सत्यमेव जयते

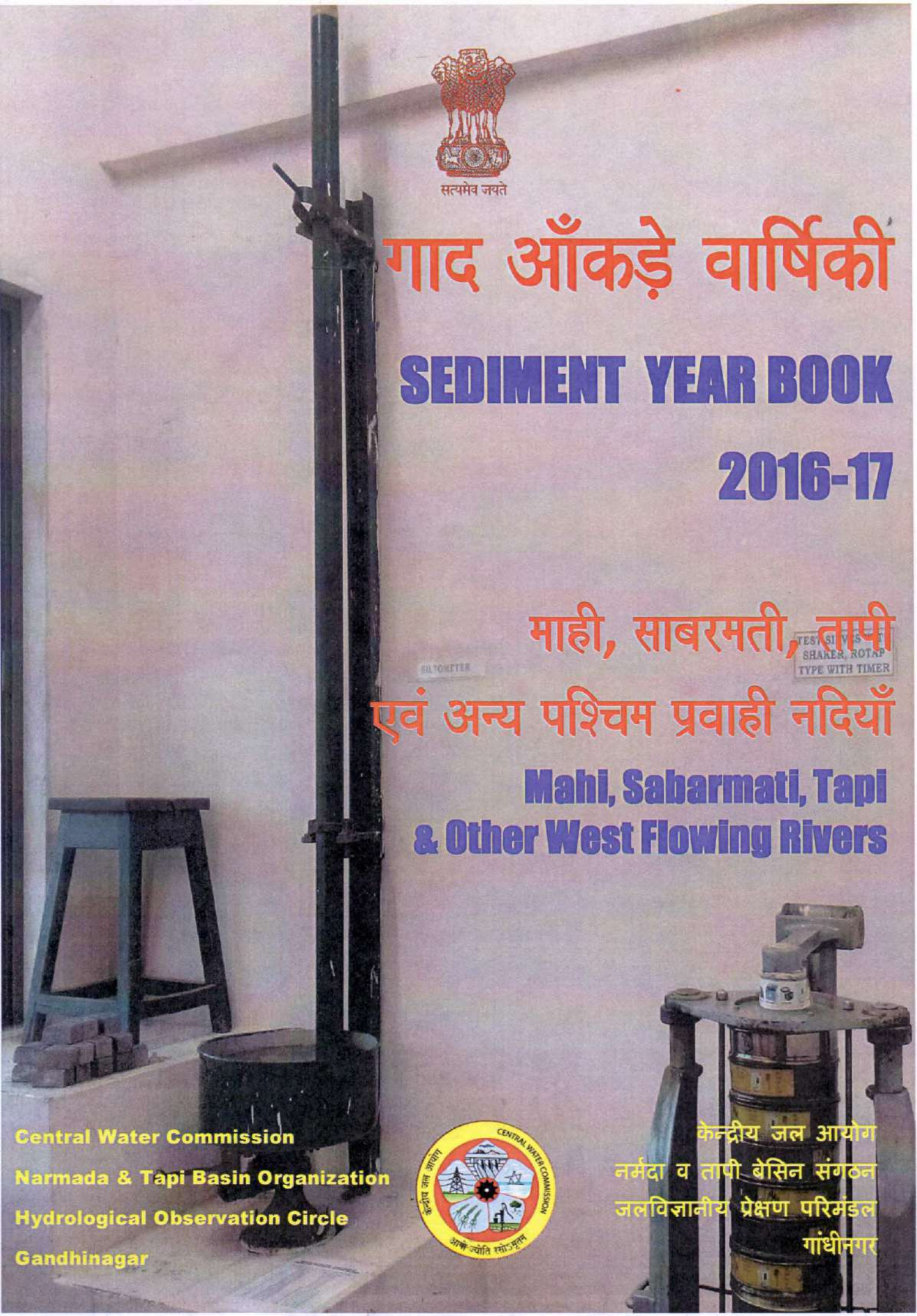
गाद आँकड़े वार्षिकी

SEDIMENT YEAR BOOK

2016-17

माही, साबरमती, तापी एवं अन्य पश्चिम प्रवाही नदियाँ

Mahi, Sabarmati, Tapi & Other West Flowing Rivers



Central Water Commission
Narmada & Tapi Basin Organization
Hydrological Observation Circle
Gandhinagar

केन्द्रीय जल आयोग
नर्मदा व तापी बेसिन संगठन
जलविज्ञानीय प्रेक्षण परिमंडल
गांधीनगर

आमुख

भूक्षरण पर्यावरण संतुलन को प्रभावित करने वाला एक मुख्य घटक है। यह अन्य कारकों जैसे जलवायु भौगोलिक स्थिति, वनस्पति तथा भूमि के प्रकार तथा प्रकृति आदि पर निर्भर करता है। तीव्र वर्षा के फलस्वरूप क्षरित भूमि के कण वहते हुए जल के साथ नदियों में चले जाते हैं। इस तरह नदियों में गाद की मात्रा में वृद्धि होती है। अतः गाद की मात्रा की उपस्थिति के अनुसार किसी नदी वेसिन में होने वाले भूक्षरण का गुणात्मक अनुमान लगाया जा सकता है। नदियों में पहुँचने वाली क्षरित मिट्टी अर्थात गाद निलंवित भार के रूप में पानी के साथ वहती है तथा नदी की स्थलाकृति तथा वहाव के अनुसार जगह - जगह तल में वैठ जाती है। इस तरह भूक्षरण नदियों के वहाव एवं प्रवृत्ति को भी प्रभावित करता है। नदी में पाए जाने वाले गाद कणों के शैल वर्गीय अभिलक्षण तथा आकार, जल संसाधन परियोजनाओं कें नियोजन का एक अभिन्न अंग है। उपरोक्त तथा अन्य कारणों से गाद की मात्रा का प्रेक्षण तथा आकलन वहुत महत्वपूर्ण हो जाता है।

जल विज्ञानीय प्रेक्षण परिमंडल, गांधीनगर, नर्मदा तापी वेसिन संगठन के अन्तर्गत केन्द्रीय जल आयोग की एक क्षेत्रीय ईकाई है जिसके अन्तर्गत माही मंडल, गांधीनगर एवं तापी मंडल, सूरत द्वारा गुजरात, मध्य प्रदेश, राजस्थान, महाराष्ट्र, दादरा नगर हवेली (केन्द्र शासित प्रदेश) एवं दमन तथा दीव (केन्द्र शासित प्रदेश) से होकर पश्चिम की ओर वहने वाली नदियों पर **16** अधिसूचित महत्वपूर्ण स्थलों पर नदियों के तलछट पदार्थ एवं गाद के नमूने एकत्रित किए जा रहे हैं। नमूनों का परीक्षण / विश्लेषण भारतीय मानक व्यूरो द्वारा निर्धारित रीति एवं मानकों के अनुसार किया जाता है।

इनमें से तलछट के नमूनों का परीक्षण तथा विश्लेषण, मण्डल मुख्यालय स्थित स्तर–II (Level –II) प्रयोगशालाओं में किया जाता है। निलंवित गाद के नमूनों का परीक्षण तथा विश्लेषण कार्यस्थल स्थित प्रयोगशालाओं में किया जाता है। निलंवित गाद तथा तलछट पदार्थ की नदियों में उपस्थिति के प्रभावी प्रवोधन हेतु, माही, सावरमती, तापी एवं पश्चिम प्रवाही, कुल **9** नदी वेसिनों पर स्थापित कुल **14** कार्य स्थलों (माही मंण्डल की **7** स्थलों एवं तापी मंण्डल की **7** स्थलों) के वर्ष **2016-17** के आँकड़े इस वार्षिकी द्वारा प्रकाशित किए जा रहे हैं। शेष **2** कार्य स्थलों के आँकड़े जो नर्मदा नदी से संवंधित हैं, नर्मदा वेसिन संगठन, केन्द्रीय जल आयोग, भोपाल को भेज दिए जाते हैं जहाँ से उनका प्रकाशन किया जाता है। इसके अतिरिक्त प्रेक्षण तकनीक, विश्लेषण रीति, आदि का वर्णन इस वार्षिकी में उल्लेखित हैं।

इस वार्षिकी में दी गयी सूचना एवं संकलित आंकडे, जल संसाधन परियोजनाओं के नियोजन, अभिकल्पन, विकास एवं अन्य जलवायवीय अध्ययनों के लिये उपयोगी होंगे। इसे और उपयोगी वनाने हेतु सुझाव आमंत्रित हैं।

वार्षिकी में प्रकाशित आंकडों के संकलन, विश्लेषण तथा प्रकाशन हेतु नर्मदा - तापी वेसिन संगठन के अधीनस्थ जल विज्ञानीय प्रेक्षण परिमंडल, गांधीनगर, माही मंण्डल, गांधीनगर एवं तापी मंण्डल, सूरत के अधिकारियों एवं कर्मचारियों ने जिस समर्पण एवं लगन से कार्य संपादित किया है, वह प्रशंसनीय है।

नवम्वर 2017
गांधीनगर

विमल कुमार
अधीक्षण अभियंता

PREFACE

Soil erosion is one of the main factors affecting the environment. It depends upon factors like weather, geographical location, vegetation and type and ecological balance of soil etc. Fractions of top soil of a river basin are dislodged with the impact of rain water and are carried by water, flowing on surface, into the river. Thus quantity of silt in the river may lead to a qualitative assessment of soil erosion in the river basin. The eroded soil reaching the river is transported as suspended load till it is deposited in various reaches of river, which in turn, affects the characteristics of river flow and regime. Petrographic characteristics and size of silt particles in flowing water are extensively used for design of water resources structures especially penstocks and turbines.

Hydrological Observation Circle, Gandhinagar, a field unit in Narmada Tapi Basin Organization of the Central Water Commission, is entrusted with the assessment of Sediment load data and Bed material data of west flowing rivers draining through the states of Gujarat, Madhya Pradesh, Maharashtra, Rajasthan, Daman & Diu (UT) and DNH (UT). Mahi Division, Gandhinagar and Tapi Division, Surat are collecting samples of sediment load data and bed material data at 16 identified sites. Samples of river bed material, collected at sites, are tested and analysed at level-II, Divisional laboratories and the suspended sediment samples are tested and analysed at site laboratories. All these tests and analyses including sample collection are carried out as per the standards laid down by Bureau of Indian Standards.

This annual publication presents the Sediment Load and Bed Material data for 14 sites (7 stations under Mahi Division and 7 stations under Tapi Division) from 9 west flowing river basins including the Mahi, Sabarmati and Tapi for the year 2016-17. Such data of 2 sites, located in Narmada basin are sent to Narmada Basin Organisation, C.W.C. Bhopal, which publishes them separately. Short notes on methodology adopted, basin description, site history and index map are also described in this volume.

It is hoped that the information and data compiled herein will be useful for planning, design and development of water resources as well as other climatic studies. Comments and suggestions for improvement of this volume are welcome. The efforts put in by all the concerned officers and staffs of Mahi Division, Tapi Division and Hydrological Observation Circle, Gandhinagar under NTBO, Central Water Commission is gratefully acknowledged.

Vimal

(Vimal Kumar)

Superintending Engineer

November 2017

Gandhinagar

List of Officers

1	Shri M.P. Singh	:	Chief Engineer, NTBO, Gandhinagar
2	Shri. Vimal Kumar	:	Superintending Engineer, HOC, Gandhinagar
3	Shri. Vishnu Sharma	:	Executive Engineer, Mahi Division, Gandhinagar
4	Dr. U.P.Gupta	:	Executive Engineer, Tapi Division, Surat
5	Shri. T.K. Chakraborty	:	Assistant Director II, HOC, Gandhinagar
6	Shri. Satish Dave	:	Assistant Director II, HOC, Gandhinagar
7	Shri. K. P. Gireendran	:	Assistant Research Officer, Mahi Division, Gandhinagar
8	Shri. D.K.Jawale	:	Scientific Assistant, Tapi Division, Surat

Contents

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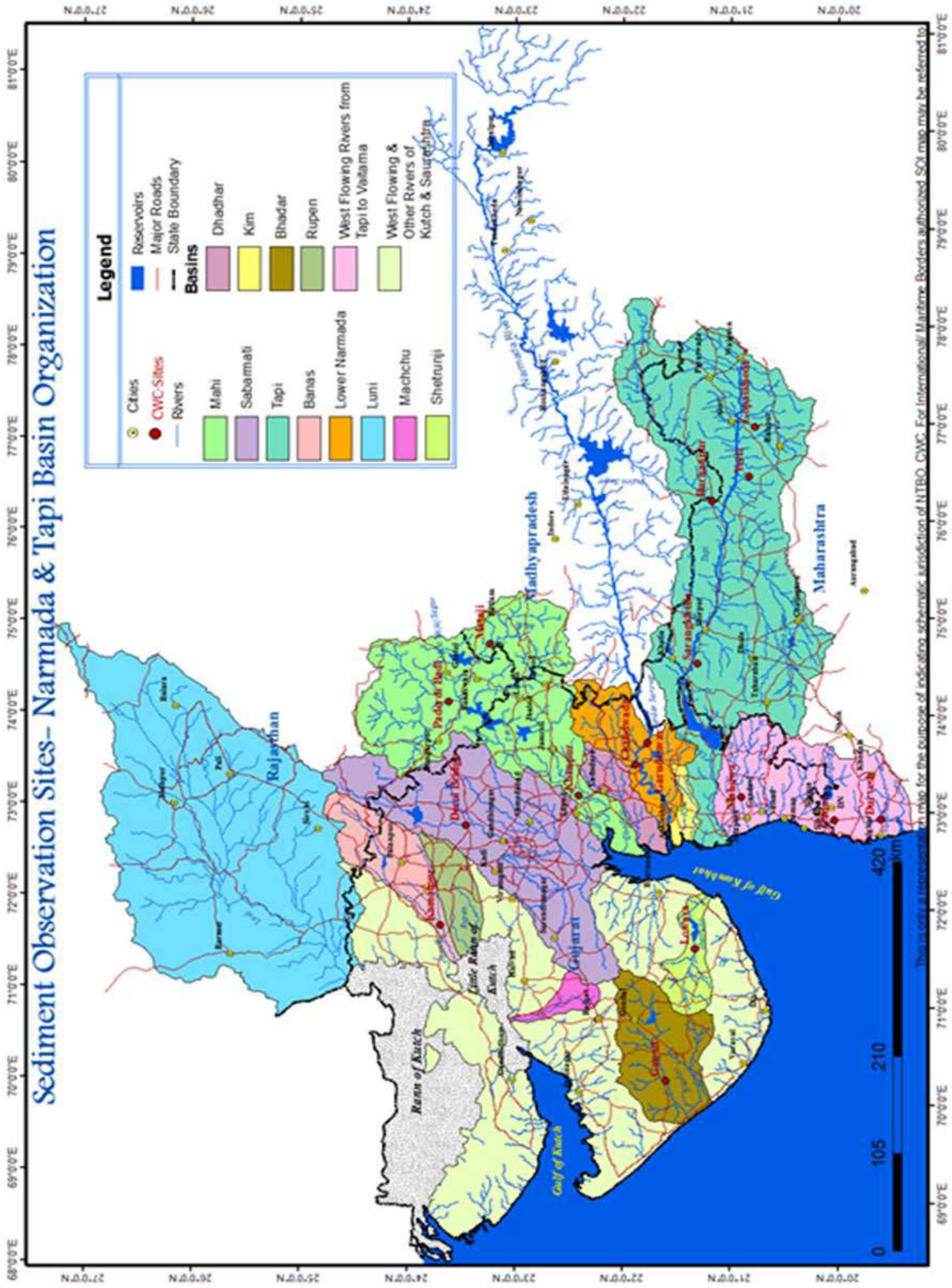
Abbreviations and Symbols

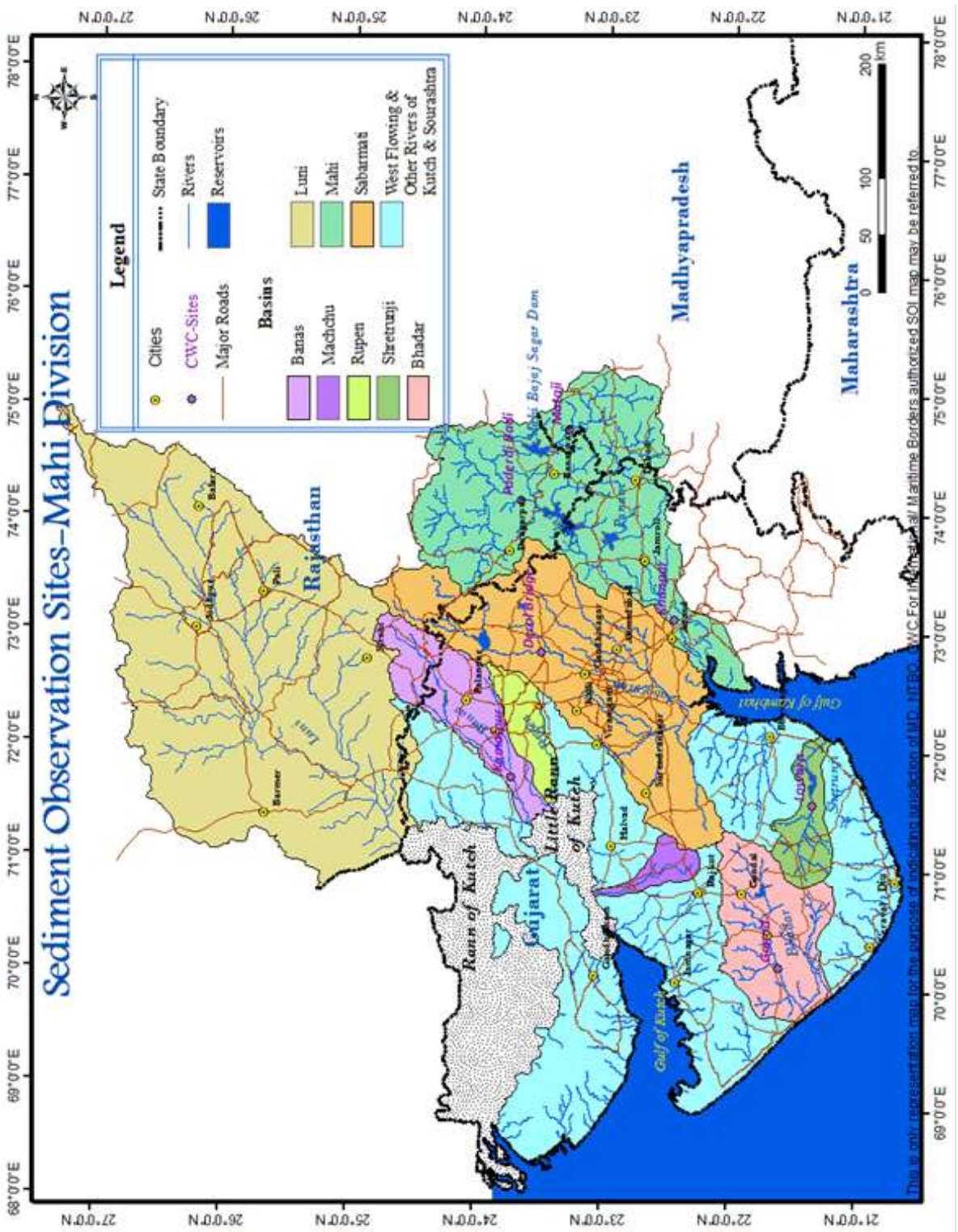
AV	:	Average
C	:	Coarse Sediment
Con.	:	Concentration
cumec , m^3/s	:	Cubic meter per second
cum, m^3	:	Cubic meter
D	:	Day
Dis, Q	:	Discharge
F	:	Fine Sediment
G	:	Gauge
GD	:	Gauge and Discharge
GDS	:	Gauge, Discharge and Sediment
MDN, MD	:	Mahi Division
MSD	:	Mahi Sub Division
SSD	:	Sabarmati Sub Division
NWRSD	:	North Western River Sub Division
BLSD	:	Banas Luni Sub Division
TDN, TD	:	Tapi Division
UTSD	:	Upper Tapi Sub Division
MTSD	:	Middle Tapi Sub Division
LTSD	:	Lower Tapi Sub Division
DSD	:	Damanganga Sub Division
LNSD	:	Lower Narmada Sub Division
g/l	:	Gramm per liter
km	:	Kilometer
M	:	Medium Sediment
m	:	Meter

mm	:	Millimeter
%	:	Percentage
R. Days	:	Remaining Days
RL	:	Reduced Level
sec., S	:	Second
Sed.	:	Sediment
T/ D	:	Tonnes per Day
W.L.	:	Water Level
WY	:	Water Year
WQ	:	Water Quality
RB	:	Right Bank
sq m	:	Square Meter
A	:	Area of section
V	:	Mean velocity
P	:	Wetted Perimeter
R	:	Hydraulic Mean Depth
f	:	Average Silt Factor
LB	:	Left Bank
RD	:	Reduced Distance
S/G	:	Station Gauge Line
°	:	Degree
'	:	Minute

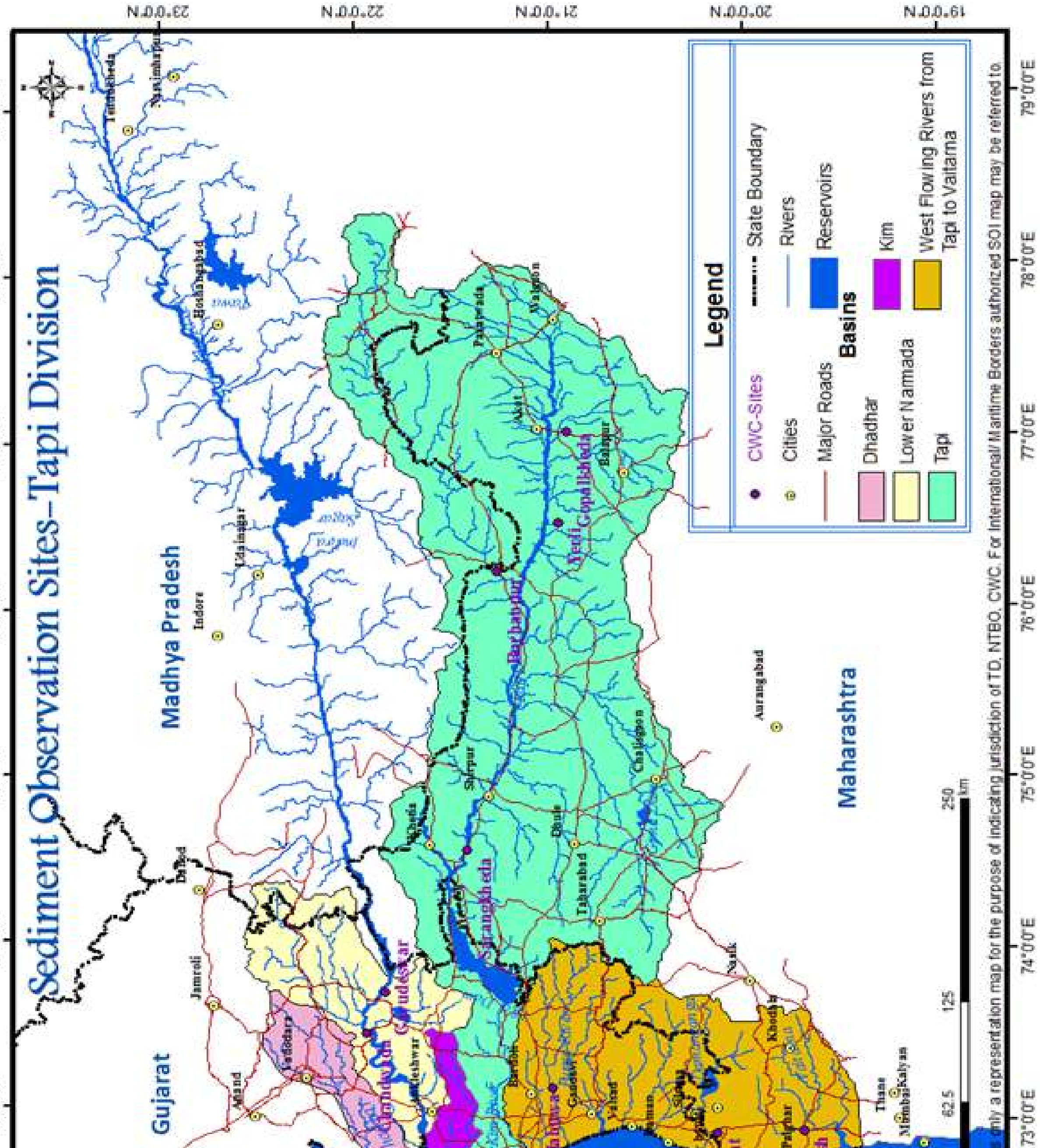
Sediment Observation Sites under NTBO



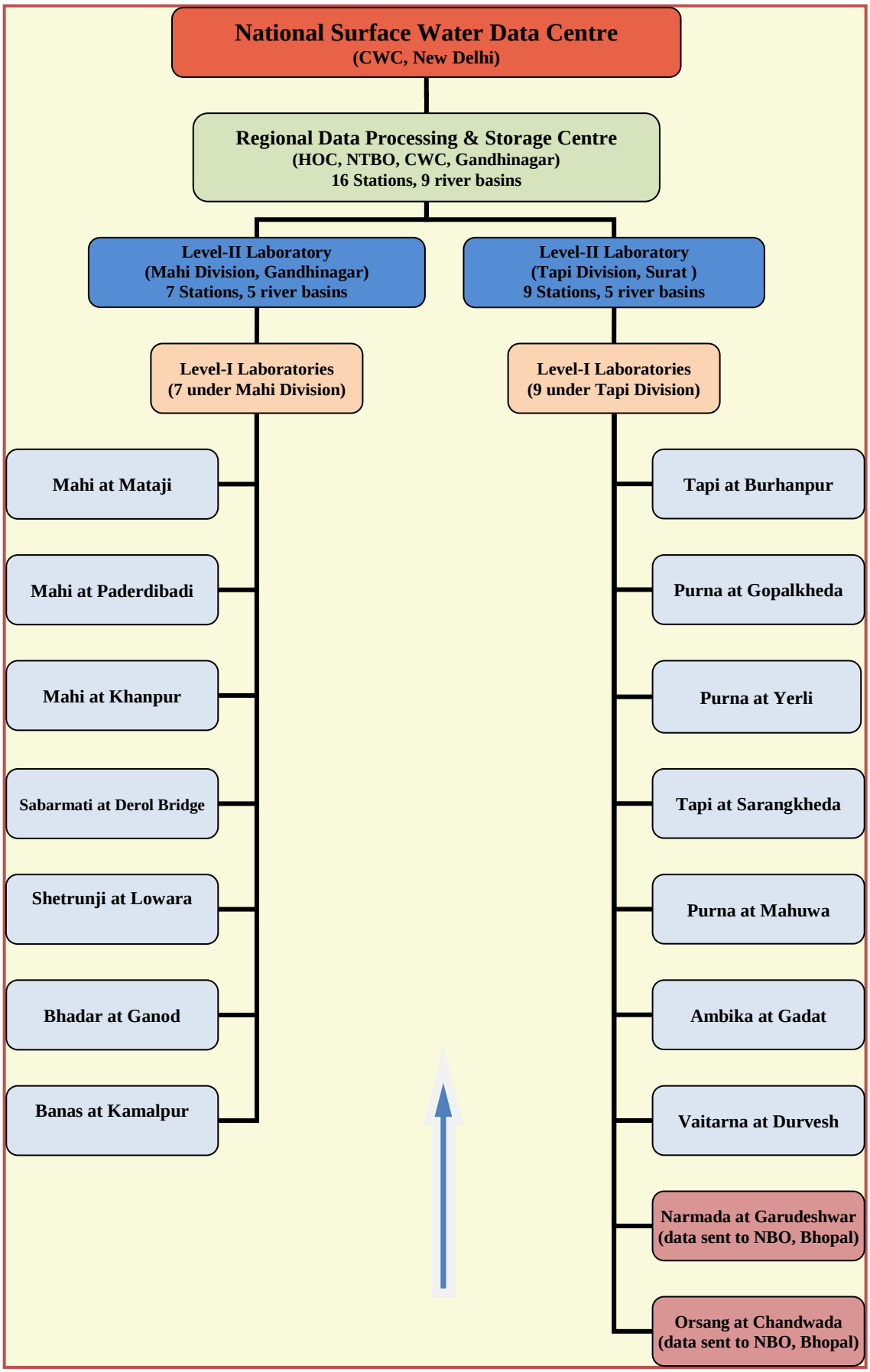
Sediment Observation Sites under Mahi Division



Sediment Observation Sites under Tapi Division



Sediment Analysis- Flow of Data



1.0 Introduction

1.1 Scope

Central Water Commission conducts observations of Suspended Sediment and bed material loads at selected locations on river along with discharge and water quality observations. During the year 2016-17, sediment observations were carried out at 16 stations under the jurisdiction of Hydrological Observation Circle, Narmada Tabi Basin Organisation, Gandhinagar. These stations were opened under three schemes viz. National Network (NNW), 80-key hydrological stations (80-key) and flood forecasting (FF) Scheme. These stations are located on ten west flowing river basins in the States of Madhya Pradesh, Maharashtra, Gujarat and Rajasthan. Data collected from these stations is compiled and presented in this Year Book with analysis consisting of sediment rating curves, annual sediment yields, trends, etc.

The data has been compiled basin-wise. Names of the stations where suspended sediment and bed material load observation were conducted during the year 2016-17 are given, in **Table-1** and their location is shown in respective maps.

Table-1: Stations where suspended sediment observations and bed material studies were conducted during the water year 2016-17

Sl. No.	Name of station	Station Code No	Scheme
1.	Mahi at Mataji	01 02 13 001	NNW
2.	Mahi at Paderdibadi	01 02 13 006	80Key
3.	Mahi at Khanpur	01 02 13 012	80Key
4.	Sabarmati at Derol Bridge	01 02 12 006	FF
5.	Shetrunji at Luwara	01 02 09 001	NNW
6.	Bhadar at Ganod	01 02 07 001	NNW
7.	Banas at Kamalpur	01 02 02 007	NNW
8.	Tapi at Burhanpur	01 02 17 002	NNW
9.	Purna at Gopalkheda	01 02 17 004	80 Key

10.	Purna at Yerli	01 02 17 005	80 Key
11.	Tapi at Sarangkheda	01 02 17 015	80 Key
12.	Purna at Mahuwa	01 02 19 001	NNW
13.	Ambika at Gadat	01 02 20 001	80 Key
14.	Vaitarna at Durvesh	01 02 25 001	NNW
15.	Narmada at Garudeshwar	01 02 15 030	NNW
16.	Orsang at Chandwada	01 02 15 032	80 Key

1.2 Source of information

Data has been collected by the field offices of two divisions, viz. Mahi Division, Gandhinagar and Tapi Division, Surat under the Hydrological Observation Circle, Gandhinagar. The Division wise distribution of stations is as under:

Sl.No.	Name of Division	No. of Stations
1.	Mahi Division, Gandhinagar	7
2.	Tapi Division, Surat	9 *

(* Data of two sites at Garudeshwar and Chandwada collected by Tapi Division are being published by NBO, CWC, Bhopal**)**

Division wise list of the sediment monitoring stations is as under

A: Mahi Division, Gandhinagar		**B: Tapi Division, Surat**	
Sl. No.	Name of Station	Sl. No.	Name of Station
1.	Mahi at Mataji	1.	Tapi at Burhanpur
2.	Mahi at Paderdibadi	2.	Purna at Gopalkheda
3.	Mahi at Khanpur	3.	Purna at Yerli
4.	Sabarmati at Derol Bridge	4.	Tapi at Sarangkheda
5.	Shetrunji at Luwara	5.	Purna at Mahuwa
6.	Bhadar at Ganod	6.	Ambika at Gadat
7.	Banas at Kamalpur	7.	Vaitarna at Durvesh
		8	Narmada at Garudeshwar *
		9	Orsang at Chandwada *

(* Data of Garudeshwar and Chandwada sites are being published by NBO, CWC, Bhopal**)**

2.0 Suspended Sediment Observation and analysis

2.1 Observation Technique

2.1.1 Collection of Sediment Samples

Suspended sediment observations are conducted simultaneously with discharge observation once a day starting at 08:00 hours except on Sundays and holidays. The observations are conducted at station gauge line under normal conditions. However, when the conditions become unsuitable for observations, say due to pooling, shallow depths, multi channel formation etc, the observation site is shifted to a temporary section at up - stream or down - stream of the station gauge line.

Sediment samples are collected at 0.6 depth from each vertical where velocity observation is done for computation of discharge, provided depth of flow is greater than 0.3m. The samples thus collected from each vertical are grouped in 1, 2, 3, 4 or 5 composite groups depending on the width of river in such a way that each composite group discharge is almost nearly equal or within the limit of average discharge $\pm$10 % of the total discharge. Punjab type bottle sampler is commonly used for collection of water sample for suspended sediment analysis. A uniform practice of holding the bottle in vertical position only is adopted. The samples from shallow depths (water depth less than 0.8m but more than 0.3m) are collected from the surface. These surface samples, at shallow depths are presumed to be of 0.6 depth sampling. The water samples collected are kept in composite groups based on the data observed on previous day and carried to the site office for analysis. Sometimes these observations at higher stages may not be made as per standard procedure due to infeasibility of observation by boat under such circumstances water samples are collected at the surface.

2.1.2 Analysis of Suspended Sediment samples

Analysis of the suspended sediment samples is carried out for three different grades viz. coarse sediment with particle diameter above 0.2 mm, medium sediment with diameter ranging from 0.075 mm to 0.2 mm and fine sediment with diameter less than 0.075 mm. Sediment samples from each group (as stated in section- 2.1.1) is passed through 212- micron mesh sieve. Residue on the sieve is washed with clean water several times, transferred to a pre-weighted crucible and its oven- dried weight is

determined. This gives the course sediment from which sediment intensity in g/l for a groups is worked out.

After removal of coarse sediment, the filtrate and washings which now contain medium and fine sediment is similarly passed through 75-micron mesh sieve. Residue on the sieve is washed with clean water several times and is transferred to pre-weighted crucible. After drying, the quantity is measured to work out the sediment intensity in g/l for that particular group.

The filtrate and washings after separation of coarse and medium grade now contain only fine sediment. All the filtrate and washings from different composite groups are kept overnight to allow them to settle down. About 5 to 10 ml of 10% alum solution is added to hasten the coagulation of colloidal silt. After the settlement, the supernatant liquid is siphoned off carefully and the remaining volume of suspension is filtered in pre-weighted filter paper (Whatman grade 2) and the transfer of entire settled silt is ensured by additional washing with clean water. The filter paper along with the sediment is dried and weighed to obtain the amount of sediment intensity in g/l for the composite group.

The total suspended sediment load of the river along the section is worked out from the concentrations thus obtained for coarse, medium and fine sediment group-wise for the entire cross section.

2.2 Explanatory Notes

The explanatory notes described hereunder are given to assist in the interpretation of hydrological parameters contained in the data presented. The notes are, therefore, applicable in so far as data presented in this book are concerned.

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

2. The water year is further subdivided as

(a) Monsoon Period from June to November

(b) Non-monsoon period From December to May

3. Discharge

(a) Discharge is given in cubic meters per second.

(b) Discharges given are daily actual observed / estimated at 08.00 hours

4. Discharges are rounded off to

(a) Nearest full integer when more than 1000.

(b) Nearest first decimal figures when between 100 and 1000.

(c) Nearest two decimal figures when between 10 and 100.

(d) Nearest three decimal figures when less than 10.

5. Measuring authority refers to the field division responsible for the operation of the gauging station.

6. The gauging station code number is a unique nine figures numeric reference number, which facilitates storage and retrieval of flow data in data banks. The first two digit indicates the measuring authority who is hole responsible for R & M of sites, next two digit indicates the Basin/Zone and the river identification i.e. 01 for West coast of Gujarat, and 02 for West coast Maharastra, the next two digits indicates the name of river in basin like 13 is for Mahi basin, the last three digits will represents the site number, viz 001 is for Mataji site of Mahi basin.

7. Sediment is classified as coarse, medium and fine according to diameter as indicated below.

Coarse	- Sediment above 0.20 mm diameter.
Medium	- Sediment between 0.20 & 0.075 mm diameter.
Fine	- Sediment below 0.075 mm diameter.

8. The sediment load reported in the daily observed sediment data sheet indicates daily sediment load, 10 daily mean and monthly sediment load

9. When the sediment samples collected give non-measurable sediment, it is presumed to be of nil value.

10. In daily observed sediment data sheet, values are rounded off to

a) – Nearest full integer when more than 1000.

b) – Nearest first decimal figure when between 100 and 1000.

c) – Nearest two decimal figures when less than 100.

11. Annual / seasonal sediment yield in mm is the notional depths of soil in millimeters over the catchment equivalent to annual/seasonal suspended sediment run off calculated at the sediment observation station. It is computed using the relation

$$\text{Sediment yield (mm)} = \frac{\text{Total suspended Load (T)}}{\text{1400 x catchment area (sq km)}}$$

This is only an approximation as no specific consideration has been given to intercepted catchment.

2.3 Method of Presentation

In the succeeding pages, station wise suspended sediment data is presented as Section 4.0 of this year book which comprises history sheet and Daily Observed Sediment Datasheet and Seasonal Sediment load tables. Suspended sediment observation stations are arranged beginning from the origin of the river to downstream giving inter-se priority to an intermediate tributary station in similar fashion

History sheet gives concise description of the suspended sediment observation station. The Daily Observed Sediment Datasheet table includes the following:

1. Daily observed sediment flow tables for the period from June to May.

2. Ten daily mean of coarse, medium and fine sediment for the full year.

3. Monthly sediment load and Annual Sediment load are shown in the Daily Observed Sediment Datasheet.

4. Seasonal Sediment load for the year are shown in the form of pie chart.

2.4 Summary- Suspended Sediment

A summary at a glance for the year 2016-17 for all sites for suspended sediment data is shown in the Table-2 Annual sediment load at these sites is also shown by an

adjoining chart on the following page. Detailed data are given in Section-4 of this Year Book.

Table 2: Sediment Load at a Glance for the water year 2016-17

Sl. No	Name of Site	Catchment Area	Maximum Sediment Concentration Observed		Annual Sediment Load	Sediment Yield in mm	% in Mon-soon
		in sq km	g/l	Date	in metric tonnes		
1	Mahi at Mataji	3880	1.615	04.07.2016	951366	0.1751	100.0
2	Mahi at Paderdibadi	16247	0.902	21.08.2016	1180970	0.0519	99.99
3	Mahi at Khanpur	32510	1.354	11.08.2016	1250954	0.0275	100.0
4	Derol Bridge at Sabarmati	6724	0.017	28.08.2016	4429	0.0005	100.0
5	Shetrunji at Luwara	3953	1.617	19.09.2016	150862	0.0273	100.0
6	Bhadar at Ganod	6266	1.003	05.08.2016	203479	0.0232	100.0
7	Banas at Kamalpur	6960	1.150	24.08.2016	14323	0.0015	100.0
8	Tapi at Burhanpur	8487	2.025	10.07.2016	1975643	0.1663	100.0
9	Purna at Gopalkheda	9500	1.208	09.08.2016	1457547	0.1096	100.0
10	Purna at Yerli	16517	3.901	04.08.2016	2971356	0.1285	100.0
11	Tapi at Sarangkheda	58400	6.950	13.07.2016	12583627	0.1539	100.0
12	Purna at Mahuwa	1995	1.208	09.08.2016	312447	0.1119	100.0
13	Ambika at Gadat	1510	2.610	09.08.2016	1303633	0.6167	100.0
14	Vaitarna at Durvesh	2019	4.000	02.08.2016	1975643	0.6989	100.0

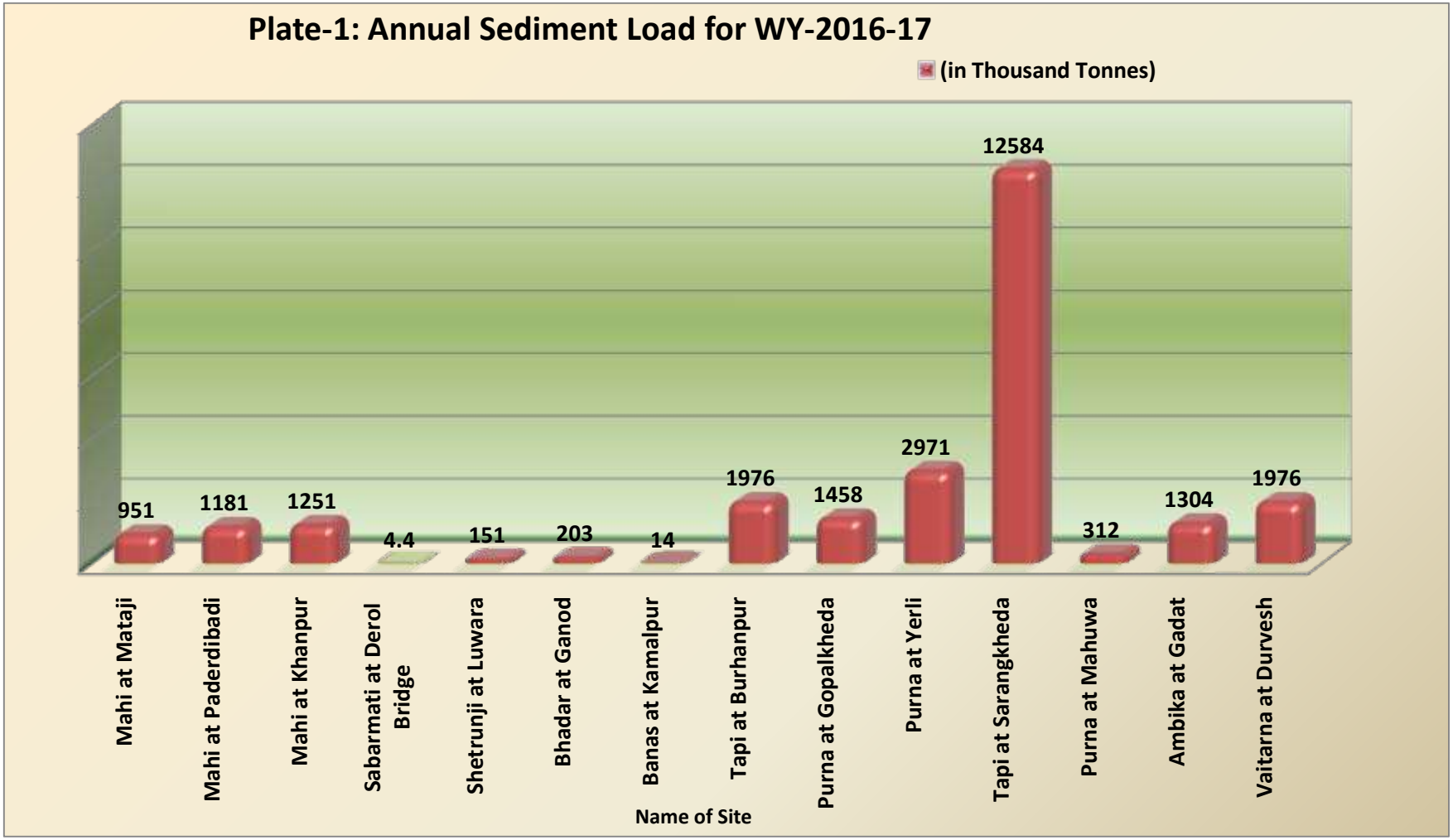


Plate-1: Annual Sediment Load for WY-2016-17
(in Thousand Tonnes)
951
1181
1251
4.4
151
203
14
1976
1458
2971
12584
312
1304
1976
Mahi at Mataji
Mahi at Paderdibadi
Mahi at Khanpur
Sabarmati at Derol Bridge
Shetrunji at Luwara
Bhadar at Ganod
Banas at Kamalpur
Tapi at Burhanpur
Purna at Gopalkheda
Purna at Yerli
Tapi at Sarangkheda
Purna at Mahuwa
Ambika at Gadat
Vaitarna at Durvesh
Name of Site

3. Bed Material collection and Analysis

3.1 Collection of Samples

Bed material surveys are being carried out at the suspended sediment observation sites regularly thrice a year pre- monsoon, monsoon and post monsoon periods. Depending upon the width of the river, 3 to 10 samples are collected from the site along the station gauge line. A scoop type bed material sampler is used for collecting the samples from flowing portion of the channel and where the bed is dry, samples are collected manually after scraping the upper layer of the bed to avoid local surface contamination. After drying the samples, about 1 kg of the sample is taken by coning and quartering process.

3.2 Packing of Samples

Bed material samples thus collected are filled in polythene bags and placed inside a thick cloth bag for protection. The details of the samples are inserted in the polythene bag and the same are sent to divisional laboratory for analysis.

3.3 Analysis of Samples

In the laboratory, analysis of samples is done by two methods:

i) Analysis by sieve for Bed material Particles above 0.6 mm size and
ii) Analysis by wet process using Puri's Siltometer for Particles below 0.6 mm size.

3.3.1 Analysis by Sieves

The sieves are arranged one above the other in order of their mesh sizes, largest at top and smallest (0.6 mm) aperture sieve at the bottom. Each representative sample is weighed and then put on the top metallic sieve. The portion of the materials passing through 0.6 mm sieve is collected in a metallic container placed at the bottom of the set of sieves. Shaking of the sieves is done either by gentle horizontal rotation or by a mechanical shaker for about 15 to 20 minutes. The material retained on each sieve is collected separately in a metallic container and is weighed. The material passing through 0.6 mm sieve is also weighed and recorded.

3.3.2 By Puri's Siltometer

For Particles of size below 0.6 mm, the analysis is done by wet process using Puri's Siltometer. About 10 grams of the Bed Material sample passing through 0.6 mm sieve is released from the top of the Siltometer. The sand, silt Particles travel downwards at different velocities depending upon their diameter and the temperature of water. The trough of the Siltometer is rotated at a pre- determined rate to collect the fractions. Thus different fractions of a sample are deposited in 20 receptacles in a trough. Each of these fractions is then collected in the silt measuring tube and compacted by tapping on the rubber pad. The volume of the each fraction is noted down.

From the result of the above analysis, summation curves are plotted and the mean diameter of the samples worked out as per the standard procedure. Statistical method is also used to work out the mean diameter. The silt factor is obtained from the formula:

$$\mathbf{f = 1.76 \sqrt{m}}$$

Where, 'm' is the mean diameter of the particles in mm.

3.4 Presentation of Bed Material Data

The bed material data is presented in section 5.0 of this year book that gives average mean diameter and silt factor for the pre, monsoon and post monsoon periods.

4.0 Basin Description and Suspended Sediment Data

4.1 MAHI BASIN

4.1 Mahi Basin

The river Mahi is third major west flowing interstate river of India, draining into the Gulf of Cambay. It originates in the northern slopes of Vindhya hill range near village Sardarpur in Dhar district of Madhya Pradesh at an elevation of 500 m above mean sea level. Its length is 583 km, traversing 167 km in Madhya Pradesh, 174 km in Rajasthan and the remaining 242 km in Gujarat. It flows initially in North West direction through Dhar and Jhabua districts of Madhya Pradesh. Thereafter, it takes turn to the left and flows in south – west direction through Banswara district of Rajasthan, Panchmahal and Kheda districts of Gujarat State before draining into Gulf of Cambay. It drains an area of 34,842 sq.km, spread over Rajasthan (47%), Madhya Pradesh (19%) and Gujarat (34%). The basin lies between the geographical co-ordinates of 73^0 00' to 74^0 20' east longitudes and 22^0 30' to 24^0 20' north latitudes. The basin is bounded by the Aravalli hills in north and north-west, by the ridge separating it from Chambal basin in the east, by the Vindhya hill range in the south and finally by Gulf of Cambay in the west. In Rajasthan, the basin consists of hills, forests and eroded terrain. In Gujarat upto the confluence of Mahi and Panam, the basin comprises semi developed lands. Below Wanakbori Weir and up to the mouth, the basin is flat, fertile and well developed alluvial track.

The Mahi river receives several tributaries on both banks out of which the main tributaries are Som, Anas and Panam. The Som River joins the main river on the right Bank in Rajasthan. The Anas and Panam join the main river on the left Bank in the Rajasthan & Gujarat respectively.

The average rainfall in Mahi basin 785 mm. In the dry cool winter,the minimum temperature varies from 5°C to 20°C. Maximum temperature varies from 30°c to 50°c during the hottest month of May.

At present there are 15 completed major / medium projects in Mahi basin. The two main projects across Mahi are Mahi Bajaj Sagar and Kadana reservoir. A weir at Wanakbori is also constructed across the main river. Other 11 projects are on different tributaries of Mahi River. There are three Silt Monitoring Station in this basin, all the three stations are located on main river Mahi and a brief of the Sediment stations is given in the section- 4.1.1 to 4.1.3.

4.1.1. Mahi at Mataji

The station has a Catchment area of 3,880 sq km. The maximum sediment concentration of 1.615 g/l was observed on 04.07.2016. The total sediment load during the year is 951366 metric tonnes. The monsoon load constitutes 100 % of the total load. The annual sediment yield over the catchment during water year 2016-17 is 0.1751 mm.

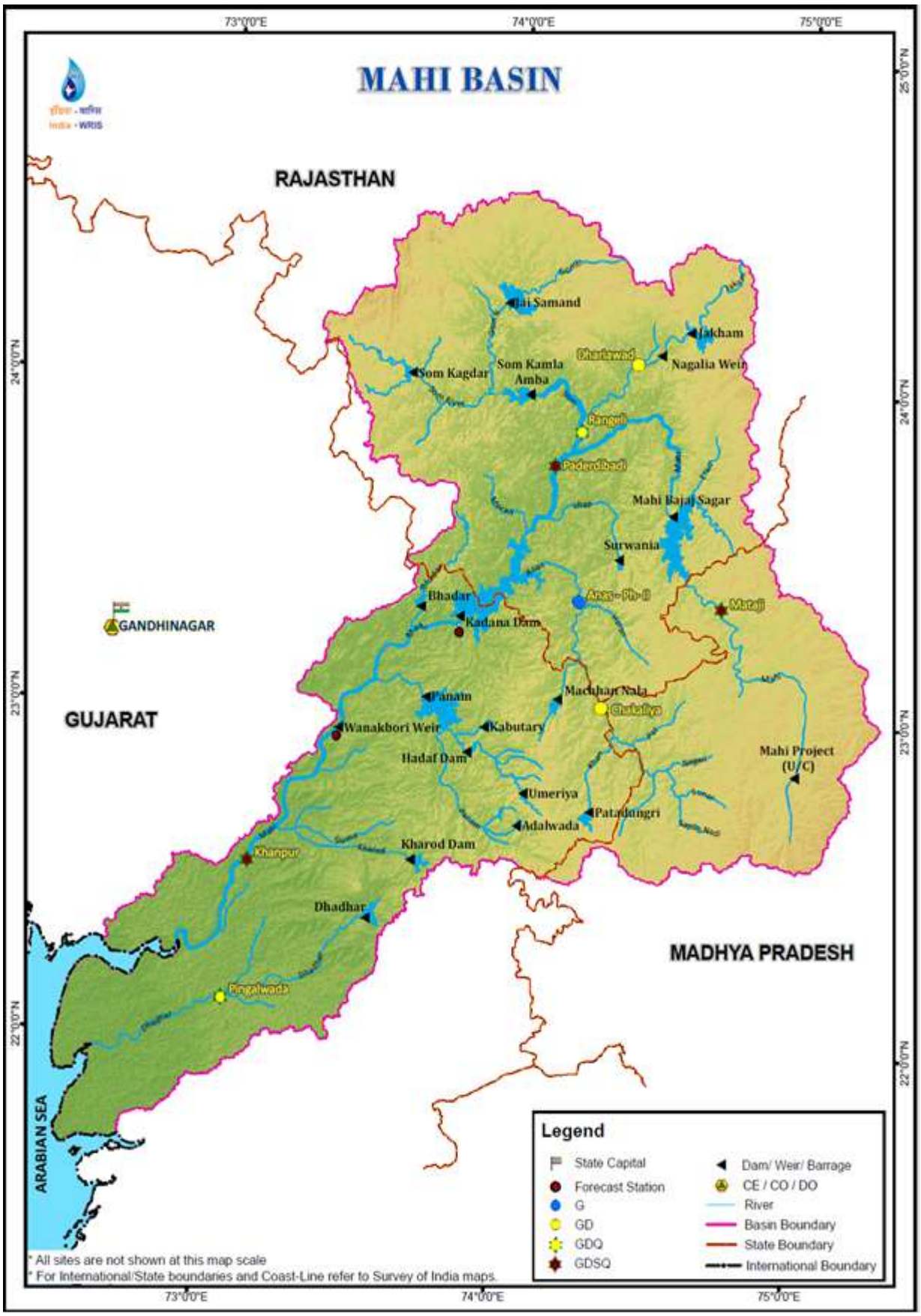
4.1.2. Mahi at Paderdibadi

The station has a Catchment area of 16,247 sq km. The maximum sediment concentration of 0.902 g/l was observed on 21.08.2016. The total sediment load during the year is 1180970 metric tonnes. The monsoon load constitutes 99.99 % of the total load. The annual sediment yield over the catchment during water year 2016-17 is 0.0519 mm.

4.1.3 Mahi at Khanpur

The station has a Catchment area of 32,510 sq km. The maximum sediment concentration of 1.354 g/l was observed on 11.08.2016. The total sediment load during the year is 1250954 metric tons. The monsoon load constitutes 100 % of the total load. The annual sediment yield over the catchment during water year 2016-17 is 0.0275 mm.

