MANAGING HISTORIC FLOOD



IN KRISHNA RIVER BASIN OCTOBER 2009 ANDHRA PRADESH, INDIA





AN EXPERIENCE OF AVERTING CATASTROPHE

APWRDC ANDHRA PRADESH WATER RESOURCES DEVELOPMENT CORPORATION

DEDICATED TO

THE VISIONARIES & ARCHITECTS OF SRISAILAM DAM



Hon'ble Prime Minister Sri Jawaharlal Nehru laying Foundation Stone for Srisailam Dam on JULY 24TH 1963

Acknowledgements

Managing historic flood in Krishna basin is a unique experience for the present generation of Engineers and decision makers. The parts of the State were reeling under drought till then and administrators had to switch their role overnight from drought management to flood management in the State. The confidence with which the entire community of Engineers and Administrators handled the historic flood is exemplary.

Experts in various engineering fields, administrators, weather forecast experts, were present to given their valuable inputs for decision making at the flood control centre. The professional excellence, team coordination and responsible administration have played important role. The systems for decision support and communication played important role in bringing clarity for critical decision making.

The information shared and the discussions held during the the historic floods at flood control centre and the secondary literature collected from various line departments was useful for completing this document.

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The intension in bringing out this document to share the moments of the historic flood management experience. Climate change becoming real on the planet we may face such instances anywhere on the globe, I hope that this document with experiences could be useful in guiding for the management of the floods.

G. CHANDRASHEKAR REDDY. IFS MD, APWRDC

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CHAPTER - 1

INTRODUCTION

Floods are the most frequent type of disaster worldwide. It can strike anywhere and anytime. Although floods can be predicted, they often cause massive damage and destruction of property as most urban communities are located near the water sources such as sea coasts and river banks.

Andhra Pradesh in the year 2009 had to tackle the dual challenges of a drought like situation in its peak monsoon period and a catastrophic flood situation in the River Krishna Basin. The flood occurred during October 2009 is а representative of the devastating impact of an erratic natural phenomenon and the strength of the human capabilities and capacities in trying to minimize the catastrophic impacts on human life. Entire quantum of water is safely routed to the sea without causing much impact on the civilization existing enroute. The October 2009 floods can be cited as an excellent example of perfectly coordinated efforts and consultative decision making on such complex technical matters. Sri. K. Rosaiah, the Hon'ble Chief Minister of Andhra Pradesh, led the flood management task from the front through constant review and monitoring. A team headed by Sri S.P. Tucker, the Principal Secretary I&CAD, senior most Irrigation Engineers and Irrigation Experts monitored the flood constantly round the clock, for almost a week period.

FLOODS IN ANDHRA PRADESH

Cyclones occurring in Andhra Pradesh are one of the important causes of floods and inundation. The incidence of cyclones seems to have increased in the past decades, to the extent that severe cyclones have become a common phenomenon occurring once in every two to three years, repeatedly and severely affecting the State's economy while challenging its financial and institutional resources. Almost 29 million people are vulnerable to cyclones and their effects in Coastal Andhra Pradesh, 3.3 million belong to communities located within five km of the seashore. The deadliest cyclone in the last thirty years took place in November 1977 causing death of about 10,000 people.

The Godavari and the Krishna rivers have well-defined regime courses, and their natural and man-made banks have usually been capable of carrying flood discharges, with the exception of the delta areas. Traditionally, the flood problem in Andhra Pradesh had been confined to the spilling of smaller rivers and the submersion of marginal areas surrounding Kolleru Lake. However, the drainage problem in the delta zones of the coastal districts has worsened, thereby multiplying the destructive potential of cyclones and increasing flood hazards. Moreover, when a storm surge develops, as it was the case during the severe November 1977 cyclone, threats to people and property multiply as the sea water might inundate coastal areas which are already subjected to torrential rains.



Finally, a critical additional factor affecting the flood management is the irrigation systems maintenance and also dam safety aspects of large dams.

CHAPTER – 2

KRISHNA RIVER BASIN

Krishna River is the second largest river, after Godavari that flows through Andhra Pradesh. Krishna Basin extends over an area of 258,948 km² which is nearly 8% of total geographical area of the country. The basin lies in the States of Andhra Pradesh (113,271 km²), Karnataka (76,252 km²) and Maharashtra (69,425 km²).



Krishna river rises in the Western Ghats at an elevation of about 1337 meters just north of Mahabaleshwar, about 64 km from the Arabian Sea and flows for about 1400 kms and empties into the Bay of Bengal. It flows through Maharastra and Karnataka before entering Andhra Pradesh at 782nd km and flows for a common lenghth of 42 kms between Karnataka and Andhra Pradesh and further a length of 576 kms before joining the Bay of Bengal in Krishna District. It is the second largest river in peninsular India. Most part of this basin comprises rolling and undulating country except the western border which is formed by an unbroken line of ranges of the Western Ghats.

The river bifurcates into two arms after about 64 kms from Prakasam barrage. The left stream after traversing a distance of 31 kms empties in to Bay of Bengal at Malakaya Lanka village in Krishna District. The right stream after traversing a length of 32 kms empties in to Bay of Bengal at Lankevanidibba village in Guntur district. The land situated between these two arms of the river is called "DIVISEEMA"

Most of the catchment area of Krishna River in Andhra Pradesh is a drought prone area. The mean annual rainfall in the catchment area ranges between 635mm and 1016mm and it is mainly from South-West monsoon. In the normal dependable year, the State has to receive about 550 TMC of water from upper States, out of its total allocation of 800 TMC of water inaddition a retun inflow of 11 TMC.

The State has constructed Nagarjuna Sagar, Srisailam, Jurala and Prakasam Barrage to harness the waters of Krishna river. The river also meets the drinking water demands of Hyderabad and Chennai cities, apart from municipalities, panchayats in its catchment and command.



The principal tributaries joining Krishna are the Ghataprabha, the Malaprabha, the Bhima, the Tungabhadra and the Musi. Tributaries like Dindi, Musi, Paleru and Muneru join it upstream of Vijayawada city. Cultivable area in the basin is about 203,000 km², i.e., 80 percent of the basin area, which is 10.4% of the total cultivable area of the country.

CHAPTER - 3

HISTORIC FLOOD IN KRISHNA BASIN – OCTOBER 2009

Both Krishna and Godavari basins were undergoing through severe shortage of water due to less rainfall till September 2009. As a result the Kharif irrigation water could not be supplied to the 22 lakh acres ayacut under Nagarjuna Sagar project. There were serious limitations on drinking water availability, as a result available limited quantity of water in reservoirs was being rationed and distributed. The contingency plans were operationalised to supply drinking water, power reserves and to save the area sown under command. Most of the Mandals in the State are declared drought affected, by 29th September, 2009.

In October 2009 floods at Srisailam, the Krishna basin received unprecedented flood flow of 25.4 lakh cusecs which is more than thousand year return flood. The previous highest recorded flood in the past hundread years for Krishna basin is 9.32 lakh cusecs on 17th October 1998 at Vijayawada.

The Srisailam Dam is primarily built for generating hydel power and is not designed for managing huge floods. Hence, the only way left is to moderate the floods by discharging flood water. However, free discharge of the entire flow is not possible because of limitations at the Srisailam Dam itself and also limitations at the Nagarjuna Sagar Project (NSP) below and the Prakasham Barrage (PB) near Vijayawada.



Photo 1: Srisailam Flood Water Touching 896 feet on 3rd October 2009

The Srisailam Dam is designed for a thousand year return flood of 20.20 lakh cusecs and for a discharge of 11.1 lakh cusecs at FRL +885 ft and 13.2 lakh cusecs at MWL 892 ft including the power draft, while the flood received peaked to 25.40 Lakh Cusecs, on 2^{nd} October from 6.00 pm onwards and continued at this level of inflow for more than 10 hours. The previous maximum flood received was 9.11 lakh cusecs. The flood resulted in building up of water at the Srisailam dam to a level of +896.5 ft. which is above maximum water level (MWL) of +892 ft.

Probable maximum flood is a theoretical concept likely to happen once in 10000 years. PMF is the flood that may be expected from the most severe combination of critical and hydrologic conditions that are reasonably possible in a particular drainage. The Probable Maximum Flood (PMF) for Srisailam reservoir is estimated as 26.08 lakh cusecs. Thus the flood inflows received on 2nd October night touched almost the PMF assessed.



Likewise the Nagarjuna Sagar Dam which is designed for 15.9 lakh cusecs discharge at MWL (Spillway capacity of 15.3 lakh cusecs at MWL and discharge of 35,000 cusecs through main power units and another 25,000 cusecs through canals) and 13.83 lakh cusec at FRL has received a flood inflow of 14.66 lakh cusecs at 6.00 pm on 3rd October 2009, against the previous highest record of 8.6 lakh cusecs. The maximum flood discharge released was 10.50 lakh cusecs on 3rd October 2009 against the previous highest discharge of 8 lakh cusecs on 16th October, 1998.

The Prakasam Barrage which is designed for 11.9 lakh cusecs has received 11.10 lakh cusecs at 7 pm on 5th October, 2009, and 10.94 lakh cuses flood is discharged on midnight of 5th & 6th October, 2009. The Sunkesula Barrage and Jurala Dam also received maximum inflows.



Thus, all irrigation systems in Krishna Basin were at the maximum capacity for the first time in history.

CHAPTER – 4

LIMITATIONS FOR FLOOD DISCHARGE

DAM SPECIFIC CONSTRAINTS

SRISAILAM

At Srisailam dam, the Maximum Water Level (MWL) is +892 feet, The maximum flood discharge at this level is 13.20 lakh cusecs, no guidelines on operating gates beyond this and more storage would submerge more areas upstream due to back waters. Beyond MWL there is a problem in emptying of the Tungabhadra River water into Krishna. In down stream when discharge is more, there is a issue of submergence of power utilities on left and right banks. The maximum discharge released from Srisailam was 7.36 lakh cuses on 15th October 1998, whereas present flood inflow is at 25.4 lakh cusecs on 3rd October, 2009.



Photo 2: Srisailam at its Highest Flood Level October, 2009

NAGARJUNA SAGAR DAM

The dam is a combination of masonry and earth work construction. The FRL is +590 ft. The spillway of the dam is designed for discharge of 13.15 lank cusecs at FRL and 72,000 cusecs through power utilities. The dam is currently proposed for modernization. If more flood is discharged from Srisailam there is threat to NSP and if more discharge is let out at NSP large areas will submerge at Vijayawada. Hence, NSP is not a place to store more water in either case. The stretch of river between NSP and Vijayawada is significantly populated on the banks and submergence would cause lot of damage to property as well as lives.



PRAKASHAM BARRAGE

The Barrage is built only to divert water in to the Eastern and Western canals and is not meant for storage. The maximum

water level at the barrage can be only about 12 feet above crest of barrage. The first warning is issued at flood level of 12ft over crest and discharge of 3.97 lakh cusecs. Second warning is issued at 15 ft over crest and discharge exceeding 5.69 lakh cusecs. Thus, any discharge beyond 5 lakh cusecs causes submergence of a large number of villages along the banks till its confluence in to the sea. The flood banks are designed for 10.6 lakh cusecs, but the flood contingency plan is made only up to 10 lakh cusecs discharge. The highest discharge from the barrage in last 100 years is only 9.32 lakh cusecs. The areas under Prakasam Barrage are thickly populated, and major towns including Vijayawada city are along the banks of river Krishna. Excess flood discharge will cause severe threat to population as well as property on downstream of barrage.



Photo 4: Prakasam Barrage during October, 2009 Flood

UNPRECEDENTED HEAVY RAINFALL

The drought situation looming large in the back ground and everyone was waiting for the rains. The Mahaboobnagar and Kurnool districts which are frequently drought prone areas, received unprecedented rains from 30th of September and is continued up to 3rd of October. The normal annual rainfall for Mahaboobnagar and Kurnool District is 603mm and 670mm respectively.



The unprecedented heavy rainfall received in areas around Mantralayam on the border of Karnataka and Andhra Pradesh in the Krishna basin ranging between 300 mm to 560 mm in the Mandals of Mahaboobnagar and Kurnool district. This rainfall was almost 4 to 5 times of the normal rainfall of the month of October. The rainfall at Mantralayam was unheard in the 338 years of history in temple records. This heavy rainfall historic flood inflows River Krishna caused in and Tungabhadra.

SHORT LEAD TIME

Heavy rainfall in Western Ghats is generally prime cause of the flood in Krishna river. Usually long lead time is available before the flood water from Western Ghats reaches in to Andhra Pradesh State. On September 30th, 2009 an unusual weather system stationed in the middle reaches of the Krishna river close to the State border started causing unprecedented floods in its penultimate reaches and also for Tungabhadra River.



Bulk of the rainfall occurred below the major storage reservoirs of upper riparian states giving little scope for flood moderation. Cloud Burst remained stationary and emptied the large quantity of water load over a small area below Tungabhadra Dam, Narayanpur dam and Ujjain dam in Karnataka State and

over Mahaboobnagar and Kurnool including Mantralayam in Andhra Pradesh. As such it was fag end of monsoon and all the reservoirs in Karnataka were at almost full capacity.



Very little lead time of about 6-8 hours to Sunkesula and Jurala projects from intense rainfall areas. There are no big reservoirs in between intense rainfall area and Srisailam to store the flood water.



CHAPTER – 5

KRISHNA BASIN FLOOD MANAGEMENT

STATE FLOOD CONTROL CENTRE

Flood management is an important assignment with the CADA after the Engineering wing of Irrigation Department finishes building the dam structure and creating the reservoir. The water release comes under the purview of the CADA that has to allocate available water according to State approved set priority. As such flood management becomes a crucial responsibility of the department and the unit State Flood Control Centre which is assigned the task of monitoring and recording inflows and the water in reservoirs to take decisions on the amount of water to be released and stored.

The State Flood Control Centre in Irrigation Department under Engineer-in-Chief, irrigation operates round the clock from 16th June to 15th December every year, and one shift from 8 am to 2 pm during non-flood season. Sri. G. V. Krishna Reddy, DCE is the person incharge of flood control center during October 2009.

The forecast reports from Central Water Commission and Indian Meteorological Department are received at the State flood control centre on day to day basis. Based on the forecast received in the flood control centre the periodical actual flood inflow statement is prepared by collecting the data from river gauges and reservoir gauges then indicate the warning level first and second and danger level. This information is passed on to all concerned to safe guard the irrigation structures, lives of people and their assets and ensure safe passage of flood. The necessary action is taken by river conservators based on the flood contingency plan prepared.

FLOOD MANAGEMENT STRATEGY

The flood management exercise of 2009 was complex as until the end of September 2009, the monsoon was much below normal and the State was facing one of the worst droughts in recent years. Faced with low water flows in to the reservoirs the department focused on conserving the available water for meeting drinking water requirements for the rest of the period of rainfall year.

On 29th September the discussions in the State were on the drought mitigation and visit of drought study team from the Government of India and overnight the scenario changed drastically to the flood management.

During the floods the State Flood Control Centre in Irrigation Department was personally monitored by Principal Secretary Irrigation. An interdisciplinary team of Engineers, experts, and retired engineers with highly acclaimed credentials in various engineering disciplines like mechanical, dam safety, flood management, etc. has supported the flood control team round the clock.

At the field level, one Chief Engineer with experience on respective projects was deputed to Jurala Project, Sunkesula Barrage, Srisailam Dam, Nagarjuna Sagar Dam and Prakasham Barrage including right flood bank and left flood bank of Krishna river below Prakasam Barrage. The Secretaries of Irrigation Department, Sri. S.K. Joshi , Sri. Rajiv Ranjan Mishra and Sri. Adityanath Das were deputed by the Government to Vijayawada, Kurnool and Mahaboob Nagar respectivly to coordinate the flood management with the district officials.



Photo 5: Sri Basheer, Chief Engineer, Srisailam and team lead by I.S.N. Raju, CE, CDO at Dam Site during October, 2009 Floods

Sri I.S.N. Raju, Chief Engineer, Central Designs Organization, has visited Srisailam along with Sri Kannaiah Naidu, the gates expert for monitoring the operation of gates, later on he played an important role in flood management at Prakasam Barrage. Sri B.S.N. Reddy, Engineer-in-Chief, Irrigation was deputed to Nagarjuna Sagar Project to monitor discharge regulation and also to keep track on the seepage pattern through porous holes in galleries of the Nagarjuna Sagar dam. The Chief Engineers, Sri. Basheer, Sri Narayana Reddy and Sri. Masood Alam, were operating from Srisailam, Jurala and Sunkesula respectively.

Hon'ble Minister for Major Irrigation, Sri P. Lakshmaiah, in spite of his ill-health was constantly monitoring the flood situation and guiding from time to time. The Hon'ble ministrer for Minor Irrigation, Smt. Sunitha Laxma Reddy, reviewed the status of tanks and minor lift irrigation schemes. Hon'ble Revenue Minister, Sri Dharmana Prasada Rao kept regular track of flood management in the state and briefed press and electronic media from time to time. Sri M. Shashidhar Reddy, M.L.A., and Hon'ble Member of National Disaster Management Authority, Govt. of India, actively associated with flood management at state level and mobilized resources from National Disaster Management Authority (NDMA). Hon'ble ministers of concerned districts were on the field guiding the officials throughout the flood management operation.

The Chief Minister and the Principal Secretary (Irrigation) were in constant touch with their counterparts in Karnataka for outflow management from dams in Karnataka to reduce the impact of the floods. The situation was reviewed every three hours by Hon'ble Chief Minister.

