	5	6	10
4	1993-1994	199	32	231	7	1	8
5	1994-1995	144	48	192	5	2	7
6	1995-1996	26	7	33	1	0	1
7	1996-1997	42	3	46	1	0	2
8	1997-1998	27	39	66	1	1	2
9	1998-1999	51	15	67	2	1	2
10	1999-2000	233	32	265	8	1	9
11	2000-2001	367	78	444	13	3	16
12	2001-2002	21	5	26	1	0	1
13	2002-2003	8	2	10	0	0	0
14	2003-2004	10	0	10	0	0	0
15	2004-2005	0	0	0	0	0	0
16	2005-2006	45	5	50	2	0	2
17	2006-2007	1	1	1	0	0	0
18	2007-2008	1	0	1	0	0	0
19	2008-2009	15	7	21	1	0	1
20	2009-2010	64	7	71	2	0	2
21	2010-2011	94	210	305	3	7	11
22	2011-2012	6	1	7	0	0	0
23	2012-2013	1	0	1	0	0	0
24	2013-2014	2	0	2	0	0	0
25	2014-2015	62	7	69	2	0	2
26	2015-2016	38	31	69	1	1	2
27	2016-2017	0	0	0	0	0	0
28	2017-2018	30	0	30	1	0	1
29	2018-2019	2	0	2	0	0	0
30	2019-2020	288	206	494	10	7	17
31	2020-2021	132	160	292	5	6	10
32	2021-2022	346	82	428	12	3	15
33	2022-2023	0	0	0	0	0	0
Average		76	36	112	3	1	4

Instantaneous Flood Peak of Krishna at Kllodu					
Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1990-1991	100.450	28-10-1990	08:00:00	77 *
2	1991-1992	101.250	17-09-1991	03:00:00	162 *
3	1992-1993	103.150	17-11-1992	10:00:00	551 *
4	1993-1994	102.550	22-10-1993	19:00:00	400 *
5	1994-1995	101.880	27-10-1994	18:00:00	261 *
6	1995-1996	100.430	23-10-1995	11:00:00	76 *
7	1996-1997	100.740	29-09-1996	00:00:00	103 *
8	1997-1998	101.480	28-11-1997	07:00:00	195 *
9	1998-1999	100.070	24-08-1998	01:00:00	54 *
10	1999-2000	102.930	26-10-1999	14:00:00	493 *
11	2000-2001	102.600	23-10-2000	08:00:00	411
12	2001-2002	99.330	19-09-2001	13:00:00	39 *
13	2002-2003	99.600	30-10-2002	13:00:00	40 *
14	2003-2004	99.380	04-10-2003	08:00:00	40
15	2004-2005	Dry Bed			
16	2005-2006	99.54	17-07-2005	13:00:00	54 *
17	2006-2007	649.220	03-11-2006	08:00:00	160 *
18	2007-2008	648.840	24-03-2008	08:00:00	116 *
19	2008-2009	647.910	03-09-2008	08:00:00	48
20	2009-2010	649.110	23-09-2009	16:00:00	146 *
21	2010-2011	650.400	13-11-2010	18:30:00	356 *
22	2011-2012	647.770	15-10-2011	13:00:00	43 *
23	2012-2013	647.070	01-10-2012	08:00:00	35 *
24	2013-2014	647.310	17-09-2013	00:00:00	34 *
25	2014-2015	650.490	27-10-2014	13:00:00	375 *
26	2015-2016	648.980	03-11-2015	06:00:00	131 *
27	2016-2017	Dry Bed			
28	2017-2018	647.260	01-07-2017	04:00:00	34 *
29	2018-2019	647.410	20-08-2018	19:00:00	35 *
30	2019-2020	653.210	22-10-2019	14:00:00	1187 *
31	2020-2021	648.200	09-09-2020	20:00:00	63 *
32	2021-2022	650.570	20-11-2021	18:00:00	122 *
33	2022-2023	653.990	No Flow		

Stage-Discharge Data for the period 2022 - 2023

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	649.290	0.00	649.460	0.00	649.890	0.00	651.900	0.00	652.690	0.00	652.760	0.00
2	649.290	0.00	649.460	0.00	650.270	0.00	652.010	0.00	652.660	0.00	652.700	0.00
3	649.290	0.00	649.460	0.00	650.290	0.00	652.370	0.00	652.610	0.00	652.640	0.00
4	649.290	0.00	649.460	0.00	650.370	0.00	652.400	0.00	652.540	0.00	652.560	0.00
5	649.290	0.00	649.460	0.00	650.450	0.00	652.390	0.00	652.450	0.00	652.600	0.00
6	649.290	0.00	649.460	0.00	650.530	0.00	652.470	0.00	652.350	0.00	652.600	0.00
7	649.440	0.00	649.450	0.00	650.600	0.00	653.100	0.00	652.270	0.00	652.600	0.00
8	649.440	0.00	649.450	0.00	650.670	0.00	653.670	0.00	652.200	0.00	652.520	0.00
9	649.440	0.00	649.450	0.00	650.730	0.00	653.980	0.00	652.150	0.00	652.480	0.00
10	649.440	0.00	649.450	0.00	650.760	0.00	653.960	0.00	652.160	0.00	652.400	0.00
11	649.440	0.00	649.450	0.00	650.840	0.00	653.900	0.00	652.380	0.00	652.380	0.00
12	649.440	0.00	649.450	0.00	650.920	0.00	653.830	0.00	652.390	0.00	652.360	0.00
13	649.440	0.00	649.450	0.00	651.030	0.00	653.730	0.00	652.390	0.00	652.350	0.00
14	649.440	0.00	649.450	0.00	651.140	0.00	653.650	0.00	652.480	0.00	652.350	0.00
15	649.440	0.00	649.450	0.00	651.250	0.00	653.540	0.00	652.710	0.00	652.350	0.00
16	649.550	0.00	649.480	0.00	651.380	0.00	653.420	0.00	652.900	0.00	652.350	0.00
17	649.480	0.00	649.520	0.00	651.490	0.00	653.300	0.00	652.900	0.00	652.350	0.00
18	649.480	0.00	649.530	0.00	651.610	0.00	653.180	0.00	652.930	0.00	652.320	0.00
19	649.480	0.00	649.560	0.00	651.720	0.00	653.080	0.00	652.960	0.00	652.250	0.00
20	649.480	0.00	649.580	0.00	651.830	0.00	652.970	0.00	652.990	0.00	652.170	0.00
21	649.480	0.00	649.600	0.00	651.900	0.00	652.850	0.00	653.090	0.00	652.100	0.00
22	649.480	0.00	649.610	0.00	651.950	0.00	652.760	0.00	653.150	0.00	652.040	0.00
23	649.480	0.00	649.610	0.00	651.950	0.00	652.760	0.00	653.150	0.00	651.990	0.00
24	649.480	0.00	649.720	0.00	651.470	0.00	652.760	0.00	653.180	0.00	651.960	0.00
25	649.480	0.00	649.790	0.00	651.420	0.00	652.760	0.00	653.180	0.00	651.920	0.00
26	649.470	0.00	649.820	0.00	651.420	0.00	652.750	0.00	653.180	0.00	651.920	0.00
27	649.470	0.00	649.850	0.00	651.420	0.00	652.750	0.00	653.180	0.00	651.920	0.00
28	649.470	0.00	649.860	0.00	651.420	0.00	652.750	0.00	653.100	0.00	651.920	0.00
29	649.460	0.00	649.860	0.00	651.420	0.00	652.710	0.00	653.010	0.00	651.920	0.00
30	649.460	0.00	649.860	0.00	651.420	0.00	652.710	0.00	652.890	0.00	651.920	0.00
31			649.870	0.00	651.810	0.00			652.790	0.00		
<u>Ten-Daily Mean</u>												
I Ten-Daily	649.350		649.456		650.456		652.825		652.408		652.586	
II Ten-Daily	649.467		649.492		651.321		653.460		652.703		652.323	
III Ten-Daily	649.474		649.768		651.600		652.756		653.082		651.961	
<u>Monthly</u>												
Min.	649.290		649.450		649.890		651.900		652.150		651.920	
Max.	649.550		649.870		651.950		653.980		653.180		652.760	
Mean	649.430		649.578		651.141		653.014		652.742		652.290	

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

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 2022 - 2023

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	651.750	0.00	652.040	0.00	651.990	0.00	651.470	0.00	651.240	0.00	650.670	0.00
2	651.750	0.00	652.040	0.00	651.990	0.00	651.450	0.00	651.210	0.00	650.670	0.00
3	651.750	0.00	652.040	0.00	651.970	0.00	651.420	0.00	651.210	0.00	650.650	0.00
4	651.750	0.00	652.040	0.00	651.970	0.00	651.410	0.00	651.190	0.00	650.650	0.00
5	651.750	0.00	652.040	0.00	651.970	0.00	651.380	0.00	651.190	0.00	650.650	0.00
6	651.750	0.00	652.090	0.00	651.960	0.00	651.360	0.00	651.170	0.00	650.620	0.00
7	651.750	0.00	652.090	0.00	651.960	0.00	651.350	0.00	651.150	0.00	650.610	0.00
8	651.750	0.00	652.090	0.00	651.940	0.00	651.330	0.00	651.140	0.00	650.610	0.00
9	651.750	0.00	652.090	0.00	651.930	0.00	651.330	0.00	651.130	0.00	650.590	0.00
10	651.750	0.00	652.090	0.00	651.910	0.00	651.330	0.00	651.130	0.00	650.590	0.00
11	651.750	0.00	652.090	0.00	651.890	0.00	651.330	0.00	651.110	0.00	650.590	0.00
12	652.040	0.00	652.090	0.00	651.860	0.00	651.330	0.00	651.110	0.00	650.650	0.00
13	652.080	0.00	652.090	0.00	651.820	0.00	651.330	0.00	651.110	0.00	650.650	0.00
14	652.080	0.00	652.090	0.00	651.760	0.00	651.330	0.00	651.080	0.00	650.650	0.00
15	652.180	0.00	652.090	0.00	652.420	0.00	651.330	0.00	651.060	0.00	650.650	0.00
16	652.200	0.00	652.090	0.00	652.050	0.00	651.320	0.00	651.050	0.00	650.640	0.00
17	652.190	0.00	652.090	0.00	651.910	0.00	651.320	0.00	651.040	0.00	650.640	0.00
18	652.190	0.00	652.070	0.00	651.850	0.00	651.320	0.00	651.040	0.00	650.630	0.00
19	652.190	0.00	652.070	0.00	651.800	0.00	651.320	0.00	650.910	0.00	650.630	0.00
20	652.190	0.00	652.060	0.00	651.760	0.00	651.310	0.00	650.750	0.00	650.610	0.00
21	652.190	0.00	652.040	0.00	651.680	0.00	651.310	0.00	650.740	0.00	650.600	0.00
22	652.140	0.00	652.030	0.00	651.630	0.00	651.310	0.00	650.740	0.00	650.580	0.00
23	652.110	0.00	652.010	0.00	651.580	0.00	651.310	0.00	650.740	0.00	650.560	0.00
24	652.090	0.00	652.010	0.00	651.570	0.00	651.300	0.00	650.730	0.00	650.550	0.00
25	652.070	0.00	652.010	0.00	651.560	0.00	651.280	0.00	650.730	0.00	650.550	0.00
26	652.040	0.00	652.010	0.00	651.550	0.00	651.260	0.00	650.720	0.00	650.530	0.00
27	652.040	0.00	652.010	0.00	651.520	0.00	651.260	0.00	650.720	0.00	650.510	0.00
28	652.040	0.00	652.010	0.00	651.500	0.00	651.260	0.00	650.700	0.00	650.510	0.00
29	652.040	0.00	652.010	0.00			651.260	0.00	650.680	0.00	650.500	0.00
30	652.040	0.00	652.000	0.00			651.260	0.00	650.680	0.00	650.480	0.00
31	652.040	0.00	652.000	0.00			651.260	0.00			650.460	0.00
Ten-Daily Mean												
I Ten-Daily	651.750		652.065		651.959		651.383		651.176		650.631	
II Ten-Daily	652.109		652.083		651.912		651.324		651.026		650.634	
III Ten-Daily	652.076		652.013		651.574		651.279		650.718		650.530	
Monthly												
Min.	651.750		652.000		651.500		651.260		650.680		650.460	
Max.	652.200		652.090		652.420		651.470		651.240		650.670	
Mean	651.982		652.052		651.832		651.327		650.973		650.596	

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 : 2022-2023

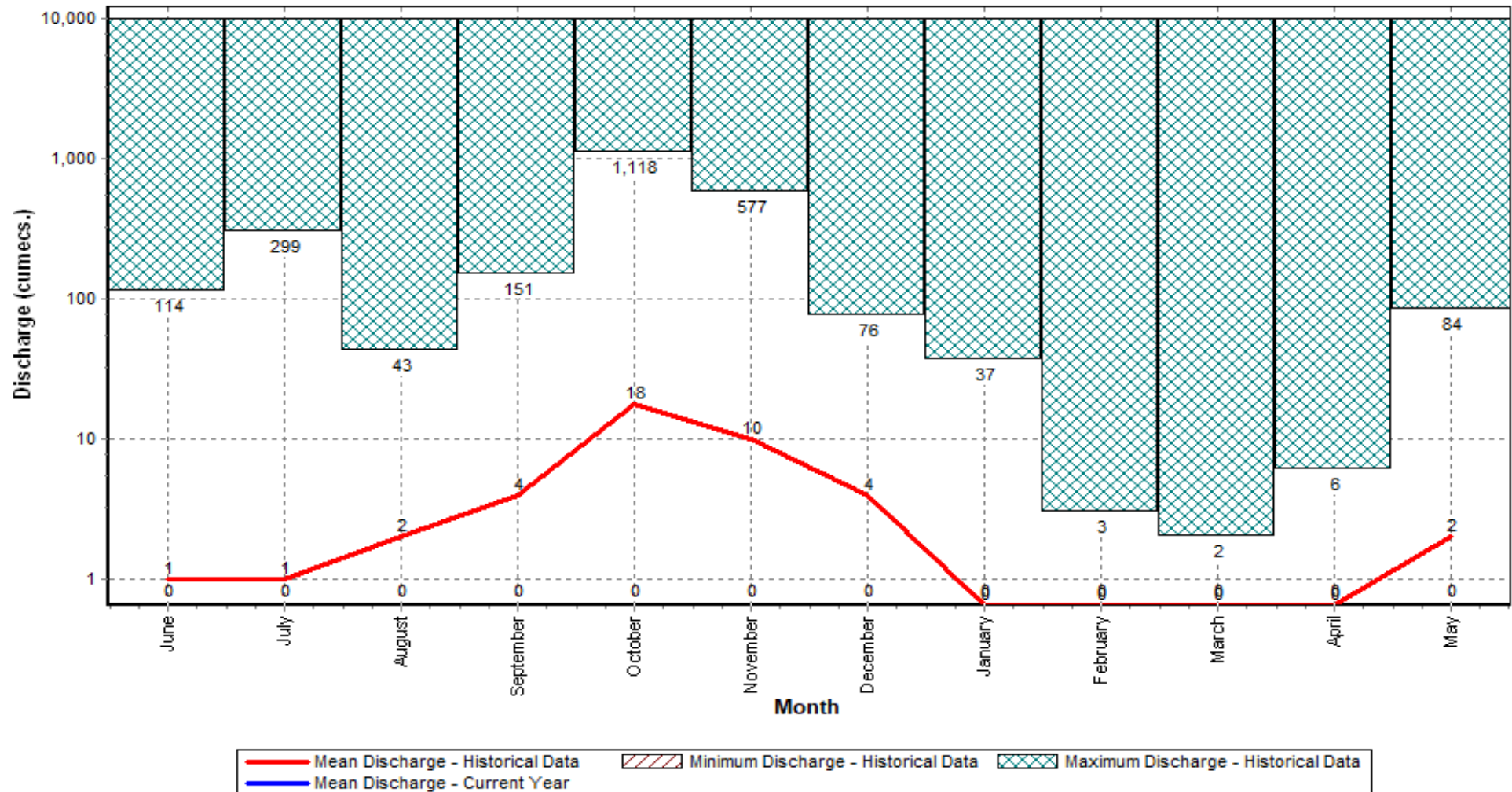
Station Name : KELLODU (AKL50T9)

Data considered : 1991-2023

Division : Cauvery Division, Bangalore

Local River : Vedavathi

Sub-Division : Upper Tunga Subdn, Devangere



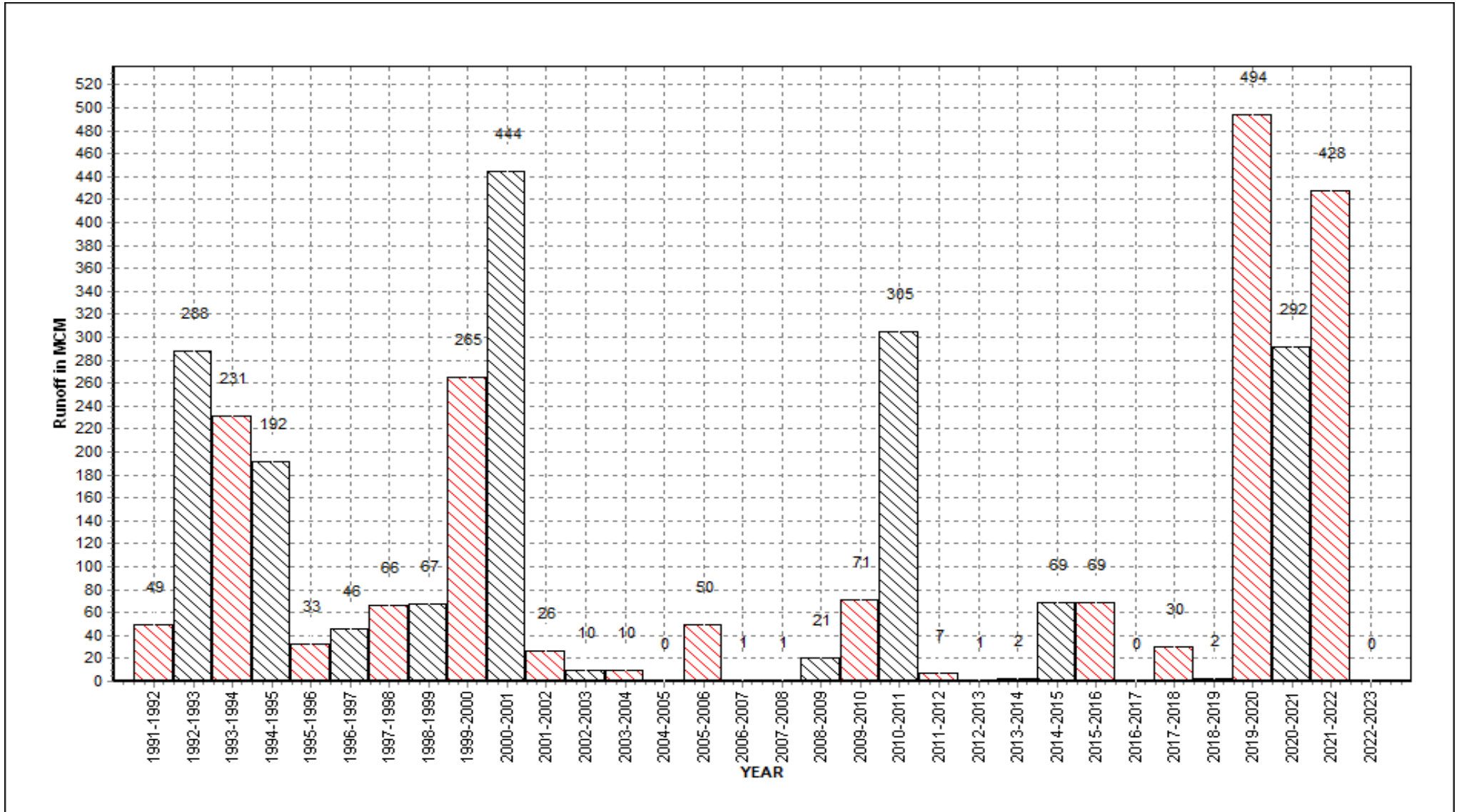
Annual Runoff Values for the period: 1991 - 2023

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

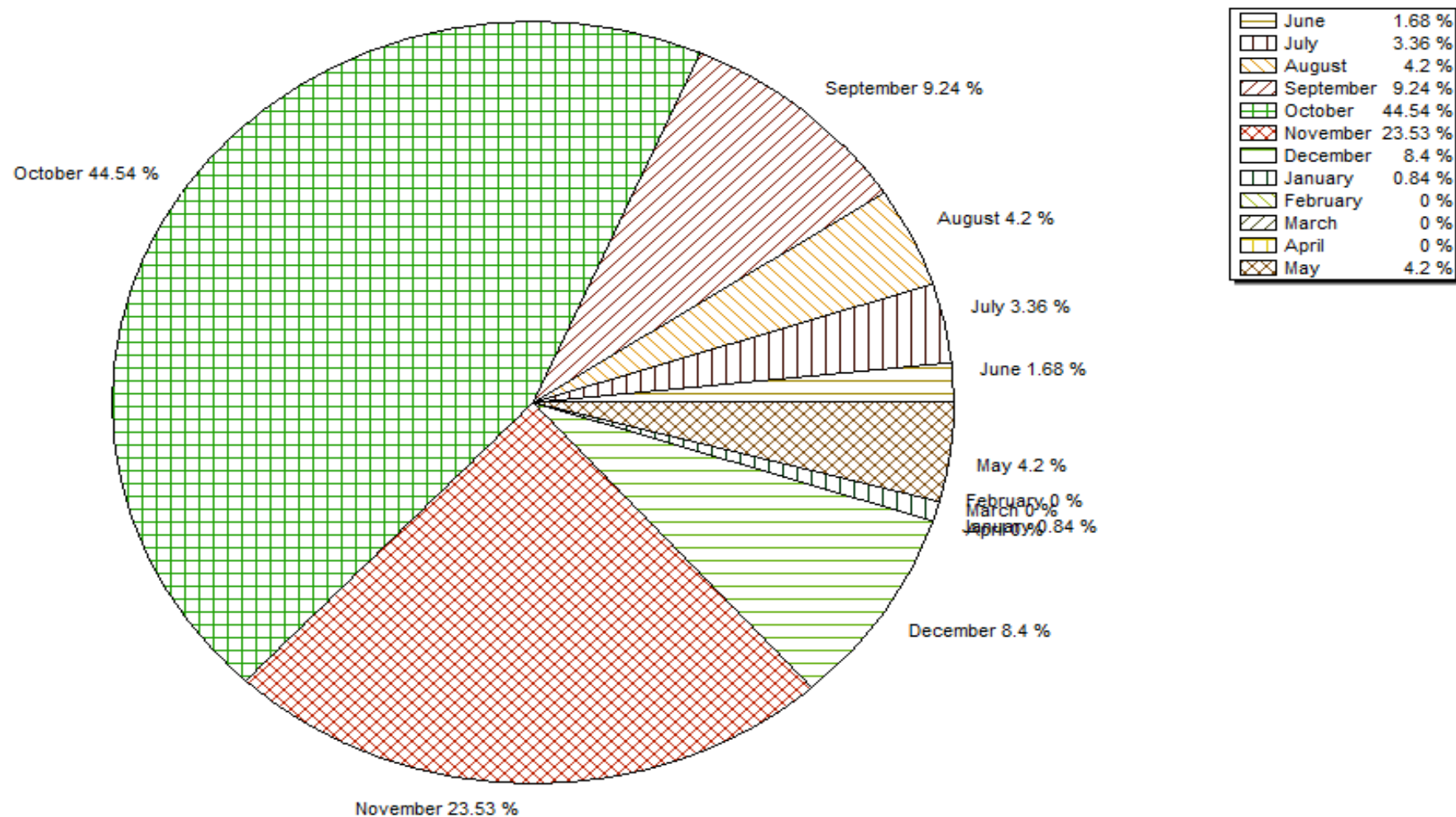
Monthly Average Runoff based on period : 1991-2022

Station Name : KELLODU (AKL50T9)

Local River : Vedavathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



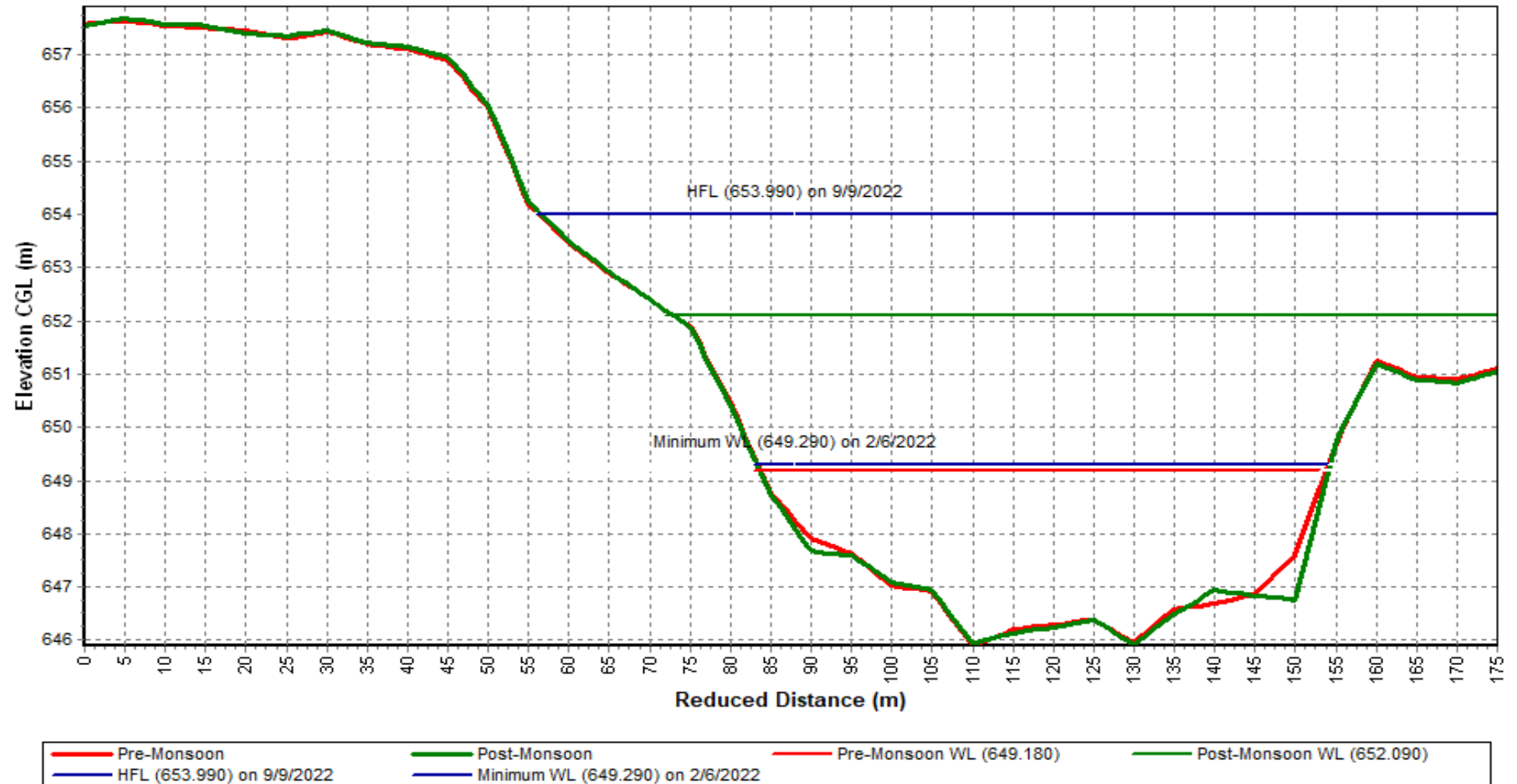
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : KELLODU (AKL50T9)

Local River : Vedavathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



Zero of the Gauge: 644.75 (m.s.l)

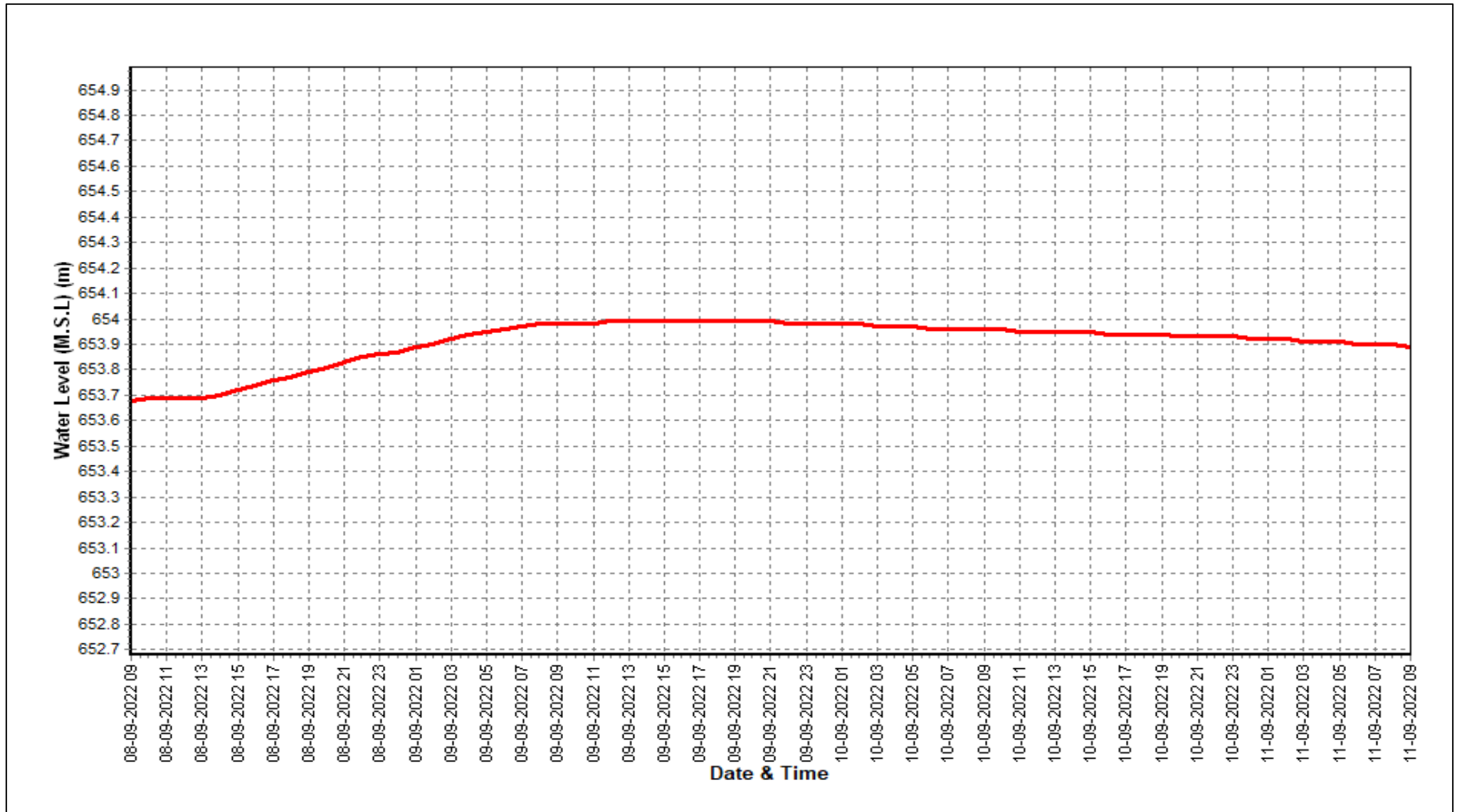
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : KELLODU (AKL50T9)

Local River : Vedavathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



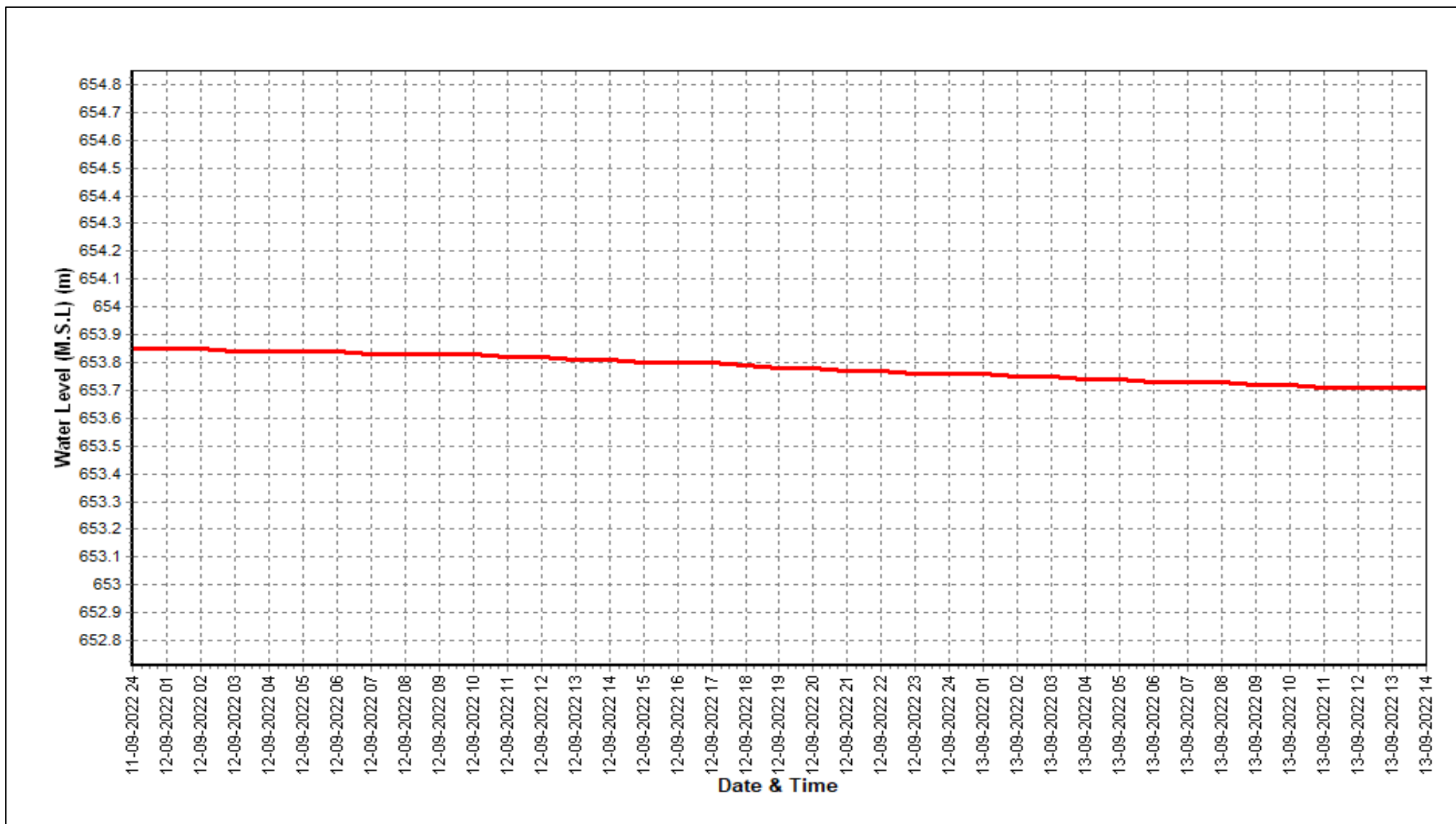
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : KELLODU (AKL50T9)

Local River : Vedavathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



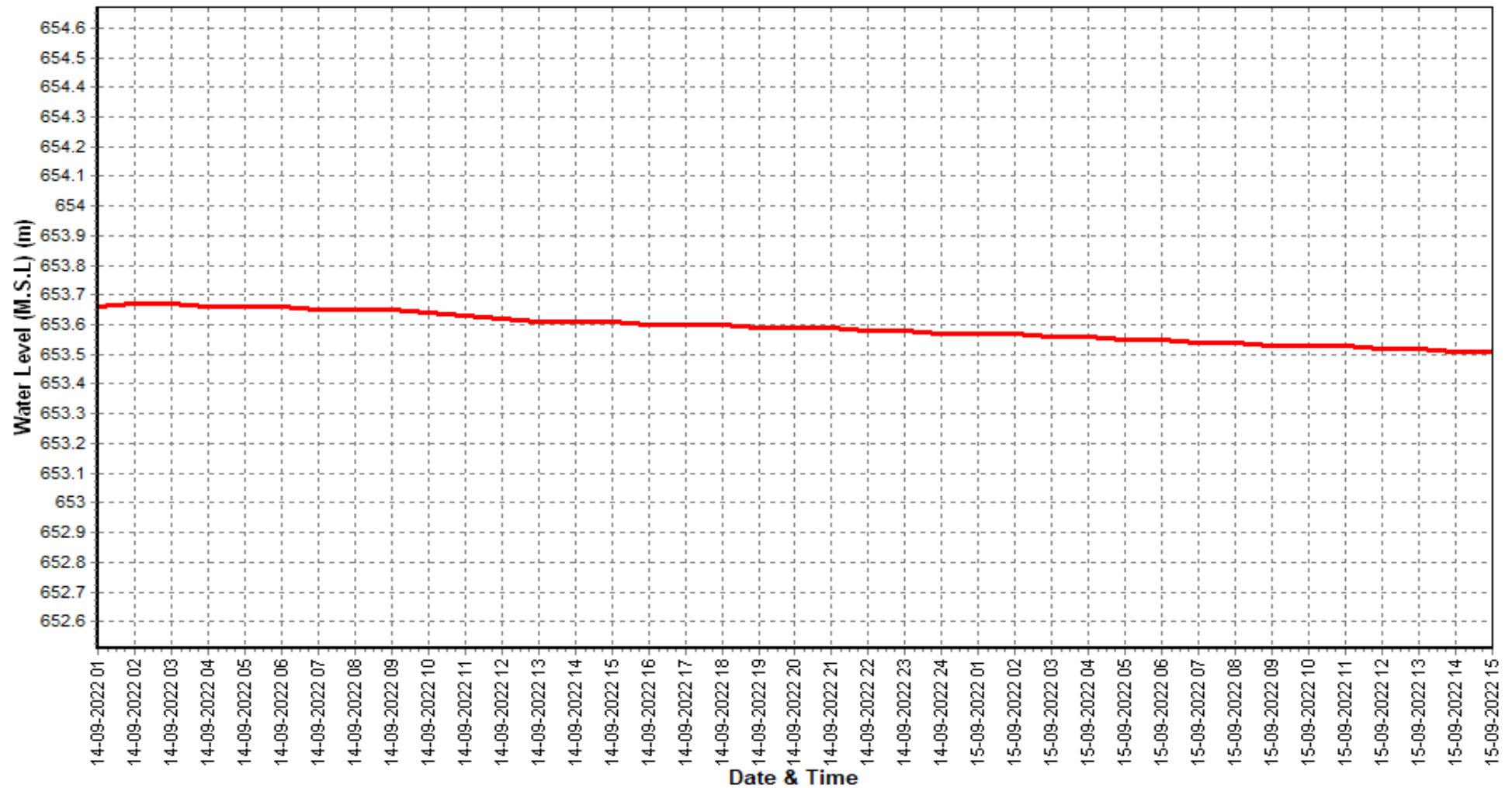
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : KELLODU (AKL50T9)

Local River : Vedavathi

Division : Cauvery Division, Bangalore

Sub-Division : Upper Tunga Subdn, Devangere



HISTORY SHEET

Water Year : 2022-2023

Site : T Ramapuram

Code : AKL50A6

State : Karnataka

District : Bellary

Basin : Krishna

Independent River : Krishna

Tributary : Tungabhadra

Sub Tributary : Hagari

Sub-Sub Tributary : -

Local River : Hagari

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool

Drainage Area : 23500 Sq. Km.

Bank : Right

Latitude : 15°39'40"

Longitude : 76°57'56"

Zero of Gauge (m) : 349.368 (m.s.l)
349.368 (m.s.l)13-07-1963 - 30-04-2019
01-05-2019

Opening Date

Closing Date

Gauge : 13-07-1963

HFL During 2022-23 : 354.488 m

Corres. Discharge : 2735 (Estimated)

Discharge : 23-08-1964

Date & Time of

occurrence : 19:00 Hrs

Water Quality : 01-01-1980

HFL Recorded so far in m : 356.478 dt 02-10-2009

Corresponding Discharge (cumecs) : 3720*

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

Year	Maximum			Minimum		
	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	1603	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1985-1986	144.9	351.228	29-09-1985	0.000	350.018	19-04-1986
1986-1987	905.0	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
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	858.8	352.788	24-08-2010	0.000		31-07-2010
2011-2012	115.8	350.563	31-10-2011	0.000		12-08-2011
2012-2013	221.1	350.963	27-08-2012	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
2016-2017	95.00	350.858	03-06-2016	0.000		27-08-2016
2017-2018	911.8	352.783	13-10-2017	0.000		27-04-2018
2018-2019	183.6	350.878	20-10-2018	0.000		02-04-2019
2019-2020	1026	353.008	25-09-2019	0.000		08-07-2019
2020-2021	516.3	351.748	01-07-2020	0.000		11-04-2021
2021-2022	1441	352.878	22-11-2021	0.000		07-07-2021

Annual Runoff of Hagari at T Ramapuram

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1965-1966		76	76		3	3
2	1966-1967	723	259	983	26	9	35
3	1967-1968	375	90	464	13	3	16
4	1968-1969	940	172	1112	33	6	39
5	1969-1970	543	234	777	19	8	27
6	1970-1971	923	152	1075	33	5	38
7	1971-1972	792	273	1065	28	10	38
8	1972-1973	535	80	614	19	3	22
9	1973-1974	928	150	1078	33	5	38
10	1974-1975	942	160	1102	33	6	39
11	1975-1976	2226	259	2485	79	9	88
12	1976-1977	298	137	435	11	5	15
13	1977-1978	790	148	938	28	5	33
14	1978-1979	939	177	1116	33	6	39
15	1979-1980	645	144	789	23	5	28
16	1980-1981	399	153	552	14	5	20
17	1981-1982	1381	163	1544	49	6	55
18	1982-1983	712	163	876	25	6	31
19	1983-1984	662	116	778	23	4	27
20	1984-1985	355	91	446	13	3	16
21	1985-1986	249	75	324	9	3	11
22	1986-1987	666	88	754	24	3	27
23	1987-1988	653	79	732	23	3	26
24	1988-1989	748	11	759	26	0	27
25	1989-1990	839	86	925	30	3	33
26	1990-1991	338	84	422	12	3	15
27	1991-1992	450	66	516	16	2	18
28	1992-1993	644	149	793	23	5	28
29	1993-1994	444	230	674	16	8	24
30	1994-1995	360	148	508	13	5	18
31	1995-1996	545	58	603	19	2	21
32	1996-1997	1270	121	1390	45	4	49
33	1997-1998	283	109	392	10	4	14
34	1998-1999	1016	94	1110	36	3	39
35	1999-2000	734	84	818	26	3	29
36	2000-2001	901	85	987	32	3	35
37	2001-2002	1263	77	1340	45	3	47
38	2002-2003	235	29	263	8	1	9
39	2003-2004	181	57	238	6	2	8
40	2004-2005	310	45	354	11	2	13
41	2005-2006	957	124	1081	34	4	38
42	2006-2007	461	Site downgraded as Seasonal Site from 2006-07 and again upgraded in 2014 - 15	461	16	Site downgraded as Seasonal Site from 2006-07 and again upgraded in 2014 - 15	16
43	2007-2008	914		914	32		32
44	2008-2009	1017		1017	36		36
45	2009-2010	1766		1766	62		62
46	2010-2011	772		772	27		27
47	2011-2012	289		289	10		10
48	2012-2013	384		384	14		14
49	2013-2014	456		456	16		16

50	2014-2015	425	96	521	15	3	18
51	2015-2016	713	68	781	25	2	28
52	2016-2017	102	0	102	4	0	4
53	2017-2018	716	82	798	25	3	28
54	2018-2019	194	21	216	7	1	8
55	2019-2020	995	136	1131	35	5	40
56	2020-2021	962	176	1138	34	6	40
57	2021-2022	1014	229	1242	36	8	44
58	2022-2023	3324	242	3566	117	9	126
Average		749	118	842	24	4	28

Instantaneous Flood Peak of Hagari at T Ramapuram

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1965-1966	352.583	21-09-1965	21:00:00	790 *
2	1966-1967	353.578	30-11-1966	23:00:00	1374 *
3	1967-1968	353.288	04-10-1967	07:00:00	1186 *
4	1968-1969	353.163	09-10-1968	07:00:00	1108 *
5	1969-1970	352.118	21-10-1969	11:00:00	536 *
6	1970-1971	353.468	20-09-1970	15:00:00	1301 *
7	1971-1972	354.328	14-10-1971	18:00:00	1923 *
8	1972-1973	352.868	17-05-1972	18:00:00	933 *
9	1973-1974	353.548	19-09-1973	09:00:00	1400 *
10	1974-1975	354.108	27-09-1974	22:00:00	1745 *
11	1975-1976	353.268	05-11-1975	13:00:00	1173 *
12	1976-1977	351.548	21-08-1976	23:00:00	282 *
13	1977-1978	352.283	16-06-1977	02:00:00	617 *
14	1978-1979	353.618	30-09-1978	07:00:00	1451 *
15	1979-1980	352.148	28-09-1979	04:00:00	551 *
16	1980-1981	352.378	30-09-1980	00:00:00	666 *
17	1981-1982	354.008	09-10-1981	18:00:00	1672 *
18	1982-1983	353.148	07-11-1982	08:00:00	1070 *
19	1983-1984	353.308	04-10-1983	16:00:00	1199 *
20	1984-1985	351.748	14-07-1984	17:00:00	367 *
21	1985-1986	351.238	29-09-1985	15:00:00	161 *
22	1986-1987	353.068	19-09-1986	20:00:00	1116 *
23	1987-1988	352.938	23-10-1987	08:00:00	973 *
24	1988-1989	353.208	30-08-1988	04:00:00	1136 *
25	1989-1990	353.418	24-09-1989	13:00:00	1269 *
26	1990-1991	351.668	27-05-1990	18:00:00	332 *
27	1991-1992	353.768	06-06-1991	18:00:00	1503 *
28	1992-1993	353.118	19-11-1992	06:00:00	1081 *
29	1993-1994	352.908	10-10-1993	10:00:00	956 *
30	1994-1995	352.538	04-10-1994	10:00:00	749 *
31	1995-1996	352.468	30-08-1995	12:00:00	712 *
32	1996-1997	354.103	03-09-1996	00:00:00	1741 *
33	1997-1998	351.618	11-11-1997	18:00:00	311 *
34	1998-1999	352.818	12-10-1998	11:00:00	904 *
35	1999-2000	352.978	27-09-1999	16:00:00	997 *
36	2000-2001	353.518	09-10-2000	15:00:00	1334 *
37	2001-2002	353.258	17-09-2001	13:00:00	1167 *
38	2002-2003	351.948	14-10-2002	20:00:00	456 *
39	2003-2004	351.578	07-10-2003	14:00:00	295 *
40	2004-2005	351.658	06-09-2004	06:00:00	328 *
41	2005-2006	353.108	05-09-2005	22:00:00	1075 *
42	2006-2007	352.928	04-11-2006	13:00:00	968 *
43	2007-2008	354.408	19-09-2007	11:00:00	1970 *
44	2008-2009	353.458	29-08-2008	08:00:00	1295 *
45	2009-2010	356.478	02-10-2009	01:00:00	3720 *

46	2010-2011	353.988	24-08-2010	19:00:00	1658 *
47	2011-2012	351.038	02-06-2011	13:00:00	193 *
48	2012-2013	351.168	04-09-2012	11:00:00	326 *
49	2013-2014	351.878	04-09-2013	10:00:00	489 *
50	2014-2015	352.158	26-10-2014	08:00:00	648 *
51	2015-2016	353.728	07-09-2015	12:00:00	1498 *
52	2016-2017	350.948	03-06-2016	10:00:00	306 *
53	2017-2018	353.168	13-10-2017	04:00:00	2125 *
54	2018-2019	350.988	20-10-2018	02:00:00	212 *
55	2019-2020	353.168	25-09-2019	11:00:00	2125 *
56	2020-2021	351.748	26-07-2020	06:00:00	487 *
57	2021-2022	352.878	22-11-2021	08:00:00	1441
58	2022-2023	354.488	08-09-2022	19:00:00	2735 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : T Ramapuram (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	349.588	12.82	349.273	2.149	350.168	75.26	350.408	121.8	351.658	589.8	350.798	271.5
2	349.548	9.007	349.243	1.823	350.138	69.54	350.258	82.37	351.638	614.9 *	350.758	257.1
3	349.468	5.611	349.238	1.650 *	352.668	1178	351.148	366.5	351.453	476.8	350.723	238.9
4	349.608	16.78	349.278	2.434	351.328	393.8	351.228	418.5 *	351.078	367.6	350.743	247.8
5	349.648	20.43 *	349.238	1.677	350.748	243.5	351.058	349.7	350.968	310.4 *	350.718	229.5
6	349.868	40.27	349.283	2.487	350.778	258.4	350.758	196.3	350.838	289.4	350.678	206.0 *
7	350.358	125.6	349.408	7.286	350.528	162.7 *	352.818	1209	350.943	322.1	350.668	205.6
8	350.088	70.88	349.378	6.083	350.378	91.52	353.418	1833	351.188	419.0	350.618	186.6 *
9	349.948	50.70	349.378	6.082	350.348	120.6 *	353.698	2093	350.848	265.1 *	350.548	152.1
10	349.868	41.15	349.378	6.000 *	350.318	82.23	352.018	863.2	350.703	224.0	350.528	145.2
11	349.668	20.18	349.338	3.883	350.498	126.1	351.818	710.7 *	350.663	196.2	350.538	148.2
12	349.598	17.15 *	349.308	3.579	350.258	80.62	351.898	778.3	350.938	330.1	350.478	136.9
13	349.548	11.81	349.298	3.386	350.003	55.39	351.068	352.1	351.118	389.7	350.458	138.8 *
14	349.448	7.728	349.288	3.088	349.898	44.56 *	351.318	388.8	352.803	1207	350.448	128.8
15	349.388	5.776	349.253	2.737	349.908	45.80 *	350.978	343.5	352.038	879.7	350.413	110.6
16	349.393	6.850	349.243	1.772	349.923	48.86	351.048	348.4	351.548	569.1 *	350.433	118.0
17	349.338	4.730	349.258	2.700 *	349.908	47.45	350.778	264.9	351.678	591.5	350.328	91.62
18	349.338	4.051	349.258	2.688	349.968	50.91	350.998	322.2 *	352.033	873.4	350.288	94.61
19	349.308	8.362 *	349.218	2.130	349.913	48.63	350.633	181.0	351.908	794.3	350.348	105.4
20	349.293	3.838	349.298	3.672	349.873	44.48	351.038	349.2	351.503	488.2	350.328	104.4 *
21	349.338	4.529	349.438	11.43	349.888	43.35 *	350.803	265.3	351.283	439.5	350.258	88.28
22	349.533	15.77	349.458	12.55	349.808	37.42	350.648	189.0	351.138	389.1	350.238	87.58
23	349.433	11.44	349.408	7.375	349.833	39.85	350.708	219.4	351.448	520.0 *	350.263	89.25
24	349.458	12.36	349.428	9.888 *	350.008	55.77	350.663	199.7	351.638	614.9 *	350.268	89.70
25	349.393	7.081	349.488	14.39	349.898	48.08	350.648	196.2 *	351.473	483.4	350.333	94.24
26	349.438	10.15 *	349.503	15.23	349.883	47.19	350.648	190.7	351.218	430.5	350.263	88.55
27	349.338	4.273	349.548	18.55	349.933	50.90	350.758	249.5	351.138	398.4	350.238	82.95 *
28	349.308	3.819	349.473	13.38	350.448	143.2 *	350.678	204.9	351.048	360.9	350.208	83.25
29	349.268	2.622	349.463	12.70	351.428	474.1	350.708	215.5	350.808	277.9	350.148	76.95
30	349.288	3.056	349.753	31.53	351.058	349.7	351.028	350.7	350.818	254.2 *	350.128	74.38
31			350.758	226.4 *	350.778	232.4 *			350.833	286.4		
<u>Ten-Daily Mean</u>												
I Ten-Daily	349.799	39.32	349.309	3.767	350.740	267.5	351.681	753.4	351.132	387.9	350.678	214.0
II Ten-Daily	349.432	9.048	349.276	2.963	350.015	59.28	351.158	403.9	351.623	631.9	350.406	117.7
III Ten-Daily	349.380	7.509	349.611	33.94	350.269	138.4	350.729	228.1	351.168	405.0	350.234	85.51
<u>Monthly</u>												
Min.	349.268	2.622	349.218	1.650	349.808	37.42	350.258	82.37	350.663	196.2	350.128	74.38
Max.	350.358	125.6	350.758	226.4	352.668	1178	353.698	2093	352.803	1207	350.798	271.5
Mean	349.537	18.63	349.406	14.22	350.339	154.5	351.189	461.8	351.303	472.7	350.440	139.1

Annual Runoff in MCM = 3566 Annual Runoff in mm = 152

Peak Observed Discharge = 2093 cumecs on 09-09-2022 Corres. Water Level :353.698 m

Lowest Observed Discharge = 0.000 cumecs on 20-04-2023

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 2022 - 2023

Station Name : T Ramapuram (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	350.098	64.43 #	349.768	32.49 *	349.578	19.17	349.348	7.049	349.168	2.194	Dry Bed	0.000
2	350.078	62.17 #	349.818	39.08	349.573	18.78	349.378	8.167	349.238	4.055 *		0.000
3	350.023	56.19 #	349.708	27.71	349.523	16.24	349.358	8.372	349.128	1.322		0.000
4	349.918	45.64 *	349.638	22.51	349.563	18.21	349.323	5.846	349.208	3.269 *		0.000
5	349.788	34.11 #	349.608	21.25	349.558	17.89 *	349.318	6.575 *	349.128	1.284		0.000
6	349.743	31.46	349.598	20.57	349.473	13.33	349.268	4.958	349.118	1.012	349.648	23.61
7	349.903	43.25	349.583	19.41	349.493	14.51	349.278	4.710	349.128	1.593 *	349.768	32.49 *
8	349.828	39.70	349.628	22.27 *	349.468	13.07	349.098	1.323	349.138	1.769 *	349.528	16.17
9	349.783	35.25	349.578	19.07	349.458	12.53	349.078	1.061	349.178	2.569 *	349.443	11.76
10	349.738	28.97	349.603	20.99	349.468	13.11	349.068	0.433	349.198	3.026	349.468	12.98
11	349.778	33.30 *	349.598	20.35	349.458	12.49 *	349.148	1.955 *	349.178	2.377	349.458	12.49
12	349.848	40.28	349.578	19.14	349.458	12.49 *	349.278	5.237 *	349.128	1.386	349.348	7.680
13	350.083	62.73	349.588	19.98	349.463	12.80	349.258	4.431	349.118	1.164	349.288	5.557 *
14	350.193	73.54	349.588	19.96	349.458	12.65	349.248	4.336	349.168	2.355 *	349.268	4.927 *
15	350.013	55.14	349.608	20.97 *	349.433	11.12	349.273	5.081	349.068	0.667	349.248	4.336
16	349.908	43.75	349.643	23.31	349.428	10.81	349.263	4.776	349.098	1.121 *	349.248	4.336
17	349.888	42.84	349.633	22.22	349.423	10.52	349.273	5.081	349.058	0.621	349.258	4.627
18	349.988	52.55 *	349.633	22.19	349.403	9.514	349.268	4.302	349.058	0.582	349.208	3.038
19	350.043	55.78	349.648	23.83	349.408	10.16 *	349.268	4.927 *	349.058	0.603	349.178	2.395
20	349.963	52.87	349.658	24.71	349.408	9.805	349.388	9.481	Dry Bed	0.000	349.158	1.868
21	349.963	50.02	349.658	24.68	349.398	9.269	349.393	9.375		0.000	349.138	1.769 *
22	349.953	49.03	349.668	24.99 *	349.378	8.186	349.398	9.718 *		0.000	349.158	1.530
23	349.948	48.54	349.708	27.87	349.418	10.28	349.278	5.647		0.000	349.158	1.735
24	349.943	48.05	349.668	25.40	349.358	7.611	349.248	4.145		0.000	Dry Bed	0.000
25	349.828	37.48 *	349.668	25.34	349.388	8.718	349.268	4.931		0.000		0.000
26	349.813	38.11	349.648	23.61 *	349.398	9.718 *	349.218	3.521 *		0.000		0.000
27	349.813	38.61	349.598	20.47	349.378	8.212	349.238	3.729		0.000		0.000
28	349.813	38.73	349.598	20.49	349.373	7.958	349.238	3.918		0.000		0.000 *
29	349.813	38.15	349.588	19.71 *			349.208	3.251		0.000		0.000
30	349.773	34.17	349.578	19.26			349.198	3.026 *		0.000		0.000
31	349.788	35.75	349.588	20.01			349.138	1.481				0.000
Ten-Daily Mean												
I Ten-Daily	349.890	44.12	349.653	24.54	349.516	15.69	349.251	4.849	349.163	2.209	349.571	9.701
II Ten-Daily	349.971	51.28	349.617	21.67	349.434	11.23	349.267	4.961	349.104	1.088	349.266	5.125
III Ten-Daily	349.859	41.51	349.633	22.89	349.386	8.744	349.257	4.795	Drybed	0.000	349.151	0.458
Monthly												
Min.	349.738	28.97	349.578	19.07	349.358	7.611	349.068	0.433	349.058	0.000	349.138	0.000
Max.	350.193	73.54	349.818	39.08	349.578	19.17	349.398	9.718	349.238	4.055	349.768	32.49
Mean	349.905	45.5	349.635	23.03	349.449	12.11	349.258	4.866	349.135	1.099	349.332	4.945

Peak Computed Discharge = 710.7 cumecs on 11-09-2022

Corres. Water Level :351.818 m

Lowest Computed Discharge = 0.000 cumecs on 28-05-2023

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 : 2022-2023

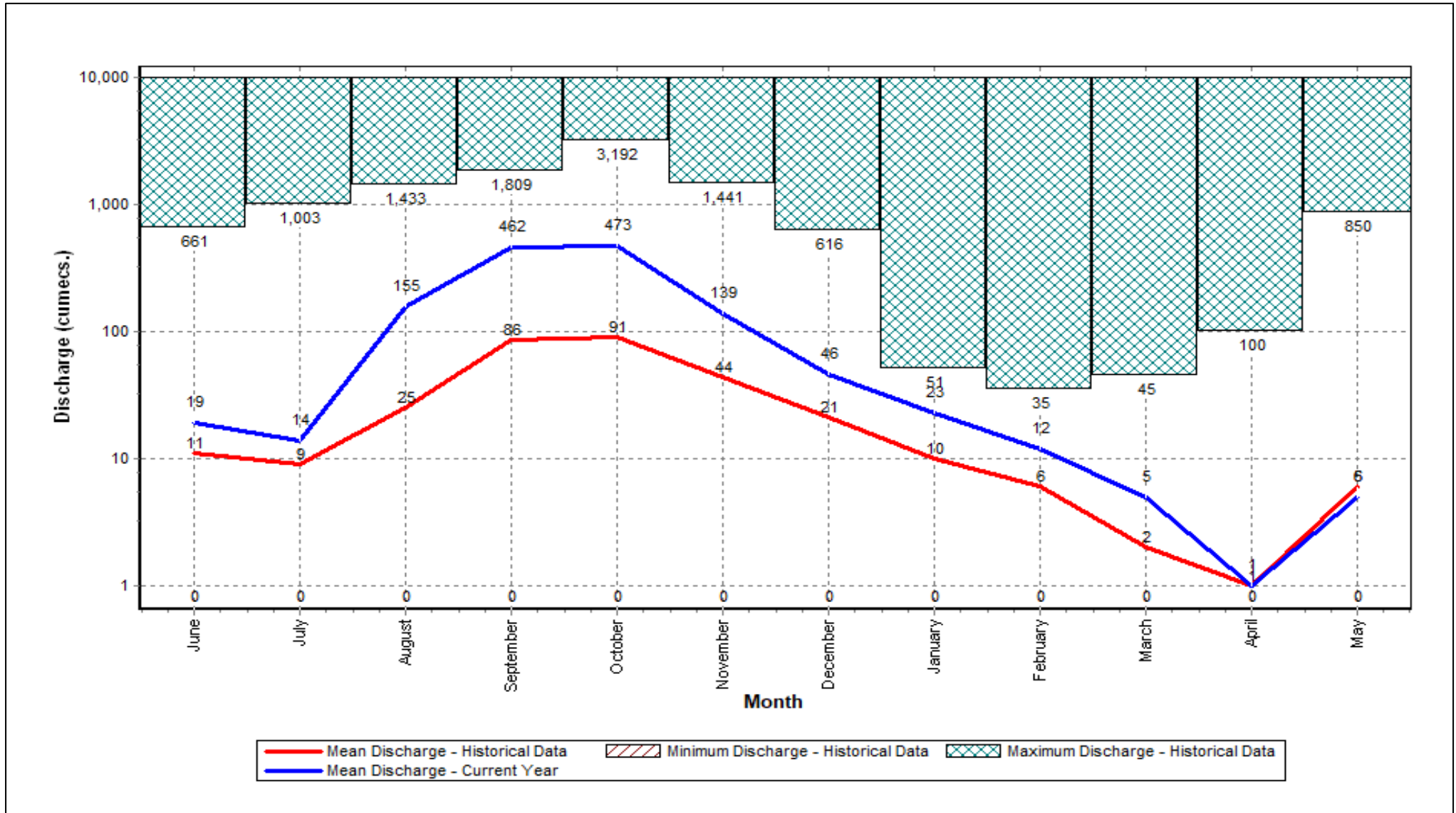
Station Name : T Ramapuram

Data considered : 1966-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Hagari

Sub-Division : Lower Tungabhadra SD, Kurnool



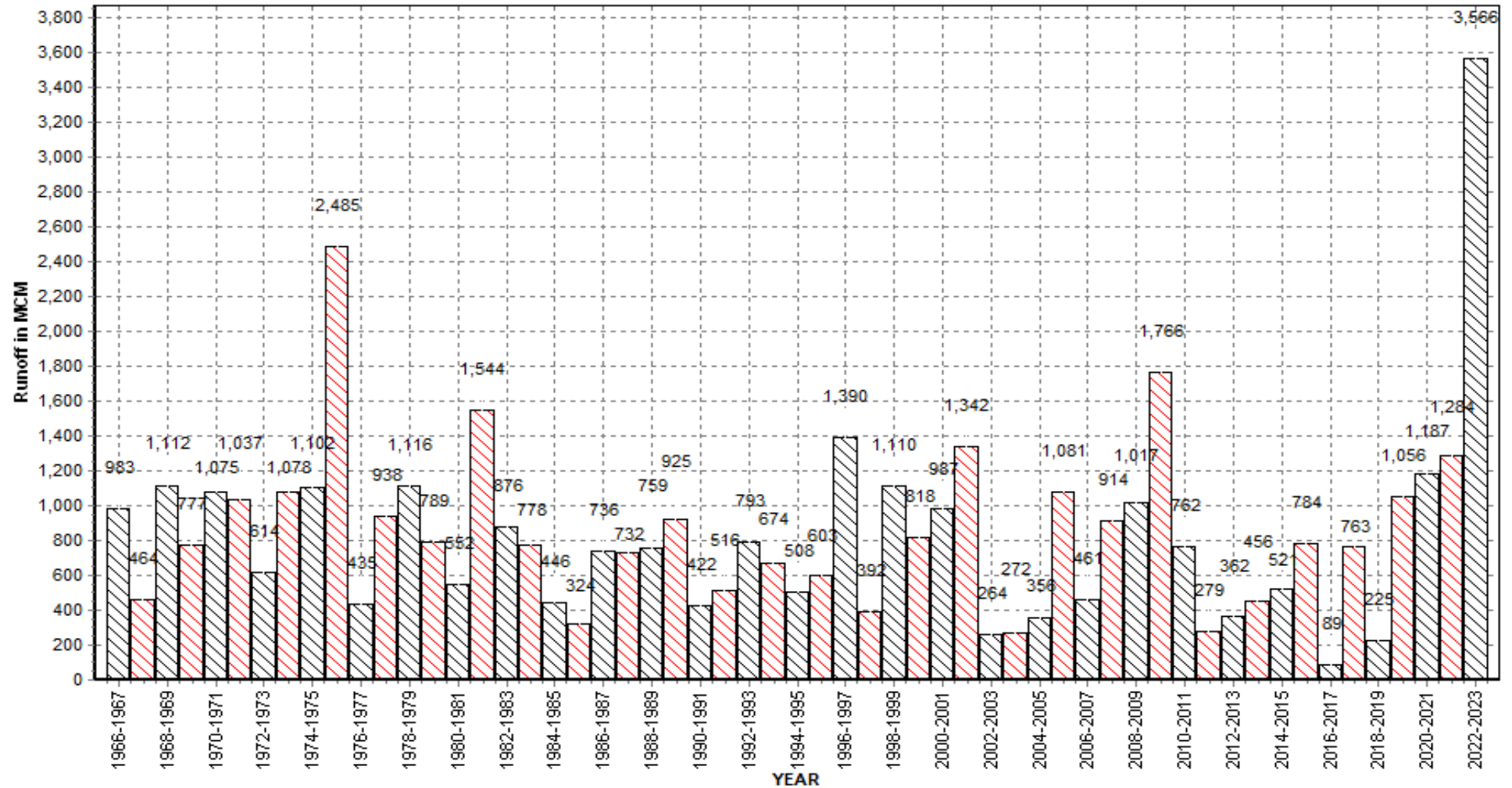
Annual Runoff Values for the period: 1966 - 2023

Station Name : T Ramapuram (AKL50A6)

Local River : Hagari

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



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

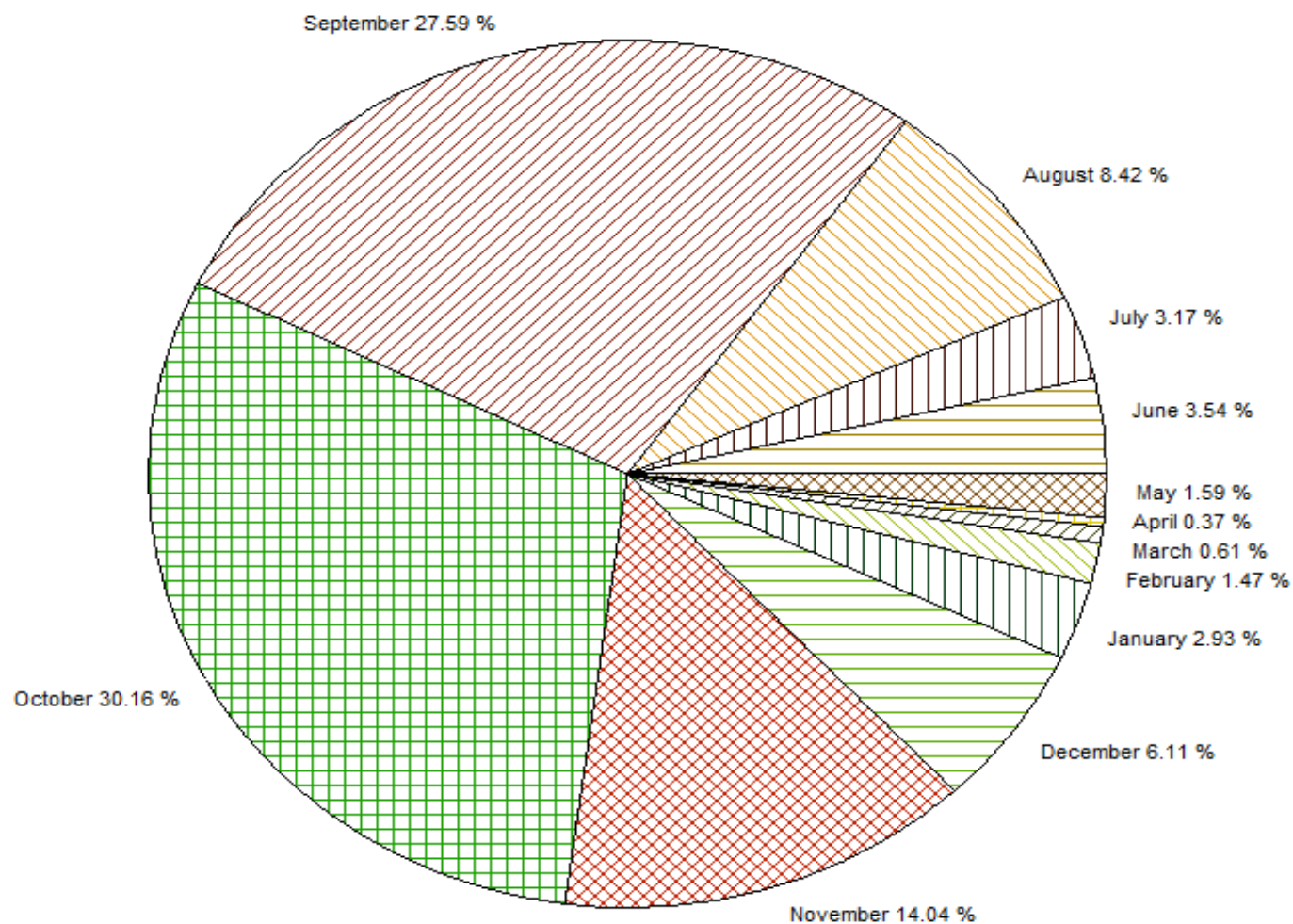
Monthly Average Runoff based on period : 1966-2022

Station Name : T Ramapuram (AKL50A6)

Local River : Hagari

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



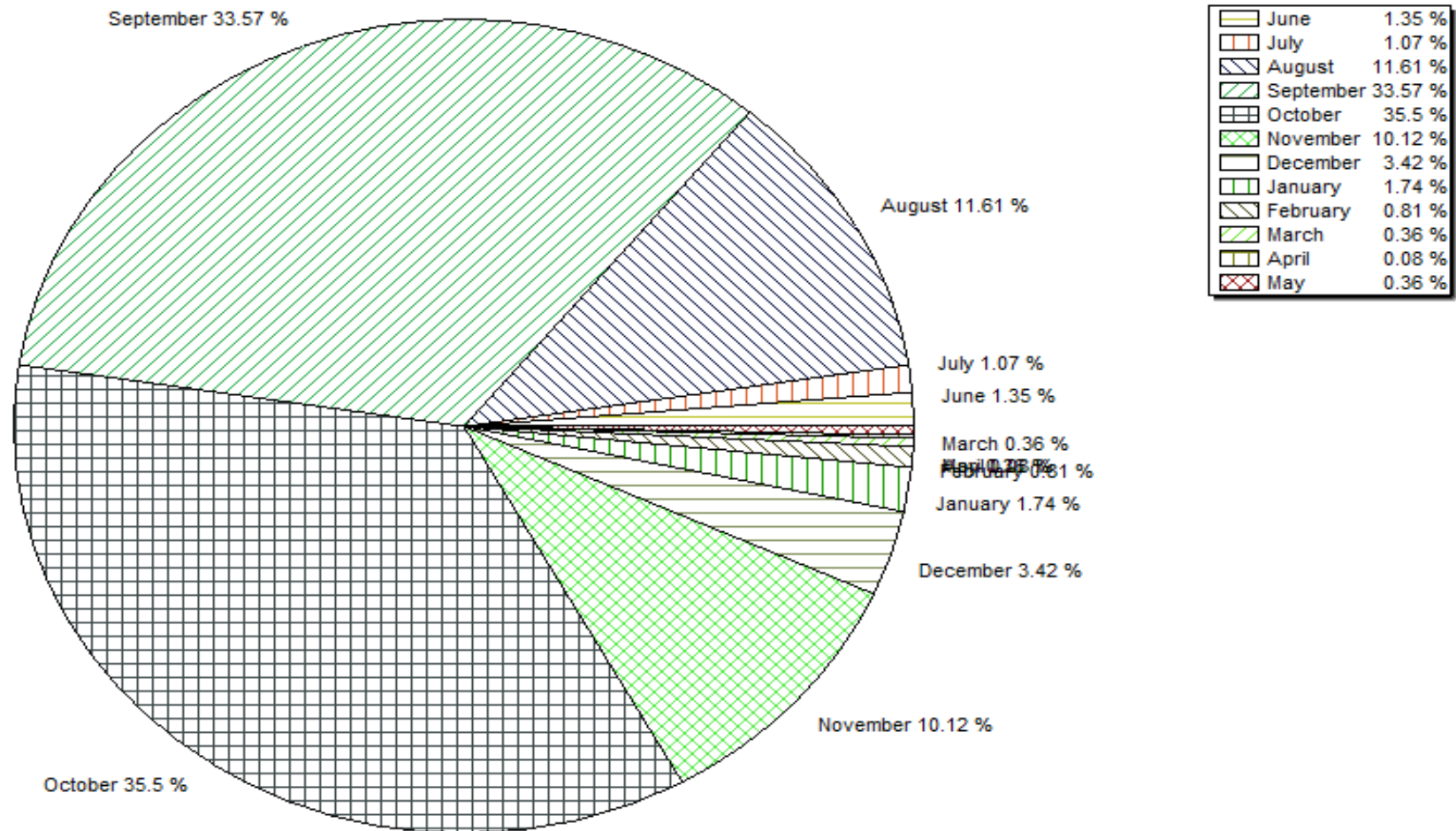
Monthly Runoff for the Year : 2022-2023

Station Name : T Ramapuram (AKL50A6)

Local River : Hagari

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



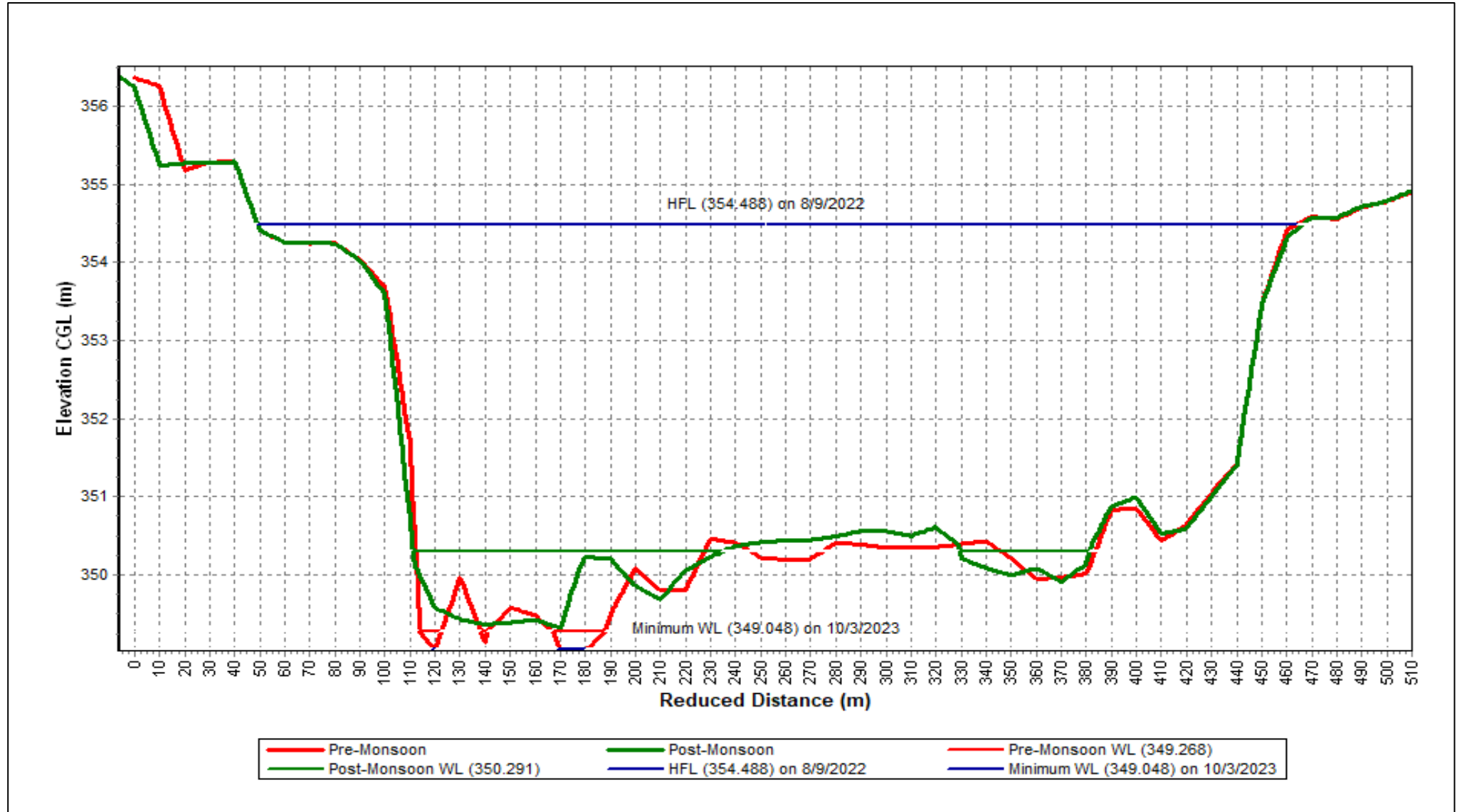
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : T Ramapuram (AKL50A6)

Local River : Hagari

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



Note: X-Section Difference due to Sand Erosion.

Zero of the Gauge: 349.368 (m.s.l)

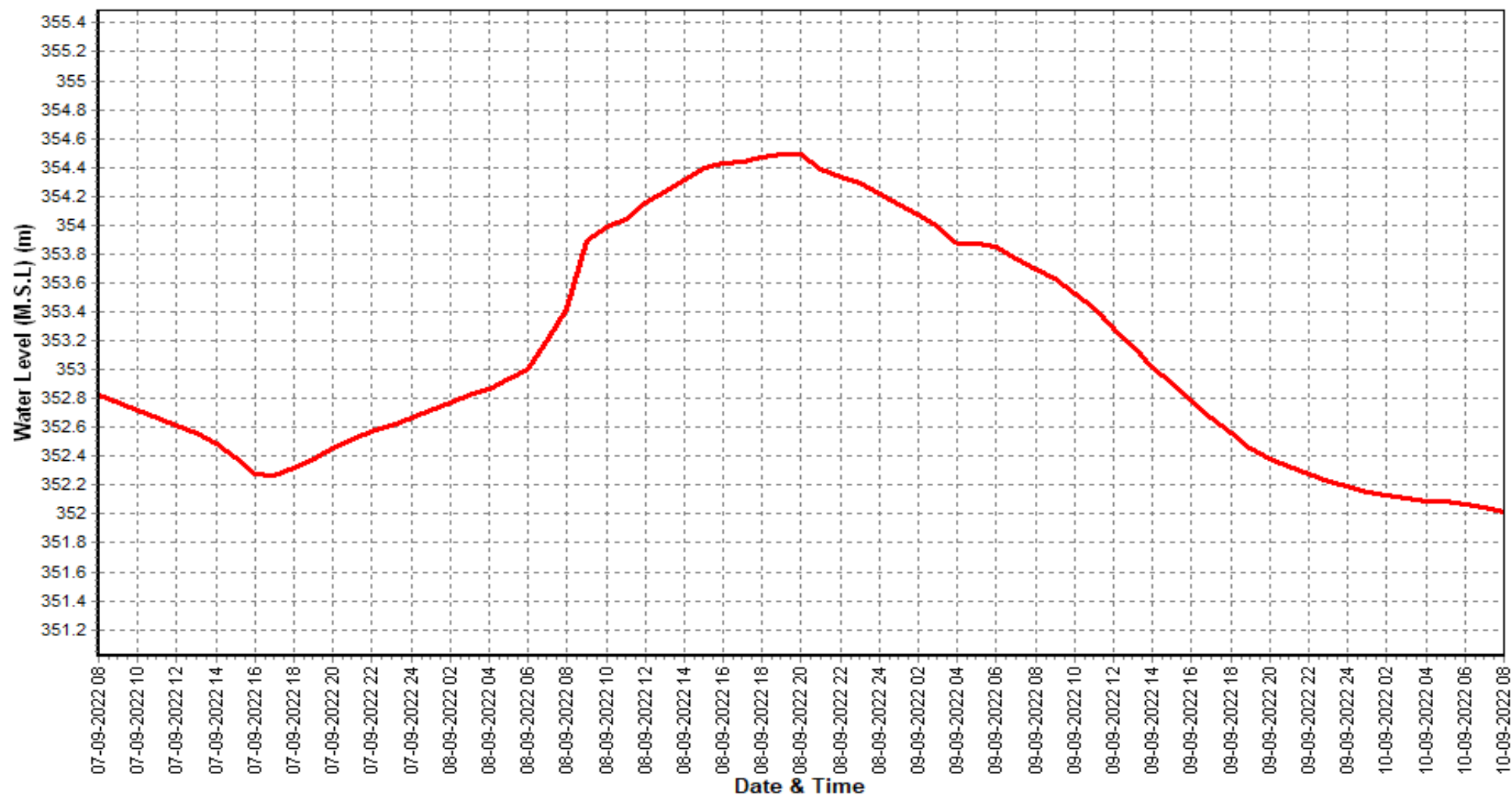
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : T Ramapuram

Local River : Hagari

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



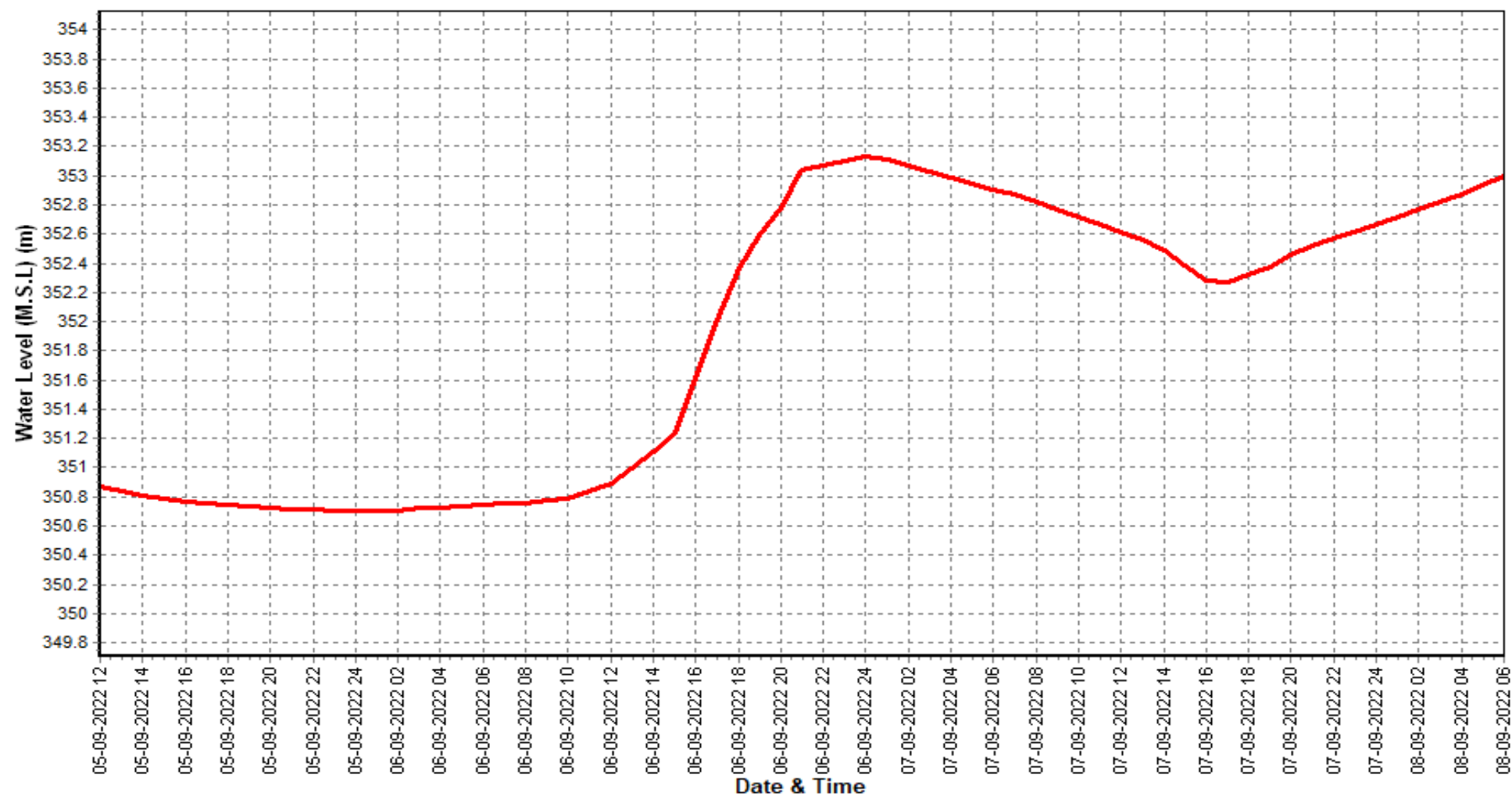
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : T Ramapuram

Local River : Hagari

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



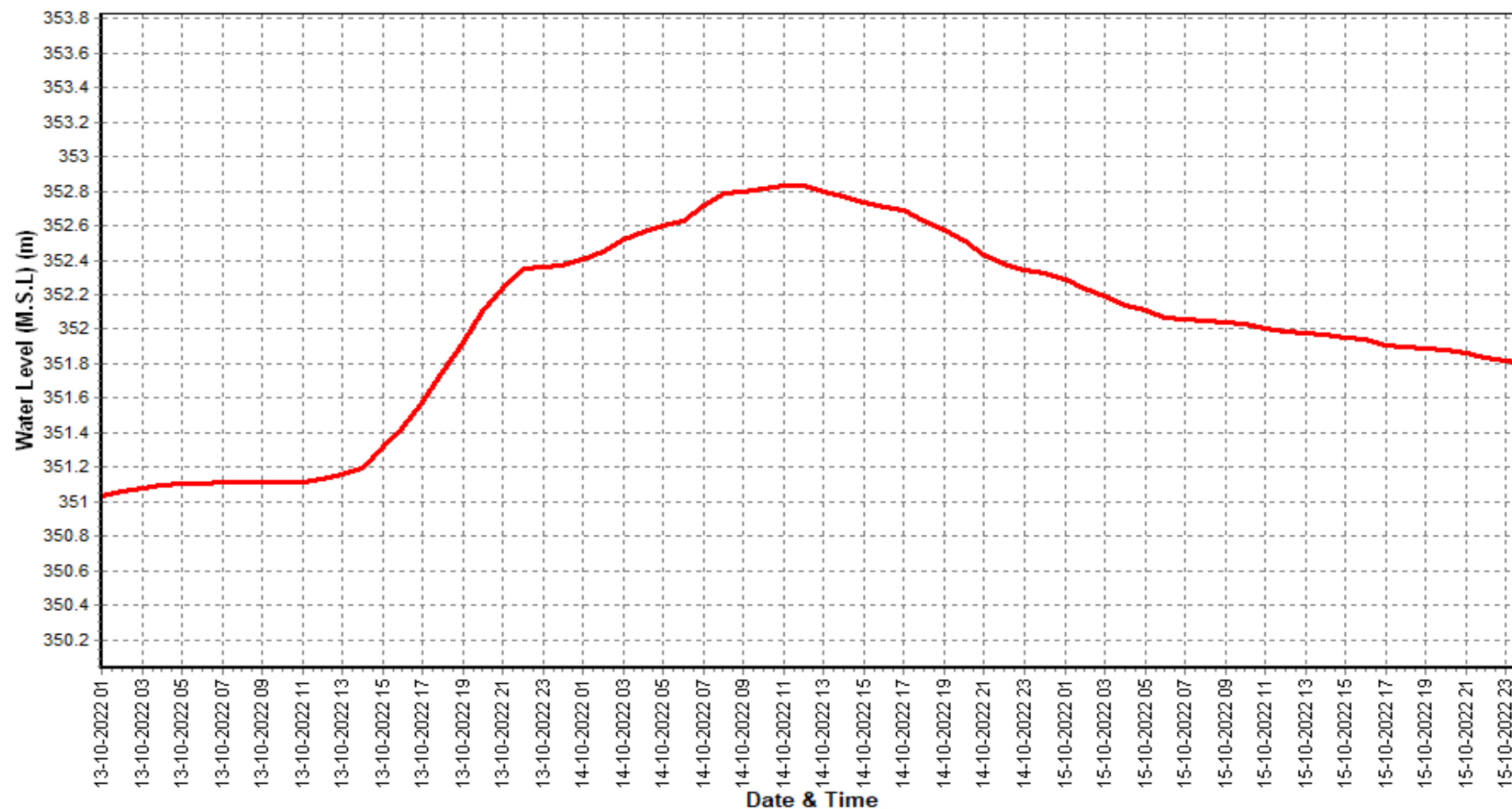
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : T Ramapuram

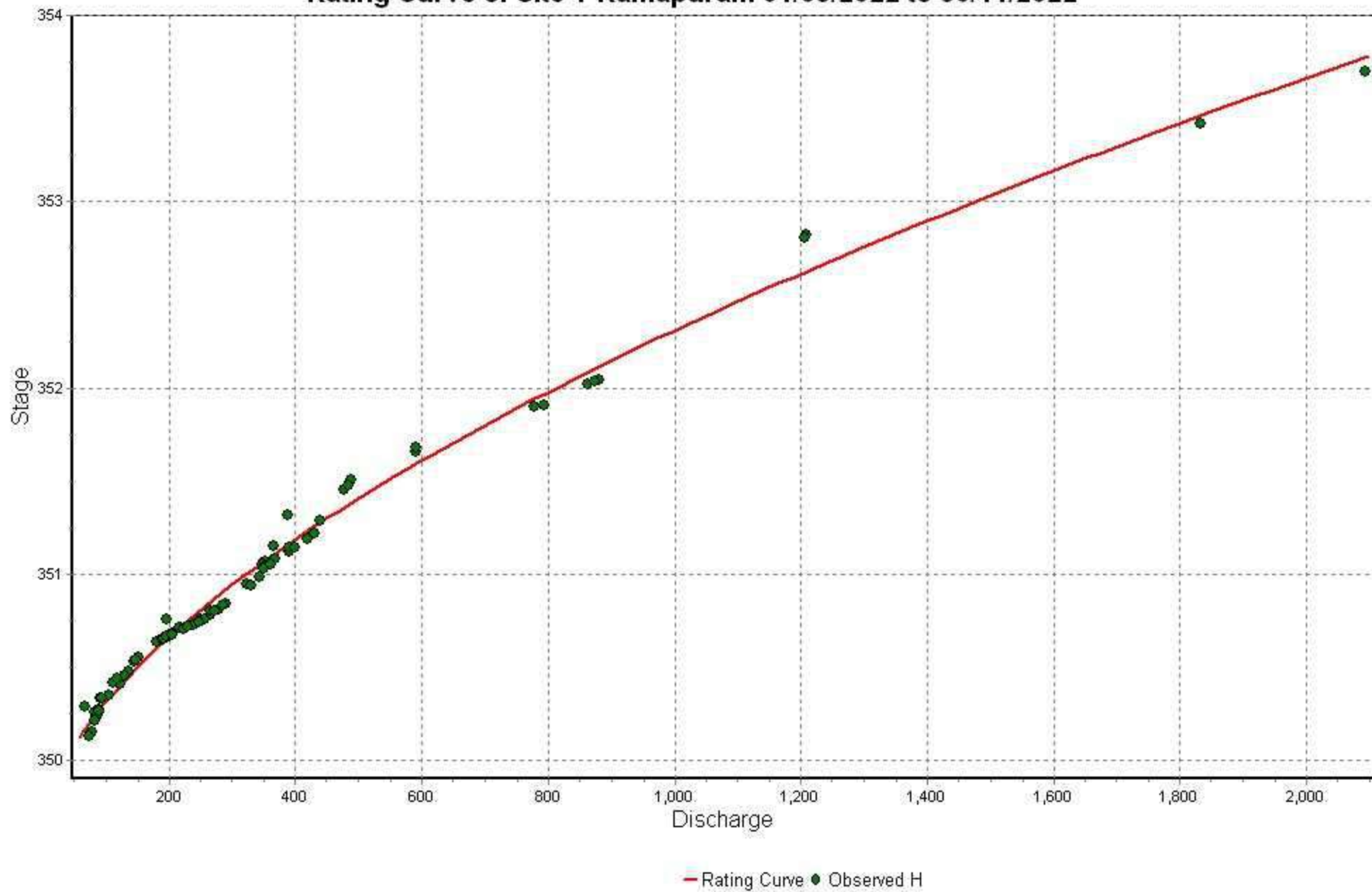
Local River : Hagari

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



Rating Curve of Site T Ramapuram 01/09/2022 to 30/11/2022



HISTORY SHEET

		Water Year	: 2022-2023
Site	: MELAGANUR	Code	: 030-LKDHYD
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	: 593.75 Sq. Km.	Bank	: Right
Latitude	: 15°50'44"	Longitude	: 77°01'31"
Zero of Gauge (m)	: 93.5 (m.s.l) 332.5 (m.s.l)	24-10-2016 02-07-2018	- 01-07-2018
	Opening Date	Closing Date	
Gauge	: 24-10-2016	HFL During 2022-23	: 341.990 m
		Corres. Discharge	: 5557 (Estimated)
Discharge	: 24-10-2016	Date & Time of occurrence	: 08-09-2022 : 11:00 Hrs

HFL Recorded so far in m : 342.840 dt 12-08-2019

Corresponding Discharge (cumecs) : 6585 *

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2018-2019	5543	342.220	17-08-2018	0.000		27-03-2019
2019-2020	5657	342.750	12-08-2019	0.000	335.710	08-05-2020
2020-2021	2665	340.050	22-09-2020	0.000	335.580	17-07-2020
2021-2022	3731	340.900	27-07-2021	2.639	335.850	26-06-2021

Annual Runoff of Tungabhadra at Melaganur

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2017-2018	1377	21	1589	49	1	56
2	2018-2019	5711	205	5917	202	7	209
3	2019-2020	6987	429	7416	247	15	262
4	2020-2021	5892	485	6378	208	17	225
5	2021-2022	6774	1476	8249	239	52	291
6	2022-2023	18414	871	19285	651	31	681
Average		7526	581	8139	266	21	288

Instantaneous Flood Peak of Tungabhadraa at Melaganuru

Sl. No.	Year	Instantaneous Annual Flood Peak			
		Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2017-2018	100.6	15-09-2017	20:00:00	1478 *
2	2018-2019	342.380	17-08-2018	14:00:00	5576 *
3	2019-2020	342.840	12-08-2019	12:00:00	6585 *
4	2020-2021	340.430	22-09-2020	01:00:00	3270 *
5	2021-2022	341.540	21-11-2021	18:00:00	4793 *
6	2022-2023	341.990	08-09-2022	11:00:00	5557 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : MELAGANUR (030-LKDHYD)

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	336.190	55.71	335.880	14.49	338.710	1429	340.205	3099	340.380	3267	337.150	284.4
2	336.210	60.99	335.870	13.46	338.570	1227	339.770	2460	339.680	2230 *	337.130	265.4
3	336.250	65.53	335.860	13.18 *	340.890	3945	340.195	2952	339.800	2476	337.160	287.3
4	336.540	125.6	335.850	11.46	340.240	2810	340.200	2845 *	338.600	1244	337.110	270.8
5	336.360	82.78 *	335.840	9.828	339.550	2216	339.485	2101	338.250	934.7 *	337.150	288.1
6	336.470	115.8	335.840	9.312	339.200	1715	338.660	1249	337.900	650.8	337.120	269.5 *
7	336.860	183.3	335.865	9.599	338.760	1331 *	341.220	4468	338.460	1182	337.040	216.9
8	336.660	148.5	335.930	19.14	340.550	3347	341.560	4559	339.010	1732	336.980	208.8 *
9	336.515	117.1	336.000	30.60	340.560	3316 *	341.400	4372	338.270	948.9 *	336.930	190.6 *
10	336.300	73.04	336.030	29.92 *	341.560	4559	339.540	2192	337.780	591.5	336.920	179.7
11	336.250	68.57	335.950	23.63	341.730	4859	339.300	1830 *	337.640	514.1	336.920	177.1
12	336.200	53.75 *	335.900	18.84	341.570	4576	339.030	1676	339.590	2362	336.930	188.4
13	336.160	47.56	335.900	18.49	340.000	2658	339.270	1968	339.820	2545	336.940	194.1 *
14	336.120	41.31	340.010	2622	340.400	3102 *	339.170	1774	340.530	3314	336.940	196.0
15	336.090	40.11	340.820	3820	340.160	2795 *	339.050	1701	339.840	2553	336.940	193.8
16	336.080	39.87	341.100	4328	339.270	1861	339.110	1846	339.220	1751 *	336.840	167.0
17	336.070	38.04	341.070	4047 *	338.500	1219	338.980	1562	339.570	2221	336.760	128.4
18	336.060	36.58	341.360	4496	338.640	1405	338.550	1159 *	339.280	1892	336.720	122.3
19	336.090	37.51 *	341.040	4225	338.260	849.6	337.610	429.6	339.110	1784	336.740	144.6
20	336.090	39.01	340.470	3203	337.880	615.1	337.745	549.3	338.800	1517	336.730	136.2 *
21	336.090	39.23	340.400	3078	337.680	576.6 *	337.930	660.7	339.020	1741	336.720	137.3
22	336.140	46.93	339.560	2265	337.550	462.6	337.620	476.2	338.610	1334	336.700	128.6
23	336.020	31.65	337.720	535.7	338.140	732.1	337.340	342.4	338.950	1497 *	336.730	154.1
24	335.990	29.77	337.500	482.0 *	337.720	532.3	337.320	341.6	338.760	1331 *	336.730	151.6
25	335.960	25.27	338.080	714.7	338.160	806.9	337.190	339.4 *	338.110	802.2	336.750	162.6
26	335.950	21.17 *	338.570	1149	338.600	1303	337.380	359.6	337.960	668.1	336.730	147.6
27	335.920	19.27	338.110	726.2	339.120	1831	337.320	337.7	337.790	602.0	336.710	132.4 *
28	335.920	18.65	338.450	1105	340.400	3102 *	337.430	394.2	337.700	536.2	336.690	122.7
29	335.900	17.57	339.750	2520	339.930	2701	337.240	305.6	337.550	488.6	336.650	110.5
30	335.880	14.54	339.680	2452	339.670	2371	337.800	606.6	337.390	428.4 *	336.640	119.8
31			339.690	2242 *	340.310	2985 *			337.240	349.5		
Ten-Daily Mean												
I Ten-Daily	336.435	102.8	335.896	16.10	339.859	2590	340.224	3030	338.813	1526	337.069	246.2
II Ten-Daily	336.121	44.23	339.362	2680	339.641	2394	338.782	1449	339.340	2045	336.846	164.8
III Ten-Daily	335.977	26.40	338.865	1570	338.844	1582	337.457	416.4	338.098	889.0	336.705	136.7
Monthly												
Min.	335.880	14.54	335.840	9.312	337.550	462.6	337.190	305.6	337.240	349.5	336.640	110.5
Max.	336.860	183.3	341.360	4496	341.730	4859	341.560	4559	340.530	3314	337.160	288.1
Mean	336.178	57.82	338.068	1427	339.428	2169	338.821	1632	338.729	1467	336.873	182.6

Annual Runoff in MCM = 19285 Annual Runoff in mm = 32480

Peak Observed Discharge = 4859 cumecs on 11-08-2022 Corres. Water Level :341.73 m

Lowest Observed Discharge = 0.000 cumecs on 13-04-2023 Corres. Water Level :335.67 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 2022 - 2023

Station Name : MELAGANUR (030-LKDHYD)

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	336.630	130.2 #	336.280	51.34 *	336.360	68.03	336.400	80.14	336.140	29.93 #	335.670	0.000
2	336.610	126.0 #	336.300	58.93	336.350	67.60	336.380	76.05	336.080	20.01 *	335.760	0.000
3	336.560	112.0	336.310	58.99	336.320	59.33	336.380	75.32	335.900	5.629	336.140	35.47
4	336.540	110.9 *	336.455	97.42	336.300	55.87	336.390	78.99	335.860	4.500 *	336.050	21.20 #
5	336.450	85.77	336.450	94.71	336.330	63.41 *	336.340	65.78 *	335.810	2.361	336.030	18.77 *
6	336.400	79.24	336.440	93.20	336.420	88.50	336.230	40.99	335.770	1.784	336.100	28.44
7	336.420	85.63	336.420	84.60	336.410	84.32	336.240	41.81	335.800	2.200 *	336.250	60.40 *
8	336.440	92.81	336.400	79.74 *	336.400	81.27	336.330	60.41	335.750	1.600 *	336.210	45.34
9	336.390	83.74	336.390	82.91	336.410	84.67	336.380	74.31	335.650	0.400 *	336.150	32.08
10	336.350	73.11	336.380	74.25	336.410	83.28	336.320	58.13	335.680	0.427	336.150	33.58
11	336.340	65.78 *	336.400	84.37	336.420	84.30 *	336.320	61.03 *	335.660	0.316	336.110	25.74
12	336.430	84.53	336.400	83.00	336.410	82.02 *	336.380	75.13 *	335.700	0.579	336.100	23.22
13	336.520	107.6	336.380	74.20	336.400	80.49	336.340	60.29	335.670	0.000	336.100	28.44 *
14	336.670	149.4	336.400	79.74 *	336.300	54.20	336.310	47.94	335.660	0.000	336.080	25.34 *
15	336.605	126.3	336.400	79.74 *	336.270	49.94	336.360	60.48	335.670	0.000	336.060	17.56
16	336.530	108.3	336.400	80.10	336.230	38.99	336.370	61.29	335.660	0.000	336.040	16.35
17	336.460	101.0	336.535	114.2	336.260	48.83	336.360	70.48 *	335.670	0.000	336.020	13.70
18	336.450	91.07 *	336.500	103.4	336.250	47.07	336.350	57.33	335.670	0.000	335.980	9.364
19	336.500	103.9	336.520	108.3	336.250	43.87 *	336.450	91.07 *	335.670	0.000	335.970	8.377
20	336.430	89.07	336.560	122.0	336.250	47.85	336.570	114.3	335.670	0.000	335.940	6.813
21	336.410	83.40	336.480	100.8	336.310	57.55	336.540	105.7	335.670	0.000	335.940	7.045 *
22	336.400	79.03	336.460	93.31 *	336.380	77.11	336.500	102.2 *	335.650	0.000	335.950	7.809 #
23	336.350	72.99	336.440	90.79	336.420	88.42	336.400	75.18	335.660	0.000	336.020	11.81
24	336.330	66.52	336.400	79.97	336.470	101.7	336.390	74.40	335.650	0.000	336.000	12.35
25	336.310	58.63 *	336.400	81.75	336.540	115.4	336.380	72.00	335.650	0.000	336.010	10.97
26	336.290	53.25	336.360	70.48 *	336.500	102.2 *	336.400	79.74 *	335.650	0.000	336.020	11.01
27	336.290	58.05	336.340	66.63	336.480	99.99	336.430	82.68	335.640	0.000	336.000	12.70
28	336.290	56.01	336.340	63.20	336.470	99.48	336.380	71.30	335.630	0.000	335.980	9.689 *
29	336.290	53.24	336.340	65.78 *			336.340	57.71	335.650	0.000	335.940	7.045 *
30	336.290	52.90	336.350	66.82			336.250	43.87 *	335.660	0.000	335.970	8.798
31	336.290	54.95	336.350	67.29			336.210	32.59			335.940	6.459
<u>Ten-Daily Mean</u>												
I Ten-Daily	336.479	97.95	336.382	77.61	336.371	73.63	336.339	65.19	335.844	6.884	336.051	27.53
II Ten-Daily	336.493	102.7	336.450	92.90	336.304	57.76	336.381	69.93	335.670	0.089	336.040	17.49
III Ten-Daily	336.322	62.63	336.387	76.98	336.446	92.73	336.384	72.49	335.651	0.000	335.979	9.608
<u>Monthly</u>												
Min.	336.290	52.90	336.280	51.34	336.230	38.99	336.210	32.59	335.630	0.000	335.670	0.000
Max.	336.670	149.4	336.560	122.0	336.540	115.4	336.570	114.3	336.140	29.93	336.250	60.40
Mean	336.428	86.95	336.406	82.32	336.369	73.42	336.368	69.31	335.722	2.325	336.022	17.93

Peak Computed Discharge = 4047 cumecs on 17-07-2022

Corres. Water Level :341.07 m

Lowest Computed Discharge = 0.400 cumecs on 09-04-2023

Corres. Water Level :335.65 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

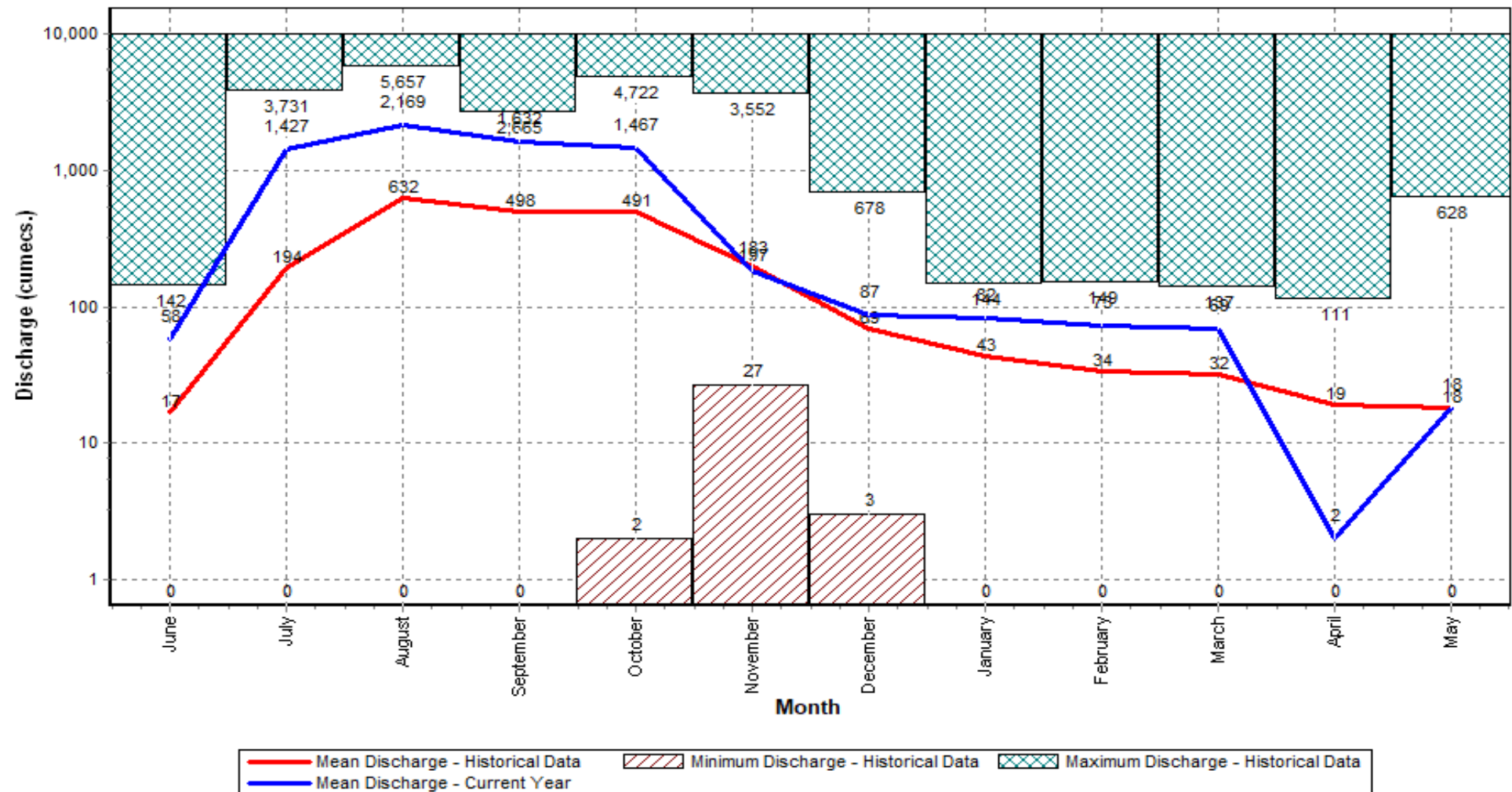
Station Name : MELAGANUR (030-LKDHYD)

Data considered : 2018-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

Sub-Division : Lower Tungabhadra SD, Kurnool



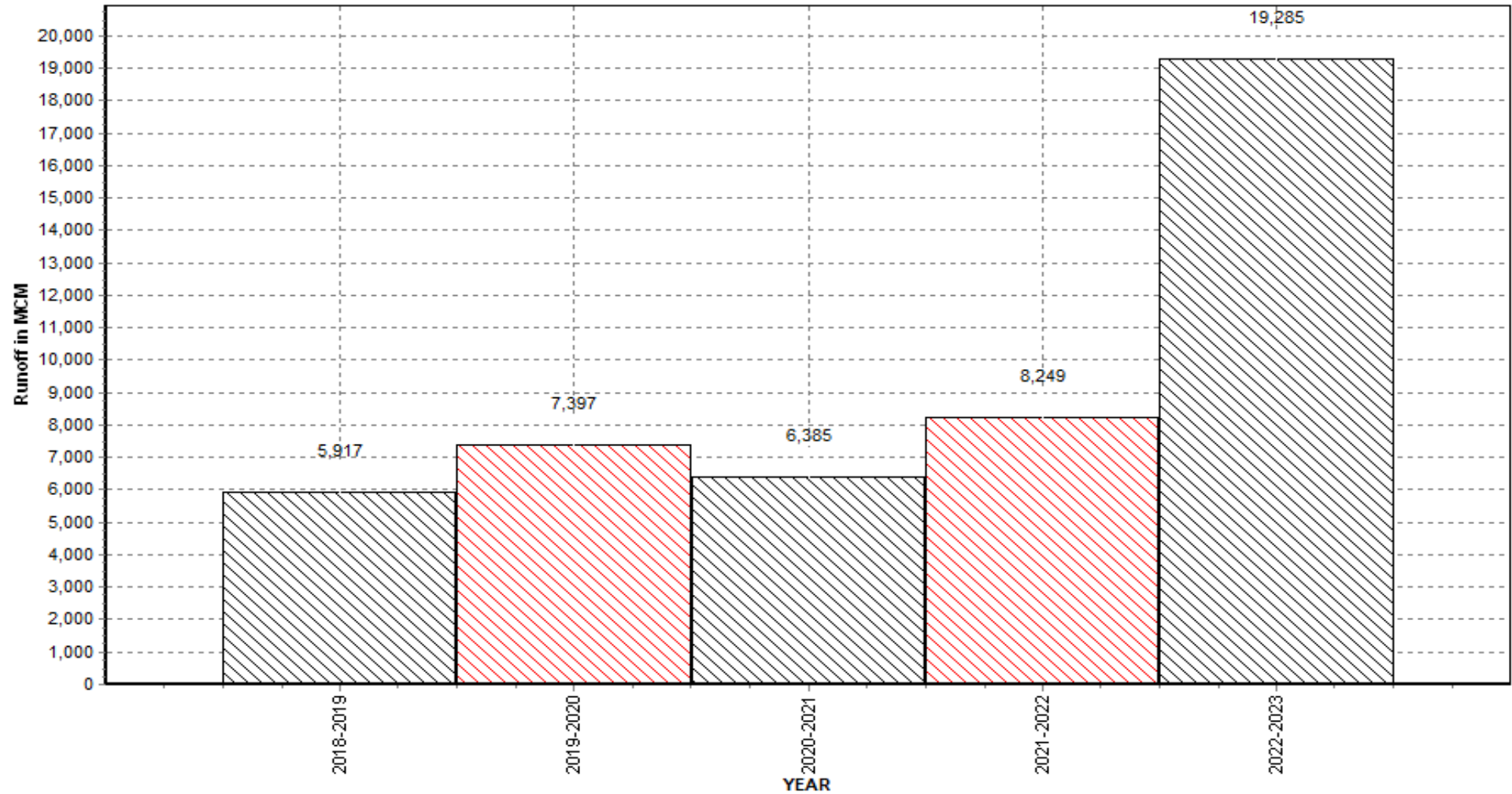
Annual Runoff Values for the period: 2018 - 2023