Plate - 4.1 Mahi Basin



HISTORY SHEET

		Water Year	**: 2016-17**
Site	**: Mahi at Mataji**	**Code**	**: 01 02 13 001**
State	: Madhya Pradesh	District	Ratlam
Basin	: Mahi	Independent River	: Mahi
Tributary	: Mahi	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Mahi
Division	: Mahi Division, Gandhinagar	Sub-Division	: Mahi Sub Divn., Kadana
Drainage Area	: 3880 Sq. Km.	Bank	: Left
Latitude	: 23°20'57" N	Longitude	: 74°43'31" E
Zero of Gauge (m)	: 295 (m.s.l) 284 (m.s.l)	01-01-1982 01-01-2004	- 31-12-2003
	Opening Date	Closing Date	
Gauge	: 21-07-1982		
Discharge	: 21-07-1982		
Sediment	: 21-07-1982		
Water Quality	: 21-07-1982		

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Mahi at Mataji (01 02 13 001) **Division : Mahi Division, Gandhinagar**

Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	227.9	0.000	0.000	0.156	0.156	3066
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	608.7	0.000	0.034	1.064	1.099	57780
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	466.4	0.000	0.000	0.199	0.199	8012
4	0.000	0.000	0.000	0.000	0.000	0	329.6	0.013	0.015	1.587	1.615	46008	366.0	0.000	0.002	0.309	0.311	9824
5	0.000	0.000	0.000	0.000	0.000	0	119.0	0.000	0.001	0.611	0.612	6292	620.1	0.000	0.000	0.207	0.207	11095
6	0.000	0.000	0.000	0.000	0.000	0	47.33	0.000	0.000	0.062	0.062	251	513.4	0.000	0.000	0.169	0.169	7510
7	0.000	0.000	0.000	0.000	0.000	0	39.85	0.000	0.000	0.052	0.052	179	405.4	0.000	0.000	0.134	0.134	4683
8	0.000	0.000	0.000	0.000	0.000	0	39.57	0.000	0.000	0.038	0.038	128	527.6	0.000	0.000	0.172	0.172	7828
9	0.000	0.000	0.000	0.000	0.000	0	37.85	0.000	0.000	0.037	0.037	121	538.1	0.000	0.000	0.183	0.183	8499
10	0.000	0.000	0.000	0.000	0.000	0	28.49	0.000	0.000	0.026	0.026	63	425.4	0.000	0.000	0.171	0.171	6278
11	0.000	0.000	0.000	0.000	0.000	0	40.85	0.000	0.000	0.031	0.031	111	540.1	0.000	0.000	0.256	0.256	11946
12	0.000	0.000	0.000	0.000	0.000	0	622.9	0.000	0.003	0.209	0.212	11409	509.3	0.000	0.000	0.327	0.327	14393
13	0.000	0.000	0.000	0.000	0.000	0	366.7	0.000	0.000	0.000	0.000	0	185.3	0.000	0.000	0.034	0.034	549
14	0.000	0.000	0.000	0.000	0.000	0	228.6	0.000	0.000	0.195	0.195	3842	186.9	0.000	0.000	0.034	0.034	542
15	0.000	0.000	0.000	0.000	0.000	0	164.7	0.000	0.000	0.126	0.126	1797	151.3	0.000	0.000	0.028	0.028	369
16	0.000	0.000	0.000	0.000	0.000	0	152.7	0.000	0.000	0.109	0.109	1433	123.5	0.000	0.000	0.027	0.027	292
17	0.000	0.000	0.000	0.000	0.000	0	154.0	0.000	0.000	0.109	0.109	1454	131.2	0.000	0.000	0.016	0.016	178
18	0.000	0.000	0.000	0.000	0.000	0	125.0	0.000	0.000	0.102	0.102	1098	107.6	0.000	0.000	0.012	0.012	107
19	0.000	0.000	0.000	0.000	0.000	0	114.0	0.000	0.000	0.051	0.051	506	102.4	0.000	0.000	0.014	0.014	126
20	0.000	0.000	0.000	0.000	0.000	0	100.7	0.000	0.000	0.041	0.041	360	129.8	0.000	0.000	0.015	0.015	166
21	0.000	0.000	0.000	0.000	0.000	0	103.6	0.000	0.000	0.030	0.030	271	2204	0.000	0.000	3.041	3.041	578963
22	0.000	0.000	0.000	0.000	0.000	0	80.42	0.000	0.000	0.023	0.023	157	661.3	0.000	0.006	0.913	0.919	52477
23	0.000	0.000	0.000	0.000	0.000	0	95.25	0.000	0.000	0.156	0.156	1281	487.7	0.000	0.000	0.467	0.468	19712
24	0.000	0.000	0.000	0.000	0.000	0	77.77	0.000	0.000	0.124	0.124	836	671.0	0.000	0.001	0.481	0.481	27903
25	0.000	0.000	0.000	0.000	0.000	0	165.5	0.000	0.000	0.167	0.167	2394	294.2	0.000	0.000	0.209	0.209	5306
26	0.000	0.000	0.000	0.000	0.000	0	111.9	0.000	0.000	0.056	0.056	538	131.2	0.000	0.000	0.030	0.030	343
27	0.000	0.000	0.000	0.000	0.000	0	671.0	0.000	0.000	0.214	0.214	12430	121.0	0.000	0.000	0.007	0.007	68
28	0.000	0.000	0.000	0.000	0.000	0	168.3	0.000	0.000	0.153	0.153	2224	228.6	0.000	0.000	0.121	0.121	2392
29	0.000	0.000	0.000	0.000	0.000	0	131.2	0.000	0.000	0.143	0.143	1620	131.2	0.000	0.000	0.070	0.070	797
30	0.000	0.000	0.000	0.000	0.000	0	121.0	0.000	0.000	0.114	0.114	1192	125.2	0.000	0.000	0.081	0.081	881
31							107.4	0.000	0.000	0.101	0.101	937	109.8	0.000	0.000	0.067	0.067	640
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	64.17	0.001	0.002	0.241	0.244	5304	469.9	0.000	0.004	0.276	0.280	12458
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	207.0	0.000	0.000	0.097	0.098	2201	216.7	0.000	0.000	0.076	0.076	2867
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	166.7	0.000	0.000	0.116	0.116	2171	469.5	0.000	0.001	0.499	0.499	62680
Monthly Total						**0**						**98931**						**842725**

Annual Sediment Load (Metric Tonnes) : 951366

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Mahi at Mataji (01 02 13 001) **Division : Mahi Division, Gandhinagar**

Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	648.5	0.000	0.000	0.064	0.064	3603	298.2	0.000	0.000	0.001	0.001	36	5.870	0.000	0.000	0.000	0.000	0
2	475.2	0.000	0.000	0.074	0.074	3051	503.6	0.000	0.000	0.002	0.002	104	4.776	0.000	0.000	0.000	0.000	0
3	426.6	0.000	0.000	0.007	0.007	262	329.9	0.000	0.000	0.001	0.001	40	4.776	0.000	0.000	0.000	0.000	0
4	432.9	0.000	0.000	0.007	0.007	258	317.2	0.000	0.000	0.001	0.001	38	4.775	0.000	0.000	0.000	0.000	0
5	405.1	0.000	0.000	0.006	0.006	200	410.6	0.000	0.000	0.004	0.004	128	4.597	0.000	0.000	0.000	0.000	0
6	356.4	0.000	0.000	0.014	0.014	440	287.3	0.000	0.000	0.004	0.004	89	4.540	0.000	0.000	0.000	0.000	0
7	178.6	0.000	0.000	0.001	0.001	22	249.3	0.000	0.000	0.003	0.003	62	4.579	0.000	0.000	0.000	0.000	0
8	144.8	0.000	0.000	0.001	0.001	18	270.1	0.000	0.000	0.004	0.004	100	2.583	0.000	0.000	0.000	0.000	0
9	233.3	0.000	0.000	0.004	0.004	73	200.2	0.000	0.000	0.001	0.001	17	2.470	0.000	0.000	0.000	0.000	0
10	221.2	0.000	0.000	0.004	0.004	69	242.2	0.000	0.000	0.001	0.001	25	2.384	0.000	0.000	0.000	0.000	0
11	190.7	0.000	0.000	0.003	0.003	49	190.7	0.000	0.000	0.001	0.001	15	2.275	0.000	0.000	0.000	0.000	0
12	221.2	0.000	0.000	0.004	0.004	69	158.9	0.000	0.000	0.001	0.001	11	0.960	0.000	0.000	0.000	0.000	0
13	188.4	0.000	0.000	0.003	0.003	49	174.9	0.000	0.000	0.000	0.000	0	0.620	0.000	0.000	0.000	0.000	0
14	211.4	0.000	0.000	0.003	0.003	53	154.6	0.000	0.000	0.000	0.000	0	0.330	0.000	0.000	0.000	0.000	0
15	206.7	0.000	0.000	0.001	0.001	13	272.2	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
16	212.4	0.000	0.000	0.003	0.003	53	234.6	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
17	225.0	0.000	0.000	0.002	0.002	41	263.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	265.5	0.000	0.000	0.002	0.002	55	252.2	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	336.9	0.000	0.000	0.003	0.003	84	209.8	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	430.4	0.000	0.000	0.004	0.004	134	190.7	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	335.0	0.000	0.000	0.002	0.002	55	192.4	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	338.1	0.000	0.000	0.001	0.001	41	183.9	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	314.8	0.000	0.000	0.001	0.001	38	152.3	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	335.9	0.000	0.000	0.001	0.001	41	105.4	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	375.0	0.000	0.000	0.002	0.002	49	99.73	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	365.9	0.000	0.000	0.001	0.001	44	28.78	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	382.8	0.000	0.000	0.002	0.002	63	22.84	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	346.0	0.000	0.000	0.001	0.001	42	5.467	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	340.9	0.000	0.000	0.001	0.001	41	5.104	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	298.0	0.000	0.000	0.001	0.001	36	7.310	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31							6.580	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	352.3	0.000	0.000	0.018	0.018	799	310.9	0.000	0.000	0.002	0.002	64	4.135	0.000	0.000	0.000	0.000	0
Ten Daily II	248.9	0.000	0.000	0.003	0.003	60	210.2	0.000	0.000	0.000	0.000	3	0.440	0.000	0.000	0.000	0.000	0
Ten Daily III	343.2	0.000	0.000	0.002	0.002	45	73.61	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**9043**						**667**						**0**

Annual Sediment Load (Metric Tonnes) : 951366

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Mahi at Mataji (01 02 13 001) **Division : Mahi Division, Gandhinagar**

Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	2.857	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	3.330	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	2.780	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	2.597	0.000	0.000	0.000	0.000	0	2.503	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	2.270	0.000	0.000	0.000	0.000	0	2.780	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	2.223	0.000	0.000	0.000	0.000	0	2.780	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	2.295	0.000	0.000	0.000	0.000	0	2.480	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	2.780	0.000	0.000	0.000	0.000	0	2.386	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	2.780	0.000	0.000	0.000	0.000	0	5.190	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	2.780	0.000	0.000	0.000	0.000	0	3.679	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	2.780	0.000	0.000	0.000	0.000	0	3.330	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	3.330	0.000	0.000	0.000	0.000	0	1.350	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	3.330	0.000	0.000	0.000	0.000	0	2.058	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	3.330	0.000	0.000	0.000	0.000	0	0.620	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	3.330	0.000	0.000	0.000	0.000	0	2.144	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	2.587	0.000	0.000	0.000	0.000	0	0.330	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	2.675	0.000	0.000	0.000	0.000	0	0.330	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	2.662	0.000	0.000	0.000	0.000	0	0.330	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	3.920	0.000	0.000	0.000	0.000	0	0.330	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	3.920	0.000	0.000	0.000	0.000	0	0.330	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	2.655	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	3.330	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	3.330	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	3.330	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	3.920	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	3.920	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	2.556	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	2.543	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	3.330	0.000	0.000	0.000	0.000	0						
30	0.000	0.000	0.000	0.000	0.000	0	3.330	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	3.330	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	1.773	0.000	0.000	0.000	0.000	0	3.077	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	3.186	0.000	0.000	0.000	0.000	0	1.115	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	3.234	0.000	0.000	0.000	0.000	0	0.028	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 951366

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Mahi at Mataji (01 02 13 001) **Division : Mahi Division, Gandhinagar**

Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 951366

Annual Sediment Load for period : 2005-2017

Station Name : Mahi at Mataji (01 02 13 001) **Division : Mahi Division, Gandhinagar**

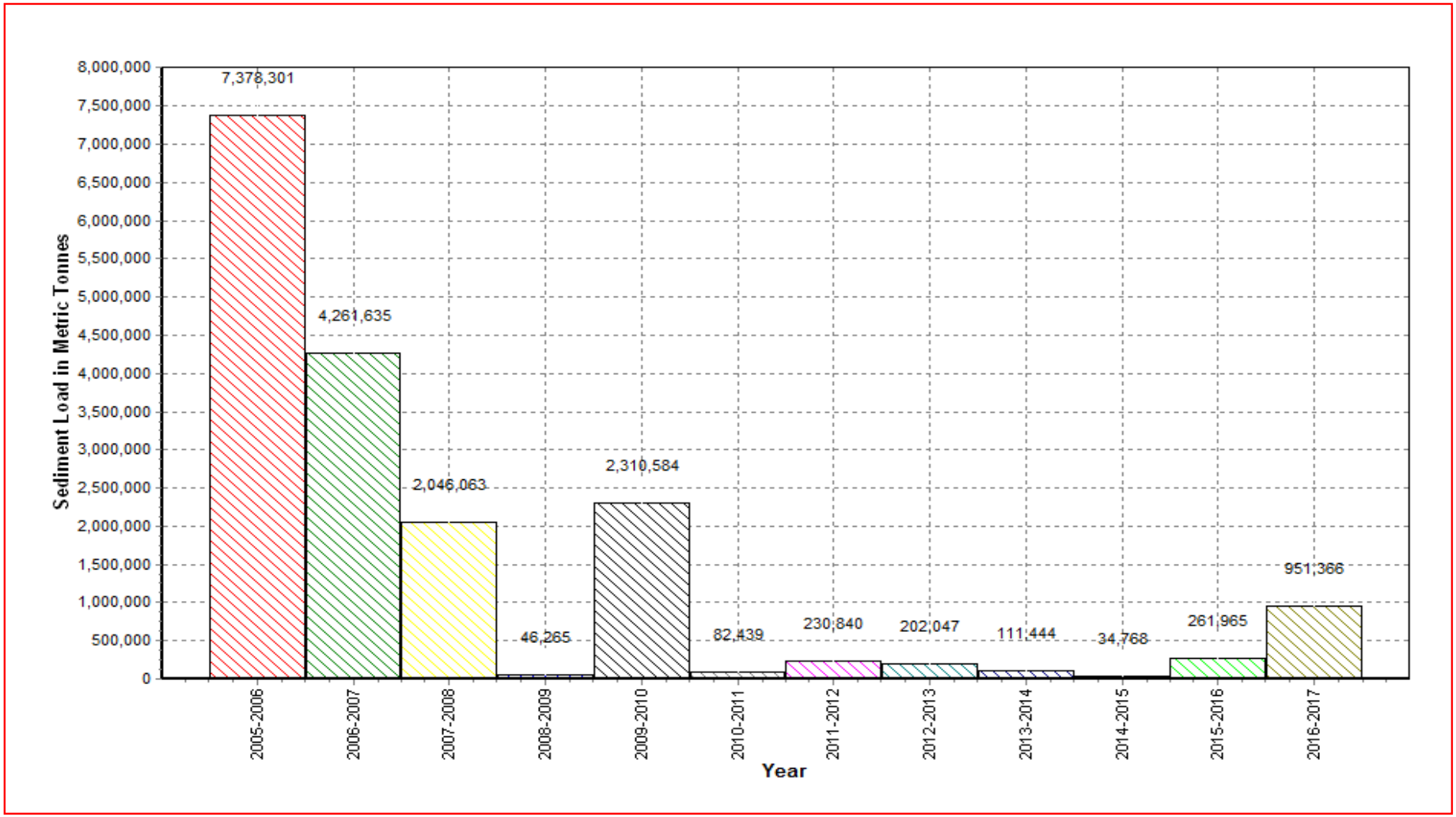
Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2005-2006	7378301	0	7378301	1019
2006-2007	4261635	0	4261635	4055
2007-2008	2046059	4	2046063	2160
2008-2009	46265	0	46265	278
2009-2010	2310584	0	2310584	1067
2010-2011	82439	0	82439	623
2011-2012	230840	0	230840	3001
2012-2013	202047	0	202047	2230
2013-2014	111444	0	111444	3488
2014-2015	34768	0	34768	704
2015-2016	261965	0	261965	1570
2016-2017	951366	0	951366	2783

Annual Sediment Load for the period: 2005-2017

Station Name : Mahi at Mataji (01 02 13 001)
Local River : Mahi

Division : Mahi Division, Gandhinagar
Sub-Division : Mahi Sub Divn., Kadana



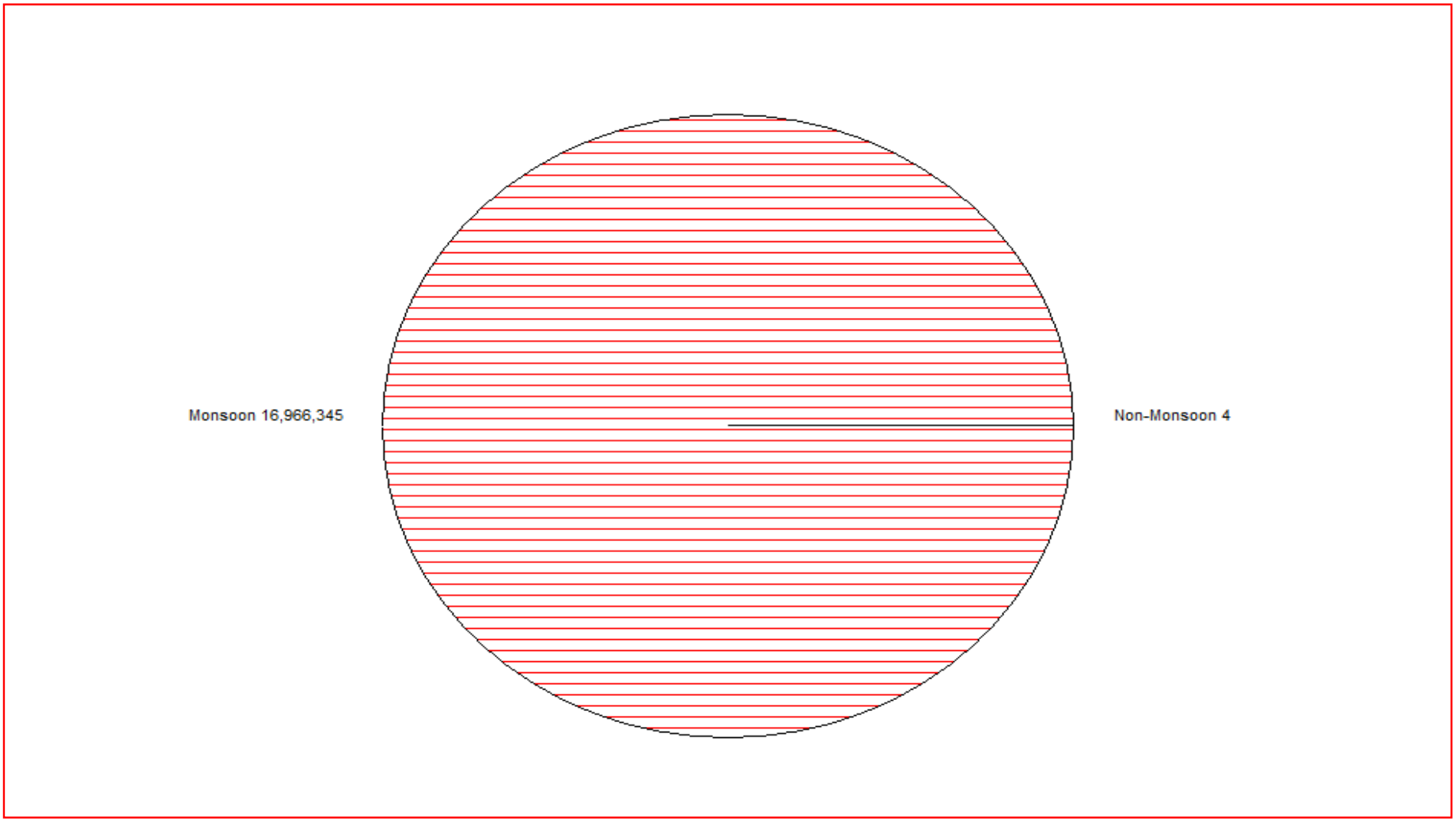
Seasonal Sediment Load for the period : 2005-2016

Station Name : Mahi at Mataji (01 02 13 001)

Division : Mahi Division, Gandhinagar

Local River : Mahi

Sub-Division : Mahi Sub Divn., Kadana



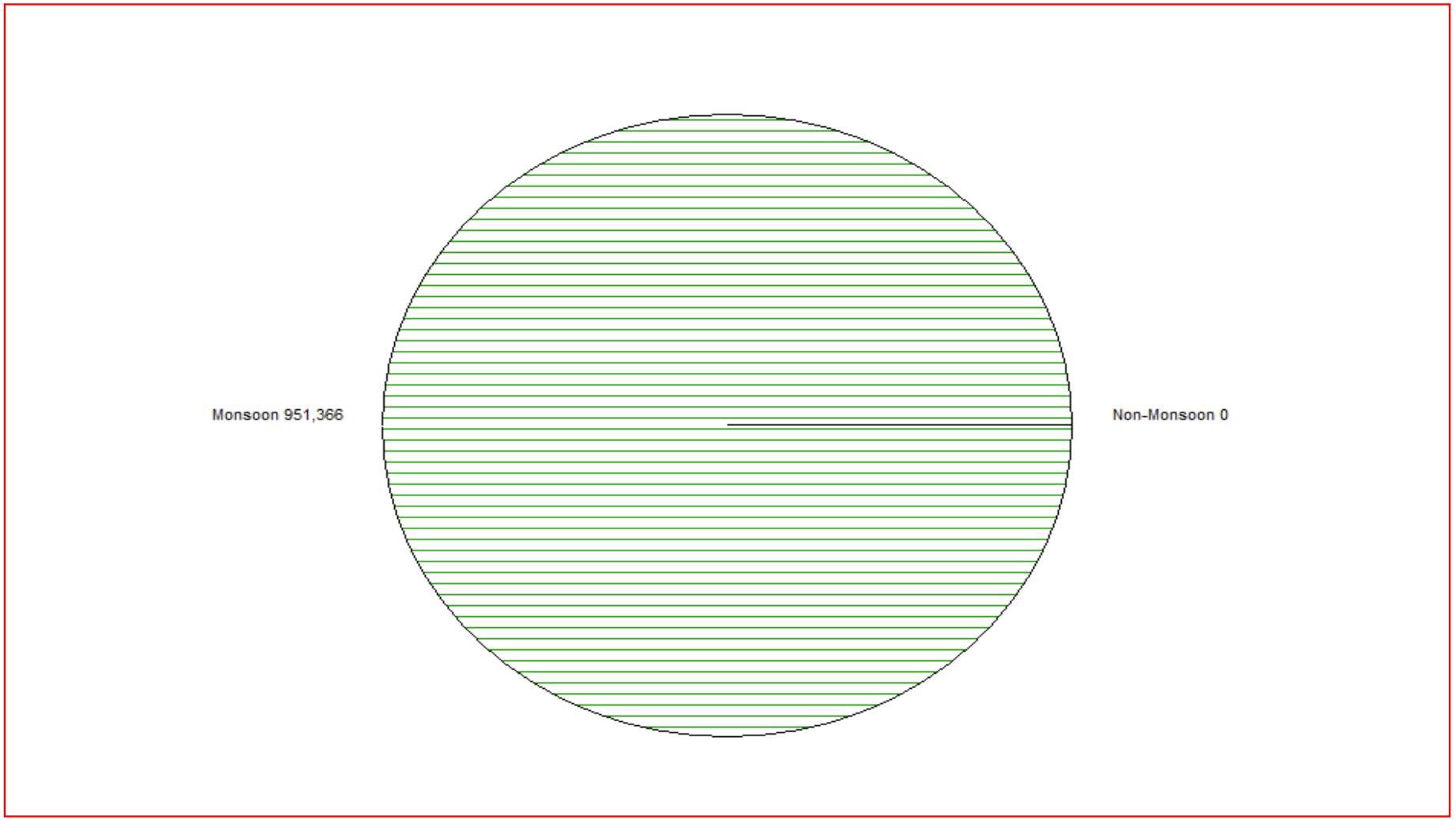
Seasonal Sediment Load for the Year: 2016-2017

Station Name : Mahi at Mataji (01 02 13 001)

Division : Mahi Division, Gandhinagar

Local River : Mahi

Sub-Division : Mahi Sub Divn., Kadana



HISTORY SHEET

			Water Year	**:**	**2016-17**
Site	**:**	**Mahi at Paderdibadi**	**Code**	**:**	**01 02 13 006**
State	:	Rajasthan	District		Dungarpur
Basin	:	Mahi	Independent River	:	Mahi
Tributary	:	Mahi	Sub Tributary	:	
Sub-Sub Tributary	:		Local River	:	Mahi
Division	:	Mahi Division, Gandhinagar	Sub-Division	:	Mahi Sub Divn., Kadana
Drainage Area	:	16247 Sq. Km.	Bank	:	Right
Latitude	:	23°46'02" N	Longitude	:	74°08'12" E
Zero of Gauge (m)	:	131 (m.s.l)	17-09-1977		
		Opening Date	Closing Date		
Gauge	:	17-09-1977			
Discharge	:	24-06-1978			
Sediment	:	21-07-1980			
Water Quality	:	01-07-1978			

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Mahi at Paderdibadi (01 02 13 006) **Division : Mahi Division, Gandhinagar**

Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	182.4	0.000	0.000	0.008	0.008	132
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	208.0	0.000	0.000	0.006	0.006	115
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	304.0	0.000	0.000	0.048	0.048	1266
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	430.9	0.000	0.000	0.008	0.008	302
5	0.000	0.000	0.000	0.000	0.000	0	182.5	0.000	0.000	0.088	0.088	1386	274.0	0.000	0.000	0.013	0.013	310
6	0.000	0.000	0.000	0.000	0.000	0	117.3	0.000	0.000	0.056	0.056	570	220.2	0.000	0.000	0.005	0.005	93
7	0.000	0.000	0.000	0.000	0.000	0	99.39	0.000	0.000	0.025	0.025	218	428.1	0.000	0.000	0.009	0.009	318
8	0.000	0.000	0.000	0.000	0.000	0	16.68	0.000	0.000	0.006	0.006	9	264.9	0.000	0.000	0.013	0.013	302
9	0.000	0.000	0.000	0.000	0.000	0	80.44	0.000	0.000	0.019	0.019	133	278.2	0.000	0.000	0.018	0.018	423
10	0.000	0.000	0.000	0.000	0.000	0	76.77	0.000	0.000	0.015	0.015	102	1119	0.000	0.000	0.732	0.732	70755
11	0.000	0.000	0.000	0.000	0.000	0	77.67	0.000	0.000	0.026	0.026	177	1464	0.000	0.000	0.009	0.009	1088
12	0.000	0.000	0.000	0.000	0.000	0	77.67	0.000	0.000	0.009	0.009	63	545.8	0.000	0.000	0.010	0.010	486
13	0.000	0.000	0.000	0.000	0.000	0	431.6	0.000	0.000	0.008	0.008	313	459.2	0.000	0.000	0.011	0.011	440
14	0.000	0.000	0.000	0.000	0.000	0	184.5	0.000	0.000	0.017	0.017	266	399.9	0.000	0.000	0.008	0.008	276
15	0.000	0.000	0.000	0.000	0.000	0	146.4	0.000	0.000	0.010	0.010	124	249.1	0.000	0.000	0.005	0.005	105
16	0.000	0.000	0.000	0.000	0.000	0	107.8	0.000	0.000	0.015	0.015	140	266.8	0.000	0.000	0.028	0.028	652
17	0.000	0.000	0.000	0.000	0.000	0	103.7	0.000	0.000	0.014	0.014	129	216.2	0.000	0.000	0.025	0.025	475
18	0.000	0.000	0.000	0.000	0.000	0	20.06	0.000	0.000	0.011	0.011	19	200.4	0.000	0.000	0.016	0.016	268
19	0.000	0.000	0.000	0.000	0.000	0	17.89	0.000	0.000	0.009	0.009	15	232.2	0.000	0.000	0.017	0.017	349
20	0.000	0.000	0.000	0.000	0.000	0	17.56	0.000	0.000	0.012	0.012	19	229.5	0.000	0.000	0.021	0.021	406
21	0.000	0.000	0.000	0.000	0.000	0	16.65	0.000	0.000	0.007	0.007	10	11915	0.000	0.008	0.894	0.902	928034
22	0.000	0.000	0.000	0.000	0.000	0	15.48	0.000	0.000	0.005	0.005	7	3497	0.001	0.009	0.264	0.273	82536
23	0.000	0.000	0.000	0.000	0.000	0	14.30	0.000	0.000	0.007	0.007	9	2248	0.000	0.000	0.053	0.053	10354
24	0.000	0.000	0.000	0.000	0.000	0	76.77	0.000	0.000	0.010	0.010	65	1722	0.000	0.000	0.257	0.257	38227
25	0.000	0.000	0.000	0.000	0.000	0	157.2	0.000	0.000	0.008	0.008	110	939.2	0.000	0.000	0.131	0.131	10663
26	0.000	0.000	0.000	0.000	0.000	0	156.0	0.000	0.000	0.014	0.014	189	625.1	0.000	0.000	0.012	0.012	627
27	0.000	0.000	0.000	0.000	0.000	0	118.5	0.000	0.000	0.011	0.011	110	571.0	0.000	0.000	0.002	0.002	118
28	0.000	0.000	0.000	0.000	0.000	0	514.0	0.000	0.000	0.046	0.046	2056	428.1	0.000	0.000	0.002	0.002	63
29	0.000	0.000	0.000	0.000	0.000	0	288.3	0.000	0.000	0.026	0.026	645	689.4	0.000	0.000	0.003	0.003	179
30	0.000	0.000	0.000	0.000	0.000	0	187.2	0.000	0.000	0.017	0.017	272	427.1	0.000	0.000	0.003	0.003	122
31							167.4	0.000	0.000	0.015	0.015	217	467.6	0.000	0.000	0.018	0.018	727
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	57.30	0.000	0.000	0.021	0.021	242	370.9	0.000	0.000	0.086	0.086	7402
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	118.5	0.000	0.000	0.013	0.013	126	426.3	0.000	0.000	0.015	0.015	455
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	155.6	0.000	0.000	0.015	0.015	335	2139	0.000	0.001	0.149	0.151	97423
Monthly Total						**0**						**7371**						**1150212**

Annual Sediment Load (Metric Tonnes) : 1180970

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Mahi at Paderdibadi (01 02 13 006) **Division : Mahi Division, Gandhinagar**

Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	438.2	0.000	0.000	0.011	0.011	428	78.30	0.000	0.000	0.013	0.013	90	19.09	0.000	0.000	0.010	0.010	16
2	726.7	0.000	0.000	0.001	0.001	88	143.7	0.000	0.000	0.024	0.024	303	17.14	0.000	0.000	0.009	0.009	13
3	422.1	0.000	0.000	0.129	0.129	4705	397.4	0.000	0.000	0.068	0.068	2318	17.64	0.000	0.000	0.009	0.009	13
4	354.0	0.000	0.000	0.002	0.002	61	249.1	0.000	0.000	0.042	0.042	910	17.07	0.000	0.000	0.008	0.008	12
5	378.6	0.000	0.000	0.002	0.002	72	262.4	0.000	0.000	0.045	0.045	1009	15.98	0.000	0.000	0.008	0.008	11
6	336.7	0.000	0.000	0.003	0.003	99	452.0	0.000	0.000	0.077	0.077	2999	16.58	0.000	0.000	0.008	0.008	11
7	324.6	0.000	0.000	0.003	0.003	90	300.8	0.000	0.000	0.051	0.051	1328	16.90	0.000	0.000	0.007	0.007	11
8	283.8	0.000	0.000	0.004	0.004	93	342.4	0.000	0.000	0.058	0.058	1719	16.43	0.000	0.000	0.008	0.008	11
9	265.5	0.000	0.000	0.004	0.004	85	264.4	0.000	0.000	0.045	0.045	1026	16.28	0.000	0.000	0.008	0.008	11
10	278.2	0.000	0.000	0.004	0.004	96	222.0	0.000	0.000	0.038	0.038	723	15.90	0.000	0.000	0.007	0.007	10
11	252.9	0.000	0.000	0.004	0.004	79	184.1	0.000	0.000	0.031	0.031	498	15.35	0.000	0.000	0.007	0.007	10
12	207.7	0.000	0.000	0.004	0.004	63	149.1	0.000	0.000	0.025	0.025	326	14.59	0.000	0.000	0.008	0.008	9
13	195.1	0.000	0.000	0.003	0.003	54	152.2	0.000	0.000	0.007	0.007	92	14.08	0.000	0.000	0.007	0.007	9
14	236.5	0.000	0.000	0.003	0.003	67	146.8	0.000	0.000	0.003	0.003	42	13.57	0.000	0.000	0.000	0.000	0
15	234.8	0.000	0.000	0.004	0.004	73	145.4	0.000	0.000	0.004	0.004	49	14.03	0.000	0.000	0.007	0.007	8
16	200.4	0.000	0.000	0.003	0.003	50	138.4	0.000	0.000	0.004	0.004	49	13.05	0.000	0.000	0.007	0.007	8
17	167.9	0.000	0.000	0.021	0.021	311	138.5	0.000	0.000	0.010	0.010	120	13.05	0.000	0.000	0.007	0.007	7
18	179.4	0.000	0.000	0.001	0.001	22	136.4	0.000	0.000	0.009	0.009	100	12.53	0.000	0.000	0.006	0.006	6
19	205.0	0.000	0.000	0.002	0.002	28	134.6	0.000	0.000	0.008	0.008	91	12.01	0.000	0.000	0.006	0.006	6
20	211.7	0.000	0.000	0.002	0.002	31	132.7	0.000	0.000	0.008	0.008	96	11.48	0.000	0.000	0.005	0.005	5
21	368.5	0.000	0.000	0.003	0.003	105	90.67	0.000	0.000	0.002	0.002	15	11.48	0.000	0.000	0.004	0.004	4
22	242.5	0.000	0.000	0.003	0.003	52	85.70	0.000	0.000	0.009	0.009	64	10.95	0.000	0.000	0.004	0.004	4
23	359.4	0.000	0.000	0.022	0.022	695	100.5	0.000	0.000	0.003	0.003	26	10.95	0.000	0.000	0.004	0.004	4
24	266.7	0.000	0.000	0.017	0.017	394	80.22	0.000	0.000	0.002	0.002	14	10.95	0.000	0.000	0.004	0.004	4
25	222.0	0.000	0.000	0.013	0.013	255	78.34	0.000	0.000	0.002	0.002	10	12.53	0.000	0.000	0.004	0.004	5
26	194.7	0.000	0.000	0.026	0.026	429	36.23	0.000	0.000	0.001	0.001	2	12.53	0.000	0.000	0.004	0.004	5
27	175.4	0.000	0.000	0.009	0.009	139	77.53	0.000	0.000	0.004	0.004	25	14.08	0.000	0.000	0.004	0.004	5
28	188.8	0.000	0.000	0.009	0.009	153	76.11	0.000	0.000	0.002	0.002	11	16.62	0.000	0.000	0.003	0.003	4
29	163.1	0.000	0.000	0.008	0.008	114	94.16	0.000	0.000	0.002	0.002	15	15.95	0.000	0.000	0.003	0.003	4
30	153.2	0.000	0.000	0.008	0.008	101	93.14	0.000	0.000	0.002	0.002	14	15.58	0.000	0.000	0.003	0.003	4
31							92.12	0.000	0.000	0.002	0.002	14						
Ten Daily Mean																		
Ten Daily I	380.8	0.000	0.000	0.016	0.016	582	271.2	0.000	0.000	0.046	0.046	1242	16.90	0.000	0.000	0.008	0.008	12
Ten Daily II	209.1	0.000	0.000	0.005	0.005	78	145.8	0.000	0.000	0.011	0.011	146	13.37	0.000	0.000	0.006	0.006	7
Ten Daily III	233.4	0.000	0.000	0.012	0.012	244	82.24	0.000	0.000	0.003	0.003	19	13.16	0.000	0.000	0.004	0.004	4
Monthly																		
Total						**9033**						**14098**						**229**

Annual Sediment Load (Metric Tonnes) : 1180970

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Mahi at Paderdibadi (01 02 13 006) **Division : Mahi Division, Gandhinagar**

Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	15.59	0.000	0.000	0.003	0.003	4	17.07	0.000	0.000	0.000	0.000	0	17.76	0.000	0.000	0.000	0.000	0
2	15.59	0.000	0.000	0.003	0.003	4	17.62	0.000	0.000	0.000	0.000	0	18.04	0.000	0.000	0.000	0.000	0
3	15.59	0.000	0.000	0.003	0.003	3	18.04	0.000	0.000	0.000	0.000	0	17.11	0.000	0.000	0.000	0.000	0
4	16.09	0.000	0.000	0.001	0.001	1	17.79	0.000	0.000	0.000	0.000	0	17.42	0.000	0.000	0.000	0.000	0
5	17.07	0.000	0.000	0.001	0.001	1	17.44	0.000	0.000	0.000	0.000	0	18.04	0.000	0.000	0.000	0.000	0
6	17.23	0.000	0.000	0.001	0.001	1	17.26	0.000	0.000	0.000	0.000	0	18.04	0.000	0.000	0.000	0.000	0
7	17.02	0.000	0.000	0.007	0.007	10	16.52	0.000	0.000	0.000	0.000	0	17.56	0.000	0.000	0.000	0.000	0
8	16.85	0.000	0.000	0.001	0.001	1	18.52	0.000	0.000	0.000	0.000	0	17.56	0.000	0.000	0.000	0.000	0
9	16.09	0.000	0.000	0.001	0.001	1	19.26	0.000	0.000	0.000	0.000	0	19.00	0.000	0.000	0.000	0.000	0
10	16.09	0.000	0.000	0.000	0.000	1	19.00	0.000	0.000	0.000	0.000	0	19.00	0.000	0.000	0.000	0.000	0
11	16.09	0.000	0.000	0.000	0.000	0	17.93	0.000	0.000	0.000	0.000	0	17.07	0.000	0.000	0.000	0.000	0
12	15.59	0.000	0.000	0.000	0.000	0	17.66	0.000	0.000	0.000	0.000	0	16.09	0.000	0.000	0.000	0.000	0
13	16.49	0.000	0.000	0.000	0.000	0	16.52	0.000	0.000	0.000	0.000	0	14.07	0.000	0.000	0.000	0.000	0
14	16.39	0.000	0.000	0.000	0.000	0	17.05	0.000	0.000	0.000	0.000	0	14.08	0.000	0.000	0.000	0.000	0
15	16.29	0.000	0.000	0.000	0.000	0	17.07	0.000	0.000	0.000	0.000	0	14.13	0.000	0.000	0.000	0.000	0
16	15.59	0.000	0.000	0.000	0.000	0	16.64	0.000	0.000	0.000	0.000	0	14.59	0.000	0.000	0.000	0.000	0
17	15.59	0.000	0.000	0.000	0.000	0	16.46	0.000	0.000	0.000	0.000	0	14.13	0.000	0.000	0.000	0.000	0
18	15.09	0.000	0.000	0.000	0.000	0	16.21	0.000	0.000	0.000	0.000	0	13.87	0.000	0.000	0.000	0.000	0
19	14.59	0.000	0.000	0.000	0.000	0	15.59	0.000	0.000	0.000	0.000	0	12.53	0.000	0.000	0.000	0.000	0
20	14.59	0.000	0.000	0.000	0.000	0	15.59	0.000	0.000	0.000	0.000	0	10.95	0.000	0.000	0.000	0.000	0
21	14.59	0.000	0.000	0.000	0.000	0	11.48	0.000	0.000	0.000	0.000	0	10.41	0.000	0.000	0.000	0.000	0
22	14.59	0.000	0.000	0.000	0.000	0	4.610	0.000	0.000	0.000	0.000	0	10.41	0.000	0.000	0.000	0.000	0
23	15.59	0.000	0.000	0.000	0.000	0	11.83	0.000	0.000	0.000	0.000	0	9.870	0.000	0.000	0.000	0.000	0
24	15.59	0.000	0.000	0.000	0.000	0	6.460	0.000	0.000	0.000	0.000	0	9.870	0.000	0.000	0.000	0.000	0
25	15.59	0.000	0.000	0.000	0.000	0	7.050	0.000	0.000	0.000	0.000	0	10.41	0.000	0.000	0.000	0.000	0
26	15.59	0.000	0.000	0.000	0.000	0	9.870	0.000	0.000	0.000	0.000	0	10.41	0.000	0.000	0.000	0.000	0
27	15.09	0.000	0.000	0.000	0.000	0	19.00	0.000	0.000	0.000	0.000	0	10.41	0.000	0.000	0.000	0.000	0
28	15.09	0.000	0.000	0.000	0.000	0	19.48	0.000	0.000	0.000	0.000	0	13.96	0.000	0.000	0.000	0.000	0
29	16.10	0.000	0.000	0.000	0.000	0	20.90	0.000	0.000	0.000	0.000	0						
30	16.67	0.000	0.000	0.000	0.000	0	20.43	0.000	0.000	0.000	0.000	0						
31	16.56	0.000	0.000	0.000	0.000	0	19.48	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	16.32	0.000	0.000	0.002	0.002	3	17.85	0.000	0.000	0.000	0.000	0	17.95	0.000	0.000	0.000	0.000	0
Ten Daily II	15.63	0.000	0.000	0.000	0.000	0	16.67	0.000	0.000	0.000	0.000	0	14.15	0.000	0.000	0.000	0.000	0
Ten Daily III	15.55	0.000	0.000	0.000	0.000	0	13.69	0.000	0.000	0.000	0.000	0	10.72	0.000	0.000	0.000	0.000	0
Monthly																		
Total						**27**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 1180970

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Mahi at Paderdibadi (01 02 13 006) **Division : Mahi Division, Gandhinagar**

Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	14.19	0.000	0.000	0.000	0.000	0	11.75	0.000	0.000	0.000	0.000	0	10.23	0.000	0.000	0.000	0.000	0
2	13.71	0.000	0.000	0.000	0.000	0	12.01	0.000	0.000	0.000	0.000	0	9.919	0.000	0.000	0.000	0.000	0
3	13.66	0.000	0.000	0.000	0.000	0	11.48	0.000	0.000	0.000	0.000	0	9.320	0.000	0.000	0.000	0.000	0
4	13.57	0.000	0.000	0.000	0.000	0	11.49	0.000	0.000	0.000	0.000	0	9.320	0.000	0.000	0.000	0.000	0
5	13.05	0.000	0.000	0.000	0.000	0	11.36	0.000	0.000	0.000	0.000	0	9.061	0.000	0.000	0.000	0.000	0
6	13.54	0.000	0.000	0.000	0.000	0	11.48	0.000	0.000	0.000	0.000	0	9.270	0.000	0.000	0.000	0.000	0
7	14.19	0.000	0.000	0.000	0.000	0	11.48	0.000	0.000	0.000	0.000	0	8.760	0.000	0.000	0.000	0.000	0
8	13.30	0.000	0.000	0.000	0.000	0	11.48	0.000	0.000	0.000	0.000	0	8.760	0.000	0.000	0.000	0.000	0
9	14.09	0.000	0.000	0.000	0.000	0	10.95	0.000	0.000	0.000	0.000	0	8.200	0.000	0.000	0.000	0.000	0
10	13.94	0.000	0.000	0.000	0.000	0	10.94	0.000	0.000	0.000	0.000	0	7.630	0.000	0.000	0.000	0.000	0
11	14.08	0.000	0.000	0.000	0.000	0	10.76	0.000	0.000	0.000	0.000	0	7.050	0.000	0.000	0.000	0.000	0
12	14.59	0.000	0.000	0.000	0.000	0	10.76	0.000	0.000	0.000	0.000	0	6.460	0.000	0.000	0.000	0.000	0
13	14.59	0.000	0.000	0.000	0.000	0	10.80	0.000	0.000	0.000	0.000	0	5.850	0.000	0.000	0.000	0.000	0
14	14.83	0.000	0.000	0.000	0.000	0	10.95	0.000	0.000	0.000	0.000	0	5.850	0.000	0.000	0.000	0.000	0
15	15.59	0.000	0.000	0.000	0.000	0	10.41	0.000	0.000	0.000	0.000	0	5.240	0.000	0.000	0.000	0.000	0
16	15.00	0.000	0.000	0.000	0.000	0	10.48	0.000	0.000	0.000	0.000	0	5.610	0.000	0.000	0.000	0.000	0
17	14.76	0.000	0.000	0.000	0.000	0	11.80	0.000	0.000	0.000	0.000	0	5.610	0.000	0.000	0.000	0.000	0
18	14.58	0.000	0.000	0.000	0.000	0	11.57	0.000	0.000	0.000	0.000	0	5.610	0.000	0.000	0.000	0.000	0
19	14.59	0.000	0.000	0.000	0.000	0	11.56	0.000	0.000	0.000	0.000	0	5.610	0.000	0.000	0.000	0.000	0
20	14.08	0.000	0.000	0.000	0.000	0	11.55	0.000	0.000	0.000	0.000	0	5.020	0.000	0.000	0.000	0.000	0
21	13.20	0.000	0.000	0.000	0.000	0	11.25	0.000	0.000	0.000	0.000	0	4.610	0.000	0.000	0.000	0.000	0
22	13.15	0.000	0.000	0.000	0.000	0	11.03	0.000	0.000	0.000	0.000	0	4.610	0.000	0.000	0.000	0.000	0
23	13.11	0.000	0.000	0.000	0.000	0	11.48	0.000	0.000	0.000	0.000	0	4.610	0.000	0.000	0.000	0.000	0
24	13.57	0.000	0.000	0.000	0.000	0	10.90	0.000	0.000	0.000	0.000	0	3.960	0.000	0.000	0.000	0.000	0
25	12.86	0.000	0.000	0.000	0.000	0	10.73	0.000	0.000	0.000	0.000	0	3.960	0.000	0.000	0.000	0.000	0
26	13.05	0.000	0.000	0.000	0.000	0	10.50	0.000	0.000	0.000	0.000	0	3.960	0.000	0.000	0.000	0.000	0
27	12.71	0.000	0.000	0.000	0.000	0	10.41	0.000	0.000	0.000	0.000	0	3.290	0.000	0.000	0.000	0.000	0
28	12.26	0.000	0.000	0.000	0.000	0	10.41	0.000	0.000	0.000	0.000	0	3.290	0.000	0.000	0.000	0.000	0
29	12.26	0.000	0.000	0.000	0.000	0	10.19	0.000	0.000	0.000	0.000	0	3.290	0.000	0.000	0.000	0.000	0
30	12.05	0.000	0.000	0.000	0.000	0	10.41	0.000	0.000	0.000	0.000	0	3.290	0.000	0.000	0.000	0.000	0
31	11.93	0.000	0.000	0.000	0.000	0							3.290	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	13.72	0.000	0.000	0.000	0.000	0	11.44	0.000	0.000	0.000	0.000	0	9.047	0.000	0.000	0.000	0.000	0
Ten Daily II	14.67	0.000	0.000	0.000	0.000	0	11.06	0.000	0.000	0.000	0.000	0	5.791	0.000	0.000	0.000	0.000	0
Ten Daily III	12.74	0.000	0.000	0.000	0.000	0	10.73	0.000	0.000	0.000	0.000	0	3.833	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 1180970

Annual Sediment Load for period : 2005-2017

Station Name : Mahi at Paderdibadi (01 02 13 006) **Division : Mahi Division, Gandhinagar**

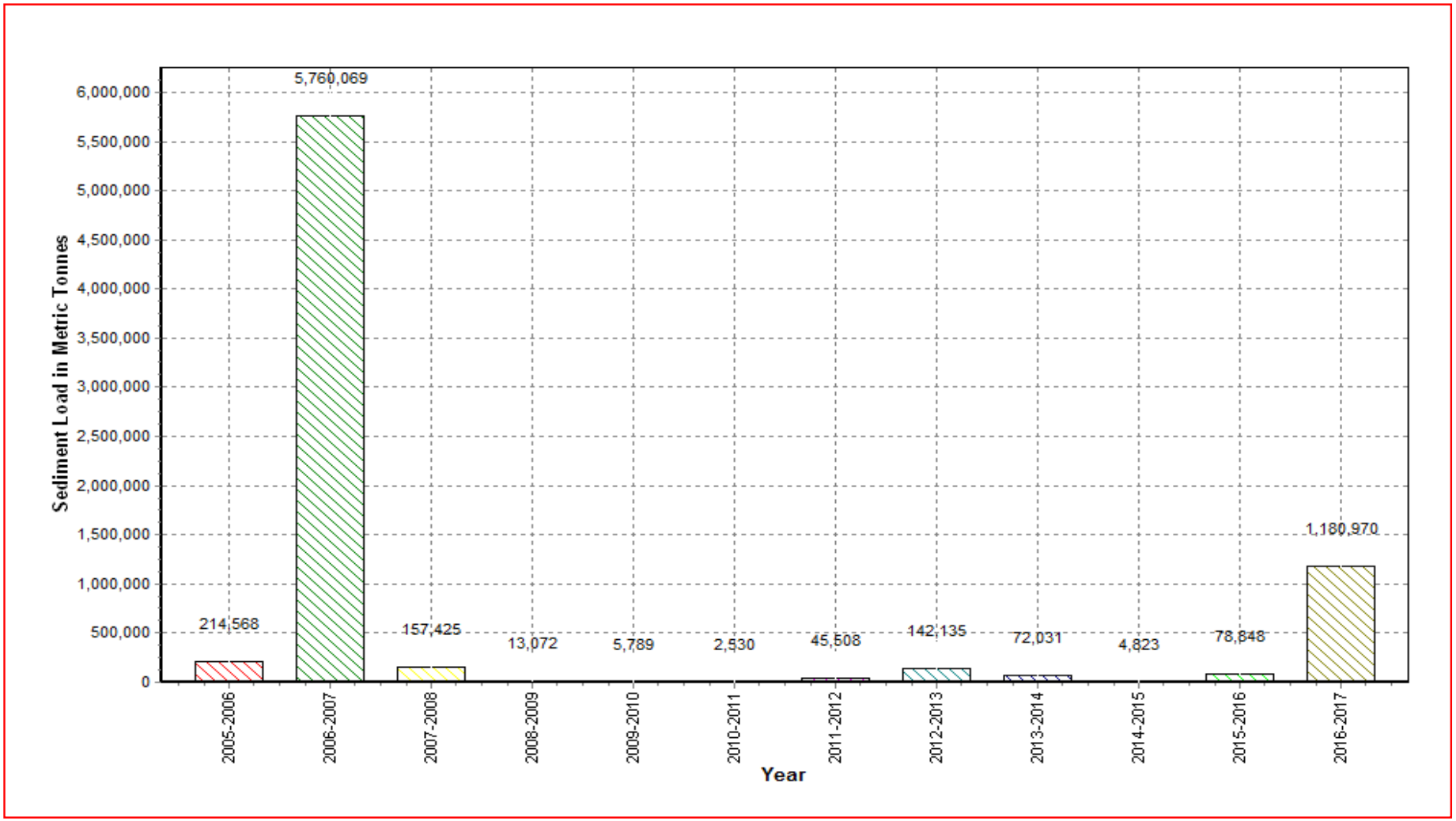
Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2005-2006	214390	178	214568	930
2006-2007	5759652	418	5760069	10946
2007-2008	157170	255	157425	1600
2008-2009	13064	8	13072	314
2009-2010	5751	38	5789	552
2010-2011	2525	5	2530	407
2011-2012	45508	0	45508	3777
2012-2013	142133	3	142135	2949
2013-2014	72031	0	72031	3003
2014-2015	4811	12	4823	1360
2015-2016	78230	618	78848	1678
2016-2017	1180943	27	1180970	4411

Annual Sediment Load for the period: 2005-2017

Station Name : Mahi at Paderdibadi (01 02 13 006)
Local River : Mahi

Division : Mahi Division, Gandhinagar
Sub-Division : Mahi Sub Divn., Kadana



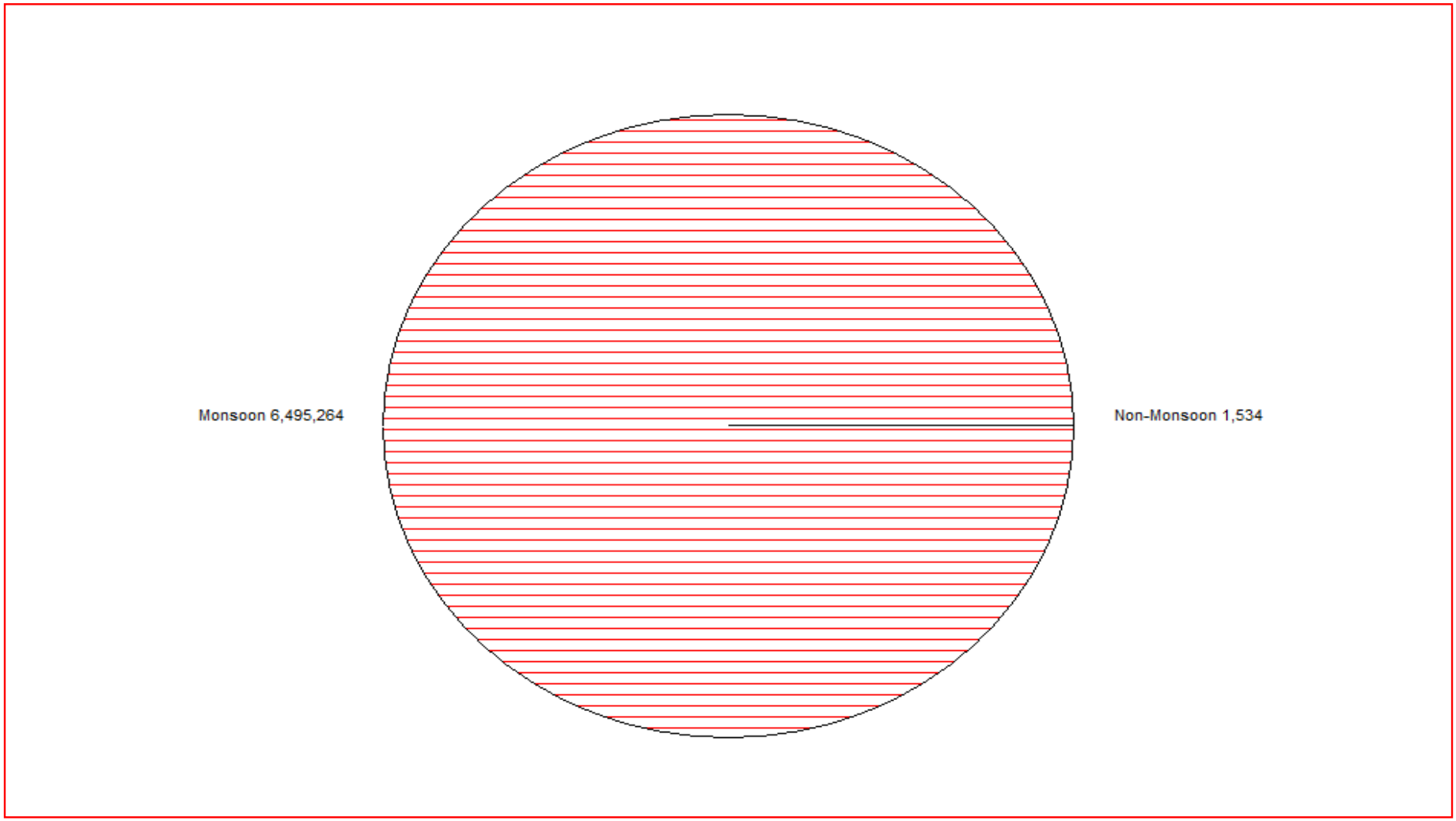
Seasonal Sediment Load for the period : 2005-2016

Station Name : Mahi at Paderdibadi (01 02 13 006)

Division : Mahi Division, Gandhinagar

Local River : Mahi

Sub-Division : Mahi Sub Divn., Kadana



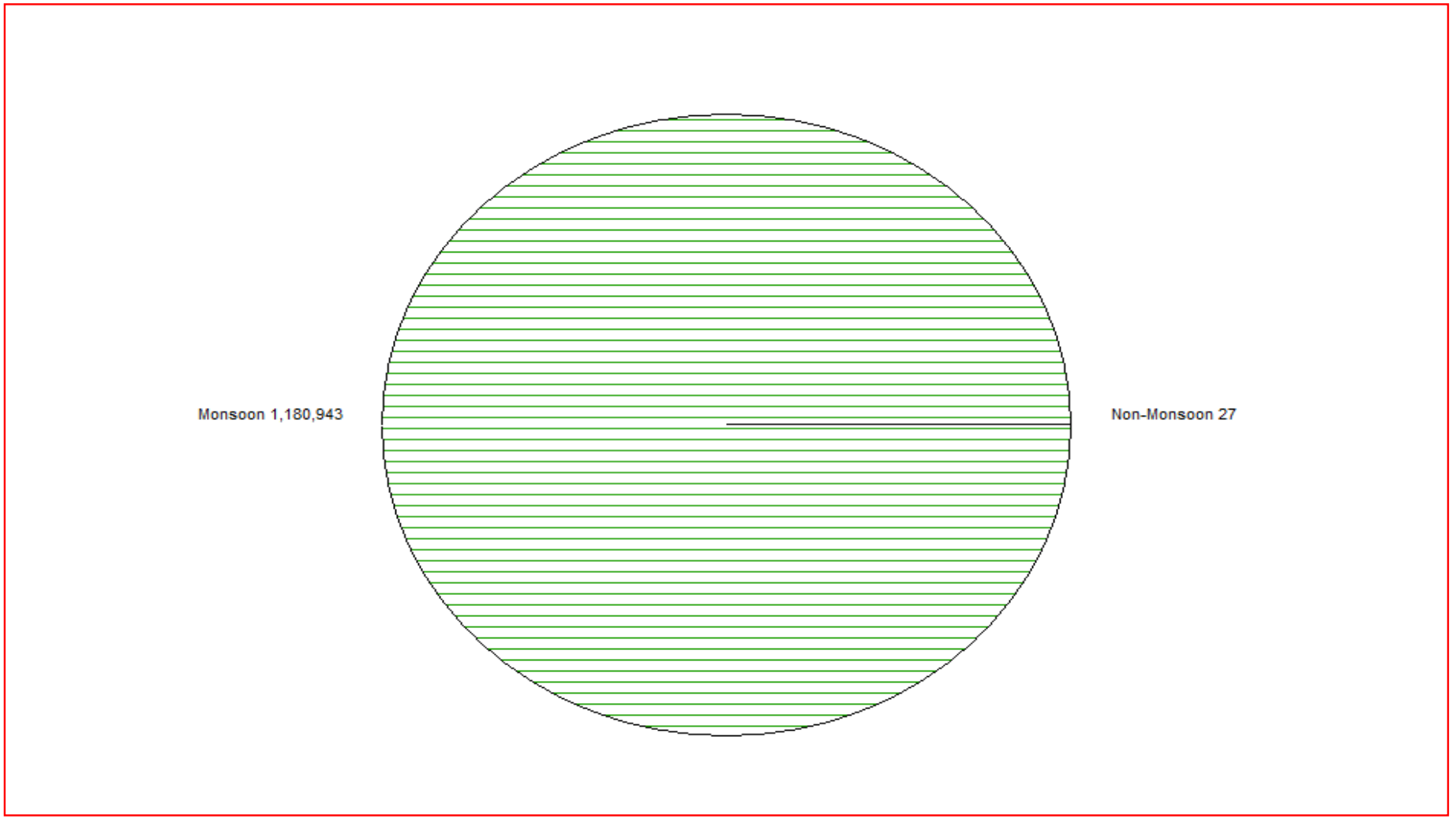
Seasonal Sediment Load for the Year: 2016-2017

Station Name : Mahi at Paderdibadi (01 02 13 006)

Division : Mahi Division, Gandhinagar

Local River : Mahi

Sub-Division : Mahi Sub Divn., Kadana



HISTORY SHEET

		Water Year	**: 2016-17**
Site	**: Mahi at Khanpur**	**Code**	**: 01 02 13 012**
State	: Gujarat	District	Anand
Basin	: Mahi	Independent River	: Mahi
Tributary	: Mahi	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Mahi
Division	: Mahi Division, Gandhinagar	Sub-Division	: Mahi Sub Divn., Kadana
Drainage Area	: 32510 Sq. Km.	Bank	: Right
Latitude	: 22°31'55" N	Longitude	: 73°08'27" E
Zero of Gauge (m)	: 8.22 (m.s.l)	21-12-1978	
	Opening Date	Closing Date	
Gauge	: 21-12-1978		
Discharge	: 21-12-1978		
Sediment	: 01-05-1988		
Water Quality	: 01-01-1979		

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Mahi at Khanpur (01 02 13 012) **Division : Mahi Division, Gandhinagar**

Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	13.26	0.000	0.000	0.000	0.000	0	18.85	0.000	0.000	0.000	0.000	0	33.52	0.000	0.000	0.004	0.004	10
2	11.80	0.000	0.000	0.000	0.000	0	16.80	0.000	0.000	0.000	0.000	0	43.78	0.000	0.000	0.008	0.008	30
3	11.16	0.000	0.000	0.000	0.000	0	16.83	0.000	0.000	0.000	0.000	0	223.2	0.000	0.000	0.006	0.006	116
4	11.16	0.000	0.000	0.000	0.000	0	15.78	0.000	0.000	0.000	0.000	0	123.9	0.000	0.000	0.071	0.071	755
5	10.53	0.000	0.000	0.000	0.000	0	374.2	0.000	0.000	0.012	0.012	401	206.2	0.000	0.000	0.019	0.019	331
6	10.53	0.000	0.000	0.000	0.000	0	131.8	0.000	0.000	0.000	0.000	0	144.8	0.000	0.000	0.055	0.055	685
7	11.99	0.000	0.000	0.000	0.000	0	34.40	0.000	0.000	0.009	0.009	27	192.4	0.000	0.000	0.073	0.073	1215
8	11.87	0.000	0.000	0.000	0.000	0	21.03	0.000	0.000	0.034	0.034	61	134.5	0.000	0.000	0.020	0.020	229
9	11.85	0.000	0.000	0.000	0.000	0	18.39	0.000	0.000	0.028	0.028	44	260.2	0.000	0.000	0.102	0.102	2295
10	12.03	0.000	0.000	0.000	0.000	0	13.15	0.000	0.000	0.020	0.020	22	262.0	0.000	0.000	1.236	1.236	27975
11	11.16	0.000	0.000	0.000	0.000	0	14.49	0.000	0.000	0.015	0.015	18	939.2	0.014	0.022	1.318	1.354	109872
12	9.370	0.000	0.000	0.000	0.000	0	19.21	0.000	0.000	0.019	0.019	31	2004	0.001	0.004	1.157	1.162	201217
13	13.04	0.000	0.000	0.000	0.000	0	274.9	0.000	0.000	0.054	0.054	1283	985.7	0.000	0.000	1.000	1.000	85202
14	11.50	0.000	0.000	0.000	0.000	0	210.3	0.000	0.000	0.075	0.075	1363	983.0	0.000	0.000	0.983	0.983	83487
15	13.24	0.000	0.000	0.000	0.000	0	100.3	0.000	0.000	0.082	0.082	714	553.2	0.000	0.000	0.017	0.017	793
16	13.48	0.000	0.000	0.000	0.000	0	53.05	0.000	0.000	0.045	0.045	206	662.8	0.000	0.000	0.022	0.022	1260
17	13.38	0.000	0.000	0.000	0.000	0	57.51	0.000	0.000	0.048	0.048	240	485.0	0.000	0.000	0.019	0.019	779
18	15.14	0.000	0.000	0.000	0.000	0	32.82	0.000	0.000	0.039	0.039	111	476.7	0.000	0.000	0.017	0.017	712
19	14.57	0.000	0.000	0.000	0.000	0	24.51	0.000	0.000	0.023	0.023	49	316.0	0.000	0.000	0.007	0.007	194
20	13.31	0.000	0.000	0.000	0.000	0	24.63	0.000	0.000	0.015	0.015	32	283.5	0.000	0.000	0.018	0.018	434
21	13.33	0.000	0.000	0.000	0.000	0	20.01	0.000	0.000	0.008	0.008	13	343.4	0.000	0.000	0.010	0.010	306
22	13.28	0.000	0.000	0.000	0.000	0	18.62	0.000	0.000	0.008	0.008	13	13879	0.014	0.066	0.371	0.451	540576
23	13.14	0.000	0.000	0.000	0.000	0	18.57	0.000	0.000	0.015	0.015	24	3232	0.000	0.022	0.338	0.360	100537
24	13.17	0.000	0.000	0.000	0.000	0	13.20	0.000	0.000	0.011	0.011	13	4196	0.000	0.011	0.088	0.099	35889
25	14.00	0.000	0.000	0.000	0.000	0	18.46	0.000	0.000	0.014	0.014	22	2314	0.000	0.000	0.046	0.046	9256
26	27.44	0.000	0.000	0.000	0.000	0	18.24	0.000	0.000	0.015	0.015	24	1602	0.000	0.000	0.033	0.033	4527
27	14.53	0.000	0.000	0.000	0.000	0	39.57	0.000	0.000	0.005	0.005	17	1528	0.000	0.000	0.023	0.023	3023
28	14.57	0.000	0.000	0.000	0.000	0	32.09	0.000	0.000	0.003	0.003	7	836.9	0.000	0.000	0.017	0.017	1208
29	16.97	0.000	0.000	0.000	0.000	0	33.01	0.000	0.000	0.008	0.008	23	1992	0.000	0.000	0.021	0.021	3649
30	19.00	0.000	0.000	0.000	0.000	0	33.23	0.000	0.000	0.003	0.003	9	765.1	0.000	0.000	0.019	0.019	1236
31							33.74	0.000	0.000	0.003	0.003	9	563.8	0.000	0.000	0.016	0.016	799
Ten Daily Mean																		
Ten Daily I	11.62	0.000	0.000	0.000	0.000	0	66.13	0.000	0.000	0.010	0.010	56	162.4	0.000	0.000	0.159	0.159	3364
Ten Daily II	12.82	0.000	0.000	0.000	0.000	0	81.18	0.000	0.000	0.042	0.042	405	768.9	0.002	0.003	0.456	0.460	48395
Ten Daily III	15.94	0.000	0.000	0.000	0.000	0	25.34	0.000	0.000	0.008	0.008	16	2841	0.001	0.009	0.089	0.100	63728
Monthly Total						**0**						**4776**						**1218599**

