



INTEGRATED HYDROLOGICAL DATA BOOK

(NON-CLASSIFIED RIVER BASINS)

**HYDROLOGICAL DATA DIRECTORATE
INFORMATION SYSTEMS ORGANISATION
WATER PLANNING & PROJECTS WING
CENTRAL WATER COMMISSION
NEW DELHI**

September, 2006

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ABBREVIATIONS

G	:	Gauge Sites
GD	:	Gauge & Discharge sites
GDS	:	Gauge, Discharge & Sediment sites
GDQ	:	Gauge, Discharge and Water Quality Sites
GDSQ	:	Gauge, Discharge, Sediment and Water Quality Sites
Sq Km	:	Square Kilometers
°C	:	Degree Centigrade
mm	:	Millimeters
MCM	:	Million Cubic Meter
N.A.	:	Not Applicable
W YEAR	:	Water Year
cumec	:	Cubic Meter per Second
mhos/cm	:	Micro mhos per Centimeter
+	:	Cation
-	:	Anion
ppm	:	Part per million
m.e./litre	:	Milli equivalent per Litre
pH	:	Negative logarithm of hydrogen ion concentration
DO	:	Dissolved Oxygen
BOD	:	Bio-Chemical Oxygen Demand
Sod % age	:	Sodium percentage
SAR	:	Sodium Absorption Ratio
RSC	:	Residual Sodium Carbonate
MPN	:	Most Probable Number
mg/l	:	Milligram per Litre
max	:	Maximum
min	:	Minimum
WQ	:	Water Quality
m	:	Meter
TDS	:	Total Dissolved Solids
SNR	:	Sample Not received
NF	:	No flow
RD	:	River Dry
Q	:	Water Discharge per Second
CWC	:	Central Water Commission

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SECTION - I
DESCRIPTION OF DIFFERENT RIVER BASINS

DESCRIPTION OF DIFFERENT RIVER BASINS

1. Mahanadi Basin

Location: The basin is physically bounded in the North by Central India hills, in the South and East by the Eastern Ghats and in the West by Maikala hill range. The Chiroli Hills form the watershed dividing the Wainganga valley from the Mahanadi Basin, the upper portion of which is designed as the Chattisgarh Basin. It is a typical basin considered from geographical and geological point of view. The Mahanadi basin lies encompassed within geographical co-ordinates of 80°30' to 86°50' East longitudes and 19°20' to 23°35' of North latitudes running a total length of about 851 km.. The total catchment area of the basin is 1,41,600 sq.km..

The river Mahanadi is one of the major inter-state east flowing rivers in peninsular India. It originates at an elevation of about 442 m. above Mean Sea Level (m.s.l.) near Pharsiya village near Nagri town in Raipur district of Chhatisgarh. During the course of its traverse, it drains fairly large areas of Chhatisgarh and Orissa and comparatively small area in the state of Jharkhand and Maharashtra. The total length of the river from its origin to confluence of the Bay of Bengal is about 851 km., of which, 357 km. is in Chhatisgarh and the balance 494 km. in Orissa. During its traverse, a number of tributaries join the river on both the flanks. There are 14 major tributaries of which 12 nos. are joining upstream of Hirakud reservoir and 2 nos. down stream of it.

On the Left Bank six tributaries namely the Seonath, the Hasdeo, the Mand, the Ib, the Kelo and Borai drain into main channel upstream of Hirakud reservoir. The drainage system upstream of Hirakud reservoir is more extensive on the left bank of Mahanadi as compared to that on the Right Bank. On the Right Bank six tributaries namely the Pairi, the Jonk, the Sukha, Kanji, the Lilar and the Lath join upstream of Hirakud reservoir and two tributaries namely Tel and Ong join down stream of it. The three major tributaries namely the Seonath and the Ib on the Left Bank and the Tel on the Right Bank together constitute nearly 46.63% of the total catchment area of the river Mahanadi. The Seonath, which is the largest tributary of Mahanadi, rises in village Kotgai, District Durg (Chhatisgarh) and drains three districts of Chhatisgarh namely Durg, Rajandgaon and Bilaspur. The Tel, which is the second largest tributary of Mahanadi River, rises in village Jorigam of Koraput district of Orissa and drains four districts of Orissa namely Koraput, Kalahandi, Balangir and Phulbhani. The Ib, which is the third largest tributary of Mahanadi, rises in village Pandrapat,

District Raigarh (Chhatisgarh) and drains Raigarh district of Chhatisgarh and two districts of Orissa, namely Sundergarh and Sambalpur.

Urban Centres: Three important urban centres in the basin are Raipur, Durg & Cuttack.

Industries: Mahanadi, because of its rich mineral reserve and adequate power resource has a favourable industrial climate. The important industries presently existing in the basin are iron & steel plant at Bhilai, aluminum factories at Hirakund and Korba, paper mill near Cuttack and cement industries at Sundargarh. Other industries based primarily on agricultural produce are sugar, textile and oil mills. Mining of coal, iron and manganese are other industrial activities.

Sites: The Central as well as State Governments carry out hydrological observations. The CWC maintains 20 gauge discharge sites in the basin. At 14 of these stations, sediment observations are also made.

2. Subernarekha, Burhabalang, & Baitarni

a) Subernarekha

Location: The Subernarekha is one of the longest east flowing inter-state river. It covers large areas of Bihar and some parts of West Bengal and Orissa. The basin lies between north latitudes of 21°-33' to 23°-32' and east longitudes of 85°-09' to 87°-27' situated in the northeast corner of the peninsular India. It is bounded on the northwest by the Chhotanagpur Plateau, in the south west by Brahmani Basin, in the south by Burhabalang basin and in the south-east by the Bay of Bengal.

The Subernarekha river originates near Nagri village in Ranchi district of Jharkhand at an elevation of 600 m. The total length of the river is about 395 Km. The principal tributaries of the river are Kanchi, Kharkai and Karkari.

Urban Centres: The important cities/ towns in the basin are Jamshedpur, Ranchi, Muri, etc.

Industries: Important industries in the basin are tobacco products in Chakradharpur, cement, asbestos sheets, glass and ceramics at Chaibasa. Locomotives and coaches, automobiles, agricultural equipment, wires and cables, iron and steel machinery, metal tubes and conduits, copper and brass, chemicals (acids) and caustics, fertilizers and Soaps at Jamshedpur.

The important minerals found in the basin are copper, uranium, chromium, gold, vanadium, limestone, dolomite, asbestos, china clay, talc and building stones besides iron and aluminum.

Sites: Water quality observation is also being done along with gauge and discharge observation at three sites Ghatsila, Muri and Adityapur. Sediment observations are made at only Ghatsila and Adityapur.

b) Burhabalang

Location: The Burhabalang is one of the east flowing medium river situated in the northern part of Orissa State. It is bounded by the geographical coordinates of north latitudes between 21° 22' to 22° 20' and east longitudes 86° 20' to 87° 05'. It drains parts of the areas in Mayurbhanj and Balasore districts of Orissa with a total catchment area of 4800 sq.km.. This is a flashy river having a source at an elevation of 800 m. and drops into the sea after traversing a total distance of 125 kms.

Urban Centres: The important town of the basin are Baripada and Balasore.

Industries: The basin has no large industry. Recently some medium and small scale industries have been established in and around Balasore and Baripada.

The basin has no significant mineral resources, iron ore, china clay, quartz and soap stone are found in limited areas in the Mayurbhanj portion of the basin. Limestone is seen in the Similipal hill ranges.

Sites: Gauge discharge observations are made at Govindpur station.

c) Baitarni

Location: The Baitarani is one of the important east flowing river of peninsular India, flowing eastward and joining the Bay of Bengal. The river rises in the hill ranges of Keonjhar District of Orissa near Mankarancho village at an elevation of about 900m. above m.s.l. On its way, many tributaries join the river from both banks. On its way many tributaries join the river from both banks. The total catchment area of this basin is 10,982 sq.km.. The basin is situated approximately between east longitudes of 85⁰-10' to 87⁰-03' and between north latitudes of 20⁰-35' to 22⁰-15'. The basin is surrounded by the Brahmani on the South and West, the Subernarekha on the north, the Burhabalang and the Bay of Bengal on the east. The river is flashy in nature having a total length of 355m, with the upper reach up to Anandpur in the hilly region. There is a considerable fall in geographical gradient from RL. 367m. at Champua to RL 28m at Anandpur.

Urban Centres: The important towns in the basin are Joda, Champua, Karanjia, Keonjhar, Anandpur and Jaipur.

Industries: The basin is backward from the industrial point of view. There are three medium scale industries in the basin viz. (i) Ferro-Manganese Plant (ii) The sponge Iron Plant at Joda and (iii) The Orissa Sponge Iron Plant. There are few small scale industries also in the basin.

The basin is rich in mineral wealth. Iron ore, copper, chromite, asbestos, manganese, atomic minerals, china clay and soap stone are available in Cuttack, Keonjhar, Mayurbhanj districts of Orissa and in the Singhbhum district of Bihar.

Sites: Water Quality observation is also being done along with gauge and discharge observations at sites Anandpur and Champua. Sediment observation is also made at these stations.

3. Brahmani

Location: The Brahmani is one of the major inter-state east flowing river amongst the peninsular rivers in India. This basin is situated within the geographical co-ordinates of north latitude $20^{\circ} - 28'$ to $23^{\circ} - 35'$ and east longitude $83^{\circ} - 52'$ to $87^{\circ} - 03'$ approximately. This basin is bounded in the north by Chhotanagpur plateau in the west and south by Mahanadi basin and in the east by the Bay of Bengal. The basin covers Bihar, Jharkhand, Madhya Pradesh and Orissa States and drains an area of 39033 sq.km..

The Brahmani, known as the South Koel in the upper reaches, originates near Nagri village in Ranchi District of Bihar at an elevation of about 600m. The total length of its run is about 799 km. The principal tributaries of this river are Sankh, Tirka and Karo.

Urban Centres: The important towns of the basin are, Rourkela, Talcher, Angul, Dhenkanal, Jajpur and Rajgangpur.

Industries: It has two prominent industrial belts, one at Rourkela and the other at Talcher. At Rourkela besides the Steel Plant there exist a number of other industries, like fertilizers, cement, explosives, chemicals and machine tools, The Talcher industrial area has the National Aluminium Company at Angul, the Fertilizer Plant and other small industries. The basin is rich in mineral resources like coal, iron ore, copper, bauxite, chromite, limestone, manganese, dolomites, lead, fire-clay and china clay, etc.

Sites: Water Quality observation is being conducted alongwith gauge and discharge observation at five G&D sites namely Jenapur, Gomlai, Panposh, Jaraikela and Tilga. Sediment observations are also made at all these five stations.

4. Rushikulya, Vamsadhara, Sarda & Nagavali

a) Rushikulya

Location: The river Rushikulya is one of the medium sized east flowing river in peninsular India. It is an important river of Orissa state and covers entire catchment area in the districts of Phulbani and Ganjam. The river flows through Purushottampur, Pratappur and joins with the Bay of Bengal at Ganjam district.

The river Rushikulya originates at an elevation of about 1000 m. near Matarbarhi village of Phulbani district and lies within the geographical coordinates of 19° 07' to 20° 19' north latitude and 84° 01' to 85° 06' east longitude. The total catchment area is 7700 sq.km.

Urban Centres: Only one city Berhampur is situated in the basin and important towns are Chhatrapur, Ganjam, Aska, Bhajanagar and Sorada.

Industries: A number of large scale industries have been set up in the basin. Among them are M/s Jayashree Chemical Industries. Aska Co-operative Sugar Industries Ltd., Aska Spinning Mills, Monorama Chemical Works Ltd., Orissa Tubes Pvt. Ltd., etc. There are about 3360 numbers of small scale industries of different categories mainly food and allied, forest & wood based, rubber and plastic products and glass and ceramics. There is enough scope for setting up forest based industries. A major steel plant is proposed near Gopalpur. The basin is rich in mineral wealth. The major economic minerals are clay, lime stone, manganese, sand talc, black sand and grinding materials.

Sites: Gauge Discharge, sediment and water quality observation is made at Purushottampur station.

b) Vamsadhara

Location: The Vamsadhara river is an important east flowing river between Mahanadi and Godavari. The river originates near Lanjigarh village in Kalahanadi district and runs to a total distance of about 254 km. before it joins the Bay of Bengal at Kalingapatnam. A number of tributaries join the river on both the sides. Much of its catchment falls on the left. The basin is narrow and full of undulations. It is situated within the geographical coordinates of 18° 15' to 19° 55' north latitudes and 83° 20' to 84° 20' east longitudes. The total catchment area of this basin works out to 10830 Sq.km.

Urban Centres: Srikakulam, Narasannapeta, Patapatnam, tekkali, Palasa, Sompeta, Parlakhemundi, Gunupur, Kashinagar, Bissam Cuttack are the important towns in the basin.

Industries: There is no large scale industry in the basin but there are a number of agro and forest based small scale industries in Srikakulam district of Andhra Pradesh and Koraput & Kalahandi district of Orissa. The important minerals found in the Vamsdhara basin are manganese, graphite, quartz, limestone, mica and bauxite besides building materials. Manganese ore is available extensively in Srikakulam and Koraput districts.

Sites: Water quality, Gauge discharge and sediment observations are done at Kashinagar station. Gauge discharge observation is also made at Gunupur.

c) Sarada

Location: The river Sarada, an east flowing medium sized river, lies in the district of Visakhapatnam of Andhra Pradesh. The geographical co-ordinates of the river are north latitude $17^{\circ} 25'$ to $18^{\circ} 17'$ and east longitude $82^{\circ} 32'$ to $83^{\circ} 06'$. The basin is surrounded by Nagavali in the north, Gostari, Gambi Ramedda, Megadnigedda in the east Bay of Bengal in the South and Machhkund sub-basin of the Godavari in the west. The catchment area of the basin is 2665 sq.km. It rises at an elevation of 1000 m. and runs a distance of 122 Kms. before joining the sea.

Urban Centres: Visakhapatnam is the main important town in the basin.

Industries: There are many large scale industries like Visakhapatnam Steel plant, Bharat Heavy Plates and Vessels Limited, Hindustan Shipyard Ltd. etc. Important minerals found in the basin are manganese, quartz, graphite, mica, bauxite, aluminium and fire clay.

Sites: Gauge & discharge observations are made at Anakapali station.

d) Nagavali

Location: The river Nagavali is a medium sized east flowing river in peninsular India and lies within the geographical co-ordinates of north latitude $18^{\circ} 10'$ to $19^{\circ} 44'$ and east longitudes of $82^{\circ} 53'$ and $84^{\circ} 05'$. It is surrounded by Vamsadhara in the north, Champavathi and Peddagedda in the south, Godavari in the west and the Bay of Bengal in the east. It drains parts of the districts of Kalahandi, Rayagada, Koraput of Orissa and Srikakulam, Vijayanagaram and Visakhapatnam of Andhra Pradesh state. The total basin area is 9510 sq.km.

The Nagavali originates near the Lakhbahal in Kalahandi district at an elevation of about 1300m. The total length of the river run is 256 Km. out of which the first 161 kms, are in Orissa and the rest in Andhra Pradesh. The important tributaries are Barha, Baldiya, Satklnala, Sitagurha, Srikona, Janjhvati, Gumidigedda, Vottigedda, Suvrarnamukhi, Vonigedda, Vagavathi and Relligedda.

Urban Centres: The important towns in the basin are Amadalavalasa, Rayagada, Parvatipuram, Palkonda, Veeragattam and Bobbili.

Industries: The basin has no large industry. The existing small scale industries are mostly oriented to forest and agricultural produce and are located in the Srikakulam Regional Economy. Manganese, quartz, mica, graphite, limestone, bauxite and construction materials are found in abundance in the Basin.

Sites: Gauge discharge, sediment and water quality observations are made at Srikakulam station.

5. Godavari

Location: The river Godavari, the largest of the peninsular rivers, and third largest in India, drains about 10% of India's total geographical area. The catchment area of the river is 3,12,812 sq.km. and is spread in the States of Maharashtra (48.6%), Andhra Pradesh (23.4%), Madhya Pradesh (10.0%), Chhatisgarh (10.9%), Orissa (5.7%) and Karnataka (1.4%) The basin lies in the Deccan Plateau and is situated between latitude 16° 16' North and 22° 43' North and longitude 73° 26' East and 83° 07' East.

The river Godavari rises in the Nasik district of Maharashtra, about 80 km. from the Arabian sea at an elevation of 1,067 m after flowing for about 1,465 km in a generally south-east direction, through Maharashtra and Andhra Pradesh it falls into the Bay of Bengal.

The Godavari basin is bounded on the north by the Satmala Hills, the Ajantha Range and the Mahadeo Hills on the south and east by the Eastern Ghats and on the west by the Western Ghats. The basin is roughly triangular in shape and the main river itself runs practically along the base of the triangle.

The western edge of the basin is an almost unbroken line formed by the Sahyadri range of the Western Ghats, from 600 to 2100 m height. It has the heaviest rainfall and the dampest climate in the basin. Hardly 50 to 60 km. east of the ghats lie the sparsely cultivated and undulating plains of the Deccan, with a dry climate.

About 64 km. from its source, the Godavari receives the waters from Dharna, on its right bank and a short distance lower down the Kadana joins it from the left. The combined waters of the Pravara and Mula which rise in the hills of Akola join the river about 217 km. from its source, About 338 km. lower down, while still in Maharashtra, the river receives the combined waters from the Purna and Dudhna rivers and after a further 138 km. at the border of Maharashtra and Andhra Pradesh, the waters of the Majira river joins it from the south. At this point, Godavari flows at an elevation of about 329 m.

The river Pranhita, conveying the combined waters of the Penganga, the Wardha and Wainganga, which drain Nagpur and the southern slopes of the Satpura ranges, falls into Godavari about 306 km.. Below its confluence with the Majira. Forty eight km. lower, the waters of the Indravathi join the river. Both the Pranhita and the Indravathi are major rivers in their own right. The last major tributary is the Sabari from Orissa, which falls into the Godavari, 100 km. above Rajahmundry.

The largest tributary of the Godavari is the Pranhita with about 34% coverage of drainage area. The Pravara, Manjira and Maner are notable right bank tributaries covering about 16.1%, the Purna, Pranhita, Indravathi and Sabari are important left bank tributaries, covering nearly 59.7% of the total catchment area of the basin. The Godavari in the upper, middle and lower reaches make up for the balance of 24.2%.

Urban Centres: Nagpur is the most important urban centre in the basin. Other important towns in the area are Nasik, Aurangabad, Warangal, Rajamundry, Akola, Amravati, and Ahmednagar.

This basin is working since pre-independence era and a number of interstate agreements exist among basin states on sharing of water of the basin and very often court cases arise on this issue.

Industries: Rich in forests, agricultural and mineral resources, the industrial potential of the Godavari basin is high. A small part of the enormous forest wealth of the basin is at present utilised as timber and in the manufacture of paper and other timber products. Industries based on agricultural produce are the processing of agricultural commodities like rice milling, cotton ginning, pressing, spinning and weaving, manufacture of sugar, manufacture of textiles, extraction of oil from groundnut and other oil seeds. Mining of coal, manganese and other ores is an important activity in the districts rich in minerals. Most of the ores are at present being exported. Small engineering industries are spread all over the area.

The Godavari basin has a rich variety of mineral wealth spread over vast areas. The principal minerals found are bauxite, manganese, iron ore and coal. Other minerals like lead, zinc, corundum, refractory minerals and kaolin are also found in small quantities in different parts of the basin.

Sites: There are 32 water quality measurement sites on the basin and as many as 25 of them are for sediment measurements also. In addition, there are 24 gauge discharge observation stations in the basin.

6. Krishna

Location: The Krishna basin extends over an area of 2,58,948 Sq.km. out of which 27.01% is in Maharashtra, 44.06% is in Karnataka and 28.93% falls in Andhra Pradesh. The basin lies between east longitudes $73^{\circ} 21'$ to $81^{\circ} 09'$ and north latitudes $13^{\circ} 07'$ to $19^{\circ} 25'$ lying in the deccan plateau. The Krishna rises in the Western Ghats at an altitude of 1337 m just north of Mahabaleshwar, about 64 km. from the Arabian Sea and flows from west to east through the States of Maharashtra, Karnataka and Andhra Pradesh to join the Bay of Bengal. The total length of the river from the sources to its outfall in the sea is about 1,400 km of which 612 km are in Andhra Pradesh, 306 km in Maharashtra and 483 km in Karnataka. Together with its tributaries, the river drains about 708 km. of the Western Ghats, which is its chief source of supply. The Ghataprabha, the Malaprabha, the Bhima, the Tungabhadra and Musi are the principal tributaries. The Krishna Basin's predominant land use is agriculture.

The Krishna basin is bounded on the north by the ridge separating it from the Godavari basin, on the south and east by the Eastern Ghats and on the west by the Western Ghats. The basin is roughly triangular in shape with its base along the Western Ghats, the apex at Vijayawada and the Krishna itself forming the median. All the major tributaries draining the base of the triangle fall into the river in the upper two-thirds of its length.

The interior of the basin is a plateau, the greater part of which is at an elevation from 300 to 600 m. Its general slope is eastwards. Great undulating plains, divided from each other by flat-topped ranges of hills are the main characteristics of this plateau. To the south of the Krishna, the Eastern Ghats comprises parallel ranges, which are the successive outcrops of an ancient series of stratified rocks.

The delta of the Krishna formed by deposits at the mouth of the river over past ages, consists of a wide belt of river-borne alluvium. The process of silt deposition at the mouth of the river is still continuing and the delta is gradually extending into the sea.

About 137 km. from the source, it receives a main tributary, the Koyna, from the western side of the Mahabaleshwar hills. Lower down, the river Yerla falls into the Krishna from the left and then the Varna, the Panchganga and the Dudhganga from the right.

Just near its confluence with Dudhganga and about 306 km. from its source, the Krishna enters Karnataka State. At this point, the bed level of the river at an altitude of about 533 m. and the river has emerged from the heavy rainfall zone along, and near the Western Ghats. After flowing for 201

km. in Karnataka territory, the Krishna receives, from its right, the waters of the Ghataprabha, and 35 km. lower down, those of the Malaprabha. Both these tributaries have their sources in the Western Ghats.

A short distance downstream of its confluence with the Malaprabha, the Krishna drops about 122 m. from the tableland of the Deccan plateau to the alluvial lands of Raichur. The Krishna receives its two major tributaries, the Bhima and the Tungabhadra the former on its left at 789 km. from its source and the latter 129 km. further downstream near Kurnool from its right. Both the Bhima and the Tungabhadra drain large area of the Western Ghats and each is a major river in its own right.

From a short distance below its confluence with the Tungabhadra, the Krishna runs in a deep gorge through a series of hills, for nearly 290 km. before emerging into the coastal belt a pulichintala, at an elevation of about 37 m. above sea level. Beyond this point, the river flows for about 80 km. before it spreads into the delta. Vijayawada is at the head of the delta.

The Dindi and the Musi join the Krishna from its left between Kurnool and Pulichintala and two more tributaries, the Palleru and the Muneru also from the left, fall into the river between Pulichintala and Vijayawada.

Urban Centres: The major cities in the basin are Pune, Hyderabad and Vijayawada and the important towns are Satara, Karad, Sangli, Kolhapur, Sholapur, in Maharashtra state. Bijapur, Gulbarga, Raichur, Bagalkot, Bellary, Belgaum, Dharwar, Hospet, Davanagere, Badravathi Chikkamagalur, Tumkur, Chitradurga, Shimoga in Karnataka state and Mahboobnagar, Kurnool, Nandyala, Nalgonda, Miryalaguda, Khammam, Guntur, Gudivada, Machilipatnam in Andhra Pradesh state.

Industries: There are many large medium and small-scale industries in the catchment. The main industries in the catchment are Textiles, Sugar, Chemical, Cement factories, Automobiles, Engineering goods, Extraction of Gold, Indian Aluminium Company Belgaum, Bharat Heavy Electrical Limited (Hyderabad), Hindustan Machine Tools Limited (Hyderabad), Nuclear Fuel Complex (Hyderabad), Hindustan Cables Limited (Hyderabad), Indian Drugs and Pharmaceuticals Limited (Hyderabad), Bharat Dynamics Limited (Hyderabad), Bharat Electricals Limited (Hyderabad), etc. Among the small-scale industries, engineering works, ferrous and non-ferrous foundries and cotton ginning are important. There are also cottage industries like weaving, carpentry, leather, rope making, tiles, pottery, copper and brass works in the catchment. The important minerals found in the catchment are gold, bauxite, lime stone, iron ore, manganese ore, quartz, copper, red oxide, soapstone, etc.

Sites: There are 35 water quality observation stations in the basin. Sediment observations are also made at 25 stations. In addition, there are 22 gauge discharge observation stations in the basin.

7. Cauvery

Location: The river Cauvery originates at Talakaveri in Coorg District of Karnataka in Brahmagiri Range of hills in the Western ghats at an elevation of 1,341 m. and drains a total of 81,155 Sq.kms. area of which 34,273 Sq.kms. lies in Karnataka, 43,856 sq.kms. in Tamilnadu, 2,866 sq.kms. in Kerala and 160 sq.kms. in the Union Territory of Pondicherry. The Cauvery basin is bounded by Tungabhadra sub-basin of Krishna basin on the northern side and Palar basin on the Southern side. The Western ghats from the Western boundary, the Nilgiris, an offshore of Western ghats, extend eastwards to the Eastern ghats and divide the basin into two natural and political regions i.e. Karnataka plateau in the North and the Tamilnadu plateau in the South. In Tamilnadu, the Eastern part of the basin is in the elevation range of 0 to 150 m slopping gently up from the sea.

At Shivanasamudram, the river branches off into two parts and falls through a height of 91 m. in a series of falls and rapids. The falls at this point is utilised for power generation. The power station at Shivansamudram was built as early as 1902. The two branches of the river joins after the fall and flows through a wide gorge which is known as "Mekedatu" (Goats leap) and continues its journey and forms the boundary between Karnataka and Tamilnadu States for a distance of 64 kms. At Hogennekkal Falls, it takes southernly direction and enters the Mettur Reservoir, which was constructed in 1934. A tributary called Bhavani joins Cauvery on the Right bank about 45 kms below Mettur Reservoir, thereafter it takes Easternly course to enter the plains of Tamilnadu. Two more tributaries Noyil and Amaravathi join on the right bank and here the river widens with sandy bed and flows as "Akhanda Cauvery".

Immediately after crossing Tiruchirappalli district, the river divides into two parts, the northern branch being called "The Coleron" and southern branch remains as Cauvery and from here the Cauvery Delta begins. After flowing for about 16 kms., the two branches join again to form "Srirangam Island". On the Cauvery branch a Grand Anicut is said to have been constructed by a Chola King in 1st Century AD. Below the Grand Anicut, the Cauvery branch splits into two, Cauvery and Vennar. These branches divide and sub-divide into small branches and forms a network all over the delta.

The total length of the river from the origin to its outfall into the sea is 800 kms. of which 320 kms. is in Karnataka, 416 kms. in Tamilnadu and 64 kms. form the common border between the Karnataka and Tamilnadu states. The Cauvery basin is fan shaped in Karnataka and leaf shaped in Tamilnadu. The run-off does not drain off quickly because of its shape and therefore no fast raising floods occur in the basin. The basin receives rainfall mainly from the S-W Monsoon and partially from N-E Monsoon in

the Karnataka. The basin in Tamilnadu receives good flows from the North-East Monsoon.

The Cauvery river system consists of 21 principal tributaries each with catchment area exceeding 250 sq.kms. The largest of all of them of Catchment area are Shimsha, lying wholly in Karnataka, the Amaravathi rising in Kerala but lying mostly in Tamilnadu and the Kabini rising in both Kerala and Tamilnadu but lying mostly in Karnataka. The Bhavani is the fourth largest and the second longest. It rises in Kerala and Karnataka but lies mostly in Tamilnadu. The longest tributary, the Hemavathi (245 kms.) is the fifth largest in catchment area and lies wholly in Karnataka.

From the point of view of flow contribution to the system, apart from the head reach of the Cauvery main, the most important tributaries are i) the Hemavathi, ii) the Kabini and iii) the Bhavani.

There are disputes in sharing of this river water among states.

Urban Centres: Important cities on the basin are Coimbatore, Bangalore & Tiruchirapalli.

Industries: Some of the main industries in the basin are Paper mills, Sugar mills, Chemical Factories, Cotton mills, Steel & Cement factories, etc.

Mining activity in the basin includes Stone mining for building construction works.

Sites: There are 16 Water Quality observation stations in the basin. Sediment observations are also made at 11 of these stations.

8. East flowing rivers

The basin of east flowing rivers consists of all small independent river basins of peninsular India lying to the south of Krishna basin except Cauvery basin. It lies within $8^{\circ} 12'$ to $15^{\circ} 56'$ north latitude & $77^{\circ} 29'$ to $79^{\circ} 59'$ east longitude. All these rivers are draining into the Bay of Bengal.

The basin of East flowing rivers covers large areas in the states of Andhra Pradesh, Tamilnadu and a small area in the state of Karnataka. There are eleven river basins of which the Palar and Ponniyar are more important. Other river basins are the Pellar, Vellar, the Vaigai, the Vaippar, and the Tambraparani. Brief descriptions of these river basins are given below.

i) The Palar

The Palar basin is an important basin among the 12 basins lying between the Pennar and the Cauvery basins. This basin is divided into three major topographical divisions namely, (i) the hill ranges of Eastern Ghats (ii) the plateau region and (iii) the coastal plains. Though most of the drainage area lies in Tamilnadu, its drainage area extends also to cover the southeast and southwest parts of Karnataka and Andhra Pradesh respectively. The shape of the basin is rhombus and lies approximately between $12^{\circ} 15'$ and $13^{\circ} 38'$ north latitudes. The basin finds its outlet in to Bay of Bengal.

The Palar drains an area of 17,871 sq.kms. out of which nearly 57 percent lies in Tamilnadu and the balance in the states of Karnataka and Andhra Pradesh.

ii) The Ponniar

The Ponniar basin is the second largest interstate East Flowing river basin among the 12 basins lies between the Pennar and the Cauvery basins. It covers a large area in the state of Tamilnadu, besides the areas covered in the states of Karnataka and Andhra Pradesh. It lies between the east longitudes $77^{\circ} 33'$ to $79^{\circ} 47'$ and north latitudes $11^{\circ} 45'$ to $13^{\circ} 30'$. This basin is bounded on the north west and south by various ranges of the Eastern Ghats like the Velikonda range, the Nagari hills, the Javadu hills, the Shevaroy hills, the Chitteri hills and the Kalrayan hills and in the east by the Bay of Bengal. The Ponniar basin is elongated in shape and finds its outlet in to the Bay of Bengal.

The Ponniar drains an area of 16,019 Sq.kms. out of which nearly 77 percent lies in Tamilnadu.

The Ponnar or the Dakshina Pinakini river rises near Hongashenhalli village at an elevation of about 900m above m.s.l. at north latitude 13° 25' and east longitude 77° 58' in the Kolar district of Karnataka state. From its origin, the river Ponnar generally flows in the southern direction through the Kolar and Bangalore districts of Karnataka to a length of 79 km before entering the Dharmapuri district of Tamilnadu. The river flows another 247 kms. generally in the south easterly direction in the districts of Dharmapuri, Vellore, Tiruvannamalai, Cuddalore and Villupuram districts, then the river flows in the easterly direction below the Tirukoyilur anicut for another 70 kms. before finding its way into the Bay of Bengal. The river Ponnar branches into two, the Gadilam near Cuddalore and the Ponnar near the Union Territory of Pondicherry. On its way the river Ponnar receives a number of small streams and rivulets.

iii) The Vellar

The Vellar river rises at an elevation of 900 m near the village of Tumba in the Chittori hills, of the Eastern Ghats in the Salem district of Tamilnadu. It flows generally in an easterly direction for a total length of 210 Km through the Salem & Cuddalore districts in Tamilnadu and finally out falls into the Bay of Bengal near Porto Nova in Cuddalore district. It drains a total catchment area of about 8,922 sq.kms. The catchment area lies entirely in Tamilnadu. The Gomukinadhi and Manimukthanadi are the important left tributaries and Swetanadhi and Chinnar are the right tributaries of the Vellar.

iv) The Vaigai

The Vaigai basin is an important basin among the 12 basins lying between the Cauvery and Kanyakumari. The basin is bounded by the Varushanadu hills, the Andipatti hills, the Cardaman hills and the Palani hills on the west and by the Palk Strait and Palk Bay on the east. The basin lies between 9° 17' to 10° 22' north latitudes approximately. This basin is divided into two major topographical divisions namely (i) the hilly areas and (ii) the plains. The basin is elongated in shape and drains into the Palk Bay. The Vaigai drains an area of 7,741 Sq.kms., which entirely lies in the state of Tamilnadu.

The Vaigai river on the western slopes of the Varushanadu hills at an elevation on 1,200m above m.s.l. near Kottaimalai in the Madurai district at a north latitude 9° 32' and east longitude 77° 23' and flows in the northerly and north easterly directions up to its confluence with the Varahanadhi and then takes a turn towards the east and south east to flow through Madurai, Sivakangai and Ramanathapuram districts. After traversing about 258 kms. the river Vaigai discharges into Ramnad big tank and some other

tanks. The surplus water from the tanks finally discharges into the Palk Bay near Mandapam. On its way the Vaigai receives two important tributaries namely the Suruliyar and the Manjalar on its left bank, besides a large number of small streams and rivulets. The river has been dammed down stream of its confluence with the Suruliyar.

The Suruliyar and the Manjalar, the two important left bank tributaries together account for nearly 20 percent of the total catchment area of the Vaigai. The Suruliyar the principal tributary of the Vaigai also rises in the eastern slopes of the Varushanadu hills and flows in the north and northeasterly direction. It receives Theniar on its left bank, just before its confluence with the Vaigai. The Manjalar another major tributary rises in the Palani hills and flows generally in the easterly direction before joining the Vaigai below the Vaigai dam. The Vaigai also receives another minor tributary namely the Varshanadhi on its left bank below the Vaigai dam.

v) The Vaippar

The Vaippar river rises on the eastern slopes of the Varushanadu hill ranges of the Western Ghats near Sivagiri in Thirunelveli district in Tamilnadu at an elevation of about 900m. It flows generally in an easterly direction for a length of about 125 kms. through Thirunelveli, Virudhunagar and Tuticorin districts in Tamilnadu and joins the gulf of Mannar near Kalattur. The river basin is located on south of Vaigai. It drains a total catchment area of 5,069 sq.kms. The catchment area lies entirely in Tamilnadu.

The Arjuna-nadhi and Vijanadhi are the important tributaries. Both the tributaries are left tributaries. There are four anicuts in the basin. No large storages exist in this basin.

vi) The Tambraparni

The Tambraparani river rises on the eastern slopes of the Western Ghats at an elevation of about 1,400m at north latitude $8^{\circ} 46'$ and east longitude $77^{\circ} 15'$ near Alwarkurichi village in Thirunelveli district of Tamilnadu to flow in a generally easterly direction for a total length of 130 kms. and joins the Gulf of Mannar. The Chittar and Manimuthar are the left & right bank tributaries of this river. The total area drained by the Tambraparani is 5,482 sq.kms.. There are number of anicuts across this river of which the more important are the Marudur and the Srivaikuntam anicut systems. Papanasam Hydro Electric Project and Manimuthar Dam are two important storages in this river.

Other small river basins in the east flowing rivers are as under:

a) The Gundalakamma

The Gundalakamma river rises near Iskagundam village in Kurnool district at an elevation of 600m from the eastern slopes of the Nallamala hills at north latitude $15^{\circ} 38'$ and east longitude $78^{\circ} 47'$ and flows in a north-east, east and southern direction for a total length of 220 kms. to join the Bay of Bengal. The total area drained by this river is 8,494 sq.kms. The Kandleru is its important left bank tributary.

b) The Paleru

The Paleru river rises near Gogulapalle village in Nellore District at an elevation of 325m at North Latitude $15^{\circ} 17'$ and East Longitude $79^{\circ} 13'$ and flows in an easterly direction for a total length of 104 kms. to join into the Bay of Bengal. The Paleru drains an area of 2,483 sq.kms.

c) The Pennar

The Pennar river is one of the major East Flowing rivers in Southern India. It rises in the Chennakesava hill of the Nandidurg range in Karnataka, flows in the north westernly direction through the Kolar and Tumkur districts of Karnataka, it enters Andhra Pradesh in the Hindupur taluk of Anantapur district, runs eastwards before draining into the Bay of Bengal near Nellore. The Basin lies between east longitude $77^{\circ} 04'$ to $80^{\circ} 10'$ and north latitude $13^{\circ} 16'$ to $15^{\circ} 52'$.

d) The Swarnamukhi

The Swarnamukhi is an East Flowing river basin having a small catchment Area of 3,225 sq.kms.. It rises at an elevation of 300m in the Eastern Ghat ranges near Pakala village in Chittur district of Andhra Pradesh at North latitude $13^{\circ} 28'$ and east longitude $79^{\circ} 09'$. It runs generally in north eastern direction passing through the famous Tirupati hills before joining into the Bay of Bengal. Its total length is 130 kms.. This Independent river has no major tributaries and therefore its flow depends only on rainfall in its upper catchment.

e) The Kalingi

The river Kalingi is one of the East flowing rivers in Andhra Pradesh. It originates near Kalashasti in Andhra Pradesh and drains completely in Andhra Pradesh and joins in Pulicat lake after Sulerpet. The catchment area of Kalingi river is 5,927 sq.kms. and the length is 76 kms.. The important tributary is Kalleru river which joins Kalingi river after Sulerpet

town. At present there are two medium irrigation projects in this basin namely (1) Kalingi Reservoir and (2) Thanyali Anicut which irrigate an area of 4,650 acres and 10,000 acres respectively.

Industries: Agriculture based industries are located on this basin area.

Site: There are 24 water quality observation stations in the basin. Sediment observations are also made at 6 of these stations. In addition, one gauge discharge observation station is also there in the basin.

9. West flowing rivers

The basin of West flowing rivers consists of all small independent river basins of peninsular India lying to the south of Krishna basin, except Cauvery basin. There are about 22 rivers basins and they are located within 8° 43' to 19° 10' North latitude and 73° 15' to 76° 51' East longitude. These rivers are draining into the Arabian Sea.

The basin of the West Flowing rivers located in the South West corner of the peninsular India covers areas in the states of Maharashtra, Karnataka, Tamilnadu and Kerala. There are a number of medium and minor river basins in this region. All the rivers originate from the high mountains of the Western Ghats and exhibit similar characteristics. They have steep high banks, which rarely overflow or cause floods.

Important west flowing river basins are described as under.

i) The Bharathapuzha

The Bharathapuzha river is the second longest west flowing river that drains into the Arabian Sea in Kerala State. This basin is bounded in the east by the Cauvery basin and in the west by the Arabian Sea. The basin lies approximately between 10° 26' and 11° 13' north latitudes and 75° 53' to 77° 13' east longitudes. Its drainage area is spread over the two states namely Tamilnadu and Kerala. The basin is elongated in shape and finds its outlet into the Arabian Sea.

The total drainage area of the basin is 6,186 sq.kms.. Out of which nearly 71 percent lies in the Kerala State.

ii) The Periyar

The Periyar 244 kms. in length is the longest river of Kerala and drains an area of 5,398 sq.kms. It rises at the forest land Sivagiri peak 80 kms. south of Devikulam at an elevation of 2,438m above m.s.l. and traverses the steep mountainous terrain before it is joined by the Mullaiyar, 16 kms. downstream. The river then turns west and continues to flow in the direction for about 16 km. in a sandy bed. After a winding course of about 13 kms., the river reaches Vandiperiyar and passes through a second narrow gorge below which the Perumthura joins it. Further down, it is joined by six tributaries after which the important tributary Edmala joins the Periyar. Passing Malayattur and thereafter taking a meandering course, the river reaches Alwaye where it divides itself into two branches. The upper branch joins the Chalakudi river at Punthenvelikara and then expands into a broad sheet of water at Munambham. The other branch taking a southerly

course is broken up into a number of small channels, which fall into the Vembanad Lake as Varapuzha.

iii) The Ulhas

The Ulhas river is one of the West Flowing rivers in Maharashtra falling into the Arabian Sea. The boundary of the basin consists of the main Sahyadri hills on the east, westerly off shoots on the north and south and on the west, a narrow opening at the end leading to the sea. The Ulhas basin lies between north, latitudes of 18° 44' to 19° 42' and east longitudes of 72° 45' to 73° 48'.

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

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

There are mainly two completed projects on the tributaries of the Ulhas river on Bhivapuri and on Barvi. Two ongoing projects are on Bhates and Poshir.

iv) The Netravathi

The Netravathi rises between Kudermukh and Ballalaryan Durga in the Dakshina Kannada district of Karnataka at an elevation of about 1000m at 75° 20' East longitude and 30° 10' North latitude flows in a generally north-south direction for 40 kms. up to Gohattu, where it takes a turn towards the west and flow in a generally east-west direction practically up to its outfall into the Arabian Sea near Mangalore. The Kumaradhara, a major left-bank tributary joins it near the village Uppinangadi. The total length of the Netravathi is 103 kms. from its source to the outfall. The river drains an area of 3,657 sq.kms.. No major project is in existence in this basin. However, the investigation for the project titled multi-purpose Netravathi Anicut Scheme has been completed.

v) The Chaliyar

The Chaliyar, known in the lower reaches, as the Beypore is one of the major rivers of Kerala. The main river starts from the Elambalari hills at an

altitude of 2,067m above m.s.l. It is formed by the confluence of numerous streams and rivers. Its important tributaries are the Cherupuzha, the Kurumbanpuzha, the Kanhirapuzha, The Punnapuzha, the Karimpuzha, the Vadapurampuzha, the Chaliyarpuzha. The Chaliyar flowing for a total length of about 169 kms. finally joins the Arabian Sea at Beypore. The river drains a total area of about 2,933 sq.kms. of which 388 sq.kms.. lies in Tamilnadu.

vi) The Pamba

The Pamba, 176 kms in length is the third longest river in Kerala. It is formed by the confluence of the Pamba Aar, Kaki Aar, Arudhai Aar, Kakkad Aar and Kall Aar. The Pamba Aar rises in the Peermedu Plateau at an elevation of 1,670m. The Kaki Aar, which forms the major tributary of the Pamba river is a much larger stream at the beginning than the main river. The Pamba river, after receiving the Kaki Aar flows in a Westerly direction till the Arudhai Aar joins it. At Narayanamuzhi, it turns and follows a south-eastern direction until the Kakkad Aar joins it. Beyond the confluence, the river flows in a southerly direction up to Vadasserikkara where it is joined by the Kall Aar, which has its origin in the Valanjakkatti Malai. The catchment area of the river is 2,235 sq.kms..

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

At present there are two completed structures in Pamba basin.

vii) The Valapatanam

The Valapatanam river rises south of Ammatti village in the district of Coorg in Karnataka State at 75° 52' east longitude 12° 13' north latitude at an elevation of 900 m above m.s.l. The river has a total length of 101 kms. from its source to its fall into the Arabian sea. The river drains an area of 1,867 sq.km.. of which 546 sq.kms. lies in Karnataka and rest in Kerala.

The multipurpose Kattampally project at Kattampally, and Pazhassi project at Valiambra are the main irrigation Projects in this basin. The Kattampally project has been planned in two stages. The stage I will not only prevent saline water intrusion and reduction of flood, but also provide irrigation benefits to an area of 1,280 ha. The second stage of the project is expected to irrigate an additional area of 1,650 hectares. The Pazhassi project is proposed to irrigate 16,110 hectares of land.

vii) The Chalakudi

The Chalakudi river has its origin from the Anamalai hills of Western Ghats. It is formed by the confluence of five streams namely the Parambikulam, the Kuriarkutty, the Sholayar, the Karappara and the Anakayam. The river has a length of 130 kms. The total drainage area of the river is 1,704 sq.kms. of which 300 sq.kms. lies in Tamilnadu and the rest is in Kerala.

The Chalakudi river diversion scheme with a weir across the Chalakudi river at Thumburmuzhi is the only Major irrigation scheme in existence in the basin. Presently the project is irrigating an area of 13,500 hectares of land and has a potential to irrigate 19,696 hectares ultimately in the Karuvannur, Chalakudi and Periyar basins.

Next to the Periyar and Pamba basin the Chalakudi basin offers the maximum scope for hydel power development.

ix) The Kallada

The river is formed by the three rivers i.e. Kulathupuzha, Chendurni and Kalthuruthy joining together near Parappan. The river has its origin in Papanasam range south of Kulathupuzha in Quilon district of Kerala State at an altitude of 900 m above m.s.l. The river has a length of 121 kms. and drains an area of 1,699 sq.kms. before confluencing with the Ashtamudilake. The Kallada irrigation project is the one existing major project in the basin. The releases from Kallada dam are used to generate electricity.

There are other small 13 river basins on west flowing rivers and their drainage area varies from 165 sq.kms. to 1,550 sq.kms.

Industries: Mainly agriculture based industries are located in these basins.

Sites: There are 26 Water Quality observation stations in west flowing river basin. Sediment observations are also made at 17 of these stations. In addition, there are six gauge discharge observation stations in the basin.

10. Tapi

Locaton: The Tapi is the second largest westward draining inter state river basin. It covers a large area in the State of Maharashtra besides areas in the states of Madhya Pradesh and Gujarat. The Tapi Basin is the northern-most basin of the Deccan plateau and is situated between latitudes 20° N to 22° N approximately. The Satpura range forms its northern boundary whereas the Ajanta and Satmala hills form its southern extremity. Mahadeo hills form its eastern boundary. The basin finds its outlet in the Arabian Sea in the west. Bounded on the three sides by the hill ranges, the river Tapi, along with its tributaries, more or less flows over the plains of Vidharbha, Khandesh and Gujarat.

The Tapi River drains an area of 65,145 sq.kms. out of which nearly 80 percent lies in Maharashtra state.

The Tapi river originates near Multai in Betul district at an elevation of 752 m above m.s.l. The total length of this west flowing river from its origin to its out fall into the sea is 724 km. For the first 282 km the river flows in Madhya Pradesh, out of which 54 km forms the common boundary with Maharashtra State. It flows for 228 km in Maharashtra before entering Gujarat. Traversing a length of 214 km in Gujarat, the Tapi river joins Arabian sea in the Gulf of Cambay after flowing past the Surat city. The river receives tidal influence for a length of about 25 km upstream from the mouth.

The Tapi river receives several tributaries on both the banks. There are 14 major tributaries having a length more than 50 km. On the right bank, 4 tributaries namely the Vaki, Gomai, Arunavati and Aner join the Tapi river. On the left bank, 10 important tributaries namely the Nesu, Amaravati, Buray, Panjhra, Bori, Girna, Waghur, Purna, Mona and Sipna drain into the main channel. The drainage system on the left bank of the Tapi river is, therefore, more extensive as compared to the right Bank area.

The Purna and the Girnma, the two important left bank tributaries together account for nearly 45 percent of the total catchment area of the Tapi river. The Purna is the principal tributary of the Tapi river originating in Betul district in Gawilgarh hills of the Satpura range, mostly drains the three districts of Vidharbha, namely Amravati, Akola and Buldhana. The Girna, another major tributary, rises in the western Ghats and drains Nasik and Jalgaon districts of Maharashtra.

Urban Centres: Surat is the most important city in the area. Other cities are Amravati, Malegaon, Akola, and Jalgaon.

Industries: Important industries in the basin are textile factories in Surat and newsprint factory at Nepanagar. Other industries are machine tools, drugs & pharmaceuticals, plastics, paper & sugar mills, Dal, Oil & Shaw Mills.

Sites: There are 12 Water Quality observation sites are in the basin. Sediment observations are also made at 8 of these stations.

11. Narmada

Location: The Narmada is the largest west flowing and seventh largest river of India. It drains an area of 98,796 sq.kms. out of which nearly 87% lies in Madhya Pradesh besides some areas in the states of Maharashtra and Gujarat. The Narmada basin lies between east longitudes $72^{\circ} 32'$ to $81^{\circ} 45'$ and north latitudes $21^{\circ} 20'$ to $23^{\circ} 45'$. It flows through Deccan trap in between Vindhya and Satpura ranges of hills before falling into the gulf of Cambay in the Arabian Sea.

The Narmada rises from a Kund (spring) at an elevation of 1057m. at Amarkantak in the Maikal hill in Shahdol district of Madhya Pradesh and flows through Madhya Pradesh, Maharashtra and Gujarat between Vindhya and Satpura hill ranges before falling into the gulf of Cambay in the Arabian Sea about 10 km north of Bharuch district of Gujarat. The total length of this west flowing river from its origin to its outfall into the Sea is 1,312 kms. For the first 1,079 kms. it runs in Madhya Pradesh and thereafter it forms the common boundary between Madhya Pradesh and Maharashtra for 35 kms., and Maharashtra and Gujarat for 35 kms. In Gujarat State it stretches for 159 km.

There are 41 important tributaries to the Narmada River. Significant among them are Burhner, Banjar, Hiran, Tawa, Chhota Tawa, Orsang and Kundi which are major tributaries having catchment area of more than 3,500 sq.kms each. The remaining tributaries are having catchment areas ranging from 500 to 2,500 sq.kms.

Urban Centres: Jabalpur town is the main city in this basin area. The second largest urban pocket in the Narmada is Bharuch of Gujarat. Other urbanized centers are Khandawa and Dewas of Madhya Pradesh.

Industries: There are about 40 large scale and 70 small-scale industries in the area. But compared to other basins, industrialisation is thin in this area. Important minerals found in the basin are Bauxite, Clay, coal, dolomite, graphite, iron ore, manganese, talc & limestone, etc.

Sites: There are 21 Water Quality observation sites are in the basin. Sediment observations are also made at 16 of these stations. Further, there are 31 gauge and discharge sites being maintained by State Government of Gujarat in Narmada basin.

12. Mahi, Sabarmati, Luni and other west flowing rivers Basin

West flowing river basins, excluding those of Narmada & Tapi, considered here consist of 14 rivers namely Mahi, Sabarmati, Luni and other small river basins. The salient features of major 8 basins are explained below.

i) The Mahi

The river Mahi is one of the major west flowing interstate rivers of India, draining into the Gulf of Cambay. The basin is bounded on the North and the North - West by Aravalli hills, on the East by the ridge separating it from the Chambal Basin, on the South by the Vindhya and on the West by the gulf of Cambay. The basin has a maximum width of about 250 kms. The river Mahi originates on the Northern slope of Vindhya at latitude $22^{\circ} 35' N$ and longitude $74^{\circ} 58' E$ near the village of Sardarpur in the Dhar District of Madhya Pradesh at an elevation of 500 m above m.s.l. Its length is 583 kms. and it traverses the states of Madhya Pradesh, Rajasthan and Gujarat.

The river Mahi drains an area of 34,842 sq.kms. Initially the river flows Northwards through Dhar and Jhabua districts of M.P. and then turns left and passes through the Ratlam district of M.P., then turning to North - West, it enters the Banswara district of Rajasthan and flows in South-West directions and thereafter enters the Panchmahal district of Gujarat state. Then the river continues to flow in the same direction through Kheda district of Gujarat and finally falls into Gulf of Cambay in Arabian Sea.

ii) The Luni

The Luni is the only river basin of any significance in Western Rajasthan which forms the bulk of arid zone. Luni originates from Western slopes of the Aravalli ranges at an elevation of 772 m above m.s.l. near Ajmer flowing in South West direction and traversing a course of 511 kms. in Rajasthan, it finally flows into the Rann of Kutchh. Its total catchment area falls in Rajasthan. Luni basin is situated in between $24^{\circ} 11'$ to $26^{\circ} 43'$ North latitude and $70^{\circ} 37'$ to $74^{\circ} 39'$ East longitude approximately, The peculiarity of this river is that it tends to increase its width rather than deepening the bed because the banks are of soils which are easily erodible whereas beds are of sand. The floods develop and disappear so rapidly that they have no time to scour the bed. The Aravalli ranges form its East boundary whereas main course of river in Barmer district itself forms North boundary and mostly Banas and initial reach of Chambal river form its Southern boundary. Luni receives all the main tributaries on its left bank except one i.e. Jojari (Mithri) on the right bank. Luni receives ten tributaries namely Lilari, Guhiya, Bandi (Hemawas), Sukri(Hemawas), Sukri, Mithri, Jawai, Khari

Bandi, Sukri Bandi and Sugi. Hence the drainage on the left bank of Luni is, therefore, more extensive than on Right Bank. The Luni drains an area of 32,879 sq Kms. In Rajasthan state only.

iii) The Sabarmati

The river Sabarmati is one of the major West flowing interstate rivers in India, draining into the Gulf of Cambay. The basin is bounded by Aravalli hills in the North and North-east, by ridge separating it from basins of minor streams and draining into Rann of Kutchh and Gulf of Cambay in West and by Gulf of Cambay in South. The basin has a maximum length of 300 km and maximum width of 105 kms. It is triangular in shape with the main river as the base and the source of the Watrak as the apex point. It originates in the Aravalli hills at latitude $24^{\circ} 40'$ N and longitude $73^{\circ} 20'$ E in the Rajasthan State at an elevation of 762 m above m.s.l. The river Sabarmati drains an area of 21,674 sq kms. with a total length of 371 kms..

The Sabarmati river with its origin in Rajasthan flows generally in south west direction. It enters the Gujarat State and passes through the plains and continues to flow in the same direction and joins the Gulf of Cambay in the Arabian sea.

iv) The Banas

The river Banas originates from Aravalli hills and descends in a South-Western direction through Rajasthan state and travels through Banaskantha and Mehsana district of Gujarat before it drains into little Rann of Kutchh. The Banas basin is the Northern basin and is situated between $23^{\circ} 30'$ & $24^{\circ} 55'$ North latitudes and $71^{\circ} 15'$ to $73^{\circ} 15'$ East longitudes approximately. Saraswati and Luni basins form the Southern and Northern boundaries of this basin. The Aravalli hills form its eastern extremity. The Banas drains an area of 8,674 sq.kms. out of which nearly 37.69% lies in Rajasthan state and remaining 62.31% falls in Gujarat state.

The Banas river rises near Pindwara of Sirohi district of Rajasthan at an elevation of 372.51m above m.s.l. Little Rann of Kutchh is the outfall of Banas river. Sipu is the only right bank tributary of Banas river which drains into the main channel. There are 6 tributaries on the left bank of Banas river namely the Batria, the Sukli, the Sewaran, the Suket, the Balaram and the Khari which drain into the main channel. Hence the draining system on the left bank of the Banas river is more extensive as compared to the right area. The Sipu and the Khari are the two important right and left bank tributaries which together drain nearly 37% of the total catchment area of Banas.

v) The Bhadar

Bhadar is one of the major rivers of Saurashtra and it drains about 1/7th of the area of Saurashtra. The Bhadar basin is the South Western basin and situated between 21° 25' to 22° 10' North latitude and 69° 45' to 71° 20' East longitude. The river Bhadar originates at an elevation of 261 m above m.s.l. in Vaddi about 26 kms. North-West of Jasdan in Rajkot district and flows towards South upto Jasdan village and then turns towards South-West upto village Jetpur and finally changes its direction towards West till its confluence with Arabian sea at Navibandar (Porbandar). Thus from Jetpur to Porbandar the river Bhadar fertiles Rajkot, Jamnagar, Amreli and Junagadh district of Saurashtra. The river drains an area of 7,094 sq kms. out of which 706 sq. kms. in hilly and the rest in plain regions of Saurashtra.

The total length of this South West flowing river from its origin to its outfall into the sea is 198 kms.. For the first 150 kms. the river flows in Rajkot district and the rest of 48 kms. in Junagadh district. The river receives tidal influence for a length of about 26 kms. from mouth in Junagadh district. The river Bhadar receives several tributaries on both the banks. There are 9 major tributaries having a length of more than 25 kms. out of which 6 tributaries namely Gondali, Chapparwadi, Phopal, Utawali, Moj and Venu are feeding from right and the remaining 3 tributaries namely Vasavadi, Surwa and Galolia from left. The drainage system on the right bank of river Bhadar is more extensive as compared to the left bank.

vi) The Shetrunji

The Shetrunji is one of the major rivers of Saurashtra. The Shetrunji basin is the Eastern most basin of Saurashtra and is situated in between 21° 00' to 21° 47' North latitude and 70° 50' to 72° 10' East longitude. The river Shetrunji originates at Chchai hills in Gir forest of Junagadh district at R.L. 380 m above m.s.l and flows towards East direction till its confluence with Gulf of Cambay near Santhrapur port. The river Shetrunji fertiles the Amreli and Bhavanagar districts and a small area of Junagadh district of Saurashtra. The Shetrunji drains an area of 5,514 sq.kms. out of which more than 50% in Amreli district.

The total length of this East flowing river from its origin to the outfall into the Gulf of Cambay is 182 kms. This river receives tidal influence for a length of 5 kms. from mouth. The Shetrunji receives several tributaries on both banks. There are 9 tributaries having lengths more than 15 kms. Out of which Safara, Shel, Khari and Talaji are the 4 tributaries on the right bank of Shetrunji and the remaining 5 tributaries namely Stali, Thebu, Gagadia, Rajwal and Kharo are on left bank. The drainage system on left

bank of Shetrunji is more extensive as compared to the right bank area. The Stali, Thebi and Gagadia 3 important tributaries feeding from left bank of Shetrunji and drain nearly 34% of total catchment area of river Shetrunji.

vii) The Vaitarna

The river Vaitarna originates from hilly terrains of Maharashtra at Trimbak, district Nasik. After running for 120 kms., in Maharashtra towards West, it falls in the Arabian Sea. The Catchment area of the basin is 3637 sq.km. The complete catchment area is located between East longitude of 72° 45' to 73° 35' and North latitude of 19° 30' to 20° 20'. The main tributaries of this river are Pinjal, Ganjal, Surya, Daharji and Tansa.

viii) Dhadar

The river Dhadar is one of the West flowing rivers in Gujarat state. It originates from Pavagadh hills of Gujarat state and flows through Vadodara and Bharuch districts. The river Dhadar after flowing 87 kms. receives Vishwamitri tributary from right bank at Pingalwada village. After flowing 55 kms it falls into the Gulf of Cambay. The total catchment area of Dhadar basin is 3,423 sq.kms.. It lies between east longitude 72° 30' and 72° 45' and north latitude 21° 45' and 22° 45'. The important tributaries of Dhadar are Vishwamitri and Rangav.

Urban Centres: Ahmedabad & Vadodara are two important cities on west flowing rivers basin.

Industries: In addition to agriculture based industries there are important industries of textile, leather & leather goods, plastic, rubber goods, paper, newsprint, automobile, machine tools, drugs, Pharmaceuticals etc.

Sites: There are 19 Water Quality observation centers in this basin. Sediment observations are also made at 13 of these stations. In addition there are 10 gauge discharge observation stations in the basin.

WATER AND RELATED STATISTICS

1. Water Resources of India

1.1 The Annual precipitation including snowfall is the main source of water in the country and is estimated to be of the order of 4000 Cu. Km. The total water resource potential of the country, which occurs as natural run off in the rivers is estimated at 1869 Cu. Km. considering both surface and groundwater as one system. However, due to various constraints of topography, uneven distribution of resource over space and time, it has been estimated that only about 1122 Cu. Km. including 690 Cu. Km. from surface water resources can be put to beneficial use. However, 370 Cu. Km. of estimated utilizable surface water comes from the non-classified river basins.

1.2 The distribution of water resources potential in the country shows that as against the national per capita annual availability of water of 1731 Cu. M. (estimated as on 1st March 2004) the average availability in Brahmaputra and Barak basin is as high as 14057 Cu. M. while it is as low as 308 Cu. M. in Sabarmati basin in 2000. Brahmaputra and Barak basin with 7.6 % of geographical area and 5.2 % of population of all the basins in the country has 31 % of the annual water resources. Per capita annual availability for rest of the country excluding Brahmaputra and Barak basin works out to about 1345 Cu. M.. Any situation of availability of less than 1000 Cu. M. per capita is considered by international agencies as scarcity conditions. Cauvery, Pennar, Sabarmati, East flowing rivers and west flowing rivers are some of the basins which fall into this category.

2. Drainage/catchment area and population distribution.

2.1 The 12 non-classified river basins cover an estimated population of 50 crores on 1st March 2004 accounting for 46% of total population of India. The drainage area of these basins account for 43% of the total geographical area of the country. The Godavari basin has the highest drainage area of 3,12,800 Sq. Kms. followed by Krishna basin with drainage area of 2,58,948 Sq. Kms. and Mahanadi basin with drainage area of 1,41,600 Sq. Kms. The river basins of Rushikulya (7,700 sq. kms.), Vamsadhara (10,830 sq. kms.), Sarda (2,665 sq. kms.) and Nagavali (9,510 sq. kms.) together have the least total drainage area of 30,705 Sq. Kms.

The population wise, the East flowing rivers have the highest population of 9.86 crores followed by Krishna (7.65 crores), east flowing rivers (7.35 crores) and Godavari with 6.8 crores. West flowing rivers have the maximum population density of 846 persons per Sq. Km. followed by east flowing rivers (722 persons per Sq. Km.). Narmada has the least population density of 187 persons per

Sq. Km. followed by Godavari basin with density of 217 persons per Sq. Km.

2.2 The average annual potential/average annual flow in non-classified river basins is maximum at 113.53 Cu. Km. in West Flowing rivers from Tadri to Kanyakumari followed by 110.54 Cu. Km. at Godavari basin and 87.41 Cu. Km. in West Flowing Rivers from Tapi to Tadri. The run off at terminal site is, however, maximum at Polavaram in Godavari (88728 MCM.), followed by 68824 MCM in West Flowing Rivers from Tapi to Kanyakumari and 46477 MCM in Mahandi Basin at Tikrapara. The site wise distribution is given in Table 1.1.

2.3 Surface Water Storage

So far a total storage capacity of 212.79 Cu. Km. (Table 1.3) has been created in India and the projects under construction will add up another 76.26 Cu. Km. The reservoir projects under consideration will contribute further about 107.54 Cu. Km. of water storage capacity. Therefore expected storage capacity would be 376 Cu. Km. against total availability of 1869 Cu. Km. of water in the river basins of this country. The Krishna basin leads in term of storage capacity (49.55 Cu. Km.) followed by Godavari basin (31.33 Cu. Km.) and Narmada basin (23.60 Cu. Km.). Pennar basin leads (76%) in terms of storage capacity created as percentage of average annual flow followed by Tapi basin (71%) which even otherwise has requirement for higher storage capacity as it covers the semi desert areas of Madhya Pradesh, Maharashtra & Gujarat. The West Flowing Rivers of Kutch, Shaurashtra including Luni, Krishna, Narmada and Brahmani & Baitarni basins exceed 50% capacity of their respective average annual flow. The storage percentage is, however, less than 25% in few basins and hence there is a scope for increasing storage potential in them particularly for those basins for which the annual average flow is higher. This publication presents data on average annual runoff at terminal sites of all basins with catchment area upto the site (Table 1.1).

3. Details of other information

3.1 Observations on water discharges, volume of sediments deposited on the flow areas & examinations of water qualities are made at different water releasing points of the river basins. Geographical locations of observation sites, types of experiments done on those sites and dates of commencement of experiments are also given for understanding distribution of waters on participating States. There are 57 (Table 1.2) such sites on Krishna basin out of 286 sites and 56 sites in Godavari basin. Rushikulaya & other small three rivers altogether have only 5 observation centres.

3.2 Live storage capacities in respect of different river basins are given in table 1.3.

3.3 Site-wise further details of findings in terms of seasonal & annual flow of water for last ten years and historical extreme levels like maximum & minimum water levels & discharges, from the times of commencements of observations to latest information available, are presented as time series data in table 1.5 .

3.4 Site-wise maximum and minimum observed water levels and discharges in different river basins are given in table 1.6.

3.5 Expectation of availability of required amount of water is of paramount importance for any plan/project or irrigated cultivation purposes. Therefore dependable flow of water (Table 1.7) at 10 equal percentile levels has been presented here for each site. And the percentiles have been evaluated taking into consideration the whole period of releases of water from the sites from the day of its openings. Monthly average flow of water per unit drainage area (Table 1.8) has also been shown in the publication based on its evaluation for total ages of different sites separately. This will also help in understanding expected water availability in different months of a year.

3.6 The site-wise historical observations on latitude, longitude, stage record, drainage area in these non-classified basins is presented in Table 1.4.

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Sites	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b')	Longitute (x°-y')		Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Mahanadi Rises from Pharsiya village near Nagri Town in Raipur Distt. of Chhattisgarh at an elevation of 442 m. Length 851 Km.	MP/Chhatisga Orissa Bihar Maharashtra	75100 65600 650 250	Mahanadi Seonath Jonk Hasdeo Mand Ib Ong Tel	51733 30761 3673 9803 5237 12447 5128 22818	19-20 to 23-35	80-30 to 86-50	GD = 4 GDQ = 2 GDSQ = 14	7 to 45.5	1400	Monthly range 40 in Winter to 360 in summer
		Total	141600	Total	141600						

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
1	Mahanadi (water withdrawals during 1997-99)	Iron Ores Coal Lime stone Quartzite Copper Ores Silver Lead Mica Bauxite Galena & Graphite	179.25	Iron Steel Copper Cement Paper and Aluminium Tikarapara	46477 (1972 to 2002) (124450)	Black Red Yellow Brownish red to Yellowish red Dark Gray Coastal alluvial	Hirakund Tandula Hasdeo Bango Dam Mand Diversion Project Ib Diversion Scheme Sunder Dam Barupa Barrage	8141.00 312.07 7901.21 - - - - 4700.00 -	5892.00 302.09 - - - - - 4440.00 -	14195.00 310.00 2532.71 - 111.62 199.00 65.69 2300.84

Source : Water Year Book for year 2002-2003.

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
2 Subernarekha, Burhablang and Baitarni										
2.1	Subernarekha (water withdrawals during 1997-99)	Coal Iron Ore Bauxite Copper Chromium Gold Vanadium Lime Stone Dolomite Asbestos Chinaclay Talc and Building Stone	88.23	Tobacco Products, Cement, Asbestos Sheets, Ceramics, Glass, Coaches & Locomotive , Automobiles, Agricultural Equipment, Wires & Cables, Iron & Steel Machinery, Metal Tubes & conduits, Copper & Brass, Chemical Acids & Caustics, Fertilizer, Soaps	6552 (1971 to 2003) Gatshila (14176)	Gravelly Sandy Loams Alluvium & Black Clays Laterite Red etc.	-	-	-	-
2.2	Burhabalang (water withdrawals during 1997-99)	Iron ore, China Clay, Quartz, Soap stone & Lime stone found in limited areas.		NIL	2844 (1992-2003) Govindpur (4495)	Red & Yellow Soil Laterite Soil Alluvial Soil	-	-	-	-

Source : Water Year Book for year 2002-2003.

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Number of Hydrological Observation Sites	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b')	Longitude (x°-y')		Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evaporation (mm)
2.3	Baitarni Rises in the hill ranges of Keonjhar Distt. of Orissa near Mankarancha village at an elevation of 900 m. Length 355 Km.	Bihar Orissa	736 10246	Baitarni Salindi Kusai Orarai Others	4113 1793 870 821 3385	20-35 to 22-15	85-10 to 87-03	GDSQ = 1 GD = 1	10 to 45	1600	-
	Total	Total	10982	Total	10982						
3	Brahmani Rises from Nagri village in Ranchi Distt. of Bihar at an elevation of 600 m. Length 799 Km.	Bihar/ Orissa M.P.	15769 22364 900	Brahmani Karo Sankh Tikra	26831 2741 6933 2528	20-28 to 23-35	83-52 to 87-03	GDSQ = 5	13 to 45	1500	Average Monthly Evaporation varies from 18 to 135
	Total	Total	39033	Total	39033						

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
2.3	Baitarni (water withdrawals during 1997-99)	Iron Ore, Copper, Chromite, Asbestos, Manganese, Atomic Minerals, China Clay & Soap Stone	96.78	Ferro - Manganese Plant Sponge Iron Plant	4746 (1990-2003) Anandpur (8570)	Red & Yellow Laterite Alluvial	Akhuapada	-	-	451.46
							Kanpur Irrigation Project	242.65	184.15	581.09
3	Brahmani (water withdrawals during 1997-99)	Iron Copper Chromite Coal Manganese Lime stone Dolomite Lead Fire-Clay Bauxite & China-Clay	96.78	Steel Plants Cement Aluminium Explosive Chemical Machine Tools Fertilizer Plant	17636 (1979 to 2003) Jenapur (33955)	Red & Yellow Mixed Red & Black Red Sandy Red Loamy & Coastel Alluvium	-	-	-	

Source : Water Year Book for year 2002-2003.

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
4	Rushikulya, Vamsadhara, Sarada & Nagavali		96.79							
4.1	Rushikulya (water withdrawals during 1997-99)	Clay Lime Stone Manganese Sand Talc Black Sand & Grinding Material		Chemical Sugar Spining Mills	2069 (1992 to 2003) Purshottampur (7112)	Red & Yellow Laterite Alluvial Saline		-	-	-
4.2	Vamsadhara (water withdrawals during 1997-99)	Manganese Grayphite Lime Stone Bauxite Mica & Quartz		No large scale Industries.	2256 (1971 to 2003) Kashi Nagar (7820)	Red & Black Red Sandy Balck Laterite Yellow		-	-	-
4.3	Sarada (water withdrawals during 1997-99)	Manganese Grayphite Aluminium Bauxite & --		Steel Plant	424.4 (1990 to 2003) Anakapalli (2090)	Red & Coastal Sands Laterite Alluvial Forest		-	-	-
4.4	Nagavali (water withdrawals during 1997-99)	Manganese Grayphite Lime Stone Bauxite & Mica		There is no large scale Industries.	2337 (1991 to 2003) Srikakulam (9500)	Coastel Sand Red Mixed Laterite Forest	Thotapally Narayan Puram Jaiyavathi Janjavathi	- - -	- - -	189.73 79.97 113.27

Source : Water Year Book for year 2002-2003.

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Number of Hydrological Observation Sites	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b')	Longitude (x°-y')		Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evaporation (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
5.	Godavari Rises from Nasik distt. of Maharashtra at an elevation of 1067 m. Length 1465 Km.	Andhra Pd. Karnataka Madhya Pd. Maharashtra/ Chhatisgarh Orissa	73201 4405 65255 152199 17740	Godavari Pravara Purna Manjira Maner Pranhita Indravathi Sabari	75600 6500 15600 30800 13100 109100 41700 20400	16-16 to 22	73-26 to 83-07	GD = 27 GDQ = 3 GDSQ = 25	15 to 40	606 to 1588	Mean daily evaporation varies from about 5 mm near coastal region to 16.6 mm in upper region.
		Total	312800	Total	312800						

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
5.	Godavari (water withdrawals during 1995-2000)	Bauxite Manganege Iron Ore Coal Lead Zinc Corundum	572.81	Paper Other Timber Product Rice Milling Cotton Ginning processing Spinning & Weaving Manufacture of various textile Extraction of Oil from Ground Nut & other Oil Seeds Small Engineering Industries	88728 (1966 to 2000) Polavaram (307800)	Black Red Laterite Alluvium Mixed Saline & Alkaline	Waghed Ozarkhed Karanjawan Palkhed Gangapur N.Madmeswar Jayakwadi Stage-I Puma Mula Bhandaradara Maner Adhole S.R.S. Project Stage-I Kaddam Nizam Sagar Lower Maner Maner Project Manjira Dhuti Weir Bagh Idiadoh Cotton Barrage Lakhnavaram	76.48 67.96 175.56 21.24 215.8 - 2909.00 934.46 735.8 312.6 67.68 30.00 3172.00 - 186.80 841.30 - 85.52 - 15.43 269.00 - - 60.46	70.00 62.50 166.22 21.24 203.8 - 2170.00 809.3 636.8 307.53 49.27 27.6 2322.00 137.1 724.92 - 69.66 - 7.79 241.00 - - 47.39	24.72 20.56 54.82 44.43 538.98 - 225.20 127.95 245.13 219.20 87.28 17.57 392.80 - - 6654.70 - - 21.02 254.54 161.86 -

Source : Water Year Book for year 2001-2002.

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Sites	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b')	Longitude (x°-y')		Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
6.	Krishna Rises from near Mahabaleshwar about 64 Km. from Arabian Sea at an elevation of 1337 m. Length 1401 Km.	Andhra Prd Maharashtra Karnataka	76252 69425 113271	Ghataprabha Malaprabha Bhima Tungabhadra Hagari Musi Palleru Muneru Others	8829 11549 70614 47827 23590 11212 3263 10409 71655	13-7 to 19-25	73-21 to 81-9	GD = 23 GDSQ = 22 GDQ = 12	15 to 39	565 to 1508	-
		Total	258948	Total	258948						
7.	Cauvery Originate at Talakavasi in Georg Distt. Karnataka at an elevation of 1341 m. Length 800 Km.	Karnataka Tamil Nadu Kerala Pondicherry	34273 43856 2866 160	Harangi Hemavathi Lakshmana- Tirtha Kabini Shimsha Arkavathi Bhawani Amravathi Others	717 5410 1690 7040 8469 4150 6154 8380 39145	10-05 to 13-30	75-30 79-45	to GDQ = 5 GDSQ =11	20 to 30	500 to 3800	Annual 2500
		Total	81155	Total	81155						

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
6	Krishna (water withdrawals during 1998-99)	Bauxite Manganeg Iron Ore Copper Gold Coal Lime Stone Lead Zinc Corundum Ilmenite Refractory minerals & Kaolin	643.82	Textile Sugar Chemical Cement Automobiles Engineering Extraction of Gold Alluminum Electrical Dynamic	26706 (6/65 to 5/96) Vijaywada 251360	Forest Deep Black Medium Black, Coarse Shallow Black, Mixed Red & Black, Red, Red Loamy, Red Sandy, Redish Brown, Laterite, Deltaic Alluvium	Radha Nagari Ghod Khadakwasla Stage - I Vir Dham Konya Dam Tungabhadra Bhadra Ghataprabha Stage -II Upper Krishna Rajouliunda Diversion Musi Project Naga-Arjun-Sagar Sri Sailam P.D. Jurala Prakashan Barrag	- - - - - - 3767.00 2023.00 - - 1066.00 - - - 11559.00 8716.00 - -	- - - - - - - 1780.00 - - 863.00 - - - 6767.00 - -	Major & Medium Projects -20363; Through Kony Hydro Electric Power Project, Tungbhadra Dam, Nagarjun Sagar Project and Prakashan Barrage -12666 for export to other basins; Total withdrawal 33029 Import from Godavari basin through Sri Ram Sagar Project - 986
7.	Cauvery (water withdrawals during 1996-99)	Stone Mining	286.54	Paper Mills Sugar Mills Chemical Factory Cotton Mills	8512 (6/72 to 5/2000) Musiri (66243)	Black Cotton Red Laterite Alluvial Forest Mixed	Krishnaraja Saga Hemavathi Mattur Bhawani Lower Kabini	1400.35 1050.62 2708.79 928.80 552.74	1275.69 1012.60 2646.77 907.80 453.06	- - - - -

Source : Water Year Book of Krishna Basin for year 1995-1996, Water Year Book of Cauvery Basin for year 1999-2000.

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Number of Hydrological Observation Sites	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a ⁰ -b ['])	Longitude (x ⁰ -y ['])		Temperature Variation (Centigrade) (⁰ C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
8. East Flowing Rivers of Coastal of Andhra Pradesh, Karnataka and Tamil Nadu											
8.1	Gundlakama Rises near Iskagudem Village in Kurnool Distt. of Andhra Pd. at an elevation of 600 m. Length 220 Km.	Andhra Pd.	8494			15 - 38	78-47	GDSQ = 1	-	-	-
		Total	8494								
8.2	Paleru Rises from near Gogulapalle Village in Nellore Distt. of Andhra Pradesh at an elevation of 325 m. Length 104 Km.	Andhra Pd.	2483			15 - 17	79 - 13	GD = 1	-	-	-
		Total	2483								
8.3	Pennar Rises from Thena- nahesava Hills of Nandidurg range in Karnataka Length 597 Km.	Karnataka Andhra Pd.	6937 48276	Jayamangla Chitravathi Kunderu Papagini Sagileru Cheyyeru Others	1282 5908 8057 7423 3077 7325 22141	13-16 15-52	to 77-04 80-10	to GDQ = 7 GDSQ = 1	15.02 to 40.9	508 to 988	-
		Total	55213	Total	55213						

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)

**8. East Flowing Rivers of Coastal of Andhra Pradesh, Karnataka & Tamil Nadu
(water withdrawals during 1996-97)**

8.1 Gundlakama					1192 (6/78 to 5/2000) Thammavaram (7889)			-	-	-
8.2 Paleru					161 (6/91 to 5/2000) K.Bitragunta (2420)			-	-	-
8.3 Pennar					1742 (6/88 to 5/2000) Nellore 50800	Somashila	2093.00	-	-	-

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	8.4 Swarnamukhi				431 (6/78 to 5/2000) Naidupeta (2650)			-	-	-
	8.5 Kalingi				235 (6/87-5/2000) Sullurpet (5927)			-	-	-
	8.6 Palar				559 (6/78-5/2000) Chengalpattu (16230)			-	-	-
	8.7 Ponnaiar				330 (6/72-5/2000) Villupuram (12900)		Krishnagiri Sathanur Reservo	66.10 228.91	-	-

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Number of Hydrological Observation Sites	Climate Details			
				Tributary	Area (Sq.Km)	Latitude (a°-b')	Longitude (x°-y')		Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)	
												(1)
8.8	Vellar Rises near village Tumba in Chottori Hills of Eastern Ghats in Salem Distt. of Tamil Nadu at an elevation of 900 m. Length 210 Kms	Tamil Nadu	8922					-	GDQ = 1	-	-	-
	Total		8922									
8.9	Vaigai Rises in Western shopes of Varushanadu Hills near Kottaimalai in Madurai Distt. of Tamil Nadu at an elevation of 1200 m. Length 258 Km.	Tamil Nadu	7741	Mangalar 375 Suruliyar 1210 Varahanadi 380 Others 5776		9-17 to 10-22		-	GDQ = 1 GDSQ = 1	25 to 35	635 to 1270	-
	Total		7741	Total		7741						

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	8.8 Vellar				520 (6/90-5/2000) Kudalaiyathur (7890)			-	-	-
	8.9 Vaigai				166 (6/72-5/2000) Parmakudi (6796)		Vaigai Reservoir	194.78	-	-

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
8.10	Vaipar				109 (6/90-5/2000) Irukkankudi (3721)			-	-	-
8.11	Tambraparani				573 (6/79-5/2000) Murappandu (4380)			-	-	-

Source : Water Year Book for year 1999-2000.

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)

9. West Flowing Rivers from Kanniyakumari to Tapi

9.1 Ulahas					2816 (6/87 - 5/2000) Badlapur (785)			-	-	-
9.2 Kal					903 (6/87 - 5/2000) Mangaon (259)			-	-	-
9.3 Kajavi					906 (6/92 - 5/2000) Anjanari (315)	Sandy mixed with Gravel.		-	-	-
9.4 Gad					2983 (6/87 - 5/2000) Adavali (835)			-	-	-

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	9.5 MandovyiMadai				3697 (6/71 - 5/2000) Ganjim (880)		Anjunem	-	-	-
	9.6 Agnashini				5003 (6/88 - 5/2000) Santeguli (1090)			-	-	-
	9.7 Haladi				1978 (6/86 - 5/2000) Haladi (583)			-	-	-
	9.8 Swarna				1648 (6/90 - 5/2000) Yennehole (327)		Proposed Dam Si	370.95	105.68	-

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	9.9 Netravathi				11707 (6/71 - 5/2000) Bantwal (3184)			-	-	-
	9.10 Payaswani				3660 (6/86 - 5/2000) Erinjipuzha (957)			-	-	-
	9.11 Valapatanam				3575 (6/86 - 5/2000) Perumannu (1070)	Kattampally Pazhassi		-	-	-

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
9.12	Chaliyar (Beypore)				4241 (6/81 - 5/2000) Kuniyil (1876)			-	-	-
9.13	Kadalundi				1401 (6/87-5/2000) Karathodu (750)			-	-	-
9.14	Bharathapuzha				752 (6/80-5/2000) Mankara (2775)		Malampuzha Res	228.40	226.00	-
9.15	Chalakuadi				1918 (6/78-5/2000) Arangaly (1342)		Chalakuadi River Diversion Scheme Sholayar H.E.S. Peringilkuthu Lel Scheme	443.50	299.50	-

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	9.16 Periyar				7292 (6/71-5/2000) Neeleshwaram (4234)		Periyarvalley Pro Edamalayar Idukky Hydrel Pro	453.50 1089.80 1996.30	299.35 1017.80 1489.50	- 1824.00 2027.90
	9.17 Morathupuzha				5052 (6/78-5/2000) Ramamangalam (1208)			-	-	-
	9.18 Meenachil				1762 (6/86-5/2000) Kidangoor (615)			-	-	-
	9.19 Pamba				4060 (6/86-5/2000) Malakkara (1713)	Pamba Hydrel Project		487.30	471.68	1046.80

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
9.20	Achankovil				1208 (6/78-5/2000) Thumpamon (810)			-	-	-
9.21	Kalada				1600 (6/78-5/2000) Pattazhy (1210)	Kalada Irrigation Project		-	-	-
9.22	Vamanapuram				662 (6/79-5/2000) Ayilam (540)			-	-	-

Source : Water Year Book for year 1999-2000.

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Sites	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b')	Longitude (x°-y')		Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
10	Tapi Rises from Near Multai in Betul Distt. of Madhya Pradesh at an elevation of 752 m. Length 724 Km.	M.P. Maharashtra of Gujarat	9804 51504 3837	Tapi (Main) Gomai Arunavati Buray Panjhara Bori Aner Girna Waghur Purna	22522 1148 935 1419 3257 2580 1702 10061 2592 18929	20.00 to 22.00	72.45 to 78.15	GDQ = 4 GDSQ = 8	10 to 48	830	-
		Total	65145	Total	65145						
11	Narmada Originates from Amarkantak of Shehdol Distt. of Madhya Pradesh at an elevation of 1057 m. Length 1312 Km.	Madhya Prade Maharashtra Gujarat	85859 1538 11399	Burhner Hiran Tawa Chhota Tawa Kundi Orsang Others	4228 4795 6338 5055 3973 3946 70461	21-20 to 23-45	72-32 to 81-45	GDQ = 5 GDSQ = 14	7.5 to 42	674 to 1623	Lower Zone 12.0 to 28.0 Middle Zone 1.0 to 3.0
		Total	98796	Total	98796						

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
10	Tapi (water withdrawals during 1995-98)	Coal	190.84	Paper Mills	6694	Shallow Black	Ukai Dam	8510.00	7092.00	Information
				Sugar Mills	(6/78-5/99)	Medium Black	Kate Purna	97.67	86.35	not available
				Cotton Spinning Mills	Ghala (63325)	Black Cotton	Nalganga	76.20	69.32	
				Dal Mills		Light Brown to Redish Brown	Kakrapar weir	51.51	36.57	
				Oil Mills		Dark Yellow & Redish				
11	Narmada (water withdrawals during 1995-99)	Bauxite Clay Coal Dolomite Graphite Iron Ore Manganese Talc & Lime Stone	162.56	40 Large Scale & 70 Medium Scale Industries.	34273.5 (3/72-5/2000)	Shallow BlackMedium BlackMedium Deep BlackMixed Red & Black Sandy	Karjan	630.00	-	-
				Industries are low as compared with other Basins.	Gurudeshwar (87892)		Sardar Sarover	-	-	-
							Jobat	-	-	-
							Man	-	-	-
							Upper Beda	-	-	-
							Maheshwar	-	-	-
							Narmada Sagar			
							Sukta	89.50	78.05	62.37
							Kolar	270.00	265.00	210.38
							Tawa	2310.00	2050.50	1677.04
							Barna	539.00	455.00	284.97
			Bargi	3920.00	3180.00	167.62				
			Matiyari	56.80	51.12	13.11				

Source : Water Year Book of Tapi Basin for year 1998-1999, Water Year Book of Narmada Basin for year 1999-2000.

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Number of Hydrological Observation Sites	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a°-b')	Longitude (x°-y')		Temperature Variation (Centigrade) (°C)	Average Annual Rainfall (mm)	Evapo-ration (mm)
12 Mahi, Sabarmati & Other West Flowing Rivers of Saurashtra and Kutch											
12.1	Mahi Rises from Near village Sardarpur in Dhar Dist. of Madhya Pradesh at an elevation of 500 m. Length 583 Km.	Madhya Prade Rajasthan Gujarat	6695 16453 11694	Som Anas Panam Others	8707 5604 2470 18061	22-35	74-58	GD = 2 GDSQ = 3 GDQ = 1	5 to 50	785	-
	Total		34842	Total	34842						
12.2	Sabarmati Originates in Aravali Hills in Rajasthan at an elevation of 762 m. Length 371 Km.	Rajasthan in Gujarat	4124 17550	Sei Wakal Harnav Hathmati Watrak Others	946 1625 972 1526 8638 7967	24-40	73-20	GD = 3 GDSQ = 1 GDQ = 1	9 to 48	787.5	-
	Total		21674	Total	21674						
12.3	Luni Western Slope of Aravali Hills near Ajmer in Rajasthan at an elevation of 772 m. Length 511 Km.	Rajasthan	32879	Guhiya Sukri Bandi Sukari Jawai Others	4126 3016 3280 2701 19756	24-11 to 26-43	70-37 to 74-39	GD = 2	2 - 46	300 - 500	-
	Total		32879	Total	32879						

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
12 Mahi, Sabarmati & Other West Flowing Rivers of Saurashtra and Kutch.										
			(water withdrawals during 1995-97)	465.36						
12.1 Mahi					4359 (6/78-5/98) Khanpur (32,510)		Mahi Bajaj Sagar Kadana Wanakbori Weir	2180.00 1542.00 41.88	1712.00 1203.00 36.22	- - -
12.2 Sabarmati					1559 (3/91-5/97) Nabhoi (20149)		Dharoi Dam Watrak	907.88 176.90	731.99 154.30	- -
12.3 Luni					365 (6/74-5/98) Gandhav (32010)					

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributaries & their Catchment Area		Basin Location		Number of Hydrological Observation Sites	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a ⁰ -b ['])	Longitude (x ⁰ -y ['])		Temperature Variation (Centigrade) (⁰ C)	Average Annual Rainfall (mm)	Evaporation (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
12.4	Banas Rises from village Pindara of Sirohi Distt. in Rajasthan at an elevation of 372 m. Length 266 Km.	Rajasthan Gujarat	3269 5405	Sipu Sukli Khari Others	1420 438 1391 5425	23-30 to 24-55	71-15 to 73-15	GD = 1 GDQ = 2 GDSQ = 1	10 to 45	921.4	-
	Total	Total	8674	Total	8674						
12.5	Shetrunji Originates at Chchai Hills in Gir Forest of Junagarh Distt. of Gujarat at an elevation of 380 m. Length 182 Km.	Gujarat	5514	Satali Thali Gagaria Kharai Others	651 484 754 665 2960	21-00 to 21-47	70-50 to 72-10	GDSQ = 1	6 to 47	604.52	-
	Total	Total	5514	Total	5514						
12.6	Bhadar Rises from Near Vaddi village of Rajkot Distt. of Gujarat at an elevation of 261 m. Length 198 Km.	Gujarat	7094	Vasawadi Gondali Phopal Venu Others	583 513 590 953 4455	21-25 to 22-10	69-45 to 71-20	GDSQ = 1	4 to 45	625	-
	Total	Total	7094	Total	7094						
12.7	Machhu Rises from near village Khokhara in Surendra Nagar Distt. of Gujarat at an elevation of 220 m. Length 142 Km.	Gujarat	2515	Beti Maha Others	236 508 1771	22-10 to 23-10	70-40 to 71-45	GD = 1	6 to 44	533	-
	Total	Total	2515	Total	2515						

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
12.4	Banas				449.8 (7/71-5/98) Kamalpur (6960)		Sipu Dam Dantiwada Dam	177.80 464.00	156.00 444.00	-
12.5	Shetrunji				182.4 (11/70-5/98) Lowara (3953)		Shetrunji Irrigati Scheme	350.00	309.00	-
12.6	Bhadar				474.3 (11/70-5/98) Ganod (6266)		Bhadar Irrigation Scheme	238.00	221	-
12.7	Machhu				171.1 (12/70-5/98) Gungoan (2137)			-	-	-

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	12.8 Rupen				79.20 (8/89-5/98) Sapawada (2125)			-	-	-
	12.9 Purna				1315 (11/70-5/98) Mahuwa (1995)			-	-	-
	12.10 Ambica				1463 (3/73-5/98) Gadat (1510)			-	-	-
	12.11 Vaitarna				2937 (1/71-5/98) Durvesh (2019)			-	-	-

Table No.1.1 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as per 2001 Census)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with Catch me Area)	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
12.12	Dhadar				489.5 (6/89-5/98) Pingalwada (2400)			-	-	-
12.13	Damanganga				751.4 (6/91-5/98) Nanipalsan (764)		Madhuban Dam	567.00	-	-
12.14	Kim				452.1 (10/90-5/98) Motinaroli (804)			-	-	-

Source : Water Year Book for year 1997-1998.

Average Annual Flow, Estimated Utilisable Flow and Total Live Storage Capacity in Different River Basins

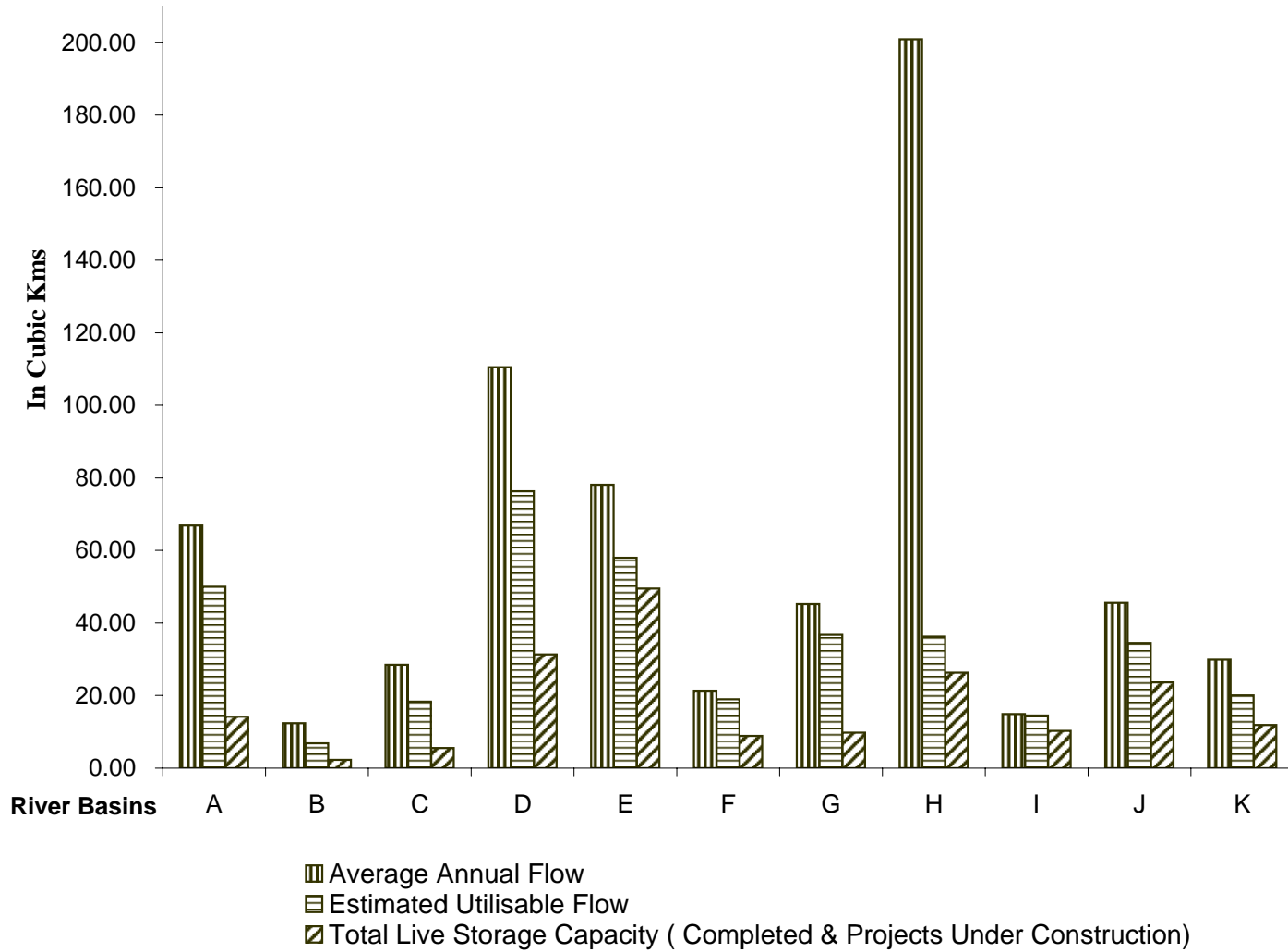


Table No. 1.2 : Number of Hydrological Observation Sites in Different River Basins

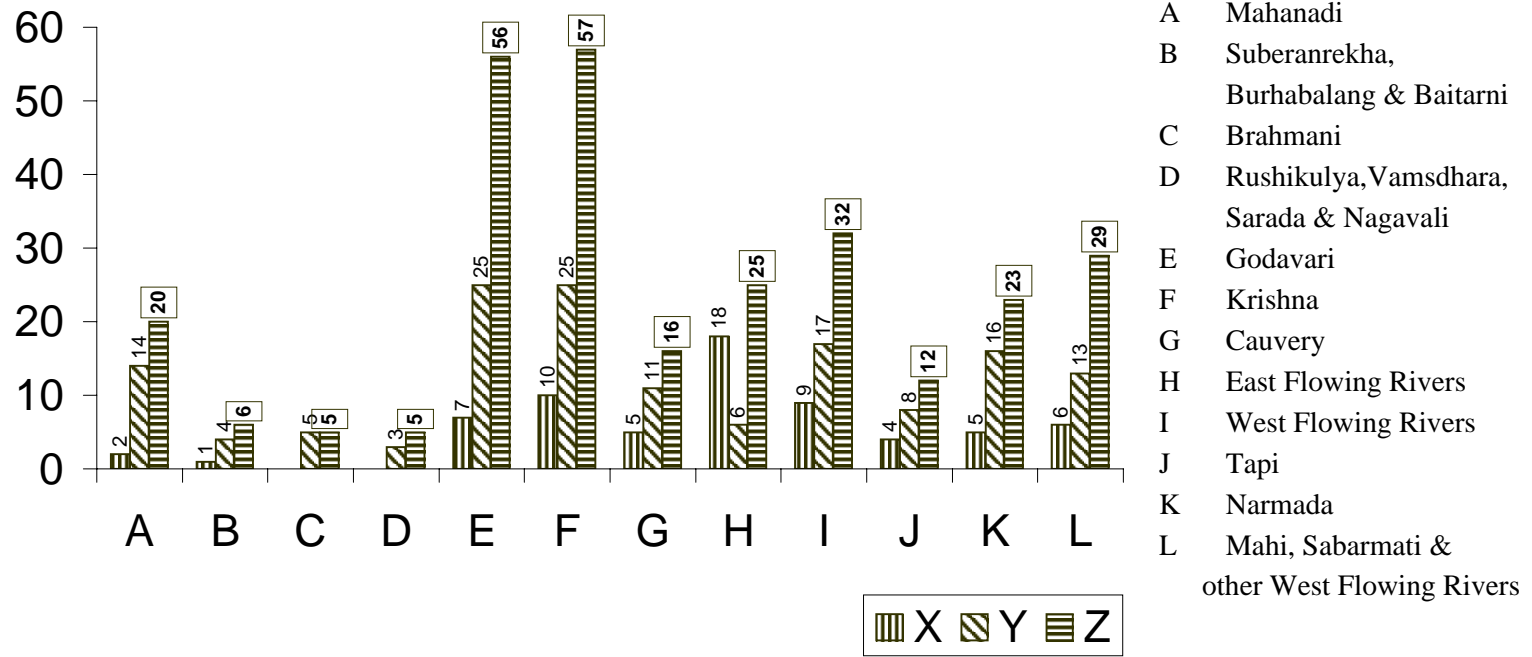
(Non Classified)

S.No.	Basin Name	Type & Nos. of Sites				Frequency of Water Quality Monitoring
		Guage & Discharge	Guage, Discharge & Water Quality	Guage, Discharge, Sediment & Water Quality	Total no. of Sites	
1	2	3	4	5	6	7
1	Mahanadi	4	2	14	20	Once a month
2	Suberanrekha, Burhabalang & Baitarni	1	1	4	6	-do-
3	Brahmani	Nil	Nil	5	5	-do-
4	Rushikulya, Vamsdhara, Sarada & Nagavali	2	Nil	3	5	-do-
5	Godavari	24	7	25	56	Thrice a month
6	Krishna	22	10	25	57	-do-
7	Cauvery	Nil	5	11	16	Once a month
8	East Flowing Rivers of Coastal Andhra Pradesh, Karnataka & Tamil Nadu	1	18	6	25	-do-
9	West Flowing Rivers from Kanya Kumari to Tapi	6	9	17	32	-do-
10	Tapi	Nil	4	8	12	-do-
11	Narmada	2	5	16	23	Twice a month
12	Mahi, Sabarmati & other West Flowing Rivers of Saurashtra & Kutch	10	6	13	29	-do-
Total		72	67	147	286	

Source : Water Year Books of differernt Basins.