Station Name : MELAGANUR (030-LKDHYD)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



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

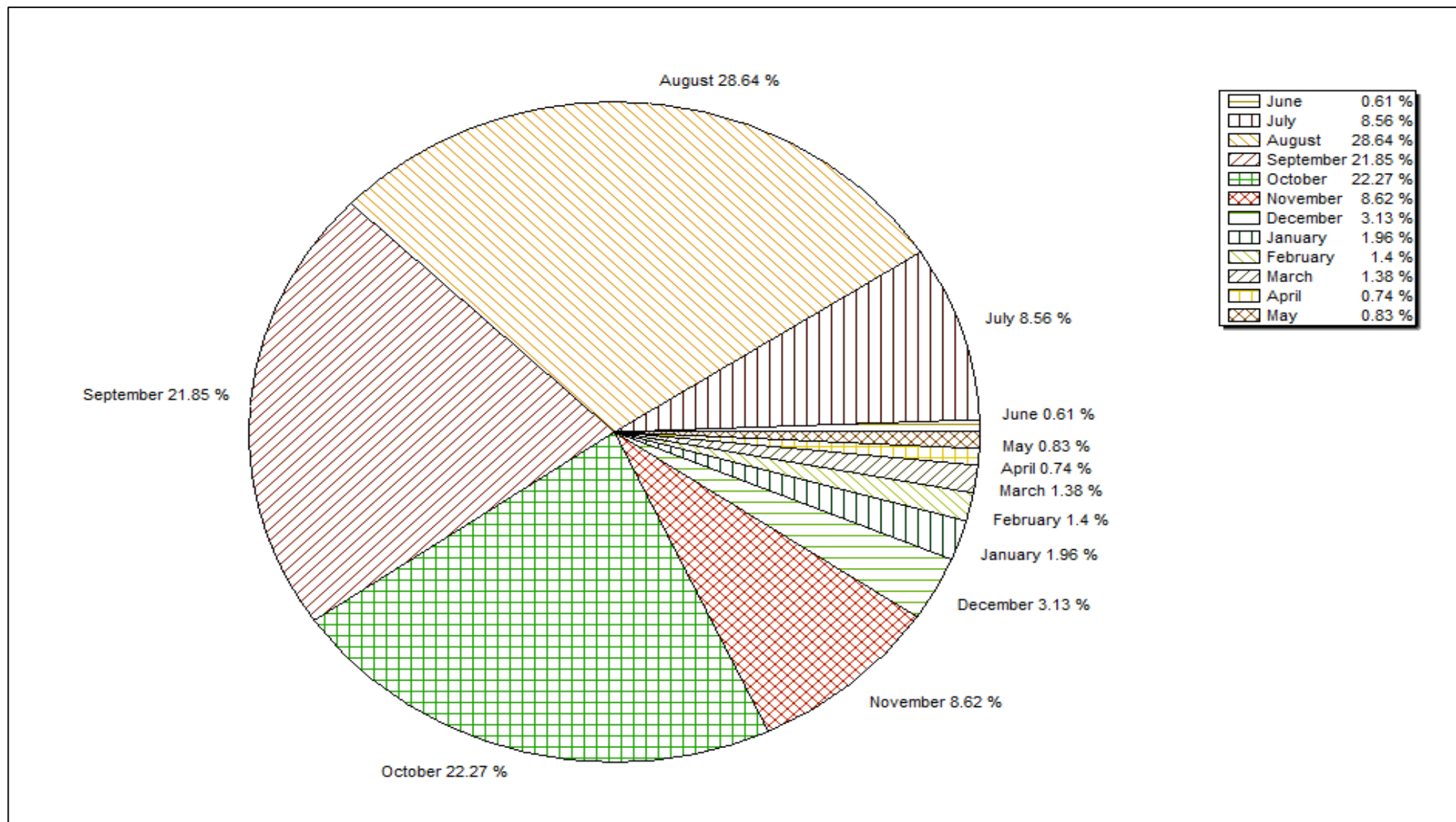
Monthly Average Runoff based on period : 2018-2022

Station Name : MELAGANUR (030-LKDHYD)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



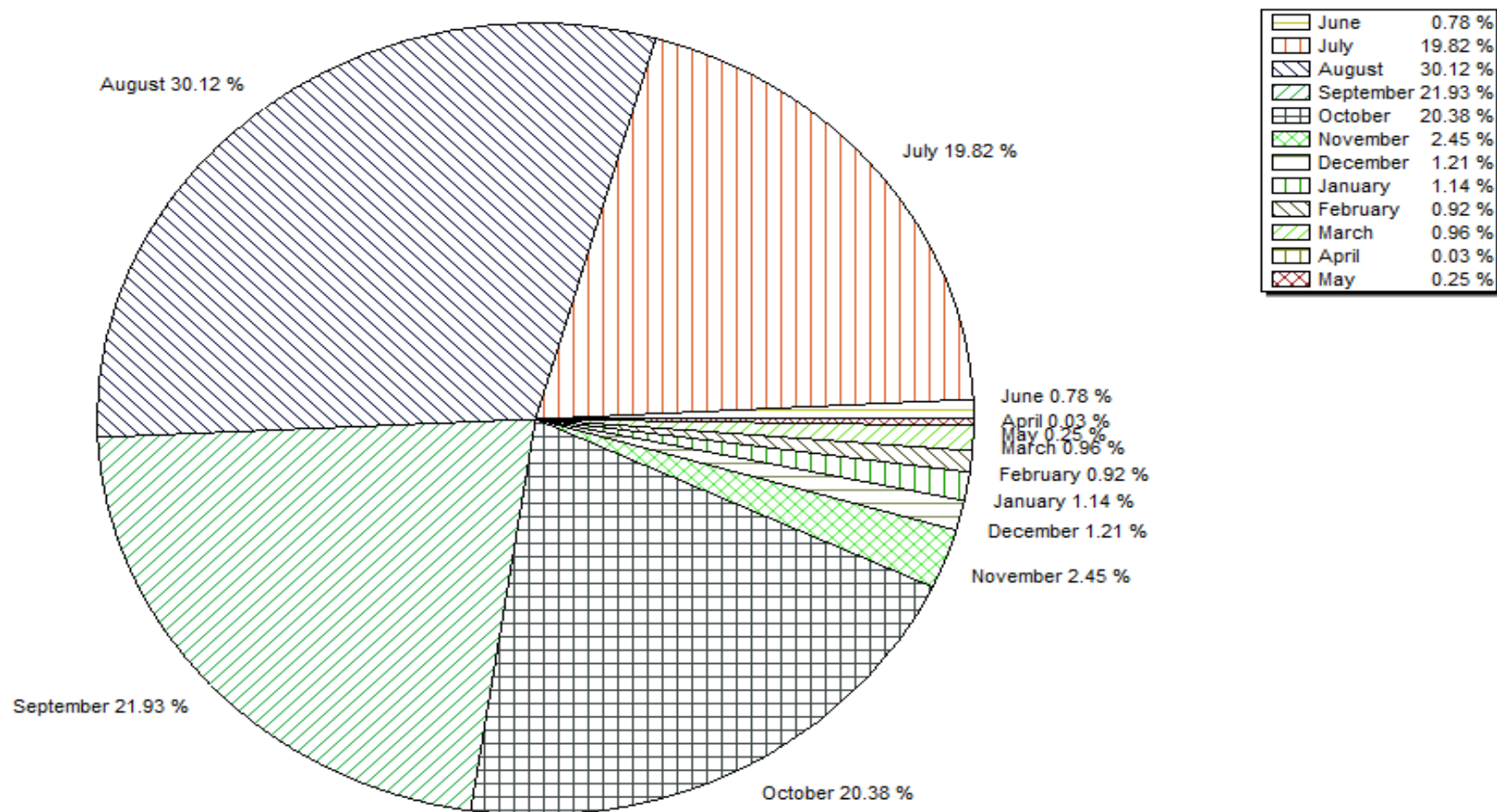
Monthly Runoff for the Year : 2022-2023

Station Name : MELAGANUR (030-LKDHYD)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



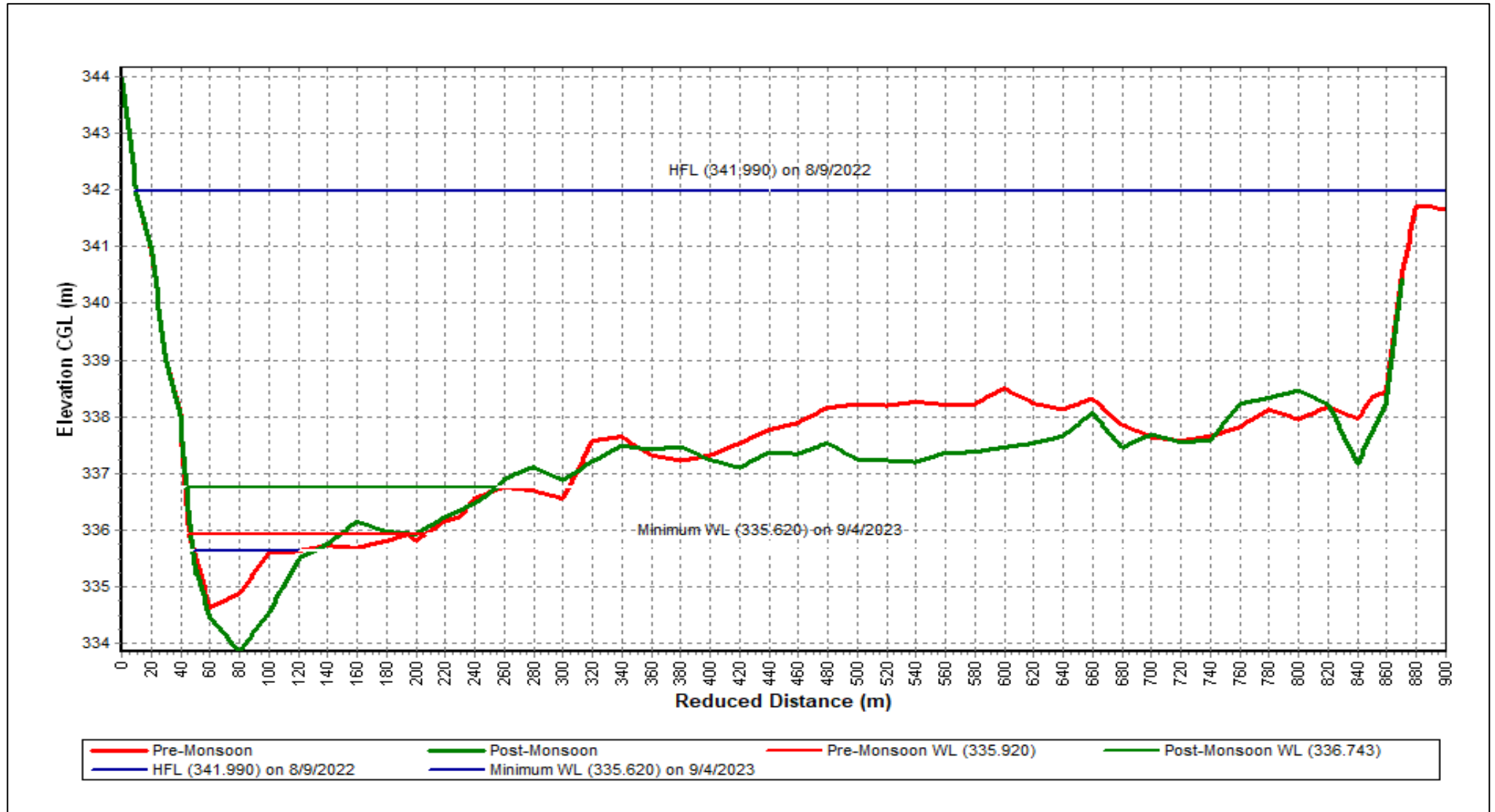
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : MELAGANUR (030-LKDHYD)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



Cross section difference due to high flood
Zero of the Gauge: 332.5 (m.s.l)

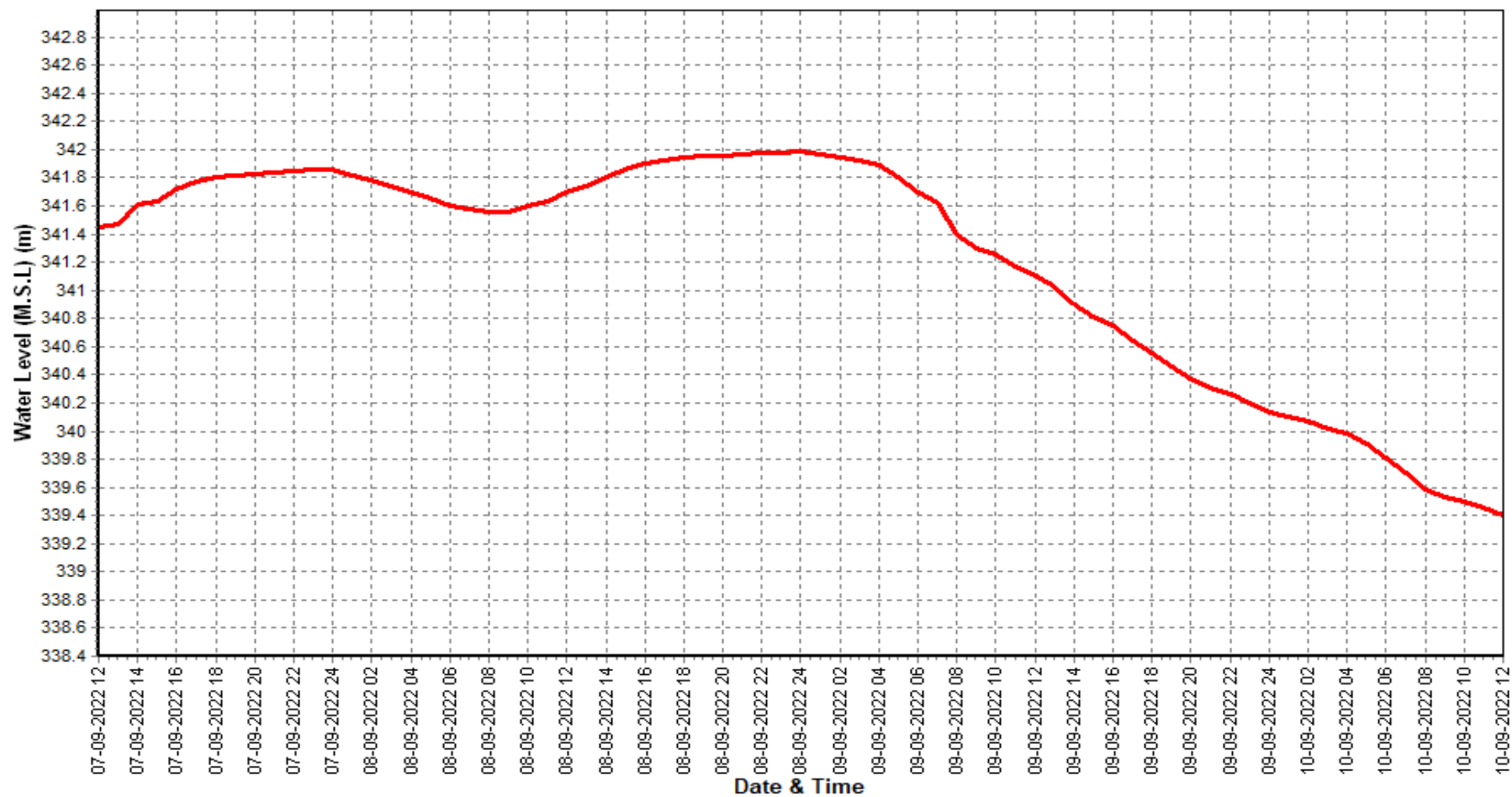
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : MELAGANUR (030-LKDHYD)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



Time Span: 72 Hrs

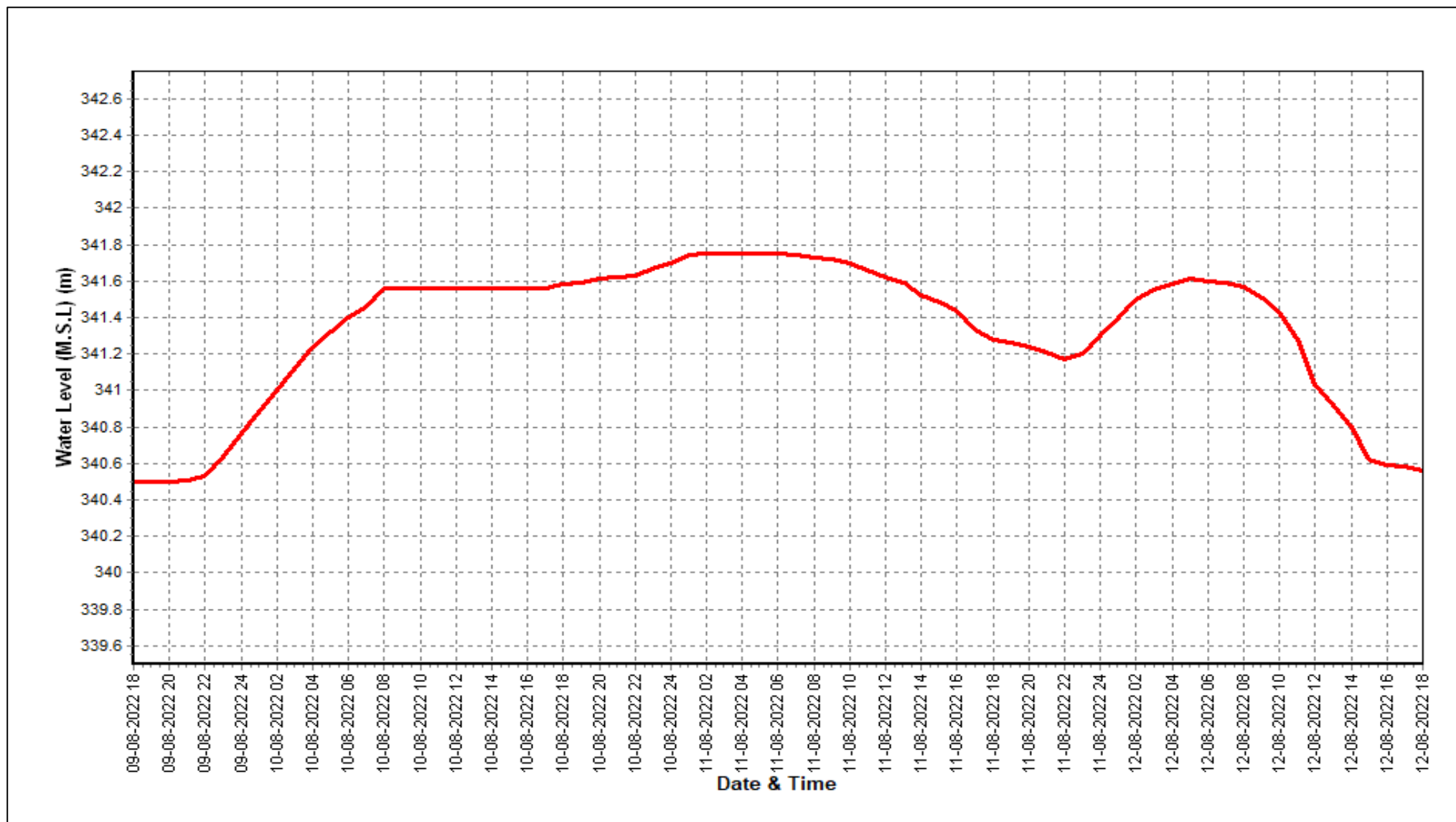
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : MELAGANUR (030-LKDHYD)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



Time Span: 72 Hrs

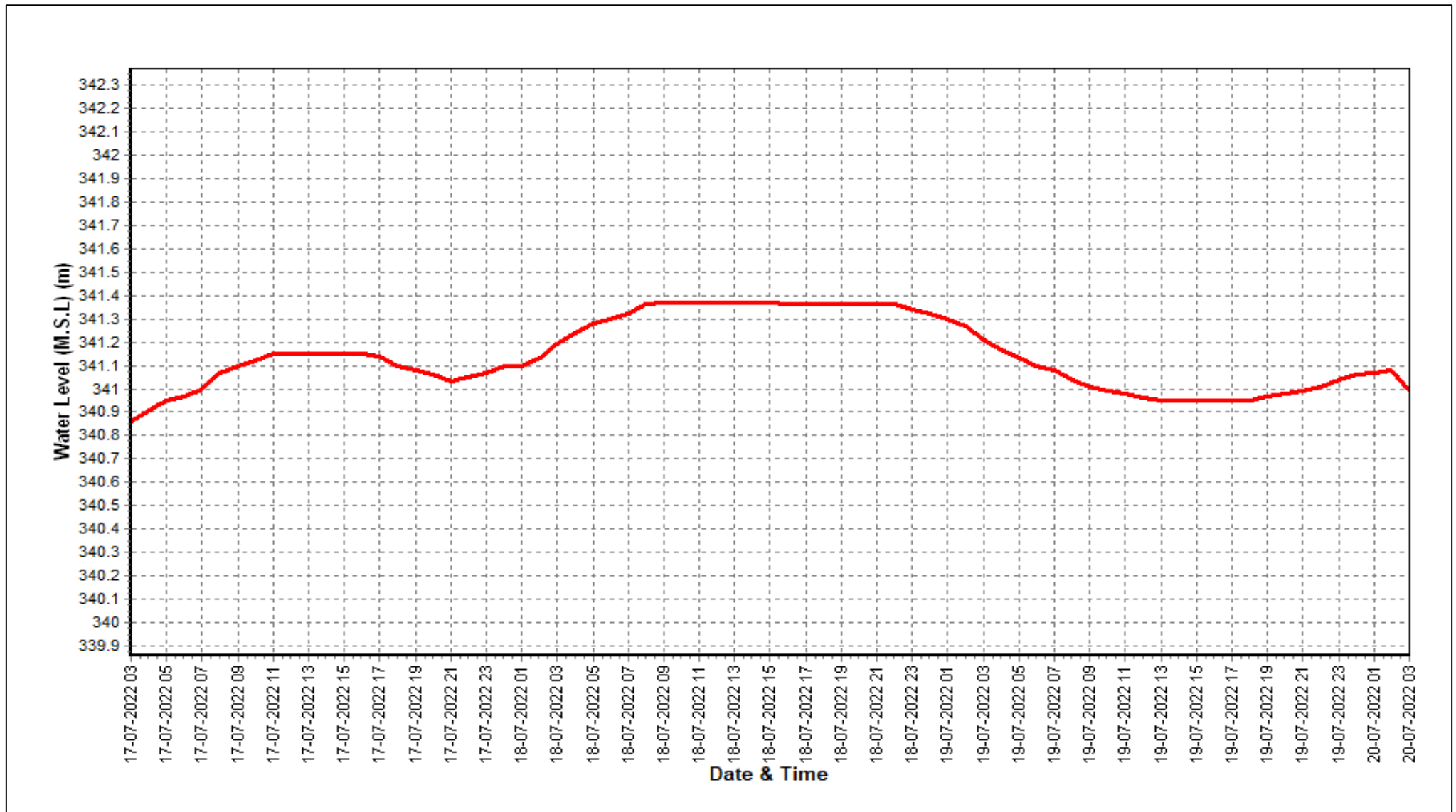
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : MELAGANUR (030-LKDHYD)

Local River : Tungabhadra

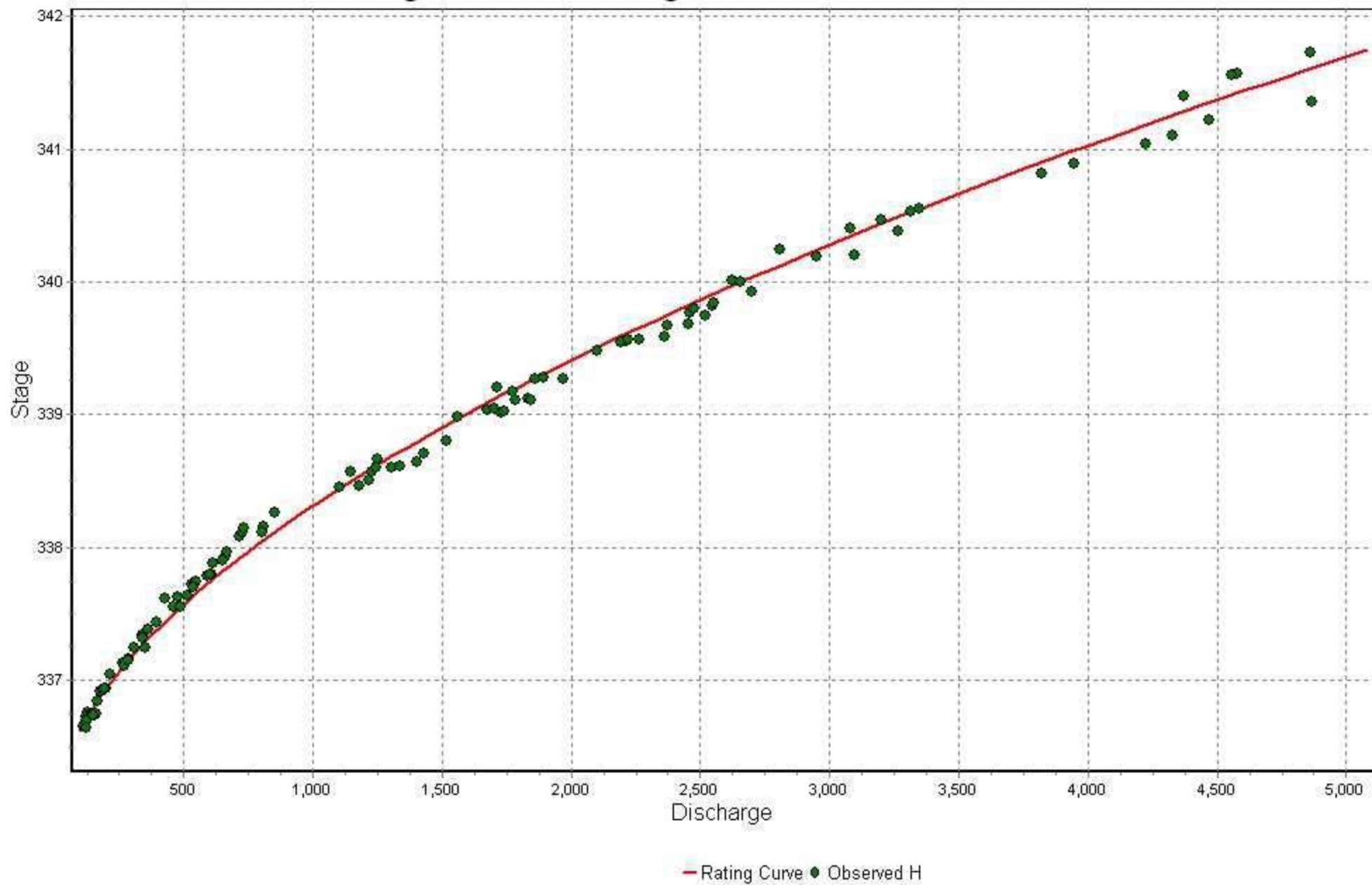
Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



Time Span: 72 Hrs

Rating Curve of Site Melagnur 14/07/2022 to 30/11/2022



HISTORY SHEET

Water Year : 2022-2023

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°56'00"

Longitude : 77°25'00"

Zero of Gauge (m) : 308.34 (m.s.l)
 307.645 (m.s.l)
 307.5 (m.s.l)
 306 (m.s.l)

10-03-1972 - 30-11-1973
 01-12-1973 - 31-05-1975
 01-06-1975 - 31-05-1982
 01-06-1982

Opening Date

Closing Date

Gauge : 10-03-1972

HFL During 2022-23 : 312.450 m

Corres. Discharge : 5794 (Estimated)

Discharge : 01-06-1972

Date & Time of
 occurrence : 09-09-2022
 : 03:00 Hrs

Sediment : 26-07-1977

Water Quality : 01-08-1977

HFL Recorded so far in m : 318.770 dt 02-10-2009

Corresponding Discharge (cumecs) : 18882 *

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
1992-1993	12040	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	6203	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	4421	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	305.820	12-03-2013
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		05-05-2016
2016-2017	614.1	308.440	17-09-2016	0.000	305.930	25-02-2017
2017-2018	1940	310.095	16-09-2017	0.000	305.500	06-04-2018
2018-2019	5401	312.390	18-08-2018	0.000	305.720	21-02-2019
2019-2020	5934	312.630	13-08-2019	0.000	305.170	06-06-2019
2020-2021	2930	310.855	22-09-2020	0.000	306.090	08-05-2021
2021-2022	4312	311.750	22-11-2021	0.000	306.080	26-06-2021

Annual Runoff of Tungabhadra at Mantralayam

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1972-1973	2713	835	3548	96	30	125
2	1973-1974	6113	1226	7339	216	43	259
3	1974-1975	5864	1127	6992	207	40	247
4	1975-1976	16080	1582	17662	568	56	624
5	1976-1977	1640	786	2425	58	28	86
6	1977-1978	4095	1019	5113	145	36	181
7	1978-1979	13064	1088	14152	462	38	500
8	1979-1980	4799	1000	5799	170	35	205
9	1980-1981	10803	926	11730	382	33	414
10	1981-1982	8540	900	9441	302	32	334
11	1982-1983	6082	861	6943	215	30	245
12	1983-1984	5316	825	6141	188	29	217
13	1984-1985	4806	639	5445	170	23	192
14	1985-1986	1865	601	2465	66	21	87
15	1986-1987	3142	476	3618	111	17	128
16	1987-1988	2742	502	3244	97	18	115
17	1988-1989	4887	501	5388	173	18	190
18	1989-1990	3032	690	3722	107	24	132
19	1990-1991	5682	748	6429	201	26	227
20	1991-1992	7576	900	8476	268	32	300
21	1992-1993	10667	949	11617	377	34	410
22	1993-1994	6109	795	6904	216	28	244
23	1994-1995	11024	586	11611	390	21	410
24	1995-1996	2025	498	2523	72	18	89
25	1996-1997	5407	606	6013	191	21	212
26	1997-1998	5095	618	5713	180	22	202
27	1998-1999	8066	553	8620	285	20	305
28	1999-2000	6291	405	6696	222	14	237
29	2000-2001	5883	391	6275	208	14	222
30	2001-2002	3617	412	4029	128	15	142
31	2002-2003	915	285	1200	32	10	42
32	2003-2004	846	364	1210	30	13	43
33	2004-2005	2195	318	2513	78	11	89
34	2005-2006	7157	468	7625	253	17	269
35	2006-2007	5122	319	5441	181	11	192
36	2007-2008	11641	1171	12812	411	41	453
37	2008-2009	5816	368	6185	206	13	219
38	2009-2010	11503	781	12284	406	28	434
39	2010-2011	7130	544	7674	252	19	271
40	2011-2012	4255	294	4548	150	10	161
41	2012-2013	1786	167	1953	63	6	69
42	2013-2014	7804	272	8077	276	10	285
43	2014-2015	6999	481	7481	247	17	264
44	2015-2016	1530	194	1723	54	7	61
45	2016-2017	518	1	519	18	0	18
46	2017-2018	1642	133	1776	58	5	63
47	2018-2019	5480	150	5630	194	5	199
48	2019-2020	7602	326	7928	269	12	281
49	2020-2021	5887	346	6234	208	12	220
50	2021-2022	6358	1017	7375	225	36	261
51	2022-2023	18661	502	19163	659	18	677
Average		5958	619	6577	211	22	232

Instantaneous Flood Peak of Tungabhadra at Mantralayam

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1972-1973	311.010	18-09-1972	22:00:00	3303 *
2	1973-1974	312.290	25-10-1973	12:00:00	5018 *
3	1974-1975	313.345	28-09-1974	03:00:00	6432 *
4	1975-1976	313.880	19-10-1975	05:00:00	7149 *
5	1976-1977	310.000	25-08-1976	18:00:00	2526 *
6	1977-1978	312.120	12-10-1977	12:00:00	5383 *
7	1978-1979	314.950	30-09-1978	13:00:00	10311 *
8	1979-1980	312.520	13-08-1979	12:00:00	6002 *
9	1980-1981	313.630	08-07-1980	05:00:00	7854 *
10	1981-1982	313.700	19-09-1981	12:00:00	7977 *
11	1982-1983	311.720	06-08-1982	22:00:00	4789 *
12	1983-1984	310.900	17-08-1983	23:00:00	3651 *
13	1984-1985	310.830	10-10-1984	12:00:00	3559 *
14	1985-1986	309.375	19-08-1985	08:00:00	1820 *
15	1986-1987	310.700	15-08-1986	18:00:00	3390 *
16	1987-1988	310.040	28-06-1987	18:00:00	2573 *
17	1988-1989	310.800	31-08-1988	06:00:00	3520 *
18	1989-1990	310.470	25-09-1989	00:00:00	3097 *
19	1990-1991	311.050	17-08-1990	18:00:00	3851 *
20	1991-1992	311.570	31-07-1991	18:00:00	4573 *
21	1992-1993	315.800	19-11-1992	00:00:00	12040 *
22	1993-1994	313.600	10-10-1993	17:00:00	7801 *
23	1994-1995	313.120	19-07-1994	02:00:00	6979 *
24	1995-1996	309.220	31-08-1995	06:00:00	1654 *
25	1996-1997	312.460	03-10-1996	03:00:00	5908 *
26	1997-1998	311.810	10-08-1997	01:00:00	4920 *
27	1998-1999	311.600	15-10-1998	04:00:00	4616 *
28	1999-2000	311.090	30-07-1999	13:00:00	3905 *
29	2000-2001	310.860	10-10-2000	21:00:00	3598 *
30	2001-2002	311.440	08-10-2001	05:00:00	4388 *
31	2002-2003	309.330	12-10-2002	20:00:00	1771 *
32	2003-2004	308.690	23-10-2003	23:00:00	1117 *
33	2004-2005	309.900	17-08-2004	04:00:00	2408 *
34	2005-2006	312.230	15-10-2005	11:00:00	5551 *
35	2006-2007	312.060	15-08-2006	12:00:00	5292 *
36	2007-2008	314.200	19-09-2007	15:00:00	8881 *
37	2008-2009	312.590	15-08-2008	22:00:00	6113 *
38	2009-2010	318.770	02-10-2009	00:00:00	18882 *
39	2010-2011	312.690	25-08-2010	08:00:00	6273 *
40	2011-2012	311.250	04-09-2011	20:00:00	4124 *
41	2012-2013	309.770	05-09-2012	05:00:00	2259 *
42	2013-2014	311.390	05-08-2013	23:00:00	4318 *
43	2014-2015	312.070	05-08-2014	02:00:00	5307 *
44	2015-2016	310.090	08-09-2015	07:00:00	2632 *
45	2016-2017	308.580	16-09-2016	23:00:00	1012 *
46	2017-2018	310.510	16-09-2017	01:00:00	3148 *
47	2018-2019	312.480	17-08-2018	21:00:00	5939 *
48	2019-2020	312.900	12-08-2019	17:00:00	6614 *
49	2020-2021	310.870	22-09-2020	06:00:00	3008 *
50	2021-2022	311.750	22-11-2022	08:00:00	4312 *
51	2022-2023	312.450	09-09-2022	03:00:00	5794 *

Stage-Discharge Data for the period 2022 - 2023

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	306.490	25.45	306.190	7.460	309.220	1197 #	310.615	2700	310.765	3306	307.690	252.4
2	306.460	23.87	306.170	6.283	308.550	760.3	310.615	2707	310.530	2583 *	307.640	248.9
3	306.430	20.44	306.160	5.467 *	311.240	3805	310.500	2633	310.275	2629	307.600	217.9
4	306.580	41.14	306.130	0.000	311.400	3997	310.830	2989 *	309.320	1379	307.620	233.4
5	306.850	71.99 *	306.070	0.000	310.495	2668	310.345	2439	308.940	977.1 *	307.630	236.8
6	306.745	60.26	306.060	0.000	310.165	2247	309.510	1301	308.700	802.3	307.600	260.3 *
7	306.890	90.45	306.060	0.000	309.000	1022 *	311.380	3982	309.125	1119	307.550	225.9
8	307.385	177.6	306.060	0.000	310.630	2943	312.260	5109	309.610	1546 *	307.530	236.8 *
9	307.180	125.2	306.070	0.000	311.070	3338 *	312.270	5125	308.980	1007 *	307.460	191.1
10	306.950	91.79	306.110	0.000	311.820	4553	310.500	2545 *	308.460	658.7	307.400	156.6
11	306.755	60.54	306.150	0.000	312.210	5172	309.840	1777 *	308.410	590.8	307.330	147.5
12	306.650	43.42 *	306.235	10.16	312.030	4894	309.565	1478	309.890	2149	307.320	174.0 *
13	306.550	34.11	306.250	10.34	310.600	2814	309.580	1699	310.685	2928	307.350	182.3 *
14	306.520	32.27	306.250	10.35	310.710	2823 *	309.720	1815	310.985	3236	307.390	154.8
15	306.470	24.29	311.480	4135	311.050	3308 *	309.520	1542	310.610	2723	307.440	166.7
16	306.420	20.11	311.980	4693	310.155	2366	309.490	1491	309.960	1905 *	307.380	147.5
17	306.390	17.95	311.700	4363 *	309.660	1769	309.360	1311	309.680	1868	307.330	134.5
18	306.370	16.15	311.990	4821	309.100	1099 #	309.200	1180 *	310.230	2451	307.240	115.4
19	306.500	27.26 *	311.900	4569	309.215	1193	308.325	578.4	309.570	1754	307.180	101.3
20	306.375	17.85	311.450	3992	308.440	645.5	308.120	467.2	309.360	1384	307.180	138.2 *
21	306.370	17.45	311.210	3642	308.320	579.4 *	308.370	603.0	309.640	1810	307.180	104.6
22	306.370	17.07	310.525	2608	308.270	533.8	308.275	494.4	309.190	1244	307.150	99.44
23	306.360	16.38	309.270	1300	308.470	709.7	307.985	395.7	309.240	1213 *	307.150	115.7
24	306.350	15.74	308.250	541.9 *	308.330	617.8	307.840	340.9	309.520	1461 *	307.230	155.8
25	306.330	14.96	307.945	417.2	308.625	760.1 #	307.760	318.8 *	308.715	844.8	307.210	128.4
26	306.310	12.72 *	308.690	882.5	309.120	1095	307.835	368.8	308.520	659.5	307.230	137.6
27	306.260	10.98	308.640	807.0	309.325	1245	307.900	393.9	308.500	675.0	307.200	143.0 *
28	306.230	10.24	308.840	940.8	311.150	3460 *	307.990	424.3	308.255	524.4	307.150	128.6
29	306.220	9.124	309.295	1364	310.815	3098	308.010	460.9	308.140	449.3	307.100	118.7
30	306.210	8.884	310.615	2632	310.560	2646	308.220	507.2	307.950	397.2 *	307.080	110.3
31			310.160	2129 *	310.740	2864 *			307.760	305.5		
Ten-Daily Mean												
I Ten-Daily	306.796	72.82	306.108	1.921	310.359	2653	310.883	3153	309.471	1601	307.572	226.0
II Ten-Daily	306.500	29.40	309.538	2660	310.317	2608	309.272	1334	309.938	2099	307.314	146.2
III Ten-Daily	306.301	13.35	309.404	1569	309.430	1601	308.018	430.8	308.675	871.4	307.168	124.2
Monthly												
Min.	306.210	8.884	306.060	0.000	308.270	533.8	307.760	318.8	307.760	305.5	307.080	99.44
Max.	307.385	177.6	311.990	4821	312.210	5172	312.270	5125	310.985	3306	307.690	260.3
Mean	306.532	38.52	308.384	1416	310.016	2265	309.391	1639	309.339	1503	307.351	165.5

Annual Runoff in MCM = 19163 Annual Runoff in mm = 316

Peak Observed Discharge = 5172 cumecs on 11-08-2022 Corres. Water Level :312.21 m

Lowest Observed Discharge = 0.000 cumecs on 04-07-2022 Corres. Water Level :306.13 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2022 - 2023

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	307.090	118.2	306.460	23.24 *	306.520	27.48	306.660	45.94	306.490	25.83	306.020	0.000
2	307.040	102.5	306.460	26.19	306.520	27.32	306.620	41.00	306.430	20.26 *	306.080	0.000
3	307.020	94.27	306.430	22.09	306.520	27.27	306.560	32.16	306.370	13.18	306.080	0.000
4	306.990	96.49 *	306.410	20.07	306.490	25.12	306.550	30.16	306.300	9.217 *	306.080	0.000
5	306.900	72.97	306.400	14.17	306.460	23.24 *	306.530	30.73 *	306.230	5.667	306.760	60.29 *
6	306.780	59.32	306.460	26.36	306.420	17.87	306.520	26.11	306.220	5.394	306.490	25.74
7	306.680	56.24	306.480	31.32	306.565	39.37	306.480	23.31	306.150	1.041 *	306.500	27.42 *
8	306.690	61.62	306.550	33.01 *	306.685	53.81	306.480	23.68	306.130	0.000	306.460	23.54
9	306.720	67.68	306.520	34.25	306.700	56.24	306.400	17.72	306.100	0.000	306.510	27.69
10	306.700	51.89 *	306.620	41.76	306.720	58.57	306.490	25.83	306.080	0.000	306.480	23.61
11	306.700	51.89 *	306.650	42.30	306.710	53.26 *	306.520	29.61 *	306.060	0.000	306.440	21.00
12	306.690	57.13	306.650	43.40	306.690	50.54 *	306.620	41.43 *	306.030	0.000	306.420	19.91
13	306.850	71.40	306.630	40.84	306.670	47.90	306.610	44.36	306.030	0.000	306.400	17.44 *
14	307.030	103.4 #	306.600	38.96 *	306.670	49.84	306.540	29.37	306.020	0.000	306.370	14.78 *
15	307.135	124.8	306.560	34.17 *	306.540	30.94	306.490	25.28	306.010	0.000	306.330	10.07
16	307.010	90.62	306.565	33.16	306.430	20.90	306.480	24.66	305.960	0.000	306.310	8.996
17	306.910	83.35	306.570	31.88	306.410	19.10	306.490	26.35 *	305.930	0.000	306.380	14.21
18	306.870	76.83 *	306.600	38.34	306.370	13.11	306.480	24.90	305.910	0.000	306.350	11.92
19	306.850	71.26	306.720	58.80	306.360	13.93 *	306.650	45.26 *	305.910	0.000	306.330	10.04
20	306.790	69.94	306.740	60.81	306.360	12.29	306.780	67.18	305.900	0.000	306.320	9.034
21	306.730	58.85	306.815	73.81	306.350	11.66	306.910	82.12	305.900	0.000	306.300	9.217 *
22	306.680	54.98	306.800	66.13 *	306.400	16.80	306.810	67.63 *	305.940	0.000	306.250	6.039
23	306.660	41.92	306.780	68.16	306.510	32.68	306.900	79.05	305.940	0.000	306.210	4.840
24	306.580	33.75	306.640	44.19	306.685	57.00	306.740	61.86	305.930	0.000	306.160	0.000
25	306.550	33.01 *	306.620	41.76	306.850	76.28	306.590	42.15	305.910	0.000	306.150	0.000
26	306.530	32.36	306.620	41.43 *	306.850	73.71 *	306.650	45.26 *	305.940	0.000	306.160	0.000
27	306.490	35.01	306.620	41.80	306.710	59.02	306.540	29.45	305.940	0.000	306.160	0.000
28	306.460	32.34	306.540	30.63	306.710	58.70	306.620	45.12	305.940	0.000	306.160	0.000
29	306.510	30.54	306.520	29.61 *			306.570	33.58	305.990	0.000	306.160	0.000
30	306.480	32.05	306.520	28.03			306.570	35.34 *	306.000	0.000	306.160	0.000
31	306.470	29.73	306.570	32.44			306.540	29.37			306.160	0.000
Ten-Daily Mean												
I Ten-Daily	306.861	78.12	306.479	27.25	306.560	35.63	306.529	29.66	306.250	8.059	306.346	18.83
II Ten-Daily	306.887	81.04	306.629	42.26	306.521	31.18	306.566	35.84	305.976	0.000	306.365	13.74
III Ten-Daily	306.558	37.69	306.640	45.27	306.633	48.23	306.676	50.08	305.943	0.000	306.185	1.827
Monthly												
Min.	306.460	29.73	306.400	14.17	306.350	11.66	306.400	17.72	305.900	0.000	306.020	0.000
Max.	307.135	124.8	306.815	73.81	306.850	76.28	306.910	82.12	306.490	25.83	306.760	60.29
Mean	306.758	64.17	306.585	38.49	306.567	37.64	306.593	38.9	306.056	2.686	306.295	11.15

Peak Computed Discharge = 4363 cumecs on 17-07-2022

Corres. Water Level :311.7 m

Lowest Computed Discharge = 1.041 cumecs on 07-04-2023

Corres. Water Level :306.15 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

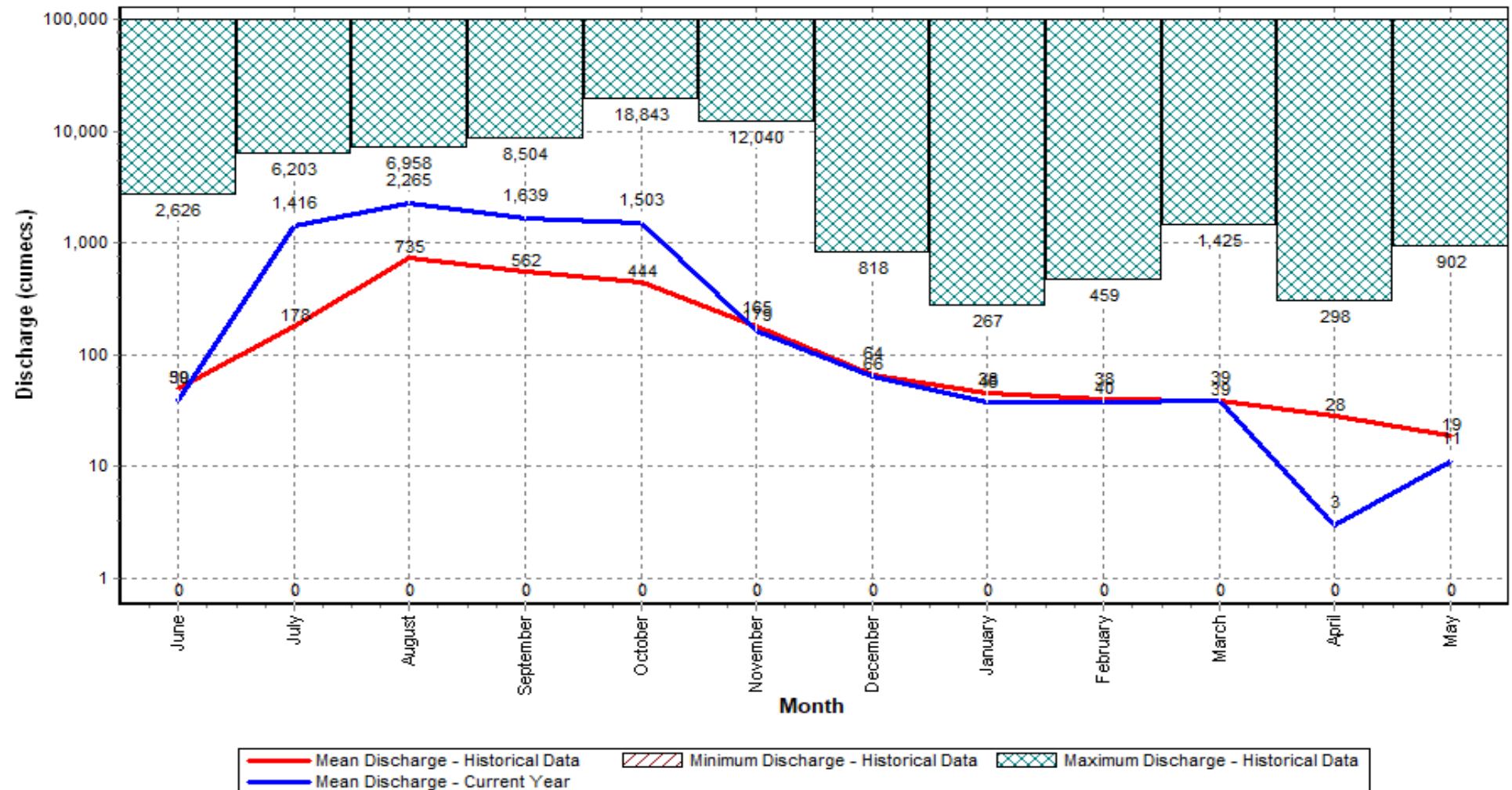
Station Name : Mantralayam (AKL00F2)

Data considered : 1972-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

Sub-Division : Lower Tungabhadra SD, Kurnool



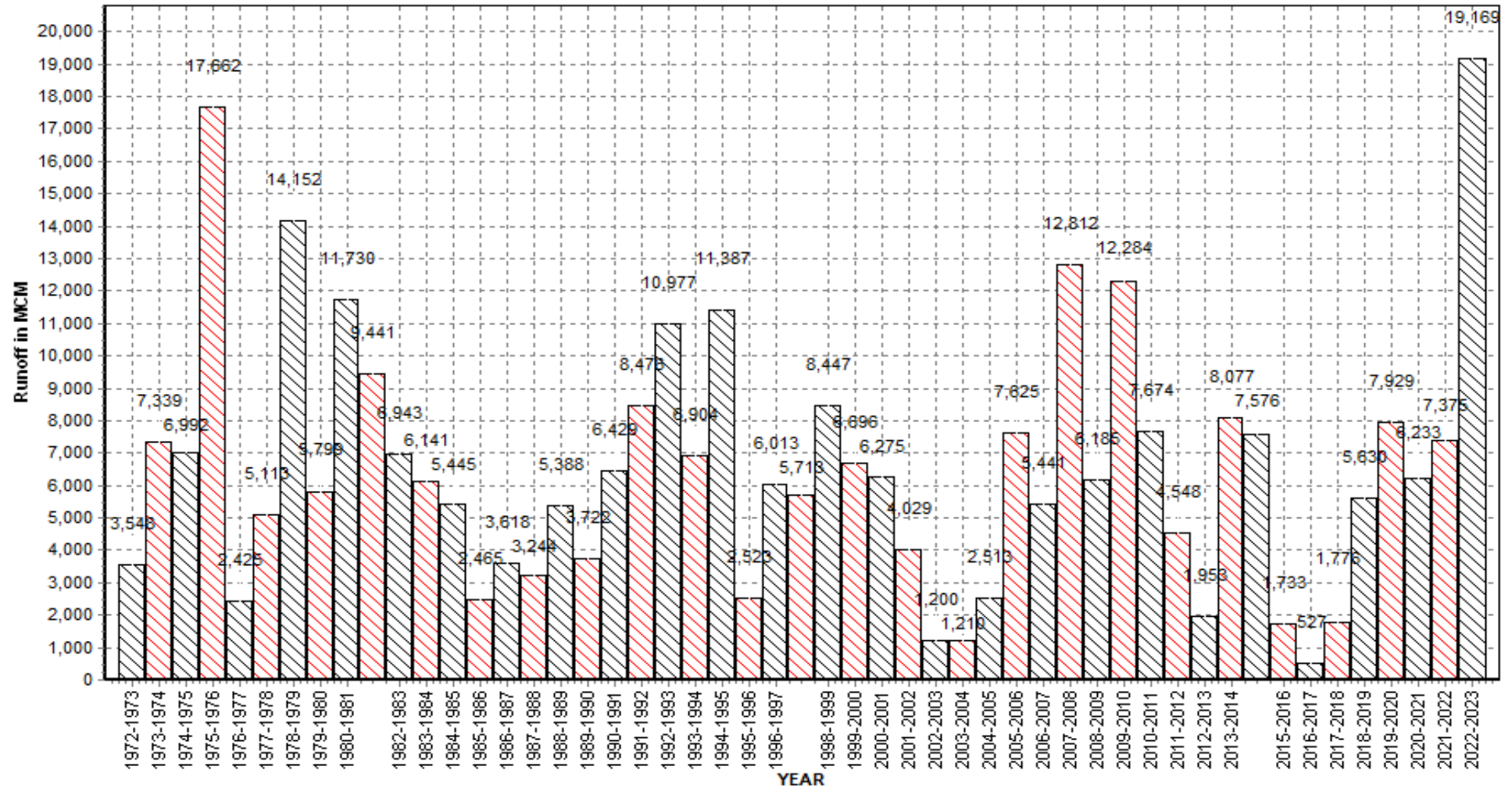
Annual Runoff Values for the period: 1972 - 2023

Station Name : Mantralayam (AKL00F2)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



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

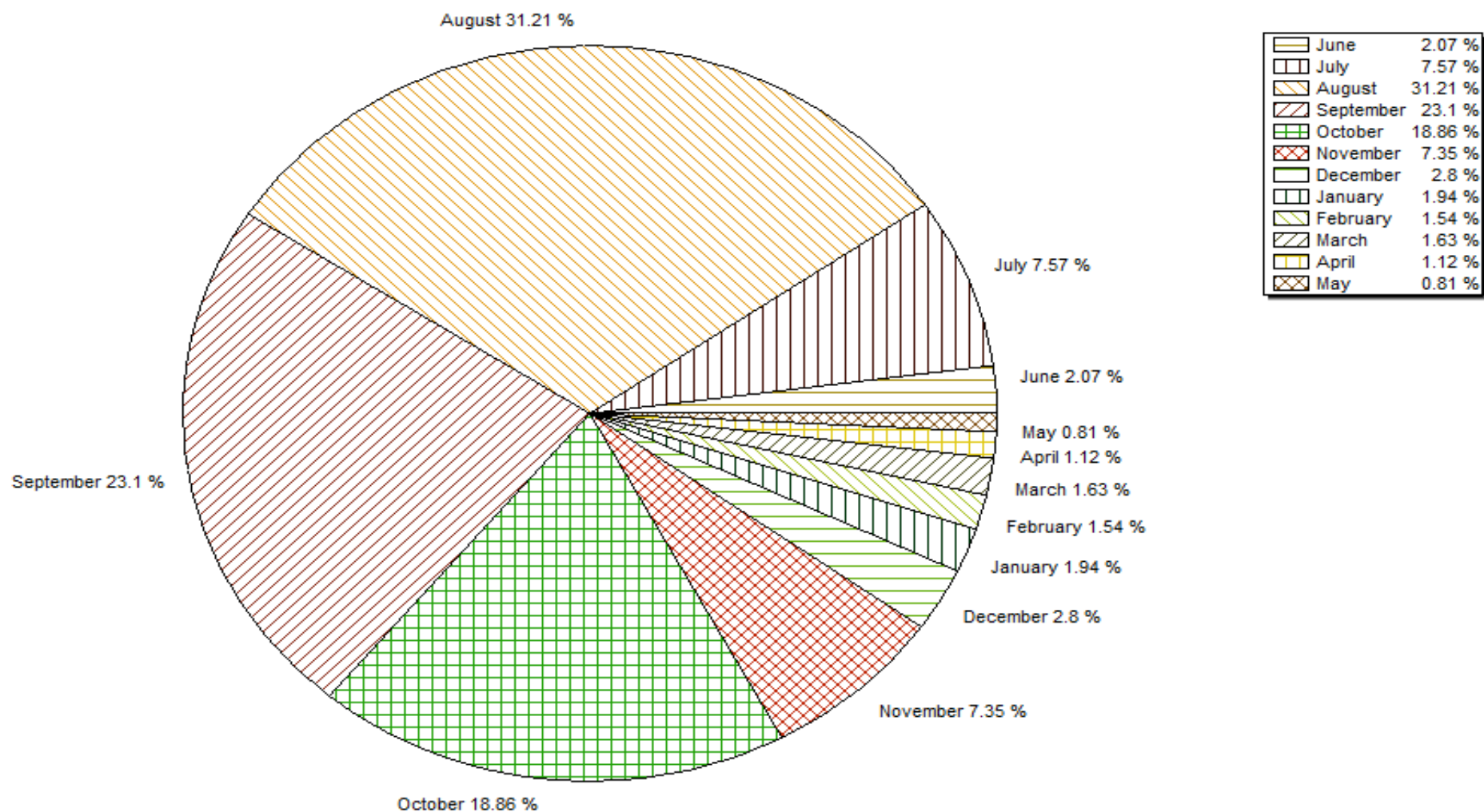
Monthly Average Runoff based on period : 1972-2022

Station Name : Mantralayam (AKL00F2)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



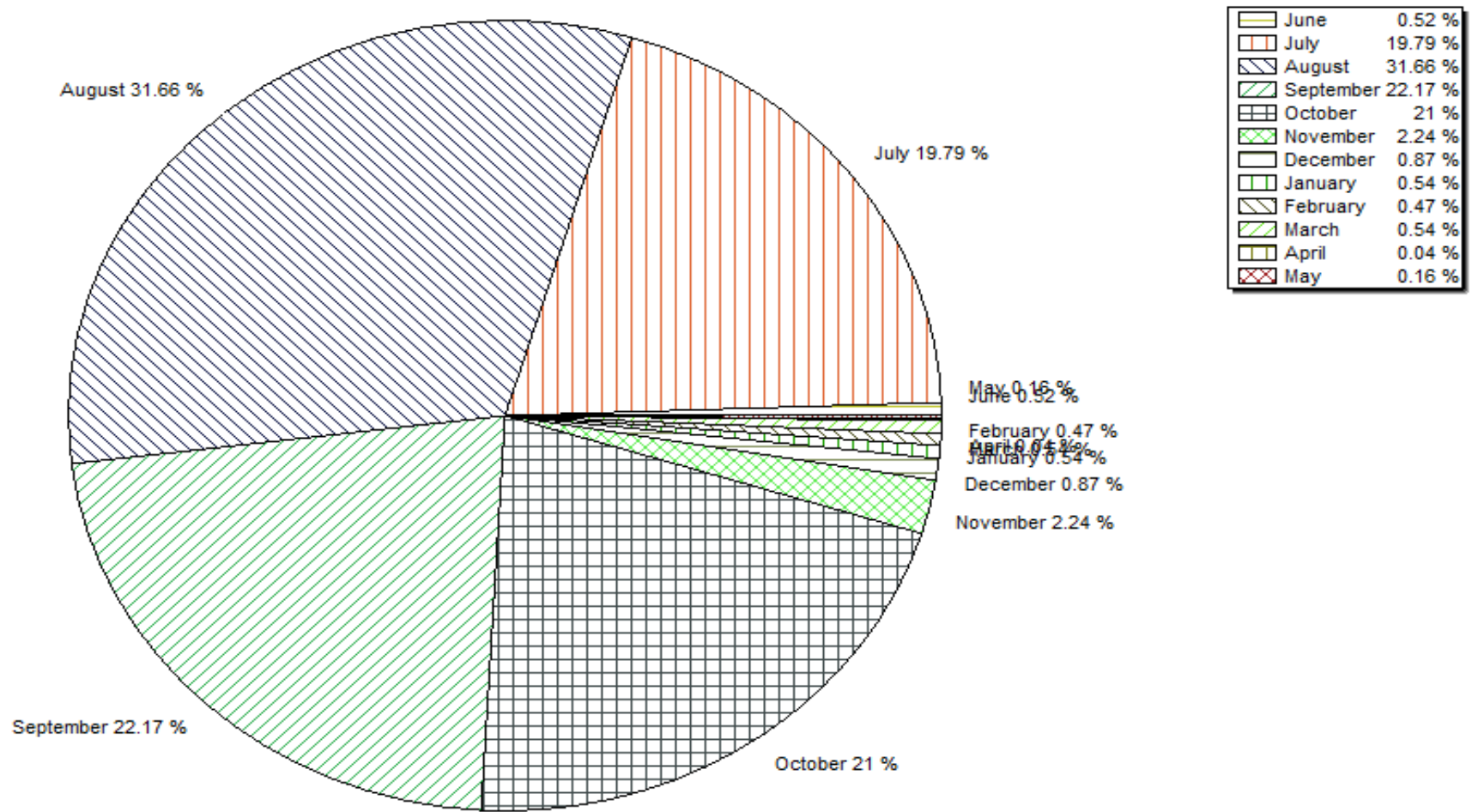
Monthly Runoff for the Year : 2022-2023

Station Name : Mantralayam (AKL00F2)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



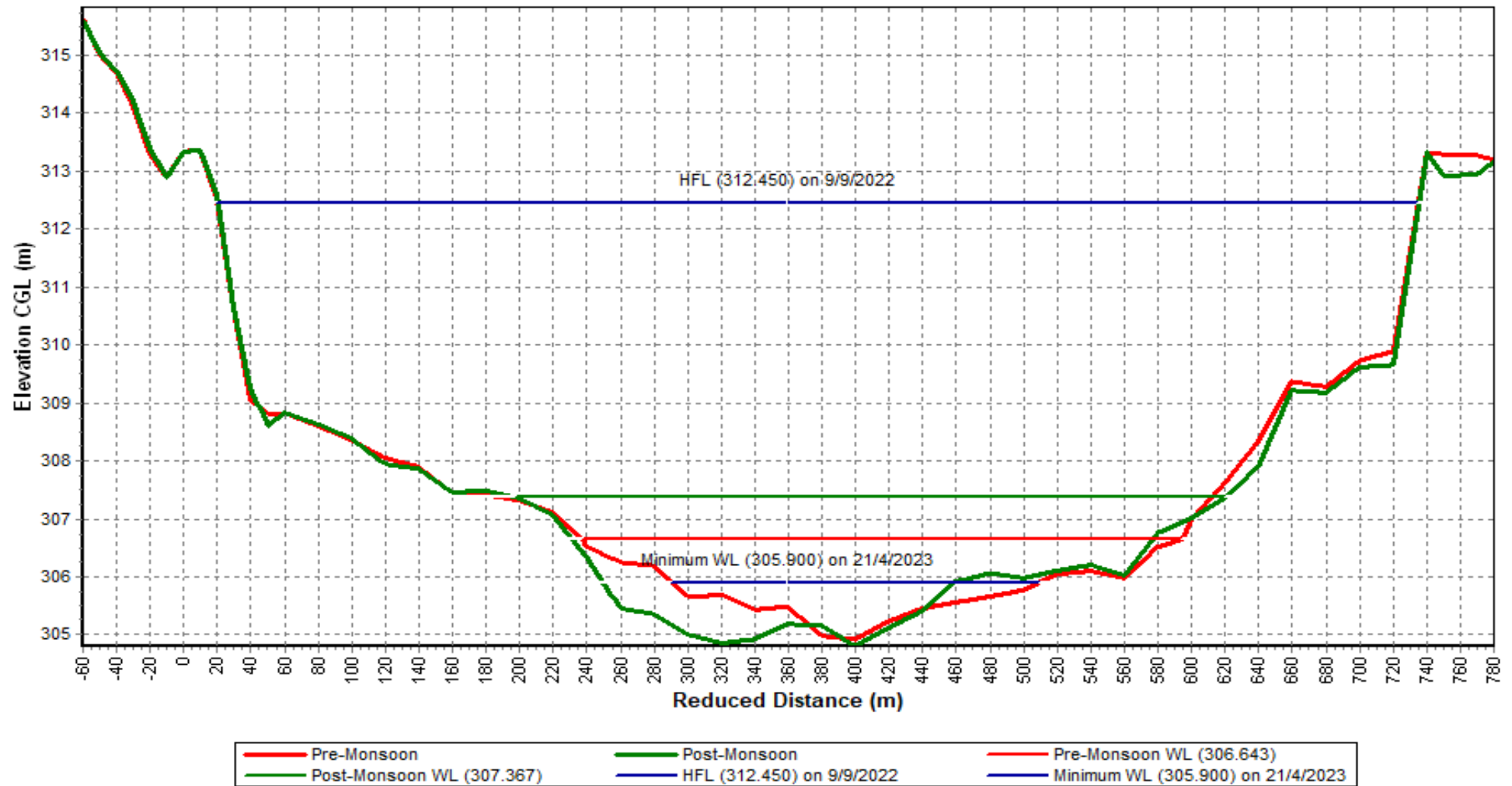
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Mantralayam (AKL00F2)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



Note : Post Monsoon X-Section Defferance due to High Flood during monsoon.
Zero of the Gauge: 306 (m.s.l)

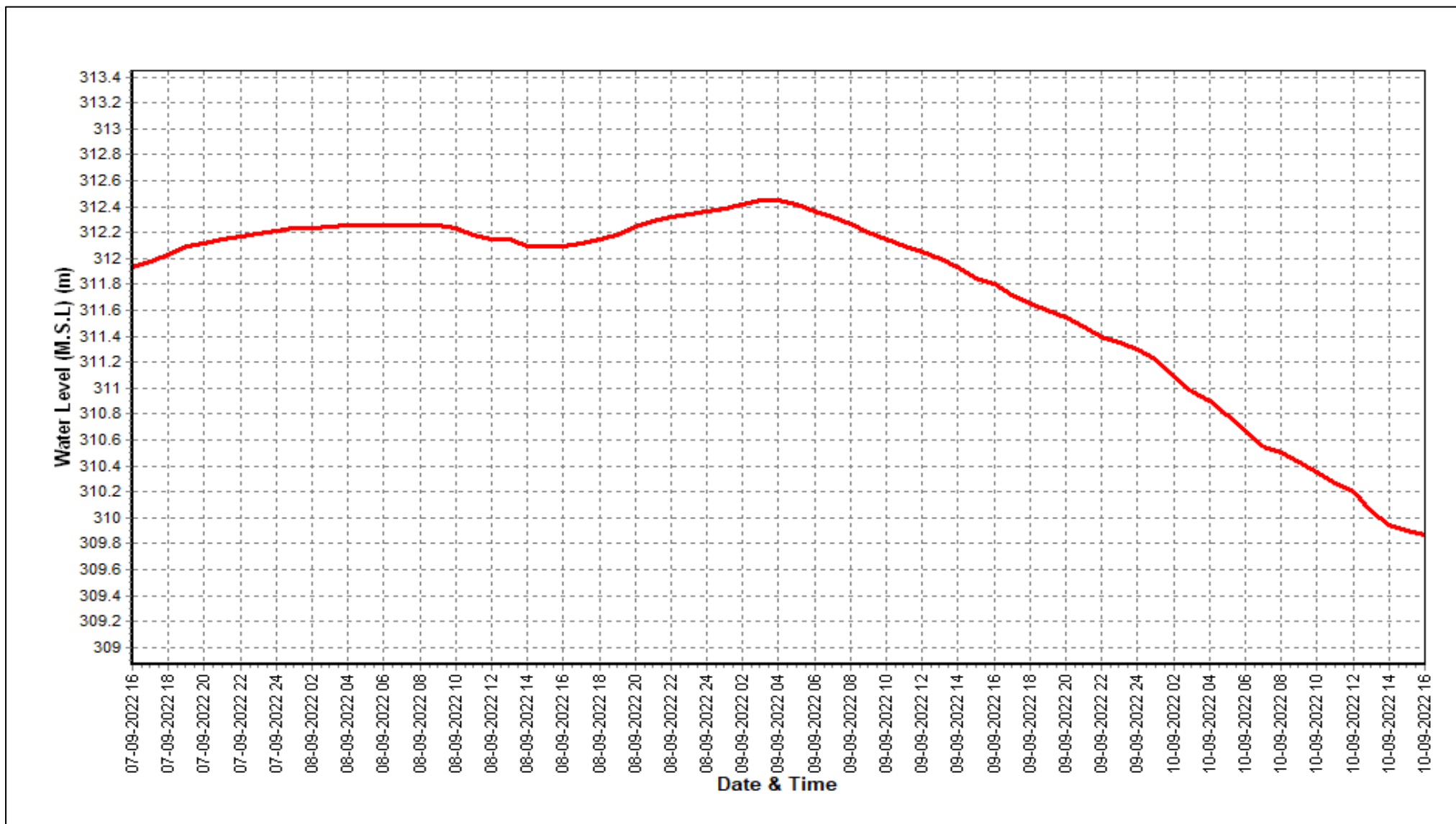
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Mantralayam (AKL00F2)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



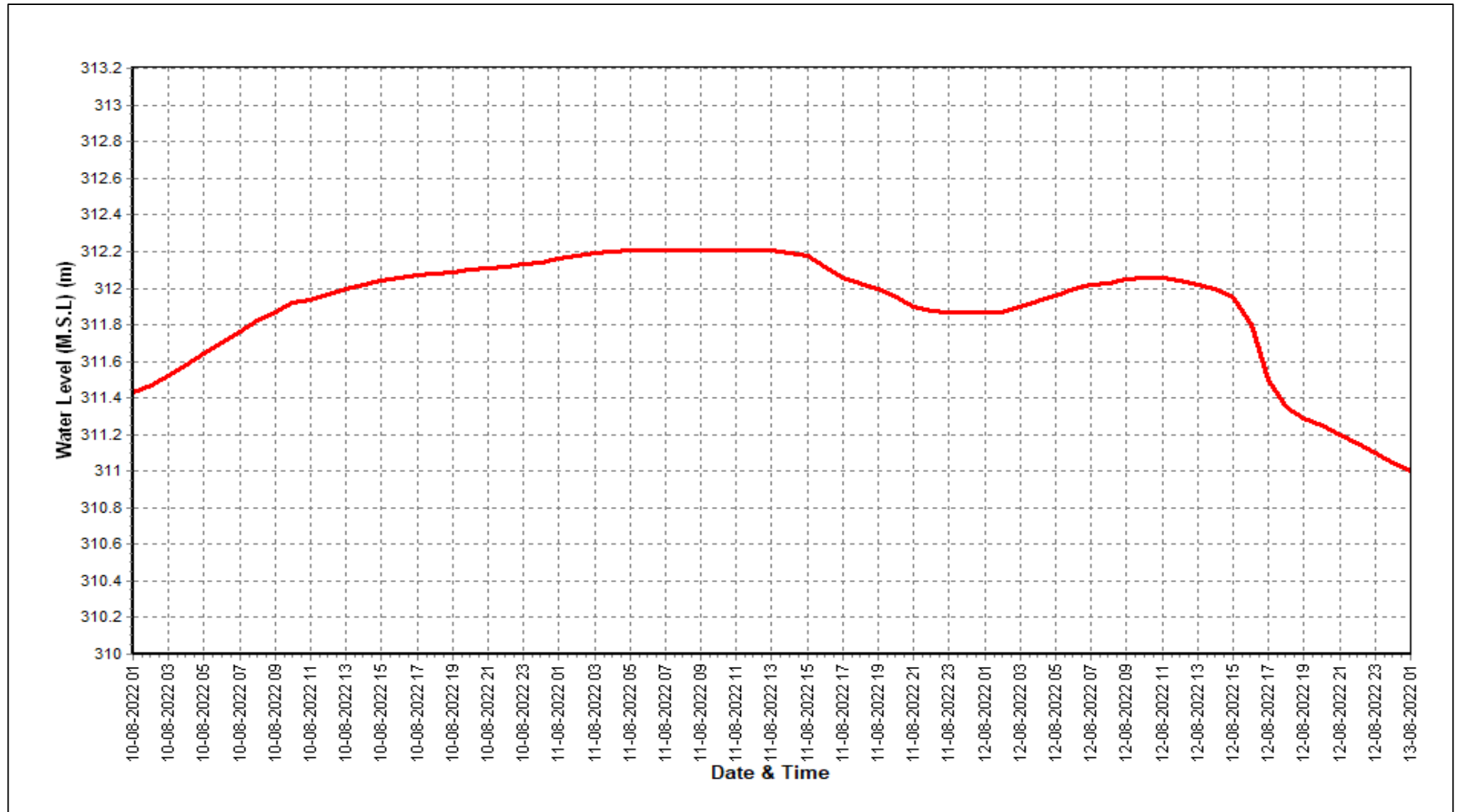
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Mantralayam (AKL00F2)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



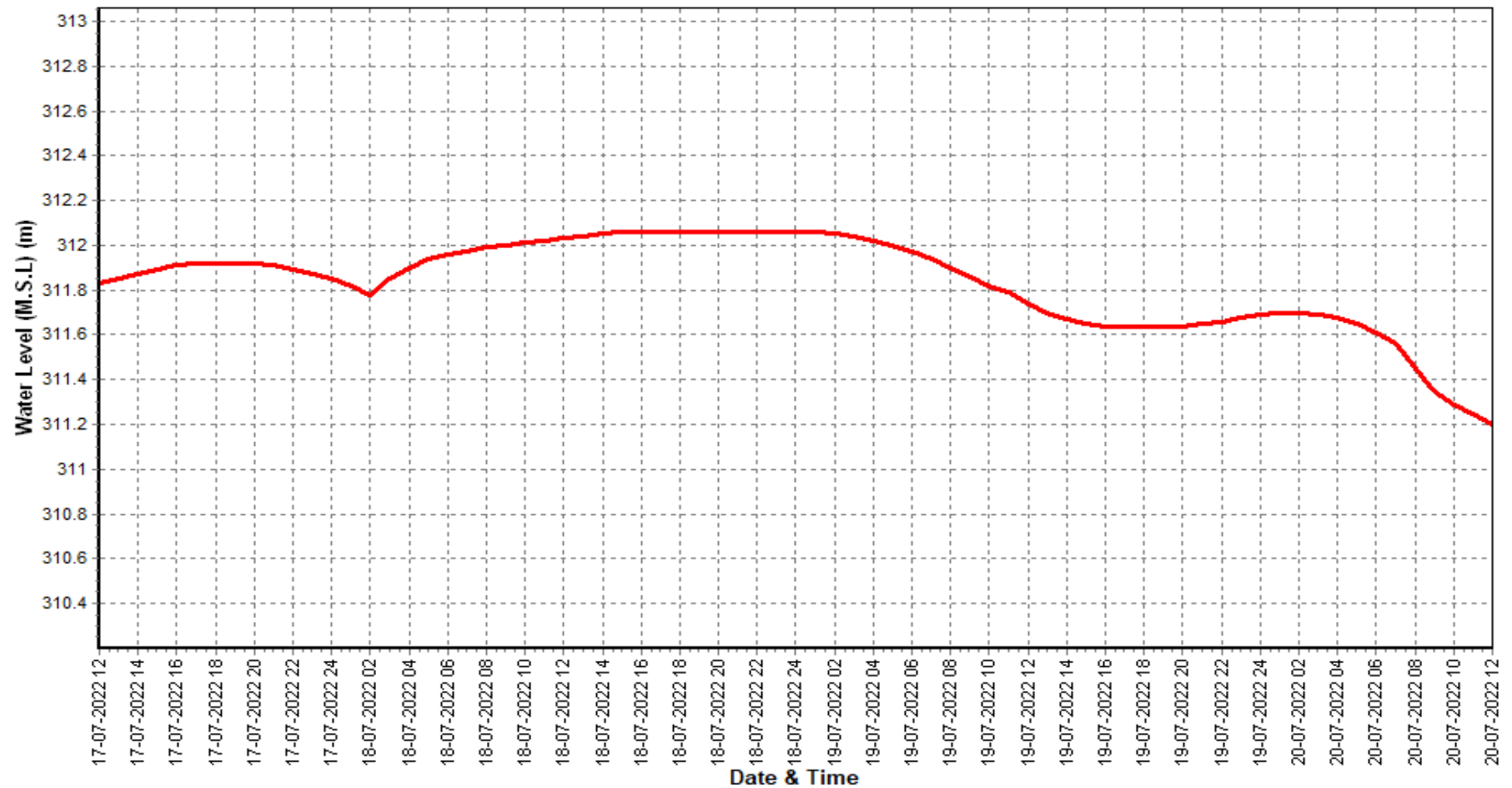
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Mantralayam (AKL00F2)

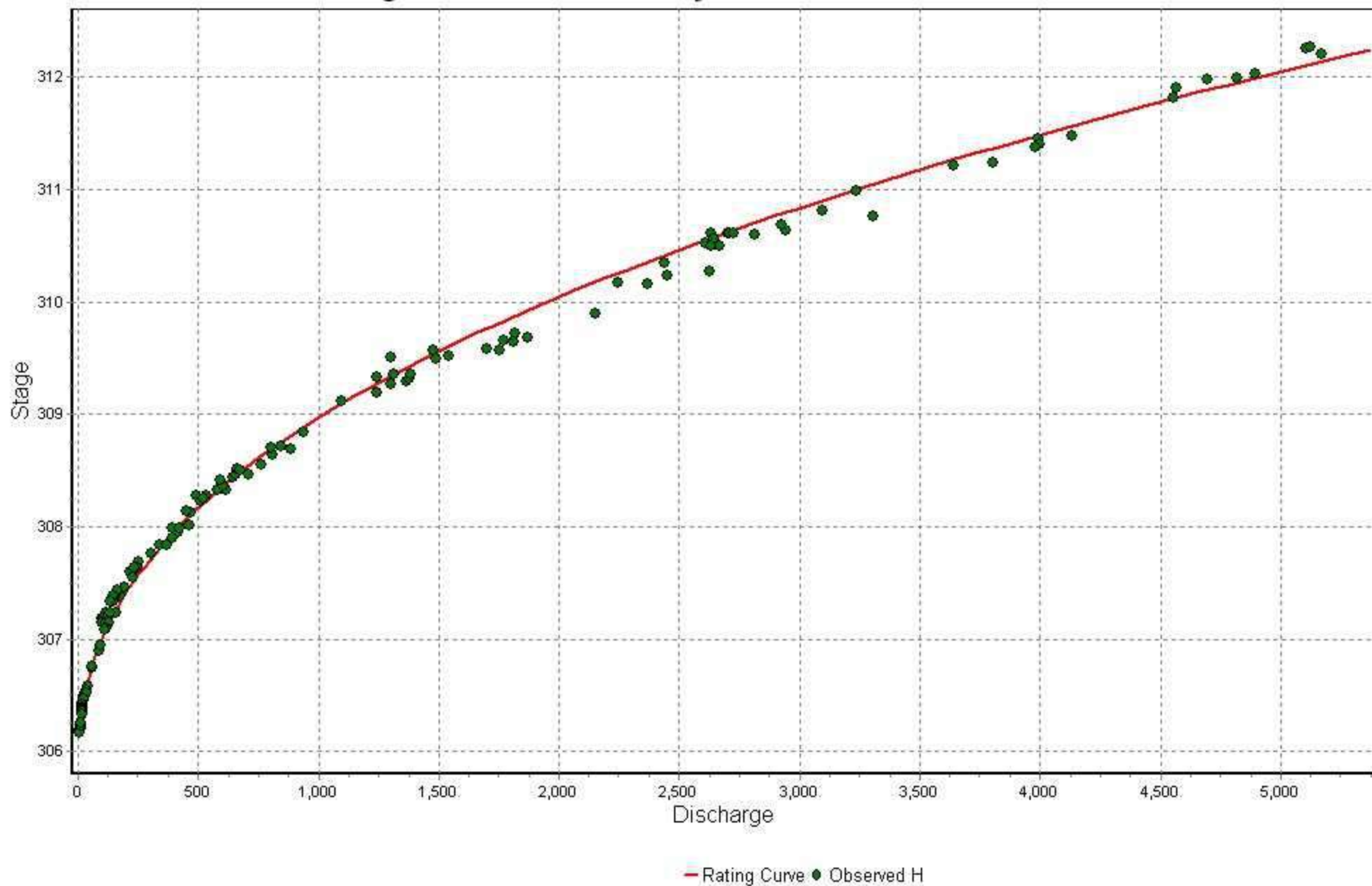
Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



Rating Curve of Site Mantralayam 01/06/2022 to 30/11/2022



HISTORY SHEET

Water Year : 2022-2023

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)
 270.485 (m.s.l)
 270.245 (m.s.l)
 270.245 (m.s.l)

14-03-1964 - 31-05-1969
 01-06-1969 - 31-12-1972
 01-01-1973 - 30-04-2019
 01-05-2019

Opening Date

Closing Date

Gauge : 14-03-1964

HFL During 2022-23 : 276.145 m

Corres. Discharge : 5042 (Estimated)

Discharge : 01-04-1964

Date & Time of

occurrence : 09:00 Hrs

Sediment : 01-06-1965

Water Quality : 01-01-1972

HFL Recorded so far in m : 285.225 dt 02-10-2009

Corresponding Discharge (cumecs) : 30527*

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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	30527	285.225	03-10-2009	0.632	270.515	22-03-2010
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	270.125	23-04-2013
2013-2014	4755	275.755	06-08-2013	0.000	270.335	01-03-2014
2014-2015	3900	276.105	05-08-2014	0.000	270.285	08-04-2015
2015-2016	2081	273.955	08-09-2015	0.000	269.655	18-05-2016
2016-2017	1234	273.105	17-09-2016	0.000	269.995	25-01-2017
2017-2018	2757	274.495	16-09-2017	0.000	270.025	19-03-2018
2018-2019	5750	276.415	18-08-2018	0.000	270.115	10-02-2019
2019-2020	6013	276.825	13-08-2019	0.000	270.035	07-08-2019
2020-2021	2667	274.815	01-08-2020	0.000	270.175	09-05-2021
2021-2022	3002	275.745	22-11-2021	0.846	270.265	25-06-2021

Annual Runoff of Tungabhadra at Bawapuram

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1965-1966	4936	736	5672	174	26	200
2	1966-1967	2750	844	3594	97	30	127
3	1967-1968	4695	307	5002	166	11	177
4	1968-1969	5721	791	6511	202	28	230
5	1969-1970	6261	693	6954	221	25	246
6	1970-1971	9624	536	10160	340	19	359
7	1971-1972	4034	689	4723	143	24	167
8	1972-1973	2091	155	2246	74	5	79
9	1973-1974	5584	374	5958	197	13	211
10	1974-1975	5725	295	6020	202	10	213
11	1975-1976	14441	462	14903	510	16	527
12	1976-1977	686	292	978	24	10	35
13	1977-1978	3403	205	3608	120	7	127
14	1978-1979	11649	218	11867	412	8	419
15	1979-1980	3590	254	3843	127	9	136
16	1980-1981	8910	151	9061	315	5	320
17	1981-1982	6789	110	6900	240	4	244
18	1982-1983	4951	87	5038	175	3	178
19	1983-1984	4737	93	4830	167	3	171
20	1984-1985	3896	68	3964	138	2	140
21	1985-1986	1200	83	1283	42	3	45
22	1986-1987	2118	44	2161	75	2	76
23	1987-1988	2336	138	2475	83	5	87
24	1988-1989	4358	89	4447	154	3	157
25	1989-1990	2557	255	2812	90	9	99
26	1990-1991	4448	44	4492	157	2	159
27	1991-1992	6201	82	6284	219	3	222
28	1992-1993	9654	177	9831	341	6	347
29	1993-1994	5235	692	5927	185	24	209
30	1994-1995	10128	76	10204	358	3	361
31	1995-1996	1766	68	1834	62	2	65
32	1996-1997	5346	169	5515	189	6	195
33	1997-1998	4477	264	4741	158	9	168
34	1998-1999	8100	175	8275	286	6	292
35	1999-2000	5119	142	5261	181	5	186
36	2000-2001	5422	156	5578	192	6	197
37	2001-2002	3277	128	3405	116	5	120
38	2002-2003	786	53	839	28	2	30
39	2003-2004	495	177	672	17	6	24
40	2004-2005	1528	167	1695	54	6	60
41	2005-2006	5931	198	6129	210	7	217
42	2006-2007	4472	86	4558	158	3	161
43	2007-2008	10818	708	11526	382	25	407
44	2008-2009	5341	160	5501	189	6	194
45	2009-2010	9946	467	10414	351	17	368
46	2010-2011	5479	234	5713	194	8	202
47	2011-2012	3566	56	3622	126	2	128

48	2012-2013	1334	16	1351	47	1	48
49	2013-2014	7873	12	7885	278	0	279
50	2014-2015	7180	33	7213	254	1	255
51	2015-2016	1150	9	1159	41	0	41
52	2016-2017	356	0	356	13	0	13
53	2017-2018	1667	16	1683	59	1	59
54	2018-2019	5079	2	5081	179	0	180
55	2019-2020	7686	164	7850	272	6	277
56	2021-2021	6471	125	6596	229	4	233
57	2021-2022	6036	709	6745	213	25	238
58	2022-2023	15125	159	15284	534	6	540
Average		5251	236	5487	186	8	194

Instantaneous Flood Peak of Tungabhadra at Bawapuram

Sl. No.	Year	Instantaneous Annual Flood Peak		Time	Discharge * (Cumecs)
		Peak WL (m) Recorded	Date		
1	1965-1966	277.965	20-09-1965	17:00:00	7201 *
2	1966-1967	278.045	25-09-1966	00:00:00	7401 *
3	1967-1968	278.090	05-08-1967	19:00:00	7515 *
4	1968-1969	278.575	09-10-1968	16:00:00	8808 *
5	1969-1970	276.450	06-08-1969	02:00:00	4009 *
6	1970-1971	277.985	21-09-1970	03:00:00	7250 *
7	1971-1972	276.420	15-10-1971	08:00:00	3957 *
8	1972-1973	274.660	19-09-1972	08:00:00	1708 *
9	1973-1974	275.555	25-10-1973	21:00:00	2659 *
10	1974-1975	277.355	28-09-1974	10:00:00	5778 *
11	1975-1976	277.835	19-10-1975	08:00:00	6882 *
12	1976-1977	273.225	26-08-1976	10:00:00	1014 *
13	1977-1978	275.645	12-10-1977	22:00:00	2777 *
14	1978-1979	278.595	30-09-1978	22:00:00	8864 *
15	1979-1980	276.125	13-08-1979	20:00:00	3473 *
16	1980-1981	277.245	08-07-1980	14:00:00	5541 *
17	1981-1982	277.345	19-09-1981	21:00:00	5756 *
18	1982-1983	276.755	07-08-1982	07:00:00	4560 *
19	1983-1984	275.905	18-08-1983	07:00:00	3139 *
20	1984-1985	275.815	06-08-1984	07:00:00	3010 *
21	1985-1986	274.345	05-10-1985	16:00:00	1468 *
22	1986-1987	275.685	16-08-1986	06:00:00	2830 *
23	1987-1988	274.855	29-06-1987	06:00:00	1881 *
24	1988-1989	276.165	31-08-1988	12:00:00	3536 *
25	1989-1990	275.675	25-09-1989	11:00:00	2817 *
26	1990-1991	275.945	18-08-1990	08:00:00	3198 *
27	1991-1992	276.535	01-08-1991	06:00:00	4158 *
28	1992-1993	280.495	19-11-1992	18:00:00	15075 *
29	1993-1994	279.145	11-10-1993	00:00:00	10478 *
30	1994-1995	278.015	19-07-1994	07:00:00	7326 *
31	1995-1996	273.985	31-08-1995	13:00:00	1254 *
32	1996-1997	277.525	03-10-1996	10:00:00	6156 *
33	1997-1998	276.665	10-08-1997	10:00:00	4392 *
34	1998-1999	276.985	15-10-1998	09:00:00	5006 *
35	1999-2000	275.885	30-07-1999	19:00:00	3110 *
36	2000-2001	275.635	11-10-2000	02:00:00	2764 *
37	2001-2002	276.135	08-10-2001	14:00:00	3488 *
38	2002-2003	274.305	13-10-2002	14:00:00	1441 *
39	2003-2004	273.565	25-10-2003	02:00:00	1086 *
40	2004-2005	274.755	17-08-2004	19:00:00	1790 *
41	2005-2006	277.085	15-10-2005	19:00:00	5208 *
42	2006-2007	276.945	15-08-2006	08:00:00	4926 *
43	2007-2008	278.945	19-09-2007	23:00:00	9873 *
44	2008-2009	277.335	16-08-2008	04:00:00	5735 *
45	2009-2010	285.225	02-10-2009	18:00:00	30527 *

46	2010-2011	277.025	25-08-2010	15:00:00	5086 *
47	2011-2012	275.645	05-09-2011	07:00:00	2777 *
48	2012-2013	274.395	05-09-2012	10:00:00	1503 *
49	2013-2014	275.775	06-08-2013	17:00:00	2954 *
50	2014-2015	276.105	05-08-2014	08:00:00	3441 *
51	2015-2016	274.915	08-09-2015	13:00:00	1938 *
52	2016-2017	273.445	17-09-2016	12:00:00	1054 *
53	2017-2018	274.525	16-09-2017	06:00:00	1599 *
54	2018-2019	276.415	18-08-2018	06:00:00	3948 *
55	2019-2020	276.825	13-08-2019	06:00:00	4693 *
56	2020-2021	274.815	20-08-2020	14:00:00	1844 *
57	2021-2022	275.745	22-11-2021	08:00:00	3002
58	2022-2023	276.145	09-09-2022	09:00:00	5042 *

Stage-Discharge Data for the period 2022 - 2023

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	270.695	14.27	270.425	4.284	273.055	1004	274.465	2566	273.805	1804	271.415	230.6
2	271.045	101.3	270.425	4.247	272.985	940.5	274.445	2549	274.685	2745 *	271.415	230.4
3	270.735	36.00	270.425	4.230 *	273.395	1212	273.945	2152	273.805	1804	270.945	70.92
4	270.475	5.643	270.405	4.291	275.225	3251	274.445	2457 *	272.920	915.0	271.355	205.9
5	270.605	15.84 *	270.405	4.021	274.045	2230	274.045	2230	272.795	910.1 *	271.295	184.0
6	270.735	35.94	270.515	10.80	273.805	2045	273.010	1104	272.445	610.2	271.355	205.5 *
7	271.355	210.5	270.475	5.340	273.305	1308 *	273.765	2015	273.125	1159	271.415	240.9
8	271.415	215.8	270.425	3.953	274.525	2613	275.945	4744	272.925	1005 *	271.045	92.33 *
9	271.245	194.2	270.425	3.950 *	274.685	2745 *	276.125	4970	273.045	1096 *	271.355	202.4
10	271.245	192.2	270.475	5.600 *	275.225	3248	274.785	2870 *	272.405	622.4	270.815	53.87
11	271.475	248.9 *	270.475	5.568	275.825	4396	273.565	1538 *	272.015	358.4	271.005	88.17
12	271.315	184.8 *	270.435	4.271	275.525	3712	273.085	1127 #	271.955	340.2	271.355	205.5 *
13	270.695	14.76	270.435	4.436	274.525	2552 *	272.975	1082	274.445	2549	271.165	121.4 *
14	270.515	10.40	270.435	4.388	274.045	2013 *	273.225	1235	274.525	2613	270.985	81.51
15	270.745	34.96	274.955	2994	274.645	2696 *	273.225	1212	274.445	2549	271.275	168.6
16	270.745	35.50	275.525	3711	274.045	2230	273.045	1073	273.765	1728 *	271.175	130.5
17	270.515	10.34	275.095	3274 *	273.765	2014	273.045	1090	272.995	1057	271.205	140.5
18	270.475	5.802	275.455	3535	272.630	809.9	272.975	1042 *	274.445	2549	270.895	61.03
19	270.405	3.923 *	275.635	4018	272.925	859.2	272.410	685.0	273.225	1241 #	270.895	61.03
20	270.745	33.42	275.225	3245	272.355	659.0	271.585	254.4 #	273.140	1171 #	271.045	92.33 *
21	270.475	5.903	274.795	2847	272.045	455.9 *	272.145	390.6	272.900	962.6	271.045	91.80
22	270.405	3.964	274.525	2613	271.905	356.0	272.045	368.3	272.805	996.1	271.035	91.89
23	270.405	3.645	273.180	1334	272.010	380.0	271.965	364.7	272.815	924.3 *	270.895	60.70
24	270.395	3.433	272.795	910.1 *	272.295	505.7	271.585	275.9	273.305	1308 *	271.025	87.98
25	270.745	32.97	271.925	379.2	271.875	319.1	271.765	326.3 *	272.725	951.8	271.145	114.0
26	270.645	20.36 *	272.780	836.6	272.535	653.2	271.765	310.9	272.225	584.0	271.025	78.70
27	270.575	10.33	272.645	790.2	272.620	798.8	271.585	254.4	272.205	662.1	271.165	121.4 *
28	270.485	6.565	272.145	544.8	274.685	2745 *	271.665	285.2	271.905	450.3	270.875	58.38
29	270.605	11.73	272.715	816.8	274.795	2847	271.765	326.3	271.930	440.6	271.045	78.17
30	270.475	5.537	274.525	2613	274.045	2230	271.985	370.3	271.585	254.4 *	270.765	33.55
31			273.565	1538 *	273.945	1909 *			271.400	220.9		
Ten-Daily Mean												
I Ten-Daily	270.955	102.2	270.440	5.071	274.025	2060	274.497	2766	273.195	1267	271.241	171.7
II Ten-Daily	270.763	58.29	273.367	2080	274.029	2194	272.914	1034	273.496	1616	271.100	115.1
III Ten-Daily	270.521	10.44	273.236	1384	272.978	1200	271.827	327.3	272.345	705.0	271.002	81.66
Monthly												
Min.	270.395	3.433	270.405	3.950	271.875	319.1	271.585	254.4	271.400	220.9	270.765	33.55
Max.	271.475	248.9	275.635	4018	275.825	4396	276.125	4970	274.685	2745	271.415	240.9
Mean	270.746	56.96	272.376	1164	273.655	1798	273.079	1376	272.991	1180	271.114	122.8

Annual Runoff in MCM = 15283 Annual Runoff in mm = 227

Peak Observed Discharge = 4970 cumecs on 09-09-2022 Corres. Water Level :276.125 m

Lowest Observed Discharge = 0.000 cumecs on 08-03-2023 Corres. Water Level :270.245 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 2022 - 2023

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	271.125	104.2	270.495	6.766 *	270.515	8.404	270.375	3.434	270.315	1.981	270.315	1.638
2	270.680	21.75	270.475	6.118	270.515	8.528	270.375	3.454	270.305	2.000 *	270.305	1.310
3	270.970	68.29	270.475	5.918	270.495	6.964	270.375	3.362	270.245	0.000	270.285	1.051
4	270.885	49.44 *	270.475	5.829	270.475	6.013	270.315	2.117	270.235	0.000	270.255	0.000
5	270.805	36.30 #	270.475	5.975	270.475	6.000 *	270.315	2.100 *	270.225	0.000	270.255	0.000
6	270.805	36.30 #	270.455	5.360	270.465	5.464	270.315	2.050	270.215	0.000	270.255	0.000
7	270.605	13.72	270.455	5.137	270.465	5.638	270.305	1.703	270.215	0.000	270.255	0.000 *
8	270.575	9.262	270.455	4.947 *	270.435	4.670	270.245	0.000	270.215	0.000	271.145	112.2 *
9	270.575	9.849	270.415	4.211	270.415	3.966	270.225	0.000	270.215	0.000	271.045	84.13 *
10	270.605	13.84 *	270.415	4.520	270.415	4.112	270.215	0.000	270.215	0.000	270.885	49.44 *
11	270.885	49.44 *	270.415	4.433	270.415	4.100 *	270.205	0.000	270.205	0.000	270.585	8.223
12	270.885	47.97	270.455	5.103	270.415	4.100 *	270.195	0.000	270.185	0.000	271.005	74.33 *
13	270.915	57.68	270.465	5.581	270.405	3.897	270.185	0.000	270.175	0.000	270.885	49.44 *
14	270.935	59.02	270.475	5.811 *	270.405	3.630	270.165	0.000	270.165	0.000	270.815	37.80 *
15	270.885	44.56	270.475	5.811 *	270.405	3.905	270.155	0.000	270.165	0.000	270.535	5.859
16	270.900	52.20 #	270.475	5.710	270.455	5.198	270.165	0.000	270.165	0.000	270.485	4.388
17	271.105	99.70	270.475	5.875	270.455	5.006	270.215	0.000	270.165	0.000	270.575	7.807
18	270.885	49.44 *	270.475	5.473	270.455	5.361	270.245	0.000	270.155	0.000	270.600	8.851
19	270.565	9.284	270.495	6.571	270.455	5.350 *	270.295	1.200 *	270.145	0.000	270.595	9.323
20	270.685	21.91	270.495	6.571	270.435	4.506	270.295	1.211	270.145	0.000	270.605	9.495
21	270.670	17.05	270.475	5.767	270.405	3.742	270.275	1.068	270.145	0.000	270.575	9.200 *
22	270.525	7.211	270.475	5.811 *	270.405	3.264	270.375	2.800 *	270.165	0.000	270.495	5.078
23	270.495	6.389	270.495	6.420	270.375	3.103	270.525	7.210	270.175	0.000	270.625	9.631
24	270.475	5.336	270.495	6.681	270.375	2.972	270.585	7.515	270.185	0.000	270.625	9.496
25	270.495	6.766 *	270.495	6.282	270.375	2.800	270.445	3.580	270.185	0.000	270.515	5.634
26	270.515	7.638	270.495	6.766 *	270.375	2.800 *	270.415	4.100 *	270.215	0.000	270.365	2.941
27	270.515	7.058	270.495	6.717	270.375	2.933	270.395	3.290	270.315	1.681	270.295	1.227
28	270.515	7.418	270.515	7.818	270.375	3.676	270.375	2.529	270.305	1.291	270.265	1.000 *
29	270.515	7.108	270.515	7.818 *			270.375	2.871	270.245	0.000	270.245	0.000
30	270.515	7.013	270.505	7.281			270.375	2.850 *	270.275	0.000	270.245	0.000
31	270.495	6.664	270.515	8.746			270.375	2.680			270.245	0.000
Ten-Daily Mean												
I Ten-Daily	270.763	36.30	270.459	5.478	270.467	5.976	270.306	1.822	270.240	0.398	270.500	24.97
II Ten-Daily	270.865	49.12	270.470	5.694	270.430	4.505	270.212	0.241	270.167	0.000	270.669	21.55
III Ten-Daily	270.521	7.786	270.498	6.919	270.383	3.161	270.410	3.681	270.221	0.297	270.409	4.019
Monthly												
Min.	270.475	5.336	270.415	4.211	270.375	2.800	270.155	0.000	270.145	0.000	270.245	0.000
Max.	271.125	104.2	270.515	8.746	270.515	8.528	270.585	7.515	270.315	2.000	271.145	112.2
Mean	270.710	30.32	270.476	6.059	270.430	4.647	270.313	1.972	270.209	0.232	270.522	16.43

Peak Computed Discharge = 3274 cumecs on 17-07-2022

Corres. Water Level :275.095 m

Lowest Computed Discharge = 0.000 cumecs on 07-05-2023

Corres. Water Level :270.255 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 : 2022-2023

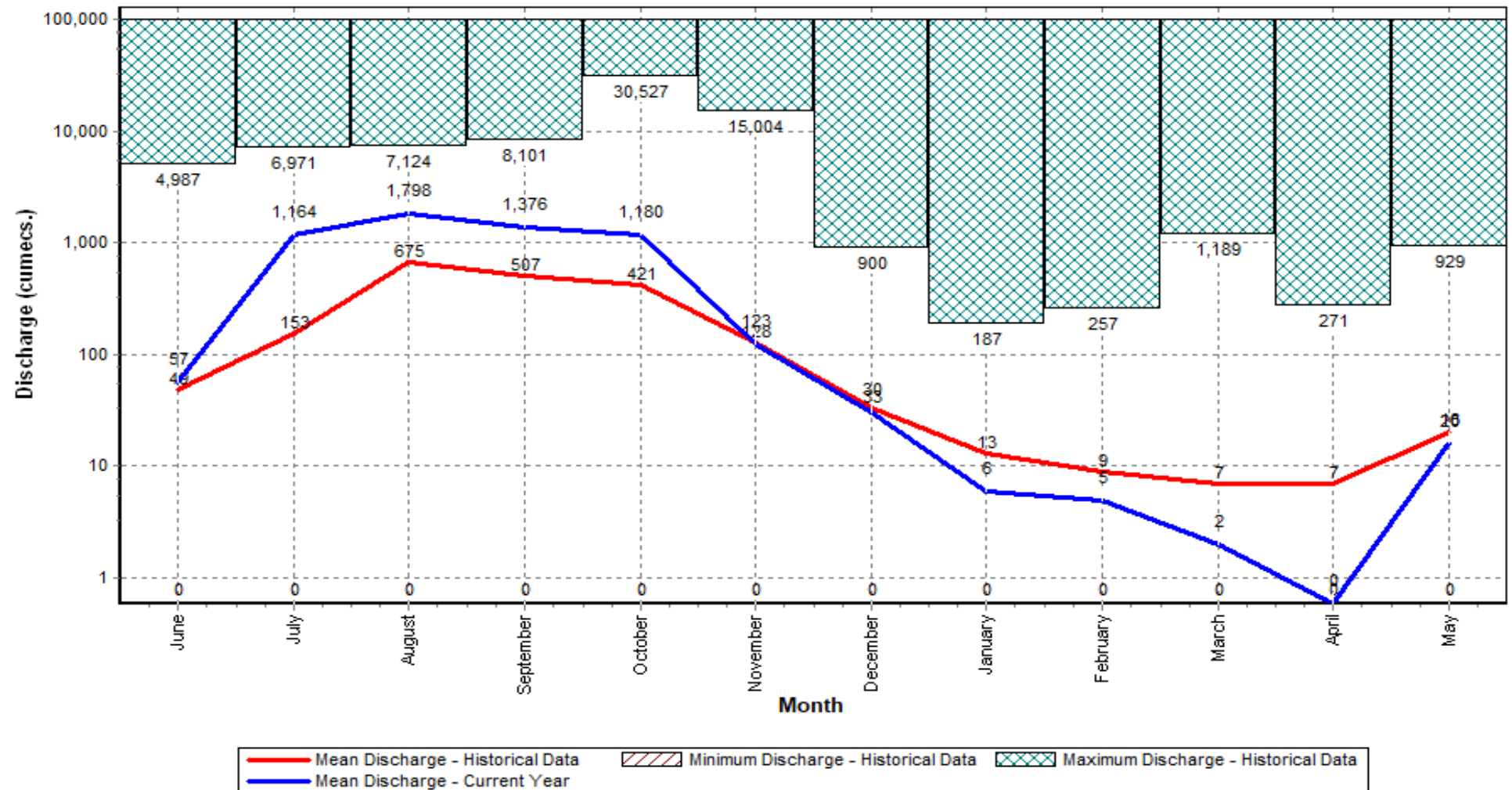
Station Name : Bawapuram (AKL00B8)

Data considered : 1965-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Tungabhadra

Sub-Division : Lower Tungabhadra SD, Kurnool



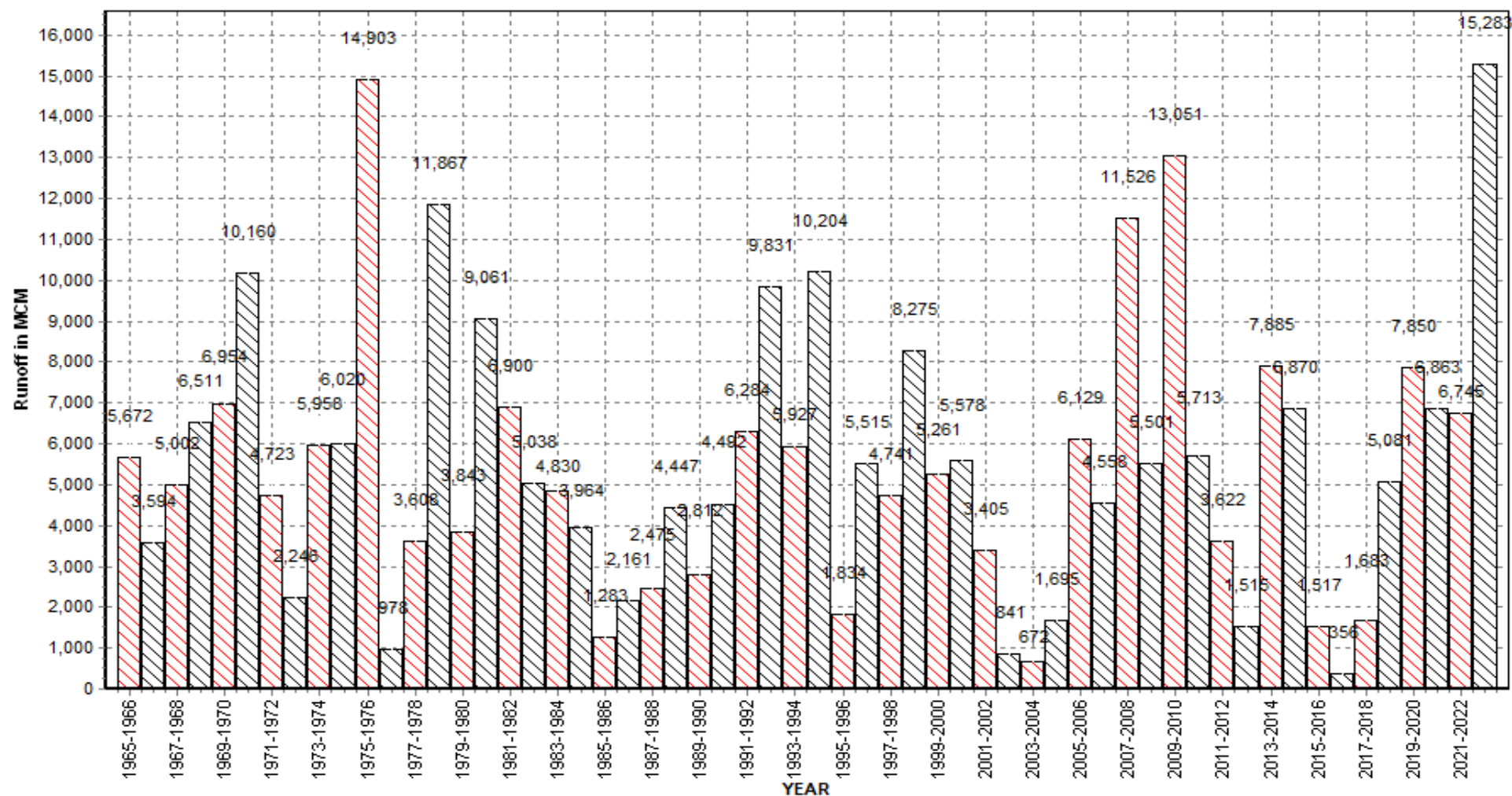
Annual Runoff Values for the period: 1965 - 2023

Station Name : Bawapuram (AKL00B8)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



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

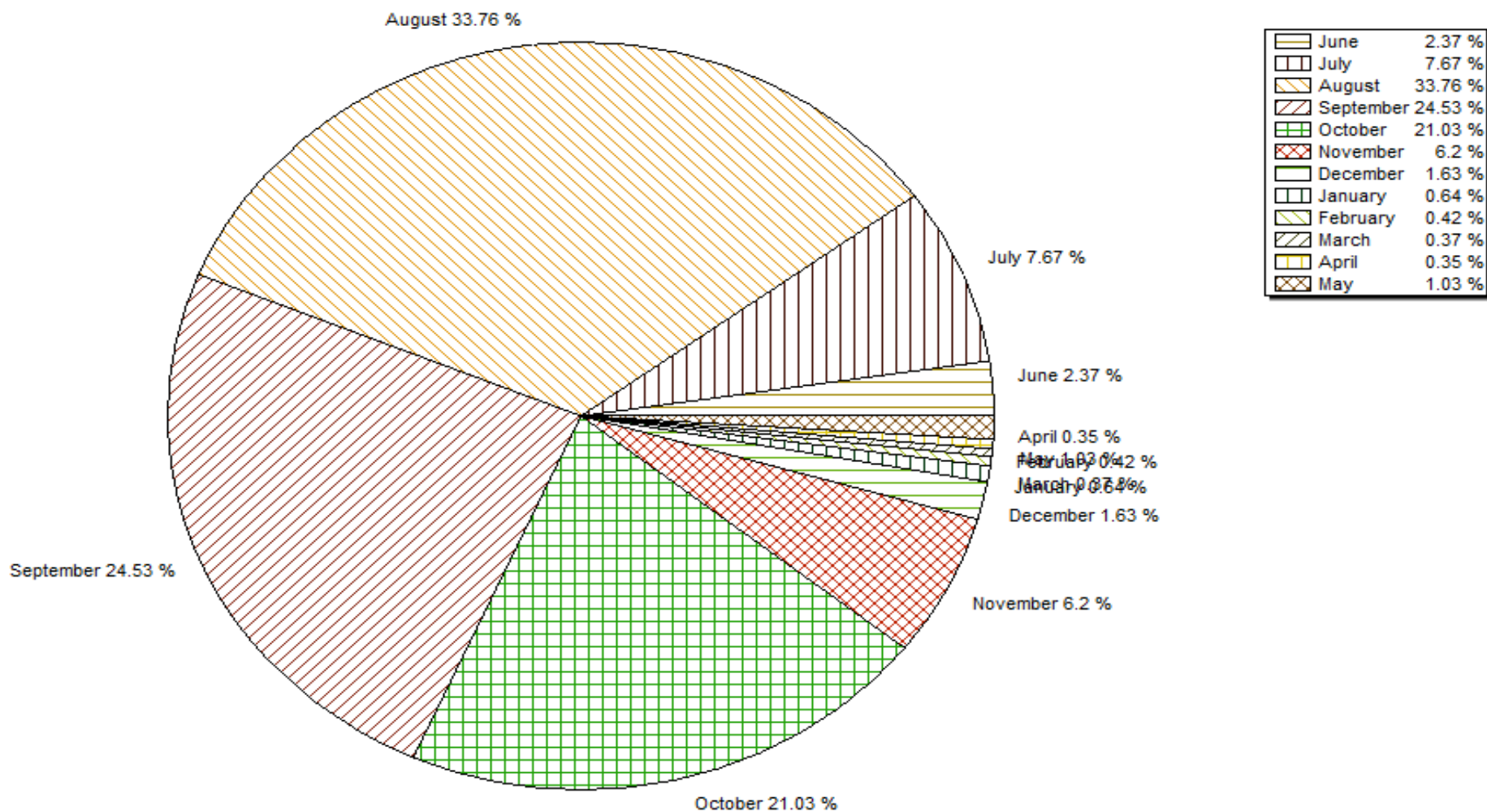
Monthly Average Runoff based on period : 1965-2022

Station Name : Bawapuram (AKL00B8)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