Annual Sediment Load (Metric Tonnes) : 1250954

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Mahi at Khanpur (01 02 13 012) **Division : Mahi Division, Gandhinagar**

Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	587.3	0.000	0.000	0.087	0.087	4415	205.2	0.000	0.000	0.005	0.005	82	61.06	0.000	0.000	0.001	0.001	3
2	1643	0.000	0.000	0.002	0.002	270	144.2	0.000	0.000	0.003	0.003	36	51.42	0.000	0.000	0.001	0.001	2
3	1118	0.000	0.000	0.018	0.018	1719	807.5	0.000	0.000	0.014	0.014	977	45.10	0.000	0.000	0.000	0.000	1
4	692.7	0.000	0.000	0.007	0.007	413	660.1	0.000	0.000	0.018	0.018	1021	21.00	0.000	0.000	0.001	0.001	1
5	681.1	0.000	0.000	0.004	0.004	241	825.5	0.000	0.000	0.147	0.147	10484	12.79	0.000	0.000	0.001	0.001	1
6	917.0	0.000	0.000	0.006	0.006	491	668.2	0.000	0.000	0.008	0.008	485	13.51	0.000	0.000	0.001	0.001	1
7	675.6	0.000	0.000	0.006	0.006	362	938.6	0.000	0.000	0.009	0.009	730	20.66	0.000	0.000	0.001	0.001	1
8	670.4	0.000	0.000	0.005	0.005	272	836.5	0.000	0.000	0.007	0.007	470	20.55	0.000	0.000	0.000	0.000	1
9	476.1	0.000	0.000	0.005	0.005	222	583.4	0.000	0.000	0.005	0.005	237	20.54	0.000	0.000	0.001	0.001	1
10	258.4	0.000	0.000	0.005	0.005	118	502.5	0.000	0.000	0.002	0.002	104	20.80	0.000	0.000	0.001	0.001	1
11	233.2	0.000	0.000	0.005	0.005	95	464.4	0.000	0.000	0.003	0.003	128	23.74	0.000	0.000	0.000	0.000	1
12	329.0	0.000	0.000	0.007	0.007	185	369.7	0.000	0.000	0.003	0.003	83	22.71	0.000	0.000	0.001	0.001	1
13	186.4	0.000	0.000	0.010	0.010	153	242.4	0.000	0.000	0.001	0.001	19	20.08	0.000	0.000	0.001	0.001	1
14	183.6	0.000	0.000	0.011	0.011	181	248.1	0.000	0.000	0.001	0.001	26	20.08	0.000	0.000	0.001	0.001	1
15	208.5	0.000	0.000	0.012	0.012	220	243.9	0.000	0.000	0.001	0.001	21	22.50	0.000	0.000	0.001	0.001	1
16	142.7	0.000	0.000	0.003	0.003	41	195.4	0.000	0.000	0.001	0.001	14	23.96	0.000	0.000	0.001	0.001	2
17	83.75	0.000	0.000	0.003	0.003	20	129.0	0.000	0.000	0.002	0.002	17	22.90	0.000	0.000	0.001	0.001	1
18	61.85	0.000	0.000	0.002	0.002	10	133.9	0.000	0.000	0.001	0.001	8	22.87	0.000	0.000	0.001	0.001	2
19	165.0	0.000	0.000	0.002	0.002	30	107.6	0.000	0.000	0.001	0.001	11	20.06	0.000	0.000	0.001	0.001	1
20	683.3	0.000	0.000	0.018	0.018	1063	70.26	0.000	0.000	0.001	0.001	3	16.61	0.000	0.000	0.001	0.001	1
21	512.1	0.000	0.000	0.020	0.020	863	47.93	0.000	0.000	0.001	0.001	5	21.50	0.000	0.000	0.000	0.000	1
22	388.6	0.000	0.000	0.007	0.007	248	46.36	0.000	0.000	0.001	0.001	4	20.95	0.000	0.000	0.000	0.000	1
23	526.6	0.000	0.000	0.003	0.003	132	36.46	0.000	0.000	0.000	0.000	0	19.89	0.000	0.000	0.000	0.000	1
24	613.1	0.000	0.000	0.005	0.005	244	78.04	0.000	0.000	0.000	0.000	3	19.15	0.000	0.000	0.000	0.000	0
25	423.0	0.000	0.000	0.004	0.004	132	127.4	0.000	0.000	0.001	0.001	13	19.28	0.000	0.000	0.000	0.000	0
26	441.1	0.000	0.000	0.004	0.004	141	92.46	0.000	0.000	0.001	0.001	6	20.19	0.000	0.000	0.000	0.000	1
27	393.2	0.000	0.000	0.003	0.003	109	75.10	0.000	0.000	0.001	0.001	7	18.30	0.000	0.000	0.000	0.000	1
28	338.8	0.000	0.000	0.002	0.002	64	49.00	0.000	0.000	0.001	0.001	3	20.56	0.000	0.000	0.000	0.000	1
29	276.0	0.000	0.000	0.002	0.002	36	20.08	0.000	0.000	0.001	0.001	2	20.84	0.000	0.000	0.000	0.000	0
30	264.7	0.000	0.000	0.003	0.003	59	15.01	0.000	0.000	0.001	0.001	1	20.46	0.000	0.000	0.000	0.000	0
31							46.01	0.000	0.000	0.001	0.001	2						
Ten Daily Mean																		
Ten Daily I	772.0	0.000	0.000	0.015	0.015	852	617.2	0.000	0.000	0.022	0.022	1463	28.74	0.000	0.000	0.001	0.001	1
Ten Daily II	227.7	0.000	0.000	0.007	0.007	200	220.5	0.000	0.000	0.001	0.001	33	21.55	0.000	0.000	0.001	0.001	1
Ten Daily III	417.7	0.000	0.000	0.005	0.005	203	57.62	0.000	0.000	0.001	0.001	4	20.11	0.000	0.000	0.000	0.000	0
Monthly Total						**12548**						**15002**						**28**

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Annual Sediment Load (Metric Tonnes) : 1250954

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Mahi at Khanpur (01 02 13 012) **Division : Mahi Division, Gandhinagar**

Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	22.68	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0	14.54	0.000	0.000	0.000	0.000	0
2	22.97	0.000	0.000	0.000	0.000	0	15.52	0.000	0.000	0.000	0.000	0	14.49	0.000	0.000	0.000	0.000	0
3	20.08	0.000	0.000	0.000	0.000	0	16.06	0.000	0.000	0.000	0.000	0	14.52	0.000	0.000	0.000	0.000	0
4	20.08	0.000	0.000	0.000	0.000	0	16.09	0.000	0.000	0.000	0.000	0	14.62	0.000	0.000	0.000	0.000	0
5	21.16	0.000	0.000	0.000	0.000	0	16.03	0.000	0.000	0.000	0.000	0	16.61	0.000	0.000	0.000	0.000	0
6	20.26	0.000	0.000	0.000	0.000	0	14.65	0.000	0.000	0.000	0.000	0	17.44	0.000	0.000	0.000	0.000	0
7	19.33	0.000	0.000	0.000	0.000	0	14.35	0.000	0.000	0.000	0.000	0	19.18	0.000	0.000	0.000	0.000	0
8	17.84	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0	22.92	0.000	0.000	0.000	0.000	0
9	17.61	0.000	0.000	0.000	0.000	0	17.40	0.000	0.000	0.000	0.000	0	17.44	0.000	0.000	0.000	0.000	0
10	17.31	0.000	0.000	0.000	0.000	0	19.16	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0
11	16.61	0.000	0.000	0.000	0.000	0	14.63	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0
12	15.80	0.000	0.000	0.000	0.000	0	14.69	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0
13	17.03	0.000	0.000	0.000	0.000	0	14.73	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0
14	16.88	0.000	0.000	0.000	0.000	0	14.54	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0
15	16.88	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0
16	16.92	0.000	0.000	0.000	0.000	0	14.46	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0
17	18.15	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0
18	16.61	0.000	0.000	0.000	0.000	0	14.25	0.000	0.000	0.000	0.000	0	16.61	0.000	0.000	0.000	0.000	0
19	17.05	0.000	0.000	0.000	0.000	0	14.25	0.000	0.000	0.000	0.000	0	19.18	0.000	0.000	0.000	0.000	0
20	18.14	0.000	0.000	0.000	0.000	0	13.51	0.000	0.000	0.000	0.000	0	18.30	0.000	0.000	0.000	0.000	0
21	15.32	0.000	0.000	0.000	0.000	0	13.51	0.000	0.000	0.000	0.000	0	18.30	0.000	0.000	0.000	0.000	0
22	15.24	0.000	0.000	0.000	0.000	0	13.51	0.000	0.000	0.000	0.000	0	18.30	0.000	0.000	0.000	0.000	0
23	16.08	0.000	0.000	0.000	0.000	0	13.51	0.000	0.000	0.000	0.000	0	18.30	0.000	0.000	0.000	0.000	0
24	17.40	0.000	0.000	0.000	0.000	0	14.25	0.000	0.000	0.000	0.000	0	18.30	0.000	0.000	0.000	0.000	0
25	18.30	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0	16.61	0.000	0.000	0.000	0.000	0
26	16.61	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0	15.80	0.000	0.000	0.000	0.000	0
27	15.01	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0	16.81	0.000	0.000	0.000	0.000	0
28	15.01	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0	16.75	0.000	0.000	0.000	0.000	0
29	16.26	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0						
30	16.03	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0						
31	15.96	0.000	0.000	0.000	0.000	0	15.01	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	19.93	0.000	0.000	0.000	0.000	0	15.93	0.000	0.000	0.000	0.000	0	16.68	0.000	0.000	0.000	0.000	0
Ten Daily II	17.01	0.000	0.000	0.000	0.000	0	14.51	0.000	0.000	0.000	0.000	0	15.92	0.000	0.000	0.000	0.000	0
Ten Daily III	16.11	0.000	0.000	0.000	0.000	0	14.53	0.000	0.000	0.000	0.000	0	17.40	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 1250954

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Mahi at Khanpur (01 02 13 012) **Division : Mahi Division, Gandhinagar**

Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	16.24	0.000	0.000	0.000	0.000	0	12.70	0.000	0.000	0.000	0.000	0	10.54	0.000	0.000	0.000	0.000	0
2	16.35	0.000	0.000	0.000	0.000	0	13.51	0.000	0.000	0.000	0.000	0	10.71	0.000	0.000	0.000	0.000	0
3	14.20	0.000	0.000	0.000	0.000	0	12.69	0.000	0.000	0.000	0.000	0	10.44	0.000	0.000	0.000	0.000	0
4	14.03	0.000	0.000	0.000	0.000	0	12.56	0.000	0.000	0.000	0.000	0	9.603	0.000	0.000	0.000	0.000	0
5	14.25	0.000	0.000	0.000	0.000	0	12.52	0.000	0.000	0.000	0.000	0	11.33	0.000	0.000	0.000	0.000	0
6	14.73	0.000	0.000	0.000	0.000	0	11.43	0.000	0.000	0.000	0.000	0	11.03	0.000	0.000	0.000	0.000	0
7	14.30	0.000	0.000	0.000	0.000	0	11.01	0.000	0.000	0.000	0.000	0	9.932	0.000	0.000	0.000	0.000	0
8	14.51	0.000	0.000	0.000	0.000	0	10.80	0.000	0.000	0.000	0.000	0	9.759	0.000	0.000	0.000	0.000	0
9	14.36	0.000	0.000	0.000	0.000	0	10.76	0.000	0.000	0.000	0.000	0	9.558	0.000	0.000	0.000	0.000	0
10	15.42	0.000	0.000	0.000	0.000	0	10.41	0.000	0.000	0.000	0.000	0	11.41	0.000	0.000	0.000	0.000	0
11	14.86	0.000	0.000	0.000	0.000	0	10.26	0.000	0.000	0.000	0.000	0	10.66	0.000	0.000	0.000	0.000	0
12	15.01	0.000	0.000	0.000	0.000	0	9.603	0.000	0.000	0.000	0.000	0	10.66	0.000	0.000	0.000	0.000	0
13	15.01	0.000	0.000	0.000	0.000	0	10.08	0.000	0.000	0.000	0.000	0	10.60	0.000	0.000	0.000	0.000	0
14	14.86	0.000	0.000	0.000	0.000	0	11.41	0.000	0.000	0.000	0.000	0	11.41	0.000	0.000	0.000	0.000	0
15	14.25	0.000	0.000	0.000	0.000	0	10.95	0.000	0.000	0.000	0.000	0	9.475	0.000	0.000	0.000	0.000	0
16	14.91	0.000	0.000	0.000	0.000	0	11.41	0.000	0.000	0.000	0.000	0	10.63	0.000	0.000	0.000	0.000	0
17	14.68	0.000	0.000	0.000	0.000	0	10.72	0.000	0.000	0.000	0.000	0	9.692	0.000	0.000	0.000	0.000	0
18	15.23	0.000	0.000	0.000	0.000	0	10.67	0.000	0.000	0.000	0.000	0	9.871	0.000	0.000	0.000	0.000	0
19	15.01	0.000	0.000	0.000	0.000	0	10.38	0.000	0.000	0.000	0.000	0	10.41	0.000	0.000	0.000	0.000	0
20	14.74	0.000	0.000	0.000	0.000	0	10.22	0.000	0.000	0.000	0.000	0	9.982	0.000	0.000	0.000	0.000	0
21	15.04	0.000	0.000	0.000	0.000	0	10.19	0.000	0.000	0.000	0.000	0	11.41	0.000	0.000	0.000	0.000	0
22	14.51	0.000	0.000	0.000	0.000	0	10.44	0.000	0.000	0.000	0.000	0	9.676	0.000	0.000	0.000	0.000	0
23	12.89	0.000	0.000	0.000	0.000	0	11.41	0.000	0.000	0.000	0.000	0	9.782	0.000	0.000	0.000	0.000	0
24	13.39	0.000	0.000	0.000	0.000	0	10.72	0.000	0.000	0.000	0.000	0	9.909	0.000	0.000	0.000	0.000	0
25	13.67	0.000	0.000	0.000	0.000	0	10.46	0.000	0.000	0.000	0.000	0	9.395	0.000	0.000	0.000	0.000	0
26	15.80	0.000	0.000	0.000	0.000	0	10.48	0.000	0.000	0.000	0.000	0	9.395	0.000	0.000	0.000	0.000	0
27	13.60	0.000	0.000	0.000	0.000	0	10.74	0.000	0.000	0.000	0.000	0	8.733	0.000	0.000	0.000	0.000	0
28	13.61	0.000	0.000	0.000	0.000	0	10.66	0.000	0.000	0.000	0.000	0	11.41	0.000	0.000	0.000	0.000	0
29	13.18	0.000	0.000	0.000	0.000	0	10.41	0.000	0.000	0.000	0.000	0	9.617	0.000	0.000	0.000	0.000	0
30	13.01	0.000	0.000	0.000	0.000	0	11.41	0.000	0.000	0.000	0.000	0	9.553	0.000	0.000	0.000	0.000	0
31	12.58	0.000	0.000	0.000	0.000	0							7.483	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	14.84	0.000	0.000	0.000	0.000	0	11.84	0.000	0.000	0.000	0.000	0	10.43	0.000	0.000	0.000	0.000	0
Ten Daily II	14.86	0.000	0.000	0.000	0.000	0	10.57	0.000	0.000	0.000	0.000	0	10.34	0.000	0.000	0.000	0.000	0
Ten Daily III	13.75	0.000	0.000	0.000	0.000	0	10.69	0.000	0.000	0.000	0.000	0	9.669	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 1250954

Annual Sediment Load for period : 2005-2017

Station Name : Mahi at Khanpur (01 02 13 012) **Division : Mahi Division, Gandhinagar**

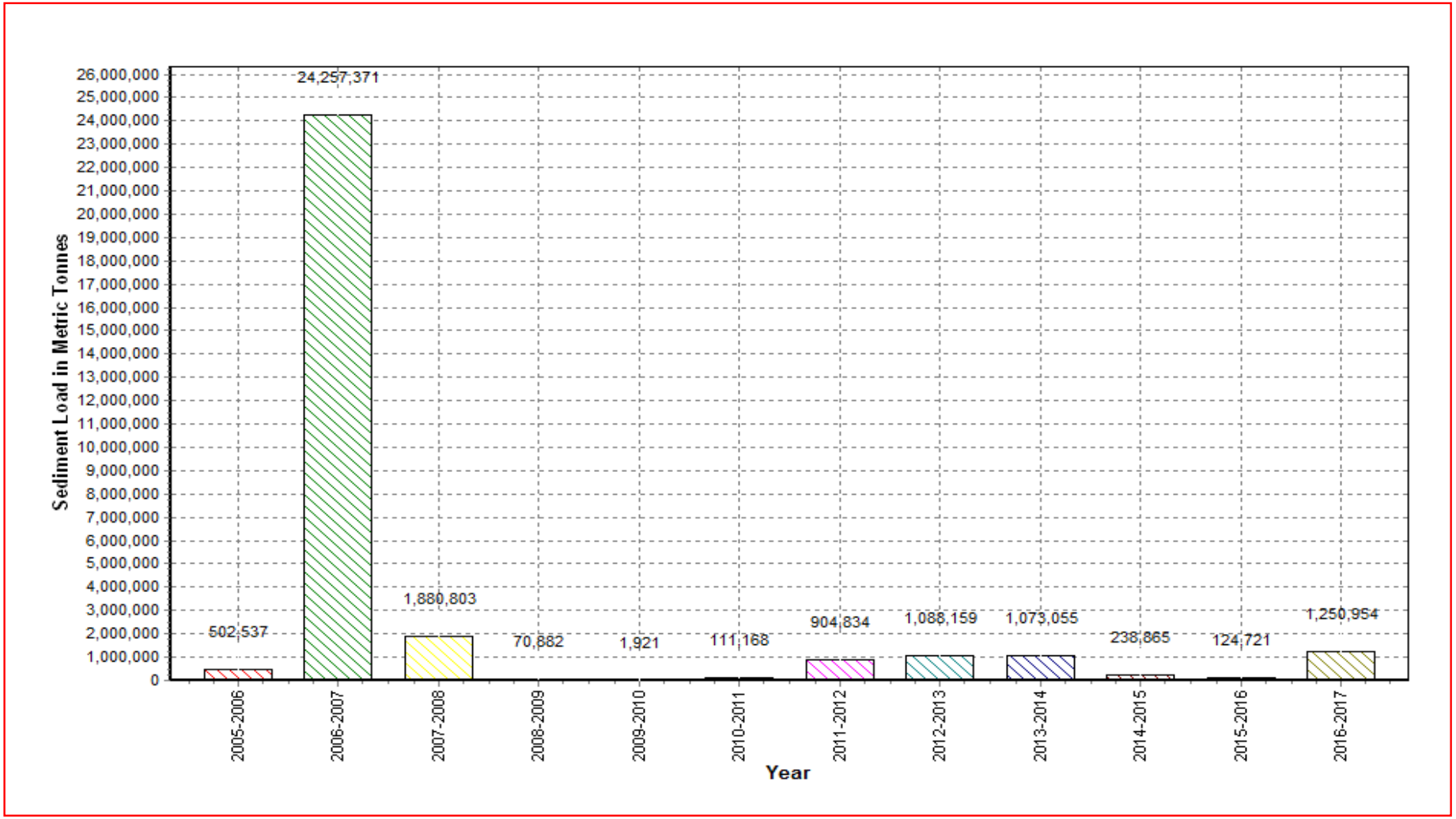
Local River : Mahi **Sub-Division : Mahi Sub Divn., Kadana**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2005-2006	497519	5018	502537	2779
2006-2007	24257371	0	24257371	21880
2007-2008	1876145	4657	1880803	6737
2008-2009	68954	1928	70882	868
2009-2010	1776	145	1921	553
2010-2011	111057	111	111168	1078
2011-2012	904816	19	904834	5014
2012-2013	1088159	0	1088159	7039
2013-2014	1073055	0	1073055	8787
2014-2015	238865	0	238865	2204
2015-2016	124721	0	124721	2692
2016-2017	1250954	0	1250954	5977

Annual Sediment Load for the period: 2005-2017

Station Name : Mahi at Khanpur (01 02 13 012)
Local River : Mahi

Division : Mahi Division, Gandhinagar
Sub-Division : Mahi Sub Divn., Kadana



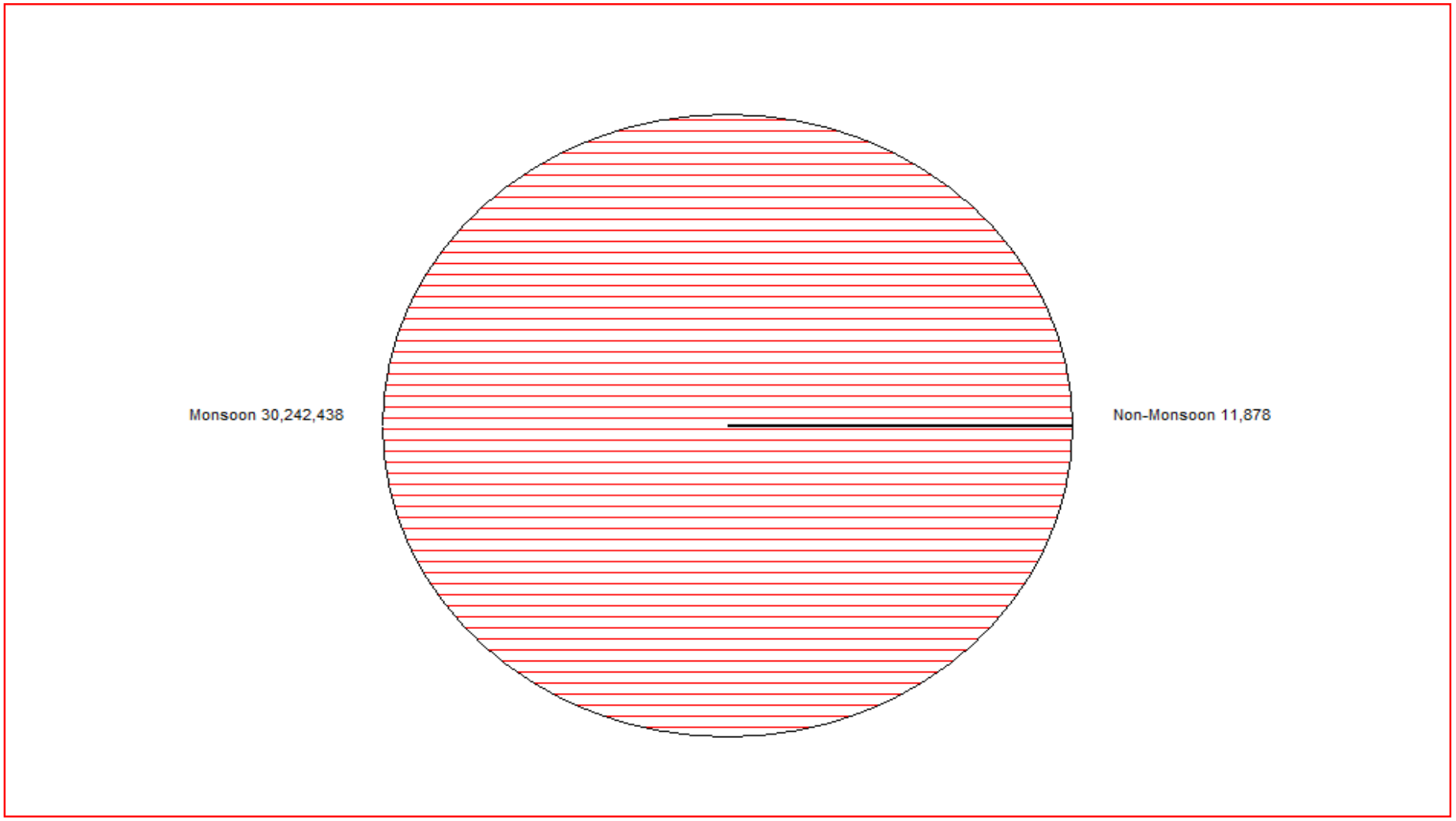
Seasonal Sediment Load for the period : 2005-2016

Station Name : Mahi at Khanpur (01 02 13 012)

Division : Mahi Division, Gandhinagar

Local River : Mahi

Sub-Division : Mahi Sub Divn., Kadana



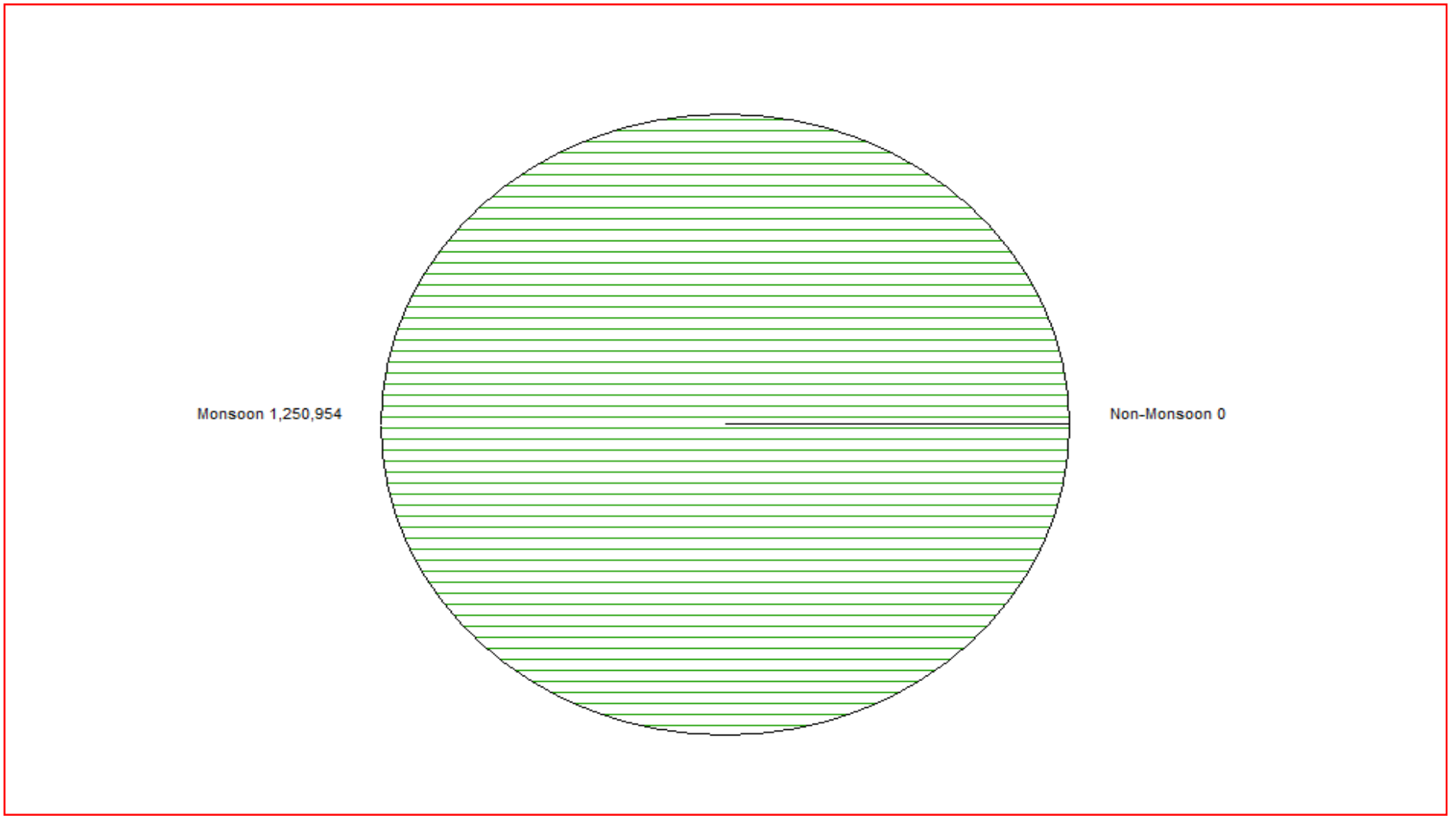
Seasonal Sediment Load for the Year: 2016-2017

Station Name : Mahi at Khanpur (01 02 13 012)

Division : Mahi Division, Gandhinagar

Local River : Mahi

Sub-Division : Mahi Sub Divn., Kadana



4.2 SABARMATI BASIN

4.2 Sabarmati Basin

The Sabarmati is one of the major west flowing interstate rivers in India. It originates in the foothills of Aravalli range at an elevation of 762 m above mean sea level. It traverses a length of 371 km in southwest direction. It flows initially in Rajasthan for about 48 km and enters Gujarat where it flows for 323 km to join Gulf of Cambay in the Arabian sea. The river drains an area of 21,674 sq.km. The basin is triangular in shape with the main river as the base and Watrak as the apex point. The basin lies in between 72^0 20' and 73^0 30' east longitudes and 20^0 and 25^0 north latitudes

The important tributaries are Sai, Wakal, Harnav, Hathmati and Watrak. The left bank tributary Wakal joins the river at 51 km of its run from the origin. It receives the Sai, a major right bank tributary near Mahuri and then Harnav on the left bank at about 103 km. Below this confluence, the Sabarmati flows through the Dharoi gorge. Emerging from the gorge, it passes through the plains. Two major tributaries viz. Hathmati and Watrak joins on the left bank of main stream at a distance of 170 km and 235 km respectively from the origin

The average annual rainfall in the Sabarmati basin is about 787 mm. The climate varies widely. In winter, the minimum temperature generally varies from 9 ^{0}C to14 ^{0}C. However, lower temperatures have also been recorded in several areas. The maximum temperature in the basin varies from 40 ^{0}C to 48 ^{0}C.

At present, there are 13 major/medium irrigation schemes. However, Dharoi Dam and Watrak project have 80 percent of the storage capacity of all the projects of the basin.

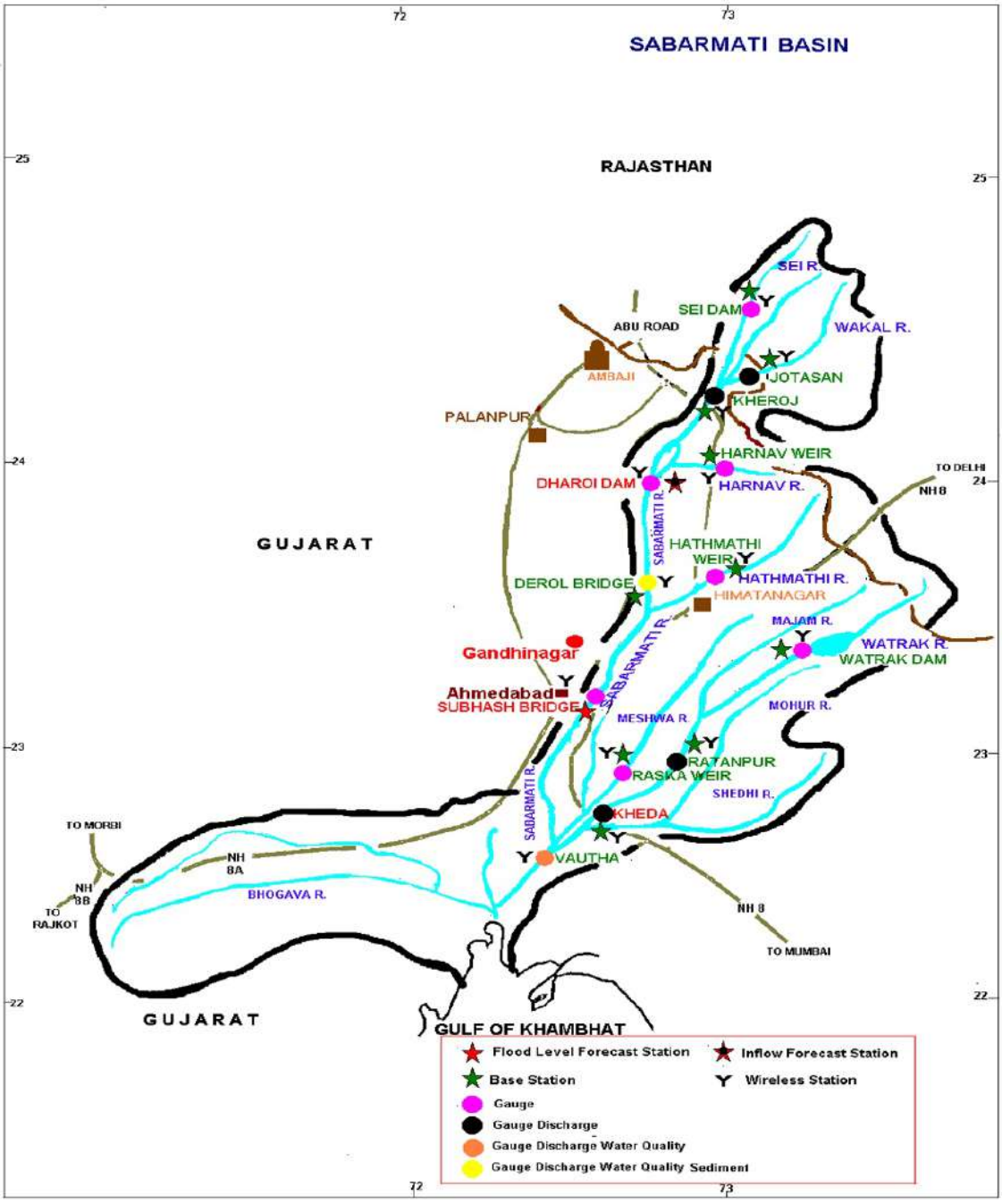
Dharoi Dam is located at Dharoi village, which is about 70km from Mehsana. In the Gujarat State the direct benefits of this project are water supply to Ahmedabad city and providing irrigation facilities. There is provision for 1.4 MW hydropower generations also.

There is only one monitoring station on main river Sabarmati for sediment analysis at Derol Bridge in Sabarkantha district. A brief about the station is given in section-4.2.1

4.2.1 Sabarmati at Derol Bridge

The station has a Catchment area of 6,724 sq km. The maximum sediment concentration of 0.017 g/l was observed on 28.08.2016. The total sediment load during the year is 4429 metric tonnes. The monsoon load constitutes 100 % of the total load. The annual sediment yield over the catchment during water year 2016-17 is 0.0005 mm.

Plate – 4.2 Sabarmati Basin



HISTORY SHEET

		Water Year	**: 2016-17**
Site	**: Sabarmati at Derol Bridge**	**Code**	**: 01 02 12 006**
State	: Gujarat	District	Sabarkantha
Basin	: Sabarmati	Independent River	: Sabarmati
Tributary	: Sabarmati	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Sabarmati
Division	: Mahi Division, Gandhinagar	Sub-Division	: N.W.R.Sub Div., Himatnagar
Drainage Area	: 6724 Sq. Km.	Bank	: Left
Latitude	: 23°34'24" N	Longitude	: 72°48'25" E
Zero of Gauge (m)	: 89 (m.s.l) 87 (m.s.l)	19-08-1980 01-06-2005	- 31-05-2005
	Opening Date	Closing Date	
Gauge	: 19-08-1980		
Discharge	: 01-06-1991		
Sediment	: 25-09-1992		
Water Quality	: 15-07-1992		

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Sabarmati at Derol Bridge (01 02 12 006) **Division : Mahi Division, Gandhinagar**

Local River : Sabarmati **Sub-Division : N.W.R.Sub Div., Himatnagar**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0							1.810	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0							106.9	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0							5.650	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0							2.740	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	45.79	0.000	0.000	0.000	0.000	0	2.685	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	4.403	0.000	0.000	0.000	0.000	0	2.290	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	1.811	0.000	0.000	0.000	0.000	0	1.750	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.740	0.000	0.000	0.000	0.000	0	1.360	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.590	0.000	0.000	0.000	0.000	0	1.304	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.538	0.000	0.000	0.000	0.000	0	0.922	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.506	0.000	0.000	0.000	0.000	0	0.590	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.590	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.590	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.758	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	524.6	0.000	0.000	0.009	0.009	426
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	830.3	0.000	0.000	0.011	0.011	803
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	427.6	0.000	0.000	0.011	0.011	388
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	116.3	0.000	0.000	0.012	0.012	121
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	32.09	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	563.7	0.000	0.000	0.017	0.017	818
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	221.6	0.000	0.000	0.011	0.011	218
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	224.6	0.000	0.000	0.014	0.014	279
31							0.000	0.000	0.000	0.000	0.000	0	177.9	0.000	0.000	0.012	0.012	186
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0							10.87	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	6.797	0.000	0.000	0.000	0.000	0	1.988	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	283.6	0.000	0.000	0.009	0.009	295
Monthly Total						**0**						**0**						**3240**

Annual Sediment Load (Metric Tonnes) : 4429

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Sabarmati at Derol Bridge (01 02 12 006) **Division : Mahi Division, Gandhinagar**

Local River : Sabarmati **Sub-Division : N.W.R.Sub Div., Himatnagar**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	360.6	0.000	0.000	0.009	0.009	280	1.070	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0
2	312.6	0.000	0.000	0.011	0.011	286	1.090	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
3	218.8	0.000	0.000	0.017	0.017	329	0.667	0.000	0.000	0.000	0.000	0	0.060	0.000	0.000	0.000	0.000	0
4	110.3	0.000	0.000	0.010	0.010	93	3.157	0.000	0.000	0.000	0.000	0	0.060	0.000	0.000	0.000	0.000	0
5	129.6	0.000	0.000	0.014	0.014	152	151.9	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	18.73	0.000	0.000	0.000	0.000	0	201.9	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	16.49	0.000	0.000	0.000	0.000	0	28.55	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	16.74	0.000	0.000	0.000	0.000	0	225.3	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	9.375	0.000	0.000	0.000	0.000	0	83.59	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	7.938	0.000	0.000	0.000	0.000	0	14.99	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	9.310	0.000	0.000	0.000	0.000	0	8.730	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	4.255	0.000	0.000	0.000	0.000	0	6.580	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	6.090	0.000	0.000	0.000	0.000	0	3.324	0.000	0.000	0.000	0.000	0	0.590	0.000	0.000	0.000	0.000	0
14	5.620	0.000	0.000	0.000	0.000	0	3.199	0.000	0.000	0.000	0.000	0	0.590	0.000	0.000	0.000	0.000	0
15	120.5	0.000	0.000	0.000	0.000	0	3.190	0.000	0.000	0.000	0.000	0	0.590	0.000	0.000	0.000	0.000	0
16	104.8	0.000	0.000	0.000	0.000	0	3.060	0.000	0.000	0.000	0.000	0	0.590	0.000	0.000	0.000	0.000	0
17	37.88	0.000	0.000	0.015	0.015	48	2.593	0.000	0.000	0.000	0.000	0	0.590	0.000	0.000	0.000	0.000	0
18	28.55	0.000	0.000	0.000	0.000	0	2.404	0.000	0.000	0.000	0.000	0	0.460	0.000	0.000	0.000	0.000	0
19	15.37	0.000	0.000	0.000	0.000	0	1.896	0.000	0.000	0.000	0.000	0	0.460	0.000	0.000	0.000	0.000	0
20	13.75	0.000	0.000	0.000	0.000	0	1.488	0.000	0.000	0.000	0.000	0	0.350	0.000	0.000	0.000	0.000	0
21	7.341	0.000	0.000	0.000	0.000	0	1.372	0.000	0.000	0.000	0.000	0	0.350	0.000	0.000	0.000	0.000	0
22	6.210	0.000	0.000	0.000	0.000	0	1.329	0.000	0.000	0.000	0.000	0	0.350	0.000	0.000	0.000	0.000	0
23	6.007	0.000	0.000	0.000	0.000	0	1.400	0.000	0.000	0.000	0.000	0	0.350	0.000	0.000	0.000	0.000	0
24	4.274	0.000	0.000	0.000	0.000	0	1.275	0.000	0.000	0.000	0.000	0	0.250	0.000	0.000	0.000	0.000	0
25	9.310	0.000	0.000	0.000	0.000	0	1.243	0.000	0.000	0.000	0.000	0	0.250	0.000	0.000	0.000	0.000	0
26	2.849	0.000	0.000	0.000	0.000	0	1.317	0.000	0.000	0.000	0.000	0	0.250	0.000	0.000	0.000	0.000	0
27	2.054	0.000	0.000	0.000	0.000	0	1.235	0.000	0.000	0.000	0.000	0	0.250	0.000	0.000	0.000	0.000	0
28	2.656	0.000	0.000	0.000	0.000	0	0.460	0.000	0.000	0.000	0.000	0	0.250	0.000	0.000	0.000	0.000	0
29	2.702	0.000	0.000	0.000	0.000	0	0.350	0.000	0.000	0.000	0.000	0	0.250	0.000	0.000	0.000	0.000	0
30	2.038	0.000	0.000	0.000	0.000	0	0.250	0.000	0.000	0.000	0.000	0	0.250	0.000	0.000	0.000	0.000	0
31							0.250	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	120.1	0.000	0.000	0.006	0.006	114	71.22	0.000	0.000	0.000	0.000	0	0.040	0.000	0.000	0.000	0.000	0
Ten Daily II	34.62	0.000	0.000	0.001	0.001	5	3.646	0.000	0.000	0.000	0.000	0	0.422	0.000	0.000	0.000	0.000	0
Ten Daily III	4.544	0.000	0.000	0.000	0.000	0	0.953	0.000	0.000	0.000	0.000	0	0.280	0.000	0.000	0.000	0.000	0
Monthly Total						**1189**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 4429

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Sabarmati at Derol Bridge (01 02 12 006) **Division : Mahi Division, Gandhinagar**

Local River : Sabarmati **Sub-Division : N.W.R.Sub Div., Himatnagar**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
2	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
3	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
4	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
5	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
6	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
7	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
8	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
9	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
10	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
11	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
12	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
13	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
14	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
15	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
16	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
17	0.170	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
18	0.170	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
19	0.170	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
20	0.170	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
21	0.170	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
22	0.170	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.060	0.000	0.000	0.000	0.000	0
23	0.170	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.060	0.000	0.000	0.000	0.000	0
24	0.170	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.060	0.000	0.000	0.000	0.000	0
25	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0	0.060	0.000	0.000	0.000	0.000	0
26	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0	0.060	0.000	0.000	0.000	0.000	0
27	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0	0.060	0.000	0.000	0.000	0.000	0
28	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0	0.060	0.000	0.000	0.000	0.000	0
29	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0						
30	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0						
31	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.250	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
Ten Daily II	0.218	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
Ten Daily III	0.170	0.000	0.000	0.000	0.000	0	0.132	0.000	0.000	0.000	0.000	0	0.066	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 4429

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Sabarmati at Derol Bridge (01 02 12 006) **Division : Mahi Division, Gandhinagar**

Local River : Sabarmati **Sub-Division : N.W.R.Sub Div., Himatnagar**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.006	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 4429

Annual Sediment Load for period : 2005-2017

Station Name : Sabarmati at Derol Bridge (01 02 12 006) **Division : Mahi Division, Gandhinagar**

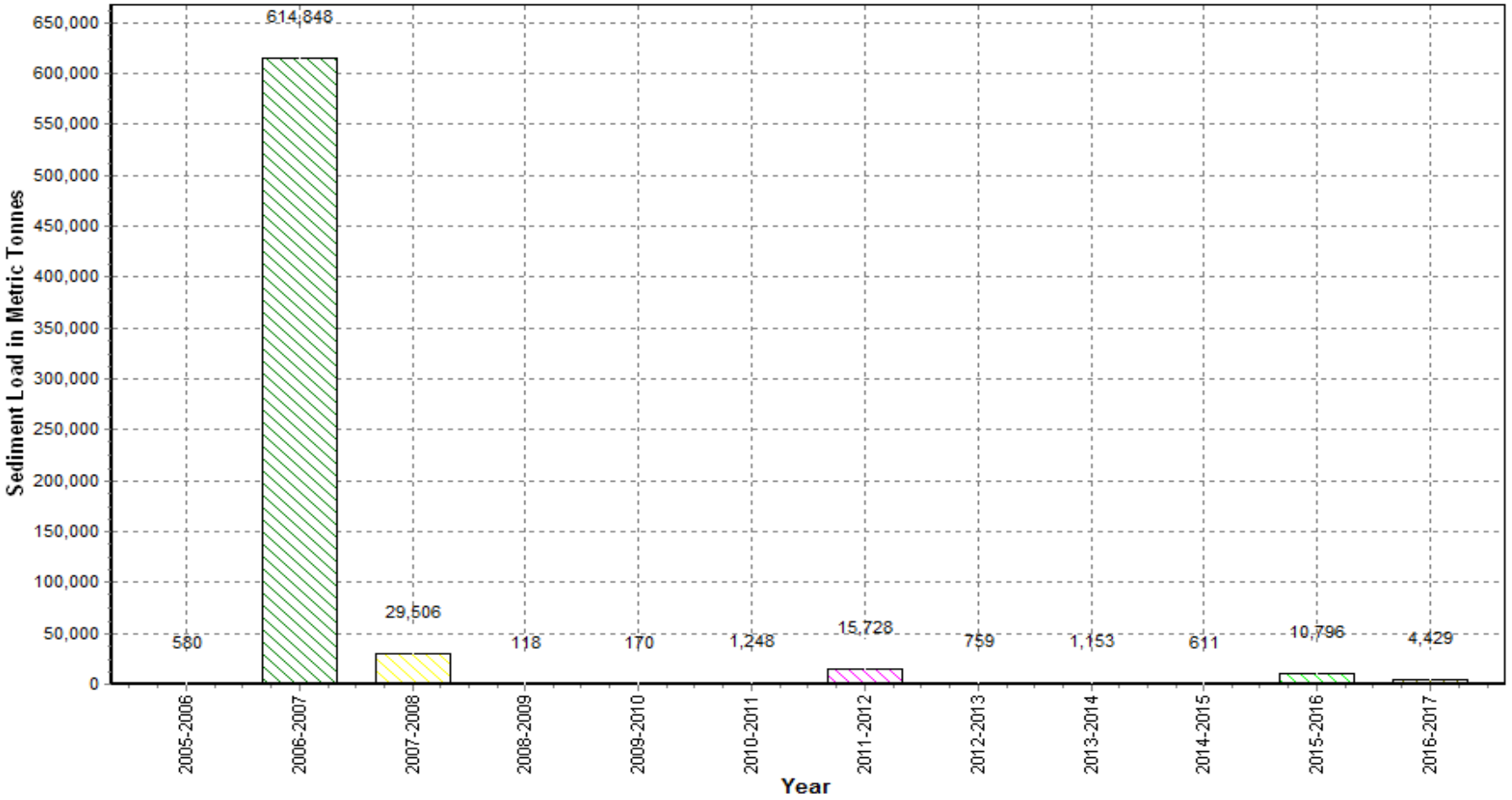
Local River : Sabarmati **Sub-Division : N.W.R.Sub Div., Himatnagar**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2005-2006	580	0	580	157
2006-2007	614848	0	614848	2864
2007-2008	29506	0	29506	693
2008-2009	118	0	118	26
2009-2010	170	0	170	14
2010-2011	1248	0	1248	32
2011-2012	15728	0	15728	326
2012-2013	759	0	759	50
2013-2014	1153	0	1153	61
2014-2015	611	0	611	38
2015-2016	10796	0	10796	549
2016-2017	4429	0	4429	490

Annual Sediment Load for the period: 2005-2017

Station Name : Sabarmati at Derol Bridge (01 02 12 006) **Division : Mahi Division, Gandhinagar**

Local River : Sabarmati **Sub-Division : N.W.R.Sub Div., Himatnagar**



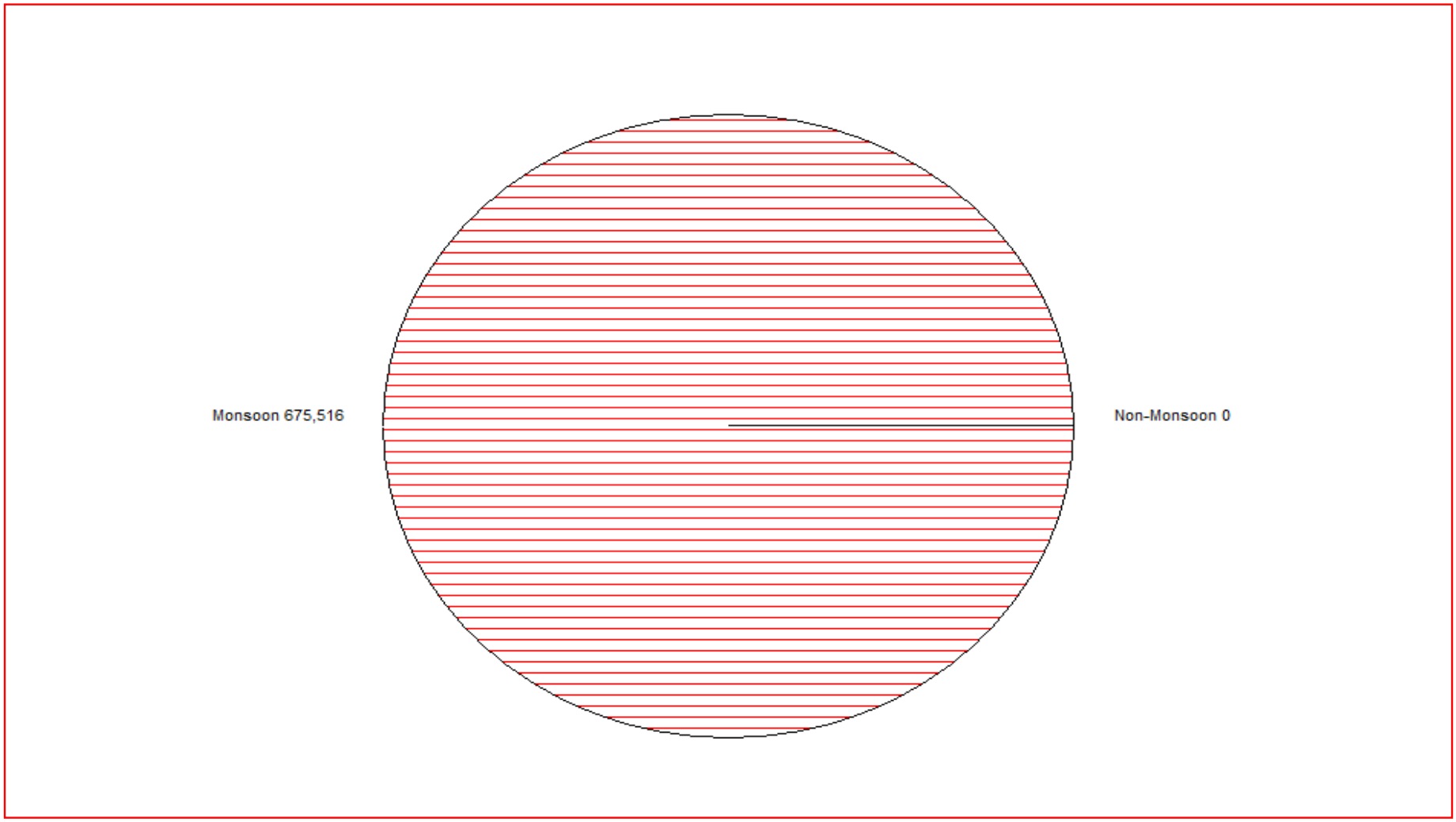
Seasonal Sediment Load for the period : 2005-2016

Station Name : Sabarmati at Derol Bridge (01 02 12 006)

Division : Mahi Division, Gandhinagar

Local River : Sabarmati

Sub-Division : N.W.R.Sub Div., Himatnagar



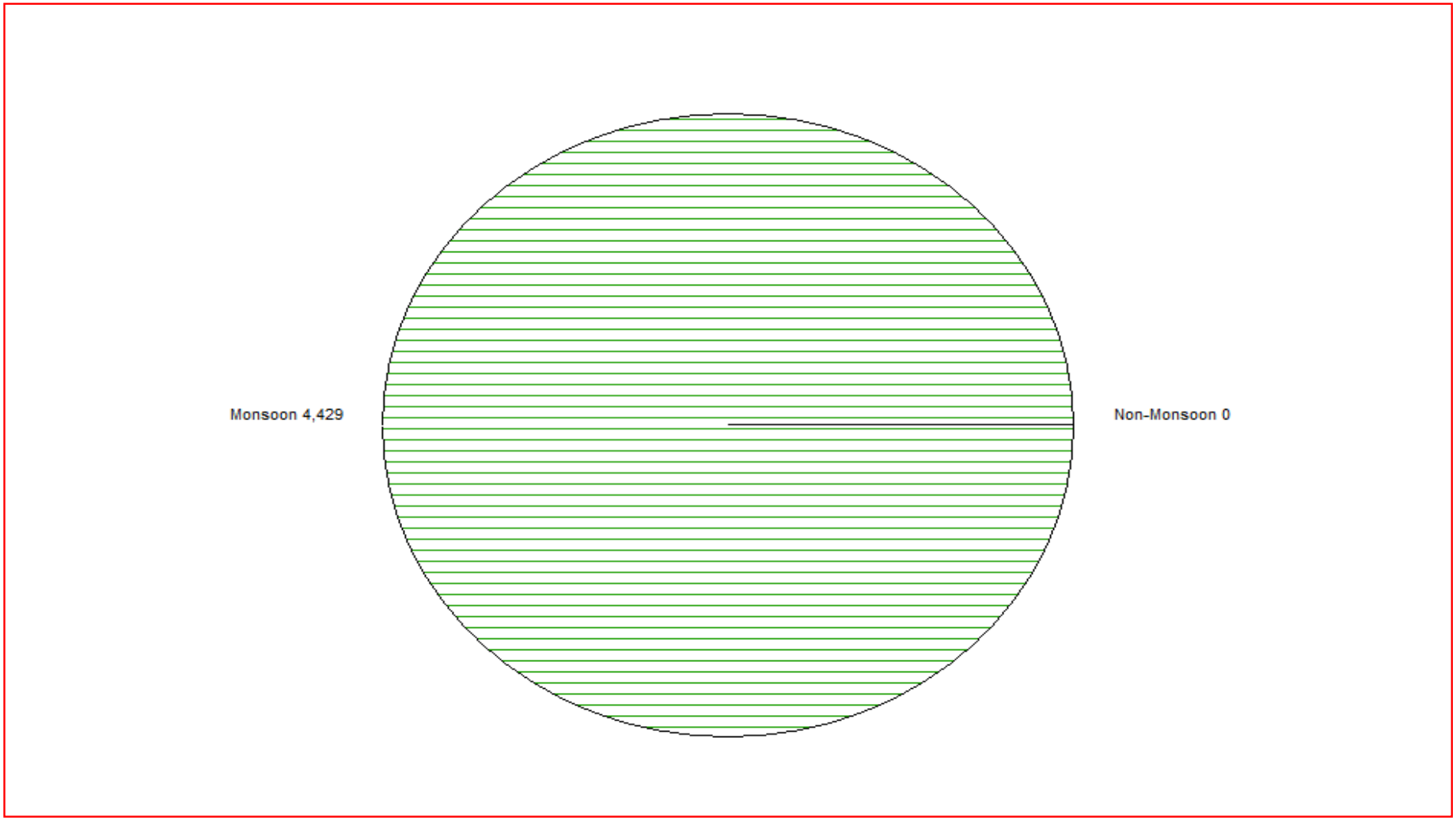
Seasonal Sediment Load for the Year: 2016-2017

Station Name : Sabarmati at Derol Bridge (01 02 12 006)

Local River : Sabarmati

Division : Mahi Division, Gandhinagar

Sub-Division : N.W.R.Sub Div., Himatnagar



4.3 SHETRUNJI BASIN

4.3 Shetrunji Basin

The Shetrunji is one of the major rivers of Saurashtra. It rises at Chachai hills in Gir Forest of Junagadh district of Gujarat at an elevation of 380 m above mean sea level. It flows towards east direction and empties into the gulf of Cambay. The total length of this east flowing river from its origin to the outfall is 182 km. The river drains an area of 5514 sq.km. The basin is situated approximately between east longitudes of 700 50' and 72^0 10' and between north latitudes of 21^0 00' and 21^0 47'.

The Shetrunji receives several tributaries on both the banks. There are 9 tributaries having length more than 15 km. Out of which Safara, Shel, Kharai and Talaji are four tributaries on the right bank and remaining five tributaries viz. Stali, Thebu, Gagadia, Rajawal and Kharo are on the left bank. The drainage system on left bank of Shetrunji is more extensive as compared to the right bank area.

The average rainfall in the Shetrunji basin is 604 mm. In winter, the minimum temperature varies form 6 ^oC to 18 ^oC.