Note : Guage-Discharge & Sediment observations are taken daily.

Number of Different Types of Observation Sites on River Basins



X : Guage, Discharge & Water Quality

Y : Guage, Discharge, Sediment & Water Quality

Z : Total Number of Observation Sites

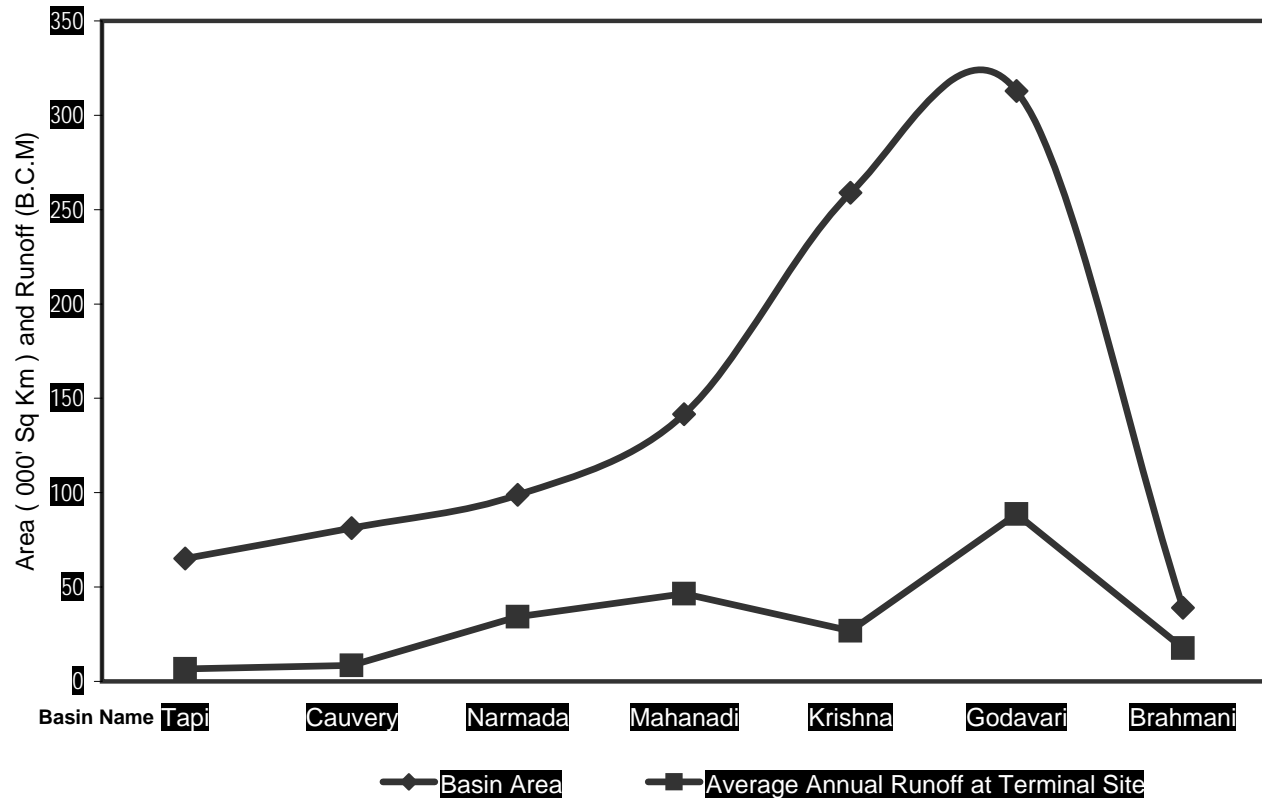
Table No.1.3 : Live Storage Capacity in respect of Different River Basins

(Cubic km.)

Sl. No.	Basin Name	Average Annual Flow	Live Storage Capacities				Percentage of likely storage to Average Annual Flow ((Col.6+Col.7)/Col.3)*100
			Completed Projects	Projects Under Construction	Total	Projects Under Consideration	
1	2	3	4	5	6	7	8
1	Mahanadi	66.88	12.33	1.87	14.21	10.09	36
2	Subernarekha	12.37	0.67	1.65	2.32	1.38	32
3	Brahmani & Baitarni	28.48	4.65	0.88	5.52	8.72	50
4	Rushikulya, Vamsadhara, Sarada &	-	-	-	-	-	-
5	Godavari	110.54	25.12	6.21	31.33	5.84	34
6	Krishna	78.12	41.80	7.74	49.55	1.13	65
7	Cauvery	21.36	8.60	0.27	8.87	0.26	43
8	East Flowing Rivers of Coastal of Andhra Pradesh, Karnataka & Tamil Nadu						
	a) East Flowing Rivers from Mahanadi to Godavari & Krishna to	22.52	1.60	1.42	3.03	0.95	18
	b) Pennar	6.32	2.65	2.17	4.82	0.00	76
	c) East Flowing Rivers Between Pennar And Kanyakumari	16.46	1.84	0.07	1.91	0.00	12
9	West Flowing rivers from Tapi to Kanya Kumari						
	a) West Flowing Rivers from Tapi to Tadri	87.41	11.27	3.46	14.73	0.08	17
	b) West Flowing Rivers from Tadri to	113.53	10.24	1.32	11.55	1.45	11
10	Tapi	14.88	9.41	0.85	10.26	0.29	71
11	Narmada	45.64	7.23	16.38	23.60	0.47	53
12	Mahi, Sabarmati & Other west flowing Rivers of Saurashtra & Kutch						
	a) Sabarmati	3.81	1.31	0.06	1.37	0.10	39
	b) Mahi	11.02	4.72	0.26	4.98	0.01	45
	c) West Flowing Rivers of Kutch, Saurashtra including Luni	15.10	4.73	0.80	5.52	2.85	55
13	Others	1214.93	64.62	30.85	95.46	73.92	14
	Total	1869.37	212.79	76.26	289.03	107.54	21

Source : Hand Book on Water & Related Information, 2005

Basinwise Catchment Area & Average Annual Runoff at Terminal Site



S. No.	Basin name	Terminal site	S. No.	Basin name	Terminal site
1	Tapi	Ghala	4	Mahanadi	Tikarapara
2	Cauvery	Musiri	5	Krishna	Vijaywada
3	Narmada	Gurudeshwar	6	Godavari	Polavaram
			7	Brahmani	Jenapur

Table No. 1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge (MCM)	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
I Basin : Mahanadi											
1	Baronda	3225	20°55'06"	81°52'56"	283.000	289.400	18.09.1980	7/77 to 5/2003	06.12.77	29.06.80	02.06.80
2	Rajim	8760	20°58'00"	81°52'30"	275.000	283.710	18.09.1980	2/71 to 5/2003	01.02.71	04.12.72	01.09.72
3	Seorinarayan	48050	21°53'50"	82°35'30"	209.500	222.960	11.07.1994	12/85 to 5/2003	09.12.85	-	-
4	Basantpur	57780	21°43'18"	82°47'27"	206.000	219.820	20.09.1980	2/71 to 5/2003	11.05.71	07.04.73	01.09.72
5	Kotni	6990	21°13'02"	81°14'19"	268.000	280.080	30.08.1978	9/77 to 5/2003	30.09.78	-	-
6	Pathardih	2511	21°20'28"	81°35'48"	271.000	279.210	12.07.1994	9/87 to 5/2003	15.09.89	-	01.08.92
7	Simga	16060	21°37'33"	81°41'36"	244.000	257.680	13.07.1994	9/71 to 5/2003	09.09.71	30.12.72	01.09.72
8	Andhiyarkore	2210	21°47'00"	81°36'30"	252.000	260.150	08.10.1994	9/77 to 5/2003	29.11.77	12.07.80	01.06.80
9	Ghatora	3035	22°02'04"	82°13'34"	246.000	254.650	21.07.1994	10/77 to 5/2003	17.09.79	-	01.11.91
10	Jondhra	29645	21°43'00"	82°20'34"	219.000	230.595	14.07.1994	1/79 to 5/2003	21.07.79	11.10.80	02.06.80
11	Rampur	2920	21°39'00"	82°31'00"	219.000	227.890	30.08.1982	1/71 to 5/2003	20.02.71	05.07.76	15.09.72
12	Manendragarh	1100	23°12'10"	82°12'54"	411.000	420.860	12.07.1990	6/87 to 5/2003	21.06.89	09.07.93	01.10.92
13	Bamnidhi	9730	21°53'55"	82°32'37"	223.000	229.255	22.08.1975	1/71 to 5/2003	18.02.71	01.05.73	01.09.72
14	Kurubhata	4625	21°59'15"	83°12'15"	215.000	220.320	18.07.1995	10/77 to 5/2003	01.04.78	22.07.80	01.07.80
15	Sundergarh	5870	22°06'55"	84°00'40"	214.000	222.900	13.08.1998	8/77 to 5/2003	30.12.77	21.07.80	02.06.80
16	Selebhata	4650	20°59'00"	82°42'29"	130.000	140.280	30.08.1982	7/71 to 5/2003	12.11.71	01.05.73	15.09.72
17	Pandigaon	6060	20°05'35"	83°05'00"	180.000	190.945	27.07.1992	3/89 to 5/2003	16.06.89	-	-
18	Kesinga	11960	20°11'51"	83°13'30"	166.000	178.835	13.09.1977	11/77 to 5/2003	07.11.78	-	-
19	Kantamal	19600	20°38'49"	83°43'45"	118.000	131.850	29.08.1982	8/71 to 5/2003	26.08.71	22.07.76	01.10.72
20	Sukma	1365	20°48'30"	84°30'00"	150.000	158.080	23.07.1995	6/87 to 5/2003	20.06.89	-	-
21	Tikarpara	124450	20°38'00"	84°37'08"	50.000	74.980	30.08.1982	2/71 to 5/2003	28.05.72	01.06.73	01.12.72

Source: Water Year Book for 2002-03.

Table No.1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge (MCM)_	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
II Basin : Subarnarekha, Burhabalang & Baitarni											
1	Muri	1330	23°22'00"N	85°48'00"E	231.000	237.80	09.07.94	20.08.88 to 5/03	01.11.89	-	01.05.91
2	Adityapur	6309	22°47'29"N	86°10'06"E	123.000	139.850	13.09.73	23.03.71 to 5/03	22.11.71	02.06.75	01.01.76
3	Ghatsila	14176	22°34'49"N	86°28'08"E	72.000	86.83	13.10.73	16.03.71 to 5/03	16.03.71	30.12.72	10.09.72
4	Govindapur	4495	21°33'00"N	86°55'06"E	0.000	9.50	12.10.73	24.04.91 to 5/03	07.03.92	-	-
5	Champua	1710	22°03'57"N	85°40'56"E	367.000	376.41	07.08.85	01.06.87 to 5/03	20.07.90	09.08.01	01.09.01
6	Anandpur	8570	21°12'40"N	86°07'21"E	28.000	41.20	19.08.75	21.02.71 to 5/03	13.03.71	26.08.72	01.09.72

Source: Water Year Book for 2002-03

Table No. 1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge (MCM)	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
III Basin : Brahmani											
1	Tilga	3160	22°20'00"N	84°30'00"E	372.000	379.320	28.09.87	4/78 to 5/03	15.07.80	21.07.80	01.06.80
2	Jaraikela	9160	22°19'08"N	85°06'19"E	185.000	194.055	06.08.77	7/71 to 5/03	29.12.71	01.06.75	01.09.75
3	Panposh	19448	22°13'32"N	84°48'17"E	170.500	180.310	26.07.96	8/77 to 5/03	21.06.96	01.08.96	01.11.90
4	Gomlai	21950	21°50'16"N	84°56'33"E	135.000	147.000	26.07.96	8/77 to 5/03	21.01.79	17.07.80	01.06.80
5	Jenapur	33955	20°55'23"N	86°00'51"E	13.000	23.475	18.08.84	7/77 to 5/03	20.07.79	09.07.80	01.03.80

Source: Water Year Book for 2002-03

Table No. 1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrece		Discharge (MCM)_	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
IV Basin : Rushikulya, Vamsadhara, Sarada & Nagavali											
1	Purushottampur	7112	19°31'00"N	84°53'00"E	12.000	19.665	04.11.99	07/78 to 5/03	16.06.92	15.01.01	08.10.01
2	Kashi Nagar	7820	18°50'49"N	83°57'04"E	51.000	58.935	18.09.80	03/79 to 5/03	28.04.71	27.07.92	24.09.92
3	Ankapali	2090	17°41'00"N	83°01'08"E	20.400	28.450	10.05.90	12/87 to 5/03	16.08.89	-	-
4	Srikakulam	9500	18°18'48"N	83°53'18"E	6.65	14.53	12.05.90	02/88 to 5/03	25.08.90	27.06.01	27.06.01

Source: Water Year Book 2002-03

Table No.1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge (MCM)	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
V Basin : Godavari											
1	Polavaram	307800	17°14'45"N	81°39'35"E	10.897	24.257	26.08.02	1/66 to 5/02	01.01.66	25.10.66	25.10.66
2	Koida	305460	17°27'21"N	81°30'20"E	13.000	29.500	26.08.02	2/76 to 5/02	13.11.76	-	-
3	Konta	19550	17°48'00"N	81°23'00"E	29.000	37.630	26.08.02	2/64 to 5/02	28.10.65	01.01.68	05.05.68
4	Injaram	12925	17°50'00"N	81°23'00"E	34.000	40.980	25.08.02	1/64 to 5/02	19.01.66	-	-
5	Potteru	1120	18°10'13"N	81°47'40"E	120.500	126.120	09.08.02	3/89 to 5/02	20.05.97	-	-
6	Saradaput	4800	18°36'00"N	82°08'00"E	223.972	233.130	18.07.02	1/68 to 5/02	05.09.70	-	-
7	Sangam	1565	17°35'50"N	80°49'40"E	53.000	56.250	08.08.02	6/96 to 5/02	24.08.96	-	-
8	Perur	268200	18°33'00"N	80°22'00"E	68.150	82.400	25.08.02	3/64 to 5/02	17.09.65	24.02.68	24.10.68
9	Pathagudem	40000	18°49'00"N	80°21'00"E	85.750	96.970	25.08.02	7/64to 5/02	20.07.64	21.07.65	01.01.72
10	Medapalli	2031	19°24'42"N	80°37'49"E	202.770	212.450	09.08.02	6/65 to 5/02	09.12.91	-	-
11	Mirdapalli	24210	19°17'56"N	80°41'34"E	228.500	238.280	25.08.02	10/72 to 5/02	27.10.72	-	-
12	Tumnar	1700	19°00'30"N	81°14'20"E	315.007	321.707	24.08.02	3/89 to 5/02	19.12.91	-	-
13	Chindnar	17270	19°05'00"N	81°18'00"E	327.150	337.250	24.08.02	6/71 to 5/02	07.12.71	-	-
14	Cherribeda	890	19°38'23"N	81°29'07"E	564.400	569.580	08.09.02	3/96 to 5/02	13.11.96	-	-
15	Amabal	1968	19°17'00"N	81°47'20"E	534.000	538.360	24.08.02	12/88 to 5/02	30.10.93	-	-
16	Sonarpal	1523	19°16'00"N	81°52'00"E	534.356	540.650	24.08.02	7/89 to 5/02	05.12.91	-	-
17	Jagdapur	7380	19°06'30"N	82°01'30"E	532.501	540.821	24.08.02	8/64 to 5/02	21.09.65	21.09.65	01.12.79
18	Kosagumda	1635	19°16'37"N	82°14'00"E	547.000	554.190	23.08.02	3/96 to 5/02	13.11.96	-	-
19	Murthahandi	N.A.	19°03'00"N	82°17'00"E	533.600	540.330	24.08.02	2/79 to 5/02	01.12.88	-	-
20	Nowrangpur	3545	19°12'00"N	82°31'00"E	549.745	555.235	23.06.02	6/71 to 5/02	21.06.71	21.06.71	01.01.72
21	Tekra	108780	18°57'06"N	79°57'45"E	95.090	108.470	25.08.02	6/64 to 5/02	15.07.64	01.07.65	15.06.66
22	Bhatpalli	3100	19°18'47"N	79°27'57"E	156.000	164.650	24.08.02	8/86 to 5/02	01.10.86	07.10.88	04.01.88
23	Sirpur	47500	19°32'54"N	79°32'51"E	145.710	159.170	27.06.02	6/64 to 5/02	01.02.68	-	-
24	Bamni	46020	19°48'48"N	79°22'58"E	157.970	174.050	27.06.02	1/64 to 5/02	16.10.65	13.12.65	03.06.66

Table No.1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge (MCM)	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
V Basin : Godavari											
25	P.G. Bridge	18441	19°49'08"N	78°34'11"E	198.630	214.180	25.08.02	12/64 to 5/02	21.07.65	19.10.65	31.05.66
26	Mangrul	2500	20°11'15"N	77°59'15"E	279.375	290.380	26.08.02	11/92 to 5/02	09.11.92	-	-
27	Marlegaon	7410	19°32'28"N	77°40'19"E	385.938	398.763	09.09.02	8/63 to 5/02	01.09.64	-	-
28	Kanhergaon	3515	19°57'37"N	77°07'03"E	465.015	476.005	02.09.02	2/91 to 5/02	20.07.92	-	-
29	Ghugus	21429	19°56'05"N	79°05'29"E	165.041	181.901	26.06.02	6/64 to 5/02	29.12.65	-	-
30	Nandgaon	4580	20°31'01"N	78°48'21"E	198.000	210.550	25.06.02	10/85 to 5/02	21.07.86	13.07.88	01.01.88
31	Hivra	10240	20°32'54"N	78°19'29"E	230.000	240.960	25.06.02	11/86 to 5/02	11.08.87	26.06.90	16.12.87
32	Bhisnur	5000	21°06'26"N	78°07'59"E	286.000	292.560	25.06.02	11/86 to 5/02	25.06.88	26.06.90	07.11.87
33	Asti	50990	19°41'05"N	79°47'19"E	141.420	151.850	21.08.02	8/63 to 5/02	14.07.65	14.03.66	01.06.66
34	Rajoli	1900	20°11'30"N	79°40'03"E	180.620	189.210	24.08.02	1/85 to 5/02	25.06.86	-	-
35	Wairagarh	2600	20°25'26"N	80°05'09"E	208.705	213.405	25.06.02	7/92 to 5/02	07.08.92	-	-
36	Salebardi	1800	20°54'40"N	79°55'42"E	223.800	231.800	23.08.02	7/85 to 5/02	21.06.86	-	-
37	Pauni	35520	20°47'46"N	79°38'32"E	223.275	233.415	20.08.02	9/84 to 5/02	21.09.64	12.01.66	12.01.66
38	Satrapur	11100	21°13'04"N	79°14'05"E	263.300	267.200	18.08.02	1/64 to 5/02	30.05.86	01.08.88	09.12.87
39	Ramkona	2500	21°43'16"N	78°49'11"E	336.380	341.250	30.08.02	2/86 to 5/02	21.11.86	-	18.01.88
40	Rajegaon	5380	21°37'32"N	80°15'09"E	272.000	282.050	18.08.02	12/85 to 5/02	26.07.86	22.06.90	15.01.88
41	Kumhari	8070	21°52'58"N	80°10'41"E	289.000	304.360	18.08.02	12/86 to 5/02	01.12.86	10.10.88	01.01.88
42	Keolari	2970	22°22'52"N	79°54'06"E	425.000	436.540	18.08.02	11/86 to 5/02	29.06.87	-	16.08.88
43	Somanpalli	12691	18°38'30"N	79°49'35"E	121.000	124.530	24.08.02	7/64 to 5/02	17.03.67	-	-
44	Mancherial	102900	18°50'00"N	79°27'00"E	124.316	129.946	25.08.02	3/64 to 5/02	03.07.64	01.07.65	01.12.79
45	Gandlapet	1360	18°49'16"N	78°26'17"E	312.000	314.050	24.08.02	7/86 to 5/02	10.09.86	-	31.07.88
46	Betmorga	2105	18°42'12"N	77°32'30"E	349.000	353.030	06.09.02	8/84 to 5/02	03.07.97	-	15.07.97
47	Degloor	1900	18°32'12"N	77°34'56"E	352.000	356.980	24.08.02	8/64 to 5/02	17.07.87	01.09.94	15.09.88
48	Saigaon	9960	18°03'00"N	77°03'00"E	542.723	545.513	24.08.02	6/89 to 5/02	10.11.67	19.07.73	16.08.73

Table No.1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge (MCM)	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
V Basin : Godavari											
49	Bhatknedda	4650	18°25'38"N	76°40'22"E	570.500	573.870	03.09.02	6/76 to 5/02	19.07.91	-	-
50	Yelli	53630	19°02'00"N	77°28'00"E	334.300	343.960	07.09.02	6/68 to 5/02	22.04.78	01.06.78	01.07.78
51	Purne	15000	19°11'00"N	77°02'00"E	358.000	365.200	06.09.02	7/86 to 5/02	02.09.69	10.10.72	01.11.72
52	Zari	5550	19°23'41"N	76°46'24"E	373.000	380.900	27.06.02	7/86 to 5/02	18.06.87	-	01.08.88
53	G.R. Bridge	33934	18°57'00"N	76°45'00"E	364.000	369.850	25.08.02	6/76 to 5/02	19.06.76	01.07.76	01.07.76
54	Dhalegaon	30840	19°12'00"N	76°22'00"E	386.575	389.935	06.09.02	1/64 to 5/02	16.08.64	11.07.71	01.07.72
55	Manjlegaon	3960	19°10'00"N	76°15'00"E	401.900	-	-	-	01.01.65	-	-
56	Pathegoan	5800	19°32'00"N	74°52'00"E	475.000	477.320	14.08.02	12/78 to 5/02	23.07.83	-	-
57	Ashwi	1820	19°33'00"N	74°36'00"E	520.500	-	-	-	11.05.72	-	-
58	Ghargaon	626	19°19'13"N	74°10'43"E	597.810	606.360	28.06.02	6/89 to 5/02	29.07.91	-	-
59	Chass	5230	19°57'20"N	74°19'15"E	500.000	-	-	-	02.08.72	-	-

Source : Water Year Book for 2002-03.

Table No.1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level	Date of Occurrence		Discharge (MCM)_	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
VI Basin : Krishna											
1	Vijaywada	251360	16°30'00" N	80°37'00" E	8.152	21.182	02.10.64	03/64 to 5/96	24.03.64	01.02.65	01.01.72
2	Keesara	9854	16°43'00" N	80°19'00" E	27.500	35.810	24.07.89	09/63 to 5/96	26.06.64	02.07.65	01.01.72
3	Madhira	1850	16°50'00" N	80°24'00" E	44.500	51.220	12.08.86	02/84 to 5/96	07.06.84	N.A.	01.06.92
4	P.S. Gudem	2720	17°26'15" N	79°57'20" E	144.000	154.250	23.07.89	08/87 to 5/96	01.09.87	N.A.	N.A.
5	Paleru Bridge	2928	16°57'00" N	80°03'00" E	70.357	78.877	23.07.89	05/64 to 5/96	01.07.64	N.A.	01.06.92
6	Wadenapalli	235544	16°47'00" N	80°04'00" E	22.054	38.634	06.08.67	05/64 to 5/96	10.12.64	01.12.66	01.01.72
7	Dameracherla	11501	16°45'00" N	79°53'00" E	55.000	62.040	24.07.89	07/68 to 5/96	27.07.68	N.A.	01.01.80
8	Pondugala	221220	16°20'00" N	79°20'00" E	42.334	57.234	01.10.78	11/75 to 5/96	13.11.75	01.12.75	01.12.75
9	Halia	3100	16°46'00" N	79°21'00" E	129.000	134.405	23.09.91	02/84 to 5/96	11.07.84	N.A.	01.06.92
10	Lakshampuram	2400	15°45'30" N	78°04'30" E	286.300	288.750	22.10.87	06/84 to 5/96	13.09.84	N.A.	N.A.
11	Bawapuram	67180	15°53'00" N	77°57'00" E	270.245	280.500	19.11.92	03/64 to 5/96	01.04.64	01.06.65	01.01.72
12	Mantralayam	60630	15°56'00" N	77°21'00" E	306.000	315.800	18.11.92	03/72 to 5/96	01.06.72	26.07.77	01.08.77
13	T. Ramapuram	23500	15°38'00" N	76°58'00" E	349.368	354.330	14.10.71	07/63 to 5/96	23.08.64	N.A.	01.01.80
14	Amkundibridge	1725	14°45'00" N	76°45'00" E	508.235	510.990	25.09.89	08/79 to 5/96	03.06.80	N.A.	01.08.86
15	Bhupasamudram	15026	14°37'00" N	76°58'00" E	477.005	474.110	12.09.81	12/78 to 5/96	01.12.78	N.A.	01.10.86
16	Kellodu	4320	13°45'00" N	76°20'00" E	97.750	103.150	17.11.92	06/90 to 5/96	11.07.90	N.A.	N.A.
17	Oollenur	33018	15°28'00" N	76°42'00" E	370.008	380.268	18.11.92	06/72 to 5/96	10.07.72	21.12.72	01.02.73
18	Marol	4901	14°56'00" N	75°35'00" E	507.551	517.600	18.11.92	02/65 to 5/96	01.02.66	16.09.72	01.02.73
19	Harlahalli	14582	14°48'00" N	75°39'00" E	507.436	518.350	18.11.92	03/64 to 5/96	13.12.66	01.11.72	01.11.72
20	Byladahalli	2300	14°26'30" N	75°47'15" E	530.400	538.450	17.11.92	03/85 to 5/96	11.06.85	N.A.	02.06.86
21	Kuppelur	1850	14°30'00" N	75°37'45" E	93.000	101.220	16.07.94	06.90 to 5/96	24.07.90	N.A.	N.A.
22	Honnali	7075	14°15'00" N	75°45'00" E	533.900	546.470	16.07.94	06/78 to 5/96	06.06.80	N.A.	02.06.86
23	Shimoga	2831	13°56'00" N	75°35'00" E	556.500	565.040	03.08.82	06/71 to 5/96	22.01.72	14.09.72	01.01.73
24	Krishna Agraharam	132920	16°15'00" N	77°52'00" E	270.000	281.260	21.07.94	06/81 to 5/96	30.08.81	01.06.82	01.06.82
25	Yadgir	69863	16°44'00" N	77°08'00" E	350.503	361.920	07.09.69	09/63 to 5/96	11.11.64	01.06.65	01.01.72
26	Malkhed	7650	17°12'35" N	77°09'25" E	390.000	400.030	16.08.90	09.89 to 5/96	15.08.90	08.09.92	01.06.92
27	Chincholi	830	17°45'00" N	76°41'00" E	536.300	532.800	17.07.89	06/79 to 5/96	02.08.79	N.A.	N.A.
28	Jewangi	1920	17°15'00" N	77°28'00" E	421.100	426.960	15.08.90	11/78 to 5/96	24.11.78	N.A.	N.A.
29	Boriomerga	1640	17°29'00" N	76°14'00" E	427.000	434.950	15.08.83	06/79 to 5/96	25.07.79	N.A.	N.A.
30	Wadakbal	12092	17°32'00" N	75°53'00" E	416.883	428.560	29.09.89	07/63 to 5/96	06.08.64	01.06.65	01.09.72

Table No.1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level	Date of Occurrence		Discharge (MCM)	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
VI Basin : Krishna											
31	Takli	33916	17°24'00" N	75°51'00" E	409.278	423.110	01.08.67	07/63 to 5/96	10.08.64	01.12.66	01.09.72
32	Kokangaon	1640	17°18'00" N	75°49'00" E	452.000	458.350	27.09.79	07/79 to 5/96	25.07.79	N.A.	N.A.
33	Shirdhon	630	17°24'00" N	75°32'00" E	437.000	442.200	26.09.79	07/79 to 5/96	26.07.79	N.A.	N.A.
34	Narsingpur	22856	17°58'00" N	75°08'00" E	448.243	461.590	30.07.67	06/64 to 5/96	22.02.66	N.A.	N.A.
35	Sarati	7200	17°54'00" N	75°02'00" E	468.128	476.790	08.08.76	08/63 to 5/96	16.08.65	01.06.66	01.09.72
36	Dhond	11660	18°28'00" N	74°34'00" E	496.000	508.340	02.08.76	05/67 to 5/96	24.11.67	N.A.	N.A.
37	Phulgaon	20205	18°40'00" N	74°02'00" E	81.000	90.450	14.07.94	07/86 to 5/96	21.07.92	N.A.	02.08.93
38	Huvinhedgi	55150	16°27'00" N	76°51'00" E	342.240	355.120	21.07.94	02/76 to 5/96	01.02.76	01.06.76	01.02.76
39	Talikota	2486	16°28'22" N	76°17'23" E	48.000	-	-	03/90 to 5/96	21.09.95	N.A.	N.A.
40	Cholachguda	9373	15°52'00" N	75°43'00" E	522.500	535.600	18.11.92	06/82 to 5/96	01.06.82	01.06.82	01.06.82
41	Navalgund	2952	15°33'00" N	75°22'00" E	558.000	565.260	30.09.92	03/90 to 5/96	16.06.91	N.A.	N.A.
42	Bagalkot	8610	16°13'00" N	75°44'00" E	506.047	513.030	19.07.94	10/63 to 5/96	20.04.67	03.08.72	01.08.72
43	Gokakfalls	2770	16°10'00" N	74°49'00" E	536.004	546.560	16.07.94	03/71 to 5/96	14.07.71	N.A.	N.A.
44	Gotur	1100	16°13'00" N	74°31'00" E	615.830	626.470	28.06.83	06/79 to 5/96	17.06.80	N.A.	N.A.
45	Daddi	1150	16°04'00" N	74°28'00" E	674.153	681.000	27.06.83	12/78 to 5/96	01.12.78	N.A.	N.A.
46	Galgali	22560	16°25'00" N	75°26'00" E	503.310	517.870	21.07.94	02/76 to 5/96	01.02.76	07.08.78	01.01.80
47	Pandegaon	690	16°56'00" N	74°56'00" E	576.785	582.250	26.09.79	08/79 to 5/96	06.10.79	N.A.	N.A.
48	Sadarga	2322	16°34'00" N	74°31'00" E	525.160	538.950	29.06.83	06/64 to 5/96	24.06.69	N.A.	N.A.
49	Bastewad	640	16°27'00" N	74°21'00" E	535.100	546.860	28.06.83	06/79 to 5/96	27.08.79	N.A.	N.A.
50	Vandur	550	16°34'00" N	74°17'00" E	531.000	542.020	24.07.89	03/79 to 5/96	18.07.79	N.A.	N.A.
51	Terwad	2425	16°44'00" N	74°35'00" E	520.000	538.740	17.07.94	03/79 to 5/96	22.08.79	N.A.	N.A.
52	Kurunwad	15190	16°36'00" N	75°12'00" E	519.455	538.115	17.07.94	05/72 to 5/96	20.05.72	N.A.	N.A.
53	Arjunwad	12660	16°33'00" N	74°38'00" E	523.225	541.225	17.07.94	09/63 to 5/96	21.09.67	N.A.	N.A.
54	Samdoli	1948	16°51'00" N	74°30'00" E	528.594	544.354	29.07.67	09/63 to 5/96	01.12.64	N.A.	N.A.
55	Karad	5462	17°18'00" N	74°18'00" E	549.962	567.162	07.06.76	12/64 to 5/96	21.06.65	22.06.65	01.09.72
56	Warunji	1890	17°16'00" N	74°10'00" E	549.437	568.047	06.06.76	08/63 to 5/96	13.01.66	01.06.74	01.06.74
57	Koyananagar	920	17°23'00" N	73°44'00" E	568.000	580.670	02.09.94	07.72 to 5/96	15.10.72	N.A.	N.A.

Source: Water Year Book for 1995-96

N.A. : Not Applicable

Table No.1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge (MCM)	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
VII Basin : Cauvery											
1	Musiri	66243	10°56'36"N	78°26'06"E	82.000	86.725	13.11.77	2/71 to 5/2000	01.06.72	31.03.73	01.06.78
2	Nallamaranpatti	9080	10°52'51"N	77°59'05"E	129.000	135.300	10.11.93	7/77 to 5/2000	23.01.78	10.12.78	16.08.78
3	Kodumudi	53233	11°04'52"N	77°53'27"E	121.570	128.140	9.12.72	5/71 to 5/2000	21.06.71	11.07.72	01.06.78
4	Savandapur	5776	11°31'18"N	77°30'36"E	179.000	189.560	5.11.78	6/77 to 5/2000	17.07.78	24.04.79	02.04.79
5	Tengumarahada	1370	11°34'20"N	76°55'15"E	336.650	341.650	30.10.91	10/78 to 5/2000	02.04.79	-	01.06.79
6	Nellithurai	1475	11°17'16"N	76°53'35"E	301.000	309.450	15.11.92	5/78 to 5/2000	01.06.79	-	01.06.79
7	Urachikottai	44100	11°28'40"N	77°42'05"E	154.000	165.920	12.9.81	6/78 to 5/2000	05.08.79	-	01.06.79
8	Biligundulu	36682	12°10'48"N	77°43'48"E	255.000	265.840	30.7.91	7/71 to 5/2000	30.08.71	06.09.72	01.06.78
9	Kanakpara	3425	12°32'45"N	77°25'40"E	614.000	619.925	2.10.84	7/78 to 5/2000	09.09.78	-	01.06.79
10	T.K Halli	7890	12°25'00"N	77°11'36"E	580.000	585.950	3.10.84	6/78 to 5/2000	12.06.78	01.06.85	02.06.79
11	Kollegal	21082	12°11'21"N	77°06'00"E	622.000	630.250	30.7.91	1/71 to 5/2000	06.02.71	15.03.72	01.06.78
12	T.Narsipur	7000	12°13'48"N	76°53'46"E	635.000	642.300	5.7.81	2/71 to 5/2000	12.03.71	20.03.72	01.06.78
13	Muthankera	1260	11°50'00"N	76°07'00"E	705.000	712.840	22.6.92	4/72 to 5/2000	23.05.72	15.02.74	01.6.78
14	Kattemalalavadi	1330	12°20'45"N	76°17'18"E	765.000	771.250	14.7.94	2/78 to 5/2000	26.06.79	-	01.07.79
15	M.H. Halli	3050	12°49'06"N	76°08'00"E	838.000	846.655	28.7.91	10/77 to 5/2000	16.10.78	01.06.94	01.12.80
16	Kudige	1934	12°30'09"N	75°57'43"E	809.000	820.410	3.7.80	12/71 to 5/2000	01.05.72	15.06.72	01.06.78

Source:Water Year Book for 1999-2000

Table No.1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge (MCM)_	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
VIII Basin : East Flowing Rivers											
1	Thammavaram	7889	15°56'00"N	79°57'00"E	13.365	20.490	14.05.79	09/77 to 5/2000	09.09.77	01.06.79	01.06.79
2	K.Bitragunda	2420	15°18'10"N	80°00'15"E	0.200	6.470	19.10.96	09/89 to 5/2000	06.06.90	-	-
3	Nellore	50800	14°28'10"N	79°59'20"E	43.500	51.450	18.11.91	08/87 to 5/2000	28.08.87	-	01.09.88
4	Chennur	37981	14°34'20"N	78°48'00"E	115.805	123.545	16.07.89	07/89 to 5/2000	13.07.89	08.08.89	01.09.80
5	Alladupalli	8758	14°42'40"N	78°42'40"E	94.000	102.925	03.10.96	07/85 to 5/2000	21.08.85	11.07.96	01.07.87
6	Singavaram	6262	14°35'50"N	78°01'00"E	256.465	261.085	07.07.89	09/79 to 5/2000	06.11.79	-	15.09.81
7	Tadapatri	12482	14°55'20"N	78°01'10"E	223.650	230.340	04.11.75	08/71 to 5/2000	12.12.71	-	01.09.79
8	Nagalamadike	5050	14°11'20"N	77°22'20"E	544.550	550.500	12.09.88	02/78 to 5/2000	11.07.78	-	01.06.80
9	Nandipalli	2486	14°42'50"N	79°01'20"E	95.000	104.300	09.10.96	06/90 to 5/2000	18.06.90	-	-
10	Kamalapuram	7187	14°34'50"N	78°40'40"E	135.650	139.250	29.10.96	06/90 to 5/2000	16.06.90	-	-
11	Naidupeta	2650	13°56'50"N	79°53'50"E	20.130	25.950	14.11.84	09/77 to 5/2000	19.10.77	-	01.12.80
12	Sullurpet	5927	13°42'40"N	80°00'30"E	13.000	20.200	18.10.96	10/88 to 5/2000	05.10.88	-	01.12.88
13	Chengalpattu	16230	12°39'00"N	79°56'50"E	26.000	29.500	14.11.85	09/77 to 5/2000	01.10.78	-	01.06.79
14	Magaral	1803	12°42'30"N	79°45'00"E	58.000	62.260	13.11.85	11/71 to 5/2000	25.11.71	-	01.11.83
15	Arcot	10174	12°54'50"N	79°20'00"E	159.000	161.180	18.11.91	09/79 to 5/2000	20.09.79	-	01.06.88
16	Avaramkuppam	3300	12°41'03"N	78°32'13"E	365.275	368.820	30.10.91	06/78 to 5/2000	10.07.78	-	01.08.79
17	Villupuram	12900	11°52'14"N	79°27'34"E	42.000	46.550	09.12.72	03/71 to 5/2000	09.10.72	-	01.01.87
18	Vazhavachanur	10780	12°03'55"N	78°58'42"E	133.000	139.650	15.11.91	04/78 to 5/2000	21.07.78	-	01.10.90
19	Gummanur	4620	12°33'18"N	78°08'20"E	490.000	495.050	11.09.81	06/78 to 5/2000	20.09.78	26.08.81	20.09.78
20	Kudalaiyathur	7890	11°25'20"N	79°28'20"E	41.000	49.100	11.10.96	09/89 to 5/2000	15.11.89	-	01.06.93
21	Paramakudi	6796	09°33'11"N	78°35'10"E	38.000	41.475	20.11.79	05/71 to 5/2000	03.11.71	-	05.11.87
22	Theni	1200	09°59'58"N	77°29'06"E	278.000	285.670	14.11.92	12/77 to 5/2000	07.06.78	29.01.79	15.07.78
23	Irrukkankudi	3721	09°19'26"N	77°59'25"E	46.000	51.100	15.12.98	09/89 to 5/2000	25.11.89	-	01.06.93
24	Murappanadu	4380	08°42'52"N	77°50'11"E	14.025	22.880	14.11.92	08/77 to 5/2000	23.11.77	15.02.79	15.08.78
25	A.P.Puram	1095	08°54'04"N	77°38'55"E	61.000	69.570	11.12.98	06/78 to 5/2000	14.12.79	-	01.06.93

Source: Water Year Book for 1999-2000

Table No.1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
IX Basin : West Flowing Rivers											
1	Badlapur	785	19°10'00" N	73°15'00" E	9.017	19.467	24.07.89	02/88 to 5/2000	16.02.88	-	02.07.93
2	Mangaon	259	18°14'00" N	73°17'00" E	3.905	10.255	24.07.89	12/86 to 5/2000	01.12.86	-	02.07.93
3	Anjanari	315	16°56'00" N	73°31'30" E	11.000	18.250	16.07.99	07/87 to 5/2000	08.08.91	-	-
4	Adavali	835	16°12'00" N	73°34'00" E	95.000	106.750	23.07.89	05/85 to 5/2000	05.12.86	-	04.08.92
5	Ganjim	880	15°28'15" N	74°06'00" E	0.000	12.520	29.07.82	05/71 to 5/2000	26.05.71	-	-
6	Collem	117	15°20'20" N	74°15'00" E	65.000	72.885	28.07.82	05/71 to 5/2000	26.05.71	-	-
7	Kolad	294	18°25'00" N	73°13'00" E	7.000	15.050	16.07.99	7/96 to 5/2000	13.09.96	-	-
8	Nagothane	420	18°32'00" N	73°10'00" E	2.000	13.950	16.09.99	7/96 to 5/2000	25.09.96	-	-
9	Pen	125	18°44'00" N	73°07'00" E	7.000	17.000	16.07.99	7/96 to 5/2000	17.09.96	-	-
10	Santeguli	1090	14°26'00" N	74°35'10" E	8.000	18.880	12.04.92	05/88 to 5/2000	09.06.88	-	01.09.93
11	Haladi	583	13°34'52" N	74°51'09" E	2.000	9.050	18.07.99	07/84 to 5/2000	30.12.85	-	01.09.93
12	Yennehole	327	14°18'40" N	74°58'57" E	15.000	24.140	30.07.94	07/89 to 5/2000	24.07.89	-	01.09.93
13	Bantwal	3184	12°53'04" N	75°02'35" E	1.000	13.550	26.07.74	10/70 to 5/2000	01.11.70	22.06.72	15.06.78
14	Erinjipuzha	957	12°29'00" N	75°08'50" E	9.100	19.080	12.07.95	07/84 to 5/2000	25.06.85	13.06.88	01.07.88
15	Perumannu	1070	11°58'10" N	75°35'15" E	3.470	14.500	24.07.89	05/84 to 5/2000	25.06.85	26.07.86	02.06.86
16	Kuniyal	1876	11°14'26" N	76°01'32" E	0.000	10.630	14.07.94	06/78 to 5/2000	04.01.79	21.01.79	15.01.79
17	Karathodu	750	11°03'25" N	76°02'18" E	2.000	13.430	15.07.94	12/85 to 5/2000	20.06.86	22.06.89	01.12.88
18	Kumbidi	5755	10°51'00" N	76°02'00" E	4.000	9.665	27.06.85	06/78 to 5/2000	08.01.79	24.06.80	03.12.79
19	Pulamanthole	940	10°53'50" N	76°11'50" E	10.400	19.070	14.07.94	05/85 to 5/2000	17.02.86	28.08.86	02.06.86
20	Mankara	2775	10°45'40" N	76°29'20" E	45.000	51.550	14.11.92	05/84 to 5/2000	21.06.85	-	02.06.86
21	Pudur	1313	10°46'20" N	76°34'30" E	58.000	65.550	14.11.92	06/85 to 5/2000	02.09.85	-	02.06.86
22	Ambarampalyam	950	10°36'00" N	76°59'00" E	217.000	226.830	19.11.79	09/77 to 5/2000	09.03.78	-	01.08.78
23	Arangali	1342	10°16'50" N	76°18'55" E	0.000	7.620	27.06.85	02/78 to 5/2000	27.04.78	08.07.80	01.08.78
24	Neeswaram	4234	10°11'00" N	76°30'00" E	1.000	11.105	27.07.74	01/71 to 5/2000	16.03.71	26.09.72	15.06.78
25	Ramamangalam	1208	09°50'00" N	76°28'00" E	0.000	8.305	28.06.85	02/78 to 5/2000	25.04.78	20.02.79	15.08.78
26	Kalampur	405	09°59'25" N	76°37'50" E	5.000	13.730	02.08.94	11/85 to 5/2000	23.06.86	01.06.88	01.06.88
27	Kidangoor	615	09°40'30" N	76°36'20" E	-1.200	8.015	03.08.94	06/85 to 5/2000	02.07.85	01.06.87	02.06.86
28	Kallooppara	731	09°24'10" N	76°39'00" E	0.000	9.260	03.08.94	06/85 to 5/2000	19.06.85	19.05.86	02.06.86
29	Malakkara	1713	09°19'45" N	76°39'50" E	-1.000	7.820	03.08.94	05/84 to 5/2000	19.06.85	18.06.86	01.07.86
30	Thumpamon	810	09°13'40" N	76°42'40" E	5.000	13.735	07.11.78	12/77 to 5/2000	28.01.78	23.03.81	15.10.78
31	Pattazhi	1210	09°04'00" N	76°45'40" E	3.000	13.805	15.11.92	04/78 to 5/2000	20.04.78	25.09.80	15.10.78
32	Ayilam	540	08°42'55" N	76°51'15" E	0.000	10.685	10.10.92	06/78 to 5/2000	18.12.78	26.12.78	02.01.79

Source: Water Year Book for 1999-2000

Table No.1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage	Latitude	Longitude	Zero of	Stage Record		Reference Period	Date of Establishment		
		Area (Km ²)			Gauge (m)	Peak Water Level (m)	Date of Occurrence		Discharge (MCM)	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
X Basin : Tapi											
1	Dedtalai	6660	21°30'47"N	76°45'26"E	270.000	293.000	15.09.98	1/77 to 5/99	12.12.77	24.01.84	01.08.79
2	Burhanpur	9170	21°17'54"N	76°14'10"E	213.000	239.500	29.08.78	6/72 to 5/99	14.09.72	23.12.72	01.06.77
3	Lakhpuri	3560	20°50'44"N	77°21'38"E	259.000	271.015	10.08.79	2/77 to 5/99	18.02.77	-	03.11.86
4	Gopalkheda	9500	20°52'27"N	76°59'29"E	236.000	252.100	10.08.79	2/77 to 5/99	17.02.77	30.07.77	01.08.79
5	Yerli	16517	20°56'09"N	76°28'33"E	213.000	234.840	1959	11/71 to 5/99	01.03.72	09.04.73	01.06.77
6	Dapuri	8901	20°55'38"N	75°29'37"E	188.000	197.815	1969	9/71 to 5/99	21.01.72	01.07.73	01.06.77
7	Savkheda	48136	21°08'53"N	75°14'27"E	141.000	166.080	15.09.59	4/72 to 5/99	10.04.72	01.11.72	01.06.77
8	Malkheda	1830	21°03'23"N	75°04'18"E	170.000	175.610	10.10.92	7/76 to 5/99	02.11.77	-	01.09.77
9	Gidhade	54750	20°54'33"N	74°42'04"E	265.000	268.500	22.09.88	6/69 to 5/99	15.06.90	13.07.84	01.09.90
10	Sarangkheda	58400	21°17'41"N	74°48'33"E	119.000	138.820	07.09.74	7/76 to 5/99	19.10.72	-	01.01.80
11	Morane	1933	21°25'42"N	74°31'38"E	108.000	123.640	08.09.94	3/78 to 5/99	28.03.78	29.08.86	01.07.86
12	Ghala	63325	21°17'50"N	73°01'31"E	1.870	19.835	17.09.98	8/77 to 5/99	01.06.78	-	01.08.83

Source: Water Year Book for 1998-99

Table No.1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge (MCM)	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
XI Basin : Narmada											
1	Chandwada	3846	22°01'48"	73°25'30"	18.000	49.600	06.08.1989	1/79 to 5/2000	01.11.1979	01.08.1988	15.03.1980
2	Gurudeshwar	87892	21°53'11"	73°39'09"	10.000	41.645	06.09.1970	12/71 to 5/2000	23.03.1972	21.01.1973	15.06.1977
3	Dhulsar	787	22°12'00"	74°52'00"	151.000	159.215	1994	6/99 to 5/2000	15.03.1999	-	-
4	Pati	2151	21°57'00"	74°45'30"	187.000	192.190	18.06.1999	6/99 to 5/2000	23.02.1999	-	-
5	Rajghat	77674.1	22°04'32"	74°51'15"	110.000	134.510	31.08.1973	11/71 to 5/2000	17.01.1972	23.06.1972	15.06.1979
6	Mandaleshwar	72809.3	22°10'06"	75°39'36"	138.000	158.900	1822	12/70 to 5/2000	28.08.1971	14.04.1972	18.06.1979
7	Kogaon	3919	22°06'00"	75°41'00"	151.000	163.010	1979	2/78 to 5/2000	01.07.1978	-	15.09.1986
8	Mortakka	67184	22°13'30"	76°02'20"	153.000	173.736	16.09.1961	6/78 to 5/2000	01.07.1999	23.08.1999	01.09.1999
9	Handia	54027	22°29'18"	77°00'00"	258.000	274.000	1973	2/77 to 5/2000	26.04.1977	11.12.1977	01.08.1979
10	Chhidgaon	1729	22°25'00"	77°20'00"	287.000	301.000	1962	12/76 to 5/2000	22.12.1976	-	16.09.1986
11	Hoshangabad	44548	22°46'29"	77°43'00"	282.000	301.330	1973	5/72 to 5/2000	16.09.1972	29.12.1972	15.07.1979
12	Sandia	33953.5	22°55'00"	78°21'00"	297.000	318.550	1973	3/78 to 5/2000	18.04.1978	09.08.1978	15.09.1979
13	Gadarwara	2270	22°06'00"	75°41'00"	321.000	333.012	1973	2/77 to 5/2000	01.02.1977	15.06.1978	16.08.1979
14	Barmanghat	26453	22°01'36"	79°00'54"	306.000	336..75	1926	12/70 to 5/2000	20.11.1974	27.08.1972	01.06.1979
15	Belkheri	1508	22°54'54"	79°20'24"	340.000	359.950	21.07.1994	3/77 to 5/2000	16.03.1977	-	01.09.1986
16	Patan	3950	23°18'30"	79°39'45"	89.000	356.080	13.09.1992	8/79 to 5/2000	30.08.1979	-	01.09.1986
17	Jamtara	17157	23°05'12"	79°57'06"	360.000	382.000	24.08.1991	10/71 to 5/2000	22.02.1972	15.07.1972	01.06.1979
18	Hriday Nagar	3133	22°32'36"	80°23'00"	436.000	448.455	1926	11/76 to 5/2000	21.11.1976	26.08.1992	01.09.1986
19	Bamni	1864	22°29'00"	80°22'00"	440.000	486.600	23.08.1999	6/99 to 5/2000	30.11.1999	-	-
20	Mohgaon	3919	22°45'42"	80°37'30"	447.000	463.620	23.08.1991	1/77 to 5/2000	13.01.1977	27.08.1992	16.09.1986
21	Manot	4667	22°44'00"	80°31'00"	442.000	468.000	1926	12/76 to 5/2000	16.12.1976	09.11.1979	01.01.1980
22	Dindori	2292	22°57'00"	81°05'00"	660.000	669.640	23.08.1991	6/88 to 5/2000	01.08.1988	-	15.03.1990
23	Bijora	14561	22°55'30"	79°55'30"	366.000	380.900	-	6/99 to 5/2000	1951	1980	-

Source : Water Year Book for 1999-2000

Table No.1.4 : Sitewise Important Historical Observations for Different River Basins

Sl. No.	Site Name	Drainage Area (Km ²)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge (MCM)	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
XII Basin : Mahi, Sabarmati & Other Rivers of Saurashtra Kutch.											
1	Khanpur	35510	22°31'55"N	73°08'27"E	8.220	28.270	24.08.90	12/78 to 5/98	21.12.78	01.06.87	01.01.79
2	Chakaliya	3121	23°02'58"N	74°19'14"E	180.000	192.500	17.07.93	2/91 to 5/98	13.02.91	-	-
3	Paderdibadi	16247	23°46'03"N	74°08'12"E	131.000	147.040	19.08.84	9/77 to 5/98	24.06.78	21.07.80	01.07.78
4	Rangeli	8329	23°52'22"N	74°13'25"E	150.000	157.900	31.07.91	7/78 to 5/98	15.07.78	-	01.07.88
5	Dhariawad	1510	24°04'43"N	74°28'02"E	203.000	207.400	31.07.91	7/84 to 5/98	01.06.88	-	-
6	Mataji	3880	23°20'57"N	74°43'31"E	295.000	309.035	28.07.96	7/82 to 5/98	21.07.82	21.07.82	21.07.82
7	Nabhoi	20149	22°34'14"N	72°27'24"E	13.000	20.200	09.09.94	1/91 to 5/98	14.02.91	-	15.07.91
8	Kheda	7550	22°44'45"N	72°40'49"E	19.000	28.200	25.08.90	3/85 to 5/97	10.07.89	-	-
9	Ratanpur	2916	22°58'31"N	72°53'02"E	37.000	48.200	28.07.97	3/85 to 5/98	11.07.89	-	-
10	Derol Bridge	6724	23°34'24"N	72°48'00"E	89.000	95.830	17.07.93	8/80 to 5/98	01.06.91	25.09.92	15.07.92
11	Kheroj	3650	24°13'45"N	73°00'26"E	210.500	216.700	27.07.92	6/81 to 5/98	22.06.92	-	-
12	Gandhav	32010	24°59'22"N	71°40'49"E	31.000	37.625	07.07.90	6/74 to 5/98	24.06.74	-	-
13	Balotra	19000	25°49'18"N	72°13'23"E	102.000	108.755	18.07.79	7/90 to 5/98	11.07.90	-	-
14	Kamalpur	6960	23°47'59"N	71°45'00"E	34.000	38.980	08.09.92	7/71 to 5/98	25.07.71	25.08.73	01.07.77
15	Chitrasam	320	24°17'20"N	72°29'54"E	184.000	187.900	28.07.92	5/78 to 5/98	15.06.88	-	15.07.88
16	Sarotry	2200	24°22'04"N	72°32'48"E	186.000	194.310	01.09.73	6/80 to 5/98	12.06.80	-	-
17	Abu Road	1600	24°29'38"N	72°47'30"E	254.850	265.400	01.09.73	5/78 to 5/98	10.05.78	-	01.07.88
18	Lowara	3953	21°26'36"N	71°33'42"E	56.000	66.930	09.11.82	11/70 to 5/98	29.11.70	25.07.73	01.07.77
19	Ganod	6266	21°39'53"N	70°12'52"E	26.000	34.100	22.06.83	11/70 to 5/98	14.11.70	07.07.73	01.07.77
20	Gungan	2137	20°57'42"N	70°45'52"E	8.000	24.595	11.08.79	9/70 to 5/98	09.12.70	-	-
21	Sapawada	2125	23°32'54"N	72°00'52"E	36.000	43.000	27.06.97	8/89 to 5/98	31.08.89	-	-
22	Mahuwa	1995	21°02'52"N	73°08'00"E	9.000	24.800	16.06.94	10/70 to 5/98	21.11.70	18.06.73	15.06.77
23	Gadat	1510	20°51'22"N	72°59'05"E	1.500	13.985	16.06.94	1/79 to 5/98	12.03.79	01.02.85	01.04.80
24	Durvesh	2019	19°42'45"N	72°50'50"E	0.000	14.700	31.07.76	10/70 to 5/98	26.01.71	26.01.71	01.06.77
25	Pongalwada	2400	22°06'17"N	73°04'44"E	2.000	19.250	09.09.94	4/89 to 5/98	30.06.89	-	15.03.90
26	Ozerkheda	640	20°06'01"N	73°16'16"E	80.100	90.400	15.08.83	6/83 to 5/98	15.06.84	-	-
27	Nauipalsam	764	20°12'10"N	73°16'52"E	95.000	107.890	13.07.93	6/82 to 5/98	13.10.83	-	-
28	Motinaroli	804	21°24'16"N	72°57'48"E	5.000	18.150	16.06.94	10/90 to 5/98	17.10.90	-	01.07.91

Source: Water Year Book for 1997-98

Table No.1.5 : Sitewise Monsoon, Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
I Basin Mahanadi													
1	Baronda	Monsoon	1754.98	534.95	172.07	223.29	2968.42	1675.31	2173.34	1141.09	2924.68	1033.22	637.74
		Non-Monsoon	6.64	9.31	1.71	4.48	20.26	4.88	7.46	5.81	25.96	9.01	8.18
		Annual	1761.63	544.25	173.79	227.77	3008.68	1580.19	2180.81	1146.90	2950.64	1042.23	548.93
2	Rajim	Monsoon	4868.26	896.55	409.18	507.69	7051.59	3503.26	3814.11	1872.40	7273.24	2343.66	1598.16
		Non-Monsoon	20.88	33.89	9.48	16.08	41.54	10.41	22.75	15.47	51.29	29.22	20.32
		Annual	4889.14	930.43	418.66	523.77	7093.12	3513.67	3835.85	1887.67	7324.53	2372.88	1616.48
3	Basantpur	Monsoon	24966.46	10193.50	10593.43	9225.38	32703.09	19507.70	16736.99	16319.15	51709.12	18727.79	11845.12
		Non-Monsoon	664.95	555.64	225.77	336.65	1980.85	958.48	1012.36	826.84	2022.93	1131.00	1116.88
		Annual	25631.40	10749.14	10819.20	9562.03	34683.94	20466.18	17749.36	17146.00	53732.06	19858.78	12961.98
4	Kotni	Monsoon	3760.01	564.74	859.01	396.63	4276.12	1898.03	1585.95	1283.64	5161.94	2518.77	826.98
		Non-Monsoon	12.48	12.84	0.54	0.09	49.50	4.20	5.51	43.67	144.78	20.69	3.53
		Annual	3772.49	577.58	859.55	396.71	4325.62	1902.23	1591.46	1327.31	6306.72	2539.46	830.51
5	Pathardih	Monsoon	Observation started				2004.11	1088.42	1424.81	810.16	2094.66	1335.81	1012.76
		Non-Monsoon	with effect from				22.03	18.70	9.28	28.76	51.75	37.98	10.54
		Annual	year 1990-91				2026.14	1107.12	1434.09	838.91	2146.41	1373.79	1023.30
6	Simga	Monsoon	7135.73	1552.48	2058.78	1862.59	9771.87	4432.64	3938.90	3300.61	13531.51	5603.87	2761.61
		Non-Monsoon	181.85	177.80	44.52	68.81	173.48	76.64	49.17	101.96	227.28	129.15	73.81
		Annual	7317.58	1730.28	2103.30	1931.40	9945.35	4509.28	3988.07	3402.57	13758.79	5733.02	2835.42
7	Andhiyarkore	Monsoon	212.28	173.34	493.51	175.26	791.76	293.60	254.44	145.85	841.35	324.13	264.79
		Non-Monsoon	26.03	24.79	18.24	18.07	39.39	13.99	10.17	12.03	38.00	31.16	17.71
		Annual	238.32	198.13	511.75	193.33	831.16	307.58	264.61	157.88	879.35	355.29	282.50
8	Ghatora	Monsoon	918.33	534.39	954.16	481.88	1383.06	949.92	648.44	1283.72	3093.06	991.31	1054.43
		Non-Monsoon	32.95	22.20	15.77	16.09	39.07	18.48	9.88	24.20	51.10	23.05	15.00
		Annual	951.28	556.60	969.93	497.97	1422.14	968.40	658.33	1307.92	3144.16	1014.36	1069.43

Table No.1.5 : Sitewise Monsoon, Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
I Basin Mahanadi													
9	Jondhra	Monsoon	12067.66	3831.45	5241.59	4252.17	16244.61	6815.08	5877.91	7521.31	21647.03	7946.72	6139.33
		Non-Monsoon	311.96	254.54	97.56	88.53	338.09	143.90	98.88	194.74	426.66	172.51	102.31
		Annual	12379.62	4085.99	6339.15	4340.70	16582.69	6958.98	5976.79	7716.05	22073.69	8119.23	6241.64
10	Rampur	Monsoon	1661.57	807.69	270.98	660.53	2453.62	894.47	1724.47	1304.36	3455.41	979.67	434.85
		Non-Monsoon	9.03	7.73	1.03	2.66	15.66	2.63	3.90	6.94	10.08	9.05	0.43
		Annual	1670.60	815.43	272.00	663.19	2469.29	897.10	1728.37	1311.30	3465.49	988.72	435.28
11	Manendragarh	Monsoon	Observation started with effect			195.69	571.21	446.19	234.98	293.49	673.55	318.45	331.85
		Non-Monsoon	from year 1989-90			9.56	17.10	8.33	2.74	14.30	19.51	50.05	13.85
		Annual				205.25	588.32	454.52	237.72	307.79	693.07	368.50	345.70
12	Bamnidhi	Monsoon	5131.25	3765.86	2952.04	2406.06	3905.91	4209.30	1621.40	1982.40	11103.96	1974.94	2845.58
		Non-Monsoon	193.31	167.67	82.39	151.91	1424.32	807.98	1018.87	384.98	1143.90	548.59	800.80
		Annual	5324.56	3933.53	3034.43	2557.98	5330.23	5017.27	2640.28	2367.38	12247.86	2523.53	3646.38
13	Kurubhata	Monsoon	2444.58	2083.54	2209.87	2097.36	2656.40	3117.01	1577.11	2660.91	4275.61	1768.94	2888.65
		Non-Monsoon	104.01	114.87	50.33	98.87	199.62	131.94	39.47	66.97	162.60	65.65	78.21
		Annual	2548.58	2198.40	2260.20	2196.24	2856.02	3248.94	1616.58	2727.88	4438.21	1834.59	2966.87
14	Surdergarh	Monsoon	2950.75	3118.41	3326.10	2294.47	3297.59	4383.92	1873.06	3089.88	5708.41	2458.00	4086.16
		Non-Monsoon	117.16	120.81	113.78	87.19	125.83	108.20	51.40	65.73	123.14	113.09	52.04
		Annual	3067.91	3239.22	3439.88	2381.66	3423.41	4492.12	1924.46	3155.61	5831.56	2571.09	4138.19
15	Salebhata	Monsoon	3050.87	690.26	566.59	1255.65	2473.74	1152.06	2293.78	1639.56	4043.66	1525.61	573.69
		Non-Monsoon	30.27	26.66	10.53	26.64	44.36	24.14	14.61	18.28	66.04	37.06	8.43
		Annual	3081.14	716.92	577.12	1282.29	2518.09	1176.20	2308.38	1657.84	4109.71	1562.68	582.12
16	Kesinga	Monsoon	5215.92	2569.16	2338.54	3173.06	14419.86	7942.77	7289.85	4463.90	10168.43	5684.10	2748.89
		Non-Monsoon	68.51	103.36	44.22	265.05	227.69	119.45	45.12	100.67	203.57	131.02	185.77
		Annual	5284.42	2672.52	2382.76	3441.11	14647.54	8062.22	7334.97	4564.57	10372.00	5815.12	2934.66

Table No.1.5 : Sitewise Monsoon, Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.

Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
I Basin Mahanadi													
17	Kantamal	Monsoon	10594.37	3271.69	3661.96	5781.34	21382.88	14660.07	12428.59	7693.25	20137.84	9299.67	3756.09
		Non-Monsoon	161.08	144.32	63.32	359.74	558.90	310.47	156.49	224.22	812.31	379.72	151.43
		Annual	10755.45	3416.01	3725.28	6141.08	21941.78	14970.53	12585.08	7917.47	20950.15	9679.39	3907.53
18	Sukma	Monsoon	Observation started with effect			327.95	955.78	494.51	1116.57	454.91	1417.91	815.22	88.14
		Non-Monsoon	from year 1989-90			6.24	16.42	5.40	1.28	4.84	13.96	6.81	0.00
		Annual				334.19	972.20	499.91	1117.85	459.74	1431.87	822.03	88.14
19	Pandigaon	Monsoon	Observation started with effect			803.00	1163.90	3773.40	3821.80	2556.20	3661.50	3327.30	1439.50
		Non-Monsoon	from year 1989-90			93.70	157.50	84.20	39.20	80.90	180.20	92.30	33.40
		Annual				896.70	1321.40	3857.60	3861.00	2637.10	3811.70	3419.60	1472.90
20	Tikarapara	Monsoon	55319.00	19814.00	21511.00	25379.00	65100.00	40699.00	42513.00	31188.00	118425.00	25920.00	19870.00
		Non-Monsoon	4288.00	4101.00	2363.00	3995.00	6678.00	4736.00	5211.00	5241.00	6823.00	5812.00	4804.00
		Annual	59607.00	23915.00	23874.00	29374.00	71778.00	45435.00	47724.00	36429.00	125248.00	31732.00	24674.00

Source: Office of the Superintending Engineer, CWC, Bhubaneswar

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
II Basin : Subarnarekha, Burhabalang & Baitarni													
a) Basin: Subarnarekha													
1	Ghatsila	Monsoon	3918.00	4959.00	6180.00	6579.00	9120.00	5013.00	3100.00	5413.00	13302.00	7911.00	4081.00
		Non-Monsoon	346.10	217.00	140.00	245.10	261.80	338.10	62.84	186.80	506.80	286.30	158.10
		Annual	4264.10	5176.00	6320.00	6824.10	9381.80	5351.10	3162.84	5599.80	13808.80	8197.30	4239.10
2	Muri	Monsoon	Dis. Obsn. Started from 1.11.89				3126.00	528.40	417.20	568.00	908.60	639.10	738.80
		Non-Monsoon					365.90	217.40	64.89	194.80	172.10	187.40	107.20
		Annual					3492.00	745.80	482.09	762.80	1080.70	826.50	846.00
3	Adityapur	Monsoon	1795.00	2008.00	2641.00	2590.00	4658.00	2049.00	1362.00	2863.00	5920.00	3428.00	1421.00
		Non-Monsoon	89.91	53.70	43.45	98.33	140.10	106.80	68.84	62.07	127.40	90.56	29.88
		Annual	1884.91	2061.70	2684.45	2688.33	4798.10	2155.80	1431.00	2925.07	6047.40	3518.56	1450.88
b) Basin: Burhabalang													
	Govindpur	Monsoon	Discharge observation started from 7.3.92					1837.00	2253.00	3428.00	3232.00	1403.00	
		Non-Monsoon						80.42	128.80	302.90	262.40	130.40	
		Annual						1917.42	2381.80	3730.90	3494.40	1533.40	
		Non-Monsoon											
c) Basin: Baitarani													
1	Champua	Monsoon	Discharge observation started from 20.7.90				943.10	990.90	389.70	905.40	1520.00	789.60	634.60
		Non-Monsoon					128.70	112.90	60.57	85.96	131.60	106.20	89.31
		Annual					1071.80	1103.80	450.27	991.36	1651.60	895.80	723.91
2	Anandapur	Monsoon	3713.00	1954.00	4113.00	5905.00	6245.00	5897.00	2535.00	4386.00	7356.00	4141.00	2282.00
		Non-Monsoon	215.40	224.70	99.87	177.00	202.00	245.80	143.00	176.50	518.50	386.00	227.30
		Annual	3928.40	2178.70	4212.87	6082.00	6447.00	6142.80	2678.00	4562.50	7874.50	4527.00	2509.30

Source: Office of the Superintending Engineer, CWC, Bhubaneswar

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.

Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
III Basin: Brahmani													
1	Jenapur	Monsoon	14019.00	11610.00	14466.00	11983.00	16684.00	19885.00	9425.00	12907.00	27517.00	11355.00	14171.00
		Non-Monsoon	3561.00	3720.00	2765.00	3095.00	3165.00	2691.00	1373.00	3918.00	3513.00	4009.00	2673.00
		Annual	17580.00	15330.00	17231.00	15078.00	19849.00	22576.00	10798.00	16825.00	31030.00	15364.00	16844.00
2	Panposh	Monsoon	Discharge Obsn. Started from 21.6.96										6545.00
		Non-Monsoon											331.90
		Annual											6876.90
3	Gomlai	Monsoon	9565.00	10478.00	11409.00	8432.00	12374.00	11336.00	4766.00	8727.00	21440.00	9713.00	7144.00
		Non-Monsoon	550.00	450.00	277.00	466.50	677.70	570.50	235.20	319.50	619.00	510.20	459.90
		Annual	10115.00	10928.00	11686.00	8898.50	13051.70	11906.50	5001.20	9046.50	22059.00	10223.20	7603.90
4	Tilga	Monsoon	1430.00	1812.00	2056.00	1204.00	1696.00	2054.00	1126.00	1876.00	3361.00	1594.00	1983.00
		Non-Monsoon	111.40	83.00	34.00	65.02	100.50	134.60	41.99	55.18	100.60	156.20	59.86
		Annual	1541.40	1895.00	2090.00	1269.02	1796.50	2189.00	1167.99	1931.18	3461.60	1750.20	2042.86
5	Jaraikela	Monsoon	4022.00	4770.00	4955.00	3525.00	5460.00	4307.00	1785.00	3460.00	7649.00	4160.00	3545.00
		Non-Monsoon	298.00	171.00	76.00	276.10	290.10	236.60	86.16	130.80	236.00	220.50	133.90
		Annual	4320.00	4941.00	5031.00	3801.10	5750.10	4543.60	1871.16	3590.80	7885.00	4380.50	3678.00

Source: Office of the Superintending Engineer, CWC, Bhubaneswar

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
IV Basin: Rushikulya, Vamsdhara, Saroda & Nagavali													
a) Basin: Rushikulya													
	Purushottampur	Monsoon	Discharge Obsn. started			1432.00	2451.00	1731.00	2810.00	1445.00	1739.00	3249.00	718.10
		Non-Monsoon	from 14.6.89				Not Observed		47.84	14.04	783.40	200.20	14.78
		Annual				1432.00	2451.00	1731.00	2857.84	1459.04	2522.40	3449.20	732.88
b) Basin: Vamsadhara													
	Kashinagar	Monsoon	2059.00	608.40	2333.00	1752.00	6381.00	3525.00	4329.00	1406.00	3020.00	3758.00	1059.00
		Non-Monsoon	168.00	118.40	68.00	604.40	503.90	259.70	286.10	120.70	939.10	305.40	118.50
		Annual	2227.00	726.80	2401.00	2356.00	6884.90	3784.70	4615.10	1526.70	3959.10	4063.40	1177.50
c) Basin: Nagavali													
	Srikakulam	Monsoon	Discharge Obsn. started				3126.00	3549.00	2940.00	1380.00	2241.00	2744.00	2553.00
		Non-Monsoon	from 25.8.90				365.90	333.00	233.90	84.46	793.10	215.50	169.70
		Annual					3492.00	3882.00	3173.90	1464.46	3034.10	2959.50	2722.70
d) Basin: Sarda													
	Ankapalli	Monsoon	Discharge Obsn. started			No flow	581.40	277.60	574.60	177.20	248.90	780.20	1106.00
		Non-Monsoon	from 16.8.89			No flow	31.70	20.20	58.90	9.81	97.92	54.62	37.31
		Annual				No flow	613.10	297.80	633.50	187.00	346.82	834.82	1143.31

Source: Office of the Superintending Engineer, CWC, Bhubaneswar

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

												Unit : M.C.M.	
Sl.No.	Site Name	Season	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
V Basin :Godavari													
1	Polavaram	Monsoon	169569.30	66016.30	82461.00	54206.70	152181.10	78914.00	52705.00	39260.00	68976.00	90084.00	72386.00
		Non-Monsoon	8751.60	5570.70	4476.30	3868.80	8368.00	7638.60	5856.00	7827.00	5846.00	6739.00	2901.00
		Annual	178320.90	71587.00	86937.30	58075.50	160549.10	86552.60	58560.00	47087.00	74822.00	96823.00	75287.00
2	Koida	Monsoon	177732.80	73352.90	85223.00	60129.40	135588.20	78382.80	57711.00	42358.00	87392.00	124082.00	85688.00
		Non-Monsoon	7698.20	6031.50	5845.20	3819.10	9070.00	7628.60	6392.00	10299.00	6235.00	6250.00	3701.00
		Annual	185431.00	79384.40	91068.20	63948.50	144658.20	86011.40	64103.00	52657.00	93627.00	130332.00	89389.00
3	Konta	Monsoon	20052.70	11220.80	10481.30	7978.10	17573.40	12896.10	10093.00	7723.00	11909.00	13065.00	13976.00
		Non-Monsoon	4079.60	4076.20	3817.90	2161.10	4748.20	4268.50	3899.00	3341.00	3044.00	3571.00	1981.00
		Annual	24132.30	15297.00	14299.20	10139.20	22321.60	17164.60	13992.00	11065.00	14952.00	16636.00	15957.00
4	Injaram	Monsoon	18436.70	8928.90	9531.60	6856.80	15674.40	9867.30	8936.00	5643.00	7092.00	12573.00	9805.00
		Non-Monsoon	2275.70	2155.80	1887.50	1445.60	2769.50	2278.00	2262.00	1772.00	1440.00	2019.00	1014.00
		Annual	20712.40	11084.70	11419.10	8302.40	18443.90	12145.30	11198.00	7415.00	8532.00	14592.00	10819.00
5	Potteru	Monsoon	-	-	-	-	-	-	-	1241.80	1145.70	1755.50	1244.10
		Non-Monsoon	-	-	-	-	-	-	-	684.00	729.60	1199.50	582.20
		Annual	-	-	-	-	-	-	-	1925.80	1875.30	2955.00	1826.30
6	Saradaput	Monsoon	7765.50	5046.10	4013.30	3523.30	7239.70	4927.70	3503.40	2764.30	2535.30	5027.30	3911.40
		Non-Monsoon	1105.30	1283.60	1094.40	666.00	1458.40	1270.00	1078.50	1019.00	553.50	639.50	306.80
		Annual	8870.80	6329.70	5107.70	4189.30	8698.10	6197.70	4581.90	3783.30	3088.80	5666.80	4218.10
7	Sangam	Monsoon	-	-	-	-	-	-	144.20	92.00	391.20	360.10	341.40
		Non-Monsoon	-	-	-	-	-	-	11.27	5.08	5.02	4.11	7.14
		Annual	-	-	-	-	-	-	155.47	97.10	396.30	364.20	348.50
8	Perur	Monsoon	134514.60	44000.10	61096.20	35587.00	106806.40	64129.00	39957.40	33302.10	62411.00	70545.80	63173.70
		Non-Monsoon	2890.30	1335.10	1408.80	1511.50	4521.10	2726.10	2240.60	6099.50	2399.30	2342.10	1167.40
		Annual	137404.90	45335.20	62505.00	37098.50	111327.50	66855.10	42198.00	39401.60	64810.30	72887.90	64341.10
9	Pathagudem	Monsoon	46323.10	18721.60	24532.80	15333.10	39013.40	20017.00	15819.20	12564.80	16151.90	26708.10	18177.10
		Non-Monsoon	972.40	670.60	397.90	355.00	1085.40	537.30	670.90	1490.50	456.80	403.70	196.20
		Annual	47295.50	19392.20	24930.70	15688.10	40098.80	20554.30	16490.10	14055.30	16608.70	27111.80	18373.30
10	Medapalli	Monsoon	5555.60	295.20	3433.50	3046.20	2095.20	1157.30	409.40	0.00	1428.30		
		Non-Monsoon	93.30	175.40	623.30	109.70	23.40	19.20	0.00	0.00	0.00		
		Annual	5648.90	470.60	4056.80	3155.90	2118.60	1176.50	409.40	0.00	1428.30		
												Discharge Observations not conducted	

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

												Unit : M.C.M.		
Sl.No.	Site Name	Season	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
V Basin :Godavari														
11	Madadapalli	Monsoon	44682.20	40004.90	34519.90	20865.20	54185.20	44926.80	47698.20	20525.50	27347.00			
		Non-Monsoon	755.50	840.00	3092.00	3762.40	5552.10	5148.40	2913.70	0.00	0.00	Discharge Observations not conducted		
		Annual	45437.70	40844.90	37611.90	24627.60	59737.30	50075.20	50611.80	20525.50	27347.00			
12	Tumnar	Monsoon	-	-	-	-	-	1103.90	522.00	1099.60	1673.90	841.90		
		Non-Monsoon	-	-	-	22.10	84.90	46.20	35.30	49.30	34.50	37.40	25.70	
		Annual	-	-	-	-	-	-	1139.10	571.30	1134.10	1711.30	867.60	
13	Chindanar	Monsoon	16437.50	9123.60	10185.30	6764.50	13660.30	9011.60	5888.40	4605.60	4017.20	24966.90	511.60	
		Non-Monsoon	601.20	340.70	296.20	205.00	526.40	205.10	391.20	941.10	97.90	75.50	Discharge Observations not conducted	
		Annual	17038.70	9464.30	10481.50	6969.50	14186.70	9216.70	6279.60	5546.70	4115.10	25042.40	170.00	
14	Cherribeda	Monsoon	-	-	-	-	-	-	-	117.30	107.30	505.20	172.80	
		Non-Monsoon	-	-	-	-	-	-	-	19.80	4.60	15.80	2.70	
		Annual	-	-	-	-	-	-	-	137.10	111.90	521.00	172.80	
15	Amabal	Monsoon	-	-	-	-	1062.00	896.60	746.20	520.40	409.90	943.90	511.60	
		Non-Monsoon	-	-	-	-	71.20	3.50	1.80	23.50	5.80	5.80	0.00	
		Annual	-	-	-	-	1133.20	900.10	748.00	543.90	415.70	949.70	511.60	
16	Sonarpal	Monsoon	-	-	-	-	-	-	643.10	342.00	402.70	826.60	549.20	
		Non-Monsoon	-	-	-	-	-	-	1.40	12.30	4.00	3.10	0.00	
		Annual	-	-	-	-	-	-	644.60	354.30	406.70	829.70	549.20	
17	Jagdapur	Monsoon	6649.10	4462.00	4137.70	2783.90	5766.60	3486.30	2053.10	2200.10	1299.90	2568.70	2021.40	
		Non-Monsoon	386.80	224.10	203.30	168.00	319.90	178.80	425.50	775.30	77.20	41.40	65.20	
		Annual	7035.90	4686.10	4341.00	2951.90	6086.50	3665.10	2478.60	2975.40	1377.10	2610.10	2086.70	
18	Kosagumta	Monsoon	-	-	-	-	-	-	-	79.10	441.70	726.90	713.30	
		Non-Monsoon	-	-	-	-	-	-	-	39.70	21.80	15.90	15.40	
		Annual	-	-	-	-	-	-	-	118.80	463.50	742.80	728.70	
19	Murthahandi	Monsoon	759.60	-	1392.60	1094.80	2901.90	1571.40	964.50	1072.20	694.90	1264.40	1308.70	
		Non-Monsoon	284.30	257.50	198.50	184.60	457.70	389.80	498.70	686.70	117.60	121.20	128.00	
		Annual	1043.90	-	1591.10	1279.40	3359.60	1961.20	1463.20	1758.90	812.50	1385.60	1436.70	
20	Nowrangpur	Monsoon	5431.00	3582.40	3243.70	2423.70	5503.80	2972.40	1217.70	1870.00	667.50	1341.60	1506.80	
		Non-Monsoon	410.20	316.60	362.20	277.90	639.00	367.30	797.70	1262.10	46.70	42.90	64.90	
		Annual	5841.20	3899.00	3605.90	2701.60	6142.80	3339.70	2015.40	3132.10	714.20	1384.50	1571.70	

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
V Basin :Godavari													
21	Tekra	Monsoon	60712.30	20606.00	38847.30	21382.20	76657.40	30511.70	14744.10	18087.20	30677.20	40844.80	32270.00
		Non-Monsoon	1644.10	342.60	535.80	1097.40	2083.90	901.10	475.50	4818.00	1161.30	1311.30	484.80
		Annual	62356.40	20948.60	39383.10	22479.60	78741.30	31412.80	15219.60	22905.20	31838.50	42156.10	32754.80
22	Bhatpalli	Monsoon	2669.00	811.90	1649.50	616.30	2381.90	2571.70	1023.90	326.10	1693.00	715.70	1983.10
		Non-Monsoon	96.40	33.00	38.10	21.80	91.50	85.70	57.70	56.40	59.00	51.50	55.10
		Annual	2765.40	844.90	1687.60	638.10	2473.40	2657.40	1081.70	382.50	1752.00	767.20	2038.30
23	Sirpur	Monsoon	29745.80	6339.50	14280.70	5191.90	21640.60	12037.70	5221.50	3295.00	10364.30	14582.30	13185.90
		Non-Monsoon	451.60	117.60	336.10	286.90	628.60	491.00	180.70	857.80	339.90	253.50	226.20
		Annual	30197.40	6457.10	14616.80	5478.80	22269.20	12528.70	5402.20	4152.80	10704.20	14835.80	13412.10
24	Bamni	Monsoon	24406.60	6265.40	13486.80	5176.90	25071.90	12338.40	4798.50	2398.30	8407.80	12495.00	9677.50
		Non-Monsoon	464.90	87.50	362.60	381.40	660.60	468.90	197.60	824.30	292.20	419.10	191.80
		Annual	24871.50	6352.90	13849.40	5558.30	25732.50	12807.30	4996.10	3220.70	8700.00	12914.10	9869.30
25	P.G. Bridge	Monsoon	10982.30	967.40	5228.20	2346.90	5054.20	3929.30	2617.00	824.50	4290.70	5742.30	3046.90
		Non-Monsoon	163.90	4.20	53.80	41.00	144.40	120.40	56.00	163.10	77.10	132.90	43.00
		Annual	11146.20	971.60	5282.00	2387.90	5198.60	4049.70	2673.00	987.60	4367.80	5875.20	3089.90
26	Mangrul	Monsoon	-	-	-	122.50	514.00	353.90	120.30	50.30	235.20	587.00	423.10
		Non-Monsoon	-	-	-	11.00	29.40	19.50	12.10	8.60	7.80	17.80	7.40
		Annual	-	-	-	133.50	543.40	373.40	132.40	58.90	243.00	604.80	430.50
27	Marlegaon	Monsoon	3191.00	408.20	1237.40	426.10	803.70	629.20	660.00	252.70	1768.80	2198.30	421.20
		Non-Monsoon	57.30	76.00	18.20	57.90	39.00	40.50	36.30	112.30	44.60	39.50	45.30
		Annual	3248.30	484.20	1255.60	484.00	842.70	669.70	696.30	365.00	1813.40	2237.80	466.50
28	Kanhaergaon	Monsoon	-	-	300.50	186.70	329.40	289.00	246.70	167.60	1188.90	1217.60	360.80
		Non-Monsoon	-	-	0.50	4.00	1.50	1.30	0.40	35.90	4.80	0.00	0.00
		Annual	-	-	301.00	190.70	330.90	290.30	247.10	203.50	1193.70	1217.60	360.80

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
V Basin :Godavari													
29	Ghugus	Monsoon	9009.30	3337.10	5366.60	1599.80	10014.30	4265.30	1480.90	827.90	2886.40	5706.20	4134.70
		Non-Monsoon	137.90	32.10	147.90	144.40	373.00	153.30	50.50	539.80	138.70	175.10	88.60
		Annual	9147.20	3369.20	5514.50	1744.20	10387.30	4418.60	1531.40	1367.70	3025.10	5881.30	4223.30
30	Nandgaon	Monsoon	1798.70	792.10	1037.70	342.60	1982.80	843.50	251.50	191.10	438.20	953.60	169.10
		Non-Monsoon	35.90	11.50	8.30	8.20	51.50	43.10	14.40	177.60	85.60	104.50	65.90
		Annual	1834.60	803.60	1046.00	350.80	2034.30	886.60	265.90	368.60	523.90	1058.10	235.00
31	Hivra	Monsoon	2636.90	1048.00	1805.60	298.40	3733.20	1065.20	519.20	356.50	1473.10	2894.10	888.30
		Non-Monsoon	54.60	4.40	133.90	195.90	297.80	139.80	27.10	499.90	75.80	146.80	42.60
		Annual	2691.50	1052.40	1939.50	494.30	4031.00	1205.00	546.30	856.40	1548.90	3040.90	930.90
32	Bhisnur	Monsoon	1095.10	581.10	447.90	106.80	1356.80	515.80	67.70	214.90	1268.80	1427.20	146.10
		Non-Monsoon	15.00	1.80	142.70	218.90	221.90	175.90	16.60	424.00	39.90	53.80	32.00
		Annual	1110.10	582.90	590.60	325.70	1578.70	691.70	84.30	638.80	1308.70	1481.00	178.10
33	Ahsti	Monsoon	27908.60	16897.30	22417.60	19578.30	60361.00	18552.30	8487.00	14809.60	17591.20	29320.30	16440.20
		Non-Monsoon	926.80	169.40	267.50	428.90	1084.60	543.10	275.40	3376.00	872.60	845.80	149.80
		Annual	28835.40	17066.70	22685.10	20007.20	61445.60	19095.40	8761.00	18185.60	18463.80	30166.10	16590.00
34	Rajoli	Monsoon	1449.50	505.00	1161.20	606.90	1558.50	481.50	237.00	476.40	263.50	831.60	1511.60
		Non-Monsoon	3.80	0.40	1.00	0.50	8.00	1.10	0.00	15.80	1.70	0.70	0.40
		Annual	1453.30	505.40	1162.20	607.40	1566.50	482.60	237.00	492.20	265.20	832.30	1512.00
35	Wairagat	Monsoon	-	-	-	595.00	1521.50	792.30	490.90	552.20	519.20	973.30	1082.20
		Non-Monsoon	-	-	-	1.00	8.70	2.10	1.40	15.40	1.30	2.70	0.10
		Annual	-	-	-	596.00	1530.20	794.40	492.30	567.60	520.50	976.00	1082.30
36	Salebardi	Monsoon	519.40	506.90	630.00	658.30	562.10	742.00	330.00	532.30	627.80	654.80	599.80
		Non-Monsoon	4.70	0.30	1.20	3.20	2.90	1.30	0.30	50.00	2.80	3.10	0.00
		Annual	524.10	507.20	631.20	661.50	565.00	743.30	330.30	582.30	630.60	657.90	599.80

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
V Basin :Godavari													
37 Pauni	Monsoon		13631.00	7365.80	8185.30	10198.00	30552.30	8361.20	4588.00	9318.60	9819.00	17141.30	6993.80
	Non-Monsoon		819.90	182.70	285.70	388.80	953.80	394.80	246.00	3008.00	688.50	759.40	107.30
	Annual		14450.90	7548.50	8471.00	10586.80	31506.10	8756.00	4834.00	12326.60	10507.50	17900.60	7101.10
38 Satrapur	Monsoon		1937.40	1516.60	1429.50	2128.70	6594.80	1343.40	1131.30	2605.60	1952.20	4788.20	714.60
	Non-Monsoon		354.00	14.50	76.00	82.20	300.70	86.20	53.90	1394.00	212.30	201.40	16.00
	Annual		2291.40	1531.10	1505.50	2210.90	6895.50	1429.60	1185.20	3999.60	2164.50	4989.60	730.60
39 Ramkona	Monsoon		1417.50	730.70	736.40	1060.90	1549.60	400.40	566.60	1023.30	886.30	1520.60	202.90
	Non-Monsoon		16.40	0.00	0.80	9.60	35.10	9.80	6.50	322.60	47.10	26.30	3.50
	Annual		1433.90	730.70	737.20	1070.50	1584.70	410.20	573.10	1345.90	933.40	1546.90	206.30
40 Rajegaon	Monsoon		3893.40	2175.40	2130.40	1992.60	11590.60	3245.70	1099.50	2897.60	2556.50	3300.50	1598.50
	Non-Monsoon		101.30	14.60	9.20	19.40	137.70	34.40	10.80	338.10	49.80	31.00	0.20
	Annual		3994.70	2190.00	2139.60	2012.00	11728.30	3280.10	1110.30	3235.70	2606.30	3331.50	1598.70
41 Kumhari	Monsoon		4888.30	1816.40	2630.50	2984.20	9937.20	2631.10	1625.60	3112.60	3435.50	5889.00	1658.20
	Non-Monsoon		129.30	18.30	11.60	53.70	102.40	73.40	67.00	1073.90	115.80	143.60	77.80
	Annual		5017.60	1834.70	2642.10	3037.90	10039.60	2704.50	1692.50	4186.50	3551.30	6032.60	1736.00
42 Keolari	Monsoon		1579.90	317.90	880.40	989.50	2577.50	912.50	672.40	852.30	977.40	1935.60	412.40
	Non-Monsoon		36.90	9.30	1.30	12.90	31.50	66.10	43.40	447.90	137.40	106.50	26.50
	Annual		1616.80	327.20	881.70	1002.40	2609.00	978.60	715.80	1300.20	1114.80	2042.10	438.90
43 Somanpalli	Monsoon		2813.10	1000.80	608.40	1194.90	717.60	1549.70	1821.20	194.80	1468.20	1810.80	1468.20
	Non-Monsoon		201.50	88.00	75.20	14.60	89.70	122.10	142.90	29.10	233.70	108.90	233.70
	Annual		3014.60	1088.80	683.60	1209.50	807.30	1671.80	1964.10	223.90	1701.90	1919.70	1701.90
44 Mancheria	Monsoon		27598.90	6793.80	4255.10	2647.40	3606.00	9161.00	6516.00	1368.30	22108.50	6344.90	10973.30
	Non-Monsoon		801.70	320.70	342.00	148.20	628.80	577.20	616.10	148.00	417.30	455.80	382.80
	Annual		28400.60	7114.50	4597.10	2795.60	4234.80	9738.20	7132.10	1516.30	22525.80	6800.70	11356.10

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
V Basin :Godavari													
45	Gandlapet	Monsoon	808.90	111.70	18.90	68.80	38.30	366.10	72.90	1.80	177.70	164.20	171.90
		Non-Monsoon	1.50	0.00	0.00	0.00	3.50	1.00	0.00	0.00	0.30	0.00	0.00
		Annual	810.40	111.70	18.90	68.80	41.80	367.10	72.90	1.80	178.00	164.20	171.90
46	Betmogra	Monsoon	600.10	47.80	129.30	122.50	1.40	315.20	80.00	27.50	770.90	245.70	342.10
		Non-Monsoon	12.70	0.00	0.00	0.00	0.10	0.00	0.90	5.00	0.90	1.60	0.00
		Annual	612.80	47.80	129.30	122.50	1.50	315.20	80.90	32.50	771.80	247.30	342.10
47	Degloor	Monsoon	533.70	70.90	105.50	690.40	18.20	285.70	476.50	57.40	694.70	253.50	599.30
		Non-Monsoon	2.30	0.00	0.00	0.00	5.10	1.90	0.40	6.60	12.00	0.00	0.00
		Annual	536.00	70.90	105.50	690.40	23.30	287.60	476.90	64.00	706.70	253.50	599.30
48	Saigaon	Monsoon	3272.40	401.60	340.80	230.10	18.10	330.10	1856.10	27.70	4644.50	501.20	1656.30
		Non-Monsoon	18.80	0.00	0.00	0.00	0.00	0.10	0.50	2.10	4.50	0.00	0.00
		Annual	3291.20	401.60	340.80	230.10	18.10	330.20	1856.60	29.70	4649.00	501.20	1656.30
49	Bhatkheda	Monsoon	-	20.20	5.20	278.60	13.90	197.50	498.00	8.00	1563.40	252.40	721.70
		Non-Monsoon	-	0.00	0.00	43.70	0.00	0.00	0.00	1.20	0.00	0.00	0.00
		Annual	-	20.20	5.20	322.30	13.90	197.50	498.00	9.30	1563.40	252.40	721.70
50	Yelli	Monsoon	12915.30	4763.30	3408.10	1322.10	2318.90	1629.80	2951.10	461.70	10857.60	3719.20	4967.30
		Non-Monsoon	458.20	132.40	60.20	15.10	102.60	0.10	8.30	114.50	35.10	63.90	13.90
		Annual	13373.50	4895.70	3468.30	1337.20	2421.50	1629.90	2959.40	576.20	10892.70	3783.10	4981.20
51	Purna	Monsoon	3719.30	999.40	1293.60	438.40	163.80	410.20	881.60	241.30	4429.70	1393.70	1712.10
		Non-Monsoon	110.60	27.10	65.10	17.20	4.50	0.00	3.40	67.80	26.30	2.40	3.60
		Annual	3829.90	1026.50	1358.70	455.60	168.30	410.20	885.00	309.10	4456.00	1396.00	1715.70
52	Zari	Monsoon	1149.60	413.90	670.20	347.00	23.70	59.80	221.20	64.30	1417.80	481.40	533.50
		Non-Monsoon	11.90	0.00	0.00	5.50	0.00	0.00	0.00	0.00	0.60	0.00	5.90
		Annual	1161.50	413.90	670.20	352.50	23.70	59.80	221.20	64.30	1418.40	481.40	539.40

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
V Basin :Godavari													
53 G.R. Bridge	Monsoon		2468.90	2468.90	973.30	366.40	1728.50	422.40	1100.30	137.90	4298.10	1028.90	2578.50
	Non-Monsoon		236.60	102.30	1.20	4.70	0.00	0.00	0.00	0.00	1.20	0.00	0.00
	Annual		2705.50	2571.20	974.50	371.10	1728.50	422.40	1100.30	137.90	4299.30	1028.90	2578.50
54 Dhalegaon	Monsoon		3938.30	2536.10	805.60	184.80	2145.10	263.20	667.30	77.40	3147.00	711.00	1729.60
	Non-Monsoon		279.00	133.50	15.30	49.20	93.70	11.30	0.00	47.20	33.10	15.70	9.30
	Annual		4217.30	2669.60	820.90	234.00	2238.80	274.50	667.30	124.60	3180.10	726.70	1738.90
55 Pachegaon	Monsoon		816.60	938.00	16.10	29.90	936.20	17.60	196.40	300.20	569.00	323.50	87.30
	Non-Monsoon		0.00	0.00	0.00	0.00	0.00	0.00	0.30	3.30	3.50	1.00	0.10
	Annual		816.60	938.00	16.10	29.90	936.20	17.60	196.70	303.50	572.50	324.50	87.40
56 Ghargaon	Monsoon		-	-	-	-	1316.40	2729.90	798.10	872.30	682.30	671.40	408.30
	Non-Monsoon		-	-	-	-	0.00	0.00	0.00	12.70	4.50	1.40	0.00
	Annual		-	-	-	-	1316.40	2729.90	798.10	885.00	686.80	672.90	408.30

Source : Letter No.1/17/96-GC(Tech)/1106 dated 08.05.2003 from Superintending Engineer, Godavari Circle, Hyderabad and Water Year Book of Godavari Basin for the year 1995-96.