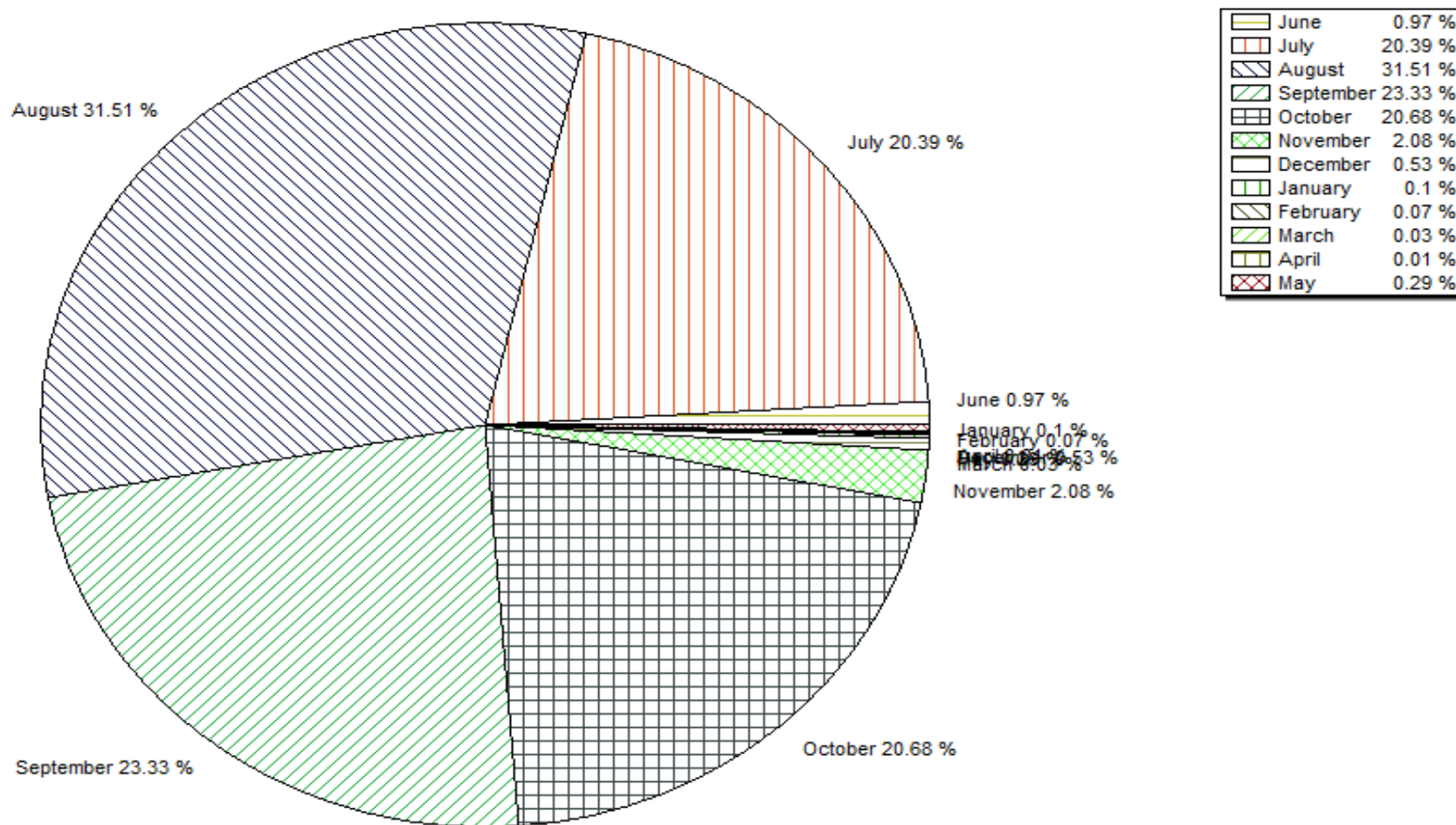
Monthly Runoff for the Year : 2022-2023

Station Name : Bawapuram (AKL00B8)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



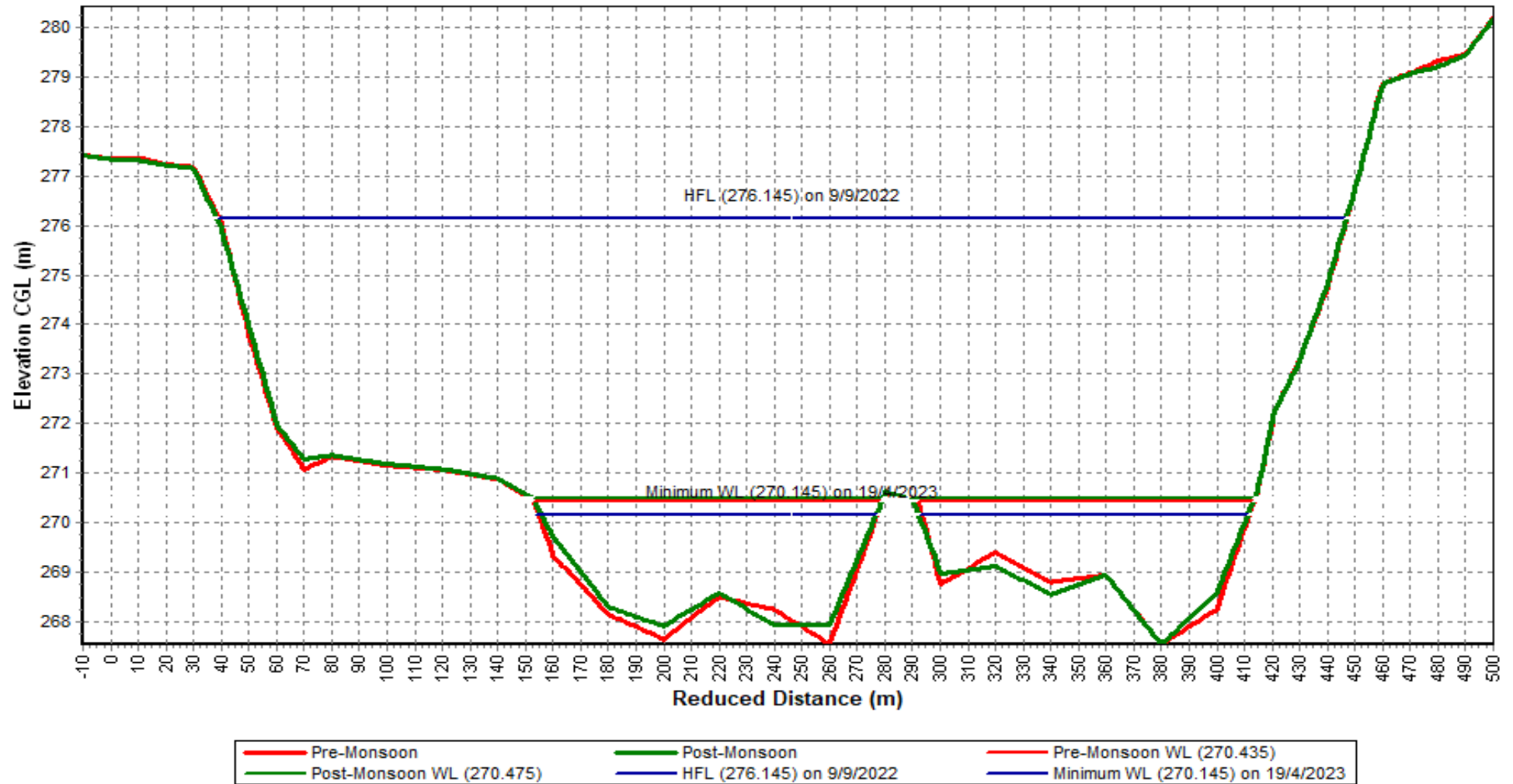
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Bawapuram (AKL00B8)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



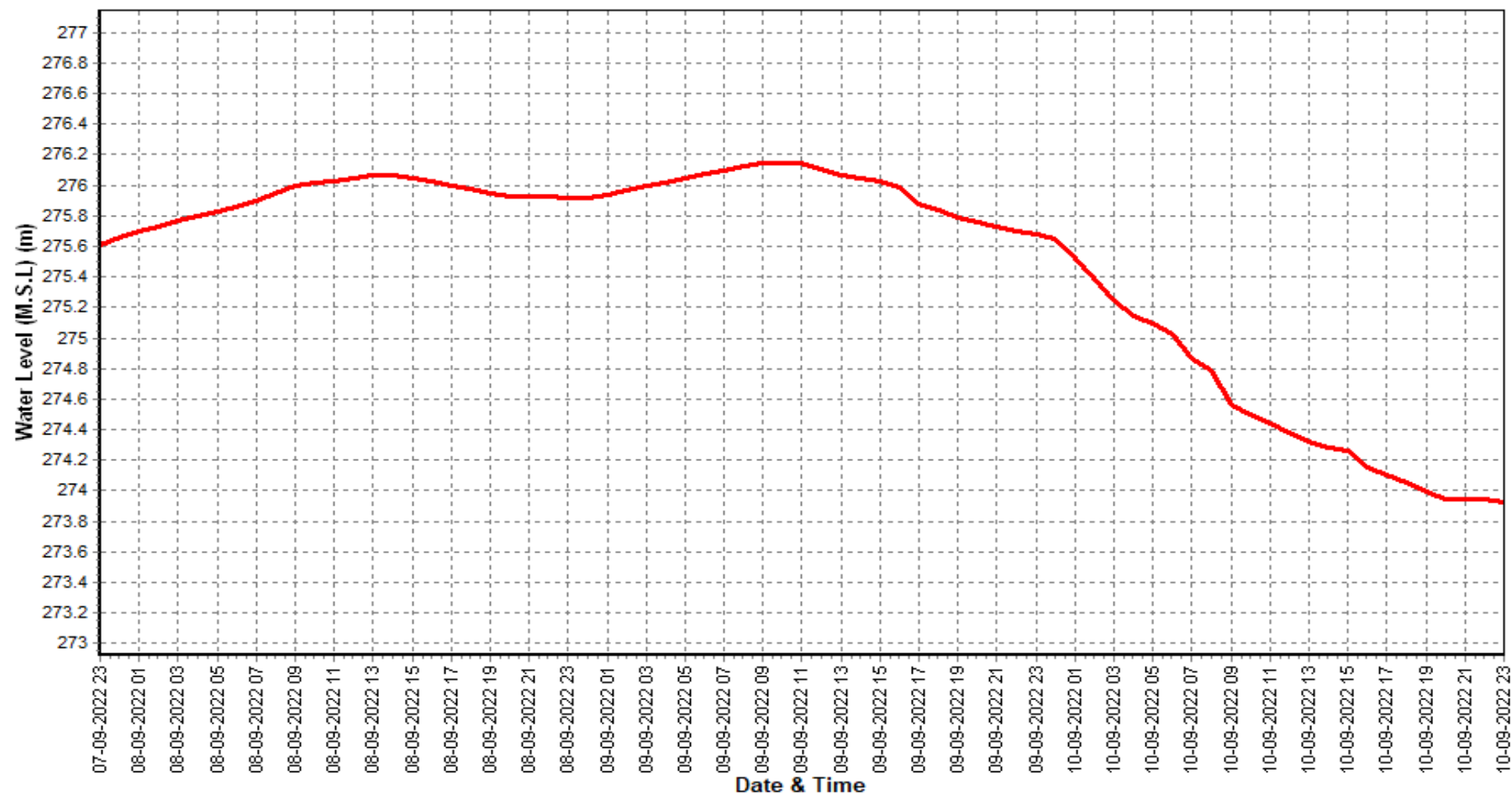
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Bawapuram (AKL00B8)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



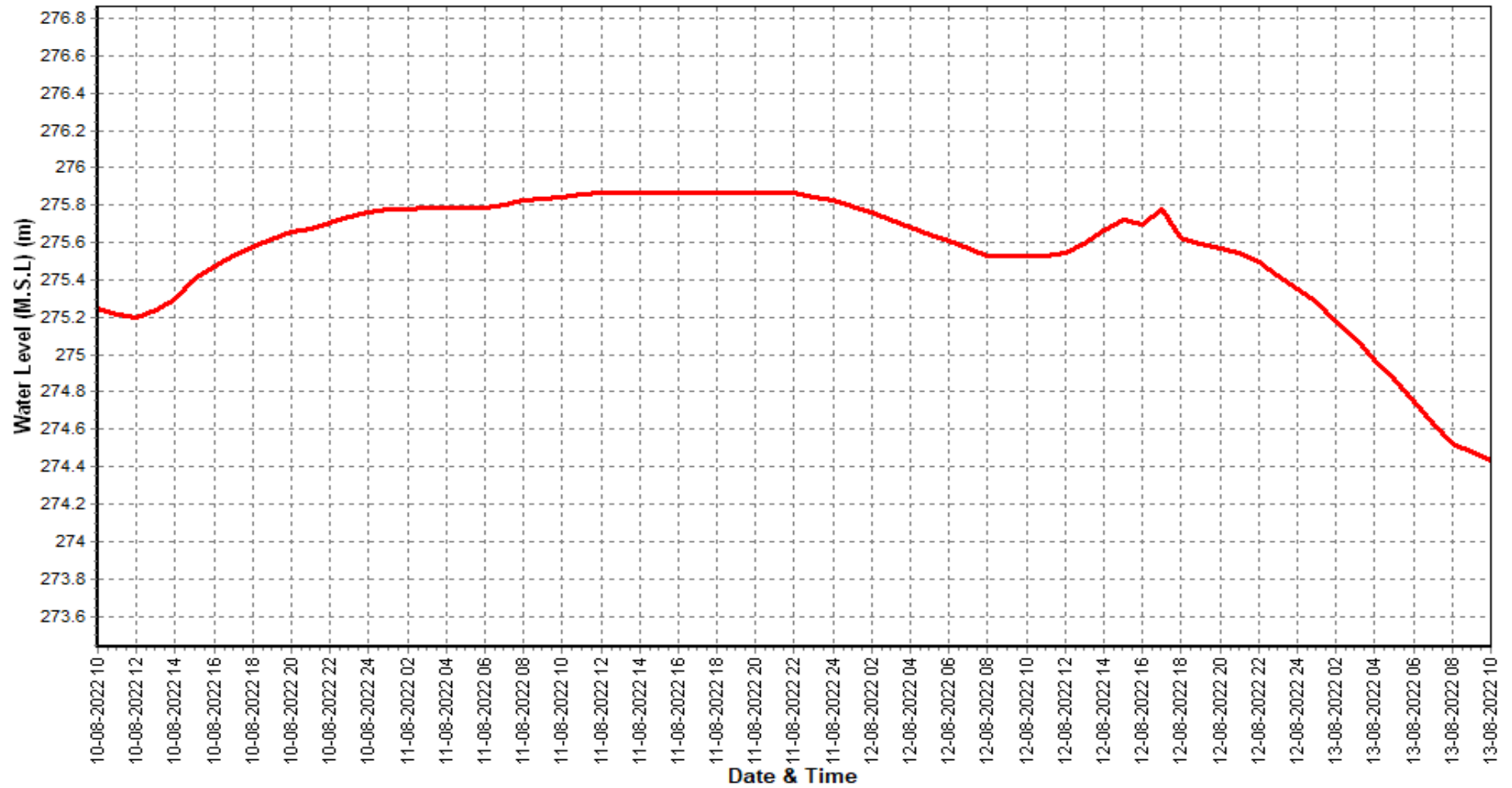
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Bawapuram (AKL00B8)

Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



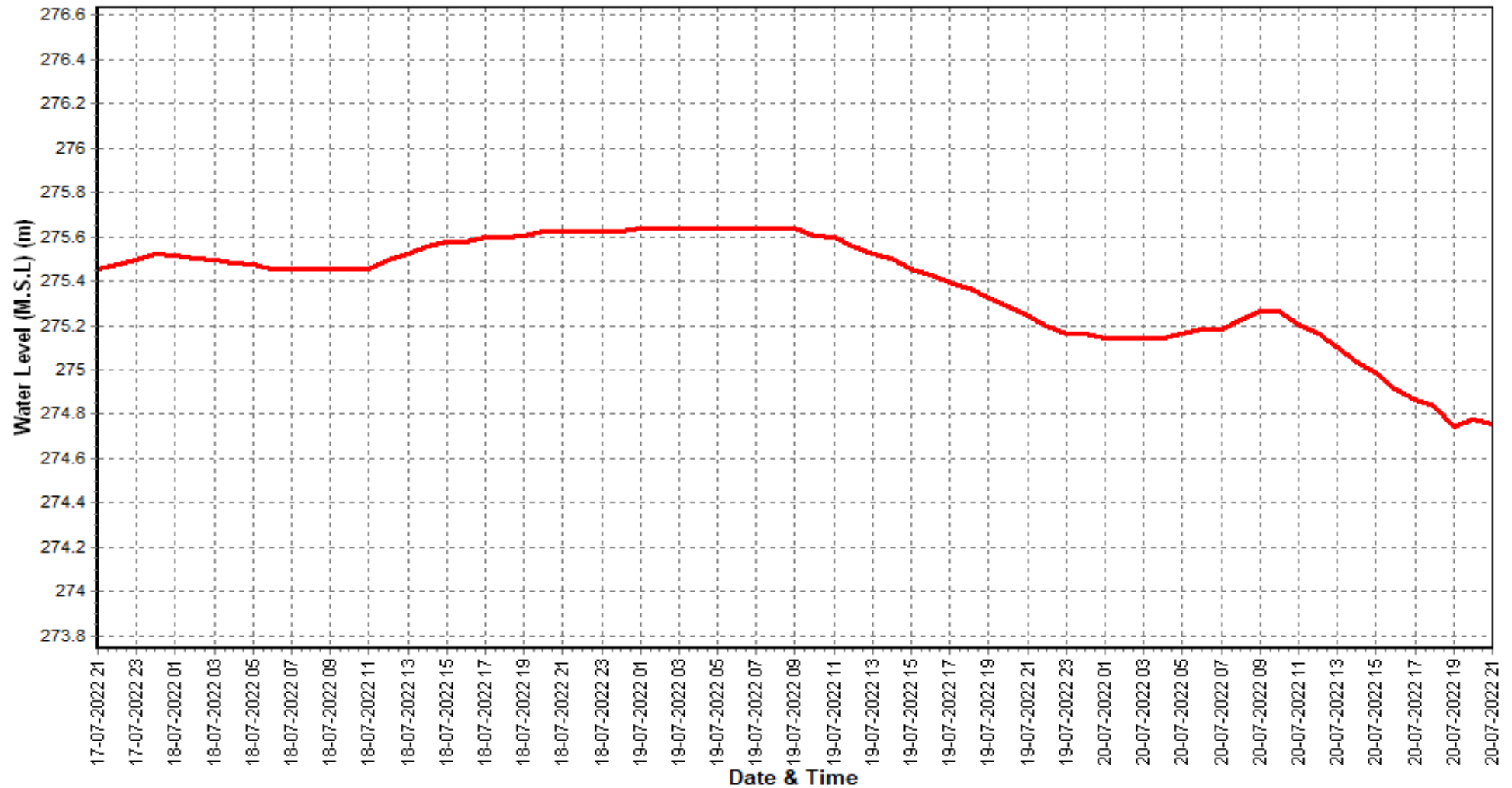
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Bawapuram (AKL00B8)

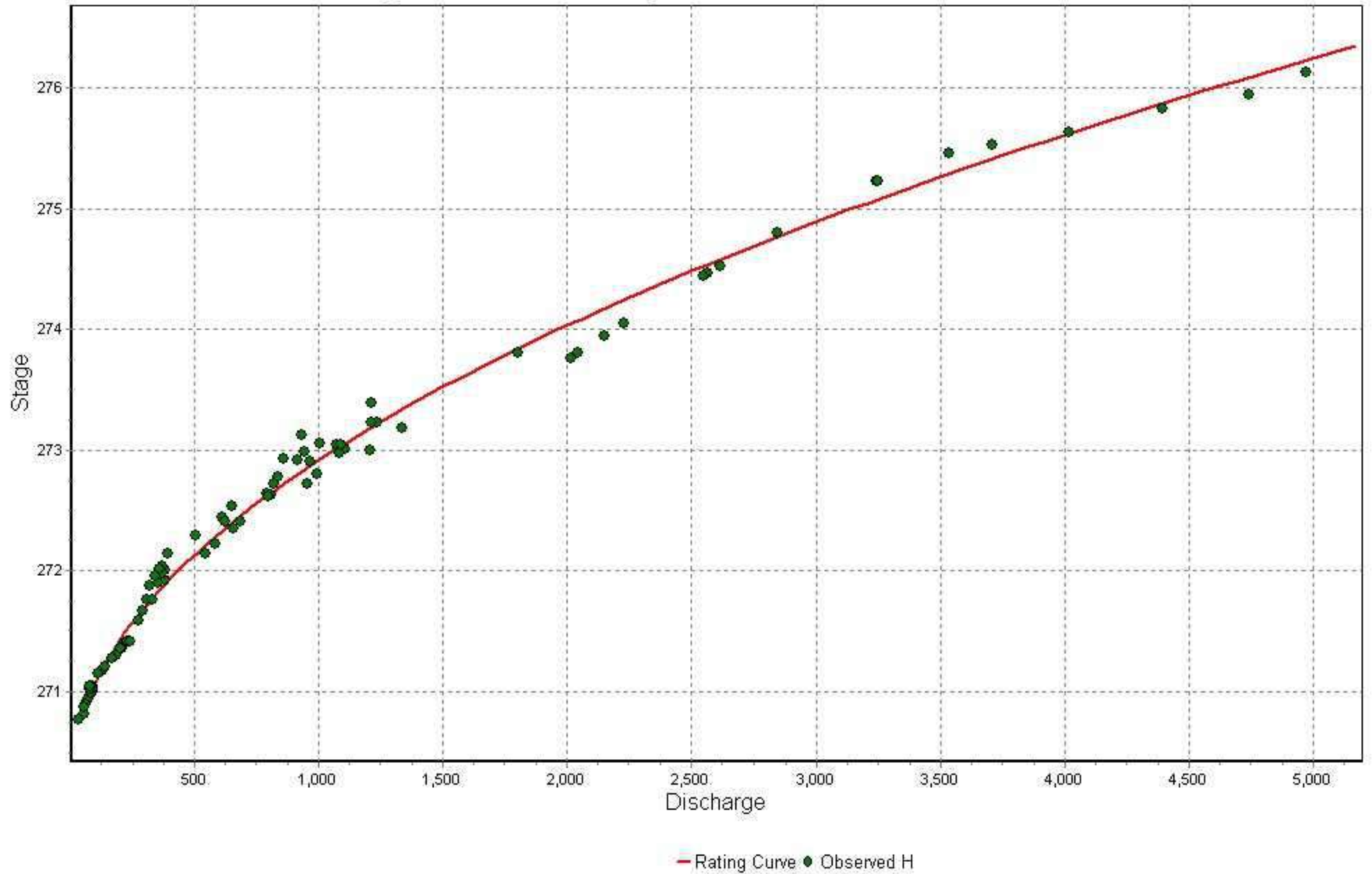
Local River : Tungabhadra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



Rating Curve of Site Bawapuram 16/07/2022 to 30/11/2022



HISTORY SHEET

Water Year : 2022-2023

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 : 2600 Sq. Km.

Bank : Left

Latitude : 15°44'24"

Longitude : 77°59'89"

Zero of Gauge (m) : 286.383 (m.s.l)
285.803 (m.s.l)18-11-2014 - 30-04-2019
01-05-2019

Opening Date

Closing Date

Gauge : 18-11-2014

HFL During 2022-23 : 290.193 m

Corres. Discharge : 2059 (Estimated)

Discharge : 18-11-2014

Date & Time of
occurrence : 13-10-2022
: 11:00 Hrs

HFL Recorded so far in m :290.193 dt 14-10-2022

Corresponding Discharge (cumecs) : 2059*

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2015-2016	114.1	288.693	11-09-2015	0.000		24-08-2015
2016-2017	54.34	287.723	16-09-2016	0.000		18-04-2017
2017-2018	1012	289.443	13-10-2017	0.000		27-03-2018
2018-2019	38.64	287.623	18-10-2018	0.000	286.593	30-03-2019
2019-2020	60.37	287.813	24-09-2019	0.000		14-06-2019
2020-2021	622.3	290.353	02-07-2020	0.000	286.573	01-06-2020
2021-2022	285.0	289.093	03-07-2021	0.000		19-02-2022

Annual Runoff of Hundri at Doddipadu

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2014-2015	2	6	7	0	0	0
2	2015-2016	108	0	108	4	0	4
3	2016-2017	37	10	47	1	0	2
4	2017-2018	208	36	244	7	1	9
5	2018-2019	55	3	58	2	0	2
6	2019-2020	72	27	99	3	1	3
7	2020-2021	571	102	673	20	4	24
8	2021-2022	146	31	177	5	1	6
9	2022-2023	202	42	244	7	1	9
Average		156	29	184	5	1	7

Instantaneous Flood Peak of Hundri at Doddipadu

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2014-2015	288.173	18-11-2014	08:00:00	215 *
2	2015-2016	288.853	11-09-2015	14:00:00	574 *
3	2016-2017	288.753	15-09-2016	15:00:00	512 *
4	2017-2018	290.063	13-10-2017	07:00:00	1584 *
5	2018-2019	288.453	18-10-2018	12:00:00	345 *
6	2019-2020	288.593	28-09-2019	00:00:00	219 *
7	2020-2021	290.353	01-10-2020	22:00:00	1299 *
8	2021-2022	289.093	05-07-2021	16:00:00	285 *
9	2022-2023	290.193	13-10-2022	11:00:00	2059 *

Note:- Zero of the gauge change from 01-05-2019

Stage-Discharge Data for the period 2022 - 2023

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	Dry Bed	0.000	Dry Bed	0.000	287.198	1.319	287.363	6.917	288.013	115.6	287.323	3.705
2		0.000		0.000	287.723	52.47	287.398	8.921	287.803	61.58 *	287.323	3.762
3		0.000		0.000	287.483	13.55	287.393	8.846	287.723	49.58	287.333	4.698
4		0.000		0.000	287.343	5.539	287.353	5.744 *	287.483	14.87	287.363	6.746
5		0.000		0.000	287.388	8.370	287.433	10.42	287.453	12.35 *	287.383	7.885
6		0.000		0.000	287.283	2.788	287.513	16.91	287.423	10.40	287.383	7.422 *
7		0.000		0.000	287.263	2.131 *	287.573	21.78	287.453	12.69	287.343	5.122
8		0.000		0.000	287.263	2.067	287.483	14.36	287.493	15.76	287.343	5.240 *
9		0.000		0.000	287.253	1.851 *	287.463	12.42	287.423	10.06 *	287.333	4.653
10		0.000	287.153	0.600 *	287.273	2.342	287.423	9.754	287.483	15.01	287.323	3.716
11		0.000	287.103	0.000	287.273	2.385	287.373	6.835 *	287.483	14.89	287.283	2.319
12		0.000	287.113	0.000	287.253	1.836	287.343	5.164	287.453	12.79	287.293	2.715
13		0.000	287.148	0.599	287.283	2.779	287.333	4.691	288.443	292.0	287.283	2.760 *
14		0.000	287.143	0.500	287.283	2.760 *	287.323	4.382	288.893	556.2	287.263	1.461
15	287.813	65.99	287.123	0.000	287.283	2.760 *	287.303	3.293	287.923	89.91	287.263	1.393
16	287.403	7.820	287.103	0.000	287.253	1.761	287.308	3.503	287.643	33.61 *	287.253	1.210
17	287.223	1.341	287.103	0.000	287.283	2.722	287.343	5.353	287.733	48.11	287.253	1.303
18	287.183	0.833	287.113	0.000	287.278	2.517	287.343	5.240 *	287.633	29.59	287.263	1.650
19	287.283	1.500 *	287.093	0.000	287.258	1.770	287.343	5.405	287.583	22.69	287.253	1.256
20	287.193	0.924	287.073	0.000	287.253	1.619	287.333	4.662	287.563	19.76	287.253	1.851 *
21	287.173	0.660	287.073	0.000	287.203	0.781 *	287.323	4.286	287.553	19.03	287.253	1.407
22	287.133	0.393	287.053	0.000	287.158	0.481	287.323	4.241	287.483	14.94	287.263	1.543
23	287.103	0.000	287.033	0.000	287.208	1.112	287.333	4.696	287.453	12.35 *	287.273	1.911
24	287.083	0.000	287.053	0.000	287.283	2.626	287.303	3.277	287.593	26.82 *	287.263	1.706
25	287.063	0.000	287.083	0.000	287.323	4.423	287.333	4.762 *	287.538	17.31	287.263	1.622
26	287.043	0.000	287.208	1.566	287.333	4.761	287.343	5.221	287.443	12.08	287.263	1.702
27	Dry Bed	0.000	287.208	1.417	287.403	9.002	287.333	4.652	287.413	10.44	287.263	2.131 *
28		0.000	287.193	1.357	287.413	9.356 *	287.348	5.894	287.393	8.937	287.303	3.226
29		0.000	287.183	0.956	287.743	53.92	287.713	47.39	287.363	6.706	287.293	2.742
30		0.000	287.173	0.889	287.703	46.49	287.853	72.98	287.363	6.276 *	287.283	2.479
31			287.203	1.300 *	287.463	13.17 *			287.363	6.641		
<u>Ten-Daily Mean</u>												
I Ten-Daily	Dry Bed	0.000	287.153	0.060	287.347	9.244	287.439	11.61	287.575	31.79	287.345	5.295
II Ten-Daily	287.350	7.841	287.112	0.110	287.270	2.291	287.335	4.853	287.835	112.0	287.266	1.792
III Ten-Daily	287.100	0.105	287.133	0.680	287.385	13.28	287.421	15.74	287.451	12.87	287.272	2.047
<u>Monthly</u>												
Min.	287.043	0.000	287.033	0.000	287.158	0.481	287.303	3.277	287.363	6.276	287.253	1.210
Max.	287.813	65.99	287.208	1.566	287.743	53.92	287.853	72.98	288.893	556.2	287.383	7.885
Mean	287.225	2.649	287.124	0.296	287.336	8.434	287.398	10.73	287.615	50.94	287.294	3.045

Annual Runoff in MCM = 245 Annual Runoff in mm = 94

Peak Observed Discharge = 556.2 cumecs on 14-10-2022 Corres. Water Level :288.893 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022

Stage-Discharge Data for the period 2022 - 2023

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	287.293	2.743	287.203	0.000	287.263	1.717	287.223	0.000	287.263	1.868	287.773	71.71
2	287.303	3.258	287.203	0.000	287.273	2.029	287.213	0.000	287.253	1.450 *	287.683	52.66
3	287.303	3.278	287.203	0.000	287.273	2.078	287.203	0.000	287.263	1.760	287.333	4.896
4	287.303	3.250 *	287.203	0.000	287.263	1.618	287.203	0.000	287.253	1.450 *	287.323	3.829
5	287.333	4.475	287.203	0.000	287.253	1.400 *	287.203	0.000	287.253	1.473	287.313	3.800 *
6	287.323	3.783	287.203	0.000	287.253	1.381	287.203	0.000	287.253	1.429	287.273	2.008
7	287.303	3.271	287.203	0.000	287.253	1.379	287.233	0.000	287.253	1.500	287.273	2.000 *
8	287.323	3.791	287.203	0.000	287.243	1.099	287.233	0.000	287.253	1.450 *	287.263	1.805
9	287.323	3.738	287.203	0.000	287.243	1.163	287.233	0.000	287.233	1.450 *	287.273	1.948
10	287.323	3.740	287.203	0.000	287.243	1.138	287.233	0.000	287.213	0.000	287.303	3.096
11	287.353	5.600 *	287.203	0.000	287.203	0.000	287.233	0.000	287.193	0.000	287.273	1.949
12	287.383	7.721	287.203	0.000	287.203	0.000	287.233	0.000	287.193	0.000	287.253	1.555
13	287.373	7.308	287.203	0.000	287.203	0.000	287.233	0.000	287.193	0.000	287.253	1.550 *
14	287.373	6.756	287.203	0.000	287.203	0.000	287.233	0.000	287.193	0.000	287.233	0.000
15	287.363	6.362	287.203	0.000	287.203	0.000	287.263	1.799	Dry Bed	0.000	287.233	0.000
16	287.353	5.620	287.203	0.000	287.193	0.000	287.263	1.702		0.000	287.213	0.000
17	287.343	5.025	287.293	2.841	287.203	0.000	287.233	0.000		0.000	287.203	0.000
18	287.353	5.600 *	287.293	2.813	287.203	0.000	287.233	0.000		0.000	285.803	0.000
19	287.323	3.834	287.303	3.160	287.203	0.000	287.233	0.000		0.000	285.803	0.000
20	287.313	3.502	287.293	2.794	287.203	0.000	287.233	0.000		0.000	285.803	0.000
21	287.293	2.776	287.283	2.394	287.183	0.000	287.323	4.024		0.000	285.803	0.000
22	287.283	2.123	287.283	2.320 *	287.193	0.000	287.323	4.000 *		0.000	285.803	0.000
23	287.203	0.000	287.283	2.314	287.203	0.000	287.323	3.879		0.000	285.803	0.000
24	287.203	0.000	287.263	1.728	287.203	0.000	287.313	3.471		0.000	285.803	0.000
25	287.203	0.000	287.283	2.276	287.203	0.000	287.283	2.224		0.000	285.803	0.000
26	287.193	0.000	287.283	2.320 *	287.203	0.000	287.283	2.220 *	287.833	90.06	285.803	0.000
27	287.193	0.000	287.293	2.729	287.203	0.000	287.253	1.526	287.663	48.04	285.803	0.000
28	287.193	0.000	287.283	2.338	287.203	0.000	287.253	1.400	287.273	1.820	285.803	0.000
29	287.203	0.000	287.283	2.320 *			287.253	1.407	287.253	1.355	285.803	0.000
30	287.203	0.000	287.263	1.797			287.253	1.400 *	287.253	1.350 *	285.803	0.000
31	287.203	0.000	287.253	1.377			287.253	1.380			285.803	0.000
Ten-Daily Mean												
I Ten-Daily	287.313	3.533	287.203	0.000	287.256	1.500	287.218	0.000	287.249	1.383	287.381	14.78
II Ten-Daily	287.353	5.733	287.240	1.161	287.202	0.000	287.239	0.350	287.193	0.000	286.807	0.505
III Ten-Daily	287.216	0.445	287.278	2.174	287.199	0.000	287.283	2.448	287.455	14.26	285.803	0.000
Monthly												
Min.	287.193	0.000	287.203	0.000	287.183	0.000	287.203	0.000	287.193	0.000	285.803	0.000
Max.	287.383	7.721	287.303	3.160	287.273	2.078	287.323	4.024	287.833	90.06	287.773	71.71
Mean	287.291	3.147	287.241	1.146	287.220	0.536	287.248	0.982	287.291	5.215	286.636	4.929

Peak Computed Discharge = 61.58 cumecs on 02-10-2022

Corres. Water Level :287.803 m

Lowest Computed Discharge = 0.600 cumecs on 10-07-2022

Corres. Water Level :287.153 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 : 2022-2023

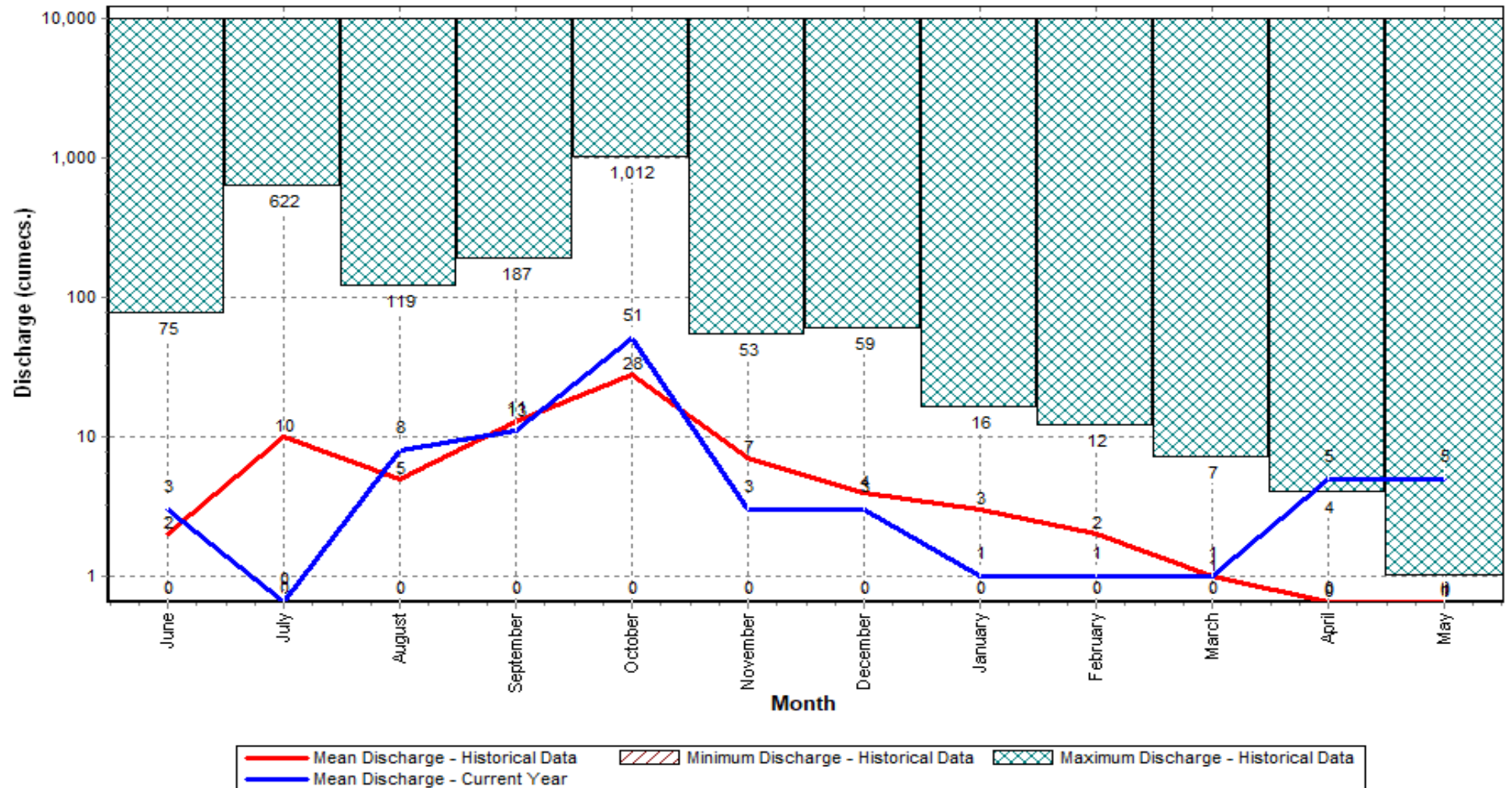
Station Name : DODDIPADU. (AKL00B1)

Data considered : 2015-2023

Division : Lower Krishna Divn., Hyderabad

Local River : HUNDRI

Sub-Division : Lower Tungabhadra SD, Kurnool



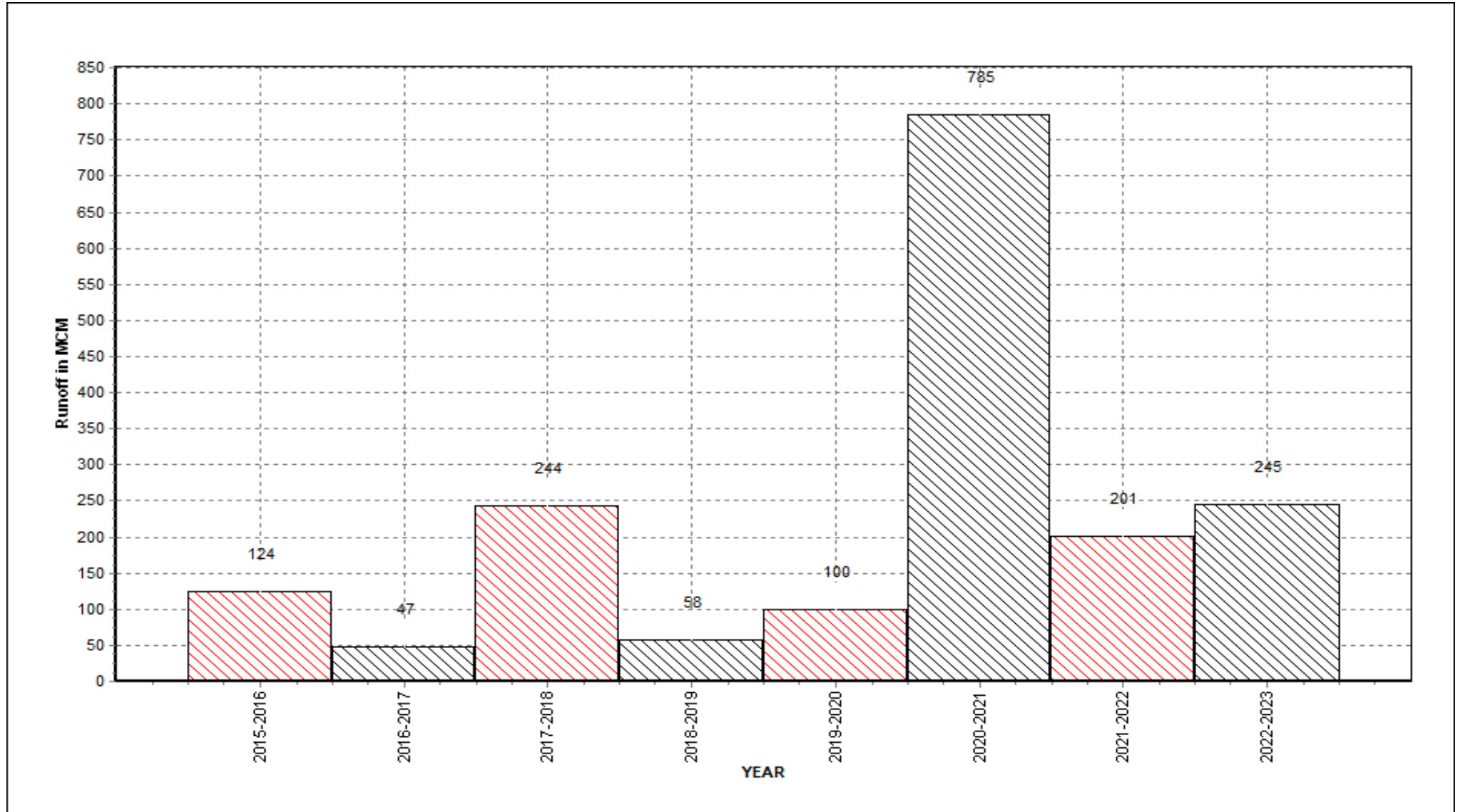
Annual Runoff Values for the period: 2015 - 2023

Station Name : DODDIPADU. (AKL00B1)

Local River : HUNDRI

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



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

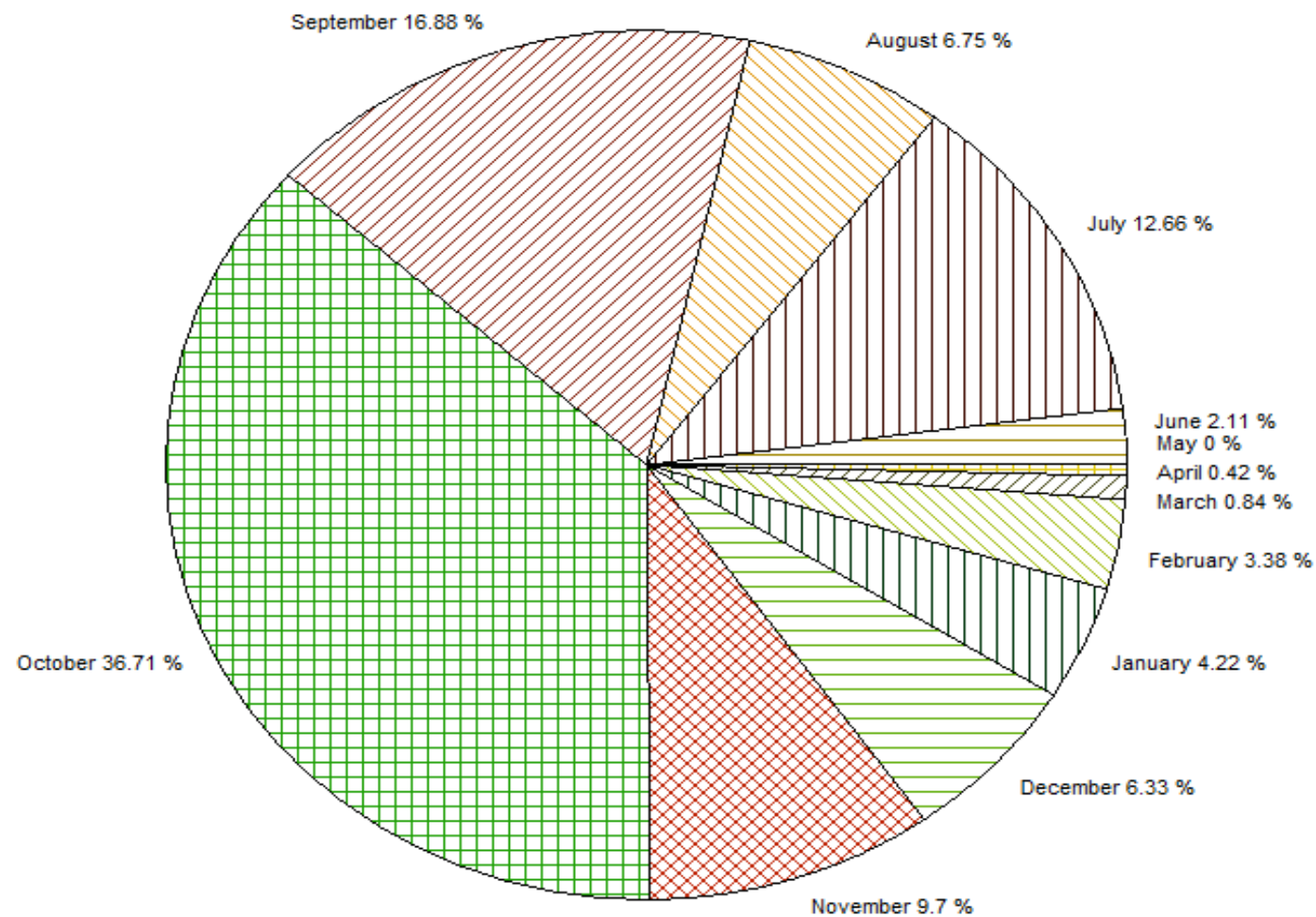
Monthly Average Runoff based on period : 2015-2022

Station Name : DODDIPADU. (AKL00B1)

Local River : HUNDRI

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



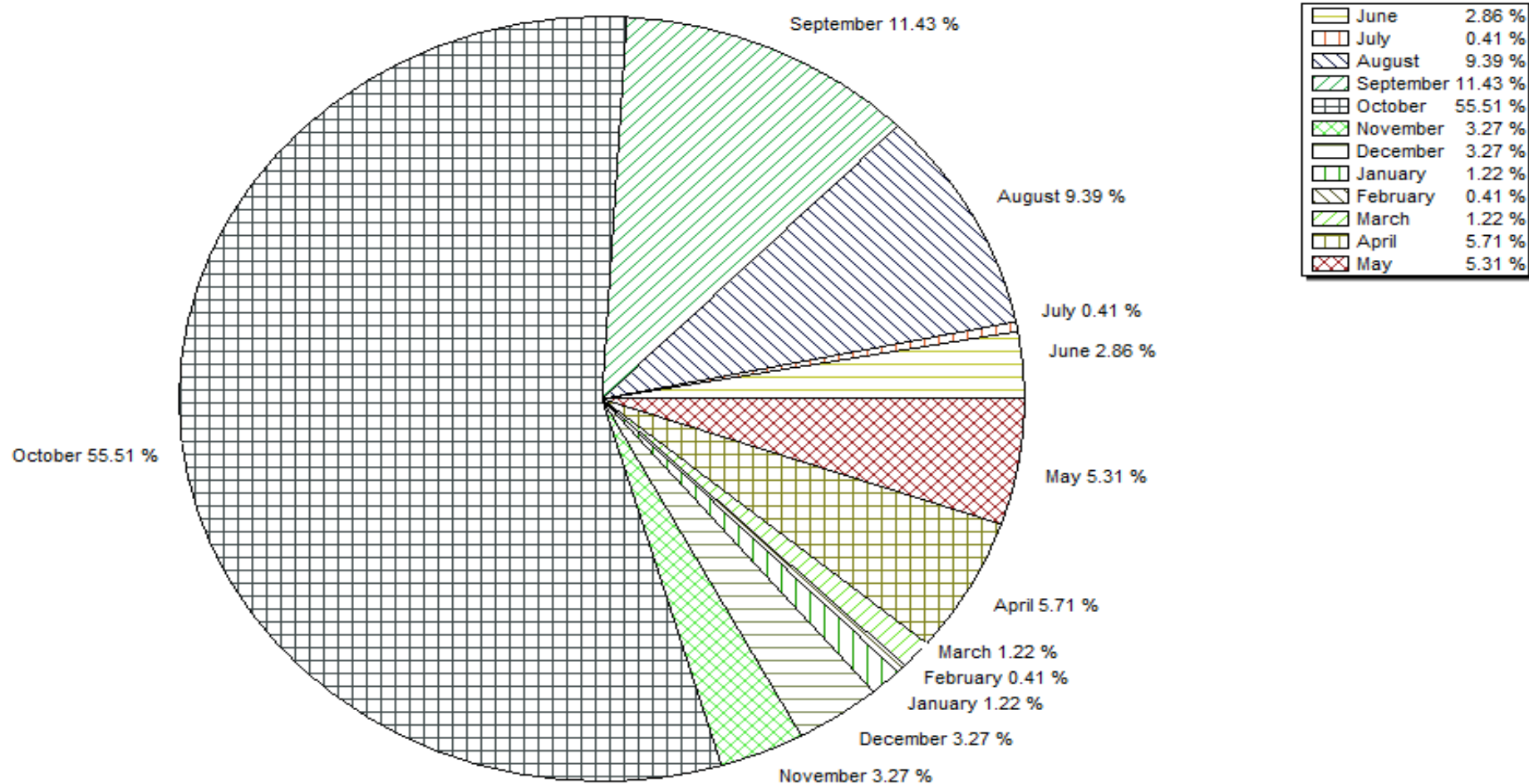
Monthly Runoff for the Year : 2022-2023

Station Name : DODDIPADU. (AKL00B1)

Local River : HUNDRI

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



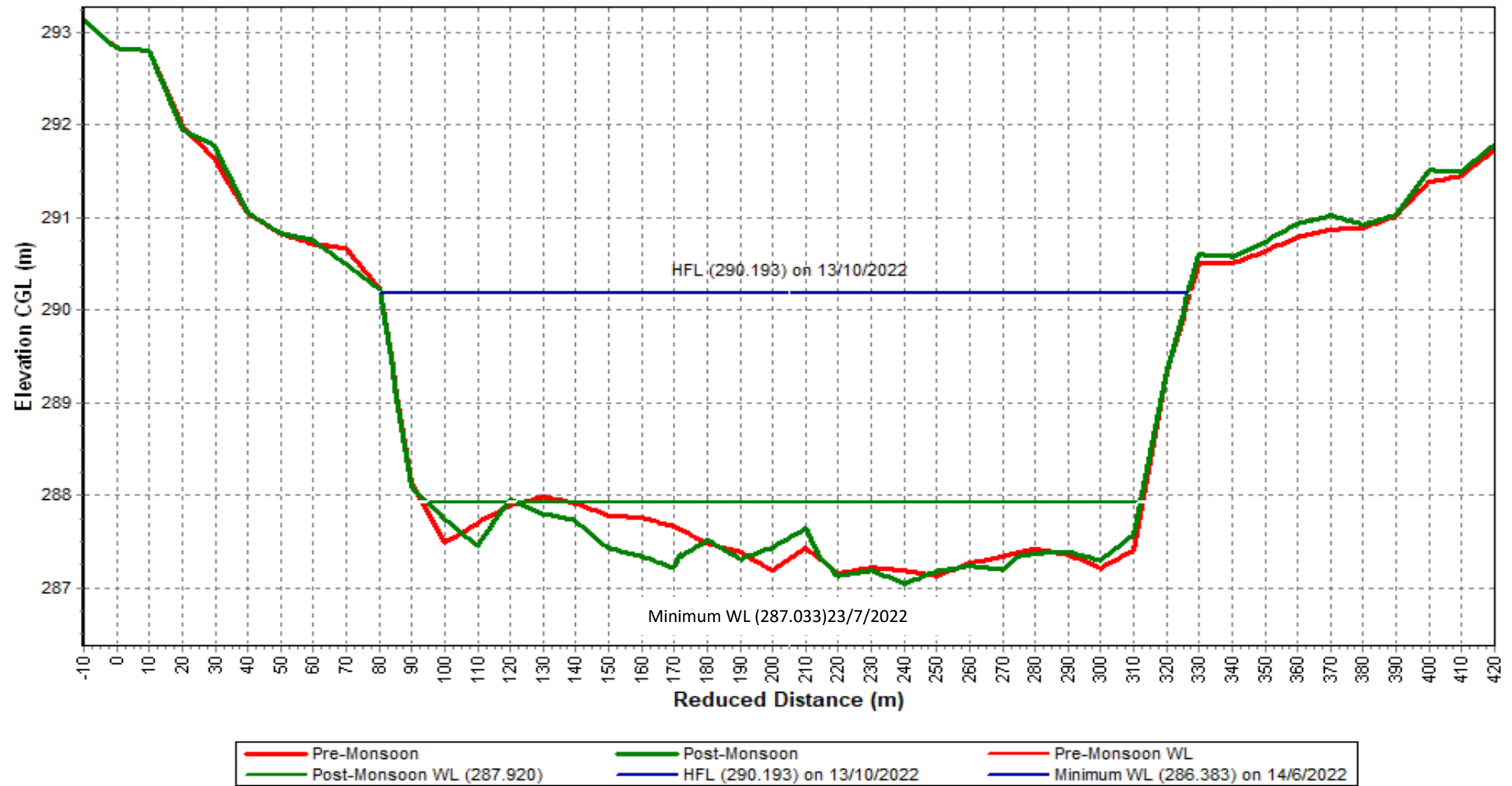
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : DODDIPADU. (AKL00B1)

Local River : HUNDRI

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



Note : Post Monsoon X-Section Defferance due to High Flood during monsoon.
Zero of the Gauge: 285.803 (m.s.l)

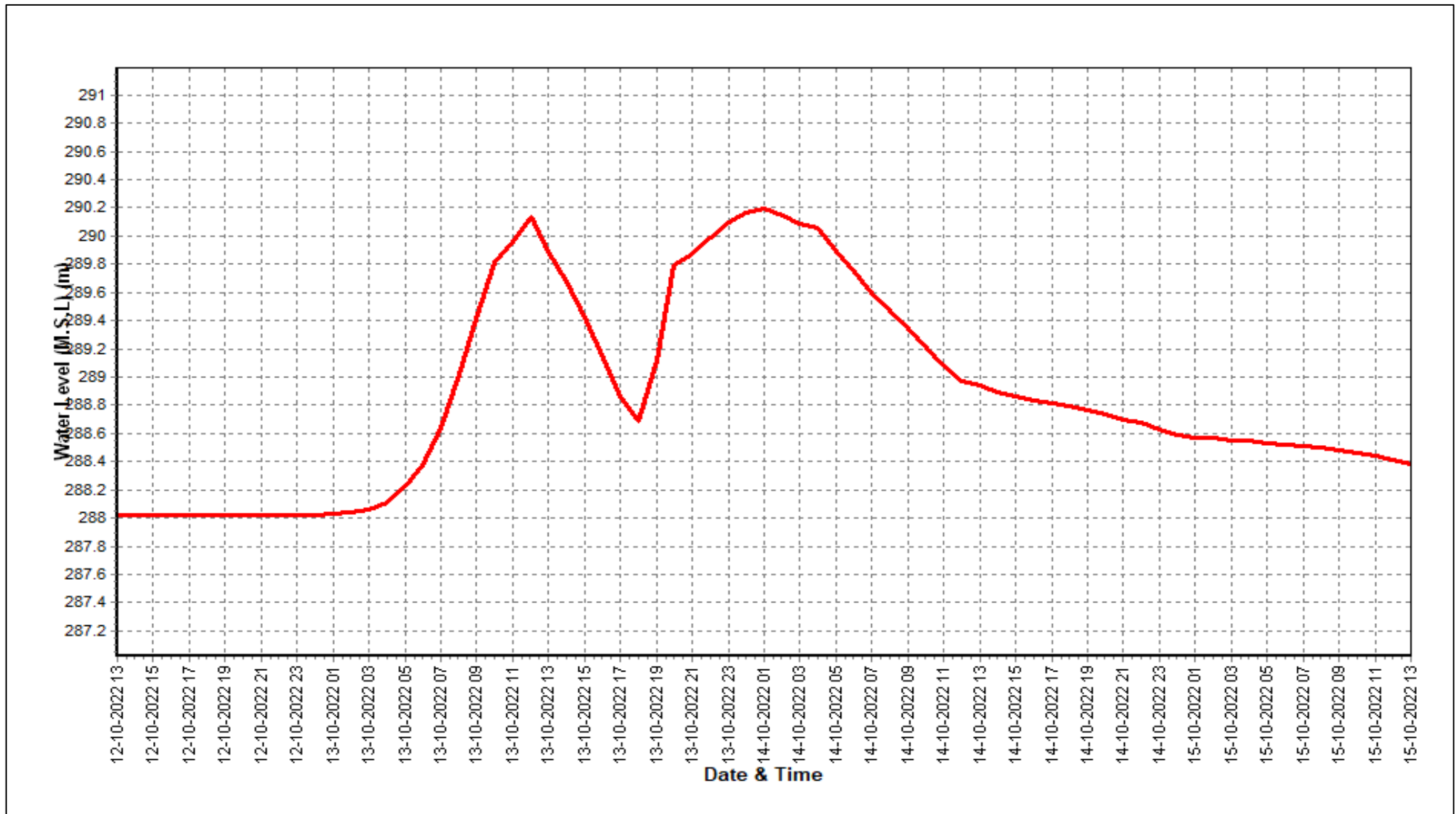
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : DODDIPADU. (AKL00B1)

Local River : HUNDRI

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



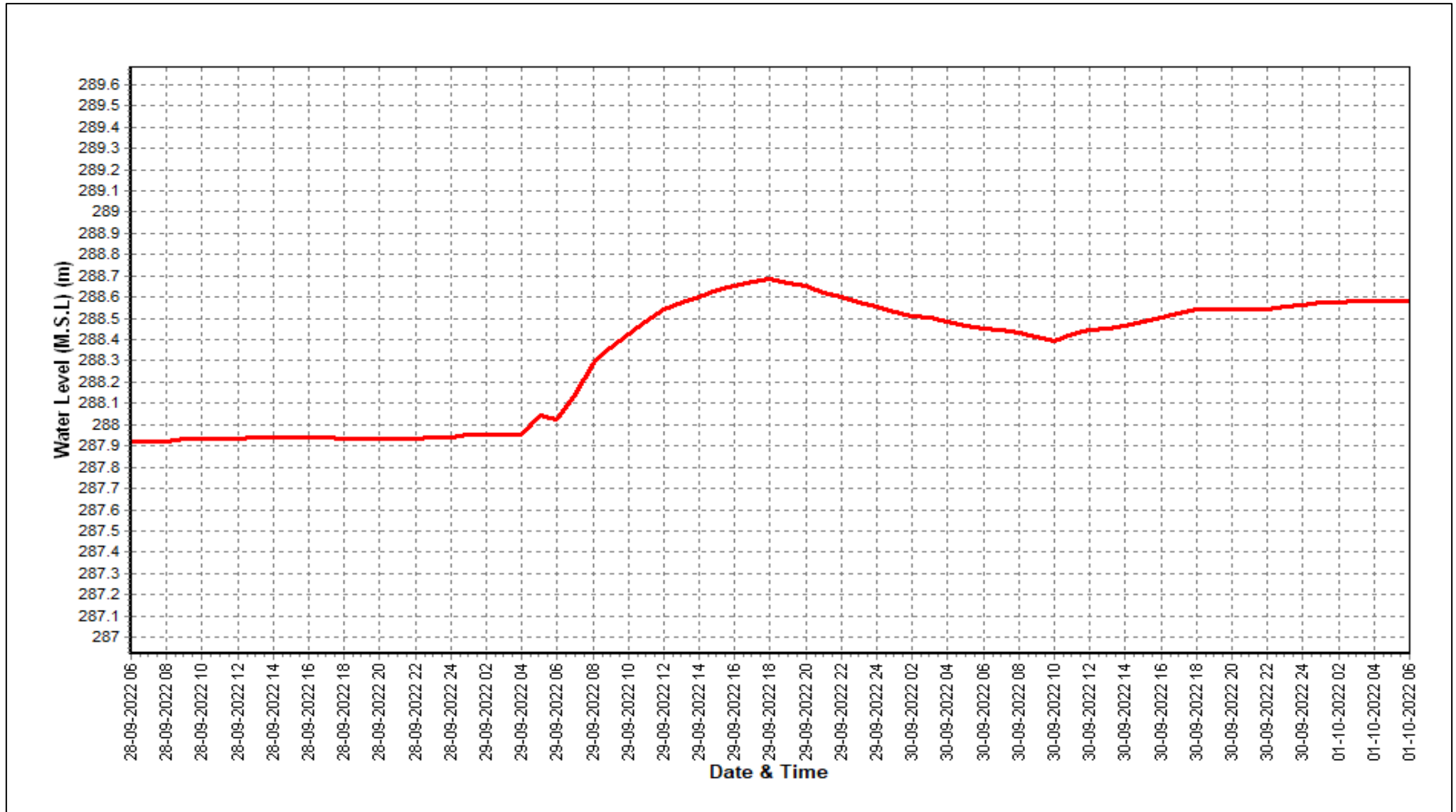
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : DODDIPADU. (AKL00B1)

Local River : HUNDRI

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



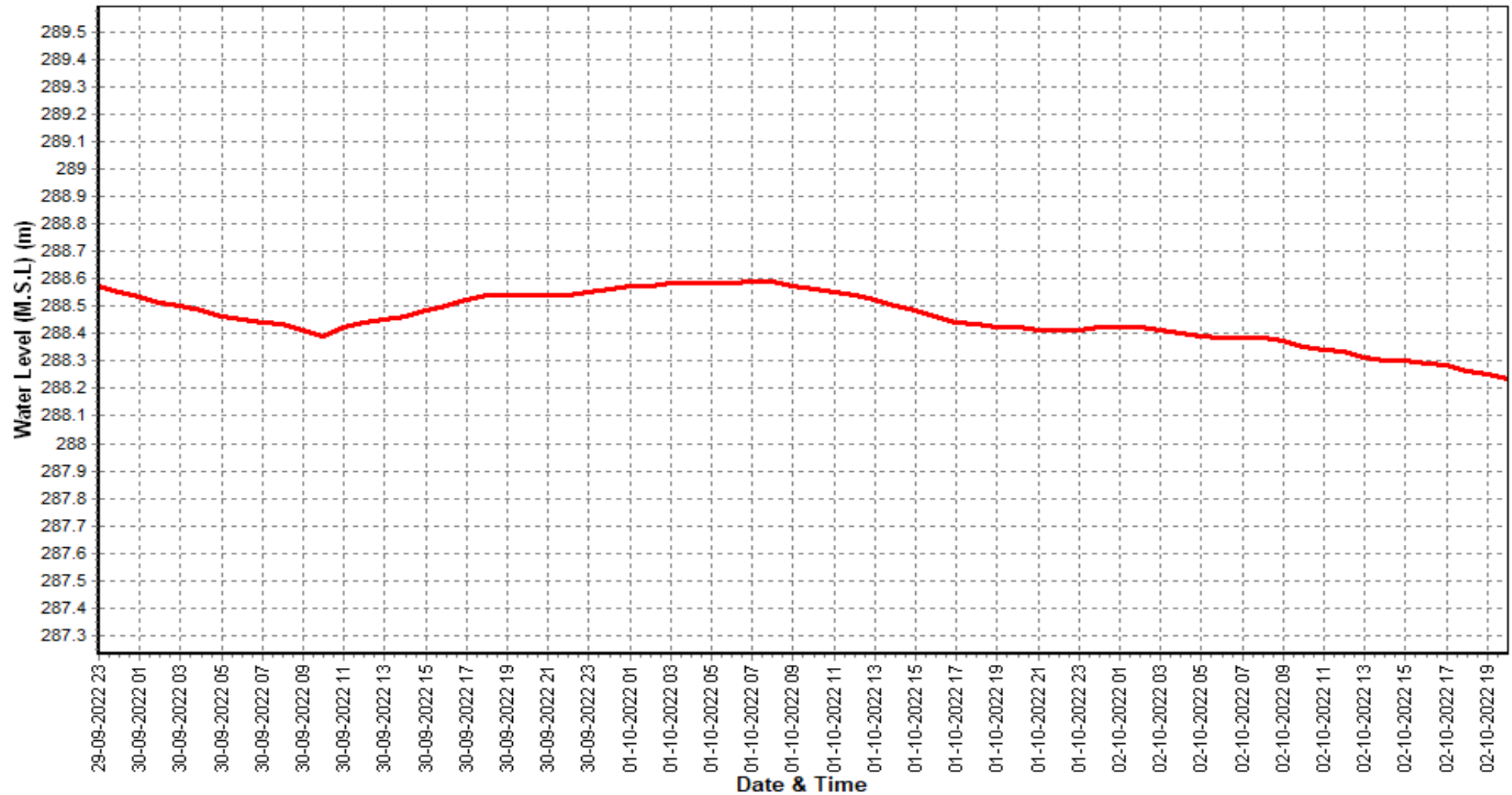
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : DODDIPADU. (AKL00B1)

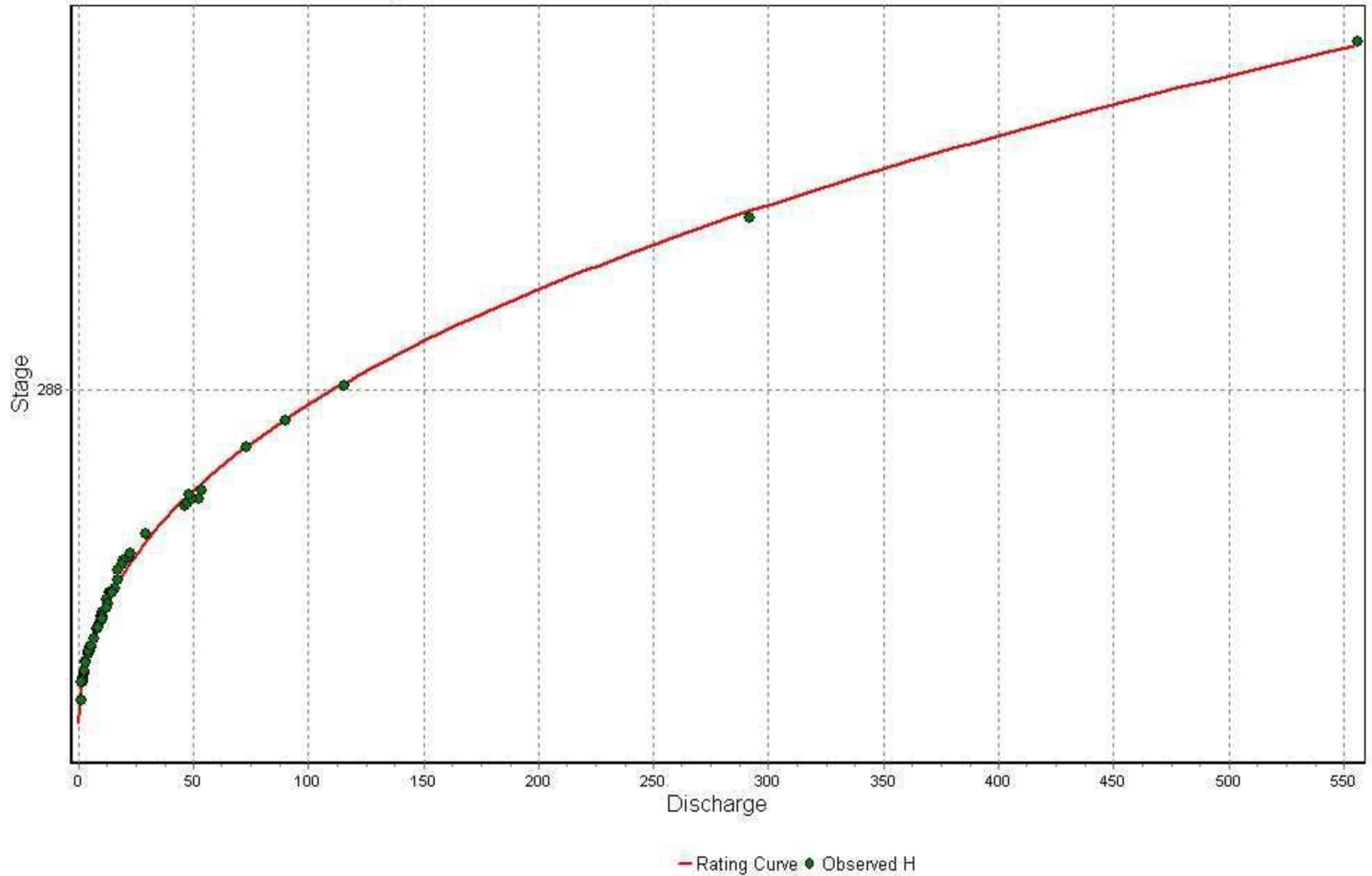
Local River : HUNDRI

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Tungabhadra SD, Kurnool



Rating Curve of Site Doddipadu 01/08/2022 to 31/10/2022



HISTORY SHEET

Water Year : 2022-2023

Site : HALIA

Code : AKH00G2

State : Andhra Pradesh

District : Nalgonda

Basin : Krishna

Independent River : Krishna

Tributary : Musi

Sub Tributary : -

Sub-Sub Tributary : -

Local River : Halia

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda

Drainage Area : 3100 Sq. Km.

Bank :

Latitude : 16°46'00"

Longitude : 79°21'00"

Zero of Gauge (m) : 129 (m.s.l)
127.9 (m.s.l)15-02-1984 - 31-05-2002
01-06-2002

Opening Date

Closing Date

Gauge : 01-06-1984

HFL During 2022-23 : 130.260 m
Corres. Discharge : 291 (Estimated)

Discharge : 11-07-1984

Date & Time of
occurrence : 16-10-2022
: 06:00 Hrs

Water Quality : 01-06-1992

HFL Recorded so far in m : 134.405 dt 23-09-1991

Corresponding Discharge (cumecs) : 4233*

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2003-2004	144.3	129.600	24-10-2003	0.000	127.970	20-01-2004
2004-2005	263.3	129.600	05-10-2004	0.000		19-07-2004
2005-2006	3383	133.000	29-10-2005	0.000		02-07-2005
2006-2007	49.94	129.300	01-11-2006	0.000	128.000	13-07-2006
2007-2008	470.1	130.300	18-09-2007	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		07-03-2016
2016-2017	291.2	130.870	23-09-2016	0.000	128.260	17-04-2017
2017-2018	22.72	129.080	05-10-2017	0.000	128.300	22-01-2018
2018-2019	29.65	129.150	19-09-2018	0.000	128.320	14-06-2018
2019-2020	252.9	130.200	18-09-2019	0.000	128.190	15-07-2019
2020-2021	522.1	131.960	14-10-2020	0.000	128.790	24-01-2021
2021-2022	310.3	130.655	30-08-2021	0.000	128.520	01-08-2021

Annual Runoff of Halia at Halia

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1984-1985	29	7	35	1	0	1
2	1985-1986	51	3	55	2	0	2
3	1986-1987	21	5	26	1	0	1
4	1987-1988	128	8	136	5	0	5
5	1988-1989	158	10	167	6	0	6
6	1989-1990	133	20	153	5	1	5
7	1990-1991	53	9	62	2	0	2
8	1991-1992	484	8	492	17	0	17
9	1992-1993	12	11	23	0	0	1
10	1993-1994	60	9	70	2	0	2
11	1994-1995	124	10	134	4	0	5
12	1995-1996	125	4	129	4	0	5
13	1996-1997	55	13	67	2	0	2
14	1997-1998	21	4	24	1	0	1
15	1998-1999	118	9	126	4	0	4
16	1999-2000	15	4	19	1	0	1
17	2000-2001	106	8	114	4	0	4
18	2001-2002	214	6	220	8	0	8
19	2002-2003	2	0	2	0	0	0
20	2003-2004	17	0	18	1	0	1
21	2004-2005	107	8	115	4	0	4
22	2005-2006	853	51	904	30	2	32
23	2006-2007	124	47	171	4	2	6
24	2007-2008	480	59	539	17	2	19
25	2008-2009	351	115	465	12	4	16
26	2009-2010	137	99	237	5	4	8
27	2010-2011	282	141	423	10	5	15
28	2011-2012	130	39	170	5	1	6
29	2012-2013	18	9	27	1	0	1
30	2013-2014	439	62	501	16	2	18
31	2014-2015	120	43	163	4	2	6
32	2015-2016	62	5	67	2	0	2
33	2016-2017	169	11	180	6	0	6
34	2017-2018	36	19	55	1	1	2
35	2018-2019	41	27	68	1	1	2
36	2019-2020	239	75	314	8	3	11
37	2020-2021	457	0	457	16	0	16
38	2021-2022	527	88	614	19	3	22
39	2022-2023	307	95	402	11	3	14
Average		174	29	204	6	1	7

Instantaneous Flood Peak of Halia at Halia

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1984-1985	130.530	12-10-1984	00:00:00	161 *
2	1985-1986	130.755	27-07-1985	11:00:00	225 *
3	1986-1987	130.260	07-11-1986	08:00:00	112
4	1987-1988	131.540	04-11-1987	13:00:00	615 *
5	1988-1989	131.050	20-09-1988	01:00:00	341 *
6	1989-1990	132.040	24-07-1989	01:00:00	999 *
7	1990-1991	130.800	11-05-1990	18:00:00	240 *
8	1991-1992	134.405	23-09-1991	01:00:00	4233 *
9	1992-1993	129.960	02-07-1992	00:00:00	93 *
10	1993-1994	130.900	08-10-1993	18:00:00	278 *
11	1994-1995	131.960	06-10-1994	11:00:00	930 *
12	1995-1996	131.360	18-06-1995	00:00:00	503 *
13	1996-1997	131.200	18-07-1996	02:00:00	414 *
14	1997-1998	130.800	24-09-1997	01:00:00	240 *
15	1998-1999	131.450	15-10-1998	16:00:00	557 *
16	1999-2000	130.450	07-09-1999	13:00:00	143 *
17	2000-2001	131.580	23-08-2000	08:00:00	642 *
18	2001-2002	129.560	19-02-2001	08:00:00	127 *
19	2002-2003	129.950	08-01-2002	18:00:00	93 *
20	2003-2004	129.800	23-10-2003	18:00:00	144 *
21	2004-2005	129.650	09-10-2004	08:00:00	280
22	2005-2006	133.000	29-10-2005	08:00:00	3383 *
23	2006-2007	129.350	06-11-2006	18:00:00	50 *
24	2007-2008	130.600	17-09-2007	13:00:00	524 *
25	2008-2009	130.880	29-11-2008	18:00:00	535 *
26	2009-2010	130.060	30-09-2009	18:00:00	204 *
27	2010-2011	130.150	14-09-2010	18:00:00	119 *
28	2011-2012	129.400	25-08-2011	13:00:00	31 *
29	2012-2013	129.210	03-10-2012	08:00:00	28 *
30	2013-2014	133.570	26-10-2013	00:00:00	1126 *
31	2014-2015	129.550	26-10-2014	16:00:00	72 *
32	2015-2016	129.280	15-09-2015	18:00:00	31 *
33	2016-2017	131.100	23-09-2016	13:00:00	291 *
34	2017-2018	129.080	05-10-2017	08:00:00	23 *
35	2018-2019	129.260	20-09-2018	21:00:00	30 *
36	2019-2020	130.440	18-09-2019	14:00:00	253 *
37	2020-2021	132.130	14-10-2020	06:00:00	570 *
38	2021-2022	130.900	03-09-2021	21:00:00	382 *
39	2022-2023	130.260	16-10-2022	06:00:00	291 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : HALIA (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

Sub-Division : Lower Krishna SD 1,Miryalguda

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	128.650	1.402	128.590	0.000	128.680	1.952	129.205	32.37	129.640	95.90	129.010	14.93
2	128.650	1.402	128.620	0.000	128.660	1.623	129.145	25.27	129.900	165.3 *	129.020	15.48
3	128.640	1.103	128.750	3.048 *	128.740	2.352	129.130	21.87	129.490	74.22	129.060	19.05
4	128.620	0.000	128.690	2.548	128.720	1.996	129.050	19.65 *	129.215	31.76	129.060	19.43
5	128.620	0.000	128.650	1.407	128.720	1.944	128.880	9.907	129.180	30.92 *	129.080	21.49
6	128.600	0.000	128.640	1.120	128.720	1.965	128.900	11.26	129.155	25.45	129.070	21.17 *
7	128.600	0.000	128.660	1.689	128.730	2.238 *	129.245	35.99	129.180	28.87	129.040	16.84
8	128.590	0.000	128.680	2.185	128.730	2.225	129.380	66.63	129.190	29.56	129.020	17.49 *
9	128.570	0.000	128.735	3.498	128.740	2.639 *	129.390	69.95	129.300	44.35 *	129.020	15.30
10	128.570	0.000	129.030	18.23 *	128.740	2.325	129.380	64.13	129.380	63.91	128.950	12.30
11	128.570	0.000	129.100	24.39	128.765	2.710	129.330	48.20 *	129.330	53.51	128.920	11.60
12	128.580	0.000	129.030	18.39	128.770	2.848	129.575	83.40	129.270	46.04	128.910	10.77
13	128.580	0.000	129.020	17.31	128.740	2.311	129.460	71.94	129.220	31.66	128.880	9.413 *
14	128.580	0.000	129.030	18.19	128.740	2.639 *	129.330	54.28	129.330	52.86	128.880	9.888
15	128.620	0.000	128.960	12.50	128.720	1.847 *	129.220	31.96	129.970	189.7	128.900	10.55
16	128.630	0.000	128.890	8.548	128.730	2.298	129.150	25.04	130.220	274.4 *	128.890	10.32
17	128.630	0.000	128.860	8.156 *	128.750	2.621	129.100	21.84	129.845	146.1	128.900	10.84
18	128.610	0.000	128.820	5.173	128.770	2.797	129.070	21.17 *	129.605	93.18	128.900	10.72
19	128.600	0.000	128.850	6.301	128.770	2.839	129.050	19.50	129.420	68.52	128.890	10.30
20	128.600	0.000	128.820	4.994	128.800	4.133	129.085	20.93	129.300	53.74	128.890	9.888 *
21	128.610	0.000	128.790	3.855	128.810	5.697 *	128.985	16.58	129.220	31.13	128.895	10.77
22	128.620	0.000	128.750	2.171	128.800	4.002	128.985	16.63	129.180	29.41	128.910	11.85 *
23	128.620	0.000	128.750	2.178	128.790	3.615	128.920	12.09	129.160	28.97 *	128.910	11.75
24	128.620	0.000	128.760	3.467 *	128.800	3.964	128.960	14.23	129.110	24.45 *	128.900	11.06
25	128.610	0.000	128.720	1.984	128.900	11.32	128.920	11.40 *	129.090	20.99	128.910	11.86
26	128.610	0.000	128.720	2.078	128.860	8.539	128.910	11.73	129.080	19.56	128.930	12.89
27	128.600	0.000	129.020	16.70	128.925	12.72	128.910	11.51	129.090	20.90	128.920	11.40 *
28	128.590	0.000	128.910	9.299	129.100	23.14 *	129.060	18.90	129.070	19.28	128.900	11.23
29	128.600	0.000	128.850	5.755	129.180	29.28	129.060	18.71	129.040	17.05	128.900	11.25
30	128.600	0.000	128.760	2.616	129.080	19.84	129.185	28.97	129.020	17.49 *	128.890	10.63
31			128.730	2.238 *	129.050	19.58 *			129.020	15.70		
Ten-Daily Mean												
I Ten-Daily	128.611	0.391	128.704	3.372	128.718	2.126	129.171	35.70	129.363	59.02	129.033	17.35
II Ten-Daily	128.600	0.000	128.938	12.40	128.756	2.704	129.237	39.83	129.551	101.0	128.896	10.43
III Ten-Daily	128.608	0.000	128.796	4.758	128.936	12.88	128.990	16.08	129.098	22.27	128.907	11.47
Monthly												
Min.	128.570	0.000	128.590	0.000	128.660	1.623	128.880	9.907	129.020	15.70	128.880	9.413
Max.	128.650	1.402	129.100	24.39	129.180	29.28	129.575	83.40	130.220	274.4	129.080	21.49
Mean	128.606	0.13	128.812	6.775	128.807	6.129	129.132	30.53	129.330	59.51	128.945	13.08

Annual Runoff in MCM = 402 Annual Runoff in mm = 130

Peak Observed Discharge = 189.7 cumecs on 15-10-2022 Corres. Water Level :129.97 m

Lowest Observed Discharge = 0.000 cumecs on 04-06-2022 Corres. Water Level :128.62 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 2022 - 2023

Station Name : HALIA (AKH00G2)

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

Sub-Division : Lower Krishna SD 1,Miryalguda

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	128.880	10.19	128.700	3.471 *	128.820	8.351	128.810	7.091	128.870	9.196	128.720	4.080
2	128.880	10.09	128.690	3.465	128.840	8.964	128.790	5.804	128.860	8.990 *	128.800	6.718
3	128.870	9.823	128.740	4.624	128.820	8.397	128.780	5.724	128.850	8.134	128.760	4.962
4	128.870	9.398 *	128.750	4.956	128.820	8.616	128.800	6.558	128.850	8.589 *	128.750	4.798
5	128.850	8.669	128.750	4.903	128.820	7.429 *	128.800	6.692 *	128.880	9.620	128.750	4.982 *
6	128.820	7.228	128.740	4.518	128.800	7.045	128.810	6.766	128.830	7.567	128.760	4.974
7	128.820	7.318	128.760	5.441	128.810	7.271	128.800	6.718	128.810	7.057 *	128.750	4.982 *
8	128.770	5.341	128.760	5.308 *	128.800	6.734	128.810	6.858	128.780	5.687	128.760	5.014
9	128.760	4.960	128.780	6.320	128.780	5.782	128.820	7.377	128.770	5.643 *	128.720	4.080
10	128.760	5.010	128.780	6.375	128.820	7.121	128.830	7.838	128.760	4.942	128.730	4.381
11	128.740	4.663 *	128.840	8.891	128.810	7.054	128.850	8.168	128.740	4.531	128.730	4.294
12	128.760	5.078	128.840	8.794	128.830	7.809 *	128.820	7.429 *	128.730	4.195	128.720	4.100
13	128.780	5.894	128.840	8.751	128.800	6.559	128.850	8.254	128.730	4.213	128.720	4.027
14	128.780	5.853	128.830	8.310	128.780	5.599	128.840	8.019	128.740	4.663 *	128.700	3.471 *
15	128.840	8.632	128.830	7.809 *	128.780	5.523	128.850	8.272	128.740	4.612	128.680	3.380
16	128.820	7.677	128.840	8.386	128.800	6.669	128.840	7.754	128.730	4.352 *	128.650	2.163
17	128.790	6.009	128.840	8.410	128.800	6.604	128.900	10.94	128.730	4.233	128.630	1.317
18	128.790	6.335 *	128.780	6.097	128.810	6.949	128.930	12.52	128.710	3.965	128.620	0.745
19	128.750	4.868	128.780	6.081	128.810	7.057 *	128.960	13.37 *	128.700	3.622	128.630	1.294
20	128.760	5.499	128.770	5.235	128.830	7.715	129.050	17.68	128.700	3.713	128.650	2.189
21	128.750	4.903	128.740	4.368	128.840	8.060	129.040	17.19	128.700	3.711	128.660	2.419 *
22	128.740	4.598	128.740	4.663 *	128.830	7.744	128.930	11.99 *	128.700	3.471 *	128.670	2.914
23	128.740	4.530	128.770	5.325	128.850	8.359	128.860	8.622	128.690	3.194 *	128.620	0.767
24	128.730	4.125	128.760	4.872	128.850	8.260	128.850	8.103	128.680	3.360	128.600	0.000
25	128.730	4.352 *	128.760	4.923	128.860	8.677	128.840	7.869	128.680	3.248	128.590	0.000
26	128.700	3.831	128.760	5.308 *	128.850	8.589 *	128.840	8.195 *	128.680	3.396	128.560	0.000
27	128.710	4.069	128.770	5.401	128.840	7.974	128.920	11.92	128.700	3.701	128.520	0.000
28	128.710	4.044	128.800	6.890	128.810	6.874	128.910	11.23	128.700	3.582	128.510	0.000
29	128.700	3.772	128.800	6.692 *			128.880	9.409	128.700	3.614	128.510	0.000
30	128.700	3.686	128.800	6.870			128.880	9.812 *	128.710	3.756 *	128.510	0.000
31	128.700	3.620	128.820	8.256			128.860	8.430			128.550	0.000
Ten-Daily Mean												
I Ten-Daily	128.828	7.802	128.745	4.938	128.813	7.571	128.805	6.743	128.826	7.542	128.750	4.897
II Ten-Daily	128.781	6.051	128.819	7.676	128.805	6.754	128.889	10.24	128.725	4.210	128.673	2.698
III Ten-Daily	128.719	4.139	128.775	5.779	128.841	8.067	128.892	10.25	128.694	3.503	128.573	0.555
Monthly												
Min.	128.700	3.620	128.690	3.465	128.780	5.523	128.780	5.724	128.680	3.194	128.510	0.000
Max.	128.880	10.19	128.840	8.891	128.860	8.964	129.050	17.68	128.880	9.620	128.800	6.718
Mean	128.774	5.937	128.779	6.12	128.818	7.421	128.863	9.116	128.748	5.085	128.662	2.647

Peak Computed Discharge = 274.4 cumecs on 16-10-2022

Corres. Water Level :130.22 m

Lowest Computed Discharge = 1.847 cumecs on 15-08-2022

Corres. Water Level :128.72 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 : 2022-2023

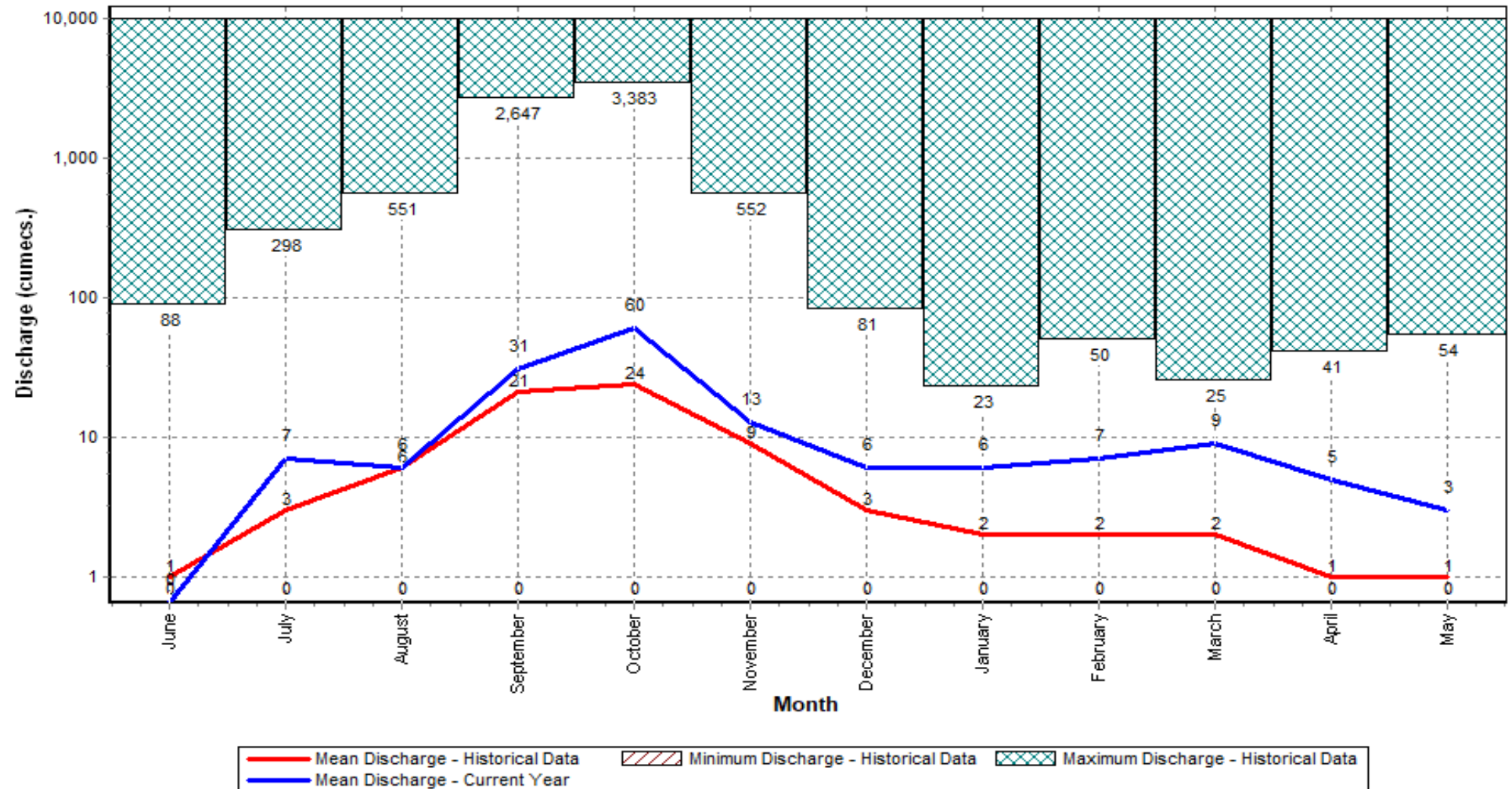
Station Name : HALIA (AKH00G2)

Data considered : 1985-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Halia

Sub-Division : Lower Krishna SD 1,Miryalguda



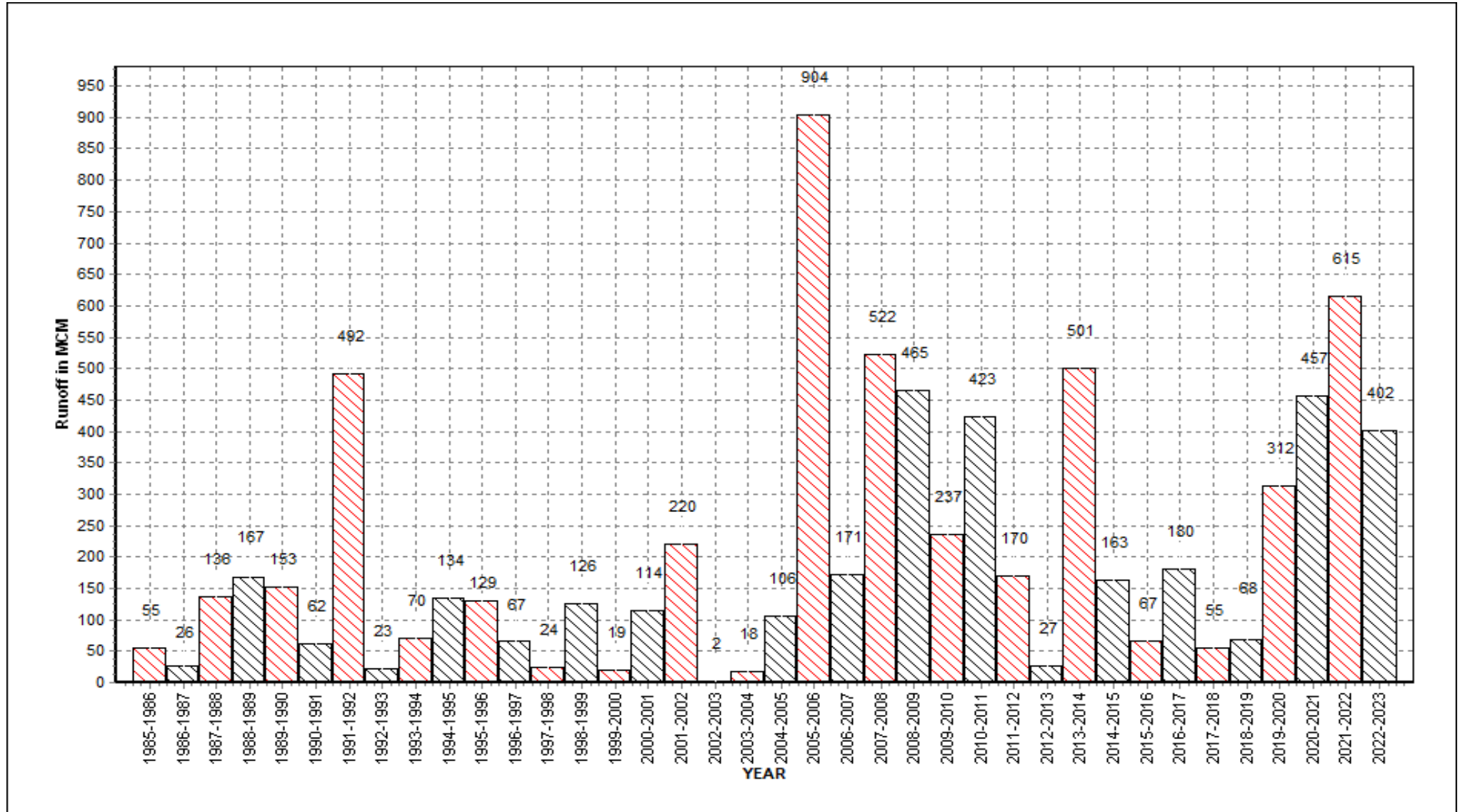
Annual Runoff Values for the period: 1985 - 2023

Station Name : HALIA (AKH00G2)

Local River : Halia

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1,Miryala



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

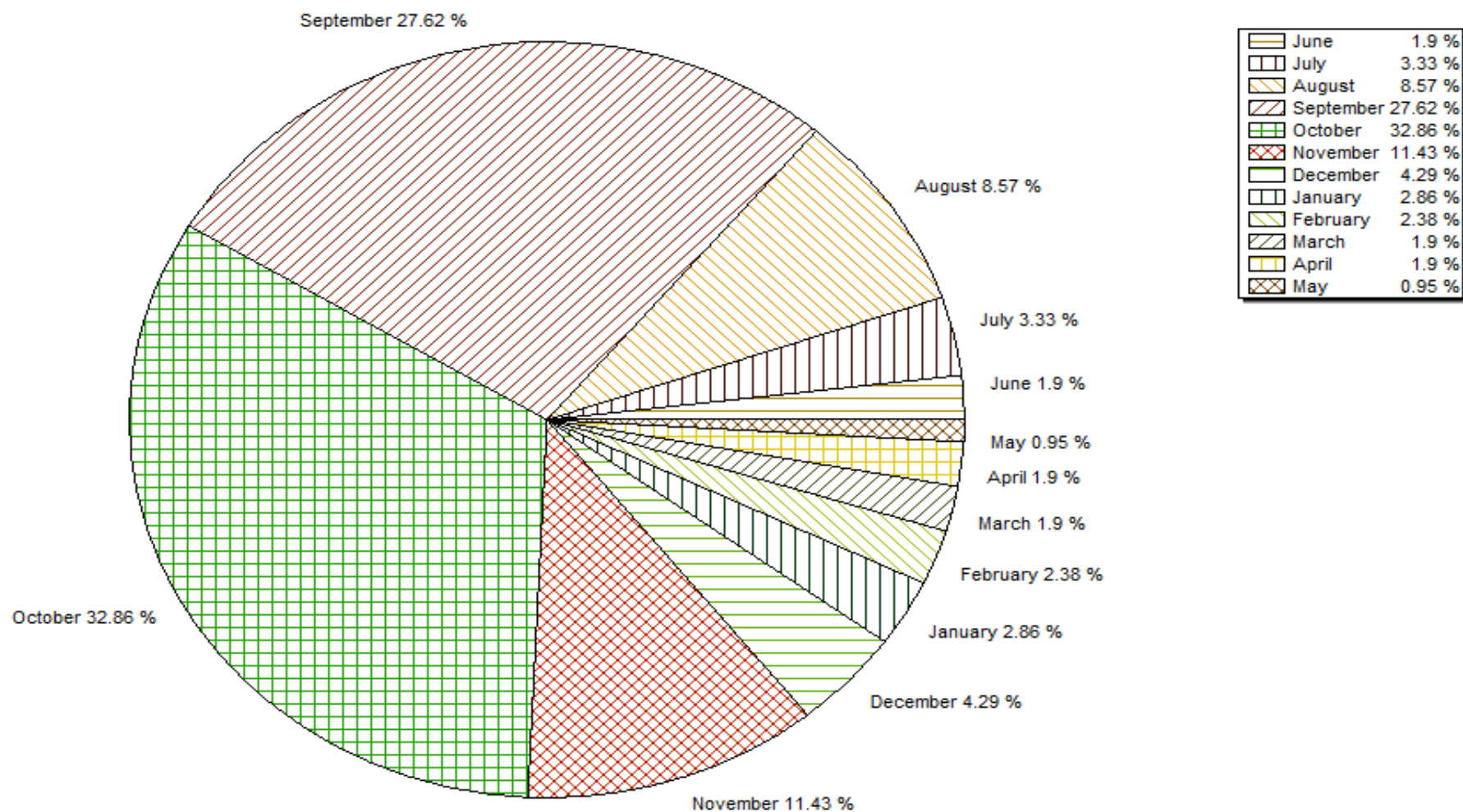
Monthly Average Runoff based on period : 1985-2022

Station Name : HALIA (AKH00G2)

Local River : Halia

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1,Miryalguda



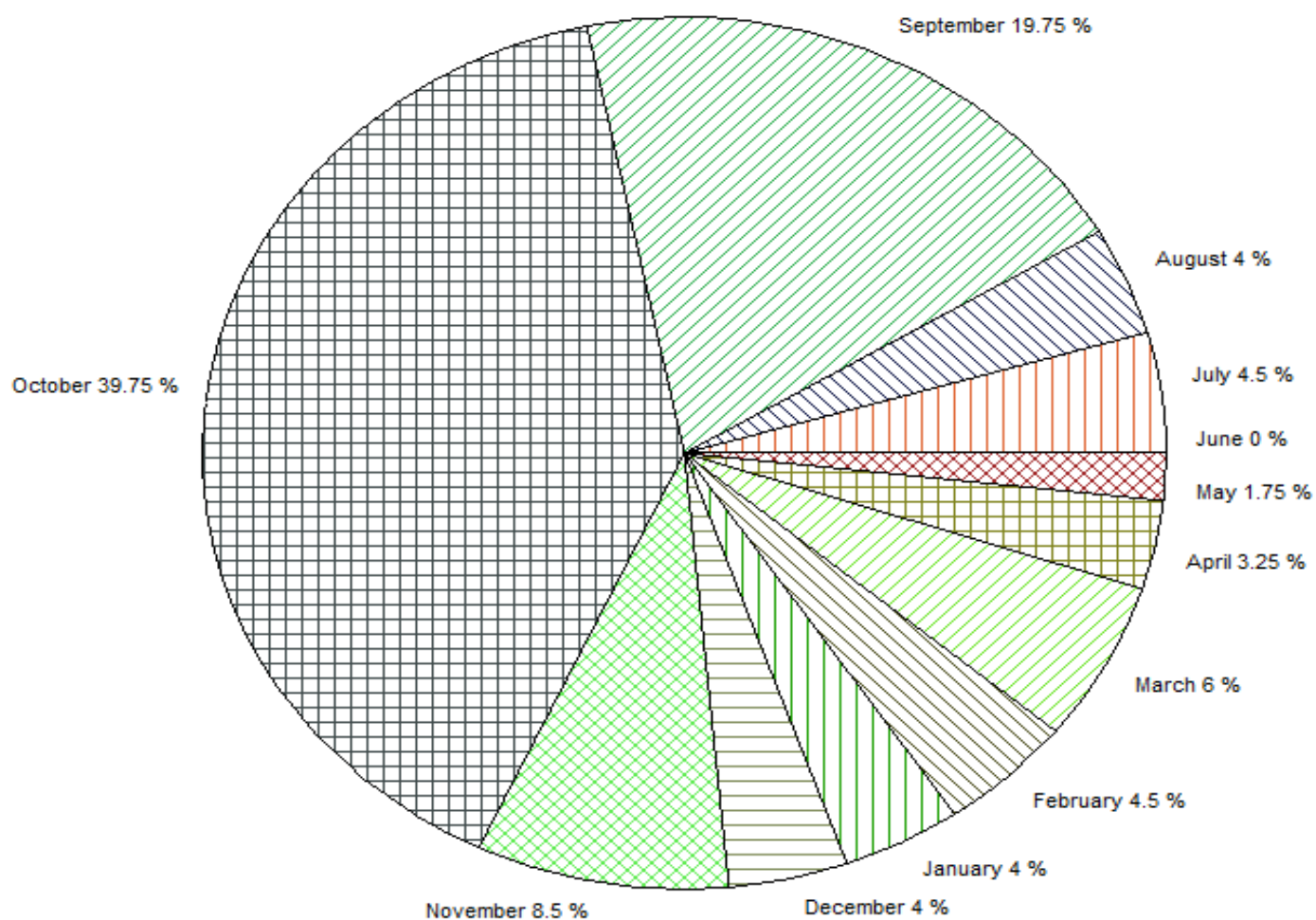
Monthly Runoff for the Year : 2022-2023

Station Name : HALIA (AKH00G2)

Local River : Halia

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1,Miryalguda



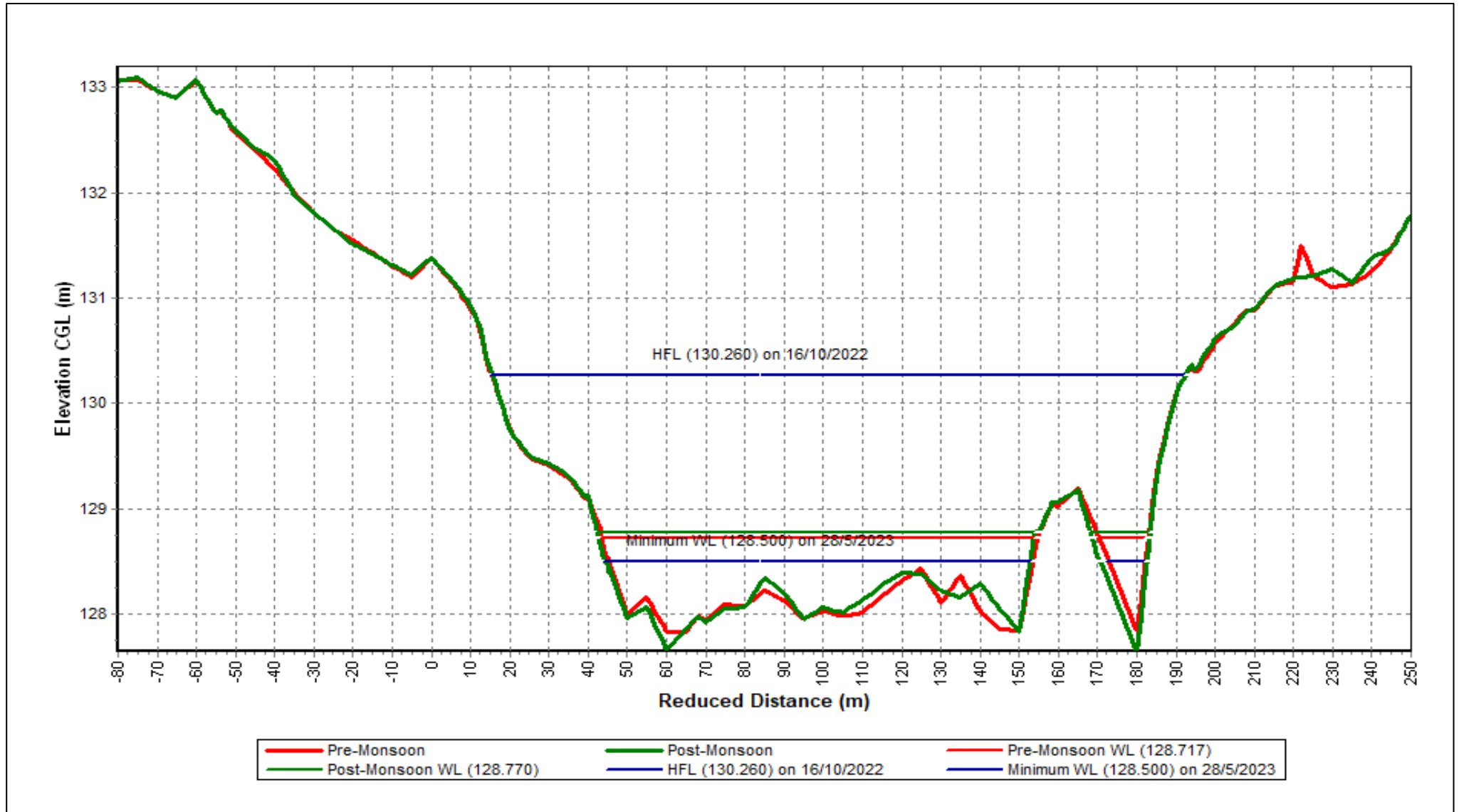
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : HALIA (AKH00G2)

Local River : Halia

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda



Zero of the Gauge: 127.9 (m.s.l)

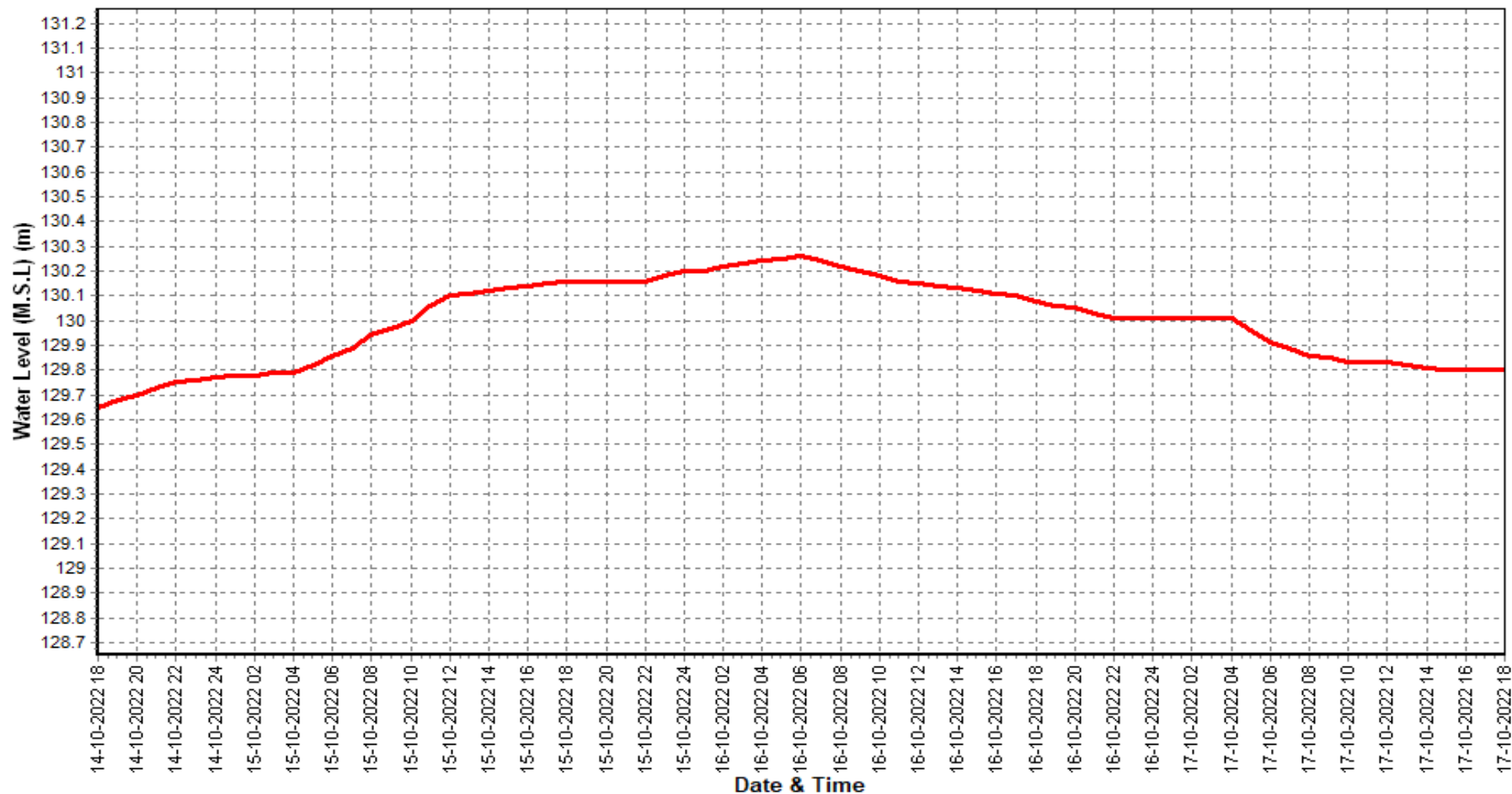
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : HALIA (AKH00G2)

Local River : Halia

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda



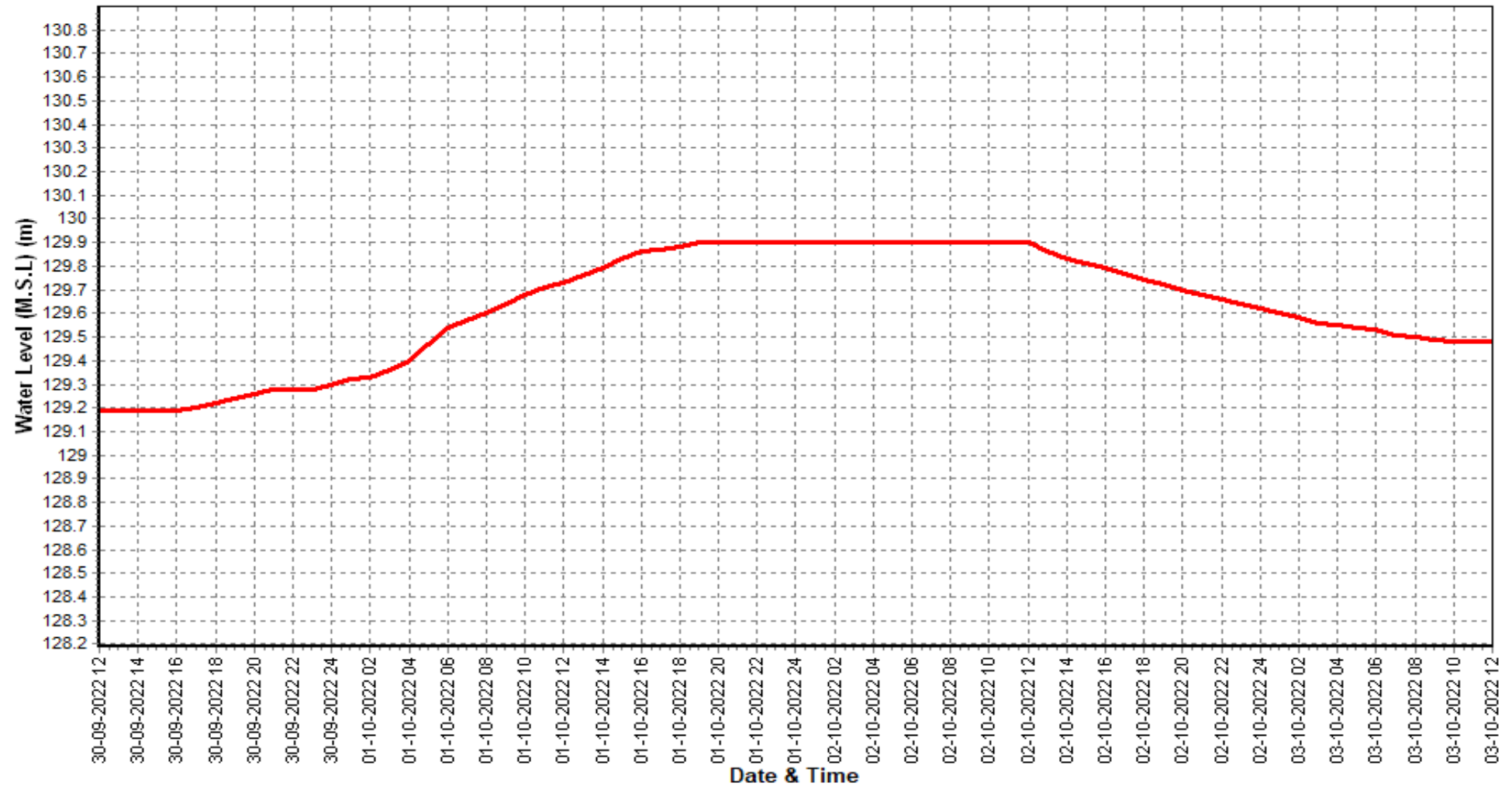
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : HALIA (AKH00G2)