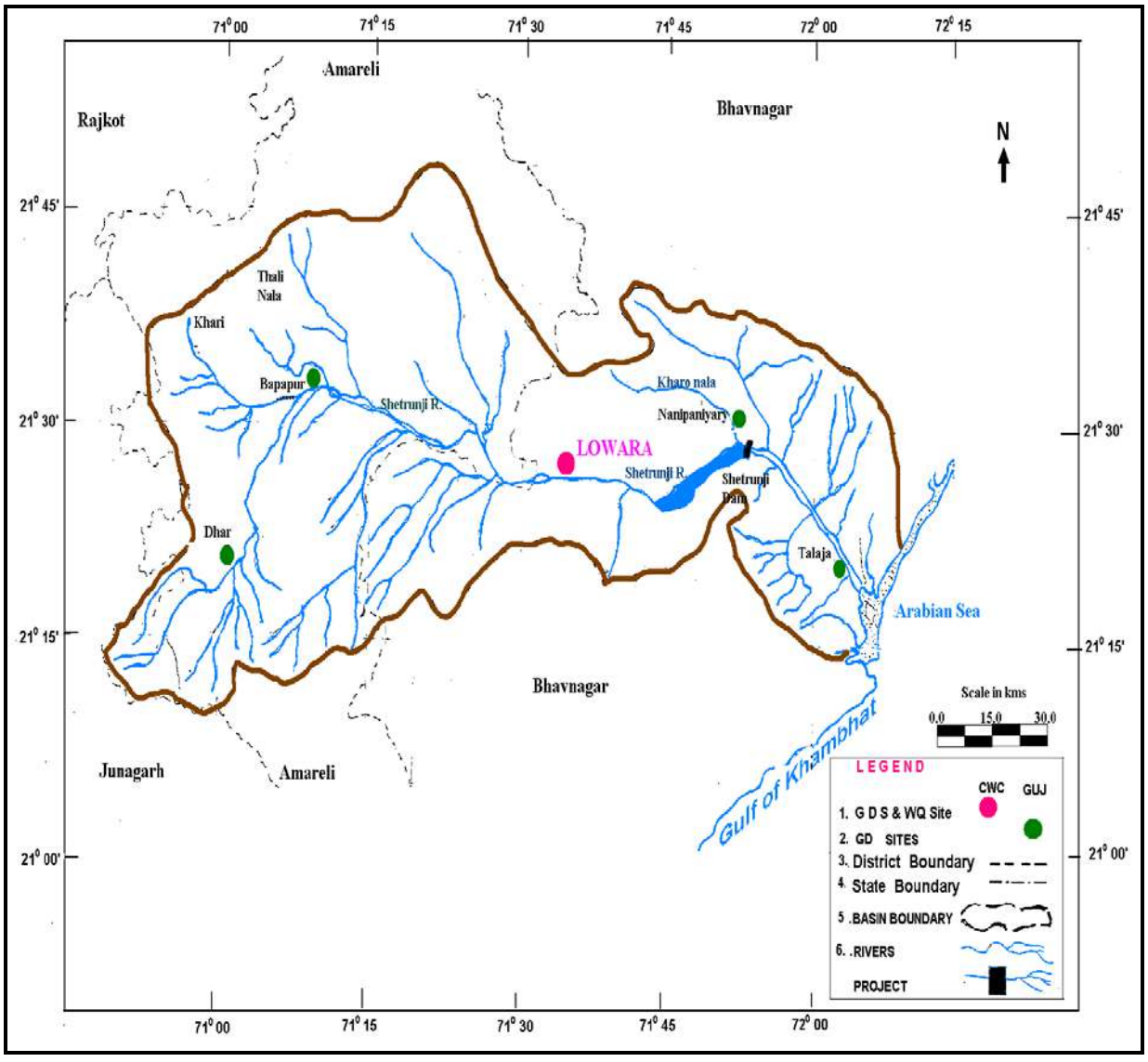
At present, there are 16 completed irrigation schemes. "Shetrunji Irrigation Scheme" is a major project and remaining 15 projects are medium irrigation schemes.

The only one monitoring station for sediment analysis is selected at Luwara. A brief about the station is given in section- 4.5.1

4.5.1 Shetrunji at Lowara

The station has a Catchment area of 3,953 sq km. The maximum sediment concentration of 1.617 g/l was observed on 19.09.2016. The total sediment load during the year is 150862 metric tonnes. The monsoon load constitutes 100 % of the total load. The annual sediment yield over the catchment during water year 2016-17 is 0.0273 mm.

Plate – 4.3 Shetrunji Basin



HISTORY SHEET

		Water Year	**: 2016-17**
Site	**: Shetrunji at Lowara**	**Code**	**: 01 02 09 001**
State	: Gujarat	District	Bhavnagar
Basin	: WFR of Kach.-Saur. & Luni	Independent River	: Shetrunji
Tributary	: Shetrunji	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Shetrunji
Division	: Mahi Division, Gandhinagar	Sub-Division	: Sabarmati Sub Divn., Ahmedabad
Drainage Area	: 3953 Sq. Km.	Bank	: Left
Latitude	: 21°26'36" N	Longitude	: 71°33'42" E
Zero of Gauge (m)	: 57 (m.s.l) 56 (m.s.l)	14-11-1970 01-02-1991	- 31-01-1991
	Opening Date	Closing Date	
Gauge	: 29-11-1970		
Discharge	: 29-11-1970		
Sediment	: 25-07-1973		
Water Quality	: 01-07-1977		

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Shetrunji at Lowara (01 02 09 001) **Division : Mahi Division, Gandhinagar**

Local River : Shetrunji **Sub-Division : Sabarmati Sub Divn., Ahmedabad**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1							0.000	0.000	0.000	0.000	0.000	0	0.110	0.000	0.000	0.000	0.000	0
2							6.425	0.000	0.000	0.000	0.000	0	0.070	0.000	0.000	0.000	0.000	0
3							50.47	0.000	0.000	0.115	0.115	501	0.000	0.000	0.000	0.000	0.000	0
4							45.31	0.000	0.000	0.104	0.104	405	0.000	0.000	0.000	0.000	0.000	0
5							3.164	0.000	0.000	0.000	0.000	0	1.432	0.000	0.000	0.000	0.000	0
6							0.820	0.000	0.000	0.000	0.000	0	5.516	0.000	0.000	0.000	0.000	0
7							1.039	0.000	0.000	0.000	0.000	0	0.980	0.000	0.000	0.000	0.000	0
8							0.491	0.000	0.000	0.000	0.000	0	0.620	0.000	0.000	0.000	0.000	0
9							0.130	0.000	0.000	0.000	0.000	0	0.386	0.000	0.000	0.000	0.000	0
10							0.000	0.000	0.000	0.000	0.000	0	14.08	0.000	0.000	0.032	0.032	39
11							0.000	0.000	0.000	0.000	0.000	0	2.827	0.000	0.000	0.001	0.001	0
12							0.000	0.000	0.000	0.000	0.000	0	0.836	0.000	0.000	0.000	0.000	0
13							0.000	0.000	0.000	0.000	0.000	0	0.398	0.000	0.000	0.000	0.000	0
14							0.000	0.000	0.000	0.000	0.000	0	0.170	0.000	0.000	0.000	0.000	0
15							0.000	0.000	0.000	0.000	0.000	0	0.050	0.000	0.000	0.000	0.000	0
16							0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17							0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18							0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19							0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20							0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21							0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22							0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.100	0.000	0.000	0.000	0.000	0
29	3.067	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.100	0.000	0.000	0.000	0.000	0
30	0.412	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	1.142	0.000	0.000	0.000	0.000	0
31							0.470	0.000	0.000	0.000	0.000	0	1.083	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I							10.78	0.000	0.000	0.022	0.022	91	2.319	0.000	0.000	0.003	0.003	4
Ten Daily II							0.000	0.000	0.000	0.000	0.000	0	0.428	0.000	0.000	0.000	0.000	0
Ten Daily III	0.435	0.000	0.000	0.000	0.000	0	0.043	0.000	0.000	0.000	0.000	0	0.220	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**907**						**39**

Annual Sediment Load (Metric Tonnes) : 150862

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Shetrunji at Lowara (01 02 09 001) **Division : Mahi Division, Gandhinagar**

Local River : Shetrunji **Sub-Division : Sabarmati Sub Divn., Ahmedabad**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.693	0.000	0.000	0.000	0.000	0	1.107	0.000	0.000	0.000	0.000	0	0.840	0.000	0.000	0.000	0.000	0
2	0.705	0.000	0.000	0.000	0.000	0	1.150	0.000	0.000	0.000	0.000	0	0.828	0.000	0.000	0.000	0.000	0
3	0.449	0.000	0.000	0.000	0.000	0	1.145	0.000	0.000	0.000	0.000	0	0.802	0.000	0.000	0.000	0.000	0
4	0.200	0.000	0.000	0.000	0.000	0	1.893	0.000	0.000	0.000	0.000	0	0.791	0.000	0.000	0.000	0.000	0
5	0.100	0.000	0.000	0.000	0.000	0	3.883	0.000	0.000	0.000	0.000	0	0.769	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	26.70	0.000	0.000	0.061	0.061	142	0.920	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	35.88	0.000	0.000	0.083	0.083	256	0.780	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	54.36	0.000	0.000	0.125	0.125	587	0.759	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	7.855	0.000	0.000	0.018	0.018	12	0.767	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	4.286	0.000	0.000	0.009	0.009	3	0.753	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	2.973	0.000	0.000	0.007	0.007	2	0.719	0.000	0.000	0.000	0.000	0
12	0.080	0.000	0.000	0.000	0.000	0	2.618	0.000	0.000	0.006	0.006	1	0.715	0.000	0.000	0.000	0.000	0
13	0.100	0.000	0.000	0.000	0.000	0	1.662	0.000	0.000	0.000	0.000	0	0.820	0.000	0.000	0.000	0.000	0
14	0.050	0.000	0.000	0.000	0.000	0	1.790	0.000	0.000	0.000	0.000	0	0.770	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	1.727	0.000	0.000	0.000	0.000	0	0.696	0.000	0.000	0.000	0.000	0
16	30.87	0.000	0.000	0.071	0.071	189	1.620	0.000	0.000	0.000	0.000	0	0.689	0.000	0.000	0.000	0.000	0
17	5.178	0.000	0.000	0.001	0.001	0	1.551	0.000	0.000	0.000	0.000	0	0.637	0.000	0.000	0.000	0.000	0
18	31.63	0.000	0.000	0.073	0.073	198	1.495	0.000	0.000	0.000	0.000	0	0.614	0.000	0.000	0.000	0.000	0
19	850.9	0.001	0.001	1.615	1.617	118838	1.446	0.000	0.000	0.000	0.000	0	0.601	0.000	0.000	0.000	0.000	0
20	321.2	0.000	0.001	0.610	0.612	16971	1.335	0.000	0.000	0.000	0.000	0	0.680	0.000	0.000	0.000	0.000	0
21	252.9	0.000	0.001	0.580	0.581	12688	1.294	0.000	0.000	0.000	0.000	0	0.581	0.000	0.000	0.000	0.000	0
22	10.05	0.000	0.000	0.023	0.023	20	1.306	0.000	0.000	0.000	0.000	0	0.572	0.000	0.000	0.000	0.000	0
23	5.023	0.000	0.000	0.012	0.012	5	1.278	0.000	0.000	0.000	0.000	0	0.550	0.000	0.000	0.000	0.000	0
24	3.112	0.000	0.000	0.006	0.006	2	1.217	0.000	0.000	0.000	0.000	0	0.531	0.000	0.000	0.000	0.000	0
25	2.470	0.000	0.000	0.004	0.004	1	1.160	0.000	0.000	0.000	0.000	0	0.523	0.000	0.000	0.000	0.000	0
26	1.844	0.000	0.000	0.000	0.000	0	1.055	0.000	0.000	0.000	0.000	0	0.428	0.000	0.000	0.000	0.000	0
27	1.330	0.000	0.000	0.000	0.000	0	1.008	0.000	0.000	0.000	0.000	0	0.358	0.000	0.000	0.000	0.000	0
28	1.285	0.000	0.000	0.000	0.000	0	0.987	0.000	0.000	0.000	0.000	0	0.430	0.000	0.000	0.000	0.000	0
29	1.192	0.000	0.000	0.000	0.000	0	0.943	0.000	0.000	0.000	0.000	0	0.376	0.000	0.000	0.000	0.000	0
30	1.166	0.000	0.000	0.000	0.000	0	1.150	0.000	0.000	0.000	0.000	0	0.403	0.000	0.000	0.000	0.000	0
31							0.860	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.215	0.000	0.000	0.000	0.000	0	13.83	0.000	0.000	0.030	0.030	100	0.801	0.000	0.000	0.000	0.000	0
Ten Daily II	124.0	0.000	0.000	0.237	0.237	13620	1.822	0.000	0.000	0.001	0.001	0	0.694	0.000	0.000	0.000	0.000	0
Ten Daily III	28.04	0.000	0.000	0.062	0.062	1272	1.115	0.000	0.000	0.000	0.000	0	0.475	0.000	0.000	0.000	0.000	0
Monthly Total						**148913**						**1003**						**0**

Annual Sediment Load (Metric Tonnes) : 150862

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Shetrunji at Lowara (01 02 09 001) **Division : Mahi Division, Gandhinagar**

Local River : Shetrunji **Sub-Division : Sabarmati Sub Divn., Ahmedabad**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.372	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.382	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.374	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.400	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.346	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.338	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.342	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.329	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.337	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.306	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.250	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.250	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.250	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.307	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.254	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.247	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.234	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.150	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.353	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.194	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 150862

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Shetrunji at Lowara (01 02 09 001) **Division : Mahi Division, Gandhinagar**

Local River : Shetrunji **Sub-Division : Sabarmati Sub Divn., Ahmedabad**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 150862

Annual Sediment Load for period : 2005-2017

Station Name : Shetrunji at Lowara (01 02 09 001) **Division : Mahi Division, Gandhinagar**

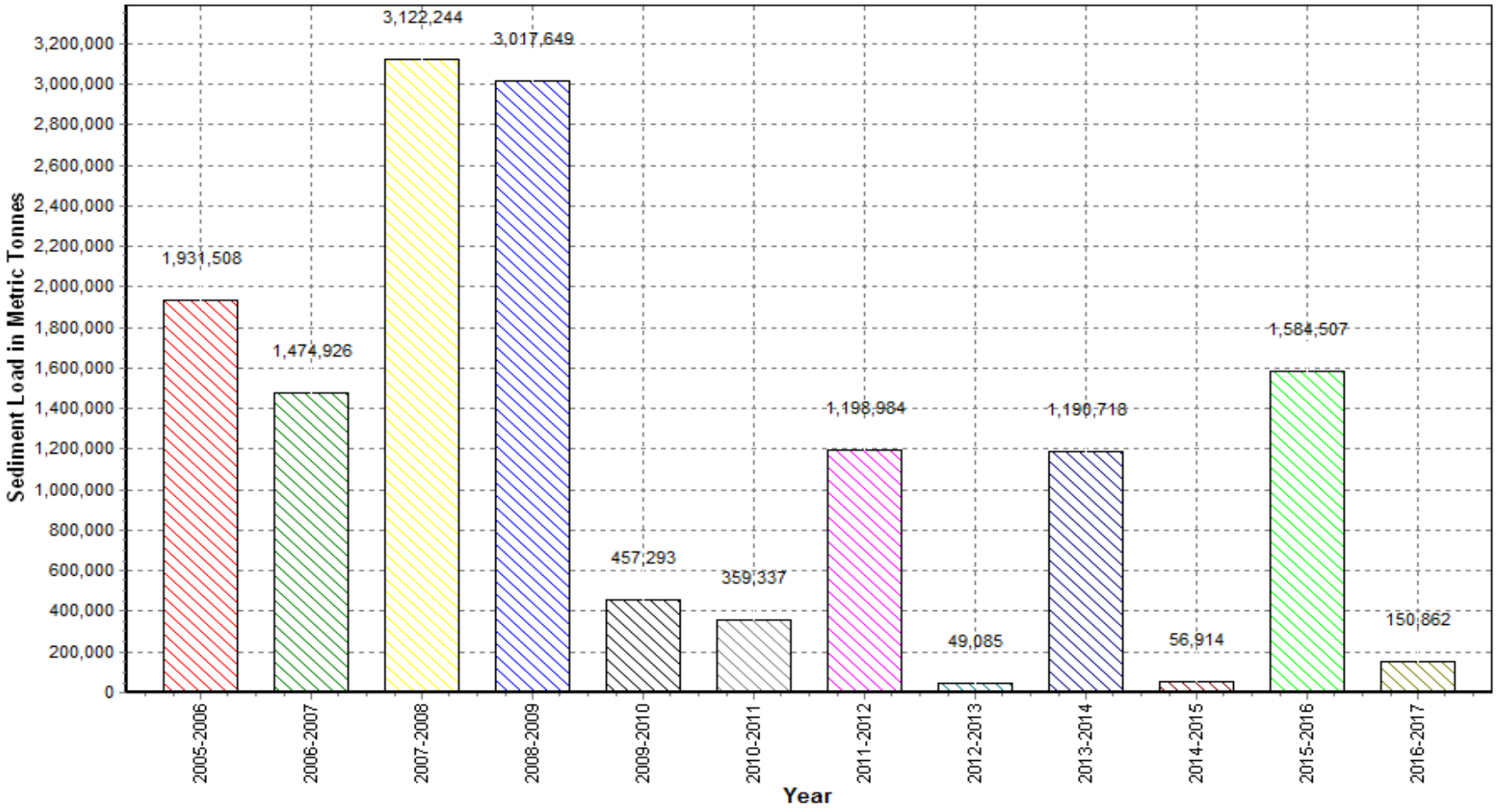
Local River : Shetrunji **Sub-Division : Sabarmati Sub Divn., Ahmedabad**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2005-2006	1931508	0	1931508	1055
2006-2007	1474926	0	1474926	629
2007-2008	3122244	0	3122244	1269
2008-2009	3017649	0	3017649	1061
2009-2010	457293	0	457293	177
2010-2011	359337	0	359337	572
2011-2012	1198984	0	1198984	506
2012-2013	49085	0	49085	54
2013-2014	1190718	0	1190718	426
2014-2015	56914	0	56914	127
2015-2016	1584507	0	1584507	440
2016-2017	150862	0	150862	161

Annual Sediment Load for the period: 2005-2017

Station Name : Shetrunji at Lowara (01 02 09 001)
Local River : Shetrunji

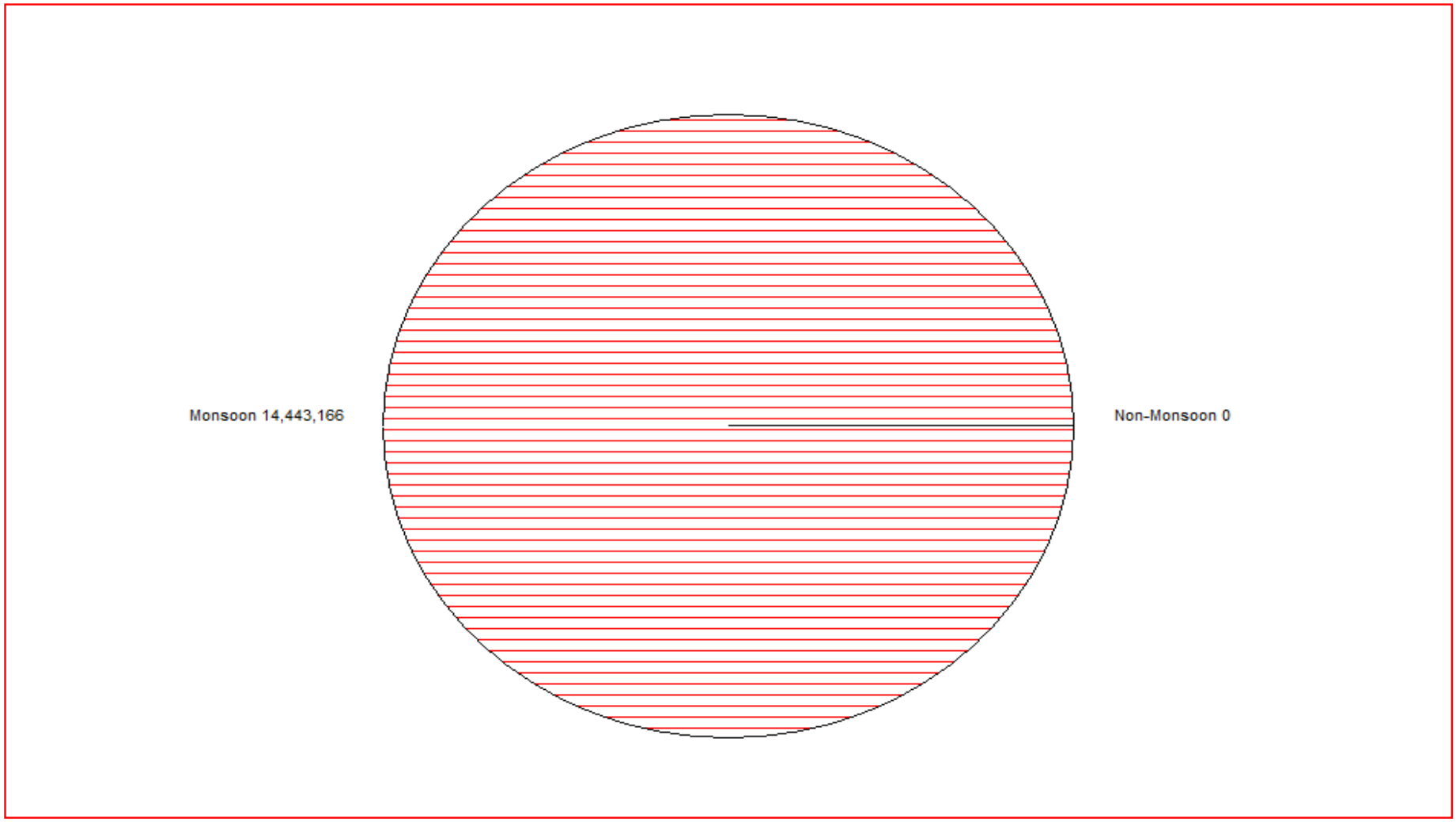
Division : Mahi Division, Gandhinagar
Sub-Division : Sabarmati Sub Divn., Ahmedabad



Seasonal Sediment Load for the period : 2005-2016

Station Name : Shetrunji at Lowara (01 02 09 001) **Division : Mahi Division, Gandhinagar**

Local River : Shetrunji **Sub-Division : Sabarmati Sub Divn., Ahmedabad**



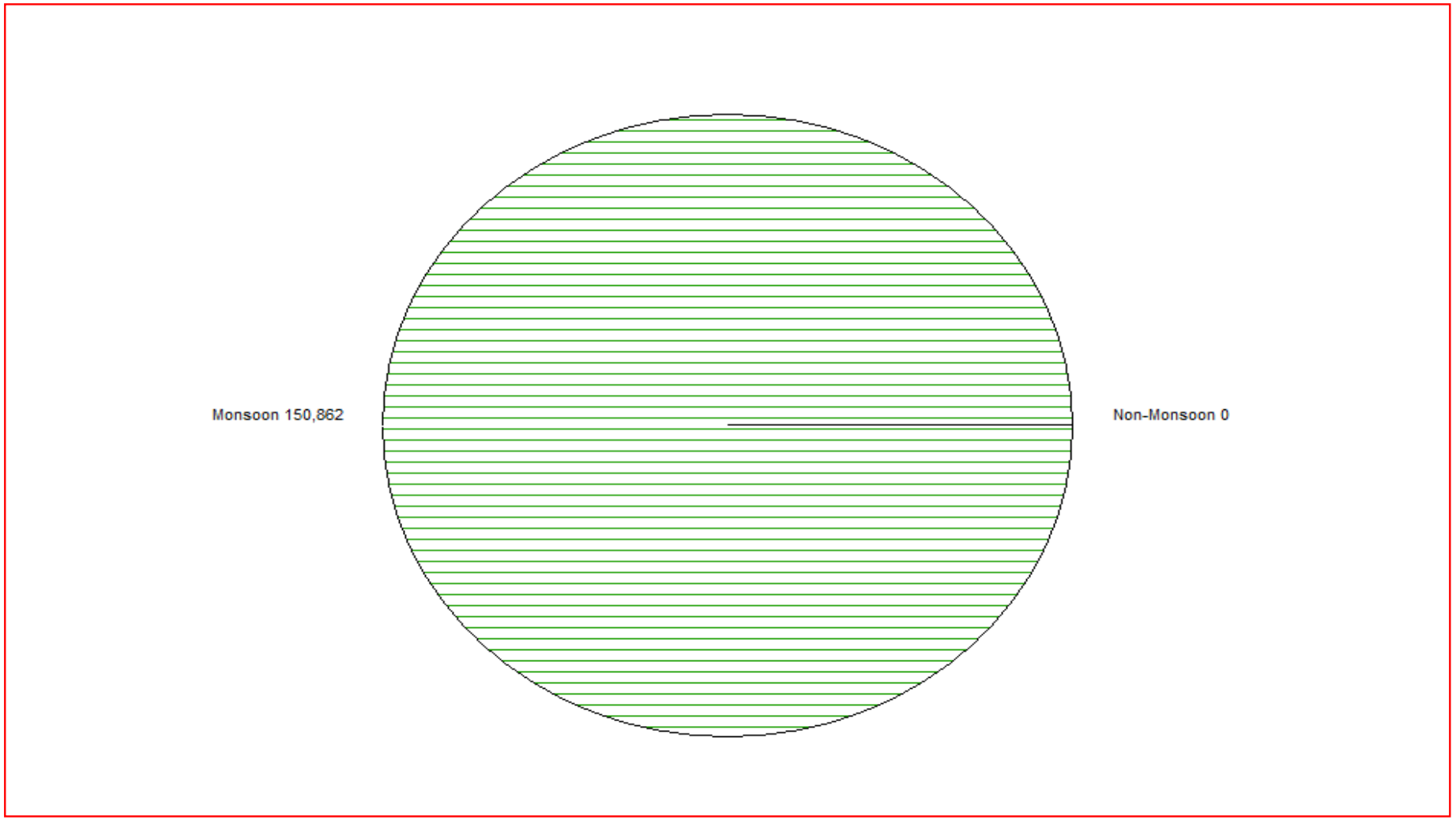
Seasonal Sediment Load for the Year: 2016-2017

Station Name : Shetrunji at Lowara (01 02 09 001)

Division : Mahi Division, Gandhinagar

Local River : Shetrunji

Sub-Division : Sabarmati Sub Divn., Ahmedabad



4.4 BHADAR BASIN

4.4 Bhadar Basin

The Bhadar is one of the major rivers of Kathaiwar (Saurashtra) peninsula in Gujarat. It originates near Vaddi (Aniali Village) about 26 km north – west of Jasdan in Rajkot district at an elevation of 261 m above mean sea level.

It flows towards South up to Jasdan and turns towards south - west upto Jetpur and finally changes its direction towards west till its confluence with Arabian sea at Naviobandar (Porbandar). The total length of this river is 198 km. It has a drainage area of 7094 sq.km out of which 706 sq km is in hilly and the rest in plain regions of Saurashtra. The basin lies between geographical co-ordinates of 21^0 25' and 22^0 10' north latitudes and 69^0 45' and 71^0 20' east longitudes. It drains about $1/7^{th}$ of the area of Saurashtra.

The Bhadar receives several tributaries on both the banks. There are 9 major tributaries having lengths more than 25 km out of which 6 tributaries namely Gandali, Chapparwadi, Phopal, Utawali, Moj and Venu are feeding from the right and the remaining 3 tributaries namely Vasavadi, Surwa and Galolio from the left. The drainage system of the river on right bank is more extensive as compared to the left bank.

The average rainfall in Bhadar basin is 625 mm. In winter the temperature vary between 4 ^{0}C and 15 ^{0}C in different Parts of the region. May is the hottest month. Maximum temperature varies between 40 ^{0}C and 45 ^{0}C.

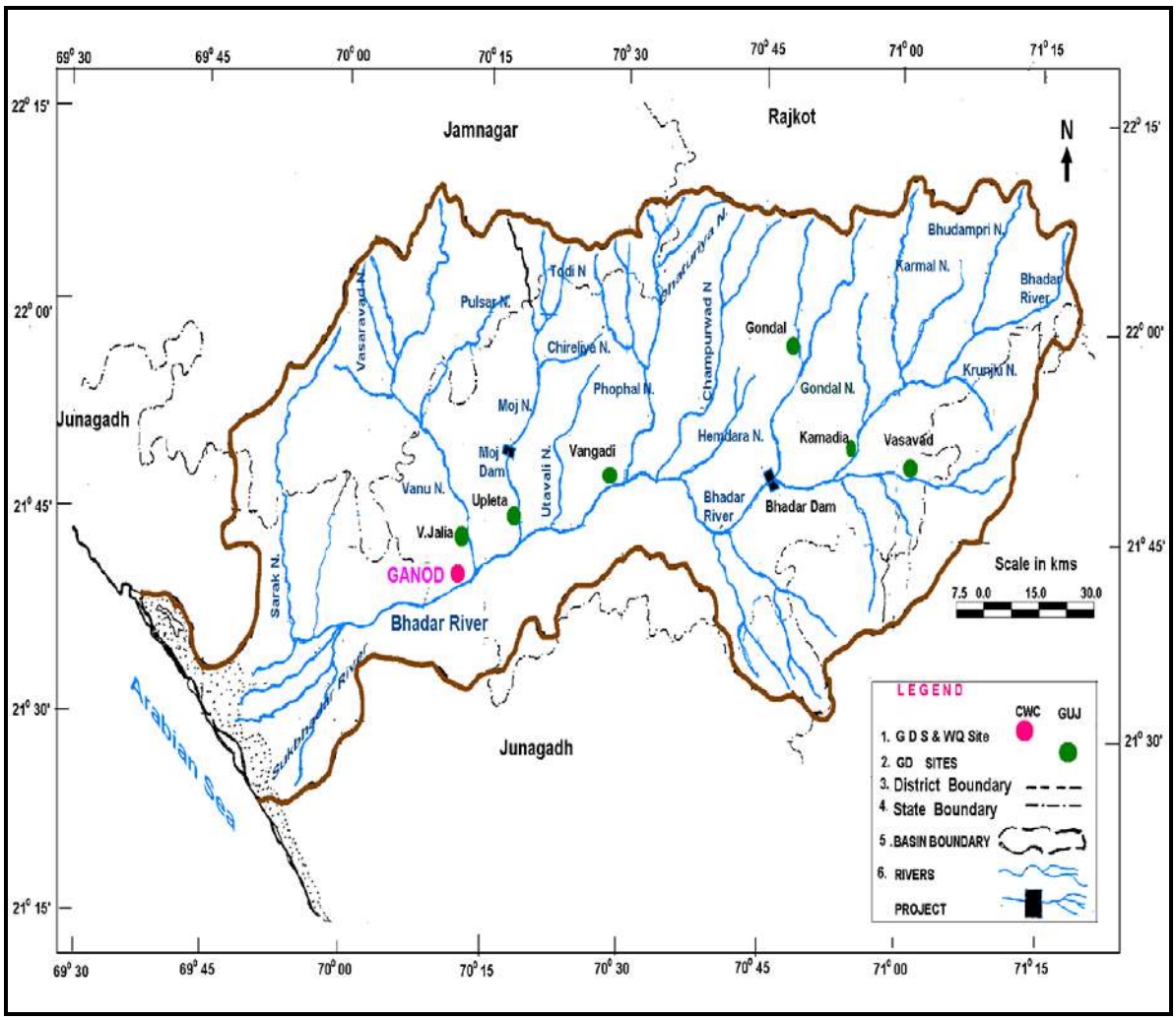
At present, there are 12 completed structures, either reservoirs or weirs, in Bhadar catchment.

There is only one monitoring station for gauge-discharge and sediment load analysis in this basin, which is near the mouth of river in plains of Rajkot district at Ganod. A brief about the station is given in section- 4.4.1

4.4.1. Bhadar at Ganod

The station has a Catchment area of 6,266 sq km. The maximum sediment concentration of 1.003 g/l was observed on 05.08.2016. The total sediment load during the year is 203479 metric tonnes. The monsoon load constitutes 100 % of the total load. The annual sediment yield over the catchment during water year 2016-17 is 0.0232 mm.

Plate – 4.4 Bhadar Basin



HISTORY SHEET

			Water Year	**:**	**2016-17**
Site	**:**	**Bhadar at Ganod**	**Code**	**:**	**01 02 07 001**
State	:	Gujarat	District		Rajkot
Basin	:	WFR of Kach.-Saur. & Luni	Independent River	:	Bhadar
Tributary	:	Bhadar	Sub Tributary	:	
Sub-Sub Tributary	:		Local River	:	Bhadar
Division	:	Mahi Division, Gandhinagar	Sub-Division	:	Sabarmati Sub Divn., Ahmedabad
Drainage Area	:	6266 Sq. Km.	Bank	:	Right
Latitude	:	21°39'53" N	Longitude	:	70°10'52" E
Zero of Gauge (m)	:	26 (m.s.l)	14-11-1970		
		Opening Date	Closing Date		
Gauge	:	14-11-1970			
Discharge	:	14-11-1970			
Sediment	:	07-07-1973			
Water Quality	:	01-07-1977			

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Bhadar at Ganod (01 02 07 001) **Division : Mahi Division, Gandhinagar**

Local River : Bhadar **Sub-Division : Sabarmati Sub Divn., Ahmedabad**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1																		
2																		
3																		
4																		
5													2164	0.000	0.000	1.003	1.003	187501
6													331.0	0.000	0.000	0.525	0.525	15002
7													0.000	0.000	0.000	0.000	0.000	0
8													0.000	0.000	0.000	0.000	0.000	0
9													0.000	0.000	0.000	0.000	0.000	0
10													0.000	0.000	0.000	0.000	0.000	0
11													0.000	0.000	0.000	0.000	0.000	0
12													0.000	0.000	0.000	0.000	0.000	0
13													0.000	0.000	0.000	0.000	0.000	0
14													0.000	0.000	0.000	0.000	0.000	0
15													0.000	0.000	0.000	0.000	0.000	0
16													0.000	0.000	0.000	0.000	0.000	0
17													0.000	0.000	0.000	0.000	0.000	0
18													0.000	0.000	0.000	0.000	0.000	0
19													0.000	0.000	0.000	0.000	0.000	0
20													0.000	0.000	0.000	0.000	0.000	0
21													0.000	0.000	0.000	0.000	0.000	0
22													0.000	0.000	0.000	0.000	0.000	0
23													0.000	0.000	0.000	0.000	0.000	0
24													0.000	0.000	0.000	0.000	0.000	0
25													0.000	0.000	0.000	0.000	0.000	0
26													0.000	0.000	0.000	0.000	0.000	0
27													0.000	0.000	0.000	0.000	0.000	0
28													0.000	0.000	0.000	0.000	0.000	0
29													0.000	0.000	0.000	0.000	0.000	0
30													0.000	0.000	0.000	0.000	0.000	0
31													0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I													415.9	0.000	0.000	0.255	0.255	33750
Ten Daily II													0.000	0.000	0.000	0.000	0.000	0
Ten Daily III													0.000	0.000	0.000	0.000	0.000	0
Monthly Total																		**202503**

Annual Sediment Load (Metric Tonnes) : 203479

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Bhadar at Ganod (01 02 07 001) **Division : Mahi Division, Gandhinagar**

Local River : Bhadar **Sub-Division : Sabarmati Sub Divn., Ahmedabad**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	155.2	0.000	0.000	0.020	0.020	268	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	136.3	0.000	0.000	0.016	0.016	188	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	300.8	0.000	0.000	0.014	0.014	372	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	133.8	0.000	0.000	0.013	0.013	148	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31							0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	29.15	0.000	0.000	0.004	0.004	46	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	30.08	0.000	0.000	0.001	0.001	37	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	13.38	0.000	0.000	0.001	0.001	15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**520**						**457**						**0**

Annual Sediment Load (Metric Tonnes) : 203479

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Bhadar at Ganod (01 02 07 001) **Division : Mahi Division, Gandhinagar**

Local River : Bhadar **Sub-Division : Sabarmati Sub Divn., Ahmedabad**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 203479

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Bhadar at Ganod (01 02 07 001) **Division : Mahi Division, Gandhinagar**

Local River : Bhadar **Sub-Division : Sabarmati Sub Divn., Ahmedabad**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 203479

Annual Sediment Load for period : 2005-2017

Station Name : Bhadar at Ganod (01 02 07 001) **Division : Mahi Division, Gandhinagar**

Local River : Bhadar **Sub-Division : Sabarmati Sub Divn., Ahmedabad**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2005-2006	38970	0	38970	252
2006-2007	433886	0	433886	795
2007-2008	1329625	0	1329625	2052
2008-2009	502740	459	503198	800
2009-2010	48969	71	49041	201
2010-2011	69812	0	69812	703
2011-2012	6547	0	6547	632
2012-2013	0	0	0	0
2013-2014	9784	0	9784	1089
2014-2015	0	0	0	0
2015-2016	3853	0	3853	381
2016-2017	203479	0	203479	278

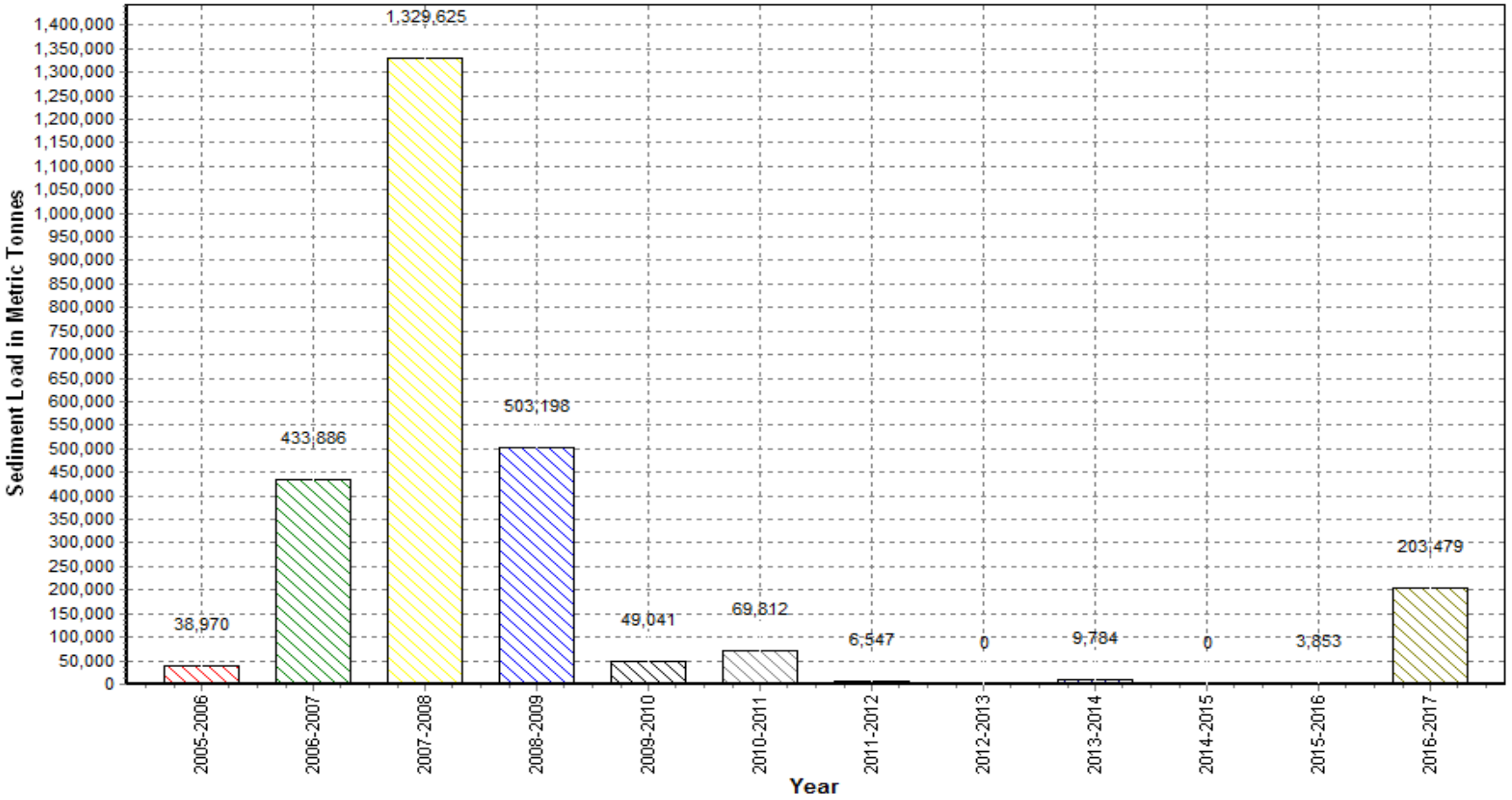
Annual Sediment Load for the period: 2005-2017

Station Name : Bhadar at Ganod (01 02 07 001)

Division : Mahi Division, Gandhinagar

Local River : Bhadar

Sub-Division : Sabarmati Sub Divn., Ahmedabad



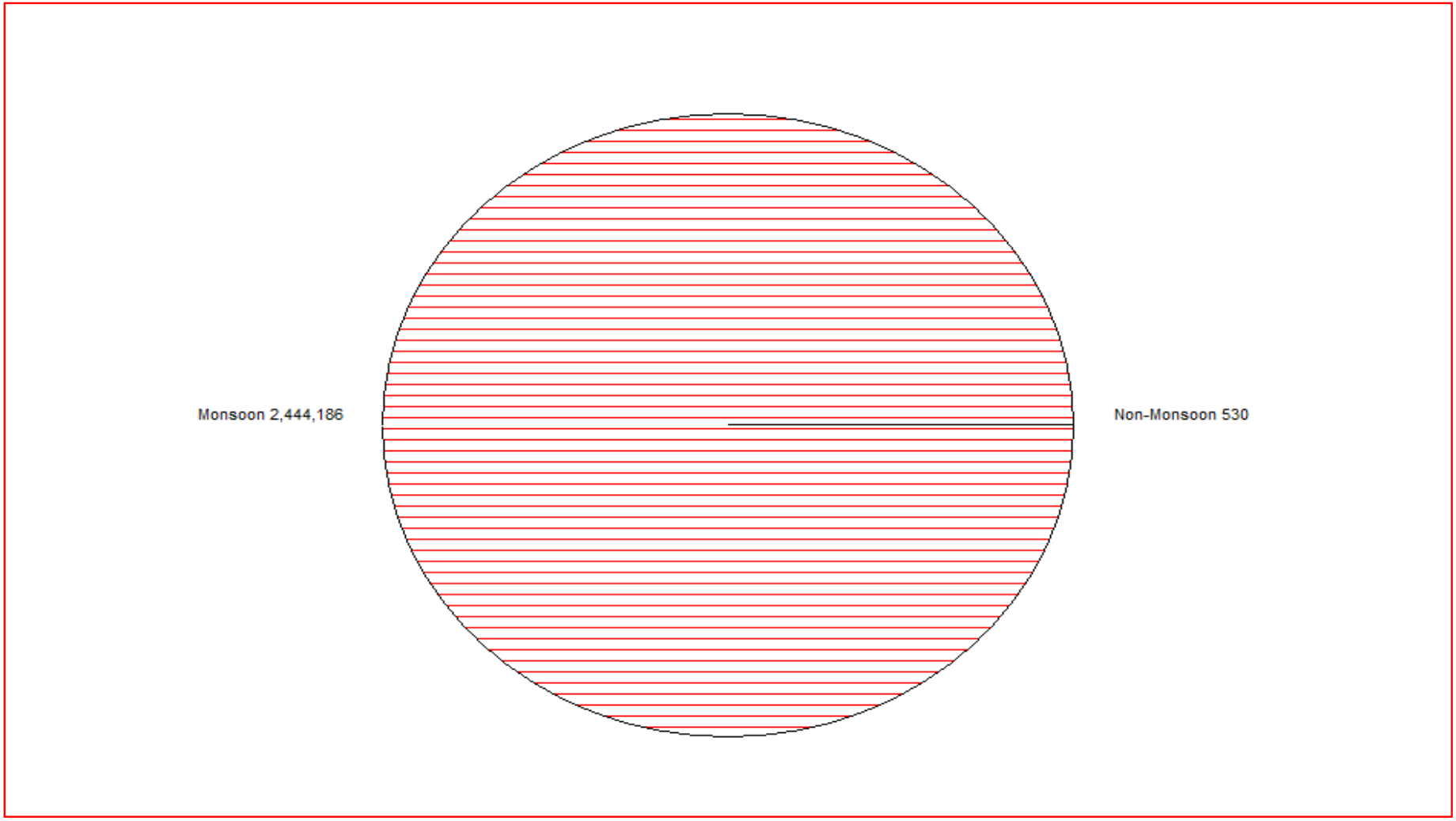
Seasonal Sediment Load for the period : 2005-2016

Station Name : Bhadar at Ganod (01 02 07 001)

Division : Mahi Division, Gandhinagar

Local River : Bhadar

Sub-Division : Sabarmati Sub Divn., Ahmedabad



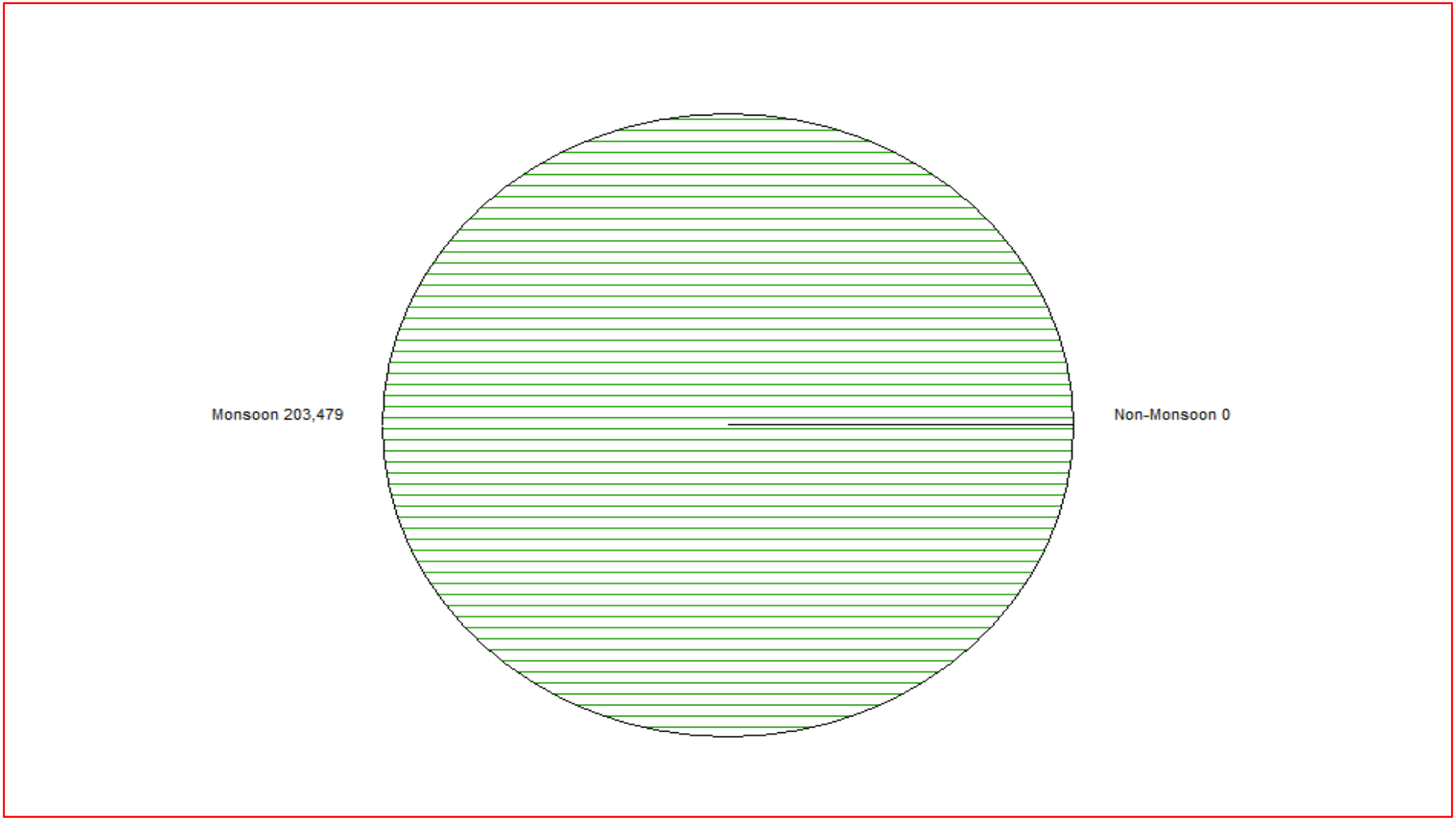
Seasonal Sediment Load for the Year: 2016-2017

Station Name : Bhadar at Ganod (01 02 07 001)

Local River : Bhadar

Division : Mahi Division, Gandhinagar

Sub-Division : Sabarmati Sub Divn., Ahmedabad



4.5 BANAS BASIN

4.5 Banas Basin

The Banas river rises near Pindwara village in Sirohi district of Rajasthan at an elevation of 372.5 m above mean sea level. The total length of the river from origin to its outfall into the little Rann of Kachchh It drains an area of 8,674 sq km out of which nearly 38 % lies in Rajasthan State and the remaining 62 % falls in Gujarat state. The basin lies between the geographical co-ordinates of $71^0$15' to 73^0 15' east longitudes and 23^0 30' to 24^0 55' north latitudes. The river flows in a south – westerly direction and empties into little Rann of Kachchh. It is bounded by Luni basin in the north, Sarasvati basin in the south, Aravalli Hill ranges in the east and finally, Arabian Sea in the west.

The number of principal tributaries, which contribute significantly, is seven. Sipu is the only major tributary on the right bank. The other six tributaries namely Batria, Sukli, Sewaran, Suket, Balaram and Khari drain into the main channel from left bank. Hence draining system on the left bank of the Banas river is more extensive as compared to the right bank area.

The average rainfall in the Banas basin is 921 mm. Owing to topographical characteristics, the climate is variable. The Mount Abu is one of the coldest regions and is one of the famous hill stations of India.

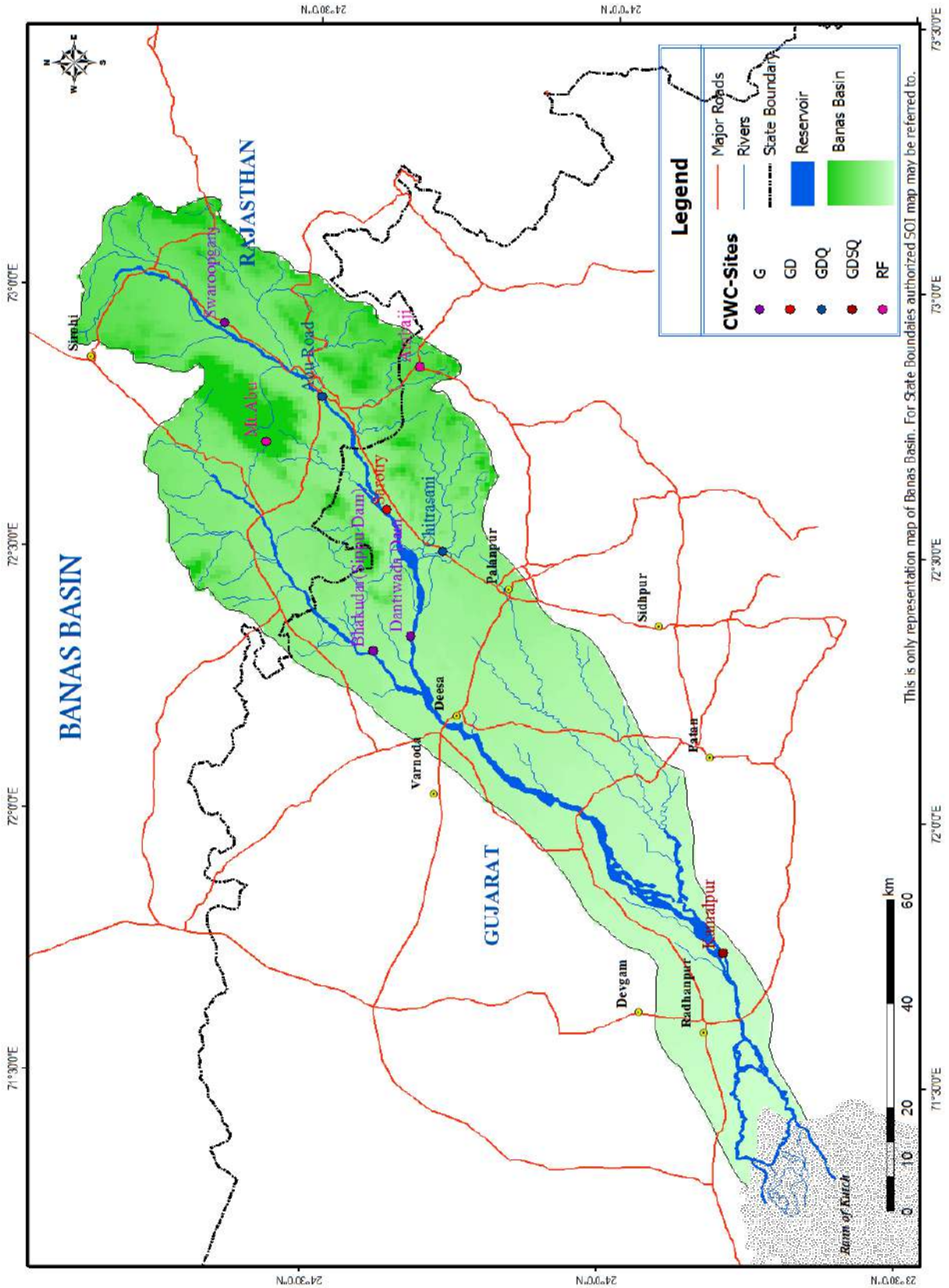
The Dantiwada dam and Swaroopganj dam are two main irrigation structures existing on the main channel of Banas river. The earthen dam on river Sipu, a tributary of Banas, is another project, which is under progress.

There is one monitoring station at Kamalpur for analysis of sediment load of river Banas. A brief about the station is given in section- 4.5.1.

4.5.1. Banas at Kamalpur

The station has a Catchment area of 6,960 sq km. The maximum sediment concentration of 1.150 g/l was observed on 24.08.2016. The total sediment load during the year is 14323 metric tonnes. The monsoon load constitutes 100 % of the total load. The annual sediment yield over the catchment during water year 2016-17 is 0.0015 mm.