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VI Basin : Krishna													
1	Vijayawada	Monsoon	3923.00	2186.00	35609.00	21146.00	20731.00	31490.00	3986.00	3995.00	34096.00	4493.00	-
		Non-Monsoon	1029.00	2085.00	2611.00	4179.00	6138.00	5119.00	4639.00	7216.00	5104.00	1533.00	-
		Annual	4952.00	4271.00	38220.00	25325.00	26869.00	36609.00	8625.00	11211.00	39200.00	6026.00	-
2	Keesara	Monsoon	1554.00	1016.00	3843.00	3670.00	3121.00	3017.00	599.00	877.00	1936.00	1677.00	-
		Non-Monsoon	132.00	111.00	145.00	826.00	247.00	190.00	182.00	163.00	312.00	129.00	-
		Annual	1686.00	1127.00	3988.00	4496.00	3368.00	3207.00	781.00	1040.00	2248.00	1806.00	-
3	Madhira	Monsoon	495.00	186.00	763.00	1365.00	999.00	982.00	183.00	274.00	529.00	356.00	-
		Non-Monsoon	71.00	56.00	63.00	270.00	105.00	80.00	61.00	76.00	119.00	65.00	-
		Annual	566.00	242.00	826.00	1635.00	1104.00	1062.00	244.00	350.00	648.00	421.00	-
4	P.S. Gudem	Monsoon	-	-	576.00	525.00	255.00	52.00	8.00	41.00	56.00	145.00	-
		Non-Monsoon	-	1.00	1.00	37.00	5.00	1.00	0.00	1.00	5.00	2.00	-
		Annual	-	1.00	577.00	562.00	260.00	53.00	8.00	42.00	61.00	147.00	-
5	Paleru Bridge	Monsoon	374.00	210.00	1086.00	772.00	477.00	403.00	215.00	281.00	419.00	307.00	-
		Non-Monsoon	106.00	63.00	130.00	191.00	201.00	89.00	153.00	154.00	177.00	98.00	-
		Annual	480.00	273.00	1216.00	963.00	678.00	492.00	368.00	435.00	596.00	405.00	-
6	Wadenapalli	Monsoon	7958.00	6515.00	36767.00	20894.00	26112.00	31416.00	8422.00	17969.00	37892.00	5636.00	-
		Non-Monsoon	2636.00	3648.00	4493.00	5580.00	7793.00	6120.00	6587.00	8828.00	7497.00	3383.00	-
		Annual	10594.00	10163.00	41260.00	26474.00	33905.00	37536.00	15009.00	26797.00	45389.00	9019.00	-
7	Dameracherla	Monsoon	471.00	422.00	1416.00	1619.00	750.00	1384.00	383.00	416.00	577.00	726.00	-
		Non-Monsoon	120.00	126.00	206.00	328.00	279.00	224.00	346.00	273.00	326.00	127.00	-
		Annual	591.00	548.00	1622.00	1947.00	1029.00	1608.00	729.00	689.00	903.00	853.00	-
8	Pondugala	Monsoon	5077.00	3964.00	35076.00	19874.00	21584.00	31177.00	7158.00	17247.00	25287.00	4998.00	-
		Non-Monsoon	2559.00	4169.00	4330.00	4073.00	6090.00	5327.00	6119.00	8316.00	4914.00	3396.00	-
		Annual	7636.00	8133.00	39406.00	23947.00	27674.00	36504.00	13277.00	25563.00	30201.00	8394.00	-

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VI Basin : Krishna													
9	Halia	Monsoon	22.00	129.00	123.00	148.00	52.00	1299.00	11.00	74.00	124.00	131.00	-
		Non-Monsoon	5.00	8.00	10.00	20.00	9.00	8.00	11.00	9.00	10.00	4.00	-
		Annual	27.00	137.00	133.00	168.00	61.00	1307.00	22.00	83.00	134.00	135.00	-
10	Lakshmipuram	Monsoon	22.00	113.00	204.00	111.00	90.00	80.00	21.00	156.00	172.00	57.00	-
		Non-Monsoon	2.00	18.00	13.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	-
		Annual	24.00	131.00	217.00	112.00	91.00	81.00	21.00	156.00	172.00	57.00	-
11	Bawapuram	Monsoon	2358.00	2569.00	4027.00	4153.00	3538.00	6203.00	9047.00	5703.00	9986.00	1537.00	-
		Non-Monsoon	44.00	139.00	89.00	255.00	45.00	82.00	178.00	8316.00	80.00	66.00	-
		Annual	2402.00	2708.00	4116.00	4408.00	3583.00	6285.00	9225.00	14019.00	10066.00	1603.00	-
12	Mantralayam	Monsoon	3292.00	2979.00	4385.00	4566.00	4675.00	7576.00	10499.00	6297.00	11011.00	2106.00	-
		Non-Monsoon	476.00	465.00	507.00	645.00	729.00	892.00	952.00	776.00	587.00	496.00	-
		Annual	3768.00	3444.00	4892.00	5211.00	5404.00	8468.00	11451.00	7073.00	11598.00	2602.00	-
13	T.Ramapuram	Monsoon	632.00	728.00	539.00	1657.00	328.00	568.00	640.00	546.00	366.00	549.00	-
		Non-Monsoon	88.00	79.00	98.00	86.00	84.00	66.00	149.00	231.00	148.00	58.00	-
		Annual	720.00	807.00	637.00	1743.00	412.00	634.00	789.00	777.00	514.00	607.00	-
14	Amkundibridge	Monsoon	16.00	15.00	37.00	45.00	9.00	8.00	15.00	4.00	1.00	2.00	-
		Non-Monsoon	0.00	0.00	4.00	1.00	3.00	1.00	3.00	1.00	0.00	0.00	-
		Annual	16.00	15.00	41.00	46.00	12.00	9.00	18.00	5.00	1.00	2.00	-
15	Bhupasamudram	Monsoon	126.00	7.00	139.00	62.00	3.00	5.00	1.00	1.00	0.00	0.00	-
		Non-Monsoon	2.00	2.00	9.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	-
		Annual	128.00	9.00	148.00	68.00	3.00	5.00	1.00	1.00	0.00	0.00	-
16	Kellodu	Monsoon	-	-	-	-	12.00	47.00	259.00	222.00	175.00	28.00	-
		Non-Monsoon	-	-	-	-	4.00	2.00	29.00	9.00	17.00	6.00	-
		Annual	-	-	-	-	16.00	49.00	288.00	231.00	192.00	34.00	-
17	Oollenur	Monsoon	1598.00	712.00	3408.00	1741.00	3013.00	5980.00	5134.00	4490.00	9947.00	1112.00	-
		Non-Monsoon	547.00	616.00	731.00	721.00	924.00	762.00	880.00	677.00	756.00	1134.00	-
		Annual	2145.00	1328.00	4139.00	2462.00	3937.00	6742.00	6014.00	5167.00	10703.00	2246.00	-

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VI Basin : Krishna													
18	Marol	Monsoon	1498.00	812.00	1908.00	1251.00	1822.00	3254.00	3406.00	1901.00	3428.00	1215.00	-
		Non-Monsoon	4.00	8.00	0.00	0.00	0.00	1.00	87.00	99.00	4.00	0.00	-
		Annual	1502.00	820.00	1908.00	1251.00	1822.00	3255.00	3493.00	2000.00	3432.00	1215.00	-
19	Harlahalli	Monsoon	5113.00	3582.00	4919.00	5533.00	7140.00	8166.00	10975.00	6746.00	11224.00	4682.00	-
		Non-Monsoon	321.00	344.00	378.00	318.00	570.00	383.00	690.00	505.00	945.00	356.00	-
		Annual	5434.00	3926.00	5297.00	5851.00	7710.00	8549.00	11665.00	7251.00	12169.00	5038.00	-
20	Byladahalli	Monsoon	234.00	244.00	190.00	232.00	297.00	387.00	591.00	456.00	494.00	245.00	-
		Non-Monsoon	56.00	51.00	72.00	98.00	211.00	4.00	74.00	103.00	70.00	46.00	-
		Annual	290.00	295.00	262.00	330.00	508.00	391.00	665.00	559.00	564.00	291.00	-
21	Kuppelur	Monsoon	-	-	-	-	165.00	475.00	636.00	292.00	658.00	176.00	-
		Non-Monsoon	-	-	-	-	0.00	2.00	24.00	14.00	18.00	2.00	-
		Annual	-	-	-	-	165.00	477.00	660.00	306.00	676.00	178.00	-
22	Honnali	Monsoon	4831.00	2824.00	4567.00	5113.00	6487.00	6943.00	8706.00	5955.00	10663.00	4470.00	-
		Non-Monsoon	323.00	252.00	387.00	283.00	440.00	426.00	721.00	504.00	469.00	459.00	-
		Annual	5154.00	3076.00	4954.00	5396.00	6927.00	7369.00	9427.00	6459.00	11132.00	4929.00	-
23	Shimoga	Monsoon	4099.00	2463.00	3962.00	4507.00	5866.00	5615.00	6438.00	5141.00	8324.00	4063.00	-
		Non-Monsoon	91.00	145.00	80.00	85.00	126.00	91.00	252.00	196.00	150.00	78.00	-
		Annual	4190.00	2608.00	4042.00	4592.00	5992.00	5706.00	6690.00	5337.00	8474.00	4141.00	-
24	Krishna Agraharan	Monsoon	16908.00	12840.00	43130.00	28799.00	31802.00	34167.00	13790.00	27899.00	31652.00	11992.00	-
		Non-Monsoon	245.00	693.00	678.00	827.00	884.00	558.00	620.00	1652.00	887.00	529.00	-
		Annual	17153.00	13533.00	43808.00	29626.00	32686.00	34725.00	14410.00	29551.00	32539.00	12521.00	-
25	Yadgir	Monsoon	4460.00	3454.00	16783.00	14733.00	14438.00	9214.00	2687.00	4845.00	10491.00	2726.00	-
		Non-Monsoon	52.00	302.00	230.00	312.00	313.00	64.00	44.00	359.00	86.00	103.00	-
		Annual	4512.00	3756.00	17013.00	15045.00	14751.00	9278.00	2731.00	5204.00	10577.00	2829.00	-
26	Malkhed	Monsoon	-	-	-	-	-	589.00	111.00	565.00	98.00	916.00	-
		Non-Monsoon	-	-	-	-	76.00	13.00	14.00	26.00	4.00	50.00	-
		Annual	-	-	-	-	76.00	602.00	125.00	591.00	102.00	966.00	-

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

												Unit : M.C.M.		
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
VI Basin : Krishna														
27	Chincholi	Monsoon	12.00	23.00	188.00	268.00	76.00	28.00	2.00	26.00	0.00	0.00	-	
		Non-Monsoon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
		Annual	12.00	23.00	188.00	268.00	76.00	28.00	2.00	26.00	0.00	0.00	-	
28	Jewangi	Monsoon	197.00	192.00	163.00	126.00	105.00	92.00	85.00	84.00	20.00	259.00	-	
		Non-Monsoon	10.00	7.00	12.00	8.00	15.00	1.00	3.00	4.00	0.00	7.00	-	
		Annual	207.00	199.00	175.00	134.00	120.00	93.00	88.00	88.00	20.00	266.00	-	
29	Boriomerga	Monsoon	9.00	126.00	771.00	523.00	489.00	48.00	12.00	147.00	0.00	16.00	-	
		Non-Monsoon	0.00	4.00	4.00	2.00	3.00	0.00	0.00	0.00	0.00	0.00	-	
		Annual	9.00	130.00	775.00	525.00	492.00	48.00	12.00	147.00	0.00	16.00	-	
30	Wadakbal	Monsoon	231.00	486.00	2416.00	1928.00	1820.00	432.00	51.00	419.00	40.00	185.00	-	
		Non-Monsoon	6.00	18.00	2.00	50.00	7.00	0.00	0.00	14.00	0.00	0.00	-	
		Annual	237.00	504.00	2418.00	1978.00	1827.00	432.00	51.00	433.00	40.00	185.00	-	
31	Takli	Monsoon	2825.00	1001.00	7074.00	5009.00	8696.00	8122.00	2033.00	3160.00	11420.00	222.00	-	
		Non-Monsoon	21.00	151.00	69.00	91.00	33.00	92.00	15.00	140.00	0.00	0.00	-	
		Annual	2846.00	1152.00	7143.00	5100.00	8729.00	8214.00	2048.00	3300.00	11420.00	222.00	-	
32	Kokangaon	Monsoon	43.00	124.00	158.00	152.00	56.00	62.00	12.00	130.00	0.00	35.00	-	
		Non-Monsoon	0.00	13.00	2.00	7.00	0.00	0.00	0.00	4.00	0.00	0.00	-	
		Annual	43.00	137.00	160.00	159.00	56.00	62.00	12.00	134.00	0.00	35.00	-	
33	Shirdhon	Monsoon	15.00	46.00	44.00	27.00	4.00	1.00	1.00	34.00	2.00	6.00	-	
		Non-Monsoon	0.00	14.00	0.00	1.00	0.00	0.00	0.00	3.00	0.00	0.00	-	
		Annual	15.00	60.00	44.00	28.00	4.00	1.00	1.00	37.00	2.00	6.00	-	
34	Narsingpur	Monsoon	2364.00	290.00	5845.00	3713.00	8468.00	7353.00	2013.00	4100.00	11639.00	436.00	-	
		Non-Monsoon	12.00	51.00	10.00	3.00	14.00	0.00	0.00	132.00	0.00	0.00	-	
		Annual	2376.00	341.00	5855.00	3716.00	8482.00	7353.00	2013.00	4232.00	11639.00	436.00	-	
35	Sarati	Monsoon	497.00	174.00	1725.00	864.00	1736.00	1656.00	809.00	1096.00	3625.00	208.00	-	
		Non-Monsoon	6.00	40.00	0.00	0.00	10.00	0.00	0.00	115.00	0.00	0.00	-	
		Annual	503.00	214.00	1725.00	864.00	1746.00	1656.00	809.00	1211.00	3625.00	208.00	-	

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VI Basin : Krishna													
36	Dhond	Monsoon	2903.00	1277.00	4365.00	3903.00	7263.00	6131.00	2565.00	3680.00	8825.00	1509.00	-
		Non-Monsoon	59.00	41.00	144.00	74.00	134.00	47.00	47.00	139.00	81.00	9.00	-
		Annual	2962.00	1318.00	4509.00	3977.00	7397.00	6178.00	2612.00	3819.00	8906.00	1518.00	-
37	Phulgaon	Monsoon	-	-	-	-	-	-	1178.00	1358.00	2697.00	751.00	-
		Non-Monsoon	-	-	-	-	-	-	0.00	0.00	0.00	0.00	-
		Annual	-	-	-	-	-	-	1178.00	1358.00	2697.00	751.00	-
38	Huvinhedgi	Monsoon	10663.00	9320.00	24059.00	15426.00	16315.00	23662.00	10362.00	18116.00	24608.00	7946.00	-
		Non-Monsoon	214.00	351.00	400.00	597.00	474.00	411.00	696.00	1581.00	608.00	361.00	-
		Annual	10877.00	9671.00	24459.00	16023.00	16789.00	24073.00	11058.00	19697.00	25216.00	8307.00	-
39	Talikot	Monsoon	-	-	Observation started w.e.f. 21.9.95			-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	-	-	-	-	-	-	-	-	-	-	-
40	Cholachadagudda	Monsoon	692.00	628.00	710.00	598.00	250.00	1385.00	861.00	848.00	1045.00	738.00	-
		Non-Monsoon	48.00	43.00	175.00	64.00	63.00	211.00	195.00	160.00	268.00	123.00	-
		Annual	740.00	671.00	885.00	662.00	313.00	1596.00	1056.00	1008.00	1313.00	861.00	-
41	Navalgund	Monsoon	-	-	-	-	-	255.00	216.00	195.00	269.00	189.00	-
		Non-Monsoon	-	-	-	-	-	0.00	0.00	58.00	70.00	26.00	-
		Annual	-	-	-	-	0.00	255.00	216.00	253.00	339.00	215.00	-
42	Bagalkot	Monsoon	1314.00	771.00	2714.00	1678.00	1715.00	2785.00	1647.00	2353.00	4726.00	1031.00	-
		Non-Monsoon	172.00	108.00	198.00	265.00	135.00	196.00	158.00	209.00	180.00	161.00	-
		Annual	1486.00	879.00	2912.00	1943.00	1850.00	2981.00	1805.00	2562.00	4906.00	1192.00	-
43	Gokakfalls	Monsoon	747.00	364.00	2139.00	1178.00	1419.00	2105.00	1289.00	1703.00	4216.00	581.00	-
		Non-Monsoon	147.00	133.00	129.00	52.00	112.00	16.00	0.00	11.00	20.00	19.00	-
		Annual	894.00	497.00	2268.00	1230.00	1531.00	2121.00	1289.00	1714.00	4236.00	600.00	-
44	Gotur	Monsoon	765.00	527.00	1327.00	1084.00	1346.00	1517.00	1127.00	1412.00	2224.00	806.00	-
		Non-Monsoon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
		Annual	765.00	527.00	1327.00	1084.00	1346.00	1517.00	1127.00	1412.00	2224.00	806.00	-

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VI Basin : Krishna													
45	Daddi	Monsoon	1570.00	1060.00	2348.00	1885.00	2026.00	1924.00	1967.00	2184.00	3321.00	1422.00	-
		Non-Monsoon	2.00	3.00	0.00	1.00	1.00	0.00	4.00	8.00	3.00	3.00	-
		Annual	1572.00	1063.00	2348.00	1886.00	2027.00	1924.00	1971.00	2192.00	3324.00	1425.00	-
46	Galgali	Monsoon	9660.00	6830.00	14699.00	10631.00	16328.00	20071.00	10593.00	20228.00	34877.00	9953.00	-
		Non-Monsoon	1.00	0.00	0.00	12.00	226.00	141.00	75.00	1233.00	426.00	0.00	-
		Annual	9661.00	6830.00	14699.00	10643.00	16554.00	20212.00	10668.00	21461.00	35303.00	9953.00	-
47	Pandegaon	Monsoon	3.00	35.00	102.00	21.00	0.00	87.00	1.00	8.00	1.00	58.00	-
		Non-Monsoon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
		Annual	3.00	35.00	102.00	21.00	0.00	87.00	1.00	8.00	1.00	58.00	-
48	Sadalga	Monsoon	1909.00	1416.00	3166.00	2250.00	3089.00	3258.00	2147.00	2948.00	3954.00	1742.00	-
		Non-Monsoon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
		Annual	1909.00	1416.00	3166.00	2250.00	3089.00	3258.00	2147.00	2948.00	3954.00	1742.00	-
49	Bastewad	Monsoon	957.00	675.00	1230.00	901.00	1353.00	1308.00	1172.00	1416.00	1995.00	947.00	-
		Non-Monsoon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
		Annual	957.00	675.00	1230.00	901.00	1353.00	1308.00	1172.00	1416.00	1995.00	947.00	-
50	Vandur	Monsoon	912.00	661.00	1090.00	815.00	1120.00	1356.00	928.00	1162.00	1564.00	631.00	-
		Non-Monsoon	0.00	0.00	0.00	0.00	4.00	17.00	6.00	55.00	15.00	77.00	-
		Annual	912.00	661.00	1090.00	815.00	1124.00	1373.00	934.00	1217.00	1579.00	708.00	-
51	Tewrwad	Monsoon	3416.00	2818.00	5134.00	3971.00	5413.00	5771.00	3207.00	4146.00	7183.00	2263.00	-
		Non-Monsoon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
		Annual	3416.00	2818.00	5134.00	3971.00	5413.00	5771.00	3207.00	4146.00	7183.00	2263.00	-
52	Kurundwad	Monsoon	7754.00	5272.00	11698.00	7860.00	14473.00	15352.00	6916.00	12531.00	19303.00	5902.00	-
		Non-Monsoon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
		Annual	7754.00	5272.00	11698.00	7860.00	14473.00	15352.00	6916.00	12531.00	19303.00	5902.00	-
53	Arjunwad	Monsoon	4860.00	2931.00	7930.00	5159.00	10047.00	11528.00	5618.00	8358.00	15464.00	4350.00	-
		Non-Monsoon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	182.00	0.00	0.00	-
		Annual	4860.00	2931.00	7930.00	5159.00	10047.00	11528.00	5618.00	8540.00	15464.00	4350.00	-

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VI Basin : Krishna													
54	Samdoli	Monsoon	2130.00	1693.00	3198.00	2685.00	3586.00	4612.00	2490.00	3345.00	5054.00	1502.00	-
		Non-Monsoon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
		Annual	2130.00	1693.00	3198.00	2685.00	3586.00	4612.00	2490.00	3345.00	5054.00	1502.00	-
55	Karad	Monsoon	2844.00	1687.00	3558.00	2189.00	5919.00	6136.00	2761.00	3960.00	9219.00	2035.00	-
		Non-Monsoon	625.00	516.00	566.00	580.00	873.00	853.00	536.00	1037.00	649.00	509.00	-
		Annual	3469.00	2203.00	4124.00	2769.00	6792.00	6989.00	3297.00	4997.00	9868.00	2544.00	-
56	Warunji	Monsoon	1734.00	1107.00	2490.00	1523.00	3746.00	3778.00	1864.00	2650.00	5240.00	1288.00	-
		Non-Monsoon	566.00	421.00	505.00	536.00	815.00	747.00	522.00	765.00	546.00	451.00	-
		Annual	2300.00	1528.00	2995.00	2059.00	4561.00	4525.00	2386.00	3415.00	5786.00	1739.00	-
57	Koynanagar	Monsoon	478.00	214.00	680.00	311.00	2113.00	1794.00	458.00	970.00	2848.00	204.00	-
		Non-Monsoon	499.00	347.00	534.00	558.00	799.00	747.00	456.00	834.00	577.00	623.00	-
		Annual	977.00	561.00	1214.00	869.00	2912.00	2541.00	914.00	1804.00	3425.00	827.00	-

Source: Water Year Book of Vol-I/III(1995-96)

- : Not Available

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.

Sl.No.	Site Name	Season	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VII Basin : Cauvery													
1	Musiri	Monsoon	3079.00	3007.00	5962.00	8617.00	5799.00	9829.00	4831.00	4632.00	7053.00	6709.00	5452.00
		Non-Monsoon	1478.00	767.00	1806.00	1833.00	1797.00	2843.00	1751.00	1963.00	2701.00	1829.00	2087.00
		Annual	4557.00	3774.00	7768.00	10450.00	7596.00	12672.00	6582.00	6595.00	9754.00	8538.00	7539.00
2	Nallamarampatti	Monsoon	123.00	34.00	29.00	284.00	1438.00	460.00	54.00	97.00	423.00	218.00	166.00
		Non-Monsoon	148.00	13.00	3.00	42.00	321.00	36.00	0.00	211.00	313.00	296.00	158.00
		Annual	271.00	47.00	32.00	326.00	1759.00	496.00	524.00	308.00	730.00	514.00	324.00
3	Kodumudi	Monsoon	3895.00	3382.00	6980.00	8894.00	5959.00	10108.00	5262.00	4474.00	6513.00	6922.00	5572.00
		Non-Monsoon	1745.00	1139.00	2370.00	2466.00	1848.00	2961.00	1940.00	1830.00	2435.00	2040.00	2276.00
		Annual	5640.00	4521.00	9350.00	11360.00	7807.00	13069.00	7202.00	6304.00	8948.00	8962.00	7848.00
4	Savandapur	Monsoon	244.00	294.00	315.00	569.00	312.00	598.00	329.00	293.00	353.00	373.00	405.00
		Non-Monsoon	249.00	210.00	230.00	280.00	274.00	321.00	404.00	284.00	373.00	356.00	249.00
		Annual	493.00	504.00	545.00	849.00	586.00	919.00	733.00	577.00	653.00	729.00	654.00
5	Tengumarahada	Monsoon	186.00	134.00	384.00	503.00	222.00	313.00	157.00	218.00	201.00	166.00	197.00
		Non-Monsoon	79.00	85.00	115.00	134.00	119.00	86.00	74.00	129.00	121.00	109.00	87.00
		Annual	265.00	219.00	499.00	637.00	341.00	399.00	231.00	347.00	322.00	275.00	284.00
6	Nellithurai	Monsoon	865.00	966.00	936.00	1749.00	960.00	1660.00	879.00	1092.00	1267.00	1022.00	820.00
		Non-Monsoon	214.00	170.00	227.00	328.00	89.00	111.00	240.00	445.00	508.00	296.00	41.00
		Annual	1079.00	1136.00	1163.00	2077.00	1049.00	1771.00	1119.00	1537.00	1775.00	1318.00	861.00
7	Urachikottai	Monsoon	3533.00	3235.00	6309.00	8297.00	5350.00	9255.00	4880.00	4175.00	5827.00	6573.00	4770.00
		Non-Monsoon	1802.00	1289.00	2205.00	2315.00	1535.00	2736.00	1701.00	1718.00	2077.00	1257.00	1557.00
		Annual	5335.00	4524.00	8514.00	10612.00	6885.00	11991.00	6581.00	5893.00	7904.00	7830.00	6327.00
8	Biligundulu	Monsoon	4043.00	3307.00	8249.00	8762.00	5105.00	9770.00	4339.00	5462.00	6195.00	5760.00	6194.00
		Non-Monsoon	1248.00	1156.00	1395.00	1392.00	1418.00	1387.00	1197.00	1526.00	1650.00	1578.00	1555.00
		Annual	5291.00	4463.00	9644.00	10154.00	6523.00	11157.00	5536.00	6988.00	7845.00	7338.00	7749.00

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.

Sl.No.	Site Name	Season	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VII Basin : Cauvery													
9	Kanakpara	Monsoon	153.00	29.00	289.00	108.00	133.00	61.00	102.00	231.00	175.00	401.00	285.00
		Non-Monsoon	12.00	1.00	29.00	14.00	41.00	7.00	7.00	39.00	51.00	40.00	109.00
		Annual	165.00	30.00	318.00	122.00	174.00	68.00	109.00	270.00	226.00	441.00	394.00
10	T.K Halli	Monsoon	449.00	179.00	651.00	511.00	472.00	382.00	373.00	1002.00	588.00	858.00	727.00
		Non-Monsoon	102.00	92.00	108.00	141.00	189.00	117.00	110.00	94.00	141.00	164.00	200.00
		Annual	551.00	271.00	759.00	652.00	661.00	499.00	483.00	1096.00	729.00	1022.00	927.00
11	Kollegal	Monsoon	3146.00	3154.00	6067.00	8483.00	3953.00	9734.00	3756.00	4094.00	6033.00	4651.00	5514.00
		Non-Monsoon	1078.00	1005.00	995.00	1083.00	1030.00	1022.00	974.00	1162.00	1525.00	1158.00	1150.00
		Annual	4224.00	4159.00	7062.00	9566.00	4983.00	10756.00	4730.00	5256.00	7558.00	5809.00	6664.00
12	T.Narsipur	Monsoon	1817.00	1731.00	2757.00	3599.00	2372.00	4012.00	2055.00	1992.00	2483.00	2259.00	2095.00
		Non-Monsoon	362.00	401.00	290.00	331.00	261.00	293.00	281.00	323.00	482.00	511.00	283.00
		Annual	2179.00	2132.00	3047.00	3930.00	2633.00	4305.00	2336.00	2315.00	2965.00	2770.00	2378.00
13	Muthankera	Monsoon	1914.00	2183.00	2522.00	3169.00	2066.00	3289.00	2104.00	2409.00	2373.00	2406.00	2124.00
		Non-Monsoon	88.00	116.00	83.00	183.00	141.00	186.00	92.00	185.00	163.00	158.00	91.00
		Annual	2002.00	2299.00	2605.00	3352.00	2207.00	3475.00	2196.00	2594.00	2536.00	2564.00	2215.00
14	Kattemalalavadi	Monsoon	155.00	163.00	465.00	672.00	282.00	677.00	277.00	293.00	458.00	298.00	330.00
		Non-Monsoon	1.00	2.00	11.00	25.00	9.00	13.00	7.00	27.00	25.00	13.00	10.00
		Annual	156.00	165.00	476.00	697.00	291.00	690.00	284.00	320.00	483.00	311.00	340.00
15	M.H. Halli	Monsoon	519.00	621.00	1482.00	2010.00	924.00	2172.00	429.00	338.00	500.00	343.00	621.00
		Non-Monsoon	501.00	390.00	395.00	553.00	597.00	311.00	409.00	245.00	191.00	199.00	340.00
		Annual	1020.00	1011.00	1877.00	2563.00	1521.00	2483.00	838.00	583.00	691.00	542.00	961.00
16	Kudige	Monsoon	2285.00	2397.00	3021.00	3322.00	1993.00	3997.00	2226.00	2465.00	2974.00	2259.00	2430.00
		Non-Monsoon	94.00	109.00	82.00	188.00	119.00	167.00	89.00	172.00	185.00	191.00	130.00
		Annual	2379.00	2506.00	3103.00	3510.00	2112.00	4164.00	2315.00	2637.00	3159.00	2450.00	2560.00

Source: Water Year Book for 1999-2000

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.

Sl.No.	Site Name	Season	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VIII Basin : East Flowing River													
1	Thammavaram	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	1218.00	1601.00	1344.00	1030.00	1189.00	1273.00	899.00	1709.00	1732	1729	916.0
2	K.Bitragunta	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	-	-	300.00	137.00	323.00	323.00	58.00	463.40	206.2	434.0	3.133
3	Nellore	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	643.50	782.10	3820.00	173.00	1140.00	555.90	14.77	7281.00	1182	3377	33.78
4	Chennur	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	-	1382.00	1671.00	598.50	1360.00	875.10	893.20	6548.00	1575	3789	1068
5	Alladupalli	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	1215.00	1265.00	1144.00	765.10	1017.00	741.90	709.30	2905.00	1245	2707	1241
6	Singavaram	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	314.30	4.67	197.30	6.83	0.26	Dry	33.44	666.90	13.14	127.4	28.51
7	Tadapatri	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	433.30	67.13	47.26	43.03	86.75	32.57	43.80	380.00	90.36	464.0	89.24
8	Nagalamadike	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	36.46	1.04	154.10	Dry	4.41	0.95	Dry	1.60	0.407	20.36	2.212

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

													Unit : M.C.M.	
Sl.No.	Site Name	Season	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
VIII Basin : East Flowing River														
9	Nandipalli	Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Annual	-	190.60	213.90	23.24	60.83	52.01	37.24	488.50	28.81	242.7	1.918	
10	Kamalapuram	Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Annual	-	34.13	813.70	12.53	53.91	16.68	47.52	1275.00	200.1	146.9	Dry	
11	Naidupeta	Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Annual	181.30	472.30	969.10	94.44	515.20	205.20	95.82	1199.00	580.2	196.7	22.40	
12	Sullurpet	Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Annual	24.54	144.50	293.50	27.65	246.60	174.50	89.34	658.20	400.5	125.9	12.45	
13	Chengalpattu	Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Annual	34.62	47.10	928.80	78.41	231.30	182.00	94.75	1849.00	1088	1327	27.68	
14	Magaral	Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Annual	Dry	Dry	287.50	54.10	29.90	77.01	9.30	737.80	608.1	419.9	1.065	
15	Arcot	Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Annual	Dry	Dry	1176.00	0.17	212.20	7.49	51.83	834.00	55.18	64.08	Dry	
16	Avaramkuppam	Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Annual	42.34	3.74	162.70	15.69	52.30	8.88	60.26	233.00	29.41	105.0	7.116	
17	Villupuram	Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Annual	9.16	Dry	1014.00	189.20	327.20	80.88	1.40	1710.00	903.10	803.50	61.25	
18	Vazhavachanur	Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-	
		Annual	41.16	9.47	1051.00	298.50	336.70	143.30	90.12	1253.00	758.0	576.9	208.2	

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VIII Basin : East Flowing River													
19	Gummanur	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	172.60	25.92	532.00	70.29	169.70	78.28	141.20	234.10	314.3	301.0	236.8
20	Kudalaisyathur	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	-	Dry	493.50	824.70	1434.00	179.30	20.04	410.90	691.0	880.9	266.8
21	Paramakudi	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	27.52	9.77	0.40	177.60	527.80	260.80	Dry	10.80	450.1	510.7	22.06
22	Theni	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	709.30	615.40	514.80	905.70	667.70	819.40	588.70	583.20	767.0	880.8	481.9
23	Irrukkankudi	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	-	230.20	10.63	15.91	93.90	18.73	Dry	54.94	571.4	100.8	8.334
24	Murappanadu	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	381.60	511.40	386.90	996.10	1215.00	558.60	242.10	215.30	881.8	420.7	390.7
25	A.P.Puram	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	32.57	6.19	11.98	72.47	38.36	8.83	2.90	0.02	169.0	30.98	1.767

Source: Water Year Book for 1999-2000

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
IX Basin: West Flowing River													
1	Badlapur	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	2140.00	3742.00	3326.00	2370.00	3209.00	3876.00	1808.00	2424.00	2576.00	2642.00	2539
2	Mangaon	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	813.20	1243.00	1096.00	801.70	1134.00	1376.00	869.50	921.00	913.80	1156.00	1006
3	Anjanari	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	-	-	-	620.90	907.10	1043.00	750.60	961.00	860.30	1068.00	1019
4	Adavali	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	3111.00	3215.00	3091.00	2382.00	3301.00	3210.00	2964.00	3309.00	2834.00	3316.00	2713
5	Ganjim	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	2766.00	4053.00	3214.00	3313.00	3191.00	4658.00	2948.00	2547.00	3796.00	3032.00	3842
6	Collem	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	428.80	627.40	479.20	486.20	471.50	627.50	414.70	421.00	524.40	420.40	393.20
7	Santeguli	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	3395.00	4751.00	4925.00	5566.00	4287.00	6567.00	3521.00	3718.00	6040.00	5898.00	5121
8	Haladi	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	2022.00	2554.00	2077.00	2203.00	2069.00	2800.00	1699.00	1531.00	2122.00	2125.00	2008
9	Yennehole	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	-	1746.00	1551.00	1767.00	1405.00	2143.00	1375.00	1409.00	1612.00	1803.00	1665
10	Bantwal	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	9485.00	12417.00	11128.00	12674.00	9577.00	15076.00	10023.00	10053.00	12073.00	12487.00	10972
11	Erinjipuzha	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	2330.00	2798.00	2832.00	2794.00	1863.00	3301.00	1948.00	2488.00	2522.00	2478.00	2271

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
IX Basin: West Flowing River													
12	Perumannu	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	3084.00	3695.00	3636.00	4742.00	3355.00	4688.00	3272.00	3568.00	4166.00	4311.00	3976
13	Kuniyal	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	3399.00	3262.00	4325.00	5539.00	3941.00	6060.00	3842.00	3940.00	4617.00	5775.00	4853
14	Karathodu	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	1033.00	1059.00	1543.00	1815.00	1105.00	1937.00	1239.00	1024.00	1561.00	1195.00	1518
15	Kumbidi	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	4107.00	3808.00	5539.00	6041.00	3686.00	6785.00	4744.00	3850.00	4041.00	5449.00	3614
16	Pulamanthol	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	1639.00	1275.00	1816.00	2469.00	1502.00	2304.00	1729.00	1606.00	2005.00	2197.00	1891
17	Mankar	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	387.30	446.80	638.90	1323.00	439.50	1274.00	546.50	597.80	907.80	1658.00	1046
18	Pudur	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	204.60	299.30	289.90	550.70	239.70	562.40	206.30	164.60	306.10	426.70	213.70
19	Ambarampalyan	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	286.40	263.40	250.00	824.50	351.80	551.40	299.80	266.80	358.30	499.10	362.80
20	Arangaly	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	1739.00	1656.00	1961.00	2362.00	1598.00	2765.00	1854.00	1351.00	1419.00	2663.00	1951
21	Neeleswaram	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	7628.00	6177.00	9968.00	8143.00	6355.00	8911.00	6715.00	6048.00	6603.00	8761.00	5777
22	Ramamangalan	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	5290.00	4529.00	4876.00	6098.00	5505.00	5902.00	5509.00	5002.00	4897.00	6703.00	5214

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.

Sl.No.	Site Name	Season	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
IX Basin: West Flowing River													
23	Kalampur	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	1380.00	952.50	1049.00	1340.00	1062.00	1329.00	1257.00	1214.00	1148.00	1578.00	1238
24	Kidangoor	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	1751.00	1362.00	1761.00	2252.00	1874.00	1893.00	1753.00	1723.00	1966.00	2310.00	1752
25	Kallooppara	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	2073.00	1378.00	1803.00	2398.00	2002.00	2147.00	1951.00	1905.00	1973.00	2196.00	1474
26	Malakkar:	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	4355.00	3289.00	4064.00	5397.00	4300.00	4721.00	4247.00	3785.00	3666.00	5295.00	3728
27	Thumpamon	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	1439.00	860.50	1470.00	1911.00	1284.00	1614.00	1449.00	1039.00	1072.00	1613.00	1195
28	Pattazhi	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	1893.00	1511.00	1943.00	2839.00	1533.00	2032.00	1472.00	1196.00	1208.00	2054.00	1711
29	Ayilam	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	749.50	488.80	965.30	1134.00	876.80	750.80	542.40	542.70	651.00	920.50	740.2
30	Kolad	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	<-----Stared w.e.f. 13.09.1996 ----->									817.20	471.40
31	Nagothane	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	<-----Stared w.e.f. 25.09.1996 ----->									1603.00	1261.00
32	Pan	Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Non-Monsoon	-	-	-	-	-	-	-	-	-	-	-
		Annual	<-----Stared w.e.f. 17.09.1996 ----->									334.60	305.80

Source: Water Year Book for 1999-2000

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.

Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
X Basin : Tapi														
1	Ghala	Monsoon	1517.00	745.60	10715.00	3768.00	9671.00	1239.00	1091.00	2398.00	14956.00	4904.00	1529.00	
		Non-Monsoon	397.00	207.80	2914.00	1911.00	2479.00	261.00	890.00	13.02	1833.00	98.00	1455.00	
		Annual	1914.00	953.40	13629.00	5679.00	12150.00	1500.00	1981.00	2411.02	16789.00	5002.00	2984.00	
2	Sarangkheda	Monsoon	6838.00	2669.00	16553.00	8184.00	15917.00	4238.00	5626.00	7730.00	14568.00	4194.00	6254.00	
		Non-Monsoon	22.00	82.00	266.00	59.00	420.00	0.00	24.00	154.00	85.00	6.00	150.00	
		Annual	6860.00	2751.00	16819.00	8243.00	16337.00	4238.00	5650.00	7884.00	14653.00	4200.00	6404.00	
3	Gidhade	Monsoon						3777.00	4884.00	5648.00	11781.00	3229.00	4758.00	
		Non-Monsoon	Observation started w.e.f.19.6.90						18.00	35.00	137.00	121.00	7.00	124.00
		Annual						3795.00	4919.00	5785.00	11902.00	3236.00	4882.00	
4	Morane	Monsoon	12.52	60.01	356.30	153.70	105.30	77.24	44.52	61.78	288.00	27.36	104.80	
		Non-Monsoon	0.37	10.45	10.30	4.40	2.30	0.00	0.82	6.27	2.70	0.00	2.90	
		Annual	12.89	70.46	366.60	158.10	107.60	77.24	45.34	68.05	290.70	27.36	107.70	
5	Malkheda	Monsoon	5.73	80.03	174.80	93.96	71.54	63.51	90.50	8.12	76.62	17.95	8.80	
		Non-Monsoon	0.00	4.06	4.20	0.35	2.62	0.00	0.68	0.00	1.98	0.00	0.03	
		Annual	5.73	84.09	179.00	94.31	74.16	63.51	91.18	8.12	78.60	17.95	8.83	
6	Savkheda	Monsoon	7409.00	2223.00	15006.00	7140.00	14005.00	3643.00	4860.00	6724.00	13103.00	4366.00	5994.00	
		Non-Monsoon	27.00	71.00	213.00	58.00	621.00	30.00	35.00	140.00	96.00	14.00	125.00	
		Annual	7436.00	2294.00	15219.00	7198.00	14626.00	3673.00	4895.00	6864.00	13199.00	4380.00	6119.00	
7	Dapuri	Monsoon	76.50	192.10	786.20	584.30	644.40	394.40	645.10	219.80	716.30	50.20	442.80	
		Non-Monsoon	7.50	12.00	31.80	24.30	44.60	10.00	7.90	16.70	19.90	5.50	7.60	
		Annual	84.00	204.10	818.00	608.60	689.00	404.40	653.00	236.50	736.20	55.70	450.40	
8	Yerli	Monsoon	2607.00	692.20	7087.00	1791.00	4704.00	760.40	1677.00	1147.00	3364.00	1092.00	908.70	
		Non-Monsoon	32.00	31.20	164.00	20.00	165.00	3.40	54.00	30.00	102.00	10.00	43.10	
		Annual	2639.00	723.40	7251.00	1811.00	4869.00	763.80	1731.00	1177.00	3466.00	1102.00	951.80	
9	Gopalkheda	Monsoon	1033.00	210.40	2959.00	374.40	1439.00	358.20	728.60	347.20	1960.00	568.60	684.00	
		Non-Monsoon	21.00	24.60	100.00	15.00	73.00	0.00	22.10	14.60	34.00	13.00	24.20	
		Annual	1054.00	235.00	3059.00	389.40	1512.00	358.20	750.70	361.80	1994.00	581.60	708.20	
10	Lakhpuri	Monsoon	389.00	161.40	1275.00	237.60	1135.00	284.40	545.90	179.00	822.20	286.80	453.80	
		Non-Monsoon	9.00	5.30	28.00	0.30	32.00	0.50	5.90	6.40	18.90	4.80	15.30	
		Annual	398.00	166.70	1303.00	237.90	1167.00	284.90	551.80	185.40	841.10	291.60	469.10	
11	Burhanpur	Monsoon	3733.00	1155.00	6459.00	3916.00	10401.00	2613.00	2858.00	6406.00	10157.00	3579.00	4728.00	
		Non-Monsoon	33.00	54.00	95.00	41.00	192.00	25.00	31.00	174.00	145.00	55.00	172.00	

Table No.1.5 : Sitewise Monsoon Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.

Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
X Basin : Tapi													
		Annual	3766.00	1209.00	6554.00	3957.00	10593.00	2638.00	2889.00	6580.00	10302.00	3634.00	4900.00
	12 Dedtalai	Monsoon	2859.00	648.80	3059.00	2094.00	5662.00	1773.00	2205.00	4340.00	6879.00	2345.00	3617.00
		Non-Monsoon	22.00	2.60	71.00	27.00	131.00	35.00	33.00	129.00	82.00	46.00	129.00
		Annual	2881.00	651.40	3130.00	2121.00	5793.00	1808.00	2238.00	4469.00	6961.00	2391.00	3746.00

Source: Office of the Superintending Engineer, CWC, Vadodara

Table No.1.5 : Sitewise Monsoon, Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
XI Basin: Narmada													
1	Orsang at Chandwada	Monsoon	301.28	149.33	1613.50	1026.92	2586.23	839.48	531.13	820.70	3867.53	481.16	211.96
		Non-Monsoon	0.00	0.00	2.60	0.00	27.45	0.78	0.96	0.01	23.93	0.10	13.52
		Annual	301.28	149.33	1616.10	1026.92	2613.68	840.26	532.09	820.71	3891.46	481.26	225.48
2	Narmada at	Monsoon	32556.44	13181.81	30197.66	19849.61	46091.72	22462.95	16535.93	29925.68	69256.49	18175.28	21616.87
		Non-Monsoon	2458.43	1818.31	2531.53	3339.45	4784.37	3027.15	4149.07	5625.04	4208.38	5217.46	5342.50
		Annual	301.28	149.33	1616.10	1026.92	50876.09	25490.10	20685.00	35550.72	73464.87	23392.74	26959.37
3	Narmada at Rajghat	Monsoon	20887.44	32219.10	12797.13	28997.31	16937.82	40178.03	22188.37	16848.52	31357.32	67798.63	21103.58
		Non-Monsoon	3157.00	2282.12	1683.75	2145.50	2913.78	4541.60	2958.08	3423.76	4783.32	4471.55	4072.00
		Annual	301.28	149.33	1616.10	1026.92	19851.60	44719.63	25146.45	20272.28	36140.64	72270.18	25175.58
4	Narmada at Mandleshwar	Monsoon	35222.46	12921.09	29582.91	16664.25	42935.62	21644.02	16564.47	30158.61	64561.80	20359.79	19129.97
		Non-Monsoon	2340.26	1785.51	2195.27	2701.20	4662.49	3233.87	3188.10	4947.83	3942.03	4196.51	4485.45
		Annual	301.28	149.33	1616.10	1026.92	47598.11	24877.89	19752.57	35106.44	68503.83	24556.30	23615.42
5	Kundi at Kogaon	Monsoon	711.10	162.60	2041.89	1831.06	2153.48	569.14	219.41	940.51	1825.62	635.44	1292.87
		Non-Monsoon	4.21	1.05	66.45	22.37	80.59	5.82	2.75	24.62	24.79	1.68	38.56
		Annual	301.28	149.33	1616.10	1026.92	2234.07	574.96	222.16	965.13	1850.41	637.12	1331.43
6	Chhota Tawa at Ginnore	Monsoon	2332.30	709.50	2657.14	1394.55	2402.45	956.32	553.11	2531.03	4482.91	1499.27	2086.90
		Non-Monsoon	14.90	32.83	71.37	15.19	73.72	1.31	0.78	102.65	50.07	6.91	80.31
		Annual	301.28	149.33	1616.10	1026.92	2476.17	957.63	553.89	2633.68	4532.98	1506.18	2167.21
7	Narmada at Handia	Monsoon	28588.08	10460.51	18891.90	11937.53	30299.62	21645.30	15493.53	20746.31	54880.23	17869.95	9483.75
		Non-Monsoon	2058.73	1634.39	1743.79	2727.23	4072.33	3306.74	3453.73	5238.29	3467.94	3294.63	3570.39
		Annual	301.28	149.33	1616.10	1026.92	34371.95	24952.04	18947.26	25984.60	58348.17	21164.58	13054.14
8	Ganjal at Chhidgaon	Monsoon	1463.40	216.57	788.65	683.20	1572.38	364.01	372.88	1075.55	2137.40	677.08	886.60
		Non-Monsoon	33.60	18.31	23.30	18.61	50.38	11.01	12.00	56.01	45.37	19.76	64.79
		Annual	301.28	149.33	1616.10	1026.92	1622.76	375.02	384.88	1131.56	2182.77	696.84	951.39
9	Narmada at Hoshangabad	Monsoon	22565.95	10646.20	18771.52	9747.75	28212.62	18456.87	13927.04	17118.17	48600.81	14561.75	6694.39
		Non-Monsoon	1564.22	1209.59	1716.21	2614.68	4035.30	2744.31	3107.30	4046.41	3757.60	4620.09	4308.48
		Annual	301.28	149.33	1616.10	1026.92	32247.92	21201.18	17034.34	21164.58	52358.41	19181.84	11002.87
10	Narmada at Sandia	Monsoon	9114.15	6065.60	14107.58	5720.28	20069.14	13580.72	10464.36	10913.37	33572.86	12608.10	5080.22
		Non-Monsoon	1212.10	943.15	1281.04	2049.68	3586.53	2829.38	2481.65	3622.25	3417.50	3577.61	3868.51
		Annual	301.28	149.33	1616.10	1026.92	23655.67	16410.10	12946.01	14535.62	36990.36	16185.71	8948.73

Table No.1.5 : Sitewise Monsoon, Non-monsoon & Annual Flow of Water in Different River Basins

Unit : M.C.M.													
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
XI Basin: Narmada													
11	Shakkat at Gadarwara	Monsoon	1336.72	394.00	1359.63	923.14	2080.30	659.47	1062.94	1324.67	2917.43	793.04	608.08
		Non-Monsoon	66.21	44.21	60.24	42.63	97.10	39.62	44.31	76.72	105.74	55.06	48.30
		Annual	301.28	149.33	1616.10	1026.92	2177.40	699.09	1107.25	1401.39	3023.17	848.10	656.38
12	Narmada at Barmanghat	Monsoon	8133.66	6512.62	5420.58	3029.53	15613.04	11020.41	7732.20	7561.70	25138.14	9774.38	3698.30
		Non-Monsoon	706.29	601.50	886.01	1658.41	2540.94	1877.14	2097.49	3356.58	2884.84	3512.66	2720.56
		Annual	301.28	149.33	1616.10	1026.92	18153.98	12897.55	9829.69	10918.28	28022.98	13287.04	6418.86
13	Sher at Belkheri	Monsoon	611.97	188.07	554.51	455.60	1174.17	435.16	624.74	623.52	1626.88	489.32	236.46
		Non-Monsoon	24.49	19.87	10.98	14.20	32.19	12.77	12.82	18.96	27.72	30.58	14.50
		Annual	301.28	149.33	1616.10	1026.92	1206.36	447.93	637.56	642.48	1654.60	519.90	250.96
14	Hiran at Patan	Monsoon	1256.88	1415.68	1258.43	439.48	2988.50	1794.45	1711.12	1317.89	3467.26	1436.37	496.41
		Non-Monsoon	77.17	154.54	94.68	40.43	144.89	82.77	110.44	119.11	123.41	111.12	63.68
		Annual	301.28	149.33	1616.10	1026.92	3133.39	1877.22	1821.56	1437.00	3590.67	1547.49	560.09
15	Narmada at Jamtara	Monsoon	8555.33	5393.58	9707.30	1725.13	10372.20	7889.24	6749.71	5093.21	19724.48	7175.48	2906.78
		Non-Monsoon	510.94	375.97	623.46	955.72	2594.72	1876.58	2040.75	3433.60	2918.17	3327.09	3148.44
		Annual	301.28	149.33	1616.10	1026.92	12966.92	9765.82	8790.46	8526.81	22642.65	10502.57	6055.22
16	Banjar at Hirdaya Nagar	Monsoon	1961.09	578.45	1964.57	934.48	2921.67	1436.43	1098.67	1345.96	4643.90	1508.97	796.49
		Non-Monsoon	36.88	40.69	27.41	27.66	89.71	17.25	7.18	38.37	219.14	101.30	17.92
		Annual	301.28	149.33	1616.10	1026.92	3011.38	1453.68	1105.85	1384.33	4863.04	1610.27	814.41
17	Burdner at Mohgaon	Monsoon	2120.46	1651.19	2509.06	1017.66	3583.41	1937.18	2102.07	1887.89	4177.25	2323.57	1256.43
		Non-Monsoon	73.48	107.14	56.29	40.83	136.21	44.80	38.08	67.21	126.54	127.88	54.16
		Annual	301.28	149.33	1616.10	1026.92	3719.62	1981.98	2140.15	1955.10	4303.79	2451.45	1310.59
18	Narmada at Manot	Monsoon	3469.55	3688.27	3101.84	1309.88	4119.56	2914.95	2418.26	2593.50	5293.54	3097.26	2027.91
		Non-Monsoon	154.98	211.07	103.68	97.02	206.64	92.94	88.02	121.74	180.23	254.44	138.90
		Annual	301.28	149.33	1616.10	1026.92	4326.20	3007.89	2506.28	2715.24	5473.77	3351.70	2166.81
19	Narmada at Dindori	Monsoon	0.00	0.00	656.71	699.00	1399.13	1051.91	897.28	1011.64	2408.56	1069.01	1099.62
		Non-Monsoon	0.00	0.00	68.15	63.87	105.99	72.93	55.37	88.38	7127.64	127.70	80.38
		Annual	301.28	149.33	1616.10	1026.92	1505.12	1124.84	952.65	1100.02	9536.20	1196.71	1180.00

Source: Letter (No.5/1/2000/CE(NBO)/416), dated 21/05/2002, of Superintending Engineer, CWC, Bhopal.

Table No.1.5 : Sitewise Monsoon, Non-monsoon & Annual Flow of Water in Different River Basin

Unit : M.C.M.

Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
XII Basin : Mahi, Sabarmati & other West Flowing Rivers of Saurashtra & Kutch														
a) Basin: Mahi														
1	Khanpur	Monsoon	1922.00	919.30	2453.00	2088.00	9642.00	4387.00	492.70	3240.00	19112.00	476.30	-	
		Non-Monsoon	147.00	190.30	307.00	212.00	1918.00	244.00	376.40	239.00	571.00	315.20	-	
		Annual	2069.00	1109.60	2760.00	2300.00	11560.00	4631.00	869.10	3479.00	19683.00	791.50	-	
2	Chalaliya	Monsoon						987.50	323.50	1410.00	5267.00	776.10	-	
		Non-Monsoon	Discharge Observation started from 13.2.91.						17.80	7.80	15.00	29.00	1.90	-
		Annual						1005.30	331.30	1425.00	5296.00	778.00	-	
3	Paderdibadi	Monsoon	1637.00	641.00	834.20	868.30	3762.00	2109.00	661.70	1217.00	6258.00	327.90	-	
		Non-Monsoon	116.00	44.30	51.70	106.60	192.00	120.00	81.20	105.00	168.00	39.80	-	
		Annual	1753.00	685.30	885.90	974.90	3954.00	2229.00	742.90	1322.00	6426.00	367.70	-	
4	Rangeli	Monsoon	528.70	-	-	470.80	Data Not	962.00	556.80	753.00	2181.00	150.90	-	
		Non-Monsoon	85.80	-	-	98.40	published	88.00	76.30	69.70	121.00	27.10	-	
		Annual	614.50	-	-	569.20	0.00	1050.00	633.10	822.70	2302.00	178.00	-	
5	Dhariawad	Monsoon	Observation	started	89.40	Data Not	460.50	247.50	30.85	140.40	349.80	26.45	-	
		Non-Monsoon	w.e.f 1.6.88		0.00	published	50.50	11.80	3.79	7.30	3.20	0.53	-	
		Annual	-	-	89.40	0.00	511.00	259.30	34.64	147.70	353.00	26.98	-	
6	Mataji	Monsoon	1224.00	481.90	1893.00	702.70	2277.00	1333.00	372.70	1074.00	2556.00	877.90	-	
		Non-Monsoon	5.00	6.00	31.00	5.70	41.00	8.00	15.10	33.00	17.00	12.20	-	
		Annual	1229.00	487.90	1924.00	708.40	2318.00	1341.00	387.80	1107.00	2573.00	890.10	-	

Table No.1.5 : Sitewise Monsoon, Non-monsoon & Annual Flow of Water in Different River Basin

Unit : M.C.M.													
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
XII Basin : Mahi, Sabarmati & other West Flowing Rivers of Saurashtra & Kut													
b) Basin : Sabarmat													
1	Nabhoi	Monsoon						888.10	918.70	1435.00	4374.00	202.60	-
		Non-Monsoon						23.40	12.20	53.00	9.00	4.00	-
		Annual						911.50	930.90	1488.00	4383.00	206.60	-
2	Kheda	Monsoon				151.50	738.80	189.50	29.75	278.20	1299.00	23.04	-
		Non-Monsoon	Observation Started w.e.f.10.7.85			0.00	3.10	0.00	0.00	0.00	1.00	0.00	-
		Annual				151.50	741.90	189.50	29.75	278.20	1300.00	23.04	-
3	Ratanpur	Monsoon						143.50	54.49	231.00	728.50	38.25	-
		Non-Monsoon	Observation Started w.e.f.11.7.85					Data not Published	1.90	0.02	0.10	20.00	0.00
		Annual						145.40	54.51	231.10	748.50	38.25	-
4	Derol Bridge	Monsoon								714.20	1885.00	166.30	-
		Non-Monsoon	Observation Started w.e.f.1.6.91							126.00	139.00	119.40	-
		Annual								840.20	2024.00	285.70	-
5	Kheroj	Monsoon							793.00	421.30	1048.00	189.50	-
		Non-Monsoon	Discharge Observation w.e.f.1.6.91						10.40	0.00	8.00	0.80	-
		Annual							803.40	421.30	1056.00	190.30	-
c) Basin : Luni													
1	Gandhav	Monsoon	0.00	0.00	0.00	0.00	1991.00	3.43	841.30	91.80	442.10	489.30	-
		Non-Monsoon	0.00	0.00	0.00	0.00	20.00	0.85	5.30	0.89	32.20	0.00	-
		Annual	0.00	0.00	0.00	0.00	2011.00	4.28	846.60	92.69	474.30	489.30	-
2	Balotra	Monsoon	Observation started w.e.f 11.7.90			0.00	712.60	0.00	1036.00	5.44	307.90	613.50	-
		Non-Monsoon				0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
		Annual				0.00	712.60	0.00	1036.00	5.44	307.90	613.50	-

Table No.1.5 : Sitewise Monsoon, Non-monsoon & Annual Flow of Water in Different River Basin

Unit : M.C.M.														
Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
XII Basin : Mahi, Sabarmati & other West Flowing Rivers of Saurashtra & Kutch														
d) Basin : Banas														
1	Kamalpur	Monsoon	0.00	0.00	46.22	34.04	639.70	0.77	865.10	984.40	3262.00	59.49	-	
		Non-Monsoon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.00	0.00	-	
		Annual	0.00	0.00	46.22	34.04	639.70	0.77	865.10	984.40	3274.00	59.49	-	
2	Chitrasani	Monsoon					52.49	11.40	107.90	37.74	150.70	33.81	-	
		Non-Monsoon	Observation Started w.e.f.15.6.91				Data not Published	0.60	0.04	2.10	0.04	7.20	0.00	-
		Annual					53.09	11.44	110.00	37.78	157.90	33.81	-	
3	Sarotry	Monsoon				35.03	870.90	65.20	897.90	220.70	1483.00	133.20	-	
		Non-Monsoon	Discharge Observation w.e.f.1.6.81				0.00	17.60	0.80	26.60	16.10	1128.00	2.20	-
		Annual				35.03	888.50	66.00	924.50	236.80	2611.00	135.40	-	
4	Abu Road	Monsoon				12.98	431.50	19.84	489.00	77.48	602.40	58.29	-	
		Non-Monsoon	Discharge Observation w.e.f.3.7.81				0.00	4.50	0.00	10.90	2.07	8.90	0.00	-
		Annual				12.98	436.00	19.84	499.90	79.55	611.30	58.29	-	
e) Basin : Damanganga														
1	Ozerkheda	Monsoon						1010.00	643.60	913.50	1740.00	883.30	-	
		Non-Monsoon	Discharge Observation w.e.f.1.6.91					7.00	10.30	29.70	5.00	5.30	-	
		Annual					1017.00	653.90	943.20	1745.00	888.60	-		
2	Nanipalsar	Monsoon						1041.00	633.00	907.40	1220.00	433.60	-	
		Non-Monsoon	w.e.f.1.6.91					1.00	2.20	27.20	8.00	5.40	-	
		Annual					1042.00	635.20	934.60	1228.00	439.00	-		

Table No.1.5 : Sitewise Monsoon, Non-monsoon & Annual Flow of Water in Different River Basin

Unit : M.C.M.

Sl.No.	Site Name	Season	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
XII Basin : Mahi, Sabarmati & other West Flowing Rivers of Saurashtra & Kut													
f) Basin : Independent River:													
1	Shetrunji at Lowara	Monsoon	113.40	19.44	484.80	182.60	200.80	65.75	118.50	155.00	314.00	51.97	-
		Non-Monsoon	0.00	1.99	0.60	4.40	4.10	0.00	0.00	0.70	0.70	0.00	-
		Annual	113.40	21.43	485.40	187.00	204.90	65.75	118.50	155.70	314.70	51.97	-
2	Bhadar at Ganod	Monsoon	56.90	0.00	1723.00	0.60	164.70	83.72	372.30	38.27	832.20	42.37	-
		Non-Monsoon	0.00	2.59	5.00	293.80	0.00	0.00	0.10	0.00	2.60	0.00	-
		Annual	56.90	2.59	1728.00	294.40	164.70	83.72	372.40	38.27	834.80	42.37	-
3	Machhu at Gungan	Monsoon	111.20	14.06	670.00	294.80	48.13	3.76	46.38	1.63	667.50	17.05	-
		Non-Monsoon	0.00	0.00	0.00	185.30	0.82	0.00	0.00	0.00	12.10	0.00	-
		Annual	111.20	14.06	670.00	480.10	48.95	3.76	46.38	1.63	679.60	17.05	-
4	Rupen at Sapawada	Monsoon				185.30	104.70	8.05	54.76	225.50	177.80	25.04	-
		Non-Monsoon	Started w.e.f. 31.8.89			0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
		Annual				185.30	104.70	8.05	54.76	225.50	177.80	25.04	-
5	Purna at Mahuwa	Monsoon	495.60	326.06	2022.00	1182.00	1020.00	594.70	956.30	1319.00	2953.00	681.30	-
		Non-Monsoon	18.60	15.70	48.00	39.00	55.00	23.00	28.60	64.00	38.00	28.60	-
		Annual	514.20	341.76	2070.00	1221.00	1075.00	617.70	984.90	1383.00	2991.00	709.90	-
6	Ambica at Gadat	Monsoon	859.40	351.40	2253.00	1224.00	1044.00	915.80	1337.00	1617.00	3807.00	891.90	-
		Non-Monsoon	29.50	23.00	59.00	41.00	53.00	26.70	52.00	88.00	52.00	46.30	-
		Annual	888.90	374.40	2312.00	1265.00	1097.00	942.50	1389.00	1705.00	3859.00	938.20	-
7	Vitarana at Durvesh	Monsoon	1678.00	1397.00	2840.00	1998.00	3481.00	2263.00	1906.00	2463.00	3989.00	1620.00	-
		Non-Monsoon	0.00	1.00	8.00	6.00	12.00	2.00	4.00	33.00	1.00	18.00	-
		Annual	1678.00	1398.00	2848.00	2004.00	3493.00	2265.00	1910.00	2496.00	3990.00	1638.00	-
8	Dhadar at Pongalwada	Monsoon					933.10	296.00	131.60	416.80	624.90	330.30	-
		Non-Monsoon	Discharge Observation started w.e.f.30.6.89				30.20	8.80	8.30	11.20	13.10	15.10	-
		Annual					963.30	304.80	139.90	428.00	638.00	345.40	-
9	Kim at Motinaroli	Monsoon						105.60	511.40	320.00	857.50	190.50	-
		Non-Monsoon	Discharge Observation started w.e.f.17.10.90					26.20	33.20	36.40	46.40	31.70	-
		Annual						131.80	544.60	356.40	903.90	222.20	-

Source: Office of the Superintending Engineer, CWC, Vadodar

- : Not Available

Basinwise Annual Runoff at Terminal Site for Last Ten Years

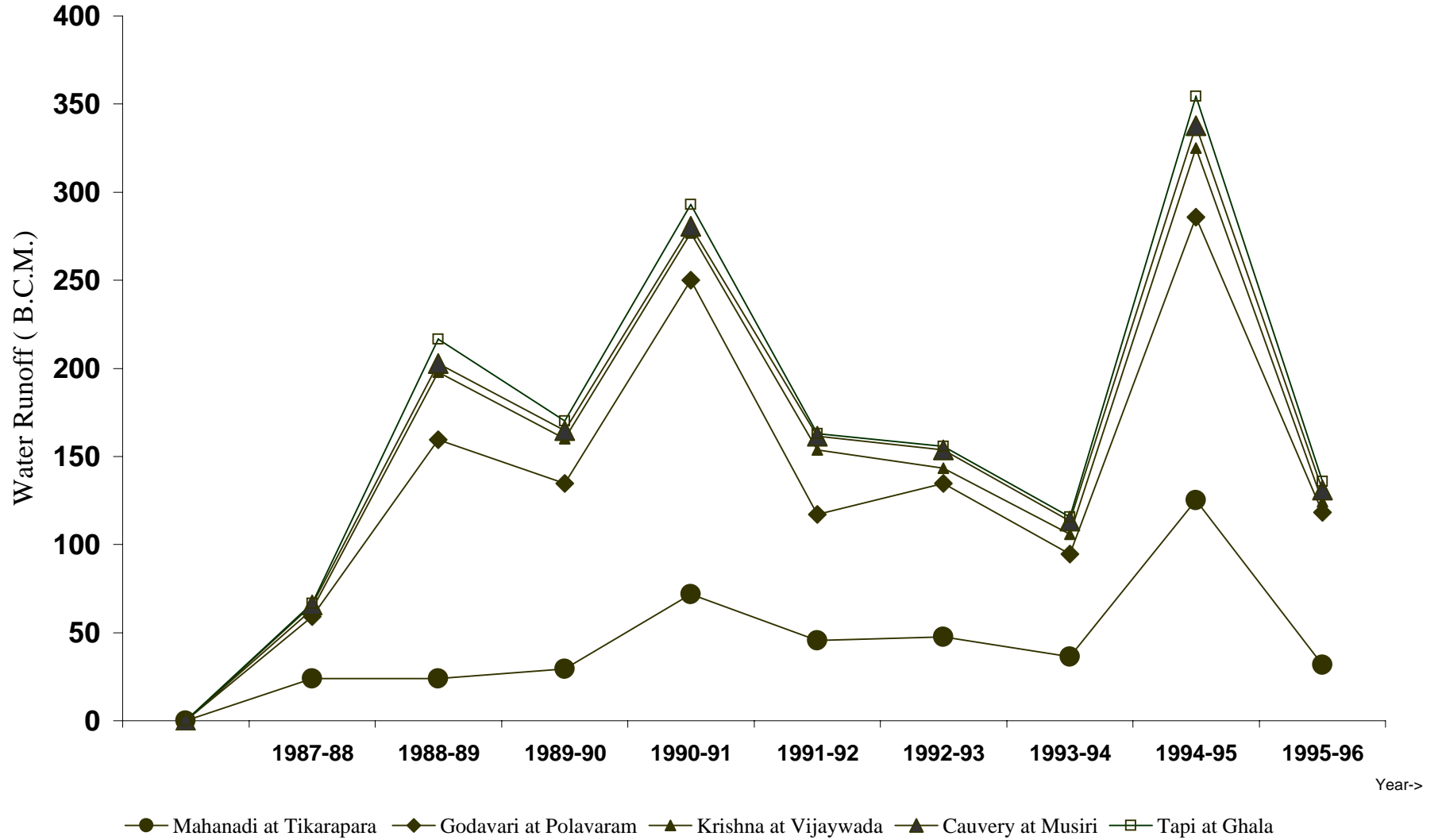


Table No.1.6 : Sitewise Maximum and Minimum Observed Water Levels & Discharges in Different River Basins

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed		Minimum Observed		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Discharge		Discharge		
								Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I Basin: Mahanadi River												
1	Sukma	158.080	23.07.1995	2536	152.790	11.02.1994	0.050	23.07.1995	2512	11.02.1994	0.050	06/89 to 05/02
2	Kantamal	131.415	29.08.1982	16409	119.745	18.04.1988	0.027	28.07.1992	16283	18.04.1998	0.027	08/71 to 05/02
3	Kesinga	178.835	13.09.1977	19603	168.045	17.05.1993	0.033	22.08.1990	19441	17.05.1993	0.033	11/78 to 05/02
4	Pandigaon @@	190.945	27.07.1992	4250	182.010	08.05.1994	0.040	28.07.1992	4217	08.05.1994	0.040	06/89 to 05/02
5	Salebhata	140.280	30.08.1982	14547.5	130.510	16.12.1996	0.016	30.08.1982	14508	16.12.1996	0.016	11/71 to 05/02
6	Sundergarh	222.900	11.09.1998	10500	216.510	27.05.1980	0.004	11.09.1998	10404	27.05.1980	0.004	12/77 to 05/02
7	Kurubhata	220.320	18.07.1995	2200	215.900	23.04.1980	0.100	08.08.1985	2120	23.04.1980	0.100	04/77 to 05/02
8	Basantpur	219.820	20.09.1980	26874	207.845	22.05.1975	1.000	15.08.1976	26142	22.05.1975	1.000	09/70 to 05/02
9	Bamnidhi	229.285	22.08.1975	12700	224.325	15.05.1980	0.900	22.08.1975	9583	15.05.1980	0.900	04/77 to 05/02
10	Manendragarh	420.860	12.07.1990	2329	413.020	31.03.1990	0.046	12.07.1990	2088	31.03.1990	0.046	06/89 to 05/02
11	Seorinarayan	222.960	11.07.1994	18960	211.930	07.05.1995	0.130	11.07.1994	17500	07.05.1995	0.130	12/85 to 05/02
12	Rampur	227.890	30.08.1982	4100	220.445	08.01.1986	0.100	31.08.1982	3578	08.01.1983	0.100	02/71 to 05/02
13	Jondhra	230.595	14.07.1994	12700	219.790	27.05.1997	0.076	20.09.1980	11033	27.05.1997	0.076	06/79 to 05/02
14	Ghatora	254.650	11.07.1994	2872	247.350	12.05.1993	0.021	14.07.1994	1893	12.05.1993	0.021	09/79 to 05/02
15	Andhiyakore	260.150	08.10.1994	1365	253.700	05.03.1999	0.147	08.10.1994	1365	05.03.1999	0.147	11/77 to 05/02
16	Simga	257.680	13.07.1994	11708	245.785	13.05.1999	0.036	13.07.1994	11703	13.05.1993	0.036	08/71 to 05/02
17	Pathardih	279.210	12.07.1994	1950	272.140	03.05.1993	0.026	02.08.1996	1890	03.05.1993	0.026	09/89 to 05/02
18	Kotni	280.080	30.08.1998	5120	270.380	02.03.1996	0.014	15.08.1986	5098	02.03.1996	0.014	09/78 to 05/02
19	Rajim	283.710	18.09.1980	8652	275.970	01.05.1972	0.100	16.08.1978	8620	01.05.1972	0.100	05/71 to 05/02
20	Baronda	289.400	18.09.1980	6450	284.155	25.04.1989	0.003	18.09.1980	6250	25.04.1989	0.003	12/77to 05/02

Source: letter No.HOC/Data-2/2002/448-49 dated 25.02.2003, Superintending Engineer, CWC, Bhubaneshwar.

Note : @@ : Site closed during May-1998.

Table No.1.6 : Sitewise Maximum & Minimum Observed Water Level & Discharge in Different River Basins

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
II	Basin: Subarnarekha											
1	Muri	237.800	09.07.94	590	234.28	15.06.97	0.060	07.09.91	412.5	15.06.97	0.06	11/89 to 5/2002
2	Adityapur	139.850	03.09.73	10100	123.81	19.05.72	0.100	20.08.75	6416	19.05.72	0.1	11/71 to 5/2002
3	Ghatsila	86.840	13.10.73	14400	74.18	22.02.93	0.683	06.08.97	1058.2	22.02.93	0.683	03/71 to 5/2002
	Basin : Burhabalang											
1	Gobindpur	9.000	31.10.99	1933	2.315	24.03.97	0.981	01.11.99	1811	24.03.97	0.981	03/92 to 5/2002

Source: letter No.HOC/Data-2/2002/448-49 dated 25.02.2003 Office of the Superintending Engineer, CWC, Bhubaneshwar.

Table No.1.6 : Sitewise Maximum & Minimum Observed Water Level & Discharge in Different River Basins

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
III	Basin: Baitarani											
1	Champua	376.410	13.08.91	1030	370.77	18.05.94	1.730	13.08.91	1010.00	18.05.94	1.730	07/90 to 5/2002
2	Anandpur	41.200	19.08.75	12200	32.13	14.05.80	1.000	19.08.75	10394.00	14.05.80	1.000	03/71 to 5/2002
	Basin : Mahanadi											
1	Tikarpada	74.980	30.08.82	41400	53.56	11.06.80	24.00	29.08.78	30863.00	11.06.80	24.00	05/72 to 5/2002

Source: letter No.HOC/Data-2/2002/448-49 dated 25.02.2003 Office of the Superintending Engineer, CWC, Bhubaneswar.

Table No.1.6 : Sitewise Maximum & Minimum Observed Water Level & Discharge in Different River Basins

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed		Minimum Observed		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
IV	Rushikulya, Vamsadhara, Saroda & Nagavali											
	a) Basin: Rushikulya Purushottampur	19.660	04.11.90	3085.00	Dry Bed	-	-	22.08.97	2195	-	Dry Bed	06/89 to 5/02
	b) Basin: Vamsadhara Kashinagar	58.940	18.09.80	16790.00	Dry Bed	-	-	23.09.72	6589	-	Dry Bed	04/71 to 5/02
	c) Basin: Nagavali Srikakulam	14.530	12.05.90	7669.00	Dry Bed	-	-	28.07.92	2013	-	Dry Bed	08/90 to 5/02
	d) Basin: Sarada Anakapalle	28.450	10.05.90	5364.00	Dry Bed	-	-	10.10.92	499.7	-	Dry Bed	08/89 to 5/02

Source: letter No.HOC/Data-2/2002/448-49 dated 25.02.2003 Office of the Superintending Engineer, CWC, Bhubaneswar.

Table No.1.6 : Sitewise Maximum & Minimum Observed Water Level & Discharge in Different River Basin

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
V Basin : Godavari												
1	Polavaram	28.017	16.08.86	87250	12.077	18.05.73	48.40	30.07.88	43506	01.06.72	48.40	6/67 to 5/2001
2	Koida	47.260	16.08.86	97500	14.010	31.05.85	68.00	15.08.83	57978	07.06.88	68.03	6/77 to 5/2001
3	Konta	50.140	16.08.86	14350	30.700	15.05.67	17.60	13.07.98	13798	28.03.73	17.60	6/66 to 5/2001
4	Injaram	50.140	16.08.86	13300	36.242	02.06.86	3.50	14.08.86	10267	26.06.66	3.50	6/66 to 5/2001
5	Poterru	99.270	18.08.99	790.0	93.900	18.05.92	6.40	28.03.97	583	27.04.97	2.85	1997-2001
6	Saradapat	238.272	04.09.94	5340	224.697	17.06.72	5.70	22.08.77	4790	18.06.72	5.00	6/70 to 5/2001
7	Sangam	56.400	10.07.98	637.3	<----- River Bed Dry ----->			10.07.98	637	<--- River Bed Dry --->		1996-2000
8	Perur	87.420	15.08.86	77500	69.155	03.06.94	9.60	11.08.81	51496	03.06.94	9.62	6/65 to 5/2001
9	Pathagudem	103.610	23.08.90	28900	86.130	14.05.95	0.10	21.07.76	24862	24.05.85	0.50	6/65 to 5/2001
10	Medapalli	213.730	12.07.94	6478	205.510	30.04.73	0.00	01.08.69	13750	01.05.86	0.00	6/66 to 5/2002
11	Madadapalli	241.060	15.08.86	Not observed	229.635	10.06.76	0.00	22.08.90	13635	24.05.84	4.50	6/72 to 5/2002
12	Tumnar	322.460	24.07.99	991.1	317.342	15.05.93	0.00	24.07.99	991	09.06.92	0.30	6/91 to 5/2001
13	Chindnar	339.160	24.07.95	10878	329.650	28.04.95	1.20	24.7.95	10878	28.04.95	3.97	6/72 to 5/2001
14	Cherribeda	571.260	22.08.97	Not observed	<----- River Bed Dry ----->			14.08.97	38.35	<--- River Bed Dry --->		1997-2001
15	Ambabal	542.086	05.09.94	Not observed	<----- River Bed Dry ----->			16.08.96	511.5	<--- River Bed Dry --->		6/93 to 5/2001
16	Sonarpal	542.156	30.08.94	Not observed	<----- River Bed Dry ----->			31.08.94	689.3	<--- River Bed Dry --->		6/91 to 5/2001
17	Jagdapur	544.686	09.07.73	2550	533.500	17.05.2000	0.60	22.07.76	2499	17.05.2000	0.58	6/66 to 5/2001
18	Kosagumda	554.180	30.08.2000	820.9	548.030	25.03.97	0.00	01.09.99	176.6	06.03.99	0.31	1997-2001
19	Murthahandi	545.190	14.08.86	Not observed	533.860	30.04.79	0.00	29.07.92	1197	27.05.80	0.40	6/88 to 5/2001
20	Nowrangpur	559.325	07.07.73	7000	549.890	27.03.99	0.50	07.07.73	5933	27.03.99	0.48	6/71 to 5/2001
21	Tekra	114.670	15.09.86	47500	96.175	09.06.66	1.40	11.08.81	33732	16.06.72	1.40	6/64 to 5/2002
22	Bhatpalli	171.720	29.08.90	5004	158.590	08.05.87	0.00	20.10.95	7862	31.05.88	0.00	6/86 to 5/2002
23	Sirpur	160.680	15.08.86	21360	145.765	01.06.73	0.00	21.08.70	15223	22.06.72	0.00	6/68 to 5/2002
24	Bamni	176.000	14.08.86	21720	157.510	17.06.67	0.00	20.10.95	11365	05.06.72	0.00	6/65 to 5/2002
25	P.G. Bridge	214.178	11.08.83	16000	197.192	01.06.65	0.00	20.10.95	6591	01.06.86	0.00	6/65 to 5/2002
26	Mangrul	197.080	02.09.95	820.4	189.440	19.01.96	0.00	02.09.95	698.4	18.02.94	0.00	6/65 to 5/2002
27	Marlegaon	399.109	10.08.83	4610	386.179	13.06.67	0.00	22.07.76	3141	01.02.86	0.00	6/64 to 5/2002
28	Kanhergaon	473.050	19.06.93	561.8	< ----- DRY BED ----- >			02.09.95	476.7	01.04.94	0.00	6/92 to 5/2002
29	Ghugus	183.651	14.07.94	11100	166.866	12.06.88	0.00	11.07.73	179.05	01.05.88	0.00	6/65 to 5/2002
30	Nandgaon	213.630	12.07.94	2488	< ----- DRY BED ----- >			16.08.91	2583.0	01.05.88	0.00	6/86 to 5/2002
31	Hivra	248.410	12.07.94	8724	< ----- DRY BED ----- >			13.07.94	7699.0	01.05.88	0.00	6/87 to 5/2002
32	Bhisnur	302.980	06.09.94	4452	288.605	24.05.89	0.00	31.08.90	1104.0	01.05.90	0.00	6/88 to 5/2002
33	Asti	155.350	08.09.94	28800	138.071	18.06.72	0.00	21.08.74	21554	12.06.67	0.40	6/65 to 5/2002

Table No.1.6 : Sitewise Maximum & Minimum Observed Water Level & Discharge in Different River Basin

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
V Basin : Godavari												
34	Rajoli	191.360	14.08.86	2110	< ----- DRY BED ----- >			06.09.94	1469	01.05.88	0.00	6/86 to 5/2002
35	Wairagarh	101.590	10.07.94	1410	< ----- DRY BED ----- >			27.07.94	326	01.06.93	0.00	6/92 to 5/2002
36	Salebardi	232.300	11.07.94	1390	< ----- DRY BED ----- >			14.08.86	2044	March 88	0.00	6/86 to 5/2002
37	Pauni	237.115	07.09.94	27500	223.710	09.06.66	0.40	11.08.79	18500.0	02.06.66	0.40	6/64 to 5/2002
38	Satrapur	277.610	06.09.94	14173	263.620	13.04.2001	0.136	06.09.94	14173.0	25.06.88	0.14	6/86 to 5/2002
39	Ramkona	349.900	30.07.91	3040	< ----- DRY BED ----- >			16.08.92	1296	01.05.87	0.00	6/86 to 5/2002
40	Rajegaon	283.970	06.09.94	8920	273.040	30.05.87	0.00	18.07.96	6415.0	May 88	0.00	6/86 to 5/2002
41	Kumhari	305.500	21.07.94	9690	291.285	11.05.87	0.00	16.08.92	3766	01.06.87	0.00	6/86 to 5/2002
42	Keolari	440.800	21.07.94	4850	< ----- DRY BED ----- >			22.08.94	2353	01.04.91	0.00	6/87 to 5/2002
43	Somanpalli	128.604	24.07.89	5180	< ----- DRY BED ----- >			21.07.76	3457.0	DRY BED	0.00	6/67 to 5/2000
44	Mancherial	138.615	20.10.95	29200	125.016	09.06.92	0.93	08.10.83	23940.0	25.05.73	0.10	6/66 to 5/2000
45	Gandlapet	318.500	30.08.90	2240	< ----- DRY BED ----- >			30.07.88	1088.0	Many days	0.00	6/87 to 5/2000
46	Betmorga	358.390	19.10.95	1540	< ----- DRY BED ----- >			03.09.88	925.5	Many days	0.00	6/87 to 5/2000
47	Degloor	363.930	19.10.95	2450	< ----- DRY BED ----- >			30.09.88	1127.0	Many days	0.00	6/87 to 5/2000
48	Saigaon	556.008	06.09.69	3395	< ----- DRY BED ----- >			07.10.83	3395.2	Many days	0.00	6/87 to 5/2000
49	Bhatkheda	581.960	16.11.98	1718	< ----- DRY BED ----- >			14.09.95	301.3	Many days	0.00	6/67 to 5/2000
50	Yelli	351.100	13.08.83	9815	< ----- DRY BED ----- >			13.08.83	9815.4	Many days	0.00	6/91 to 5/2000
51	Purna	371.610	05.09.75	7493	< ----- DRY BED ----- >			05.09.75	7493.0	Many days	0.00	6/78 to 5/2000
52	Zari	385.850	30.07.98	1690	< ----- DRY BED ----- >			30.09.88	781.6	Many days	0.00	6/78 to 5/2000
53	G.R. Bridge	377.370	25.07.89	5676	< ----- DRY BED ----- >			16.09.83	5675.7	Many days	0.00	6/87 to 5/2000
54	Dhalegaon	399.290	13.09.69	8040	< ----- DRY BED ----- >			13.09.69	7535.0	Many days	0.00	6/76 to 5/2000
55	Pachegaon	481.580	26.08.97	1363	< ----- DRY BED ----- >			03.08.88	430.0	Many days	0.00	6/83 to 5/2000
56	Ghargaon	608.110	14.07.94	1850	< ----- DRY BED ----- >			14.07.94	1585.0	Many days	0.00	6/94 to 5/2000

Source : Letter No.1/17/96-GC(Tech)/1106 dated 08.05.2003 from Superintending Engineer, Godavari Circle, Hyderabad

Table No.1.6 : Sitewise Maximum and Minimum Observed Water Level & Discharge in Different River Basin

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
VI Basin : Krishna												
1	Vijaywada	21.18	02.10.64	28360.00	8.69	17.05.87	0.00	06.10.83	22721.00	05.06.67	0.00	1965 to 1995
2	Keesara	35.81	24.07.89	7000.00	27.60	31.05.79	0.00	15.08.78	5180.00	31.05.79	0.00	1965 to 1995
3	Madhira	51.22	12.08.86	2060.00	44.82	08.05.86	0.00	13.08.86	1269.00	08.05.86	0.00	1984 to 1995
4	P.S. Gudem	154.25	23.07.89	1720.00	144.80	13.01.96	0.00	02.10.90	460.10	13.01.96	0.00	1988 to 1995
5	Paleru Bridge	78.88	23.07.89	1800.00	71.51	13.07.84	0.30	06.10.83	2250.00	09.06.67	0.00	1965 to 1995
6	Wadenapalli	38.63	06.08.67	20600.00	24.11	20.05.87	8.10	30.09.79	21560.00	09.06.71	0.00	1967 to 1995
7	Dameracherla	62.04	24.07.89	6600.00	55.08	06.06.88	0.15	06.10.83	5762.00	20.06.83	0.00	1968 to 1995
8	Pondugala	57.23	01.10.78	20950.00	42.83	18.05.87	5.80	01.10.78	20398.00	05.06.76	4.60	1976 to 1995
9	Halia	134.41	23.09.91	3700.00	129.07	22.05.86	0.00	06.10.94	825.30	22.05.86	0.00	1984 to 1995
10	Lakshmipuram	288.75	22.10.87	670.00	286.54	22.11.86	0.00	22.10.87	666.90	16.07.85	0.00	1984 to 1995
11	Bawapuram	280.50	19.11.92	14053.00	270.66	28.06.95	0.00	30.09.78	6723.00	28.06.95	0.00	1965 to 1995
12	Mantralayam	315.80	18.11.92	12403.00	306.23	22.06.95	0.00	30.09.78	8504.00	22.06.85	0.00	1972 to 1995
13	T. Ramapuram	354.33	14.10.71	2230.00	349.75	30.04.87	0.00	14.10.71	1923.00	30.04.87	0.00	1966 to 1995
14	Amkundibridge	510.99	25.09.89	150.70	Dry Bed	1994	0.00	19.09.82	92.00	1994	0.00	1980 to 1995
15	Bhupasamudram	474.11	12.09.81	713.00	Dry Bed	1994	0.00	20.09.81	362.90	1994	0.00	1978 to 1995
16	Kelloodu	103.15	17.11.92	659.00	Dry Bed	21.06.94	0.00	17.11.92	610.90	21.06.94	0.00	1990 to 1995
17	Oollenur	380.27	18.11.92	11043.00	371.01	30.05.86	0.90	15.08.80	5246.00	30.05.86	0.90	1974 to 1995
18	Marol	517.60	18.11.92	1562.00	Dry Bed	01.05.95	0.00	03.07.80	1235.00	29.03.77	0.00	1966 to 1995
19	Harlahalli	518.35	18.11.92	7788.00	Dry Bed	18.03.92	0.00	04.08.82	4883.00	18.04.89	0.00	1966 to 1995
20	Bylahahalli	538.45	17.11.92	1124.00	Dry Bed	01.04.92	0.00	18.11.92	675.40	01.04.92	0.00	1985 to 1995
21	Kuppelur	101.22	16.07.94	482.00	Dry Bed	11.05.92	0.00	20.08.92	243.60	11.05.92	0.00	1990 to 1995
22	Honnali	546.47	16.07.94	7200.00	Dry Bed	05.04.88	1.73	03.08.82	4569.00	05.04.88	1.73	1980 to 1995
23	Shimoga	565.04	03.08.82	4400.00	Dry Bed	08.05.96	0.00	03.08.82	4124.00	08.05.96	0.00	1972 to 1995
24	Krishna Agrahara	281.26	21.07.94	15900.00	270.66	29.05.93	0.00	21.08.83	14279.00	30.05.93	0.00	1981 to 1995
25	Yadgir	361.92	07.09.89	10300.00	350.17	29.05.96	0.00	07.09.69	10254.00	29.05.96	0.00	1965 to 1995
26	Malkhed	400.00	16.08.90	3040.00	390.00	01.05.95	0.00	09.07.91	1414.00	01.05.95	0.00	1990 to 1995
27	Chincholi	532.80	17.07.89	1325.00	Dry Bed	27.05.81	0.00	28.09.89	355.60	07.09.87	0.04	1979 to 1995
28	Jewangi	426.96	15.08.90	1263.00	421.67	31.01.95	0.00	01.08.84	1500.00	31.01.95	0.00	1979 to 1995
29	Boriomerga	434.95	15.09.83	920.00	Dry Bed	01.06.79	0.00	15.09.83	1026.00	30.08.91	0.03	1979 to 1995

Table No.1.6 : Sitewise Maximum and Minimum Observed Water Level & Discharge in Different River Basin

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed		Minimum Observed		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Discharge		Discharge		
								Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VI Basin : Krishna												
30	Wadakbal	428.56	29.09.89	2850.00	Dry Bed	21.05.69	0.00	29.09.89	2746.00	11.04.69	0.01	1964 to 1995
31	Takli	423.11	01.08.67	8400.00	Dry Bed	28.04.72	0.00	31.07.67	8600.00	10.05.69	0.01	1964 to 1995
32	Kokangaon	458.35	27.09.79	1215.00	Dry Bed	01.06.79	0.00	22.09.81	634.00	20.07.92	0.01	1979 to 1995
33	Shirdhon	442.20	26.09.79	460.00	Dry Bed	01.06.79	0.00	06.10.84	125.50	28.11.88	0.01	1979 to 1995
34	Narsingpur	461.59	30.07.67	6680.00	448.21	11.04.79	0.10	17.08.83	7602.00	28.10.91	0.09	1966 to 1995
35	Sarati	476.79	02.08.76	3190.00	Dry Bed	21.05.87	0.00	02.08.76	2753.00	15.10.94	0.06	1965 to 1995
36	Dhond	508.34	02.08.76	9240.00	Dry Bed	01.06.83	0.00	01.08.76	6964.00	20.05.69	0.01	1967 to 1995
37	Phulgaon	90.45	14.07.94	3600.00	Dry Bed	01.06.92	0.00	14.07.94	2965.00	27.09.92	2.71	1992 to 1995
38	Huvinhedgi	355.12	21.07.94	11000.00	342.24	07.04.78	6.50	02.07.83	9510.00	04.05.81	0.10	1976 to 1995
39	Talikota	-	-	-	-	-	-	-	-	-	-	-
40	Cholachguda	535.60	18.11.92	2315.00	Dry Bed	12.01.86	0.00	06.06.91	1531.00	11.01.86	0.10	1982 to 1995
41	Navalgund	565.26	30.09.92	205.00	Dry Bed	01.04.92	0.00	30.09.92	95.94	22.04.95	0.27	1991 to 1995
42	Bagalkot	513.03	19.07.94	2900.00	Dry Bed	01.04.88	0.00	13.07.75	2592.00	09.04.68	0.08	1967 to 1995
43	Gokakfalls	546.56	16.07.94	3470.00	Dry Bed	01.12.73	0.00	10.08.79	3147.00	18.03.72	0.03	1971 to 1995
44	Gotur	626.47	28.06.83	1350.00	Dry Bed	01.04.82	0.00	12.07.93	1091.00	26.10.80	0.10	1980 to 1995
45	Daddi	681.00	27.06.83	2730.00	Dry Bed	26.03.81	0.00	29.06.83	1929.00	16.02.80	0.10	1978 to 1995
46	Galgali	517.87	21.07.94	13320.00	505.33	06.06.87	0.00	20.07.94	13323.00	31.03.93	0.01	1976 to 1995
47	Pandegaon	582.25	26.09.79	480.00	Dry Bed	01.09.79	0.00	26.09.88	224.80	30.11.87	0.09	1979 to 1995
48	Sadalga	538.95	29.06.83	2435.00	Dry Bed	01.06.71	0.00	11.07.75	1759.00	12.06.81	0.40	1969 to 1995
49	Bastewad	546.86	28.06.83	1420.00	Dry Bed	01.06.79	0.00	30.07.82	505.00	06.11.79	0.10	1979 to 1995
50	Vandur	542.02	24.07.89	660.00	Dry Bed	01.06.79	0.00	09.08.86	562.10	31.12.91	0.12	1979 to 1995
51	Terwad	538.74	17.07.94	2750.00	Dry Bed	28.04.85	0.00	07.08.80	1918.00	16.01.83	0.10	1979 to 1995
52	Kurunwad	538.12	17.07.94	5760.00	519.87	29.03.78	0.00	04.08.76	6854.00	28.12.73	0.10	1972 to 1995
53	Arjunwad	541.23	17.07.94	6380.00	Dry Bed	26.01.70	0.00	22.06.70	5079.00	05.01.70	0.10	1967 to 1995
54	Samdoli	544.35	29.07.67	1710.00	Dry Bed	01.06.69	0.00	09.07.73	2250.00	21.06.67	0.04	1964 to 1995
55	Karad	567.16	07.06.76	7410.00	Dry Bed	20.05.83	0.00	02.08.76	4562.00	30.05.69	0.01	1965 to 1995
56	Warunji	568.05	06.06.76	4200.00	Dry Bed	01.04.73	0.00	28.07.68	3830.00	07.06.67	0.02	1966 to 1995
57	Koyananagar	580.67	02.09.94	2760.00	569.83	15.06.79	0.00	03.09.94	2505.00	28.02.73	0.10	1972 to 1995

Source: Water Year Book Vol. (I/III) 1995-96

Table No.1.6 : Sitewise Maximum & Minimum Observed Water Level & Discharge in Different River Basin