Local River : Halia

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1,Miryalguda



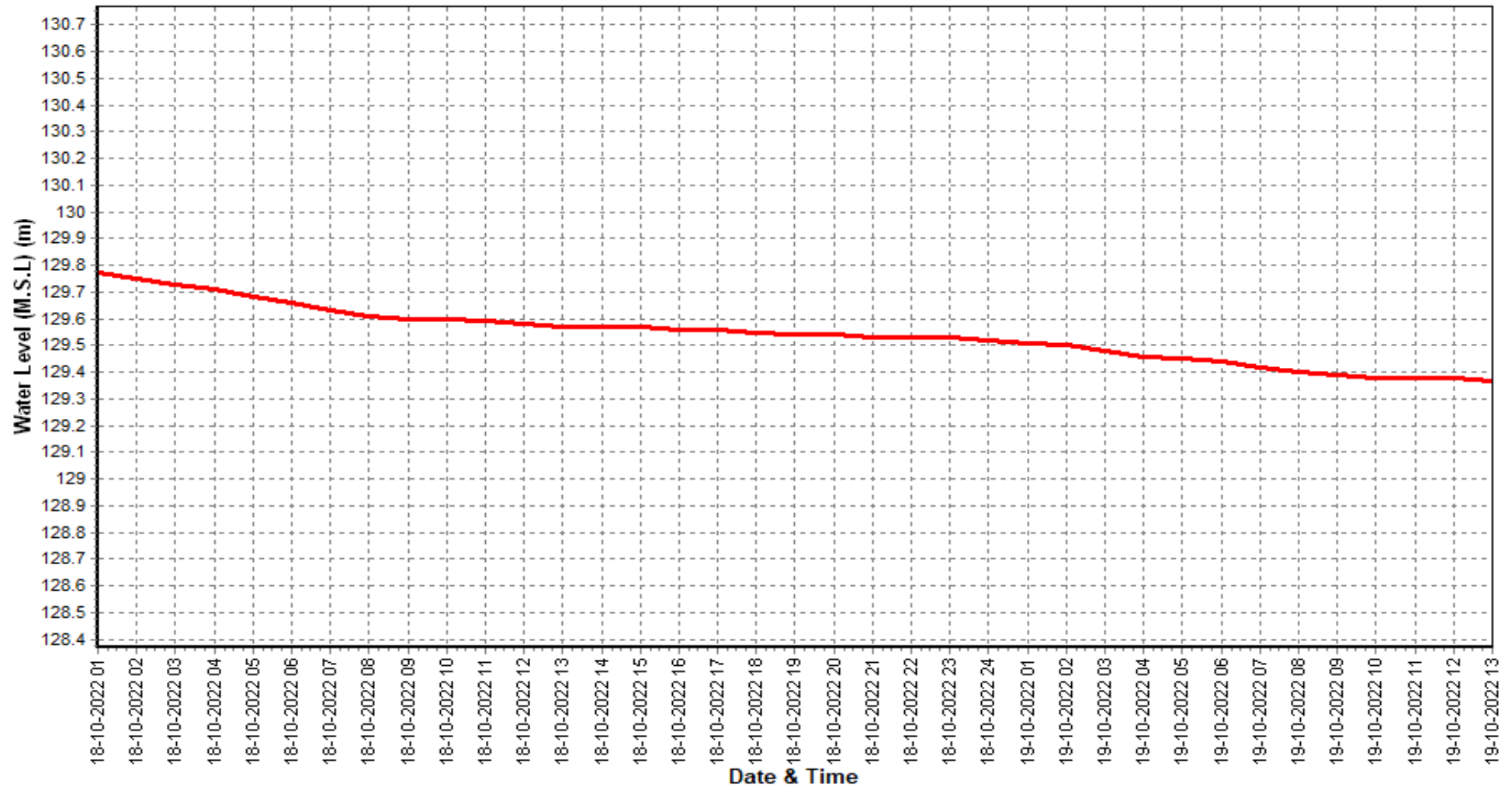
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : HALIA (AKH00G2)

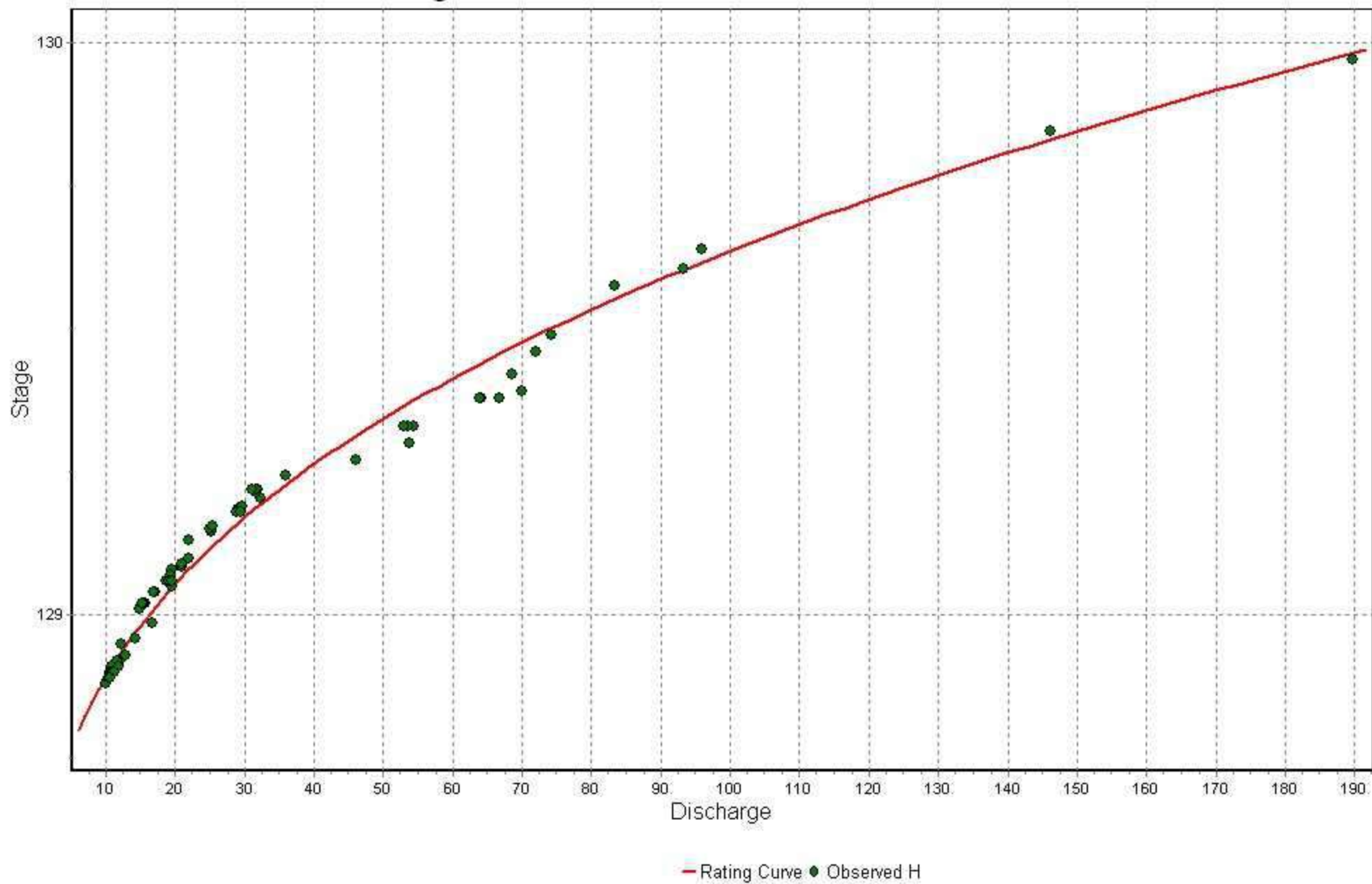
Local River : Halia

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda



Rating Curve of Site Halia 01/09/2022 to 30/11/2022



HISTORY SHEET

		Water Year	: 2022-2023
Site	: Veerlapalem	Code	: 032-LKDHYD
State	: Telangana	District	Nalgonda
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Tungapadu
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Krishna SD 1, Miryalguda
Drainage Area	: 624.5 Sq. Km.	Bank	: Left
Latitude	: 16°41'15"	Longitude	: 79°32'46"
Zero of Gauge (m)	: 44.5 (m.s.l) 63 (m.s.l) 63 (m.s.l)	01-03-2017	- 25-02-2019
		26-02-2019	- 09-01-2019
		10-01-2019	
	Opening Date	Closing Date	
Gauge	: 21-10-2016	HFL During 2022-23	: 66.500 m
		Corres. Discharge	: 96 (Observed)
Discharge	: 21-10-2016	Date & Time of occurrence	: 01-10-2022 : 08:00 Hrs

HFL Recorded so far in m :67.100 m dt 14-10-2020

Corresponding Discharge (cumecs) : 151 *

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2018-2019	38.99	47.830	20-08-2018	0.000		09-06-2018
2019-2020	108.1	66.490	18-09-2019	0.000	64.300	17-08-2019
2020-2021	85.9	64.100	14-10-2020	0.000	64.350	09-08-2020
2021-2022	95.34	66.200	14-01-2022	0.574	64.460	03-08-2021

Annual Runoff of Tungapadu at Veeralapalem

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2017-2018	14	41	55	1	1	2
2	2018-2019	49	24	73	2	1	3
3	2019-2020	124	68	192	4	2	7
4	2020-2021	169	95	264	6	3	9
5	2021-2022	136	106	242	5	4	9
6	2022-2023	143	93	236	5	3	8
Average		106	71	146	4	3	6

Instantaneous Flood Peak of Tungapadu at Veerlapalem

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2017-2018	47.93	13-10-2017	12:00:00	35 *
2	2018-2019	48.000	20-08-2018	11:00:00	39 *
3	2019-2020	66.570	18-09-2019	20:00:00	108 *
4	2020-2021	67.100	14-10-2020	20:00:00	151 *
5	2021-2022	66.400	30-08-2021	14:00:00	105 *
6	2022-2023	66.500	01-10-2022	08:00:00	96

Stage-Discharge Data for the period 2022 - 2023

Station Name : VEERALAPALEM (032-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungapadu

Sub-Division : Lower Krishna SD 1, Miryalguda

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	64.930	1.561	65.520	41.79 #	64.580	0.000	64.900	7.191	66.500	95.52	64.970	12.51
2	64.920	1.366	65.510	40.98 #	64.580	0.000	65.130	24.45	65.670	47.31 *	65.035	14.78
3	64.900	1.276	64.700	2.252 *	64.680	2.018	65.030	13.44	65.025	14.58	64.890	8.941
4	64.900	1.349	64.700	2.252 #	64.730	2.772	64.950	12.06 *	64.950	12.38	64.840	7.515
5	64.890	1.200 *	64.660	1.631 #	64.680	1.977	64.830	5.659	64.870	8.861 *	64.760	5.708
6	64.880	1.016	64.720	2.247	64.640	1.238	64.800	5.344	65.060	16.85	64.870	8.861 *
7	64.900	1.205	64.700	1.938	64.620	1.116 *	64.890	7.110	65.370	31.48 #	64.880	8.775
8	64.900	1.264	64.690	1.714	64.730	2.912	65.050	18.26	65.130	21.49	64.930	11.24 *
9	64.880	1.162	64.955	7.590	64.830	5.042 *	65.070	19.54	65.000	0.000	64.930	11.25
10	64.870	1.012	64.980	9.800 *	64.740	3.117	64.880	6.809	65.170	21.76 #	64.920	10.63
11	64.870	0.993	64.900	6.365	64.620	1.147	64.920	10.84 *	65.350	30.48 #	64.920	10.71
12	64.860	0.945 *	64.900	6.377	64.580	0.000	64.970	10.76	65.230	27.27	64.920	10.90
13	64.850	0.905	65.020	11.70	64.550	0.000	64.790	5.376	65.070	20.06	64.900	10.04 *
14	64.820	0.981	65.040	12.18	64.540	0.000	64.730	3.190	65.000	12.90	64.930	11.27
15	65.520	2.474	65.050	12.83	64.720	2.604 *	64.625	1.823	65.885	59.40	64.920	10.34
16	65.600	2.811	65.060	13.56	64.940	7.862	64.600	1.587	65.700	48.96 *	64.880	9.062
17	65.580	2.694	65.000	10.56 *	64.850	5.388	64.550	0.000	65.500	38.17	64.850	7.228
18	65.560	2.118	64.820	4.810	64.830	5.178	64.500	0.000	65.150	24.89	64.840	7.183
19	65.530	2.000 *	64.780	3.477	64.840	5.397	64.500	0.000	65.010	13.24	64.800	5.833
20	65.520	1.965	64.730	2.804	64.870	6.207	64.490	0.000	64.950	11.09	64.800	6.248 *
21	65.520	1.945	64.710	2.451	64.900	7.052 *	64.470	0.000	64.920	10.35	64.820	6.640
22	65.530	1.982	64.690	2.116	64.800	4.227	64.470	0.000	64.940	11.67	64.870	8.287
23	65.530	1.992	64.750	3.849	64.830	5.056	64.470	0.000	64.950	12.06 *	64.860	7.687
24	65.530	1.981	64.750	3.184 *	64.840	5.509	64.470	0.000	64.910	10.43 *	64.830	7.010
25	65.530	2.014	64.660	1.837	64.940	8.005	64.480	0.000	64.950	11.33	64.770	5.669
26	65.520	1.950 *	64.640	1.578	65.620	50.43	64.480	0.000	64.950	11.82	64.760	5.340
27	65.530	2.083	64.630	1.316	65.090	17.10	65.110	24.67	64.970	13.21	64.750	4.509 *
28	65.520	1.595	64.620	1.161	65.000	10.56 *	65.160	26.12	64.970	12.67	64.740	4.834
29	65.510	1.370	64.600	0.855	64.980	10.93	65.190	21.30 #	64.960	12.22	64.740	4.955
30	65.510	1.299	64.570	0.000	65.040	12.18 #	65.390	32.49	64.950	12.06 *	64.760	5.112
31			64.560	0.000	65.090	14.39 *			64.960	11.89		
Ten-Daily Mean												
I Ten-Daily	64.897	1.241	64.913	11.22	64.681	2.019	64.953	11.99	65.274	27.02	64.902	10.02
II Ten-Daily	65.271	1.789	64.930	8.467	64.734	3.378	64.667	3.357	65.285	28.65	64.876	8.880
III Ten-Daily	65.523	1.821	64.653	1.668	65.012	13.22	64.769	10.46	64.948	11.79	64.790	6.004
Monthly												
Min.	64.820	0.905	64.560	0.000	64.540	0.000	64.470	0.000	64.870	0.000	64.740	4.509
Max.	65.600	2.811	65.520	41.79	65.620	50.43	65.390	32.49	66.500	95.52	65.035	14.78
Mean	65.230	1.617	64.826	6.942	64.815	6.433	64.797	8.601	65.162	22.14	64.856	8.302

Annual Runoff in MCM = 236 Annual Runoff in mm = 377

Peak Observed Discharge = 95.52 cumecs on 01-10-2022 Corres. Water Level :66.5 m

Lowest Observed Discharge = 0.000 cumecs on 30-07-2022 Corres. Water Level :64.57 m

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

Stage-Discharge Data for the period 2022 - 2023

Station Name : VEERALAPALEM (032-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River : Tungapadu

Sub-Division : Lower Krishna SD 1, Miryalguda

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	64.760	5.284	64.860	8.121 *	64.870	8.991	64.830	7.159	64.850	7.433	64.730	5.050
2	64.760	5.885	64.890	8.866	64.850	8.029	64.860	8.234	64.820	7.141 *	64.850	7.336
3	64.770	6.245	64.900	9.579	64.800	6.625	64.870	8.802	64.800	6.116	64.900	9.344
4	64.750	5.354 *	64.860	7.766	64.750	5.784	64.860	8.241	64.780	6.132 *	64.950	10.12
5	64.710	4.280 #	64.860	7.741	64.730	4.823 *	64.850	7.878 *	64.770	5.742	64.900	9.079 *
6	64.670	2.123	64.920	9.988	64.750	5.688	64.800	6.110	64.710	4.038	64.850	7.271
7	64.650	1.910	64.920	9.955	64.750	5.725	64.750	5.782	64.700	4.003 *	64.830	7.388 *
8	64.690	2.795	64.900	9.079 *	64.710	4.756	64.670	3.592	64.680	3.305	64.780	6.423
9	64.680	2.560	64.870	8.170	64.730	4.944	64.650	2.603	64.670	3.148 *	64.730	5.117
10	64.760	5.917	64.870	8.165	64.740	5.203	64.630	1.573	64.680	3.409	64.720	4.725
11	64.760	5.616 *	64.880	8.284	64.820	6.883	64.720	4.756	64.660	2.852	64.700	3.888
12	64.790	6.891	64.900	8.874	64.800	6.640 *	64.730	4.823 *	64.700	3.755	64.700	3.946
13	64.800	7.034	64.900	8.930	64.830	7.385	64.850	7.827	64.680	3.348	64.670	3.111
14	64.790	6.263	64.880	8.007	64.850	7.685	64.860	8.160	64.670	3.148 *	64.670	3.148 *
15	64.740	4.994	64.850	7.878 *	64.880	9.038	64.870	8.742	64.700	3.933	64.660	2.889
16	64.740	4.916	64.860	7.815	64.870	8.526	64.890	9.354	64.710	4.280 *	64.650	2.614
17	64.790	6.311	64.850	7.688	64.890	9.063	65.050	12.03	64.680	3.393	64.650	2.650
18	64.800	6.640 *	64.820	6.911	64.870	8.541	65.000	11.01	64.670	2.997	64.660	2.992
19	64.780	6.216	64.760	5.995	64.850	7.878 *	65.180	19.35 *	64.660	2.752	64.650	2.631
20	64.845	7.808	64.760	6.114	64.750	5.526	64.890	9.239	64.660	2.803	64.670	3.209
21	64.870	8.888	64.745	5.486	64.730	5.063	64.780	5.986	64.670	3.095	64.650	2.552 *
22	64.870	8.973	64.730	4.823 *	64.750	5.692	64.760	5.616 *	64.660	2.853 *	64.640	2.443
23	64.900	9.563	64.720	5.118	64.770	6.047	64.630	1.840	64.650	2.552 *	64.650	2.602
24	64.880	8.778	64.710	4.612	64.810	6.171	64.610	1.659	64.660	2.880	64.640	2.334
25	64.860	8.121 *	64.710	4.112	64.830	7.201	64.630	1.904	64.660	2.792	64.630	2.131
26	64.830	7.523	64.750	5.354 *	64.860	8.121 *	64.650	2.552 *	64.650	2.520	64.630	2.113
27	64.890	9.212	64.750	5.136	64.860	8.225	64.700	3.836	64.650	2.483	64.640	2.379
28	64.910	9.787	64.810	6.344	64.820	6.661	64.770	5.640	64.700	3.829	64.620	1.599 *
29	64.890	9.389	64.830	7.388 *			64.820	6.764	64.710	4.070	64.650	2.670
30	64.880	8.706	64.850	7.192			64.830	7.388 *	64.700	4.003 *	64.660	3.011
31	64.850	7.685	64.870	8.834			64.830	7.023			64.680	3.491
Ten-Daily Mean												
I Ten-Daily	64.720	4.235	64.885	8.743	64.768	6.057	64.777	5.998	64.746	5.047	64.824	7.185
II Ten-Daily	64.783	6.269	64.846	7.650	64.841	7.717	64.904	9.529	64.679	3.326	64.668	3.108
III Ten-Daily	64.875	8.784	64.770	5.854	64.804	6.648	64.728	4.564	64.671	3.108	64.645	2.484
Monthly												
Min.	64.650	1.910	64.710	4.112	64.710	4.756	64.610	1.573	64.650	2.483	64.620	1.599
Max.	64.910	9.787	64.920	9.988	64.890	9.063	65.180	19.35	64.850	7.433	64.950	10.12
Mean	64.796	6.505	64.832	7.365	64.804	6.818	64.801	6.628	64.699	3.827	64.710	4.202

Peak Computed Discharge = 48.96 cumecs on 16-10-2022

Corres. Water Level :65.7 m

Lowest Computed Discharge = 0.945 cumecs on 12-06-2022

Corres. Water Level :64.86 m

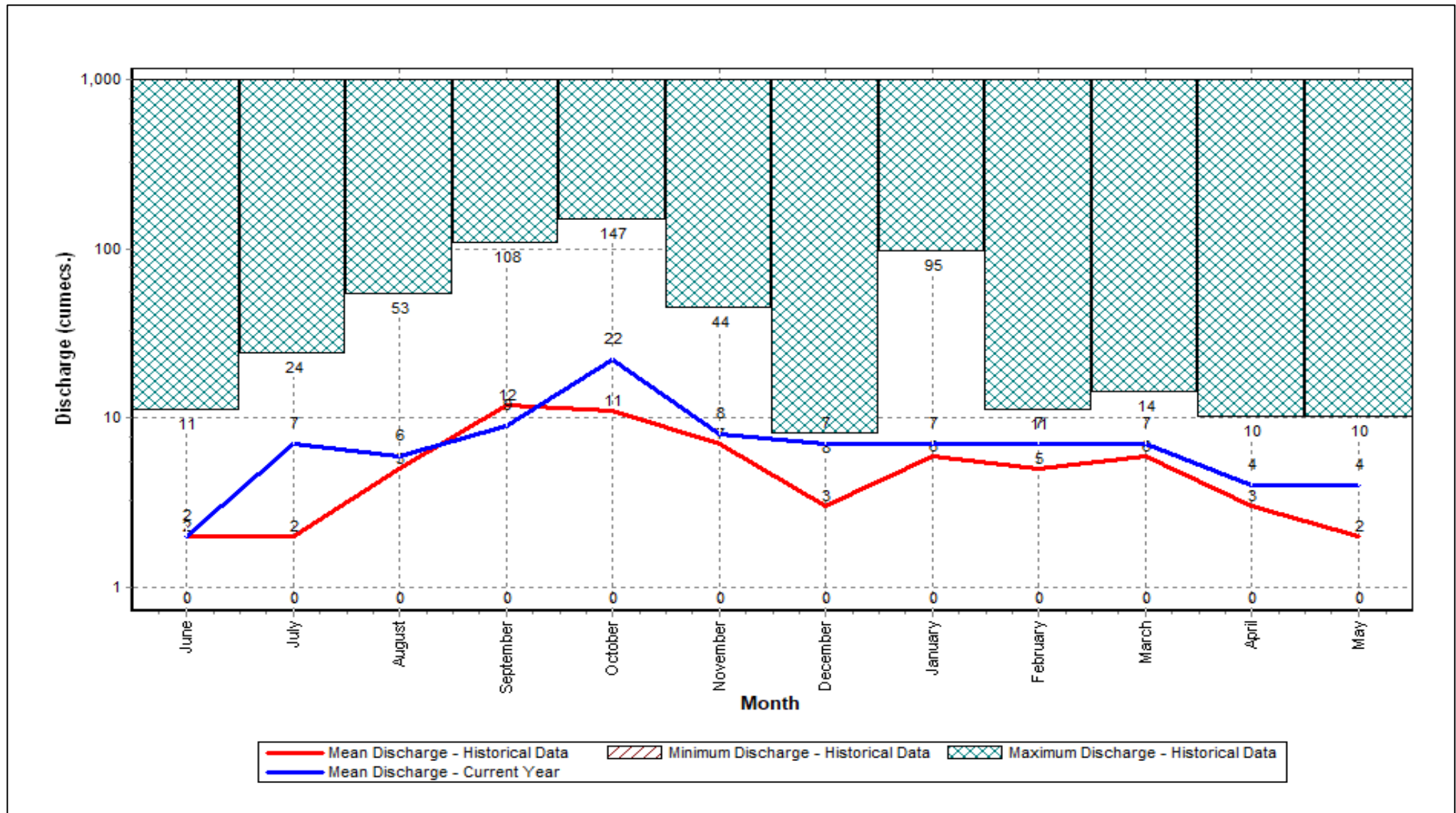
Q : Observed / Computed Discharge WL : Corresponding Water Level(m.s.l)

Station Name : VEERALAPALEM (032-LKDHYD)

Data considered : 2018-2023

Sub-Division : Lower Krishna SD 1, Miryalguda

Local River : Tungapadu

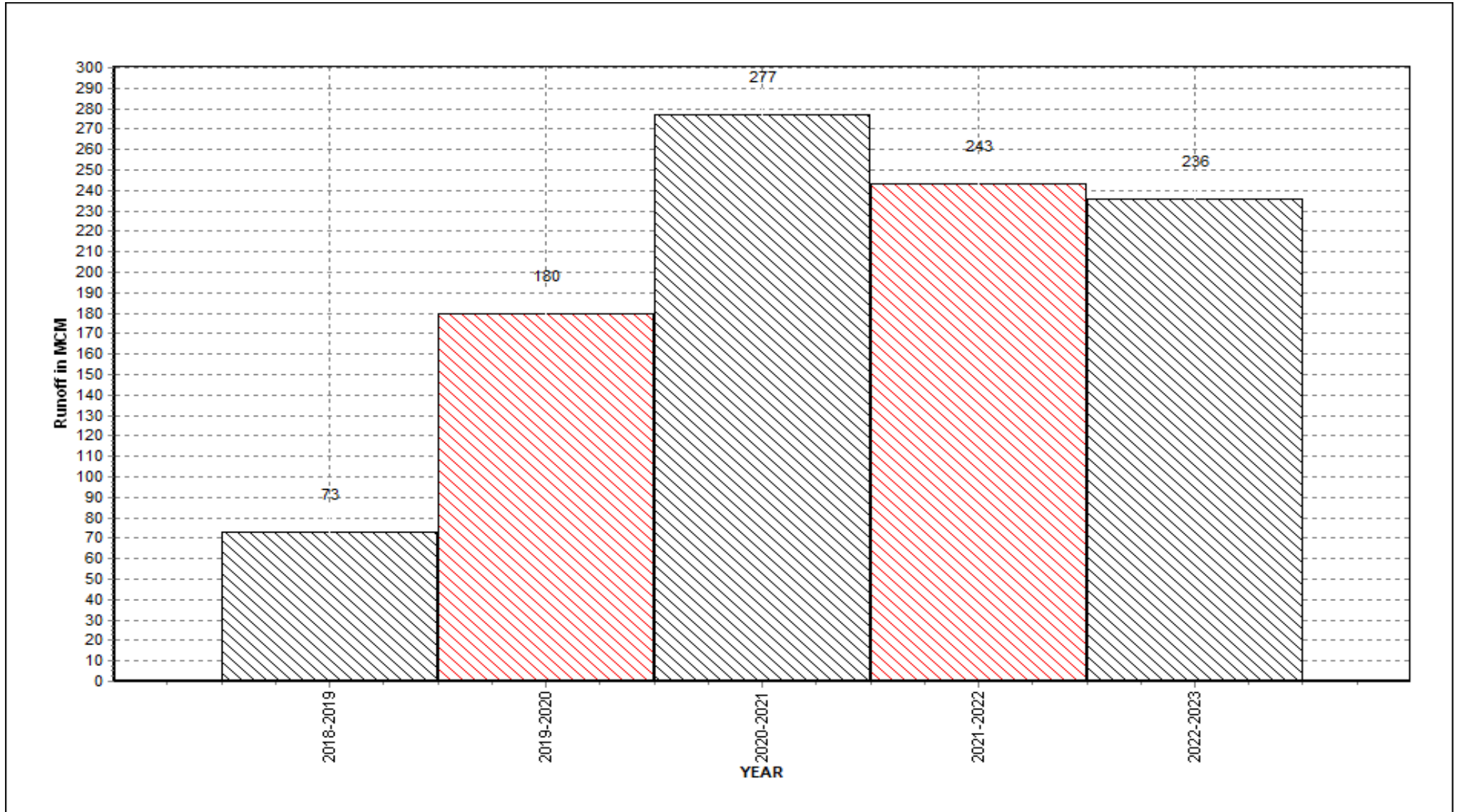


Q : Observed / Computed Discharge WL : Corresponding Water Level(m.s.l)

Station Name : VEERALAPALEM (032-LKDHYD)

Sub-Division : Lower Krishna SD 1, Miryalguda

Local River : Tungapadu

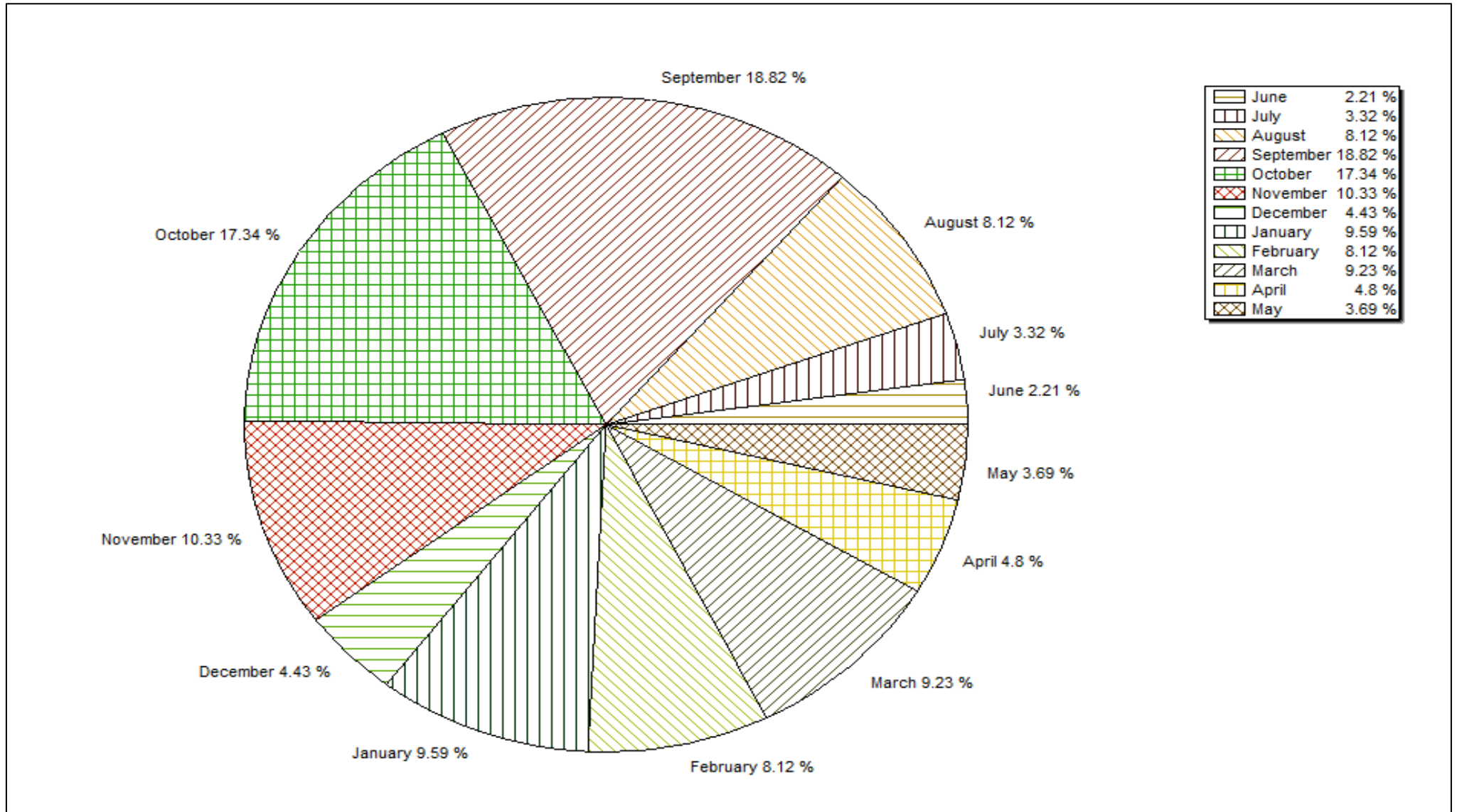


Q : Observed / Computed Discharge WL : Corresponding Water Level(m.s.l)

Station Name : VEERALAPALEM (032-LKDHYD)

Sub-Division : Lower Krishna SD 1,Miryalguda

Local River : Tungapadu

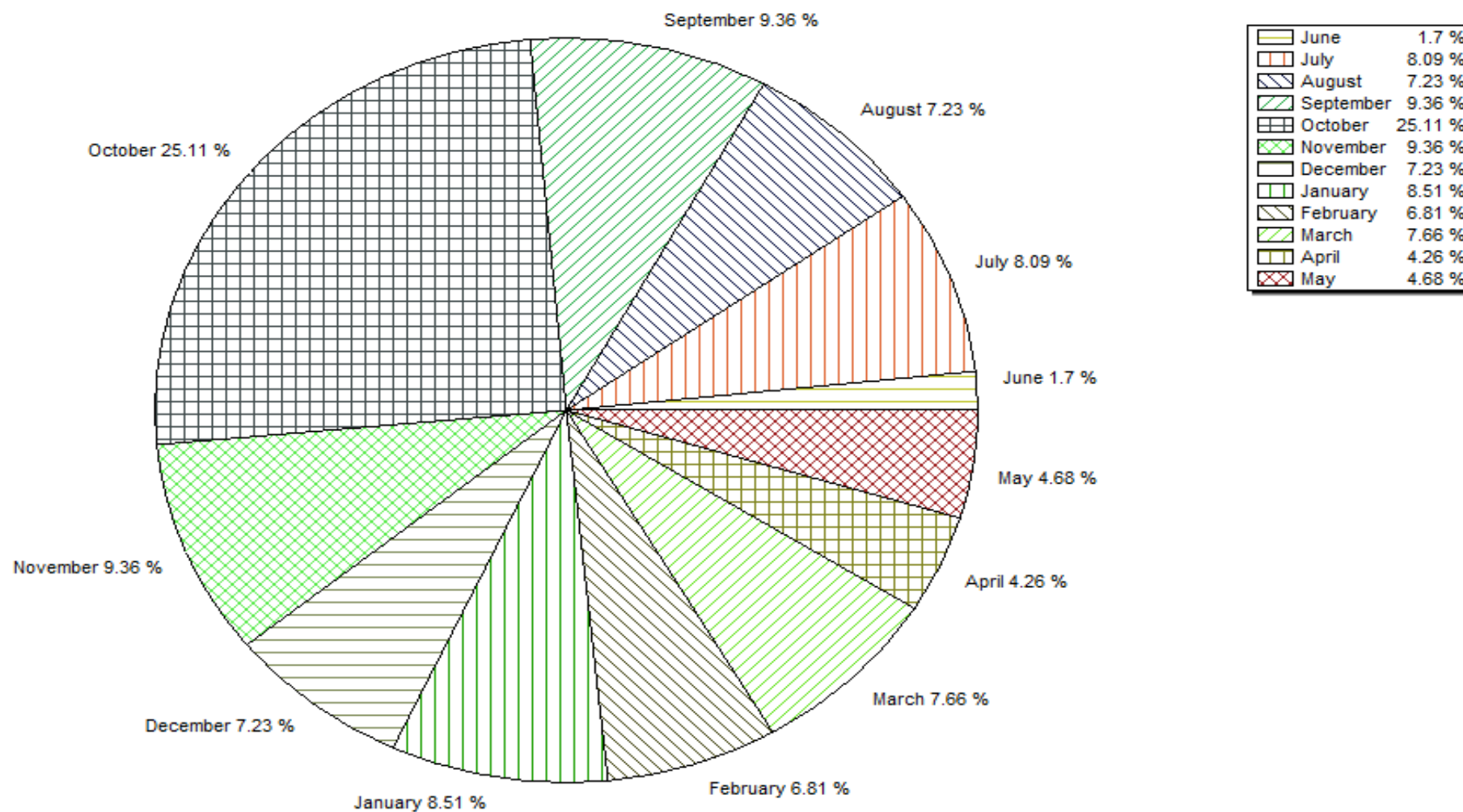


Q : Observed / Computed Discharge WL : Corresponding Water Level(m.s.l)

Station Name : VEERALAPALEM (032-LKDHYD)

Sub-Division : Lower Krishna SD 1, Miryalguda

Local River : Tungapadu



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

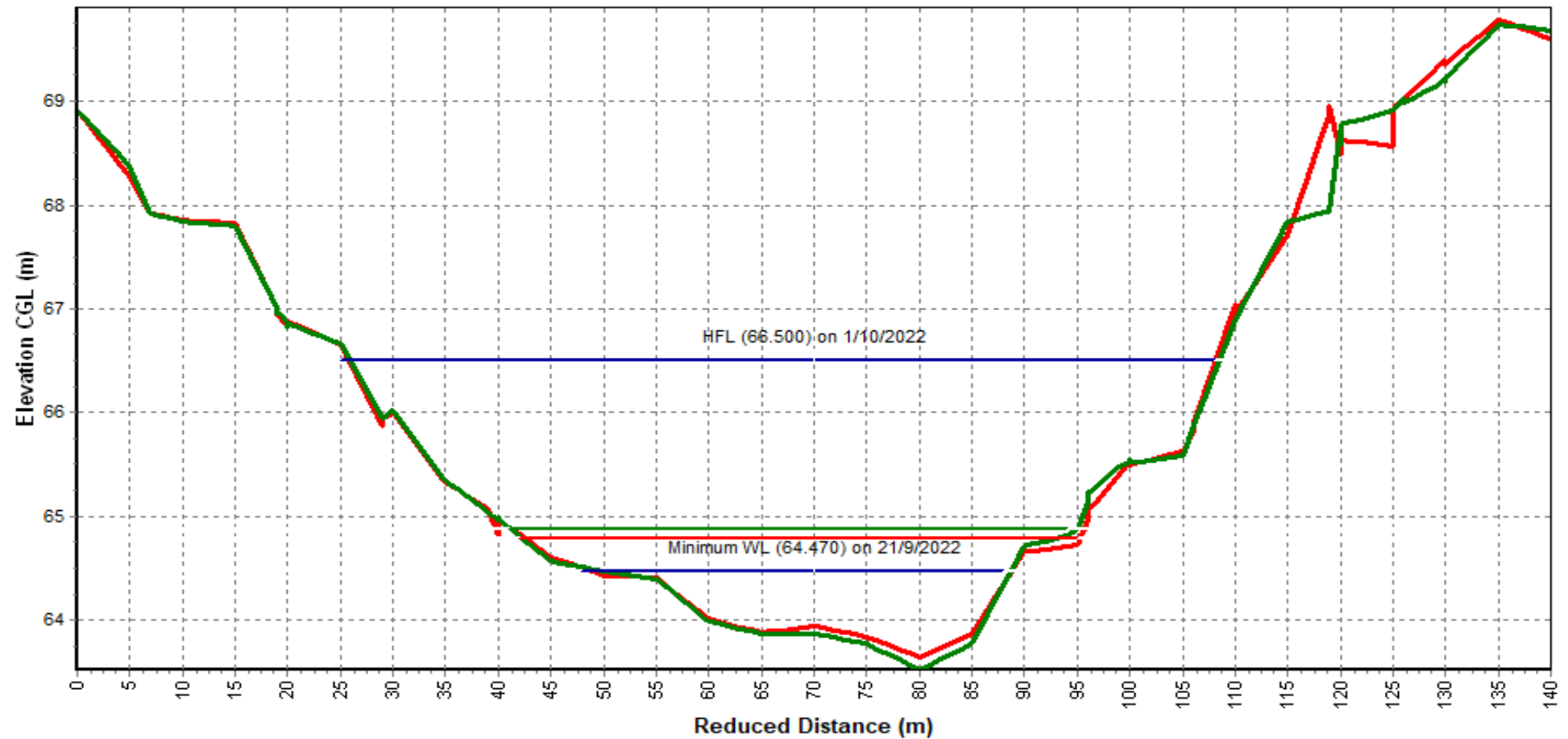
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Veerlapalem (032-LKDHYD)

Local River : Tungapadu

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda

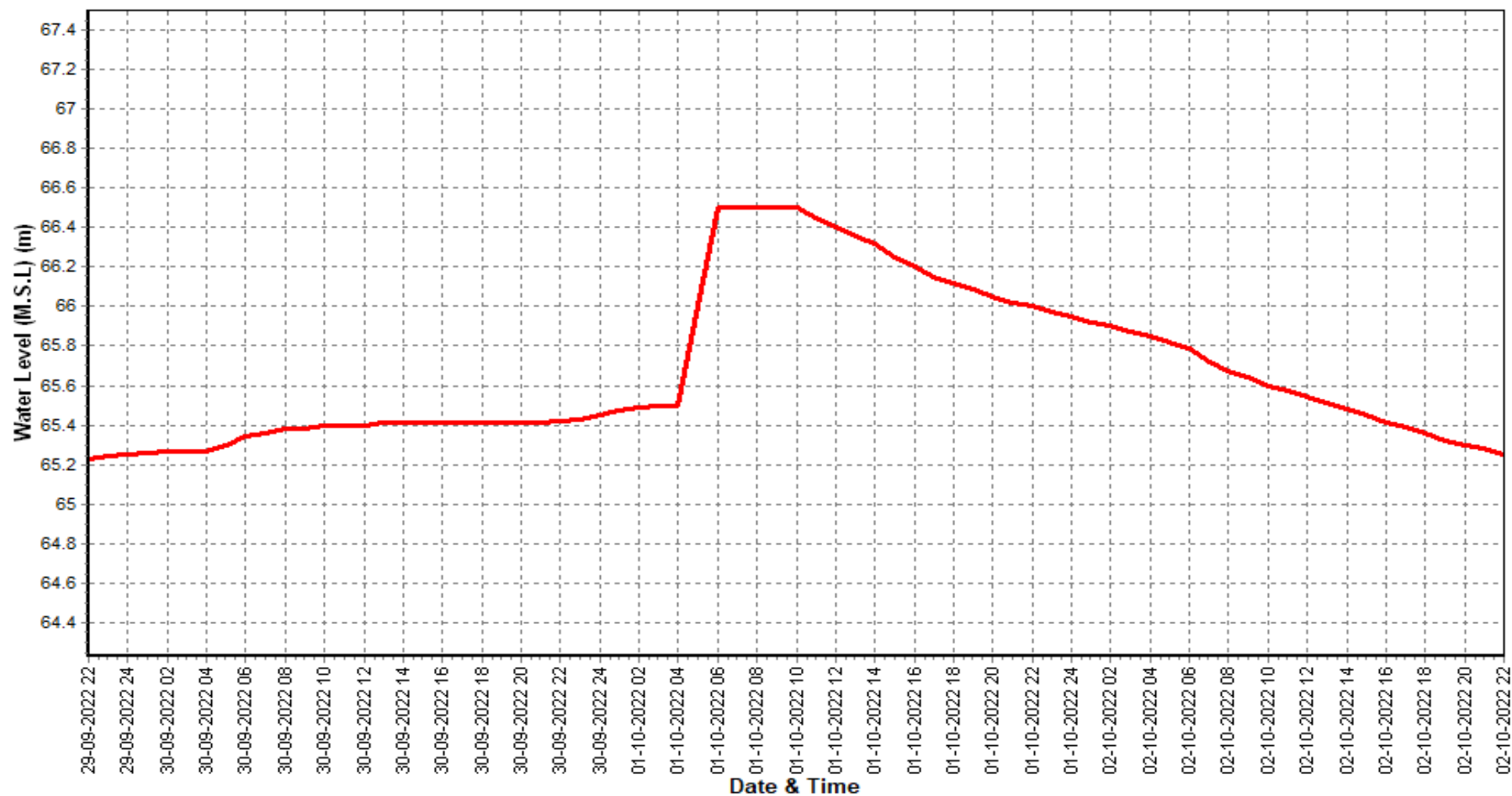


Zero of the Gauge: 63 (m.s.l)

Station Name : VEERALAPALEM (032-LKDHYD)

Sub-Division : Lower Krishna SD 1, Miryalguda

Local River : Tungapadu

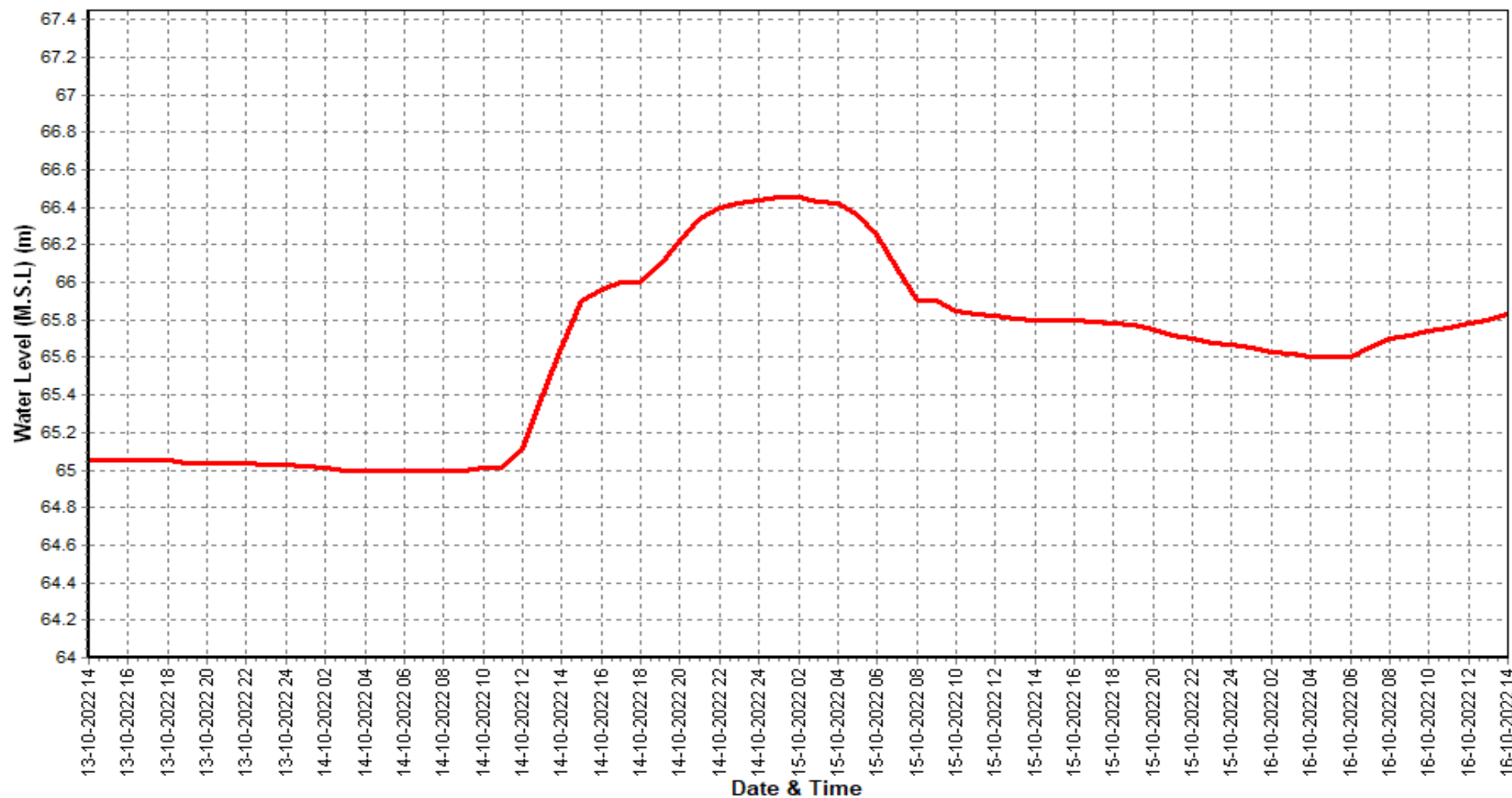


Q : Observed / Computed Discharge WL : Corresponding Water Level(m.s.l)

Station Name : VEERALAPALEM (032-LKDHYD)

Sub-Division : Lower Krishna SD 1, Miryalguda

Local River : Tungapadu

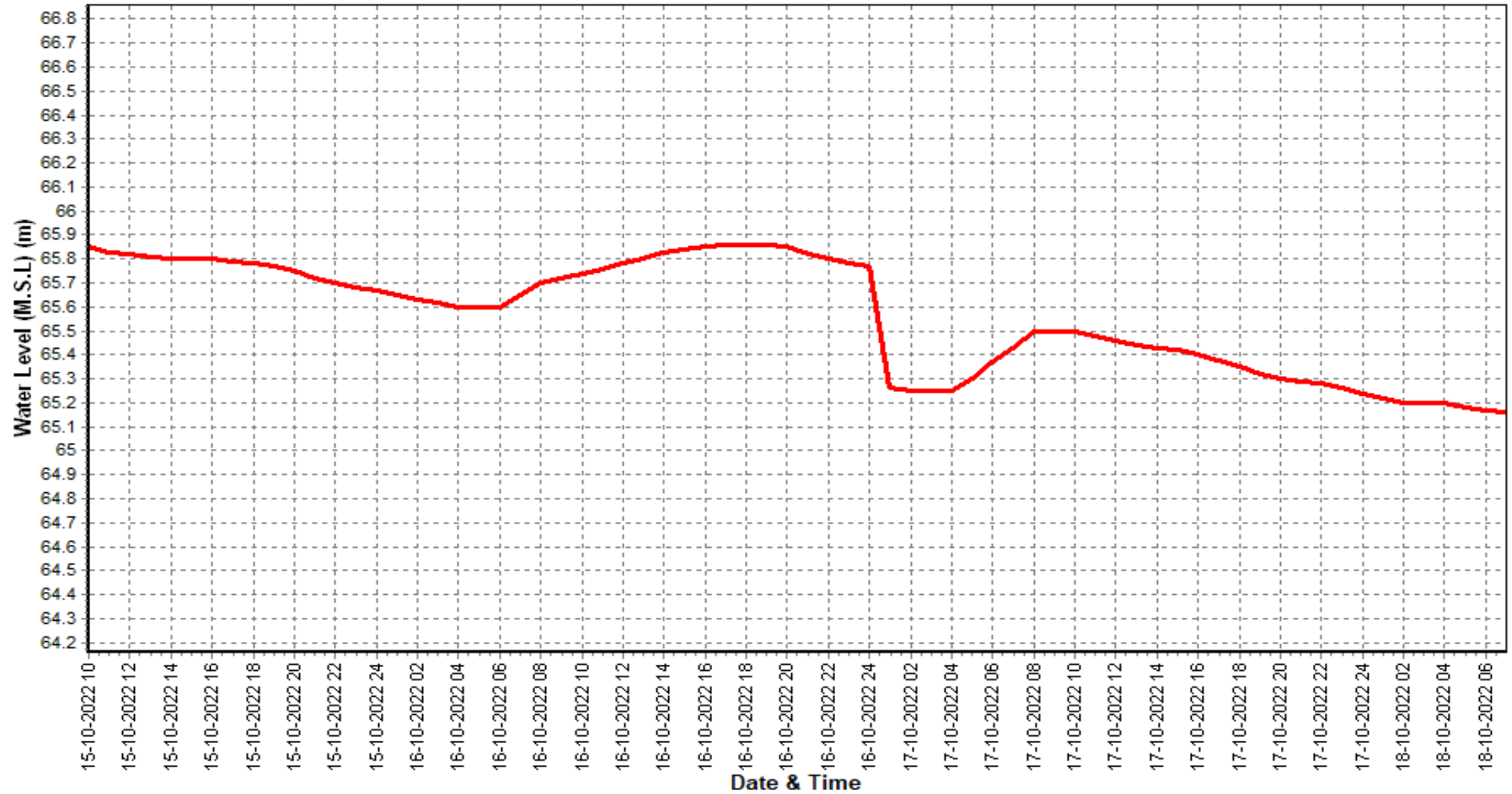


Q : Observed / Computed Discharge WL : Corresponding Water Level(m.s.l)

Station Name : VEERALAPALEM (032-LKDHYD)

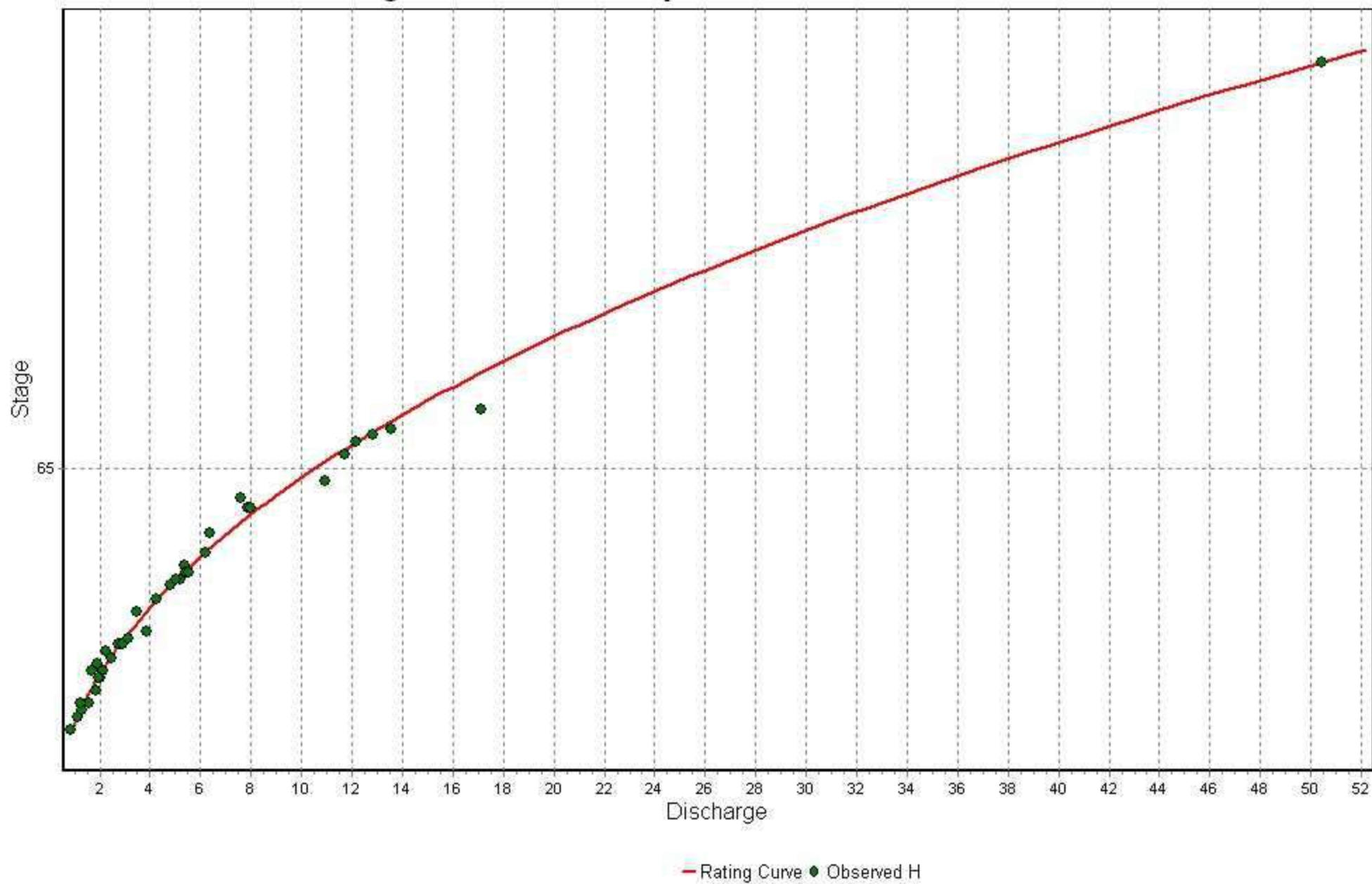
Sub-Division : Lower Krishna SD 1, Miryalguda

Local River : Tungapadu



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

Rating Curve of Site Veerlapalem 01/07/2022 to 31/08/2022



HISTORY SHEET

Water Year : 2022-2023

Site : Anantharam

Code : 034-LKDHYD

State : Andhra Pradesh

District : Nalgonda

Basin : Krishna

Independent River : Krishna

Tributary : Musi

Sub Tributary : Aleru

Sub-Sub Tributary :

Local River : Aleru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda

Drainage Area : 2448.4 Sq. Km.

Bank :

Latitude : 17°26'05"

Longitude : 79°24'43"

Zero of Gauge (m) : 96 (m.s.l)
226.5 (m.s.l)01-03-2017 - 11-04-2019
12-04-2019

Opening Date

Closing Date

Gauge : 26-10-2016

HFL During 2022-23 : 230.500m

Corres. Discharge : 1035 (Observed)

Discharge : 26-10-2016

Date & Time of
occurrence : 24-07-2022
: 08:00 Hrs

HFL Recorded so far in m :230.500 dt 23-07-2022

Corresponding Discharge (cumecs) : 1035

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2018-2019	0.000		09-02-2019	0.000		27-06-2018
2019-2020	0.000		09-11-2019	0.000		25-01-2020
2020-2021	808.1	230.155	14-10-2020	0.000		07-05-2021
2021-2022	80.39	229.180	31-08-2021	0.000		21-05-2022

Annual Runoff of Aleru at Anantharam

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2020-2021	344	0	344	12	0	12
2	2021-2022	166	0	166	6	0	6
3	2022-2023	358	0	358	13	0	13
Average		289	0	289	10	0	10

Instantaneous Flood Peak of Aleru at Anantharam

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2020-2021	230.210	14-10-2020	12:00:00	820 *
2	2021-2022	229.180	31-08-2021	08:00:00	80
3	2022-2023	230.500	24-07-2022	08:00:00	1035

Stage-Discharge Data for the period 2022 - 2023

Station Name : Anantharam (034-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River : Aleru

Sub-Division : Lower Krishna SD 1, Miryalguda

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	Dry Bed	0.000	Dry Bed	0.000	228.100	17.05	228.250	52.55	228.700	80.79	228.070	11.49
2		0.000		0.000	228.300	63.59	228.220	50.84	228.490	51.05 *	228.040	10.55
3		0.000		0.000	228.275	57.63	228.190	30.65	228.170	26.08	228.000	8.261
4		0.000		0.000	228.570	54.21	228.160	25.26 *	228.040	10.98	227.970	4.878
5		0.000		0.000	228.700	85.11	228.095	14.61	228.020	10.25 *	227.940	0.000
6		0.000		0.000	228.700	83.44	227.980	6.262	228.000	9.436	227.900	0.000
7		0.000		0.000	228.700	84.25 *	227.935	8.203	228.000	9.547	227.860	0.000
8		0.000		0.000	229.100	191.4	228.350	69.84	228.000	9.198	227.830	0.000
9		0.000		0.000	228.880	131.3 *	228.700	85.11	227.990	9.000 *	227.820	0.000
10		0.000		0.000	228.440	42.14	228.700	85.11	227.980	8.702	227.820	0.000
11		0.000		0.000	228.330	63.36	228.700	85.10 *	228.030	12.72	227.810	0.000
12		0.000		0.000	228.260	52.94	228.700	85.11	228.140	26.76	227.810	0.000
13	Dry Bed	0.000	227.550	0.000	228.180	31.37	228.570	54.21	228.170	29.86	227.810	0.000
14		0.000	227.700	12.08	228.170	28.12 *	228.440	42.14	228.140	26.10	227.810	0.000
15		0.000	227.640	8.447	228.170	28.12 *	228.330	53.52	228.070	13.35	227.800	0.000
16		0.000	227.580	3.989	228.170	27.74	228.330	60.94	228.030	12.50 *	227.800	0.000
17		0.000	227.510	0.000	228.120	22.12	228.260	50.26	228.020	12.70	227.800	0.000
18		0.000	227.510	0.000	228.070	12.92	228.200	48.52 *	228.010	11.56	227.790	0.000
19		0.000	227.490	0.000	228.020	10.86	228.150	27.43	228.010	11.43	227.790	0.000
20		0.000	227.490	0.000	228.000	8.784	228.110	22.69	228.030	13.28	227.790	0.000
21		0.000	227.490	0.000	227.880	0.000	228.100	21.36	228.120	26.46	227.790	0.000
22		0.000	227.490	0.000	227.820	0.000	228.100	21.48	228.200	56.86	227.790	0.000
23		0.000	230.500	1035	227.800	0.000	228.090	14.87	228.250	60.12 *	227.790	0.000
24		0.000	229.880	260.3 *	227.790	0.000	228.050	12.11	228.250	60.12 *	227.790	0.000
25		0.000	228.380	70.09 #	227.790	0.000	228.020	10.25 *	228.240	58.98	227.790	0.000
26		0.000	228.330	66.89	227.790	0.000	227.980	7.417	228.240	56.92	227.790	0.000
27		0.000	228.255	55.60	227.790	0.000	227.950	6.642	228.210	53.48	227.790	0.000
28		0.000	228.190	31.70	227.820	0.000	227.910	4.639	228.180	33.85	227.790	0.000
29		0.000	228.150	33.47	227.810	0.000	228.120	24.53	228.150	29.82	227.790	0.000
30		0.000	228.120	23.35	227.810	0.000	228.570	52.49	228.130	16.25 *	227.790	0.000
31			228.110	22.35 *	227.810	0.000			228.100	21.86		
Ten-Daily Mean												
I Ten-Daily		0.000		0.000	228.576	81.01	228.258	42.84	228.139	22.50	227.925	3.518
II Ten-Daily		0.000	227.559	2.452	228.149	28.63	228.379	52.99	228.065	17.03	227.801	0.000
III Ten-Daily		0.000	228.445	145.3	227.810	0.000	228.089	17.58	228.188	43.16	227.790	0.000
Monthly												
Min.		0.000	227.490	0.000	227.790	0.000	227.910	4.639	227.980	8.702	227.790	0.000
Max.		0.000	230.500	1035	229.100	191.4	228.700	85.11	228.700	80.79	228.070	11.49
Mean		0	228.072	52.36	228.167	35.37	228.242	37.8	228.133	28.07	227.839	1.173

Annual Runoff in MCM = 411 Annual Runoff in mm = 168

Peak Observed Discharge = 1035 cumecs on 23-07-2022 Corres. Water Level :230.5 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022

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 2022 - 2023

Station Name : Anantharam (034-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River : Aleru

Sub-Division : Lower Krishna SD 1, Miryalguda

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	Dry Bed											
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
<u>Ten-Daily Mean</u>												
I Ten-Daily												
II Ten-Daily												
III Ten-Daily												
<u>Monthly</u>												
Min.												
Max.												
Mean												

Peak Computed Discharge = 260.3 cumecs on 24-07-2022

Corres. Water Level :229.88 m

Lowest Computed Discharge = 9.000 cumecs on 09-10-2022

Corres. Water Level :227.99 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

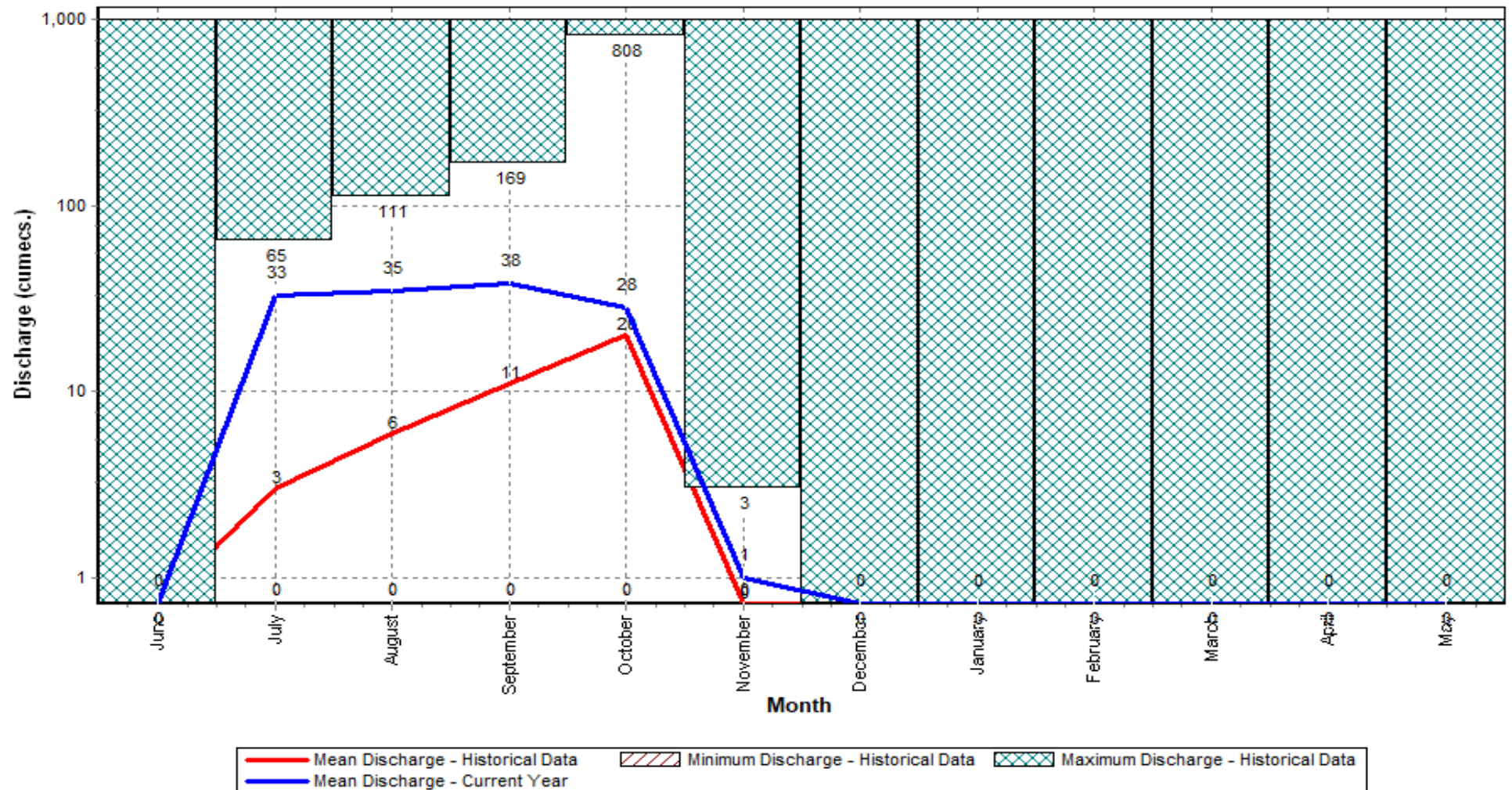
Station Name : Anantharam (034-LKDHYD)

Data considered : 2018-2023

Divn : Lower Krishna Divn., Hyderabad

Local River : Aleru

Sub-Divn : Lower Krishna SD 1, Miryalguda



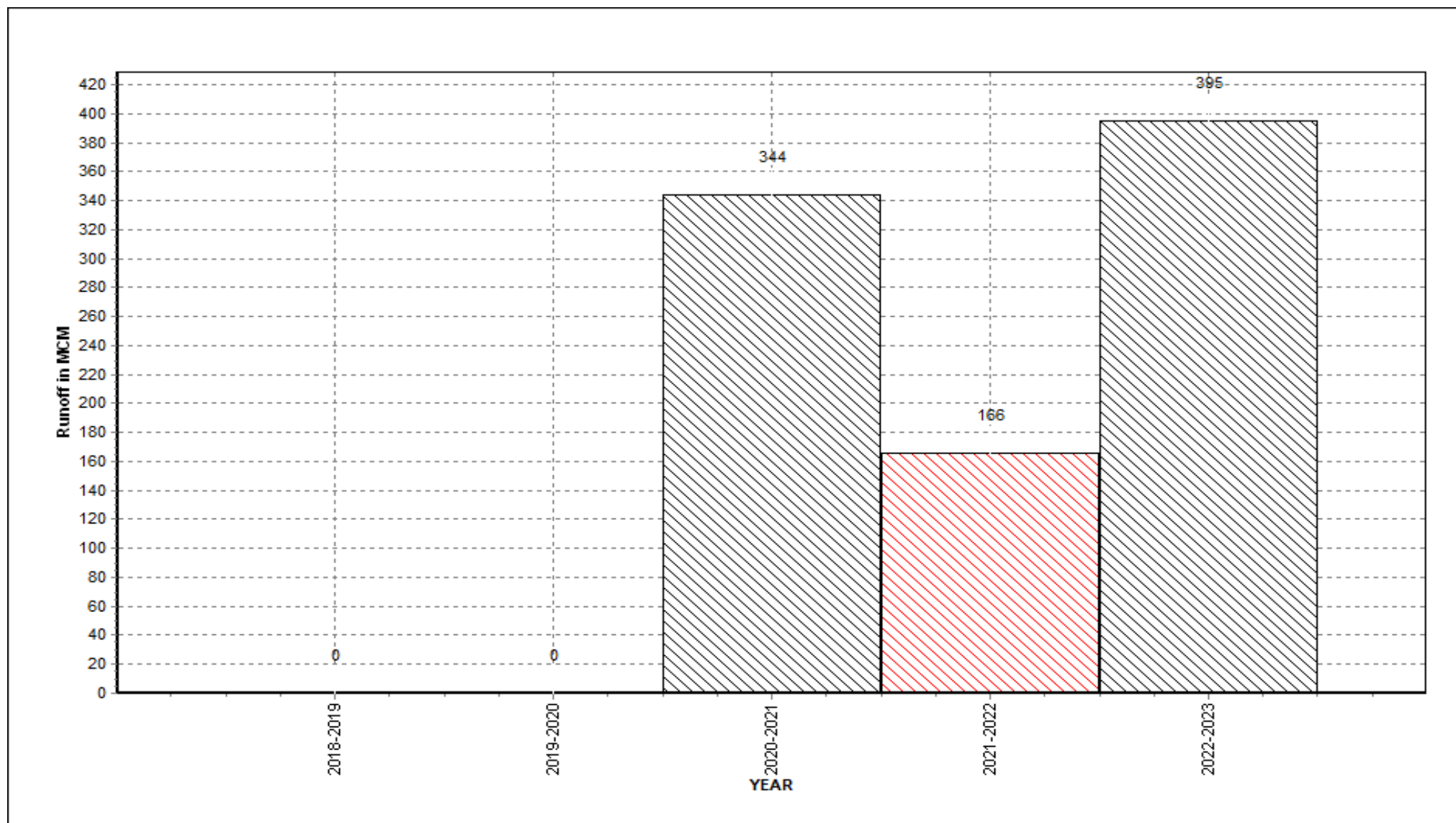
Annual Runoff Values for the period: 2018 - 2023

Station Name : Anantharam (034-LKDHYD)

Local River : Aleru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1,Miryalguda



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

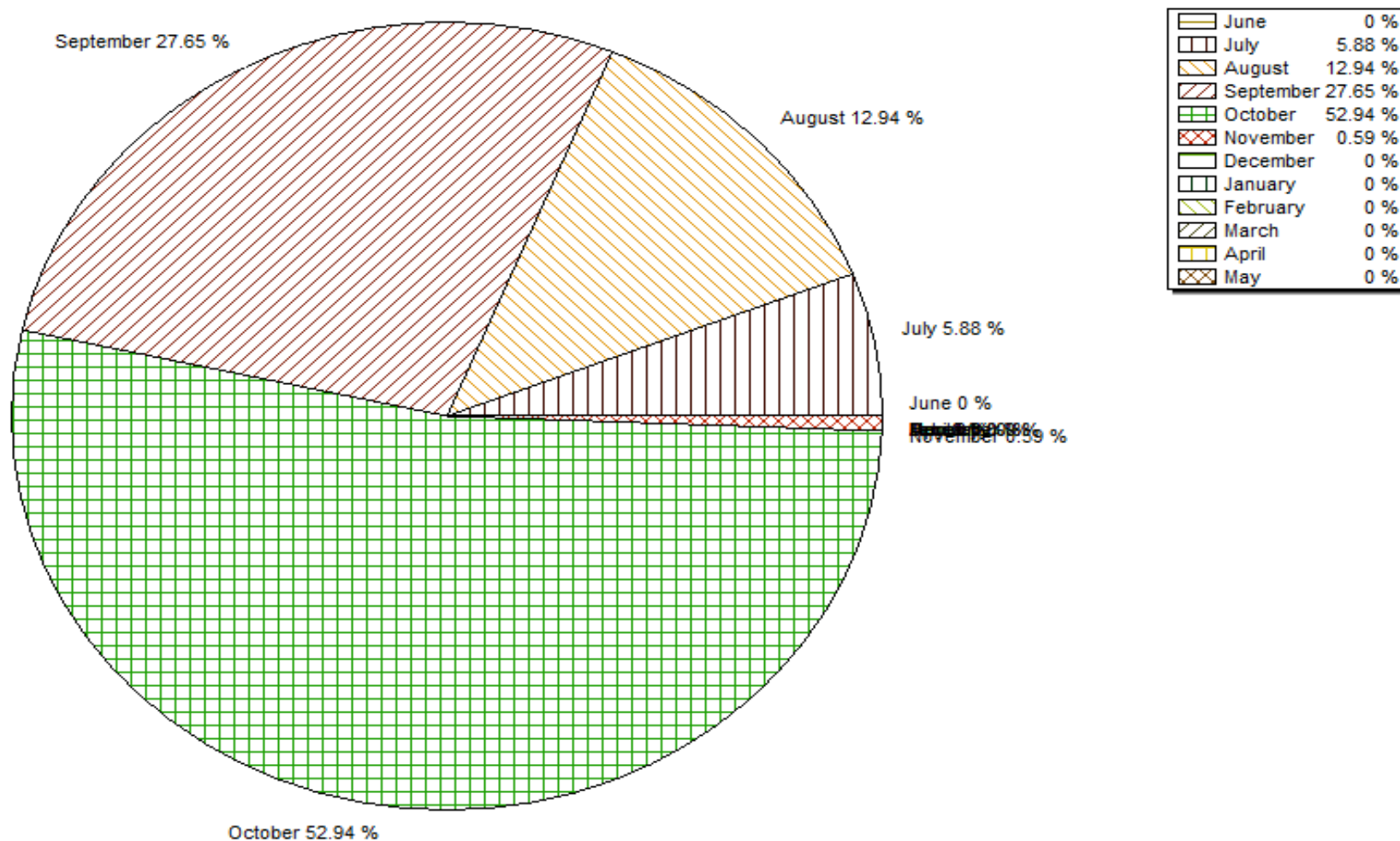
Monthly Average Runoff based on period : 2018-2022

Station Name : Anantharam (034-LKDHYD)

Local River : Aleru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1,Miryalguda



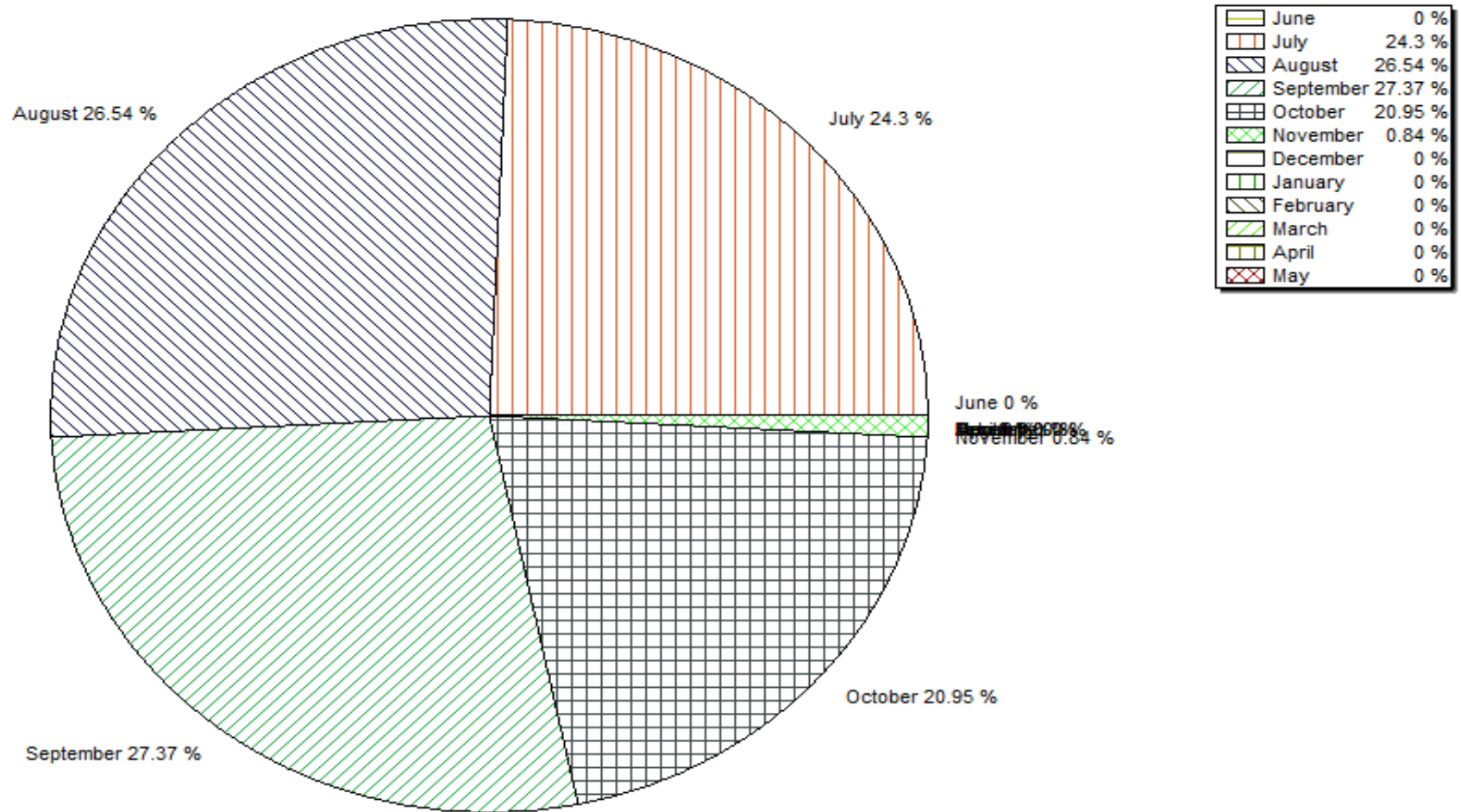
Monthly Runoff for the Year : 2022-2023

Station Name : Anantharam (034-LKDHYD)

Local River : Aleru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda



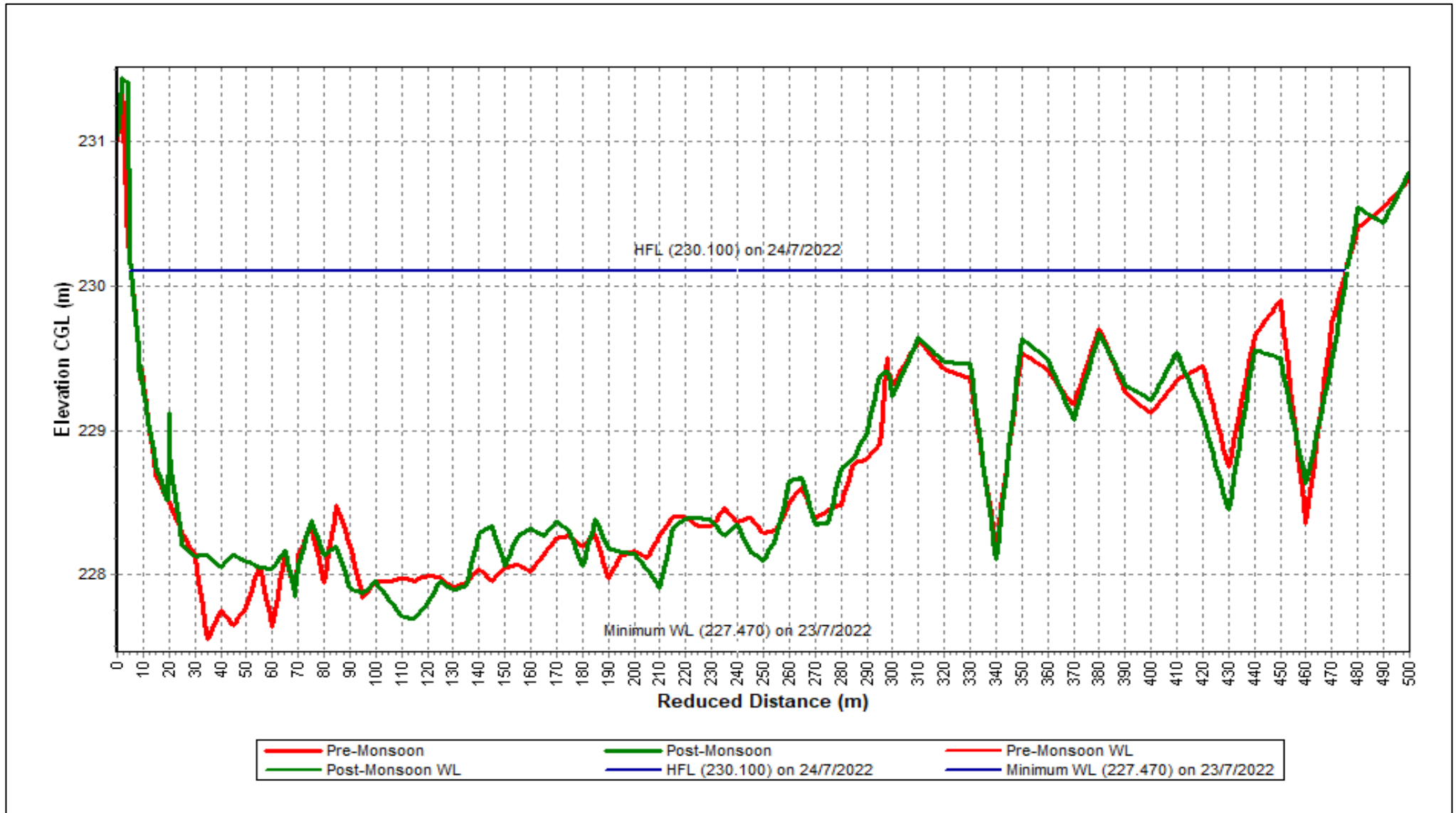
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Anantharam (034-LKDHYD)

Local River : Aleru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda



Note : X-Section Defferance due to Sand Erosion.

Zero of the Gauge: 226.5 (m.s.l)

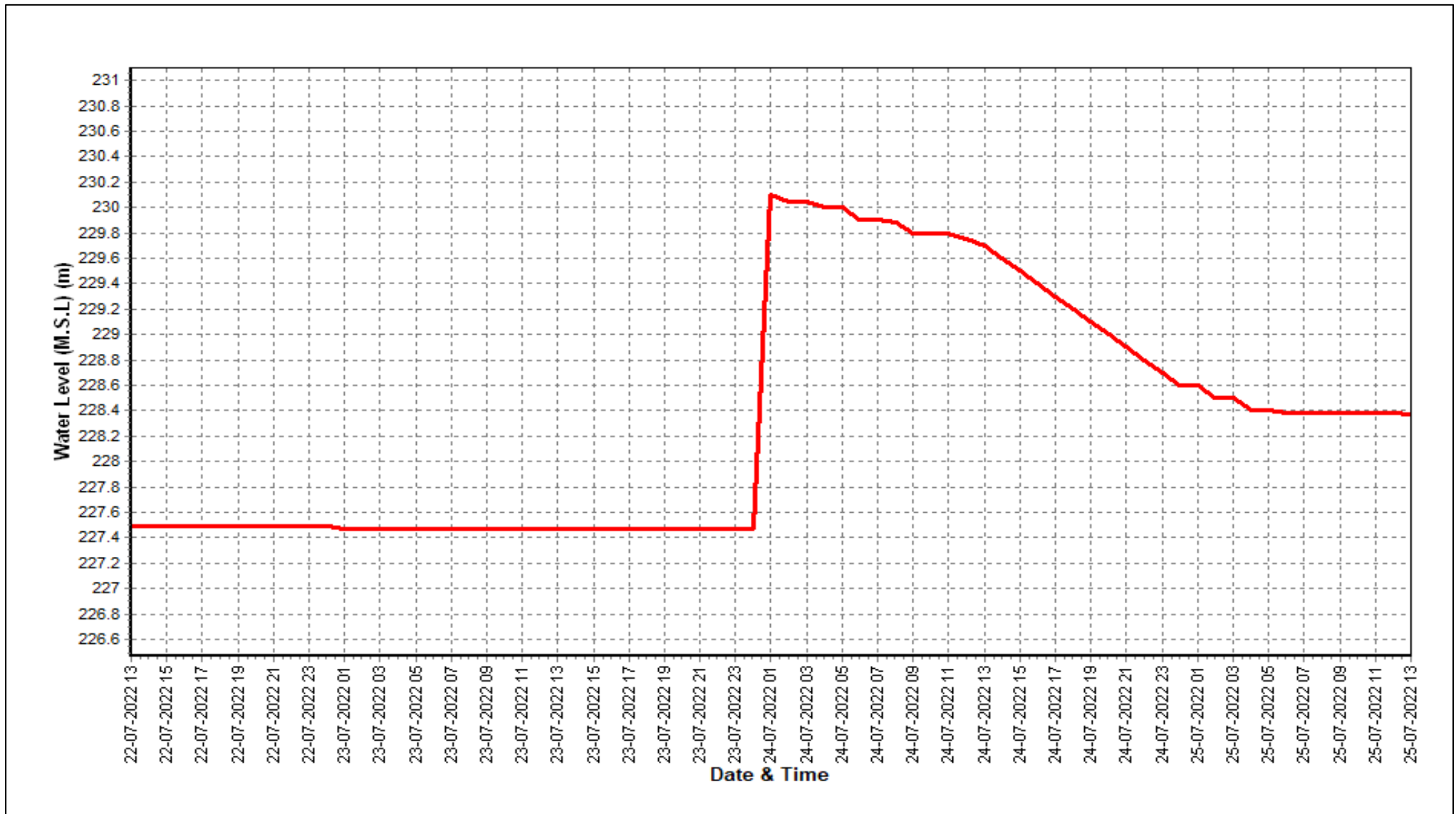
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Anantharam (034-LKDHYD)

Local River : Aleru

Division : Lower Krishna Divn., Hyderabad

Sub-Divn : Lower Krishna SD 1,Miryalguda



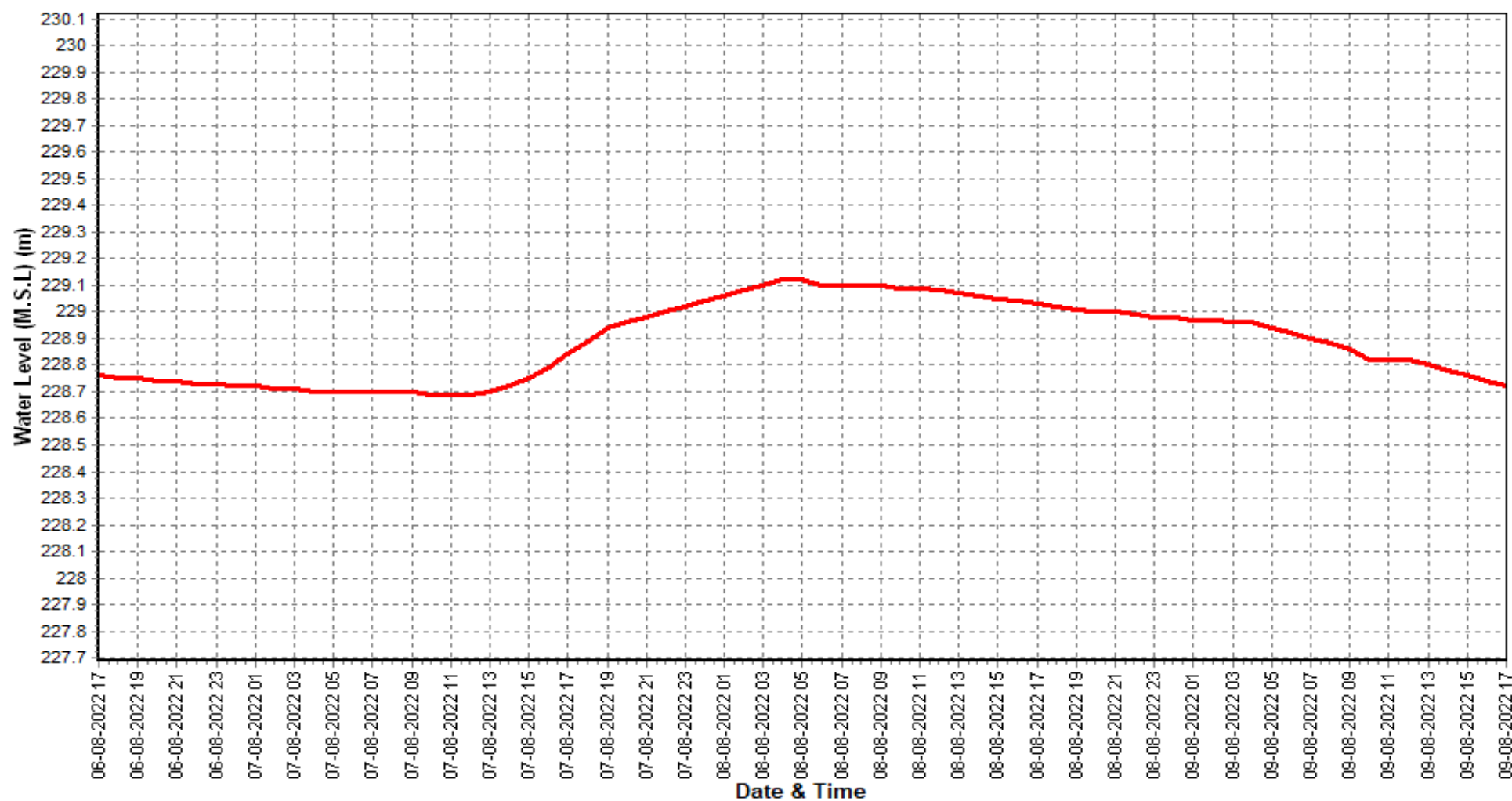
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Anantharam (034-LKDHYD)

Local River : Aleru

Divn : Lower Krishna Divn., Hyderabad

Sub-Divn : Lower Krishna SD 1,Miryalguda



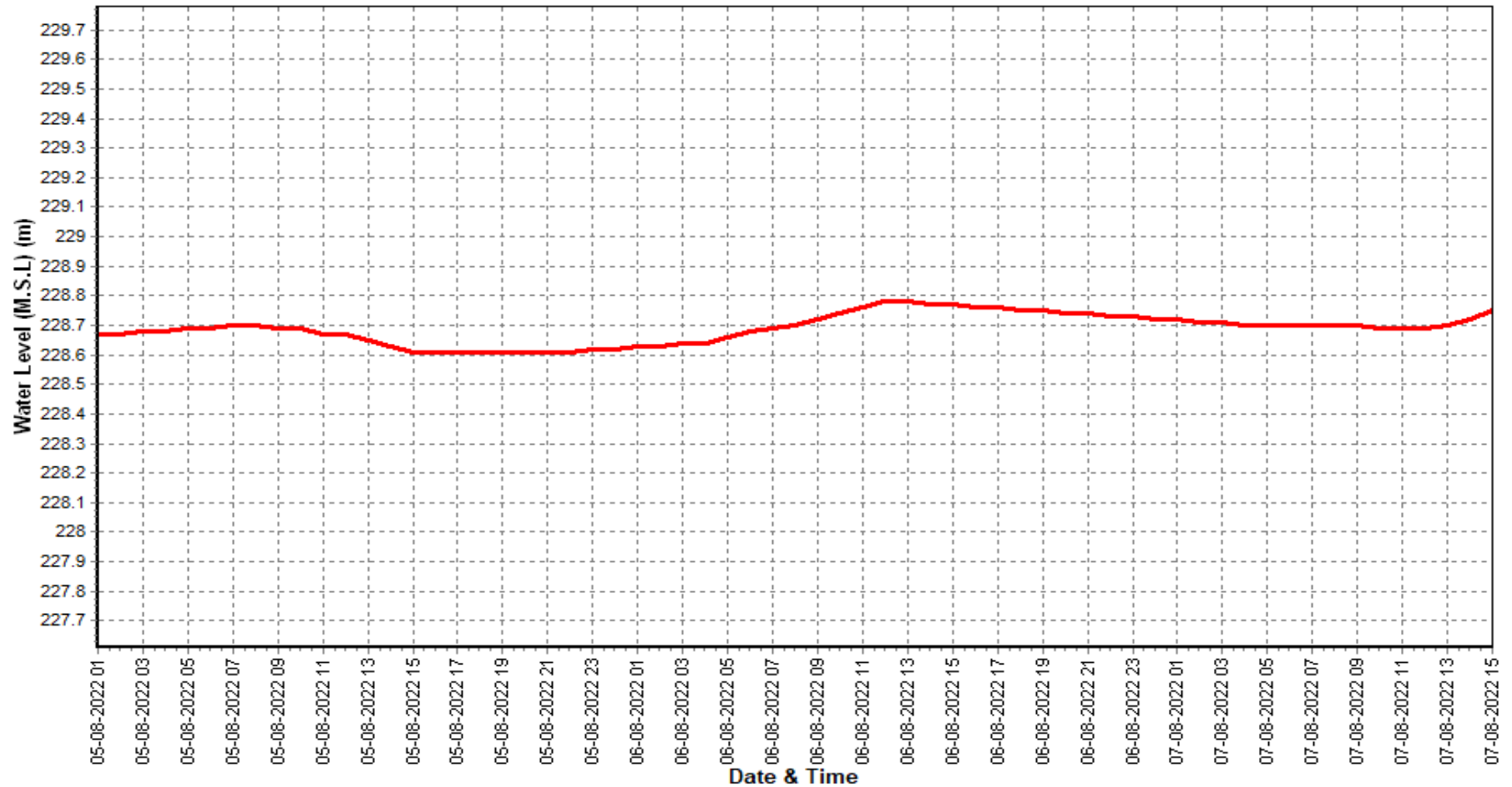
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Anantharam (034-LKDHYD)

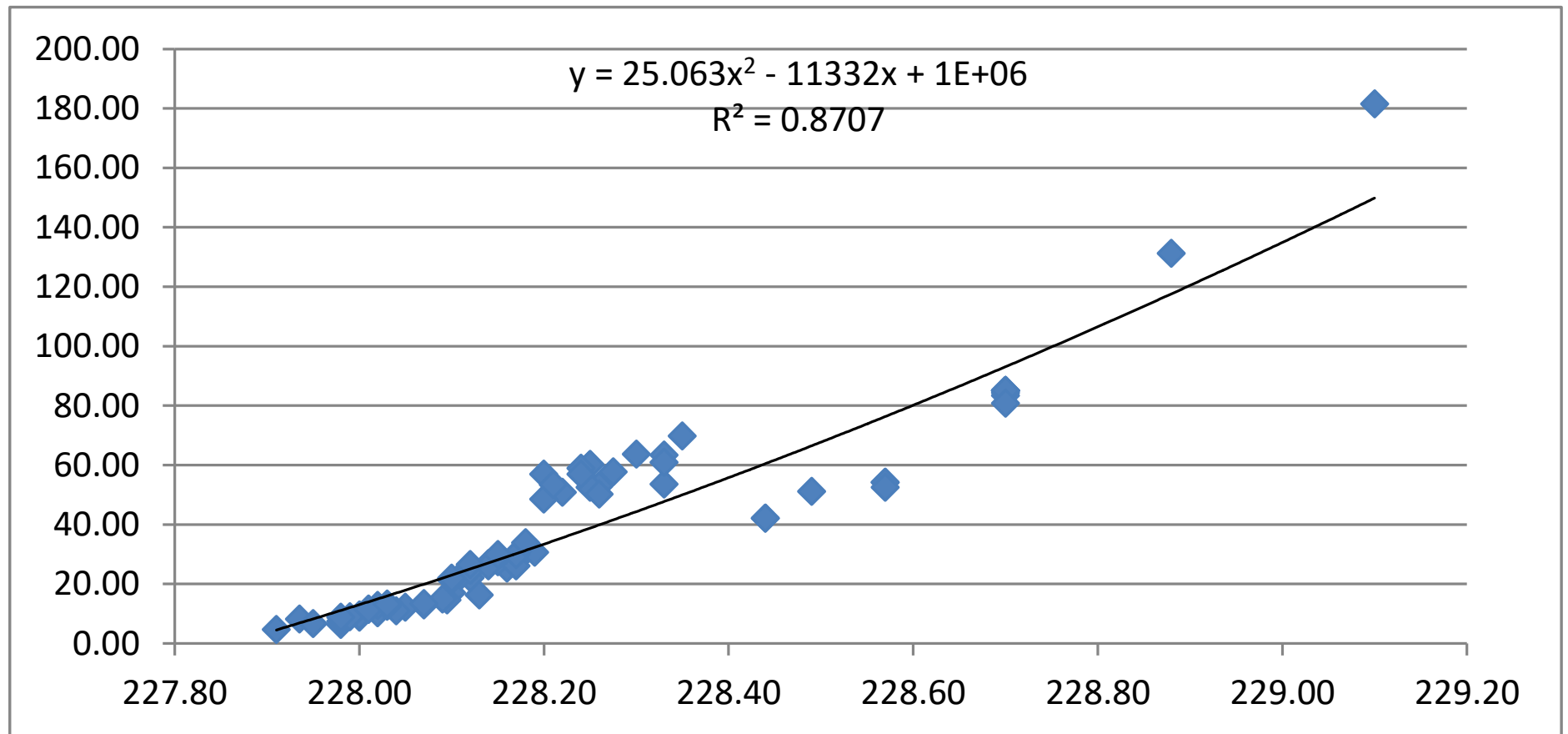
Local River : Aleru

Divn : Lower Krishna Divn., Hyderabad

Sub-Divn : Lower Krishna SD 1,Miryalguda



Anantaram 2022-23



HISTORY SHEET

Water Year : 2022-2023

Site : DAMERCHERLA

Code : AKF00A7

State : Andhra Pradesh

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, Miryalguda

Drainage Area : 11501 Sq. Km.

Bank :

Latitude : 16°44'21"

Longitude : 79°40'11"

Zero of Gauge (m) : 56 (m.s.l.)

01-06-1968 - 31-05-1972

55 (m.s.l.)

01-06-1972 - 31-05-2010

53 (m.s.l.)