The Chief Minister reviewed flood situation at 11.30 pm on 2nd October, and at 6 am 3rd October. the on as situation warranted decision making on flood discharge. Hon'ble Chief Minister appeal on 1st October to the people to move out to safer places in Kurnool 24 hours before anticipated increase of flood rise, saved many lives.



Photo 6: Hon'ble Chief Minister addressing Electronic Media

The advance action taken for depletion of Srisailam and Nagarjuna Sagar facilitated moderation of flood during peak inflows on 2.10.2009 night.

The inundation areas were identified for Kurnool, Guntur, Vijayawada for various volumes of flood water discharge on digital maps with the support of APSRAC and circulated to the districts for advance evacuation.

All the irrigation Engineers in the affected districts were on high alert and took up extensive vigilance on the dams and along the courses of the river. Engineers also took up extensive vigil on the flood banks below Vijayawada to watch any slippage, seepage, distress on the bunds and taken preventive measures.

The hourly increase in reservoir levels interms of height in feet and quantum of water in tmc is assessed to predict the inflows and expected rise in reservoir levels as the river gauges in most places are either washed out or water level crossed above gauges. Srisailam has double the extent of water spread area i.e., 616.42 sq. kms. compared to 295 sq.km of Nagarjuna Sagar Dam water spread area and is used for correlating to rise in water levels.

Srisailam inflow and Nagarjuna Sagar outflow is balanced for number of hours. Bringing to this status involved lot of modeling and real time assessment of flood flow which ultimately resulted in the minimal damage.

CIOKRIP meeting was held twice on 3rd October to decide the quantum of water to be discharged from the Nagarjuna Sagar Dam.

The time to time modelling studies for dam sites and hourly monitoring of the flood levels helped in taking decisions on flood discharge from the dams at flood control centre. The temporal movement of flood discharge from one dam to other is regularly kept under track and assessment is made with reference to rise in water level and its timing in next dam and is informed to the district administration.

In free flow condition the outflow or discharge from the dam depends on the water level in the reservoir. Though the inflows are reduced, at free flow conditions the dam discharge was very high as water level in the dams were at peak. The static discharge is due to the head up and time lag. More than 200 km of earthen flood banks downstream of Prakasham Barrage, running to the capacity for more than 36 hours, required constant vigilance and watch. The water user associations, distributory committees and projects committees in Krishna Delta system have played significant role in preparing sand bags and breach closures during this period.

The district administration of the adjacent district has played important role in mobilizing Engineers to the affected areas and also supplying food and water in affected districts.

The Central Water Commission officials and Indian Meteorological Department officials have participated in decision making process at State flood control room and also attended the chief Minister's review meetings, on invitation of the irrigation department.

The flood water management was crucial first at Srisailam initially and gradually the focus of flood management shifted to prakasam Barrage. Leadtime of 3-4 days was available for flood preparedness at prakasam barrage.

CONTRIBUTING FACTORS IN FLOOD MANAGEMENT

- 1. Holding of 90 TMC water between +885ft and +896 ft at Srisailam was crucial and critical decision, as anything like damtilt, dam overflow, dam breakge or dam upliftment was possible
- Cushion of 146 tmc that was available at NSP helped in moderation of flood and restriciting to the maximum discharge of 10.5 lakh cusecs

- There were no catchment inflows below NSP from Munneru, Halia, Paleru and Musi which otherwise would have been in the range of even 5 lakh cusecs
- 4. Interbasin transfer of about 40 TMC flood water from Krishna to Pennar has taken place as the breach at Pothireedypadu has allowed to pass one lakh cusecs to Kundu River and subsequently to Somasila reservoir partially flooding Nandyala town and some villages.
- 5. There was no rain in Krishna basin after 4th October morning.
- 6. The seepage through porous holes is noticed in the galleries of Nagarjuna Sagar dam. Therefore, the Turbidity test is carried out to know the sand content in the seepage water and then matching with the outflow or discharge water turbidity. The permissible seepage through the porous hole is 17 GPM. However, the turbidity was within the limits.
- 7. A concern was expressed regarding the full moon tidal movement of sea water in to the coast which may cause obstruction to the entry of flood water in to sea and thereby causing more flooding. However, the low and high tide difference in height is 2 meters where as river discharges at 4mt height. Therefore it has not become an issue.
- 8. The upstream topography of the Srisailam dam is safe as the velocity of water coming does not touch dam directly. The flood water first hits hillocks and velocity is dissipated. The dam tilt study indicated that the tilt is within the safe limits.
- 9. The modernization of the 1700 railway affecting tanks with an investment of Rs 200 crore has resulted in less damage to the railway lines.

 Free board cushion of Flood banks could accommodate flood water more than the designed capacity of 10.6 lakh cusecs for almost 24 hours on 5th and 6th of October, 2009.

DECISION SUPPORT SYSTEM

APSRAC

The APSRAC has prepared the digital images to know the flood impact areas for various quantities of flood discharges within few minutes of request and these maps are sent to the district administration for evacuating the people to safer places. The result is that with such a deluge also the flood could be managed with minimum loss of property and lives.

Keeping inview of the opening of the gates at Prakasam Barrage and high inflows at Srisailam reservoir APSRAC was asked to prepare the areas likely under inundation at different levels of storage at Srisailam reservoir and different discharge flows below Prakasam Barrage. The inundation maps for +885 ft, +892ft, and +904 ft storage levels at Srisailam were communicated to Mahaboobnagar and Kurnool districts in advance for evacuation.

Similarly for discharge of 10 lakh cusecs and 12 lakh cusecs water from Prakasam Barrage, the likely inundation maps were sent to Guntur and Krishna districts in advance for taking up evacuation measures. The inundation maps for breach at Oleru on Krishna river banks in Guntur district is also prepared and circulated to district administration for evacuation of the people. This advance warning facilitated the districts administration to evacuate one million people and prevented the loss of human life.







As the flood water in Srailam Dam touched about +896.2 ft against MWL +892 ft, everybody's apprehension was that the dam may break at any time if the water level further increases. In this context, the Principal Secretary, I&CAD solicited APSRAC to map possible extension of inundated areas in the downstream of Jurala, Srisailam, Nagarjunasagar dams and Prakasam barrage in case of such eventuality. Though specific softwares were not available for carrying out dam break analysis, APSRAC has carried out the mapping immediately with available resources, reservoirs/barrage data and topographic information in GIS format i.e. DEM, slope, drainage, geology, soils and landforms, etc.

The number of habitations with demographic details in the possible inundation areas in the downstream of each dam is analyzed and disseminated to the concerned departments for preparedness in advance.

IMD RAINFALL FORECAST

Indian Meteorological Department, Hyderabad issues daily weather bulletins for Andhra Pradesh State, covering synoptic situation, realized rainfall, rain forecast. Daily weather report given on 29th September, 2009, by Meteorological Centre, Hyderabad, indicated rain or thunderstorms are likely to occur at many places over few places in interior Karnataka and Telangana, and a Rayalaseema during the next 48 hours. The warning given is, isolated heavy to very heavy rain is likely to occur over Telangana and isolated heavy rain is likely to occur over Rayalaseema during next 48 hours. The daily weather report issued by Meteorological Centre, Hyderabad, on 30th September, indicated isolated heavy to very heavy rain like to occur in coastel area, Telangana and isolated heavy rain is likely over Rayalaseema during next 48 hours. However the quantum of rainfall received was beyond forecast and imagination.
CWC FORECAST

The Central Water Commission maintains river gauges at all important locations on all major rivers like Krishna, Godavari and Pennar and its tributaries. The Central Water commission based on the rainfall pattern and rainfall received issues a forecast of inflows to various river basin reservoirs on daily basis. The CWC forecasts the inflows at various points for effective coordination and management of available waters.

The CWC forecast of the inflow at the Srisailam Dam and the actual realised inflows are tabulated and given below.

The CWC forecast for levels at Mantralayam until 29th of September, 2009 were not alarming and well below the warning level. The warning level of Mantralayam is +310mt. The first advisory indicating the level to touch +310 at Mantralayam was issued on 30th September at 10.40 am. The discharge at Mantralayam was 26,486 cusecs on 30th September which is the nominal flow in Tungabhadra River.

A specific forecast bulletin about flood at Matralayam is received around 4.30PM on 1.10.2009 from CWC unit office at Kurnool mentioning that the historical flood level of +315.8M is likely to touch by midnight. The forecast bulletin was communicated to the District collector by 5.15PM on the same day requesting him to take all precautionary measures for safeguarding people and property.

Table	Table 1: SRISAILAM RESERVOIR INFLOW & OUTFLOW DETAILS						
DATE	TIME	As Per CWC	Reservoir Level Ft	Capacity in TMC	Inflows in c/s *	Out flows in c/s	
29/09/09	6:00 AM	63,563	884.2	258.88	80,243	71,109	
30/09/09	6:00 AM	Nominal flows	884.4	260.31	57,470	67,774	
	7:00 PM	116,533	884.9	263.16	2,06,261	1,80,732	
1/10/2009	6:00 AM	3,17,817	884.5	260.78	6,38,825	5,41,150	
	6:00 PM	8,12,199	881.7	245.07	10,33,348	8,74,557	
2/10/2009	6:00 AM	10,94,703	881.1	241.45	15,60,533	9,65,739	
	6:00 PM	15,89,085	885.8	263.63	22,36,516	10,15,882	
	9:00 PM	18,36,640	888.1	270.7	22,50,151	10,51,822	
3/10/2009	6:00 AM	18,36,640	894	329.86	14,18,288	13,15,000	
	11:00 AM	16,95,630	896.5	350	13,92,020	14,40,000	
	6:00 PM	15,89,085	895.5	342.09	13,22,920	13,42,920	
4/10/2009	6:00 AM	12,35,955	895.6	342.5	12,35,749	13,56,400	
	6:00 PM	8,82,825	893.7	326.5	9,39,474	13,39,000	

Though High inflow indications are given, the realized inflows are much higher than expected by CWC. On 2nd October midnight almost 25.4 lakh cusecs inflows are realized at Srisailam reservoir for almost 10hours which is far above forecast of CWC. Inspite of this the situation is well managed and brought under control.

CIOKRIP MEETING

The Committee on Integrated Operation of Krishna river Irrigation projects (CIOKRIP) meetings are held under Chairmanship of Sri M. K. Rahaman, Engineer-in-Chief, Administration twice on 3rd of October, to take decisions on flood discharge in Krishna basin. In the CIOKRIP meeting held on 3rd October at 4pm a decision is taken to limit the outflows at Nagarjuna Sagar to 9.50lakh cusec keeping inview of the flood banks. At the CIOKRIP meeting held on the same day at 9pm after reviewing the inflow position at Srisailam, Nagarjunasagar and Prakasam barrage a decision is taken to increase the outflows from Nagarjuna Sagar to 10lakh cusec immediatly and then outflow is to be increased to 10.50 lakh cusec from 6Am on 4th october,2009 onwards.

EXPERTS ADVICE

Senior most Irrigation Engineers, Advisors to the Government in Irrigation department and Experts on irrigation monitored the whole flood management constantly round the clock and played an important part in decision support. Continuous consultation with battery of experts led to the best possible solutions, and there were no knee jerk reactions. The experts were allowed to give all options and finally the administrators made the decisions.

The Principal Secretary Sri. S. P. Tucker, Engineer-in-Chief (Administration) Sri. M. K. Rahaman, Engineer in Chief, (Irrigation) Sri B.S.N. Reddy, Chief Engineer CDO, Sri. I. S. N. Raju, Chief Engineer ISWR, Sri P.Rama Raju, Advisors to the Government in Irrigation Department, Engineer-in-Chief (Retd.) Sri. K. Prakash, Director General APSRAC Dr. Mruthyunjaya Reddy and Sri. M.S. Reddy - Former Chairman, CWC and Secretary, Ministry of Water Resources, Government of India , Sri. S.K Das- Former Chairman, CWC also the Gates expert- Sri Kannaiah Naidu were among the key participants who played a lead role in managing the unprecendented floods and the flood situation. Sri S.B. Thyagi, Director, IMD. Sri Vijaya Bhaskar, Meteorologist,

Sri M.Y.N. Wakpanjar, Chief Engineer, CWC, Sri A. Paramesam, SE, CWC, have given their valuable inputs on forecast and assessment of inflows for decision making.

Sri. K. Tirupathaiah, Director General, WALAMTARI, has supervised the real time video recording of the flood situation as well as production of animated video film on floods, Sri. Sanjay Gupta, Spl. Commissioner, CADA has co-ordinated the preparation of the presentation made before Hon'ble Prime Minister of India. Sri. G. Chandra Shekar Reddy, MD, APWRDC is involved in documenting all the events of flood management. All the three above officers were facilitating decision making and implementation of the flood management decisions taken at flood control centre.

APGENCO requested to examine the reduction of outflow from Srisailam and increase out flow from Nagajuna Sagar Project to protect the power houses which is rejected keeping in view of the rising trend of water level on 3rd October night.



The professional learners have sat with the experts while making the decision. As such, it was the unique experience for the Engineers of present time as imaginary situation of probable maximum flood is dealt in their life time.

SUGGESTIONS FOR FLOOD MANAGEMENT

The following suggestions have come out during the discussion at the Flood Control Center for managing the flood situation arising in future.

- 1. Software for flood estimation for hourly rainfall, dam break analysis and inundation assessemnt is to be procured.
- 2. one meter contour interval digital contour maps for 5 kms distance on either side of the river course is to be procured.
- 3. Relocation of people from low lying areas along Krishna river specially at Alampur, Rajoli, Vijayawada town
- 4. Dam gates, gantry crane, stop log gates must be ensured in working condition before every rainy season
- 5. State dam safety committee must inspect the dams every year and ensure guidelines for operational plans for the flood management.
- 6. Special compensatory allowance of 30% for project staff staying at the project site
- 7. Prakasm Barrage flood banks works with modified TBL considering 1.8 meters free board to be completed at the earliest
- 8. More numbers of floating bulk head gates to be procured against existing two gates for safety of Pakasam barrage.
- 9. Permanent restoration of breeched earth dam and flood banks of Sunkesula barrage and additional spillway to be taken up for flood discharge over and above designed flood of 5.25 lakh cusecs
- 10. Flood banks to Hundri and Tungabhadra to protect kurnool city to be taken up.

- 11. Protection of Alampur town by raising retaining wall and permanent restoration of the pumping scheme with new motors of higher capacity
- 12. Satellite phone placed in coastal districts is now required in other places too.
- 13. Modernization of the existing flood control centre with the historical record and decision support systems in place.
- 14. Request could be made to retain water in Karnataka dams where there is forest or remote uninhabited areas inundation is likely
- 15. Engineers should see safe flood management and other officers to look after the relief arrangement
- 16. Flood embankment where the routes are made to facilitate the sand lifting are to be plugged with sand bags and are to be monitored.
- 17. The option of flood discharge tunnel for Dams could be explored to increase the flood water disposal capacity
- 18. 1st and 12th gate are the flanking gates and they should be opened only in extreme condition as the erosion of the flanks are expected.
- 19. During the flood rise seepage along the rear side of the banks has to be observed while doing patrolling. During the receeding of flood there is a possibility of slippage of flood banks on the river side as they have been wetted and needs vigilant patrolling.
- 20. Installation of automatic recording rain and river gauges having capability of measuring at frequent intervals and to transmit the data to the places of decision making without loss of any time specially for the catchment area of Srisailam dam.

COMMUNICATION SYSTEMS

SMS BASED RESERVOIR LEVEL INFORMATION SYSTEM

SMS text messaging is the most widely used data application in the world. With penetration of mobile phones even in rural areas, SMS serves as an instant disaster warning system to the communities. The inflow, outflow, level and capacity information SMS from affected reservoirs were obtained at each hour round the clock and were also disseminated to the flood control room and connected authorities every hour round the clock thus a real time scenario could be created for hour to hour decision making.

The loss to life and property could be avoided using these instant communication systems. The thousands of people stranded in the flood waters could get connected to people, authorities and media and could save their lives in time through rescue operations.

ROLE OF PRESS AND ELECTRONIC MEDIA

Electronic media seems to be teaching many things even to the unlettered. During the floods, many people reeled out their problems the moment they saw news channels. Live discussions have taken place on managerial issues and decisions taken on flood discharge. This has helped in making better decisions for flood management. The statement given by Sri Arun Kumar Bajaj the CWC Chairman has led to lot of debate on the flood management across the country.



The CM appeal through press and electronic media at 5 pm on 1st October to vacate the Kurnool and asking people to move to safer places as flood is likely increase and water level in kurnool will rise by 4 ft by mid night and another 4 ft by morning has really saved human lives. Almost 200 press and media personnel were there in press conference. The lack of power supply and rising water level in Kurnool would have been a real problem

The television has played a vital role in flashing flood levels and inundated and likely submergence areas. Eleven Telugu news channels and many national and international channels reached millions of people with coverage of floods for full five days. Some TV Channels collected relief materials to be sent to the flood victims.

Press has brought out detailed aspects of the flood management in a simple manner so that every one could understand. It has provided enough information for the people to safe guard themselves and their property in advance as good lead time was available for flood management below Nagarjuna sagar Dam. Sri. M. K. Rahaman, Engineer-in-Chief, was in constant touch with the Press and Electronic Media and briefed about the flood situation and its management from time to time.

INTERNET SERVICE

There are many international scientific agencies working on weather system realtime monitoring in the world. The satellite imageries of weather systems are available on the internet. Likewise the IMD site on weather forecasting is highly informative. Access to all these through the web sites has reinforced the confidence of decision-making with reference to flood management.