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level	Date	Discharge	Water Level	Date	Discharge	Date	Discharge	Date	Discharge	
		(m)		(Cumecs)	(m)		(Cumecs)		(Cumecs)		(Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VII Basin : Cauvery												
1	Musiri	86.725	13.11.77	4510.00	82.780	18.03.93	0.000	10.11.93	6949.00	11.07.87	0.357	6/72 to 5/2000
2	N.Patti	135.300	10.11.93	7500.00	128.920	23.09.95	0.000	10.11.93	7145.00	14.09.82	0.010	6/72 to 5/2000
3	Kodumudi	128.140	09.12.72	6000.00	122.070	06.06.83	1.000	17.07.80	4829.00	06.06.83	1.200	12/78 to 5/2000
4	Savandapur	189.560	05.11.78	2850.00	180.320	17 05 99	0.725	20.11.79	1446.00	02.05.87	0.500	6/71 to 5/2000
5	T.Marahada	341.650	30.10.91	1020.00	338.210	08.04.83	0.030	30.10.91	849.60	11.04.83	0.030	7/78 to 5/2000
6	Nellithurai	309.450	15.11.92	1500.00	302.040	17.07.84	0.000	27.07.92	1386.00	01.08.79	0.150	14/79 to 5/2000
7	Urachikottai	165.920	12.09.81	4720.00	157.500	22.08.88	0.000	06.07.80	4664.00	31.01.83	5.000	6/79 to 5/2000
8	Biligundulu	265.840	30.07.91	7080.00	257.660	21.03.72	40.000	30.07.91	7013.00	25.06.74	8.900	9/71 to 5/2000
9	Kanakapura	619.925	02.10.84	519.50	614.300	21.01.96	0.000	15.09.88	338.90	21.04.93	0.075	9/78 to 5/2000
10	T.K.Halli	585.950	03.10.84	1219.00	580.600	28.03.79	0.000	03.10.84	1219.00	04.06.83	0.500	6/78 to 5/2000
11	Kollegal	630.250	30.07.91	6570.00	623.510	26.05.74	10.000	17.07.94	5620.00	05.04.72	10.000	2/71 to 5/2000
12	T.Narasipur	642.300	05.07.80	2875.00	635.200	02.02.96	4.339	04.07.84	1826.00	11.04.74	0.700	3/71 to 5/2000
13	Muthankera	712.840	22.05.92	1636.00	838.695	08.04.86	0.375	10.07.73	1199.00	05.04.90	0.116	5/72 to 5/2000
14	K.M.Vadi	771.250	14.07.84	688.00	766.165	02.06.87	0.000	15.07.94	681.20		0.500	6/79 to 5/2000
15	M.H.Halli	846.655	28.07.91	2375.00	707.045	23.06.95	2.200	19.08.81	1311.00	02.05.83	0.400	10/78 to 5/2000
16	Kudige	820.410	03.07.80	2265.00	810.995	10.06.83	1.200	03.07.80	2265.00	09.04.75	0.200	11/75 to 5/2000

Source: Water Year Book for 1998-99

Table No.1.6 : Sitewise Maximum & Minimum Observed Water Level & Discharge in Different River Basin

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VIII Basin : East Flowing Rivers												
1	Thammavaram	20.490	14-05-79	3605.00	14.66	05-07-81	0.10	14-05-79	3606.00	31-05-78	0.00	9/78 to 5/2000
2	K.Bitragunda	6.470	19-10-96	1615.00	0.85	31-05-92	0.00	07-11-98	366.60	11-05-93	0.00	6/90 to 5/2000
3	Nellore	51.450	18-11-91	8378.00	44.75	19-09-91	0.00	21.10.96	5363.00	19-03-93	0.00	9/87 to 5/2000
4	Chennur	123.545	16-07-89	5775.00	117.22	11-03-98	0.01	03.10.96	4084.00	08-03-93	0.00	7/89 to 5/2000
5	Alladupalli	102.720	03-10-96	2029.00	95.01	16-07-98	0.00	03-10-96	2029.00	01-06-98	0.00	9/85 to 5/2000
6	Singavaram	261.850	07-07-89	1377.00	256.51	07-03-98	0.00	12-09-88	878.00	08-04-92	0.00	11/79 to 5/2000
7	Tadapatri	230.340	04-11-75	1862.00	224.22	14-09-80	0.00	04-11-75	1862.00	01-06-98	0.00	12/71 to 5/2000
8	Nagalamadike	550.500	12-09-88	1357.00	545.27	01-09-98	0.41	12-09-88	966.60	01-06-98	0.00	7/78 to 5/2000
9	Nandipalli	104.300	19-10-96	605.00	96.51	25-05-95	0.04	02-10-90	237.40	01-06-98	0.00	6/90 to 5/2000
10	Kamalapuram	139.250	20-10-96	1540.00	136.02	01-10-90	0.00	17-11-91	1279.00	07-12-90	0.00	6/90 to 5/2000
11	Naidupeta	25.950	14-11-84	2525.00	20.43	25-10-91	0.00	15-11-91	1934.00	01-06-98	0.00	10/77 to 5/2000
12	Sullurpet	20.200	18-10-96	520.00	13.02	01-11-94	0.00	13-12-96	877.00	01-06-98	0.00	5/88 to 5/2000
13	Chengalpattu	29.500	14-11-85	3210.00	25.20	20-01-98	0.00	18-11-91	2959.00	20-01-98	0.00	10/78 to 5/2000
14	Magaral	62.260	14-11-85	1800.00	59.21	09-01-76	0.06	13-11-85	1607.00	01-06-98	0.00	12/71 to 5/2000
15	Arcot	161.180	18-11-91	1500.00	159.42	06-12-95	0.22	18-11-91	1445.00	01-06-98	0.00	9/79 to 5/2000
16	Avaramkuppam	368.820	30-10-91	400.00	365.71	05-05-79	0.00	19-11-79	290.90	01-06-98	0.00	7/78 to 5/2000
17	Villupuram	46.550	09-12-72	650.00	42.88	17-11-93	0.00	11-12-96	2305.00	01-06-98	0.00	10/72 to 5/2000
18	Vazhavachanur	139.650	15-11-91	1935.00	133.52	27-07-87	0.00	18-11-79	2078.00	09-07-98	0.00	7/78 to 5/2000
19	Gummanur	495.050	11-09-81	1113.00	491.08	15-07-85	0.01	11-09-81	841.20	01-06-98	0.00	9/78 to 5/2000
20	Kudalaiyathur	49.100	11-12-98	2027.00	42.92	28.09.93	0.00	05-12-93	2176.00	01-06-98	0.00	11/89 to 5/2000
21	Paramakudi	41.475	20-11-79	1950.00	37.85	04-03-94	0.00	13-12-98	915.80	07-12-86	0.00	11/71 to 5/2000
22	Theni	285.670	14-11-92	1240.00	278.43	29-05-96	0.00	14-11-92	1189.00	01-06-98	0.00	6/78 to 5/2000
23	Irukkankudi	51.100	15-12-98	1180.00	47.20	03-06-95	0.22	09-12-97	1032.00	17-01-92	0.00	12/89 to 5/2000
24	Murappanadu	22.880	14-11-92	4022.00	14.75	09-04-96	0.00	14-11-92	3868.00	11-05-87	0.00	12/77 to 5/2000
25	A.P.Puram	69.570	14-11-92	713.00	63.60	06-12-95	0.22	14-11-92	486.90	17-01-92	0.00	12/79 to 5/2000

Source: Water Year Book for year 1999-2000

Table No.1.6 : Sitewise Maximum & Minimum Observed Water Level & Discharge in Different River Basins

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed		Minimum Observed		Period of Record	
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Discharge		Discharge			
								Date	Discharge (Cumecs)	Date	Discharge (Cumecs)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
IX West Flowing Rivers from Kanyakumari to Taj								incomplete					
1	Badlapur	19.467	24.07.89	4260.00	9.937	16.03.93	0.000	16.07.88	4440.00	07.01.95	1.481	2/88 to 5/2000	
2	Mangaon	10.255	24.07.89	1340.00	4.315	20.12.94	0.100	03.08.95	1116.00	12.05.87	0.000	12/86 to 5/2000	
3	Anjanari	18.250	16.07.99	1100.00	11.410	01.06.96	0.000	11.07.98	495.50	01.06.96	0.000	8/91 to 5/2000	
4	Adavali	106.750	23.07.89	3500.00	97.600	30.05.95	0.000	01.08.95	2405.00	30.05.95	0.000	12/86 to 5/2000	
5	Ganjim	12.520	29.07.82	4400.00	1.410	27.04.86	0.600	29.07.82	4746.00	05.09.99	0.400	5/71 to 5/2000	
6	Collem	72.885	28.07.82	520.00	66.510	22.03.82	0.200	01.08.85	617.50	29.03.95	0.082	5/71 to 5/2000	
7	Kolad	15.050	16.07.99	590.00	11.000	21.09.97	0.000	23.08.97	576.70	01.06.97	0.000	5/71 to 5/2000	
8	Nagothane	13.950	16.09.99	1750.00	3.860	12.07.97	0.000	23.08.97	1727.00	30.11.97	0.000	5/71 to 5/2000	
9	Pen	17.000	16.07.99	255.00	8.100	02.06.97	0.000	16.07.99	344.00	01.11.97	0.000	5/71 to 5/2000	
10	Santeguli	226.830	19.11.79	5822.00	10.120	21.04.90	0.364	19.11.79	6730.00	11.07.83	0.000	6/88 to 5/2000	
11	Haladi	18.880	12.04.92	1155.00	0.840	29.05.89	0.000	18.07.88	915.80	01.04.90	0.000	1/86 to 5/2000	
12	Yennehole	9.050	18.07.99	1127.00	16.910	05.05.90	0.000	15.07.94	1062.00	01.06.88	0.000	7/89 to 5/2000	
13	Bantwal	24.140	30.07.94	9832.00	1.060	06.05.90	0.050	13.07.94	9832.00	01.03.90	0.050	11/70 to 5/2000	
14	Erinjipuzha	13.550	26.07.74	1445.00	12.250	05.05.97	0.000	25.07.74	1277.00	06.05.90	0.000	6/85 to 5/2000	
15	Perumannu	19.080	12.07.95	2100.00	5.825	19.04.89	0.000	30.07.94	1878.00	11.04.86	0.000	6/85 to 5/2000	
16	Kuniyal	14.500	24.07.89	3177.00	0.030	16.03.97	0.000	21.06.92	3086.00	11.05.87	0.050	1/79 to 5/2000	
17	Karathodu	10.630	14.07.94	806.70	0.000	26.02.87	0.000	14.07.94	784.40	02.03.98	0.000	6/86 to 5/2000	
18	Kumbidi	13.430	15.07.94	2295.00	4.100	30.03.95	0.177	16.07.94	2813.00	06.02.87	0.000	1/79 to 5/2000	
19	Pulamanthol	9.665	27.06.85	1429.00	0.000	02.04.88	0.000	15.07.94	1410.00	02.03.80	0.000	2/86 to 5/2000	
20	Mankar	19.070	14.07.94	1220.00	46.870	02.04.92	0.000	28.07.92	664.00	04.03.86	0.000	6/85 to 5/2000	
21	Pudur	51.550	14.11.92	610.00	59.600	28.04.97	0.000	28.07.91	744.10	21.06.86	0.000	9/85 to 5/2000	
22	Ambarampalyan	65.550	14.11.92	850.00	218.910	31.05.84	0.020	14.11.92	389.40	21.04.86	0.020	3/78 to 5/2000	
23	Arangali	7.620	27.06.85	1149.00	0.08	30.04.97	0.000	03.08.94	915.30	20.12.94	0.000	4/78 to 5/2000	
24	Neeleswaram	11.105	27.07.74	4430.00	0.760	09.02.97	27.000	15.08.75	3502.00	13.05.83	1.500	3/71 to 5/2000	
25	Ramamangalan	8.305	28.06.85	1304.00	11.130	16.04.97	44.50	28.06.85	1304.00	04.04.83	15.000	4/78 to 5/2000	
26	Kalampur	13.730	02.08.95	808.40	7.020	30.04.90	0.000	09.08.86	480.30	01.03.87	0.000	6/86 to 5/2000	
27	Kidangoor	8.015	03.08.94	842.00	-0.060	16.04.97	0.000	03.08.94	819.90	01.03.87	0.000	7/85 to 5/2000	
28	Kalloppara	9.260	03.08.94	885.00	0.530	27.02.95	0.000	03.08.94	848.30	18.04.83	0.000	6/85 to 5/2000	
29	Malakkara	7.820	03.08.94	1988.00	-0.410	07.04.92	1.386	03.08.94	1988.00	08.04.99	1.222	6/85 to 5/2000	
30	Thumpamon	13.735	07.11.78	680.00	5.240	19.03.97	0.200	03.08.94	720.60	07.03.83	0.000	1/78 to 5/2000	
31	Pattazhi	13.805	15.11.92	2367.00	1.650	17.03.97	1.765	11.10.92	1459.00	27.04.90	0.000	4/78 to 5/2000	
32	Ayilam	10.685	10.10.92	974.80	0.045	06.06.83	0.200	10.10.92	974.80	02.03.82	0.000	12/78 to 5/2000	

Source: Water Year Book Year 1999-2000

Table No.1.6 : Sitewise Maximum & Minimum Observed Water Level & Discharge in Different River Basin

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record	
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)		
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
X Tapi													
1	Dedtalai	293.000	15.09.98	15000	River	River	Many Days	0.00	22.09.98	1427	Many Days	0.00	12/77 to 5/99
2	Burhanpur	238.000	15.09.98	26600	do	do		0.00	15.09.98	25261	do	0.00	09/72 to 5/99
3	Lakhpuri	268.320	16.09.98	1560	do	do		0.00	16.09.98	1343	do	0.00	12/77 to 5/99
4	Gopalkheda	250.150	16.09.98	2210	do	do		0.00	16.09.98	2521	do	0.00	02/77 to 5/99
5	Yerli	224.730	17.09.98	3060	do	do		0.00	17.09.98	3059	do	0.00	03/77 to 5/99
6	Dapuri	194.150	30.07.98	2000	do	do		0.00	30.07.98	1306	do	0.00	01/72 to 5/99
7	Savkheda	159.150	16.09.98	16650	do	do		0.00	16.09.98	15894	do	0.00	04/72 to 5/99
8	Malkheda	174.900	30.09.98	950.0	do	do		0.00	11.08.98	479.5	do	0.00	11/77 to 5/99
9	Morane	267.330	15.09.98	655.0	do	do		0.00	15.09.98	644.7	do	0.00	03/78 to 5/99
10	Gidhade	137.890	16.09.98	17600	do	do		0.00	16.09.98	17578	do	0.00	06/71 to 5/99
11	Sarangkheda	123.430	16.09.98	22850	do	do		0.00	16.09.98	21292	do	0.00	10/97 to 5/99
12	Ghala	19.835	17.09.98	10200	do	do		0.00	09.07.98	458.3	do	0.00	06/78 to 5/99

Source : Water Year Book for 1998-99.

Table No.1.6 : Sitewise Maximum & Minimum Observed Water Level & Discharge in Different River Basins

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
XI Basin : Narmada												
1	Chandwada	33.500	07.09.94	9070.0	20.075	22.09.87	0.00	08.09.94	1911.000	21.09.87	0.041	80-81 to 98-99
2	Gurudeshwar	39.780	07.09.94	60642.0	14.310	03.06.80	14.50	07.09.94	60642.000	03.06.80	14.050	73-74 to 98-99
3	Rajghat	134.510	19.08.84	56610.0	112.500	03.06.89	13.40	19.08.84	56610.0	05.06.89	13.070	72-73 to 98-99
4	Mandaleshwar	157.290	31.08.73	18000.0	139.035	27.05.80	37.60	07.09.94	44422.0	06.06.88	11.920	72-73 to 98-99
5	Kogaon	163.010	26.06.79	7900.0	151.600	16.06.95	0.00	23.08.90	4460.0	16.02.89	0.015	78-79 to 98-99
6	Ginnore	237.650	06.09.94	5950.0	220.045	24.05.94	0.00	29.08.78	12158.0	20.04.74	0.600	71-72 to 98-99
7	Handia	273.580	19.08.84	26240.0	258.965	08.06.77	18.50	24.07.86	22381.0	01.06.89	11.000	77-78 to 98-99
8	Chhidgaon	300.300	15.09.98	6660.0	287.155	19.05.88	0.41	16.07.93	5805.0	20.05.80	0.100	77-78 to 98-99
9	Hoshangabad	301.330	30.08.73	33593.0	283.770	29.05.80	14.40	31.08.73	31463.0	30.05.80	14.300	72-73 to 98-99
10	Sandia	314.900	30.08.80	16400.0	298.900	18.05.96	36.48	29.07.94	16683.0	09.05.89	9.290	78-79 to 98-99
11	Gadarwara	330.350	07.08.77	2950.0	322.351	22.05.97	0.00	20.08.82	30031.0	21.04.96	0.043	77-78 to 98-99
12	Barmanghat	331.320	30.08.73	19000.0	307.360	01.06.80	4.50	30.08.73	20658.0	31.05.84	2.900	72-73 to 98-99
13	Belkheri	359.950	21.07.94	7600.0	340.950	31.05.96	0.33	16.09.84	4961.0	09.06.77	0.100	77-78 to 98-99
14	Patan	356.080	13.09.92	1880.0	341.590	17.06.97	0.00	15.07.94	1339.0	15.05.97	0.176	79-80 to 98-99
15	Jamtara	382.000	24.08.91	17250.0	316.790	05.06.80	0.00	30.08.72	21355.0	12.05.88	0.090	72-73 to 98-99
16	Hriday Nagar	445.930	17.07.94	4790.0	436.260	21.06.85	0.20	18.07.94	3172.0	01.04.93	0.025	77-78 to 98-99
17	Mohgaon	463.620	23.08.91	7184.0	448.490	20.06.79	0.00	23.08.91	7182.0	09.06.82	0.007	78-79 to 98-99
18	Manot	459.650	18.08.84	5660.0	442.360	31.05.80	0.00	23.08.91	7528.0	14.06.93	0.051	77-78 to 98-99
19	Dindori	669.640	23.08.91	4710.0	662.540	03.06.95	1.10	23.08.91	4577.0	26.05.94	0.581	88-89 to 98-99

Source: Letter (No.5/1/2000/CE(NBO)/416), dated 21/05/2002, of Superintending Engineer, CWC, Bhopal.

Table No.1.6 : Sitewise Maximum & Minimum Observed Water Level and Discharge in Different River Basin

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
XII Basin : Mahi, Sabarmati & Other Rivers of Saurashtra Kutch												
Year 1994-95												
1	Khanpur	28.270	01.08.97	13750	Dry River	Many Days	0.00	01.08.97	13783	Many Days	0.00	12/78 to 5/98
2	Chakaliya	191.800	26.06.97	6100	do	do	0.00	01.08.97	3419	do	0.00	02/78 to 5/98
3	Paardibadi	139.140	25.08.97	3560	do	do	0.00	27.08.97	1122	do	0.00	09/77 to 5/98
4	Rangeli	153.350	02.08.97	200.0	do	do	0.00	04.8.97	19.95	do	0.00	07/78 to 5/98
5	Dhariawad	205.600	10.09.97	177.0	do	do	0.00	11.09.97	9.773	do	0.00	07/84 to 5/98
6	Mataji	305.200	26.07.97	4450	do	do	0.00	31.07.97	4504	do	0.00	07/82 to 5/98
7	Nabhoi	20.100	28.06.97	2460	do	do	0.00	26.08.97	536.30	do	0.00	01/91 to 5/98
8	Kheda	26.250	02.08.97	2560	do	do	0.00	01.08.97	2258	do	0.00	04/85 to 5/98
9	Ratanpur	48.200	28.07.97	3680	do	do	0.00	27.07.97	2614	do	0.00	04/85 to 5/98
10	Derol Bridge	95.030	25.06.97	2930	do	do	0.00	-	-	do	0.00	08/80 to 5/98
11	Kheroj	214.900	25.06.97	1330	do	do	0.00	25.06.97	401.0	do	0.00	06/81 to 5/98
12	Gandhav	33.650	29.08.97	540.0	do	do	0.00	29.08.97	534.2	do	0.00	06/74 to 5/98
13	Balotra	104.420	28.08.97	785	do	do	0.00	29.08.97	658.3	do	0.00	07/90 to 5/98
14	Kamalpur	37.175	26.06.97	780.0	do	do	0.00	26.08.97	123.2	do	0.00	07/71 to 5/98
15	Chitrasavi	185.570	25.06.97	26.20	do	do	0.00	11.09.97	17.22	do	0.00	05/78 to 5/98
16	Sarotry	188.660	28.07.97	484.0	do	do	0.00	14.09.97	331.0	do	0.00	06/80 to 5/98
17	Abu Road	256.650	14.09.97	174.0	do	do	0.00	26.08.97	24.13	do	0.00	05/78 to 5/98
18	Lowara	58.700	04.07.97	106.0	do	do	0.00	11.09.97	9.629	do	0.00	12/70 to 5/98
19	Ganod	29.980	13.09.97	1185	do	do	0.00	13.09.97	323.5	do	0.00	11/70 to 5/98
20	Gungan	17.000	24.06.97	540.0	do	do	0.00	09.07.97	130.3	do	0.00	09/70 to 5/98
21	Sapawada	43.000	27.06.97	1185	do	do	0.00	28.06.97	94.50	do	0.00	08/89 to 5/98
22	Mahuwa	18.000	31.07.97	2410	do	do	0.00	25.08.97	2174	do	0.00	10/70 to 5/98
23	Gadat	12.400	31.07.97	2700	do	do	0.00	26.08.97	762.6	do	0.00	01/79 to 5/98
24	Durvesh	12.920	31.07.76	4380	do	do	0.00	31.07.97	4044	do	0.00	11/70 to 5/98
25	Pongalwada	17.400	26.08.97	1014	do	do	0.00	26.08.97	1014	do	0.00	04/79 to 5/98
26	Ozerkheda	89.650	31.07.97	1215	do	do	0.00	23.08.97	1002	do	0.00	06/84 to 5/98
27	Nauipalsam	107.890	31.07.97	650.0	do	do	0.00	01.08.97	318.0	do	0.00	10/85 to 5/98
28	Motinaroli	18.150	24.08.97	372.0	do	do	0.00	25.08.97	295.2	do	0.00	10/90 to 5/98

Source: Water Year Book for 1997-98

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basin

Unit: M. C. M.

Sl. No.	Site Name	Period/ Years	DEPENDABLE FLOW									Current Year
			10%	20%	30%	40%	50%	60%	70%	80%	90%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I Basin : Mahanadi												
1	Baronda	1978-2003	2974	2114	1696	1337	1043	671	623	534	206	114
2	Rajim	1971-2003	5912	4804	3701	2918	1935	1762	1574	932	653	419
3	Seorinarayan	1986-2003	33096	21053	17480	15993	14871	11705	8913	7338	5874	4321
4	Basantpur	1972-2003	33615	29718	24913	20959	19962	18587	16351	11674	9637	7725
5	Kotni	1979-2003	4042	2741	2224	1679	1578	1513	1103	834	551	396
6	Pathardih	1989-2003	2086	1434	1241	1059	961	892	700	460	348	343
7	Simga	1972-2003	8434	7245	5861	4996	4678	3888	2793	2304	1771	1136
8	Andhiyarkore	1978-2003	674	505	469	378	308	267	256	205	154	110
9	Ghatora	1980-2003	1471	1297	1114	1082	1014	962	732	545	412	325
10	Jondhra	1979-2003	14481	10827	9670	7938	7002	6339	6039	4341	3427	2310
11	Rampur	1971-2003	2653	1847	1562	1308	1222	943	855	657	435	130
12	Manendragarh	1989-2003	640	473	448	366	329	308	296	258	222	205
13	Bamnidhi	1971-2003	8228	7693	5321	5027	4559	3998	3402	2562	2521	1351
14	Kurubhata	1978-2003	3807	2979	2861	2728	2566	2353	2198	1911	1689	907
15	Sundergarh	1978-2003	4986	4421	4120	3605	3240	3133	2968	2283	2038	948
16	Selebhata	1972-2003	3266	2857	2464	2103	1598	1374	1265	946	579	236
17	Kesinga	1979-2003	8061	4039	6894	2383	11354	4565	4304	2848	10109	2429
18	Kantamal	1975-2003	21975	15520	12862	10772	9384	7141	6323	5417	3791	3416
19	Sukma	2002-2003	-	-	-	-	-	-	-	-	-	-
20	Tikarpara	2002-2003	-	-	-	-	-	-	-	-	-	-

Source: Water Year Book for 2002-2003.

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basins

Unit: M. C. M.

Sl. No.	Site Name	Period/ Years	DEPENDABLE FLOW									Current Year
			10%	20%	30%	40%	50%	60%	70%	80%	90%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
II Subernarekha Burhabalang & Baitarni												
a) Basin : Subararekha												
1	Muri	11/89 to 5/99	1192	1081	993	846	827	763	746	732	482	-
2	Adityapur	11/71 to 5/99	4725	4286	3434	3016	2614	2206	2071	1696	1340	-
3	Ghatsila	3/71 to 5/99	11285	8984	7940	6401	5569	5257	4443	4058	2738	-
b) Basin: Burhabalang												
	Govindapur	3/92 to 5/99	-	3589	3353	2990	2382	2099	1961	1763	1533	-
c) Basin: Baitarani												
1	Anandpur	3/71 to 5/99	7677	6204	5773	4609	4314	4132	3193	2880	2476	-
2	Champua	7/90 to 5/99	1652	1182	1104	1072	991	896	749	724	450	-

Source: Water Year Book for 1998-99

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basins

Unit: M. C. M.

Sl. No.	Site Name	Period/ Years	DEPENDABLE FLOW									Current Year
			10%	20%	30%	40%	50%	60%	70%	80%	90%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
III Basin: Brahmani												
1	Tilga	6/79-5/99	2916	2419	2076	1982	1874	1769	1580	1496	1178	-
2	Jaraikela	6/72-5/99	7806	6031	5138	4645	4428	4294	3691	3578	2186	-
3	Panposh	6/96-5/99	-	-	13869	12594	11318	9542	7765	6877	6877	-
4	Gomlai	6/89-5/99	15593	12823	11770	10679	10190	9474	8570	7618	5243	-
5	Jenapur	6/80-5/99	23747	20885	19419	17472	16844	15364	15136	14567	11328	-

Source: Water Year Book for 1998-99

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basins

Unit: M. C. M.

Sl. No.	Site Name	Period/ Years	DEPENDABLE FLOW									Current Year
			10%	20%	30%	40%	50%	60%	70%	80%	90%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
IV Rushikulya, Vamsadhra, Saroda & Nagavali												
a)	Basin: Rushikulya Purushottampur	6/89 to 5/99	-	3094	2794	2654	2522	1807	1527	1169	733	-
b)	Basin: Vamsadhra Kashi Nagar	4/71 to 5/99	4118	3501	2947	2509	2338	2153	1800	1593	1176	-
c)	Basin: Sarada Anakapalli	8/89 to 5/99	1415	1143	835	634	613	347	298	187	105	-
d)	Basin: Nagavali Srikakulam	8/90 to 5/99	-	3316	3076	2990	2842	2630	2183	1418	1232	-

Source: Water Year Book for 1998-99

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basins

Unit: M. C. M.

Sl. No.	Site Name	Period/ Years	DEPENDABLE FLOW									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	Current Year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
V Godavari												
1	Polavaram	1967- 5/2001	143964	110899	104600	95464	87130	74822	70231	56956	49307	35086
2	Koida	1977-5/2001	159492	131816	106413	94454	90228	81753	69410	61781	54403	35773
3	Konta	1966-5/2001	18396	17121	15510	14871	14218	13658	12491	10605	9820	6278
4	Injaram	1966-5/2001	14472	12819	11329	10854	10152	9516	8739	7433	6220	4721
5	Potteru	1997-2001	<----- SUFFICIENT DATA IS NOT AVAILABLE ----->									
6	Saradapat	1970-5/2001	6681	5863	5558	5060	4575	4273	4197	3789	3136	2302
7	Sangam	1996-2001	<----- SUFFICIENT DATA IS NOT AVAILABLE ----->									
8	Perur	1965-5/2001	111863	104422	84235	73156	64713	62778	44341	41171	35829	24385
9	Pathagudem	1965-5/2001	30973	27926	24983	22302	20194	18235	17326	16125	13583	8843
10	Medapalli	1966-2001	<----- SUFFICIENT DATA IS NOT AVAILABLE ----->									
11	Madadapalli	1972-2001	<----- SUFFICIENT DATA IS NOT AVAILABLE ----->									
12	Tumnar	1991-2001	<----- SUFFICIENT DATA IS NOT AVAILABLE ----->									
13	Chindnar	1972-5/2001	14473	10765	9654	9205	8239	7619	6763	5842	4624	3253
14	Cherribeda	1997-2001	<----- SUFFICIENT DATA IS NOT AVAILABLE ----->									
15	Ambabal	1993-2001	<----- SUFFICIENT DATA IS NOT AVAILABLE ----->									
16	Sonarpal	1991-2001	<----- SUFFICIENT DATA IS NOT AVAILABLE ----->									
17	Jagdapur	1966-5/2001	5719	5169	4677	4464	3897	3671	3021	2679	2169	1377
18	Kosagumda	1997-2001	<----- SUFFICIENT DATA IS NOT AVAILABLE ----->									
19	Murthahandi	1988-2001	2635	1500	1342	1295	1264	1061	1029	841	708	695
20	Nowrangpur	1971-5/2001	4619	3908	3526	3207	2974	2806	2486	2014	1574	714.2
21	Tekra	1964-5/2001	59222	53210	43554	39004	35180	31169	23764	22563	17318	10938
22	Bhatpalli	1986-5/2001	2637	2448	2197	1712	1520	1082	782.9	707.8	298.7	271.3
23	Sirpur	1968-5/2001	23715	19076	16624	14704	12741	10642	6519	5242	3996	3272
24	Bamni	1965-5/2001	23739	18035	15948	13476	11848	9167	6289	5053	3693	2664
25	P.G. Bridge	1965-5/2001	8303	5799	5407	4533	3893	3030	2405	1829	983.0	606.2
26	Mangrul	1992-2001	<----- SUFFICIENT DATA IS NOT AVAILABLE ----->									

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basins

Unit: M. C. M.

Sl. No.	Site Name	Period/ Years	DEPENDABLE FLOW									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	Current Year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
V	Godavari											
27	Marlegaon	1964-5/2001	3058	2190	1798	1387	1192	861.9	670.4	473.5	330.8	185.9
28	Kanhergaon	1992-2001	<-----SUFFICIENT DATA IS NOT AVAILABLE----->									
29	Ghugus	1965-5/2001	9044	7827	7048	5515	4518	3243	3016	2278	1826	873.5
30	Nandgaon	1986-5/2001	1935	1058	966.3	803.6	590.0	442.3	359.7	265.9	170.2	105.4
31	Hivra	1987-5/2001	3635	2815	2541	1705	1205	1024	941.2	794.3	515.2	494.3
32	Bhisnur	1988-5/2001	1540	1343	1169	859.4	638.8	606.4	584.4	296.2	121.9	84.3
33	Asti	1965-5/2001	31394	28371	24637	21790	19486	18423	17071	12496	9101	5769
34	Rajoli	1986-5/2001	1539	1453	997.3	802.0	556.4	492.2	383.4	265.2	205.1	173.2
35	Wairagarh	1992-2001	<-----SUFFICIENT DATA IS NOT AVAILABLE----->									
36	Salebardi	1988-5/2001	767.9	677.9	652.5	630.8	599.8	575.3	532.3	477.4	341.6	330.2
37	Pauni	1964-5/2001	21240	15935	15209	13679	11466	10304	8780	7774	4953	1990
38	Satrapur	1986-5/2001	5943	4000	2437	2211	1849	1506	1307	997.4	573.4	416.4
39	Ramkona	1986-5/2002	1566	1434	1208	933.4	734.0	573.1	499.0	410.1	196.2	186.1
40	Rajegaon	1986-5/2003	7742	3301	3072	2557	2153	2094	1796	1167	803.3	507.2
41	Kumhari	1986-5/2004	8036	5018	3897	3551	2871	2642	1785	1693	832.0	620.9
42	Keolari	1987-5/2001	2326	1617	1208	1002	974.2	881.8	577.3	407.9	296.5	265.9
43	Somanpalli	1967-5/2001	3605	1964	1769	1429	1224	968.7	725.0	528.4	351.0	223.8
44	Mancherial	1964-5/2001	29037	22468	15774	12101	9738	7367	6104	4287	2049	1516
45	Gandlapet	1986-5/2001	830.2	508.1	272.5	171.9	137.5	72.9	55.3	18.88	4.20	1.78
46	Betmorga	1986-5/2001	1128.2	612.82	440	315.2	188.3	122.6	64.3	32.46	16.9	3.5
47	Degloor	1987-5/2001	982.4	690.4	567.6	503.5	382.2	253.5	88.2	68.55	43.6	23.24
48	Saigaon	1967-5/2001	3352	2084	1418	733.7	631	411.5	280	200.8	64	18.1
49	Bhatkheda	1991-5/2001	711	393	295	242	197	55	16	12	8	5
50	Yelli	1978-5/2001	13691	9450	5250	4229	3468	2744	2018	1493	948.9	576.2
51	Purna	1969-5/2001	4453	3494	1989	1457	1312	867.1	501.1	360.2	307.7	168.4
52	Zari	1987-5/2001	1513	1161	684.3	539.4	447.7	394.5	286.9	64.34	41.8	23.73

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basins

Unit: M. C. M.

Sl. No.	Site Name	Period/ Years	DEPENDABLE FLOW									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	Current Year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
V Godavari												
53	G.R. Bridge	1976-5/2001	4918	4178	3162	2576	1729	1141	916.3	584.4	358.3	137.9
54	Dhalegaon	1964-5/2001	5744	4947	4211	3150	2661	1654	982.4	675.0	262.4	124.6
55	Pachegoan	1983-5/2001	936.4	621.2	356.3	308.4	164.6	86.84	26.46	17.30	12.48	11.52
56	Ghargaon	1991-5/2001	2023	1316	1101	885	842	798	744	690	681	671

Source : Letter No.1/17/96-GC(Tech)/1106 dated 08.05.2003 from Superintending Engineer, Godavari Circle, Hyderabad and Water Year Book of Godavari Basin for the year 1995-2001

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basins

Unit: M. C. M.

Sl. No.	Site Name	Period/ Years	DEPENDABLE FLOW									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	Current Year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VI Krishna												
1	Vijaywada	6/65-5/95	50093	40295	36019	32815	27447	25275	14403	9117	5303	4271
2	Keesara	6/65-5/95	4394	3304	2276	1886	1302	1221	966	757	472	177
3	Madhira	6/84-5/95	1475	1078	850	632	543	441	344	271	242	241
4	P.S. Gudem	6/88-5/95	569	563	351	192	104	58	50	35	8	8
5	Paleru Bridge	6/65-5/95	960	645	556	466	434	403	339	181	84	24
6	Wadenapalli	6/67-5/95	53229	48035	43700	37536	33905	28772	21271	15009	10543	9019
7	Dameracherla	6/68-5/95	2024	1670	1481	954	895	814	685	585	548	544
8	Pondugala	6/76-5/95	53652	44431	37867	30686	26619	23124	16742	9371	8156	7637
9	Halia	6/84-5/95	965	150	135	134	108	65	52	31	24	22
10	Lakshmipuram	6/84-5/95	204	162	134	107	87	63	54	23	17	15
11	Bawapuram	6/65-5/95	13396	9325	6716	6048	5359	4606	4023	2831	1695	946
12	Mantralayam	6/72-5/95	16049	11598	8549	7302	6707	5410	5052	3444	2519	2419
13	T. Ramapuram	6/66-5/95	1717	1244	994	947	798	766	635	520	416	365
14	Amkundibridge	6/80-5/95	41	22	17	16	12	9	6	2	2	1
15	Bhupasamudram	6/78-5/95	159	148	68	57	9	6	3	1	0	0
16	Kellodu	6/90-5/95	288	288	231	231	192	49	49	33	33	15
17	Oollenur	6/74-5/95	11023	8326	5946	5149	4514	3977	2701	2226	1717	1328
18	Marol	6/66-5/95	3370	2769	2409	2000	1822	1629	1497	1383	1251	820
19	Harlahalli	6/66-5/95	11666	8549	7604	7251	6996	6851	6126	5557	5038	1706
20	Bylahahalli	6/85-5/95	666	564	559	508	329	290	262	0	0	0
21	Kuppelur	6/90-5/95	676	676	660	660	476	306	306	178	178	165
22	Honnali	6/80-5/95	11131	9427	7322	7308	7145	6459	5396	5155	4954	3075
23	Shimoga	6/72-5/95	7450	6690	5862	5351	5217	5152	4285	4190	3657	1966
24	Krishna Agraharam	6/81-5/95	43942	41867	33094	31374	29552	22050	17151	14957	13127	12520
25	Yadgir	6/65-5/95	19313	16770	14042	12231	11009	8817	7799	4657	3176	2731
26	Malkhed	6/90-5/95	2089	1640	930	675	596	497	172	111	102	102
28	Jewangi	6/79-5/95	760	714	390	289	207	179	126	91	74	20
29	Boriomerga	6/79-5/95	637	505	258	145	130	65	38	14	7	0
30	Wadakbal	6/65-5/95	2366	1869	1398	1010	840	566	433	220	118	40
31	Takli	6/65-5/95	11003	9038	7867	7098	6722	5583	4566	2835	2166	222
32	Kokangaon	6/79-5/95	366	159	136	94	62	50	38	30	10	0

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basins

Unit: M. C. M.

Sl. No.	Site Name	Period/ Years	DEPENDABLE FLOW									Current Year
			10%	20%	30%	40%	50%	60%	70%	80%	90%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VI Krishna												
33	Shirdhon	6/79-5/95	111	50	33	24	15	9	5	3	1	1
34	Narsingpur	6/66-5/95	10421	7972	7353	6708	6105	5855	4232	2635	2013	341
35	Sarati	6/65-5/95	2280	1907	1684	1572	1432	1199	893	619	388	208
36	Dhond	6/67-5/95	7736	6833	6149	5434	4774	4459	3803	2860	1938	1318
37	Phulgaon	6/92-5/95	<-----INSUFFICIENT DATA----->									
38	Huvinhedgi	6/76-5/95	25151	24382	23603	20296	18485	16646	15294	10912	9789	8307
39	Takli		<-----DISCHARGE OBSERVATIONS COMMENCED ON 21.09.1995----->									
40	Cholachguda	6/82-5/95	1546	1313	1159	1008	873	740	692	662	320	313
41	Navalgund	6/91-5/95	<-----INSUFFICIENT DATA----->									
42	Bagalkot	6/67-5/95	4498	4010	3634	3190	2981	2912	2188	1850	1486	879
43	Gokakfalls	6/71-5/95	3508	2818	2493	2185	2121	1795	1478	1242	776	497
44	Gotur	6/80-5/95	1874	1530	1411	1357	1283	1153	1088	904	694	527
45	Daddi	6/78-5/95	2886	2505	2331	2185	2027	1969	1901	1715	1353	1063
46	Galgali	6/76-5/95	21461	17557	16832	16418	15210	12014	10668	10223	9661	6830
47	Pandegaon	6/79-5/95	100	89	49	18	3	2	1	1	0	0
48	Sadalga	6/69-5/95	3698	3296	3135	2909	2719	2614	2518	2209	1705	1416
49	Bastewad	6/79-5/95	1999	1530	1391	1311	1244	1212	1158	955	856	675
50	Vandur	6/79-5/95	1424	1279	1155	1120	1090	1042	921	870	699	661
51	Terwad	6/79-5/95	6195	5361	5103	4577	4127	3932	3674	3291	2652	2263
52	Kurunwad	6/72-5/95	15786	14473	13751	12705	12274	11248	8974	7860	6409	5272
53	Arjunwad	6/67-5/95	10908	10015	8933	8718	7606	6756	5767	5206	4264	2931
54	Samdoli	6/65-5/95	4327	3980	3711	3429	3315	3154	2901	2490	1693	1502
55	Karad	6/65-5/95	7015	6748	5290	5005	4356	3800	3416	2919	2589	2203
56	Warunji	6/66-5/95	4561	3491	3045	2794	2467	2310	2070	1867	1600	1447
57	Koyananagar	6/72-5/95	2764	1807	1378	1082	927	852	733	557	473	364

Source: Water Year Book for 1995-96

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basins

Unit: M. C. M.

Sl. No.	Site Name	Period/Years	DEPENDABLE FLOW									Current Year
			10%	20%	30%	40%	50%	60%	70%	80%	90%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VII Basin :Cauvery												
1	Musiri	1973-2000	13568	12672	10450	8885	7768	6595	5719	4827	3774	2431
2	Nallamaranpatti	1979-2000	736	514	326	308	271	159	54	47	33	32
3	Kodumudi	1972-2000	13234	12691	11360	9804	8962	7807	6476	5640	4521	3157
4	Savandapur	1978-2000	980	876	733	654	643	577	504	481	442	436
5	Tengumarahada	1979-2000	499	407	347	322	275	233	219	193	168	154
6	Nellithurai	1979-2000	2077	1775	1633	1513	1294	1136	1079	920	861	544
7	Urachikottai	1979-2000	11540	10293	8514	7830	6581	5893	5537	5335	4524	2971
8	Biligundulu	1972-2000	11810	10154	9644	8995	7749	6988	5536	5291	3630	3042
9	Kanakpara	1979-2000	394	279	250	226	174	122	109	68	30	16
10	T.K Halli	1978-2000	1071	927	759	666	652	593	548	483	378	271
11	Kollegal	1972-2000	10756	9551	8073	7557	7062	5256	4730	4224	3936	2155
12	T.Narsipur	1972-2000	4329	4092	3706	3198	2965	2712	2378	2274	2132	1091
13	Muthankera	1973-2000	3473	3116	2851	2564	2301	2251	2196	1922	1268	1051
14	Kattamalalavadi	1979-2000	504	483	467	340	311	284	165	138	114	22
15	M.H. Halli	1979-2000	2563	2483	1877	1521	1130	1011	838	691	583	542
16	Kudige	1974-2000	4274	3510	3183	3012	2562	2450	2327	2112	1622	956

Source: Water Year Book for 1999-2000

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basins

Unit: M. C. M.

Sl. No.	Site Name	Period/ Years	DEPENDABLE FLOW									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	Current Year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VIII Basin : East Flowing Rivers												
1	Thammavaram	1978-2000	1709.00	1601.00	1344.00	1218	1067.00	1046.00	916.00	878.00	728.00	532.00
2	K.Bitragunda	1991-2000	463.40	434.00	323.00	323.00	300.00	206.20	137.00	58.00	3.13	3.133
3	Nellore	1988-2000	4094.00	3820.00	3377.00	1140.00	782.10	643.50	173.00	33.78	14.77	14.77
4	Chennur	1990-2000	3789.00	1671.00	1575.00	1382.00	1360.00	1068.00	893.20	875.10	598.50	598.50
5	Alladupalli	1986-2000	2707.00	2109.00	1245.00	1241.00	1144.00	1138.00	765.10	741.90	265.40	265.40
6	Singavaram	1980-2000	314.30	163.20	72.14	32.40	22.90	15.12	6.826	2.160	Dry	Dry
7	Tadapatri	1972-2000	632.70	464.00	284.90	150.90	97.72	89.24	67.13	43.80	23.93	22.03
8	Nagalamadike	1978-2000	154.10	21.43	5.011	3.110	2.246	1.642	1.037	0.407	Dry	Dry
9	Nandipalli	1990-2000	242.70	213.90	190.60	60.83	52.01	37.24	28.81	23.24	1.918	1.918
10	Kamalapuram	1990-2000	813.70	200.10	146.90	53.91	47.52	34.13	16.68	12.53	Dry	Dry
11	Naidupeta	1979-2000	825.80	531.50	472.30	362.30	208.40	181.30	95.82	74.65	63.33	22.4
12	Sullurpet	1989-2000	400.50	293.50	246.60	174.50	144.50	89.34	27.65	24.54	12.45	12.45
13	Chengalpattu	1979-2000	1088.00	928.80	326.50	182.00	89.19	47.10	32.94	27.68	12.83	12.19
14	Magaral	1972-2000	608.10	301.20	147.40	54.10	29.90	3.223	0.480	Dry	Dry	Dry
15	Arcot	1979-2000	604.90	212.20	94.53	55.18	36.90	0.166	Dry	Dry	Dry	Dry
16	Avaramkuppam	1978-2000	205.40	105.00	81.24	43.30	42.34	29.41	12.73	7.116	3.736	0.700
17	Villupuram	1972-2000	1131.00	803.50	327.20	189.20	80.88	54.00	42.49	1.404	Dry	Dry
18	Vazhavachanur	1978-2000	1015.00	707.10	336.70	208.20	165.90	147.20	101.00	41.16	9.472	9.245
19	Gummanur	1978-2000	419.80	301.00	234.10	197.70	169.70	141.20	78.28	64.30	56.85	25.92
20	Kudalaiyathur	1990-2000	880.90	824.70	691.00	493.50	410.90	266.80	179.30	20.04	Dry	Dry
21	Paramakudi	1972-2000	527.80	260.80	177.60	47.76	24.62	15.46	9.765	6.368	Dry	Dry
22	Theni	1978-2000	880.80	819.40	767.00	672.90	653.30	604.60	514.8	481.90	355.20	312.60
23	Irrukkankudi	1990-2000	230.20	100.80	93.90	54.94	18.73	15.91	10.63	8.334	Dry	Dry
24	Murappanadu	1978-2000	1201.00	881.80	558.60	390.50	381.60	343.60	253.00	240.20	229.40	215.30
25	A.P.Puram	1980-2000	72.47	32.57	22.45	8.83	6.134	2.898	0.657	0.035	0.020	0.009

Source: Water Year Book for 1999-2000.

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basins

Unit: M. C. M.

Sl. No.	Site Name	Period/ Years	DEPENDABLE FLOW									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	Current Year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
XI Basin: Narmada												
1	Orsang at Chandwada	06/1999-5/2000	3448.0	2226.9	1661.6	1185.7	824.0	539.9	352.5	227.9	134.5	52.7
2	Narmada at	06/1999-5/2000	65021.3	49049.6	40356.5	34319.9	27770.0	24547.7	21832.2	17554.3	12068.2	4579.7
3	Uri at Dhulsar	06/1999-5/2000	-	-	-	-	-	-	-	-	-	-
4	Goi at Pati	06/1999-5/2000	-	-	-	-	-	-	-	-	-	-
5	Narmada at Rajghat	06/1999-5/2000	60684.5	47234.3	39397.6	35119.6	27574.3	24931.1	21822.1	18057.7	13764.7	6608.4
6	Narmada at Mandleshwar	06/1999-5/2000	58081.3	46549.3	40217.6	34881.0	26742.0	24500.3	20906.3	18050.9	13170.0	7412.8
7	Kundi at Kogaon	06/1999-5/2000	2427.00	1603.10	1237.40	868.90	723.60	566.30	438.60	283.50	166.50	60.20
8	Naarmada at Mortakka	06/1999-5/2000	-	-	-	-	-	-	-	-	-	-
9	Narmada at Handia	06/1999-5/2000	44827.4	35183.6	29135.9	25776.0	21670.6	17676.8	15855.6	13287.7	9137.3	5346.9
10	Ganjal at Chhidgaon	06/1999-5/2000	2306.7	1583.2	1142.0	867.5	712.7	716.9	494.5	357.0	263.0	154.7
11	Narmada at Hoshangabad	06/1999-5/2000	44480.3	33406.7	27671.0	20087.8	18769.1	15652.4	13394.0	10587.3	8045.1	3694.5
12	Narmada at Sandia	06/1999-5/2000	26343.4	20858.4	17265.1	15214.3	11956.5	9775.8	8248.1	7159.1	5076.3	2515.1
13	Shakkat at Gadarwara	06/1999-5/2000	2730.0	1871.7	1463.3	1178.3	962.6	852.5	711.3	514.2	376.7	5.9
14	Narmada at Barmanghat	06/1999-5/2000	17438.10	18948.00	15136.00	12646.90	10408.40	7877.00	6937.80	4818.70	3453.20	1448.70
15	Sher at Belkheri	06/1999-5/2000	1378.8	947.1	769.3	677.9	565.7	482.8	383.0	303.2	232.3	101.4
16	Hiran at Patan	06/1999-5/2000	2882.3	2329.4	1939.8	1543.0	1393.1	1041.0	770.0	572.9	447.3	114.5
17	Narmada at Jamtara	06/1999-5/2000	18266.5	14080.9	12178.8	9836.9	6929.8	8596.4	4799.3	3735.8	2417.1	1114.1
18	Banjar at Hirdaya Nagar	06/1999-5/2000	2917.2	2203.4	1898.3	1474.7	1211.9	978.4	789.3	672.9	511.9	5.4
19	Banjar at Bamni	06/1999-5/2000	-	-	-	-	-	-	-	-	-	-
20	Burhner at Mohgaon	06/1999-5/2000	3937.6	3091.2	2610.8	2224.9	1875.3	1617.3	1313.2	1168.2	847.2	429.3
21	Narmada at Manot	06/1999-5/2000	5707.1	4278.4	3618.3	2874.4	2485.4	2118.0	1887.3	1625.0	1357.4	810.7
22	Narmada at Bijora	06/1999-5/2000	-	-	-	-	-	-	-	-	-	-
23	Narmada at Dindori	06/1999-5/2000	1880.4	1549.1	1385.8	1224.4	1079.6	912.3	810.3	669.2	537.4	442.9

Source : Water Year Book for 1999-2000

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basins

Unit: M. C. M.

Sl. No.	Site Name	Period/ Years	DEPENDABLE FLOW									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	Current Year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
X Basin: Tapi												
1	Dedtalai	1998-99	5593	4347	3790	3237	2651	2282	2233	1961	1095	95.62
2	Burhanpur	1998-99	9191	6819	5809	5275	4768	3918	3778	2739	1681	392
3	Lakhpuri	1998-99	1113	793.1	550.0	504.5	436.5	361	288.70	206.40	171.20	62.75
4	Gopalkheda	1998-99	1956	1759	1567	1066	916.6	701.5	504.6	359.6	322.9	265.6
5	Yerli	1998-99	4777	3736	3047	2631	2224	1763	1228	1099	876.6	647.9
6	Dapuri	1998-99	981.7	746.4	687.2	539.7	457.8	371.9	207.4	160.1	118.6	55.60
7	Savkheda	1998-99	14807	11818	10158	9045	7378	6916	6131	4633	3484	2294
8	Malkheda	1998-99	203.8	171.9	92.46	79.7	63.51	38.16	19.45	14.43	8.190	3.560
9	Gidhade	1998-99	-	-	-	-	-	-	-	-	-	-
10	Sarangkheda	1998-99	16001	14370	11305	9090	7884	6498	6102	4217	3219	1111
11	Morane	1998-99	285.1	208.7	174.2	134.4	108.6	89.41	76.59	51.5	44.76	12.89
12	Ghala	1998-99	16542	12402	10768	7081	5226	3842	2780	1927	1063	736.4

Source: Water Year Book for 1998-99

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basins

Unit: M. C. M.

Sl. No.	Site Name	Period/ Years	DEPENDABLE FLOW									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	Current Year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
XI Basin: Narmada												
1	Orsang at Chandwada	06/1999-5/2000	3448.0	2226.9	1661.6	1185.7	824.0	539.9	352.5	227.9	134.5	52.7
2	Narmada at	06/1999-5/2000	65021.3	49049.6	40356.5	34319.9	27770.0	24547.7	21832.2	17554.3	12068.2	4579.7
3	Uri at Dhulsar	06/1999-5/2000	-	-	-	-	-	-	-	-	-	-
4	Goi at Pati	06/1999-5/2000	-	-	-	-	-	-	-	-	-	-
5	Narmada at Rajghat	06/1999-5/2000	60684.5	47234.3	39397.6	35119.6	27574.3	24931.1	21822.1	18057.7	13764.7	6608.4
6	Narmada at Mandleshwar	06/1999-5/2000	58081.3	46549.3	40217.6	34881.0	26742.0	24500.3	20906.3	18050.9	13170.0	7412.8
7	Kundi at Kogaon	06/1999-5/2000	2427.00	1603.10	1237.40	868.90	723.60	566.30	438.60	283.50	166.50	60.20
8	Naarmada at Mortakka	06/1999-5/2000	-	-	-	-	-	-	-	-	-	-
9	Narmada at Handia	06/1999-5/2000	44827.4	35183.6	29135.9	25776.0	21670.6	17676.8	15855.6	13287.7	9137.3	5346.9
10	Ganjal at Chhidgaon	06/1999-5/2000	2306.7	1583.2	1142.0	867.5	712.7	716.9	494.5	357.0	263.0	154.7
11	Narmada at Hoshangabad	06/1999-5/2000	44480.3	33406.7	27671.0	20087.8	18769.1	15652.4	13394.0	10587.3	8045.1	3694.5
12	Narmada at Sandia	06/1999-5/2000	26343.4	20858.4	17265.1	15214.3	11956.5	9775.8	8248.1	7159.1	5076.3	2515.1
13	Shakkat at Gadarwara	06/1999-5/2000	2730.0	1871.7	1463.3	1178.3	962.6	852.5	711.3	514.2	376.7	5.9
14	Narmada at Barmanghat	06/1999-5/2000	17438.10	18948.00	15136.00	12646.90	10408.40	7877.00	6937.80	4818.70	3453.20	1448.70
15	Sher at Belkheri	06/1999-5/2000	1378.8	947.1	769.3	677.9	565.7	482.8	383.0	303.2	232.3	101.4
16	Hiran at Patan	06/1999-5/2000	2882.3	2329.4	1939.8	1543.0	1393.1	1041.0	770.0	572.9	447.3	114.5
17	Narmada at Jamtara	06/1999-5/2000	18266.5	14080.9	12178.8	9836.9	6929.8	8596.4	4799.3	3735.8	2417.1	1114.1
18	Banjar at Hirdaya Nagar	06/1999-5/2000	2917.2	2203.4	1898.3	1474.7	1211.9	978.4	789.3	672.9	511.9	5.4
19	Banjar at Bamni	06/1999-5/2000	-	-	-	-	-	-	-	-	-	-
20	Burhner at Mohgaon	06/1999-5/2000	3937.6	3091.2	2610.8	2224.9	1875.3	1617.3	1313.2	1168.2	847.2	429.3
21	Narmada at Manot	06/1999-5/2000	5707.1	4278.4	3618.3	2874.4	2485.4	2118.0	1887.3	1625.0	1357.4	810.7
22	Narmada at Bijora	06/1999-5/2000	-	-	-	-	-	-	-	-	-	-
23	Narmada at Dindori	06/1999-5/2000	1880.4	1549.1	1385.8	1224.4	1079.6	912.3	810.3	669.2	537.4	442.9

Source : Water Year Book for 1999-2000

Table No.1.7 : Sitewise Annual Dependable Flow of Water in Different River Basins

Unit: M. C. M.

Sl. No.	Site Name	Period/ Years	DEPENDABLE FLOW									Current Year
			10%	20%	30%	40%	50%	60%	70%	80%	90%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
XII Basin : Mahi, Sabarmati & Other West Flowing Rivers of Sourashtra & Kutch												
1	Khanpur	6/78 to 5/98	12365	6586	5060	3938	3021	2439	1968	1104	857.6	712
2	Chakaliya	6/91 to 5/98	-	-	-	-	-	-	-	-	-	-
3	Paardibadi	6/78 to 5/98	5079	3408	3125	2863	2051	1753	1302	892.2	742.4	307.60
4	Rangeli	6/78 to 5/98	1570	1050	822.0	744.5	633.0	618.0	569.2	389.6	320.2	178.1
5	Dhariawad	6/89 to 5/98	-	-	-	-	-	-	-	-	-	-
6	Mataji	6/82 to 5/98	2677	2254	1947	1411	1340	1152	853	634.9	447.5	171
7	Nabhoi	6/91 to 5/98	-	-	-	-	-	-	-	-	-	-
8	Kheda	6/89 to 5/98	-	-	-	-	-	-	-	-	-	-
9	Ratanpur	6/91 to 5/98	-	-	-	-	-	-	-	-	-	-
10	Derol Bridge	6/93 to 5/98	-	-	-	-	-	-	-	-	-	-
11	Kheroj	6/92 to 5/98	-	-	-	-	-	-	-	-	-	-
12	Jotasan	6/96 to 5/98	-	-	-	-	-	-	-	-	-	-
13	Gandhav	6/74 to 5/98	1109	895	613	325	63	20	2	0	0	0
14	Balotra (Jasol)	6/90to 5/96	-	-	-	-	-	-	-	-	-	-
15	Kamalpur	6/71 to 5/98	1396	820	513	234	160	99	35	4	0	0
16	Chitrasavi	6/90 to 5/98	-	-	-	-	-	-	-	-	-	-
17	Sarotry	6/89 to 5/98	-	-	-	-	-	-	-	-	-	-
18	Abu Road	6/89 to 5/98	-	-	-	-	-	-	-	-	-	-
19	Lowara	6/70 to 5/98	418	326	240	189	119	102	54	32	20	0
20	Ganod	6/70 to 5/98	1759	814	441	366	229	167	102	77	42	3
21	Gungan	6/70 to 5/98	516	348	238	177	111	45	26	15	3	0
22	Sapawada	6/89 to 5/98	-	-	-	-	-	-	-	-	-	-
23	Mahuwa	6/71 to 5/98	2661	1795	1370	1193	1157	1046	987	850	587	172
24	Gadat	6/79 to 5/98	2468	2101	1734	1380	1236	1153	1084	942	927	374
25	Durvesh	6/71 to 5/98	4364	3829	3555	3044	2840	2459	2230	1631	1641	1398
26	Pingalwada	6/89 to 5/98	-	-	-	-	-	-	-	-	-	-
27	Ozerkheda	6/91 to 5/98	-	-	-	-	-	-	-	-	-	-
28	Nanipalsam	6/91 to 5/98	-	-	-	-	-	-	-	-	-	-
29	Motinaroli	6/91 to 5/98	-	-	-	-	-	-	-	-	-	-

Source: Water Year Book for 1997-98

Table No.1.8 : Sitewise Average Flow Per Unit Drainage Area In Different River Basins.

<i>Unit : Millimeter</i>														
Sl.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
I Basin : Mahanadi														
1	Baronda	1978-2003	4.80	5.18	6.08	2.35	3.44	5.98	33.07	48.51	47.69	20.39	4.23	2.26
2	Rajim	1971-2003	4.31	4.79	34.92	19.44	10.78	3.96	1.16	0.60	0.87	0.17	0.00	0.00
3	Seorinarayan	1986-2003	6.73	2.94	44.34	65.94	6.37	2.38	0.77	0.35	0.28	0.14	0.07	0.01
4	Basantpur	1972-2003	12.87	16.24	18.53	12.66	10.72	22.43	37.77	67.55	73.03	58.39	27.14	7.58
5	Kotni	1979-2003	14.32	1.62	37.50	18.65	2.20	0.64	0.00	0.00	0.00	0.00	0.00	0.00
6	Pathardih	1989-2003	9.91	0.59	71.50	32.70	19.10	2.66	0.00	0.00	0.00	0.00	0.00	0.00
7	Simga	1972-2003	12.45	2.60	58.25	38.01	6.00	1.78	0.84	0.37	0.30	0.26	0.12	0.00
8	Andhiyarkore	1978-2003	6.77	2.04	30.58	75.68	1.74	1.20	1.31	0.85	1.10	0.78	0.17	0.04
9	Ghatora	1980-2003	6.06	3.63	27.63	75.86	9.28	1.65	0.90	0.49	0.51	0.21	0.00	0.00
10	Jondhra	1979-2003	6.89	2.59	32.01	51.68	4.14	1.44	0.70	0.35	0.36	0.21	0.08	0.00
11	Rampur	1971-2003	3.31	2.63	33.40	8.03	2.18	0.50	0.05	0.00	0.00	0.00	0.00	0.00
12	Manendragarh	1989-2003	6.44	15.56	93.16	3.48	6.54	1.95	1.52	1.31	2.20	1.89	0.13	0.00
13	Bamnidhi	1971-2003	53.80	62.10	29.67	58.15	31.41	27.22	18.58	7.19	8.45	8.53	6.90	5.03
14	Kurubhata	1978-2003	18.56	43.16	9.94	3.37	15.54	8.21	5.33	2.62	3.81	2.50	0.15	0.00
15	Sundergarh	1978-2003	23.24	29.77	17.95	78.30	18.56	9.00	3.06	1.86	1.89	0.70	0.35	0.00
16	Selebhata	1972-2003	1.64	3.01	35.04	47.64	4.15	1.21	0.00	0.00	0.00	0.00	0.00	0.00
17	Kesinga	1979-2003	14.50	10.82	69.68	59.58	6.85	5.17	6.25	2.62	3.56	3.28	7.06	13.71
18	Kantamal	1975-2003	11.60	8.65	76.21	71.37	8.88	5.61	5.27	2.53	1.36	2.24	5.19	9.80
19	Sukma	2002-2003	-	-	-	-	-	-	-	-	-	-	-	-
20	Tikarpara	2002-2003	1.18	1.46	3.25	7.28	1.56	0.96	0.81	0.77	0.42	0.40	0.47	0.48

Source: Water Year Book for 2002-2003

Table No.1.8 : Sitewise Average Flow Per Unit Drainage Area In Different River Basins.

<i>Unit : Millimeter</i>														
Sl.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
II Subernarekha Burhabalang & Baitarni														
a) Basin : Subararekha														
1	Muri	2002-2003	0.01	0.01	0.03	0.08	0.07	0.03	0.06	0.03	0.01	0.01	0.01	0.00
2	Adityapur	2002-2003	0.03	0.01	0.10	0.12	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
3	Ghatsila	2002-2003	0.01	0.01	0.09	0.23	0.09	0.03	0.16	0.01	0.00	0.00	0.00	0.00
b) Basin: Burhabalang														
	Govindapur	2002-2003	0.01	0.01	0.09	0.23	0.09	0.03	0.02	0.01	0.00	0.00	0.00	0.00
c) Basin: Baitarani														
1	Anandpur	2002-2003	0.01	0.01	0.04	0.10	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00
2	Champua	2002-2003	0.01	0.01	0.05	0.10	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Source: Water Year Book for 2002-2003

Table No.1.8 : Sitewise Average Flow Per Unit Drainage Area In Different River Basins.

<i>Unit : Millimeter</i>														
Sl.No	Site Name	Reference	June	July	August	September	October	November	December	January	February	March	April	May
		Period												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
III Basin : Brahmani														
1	Tilga	1998-99	0.03	0.13	0.14	0.27	0.10	0.07	0.02	0.01	0.01	0.00	0.00	0.01
2	Jaraikela	1998-99	0.01	0.06	0.09	0.19	0.07	0.05	0.01	0.01	0.00	0.00	0.00	0.01
3	Panposh	1998-99	0.02	0.10	0.10	0.23	0.07	0.04	0.01	0.01	0.01	0.00	0.00	0.00
4	Gomlai	1998-99	0.01	0.07	0.08	0.18	0.07	0.04	0.01	0.00	0.00	0.00	0.00	0.00
5	Jenapur	1998-99	0.02	0.07	0.06	0.10	0.05	0.05	0.02	0.02	0.01	0.01	0.01	0.02

Source: Water Year Book, 1998-99

Table No.1.8 : Sitewise Average Flow Per Unit Drainage Area In Different River Basins.

													<i>Unit : Millimeter</i>		
Sl.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
IV Rushikulya, Vamsadhra, Saroda & Nagavali															
a) Basin: Rushikulya															
	Purushottampur	2002-2003	0.0026	0.0010	0.0304	0.0606	0.0205	0.0020	0.0011	0.0002	0.0004	0.0001	0.0003	0.0000	
b) Basin: Vamsadhra															
	Kashi Nagar	2002-2003	0.0044	0.0022	0.0308	0.0325	0.0112	0.0028	0.0016	0.0008	0.0007	0.0007	0.0008	0.0001	
c) Basin: Saroda															
	Anakapalli	2002-2003	0.0030	0.0010	0.0010	0.0050	0.0050	0.0002	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	
d) Basin: Nagavali															
	Srikakulam	2002-2003	0.0055	0.0017	0.0128	0.0169	0.0015	0.0015	0.0023	0.0022	0.0015	0.0010	0.0001	0.0000	

Source: Water Year Book doe 2002-2003

Table No.1.8 : Sitewise Average Flow Per Unit Drainage Area In Different River Basins.

<i>Unit : Millimeter</i>														
SL.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
V Basin : Godavari														
1	Polavaram	1967-2001	7.15	52.46	102.66	71.30	30.55	7.73	4.53	3.21	2.42	2.28	2.02	1.96
2	Koida	1977-2001	8.95	56.03	116.90	73.22	32.32	8.36	5.01	3.67	2.91	2.84	2.30	2.39
3	Konta	1966-2001	34.61	120.94	192.08	137.04	71.48	35.42	27.74	24.00	20.81	21.30	19.10	19.97
4	Injaram	1966-2001	35.93	145.47	254.97	163.54	75.12	30.55	22.98	18.04	14.88	15.04	13.70	14.53
5	Potteru	1997-2001	178.50	226.08	291.77	223.57	134.92	125.87	82.89	85.13	81.71	93.08	88.15	9354.00
6	Saradaput	1970-2001	58.81	186.39	304.59	209.53	94.36	41.63	28.42	22.17	18.70	18.02	16.96	19.61
7	Sagam	1996-2001	0.78	28.04	63.47	52.51	14.95	6.54	3.10	0.73	0.06	0.15	0.00	0.00
8	Perur	1965-2001	7.17	48.36	95.65	66.87	26.82	6.69	2.97	1.94	1.41	1.11	0.68	0.63
9	Pathagudem	1965-2001	17.35	117.43	212.77	129.07	42.88	11.68	5.52	3.47	1.90	1.42	1.05	1.50
10	Medapalli	1966-2001	11.63	151.97	344.59	186.97	58.59	19.10	11.31	7.40	4.18	2.92	1.62	1.07
11	Madadapalli	1973-2001	32.84	177.47	341.00	217.90	98.27	37.55	16.07	12.03	9.06	8.45	8.29	6.99
12	Tumnar	1991-2001	20.97	132.15	218.33	158.52	62.01	19.37	7.36	4.47	2.29	1.64	1.99	1.75
13	Chindnar	1972-2001	22.23	109.81	179.29	118.47	43.72	13.90	6.40	4.75	2.92	2.30	2.03	3.50
14	Cherribeda	1997-2001	10.98	41.51	72.81	69.16	38.36	14.83	6.15	2.64	2.54	0.54	0.00	0.00
15	Ambabal	1993-2001	7.04	77.57	139.74	105.67	31.36	8.29	2.27	5.80	0.03	0.00	0.00	0.00
16	Sonarpal	1991-2001	7.70	60.29	157.88	96.42	23.99	6.09	10.81	0.94	0.00	0.00	0.00	0.00
17	Jagdapur	1966-2001	30.11	109.49	174.42	120.53	44.31	16.51	11.51	8.33	5.47	5.44	4.55	5.93
18	Kosagumda	1997-2001	21.38	52.88	115.63	64.57	24.19	14.68	4.89	2.33	2.37	0.68	1.01	2.71
19	Murthahandi	1988-2001	-	-	-	-	-	-	-	-	-	-	-	-
20	Nowrangpur	1971-2001	46.47	173.21	265.24	182.96	68.92	31.92	26.60	20.14	13.15	13.27	10.12	13.87
21	Tekra	1964-2001	12.02	70.60	129.05	84.10	26.54	6.53	3.49	2.18	1.64	1.21	0.62	0.57
22	Bhatpalli	1986-2001	31.84	102.92	167.95	84.17	67.71	11.41	5.65	3.77	2.34	1.97	2.05	2.87
23	Sirpur	1968-2001	16.17	52.75	99.33	67.76	23.18	4.56	2.40	1.73	1.26	0.91	0.39	0.42
24	Bamni	1965-2001	14.24	51.99	95.83	68.64	22.61	4.44	2.64	1.76	1.21	0.98	0.40	0.37
25	P.G. Bridge	1965-2001	14.96	41.74	82.66	63.45	23.17	4.88	2.37	1.43	0.85	0.63	0.23	0.20
26	Mangrul	1992-2001	10.12	29.72	31.43	36.04	10.58	2.43	1.44	1.44	0.80	0.88	0.57	0.52
27	Marlegaon	1964-2001	10.01	32.12	68.40	56.50	17.45	3.33	2.14	0.98	0.59	0.41	0.49	0.50
28	Kanhergaon	1992-2001	8.96	27.02	41.76	36.08	16.17	6.51	1.29	0.14	0.05	0.03	0.01	0.01
29	Ghugus	1965-2001	12.78	46.87	83.87	67.57	18.15	3.11	2.41	1.25	1.12	0.82	0.28	0.29
30	Nandgaon	1986-2001	10.08	29.50	56.28	43.42	13.34	2.94	2.50	2.93	1.81	1.71	0.59	0.36
31	Hivra	1987-2001	10.23	31.34	42.71	49.90	15.92	3.33	3.67	2.59	1.92	1.62	0.74	1.86
32	Bhisnur	1988-2001	11.57	26.28	30.67	51.90	14.74	3.53	3.92	4.26	3.87	2.78	1.38	4.55
33	Asti	1965-2001	11.40	88.03	168.29	101.24	28.03	7.37	4.07	2.50	1.95	1.35	0.77	0.58
34	Rajoli	1986-2001	4.51	101.56	166.46	80.74	29.14	6.27	0.79	0.39	0.16	0.02	0.00	0.00

Table No.1.8 : Sitewise Average Flow Per Unit Drainage Area In Different River Basins.

Unit : Millimeter

SL.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
35	Wairagarh	1992-2001	5.11	90.14	104.67	91.31	18.83	3.72	1.03	0.48	0.07	0.00	0.00	0.00
36	Salebardi	1988-2001	4.39	93.80	126.13	69.15	21.15	6.09	2.10	0.54	0.36	0.02	0.03	0.01
37	Pauni	1964-2001	11.19	75.50	138.64	83.30	22.47	6.67	4.12	2.82	2.20	1.52	1.05	0.73
38	Satrapur	1986-2001	10.90	37.64	51.65	68.95	17.58	6.05	6.37	4.96	2.55	2.10	1.93	1.17
39	Ramkona	1986-2001	15.68	63.22	103.44	97.78	33.49	8.50	7.12	3.08	1.64	1.45	0.34	0.13
40	Rajegaon	1986-2001	13.10	157.67	190.42	128.05	36.81	8.33	3.93	2.38	1.17	1.62	0.94	0.55
41	Kumhari	1986-2001	13.13	117.04	137.04	109.51	22.64	6.13	7.07	4.52	2.40	1.41	0.75	0.90
42	Keolari	1987-2001	12.65	95.97	92.09	99.29	25.20	4.44	9.03	4.99	3.05	2.43	2.11	1.50
43	Somanpalli	1967-2001	2.39	19.67	42.11	29.77	19.13	4.67	1.99	1.07	0.78	0.70	0.52	0.68
44	Mancherial	1964-2001	2.27	14.14	38.47	38.64	23.00	3.85	1.74	1.12	0.90	0.96	0.51	0.34
45	Gandlapet	1986-2001	5.18	28.76	68.08	40.92	31.55	2.28	0.17	0.18	0.00	0.00	0.00	0.00
46	Betmorga	1986-2001	1.55	16.34	65.70	45.66	28.23	2.43	0.80	0.43	0.34	0.24	0.06	0.06
47	Degloor	1987-2001	4.20	24.62	84.72	57.25	35.70	4.27	0.74	0.33	0.01	0.02	0.00	0.10
48	Saigaon	1967-2001	4.19	7.89	23.62	45.60	27.83	3.67	0.95	0.31	0.13	0.07	0.01	0.13
49	Bhatkheda	1991-2001	0.38	2.88	18.34	27.11	25.49	2.34	0.97	0.00	0.00	0.00	0.00	0.00
50	Yelli	1978-2001	5.47	13.11	24.98	28.97	15.58	2.26	1.17	0.75	0.66	0.58	0.41	0.61
51	Purna	1969-2001	7.44	14.41	32.15	36.49	15.12	2.85	1.39	0.84	0.83	0.65	0.74	0.97
52	Zari	1987-2001	7.83	16.29	23.77	31.19	20.79	3.97	0.37	0.05	0.00	0.02	0.00	0.01
53	G.R. Bridge	1976-2001	3.68	10.30	16.54	18.99	10.12	2.03	1.13	0.64	0.54	0.45	0.26	0.32
54	Dhalegaon	1964-2001	3.97	15.81	26.80	27.56	11.23	2.18	1.53	0.73	0.61	0.47	0.31	0.40
55	Pathegaon	1983-2001	0.81	9.34	17.57	11.08	10.31	1.06	0.09	0.01	0.00	0.00	0.00	0.00
56	Ghargaon	1991-2001	57.55	498.72	393.34	239.47	305.90	211.72	3.67	0.27	0.00	0.00	0.00	0.33

Source : Letter No.1/17/96-GC(Tech)/1106 dated 08.05.2003 from Superintending Engineer, Godavari Circle, Hyderabad

Table No.1.8 : Sitewise Average Flow Per Unit Drainage Area In Different River Basins.

<i>Unit : Millimeter</i>														
Sl.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
VI Basin : Krishna														
1	Vijaywada	1965 to 1996	11.2	128.1	421.5	342.4	212.4	59.1	24	17	14.6	17.4	16.2	23
2	Keesara	1966 to 1996	35.5	296.6	651	502.9	429.4	140.9	53.6	27.1	14.7	11.8	5.9	29.7
3	Madhira	1984 to 1996	47.4	299.3	1032	972.7	849.3	340.4	177.2	117.6	84.1	59.4	33.7	108.5
4	P.S. Gudem	1988 to 1996	7.7	239.3	152.2	229.5	221	27.6	5.1	2.7	0.2	0	0.1	19.3
5	Paleru Bridge	1965 to 1996	33.4	153.7	353.7	391	383.1	177.3	96.7	60.5	52	58.5	44	43.2
6	Wadenapalli	1967 to 1996	28.4	170.5	474.9	403	270	81.9	39.4	36.7	35.9	40.6	30.7	19.8
7	Dameracherla	1968 to 1996	10.3	58.2	151.5	283.8	266.9	122.9	49	55.3	54.2	54.1	33.6	12.9
8	Pondugala	1976 to 1996	33.3	159.9	457.5	372.1	182.5	46.5	39.8	34.6	38.0	51.1	37.1	27.2
9	Halia	1984 to 1996	17.5	45.7	37.2	433.0	95.1	53.2	7.5	6.7	5.7	5.3	2.5	4.4
10	Lakshmipuram	1984to 1996	16.4	54.7	68.9	123.5	153.6	22.7	2.6	3.2	1.4	4.8	3.1	2.2
11	Bawapuram	1965 to 1996	23.4	89.9	328.4	278.8	182.5	64.6	20.3	13.8	14.9	16.7	10.0	17.3
12	Mantralayam	1972 to 1996	32.1	122.2	412.3	328.5	278.0	114.2	36.6	31.2	27	29	21.6	13.5
13	T. Ramapuram	1966 to 1996	17	16.2	35.5	158.8	113.2	53.8	30.2	15.3	7.9	3.6	2.3	9.7
14	Amkundibridge	1980 to 1996	0.274	0.058	0.303	1.314	0.683	0.295	0.083	0.028	0.015	0.012	0.012	0.050
15	Bhupasamudram	1978 to 1996	0.030	0.035	0.031	0.672	0.298	0.282	0.025	0.028	0.023	0.017	0.017	0.014
16	Kellodu	1990 to 1996	0.848	0.285	0.389	0.497	6.021	2.930	0.515	0.128	0.062	0.036	0.059	0.152
17	Oollenur	1974 to 1996	19.7	226.7	615.7	343	212.3	122.2	39.5	50.7	55.3	64.2	45.3	16
18	Marol	1966 to 1996	8.774	51.82	84.82	17.98	11.85	6.350	1.144	0.214	0.072	0.015	0.054	0.538
19	Harlahalli	1966 to 1996	12.89	50.73	69.32	25.91	17.34	11.08	4.154	1.944	1.952	1.617	2.150	3.209
20	Byladahalli	1985 to 1996	2.947	5.669	11.09	9.988	13.85	10.32	2.635	1.588	1.235	1.436	2.636	2.828
21	Kuppelur	1990 to 1996	1.254	22.570	22.19	11.20	13.87	11.04	1.343	0.213	0.067	0.015	0.393	0.016
22	Honnali	1980 to 1996	29.85	104.7	120.8	44.77	27.92	14.67	6.697	3.639	3.817	3.065	3.805	3.739
23	Shimoga	1972 to 1996	68.87	243.0	243.9	79.07	37.43	18.99	11.04	4.977	1.220	0.745	0.729	0.952
24	Krishna Agrahar:	1981 to 1996	85.8	599.3	812.4	482.4	280.3	58.20	19.50	13.60	10.70	6.700	6.400	6.100
25	Yadgir	1965 to 1996	64	270.1	468.8	585.1	297.1	68.6	27.3	13.6	6.9	4	2	6.5
26	Malkhed	1990 to 1996	29.9	117.6	321	188.9	373.4	51.4	23.8	11.2	5.4	2.6	1.9	1.2
27	Chincholi	1979 to 1996	3.2	13	7.5	32.2	12.6	2	0.2	0.1	0	0	0	0
28	Jewangi	1979 to 1996	28.6	226.4	474.2	683.5	377.6	54.7	20	11	5.8	4.3	4	11.3
29	Boriomerga	1979 to 1996	1.9	5.2	14	39.2	13.3	4.5	0.6	0.2	0	0	0	0
30	Wadakbal	1965 to 1996	5.1	6.8	11	34.9	17.6	4.9	3.6	0.5	0.3	0.2	0.1	0.8

Table No.1.8 : Sitewise Average Flow Per Unit Drainage Area In Different River Basins.

<i>Unit : Millimeter</i>														
SL.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
VI Basin : Krishna														
31	Takli	1965 to 1996	6.4	43.8	64.4	41.7	22.3	5.6	2.3	1.2	0.6	0.4	0.2	0.8
32	Kokangaon	1979 to 1996	7.9	3.6	2.5	30.6	15.8	3.7	1	0.3	0.1	0.1	0	0.3
33	Shirdhon	1979 to 1996	3.5	2.1	1.5	22.6	11	3.2	1.7	0.4	0.2	0	0	0
34	Narsingpur	1966 to 1996	10	67.6	91.9	50.1	22	4.2	2.5	1.4	0.7	0.7	0.6	0.8
35	Sarati	1965 to 1996	7.2	45.5	59.8	42.6	21.3	4.9	3.2	1.8	0.9	0.4	0.1	1.7
36	Dhond	1967 to 1996	17.5	129.1	136.3	71.9	24.8	4.4	2.4	1.9	1.1	0.8	0.8	1.4
37	Phulgaon	1992 to 1996	17.3	352.6	378.8	131.7	66.3	15	0	0	0	0	0	0
38	Huvinhedgi	1976 to 1996	175.6	1185.8	1494.9	497.1	276.3	63.1	11.7	7.6	4.1	2.4	0.9	1
39	Talikot	1966 to 1996	-	-	-	-	-	-	-	-	-	-	-	-
40	Cholachguda	1982 to 1996	11	6	11.6	15.5	15.7	8.3	3.7	3	2.1	1.4	0.9	1.9
41	Navalgund	1991 to 1996	14	6.8	7.7	12.5	26.7	8.4	4.2	2.7	8.5	1	0.9	0
42	Bagalkot	1967 to 1996	15.7	101.3	122.7	46.7	27.7	9.4	5.9	5.2	3.6	2.2	0.8	2.1
43	Gokakfalls	1971 to 1996	37.6	270	310.5	74.1	24.3	10.3	6	4.9	3.8	3.6	3.2	3.4
44	Gotur	1980 to 1996	96	489.7	424.7	103.5	33.1	3.4	0	0	0	0	0	0
45	Daddi	1978 to 1996	195	740.7	650.5	168.2	58.6	13	2.6	0.1	0	0	0	0.3
46	Galgali	1976 to 1996	38.7	238.8	264.4	96.4	34.8	4.8	2	1.7	0.8	0.5	0.6	0.6
47	Pandegaon	1979 to 1996	2.7	3.3	1.6	16.8	9.7	2.4	0	0	0	0	0	0
48	Sadalga	1969 to 1996	76.3	476.3	468.7	131.7	41.5	3.7	0	0	0	0	0	0.2
49	Bastewad	1979 to 1996	154.2	797.3	759.8	187.6	61.4	0.2	0	0	0	0	0	0
50	Vandur	1979 to 1996	111.8	708.6	810.3	220.1	62.9	10.6	8.7	1.6	2.2	1.1	4.3	1
51	Terwad	1979 to 1996	101.7	723.6	722.5	195.2	46.3	0.9	0.1	0.1	0.2	0.1	0.1	0.1
52	Kurunwad	1972 to 1996	46	276.3	293.4	101.2	35.6	6.5	1.1	0.2	0.2	0.2	0.3	0.5
53	Arjunwad	1967 to 1996	36.2	211.3	229.2	88.5	127.1	5.4	0.8	0.2	0.3	0.2	0.9	0.6
54	Samdoli	1965 to 1996	103.7	640.6	644.7	201.5	58.8	5.7	0.1	0	0	0	0	0
55	Karad	1965 to 1996	48.5	268.1	286.1	128.8	38.7	13.7	12	12.1	12.5	13.7	14.7	14.1
56	Warunji	1966 to 1996	87.8	426.3	501.5	199	51.5	16.5	22.3	29.2	32.7	37.2	39.2	31.7
57	Koyananagar	1972 to 1996	42.5	162	439	211.9	20	17.3	48.9	64	70.7	83.4	84.2	69.8

Source: Water Year Book, 1995-96

Table No.1.8 : Sitewise Average Flow Per Unit Drainage Area In Different River Basins.

<i>Unit : Millimeter</i>														
Sl.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
VII Basin : Cauvery														
1	Musiri	6/72 to 5/2000	3.035	14.53	23.54	22.74	17.22	17.61	11.98	10.95	3.748	1.625	0.823	0.736
2	Nallamaranpatti	12/78 to 5/2000	0.208	0.937	1.609	1.344	2.446	20.01	9.381	1.676	0.793	0.501	0.048	0.095
3	Kodumudi	6/71 to 5/2000	4.855	21.12	31.48	29.44	21.68	18.23	15.35	14.83	5.604	3.016	2.209	2.104
4	Savandapur	7/78 to 5/2000	5.621	14.45	12.21	10.88	12.64	23.86	14.06	9.689	7.276	8.126	6.783	4.729
5	Tengumarahada	4/79 to 5/2000	15.76	20.00	30.38	23.44	29.94	32.48	17.11	10.69	10.20	11.88	11.09	11.92
6	Nellithurai	6/79 to 5/2000	108.10	322.60	155.4	83.82	112.7	124.5	65.58	43.40	29.79	39.97	27.71	26.02
7	Urachikottai	8/79 to 5/2000	7.107	22.03	33.13	31.06	22.42	14.99	11.71	16.28	3.871	2.156	2.142	2.357
8	Biligundulu	9/71 to 5/2000	9.032	36.75	52.72	32.39	30.81	19.56	11.93	6.158	4.212	3.724	4.283	6.030
9	Kanakpara	9/78 to 5/2000	2.750	1.370	4.715	16.86	17.81	8.572	2.798	1.042	0.67	0.742	0.699	1.420
10	T.K Halli	6/78 to 5/2000	3.347	3.210	7.047	21.69	23.33	13.05	6.668	2.778	1.465	1.610	1.355	2.714
11	Kollegal	2/71 to 5/2000	16.43	66.74	89.56	42.80	36.24	23.22	16.00	8.571	5.063	5.422	0.427	8.110
12	T.Narsipur	3/71 to 5/2000	32.24	115.0	115.2	52.46	38.89	26.19	15.33	7.120	6.587	7.433	10.53	14.86
13	Muthankera	5/72 to 5/2000	276.0	625.6	534.2	211.3	141.0	84.92	40.60	20.26	9.341	6.266	11.37	19.78
14	Kattemalalavadi	6/79 to 5/2000	33.05	93.61	70.89	21.32	15.24	9.474	3.962	1.179	0.231	0.123	0.074	0.463
15	M.H. Halli	10/78 to 5/2000	20.50	81.54	117.2	53.89	46.38	38.20	25.74	18.26	20.66	21.01	23.41	21.35
16	Kudige	11/73 to 5/2000	149.10	417.5	462.1	152.2	92.61	48.30	25.16	14.06	11.32	7.777	9.405	12.19

Source: Water Year Book, 1999-2000.

Table No.1.8 : Sitewise Average Flow Per Unit Drainage Area In Different River Basins.

													<i>Unit : Millimeter</i>		
Sl.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
VIII Basin : East Flowing River															
1	Thammavaram	1978 to 2000	2.024	3.581	4.962	24.13	32.23	31.70	17.45	14.24	7.943	5.092	2.701	4.403	
2	K.Bitragunda	1990 to 2000	3.384	0.766	1.629	6.889	33.06	35.22	12.44	1.604	1.449	0.750	0.296	4.450	
3	Nellore	1989 to 2000	0.248	0.492	0.307	7.508	12.60	11.41	4.698	0.293	0.029	0.020	0.011	0.263	
4	Chennur	1989 to 2000	1.938	1.748	5.215	11.220	12.43	6.020	3.553	1.497	0.373	0.053	0.059	0.156	
5	Alladupalli	1985 to 2000	4.863	10.29	23.62	36.79	45.60	13.69	9.677	4.615	1.179	0.472	0.286	0.822	
6	Singavaram	1979 to 2000	0.611	1.505	1.169	8.296	4.931	2.601	0.139	0.030	0.010	0.000	0.000	0.006	
7	Tadapatri	1972 to 2000	0.384	1.319	0.938	6.658	9.131	6.890	1.447	0.564	0.117	0.031	0.011	0.187	
8	Nagalamadike	1978 to 2000	0.006	0.132	0.700	5.659	2.093	1.099	0.059	0.008	0.018	0.000	0.000	0.074	
9	Nandipalli	1990 to 2000	1.578	1.623	2.203	4.935	24.84	12.71	3.651	1.113	0.621	0.199	0.152	0.220	
10	Kamalapuram	1990 to 2000	1.538	0.052	1.214	6.174	10.74	12.98	2.896	0.501	0.063	0.000	0.019	0.000	
11	Naidupeta	1978 to 2000	0.843	0.092	0.544	0.815	9.504	68.86	38.80	8.756	5.427	0.115	0.002	0.581	
12	Sullurpet	1988 to 2000	1.281	0.065	0.126	0.081	4.203	16.18	10.14	1.377	0.037	0.000	0.000	0.232	
13	Chengalpattu	1977 to 2000	0.071	0.072	0.117	0.463	0.955	11.96	8.329	0.576	0.221	0.153	0.001	0.002	
14	Magaral	1972 to 2000	0.000	0.260	0.160	0.867	2.629	38.77	33.64	2.451	1.187	0.747	0.000	0.016	
15	Arcot	1979 to 2000	0.007	0.002	0.061	2.424	2.837	6.666	2.767	0.248	0.083	0.064	0.000	0.002	
16	Avaramkuppam	1978 to 2000	0.242	0.403	0.635	5.558	5.060	5.399	1.954	0.368	0.156	0.056	0.036	0.140	
17	Villupuram	1973 to 2000	0.000	0.011	0.020	0.213	2.812	12.80	8.823	0.734	0.126	0.065	0.030	0.067	
18	Vazhavachanur	1978 to 2000	0.112	0.165	0.125	0.770	5.934	10.97	8.168	1.311	1.327	0.951	0.942	0.416	
19	Gummanur	1978 to 2000	1.056	0.506	1.793	12.06	14.96	9.117	2.882	0.793	0.246	0.126	0.109	0.508	
20	Kudalaiyathur	1990 to 2000	0.000	0.000	0.000	0.044	1.209	35.82	26.99	1.506	0.205	0.132	0.000	0.000	
21	Paramakudi	1972 to 2000	0.013	0.007	0.000	0.310	2.703	14.84	4.833	0.309	0.213	1.075	0.036	0.066	
22	Theni	1978 to 2000	16.82	45.91	67.91	60.70	81.35	110.90	72.29	39.73	20.44	15.76	6.750	6.341	
23	Irrukkankudi	1990 to 2000	0.058	0.061	0.030	0.045	4.013	15.44	9.644	0.355	0.096	0.009	0.000	0.001	
24	Murappanadu	1978 to 2000	5.521	5.173	4.746	3.380	6.357	39.73	30.140	9.173	9.547	9.837	3.841	3.797	
25	A.P.Puram	1980 to 2000	0.156	0.467	0.147	0.066	1.103	8.545	6.264	1.353	0.758	3.165	0.341	0.191	

Source: Water Year Book, 1999-2000

Table No.1.8 : Sitewise Average Flow Per Unit Drainage Area In Different River Basins.

Sl.No.	Site Name	Reference Period	<i>Unit : Millimeter</i>											
			June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
IX Basin : West Flowing Rivers														
1	Badlapur	3/88 to 5/2000	239.7	1277	967.9	565.7	177.0	33.8	18.87	13.29	13.3	13.21	16.64	24.79
2	Mangaon	12/88 to 5/2000	345.3	1505	1075	497.2	147.8	2.312	0.310	0	0	0	0	0.972
3	Anjanari	8/91 to 5/2000	277	966.9	625.9	385.8	170.8	37.08	0.145	0.349	0.292	0.162	0.066	0
4	Adavali	12/86 to 5/2000	344.6	1273	957.8	428.3	220.8	46.29	4.982	1.312	0.139	0.045	0.022	0.221
5	Ganjim	6/71 to 5/2000	337	1437	1213	410.2	194.3	69.8	23.62	9.953	4.503	2.891	1.894	2.097
6	Collem	6/71 to 5/2000	376.5	1520	1511	479.8	184.2	53.28	24.45	15.93	9.47	7.005	5.140	6.960
7	Kolad	6/98 to 5/2000	173.60	810	714.4	248.7	0.419	0.952	0	0	0	0	0	0
8	Nagothane	6/98 to 5/2000	483	891.3	919	460.3	227.9	0	0	0	0	0	0	0
9	Pen	8/89 to 5/2000	63.27	874.5	786	409.5	144	0	0	0	0	0	0	0
10	Ambarampalyan	3/78 to 5/2000	17.24	19.07	27.26	37.41	35.50	81.94	46.35	40.52	27.45	15.85	6.93	12.55
11	Santeguli	6/88 to 5/2000	430.5	1912	1353	457.5	225.4	100.7	45.42	22.68	13.82	9.496	6.887	12.07
12	Haladi	1/86 to 5/2000	287.1	995.6	882.4	364.9	195.3	128.80	89.69	88.16	82.67	102.6	95.26	83.58
13	Yennehole	8/89 to 5/2000	596.1	1937	1439	543	3118	135.5	47.27	13.46	3.144	0.329	0.919	10.85
14	Bantwal	11/77 to 5/2000	394.7	1185	1137	463.9	287.2	121.6	44.53	18.5	7.188	3.946	3.188	9.932
15	Erinjipuzha	7/85 to 5/2000	212.0	760.3	732.5	315.2	232.6	126.3	47.95	19.99	6.367	1.720	1.585	9.769
16	Perumannu	7/85 to 5/2000	389.7	1165	923.4	412.9	259.0	120.6	34.11	16.00	6.669	7.002	4.723	15.29
17	Kuniyal	7/85 to 5/2000	334.6	681.3	531.7	264.5	221.9	127.3	45.18	19.65	7.429	4.223	3.885	18.79
18	Karathodu	1/79 to 5/2000	197.5	566.2	354.5	185.7	213.7	138.1	37.30	14.20	6.300	6.201	6.966	17.63
19	Kumbidi	7/86 to 5/2000	107.3	234.1	172.0	86.84	84.88	58.42	17.87	9.260	3.045	0.771	2.097	5.427
20	Pulamanthole	1/79 to 5/2000	208.1	531.0	396.9	237.0	264.8	154.4	41.77	15.81	6.281	4.790	10.12	23.10
21	Mankara	3/86 to 5/2000	23.26	71.39	45.30	30.72	32.88	40.51	12.93	5.589	2.745	1.096	1.790	2.492
22	Pudur	7/85 to 5/2000	18.91	49.88	33.02	19.86	24.37	38.66	15.87	6.903	3.836	2.602	3.396	3.565
23	Arangali	9/85 to 5/2000	182.1	413.0	343.9	165.6	129.7	88.01	29.50	18.54	11.66	11.89	12.43	20.49
24	Neeleswaram	5/78 to 5/2000	223.9	430.7	390.5	202.0	180.3	118.1	41.83	20.73	17.34	18.96	24.81	43.06
25	Ramamangalam	4/71 to 5/2000	568.7	822.5	650.9	421.1	446.6	332.4	185.0	149.1	131.0	142.2	146.60	187.5
26	Kalampur	5/78 to 5/2000	433.7	801.7	589.7	392.1	384.6	198.2	55.32	14.98	2.202	1.031	6.882	61.12

Table No.1.8 : Sitewise Average Flow Per Unit Drainage Area In Different River Basins.

Sl.No.	Site Name	Reference Period	<i>Unit : Millimeter</i>											
			June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
IX Basin : West Flowing Rivers														
27	Kidangoor	7/86 to 5/2000	515.2	666.9	481.9	315.0	425.8	256.2	48.16	8.946	2.966	2.731	24.85	121.1
28	Kalloppara	7/85 to 5/2000	448.3	572.7	414.5	291.8	369.2	230.7	40.21	6.950	6.377	3.091	20.14	97.86
29	Malakkara	7/85 to 5/2000	358.6	503.5	399.9	286.8	336.3	220.5	68.85	34.80	18.79	20.98	20.80	89.53
30	Thumpamon	7/85 to 5/2000	239.9	297.9	232.5	178.9	235.5	193.1	36.05	10.48	5.511	4.479	13.65	39.07
31	Pattazhi	2/78 to 5/2000	163.6	220.9	186.2	150.7	209.2	199.4	66.40	32.72	19.57	19.08	18.96	35.87
32	Ayilam	5/78 to 5/2000	196.2	174.2	133.2	139.8	231.5	179.2	55.98	16.72	11.99	14.47	22.51	45.09

Source: Water Year Book for 1999-2000

Table No.1.8 : Sitewise Average Flow Per Unit Drainage Area In Different River Basins.