01-06-2010

Opening Date

Closing Date

Gauge : 21-07-1968

HFL During 2022-23 : 59.060 m

Corres. Discharge : 1094 (Estimated)

Discharge : 27-07-1968

Date & Time of

occurrence : 01-10-2022

Sediment : 01-09-2013

06:00 Hrs

Water Quality : 01-01-1980

HFL Recorded so far in m : 62.500 dt 05-10-2009

Corresponding Discharge (cumecs) : 4283 *

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1969-1970	615.0	57.575	06-09-1969	1.000	56.080	31-05-1970
1970-1971	1550	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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	2200	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	54.750	06-02-2013
2013-2014	2510	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		31-03-2016
2016-2017	1563	58.050	23-09-2016	0.000	54.460	10-08-2016
2017-2018	583.5	57.200	04-10-2017	0.000	54.640	15-06-2017
2018-2019	343.9	56.350	21-08-2018	0.000	54.710	23-06-2018
2019-2020	602.4	57.200	07-10-2019	0.000	54.710	30-06-2019
2020-2021	3494	61.650	14-10-2020	0.000	54.630	09-08-2020
2021-2022	1628	59.080	29-09-2021	1.810	55.040	03-06-2021

Annual Runoff of Musi at Dameracherla

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1968-1969	729	756	1485	26	27	52
2	1969-1970	937	670	1606	33	24	57
3	1970-1971	1262	331	1593	45	12	56
4	1971-1972	568	206	774	20	7	27
5	1972-1973	311	170	481	11	6	17
6	1973-1974	527	270	798	19	10	28
7	1974-1975	548	344	892	19	12	32
8	1975-1976	3009	390	3398	106	14	120
9	1976-1977	983	149	1132	35	5	40
10	1977-1978	375	190	565	13	7	20
11	1978-1979	1430	255	1685	51	9	60
12	1979-1980	481	278	758	17	10	27
13	1980-1981	521	40	561	18	1	20
14	1981-1982	706	37	744	25	1	26
15	1982-1983	481	90	571	17	3	20
16	1983-1984	1814	265	2079	64	9	73
17	1984-1985	379	281	660	13	10	23
18	1985-1986	559	91	651	20	3	23
19	1986-1987	485	119	604	17	4	21
20	1987-1988	422	126	548	15	4	19
21	1988-1989	1504	206	1710	53	7	60
22	1989-1990	1375	327	1702	49	12	60
23	1990-1991	736	278	1015	26	10	36
24	1991-1992	739	225	964	26	8	34
25	1992-1993	410	345	756	14	12	27
26	1993-1994	423	272	695	15	10	25
27	1994-1995	584	325	908	21	11	32
28	1995-1996	684	128	812	24	5	29
29	1996-1997	707	352	1059	25	12	37
30	1997-1998	383	117	500	14	4	18
31	1998-1999	1146	339	1484	40	12	52
32	1999-2000	473	171	644	17	6	23
33	2000-2001	765	266	1031	27	9	36
34	2001-2002	387	151	538	14	5	19
35	2002-2003	8	7	15	0	0	1
36	2003-2004	40	0	40	1	0	1
37	2004-2005	247	244	491	9	9	17
38	2005-2006	1146	399	1545	41	14	55
39	2006-2007	978	510	1488	35	18	53
40	2007-2008	1218	636	1854	43	22	66
41	2008-2009	1512	586	2098	53	21	74
42	2009-2010	1212	494	1706	43	17	60
43	2010-2011	1047	597	1644	37	21	58
44	2011-2012	624	119	743	22	4	26
45	2012-2013	89	48	137	3	2	5
46	2013-2014	1924	244	2168	68	9	77
47	2014-2015	447	257	704	16	9	25

48	2015-2016	145	4	149	5	0	5
49	2016-2017	1028	64	1093	36	2	39
50	2017-2018	665	207	872	24	7	31
51	2018-2019	281	66	347	10	2	12
52	2019-2020	707	253	960	25	9	34
53	2020-2021	2628	292	2919	93	10	103
54	2021-2022	2578	410	2988	91	14	106
55	2022-2023	3028	278	3306	107	10	117
Average		880	260	1139	27	9	36

Instantaneous Flood Peak of Musi at Damarcherla

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1968-1969	57.990	08-09-1968	08:00:00	917 *
2	1969-1970	57.575	06-09-1969	08:00:00	709 *
3	1970-1971	59.260	23-09-1970	14:00:00	1662 *
4	1971-1972	58.300	03-10-1971	01:00:00	1084 *
5	1972-1973	57.195	06-10-1972	14:00:00	532 *
6	1973-1974	57.300	13-08-1973	05:00:00	580 *
7	1974-1975	56.780	24-10-1974	18:00:00	356 *
8	1975-1976	58.960	08-10-1975	19:00:00	1472 *
9	1976-1977	57.785	05-09-1976	08:00:00	812 *
10	1977-1978	56.325	23-08-1977	13:00:00	183 *
11	1978-1979	59.530	16-08-1978	02:00:00	1841 *
12	1979-1980	57.380	28-09-1979	05:00:00	616 *
13	1980-1981	56.400	18-09-1980	05:00:00	210 *
14	1981-1982	61.000	10-10-1981	08:00:00	2941 *
15	1982-1983	57.575	20-10-1982	07:00:00	709 *
16	1983-1984	61.570	06-10-1983	05:00:00	3424 *
17	1984-1985	56.600	02-08-1984	23:00:00	285 *
18	1985-1986	57.250	13-08-1985	12:00:00	557 *
19	1986-1987	56.730	13-08-1986	05:00:00	336 *
20	1987-1988	57.150	04-11-1987	18:00:00	512 *
21	1988-1989	58.500	20-09-1988	10:00:00	1197 *
22	1989-1990	62.040	24-07-1989	03:00:00	3848 *
23	1990-1991	57.530	31-08-1990	11:00:00	687 *
24	1991-1992	59.200	22-09-1991	06:00:00	1623 *
25	1992-1993	57.100	11-09-1992	17:00:00	491 *
26	1993-1994	56.950	10-10-1993	17:00:00	426 *
27	1994-1995	57.500	06-10-1994	08:00:00	673 *
28	1995-1996	57.750	20-10-1995	11:00:00	795 *
29	1996-1997	57.350	08-09-1996	22:00:00	603 *
30	1997-1998	56.700	23-09-1997	19:00:00	324 *
31	1998-1999	60.950	16-10-1998	02:00:00	2900 *
32	1999-2000	56.800	07-09-1999	16:00:00	364 *
33	2000-2001	59.160	23-08-2000	00:00:00	1598 *
34	2001-2002	58.300	30-09-2001	18:00:00	1084 *
35	2002-2003	55.380	16-12-2002	08:00:00	25 *
36	2003-2004	55.600	24-08-2003	18:00:00	35 *
37	2004-2005	56.400	06-10-2004	01:00:00	210 *
38	2005-2006	61.200	30-10-2005	20:00:00	3107 *
39	2006-2007	56.500	28-10-2006	19:00:00	247 *
40	2007-2008	56.700	25-03-2008	11:00:00	324 *
41	2008-2009	58.900	10-08-2008	12:00:00	1435 *
42	2009-2010	62.500	05-10-2009	00:00:00	4283 *
43	2010-2011	57.450	28-08-2010	05:00:00	649 *
44	2011-2012	56.940	20-08-2011	10:00:00	422 *
45	2012-2013	55.920	03-10-2012	07:00:00	45 *
46	2013-2014	61.450	26-10-2013	11:00:00	3320 *

47	2014-2015	56.860	27-10-2014	19:00:00	389 *
48	2015-2016	55.680	21-08-2015	10:00:00	40 *
49	2016-2017	58.570	24-09-2016	15:00:00	1238 *
50	2017-2018	57.200	04-10-2017	08:00:00	535 *
51	2018-2019	56.490	21-08-2018	22:00:00	243 *
52	2019-2020	60.090	07-10-2019	08:00:00	2234 *
53	2020-2021	61.650	14-10-2020	15:00:00	3494 *
54	2021-2022	59.360	03-09-2021	20:00:00	1940 *
55	2022-2023	59.060	01-10-2022	06:00:00	1094 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : DAMERCHERLA (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

Sub-Division : Lower Krishna SD 1, Miryalguda

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	56.980	4.332	57.960	232.8 #	57.960	225.7	58.060	284.7	59.020	942.4	57.790	135.4
2	56.990	4.605	57.645	65.53 #	57.970	210.4	58.090	308.9	58.320	476.6 *	57.800	125.4
3	56.980	4.217	57.510	15.16 *	58.170	396.8	57.930	203.6	58.060	295.5	57.730	94.89
4	56.950	3.772	57.140	14.00	58.290	519.1	57.790	135.8 *	58.000	232.1	57.640	65.37
5	56.950	3.800 *	56.950	7.347	58.370	564.6	57.670	77.91	57.800	141.1 *	57.630	57.74
6	56.950	3.759	57.180	14.73	58.605	738.1	57.620	36.90	57.860	161.6	57.770	125.3 *
7	56.940	3.620	57.060	10.16	58.480	536.6 *	57.600	35.58	58.020	273.8	57.770	121.7
8	56.940	3.566	56.990	8.852	58.720	821.3	57.700	0.000	58.160	360.5	57.880	185.4 *
9	56.900	3.224	58.060	304.9	58.380	521.5 *	57.940	0.000	58.130	342.2 *	57.980	242.2
10	56.900	2.837	58.140	349.0 *	58.250	454.7	58.270	525.4	58.190	390.5	57.730	92.66
11	56.880	2.551	58.190	428.0	58.100	318.7	58.480	598.4 *	58.050	334.8	57.640	72.60
12	56.660	2.900 *	58.150	376.0	58.050	252.1	58.390	583.9	58.220	410.5	57.760	120.4
13	56.600	2.045	58.020	283.7	58.040	266.2	58.370	582.7	58.050	295.1	57.720	100.2 *
14	56.570	1.825	57.990	256.8	57.820	151.9 *	58.265	459.9	58.040	326.2	57.680	87.76
15	56.540	1.508	57.970	240.6	57.750	115.1 *	57.990	224.7	58.330	445.0	57.680	78.68
16	56.550	1.632	57.780	120.6	57.670	74.31	57.950	198.9	58.720	794.0 *	57.680	82.95
17	56.580	1.877	57.870	179.7 *	57.730	105.1 *	57.790	134.6	58.230	401.9	57.640	63.91
18	56.560	1.736	57.810	123.6	57.820	138.0	57.690	85.86 *	58.290	466.4	57.620	59.23
19	56.600	2.000 *	57.720	100.3	57.735	93.53	57.670	89.08	58.220	404.0	57.620	57.90
20	56.680	2.752	57.770	105.3	57.750	99.57	57.680	95.41	58.120	330.7	57.620	54.89 *
21	56.670	2.647	57.700	77.33	57.680	81.22 *	57.710	103.1	58.130	352.8	57.620	58.98
22	56.650	2.480	57.580	26.80	57.570	28.14	57.710	107.9	58.120	338.3	57.620	61.07
23	56.650	2.608	57.580	27.25	57.520	22.97	57.710	100.2	58.110	328.8 *	57.620	55.97
24	56.660	2.836	59.000	1040 *	57.540	24.60	57.640	75.61	57.900	197.0 *	57.620	60.01
25	56.670	2.864	58.250	493.7	57.700	91.52	57.640	63.36 *	57.860	159.9	57.620	57.34
26	56.690	3.000 *	57.970	217.1	57.610	50.78 #	57.630	66.64	57.850	158.8	57.620	57.45
27	56.710	3.321	58.420	608.6 #	57.610	50.78 #	57.660	74.60	57.850	156.4	57.610	50.78 *
28	56.720	3.456	58.820	853.6	57.600	46.75 *	58.060	301.0	57.860	157.4	57.580	32.63
29	57.600	46.75 #	58.210	412.4	57.620	54.89 #	58.350	532.5	57.860	158.4	57.580	32.95
30	57.990	251.3	57.860	168.7	57.870	154.5	58.740	829.7	57.820	151.9 *	57.540	25.52
31			57.850	168.4 *	58.450	575.0 *			57.790	128.4		
Ten-Daily Mean												
I Ten-Daily	56.948	3.773	57.464	102.3	58.319	498.9	57.867	160.9	58.156	361.6	57.772	124.6
II Ten-Daily	56.622	2.083	57.927	221.5	57.847	161.5	58.028	305.4	58.227	420.9	57.666	77.85
III Ten-Daily	56.901	32.13	58.113	372.1	57.706	107.4	57.885	225.5	57.923	208.0	57.603	49.27
Monthly												
Min.	56.540	1.508	56.950	7.347	57.520	22.97	57.600	0.000	57.790	128.4	57.540	25.52
Max.	57.990	251.3	59.000	1040	58.720	821.3	58.740	829.7	59.020	942.4	57.980	242.2
Mean	56.824	12.66	57.843	236.5	57.949	251.1	57.926	230.6	58.096	326.2	57.680	83.91

Annual Runoff in MCM = 3305 Annual Runoff in mm = 287

Peak Observed Discharge = 942.4 cumecs on 01-10-2022 Corres. Water Level :59.02 m

Lowest Observed Discharge = 0.000 cumecs on 08-09-2022 Corres. Water Level :57.7 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 2022 - 2023

Station Name : DAMERCHERLA (AKF00A7)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

Sub-Division : Lower Krishna SD 1, Miryalguda

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	57.620	31.50 #	57.470	25.09 *	57.450	22.84	57.570	29.27	57.340	18.91	56.790	6.055
2	57.190	14.08	57.500	25.79	57.450	22.50	57.570	29.27	57.330	19.87 *	56.800	6.162
3	57.150	13.96	57.500	25.47	57.350	21.43	57.550	30.63	57.280	18.38	56.820	6.352
4	57.100	12.81 *	57.490	24.24	57.280	19.42	57.530	28.53	57.260	17.53 *	56.890	7.065
5	57.000	12.30	57.470	24.29	57.220	16.27 *	57.520	27.13 *	57.190	16.25	56.860	7.317 *
6	56.950	10.17	57.500	25.62	57.230	17.45	57.470	23.13	57.140	15.67	56.860	6.774
7	56.910	9.961	57.550	29.26	57.290	19.57	57.470	23.42	57.080	12.28 *	56.850	7.127 *
8	56.880	9.314	57.550	28.40 *	57.320	19.91	57.470	23.15	57.030	13.04	56.990	9.601
9	56.880	8.440	57.510	26.74	57.370	21.13	57.460	22.52	57.030	11.02 *	56.910	8.093
10	56.990	11.10	57.500	25.98	57.380	21.26	57.530	28.34	57.010	11.68	56.930	8.861
11	57.010	10.54 *	57.500	25.88	57.470	23.78	57.570	29.27	57.020	12.29	56.880	7.144
12	57.230	17.22	57.480	24.41	57.450	24.30 *	57.570	29.27 *	57.010	11.54	56.860	6.814
13	57.240	17.63	57.470	24.27	57.500	26.14	57.570	29.27	56.980	9.790	56.830	6.527
14	57.280	19.25	57.460	23.24	57.520	27.57	57.550	28.40	56.980	9.838 *	56.800	6.219 *
15	57.280	19.53	57.470	25.09 *	57.480	25.49	57.520	27.13	56.960	9.548	56.770	5.307
16	57.350	20.21	57.320	19.81	57.420	21.91	57.530	27.55	56.960	9.387 *	56.710	4.719
17	57.320	19.88	57.260	17.21	57.470	24.65	57.590	30.15	56.940	9.198	56.710	4.739
18	57.320	19.53 *	57.200	16.60	57.430	22.60	57.640	32.43	56.940	9.247	56.720	4.811
19	57.290	19.71	57.160	15.76	57.350	20.57 *	57.610	31.05 *	56.940	9.162	56.700	4.549
20	57.370	21.04	57.150	15.25	57.360	20.59	57.550	28.37	56.930	9.087	56.670	4.129
21	57.500	24.89	57.160	15.72	57.450	22.95	57.440	22.27	56.930	9.057	56.650	3.924 *
22	57.490	24.36	57.130	13.63 *	57.480	24.09	57.420	23.14 *	56.930	8.734 *	56.610	3.444
23	57.510	25.10	57.220	17.26	57.510	27.28	57.250	14.71	56.900	8.108 *	56.610	3.456
24	57.490	23.89	57.190	16.14	57.530	28.13	57.260	15.26	56.800	5.624	56.600	3.333
25	57.460	24.69 *	57.200	16.68	57.550	29.08	57.160	13.84	56.780	5.877 *	56.570	2.796
26	57.480	23.18	57.210	15.96 *	57.560	28.83 *	57.290	18.51 *	56.740	4.698	56.540	2.641
27	57.460	23.08	57.350	21.54	57.570	32.86	57.350	20.15	56.740	4.707	56.540	2.619
28	57.480	23.30	57.380	22.44	57.570	32.54	57.400	21.54	56.760	4.894	56.530	2.521 *
29	57.510	27.29	57.400	22.39 *			57.420	21.60	56.730	4.530	56.650	3.924 *
30	57.500	26.13	57.500	25.25			57.370	21.29 *	56.730	5.070 *	57.050	11.52
31	57.490	24.28	57.490	24.96			57.350	20.59			57.420	23.14 *
Ten-Daily Mean												
I Ten-Daily	57.067	13.37	57.504	26.09	57.334	20.18	57.514	26.54	57.169	15.46	56.870	7.341
II Ten-Daily	57.269	18.45	57.347	20.75	57.445	23.76	57.570	29.29	56.966	9.908	56.765	5.496
III Ten-Daily	57.488	24.56	57.294	19.27	57.528	28.22	57.337	19.35	56.804	6.130	56.706	5.756
Monthly												
Min.	56.880	8.440	57.130	13.63	57.220	16.27	57.160	13.84	56.730	4.530	56.530	2.521
Max.	57.620	31.50	57.550	29.26	57.570	32.86	57.640	32.43	57.340	19.87	57.420	23.14
Mean	57.282	18.98	57.379	21.95	57.429	23.76	57.469	24.88	56.980	10.5	56.778	6.183

Peak Computed Discharge = 1040 cumecs on 24-07-2022

Corres. Water Level :59 m

Lowest Computed Discharge = 2.000 cumecs on 19-06-2022

Corres. Water Level :56.6 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 : 2022-2023

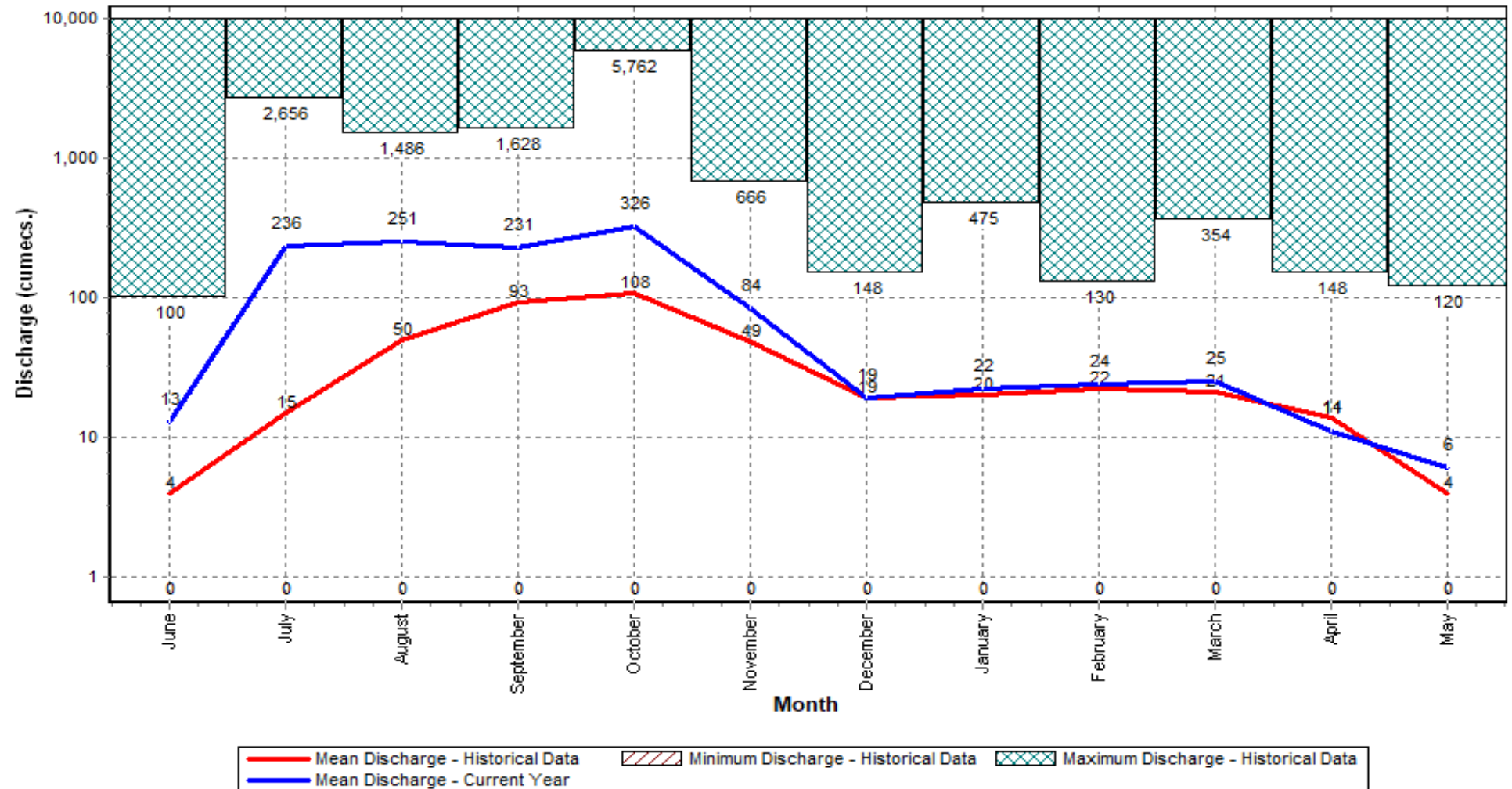
Station Name : DAMERCHERLA (AKF00A7)

Data considered : 1969-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

Sub-Divn : Lower Krishna SD 1, Miryalguda



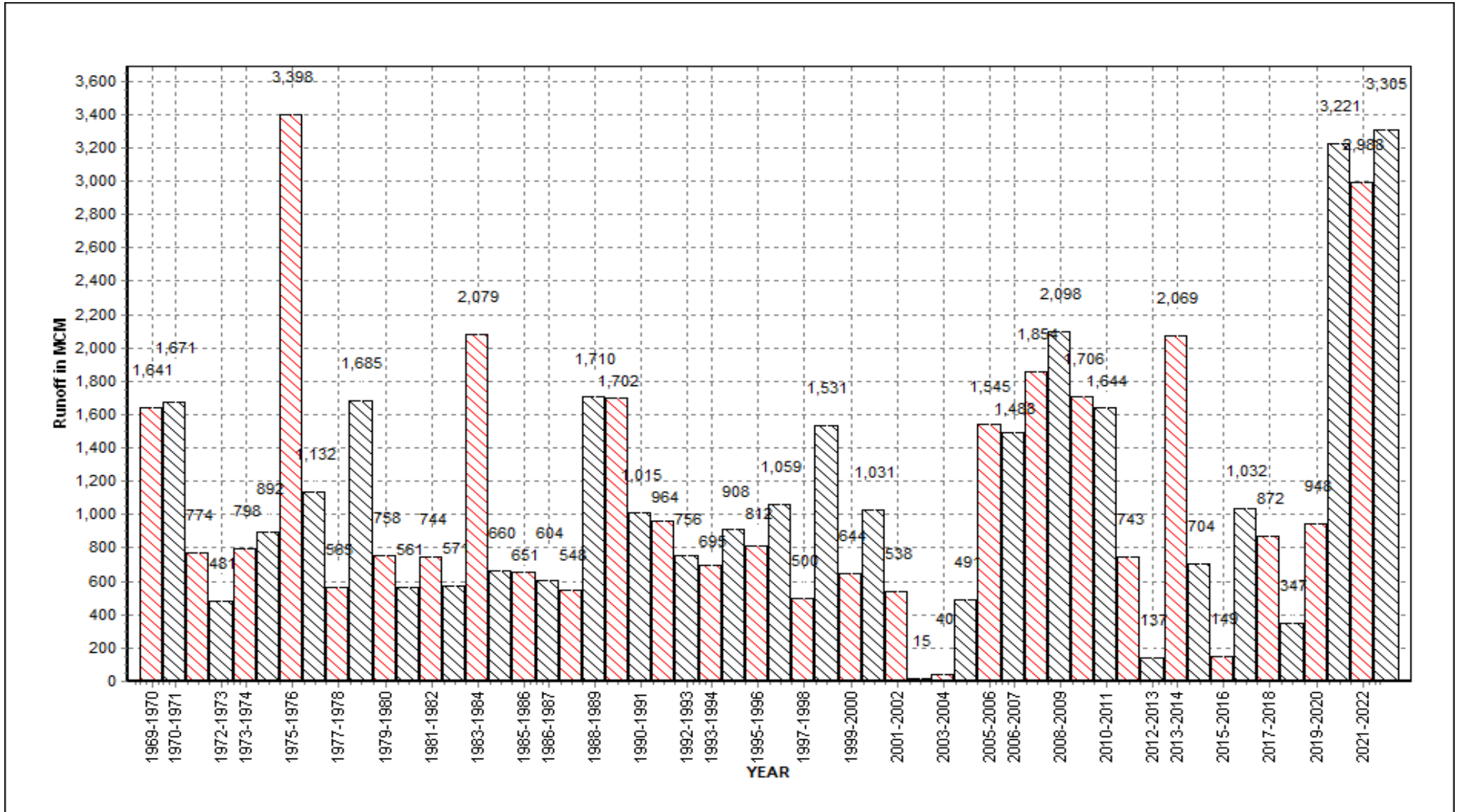
Annual Runoff Values for the period: 1969 - 2023

Station Name : DAMERCHERLA (AKF00A7)

Local River : Musi

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda



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

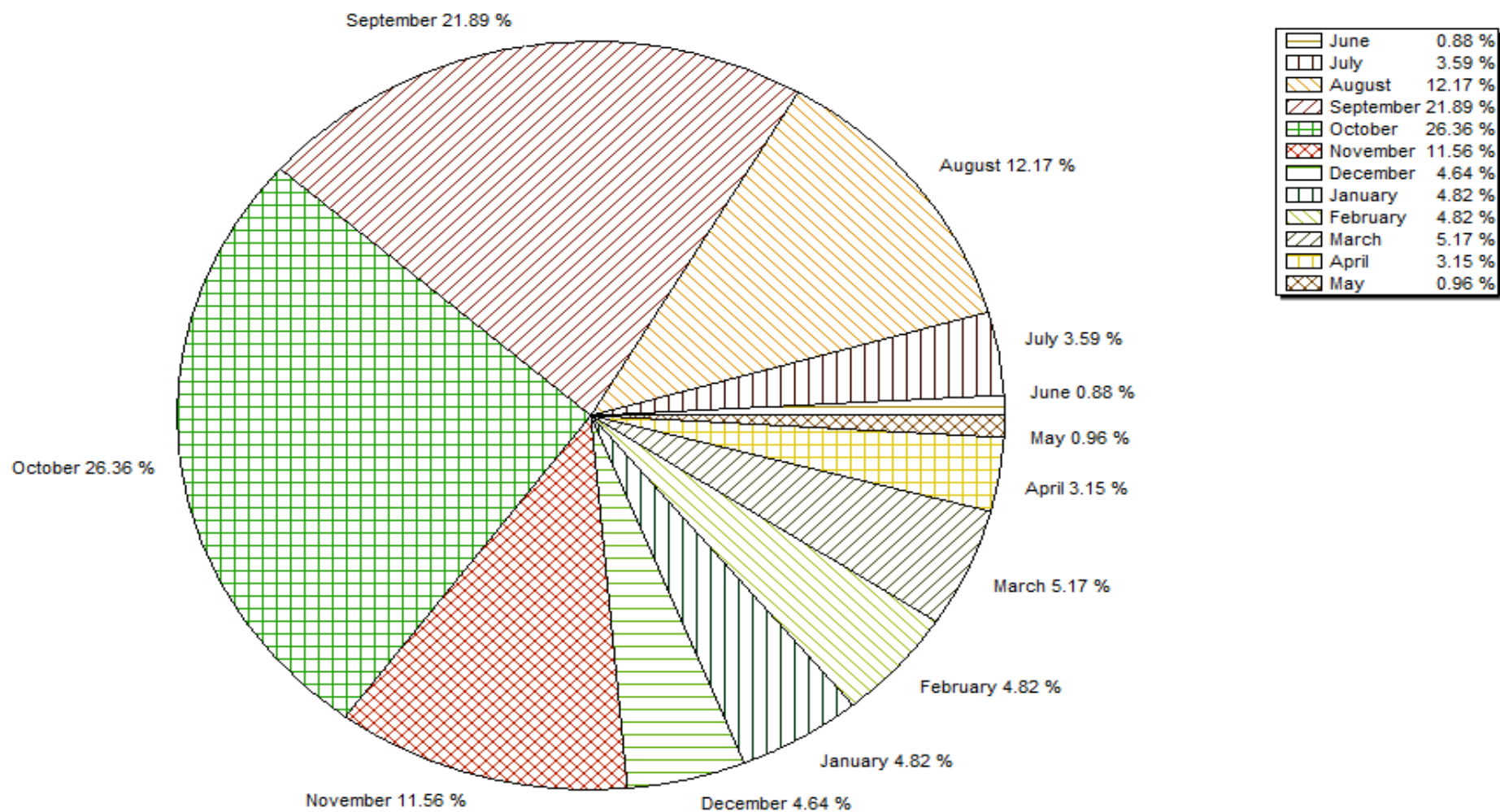
Monthly Average Runoff based on period : 1969-2022

Station Name : DAMERCHERLA (AKF00A7)

Local River : Musi

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda



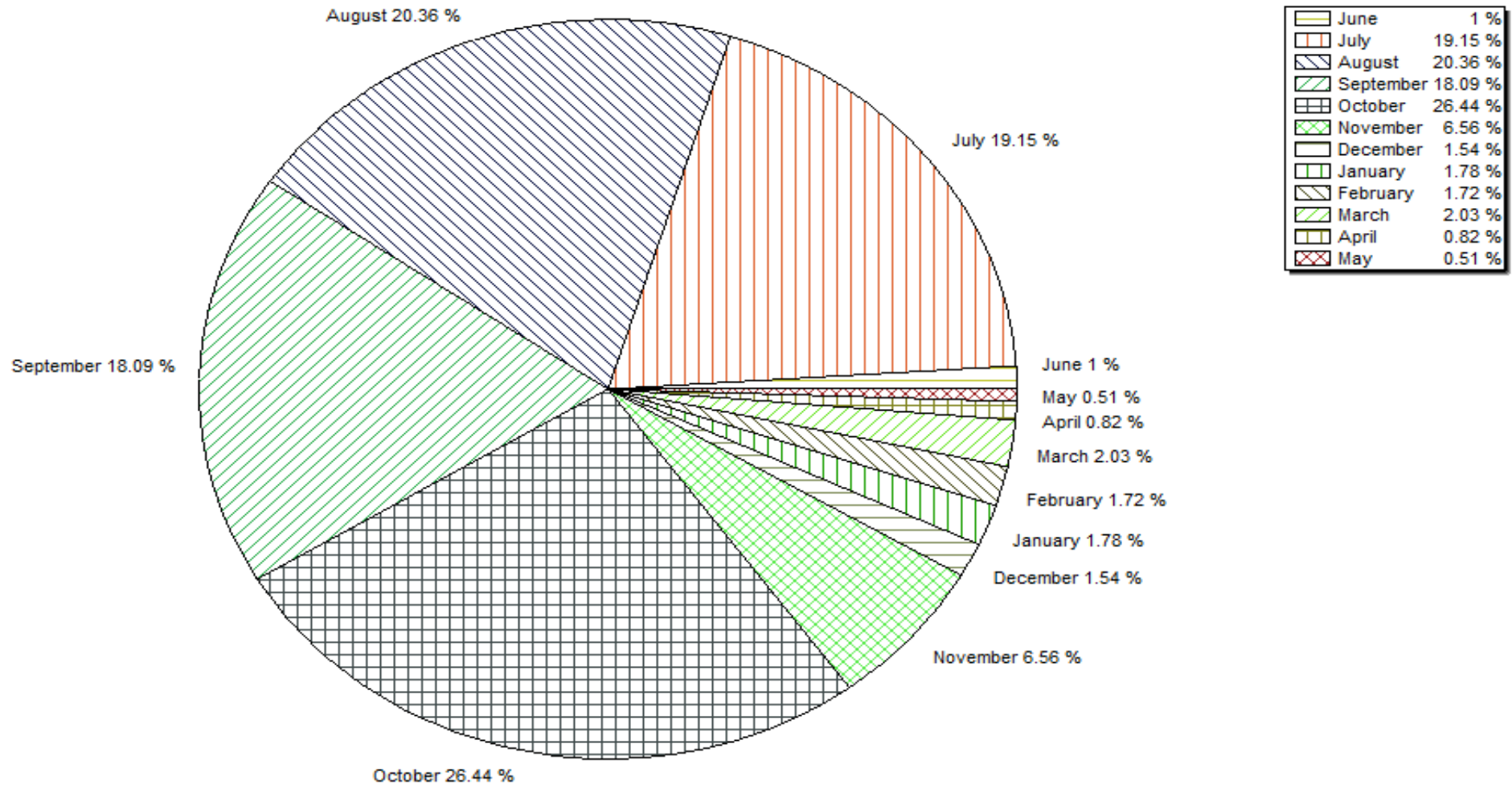
Monthly Runoff for the Year : 2022-2023

Station Name : DAMERCHERLA (AKF00A7)

Local River : Musi

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda



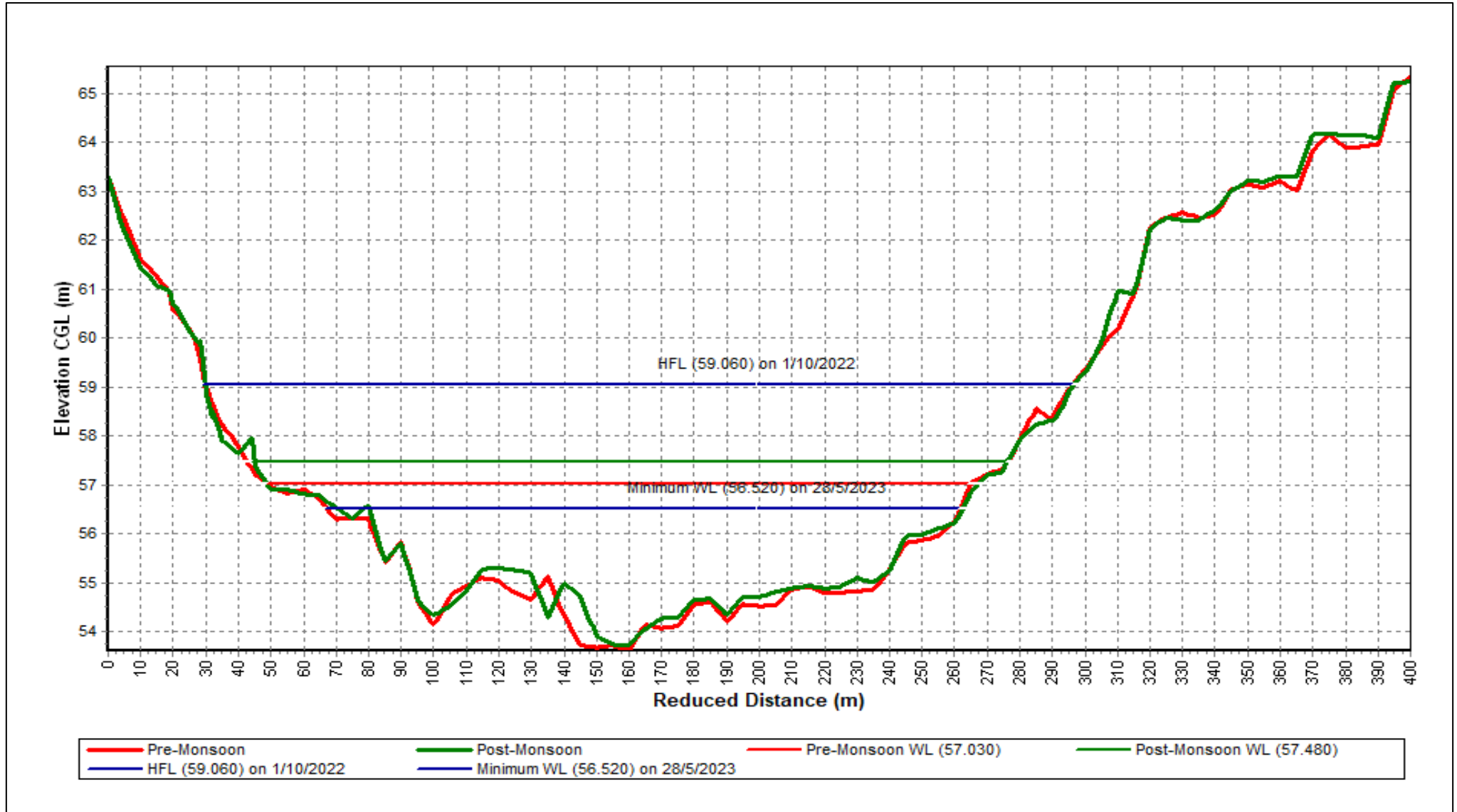
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : DAMERCHERLA (AKF00A7)

Local River : Musi

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda



Zero of the Gauge: 53 (m.s.l)

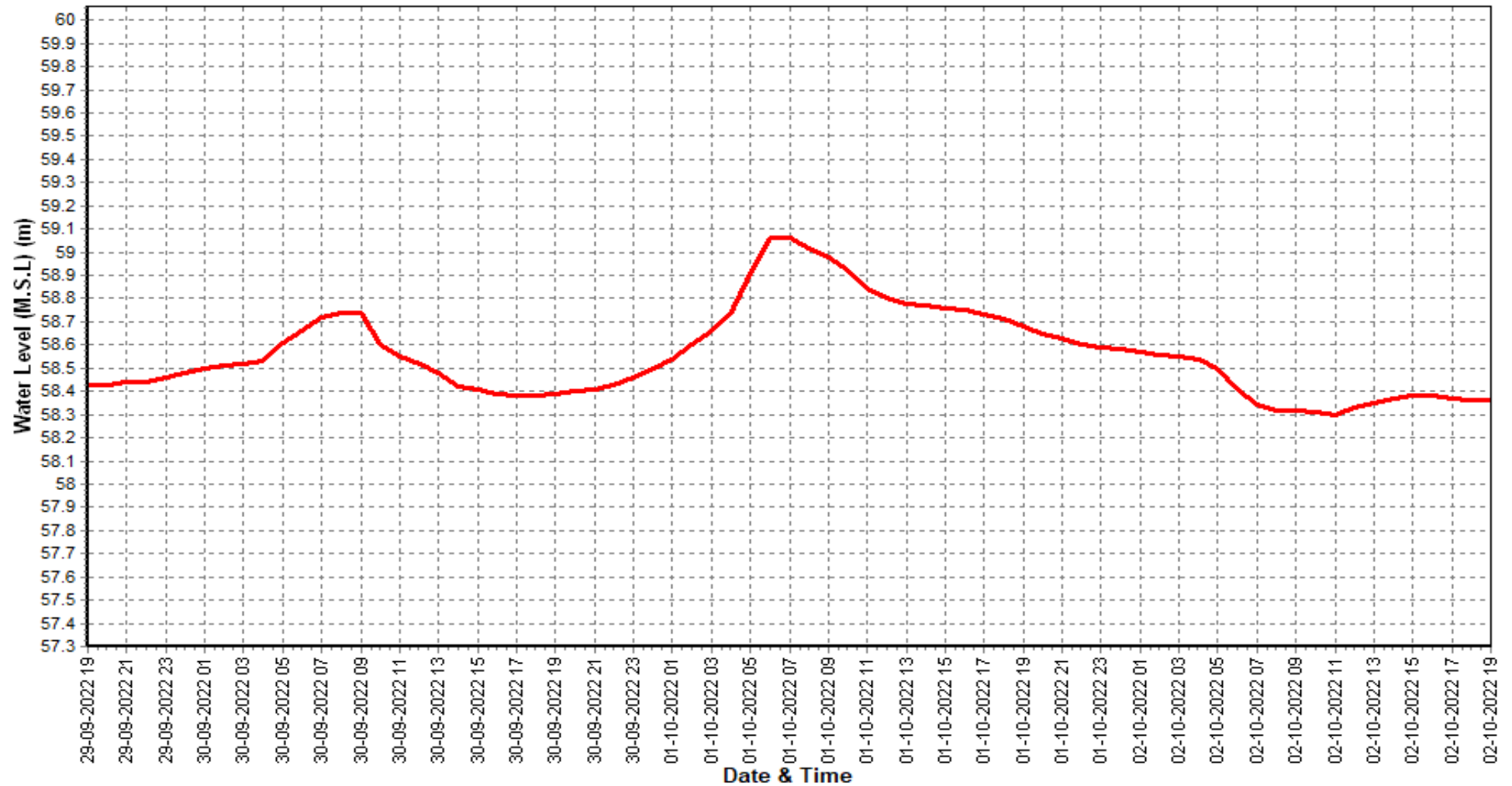
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : DAMERCHERLA (AKF00A7)

Local River : Musi

Division : Lower Krishna Divn., Hyderabad

Sub-Divn : Lower Krishna SD 1, Miryalguda



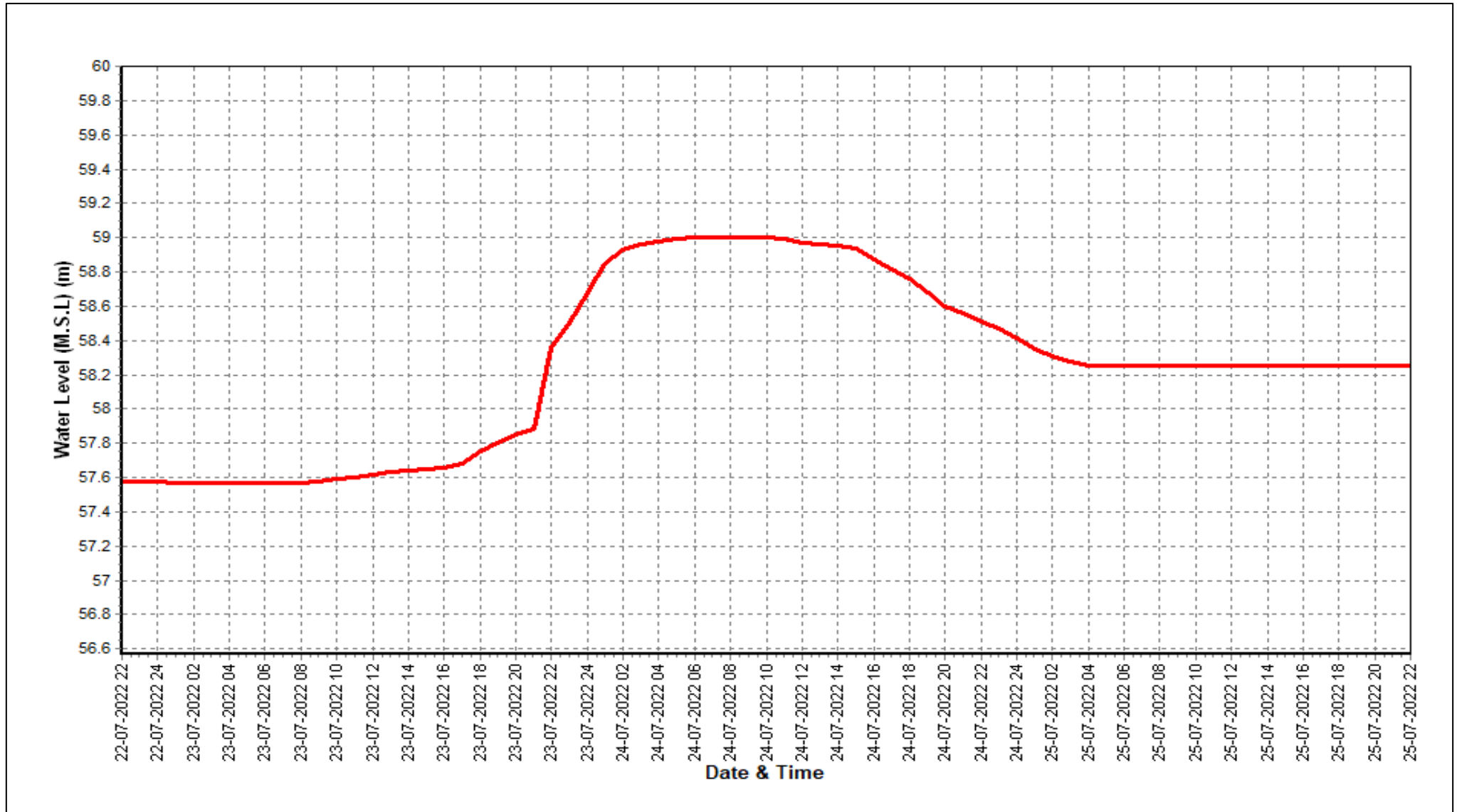
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : DAMERCHERLA (AKF00A7)

Local River : Musi

Divn : Lower Krishna Divn., Hyderabad

Sub-Divn : Lower Krishna SD 1, Miryalguda



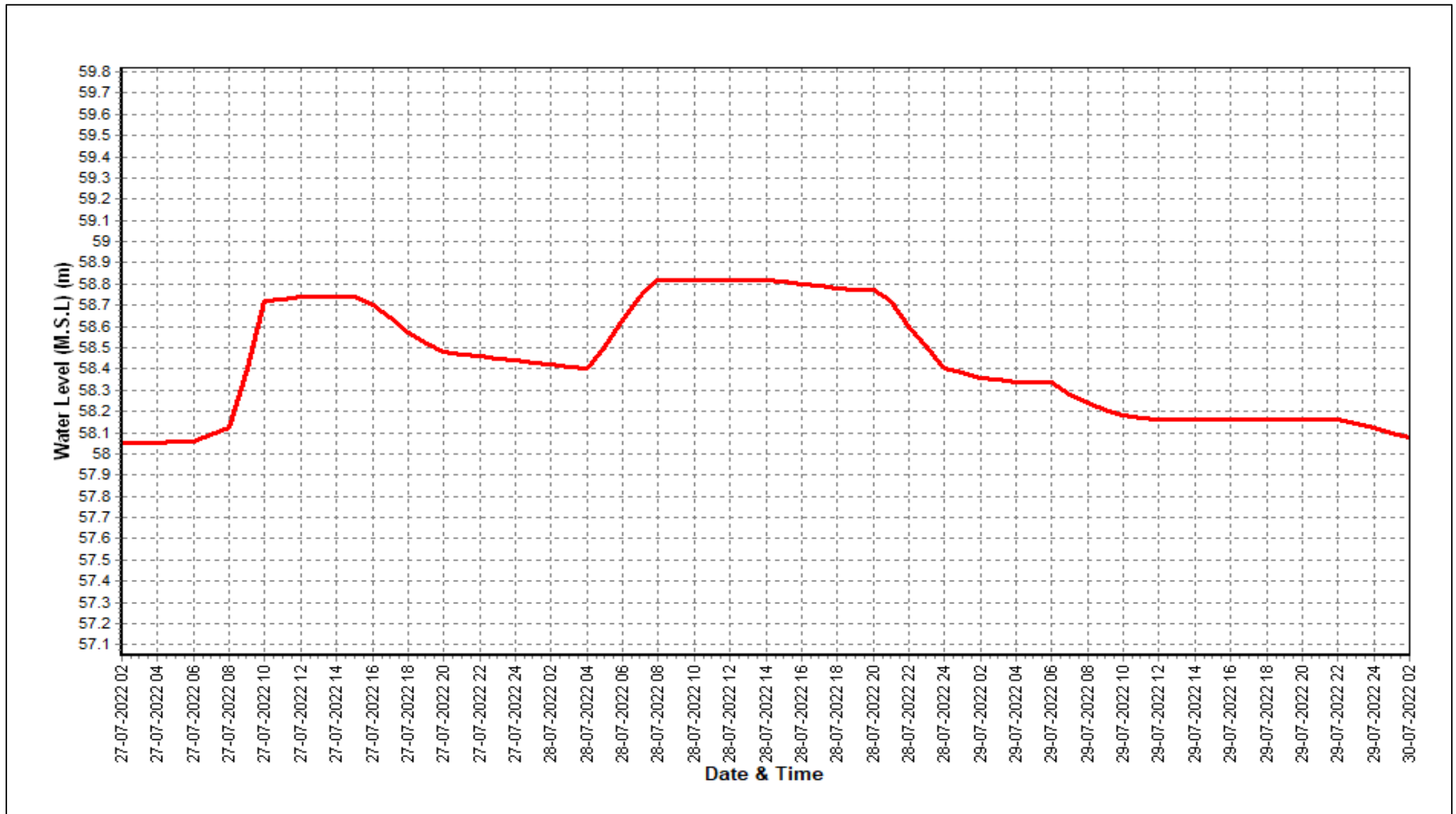
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : DAMERCHERLA (AKF00A7)

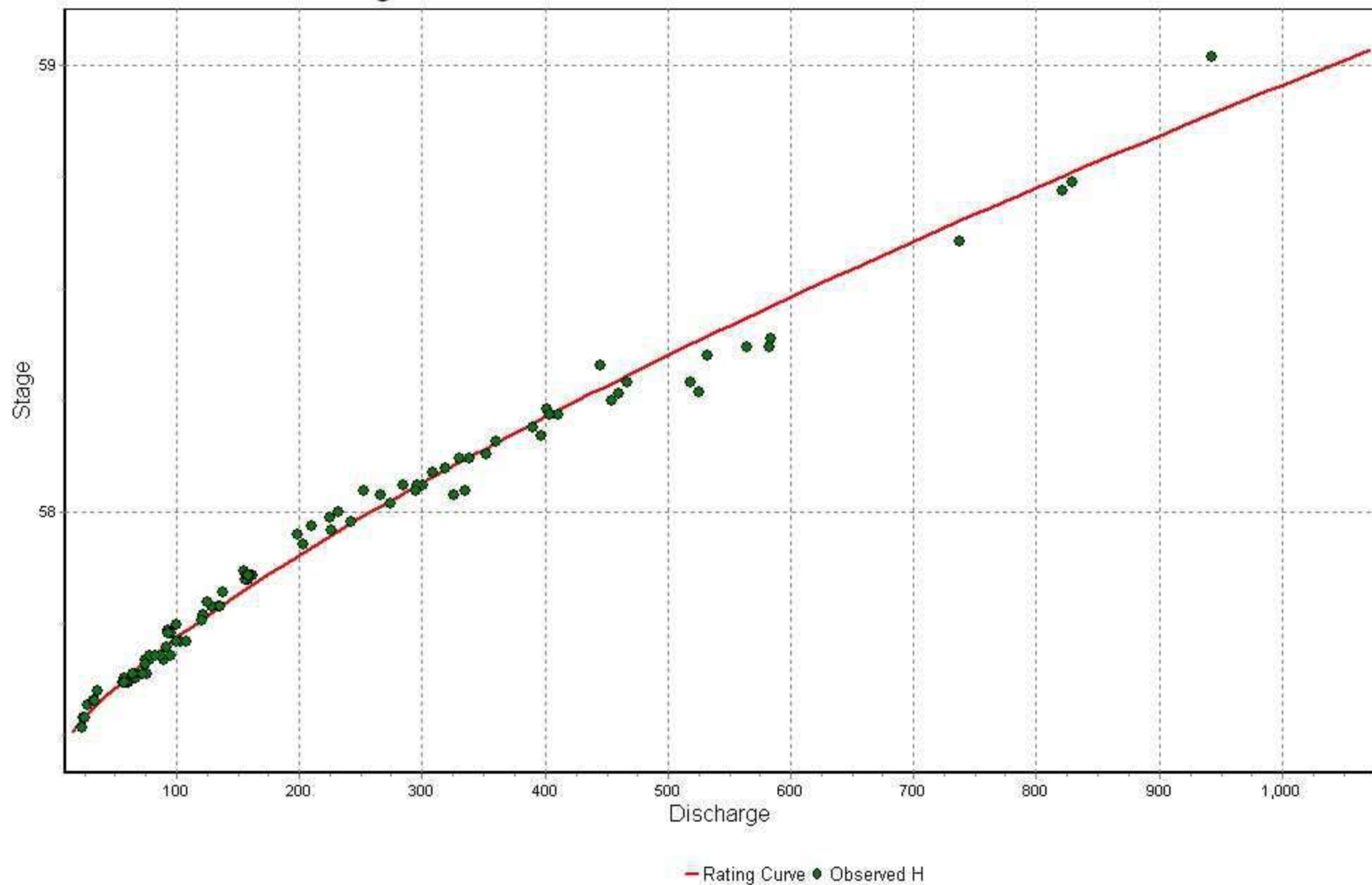
Local River : Musi

Divn : Lower Krishna Divn., Hyderabad

Sub-Divn : Lower Krishna SD 1, Miryalguda



Rating Curve of Site Dameracherla 01/08/2022 to 30/11/2022



HISTORY SHEET

		Water Year	: 2022-2023
Site	: VALIGONDA	Code	: 040-LKDHYD
State	: Telangana	District	Nalgonda
Basin	: Krishna	Independent River	: Krishna
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Musi
Division	: Lower Krishna Divn., Hyderabad	Sub-Division	: Lower Krishna SD 1, Miryalguda
Drainage Area	: 5830 Sq. Km.	Bank	:
Latitude	: 17°21'56"	Longitude	: 79°01'56"
Zero of Gauge (m)	: 94 (m.s.l) 297.5 (m.s.l)	01-06-2019	- 31-05-2020
	Opening Date	Closing Date	
Gauge	: 01-06-2019	HFL During 2022-23	: 302.060 m
Discharge	: 01-06-2019	Corres. Discharge	: 801 (Estimated)
Water Quality	: 01-06-2019	Date & Time of occurrence	: 27-07-2022 : 11:00 Hrs

HFL Recorded so far in m :306.280 dt 14-10-2020

Corresponding Discharge (cumecs) : 2711 (Estimated)

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2019-2020	144.2	98.100	28-09-2019	0.000	96.340	26-06-2019
2020-2021	2706	306.235	14-10-2020	0.000	298.950	06-09-2020
2021-2022	259.2	302.280	15-07-2021	1.366	299.340	19-09-2021

Annual Runoff of Musi at Valigonda

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2019-2020	438	11	449	15	0	16
2	2020-2021	1300	77	1377	46	3	49
3	2021-2022	702	175	876	25	6	31
4	2022-2023	1177	166	1343	42	6	47
Average		904	107	1011	32	4	36

Instantaneous Flood Peak of Musi at Valigonda

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2019-2020	98.520	28-09-2019	20:00:00	238 *
2	2020-2021	306.280	14-10-2020	08:00:00	2711 *
3	2021-2022	302.310	15-07-2021	10:00:00	262 *
4	2022-2023	302.06	27-07-2022	11:00:00	801 *

Note: 2022-23 Discharge high due to High velocity at S/G Line

Stage-Discharge Data for the period 2022 - 2023

Station Name : VALIGONDA (040-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

Sub-Division : Lower Krishna SD 1, Miryalguda

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	299.100	4.791	299.400	11.42	300.360	136.1	300.020	71.34	300.320	134.6	299.820	51.74
2	298.830	0.000	299.250	8.140	300.350	133.0	299.780	47.90	300.240	113.4 *	299.830	53.38
3	298.850	0.000	299.500	14.95 *	300.620	171.5	299.660	32.05	300.090	76.17	299.820	52.24
4	298.860	0.000	299.510	13.51	300.645	173.0	299.530	18.02 *	299.970	67.14	299.800	50.43
5	298.820	0.000	299.590	22.54	300.540	164.5	299.500	13.19	299.930	67.59 *	299.790	49.02
6	298.820	0.000	299.720	47.48	300.740	191.6	299.460	11.40	300.110	90.50	299.840	55.33 *
7	298.830	0.000	299.660	33.20	300.460	148.7 *	299.635	32.45	300.330	134.8	299.810	51.19
8	298.830	0.000	299.615	24.07	300.360	135.1	300.440	155.0	300.530	160.8	299.820	52.68 *
9	298.830	0.000	299.950	72.78	300.310	124.4 *	300.540	166.3	300.500	155.3 *	299.790	49.89
10	298.840	0.000	300.110	93.58 *	300.380	141.7	300.640	173.6	300.540	161.2	299.760	45.38
11	298.840	0.000	300.240	124.3	300.370	139.6	300.640	179.0 *	300.430	153.2	299.690	35.13
12	298.880	0.000	300.270	128.6	300.175	106.4	300.760	194.9	300.360	136.4	299.670	33.57
13	298.790	0.000	300.345	134.4	300.030	72.70	300.680	180.4	300.260	126.5	299.610	26.77 *
14	298.860	0.000	300.280	129.4	299.910	64.82 *	300.470	157.5	300.795	207.9	299.660	31.20
15	298.870	0.000	300.090	78.72	299.900	63.45 *	300.260	127.9	300.865	218.8	299.660	31.52
16	299.570	20.13	299.940	65.93	299.930	63.68	300.130	91.27	300.630	177.3 *	299.600	23.66
17	299.430	11.92	299.710	38.64 *	299.840	59.10	300.030	72.47	300.670	175.8	299.620	25.26
18	299.020	3.462	299.730	46.86	299.740	51.08	300.010	78.92 *	300.680	177.1	299.570	20.76
19	299.290	10.00 *	299.830	57.44	299.740	52.43	299.840	58.74	300.480	158.3	299.540	19.80
20	299.280	8.633	299.790	49.54	299.815	54.40	299.790	48.03	300.350	135.3	299.550	20.14 *
21	299.070	4.651	299.660	32.20	299.780	47.47 *	299.790	47.96	300.290	130.9	299.530	18.23
22	299.570	19.74	299.640	25.86	299.750	51.00	299.750	45.25	300.250	124.9	299.540	19.78
23	299.400	11.47	300.685	190.6	299.655	33.08	299.690	34.51	300.240	113.4 *	299.490	16.46
24	299.370	11.89	300.600	172.2 *	299.640	31.34	299.480	12.13	300.180	104.1 *	299.500	14.95 #
25	299.370	10.76	300.400	146.2	299.500	14.95 #	299.450	10.12 *	300.090	77.60	299.500	14.95 #
26	299.360	10.50 *	300.340	134.0	299.480	12.35	299.400	5.760 #	300.060	73.76	299.500	14.95 #
27	299.360	10.49	301.720	642.3	299.480	12.55	300.520	159.3	300.030	70.50	299.450	10.12 *
28	299.560	20.46	301.495	496.8	299.460	11.05 *	300.425	145.2	299.900	59.86	299.390	4.956 #
29	299.610	23.40	300.550	166.9	299.470	11.45	300.300	132.3	299.850	55.37	299.370	3.434 *
30	299.510	13.82	300.510	155.1	299.560	20.31	300.650	173.9	299.840	55.33 *	299.380	4.180 #
31			300.350	130.8 *	300.320	126.0 *			299.825	52.89		
<u>Ten-Daily Mean</u>												
I Ten-Daily	298.861	0.479	299.630	34.17	300.477	152.0	299.921	72.13	300.256	116.1	299.808	51.13
II Ten-Daily	299.083	5.415	300.023	85.38	299.945	72.77	300.261	118.9	300.552	166.7	299.617	26.78
III Ten-Daily	299.418	13.72	300.541	208.5	299.645	33.78	299.945	76.64	300.050	83.51	299.465	12.20
<u>Monthly</u>												
Min.	298.790	0.000	299.250	8.140	299.460	11.05	299.400	5.760	299.825	52.89	299.370	3.434
Max.	299.610	23.40	301.720	642.3	300.740	191.6	300.760	194.9	300.865	218.8	299.840	55.33
Mean	299.121	6.537	300.080	112.5	300.010	84.48	300.042	89.23	300.279	120.9	299.630	30.04

Annual Runoff in MCM = 1344 Annual Runoff in mm = 230

Peak Observed Discharge = 642.3 cumecs on 27-07-2022 Corres. Water Level :301.72 m

Lowest Observed Discharge = 0.000 cumecs on 02-06-2022 Corres. Water Level :298.83 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 2022 - 2023

Station Name : VALIGONDA (040-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

Sub-Division : Lower Krishna SD 1, Miryalguda

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	299.360	10.33	298.980	5.078 *	298.780	0.000	298.690	0.000	299.010	5.659	300.000	72.56
2	299.170	8.046	299.100	7.191	298.780	0.000	298.710	0.000	299.000	5.560 *	300.300	131.8
3	299.160	6.948	299.020	6.028	298.800	0.000	298.730	0.000	298.910	3.464	299.990	70.98
4	299.150	7.971 *	299.030	6.307	298.770	0.000	298.700	0.000	298.910	3.450 *	299.830	52.88
5	299.080	5.409	299.040	6.436	298.720	0.000	298.690	0.000	298.910	3.449	299.760	41.11 *
6	299.070	5.144	299.110	7.389	298.720	0.000	298.710	0.000	298.910	3.922	299.760	41.11
7	299.040	4.264	299.340	10.72	298.700	0.000	298.710	0.000	299.080	6.500 *	299.790	44.63 *
8	298.940	2.459	299.120	7.492 *	298.680	0.000	298.720	0.000	299.170	8.765	299.690	34.87
9	298.790	0.000	299.120	7.587	298.680	0.000	298.730	0.000	299.170	8.760 *	299.660	32.02
10	298.800	0.000	299.000	5.563	298.670	0.000	298.740	0.000	299.100	7.020	299.630	26.43
11	298.800	0.000	298.990	5.158	298.690	0.000	298.720	0.000	299.100	6.822	299.590	22.50
12	298.800	0.000	299.090	6.796	298.700	0.000	298.720	0.000	299.110	7.319	299.540	20.52
13	299.330	11.60	299.120	7.663	298.690	0.000	298.720	0.000	299.110	7.361	299.530	20.28
14	299.230	8.549	299.140	8.683	298.670	0.000	298.720	0.000	299.110	7.350 *	299.530	19.99 *
15	299.225	10.66	299.120	7.492 *	298.670	0.000	298.710	0.000	299.140	8.377	299.350	11.39
16	299.130	9.120	299.110	7.432	298.690	0.000	298.710	0.000	299.140	8.350 *	299.410	14.21
17	299.050	7.892	299.040	6.246	298.690	0.000	298.730	0.000	299.140	8.170	299.380	12.33
18	298.900	3.492 *	299.040	6.496	298.700	0.000	299.590	22.17	299.170	8.940	299.580	21.57
19	299.030	6.699	299.000	5.513	298.700	0.000	299.530	19.38 *	299.170	8.836	299.570	21.11
20	299.025	6.198	299.020	6.047	298.710	0.000	299.630	25.58	299.170	8.905	299.530	20.54
21	299.070	6.386	298.970	4.799	298.680	0.000	299.520	18.16	299.190	9.259	299.550	21.41 *
22	299.000	5.416	299.000	5.445 *	298.680	0.000	299.530	19.38 *	299.190	9.250 *	299.620	25.70
23	298.980	5.365	298.970	4.866	298.750	0.000	299.310	9.766	299.190	9.250 *	299.710	36.66
24	298.940	4.758	298.930	3.848	298.720	0.000	299.010	5.564	299.190	9.164	299.650	30.54
25	298.940	4.312 *	298.930	3.798	298.710	0.000	298.940	3.923	299.330	15.40 #	299.620	26.30
26	298.950	4.752	298.930	4.112 *	298.700	0.000	299.530	19.38 *	299.660	32.81	299.620	25.68
27	299.000	5.571	298.780	0.000	298.710	0.000	298.880	2.064	299.900	59.41	299.550	20.37
28	299.010	5.823	298.790	0.000	298.700	0.000	299.080	6.468	299.790	49.54	299.350	10.71 *
29	298.980	4.836	298.790	0.000			299.060	6.329	299.650	31.60	299.380	12.84
30	299.000	5.551	298.760	0.000			299.530	19.38 *	299.910	60.50 *	299.480	16.22
31	299.040	5.998	298.710	0.000			298.990	5.421			299.530	19.93
<u>Ten-Daily Mean</u>												
I Ten-Daily	299.056	5.057	299.086	6.979	298.730	0.000	298.713	0.000	299.017	5.655	299.841	54.83
II Ten-Daily	299.052	6.420	299.067	6.752	298.691	0.000	298.978	6.713	299.136	8.043	299.501	18.44
III Ten-Daily	298.992	5.343	298.869	2.443	298.706	0.000	299.216	10.53	299.500	28.62	299.551	22.40
<u>Monthly</u>												
Min.	298.790	0.000	298.710	0.000	298.670	0.000	298.690	0.000	298.910	3.449	299.350	10.71
Max.	299.360	11.60	299.340	10.72	298.800	0.000	299.630	25.58	299.910	60.50	300.300	131.8
Mean	299.032	5.598	299.003	5.296	298.709	0	298.977	5.902	299.218	14.11	299.628	31.58

Peak Computed Discharge = 179.0 cumecs on 11-09-2022

Corres. Water Level :300.64 m

Lowest Computed Discharge = 3.434 cumecs on 29-11-2022

Corres. Water Level :299.37 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 : 2022-2023

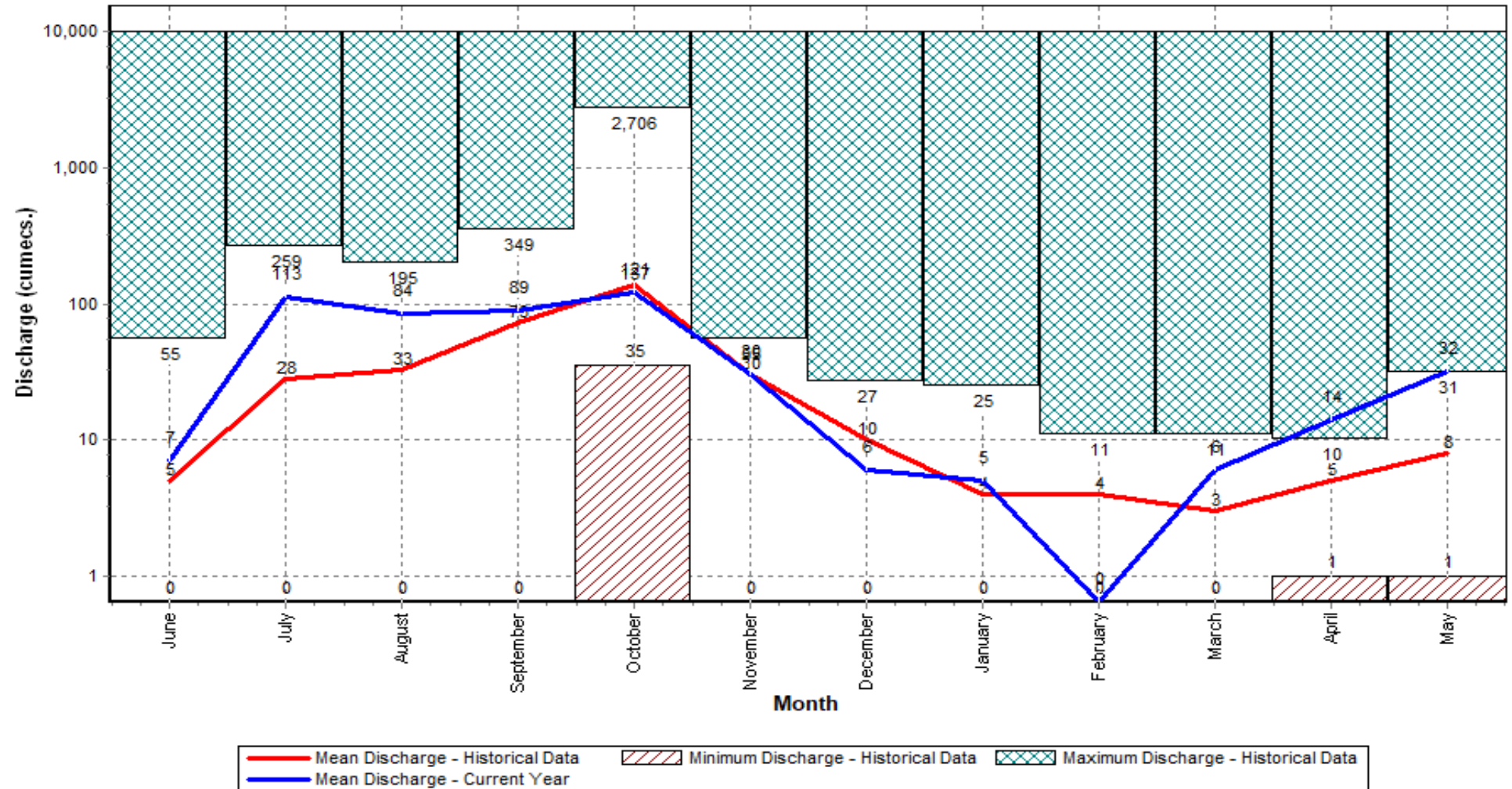
Station Name : VALIGONDA (040-LKDHYD)

Data considered : 2019-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Musi

Sub-Divn : Lower Krishna SD 1, Miryalguda



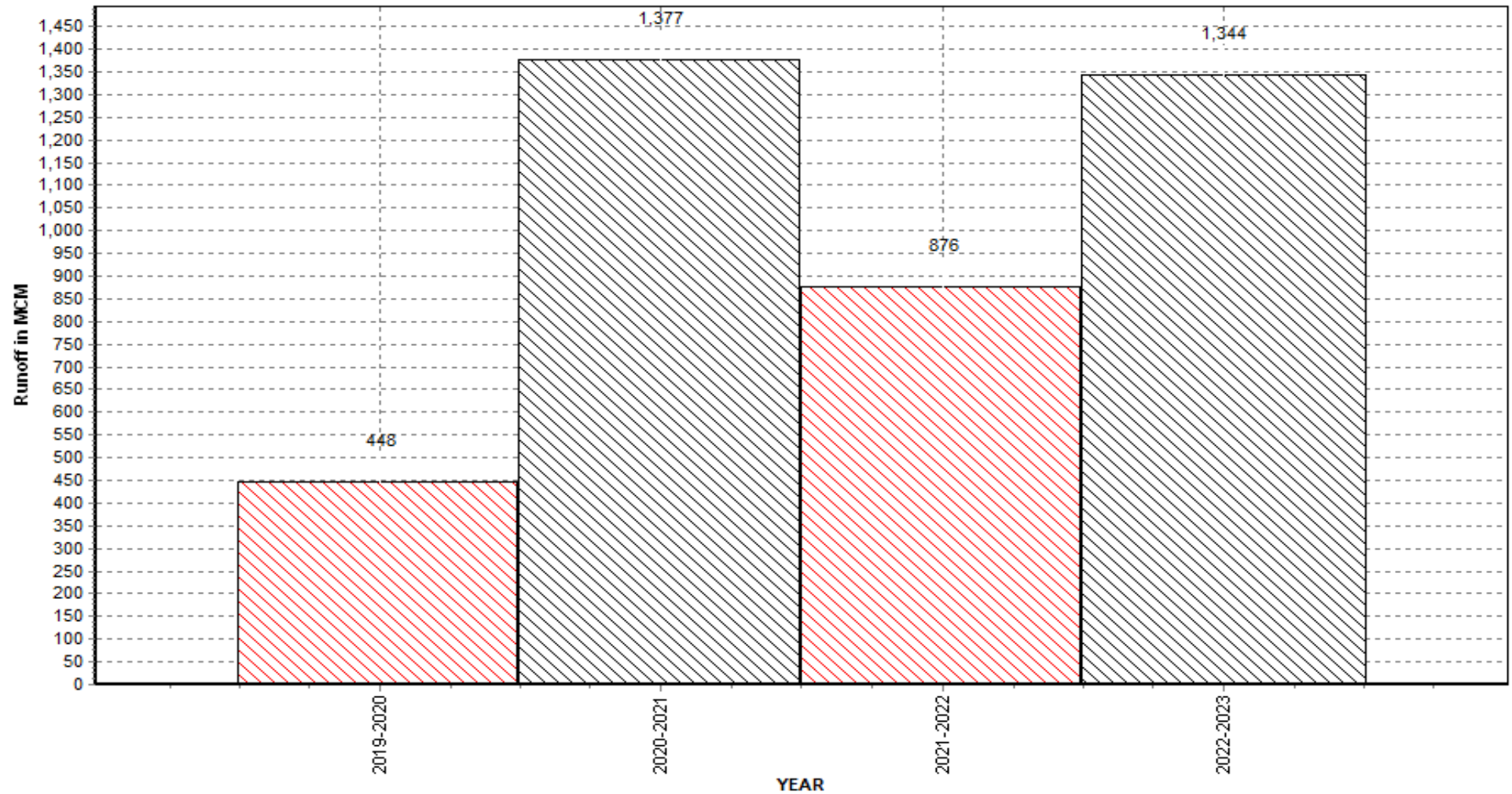
Annual Runoff Values for the period: 2019 - 2023

Station Name : VALIGONDA (040-LKDHYD)

Local River : Musi

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda



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

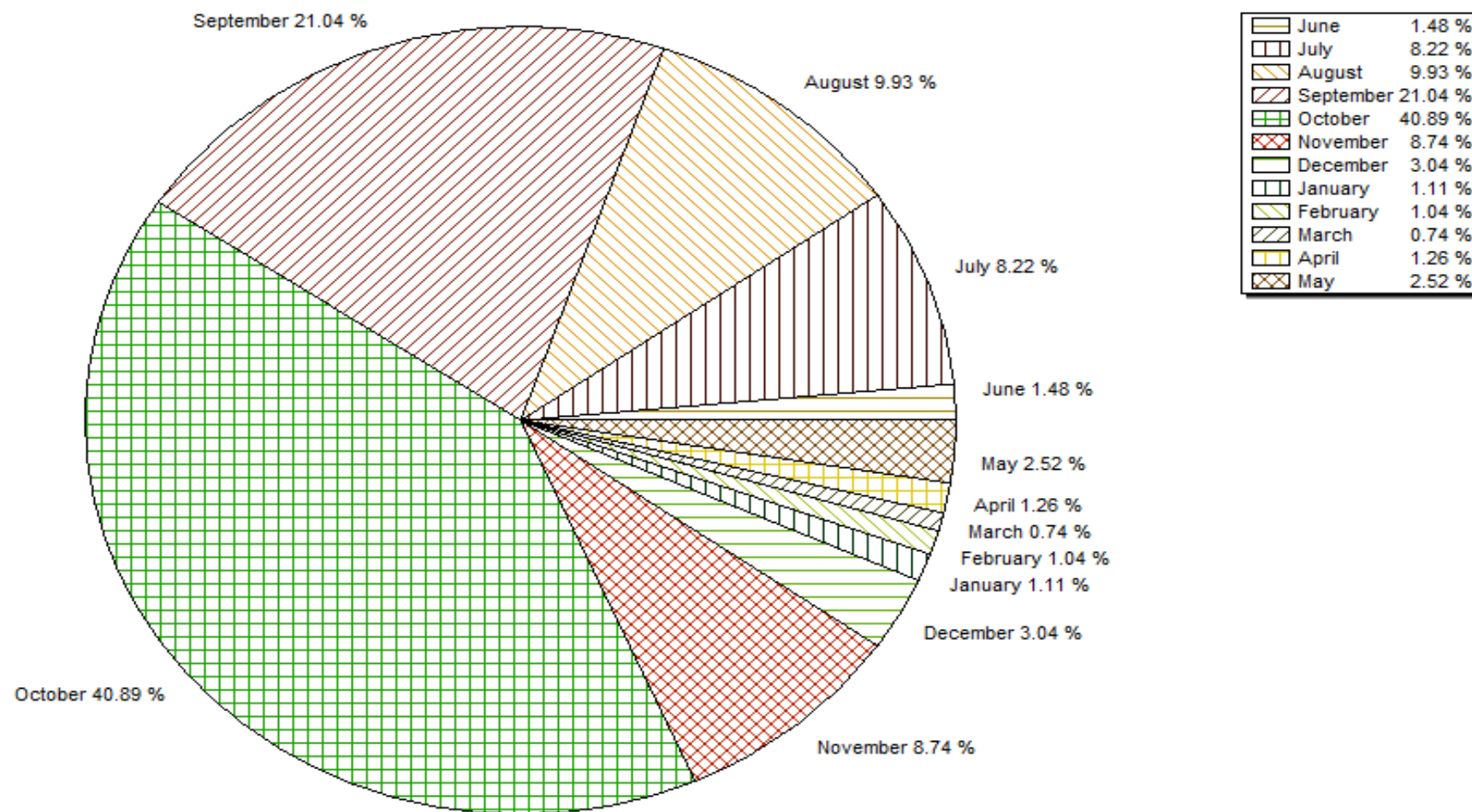
Monthly Average Runoff based on period : 2019-2022

Station Name : VALIGONDA (040-LKDHYD)

Local River : Musi

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda



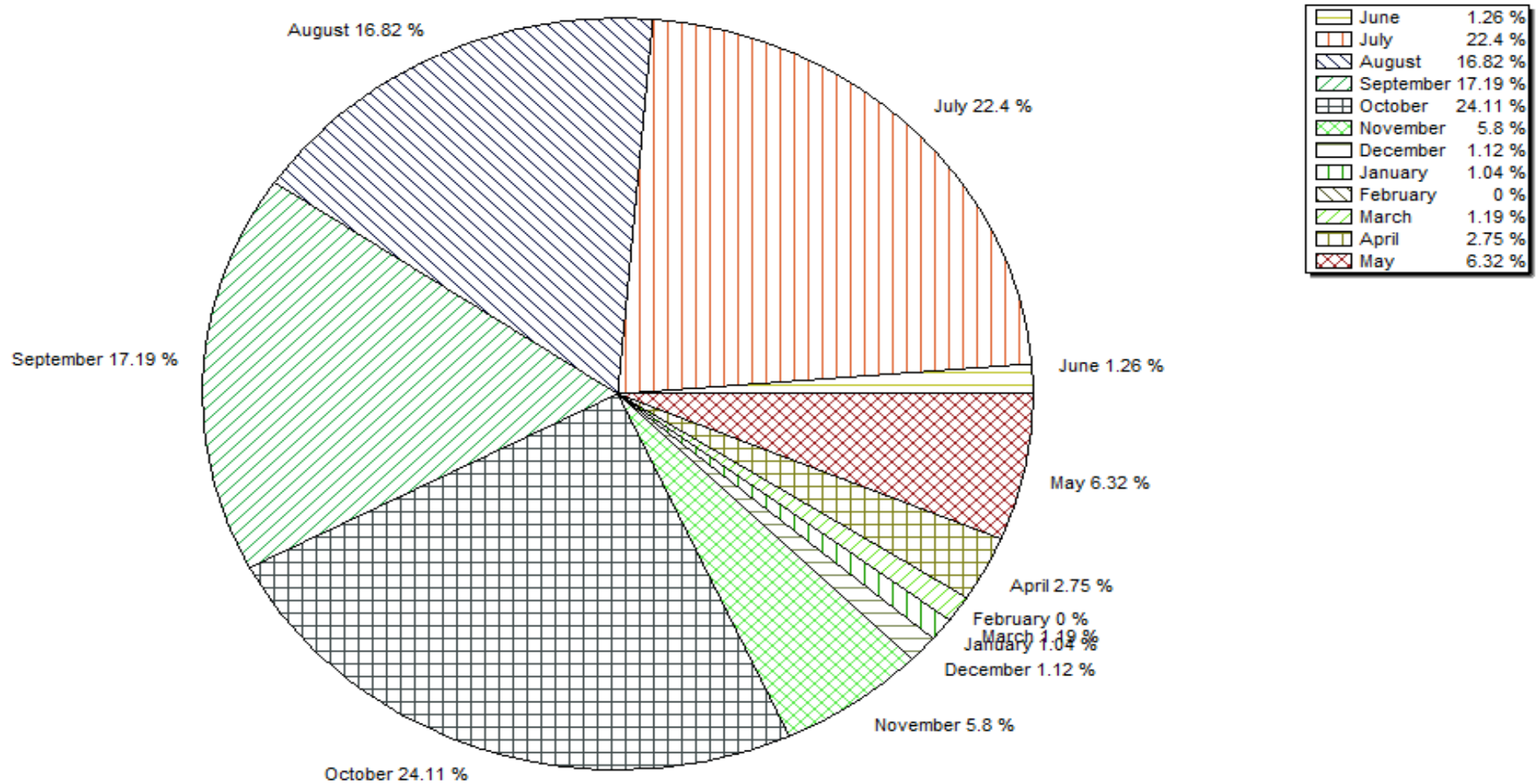
Monthly Runoff for the Year : 2022-2023

Station Name : VALIGONDA (040-LKDHYD)

Local River : Musi

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda



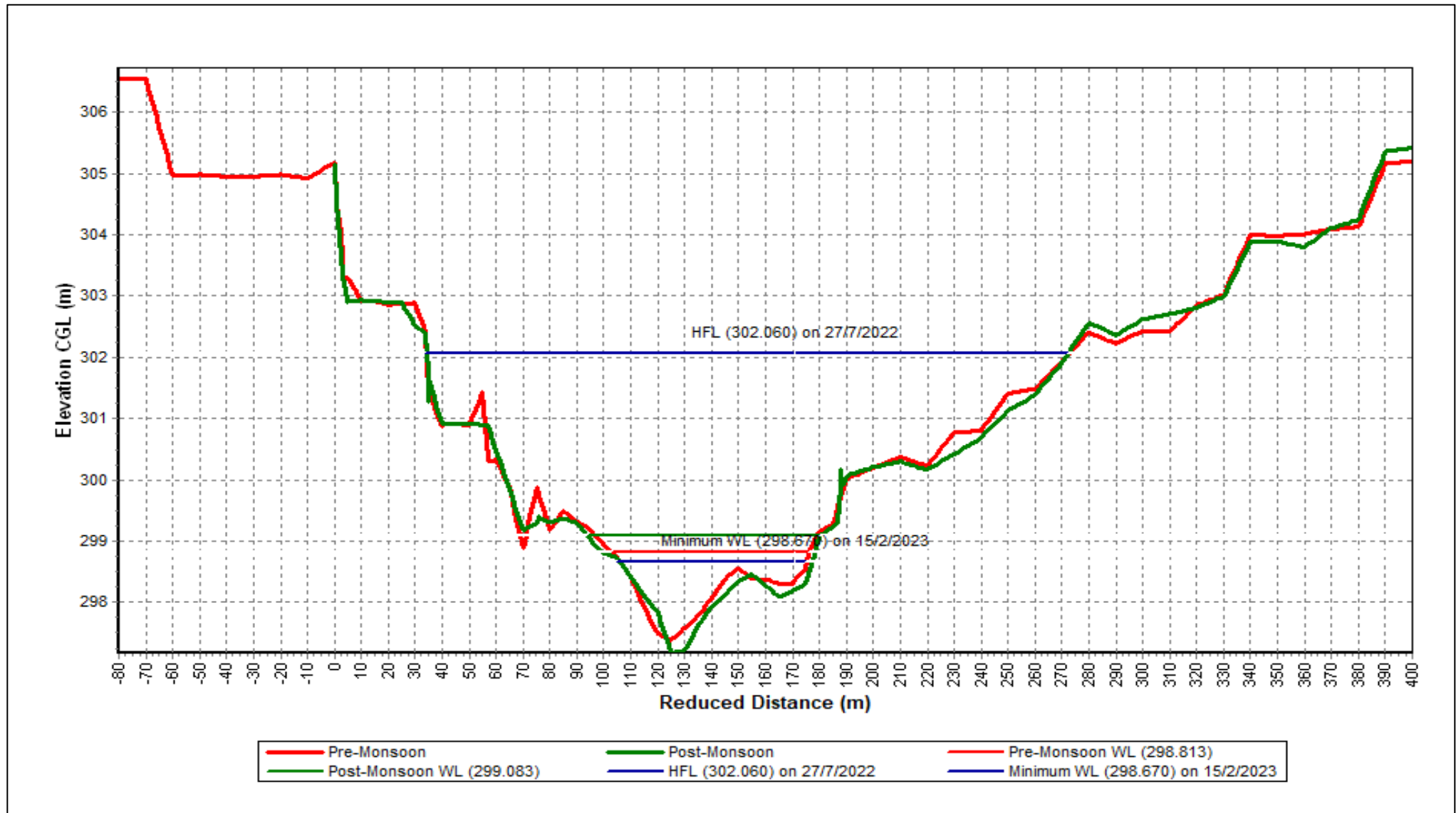
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : VALIGONDA (040-LKDHYD)

Local River : Musi

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD 1, Miryalguda



Zero of the Gauge: 297.5 (m.s.l)

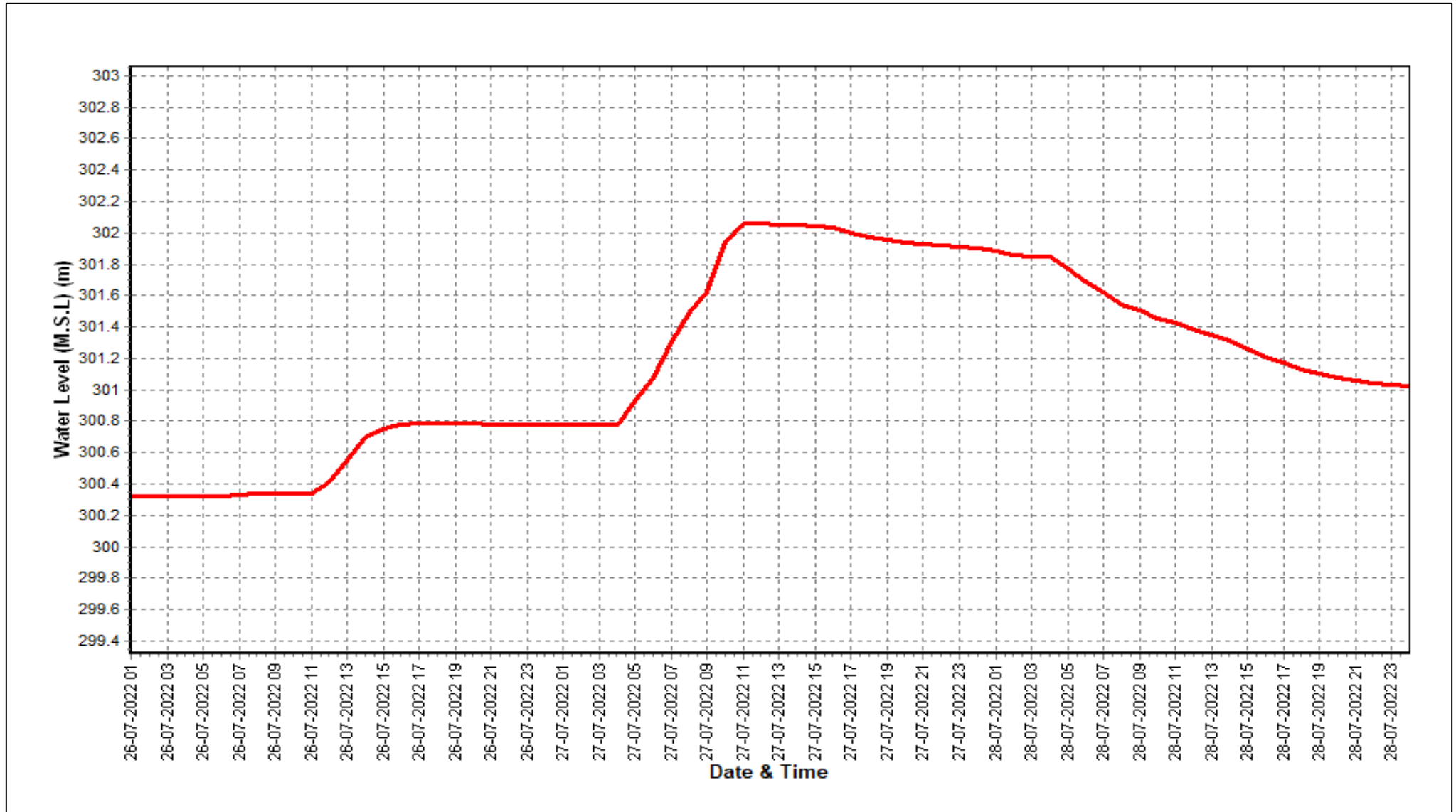
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : VALIGONDA (040-LKDHYD)

Local River : Musi

Division : Lower Krishna Divn., Hyderabad

Sub-Divn : Lower Krishna SD 1, Miryalguda



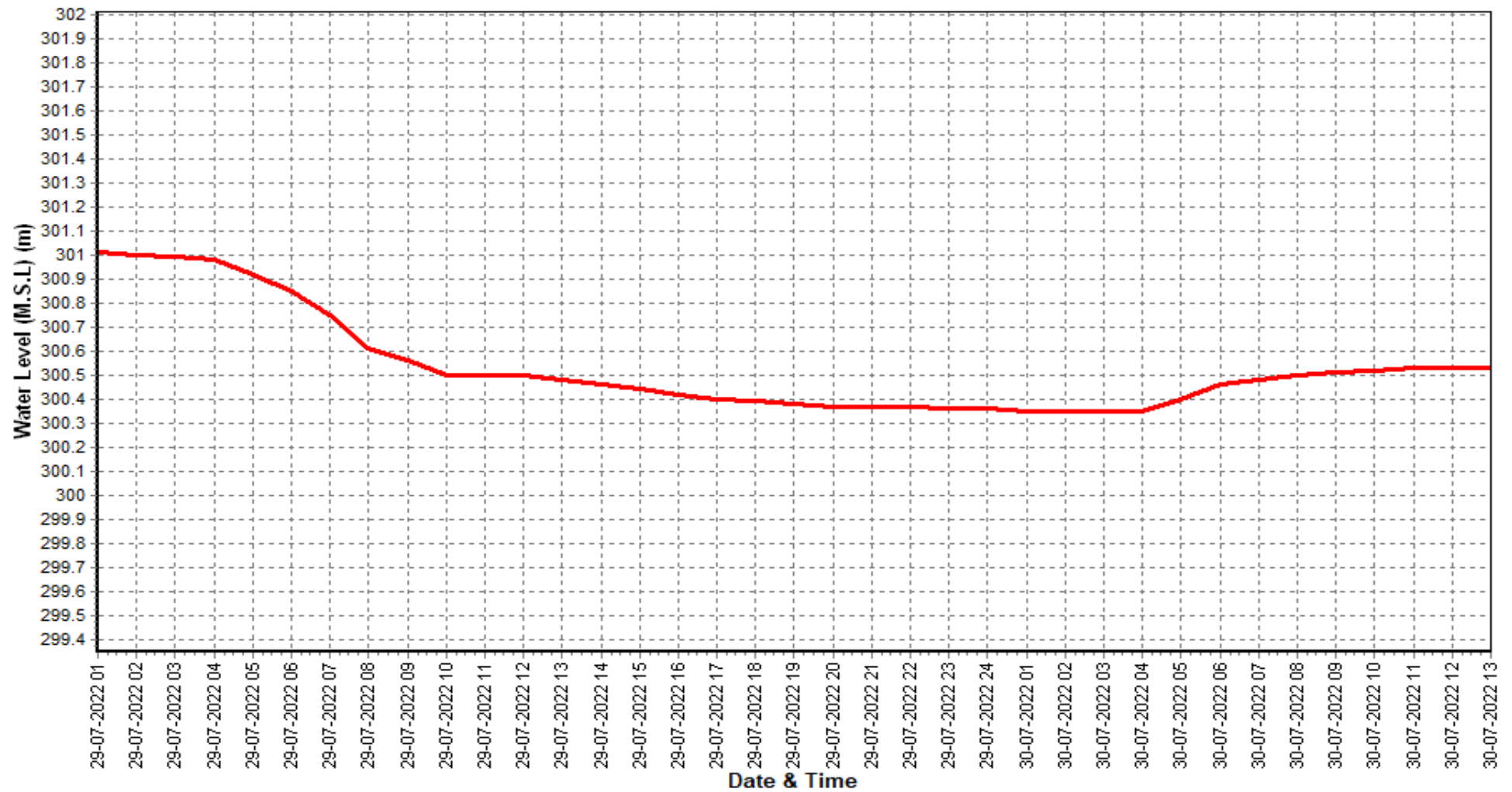
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : VALIGONDA (040-LKDHYD)

Local River : Musi

Divn : Lower Krishna Divn., Hyderabad

Sub-Divn : Lower Krishna SD 1,Miryalguda



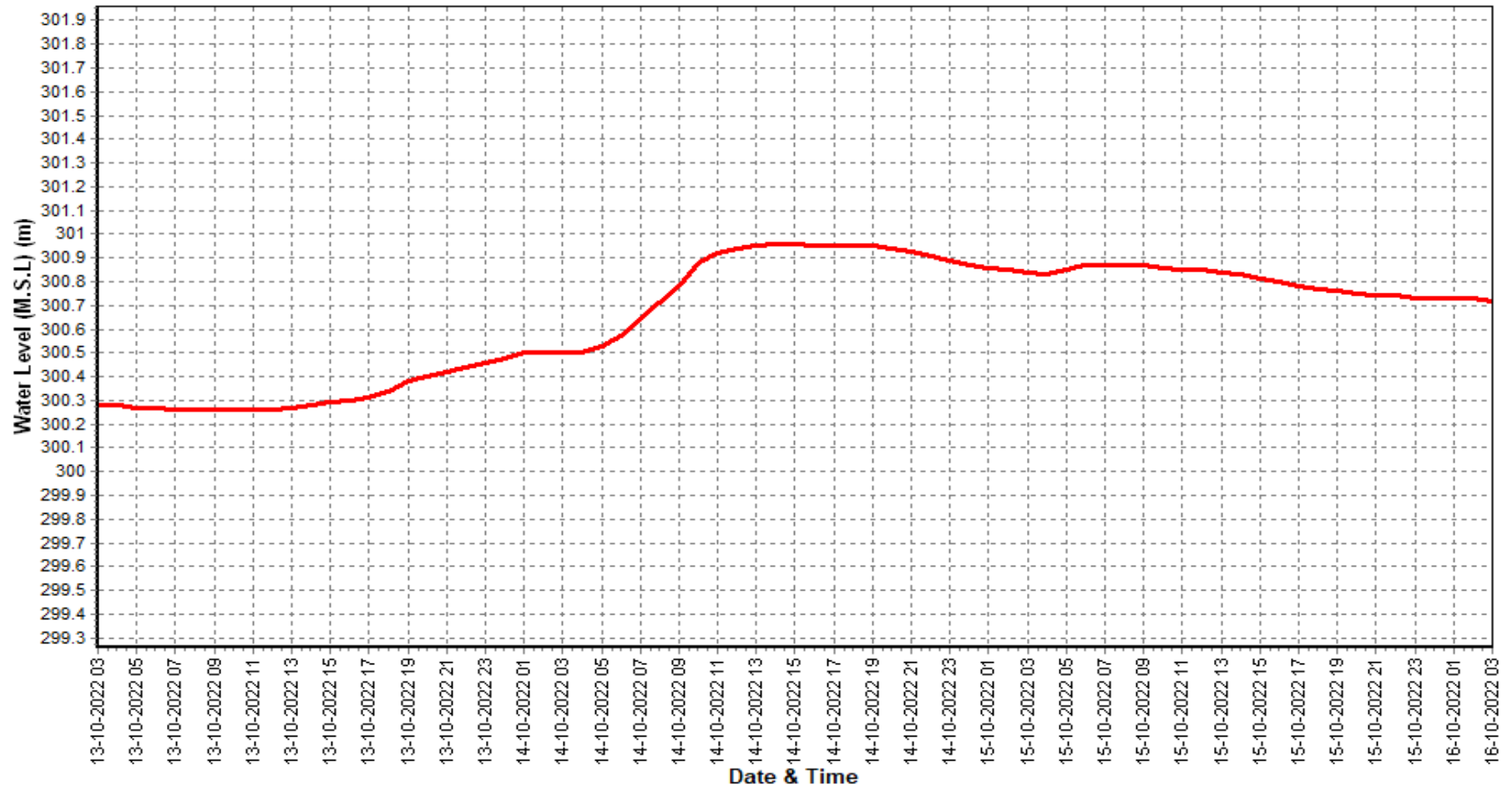
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : VALIGONDA (040-LKDHYD)

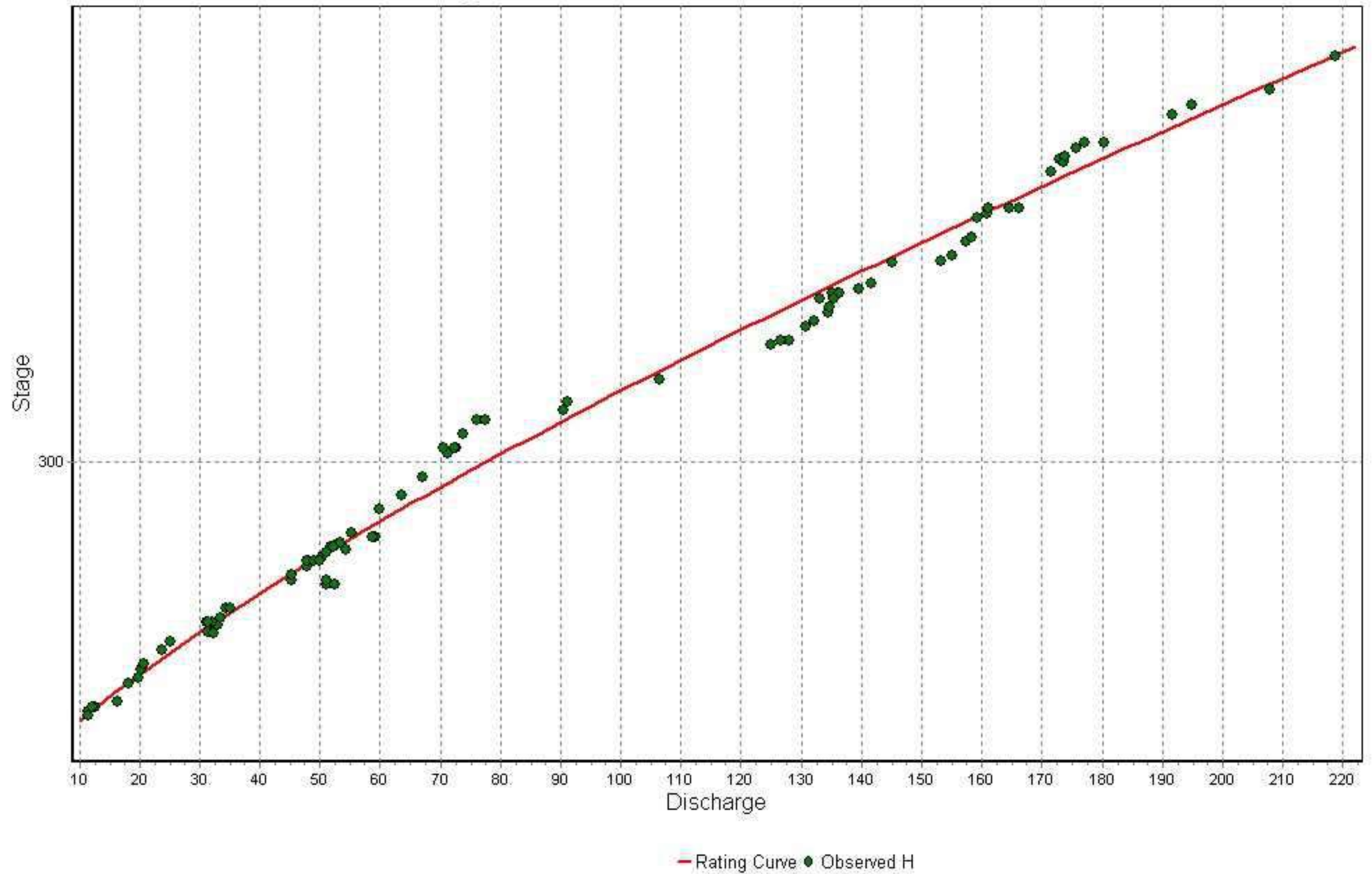
Local River : Musi

Division : Lower Krishna Divn., Hyderabad

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



Rating Curve of Site 01/08/2022 to 30/11/2022



HISTORY SHEET

Water Year : 2022-2023

Site : Wadenapally

Code : AK000D5

State : Andhra Pradesh

District : Nalgonda

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)
22.054 (m.s.l)01-01-1964 - 31-12-1999
01-01-2000

Opening Date

Closing Date

Gauge : 27-05-1964

HFL During 2022-23 : 35.954 m

Corres. Discharge : 13338 (Estimated)

Discharge : 10-12-1964

Date & Time of

occurrence : 16-10-2022

: 01:00 hrs.

Sediment : 01-12-1966

Water Quality : 01-01-1972

HFL Recorded so far in m : 42.494 dt 05-10-2009

Corresponding Discharge (cumecs) : 31836 *

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

Year	Maximum			Minimum		
	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	17560	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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	23.164	27-01-2016
2016-2017	4919	30.454	23-09-2016	0.000	23.674	11-07-2016
2017-2018	259.3	25.464	24-10-2017	0.658	23.404	10-07-2017
2018-2019	588.1	25.929	20-08-2018	0.000	24.784	12-08-2018
2019-2020	21419	39.854	16-08-2019	1.265	23.444	26-06-2019
2020-2021	16790	38.004	16-10-2020	0.000	25.054	21-08-2020
2021-2022	13848	36.254	06-08-2021	0.000	24.054	16-01-2022

Annual Runoff of Krishna at Wadenapalli

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1965-1966		2571	2571		91	91
2	1966-1967	28344	6661	35005	1002	235	1237
3	1967-1968	37915	4917	42832	1340	174	1513
4	1968-1969	24509	3030	27539	866	107	973
5	1969-1970	41191	2481	43672	1456	88	1543
6	1970-1971	44714	1905	46619	1580	67	1647
7	1971-1972	29421	1901	31322	1040	67	1107
8	1972-1973	10139	1307	11446	358	46	404
9	1973-1974	38291	1516	39807	1353	54	1407
10	1974-1975	32155	3845	36001	1136	136	1272
11	1975-1976	69282	4332	73614	2448	153	2601
12	1976-1977	30160	2032	32192	1066	72	1138
13	1977-1978	22236	3139	25375	786	111	897
14	1978-1979	45708	5188	50896	1615	183	1798
15	1979-1980	30298	4100	34398	1071	145	1215
16	1980-1981	35526	2564	38091	1255	91	1346
17	1981-1982	36102	4815	40917	1276	170	1446
18	1982-1983	14542	5129	19671	514	181	695
19	1983-1984	37428	3770	41198	1323	133	1456
20	1984-1985	11908	5166	17074	421	183	603
21	1985-1986	8228	2555	10783	291	90	381
22	1986-1987	8159	2633	10791	288	93	381
23	1987-1988	5738	3592	9330	203	127	330
24	1988-1989	30909	4456	35365	1092	157	1250
25	1989-1990	16511	5771	22282	583	204	787
26	1990-1991	30198	7860	38058	1067	278	1345
27	1991-1992	29502	6087	35589	1042	215	1258
28	1992-1993	9945	6591	16537	351	233	584
29	1993-1994	17913	8818	26731	633	312	945
30	1994-1995	38060	7464	45524	1345	264	1609
31	1995-1996	5533	3244	8776	196	115	310
32	1996-1997	14728	6058	20786	520	214	734
33	1997-1998	17848	3771	21619	631	133	764
34	1998-1999	30461	4974	35435	1076	176	1252
35	1999-2000	10453	4199	14652	369	148	518
36	2000-2001	6327	3186	9513	224	113	336
37	2001-2002	4393	2745	7137	155	97	252
38	2002-2003	3514	663	4177	124	23	148
39	2003-2004	1484	945	2429	52	33	86
40	2004-2005	3058	1206	4265	108	43	151
41	2005-2006	35327	2529	37856	1248	89	1338
42	2006-2007	32828	3052	35880	1160	108	1268
43	2007-2008	35114	3115	38229	1241	110	1351
44	2008-2009	12526	3232	15758	443	114	557
45	2009-2010	21622	3224	24846	764	114	878
46	2010-2011	14395	2723	17118	509	96	605
47	2011-2012	12454	1132	13586	440	40	480

48	2012-2013	1574	1216	2790	56	43	99
49	2013-2014	13279	2558	15837	469	90	560
50	2014-2015	6359	1359	7718	225	48	273
51	2015-2016	654	366	1019	23	13	36
52	2016-2017	2759	875	3634	98	31	128
53	2017-2018	641	969	1610	23	34	57
54	2018-2019	1274	594	1978	45	21	70
55	2019-2020	24829	976	25805	877	34	912
56	2020-2021	30758	1529	32287	1087	54	1141
57	2021-2022	15488	1229	16716	547	43	591
58	2022-2023	37375	1397	38772	1321	49	1370
Average		21265	3263	24163	751	116	867

Instantaneous Flood Peak of Krishna at Wadenapally

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1966-1967	35.364	05-08-1966	18:00:00	11140 *
2	1967-1968	38.635	06-08-1967	18:00:00	20016 *
3	1968-1969	33.154	14-08-1968	04:00:00	7152 *
4	1969-1970	37.204	08-08-1969	01:00:00	16486 *
5	1970-1971	36.634	23-09-1970	06:00:00	14596 *
6	1971-1972	32.974	07-09-1971	10:00:00	7122 *
7	1972-1973	30.894	18-07-1972	19:00:00	4313 *
8	1973-1974	33.594	18-07-1973	18:00:00	8333 *
9	1974-1975	38.064	29-09-1974	19:00:00	16473 *
10	1975-1976	38.624	13-10-1975	01:00:00	18962 *
11	1976-1977	36.514	11-08-1976	02:00:00	14408 *
12	1977-1978	33.384	02-08-1977	05:00:00	6737 *
13	1978-1979	38.064	02-10-1978	03:00:00	18256 *
14	1979-1980	37.534	30-09-1979	10:00:00	21560 *
15	1980-1981	36.634	14-07-1980	05:00:00	15450 *
16	1981-1982	35.354	24-09-1981	16:00:00	12919 *
17	1982-1983	32.624	31-08-1982	19:00:00	6540 *
18	1983-1984	37.064	22-08-1983	15:00:00	14393 *
19	1984-1985	30.994	21-08-1984	14:00:00	3832 *
20	1985-1986	29.004	14-08-1985	09:00:00	2101 *
21	1986-1987	29.714	13-08-1986	07:00:00	2675 *
22	1987-1988	29.204	05-11-1987	18:00:00	2196 *
23	1988-1989	36.484	29-09-1988	14:00:00	12959 *
24	1989-1990	36.124	02-10-1989	12:00:00	11930 *
25	1990-1991	36.184	24-08-1990	13:00:00	15540 *
26	1991-1992	36.394	03-08-1991	23:00:00	12693 *
27	1992-1993	32.104	12-09-1992	00:00:00	4913 *
28	1993-1994	35.134	12-10-1993	03:00:00	10144 *
29	1994-1995	36.974	23-07-1994	08:00:00	15575 *
30	1995-1996	28.294	19-10-1995	11:00:00	1581 *
31	1996-1997	37.284	04-10-1996	22:00:00	15740 *
32	1997-1998	36.734	01-09-1997	10:00:00	15214 *
33	1998-1999	41.144	16-10-1998	11:00:00	23689 *
34	1999-2000	33.394	14-08-1999	17:00:00	6212 *
35	2000-2001	33.744	24-08-2000	19:00:00	2957 *
36	2001-2002	31.954	01-10-2001	19:00:00	2414 *
37	2002-2003	27.264	17-08-2002	18:00:00	726.6 *
38	2003-2004	26.864	25-11-2003	18:00:00	388.2 *
39	2004-2005	28.334	05-10-2004	19:00:00	1178 *
40	2005-2006	37.884	11-08-2005	19:00:00	16793 *
41	2006-2007	37.554	16-08-2006	12:00:00	18000 *
42	2007-2008	36.904	20-09-2007	15:00:00	15956 *
43	2008-2009	32.874	17-09-2008	00:00:00	8408 *
44	2009-2010	42.494	05-10-2009	09:00:00	31836 *
45	2010-2011	32.194	08-10-2010	21:00:00	6021 *
46	2011-2012	35.924	09-09-2011	19:00:00	12951 *

47	2012-2013	26.234	29-11-2012	21:00:00	366.0 *
48	2013-2014	35.704	26-10-2013	08:00:00	13434 *
49	2014-2015	30.754	16-09-2014	06:00:00	4272 *
50	2015-2016	25.604	22-10-2015	08:00:00	229.4 *
51	2016-2017	32.554	23-09-2016	17:00:00	4919 *
52	2017-2018	25.554	24-10-2017	19:00:00	259.3 *
53	2018-2019	26.054	20-08-2018	16:00:00	588.1 *
54	2019-2020	40.624	16-08-2019	15:00:00	21419 *
55	2020-2021	40.154	16-10-2020	17:00:00	22098 *
56	2021-2022	36.454	16-08-2021	16:00:00	14158 *
57	2022-2023	35.954	16-10-2022	01:00:00	13338 *

Stage-Discharge Data for the period 2022 - 2023

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	23.854	13.53	24.554	95.60	25.454	294.0	28.254	1604	29.304	2712	26.804	836.5
2	23.854	14.49	24.554	93.14	25.504	338.4	31.254	5047	29.304	2562 *	27.504	1172
3	23.854	15.11	24.554	90.89 *	25.554	371.6	30.454	3735	29.304	2712	26.804	843.6
4	23.854	15.74	24.154	36.63	25.554	378.1	29.354	2608 *	29.504	2869	26.454	748.8
5	23.854	15.74 *	23.954	24.15	25.654	335.1	30.454	3735	31.704	5340 *	27.704	1336
6	23.854	15.70	23.854	16.58	25.904	372.6	30.454	3735	27.404	1145	26.754	809.3 *
7	23.854	16.50	24.204	40.85	26.854	853.2 *	29.304	2712	28.504	1928	26.354	709.7
8	23.854	15.40	23.904	17.27	27.404	1170	33.904	8748	31.854	5553 *	27.654	1310 *
9	24.454	63.79	24.704	117.1 *	28.254	1699 *	35.054	11734	29.304	2562 *	26.704	775.5
10	24.454	64.91	24.554	90.89 *	28.104	1671	35.304	11842 *	30.904	4148	26.804	833.2
11	24.454	64.90 *	24.554	95.00	29.654	3111	34.404	9937 *	29.304	2712	25.954	465.3 #
12	24.454	64.90 *	24.354	41.21	35.554	12629	30.904	4147	29.954	3361	26.354	625.5 *
13	24.454	64.55	24.354	42.29	34.154	9442 *	33.404	8041	30.454	3736	25.854	428.9 *
14	24.454	63.42	24.354	42.02	34.154	9442 *	33.154	7194	33.904	8748	25.654	387.2 #
15	24.454	62.46	24.454	57.35	33.404	8043 *	33.154	7194	34.904	11470	25.654	387.2 #
16	23.954	16.24	24.354	44.36	33.404	8038	33.904	8748	35.854	13101 *	25.704	394.2
17	23.954	16.66	23.904	15.61 *	34.254	9969	33.904	8748	33.154	7195	25.704	404.4
18	23.954	16.79	23.954	19.28	33.154	7195	32.554	6612 *	31.754	5330	25.104	243.6
19	23.954	16.50 *	24.054	37.25	30.704	3962	29.304	2712	33.904	8748	24.754	134.2
20	24.054	58.89	24.054	36.78	30.704	3962	30.704	3962	30.454	3736	25.354	269.3 *
21	24.454	79.17	23.904	25.14	31.554	5132 *	33.404	8041	29.954	3361	25.354	267.8
22	24.454	76.65	23.904	23.67	30.154	3470	31.754	5330	32.804	6757	24.854	150.6
23	24.374	79.31	25.454	0.000	26.954	902.7 #	27.304	1044	32.804	7016 *	24.704	118.1
24	24.504	79.54	27.154	1017 *	26.404	649.8 #	27.154	1085	33.554	8312 *	24.704	113.7
25	24.554	98.11	26.034	382.8	28.804	2408	27.704	1327 *	32.804	6757	24.704	111.2
26	24.904	157.3 *	25.654	326.6	27.304	1054	27.354	1156	30.904	4148	25.554	330.4
27	24.904	185.3	25.654	331.7	28.354	1783	27.654	1240	26.554	800.5	25.554	328.7 *
28	24.869	157.8	25.654	358.3	31.804	5482 *	27.754	1363	28.554	1873	24.654	97.23
29	24.504	79.77	25.654	354.0	32.804	6756	27.754	1357	27.654	1304	24.654	93.84
30	24.404	72.16	26.154	703.3	34.554	10070	28.674	2200	27.654	1296 *	25.554	322.4
31			25.654	360.6 *	26.254	589.1 *			27.404	1028		
Ten-Daily Mean												
I Ten-Daily	23.974	25.09	24.299	62.31	26.424	748.3	31.379	5550	29.709	3153	26.954	937.4
II Ten-Daily	24.214	44.53	24.239	43.11	32.914	7579	32.539	6730	32.364	6814	25.609	374.0
III Ten-Daily	24.593	106.5	25.534	353.0	29.540	3481	28.651	2414	30.059	3877	25.029	193.4
Monthly												
Min.	23.854	13.53	23.854	0.000	25.454	294.0	27.154	1044	26.554	800.5	24.654	93.84
Max.	24.904	185.3	27.154	1017	35.554	12629	35.304	11842	35.854	13101	27.704	1336
Mean	24.260	58.71	24.718	159.3	29.623	3922	30.856	4898	30.689	4591	25.864	501.6

Annual Runoff in MCM = 38772 Annual Runoff in mm = 165

Peak Observed Discharge = 12629 cumecs on 12-08-2022 Corres. Water Level :35.554 m

Lowest Observed Discharge = 0.000 cumecs on 23-07-2022 Corres. Water Level :25.454 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 2022 - 2023

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	25.004	193.0 #	24.954	179.3 *	24.554	77.37	24.704	104.4	24.754	130.6	23.804	16.23
2	24.704	107.2	24.654	91.54	24.554	79.27	24.804	136.7	24.804	139.5 *	23.804	15.82
3	25.854	448.2	24.554	82.77	24.554	79.54	24.554	76.77	24.804	143.2	23.804	15.97
4	25.154	235.3 *	24.554	81.48	24.554	80.49	24.554	77.69	24.704	114.2 *	24.554	71.31
5	25.154	239.8	24.554	80.16	24.754	126.7 *	24.704	114.2 *	24.554	73.19	24.554	70.10 *
6	25.154	240.3	24.554	82.53	24.804	158.1	24.404	49.44	24.554	75.42	24.154	27.32
7	24.654	94.53	24.554	78.90	24.804	147.7	24.404	46.19	24.654	101.9 *	23.954	18.90 *
8	24.654	94.06	24.554	78.34 *	24.804	143.9	24.404	47.24	24.454	56.14 *	24.154	27.89
9	24.654	91.36	23.854	17.31 #	24.654	90.20	24.404	48.24	24.804	139.5 *	23.804	15.45
10	24.654	101.9 *	24.804	154.0	24.554	76.71	24.404	45.98	24.854	150.9	23.804	13.40
11	24.654	101.9 *	24.804	151.0	24.554	78.34 *	24.404	45.65 *	24.854	150.9	23.804	13.80
12	24.654	90.53	24.804	146.7	24.554	78.34 *	24.404	45.65 *	24.854	153.9	23.804	16.18
13	24.654	87.93	24.804	139.5 #	24.554	81.10	23.954	17.93 #	24.854	155.2	23.804	14.66 *
14	24.914	186.9	24.804	139.5 *	24.554	78.83	24.404	48.52	24.854	152.5 *	23.804	14.66 *
15	24.914	191.2	24.804	139.5 *	24.554	80.08	24.404	48.68	24.854	148.5	23.804	15.82
16	24.654	91.50	24.704	106.5	24.554	79.86	24.554	77.92	24.654	101.9 *	23.804	15.98
17	24.654	90.56	24.554	81.01	24.704	107.1	24.554	77.41	24.554	72.56	23.804	15.36
18	24.654	101.9 *	24.554	78.73	24.704	107.1	23.954	17.44 #	24.554	73.44	23.804	15.51
19	24.654	87.37	24.554	81.52	24.704	114.2 *	24.004	20.00 *	24.554	73.50	23.654	12.48
20	24.654	88.57	24.554	81.18	24.554	80.03	24.004	20.80	24.554	77.17	23.654	12.09
21	24.914	186.1	24.554	79.94	24.554	76.87	24.404	48.02	24.404	47.78	23.654	13.84 *
22	25.199	256.1	24.554	78.34 *	23.954	17.28	24.554	78.34 *	24.404	45.65 *	23.654	12.49
23	24.914	187.2	24.554	82.22	24.404	48.37	24.554	78.58	24.404	45.65 *	23.654	12.64
24	24.914	185.9	24.554	79.41	24.404	49.20	24.554	78.63	24.404	47.78	23.654	13.34
25	24.914	168.5 *	24.704	108.8	24.654	89.69	24.554	79.50	24.404	48.65	23.654	13.64
26	24.914	189.6	24.754	126.7 *	24.704	114.2 *	24.554	78.34 *	24.354	37.02	23.654	13.48
27	24.954	194.9	24.804	149.3	24.704	105.8	24.554	78.05	23.804	14.47	23.654	14.06
28	24.974	195.0	24.804	150.9	24.704	107.9	24.554	72.83	23.804	14.39	23.654	13.84 *
29	24.974	192.4	24.804	139.5 *			24.554	73.02	23.804	14.09	23.654	14.27
30	24.974	193.3	24.654	88.31			24.554	78.34 *	23.804	16.00 *	23.654	14.50
31	25.364	280.2	24.554	78.53			24.554	72.77			23.654	14.64
Ten-Daily Mean												
I Ten-Daily	24.964	184.6	24.559	92.64	24.659	106.0	24.534	74.68	24.694	112.5	24.039	29.24
II Ten-Daily	24.706	111.8	24.694	114.5	24.599	88.49	24.264	42.00	24.714	116.0	23.774	14.65
III Ten-Daily	25.001	202.7	24.663	105.6	24.510	76.17	24.540	74.22	24.159	33.15	23.654	13.70
Monthly												
Min.	24.654	87.37	23.854	17.31	23.954	17.28	23.954	17.44	23.804	14.09	23.654	12.09
Max.	25.854	448.2	24.954	179.3	24.804	158.1	24.804	136.7	24.854	155.2	24.554	71.31
Mean	24.894	167.5	24.639	104.3	24.595	91.23	24.449	63.98	24.522	87.19	23.817	19.02

Peak Computed Discharge = 13101 cumecs on 16-10-2022

Corres. Water Level :35.854 m

Lowest Computed Discharge = 13.84 cumecs on 21-05-2023

Corres. Water Level :23.654 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 : 2022-2023

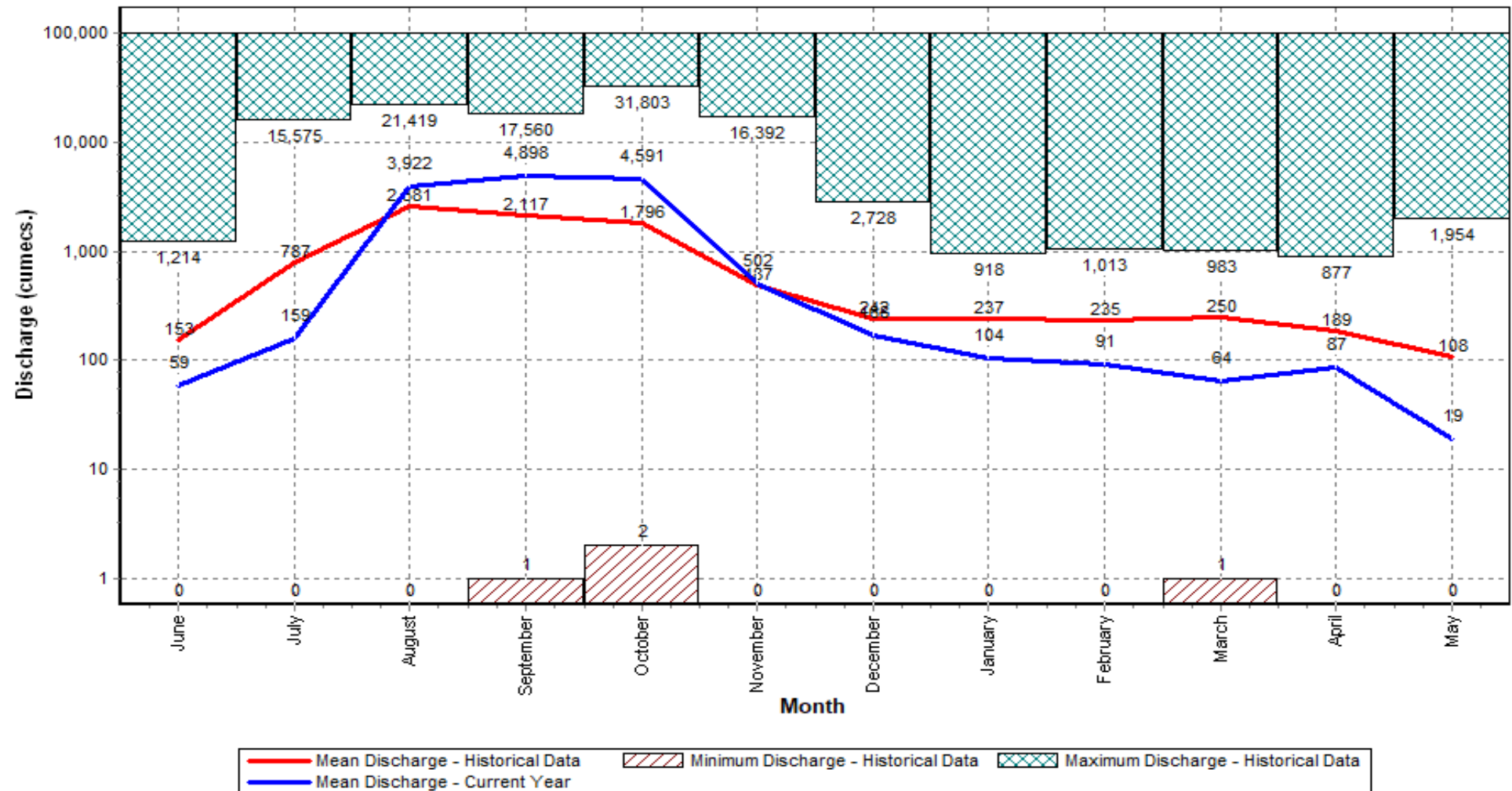
Station Name : Wadenapally (AK000D5)