REAL TIME MONITORING OF FLOOD AND MODELLING

The hourly increase in water levels is obtained from the dam sites to arrive at inflows as most of the river gauges are damaged or were overflowing. The spatial and temporal movement of water is almost accurately assessed and this has helped in decision making for flood moderation and evacuation of people.





Photo 9: Srisailam Dam during October, 2009 Flood

As on 30th September 2009 at 6 AM Srisailam Water Storage was at + 884.40 ft. The flood forecast for Srisailam Reservoir as forecast by Central Water Commission from 6 PM on 30th september 2009 to 6.AM on 1st October 2009 is 1,16,533 cusecs. Keeping in view the flood forecast and the flows observed at Jurala (Krishna River) and Roja (Tungabhadra), the spillway gates were operated gradually from 7 PM on 30th September 2009 to free flow condition by 11 AM on 1st October 2009 by operating gates stage by stage.

Thus inflow did not have any obstruction and even more than inflow was released which was maximum possible.

The lifting of gates of Srisailam was started at 7.20 pm on 30th September starting with two central gates and operating the further gates by wee hours of 1st October, 2009 with a discharging capacity of 5.4 lakh cusecs (which is maximum possible discharge with the then reservoir level of 884.4 feet by keeping the 10 gates totally

open) against the forecast inflow of 1,16,533 cusecs by CWC on 30th september, 2009 through its bulletin no 108.

	Flow to be passed on Spillway in Cusecs.								
Reservoir Level	1Lakh	2Lakh	3Lakh	4Lakh	5Lakh	6Lakh	7/Lakh	8Lakh	9Lakh
R.W.L. +865ft.									
No. of Gates	4 Nos	6 Nos.	8Nos.	10 Nos.					
Gate No:	5,6,7,8	(4to9)	(4to11)	(2to 11)					
Gate Opening	14ft.	19ft.	22ft.	23ft.					
R.W.L. +870ft.									
No. of Gates	4 Nos	6 Nos.	6 Nos.	8Nos.	10 Nos.				
Gate No:	5,6,7,8	(4to9)	(4to9)	(4to11)	(2to 11)				
Gate Opening	12ft.	17ft.	28ft.	28ft.	28ft				
R.W.L., +875ft.									
No. of Gates	4 Nos	6 Nos.	6 Nos.	8Nos.	10 no.	10 no.			
Gate No:	5,6,7,8	(4to9)	(4to9)	(4to11)	(2to 11)	(2to 11)			
Gate Opening	11ft.	16ft.	25ft.	25ft.	25ft	32ft			
R.W.L. +880ft.									
No. of Gates	4 Nos	6 Nos.	6 Nos.	8Nos.	10 no.	10 no.	10 no.	10 no.	
Gate No:	5,6,7,8	(4to9)	(4to9)	(4to11)	(2to 11)	(2to 11)	(2to 11)	(2to 11)	
Gate Opening	10ft.	lj4ft.	23ft.	23ft.	23ft	29ft	35ft	Free flow	
R.W.L. +885ft.									
No. of Gates	4 Nos	6 Nos.	6 Nos.	8Nos.	10 no.	10 no.	10 no.	10 no.	10 no.
Gate No:	5,6,7,8	(4to9)	(4to9)	(4to11)	(2to 11)	(2to 11)	(2to 11)	(2to 11))	(2to 11)
Gate Opening	10ft.	13ft.	22ft.	22ft.	22ft	27ft	32ft	38ft	43ft

This advance action has facilitated heading up of water in Nagarjuna Sagar Dam to facilitate discharge by opening all gates by 1st October, 2009 evening.

Further 11th gate was also operated at 9 PM on 1st October, 2009 and a allowed total discharge of 9,66,052 cusecs (including power houses draft). The Reservoir level then was depleted to +880.6 ft by 11 PM on 1st October, 2009 from +884.90 ft at 7 PM on 30th September, 2009 due to release of higher discharge than inflows in advance.

The FRL of Srisailam Dam is +885.00 feet which was crossed at 5.00 pm on 2nd October. The MWL of +892.00 feet was crossed 3.00 am on 3rd morning. The peak level touched was 896.50 feet at 11.00 am on 3rd October, which continued till 6.00 am on 4th October.



The inflows in Srisailam Reservoir on 2nd evening onwards are about 25.50 lakh cusecs. On 3.10.2009 morning, 12th gate (Gate No: 1) was also operated and a maximum discharge of 14.80 lakh cusecs was passed through the Srisailam spillway.

The Srisailam Dam design is checked for a thousand year return flood of 20.20 lakh cusecs. In such scenario, it is designed to accommodate the difference between the inflow and outflow to be impounded between FRL of +885.00 ft and MWL of +892.00 ft for a short period of 3 to 5 days. However, the huge inflow caused water level reaching +896.5 ft.

	Table 3: Srisailam	Water lev , Nagarju	vels and ir ına Sagar	nflow and c and Praka	outflow fro san Barra	om ge	
Name of the Reservoir	Date	Time	Storage in TMC	Reservoir level in feet	Inflow forecast in Cusecs	Received inflow in Cusecs	Outflow in Cusecs
	29.09.2009	6.00am			63563		
		6.00pm			-		
	30.09.2009	6.00am	260.31	884.40		87293	65915
		6.00pm	262.20	884.80	116533	206261	70710
	01.10.2009	6.00am	260.78	884.50	317817	638285	541150
		6.00pm	245.06	881.70	812199	1033348	871403
	02.10.2009	6.00am	241.45	881.10	1094703	1560533	66928
		6.00pm	266.97	885.50	1589085	2250000	1051822
Srisailam	03.10.2009	6.00am	329.85	894.00	1836276	2200000	1315000
Gross Capacity in T M C 263 63		6.00pm	342.08	895.50	1589085	1322920	1452000
FRL in Feet	04.10.2009	6.00am	342.91	895.60	1235955	1235749	1456400
885.00		6.00pm	327.47	893.70	882825	939474	1349700
	05.10.2009	6.00am	307.17	891.10	1024077	730233	1240400
		6.00pm	298.85	890.00	706260	374975	1000000
	06.10.2009	6.00am	312.55	891.80	459069	359266	805000
		6.00pm	308.71	891.30	406100	390540	700000
	07.10.2009	6.00am	290.74	888.90	441413	338932	680000
		6.00pm	280.72	887.50	441413	468906	670000
	08.10.2009	6.00am	272.38	886.30	452006	418090	655000
		6.00pm	267.69	885.69	370787	202008	640000
Nagajuna Sagar	29.09.2009	6.00am	258.44	534.60	N.A	85953	22620
Gross Capacity in TMC 263 63		6.00pm	259.58	535.10		27305	42020
FRL in feet 885	30.09.2009	6.00am	262.09	536.20		161825	35158
		6.00pm	263.46	536.80		75606	12273
	01.10.2009	6.00am	273.67	541.20		482018	11185
		6.00pm	302.72	553.00		24550	36898
	02.10.2009	6.00am	335.05	565.20		1042684	434072
		6.00pm	356.05	572.70		29946	632311
	03.10.2009	6.00am	369.74	577.40		1059046	816546

		6.00pm	382.26	581.60		16955	866169
	04.10.2009	6.00am	391.84	584.70		1228809	1057136
		6.00pm	397.10	586.40		1232967	1060745
	05.10.2009	6.00am	401.12	587.70		1165866	1050908
		6.00pm	406.38	589.40		1130854	1033020
	06.10.2009	6.00am	399.88	587.30		664535	750646
		6.00pm	397.72	586.60		471006	554117
	07.10.2009	6.00am	399.26	587.10		622966	579913
		6.00pm	400.19	587.40		581788	581788
	08.10.2009	6.00am	401.43	587.80		548926	548926
		6.00pm	402.67	588.20		636456	550351
	29.09.2009	6.00am	_	-	_	-	-
		6.00pm					
	30.09.2009	6.00am					
		6.00pm			56501		
	01.10.2009	6.00am			67095		
		6.00pm			70626		
	02.10.2009	6.00am		12.00	98876	63830	49750
		6.00pm		8.50	300161	69564	58050
Drakasam Barrago	03.10.2009	6.00am		13.00	512039	463651	450240
Gross Capacity in		6.00pm		15.70	776886	622029	610120
TMC 2.98	04.10.2009	6.00am		17.40	918138	733348	719880
FRL in feet 57.05		6.00pm		19.40	988764	869433	854000
	05.10.2009	6.00am		20.90	1059390	974702	959000
		6.00pm		21.80	1059390	1096536	1080422
	06.10.2009	6.00am		21.90	1024077	1103670	1087422
		6.00pm		21.30	847512	1055079	1038482
	07.10.2009	6.00am		18.40	776886	861446	844732
		6.00pm		15.30	565000	612118	597269
	08.10.2009	6.00am		14.50	547352	566859	546304
		6.00pm		14.10	536758	536153	519650

At Nagarjuna Sagar project on 30^{th} September, 2009 the water storage level was at + 536.20 ft. The water level reached the crest level of NSP +546 at 11.30 am of 1st October 2009, due to inflow

from Srisailam Dam. All the 26 gates of NSP were lifted by 6.30 pm on 1^{st} october 2009 for free flow of water to create enough cushion to regulate the flood. The maximum regulated out flow from NSP is to be in the order of 10.5 lakh cusecs which is in accordance



with the capacity of the Prakasam barrage and flood banks down stream. The water storage at NSP reached peak on 5^{th} October to +589.4 ft. The maximum inflow received is on 3^{rd} October, to the tune of 14.66 lakh cusecs. The inflow was above 10 lakh cusecs from 1^{st} October to 5^{th} Otober.



Prakasam Barrage started receiving water beyond the danger level from 3rd October and reached below normal only on 11th October, 2009. The Krishna River flood banks below Prakasam barrage was designed for a maximum flood discharge of 10.6 lakh cusecs while the actual flood discharge was 10.94 lakh cusecs which continued for about 10 hours. The outflow was maximum on 5th October at the same time inflow was 11.10 lakh cusecs.

The time to time modeling studies for dam sites and hourly monitoring of the flood levels and taking decisions on flood discharge from the dams at flood control room and excellent regulation of the inflows and out flows at Srisailam, Nagarjuna Sagar and Prakasam barrage to enable the projects work in tandem as a flood control measure, saved the state from major catastrophe.

CHAPTER - 6

PARTICIPATION OF FARMERS ORGANISATIONS

The Water Users' Associations, Distributory Committees and Project Committees have played significant role in flood management during this period. The farmers' organizations have taken responsibility in flood water management and protection of the flood banks in this unprecedented and historically high flood discharge from Prakasam Barrage.



Farmers organizations of Krishna delta system plays important role in efficient irrigation water management in 13.46 lakh acres command area. There are Project committees for Krishna Eastern Delta (KED) and Krishna Western Delta (KWD) system. There are 32 Disrtibutory committees and 223 Water user associations under KED and 22 Distributory Committees and 160 Water user associations in KWD.



Photo 11: Vigillance by the farmers

All the water user associations were asked to take up patrolling of flood banks and canal banks in their respective command areas and keep a watch on the slips on the river side and seepage on the rear side and inform district flood control room and participate in control measures. The elected representatives of the water user associations have voluntarily extended support at local level in flood management.

Presidents of WUA and Presidents of Distributory committee along with the members have participated in patrolling of the flood banks for continuous monitoring of stress and vulnerable areas on flood banks and canal banks from 4th October 2009 to 6th october 2009 in their respective jurisdiction. CADA and

irrigation department at district level established continuous contact with these farmer organizations in flood situation monitoring and control.

The following are some of the major incidents in which the farmer organizations have played important role:

The project committee chairman KWD along with members took active part in association with District administration in restoration of right bank outfall sluice at Vallabhapuram and prevented damage to the vast crop area.

The Distributory committee president of Duggirala along with members has actively worked to close the *bungas* (water seepage) along the right bank in Guntur district

At Hamsaladeevi, water user association along with local people participated in dumping sandbags in the slips of flood banks and prevented breaching.

Farmer's organizations also have taken active role in alerting the villagers to evacuate to safer places when the breach of flood bank occurred at Oleru in Guntur District.

There is a length of 230 kms flood bank in Krishna district and 116 kms length of flood bank in Guntur district. The continuous patrolling and timely rectification of weak points on the flood banks by the Water User Associations helped in the safely depleting flood water into the sea.

CHAPTER - 7

POST FLOOD MANAGEMENT : RESTORATION OF IRRIGATION SYSTEMS

Government has taken measures to restore the irrigation systems on war footing basis in order to ensure irrigation water and drinking water supplies.

Dam safety review panel visited the Srisailam dam on 2^{nd} November, 2009 and concluded that there are no significant structural damages.

AP GENCO has taken up the power plant restoration work on Srisailam Left & Right banks.

A Committee is constituted for fast technical clearances. All the works costing less than Rs. 5 lakhs is given to WUA on nomination basis.

The Sunkesula breach has threatened the farmers under KC canal and augumentation of drinking water supply to Kurnool. The desilting of KC canal and construction of the bund in the river to divert the water in to canal is taken up on war footing basis involving thousands of farmers and ensured water by 24th October, 2009.





TABLE 4 : FLOOD DAMAGES TO THE IRRIGATION SOURCES

SI. No.	Name of the Unit	Temporary Restoration Rs in Crores	Permanent Restoration Rs. In Crores
1	Major	56	2800
2	Medium	1.9	100
3	Minor	65	500
4	APSIDC	11.1	100
	Total	134	3500

DETAILS OF FLOOD DAMAGES TO IRRIGATION SYSTEM

	MAJOR	Temporary Restoration	Remarks
1	Pothyreddypadu Regulator	2	Repairs to Structures
2	Banakacharla	2	Repairs to Structures
3	Sunkesula	7.5	Earthen bund flood bank and repairs to structures
4	K.C. Canal	3	Repairs to canal Systems
5	PJP	4	Canal/Dam works
6	RDS	2.5	Canal Systems
7	Telugu Ganga Project	5	Reparis approach canal and canal systems.
8	Krishna Delta system	10	Repairs canal system
9	Krishna Flood Bank	10	Reparis flood banks and structures
10	N.S.Project	5	Repairs to Dam.
11	Srisailam Dam	5	Repairs to Dam.
	Total	56	
MEDIU	M IRRIGATION		
1	Gajuladinne	1.7	- bund
			- 30 breaches on canal
2	Dindi	0.15	Minor damages
3	Muniyeru	0.05	Minor damages
	Total	1.9	
MINOR	2		
1	No of tanks	65	1341 nos of M.I.Tanks
	Total	65	
APSID	C	11	28 Schemes
	ALAMPUR	0.1	- flood bank breached to let out flood water
			- 20 pumps stationed to pump out flood water
	Total	11.1	
	Grand Total	134	

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CHAPTER 8

FLOOD IMPACT : RESCUE & RELIEF

RESCUE

The State Government launched immediate rescue operations with the help of National Disaster Responsive Forces provided by NDMA, Army, Navy, State Police and Civil Administration. NDRF on the request of NDMA has deployed 713 personnel with 302 boats in three affected districts and this assistance was prompt and useful. Round-the-clock monitoring was going on both at State Head Quarters and Districts Head Quarters through control rooms.

Nineteen Helicopters were pressed into service in Kurnool, Mahabubnagar, Krishna and Guntur districts to rescue and provide food to the people marooned in flood water.

Army columns with 805 personnel were deployed for undertaking rescue and relief operations in the affected districts. In addition to local vehicles such as tractors, trucks, Lorries etc., 439 boats including Naval boats and 1,576 swimmers were also engaged to rescue and evacuate the people to the relief camps or safer places.

The State Government appointed Special Officers to monitor the flood situation and the rescue and relief operations in the flood affected districts. Massive Relief Measures were taken up in the flood affected areas. Necessary arrangements were made for the provision of food, water etc., at relief camps and to the marooned people; Medical teams were constituted to take necessary measures to prevent the out-break of epidemics; Health camps have been opened in the affected areas; Damaged infrastructure – Roads, drinking water, power, etc., are being restored on priority basis.

RELIEF

Relief Measures had been taken on massive scale in the flood affected areas. These measures include:-

- i) Ex-gratia of Rs.2.00 lakh to the kin of the deceased;
- ii) Organization of Relief Camps in the affected areas as per requirements;
- iii) Distribution of 20 Kgs. of rice and 5 ltrs. Of kerosene to the families whose houses have been washed away / damaged and who were brought to the relief camps; since the affected families lost everything including provisions and were living in pathetic conditions essential commodities namely rice (20 Kgs.), dal (2 Kgs.), palm oil (2 kgs.), sugar (2Kgs.), kerosene (5 ltrs.) and tea powder (50 Grms.) were provided additionally per family.
- iv) Assistance for repair / restoration of damaged houses;
- Assistance for clothing and utensils / house hold goods to the families whose houses have been washed away;
- vi) Distribution of food and water packets in the affected areas; and
- vii) Organization Medical Camps / Veterinary camps in the affected areas.



Photo 13 :Hon'ble Prime Minister Shri Man Mohan Singh is briefed on the Impact of the Flood Damage by Dr. Mruthyunjaya Reddy, Director General, APSRAC Hon'ble Chief Minister Sri K. Rosaiah and Sri Dinesh Kumar, Commissioner, Disaster Management are also present

Smt Sonia Gandhi, Chair Person, UPA accompanied by Minister for Home Affairs, Government of India visited on 4th Oct'2009 the flood affected areas in Andhra Pradesh.

The Hon'ble Prime Minister along with the Chief Minister of Andhra Pradesh visited the flood affected areas in Krishna and Guntur districts on 9th October and those in Kurnool and Mahabunagar districts on 10th Oct'2009.