<i>Unit : Millimeter</i>														
Sl.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
XI Basin : Narmada														
1	Chandwada	1980-2002	12.18	76.84	174.68	84.96	9.64	2.14	0.56	0.22	0.07	0.03	0.01	0.01
2	Gurudeshwar	1977-2002	8.79	63.67	145.58	97.09	25.67	9.53	7.75	5.20	4.18	4.14	3.00	2.45
3	Rajghat	1979-2002	9.78	78.92	175.75	108.83	24.57	0.93	7.29	5.26	4.67	4.59	3.14	2.40
4	Mandaleshwar	1979-2002	10.51	79.63	180.75	111.31	32.93	10.33	9.12	5.73	5.65	4.99	3.64	2.89
5	Kogaon	1986-2002	17.43	41.36	96.44	70.01	23.98	5.98	2.14	0.96	0.42	0.31	0.22	0.15
6	Ginnore	1999-2002	18.00	92.11	175.86	109.50	21.85	6.14	3.92	1.83	1.01	0.45	0.07	0.04
7	Handia	1979-2002	12.89	84.52	190.57	101.60	26.43	11.63	11.82	7.05	7.98	7.31	5.31	3.88
8	Chhidgaon	1986-2002	17.55	112.14	272.50	132.28	21.54	6.55	5.52	3.99	2.38	1.73	1.01	0.73
9	Hoshangabad	1979-2002	17.33	86.82	207.80	115.19	29.66	12.89	11.38	7.10	7.72	6.85	5.34	4.48
10	Sandia	1979-2002	10.60	74.70	164.42	86.42	25.99	13.86	12.79	7.59	8.79	8.47	6.96	5.87
11	Gadarwara	1979-2002	19.03	104.80	254.19	116.93	29.50	9.84	8.49	5.56	4.83	3.63	2.39	2.00
12	Barmanghat	1979-2002	10.77	74.01	177.66	90.36	30.02	13.75	11.20	6.04	8.42	6.69	5.89	4.04
13	Belkheri	1986-2002	20.52	107.04	223.86	89.18	20.32	9.08	7.71	3.16	2.83	2.34	1.10	0.86
14	Patan	1986-2002	8.16	53.38	156.72	115.53	30.25	11.35	7.19	4.77	3.66	3.03	2.26	1.50
15	Jamtara	1979-2002	12.33	105.58	208.49	95.95	33.60	16.51	13.29	6.16	92.54	9.26	8.51	6.00
16	Hriday Nagar	1986-2002	20.19	127.72	196.44	98.73	26.47	7.26	3.72	3.45	2.76	1.49	0.34	0.08
17	Mohgaon	1986-2002	22.94	128.46	213.59	120.54	28.56	7.07	6.89	6.91	4.92	1.89	0.53	0.27
18	Manot	1980-2002	28.11	146.08	240.05	143.65	28.92	10.78	8.69	9.88	5.61	3.08	1.32	0.67
19	Dindori	1990-2002	31.28	112.85	195.65	119.93	28.63	13.54	12.22	12.76	6.78	5.03	3.01	2.36

Source :Letter No.5/1/2000/CE(NBO)/416 Dated 21.05.2002 from Superintending Engineer©, Bhopal.

SECTION - II
SEDIMENTATION STATISTICS

SECTION - II

SEDIMENTATION STATISTICS

Whenever, water flows in a channel (natural or artificial), it tries to scour its surface. Silt or gravel or even larger boulders are detached from its bed or banks. The moving water sweeps these detached particles downstream. Silting and scouring in channels is not very uncommon and must be avoided by proper designs. Scouring lowers the full supply level and causes loss of command. It may also cause breaching of canal banks and failure of foundations of irrigation structures. Silting interferes with the proper working of a channel as the channel section gets reduced by silting, thereby reducing its discharging capacity.

Development and construction of projects formulated by harnessing the available water resources during last three to four decades has been instrumental in bringing the Green revolution that has essentially made India to achieve self-sufficiency in food and has ushered in an era of prosperity. However, these projects are seriously threatened by sedimentation due to the silt carried by various rivers and streams up to the point of their interception. Sediment is also threatening denudation of our forests. The sediment in a canal is a burden to be borne by the flowing water and is, therefore, designated as sediment load. The sediment may move in water either as bed load or as suspended load. Bed load is that in which the sediment moves along the bed with occasional jumps into the main river. While the suspended load is one in which the material is maintained in suspension due to the turbulence of the flowing water.

Sediment is one of the major obstructions on the flow line or channel of water and unmanageable quantity of it shorten longevity of channels. Moreover, it causes soil-erosion. Therefore, study of sediments and nature of its deposits on downstream are very important for preparation of any water supply projects and for this purpose sound database on sediments are essential tools.

The analysis of suspended sediment sample is carried out for three different grade of sediments, namely, coarse sediment, having particle diameter above 0.2 mm., medium sediment with diameter ranging from 0.075 to 0.2 mm. And fine sediment with diameter less than 0.075 mm.

The water sample from each group is passed through 100/72 mesh sieve (B.S.S). The residue on the sieve is washed with clear water several times, transferred to a crucible and its oven dry weight is measured. This gives the

coarse sediment in the group from which the sediment intensity in gm./lit, for the group is worked out.

After the removal of coarse sediment, the filtrate and washings, which now contain the medium and fine sediment is passed through 200 mesh sieve (B.S.S). Sediment particles retained on the sieve are medium sediment and part of the fine sediment. So, the residue in the sieve is thoroughly washed with clear water several times, transferred to a crucible and its oven dry weight is measured. Medium grade sediment intensity in gm/1 for that particular group is worked out, as is done for coarse sediment.

The filtrate and washings after separation of coarse and medium grade of sediment now contain only fine grade of sediment in suspension. The filtrate and washings obtained from all the groups are combined together in an enameled bucket and kept overnight for settlement. About 5 to 10 ml. of 10% alum solution is added to hasten the coagulation of colloidal silt. After the settlement is complete, the supernatant liquid is siphoned off carefully and the reduced volume of suspension is filtered through a dried and pre weighted Whitman No.2 grade filter paper. Extra washings with clear water are given to remove excessive alum, if used. The filter paper along with the residue is dried to its constant weight and weighed. From this weight, weight of the fine sediment in gm/1 is determined. The intensity of fine silt in gm/ lit., so obtained, is the amount of the sediment for the entire cross section.

The total sediment load of the river along the cross-section is evaluated from the coarse and medium sediment concentration obtained group-wise and the sediment for the entire cross section. In this section detailed information on quantity of average sediment deposits on the streamlines is presented here separately for all sites on ten daily and monthly basis for last 10 years (table 2.1). In ten-daily summary tables T/D values are rounded off to nearest full integer when more than 1000, nearest first decimal figure when between 100-999 and nearest two decimal figures when less than 100. The frequency of sediment observation is daily during monsoon season and once in a week during the lean period. Data for non -observed days is estimated/ interpolated from the relationship of discharge vs. sediment load prepared on the basis of observed sediment concentration and weighted mean discharge of the same year.

Sediment concentration in gm./lit. (coarse, medium and fine) is recorded in the daily flow tables. The sediment load reported in the 10 daily tables indicates average sediment load. The sediment load as given in the seasonal and monthly summary tables (table 2.2) indicates total sediment load. In monthly and seasonal summary tables sediment load is rounded off to full

integer. The annual/ seasonal sediment yield in mm is the notional depth of soil in mm. over the catchment equivalent to annual/ seasonal suspended sediment runoff calculated at the sediment observation station. It is computed using the relation.

Sediment yield (mm)=Total suspended sediment load (T)/ 1400*
Catchment Area (Km²)

It can be seen that among the basins Godavari (88.822 million metric tonnes at Pathagudem site) followed by Narmada (73.140 million metric tonnes at Mandleshwar) Basin carries highest amount of sediments compared to others. However, Sediment load deposited is highest on Godavari (2220 Metric Tonnes per Sq. Kms.) basin on unit area basis. It is 1855 Metric Tones per Sq. Kms in Tapi basin and 1004 MT per Sq. Kms. in Narmada basin.

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

I Basin: Mahanadi

Site Name	Mahanadi at Tikarpara				Tel at Kantamal				Ong at Salebhata			Ib at Sundergarh		
1 1993-94	8.292	0.605	8.897	5.189	0.016	5.205	0.342	0.000	0.342	2.653	0.010	2.663		
2 1994-95	55.049	0.999	56.048	19.078	0.093	19.171	0.624	0.000	0.624	5.693	0.006	5.699		
3 1995-96	9.042	1.241	10.283	3.303	0.220	3.523	0.250	0.001	0.251	2.168	0.020	2.188		
4 1996-97	5.469	0.589	6.058	2.063	0.021	2.084	0.132	0.000	0.132	5.594	0.002	5.596		
5 1997-98	10.526	0.858	11.384	7.774	0.126	7.900	0.780	0.001	0.781	2.631	0.674	3.305		
6 1998-99	5.675	0.948	6.623	1.240	0.011	1.251	2.147	0.005	2.152	4.791	0.075	4.866		
7 1999-2000	3.031	0.845	3.876	3.038	4.739	7.777	0.316	0.000	0.316	3.085	0.013	3.098		
8 2000-2001	2.658	0.071	2.729	2.486	0.105	2.591	0.013	0.000	0.013	0.973	0.002	0.975		
9 2001-2002	16.098	0.380	16.478	25.663	0.140	25.803	0.212	0.000	0.212	5.941	0.005	5.946		
10 2002-2003	1.985	0.180	2.165	2.328	0.008	2.336	0.222	0.000	0.222	2.319	0.005	2.324		

Site Name	Mand at Kurubhatta				Mahanadi at Basantpur				Hasdeo at Bamnidihi			Jonk at Rampur		
1 1993-94	2.453	0.008	2.461	8.264	0.043	8.307	1.118	0.073	1.191	0.429	0.000	0.429		
2 1994-95	5.721	0.014	5.735	31.619	0.172	31.791	7.325	0.392	7.717	1.321	0.001	1.322		
3 1995-96	1.451	0.007	1.458	6.402	0.038	6.440	0.883	0.041	0.924	0.535	0.000	0.535		
4 1996-97	4.846	0.005	4.851	4.228	0.029	4.257	0.745	0.028	0.773	0.136	0.000	0.136		
5 1997-98	2.655	0.361	3.016	5.565	0.128	5.693	0.335	0.151	0.486	1.216	0.005	1.221		
6 1998-99	2.460	0.009	2.469	3.321	54.157	57.478	0.337	0.047	0.384	5.881	0.006	5.887		
7 1999-2000	2.293	0.031	2.324	3.908	0.031	3.939	0.568	0.044	0.612	0.221	0.000	0.221		
8 2000-2001	0.526	0.001	0.527	1.061	0.015	1.076	0.175	0.055	0.230	0.004	0.000	0.004		
9 2001-2002	4.225	0.024	4.249	11.460	0.033	11.493	1.240	0.005	1.245	0.530	0.000	0.530		
10 2002-2003	1.804	0.004	1.808	2.400	0.061	2.461	0.134	0.015	0.149	0.078	0.000	0.078		

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

I Basin: Mahanadi

Site Name	Seonath at Jondhra			Hamp at Andhiyankore			Seonath at Simga					
1 1993-94	3.775	0.043	3.818	0.329	0.001	0.330	1.428	0.005	1.433	0.646	0.000	0.646
2 1994-95	12.529	0.113	12.642	1.681	0.004	1.685	6.093	0.009	6.102	3.347	0.001	3.348
3 1995-96	2.612	0.027	2.639	0.516	0.001	0.517	2.053	0.006	2.059	1.059	0.001	1.060
4 1996-97	12.529	0.113	12.642	1.681	0.004	1.685	6.093	0.009	6.102	3.347	0.001	3.348
5 1997-98	4.297	0.181	4.478	0.628	0.155	0.783	2.730	0.028	2.758	0.864	0.002	0.866
6 1998-99	1.991	0.033	2.024	0.436	0.011	0.447	0.370	0.007	0.377	0.118	0.001	0.119
7 1999-2000	2.248	0.016	2.264	0.605	0.002	0.607	0.979	0.003	0.982	0.231	0.001	0.232
8 2000-2001	0.477	0.001	0.478	0.111	0.000	0.111	0.409	0.000	0.409	0.144	0.000	0.144
9 2001-2002	4.124	0.001	4.125	0.685	0.000	0.685	262.902	0.004	262.906	2.654	0.002	2.656
10 2002-2003	1.129	0.002	1.131	0.558	0.000	0.558	0.574	0.000	0.574	0.084	0.000	0.084

Site Name	Pairi at Baronda			Hasdeo at Manendragarh		
1 1993-94	0.829	0.000	0.829	0.127	0.004	0.131
2 1994-95	2.937	0.002	2.939	0.153	0.000	0.153
3 1995-96	0.542	0.000	0.542	0.036	0.002	0.038
4 1996-97	0.969	0.003	0.972	0.030	0.000	0.030
5 1997-98	1.803	0.000	1.803	-	-	0.000
6 1998-99	0.096	0.001	0.097	0.061	0.000	0.061
7 1999-2000	38.560	0.001	38.561	0.118	0.000	0.118
8 2000-2001	0.077	0.000	0.077	0.040	0.000	0.040
9 2001-2002	0.003	0.000	0.003	0.076	0.000	0.076
10 2002-2003	0.660	0.000	0.660	0.050	0.000	0.050

Source: Suspended Sediment Data Book (Vol.-I) for 2002-2003

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

II Basin : Subarnarekha, Burhabalang & Baitarni

Site Name	Subranrekha at Ghatsila			Kharkai at Adityapur			Baitarani at Anandpur					
1 1993-94	2.106	0.020	2.126	0.724	0.008	0.732	2.534	0.010	2.544		5.402	5.402
2 1994-95	7.931	0.024	7.955	2.819	0.019	2.838	6.120	0.241	6.361		17.154	17.154
3 1995-96	2.752	0.204	2.956	0.642	0.087	0.729	2.166	0.015	2.181		5.866	5.866
4 1996-97	2.788	0.008	2.796	0.423	0.001	0.424	2.805	0.022	2.827		6.047	6.047
5 1997-98	6.190	0.125	6.315	1.318	0.064	1.382	4.421	0.118	4.539		12.236	12.236
6 1998-99	0.920	0.198	1.118	0.356	0.021	0.377	0.929	0.105	1.034			0.000
7 1999-2000	2.522	0.091	2.613	2.011	0.047	2.058	4.747	0.255	5.002			0.000
8 2000-2001	0.642	0.025	0.667	0.241	0.002	0.243	1.863	0.015	1.878			0.000
9 2001-2002	3.018	0.033	3.051	0.913	0.003	0.916	1.914	0.013	1.927			0.000
10 2002-2003	1.236	0.018	1.254	0.504	0.004	0.508	0.496	0.012	0.508			0.000

Site Name	Baitarani at Champua		
1 1993-94	Sedinment Observation Started w.e.f		
2 1994-95	09.08.2001		
3 1995-96			
4 1996-97			
5 1997-98			
6 1998-99			
7 1999-2000			
8 2000-2001			
9 2001-2002			
10 2002-2003	0.178	0.003	0.181

Source: Suspended Sediment Data Book (Vol.-II) for 2002-2003.

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

III Basin: Brahmani

Site Name	Brahmani at Jenapur			Brahmani at Gomlai			Koel at Jaraikela			Sankh at Tilga		
1 1993-94	5.847	0.374	6.221	5.921	0.036	5.957	3.857	0.008	3.865	3.010	0.016	3.026
2 1994-95	15.700	0.558	16.258	21.989	0.032	22.021	9.317	0.014	9.331	3.687	0.017	3.704
3 1995-96	3.070	0.478	3.548	6.855	0.295	7.150	3.365	0.303	3.668	1.764	0.071	1.835
4 1996-97	5.684	0.207	5.891	12.387	0.008	12.395	6.820	0.004	6.824	2.895	0.003	2.898
5 1997-98	6.052	0.279	6.331	12.749	0.418	13.167	7.813	0.183	7.996	2.903	0.142	3.045
6 1998-99	3.119	0.243	3.362	5.962	0.233	6.195	2.680	0.175	2.855	2.815	0.112	2.927
7 1999-2000	6.950	0.349	7.299	7.675	0.030	7.705	4.289	0.012	4.301	2.224	0.007	2.231
8 2000-2001	2.467	0.131	2.598	3.589	0.009	3.598	2.920	0.005	2.925	0.642	0.001	0.643
9 2001-2002	12.650	0.090	12.740	11.989	0.008	11.997	4.275	0.003	4.278	2.340	0.003	2.343
10 2002-2003	1.678	0.007	1.685	3.430	0.004	3.434	0.990	0.000	0.990	1.107	0.001	1.108

Site Name	Brahmani at Panposh		
1 1993-94	observation		0.000
2 1994-95	started		0.000
3 1995-96	w.e.f.1996-97		0.000
4 1996-97			0.000
5 1997-98	13.317	0.201	13.518
6 1998-99	5.733	0.119	5.852
7 1999-2000	8.665	0.045	8.710
8 2000-2001	6.041	0.010	6.051
9 2001-2002	10.560	0.009	10.569
10 2002-2003	4.804	0.008	4.812

Source: Suspended Sediment Data Book (Vol.-II) for 2002-2003.

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

IV Basin: Rushikulya, Vamsadhara, Saroda & Nagavali

		Rushikulya at Purushattampur			Vamsadhara at Kashinagar			Nagavali at Srikakulam					
1	1993-94	Sediment Observation Started w.e.f. 15.01.2001			1.370	0.011	1.381	Sediment Observation Started w.e.f. 27.06.2001					
2	1994-95				2.482	0.499	2.981						
3	1995-96				2.662	0.326	2.988						
4	1996-97				0.063	0.125	0.188						
5	1997-98				6.739	0.048	6.787						
6	1998-99				1.000	0.082	1.082						
7	1999-2000				0.949	0.056	1.005						
8	2000-2001				0.521	0.000	0.521						
9	2001-2002	1.644	0.023	1.667	2.350	0.014	2.364	1.754	0.026	1.780			
10	2002-2003	0.705	0.000	0.705	0.476	0.000	0.476	0.366	0.003	0.369			

Source: Suspended Sediment Data Book (Vol.-II) for 2002-2003.

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
V Godavari Basin													
	Site Name	Polavaram			Sabari at Konta			Perur			Indravati at Pathagudem		
1	1992-93	79.828	0.137	79.964	10.141	0.207	10.348	55.572	0.010	55.582	21.879	0.000	21.879
2	1993-94	29.968	0.079	30.047	3.099	0.107	3.205	17.154	0.022	17.176	10.272	0.000	10.272
3	1994-95	57.575	0.154	57.729	9.263	0.397	9.660	3.751	0.314	4.064	28.699	0.119	28.818
4	1995-96	62.140	0.139	62.279	5.192	0.204	5.396	13.014	0.027	13.042	17.261	0.006	17.267
5	1996-97	26.870	0.148	27.018	2.411	0.039	2.450	20.568	0.060	20.628	8.305	0.001	8.306
6	1997-98	21.760	0.176	21.936	2.585	0.098	2.683	17.600	0.527	18.127	8.018	0.045	8.063
7	1998-99	40.205	0.148	40.353	3.336	0.200	3.536	31.203	0.036	31.239	6.690	0.014	6.704
8	1999-2000	44772	0.110	44772.110	8.14	0.118	8.258	44.451	0.014	44.465	15.183	0.005	15.188
9	2000-2001	86.361	0.063	86.424	6.564	0.007	6.571	81.149	0.007	81.156	7.305	0.002	7.307
10	2001-2002	48.644	0.020	48.664	4.471	0.076	4.547	72.553	0.01	72.563	72.563	16.259	88.822
	Site Name	Indravati at Jagadalpur			Indravati at Nowrangpur			Pranhita at Tekra			Paddavagu at Bhatpalli		
1	1992-93	3.662	0.016	3.678	-	0.014	0.014	61.810	0.009	61.819	5.050	0.000	5.050
2	1993-94	2.179	0.008	2.188	1.475	0.026	1.501	15.819	0.026	15.845	1.352	0.000	1.352
3	1994-95	4.952	0.076	5.028	1.896	0.030	1.926	128.735	0.141	128.875	4.116	0.004	4.120
4	1995-96	2.302	0.009	2.311	0.166	0.009	0.175	43.256	0.007	43.263	6.239	0.000	6.240
5	1996-97	1.439	0.028	1.467	0.843	0.058	0.901	9.690	0.004	9.694	3.890	0.001	3.891
6	1997-98	1.389	0.078	1.467	0.956	0.068	1.024	11.920	0.374	12.294	0.668	0.006	0.674
7	1998-99	1.604	0.001	1.605	0.404	0.000	0.404	19.813	0.017	19.830	3.815	0.000	3.815
8	1999-2000	1.497	0.000	1.497	0.378	0.000	0.378	54.44	0.004	54.444	0.851	0.001	0.852
9	2000-2001	1.651	0.001	1.652	0.633	0.000	0.633	50.222	0.000	50.222	4.090	0.000	4.090
10	2001-2002	2.821	0.002	2.823	1.100	0.000	1.100	19.988	0.001	19.989	1.117	0.001	1.118

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
V Godavari Basin													
	Site Name	Wardha at Bamni			Penganga at PG Bridge			Unna at Nandgaon			Wardha at Hivra		
1	1992-93	18.033	0.003	18.037	10.910	0.000	10.910	1.532	0.000	1.532	5.866	0.001	5.866
2	1993-94	8.217	0.009	8.226	3.506	0.001	3.507	0.041	0.000	0.041	0.035	0.007	0.041
3	1994-95	52.713	0.013	52.726	5.376	0.002	5.378	3.014	0.003	3.017	5.276	0.008	5.283
4	1995-96	27.383	0.007	27.390	8.307	0.000	8.307	0.466	0.000	0.466	0.484	0.002	0.486
5	1996-97	3.427	0.002	3.429	1.974	0.000	1.974	0.038	0.000	0.038	0.399	0.001	0.400
6	1997-98	1.567	0.044	1.611	0.282	0.090	0.372	0.023	0.002	0.025	0.088	0.067	0.155
7	1998-99	7.416	0.003	7.419	3.008	0.002	3.010	0.078	0.000	0.078	0.912	0.000	0.912
8	1999-2000	10.462	0.007	10.469	5.567	0.001	5.568	0.418	0.000	0.418	0.927	0.000	0.927
9	2000-2001	17.009	0.001	17.010	2.965	0.000	2.965	0.576	0.000	0.576	0.44	0.000	0.440
10	2001-2002	15.193	0.001	15.194	4.183	0.001	4.184	0.199	0.000	0.199	0.993	0.000	0.993
	Site Name	Wardha at Bhishnur			Wainganga at Ashti			Wainganga at Pauni			Kanhana at Satrapur		
1	1992-93	0.165	0.000	0.165	2.570	0.001	2.571	6.038	0.006	6.044	1.729	0.005	1.733
2	1993-94	0.043	0.003	0.046	5.093	0.001	5.094	12.494	0.011	12.504	2.131	0.005	2.136
3	1994-95	0.459	0.000	0.459	26.384	0.007	26.392	50.655	0.028	50.683	5.579	0.024	5.603
4	1995-96	0.071	0.000	0.071	7.320	0.001	7.322	4.839	0.005	4.844	1.069	0.005	1.074
5	1996-97	0.006	0.000	0.006	2.343	0.000	2.343	2.817	0.003	2.820	1.286	0.003	1.289
6	1997-98	0.082	0.005	0.087	4.938	0.127	5.065	6.667	0.366	7.033	3.593	0.547	4.140
7	1998-99	0.202	0.000	0.202	7.578	0.035	7.613	5.046	0.010	5.056	1.381	0.011	1.392
8	1999-2000	0.092	0.000	0.092	16.292	0.002	16.294	10.893	0.007	10.900	1.908	0.013	1.921
9	2000-2001	0.003	0.000	0.003	8.751	0.000	8.751	2.918	0.001	2.919	0.275	0.000	0.275
10	2001-2002	0.000	0.004	0.004	0.000	7.793	7.793	5.556	0.004	5.560	1.331	0.002	1.333

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
V Godavari Basin													
	Site Name	Bagh at Rajegaon			Wainganga at Kumhari			Godavari at Mancherial			Lendi at Degloor		
1	1992-93	1.786	0.000	1.786	2.130	0.000	2.130	0.693	0.002	0.695			
2	1993-94	1.698	0.000	1.698	1.403	0.000	1.403	0.149	0.001	0.150			
3	1994-95	11.823	0.005	11.828	11.830	0.001	11.832	0.402	0.011	0.413	0.005	0.000	0.005
4	1995-96	1.644	0.001	1.645	1.498	0.000	1.498	3.838	0.004	3.842	0.162	0.000	0.162
5	1996-97	0.513	0.000	0.513	0.569	0.000	0.569	0.476	0.005	0.481	0.183	0.000	0.183
6	1997-98	1.931	0.030	1.961	1.956	0.161	2.117	0.051	0.002	0.053	0.095	0.000	0.095
7	1998-99	11.220	0.000	11.220	1.008	0.002	1.010	2.378	0.007	2.385	0.126	0.000	0.126
8	1999-2000	1.901	0.001	1.902	2.449	0.002	2.451	0.390	0.003	0.393	0.015	0.000	0.015
9	2000-2001	1.102	0.000	1.102	1.256	0.002	1.258	1.897	0.004	1.901	0.243	0.000	0.243
10	2001-2002	2.039	0.000	2.039	0.999	0.000	0.999	0.305	0.002	0.307	0.000	0.005	0.005
	Site Name	Manijira at Saigaon			Godavari at Yelli			Purna at Purna			Godavari at G.R.Bridge		
1	1992-93	0.813	0.000	0.813	10.169	0.000	10.170	13.192	0.000	13.192	1.374	0.000	1.374
2	1993-94	0.089	0.000	0.089	1.609	0.000	1.609	0.222	0.000	0.222	0.068	0.000	0.068
3	1994-95	0.016	0.000	0.016	3.110	0.000	3.110	0.123	0.000	0.123	1.218	0.000	1.218
4	1995-96	0.600	0.000	0.600	1.070	0.000	1.070	0.432	0.000	0.432	0.047	0.000	0.047
5	1996-97	0.470	0.000	0.470	6.789	0.000	6.789	1.376	0.000	1.376	2.229	0.000	2.229
6	1997-98	0.024	0.000	0.024	0.068	0.002	0.070	0.228	0.022	0.250	0.006	0.000	0.006
7	1998-99	1.936	0.000	1.936	18.835	0.000	18.835	3.369	0.000	3.369	0.800	0.000	0.800
8	1999-2000	0.125	0.000	0.125	2.252	0.000	2.252	1.075	0.000	1.075	0.071	0.000	0.071
9	2000-2001	0.604	0.000	0.604	5.421	0.000	5.421	1.580	0.000	1.580	0.314	0.000	0.314
10	2001-2002	0.079	0.000	0.079	2.747	0.000	2.747	0.662	0.000	0.662	0.092	0.000	0.092

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

V Godavari Basin

Site Name	Godavari at Dhalegaon			Sindhpana at Manjlegaon		
1 1992-93	0.690	0.000	0.690	0.000	0.000	0.000
2 1993-94	0.069	0.000	0.070	0.000	0.000	0.000
3 1994-95	0.766	0.000	0.767	0.000	0.000	0.000
4 1995-96	0.076	0.000	0.076	0.000	0.000	0.000
5 1996-97	0.148	0.000	0.148 · Site closed ----->			
6 1997-98	0.012	0.005	0.017			
7 1998-99	1.941	0.001	1.942			
8 1999-2000	0.414	0.000	0.414			
9 2000-2001	0.887	0.000	0.887			
10 2001-2002	0.125	0.000	0.125			

Source: Suspended Sediment Year Books

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VI Basin : Krishna													
	Site Name	Vijaywada			Kesara			Wadenapalli			Pondugala		
1	1990-91	1.984	0.171	2.155	1.021	0.019	1.040	6.563	0.102	6.665	0.226	0.023	0.335
2	1991-92	2.741	0.134	2.875	0.342	0.013	0.355	2.030	0.076	2.106	2.310	0.025	0.249
3	1992-93	0.128	0.075	0.203	0.142	0.011	0.153	0.585	0.092	0.677	0.066	0.051	2.335
4	1993-94	1.042	0.080	1.122	0.087	0.007	0.094	0.298	0.115	0.413	0.225	0.035	0.117
5	1994-95	2.867	0.647	3.514	0.493	0.042	0.535	1.262	0.039	1.301	1.296	0.035	0.260
6	1995-96	0.674	0.026	0.700	0.311	0.008	0.319	0.088	0.039	0.127	0.111	0.030	1.331
7	1996-97			0.000			0.000			0.000			0.141
8	1997-98	0.976	0.035	1.011	0.059	0.015	0.074	0.424	0.045	0.469	1.072	0.031	1.103
9	1998-99	2.309	0.046	2.355	0.469	0.024	0.493	0.940	0.172	1.112	0.317	0.060	0.377
10	1999-2000	0.556	0.035	0.591	0.216	0.005	0.221	0.206	0.094	0.300	0.112	0.087	0.199
	Site name	Bawapuram			Mantralayam			Oollenur			Marol		
1	1990-91	2.614	0.005	2.619	2.008	0.034	2.042	0.160	0.030	0.190	0.179	0.002	0.181
2	1991-92	2.293	0.007	2.300	2.579	0.051	2.630	0.535	0.038	0.573	0.821	0.001	0.822
3	1992-93	1.404	2.312	3.716	1.707	0.881	2.588	0.450	0.536	0.986	0.837	0.195	1.032
4	1993-94	5.035	0.019	5.054	4.160	0.052	4.212	0.209	0.031	0.240	0.569	0.046	0.615
5	1994-95	2.641	0.053	2.694	2.921	0.051	2.972	0.590	0.039	0.629	0.758	0.003	0.761
6	1995-96	0.389	0.001	0.390	1.202	0.028	1.230	0.043	0.025	0.068	0.307	0.000	0.307
7	1996-97			0.000			0.000			0.000			0.000
8	1997-98	0.501	0.011	0.512	0.584	0.055	0.639	0.305	0.029	0.334	0.420	0.040	0.460
9	1998-99	2.386	0.005	2.391	4.061	0.035	4.096	0.328	0.023	0.351	0.381	0.006	0.387
10	1999-2000	1.153	0.028	1.181	1.375	0.051	1.426	0.288	0.023	0.311	1.166	0.001	1.167

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VI Basin : Krishna													
	Site name	Harlahalli			Shimoga			Krishna Agraharam			Yadgir		
1	1990-91	0.622	0.095	0.717	0.385	0.003	0.388	5.091	0.088	5.179	19.263	0.349	19.612
2	1991-92	1.507	0.024	1.531	0.479	0.002	0.481	23.005	0.010	23.015	8.440	0.002	8.442
3	1992-93	1.297	6.288	7.585	0.494	0.042	0.536	11.113	2.404	13.517	4.110	0.053	4.163
4	1993-94	0.644	0.019	0.663	0.342	0.006	0.348	180.313	0.120	180.433	7.445	0.039	7.484
5	1994-95	1.115	0.028	1.143	1.067	0.008	1.075	21.907	0.249	22.156	4.556	0.011	4.567
6	1995-96	0.573	0.012	0.585	0.323	0.003	0.326	7.171	0.025	7.196	0.419	0.007	0.426
7	1996-97			0.000			0.000			0.000			0.000
8	1997-98	0.903	0.081	0.984	0.757	0.007	0.764	4.466	0.09	4.556	2.606	0.018	2.624
9	1998-99	0.866	0.038	0.904	0.531	0.012	0.543	105.272	0.046	105.318	18.202	0.140	18.342
10	1999-2000	1.287	0.062	1.349	0.642	0.008	0.650	3.632	0.022	3.654	1.164	0.006	1.170
	Site name	Malkhed			Wadakbal			Takali			Sarati		
1	1990-91				4.364	0.068	4.432	2.049	0.004	2.053	0.191	0.000	0.191
2	1991-92				0.451	0.000	0.451	0.799	0.001	0.800	0.163	0.000	0.163
3	1992-93		0.002	0.002	0.302	0.000	0.302	0.148	0.000	0.148	0.124	0.000	0.124
4	1993-94	0.067	0.000	0.067	0.515	0.000	0.515	0.433	0.002	0.435	0.347	0.002	0.349
5	1994-95	0.009	0.000	0.009	0.002	0.000	0.002	0.704	0.000	0.704	0.551	0.000	0.551
6	1995-96	0.841	0.001	0.842	0.476	0.000	0.476	0.001	0.000	0.001	0.008	0.000	0.008
7	1996-97			0.000			0.000			0.000			0.000
8	1997-98	0.047	0.000	0.047	0.327	0.000	0.327	0.213	0.002	0.215	0.053	0.000	0.053
9	1998-99	1.053	0.003	1.056	3.667	0.021	3.688	1.563	0.011	1.574	0.060	0.001	0.061
10	1999-2000	0.073	0.001	0.074	0.259	0.000	0.259	0.329	0.001	0.330	0.015	0.000	0.015

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VI Basin : Krishna													
	Site name	Huvinhedgi			Cholachagudda			Bagalkot			Galgali		
1	1990-91	5.228	0.034	5.262	0.388	0.046	0.434	2.006	0.086	2.092	2.585	0.000	2.585
2	1991-92	8.568	0.011	8.579	11.220	0.023	11.243	1.796	0.007	1.803	5.908	0.002	5.910
3	1992-93	1.243	0.109	1.352	1.845	4.652	6.497	0.361	0.010	0.371	1.919	0.004	1.923
4	1993-94	3.305	0.037	3.342	5.364	0.126	5.490	0.980	0.010	0.990	3.778	0.022	3.800
5	1994-95	11.328	0.055	11.383	3.162	0.082	3.244	0.697	0.013	0.710	5.050	0.013	5.063
6	1995-96	2.395	0.009	2.404	4.858	0.031	4.889	0.619	0.005	0.624	1.809	0.006	1.815
7	1996-97			0.000			0.000			0.000			0.000
8	1997-98	2.058	0.116	2.174	4.437	0.833	5.270	0.661	0.065	0.726	3.371	0.008	3.379
9	1998-99	5.952	0.032	5.984	4.774	0.040	4.814	0.432	0.015	0.447	3.147	0.016	3.163
10	1999-2000	3.731	0.042	3.773	2.451	0.091	2.542	0.566	0.013	0.579	2.314	0.009	2.323
	Site name	Karad			Warunji			Byaladahalli			Honnali		
1	1990-91	0.400	0.014	0.414	0.529	0.009	0.538	Sediment Observation started w.e.f. 10.12.1997.			Sediment Observation started w.e.f. 15.09.1995		
2	1991-92	1.773	0.027	1.800	0.561	0.007	0.568						
3	1992-93	0.451	0.009	0.460	0.363	0.008	0.371						
4	1993-94	1.087	0.007	1.094	0.348	0.006	0.354						
5	1994-95	2.292	0.008	2.300	1.468	0.005	1.473						
6	1995-96	0.270	0.005	0.275	0.171	0.006	0.177						
7	1996-97			0.000			0.000						
8	1997-98	1.604	0.006	1.610	0.843	0.004	0.847						
9	1998-99	0.176	0.004	0.180	0.260	0.004	0.264	0.037	0.003	0.040	0.433	0.085	0.518
10	1999-2000	0.784	0.006	0.790	0.470	0.004	0.474	0.013	0.001	0.014	0.668	0.073	0.741

Source: Suspended Sediment and Bedmaterial Data Book for 1990-2000(Krishna Basin).

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VII Basin : Cauvery													
	Site Name	Kudige			Muthankera			T.Narsinpur			Kollegal		
1	1990-91	0.080	0.005	0.085	0.128	0.008	0.136	0.077	0.031	0.108	0.054	0.019	0.073
2	1991-92	0.158	0.003	0.161	0.204	0.006	0.210	0.169	0.012	0.181	0.368	0.033	0.401
3	1992-93	0.194	0.025	0.219	0.282	0.022	0.304	0.253	0.013	0.266	0.271	0.031	0.302
4	1993-94	0.090	0.004	0.094	0.157	0.008	0.165	0.116	0.009	0.125	0.079	0.020	0.099
5	1994-95	0.258	0.004	0.262	0.315	0.013	0.328	0.248	0.015	0.263	0.582	0.055	0.637
6	1995-96	0.138	0.002	0.140	0.158	0.005	0.163	0.085	0.009	0.094	0.132	0.029	0.161
7	1996-97	0.124	0.009	0.133	0.162	0.023	0.185	0.067	0.006	0.073	0.272	0.026	0.298
8	1997-98	0.187	0.014	0.201	0.225	0.021	0.246	0.135	0.013	0.148	0.268	0.059	0.327
9	1998-99	0.102	0.002	0.104	0.141	0.010	0.151	0.101	0.012	0.113	0.161	0.013	0.174
10	1999-2000	0.107	0.005	0.112	0.104	0.003	0.107	0.008	0.001	0.009	0.160	0.020	0.180
	Site Name	T.K. Halli			Biligundulu			Savandapur			Kodumudi		
1	1990-91	0.005	0.004	0.009	0.206	0.084	0.290	0.008	0.006	0.014	0.077	0.036	0.113
2	1991-92	0.092	0.016	0.108	2.149	0.191	2.340	0.018	0.003	0.021	0.386	0.043	0.429
3	1992-93	0.012	0.003	0.015	0.703	0.076	0.779	0.024	0.005	0.029	0.398	0.050	0.448
4	1993-94	0.021	0.007	0.028	0.337	0.058	0.395	0.007	0.006	0.013	0.137	0.051	0.188
5	1994-95	0.014	0.004	0.018	1.136	0.094	1.230	0.009	0.012	0.021	0.332	0.270	0.602
6	1995-96	0.015	0.003	0.018	0.314	0.046	0.360	0.006	0.011	0.017	0.015	0.006	0.021
7	1996-97	0.005	0.001	0.006	0.639	0.030	0.669	0.006	0.009	0.015	0.286	0.078	0.364
8	1997-98	0.003	0.000	0.003	0.223	0.128	0.351	0.007	0.009	0.016	0.225	0.065	0.290
9	1998-99	0.003	0.000	0.003	0.577	0.023	0.600	0.007	0.008	0.015	0.099	0.057	0.156
10	1999-2000	0.007	0.003	0.010	0.539	0.014	0.553	0.011	0.006	0.017	0.016	0.084	0.100

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
VII Basin : Cauvery													
	Site Name	Nallamarpatty			Musiri			Mukundur Hoshalli					
1	1990-91	0.000	0.014	0.014	0.061	0.025	0.086						
2	1991-92	0.002	0.000	0.002	0.381	0.036	0.417						
3	1992-93	0.127	0.003	0.130	0.453	0.042	0.495						
4	1993-94	0.128	0.048	0.176	0.875	0.079	0.954						
5	1994-95	0.017	0.061	0.078	0.385	0.255	0.640	0.053	0.013	0.066			
6	1995-96	0.002	0.000	0.002	0.133	0.070	0.203	0.014	0.011	0.025			
7	1996-97	0.014	0.032	0.046	0.160	0.170	0.330	0.011	0.005	0.016			
8	1997-98	0.002	0.108	0.110	0.185	0.205	0.390	0.015	0.004	0.019			
9	1998-99	0.001	0.067	0.068	0.172	0.106	0.278	0.014	0.005	0.019			
10	1999-2000	0.006	0.024	0.030	0.127	0.154	0.281	0.018	0.004	0.022			

Source: Suspended Sediment and Bedmaterial Data Book for 1990-2000

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

VIII Basin: East Flowing Rivers

Site Name	Gundalakamma at Thammavaram			Pennar at Chennur			Kunderu at Alladupalli			Ponniar at Gummanur		
1 1990-91	0.238	0.096	0.334	0.850	0.017	0.867				0.025	0.000	0.025
2 1991-92	0.057	0.074	0.131	0.460	0.401	0.861				0.306	0.003	0.309
3 1992-93	0.104	0.093	0.197	0.221	0.012	0.233				0.299	0.000	0.299
4 1993-94	0.051	0.030	0.081	4.940	0.036	4.976				0.012	0.000	0.012
5 1994-95	0.024	0.087	0.111	1.284	0.015	1.299				0.003	0.001	0.004
6 1995-96	0.028	0.010	0.038	0.315	0.010	0.325	on started from 1996-97			0.009	0.004	0.013
7 1996-97	0.137	0.036	0.173	3.021	0.042	3.063	2.163	0.019	2.182	0.018	0.000	0.018
8 1997-98	0.137	0.049	0.186	0.943	0.034	0.977	0.664	0.025	0.689	0.103	0.018	0.121
9 1998-99	0.094	0.025	0.119	<----- Not Obsertvation ----->			<----- Not Obsertvation ----->			0.032	0.000	0.032
10 1999-2000	0.038	0.007	0.045	<----- Not Obsertvation ----->			<----- Not Obsertvation ----->			0.045	0.000	0.045
Site Name	Suriliyar at Theni			Thampaparani at Murappandu			Pennar at Siddavattam					
1 1990-91	0.059	0.036	0.095	0.015	0.042	0.057				0.000		
2 1991-92	0.038	0.003	0.041	0.020	0.006	0.026				0.000		
3 1992-93	0.167	0.008	0.175	0.270	0.041	0.311				0.000		
4 1993-94	0.097	0.027	0.124	0.107	0.071	0.178				0.000		
5 1994-95	0.070	0.071	0.141	0.011	0.046	0.057				0.000		
6 1995-96	0.044	0.014	0.058	0.006	0.007	0.013				0.000		
7 1996-97	0.045	0.020	0.065	0.003	0.007	0.010				0.000		
8 1997-98	0.045	0.020	0.065	0.002	0.073	0.075				0.000		
9 1998-99	0.033	0.188	0.221	0.002	0.024	0.026	<----- Not Obsertvation ----->					
10 1999-2000	0.034	0.018	0.052	0.003	0.010	0.013	<----- Not Obsertvation ----->					

Source : Sediment Year Books 1990-2000

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

IX Basin: West Flowing Rivers

Site Name	Nethravathi at Bantwal			Payaswani at Erinijipuzha			Valapatanam at Perumannu			Chaliyar at Kuniyil			
1	1990-91	1.076	0.013	1.089	0.340	0.005	0.345	0.269	0.003	0.272	0.751	0.014	0.765
2	1991-92	0.944	0.057	1.001	0.347	0.019	0.366	0.462	0.008	0.470	0.793	0.022	0.815
3	1992-93	0.698	0.005	0.703	0.145	0.005	0.150	0.208	0.003	0.211	0.319	0.008	0.327
4	1993-94	1.524	0.016	1.540	0.398	0.006	0.404	0.409	0.003	0.412	0.487	0.032	0.519
5	1994-95	1.297	0.038	1.335	0.192	0.007	0.199	0.226	0.004	0.230	0.260	0.013	0.273
6	1995-96	1.247	0.006	1.253	0.182	0.003	0.185	0.260	0.003	0.263	0.340	0.010	0.350
7	1996-97	2.769	0.040	2.809	0.206	0.003	0.209	0.391	0.007	0.398	0.315	0.022	0.337
8	1997-98	2.026	0.010	2.036	0.128	0.042	0.170	0.230	0.008	0.238	0.292	0.024	0.316
9	1998-99	2.026	0.010	2.036	0.128	0.042	0.170	0.230	0.008	0.238	0.292	0.024	0.316
10	1999-2000	1.348	0.001	1.349	0.264	0.003	0.267	0.234	0.002	0.236			
Site Name	Bharathapuzha at Kumbidi			Pulanthode at Pulamanthole			Chalakudi at Arangaly			Periyar at Neeleswaram			
1	1990-91	0.229	0.044	0.273	0.049	0.003	0.052	0.021	0.009	0.030	0.180	0.020	0.200
2	1991-92	0.565	0.011	0.576	0.113	0.007	0.120	0.068	0.002	0.070	0.492	0.019	0.511
3	1992-93	0.506	0.034	0.540	0.144	0.011	0.155	0.890	0.004	0.894	0.451	0.018	0.469
4	1993-94	0.254	0.099	0.353	0.063	0.004	0.067	0.032	0.005	0.037	0.183	0.009	0.192
5	1994-95	0.670	0.099	0.769	0.179	0.015	0.194	0.126	0.004	0.130	0.419	0.020	0.439
6	1995-96	0.317	0.054	0.371	0.081	0.013	0.094	0.041	0.002	0.043	0.529	0.008	0.537
7	1996-97	0.236	0.005	0.241	0.082	0.004	0.086	0.029	0.001	0.030	0.335	0.002	0.337
8	1997-98	0.302	0.030	0.332	0.104	0.020	0.124	0.028	0.005	0.033	0.214	0.007	0.221
9	1998-99	0.446	0.076	0.522	0.102	0.018	0.120	0.074	0.067	0.141	0.340	0.016	0.356
10	1999-2000	0.273	0.008	0.281	0.078	0.001	0.079	0.040	0.001	0.041	0.100	0.001	0.101

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

IX Basin: West Flowing Rivers

Site Name	Muvattupuzha at Ramamangalam			Kaliyar at Kalampur			Meenachil at Kidangoor			Manimala at Kolloppara			
1	1990-91	0.085	0.017	0.102	0.032	0.002	0.034	0.013	0.001	0.014	0.039	0.005	0.044
2	1991-92	0.129	0.021	0.150	0.039	0.003	0.042	0.056	0.003	0.059	0.054	0.004	0.058
3	1992-93	0.199	0.031	0.230	0.045	0.002	0.047	0.040	0.008	0.048	0.094	0.009	0.103
4	1993-94	0.200	0.015	0.215	0.058	0.001	0.059	0.059	0.003	0.062	0.094	0.008	0.102
5	1994-95	0.138	0.022	0.160	0.041	0.006	0.047	0.039	0.007	0.046	0.086	0.022	0.108
6	1995-96	0.132	0.034	0.166	0.041	0.002	0.043	0.033	0.003	0.036	0.063	0.005	0.068
7	1996-97	0.123	0.017	0.140	0.034	0.001	0.035	0.034	0.002	0.036	0.062	0.004	0.066
8	1997-98	0.101	0.046	0.147	0.036	0.004	0.040	0.016	0.002	0.018	0.072	0.014	0.086
9	1998-99	0.129	0.034	0.163	0.035	0.051	0.086	0.023	0.068	0.091	0.051	0.014	0.065
10	1999-2000	0.117	0.016	0.133	0.037	0.001	0.038	0.026	0.001	0.027	0.039	0.001	0.040

Site Name	Pamba at Malakkara			Achankovil at Thumpamon			Kallada at Pattazhy			Vamanapuram at Ayilam			
1	1990-91	0.051	0.015	0.066	0.025	0.012	0.037	0.039	0.030	0.069	0.012	0.009	0.021
2	1991-92	0.097	0.008	0.105	0.092	0.008	0.100	0.081	0.010	0.091	0.096	0.017	0.113
3	1992-93	0.364	0.137	0.501	0.094	0.088	0.182	0.127	0.438	0.565	0.065	0.214	0.279
4	1993-94	0.105	0.012	0.117	0.080	0.009	0.089	0.071	0.011	0.082	0.026	0.024	0.050
5	1994-95	0.172	0.030	0.202	0.107	0.023	0.130	0.099	0.029	0.128	0.052	0.008	0.060
6	1995-96	0.116	0.016	0.132	0.059	0.008	0.067	0.038	0.016	0.054	0.014	0.008	0.022
7	1996-97	0.086	0.012	0.098	0.084	0.003	0.087	0.037	0.009	0.046	0.057	0.006	0.063
8	1997-98	0.072	0.023	0.095	0.065	0.021	0.086	0.038	0.017	0.055	0.021	0.003	0.024
9	1998-99	0.235	0.055	0.290	0.050	0.084	0.134	0.068	0.021	0.089	0.059	0.003	0.062
10	1999-2000	0.086	0.004	0.090	0.026	0.001	0.027	0.040	0.006	0.046	0.035	0.004	0.039

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

IX Basin: West Flowing Rivers

Site Name	Kadalundi at Karathodu			
1	1990-91	0.050	0.009	0.059
2	1991-92	0.102	0.003	0.105
3	1992-93	0.122	0.006	0.128
4	1993-94	0.063	0.003	0.066
5	1994-95	0.142	0.011	0.153
6	1995-96	0.064	0.014	0.078
7	1996-97	0.052	0.002	0.054
8	1997-98	0.101	0.012	0.113
9	1998-99	0.073	0.004	0.077
10	1999-2000	<-----Not Observation----->		

Source: Sediment Year Books for 1990-2000.

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
X Basin : Tapi													
	Site Name	Sarankheda			Panjhara at Morane			Savkheda			Yarna at Dapri		
1	1988-89	54.788	0.001	54.789	0.265	0.010	0.275	62.017	0.005	62.022	1.484	0.000	1.484
2	1989-90	19.353	0.003	19.356	0.299	0.008	0.307	17.937	0.001	17.938	0.376	0.002	0.378
3	1990-91	39.132	0.003	39.135	0.097	0.000	0.097	44.841	0.010	44.851	0.222	0.000	0.222
4	1991-92	9.637	0.000	9.637	0.031	0.000	0.031	9.440	0.000	9.440	0.244	0.000	0.244
5	1992-93	9.186	0.000	9.186	0.023	0.000	0.023	8.175	0.000	8.175	0.318	0.000	0.318
6	1993-94	18.199	0.001	18.200	0.037	0.000	0.037	12.461	0.003	12.464	0.038	0.000	0.038
7	1994-95	23.307	0.001	23.308	0.122	0.000	0.122	24.085	0.001	24.086	0.245	0.000	0.246
8	1995-96	----- Sediment Year Book Not Published -----											
9	1996-97	----- Water Year Book Not Published -----											
10	1997-98	6.159	0.828	6.987	0.280	0.000	0.280	5.367	2.852	8.219	0.061	0.003	0.064
	Site Name	Purna at Yerli			Purna at Gopalkheda			Burhanpura			Dedkali		
1	1988-89	34.422	0.001	34.424	6.777	0.000	6.777	15.928	0.000	15.928	16.108	0.001	16.108
2	1989-90	3.447	0.000	3.447	0.377	0.000	0.377	6.884	0.001	6.885	0.326	0.000	0.326
3	1990-91	1.577	0.003	1.580	3.771	0.009	3.780	17.438	0.002	17.440	5.306	0.004	5.310
4	1991-92	0.195	0.000	0.195	0.319	0.000	0.319	7.467	0.001	7.468	8.558	0.000	8.558
5	1992-93	1.614	0.002	1.616	3.573	0.002	3.575	4.594	0.001	4.594	3.051	0.000	3.051
6	1993-94	1.931	0.000	1.931	0.110	0.000	0.111	18.462	0.002	18.464	5.956	0.000	5.956
7	1994-95	1.928	0.003	1.931	3.847	0.005	3.852	10.475	0.002	10.477	7.829	0.000	7.829
8	1995-96	-	-	-	-	-	-	-	-	-	-	-	-
9	1996-97	-	-	-	-	-	-	-	-	-	-	-	-
10	1997-98	0.345	0.195	0.540	0.909	0.565	1.474	15.662	0.086	15.748	4.737	0.033	4.770

Source: Sediment Data Books for 1988-98.

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

XI Basin: Narmada

Site Name	Orsang at Chandwada				Narmada at Garudeshwar				Narmada at Rajghat				Narmada at Mandleshwar			
1	1990-91	2.733	0.000	2.733	51.507	0.031	51.538	70.688	0.077	70.765	41.647	0.017	41.664			
2	1991-92	1.632	0.000	1.632	27.426	0.018	27.443	18.974	0.047	19.020	19.847	0.007	19.854			
3	1992-93	0.786	0.000	0.786	15.203	0.200	15.404	17.154	0.063	17.218	10.802	0.010	10.813			
4	1993-94	0.845	0.000	0.845	9.946	0.001	9.946	50.975	0.081	51.056	53.967	0.054	54.021			
5	1994-95	1.828	0.000	1.828	36.523	0.012	36.534	108.226	0.066	108.292	103.964	0.064	104.028			
6	1995-96	0.641	0.000	0.641	2.233	0.019	2.253	15.647	0.033	15.679	33.377	0.031	33.408			
7	1996-97	2.782	0.000	2.782	8.309	0.016	8.325	18.010	0.088	18.098	19.987	0.036	20.023			
8	1997-98	1.543	0.000	1.543	7.255	0.143	7.398	19.107	0.586	19.694	34.216	0.205	34.421			
9	1998-99	0.833	0.000	0.833	4.359	0.025	4.384	23.834	0.117	23.951	19.151	0.109	19.260			
10	1999-2000	1.698	0.000	1.698	15.146	0.179	15.325	63.659	0.102	63.761	72.906	0.234	73.140			
Site Name	Chhota Tawa at Ginnore				Narmada at Handia				Narmada at Hoshangabad				Narmada at Sandia			
1	1990-91	2.413	0.001	2.414	17.266	0.058	17.324	12.063	0.017	12.080	4.741	0.017	4.758			
2	1991-92	1.129	0.000	1.129	35.722	0.073	35.795	28.690	0.036	28.726	16.732	0.043	16.775			
3	1992-93	0.374	0.000	0.374	25.154	0.078	25.232	16.991	0.063	17.054	29.939	0.031	29.970			
4	1993-94	3.134	0.002	3.136	28.867	0.085	28.953	22.153	0.031	22.184	7.464	0.027	7.491			
5	1994-95	5.075	0.001	5.076	32.560	0.236	32.796	23.837	0.057	23.893	10.503	0.075	10.578			
6	1995-96	1.101	0.000	1.101	102.003	0.061	102.064	41.285	0.035	41.320	42.998	0.125	43.123			
7	1996-97	2.320	0.001	2.321	271.652	0.040	271.692	13.104	0.083	13.187	11.232	0.070	11.302			
8	1997-98	2.320	0.001	2.321	8.169	0.077	8.245	1.728	0.171	1.900	2.404	0.045	2.450			
9	1998-99	Suspended w.e.f.1997-98			17.130	1.497	18.627	14.056	1.423	15.479	6.873	0.805	7.678			
10	1999-2000				60.419	0.126	60.545	27.854	0.952	28.806	35.145	0.250	35.398			

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

XI Basin: Narmada

Site Name	Shakkar at Gadarwara				Narmada at Barmanghat				Narmada at Jamtara				Banjar at Hirdaynagar	
1 1990-91	2.676	0.001	2.677	20.201	0.018	20.219	2.619	0.025	2.644					
2 1991-92	0.762	0.000	0.762	14.700	0.017	14.717	1.624	0.040	1.664					
3 1992-93	1.417	0.000	1.417	9.870	0.018	9.888	1.368	0.027	1.395	0.179	0.000	0.179		
4 1993-94	1.193	0.001	1.194	7.200	0.038	7.237	1.475	0.025	1.500	0.547	0.000	0.548		
5 1994-95	6.073	0.002	6.075	59.033	0.038	59.071	3.639	0.028	3.667	2.383	0.000	2.384		
6 1995-96	1.515	0.000	1.515	13.169	0.044	13.213	1.568	0.034	1.602	0.353	0.000	0.353		
7 1996-97	0.433	0.000	0.433	0.706	0.038	0.744	0.483	0.102	0.585	0.192	0.000	0.193		
8 1997-98	1.439	0.137	1.576	5.778	0.715	6.493	1.156	0.132	1.288	0.875	0.000	0.875		
9 1998-99	0.294	0.002	0.296	1.332	0.030	1.362	0.713	0.022	0.735	0.487	0.008	0.495		
10 1999-2000	3.559	0.0001	3.360	12.354	0.038	12.392	8.390	0.059	8.449	1.844	0.007	1.851		
Site Name	Burhner at Mohgaon				Narmada at Manot									
1 1990-91	Site started from 1992-93				6.336	0.006	6.342							
2 1991-92					4.109	0.002	4.111							
3 1992-93	0.548	0.001	0.549	4.856	0.002	4.858								
4 1993-94	2.576	0.004	2.580	7.275	0.004	7.279								
5 1994-95	11.488	0.027	11.515	9.395	0.004	9.399								
6 1995-96	4.572	0.047	4.619	5.871	0.044	5.915								
7 1996-97	1.368	0.021	1.389	2.699	0.004	2.703								
8 1997-98	4.003	0.614	4.617	4.867	0.875	5.742								
9 1998-99	1.941	0.063	2.004	0.975	0.012	0.987								
10 1999-2000	2.877	0.048	2.925	7.257	0.004	7.261								

Source: Sediment data Books for 1999-2000

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

XII Basin : Mahi, Sabarmati & other West Flowing Rivers of Saureshra & Kutch

Site Name	Khanpur			Vaitarana at Durvesh			Padaradibadi			Mataji		
1 1988-89	1.545	0.004	1.549	0.561	0.000	0.561	0.234	0.000	0.234	12.282	0.000	12.282
2 1989-90	1.208	0.002	1.211	0.440	0.000	0.440	0.260	0.000	0.260	1.047	0.000	1.047
3 1990-91	4.830	0.015	4.845	0.739	0.000	0.739	0.500	0.001	0.501	4.971	0.000	4.971
4 1991-92	3.065	0.001	3.066	0.460	0.000	0.460	0.826	0.001	0.827	2.958	0.000	2.958
5 1992-93	0.018	0.002	0.020	0.450	0.000	0.450	0.052	0.000	0.052	0.166	0.000	0.166
6 1993-94	1.709	0.001	1.710	0.409	0.001	0.410	0.267	0.000	0.268	1.210	0.000	1.210
7 1994-95	5.996	0.002	5.999	1.108	0.000	1.108	1.207	0.001	1.208	3.407	0.000	3.407
8 1995-96	-	-	-	-	-	-	-	-	-	-	-	-
9 1996-97	-	-	-	-	-	-	-	-	-	-	-	-
10 1997-98	3.355	0.003	3.358	0.667	0.001	0.668	0.017	0.001	0.018	1.569	0.012	1.581

Site Name	Ambica at Gadat			Banas at Kamalpur			Bhadar at Ganod			Purna at Mahuwa		
1 1988-89	1.822	0.000	1.822	0.345	0.000	0.345	7.310	0.000	7.310	1.788	0.000	1.788
2 1989-90	0.957	0.000	0.957	0.202	0.000	0.202	0.252	0.000	0.252	0.654	0.000	0.654
3 1990-91	0.364	0.000	0.364	2.228	0.000	2.228	0.302	0.000	0.302	0.493	0.000	0.493
4 1991-92	0.128	0.000	0.128	0.003	0.000	0.003	0.138	0.000	0.138	0.090	0.000	0.090
5 1992-93	0.923	0.000	0.923	3.379	0.000	3.379	0.211	0.000	0.211	0.293	0.000	0.293
6 1993-94	0.799	0.000	0.799	4.114	0.000	4.114	0.012	0.000	0.012	0.853	0.000	0.853
7 1994-95	5.986	0.000	5.986	8.557	0.002	8.559	0.303	0.000	0.303	3.607	0.000	3.607
8 1995-96				----- Sediment Year Book Not Published -----								
9 1996-97				----- Water Year Book Not Published -----								
10 1997-98	0.542	0.001	0.543	0.864	0.000	0.864	0.009	0.000	0.009	0.143	0.000	0.143

Table No.2.1 : Sitewise Sediment Load for Different River Basins

Unit: Million Metric Tonnes

Sl. No	Year	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

XII Basin : Mahi, Sabarmati & other West Flowing Rivers of Saureshra & Kutch

Site Name	Shetrunji at Lowara			Sabarmati at Derol Bridge		
1 1988-89	2.437	0.000	2.437			
2 1989-90	0.801	0.029	0.829			
3 1990-91	0.607	0.000	0.607			
4 1991-92	0.155	0.000	0.155			
5 1992-93	0.358	0.000	0.358			
6 1993-94	0.694	0.000	0.694			
7 1994-95	0.000	0.000	0.000			
8 1995-96	-	-	-	0.087		0.087
9 1996-97	-	-	-	0.265	0.002	0.266
10 1997-98	0.016	0.000	0.016	-	-	-

Source: Sediment Data Book for 1988-98.

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period (1)	June (2)	July (3)	August (4)	September (5)	October (6)	November (7)	December (8)	January (9)	February (10)	March (11)	April (12)	May (13)
I	Basin : Mahanadi											
	Year : 2002-2003											
Mahanadi at Tikarpara	2628	3983	6399	41055	3332	3033	1287	1272	516.7	409.4	456.6	499.7
01-10 days	3836	6044	16075	58947	5716	1700	1156	581.7	390.7	449.1	440.6	496.4
11-20 days	5239	7042	23528	7305	3922	1515	1138	710.8	443.0	434.0	479.4	391.8
R - days	3901	5733	15598	35769	4311	2083	1186	850.3	450.6	430.9	458.9	460.3
Monthly												
Tel at Kantamal												
01-10 days	98.22	1060	19395	30184	285.3	27.73	342.70	50.86	67.64	18.07	0.000	0.000
11-20 days	797.7	4193	10733	14511	916.7	41.60	13.15	14.73	60.03	0.000	0.000	0.000
R - days	12103	4082	120438	1425	114.8	75.25	25.97	10.13	54.60	0.000	0.000	0.000
Monthly	4333	3143	52455	15373	428.5	48.19	124.00	24.75	61.20	5.828	0.000	0.000
Ong at Salebhata												
01-10 days	0.000	20.61	131.1	6676	22.45	26.43	0.000	0.00	0.000	0.000	0.000	0.000
11-20 days	0.000	65.13	367.2	11466	23.91	14.62	0.000	0.000	0.000	0.000	0.000	0.000
R - days	74.00	119.2	2793	121	22.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
Monthly	24.50	69.95	1152	6088	22.70	13.68	0.000	0.00	0.000	0.000	0.000	0.000
Ib at Sundergarh												
01-10 days	0.000	3856	1640	30708	174.8	11.62	38.78	14.51	13.05	1.538	0.000	0.000
11-20 days	820.5	2003	27363	25020	630	206.6	31.57	20.03	9.407	0.000	0.000	0.000
R - days	2863	1681	3417	130675	497	104.5	15.25	8.125	6.217	0.000	0.000	0.000
Monthly	1228	2486	10569	62135	436	107.6	27.46	14.02	9.796	0.496	0.000	0.000
Mand at Kurubhata												
01-10 days	0.000	1780	2892	38723	149.1	51.42	21.52	15.50	11.89	7.670	0.000	0.000
11-20 days	0.000	3528	62248	50471	159.9	46.09	24.23	27.72	79.98	0.000	0.000	0.000
R - days	7542	4986	4208	2761	15.13	38.61	20.16	28.64	45.69	0.000	0.000	0.000
Monthly	2514	3481	22506	30652	105.0	45.37	21.91	24.11	45.86	2.474	0.000	0.000
Mahanadi at Basantpur												
01-10 days	412.8	2008	1059	95836	766.9	326.9	105.9	207.5	545.3	677.7	416.6	197.9
11-20 days	404	572.1	40893	26994	1091	179.0	75.03	179.3	432.3	486.0	346.9	202.5
R - days	7467	506.5	53765	1027	1633	152.8	189.1	190.3	461.5	392.2	210.4	151.6

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

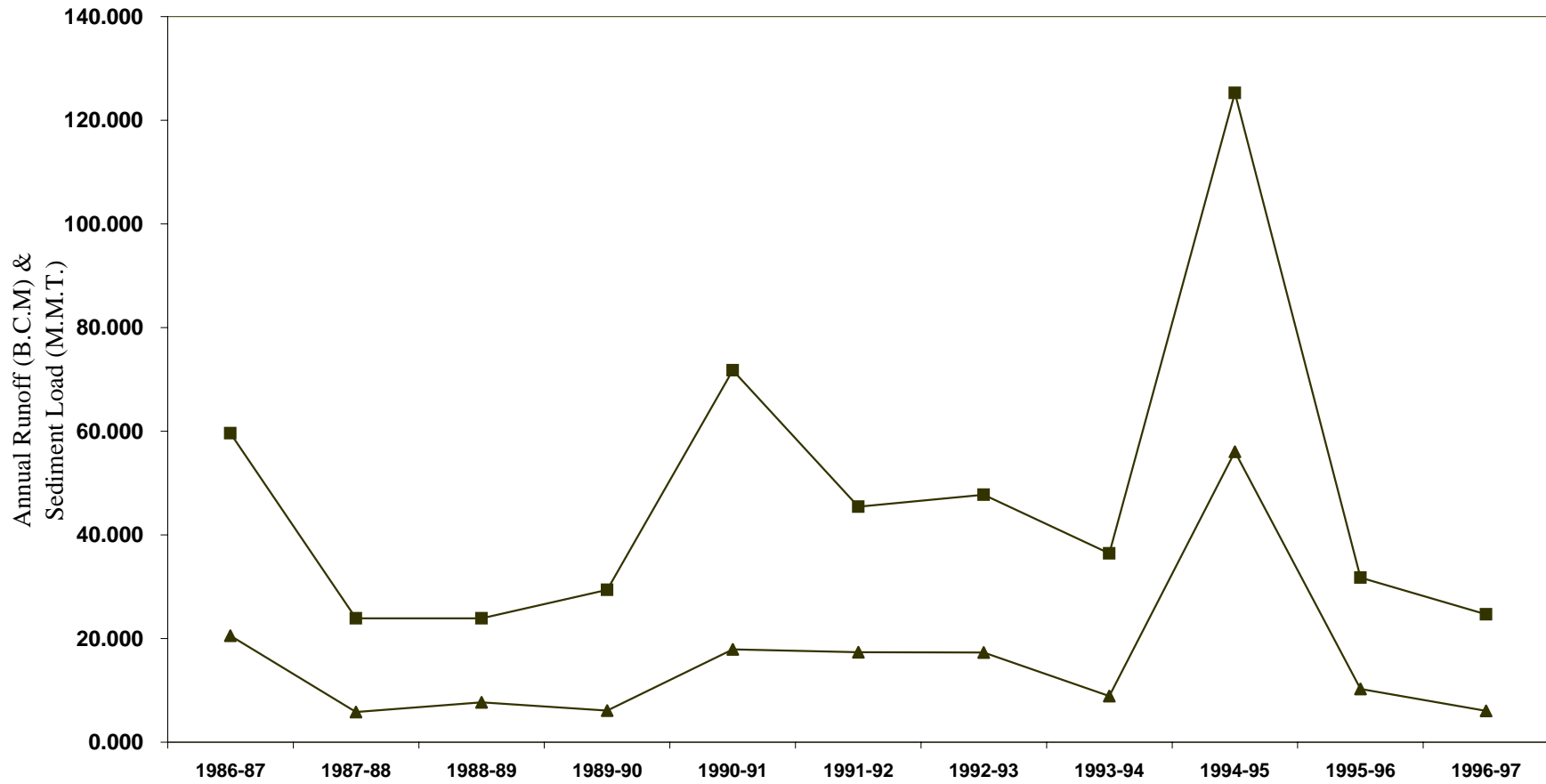
Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I	Basin : Mahanadi											
	Year : 2002-2003											
Monthly	2761	1012	32611	41286	1179	219.6	125.5	192.3	481.0	514.6	324.6	183.0
Hasdeo at Bammidhi												
01-10 days	0.000	2258	360.1	1012	206.3	113.7	82.99	55.43	41.03	120.5	63.64	25.53
11-20 days	40.23	1663	3157	1593	166.4	163.0	115.6	49.23	104.0	45.29	53.96	36.61
R - days	973.0	925.9	447.8	296	171.8	115.0	70.14	47.15	69.77	63.30	30.57	32.78
Monthly	337.8	1594	1293	967	181.2	130.6	88.96	50.49	71.73	75.94	40.30	31.68
Hasdeo at Manendragarh												
01-10 days	0.000	20.53	257.4	1157	8.470	0.000	0.000	0.000	0.047	0.000	0.000	0.000
11-20 days	0.000	16.52	918.5	1561	0.681	0.000	0.000	0.000	0.000	0.000	0.000	0.000
R - days	31.00	71.31	802.5	20.22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Monthly	10.38	37.25	664.1	912.7	2.952	0.000	0.000	0.000	0.017	0.000	0.000	0.000
Jonk at Rampur												
01-10 days	0.000	4.696	147.5	2109	3.022	1.398	0.000	0.000	0.000	0.000	0.000	0.000
11-20 days	0.000	10.98	464.2	4065	2.757	0.237	0.000	0.000	0.000	0.000	0.000	0.000
R - days	0.000	5.273	918.1	6.716	2.938	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Monthly	0.000	6.929	523.1	2060	2.907	0.545	0.000	0.000	0.000	0.000	0.000	0.000
Seonath at Jondhra												
01-10 days	0.000	681.6	542.4	34719	54.74	74.25	27.67	10.94	0.000	0.000	0.000	0.000
11-20 days	0.000	12.30	28593	15014	181.4	39.62	13.00	5.192	0.000	0.000	0.000	0.000
R - days	13338	126.9	16882	637.2	367.0	27.33	15.21	3.961	0.000	0.000	0.000	0.000
Monthly	4446	268.8	15389	16790	206.4	47.07	18.52	6.609	0.000	0.000	0.000	0.000
Hamp at Andhiyarkore												
01-10 days	0.000	7.95	5046	42370	0.495	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11-20 days	0.000	10.57	4566	472.0	0.410	0.000	0.000	0.000	0.000	0.000	0.000	0.000
R - days	1783	12.56	1342	5.289	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Monthly	594.4	10.43	3577	14282	0.314	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Seonath at Simga												
01-10 days	0.000	73.21	42.39	11096	16.85	26.39	2.735	0.000	0.000	0.000	0.000	0.000
11-20 days	0.000	20.03	21197	2142	43.80	8.166	2.052	0.000	0.000	0.000	0.000	0.000

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

<i>Unit : Tonnes per day</i>												
Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I	Basin : Mahanadi										Year : 2002-2003	
R - days	8017	254.7	13055	33.44	72.12	4.762	0.793	0.000	0.000	0.000	0.000	0.000
Monthly	2672	120.4	11484	4424	45.15	13.10	1.826	0.000	0.000	0.000	0.000	0.000
Mahanadi at Rajim												
01-10 days	16.80	12.10	91.35	1498	56.96	12.94	0.942	0.000	0.000	0.000	0.000	0.000
11-20 days	13.55	52.51	802.8	64.04	196.1	14.03	0.264	0.000	0.000	0.000	0.000	0.000
R - days	47.00	44.55	4910	21.59	25.41	5.90	0.476	0.000	0.000	0.000	0.000	0.000
Monthly	25.82	36.65	2031	527.8	90.64	10.96	0.558	0.000	0.000	0.000	0.000	0.000
Pairi at Baronda												
01-10 days	0.000	1.212	28.58	402.0	9.835	1.155	0.000	0.000	0.000	0.000	0.000	0.000
11-20 days	0.000	21.11	64.22	55.83	14.29	0.000	0.000	0.000	0.000	0.000	0.000	0.000
R - days	3.000	4.385	5426	11.50	7.544	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Monthly	0.985	8.756	1955	156.4	10.46	0.385	0.000	0.000	0.000	0.000	0.000	0.000

Source: Sediment Year Book, 2002-2003

Annual Sediment Load and Annual Runoff in Mahanadi Basin



—▲— Mahanadi at Tikrapara Sediment Load —■— Mahanadi at Tikrapara Annual Run off

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
II Subernarekha, Burhabalang & Baitarni						Year : 2002-2003						
a) Basin : Subernarekha												
Subarnarekha at Ghatsila												
01-10 days	680	1448	1079	17194	2801	376.2	71.46	42.18	39.84	31.56	54.44	32.11
11-20 days	403.6	869.5	23956	44592	1176	336.8	65.31	40.36	52.43	29.52	53.98	33.73
R - days	10318	1053	6632	8968	1515	268.9	46.65	37.49	40.08	30.90	35.13	31.63
Monthly	3801	1121	10429	23584	1820	327.3	60.67	39.93	44.41	30.67	47.85	32.5
Kharkai at Adityapur												
01-10 days	5,553	1044	2359	4844	1235	53.59	22.23	9.645	13.00	9.170	47.44	0.000
11-20 days	226.7	32.53	12916	13685	204.9	35.53	23.67	11.74	14.49	14.63	58.31	0.000
R - days	5918	113.6	2727	4555	188.2	24.32	14.82	10.09	14.26	20.69	11.81	0.000
Monthly	2050	387.5	5895	7695	531.3	37.81	20.06	10.48	13.89	15.02	39.19	0.000
b) Basin: Burhabalang No sediment observation site												
c) Basin: Baitarani												
Baitarani at Anandpur												
01-10 days	58.74	946.0	2274	16021	559.5	179.4	79.29	69.34	28.18	27.92	39.12	32.49
11-20 days	306.1	493.0	2657	12298	290.9	149.0	75.32	50.59	33.13	34.66	32.27	37.19
R - days	1458	1463	7192	2198	503.4	103.0	76.35	36.23	32.29	43.69	17.30	12.96
Monthly	607.6	980.0	4143	10172	453.0	143.8	76.97	51.54	31.12	35.69	29.56	27.08
Baitarani at Champua												
01-10 days	0.000	203.8	1059	6568	534.2	72.72	6.237	5.515	4.662	3.887	4.566	9.609
11-20 days	78.29	317.5	1361	3531	279.5	21.05	6.865	4.455	4.138	3.995	4.485	24.08
R - days	185.40	249.0	2245	826.9	108.0	13.83	6.346	4.212	4.285	4.560	2.696	46.73
Monthly	93.99	256.5	1577	3642	300.8	35.87	6.478	4.711	4.367	4.161	3.916	27.45

Source: Suspended Sediment Data Book (Vol-II), 2002-2003

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
III Basin : Brahmani						Year : 2002-2003						
Brahmani at Jenapur												
01-10 days	37.1	9171	6587	30227	7321	283	10.6	7.0	15.7	7.3	8.5	14.2
11-20 days	239.7	7602	27054	27180	690	185.5	7.8	7.6	3.2	4.2	4.8	6.6
R - days	4450.1	1094	30461	11908	520	88.6	9.5	2.9	5.5	8.7	16.6	2.04
Monthly	1575.6	5799	21661	23105	2769	186	9.3	5.7	8.3	6.8	9.9	7.4
Brahmani at Gomlai												
01-10 days	30	10392	28246	76028	1393	97.5	6.51	1.42	11.74	3.51	9.73	0.98
11-20 days	4524	2552	62677	62461	1948	133.21	4.65	1.43	1.57	5.59	2.59	10.16
R - days	48810	7265	20636	11850	1235.8	56.04	2.07	1.04	1.03	1.249	2.45	4.31
Monthly	1788	6753	36652	50113	1516	95.6	4.34	1.29	5.05	3.38	4.93	5.12
Brahmani at Panposh												
01-10 days	73	6476	24577	82586	1886	426.9	9.24	3.98	7.82	7.18	36.53	1.56
11-20 days	3903	2062	111853	121143	2018	146.7	2.69	7.22	5.54	12.60	0.84	3.24
R - days	61958	5910	28082	23044	1256.6	67.38	10.11	2.33	5.17	8.64	2.76	1.69
Monthly	21978	4851	53974	75591	1705	213.6	7.44	4.44	6.25	9.45	13.38	2.15
Sankh at Tilga												
01-10 days	0.0	4579	7899	8364	1586	51.2	3.32	0.000	0.000	0.000	0.000	0.000
11-20 days	5112.1	5556	10912	17979	2512	9.15	2.17	0.000	0.000	0.000	0.000	0.000
R - days	32565	4942	3828	3898.4	125.0	3.36	0.000	0.000	0.000	0.000	0.000	0.000
Monthly	12559	5023	7426	10080	1366	21.22	1.77	0.000	0.000	0.000	0.000	0.000
Koel at Jaraikela												
01-10 days	3.2	6802	6666	17388	-	-	-	-	-	-	-	-
11-20 days	4939.6	625	21630	-	-	-	-	-	-	-	-	-
R - days	38467	3416	8341	-	-	-	-	-	-	-	-	-
Monthly	14470	3608	12087	17388	-	-	-	-	-	-	-	-

Source: Suspended Sediment Data Book (Vol-II), 2002-2003.

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
IV Rushikulya, Vamsadhra, Saroda & Nagavali						Year : 2002-2003						
Vamsadhara at Kashinagar												
01-10 days	884.9	385.7	4260	8644	111.2	19.48	0.000	0.000	0.000	0.239	0.000	0.000
11-20 days	1545	483.3	531.3	5228	1542	7.178	0.000	0.000	3.676	0.00	2.806	0.000
R - days	2691	73.64	18096	1072	231.3	3.846	0.000	0.000	4.455	0.000	0.000	0.000
Monthly	1707	306.5	7967	4981	615.5	9.847	0.000	0.000	2.586	0.077	0.935	0.000
Vamsadhara at Purushottampur												
01-10 days	0.000	18.95	1461	24823	30.37	12.64	0.000	0.000	0.000	0.000	3.323	0.000
11-20 days	0.000	3.294	1083	8680	2875	13.25	0.000	0.000	0.000	0.000	0.000	0.000
R - days	2834	0.000	25717	171.7	185.9	7.582	0.000	0.000	0.000	0.000	0.000	0.000
Monthly	944.7	7.174	9946	11225	1003	11.16	0.000	0.000	0.000	0.000	1.108	0.000
Nagavali at Srikakulam												
01-10 days	2563.0	161.8	1557	1501	8.104	13.59	0.000	35.86	19.36	5.199	0.000	0.000
11-20 days	1609	175.5	412.2	8518	6848	4.930	39.60	18.09	11.52	0.000	0.000	0.000
R - days	812.1	160.0	8735	154.7	358.3	0.014	37.01	19.45	47.07	49.22	0.000	0.000
Monthly	1691	165.6	3735	4126	2339	6.178	20.91	24.31	24.48	19.14	0.000	0.000

Source: Suspended Sediment Data Book (Vol-II), 2002-2003

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
V Basin : Godavari												
Year : 2000-01												
Godavari at Polavaram												
01-10 days	4872	39096	34916	1647269	10429	491.5	186.6	824.8	392.3	178.4	112.5	68.29
11-20 days	10768	652962	4468795	41202	2930	370.8	403.8	1378	241.7	133.7	96.58	59.27
R - days	50839	1760400	3396408	17445	784.3	331.8	754.2	786.3	204.2	163.2	120.6	75.89
Monthly	22160	847902	1360568	568639	4588	398.0	458.1	989.6	284.8	158.6	109.9	68.08
Sabari at Konta												
01-10 days	7493	33676	66340	44165	5190	836.0	710.8	472.9	333.7	348.5	280.6	182.0
11-20 days	26300	98949	51611	11934	1478	865.8	600.2	472.7	461	307.9	143.0	212.5
R - days	40393	65584	40093	7451	1123	810.1	550.4	350.1	280.7	213.9	273.3	321.3
Monthly	24729	66054	32410	21183	2549	837.3	618.4	429.2	364.2	287.7	231.3	241.3
Godavari at Perur												
01-10 days	2301	32220	38391	584959	4529	281.3	47.52	70.08	25.57	25.25	25.43	15.88
11-20 days	25764	1459445	255959	17409	1361	167.4	107.1	64.23	37.11	24.70	27.41	10.54
R - days	12659	2409379	2735555	18906	984.2	82.7	85.51	20.89	24.32	25.76	27.16	13.70
Monthly	13575	1336123	1065633	207091	2249	177.1	80.21	50.74	29.33	25.26	26.67	13.38
Indravati at Pathagudem												
01-10 days	1433	22555	12114	80707	7884	206.0	36.67	45.98	0.000	0.000	0.000	0.000
11-20 days	19093	23135	68202	19458	2030	55.87	66.68	45.39	0.000	0.000	0.000	0.000
R - days	14019	25803	225066	21469	687.2	61.10	35.94	3.811	0.000	0.000	0.000	0.000
Monthly	11515	75954	105770	40545	3442	107.7	46.09	30.83	0.000	0.000	0.000	0.000
Indravathi at Jagdalpur												
01-10 days	40.33	4913	4044	43854	514.6	42.43	22.43	25.70	0.000	0.000	1.910	0.000
11-20 days	4147	13869	20729	6012	128.1	35.19	31.90	27.28	0.000	0.000	0.000	0.000
R - days	6449	3125	47447	4559	68.04	29.32	26.49	17.39	0.000	0.000	5.869	0.000
Monthly	3545	7168	24827	18142	231.5	35.65	26.93	23.26	0.000	0.000	2.593	0.000

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
V Basin : Godavari												
Year : 2000-01												
Indravathi at Nowrangpur												
01-10 days	51.84	560.3	410.9	13738	171.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11-20 days	2355	5805	6065	5748	76.20	0.000	0.000	0.000	0.000	0.000	0.000	0.000
R - days	2912	1091	21296	750.9	38.79	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Monthly	1773	2440	9646	6746	93.67	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pranahita at Tekra												
01-10 days	730.1	5328	26405	95648	788.6	58.39	0.000	0.000	0.000	0.000	0.000	0.000
11-20 days	3708	1476506	189153	2407	188.4	2.308	0.000	0.000	0.000	0.000	0.000	0.000
R - days	3302	1982834	940045	2754	131.8	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Monthly	2580	1181597	403099	33603	361.9	20.23	0.000	0.000	0.000	0.000	0.000	0.000
Peddavagu at Bhatpalli												
01-10 days	5506	19516	2873	538.6	74.40	12.91	1.610	0.000	0.000	0.000	0.000	0.000
11-20 days	8404	34969	122786	115.3	41.44	3.733	0.000	0.000	0.000	0.000	0.000	0.000
R - days	4453	919.0	189596	112.2	15.90	2.449	0.000	0.000	0.000	0.000	0.000	58.24
Monthly	6121	17902	107811	255.3	43.10	6.364	0.000	0.000	0.000	0.000	0.000	20.67
Wardha at Bamni												
01-10 days	14211	31097	2583	7576	226.9	15.98	14.66	17.19	11.05	12.66	5.580	2.867
11-20 days	26256	916534	83258	212.3	78.62	14.56	12.79	10.50	11.82	11.99	4.891	1.635
R - days	5587	415605	141554	267.4	94.33	12.11	17.21	7.764	6.906	8.987	3.955	1.248
Monthly	15351	453160	77919	2685	132.0	14.21	14.96	11.69	10.14	11.14	4.809	1.895
Penganga at Penganga Bridge												
01-10 days	936.0	51568	431.7	947.7	43.80	3.412	4.130	5.120	4.642	3.286	2.187	0.000
11-20 days	872.9	160264	35591	84.29	35.74	2.639	3.984	8.159	3.408	6.283	4.769	0.000
R - days	310.2	5385	35834	54.44	9.412	3.721	5.274	4.502	2.676	3.539	2.196	0.000
Monthly	706.4	70244	24336	362.1	29.00	3.257	4.489	5.881	3.606	4.342	3.051	0.000

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
V	Basin : Godavari											
	Year : 2000-01											
Wunna at Nandagon												
01-10 days	90.18	229.8	1401	48.61	14.32	2.953	3.261	0.000	0.000	0.000	0.000	0.000
11-20 days	89.92	46037	8211	13.03	5.413	6.412	0.711	0.000	0.000	0.000	0.000	0.000
R - days	203.6	158.5	989.7	9.912	0.883	3.009	0.000	0.000	0.000	0.000	0.000	0.000
Monthly	127.9	14981	3452	23.85	6.679	4.125	1.281	0.000	0.000	0.000	0.000	0.000
Wardha at Hivra												
01-10 days	49.94	5415	139.2	58.21	13.21	1.187	2.375	4.490	0.616	0.854	0.000	0.000
11-20 days	65.56	36489	356.4	25.79	16.29	2.268	2.489	1.484	0.689	1.243	0.000	0.000
R - days	21.92	403.0	780.1	47.19	4.388	1.893	1.451	1.156	0.332	0.000	0.000	0.000
Monthly	45.81	13661	436.7	43.73	11.07	1.783	2.084	2.337	0.561	0.676	0.000	0.036
Wardha at Bishnur												
01-10 days	0.000	278.4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11-20 days	0.000	61.13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
R - days	0.000	5.055	4.690	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Monthly	0.000	111.3	1.664	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wainganga at Ashti												
01-10 days	23.85	1597	14969	29738	168.8	6.934	0.000	0.000	0.000	0.000	0.000	0.000
11-20 days	584.6	602389	41896	3072	37.67	0.212	0.000	0.000	0.000	0.000	0.000	0.000
R - days	2365	101564	59573	1014	18.49	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Monthly	991.0	230873	39480	11275	73.17	2.382	0.000	0.000	0.000	0.000	0.000	0.000
Wainganga at Pauni												
01-10 days	45.53	787.9	3233	8164	139.8	47.51	6.108	10.70	3.692	2.118	1.449	9.492
11-20 days	220.7	140347	44337	458.3	107.5	30.75	5.519	8.375	1.524	3.711	1.377	5.723
R - days	363.1	66119	18620	229.3	113.4	22.79	5.527	2.375	2.451	3.192	19.10	9.047
Monthly	209.8	68989	21952	2951.0	120.0	33.68	5.712	6.996	2.563	3.013	7.108	8.118

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
V	Basin : Godavari						Year : 2000-01					
Manjira at Saigaon												
01-10 days	0.662	675.0	19.20	1074.9	203.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11-20 days	81.11	546.0	464.2	226.73	127.4	0.000	0.000	0.000	0.000	0.000	0.000	0.000
R - days	4.460	32.91	51490	363.9	11.76	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Monthly	28.74	405.6	18426	555.2	110.8	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Godavari at Yelli												
01-10 days	8800	4928	0.639	12786	265.8	1.653	0.000	0.000	0.000	0.000	0.000	0.000
11-20 days	8979	6873	12507	279.8	64.47	0.068	0.003	0.000	0.000	0.000	0.000	0.000
R - days	2.709	170.4	435489	7439	5.996	0.008	0.000	0.000	0.000	0.000	0.000	0.000
Monthly	5927	3867	158563	6835	108.7	0.576	0.001	0.003	0.000	0.000	0.000	0.000
Purna at Purna												
01-10 days	449.0	3148	12.40	332.0	24.49	7.796	0.000	0.000	0.394	0.000	0.000	0.000
11-20 days	433.1	9422	319.0	22.98	7.362	3.848	1.988	0.000	0.000	0.000	0.000	0.000
R - days	136.1	24.69	130552	56.34	4.105	0.156	0.434	0.000	0.000	0.000	0.000	0.000
Monthly	339.4	4063	46432	137.1	11.73	3.933	0.795	0.000	0.136	0.000	0.000	0.000
Godavari at G.R.Bridge												
01-10 days	71.65	31.36	2.139	87.70	18.09	2.000	0.000	0.000	0.000	0.000	0.000	0.0
11-20 days	50.90	23.83	41.47	19.85	11.84	0.000	0.000	0.000	0.000	0.000	0.000	0.0
R - days	1.369	4.854	28264	32.57	0.260	0.000	0.000	0.000	0.000	0.000	0.000	0.0
Monthly	41.31	19.53	10043	46.70	9.748	0.000	0.000	0.000	0.000	0.000	0.000	0.0
Godavari at Dhalegaon												
01-10 days	7882	1280	62.570	874.6	47.55	0.674	1.211	2.205	0.000	0.000	0.000	0.000
11-20 days	1166	768.3	277.20	107.7	25.29	0.882	0.927	1.000	0.000	0.000	0.000	0.000
R - days	46.92	14.06	68795	525.3	2.140	0.765	0.754	0.455	0.000	0.000	0.000	0.000
Monthly	3031	665.8	24521	502.6	24.26	0.774	0.957	1.195	0.000	0.000	0.000	0.000

Source: Suspended Sediment Year Book for 2000-01

Annual Sediment Load and Annual Runoff in Godavari Basin

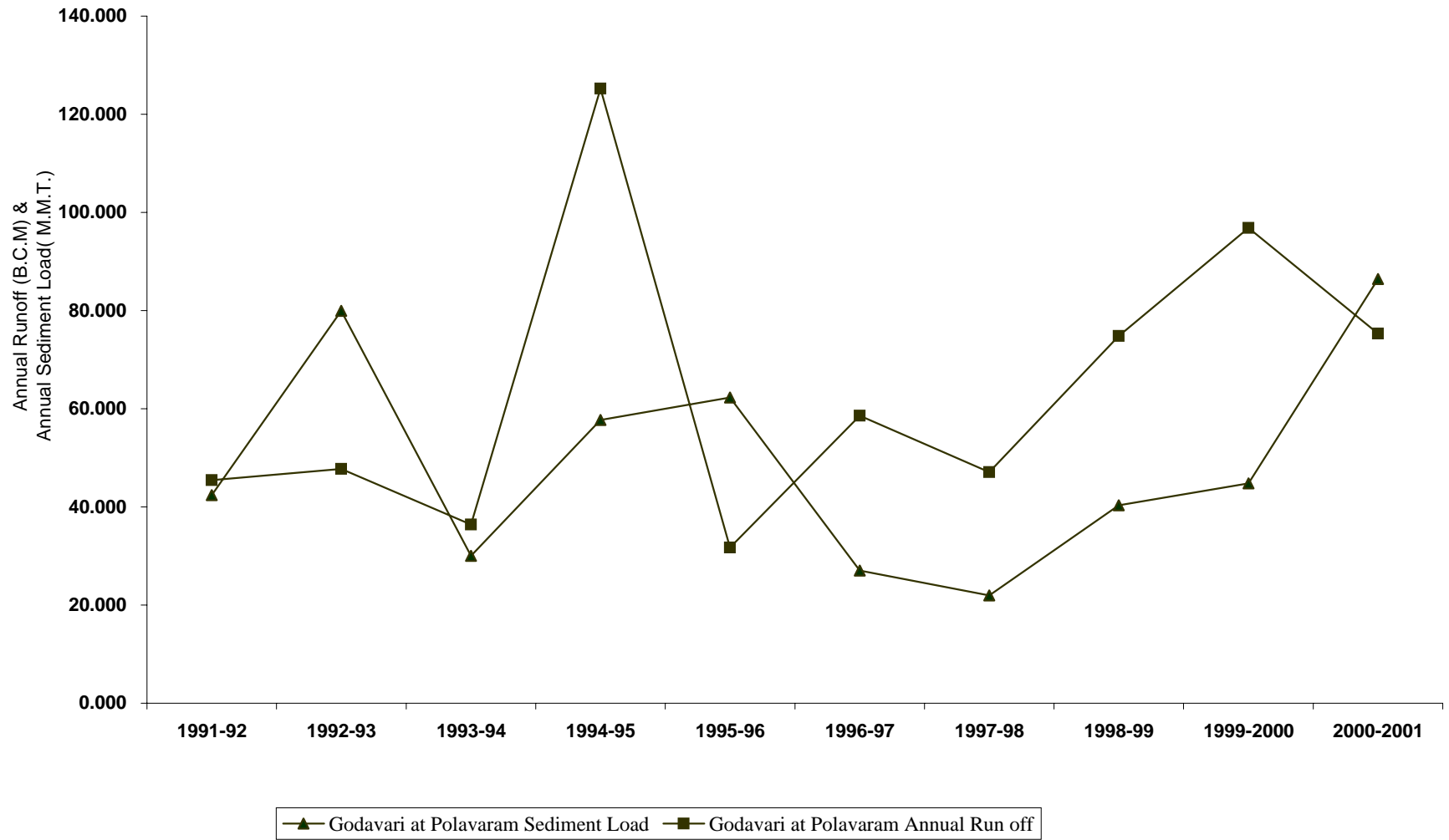


Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VI	Basin : Krishna											
	Year : 1999-2000											
Krishna at Vijayawada												
01-10 days	68.81	781.0	1462	8453	1376	43.57	187.60	19.85	23.12	38.26	481.5	186.3
11-20 days	200.6	420.4	32264	1952	180.6	129.8	137.6	31.13	64.39	205.4	529.9	111.5
R - days	357.0	510.9	6083	659.3	322.1	153.6	52.81	57.10	151.7	368.3	278.3	197.4
Monthly	208.8	543.9	13018	3688	616.5	109.0	123.6	36.71	77.24	197.4	429.9	166.1
Munneru at Keesara												
01-10 days	24.30	37.46	1959	5480	1535	85.51	46.61	23.06	13.83	25.89	3.86	3.05
11-20 days	21.65	92.23	124.1	2999	481.4	75.09	30.36	19.86	18.15	11.75	2.49	1.00
R - days	17.83	520.1	8844	813.8	224.8	48.12	29.54	19.35	26.02	6.12	1.40	0.62
Monthly	20.59	208.4	3101	3023	723.7	69.57	35.32	19.65	19.11	14.31	2.58	1.53
Krishna at Wadenapalli												
01-10 days	88.53	410.0	1893	1464	671.5	466.7	295.9	684.1	673.8	423.9	486.5	210.1
11-20 days	234.8	570.0	5922	627.5	626.3	558.3	291.2	856.9	350.8	433.9	455.1	162.2
R - days	264.7	1788	4417	718.1	456.7	281.0	369.0	796.8	430.4	483.5	329.6	211.5
Monthly	196.0	892.8	4088	936.7	580.7	435.3	320.3	779.8	501.7	448.3	423.7	195.2
Krishna at Pondugala												
01-10 days	155.3	341.2	729.9	1296	371.5	442.4	259.9	194.0	270.2	307.7	1153	184.1
11-20 days	173.0	280.9	3132	1207	413.3	439.7	237.1	232.0	367.5	1186	884.4	229.4
R - days	299.1	406.9	1045	840.8	408.0	296.5	259.0	220.7	273.8	658.8	390.1	119.3
Monthly	209.1	345.8	1617	1115	384.8	392.9	252.2	215.7	304.9	715.5	809.3	175.7
Tungabhadra at Bawapuram												
01-10 days	57.01	12.03	10327	746.7	43449	2100	108.1	5.38	12.33	85.10	8.55	10.37
11-20 days	44.87	22.19	12241	747.3	14030	34.33	58.11	4.02	16.76	7.02	20.70	9.10
R - days	27.47	11624	4698	9781	5618	137.7	10.53	2.03	42.04	2.74	12.34	124.20
Monthly	43.13	4136	8947	3825	20354	2272	57.00	3.75	23.08	30.69	13.86	50.35