Plate – 4.5 Banas Basin



HISTORY SHEET

		Water Year	**: 2016-17**
Site	**: Banas at Kamalpur**	**Code**	**: 01 02 02 007**
State	: Gujarat	District	Banaskantha
Basin	: WFR of Kach.-Saur. & Luni	Independent River	: Banas
Tributary	: -	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Banas
Division	: Mahi Division, Gandhinagar	Sub-Division	: B.L.Sub Divn, Palanpur
Drainage Area	: 6960 Sq. Km.	Bank	: Right
Latitude	: 23°47'59" N	Longitude	: 71°45'00" E
Zero of Gauge (m)	: 34 (m.s.l)	01-06-1970	
	Opening Date	Closing Date	
Gauge	: 21-07-1971		
Discharge	: 25-07-1971		
Sediment	: 25-08-1973		
Water Quality	: 01-06-1977		

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Banas at Kamalpur (01 02 02 007) **Division : Mahi Division, Gandhinagar**

Local River : Banas **Sub-Division : B.L.Sub Divn, Palanpur**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000						0.000											
2	0.000						0.000											
3	0.000						0.000											
4	0.000						0.000											
5	0.000						0.000											
6	0.000						0.000											
7	0.000						0.000						25.16	0.000	0.000	0.088	0.088	191
8	0.000						0.000						22.89	0.000	0.000	0.080	0.080	158
9	0.000						0.000						23.37	0.000	0.000	0.080	0.080	162
10	0.000						0.000						30.62	0.000	0.000	0.107	0.107	283
11	0.000						0.000						39.01	0.000	0.000	0.137	0.137	460
12	0.000						0.000						46.35	0.000	0.000	0.162	0.162	650
13	0.000						0.000						42.64	0.000	0.000	0.149	0.149	549
14	0.000						0.000						34.43	0.000	0.000	0.119	0.119	354
15	0.000						0.000						35.18	0.000	0.000	0.118	0.118	359
16	0.000						0.000						14.47	0.000	0.000	0.051	0.051	63
17	0.000						0.000						11.66	0.000	0.000	0.050	0.050	51
18	0.000						0.000						1.709	0.000	0.000	0.005	0.005	1
19	0.000						0.000						3.837	0.000	0.000	0.011	0.011	3
20	0.000						0.000						5.810	0.000	0.000	0.020	0.020	10
21	0.000						0.000						7.580	0.000	0.000	0.027	0.027	17
22	0.000						0.000						21.89	0.000	0.000	0.077	0.077	145
23	0.000						0.000						27.54	0.000	0.000	0.096	0.096	229
24	0.000						0.000						74.42	0.000	0.000	1.150	1.150	7395
25	0.000						0.000						36.52	0.000	0.000	0.540	0.540	1704
26	0.000						0.000						28.87	0.000	0.000	0.302	0.302	754
27	0.000						0.000						15.81	0.000	0.000	0.055	0.055	76
28	0.000						0.000						14.08	0.000	0.000	0.049	0.049	60
29	0.000						0.000						15.55	0.000	0.000	0.050	0.050	67
30	0.000						0.000						16.08	0.000	0.000	0.052	0.052	72
31							0.000						16.59	0.000	0.000	0.053	0.053	76
Ten Daily Mean																		
Ten Daily I	0.000						0.000						25.51	0.000	0.000	0.089	0.089	199
Ten Daily II	0.000						0.000						23.51	0.000	0.000	0.082	0.082	250
Ten Daily III	0.000						0.000						24.99	0.000	0.000	0.223	0.223	963
Monthly Total																		**13889**

Annual Sediment Load (Metric Tonnes) : 14323

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Banas at Kamalpur (01 02 02 007) **Division : Mahi Division, Gandhinagar**

Local River : Banas **Sub-Division : B.L.Sub Divn, Palanpur**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	15.83	0.000	0.000	0.055	0.055	76	0.000						0.000					
2	18.04	0.000	0.000	0.058	0.058	90	0.000						0.000					
3	20.51	0.000	0.000	0.072	0.072	127	0.000						0.000					
4	19.08	0.000	0.000	0.070	0.070	115	0.000						0.000					
5	6.116	0.000	0.000	0.021	0.021	11	0.000						0.000					
6	6.247	0.000	0.000	0.021	0.021	11	0.000						0.000					
7	3.023	0.000	0.000	0.011	0.011	3	0.000						0.000					
8	0.610	0.000	0.000	0.000	0.000	0	0.000						0.000					
9							0.000						0.000					
10							0.000						0.000					
11							0.000						0.000					
12							0.000						0.000					
13							0.000						0.000					
14							0.000						0.000					
15							0.000						0.000					
16							0.000						0.000					
17							0.000						0.000					
18							0.000						0.000					
19							0.000						0.000					
20							0.000						0.000					
21							0.000						0.000					
22							0.000						0.000					
23							0.000						0.000					
24							0.000						0.000					
25							0.000						0.000					
26							0.000						0.000					
27							0.000						0.000					
28							0.000						0.000					
29							0.000						0.000					
30							0.000						0.000					
31							0.000											
Ten Daily Mean																		
Ten Daily I	11.18	0.000	0.000	0.038	0.038	54	0.000						0.000					
Ten Daily II							0.000						0.000					
Ten Daily III							0.000						0.000					
Monthly																		
Total						**434**												

Annual Sediment Load (Metric Tonnes) : 14323

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Banas at Kamalpur (01 02 02 007) **Division : Mahi Division, Gandhinagar**

Local River : Banas **Sub-Division : B.L.Sub Divn, Palanpur**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000						0.000						0.000					
2	0.000						0.000						0.000					
3	0.000						0.000						0.000					
4	0.000						0.000						0.000					
5	0.000						0.000						0.000					
6	0.000						0.000						0.000					
7	0.000						0.000						0.000					
8	0.000						0.000						0.000					
9	0.000						0.000						0.000					
10	0.000						0.000						0.000					
11	0.000						0.000						0.000					
12	0.000						0.000						0.000					
13	0.000						0.000						0.000					
14	0.000						0.000						0.000					
15	0.000						0.000						0.000					
16	0.000						0.000						0.000					
17	0.000						0.000						0.000					
18	0.000						0.000						0.000					
19	0.000						0.000						0.000					
20	0.000						0.000						0.000					
21	0.000						0.000						0.000					
22	0.000						0.000						0.000					
23	0.000						0.000						0.000					
24	0.000						0.000						0.000					
25	0.000						0.000						0.000					
26	0.000						0.000						0.000					
27	0.000						0.000						0.000					
28	0.000						0.000						0.000					
29	0.000						0.000											
30	0.000						0.000											
31	0.000						0.000											
Ten Daily Mean																		
Ten Daily I	0.000						0.000						0.000					
Ten Daily II	0.000						0.000						0.000					
Ten Daily III	0.000						0.000						0.000					
Monthly Total																		

Annual Sediment Load (Metric Tonnes) : 14323

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Banas at Kamalpur (01 02 02 007) **Division : Mahi Division, Gandhinagar**

Local River : Banas **Sub-Division : B.L.Sub Divn, Palanpur**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000						0.000						0.000					
2	0.000						0.000						0.000					
3	0.000						0.000						0.000					
4	0.000						0.000						0.000					
5	0.000						0.000						0.000					
6	0.000						0.000						0.000					
7	0.000						0.000						0.000					
8	0.000						0.000						0.000					
9	0.000						0.000						0.000					
10	0.000						0.000						0.000					
11	0.000						0.000						0.000					
12	0.000						0.000						0.000					
13	0.000						0.000						0.000					
14	0.000						0.000						0.000					
15	0.000						0.000						0.000					
16	0.000						0.000						0.000					
17	0.000						0.000						0.000					
18	0.000						0.000						0.000					
19	0.000						0.000						0.000					
20	0.000						0.000						0.000					
21	0.000						0.000						0.000					
22	0.000						0.000						0.000					
23	0.000						0.000						0.000					
24	0.000						0.000						0.000					
25	0.000						0.000						0.000					
26	0.000						0.000						0.000					
27	0.000						0.000						0.000					
28	0.000						0.000						0.000					
29	0.000						0.000						0.000					
30	0.000						0.000						0.000					
31	0.000												0.000					
Ten Daily Mean																		
Ten Daily I	0.000						0.000						0.000					
Ten Daily II	0.000						0.000						0.000					
Ten Daily III	0.000						0.000						0.000					
Monthly Total																		

Annual Sediment Load (Metric Tonnes) : 14323

Annual Sediment Load for period : 2005-2017

Station Name : Banas at Kamalpur (01 02 02 007) **Division : Mahi Division, Gandhinagar**

Local River : Banas **Sub-Division : B.L.Sub Divn, Palanpur**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2005-2006	28925	0	28925	11
2006-2007	769748	0	769748	551
2007-2008	814875	0	814875	214
2008-2009	63893	0	63893	18
2009-2010	3560	407	3967	42
2010-2011	173787	0	173787	78
2011-2012	42838	0	42838	96
2012-2013	613	0	613	117
2013-2014	28936	0	28936	104
2014-2015	44133	0	44133	94
2015-2016	430901	0	430901	257
2016-2017	14323	0	14323	61

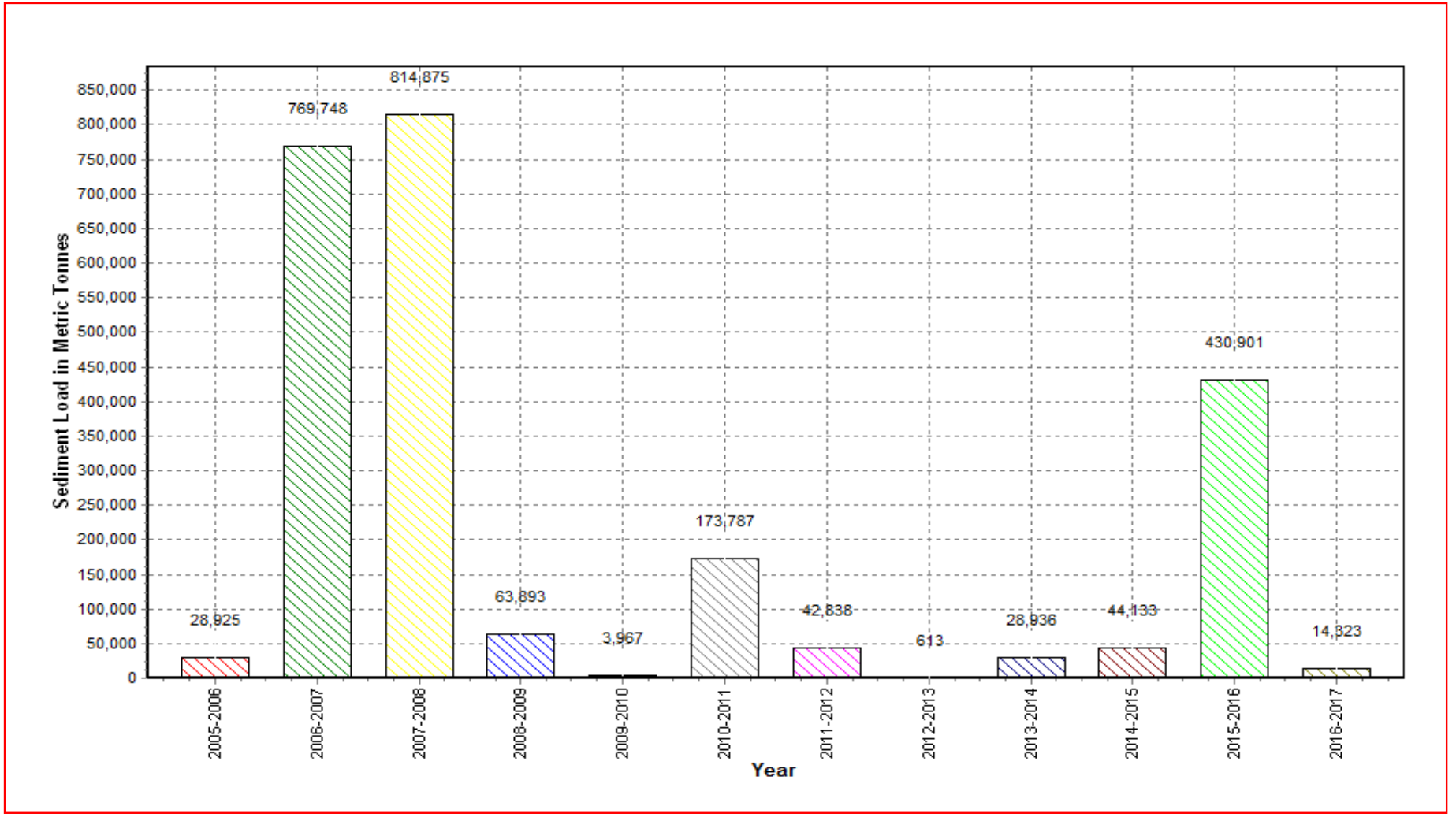
Annual Sediment Load for the period: 2005-2017

Station Name : Banas at Kamalpur (01 02 02 007)

Local River : Banas

Division : Mahi Division, Gandhinagar

Sub-Division : B.L.Sub Divn, Palanpur



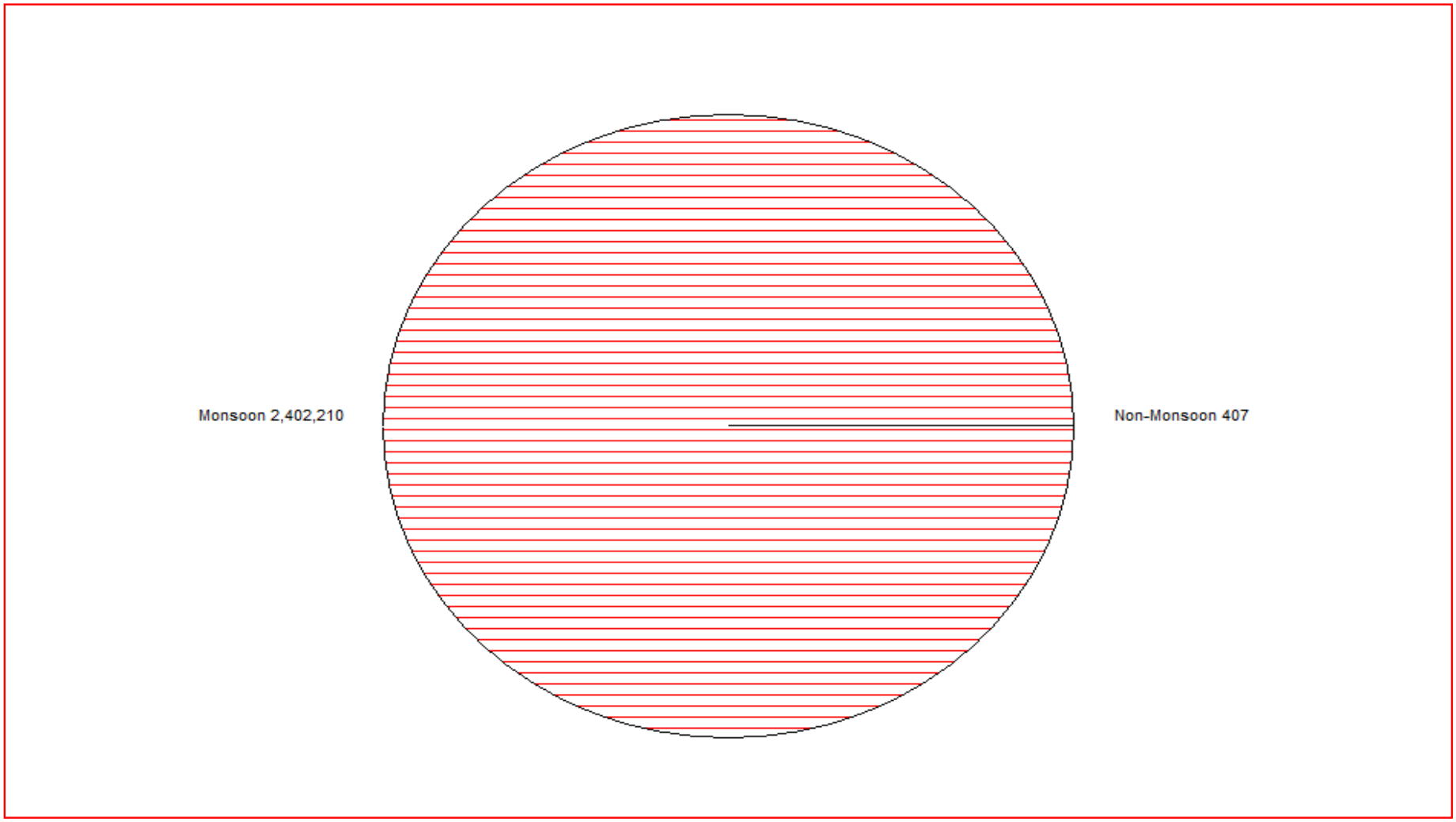
Seasonal Sediment Load for the period : 2005-2016

Station Name : Banas at Kamalpur (01 02 02 007)

Local River : Banas

Division : Mahi Division, Gandhinagar

Sub-Division : B.L.Sub Divn, Palanpur



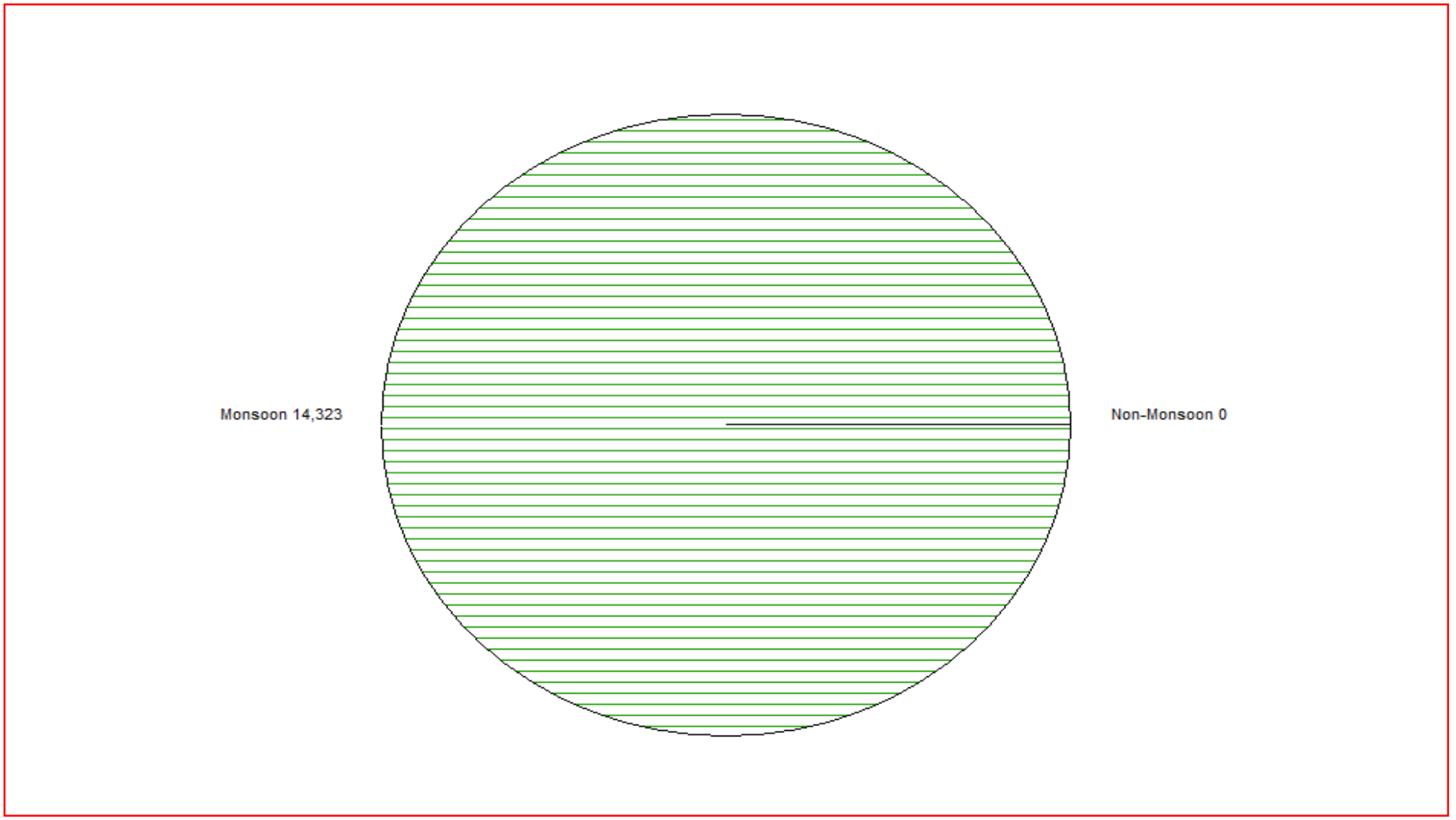
Seasonal Sediment Load for the Year: 2016-2017

Station Name : Banas at Kamalpur (01 02 02 007)

Local River : Banas

Division : Mahi Division, Gandhinagar

Sub-Division : B.L.Sub Divn, Palanpur



4.6 TAPI BASIN

4.6 Tapi Basin

The Tapi is the second largest westward draining interstate river basin. It originates near Multai in Betul district at an elevation of 752 m above *msl*. The total length of this west flowing river from its origin to its out- fall into gulf of Cambay is 724 km. It drains an area of 65,145 sq.km, out of which nearly 80% lies in Maharashtra, 15% in Madhya Pradesh and rest 5% in Gujarat .The Tapi basin is the northern most basin of Deccan Plateau and is situated between latitudes 20°N to 22°N approximately. The Satpura range forms its northern boundary and the Ajanta and Satmala hills forms its southern extremity. Mahadeo hills form its eastern boundary and its outlet into the Arabian sea is in the west. Bounded by three sides by the hill ranges, the river Tapi, along with its tributaries flows more or less over the plains of Vidarbha, Khandesh and Gujarat

The Tapi receives several tributaries on both the banks. There are 14 major tributaries having length more than 50 km. Out of which 4 tributaries viz. Vaki, Gomi, Arunavati and Aner join on the right bank. Other 10 tributaries viz. Nesu, Amaravati, Buray, Panjhra, Bori, Girna, Vaghur, Purna, Mona and Sipna drain on left bank of the main channel. The drainage system on the left bank of Tapi is, therefore, more extensive as compared to the right bank area

The Purna and Girna, two important left bank tributaries, together account for nearly 45% of the total catchment area of the Tapi. The Purna is the principal tributary of the Tapi and originates in Betul district near Gawilgarh hills of Satpura range at an elevation of 900 m. It traverses 274 km having catchments area of about 18929 sq km. The Girna, another major tributary, rises in the hill ranges of Western Ghats at an elevation of 900 m. It traverses a distance of about 260 km having a catchment area about 10061 sq km.

The average rainfall in the Tapi basin is 830 mm, Owing to topographical characteristics, the climate is variable. The Purna Sub catchment in the upper half of the Tapi basin is one of the hottest regions in India

At present, there are 40 major and medium Irrigation schemes completed and 15 ongoing schemes in the form of reservoirs or weirs in the Tapi catchment. The main projects on main river are Kakrapar weir, Ukai Dam and Hathnur Dam. The upper Tapi Stage- II project is under progress at Nawtha.

There are four silt monitoring stations in this basin, out of which two stations are on the main river and the other two stations are located on tributary of Purna. A brief of the Sediment stations is given in section- 4.6.1 to 4.6.4.

4.6.1. Tapi at Burhanpur

The station has a Catchment area of 8487 sq.km. The maximum sediment concentration of 2.025 g/l was observed on 10.07.2016. The total sediment load during the year is 1975643 metric tonnes. The monsoon load constitutes 100 % of the total load. The annual sediment yield over the catchment during water year 2016-17 is 0.1663 mm.

4.6.2. Purna at Gopalkheda

The station has a Catchment area of 9,500 sq km. The maximum sediment concentration of 1.208 g/l was observed on 09.08.2016. The total sediment load during the year is 1457547 metric tonnes. The monsoon load constitutes 100 % of the total load. The annual sediment yield over the catchment during water year 2016-17 is 0.1096 mm.

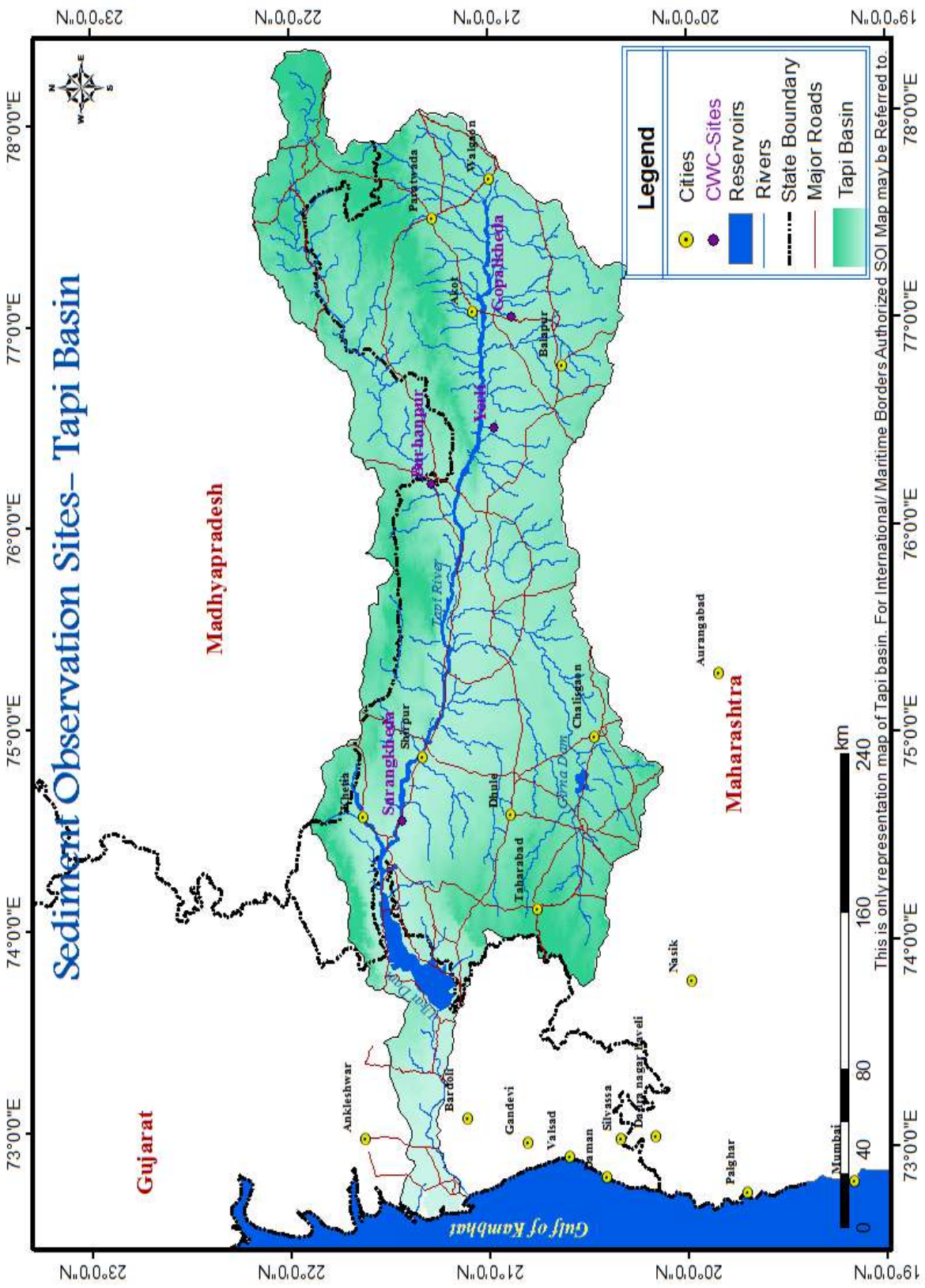
4.6.3. Purna at Yerli

The station has a Catchment area of 16,517 sq km. The maximum sediment concentration of 3.901 g/l was observed on 04.08.2016. The total sediment load during the year is 2971356 metric tonnes. The monsoon load constitutes 100 % of the total load. The annual sediment yield over the catchment during water year 2016-17 is 0.1285 mm.

4.6.4. Tapi at Sarangkheda

The station has a Catchment area of 58,400 sq km. The maximum sediment concentration of 6.950 g/l was observed on 13.07.2016. The total sediment load during the year is 12583627 metric tonnes. The monsoon load constitutes 100 % of the total load. The annual sediment yield over the catchment during water year 2016-17 is 0.1539 mm.

Plate – 4.6 Tapi Basin



HISTORY SHEET

			Water Year	**:**	**2016-17**
Site	**:**	**Tapi at Burhanpur**	**Code**	**:**	**01 02 17 002**
State	:	Madhya Pradesh	District		Khandwa
Basin	:	Tapi	Independent River	:	Tapi
Tributary	:	Tapi	Sub Tributary	:	
Sub-Sub Tributary	:		Local River	:	Tapi
Division	:	Tapi Div., Surat	Sub-Division	:	UTSD, Bhusawal
Drainage Area	:	8487 Sq. Km.	Bank	:	Right Bank
Latitude	:	21°17'12" N	Longitude	:	76°13'18" E
Zero of Gauge (m)	:	213 (m.s.l)	16-06-1972		-
		Opening Date	Closing Date		
Gauge	:	16-06-1972			
Discharge	:	14-09-1972			
Sediment	:	23-12-1972			
Water Quality	:	01-06-1977			

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Tapi at Burhanpur (01 02 17 002) **Division : Tapi Div., Surat**

Local River : Tapi **Sub-Division : UTSD, Bhusawal**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	537.0	0.000	0.000	0.162	0.162	7526
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	1258	0.000	0.000	1.221	1.221	132706
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	1217	0.000	0.000	0.923	0.923	97010
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	2245	0.000	0.000	0.963	0.963	186836
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	872.0	0.000	0.000	0.393	0.393	29572
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	929.8	0.000	0.000	0.140	0.140	11206
7	0.000	0.000	0.000	0.000	0.000	0	674.4	0.000	0.000	1.290	1.290	75161	1747	0.000	0.000	0.650	0.650	98105
8	0.000	0.000	0.000	0.000	0.000	0	177.0	0.000	0.000	1.126	1.126	17218	1199	0.000	0.000	0.319	0.319	33039
9	0.000	0.000	0.000	0.000	0.000	0	87.30	0.000	0.000	0.850	0.850	6409	909.5	0.000	0.000	0.095	0.095	7442
10	0.000	0.000	0.000	0.000	0.000	0	1026	0.000	0.025	2.000	2.025	179444	578.9	0.000	0.000	0.068	0.068	3416
11	0.000	0.000	0.000	0.000	0.000	0	878.1	0.000	0.000	1.512	1.512	114706	740.7	0.000	0.000	0.174	0.174	11135
12	0.000	0.000	0.000	0.000	0.000	0	2077	0.000	0.000	2.676	2.676	480283	597.4	0.000	0.000	0.091	0.091	4712
13	0.000	0.000	0.000	0.000	0.000	0	2126	0.000	0.000	1.067	1.067	195956	554.8	0.000	0.000	0.125	0.125	5992
14	0.000	0.000	0.000	0.000	0.000	0	706.7	0.000	0.000	0.373	0.373	22795	550.2	0.000	0.000	0.120	0.120	5704
15	0.000	0.000	0.000	0.000	0.000	0	591.7	0.000	0.000	0.212	0.212	10849	502.3	0.000	0.000	0.120	0.120	5207
16	0.000	0.000	0.000	0.000	0.000	0	416.3	0.000	0.000	0.208	0.208	7482	501.7	0.000	0.000	0.068	0.068	2939
17	0.000	0.000	0.000	0.000	0.000	0	331.1	0.000	0.000	0.180	0.180	5149	403.2	0.000	0.000	0.081	0.081	2815
18	0.000	0.000	0.000	0.000	0.000	0	314.2	0.000	0.000	0.172	0.172	4660	339.8	0.000	0.000	0.029	0.029	846
19	0.000	0.000	0.000	0.000	0.000	0	437.6	0.000	0.000	0.317	0.317	11974	264.8	0.000	0.000	0.024	0.024	538
20	0.000	0.000	0.000	0.000	0.000	0	396.6	0.000	0.000	0.476	0.476	16316	272.7	0.000	0.000	0.048	0.048	1119
21	0.000	0.000	0.000	0.000	0.000	0	300.8	0.000	0.000	0.225	0.225	5855	248.7	0.000	0.000	0.025	0.025	537
22	0.000	0.000	0.000	0.000	0.000	0	221.5	0.000	0.000	0.197	0.197	3774	244.4	0.000	0.000	0.028	0.028	585
23	0.000	0.000	0.000	0.000	0.000	0	223.7	0.000	0.000	0.176	0.176	3405	227.2	0.000	0.000	0.049	0.049	968
24	0.000	0.000	0.000	0.000	0.000	0	472.2	0.000	0.000	0.700	0.700	28557	211.5	0.000	0.000	0.013	0.013	228
25	0.000	0.000	0.000	0.000	0.000	0	475.3	0.000	0.000	0.660	0.660	27113	207.4	0.000	0.000	0.055	0.055	985
26	0.000	0.000	0.000	0.000	0.000	0	681.7	0.000	0.000	1.137	1.137	66951	199.1	0.000	0.000	0.078	0.078	1342
27	0.000	0.000	0.000	0.000	0.000	0	723.0	0.000	0.000	0.453	0.453	28266	169.0	0.000	0.000	0.017	0.017	245
28	0.000	0.000	0.000	0.000	0.000	0	1250	0.000	0.000	1.167	1.167	126060	214.8	0.000	0.000	0.025	0.025	464
29	0.000	0.000	0.000	0.000	0.000	0	787.0	0.000	0.000	0.533	0.533	36206	240.9	0.000	0.000	0.035	0.035	718
30	0.000	0.000	0.000	0.000	0.000	0	649.8	0.000	0.000	0.246	0.246	13799	273.4	0.000	0.000	0.032	0.032	749
31							510.9						224.6	0.000	0.000	0.060	0.060	1164
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	196.4	0.000	0.003	0.527	0.529	27823	1149	0.000	0.000	0.493	0.493	60686
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	827.6	0.000	0.000	0.719	0.719	87017	472.7	0.000	0.000	0.088	0.088	4101
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	572.3	0.000	0.000	0.549	0.549	33999	223.7	0.000	0.000	0.038	0.038	726
Monthly Total						**0**						**1488390**						**655853**

Annual Sediment Load (Metric Tonnes) : 2320452

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Tapi at Burhanpur (01 02 17 002) **Division : Tapi Div., Surat**

Local River : Tapi **Sub-Division : UTSD, Bhusawal**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	368.4	0.000	0.000	0.445	0.445	14163	353.8	0.000	0.000	0.065	0.065	1978	54.02	0.000	0.000	0.015	0.015	70
2	545.0	0.000	0.000	0.042	0.042	1987	509.1	0.000	0.000	0.400	0.400	17595	51.88	0.000	0.000	0.015	0.015	67
3	514.5	0.000	0.000	0.210	0.210	9322	404.6	0.000	0.000	0.207	0.207	7242	49.85	0.000	0.000	0.012	0.012	52
4	347.2	0.000	0.000	0.180	0.180	5400	362.4	0.000	0.000	0.091	0.091	2834	39.96	0.000	0.000	0.010	0.010	35
5	272.6	0.000	0.000	0.101	0.101	2386	271.0	0.000	0.000	0.058	0.058	1365	34.15	0.000	0.000	0.012	0.012	35
6	239.9	0.000	0.000	0.073	0.073	1513	277.7	0.000	0.000	0.130	0.130	3119	38.10	0.000	0.000	0.015	0.015	49
7	194.1	0.000	0.000	0.016	0.016	273	376.5	0.000	0.000	0.062	0.062	2007	29.35	0.000	0.000	0.014	0.014	36
8	193.0	0.000	0.000	0.026	0.026	425	259.0	0.000	0.000	0.060	0.060	1343	29.08	0.000	0.000	0.014	0.014	35
9	176.3	0.000	0.000	0.044	0.044	673	321.9	0.000	0.000	0.070	0.070	1947	29.13	0.000	0.000	0.014	0.014	35
10	170.1	0.000	0.000	0.065	0.065	951	321.5	0.000	0.000	0.076	0.076	2106	26.77	0.000	0.000	0.010	0.010	23
11	139.4	0.000	0.000	0.026	0.026	313	282.6	0.000	0.000	0.060	0.060	1465	26.32	0.000	0.000	0.010	0.010	23
12	120.7	0.000	0.000	0.023	0.023	243	259.1	0.000	0.000	0.050	0.050	1119	23.83	0.000	0.000	0.010	0.010	20
13	118.9	0.000	0.000	0.020	0.020	206	165.9	0.000	0.000	0.041	0.041	591	25.99	0.000	0.000	0.010	0.010	21
14	97.24	0.000	0.000	0.043	0.043	360	148.2	0.000	0.000	0.087	0.087	1107	24.39	0.000	0.000	0.010	0.010	20
15	88.96	0.000	0.000	0.011	0.011	86	134.9	0.000	0.000	0.025	0.025	295	22.39	0.000	0.000	0.011	0.011	22
16	95.88	0.000	0.000	0.010	0.010	83	128.5	0.000	0.000	0.020	0.020	222	19.24	0.000	0.000	0.010	0.010	16
17	247.2	0.000	0.000	0.122	0.122	2606	121.1	0.000	0.000	0.037	0.037	389	18.59	0.000	0.000	0.010	0.010	15
18	497.9	0.000	0.000	0.350	0.350	15058	97.75	0.000	0.000	0.022	0.022	183	18.08	0.000	0.000	0.010	0.010	15
19	312.1	0.000	0.000	0.150	0.150	4031	99.55	0.000	0.000	0.003	0.003	22	16.93	0.000	0.000	0.009	0.009	13
20	332.5	0.000	0.000	0.190	0.190	5444	96.66	0.000	0.000	0.025	0.025	205	12.95	0.000	0.000	0.010	0.010	11
21	388.6	0.000	0.000	0.127	0.127	4271	97.10	0.000	0.000	0.028	0.028	235	9.381	0.000	0.000	0.015	0.015	12
22	469.9	0.000	0.000	0.154	0.154	6261	89.78	0.000	0.000	0.036	0.036	278	5.274	0.000	0.000	0.008	0.008	4
23	307.1	0.000	0.000	0.204	0.204	5405	78.15	0.000	0.000	0.030	0.030	203	4.723	0.000	0.000	0.005	0.005	2
24	378.9	0.000	0.000	0.102	0.102	3339	88.02	0.000	0.000	0.018	0.018	137	5.158	0.000	0.000	0.005	0.005	2
25	582.5	0.000	0.000	0.450	0.450	22647	83.44	0.000	0.000	0.012	0.012	84	6.533	0.000	0.000	0.006	0.006	3
26	496.2	0.000	0.000	0.250	0.250	10705	79.28	0.000	0.000	0.029	0.029	200	6.327	0.000	0.000	0.006	0.006	3
27	368.0	0.000	0.000	0.116	0.116	3698	75.40	0.000	0.000	0.040	0.040	261	6.150	0.000	0.000	0.006	0.006	3
28	248.6	0.000	0.000	0.106	0.106	2283	72.94	0.000	0.000	0.029	0.029	184	5.775	0.000	0.000	0.007	0.007	3
29	228.9	0.000	0.000	0.053	0.053	1048	70.21	0.000	0.000	0.013	0.013	76	5.949	0.000	0.000	0.004	0.004	2
30	334.7	0.000	0.000	0.050	0.050	1437	62.27	0.000	0.000	0.010	0.010	54	5.844	0.000	0.000	0.003	0.003	2
31							56.89	0.000	0.000	0.020	0.020	98						
Ten Daily Mean																		
Ten Daily I	302.1	0.000	0.000	0.120	0.120	3709	345.7	0.000	0.000	0.122	0.122	4153	38.23	0.000	0.000	0.013	0.013	44
Ten Daily II	205.1	0.000	0.000	0.094	0.094	2843	153.4	0.000	0.000	0.037	0.037	560	20.87	0.000	0.000	0.010	0.010	18
Ten Daily III	380.3	0.000	0.000	0.161	0.161	6109	77.59	0.000	0.000	0.024	0.024	164	6.111	0.000	0.000	0.007	0.007	4
Monthly Total						**126617**						**48942**						**651**

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Annual Sediment Load (Metric Tonnes) : 2320452

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Tapi at Burhanpur (01 02 17 002) **Division : Tapi Div., Surat**

Local River : Tapi **Sub-Division : UTSD, Bhusawal**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	5.773	0.000	0.000	0.000	0.000	0	3.860	0.000	0.000	0.000	0.000	0	3.169	0.000	0.000	0.000	0.000	0
2	5.657	0.000	0.000	0.000	0.000	0	4.095	0.000	0.000	0.000	0.000	0	3.199	0.000	0.000	0.000	0.000	0
3	5.686	0.000	0.000	0.000	0.000	0	4.048	0.000	0.000	0.000	0.000	0	2.719	0.000	0.000	0.000	0.000	0
4	4.730	0.000	0.000	0.000	0.000	0	3.042	0.000	0.000	0.000	0.000	0	2.593	0.000	0.000	0.000	0.000	0
5	5.435	0.000	0.000	0.000	0.000	0	2.988	0.000	0.000	0.000	0.000	0	2.310	0.000	0.000	0.000	0.000	0
6	5.370	0.000	0.000	0.000	0.000	0	3.027	0.000	0.000	0.000	0.000	0	2.687	0.000	0.000	0.000	0.000	0
7	5.161	0.000	0.000	0.000	0.000	0	2.914	0.000	0.000	0.000	0.000	0	1.970	0.000	0.000	0.000	0.000	0
8	5.040	0.000	0.000	0.000	0.000	0	3.450	0.000	0.000	0.000	0.000	0	2.044	0.000	0.000	0.000	0.000	0
9	5.498	0.000	0.000	0.000	0.000	0	2.816	0.000	0.000	0.000	0.000	0	2.065	0.000	0.000	0.000	0.000	0
10	5.458	0.000	0.000	0.000	0.000	0	2.804	0.000	0.000	0.000	0.000	0	2.019	0.000	0.000	0.000	0.000	0
11	4.730	0.000	0.000	0.000	0.000	0	2.730	0.000	0.000	0.000	0.000	0	1.582	0.000	0.000	0.000	0.000	0
12	4.730	0.000	0.000	0.000	0.000	0	3.962	0.000	0.000	0.000	0.000	0	1.650	0.000	0.000	0.000	0.000	0
13	5.571	0.000	0.000	0.000	0.000	0	3.837	0.000	0.000	0.000	0.000	0	1.500	0.000	0.000	0.000	0.000	0
14	4.290	0.000	0.000	0.000	0.000	0	3.729	0.000	0.000	0.000	0.000	0	1.472	0.000	0.000	0.000	0.000	0
15	5.626	0.000	0.000	0.000	0.000	0	3.450	0.000	0.000	0.000	0.000	0	1.436	0.000	0.000	0.000	0.000	0
16	5.533	0.000	0.000	0.000	0.000	0	3.580	0.000	0.000	0.000	0.000	0	1.401	0.000	0.000	0.000	0.000	0
17	5.435	0.000	0.000	0.000	0.000	0	3.423	0.000	0.000	0.000	0.000	0	1.343	0.000	0.000	0.000	0.000	0
18	4.290	0.000	0.000	0.000	0.000	0	3.249	0.000	0.000	0.000	0.000	0	1.319	0.000	0.000	0.000	0.000	0
19	5.340	0.000	0.000	0.000	0.000	0	3.521	0.000	0.000	0.000	0.000	0	1.650	0.000	0.000	0.000	0.000	0
20	5.283	0.000	0.000	0.000	0.000	0	3.371	0.000	0.000	0.000	0.000	0	1.287	0.000	0.000	0.000	0.000	0
21	4.946	0.000	0.000	0.000	0.000	0	3.174	0.000	0.000	0.000	0.000	0	1.277	0.000	0.000	0.000	0.000	0
22	4.829	0.000	0.000	0.000	0.000	0	3.050	0.000	0.000	0.000	0.000	0	1.120	0.000	0.000	0.000	0.000	0
23	4.760	0.000	0.000	0.000	0.000	0	3.054	0.000	0.000	0.000	0.000	0	1.089	0.000	0.000	0.000	0.000	0
24	4.669	0.000	0.000	0.000	0.000	0	2.928	0.000	0.000	0.000	0.000	0	1.340	0.000	0.000	0.000	0.000	0
25	4.290	0.000	0.000	0.000	0.000	0	2.813	0.000	0.000	0.000	0.000	0	1.068	0.000	0.000	0.000	0.000	0
26	4.569	0.000	0.000	0.000	0.000	0	2.813	0.000	0.000	0.000	0.000	0	1.340	0.000	0.000	0.000	0.000	0
27	4.447	0.000	0.000	0.000	0.000	0	2.718	0.000	0.000	0.000	0.000	0	1.073	0.000	0.000	0.000	0.000	0
28	4.503	0.000	0.000	0.000	0.000	0	3.438	0.000	0.000	0.000	0.000	0	0.995	0.000	0.000	0.000	0.000	0
29	4.411	0.000	0.000	0.000	0.000	0	2.680	0.000	0.000	0.000	0.000	0						
30	4.305	0.000	0.000	0.000	0.000	0	3.208	0.000	0.000	0.000	0.000	0						
31	4.190	0.000	0.000	0.000	0.000	0	3.195	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	5.381	0.000	0.000	0.000	0.000	0	3.304	0.000	0.000	0.000	0.000	0	2.478	0.000	0.000	0.000	0.000	0
Ten Daily II	5.083	0.000	0.000	0.000	0.000	0	3.485	0.000	0.000	0.000	0.000	0	1.464	0.000	0.000	0.000	0.000	0
Ten Daily III	4.538	0.000	0.000	0.000	0.000	0	3.006	0.000	0.000	0.000	0.000	0	1.163	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

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Annual Sediment Load (Metric Tonnes) : 2320452

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Tapi at Burhanpur (01 02 17 002) **Division : Tapi Div., Surat**

Local River : Tapi **Sub-Division : UTSD, Bhusawal**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.969	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.936	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.912	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.861	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	1.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.810	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.555	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 2320452

Annual Sediment Load for period : 2005-2017

Station Name : Tapi at Burhanpur (01 02 17 002) **Division : Tapi Div., Surat**

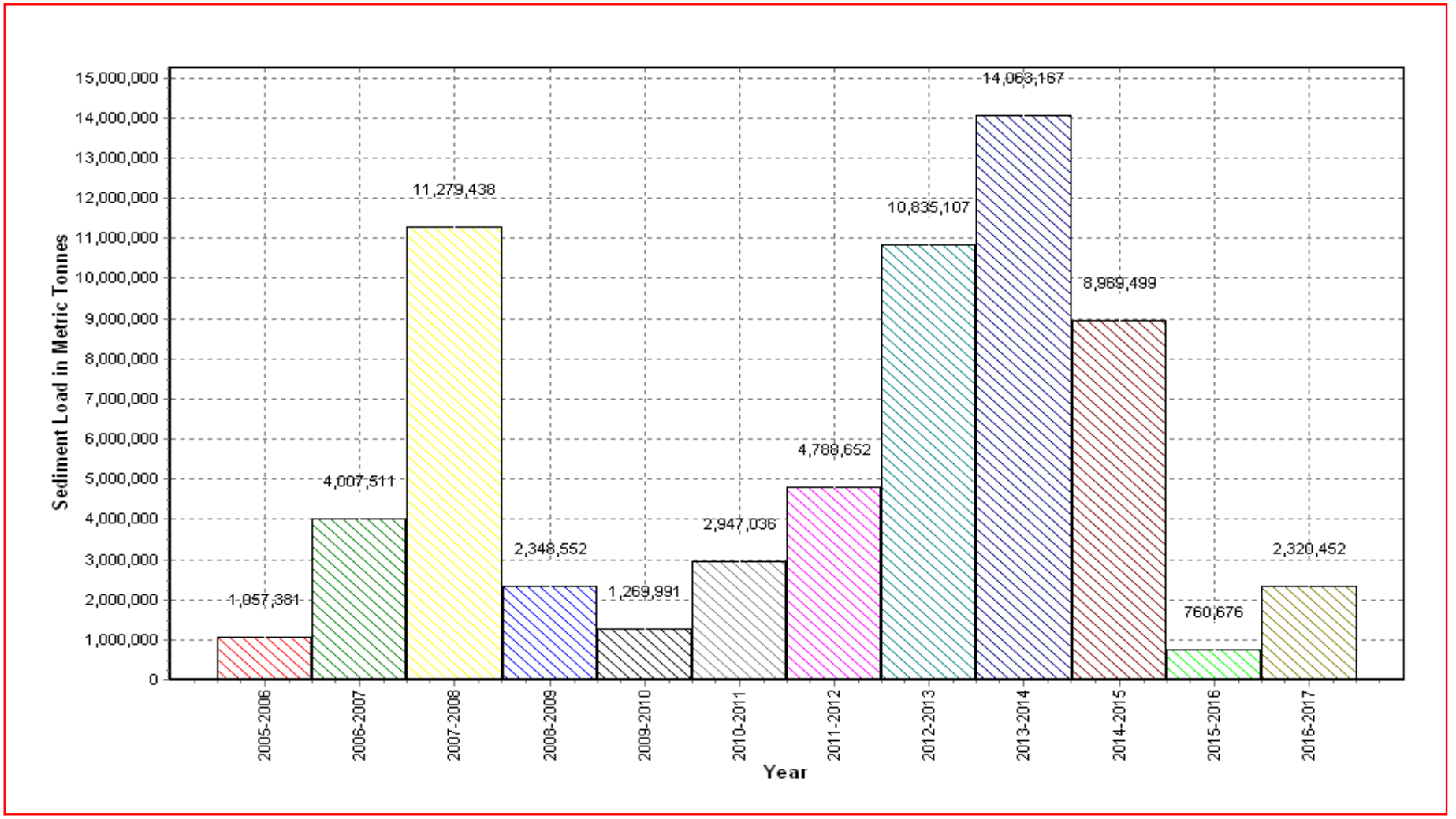
Local River : Tapi **Sub-Division : UTSD, Bhusawal**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2005-2006	1056270	1110	1057381	3328
2006-2007	4006855	656	4007511	4905
2007-2008	11278315	1122	11279438	9797
2008-2009	2348162	390	2348552	2307
2009-2010	1268880	1111	1269991	2028
2010-2011	2946752	284	2947036	3983
2011-2012	4788652	0	4788652	5039
2012-2013	10835043	64	10835107	8033
2013-2014	14063060	106	14063167	8925
2014-2015	8969482	17	8969499	5192
2015-2016	760676	0	760676	4099
2016-2017	2320452	0	2320452	4398

Annual Sediment Load for the period: 2005-2017

Station Name : Tapi at Burhanpur (01 02 17 002) **Division : Tapi Div., Surat**

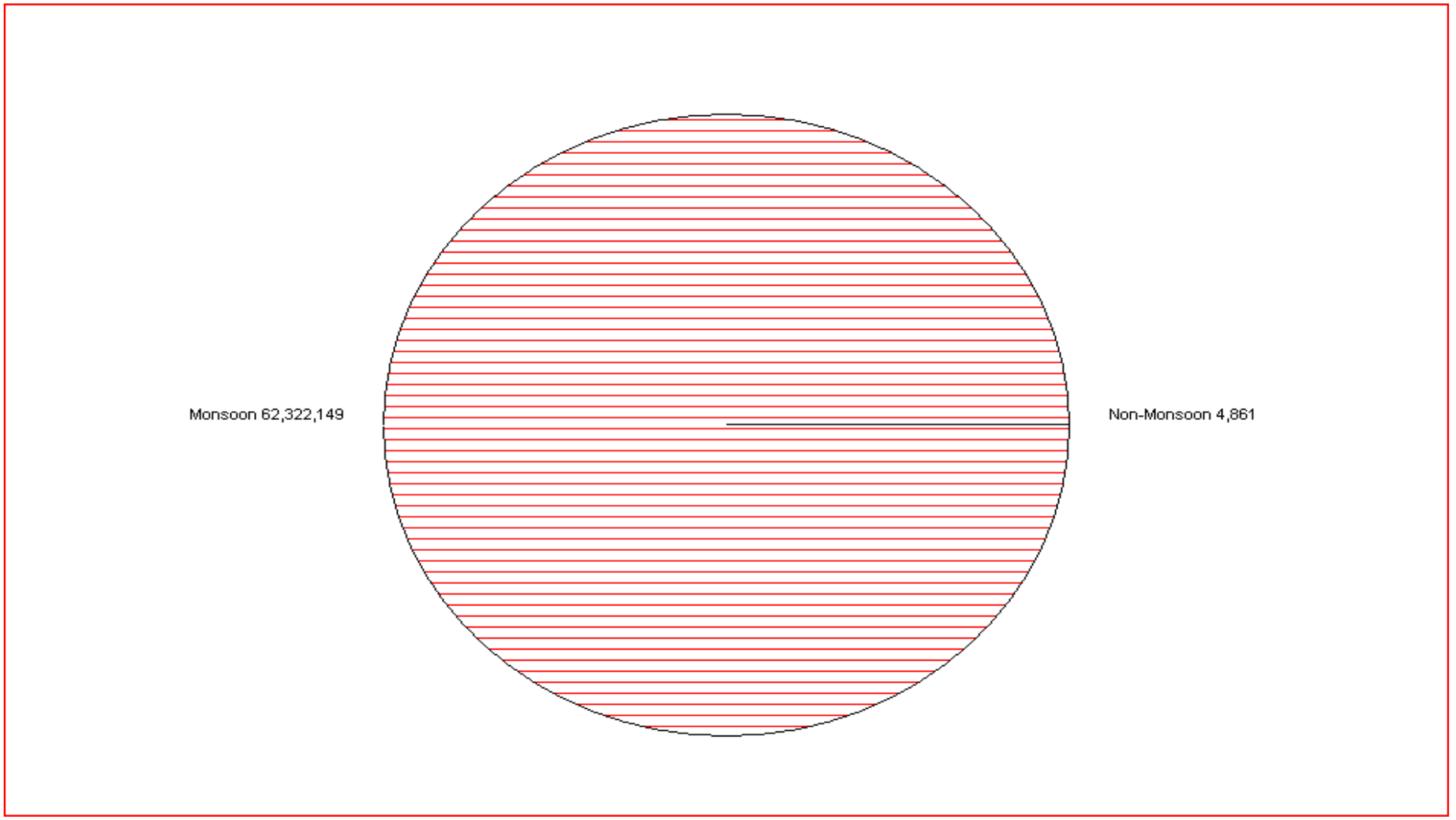
Local River : Tapi **Sub-Division : UTSD, Bhusawal**



Seasonal Sediment Load for the period : 2005-2016

Station Name : Tapi at Burhanpur (01 02 17 002) **Division : Tapi Div., Surat**

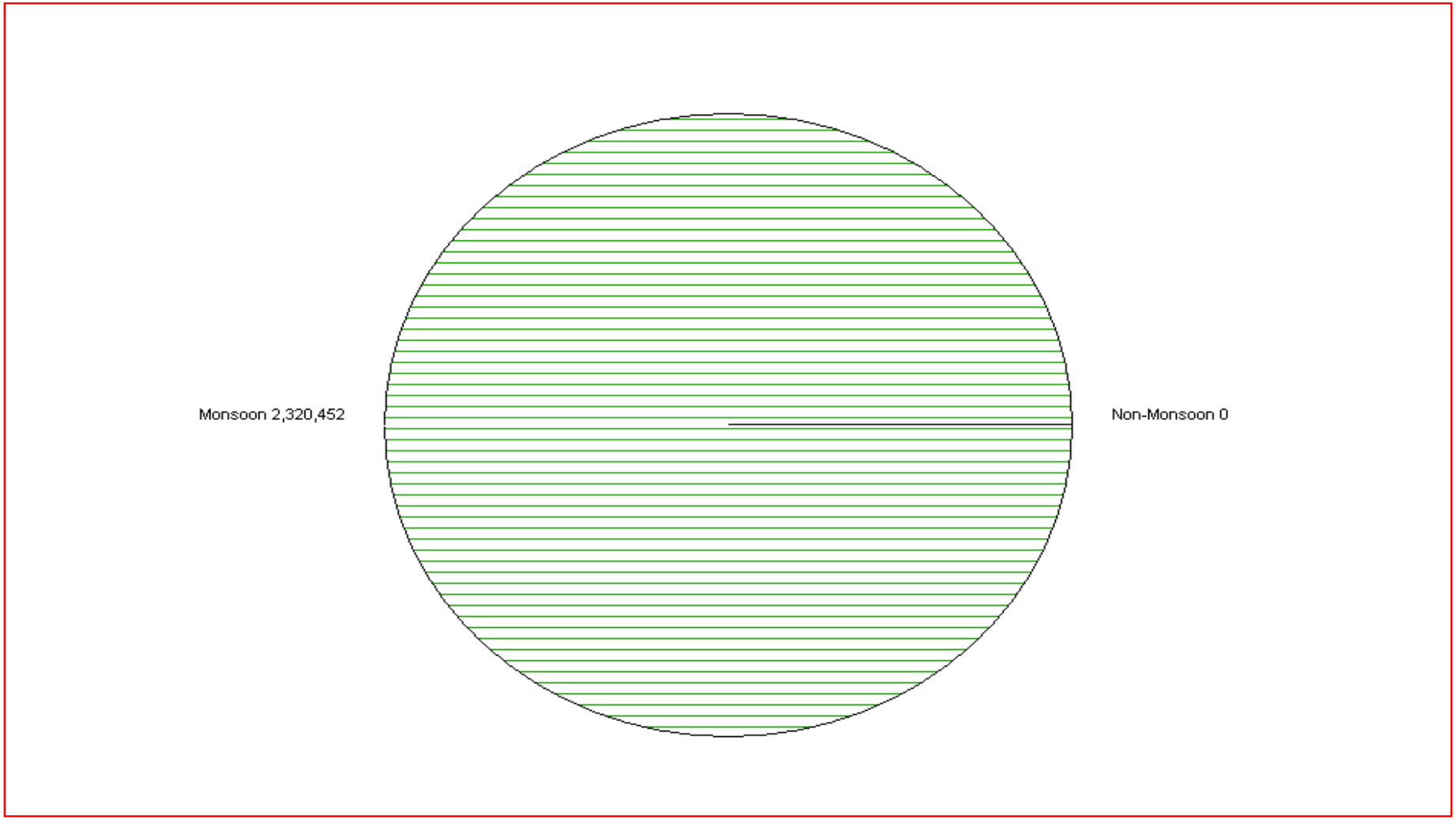
Local River : Tapi **Sub-Division : UTSD, Bhusawal**



Seasonal Sediment Load for the Year: 2016-2017

Station Name : Tapi at Burhanpur (01 02 17 002) **Division : Tapi Div., Surat**

Local River : Tapi **Sub-Division : UTSD, Bhusawal**



HISTORY SHEET

			Water Year	**:**	**2016-17**
Site	**:**	**Purna at Gopalkheda**	**Code**	**:**	**01 02 17 004**
State	:	Maharashtra	District		Akola
Basin	:	Tapi	Independent River	:	Tapi
Tributary	:	Purna	Sub Tributary	:	
Sub-Sub Tributary	:		Local River	:	Purna
Division	:	Surat	Sub-Division	:	Bhusawal
Drainage Area	:	9500 Sq. Km.	Bank	:	Left
Latitude	:	20°52'35" N	Longitude	:	76°59'14" E
Zero of Gauge (m)	:	236 (m.s.l)	17-02-1977		-
		Opening Date	Closing Date		
Gauge	:	17-02-1977			
Discharge	:	17-02-1977			
Sediment	:	30-07-1979			
Water Quality	:	01-08-1979			

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Purna at Gopalkheda (01 02 17 004) **Division : Surat**

Local River : Purna **Sub-Division : Bhusawal**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1							127.4	0.000	0.000	0.750	0.750	8258	67.93	0.000	0.000	0.650	0.650	3815
2							37.99	0.000	0.000	0.212	0.212	695	196.1	0.000	0.000	1.400	1.400	23717
3							341.8	0.000	0.000	2.000	2.000	59063	204.8	0.000	0.000	1.520	1.520	26896
4							214.3	0.000	0.000	1.500	1.500	27777	264.8	0.000	0.000	1.560	1.560	35697
5							106.1	0.000	0.000	0.700	0.700	6419	199.5	0.000	0.000	1.500	1.500	25856
6							73.69	0.000	0.000	0.700	0.700	4457	117.2	0.000	0.000	1.200	1.200	12148
7							16.87	0.000	0.000	0.156	0.156	227	118.0	0.000	0.000	1.300	1.300	13250
8							15.71	0.000	0.000	0.147	0.147	199	99.74	0.000	0.000	0.750	0.750	6463
9							17.02	0.000	0.000	0.161	0.161	237	81.18	0.000	0.000	0.600	0.600	4208
10							175.8	0.000	0.000	1.300	1.300	19747	68.72	0.000	0.000	0.600	0.600	3562
11							866.6	0.000	0.000	2.800	2.800	209658	61.79	0.000	0.000	0.500	0.500	2669
12							1168	0.000	0.000	3.500	3.500	353164	38.80	0.000	0.000	0.350	0.350	1173
13							922.2	0.000	0.000	3.000	3.000	239042	38.57	0.000	0.000	0.385	0.385	1283
14							96.71	0.000	0.000	0.650	0.650	5431	37.55	0.000	0.000	0.370	0.370	1200
15							55.05	0.000	0.000	0.550	0.550	2616	34.36	0.000	0.000	0.350	0.350	1039
16							43.02	0.000	0.000	0.380	0.380	1412	38.50	0.000	0.000	0.234	0.234	779
17							32.14	0.000	0.000	0.200	0.200	555	26.89	0.000	0.000	0.229	0.229	533
18							18.74	0.000	0.000	0.172	0.172	278	23.06	0.000	0.000	0.217	0.217	432
19							17.69	0.000	0.000	0.163	0.163	250	22.47	0.000	0.000	0.211	0.211	409
20							14.18	0.000	0.000	0.161	0.161	197	21.63	0.000	0.000	0.207	0.207	386
21							13.45	0.000	0.000	0.148	0.148	172	17.75	0.000	0.000	0.180	0.180	276
22	2.050	0.000	0.000	0.000	0.000	0	14.22	0.000	0.000	0.144	0.144	177	19.77	0.000	0.000	0.203	0.203	347
23	2.770	0.000	0.000	0.000	0.000	0	163.7	0.000	0.000	1.000	1.000	14142	17.71	0.000	0.000	0.198	0.198	303
24	48.67	0.000	0.000	0.350	0.350	1472	55.38	0.000	0.000	0.550	0.550	2632	16.32	0.000	0.000	0.193	0.193	271
25	20.43	0.000	0.000	0.157	0.157	277	77.80	0.000	0.000	0.750	0.750	5041	12.35	0.000	0.000	0.150	0.150	160
26	13.31	0.000	0.000	0.095	0.095	109	123.8	0.000	0.000	0.700	0.700	7490	10.80	0.000	0.000	0.124	0.124	116
27	8.470	0.000	0.000	0.148	0.148	109	530.3	0.000	0.000	2.400	2.400	109953	10.74	0.000	0.000	0.103	0.103	95
28	114.4	0.000	0.000	0.148	0.148	1466	616.5	0.000	0.000	2.600	2.600	138493	10.50	0.000	0.000	0.100	0.100	91
29	34.14	0.000	0.000	0.181	0.181	533	128.5	0.000	0.000	0.750	0.750	8327	10.33	0.000	0.000	0.094	0.094	84
30	170.5	0.000	0.000	0.900	0.900	13256	67.93	0.000	0.000	0.650	0.650	3815	17.67	0.000	0.000	0.123	0.123	188
31							65.15	0.000	0.000	0.600	0.600	3377	16.03	0.000	0.000	0.130	0.130	180
Ten Daily Mean																		
Ten Daily I							112.7	0.000	0.000	0.763	0.763	12708	141.8	0.000	0.000	1.108	1.108	15561
Ten Daily II							323.4	0.000	0.000	1.158	1.158	81260	34.36	0.000	0.000	0.305	0.305	990
Ten Daily III	46.08	0.000	0.000	0.220	0.220	1914	168.8	0.000	0.000	0.936	0.936	26693	14.54	0.000	0.000	0.145	0.145	192
Monthly Total						**17222**						**1233301**						**167629**