The Chief Minister of Andhra Pradesh visited the flood affected areas in Kurnool and Mahabunagar districts on 11th October, 2009 and those in Krishna and Guntur districts on 12th October, 2009. About 387 relief camps were organized on 87 mandals in Kurnool, Mahabubnagar, Krishna, Guntur and Nalgonda districts. Of the 5.89 lakh people evacuated from the flood affected areas 3.66 lakh people were provided shelter in relief camps. About 47.32 lakh food packets and 63.98 lakh water sachets have been provided to the people in relief camps.

In order to provide health care to the people evacuated and sheltered in the camps as well as those affected by the floods, 307 medical camps have been organized wherein emergency drugs / medicines are being distributed for protection of health of the people and prevention of outbreak of epidemics.

FLOOD IMPACT

Never in the history have all three projects in Krishna basin discharged the recorded maximum out flow. The impact of the flood affected 18.16 lakh population and 2.14 lakh houses damaged. About 2.82 lakh hectares of crop area is damaged. In the entire flood, 90 people lost their lives and 45,000 animals reported dead. The power utilities and road networks and housing infrastructure has suffered maximum losses. The total estimated damage is in Rs.12,824.68 crores.

The breach at Sunkesula caused lot of damage and 10 Engineers including the Chief Engineer escaped the washout. Dundubi River flow beyond the dangerous levels and 14 students rescued after 24 hours

Kurnool city once the capital of Andhra State was under 20 ft water.



The inundation of Mantralayam was due to unprecedented local rain and swelling of Tungabhadra river in a very short time. In Mantralayam the water was flowing above the houses and Tungabhadra spread two km wide making 13 ft water in temple town

The rising level in Srisailam reservoir was the cause for entry of almost 1 lakh cusecs of water through the Pothireddy padu regulator in to Kundu river which inundated Nandyal town.

The Alampur town was inundated due to flood water overtopping of the flood banks and protection wall.

The impact on Repalle was due to the breech of the left flood bank near Oleru village in Guntur district below Prakasam barrage in early hours of 6th October 2009.



Temple kitchens were used to cook food and supply and traffic jams hampered services. No access by road to Kurnool for almost two days. I km stretch of national highway was under 4ft Krishna water near Bachupally.



Photo 16: Train Transport during October Flood

People are shifted by train route from Mantralayam as the road transport is affected. Police help is sought in forceful evacuation of the people to safer places. RTC coordination helped in shifting people to safer places with the help of villagers and village assistant in known and safer routes.

Crocodiles are sighted in water scaring rescuers and people. The road bridge at 900 feet height down stream of Srisailam dam was vibrating due to the velocity of the gushing flood discharge from dam.

The flood impact is minimised as the flood control team regulated the inflows and outflows over a period of one week at Srisailam, Nagarjunasagar and Prakasam Barrage to enable the three projects to work in tandem as a strategy for flood management with minimum damage. In the process 700 TMC flood water received in one week in Srisailam Reservoir was routed through 400 km distance to the sea with minimum damage. This minimized loses in food bowl of Andhra Pradesh under Nagarjuna Sagar and Krishna Delta system, the power utilities at Srisailam and Nagarjuna sagar Projects and saved the civilization inhabited over two crore people in five districts. However, the stretch between the Srisailam and Nagarjuna Sagar is practically clear of habitations. The Srisailam dam acted as most suitable flood moderating system. The result is that with such a deluge also the flood water could be managed with minimum loss of life and property.

ANNEXURES

Annexure – 1

FREQUENLY ASKED QUESTIONS

Q: Government of Andhra Pradesh Did not Act on CWC reports and there was no coordination

The CWC forecast is issued at Mantralayam Gauge for level and at Srisailam for inflow. The Mantralayam forecast issued until 29th September 2009 were not alarming and well below the warning level. The warning level of Mantralayam is +310mt and the first advisory indicating that the level will touch that point was issued on 30th September at 10.40 am. The Discharge at Mantralayam was 26,486 cusecs as reported by the CWC on 30th September which is a nominal flow for Tungabhadra river. Based on the rainfall, its forecast, warning issued by the CWC and the flows released at Jurala and Sunkesula, the gates of Srisailam were opened at 6:20 pm onwards to deplete the water level at Srisiluam reservoir. The Srisailam dam was in free flow condition on 1st October morning after 10 of its 12 gates were opened, there by discharging an outflow of 9 lakh cusecs.

The forecast on October 1st 2009 at 4.30 pm indicated that highest flood level of +315 mt is likely to be reached. But by that time, gates of Srisailam were already opened. The district administration has issued immediate warnings and undertook evacuation measures at Mantralayam.

Moreover the CWC officials were part of the decision making. They took part in numerous meetings at various levels of the Government, including at the Hon'ble Chief minister level. Their views have been taken in to consideration and actions are expedited. The 18.36 lakh cusecs forecast of peak flood Of CWC fell short of actual inflow of more than 25 lakhs cusecss which is huge by any means. However the State government was agile and an effective evacuation plan was executed to minimize the impact below Srisailam.

Q: The water levels at Srisailam were allowed to increase to save coastal areas

Gates of Srisailam were opened from 6.20 pm onwards on September 30th. The 10 gates were kept in freeflow condition from morning of October 1st and maximum possible discharges took place depending on the level of the reservoir. The discharge capacity of srisailam at FRL(+885 ft) is 11.10 lakh cusecs and at MWL(+892 ft) 13.2 lakh cusecs. The discharge reached a peak of more than 14.66 lakh cusecs and the reservoir attained a maximum level of 896.5 ft.While the release from the spillway was at its maximum an inflow of the order of 25 lakh cusecs was received. This resulted in building of the water levels beyond MWL even as the gates were kept open. Q. More water is stored at Srisailam to facilitate drawl of more and more water to Rayalaseema through Pothireddy padu regulator. Therefore no balance storage facility when flash flood came.

From Srisailam Dam the quantum of water released in july is 22.49 tmc, in August 51.83 tmc, in September 153.63 tmc and thus a total of 227.95 tmc is released. The water released through the Pothireddy Padu regulator in August is 0.3 tmc and in September 13.24 tmc only. Except barring few years the Srisailam reservoir level was maintained above 880 ft. level as on 1st October, every year.

Reservoir water levels at N.S.R.S. Srisailam Project as on 1st October, 1984 to 2009

1984-85 883.60 298.900 1985-86 876.10 254.000 1986-87 884.50 304.770 1987-90 900 200 400 400	Year	
1985-86 876.10 254.000 1986-87 884.50 304.770 1987-89 862.20 402.400	984-85	
1986-87 884.50 304.770 1997-99 992-99 402-400	985-86	
1007.00 000.00 100.000	986-87	
1987-88 863.30 192.400	987-88	
1988-89 883.10 295.690	988-89	
1989-90 885.10 308.073	989-90	
1990-91 883.40 297.062	990-91	
1991-92 884.90 307.040	991-92	
1992-93 880.60 280.177	992-93	
1993-94 884.10 302.142	993-94	
1994-95 881.90 288.113	994-95	
1994-95 863.70 194.067	994-95	
1996-97 885.00 308.062	996-97	

Contd...

Contd	Year	Level in feet (in ft)	Storage in TMC (in ft)
	1997-98	884.30	303.457
	1998-99	884.10	302.142
	1999-2000	875.10	248.505
	2000-01	883.80	300.196
	2001-02	870.60	225.470
	2002-03	799.70	54.73
	2003-04	840.80	120.430
	2004-05	880.60	238.790
	2005-06	884.80	262.210
	2006-07	885.00	263.634
	2007-08	884.50	260.078
	2008-09	883.90	257.49
	2009-10	884.50	260.780

Note: FRL: 885.00 Ft Capacity: 308.06 TMC / 263.63 TMC (from 2004 - 05 as per APERL Capacity fables)

Q. Even the full Power generation is not taken up at NSP to facilitate water to Rayalaseema?

Srisailam reservoir is primarily built for hydro power generation. Therefore the FRL +885 is being maintained to provide enough water for this purpose until next monsoon. In its history of 25 years barring 6 years where the water inflow was poor due to inadequate rainfall the water level was always maintained between +880 ft to +885 ft. In a drought year like the current one , the water in the dam could not have been depleted with out generating power. 1 TMC of water generates 7 million units of power. The total power plant capacity is 1670 MW.

The power production is in full scale since with a discharge of 60,000 cusecs. The power draft is sufficient for irrigating 13 lakh acres in Krishna Delta system and 11 lakh acres under Nagarjuna sagar. This apart the Chennai 15 TMC and

Hyderabad 11 TMC water supply is to be met. Had water been released from Srisailam power could have been produced at NSP is only after thought which is not practical while State is reeling under drought.

Q. What are the causes of Kurnool Flooding?

The Kurnool town has a population of 3.5 lakhs and having a geographical area of 25 sq km. The Kurnool town is frequently affected by the floods of Hundri river passing through the Kurnool town. Vakkera vagu and Sudda vagu are tributories of Hundri join in Kurnool town KC canal aslo passes through city and as such the city is on the banks of Tungabhadra. The 2007 flood in the city was due to a flood of 2 lakh cusecs passing through Hundri inundating the city but receeded in 24 hours due to normal flows in Tungabhadra river and Srisailam reservoir much below FRL facilitating fast depletion.

The October 2009 flood was due to very heavy precipitation of order of 400mm in 3 days in the catchment area down below the Tungabhadra dam. A flood of 2 lakh cusecs passing through river Hundri raised the flood level to 283 mt innundating Kurnool city, but this time it innundated Kurnool for 3 days.this was because there was simultaneous flood in Tungabhadra and the Srisailam reservoir was full. Further the breach at Sunkesula the situation. the aggravated Tungabhadra flood water through breach first entered Sunkesula village and traversed to Kurnool when Hundri was in spate. The unprecedented flood to Srisailam was on 3rd October but the Kurnool suffered worst on 1st and 2nd October.the innundation of Kurnool was due to swelling Of Hudri and Tungabhadra rivers much before the water level in the Srisailam reservoir reached its FRL of +885 ft at 5 pm on 2nd October.

The Kurnool city can be made flood proof with protection works by construction of flood banks, retaining walls to Hundri and flood banks and escape sluices for Tungabhadra river can mitigate the flood to minimal losses

Q. Is the Climate Change a Reality?

The climate change is making weather less predictable. The rainfall uncertainity and heavy stormy rainfall more likely. The current rains in Andhra Pradesh preceeded with very high temperatures. With heavy intense spells no percolation is possible. The ground water dependent drinking water scenario in the country is a task to face in the coming years. Intensification of hydrological cycle will impact on the regional water resources. Unprecedented rainfall 1/3 of annual rainfall in oneday leading to flash flood and innundation of larger areas.
Annexure – 2 SALIENT FEATURES OF THE SRIAILAM, NAGARJUNA SAGAR AND PRAKASAM BARRAGE

Annexure – A SRISAILAM PROJECT

Neelam Sanjeeva Reddy Sagar Dam

1. PREAMBLE

a) Neelam Sanjeeva Reddy Sagar Dam (NSRSP)

This is Hydro Electric Project constructed in deep gorge across River Krishna at about 3 km from the famous Srisailam temple. It is the First Major Hydro Electric Project taken up for power generation in the state. Although originally envisaged as a purely Power Project, Irrigation and Water supply are also included subsequently. The construction of Dam including crest gates was completed in 1984.

b) Srisailam Right Bank Canal (SRBC)

The Krishna Water Disputes Tribunal (in 1973) has allocated 800 TMC of Krishna water to Andhra Pradesh and also entitled 11 TMC as its share in the regenerated Water. In consonance with this, for utilizing 19 TMC of Krishna Waters, the SRBC Scheme was formulated and was cleared by the Planning Commission in 1981. This Scheme was formulated to irrigate 1.90 lakh acres in Chronically famine striken area of Kurnool (3 Taluk) and Kadapa (1 Taluks) districts of Rayalaseema Region.

c) Srisailam Left Bank Canal (SLBC)

It is contemplated to provide Irrigation facilities in Drought prone areas of Nalgonda District in addition to drinking water to fluoride affected villages enroute. The Project is later renamed as Alimineti Madhava Reddy Project. This is a Lift Scheme taking off from foreshore of Nagarjuna Sagar Reservoir and consists of two canals.

2. SALIENT FEATURES

Location	:	Srisailam
River	:	Krishna
Catchment Area	:	2.06 lakh Sq Km
Design Flood	:	19.00 lakh Cusec
Type of Dam	:	Gravity Dam
Height above the Deepest	:	143 m
Gross storage @ FRL + 885'	•	308 TMC (1976 Survey)/263.63 TMC (1997 Survey, APERL)
Total Discharging capacity at MWL	:	13.65 lakh Cusec
Spillway Gates	:	12 Nos

a) Dam

b) Power House

Units	:	7 Nos.
Size of Units	:	1.1 lakh KW
Generators	:	7 Nos
Capacity of each Unit	:	1.1 lakh KW
Turbines	:	7 Nos. (Francis)

c) Srisailam Right Bank Canal (SRBC)

		Lengt h (Km)	Discharge (Cusec)
Banakacherla Regulator to Gorakallu Balancing Reservoir	:	50	4,960
Gorakallu Balancing Reservoir to Owk Balancing Reservoir	:	59	2,400 Cusec Head discharge reduceing to 1470 Cusec in last reach.

d) Srisailam Left Bank Canal (SLBC)

Water Requirement	:	30 TMC
Pumps (High Level Canal)	:	4 X 18 MW (600 Cusec each)
Pumps (Low Level Canal)	:	4 X 2.15 MW (212 Cusec each)

3. IRRIGATION POTENTIAL

(a) SRBC

The total Irrigation Potential contemplated is 1.9 lakh acres covering 3 Taluks in Kurnool District (1.67 lakh acres) and 1 Taluk in Kadapa District (0.23 lakh acres).

(b) SLBC

Irrigation Potential contemplated is 2.70 lakh acres. So far, no Irrigation Potential is created.

Annexure - B

NAGARJUNA SAGAR PROJECT

1. PREAMBLE

The multipurpose Nagarjunasagar Project (NSP) on the river Krishna, near the then Nandikonda Village, Peddavoora Mandal, Nalgonda District, is the pride of Andhra Pradesh. It is one of the Modern Temples of Independent India. This is the largest and highest masonry dam in the world. The Project was inaugurated by the (Late) Pundit Jawaharlal Nehru, the then Prime Minister of India on the 10th December 1955. The water was let into both the two main canals i.e. Right Main Canal (Jawahar Canal), Left Main Canal (Lalbahadur Canal) by the late Prime Ministre Smt. Indira Gandhi on the 4th August 1967.

2. SALIENT FEATURES

(a) Location	:	Nandikonda (Village)
		Peddavoora (Mandal)
		Nalgonda (District)

(b) Hydrology

Catchment Area	:	2.15 lakh Sq Km
Maximum Observed Flood(on 7th October 1903) at Vijayawada	:	10.61 lakh Cusec

(c) Reservoir

Water spread area at FRL	:	285 Sq Km
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(d) Masonry Dam

Spill way of Dam	:	471 m
Non-over flow Dam	:	979 m
Masonry Dam	:	1450 m
Maximum height of Dam above deepest foundation	:	125 m

(e) Earth Dam

Total Length of Earth Dam	:	3414 m
Maximum height	:	26 m

(f) Power Generation

Power Units	:	1 No. conventional
		(110 MW capacity)
		7 nos Reversible
		(100 MW capacity)

(g) Canal Power House

Right side	:	3 units 30 MW (each)
Left side	:	2 units 30 MW (each)

3. IRRIGATION POTENTIAL

Under Nagarjuna Sagar Right Main Canal and Left Main Canal, an ayacut of 10 to 11 lakh acres and 8.5 to 9.5 lakh acres respectively are irrigated during normal years.

Ayacut Canal-wise	Contemplate (lakh acres)	Localized (lakh acres)
Right Main Canal	11.75	11.13
Left Main Canal	10.38	10.30

Ayacut District-wise	Contemplate (acres)	Localized (acres)
Nalgonda	3,97,000	3,81,022
Khammam	2,75,000	2,76,633
Krishna	3,68,305	3,70,681
West Godavary	6,734	2,244
Guntur	7,01,999	6,68,541
Prakasam	4,71,999	4,44,729

Annexure - C PRAKASAM BARRAGE KRISHNA DELTA SYSTEM

1. PREAMBLE

The Prakasam Barrage (i.e. Krishna Delta System) was constructed during 1952-58 across river Krishna. It serves an ayacut of 13.09 lakh acres khariff wet (Paddy) in Krishna, West Godavary, Guntur and Prakasam Districts. The total registered ayacut is 13.09 lakh acres.