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VI	Basin : Krishna						Year : 1999-2000					
Monthly	1.74	20.31	52.74	20.15	324.7	27.26	1.02	Nil	Nil	2.95	Nil	13.49
Tungabhadra at Honnali												
01-10 days	249.1	729.9	12206	3399	2976	1279	384.4	128.6	675.2	127.5	285.5	446.2
11-20 days	1978	8836	6339	1736	2217	595.6	224.8	175.7	430.4	103.6	211.3	203.6
R - days	1956	15187	3091	1026	2757	576.9	191.2	162.5	250.1	230.9	449.0	121.8
Monthly	1394	8475	7079	2054	2654	817.2	264.4	155.9	466.3	156.5	313.5	252.9
Tunga at Shimoga												
01-10 days	32.98	119.6	10383	711.1	1239	262.5	100.9	22.34	6.44	1.40	0.40	0.54
11-20 days	1911	16027	2291	442.4	1001	145.1	80.61	18.47	5.97	2.02	0.62	1.01
R - days	1022	24818	835.5	156.3	623.3	125.1	48.07	10.32	3.92	0.74	0.68	1.50
Monthly	988.7	14015	4385	436.6	943.6	177.5	75.59	16.82	5.55	1.37	0.58	1.03
Krishna at Krishna Agraharam												
01-10 days	16.55	6700	92003	2809	13575	1236	119.9	55.00	24.09	38.04	15.01	4.52
11-20 days	246.4	5053	17869	883.6	14140	146.1	38.53	43.84	41.42	16.66	15.81	3.06
R - days	3176	183009	1822	795.3	2278	39.75	33.32	26.14	50.82	15.71	29.86	223.1
Monthly	1198	68730	36089	1496	9748	474.1	60.34	41.16	38.38	23.22	20.23	81.61
Bhima at Yadgir												
01-10 days	331.5	310.7	49289	128.3	26755	386.4	31.71	11.87	6.92	3.56	2.00	0.03
11-20 days	796.6	279.6	2876	1920	21051	86.46	11.49	42.29	3.66	2.73	2.11	0.06
R - days	801.6	5283	426.3	371.5	4698	26.85	5.42	9.95	3.38	2.27	1.42	Nil
Monthly	643.2	2065	16979	806.7	17088	165.6	15.86	21.00	4.70	2.84	1.84	0.03
Kegna at Malkhed												
01-10 days	13.49	59.04	1938	128.8	1005	16.85	7.98	7.25	2.04	0.94	0.43	0.07
11-20 days	638.0	48.30	45.81	1390	1054	17.58	6.61	8.44	1.31	0.80	0.23	0.05
R - days	38.79	89.52	24.21	809.0	29.87	11.37	4.27	5.59	1.00	0.62	0.16	0.21
Monthly	230.1	66.38	648.4	775.9	674.8	15.27	6.22	7.05	1.46	0.78	0.27	0.11

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VI	Basin : Krishna						Year : 1999-2000					
Sina at Wadakbal												
01-10 days	7.09	529.9	1.81	5.12	2878	Nil	2.00	Nil	6.00	Nil	Nil	Nil
11-20 days	12279	27.62	1.67	131.7	2076	Nil	Nil	Nil	1.00	Nil	3.60	1.00
R - days	18.28	1.49	0.39	7922	3.74	3.20	2.90	Nil	Nil	6.00	7.00	4.70
Monthly	4101	180.4	1.26	2687	1599	1.07	2.00	Nil	2.24	2.00	3.00	2.00
Bhima at Takli												
01-10 days	Nil	56.70	1266	58.84	18467	1105	13.92	3.92	Nil	Nil	Nil	Nil
11-20 days	Nil	206.0	1058	144.9	8415	8.99	1.91	0.12	Nil	Nil	Nil	Nil
R - days	Nil	1009	68.01	491.5	1383	18.24	1.34	0.00	Nil	Nil	Nil	Nil
Monthly	Nil	442.9	773.7	231.7	9162	45.90	5.58	1.30	Nil	Nil	Nil	Nil
Nira at Sarati												
01-10 days	Nil	8.41	35.52	Nil	356.6	23.79	Nil	Nil	Nil	Nil	Nil	Nil
11-20 days	7.71	288.0	11.32	26.07	208.9	Nil	Nil	Nil	Nil	Nil	Nil	Nil
R - days	5.23	374.4	Nil	88.02	32.24	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Monthly	4.31	228.5	15.11	38.03	193.9	0.79	Nil	Nil	Nil	Nil	Nil	Nil
Krishna at Huvinhedgi												
01-10 days	173.0	15015	27034	2573	33497	1188	133.4	179.3	292.8	155.6	47.02	61.93
11-20 days	266.3	15626	11971	811.2	35904	132.2	112.2	159.4	160.1	62.88	60.82	27.99
R - days	40121	153364	2563	9639	8171	126.4	172.6	179.5	165.7	47.94	49.33	578.5
Monthly	13520	64304	13492	4341	25287	482.1	140.5	172.9	207.6	87.49	52.40	234.3
Malaprabha at Cholachgudda												
01-10 days	42.58	64.37	332.1	1678	90844	26152	664.0	437.3	249.8	9.79	Nil	2.00
11-20 days	24.16	2.00	4976	694.3	98544	1537	597.8	389.2	118.4	1.25	Nil	2.00
R - days	3.08	74.00	2111	30967	13209	1120	570.1	317.0	34.47	0.00	Nil	2801.0

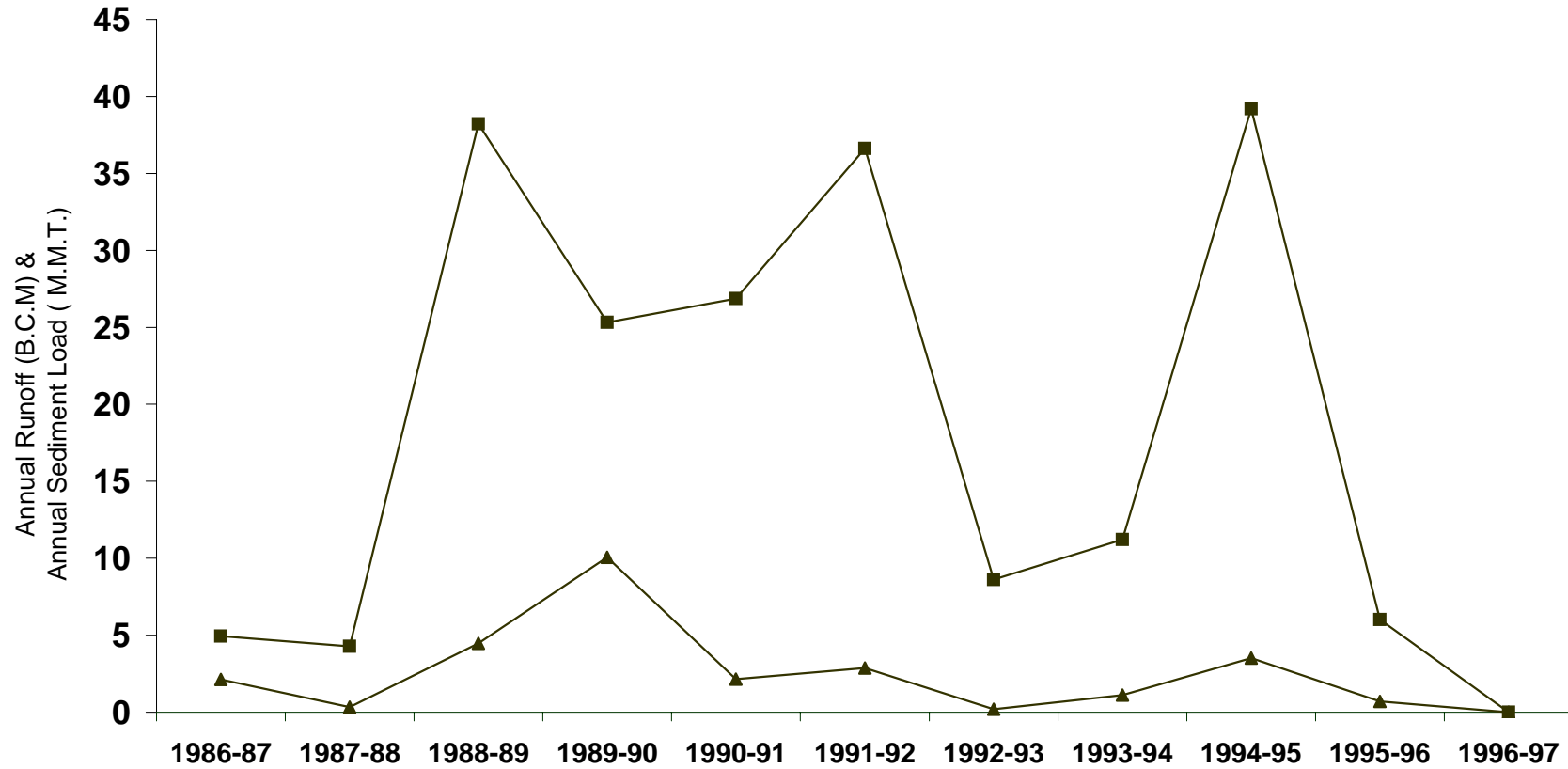
Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VI	Basin : Krishna						Year : 1999-2000					
Monthly	23.27	48.00	2461	11113	65780	1157	609.3	379.1	137.7	3.56	Nil	280.1
Ghatprabha at Bagalkot												
01-10 days	43.79	632.8	3781	125.7	3802	2162	134.4	101.4	47.76	18.50	Nil	1.6
11-20 days	49.07	2446	1476	92.55	5528	187.4	107.5	100.5	53.71	5.94	Nil	1.52
R - days	10012	13325	124.4	12574	1144	106.3	88.32	70.45	44.80	Nil	Nil	Nil
Monthly	3368	5721	1740	4264	3416	170.0	109.4	93.13	48.79	7.88	Nil	1.01
Krishna at Galgali												
01-10 days	112.8	7527	18433	2243	30027	851.7	Nil	Nil	Nil	Nil	11.17	7.62
11-20 days	279.4	39285	14114	1247	10578	18.56	Nil	Nil	Nil	Nil	16.28	7.12
R - days	42272	54582	2204	619.4	1998	Nil	Nil	Nil	Nil	Nil	7.99	24.95
Monthly	14221	34468	11281	1370	13807	290.1	Nil	Nil	Nil	Nil	11.81	13.61
Krishna at Karad												
01-10 days	18.65	82.76	16264	44.51	4113	29.14	22.00	12.00	30.00	31.00	24.34	40.00
11-20 days	21.59	9886	2819	26.82	2021	21.70	13.00	12.00	23.00	31.00	12.00	33.00
R - days	5158	33993	154.5	329.0	65.13	36.58	36.60	40.90	19.56	28.30	34.00	44.80
Monthly	1733	15278	6211	133.0	2001	29.14	24.00	22.00	24.03	30.00	23.00	39.00
Koyna at Warunji												
01-10 days	33.02	107.4	12642	117.1	899.9	6.998	21.17	11.34	27.93	27.23	23.56	36.23
11-20 days	38.62	6843	2256	10.67	451.3	6.760	7.125	13.02	19.10	29.02	13.98	29.02
R - days	4324	15847	297.6	1466	23.95	16.25	30.22	33.78	11.29	18.96	29.91	19.47
Monthly	1466	7864	4911	531.4	444.4	10.00	19.85	19.85	19.72	25.00	22.48	27.96

Source: Suspended Sediment Data Book, 1999-2000

Annual Sediment Load and Annual Runoff in Krishna Basin



—▲— Krishna at Vijaywada Sediment Load —■— Krishna at Vijaywada Annual Run off

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

<i>Unit : Tonnes per day</i>												
Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VII Basin : Cauvery												
Year : 1999-2000												
Cauvery at Musiri												
01-10 days	3.68	811.1	1725	1079	360.0	467.8	2376	680.9	495.3	70.82	18.77	47.35
11-20 days	16.55	1128	1979	1109	433.9	1003	1045	266.4	52.77	34.12	26.77	12.89
R - days	43.68	1026	1180	969.0	546.3	6556	982.8	855.8	107.1	21.62	45.69	13.24
Monthly	21.33	989.5	1614	1052	449.9	2676	1452	609.3	222.2	41.52	30.41	24.13
Amaravathy at Nallamaranpatty												
01-10 days	0.34	0.00	0.25	0.00	481.7	19.62	470.7	2.41	4.88	1.53	0.00	0.00
11-20 days	0.00	13.12	2.54	0.00	75.67	5.66	88.85	27.11	0.40	0.03	0.00	0.00
R - days	0.00	0.00	0.00	0.00	41.83	1765	28.24	2.57	1.09	0.00	0.00	0.00
Monthly	0.11	4.23	0.90	0.00	194.60	596.9	190.5	10.43	2.16	0.50	0.00	0.00
Cauvery at Kodumudu												
01-10 days	49.17	1247	2060	899.30	151.8	912.2	849.5	306.3	257.1	50.36	49.87	62.66
11-20 days	54.55	573.3	1863	892.30	458.7	1260	494.8	181.7	47.01	58.14	45.75	31.32
R - days	24.90	801.7	1073	718.00	544.3	2286	595.0	509.4	61.58	52.18	68.07	65.48
Monthly	42.87	871.6	1646	836.50	390.1	1486	644.8	338.2	124.0	53.51	54.56	53.55
Bhavani at Savandapur												
01-10 days	22.93	25.73	29.14	37.42	210.7	47.21	32.63	29.11	45.36	20.05	9.03	3.59
11-20 days	21.41	26.53	30.39	42.48	296.0	28.13	30.52	24.45	28.25	24.69	8.95	0.97
R - days	24.84	27.57	24.44	50.42	193.9	156.6	29.30	24.03	32.87	12.11	8.04	2.65
Monthly	23.06	26.64	27.87	43.44	232.2	77.31	30.77	25.80	35.59	18.73	8.67	2.41
Cauvery at Biligundulu												
01-10 days	362.9	114.6	4791	323.3	4789	1220	120.8	74.09	38.25	24.75	71.04	185.90
11-20 days	148.8	2661	2081	274.7	4415	402.3	83.73	68.74	34.16	23.36	104.4	67.01
R - days	597.7	2534	277.1	1285	23118	1935	162.60	54.61	166.2	20.33	45.94	45.08
Monthly	369.8	1795	2315	627.8	11172	1186	123.7	65.45	73.35	22.73	73.80	97.58

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

<i>Unit : Tonnes per day</i>												
Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VII Basin : Cauvery												
Year : 1999-2000												
Shimsha at T.K.Halli												
01-10 days	4.40	2.19	2.68	10.62	114.40	38.64	32.00	10.36	6.65	4.90	1.55	2.57
11-20 days	3.44	1.53	5.21	10.00	150.4	17.08	32.46	2.92	6.77	2.01	5.46	1.30
R - days	3.06	4.35	13.75	32.24	276.7	84.11	20.12	4.26	3.47	2.30	1.85	0.81
Monthly	3.63	2.74	7.43	17.62	183.6	46.61	27.93	5.79	5.78	3.05	2.95	1.54
Cauvery at Kollegal												
01-10 days	568.1	44.48	3918	270.8	815.5	764.8	160.9	54.38	15.21	19.64	20.37	87.98
11-20 days	32.37	677.7	1196	191.1	634.3	207.1	122.8	33.96	12.59	9.35	34.09	19.01
R - days	244.8	1367	297.4	249.7	4860	269.6	94.69	35.30	36.91	9.48	18.13	10.30
Monthly	281.8	718.1	1755	237.2	2192	413.7	125.1	41.02	20.47	12.71	24.20	38.17
Kabini at T.Narasipur												
01-10 days	46.05	48.20	1207	148.8	251.2	336.8	97.81	19.72	3.82	13.75	34.02	46.28
11-20 days	40.12	1386	750.3	127.8	364.3	117.3	72.33	14.10	3.33	26.00	39.96	44.40
R - days	928.9	1681	147.1	187.3	462.8	198.3	36.75	10.13	4.89	30.79	36.80	47.35
Monthly	338.4	1059	683.5	154.6	362.8	217.5	67.93	14.50	3.95	23.75	36.92	46.06
Kabini at Muthankera												
01-10 days	44.83	97.37	2158	128.9	141.9	66.53	28.41	13.87	12.41	5.13	5.18	7.49
11-20 days	1502	2180	414.1	70.27	1135	24.32	20.10	24.56	8.62	2.27	8.40	8.01
R - days	363.0	1358	129.3	55.44	438.6	32.25	14.46	11.18	7.01	1.48	8.48	7.99
Monthly	636.8	1216	875.8	84.85	567.8	41.03	20.78	16.36	9.43	2.91	7.35	7.83
Hemavathi at Mukundur Hosahalli												
01-10 days	63.02	73.19	878.5	42.37	40.57	21.10	35.98	8.31	16.04	14.12	17.26	18.74
11-20 days	82.04	40.58	209.6	37.79	41.35	36.90	32.80	6.58	29.16	11.87	17.33	19.47
R - days	84.72	74.00	49.70	38.68	48.95	37.04	11.81	6.10	14.54	28.93	22.88	23.17
Monthly	76.59	62.96	368.6	39.61	43.80	31.68	26.38	6.97	20.30	18.65	19.15	20.55

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

<i>Unit : Tonnes per day</i>												
Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VII Basin : Cauvery												
Year : 1999-2000												
Cauvery at Kudige												
01-10 days	14.47	82.89	1048	64.90	220.8	147.7	40.71	26.02	9.77	7.18	7.07	6.57
11-20 days	391.2	2216	454.9	72.51	338.4	61.98	35.48	16.45	6.75	4.09	9.16	8.15
R - days	308.7	3966	140.4	76.88	841.1	53.48	25.08	11.38	6.37	4.54	8.93	7.33
Monthly	238.1	2149	534.7	71.43	478.8	87.71	33.48	17.74	7.72	5.25	8.39	7.35

Source: Suspended Sediment and Bedmaterial Data Book for 1999-2000

Annual Sediment Load and Annual Runoff in Cauvery Basin

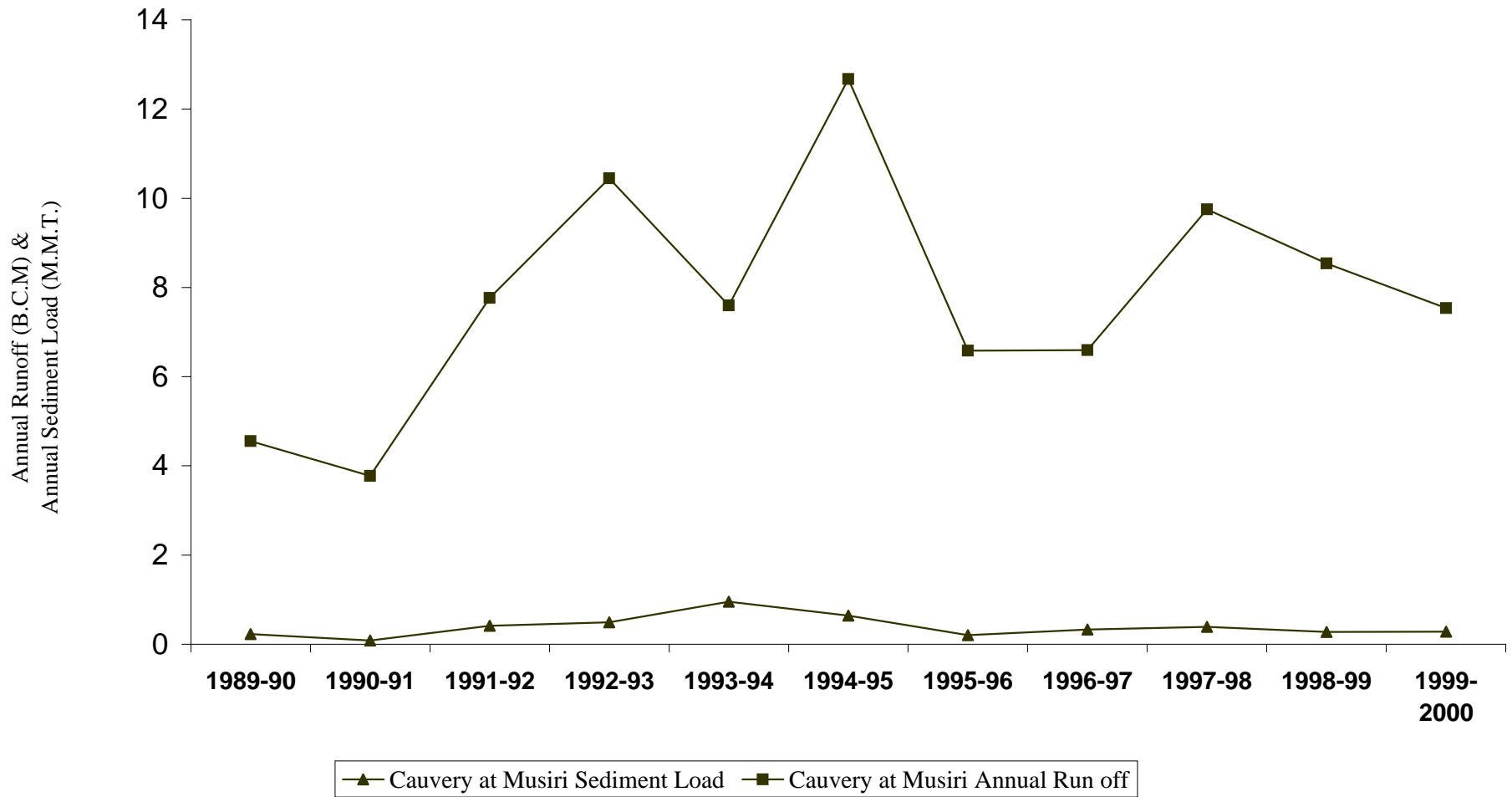


Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

<i>Unit : Tonnes per day</i>												
Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VIII Basin : East Flowing Rivers						Year : 1999-2000						
Gundlakamma at Thammavarai												
01-10 days	3.50	126.1	0.24	111.3	2030	82.63	28.00	29.70	34.16	62.02	5.10	1.63
11-20 days	28.25	23.79	32.78	40.80	323.5	53.03	12.26	28.61	32.41	15.77	2.58	0.78
R - days	1.44	0.64	497.1	141.5	319.8	51.06	34.64	33.73	184.6	9.87	2.31	0.08
Monthly	11.06	48.58	187.0	97.87	872.5	62.24	25.28	30.78	80.21	28.60	33.30	0.81
Ponniyar at Gummanu												
01-10 days	Nil	Nil	Nil	Nil	186.6	30.26	4.49	1.83	0.19	0.37	Nil	Nil
11-20 days	Nil	Nil	Nil	Nil	133.9	11.74	2.42	0.84	0.06	0.02	Nil	Nil
R - days	Nil	Nil	Nil	81.23	3709	8.97	2.99	0.24	0.04	Nil	Nil	Nil
Monthly	Nil	Nil	Nil	27.08	1420	16.99	3.29	0.94	0.10	0.12	Nil	Nil
Suruliyar at Then												
01-10 days	0.00	102.9	344.0	93.36	275.6	275.9	223.7	22.67	43.88	9.31	26.18	1.89
11-20 days	0.05	207.9	271.2	25.70	298.6	220.1	116.0	32.77	13.47	4.45	4.18	4.76
R - days	186.2	434.7	150.9	67.37	802.7	595.2	73.15	15.64	130.8	4.36	1.60	0.02
Monthly	62.08	254.5	252.0	62.14	470.1	363.7	135.5	23.43	60.38	5.99	10.65	2.15
Tambraparani at Murappanadi												
01-10 days	59.58	15.16	20.51	12.86	28.39	29.39	206.1	30.83	41.43	16.48	17.71	12.49
11-20 days	104.8	23.36	15.61	5.23	8.15	59.09	31.68	48.78	14.74	4.68	25.93	10.18
R - days	6.82	8.96	9.63	7.75	15.43	331.9	46.33	11.89	12.76	1.96	12.02	4.23
Monthly	57.06	15.60	15.07	8.62	17.26	140.1	93.13	29.90	23.33	7.59	18.55	8.82

Source: Sediment Year Book for 1999-2000

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
IX Basin : West Flowing Rivers												Year : 1999-2000
Nethravathi at Bantwal												
01-10 days	289.2	1472	17919	2403	2885	1684	31.49	0.80	0.52	0.80	0.49	0.67
11-20 days	4885	40898	5660	1233	3843	347.8	20.61	0.92	0.43	1.29	0.35	0.74
R - days	3895	34613	2973	769.7	4759	72.30	14.36	0.87	0.58	0.74	0.54	35.09
Monthly	3023	25950	8661	1469	3859	701.2	21.90	0.86	0.50	0.94	0.46	12.90
Payaswani at Erinjipuzha												
01-10 days	27.72	707.0	3074	227.7	930.8	159.4	16.65	6.74	2.55	0.70	Nil	0.04
11-20 days	3007	9980	1878	100.7	264.1	33.52	11.62	10.38	2.33	0.03	Nil	1.53
R - days	454.1	3879	257.4	121.0	1010	26.12	7.18	4.22	0.69	Nil	1.42	6.83
Monthly	1163	4824	1689	149.8	743.9	73.01	11.67	7.02	1.89	0.24	0.47	2.93
Valapatanam at Perumannu												
01-10 days	82.16	245.1	2904	221.9	1196	76.78	2.17	2.12	5.62	2.08	1.69	1.74
11-20 days	3244	5274	769.6	132.1	167.9	46.04	2.94	11.76	2.27	1.69	1.51	1.88
R - days	2331	4697	672.3	54.83	784.8	28.76	2.29	2.98	2.06	1.81	1.74	2.14
Monthly	1886	3447	1423	136.3	718.7	50.53	2.46	5.54	3.36	1.86	1.65	1.92
Bharathapuzha at Kumbidi												
01-10 days	379.2	417.3	3278	111.1	1144	229.0	86.18	35.34	20.47	Nil	12.12	1.20
11-20 days	4806	4639	1160	57.64	2094	111.6	77.26	30.86	Nil	Nil	1.69	0.77
R - days	1781	4565	234.1	64.82	1865	104.7	57.34	20.74	12.36	Nil	5.37	9.47
Monthly	2322	3251	1515	77.86	1706	148.4	73.07	28.71	10.89	Nil	6.39	3.99

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
IX	Basin : West Flowing Rivers						Year : 1999-2000					
Pulanthodu at Pulamanthole												
01-10 days	443.7	114.7	598.7	25.69	542.4	40.83	4.73	2.34	0.30	0.21	2.41	0.25
11-20 days	1544	945.5	115.7	12.53	1116	6.97	3.68	0.83	0.24	0.01	1.05	0.06
R - days	239.3	931.2	52.15	16.76	889.4	5.55	2.53	0.26	0.16	0.08	0.47	2.23
Monthly	742.4	672.4	248.90	18.32	850.6	17.78	3.61	1.11	0.24	0.10	1.31	0.89
Chalakydy at Arangaly												
01-10 days	201.1	91.78	847.4	14.92	47.60	10.91	3.50	4.79	6.34	0.93	Nil	Nil
11-20 days	521.6	779.6	107.4	24.13	341.9	8.09	4.71	9.99	5.53	Nil	Nil	Nil
R - days	189.1	647.1	14.82	11.73	119.2	13.85	6.60	1.30	5.39	Nil	Nil	Nil
Monthly	304.0	510.7	313.3	16.93	168.0	10.95	4.99	5.23	5.76	0.30	Nil	Nil
Periyar at Neeleeswaram												
01-10 days	870.7	79.93	2129	21.18	28.80	52.21	6.41	1.60	1.52	2.07	1.58	2.00
11-20 days	723.2	1887	149.2	13.31	412.9	40.97	2.21	1.55	1.40	1.37	1.38	1.88
R - days	120.2	2601	47.27	7.65	606.5	12.51	2.40	2.00	2.64	1.43	1.41	2.66
Monthly	571.4	1558	751.8	14.05	357.7	35.23	3.63	1.73	1.83	1.61	1.46	2.19
Muvattupuzha at Ramamangalam												
01-10 days	1039	334.1	1284	233.7	1279	145.8	49.84	103.20	63.63	59.92	130.80	67.88
11-20 days	951.5	746.1	406.8	117.1	1199	63.49	64.77	77.42	54.84	53.20	62.65	53.67
R - days	202.8	1230	198.1	317.7	1856	89.62	63.64	62.56	46.22	91.45	68.80	60.41
Monthly	731.1	785.1	616.1	222.9	1458	99.62	59.55	80.45	55.19	68.94	87.41	60.48
Kaliyar at Kalampur												
01-10 days	194.7	130.7	193.7	52.12	372.1	29.96	4.07	0.73	Nil	Nil	Nil	0.17
11-20 days	283.5	226.1	182.8	37.17	498.6	12.13	2.05	0.29	Nil	Nil	Nil	10.70
R - days	60.94	569.6	66.05	32.69	658.9	18.09	1.82	0.12	Nil	Nil	0.91	3.55
Monthly	179.7	317.2	144.9	40.66	514.7	20.06	2.62	0.37	Nil	Nil	0.30	4.77

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
IX	Basin : West Flowing Rivers						Year : 1999-2000					
Meenachil at Kidangoor												
01-10 days	694.6	77.52	93.71	22.95	147.5	29.83	6.96	1.97	Nil	Nil	0.27	0.31
11-20 days	393.2	130.8	34.50	9.48	388.5	13.16	3.42	2.17	0.73	Nil	0.56	0.67
R - days	73.36	107.1	23.33	7.05	359.6	25.77	3.76	1.44	Nil	Nil	0.75	0.85
Monthly	387.1	105.2	49.64	13.16	300.5	22.92	4.68	1.85	0.25	Nil	0.53	0.62
Manimala at Kalloppara												
01-10 days	875.1	116.2	119.6	19.94	199.6	39.66	1.44	0.29	0.62	1.11	6.61	2.18
11-20 days	700.8	262.5	32.28	5.49	406.6	2.63	0.56	0.33	1.39	0.74	2.85	2.50
R - days	53.42	145.1	10.00	49.76	770.5	20.45	0.37	0.14	2.94	0.25	2.16	2.87
Monthly	543.1	173.7	52.55	25.06	468.9	20.91	0.78	0.25	1.60	0.68	3.87	2.53
Pamba at Malakkara												
01-10 days	1385	190.9	439.2	72.74	620.8	122.2	20.89	12.05	8.93	13.52	Nil	Nil
11-20 days	724.7	289.6	196.8	27.09	1801	37.25	9.11	19.85	18.76	3.80	Nil	Nil
R - days	145.1	351.2	56.09	43.38	1977	124.6	18.26	8.45	23.29	Nil	Nil	Nil
Monthly	751.6	279.6	225.0	47.74	1482	94.69	16.16	13.29	16.77	5.59	Nil	Nil
Achankovil at Thumpamon												
01-10 days	839.8	36.37	72.98	18.68	57.72	16.24	6.62	0.46	5.17	1.00	1.51	0.25
11-20 days	527.2	69.22	28.15	3.93	556.4	7.13	1.93	0.53	5.36	0.82	0.52	0.29
R - days	67.69	59.60	24.19	3.36	231.3	18.81	0.78	0.21	1.79	0.24	0.75	0.35
Monthly	478.2	55.21	41.21	8.66	280.2	14.06	3.03	0.39	4.19	0.67	0.93	0.30
Kallada at Pattazhy												
01-10 days	911.8	109.1	111.2	40.46	322.0	85.76	17.71	13.01	98.76	16.27	17.77	27.77
11-20 days	293.3	84.61	45.83	19.91	1084	40.41	16.91	9.13	28.88	6.23	10.83	19.24
R - days	55.37	184.7	51.39	17.36	576.9	140.8	13.69	15.07	21.96	5.19	25.14	16.45
Monthly	420.2	128.0	68.88	25.91	658.4	89.00	16.02	12.49	50.83	9.10	17.91	21.00

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
IX	Basin : West Flowing Rivers										Year : 1999-2000	
Vamanapuram at Ayilam												
01-10 days	1074	23.13	21.47	5.22	266.8	30.91	8.09	1.80	5.22	Nil	Nil	Nil
11-20 days	248.0	57.55	8.74	4.03	1411	10.24	4.93	2.31	5.51	Nil	Nil	Nil
R - days	16.93	33.85	5.38	12.15	322.1	316.1	2.69	Nil	Nil	Nil	Nil	Nil
Monthly	446.4	38.04	11.65	7.13	655.7	119.1	5.16	1.33	3.70	Nil	Nil	Nil

Source: Sediment Year Book for 1999-2000.

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
X	Basin : Tapi						Year : 1997-98					
Tapi at Sarankheda												
01-10 days	River Dry	8259	48759	13192	524.1	424.4	70035	974.5	2.728	River Dry	River Dry	River Dry
11-20 days	0.0	1595	116.9	5748	13.29	16.97	6255	483.5	D.B.0.3 m	do	do	do
R - days	99.46	277613	198183	14068	116.0	1515	2673	160.9	do	do	do	do
Monthly	33.15	101686	86090	11003	214.5	652.3	25558	527.4	0.974	do	do	do
Panjhra at Morane												
01-10 days	River Dry	0.797	3906	20.64	0.610	Traces	Traces	River Dry	River Dry	River Dry	River Dry	River Dry
11-20 days	0.197	0.000	11.41	1.653	D.B.0.3 m	P.Water	Traces	do	do	do	do	-do-
R - days	-do-	0.000	21878	6.088	0.383	do	P.Water	do	do	do	do	-do-
Monthly	0.066	0.257	9027	9.462	0.383	Traces	Traces	do	do	do	do	-do-
Tapi at Savkheda												
01-10 days	River Dry	8930	42462	15645	243.9	181.4	30989	84.59	7.952	D.B.0.3 m	D.B.0.3 m	River Dry
11-20 days	7781	424	169.2	15461	120.7	39.25	597	60.56	do	do	do	do
R - days	594.4	131407	271085	15461	380.4	5395	126	21.42	do	do	do	do
Monthly	2792	49646	109943	10934	252.6	1872	90133	53.73	2.840	do	do	do
Girna at Dapuri												
01-10 days	D.B.0.3 m	32.17	D.B.0.3 m	8.426	D.B.0.3 m	167.1	248.0	D.B.0.3 m	D.B.0.3 m	D.B.0.3 m	D.B.0.3 m	D.B.0.3 m
11-20 days	15.15	D.B.0.3 m	44.31	4.425	do	10.22	20.60	do	do	do	do	do
R - days	D.B.0.3 m	D.B.0.3 m	5457	8.051	do	239.4	3.096	do	do	do	do	0.573
Monthly	5.051	10.38	1951	6.968	do	138.9	87.64	do	do	do	do	0.203

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
X	Basin : Tapi											Year : 1997-98
Purna at Yerly												
01-10 days	River Dry	1602	2533	2764	47.19	53.54	11450	160.7	39.46	2.633	4.700	Traces
11-20 days	235.4	33.98	32.58	365.6	19.07	14.33	1616	97.00	11.64	1.562	2.960	No Flow
R - days	726.7	6560	16296	545.3	376.3	5484	427.6	69.54	3.931	2.191	0.940	-do-
Monthly	320.7	2856	6610	1225	154.9	1851	4367	107.8	19.37	2.131	2.867	Traces
Purna at Gopalkheda												
01-10 days	No Flow	2700	36996	3011	10.43	38.88	15407	11.073	1.044	0.548	D.B.0.3 m	D.B.0.3 m
11-20 days	-do-	121	56.68	1088	4.401	7.346	198.7	4.491	0.411	0.328	-do-	-do-
R - days	86.33	27712	9486	506.1	4868	40806	67.25	2.537	0.430	0.062	-do-	-do-
Monthly	28.78	10743	15318	1535	1732	13617	5056	5.920	0.642	0.304	-do-	-do-
Tapi at Burhanpur												
01-10 days	D.B.0.3 m	5753	9845	6222	846.6	131.8	4604	399.0	53.14	5.692	D.B.0.3 m	D.B.0.3 m
11-20 days	66.94	702.5	129.8	17603	269.9	57.03	1690	131.5	52.37	D.B.0.3 m	-do-	-do-
R - days	75.89	1282146	93968	10719	163.3	647.4	6580.8	40.04	37.43	D.B.0.3 m	-do-	-do-
Monthly	47.61	457038	36568	11515	418.1	278.7	2261	185.3	48.39	1.836	-do-	-do-
Tapi at Deditalai												
01-10 days	0.000	1593	2520	9659	19.67	0.656	32.85	3.070	Trace	Trace	Trace	Trace
11-20 days	82.39	298	114.1	3068	9.816	0.000	40.40	0.300	do	do	do	do
R - days	37.63	307730	105281	1995	3.451	4.887	3.604	0.000	do	do	do	do
Monthly	40.01	109805	38207	4907	10.74	1.848	1074	0.990	do	do	do	do

Source: Suspended Sediment Data Book for 1997-98

N.A. : Not Available

P.Water : Pooling Water

D.B.0.3m : Depth Below 0.3m

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
XI Basin : Narmada Year : 1999-2000												
Orsang at Chandwada												
01-10 days	River Dry	River Dry	3.13	0.00	126.4	D.B.0.3 m	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry
11-20 days	River Dry	23.22	90037	62491	1144	D.B.0.3 m	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry
R - days	129.2	25.95	0.00	15665	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry
Monthly	43.07	16.70	29075	26052	409.8	D.B.0.3 m	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry
Narmada at Garudeshwar												
01-10 days	10.63	1407	78532	8261	29426	1746	1748	1524	1108	215.2	243.1	289.0
11-20 days	310.9	5217	328029	413567	76190	1494	845.6	1474	965.8	182.1	478.5	208.4
R - days	1639	19567	4891	538704	5830	1421	1174	1368	444.5	173.2	359.8	219.3
Monthly	653.7	9080	132885	320177	36138	1554	1253	1453	853.1	189.6	360.4	238.3
Narmada at Rajghat												
01-10 days	69.59	6907	1016046	63723	108870	1238	1178	336.1	656.9	205.4	158.5	176.3
11-20 days	9366	86578	1228403	2269491	91229	1405	210.4	394.8	361.2	209.1	251.9	216.7
R - days	140656	260823	19913	1032499	2951	1016	441.2	461.8	276.9	252.7	246.7	336.9
Monthly	50030	122707	731082	1121904	65596	1219	604.5	399.6	437.0	223.4	219.0	246.3
Narmada at Mandaleshwar												
01-10 days	22.98	16539	1667213	180533	139596	8409	1319	624.9	359.5	147.9	116.9	94.40
11-20 days	257.2	133990	1572513	1803205	201806	4634	1381	726.7	182.1	171.0	206.3	86.87
R - days	25708	254140	19450	1225337	20857	2629	1069	513.8	171.9	130.9	114.9	115.1
Monthly	8663	138737	1051975	1069692	117531	5224	1250	618.3	240.1	149.3	146.0	99.31

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
XI Basin : Narmada												
Year : 1999-2000												
Narmada at Handia												
01-10 days	47.99	519.5	989402	153809	105401	2630	984.4	360.6	302.8	149.1	92.01	84.48
11-20 days	1519	43407	577991	2746363	124311	2088	1530	487.6	153.3	137.1	134.1	68.89
R - days	8874	193786	25866	1044251	4032	1566	1029	330.4	175.5	79.72	49.62	57.20
Monthly	3480	82933	514789	1314807	75531	2094	1176	390.9	211.7	120.6	91.91	69.77
Narmada at Hoshangabad												
01-10 days	20.71	1236	953421	102566	152236	2537	10110	4620	7043	4490	266.4	433.1
11-20 days	589.9	72673	209704	460583	53008	1794	9832	24290	7714	1194	111.4	124.0
R - days	12040	327568	45980	352508	3515	321.3	7749	6484	4297	311.2	138.5	249.4
Monthly	4217	140075	391517	305219	67455	1551	9183	11627	6422	1944	172.1	268.2
Narmada at Sandia												
01-10 days	75.96	549.3	573040	78477	167089	3486	1668	518.6	432.6	427.7	434.2	1628
11-20 days	958.1	3447	202760	1419805	90458	5034	1211	612.4	322.7	498.9	418.0	661.7
R - days	7671	145138	21039	780353	6678	3948	521.2	678.4	276.8	407.7	812.4	828.2
Monthly	2902.00	52790	257723	759545	85449	4156	1114	605.6	346.4	443.6	554.9	1032
Shakkar at Gadarwara												
01-10 days	0.0	191.7	73039	3608	7580	24.44	8.35	1.92	1.11	0.61	0.28	0.05
11-20 days	450.7	1111	7394	222778	2392	23.31	5.22	1.69	1.01	0.53	0.17	0.06
R - days	732.2	4140	3068	28666	67.68	10.91	2.73	1.31	0.68	0.46	0.13	0.02
Monthly	394.3	1889	27035	85017	3241	19.55	5.35	1.63	0.94	0.53	0.19	0.04

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
XI Basin : Narmada Year : 1999-2000												
Narmada at Barmanghat												
01-10 days	19.93	674.8	244582	36484	22940	272.0	503.4	150.9	31.95	34.52	82.41	108.4
11-20 days	92.98	1726	26820	767310	14464	255.0	451.9	571.8	55.66	33.73	65.22	88.87
R - days	64.18	56588	5792	48723	2623	316.5	336.8	232.2	39.39	32.92	33.67	57.58
Monthly	59.03	20854	89604	284172	12997	281.1	427.7	315.5	42.44	33.70	60.43	84.06
Narmada at Jamtara												
01-10 days	15.13	6.67	240546	7048	29928	2211	244.3	52.39	27.73	10.10	17.87	11.39
11-20 days	7.07	440.5	60446	384341	17681	2028	185.3	71.55	11.53	9.84	17.69	11.13
R - days	7.15	41588	1323	48184	2888	877.0	42.33	55.38	7.98	10.72	16.42	12.40
Monthly	9.78	14901	97564	146524	16383	1705	153.6	59.63	16.01	10.24	17.33	11.67
Banjar at Hridaynagar												
01-10 days	0.000	34.93	24748	1865	5304	440.6	20.62	25.66	0.00	0.00	0.00	0.00
11-20 days	0.000	82.84	3976	111315	2105	106.7	11.50	0.00	0.00	0.00	0.00	0.00
R - days	3066	15824	1097	12239	930.4	54.12	7.02	0.00	0.00	0.00	0.00	0.00
Monthly	1022	5653	9655	41806	2720	200.5	12.85	8.28	0.00	0.00	0.00	0.00
Burhner at Mohgaon												
01-10 days	0.000	473.1	72687	13695	15271	1318	383.4	166.8	118.2	99.42	0.00	0.00
11-20 days	21.28	3819	12619	65818	4118	762.8	331.5	508.7	112.5	0.00	0.00	0.00
R - days	9255	47300	8447	25939	2459	496.8	244.4	126.3	103.6	0.00	0.00	0.00
Monthly	3092	18168	30515	35151	7127	859.3	317.4	262.7	111.7	32.07	0.00	0.00
Narmada at Manot												
01-10 days	3.10	672.6	170358	66630	26745	113.1	31.68	19.04	9.92	8.94	4.42	1.46
11-20 days	9.33	9741	4699	299270	2510	75.43	27.28	15.33	10.30	5.13	3.67	5.93
R - days	5074	70558	32669	25823	541.7	43.14	23.99	12.98	9.26	3.68	2.28	10.09
Monthly	1695	28396	68062	130574	9629	77.22	27.53	15.69	9.84	5.84	3.46	5.96

Source: Suspended Sediment Data Book for 1999-2000

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

<i>Unit : Tonnes per day</i>												
Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
XII Basin : Mahi & Other Independent River												
Year : 1997-98												
Mahi at Khanpur												
01-10 days	16.02	439.9	216479	1437	24.43	35.87	16.96	15.57	18.52	2.648	3.769	3.275
11-20 days	6.855	10.86	3207	1272	20.79	42.01	16.60	16.81	8.813	3.848	3.231	3.309
R - days	5577	14897	81839	507.6	39.70	33.21	15.93	15.32	4.327	2.801	2.937	4.850
Monthly	1867	5446	99906	1072	28.67	37.03	16.48	15.88	11.00	3.089	3.312	3.774
Mahi at Paderdibadi												
01-10 days	D.B. 0.3m	P. Water	175.4	104.9	22.66	1.476	4.137	1.341	1.972	3.099	27.48	D.B. 0.3m
11-20 days	Pooling	16.31	35.76	84.32	4.384	1.802	2.022	1.151	1.598	2.472	68.64	P.Water
R - days	Water	161.7	969.2	17.60	1.057	3.742	0.798	1.750	2.279	1.664	0.000	-do-
Monthly	D.B. 0.3m	62.63	412.0	68.95	9.100	2.340	2.270	1.425	1.926	2.388	32.04	D.B. 0.3m
Mahi at Mataji												
01-10 days	0.00	30.05	13307	221.9	12.21	9.907	1083	0.740	0.502	0.102	D.B. 0.3m	D.B. 0.3m
11-20 days	0.00	349.5	24.07	88.82	3.163	1.138	79.63	0.324	0.349	0.081	P.Water	P.Water
R - days	39.00	100150	29478	186.3	0.855	1.387	7.143	0.106	0.245	0.034	P.Water	P.Water
Monthly	13.00	35660	14760	165.7	5.263	4.144	377.5	0.381	0.374	0.071	D.B. 0.3m	D.B. 0.3m
Banas at Kamalpur												
01-10 days	River Dry	River Dry	743.2	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry
11-20 days	River Dry	River Dry	River Dry	414.6	-do-	-do-	do	do	do	do	do	do
R - days	67082	12611	3832	River Dry	-do-	-do-	do	do	do	do	do	do
Monthly	22361	4475	1600	138.2	-do-	-do-	do	do	do	do	do	do
Bhadar at Ganod												
01-10 days	0.000	10.55	DB 0.3m	DB 0.3m	11.97	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry
11-20 days	0.000	0.000	DB 0.3m	536.8	179.2	-do-	do	do	do	do	do	do
R - days	15.72	10.18	DB 0.3m	150.7	0.000	-do-	do	do	do	do	do	do
Monthly	5.239	7.014	DB 0.3m	229.2	61.68	-do-	do	do	do	do	do	do

Table No.2.2 : Sitewise Ten Daily & Monthly Average Sediment Load for Different River Basins.

Unit : Tonnes per day

Site / Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
XII Basin : Mahi & Other Independent River												
Year : 1997-98												
Shetrunji at Lowara												
01-10 days	78.34	551.1	0.035	3.383	0.144	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry
11-20 days	37.55	0.591	P.Water	77.92	P.Water	do	do	do	do	do	do	-do-
R - days	402.6	152.6	290.9	5.494	P.Water	do	do	do	do	do	do	-do-
Monthly	172.8	232.1	103.2	28.93	0.05	do	do	do	do	do	do	-do-
Purna at Mahuwa												
01-10 days	DB 0.3m	12.12	4488	2052	66.15	2.032	Traces	Traces	Traces	Traces	Traces	Traces
11-20 days	4.022	10.67	495.9	731.6	3.882	0.211	-do-	-do-	-do-	-do-	-do-	-do-
R - days	44.66	763.4	4916	147.1	10.79	Traces	-do-	-do-	-do-	-do-	-do-	-do-
Monthly	16.23	278.2	3352	977	26.42	0.748	-do-	-do-	-do-	-do-	-do-	-do-
Ambika at Gadat												
01-10 days	0.000	263.6	11176	89.35	60.66	1.467	Traces	Traces	Traces	Traces	Traces	Traces
11-20 days	0.000	26.44	894.3	53.66	18.27	Traces	-do-	-do-	-do-	-do-	-do-	-do-
R - days	489.0	5438	28045	4304	2.045	Traces	-do-	-do-	-do-	-do-	-do-	-do-
Monthly	163.0	2023	13845	1482	26.19	0.489	-do-	-do-	-do-	-do-	-do-	-do-
Vaitarna at Durvesh												
01-10 days	P. Water	4831	4208	620	197.5	23.63	3.838	P.Water	P.Water	P.Water	P.Water	P.Water
11-20 days	P. Water	687.9	2345	158	50.39	22.04	0.000	-do-	-do-	-do-	-do-	-do-
R - days	1116	30644	16248	909.2	29.9	10.90	0.000	-do-	-do-	-do-	-do-	-do-
Monthly	372.1	12654	7879	562	90.6	18.86	1.238	-do-	-do-	-do-	-do-	-do-

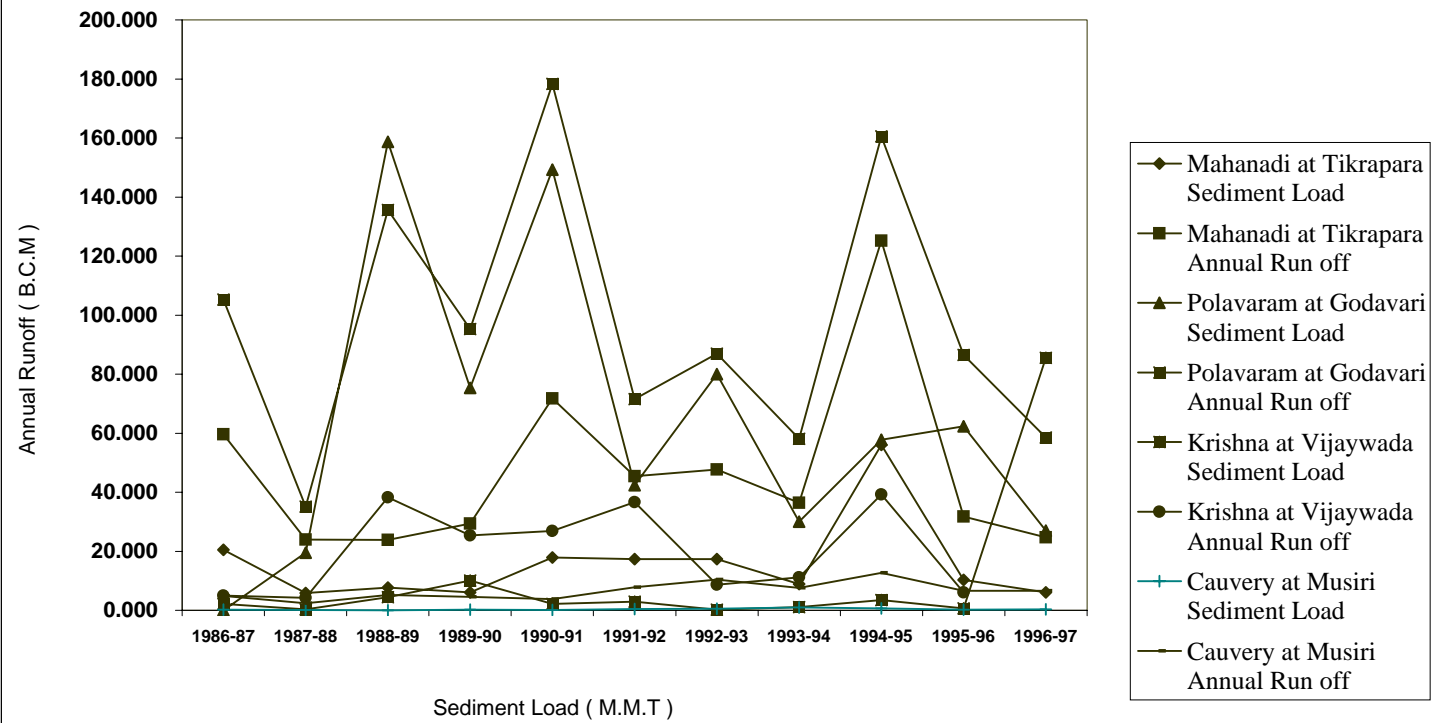
Source: Suspended Sediment Data Book for 1997-98

N.A. : Not Available

P.Water : Pooling Water

D.B.0.3m : Depth Below 0.3m

Annual Sediment Load and Annual Runoff in Different River Basins



SECTION - III
WATER QUALITY STATISTICS

SECTION - III

WATER QUALITY STATISTICS

Water is a prime necessity for human survival and for growth of agriculture as well as for industrial development. Effective management of water resource, monitoring and control of its quality are becoming increasingly important for sustainable development and human welfare. Pollution of water has become a universal phenomena in present day world and for maintaining water quality at acceptable levels, Environmental Protection Act also includes, as one of its objectives, protection of water from pollution. Now-a-days greater emphasis is also being given to water quality because of concern of environmentalists. Degradation of water quality is not only caused by increasing inflow of domestic and industrial waste water into water course, but also from the abstraction of water from rivers rendering them dry or with meager flow leading to concentration of pollution.

World Health Organisation (WHO) has classified inland water uses in five classes and has fixed tolerance limits of all polluting factors of water. And following the same Bureau of Indian Standards(BIS) has also fixed the same (table 3.1) in Indian context.

Considering importance of water quality an attempt has been made to present here detailed information about the quality of water being supplied from different reservoirs in India. Maximum & minimum values of as many as 42 water quality parameters (table 3.3) and values of the same crossing tolerance limits are presented here (table 3.2) for reviewing the kind of water being discharged/supplied for different purposes.

From the data it can be seen that water coming through east flowing rivers namely Rushikulya, Vamsdhara, Sarada & Nagavali are in general good for all kinds of uses. Most of the Indian waters are alkaline (i.e. having P^H value more than 7.00) and are considered safe for industrial uses especially for boilers, etc.

Comparing with the BIS tolerance limits it can be seen that P^H value is exceeding the prescribed limit at many sites of Godavari, Krishna, Cauvery, East flowing rivers and Narmada river basin. Chemically the water flowing through many sites of Godavari, Krishna and Mahi basins is over-limiting the concentration of magnesium, sodium, ammonia and fluorides. Water of Tapi basin is also having higher concentration of sodium.

Compared to west flowing rivers East flowing rivers show moderate to high conductivity. In contrast to west flowing rivers the well waters of east flowing rivers are more alkaline. The waters of west flowing rivers are

generally of good quality with low to medium ionic concentrations, The dissolved Oxygen also confirmed that this water is of good quality.

The Mahanadi water as a whole was good to very good throughout the year and suitable for all purposes. The water of Cauvery basin showed low to high salinity. Silicate was present in good quantity in all the waters. Nitrate, Fluoride, Phosphate anions were present in low concentration throughout the year at all the water quality stations. Brahmani water in the upper reaches upto Panposh is free from biological pollution and the water is good, healthy and suitable for use for all purposes. Observed sodium proportion and low S.A.R. values in Brahmani and Baitarni throughout the year indicate good water for irrigation purpose. The Subarnrekha water upto Jamshedpur is good to very good with some variation during non-monsoon but huge amount of chemical and biological pollutants of waste effluents from Jamshedpur, polluted the Subarnrekha water.

**Table No.3.1 : Tolerance limits of relating to selected pollution parameters for
Inland Surface Water required for different uses as prescribed by the Bureau
of Indian Standards BIS : 2296-1982**

Sl. No.	Constituent	Unit	Designated use classes of Inland Surface Water				
			A	B	C	D	E
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	pH		6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.0-8.5
2	Electric Conductivity at 25°C	micromho/cm/max	-	-	-	1000.00	2250.00
3	Calcium (Ca ⁺⁺)	mg/l(max.)	80.00	-	-	-	-
4	Magnesium (Mg ⁺⁺)	mg/l(max.)	24.00	-	-	-	-
5	Iron (Fe ⁺⁺⁺)	mg/l(max.)	0.30	-	50.00	-	-
6	Free Ammonia (NH ₄ ⁺)	mg/l(max.)	-	-	-	1.20	-
7	Chloride (Cl ⁻)	mg/l(max.)	250.00	-	600.00	-	600.00
8	Fluoride (F ⁻)	mg/l(max.)	1.50	1.50	1.50	-	-
9	Sulphate (SO ₄)	mg/l(max.)	400.00	-	400.00	-	1000.00
10	Nitrate (NO ₃)	mg/l(max.)	20.00	-	50.00	-	-
11	Dissolved Oxygen (DO)	mg/l(min.)	6.00	5.00	4.00	4.00	-
12	Biochemical Oxygen Demand (BOD)	mg/l(max.)	2.00	3.00	3.00	-	-
13	Total Coliform	most probable number/100 ml	50.00*	500.00*	5000.00*	-	-
14	Arsenic (As)	mg/l(max.)	0.05	0.20	0.20	-	-
15	Boron (B)	mg/l(max.)	-	-	-	-	2.00
16	Cadmium (Cd)	mg/l(max.)	0.01	-	-	-	-
17	Chromium (Cr ⁺⁺⁺⁺⁺)	mg/l(max.)	0.05	0.05	0.05	-	-
18	Copper (Cu ⁺⁺)	mg/l(max.)	1.50	-	1.50	-	-
19	Cyanide (Cn)	mg/l(max.)	0.05	0.05	0.05	-	-
20	Lead (Pb)	mg/l(max.)	0.10	-	0.10	-	-
21	Manganese (Mn)	mg/l(max.)	0.50	-	-	-	-
22	Mercury (Hg)	mg/l(max.)	0.001	-	-	-	-
23	Zinc (Zn)	mg/l(max.)	15.00	-	15.00	-	-
24	Phenolic Compounds (C ₆ H ₅ OH)	mg/l(max.)	0.002	0.005	0.005	-	-
25	Total Hardness (CaCO ₃)	mg/l(max.)	300	-	-	-	-
26	Sodium percentage	(max)	-	-	-	-	60.00
27	Sodium Absorption Ratio (SAR)	(max)	-	-	-	-	26.00

Source : Water Quality Year Book for 2001-2002 (Godavari Basin).

Note :

A - Drinking Water source without conventional treatment but after disinfection.

B - Out door bathing organised.

C - Drinking Water source with conventional treatment followed by disinfection.

D - Propagation of wildlife, fisheries.

E - Irrigation, Industrial cooling, Controlled waste disposal.

* If the coliform count is more than the prescribed tolerance limit, the criteria for coliforms shall be satisfied if not more than 20% of samples show more than the tolerance limit specified and not more than 5% samples show more than 4 times the tolerance limit. Further, the faecal coliform should not be more than 40% of the total coliform.

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I	Basin : Mahanadi						
				Year : 2002-2003			
1	Basantpur			DO=5.90 DO=5.90 BOD=2.24 BOD=2.03	July August September October		
2	Salebhata	pH=8.52	April				
3	Kurubhata					DO=5.83	December
4	Mahendergarh	Ph=8.86	March	pH=8.70	October	pH=8.59	January
5	Jondhra	pH=8.90 pH=8.72	March April	pH=8.51	October	pH=8.67 pH=8.54	December January
6	Ghatora	DO=4.07 DO=1.44 DO=1.80	March April May	DO=4.27 DO=1.83	July August	DO=3.91 DO=4.29 DO=3.87	November December January
7	Bamnidhi	pH=8.86 BOD=21.00 BOD=72.00 BOD=72.00	March March April May	pH=8.70 BOD=123.00	October August	pH=8.59 BOD=21.00	January February
8	Andhiyarkore	pH=8.64	April			DO=3.05	February
9	Simga	BOD=2.44 pH=8.57	March April			pH=8.60	December
10	Rampur	Hardness=444.36 Hardness=432.35	April May			Hardness=324.26	February
11	Pathardihi			pH=8.70	October		

Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Summer, Monsoon and Winter Seasons

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
II Basin:Subernarekha, Burhablang and Baitarni				Year : 2002-2003			
1	Muri	DO=5.76 BOD=2.04 BOD=2.52	May March May	pH=8.60	July		
2	Jamshedpur	DO(ppm)=3.96 BOD=2.04	May June	DO=5.09	June	BOD=2.64	Janaury
3	Ghatsila	BOD=2.44	March				
4	Adityapur	DO=4.07 DO=4.48 DO=5.22 BOD=2.45 BOD=2.65 Hardness=332.27	June March April March June May			BOD=2.24	February

Source: Water Quality Data Book (Vol.-II) for 2002-2003

Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Summer, Monsoon and Winter Seasons

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

III Basin: Brahmani

Year : 2002-2003

1	Jenapur	DO=5.94 DO=5.58	April May				
2	Gomlai	DO=5.40 DO=5.76	April May	DO=5.09	September		
3	Pamposh	DO=5.76 DO=5.76 BOD=2.24	April May June	DO=5.90	July		

Source: Water Quality Year Book for 2002-2003

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

IV Rushikulya, Vamsadhara, Sarda & Nagavali

Year : 2002-2003

All Water Quality Parameters are within the Tolerance Limits.

Source: Water Quality Year Book for 2002-2003

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
V Basin : Godavari		Year : 2001-2002					
1	Polavaram	pH=8.6	9 May			pH=8.7 pH=8.6 pH=8.6 pH=8.6	12 November 22 November 20 December 11 February
2	Konta	pH=8.9 DO=5.2 DO=5.6	1 April 2 May 1 June	Iron(Fe)=0.38	4 October		
3	Perur	pH=8.8 pH=8.6 pH=8.6 pH=8.7	1 April 1 June 1 March 2 May	DO=5.7	2 July	pH=8.6 pH=8.6	1 November 3 December
4	Pathagudam	DO=5.7	1 March	DO=5.5	3 September		
5	Jagdapur	DO=5.3	2 May			pH=8.6	3 December
6	Saigaon			DO=5.9 DO=5.9 BOD=2.8	3 September 4 October 3 September		
7	Tekra	pH=8.6 DO=5.9 DO=5.9 BOD=2.5 BOD=2.4	11 April 1 June 11 June 13 May 21 May	pH=8.6 DO=5.8 DO=5.6	22 October 3 July 11 July	pH=8.6 pH=8.8 BOD=2.3	21 December 1 January 1 November

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
8	Bhatpalli	BOD=2.9	11 June	Ammonia NH ₄ ⁺ =1.21	11 October	Magnesium=26.6	12 November
		pH=8.6	1 March	BOD=2.9	23 August	pH=8.9	1 January
		BOD=2.6	13 March	Magnesium=25.7	21 September	pH=8.14	14 January
		Magnesium=36.2	1 March	Magnesium=25.4	21 December	pH=8.6	1 February
		Magnesium=27.8	13 March			Magnesium=27.6	1 February
		Magnesium=24.6	21 March			Magnesium=30.9	11 February
		Magnesium=24.8	11 April				
		Magnesium=31.6	22 April				
		Magnesium=25.7	1 May				
		Magnesium=25.7	13 May				
9	Bamni	Magnesium=24.6	21 May				
		Cl=90	1 June			Magnesium=24.1	1 January
		Magnesium=31.7	1 June			Magnesium=25.8	14 January
		Chloride=284	1 June			Magnesium=26.8	21 January
		Fluoride=2.28	1 June			Magnesium=27.8	11 February
		BOD=40.0	1 June				
		DO=4.0	1 June				
		Hardness=355	1 June				
		Magnesium=26.4	1 March				
		Magnesium=24.9	13 March				
10	P.G. Bridge	Magnesium=33.9	22 April				
		Magnesium=38.9	23 May				
		Magnesium=44.5	21 May				
		DO=5.0	11 June	Magnesium=24.6	21 September	pH=8.6	21 November
		BOD=2.1	11 June	BOD=6.0	1 August	pH=8.6	12 November
		Magnesium=28.7	1 March	DO=5.0	1 August	pH=8.6	21 December
		pH=8.6	21 March	DO=5.5	13 August	pH=9.8	3 January

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		pH=8.8	11 April			pH=8.8	11 January
		BOD=2.1	21 June			pH=8.7	1 February
		DO=5.8	1 April			pH=8.6	12 February
						pH=8.6	21 February
						Magnesium=24.6	11 December
						Magnesium=26.3	21 December
						Magnesium=24.6	22 January
						Magnesium=30.5	12 February
11	Nandgoan	pH=8.6	11 June	pH=8.6	2 July	BOD=10.0	11 February
		DO=4.7	1 June	Magnesium=24.1	23 July	BOD=8.0	21 February
		DO=5.7	11 June	DO=5.2	11 July	DO=4.5	12 November
		Magnesium=24.1	1 March	DO=5.5	23 July	DO=5.1	21 November
				DO=4.7	1 August	DO=5.6	21 December
				DO=5.7	13 August	DO=5.7	1 January
				DO=5.8	23 August	DO=5.3	14 January
				DO=5.1	11 September	DO=4.7	21 January
				DO=5.1	21 September	DO=3.9	11 February
				DO=5.2	3 October	DO=3.5	21 February
				DO=5.8	11 October		
				DO=5.3	22 October		
				BOD=2.7	2 July		
				BOD=3.0	1 August		
				BOD=2.3	3 October		
12	Hivra	pH=8.6	1 June	DO=5.8	11 September	pH=8.7	21 December
		pH=8.6	1 March			pH=8.9	1 January
		pH=8.7	13 March			pH=8.14	14 January
		pH=8.7	21 March			pH=8.8	21 January
		pH=8.6	1 April			pH=8.8	1 February

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
13	Bhishnur	pH=8.8	11 April			pH=8.9	11 February
		pH=8.7	1 May			pH=8.7	21 February
		DO=4.6	22 April			Magnesium=26.6	12 November
		DO=4.6	1 May			Magnesium=25.8	3 December
		DO=5.7	13 May			Magnesium=31.5	11 December
		BOD=5.3	13 May			Magnesium=24.9	14 January
		Sodium%=60.71	11 April			Magnesium=25.4	1 February
		Sodium%=61.18	22 April			Magnesium=26.8	11 February
		Magnesium=24.6	1 March				
		Magnesium=25.4	1 June				
		Iron(Fe)=0.37	1 Marh	DO=5.1	2 July	DO=3.9	1 November
		DO=3.9	1 June	DO=5.1	11 July	DO=4.2	12 November
		DO=3.3	11 June	DO=5.9	23 July	DO=4.7	21 November
		DO=5.0	21 June	DO=4.1	1 August	DO=4.7	3 December
		DO=3.8	1 March	DO=5.8	13 August	DO=5.1	11 December
		DO=2.2	13 March	DO=4.7	23 August	DO=5.7	21 December
		DO=3.6	21 March	DO=4.4	3 September	DO=4.6	3 January
		DO=3.4	1 April	DO=4.1	11 September	DO=5.8	11 January
		DO=3.7	11 April	DO=3.5	23 September	DO=4.5	22 January
		DO=3.2	22 April	DO=3.4	3 October	DO=3.8	12 February
		DO=3.8	1 May	DO=2.8	11 October	DO=2.5	21 February
		DO=5.1	13 May	DO=4.3	22 October	BOD=20.0	1 November
		DO=2.9	21 May	BOD=3.0	1 August	BOD=3.0	21 February
		BDO=4.0	1 June	BOD=3.4	13 August	Magnesium=26.8	11 December
		BOD=3.0	11 June	BOD=20.0	3 October	Magnesium=28.0	3 January
		BOD=6.0	1 March	BOD=25.0	11 October	Magnesium=26.3	11 January
		BOD=4.0	13 March	Magnesium=26.0	2 July	Magnesium=25.8	22 January
		BOD=7.0	21 March	Magnesium=25.5	11 July	Magnesium=28.0	1 February

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
14	Ashti	BOD=4.0	1 April	Magnesium=26.5	1 August	Magnesium=30.9	11 February
		BOD=3.0	11 April	Magnesium=24.1	21 September	Magnesium=26.4	21 February
		BOD=3.0	22 April				
		BOD=5.0	1 May				
		BOD=35.0	21 May				
		Magnesium=29.4	13 March				
		Magnesium=24.6	21 March				
		Magnesium=26.4	1 April				
		Magnesium=30.2	11 April				
		Magnesium=24.6	22 April				
		Magnesium=27.2	1 May				
		pH=8.6	1 March	BOD=2.7	11 September	pH=8.6	22 November
		pH=8.6	13 March			pH=8.7	3 December
		pH=8.6	21 March			pH=9.0	3 January
pH=8.7	11 April			pH=8.8	11 January		
pH=8.6	1 May			pH=8.6	22 January		
pH=8.7	13 May			pH=8.6	1 February		
pH=8.6	21 May			pH=8.8	11 February		
DO=5.2	11 June			pH=8.6	21 February		
				BOD=2.2	12 November		
15	Pauni	Ammonia NH ₄ ⁺ =2.16	1 March	DO=5.2	2 July	pH=8.6	3 January
		pH=8.7	21 May	DO=5.1	11 July	DO=5.6	21 November
		pH=8.6	11 June	DO=5.3	23 July	DO=5.9	11 December
		DO=5.2	11 June	DO=5.3	13 August	DO=5.3	21 December
		DO=3.0	1 March	DO=4.9	23 August	DO=5.2	3 January
		DO=5.3	21 March	DO=5.1	3 October	DO=5.5	11 January
		DO=5.8	1 April	DO=5.3	11 October	DO=5.0	22 January
		DO=3.4	11 April	BOD=3.9	1 August	DO=4.1	12 February

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
16	Sartarpur	DO=4.2	22 April	BOD=5.7	22 October	DO=5.0	21 February
		DO=4.9	1 May			BOD=5.3	12 November
		DO=3.1	13 May			BOD=2.4	21 November
		DO=3.0	13 March			BOD=3.1	22 January
		BOD=3.4	1 March			BOD=3.2	1 February
		BOD=6.0	13 March			BOD=4.0	12 February
		BOD=5.4	1 April			BOD=4.6	21 February
		BOD=5.0	11 April				
		BOD=5.0	22 April				
		BOD=3.9	1 May				
		BOD=4.0	13 May				
		BOD=3.2	1 June				
		pH=8.7	11 June	BOD=3.0	1 August	BOD=2.8	3 January
		DO=5.9	21 June	BOD=2.9	11 September	BOD=2.3	11 January
		BOD=3.0	21 June	BOD=3.8	22 October	BOD=2.2	22 January
		BOD=3.8	1 March	BOD=2.2	21 December	BOD=2.1	1 February
		BOD=3.1	13 March			Magnesium=25.4	11 January
		BOD=2.9	1 April			Magnesium=30.2	22 January
		Magnesium=31.3	1 March			Magnesium=35.0	12 February
		Magnesium=28.3	13 March				
Magnesium=30.5	21 March						
Magnesium=40.7	1 April						
Magnesium=37.7	11 April						
Magnesium=30.2	22 April						
Magnesium=24.4	1 June						
17	Rajegaon	DO=5.5	1 March	Ammonia NH ₄ ⁺ =1.21	22 October	DO=5.8	21 February
		DO=2.5	13 March	DO=5.2	11 July		
		DO=4.1	11 June	DO=5.9	23 July		

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
18	Kumhari	DO=5.6	21 June	DO=5.4	1 August		
		BOD=4.0	13 March	BOD=2.4	11 October		
		BOD=2.1	21 March				
		BOD=2.6	11 April				
		DO=5.4	11 June	DO=5.4	21 September	BOD=4.4	11 December
		BOD=2.1	1 March	BOD=2.6	3 October	BOD=3.6	11 January
		BOD=5.2	13 March				
		BOD=3.2	21 March				
		BOD=3.0	22 April				
		BOD=5.1	21 May				
19	Mancherial	BOD=5.0	1 June				
		pH=8.6	1 April	pH=8.8	2 July	pH=8.7	3 December
		pH=8.7	11 April	pH=8.7	12 July	pH=8.6	11 December
		pH=8.6	22 April	pH=8.6	20 July	pH=8.6	20 December
		pH=8.6	2 May	pH=8.6	2 August	pH=8.6	11 February
		pH=8.9	9 May	pH=8.6	11 September	DO=5.9	1 November
		pH=8.9	20 May	DO=5.9	20 July	DO=5.9	21 February
		pH=8.7	1 June			Magnesium=24.3	3 December
		pH=8.7	21 June			Magnesium=24.3	11 December
		DO=5.1	11 June				
		DO=5.7	1 March				
		DO=5.7	7 March				
		DO=5.9	19 March				
		DO=5.5	1 April				
		DO=5.9	11 April				
		DO=5.5	2 May				
		Floride=1.54	2 May				

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
20	Degloor			DO=5.1	3 September		
				BOD=2.4	2 August		
				BOD=2.4	3 September		
				BOD=2.6	2 July		
21	Yelli			DO=5.1	4 October		
				pH=9.0	2 July		
				pH=8.8	2 August		
				DO=5.5	4 October		
				BOD=2.1	3 September		
22	Purna			DO=5.5	4 October		
				BOD=3.7	4 October		
23	Dhalegaon			Calcium=88	3 September	Magnesium=26.7	1 November
				DO=5.7	3 September	DO=5.7	1 November
				DO=4.5	4 October		
				DO=4.5	4 October		

Source : Water Quality Year Book for 2001-2002

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VI Basin : Krishna		Year : 1999-2000					
1	Vijaywada	pH=8.65 pH=8.57 pH=8.70	1, June 1, June 21, March	pH=8.53 pH=8.58	1, July 2, August	pH=8.62	9, December
2	Keesra	pH=8.53 pH=8.70 pH=8.68	1, June 21, March 21, March	pH=8.62 pH=8.52 BOD=2.50	1, July 12, July 21, September		
3	Wadenpalli	BOD=3.30	19, April	BOD=2.50	1, November		
4	Dhamracherla	pH=8.60 BOD=2.70 BOD=2.40 Hardness=303	21, March 2, March 11, May 2, March	pH=8.51 Hardness=387	11, August 12, July	Hardness=317	1, February
5	Pondugala	pH=8.64 BOD=2.50 BOD=2.90	21, June 9, March May	BOD=2.90	11, November	pH=8.65 BOD=2.30	21, Janaury 21, Janaury
6	Madhira	pH=8.53 pH=8.68	June March				

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VI Basin : Krishna		Year : 1999-2000					
7	Bawapuram	pH=8.56 pH=8.59 pH=9.20 pH=9.11 pH=8.71 pH=8.70 pH=8.87 pH=9.14 BOD=2.30 BOD=2.30	8, June 21, June 21, March 11, April 19, April 1, May 11, May 22, May 19, April May	pH=8.86 pH=8.86 pH=8.86	1, July August August	pH=8.55 pH=8.66 pH=8.72 pH=8.85 BOD=2.50	9, December 21, January 1, February 21, February November
8	Paleru Bridge	Hardness=308 Hardness=475 Hardness=448 Hardness=308 Hardness=339	21, June 3, April 11, April 19, April 8, May	Hardness=338 Hardness=351 Hardness=338	21, August 2, August 20, August		
9	Mantralayam	pH=8.61 pH=8.69 pH=8.68 pH=8.96	1, June 21, June 9, March 21, March	pH=8.70 pH=8.64 Sodium%=64.00	1, July 21, July 2, August	pH=8.60 pH=8.51 pH=8.70 pH=8.74	11, November 21, January 1, February 21, February
10	T.Ramapuram	Hardness=402	10, June	BOD=2.30 BOD=5.60 Hardness=609	4, October 21, October 21, July	BOD=3.90 Hardness=312 Hardness=303	9, December 21, December 1, February

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VI	Basin : Krishna				Year : 1999-2000		
				Hardness=311 Sodium%=66.80	2, August 2, August	Sodium%=63.49 Sodium%=77.70	1, February 21, February
11	Kellodu	Hardness=63.37	June	Hardness=63.82	October		
12	Oolinur	pH=8.68	21, March	pH=8.82 pH=8.75	2, August 11, August		
13	Krishna Agraharam	pH=8.66 pH=8.63 pH=8.51 pH=5.40 Hardness=312	21, June 21, March 22, May May 11, April	BOD=3.00	2, August	BOD=3.30 BOD=3.10 pH=8.52 pH=8.51	1, November 9, December 1, February 21, February
14	Yadgir	pH=8.65 pH=8.52 pH=9.04 pH=8.54 BOD=2.70	10, June 9, March 21, March 19, April 2, March	pH=8.52 pH=8.56 pH=8.65 pH=8.62	21, July 11, August 20, August 1, September	pH=8.74 pH=8.52 BOD=2.50 BOD=2.30	1, February 21, February 21, October 21, December
15	Sarati			DO=4.70 DO=4.40 DO=5.10 DO=5.60 BOD=310 BOD=300	July August October November October November		

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VI	Basin : Krishna				Year : 1999-2000		
				Sodium%=71.79 Hardness=305	October November		
16	Phulgaon			BOD=2.30 DO=4.80	September August		
17	Malkhed	pH=8.59	21, March	pH=8.66	1, July		
18	Wadakbal	BOD=2.60 DO=5.10	June June	BOD=2.30 DO=3.90 DO=5.80 Hardness=412	October July October July	BOD=3.50	December
19	Takali			BOD=2.20 DO=4.00 DO=5.10 DO=5.60 Hardness=321 Sodium%=70.98	August July August September July October	BOD=2.20 BOD=2.60 DO=5.80 Hardness=367	November December November December
20	Galgali	DO=5.00	June	DO=4.10 DO=4.60 DO=5.70 DO=4.00	July August September October		
21	Karad			DO=4.20	July	pH=8.67	December

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VI	Basin : Krishna				Year : 1999-2000		
				DO=5.40	August	DO=3.90	November
				DO=5.10	October	BOD=2.40	November
				BOD=3.60	September		
				BOD=2.10	October		
22	Huvenhedgi	pH=8.53	21, June	pH=8.54	August	BOD=2.10	11, November
		pH=8.80	21, March			pH=8.62	1, February
		BOD=2.30	21, March			pH=8.60	21, February
23	Cholachgudda	DO=4.70	June	DO=4.70	September	DO=5.70	November
		Sodium%=63.41	March	DO=5.50	October	BOD=4.10	November
				BOD=2.20	October		
24	Bagalkot	DO=4.70	June	DO=4.10	July	DO=5.30	November
		BOD=3.30	March	DO=4.00	September	DO=4.40	December
		Sodium%=64.44	March	DO=5.40	October	BOD=2.20	October
						BOD=2.30	November
						Sodium%=66.73	October
25	Warunji			DO=4.20	July	DO=5.80	November
				DO=5.30	September	BOD=2.60	October
				DO=4.50	October	BOD=2.50	November
				BOD=2.10	August	BOD=3.50	December

Source: Water Quality Year Book for 1999-2000

Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VII Basin : Cauvery		Year : 2000-2001					
1	Urachikottai					pH=8.50	January
2	Muthankera					pH=8.25 D.O.=5.7	January
3	Kanakpura	pH=8.21 SO ₄ ⁻ =2.540	June	DO=4.8 BOD=5.0	August July	Hardeness=363	Februrary
4	Musiri					pH=8.55 SO ₄ ⁻ =.522	January January
5	Savandapur	DO=5.6	June	SO ₄ ⁻ =0.792 DO=5.6	October June	DO=5.6	February
6	Nellithurai	pH=8.15	May	ph=8.15	May		
7	Biligundulu	SO ₄ ⁻ =0.629	June	BOD=2.9 DO=5.9	July October	pH=8.19	December
8	T.K. Halli	DO=5.2 BOD=2.7	May March			Ph=8.22 SO ₄ ⁻ =.0.833	Janaury Janaury
9	Kollegal	pH=8.27 BOD=3.8	April May	Do=2.3	August	SO ₄ ⁻ =.0.708	November
10	T.Narsipur			pH=8.23 DO=5.2 BOD=2.9	July July July	Sodium%=69.52	February
11	Hoshalli			DO=5.5	October	pH=8.23	January

Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VII Basin : Cauvery				Year : 2000-2001			
12	Kudige					SO ₄ ⁻ =0.833 BOD=2.7 Sodium%=61.62	Janaury Janaury November
13	Kudlur	pH=8.44	May			DO=5.4	February
14	Kodumudi	Ph=8.37 SO ₄ ⁻ =0.557 BOD=2.4	May May May				
15	Elunuthimangalam			Ph=8.64 SO ₄ ⁻ =3.532 Hardness=432 Sodium%=74.28	October October October October		
16	Nallamaranpatty					pH=8.43 SO ₄ ⁻ =0.697	February February
17	Kattamalavadi			SO ₄ ⁻ =0.708	November	pH=8.21	Janaury

Source: Water Quality Year Book for 2000-2001

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

VIII Basin : East Flowing Rivers of Coastal of A.P.& Tamil Nadu.

Year : 2000-2001

1	Thammavaram	pH=8.64	May	pH=8.55	September		
		BOD=3.90	June	BOD=4.00	August		
		Hardness=315.14	April	Sodium%=61.05	July		
		Sodium%=66.64	June	Sodium%=61.37	August		
		Sodium%=60.93	May				
2	Vazhavachanur	DO=3.00	June	DO=5.50	October	DO=4.90	November
		DO=4.80	March			DO=3.90	February
		DO=4.90	April				
		DO=3.20	May				
3	Murappandu	DO=5.3	June	DO=5.7	October	DO=5.7	February
		DO=5.0	March			DO=5.4	November
		DO=5.6	April				
		DO=5.8	May				
4	A.P. Puram	Hardness=693.38	June	Hardness=368.00	September	Hardness=364.76	January
		Hardness=510.96	March	Hardness=452.00	October	Hardness=521.04	February
		Hardness=384.00	April			Hardness=496.00	November
		Hardness=600.00	May			Hardness=480.00	December
		Sodium%=61.64	April				
Sodium%=60.29	June						
5	Gummanur	DO=4.90	March			DO=5.4	November

Source: Water Quality Year Book for 2000-2001.

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
IX Basin : West Flowing Rivers of Coastal of Kerala, Karnataka, & Maharashtra.		Year : 2000-2001					
1	Alladupalli					BOD=2.40 BOD=3.25	December February
2	Mangaon			DO=5.70	September		
3	Badlapur	DO=4.10 DO=5.68 DO=4.05	June March April	DO=5.70	July	DO=5.30 DO=5.70 DO=5.68 DO=5.68	November December January February
4	Kuniyil			pH=8.62	October		
5	Mankara			pH=8.55 DO=3.92	October July		
6	Pudur			DO=4.59 DO=5.12 DO=5.76	July September October	pH=8.55	February
7	Pattazhy	DO=4.90	June				

Source: Water Quality Year Book for 2000-2001.

Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing Tolerance Limits for Summer, Monsoon and Winter Seasons

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
X Basin : Tapi		Year : 1996-97					
1	Lakhpuri	Sodium%=61.64	1 March			Sodium% =63.39	15 January
						Sodium% =62.40	15 February
2	Pingalwada	Fe=0.031	15 June	Sodium%=67.38	1 July	Fe=0.032	1 January
		Sodium%=66.05	1 March			Sodium%=73.38	2 December
		Sodium%=74.43	1 April			Sodium%=73.69	16 December
		Sodium%=67.08	15 April			Sodium%=76.23	1 January
		Sodium%=67.02	1 May			Sodium%=74.55	15 January
		Sodium%=66.42	15 May			Sodium%=75.28	1 February
		Sodium%=74.43	1 June			Sodium%=75.37	15 February
		Sodium%=71.85	15 June				
3	Motinaroli	Sodium%=66.70	15 April			Sodium%=61.76	16 December
						Sodium%=64.36	1 January
						Sodium%=67.64	15 January
						Sodium%=62.26	1 February
						Sodium%=66.42	15 February

Source: Water Quality Year Book for 1996-97

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
XI	Basin : Narmada						
				Year : 2001-2002			
1	Rajghat	pH=8.55 BOD=2.8	15, May June				
2	Mandleshwar			pH=8.63 BOD=2.1	17, September 2, July		
3	Kogaon					pH=8.59 BOD=3.5 Hardness=306 Sodium%=65.0	1, January 1, January 1, January 1, January
4	Gadarwara					BOD=2.5	1, January
5	Patan	BOD=3.4	1, March				
6	Dindori					BOD=8.70	1, January
7	Mortaka					BOD=3.0	1, January
8	Handia			DO=5.7	July	pH=8.53	15, January
9	Barmanghat					pH=8.46 BOD=3.4	1, January 1, February
10	Mohegaon					pH=8.58	1, January
11	Manot					BOD=2.6	1, December

Source: Water Quality Year Book for 2001-2002.

**Table No 3.2 : Critical Absolute Values of Water Quality Parameters Crossing
Tolerance Limits for Summer, Monsoon and Winter Seasons**

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
XII Basin : Mahi,Sabarmati & Others		Year : 1996-97					
1	Derol Bridge	Sodium%=61.13	1 March	Sodium%=62.58	1 July	Sodium%=65.59	1 January
		Sodium%=65.36	15 March			Sodium%=65.88	1 February
		Sodium%=60.13	15 May			Sodium%=65.25	15 February
		Sodium%=60.65	1 June				
		Sodium%=65.87	15 June				
2	Nabhoi	Fe=0.077	1 June	Fe=0.079	1 July	Fe=0.057	15 November
		Fe=0.084	15 June	Fe=0.062	15 July	Fe=0.086	2 December
		Fe=0.062	1 March	Sodium %=75.49	1 July	Fe=0.060	16 December
		Fe=0.077	15 March	Sodium %=71.70	15 July	Fe=0.063	1 January
		Fe=0.108	1 April			Fe=0.107	15 January
		Fe=0.052	15 April			Fe=0.113	1 February
		Fe=0.073	1 May			Fe=0.111	15 February
		Fe=0.079	15 May			NH ₄ ⁺ =1.239	15 November
		NH ₄ ⁺ =1.134	1 April			NH ₄ ⁺ =1.368	2 December
		NH ₄ ⁺ =1.224	15 May			NH ₄ ⁺ =1.191	15 January
		Sodium %=75.34	1 March			NH ₄ ⁺ =1.467	1 February
		Sodium %=75.98	15 March			NH ₄ ⁺ =1.134	15 February
		Sodium %=75.75	1 April			Sodium %=74.93	1 November
		Sodium %=73.63	15 April			Sodium %=76.97	15 November
		Sodium %=76.09	1 May			Sodium %=77.57	2 December
		Sodium %=76.21	15 May			Sodium %=74.37	16 December
						Sodium %=75.05	1 January
						Sodium %=74.97	15 January
				Sodium %=74.71	1 February		
				Sodium %=76.30	15 February		

Source: Water Quality Year Book for 1996-97

Table No.3.3 : Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
I Basin : Mahanadi														
Year : 2002-03														
1	Tikarapara	Mahanadi	155.20	3500.00	21.00	30.00	7.40	8.20	146	200	0.042	0.064	0.268	0.487
2	Kesinga	Tel	-	-	23.50	32.00	7.69	8.38	102	250	0.015	0.261	0.082	0.432
3	Kantamal	Tel	-	-	20.50	29.00	7.94	8.33	121	262	0.015	0.133	0.113	0.543
4	Salebhata	Ong	-	-	18.50	28.50	7.87	8.52	169	430	0.015	0.143	0.182	1.695
5	Sundergarh	Ib	-	-	24.50	31.00	7.92	8.42	134	227	0.054	0.076	0.160	0.231
6	Kurubhanta	Mand	-	-	19.50	29.00	7.34	8.16	137	310	0.025	0.106	0.130	0.247
7	Basantpur	Mahanadi	17.33	2600.00	16.50	30.00	7.90	8.20	103	300	0.051	0.101	0.318	0.607
8	Bamnidhi	Hasdeo	18.66	250.00	14.00	28.00	6.75	8.15	118	170	0.032	0.081	0.248	0.557
9	Manendragarh	Hasdeo	-	-	14.50	27.00	6.98	8.86	103	340	0.023	0.176	0.117	0.343
10	Rampur	Jonk	-	-	26.50	29.50	7.57	8.33	118	240	0.074	0.099	0.308	0.381
11	Jondhra	Jonk	-	-	20.50	29.50	7.53	8.90	161	620	0.007	0.253	0.352	1.600
12	Ghatora	Arpa	0.164	151.0	17.00	27.00	7.30	8.10	154	1000	0.042	0.141	0.272	2.227
13	Andhiyarkore	Hamp	-	-	16.00	31.00	7.34	8.64	530	900	0.038	0.324	0.952	2.312
14	Simga	Seonath	-	-	19.00	29.00	7.81	8.60	197	600	0.043	0.152	0.126	1.364
15	Pathardhi	Kharun	-	-	27.00	29.50	7.81	8.70	219	340	0.076	0.215	0.139	0.696
16	Rajim	Mahanadi	-	-	18.50	27.50	7.44	8.36	75	340	0.038	0.165	0.139	0.291
17	Baronda	Pairi	-	-	17.50	30.50	7.51	7.95	64	134	0.020	0.189	0.095	0.434

Table No.3.3 : Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH ₃)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
I Basin : Mahanadi														
Year : 2002-03														
1	Tikarapara	Mahanadi	0.720	0.960	0.240	0.640	0.003	0.024	0.003	0.023	0.009	0.031	0.000	0.000
2	Kesinga	Tel	0.250	1.316	0.182	0.658	-	-	-	-	-	-	0.107	0.217
3	Kantamal	Tel	0.299	1.248	0.165	0.599	-	-	-	-	-	-	0.87	0.113
4	Salebhata	Ong	0.998	1.892	0.411	0.782	-	-	-	-	-	-	0.52	0.217
5	Sundergarh	Ib	0.200	0.848	0.165	0.576	-	-	-	-	-	-	0.000	0.167
6	Kurubhanta	Mand	0.317	1.846	0.165	0.448	-	-	-	-	-	-	0.000	0.000
7	Basantpur	Mahanadi	0.320	1.680	0.240	0.880	0.012	0.032	0.004	0.015	0.005	0.007	0.000	0.000
8	Bamnidhi	Hasdeo	0.480	0.800	0.240	0.480	0.011	0.029	0.002	0.026	0.000	0.000	0.000	0.000
9	Manendragarh	Hasdeo	0.450	1.076	0.082	0.796	-	-	-	-	-	-	0.087	0.187
10	Rampur	Jonk	0.699	1.547	0.165	0.499	-	-	-	-	-	-	0.000	0.767
11	Jondhra	Jonk	0.948	2.599	0.329	1.349	-	-	-	-	-	-	0.113	0.333
12	Ghatora	Arpa	0.640	5.120	0.320	3.760	0.011	0.031	0.001	0.011	0.002	0.039	0.000	0.000
13	Andhiyarkore	Hamp	1.845	4.987	0.494	1.715	-	-	-	-	-	-	0.162	1.167
14	Simga	Seonath	1.047	2.599	0.247	1.082	-	-	-	-	-	-	0.048	0.733
15	Pathardhi	Kharun	0.749	1.447	0.365	0.576	-	-	-	-	-	-	0.267	0.392
16	Rajim	Mahanadi	0.399	1.494	0.082	0.494	-	-	-	-	-	-	0.212	0.242
17	Baronda	Pairi	0.699	0.749	0.110	0.247	-	-	-	-	-	-	0.000	0.000

Table No.3.3 : Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
I Basin : Mahanadi														
Year : 2002-03														
1	Tikarapara	Mahanadi	0.689	1.651	0.214	0.438	0.000	0.000	0.042	0.183	0.000	0.000	0.032	0.132
2	Kesinga	Tel	0.819	1.981	0.105	0.310	-	-	0.102	0.192	-	-	-	-
3	Kantamal	Tel	0.432	2.196	0.133	0.195	-	-	0.102	0.102	-	-	-	-
4	Salebhata	Ong	0.819	2.917	0.141	0.367	-	-	0.021	0.308	0.004	0.029	0.094	0.161
5	Sundergarh	Ib	0.687	1.327	0.107	0.210	-	-	-	0.000	-	0.041	0.000	0.041
6	Kurubhanta	Mand	0.691	2.655	0.085	1.519	0.050	0.107	-	-	-	-	-	-
7	Basantpur	Mahanadi	0.472	1.785	0.274	0.603	0.000	0.000	0.052	0.308	0.000	0.000	0.034	0.084
8	Bamnidhi	Hasdeo	0.472	1.116	0.217	0.472	0.000	0.000	0.042	0.333	0.000	0.000	0.035	0.333
9	Manendragarh	Hasdeo	0.459	2.026	0.085	0.210	-	-	0.130	0.160	-	-	-	-
10	Rampur	Jonk	2.426	4.556	0.117	0.903	-	-	0.125	0.167	-	0.077	-	-
11	Jondhra	Jonk	0.739	3.846	0.190	0.346	-	-	0.146	0.292	-	0.094	-	0.041
12	Ghatora	Arpa	0.690	7.908	0.274	2.466	-	-	0.060	0.642	0.000	0.000	0.021	0.245
13	Andhiyarkore	Hamp	3.081	6.653	0.141	0.564	-	-	0.392	1.312	-	-	-	-
14	Simga	Seonath	1.098	3.179	0.110	0.236	-	-	0.160	0.279	0.044	0.044	-	0.44
15	Pathardhi	Kharun	1.278	1.884	0.197	0.223	-	-	0.250	0.250	0.000	0.046	-	-
16	Rajim	Mahanadi	0.459	1.863	0.092	0.277	-	-	0.033	0.142	-	-	-	-
17	Baronda	Pairi	0.329	1.152	0.105	0.226	0.000	0.000	0.075	0.156	0.000	0.000	-	-

Table No.3.3 : Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO ₃)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
			(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
I Basin : Mahanadi														
Year : 2002-03														
1	Tikarapara	Mahanadi	0.000	0.004	0.002	0.008	0.276	0.460	0.10	8.54	0.38	1.63	-	-
2	Kesinga	Tel	-	-	-	-	-	-	7.18	10.29	0.36	1.49	-	-
3	Kantamal	Tel	-	-	-	-	-	-	6.46	9.33	0.35	1.43	-	-
4	Salebhata	Ong	-	-	-	-	-	-	6.23	8.94	0.44	1.43	-	-
5	Sundergarh	Ib	-	-	-	-	-	-	7.28	8.40	0.68	0.94	-	-
6	Kurubhanta	Mand	-	-	-	-	-	-	5.83	8.38	0.72	1.20	-	-
7	Basantpur	Mahanadi	-	-	-	0.00	0.243	0.513	5.90	8.95	0.56	2.24	-	-
8	Bamnidhi	Hasdeo	-	-	-	0.00	0.204	0.375	5.10	8.88	0.50	1.70	-	-
9	Manendragarh	Hasdeo	-	-	-	-	-	-	7.42	11.49	0.48	1.11	-	-
10	Rampur	Jonk	-	-	-	-	-	-	5.79	8.59	0.37	0.93	-	-
11	Jondhra	Jonk	-	-	-	-	-	-	7.33	9.57	0.56	1.44	-	-
12	Ghatora	Arpa	0.000	0.000	0.006	0.013	0.302	1.341	1.44	7.12	0.75	123.00	-	-
13	Andhiyarkore	Hamp	-	-	-	-	-	-	7.18	9.07	0.52	1.64	-	-
14	Simga	Seonath	-	-	-	-	-	-	7.16	9.81	0.56	2.44	-	-
15	Pathardhi	Kharun	-	-	-	-	-	-	7.72	8.10	0.73	1.68	-	-
16	Rajim	Mahanadi	-	-	-	-	-	-	6.03	8.68	0.24	0.96	-	-
17	Baronda	Pairi	-	-	-	-	-	-	7.66	8.62	0.31	1.35	-	-

Table No.3.3 : Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
I Basin : Mahanadi														
Year : 2002-03														
1	Tikarapara	Mahanadi	-	-	-	-	50.04	72.06	15.23	26.11	0.32	0.57	0.00	0.00
2	Kesinga	Tel	-	-	-	-	34.08	87.87	-	6.88	-	0.11	0.05	0.34
3	Kantamal	Tel	-	-	-	-	24.72	83.02	-	8.78	-	0.15	0.10	0.54
4	Salebhata	Ong	-	-	-	-	74.66	129.65	12.02	26.56	0.31	0.74	0.13	0.43
5	Sundergarh	Ib	-	-	-	-	45.54	63.80	-	-	-	-	0.21	0.31
6	Kurubhanta	Mand	-	-	-	-	21.82	43.23	-	-	-	-	0.30	0.34
7	Basantpur	Mahanadi	-	-	-	-	28.02	120.10	16.05	38.58	0.43	0.74	0.00	0.32
8	Bamnidhi	Hasdeo	-	-	-	-	36.03	60.05	19.54	35.08	0.05	0.80	0.03	0.16
9	Manendragarh	Hasdeo	-	-	-	-	33.23	93.67	12.62	13.45	0.19	0.22	0.13	0.37
10	Rampur	Jonk	-	-	-	-	78.46	97.98	15.72	15.72	0.39	0.39	2.60	3.18
11	Jondhra	Jonk	-	-	-	-	63.90	188.35	15.47	17.24	0.43	0.48	0.08	0.60
12	Ghatora	Arpa	-	-	-	-	48.04	444.36	8.19	35.73	0.22	1.31	0.00	0.00
13	Andhiyarkore	Hamp	-	-	-	-	142.16	285.88	21.80	35.42	0.80	1.34	0.30	0.72
14	Simga	Seonath	-	-	-	-	105.88	184.20	16.34	22.23	0.46	0.60	0.05	0.26
15	Pathardhi	Kharun	-	-	-	-	66.30	97.13	-	-	-	-	0.07	0.34
16	Rajim	Mahanadi	-	-	-	-	24.07	87.27	7.44	15.76	0.15	0.32	0.03	0.12
17	Baronda	Pairi	-	-	-	-	32.93	49.84	9.14	15.14	0.14	0.21	0.07	0.24

Source: Water Quality Year Book for 2002-2003

Note : All the ionic concentrations are expressed in mg./lit., unless mentioned otherwise.