Annual Sediment Load (Metric Tonnes) : 1457547

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Purna at Gopalkheda (01 02 17 004) **Division : Surat**

Local River : Purna **Sub-Division : Bhusawal**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	23.69	0.000	0.000	0.139	0.139	285	16.16	0.000	0.000	0.195	0.195	272	5.974	0.000	0.000	0.035	0.035	18
2	14.94	0.000	0.000	0.132	0.132	170	33.02	0.000	0.000	0.300	0.300	856	5.441	0.000	0.000	0.030	0.030	14
3	24.42	0.000	0.000	0.144	0.144	304	102.8	0.000	0.000	0.750	0.750	6663	5.223	0.000	0.000	0.030	0.030	14
4	24.19	0.000	0.000	0.140	0.140	293	51.22	0.000	0.000	0.400	0.400	1770	5.000	0.000	0.000	0.030	0.030	13
5	15.80	0.000	0.000	0.142	0.142	193	30.63	0.000	0.000	0.174	0.174	461	4.719	0.000	0.000	0.028	0.028	11
6	13.87	0.000	0.000	0.140	0.140	168	25.89	0.000	0.000	0.156	0.156	348	3.990	0.000	0.000	0.020	0.020	7
7	11.63	0.000	0.000	0.140	0.140	141	24.77	0.000	0.000	0.148	0.148	317	3.456	0.000	0.000	0.020	0.020	6
8	11.09	0.000	0.000	0.130	0.130	125	21.36	0.000	0.000	0.138	0.138	255	3.185	0.000	0.000	0.018	0.018	5
9	9.832	0.000	0.000	0.095	0.095	81	57.51	0.000	0.000	0.550	0.550	2733	2.790	0.000	0.000	0.009	0.009	2
10	8.736	0.000	0.000	0.094	0.094	71	40.97	0.000	0.000	0.300	0.300	1062	2.970	0.000	0.000	0.008	0.008	2
11	7.920	0.000	0.000	0.090	0.090	62	30.41	0.000	0.000	0.170	0.170	447	0.000	0.000	0.000	0.000	0.000	0
12	7.062	0.000	0.000	0.085	0.085	52	27.03	0.000	0.000	0.150	0.150	350	0.000	0.000	0.000	0.000	0.000	0
13	6.600	0.000	0.000	0.080	0.080	46	24.74	0.000	0.000	0.137	0.137	292	0.000	0.000	0.000	0.000	0.000	0
14	7.252	0.000	0.000	0.085	0.085	53	20.52	0.000	0.000	0.132	0.132	233	0.000	0.000	0.000	0.000	0.000	0
15	10.89	0.000	0.000	0.095	0.095	89	18.97	0.000	0.000	0.128	0.128	210	0.000	0.000	0.000	0.000	0.000	0
16	19.52	0.000	0.000	0.196	0.196	330	13.96	0.000	0.000	0.100	0.100	121	0.000	0.000	0.000	0.000	0.000	0
17	63.58	0.000	0.000	0.600	0.600	3296	16.84	0.000	0.000	0.123	0.123	179	0.000	0.000	0.000	0.000	0.000	0
18	45.68	0.000	0.000	0.350	0.350	1381	15.87	0.000	0.000	0.120	0.120	165	0.000	0.000	0.000	0.000	0.000	0
19	24.95	0.000	0.000	0.206	0.206	444	15.30	0.000	0.000	0.113	0.113	150	0.000	0.000	0.000	0.000	0.000	0
20	64.55	0.000	0.000	0.600	0.600	3346	14.65	0.000	0.000	0.093	0.093	118	0.000	0.000	0.000	0.000	0.000	0
21	24.21	0.000	0.000	0.198	0.198	415	11.50	0.000	0.000	0.077	0.077	76	0.000	0.000	0.000	0.000	0.000	0
22	17.60	0.000	0.000	0.190	0.190	289	10.80	0.000	0.000	0.070	0.070	65	0.000	0.000	0.000	0.000	0.000	0
23	14.94	0.000	0.000	0.222	0.222	286	9.610	0.000	0.000	0.070	0.070	58	0.000	0.000	0.000	0.000	0.000	0
24	38.05	0.000	0.000	0.205	0.205	674	8.779	0.000	0.000	0.060	0.060	46	0.000	0.000	0.000	0.000	0.000	0
25	50.71	0.000	0.000	0.400	0.400	1753	8.369	0.000	0.000	0.059	0.059	43	0.000	0.000	0.000	0.000	0.000	0
26	71.05	0.000	0.000	0.730	0.730	4481	8.292	0.000	0.000	0.058	0.058	42						
27	38.14	0.000	0.000	0.250	0.250	824	7.692	0.000	0.000	0.050	0.050	33						
28	45.07	0.000	0.000	0.350	0.350	1363	7.181	0.000	0.000	0.045	0.045	28						
29	24.33	0.000	0.000	0.231	0.231	485	6.432	0.000	0.000	0.040	0.040	22						
30	18.67	0.000	0.000	0.210	0.210	339	6.850	0.000	0.000	0.045	0.045	27						
31							6.514	0.000	0.000	0.040	0.040	23						
Ten Daily Mean																		
Ten Daily I	15.82	0.000	0.000	0.130	0.130	183	40.44	0.000	0.000	0.311	0.311	1474	4.275	0.000	0.000	0.023	0.023	9
Ten Daily II	25.80	0.000	0.000	0.239	0.239	910	19.83	0.000	0.000	0.127	0.127	227	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	34.28	0.000	0.000	0.299	0.299	1091	8.365	0.000	0.000	0.056	0.056	42	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**21837**						**17466**						**92**

Annual Sediment Load (Metric Tonnes) : 1457547

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Purna at Gopalkheda (01 02 17 004) **Division : Surat**

Local River : Purna **Sub-Division : Bhusawal**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1																		
2																		
3																		
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28																		
29																		
30																		
31																		
Ten Daily Mean																		
Ten Daily I																		
Ten Daily II																		
Ten Daily III																		
Monthly Total																		

Annual Sediment Load (Metric Tonnes) : 1457547

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Purna at Gopalkheda (01 02 17 004) **Division : Surat**

Local River : Purna **Sub-Division : Bhusawal**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1																		
2																		
3																		
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30																		
31																		
Ten Daily Mean																		
Ten Daily I																		
Ten Daily II																		
Ten Daily III																		
Monthly Total																		

Annual Sediment Load (Metric Tonnes) : 1457547

Annual Sediment Load for period : 2005-2017

Station Name : Purna at Gopalkheda (01 02 17 004) **Division : Surat**

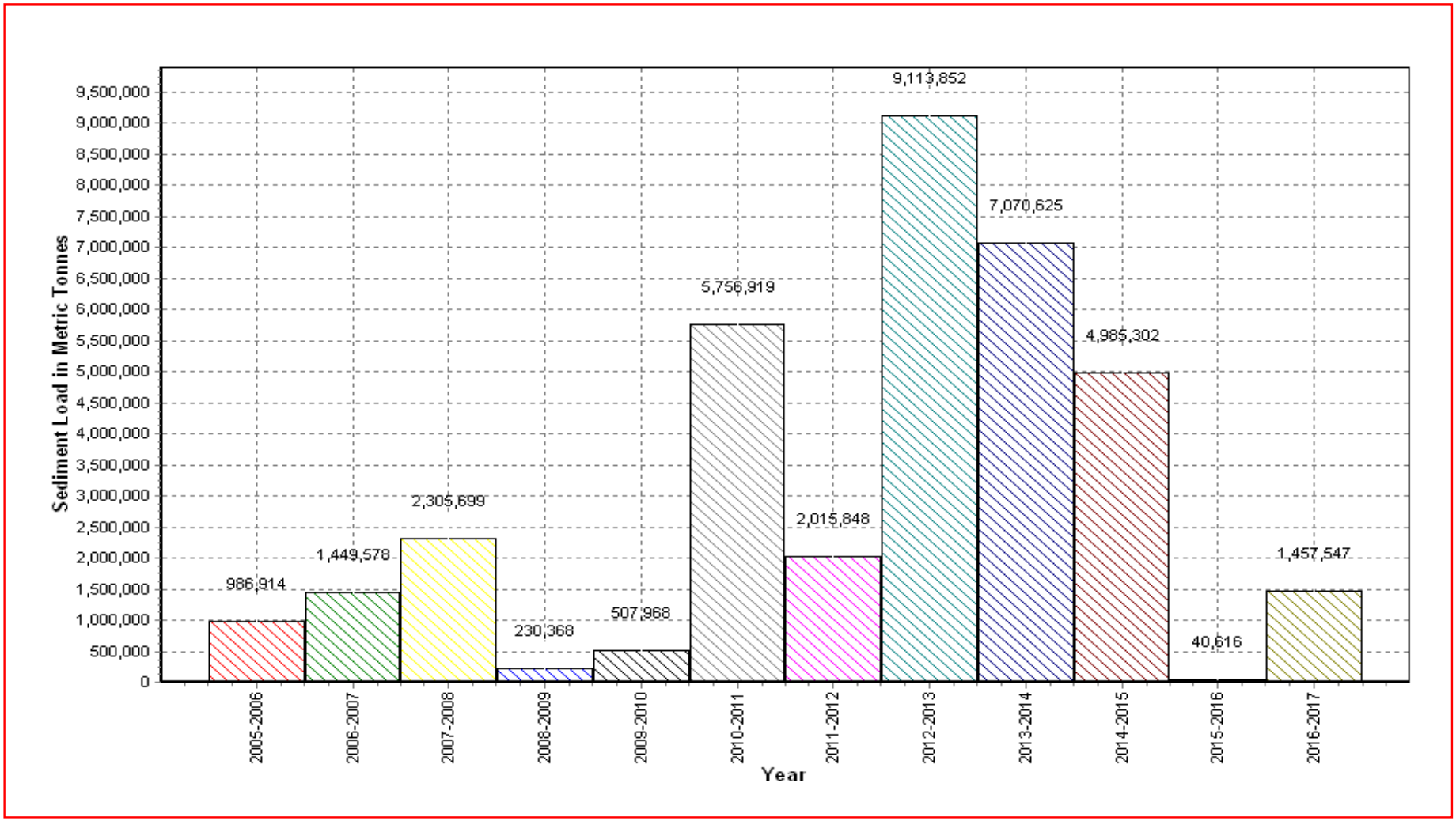
Local River : Purna **Sub-Division : Bhusawal**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2005-2006	986687	227	986914	630
2006-2007	1449485	93	1449578	1986
2007-2008	2299615	6085	2305699	2827
2008-2009	230368	0	230368	211
2009-2010	507967	1	507968	295
2010-2011	5756871	48	5756919	1400
2011-2012	2015848	0	2015848	601
2012-2013	9113852	0	9113852	1359
2013-2014	7070396	229	7070625	2374
2014-2015	4985302	0	4985302	1204
2015-2016	40616	0	40616	928
2016-2017	1457547	0	1457547	868

Annual Sediment Load for the period: 2005-2017

Station Name : Purna at Gopalkheda (01 02 17 004) **Division : Surat**

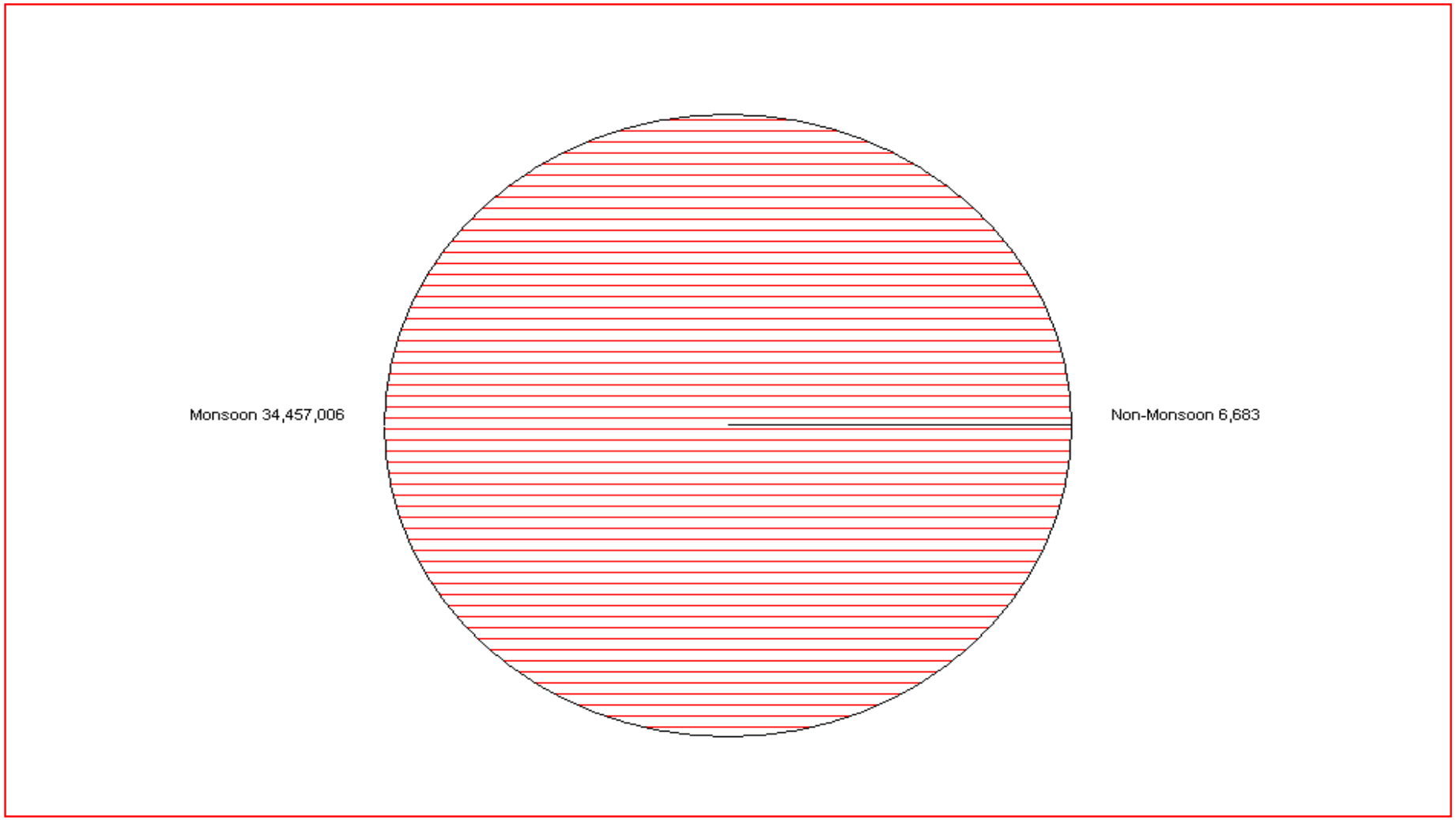
Local River : Purna **Sub-Division : Bhusawal**



Seasonal Sediment Load for the period : 2005-2016

Station Name : Purna at Gopalkheda (01 02 17 004) **Division : Surat**

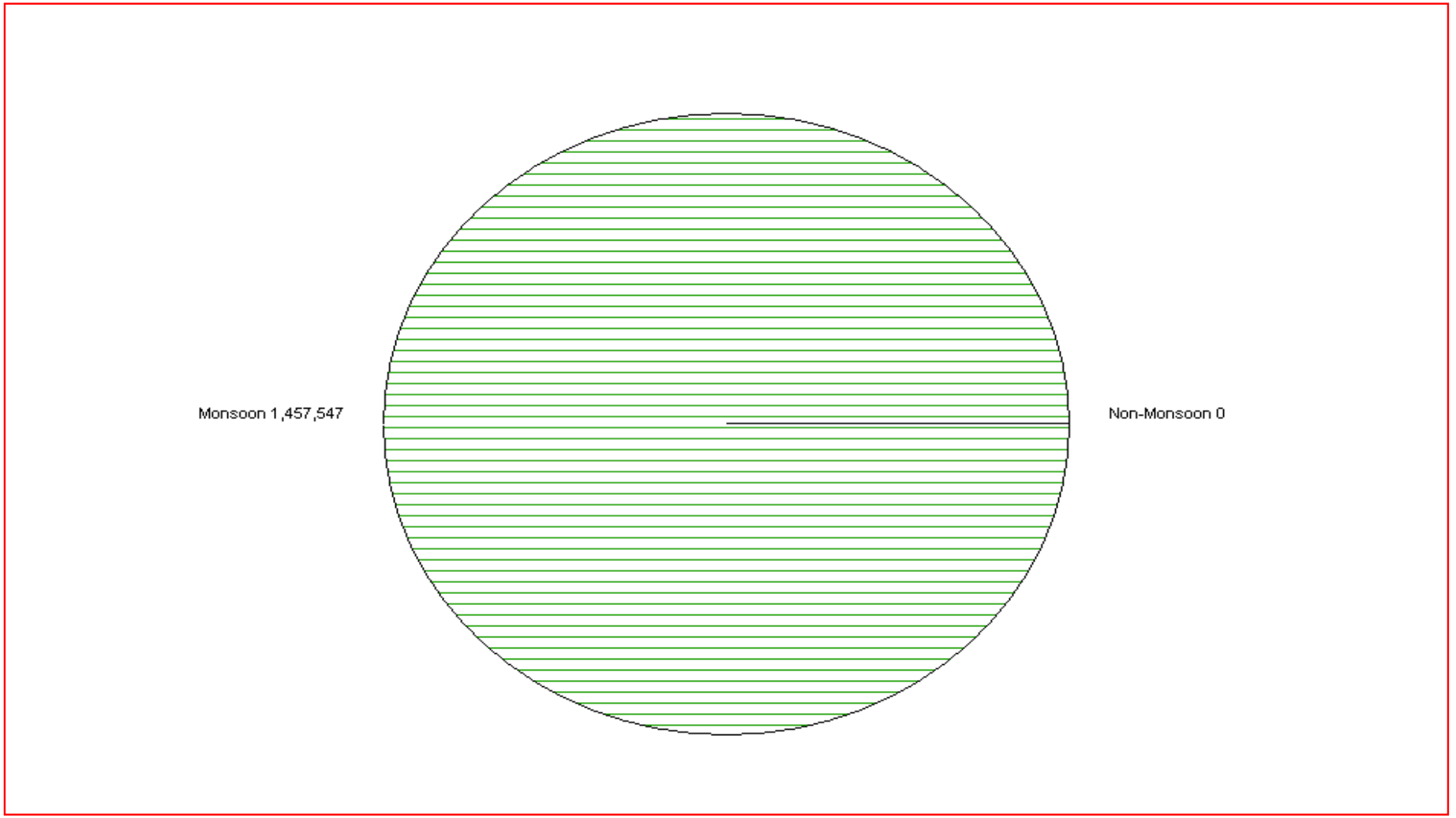
Local River : Purna **Sub-Division : Bhusawal**



Seasonal Sediment Load for the Year: 2016-2017

Station Name : Purna at Gopalkheda (01 02 17 004) **Division : Surat**

Local River : Purna **Sub-Division : Bhusawal**



HISTORY SHEET

			Water Year	**:**	**2016-17**
Site	**:**	**Purna at Yerli**	**Code**	**:**	**01 02 17 005**
State	:	Maharashtra	District		Buldana
Basin	:	Tapi	Independent River	:	Tapi
Tributary	:	Purna	Sub Tributary	:	
Sub-Sub Tributary	:		Local River	:	
Division	:	Surat	Sub-Division	:	Bhusawal
Drainage Area	:	16517 Sq. Km.	Bank	:	
Latitude	:	20°56'11" N	Longitude	:	76°28'27" E
Zero of Gauge (m)	:	213 (m.s.l)	11-11-1971		-
		Opening Date	Closing Date		
Gauge	:	11-11-1971			
Discharge	:	01-03-1972			
Sediment	:	09-04-1973			
Water Quality	:	01-06-1977	31-05-2005		

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Purna at Yerli (01 02 17 005) **Division : Surat**

Local River : **Sub-Division : Bhusawal**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1		0.000	0.000	0.000	0.000		178.2	0.000	0.000	1.385	1.385	21314	161.2	0.000	0.000	1.048	1.048	14593
2		0.000	0.000	0.000	0.000		116.3	0.000	0.000	0.328	0.328	3297	390.2	0.000	0.000	1.781	1.781	60030
3		0.000	0.000	0.000	0.000		62.05	0.000	0.000	0.150	0.150	804	299.5	0.000	0.000	1.667	1.667	43152
4		0.000	0.000	0.000	0.000		394.7	0.000	0.000	2.000	2.000	68212	588.1	0.000	0.000	3.901	3.901	198208
5		0.000	0.000	0.000	0.000		120.3	0.000	0.000	0.379	0.379	3945	410.0	0.000	0.000	2.560	2.560	90689
6		0.000	0.000	0.000	0.000		172.0	0.000	0.000	1.500	1.500	22295	242.4	0.000	0.000	0.150	0.150	3141
7		0.000	0.000	0.000	0.000		54.10	0.000	0.000	0.700	0.700	3272	214.8	0.000	0.000	0.100	0.100	1856
8		0.000	0.000	0.000	0.000		25.25	0.000	0.000	0.220	0.220	481	314.1	0.000	0.000	1.738	1.738	47169
9		0.000	0.000	0.000	0.000		22.35	0.000	0.000	0.200	0.200	386	197.3	0.000	0.000	1.277	1.277	21766
10		0.000	0.000	0.000	0.000		32.06	0.000	0.000	0.250	0.250	692	183.3	0.000	0.000	0.440	0.440	6961
11		0.000	0.000	0.000	0.000		995.9	0.000	0.000	2.200	2.200	189307	137.0	0.000	0.000	0.524	0.524	6202
12		0.000	0.000	0.000	0.000		2172	0.000	0.000	3.354	3.354	629504	122.6	0.000	0.000	0.487	0.487	5162
13		0.000	0.000	0.000	0.000		1968	0.000	0.000	2.550	2.550	433605	111.1	0.000	0.000	0.218	0.218	2094
14		0.000	0.000	0.000	0.000		439.6	0.000	0.000	1.080	1.080	41024	74.22	0.000	0.000	0.200	0.200	1283
15		0.000	0.000	0.000	0.000		185.2	0.000	0.000	0.759	0.759	12154	72.97	0.000	0.000	0.200	0.200	1261
16		0.000	0.000	0.000	0.000		109.9	0.000	0.000	0.765	0.765	7258	55.44	0.000	0.000	0.166	0.166	795
17		0.000	0.000	0.000	0.000		75.47	0.000	0.000	0.700	0.700	4564	51.05	0.000	0.000	0.080	0.080	352
18		0.000	0.000	0.000	0.000		35.63	0.000	0.000	0.306	0.306	942	42.26	0.000	0.000	0.073	0.073	267
19		0.000	0.000	0.000	0.000		51.90	0.000	0.000	0.346	0.346	1551	43.63	0.000	0.000	0.037	0.037	140
20		0.000	0.000	0.000	0.000		44.37	0.000	0.000	0.636	0.636	2440	24.57	0.000	0.000	0.000	0.000	0
21		0.000	0.000	0.000	0.000		48.29	0.000	0.000	0.685	0.685	2856	21.72	0.000	0.000	0.000	0.000	0
22		0.000	0.000	0.000	0.000		34.76	0.000	0.000	0.110	0.110	330	21.87	0.000	0.000	0.000	0.000	0
23		0.000	0.000	0.000	0.000		29.55	0.000	0.000	0.092	0.092	235	20.74	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	458.7	0.000	0.000	1.200	1.200	47553	19.87	0.000	0.000	0.000	0.000	0
25	77.62	0.000	0.000	0.400	0.400	2683	224.4	0.000	0.000	1.042	1.042	20196	23.87	0.000	0.000	0.000	0.000	0
26	27.41	0.000	0.000	0.250	0.250	592	359.3	0.000	0.000	2.087	2.087	64783	19.55	0.000	0.000	0.000	0.000	0
27	9.933	0.000	0.000	0.168	0.168	144	642.7	0.000	0.000	2.864	2.864	159043	19.13	0.000	0.000	0.000	0.000	0
28	86.29	0.000	0.000	0.377	0.377	2809	1525	0.000	0.000	3.100	3.100	408383	23.02	0.000	0.000	0.000	0.000	0
29	90.66	0.000	0.000	0.357	0.357	2798	668.9	0.000	0.000	1.800	1.800	104026	14.99	0.000	0.000	0.000	0.000	0
30	50.45	0.000	0.000	0.091	0.091	397	241.0	0.000	0.000	1.652	1.652	34397	18.21	0.000	0.000	0.000	0.000	0
31							173.7	0.000	0.000	1.000	1.000	15006	19.98	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I		0.000	0.000	0.000	0.000		117.7	0.000	0.000	0.711	0.711	12470	300.1	0.000	0.000	1.466	1.466	48757
Ten Daily II		0.000	0.000	0.000	0.000		607.8	0.000	0.000	1.270	1.270	132235	73.49	0.000	0.000	0.199	0.199	1756
Ten Daily III	48.91	0.000	0.000	0.164	0.164	1346	400.5	0.000	0.000	1.421	1.421	77892	20.27	0.000	0.000	0.000	0.000	0
Monthly Total						**9422**						**2303857**						**505121**

Annual Sediment Load (Metric Tonnes) : 2971356

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Purna at Yerli (01 02 17 005) **Division : Surat**

Local River : **Sub-Division : Bhusawal**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	64.07	0.000	0.000	0.150	0.150	830	40.28	0.000	0.000	0.145	0.145	506	4.504	0.000	0.000	0.000	0.000	0
2	123.4	0.000	0.000	0.312	0.312	3326	34.95	0.000	0.000	0.090	0.090	272	3.784	0.000	0.000	0.000	0.000	0
3	91.93	0.000	0.000	0.560	0.560	4448	266.4	0.000	0.000	1.400	1.400	32218	3.643	0.000	0.000	0.000	0.000	0
4	45.18	0.000	0.000	0.400	0.400	1561	226.2	0.000	0.000	1.104	1.104	21571	3.134	0.000	0.000	0.000	0.000	0
5	27.33	0.000	0.000	0.324	0.324	765	132.7	0.000	0.000	0.920	0.920	10550	2.838	0.000	0.000	0.000	0.000	0
6	20.19	0.000	0.000	0.049	0.049	85	104.9	0.000	0.000	0.486	0.486	4403	0.750	0.000	0.000	0.000	0.000	0
7	19.10	0.000	0.000	0.036	0.036	59	99.45	0.000	0.000	0.377	0.377	3241	0.100	0.000	0.000	0.000	0.000	0
8	12.71	0.000	0.000	0.009	0.009	9	39.33	0.000	0.000	0.133	0.133	451	0.000	0.000	0.000	0.000	0.000	0
9	11.82	0.000	0.000	0.000	0.000	0	43.07	0.000	0.000	0.160	0.160	595	0.000	0.000	0.000	0.000	0.000	0
10	10.48	0.000	0.000	0.000	0.000	0	175.3	0.000	0.000	1.000	1.000	15150	0.000	0.000	0.000	0.000	0.000	0
11	10.12	0.000	0.000	0.000	0.000	0	76.74	0.000	0.000	0.600	0.600	3978	0.000	0.000	0.000	0.000	0.000	0
12	1.730	0.000	0.000	0.000	0.000	0	56.23	0.000	0.000	0.400	0.400	1943	0.000	0.000	0.000	0.000	0.000	0
13	4.840	0.000	0.000	0.000	0.000	0	46.58	0.000	0.000	0.142	0.142	573	0.000	0.000	0.000	0.000	0.000	0
14	7.996	0.000	0.000	0.000	0.000	0	40.53	0.000	0.000	0.169	0.169	590	0.000	0.000	0.000	0.000	0.000	0
15	5.016	0.000	0.000	0.000	0.000	0	28.62	0.000	0.000	0.154	0.154	380	0.000	0.000	0.000	0.000	0.000	0
16	10.58	0.000	0.000	0.000	0.000	0	25.62	0.000	0.000	0.120	0.120	266	0.000	0.000	0.000	0.000	0.000	0
17	27.03	0.000	0.000	0.071	0.071	166	12.00	0.000	0.000	0.051	0.051	52	0.000	0.000	0.000	0.000	0.000	0
18	122.0	0.000	0.000	0.400	0.400	4217	21.83	0.000	0.000	0.100	0.100	189	0.000	0.000	0.000	0.000	0.000	0
19	75.47	0.000	0.000	0.334	0.334	2175	21.18	0.000	0.000	0.100	0.100	183	0.000	0.000	0.000	0.000	0.000	0
20	51.15	0.000	0.000	0.710	0.710	3138	10.97	0.000	0.000	0.080	0.080	76	0.000	0.000	0.000	0.000	0.000	0
21	78.55	0.000	0.000	0.744	0.744	5049	9.668	0.000	0.000	0.075	0.075	63	0.000	0.000	0.000	0.000	0.000	0
22	51.93	0.000	0.000	0.608	0.608	2728	8.736	0.000	0.000	0.060	0.060	45	0.000	0.000	0.000	0.000	0.000	0
23	48.34	0.000	0.000	0.561	0.561	2345	10.12	0.000	0.000	0.075	0.075	66	0.000	0.000	0.000	0.000	0.000	0
24	37.12	0.000	0.000	0.304	0.304	976	8.542	0.000	0.000	0.060	0.060	44	0.000	0.000	0.000	0.000	0.000	0
25	44.12	0.000	0.000	0.280	0.280	1067	7.823	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	106.9	0.000	0.000	0.350	0.350	3232	7.071	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	154.2	0.000	0.000	1.000	1.000	13324	6.869	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	86.15	0.000	0.000	0.164	0.164	1224	6.519	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	89.98	0.000	0.000	0.370	0.370	2873	5.792	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	66.36	0.000	0.000	0.340	0.340	1952	5.900	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31							5.079	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	42.62	0.000	0.000	0.184	0.184	1108	116.3	0.000	0.000	0.581	0.581	8896	1.875	0.000	0.000	0.000	0.000	0
Ten Daily II	31.60	0.000	0.000	0.151	0.151	970	34.03	0.000	0.000	0.192	0.192	823	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	76.36	0.000	0.000	0.472	0.472	3477	7.465	0.000	0.000	0.025	0.025	20	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						**55552**						**97405**						**0**

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Annual Sediment Load (Metric Tonnes) : 2971356

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Purna at Yerli (01 02 17 005) **Division : Surat**

Local River : **Sub-Division : Bhusawal**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0												
2	0.000	0.000	0.000	0.000	0.000	0												
3	0.000	0.000	0.000	0.000	0.000	0												
4	0.000	0.000	0.000	0.000	0.000	0												
5	0.000	0.000	0.000	0.000	0.000	0												
6	0.000	0.000	0.000	0.000	0.000	0												
7	0.000	0.000	0.000	0.000	0.000	0												
8	0.000	0.000	0.000	0.000	0.000	0												
9	0.000	0.000	0.000	0.000	0.000	0												
10	0.000	0.000	0.000	0.000	0.000	0												
11	0.000	0.000	0.000	0.000	0.000	0												
12	0.000	0.000	0.000	0.000	0.000	0												
13																		
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26																		
27																		
28																		
29																		
30																		
31																		
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0												
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0												
Ten Daily III																		
Monthly																		
Total						0												

Annual Sediment Load (Metric Tonnes) : 2971356

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Purna at Yerli (01 02 17 005) **Division : Surat**

Local River : **Sub-Division : Bhusawal**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
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24																		
25																		
26																		
27																		
28																		
29																		
30																		
31																		
Ten Daily Mean																		
Ten Daily I																		
Ten Daily II																		
Ten Daily III																		
Monthly Total																		

Annual Sediment Load (Metric Tonnes) : 2971356

Annual Sediment Load for period : 2005-2017

Station Name : Purna at Yerli (01 02 17 005) **Division : Surat**

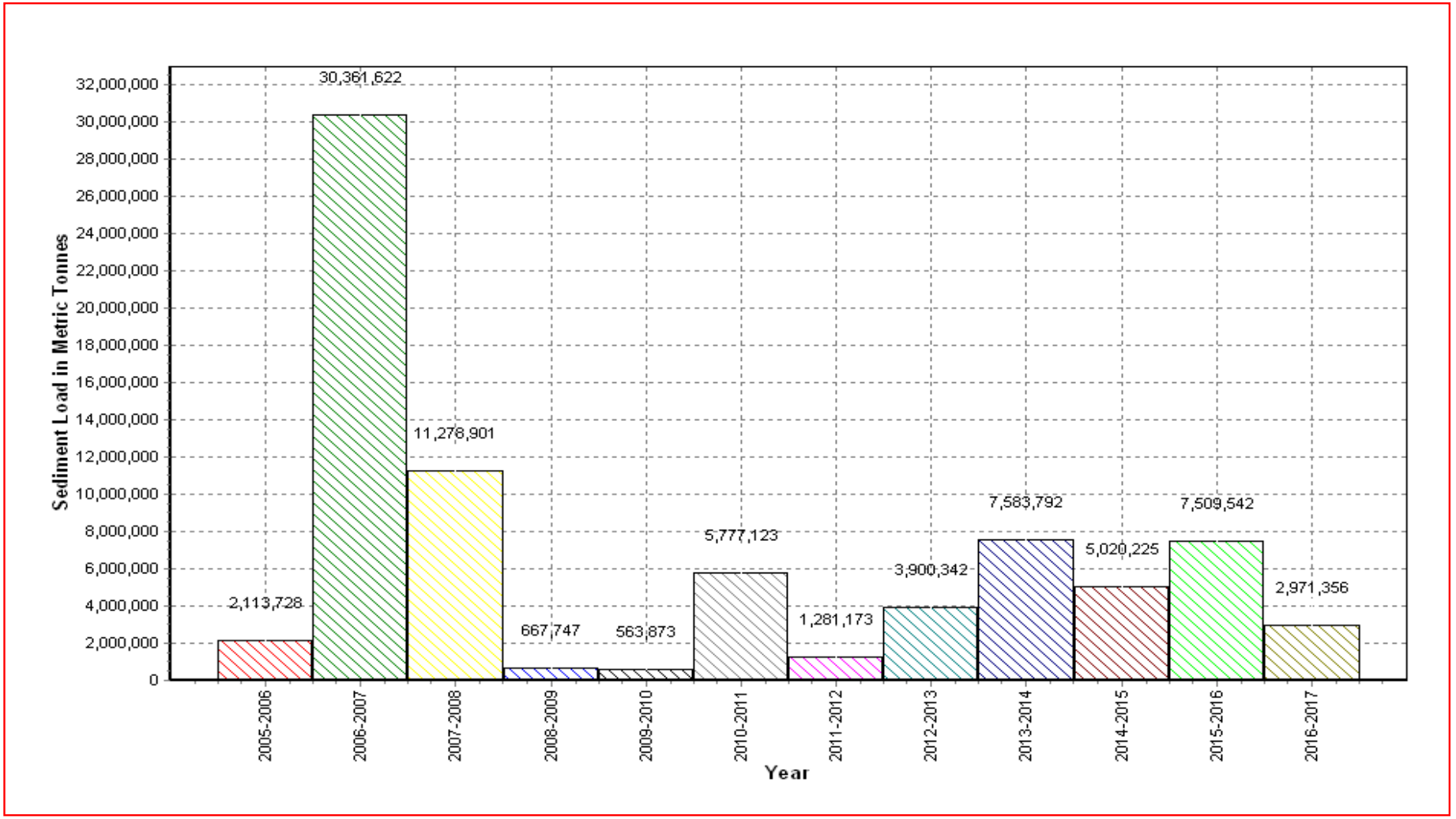
Local River : **Sub-Division : Bhusawal**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2005-2006	2110313	3415	2113728	1041
2006-2007	30361621	2	30361622	3518
2007-2008	11278856	45	11278901	3340
2008-2009	667747	0	667747	365
2009-2010	557587	6286	563873	640
2010-2011	5777103	20	5777123	2433
2011-2012	1281173	0	1281173	855
2012-2013	3900342	0	3900342	1832
2013-2014	7583548	244	7583792	3822
2014-2015	4978972	41253	5020225	1787
2015-2016	7509542	0	7509542	1720
2016-2017	2971356	0	2971356	1648

Annual Sediment Load for the period: 2005-2017

Station Name : Purna at Yerli (01 02 17 005) **Division : Surat**

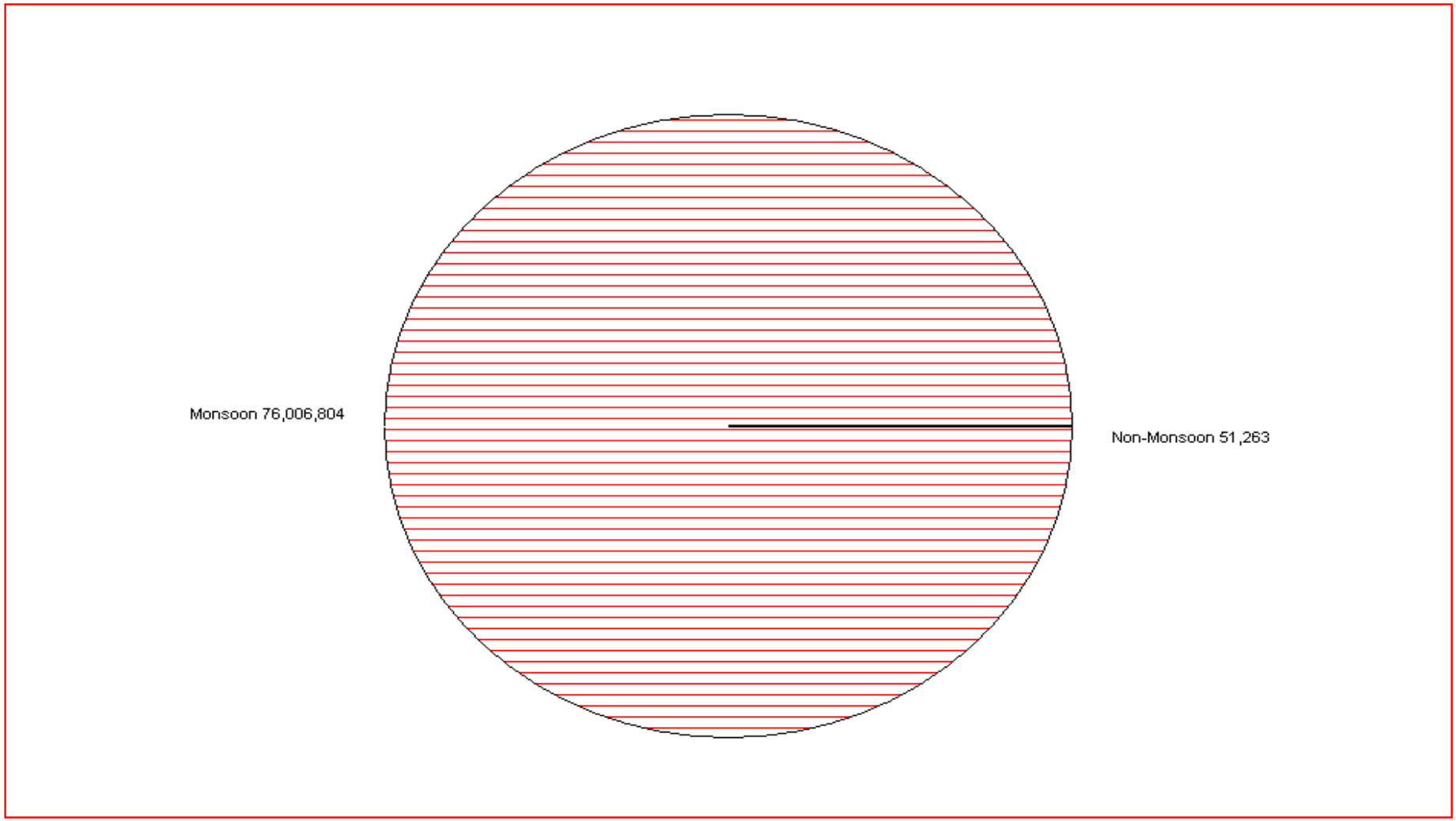
Local River : **Sub-Division : Bhusawal**



Seasonal Sediment Load for the period : 2005-2016

Station Name : Purna at Yerli (01 02 17 005) **Division : Surat**

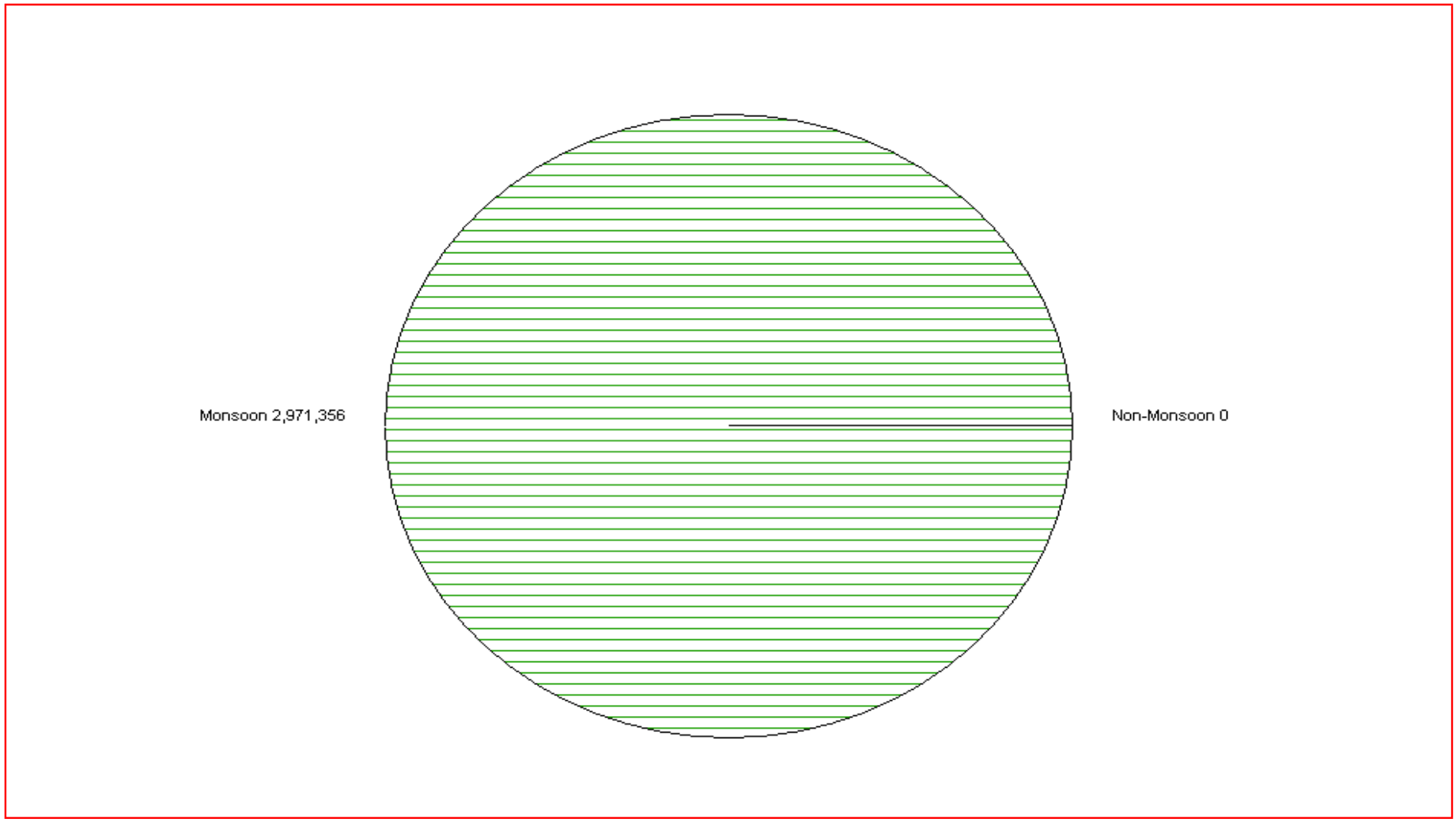
Local River : **Sub-Division : Bhusawal**



Seasonal Sediment Load for the Year: 2016-2017

Station Name : Purna at Yerli (01 02 17 005) **Division : Surat**

Local River : **Sub-Division : Bhusawal**



HISTORY SHEET

			Water Year	**:**	**2016-17**
Site	**:**	**Tapi at Sarangkheda**	**Code**	**:**	**01 02 17 015**
State	:	Maharashtra	District		Nandurbar
Basin	:	Tapi	Independent River	:	Tapi
Tributary	:		Sub Tributary	:	
Sub-Sub Tributary	:		Local River	:	
Division	:	Surat	Sub-Division	:	MTSD, Dhule
Drainage Area	:	58400 Sq. Km.	Bank	:	Right
Latitude	:	21°25'55" N	Longitude	:	74°31'37" E
Zero of Gauge (m)	:	108 (m.s.l)	21-09-1971		-
		Opening Date	Closing Date		
Gauge	:	29-07-1976			
Discharge	:	19-10-1977			
Sediment	:	13-07-1984			
Water Quality	:	01-01-1980			

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Tapi at Sarangkheda (01 02 17 015) **Division : Surat**

Local River : **Sub-Division : Dhule**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1							18.25	0.000	0.000	0.060	0.060	95	608.6	0.000	0.000	0.396	0.396	20823
2							213.7	0.000	0.000	0.300	0.300	5540	564.0	0.000	0.000	0.243	0.243	11841
3							213.7	0.000	0.000	0.300	0.300	5540	1511	0.000	0.000	2.176	2.176	284078
4							213.7	0.000	0.000	0.300	0.300	5540	1927	0.000	0.000	2.491	2.491	414734
5							378.0	0.000	0.000	0.596	0.596	19463	2541	0.000	0.000	5.380	5.380	1181138
6							271.6	0.000	0.000	0.350	0.350	8214	1616	0.000	0.000	1.252	1.252	174807
7							471.2	0.000	0.000	0.496	0.496	20191	1171	0.000	0.000	0.500	0.500	50598
8							355.8	0.000	0.000	0.332	0.332	10205	1658	0.000	0.000	0.664	0.664	95119
9							416.8	0.000	0.000	0.376	0.376	13539	1449	0.000	0.000	0.450	0.450	56337
10							232.5	0.000	0.000	0.250	0.250	5022	1064	0.000	0.000	0.400	0.400	36772
11							1031	0.000	0.000	4.500	4.500	401025	915.5	0.000	0.000	0.340	0.340	26894
12							2501	0.000	0.000	5.950	5.950	1285458	899.8	0.000	0.000	0.320	0.320	24878
13							5701	0.000	0.000	6.950	6.950	3423094	627.7	0.000	0.000	0.300	0.300	16270
14							3943	0.000	0.000	5.000	5.000	1703532	623.3	0.000	0.000	0.300	0.300	16156
15							1832	0.000	0.000	2.252	2.252	356510	623.3	0.000	0.000	0.300	0.300	16156
16							855.7	0.000	0.000	0.912	0.912	67424	509.9	0.000	0.000	0.098	0.098	4317
17							597.0	0.000	0.000	0.550	0.550	28368	427.6	0.000	0.000	0.076	0.076	2808
18							308.8	0.000	0.000	0.210	0.210	5603	327.1	0.000	0.000	0.108	0.108	3052
19							463.9	0.000	0.000	0.258	0.258	10341	250.5	0.000	0.000	0.048	0.048	1039
20							378.0	0.000	0.000	0.128	0.128	4180	235.8	0.000	0.000	0.030	0.030	611
21							304.7	0.000	0.000	0.133	0.133	3501	177.8	0.000	0.000	0.025	0.025	384
22							304.9	0.000	0.000	0.122	0.122	3214	134.0	0.000	0.000	0.018	0.018	208
23							272.5	0.000	0.000	0.131	0.131	3084	134.9	0.000	0.000	0.029	0.029	338
24							291.9	0.000	0.000	0.150	0.150	3784	135.7	0.000	0.000	0.028	0.028	328
25							711.5	0.000	0.000	0.455	0.455	27970	113.0	0.000	0.000	0.015	0.015	146
26							594.8	0.000	0.000	0.302	0.302	15520	125.3	0.000	0.000	0.024	0.024	260
27							1190	0.000	0.000	0.555	0.555	57063	98.41	0.000	0.000	0.010	0.010	85
28							1159	0.000	0.000	0.972	0.972	97334	18.25	0.000	0.000	0.000	0.000	0
29							2390	0.000	0.000	6.932	6.932	1431430	18.25	0.000	0.000	0.000	0.000	0
30							1538	0.000	0.000	4.519	4.519	600499	18.25	0.000	0.000	0.000	0.000	0
31							937.1	0.000	0.000	3.000	3.000	242907	18.25	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I							278.5	0.000	0.000	0.336	0.336	9335	1411	0.000	0.000	1.395	1.395	232625
Ten Daily II							1761	0.000	0.000	2.671	2.671	728553	544.1	0.000	0.000	0.192	0.192	11218
Ten Daily III							881.3	0.000	0.000	1.570	1.570	226028	90.19	0.000	0.000	0.014	0.014	159
Monthly Total												**9865189**						**2440178**

Annual Sediment Load (Metric Tonnes) : 12583627

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Tapi at Sarangkheda (01 02 17 015) **Division : Surat**

Local River : **Sub-Division : Dhule**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	18.25	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	136.2	0.000	0.000	0.170	0.170	2000	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	1224	0.000	0.000	0.200	0.200	21153	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	1224	0.000	0.000	0.200	0.200	21153	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	1258	0.000	0.000	0.200	0.200	21731	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	1258	0.000	0.000	0.180	0.180	19558	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	1944	0.000	0.000	0.380	0.380	63825	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	1291	0.000	0.000	0.285	0.285	31798	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	1093	0.000	0.000	0.210	0.210	19839	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	1536	0.000	0.000	0.360	0.360	47772	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	1191	0.000	0.000	0.286	0.286	29430	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31							0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	15.44	0.000	0.000	0.017	0.017	200	496.3	0.000	0.000	0.078	0.078	8360	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	323.5	0.000	0.000	0.067	0.067	9562	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	382.0	0.000	0.000	0.086	0.086	9704	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**194664**						**83595**						**0**

Annual Sediment Load (Metric Tonnes) : 12583627

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Tapi at Sarangkheda (01 02 17 015) **Division : Surat**

Local River : **Sub-Division : Dhule**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

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Annual Sediment Load (Metric Tonnes) : 12583627

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Tapi at Sarangkheda (01 02 17 015) **Division : Surat**

Local River : **Sub-Division : Dhule**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 12583627

Annual Sediment Load for period : 2005-2017

Station Name : Tapi at Sarangkheda (01 02 17 015) **Division : Surat**

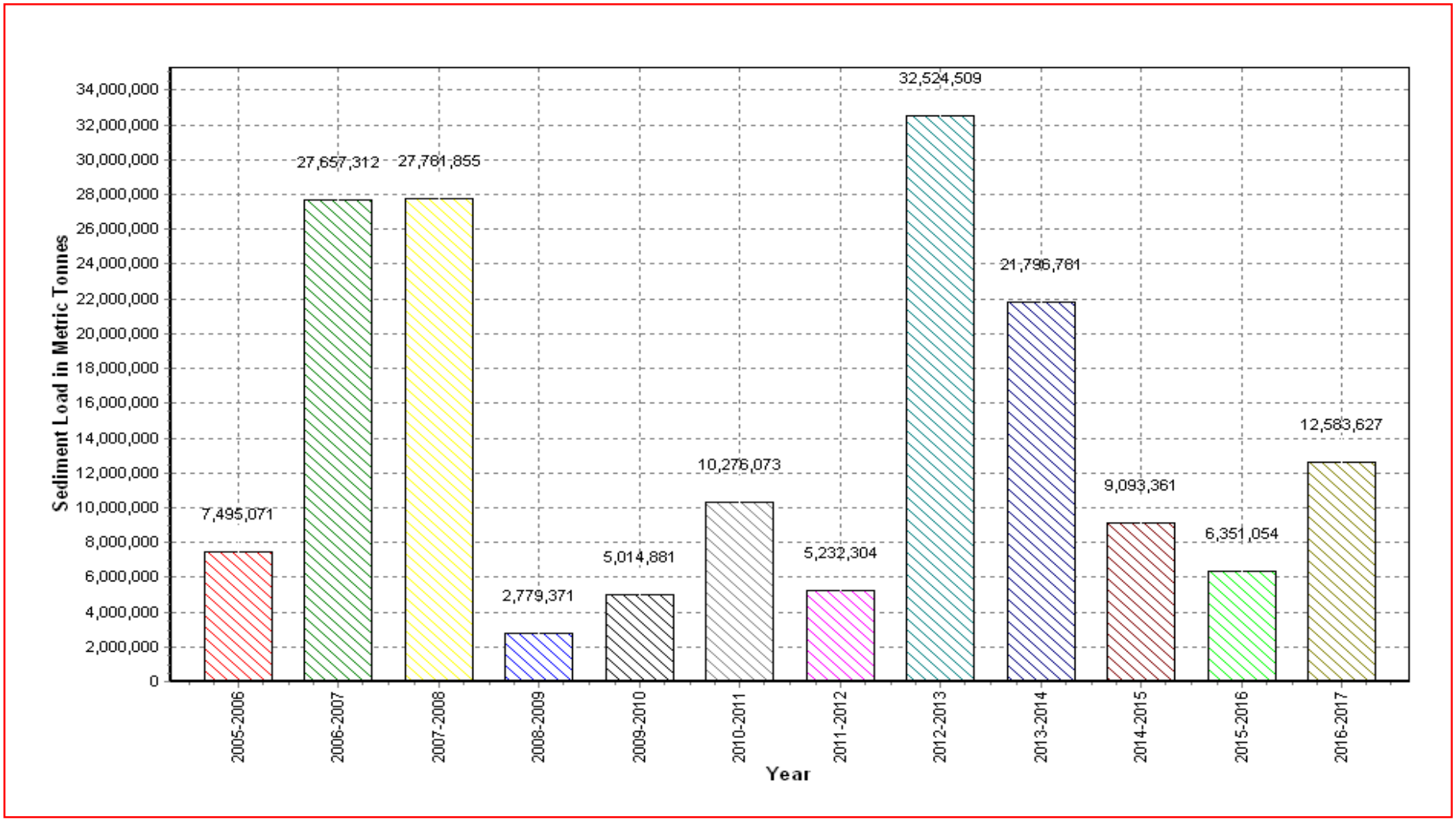
Local River : **Sub-Division : Dhule**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2005-2006	7495071	0	7495071	5043
2006-2007	27657085	227	27657312	17486
2007-2008	27781784	71	27781855	11414
2008-2009	2779371	0	2779371	3443
2009-2010	5014881	0	5014881	3071
2010-2011	10276073	0	10276073	7001
2011-2012	5232304	0	5232304	6202
2012-2013	32524509	0	32524509	8298
2013-2014	21796781	0	21796781	12353
2014-2015	9093361	0	9093361	3852
2015-2016	6351054	0	6351054	3257
2016-2017	12583627	0	12583627	5427