2. SALIENT FEATURES

Location	:	Vijayawada (Town)
River	:	Krishna
Catment area	:	2.51 lakh sq km
Maximum flood discharge	:	10.61 lakh cusec (1903)
Designed discharge	:	11.90 lakh cusec
Gross capacity at FRL	:	3.071 TMC
Dead Storage	:	0.771 TMC
Live storage between MDDL and FRL	:	2.300 TMC

3. IRRIGATION POTENTIAL

Total ayacut under the project (lakh acres)

Kharif	:7.37	Rabi	:3.06
Avecut (⁷ onal wie	 lakh agnad)	

Ayacut Canal wise (lakh acres)

Eastern Main Canal	:	7.37	Western Main Canal	:	5.71
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4. COMPONENTS

a) Barrage

Length	:	973 m
Vents	••	70 nos

b) Head Sluices

		Eastren Head Sluice	Westren Head Sluice
Vents (Nos)	:	6	16
Discharge (Cusec)	:	10,600	6,640

c) **Canals**

Eastern Main Canal	:	370 Km
Western Main Canal		322 Km

Annexure – 3 FLOOD BANKS IN KRISHNA AND GUNTUR DISTRICTS

S. No.	Krishna District	Length in K. M							
1	Krishna Left Flood Bank (above Prakasham Barrage)	13.00							
2	Krishna Flood Bank (below Prakasham Barrage)	6.40							
3	Krishna Left Flood Bank (below Prakasham Barrage)	89.60							
4	Divi Left Flood Bank	36.00							
5	Divi Right Flood Bank	32.00							
6	K. E. Tridal Bank Divi Island	22.00							
7	Kona Tidal Bank (Machilipatnam Side)	18.50							
8	Seadyke Flood Bank (Machilipatnam Side) 2.5								
9	West Side Flood Bank (Machilipatnam Side)	6.00							
10	Rudravaram Flood Bank (Machilipatnam Side)	4.00							
	Total:	230.00							
	GUNTUR DISTRICT								
11.	Krishna Right Flood Bank (Above Barrage)	22.00							
12	Krishna Right Flood Bank (Below Barrage)	85.40							
13	Rajukalva Flood Bank	9.00							
	Total:	116.40							
	TOTAL LENGTH OF FLOOD BANKS IN BOTH DISTRICTS : 346.40 Kms.								



Annexure – 4 STATUS AS ON 29TH SEPTEMBER & 7TH OCTOBER 2009

	PARTICULARS OF MAJOR RESERVOIRS AS ON 29-09-2009 @ 6.00 AM.													
			Gross		LAS1 29-0	YEAR 9-2008								
SI. No	SI. RESERVOIR F.R.I	F.R.L. in feet	Capacity	Level in	Storage	Inflow	Outflow	Out flow detail		ils in Cuse	cs	Floor	Level in	Storage
				Feet	T.M.C.	Cusecs	Cusecs	SPILLWAY	POWER HOUSE	CANALS	OTHER	S in T.M.	C feet	in T.M.C
	KRISHNA BASIN													
1	ALMATTI	1705.00	129.72	1704.72	128.00	17699	17500	0	17500	0		0 1.	72 1704.81	128.66
2	NARAYANAPUR	1615.00	37.64	1614.53	37.20	19830	16431	0	16431	0		0 0 .	44 1614.61	37.33
3	UJJANI DAM	1630.00	117.24	1624.91	99.70	2472	0	0	0	0		0 17.	54 N.A.	N.A.
4	JURALA	1045.00	11.94	1042.37	10.12	49234	49234	23313	24421	1500		0 1.	82 1040.56	9.00
5	TUNGABHADRA	1633.00	104.34	1633.00	104.34	17250	17093	4611	4236	8246		0 0.	00 1632.95	104.14
6	SRISAILAM	885.00	263.63	884.20	258.88	80243	71109	0	64609	6500		0 4.	75 884.50	260.78
7	NAGARJUNA SAGAR	590.00	408.24	534.60	258.44	63583	23976	0	12919	11057		0 149	80 590.00	408.24
						GODA	VARI BAS	SIN						
8	SINGUR	1717.93	29.91	1703.71	12.73	0	282			0		0 17.	18 1717.68	29.47
9	NIZAM SAGAR	1405.00	17.80	1381.06	1.51	961	911			0		0 16	29 1405.00	17.80
10	JAIKWADI	1522.00	102.73	1503.32	42.68	357	357			0		0 60	05 1522.00	102.73
11	SRI RAM SAGAR	1091.00	90.31	1068.80	26.64	2064	2064			1725	33	9 63	67 1091.00	90.31
						PEN	NAR BAS	N						
12	VELIGODU BALANCING RESERVOIR	868.50	16.95	848.46	8.13	5000	2310	0	0	0	0	8.82	857.49	11.68
13	SOMASILA	330.00	73.90	291.54	21.52	3885	204	0	0	0	0	52.38	312.11	44.27
14	KANDALERU	278.89	68.03	233.48	19.91	205	1632	0	0	0	0	48.12	250.99	33.79
15	YELERU	283.00	24.10	233.70	5.22	1174	536	0	0	0	0	18.88	275.49	19.11

NOTE: Please visit the above particulars on the WEBSITE; http:// irrigation.cgg.gov.in user ID : guest , password guest

_										
1					S.A.C.BARRAGE, DOWLAISWARAM					
	Arms	Depth of water in feet (above Crest)	Discharge in cusecs		DISCHARGE INTO CANALS IN GODAVRI DELTA	As on Today in Cusecs	CUMULATIVE UTILISATION IN T.M.C. FROM 1-06-09			
(a)	Dowlaiswaram Arm	10.80	3209	1	Eastern Delta (Canal Opened On (9-6-2009)	4300	31.89			
(b)	Rali Arm	10.90	1128	2	Central Delta (Canal Opened On (4-6-2009)	2400	19.95			
(c)	Maddur Arm	10.60	795	3	Westeren Delta (Canal Opened on (10-6-2009)	7300	53.76			
(d)	Vijjeswaram Arm	10.65	1593	4	Industial Discharge	0	0.00			
	(Surplus) Total o	ut flow over crest	6725		TOTAL	14000	105.60			
	inflow in cu	secs	20725	CU	MULATIVE SURPLUS IN TO SEA FROM 1-06-2009 in T.M.C.	653.05				
	Depth of water in feet	10.80		SU	RPLUS IN TO SEA FROM 1-6-09 To 31-5-2009 (1865.175 T.M.C.)	_				
	(above Crest)	10.80		CU	MULATIVE UTILISATION FROM 1-6-08 to31-05-2009 (224.03 TMC)					
2										
2					PRAKASAM BARRAGE , VIJAYAWADA					
2			Discharge in cusecs		PRAKASAM BARRAGE, VIJAYAWADA DISCHARGE INTO CANALS IN KRISHNA DELTA	As on Today in Cusecs	CUMULATIVE UTILISATION IN T.M.C. FROM 1-06-09			
	Depth of water in feet	12.00	Discharge in cusecs	1	PRAKASAM BARRAGE , VIJAYAWADA DISCHARGE INTO CANALS IN KRISHNA DELTA Eastern Main Canal (Water released on 01-7-2009)	As on Today in Cusecs 9168	CUMULATIVE UTILISATION IN T.M.C. FROM 1-06-09 57.16			
	Depth of water in feet (above Crest)	12.00	Discharge in cusecs	1	PRAKASAM BARRAGE , VIJAYAWADA DISCHARGE INTO CANALS IN KRISHNA DELTA Eastern Main Canal (Water released on 01-7-2009) Westeren Main Canal(Water released on 10-7-2009)	As on Today in Cusecs 9168 8430	CUMULATIVE UTILISATION IN T.M.C. FROM 1-06-09 57.16 35.55			
2	Depth of water in feet (above Crest)	12.00	Discharge in cusecs 0	1 2 3	PRAKASAM BARRAGE , VIJAYAWADA DISCHARGE INTO CANALS IN KRISHNA DELTA Eastern Main Canal (Water released on 01-7-2009) Westeren Main Canal(Water released on 10-7-2009) Guntur Channel (Water released on 25-7-2009)	As on Today in Cusecs 9168 8430 271	CUMULATIVE UTILISATION IN T.M.C. FROM 1-06-09 57.16 35.55 1.36			
2	Depth of water in feet (above Crest)	12.00	Discharge in cusecs 0	1 2 3 4	PRAKASAM BARRAGE , VIJAYAWADA DISCHARGE INTO CANALS IN KRISHNA DELTA Eastern Main Canal (Water released on 01-7-2009) Westeren Main Canal(Water released on 10-7-2009) Guntur Channel (Water released on 25-7-2009) Lift Irrigation Scheme	As on Today in Cusecs 9168 8430 271 0	CUMULATIVE UTILISATION IN T.M.C. FROM 1-06-09 57.16 35.55 1.36 0.00			
2	Depth of water in feet (above Crest) (Surplus) Ou	12.00 t Flow over crest	Discharge in cusecs 0	1 2 3 4	PRAKASAM BARRAGE , VIJAYAWADA DISCHARGE INTO CANALS IN KRISHNA DELTA Eastern Main Canal (Water released on 01-7-2009) Westeren Main Canal(Water released on 10-7-2009) Guntur Channel (Water released on 25-7-2009) Lift Irrigation Scheme TAI	As on Today in Cusecs 9168 8430 271 0	CUMULATIVE UTILISATION IN T.M.C. FROM 1-06-09 57.16 35.55 1.36 0.00 94.07			
2	Depth of water in feet (above Crest) (Surplus) Ou	12.00 t Flow over crest Inflow in Cusecs	Discharge in cusecs 0 	1 2 3 4 . TO	PRAKASAM BARRAGE , VIJAYAWADA DISCHARGE INTO CANALS IN KRISHNA DELTA Eastern Main Canal (Water released on 01-7-2009) Westeren Main Canal (Water released on 10-7-2009) Guntur Channel (Water released on 25-7-2009) Lift Irrigation Scheme TAL	As on Today in Cusecs 9168 8430 271 0 17869	CUMULATIVE UTILISATION IN T.M.C. FROM 1-06-09 57.16 35.55 1.36 0.00 94.07			
2	Depth of water in feet (above Crest) (Surplus) Ou	12.00 t Flow over crest Inflow in Cusecs	Discharge in cusecs 0 0 17869	1 2 3 4 TO CU	PRAKASAM BARRAGE , VIJAYAWADA DISCHARGE INTO CANALS IN KRISHNA DELTA Eastern Main Canal (Water released on 01-7-2009) Westeren Main Canal (Water released on 10-7-2009) Guntur Channel (Water released on 25-7-2009) Lift Irrigation Scheme TAL MULATIVE SURPLUS IN TO SEA FROM 1-06-2009 in T.M.C.	As on Today in Cusecs 9168 8430 271 0 17869 0.69	CUMULATIVE UTILISATION IN T.M.C. FROM 1-06-09 57.16 35.55 1.36 0.00 94.07			
2	Depth of water in feet (above Crest) (Surplus) Ou	12.00 t Flow over crest Inflow in Cusecs	Discharge in cusecs 0 0 17869	1 2 3 4 TO CU	PRAKASAM BARRAGE , VIJAYAWADA DISCHARGE INTO CANALS IN KRISHNA DELTA Eastern Main Canal (Water released on 01-7-2009) Westeren Main Canal (Water released on 10-7-2009) Guntur Channel (Water released on 25-7-2009) Lift Irrigation Scheme TAL MULATIVE SURPLUS IN TO SEA FROM 1-06-2009 in T.M.C. JRPLUS IN TO SEA FROM 1-06-08 To 31-5-2009 (305.56 T.M.C)	As on Today in Cusecs 9168 8430 271 0 17869 0.69	CUMULATIVE UTILISATION IN T.M.C. FROM 1-06-09 57.16 35.55 1.36 0.00 94.07			

PARTICULARS OF BARRAGES ON 29-09-2009 @ 6.00 AM.

OFFICER INCHARGE OF FLOOD DUTY

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	PARTICULARS OF MAJOR RESERVOIRS AS ON 07-10-2009 @ 6.00 AM													
	RESERVOIR	F.R.L. in Gross THIS YEAR 07-10-2009											LAST YEAR	
		feet	Capacit										07-10	-2008
			T.M.C.	Level in	Storage	Inflow	Outflow	Out	flow detai	ls in Cuse	ecs	Flood	Level	Storage
				reet	T.M.C.	Cusec	Cusecs	SPILLWA	POWE	CANAL	OTHER	n in	mileet	T.M.C
						s	•	Y	R HOUSE	S	S	T.M.C		
KRISHNA BASIN														
1	ALMATTI	1705.00	129.72	1703.95	124.11	87522	30000					5.61	1704.81	128.66
2	NARAYANAPUR	1615.00	37.64	1613.92	36.69	80594	43282					0.95	1614.42	37.18
3	UJJANI DAM	1630.00	117.24	1624.91	99.80	2224	0					17.44	N.A.	N.A.
4	JURALA	1045.00	11.94	1039.09	8.16	260789	240932	216432	24000	500	0	3.78	1040.57	9.01
5	TUNGABHADRA	1633.00	104.34	1632.25	101.38	91777	89354	83465	0	5889	0	2.96	1632.22	101.26
6	SRISAILAM	885.00	263.63	888.90	330.17	356983	668521	668521	0	0	0		881.10	241.46
7	NAGARJUNA SAGAR	590.00	408.24	587.10	399.26	607964	615130	566147	25865	23118	0	8.98	589.80	407.63
					G	ODAVAR	BASIN	•						
8	SINGUR	1717.93	29.91	1705.89	14.71	991	297			0	0	15.20	1717.68	29.47
9	NIZAM SAGAR	1405.00	17.80	1383.32	2.01	907	52			0	0	15.79	1404.50	17.08
10	JAIKWADI	1522.00	102.73	1504.22	44.73	3255	239			0	0	58.00	1522.00	102.73
11	SRI RAM SAGAR	1091.00	90.31	1069.60	28.12	10642	1905			0	0	62.19	1090.60	88.11
						PENNAR	BASIN							
12	VELIGODU BALANCING	868.50	16.95	859.62	12.61	17400	19000			0	0	4.34	855.19	10.71
12	SOMAGILA	330.00	73 00	216 11	50.22	10461	6276			0	0	23.68	214 64	47.02
13	JUWAJILA	330.00	13.90	310.11	50.22	0	0270			0	0	23.00	314.04	47.02
14	KANDALERU	278.89	68.03	231.87	18.88	0	1552			0	0	49.15	249.65	32.49
L							•				1			
15	YELERU	283.00	24.10	240.26	6.74	1606	545			0	0	17.36	274.86	18.76
	NOTE: Ple	ease visit the	e above par	ticulars on t	he WEBSI	TE; http://	irrigation.c	gg.gov.in	user ID :	guest, p	bassword	guest		
1				*H	keading as	s on 06-1	u-∠009 @ 6	.uu am.						

	PARTICULARS OF BARRAGES ON 07-10-2009 @ 6.00 AM.											
1	S.A.C.BARRAGE, DOV	VLAISWARAI	М									
	Arms	ns Depth of water in feet (above Crest)				DISCHARGE INTO CANALS IN GODAVRI DELTA	As on Today in Cusecs	CUMULATIVE UTILISATION IN T.M.C. FROM 01-06-09				
(a)	Dowlaiswaram Arm	11.0	0	11337	1	Eastern Delta (Canal Opened On (9-6-2009)	3300	33.78				
(b)	Rali Arm	10.8	5	3217	2	Central Delta (Canal Opened On (4-6-2009)	1800	21.25				
(c)	Maddur Arm	10.6	5	1593	3	Westeren Delta (Canal Opened on (10-6-2009)	4500	56.84				
(d)	Vijjeswaram Arm	10.7	0	3194	4	Industial Discharge	0	0.00				
	(Surplus) T	otal out flow o	over crest	19341		TOTAL	9600	111.87				
	inflow in cusecs			28941	CU	IMULATIVE SURPLUS IN TO SEA FROM 1-06-2009 in T.M.C.	667.75					
	Depth of water in feet (above Crest)	0		SU								
	(above creat)				CU	IMULATIVE UTILISATION FROM 1-6-08 to 31-05-2009 (224.03 TMC)						
2	PRAKASAM BARRAGE	, VIJAYAWA	DA					•				
				Discharge in cusecs		DISCHARGE INTO CANALS IN KRISHNA DELTA	As on Today in Cusecs	CUMULATIVE UTILISATION IN T.M.C. FROM 1-06-09				
	Depth of water in feet (a	bove Crest)	18.40	844732								
					1	Eastern Main Canal (Water released on 01-7-2009)	8772	62.63				
	(Surplus) Out F	low over cres	+	844732	2	Westeren Main Canal(Water released on 10-7-2009)	7026	40.06				
	(Oulpids) Out i			0447.52	3	Guntur Channel (Water released on 25-7-2009)	114	1.47				
					4	Lift Irrigation Scheme	0	0.00				
						TOTAL	15912	104.16				
		Inflow	n Cusacc	860644	CU	IMULATIVE SURPLUS IN TO SEA FROM 1-06-2009 in T.M.C.	358.01					
		I IIIOW I	II CUSECS	000044	SL	JRPLUS IN TO SEA FROM 1-06-08 To 31-5-2009 (305.56 T.M.C)						
					CU	IMULATIVE UTILISATION FROM 1-6-08 to31-05-2009(230.48T.M.C)						