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

**II Basin : Subarnarekha,
Burhabalang & Baitarni,
Year : 2002-03**

a) Basin : Subarnarekha

1	Ghatshila	Subarnarekha	12.68	697.7	18.0	30.5	7.30	8.10	165	570	0.052	0.230	0.215	1.409
2	Adityapur	Kharkai	3.702	295.7	19.0	30.0	6.80	8.20	133	860	0.046	0.195	0.370	1.949
3	Muri	Subarnarekha	1.239	39.7	15.0	33.0	7.50	8.60	134	310	0.061	0.091	0.370	0.840
4	Jamshedpur	Subanarekha	-	-	18.5	32.0	7.3	8.05	167	300	0.045	0.092	0.370	1.253

b) Basin : Baitarni

1	Anandpur	Baitarni	7.391	540.00	20.5	29.0	7.30	8.20	95	192	0.032	0.068	0.215	0.452
2	Champua	Baitarni	2.810	75.14	21.5	28.5	7.50	7.90	68	540	0.020	0.067	0.109	0.215

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH ₃)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)

**II Basin : Subarnarekha,
Burhabalang & Baitarni,
Year : 2002-03**

a) Basin : Subarnarekha

1	Ghatshila	Subarnarekha	0.800	2.720	0.400	1.440	0.027	0.050	0.006	0.049	0.003	0.017	0.000	0.000
2	Adityapur	Kharkai	0.640	5.200	0.240	1.440	0.008	0.046	0.009	0.030	0.017	0.092	0.000	0.000
3	Muri	Subarnarekha	0.720	1.440	0.240	0.880	0.011	0.026	0.001	0.012	0.003	0.034	0.000	0.000
4	Jamshedpur	Subanarekha	0.800	1.680	0.160	0.960	0.016	0.090	0.006	0.035	0.027	0.052	0.000	0.000

b) Basin : Baitarni

1	Anandpur	Baitarni	0.320	0.960	0.160	0.480	0.009	0.031	0.004	0.025	0.003	0.054	0.000	0.000
2	Champua	Baitarni	0.320	2.800	0.160	1.840	0.007	0.031	0.002	0.022	0.002	0.012	0.000	0.000

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)

**II Basin : Subarnarekha,
Burhabalang & Baitarni,
Year : 2002-03**

a) Basin : Subarnarekha

1	Ghatshila	Subarnarekha	0.738	2.165	0.219	1.424	0.020	0.039	0.042	1.697	0.000	0.000	0.066	0.683
2	Adityapur	Kharkai	0.541	4.429	0.329	1.904	0.004	0.060	0.033	0.832	0.000	0.000	0.018	0.683
3	Muri	Subarnarekha	0.846	2.067	0.326	1.033	0.001	0.063	0.050	0.291	0.000	0.000	0.023	0.093
4	Jamshedpur	Subanarekha	0.837	1.575	0.329	1.370	0.001	0.006	0.017	0.100	0.000	0.000	0.024	0.093

b) Basin : Baitarni

1	Anandpur	Baitarni	0.547	1.280	0.217	0.493	0.005	0.009	0.033	0.166	0.000	0.000	0.010	0.106
2	Champua	Baitarni	0.466	4.135	0.110	0.767	0.005	0.053	0.021	0.324	0.000	0.000	0.041	0.177

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO ₃)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
			(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)

**II Basin : Subarnarekha,
Burhabalang & Baitarni,
Year : 2002-03**

a) Basin : Subarnarekha

1	Ghatshila	Subarnarekha	0.000	0.000	0.002	0.003	0.322	0.684	6.30	8.95	0.72	2.44	-	-
2	Adityapur	Kharkai	0.000	0.000	0.001	0.010	0.270	1.072	4.48	8.39	0.54	2.45	-	-
3	Muri	Subarnarekha	0.001	0.002	0.004	0.011	0.273	0.704	5.76	8.54	0.72	2.52	-	-
4	Jamshedpur	Subanarekha	0.000	0.000	0.003	0.006	0.256	0.684	3.96	7.83	0.75	2.04	-	-

b) Basin : Baitarni

1	Anandpur	Baitarni	0.000	0.000	0.001	0.004	0.138	0.947	-	-	-	-	-	-
2	Champua	Baitarni	0.000	0.000	0.000	0.000	0.301	0.901	-	-	-	-	-	-

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)

**II Basin : Subarnarekha,
Burhabalang & Baitarni,
Year : 2002-03**

a) Basin : Subarnarekha

1	Ghatshila	Subarnarekha	-	-	-	-	64.05	208.17	7.30	25.22	19.00	0.98	0.00	0.00
2	Adityapur	Kharkai	-	-	-	-	44.04	332.27	15.97	29.95	0.39	1.07	0.00	0.00
3	Muri	Subarnarekha	-	-	-	-	48.04	96.08	20.61	44.77	0.53	1.34	0.00	0.02
4	Jamshedpur	Subanarekha	-	-	-	-	52.04	120.10	20.56	53.23	0.46	1.74	0.00	0.01

b) Basin : Baitarni

1	Anandpur	Baitarni	-	-	-	-	28.02	72.06	19.08	34.96	0.32	0.71	0.00	0.00
2	Champua	Baitarni	-	-	-	-	24.02	232.19	11.63	26.61	0.17	0.41	0.00	0.01

Note : All the ionic concentrations are expressed in mg./lit., unless mentioned otherwise.

Source: Water Quality Year Book for 2002-03

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

III Basin : Brahmani
Year : 2002-03

1	Jenapur	Brahmani	10.32	3182	21.0	30.0	7.2	8.10	101	290	0.031	0.062	0.248	0.318
2	Talcher	Brahmani	2.372	188	2.2	32.0	7.1	8.10	103	172	0.32	0.052	0.231	0.370
3	Gomlai	Brahmani	10.32	3182	21.5	31.5	7.2	8.00	98	390	0.031	0.099	0.37	0.642
4	Tilga	Sankh/ Brahmani	1.311	256.6	16.0	29.0	7.1	7.80	50	150	0.034	0.061	0.198	0.318
5	Jaraikela	Koel/ Brahmani	2.129	599.2	18.0	31.0	7.1	8.10	79	240	0.032	0.079	0.165	0.396
6	Pamposh	Brahmani	16.45	352.4	19.5	29.5	7.6	8.10	88	280	0.031	0.099	0.265	0.470

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH ₃)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)

III Basin : Brahmani
Year : 2002-03

1	Jenapur	Brahmani	0.480	1.360	0.160	0.800	0.001	0.014	0.001	0.009	0.001	0.041	0.000	0.121
2	Talcher	Brahmani	0.560	0.960	0.160	0.480	0.006	0.018	0.002	0.011	0.000	0.041	0.000	0.000
3	Gomlai	Brahmani	0.480	2.080	0.160	1.040	0.003	0.041	0.001	0.019	0.002	0.042	0.000	0.000
4	Tilga	Sankh/ Brahmani	0.240	0.640	0.080	0.480	0.009	0.023	0.003	0.009	0.002	0.016	0.000	0.000
5	Jaraikela	Koel/ Brahmani	0.400	1.200	0.160	0.720	0.002	0.015	0.001	0.007	0.006	0.031	0.000	0.000
6	Pamposh	Brahmani	0.400	1.280	0.160	0.880	0.005	0.029	0.002	0.007	0.011	0.057	0.240	0.430

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)

**III Basin : Brahmani
Year : 2002-03**

1	Jenapur	Brahmani	0.541	1.673	0.217	0.657	0.000	0.000	0.009	0.087	0.000	0.000	0.017	0.171
2	Talcher	Brahmani	0.492	1.132	0.217	0.381	0.000	0.008	0.006	0.116	0.000	0.000	0.022	0.303
3	Gomlai	Brahmani	0.468	1.870	0.272	0.657	0.000	0.023	0.019	0.799	0.000	0.000	0.028	0.631
4	Tilga	Sankh/ Brahmani	0.295	0.886	0.163	0.295	0.000	0.000	0.012	0.063	0.000	0.000	0.013	0.074
5	Jaraikela	Koel/ Brahmani	0.394	1.870	0.164	0.384	0.000	0.004	0.018	0.050	0.000	0.000	0.015	0.081
6	Pamposh	Brahmani	0.492	1.378	0.217	0.438	0.000	0.027	0.048	0.133	0.000	0.000	0.010	0.184

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO ₃)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
			(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)

III Basin : Brahmani
Year : 2002-03

1	Jenapur	Brahmani	0.000	0.005	0.000	0.000	0.224	0.967	5.58	8.54	0.37	1.02	-	-
2	Talcher	Brahmani	0.000	0.002	0.000	0.009	0.270	0.562	6.48	8.34	0.41	1.12	-	-
3	Gomlai	Brahmani	0.000	0.007	0.000	0.000	0.270	0.684	5.09	8.14	0.55	1.63	-	-
4	Tilga	Sankh/ Brahmani	0.001	0.003	0.000	0.000	0.224	0.526	5.40	8.39	0.41	1.10	-	-
5	Jaraikela	Koel/ Brahmani	0.000	0.003	0.000	0.002	0.204	0.381	6.12	8.75	0.40	1.43	-	-
6	Pamposh	Brahmani	0.001	0.008	0.000	0.000	0.270	0.743	5.90	8.54	0.72	2.24	-	-

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)

III Basin : Brahmani
Year : 2002-03

1	Jenapur	Brahmani	-	-	-	-	-	-	-	-	-	-	0.000	0.000
2	Talcher	Brahmani	-	-	-	-	-	-	-	-	-	-	0.000	0.000
3	Gomlai	Brahmani	-	-	-	-	-	-	-	-	-	-	0.000	0.000
4	Tilga	Sankh/ Brahmani	-	-	-	-	-	-	-	-	-	-	0.000	0.000
5	Jaraikela	Koel/ Brahmani	-	-	-	-	-	-	-	-	-	-	0.000	0.13
6	Pamposh	Brahmani	-	-	-	-	-	-	-	-	-	-	0.000	0.000

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
III Basin : Brahmani														
Year : 2002-03														
1	Jenapur	Brahmani	-	-	-	-	34.03	108.09	22.76	52.88	2.73	7.99	0.00	0.00
2	Talcher	Brahmani	-	-	-	-	36.03	72.06	19.09	25.83	0.39	0.49	0.00	0.01
3	Gomlai	Brahmani	-	-	-	-	8.46	88.07	16.63	28.54	0.39	0.54	0.00	0.00
4	Tilga	Sankh/ Brahmani	-	-	-	-	20.02	56.04	19.46	37.70	0.38	0.65	0.01	0.09
5	Jaraikela	Koel/ Brahmani	-	-	-	-	28.02	96.08	16.80	26.06	0.31	0.51	0.00	0.00
6	Pamposh	Brahmani	-	-	-	-	28.02	108.09	16.60	30.67	0.36	0.52	0.00	0.26

Source: Water Quality Year Book for 2002-03

Note : All the ionic concentrations are expressed in mg./lit., unless mentioned otherwise.

Table No.3.3 Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
IV Basin : Rushikulya, Vamsadhara, Sarada & Nagavali Year : 2002-2003														
Basin : Rushikulya														
	Purushattampur	Rushikulya	0.170	191.8	33.6	25.0	7.30	8.20	190	350	0.033	0.058	0.335	0.861
Basin : Vamsdhara														
	Kashi Nagar	Vamsdhara	0.940	147.5	16.5	31.5	7.20	8.10	110	660	0.079	0.116	0.370	0.905
Basin : Nagavali														
	Srikakulam	Nagavali	1.450	145.30	26.0	34.1	7.50	8.10	210	560	0.041	0.138	0.283	1.679

Table No.3.3 Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH ₃)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
IV Basin : Rushikulya, Vamsadhar Sarada & Nagavali Year : 2002-2003														
Basin : Rushikulya														
	Purushattampur	Rushikulya	1.040	1.920	0.72	0.880	0.003	0.017	0.001	0.008	0.000	0.000	0.000	0.009
Basin : Vamsdhara														
	Kashi Nagar	Vamsdhara	0.560	3.200	0.320	2.480	0.006	0.030	0.001	0.011	0.006	0.010	0.000	0.000
Basin : Nagavali														
	Srikakulam	Nagavali	1.440	2.800	0.320	1.200	0.003	0.022	0.002	0.014	0.000	0.000	0.000	0.000

Table No.3.3 Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
IV Basin : Rushikulya, Vamsadhar Sarada & Nagavali Year : 2002-2003														
Basin : Rushikulya														
	Purushattampur	Rushikulya	1.410	2.445	0.384	0.767	0.005	0.042	0.058	0.175	0.000	0.000	0.008	0.039
Basin : Vamsdhara														
	Kashi Nagar	Vamsdhara	0.689	5.512	0.329	0.925	0.004	0.006	0.017	0.166	0.000	0.000	0.027	0.100
Basin : Nagavali														
	Srikakulam	Nagavali	1.699	3.775	0.326	1.370	0.011	0.068	0.092	0.250	0.000	0.000	0.019	0.213

Table No.3.3 Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO ₃)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
			(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
IV Basin : Rushikulya, Vamsadhar Sarada & Nagavali Year : 2002-2003														
Basin : Rushikulya														
	Purushattampur	Rushikulya	0.000	0.000	0.000	0.000	0.250	0.460	-	-	-	-	-	-
Basin : Vamsdhara														
	Kashi Nagar	Vamsdhara	0.000	0.000	0.003	0.010	0.500	1.184	-	-	-	-	-	-
Basin : Nagavali														
	Srikakulam	Nagavali	0.000	0.000	0.002	0.421	0.263	0.572	-	-	-	-	-	-

Table No.3.3 Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
IV Basin : Rushikulya, Vamsadhar Sarada & Nagavali Year : 2002-2003														
Basin : Rushikulya														
	Purushattampur	Rushikulya	-	-	-	-	-	-	-	-	-	-	0.00	0.00
Basin : Vamsdhara														
	Kashi Nagar	Vamsdhara	-	-	-	-	-	-	-	-	-	-	0.00	0.00
Basin : Nagavali														
	Srikakulam	Nagavali	-	-	-	-	-	-	-	-	-	-	0.00	0.00

Table No.3.3 Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
IV Basin : Rushikulya, Vamsadhar Sarada & Nagavali Year : 2002-2003														
Basin : Rushikulya														
	Purushattampur	Rushikulya	-	-	-	-	80.06	132.11	13.57	52.45	0.37	0.91	0.00	0.04
Basin : Vamsdhara														
	Kashi Nagar	Vamsdhara	-	-	-	-	32.03	284.23	11.78	33.73	0.41	0.84	0.05	0.84
Basin : Nagavali														
	Srikakulam	Nagavali	-	-	-	-	88.07	192.15	12.08	52.49	0.30	1.21	0.03	0.38

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analysis of a particular parameter has not been carried out.

Source: Water Quality YearBook for 2002-03

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters in Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
V Basin : Godavari Year : 2001-2002														
1	Polavaram	Godavari	65.21	33784	23.0	32.0	7.9	8.7	78	252	1.00	2.10	3	25
2	Konta	Sabari	96.06	633.5	19.5	31.0	7.8	8.9	61	147	0.70	5.40	2	8
3	Perur	Godavari	12.70	2930	21.0	31.0	8.2	8.8	130	461	0.60	3.40	3	65
4	Pathagudem	Indravati	1.160	1518	20.0	31.0	7.6	8.5	75	204	0.90	2.30	4	15
5	Jagdapur	Indravati	2.400	157.3	17.5	28.0	7.3	8.6	80	291	0.70	2.40	3	13
6	Nowrangpur	Indravati	2.395	60.16	19.0	30.0	7.3	8.2	104	250	1.00	1.80	3	6
7	Tekra	Pranhita	8.617	4988	19.1	28.6	7.7	8.8	122	671	1.17	7.43	2	59
8	Bhatpalli	Peddavagu	1.391	279.4	18.0	28.0	6.7	8.9	236	601	1.17	5.08	10	63
9	Bamni	Wardha	1.050	2824	20.0	31.5	7.6	8.9	248	1395	1.17	23.46	7	172
10	P.G. Bridge	Penganga	0.171	4530	25.5	32.0	7.9	9.0	202	488	1.17	6.26	5	59
11	Nandgaon	Wunna	0.153	387.6	15.5	29.5	7.9	8.6	192	500	1.56	6.26	5	45
12	Hivra	Wardha	0.063	160.7	18.0	30.0	8.0	8.9	178	751	1.56	7.04	8	101
13	Bhishnur	Wunna	0.802	26.85	16.0	30.0	7.7	8.7	266	818	1.17	4.30	15	106
14	Ashti	Wainganga	1.806	2709	20.5	31.0	7.8	9.0	118	418	1.17	6.26	3	52
15	Pauni	Wainganga	1.217	1420	14.0	31.5	7.7	8.7	157	514	1.17	7.04	5	72
16	Satrapur	Kanhan	0.133	152.4	20.0	30.0	7.8	8.7	197	769	1.56	3.52	4	69
17	Rajegaon	Bagh	0.000	701.7	18.0	30.0	7.5	8.3	79	313	0.78	5.47	2	21
18	Kumhari	Wainganga	0.865	336.6	17.0	30.0	7.6	8.9	103	404	0.78	3.52	3	21
19	Mancherial	Godavari	2.297	772.4	20.5	31.5	8.2	8.9	387	579	1.60	3.10	27	69
20	Gandlapet	Peddavagu	0.431	0.509	27.5	27.7	8.2	8.4	427	494	0.80	1.60	41	45
21	Betmogra	Manar	2.095	69.96	29.0	30.0	8.0	8.2	251	463	2.00	2.60	9	35
22	Degloor	Lendi	0.242	37.33	27.0	27.3	7.9	8.4	381	533	2.40	6.00	17	54
23	Saigaon	Manjira	1.627	22.59	21.5	25.0	8.0	8.3	300	382	3.20	4.30	14	35
24	Yelli	Godavari	0.398	21.74	22.0	28.0	8.2	9.0	216	591	1.60	6.00	17	64
25	Purna	Purna	1.246	203.9	23.0	26.0	8.0	8.4	346	558	2.80	3.20	22	55
26	Zari	Dudhna	0.642	113.6	25.0	26.0	8.1	8.5	225	489	2.20	3.90	17	54
27	G.R. Bridge	Godavari	6.490	170.90	22.0	24.0	8.0	8.5	271	728	2.10	3.50	24	71
28	Dhalegaon	Godavari	2.438	45.96	24.0	26.0	8.0	8.3	327	1014	2.50	4.60	30	128

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters in Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH ₃)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
V	Basin : Godavari													
	Year : 2001-2002													
1	Polavaram	Godavari	12	30	1.9	8.3	-	-	0.00	0.15	0.00	0.54	0.00	11.60
2	Konta	Sabari	5	30	1.0	5.3	-	-	0.00	0.38	0.00	0.16	0.00	4.60
3	Perur	Godavari	13	56	2.9	12.1	-	-	0.00	0.09	0.00	0.09	0.00	13.80
4	Pathagudem	Indravati	10	30	1.5	5.8	-	-	0.00	0.18	0.00	0.12	0.00	12.50
5	Jagdapur	Indravati	9	57	1.9	8.3	-	-	0.00	0.20	0.00	0.64	0.00	16.30
6	Nowrangpur	Indravati	9	18	1.5	4.9	-	-	0.00	0.21	0.00	0.07	0.00	0.00
7	Tekra	Pranhita	16	51	3.8	29.4	-	-	0.00	0.15	0.00	0.85	0.00	15.30
8	Bhatpalli	Peddavagu	15	41	5.8	36.2	-	-	0.00	0.22	0.00	1.21	0.00	15.30
9	Bamni	Wardha	21	99	8.5	44.5	-	-	0.00	0.28	0.13	0.97	0.00	12.90
10	P.G. Bridge	Penganga	14	37	6.2	30.5	-	-	0.00	0.30	0.00	0.78	0.00	22.80
11	Nandgaon	Wunna	16	44	5.7	24.1	-	-	0.00	0.26	0.00	0.81	0.00	12.60
12	Hivra	Wardha	12	40	6.8	31.5	-	-	0.00	0.28	0.00	0.85	0.00	43.20
13	Bhishnur	Wunna	16	46	3.6	30.9	-	-	0.00	0.37	0.00	0.79	0.00	15.60
14	Ashti	Wainganga	13	32	2.8	17.8	-	-	0.00	0.30	0.07	1.17	0.00	18.3
15	Pauni	Wainganga	16	40	2.7	23.7	-	-	0.00	0.39	0.00	2.16	0.00	14.40
16	Satrapur	Kanhan	23	65	5.2	40.7	-	-	0.00	0.30	0.00	1.03	0.00	24.00
17	Rajegaon	Bagh	10	29	1.5	15.4	-	-	0.00	0.80	0.00	1.21	0.00	4.80
18	Kumhari	Wainganga	9	51	1.9	18.8	-	-	0.00	0.28	0.00	0.79	0.00	12.00
19	Mancherial	Godavari	28	59	4.9	24.3	-	-	0.00	0.11	0.00	0.32	4.60	28.50
20	Gandlapet	Peddavagu	40	49	9.2	10.7	-	-	0.00	0.00	0.00	0.00	0.00	9.30
21	Betmogra	Manar	35	48	4.9	22.0	-	-	0.00	0.00	0.00	0.00	0.00	0.00
22	Degloor	Lendi	44	61	2.9	24.3	-	-	0.00	0.06	0.00	0.04	0.00	7.00
23	Saigaon	Manjira	38	42	4.4	6.8	-	-	0.00	0.00	0.00	0.00	0.00	4.80
24	Yelli	Godavari	23	55	4.9	24.3	-	-	0.00	0.16	0.00	0.32	0.00	20.60
25	Purna	Purna	46	64	7.3	19.4	-	-	-	-	0.00	0.00	0.00	9.60
26	Zari	Dudhna	24	32	2.9	18.2	-	-	0.00	0.00	0.00	0.00	0.00	11.70
27	G.R. Bridge	Godavari	26	74	0.3	16.5	-	-	0.00	0.03	0.00	0.00	0.00	12.00
28	Dhalegaon	Godavari	29	88	6.3	26.7	-	-	0.00	0.00	0.00	0.03	0.00	12.00

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters in Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
V	Basin : Godavari													
	Year : 2001-2002													
1	Polavaram	Godavari	44	146	4	15	0.00	1.37	0	14	-	-	0.0	7.5
2	Konta	Sabari	28	84	2	12	0.00	0.91	0	8	-	-	0.1	5.4
3	Perur	Godavari	42	201	5	30	1.40	0.32	3	36	-	-	0.0	8.1.
4	Pathagudem	Indravati	49	106	4	11	0.00	0.60	0	1	-	-	0.0	2.3
5	Jagdapur	Indravati	42	192	4	7	0.00	0.63	0	1	-	-	0.0	5.6
6	Nowrangpur	Indravati	42	87	4	8	0.00	0.33	0	3	-	-	0.0	3.0
7	Tekra	Pranhita	73	264	4	71	0.06	0.86	1	31	-	-	0.0	35.3
8	Bhatpalli	Peddavagu	134	372	3	50	0.00	1.20	3	23	-	-	1.9	27.9
9	Bamni	Wardha	73.0	478.0	6	291	0.17	5.49	7	137	-	-	1.9	18.6
10	P.G. Bridge	Penganga	122	268	3	23	0.00	0.91	2	44	-	-	0.6	11.8
11	Nandgaon	Wunna	98	256	6	38	0.10	1.01	4	19	-	-	0.0	13.0
12	Hivra	Wardha	98	416	6	43	0.00	0.74	6	35	-	-	0.0	9.9
13	Bhishnur	Wunna	98.0	488	6	35	0.11	0.93	2	13	-	-	0.0	5.6
14	Ashti	Wainganga	61	178	2	40	0.00	0.68	2	21	-	-	0.0	4.3
15	Pauni	Wainganga	90	240	4	82	0.00	0.93	1	18	-	-	0.0	11.2
16	Satrapur	Kanhan	98	323	4	106	0.25	1.10	10	84	-	-	1.2	7.4
17	Rajegaon	Bagh	32	187	0	13	0.00	0.89	1	8	-	-	0.0	8.7
18	Kumhari	Wainganga	49	232	3	31	0.00	1.01	1	17	-	-	0.0	4.3
19	Mancherial	Godavari	172	263	16	32	0.13	1.54	14	35	-	-	0.0	2.0
20	Gandlapet	Peddavagu	227	244	22	22	0.90	1.14	12	22	-	-	4.8	5.9
21	Betmogra	Manar	145	234	10	20	0.35	0.61	11	65	-	-	2.0	5.6
22	Degloor	Lendi	196	271	15	36	0.50	1.01	13	32	-	-	3.8	7.9
23	Saigaon	Manjira	168	183	13	26	0.43	0.71	17	28	-	-	0.6	4.5
24	Yelli	Godavari	125	240	8	47	0.34	0.82	19	79	-	-	1.2	7.9
25	Purna	Purna	208	254	14	27	0.44	0.72	17	64	-	-	5.6	96.3
26	Zari	Dudhna	126	218	6	29	0.40	0.70	13	52	-	-	2.8	16.3
27	G.R. Bridge	Godavari	133	253	13	51	0.39	0.68	28	83	-	-	3.7	7.7
28	Dhalegaon	Godavari	154	279	16	75	0.43	0.77	30	183	-	-	3.5	7.0

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters in Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO ₃)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
			(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
V	Basin : Godavari													
	Year : 2001-2002													
1	Polavaram	Godavari	-	-	0.00	2.61	6	19	5.7	7.6	0.0	6.7	90	4600
2	Konta	Sabari	-	-	0.00	3.74	6	16	5.2	8.2	0.0	1.4	430	24000
3	Perur	Godavari	-	-	0.00	3.31	10	22	5.7	8.0	0.0	1.6	-	-
4	Pathagudem	Indravati	-	-	0.00	0.09	9	18	5.5	7.4	0.2	2.0	30	24000
5	Jagdapur	Indravati	-	-	0.00	0.12	6	17	5.3	7.3	0.0	1.2	750	11000
6	Nowrangpur	Indravati	-	-	0.00	0.12	7	38	6.2	7.4	0.0	1.2	-	-
7	Tekra	Pranhita	0.00	0.14	0.00	0.25	15	62	5.60	8.10	0.30	2.50	10	3950
8	Bhatpalli	Peddavagu	0.00	0.51	0.00	0.44	23	77	6.40	8.7	0.30	2.90	10	17400
9	Bamni	Wardha	0.00	1.61	0.00	1.93	29	56	3.50	7.70	0.30	40.00	10	47000
10	P.G. Bridge	Penganga	0.00	0.23	0.00	0.32	23	65	5.00	8.9	0.40	6.00	0	17400
11	Nandgaon	Wunna	0.00	0.23	0.00	0.38	17	46	2.40	7.4	0.40	10.00	25	47000
12	Hivra	Wardha	0.00	0.14	0.00	0.38	23	58	4.60	8.8	0.20	5.30	10	27100
13	Bhishnur	Wunna	0.00	0.23	0.00	0.38	20	59	2.20	6.00	0.40	35.00	10	75500
14	Ashti	Wainganga	0.00	0.09	0.00	0.54	12	30	5.20	9.00	0.40	2.70	10	2450
15	Pauni	Wainganga	0.00	1.06	0.00	1.49	11	42	3.00	8.80	0.20	6.00	10	75500
16	Satrapur	Kanhan	0.00	0.60	0.00	0.32	18	47	5.90	11.90	0.60	3.80	40	47000
17	Rajegaon	Bagh	0.00	0.51	0.00	0.32	15	42	2.50	9.20	0.20	4.00	10	27100
18	Kumhari	Wainganga	0.00	0.18	0.00	0.38	19	54	5.40	12.80	0.60	5.20	10	27100
19	Mancherial	Godavari	-	-	0.00	0.18	11	26.0	5.10	8.20	0.00	1.5	30	11000
20	Gandlapet	Peddavagu	-	-	0.00	0.00	12	13	6.60	7.6	0.90	1.0	-	-
21	Betmogra	Manar	-	-	0.00	0.00	15	23	5.60	6.40	0.90	1.2	-	-
22	Degloor	Lendi	-	-	0.00	0.61	15	62	5.10	6.5	0.00	2.6	-	-
23	Saigaon	Manjira	-	-	0.00	0.00	15	17	5.90	5.9	0.00	2.8	-	-
24	Yelli	Godavari	-	-	0.00	0.09	12	26	5.50	7.2	0.40	2.1	-	-
25	Purna	Purna	-	-	0.00	0.03	19	30	-	-	-	-	-	-
26	Zari	Dudhna	-	-	0.00	0.00	14	27	6.30	6.4	0.90	1.8	-	-
27	G.R. Bridge	Godavari	-	-	0.00	0.06	15	33	6.3	6.7	0.10	0.8	24000	24000
28	Dhalegaon	Godavari	-	-	0.00	0.06	15	33	4.5	5.7	0.60	1.4	-	-

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters in Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
V Basin : Godavari Year : 2001-2002														
1	Polavaram	Godavari	30	210	14	990	-	-	-	-	-	-	0.00	0.30
2	Konta	Sabari	30	920	80	1145	-	-	-	-	-	-	0.00	0.15
3	Perur	Godavari	-	-	-	-	-	-	-	-	-	-	0.00	0.17
4	Pathagudem	Indravati	30	2400	60	625	-	-	-	-	-	-	0.00	0.14
5	Jagdapur	Indravati	70	1500	75	1080	-	-	-	-	-	-	0.00	0.11
6	Nowrangpur	Indravati	-	-	-	-	-	-	-	-	-	-	0.00	0.00
7	Tekra	Pranhita	10	2450	1500	105000	-	-	-	-	-	-	0.03	1.26
8	Bhatpalli	Peddavagu	10	6500	1500	95000	-	-	-	-	-	-	0.12	1.19
9	Bamni	Wardha	10	17400	2000	125000	-	-	-	-	-	-	0.07	1.58
10	P.G. Bridge	Penganga	0	12000	0	95000	-	-	-	-	-	-	0.07	0.88
11	Nandgaon	Wunna	10	17400	1200	95000	-	-	-	-	-	-	0.03	1.22
12	Hivra	Wardha	10	17400	1500	120000	-	-	-	-	-	-	0.07	1.62
13	Bhishnur	Wunna	10	27100	1500	92000	-	-	-	-	-	-	0.00	1.46
14	Ashti	Wainganga	10	1150	1800	132000	-	-	-	-	-	-	0.07	1.43
15	Pauni	Wainganga	10	5450	1800	118000	-	-	-	-	-	-	0.07	1.72
16	Satrapur	Kanhan	10	27100	1800	112000	-	-	-	-	-	-	0.07	1.37
17	Rajegaon	Bagh	10	17400	1200	110000	-	-	-	-	-	-	0.00	1.38
18	Kumhari	Wainganga	10	12000	1600	115000	-	-	-	-	-	-	0.00	1.33
19	Mancherial	Godavari	30	230	68	600	-	-	-	-	-	-	0.00	0.19
20	Gandlapet	Peddavagu	-	-	-	-	-	-	-	-	-	-	0.00	0.00
21	Betmogra	Manar	-	-	-	-	-	-	-	-	-	-	0.00	0.75
22	Degloor	Lendi	-	-	-	-	-	-	-	-	-	-	0.00	0.77
23	Saigaon	Manjira	-	-	-	-	-	-	-	-	-	-	0.00	0.00
24	Yelli	Godavari	-	-	-	-	-	-	-	-	-	-	0.00	0.10
25	Purna	Purna	-	-	-	-	-	-	-	-	-	-	0.00	0.31
26	Zari	Dudhna	-	-	-	-	-	-	-	-	-	-	0.00	0.40
27	G.R. Bridge	Godavari	11000	11000	700	700	-	-	-	-	-	-	0.00	0.27
28	Dhalegaon	Godavari	-	-	-	-	-	-	-	-	-	-	0.00	0.31

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters in Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
V Basin : Godavari Year : 2001-2002														
1	Polavaram	Godavari	-	-	-	-	40	100	13.70	48.48	0.21	1.39	0.00	0.47
2	Konta	Sabari	-	-	-	-	17	91	8.65	39.51	0.15	0.60	0.00	0.39
3	Perur	Godavari	-	-	-	-	44	160	11.03	48.92	0.18	2.29	0.00	0.00
4	Pathagudem	Indravati	-	-	-	-	31	93	11.98	29.46	0.27	0.75	0.13	0.47
5	Jagdapur	Indravati	-	-	-	-	30	156	6.82	24.84	0.18	0.50	0.01	0.35
6	Nowrangpur	Indravati	-	-	-	-	29	59	12.45	26.28	0.20	0.44	0.11	0.33
7	Tekra	Pranhita	-	-	-	-	63	248	7.19	46.15	0.13	1.99	0.00	1.18
8	Bhatpalli	Peddavagu	-	-	-	-	90	187	11.17	42.86	0.33	2.04	0.09	2.45
9	Bamni	Wardha	-	-	-	-	99	431	12.26	49.69	0.30	3.61	0.00	0.87
10	P.G. Bridge	Penganga	-	-	-	-	93	174	8.94	41.52	0.20	1.77	0.00	1.70
11	Nandgaon	Wunna	-	-	-	-	84	183	10.42	42.216	0.22	1.67	0.00	1.07
12	Hivra	Wardha	-	-	-	-	77	195	16.36	61.18	0.38	3.79	0.03	3.45
13	Bhishnur	Wunna	-	-	-	-	75	198	22.44	56.68	0.73	3.42	0.10	4.04
14	Ashti	Wainganga	-	-	-	-	53	121	10.65	51.59	0.19	2.28	0.00	1.33
15	Pauni	Wainganga	-	-	-	-	72	155	11.17	57.78	0.23	3.04	0.00	1.45
16	Satrapur	Kanhan	-	-	-	-	86	261	8.23	43.17	0.19	2.11	0.00	0.75
17	Rajegaon	Bagh	-	-	-	-	32	124	8.82	29.81	0.13	0.92	0.00	0.58
18	Kumhari	Wainganga	-	-	-	-	39	171	8.62	25.20	0.17	0.80	0.00	0.92
19	Mancherial	Godavari	-	-	-	-	127	200	26.96	48.6	0.94	2.40	0.21	1.43
20	Gandlapet	Peddavagu	-	-	-	-	138	166	36.91	38.96	1.52	1.52	0.97	0.98
21	Betmogra	Manar	-	-	-	-	108	190	15.10	28.27	0.38	1.10	0.03	0.33
22	Degloor	Lendi	-	-	-	-	158	240	18.11	40.30	0.58	1.82	0.00	0.87
23	Saigaon	Manjira	-	-	-	-	123	123	19.35	37.22	0.55	1.37	0.30	0.70
24	Yelli	Godavari	-	-	-	-	81	220	14.65	48.54	0.51	2.35	0.00	0.51
25	Purna	Purna	-	-	-	-	147	240	24.13	33.61	0.79	1.55	0.00	0.69
26	Zari	Dudhna	-	-	-	-	72	155	33.13	42.38	0.87	1.89	0.63	0.87
27	G.R. Bridge	Godavari	-	-	-	-	87	229	36.27	41.57	1.12	2.12	0.00	0.45
28	Dhalegaon	Godavari	-	-	-	-	98	300	36.33	50.73	1.32	3.42	0.00	0.56

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analysis of a particular parameter has not been carried out.

Source: Water Quality YearBook for 2001-02

Table No.3.3 : Sitewise Maximum.Minimum Values of Water Quality Paramters for Different River Basin.

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
VI Basin : Krishna Year : 1999-2000														
1	Vijaywada	Krishna	16.44	1759	26.0	30.5	7.60	8.65	403	735	0.03	0.36	0.04	2.28
2	Keesara	Munneru	0.032	337.30	20.0	31.0	7.45	8.70	335	1000	0.05	0.17	0.08	5.05
3	Madhira	Wyra	0.052	81.06	22.0	31.5	7.80	8.68	539	1020	0.04	0.38	0.25	5.30
4	Paleru	Paleru Bridge	0.330	89.71	26.0	30.0	6.30	8.18	503	1260	0.02	0.33	0.10	4.75
5	Wadenapalli	Krishna	75.43	1547	24.0	30.0	7.48	8.46	347	685	0.04	0.17	0.48	2.36
6	Dameracherla	Musi	0.725	116.0	25.0	34.0	7.66	8.60	564	1120	0.02	0.24	0.05	2.88
7	Pondugala	Krishna	22.87	2114.0	24.0	31.0	7.34	8.65	316	597	0.01	0.21	0.04	2.40
8	Halia	Halia	0.802	4.535	21.0	26.5	7.84	8.16	535	679	0.02	0.19	0.43	2.00
9	Bawapuram	Tungbhadra	0.542	1526	19.5	27.0	7.84	9.20	148	1370	0.03	0.74	0.25	6.75
10	Mantralayam	Tungbhadra	3.039	2753.0	21.0	29.0	7.78	8.96	122	1490	0.03	0.71	0.50	5.90
11	T. Ramapuram	Hagari	0.293	352.4	13.0	21.0	7.72	8.35	468	3250	0.03	0.34	0.40	13.80
12	Kellodu	Vedavathi	0.229	133.16	22.5	25.0	7.44	8.21	327	1120	0.06	0.53	2.17	4.98
13	Oollenur	Tungbhadra	6.367	2162	21.5	30.0	7.65	8.82	107	1330	0.02	0.21	0.08	3.70
14	Marol	Varada	44.93	91.3	23.5	25.5	7.18	8.29	130	239	0.03	0.06	0.12	0.63
15	Harlahalli	Tungbhadra	15.82	1083.4	24.3	28.5	7.20	8.19	122	695	0.01	0.16	0.15	2.17
16	Byaladahalli	Haridra	3.034	168.5	21.00	24.0	7.66	8.18	318	893	0.008	0.140	0.750	2.350
17	Kuppelur	Kumudvathi	3.53	47.69	24.0	25.5	7.27	8.10	162	355	0.01	0.25	0.14	0.69
18	Honali	Tungbhadra	19.40	790.0	19.0	25.8	7.02	7.94	82	454	0.02	0.19	0.08	0.94
19	Shimoga	Tunga	2.160	900.4	24.0	27.0	7.08	8.24	68	302	0.00	0.05	0.05	0.77
20	Krishna Agraharam	Krishna	1.601	6539	23.0	32.0	8.19	8.66	231	1380	0.02	0.24	0.02	4.40
21	Yadgir	Bhima	1.144	12.36	18.0	32.5	7.98	9.04	447	1140	0.04	0.32	0.60	6.50
22	Malkhed	Kagna	0.084	149.1	19.0	28.0	7.75	8.66	301	782	0.03	0.38	0.20	1.60
23	Wadakbal	Sina	3.859	96.93	21.0	27.0	8.05	8.35	629	1477	0.03	0.20	0.86	3.00
24	Takali	Bhima	3.515	780.0	17.5	27.0	7.54	8.03	534	1401	0.00	0.15	0.87	8.35
25	Sarati	Nira	12.53	228.6	26.0	28.0	7.83	8.13	385	882	0.03	0.28	0.75	5.87
26	Phulgaon	Bhima	17.06	113.5	22.5	25.5	7.62	7.83	190	266	0.00	0.05	0.84	0.98
27	Huvenhedgi	Krishna	12.37	5340	21.0	28.0	8.08	8.80	186	1220	0.02	0.18	0.00	4.90
28	Cholachguda	Malaprabha	1.931	497.5	22.0	24.0	7.91	8.30	351	1357	0.03	0.20	1.02	10.34
29	Balgalkot	Ghataprabha	12.930	551.3	23.5	26.0	7.74	8.45	182	1053	0.00	0.13	0.86	7.03
30	Galgali	Krishna	7.605	1073.0	24.5	27.0	7.53	8.40	258	998	0.00	0.07	0.32	4.52
31	Karad	Krishna	1.700	347.7	22.0	25.5	7.92	8.67	122	481	0.00	0.13	0.48	2.72
32	Waruji	Koyna	2.970	249.8	22.5	25.5	7.46	8.60	96	241	0.00	0.03	0.37	0.96

Table No.3.3 : Sitewise Maximum.Minimum Values of Water Quality Paramters for Different River Basin.

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH ₃)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
VI Basin : Krishna Year : 1999-2000														
1	Vijaywada	Krishna	1.00	3.39	0.08	3.21	0.000	0.22	0.000	0.011	0.000	0.000	0.000	1.42
2	Keesara	Munneru	0.45	2.25	1.32	4.44	0.000	0.04	0.000	0.007	0.000	0.079	0.000	2.36
3	Madhira	Wyra	0.45	2.05	1.15	4.03	0.000	0.03	0.000	0.013	0.000	0.104	0.056	1.70
4	Paleru	Paleru Bridge	0.90	4.24	2.14	7.07	0.000	0.00	0.000	0.020	0.000	0.104	0.000	0.00
5	Wadenapalli	Krishna	0.90	2.20	0.74	2.80	0.000	0.02	0.000	0.011	0.000	0.000	0.026	1.48
6	Dameracherla	Musi	0.55	2.30	1.89	5.51	0.000	0.040	0.000	0.010	0.000	0.000	0.010	2.54
7	Pondugala	Krishna	1.00	1.85	0.82	3.13	0.000	0.030	0.000	0.013	0.000	0.000	0.000	1.98
8	Halia	Halia	0.35	2.15	1.15	4.20	0.000	0.00	0.000	0.005	0.000	0.072	0.000	0.00
9	Bawapuram	Tungbhadra	0.70	2.25	0.33	3.78	0.000	0.040	0.000	0.014	0.000	0.000	0.000	2.08
10	Mantralayam	Tungbhadra	0.80	2.25	0.58	5.02	0.00	0.10	0.000	0.013	0.000	0.000	0.000	1.76
11	T. Ramapuram	Hagari	0.65	3.19	1.48	8.97	0.00	0.10	0.000	0.014	0.000	0.000	0.000	2.36
12	Kellodu	Vedavathi	0.66	2.24	0.51	2.09	0.001	0.010	0.000	0.002	0.001	0.004	0.000	0.00
13	Oollenur	Tungbhadra	0.70	2.35	0.49	3.62	0.000	0.010	0.000	0.016	0.000	0.000	0.000	1.42
14	Marol	Varada	0.60	0.93	0.45	0.87	0.005	0.017	0.002	0.003	0.000	0.002	0.000	0.00
15	Harlahalli	Tungbhadra	0.58	1.96	0.45	1.53	0.001	0.011	0.001	0.008	0.001	0.008	0.000	0.00
16	Byaladahalli	Haridra	1.470	3.020	1.020	2.140	0.002	0.012	0.000	0.001	0.001	0.003	0.000	0.000
17	Kuppelur	Kumudvathi	0.78	1.66	0.63	1.07	0.004	0.021	0.002	0.009	0.001	0.002	0.00	0.00
18	Honali	Tungbhadra	0.43	1.95	0.20	1.35	0.000	0.06	0.001	0.003	0.001	0.006	0.00	0.00
19	Shimoga	Tunga	0.39	1.22	0.21	0.81	0.001	0.011	0.001	0.002	0.000	0.006	0.00	0.00
20	Krishna Agraharam	Krishna	0.80	2.69	0.74	4.85	0.00	0.030	0.00	0.012	0.00	0.00	0.00	0.02
21	Yadgir	Bhima	0.60	2.54	1.32	4.69	0.00	0.18	0.00	0.014	0.00	0.00	0.00	1.78
22	Malkhed	Kagna	0.35	1.90	1.81	3.95	0.00	0.00	0.00	0.016	0.00	0.00	0.00	1.48
23	Wadakbal	Sina	0.80	1.70	1.66	7.35	0.00	0.006	0.003	0.016	0.00	0.018	0.00	0.00
24	Takali	Bhima	0.32	1.90	1.42	5.77	0.00	0.008	0.001	0.013	0.00	0.018	0.00	0.00
25	Sarati	Nira	0.32	0.88	1.03	5.77	0.00	0.001	0.002	0.015	0.00	0.016	0.00	0.00
26	Phulgaon	Bhima	0.48	0.80	0.87	1.90	0.000	0.004	0.001	0.003	0.000	0.010	0.00	0.00
27	Huvenhedgi	Krishna	0.70	2.40	0.58	3.78	0.000	0.220	0.000	0.015	0.000	0.172	0.00	1.50
28	Cholachguda	Malaprabha	0.40	1.82	1.11	4.92	0.000	0.018	0.002	0.036	0.000	0.016	0.00	0.16
29	Balgalkot	Ghataprabha	0.40	2.12	0.47	4.11	0.000	0.005	0.002	0.054	0.000	0.033	0.00	0.61
30	Galgali	Krishna	0.36	1.20	1.42	6.78	0.000	0.003	0.002	0.018	0.000	0.016	0.00	0.32
31	Karad	Krishna	0.40	2.83	0.01	3.48	0.000	0.003	0.003	0.030	0.000	0.023	0.00	1.21
32	Waruji	Koyna	0.24	1.10	0.39	2.53	0.000	0.001	0.001	0.031	0.000	0.008	0.00	0.16

Table No.3.3 : Sitewise Maximum.Minimum Values of Water Quality Paramters for Different River Basin.

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
VI Basin : Krishna Year : 1999-2000														
1	Vijaywada	Krishna	0.60	2.26	0.91	4.65	0.000	0.056	0.55	1.61	-	-	0.007	0.086
2	Keesara	Munneru	0.44	3.11	0.73	4.41	0.004	0.073	0.27	2.71	-	-	0.022	0.064
3	Madhira	Wyra	1.93	3.25	1.65	19.40	0.006	0.068	0.42	1.67	-	-	0.011	0.068
4	Paleru	Paleru Bridge	0.30	2.96	1.31	6.87	0.000	0.068	0.56	5.62	-	-	0.018	0.139
5	Wadenapalli	Krishna	0.30	1.77	0.91	4.75	0.005	0.056	0.70	1.93	-	-	0.027	0.143
6	Dameracherla	Musi	1.54	2.90	1.44	6.83	0.014	0.113	0.58	2.66	-	-	0.025	0.182
7	Pondugala	Krishna	0.45	1.56	0.80	3.08	0.000	0.037	0.65	1.82	-	-	0.021	0.118
8	Halia	Halia	2.05	7.49	1.23	6.87	0.028	0.068	0.62	1.09	-	-	0.030	0.070
9	Bawapuram	Tungbhadra	0.46	2.39	1.11	6.83	0.003	0.097	0.16	5.83	-	-	0.026	0.100
10	Mantralayam	Tungbhadra	0.53	1.98	0.71	5.23	0.000	0.057	0.09	4.17	-	-	0.024	0.164
11	T. Ramapuram	Hagari	1.26	2.66	1.01	14.74	0.009	0.063	1.04	15.62	-	-	0.024	0.117
12	Kellodu	Vedavathi	0.32	1.97	2.66	5.49	0.010	0.072	0.04	0.079	0.042	0.108	0.000	0.004
13	Oollenur	Tungbhadra	0.26	2.34	0.82	4.16	0.000	0.115	0.02	3.65	-	-	0.027	0.127
14	Marol	Varada	0.20	0.38	0.62	1.71	0.001	0.013	0.22	0.32	0.042	0.075	0.004	0.005
15	Harlahalli	Tungbhadra	0.12	1.78	0.66	2.68	0.004	0.051	0.15	0.59	0.033	0.167	0.002	0.005
16	Byaladahalli	Haridra	0.850	1.860	1.630	3.750	0.023	0.050	0.187	0.870	0.042	1.132	0.003	0.014
17	Kuppelur	Kumudvathi	0.20	0.81	0.76	2.06	0.002	0.036	0.13	0.55	0.033	0.125	0.003	0.005
18	Honali	Tungbhadra	0.15	1.16	0.38	2.39	0.000	0.066	0.014	0.33	0.03	0.099	0.001	0.003
19	Shimoga	Tunga	0.08	0.82	0.20	1.54	0.001	0.045	0.08	0.37	0.033	0.125	0.001	0.013
20	Krishna Agraharam	Krishna	0.53	3.11	1.02	4.37	0.004	0.064	0.25	3.96	-	-	0.009	0.207
21	Yadgir	Bhima	0.85	2.05	1.01	6.77	0.004	0.096	0.69	4.69	-	-	0.027	0.129
22	Malkhed	Kagna	1.41	2.65	0.71	3.64	0.000	0.056	0.05	2.29	-	-	0.025	0.119
23	Wadakbal	Sina	2.48	5.36	0.88	3.36	0.000	0.011	0.089	0.232	-	-	0.000	0.002
24	Takali	Bhima	1.84	4.72	0.99	6.90	0.000	0.017	0.125	16.23	-	-	0.000	0.002
25	Sarati	Nira	1.04	6.16	0.81	4.09	0.000	0.004	0.089	0.303	-	-	0.000	0.003
26	Phulgaon	Bhima	1.04	2.24	0.09	0.89	0.002	0.008	0.080	0.018	-	-	0.001	0.002
27	Huvenhedgi	Krishna	0.35	2.00	0.51	5.35	0.000	0.088	0.19	3.54	-	-	0.029	0.179
28	Cholachguda	Malaprabha	0.30	4.48	1.20	6.26	0.000	0.007	0.036	3.420	-	-	0.000	0.035
29	Balgalkot	Ghataprabha	0.66	5.04	0.08	2.18	0.000	0.013	0.027	2.460	-	-	0.000	0.018
30	Galgali	Krishna	1.35	4.56	0.45	3.88	0.000	0.073	0.036	3.330	-	-	0.001	0.019
31	Karad	Krishna	0.72	4.16	0.07	0.75	0.000	0.015	0.000	0.500	-	-	0.000	0.027
32	Waruji	Koyna	0.80	3.20	0.06	0.90	0.000	0.009	0.000	0.071	-	-	0.001	0.008

Table No.3.3 : Sitewise Maximum.Minimum Values of Water Quality Paramters for Different River Basin.

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO ₃)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
			(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
VI	Basin : Krishna													
	Year : 1999-2000													
1	Vijaywada	Krishna	-	-	0.000	0.014	0.07	0.59	-	-	0.00	2.00	-	-
2	Keesara	Munneru	-	-	0.000	0.000	0.11	1.32	-	-	0.00	2.50	-	-
3	Madhira	Wyra	-	-	0.000	0.019	0.05	0.57	-	-	-	-	-	-
4	Paleru	Paleru Bridge	-	-	0.000	0.046	0.15	0.73	-	-	-	-	-	-
5	Wadenapalli	Krishna	-	-	0.000	0.019	0.06	0.63	7.30	9.17	0.00	3.30	-	-
6	Dameracherla	Musi	-	-	0.000	0.28	0.24	0.82	7.03	7.86	0.00	5.40	-	-
7	Pondugala	Krishna	-	-	0.000	0.009	0.06	0.56	7.03	7.86	0.00	2.90	-	-
8	Halia	Halia	-	-	0.000	0.031	0.42	0.61	-	-	-	-	-	-
9	Bawapuram	Tungbhadra	-	-	0.000	0.039	0.03	0.53	7.02	8.69	0.00	2.90	-	-
10	Mantralayam	Tungbhadra	-	-	0.000	0.026	0.01	0.360	6.63	7.87	0.00	6.20	-	-
11	T. Ramapuram	Hagari	-	-	0.000	0.026	0.12	0.94	6.75	8.18	0.00	5.60	-	-
12	Kellodu	Vedavathi	0.000	0.001	0.012	0.023	0.10	1.72	-	-	-	-	-	-
13	Oollenur	Tungbhadra	-	-	0.000	0.035	0.10	0.50	-	-	-	-	-	-
14	Marol	Varada	0.000	0.001	0.015	0.017	0.27	0.69	-	-	-	-	-	-
15	Harlahalli	Tungbhadra	0.000	0.001	0.014	0.035	0.32	0.74	-	-	-	-	-	-
16	Byaladahalli	Haridra	0.000	0.000	0.013	0.033	0.153	0.519	-	-	-	-	-	-
17	Kuppelur	Kumudvathi	0.000	0.001	0.019	0.022	0.46	0.83	-	-	-	-	-	-
18	Honali	Tungbhadra	0.000	0.000	0.011	0.016	0.10	0.75	-	-	-	-	-	-
19	Shimoga	Tunga	0.000	0.001	0.012	0.047	0.12	0.67	-	-	-	-	-	-
20	Krishna Agraharam	Krishna	-	-	0.000	0.000	0.17	0.73	0.00	8.11	0.00	3.30	-	-
21	Yadgir	Bhima	-	-	0.000	0.000	0.15	1.07	-	-	0.00	2.70	-	-
22	Malkhed	Kagna	-	-	0.000	0.007	0.23	0.84	-	-	-	-	-	-
23	Wadakbal	Sina	0.000	0.002	0.001	0.004	0.43	1.01	3.90	6.20	1.80	3.50	-	-
24	Takali	Bhima	0.000	0.003	0.000	0.095	0.44	0.92	4.00	6.10	0.00	2.60	-	-
25	Sarati	Nira	0.000	0.002	0.000	0.005	0.59	0.73	4.40	5.60	0.20	3.10	-	-
26	Phulgaon	Bhima	0.000	0.000	0.000	0.001	0.53	0.63	4.80	6.10	1.20	2.30	-	-
27	Huvenhedgi	Krishna	-	-	0.000	0.000	0.08	0.68	7.24	8.32	0.00	2.30	-	-
28	Cholachguda	Malaprabha	0.000	0.001	0.000	0.063	0.30	1.04	4.70	7.30	0.00	4.10	-	-
29	Balgalkot	Ghataprabha	0.000	0.003	0.000	0.095	0.32	0.82	4.00	8.10	0.50	3.30	-	-
30	Galgali	Krishna	0.000	0.005	0.000	0.002	0.43	0.78	4.00	5.70	0.80	1.80	-	-
31	Karad	Krishna	0.000	0.004	0.000	0.032	0.16	1.30	3.90	6.80	0.50	3.60	-	-
32	Waruji	Koyna	0.000	0.008	0.000	0.003	0.22	0.77	4.20	6.10	0.40	3.50	-	-

Table No.3.3 : Sitewise Maximum.Minimum Values of Water Quality Paramters for Different River Basin.

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
VI Basin : Krishna														
Year : 1999-2000														
1	Vijaywada	Krishna	-	-	-	-	-	-	-	-	-	-	0.00	0.75
2	Keesara	Munneru	-	-	-	-	-	-	-	-	-	-	0.00	0.80
3	Madhira	Wyra	-	-	-	-	-	-	-	-	-	-	0.00	0.50
4	Paleru	Paleru Bridge	-	-	-	-	-	-	-	-	-	-	0.00	0.75
5	Wadenapalli	Krishna	-	-	-	-	-	-	-	-	-	-	0.00	0.150
6	Dameracherla	Musi	-	-	-	-	-	-	-	-	-	-	0.00	0.90
7	Pondugala	Krishna	-	-	-	-	-	-	-	-	-	-	0.00	0.75
8	Halia	Halia	-	-	-	-	-	-	-	-	-	-	0.00	0.30
9	Bawapuram	Tungbhadra	-	-	-	-	-	-	-	-	-	-	0.00	0.85
10	Mantralayam	Tungbhadra	-	-	-	-	-	-	-	-	-	-	0.00	0.85
11	T. Ramapuram	Hagari	-	-	-	-	-	-	-	-	-	-	0.00	0.75
12	Kellodu	Vedavathi	-	-	-	-	-	-	-	-	-	-	-	-
13	Oollenur	Tungbhadra	-	-	-	-	-	-	-	-	-	-	0.00	0.100
14	Marol	Varada	-	-	-	-	-	-	-	-	-	-	-	-
15	Harlahalli	Tungbhadra	-	-	-	-	-	-	-	-	-	-	-	-
16	Byaladahalli	Haridra	-	-	-	-	-	-	-	-	-	-	-	-
17	Kuppelur	Kumudvathi	-	-	-	-	-	-	-	-	-	-	-	-
18	Honali	Tungbhadra	-	-	-	-	-	-	-	-	-	-	-	-
19	Shimoga	Tunga	-	-	-	-	-	-	-	-	-	-	-	-
20	Krishna Agraharam	Krishna	-	-	-	-	-	-	-	-	-	-	0.00	1.25
21	Yadgir	Bhima	-	-	-	-	-	-	-	-	-	-	0.00	0.75
22	Malkhed	Kagna	-	-	-	-	-	-	-	-	-	-	0.00	0.50
23	Wadakbal	Sina	-	-	-	-	-	-	-	-	-	-	0.64	0.88
24	Takali	Bhima	-	-	-	-	-	-	-	-	-	-	0.35	0.96
25	Sarati	Nira	-	-	-	-	-	-	-	-	-	-	0.40	0.92
26	Phulgaon	Bhima	-	-	-	-	-	-	-	-	-	-	0.85	0.86
27	Huvenhedgi	Krishna	-	-	-	-	-	-	-	-	-	-	0.00	0.70
28	Cholachguda	Malaprabha	-	-	-	-	-	-	-	-	-	-	0.29	1.00
29	Balgalkot	Ghataprabha	-	-	-	-	-	-	-	-	-	-	0.39	0.96
30	Galgali	Krishna	-	-	-	-	-	-	-	-	-	-	0.32	1.20
31	Karad	Krishna	-	-	-	-	-	-	-	-	-	-	0.33	1.20
32	Waruji	Koyna	-	-	-	-	-	-	-	-	-	-	0.61	1.31

Table No.3.3 : Sitewise Maximum.Minimum Values of Water Quality Paramters for Different River Basin.

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
VI Basin : Krishna Year : 1999-2000														
1	Vijaywada	Krishna	-	-	-	-	127	228	1.56	40.00	0.04	1.76	0.00	0.00
2	Keesara	Munneru	-	-	-	-	142	250	1.87	55.68	0.06	3.62	0.00	0.00
3	Madhira	Wyra	-	-	-	-	133	254	5.59	55.73	0.17	3.72	0.00	0.00
4	Paleru	Paleru Bridge	-	-	-	-	209	475	1.01	40.60	0.05	2.58	0.00	0.00
5	Wadenapalli	Krishna	-	-	-	-	122	209	1.98	35.76	0.05	1.63	0.00	0.00
6	Dameracherla	Musi	-	-	-	-	195	387	1.02	36.64	0.03	1.85	0.00	0.00
7	Pondugala	Krishna	-	-	-	-	109	244	1.26	36.28	0.03	1.66	0.00	0.00
8	Halia	Halia	-	-	-	-	147	228	9.62	32.05	0.30	1.38	0.00	0.00
9	Bawapuram	Tungbhadra	-	-	-	-	76	246	6.98	65.81	0.20	4.86	0.00	0.00
10	Mantralayam	Tungbhadra	-	-	-	-	89	317	6.28	64.00	0.19	4.63	0.00	0.00
11	T. Ramapuram	Hagari	-	-	-	-	143	609	6.04	70.70	0.23	7.33	0.00	0.00
12	Kellodu	Vedavathi	-	-	-	-	58	216	52.37	63.82	2.47	4.58	0.00	0.00
13	Oollenur	Tungbhadra	-	-	-	-	76	268	2.96	50.63	0.00	2.27	0.00	0.00
14	Marol	Varada	-	-	-	-	52	90	10.00	25.91	0.17	0.66	0.00	0.00
15	Harlahalli	Tungbhadra	-	-	-	-	51	174	11.90	40.36	0.21	1.64	0.00	0.00
16	Byaladahalli	Haridra	-	-	-	-	132	258	22.94	30.88	0.67	1.46	0.00	0.00
17	Kuppelur	Kumudvathi	-	-	-	-	70	126	8.97	23.21	0.17	0.61	0.00	0.00
18	Honali	Tungbhadra	-	-	-	-	31	162	10.00	28.84	0.14	0.82	0.00	0.00
19	Shimoga	Tunga	-	-	-	-	30	101	6.82	27.11	0.09	0.76	0.00	0.00
20	Krishna Agraharam	Krishna	-	-	-	-	116	317	6.79	51.46	0.09	2.67	0.00	0.00
21	Yadgir	Bhima	-	-	-	-	134	311	12.99	57.68	0.48	4.24	0.00	0.00
22	Malkhed	Kagna	-	-	-	-	151	254	4.28	28.99	0.14	1.15	0.00	0.00
23	Wadakbal	Sina	-	-	-	-	123	412	17.55	52.33	0.61	2.43	0.00	0.00
24	Takali	Bhima	-	-	-	-	111	367	21.97	70.98	0.70	5.15	0.00	2.42
25	Sarati	Nira	-	-	-	-	96	305	24.59	71.99	0.70	5.02	0.00	0.49
26	Phulgaon	Bhima	-	-	-	-	84	119	29.17	33.47	0.90	0.92	0.00	0.02
27	Huvenhedgi	Krishna	-	-	-	-	89	272	0.00	56.26	0.00	3.60	0.00	0.00
28	Cholachguda	Malaprabha	-	-	-	-	96	292	15.72	63.47	0.62	6.06	0.00	0.76
29	Balgalkot	Ghataprabha	-	-	-	-	72	298	12.63	66.73	0.499	3.826	0.00	1.22
30	Galgali	Krishna	-	-	-	-	111	357	7.60	55.39	0.23	3.35	0.00	0.29
31	Karad	Krishna	-	-	-	-	52	232	28.74	54.29	0.62	2.151	0.00	0.320
32	Waruji	Koyna	-	-	-	-	40	159	13.98	46.98	0.41	1.11	0.00	0.17

Note : All the ionic concentrations are expressed in mg./lit., unless mentioned otherwise.

Source: Water Quality Data Book for 1999-2000

Table No. 3.3 Sitewise Maximum.Minimum Values of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
VII	Basin : Cauvery													
	Year : 2000-01													
1	Musiri	Cauvery	12.07	645.5	26.0	31.0	7.52	8.55	335	678	0.07	0.15	1.24	2.58
2	Nallamaranpatty	Amravathi	0.823	21.48	24.0	29.5	7.76	8.43	206	881	0.05	0.16	0.62	4.65
3	Elunuthimangalam	Noyyal	0.698	13.56	24.0	26.0	8.25	8.64	968	3652	0.30	0.68	4.20	26.92
4	Kodumudi	Cauvery	37.54	772.5	26.0	30.5	7.52	8.37	318	669	0.06	0.23	1.15	2.43
5	Savandapur	Bhavani	6.657	47.38	27.0	31.8	7.30	7.94	216	495	0.04	0.14	0.82	1.84
6	Thengumaradala	Moyar	4.539	153.3	22.9	25.6	6.95	7.84	104	233	0.02	0.10	0.19	0.51
7	Nellithurai	Bhavani	1.546	206.9	18.4	23.6	6.98	8.15	48	120	0.02	0.04	0.09	0.30
8	Urachikottai	Cauvery	67.82	583.0	25.0	28.5	7.59	8.50	279	490	0.06	0.22	1.00	2.02
9	Kudlur	Palar	0.384	0.965	22.6	26.0	8.29	8.44	889	998	0.13	0.16	4.02	5.14
10	Biligundulu	Cauvery	42.28	517.4	24.0	28.5	7.00	8.20	257	697	0.001	0.12	0.79	2.04
11	Kanakapura	Arkavatty	2.460	86.90	20.5	26.5	7.42	8.21	427	1306	0.04	0.48	1.19	5.11
12	T.K. Halli	Shimsha	2.162	94.33	24.5	29.0	7.47	8.22	305	612	0.01	0.20	0.32	2.14
13	Kollegal	Cauvery	21.87	1960	24.0	29.0	7.32	8.27	183	604	0.01	0.11	0.74	1.67
14	T.Narsipur	kabini	15.54	796.3	20.0	25.5	7.25	8.23	220	781	0.001	0.12	0.60	4.79
15	Muthankera	Kabini	3.081	341.4	23.0	29.5	6.75	8.25	34	169	0.02	0.13	0.13	0.37
16	Kathemalavadi	Lakshmanathirtha	0.150	73.00	23.0	27.0	7.08	8.21	145	663	0.01	0.12	0.12	2.90
17	Mukundur Hosahalli	Hemavathy	4.100	243.8	22.0	25.0	7.19	8.23	95	203	0.002	0.11	0.13	0.80
18	Kudige	Cauvery	4.330	180.50	22.0	29.0	6.95	8.20	53	200	0.001	0.04	0.17	0.61

Table No. 3.3 Sitewise Maximum.Minimum Values of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH ₃)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
VII	Basin : Cauvery													
	Year : 2000-01													
1	Musiri	Cauvery	1.04	2.08	1.12	2.40	0.08	0.013	0.03	0.006	0.001	0.003	0.00	0.34
2	Nallamaranpatty	Amravathi	0.48	2.00	0.48	4.40	0.005	0.014	0.004	0.005	0.001	0.003	0.07	0.41
3	Elunuthimangalam	Noyyal	1.36	3.00	3.44	7.28	0.012	0.016	0.004	0.010	0.002	0.004	0.00	0.42
4	Kodumudi	Cauvery	0.88	2.16	1.12	2.40	0.008	0.140	0.004	0.009	0.001	0.004	0.00	0.00
5	Savandapur	Bhavani	0.96	2.16	0.16	3.04	0.007	0.016	0.004	0.008	0.001	0.002	0.00	0.00
6	Thengumaradala	Moyar	0.24	1.04	0.08	1.28	0.006	0.014	0.004	0.007	0.001	0.002	0.00	0.00
7	Nellithurai	Bhavani	0.16	0.48	0.16	0.56	0.006	0.014	0.003	0.006	0.001	0.002	0.00	0.13
8	Urachikottai	Cauvery	0.96	1.60	0.56	1.76	0.006	0.012	0.003	0.005	0.001	0.004	0.00	0.42
9	Kudlur	Palar	1.12	1.60	3.52	4.24	0.009	0.012	0.004	0.006	0.001	0.002	0.00	0.40
10	Biligundulu	Cauvery	0.72	2.64	0.47	2.41	0.000	0.001	0.003	0.038	0.000	0.000	0.00	0.00
11	Kanakapura	Arkavatty	1.64	3.74	1.49	3.51	0.001	0.003	0.011	0.030	0.000	0.001	0.00	0.00
12	T.K. Halli	Shimsha	1.41	2.71	1.04	2.17	0.001	0.005	0.005	0.028	0.000	0.000	0.00	0.00
13	Kollegal	Cauvery	0.74	2.23	0.59	1.98	0.001	0.003	0.017	0.025	0.000	0.000	0.00	0.00
14	T.Narsipur	kabini	0.64	2.85	0.05	1.96	0.001	0.003	0.002	0.026	0.000	0.000	0.00	0.00
15	Muthankera	Kabini	0.16	0.72	0.12	0.52	0.000	0.000	0.000	0.000	0.000	0.002	0.00	0.00
16	Kathemalavadi	Lakshmanathirtha	0.78	2.35	0.63	2.12	0.000	0.015	0.000	0.028	0.000	0.000	0.00	0.00
17	Mukundur Hosahalli	Hemavathy	0.31	1.07	0.16	0.76	0.000	0.003	0.000	0.027	0.000	0.000	0.00	0.00
18	Kudige	Cauvery	0.19	0.91	0.05	0.76	0.02	0.03	0.00	0.03	0.000	0.000	0.00	0.00

Table No. 3.3 Sitewise Maximum.Minimum Values of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
VII	Basin : Cauvery													
	Year : 2000-01													
1	Musiri	Cauvery	2.67	4.24	0.60	1.83	0.026	0.068	0.277	0.522	-	-	0.070	0.142
2	Nallamaranpatty	Amravathi	1.37	5.47	0.51	2.47	0.023	0.097	0.163	0.697	-	-	0.063	0.270
3	Elunuthimangalam	Noyyal	5.06	8.90	3.47	23.44	0.037	0.048	0.937	3.532	-	-	0.500	0.750
4	Kodumudi	Cauvery	2.23	4.41	0.60	1.60	0.024	0.067	0.260	0.557	-	-	0.92	0.194
5	Savandapur	Bhavani	1.41	4.41	0.42	1.01	0.005	0.070	0.283	0.792	-	-	0.070	0.195
6	Thengumaradala	Moyar	0.54	1.66	0.37	1.11	0.008	0.053	0.060	0.136	-	-	0.084	0.202
7	Nellithurai	Bhavani	0.25	0.83	0.14	0.46	0.008	0.030	0.027	0.085	-	-	0.021	0.068
8	Urachikottai	Cauvery	1.80	3.41	0.57	1.43	0.032	0.057	0.021	0.275	-	-	0.072	0.126
9	Kudlur	Palar	4.64	7.26	0.97	3.09	0.039	0.065	0.604	0.879	-	-	0.237	0.484
10	Biligundulu	Cauvery	0.86	3.54	0.82	1.99	0.011	0.071	0.000	0.629	-	-	0.002	0.032
11	Kanakapura	Arkavatty	1.44	5.81	1.95	3.75	0.026	0.097	0.233	2.540	-	-	0.003	0.95
12	T.K. Halli	Shimsha	1.76	4.69	0.23	2.40	0.008	0.088	0.217	0.833	-	-	0.002	0.010
13	Kollegal	Cauvery	0.18	1.20	1.30	4.10	0.003	0.53	0.083	0.708	-	-	0.002	0.10
14	T.Narsipur	kabini	1.20	3.63	0.54	4.54	0.005	0.101	0.029	0.325	-	-	0.001	0.010
15	Muthankera	Kabini	0.20	0.96	0.24	0.44	-	-	0.008	0.271	-	-	-	-
16	Kathemalavadi	Lakshmanathirtha	0.20	2.12	0.72	4.86	0.003	0.053	0.125	0.708	-	-	-	-
17	Mukundur Hosahalli	Hemavathy	0.16	1.35	0.15	1.04	0.005	0.064	0.010	0.333	-	-	0.000	0.011
18	Kudige	Cauvery	0.05	1.45	0.17	0.63	0.000	0.079	0.002	0.833	-	-	0.000	0.02

Table No. 3.3 Sitewise Maximum.Minimum Values of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO ₃)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
			(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
VII Basin : Cauvery Year : 2000-01														
1	Musiri	Cauvery	0.001	0.002	0.001	0.002	0.56	1.28	6.6	8.0	1.1	1.3	-	-
2	Nallamaranpatty	Amravathi	0.000	0.002	0.000	0.002	0.40	1.37	7.5	8.7	-	-	-	-
3	Elunuthimangalam	Noyyal	0.001	0.004	0.002	0.004	1.47	1.88	0.0	6.8	-	-	-	-
4	Kodumudi	Cauvery	0.001	0.002	0.001	0.002	0.59	1.23	6.8	7.1	0.0	0.0	-	-
5	Savandapur	Bhavani	0.000	0.002	0.001	0.002	0.50	1.12	5.6	6.7	-	-	-	-
6	Thengumaradala	Moyar	0.001	0.003	0.000	0.002	0.21	0.60	6.8	8.5	0.0	0.0	-	-
7	Nellithurai	Bhavani	0.001	0.003	0.000	0.001	0.16	0.57	6.4	8.2	0.0	0.0	-	-
8	Urachikottai	Cauvery	0.001	0.003	0.001	0.002	0.53	0.98	7.1	8.1	-	-	-	-
9	Kudlur	Palar	0.001	0.001	0.001	0.001	1.07	1.19	5.4	7.4	0.0	1.4	-	-
10	Biligundulu	Cauvery	0.000	0.000	0.001	0.020	0.03	1.42	5.9	7.9	0.1	2.9	-	-
11	Kanakapura	Arkavatty	0.000	0.000	0.016	0.042	0.03	1.23	4.8	6.8	1.7	5.0	-	-
12	T.K. Halli	Shimsha	0.000	0.000	0.000	0.000	0.01	0.24	5.2	7.2	1.0	2.7	-	-
13	Kollegal	Cauvery	0.000	0.000	0.001	0.005	0.003	1.00	2.3	7.5	0.8	3.8	-	-
14	T.Narsipur	kabini	-	-	0.001	0.009	0.03	1.00	5.2	8.2	0.7	2.9	-	-
15	Muthankera	Kabini	0.000	0.000	0.004	0.014	0.14	0.29	5.7	7.8	-	-	-	-
16	Kathemalavadi	Lakshmanathirtha	0.000	0.000	0.000	0.005	0.002	0.45	-	-	-	-	-	-
17	Mukundur Hosahalli	Hemavathy	0.000	0.001	0.000	0.002	0.06	0.58	5.5	9.5	0.4	1.8	-	-
18	Kudige	Cauvery	0.000	0.000	0.000	0.000	0.000	0.70	6.3	8.2	0.4	2.7	-	-

Table No. 3.3 Sitewise Maximum.Minimum Values of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
VII	Basin : Cauvery													
	Year : 2000-01													
1	Musiri	Cauvery	-	-	-	-	120	216	32.22	41.64	1.10	1.92	0.03	0.58
2	Nallamaranpatty	Amravathi	-	-	-	-	68	244	30.54	47.99	0.75	2.98	0.00	1.00
3	Elunuthimangalam	Noyyal	-	-	-	-	304	432	38.57	74.28	2.41	12.95	0.00	0.68
4	Kodumudi	Cauvery	-	-	-	-	112	220	31.86	40.10	1.05	1.83	0.00	0.58
5	Savandapur	Bhavani	-	-	-	-	72	228	22.74	46.38	0.71	1.51	0.00	0.58
6	Thengumaradala	Moyar	-	-	-	-	40	100	11.49	23.85	0.23	0.51	0.00	0.00
7	Nellithurai	Bhavani	-	-	-	-	20	52	13.73	23.26	0.20	0.43	0.00	0.00
8	Urachikottai	Cauvery	-	-	-	-	80	168	29.76	43.53	0.96	1.84	0.32	0.51
9	Kudlur	Palar	-	-	-	-	232	280	41.10	49.47	2.40	3.19	0.44	1.93
10	Biligundulu	Cauvery	-	-	-	-	65	253	18.59	51.55	0.61	1.87	0.00	0.00
11	Kanakapura	Arkavatty	-	-	-	-	157	363	26.39	57.18	0.95	3.60	0.00	0.00
12	T.K. Halli	Shimsha	-	-	-	-	134	244	9.18	38.93	0.26	1.56	0.00	0.00
13	Kollegal	Cauvery	-	-	-	-	67	211	13.19	30.82	0.42	1.15	0.00	0.00
14	T.Narsipur	kabini	-	-	-	-	59	241	22.22	69.52	0.61	4.78	0.00	0.00
15	Muthankera	Kabini	-	-	-	-	18	52	18.32	31.03	0.25	0.56	0.00	0.00
16	Kathemalavadi	Lakshmanathirtha	-	-	-	-	71	224	7.50	45.31	0.14	2.21	0.00	0.00
17	Mukundur Hosahalli	Hemavathy	-	-	-	-	28	84	10.32	41.51	0.18	1.06	0.00	0.00
18	Kudige	Cauvery	-	-	-	-	15	84	12.88	61.62	0.23	1.44	0.00	0.00

Source : Water Quality Year Book for 2000-01

Note : All the ionic concentrations are expressed in mg./lit., unless mentioned otherwise.

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different Basins.

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

VIII Basin : East Flowing Rivers of Coastal of Andhra Pradesh & Tamil Nadu
Year : 2001-02

1	Thammavaram	Gundalakamma	0.042	41.72	23.0	32.0	7.79	8.97	635	1652	0.07	0.23	3.25	10.70
2	Avaramkuppam	Palar	0.699	24.03	24.5	26.0	7.92	8.38	222	861	0.05	0.11	0.64	4.77
3	Villupuram	Ponniyar	River Dry	River Dry	24.0	24.0	8.31	8.31	596	596	0.10	0.10	2.62	2.62
4	Vazhavachanur	Ponniyar	0.944	22.85	27.0	30.0	7.63	7.99	588	938	0.08	0.18	2.52	4.32
5	Gummanur	Ponniyar	1.708	41.18	23.0	27.3	7.45	8.32	802	1070	0.22	0.40	4.16	6.60
6	Paramakudi	Vaigai	1.239	33.85	25.00	26.5	7.27	7.72	253	396	0.08	0.12	0.68	1.30
7	Ambasamudram	Vaigai	3.038	7.123	24.0	25.0	8.14	8.52	285	507	0.04	0.07	1.03	1.48
8	Theni	Suruliyar	1.979	45.04	23.5	26.5	7.47	8.09	111	374	0.04	0.08	0.21	0.98
9	Irrukkankudi	Vaippar	0.120	0.646	26.5	28.5	7.98	8.32	295.00	525.00	0.10	0.17	0.71	2.85
10	Murappanadu	Tambraparani	3.006	19.50	24.0	29.5	6.89	7.94	159	502	0.04	0.13	0.37	2.28
11	A.P. Puram	Chittar	0.019	0.035	24.0	26.0	8.33	8.39	2509	2570	0.20	0.24	13.55	13.94

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different Basins.

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH ₃)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)

**VIII Basin : East Flowing Rivers of Coastal of Andhra Pradesh & Tamil Nadu
Year : 2001-02**

1	Thammavaram	Gundalakamma	0.54	2.00	0.90	2.88	-	-	Nil	Nil	Nil	Nil	1.10	1.67
2	Avaramkuppam	Palar	0.88	1.68	0.80	2.08	0.007	0.012	0.004	0.005	0.003	0.004	0.43	0.71
3	Villupuram	Ponniyar	1.60	1.60	1.68	1.68	0.010	0.010	0.004	0.004	0.002	0.002	0.17	0.17
4	Vazhavachanur	Ponniyar	1.92	3.00	1.36	3.20	0.011	0.013	0.004	0.004	0.003	0.003	0.00	0.00
5	Gummanur	Ponniyar	1.20	3.40	0.80	2.20	0.010	0.012	0.004	0.005	0.002	0.003	0.00	0.89
6	Paramakudi	Vaigai	1.28	1.60	0.64	0.88	0.009	0.080	0.003	0.005	0.002	0.003	0.00	0.00
7	Ambasamudram	Vaigai	0.64	1.36	0.88	2.16	0.010	0.013	0.004	0.006	0.002	0.003	0.00	0.18
8	Theni	Suruliyar	0.64	1.68	0.32	1.44	0.009	0.017	0.003	0.006	0.001	0.003	0.00	0.00
9	Irrukkankudi	Vaippar	0.96	1.60	1.28	1.68	0.009	0.012	0.004	0.005	0.001	0.003	0.00	0.18
10	Murappanadu	Tambraparani	0.56	1.92	0.48	1.76	0.007	0.080	0.004	0.009	0.001	0.002	0.00	0.00
11	A.P. Puram	Chittar	4.20	8.48	2.80	8.40	0.012	0.013	0.005	0.007	0.003	0.003	0.13	0.34

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different Basins.

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)

**VIII Basin : East Flowing Rivers of Coastal of Andhra Pradesh & Tamil Nadu
Year : 2001-02**

1	Thammavaram	Gundalakamma	0.70	3.41	1.37	6.25	0.047	0.072	1.063	3.125	-	-	0.002	0.029
2	Avaramkuppam	Palar	1.45	5.59	0.34	1.31	0.022	0.095	0.476	0.957	-	-	0.029	0.125
3	Villupuram	Ponniyar	4.61	4.61	1.27	1.27	0.031	0.031	0.446	0.446	-	-	0.106	0.106
4	Vazhavachanur	Ponniyar	3.83	5.99	1.18	2.97	0.031	0.034	0.432	0.711	-	-	0.114	0.181
5	Gummanur	Ponniyar	3.90	6.22	1.75	3.94	0.040	0.089	0.502	1.138	-	-	0.207	0.628
6	Paramakudi	Vaigai	1.30	3.02	0.79	0.88	0.014	0.021	0.268	0.272	-	-	0.057	0.114
7	Ambasamudram	Vaigai	1.25	2.49	0.70	1.75	0.015	0.028	0.168	0.620	-	-	0.053	0.159
8	Theni	Suruliyar	0.73	2.60	0.29	1.05	0.009	0.048	0.56	0.305	-	-	0.033	0.152
9	Irrukkankudi	Vaippar	1.65	3.02	0.91	1.75	0.019	0.041	0.268	0.747	-	-	0.053	0.156
10	Murappanadu	Tambraparani	0.95	2.66	0.31	1.75	0.010	0.022	0.69	0.454	-	-	0.038	0.277
11	A.P. Puram	Chittar	3.01	3.86	17.29	19.31	0.079	0.093	3.206	3.394	-	-	0.650	0.764

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different Basins.

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO ₂)		DO		BOD		Total Coliform	
			Min	Max	Min	Max	Min	Max	(ppm)		(ppm)		(no.per 10 ml)	
			(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)

**VIII Basin : East Flowing Rivers of Coastal of Andhra Pradesh & Tamil Nadu
Year : 2001-02**

1	Thammavaram	Gundalakamma	-	-	0.007	0.027	0.192	0.854	1.20	6.20	0.40	3.00	-	-
2	Avaramkuppam	Palar	0.001	0.002	0.001	0.002	0.37	1.58	River Dry	River Dry	River Dry	River Dry	-	-
3	Villupuram	Ponniyar	0.001	0.001	0.001	0.001	1.18	1.18	River Dry	River Dry	River Dry	River Dry	-	-
4	Vazhavachanur	Ponniyar	0.001	0.001	0.001	0.001	1.04	1.65	3.2	6.70	1.5	1.5	-	-
5	Gummanur	Ponniyar	0.001	0.001	0.001	0.003	1.22	1.63	5.4	8.1	1.7	2.0	-	-
6	Paramakudi	Vaigai	0.001	0.001	0.000	0.002	0.45	0.70	River Dry	River Dry	-	-	-	-
7	Ambasamudram	Vaigai	0.001	0.001	0.001	0.002	0.54	0.960	6.8	6.8	0.6	0.8	-	-
8	Theni	Suruliyar	0.001	0.001	0.001	0.002	0.27	0.98	6.5	8.1	0.6	1.5	-	-
9	Irrukkankudi	Vaippar	0.001	0.001	0.001	0.002	0.43	1.15	River Dry	River Dry	River Dry	River Dry	-	-
10	Murappanadu	Tambraparani	0.001	0.001	0.001	0.002	0.39	1.21	5.0	7.1	0.5	1.5	-	-
11	A.P. Puram	Chittar	0.001	0.002	0.001	0.002	1.33	1.56	River Dry	River Dry	-	-	-	-

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different Basins.

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform		Total plate count		Phytoplankton		Zooplankton		Arsenic		Boron	
			(no.per 10 ml)	(no.per 10 ml)	(no.per ml)	(no.per ml)	(no.per litre)	(no.per litre)	(ppm)	(ppm)	(ppm)	(ppm)		
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)

**VIII Basin : East Flowing Rivers of Coastal of Andhra Pradesh & Tamil Nadu
Year : 2001-02**

1	Thammavaram	Gundalakamma	-	-	-	-	-	-	-	-	-	-	0.01	0.04
2	Avaramkuppam	Palar	-	-	-	-	-	-	-	-	-	-	0.29	0.40
3	Villupuram	Ponniyar	-	-	-	-	-	-	-	-	-	-	0.32	0.32
4	Vazhavachanur	Ponniyar	-	-	-	-	-	-	-	-	-	-	0.35	0.39
5	Gummanur	Ponniyar	-	-	-	-	-	-	-	-	-	-	0.31	0.41
6	Paramakudi	Vaigai	-	-	-	-	-	-	-	-	-	-	0.30	0.31
7	Ambasamudram	Vaigai	-	-	-	-	-	-	-	-	-	-	0.32	0.39
8	Theni	Suruliyar	-	-	-	-	-	-	-	-	-	-	0.17	0.41
9	Irrukkankudi	Vaippar	-	-	-	-	-	-	-	-	-	-	0.28	0.36
10	Murappanadu	Tambraparani	-	-	-	-	-	-	-	-	-	-	0.21	0.32
11	A.P. Puram	Chittar	-	-	-	-	-	-	-	-	-	-	0.42	0.45

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different Basins.

Sl. No.	Site Name	Name of the River/ Stream	Mercury		Zinc		Hardness		Sodium %		SAR		RSC	
			(ppm)		(ppm)									
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)

VIII Basin : East Flowing Rivers of Coastal of Andhra Pradesh & Tamil Nadu
Year : 2001-02

1	Thammavaram	Gundalakamma	-	-	-	-	109	219	47.86	78.73	2.47	9.26	0.27	1.86
2	Avarankuppam	Palar	-	-	-	-	84	188	26.45	58.82	0.70	3.72	0.50	2.85
3	Villupuram	Ponniyar	-	-	-	-	164	164	43.67	43.67	2.05	2.05	1.50	1.50
4	Vazhavachanur	Ponniyar	-	-	-	-	164	310	37.39	45.76	1.97	2.72	0.00	0.55
5	Gummanur	Ponniyar	-	-	-	-	120	280	41.67	71.51	2.53	6.02	0.40	2.21
6	Paramakudi	Vaigai	-	-	-	-	96	124	25.37	33.33	0.69	1.17	Nil	0.54
7	Ambasamudram	Vaigai	-	-	-	-	84	176	29.25	40.48	1.03	1.28	Nil	0.06
8	Theni	Suruliyar	-	-	-	-	48	156	15.15	45.58	0.30	1.31	Nil	0.47
9	Irrukkankudi	Vaippar	-	-	-	-	112	152	23.28	49.65	0.67	2.44	0.48	0.48
10	Murappanadu	Tambraparani	-	-	-	-	60	136	20.81	44.44	0.45	1.57	Nil	Nil
11	A.P. Puram	Chittar	-	-	-	-	564	630	51.35	54.84	5.40	5.87	Nil	Nil

Note : All the ionic concentrations are expressed in mg./lit., unless mentioned otherwise.
Source: Water Quality YearBook for 2001-02.