Data considered : 1966-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

Sub-Division : Lower Krishna SD2, Vijayawada



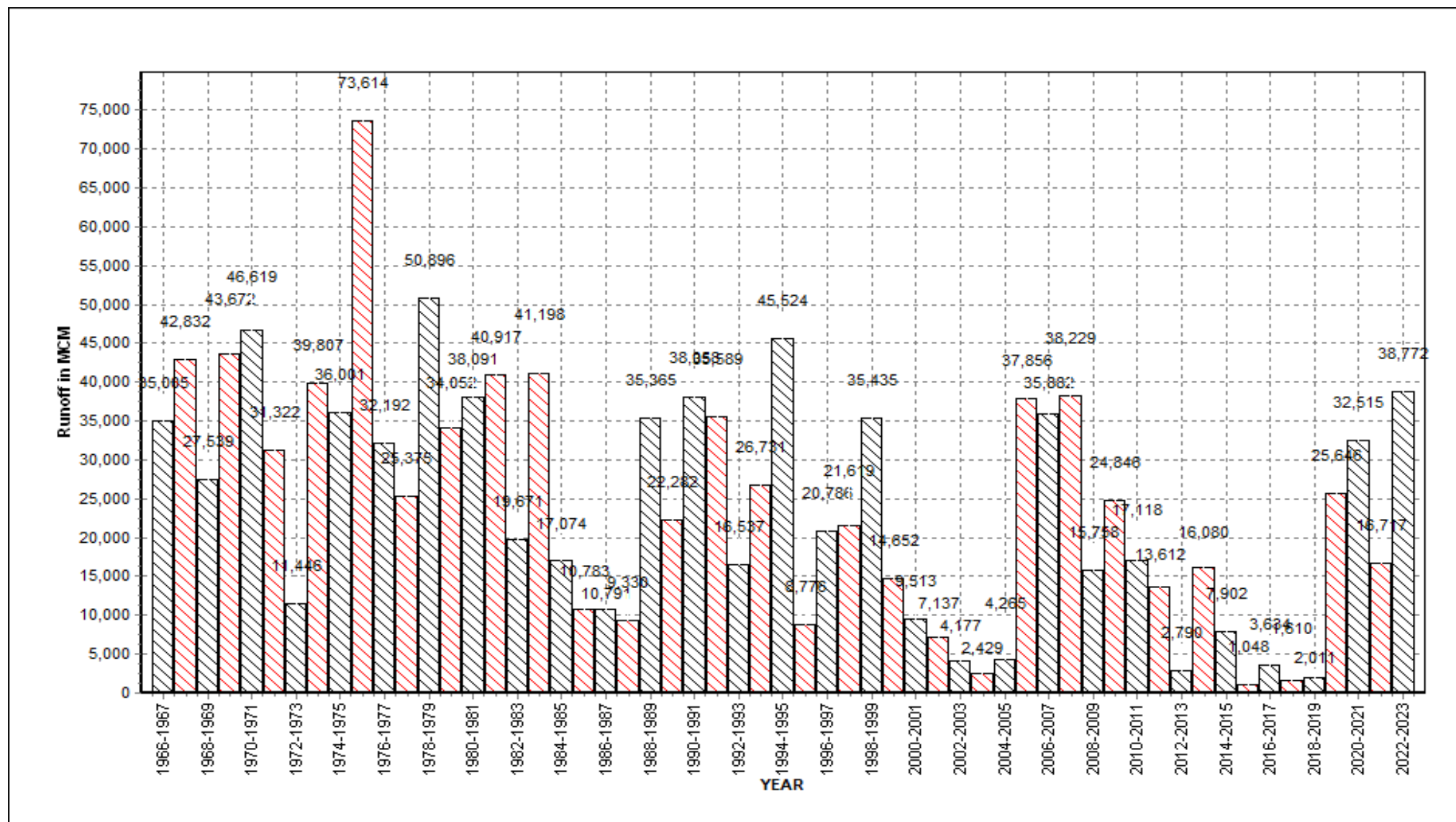
Annual Runoff Values for the period: 1966 - 2023

Station Name : Wadenapally (AK000D5)

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

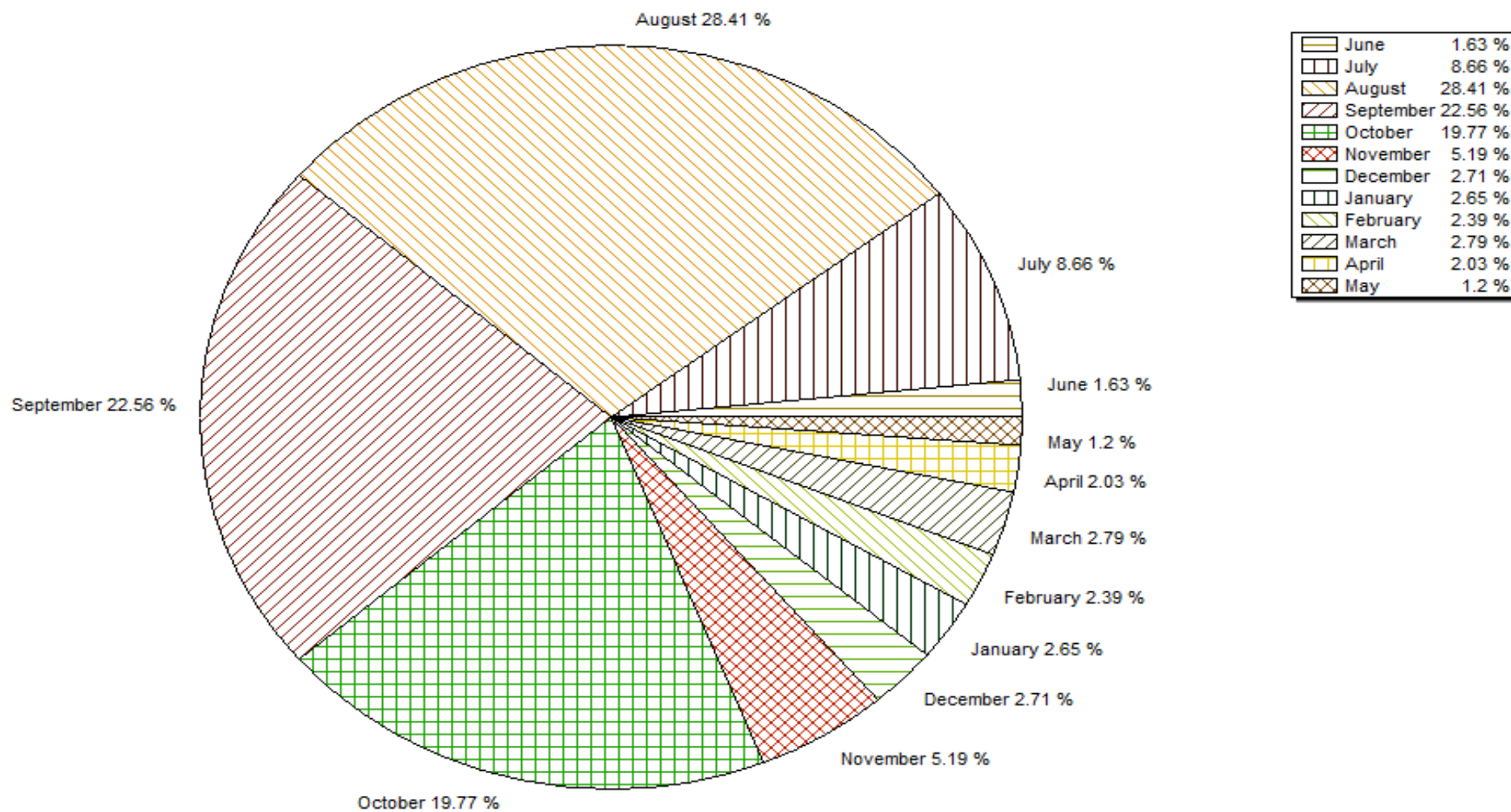
Monthly Average Runoff based on period : 1966-2022

Station Name : Wadenapally (AK000D5)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



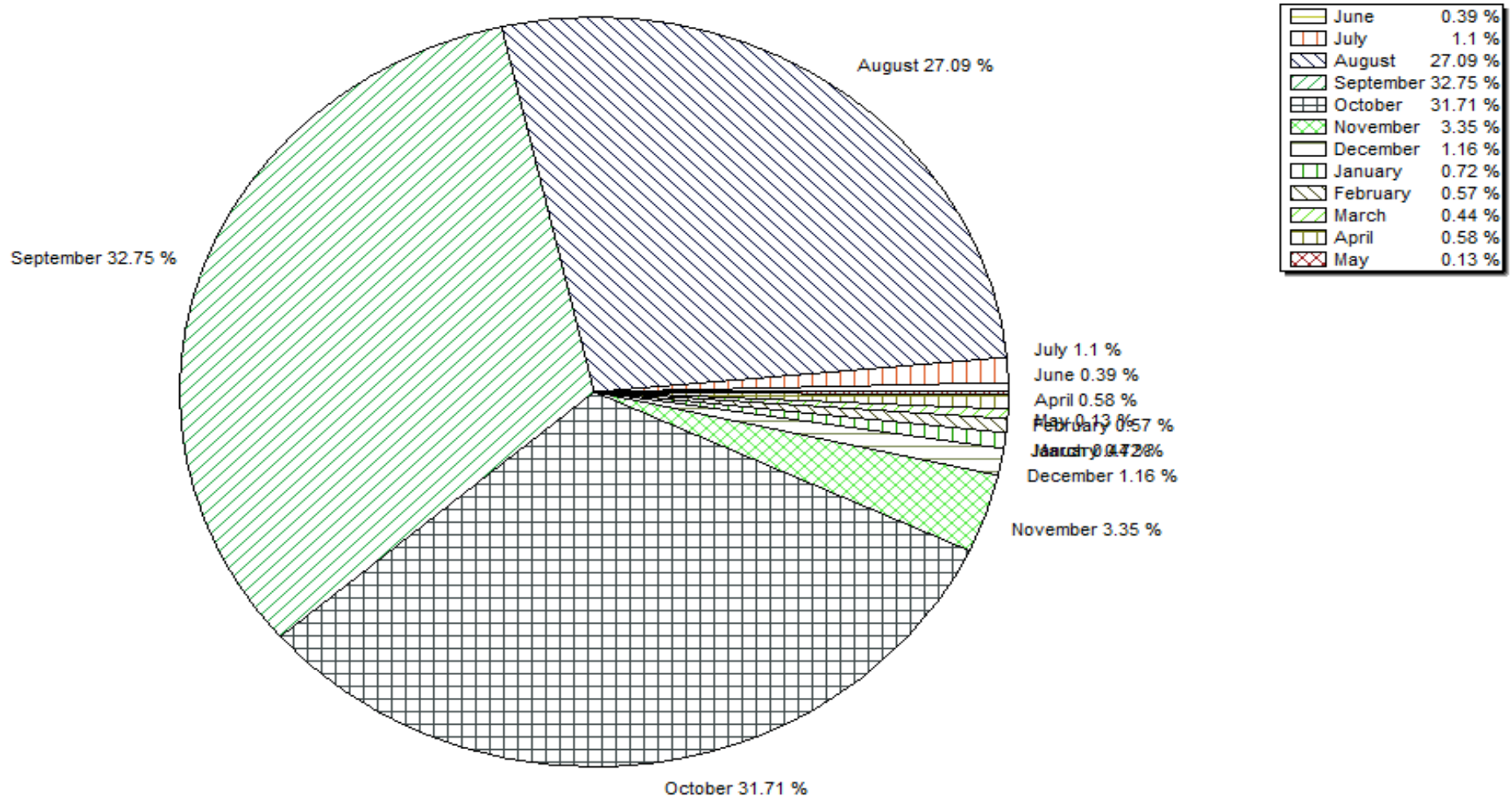
Monthly Runoff for the Year : 2022-2023

Station Name : Wadenapally (AK000D5)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



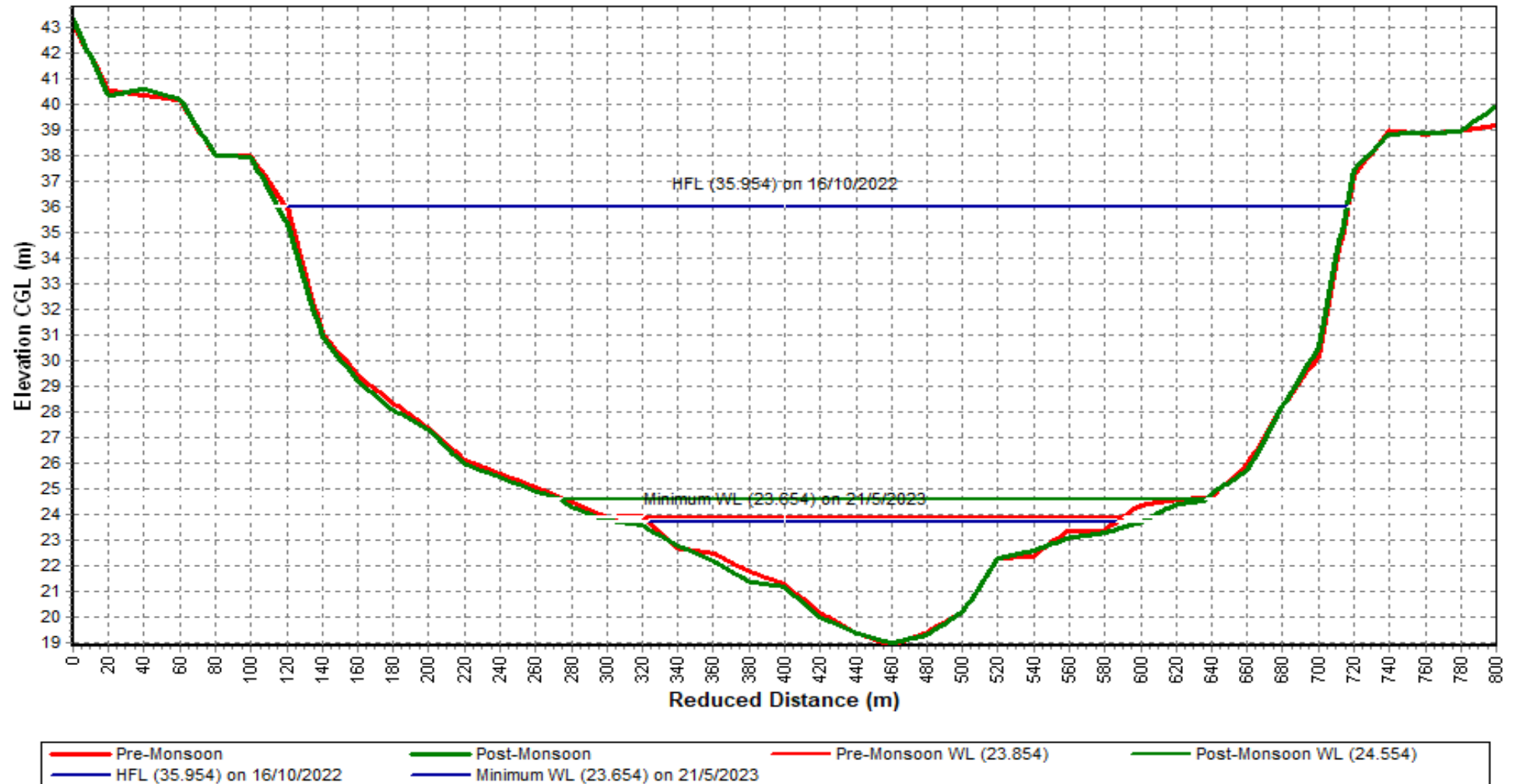
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Wadenapally (AK000D5)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



Zero of the Gauge: 22.054 (m.s.l)

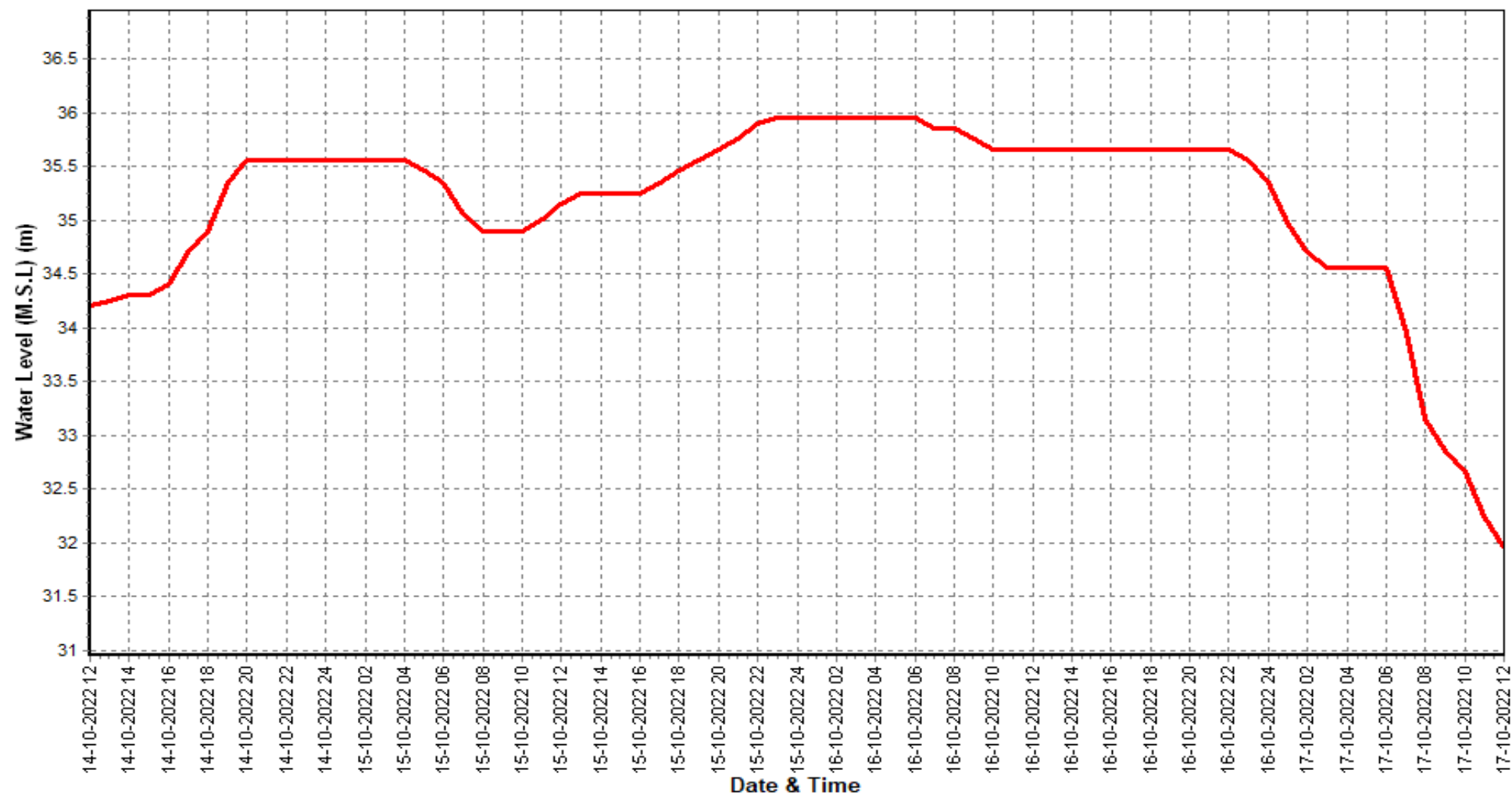
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Wadenapally (AK000D5)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



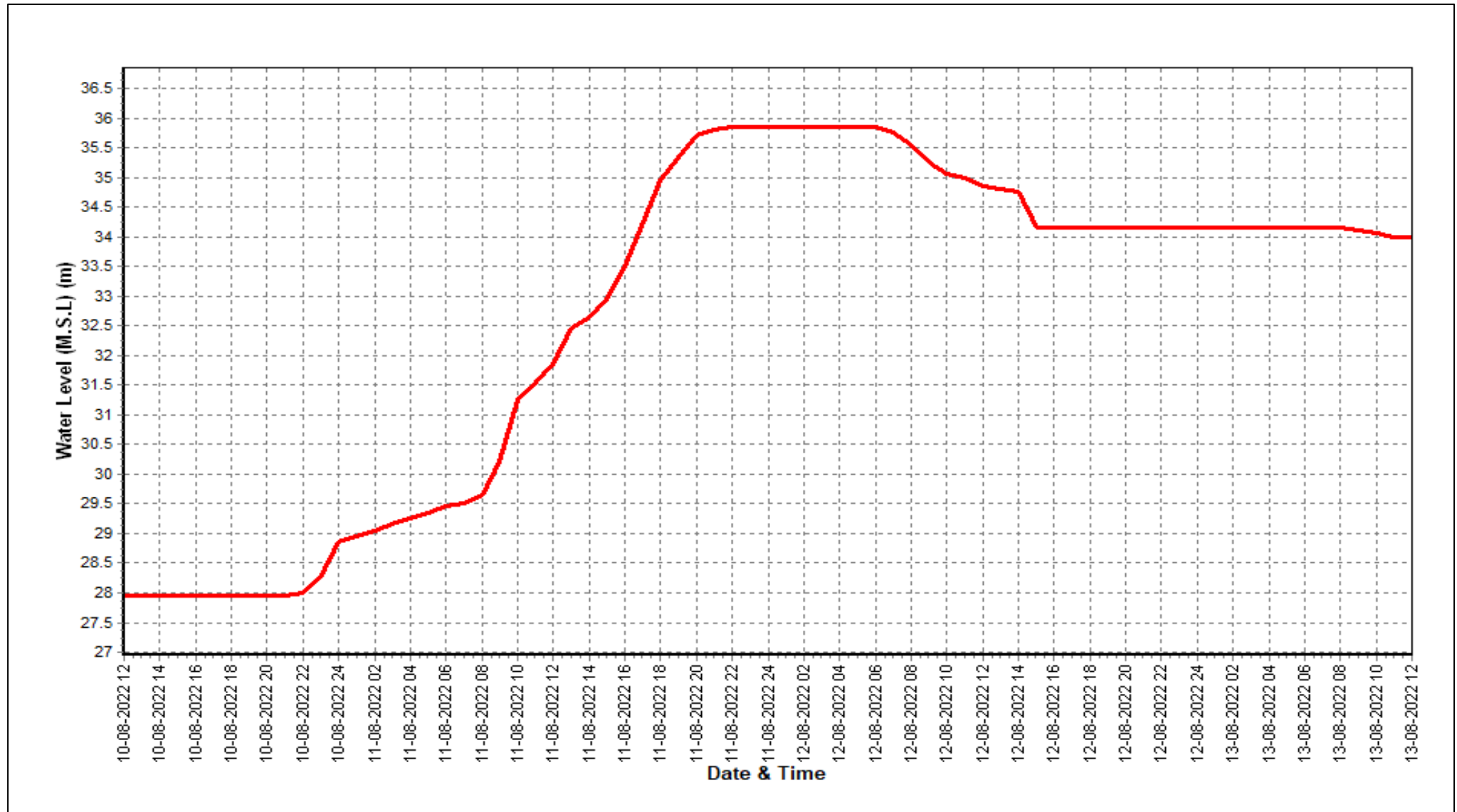
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Wadenapally (AK000D5)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



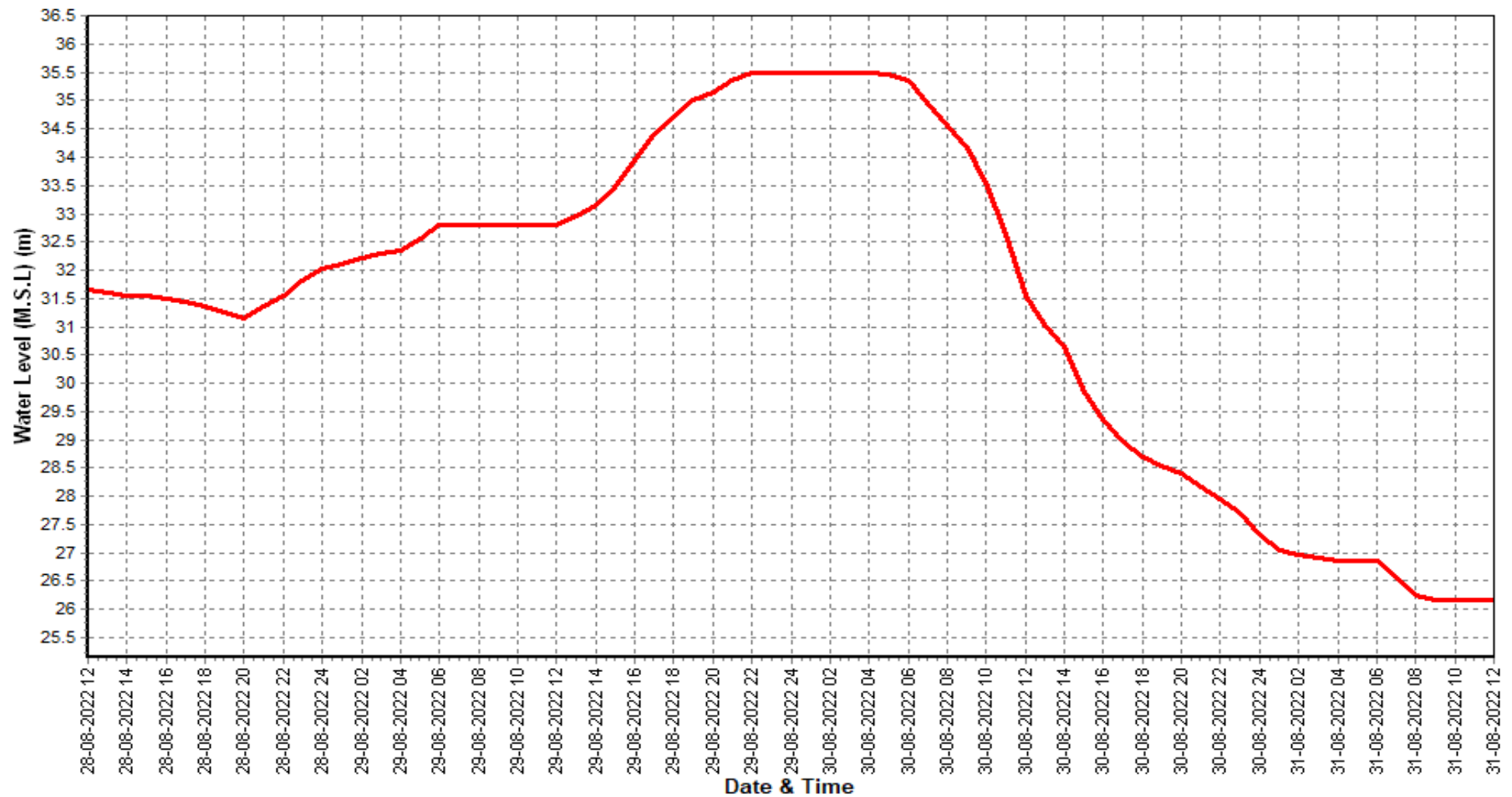
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Wadenapally (AK000D5)

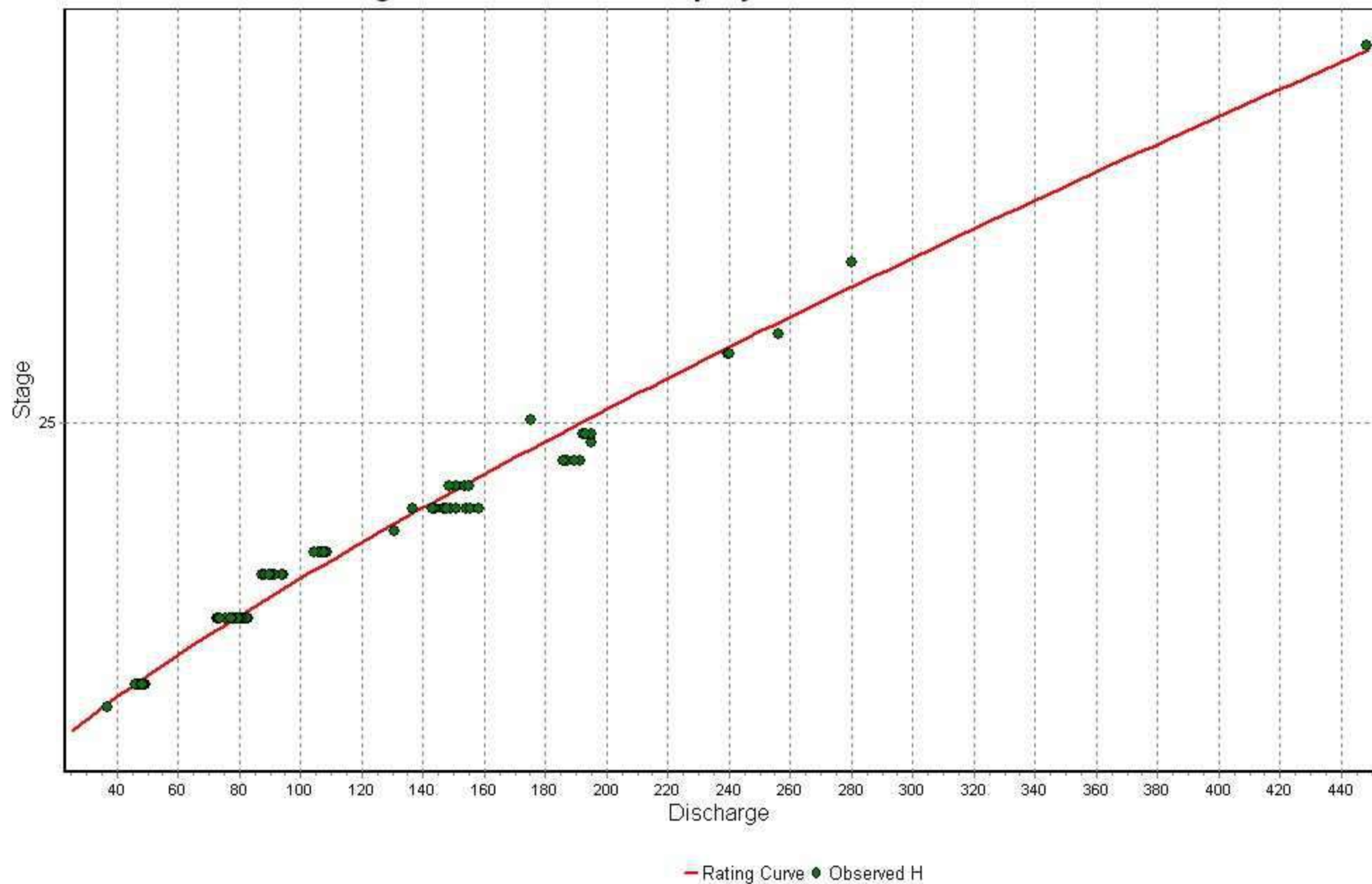
Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



Rating Curveo of Site Wadenapally 01/12/2022 to 30/04/2023



HISTORY SHEET

		Water Year	: 2022-2023
Site	: paleru Bridge	Code	: AKC00D3
State	: Andhra Pradesh	District	
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)	: 73.232 (m.s.l) : 71.367 (m.s.l) : 71.857 (m.s.l) : 70.357 (m.s.l)	01-06-1964 21-09-1964 01-06-1970 01-01-2000	- 20-09-1964 - 31-05-1970 - 31-12-1999
	Opening Date	Closing Date	
Gauge	: 18-05-1964	HFL During 2022-23	: 75.927 m
		Corres. Discharge	: 603 (Estimated)
Discharge	: 01-07-1964	Date & Time of occurrence	: 23-07-2022 : 11.00 hrs.
Sediment	: 01-03-2014		
Water Quality	: 01-06-1992		

HFL Recorded so far in m : 78.877 dt 23-07-1989

Corresponding Discharge (cumecs) : 2828*

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

Year	Maximum			Minimum		
	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	227.0	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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
2016-2017	22.99	72.452	24-09-2016	0.000		31-05-2017
2017-2018	12.65	72.117	28-04-2018	0.000	71.517	03-11-2017
2018-2019	416.1	74.672	20-08-2018	0.000	71.367	07-08-2018
2019-2020	46.72	73.072	19-09-2019	0.000	71.537	22-07-2019
2020-2021	584.3	75.957	15-10-2020	0.000	71.607	11-06-2020
2021-2022	332.7	74.857	01-09-2021	1.597	71.407	06-08-2021

Annual Runoff of Paleru at Paleru Bridge

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1965-1966	176	6	182	6	0	6
2	1966-1967	20	3	23	1	0	1
3	1967-1968	118	3	121	4	0	4
4	1968-1969	9	72	81	0	3	3
5	1969-1970	212	113	324	7	4	11
6	1970-1971	407	25	432	14	1	15
7	1971-1972	54	15	69	2	1	2
8	1972-1973	47	13	60	2	0	2
9	1973-1974	109	21	130	4	1	5
10	1974-1975	302	108	410	11	4	14
11	1975-1976	786	146	932	28	5	33
12	1976-1977	681	24	705	24	1	25
13	1977-1978	286	128	414	10	5	15
14	1978-1979	808	41	849	29	1	30
15	1979-1980	219	274	494	8	10	17
16	1980-1981	389	37	426	14	1	15
17	1981-1982	373	30	404	13	1	14
18	1982-1983	279	72	352	10	3	12
19	1983-1984	832	75	907	29	3	32
20	1984-1985	250	144	395	9	5	14
21	1985-1986	405	58	463	14	2	16
22	1986-1987	340	106	446	12	4	16
23	1987-1988	213	63	276	8	2	10
24	1988-1989	1054	130	1184	37	5	42
25	1989-1990	898	191	1089	32	7	38
26	1990-1991	486	201	687	17	7	24
27	1991-1992	403	89	492	14	3	17
28	1992-1993	214	153	367	8	5	13
29	1993-1994	281	153	434	10	5	15
30	1994-1995	419	176	596	15	6	21
31	1995-1996	320	98	418	11	3	15
32	1996-1997	348	192	540	12	7	19
33	1997-1998	268	94	362	9	3	13
34	1998-1999	558	178	735	20	6	26
35	1999-2000	304	58	362	11	2	13
36	2000-2001	504	46	550	18	2	19
37	2001-2002	111	99	210	4	4	7
38	2002-2003	39	1	39	1	0	1
39	2003-2004	12	2	14	0	0	0
40	2004-2005	34	49	83	1	2	3
41	2005-2006	486	187	673	17	7	24
42	2006-2007	268	146	414	9	5	15
43	2007-2008	Site was down graded wef 01-06-2007 and again upgraded wef 01-03-2014.					
44	2008-2009						
45	2009-2010						
46	2010-2011						
47	2011-2012						
48	2012-2013						

49	2013-2014		22	22		1	1
50	2014-2015	143	56	199	5	2	7
51	2015-2016	34	1	35	1	0	1
52	2016-2017	19	2	21	1	0	1
53	2017-2018	43	34	78	2	1	3
54	2018-2019	145	30	174	5	1	6
55	2019-2020	155	55	210	5	2	7
56	2020-2021	764	89	853	27	3	30
57	2021-2022	537	98	635	19	3	22
58	2022-2023	888	72	960	31	3	34
Average		334	82	410	12	3	14

Instantaneous Flood Peak of paleru at Paleru Bridge

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1965-1966	74.227	14-07-1965	18:00:00	258 *
2	1966-1967	72.437	28-08-1966	19:00:00	19 *
3	1967-1968	73.077	25-07-1967	06:00:00	129 *
4	1968-1969	72.347	27-07-1968	16:00:00	150 *
5	1969-1970	74.847	20-05-1969	18:00:00	444 *
6	1970-1971	75.517	23-08-1970	06:00:00	830 *
7	1971-1972	73.522	26-09-1971	18:00:00	104 *
8	1972-1973	73.427	03-11-1972	13:00:00	88 *
9	1973-1974	73.467	03-10-1973	16:00:00	95 *
10	1974-1975	75.387	15-10-1974	18:00:00	646 *
11	1975-1976	75.077	27-09-1975	12:00:00	526 *
12	1976-1977	74.912	26-08-1976	12:00:00	467 *
13	1977-1978	73.827	04-10-1977	19:00:00	163 *
14	1978-1979	76.387	16-08-1978	03:00:00	1116 *
15	1979-1980	74.077	28-09-1979	08:00:00	220 *
16	1980-1981	73.577	25-07-1980	16:00:00	114 *
17	1981-1982	74.147	04-08-1981	10:00:00	237 *
18	1982-1983	74.007	12-08-1982	09:00:00	203 *
19	1983-1984	78.057	06-10-1983	10:00:00	2179 *
20	1984-1985	73.717	12-10-1984	09:00:00	140 *
21	1985-1986	75.357	14-08-1985	10:00:00	634 *
22	1986-1987	74.997	12-08-1986	15:00:00	497 *
23	1987-1988	73.507	08-10-1987	18:00:00	101 *
24	1988-1989	76.607	20-09-1988	03:00:00	1236 *
25	1989-1990	78.877	23-07-1989	22:00:00	2828 *
26	1990-1991	74.807	03-10-1990	06:00:00	431 *
27	1991-1992	74.927	21-09-1991	18:00:00	472 *
28	1992-1993	73.427	01-09-1992	21:00:00	88 *
29	1993-1994	74.037	10-10-1993	00:00:00	210 *
30	1994-1995	74.647	06-10-1994	00:00:00	379 *
31	1995-1996	74.887	19-10-1995	12:00:00	458 *
32	1996-1997	74.377	27-08-1996	16:00:00	299 *
33	1997-1998	73.627	24-09-1997	15:00:00	123 *
34	1998-1999	74.757	16-10-1998	03:00:00	414 *
35	1999-2000	74.027	29-09-1999	08:00:00	208 *
36	2000-2001	76.017	24-08-2000	19:00:00	928 *
37	2001-2002	73.687	30-09-2001	20:00:00	134 *
38	2002-2003	73.837	13-10-2002	10:00:00	165 *
39	2003-2004	72.507	08-08-2003	16:00:00	25 *
40	2004-2005	73.017	03-08-2004	17:00:00	32 *
41	2005-2006	75.707	20-09-2005	17:00:00	783 *
42	2006-2007	74.637	20-09-2006	20:00:00	376 *
44	2014-2015	73.857	26-10-2014	12:00:00	169 *
45	2015-2016	73.357	19-06-2015	08:00:00	77 *
46	2016-2017	72.597	22-09-2016	17:00:00	43 *
47	2017-2018	72.137	19-07-2017	05:00:00	18 *
48	2018-2019	74.707	20-08-2018	12:00:00	398 *
49	2019-2020	73.217	19-09-2019	00:00:00	58 *
50	2020-2021	76.087	15-10-2020	00:00:00	613 *
51	2021-2022	75.147	28-09-2021	06:00:00	341 *
52	2022-2023	75.927	23-07-2022	11:00:00	603 *

Stage-Discharge Data for the period 2022 - 2023

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	71.777	2.055	71.857	3.082	72.277	22.35	73.147	145.4	73.287	165.0	72.107	12.05
2	71.807	3.853	71.857	3.174	72.277	21.24	73.527	198.9	74.157	307.5 *	72.087	9.940
3	71.807	3.790	71.837	2.690 *	72.387	28.22	72.847	87.58	73.757	259.9	72.127	13.43
4	71.787	2.011	71.867	3.202	72.302	25.07	72.547	37.36 *	73.047	130.6	72.147	13.99
5	71.787	2.000 *	71.837	2.700	72.392	28.86	72.467	33.72	72.607	52.99 *	72.187	16.77
6	71.777	2.051	71.967	5.161	73.457	194.1	72.377	28.27	72.687	56.48	72.157	14.78 *
7	71.707	1.671	71.967	5.292	73.667	243.1 *	72.287	23.47	73.212	167.8	72.137	13.61
8	71.737	1.877	72.037	7.278	73.217	144.1	72.157	14.77	74.137	301.5 *	72.147	14.20 *
9	71.717	1.668	73.717	211.9 *	74.617	352.5 *	72.257	19.36	73.907	275.3 *	72.247	19.86
10	71.757	1.952	73.067	119.7 *	73.667	242.8	72.447	31.28 *	73.752	254.1	72.317	24.27
11	71.767	1.980 *	72.817	60.24	73.237	149.6	72.517	35.81 *	73.127	143.1	72.497	33.92
12	71.737	1.850 *	72.707	51.12	72.862	88.86	72.597	42.93	72.807	79.19	72.457	32.31 *
13	71.747	1.860	72.757	67.00	72.557	47.43 *	72.407	29.50	72.962	110.7	72.407	29.39 *
14	71.757	1.957	72.697	54.29	72.527	44.24 *	72.397	29.23	72.937	108.8	72.307	23.98
15	71.737	1.868	72.717	56.15	72.417	33.50 *	72.372	27.76	73.147	144.0	72.287	22.65
16	71.697	1.541	72.717	56.52	72.307	24.75	72.327	25.58	73.757	265.6 *	72.247	19.61
17	71.707	1.735	72.437	37.61 *	72.337	26.98	72.302	23.95	73.247	165.0	72.247	19.51
18	71.737	1.833	72.257	20.45	72.272	22.92	71.967	7.520 *	73.657	240.7	72.187	16.33
19	71.757	1.950 *	72.317	24.64	72.162	14.84	71.937	5.502	73.242	164.8	72.167	15.60
20	71.767	1.991	72.197	17.63	72.247	19.84	71.922	5.250	73.147	145.0	72.157	14.78 *
21	71.787	3.584	72.327	26.29	72.257	20.53 *	72.057	7.404	72.612	43.05	72.107	11.97
22	71.787	3.506	72.337	26.79	72.242	19.67	72.187	16.82	72.507	35.31	72.087	10.02
23	71.777	2.105	75.507	498.6	72.197	16.43	71.922	4.164	72.487	40.16 *	72.107	11.92
24	71.777	2.103	75.657	533.5 *	72.187	16.09	71.777	1.842	72.457	37.23 *	72.187	16.32
25	71.722	1.107	73.532	199.4	72.212	17.05	71.757	1.420 *	72.317	24.22	72.337	25.36
26	71.697	1.010 *	73.047	122.0	72.777	74.00	71.747	1.708	72.297	23.75	72.317	24.99
27	71.917	4.045	72.882	89.50	72.837	85.77	71.952	5.511	72.267	21.60	72.307	23.54 *
28	71.877	3.410	72.592	42.40	72.497	41.16 *	72.507	35.20	72.247	19.30	72.337	25.46
29	71.787	2.282	72.537	37.51	72.487	34.56	72.542	35.85	72.127	13.28	72.187	16.93
30	71.807	2.567	72.502	36.09	73.097	140.8	72.557	36.78	72.117	13.12 *	72.107	12.15
31			72.337	25.25 *	73.187	136.1 *			72.107	12.44		
Ten-Daily Mean												
I Ten-Daily	71.766	2.293	72.201	36.42	73.026	130.2	72.606	62.01	73.455	197.1	72.166	15.29
II Ten-Daily	71.741	1.856	72.562	44.56	72.493	47.30	72.275	23.30	73.203	156.7	72.296	22.81
III Ten-Daily	71.794	2.572	73.205	148.8	72.543	54.74	72.101	14.67	72.322	25.77	72.208	17.86
Monthly												
Min.	71.697	1.010	71.837	2.690	72.162	14.84	71.747	1.420	72.107	12.44	72.087	9.940
Max.	71.917	4.045	75.657	533.5	74.617	352.5	73.527	198.9	74.157	307.5	72.497	33.92
Mean	71.767	2.24	72.674	78.94	72.683	76.7	72.327	33.33	72.972	123.3	72.223	18.65

Annual Runoff in MCM = 959 Annual Runoff in mm = 328

Peak Observed Discharge = 498.6 cumecs on 23-07-2022 Corres. Water Level :75.507 m

Lowest Observed Discharge = 1.107 cumecs on 25-06-2022 Corres. Water Level :71.722 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 2022 - 2023

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	72.037	7.223	71.867	3.519 *	71.857	4.137	71.807	2.694	71.832	3.986	71.907	5.266
2	71.917	4.113	71.887	3.743	71.877	4.610	71.777	2.160	71.827	3.850 *	71.957	7.474
3	71.897	3.595	71.917	4.285	71.857	4.125	71.767	2.079	71.857	4.624	71.917	5.530
4	71.877	3.707 *	71.897	3.941	71.857	4.135	71.807	2.721	71.817	3.800 *	71.907	5.506
5	71.857	3.190	71.877	3.742	71.877	4.307 *	71.807	2.720 *	71.867	4.659	71.907	5.500 *
6	71.837	2.670	71.877	3.844	71.817	3.024	71.797	2.611	71.847	4.477	71.917	5.544
7	71.807	2.291	72.082	10.08	71.817	2.954	71.777	2.143	71.807	3.820 *	71.907	5.500 *
8	71.797	2.162	72.007	7.287 *	71.837	3.321	71.807	2.597	71.857	4.450 *	71.887	5.016
9	71.767	1.878	71.977	5.788	71.907	4.846	71.827	3.072	71.807	3.820 *	71.857	4.245
10	71.767	1.922 *	71.967	5.314	71.857	4.152	71.807	2.650	71.817	3.749	71.847	4.203
11	71.807	2.251 *	71.987	5.971	71.837	3.529 *	71.817	2.710 *	71.837	4.409	71.827	3.787
12	71.777	2.023	72.027	7.840	71.847	3.798 *	71.807	2.650 *	71.817	4.088	71.817	3.682
13	71.767	1.865	72.037	8.276	71.887	4.655	71.797	2.629	71.827	4.186	71.827	3.780 *
14	71.807	2.286	72.017	7.650 *	71.857	4.143	71.827	3.061	71.807	3.820 *	71.807	3.250 *
15	71.857	3.233	72.047	8.812 *	71.837	3.313	71.807	2.643	71.842	4.418	71.837	3.641
16	71.857	3.310	72.007	6.946	71.777	2.075	71.817	2.840	71.807	3.820 *	71.837	3.752
17	71.927	4.280	71.897	4.182	71.757	1.920	72.187	15.21	71.907	5.315	71.837	3.763
18	71.937	4.398 *	71.887	4.014	71.747	1.838	72.327	26.09	71.877	4.480	71.837	3.754
19	71.907	3.667	71.877	3.910	71.757	1.970 *	72.367	28.18 *	71.887	4.697	71.887	4.957
20	71.897	3.545	71.857	3.655	71.817	2.943	72.347	27.51	71.857	4.372	71.817	3.678
21	71.857	3.201	71.917	4.227	71.907	4.813	72.177	14.99	71.917	5.617	71.817	3.670 *
22	71.867	3.308	71.927	4.835 *	71.827	3.072	72.107	12.65 *	72.077	10.25 *	71.837	3.760
23	71.837	2.678	71.947	4.958	71.817	2.932	71.937	4.935	72.057	9.820 *	71.807	3.255
24	71.867	3.298	71.947	5.027	71.807	2.757	71.857	3.721	71.987	8.670	71.792	2.321
25	71.887	3.491 *	71.907	4.530	71.807	2.726	71.847	3.596	71.967	7.841	71.787	2.050
26	71.937	4.469	71.887	3.908 *	71.817	2.865 *	71.837	3.400 *	71.967	7.815 #	71.777	1.951
27	71.967	4.907	71.867	4.043	71.877	4.426	71.807	2.640	71.967	7.930	71.787	2.178
28	71.907	3.706	71.857	3.818	71.827	3.093	71.817	2.742	71.887	5.083	71.777	1.950 *
29	71.897	3.601	71.867	3.519 *			71.847	3.741	71.887	5.100	71.777	1.865
30	71.887	3.464	71.817	2.966			71.847	3.740 *	71.857	4.370 *	71.757	1.509
31	71.877	3.575	71.817	3.001			71.777	2.582			71.757	1.603
Ten-Daily Mean												
I Ten-Daily	71.856	3.275	71.936	5.154	71.856	3.961	71.798	2.545	71.834	4.124	71.901	5.378
II Ten-Daily	71.854	3.086	71.964	6.126	71.812	3.018	72.010	11.35	71.847	4.361	71.833	3.804
III Ten-Daily	71.890	3.609	71.887	4.076	71.836	3.336	71.896	5.340	71.957	7.250	71.788	2.374
Monthly												
Min.	71.767	1.865	71.817	2.966	71.747	1.838	71.767	2.079	71.807	3.749	71.757	1.509
Max.	72.037	7.223	72.082	10.08	71.907	4.846	72.367	28.18	72.077	10.25	71.957	7.474
Mean	71.867	3.333	71.927	5.085	71.835	3.446	71.901	6.378	71.879	5.245	71.839	3.805

Peak Computed Discharge = 533.5 cumecs on 24-07-2022

Corres. Water Level :75.65701 m

Lowest Computed Discharge = 1.010 cumecs on 26-06-2022

Corres. Water Level :71.697 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 : 2022-2023

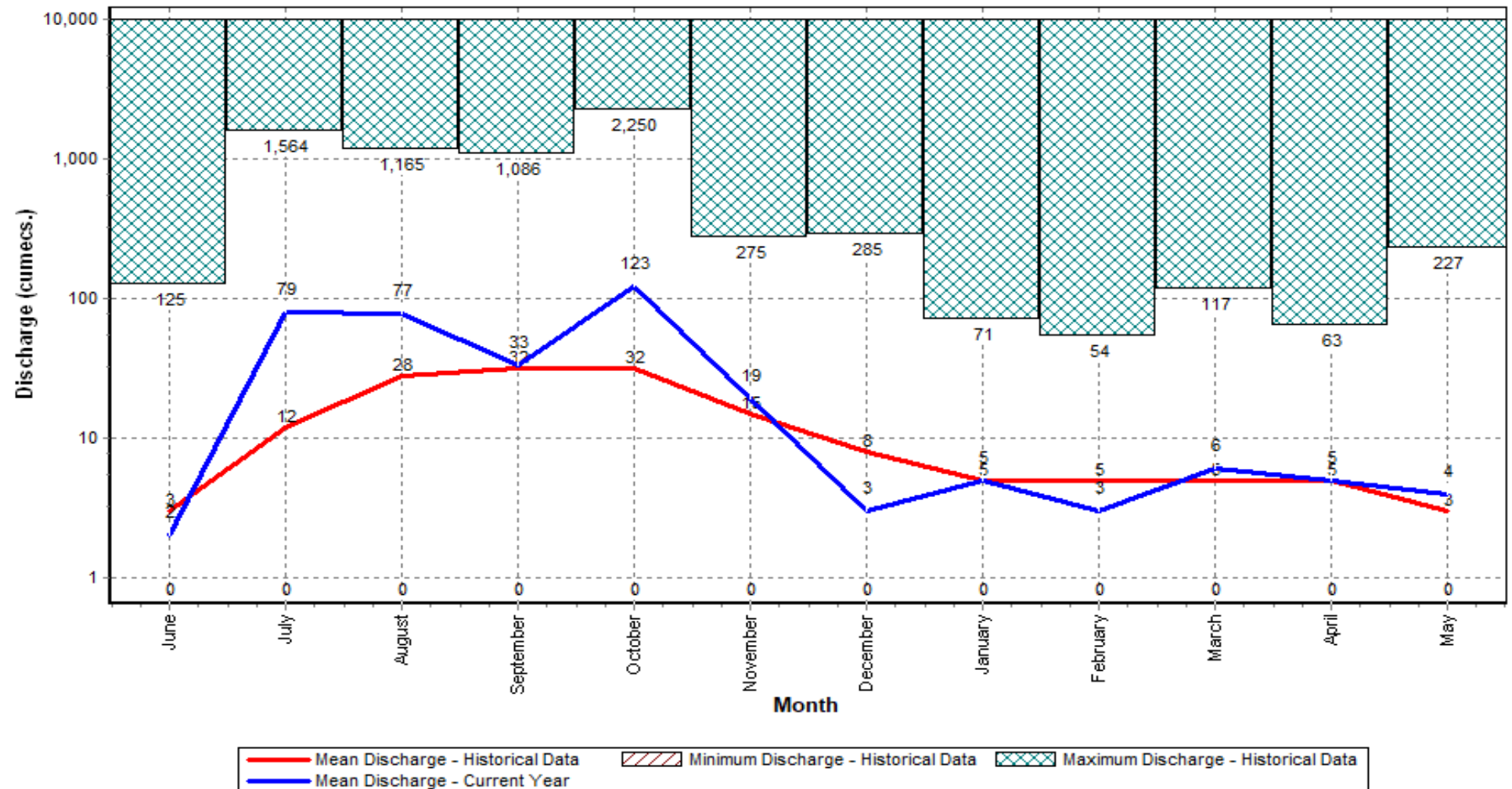
Station Name : paleru Bridge (AKC00D3)

Data considered : 1965-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Paleru

Sub-Division : Lower Krishna SD2, Vijayawada



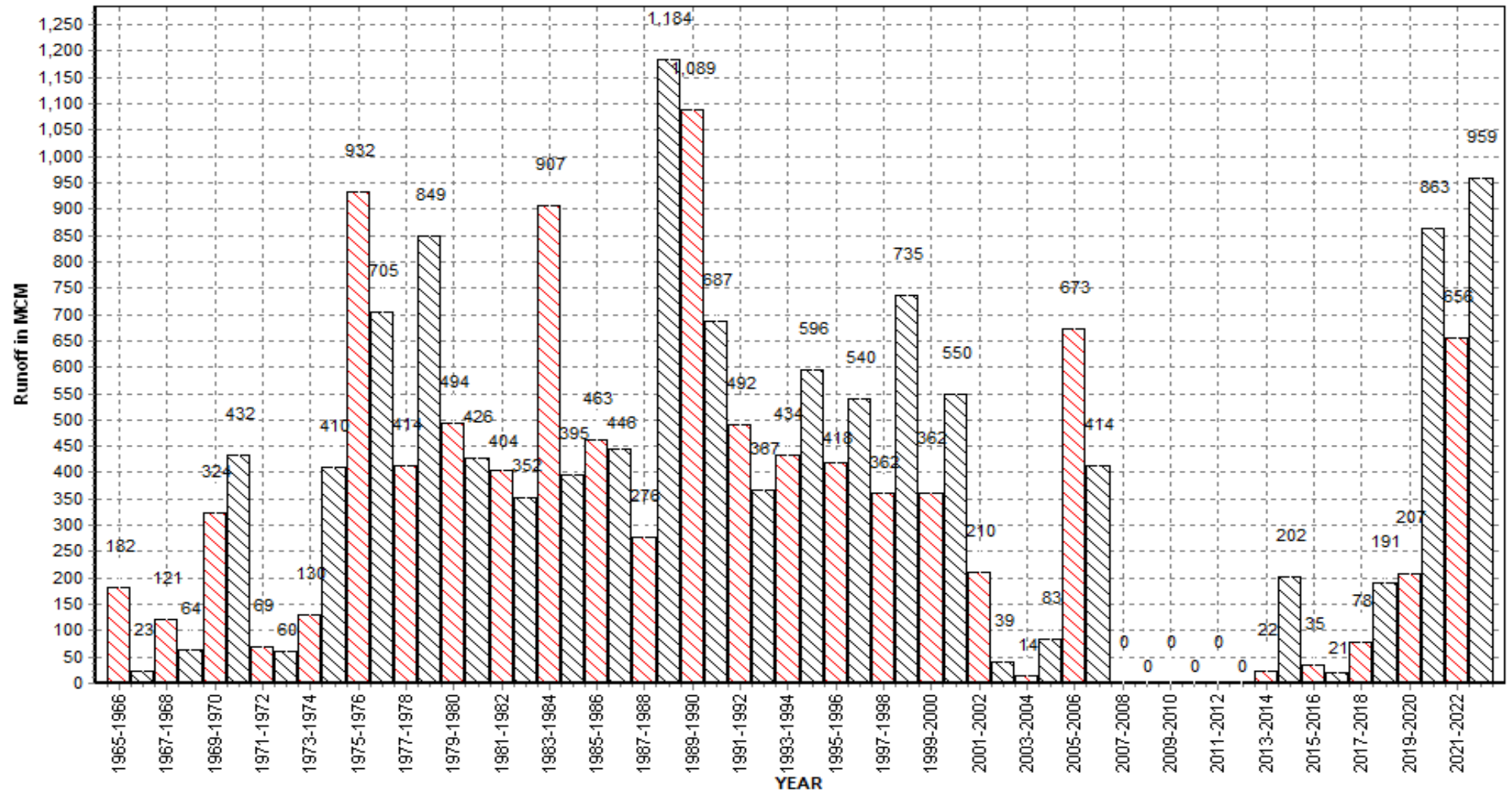
Annual Runoff Values for the period: 1965 - 2023

Station Name : paleru Bridge (AKC00D3)

Local River : Paleru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



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

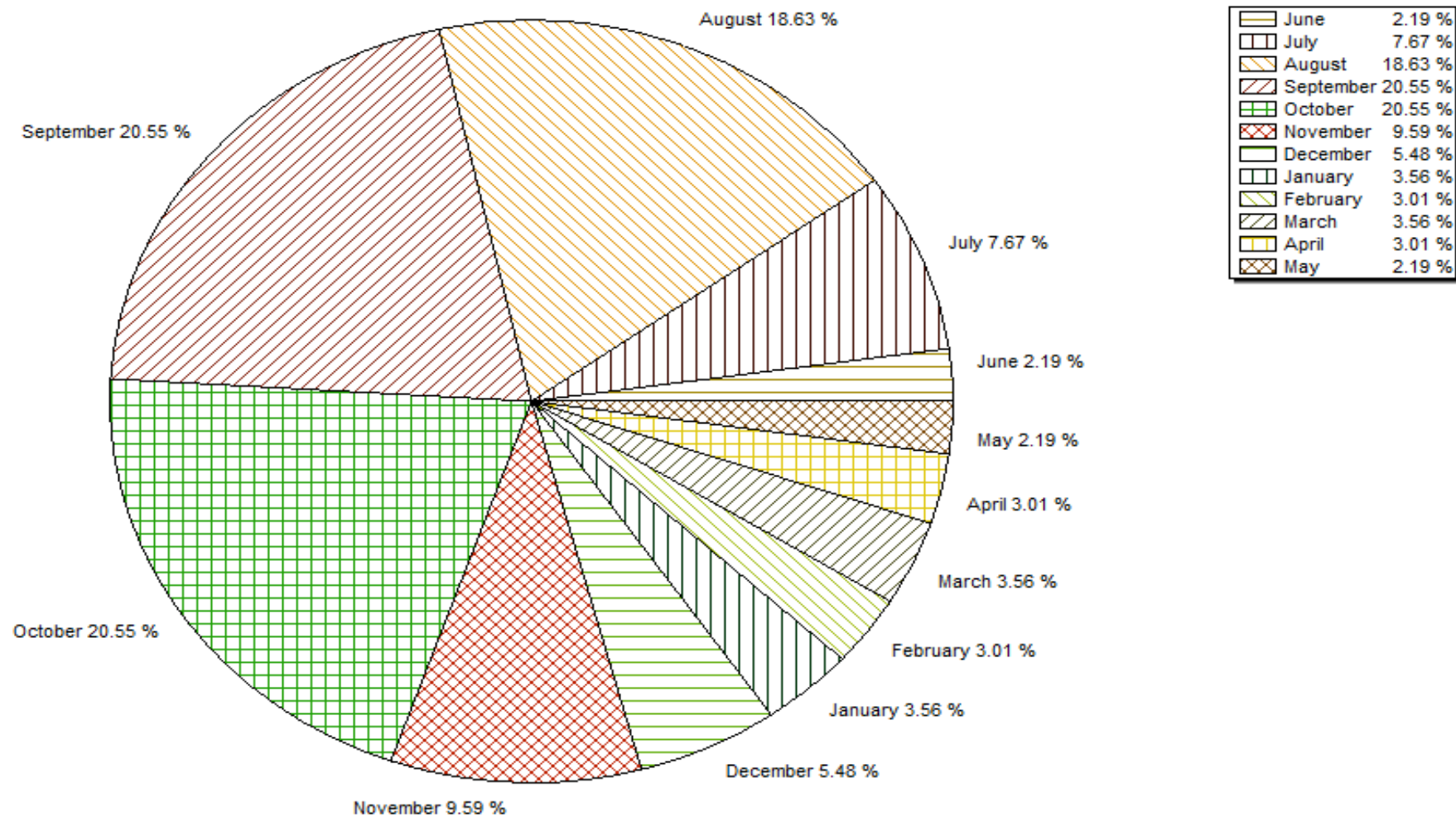
Monthly Average Runoff based on period : 1965-2022

Station Name : paleru Bridge (AKC00D3)

Local River : Paleru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



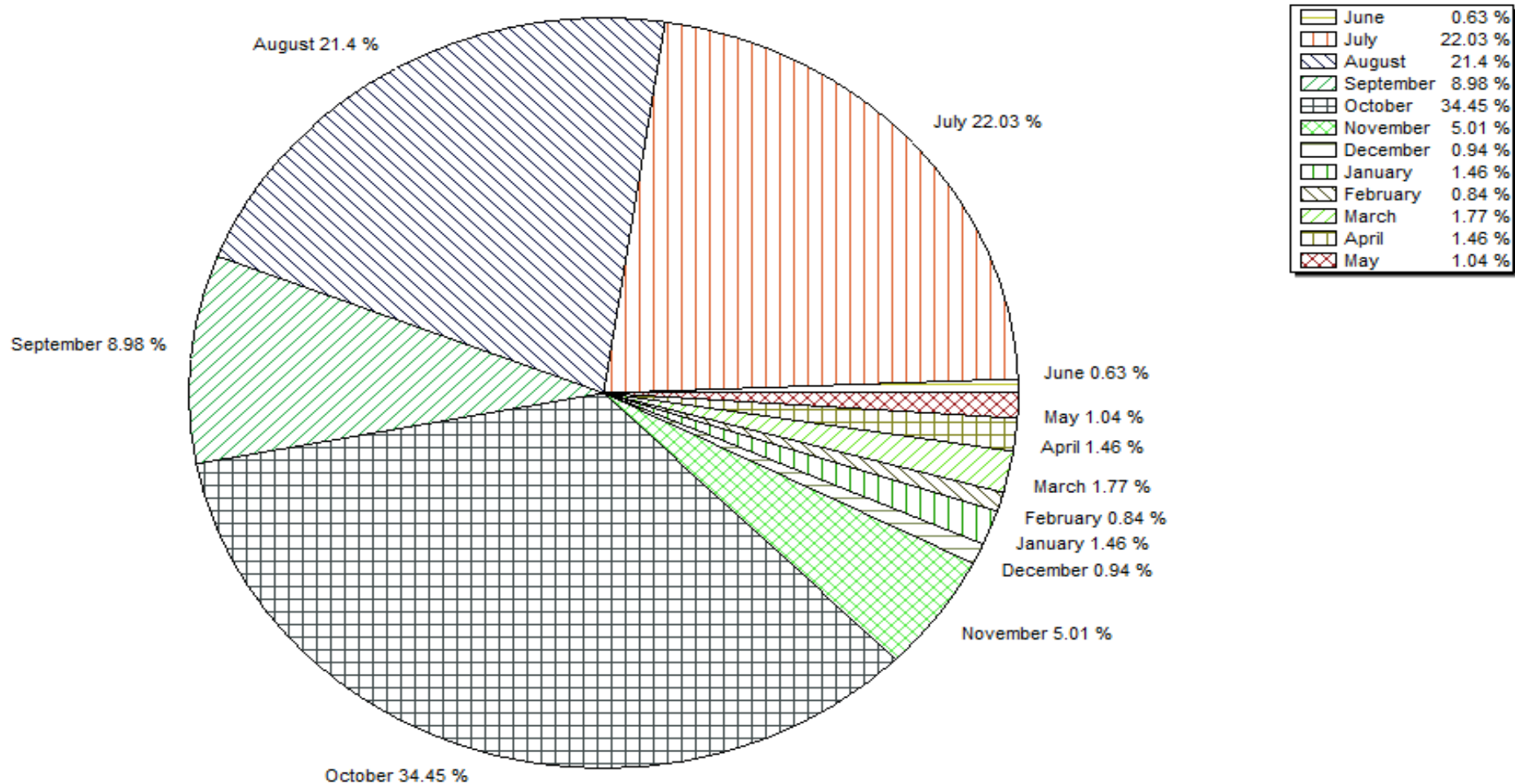
Monthly Runoff for the Year : 2022-2023

Station Name : paleru Bridge (AKC00D3)

Local River : Paleru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



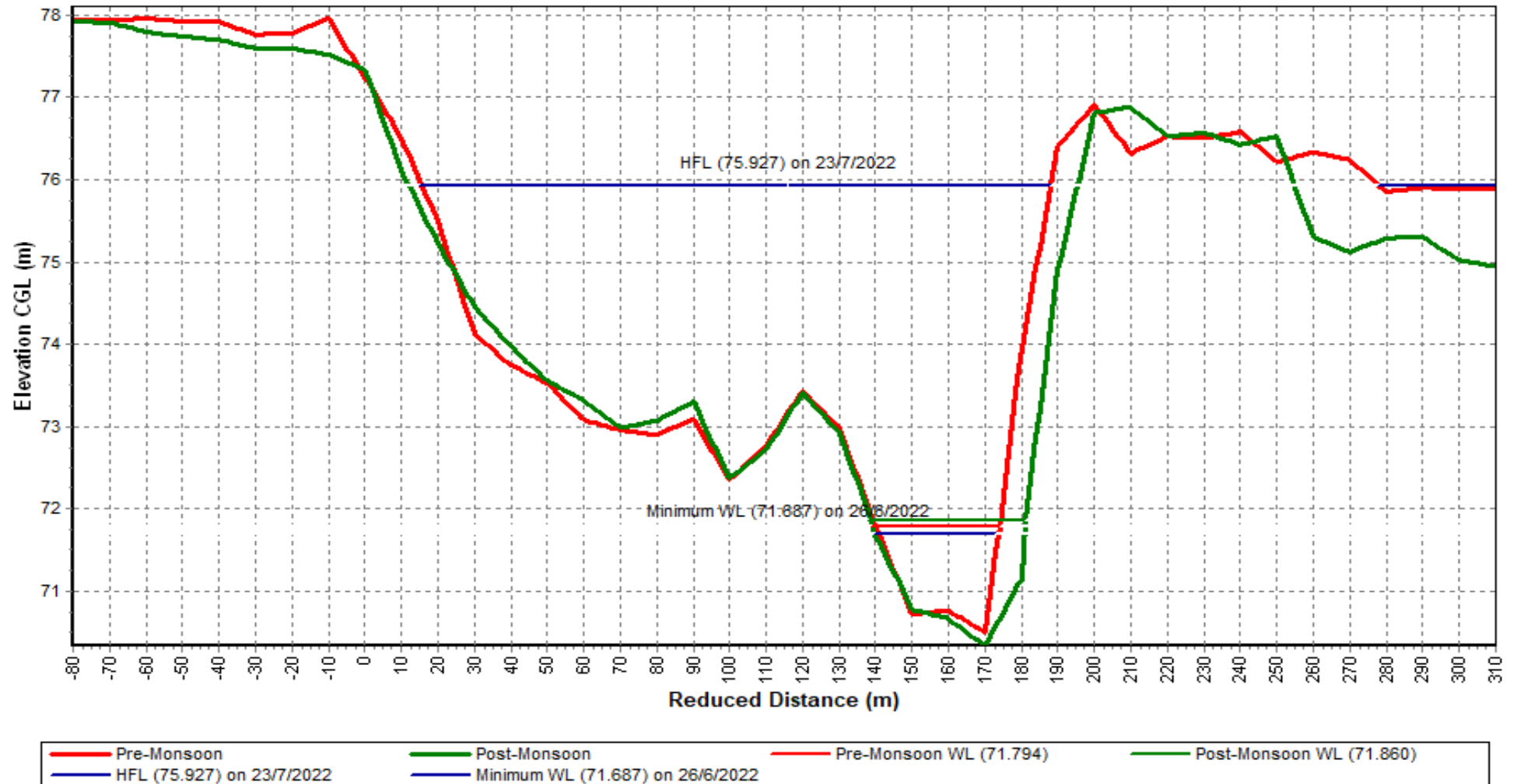
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : paleru Bridge (AKC00D3)

Local River : Paleru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



Remarks :Cross Section Deviation due to Farming Activity By local farmers at Corresponding RD points Bed Level Changed.
Zero of the Gauge: 70.357 (m.s.l)

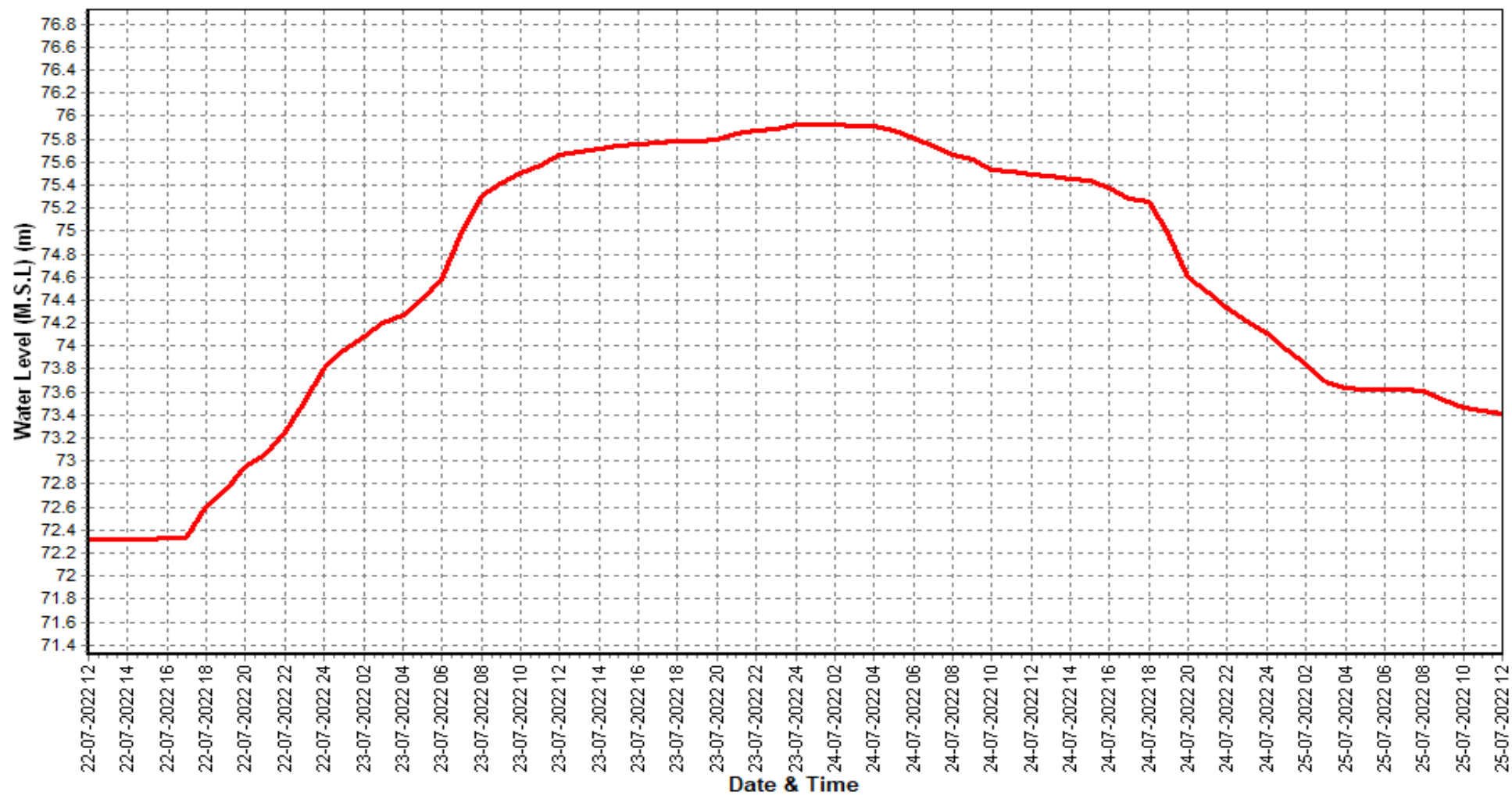
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : paleru Bridge (AKC00D3)

Local River : Paleru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



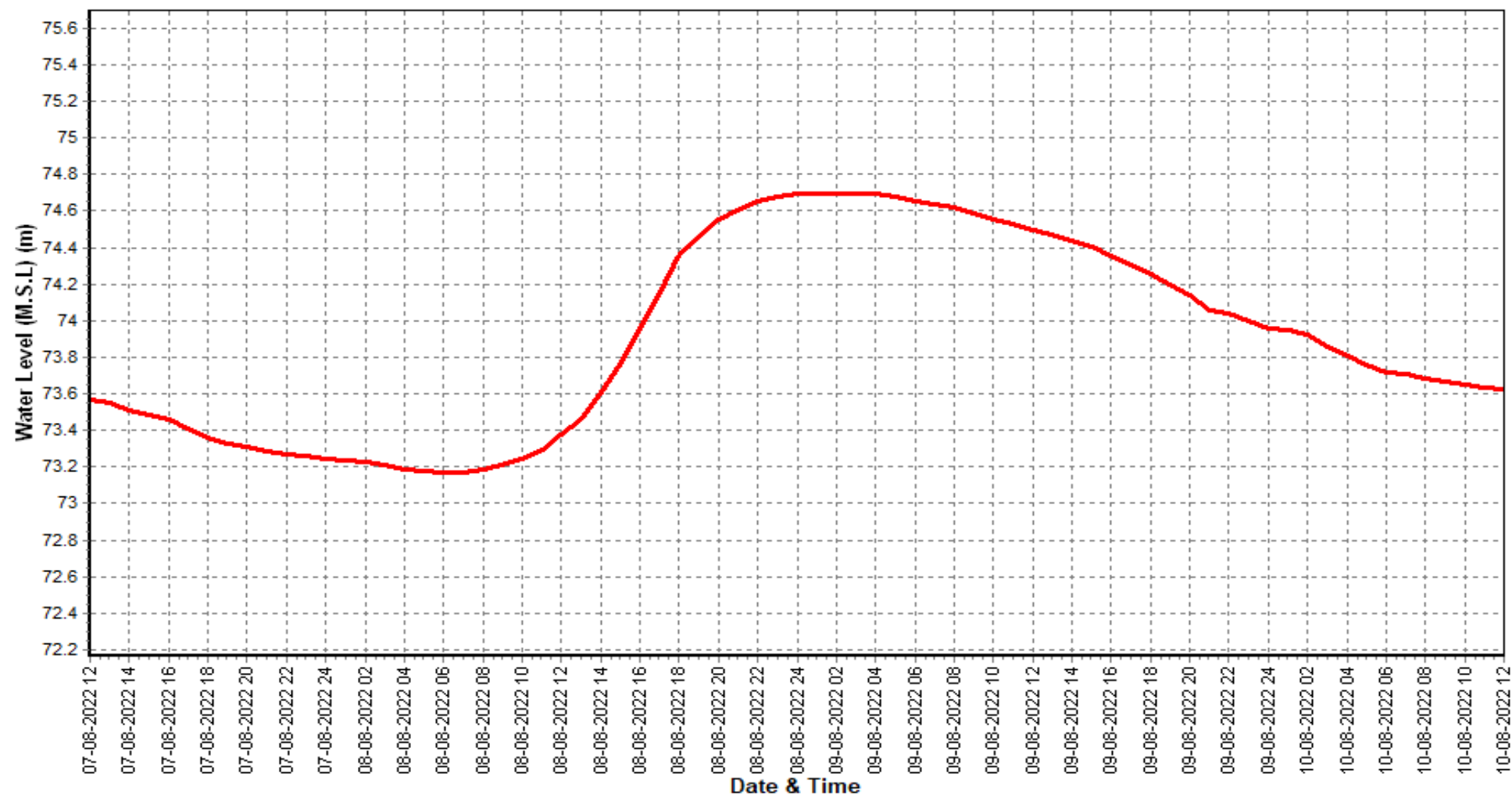
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : paleru Bridge (AKC00D3)

Local River : Paleru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



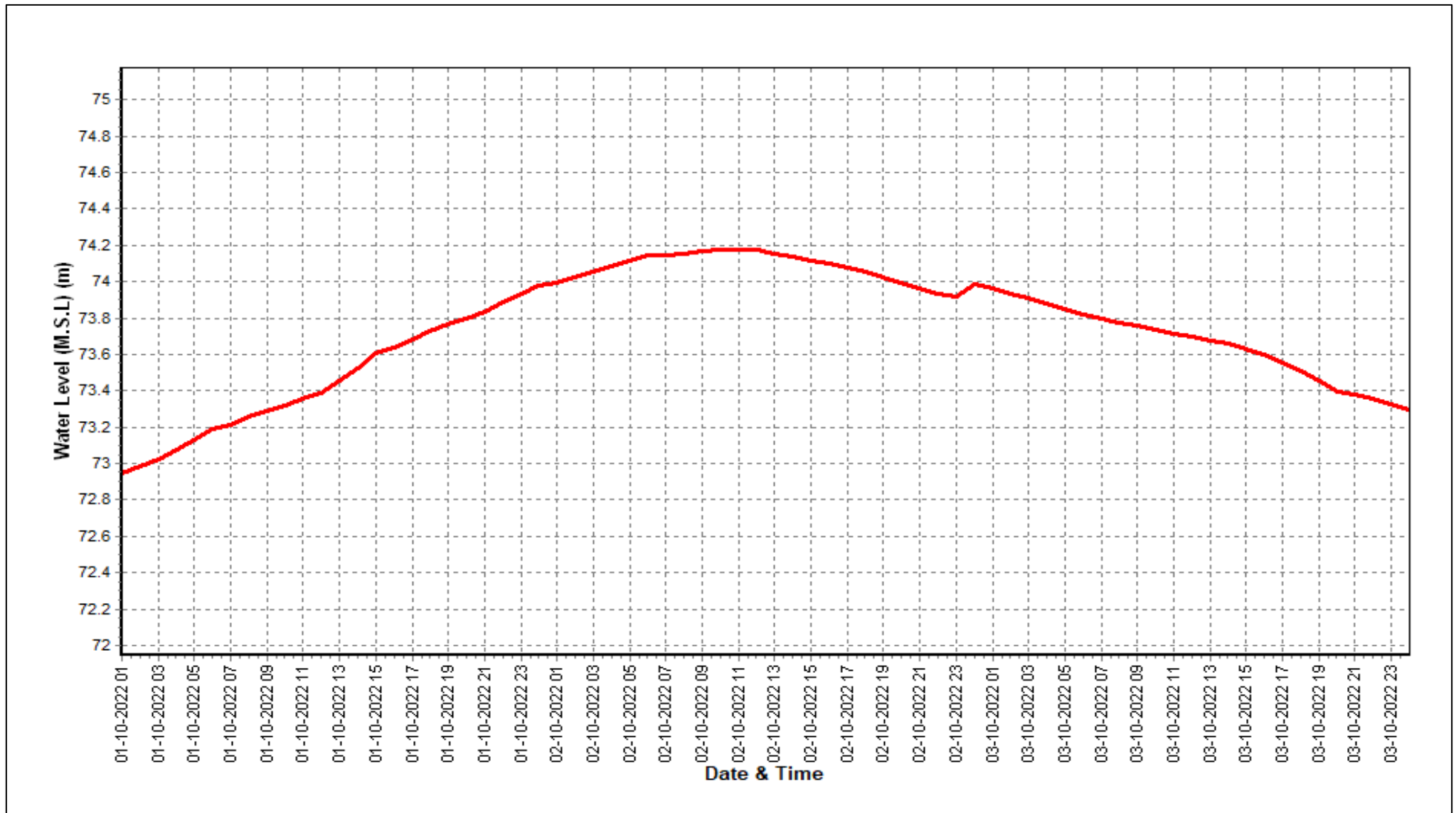
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : paleru Bridge (AKC00D3)

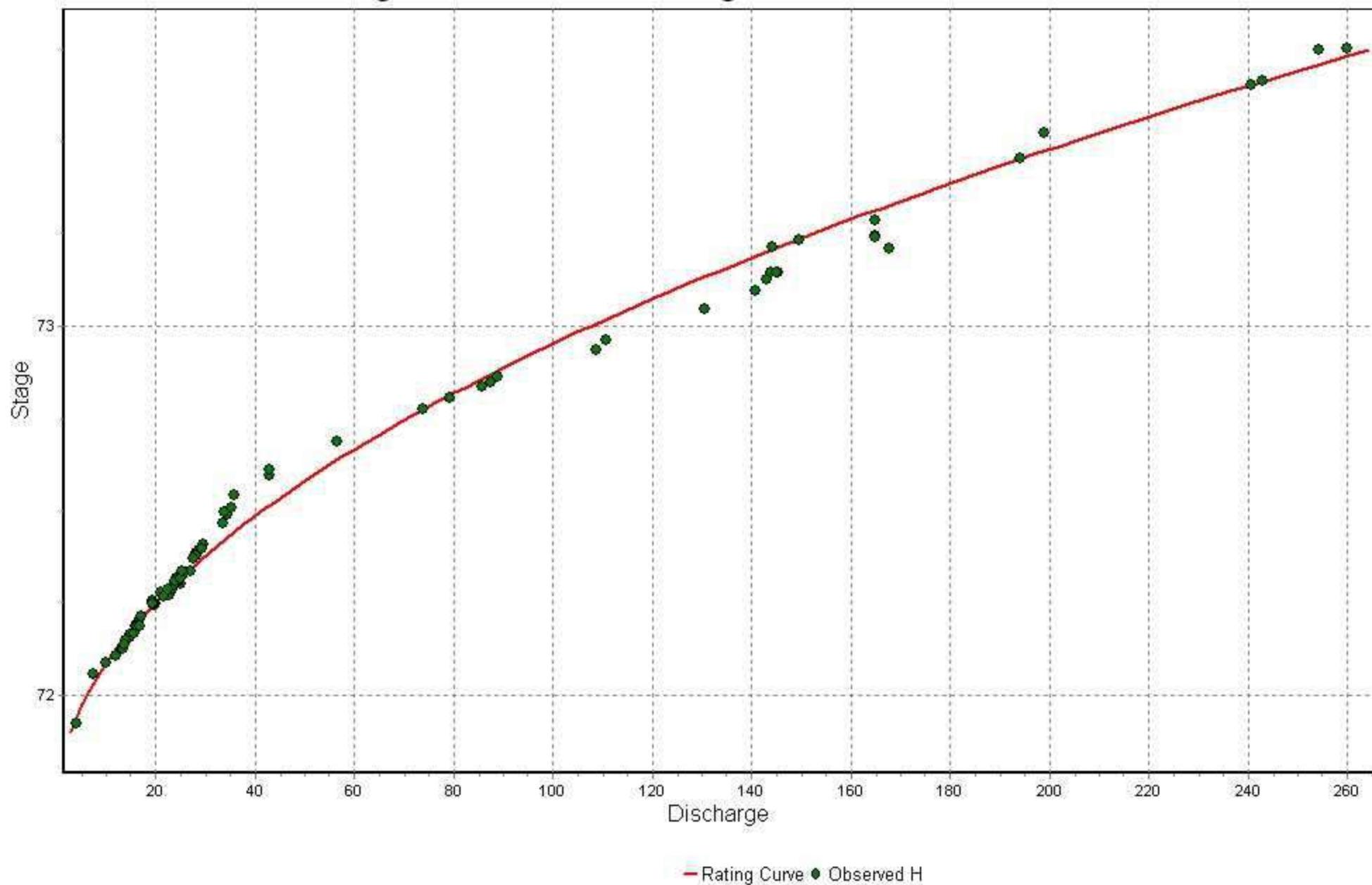
Local River : Paleru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



Rating Curve of Site Paleru Bridge 01/08/2022 to 30/11/2022



HISTORY SHEET

Water Year : 2022-2023

Site : MUNUGODU **Code : 033-LKDHYD**

State : Andhra Pradesh District : Guntur

Basin : Krishna Independent River : Krishna

Tributary : Lower Krishna Sub Tributary :

Sub-Sub Tributary : Local River : YEDDUVAGU

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

Drainage Area : 647.8 Sq. Km. Bank : Left

Latitude : 16°54'26" Longitude : 80°12'23"

Zero of Gauge (m) : 24.5 (m.s.l) 01-03-2017

Opening Date Closing Date

Gauge : 24-10-2016 HFL During 2022-23 : 28.810 m

Corres. Discharge : 423 (Estimated)

Discharge : 24-10-2016 Date & Time of occurrence : 16-10-2022 : 04.00 hrs.

HFL Recorded so far in m : 30.130 dt 14-09-2020

Corresponding Discharge (cumecs) : 1262 *

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2018-2019	68.93	27.630	20-08-2018	0.000		10-04-2019
2019-2020	570.7	29.160	18-09-2019	0.000		25-03-2020
2020-2021	676.6	29.820	14-10-2020	0.000	25.800	07-06-2020
2021-2022	330.3	28.800	30-08-2021	0.389	25.900	18-03-2022

Annual Runoff of Eddu Vagu at Munugodu

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2017-2018	27	30	57	1	1	2
2	2018-2019	71	20	91	2	1	3
3	2019-2020	228	67	294	8	2	10
4	2020-2021	406	182	588	14	6	21
5	2021-2022	323	100	423	11	4	15
6	2022-2023	412	159	571	15	6	20
Average		245	93	337	9	3	12

Instantaneous Flood Peak of Edduvagu at Munugodu					
		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	2017-2018	26.700	08-10-2017	18:00:00	19 *
2	2018-2019	27.730	20-08-2018	12:00:00	86 *
3	2019-2020	29.160	18-09-2019	08:00:00	571
4	2020-2021	30.130	14-09-2020	14:00:00	1262 *
5	2021-2022	28.800	30-08-2021	13:00:00	332 *
6	2022-2023	28.810	16-10-2022	04:00:00	423 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : MUNUGODU (033-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River : YEDDUVAGU

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	25.940	1.152	26.250	4.524	26.050	1.776	26.800	23.50	27.400	83.13	26.590	16.42
2	25.950	1.156	26.260	4.684	26.110	2.508	26.730	21.07	28.480	308.4 *	26.780	22.35
3	26.000	1.949	26.280	5.241 *	26.710	19.77	26.670	18.94	27.380	79.94	26.740	20.90
4	26.000	1.915	26.350	6.599	26.800	22.88	26.610	15.45 *	26.840	25.22	26.800	23.09
5	25.970	1.600 *	26.430	8.912	26.450	9.296	26.495	10.24	26.780	23.85 *	27.150	56.58
6	25.950	1.147	26.430	8.932	26.430	8.970	26.480	9.936	27.480	96.37	26.980	37.09 *
7	25.950	1.117	26.440	9.145	26.480	10.56 *	26.670	18.94	28.670	371.6	26.720	20.20
8	25.920	0.593	26.430	9.004	26.360	6.960	26.700	19.97	27.480	89.65 *	26.650	17.21 *
9	25.900	0.530	26.450	9.598 *	26.310	5.886 *	26.750	21.70	27.230	59.56 *	26.580	15.48
10	25.870	0.449	26.390	7.859 *	26.280	5.089	26.870	29.33 *	27.200	59.21	26.620	16.78
11	25.850	0.440 *	26.360	6.858	26.280	5.139	27.070	44.37 *	27.090	46.50	26.640	17.45
12	25.830	0.410 *	26.370	7.024	26.280	5.189	27.520	101.2	27.050	41.90	26.600	15.02 *
13	25.900	0.512	26.355	6.939	26.270	5.037 *	26.980	33.97	27.070	44.18	26.630	16.31 *
14	25.940	0.873	26.270	4.889	26.300	5.666 *	26.810	23.86	27.200	59.21	26.600	16.14
15	25.960	0.953	26.210	3.755	26.380	7.592 *	26.730	21.07	28.090	217.3	26.580	15.56
16	25.960	0.969	26.180	3.673	26.420	8.837	26.700	19.97	28.720	389.6 *	26.590	15.81
17	25.900	0.511	26.130	2.712 *	26.380	7.693	26.670	18.94	28.640	361.1 #	26.610	16.47
18	25.910	0.538	26.110	2.498	26.465	9.455	26.620	15.87 *	27.360	76.80	26.550	14.54
19	25.910	0.530 *	26.170	3.556	26.460	9.410	26.490	10.52	27.020	38.58	26.540	14.22
20	25.900	0.516	26.120	2.599	26.470	9.621	26.500	10.71	26.800	23.74	26.560	13.42 *
21	25.890	0.486	26.100	2.424	26.460	9.911 *	26.570	15.91	26.730	21.29	26.550	14.54
22	25.880	0.447	26.450	9.307	26.390	7.839	26.550	15.27	26.680	19.48	26.810	23.47
23	25.880	0.455	26.800	25.00	26.360	6.938	26.600	16.80	26.650	17.21 *	26.850	24.97
24	25.880	0.450	26.760	22.73 *	26.350	6.752	26.570	15.91	26.660	17.67 *	26.820	23.83
25	25.890	0.483	26.420	8.820	26.355	6.846	26.550	13.04 *	26.650	18.45	26.800	23.09
26	25.900	0.500 *	26.370	7.133	26.470	9.539	26.550	15.27	26.640	18.13	26.780	22.35
27	26.110	2.457	26.450	9.318	26.480	9.797	26.560	15.52	26.550	15.13	26.790	24.42 *
28	26.230	4.144	26.255	4.619	26.430	8.993 *	26.660	18.70	26.540	14.81	26.730	20.56
29	26.260	4.713	26.160	3.514	26.660	18.61	26.810	24.10	26.560	15.44	26.700	19.49
30	26.210	3.680	26.120	2.602	28.110	220.5	26.780	23.01	26.570	13.81 *	26.670	18.46
31			26.100	2.331 *	27.380	76.63 *			26.570	15.76		
Ten-Daily Mean												
I Ten-Daily	25.945	1.161	26.371	7.450	26.398	9.369	26.677	18.91	27.494	119.7	26.761	24.61
II Ten-Daily	25.906	0.625	26.227	4.450	26.371	7.364	26.809	30.05	27.504	129.9	26.590	15.49
III Ten-Daily	26.013	1.782	26.362	8.891	26.677	34.76	26.620	17.35	26.618	17.02	26.750	21.52
Monthly												
Min.	25.830	0.410	26.100	2.331	26.050	1.776	26.480	9.936	26.540	13.81	26.540	13.42
Max.	26.260	4.713	26.800	25.00	28.110	220.5	27.520	101.2	28.720	389.6	27.150	56.58
Mean	25.955	1.189	26.322	6.994	26.488	17.73	26.702	22.1	27.186	86.55	26.700	20.54

Annual Runoff in MCM = 570 Annual Runoff in mm = 881

Peak Observed Discharge = 371.6 cumecs on 07/10/2022 Corres. Water Level :28.67 m

Lowest Observed Discharge = 0.447 cumecs on 22/06/2022 Corres. Water Level :25.88 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 2022 - 2023

Station Name : MUNUGODU (033-LKDHYD)

Division : Lower Krishna Divn., Hyderabad

Local River : YEDDUVAGU

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	26.620	16.78	26.450	9.637 *	26.600	13.54	26.470	10.14	26.410	8.932	26.070	2.473
2	26.600	16.14	26.450	9.405	26.630	14.39	26.490	10.56	26.530	11.53 *	26.080	2.558
3	26.660	18.12	26.440	9.335	26.630	14.39	26.460	9.927	26.600	13.20	26.080	2.591
4	26.640	17.08 *	26.455	9.560	26.620	14.06	26.450	9.648	26.470	10.10 *	26.090	2.663
5	26.650	17.79	26.480	10.11	26.630	14.08 *	26.440	9.409 *	26.420	9.038	26.230	5.112 *
6	26.650	17.79	26.580	13.03	26.600	13.54	26.450	9.661	26.400	8.712	26.070	2.487
7	26.660	18.12	26.570	12.79	26.620	14.06	26.440	9.500	26.250	5.479 *	26.150	3.743 *
8	26.650	17.79	26.550	12.03 *	26.630	14.39	26.460	9.911	26.120	3.271 *	26.400	8.862
9	26.640	17.45	26.570	12.79	26.620	14.06	26.440	9.499	26.060	2.401 *	26.440	9.417
10	26.780	24.69 *	26.500	10.53	26.590	13.35	26.470	10.14	26.050	2.239	26.070	2.508
11	26.920	34.39 *	26.510	10.68	26.570	12.53 *	26.480	10.33 *	26.050	2.226	26.070	2.506
12	27.300	72.21	26.500	10.52	26.550	12.03 *	26.470	10.10 *	26.040	2.136	26.020	1.940
13	27.040	42.85	26.480	10.15	26.570	12.79	26.500	10.76	26.040	2.124	26.000	1.635 *
14	26.840	24.59	26.480	10.33 *	26.500	10.65	26.510	10.99	26.010	1.755 *	26.000	1.635 *
15	26.740	20.90	26.460	9.868 *	26.490	10.35	26.510	10.96	26.020	1.925	26.000	1.570
16	26.670	18.46	26.500	10.52	26.450	9.855	26.520	11.23	25.990	1.518 *	25.990	1.505
17	26.590	15.81	26.490	10.22	26.460	10.03	26.520	11.26	26.000	1.704	25.990	1.494
18	26.560	13.68 *	26.490	10.29	26.450	9.855	26.840	19.94	25.980	1.536	25.980	1.446
19	26.550	14.54	26.500	10.60	26.440	9.409 *	27.020	25.69 *	25.980	1.514	25.980	1.443
20	26.550	14.54	26.520	11.05	26.490	10.66	26.820	19.34	25.990	1.549	25.990	1.495
21	26.540	14.22	26.520	10.98	26.500	10.75	26.800	18.75	25.990	1.557	26.000	1.635 *
22	26.540	14.22	26.510	11.05 *	26.500	10.71	26.810	19.12 *	25.940	0.984 *	26.000	1.589
23	26.530	13.93	26.500	10.57	26.490	10.49	26.750	17.31	25.990	1.518 *	25.980	1.444
24	26.480	10.04	26.510	10.80	26.480	10.33	26.720	16.44	26.050	2.265	25.990	1.481
25	26.480	10.96 *	26.570	12.79	26.480	10.38	26.760	17.58	26.060	2.352	25.990	1.490
26	26.490	10.23	26.550	12.03 *	26.480	10.33 *	26.680	15.42 *	26.060	2.378	25.980	1.449
27	26.500	10.49	26.500	10.59	26.450	9.896	26.650	14.53	26.050	2.279	26.010	1.645
28	26.500	10.54	26.520	11.09	26.480	10.31	26.610	13.47	26.070	2.452	25.970	1.294 *
29	26.490	10.24	26.530	11.53 *			26.440	9.648	26.050	2.260	25.980	1.453
30	26.470	9.745	26.570	12.79			26.400	8.517 *	26.010	1.755 *	26.000	1.601
31	26.460	9.542	26.590	13.35			26.430	9.466			25.990	1.498
Ten-Daily Mean												
I Ten-Daily	26.655	18.18	26.505	10.92	26.617	13.99	26.457	9.839	26.331	7.491	26.168	4.241
II Ten-Daily	26.776	27.20	26.493	10.42	26.497	10.82	26.619	14.06	26.010	1.799	26.002	1.667
III Ten-Daily	26.498	11.29	26.534	11.60	26.482	10.40	26.641	14.57	26.027	1.980	25.990	1.507
Monthly												
Min.	26.460	9.542	26.440	9.335	26.440	9.409	26.400	8.517	25.940	0.984	25.970	1.294
Max.	27.300	72.21	26.590	13.35	26.630	14.39	27.020	25.69	26.600	13.20	26.440	9.417
Mean	26.638	18.64	26.511	11	26.536	11.83	26.575	12.88	26.123	3.756	26.051	2.441

Peak Computed Discharge = 389.6 cumecs on 16/10/2022

Corres. Water Level :28.72 m

Lowest Computed Discharge = 0.410 cumecs on 12/06/2022

Corres. Water Level :25.83 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 : 2022-2023

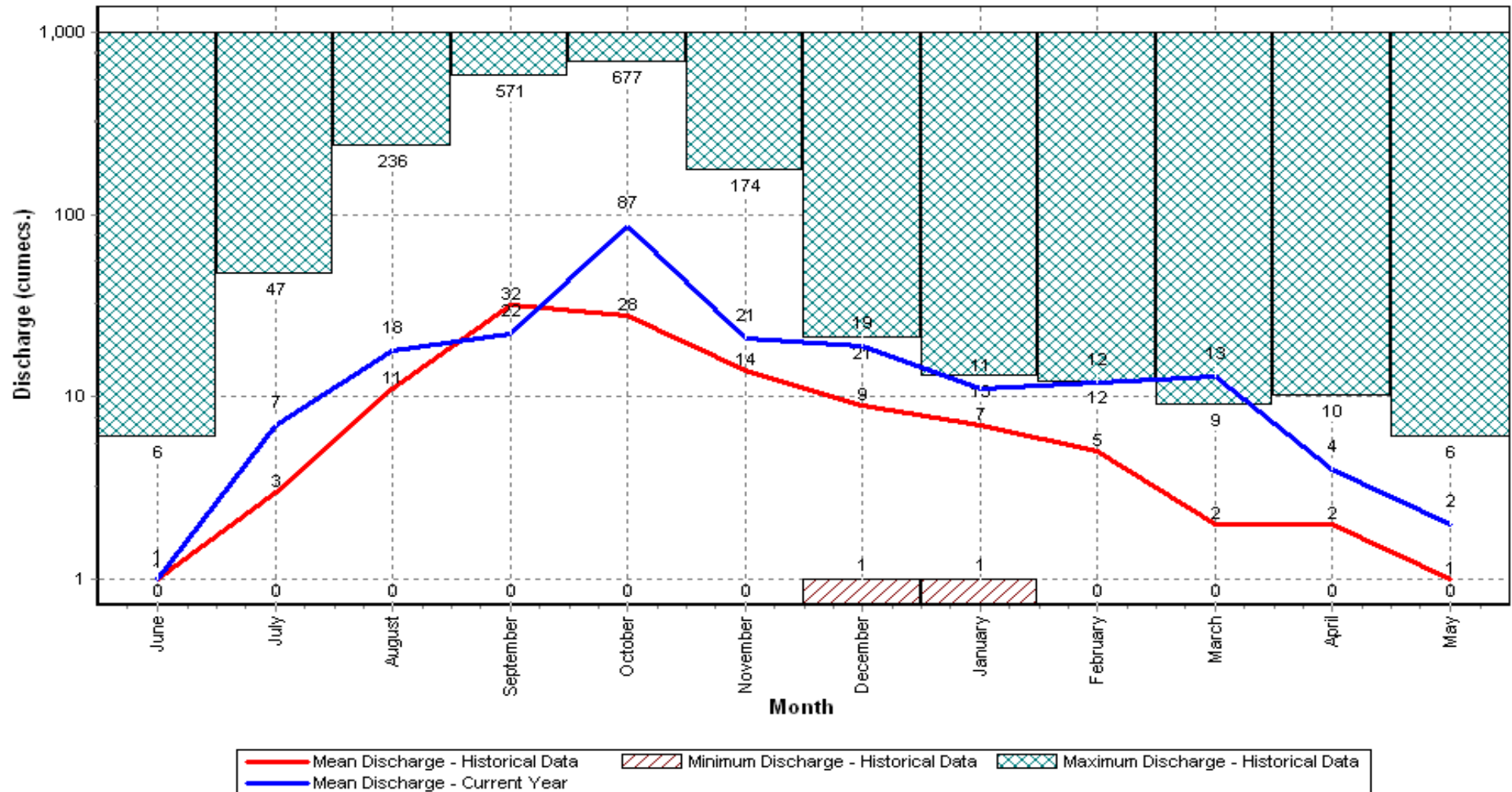
Station Name : MUNUGODU (033-LKDHYD)

Data considered : 2018-2023

Division : Lower Krishna Divn., Hyderabad

Local River : YEDDUVAGU

Sub-Division : Lower Krishna SD2, Vijayawada



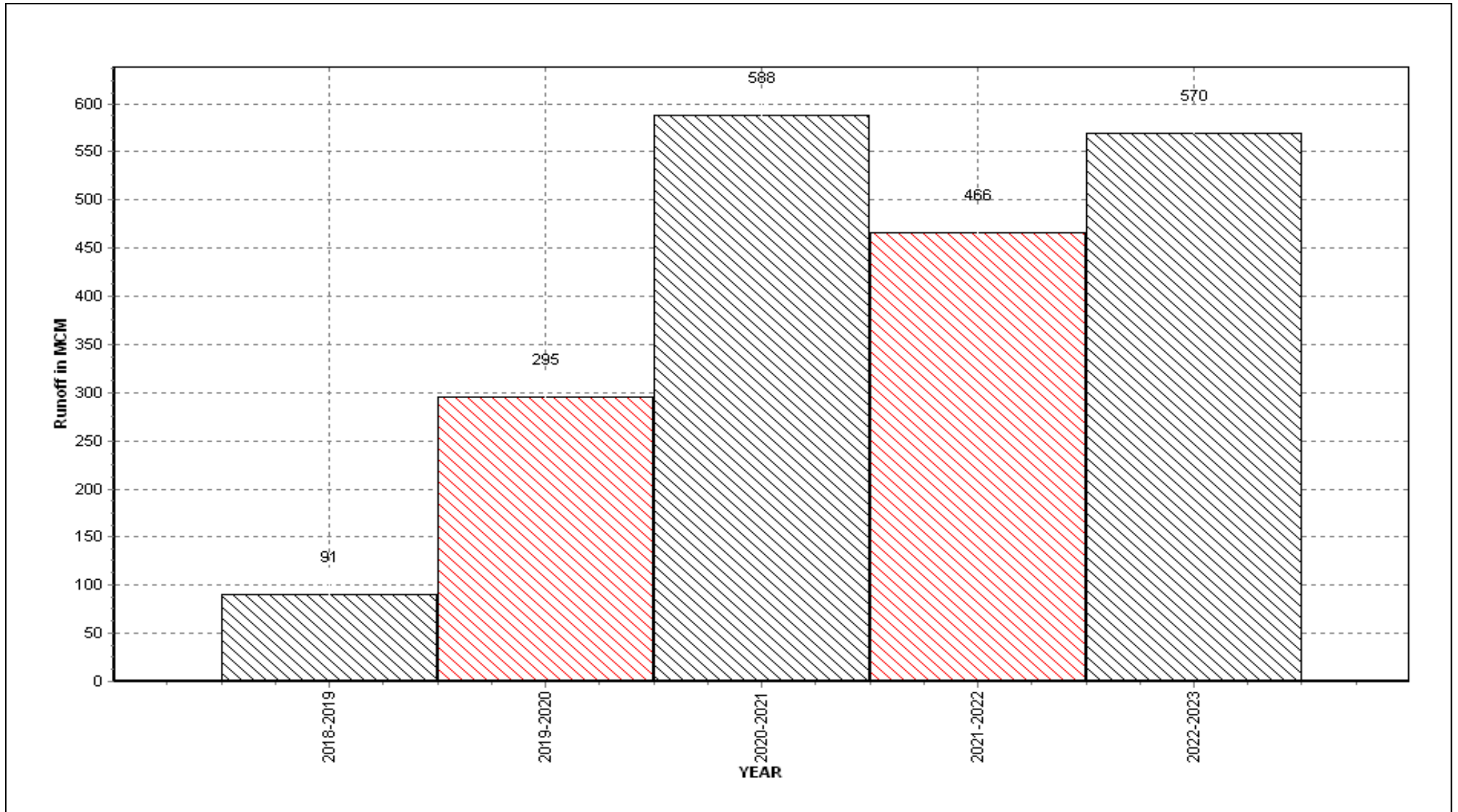
Annual Runoff Values for the period: 2018 - 2023

Station Name : MUNUGODU (033-LKDHYD)

Local River : YEDDUVAGU

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



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

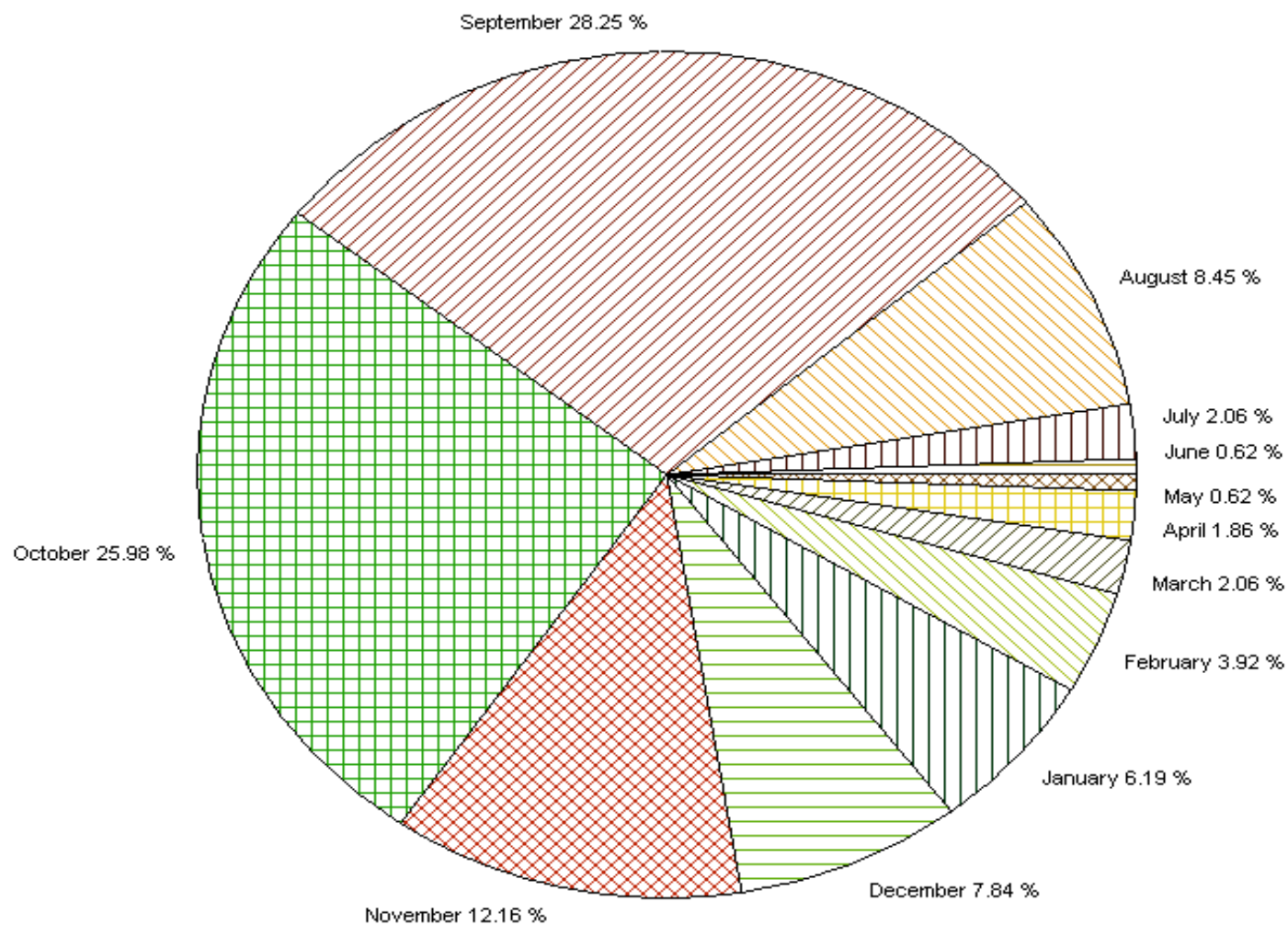
Monthly Average Runoff based on period : 2018-2022

Station Name : MUNUGODU (033-LKDHYD)

Local River : YEDDUVAGU

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



June	0.62 %
July	2.06 %
August	8.45 %
September	28.25 %
October	25.98 %
November	12.16 %
December	7.84 %
January	6.19 %
February	3.92 %
March	2.06 %
April	1.86 %
May	0.62 %

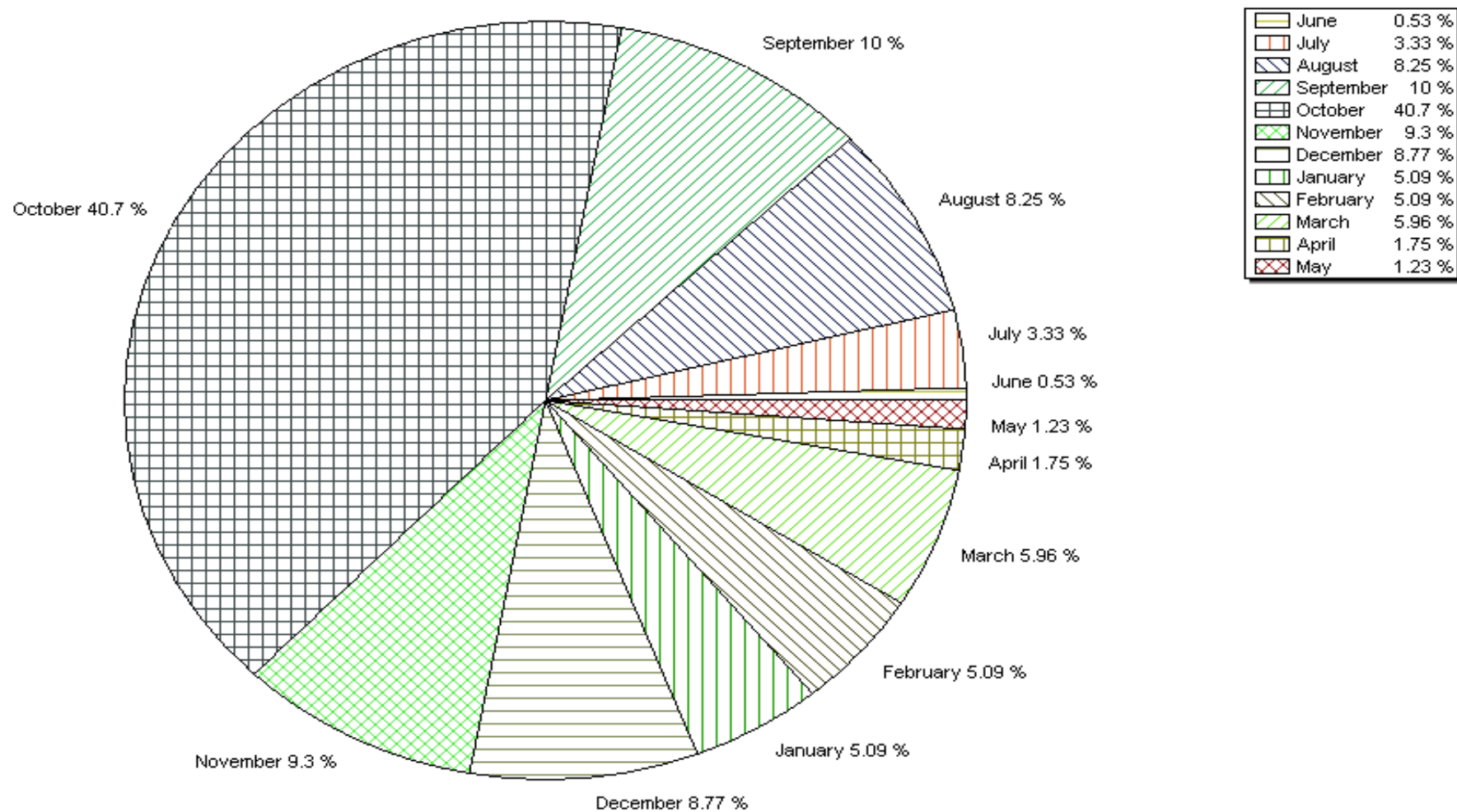
Monthly Runoff for the Year : 2022-2023

Station Name : MUNUGODU (033-LKDHYD)