OFFICER INCHARGE OF FLOOD DUTY

Annexure – 5 HOURLY STATEMENT OF INFLOWS & OUTFLOWS OF PROJECTS DURING FLOOD

					Ar	inexu	ire – A	4	5	Srisail	am	Proj	ect					
		Posonioi	Storage	Inflov	vs (in Cus	ecs)	Total I	nflows	Cumm.	0	utflows	(in Cusecs	5)	Total O	outflows	Cumm.Ou	RC Gates	s opening sitin
Date	Time	r level (in feet)	Capacity (in TMC)	Jurala	Roja	Hundri	In Cusecs	In TMC	inflow in TMC	RPH	LPH	PRPH	Spillway RC Gates	In Cusecs	In TMC	tflow in TMC	Nos. of Gates	Height in ft.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
30-9-09	6.00AM	884.40	260.31	46955	34488	5850	87293			25513	33902	6500		65915				
	7.00AM	884.40	259.83	46955	34488	5850	87293	0.31425	0.31425	25513	33902	6500		65915	0.23729	0.23729		
	8.00AM	884.40	259.83	46955	34488	5850	87293	0.31425	0.62851	25513	33902	6500		65915	0.23729	0.47459		
	9.00AM	884.40	259.83	46955	34488	3750	85193	0.30669	0.9352	30425	33902	6500		70827	0.25498	0.72957		
	10.00AM	884.40	259.83	46955	34488	3750	85193	0.30669	1.2419	30425	33902	6500		70827	0.25498	0.98454		
	11.00Am	884.60	261.25	46955	34488	3750	85193	0.30669	1.54859	30425	33902	6500		70827	0.25498	1.23952		
	12.00Noon	884.70	261.73	69955	43110	3750	116815	0.42053	1.96913	30432	33902	6500		70834	0.255	1.49452		
	1.00PM	884.70	261.73	69955	43110	3750	116815	0.42053	2.38966	30432	33902	6500		70834	0.255	1.74952		
	2.00PM	884.60	261.25	69955	43110	3750	116815	0.42053	2.8102	30432	33902	6500		70834	0.255	2.00453		
	3.00PM	884.60	261.25	100910	51732	3750	156392	0.56301	3.37321	30299	33902	6500		70701	0.25452	2.25905		
	4.00PM	884.50	260.78	100910	51732	3750	156392	0.56301	3.93622	30299	33902	6500		70701	0.25452	2.51357		
	5.00PM	884.60	261.25	100910	51732	3750	156392	0.56301	4.49923	30299	33902	6500		70701	0.25452	2.7681		
	6.00PM	884.80	262.20	150410	55601	250	206261	0.74254	5.24177	30308	33902	6500		70710	0.25456	3.02265		
	7.00PM	884.90	263.15	150410	55601	250	206261	0.74254	5.98431	30308	33902	6500	111384	182094	0.65554	3.67819	4	10
	8.00PM	884.70	261.73	150410	55601	250	206261	0.74254	6.72685	30308	33902	6500	111384	182094	0.65554	4.33373	d	0
	9.00PM	884.50	260.78	210930	55601	250	266781	0.96041	7.68726	28946	33902	6500	111384	180732	0.65064	4.98437	D	0

		Pasarvoi	Storage	Inflov	vs (in Cus	ecs)	Total I	nflows	Cumm.	01	utflows	(in Cusecs	5)	Total C	outflows	Cumm.Ou	RC Gates	s opening sitin
Date	Time	r level (in feet)	Capacity (in TMC)	Jurala	Roja	Hundri	In Cusecs	In TMC	inflow in TMC	RPH	LPH	PRPH	Spillway RC Gates	In Cusecs	In TMC	tflow in TMC	Nos. of Gates	Height in ft.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	10.00PM	884.40	260.3	210930	55601	250	266781	0.96041	8.64767	28946	33902	6500	111384	180732	0.65064	5.635	D	0
	11.00PM	884.60	261.25	210930	55601	250	266781	0.96041	9.60808	28946	33902	6500	111384	180732	0.65064	6.28564	D	0
	12.00Night	885.00	263.63	210930	55601	250	266781	0.96041	10.5685	28946	33902	6500	168450	237798	0.85607	7.14171	6	10
1.10.09	1.00AM	885.00	263.63	295125	153405	250	448780	1.61561	12.1841	29016	33902	6500	168450	237868	0.85632	7.99803	10	20
	2.00AM	885.00	263.63	295125	153405	250	448780	1.61561	13.7997	29016	33902	6500	168450	237868	0.85632	8.85436	D	0
	3.00AM	884.50	260.78	295125	153405	250	448780	1.61561	15.4153	29016	33902	6500	474270	543688	1.95728	10.8116	D	0
	4.00AM	884.50	260.78	295125	153405	250	448780	1.61561	17.0309	29016	33902	6500	474270	543688	1.95728	12.7689	D	0
	5.00AM	884.50	260.78	295125	153405	250	448780	1.61561	18.6465	29016	33902	6500	474270	543688	1.95728	14.7262	D	0
	6.00AM	884.50	260.78	295125	300000	43160	638285	2.29783	20.9444	26478	33902	6500	474270	541150	1.94814	16.6743	D	0
	7.00AM	884.50	260.78	374315	300000	43160	717475	2.58291	23.5273	26478	33902	6500				16.6743	D	0
	8.00AM	884.60	261.25	374315	300000	43160	717475	2.58291	26.1102	26478	33902	6500	663780	724160	2.60698	19.2813	10	30
	9.00AM	884.70	261.73	424176	350000	48000	822176	2.95983	29.07	26478	33902	6500	663780	730660	2.63038	21.9117	D	0
**	10.00AM	884.50	260.78	376338	429105	48000	853443	3.07239	32.1424			6500				21.9117	D	0
**	11.00Am	884.20	256.88	515654	336056	48000	899710	3.23896	35.3814			6500				21.9117	10	40
	12.00Noon	883.50	255.18	561921	336056	48000	945977	3.40552	38.7869	27774	33902	6500		68176	0.24543	22.1571	D	0
**	1.00PM	882.50	249.48	587374	336056	48000	971430	3.49715	42.284			6500				22.1571	D	0
**	2.00PM	882.20	247.77	612828	336056	48000	996884	3.58878	45.8728			6500				22.1571	D	0
	3.00PM	881.90	245.97	614994	367446	39892	1022332	3.6804	49.5532	26025	33902	6500	808130	874557	3.14841	25.3055	D	0
**	4.00PM	881.60	244.61	614994	367446	39892	1022332	3.6804	53.2336			6500				25.3055	D	0
**	5.00PM	881.90	245.97	622668	367446	39892	1030006	3.70802	56.9416			6500				25.3055	D	0
	6.00PM	881.70	245.06	614994	385624	32730	1033348	3.72005	60.6617	25421	33902	6500	805580	871403	3.13705	28.4426	D	0
**	7.00PM	881.70	245.06	686622	377715	32730	1097067	3.94944	64.6111			6500				28.4426	D	0
**	8.00PM	881.60	244.16	750342	377715	32730	1160787	4.17883	68.79			6500				28.4426	10x43'	, 1x40′
	9.00PM	881.20	242.35	745506	450000	29000	1224506	4.40822	73.1982	26839	33902	6500	905311	972552	3.50119	31.9438	D	0
**	10.00PM	880.90	240.55	772987	450000	29000	1251987	4.50715	77.7053			6500				31.9438	D	0

		Docorvoi	Storage	Inflov	ws (in Cus	ecs)	Total I	nflows	Cumm.	O	utflows	(in Cusec:	5)	Total C	outflows	Cumm.Ou	RC Gates	s opening sitin
Date	Time	r level (in feet)	Capacity (in TMC)	Jurala	Roja	Hundri	In Cusecs	In TMC	inflow in TMC	RPH	LPH	PRPH	Spillway RC Gates	In Cusecs	In TMC	tflow in TMC	Nos. of Gates	Height in ft.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
**	11.00PM	880.60	238.79	720948	529519	29000	1279467	4.60608	82.3114			6500				31.9438	D	0
	12.00Night	880.60	238.79	720948	516000	70000	1306948	4.70501	87.0164	16494	33902	6500	891671	948567	3.41484	35.3586	D	0
**2.10.0 9	1.00AM	880.70	239.67	720948	516000	73517	1310465	4.71767	91.7341			6500				35.3586	D	0
**	2.00AM	880.70	239.23	720948	516000	77033	1313981	4.73033	96.4644			6500				35.3586	D	0
	3.00AM	880.70	239.23	720948	516000	80550	1317498	4.74299	101.207	16494	33902	6500		56896	0.20483	35.5634	D	0
**	4.00AM	880.80	240.11	754702	563258	80550	1398510	5.03464	106.242			6500				35.5634	D	10
**	5.00AM	881.00	241.00	792913	606058	80550	1479521	5.32628	111.568	22189		6500		28689	0.10328	35.6667	D	10
	6.00AM	881.10	241.45	792913	667620	100000	1560533	5.61792	117.186	26526	33902	6500		66928	0.24094	35.9076	D	0
	7.00AM	881.20	241.90	828890	667620	100000	1596510	5.74744	122.934			6500			0.04507	35.9076	D	0
	8.00AM	881.60	244.16	828890	667620	100000	1596510	5.74744	128.681			6500	914408	920908	3.31527	39.2229	D	0
<u> </u>	9.00AM	881.70	245.06	849950	950000	90000	1889950	6.80382	135.485	28202	33902	6500	916685	985289	3.54704	42.77	D	0
**	10.00AM	881.90	245.97	922400	930572	90000	1942972	6.9947	142.48			6500	921228	927728	3.33982	46.1098	D	0
**	11.00Am	882.40	248.68	975422	930572	90000	1995994	7.18558	149.665			6500	932602	939102	3.38077	49.4905	D	0
	12.00Noon	882.90	251.44	979016	950000	120000	2049016	7.37646	157.042	15151	11301	6500	943976	976928	3.51694	53.0075	D	0
^^	1.00PM	883.10	252.84	1016516	950000	120000	2086516	7.51146	164.553			6500	948530	955030	3.43811	56.4456	D	0
**	2.00PM	883.40	254.23	1054016	950000	120000	2124016	7.64646	172.2	0.00/7	10010	6500	955350	961850	3.46266	59.9083	D	0
	3.00PM	883.90	257.49	1086516	875000	200000	2161516	7.78146	1/9.981	24067	10948	6500	966/13	1008228	3.62962	63.5379	D	0
**	4.00PM	884.40	259.83	1049016	950000	200000	2199016	7.91646	187.898			6500	978087	984587	3.54451	67.0824	D	0
	5.00PM	885.00	263.63	1086516	950000	200000	2236516	8.05146	195.949			6500	991738	998238	3.59366	70.676	D	0
**	6.00PM	885.50	266.97	1114072	935928	200000	2250000	8.1	204.049	24067	11301	6500	1009954	1051822	3.78656	74.4626	D	0
**	7.00PM	886.80	275.82	1230000	950000	200000	2380000	8.568	212.617			6500	1057200	1063700	3.82932	78.2919	D	0
**	8.00PM	887.80	282.83	1092840	1167160	200000	2460000	8.856	221.473		ļ	6500	1082000	1088500	3.9186	82.2105	D	0
**	9.00PM	888.10	284.96	1100151	1209849	200000	2510000	9.036	230.509	stopped	stopped	6500	1090000	1096500	3.9474	86.1579	10x45'	, 1x40′
**	10.00PM	888.90	290.74	1093340	1281660	200000	2575000	9.27	239.779			6500	1114000	1120500	4.0338	90.1917	D	0

		Posonuoi	Storage	Inflo	ws (in Cus	ecs)	Total I	nflows	Cumm.	O	utflows	(in Cusecs	5)	Total C	outflows	Cumm.Ou	RC Gates	s opening sitin
Date	Time	r level (in feet)	Capacity (in TMC)	Jurala	Roja	Hundri	In Cusecs	In TMC	inflow in TMC	RPH	LPH	PRPH	Spillway RC Gates	In Cusecs	In TMC	tflow in TMC	Nos. of Gates	Height in ft.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
**	11.00PM	889.60	295.90	1093340	1105660	200000	2399000	8.6364	248.415			6500	1136800	1143300	4.11588	94.3076	10x47	, 1x40′
**	12.00Night	890.10	299.61	1085156	1114844	200000	2400000	8.64	257.055			6500	1153700	1160200	4.17672	98.4843	D	10
*3.10.09	1.00AM	890.60	303.38	1085156	1124844	200000	2410000	8.676	265.731			6500	1172200	1178700	4.24332	102.728	D	ю
**	2.00AM	891.20	307.94	1085156	1174844	200000	2460000	8.856	274.587			6500	1198800	1205300	4.33908	107.067	D	0
**	3.00AM	891.90	313.32	1076744	1415256	50000	2542000	9.1512	283.739			6500	1217600	1224100	4.40676	111.473	D	0
**	4.00AM	892.70	319.56	1044744	1415256	50000	2510000	9.036	292.775			6500	1257100	1263600	4.54896	116.022	D	0
**	5.00AM	893.50	325.88	1044744	1167256	50000	2262000	8.1432	300.918			6500	1289500	1296000	4.6656	120.688	D	0
**	6.00AM	894.00	329.85	1068288	1081712	50000	2200000	7.92	308.838				1315000	1315000	4.734	125.422	D	10
**	7.00AM	894.40	333.91	1068288	1041712	50000	2160000	7.776	316.614				1341000	1341000	4.8276	130.25	D	10
**	8.00AM	894.70	335.53	1068288	1001712	50000	2120000	7.632	324.246				1360500	1360500	4.8978	135.147	D	10
**	9.00AM	895.20	339.61	1068288	971712	50000	2090000	7.524	331.77				1388800	1388800	4.99968	140.147	10x50'	, 1x40′
**	10.00AM	895.70	343.73	1244288	971712	50000	2266000	8.1576	339.927				1410800	1410800	5.07888	145.226	D	10
**	11.00Am	896.10	347.75	1124288	971712	50000	2146000	7.7256	347.653				1427000	1427000	5.1372	150.363	10x52	, 1x40′
**	12.00Noon	896.50	353.96	1042020	1075980	50000	2168000	7.8048	355.458				1440000	1440000	5.184	155.547	11x52′	, 1x40′
**	1.00PM	896.50	353.96	1042020	827980	50000	1920000	6.912	362.37				1440000	1440000	5.184	160.731	D	10
**	2.00PM	896.00	346.20	1032620	598380	40000	1671000	6.0156	368.385				1424000	1424000	5.1264	165.858	D	10
	3.00PM	895.50	342.08	1032620	350000	40000	1422620	5.12143	373.507				1452000	1452000	5.2272	171.085	D	0
**	4.00PM	895.50	342.08	1032620	316737	40000	1389357	5.00169	378.508				1452000	1452000	5.2272	176.312	D	0
**	5.00PM	895.50	342.08	1032620	283532	40000	1356152	4.88215	383.391				1452000	1452000	5.2272	181.539	D	0
	6.00PM	895.50	342.08	1002920	280000	40000	1322920	4.76251	388.153				1452000	1452000	5.2272	186.766	D	0
**	7.00PM	895.50	342.08	994451	280000	40000	1314451	4.73202	392.885		l		1452000	1452000	5.2272	191.994	D	0
**	8.00PM	895.70	343.73	985983	280000	40000	1305983	4.70154	397.587				1460800	1460800	5.25888	197.252	D)0
	9.00PM	896.00	346.20	992514	280000	25000	1297514	4.67105	402.258		l		1474000	1474000	5.3064	202.559	D	10

		Pasanyoi	Storage	Inflov	ws (in Cus	ecs)	Total I	nflows	Cumm.	0	utflows	(in Cusec:	5)	Total C	outflows	Cumm.Ou	RC Gates	s opening sitin
Date	Time	r level (in feet)	Capacity (in TMC)	Jurala	Roja	Hundri	In Cusecs	In TMC	inflow in TMC	RPH	LPH	PRPH	Spillway RC Gates	In Cusecs	In TMC	tflow in TMC	Nos. of Gates	Height in ft.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
**	10.00PM	896.10	347.75	990863	280000	25000	1295863	4.66511	406.923				1477200	1477200	5.31792	207.877	D	0
**	11.00PM	896.20	349.31	989212	280000	25000	1294212	4.65916	411.582				1480400	1480400	5.32944	213.206	D	0
	12.00Night	896.20	349.31	987561	280000	25000	1292561	4.65322	416.235				1480400	1480400	5.32944	218.536	D	0
*4.10.09	1.00AM	896.20	349.31	984259	280000	25000	1289259	4.64133	420.877				1480400	1480400	5.32944	223.865	D	0
**	2.00AM	896.20	349.31	980957	280000	25000	1285957	4.62945	425.506				1480400	1480400	5.32944	229.195	D	0
	3.00AM	896.20	349.31	977655	289000	25000	1291655	4.64996	430.156				1480400	1480400	5.32944	234.524	D	0
**	4.00AM	896.20	349.31	953020	289000	25000	1267020	4.56127	434.717				1480400	1480400	5.32944	239.853	D	0
**	5.00AM	896.00	346.20	937384	289000	25000	1251384	4.50498	439.222				1474000	1474000	5.30640	245.16	D	0
	6.00AM	895.60	342.91	967749	220000	48000	1235749	4.4487	443.671				1456400	1456400	5.24304	250.403	D	10
**	7.00AM	895.10	338.79	903680	261407	48000	1213087	4.36711	448.038				1434400	1434400	5.16384	255.567	D	0
**	8.00AM	894.10	330.66	903680	238746	48000	1190426	4.28553	452.324				1423500	1423500	5.1246	260.691	D	0
	9.00AM	894.90	337.14	899764	220000	48000	1167764	4.20395	456.528				1423500	1423500	5.1246	265.816	D	0
**	10.00AM	894.80	336.34	899764	176379	48000	1124143	4.04691	460.574				1417000	1417000	5.1012	270.917	D	0
**	11.00AM	894.80	336.34	899764	132757	48000	1080521	3.88988	464.464					0	0	270.917	D	0
**	12.00Noon	894.60	334.72	891900	100000	45000	1036900	3.73284	468.197				1404000	1404000	5.0544	275.972	D	0
**	1.00PM	894.50	333.91	922982	100000	45000	1067982	3.84474	472.042				1397500	1397500	5.031	281.003	D	0
**	2.00PM	894.30	332.29	860502	193563	45000	1099065	3.95663	475.999				1384500	1384500	4.9842	285.987	D	0
**	3.00PM	894.10	330.66	985147	100000	45000	1130147	4.06853	480.067				1371500	1371500	4.9374	290.924	D	0
	4.00PM	894.00	329.85	1031904	95000	41325	1168229	4.20562	484.273				1365000	1365000	4.914	295.838	D	0
**	5.00PM	893.00	321.90	972390	95000	41325	1108715	3.99137	488.264				1354800	1354800	4.87728	300.715	D	0
	6.00PM	893.70	327.47	798149	100000	41325	939474	3.38211	491.646				1349700	1349700	4.85892	305.574	D	0
**	7.00PM	893.50	325.88	846900	95000	41325	983225	3.53961	495.186				1339500	1339500	4.8222	310.397	D	0
**	8.00PM	893.40	325.08	890651	95000	41325	1026976	3.69711	498.883				1334400	1334400	4.80384	315.2	D	0
	9.00PM	893.30	324.29	984402	45000	41325	1070727	3.85462	502.738				1329300	1329300	4.78548	319.986	D	10
	10.00PM	893.10	322.70	732245	45000	41325	818570	2.94685	505.684				1319100	1319100	4.74876	324.735	D	10
	11.00PM	893.00	321.90	721127	75000	41325	837452	3.01483	508.699				1314000	1314000	4.7304	329.465	D	10