Table No.3.3 Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
IX Basin : West Flowing Rivers of Coastal of Kerala, Karnataka and Maharashtra (Year:2000-01)														
1	Badalapur	Ulhas	4.276	310.0	21.5	30.0	7.02	8.09	126	521	0.01	0.03	0.21	0.81
2	Mangaon	Kal	1.623	86.00	27.0	29.0	7.54	8.03	87	100	0.01	0.01	0.11	0.25
3	Adavali	Gad	0.070	235.3	24.0	30.0	7.00	7.87	80	149	0.02	0.020	0.17	0.390
4	Santeguli	Aghanashini	1.630	68.90	16.0	24.0	6.56	8.20	43	169	0.01	0.04	0.10	0.57
5	Haladi	Haladi	11.58	198.6	25.0	27.5	6.59	8.21	28	127	0.01	0.03	0.04	0.17
6	Yennehole	Yennehole	0.033	117.6	24.0	27.0	6.99	8.20	33	128	0.01	0.03	0.10	0.39
7	Bantwal	Netravathi	1.442	900.6	27.0	30.0	7.42	8.17	50	133	0.01	0.03	0.22	0.70
8	Erinjipuzha	Payaswani	0.285	179.7	25.0	31.5	7.28	7.72	42	69	0.01	0.03	0.11	0.23
9	Perumannu	Valapatanam	0.983	230.3	25.0	31.0	7.24	7.95	39	98	0.01	0.03	0.12	0.21
10	Kuniyil	Chaliyar	2.387	384.4	25.5	30.0	6.92	7.74	53	108	0.02	0.03	0.13	0.31
11	Karathodu	Kadalundi	0.581	79.43	25.5	27.5	6.95	7.55	52	61	0.02	0.05	0.18	0.26
12	Pulamanthole	Pulanthodu	1.788	112.9	21.0	30.0	6.50	7.74	37	94	0.02	0.05	0.13	0.30
13	Kumbidi	Bharathapuzha	1.521	326.9	24.5	30.0	7.39	8.05	63	260	0.04	0.07	0.23	0.63
14	Mankara	Bharathapuzha	12.640	18.43	25.5	30.5	6.90	8.55	190	360	0.05	0.08	0.55	1.04
15	Pudur	Bharathapuzha	0.542	46.00	24.5	28.0	7.85	8.55	370	450	0.05	0.09	0.82	1.15
16	Ambaramplayam	Bharathapuzha	0.616	18.76	24.0	27.0	7.15	8.33	146	530	0.04	0.14	0.23	1.87
17	Arangli	Chalakudy	32.81	93.14	26.0	29.0	7.40	7.57	31	51	0.02	0.03	0.10	0.17
18	Neeleshwaram	Periyar	28.19	518.0	26.0	27.0	7.02	7.75	30	53	0.02	0.04	0.10	0.19
19	Ramangalam	Muvattupuzha	47.86	369.8	24.5	27.5	6.74	7.61	43	76	0.02	0.04	0.15	0.19
20	Kalampur	Kaliyar	10.03	167.8	25.0	28.5	6.95	7.48	34	68	0.02	0.03	0.10	0.23
21	Kidangoor	Meenachil	3.853	127.1	25.5	27.0	7.05	7.58	33	57	0.02	0.04	0.10	0.20
22	Kalloopara	Manimala	0.240	197.6	25.0	28.5	6.90	7.58	34	95	0.02	0.06	0.15	0.28
23	Malakkara	Pamba	28.45	516.4	23.5	28.5	6.88	7.52	27	42	0.01	0.02	0.09	0.13
24	Thumpamon	Achankovil	0.575	241.0	25.0	29.0	7.08	7.62	39	90	0.02	0.04	0.13	0.26
25	Pattazhy	Kallada	6.048	134.3	24.5	28.0	7.02	7.80	40	96	0.02	0.05	0.13	0.31
26	Ayilam	Vamanapuram	8.323	119.3	25.5	27.0	7.05	7.44	41	126	0.02	0.05	0.14	0.63

Table No.3.3 Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH ₃)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
IX Basin : West Flowing Rivers of Coastal of Kerala, Karnataka and Maharashtra (Year:2000-01)											Year : 1999-2000			
1	Badalapur	Ulhas	0.54	1.51	0.37	2.75	0.002	0.006	0.002	0.011	0.003	0.010	0.000	0.000
2	Mangaon	Kal	0.27	0.65	0.18	0.53	0.000	0.000	0.002	0.009	0.003	0.011	0.000	0.000
3	Adavali	Gad	0.36	0.74	0.09	0.92	0.000	0.000	0.000	0.002	0.000	0.002	0.000	0.000
4	Santeguli	Aghanashini	0.15	0.63	0.08	0.31	0.000	0.001	0.001	0.027	0.000	0.000	0.000	0.000
5	Haladi	Haladi	0.11	0.81	0.06	0.26	0.001	0.002	0.000	0.027	0.000	0.000	0.000	0.000
6	Yennehole	Yennehole	0.13	0.36	0.07	0.28	0.000	0.002	0.000	0.003	0.000	0.000	0.000	0.000
7	Bantwal	Netravathi	0.16	0.37	0.08	0.29	0.000	0.002	0.002	0.006	0.000	0.000	0.000	0.000
8	Erinjipuzha	Payaswani	0.16	0.32	0.16	0.48	-	-	0.000	0.000	0.001	0.001	0.000	0.000
9	Perumannu	Valapatanam	0.24	0.36	0.12	0.36	-	-	0.000	0.000	0.000	0.001	0.000	0.000
10	Kuniyil	Chaliyar	0.20	0.40	0.20	0.48	-	-	0.000	0.000	0.000	0.000	0.000	0.000
11	Karathodu	Kadalundi	0.28	0.32	0.12	0.28	-	-	0.000	0.000	0.000	0.000	0.000	0.000
12	Pulamanthole	Pulanthodu	0.24	0.32	0.12	0.36	-	-	0.000	0.000	0.001	0.001	0.000	0.000
13	Kumbidi	Bharathapuzha	0.28	0.76	0.20	0.84	-	-	0.000	0.000	0.001	0.001	0.000	0.000
14	Mankara	Bharathapuzha	0.44	1.36	0.56	1.08	-	-	0.000	0.000	0.000	0.003	0.084	0.40
15	Pudur	Bharathapuzha	1.38	2.04	0.96	1.44	-	-	0.000	0.000	0.002	0.003	0.080	0.12
16	Ambaramplayam	Bharathapuzha	0.64	2.72	0.48	1.52	0.007	0.013	0.003	0.006	0.001	0.004	0.000	0.000
17	Arangli	Chalakudy	0.20	0.28	0.12	0.24	-	-	0.000	0.000	0.000	0.000	0.000	0.000
18	Neeleshwaram	Periyar	0.20	0.32	0.16	0.24	-	-	0.000	0.000	0.001	0.001	0.000	0.000
19	Ramangalam	Muvattupuzha	0.24	0.32	0.12	0.24	-	-	0.000	0.000	0.001	0.001	0.000	0.000
20	Kalampur	Kaliyar	0.20	0.36	0.12	0.28	-	-	0.000	0.000	0.000	0.001	0.000	0.000
21	Kidangoor	Meenachil	0.16	0.28	0.12	0.28	-	-	0.000	0.000	0.000	0.001	0.000	0.000
22	Kalloopara	Manimala	0.16	0.32	0.12	0.32	-	-	0.000	0.000	0.000	0.001	0.000	0.000
23	Malakkara	Pamba	0.16	0.24	0.08	0.28	-	-	0.000	0.000	0.001	0.001	0.000	0.000
24	Thumpamon	Achankovil	0.16	0.28	0.12	0.38	-	-	0.000	0.000	0.001	0.001	0.000	0.000
25	Pattazhy	Kallada	0.16	0.36	0.12	0.32	-	-	-	-	0.001	0.001	0.000	0.000
26	Ayilam	Vamanapuram	0.20	0.36	0.12	0.24	-	-	0.000	0.000	0.001	0.001	0.000	0.000

Table No.3.3 Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
IX Basin : West Flowing Rivers of Coastal of Kerala, Karnataka and Maharashtra (Year:2000-01)														
1	Badalapur	Ulhas	0.41	1.45	0.33	1.45	0.000	0.022	0.210	0.730	-	-	0.005	0.053
2	Mangaon	Kal	0.36	0.47	0.26	0.66	0.002	0.011	0.010	1.540	-	-	0.007	0.076
3	Adavali	Gad	0.26	0.87	0.07	1.12	0.000	0.001	0.020	0.830	-	-	0.000	0.042
4	Santeguli	Aghanashini	0.08	0.56	0.13	0.72	0.001	0.054	0.000	0.323	-	-	0.001	0.008
5	Haladi	Haladi	0.05	0.85	0.05	0.45	0.001	0.034	0.010	0.185	-	-	0.000	0.008
6	Yennehole	Yennehole	0.02	0.16	0.04	0.71	0.008	0.078	0.05	0.220	-	-	0.000	0.006
7	Bantwal	Netravathi	0.08	0.40	0.16	1.00	0.000	0.078	0.032	0.416	-	-	0.001	0.005
8	Erinjipuzha	Payaswani	0.16	0.52	0.28	0.50	-	-	0.008	0.058	-	-	-	-
9	Perumannu	Valapatanam	0.28	0.44	0.26	0.42	-	-	0.008	0.038	-	-	-	-
10	Kuniyil	Chaliyar	0.28	0.72	0.28	0.44	-	-	0.013	0.054	-	-	-	-
11	Karathodu	Kadalundi	0.28	0.36	0.30	0.40	-	-	0.013	0.088	-	-	-	-
12	Pulamanthole	Pulanthodu	0.20	0.52	0.28	0.40	-	-	0.008	0.067	-	-	-	-
13	Kumbidi	Bharathapuzha	0.44	1.72	0.34	0.58	-	-	0.013	0.175	-	-	-	-
14	Mankara	Bharathapuzha	1.12	2.32	0.50	0.80	-	-	0.013	0.158	-	-	-	-
15	Pudur	Bharathapuzha	2.20	3.36	0.54	0.86	-	-	0.013	0.649	-	-	-	-
16	Ambaramplayam	Bharathapuzha	1.13	4.33	0.23	0.75	0.021	0.098	0.115	0.364	-	-	0.035	0.162
17	Arangli	Chalakudy	0.16	0.32	0.24	0.34	-	-	0.013	0.025	-	-	-	-
18	Neeleshwaram	Periyar	0.20	0.32	0.20	0.38	-	-	0.004	0.029	-	-	-	-
19	Ramangalam	Muvattupuzha	0.28	0.36	0.28	0.40	-	-	0.008	0.037	-	-	-	-
20	Kalampur	Kaliyar	0.24	0.40	0.20	0.30	-	-	0.013	0.042	-	-	-	-
21	Kidangoor	Meenachil	0.20	0.32	0.24	0.36	-	-	0.008	0.029	-	-	-	-
22	Kalloopara	Manimala	0.16	0.40	0.24	0.42	-	-	0.013	0.125	-	-	-	-
23	Malakkara	Pamba	0.16	0.28	0.20	0.40	-	-	0.008	0.025	-	-	-	-
24	Thumpamon	Achankovil	0.20	0.40	0.26	0.44	-	-	0.008	0.067	-	-	-	-
25	Pattazhy	Kallada	0.20	0.60	0.24	0.38	-	-	0.008	0.071	-	-	-	-
26	Ayilam	Vamanapuram	0.16	0.56	0.26	0.60	-	-	0.021	0.133	-	-	-	-

Table No.3.3 Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO ₃)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
			(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
IX Basin : West Flowing Rivers of Coastal of Kerala, Karnataka and Maharashtra (Year:2000-01)														
1	Badalapur	Ulhas	0.000	0.005	0.008	0.046	0.120	1.260	4.05	6.50	0.50	2.84	-	-
2	Mangaon	Kal	0.003	0.006	0.016	0.022	0.460	2.970	5.70	6.90	0.80	2.00	-	-
3	Adavali	Gad	0.000	0.005	0.002	0.021	0.330	0.690	5.30	7.30	0.80	3.25	-	-
4	Santeguli	Aghanashini	0.000	0.000	0.000	0.005	0.010	0.570	-	-	-	-	-	-
5	Haladi	Haladi	0.000	0.000	0.001	0.004	0.010	0.550	-	-	-	-	-	-
6	Yennehole	Yennehole	0.000	0.000	0.000	0.000	0.010	0.450	-	-	-	-	-	-
7	Bantwal	Netravathi	0.000	0.000	0.000	0.001	0.020	1.030	-	-	-	-	-	-
8	Erinjipuzha	Payaswani	-	-	0.004	0.012	0.147	0.206	6.86	8.04	-	-	-	-
9	Perumannu	Valapatanam	-	-	0.006	0.014	0.147	0.200	5.88	8.08	-	-	-	-
10	Kuniyil	Chaliyar	-	-	0.005	0.012	0.147	0.269	5.94	7.71	-	-	-	-
11	Karathodu	Kadalundi	-	-	0.004	0.012	0.176	0.205	6.66	7.45	-	-	-	-
12	Pulamanthole	Pulanthodu	-	-	0.005	0.012	0.126	0.231	6.67	8.70	-	-	-	-
13	Kumbidi	Bharathapuzha	-	-	0.008	0.014	0.146	0.308	6.47	8.23	-	-	-	-
14	Mankara	Bharathapuzha	-	-	0.008	0.014	0.298	0.368	3.92	7.09	-	-	-	-
15	Pudur	Bharathapuzha	-	-	0.008	0.017	0.279	0.368	4.59	7.52	-	-	-	-
16	Ambarampalayam	Bharathapuzha	0.001	0.003	0.001	0.002	0.051	1.51	6.6	8.1	1.10	2.00	-	-
17	Arangli	Chalakudy	-	-	0.005	0.011	0.137	0.186	7.65	8.64	-	-	-	-
18	Neeleshwaram	Periyar	-	-	0.003	0.015	0.132	0.206	6.86	8.64	-	-	-	-
19	Ramangalam	Muvattupuzha	-	-	0.005	0.014	0.134	0.221	7.25	8.46	-	-	-	-
20	Kalampur	Kaliyar	-	-	0.003	0.010	0.142	0.189	7.25	7.92	-	-	-	-
21	Kidangoor	Meenachil	-	-	0.005	0.014	0.142	0.221	6.27	8.43	-	-	-	-
22	Kalloopara	Manimala	-	-	0.004	0.011	0.147	0.196	6.27	8.51	-	-	-	-
23	Malakkara	Pamba	-	-	0.003	0.012	0.132	0.189	6.66	8.15	-	-	-	-
24	Thumpamon	Achankovil	-	-	0.004	0.015	0.132	0.196	6.86	8.33	-	-	-	-
25	Pattazhy	Kallada	-	-	0.003	0.019	0.146	0.234	4.90	8.08	-	-	-	-
26	Ayilam	Vamanapuram	-	-	0.006	0.017	0.158	0.245	6.88	7.88	-	-	-	-

Table No.3.3 Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
IX Basin : West Flowing Rivers of Coastal of Kerala, Karnataka and Maharashtra (Year:2000-01)														
1	Badalapur	Ulhas	-	-	-	-	-	-	-	-	-	-	0.20	0.55
2	Mangaon	Kal	-	-	-	-	-	-	-	-	-	-	0.10	0.40
3	Adavali	Gad	-	-	-	-	-	-	-	-	-	-	0.11	0.62
4	Santeguli	Aghanashini	-	-	-	-	-	-	-	-	-	-	0.08	0.50
5	Haladi	Haladi	-	-	-	-	-	-	-	-	-	-	0.04	0.54
6	Yennehole	Yennehole	-	-	-	-	-	-	-	-	-	-	0.06	0.07
7	Bantwal	Netravathi	-	-	-	-	-	-	-	-	-	-	0.05	0.028
8	Erinjipuzha	Payaswani	-	-	-	-	-	-	-	-	-	-	0.010	0.020
9	Perumannu	Valapatanam	-	-	-	-	-	-	-	-	-	-	0.010	0.020
10	Kuniyil	Chaliyar	-	-	-	-	-	-	-	-	-	-	0.010	0.020
11	Karathodu	Kadalundi	-	-	-	-	-	-	-	-	-	-	0.000	0.010
12	Pulamanthole	Pulanthodu	-	-	-	-	-	-	-	-	-	-	0.010	0.010
13	Kumbidi	Bharathapuzha	-	-	-	-	-	-	-	-	-	-	0.010	0.020
14	Mankara	Bharathapuzha	-	-	-	-	-	-	-	-	-	-	0.010	0.040
15	Pudur	Bharathapuzha	-	-	-	-	-	-	-	-	-	-	0.020	0.030
16	Ambaramplayam	Bharathapuzha	-	-	-	-	-	-	-	-	-	-	0.14	0.047
17	Arangli	Chalakudy	-	-	-	-	-	-	-	-	-	-	-	-
18	Neeleshwaram	Periyar	-	-	-	-	-	-	-	-	-	-	0.010	0.010
19	Ramangalam	Muvattupuzha	-	-	-	-	-	-	-	-	-	-	0.010	0.010
20	Kalampur	Kaliyar	-	-	-	-	-	-	-	-	-	-	0.010	0.020
21	Kidangoor	Meenachil	-	-	-	-	-	-	-	-	-	-	0.010	0.030
22	Kalloopara	Manimala	-	-	-	-	-	-	-	-	-	-	0.010	0.010
23	Malakkara	Pamba	-	-	-	-	-	-	-	-	-	-	0.010	0.010
24	Thumpamon	Achankovil	-	-	-	-	-	-	-	-	-	-	0.010	0.010
25	Pattazhy	Kallada	-	-	-	-	-	-	-	-	-	-	0.010	0.020
26	Ayilam	Vamanapuram	-	-	-	-	-	-	-	-	-	-	0.010	0.040

Table No.3.3 Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
IX Basin : West Flowing Rivers of Coastal of Kerala, Karnataka and Maharashtra (Year:2000-01)														
1	Badalapur	Ulhas	-	-	-	-	49.59	213.41	15.88	31.84	0.28	0.56	0.00	0.00
2	Mangaon	Kal	-	-	-	-	32.00	44.58	10.89	28.10	0.16	0.45	0.00	0.00
3	Adavali	Gad	-	-	-	-	22.53	69.12	9.17	22.03	0.14	0.47	0.00	0.00
4	Santeguli	Aghanashini	-	-	-	-	14.02	47.08	20.00	49.28	0.23	0.84	0.00	0.00
5	Haladi	Haladi	-	-	-	-	9.52	53.58	8.40	41.46	0.10	0.50	0.00	0.00
6	Yennehole	Yennehole	-	-	-	-	10.02	32.05	15.51	43.24	0.19	0.69	0.00	0.00
7	Bantwal	Netravathi	-	-	-	-	14.52	30.05	37.11	55.93	0.53	1.28	0.00	0.00
8	Erinjipuzha	Payaswani	-	-	-	-	16.02	36.07	15.91	29.87	0.28	0.45	0.00	0.00
9	Perumannu	Valapatanam	-	-	-	-	18.03	32.06	18.18	32.76	0.24	0.45	0.00	0.00
10	Kuniyil	Chaliyar	-	-	-	-	22.04	38.07	18.75	29.00	0.28	0.50	0.00	0.00
11	Karathodu	Kadalundi	-	-	-	-	22.03	28.05	26.47	36.11	0.37	0.55	0.00	0.00
12	Pulamanthole	Pulanthodu	-	-	-	-	18.03	30.05	17.33	32.43	0.24	0.55	0.00	0.00
13	Kumbidi	Bharathapuzha	-	-	-	-	24.04	64.11	25.2	33.98	0.47	0.70	0.00	0.00
14	Mankara	Bharathapuzha	-	-	-	-	70.12	120.21	23.46	30.95	0.62	0.95	0.04	0.08
15	Pudur	Bharathapuzha	-	-	-	-	117.20	174.29	19.95	26.08	0.66	0.91	0.04	0.12
16	Ambaramplayam	Bharathapuzha	-	-	-	-	56.10	188.29	11.79	32.41	0.25	1.36	0.01	0.64
17	Arangli	Chalakudy	-	-	-	-	16.03	26.05	22.22	28.81	0.25	0.38	0.00	0.00
18	Neeleshwaram	Periyar	-	-	-	-	18.03	26.05	16.92	29.09	0.22	0.39	0.00	0.00
19	Ramangalam	Muvattupuzha	-	-	-	-	18.03	26.05	21.54	30.91	0.31	0.40	0.00	0.00
20	Kalampur	Kaliyar	-	-	-	-	18.03	26.05	17.86	29.87	0.21	0.45	0.00	0.00
21	Kidangoor	Meenachil	-	-	-	-	16.03	24.04	22.22	29.63	0.25	0.43	0.00	0.00
22	Kalloopara	Manimala	-	-	-	-	12.02	26.05	21.74	38.64	0.29	0.63	0.00	0.00
23	Malakkara	Pamba	-	-	-	-	14.02	26.05	15.63	27.66	0.20	0.33	0.00	0.00
24	Thumpamon	Achankovil	-	-	-	-	18.03	31.06	17.57	33.33	0.24	0.49	0.00	0.00
25	Pattazhy	Kallada	-	-	-	-	16.03	34.06	24.53	35.71	0.31	0.54	0.00	0.00
26	Ayilam	Vamanapuram	-	-	-	-	14.02	24.04	26.92	54.31	0.33	1.29	0.00	0.00

Source: Water Quality Year Book for 2000-01.

Table No. : 3.3.Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

X Basin : Tapi
Year 1997-98

1	Ghala	Tapi	20.89	473.5	21.0	27.5	7.70	8.20	131	333	0.026	0.026	0.261	1.043
2	Sarankheda	Tapi	0.547	2260	16.0	27.0	7.80	8.20	137	490	0.026	0.051	0.261	1.739
3	Gidhade	Tapi	10.29	2121	21.0	31.0	7.70	8.20	138	421	0.026	0.051	0.261	1.565
4	Savkheda	Tapi	0.302	2264	18.0	30.0	7.80	8.20	154	432	0.026	0.051	0.261	1.565
5	Burhanpur	Tapi	0.159	1345	23.0	36.0	7.70	8.20	139	685	0.026	0.051	0.261	3.130
6	Dedtalai	Tapi	0.540	1124	21.0	30.0	7.6	8.20	131	839	0.026	0.051	0.261	3.652

Table No. : 3.3.Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH ₃)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)

X Basin : Tapi
Year 1997-98

1	Ghala	Tapi	1.238	1.600	0.321	0.559	0.001	0.009	0.001	0.011	0.001	0.002	0.000	0.000
2	Sarankheda	Tapi	1.238	1.600	0.321	0.732	0.001	0.013	0.003	0.014	0.001	0.006	0.000	0.000
3	Gidhade	Tapi	1.238	1.600	0.321	0.641	0.001	0.016	0.004	0.019	0.001	0.006	0.000	0.000
4	Savkheda	Tapi	1.277	1.600	0.395	0.798	0.001	0.018	0.005	0.018	0.001	0.004	0.000	0.000
5	Burhanpur	Tapi	1.267	1.671	0.321	0.959	0.001	0.018	0.003	0.023	0.001	0.013	0.000	0.000
6	Dedtalai	Tapi	1.198	1.761	0.321	1.056	0.000	0.013	0.002	0.019	0.001	0.006	0.000	0.000

Table No. : 3.3.Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)

X Basin : Tapi
Year 1997-98

1	Ghala	Tapi	1.508	2.262	0.169	0.732	0.001	0.008	0.101	0.326	-	-	0.001	0.003
2	Sarankheda	Tapi	1.607	2.590	0.169	1.183	0.003	0.011	0.101	0.299	-	-	0.001	0.002
3	Gidhade	Tapi	1.574	2.525	0.169	1.070	0.003	0.014	0.112	0.363	-	-	0.001	0.003
4	Savkheda	Tapi	1.705	2.492	0.169	1.127	0.004	0.018	0.143	0.432	-	-	0.001	0.005
5	Burhanpur	Tapi	1.607	3.213	0.169	2.085	0.005	0.019	0.112	0.468	-	-	0.001	0.005
6	Dedtalai	Tapi	1.541	3.574	0.169	2.535	0.002	0.017	0.118	0.593	-	-	0.001	0.007

Table No. : 3.3.Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO ₃)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
			(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)

X Basin : Tapi
Year 1997-98

1	Ghala	Tapi	0.000	0.000	0.001	0.002	0.298	0.641	-	-	0.20	1.50	-	-
2	Sarankheda	Tapi	0.000	0.001	0.000	0.003	0.351	0.641	-	-	0.20	1.00	-	-
3	Gidhade	Tapi	0.000	0.001	0.000	0.006	0.324	0.745	-	-	0.20	0.80	-	-
4	Savkheda	Tapi	0.000	0.001	0.001	0.008	0.432	0.801	-	-	0.20	0.90	-	-
5	Burhanpur	Tapi	0.000	0.001	0.001	0.008	0.431	0.801	-	-	0.40	2.10	-	-
6	Dedtalai	Tapi	0.000	0.002	0.000	0.009	0.338	0.749	-	-	0.60	1.80	-	-

Table No. : 3.3.Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basins

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)

X Basin : Tapi
Year 1997-98

1	Ghala	Tapi	-	-	-	-	77.91	107.95	13.32	32.32	0.29	1.00	0.02	0.15
2	Sarankheda	Tapi	-	-	-	-	77.91	116.59	13.32	42.19	0.29	1.61	0.02	0.28
3	Gidhade	Tapi	-	-	-	-	77.91	112.06	13.32	40.57	0.29	1.48	0.02	0.28
4	Savkheda	Tapi	-	-	-	-	83.61	119.87	12.30	39.81	0.27	1.45	0.02	0.14
5	Burhanpur	Tapi	-	-	-	-	79.41	131.48	12.30	53.87	0.27	2.73	0.01	0.58
6	Dedtalai	Tapi	-	-	-	-	75.92	140.05	13.32	56.15	0.29	3.09	0.02	0.79

Source : Water Quality Year Book for 1997-98

Note : All the ionic concentrations are expressed in mg./lit., unless mentioned otherwise.

Table No.3.3 : Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basin.

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
XI	Basin : Narmada Year : 2001-2002													
1	Chandwada	Orsang	0.031	385.4	27.0	30.0	7.80	8.30	164	368	0.026	0.051	0.261	1.391
2	Gurudeshwar	Narmada	9.100	2830	16.0	28.0	7.60	8.20	204	325	0.026	0.026	0.435	0.870
3	Rajghat	Narmada	39.72	8251	17.5	30.0	7.62	8.55	187	448	0.026	0.187	0.087	2.231
4	Mandaleshwar	Narmada	56.88	11642	19.0	30.5	7.88	8.63	142	335	0.028	0.107	0.126	1.383
5	Kogaon	Kundu	0.197	296	26.0	29.0	7.82	8.59	142	1590	0.041	0.281	0.139	11.92
6	Mortaka	Narmada	66.33	10645	17.6	324.8	7.66	8.49	153	347	0.028	0.087	0.087	1.366
7	Handia	Narmada	120.9	7972	19.2	31.2	7.91	8.53	134	330	0.033	0.123	0.122	1.201
8	Chhidgaon	Ganjal	0.320	272.2	15.5	35.5	7.37	8.39	120	547	0.023	0.072	0.270	3.523
9	Hoshangabad	Narmada	77.5	6053	17.0	29.0	7.85	8.39	141	333	0.026	0.097	0.139	1.122
10	Sandia	Narmada	52.27	4700	17.0	28.5	7.82	8.41	143	395	0.023	0.194	0.109	1.635
11	Gadarwara	Sheekkar	0.828	170.8	18.0	29.0	7.61	8.33	130	557	0.023	0.082	0.139	1.070
12	Barmanghat	Narmada	33.1	4664.00	13.0	33.0	7.52	8.46	145	342	0.023	0.082	0.104	0.548
13	Belkheri	Sherat	0.331	5259	18.0	30.0	7.52	8.43	144	514	0.020	0.056	0.157	0.948
14	Patan	Hiran	0.152	459.5	16.2	31.7	7.36	8.43	216	684	0.026	0.159	0.165	2.375
15	Hriday Nagar	Banjar	0.310	239.3	18.0	29.5	7.36	8.45	89	689	0.020	0.118	0.117	1.457
16	Mohgaon	Burhner	2.08	439.5	16.0	29.5	7.42	8.58	101	340	0.020	0.115	0.022	1.975
17	Manot	Narmada	0.624	384.8	13.5	33.0	7.55	8.63	101	334	0.015	0.072	0.122	0.696
18	Dindori	Narmada	0.924	160.3	11.5	28.0	7.48	8.51	188	336	0.018	0.072	0.096	0.635

Table No.3.3 : Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basin.

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH ₃)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
XI	Basin : Narmada	Started												
	Year : 2001-2002													
1	Chandwada	Orsang	1.440	1.600	0.395	0.714	0.000	0.004	0.001	0.010	0.001	0.003	0.000	0.167
2	Gurudeshwar	Narmada	1.440	1.600	0.398	0.640	0.000	0.011	0.001	0.006	0.001	0.002	0.000	0.000
3	Rajghat	Narmada	1.143	2.136	0.444	1.802	-	-	0.000	0.000	0.001	0.016	0.373	0.907
4	Mandaleshwar	Narmada	0.813	1.702	0.296	1.663	-	-	-	-	0.001	0.004	0.303	0.837
5	Kogaon	Kundu	1.023	1.652	0.642	4.716	-	-	0.000	0.000	0.001	0.009	0.467	2.727
6	Mortaka	Narmada	0.833	2.046	0.477	1.597	-	-	0.000	0.000	0.001	0.004	0.303	0.933
7	Handia	Narmada	0.778	2.525	0.337	2.016	-	-	0.000	0.000	0.001	0.027	0.303	0.747
8	Chhidgaon	Ganjal	0.749	2.460	0.477	2.658	-	-	0.000	0.000	0.001	0.044	0.340	1.023
9	Hoshangabad	Narmada	0.828	1.761	0.296	1.663	-	-	0.000	0.000	0.001	0.004	0.373	0.467
10	Sandia	Narmada	0.848	2.026	0.420	1.720	-	-	0.000	0.000	0.001	0.004	0.000	0.467
11	Gadarwara	Sheekkar	0.704	3.253	0.560	2.502	-	-	0.000	0.000	0.001	0.028	0.303	0.680
12	Barmanghat	Narmada	0.783	1.657	0.280	1.580	-	-	0.000	0.000	0.001	0.003	0.303	0.467
13	Belkheri	Sherat	0.858	3.214	0.543	2.576	-	-	0.000	0.000	0.001	0.035	0.333	0.373
14	Patan	Hiran	1.223	3.253	0.757	2.362	-	-	-	-	0.001	0.027	0.000	0.603
15	Hriday Nagar	Banjar	0.384	2.131	0.082	1.819	-	-	-	-	0.001	0.007	0.000	0.377
16	Mohgaon	Burhner	0.614	1.607	0.403	1.638	-	-	-	-	0.001	0.035	0.000	0.680
17	Manot	Narmada	0.724	2.001	0.420	1.720	-	-	-	-	0.001	0.003	0.000	0.377
18	Dindori	Narmada	1.023	1.682	0.520	1.440	-	-	-	-	0.001	0.004	0.000	0.747

Table No.3.3 : Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basin.

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
XI	Basin : Narmada Year : 2001-2002													
1	Chandwada	Orsang	1.770	2.262	0.225	1.070	0.002	0.011	0.180	0.280	0.000	0.000	0.001	0.002
2	Gurudeshwar	Narmada	1.967	2.360	0.282	0.621	0.002	0.006	0.134	0.280	-	-	0.001	0.002
3	Rajghat	Narmada	2.065	4.638	0.090	0.341	0.001	0.033	0.017	0.456	-	-	0.008	0.070
4	Mandaleshwar	Narmada	1.868	3.278	0.102	0.257	0.004	0.031	0.025	0.437	-	-	0.003	0.048
5	Kogaon	Kundu	0.557	13.799	0.195	1.117	0.004	0.211	0.025	2.082	-	-	0.017	0.154
6	Mortaka	Narmada	1.852	3.966	0.150	0.449	0.003	0.031	0.019	0.406	-	-	0.002	0.058
7	Handia	Narmada	1.754	4.753	0.082	0.296	0.004	0.028	0.021	0.406	-	-	0.003	0.031
8	Chhidgaon	Ganjal	1.917	5.736	0.096	0.536	0.006	0.036	0.017	0.510	-	-	0.013	0.068
9	Hoshangabad	Narmada	1.665	3.966	0.090	2.116	0.003	0.032	0.031	0.333	-	-	0.011	0.061
10	Sandia	Narmada	2.081	4.031	0.102	0.544	0.006	0.027	0.042	0.346	-	-	0.005	0.067
11	Gadarwara	Sheekkar	1.573	6.064	0.096	0.488	0.005	0.031	0.050	0.458	-	-	0.004	0.063
12	Barmanghat	Narmada	1.704	3.540	0.161	0.237	0.004	0.028	0.021	0.281	-	-	0.001	0.055
13	Belkheri	Sherat	1.835	5.621	0.087	0.539	0.006	0.044	0.015	0.437	-	-	0.011	0.053
14	Patan	Hiran	2.475	6.293	0.127	0.891	0.002	0.035	0.112	0.456	-	-	0.019	0.063
15	Hriday Nagar	Banjar	1.311	4.900	0.090	0.271	0.005	0.053	0.017	0.489	-	-	0.000	0.050
16	Mohgaon	Burhner	1.409	3.818	0.152	0.237	0.000	0.030	0.017	0.146	-	-	0.000	0.039
17	Manot	Narmada	0.885	3.655	0.076	0.240	0.000	0.027	0.019	0.167	-	-	0.000	0.033
18	Dindori	Narmada	1.999	3.228	0.085	0.228	0.002	0.026	0.010	0.169	-	-	0.003	0.034

Table No.3.3 : Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basin.

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO ₃)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
			(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
XI	Basin : Narmada													
	Year : 2001-2002													
1	Chandwada	Orsang	0.000	0.001	0.001	0.003	0.280	0.358	-	-	0.1	0.7	-	-
2	Gurudeshwar	Narmada	0.000	0.001	0.001	0.003	0.269	0.404	-	-	0.2	1	-	-
3	Rajghat	Narmada	0.001	0.018	0.001	0.010	0.447	1.483	6.6	8.8	0.6	2.8	-	-
4	Mandaleshwar	Narmada	0.001	0.013	0.001	0.008	0.302	1.130	4.2	8.7	0.5	2.1	-	-
5	Kogaon	Kundu	0.001	0.013	0.001	0.012	0.444	4.206	-	-	1.0	3.5	-	-
6	Mortaka	Narmada	0.001	0.008	0.001	0.010	0.363	1.078	-	-	0.7	3.0	-	-
7	Handia	Narmada	0.001	0.007	0.001	0.012	0.415	1.330	5.7	8.2	0.1	2.2	-	-
8	Chhidgaon	Ganjal	0.001	0.021	0.001	0.010	0.373	1.725					-	-
9	Hoshangabad	Narmada	0.001	0.013	0.001	0.007	0.442	0.946	6.7	8.8	0.5	2.4	-	-
10	Sandia	Narmada	0.001	0.018	0.001	0.008	0.489	1.183	7.3	8.5	-	-	-	-
11	Gadarwara	Sheekkar	0.001	0.020	0.001	0.008	0.410	1.172	Nil	Nil	0.5	2.5	-	-
12	Barmanghat	Narmada	0.001	0.021	0.001	0.010	0.442	1.125	6.8	9.9	0.8	3.0	-	-
13	Belkheri	Sherat	0.001	0.014	0.001	0.008	0.421	1.583	-	-	-	-	-	-
14	Patan	Hiran	0.001	0.016	0.002	0.009	0.578	1.309	-	-	0.8	3.4	-	-
15	Hriday Nagar	Banjar	0.001	0.005	0.000	0.009	0.400	1.672	-	-	-	-	-	-
16	Mohgaon	Burhner	0.000	0.003	0.001	0.010	0.368	1.314	-	-	-	-	-	-
17	Manot	Narmada	0.000	0.006	0.000	0.006	0.384	1.172	-	-	-	-	-	-
18	Dindori	Narmada	0.000	0.015	0.000	0.007	0.510	1.115	-	-	-	-	-	-

Table No.3.3 : Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basin.

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
XI	Basin : Narmada Year : 2001-2002													
1	Chandwada	Orsang	-	-	-	-	92	116	12.3	37.0	0.27	1.29	0.00	0.07
2	Gurudeshwar	Narmada	-	-	-	-	92	112	18.3	28.5	0.44	0.84	0.03	0.20
3	Rajghat	Narmada	-	-	-	-	100	193	2.9	45.3	0.07	1.99	0.18	2.53
4	Mandaleshwar	Narmada	-	-	-	-	69	164	5.0	34.7	0.12	1.22	0.11	1.57
5	Kogaon	Kundu	-	-	-	-	97	306	6.5	65.0	0.14	6.81	0.29	10.40
6	Mortaka	Narmada	-	-	-	-	85	182	3.4	33.4	0.08	1.18	0.01	1.37
7	Handia	Narmada	-	-	-	-	68	206	2.8	33.9	0.08	1.12	0.10	1.28
8	Chhidgaon	Ganjal	-	-	-	-	61	235	10.9	52.3	0.27	2.80	0.40	2.79
9	Hoshangabad	Narmada	-	-	-	-	67	177	4.2	31.2	0.11	0.96	0.08	1.13
10	Sandia	Narmada	-	-	-	-	61	178	5.0	40.1	0.12	1.49	0.15	1.26
11	Gadarwara	Sheekkar	-	-	-	-	63	232	3.9	24.3	0.12	0.83	0.31	1.99
12	Barmanghat	Narmada	-	-	-	-	67	162	4.3	27.1	0.10	0.73	0.06	1.13
13	Belkheri	Sherat	-	-	-	-	77	243	4.4	25.0	0.12	0.62	0.29	2.52
14	Patan	Hiran	-	-	-	-	102	269	3.5	30.6	0.11	1.45	0.43	3.05
15	Hriday Nagar	Banjar	-	-	-	-	36	197	3.8	34.5	0.10	1.04	0.24	1.30
16	Mohgaon	Burhner	-	-	-	-	53	160	1.8	49.0	0.03	2.01	0.01	1.13
17	Manot	Narmada	-	-	-	-	60	179	3.2	21.0	0.08	0.61	0.03	1.29
18	Dindori	Narmada	-	-	-	-	69	152	4.4	23.00	0.08	0.62	0.07	1.32

Table No.3.3 : Sitewise Maximum/Minimum Value of Water Quality Parameters for Different River Basin.

Sl. No.	Site Name	Name of the River/ Stream	TDS (ppm)		NTU (ppm)		OXYGEN (ppm)		COD (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(88)	(89)	(90)	(91)	(92)	(93)	(94)	(95)
XI Basin : Narmada Year : 2001-2002										
1	Chandwada	Orsang	-	-	-	-	-	-	-	-
2	Gurudeshwar	Narmada	-	-	-	-	-	-	-	-
3	Rajghat	Narmada	120	320	35	270	1.1	1.8	19.4	36.3
4	Mandaleshwar	Narmada	100	336	34	287	1.1	1.7	15.5	34.2
5	Kogaon	Kundu	100	1130	6	287	1.1	2.6	24.1	36.1
6	Mortaka	Narmada	110	270	28	248	1	1.4	20.2	33.0
7	Handia	Narmada	100	220	27	289	1.1	23.8	19.3	34.1
8	Chhidgaon	Ganjal	90	380	12	239	1.1	2.3	15.3	32.5
9	Hoshangabad	Narmada	90	260	15	287	1	2.0	17.6	30.9
10	Sandia	Narmada	90	280	10	282	1	1.9	17.2	29.7
11	Gadarwara	Sheekkar	80	370	9	170	1	2.4	18	30.6
12	Barmanghat	Narmada	110	230	6	221	0.8	1.4	19.1	32.1
13	Belkheri	Sherat	100	380	13	248	1	2.3	18.9	33.2
14	Patan	Hiran	130	460	27	118	1.0	2.4	21.3	33.6
15	Hriday Nagar	Banjar	50	480	15	180	1.0	1.8	23.0	33.6
16	Mohgaon	Burhner	60	230	45	275	0.7	2.1	17.0	32.9
17	Manot	Narmada	70	220	30	249	0.6	2.2	23.9	33.2
18	Dindori	Narmada	100	220	15	264	1.0	1.7	22.7	32.7

Source : Water Quality Year Book for 2001-2002.

Note : All the ionic concentrations are expressed in mg./lit., unless mentioned otherwise.

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

**XII Basin : Mahi, Sabarmati and Other West Flowing Rivers of Saurashtra and Kutch
Year :1996-97**

1	Mataji	Mahi	0.13	392.6	13.0	28.0	7.70	8.10	155	414	0.026	0.051	0.261	1.130
2	Rangeli	Mahi/Som	2.62	195.0	18.0	32.0	7.70	8.10	225	557	0.026	0.051	0.522	2.087
3	Padardiwadi	Mahi	2.00	821.2	25.0	30.0	7.80	8.20	195	490	0.026	0.051	0.870	1.652
4	Khanpur	Mahi	11.93	3125	18.5	31.0	7.80	8.20	155	843	0.026	0.051	0.261	3.739
5	Derol Bridge	Sabarmati	0.306	7.427	11.0	33.0	7.70	8.20	207	1578	0.026	0.051	0.522	6.435
6	Nabhoi	Sabarmati	0.100	97.37	15.00	23.50	6.70	8.20	250	2608	0.03	0.256	0.87	13.39
7	Abu Road	Banas	0.196	5.756	28.0	29.0	7.70	8.20	273	368	0.026	0.026	0.609	1.130
8	Kamalpur	Banas	<----- River Dry ----->											
9	Balram	Chitrasani	0.611	1.055	24.0	28.0	7.80	8.00	281	337	0.26	0.051	0.783	1.217
10	Shetarunji	Lowara	1.714	4.093	26.00	30.00	7.80	8.00	147	1146	0.026	0.205	0.261	5.652
11	Bhadar at Gand	Bhadar	0.350	6.563	26.00	28.00	7.80	8.00	155	400	0.026	0.051	0.261	1.565
12	Mahuwa	Purna	0.761	217.0	20.00	31.00	7.70	8.20	140	554	0.026	0.051	0.261	2.000
13	Gadat	Ambika	1.025	294.5	19.00	31.00	7.80	8.20	141	510	0.026	0.051	0.261	1.826
14	Durvash	Baitarni	4.500	529.3	23.00	29.00	7.60	7.90	138	236	-	0.03	0.26	0.52
15	Pingarwada	Dhadar	0.656	52.34	12.50	30.00	7.80	8.20	264	1597	0.026	0.051	0.696	8.957
16	Motinaroli	Kim	0.234	10.99	17.50	31.50	7.80	8.20	302	1099	0.026	0.103	0.957	5.826

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH ₃)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)

**XII Basin : Mahi, Sabarmati and Other West Flowing Rivers of Saurashtra and Kutch
Year :1996-97**

1	Mataji	Mahi	1.238	1.600	0.395	0.641	0.001	0.007	0.001	0.008	0.000	0.004	0.000	0.000
2	Rangeli	Mahi/Som	1.440	1.680	0.395	0.715	0.001	0.011	0.002	0.008	0.001	0.003	0.000	0.000
3	Padardiwadi	Mahi	1.440	1.680	0.395	0.720	0.001	0.007	0.001	0.012	0.001	0.002	0.000	0.000
4	Khanpur	Mahi	1.226	1.780	0.395	0.798	0.001	0.009	0.002	0.016	0.001	0.006	0.000	0.000
5	Derol Bridge	Sabarmati	1.522	2.000	0.477	1.283	0.001	0.029	0.001	0.026	0.001	0.006	0.000	0.000
6	Nabhoi	Sabarmati	1.600	2.425	0.72	1.191	0.01	0.089	0.004	0.113	0.004	1.467	0.000	0.000
7	Abu Road	Banas	1.522	1.600	0.477	0.715	0.001	0.009	0.004	0.008	0.001	0.002	0.000	0.000
8	Kamalpur	Banas	<-----River Dry----->											
9	Balram	Chitrasani	1.600	1.680	0.650	0.715	0.004	0.009	0.003	0.006	0.000	0.002	0.000	0.000
10	Shetarunji	Lowara	1.268	1.905	0.395	1.104	0.002	0.011	0.006	0.021	0.001	0.004	0.000	0.000
11	Bhadar at Gand	Bhadar	1.277	1.680	0.395	0.650	0.001	0.007	0.004	0.008	0.001	0.006	0.000	0.000
12	Mahuwa	Purna	1.198	1.680	0.321	0.798	0.001	0.013	0.002	0.016	0.001	0.006	0.000	0.000
13	Gadat	Ambika	1.198	1.680	0.321	0.798	0.001	0.013	0.002	0.013	0.001	0.003	0.000	0.000
14	Durvesh	Baitarni	1.20	1.52	0.32	0.56	-	0.020	-	0.01	-	-	-	-
15	Pingarwada	Dhadar	1.600	2.00	0.559	1.039	0.002	0.018	0.011	0.032	0.070	0.935	0.000	0.000
16	Motinaroli	Kim	1.522	1.831	0.559	0.959	0.001	0.004	0.004	0.016	0.001	0.003	0.000	0.000

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)

**XII Basin : Mahi, Sabarmati and Other West Flowing Rivers of Saurashtra and Kutch
Year :1996-97**

1	Mataji	Mahi	1.639	2.426	0.169	0.789	0.001	0.009	0.097	0.301	-	-	0.001	0.003
2	Rangeli	Mahi/Som	1.902	2.721	0.338	1.408	0.002	0.013	0.205	0.296	-	-	0.002	0.003
3	Padardiwadi	Mahi	1.869	2.557	0.282	1.127	0.002	0.012	0.158	0.351	-	-	0.003	0.003
4	Khanpur	Mahi	1.672	3.311	0.169	2.535	0.001	0.017	0.093	0.437	-	-	0.004	0.005
5	Derol Bridge	Sabarmati	1.967	4.721	0.394	4.225	0.003	0.025	0.206	0.646	-	-	0.001	0.007
6	Nabhoi	Sabarmati	2.300	5.934	0.62	8.958	0.01	0.045	0.42	4.583	-	-	0.01	0.016
7	Abu Road	Banas	2.000	2.262	0.394	0.789	0.009	0.012	0.350	0.385	-	-	0.001	0.002
8	Kamalpur	Banas	<----- River Dry ----->											
9	Balram	Chitrasani	2.262	2.492	0.563	0.845	0.006	0.007	0.226	0.243	-	-	0.002	0.003
10	Shetarunji	Lowara	1.672	3.541	0.169	3.944	0.002	0.021	0.143	1.002	-	-	0.001	0.008
11	Bhadar at Gand	Bhadar	1.672	2.525	0.169	1.070	0.005	0.011	0.143	0.418	-	-	0.001	0.003
12	Mahuwa	Purna	1.574	2.918	0.169	1.352	0.002	0.015	0.112	0.382	0.000	0.000	0.000	0.003
13	Gadat	Ambika	1.574	2.689	0.169	1.239	0.001	0.013	0.112	0.382	-	-	0.001	0.004
14	Durvash	Baitarni	1.570	1.930	0.217	0.39	0.001	0.01	0.07	0.17	-	-	0.000	0.000
15	Pingarwada	Dhadar	2.262	5.379	0.560	6.141	0.007	0.018	0.281	1.378	-	-	0.001	0.005
16	Motinaroli	Kim	2.262	3.934	0.676	3.887	0.007	0.019	0.281	0.507	-	-	0.001	0.005

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO ₃)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
			(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)

**XII Basin : Mahi, Sabarmati and Other West Flowing Rivers of Saurashtra and Kutch
Year :1996-97**

1	Mataji	Mahi	0.000	0.001	0.001	0.004	0.249	0.380	-	-	-	-	-	-
2	Rangeli	Mahi/Som	0.000	0.001	0.000	0.003	0.275	0.436	-	-	-	-	-	-
3	Padardiwadi	Mahi	0.000	0.000	0.001	0.003	0.259	0.521	-	-	-	-	-	-
4	Khanpur	Mahi	0.000	0.001	0.001	0.005	0.299	0.853	-	-	-	-	-	-
5	Derol Bridge	Sabarmati	0.000	0.001	0.001	0.004	0.370	0.591	-	-	-	-	-	-
6	Nabhoi	Sabarmati	0.003	0.006	0.04	0.028	0.48	0.749	-	-	-	-	-	-
7	Abu Road	Banas	0.000	0.001	0.001	0.002	0.352	0.532	-	-	-	-	-	-
8	Kamalpur	Banas	<----- River Dry ----->											
9	Balram	Chitrasani	0.000	0.000	0.001	0.001	0.485	0.519	-	-	-	-	-	-
10	Shetarunji	Lowara	0.000	0.001	0.001	0.003	0.384	0.666	-	-	-	-	-	-
11	Bhadar at Gand	Bhadar	0.000	0.001	0.001	0.003	0.490	0.746	-	-	-	-	-	-
12	Mahuwa	Purna	0.000	0.001	0.001	0.006	0.272	0.588	-	-	-	-	-	-
13	Gadat	Ambika	0.000	0.001	0.001	0.006	0.300	0.644	-	-	-	-	-	-
14	Durvesh	Baitarni	0.000	0.001	0.001	0.000	0.029	0.48	-	-	-	-	-	-
15	Pingarwada	Dhadar	0.001	0.004	0.009	0.063	0.483	0.809	-	-	-	-	-	-
16	Motinaroli	Kim	0.000	0.001	0.001	0.008	0.348	0.583	-	-	-	-	-	-

Table No.3.3 : Sitewise Maximum/Minimum Values of Water Quality Parameters for Different River Basins.

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)

**XII Basin : Mahi, Sabarmati and Other West Flowing Rivers of Saurashtra and Kutch
Year :1996-97**

1	Mataji	Mahi	-	-	-	-	81.6	112.1	13.6	33.03	0.29	1.07	0.001	0.18
2	Rangeli	Mahi/Som	-	-	-	-	91.7	119.8	21.90	46.03	0.54	1.91	0.02	0.33
3	Padardiwadi	Mahi	-	-	-	-	91.74	119.8	18.29	40.31	0.44	1.51	0.03	0.23
4	Khanpur	Mahi	-	-	-	-	81.0	128.9	13.68	58.89	0.29	3.31	0.02	0.83
5	Derol Bridge	Sabarmati	-	-	-	-	99.9	164.1	20.49	65.88	0.52	5.02	0.44	1.46
6	Nabhoi	Sabarmati	-	-	-	-	115.8	180.80	26.20	77.57	0.79	9.96	0.01	2.32
7	Abu Road	Banas	-	-	-	-	99.95	115.8	23.12	32.56	0.61	1.05	0.00	0.05
8	Kamalpur	Banas	<----- River Dry ----->											
9	Balram	Chitrasani	-	-	-	-	112.5	119.8	25.59	33.22	0.74	1.11	0.01	0.10
10	Shetarunji	Lowara	-	-	-	-	83.16	150.2	13.38	63.78	0.029	4.61	0.01	0.54
11	Bhadar at Gand	Bhadar	-	-	-	-	83.6	116.5	20.49	40.49	0.29	1.48	0.02	0.24
12	Mahuwa	Purna	-	-	-	-	75.92	123.89	13.32	44.16	0.29	1.80	0.01	0.55
13	Gadat	Ambika	-	-	-	-	75.92	123.9	13.32	41.93	0.29	1.64	0.02	0.27
14	Durvash	Baitarni	-	-	-	-	75.92	104.1	12.3	19.85	0.27	0.51	0.01	0.06
15	Pingarwada	Dhadar	-	-	-	-	108.0	152.0	24.15	76.23	0.67	8.04	0.10	2.36
16	Motinaroli	Kim	-	-	-	-	104.1	139.5	31.22	67.64	0.94	5.00	0.18	1.22

Source: Water Quality Year Book for 1996-97

Note : All the ionic concentrations are expressed in mg./lit., unless mentioned otherwise.

SECTION – IV
LAND USE STATISTICS

SECTION – IV LAND USE STATISTICS

Land use pattern is a fairly useful indicator in understanding the environmental set up, socio-economic status, infrastructural facilities and climatic conditions of an area. The land use pattern is an outcome of the interaction and interplay of the various physical conditions of the area. It gives not only the land coverage but also an insight into the nature of environmental degradation in the catchment basin. Hence it is considered very important in the environmental study of any area. Various Government Departments for their respective administrative units such as Blocks/Tehsils/Districts mostly compile the information. But information is not available for districts/areas under different basins. It may be possible to work out estimated district wise basin wise area but the available district wise information on land use pattern is also quite back dated and the latest available information relates to 1992-93, which has also already been included in the previous issue. In this issue we have confined our analysis at statewise basinwise information. As we have latest information available on basin area state wise for 1999-2000. The basin wise land utilisation has been estimated as sum total of estimated land use pattern in the area of state falling within a basin worked out in proportion to the area of the state falling in the particular basin to total state area. The data on state-wise land use pattern as published by the Directorate of Economics and Statistics, Department of Agriculture & Co-operation, Ministry of Agriculture has been used for the purpose.

The data has been classified into (i) forest area (ii) area not available for cultivation (iii) other uncultivated lands excluding fallow land (iv) fallow land (v) net area sown (vi) total cropped area and (vii) area sown more than once.

The non-classified river basins cover 163080.6 thousand hectares area (table 4.1) of the states. The west flowing river basin from Kanyakumari to Tapi has the highest total cropped area of about 68 % of its basin area followed by Godavari and Krishna basin with 63%. Similarly west flowing river basin from Kanyakumari to Tapi has highest net sown area of 55% followed by Krishna basin 52%.

Area under forests have been reported highest in Godavari Basin. However it can be seen that around 19% of areas of all

basins together are covered under uncultivated lands including fallow land. Among these basins the East flowing river basin has the highest of about 16% of its area still lying unutilised and if sufficient irrigation water is supplied and proper treatment of land is provided it can be brought under agricultural use.

The explanation, as per Ministry of Agriculture, Government of India, of the terms used in this publication is as under:

A Terms Used in the Publication

- i) Reporting Area for Land Utilisation Statistics** The Reporting area stands for the area for which data on land use classification of area are available. In areas where land utilization figures are based on land records, reporting area is the area according to village papers, i.e. the papers prepared by the village accountants. In some cases, the village papers may not be maintained in respect of the entire area of the State. For example, village papers are not prepared for forest areas for which no village paper exists but, for which ad-hoc estimates of classification of area etc. framed to complete the coverage.
- ii) Forest** This includes all lands classified as forest under any legal enactment dealing with forests or administered as forests, whether state-owned or private, and whether wooded or maintained as potential forest land. The area of crops raised in the forest and grazing lands or areas open for grazing within the forests remains included under the forest area.
- iii) Area under agricultural Uses** **Non-** This includes all lands occupied by buildings, roads and railways or under water, e.g. rivers and canals and other lands put to uses other than agricultural.

- iv) Barren and Un-culturable Land** This include all barren and unculturable land like mountains, deserts, etc. Land which cannot be brought under cultivation, except at an exorbitant cost, is classified as unculturable whether such land is in isolated blocks or within cultivated holdings.
- v) Permanent Pastures and other Grazing Lands** This includes all grazing lands whether they are permanent pastures and meadows or not. Village common grazing land is included under this head.
- vi) Land under Miscellaneous Tree Crops, etc.** This includes all cultivable land which is not included in 'Net area sown' but is put to some agricultural use. Lands under Casuring trees, thatching grasses, bamboo bushes and other groves for fuel, etc. which are not included under 'Orchards' are classified under this category.
- vii) Culturable Waste Land** This includes land available for cultivation, whether not taken up for cultivation or taken up for cultivation once but not cultivated during the last five years or more in succession including the current year for one reason or the other. Such lands may be either fallow or covered with shrubs and jungles which are not put to any use. They may be assessed or unassessed and may lie in isolated blocks or within cultivated holdings.
- viii) Fallow Lands other than Current Fallows** (4) This includes all lands, which were taken up for cultivation but are temporarily out of cultivation for a period of not less than one year and not more than five years.
- ix) Current Fallows** This represents cropped area, which

are kept fallow during the current year. For example, if any seeding area is not cropped against the same year it may be treated as current fallow.

- x) Net Area Sown** This represents the total area sown with crops and Orchards. Area sown more than once in the same year is counted only once.
- xi) Total Cropped Area** This represents the total area covered with crops, i.e. the sum total of areas covered by all the individual crops; areas sown with crops more than once during the year being counted as separate areas for each crop. It is also known as Gross Cropped Area.
- xii) Area Sown more than once** This represents the areas on which crops are cultivated more than once during the agricultural year. This is obtained by deducting 'Net Area Sown' from 'Total Cropped Area'.

B. DEFINITION OF SOME COMMONLY USED TERMS

- i) Total Cultivable Area** This consists of net area sown, current fallows, fallow lands other than current fallows, culturable waste and land under miscellaneous tree crops.
- ii) Total Cultivated Area** This consists of net area sown and current fallows.
- iii) Agriculture Land/ Total Culturable Land** Same as cultivable area.

Table No.4.1 Land Utilisation Pattern in different River Basins (as per Land Use Classification for 1999-2000).

Sl. No.	State/ District	State Area	Basin Area in the State	Reporting Area For Land Utilisation	Classification of Reporting Area					Total Cropped Area	Area Sown more than once
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
					6	7	8	9	10		
1	2	3	4	5	6	7	8	9	10	11	12
I	Basin Mahanadi										
i)	Andhra Pradesh	27507000	7320100	7302536	1649664	1254213	453997	1121154	2823509	3465651	642142
ii)	Orissa	15571000	6558000	6558000	2361065	613220	738307	286815	2558593	3590032	1031439
iii)	Madhya Pradesh	44344000	7513600	7515294	2492786	716557	684703	249753	3371496	4440486	1068990
iv)	Maharashtra	30771000	23800	23790	4150	2276	1898	1783	13683	17288	3604
v)	Bihar	17388000	63500	63292	10770	12563	2816	9984	27160	36443	9283
	Total	135581000	21479000	21462912	6518434	2598829	1881720	1669489	8794440	11549900	2755459
II	Subernarekha										
i)	Orissa	15571000	1196400	1196400	430738	111872	134692	52325	466773	654943	188169
ii)	West Bengal	8875000	354700	347306	47640	66304	4956	9712	218695	381477	162822
iii)	Bihar	17388000	1368500	1364014	232097	270741	60681	215176	585319	785384	200065
	Total	41834000	2919600	2907720	710475	448917	200328	277212	1270788	1821804	551056
III	Brahmani and Baitarni										
i)	Orissa	15571000	3474900	3474900	1251062	324928	391208	151975	1355727	1902257	546531
ii)	Madhya Pradesh	44344000	131600	131630	43661	12550	11993	4374	59051	77775	18723
iii)	Bihar	17388000	1575700	1570535	267238	311733	69868	247755	673941	904297	230356
	Total	77303000	5182200	5177064	1561961	649211	473068	404105	2088719	2884329	795610
IV	Godavari										
i)	Andhra Pradesh	25707000	7625200	8139538	1838745	1397968	506033	1249658	3147134	3862877	715743
ii)	Karnataka	19179000	440500	437560	70350	48187	39413	43983	235627	277842	42238
iii)	Orissa	15571000	1775200	1775200	639122	165994	199854	77639	692591	971794	279203
iv)	Madhya Pradesh	44344000	6525500	6526972	2164964	622324	594659	216908	2928117	3856526	928409
v)	Maharashtra	30771000	15219900	15213470	2653627	1455662	1213793	1140095	8750293	11055214	2304921
	Total	135572000	31586300	31092740	7366809	3690134	2553752	2728284	15753761	20024252	4270514

(Area in hectares)

Table No.4.1 Land Utilisation Pattern in different River Basins (as per Land Use Classification for 1999-2000).

Sl. No.	State/ District	State Area	Basin Area in the State	Reporting Area For Land Utilisation	Classification of Reporting Area					Total Cropped Area	Area Sown more than once
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
V	Krishna										
i)	Andhra Pradesh	25707000	4827600	5153233	1164130	885069	320375	791173	1992486	2445631	453145
ii)	Karnataka	19179000	11327100	11251503	1809005	1239077	1013468	1130997	6058956	7144477	1086112
iii)	Maharashtra	30771000	6942500	6939567	1210442	663995	553667	520050	3991413	5042794	1051381
	Total	75657000	23097200	23044304	4183577	2788141	1887511	2442220	12042855	14632902	2590638
VI	Cauvery										
i)	Karnataka	19179000	3624000	3599814	578774	396431	324250	361852	1938506	2285809	347491
ii)	Tamil Nadu	13006000	4873000	4867380	799553	919448	267517	833648	2047215	2442495	395280
iii)	Kerala	3886000	293000	292925	81582	28878	5806	7841	168818	226347	57454
	Total	36071000	8790000	8760118	1459909	1344757	597572	1203341	4154539	4954651	800226
VII	Basin East Flowing Rivers										
i)	Andhra Pradesh	27507000	6505200	6489591	1466017	1114589	403456	996343	2509186	3079842	570656
ii)	Karnataka	19179000	625600	621425	99912	68435	55974	62465	334638	394592	59986
iii)	Orissa	15571000	2578000	2578000	928153	241061	290234	112749	1005802	1411269	405467
iv)	Tamil Nadu	13006000	3509000	3504953	575750	662086	192636	600302	1474179	1758817	284637
v)	Pondicherry	48000	47900	47900	-	14969	3992	4990	23950	41913	17963
	Total	75311000	13265700	13241869	3069832	2101140	946292	1776849	5347756	6686433	1338710
VIII	Basin West Flowing Rivers										
i)	Gujarat	19602000	966600	927644	91966	184621	139354	35011	476692	500608	23916
ii)	Karnataka	19179000	2509500	2492752	400782	274515	224532	250571	1342352	1582847	240626
iii)	Tamil Nadu	13006000	470200	469658	77150	88718	25813	80439	197538	235678	38141
iv)	Dadar & Nagar Haveli	49000	48900	48900	19959	3992	998	998	22953	28941	5988
v)	Daman & Diu	11000	5700	5182	-	1555	1555	-	2073	2591	518
vi)	Kerala	3886000	3592500	3591576	1000279	354073	71184	96145	2069894	2775266	704448
vii)	Maharashtra	30771000	3257300	3255924	567918	311535	259771	243998	1872701	2365991	493290
viii)	Goa	370000	361000	352219	121959	36100	55614	(m)	138546	166841	29270
	Total	86874000	11211700	11143854	2280013	1255109	778820	707163	6122748	7658763	1536197

Table No.4.1 Land Utilisation Pattern in different River Basins (as per Land Use Classification for 1999-2000).

(Area in hectares)

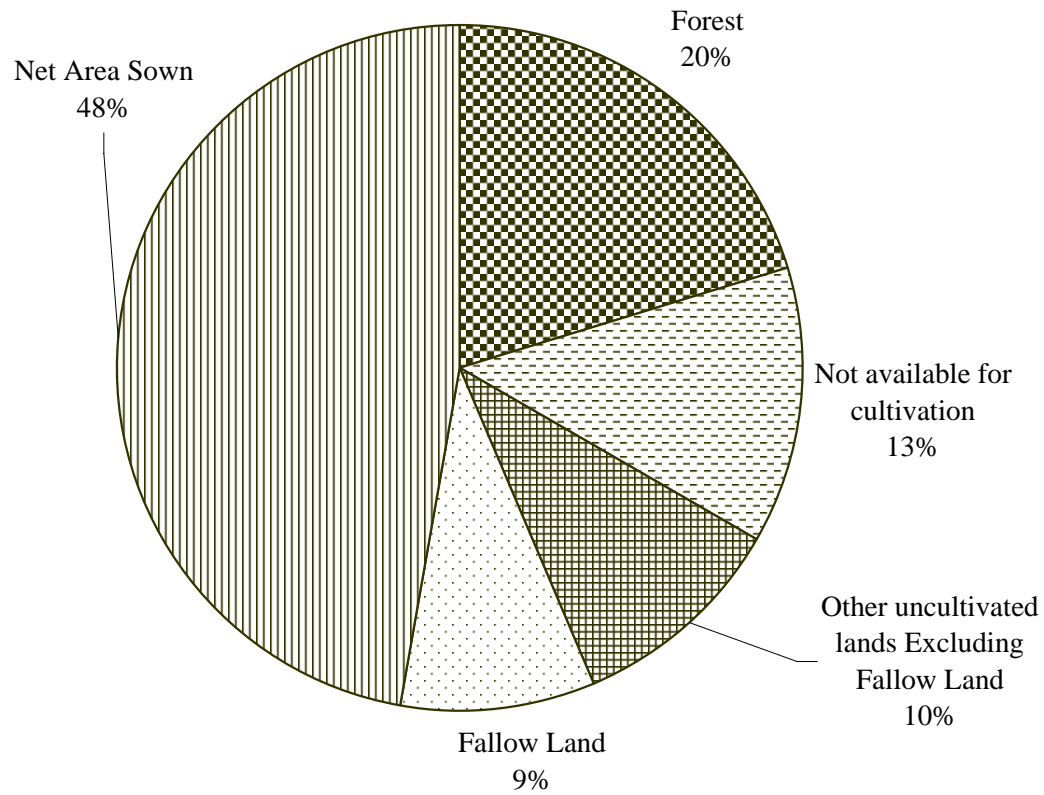
Sl. No.	State/ District	State Area	Basin Area in the State	Reporting Area For Land Utilisation	Classification of Reporting Area					Total Cropped Area	Area Sown more than once
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
IX	Narmada										
i)	Madhya Pradesh	44344000	8585900	8587836	2848542	818820	782420	285396	3852657	5074208	1221551
ii)	Maharashtra	30771000	153800	153735	26815	14710	12266	11521	88423	111715	23292
iii)	Gujarat	19602000	1139900	1093960	108454	217722	164338	41288	562158	590361	28204
	Total	94717000	9879600	9835531	2983812	1051252	959024	338205	4503238	5776285	1273046
X	Mahi, Sabarmati & West Flowing Rivers beteen Saurashtra & Kutch										
i)	Rajasthan	34224000	20984500	21005347	1581931	2639618	4117926	3156504	9509368	11825242	2315874
ii)	Daman & Diu	11000	3900	3545	-	1064	1064	-	1418	1773	355
iii)	Madhya Pradesh	44344000	669500	669651	222120	63849	61010	22254	300417	395670	95252
iii)	Gujarat	19602000	14011400	13446712	1333092	2676190	2020009	507504	6909918	7256593	346675
	Total	98181000	35669300	35125256	3137143	5380720	6200009	3686263	16721121	19479277	2758156
	Grand Total			161791369	33271964	21308211	16478097	15233132	76799966	95468596	18669612

Source : Land Use Classification for 1999-2000, Ministry of Agriculture.

Note : "(m)" : Not available separately, "included under culturable waste".

: " - " : Not available.

Land Utilisation Pattern in Non-Classified River Basin Areas (As per Land Use Classification, 1999-2000)



**Basinwise land Utilisation Pattern in Non-Classified River Basins
(As per land Use Classification, 1999-2000)**

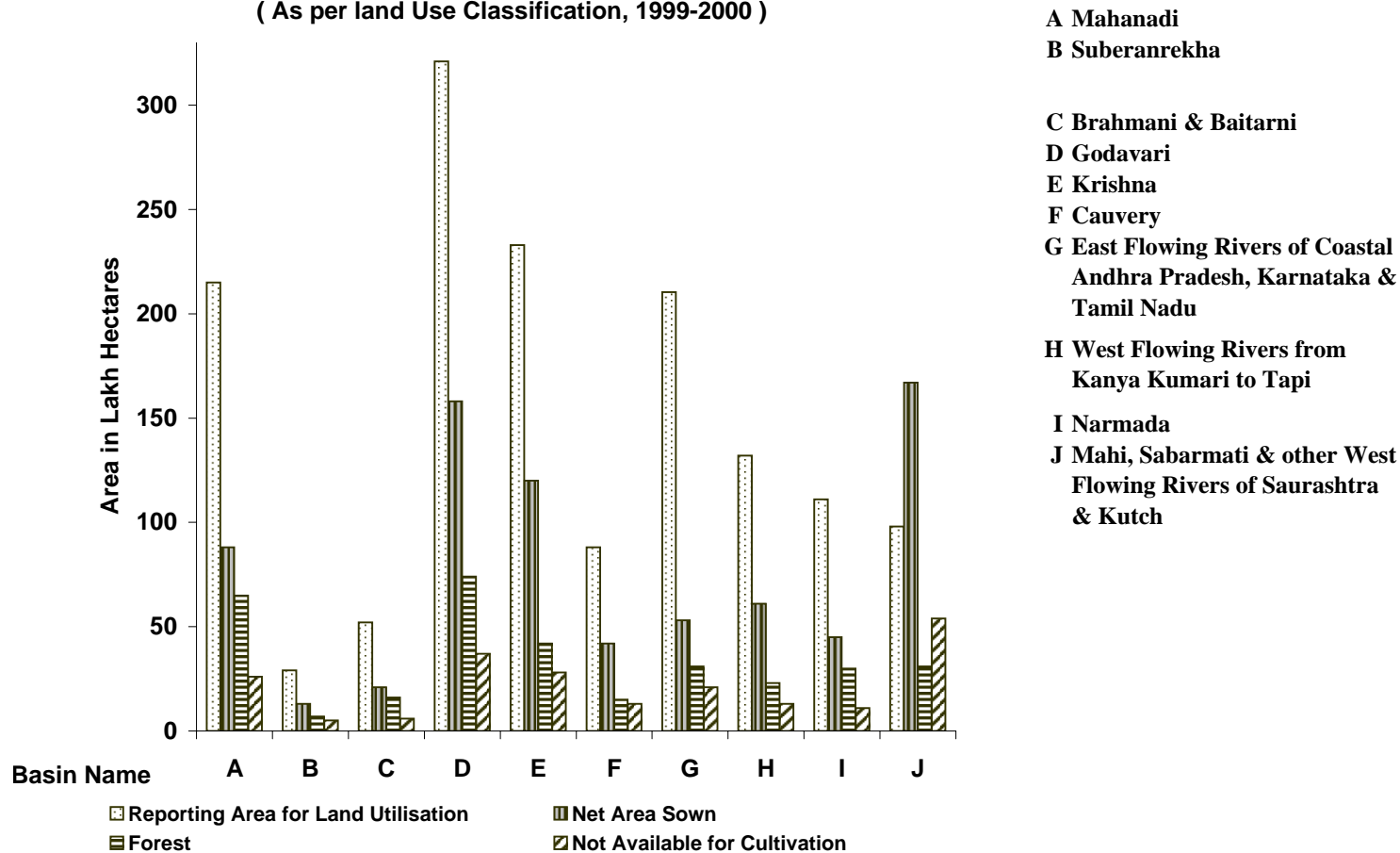


Table 4.2 : Gross Area Irrigated by Sources in different States (As per land use classification for 1999-2000)

(Area in Hectares)

Sl. No.	State/ Union Territory/ Year	State Area	Basin Area in the State	Canals		Total Canals	Tanks	Wells		Other Sources	Total
				Government	Private			Tube wells	Other wells		
1	2	3	4	5	6	7	8	9	10	11	12
I	Basin Mahanadi										
i)	Andhra Pradesh	27507000	7320100	587588	(m)	587588	191339	383742	307100	59344	1529112
ii)	Maharashtra	30771000	23800	984	-	984	-	-	1849	-	2833
iii)	Bihar	17388000	63500	5405	-	5405	719	9871	409	1154	17559
iv)	Madhya Pradesh	44344000	7513600	338031	339	338370	33888	229590	447149	152326	1201491
	Total	120010000	14921000	932007	339	932346	225946	623203	756508	212824	2750996
II	Subernarekha										
	Bihar	17388000	1368500	116481	-	116481	15505	212736	8815	24870	378407
	Total	17388000	1368500	116481	-	116481	15505	212736	8815	24870	378408
III	Brahmani and Baitarni										
i)	Madhya Pradesh	44344000	131600	5921	6	5927	594	4021	7832	2668	21044
ii)	Bihar	17388000	1575700	134118	-	134118	17852	244946	10149	28636	435701
	Total	61732000	1707300	140038	6	140044	18446	248967	17981	31304	456745
IV	Godavari										
i)	Andhra Pradesh	25707000	7625200	654936	-	654936	213269	427725	342299	66146	1704376
ii)	Karnataka	19179000	440500	29560	-	29560	6293	14171	13092	9509	72624
iii)	Madhya Pradesh	44344000	6525500	293577	294	293871	29431	199397	388346	132294	1043485
iv)	Maharashtra	30771000	15219900	629154	-	629154	-	-	1182632	-	1811787
	Total			1607227	294	1607521	248994	641293	1926369	207948	4632273
V	Krishna										
i)	Andhra Pradesh	25707000	4827600	414647	-	414647	135023	270798	216713	41878	1079060
ii)	Karnataka	19179000	11327100	760101	-	760101	161824	364400	336641	244508	1867474
iii)	Maharashtra	30771000	6942500	286986	-	286986	-	-	539453	-	826440
	Total	75657000	23097200	1461735		1461735	296847	635197	1092808	286386	3772974
VI	Cauvery										
i)	Karnataka	19179000	3624000	243187	-	243187	51774	116586	107705	78228	597481
ii)	Tamil Nadu	13006000	4873000	385164	375	385539	269390	106407	199701	7868	968530
	Total	32185000	8497000	628351	375	628726	321164	222993	307406	86096	1566011

Table 4.2 : Gross Area Irrigated by Sources in different States (As per land use classification for 1999-2000)

(Area in Hectares)

Sl. No.	State/ Union Territory/ Year	State Area	Basin Area in the State	Canals		Total Canals	Tanks	Wells		Other Sources	Total
				Government	Private			Tube wells	Other wells		
1	2	3	4	5	6	7	8	9	10	11	12
VII	East Flowing Rivers										
i)	Andhra Pradesh	27507000	6505200	522176	-	522176	170038	341022	272912	52738	1358886
ii)	Karnataka	19179000	625600	41981	-	41981	8938	20126	18593	13504	103141
iii)	Tamil Nadu	13006000	3509000	277353	270	277623	193985	76623	143803	5666	697429
iv)	Pondicherry	48000	47900	8981	-	8981	-	24948	-	(a)	33929
	Total	59740000	10687700	850490	270	850760	372961	462719	435308	71908	2193386
VIII	West Flowing Rivers										
i)	Gujarat	19602000	966600	35060	-	35060	1529	54883	96404	1529	189355
ii)	Karnataka	19179000	2509500	168399	-	168399	35852	80732	74582	54170	413736
iii)	Tamil Nadu	13006000	470200	37165	36	37201	25994	10267	19269	759	93454
iv)	Dadar & Nagar Haveli	49000	48900	1996	-	1996	-	-	998	998	4990
v)	Maharashtra	30771000	3257300	134649	-	134649	-	-	253102	-	387751
vi)	Goa	370000	361000	6830	-	6830	-	-	26343	-	33173
	Total	82977000	7613500	384099	36	384135	63374	145883	470699	57456	1122459
IX	Narmada										
i)	Madhya Pradesh	44344000	8585900	386273	387	386660	38724	262356	510964	174065	1372962
ii)	Maharashtra	30771000	153800	6358	-	6358	-	-	11951	-	18308
iii)	Gujarat	19602000	1139900	41346	-	41346	1803	64723	113688	1803	223305
	Total	94717000	9879600	433977	387	434364	40527	327079	636602	175867	1614575
X	Mahi, Sabarmati & West Flowing Rivers between Saurashtra & Kutch										
i)	Rajasthan	34224000	20984500	1421899	-	1421899	49665	657912	2091460	30658	4251593
ii)	Madhya Pradesh	44344000	669500	30120	30	30150	3020	20458	39843	13573	107059
iii)	Gujarat	19602000	14011400	508219	-	508219	22159	795566	1397423	22159	2744811
	Total	98170000	35665400	1960238	30	1960268	74843	1473935	3528726	66389	7103463
	Grand Total			8398162	1737	8399899	1663102	4781270	9172407	1196179	25212881

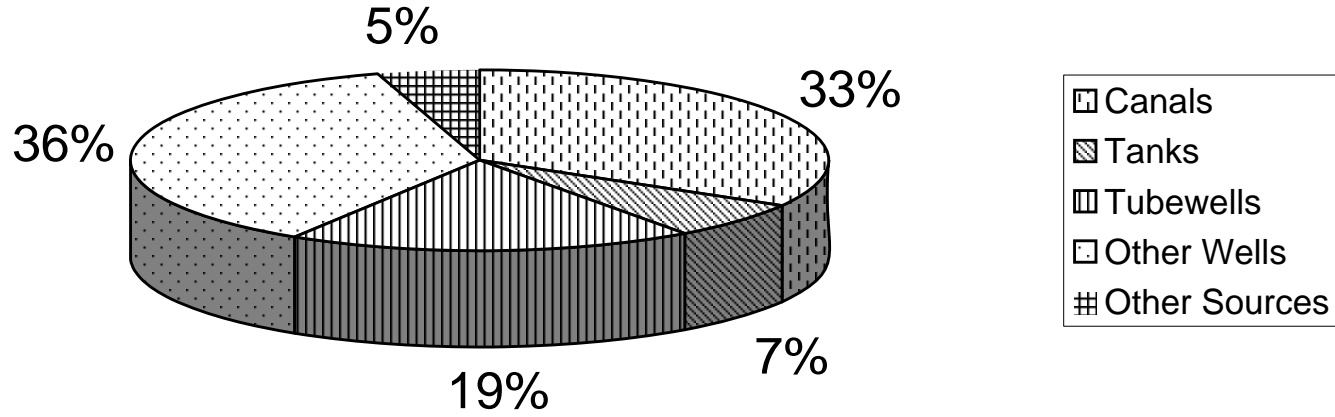
Source : Gross Area Irrigated by Sources in different States (As per land use classification for 1999-2000)

Note : "(m)" : Not available separately, "included under culturable waste".

: "(a)" : Below 500 hectares.

: " - " : Not available.

Gross Irrigated Area by Source of Irrigation in Non-Classified River Basin
(As per Land Use Classification, 1999-2000)



Basinwise Gross Area Irrigated from different sources

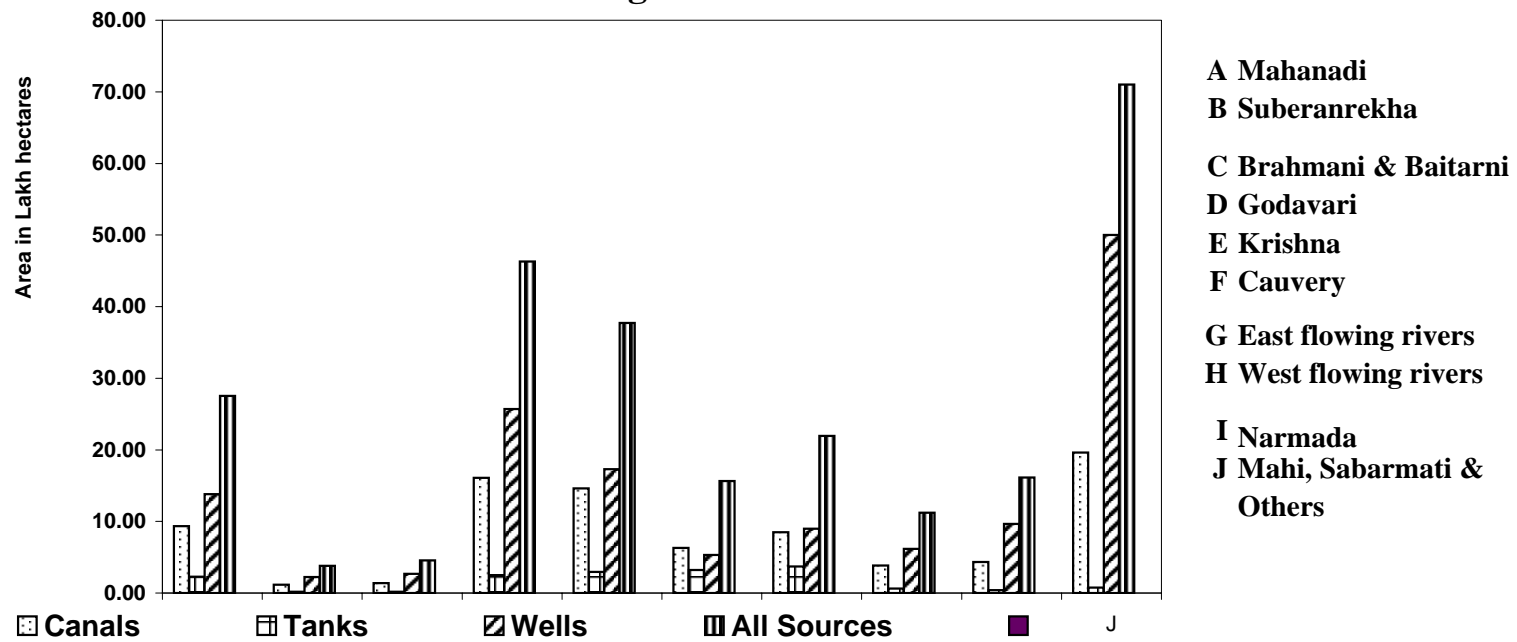


Table 4.3 : Net Gross Area Irrigated by Sources in different States (As per land use classification for 1999-2000)

(Area in Hectares)											
Sl. No.	State/ Union Territory/ Year	State Area	Basin Area in the State	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tube-wells	Other wells		
1	2	3	4	5	6	7	8	9	10	11	12
VI	Cauvery										
i)	Karnataka	19179000	3624000	187877162	-	185933	46294	91077	90132	66135	481462
ii)	Tamil Nadu	13006000	4873000	324842	375	325216	237168	83177	461223	6744	1113529
iii)	Kerala	3886000	293000	6107	377	6484	3996	9199	-	8972	28652
	Total	36071000	8790000	188208111	752	517634	287459	183453	551355	81851	1623642
VII	East Flowing Rivers										
i)	Andhra Pradesh	27507000	6505200	386429	(m)	386429	153957	236	212843	47062	1036783
ii)	Karnataka	19179000	625600	32432658	-	32097	7992	15722	15559	11417	83112
iii)	Tamil Nadu	13006000	3509000	233915	270	234185	170782	59895	332122	4856	801841
iv)	Pondicherry	48000	47900	7983	-	7983	-	12973	-	-	21954
v)	Orissa	15571000	2578000	150663	-	150663	48510	47517	85266	-	331956
	Total	75311000	13265700	33211649	270	811358	381241	136344	645790	63335	2275647
VIII	West Flowing Rivers										
i)	Gujarat	19602000	966600	29685	-	29685	1233	43788	76038	1233	151977
ii)	Karnataka	19179000	2509500	130098714	-	128753	32057	63068	62414	45796	333396
iii)	Tamil Nadu	13006000	470200	31344	36	31380	22885	8026	44504	651	107445
iv)	Dadar & Nagar Haveli	49000	48900	1996	-	1996	-	-	1996	1996	4990
v)	Maharashtra	30771000	3257300	114536	-	114536	-	-	209489	-	387539
vi)	Goa	370000	361000	3903	-	3903	-	-	17562	-	21465
vii)	Kerala	3886000	3592500	74882	4622	79505	48997	112786	-	110012	351300
viii)	Daman & Diu	11000	5700	-	-	-	-	-	518	-	518
	Total	86874000	11211700	130355060	4659	389758	105172	227668	412521	159688	1358631
IX	Narmada										
i)	Madhya Pradesh	44344000	8585900	348904	387	349291	37369	253643	493151	171741	1305001
ii)	Maharashtra	30771000	153800	5408	-	5408	-	-	9891	-	18298
iii)	Gujarat	19602000	1139900	35008	-	35008	1454	51639	89671	1454	179225
	Total	94717000	9879600	389320	387	389707	38823	305282	592713	173195	1502525

Table 4.3 : Net Gross Area Irrigated by Sources in different States (As per land use classification for 1999-2000)

Sl. No.	State/ Union Territory/ Year	State Area	Basin Area in the State	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tube-wells	Other wells		
				5	6			9	10		
1	2	3	4	5	6	7	8	9	10	11	12
I	Basin Mahanadi										
i)	Andhra Pradesh	27507000	7320100	434836	(m)	434836	173243	266118	239506	52957	1166660
ii)	Maharashtra	30771000	23800	837	-	837	-	-	1531	-	2832
iii)	Bihar	17388000	63500	4149	-	4149	566	7333	310	880	13238
iv)	Madhya Pradesh	44344000	7513600	305329	339	305668	32702	221965	431561	150292	1142018
v)	Orissa	15571000	6558000	383262	-	383262	123402	120875	216901	-	844441
	Total	135581000	21479000	1128413	339	1128752	329912	616291	889809	204130	3169189
II	Subernarekha										
i)	Bihar	17388000	1368500	89407	-	89407	12199	158037	6690	18968	285301
ii)	Orissa	15571000	1196400	69920	-	69920	22513	22052	39570	-	154054
iii)	West Bengal	8875000	354700	35290	-	35290	12949	33891	1119	10791	94040
	Total	41834000	2919600	194618	0	194618	47661	213980	47379	29758	533396
III	Brahmani and Baitarni										
i)	Madhya Pradesh	44344000	131600	5348	6	5354	573	3888	7559	2632	20002
ii)	Bihar	17388000	1575700	102944	-	102944	14046	181965	7703	21839	328497
iii)	Orissa	15571000	3474900	203080	-	203080	65387	64048	114930	-	447446
	Total	77303000	5182200	311372	6	311378	80006	249901	130191	24472	795945
IV	Godavari										
i)	Andhra Pradesh	25707000	7625200	484676	(m)	484676	193099	297	266958	59027	1300380
ii)	Karnataka	19179000	440500	22836614	-	22600	5627	11070	10956	8039	58522
iii)	Madhya Pradesh	44344000	6525500	265176	294	265470	28401	192775	374807	130528	991834
iv)	Maharashtra	30771000	15219900	535177	-	535177	-	-	978850	-	1810798
v)	Orissa	15571000	1775200	103746	-	103746	33404	32720	58714	-	228584
	Total	135572000	31586300	24225390	294	1411670	260532	236862	1690284	197594	4390117
V	Krishna										
i)	Andhra Pradesh	25707000	4827600	306854	(m)	306854	122253	187793	169014	37371	823285
ii)	Karnataka	19179000	11327100	587225000	-	581150	144697	284669	281716	206710	1504846
iii)	Maharashtra	30771000	6942500	244119	-	244119	-	-	446499	-	825989
	Total	75657000	23097200	587775973	0	1132123	266950	472462	897228	244081	3154120

Table 4.3 : Net Gross Area Irrigated by Sources in different States (As per land use classification for 1999-2000)

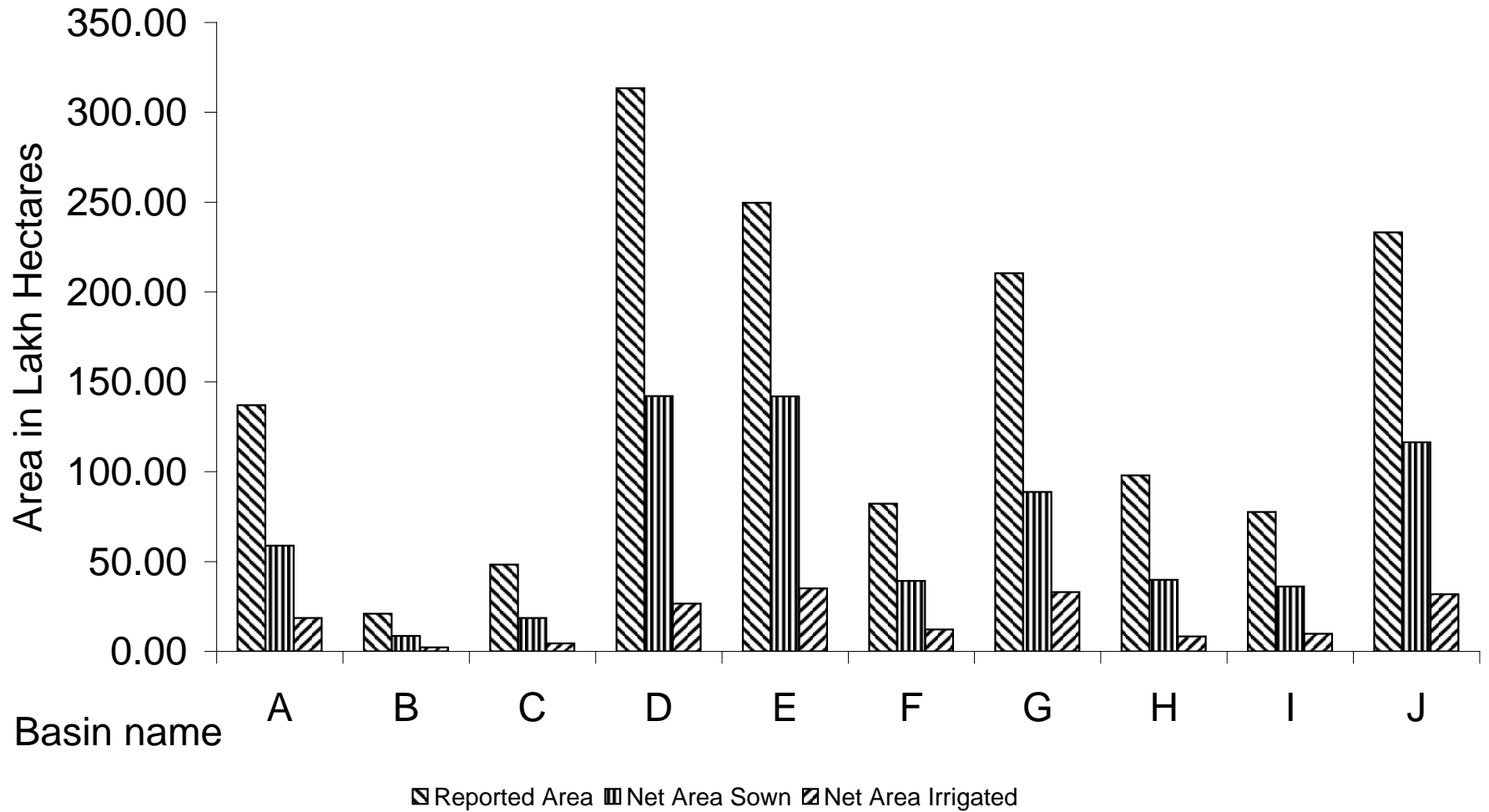
(Area in Hectares)											
Sl. No.	State/ Union Territory/ Year	State Area	Basin Area in the State	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tube-wells	Other wells		
1	2	3	4	5	6	7	8	9	10	11	12
X	Mahi, Sabarmati & West Flowing Rivers beteen Saurashtra & Kutch										
i)	Rajasthan	34224000	20984500	992692	-	992692	47826	580655	1790403	28818	3441007
ii)	Daman & Diu	11000	3900	-	-	-	-	-	355	-	355
iii)	Madhya Pradesh	44344000	669500	27206	30	27237	2914	19778	38454	13392	101760
iv)	Gujarat	19602000	14011400	430306	-	430306	17870	634737	1102213	17870	2202996
	Total	98181000	35669300	1450205	30	1450235	68610	1235170	2931424	60080	5746117
	Grand Total			967250110	6737	7737232	1866365	3877413	8788695	1238183	24549330

Source : Net Area Irrigated classification for 1999-2000

Note : "(m)" : Not available separately, "included under culturable waste".

: " - " : Not available.

Basinwise Net Area Sown and Net Area Irrigated in Non-Classified River Basins (As per Land Use Classification, 1992-93)



GLOSSARY OF TERMS

Active (usable) storage capacity	the total amount of reservoir capacity normally available for release from a reservoir below the maximum storage level. It is total or reservoir capacity minus inactive storage capacity. More specifically, it is the volume of water between the outlet works and the spillway crest.
Alluvium	sediments deposited by erosional processes, usually by streams.
Basin boundary	the topographic dividing line around the perimeter of a basin, beyond which overland flow (i.e., runoff) drains away into another basin.
Bed load	sand, silt, gravel, or soil and rock detritus carried by a stream on or immediately above its bed. The particles of this material have a density or grain size such as to preclude movement far above or for a long distance out of contact with the stream bed under natural conditions of flow.
Bed material	the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.
Biochemical Oxygen Demand (B.O.D.)	the measure of oxygen required for natural oxidation of organic matter with the aid of bacteria. The test is made by taking duplicate samples of water in two completely filled bottles, one of which is sealed and kept stored for 5 days. The dissolved oxygen content of the first sample gives the biochemical oxygen demand, or shortly B.O.D. value. The B.O.D. value of surface waters may be 1 to 10 p.p.m., and for deep well water it would be much less.
Coliform Index	the probable number of coliform organisms present in 100 ml. is known as coliform index. If out of 5 portions be isolated from one sample only, the number of coliforms would be considered to be 1 in 50 ml. or 2 in 100 ml., which would be the coliform index, assuming that the gas formation was due to one coliform only.

dam	any artificial barrier which impounds or diverts water. A dam is generally considered hydrologically significant if it is (i) One and one quarter feet (0.4 meters) or more in height from the natural bed of the stream and has a storage of at least 15 acre-feet, or (ii) has an impounding capacity of 50 acre-feet or more and is at least six feet (2 meters) above the natural bed of the stream.
Discharge	<p>the quantity of water flowing across a section of a channel in a unit time is called the discharge. It is measured in cubic feet or meters per second, briefly called cusecs and cumecs respectively and is equal to the area of section X average velocity. Common units are cubic feet per second (cfs), second-day feet (sdf), and cubic meter per second (cms). Two types of discharges are often measured and recorded:</p> <p>instantaneous discharge: the discharge at a particular instant of time.</p> <p>mean discharge: the arithmetic mean of individual discharges during a period of time.</p> <p>Discharges given are daily observed discharges commencing at 08.00 hrs.</p>
Drainage area	an area around a river rainfall of which flows into the river. Also known as watershed, catchment area, and
Drainage basin	A part of the earth's surface which is occupied by a drainage system which consists of a surface stream with all its tributaries and impounded bodies of water. Also known as watershed, catchment area, and drainage area.
Gross capacity	the maximum volume of water that can be stored in a reservoir.
Ground water	water within the earth that supplies wells and springs; water in the zone of saturation where all openings in rocks and soil are filled, the upper surface of which forms the water table. Also termed Phreatic water.
Ground water runoff	that part of the runoff which has passed into the ground, has become ground water, and has been discharged into a stream channel as spring, or seepage water.

Hardness	<p>hardness of water is generally caused by the presence of salts of calcium and magnesium. Hardness due to the presence of bicarbonates of calcium and magnesium is called temporary hardness. Permanent hardness is caused by the presence of sulphates and chlorides of these metals, and is not removable by boiling. The sum of these two hardness is called total hardness. It is expressed in terms of calcium carbonate. Since one gallon of water weighs 70,000 grains, degrees of hardness can be converted in p.p.m. by multiplying by 14.3. A water having 50 to 100 p.p.m. hardness is called soft water, one with 100 to 200 p.p.m. Moderately hard, and that with 200 to 300 p.p.m. hard. Hardness of 80 to 90 p.p.m. is considered to be the best.</p>
Headwater basin	<p>a basin at the headwaters of a river. All discharge of the river at this point is developed within the basin.</p>
Hydrogen-ion Concentration (pH)	<p>acidity and alkalinity determinations measure the amount of acid and alkali present, while the H-ion concentration determines the strength of the acid and alkali in water. An ion is an atom or a group of atoms that carries an electric charge.</p> <p>The H-ion concentration is expressed in terms of logarithm of the reciprocal of the H-ion concentration. This term is called the pH value (potential of Hydrogen). $\log 1/10^{-7} = 7$, so that pH value 7 denotes neutrality while values above 7, signify alkalinity and those below 7, acidity. The determination of pH value provides information concerning the corrosive character of water. Waters with pH between 7.4 and 8.4 are practically inactive.</p> <p>Waters with pH above 8.6 or 8.8 are likely to cause precipitation of calcium carbonate in the distribution system, while waters over-carbonate with CO₂ may dissolve the slight carbonate film on the inside of mains and start active corrosion, depending upon the pH value. When the pH of natural waters is below 7 it may be found necessary to add a small amount of soda ash or lime to the water before admittance to the mains, as otherwise corrosion may be caused.</p>

Hydrologic Cycle	Water is lost to the atmosphere as vapour from the earth, which is then precipitated back in the form of rain, snow, hail, dew, frost, etc. The process of evaporation and precipitation which combines for ever and thereby maintaining a balance between the two is called Hydrologic Cycle.
Hydrologic unit	a geographical area representing part or all of a surface drainage basin or distinct hydrologic feature such as a reservoir, lake, etc.
Hydrology	the applied science concerned with the waters of the earth, their occurrences, distribution, and circulation through the unending hydrologic cycle of: Precipitation, consequent runoff, infiltration, and storage; eventual evaporation; and so forth. It is concerned with the physical and chemical reaction of water with the rest of the earth, and its relation to the life of the earth.
Inactive storage Capacity	the portion of capacity below which the reservoir is not normally drawn, and which is provided for sedimentation, recreation, fish and wildlife, aesthetic reasons, or for the creation of a minimum controlled operational or power head in compliance with operating agreements or restrictions.
Inches of runoff	the volume of water from runoff of a given depth over the entire drainage.
Irrigated area	the gross farm area upon which water is artificially applied for the production of crops, with no reduction for access roads, canals, or farm buildings.
Irrigation efficiency	the percentage of water applied that can be accounted for in soil moisture increase for consumptive use.
Irrigation requirement	the quantity of water, exclusive of precipitation, that is required for crop production. It includes surface evaporation and other economically unavoidable wastes.

Live capacity	the minimum volume of water required for maintaining flow of water from the Reservoir. It is the total amount of storage capacity available in a reservoir for all purposes, from the dead storage level to the normal water or normal pool level surface level. Does not include surcharge, or dead storage, but does include inactive storage, active conservation storage and exclusive flood control storage.
Long term storage dams	reservoirs used for recreational use or storage of irrigation, municipal or industrial water. Because water is impounded on a "permanent" basis, the design of these dams is more complex than for tailings or flood control detention dams. A long term storage dam may include an impermeable core surrounded by shell materia, have many types of drains and filters, outlet works, with gates and valves, seepage collection boxes, and possibly several spillways. The capacity of the spillway is dependant upon the downstream hazard potential.
Mean annual rainfall	mean annual rainfall is usually worked out as a simple average of the total rainfall of various years.
Mean depth	the average depth of water in a stream channel or conduit. It is equal to the cross-sectional area divided by the surface width.
Moisture equivalent	the ratio of (1) the weight of water which the soil, after saturation, will retain against a centrifugal force 1,000 times the force of gravity, to (2) the weight of the soil when dry. The ratio is stated as a percentage.
Net rainfall	The portion of rainfall which reaches a stream channel or the concentration point as direct surface flow.
Normal year	the year during which the precipitation or stream flow approximates the average for a long period of record.
Peak discharge	rate of discharge of a volume of water passing a given location. (Usually in cubic feet per second.)
Point discharge	instantaneous rate of discharge, in contrast to the mean rate for an interval of time.
Point precipitation	precipitation at a particular site, in contrast to the mean precipitation over an area.
River Basin	drainage area of a river and its tributaries.

River datum	gauge	the arbitrary zero datum elevation which all stage measurements are made from.
Runoff		water which is not absorbed by the soil and flows to lower ground, eventually draining into a stream, river, or other body of water. It is that part of precipitation that flows toward the streams on the surface of the ground or within the ground. Runoff is composed of baseflow and surface runoff.
Runoff/ potential		runoff/ potential of a river for a specified period at a site is the total volume of water flow/passed from/through the site during the specified period. It is the notional depth of water in mm over the catchment, equivalent to annual runoff (in M.Cum.)/Catchment Area (km ²)* 1000 and calculated at the discharge measurement station.
Second-day feet		the volume of water represented by a flow of one cubic foot per second for 24 hours; equal to 84,000 cubic feet. This is used extensively as a unit of runoff volume. Often abbreviated as SDF.
Sediment storage capacity		the volume of a reservoir planned for the deposition of sediment.
Soil moisture		Water contained in the upper regions near the earth's surface.
Stage		the level of the water surface above an established "zero" plane or datum at a given location.
Surface runoff		the runoff that travels overland to the stream channel. Rain that falls on the stream channel is often lumped with this quantity.
Surface water		water that flows in streams and rivers and in natural lakes, in wetlands, and in reservoirs constructed by humans.
Temperature		the in-situ temperature in degree centigrade by thermometer is recorded in terms of water intended use, the treatment to remove impurities and its transport.

Coliform Group	<p>all waters contain bacteria, vast majority of which are perfectly harmless. One organism, bacillus Coli, found in the intestines of men and warm-blooded animals, which in itself is usually quite and may therefore be regarded as danger signal. The group of bacteria of intestinal origin is known as coliform group. The bacilli of this group ferment lactose with gas formation. Since organisms of the coliform group normally live longer in water than other bacteria, absence of such organisms indicates that the water is safe. Also this group is more resistant to treatment than pathogens, their existence or otherwise gives a useful indication of the efficiency of water treatment methods.</p>
Gross reservoir capacity	<p>the total amount of storage capacity available in a reservoir for all purposes from the streambed to the normal water or normal water or normal pool surface level. It does not include surcharge, but does include dead storage.</p>