Annual Sediment Load for the period: 2005-2017

Station Name : Tapi at Sarangkheda (01 02 17 015) **Division : Surat**

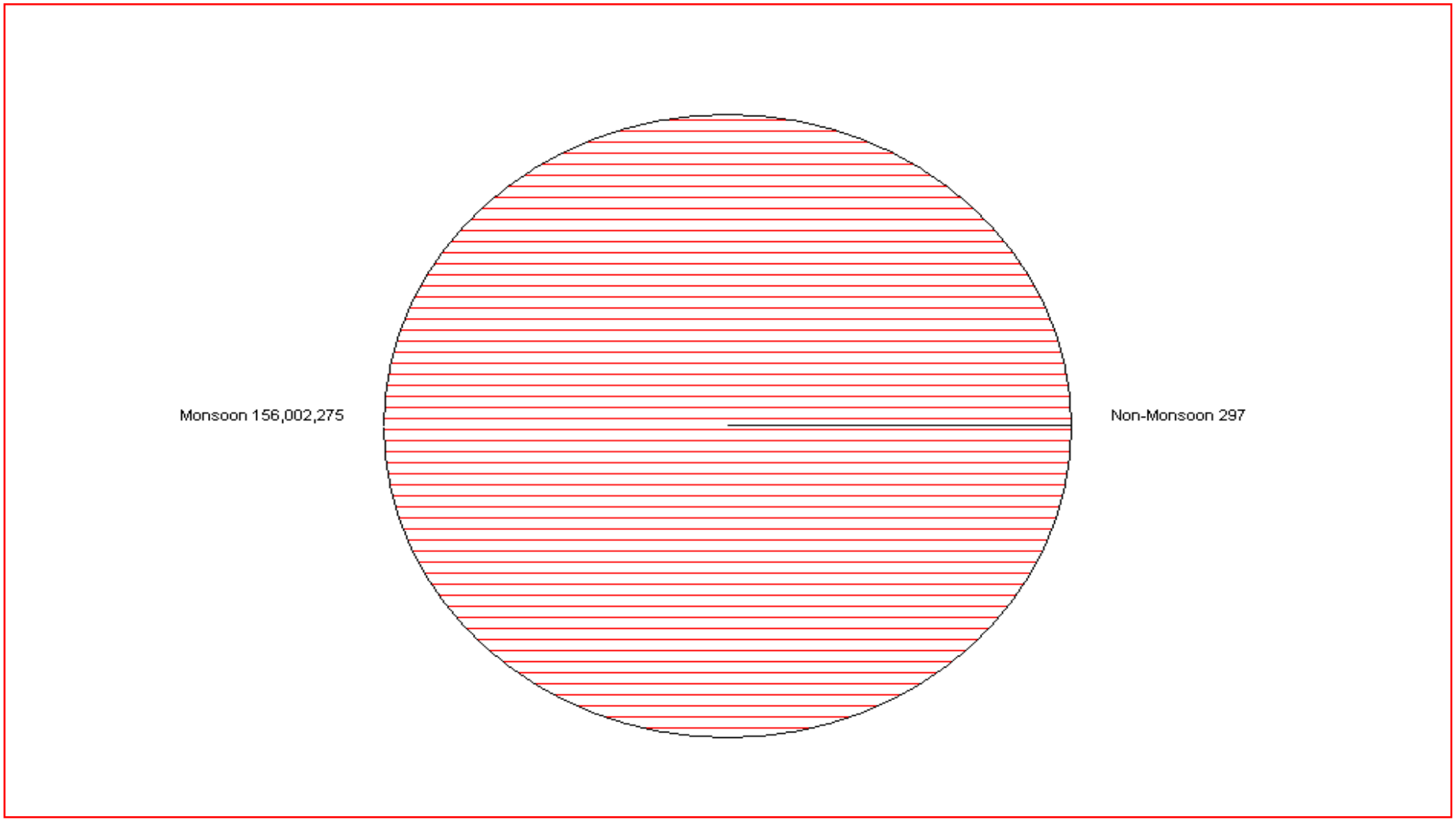
Local River : **Sub-Division : Dhule**



Seasonal Sediment Load for the period : 2005-2016

Station Name : Tapi at Sarangkheda (01 02 17 015) **Division : Surat**

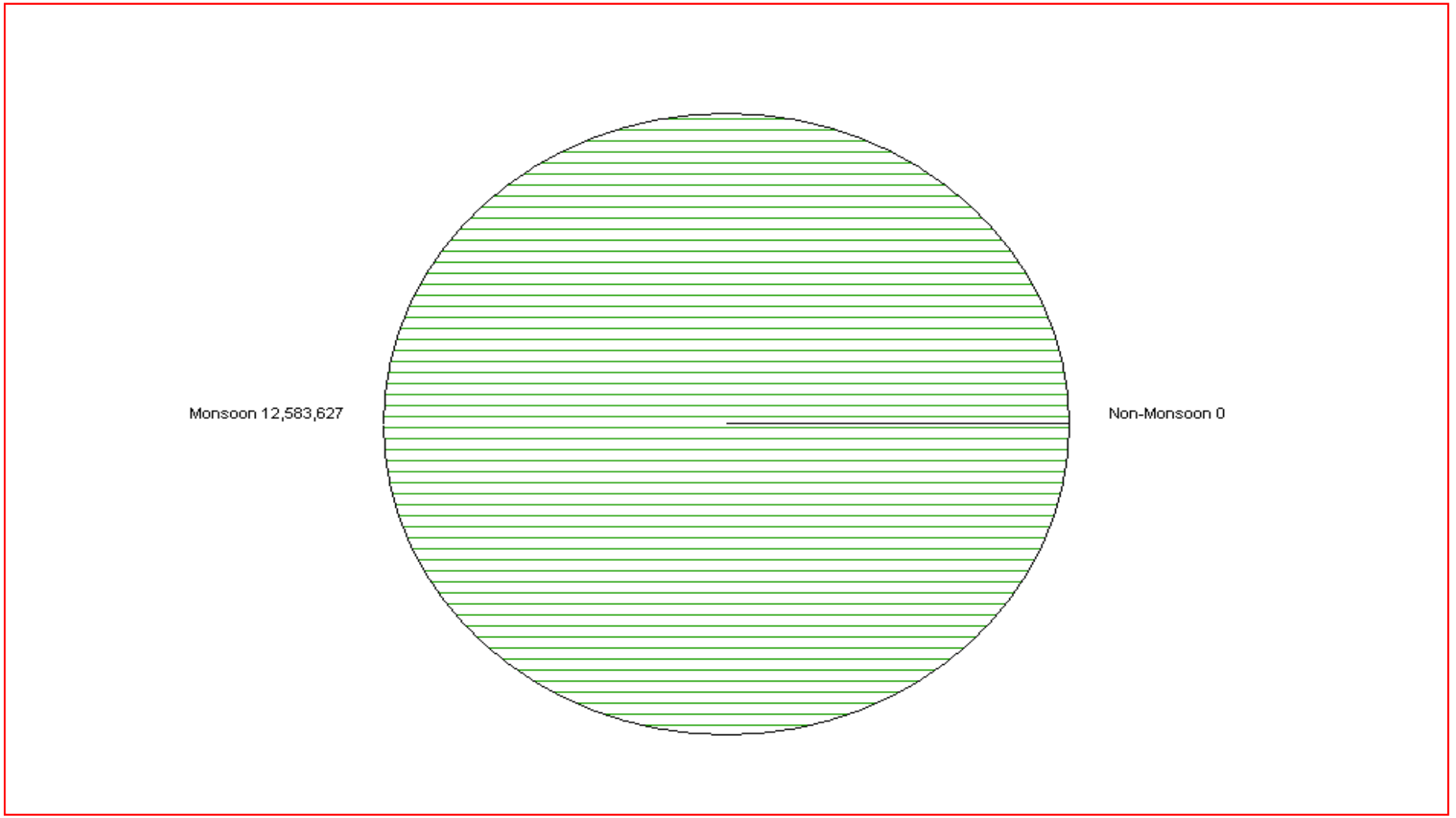
Local River : **Sub-Division : Dhule**



Seasonal Sediment Load for the Year: 2016-2017

Station Name : Tapi at Sarangkheda (01 02 17 015) **Division : Surat**

Local River : **Sub-Division : Dhule**



4.7 PURNA BASIN

4.7 Purna Basin

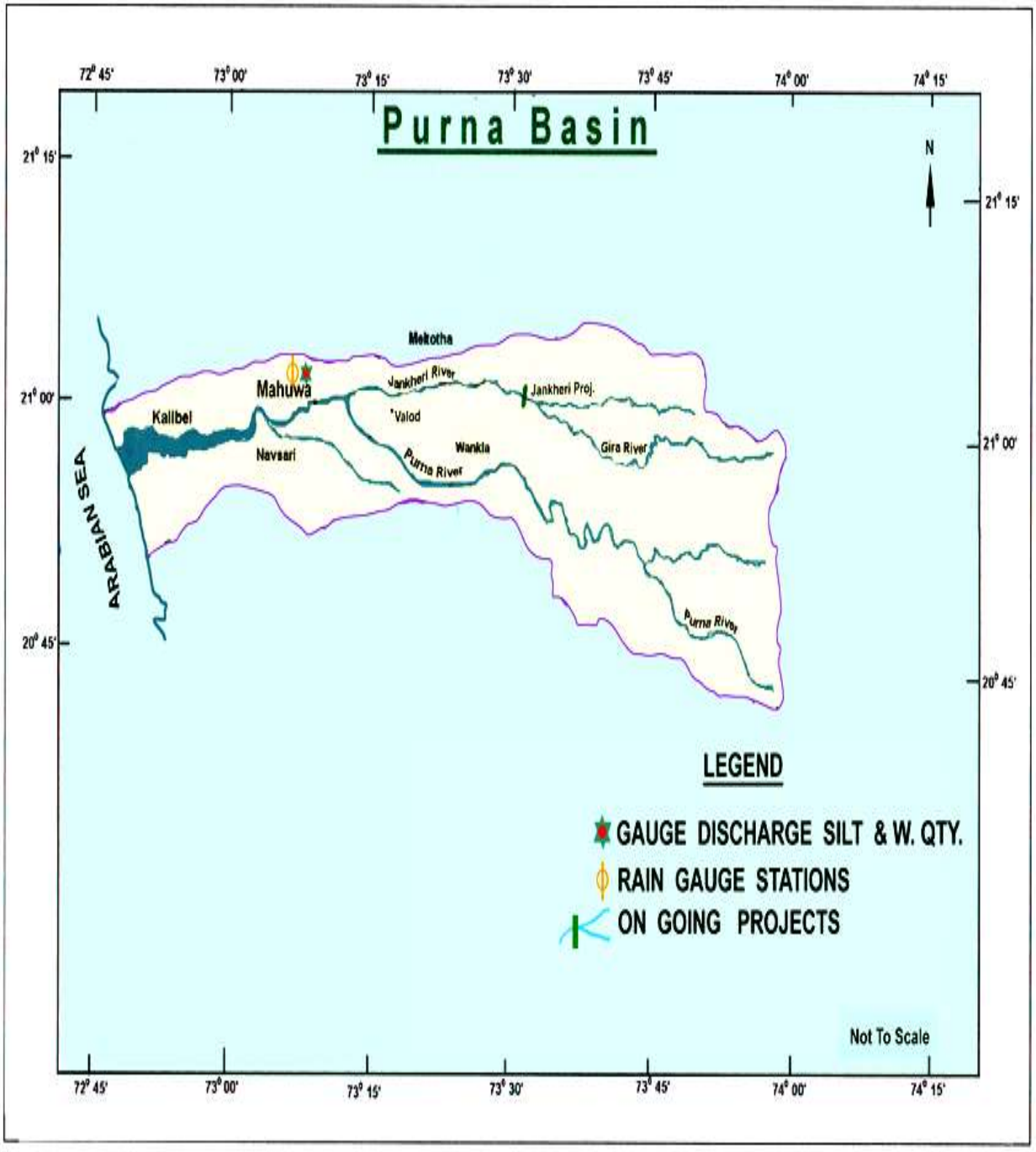
The river Purna is one of the important west flowing rivers in Gujarat state. It originates from Saputara hill ranges and after flowing in Dang, Valsad and Surat districts of Gujarat state for a length of 142-km falls into the Arabian sea. The catchment area of the Purna basin is 2431 sq.km. It lies between 72^0 45' and 74^0 east longitudes and 20^0 40' and 21^0 15' north latitudes. It has only one main tributary namely Jankhari.

There is only one monitoring station near the mouth of the river at Mahuwa in Surat district of Gujarat state. A brief about the station is given in section- 4.7.1

4.7.1 Purna at Mahuwa

The station has a Catchment area of 1,995 sq km. The maximum sediment concentration of 1.208 g/l was observed on 09.08.2016. The total sediment load during the year is 312447 metric tonnes. The monsoon load constitutes 100 % of the total load. The annual sediment yield over the catchment during water year 2016-17 is 0.1119 mm.

Plate -4.7 Purna Basin



HISTORY SHEET

			Water Year	**:**	**2016-17**
Site	**:**	**Purna at Mahuwa**	**Code**	**:**	**01 02 19 001**
State	:	Gujarat	District		Surat
Basin	:	WFR South of Tapi	Independent River	:	Purna
Tributary	:		Sub Tributary	:	
Sub-Sub Tributary	:		Local River	:	
Division	:	Tapi Division, Surat	Sub-Division	:	LTSD,CWC,Surat
Drainage Area	:	1995 Sq. Km.	Bank	:	Right
Latitude	:	21°00'52" N	Longitude	:	73°08'25" E
Zero of Gauge (m)	:	9 (m.s.l)	04-10-1970		-
		Opening Date	Closing Date		
Gauge	:	04-10-1970			
Discharge	:	12-11-1970			
Sediment	:	18-06-1973			
Water Quality	:	15-06-1977			

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Purna at Mahuwa (01 02 19 001) **Division : Tapi Division, Surat**

Local River : **Sub-Division : LTSD,CWC,Surat**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	135.5	0.000	0.000	0.078	0.078	913
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	405.9	0.000	0.002	0.045	0.047	1648
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	283.0	0.000	0.002	0.060	0.062	1516
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	261.9	0.000	0.003	0.045	0.048	1086
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	243.4	0.000	0.005	0.025	0.030	631
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	414.5	0.000	0.030	0.720	0.750	26858
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	1028	0.000	0.000	1.100	1.100	97726
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	254.6	0.000	0.004	0.044	0.048	1056
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	1048	0.000	0.008	1.200	1.208	109394
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	408.4	0.000	0.060	0.510	0.570	20113
11	0.000	0.000	0.000	0.000	0.000	0	498.8	0.000	0.010	0.297	0.307	13231	355.8	0.000	0.012	0.063	0.075	2305
12	0.000	0.000	0.000	0.000	0.000	0	54.34	0.000	0.011	0.205	0.216	1014	243.1	0.000	0.007	0.060	0.067	1407
13	0.000	0.000	0.000	0.000	0.000	0	208.1	0.000	0.007	0.211	0.218	3919	142.4	0.000	0.002	0.019	0.021	258
14	0.000	0.000	0.000	0.000	0.000	0	63.44	0.000	0.019	0.080	0.099	543	116.0	0.000	0.000	0.190	0.190	1903
15	0.000	0.000	0.000	0.000	0.000	0	23.22	0.000	0.000	0.063	0.063	126	104.8	0.000	0.000	0.150	0.150	1358
16	0.000	0.000	0.000	0.000	0.000	0	12.71	0.000	0.000	0.066	0.066	72	82.66	0.000	0.000	0.018	0.018	129
17	0.000	0.000	0.000	0.000	0.000	0	12.66	0.000	0.000	0.060	0.060	66	54.95	0.000	0.000	0.010	0.010	47
18	0.000	0.000	0.000	0.000	0.000	0	9.873	0.000	0.000	0.000	0.000	0	45.27	0.000	0.000	0.013	0.013	51
19	0.000	0.000	0.000	0.000	0.000	0	10.67	0.000	0.000	0.029	0.029	27	54.75	0.000	0.000	0.010	0.010	47
20	0.000	0.000	0.000	0.000	0.000	0	63.70	0.000	0.000	0.030	0.030	165	34.86	0.000	0.000	0.010	0.010	30
21	0.000	0.000	0.000	0.000	0.000	0	25.94	0.000	0.000	0.026	0.026	58	41.22	0.000	0.000	0.010	0.010	36
22	0.000	0.000	0.000	0.000	0.000	0	25.11	0.000	0.000	0.023	0.023	50	29.80	0.000	0.000	0.013	0.013	33
23	0.000	0.000	0.000	0.000	0.000	0	22.81	0.000	0.000	0.013	0.013	26	24.65	0.000	0.000	0.016	0.016	34
24	0.000	0.000	0.000	0.000	0.000	0	20.96	0.000	0.000	0.010	0.010	18	29.73	0.000	0.000	0.023	0.023	59
25	0.000	0.000	0.000	0.000	0.000	0	12.57	0.000	0.000	0.028	0.028	30	107.5	0.000	0.000	0.200	0.200	1858
26	0.000	0.000	0.000	0.000	0.000	0	8.606	0.000	0.000	0.013	0.013	10	56.47	0.000	0.000	0.040	0.040	195
27	0.000	0.000	0.000	0.000	0.000	0	8.611	0.000	0.000	0.016	0.016	12	53.13	0.000	0.000	0.056	0.056	257
28	0.000	0.000	0.000	0.000	0.000	0	8.103	0.000	0.000	0.010	0.010	7	37.71	0.000	0.000	0.012	0.012	39
29	0.000	0.000	0.000	0.000	0.000	0	7.499	0.000	0.000	0.004	0.004	3	29.07	0.000	0.000	0.037	0.037	93
30	0.000	0.000	0.000	0.000	0.000	0	7.226	0.000	0.000	0.016	0.016	10	25.79	0.000	0.000	0.015	0.015	33
31							28.02	0.000	0.000	0.030	0.030	73	25.14	0.000	0.000	0.016	0.016	35
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	448.4	0.000	0.011	0.383	0.394	26094
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	95.75	0.000	0.005	0.104	0.109	1916	123.4	0.000	0.002	0.054	0.056	754
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	15.95	0.000	0.000	0.017	0.017	27	41.84	0.000	0.000	0.040	0.040	243
Monthly Total						**0**						**19460**						**271150**

Annual Sediment Load (Metric Tonnes) : 312447

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Purna at Mahuwa (01 02 19 001) **Division : Tapi Division, Surat**

Local River : **Sub-Division : LTSD,CWC,Surat**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	21.29	0.000	0.000	0.030	0.030	55	27.76	0.000	0.000	0.016	0.016	38	2.989	0.000	0.000	0.000	0.000	0
2	20.20	0.000	0.000	0.011	0.011	19	29.55	0.000	0.000	0.010	0.010	26	2.715	0.000	0.000	0.000	0.000	0
3	18.78	0.000	0.000	0.010	0.010	16	250.5	0.000	0.000	0.130	0.130	2814	0.000	0.000	0.000	0.000	0.000	0
4	18.40	0.000	0.000	0.011	0.011	17	163.6	0.000	0.000	0.075	0.075	1060	0.000	0.000	0.000	0.000	0.000	0
5	11.69	0.000	0.000	0.006	0.006	6	139.7	0.000	0.000	0.054	0.054	652	0.000	0.000	0.000	0.000	0.000	0
6	10.61	0.000	0.000	0.011	0.011	10	100.3	0.000	0.000	0.022	0.022	191	0.000	0.000	0.000	0.000	0.000	0
7	8.624	0.000	0.000	0.007	0.007	5	86.90	0.000	0.000	0.018	0.018	135	0.000	0.000	0.000	0.000	0.000	0
8	8.608	0.000	0.000	0.003	0.003	2	58.95	0.000	0.000	0.015	0.015	76	0.000	0.000	0.000	0.000	0.000	0
9	22.99	0.000	0.000	0.030	0.030	60	36.00	0.000	0.000	0.008	0.008	25	0.000	0.000	0.000	0.000	0.000	0
10	16.71	0.000	0.000	0.010	0.010	14	52.93	0.000	0.000	0.019	0.019	87	0.000	0.000	0.000	0.000	0.000	0
11	12.66	0.000	0.000	0.014	0.014	15	34.34	0.000	0.000	0.008	0.008	24	0.000	0.000	0.000	0.000	0.000	0
12	9.694	0.000	0.000	0.014	0.014	12	29.55	0.000	0.000	0.009	0.009	22	0.000	0.000	0.000	0.000	0.000	0
13	12.66	0.000	0.000	0.015	0.015	16	24.97	0.000	0.000	0.012	0.012	26	0.000	0.000	0.000	0.000	0.000	0
14	7.855	0.000	0.000	0.002	0.002	1	18.14	0.000	0.000	0.016	0.016	25	0.000	0.000	0.000	0.000	0.000	0
15	7.598	0.000	0.000	0.005	0.005	3	18.58	0.000	0.000	0.007	0.007	11	0.000	0.000	0.000	0.000	0.000	0
16	7.151	0.000	0.000	0.001	0.001	1	17.17	0.000	0.000	0.007	0.007	10	0.000	0.000	0.000	0.000	0.000	0
17	50.68	0.000	0.000	0.023	0.023	101	13.02	0.000	0.000	0.004	0.004	5	0.000	0.000	0.000	0.000	0.000	0
18	176.0	0.000	0.000	0.080	0.080	1217	10.83	0.000	0.000	0.003	0.003	3	0.000	0.000	0.000	0.000	0.000	0
19	275.7	0.000	0.001	0.150	0.151	3597	8.913	0.000	0.000	0.001	0.001	1	0.000	0.000	0.000	0.000	0.000	0
20	338.2	0.000	0.003	0.280	0.283	8269	9.108	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	101.3	0.000	0.003	0.032	0.035	306	8.580	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	131.1	0.000	0.001	0.039	0.040	453	8.229	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	82.67	0.000	0.001	0.020	0.021	150	6.290	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	159.9	0.000	0.001	0.061	0.062	857	5.920	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	127.7	0.000	0.000	0.050	0.050	551	5.687	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	103.1	0.000	0.003	0.040	0.043	383	5.314	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	80.09	0.000	0.001	0.020	0.021	145	5.302	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	55.97	0.000	0.000	0.030	0.030	145	5.072	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	49.68	0.000	0.000	0.030	0.030	129	3.815	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	37.91	0.000	0.000	0.015	0.015	49	2.230	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31							2.998	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	15.79	0.000	0.000	0.013	0.013	21	94.62	0.000	0.000	0.037	0.037	510	0.570	0.000	0.000	0.000	0.000	0
Ten Daily II	89.82	0.000	0.000	0.058	0.059	1323	18.46	0.000	0.000	0.007	0.007	13	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	92.95	0.000	0.001	0.034	0.035	317	5.403	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**16607**						**5230**						**0**

Annual Sediment Load (Metric Tonnes) : 312447

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Purna at Mahuwa (01 02 19 001) **Division : Tapi Division, Surat**

Local River : **Sub-Division : LTSD,CWC,Surat**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 312447

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Purna at Mahuwa (01 02 19 001) **Division : Tapi Division, Surat**

Local River : **Sub-Division : LTSD,CWC,Surat**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 312447

Annual Sediment Load for period : 2005-2017

Station Name : Purna at Mahuwa (01 02 19 001) **Division : Tapi Division, Surat**

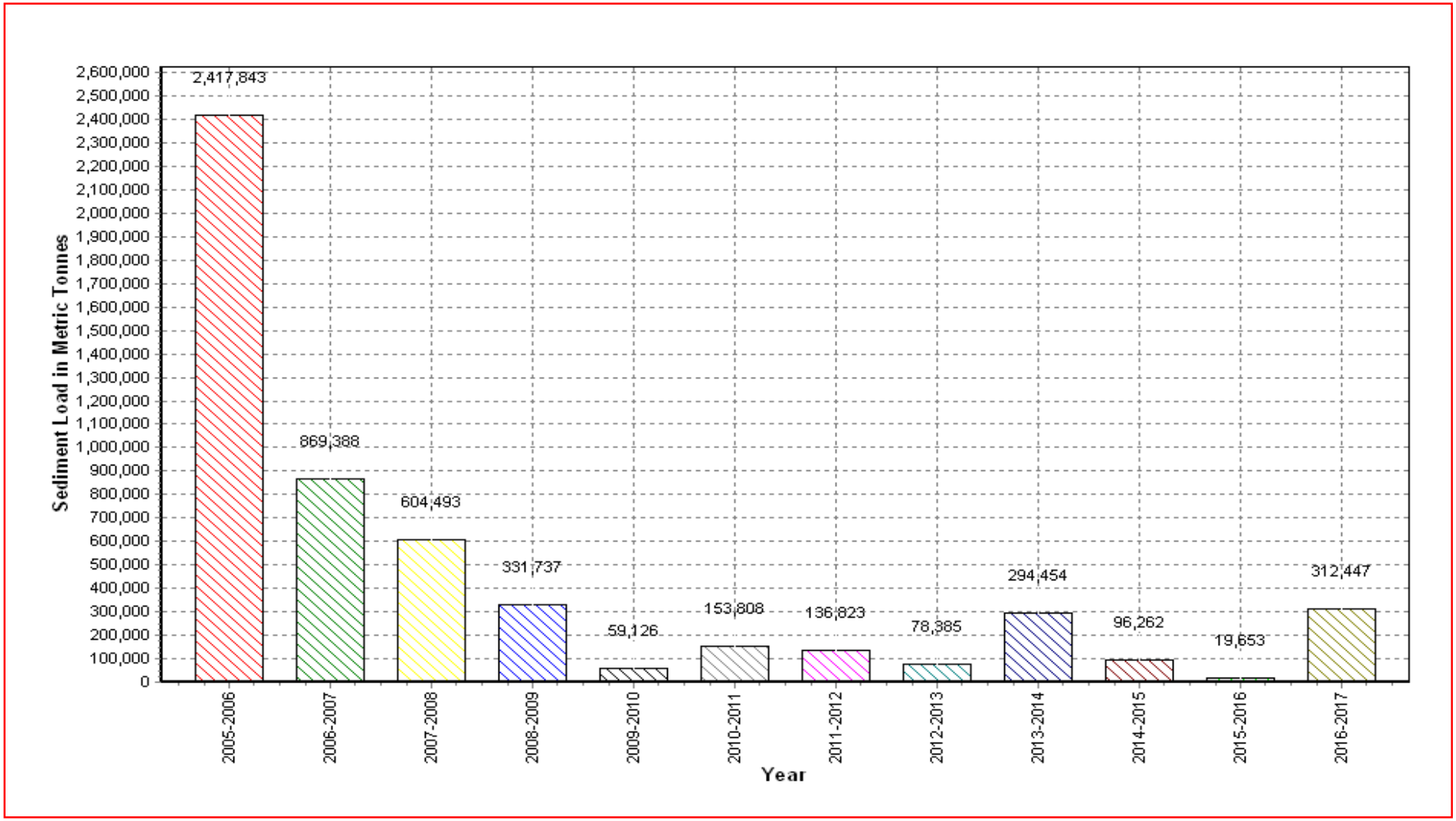
Local River : **Sub-Division : LTSD,CWC,Surat**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2005-2006	2417792	51	2417843	3395
2006-2007	869388	0	869388	2552
2007-2008	604493	0	604493	1755
2008-2009	331705	32	331737	2023
2009-2010	59126	0	59126	571
2010-2011	153808	0	153808	926
2011-2012	136823	0	136823	860
2012-2013	78385	0	78385	525
2013-2014	294454	0	294454	1547
2014-2015	96262	0	96262	512
2015-2016	19653	0	19653	246
2016-2017	312447	0	312447	907

Annual Sediment Load for the period: 2005-2017

Station Name : Purna at Mahuwa (01 02 19 001) **Division : Tapi Division, Surat**

Local River : **Sub-Division : LTSD,CWC,Surat**



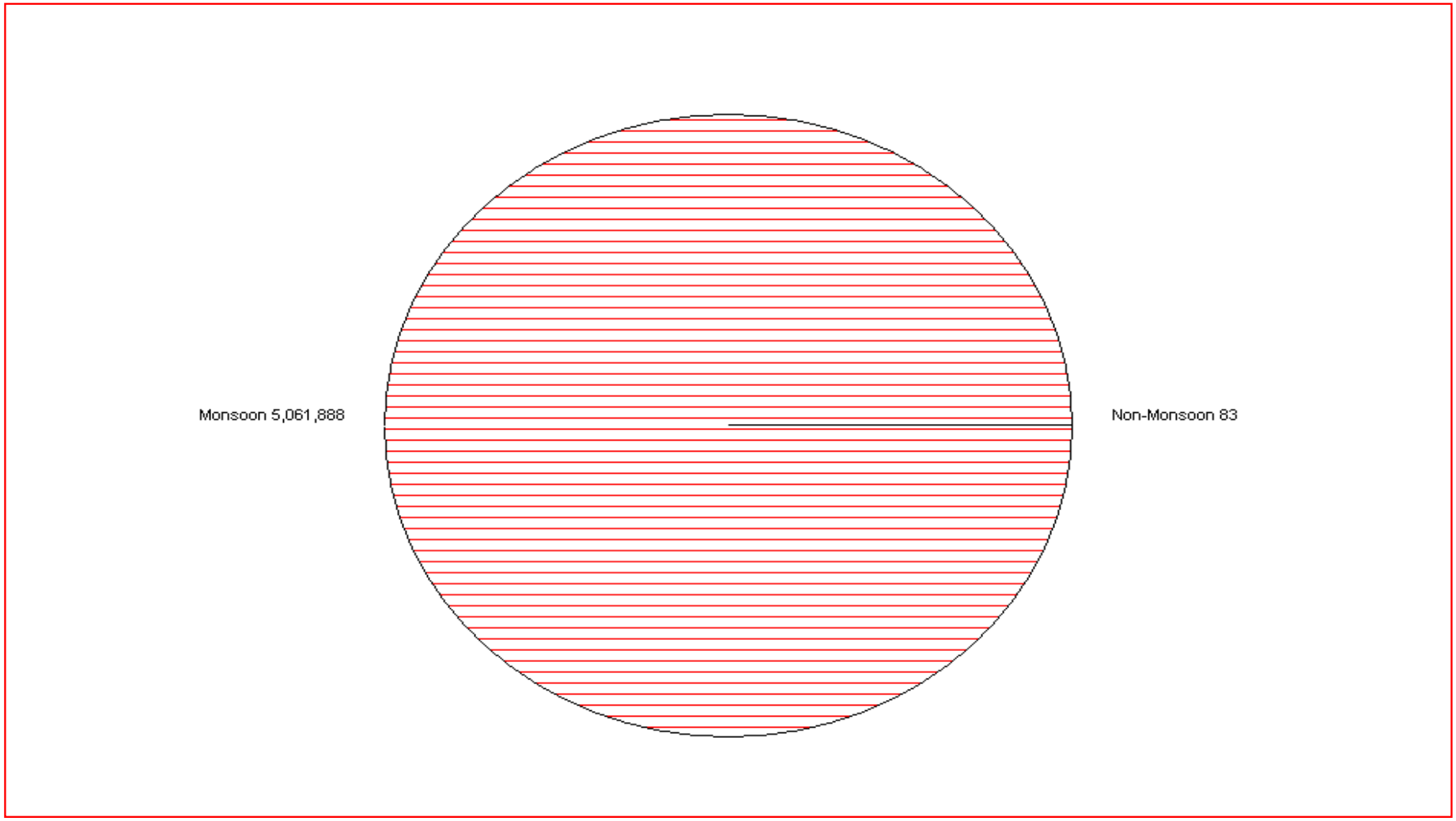
Seasonal Sediment Load for the period : 2005-2016

Station Name : Purna at Mahuwa (01 02 19 001)

Division : Tapi Division, Surat

Local River :

Sub-Division : LTSD,CWC,Surat



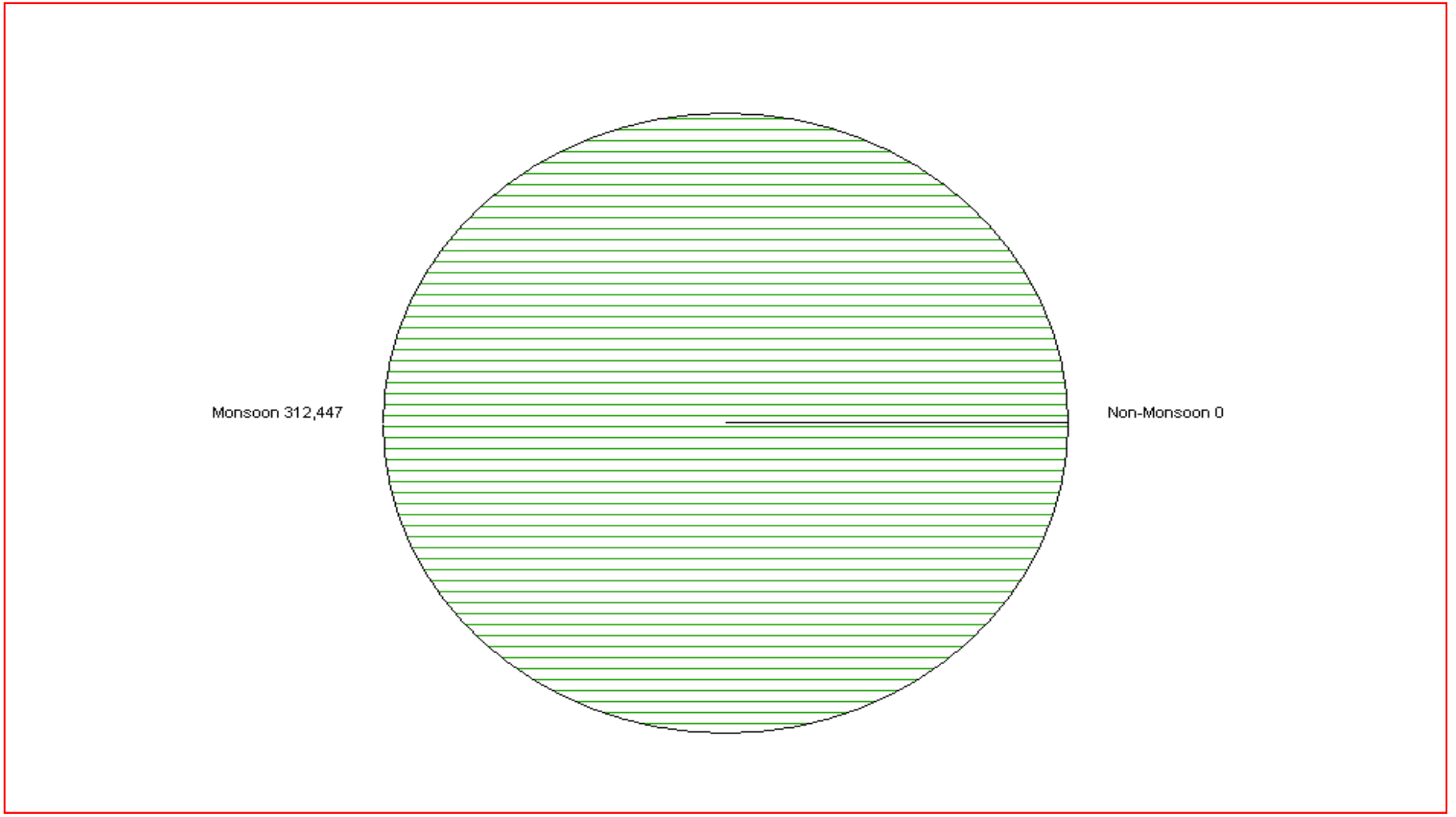
Seasonal Sediment Load for the Year: 2016-2017

Station Name : Purna at Mahuwa (01 02 19 001)

Local River :

Division : Tapi Division, Surat

Sub-Division : LTSD,CWC,Surat



4.8 AMBIKA BASIN

4.8 Ambika Basin

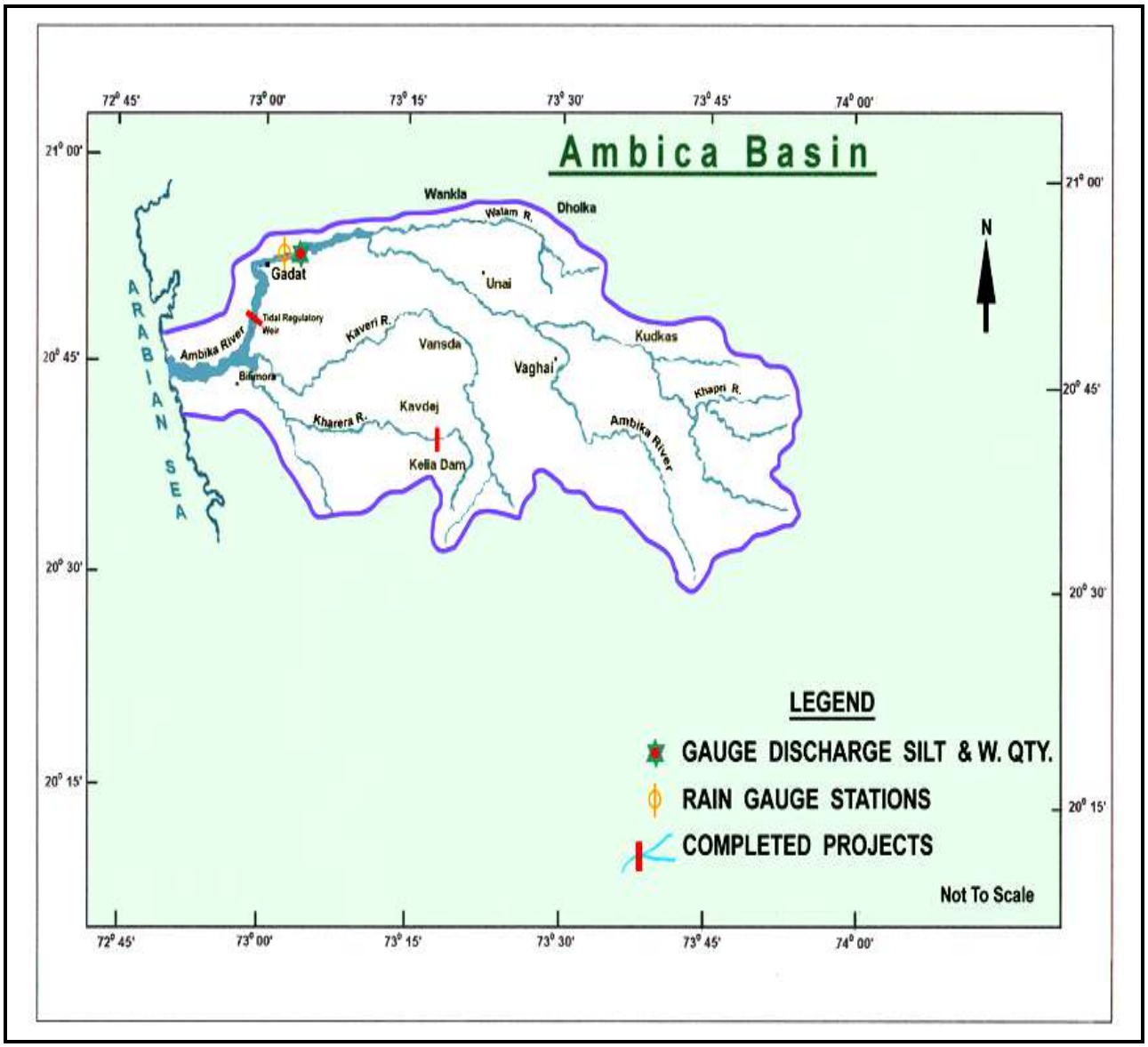
The river Ambika is one of the west flowing rivers in Gujarat State. It originates from Satapura hill ranges and flows through Dangs and Valsad districts of Gujarat. After flowing for a length of 136 km, it falls into the Arabian Sea. The catchment area of Ambika basin is 2715 sq.km. The basin lies between $72^0$50' and 73^0 50' east longitudes and 20^0 03' and 21^0 08' north latitudes. The important tributaries of Ambika are Khapri and Walam.

There is only one monitoring station at Gadat for analysis of sediment load in Ambika basin. A brief about the station is given in section- 4.8.1

4.8.1. Ambika at Gadat

The station has a Catchment area of 1,510 sq km. The maximum sediment concentration of 2.610 g/l was observed on 09.08.2016. The total sediment load during the year is 1303633 metric tonnes. The monsoon load constitutes 100 % of the total load. The annual sediment yield over the catchment during water year 2016-17 is 0.6167 mm.

Plate - 4.8 Ambika Basin



HISTORY SHEET

			Water Year	**:**	**2016-17**
Site	**:**	**Ambica at Gadat**	**Code**	**:**	**01 02 20 001**
State	:	Gujarat	District		Valsad
Basin	:	WFR South of Tapi	Independent River	:	Ambika
Tributary	:		Sub Tributary	:	
Sub-Sub Tributary	:		Local River	:	
Division	:	Surat	Sub-Division	:	Surat
Drainage Area	:	1510 Sq. Km.	Bank	:	Left
Latitude	:	20°51'22" N	Longitude	:	72°59'05" E
Zero of Gauge (m)	:	1.5 (m.s.l)	14-01-1979		-
		Opening Date	Closing Date		
Gauge	:	14-01-1979			
Discharge	:	12-03-1979			
Sediment	:	01-02-1985			
Water Quality	:	01-04-1980			

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Ambica at Gadat (01 02 20 001) **Division : Surat**

Local River : **Sub-Division : Surat**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	302.4	0.000	0.000	0.700	0.700	18290
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	793.1	0.000	0.000	1.800	1.800	123349
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	827.6	0.000	0.000	1.950	1.950	139436
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	460.3	0.000	0.000	0.800	0.800	31817
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	371.4	0.000	0.000	0.750	0.750	24069
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	979.7	0.000	0.000	2.350	2.350	198924
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	799.7	0.000	0.000	1.800	1.800	124371
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	535.6	0.000	0.000	0.900	0.900	41649
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	1362	0.040	0.070	2.500	2.610	307189
10	0.000	0.000	0.000	0.000	0.000	0	43.76	0.000	0.000	0.040	0.040	151	751.2	0.000	0.000	1.600	1.600	103847
11	0.000	0.000	0.000	0.000	0.000	0	595.1	0.000	0.000	0.470	0.470	24165	548.6	0.000	0.000	1.000	1.000	47400
12	0.000	0.000	0.000	0.000	0.000	0	184.4	0.000	0.000	0.250	0.250	3984	382.9	0.000	0.000	0.700	0.700	23155
13	0.000	0.000	0.000	0.000	0.000	0	205.5	0.000	0.000	0.200	0.200	3551	254.0	0.000	0.000	0.225	0.225	4939
14	0.000	0.000	0.000	0.000	0.000	0	74.03	0.000	0.000	0.030	0.030	192	192.4	0.000	0.000	0.100	0.100	1663
15	0.000	0.000	0.000	0.000	0.000	0	63.42	0.000	0.000	0.030	0.030	164	146.2	0.000	0.000	0.075	0.075	948
16	0.000	0.000	0.000	0.000	0.000	0	48.97	0.000	0.000	0.028	0.028	116	117.7	0.000	0.000	0.033	0.033	330
17	0.000	0.000	0.000	0.000	0.000	0	40.68	0.000	0.000	0.030	0.030	105	93.31	0.000	0.000	0.035	0.035	282
18	0.000	0.000	0.000	0.000	0.000	0	41.57	0.000	0.000	0.030	0.030	108	82.67	0.000	0.000	0.038	0.038	268
19	0.000	0.000	0.000	0.000	0.000	0	55.14	0.000	0.000	0.020	0.020	95	84.05	0.000	0.000	0.038	0.038	272
20	0.000	0.000	0.000	0.000	0.000	0	117.7	0.000	0.000	0.275	0.275	2796	84.36	0.000	0.000	0.033	0.033	237
21	0.000	0.000	0.000	0.000	0.000	0	97.00	0.000	0.000	0.300	0.300	2514	65.06	0.000	0.000	0.020	0.020	112
22	0.000	0.000	0.000	0.000	0.000	0	77.18	0.000	0.000	0.250	0.250	1667	65.63	0.000	0.000	0.028	0.028	156
23	0.000	0.000	0.000	0.000	0.000	0	94.35	0.000	0.000	0.028	0.028	224	57.38	0.000	0.000	0.030	0.030	149
24	0.000	0.000	0.000	0.000	0.000	0	121.4	0.000	0.000	0.200	0.200	2098	123.2	0.000	0.000	0.150	0.150	1596
25	0.000	0.000	0.000	0.000	0.000	0	59.90	0.000	0.000	0.030	0.030	155	190.1	0.000	0.000	0.200	0.200	3286
26	0.000	0.000	0.000	0.000	0.000	0	48.37	0.000	0.000	0.028	0.028	115	120.8	0.000	0.000	0.100	0.100	1043
27	0.000	0.000	0.000	0.000	0.000	0	43.72	0.000	0.000	0.025	0.025	94	93.42	0.000	0.000	0.020	0.020	161
28	0.000	0.000	0.000	0.000	0.000	0	46.14	0.000	0.000	0.028	0.028	110	72.04	0.000	0.000	0.015	0.015	93
29	0.000	0.000	0.000	0.000	0.000	0	48.48	0.000	0.000	0.025	0.025	105	66.24	0.000	0.000	0.030	0.030	172
30	0.000	0.000	0.000	0.000	0.000	0	49.51	0.000	0.000	0.028	0.028	118	65.36	0.000	0.000	0.028	0.028	155
31							161.3	0.000	0.000	0.250	0.250	3483	57.25	0.000	0.000	0.033	0.033	161
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	4.376	0.000	0.000	0.004	0.004	15	718.3	0.004	0.007	1.515	1.526	111294
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	142.7	0.000	0.000	0.136	0.136	3528	198.6	0.000	0.000	0.228	0.228	7949
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	77.03	0.000	0.000	0.108	0.108	971	88.77	0.000	0.000	0.059	0.059	644
Monthly Total						**0**						**46112**						**1199519**

Annual Sediment Load (Metric Tonnes) : 1303633

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Ambica at Gadat (01 02 20 001) **Division : Surat**

Local River : **Sub-Division : Surat**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	49.89	0.000	0.000	0.030	0.030	129	51.45	0.000	0.000	0.023	0.023	100	0.000	0.000	0.000	0.000	0.000	0
2	45.73	0.000	0.000	0.020	0.020	79	45.32	0.000	0.000	0.010	0.010	39	0.000	0.000	0.000	0.000	0.000	0
3	40.64	0.000	0.000	0.028	0.028	97	74.61	0.000	0.000	0.018	0.018	113	0.000	0.000	0.000	0.000	0.000	0
4	37.67	0.000	0.000	0.020	0.020	65	245.5	0.000	0.000	1.050	1.050	22271	0.000	0.000	0.000	0.000	0.000	0
5	35.47	0.000	0.000	0.028	0.028	84	119.3	0.000	0.000	0.023	0.023	232	0.000	0.000	0.000	0.000	0.000	0
6	33.22	0.000	0.000	0.025	0.025	72	91.99	0.000	0.000	0.020	0.020	159	0.000	0.000	0.000	0.000	0.000	0
7	32.23	0.000	0.000	0.020	0.020	56	90.56	0.000	0.000	0.018	0.018	137	0.000	0.000	0.000	0.000	0.000	0
8	59.71	0.000	0.000	0.028	0.028	142	60.69	0.000	0.000	0.020	0.020	105	0.000	0.000	0.000	0.000	0.000	0
9	64.35	0.000	0.000	0.023	0.023	125	50.08	0.000	0.000	0.010	0.010	43	0.000	0.000	0.000	0.000	0.000	0
10	49.09	0.000	0.000	0.025	0.025	106	37.08	0.000	0.000	0.020	0.020	64	0.000	0.000	0.000	0.000	0.000	0
11	56.62	0.000	0.000	0.030	0.030	147	39.17	0.000	0.000	0.020	0.020	68	0.000	0.000	0.000	0.000	0.000	0
12	37.12	0.000	0.000	0.023	0.023	72	33.26	0.000	0.000	0.020	0.020	57	0.000	0.000	0.000	0.000	0.000	0
13	34.71	0.000	0.000	0.018	0.018	54	34.61	0.000	0.000	0.020	0.020	60	0.000	0.000	0.000	0.000	0.000	0
14	27.70	0.000	0.000	0.025	0.025	60	31.91	0.000	0.000	0.020	0.020	55	0.000	0.000	0.000	0.000	0.000	0
15	24.44	0.000	0.000	0.025	0.025	53	30.71	0.000	0.000	0.023	0.023	60	0.000	0.000	0.000	0.000	0.000	0
16	57.45	0.000	0.000	0.028	0.028	137	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	112.2	0.000	0.000	0.100	0.100	969	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	224.9	0.000	0.000	0.200	0.200	3887	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	335.5	0.000	0.000	0.750	0.750	21741	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	215.2	0.000	0.000	0.100	0.100	1859	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	153.3	0.000	0.000	0.065	0.065	861	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	148.4	0.000	0.000	0.020	0.020	257	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	154.8	0.000	0.000	0.025	0.025	334	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	221.0	0.000	0.000	0.100	0.100	1909	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	159.1	0.000	0.000	0.020	0.020	275	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	152.8	0.000	0.000	0.020	0.020	264	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	117.6	0.000	0.000	0.023	0.023	229	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	88.20	0.000	0.000	0.020	0.020	152	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	63.39	0.000	0.000	0.023	0.023	123	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	59.10	0.000	0.000	0.020	0.020	102	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31							0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	44.80	0.000	0.000	0.025	0.025	95	86.66	0.000	0.000	0.121	0.121	2326	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	112.6	0.000	0.000	0.130	0.130	2898	16.97	0.000	0.000	0.010	0.010	30	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	131.8	0.000	0.000	0.034	0.034	451	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**34439**						**23562**						**0**

Annual Sediment Load (Metric Tonnes) : 1303633

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Ambica at Gadat (01 02 20 001) **Division : Surat**

Local River : **Sub-Division : Surat**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

140

Annual Sediment Load (Metric Tonnes) : 1303633

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Ambica at Gadat (01 02 20 001) **Division : Surat**

Local River : **Sub-Division : Surat**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 1303633

Annual Sediment Load for period : 2005-2017

Station Name : Ambica at Gadat (01 02 20 001) **Division : Surat**

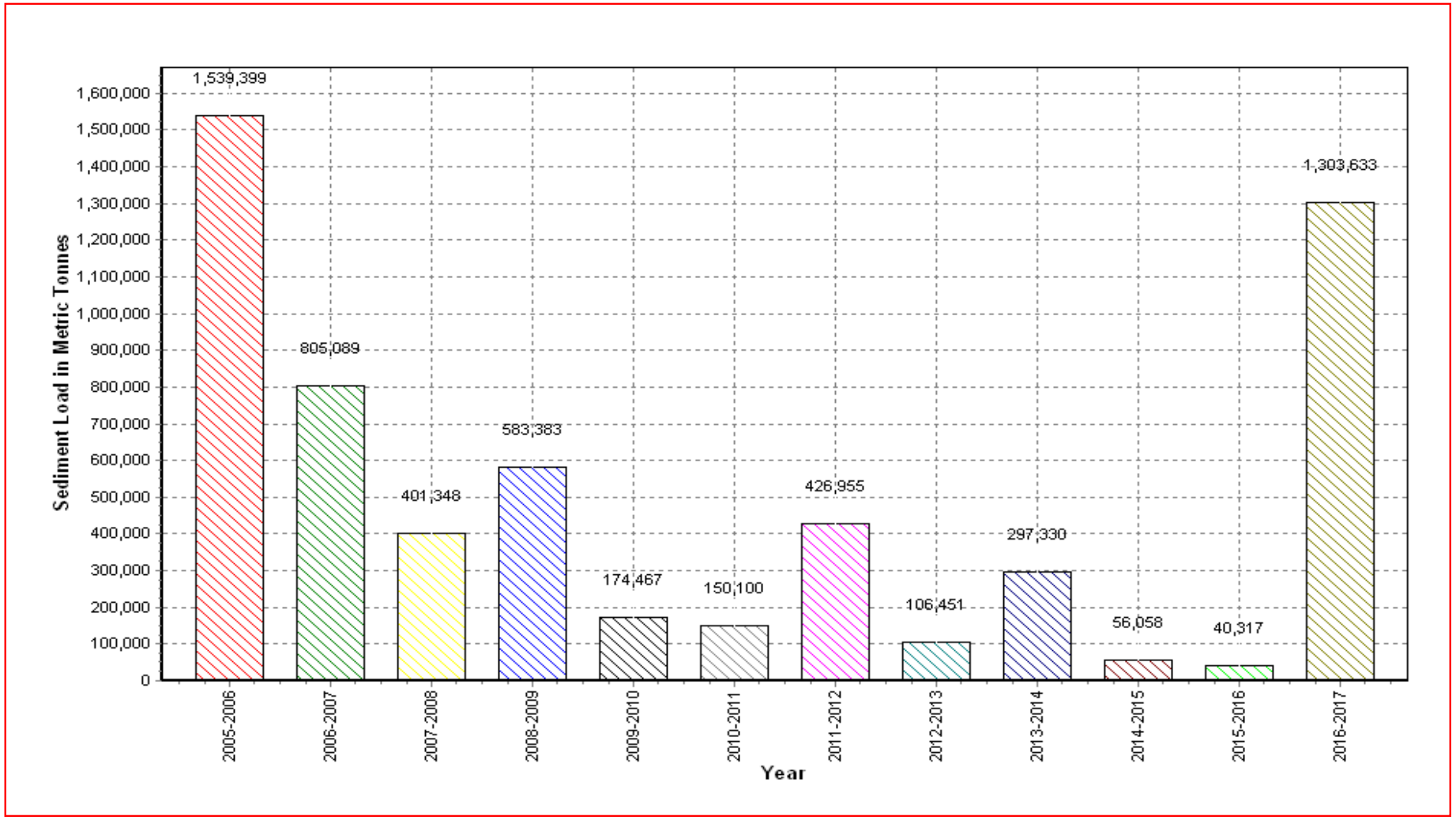
Local River : **Sub-Division : Surat**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2005-2006	1539399	0	1539399	3010
2006-2007	805089	0	805089	2126
2007-2008	401348	0	401348	1734
2008-2009	583383	0	583383	1794
2009-2010	174467	0	174467	704
2010-2011	150100	0	150100	1199
2011-2012	426955	0	426955	1299
2012-2013	106451	0	106451	635
2013-2014	297330	0	297330	2152
2014-2015	56058	0	56058	1161
2015-2016	40317	0	40317	453
2016-2017	1303633	0	1303633	1416

Annual Sediment Load for the period: 2005-2017

Station Name : Ambica at Gadat (01 02 20 001) **Division : Surat**

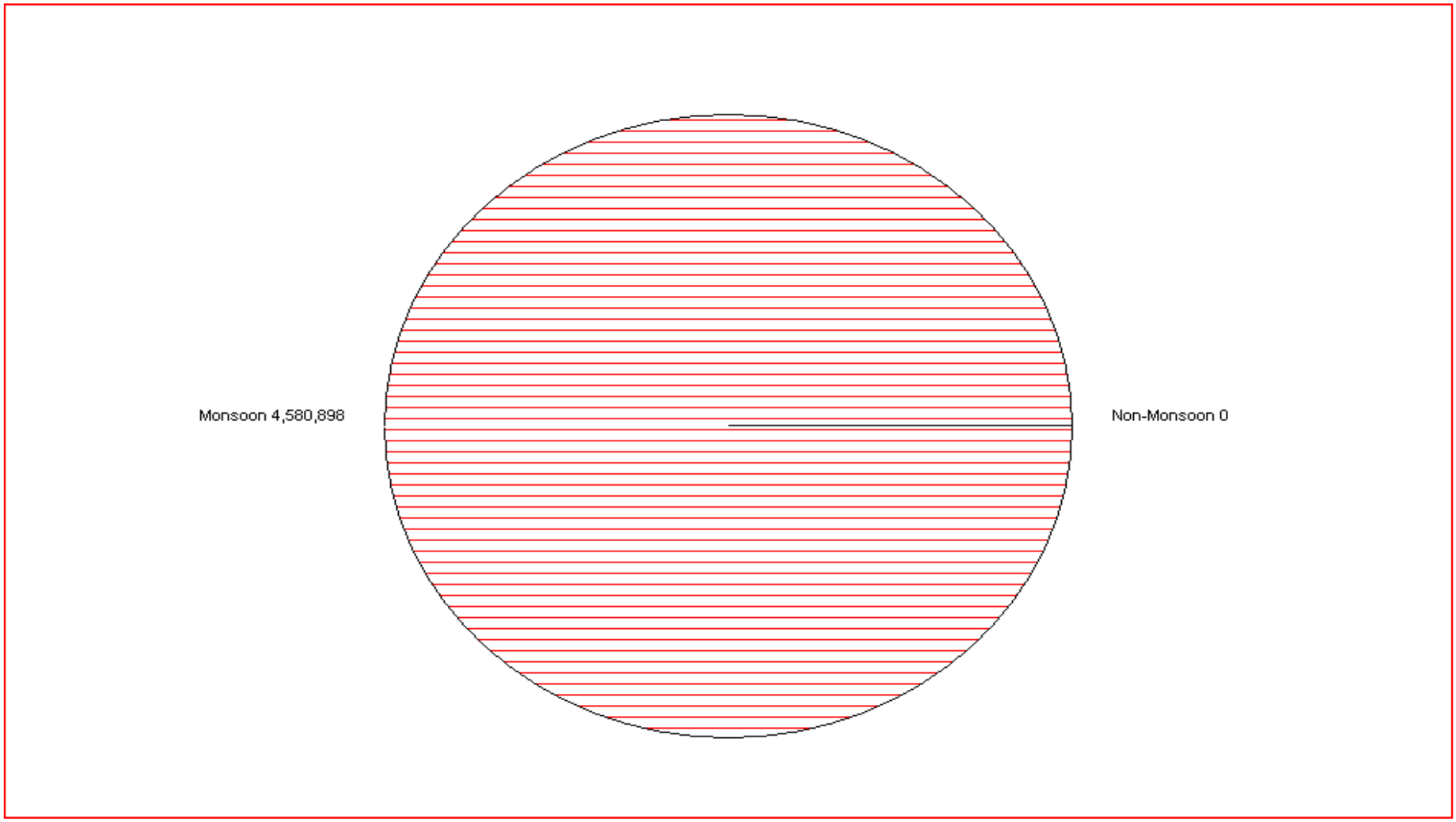
Local River : **Sub-Division : Surat**



Seasonal Sediment Load for the period : 2005-2016

Station Name : Ambica at Gadat (01 02 20 001) **Division : Surat**

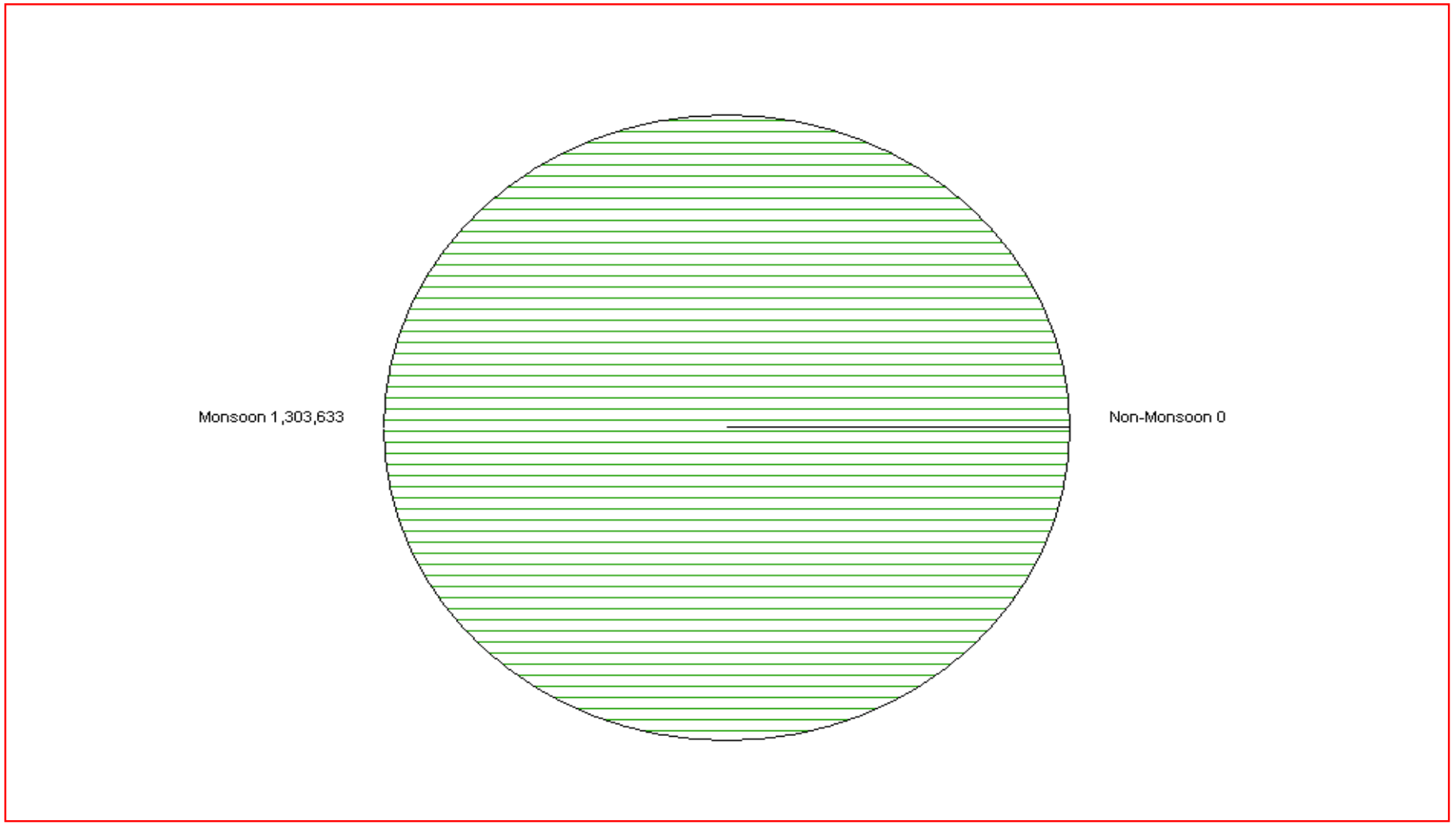
Local River : **Sub-Division : Surat**



Seasonal Sediment Load for the Year: 2016-2017

Station Name : Ambica at Gadat (01 02 20 001) **Division : Surat**

Local River : **Sub-Division : Surat**



4.9 VAITARNA BASIN

4.9 Vaitarna Basin

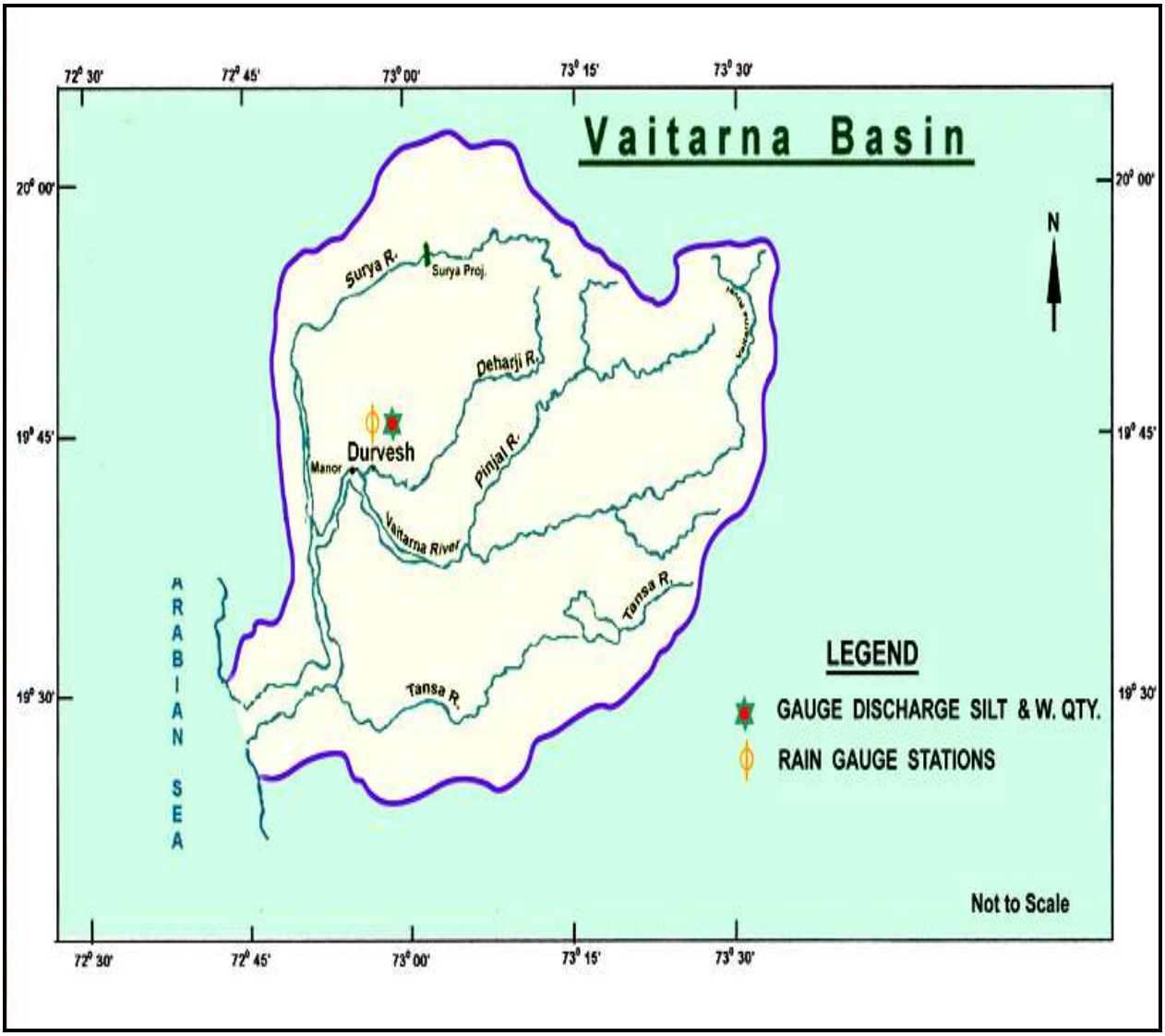
The river Vaitarna originates from hilly terrain of Maharashtra at Trimbak in Nasik district. After running for 120 km in Maharashtra towards west, it falls into the Arabian Sea. The catchment area of the basin is 3,637 sq.km. This drainage area is located between east longitudes of 72° 45’ and 73° 35’ and north latitudes of 19° 30’ and 20° 20’. The main tributaries of this river are Pinjal, Garjal, Surya, Daharji and Tansa. There are some irrigation projects under construction namely Surya and Wandri on the tributaries of the Vaitarna river

There is only one hydrological observation site on Vaitarna river at Durvesh which is situated at the upstream of confluence of Surya and Tansa tributaries. A brief about the station is given in section- 4.9.1

4.9.1. Vaitarna at Durvesh

The station has a Catchment area of 2,019 sq km. The maximum sediment concentration of 4.000 g/l was observed on 02.08.2016. The total sediment load during the year is 1975643 metric tonnes. The monsoon load constitutes 100 % of the total load. The annual sediment yield over the catchment during water year 2016-17 is 0.6989 mm.