		Posonuoi	Storage	Inflov	vs (in Cus	ecs)	Total I	nflows	Cumm.	0	utflows	(in Cusec:	5)	Total C	outflows	Cumm.Ou	RC Gates	s opening sitin
Date	Time	r level (in feet)	Capacity (in TMC)	Jurala	Roja	Hundri	In Cusecs	In TMC	inflow in TMC	RPH	LPH	PRPH	Spillway RC Gates	In Cusecs	In TMC	tflow in TMC	Nos. of Gates	Height in ft.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	12.00Night	892.80	320.34	698948	75000	41320	815268	2.93496	511.634				1305400	1305400	4.69944	334.164	D	0
5.10.09	1.00AM	892.60	318.78	687887	75000	41320	804207	2.89515	514.529				1296800	1296800	4.66848	338.833	D	0
	2.00AM	892.40	317.21	676769	75000	41320	793089	2.85512	517.384				1288200	1288200	4.63752	343.47	D	0
	3.00AM	892.20	315.65	666312	75000	41320	782632	2.81748	520.202				1279600	1279600	4.60656	348.077	D	0
	4.00AM	892.00	314.87	645341	75000	41320	761661	2.74198	522.944				1271000	1271000	4.5756	352.653	D	0
	5.00AM	891.60	311.01	634884	75000	41320	751204	2.70433	525.648				1263400	1263400	4.54824	357.201	D	0
	6.00AM	891.10	307.17	613913	75000	41320	730233	2.62884	528.277				1240400	1240400	4.46544	361.666	D	0
	7.00AM	890.90	305.65	592499	75000	32730	700229	2.52082	530.798				1233000	1233000	4.4388	366.105	D	0
	8.00AM	890.70	304.14	613913	75000		688913	2.48009	533.278				1225900	1225900	4.41324	370.518	D	0
	9.00AM	890.50	302.63	571510	45000	32730	649240	2.33726	535.615				1178500	1178500	4.2426	374.761	D	0
	10.00AM	890.40	301.37	515500	45000	32730	593230	2.13563	537.751				1174800	1174800	4.22928	378.99	D	0
	11.00Am	890.20	300.36	508500	42000	32730	583230	2.09963	539.85				1167400	1167400	4.20264	383.193	D	0
	12.00Noon	890.00	298.85	508500	42000	27000	577500	2.079	541.929				1160000	1160000	4.176	387.369	D	0
	1.00PM	889.80	297.37	545097	42000	27000	614097	2.21075	544.14				1153400	1153400	4.15224	391.521	1x52′,	11x40′
	2.00PM	889.70	296.64	520725	38000	16000	574725	2.06901	546.209				1150100	1150100	4.14036	395.661	D	0
	3.00PM	889.70	296.64	400000	41000	20000	461000	1.6596	547.869				1000000	1000000	3.6	399.261	D	0
	4.00PM	889.70	296.64	400000	41000	20000	461000	1.6596	549.528				1000000	1000000	3.6	402.861	D	0
	5.00PM	889.70	296.64	400596	41000	20000	461596	1.66175	551.19				1000000	1000000	3.6	406.461	D	0
	6.00PM	890.00	298.85	321475	38000	15500	374975	1.34991	552.54				1000000	1000000	3.6	410.061	D	0
	7.00PM	890.40	301.87	347000	38000	15000	400000	1.44	553.98				805000	805000	2.898	412.959	2x52',1x	40′,7x38′
	8.00PM	891.40	309.48	408530	38000	15000	461530	1.66151	555.642				805000	805000	2.898	415.857	2x52',1x	40',9x28'
	9.00PM	892.00	314.09	408530	38000	13600	460130	1.65647	557.298				805000	805000	2.898	418.755	D	0
	10.00PM	891.60	311.01	401420	38000	13600	453020	1.63087	558.929				805000	805000	2.898	421.653	D	0
	11.00PM	892.00	314.09	410420	38000	13600	462020	1.66327	560.592				805000	805000	2.898	424.551	D	0
	12.00Night	892.10	314.87	410420	38000	13600	462020	1.66327	562.255				805000	805000	2.898	427.449	D	0
6.10.09	1.00AM	892.10	314.87	385714	38000	13600	437314	1.57433	563.83				805000	805000	2.898	430.347	D	0

		Posonuoi	Storage	Inflov	vs (in Cus	ecs)	Total I	nflows	Cumm.	0	utflows	(in Cusec:	5)	Total C	Outflows	Cumm.Ou	RC Gates	s opening sitin
Date	Time	r level (in feet)	Capacity (in TMC)	Jurala	Roja	Hundri	In Cusecs	In TMC	inflow in TMC	RPH	LPH	PRPH	Spillway RC Gates	In Cusecs	In TMC	tflow in TMC	Nos. of Gates	Height in ft.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	2.00AM	892.10	314.87	384714	38000	13600	436314	1.57073	565.401				805000	805000	2.898	433.245	D	0
	3.00AM	892.20	315.65	349740	38000	13600	401340	1.44482	566.845				805000	805000	2.898	436.143	D	0
	4.00AM	892.10	314.87	349740	38000	13600	401340	1.44482	568.29				805000	805000	2.898	439.041	D	0
	5.00AM	891.90	313.32	349740	38000	13600	401340	1.44482	569.735				805000	805000	2.898	441.939	D	0
	6.00AM	891.80	312.55	315266	35000	9000	359266	1.29336	571.028				805000	805000	2.898	444.837	D	0
	7.00AM	891.50	310.24	258164	35000	9000	302164	1.08779	572.116				710000	710000	2.556	447.393	2x52', 1x	40′,9x23′
	8.00AM	891.70	311.78	261662	35000	9000	305662	1.10038	573.217				710000	710000	2.556	449.949	D	0
	9.00AM	891.70	311.78	265028	35000	5850	305878	1.10116	574.318				710000	710000	2.556	452.505	2x52', 1x	40′,9x17′
	10.00AM	891.70	311.78	267272	45000	5850	318122	1.14524	575.463				600000	600000	2.16	454.665	D	0
	11.00Am	892.40	317.21	292394	85000	5850	383244	1.37968	576.843				600000	600000	2.16	456.825	D	0
	12.00Noon	892.40	317.21	292394	85000	3750	381144	1.37212	578.215				600000	600000	2.16	458.985	D	0
	1.00PM	892.20	315.65	268040	85000	3750	356790	1.28444	579.499				600000	600000	2.16	461.145	D	0
	2.00PM	892.00	314.09	292040	85000	3750	380790	1.37084	580.87				600000	600000	2.16	463.305	D	0
	3.00PM	891.70	331.78	292040	85000	3750	380790	1.37084	582.241				600000	600000	2.16	465.465	D	0
	4.00PM	891.50	310.24	267540	85000	3750	356290	1.28264	583.524				600000	600000	2.16	467.625	D	0
	5.00PM	891.40	309.48	267540	85000	3750	356290	1.28264	584.806				600000	600000	2.16	469.785	D	0
	6.00PM	891.30	308.71	267540	123000		390540	1.40594	586.212				700000	700000	2.52	472.305	2x52', 1x	40′,9x23′
	7.00PM	890.70	304.14	266520	123000		389520	1.40227	587.614				700000	700000	2.52	474.825	D	0
	8.00PM	890.40	301.87	265500	123000		388500	1.3986	589.013				700000	700000	2.52	477.345	D	0
	9.00PM	890.20	300.36	264480	123000		387480	1.39493	590.408				690000	690000	2.484	479.829	D	0
	10.00PM	890.90	305.65	264480	114000		378480	1.36253	591.77				690000	690000	2.484	482.313	D	0
	11.00PM	889.80	297.37	239996	114000		353996	1.27439	593.045				690000	690000	2.484	484.797	D	0
	12.00Night	889.70	296.64	239996	114000		353996	1.27439	594.319				690000	690000	2.484	487.281	D	0
7.10.09	1.00AM	889.60	295.90	239096	114000		353096	1.27115	595.59				690000	690000	2.484	489.765	D	0
	2.00AM	889.50	295.16	239096	114000		353096	1.27115	596.861				690000	690000	2.484	492.249	D	0
	3.00AM	889.30	293.68	239096	114000		353096	1.27115	598.133				690000	690000	2.484	494.733	D	0

		Posonuoi	Storage	Inflov	vs (in Cus	ecs)	Total I	nflows	Cumm.	Οι	utflows	(in Cusecs	5)	Total C	outflows	Cumm.Ou	RC Gates	s opening sitin
Date	Time	r level (in feet)	Capacity (in TMC)	Jurala	Roja	Hundri	In Cusecs	In TMC	inflow in TMC	RPH	LPH	PRPH	Spillway RC Gates	In Cusecs	In TMC	tflow in TMC	Nos. of Gates	Height in ft.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	4.00AM	889.20	292.94	239096	114000		353096	1.27115	599.404				690000	690000	2.484	497.217	D	0
	5.00AM	889.00	291.46	239096	114000		353096	1.27115	600.675				680000	680000	2.448	499.665	D	0
	6.00AM	888.90	290.74	240932	98000		338932	1.22016	601.895				680000	680000	2.448	502.113	D	0
	7.00AM	888.80	290.02	242768	98000		340768	1.22676	603.122				680000	680000	2.448	504.561	D	0
	8.00AM	888.70	289.30	316748	98000		414748	1.49309	604.615				680000	680000	2.448	507.009	D	0
	9.00AM	888.70	289.30	316748	120071		436819	1.57255	606.187				680000	680000	2.448	509.457	D	0
	10.00AM	888.60	288.57	317972	120071		438043	1.57695	607.764				680000	680000	2.448	511.905	D	0
	11.00Am	888.40	287.13	317972	120071		438043	1.57695	609.341				680000	680000	2.448	514.353	D	0
	12.00Noon	888.20	285.69	320420	120071		440491	1.58577	610.927				680000	680000	2.448	516.801	D	0
	1.00PM	888.10	284.96	345080	120071		465151	1.67454	612.602				680000	680000	2.448	519.249	D	0
	2.00PM	888.00	284.24	358706	120071		478777	1.7236	614.325				675000	675000	2.43	521.679	D	0
	3.00PM	887.80	282.83	358706	120071		478777	1.7236	616.049				670000	670000	2.412	524.091	D	0
	4.00PM	887.70	282.13	358706	110200		468906	1.68806	617.737				670000	670000	2.412	526.503	D	0
	5.00PM	887.60	281.42	358706	110200		468906	1.68806	619.425				670000	670000	2.412	528.915	D	0
	6.00PM	887.50	280.72	358706	110200		468906	1.68806	621.113				670000	670000	2.412	531.327	D	0
	7.00PM	887.40	280.01	358706	110000		468706	1.68734	622.8				670000	670000	2.412	533.739	D	0
	8.00PM	887.30	279.31	358706	110000		468706	1.68734	624.488				670000	670000	2.412	536.151	D	0
	9.00PM	887.20	278.60	358706	110000		468706	1.68734	626.175				670000	670000	2.412	538.563	D	0
	10.00PM	887.10	277.90	358706	110000		468706	1.68734	627.862				670000	670000	2.412	540.975	D	0
	11.00PM	887.00	277.19	358706	110000		468706	1.68734	629.55				670000	670000	2.412	543.387	D	0
	12.00Night	886.90	276.50	357413	110000		467413	1.68269	631.232				655000	655000	2.358	545.745	D	0

			AII	lexure	- D	nagai	rjuna sa	gar rroj	eci		
Date	Time	Level in feet	Storage	Inflow in	Total discharge through	Discharge through Main Power	Discharge over Crest	Gate op posit	bening tion	Total discharge into river to Prakasam Barrage in	Total outflow from Reservoir in Cusecs
				Cusecs	canals in Cusecs	House in Cusecs	in Cusecs	Nos.	Height in ft	Cusecs (Col.10 +Col.11)	(Col.9 +Col.14)
1	2	3	4	5	6	7	8	9	10	11	12
30-Sep-09	1.00 AM	535.50	260.495	12108	12108	0	0	0	0	0	12108
	2.00 AM	535.60	260.723	82656	12116	15615	0	0	0	15615	27731
	3.00 AM	535.70	260.951	75462	12129	14922	0	0	0	14922	27051
	4.00 Am	535.90	261.408	154711	12152	11226	0	0	0	11226	23378
	5.00 Am	536.00	261.636	90420	12165	13492	0	0	0	13492	25657
	6.00 Am	536.20	262.092	161825	12197	22961	0	0	0	22961	35158
	7.00 Am	536.20	262.092	27720	12197	15523	0	0	0	15523	27720
	8.00 Am	536.30	262.320	91066	12210	15523	0	0	0	15523	27733
	9.00 AM	536.30	262.320	23991	12210	11781	0	0	0	11781	23991
	10.00 AM	536.40	262.548	98748	12223	23192	0	0	0	23192	35415
	11.00 Am	536.40	262.548	35646	12223	23423	0	0	0	23423	35646
	12.00 Noon	536.50	262.770	85869	12236	11966	0	0	0	11966	24202
	1.00 PM	536.50	262.770	12236	12236	0	0	0	0	0	12236
	2.00 PM	536.60	263.005	77525	12247	0	0	0	0	0	12247
	3.00 PM	536.60	263.005	12247	12247	0	0	0	0	0	12247
	4.00 PM	536.70	263.233	75590	12257	0	0	0	0	0	12257

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Date	Time	Level	Storage	Inflow in	Total discharge through	Discharge through Main Power	Discharge over Crest	Gate op posit	bening tion	Total discharge into river to Prakasam Barrage in	Total outflow from Reservoir
		Inteet	III IIMO	Cusecs	canals in Cusecs	House in Cusecs	in Cusecs	Nos.	Height in ft	Cusecs (Col.10 +Col.11)	(Col.9 +Col.14)
1	2	3	4	5	6	7	8	9	10	11	12
	5.00 PM	536.70	263.233	12257	12257	0	0	0	0	0	12257
	6.00 PM	536.80	263.461	75606	12273	0	0	0	0	0	12273
	7.00 PM	537.00	263.917	138966	12299	0	0	0	0	0	12299
	8.00 PM	537.00	263.917	11534	11534	0	0	0	0	0	11534
	9.00 PM	537.10	264.145	74094	10761	0	0	0	0	0	10761
	10.00 PM	537.50	265.058	264416	10805	0	0	0	0	0	10805
	11.00 PM	537.70	265.514	137496	10829	0	0	0	0	0	10829
	12.00 MN	538.30	265.742	74232	10899	0	0	0	0	0	10899
1-Oct-09	1.00 AM	538.60	267.567	517863	10919	0	0	0	0	0	10919
	2.00 AM	539.00	268.480	264572	10961	0	0	0	0	0	10961
	3.00 AM	539.30	269.164	200994	10994	0	0	0	0	0	10994
	4.00 AM	539.90	270.533	391338	11060	0	0	0	0	0	11060
	5.00 AM	540.50	271.972	410842	11120	0	0	0	0	0	11120
	6.00 Am	541.20	273.667	482018	11185	0	0	0	0	0	11185
	7.00 AM	542.00	275.604	549316	11260	0	0	0	0	0	11260
	8.00 AM	542.80	277.541	549391	11335	0	0	0	0	0	11335
	9.00 AM	543.50	279.236	482233	11400	0	0	0	0	0	11400

Date	Time	Level	Storage	Inflow in	Total discharge through	Discharge through Main Rowor	Discharge over Crest	Gate op posit	bening tion	Total discharge into river to Prakasam Barrago in	Total outflow from Reservoir
		inteet	III IIMC	Cusecs	canals in Cusecs	House in Cusecs	in Cusecs	Nos.	Height in ft	Cusecs (Col.10 +Col.11)	(Col.9 +Col.14)
1	2	3	4	5	6	7	8	9	10	11	12
	10.00 AM	544.20	280.931	482312	11479	0	0	0	0	0	11479
	11.00 AM	545.00	282.869	549837	11504	0	0	0	0	0	11504
	12.00 Noon	546.00	285.290	684155	11655	0	0	0	0	0	11655
	1.00 PM	547.00	287.712	710707	11766	26163	0	0	0	26163	37929
	2.00 PM	548.00	290.133	713211	11860	28851	0	0	0	28851	40711
	3.00 PM	549.00	292.554	708735	11954	24281	0	0	0	24281	36235
	4.00 PM	550.30	295.751	924283	12080	24147	0	0	0	24147	36227
	5.00 PM	551.60	299.109	969179	12209	24192	0	0	0	24192	36401
	6.00 PM	553.00	302.725	1041342	12348	24550	0	0	0	24550	36898
	7.00 PM	554.10	305.566	837869	15461	33241	0	0	0	33241	48702
	8.00PM	555.30	308.667	993813	17897	33152	83980	26	5	117132	135029
	9.00 PM	555.60	309.442	1017583	15677	33062	179400	26	10	212462	228139
	10.00 PM	557.50	314.349	1017906	15784	33555	179400	26	10	212955	228739
	11.00 PM	558.60	317.191	1019072	16860	33645	179400	26	10	213045	229905
	12.00 M N	559.70	320.032	1021075	17520	33645	180466	26	10	214111	231631
2-Oct-09	1.00 AM	560.9	323.272	1208686	17623	33645	257400	26	15	291045	308668
	2.00 AM	561.80	325.737	1006998	17737	33645	270894	26	15	304539	322276