Local River : YEDDUVAGU

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



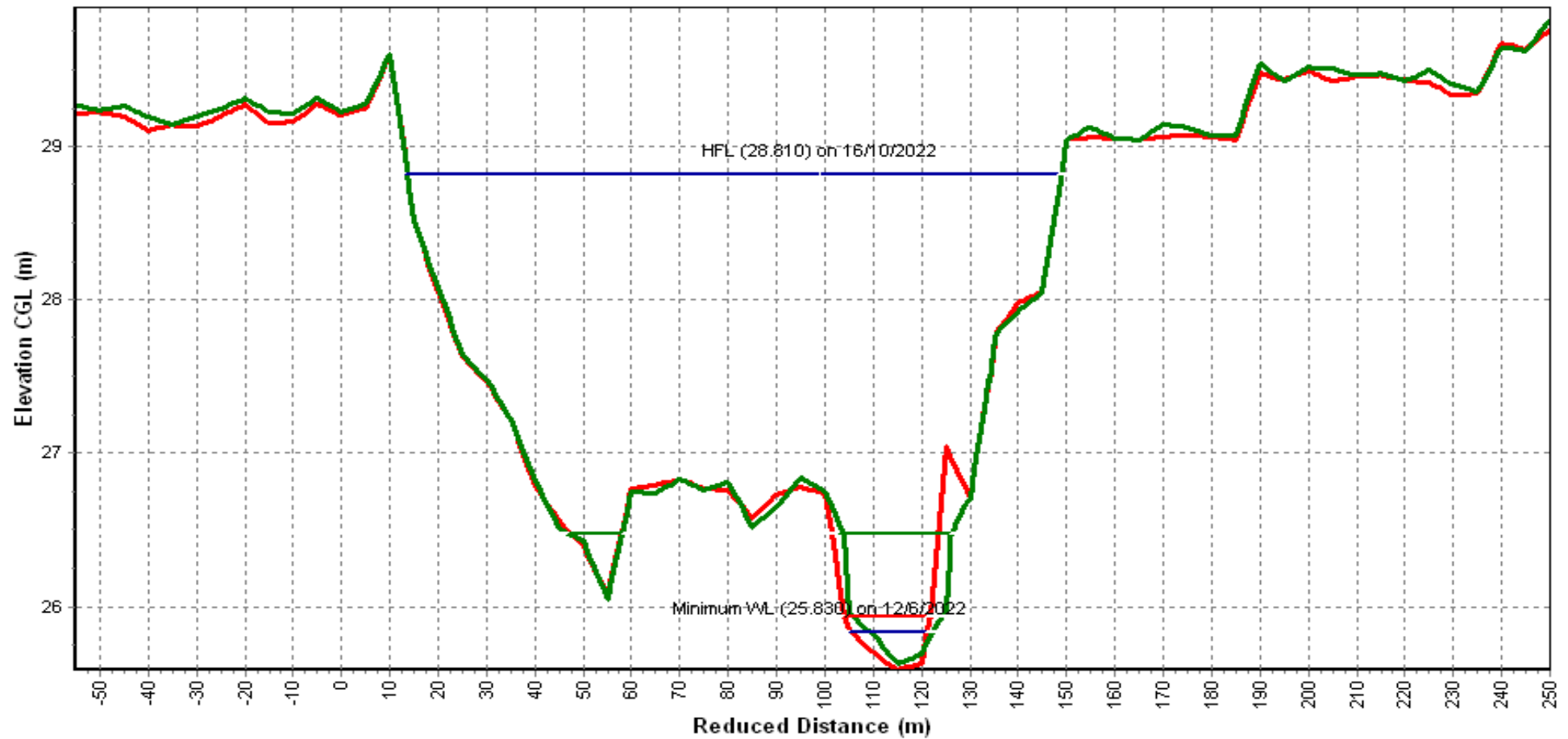
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : MUNUGODU (033-LKDHYD)

Local River : YEDDUVAGU

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



Zero of the Gauge: 24.5 (m.s.l)

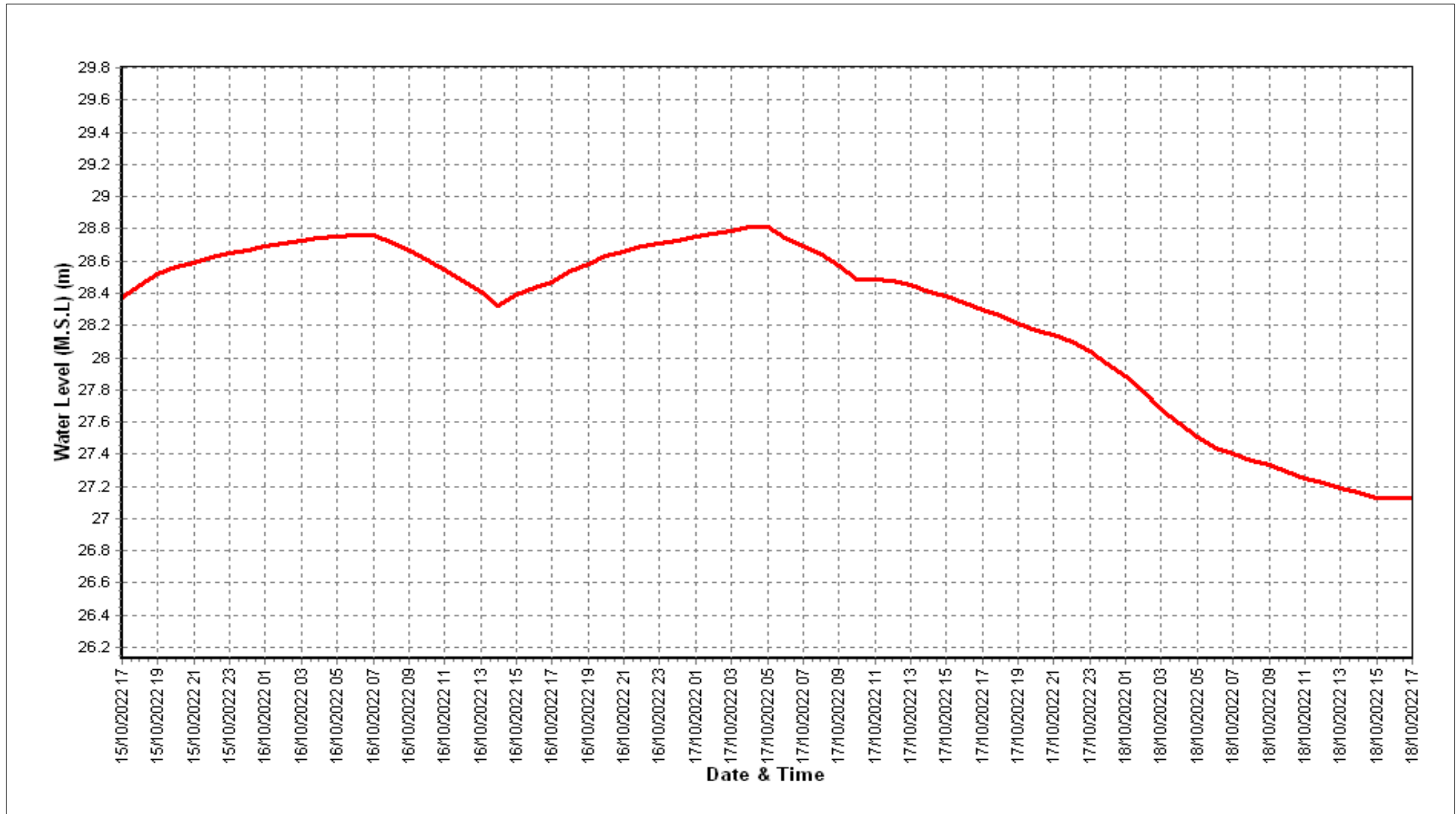
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : MUNUGODU (033-LKDHYD)

Local River : YEDDUVAGU

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



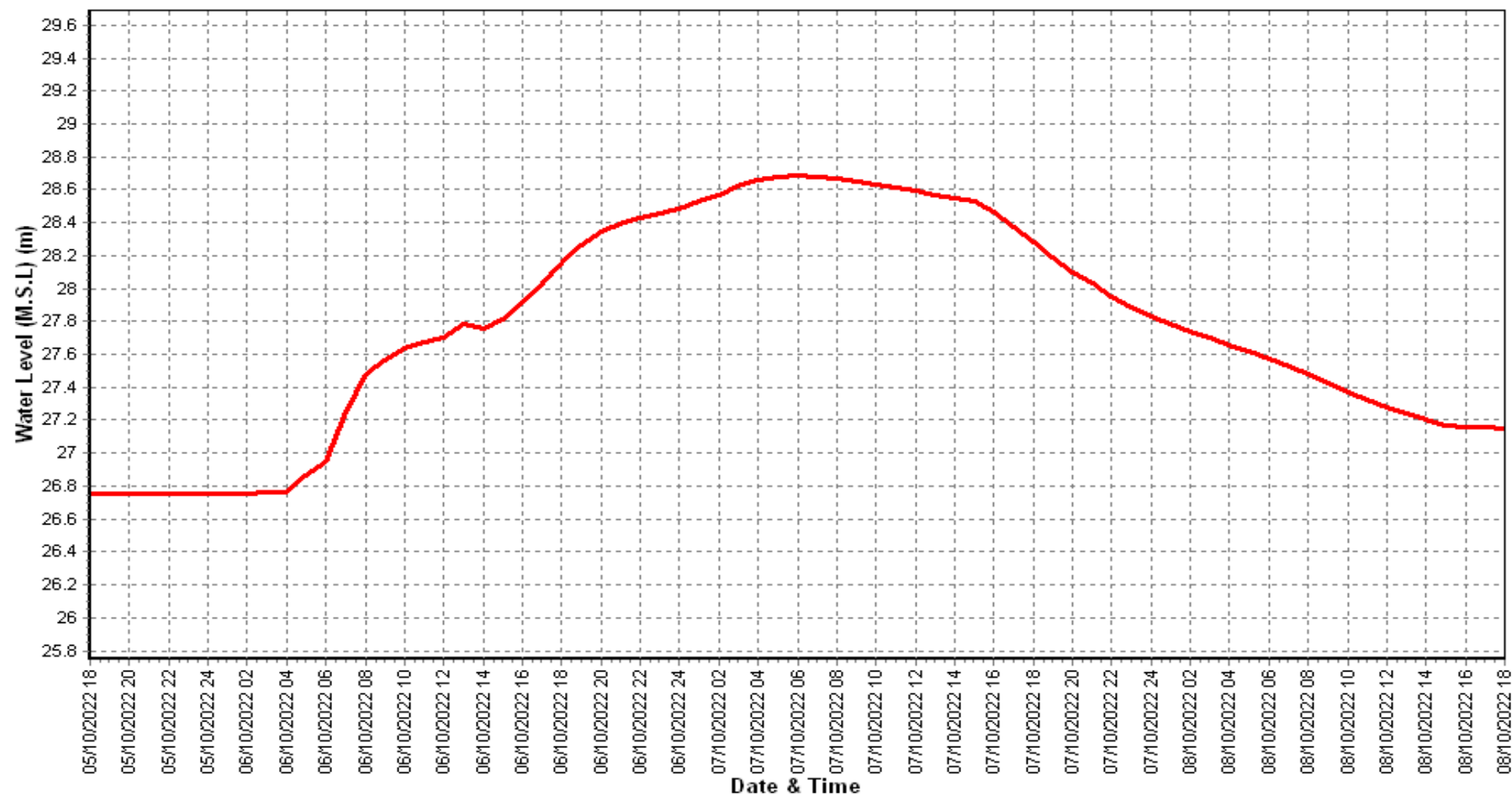
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : MUNUGODU (033-LKDHYD)

Local River : YEDDUVAGU

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



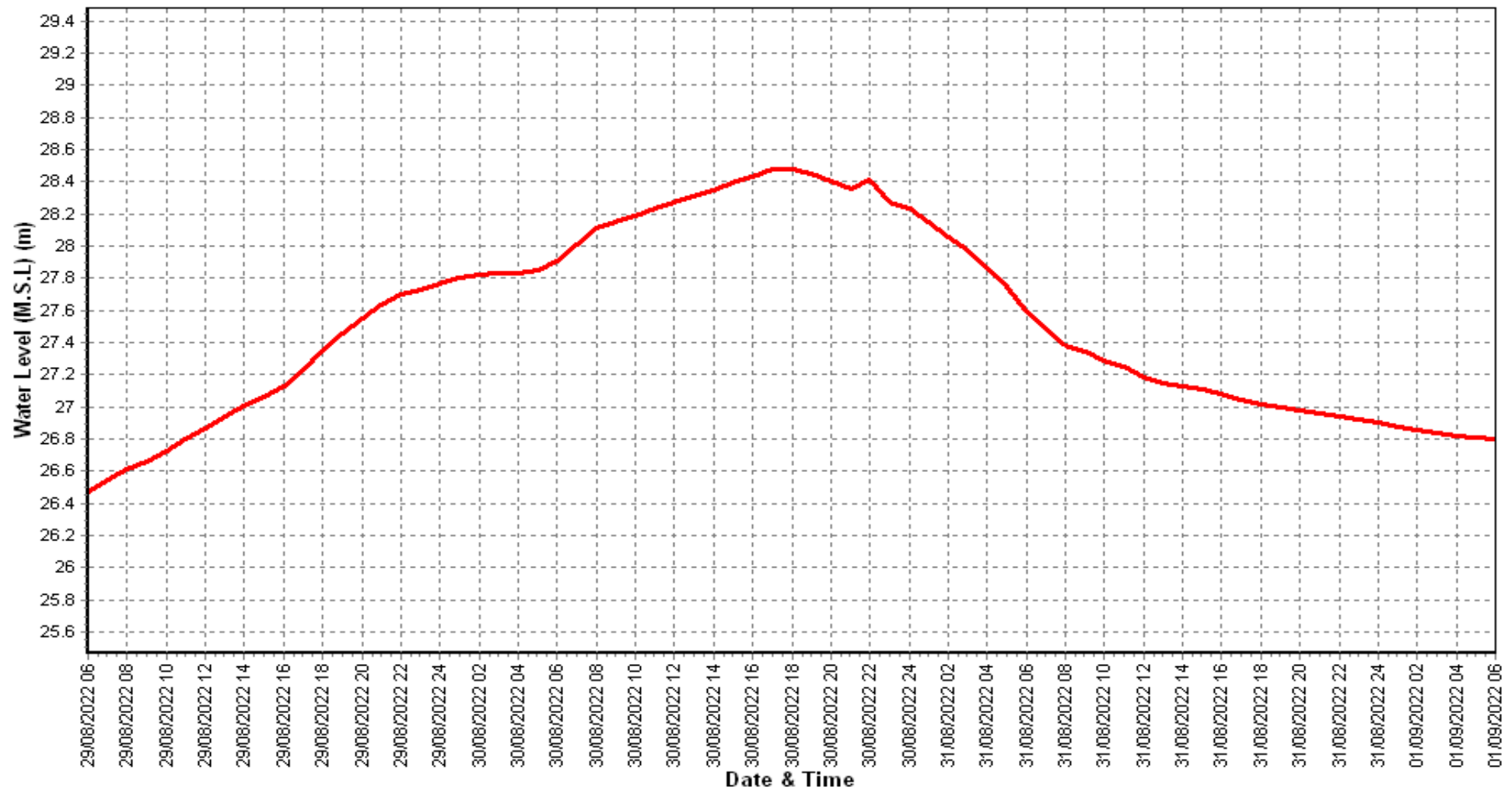
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : MUNUGODU (033-LKDHYD)

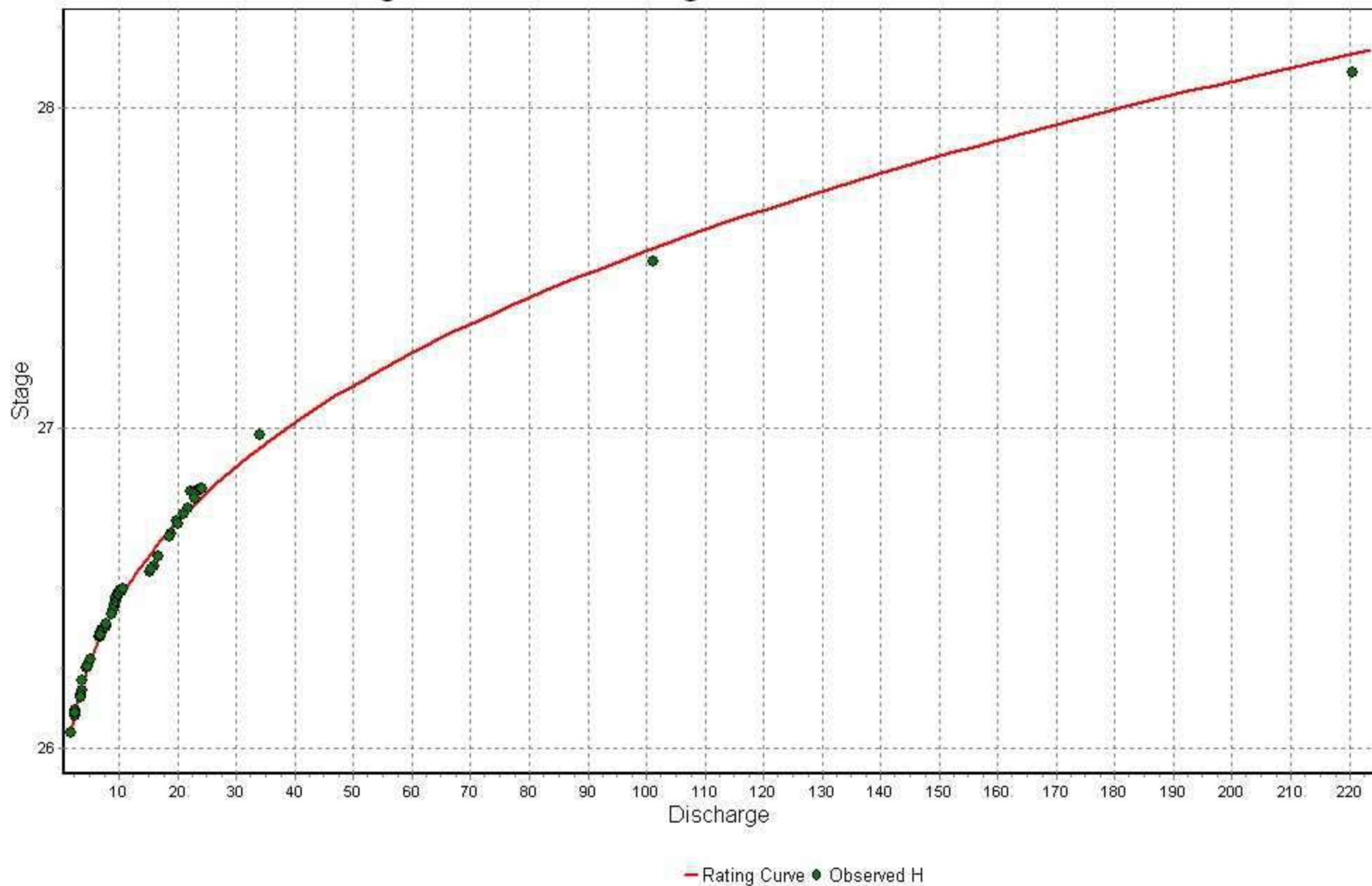
Local River : YEDDUVAGU

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



Rating Curve of site of Munugodu 01/06/2022 to 30/11/2022



Annual Runoff of Munneru at Penigrunchiprolu

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	2020-2021		35	35	0	1	1
2	2021-2022	1723	117	1840	61	4	65
3	2022-2023	2263	94	2357	80	3	83
Average		1993	82	1411	47	3	50

Instantaneous Flood Peak of Munneru at Penigrunchiprolu

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
2	2021-2022	53.700	08-09-2021	06:00:00	2726
3	2022-2023	52.850	23-07-2022	16:00:00	2452 *

Stage-Discharge Data for the period 2022 - 2023

Station Name : PENUGRANCHIPROLU (039-LKDHYD)

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	50.330	1.129	50.570	12.70	50.980	110.8	51.080	152.3	51.280	279.6	50.470	33.81
2	50.320	1.121	50.555	11.59	50.900	82.39	51.080	152.3	51.420	379.4 *	50.470	33.67
3	50.320	1.097	50.650	15.03 *	51.180	198.3	50.900	82.39	51.090	156.8	50.450	31.19
4	50.310	1.076	50.600	14.95	51.250	263.5	50.830	58.08 *	50.970	104.7	50.460	32.29
5	50.300	1.000 *	50.890	43.37	51.350	329.0	50.790	50.04	50.900	79.89 *	50.470	34.39
6	50.300	1.008	50.850	37.24	51.500	443.8	50.770	44.71	50.970	104.7	50.470	34.65 *
7	50.300	0.996	50.880	42.71	51.460	413.4 *	50.710	26.22	51.010	123.1	50.450	30.93
8	50.290	1.040	51.010	103.8	51.580	517.3	50.740	29.31	51.150	192.0 *	50.450	29.25 *
9	50.290	1.092	51.420	379.4 *	52.070	1153 *	50.810	54.76	51.070	150.1 *	50.460	30.70
10	50.290	1.142	51.520	467.6 *	51.750	684.9	50.970	105.7 *	51.000	109.1	50.460	31.02
11	50.290	1.142 *	51.950	615.0	51.450	440.2	51.500	449.1 *	50.900	75.51	50.450	30.24
12	50.280	1.050 *	52.100	741.1	51.270	299.1	51.430	422.1	50.810	54.76	50.450	29.25 *
13	50.280	1.046	51.750	470.0	51.120	175.6 *	51.450	440.2	50.770	44.71	50.450	29.25 *
14	50.320	1.194	51.660	406.1	51.020	126.8 *	51.240	281.5	50.770	44.71	50.440	29.19
15	50.305	1.095	51.410	252.0	51.010	122.4 *	51.010	112.8	50.810	54.76	50.440	29.15
16	50.300	1.065	51.220	165.2	51.000	130.4	50.970	96.00	51.000	118.1 *	50.440	27.32
17	50.290	1.060	51.100	165.1 *	51.080	152.3	50.900	75.51	51.180	198.3	50.420	21.64
18	50.290	1.086	51.070	107.6	51.010	123.1	50.870	70.06 *	51.000	109.1	50.420	19.84
19	50.300	1.065 *	51.320	213.0	50.900	81.14	50.790	46.81	50.900	75.44	50.410	18.30
20	50.335	1.843	51.300	202.7	50.880	58.00	50.820	53.49	50.840	58.15	50.400	18.09 *
21	50.330	1.713	51.170	193.1	50.870	70.06 *	51.300	295.4	50.840	58.15	50.400	17.43
22	50.330	1.719	51.080	152.3	50.860	68.43	51.400	359.8	50.800	52.37	50.390	16.71
23	50.340	1.790	52.070	1035	50.850	65.20	51.190	203.8	50.770	42.49 *	50.400	17.72
24	50.370	2.225	52.640	2252 *	50.800	52.37	51.280	279.6	50.770	42.49 *	50.400	17.61
25	50.365	2.191	51.700	634.0	50.695	25.55	51.140	186.5 *	50.760	42.53	50.400	17.43
26	50.350	1.800 *	51.600	535.3	50.640	21.54	51.010	112.8	50.750	40.39	50.390	16.87
27	50.290	0.877	51.900	841.6	50.680	25.99	51.000	109.1	50.770	44.71	50.390	16.26 *
28	50.440	4.392	51.450	401.9	50.950	97.93 *	51.080	152.3	50.710	34.27	50.380	14.90
29	50.585	13.30	51.260	269.6	50.840	60.94	50.970	104.7	50.520	37.93	50.380	14.87
30	50.610	15.82	51.150	182.4	50.830	58.78	51.080	152.3	50.490	35.56 *	50.370	14.35
31			51.020	126.8 *	50.960	101.8 *			50.480	34.81		
Ten-Daily Mean												
I Ten-Daily	50.305	1.070	50.894	112.8	51.402	419.6	50.868	75.59	51.086	167.9	50.461	32.19
II Ten-Daily	50.299	1.165	51.488	333.8	51.074	170.9	51.098	204.8	50.898	83.35	50.432	25.23
III Ten-Daily	50.401	4.582	51.549	602.2	50.816	58.96	51.145	195.6	50.696	42.34	50.390	16.42
Monthly												
Min.	50.280	0.877	50.555	11.59	50.640	21.54	50.710	26.22	50.480	34.27	50.370	14.35
Max.	50.610	15.82	52.640	2252	52.070	1153	51.500	449.1	51.420	379.4	50.470	34.65
Mean	50.335	2.272	51.318	357.8	51.088	211.4	51.037	158.7	50.887	96.08	50.428	24.61

Annual Runoff in MCM = 2356 Annual Runoff in mm = 760

Peak Observed Discharge = 1035 cumecs on 23-07-2022 Corres. Water Level :52.07 m

Lowest Observed Discharge = 0.000 cumecs on 22-02-2023 Corres. Water Level :50.18 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 2022 - 2023

Station Name : PENUGRANCHIPROLU (039-LKDHYD)

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	50.370	14.10	50.330	2.620 *	50.360	4.330	50.120	0.000	50.150	2.879	50.450	29.98
2	50.370	13.95	50.330	2.620	50.350	4.013	50.120	0.000	50.140	2.720 *	50.390	23.37
3	50.360	13.27	50.330	2.690	50.350	4.036	50.110	0.000	50.130	2.636	50.370	18.72
4	50.360	12.87 *	50.320	2.582	50.350	4.084	50.110	0.000	50.120	2.520 *	50.350	16.99
5	50.360	13.29	50.320	2.527	50.350	4.050 *	50.110	0.000	50.110	2.141	50.340	16.84 *
6	50.350	11.95	50.320	2.456	50.340	3.699	50.100	0.000	50.230	8.077	50.330	14.29
7	50.350	12.16	50.320	2.346	50.330	3.677	50.090	0.000	50.230	8.077 *	50.350	17.84 *
8	50.350	12.05	50.310	2.140 *	50.330	3.645	50.090	0.000	50.220	7.480 *	50.310	12.72
9	50.350	11.94	50.310	2.148	50.310	2.390	50.080	0.000	50.210	0.000	50.310	12.82
10	50.340	11.27 *	50.310	2.031	50.280	2.282	50.080	0.000	50.190	0.000	50.300	11.99
11	50.340	11.27 *	50.300	1.863	50.250	1.300 *	50.070	0.000	50.180	0.000	50.300	12.07
12	50.350	12.05	50.300	1.773	50.240	1.210 *	50.070	0.000	50.170	0.000	50.290	10.50
13	50.340	10.51	50.300	1.737	50.240	1.214	50.070	0.000	50.160	0.000	50.280	11.56 *
14	50.340	10.66	50.300	1.730 *	50.240	1.184	50.060	0.000	50.160	0.000	50.280	11.56 *
15	50.340	10.57	50.300	1.730 *	50.230	1.049	50.050	0.000	50.150	0.000	50.240	8.515
16	50.340	10.95	50.290	1.599	50.230	1.010	50.050	0.000	50.140	0.000	50.210	7.552
17	50.290	8.594	50.290	1.528	50.220	0.911	50.050	0.000	50.130	0.000	50.210	7.276
18	50.230	5.986 *	50.290	1.457	50.220	0.892	50.050	0.000	50.130	0.000	50.200	6.847
19	50.200	5.573	50.300	2.148	50.220	0.900 *	50.060	0.000	50.120	0.000	50.200	6.534
20	50.190	5.533	50.310	2.555	50.210	0.741	50.060	0.000	50.150	0.000	50.190	6.314
21	50.180	5.542	50.310	2.395	50.210	0.743	50.070	0.000	50.190	0.000	50.190	5.885 *
22	50.180	5.542	50.310	2.390 *	50.180	0.000	50.550	37.82 *	50.260	10.07 *	50.190	6.006
23	50.170	5.200	50.330	2.921	50.160	0.000	50.370	16.34	50.270	10.80 *	50.170	4.285
24	50.170	5.200	50.330	2.864	50.160	0.000	50.300	13.71	50.230	8.077	50.170	4.509
25	50.160	4.073 *	50.320	2.633	50.150	0.000	50.290	12.98	50.260	11.64	50.160	3.869
26	50.160	4.028	50.320	2.630 *	50.140	0.000	50.270	10.80 *	50.290	13.95	50.180	6.589
27	50.150	3.434	50.320	2.647	50.130	0.000	50.260	10.21	50.380	23.08	50.260	10.07 #
28	50.325	10.20 #	50.360	4.309	50.130	0.000	50.250	8.301	50.470	32.10	50.280	11.56 *
29	50.360	12.87 #	50.370	4.420 *			50.240	7.448	50.450	29.56	50.160	4.002
30	50.360	12.87 #	50.370	4.425			50.240	8.709 *	50.400	23.31 *	50.140	3.674
31	50.350	12.05 #	50.360	4.346			50.230	4.295			50.130	3.138
Ten-Daily Mean												
I Ten-Daily	50.356	12.69	50.320	2.416	50.335	3.621	50.101	0.000	50.173	3.653	50.350	17.56
II Ten-Daily	50.296	9.170	50.298	1.812	50.230	1.041	50.059	0.000	50.149	0.000	50.240	8.873
III Ten-Daily	50.233	7.365	50.336	3.271	50.158	0.093	50.279	11.87	50.320	16.26	50.185	5.781
Monthly												
Min.	50.150	3.434	50.290	1.457	50.130	0.000	50.050	0.000	50.110	0.000	50.130	3.138
Max.	50.370	14.10	50.370	4.425	50.360	4.330	50.550	37.82	50.470	32.10	50.450	29.98
Mean	50.293	9.664	50.319	2.525	50.247	1.691	50.151	4.213	50.214	6.638	50.256	10.58

Peak Computed Discharge = 2252 cumecs on 24-07-2022

Corres. Water Level :52.64 m

Lowest Computed Discharge = 0.900 cumecs on 19-02-2023

Corres. Water Level :50.22 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

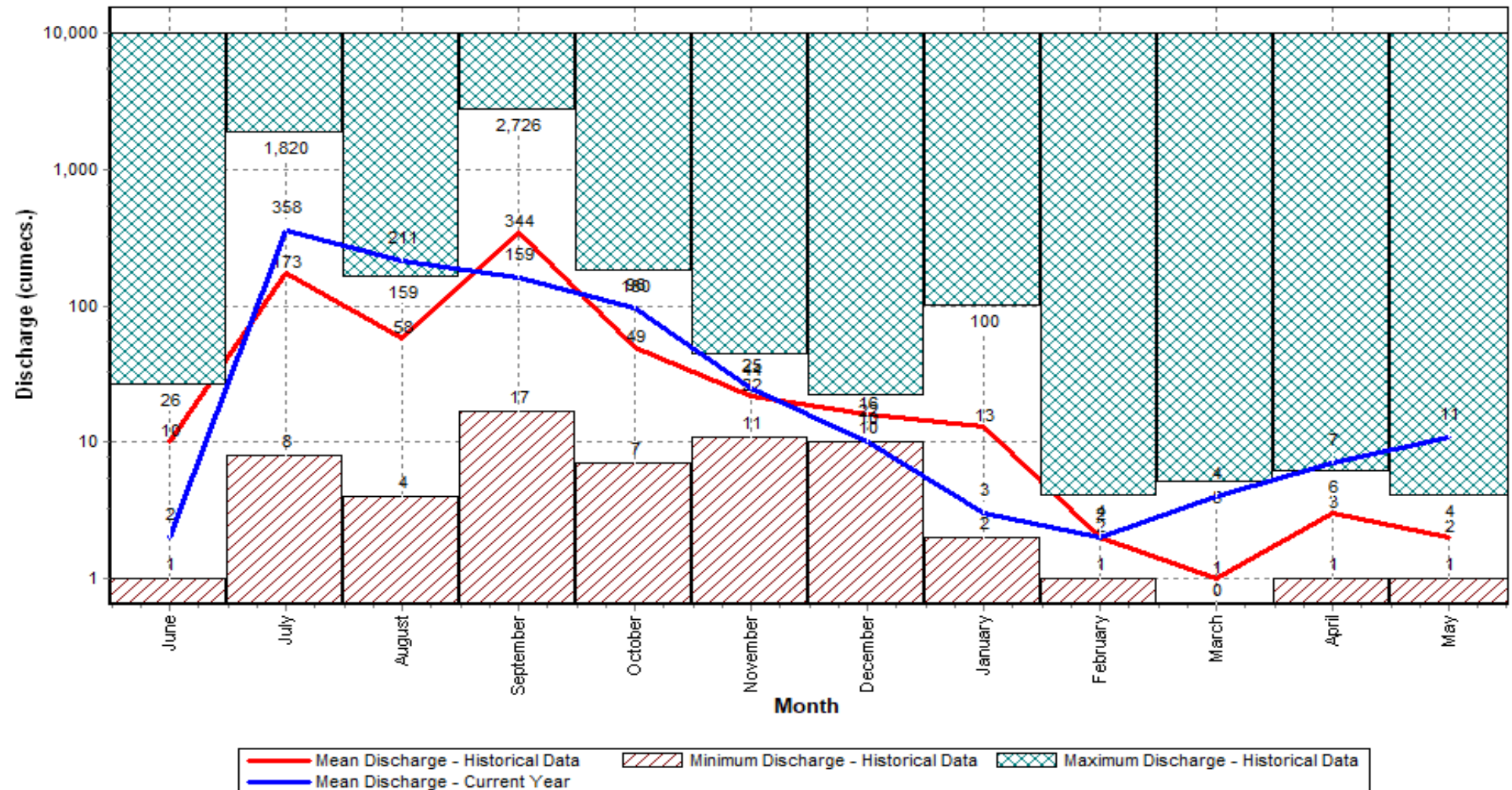
Station Name : PENUGRANCHIPROLU (039-LKDHYD)

Data considered : 2021-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

Sub-Division : Lower Krishna SD2, Vijayawada



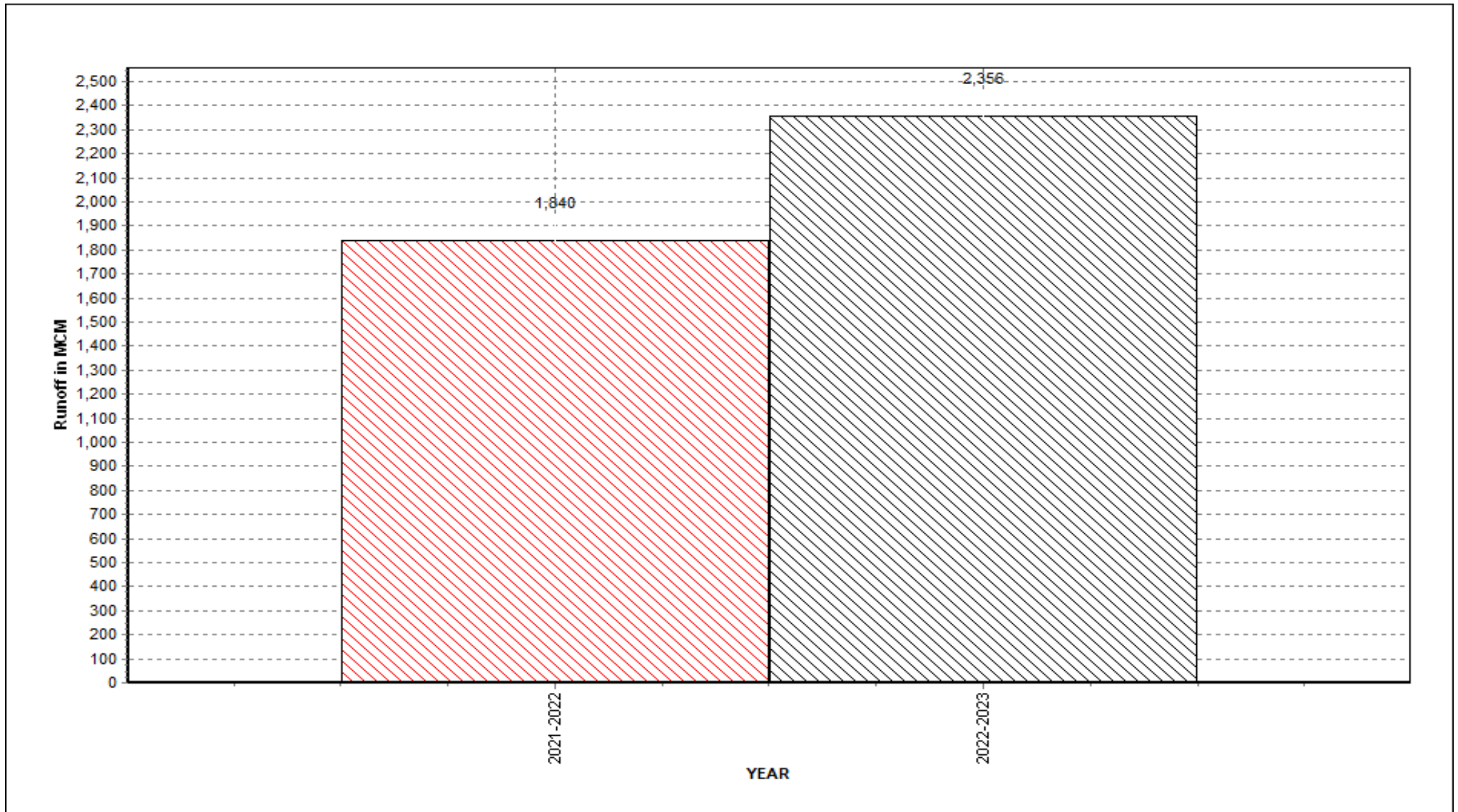
Annual Runoff Values for the period: 2021 - 2023

Station Name : PENUGRANCHIPROLU (039-LKDHYD)

Local River : Munneru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



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

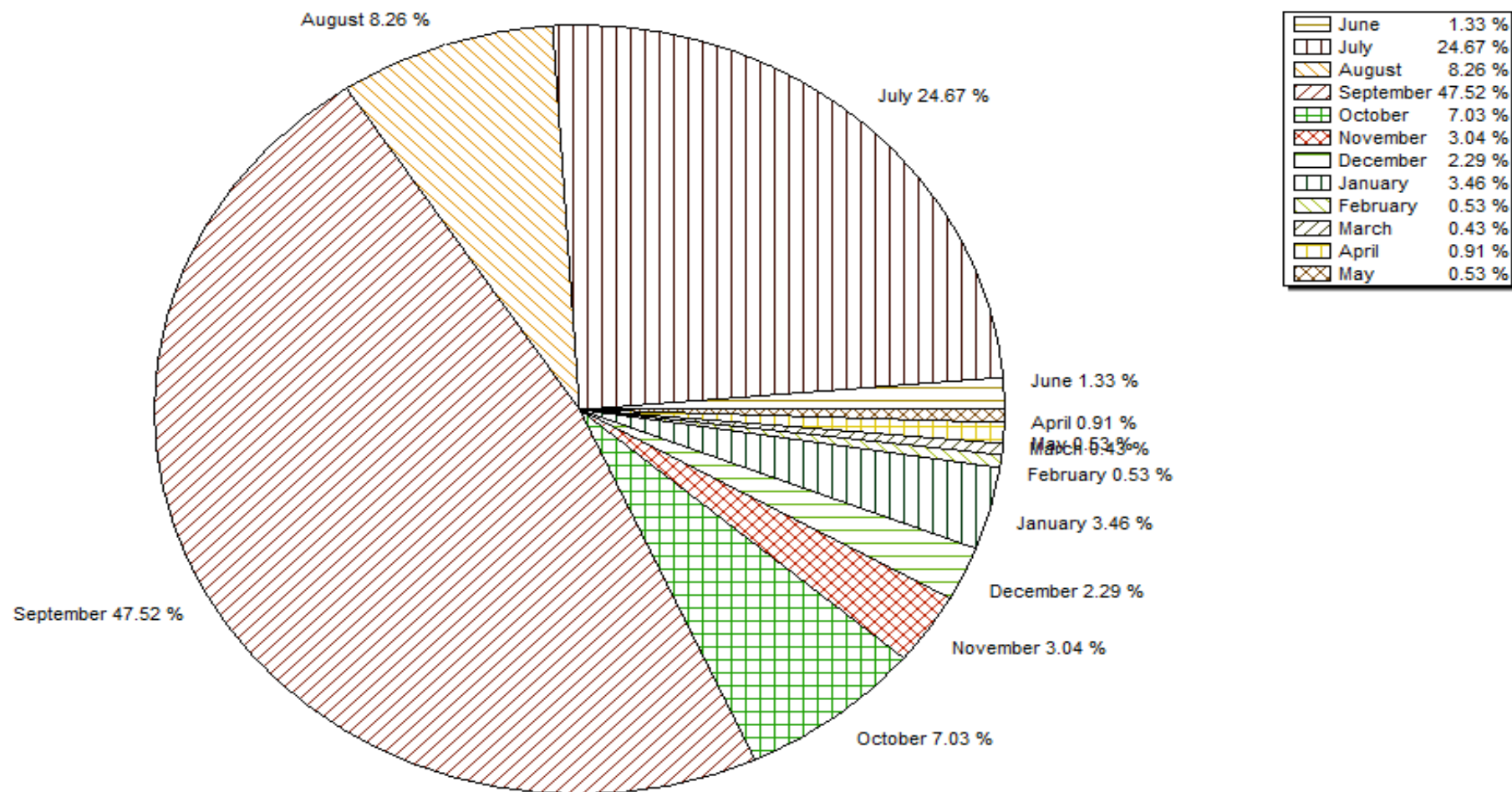
Monthly Average Runoff based on period : 2021-2022

Station Name : PENUGRANCHIPROLU (039-LKDHYD)

Local River : Munneru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



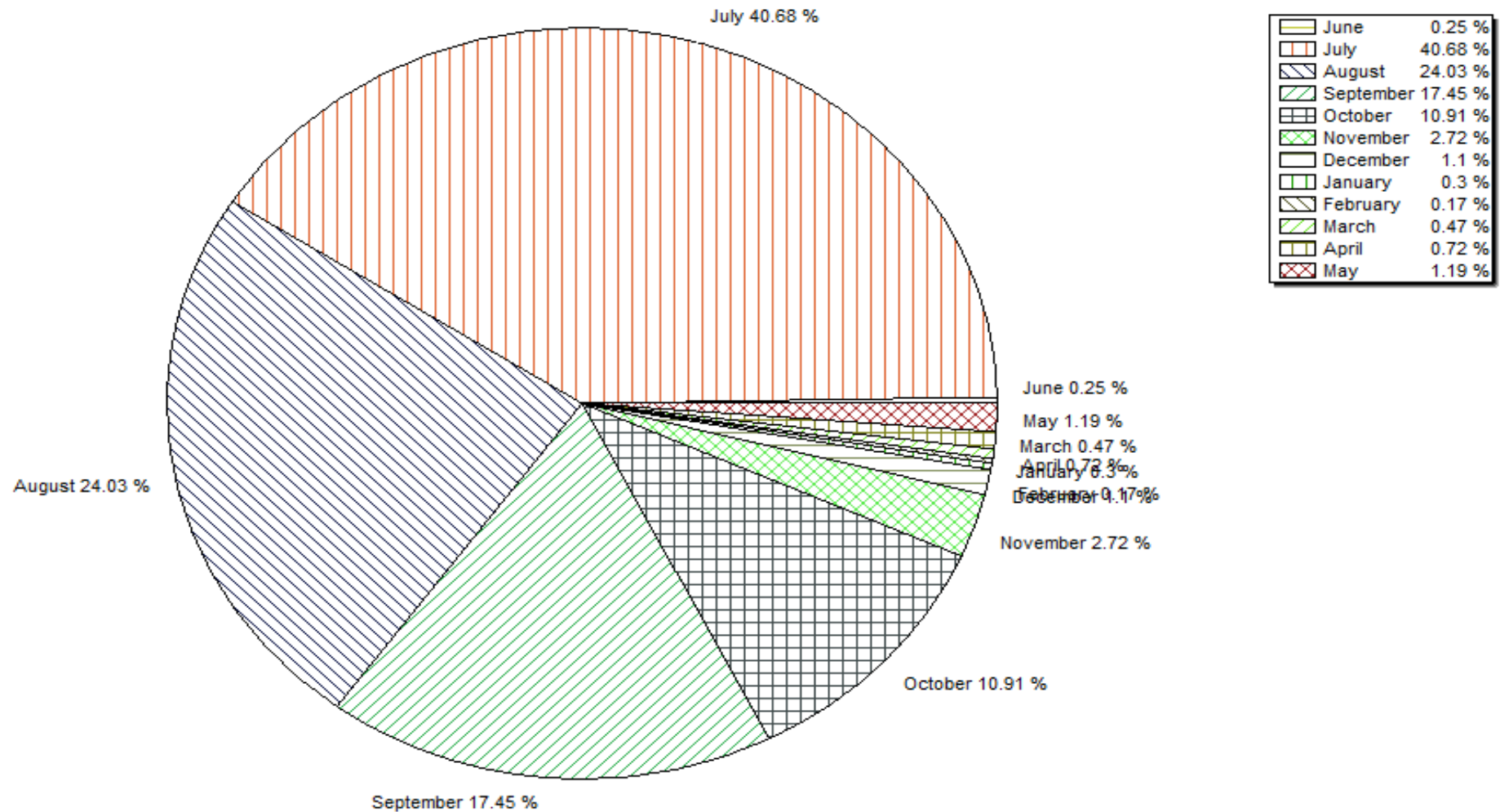
Monthly Runoff for the Year : 2022-2023

Station Name : PENUGRANCHIPROLU (039-LKDHYD)

Local River : Munneru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



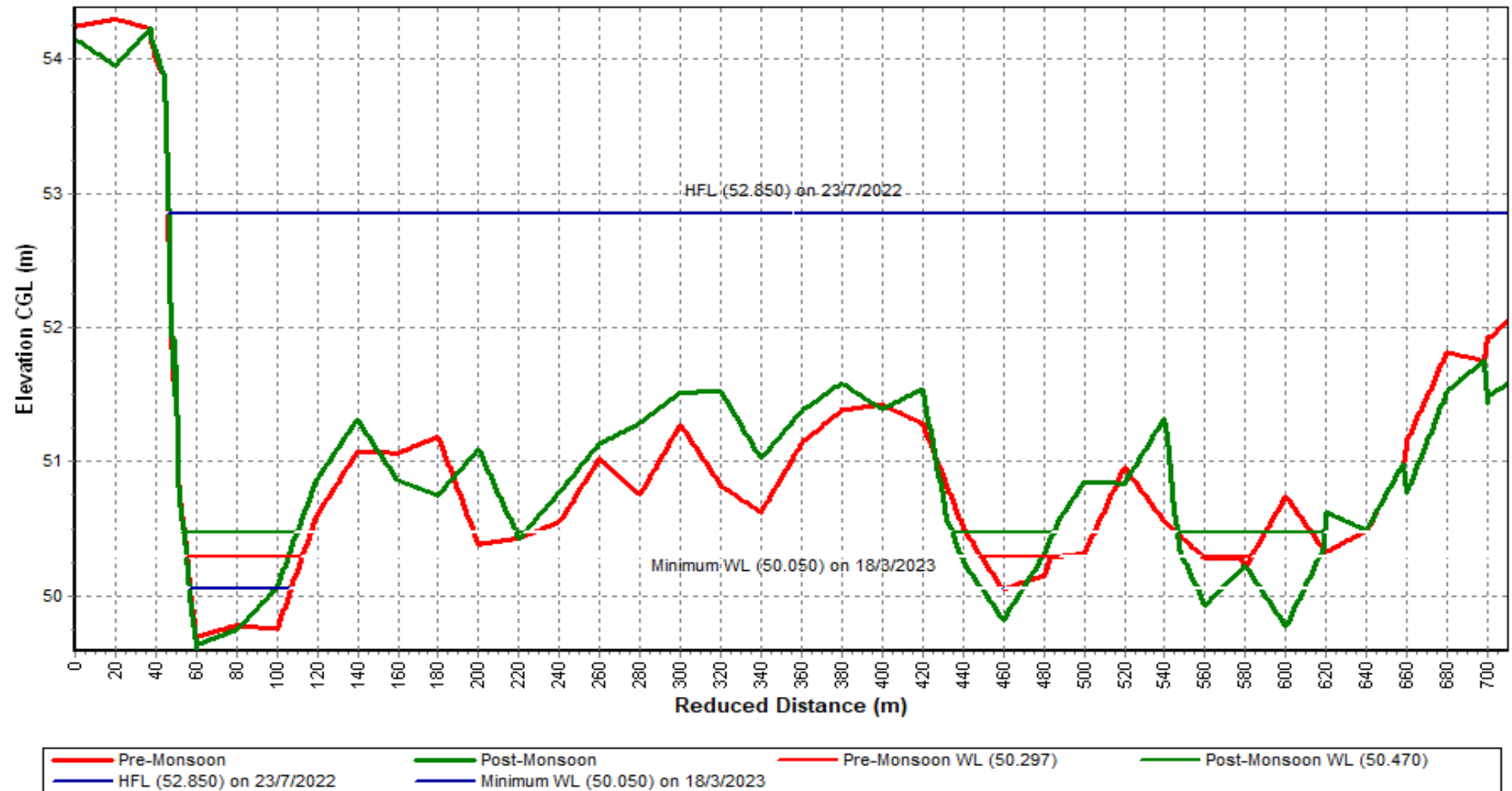
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : PENUGRANCHIPROLU (039-LKDHYD)

Local River : Munneru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



Remarks :Cross Section Deviation due to Sandy Bed X section was not Stable.
Zero of the Gauge: 48 (m.s.l)

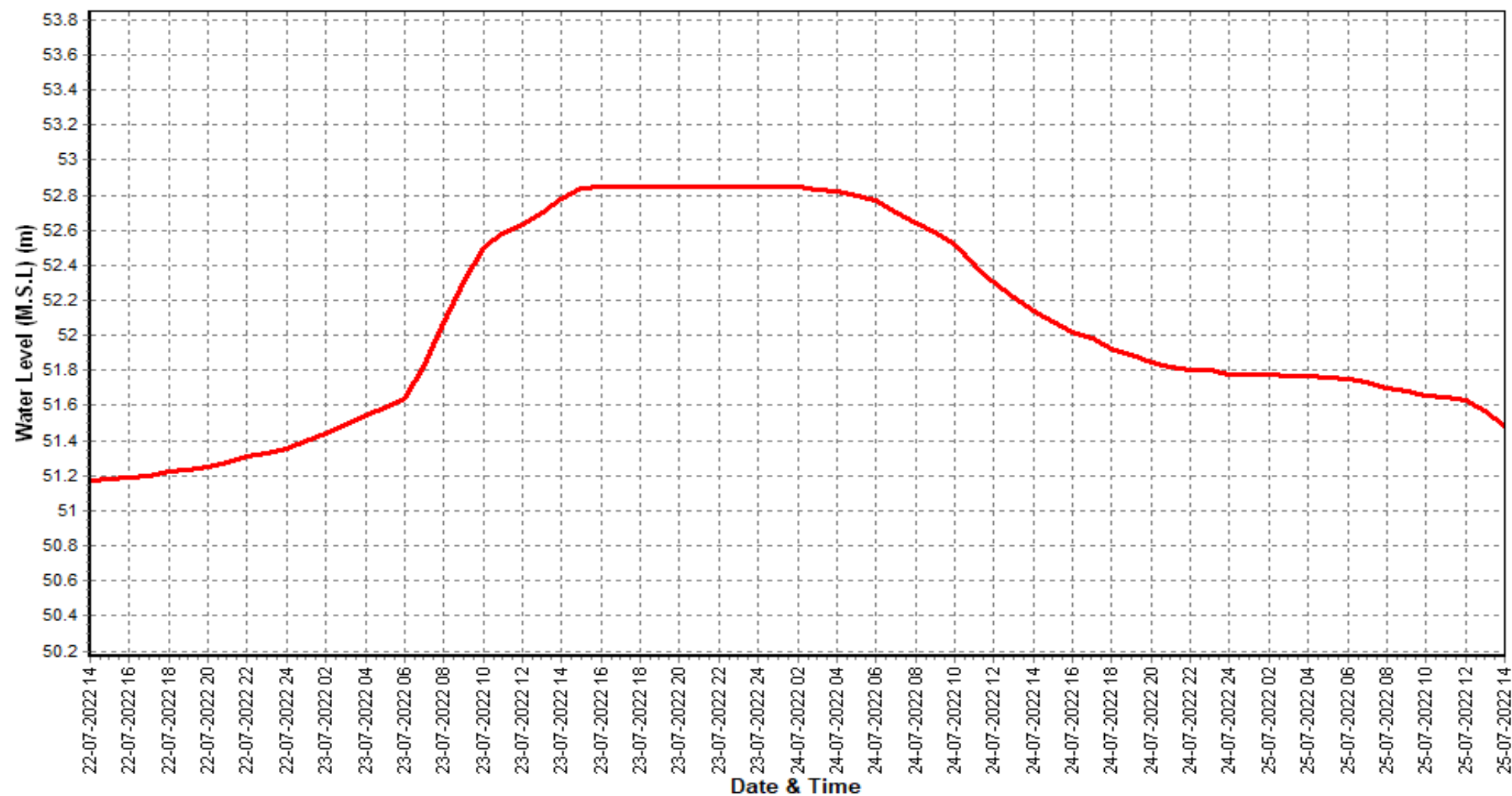
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : PENUGRANCHIPROLU (039-LKDHYD)

Local River : Munneru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



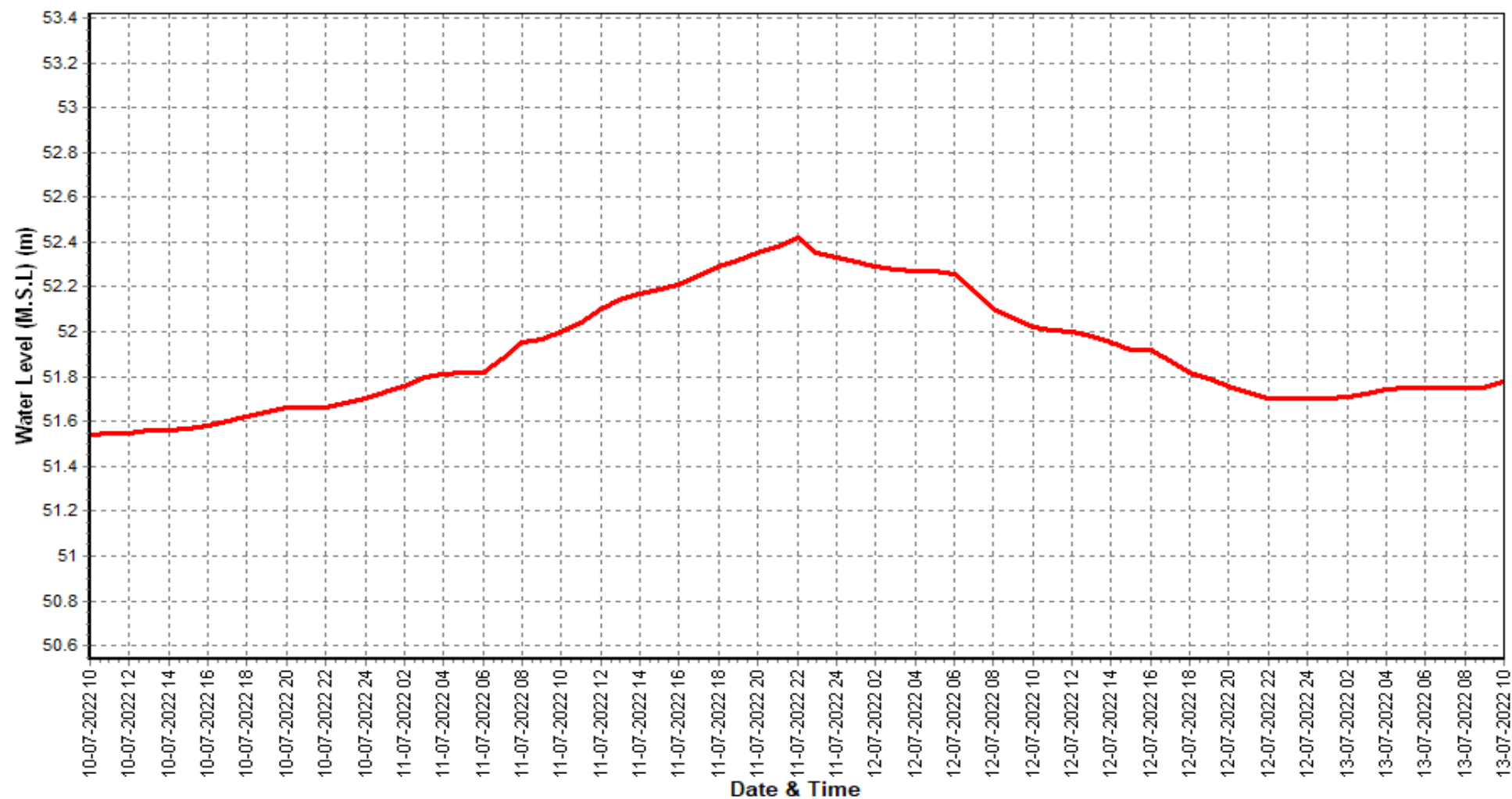
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : PENUGRANCHIPROLU (039-LKDHYD)

Local River : Munneru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



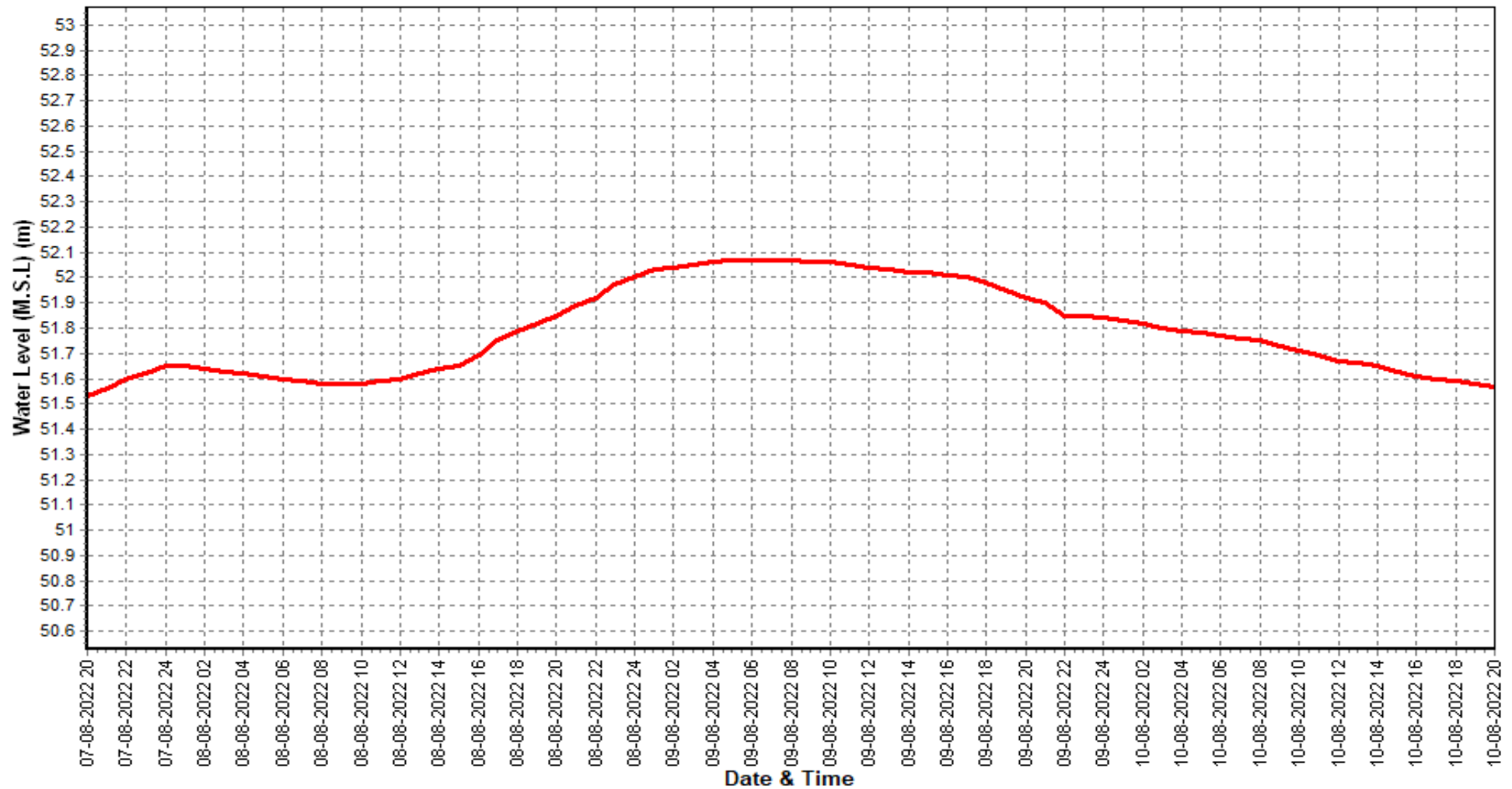
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : PENUGRANCHIPROLU (039-LKDHYD)

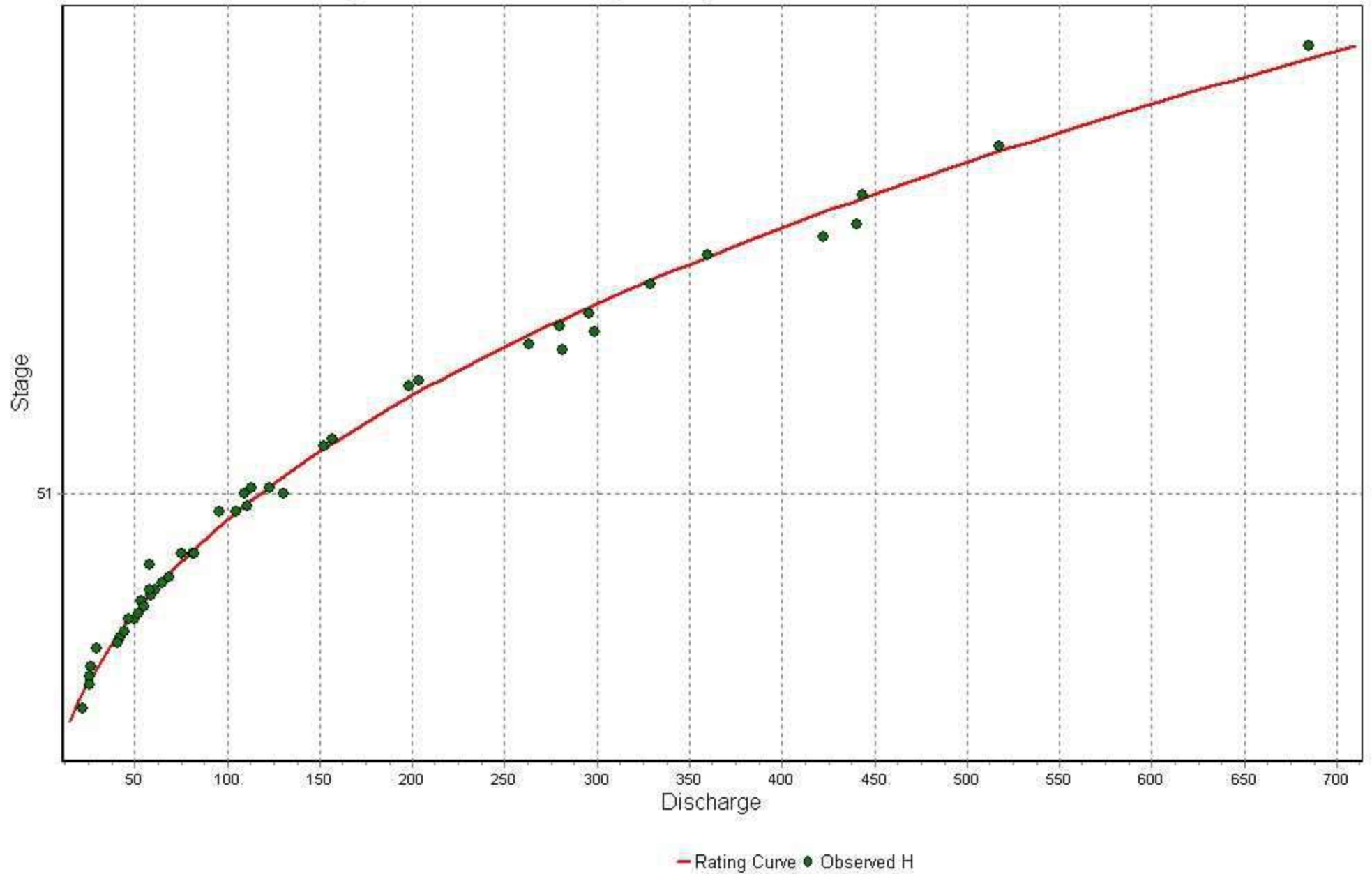
Local River : Munneru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



Rating Curve of Site Penugranchiprolu 01/08/2022 to 31/10/2022



HISTORY SHEET

		Water Year	: 2022-2023
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 2022-23	: 47.330 m
		Corres. Discharge	: 493 (Estimated)
Discharge	: 07-06-1984	Date & Time of occurrence	: 08-08-2022 : 18.00 hrs.
Sediment	: 01-03-2014		
Water Quality	: 01-06-1992	31-05-2006	

HFL Recorded so far in m : 52.010 dt 20-09-2005

Corresponding Discharge (cumecs) : 3272*

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

Year	Maximum			Minimum		
	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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
2006-2007	602.2	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	1125	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	44.473	27-05-2013
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
2016-2017	76.88	45.535	10-10-2016	0.000		03-02-2017
2017-2018	145.1	45.790	18-07-2017	0.000		24-11-2017
2018-2019	1401	50.040	20-08-2018	0.000		12-02-2019
2019-2020	213.8	46.190	19-09-2019	0.000		07-06-2019
2020-2021	1062	49.200	14-10-2020	0.000		07-06-2020
2021-2022	994.2	49.120	23-07-2021	1.154	43.720	26-05-2022

Annual Runoff of Wyra at Madhira

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1984-1985	196	95	292	7	3	10
2	1985-1986	463	53	516	16	2	18
3	1986-1987	526	71	597	19	3	21
4	1987-1988	189	59	249	7	2	9
5	1988-1989	894	63	958	32	2	34
6	1989-1990	1343	280	1623	47	10	57
7	1990-1991	1100	105	1204	39	4	43
8	1991-1992	586	80	666	21	3	24
9	1992-1993	216	61	277	8	2	10
10	1993-1994	268	76	344	9	3	12
11	1994-1995	563	119	682	20	4	24
12	1995-1996	380	65	446	13	2	16
13	1996-1997	630	119	749	22	4	26
14	1997-1998	196	83	278	7	3	10
15	1998-1999	544	122	666	19	4	24
16	1999-2000	418	69	487	15	2	17
17	2000-2001	649	76	725	23	3	26
18	2001-2002	94	55	149	3	2	5
19	2002-2003	61	0	61	2	0	2
20	2003-2004	86	13	99	3	0	4
21	2004-2005	176	13	190	6	0	7
22	2005-2006	781	164	945	28	6	33
23	2006-2007	446	71	517	16	3	18
24	2007-2008	413	116	529	15	4	19
25	2008-2009	709	52	761	25	2	27
26	2009-2010	50	142	192	2	5	7
27	2010-2011	805	167	973	28	6	34
28	2011-2012	318	51	369	11	2	13
29	2012-2013	480	10	491	17	0	17
30	2013-2014	367	47	414	13	2	15
31	2014-2015	174	72	246	6	3	9
32	2015-2016	191	0	191	7	0	7
33	2016-2017	70	6	75	2	0	3
34	2017-2018	124	36	161	4	1	6
35	2018-2019	456	21	478	16	1	17
36	2019-2020	223	44	268	7.9	1.6	9.5
37	2020-2021	829	119	948	29	4	34
38	2021-2022	667	74	741	24	3	26
39	2022-2023	598	143	741	21	5	26
Average		443	77	520	16	3	18

Instantaneous Flood Peak of Wyra at Madhira

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1984-1985	47.200	12-10-1984	10:00:00	412 *
2	1985-1986	48.750	11-10-1985	18:00:00	1025 *
3	1986-1987	51.220	12-08-1986	20:00:00	2609 *
4	1987-1988	46.610	14-08-1987	20:00:00	256 *
5	1988-1989	48.800	19-09-1988	13:00:00	1050 *
6	1989-1990	51.080	23-07-1989	20:00:00	2499 *
7	1990-1991	49.490	02-10-1990	00:00:00	1422 *
8	1991-1992	49.930	22-09-1991	12:00:00	1689 *
9	1992-1993	46.580	09-10-1992	23:00:00	249 *
10	1993-1994	46.240	28-08-1993	00:00:00	179 *
11	1994-1995	47.700	07-10-1994	15:00:00	578 *
12	1995-1996	48.480	16-10-1995	13:00:00	898 *
13	1996-1997	47.170	11-09-1996	16:00:00	403 *
14	1997-1998	46.080	12-09-1997	10:00:00	152 *
15	1998-1999	48.740	29-07-1998	16:00:00	1021 *
16	1999-2000	47.180	26-08-1999	04:00:00	406 *
17	2000-2001	49.180	27-08-2000	03:00:00	1248 *
18	2001-2002	45.970	15-08-2001	06:00:00	134 *
19	2002-2003	45.950	14-10-2002	07:00:00	131 *
20	2003-2004	46.220	08-08-2003	13:00:00	176 *
21	2004-2005	46.900	05-08-2004	08:00:00	327 *
22	2005-2006	52.010	20-09-2005	21:00:00	3272 *
23	2006-2007	48.100	20-09-2006	06:00:00	733 *
24	2007-2008	47.030	06-10-2007	02:00:00	363 *
25	2008-2009	49.620	10-08-2008	09:00:00	1498 *
26	2009-2010	45.910	02-10-2009	00:00:00	125 *
27	2010-2011	47.650	22-05-2010	08:00:00	560 *
28	2011-2012	46.330	25-08-2011	20:00:00	196 *
29	2012-2013	48.100	03-09-2012	16:00:00	733 *
30	2013-2014	47.320	26-10-2013	16:00:00	449 *
31	2014-2015	46.420	27-10-2014	22:00:00	214 *
32	2015-2016	46.790	21-06-2015	14:00:00	299 *
33	2016-2017	45.690	09-10-2016	22:00:00	97 *
34	2017-2018	45.810	18-07-2017	06:00:00	152 *
35	2018-2019	50.050	20-08-2018	07:00:00	1766 *
36	2019-2020	46.380	18-09-2019	22:00:00	221 *
37	2020-2021	49.860	14-10-2020	00:00:00	1536 *
38	2021-2022	49.880	27-09-2021	22:00:00	1595 *
39	2022-2023	47.330	08-08-2022	18:00:00	453 *

Stage-Discharge Data for the period 2022 - 2023

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	43.740	1.377	43.730	0.914	44.400	14.53	44.540	19.97	45.520	122.9	44.310	14.00
2	43.750	1.301	43.710	0.879	44.480	19.02	44.500	18.15	45.270	89.99 *	44.550	26.12
3	Dry Bed	0.000	43.730	0.910 *	44.780	41.39	44.430	15.28	44.975	60.28	44.590	28.40
4		0.000	43.740	1.002	45.100	64.39	44.380	14.21 *	44.740	39.11	44.600	28.59
5		0.000	43.710	0.902	45.280	89.98	44.440	17.67	44.610	28.30 *	44.600	28.49
6		0.000	43.820	1.833	45.320	107.3	44.410	15.87	45.070	74.25	44.570	25.55 *
7		0.000	43.770	1.050	45.680	142.7 *	44.370	14.71	45.860	174.8	44.590	28.39
8		0.000	45.580	120.5	46.395	260.6	44.620	29.67	45.270	89.99 *	44.560	24.89 *
9		0.000	45.800	160.0 *	46.190	222.3 *	45.100	63.56	44.930	54.47 *	44.530	24.04
10		0.000	45.830	164.5 *	45.470	114.4	45.150	76.58 *	44.860	45.83	44.450	18.34
11		0.000	45.810	161.5 #	45.050	62.80	45.390	104.3 *	44.965	61.98	44.440	17.56
12		0.000	45.400	105.3	44.790	39.12	45.290	100.2	44.945	61.48	44.430	16.92 *
13		0.000	45.330	93.28	44.600	27.60 *	44.980	60.93	44.845	44.47	44.410	15.81 *
14		0.000	45.060	63.67	44.480	19.82 *	44.785	38.99	44.700	37.49	44.420	15.08
15		0.000	44.860	44.10	44.850	47.25 *	44.615	29.83	44.960	63.42	44.430	16.87
16		0.000	44.670	28.36	44.835	47.80	44.590	24.11	45.650	138.5 *	44.410	16.13
17		0.000	44.550	24.23 *	44.920	59.77	44.510	19.45	45.180	79.89	44.410	16.24
18		0.000	44.670	31.73	44.750	38.27	44.450	18.06 *	44.895	51.26	44.400	15.38
19		0.000	44.790	39.19	44.740	37.25	44.575	23.21	44.730	39.05	44.430	15.85
20		0.000	44.770	37.10	44.640	28.53	45.300	93.49 #	44.630	28.36	44.390	14.73 *
21		0.000	44.575	22.76	44.570	25.55 *	45.140	79.64	44.540	26.87	44.480	20.31
22		0.000	44.510	19.92	44.530	19.59	44.870	49.97	44.510	20.28	44.510	21.00
23		0.000	45.470	108.9	44.480	16.95	44.695	36.66	44.450	18.06 *	44.570	27.54
24		0.000	45.300	93.49 *	44.440	15.97	44.595	25.99	44.410	15.81 *	44.540	25.66
25		0.000	44.970	63.36	44.430	15.44	44.520	22.29 *	44.360	13.74	44.520	24.31
26		0.000	44.960	61.51	44.720	36.40	44.415	17.91	44.410	15.23	44.490	19.19
27	43.690	0.752	44.790	38.88	44.690	35.21	44.955	56.25	44.380	14.92	44.460	18.64 *
28	43.750	1.057	44.680	30.41	44.540	23.57 *	44.830	45.14	44.380	15.68	44.390	14.94
29	43.780	1.168	44.540	22.08	44.520	17.83	45.465	119.0	44.350	15.90	44.350	13.38
30	43.760	1.062	44.490	18.78	44.690	34.60	45.690	153.7	44.330	11.71 *	44.330	12.66
31			44.450	18.06 *	44.630	29.72 *			44.330	14.74		
<u>Ten-Daily Mean</u>												
I Ten-Daily	43.745	0.268	44.342	45.25	45.310	107.6	44.594	28.57	45.110	78.00	44.535	24.68
II Ten-Daily		0.000	44.991	62.85	44.765	40.82	44.849	51.26	44.950	60.59	44.417	16.06
III Ten-Daily	43.745	0.404	44.794	45.28	44.567	24.62	44.918	60.65	44.405	16.63	44.464	19.76
<u>Monthly</u>												
Min.	43.690	0.000	43.710	0.879	44.400	14.53	44.370	14.21	44.330	11.71	44.310	12.66
Max.	43.780	1.377	45.830	164.5	46.395	260.6	45.690	153.7	45.860	174.8	44.600	28.59
Mean	43.745	0.224	44.712	50.94	44.871	56.63	44.787	46.83	44.808	50.61	44.472	20.17

Annual Runoff in MCM = 741 Annual Runoff in mm = 401

Peak Observed Discharge = 260.6 cumecs on 08-08-2022 Corres. Water Level :46.395 m

Lowest Observed Discharge = 0.000 cumecs on 03-06-2022

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 2022 - 2023

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	44.370	13.17	44.220	7.911 *	44.240	10.62	43.980	4.148	44.160	8.568	44.350	15.62
2	44.320	12.11	44.320	13.73	44.190	9.166	43.950	3.997	44.200	9.821 *	44.440	21.59
3	44.340	11.95	44.350	15.31	44.170	8.650	43.970	4.156	44.250	10.57	44.320	14.37
4	44.320	11.20 *	44.330	13.33	44.200	9.213	43.990	4.365	44.220	10.49 *	44.200	10.12
5	44.340	11.91	44.400	18.23	44.180	9.175 *	43.950	3.719 *	44.180	9.547	44.150	8.258 *
6	44.320	10.73	44.380	17.53	44.220	9.423	43.900	3.691	44.120	7.214	44.090	6.059
7	44.330	11.62	44.350	15.09	44.250	12.04	43.860	3.194	44.020	4.996 *	44.050	5.646 *
8	44.340	11.87	44.330	14.58 *	44.260	12.86	43.780	1.437	43.870	2.670 *	44.060	5.526
9	44.320	10.77	44.300	12.93	44.230	9.948	43.760	1.416	43.820	2.238 *	44.000	4.969
10	44.360	12.75 *	44.260	9.974	44.240	10.38	43.730	1.302	43.790	1.755	43.950	4.137
11	44.410	14.86 *	44.210	7.437	44.220	10.49 *	43.740	1.902 *	43.700	1.010	44.050	5.268
12	44.370	13.13	44.220	8.569	44.180	9.175 *	43.770	1.976 *	44.090	8.392	44.070	5.917
13	44.350	12.77	44.250	9.833	44.220	9.881	43.760	1.407	44.020	6.127	43.990	4.407 *
14	44.320	10.61	44.220	10.49 *	44.170	8.456	43.940	4.153	44.180	9.175 *	43.960	3.881 *
15	44.300	10.44	44.250	11.55 *	44.150	7.820	43.960	4.301	44.150	8.158	44.030	5.099
16	44.270	9.409	44.280	10.59	44.190	9.336	44.240	10.85	44.090	6.608 *	44.010	4.291
17	44.260	9.202	44.290	11.19	44.170	8.178	44.440	20.20	44.040	6.422	43.950	4.161
18	44.280	9.788 *	44.300	11.96	44.140	7.407	44.870	55.76	44.170	8.709	43.940	4.027
19	44.300	10.39	44.320	13.35	44.170	8.862 *	44.770	39.74 *	44.200	9.020	43.930	3.389
20	44.280	9.476	44.340	15.05	44.210	9.864	44.750	38.54	44.150	8.012	43.900	2.999
21	44.260	9.186	44.350	15.69	44.240	10.59	44.660	29.59	44.060	7.555	43.940	3.564 *
22	44.270	9.569	44.350	15.54 *	44.220	9.934	44.640	30.96 *	44.020	4.996 *	43.960	4.232
23	44.280	9.896	44.400	20.07	44.240	10.26	44.340	14.95	43.990	4.407 *	43.990	4.726
24	44.290	10.35	44.360	17.28	44.120	7.191	44.260	11.21	43.940	4.079	43.910	3.117
25	44.300	10.48 *	44.340	15.73	43.950	4.126	43.960	4.038	43.950	4.151	43.900	2.998
26	44.260	9.070	44.340	15.11 *	43.880	2.778 *	43.990	4.407 *	44.040	6.065	43.750	1.512
27	44.220	8.279	44.330	15.04	43.930	3.225	43.940	3.724	44.160	8.593	43.720	1.170
28	44.190	6.107	44.310	14.15	44.000	4.228	43.810	1.966	44.110	6.268	43.650	1.048 *
29	44.210	6.514	44.290	13.07 *			43.780	1.705	43.980	4.777	43.610	0.871
30	44.220	7.648	44.270	11.89			43.880	2.778 *	43.930	3.416 *	43.760	1.618
31	44.240	8.979	44.260	11.17			43.910	3.391			43.800	2.009
Ten-Daily Mean												
I Ten-Daily	44.336	11.81	44.324	13.86	44.218	10.15	43.887	3.142	44.063	6.787	44.161	9.629
II Ten-Daily	44.314	11.01	44.268	11.00	44.182	8.947	44.224	17.88	44.079	7.163	43.983	4.344
III Ten-Daily	44.249	8.735	44.327	14.98	44.072	6.541	44.106	9.883	44.018	5.431	43.817	2.442
Monthly												
Min.	44.190	6.107	44.210	7.437	43.880	2.778	43.730	1.302	43.700	1.010	43.610	0.871
Max.	44.410	14.86	44.400	20.07	44.260	12.86	44.870	55.76	44.250	10.57	44.440	21.59
Mean	44.298	10.46	44.307	13.33	44.164	8.688	44.074	10.29	44.053	6.46	43.982	5.374

Peak Computed Discharge = 222.3 cumecs on 09-08-2022

Corres. Water Level :46.19 m

Lowest Computed Discharge = 0.910 cumecs on 03-07-2022

Corres. Water Level :43.73 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 : 2022-2023

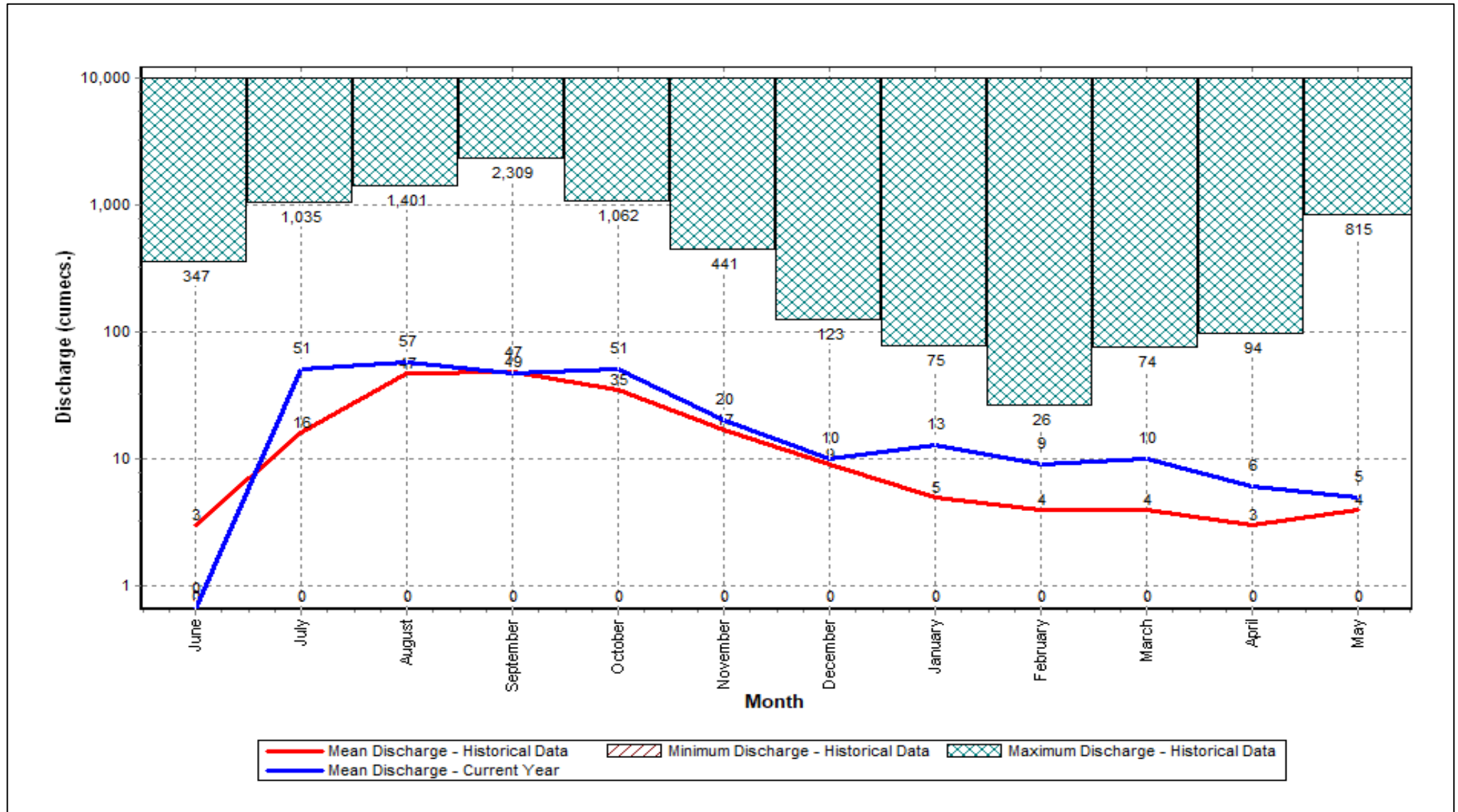
Station Name : Madhira (AKA10D2)

Data considered : 1984-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Wyra

Sub-Division : Lower Krishna SD2, Vijayawada



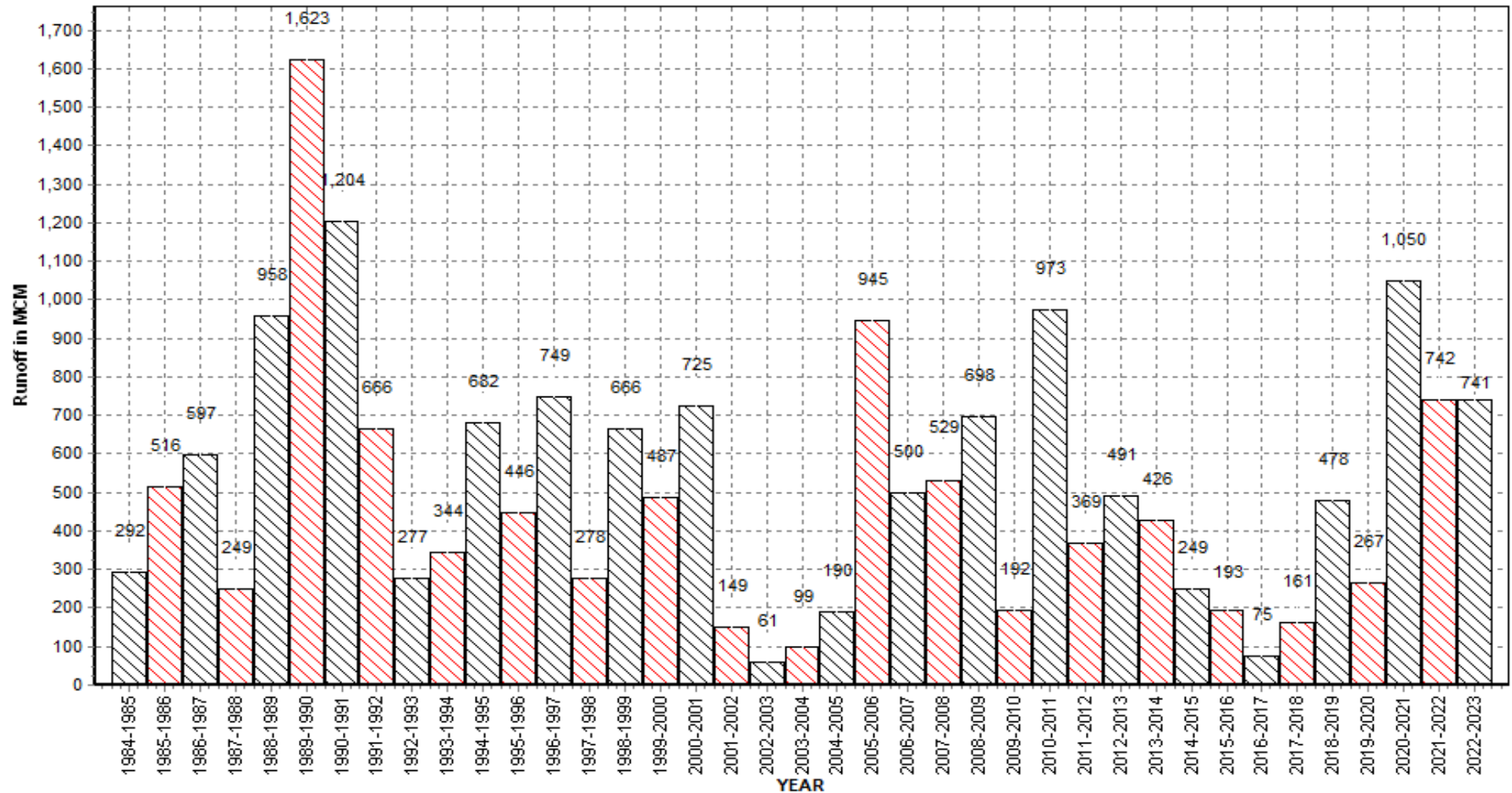
Annual Runoff Values for the period: 1984 - 2023

Station Name : Madhira (AKA10D2)

Local River : Wyra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



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

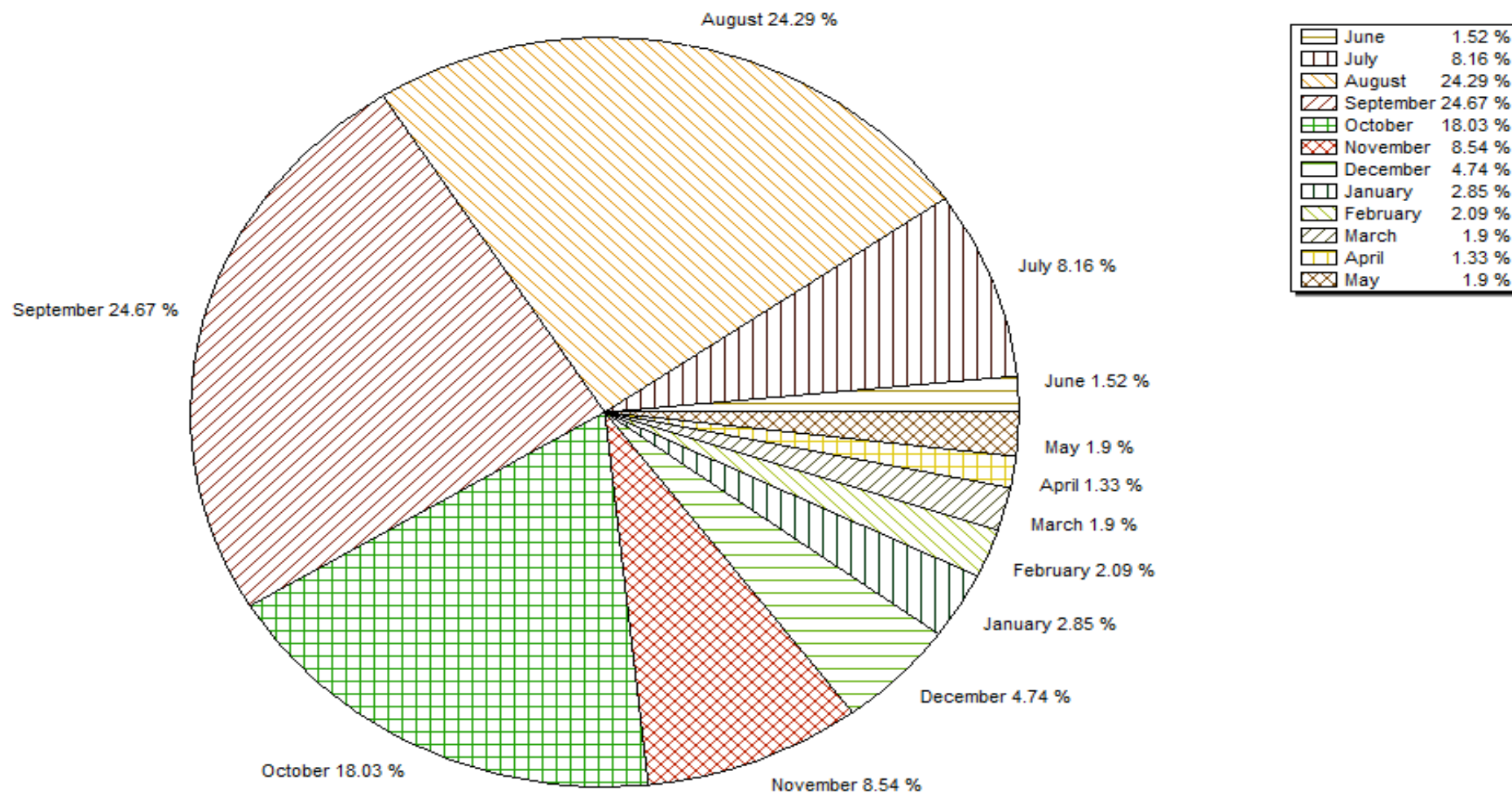
Monthly Average Runoff based on period : 1984-2022

Station Name : Madhira (AKA10D2)

Local River : Wyra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



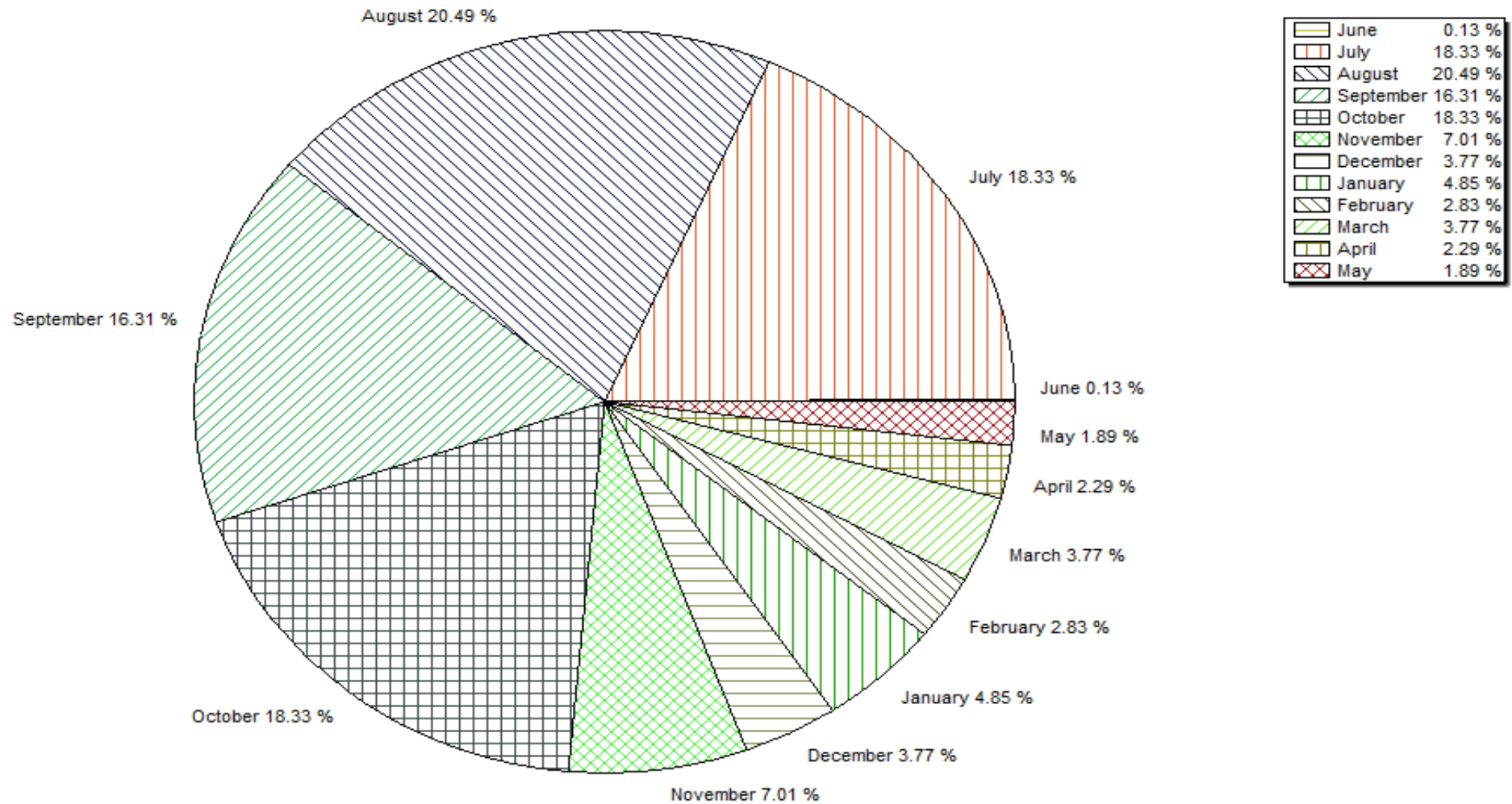
Monthly Runoff for the Year : 2022-2023

Station Name : Madhira (AKA10D2)

Local River : Wyra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



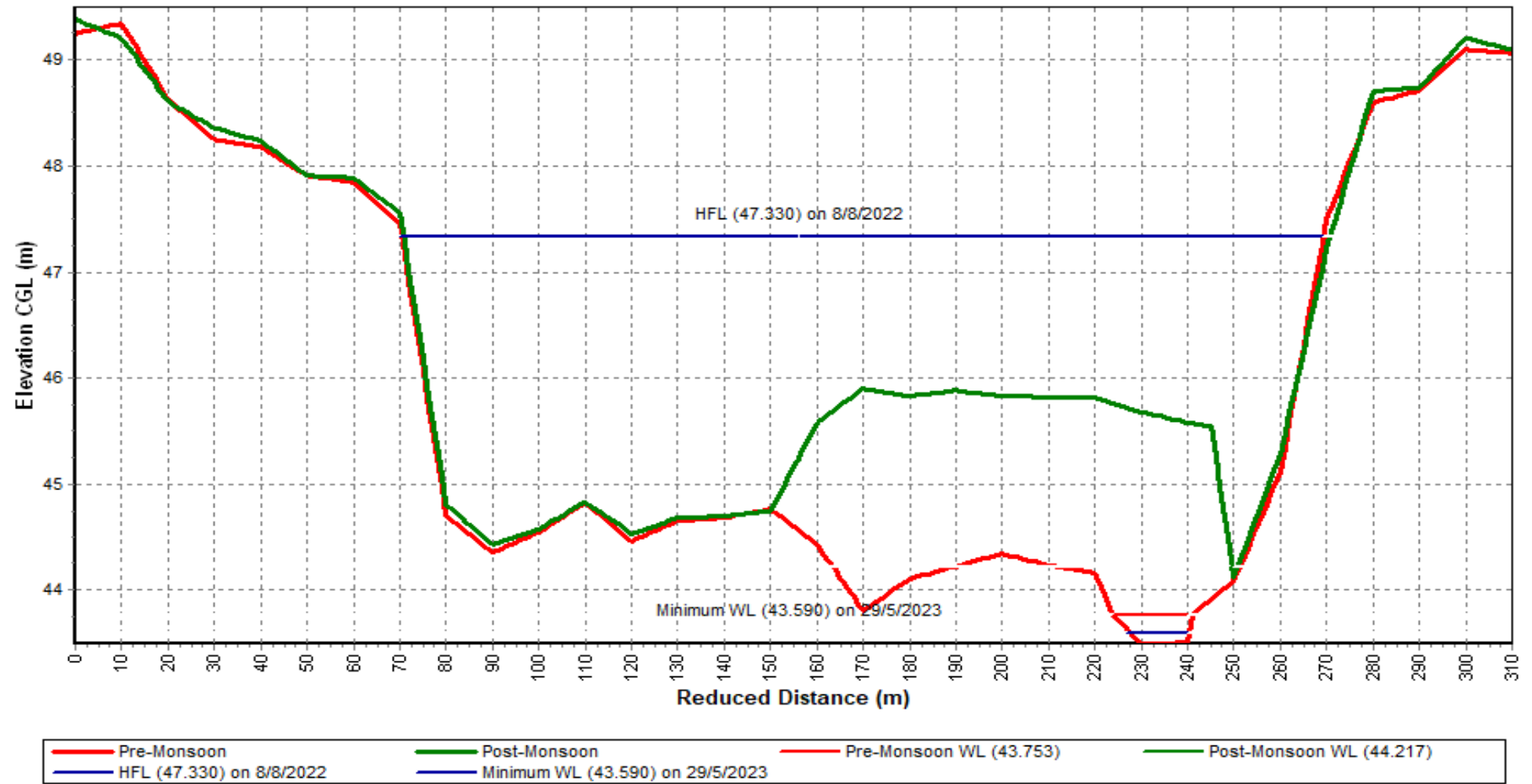
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Madhira (AKA10D2)

Local River : Wyra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



Remark: Cross Section Deviation due to Construction of ChekDam at U/S Side.

Bed Level Changws due to Silting & Souring Effects.