Plate – 4.9 Vaitarna Basin



HISTORY SHEET

			Water Year	**:**	**2016-17**
Site	**:**	**Vaitarna at Durvesh**	**Code**	**:**	**01 02 25 001**
State	:	Maharashtra	District		Thane
Basin	:	WFR South of Tapi	Independent River	:	Vaitarna
Tributary	:		Sub Tributary	:	
Sub-Sub Tributary	:		Local River	:	
Division	:	Tapi Division, Surat	Sub-Division	:	DGSD,CWC,Silvassa
Drainage Area	:	2019 Sq. Km.	Bank	:	Left
Latitude	:	19°42'45" N	Longitude	:	72°55'50" E
Zero of Gauge (m)	:	0 (m.s.l)	26-10-1970		-
		Opening Date	Closing Date		
Gauge	:	26-10-1970			
Discharge	:	26-01-1971			
Sediment	:	26-01-1971			
Water Quality	:	01-06-1977			

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Vaitarna at Durvesh (01 02 25 001) **Division : Tapi Division, Surat**

Local River : **Sub-Division : DGSD,CWC,Silvassa**

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	765.6	0.052	0.073	0.499	0.624	41285
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	3850	0.300	0.700	3.000	4.000	1330536
3	0.000	0.000	0.000	0.000	0.000	0	216.9	0.020	0.050	0.200	0.270	5059	1086	0.050	0.067	0.550	0.667	62558
4	0.000	0.000	0.000	0.000	0.000	0	444.7	0.060	0.085	0.550	0.695	26704	1038	0.032	0.049	0.548	0.629	56432
5	0.000	0.000	0.000	0.000	0.000	0	142.5	0.000	0.000	0.100	0.100	1231	1119	0.027	0.045	0.525	0.597	57674
6	0.000	0.000	0.000	0.000	0.000	0	101.1	0.000	0.000	0.080	0.080	699	1399	0.030	0.060	0.700	0.790	95478
7	0.000	0.000	0.000	0.000	0.000	0	52.77	0.000	0.000	0.049	0.049	222	545.4	0.020	0.050	0.350	0.420	19790
8	0.000	0.000	0.000	0.000	0.000	0	30.85	0.000	0.000	0.024	0.024	65	305.5	0.012	0.023	0.273	0.308	8140
9	0.000	0.000	0.000	0.000	0.000	0	41.35	0.000	0.000	0.026	0.026	91	383.9	0.010	0.020	0.300	0.330	10947
10	0.000	0.000	0.000	0.000	0.000	0	308.9	0.030	0.060	0.200	0.290	7739	262.8	0.022	0.022	0.275	0.319	7239
11	0.000	0.000	0.000	0.000	0.000	0	598.4	0.022	0.032	0.350	0.403	20846	402.4	0.065	0.088	0.500	0.653	22714
12	0.000	0.000	0.000	0.000	0.000	0	464.8	0.021	0.055	0.500	0.576	23139	303.0	0.000	0.000	0.050	0.050	1296
13	0.000	0.000	0.000	0.000	0.000	0	409.1	0.023	0.040	0.400	0.463	16370	74.48	0.000	0.000	0.020	0.020	129
14	0.000	0.000	0.000	0.000	0.000	0	281.6	0.015	0.030	0.200	0.245	5960	95.99	0.000	0.000	0.030	0.030	249
15	0.000	0.000	0.000	0.000	0.000	0	120.3	0.000	0.000	0.025	0.025	255	40.31	0.000	0.000	0.010	0.010	35
16	0.000	0.000	0.000	0.000	0.000	0	76.16	0.000	0.000	0.024	0.024	160	55.96	0.000	0.000	0.048	0.048	233
17	0.000	0.000	0.000	0.000	0.000	0	85.05	0.000	0.000	0.015	0.015	110	33.25	0.000	0.000	0.025	0.025	73
18	0.000	0.000	0.000	0.000	0.000	0	104.5	0.000	0.000	0.010	0.010	90	32.99	0.000	0.000	0.024	0.024	68
19	0.000	0.000	0.000	0.000	0.000	0	499.7	0.020	0.060	0.290	0.370	15991	20.56	0.000	0.000	0.024	0.024	43
20	0.000	0.000	0.000	0.000	0.000	0	679.7	0.090	0.180	0.400	0.670	39348	15.66	0.000	0.000	0.010	0.010	14
21	0.000	0.000	0.000	0.000	0.000	0	360.0	0.012	0.050	0.250	0.312	9702	16.65	0.000	0.000	0.010	0.010	14
22	0.000	0.000	0.000	0.000	0.000	0	165.7	0.000	0.000	0.074	0.074	1052	19.54	0.000	0.000	0.024	0.024	40
23	0.000	0.000	0.000	0.000	0.000	0	130.6	0.000	0.000	0.050	0.050	564	32.64	0.000	0.000	0.024	0.024	69
24	0.000	0.000	0.000	0.000	0.000	0	262.8	0.000	0.000	0.200	0.200	4541	33.38	0.000	0.000	0.020	0.020	58
25	0.000	0.000	0.000	0.000	0.000	0	104.1	0.000	0.000	0.100	0.100	899	30.92	0.000	0.000	0.015	0.015	40
26	0.000	0.000	0.000	0.000	0.000	0	82.96	0.000	0.000	0.025	0.025	177	39.14	0.000	0.000	0.025	0.025	85
27	0.000	0.000	0.000	0.000	0.000	0	58.87	0.000	0.000	0.024	0.024	121	65.35	0.000	0.000	0.049	0.049	274
28	0.000	0.000	0.000	0.000	0.000	0	77.53	0.000	0.000	0.024	0.024	163	48.48	0.000	0.000	0.030	0.030	126
29	0.000	0.000	0.000	0.000	0.000	0	114.0	0.000	0.000	0.025	0.025	243	72.43	0.000	0.000	0.049	0.049	307
30	0.000	0.000	0.000	0.000	0.000	0	398.7	0.018	0.025	0.420	0.463	15948	43.42	0.000	0.000	0.026	0.026	97
31							596.2	0.011	0.022	0.500	0.534	27479	59.12	0.000	0.000	0.050	0.050	255
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	133.9	0.011	0.020	0.123	0.153	4181	1075	0.056	0.111	0.702	0.868	169008
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	331.9	0.019	0.040	0.221	0.280	12227	107.5	0.007	0.009	0.074	0.089	2485
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	213.8	0.004	0.009	0.154	0.166	5535	41.91	0.000	0.000	0.029	0.029	124
Monthly Total						**0**						**224971**						**1716296**

Annual Sediment Load (Metric Tonnes) : 1975643

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Vaitarna at Durvesh (01 02 25 001) **Division : Tapi Division, Surat**

Local River : **Sub-Division : DGSD,CWC,Silvassa**

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	47.08	0.000	0.000	0.100	0.100	405	25.70	0.000	0.000	0.049	0.049	109	0.600	0.000	0.000	0.000	0.000	0
2	29.96	0.000	0.000	0.035	0.035	91	27.67	0.000	0.000	0.025	0.025	60	0.670	0.000	0.000	0.000	0.000	0
3	47.09	0.000	0.000	0.030	0.030	122	18.01	0.000	0.000	0.016	0.016	25	0.840	0.000	0.000	0.000	0.000	0
4	45.11	0.000	0.000	0.040	0.040	156	17.95	0.000	0.000	0.015	0.015	23	0.840	0.000	0.000	0.000	0.000	0
5	22.66	0.000	0.000	0.015	0.015	29	54.07	0.000	0.000	0.055	0.055	257	0.670	0.000	0.000	0.000	0.000	0
6	15.33	0.000	0.000	0.010	0.010	13	59.42	0.000	0.000	0.075	0.075	385	0.520	0.000	0.000	0.000	0.000	0
7	16.73	0.000	0.000	0.015	0.015	22	39.50	0.000	0.000	0.035	0.035	119	0.020	0.000	0.000	0.000	0.000	0
8	56.52	0.000	0.000	0.099	0.099	482	37.64	0.000	0.000	0.030	0.030	98	0.000	0.000	0.000	0.000	0.000	0
9	50.66	0.000	0.000	0.098	0.098	430	22.89	0.000	0.000	0.025	0.025	49	0.000	0.000	0.000	0.000	0.000	0
10	37.92	0.000	0.000	0.029	0.029	95	13.58	0.000	0.000	0.013	0.013	15	0.000	0.000	0.000	0.000	0.000	0
11	26.43	0.000	0.000	0.015	0.015	34	13.93	0.000	0.000	0.010	0.010	12	0.000	0.000	0.000	0.000	0.000	0
12	25.03	0.000	0.000	0.024	0.024	51	11.49	0.000	0.000	0.010	0.010	10	0.000	0.000	0.000	0.000	0.000	0
13	17.61	0.000	0.000	0.010	0.010	15	8.939	0.000	0.000	0.008	0.008	6	0.000	0.000	0.000	0.000	0.000	0
14	11.55	0.000	0.000	0.024	0.024	24	9.468	0.000	0.000	0.008	0.008	7	0.000	0.000	0.000	0.000	0.000	0
15	10.84	0.000	0.000	0.008	0.008	7	8.959	0.000	0.000	0.007	0.007	5	0.000	0.000	0.000	0.000	0.000	0
16	25.13	0.000	0.000	0.015	0.015	33	7.670	0.000	0.000	0.006	0.006	4	0.000	0.000	0.000	0.000	0.000	0
17	38.17	0.000	0.000	0.074	0.074	245	5.198	0.000	0.000	0.005	0.005	2	0.000	0.000	0.000	0.000	0.000	0
18	32.96	0.000	0.000	0.030	0.030	85	5.268	0.000	0.000	0.005	0.005	2	0.000	0.000	0.000	0.000	0.000	0
19	39.15	0.000	0.000	0.050	0.050	169	4.906	0.000	0.000	0.005	0.005	2	0.000	0.000	0.000	0.000	0.000	0
20	29.17	0.000	0.000	0.074	0.074	185	4.891	0.000	0.000	0.007	0.007	3	0.000	0.000	0.000	0.000	0.000	0
21	489.9	0.010	0.021	0.580	0.612	25886	4.680	0.000	0.000	0.005	0.005	2	0.000	0.000	0.000	0.000	0.000	0
22	142.1	0.000	0.000	0.073	0.073	896	4.706	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0
23	85.44	0.000	0.000	0.050	0.050	365	3.400	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0
24	244.4	0.000	0.000	0.100	0.100	2115	4.592	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	73.75	0.000	0.000	0.080	0.080	510	14.42	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	45.22	0.000	0.000	0.075	0.075	291	11.95	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	38.69	0.000	0.000	0.050	0.050	168	10.81	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	37.58	0.000	0.000	0.050	0.050	163	10.69	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	24.14	0.000	0.000	0.026	0.026	54	8.425	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	16.69	0.000	0.000	0.025	0.025	36	1.030	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31							6.102	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	36.91	0.000	0.000	0.047	0.047	184	31.64	0.000	0.000	0.034	0.034	114	0.416	0.000	0.000	0.000	0.000	0
Ten Daily II	25.60	0.000	0.000	0.032	0.032	85	8.072	0.000	0.000	0.007	0.007	5	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	119.8	0.001	0.002	0.111	0.114	3048	7.347	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**33179**						**1196**						**0**

Annual Sediment Load (Metric Tonnes) : 1975643

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Vaitarna at Durvesh (01 02 25 001) **Division : Tapi Division, Surat**

Local River : **Sub-Division : DGSD,CWC,Silvassa**

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 1975643

Daily Observed Sediment Datasheet for period : 2016-2017

Station Name : Vaitarna at Durvesh (01 02 25 001) **Division : Tapi Division, Surat**

Local River : **Sub-Division : DGSD,CWC,Silvassa**

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly Total						**0**						**0**						**0**

Annual Sediment Load (Metric Tonnes) : 1975643

Annual Sediment Load for period : 2005-2017

Station Name : Vaitarna at Durvesh (01 02 25 001) **Division : Tapi Division, Surat**

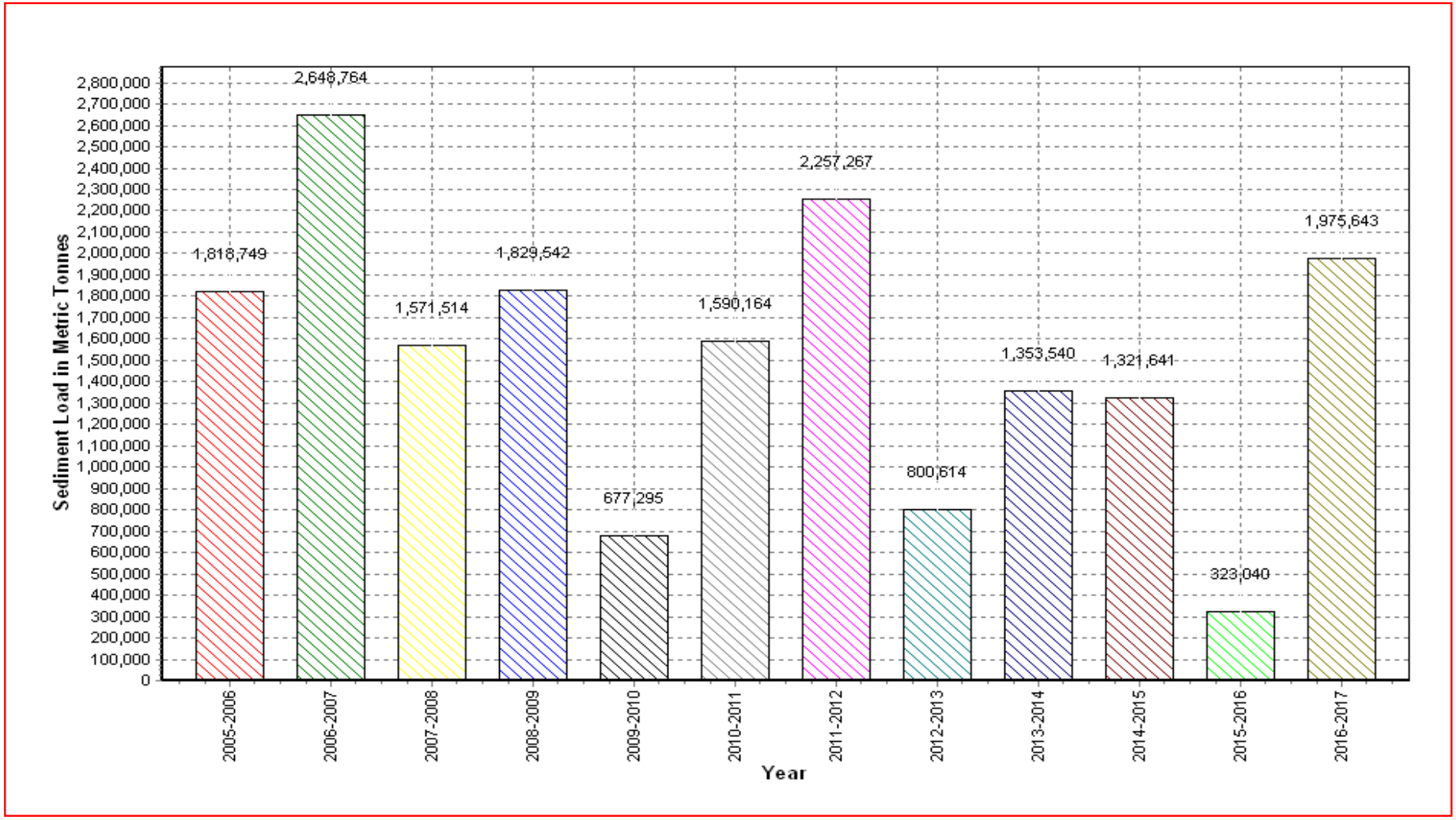
Local River : **Sub-Division : DGSD,CWC,Silvassa**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2005-2006	1818690	59	1818749	5338
2006-2007	2648735	28	2648764	5038
2007-2008	1571174	339	1571514	4082
2008-2009	1829311	231	1829542	4360
2009-2010	676991	305	677295	2076
2010-2011	1589061	1104	1590164	3829
2011-2012	2257267	0	2257267	3701
2012-2013	800614	0	800614	2466
2013-2014	1353540	0	1353540	3745
2014-2015	1321641	0	1321641	2970
2015-2016	323040	0	323040	1089
2016-2017	1975643	0	1975643	1867

Annual Sediment Load for the period: 2005-2017

Station Name : Vaitarna at Durvesh (01 02 25 001) **Division : Tapi Division, Surat**

Local River : **Sub-Division : DGSD,CWC,Silvassa**



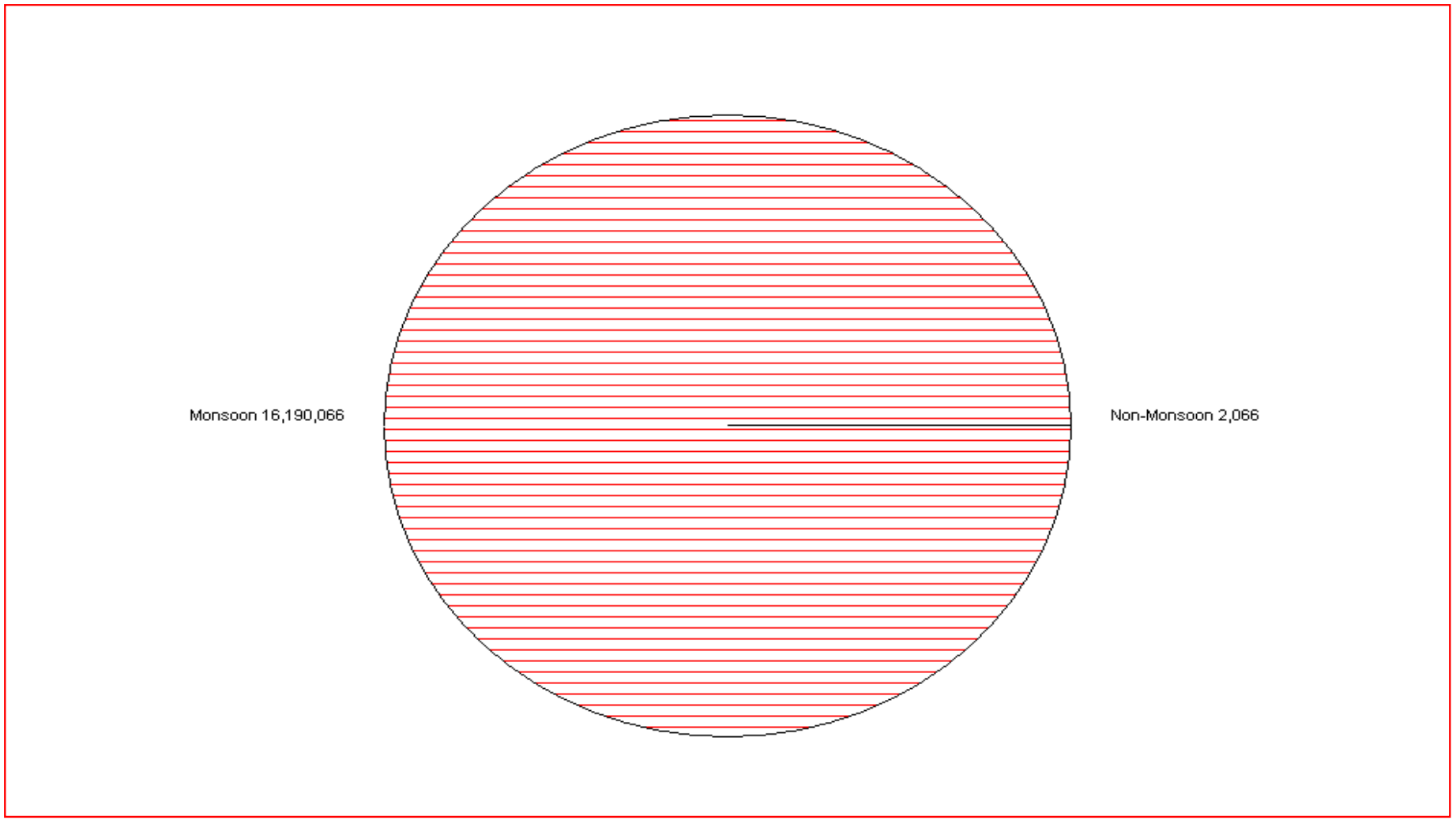
Seasonal Sediment Load for the period : 2005-2016

Station Name : Vaitarna at Durvesh (01 02 25 001)

Division : Tapi Division, Surat

Local River :

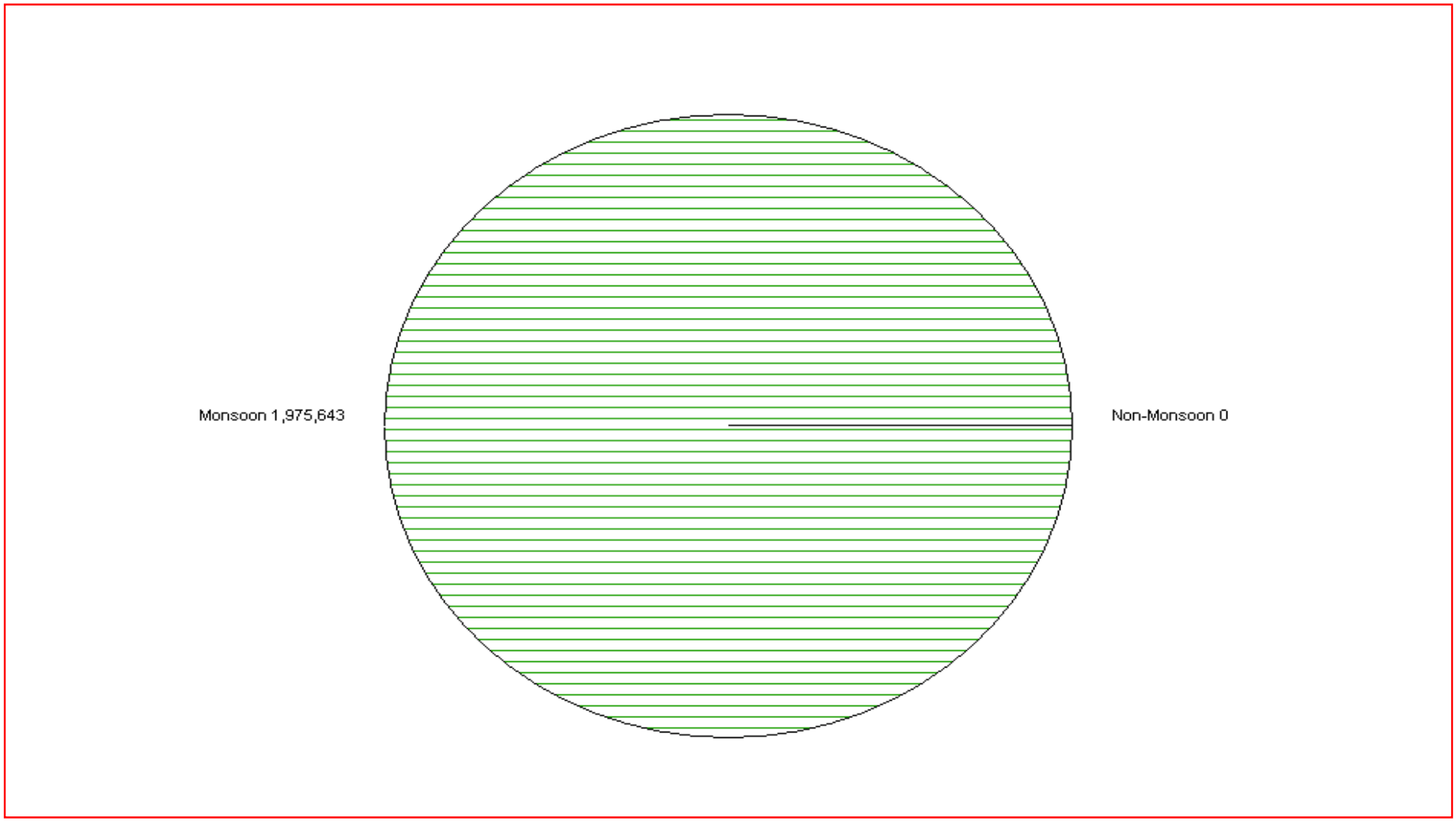
Sub-Division : DGSD,CWC,Silvassa



Seasonal Sediment Load for the Year: 2016-2017

Station Name : Vaitarna at Durvesh (01 02 25 001) **Division : Tapi Division, Surat**

Local River : **Sub-Division : DGSD,CWC,Silvassa**



5.0 BED MATERIAL DATA

BED MATERIAL ANALYSIS DATA FOR THE YEAR 2016 -2017

SITE	**MATAJI**	**CODE**	**01 02 13 001**
RIVER	**MAHI**	**BASIN**	**MAHI**
MEASURING AUTHORITY	**MAHI DIVISION**	**CROSS SECTION**	**STATION GAUGE LINE**

PRE MONSOON SURVEY (DATE 14.05.2016)

Discharge 'Q'	Pooling water	Cumecs	Water edge	R.B.	148.00	m.	L.B.	97.00 m.
Area of Section 'A'	-	Sq.m.	Mean velocity	'V'	-	m/Sec		
Wetted Perimeter 'P'	51.00	m.	Hydraulic Mean Depth	'R'	-	m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
1	10.00	298.290	2.18	**Av.mean dia."m" =**	**9.58**	**mm**	Pooling
2	50.00	290.860	3.31				Water
3	100.00	285.920	1.24		**5.45**		
4	150.00	286.150	2.35				
5	200.00	287.430	38.83				

Note Stagnated Water.

MONSOON SURVEY (DATE 26.11.2016)

Discharge 'Q'	0.000	Cumecs	Water edge	R.B.	175.00	m.	L.B.	73.00 m.
Area of Section 'A'	-	Sq.m.	Mean velocity	'V'	-	m/Sec		
Wetted Perimeter 'P'	102.00	m.	Hydraulic Mean Depth	'R'	-	m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
1	10.00	298.300	4.20	**Av.mean dia."m" =**	**8.89**	**mm**	Neg.flow
2	50.00	290.860	1.67				
3	100.00	285.650	1.11	**Silt factor "f " =**	**5.25**		
4	150.00	285.860	1.07				
5	200.00	287.430	36.41				

Note Flowing water.

POST MONSOON SURVEY (DATE 09.02.2017)

Discharge 'Q'	*5.190	Cumecs	Water edge	R.B.	175.80	m.	L.B.	70.50 m.
Area of Section 'A'	-	Sq.m.	Mean velocity	'V'	-	m/Sec		
Wetted Perimeter 'P'	105.30	m.	Hydraulic Mean Depth	'R'	-	m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
1	10.00	298.270	3.60	**Av.mean dia."m" =**	**11.41**	**mm**	* Estimated
2	50.00	290.860	2.34				discharge
3	100.00	285.710	2.48	**Silt factor "f " =**	**5.94**		
4	150.00	285.730	2.31				
5	200.00	287.420	46.30				

Note Flowing water.

BED MATERIAL ANALYSIS DATA FOR THE YEAR 2016 -2017

SITE	**PADARDIBADI**	**CODE**	**01 02 13 006**
RIVER	**MAHI**	**BASIN**	**MAHI**
MEASURING AUTHORITY	**MAHI DIVISION**	**CROSS SECTION**	**STATION GAUGE LINE/ TEMP.GAUGE**

PRE MONSOON SURVEY (DATE 18.05.2016)

Discharge 'Q'	*5.850	Cumecs	Water edge	R.B.	43.90	m.	L.B.	278.70 m.
Area of Section 'A'	-	Sq.m.	Mean velocity	'V'	-	m/Sec		
Wetted Perimeter 'P'	-	m.	Hydraulic Mean Depth	'R'	-	m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
1	20.00	141.710	2.77	**Av.mean dia."m" =**	**3.51**	**mm**	* Estimated discharge
2	34.90	135.050	2.30				
3	110.00	132.040	3.71	**Silt factor "f " =**	**3.30**		
4	210.00	132.350	5.92				
5	290.00	134.110	2.87				

Note Flowing water.

MONSOON SURVEY (DATE)

Discharge 'Q'		Cumecs	Water edge	R.B.		m.	L.B.	m.
Area of Section 'A'		Sq.m.	Mean velocity	'V'		m/Sec		
Wetted Perimeter 'P'		m.	Hydraulic Mean Depth	'R'		m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
	SURVEY NOT DONE			**Av.mean dia."m" =**		**mm**	
				Silt factor "f " =			

POST MONSOON SURVEY (DATE 24.01.2017)

Discharge 'Q'	*6.460	Cumecs	Water edge	R.B.	43.500	m.	L.B.	278.50 m.
Area of Section 'A'	-	Sq.m.	Mean velocity	'V'	-	m/Sec		
Wetted Perimeter 'P'	-	m.	Hydraulic Mean Depth	'R'	-	m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
1	20.00	141.760	2.12	**Av.mean dia."m" =**	**7.34**	**mm**	* Estimated discharge
2	34.90	135.335	3.33				
3	110.00	132.355	24.82	**Silt factor "f " =**	**4.77**		
4	210.00	132.310	4.40				
5	290.00	134.980	2.04				

Note Flowing water.

BED MATERIAL ANALYSIS DATA FOR THE YEAR 2016 -2017

SITE	**KHANPUR**	**CODE**	**01 02 13 012**
RIVER	**MAHI**	**BASIN**	**MAHI**
MEASURING AUTHORITY	**MAHI DIVISION**	**CROSS SECTION**	**STATION GAUGE LINE**

PRE MONSOON SURVEY (DATE 07.06.2016)

Discharge 'Q'	11.990	Cumecs	Water edge R.B.	57.90	m.	L.B.	455.0	m.
Area of Section 'A'	160.49	Sq.m.	Mean velocity 'V'	0.075	m/Sec			
Wetted Perimeter '	396.00	m.	Hydraulic Mean Depth 'R'	0.405	m.			

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
1	60.00	8.080	1.29	**Av.mean dia."m" =**	**1.73**	**mm**
2	160.00	7.820	2.02			
3	260.00	7.860	1.67	**Silt factor "f " =**	**2.31**	
4	360.00	8.150	3.04			
5	460.00	8.770	0.63			

Note Flowing water.

MONSOON SURVEY (DATE 18.08.2016)

Discharge 'Q'	476.65	Cumecs	Water edge R.B.	48.10	m.	L.B.	458.10	m.
Area of Section 'A'	796.72	Sq.m.	Mean velocity 'V'	0.598	m/Sec			
Wetted Perimeter '	410.32	m.	Hydraulic Mean Depth 'R'	1.942	m.			

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
1	60.00	8.490	0.47	**Av.mean dia."m" =**	**1.76**	**mm**
2	160.00	8.530	1.87			
3	260.00	7.940	3.28	**Silt factor "f " =**	**2.33**	
4	360.00	8.040	1.76			
5	460.00	10.240	1.40			

Note Flowing water.

POST MONSOON SURVEY (DATE: 20.12.2016)

Discharge 'Q'	18.14	Cumecs	Water edge R.B.	57.90	m.	L.B.	455.00	m.
Area of Section 'A'	146.37	Sq.m.	Mean velocity 'V'	0.124	m/Sec			
Wetted Perimeter '	336.16	m.	Hydraulic Mean Depth 'R'	0.435	m.			

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
1	60.00	7.910	2.59	**Av.mean dia."m" =**	**2.47**	**mm**
2	160.00	8.510	2.53			
3	260.00	7.700	1.78	**Silt factor "f " =**	**2.76**	
4	360.00	7.890	3.97			
5	460.00	9.800	1.47			

Note Flowing water.

BED MATERIAL ANALYSIS DATA FOR THE YEAR 2016 -2017

SITE	**DEROL BRIDGE**	**CODE**	**01 02 12 006**
RIVER	**SABARMATI**	**BASIN**	**SABARMATI**
MEASURING AUTHORITY	**MAHI DIVISION**	**CROSS SECTION**	**STATION GAUGE LINE**

PRE MONSOON SURVEY (DATE : 18.05.2016)

Discharge 'Q'	River dry	Cumecs	Water edge R.	-	m.	L.B.	- m.
Area of Section 'A'	-	Sq.m.	Mean velocity 'V'	-	m/Sec		
Wetted Perimeter 'P'	-	m.	Hydraulic Mean Depth 'R'	-	m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
1	70.00	90.920	1.30	**Av.mean dia."m" =**	**1.32 mm**	River dry
2	120.00	87.350	0.36			
3	180.00	86.500	0.64	**Silt factor "f " =**	**2.03**	
4	240.00	87.400	3.95			
5	320.00	88.120	0.37			

Note River Bed Dry

MONSOON SURVEY (DATE : 28.09.2016)

Discharge 'Q'	2.656	Cumecs	Water edge R.B.	236.0	m.	L.B.	121.0 m.
Area of Section 'A'	36.500	Sq.m.	Mean velocity 'V'	0.073	m/Sec		
Wetted Perimeter 'P'	116.04	m.	Hydraulic Mean Depth 'R'	0.315	m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
1	70.00	90.910	1.67	**Av.mean dia."m" =**	**1.17 mm**	
2	120.00	87.310	1.61			
3	180.00	86.940	0.27	**Silt factor "f " =**	**1.90**	
4	240.00	87.445	0.48			
5	320.00	87.930	1.80			

Note Flowing water.

POST MONSOON SURVEY (DATE :06.12.2016)

Discharge 'Q'	*0.250	Cumecs	Water edge R.B.	122	m.	L.B.	224 m.
Area of Section 'A'		Sq.m.	Mean velocity 'V'	-	m/Sec		
Wetted Perimeter 'P'	-	m.	Hydraulic Mean Depth 'R'	-	m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
1	70.00	90.865	1.08	**Av.mean dia."m" =**	**0.62 mm**	* Estimated discharge
2	120.00	87.375	0.49			
3	180.00	86.965	0.41	**Silt factor "f " =**	**1.39**	
4	240.00	87.425	0.56			
5	320.00	87.890	0.56			

Note Stagnated water .

BED MATERIAL ANALYSIS DATA FOR THE YEAR 2016 -2017

SITE	**LUWARA**	**CODE**	**01 02 09 001**
RIVER	**SHETRUNJI**	**BASIN**	**SHETRUNJI**
MEASURING AUTHORITY	**MAHI DIVISION**	**CROSS SECTION**	**STATION GAUGE LINE**

PRE MONSOON SURVEY (DATE: 03.05.2016)

Discharge 'Q'	River dry	Cumecs	Water edge R.B.	-	m.	L.B. -	m.
Area of Section 'A'	-	Sq.m.	Mean velocity 'V'	-	m/Sec		
Wetted Perimeter 'P'	-	m.	Hydraulic Mean Depth 'R'	-	m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
1	0.00	63.270	0.75	**Av.mean dia."m" =**	**3.35 mm**	River dry
2	20.00	59.865	5.33			
3	40.00	59.740	5.88	**Silt factor "f " =**	**3.22**	
4	60.00	60.110	3.19			
5	80.00	66.160	1.59			

Note River Bed Dry

MONSOON SURVEY (DATE)

Discharge 'Q'	-	Cumecs	Water edge R.B.	-	m.	L.B. -	m.
Area of Section 'A'	-	Sq.m.	Mean velocity 'V'	-	m/Sec		
Wetted Perimeter 'P'	-	m.	Hydraulic Mean Depth 'R'	-	m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
	SURVEY NOT DONE			**Av.mean dia."m" =**	**mm**	
				Silt factor "f " =		

POST MONSOON SURVEY (DATE : 31.12.2016)

Discharge 'Q'	0.000	Cumecs	Water edge R.B.	-	m.	L.B. -	m.
Area of Section 'A'		Sq.m.	Mean velocity 'V'	-	m/Sec		
Wetted Perimeter 'P'	-	m.	Hydraulic Mean Depth 'R'	-	m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
1	0.00	62.955	0.87	**Av.mean dia."m" =**	**3.64 mm**	Pooling
2	20.00	56.865	4.14			Water
3	40.00	56.820	8.07	**Silt factor "f " =**	**3.36**	
4	60.00	56.900	2.70			
5	80.00	62.880	2.40			

Note Stagnated water .

BED MATERIAL ANALYSIS DATA FOR THE YEAR 2016 -2017

SITE	**GANOD**	**CODE**	**01 02 07 001**
RIVER	**BHADAR**	**BASIN**	**BHADAR**
MEASURING AUTHORITY	**MAHI DIVISION**	**CROSS SECTION**	**STATION GAUGE LINE**

PRE MONSOON SURVEY (DATE :)

Discharge 'Q'	-	Cumecs	Water edge	R.B.	-	m.	L.B.	-	m.
Area of Section 'A'	-	Sq.m.	Mean velocity	'V'	-	m/Sec			
Wetted Perimeter 'P'	-	m.	Hydraulic Mean Depth	'R'	-	m.			

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)	Remarks
	SURVEY NOT DONE			

Av.mean dia."m" = mm

Silt factor "f " =

MONSOON SURVEY (DATE)

Discharge 'Q'	-	Cumecs	Water edge	R.B.	-	m.	L.B.	-	m.
Area of Section 'A'	-	Sq.m.	Mean velocity	'V'	-	m/Sec			
Wetted Perimeter 'P'	-	m.	Hydraulic Mean Depth	'R'	-	m.			

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)	Remarks
	SURVEY NOT DONE			

Av.mean dia."m" = mm

Silt factor "f " =

MONSOON SURVEY (DATE)

Discharge 'Q'	-	Cumecs	Water edge	R.B.	-	m.	L.B.	-	m.
Area of Section 'A'	-	Sq.m.	Mean velocity	'V'	-	m/Sec			
Wetted Perimeter 'P'	-	m.	Hydraulic Mean Depth	'R'	-	m.			

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)	Remarks
	SURVEY NOT DONE			

Av.mean dia."m" = mm

Silt factor "f " =

BED MATERIAL ANALYSIS DATA FOR THE YEAR 2016 -2017

SITE	**KAMALPUR**	**CODE**	**01 02 02 007**
RIVER	**BANAS**	**BASIN**	**BANAS**
MEASURING AUTHORITY	**MAHI DIVISION**	**CROSS SECTION**	**STATION GAUGE LINE**

PRE MONSOON SURVEY (DATE 28.05.2016)

Discharge 'Q' River dry Cumecs Water edge R.B. - m. L.B. - m.
Area of Section 'A - Sq.m. Mean velocity 'V' - m/Sec
Wetted Perimeter - m. Hydraulic Mean Depth 'R' - m.

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
1	0.00	38.070	0.65	**Av.mean dia."m" =**	**0.39**	**mm**	River dry
2	240.00	36.640	0.32				
3	480.00	34.680	0.33	**Silt factor "f " =**	**1.10**		
4	600.00	37.900	0.33				
5	840.00	36.265	0.32				

Note River Bed Dry

MONSOON SURVEY (DATE : 06.09.2016)

Discharge 'Q' 6.247 Cumecs Water edge R.B. 432.0 m. L.B. 534.0 m.
Area of Section 'A 20.640 Sq.m. Mean velocity 'V' 0.303 m/Sec
Wetted Perimeter 102.01 m. Hydraulic Mean Depth 'R' 0.202 m.

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
1	0.00	38.070	1.24	**Av.mean dia."m" =**	**0.56**	**mm**	
2	240.00	36.410	0.26				
3	480.00	34.800	0.57	**Silt factor "f " =**	**1.32**		
4	600.00	37.990	0.47				
5	780.00	36.690	0.28				

Note Flowing water.

POST MONSOON SURVEY (DATE 17.03.2017)

Discharge 'Q' River dry Cumecs Water edge R.B. - m. L.B. - m.
Area of Section 'A - Sq.m. Mean velocity 'V' - m/Sec
Wetted Perimeter - m. Hydraulic Mean Depth 'R' - m.

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
1	0.00	38.070	0.20	**Av.mean dia."m" =**	**0.29**	**mm**	River dry
2	240.00	36.205	0.28				
3	480.00	34.395	0.37	**Silt factor "f " =**	**0.95**		
4	600.00	37.495	0.32				
5	800.00	38.055	0.28				

Note River Bed Dry

BED MATERIAL ANALYSIS DATA FOR THE YEAR 2016-2017

SITE	**BURHANPUR**	**CODE**	**01 02 17 002**
RIVER	**TAPI**	**BASIN**	**TAPI**
MEASURING AUTHORITY	**TAPI DIVISION**	**CROSS SECTION**	**TEMP.SECTION**

PRE MONSOON SURVEY (DATE 12.05.2016)

Discharge 'Q'	No flow	Cumecs	Water edge	R.B.	m.	L.B.	m.
Area of Section 'A'		Sq.m.	Mean velocity	'V'	m/Sec		
Wetted Perimeter 'P'		m.	Hydraulic Mean Depth	'R'	m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
1	0.00	237.925	2.29	**Av.mean dia."m" =**	**4.22**	**mm**
2	70.00	219.200	6.28			
3	140.00	215.605	4.87	**Silt factor "f " =**	**3.62**	
4	210.00	212.130	3.06			
5	280.00	226.030	4.60			

Note 1. Stagnated water

MONSOON SURVEY 2016-17

Discharge 'Q'		Cumecs	Water edge	R.B.	m.		m.
Area of Section 'A'		Sq.m.	Mean velocity	'V'	m/Sec		
Wetted Perimeter 'P'		m.	Hydraulic Mean Depth	'R'	m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
	SURVEY NOT DONE			**Av.mean dia."m" =**		**mm**
				Silt factor "f " =		

POST MONSOON SURVEY (DATE 30.11.2016)

Discharge 'Q'	5.844	Cumecs	Water edge	R.B.	130.0 m.	L.B.	237.0 m.
Area of Section 'A'	170.7	Sq.m.	Mean velocity	'V'	0.034 m/Sec		
Wetted Perimeter 'P'	86.2	m.	Hydraulic Mean Depth	'R'	1.980 m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
1	0.00	237.925	4.47	**Av.mean dia."m" =**	**5.80**	**mm**
2	70.00	219.215	9.17			
3	140.00	215.150	7.37	**Silt factor "f " =**	**4.24**	
4	210.00	212.060	3.75			
5	280.00	226.545	4.24			

Note 1. Stagnated water

BED MATERIAL ANALYSIS DATA FOR THE YEAR 2016-2017

SITE	**GOPALKHEDA**	**CODE**	**01 02 17 004**
RIVER	**PURNA**	**BASIN**	**TAPI**
MEASURING AUTHORITY	**TAPI DIVISION**	**CROSS SECTION**	**STATION GAUGE LINE**

PRE MONSOON SURVEY (DATE 19.05.2016)

Discharge 'Q' Nil flow Cumecs Water ed m. m.
Area of Section 'A' Sq.m. Mean velocity 'V' m/Sec
Wetted Perimeter 'P' m. Hydraulic Mean Depth 'R' m.

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
1	40.00	238.930	12.29	**Av.mean dia."m" =**	**11.16 mm**	Pooling water
2	80.00	235.550	10.50			
3	120.00	244.650	10.69	**Silt factor "f " =**	**5.88**	

Note 1. Stagnated water

MONSOON SURVEY 2016-17

Discharge 'Q' Cumecs Water edge R.B. m. L.B. m.
Area of Section 'A' Sq.m. Mean velocity 'V' m/Sec
Wetted Perimeter 'P' m. Hydraulic Mean Depth 'R' m.

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
	SURVEY NOT DONE			**Av.mean dia."m" =**	**mm**	
				Silt factor "f " =		

POST MONSOON SURVEY (DATE 23.12.2016)

Discharge 'Q' NIL Cumecs Water edge R.B. 95.50 m. L.B. 56.60 m.
Area of Section 'A' Sq.m. Mean velocity 'V' m/Sec
Wetted Perimeter 'P' m. Hydraulic Mean Depth 'R' m.

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
1	40.00	238.710	6.74	**Av.mean dia."m" =**	**6.51 mm**	
2	80.00	236.010	8.12			
3	120.00	244.940	4.66	**Silt factor "f " =**	**4.49**	

Note 1. Stagnated water

BED MATERIAL ANALYSIS DATA FOR THE YEAR 2016-2017

SITE	**YERLI**	**CODE**	**01 02 17 005**
RIVER	**PURNA**	**BASIN**	**TAPI**
MEASURING AUTHORITY	**TAPI DIVISION**	**CROSS SECTION**	**TEMP.SECTION**

PRE MONSOON SURVEY (DATE 17.05.2016)

Discharge 'Q' River Dry Cumecs Water edge R.B. m. L.B. m.
Area of Section 'A' Sq.m. Mean velocity 'V' m/Sec
Wetted Perimeter 'P' m. Hydraulic Mean Depth 'R' m.

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
1	0.00	225.715	3.87	**Av.mean dia."m" =**	**3.87**	**mm**	River dry
2	50.00	219.885	4.14				
3	100.00	213.115	4.83	**Silt factor "f " =**	**3.46**		
4	150.00	214.225	4.01				
5	200.00	224.750	2.51				

Note 1 River Bed Dry

MONSOON SURVEY 2016-17

Discharge 'Q' Cumecs Water edge R.B. m. L.B. m.
Area of Section 'A' Sq.m. Mean velocity 'V' m/Sec
Wetted Perimeter 'P' m. Hydraulic Mean Depth 'R' m.

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
	SURVEY NOT DONE			**Av.mean dia."m" =**		**mm**	
				Silt factor "f " =			

POST MONSOON SURVEY (DATE 07.12.2016)

Discharge 'Q' NIL Cumecs Water edge R.B. m. L.B. m.
Area of Section 'A' Sq.m. Mean velocity 'V' m/Sec
Wetted Perimeter 'P' m. Hydraulic Mean Depth 'R' m.

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
1	0.00	225.725	2.00	**Av.mean dia."m" =**	**3.23**	**mm**	River
2	50.00	220.055	1.92				Dry
3	100.00	213.705	7.60	**Silt factor "f " =**	**3.16**		
4	150.00	214.015	2.08				
5	200.00	224.810	2.56				

Note 1. Stagnated water

BED MATERIAL ANALYSIS DATA FOR THE YEAR 2016-2017

SITE	**SARANGKHEDA**	**CODE**	**01 02 17 015**
RIVER	**TAPI**	**BASIN**	**TAPI**
MEASURING AUTHORITY	**TAPI DIVISION**	**CROSS SECTION**	**STATION GAUGE LINE**

PRE MONSOON SURVEY (DATE 21.05.2016)

Discharge 'Q'	No Flow	Cumecs	Water edge R.B.	m.	L.B. m.
Area of Section 'A'		Sq.m.	Mean velocity 'V'	m/Sec	
Wetted Perimeter 'P'		m.	Hydraulic Mean Depth 'R'	m.	

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
1	0.00	120.470	5.91	**Av.mean dia."m" =**	**5.12**	**mm**
2	80.00	110.935	9.20			
3	160.00	109.780	5.70	**Silt factor "f " =**	**3.98**	
4	240.00	109.250	3.61			
5	320.00	109.305	4.27			
6	400.00	109.465	5.06			
7	480.00	109.980	4.41			
8	560.00	116.900	2.79			

Note 1. Stagnated water

MONSOON SURVEY 2016-17

Discharge 'Q'		Cumecs	Water edge R.B.	m.	L.B. m.
Area of Section 'A'		Sq.m.	Mean velocity 'V'	m/Sec	
Wetted Perimeter 'P'		m.	Hydraulic Mean Depth 'R'	m.	

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
	SURVEY NOT DONE			**Av.mean dia."m" =**		**mm**
				Silt factor "f " =		

POST MONSOON SURVEY 2016-17

Discharge 'Q'		Cumecs	Water edge R.B.	m.	L.B. m.
Area of Section 'A'		Sq.m.	Mean velocity 'V'	m/Sec	
Wetted Perimeter 'P'		m.	Hydraulic Mean Depth 'R'	m.	

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
	SURVEY NOT DONE			**Av.mean dia."m" =**		**mm**
				Silt factor "f " =		

BED MATERIAL ANALYSIS DATA FOR THE YEAR 2016-2017

SITE	**MAHUWA**	**CODE**	**01 02 19 001**
RIVER	**PURNA**	**BASIN**	**PURNA**
MEASURING AUTHORITY	**TAPI DIVISION**	**CROSS SECTION**	**STATION GAUGE LINE**

PRE MONSOON SURVEY (DATE 22.05.2016)

Discharge 'Q'	NIL Cumecs	Water edge R.B.		m.	L.B. m.
Area of Section 'A'	Sq.m.	Mean velocity 'V'		m/Sec	
Wetted Perimeter 'P'	m.	Hydraulic Mean Depth 'R'		m.	

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
1	0.00	20.080	5.05	**Av.mean dia."m**	**3.09**	**mm**
2	60.00	14.280	2.25			
3	90.00	9.590	2.59	**Silt factor "f "**	**3.09**	
4	120.00	8.250	3.32			
5	210.00	12.290	2.23			

Note 1. Stagnated water

MONSOON SURVEY 2016-17

Discharge 'Q'	Cumecs	Water edge R.B.		m.	L.B. m.
Area of Section 'A'	Sq.m.	Mean velocity 'V'		m/Sec	
Wetted Perimeter 'P'	m.	Hydraulic Mean Depth 'R'		m.	

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
	SURVEY NOT DONE			**Av.mean dia."m" =**		**mm**
				Silt factor "f " =		

POST MONSOON SURVEY 2016-17

Discharge 'Q'	NIL Cumecs	Water edge R.B.		m.	L.B. m.
Area of Section 'A'	Sq.m.	Mean velocity 'V'		m/Sec	
Wetted Perimeter 'P'	m.	Hydraulic Mean Depth 'R'		m.	

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
	SURVEY NOT DONE			**Av.mean dia."m" =**		**mm**
				Silt factor "f " =		

BED MATERIAL ANALYSIS DATA FOR THE YEAR 2016-2017

SITE	**GADAT**	**CODE**	**01 02 20 001**
RIVER	**AMBIKA**	**BASIN**	**AMBIKA**
MEASURING AUTHORITY	**TAPI DIVISION**	**CROSS SECTION**	**STATION GAUGE LINE**

PRE MONSOON SURVEY (DATE 04.05.2016)

Discharge 'Q' NIL flow Cumecs Water edge R.B. 200.50 m. L.B. 80.50 m.
Area of Section 'A' Sq.m. Mean velocity 'V' m/Sec
Wetted Perimeter 'P' m. Hydraulic Mean Depth 'R' m.

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
1	70.00	6.965	3.00	**Av.mean dia."m" =**	**6.14**	**mm**	Pooling water
2	100.00	3.390	7.11				
3	130.00	0.050	10.77	**Silt factor "f " =**	**4.36**		
4	160.00	-0.200	3.19				
5	190.00	2.440	6.61				

Note 1. Stagnated water

MONSOON SURVEY 2016-17

Discharge 'Q' Cumecs Water edge R.B. m. L.B. m.
Area of Section 'A' Sq.m. Mean velocity 'V' m/Sec
Wetted Perimeter 'P' m. Hydraulic Mean Depth 'R' m.

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
	SURVEY NOT DONE			**Av.mean dia."m" =**	**mm**	
				Silt factor "f " =		

POST MONSOON SURVEY 2016-17

Discharge 'Q' No flow Cumecs Water edge R.B. 205.00 m. L.B. 80.00 m.
Area of Section 'A' Sq.m. Mean velocity 'V' m/Sec
Wetted Perimeter 'P' m. Hydraulic Mean Depth 'R' m.

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)			Remarks
	SURVEY NOT DONE			**Av.mean dia."m" =**	**mm**	
				Silt factor "f " =		

Note 1. Stagnated water

BED MATERIAL ANALYSIS DATA FOR THE YEAR 2016-2017

SITE	**DURVESH**	**CODE**	**01 02 25 001**
RIVER	**VAITARNA**	**BASIN**	**VAITARNA**
MEASURING AUTHORITY	**TAPI DIVISION**	**CROSS SECTION**	**TEMP.SECTION**

PRE MONSOON SURVEY (DATE 13.05.2016)

Discharge 'Q'	NIL	Cumecs	Water edge R.B.	227.0	m.	L.B.	123.0 m.
Area of Section 'A'		Sq.m.	Mean velocity 'V'		m/Sec		
Wetted Perimeter 'P'		m.	Hydraulic Mean Depth 'R'		m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
1	40.00	11.590	8.23	**Av.mean dia."m" =**	**9.46**	**mm**	Pooling water
2	80.00	12.090	10.24				
3	110.00	3.140	9.26	**Silt factor "f " =**	**5.41**		
4	180.00	-0.335	8.66				
5	210.00	-0.750	10.92				

Note 1. Stagnated water

MONSOON SURVEY 2016-17

Discharge 'Q'		Cumecs	Water edge R.B.		m.	L.B.	m.
Area of Section 'A'		Sq.m.	Mean velocity 'V'		m/Sec		
Wetted Perimeter 'P'		m.	Hydraulic Mean Depth 'R'		m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
	SURVEY NOT DONE			**Av.mean dia."m" =**		**mm**	
				Silt factor "f " =			

POST MONSOON SURVEY (DATE 29.12.2016)

Discharge 'Q'	NIL	Cumecs	Water edge R.B.	227.00	m.	L.B.	123.00 m.
Area of Section 'A'		Sq.m.	Mean velocity 'V'		m/Sec		
Wetted Perimeter 'P'		m.	Hydraulic Mean Depth 'R'		m.		

Sl. No.	R.D. of sampling point (m)	R.L. of bed (m)	Mean dia. (mm)				Remarks
1	40.00	11.600	10.98	**Av.mean dia."m" =**	**8.69**	**mm**	Pooling water
2	80.00	12.090	6.43				
3	110.00	3.165	9.17	**Silt factor "f " =**	**5.19**		
4	180.00	0.240	8.52				
5	210.00	0.650	8.35				

Note 1. Stagnated water