Zero of the Gauge : 44.5 (m.s.l)

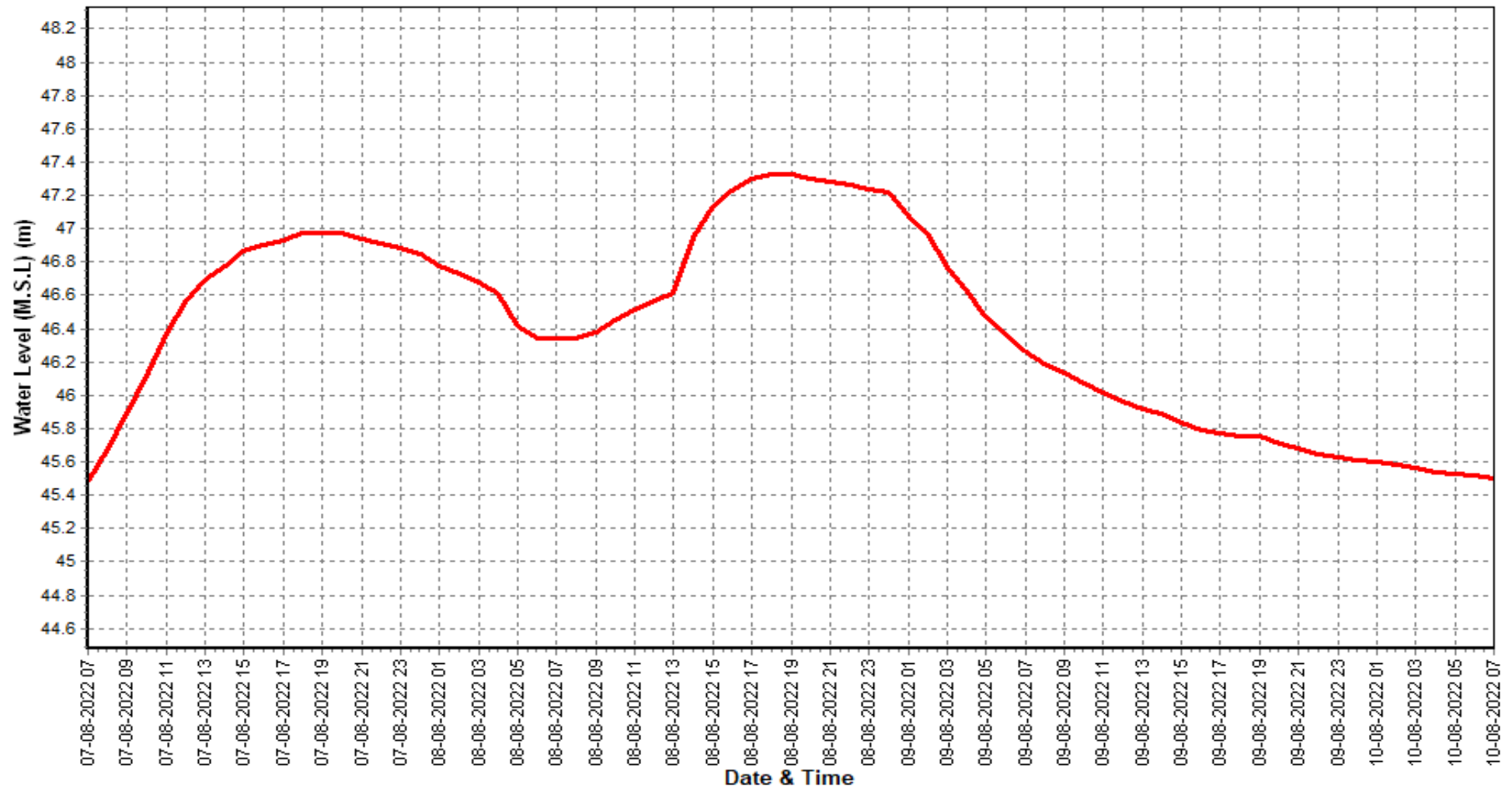
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Madhira (AKA10D2)

Local River : Wyra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



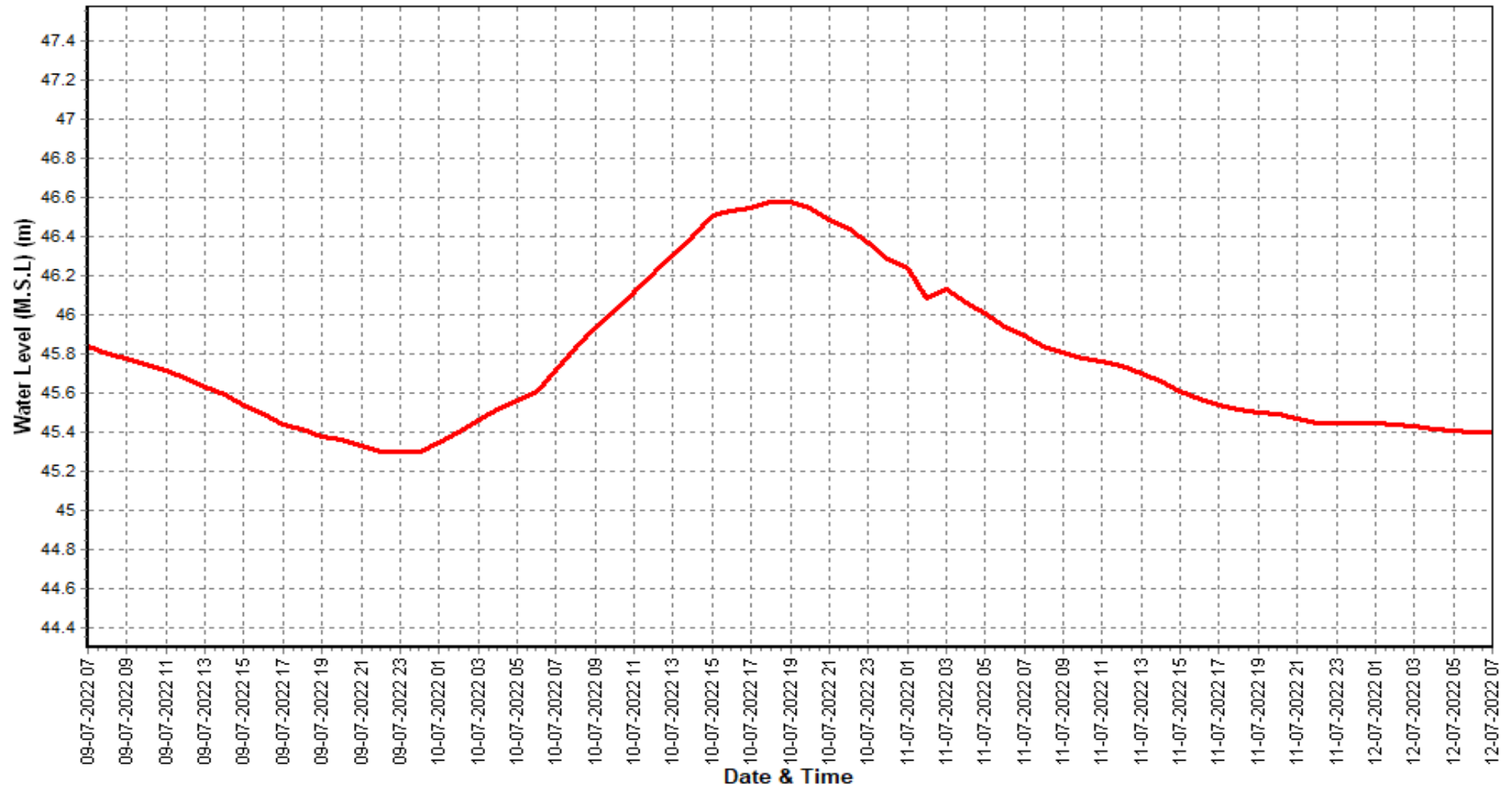
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Madhira (AKA10D2)

Local River : Wyra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



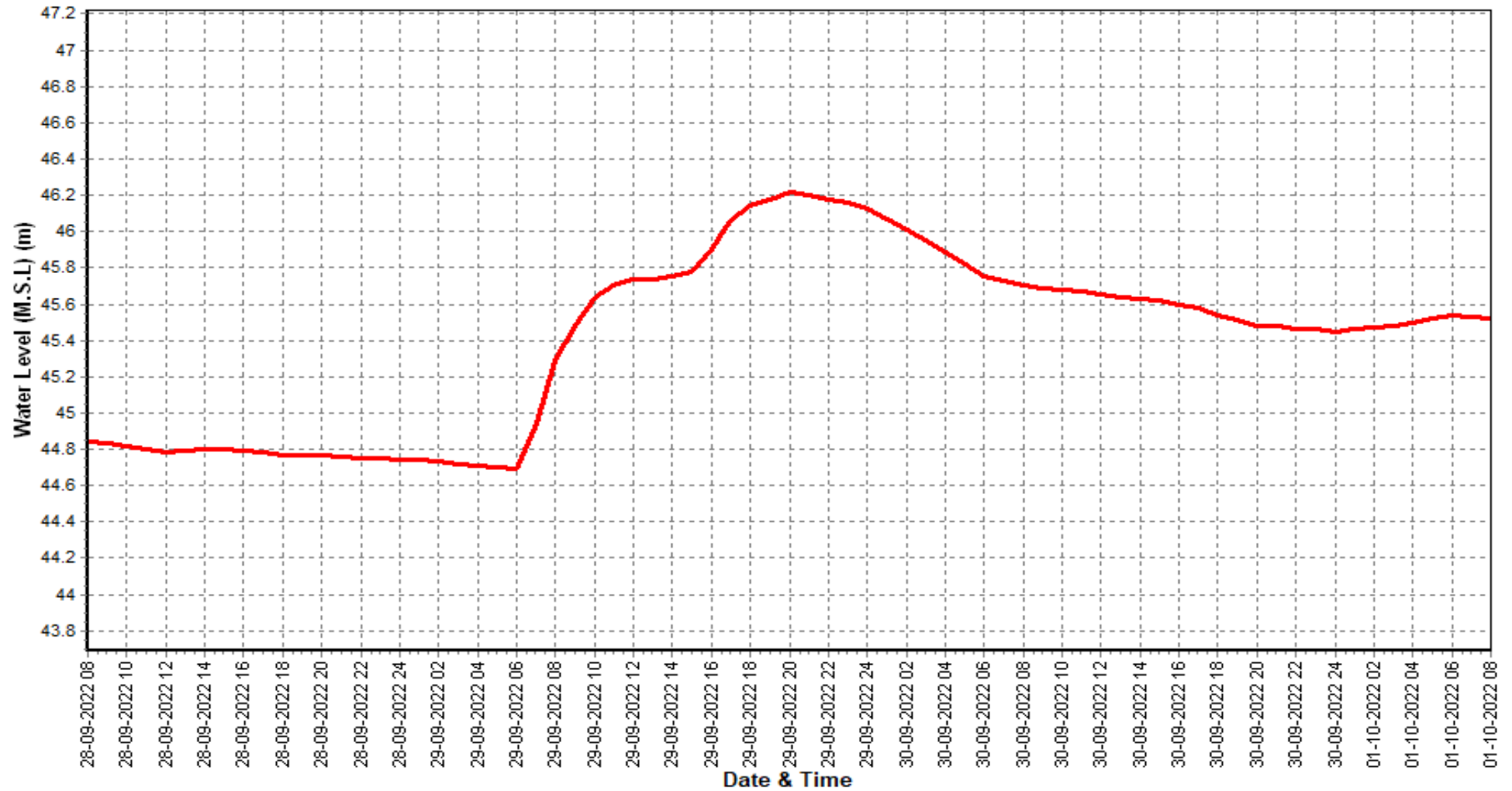
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Madhira (AKA10D2)

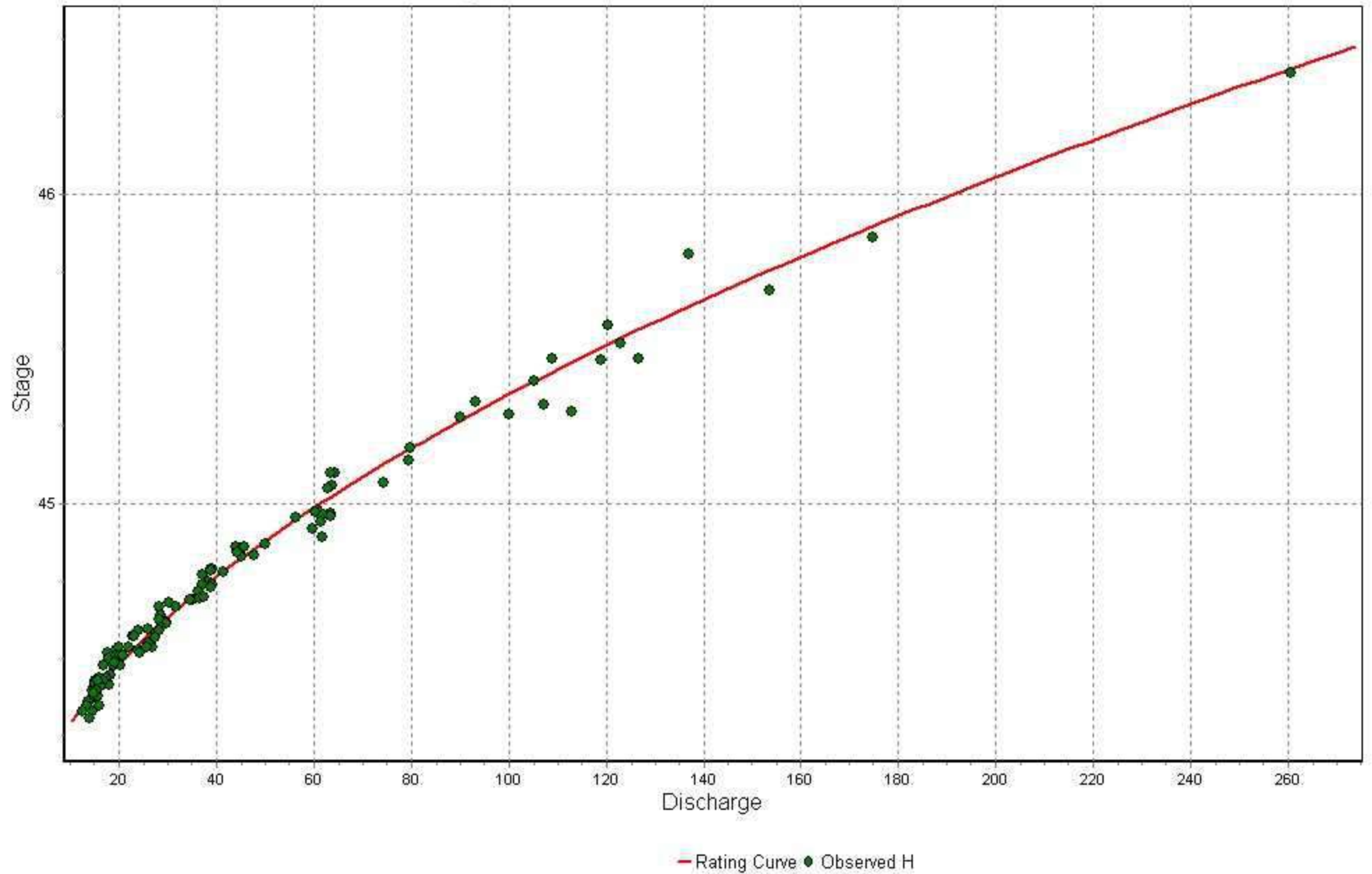
Local River : Wyra

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



Rating Curve of site 08/07/2022 to 30/11/2022



HISTORY SHEET

		Water Year	: 2022-2023
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) 28.585 (m.s.l) 28.186 (m.s.l) 27.186 (m.s.l) 27.035 (m.s.l)	01-04-1964 05-08-1970 01-02-1972 01-06-1972 01-06-1984	- 04-08-1970 - 31-01-1972 - 31-05-1972 - 31-05-1984
	Opening Date	Closing Date	
Gauge	: 23-09-1963	HFL During 2022-23	: 31.830 m
		Corres. Discharge	: 1550 (Estimated)
Discharge	: 01-06-1965	Date & Time of occurrence	: 23-07-2022 : 22.00 hrs.
Sediment	: 02-07-1965		
Water Quality	: 01-01-1972		

HFL Recorded so far in m : 35.810 dt 24-07-1989
Corresponding Discharge (cumecs) :6503*

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

Year	Maximum			Minimum		
	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	2191	31.540	03-08-1976	0.000	28.025	28-03-1977
1977-1978	1023	30.840	20-11-1977	0.200	28.010	14-04-1978
1978-1979	5047	32.940	16-08-1978	0.000	27.855	23-04-1979
1979-1980	477.2	30.020	24-09-1979	0.000	28.005	12-07-1979

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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	4140	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
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	28.310	18-05-2013
2013-2014	1371	31.810	27-10-2013	0.000	28.600	02-04-2014
2014-2015	514.8	30.585	28-10-2014	0.000	28.530	07-07-2014
2015-2016	1194	31.650	22-06-2015	0.000		23-03-2016
2016-2017	1769	32.020	24-09-2016	0.000	28.520	16-03-2017
2017-2018	348.9	30.280	19-07-2017	0.000	28.280	07-02-2018
2018-2019	2933	33.040	20-08-2018	0.000	28.480	22-03-2019
2019-2020	524.4	30.785	03-09-2019	0.000	28.760	30-04-2020
2020-2021	4052	33.680	14-10-2020	0.000	28.770	03-06-2020
2021-2022	2916	33.100	28-09-2021	0.000	28.300	21-03-2022

Annual Runoff of Munneru at Keesara

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1965-1966	899	18	917	32	1	32
2	1966-1967	1620	55	1676	57	2	59
3	1967-1968	1110	19	1129	39	1	40
4	1968-1969	530	1005	1535	19	36	54
5	1969-1970	2158	178	2335	76	6	83
6	1970-1971	2712	44	2755	96	2	97
7	1971-1972	392	6	397	14	0	14
8	1972-1973	164	16	180	6	1	6
9	1973-1974	818	13	831	29	0	29
10	1974-1975	723	12	735	26	0	26
11	1975-1976	2689	33	2722	95	1	96
12	1976-1977	2797	35	2832	99	1	100
13	1977-1978	399	29	428	14	1	15
14	1978-1979	4321	36	4357	153	1	154
15	1979-1980	312	54	366	11	2	13
16	1980-1981	1365	25	1390	48	1	49
17	1981-1982	1957	30	1987	69	1	70
18	1982-1983	1329	100	1429	47	4	50
19	1983-1984	4633	163	4796	164	6	169
20	1984-1985	614	191	805	22	7	28
21	1985-1986	1142	148	1290	40	5	46
22	1986-1987	1616	132	1748	57	5	62
23	1987-1988	1101	112	1213	39	4	43
24	1988-1989	4296	145	4440	152	5	157
25	1989-1990	3950	822	4772	140	29	169
26	1990-1991	3336	247	3583	118	9	127
27	1991-1992	1857	189	2046	66	7	72
28	1992-1993	755	181	937	27	6	33
29	1993-1994	813	162	975	29	6	34
30	1994-1995	2158	311	2470	76	11	87
31	1995-1996	1852	129	1981	65	5	70
32	1996-1997	2749	284	3033	97	10	107
33	1997-1998	749	239	988	26	8	35
34	1998-1999	2727	284	3011	96	10	106
35	1999-2000	1447	150	1597	51	5	56
36	2000-2001	2776	169	2945	98	6	104
37	2001-2002	455	81	536	16	3	19
38	2002-2003	225	0	225	8	0	8
39	2003-2004	763	39	801	27	1	28
40	2004-2005	677	32	709	24	1	25
41	2005-2006	2898	317	3214	102	11	114
42	2006-2007	2134	138	2272	75	5	80
43	2007-2008	1419	314	1733	50	11	61
44	2008-2009	4036	175	4212	143	6	149
45	2009-2010	132	310	442	5	11	16
46	2010-2011	3835	383	4218	136	14	149
47	2011-2012	944	120	1065	33	4	38

48	2012-2013	2395	34	2429	85	1	86
49	2013-2014	2175	118	2293	77	4	81
50	2014-2015	507	95	602	18	3	21
51	2015-2016	908	1	909	32	0	32
52	2016-2017	996	12	1009	35	0	36
53	2017-2018	765	17	783	27	1	28
54	2018-2019	1512	101	1614	53	4	57
55	2019-2020	1117	128	1245	39	5	44
56	2020-2021	5888	221	6109	208	8	216
57	2021-2022	2987	230	3217	106	8	114
58	2022-2023	3092	275	3367	109	10	119
Average		1806	154	1959	64	5	69

Instantaneous Flood Peak of Munneru at Keesara

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
1	1965-1966	31.435	16-07-1965	08:00:00	1214 *
2	1966-1967	31.785	06-09-1966	08:00:00	1540 *
3	1967-1968	31.375	24-07-1967	09:00:00	1160 *
4	1968-1969	30.885	07-09-1968	15:00:00	735 *
5	1969-1970	32.785	31-07-1969	12:00:00	2566 *
6	1970-1971	32.386	23-08-1970	00:00:00	2140 *
7	1971-1972	30.386	06-10-1971	22:00:00	336 *
8	1972-1973	29.225	08-07-1972	18:00:00	103 *
9	1973-1974	30.675	10-08-1973	01:00:00	563 *
10	1974-1975	30.645	16-10-1974	08:00:00	539 *
11	1975-1976	31.785	11-09-1975	00:00:00	1540 *
12	1976-1977	32.800	22-07-1976	09:00:00	2582 *
13	1977-1978	31.405	20-11-1977	13:00:00	1187 *
14	1978-1979	33.345	15-08-1978	23:00:00	3200 *
15	1979-1980	30.075	24-09-1979	07:00:00	105 *
16	1980-1981	31.055	02-08-1980	16:00:00	878 *
17	1981-1982	32.985	04-08-1981	20:00:00	2787 *
18	1982-1983	31.475	13-08-1982	13:00:00	1250 *
19	1983-1984	33.835	06-10-1983	01:00:00	3790 *
20	1984-1985	31.850	12-10-1984	21:00:00	1603 *
21	1985-1986	32.320	12-10-1985	05:00:00	2072 *
22	1986-1987	35.110	13-08-1986	05:00:00	5480 *
23	1987-1988	33.140	10-07-1987	22:00:00	2963 *
24	1988-1989	33.740	30-07-1988	07:00:00	3673 *
25	1989-1990	35.810	24-07-1989	04:00:00	6503 *
26	1990-1991	33.730	02-10-1990	15:00:00	3661 *
27	1991-1992	33.610	22-09-1991	18:00:00	3515 *
28	1992-1993	30.820	10-10-1992	12:00:00	681 *
29	1993-1994	30.740	02-08-1993	12:00:00	615 *
30	1994-1995	31.930	07-10-1994	18:00:00	1680 *
31	1995-1996	32.910	17-10-1995	16:00:00	2703 *
32	1996-1997	32.700	28-08-1996	11:00:00	2473 *
33	1997-1998	31.250	29-10-1997	08:00:00	1048 *
34	1998-1999	32.270	16-10-1998	04:00:00	2020 *
35	1999-2000	31.195	05-08-1999	00:00:00	1000 *
36	2000-2001	33.330	24-08-2000	17:00:00	3182 *
37	2001-2002	30.560	05-08-2001	12:00:00	471 *
38	2002-2003	30.700	25-08-2002	13:00:00	583 *
39	2003-2004	31.600	08-08-2003	04:00:00	1366 *
40	2004-2005	31.810	04-08-2004	22:00:00	1564 *
41	2005-2006	35.690	21-09-2005	10:00:00	6323 *
42	2006-2007	33.820	05-08-2006	14:00:00	3771 *
43	2007-2008	31.120	21-09-2007	06:00:00	934 *
44	2008-2009	34.590	10-08-2008	17:00:00	4764 *
45	2009-2010	31.635	22-05-2010	14:00:00	227
46	2010-2011	31.880	08-09-2010	18:00:00	1632 *

47	2011-2012	30.780	26-08-2011	09:00:00	648 *
48	2012-2013	33.150	04-09-2012	10:00:00	2974 *
49	2013-2014	31.810	27-10-2013	07:00:00	1564 *
50	2014-2015	30.900	30-08-2014	14:00:00	747 *
51	2015-2016	32.200	21-06-2015	20:00:00	1949 *
52	2016-2017	32.040	24-09-2016	10:00:00	1789 *
53	2017-2018	30.630	18-07-2017	15:00:00	527 *
54	2018-2019	33.400	20-08-2018	20:00:00	3264 *
55	2019-2020	30.810	03-09-2019	06:00:00	673 *
56	2020-2021	33.800	14-10-2020	13:00:00	4245 *
57	2021-2022	33.180	28-09-2021	12:00:00	2965 *
58	2022-2023	31.830	23-07-2022	22:00:00	1550 *

Stage-Discharge Data for the period 2022 - 2023

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	28.500	1.097	28.600	2.852	29.300	88.06	29.840	246.0	30.330	423.5	29.170	60.74 #
2	28.500	1.126	28.600	2.885	29.330	113.9	29.550	148.6	30.340	412.1 *	29.250	74.55 *
3	28.500	1.104	28.720	15.00 *	29.500	123.4	29.330	126.6	29.970	293.0	29.230	70.96 #
4	28.500	1.157	28.770	17.96	29.970	263.1	29.220	83.88 *	29.700	167.9	29.235	71.85 #
5	28.490	1.150 *	28.770	17.51	30.500	517.5	29.150	75.32	29.460	117.8 *	29.300	83.92 #
6	28.490	1.022	29.120	68.01	31.030	854.5	29.120	65.82	29.660	163.7	29.300	83.92 *
7	28.450	0.755	29.250	109.7	30.740	640.6 *	29.075	54.84	30.065	275.7	29.225	70.08
8	28.440	0.703	29.340	118.4	31.290	1012	29.090	55.71	30.600	534.8 *	29.170	60.74 *
9	28.435	0.696	30.900	743.0 *	31.800	1518 *	29.180	81.94	29.990	272.9 *	29.160	64.90
10	28.420	0.610	30.400	454.1 *	30.910	761.8	29.590	160.0 *	29.800	216.1	29.150	62.95
11	28.410	0.600 *	31.390	1090	30.520	553.7	30.080	314.5 *	29.690	196.9	29.135	56.82
12	28.410	0.600 *	31.180	953.3	30.040	274.1	30.800	677.8 #	29.720	213.5	29.120	52.86 *
13	28.410	0.605	30.770	676.3	29.750	203.2 *	30.560	574.9	29.670	172.8	29.060	44.14 *
14	28.380	0.000	30.680	593.6	29.540	147.8 *	30.150	316.5	29.620	138.0	29.100	48.42
15	28.380	0.000	30.250	368.0	29.500	138.5 *	29.810	222.7	29.655	175.0	29.090	46.79
16	28.380	0.000	29.910	237.1	29.740	192.7	29.620	153.8	30.340	412.1 *	29.080	40.71
17	28.390	0.000	29.620	167.6 *	29.760	196.9	29.450	134.1	30.730	636.5	29.090	45.30
18	28.390	0.000	30.070	291.3	29.900	256.4	29.340	105.2 *	30.030	266.1	29.090	43.94
19	28.380	0.000	30.060	292.1	29.670	180.8	29.260	93.93	29.775	186.7	29.100	47.21
20	28.390	0.000	30.040	279.2	29.480	157.8	29.530	162.2	29.710	166.8	29.100	49.86 *
21	28.400	0.000	29.730	183.5	29.320	101.4 *	30.070	275.9	29.685	157.9	29.090	44.94
22	28.400	0.000	29.500	126.8	29.270	96.84	30.360	466.1	29.870	224.5	29.080	41.86
23	28.400	0.000	30.815	687.4 #	29.180	76.91	29.970	264.9	29.700	179.8 *	29.120	52.86
24	28.390	0.000	31.650	1363 *	29.130	66.04	29.970	267.6	29.600	152.3 *	29.140	55.94
25	28.400	0.000	30.580	567.8	29.120	62.47	29.850	233.7 *	29.340	80.11 #	29.110	51.35
26	28.400	0.000	30.500	553.8	29.360	127.0	29.630	157.8	29.280	69.20 #	29.080	41.73
27	28.400	0.000	30.830	744.0	29.390	129.1	29.660	162.7	29.220	57.52 #	29.060	44.14 *
28	28.400	0.000	30.340	450.4	29.350	107.1 *	29.820	233.6	29.150	64.06 #	29.020	38.91
29	28.500	1.118	29.950	260.7	29.350	114.3	29.650	145.6	29.190	81.97 #	28.990	36.63
30	28.600	2.876	29.640	153.3	29.550	153.5	30.280	382.1	29.170	60.74 *	28.960	34.63
31			29.430	123.2 *	29.460	129.6 *			29.150	57.52		
Ten-Daily Mean												
I Ten-Daily	28.473	0.942	29.247	154.9	30.437	589.3	29.314	109.9	29.991	287.7	29.219	70.46
II Ten-Daily	28.392	0.181	30.397	494.9	29.790	230.2	29.860	275.6	29.894	256.4	29.097	47.61
III Ten-Daily	28.429	0.399	30.270	474.0	29.316	105.8	29.926	259.0	29.396	107.8	29.065	44.30
Monthly												
Min.	28.380	0.000	28.600	2.852	29.120	62.47	29.075	54.84	29.150	57.52	28.960	34.63
Max.	28.600	2.876	31.650	1363	31.800	1518	30.800	677.8	30.730	636.5	29.300	83.92
Mean	28.431	0.507	29.981	377.8	29.831	301.9	29.700	214.8	29.749	213.8	29.127	54.12

Annual Runoff in MCM = 3367 Annual Runoff in mm = 342

Peak Observed Discharge = 1090 cumecs on 11-07-2022 Corres. Water Level :31.39 m

Lowest Observed Discharge = 0.000 cumecs on 14-06-2022 Corres. Water Level :28.38 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2022 - 2023

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	28.960	30.34	28.900	24.45 *	28.750	13.48	28.670	4.992	28.750	11.97	28.950	27.62
2	28.990	33.63	28.950	29.45	28.740	12.43	28.660	4.507	28.750	12.20 *	28.970	29.51
3	29.010	35.96	28.950	29.04	28.730	11.33	28.650	4.443	28.910	24.83	28.970	29.47
4	29.000	34.78 *	28.950	29.29 #	28.760	13.97	28.610	2.632	28.870	21.69 *	28.980	30.32
5	28.990	34.17	28.940	27.57	28.770	13.19 *	28.610	2.626 *	28.850	21.51	28.980	30.98 *
6	28.990	33.90	28.870	22.86	28.790	15.91	28.610	2.536	28.760	11.98	28.950	27.42
7	28.960	31.71	28.810	18.01	28.810	17.31	28.480	0.000	28.760	12.98 *	28.950	28.03 *
8	28.930	27.23	28.810	17.38 *	28.810	17.13	28.440	0.000	28.730	11.18 *	28.950	27.47
9	28.900	23.53	28.800	17.29	28.810	17.13	28.350	0.000	28.690	9.014 *	28.920	25.80
10	28.890	23.56 *	28.820	18.65	28.760	11.89	28.340	0.000	28.660	4.868	28.890	23.94
11	28.890	23.56 *	28.800	16.87	28.760	12.22 *	28.320	0.000	28.650	4.598	28.850	21.88
12	28.920	24.90	28.780	15.78	28.760	12.22 *	28.320	0.000	28.500	0.000	28.850	21.52
13	28.950	28.95	28.730	11.47	28.760	11.67	28.310	0.000	28.700	10.29	28.820	17.06 *
14	28.910	24.06	28.730	11.85 *	28.740	11.08	28.310	0.000	28.710	10.06 *	28.820	17.06 *
15	28.900	23.96	28.730	11.85 *	28.740	10.84	28.660	4.667	28.750	12.51	28.800	14.72
16	28.890	22.49	28.770	14.48	28.680	5.060	28.760	11.92	28.780	14.27 *	28.790	13.57
17	28.890	22.33	28.760	14.00	28.670	4.817	28.760	11.79	28.760	12.82	28.780	14.19
18	28.890	23.56 *	28.760	13.98	28.670	4.796	29.090	44.14	28.780	13.22	28.760	13.53
19	28.900	23.57	28.750	13.65	28.670	4.790 *	29.080	44.36 *	28.780	13.45	28.750	12.93
20	28.900	23.76	28.770	14.95	28.670	4.770	29.100	46.09	28.740	11.94	28.730	12.21
21	28.900	23.76	28.830	19.84	28.760	11.74	29.080	43.59	28.730	11.17	28.750	12.36 *
22	28.900	24.57	28.830	18.77 *	28.750	11.56	29.140	52.27 *	28.730	11.18 *	28.740	12.60
23	28.940	28.39	28.880	23.35	28.740	11.31	29.140	52.27 #	28.730	11.18 *	28.770	13.87
24	28.940	27.39	28.900	24.13	28.710	10.33	29.010	38.12	28.780	13.96	28.770	13.73
25	28.940	28.27 *	28.880	22.82	28.670	4.917	28.910	24.59	28.800	14.54	28.740	12.29
26	28.880	22.04	28.860	21.05 *	28.670	4.790 *	28.830	18.24 *	29.100	45.56	28.730	11.86
27	28.840	21.22	28.870	23.41	28.660	4.738	28.760	11.89	28.980	30.13	28.710	8.866
28	28.810	17.77	28.860	21.49	28.670	4.958	28.740	11.08	28.950	27.38	28.700	9.528 *
29	28.810	18.52	28.820	18.06 *			28.710	10.38	28.970	29.29	28.730	11.77
30	28.840	21.72	28.770	14.31			28.730	10.87 *	28.910	24.34 *	28.710	8.994
31	28.840	21.06	28.740	12.27			28.740	11.65			28.710	8.878
Ten-Daily Mean												
I Ten-Daily	28.962	30.88	28.880	23.40	28.773	14.38	28.542	2.174	28.773	14.22	28.951	28.06
II Ten-Daily	28.904	24.11	28.758	13.89	28.712	8.228	28.671	16.30	28.715	10.32	28.795	15.87
III Ten-Daily	28.876	23.16	28.840	19.95	28.704	8.042	28.890	25.90	28.868	21.87	28.733	11.34
Monthly												
Min.	28.810	17.77	28.730	11.47	28.660	4.738	28.310	0.000	28.500	0.000	28.700	8.866
Max.	29.010	35.96	28.950	29.45	28.810	17.31	29.140	52.27	29.100	45.56	28.980	30.98
Mean	28.913	25.96	28.826	19.11	28.731	10.37	28.707	15.15	28.785	15.47	28.823	18.19

Peak Computed Discharge = 1518 cumecs on 09-08-2022

Corres. Water Level :31.8 m

Lowest Computed Discharge = 0.600 cumecs on 11-06-2022

Corres. Water Level :28.41 m

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

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

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2022-2023

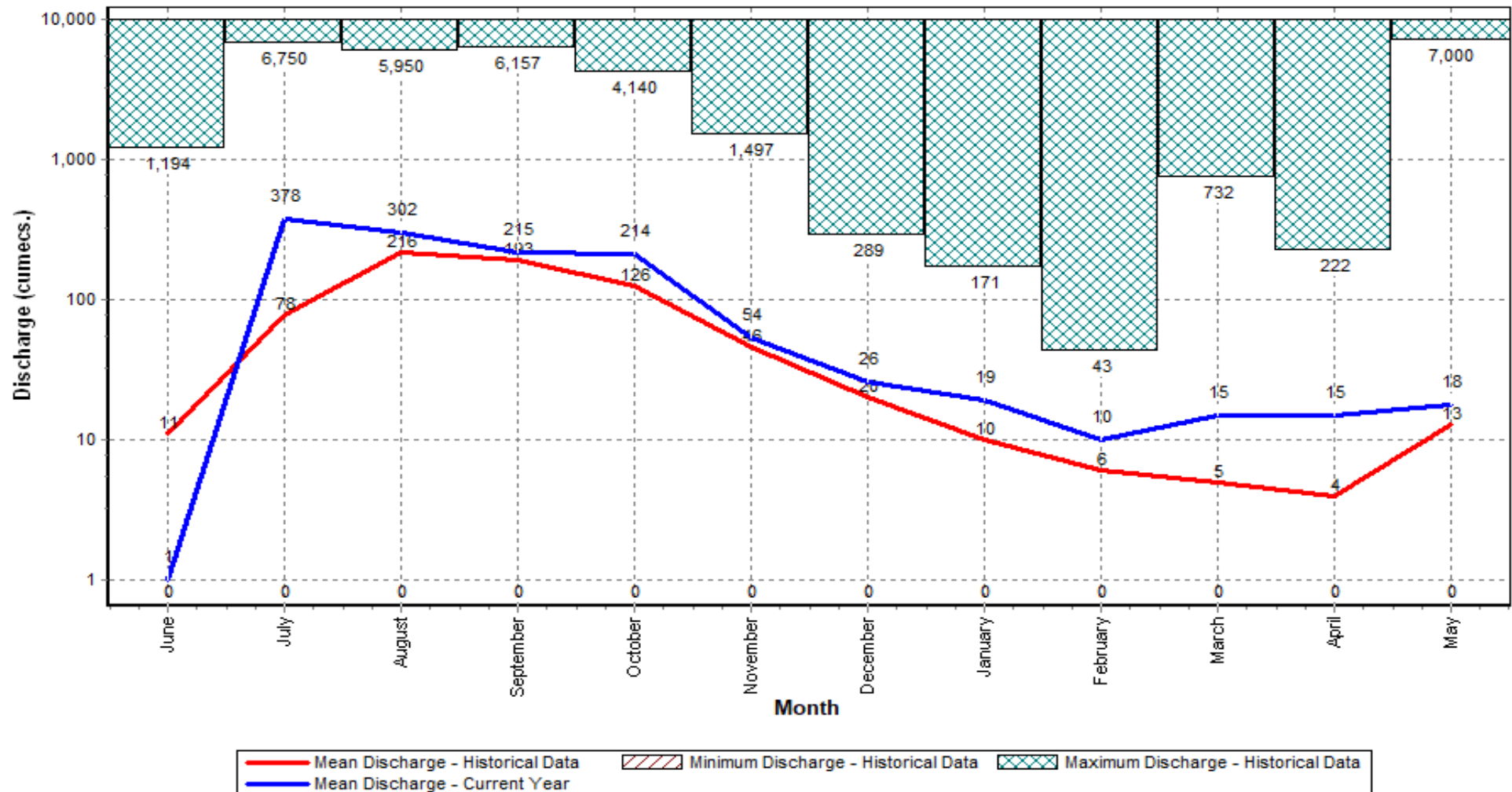
Station Name : Keesara (AKA00B4)

Data considered : 1965-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Munneru

Sub-Division : Lower Krishna SD2, Vijayawada



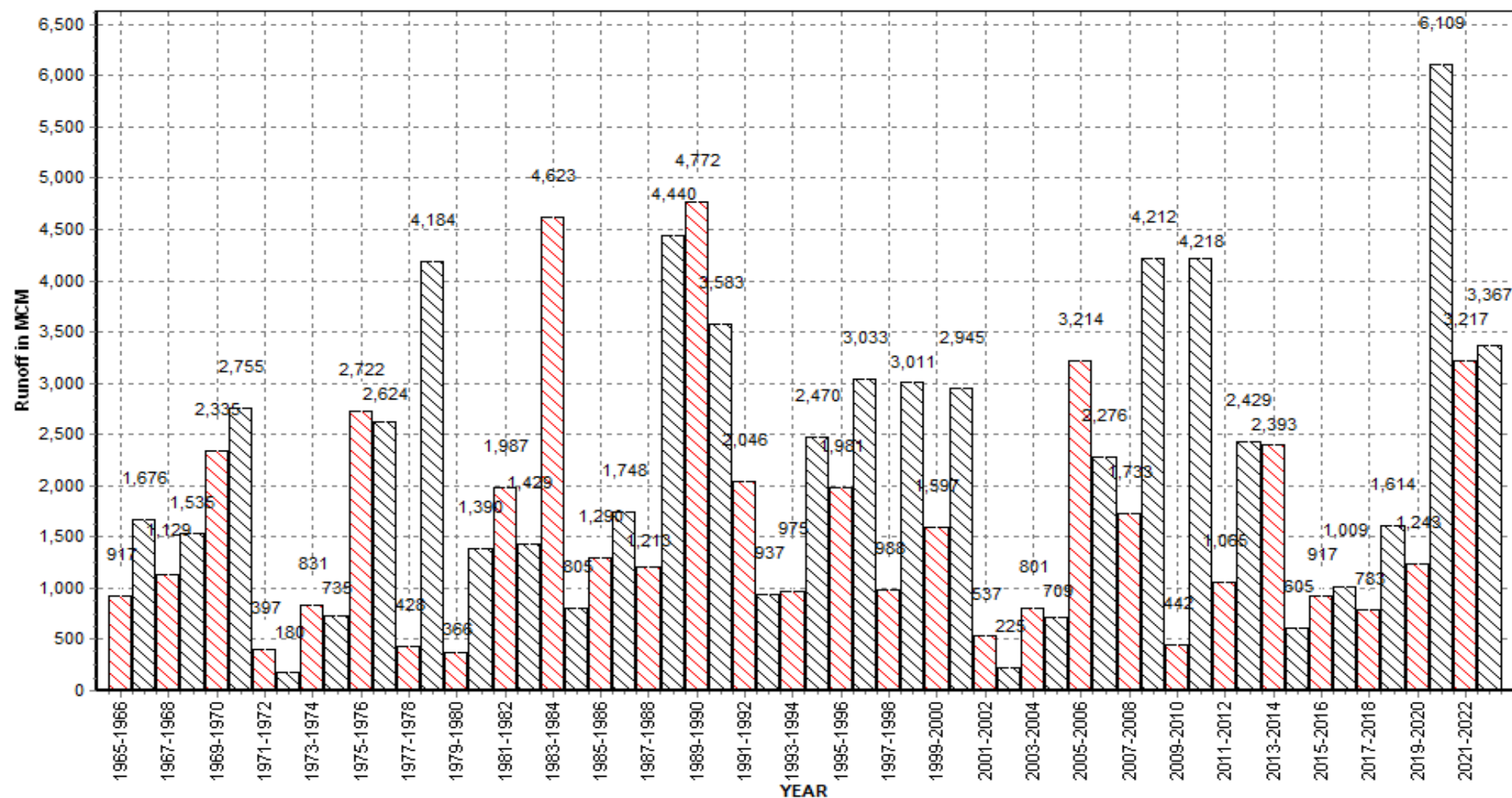
Annual Runoff Values for the period: 1965 - 2023

Station Name : Keesara (AKA00B4)

Local River : Munneru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



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

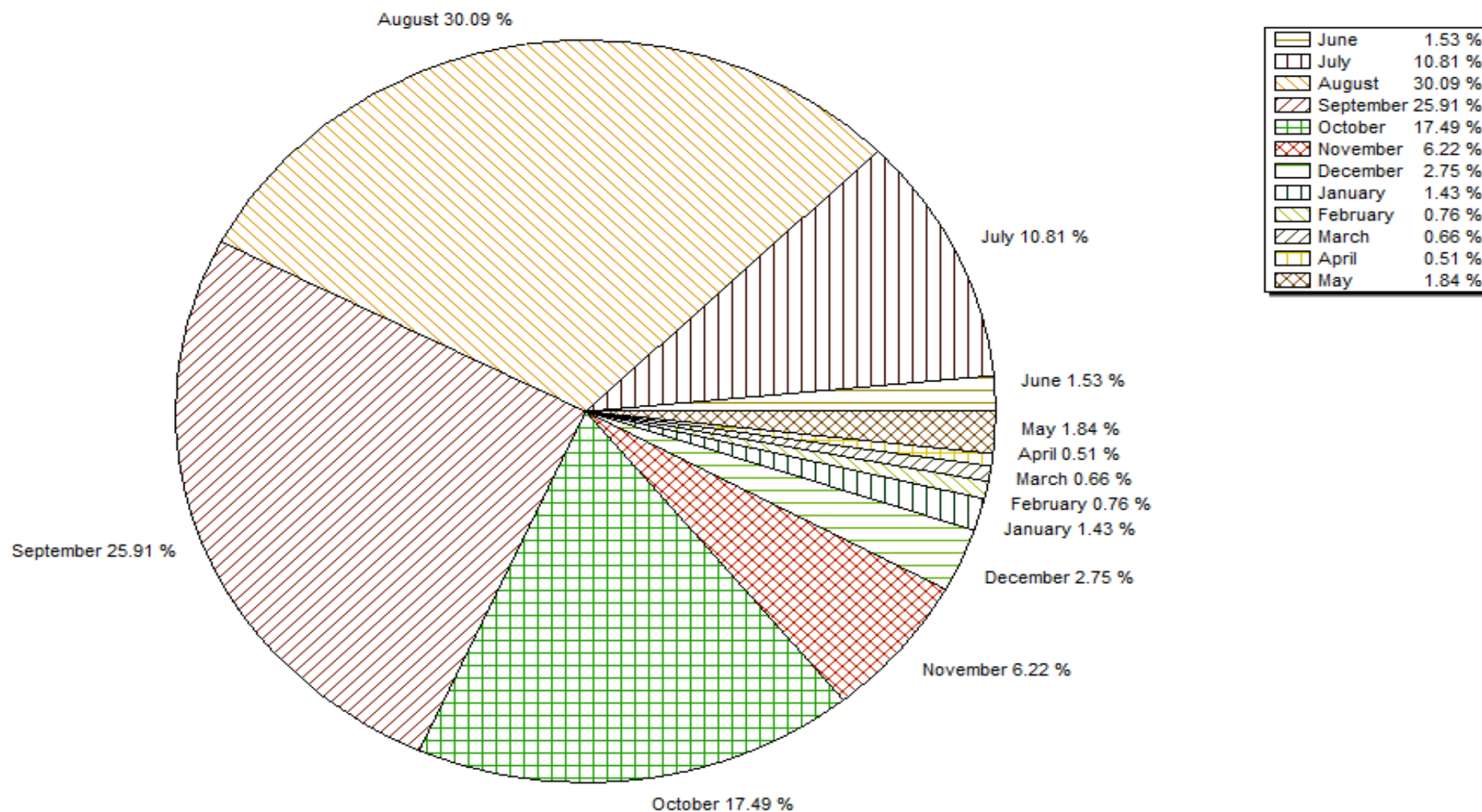
Monthly Average Runoff based on period : 1965-2022

Station Name : Keesara (AKA00B4)

Local River : Munneru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



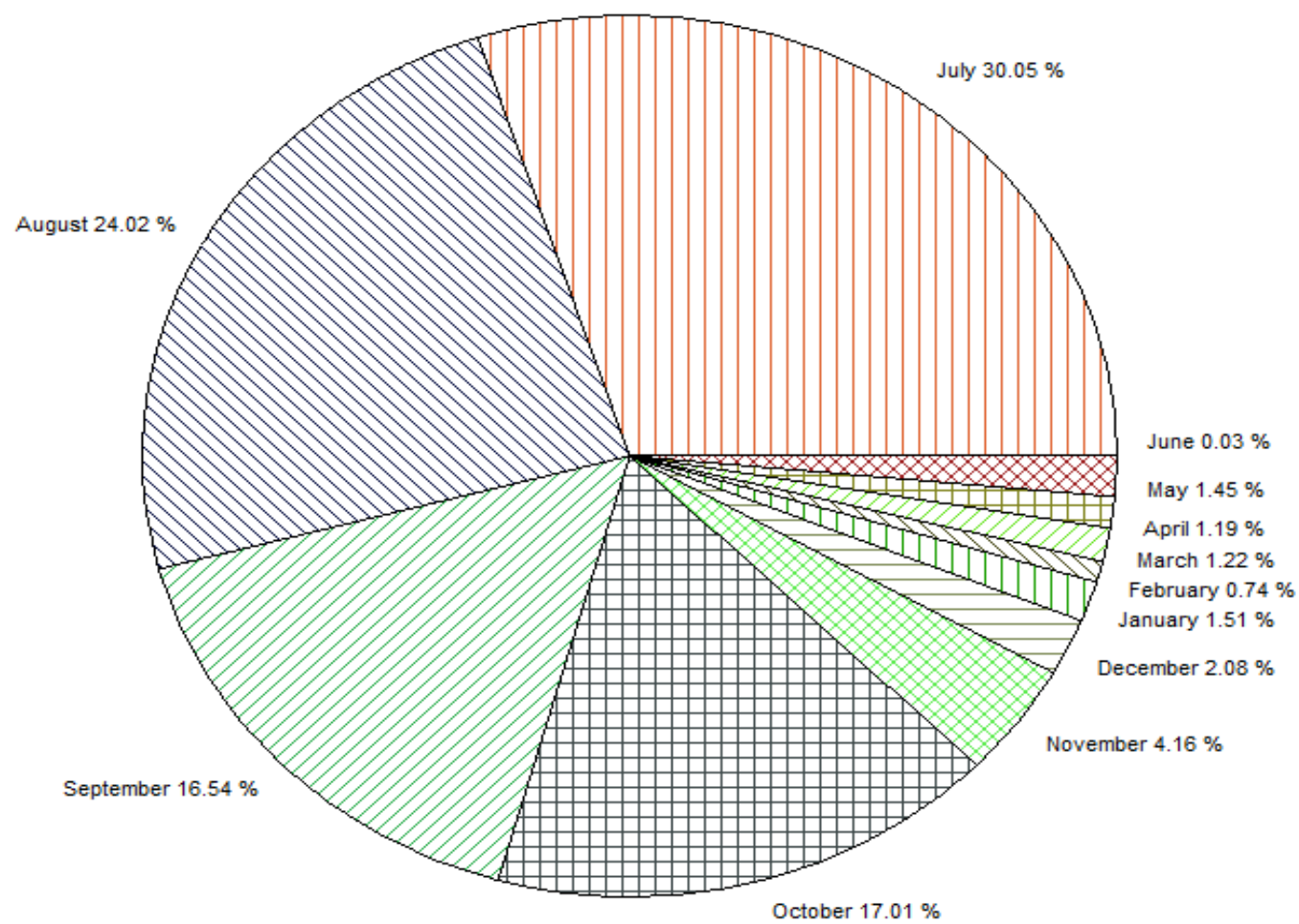
Monthly Runoff for the Year : 2022-2023

Station Name : Keesara (AKA00B4)

Local River : Munneru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada

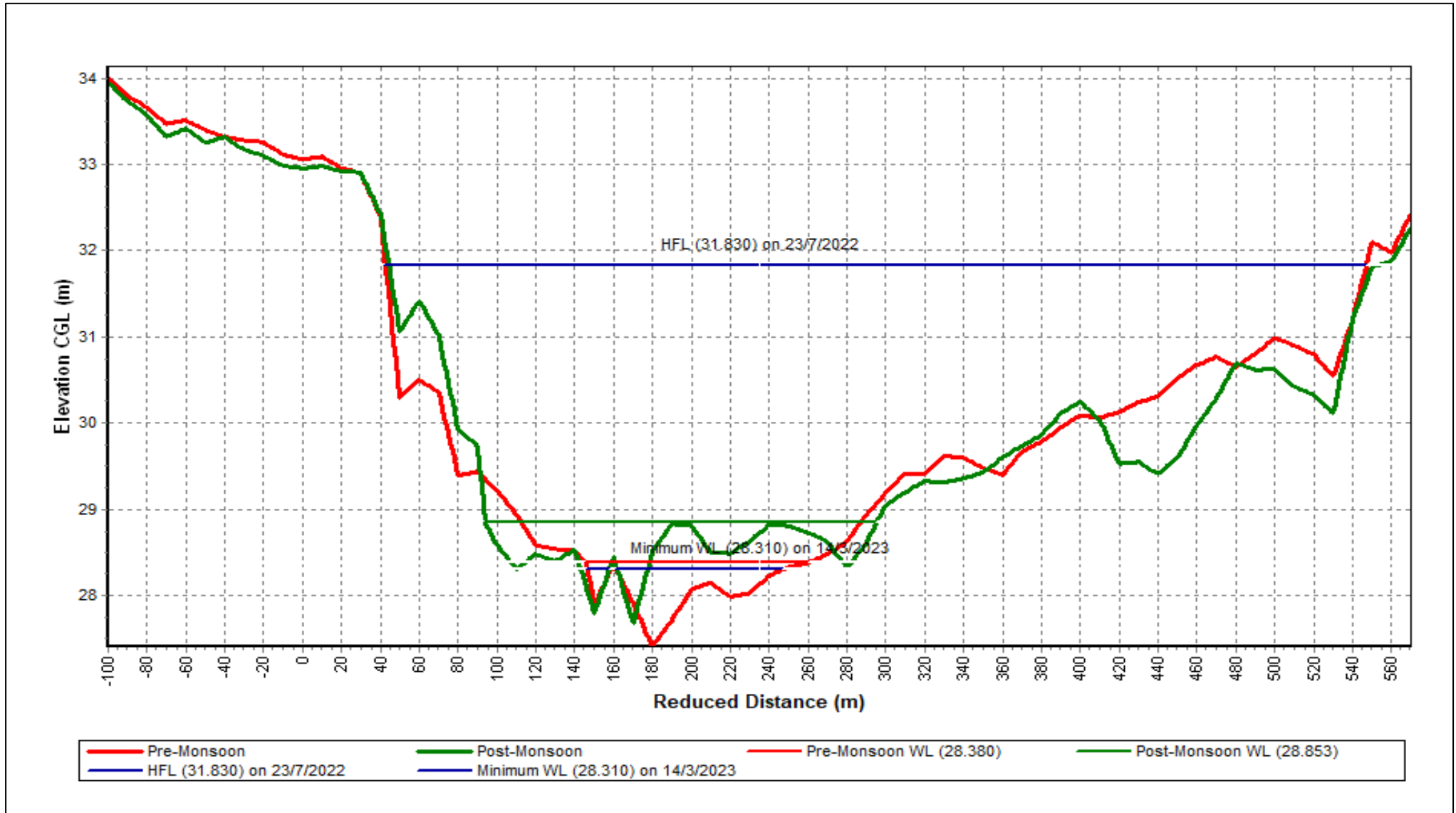


Station Name : Keesara (AKA00B4)

Local River : Munneru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



Remarks : Cross Section Deviation due to Silting and Souring Effects.

Zero of the Gauge: 27.035 (m.s.l)

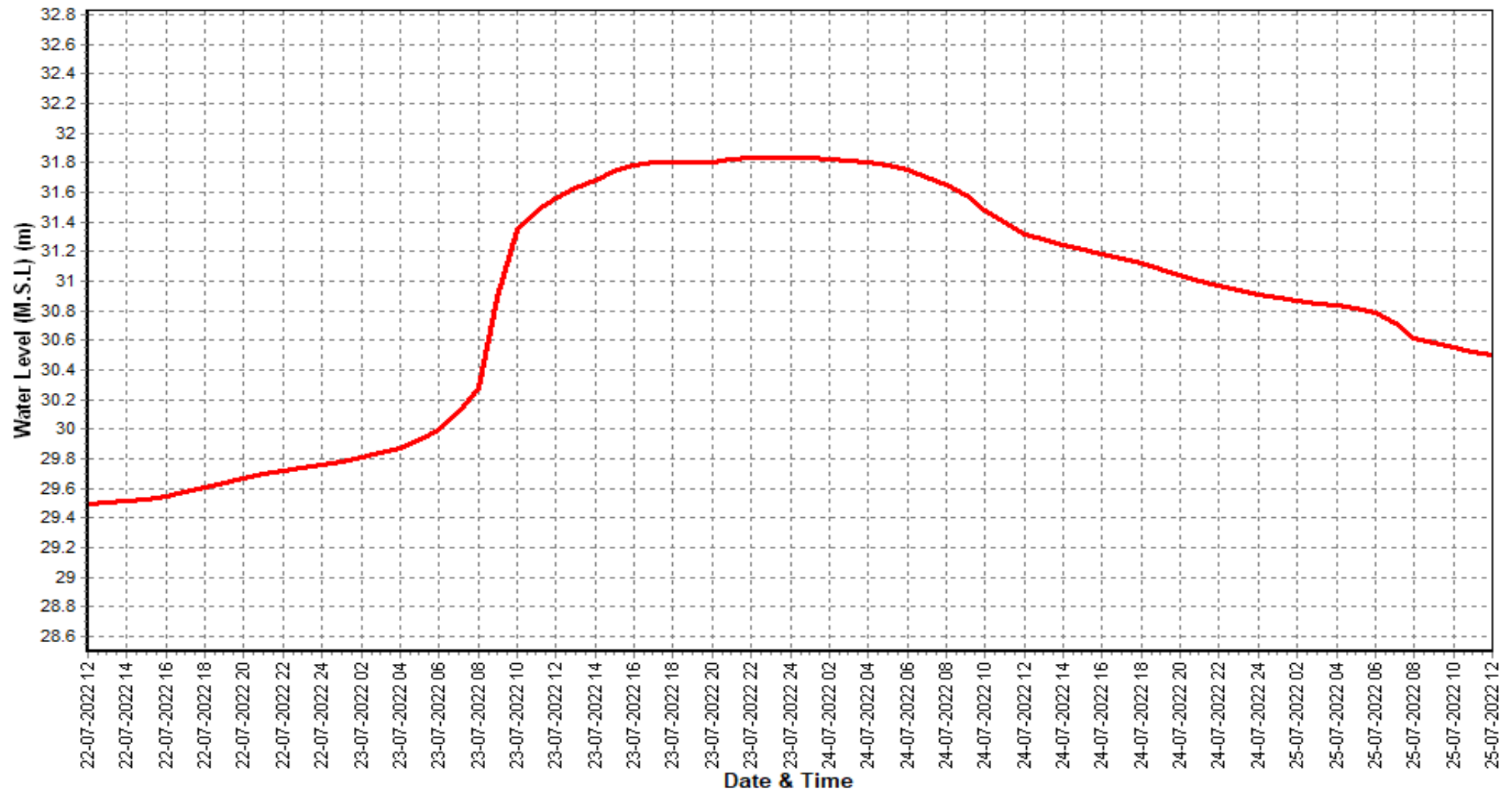
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Keesara (AKA00B4)

Local River : Munneru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



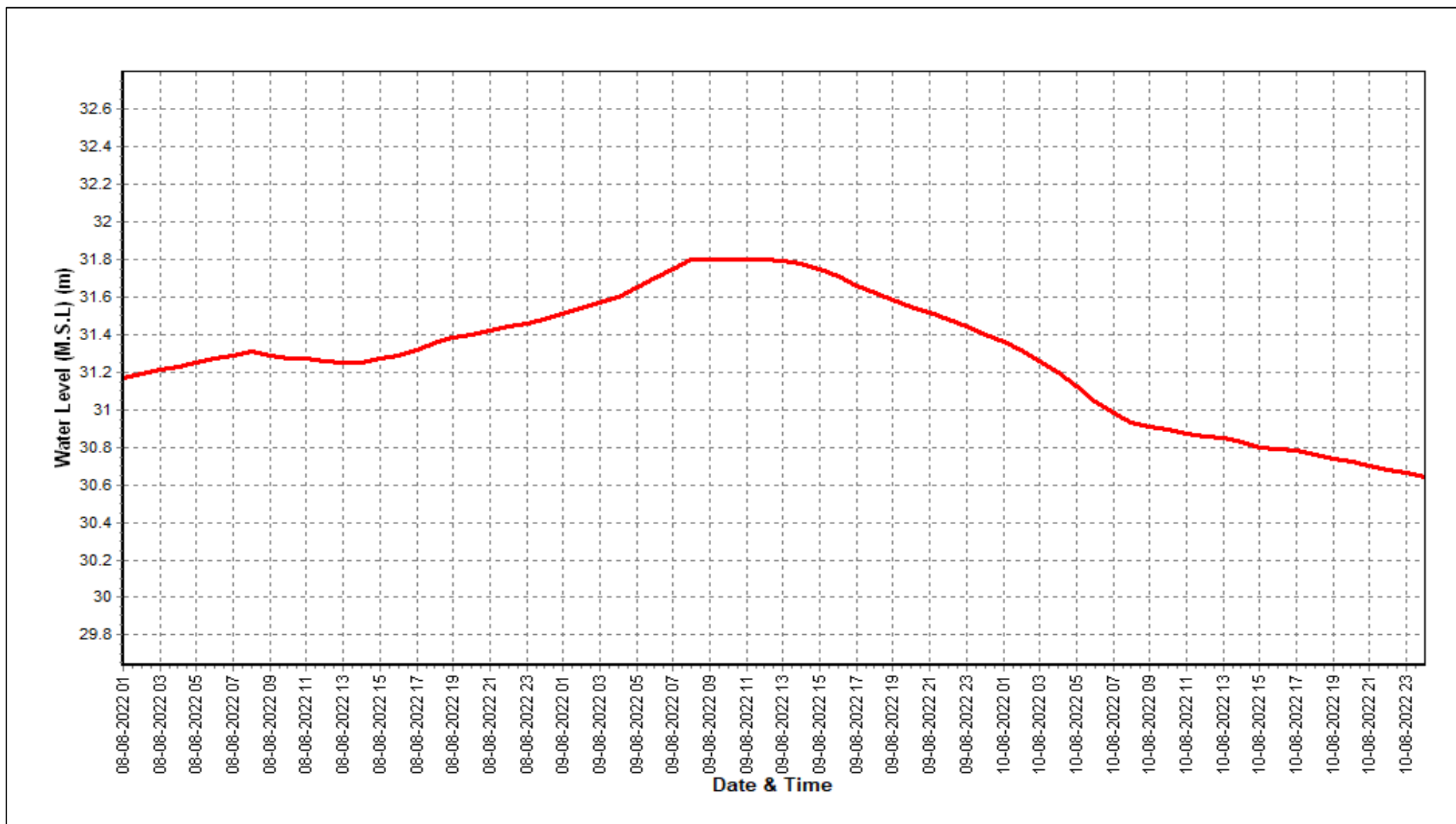
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Keesara (AKA00B4)

Local River : Munneru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



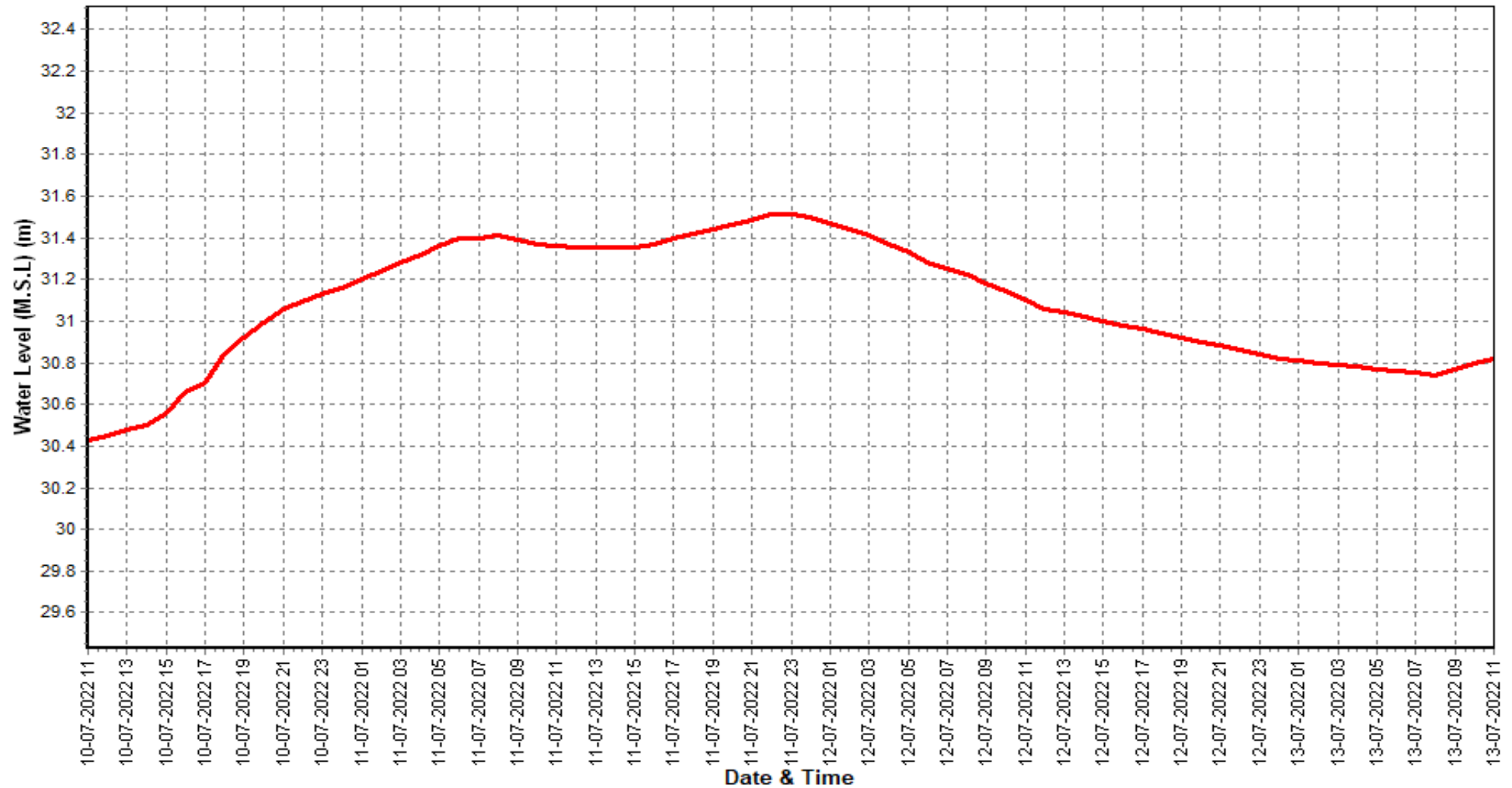
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Keesara (AKA00B4)

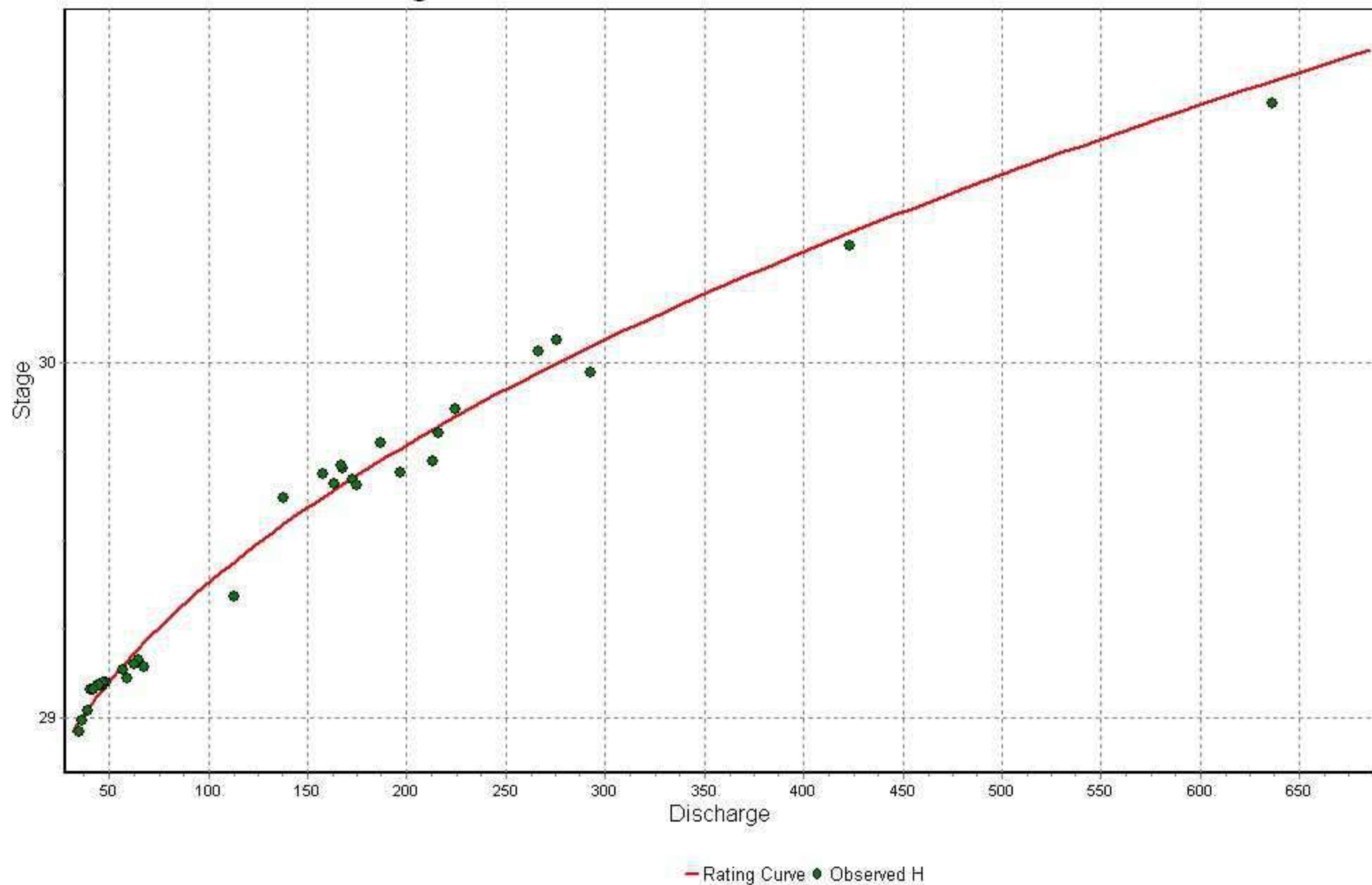
Local River : Munneru

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



Rating Curve of Site Keesara 01/10/2022 to 30/11/2022



HISTORY SHEET

		Water Year	: 2022-2023
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) 8.152 (m.s.l)	01-01-1964 01-09-1964	- 31-08-1964
	Opening Date	Closing Date	
Gauge	: 21-03-1964	HFL During 2022-23	: 16.292 m
Discharge	: 24-03-1964	Corres. Discharge	: 13508(Estimated)
Sediment	: 01-02-1965	Date & Time of occurrence	: 16-10-2022 : 04.00 hrs.
Water Quality	: 01-01-1972		

HFL Recorded so far in m : 19.332 dt 05-10-2009

Corresponding Discharge (cumecs) : 25663 *

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

Year	Maximum			Minimum		
	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	12006	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	23-04-1978
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

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

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
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
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
2016-2017	3596	13.102	23-09-2016	0.000	8.862	04-12-2016
2017-2018	134.0	9.712	20-07-2017	0.000	8.732	09-12-2017
2018-2019	4174	13.930	21-08-2018	0.000	8.842	26-01-2019
2019-2020	20641	18.832	17-08-2019	0.000	9.502	01-02-2020
2020-2021	20408	18.362	15-10-2020	0.000	9.272	26-03-2021
2021-2022	9663	15.752	06-08-2021	0.000	8.752	03-05-2022

Annual Runoff of Krishna at Vijayawada

Sl. No.	Year	Annual Runoff (MCM)			Annual Runoff (TMC)		
		Monsoon	Non Monsoon	Annual	Monsoon	Non Monsoon	Annual
1	1964-1965		241	241		9	9
2	1965-1966	34371	996	35367	1215	35	1250
3	1966-1967	23657	4263	27921	836	151	987
4	1967-1968	29502	1751	31253	1042	62	1104
5	1968-1969	20893	2394	23287	738	85	823
6	1969-1970	40870	1112	41982	1444	39	1483
7	1970-1971	43671	291	43961	1543	10	1553
8	1971-1972	27022	215	27237	955	8	962
9	1972-1973	5275	126	5402	186	4	191
10	1973-1974	32848	185	33032	1161	7	1167
11	1974-1975	27890	372	28261	986	13	999
12	1975-1976	67697	2465	70162	2392	87	2479
13	1976-1977	29842	168	30011	1054	6	1060
14	1977-1978	18708	671	19379	661	24	685
15	1978-1979	48367	3700	52067	1709	131	1840
16	1979-1980	23533	2456	25988	832	87	918
17	1980-1981	30328	611	30939	1072	22	1093
18	1981-1982	33214	2622	35835	1174	93	1266
19	1982-1983	11347	2977	14324	401	105	506
20	1983-1984	37358	1916	39274	1320	68	1388
21	1984-1985	6682	3567	10250	236	126	362
22	1985-1986	4015	1451	5466	142	51	193
23	1986-1987	4084	901	4985	144	32	176
24	1987-1988	2252	2059	4311	80	73	152
25	1988-1989	30904	2606	33509	1092	92	1184
26	1989-1990	17451	3846	21297	617	136	753
27	1990-1991	22946	6098	29044	811	215	1026
28	1991-1992	27530	5139	32669	973	182	1154
29	1992-1993	5008	4607	9614	177	163	340
30	1993-1994	12336	7159	19495	436	253	689
31	1994-1995	34061	5071	39131	1204	179	1383
32	1995-1996	4794	1537	6332	169	54	224
33	1996-1997	15169	3923	19092	536	139	675
34	1997-1998	14697	1986	16683	519	70	590
35	1998-1999	30908	2785	33692	1092	98	1191
36	1999-2000	8430	1929	10360	298	68	366
37	2000-2001	5932	1259	7191	210	44	254
38	2001-2002	2116	1087	3203	75	38	113
39	2002-2003	311	63	374	11	2	13
40	2003-2004	245	88	333	9	3	12
41	2004-2005	628	31	658	22	1	23
42	2005-2006	35590	443	36034	1258	16	1273
43	2006-2007	26740	1	26741	945	0	945
44	2007-2008	25721	541	26262	909	19	928
45	2008-2009	9064	693	9757	320	25	345
46	2009-2010	13169	1341	14510	465	47	513
47	2010-2011	12525	1299	13825	443	46	488

48	2011-2012	7306	0	7306	258	0	258
49	2012-2013	1715	0	1715	61	0	61
50	2013-2014	11207	55	11262	396	2	398
51	2014-2015	2373	0	2373	84	0	84
52	2015-2016	237	0	237	8	0	8
53	2016-2017	1439	0	1439	51	0	51
54	2017-2018	12	0	12	0	0	0
55	2018-2019	1000	16	1016	35	1	36
56	2019-2020	20336	0	20336	719	0	719
57	2020-2021	37046	57	37102	1309	2	1311
58	2021-2022	15063	27	15091	532	1	533
59	2022-2023	36781	189	36970	1300	7	1306
Average		18866	1549	20095	667	55	710

Instantaneous Flood Peak of Krishna at Vijayawada

		Instantaneous Annual Flood Peak			
Sl. No.	Year	Peak WL (m) Recorded	Date	Time	Discharge * (Cumecs)
2	1965-1966	17.952	28-07-1965	03:00:00	18366 *
3	1966-1967	16.852	06-08-1966	05:00:00	13446 *
4	1967-1968	18.202	06-08-1967	21:00:00	19595 *
5	1968-1969	15.452	12-10-1968	13:00:00	8333 *
6	1969-1970	17.902	20-05-1969	18:00:00	18125 *
7	1970-1971	17.592	23-09-1970	08:00:00	16668 *
8	1971-1972	15.182	07-09-1971	21:00:00	7496 *
9	1972-1973	13.872	18-07-1972	05:00:00	4111 *
10	1973-1974	15.712	17-08-1973	03:00:00	9185 *
11	1974-1975	17.602	30-09-1974	07:00:00	16714 *
12	1975-1976	18.282	13-10-1975	15:00:00	19997 *
13	1976-1977	17.112	11-08-1976	13:00:00	14537 *
14	1977-1978	15.262	02-08-1977	17:00:00	7739 *
15	1978-1979	17.982	16-08-1978	20:00:00	18511 *
16	1979-1980	17.592	30-09-1979	21:00:00	16668 *
17	1980-1981	16.952	14-07-1980	15:00:00	13860 *
18	1981-1982	16.512	25-09-1981	01:00:00	12086 *
19	1982-1983	14.912	25-08-1982	02:00:00	6706 *
20	1983-1984	18.682	07-10-1983	02:00:00	22070 *
21	1984-1985	13.752	21-08-1984	21:00:00	3857 *
22	1985-1986	13.582	15-08-1985	01:00:00	3514 *
23	1986-1987	16.232	13-08-1986	13:00:00	11023 *
24	1987-1988	12.832	11-07-1987	10:00:00	2226 *
25	1988-1989	16.782	01-10-1988	03:00:00	13160 *
26	1989-1990	18.152	24-07-1989	18:00:00	19346 *
27	1990-1991	16.502	22-08-1990	20:00:00	12047 *
28	1991-1992	16.982	07-08-1991	08:00:00	13986 *
29	1992-1993	13.952	12-09-1992	12:00:00	4285 *
30	1993-1994	15.632	13-10-1993	00:00:00	8919 *
31	1994-1995	16.752	23-07-1994	23:00:00	13038 *
32	1995-1996	13.312	18-10-1995	06:00:00	3008 *
33	1996-1997	17.022	04-10-1996	12:00:00	14154 *
34	1997-1998	16.662	31-08-1997	13:00:00	12676 *
35	1998-1999	19.052	16-10-1998	22:00:00	24081 *
36	1999-2000	14.602	15-08-1999	06:00:00	5858 *
37	2000-2001	15.552	24-08-2000	08:00:00	8656 *
38	2001-2002	13.682	01-10-2001	13:00:00	3713 *
39	2002-2003	10.252	17-04-2002	13:00:00	620 *
40	2003-2004	11.292	08-08-2003	18:00:00	741 *
41	2004-2005	12.452	05-10-2004	23:00:00	1715 *
42	2005-2006	18.252	21-09-2005	15:00:00	19846 *
43	2006-2007	16.782	17-08-2006	05:00:00	13160 *
44	2007-2008	16.852	21-09-2007	01:00:00	13446 *
45	2008-2009	16.302	11-08-2008	08:00:00	11284 *
46	2009-2010	19.332	05-10-2009	23:00:00	25663 *

47	2010-2011	14.692	06-09-2010	12:00:00	6097 *
48	2011-2012	16.052	10-09-2011	09:00:00	10367 *
49	2012-2013	13.902	05-09-2012	00:00:00	4175 *
50	2013-2014	16.332	26-10-2013	19:00:00	11397 *
51	2014-2015	13.122	17-09-2014	18:00:00	2680 *
52	2015-2016	12.042	22-06-2015	10:00:00	1270 *
53	2016-2017	13.432	24-09-2016	17:00:00	3227 *
54	2017-2018	9.752	20-07-2017	06:00:00	814 *
55	2018-2019	14.002	21-08-2018	07:00:00	4396 *
56	2019-2020	18.912	17-08-2019	06:00:00	23310 *
57	2020-2021	18.682	17-10-2020	03:00:00	21991 *
58	2021-2022	15.952	06-08-2021	14:00:00	10103 *
59	2022-2023	16.292	16-10-2022	04:00:00	13508 *

Stage-Discharge Data for the period 2022 - 2023

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	8.742	0.000	8.722	0.000	9.772	109.5	10.852	864.1	11.812	1795	10.622	575.5
2	8.732	0.000	8.722	0.000	9.862	181.4	13.397	4916	13.052	4121 *	10.852	819.0
3	8.732	0.000	8.722	0.000	10.312	406.7	13.017	3846	12.482	3530	10.987	967.9
4	8.732	0.000	8.722	0.000	10.242	336.1	11.672	1766 *	11.982	2150	10.422	452.2
5	8.732	0.000	8.722	0.000	10.392	463.8	12.272	2861	13.002	4018 *	10.402	429.7
6	8.732	0.000	8.722	0.000	11.177	1267	12.817	3586	12.342	2607	11.302	1301 *
7	8.732	0.000	8.722	0.000	11.492	1531 *	12.252	2755	11.737	1592	10.732	787.1
8	8.732	0.000	8.722	0.000	12.067	2314	12.442	3018	13.602	5333 *	10.632	640.2 *
9	8.732	0.000	8.722	0.000	12.502	3064 *	15.352	11150	13.612	5357 *	10.632	586.4
10	8.732	0.000	8.722	0.000	12.372	2451	15.732	11499 *	13.002	3874	10.607	565.4
11	8.732	0.000	11.167	1149 #	12.007	2050	15.372	10293 *	13.152	4175	10.352	437.1
12	8.722	0.000	11.547	1437	15.472	9042	13.877	5633	12.752	3509	10.772	759.2 *
13	8.722	0.000	10.947	871.4	15.182	9683 *	14.002	7473	12.627	3389	9.882	175.3 *
14	8.722	0.000	11.002	877.1	14.982	9061 *	14.482	8307	13.932	6241	9.682	113.3
15	8.722	0.000	10.472	552.6	14.602	7937 *	14.382	8063	15.727	11923	9.422	0.000
16	8.722	0.000	10.072	279.8	14.512	6518	14.527	8671	16.052	12627 *	9.412	0.000
17	8.722	0.000	9.832	154.6 *	14.817	7433	14.702	9494	15.752	12140	9.472	50.05
18	8.722	0.000	9.092	0.000	14.877	7857	14.302	7102 *	13.332	4700	9.222	0.000
19	8.722	0.000	9.907	210.5	13.127	4148	12.817	3679	14.862	9188	9.162	0.000
20	8.722	0.000	9.982	218.2	12.952	3925	12.602	3590	13.602	5926	9.052	0.000
21	8.722	0.000	9.747	118.3	13.152	4330 *	14.067	7788	12.182	2398	9.042	0.000
22	8.722	0.000	9.002	0.000	12.727	3341	13.602	6055	13.527	5444	9.002	0.000
23	8.722	0.000	10.427	492.5	12.002	2247	12.302	2698	14.502	7653 *	9.002	0.000
24	8.722	0.000	11.902	2090 *	10.222	359.6	10.792	929.5	13.132	4287 *	9.002	0.000
25	8.722	0.000	11.677	1623	10.827	751.7	10.852	831.7 *	13.617	5760	8.992	0.000
26	8.722	0.000	11.242	1231	11.592	1671	11.392	1382	14.242	7320	8.992	0.000
27	8.722	0.000	10.852	854.3	10.842	720.3	11.187	1264	11.272	1163	9.902	0.000
28	8.722	0.000	11.017	904.1	12.072	2347 *	11.312	1365	11.002	976.6 *	9.352	0.000
29	8.722	0.000	10.652	646.9	13.517	5014	11.352	1334	11.552	1390	9.012	0.000
30	8.722	0.000	10.327	455.6	15.277	8456	11.702	1686	11.082	1059 *	8.972	0.000
31			10.432	487.8 *	12.352	2803 *			10.982	1030		
Ten-Daily Mean												
I Ten-Daily	8.733	0.000	8.722	0.000	11.019	1213	12.980	4626	12.663	3438	10.719	712.5
II Ten-Daily	8.723	0.000	10.402	575.1	14.253	6765	14.107	7230	14.179	7382	9.643	153.5
III Ten-Daily	8.722	0.000	10.662	809.4	12.235	2913	11.856	2533	12.463	3498	9.127	0.000
Monthly												
Min.	8.722	0.000	8.722	0.000	9.772	109.5	10.792	831.7	10.982	976.6	8.972	0.000
Max.	8.742	0.000	11.902	2090	15.472	9683	15.732	11499	16.052	12627	11.302	1301
Mean	8.726	0	9.952	472.7	12.494	3607	12.981	4797	13.081	4731	9.830	288.6

Annual Runoff in MCM = 36970 Annual Runoff in mm = 147

Peak Observed Discharge = 12140 cumecs on 17-10-2022 Corres. Water Level :15.752 m

Lowest Observed Discharge = 0.000 cumecs on 01-06-2022 Corres. Water Level :8.742001 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 2022 - 2023

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	9.922	192.1	9.742	0.000	8.632	0.000	8.592	0.000	8.852	0.000	8.582	0.000
2	9.572	60.71	9.442	0.000	8.632	0.000	8.592	0.000	8.792	0.000	9.232	0.000
3	9.392	0.000	8.942	0.000	8.622	0.000	8.592	0.000	8.732	0.000	9.252	0.000
4	10.002	230.1 *	8.942	0.000	8.622	0.000	8.592	0.000	8.702	0.000	9.252	0.000
5	9.892	207.6	8.872	0.000	8.622	0.000	8.592	0.000	8.692	0.000	9.372	0.000
6	9.812	170.7	8.852	0.000	8.622	0.000	8.582	0.000	8.692	0.000	9.572	152.8
7	9.662	99.16	8.852	0.000	8.622	0.000	8.582	0.000	8.682	0.000	9.582	0.000
8	9.362	0.000	8.842	0.000	8.622	0.000	8.582	0.000	8.682	0.000	9.392	0.000
9	9.212	0.000	8.832	0.000	8.612	0.000	8.582	0.000	8.672	0.000	9.242	0.000
10	9.202	0.000	8.832	0.000	8.612	0.000	8.582	0.000	8.672	0.000	8.992	0.000
11	9.432	0.000	8.802	0.000	8.612	0.000	8.582	0.000	8.642	0.000	8.932	0.000
12	9.672	94.68	8.792	0.000	8.612	0.000	8.582	0.000	8.622	0.000	8.932	0.000
13	9.672	98.09	8.782	0.000	8.612	0.000	8.582	0.000	8.612	0.000	8.932	0.000
14	9.642	83.51	9.332	0.000	8.612	0.000	8.582	0.000	8.612	0.000	8.932	0.000
15	9.752	160.7	9.372	0.000	8.612	0.000	8.582	0.000	8.602	0.000	8.932	0.000
16	9.552	70.10	9.342	0.000	8.612	0.000	8.582	0.000	8.602	0.000	8.852	0.000
17	9.422	0.000	9.052	0.000	8.612	0.000	8.582	0.000	8.592	0.000	8.752	0.000
18	9.292	0.000	8.872	0.000	8.612	0.000	8.572	0.000	8.592	0.000	8.752	0.000
19	9.362	0.000	8.792	0.000	8.612	0.000	8.952	0.000	8.592	0.000	8.732	0.000
20	9.412	0.000	8.782	0.000	8.612	0.000	9.432	0.000	8.592	0.000	8.732	0.000
21	9.322	0.000	8.762	0.000	8.602	0.000	9.432	0.000	8.592	0.000	8.692	0.000
22	9.492	53.26	8.762	0.000	8.602	0.000	9.432	0.000	8.592	0.000	8.652	0.000
23	9.822	172.1	8.752	0.000	8.602	0.000	9.432	0.000	8.592	0.000	8.652	0.000
24	9.582	75.41	8.752	0.000	8.602	0.000	9.562	118.7	8.592	0.000	8.622	0.000
25	9.582	70.75 *	8.702	0.000	8.592	0.000	9.252	0.000	8.592	0.000	8.622	0.000
26	9.432	0.000	8.672	0.000	8.592	0.000	9.192	0.000	8.592	0.000	8.622	0.000
27	9.432	0.000	8.662	0.000	8.592	0.000	9.192	0.000	8.582	0.000	8.622	0.000
28	9.432	0.000	8.652	0.000	8.592	0.000	9.182	0.000	8.582	0.000	8.622	0.000
29	9.432	0.000	8.642	0.000			9.132	0.000	8.582	0.000	8.622	0.000
30	9.422	0.000	8.642	0.000			9.052	0.000	8.582	0.000	8.612	0.000
31	9.582	74.72	8.642	0.000			8.952	0.000			8.612	0.000
<u>Ten-Daily Mean</u>												
I Ten-Daily	9.603	96.05	9.015	0.000	8.622	0.000	8.587	0.000	8.717	0.000	9.247	15.28
II Ten-Daily	9.521	50.71	8.992	0.000	8.612	0.000	8.703	0.000	8.606	0.000	8.848	0.000
III Ten-Daily	9.503	40.57	8.695	0.000	8.597	0.000	9.256	10.79	8.588	0.000	8.632	0.000
<u>Monthly</u>												
Min.	9.202	0.000	8.642	0.000	8.592	0.000	8.572	0.000	8.582	0.000	8.582	0.000
Max.	10.002	230.1	9.742	0.000	8.632	0.000	9.562	118.7	8.852	0.000	9.582	152.8
Mean	9.541	61.74	8.894	0	8.611	0	8.862	3.828	8.637	0	8.900	4.929

Peak Computed Discharge = 12627 cumecs on 16-10-2022

Corres. Water Level :16.052 m

Lowest Computed Discharge = 70.75 cumecs on 25-12-2022

Corres. Water Level :9.582001 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 : 2022-2023

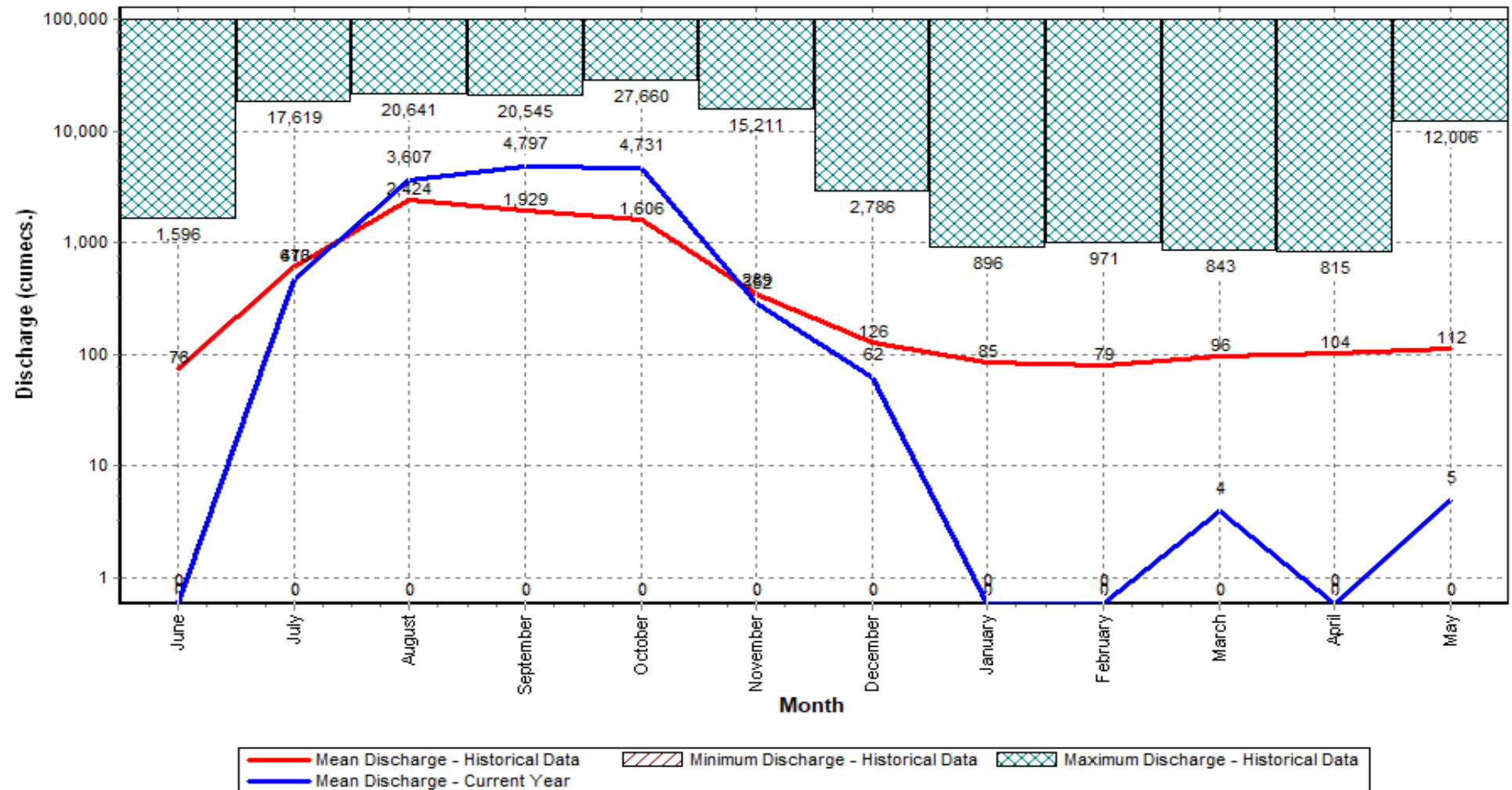
Station Name : Vijayawada (AK000B9)

Data considered : 1965-2023

Division : Lower Krishna Divn., Hyderabad

Local River : Krishna

Sub-Division : Lower Krishna SD2, Vijayawada



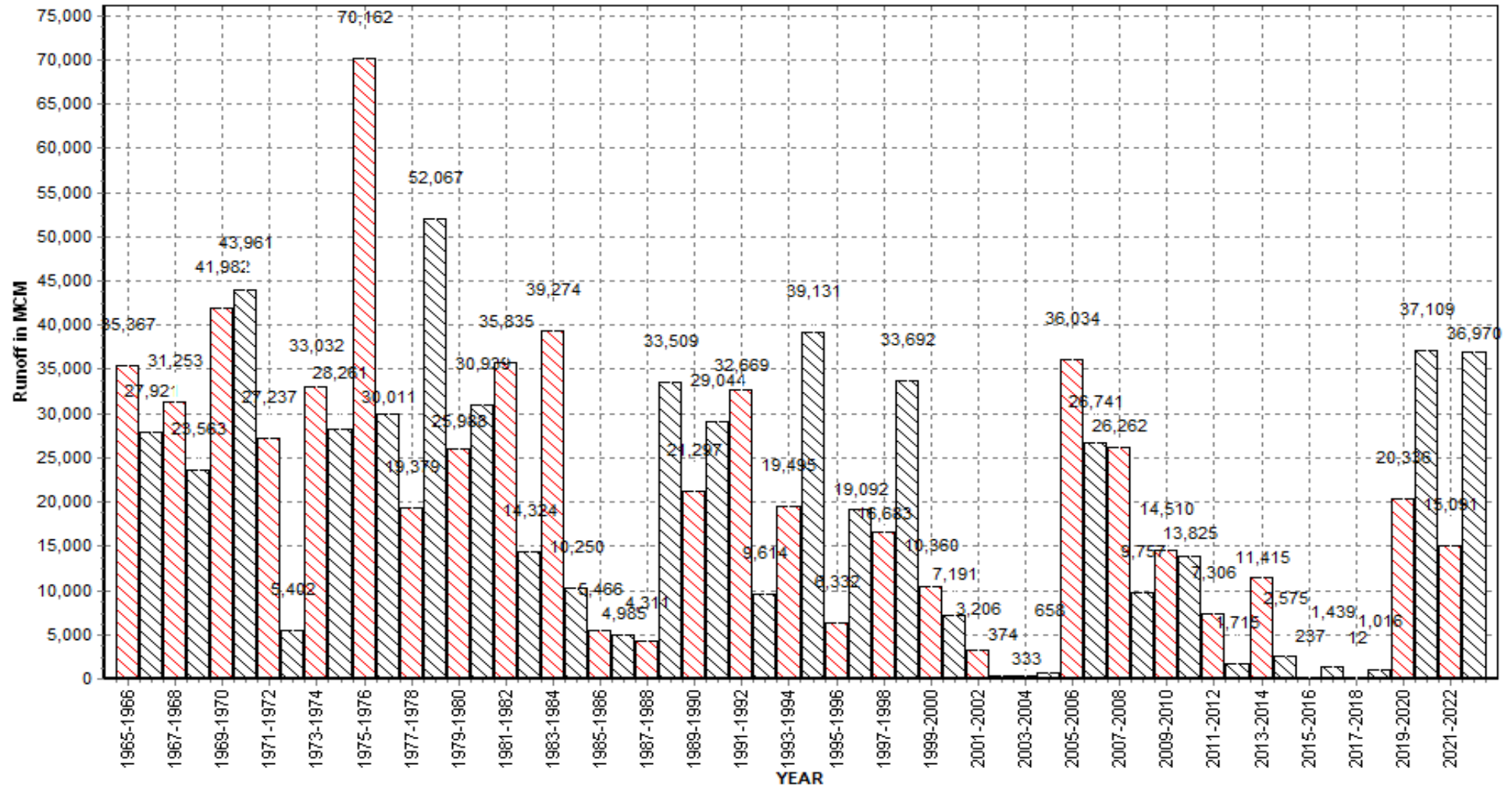
Annual Runoff Values for the period: 1965 - 2023

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

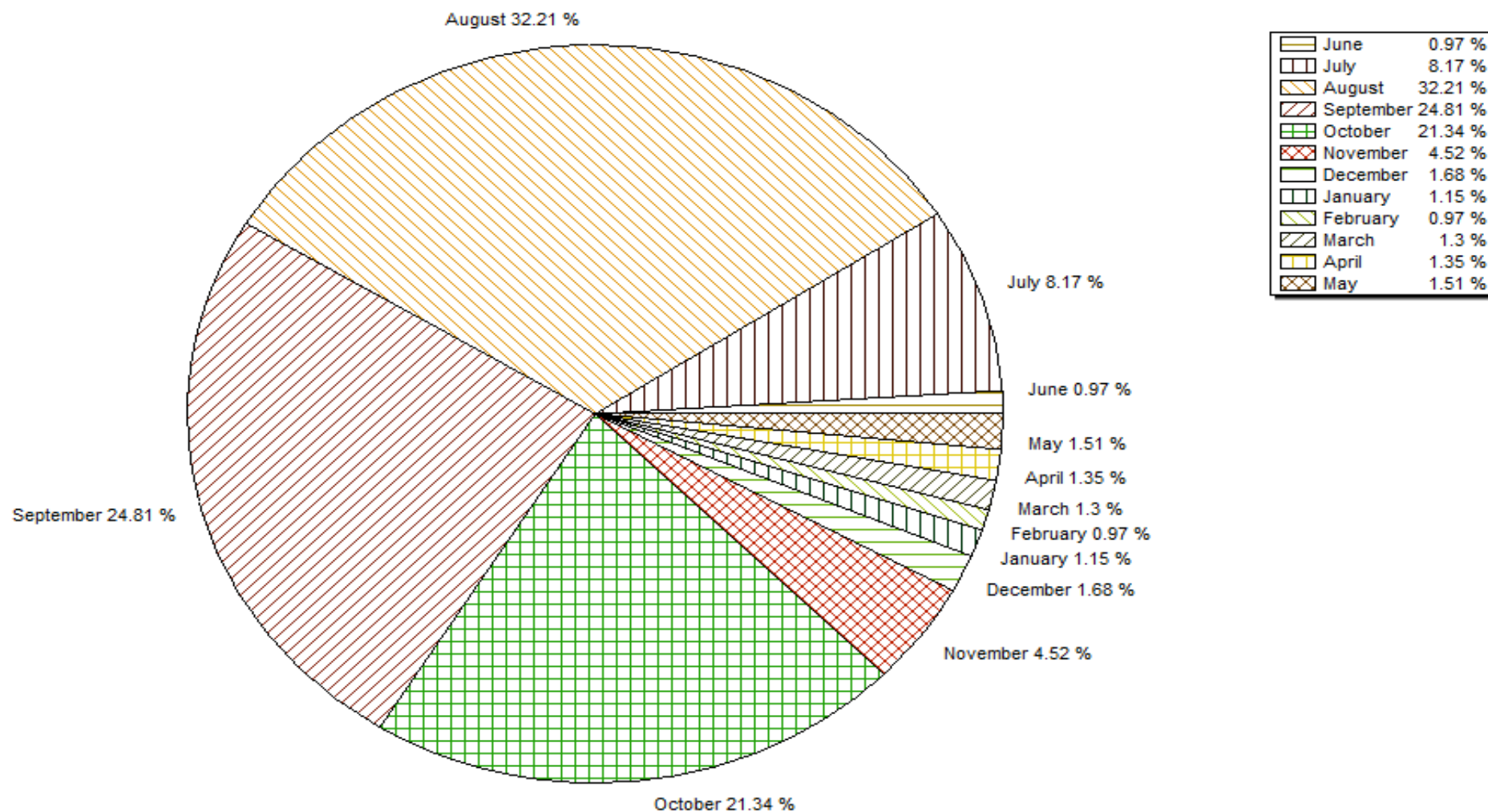
Monthly Average Runoff based on period : 1965-2022

Station Name : Vijayawada (AK000B9)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



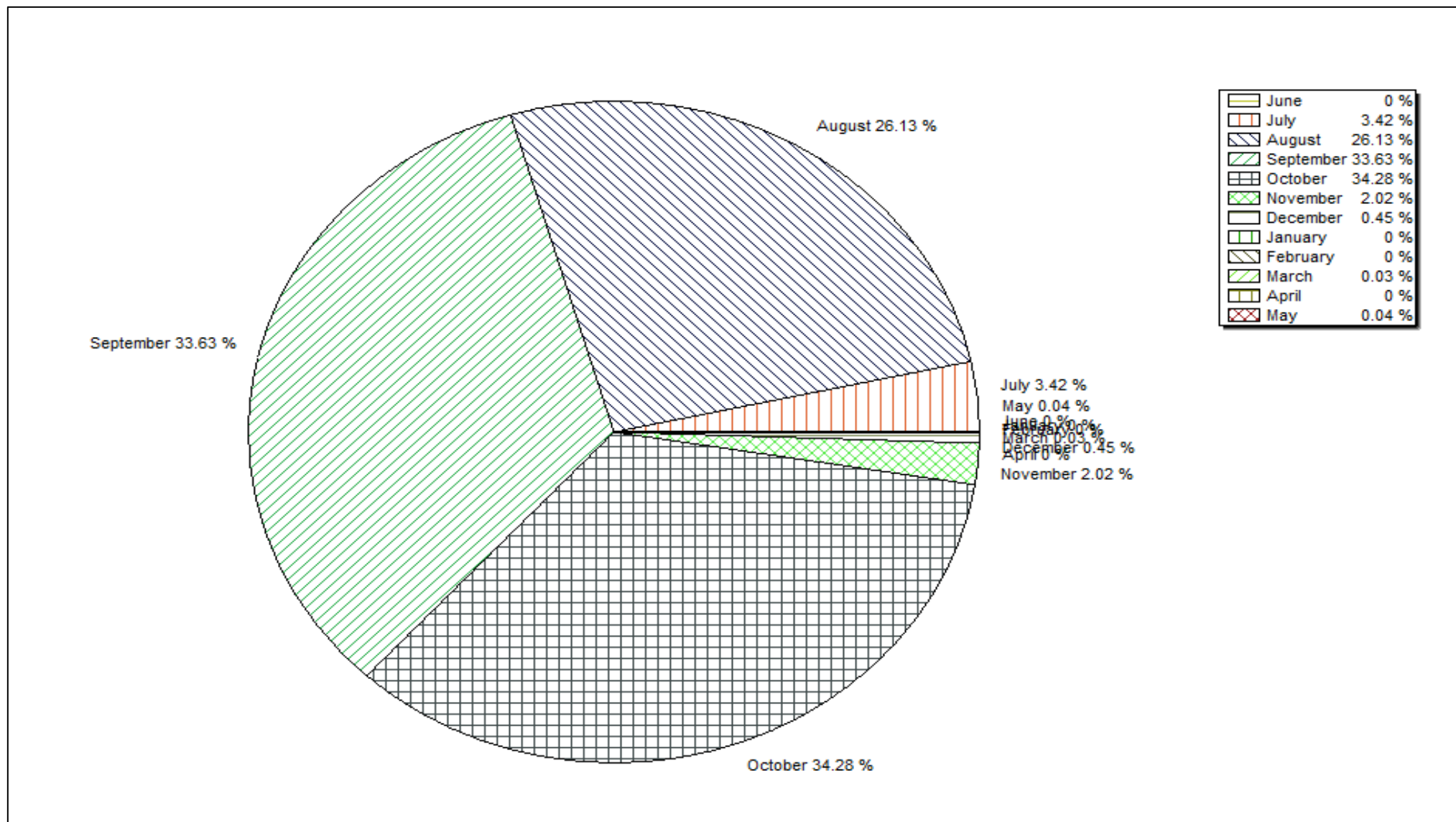
Monthly Runoff for the Year : 2022-2023

Station Name : Vijayawada (AK000B9)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



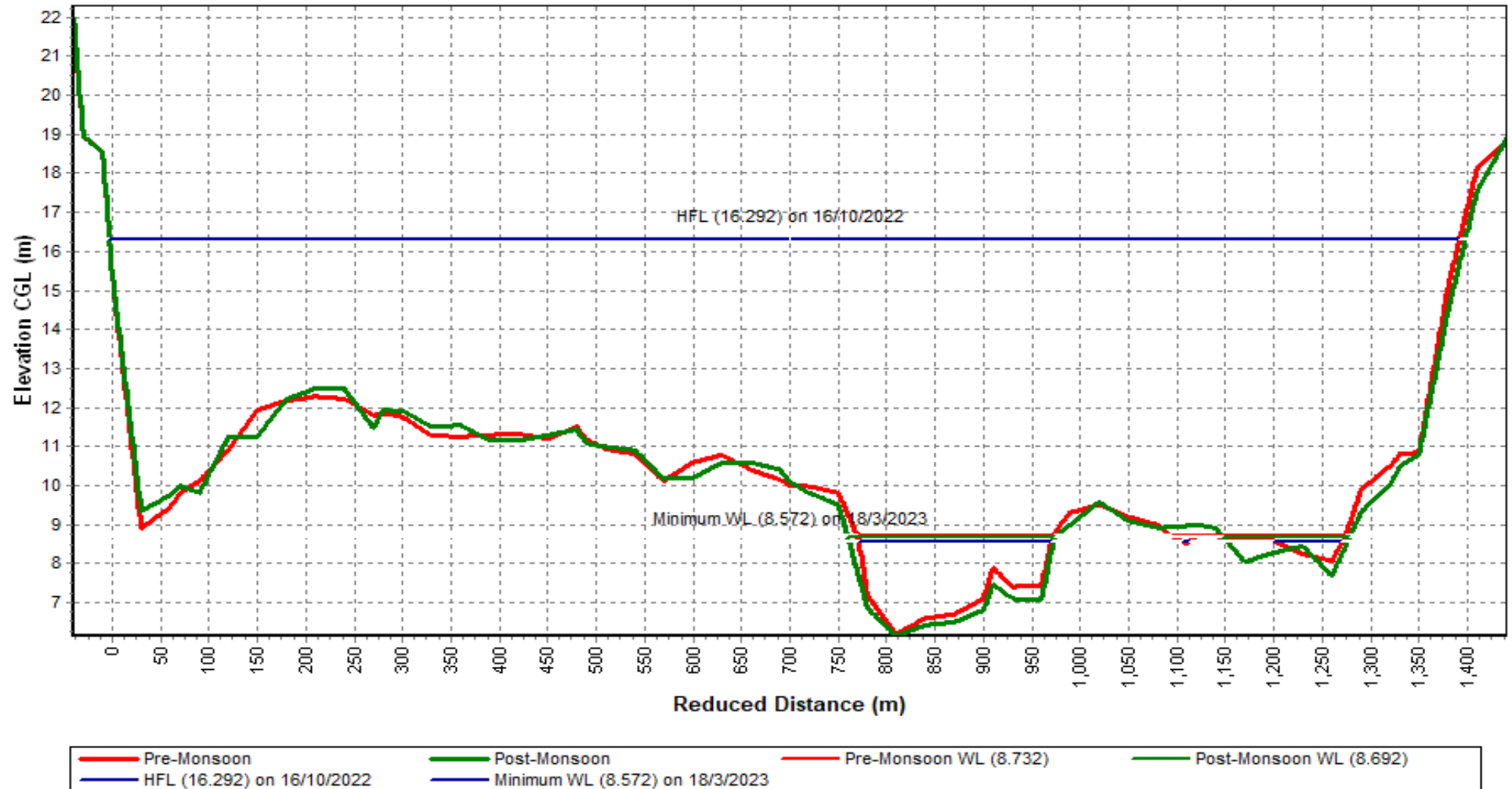
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2022-2023

Station Name : Vijayawada (AK000B9)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



Zero of the Gauge: 8.152 (m.s.l)

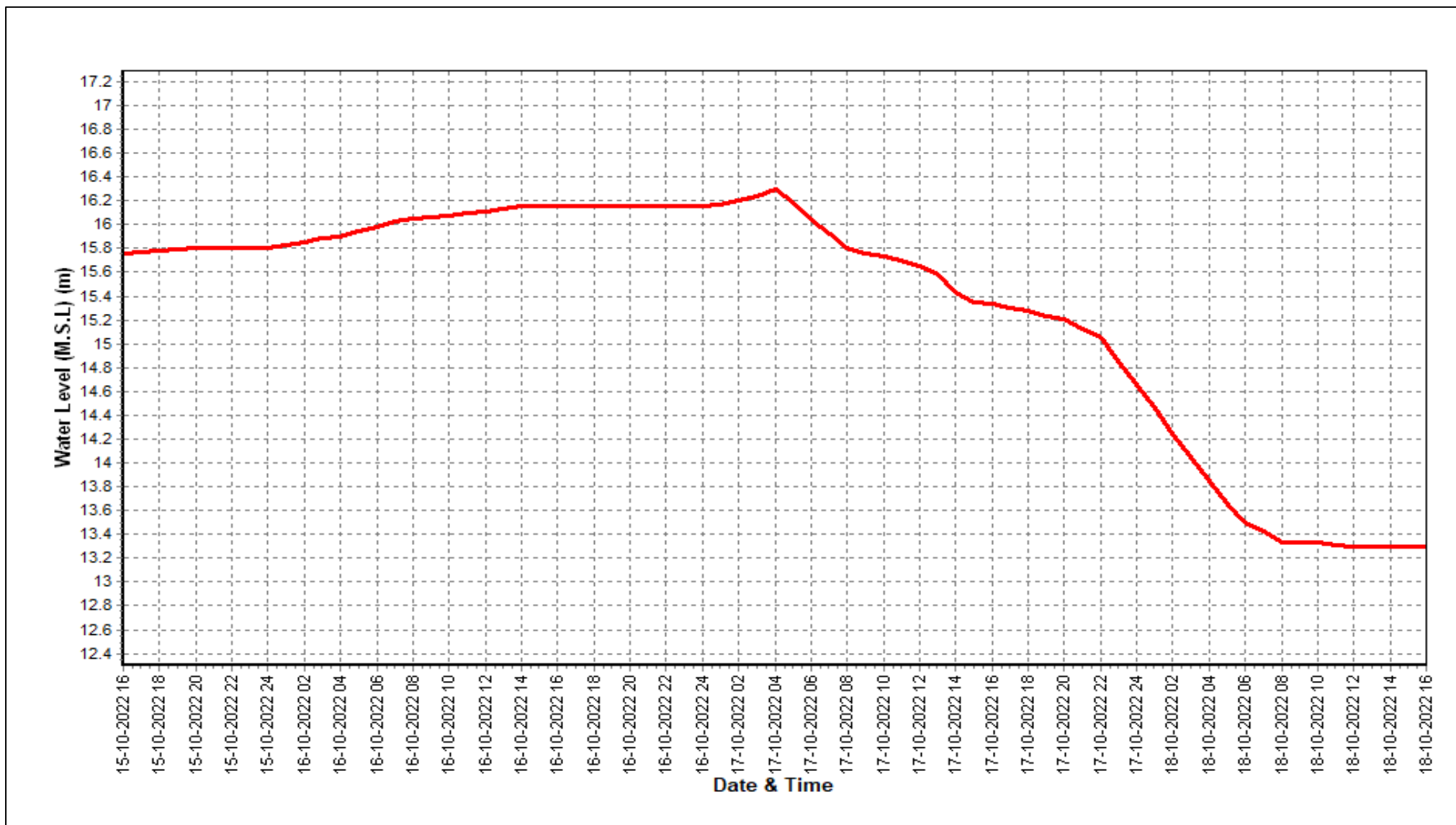
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2022-2023

Station Name : Vijayawada (AK000B9)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



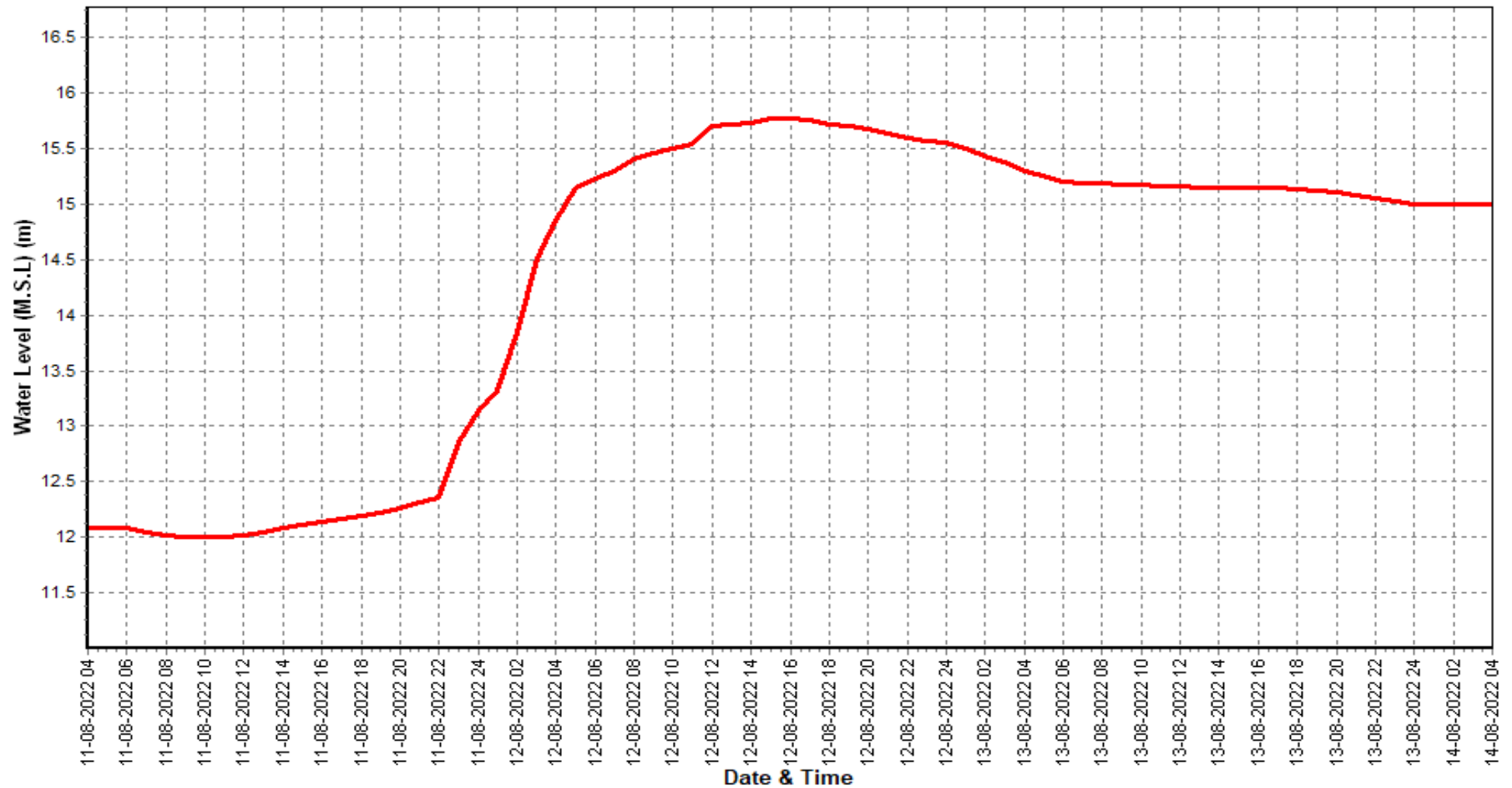
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2022-2023

Station Name : Vijayawada (AK000B9)

Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



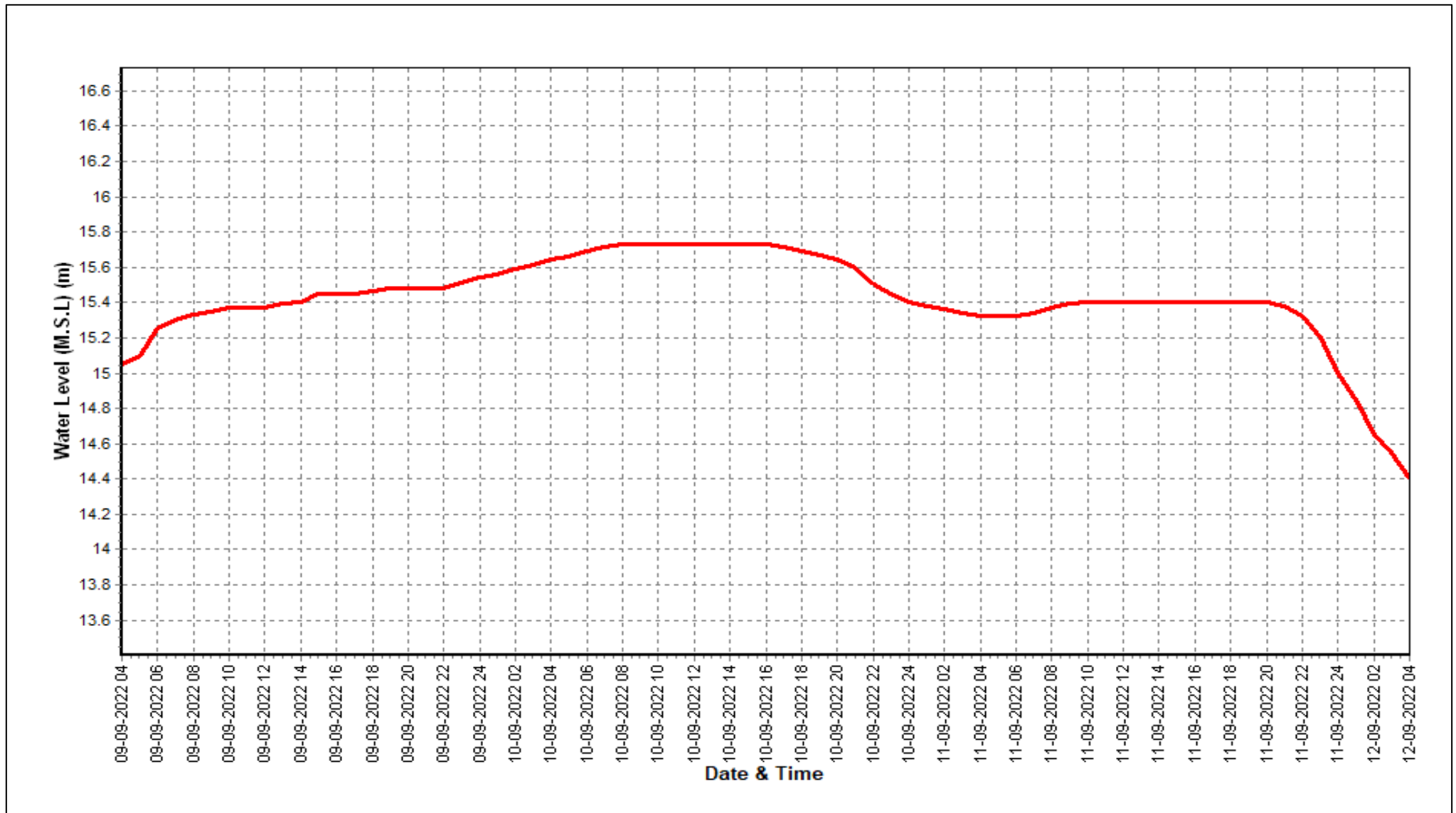
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2022-2023

Station Name : Vijayawada (AK000B9)

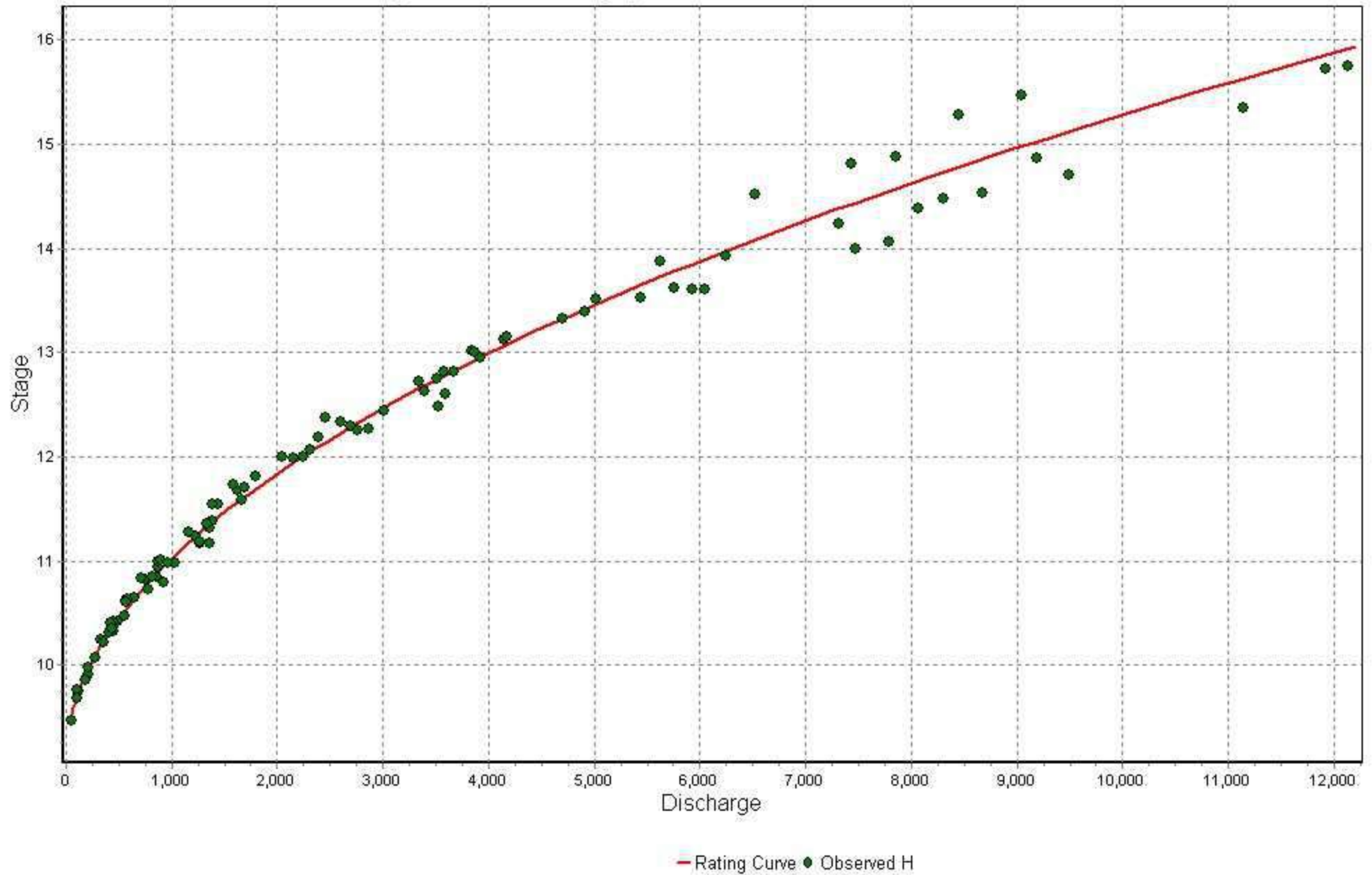
Local River : Krishna

Division : Lower Krishna Divn., Hyderabad

Sub-Division : Lower Krishna SD2, Vijayawada



Rating Curve of site Vijayawada 01/06/2022 to 30/11/2022



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

फ़रवरी-2024
February-2024