Date	Time	Level	Storage	Inflow in	Total discharge through	Discharge through Main Power	Discharge over Crest	Gate op posi	pening tion	Total discharge into river to Prakasam Barrage in	Total outflow from Reservoir
		mieet		Cusecs	canals in Cusecs	House in Cusecs	in Cusecs	Nos.	Height in ft	Cusecs (Col.10 +Col.11)	(Col.9 +Col.14)
1	2	3	4	5	6	7	8	9	10	11	12
	3.00 AM	562.70	328.202	1020972	17826	33958	284466	26	15	318424	336250
	4.00 AM	563.60	330.667	1075201	17911	34048	338520	26	17	372568	390479
	5.00 AM	564.40	332.858	1028010	17990	34003	367406	26	18	401409	419399
	6.00 AM	565.20	335.050	1042683	18065	34093	381914	26	19	416007	434072
	7.00 AM	566.00	337.240	1078549	18137	33201	418600	26	22	451801	469938
	8.00 AM	566.80	339.430	1107549	18209	34361	446368	26	22	480729	498938
	9.00 AM	567.41	341.070	978789	18324	33244	464048	26	22	497292	515616
	10.00 AM	568.20	343.260	1153887	18334	28470	498472	26	24	526942	545276
	11.00 AM	568.80	345.450	978789	18509	26343	535600	26	24	561943	580452
	12.00 Noon	569.60	347.370	970428	17968	29686	586866	26	24	616552	634520
	1.00 PM	570.10	348.480	1011476	18056	29382	578760	26	24	608142	626198
	2.00 PM	570.70	349.360	1057560	18066	28080	526136	26	27	554216	572282
	3.00 PM	571.30	351.980	1001728	18118	28428	550004	26	27	578432	596550
	4.00 PM	571.70	353.145	1001728	18180	28470	552734	26	27	581204	599384
	5.00 PM	572.10	354.310	1001728	18190	29382	569452	26	27	598834	617024
	6.00 PM	572.70	356.050	1001728	18249	29946	584116	26	27	614062	632311
	7.00 PM	573.20	357.512	1045052	18305	30206	599040	26	30	629246	647551

Date	Time	Level Stora in feet in TM	Storage In in TMC Cu	Inflow in	Total discharge through canals in	Discharge through Main Power House in	Discharge over Crest	Gate op posit	ening tion	Total discharge into river to Prakasam Barrago in	Total outflow from Reservoir in Cusecs
		Inteet		Cusecs	canals in Cusecs	House in Cusecs	in Cusecs	Nos.	Height in ft	Cusecs (Col.10 +Col.11)	(Col.9 +Col.14)
1	2	3	4	5	6	7	8	9	10	11	12
	8.00 PM	573.70	358.968	1045052	18351	29772	662763	26	30	692535	710886
	9.00 PM	574.10	360.132	997755	18380	28644	627120	26	30	655764	674144
	10.00 PM	574.40	361.005	926020	18700	28350	636430	26	30	664780	683480
	11.00 PM	574.70	361.878	934502	18442	27720	645840	26	30	673560	692002
	12.00 Midnight	575.10	363.043	1029140	18476	28728	658320	26	30	687048	705524
3-Oct-09	1.00 AM	575.60	364.495	1121127	18521	29570	673920	26	30	703490	722011
	2.00 AM	576.10	365.954	924100	18580	26250	717600	26	32	743850	762430
	3.00 AM	583.90	389.370	1237544	17783	27933	934050	26	32	961983	979766
	4.00 AM	576.60	367.410	1021803	18609	27216	733200	26	32	760416	779025
	5.00 AM	577.10	368.865	1207866	18655	26754	758290	26	32	785044	803699
	6.00 AM	577.40	369.738	1059046	18674	26712	771160	26	32	797872	816546
	7.00 AM	577.80	370.900	1159273	18710	29232	788320	26	36	817552	836262
	8.00 AM	578.00	371.480	994226	18126	29232	785200	26	36	814432	832558
	9.00 AM	578.20	372.060	1004085	18142	29232	795600	26	36	824832	842974
	10.00 AM	578.60	373.230	1179848	19280	29568	806000	26	36	835568	854848
	11.00 AM	578.90	374.100	1099859	19308	28896	808600	26	36	837496	856804
	12.00 Noon	579.10	374.680	1047678	19285	29526	837200	26	36	866726	886011

Date 1	Time Level S in feet	Level Storage I in feet in TMC C	Inflow in	Total discharge through	Discharge through Main Power	e Discharge over Crest in Cusecs	Gate opening position		Total discharge into river to Prakasam Barrage in	Total outflow from Reservoir in Cusecs	
		meet		Cusecs	Cusecs	House in Cusecs	in Cusecs	Nos.	Height in ft	Cusecs (Col.10 +Col.11)	(Col.9 +Col.14)
1	2	3	4	5	6	7	8	9	10	11	12
	1.00 PM	579.50	375.850	1236896	19306	31335	863200	26	36	894535	913841
	2.00 PM	579.80	376.720	1168487	19796	28224	878800	26	36	907024	926820
	3.00 PM	580.20	377.920	1282483	19814	29736	899600	26	36	929336	949150
	4.00 PM	580.60	379.164	1306708	16850	29694	916720	26	27	946414	963264
	5.00 PM	580.90	380.090	1100815	16886	29736	795860	26	27	825596	842482
	6.00 PM	581.60	382.257	1466169	16955	29694	819520	26	27	849214	866169
	7.00 PM	581.60	382.257	1133458	16950	30771	882860	26	30	913631	930581
	8.00 PM	582.10	383.800	1377366	17004	30857	898950	26	30	929807	946811
	9.00 PM	582.40	384.730	1211623	17023	30857	904800	26	30	935657	952680
	10.00 PM	582.70	385.656	1216594	17669	30857	910650	26	30	941507	959176
	11.00 PM	583.00	386.586	1220880	17695	28907	916500	26	30	945407	963102
	12.00 PM	583.20	387.205	1138969	17718	28907	920400	26	30	949307	967025
4-Oct-09	1.00 AM	583.40	387.823	1142608	17734	28907	924300	26	30	953207	970941
	2.00 AM	583.60	388.420	1143558	17798	25659	928200	26	32	953859	971657
	3.00 AM	583.90	389.370	1237544	17783	27933	934050	26	32	961983	979766
	4.00 AM	584.20	390.297	1244457	17802	29515	939640	26	32	969155	986957
	5.00 AM	584.50	391.225	1249952	17842	29232	945100	26	32	974332	992174

Date	Time Lev in fe	Level Storage in feet in TMC	Inflow in	Total discharge through	Discharge through Main Power	e Discharge over Crest in Cusecs	Gate opening position t		Total discharge into river to Prakasam Barrago in	Total outflow from Reservoir in Cusecs	
		Inteet		Cusecs	canals in Cusecs	House in Cusecs	in Cusecs	Nos.	Height in ft	Cusecs (Col.10 +Col.11)	(Col.9 +Col.14)
1	2	3	4	5	6	7	8	9	10	11	12
	6.00 AM	584.70	391.843	1228809	17856	29232	1010048	26	32	1039280	1057136
	7.00 AM	584.70	391.843	1228722	17856	29151	1010048	26	32	1039199	1057055
	8.00 AM	584.80	392.150	1147502	17868	31291	1012232	26	32	1043523	1061391
	9.00 AM	584.80	392.150	1147502	17868	31291	1012232	26	32	1043523	1061391
	10.00 AM	584.90	392.460	1147767	17881	29354	1014416	26	32	1043770	1061651
	11.00 AM	585.10	393.080	1238534	17901	29679	1018732	26	32	1048411	1066312
	12.00 AM Noon	585.30	393.080	1281577	17917	29719	1022719	26	32	1052438	1070355
	1.00 PM	585.30	393.690	1061656	16329	29639	1015688	20 Nos 6 No.s	32 31	1045327	1061656
	2.00 PM	585.80	395.240	1199373	16329	29679	968760	26	30	998439	1014768
	3.00 PM	585.90	395.550	1165266	16329	29779	970580	26	30	1000359	1016688
	4.00 PM	586.00	395.865	1168818	18234	29760	972400	26	30	1002160	1020394
	5.00 PM	586.20	396.480	1172139	18128	29760	976040	26	30	1005800	1023928
	6.00 PM	586.40	397.100	1232967	18129	29760	1012856	26	31	1042616	1060745
	7.00 PM	586.50	397.411	770193	18130	29841	1014780	26	31	1044621	1062751
	8.00 PM	586.60	397.720	1165707	20631	27679	1016704	26	31	1044383	1065014
	9.00 PM	586.60	397.720	1151257	19631	27649	1016704	26	31	1044353	1063984

Date	Time	Level	Storage	Inflow in	Total discharge through	Discharge through Main Power Crest		Gate op posi	pening tion	Total discharge into river to Prakasam Barrago in	Total outflow from Reservoir in Cusecs
		Inteet		Cusecs	canals in Cusecs	House in Cusecs	in Cusecs	Nos.	Height in ft	Cusecs (Col.10 +Col.11)	(Col.9 +Col.14)
1	2	3	4	5	6	7	8	9	10	11	12
	10.00 PM	586.80	398.330	1172143	19630	27649	1020552	26	31	1048201	1067831
	11.00 PM	586.90	398.640	1162359	19631	27649	1004332	10 Nos 16 Nos	31 30	1031981	1051612
	12.00 PM	586.90	398.640	1131748	19631	27649	1001740	10 Nos 16 Nos	31 30	1029389	1049020
5-Oct-09	1.00 AM	587.00	398.950	1129671	19631	27283	1003600	10 Nos 16 Nos	31 30	1030883	1050514
	2.00 AM	587.00	398.950	1112185	19631	22980	1003600	10 Nos 16 Nos	31 30	1026580	1046211
	3.00 AM	587.20	399.570	1139195	19632	27770	1007300	10 Nos 16 Nos	31 30	1035070	1054702
	4.00 AM	587.40	400.190	1135676	19633	27811	1011000	10 Nos 16 Nos	31 30	1038811	1058444
	5.00 AM	587.50	400.500	1136893	19634	27811	999700	26	30	1027511	1047145
	6.00 AM	587.70	401.120	1165866	19635	27933	1003340	26	30	1031273	1050908
	7.00 AM	587.80	401.438	1166226	19627	27933	1005160	26	30	1033093	1052720
	8.00 AM	587.90	401.740	1181935	19636	28014	1006980	26	30	1034994	1054630
	9.00 AM	588.00	402.050	1168106	20636	27852	1008800	26	30	1036652	1057288
	10.00 AM	588.10	402.360	1153962	20636	27892	1010880	26	30	1038772	1059408
	11.00 AM	588.10	402.360	1138794	20636	27892	993504	10 Nos 16 Nos	30 29	1021396	1042032
	12.00 AM Noon	588.20	402.660	1123637	20637	29892	995488	10 Nos 16 Nos	30 29	1025380	1046017

Date	Time Level in feet	I Storage infl t in TMC Cus	Inflow discharge in through	Discharge through Main Power	Discharge over Crest in Cusecs	Gate opening position		Total discharge into river to Prakasam Barrage in	Total outflow from Reservoir in Cusecs		
		Inteet		Cusecs	canals in Cusecs	House in Cusecs	in Cusecs	Nos.	Height in ft	Cusecs (Col.10 +Col.11)	(Col.9 +Col.14)
1	2	3	4	5	6	7	8	9	10	11	12
	1.00 PM	588.30	402.970	1122329	17238	28014	997472	10 Nos 16 Nos	30 29	1025486	1042724
	2.00 PM	588.40	403.280	1132901	17238	29892	960128	26	28	990020	1007258
	3.00 PM	588.90	404.830	1184881	17239	28014	961870	26	28	989884	1007123
	4.00 PM	589.30	406.070	1172611	21105	24563	928460	26	28	953023	974128
	5.00 PM	589.40	406.380	1139987	21102	20138	976820	26	28	996958	1018060
	6.00 PM	589.40	406.380	1130854	21102	20138	991780	26	28	1011918	1033020
	7.00 PM	589.40	406.380	1132984	21102	23791	991780	12 Nos 14 Nos	29 28	1015571	1036673
	8.00 PM	589.20	402.660	1103581	21093	24035	987260	12 Nos 14 Nos	29 28	1011295	1032388
	9.00 PM	589.00	405.140	1090915	21081	24075	992540	12 Nos 14 Nos	29 28	1016615	1037696
	10.00 PM	588.90	404.830	883952	21076	24075	982314	12 Nos 14 Nos	29 28	1006389	1027465
	11.00 PM	588.70	404.210	801693	21012	23223	908752	26	26	931975	952987
	12.00 Midnight	588.70	404.210	844748	21012	23223	908752	26	26	931975	952987
6-Oct-09	1.00 AM	588.30	402.970	796648	20379	24035	902928	26	26	926963	947342
	2.00 AM	588.00	402.050	749916	20976	24035	898560	26	26	922595	943571
	3.00 AM	587.80	401.430	746796	20976	24035	895440	26	26	919475	940451
	4.00 AM	587.60	400.810	677279	20976	24035	805090	26	23	829125	850101

Date	Time	Level	Storage	Inflow in	flow discharge through into river to Main Power Crest	ge h Main Power Over Crest Gate opening position Total discharge position Prakasam Barrage into strate Barrage into strate Comparison Barrage into strate Comparison	Gate opening Tota position F		Total outflow from Reservoir		
		inteet		Cusecs	canals in Cusecs	House in Cusecs	in Cusecs	Nos.	Height in ft	Cusecs (Col.10 +Col.11)	(Col.9 +Col.14)
1	2	3	4	5	6	7	8	9	10	11	12
	5.00 AM	587.40	400.190	675474	20976	24360	802360	26	23	826720	847696
	6.00 AM	587.30	399.880	664535	20802	24360	705484	26	20	729844	750646
	7.00 AM	587.30	399.880	664950	20967	24604	705484	26	20	730088	751055
	8.00 AM	587.20	399.570	601814	20985	24604	613236	26	17	637840	658825
	9.00 AM	587.20	399.570	659221	20985	24604	613236	26	17	637840	658825
	10.00 AM	587.10	399.260	571765	20922	24604	612352	26	17	636956	657878
	11.00 AM	587.10	399.260	658974	22018	24604	612352	26	17	636956	658974
	12.00 AM Noon	587.10	399.260	663277	22018	28907	612352	26	17	641259	663277
	1.00 PM	587.10	399.290	659014	22018	24644	612352	26	17	636996	659014
	2.00 PM	587.00	398.950	578914	22579	28226	611442	26	17	639668	662247
	3.00 PM	586.90	398.640	577638	22879	28866	610588	26	17	639454	662333
	4.00 PM	586.70	398.030	466070	23013	24938	503646	26	14	528584	551597
	5.00 PM	586.70	398.030	555932	23013	29273	503646	26	14	532919	555932
	6.00 PM	586.60	397.720	471006	24510	29273	500334	26	14	529607	554117
	7.00 PM	586.60	397.720	556913	24510	29069	503334	26	14	532403	556913
	8.00 PM	586.60	397.720	556913	24510	29069	503334	26	14	532403	556913
	9.00 PM	586.80	398.340	753487	24516	29069	527680	14 Nos 12 Nos	15 14	556749	581265
	10.00 PM	586.90	398.649	661917	24522	28988	525074	14 Nos	15	554062	578584

Date	Time	Level	Storage	Inflow in	Total discharge through	Discharge through Main Bowor	Discharge over Crest	Gate op posit	bening tion	Total discharge into river to Prakasam Barrago in	Total outflow from Reservoir
		meet		Cusecs	canals in Cusecs	House in Cusecs	in Cusecs	Nos.	Height in ft	Cusecs (Col.10 +Col.11)	(Col.9 +Col.14)
1	2	3	4	5	6	7	8	9	10	11	12
								12 Nos	14		
	11.00 PM	586.90	398.649	578625	24522	29029	525074	14 Nos 12 Nos	15 14	554103	578625
	12.00 PM	587.00	398.950	622220	24525	28988	525652	14 Nos 12 Nos	15 14	554640	579165
7-Oct-09	1.00 AM	587.00	398.950	622261	24525	29029	525650	14 Nos 12 Nos	15 14	554679	579204
	2.00 AM	587.00	398.950	607869	24525	28988	525652	14 Nos 12 Nos	15 14	554640	579165
	3.00 AM	587.00	398.950	579246	24525	29069	525652	14 Nos 12 Nos	15 14	554721	579246
	4.00 AM	587.00	398.950	579246	24525	29069	525652	14 Nos 12 Nos	15 14	554721	579246
	5.00 AM	587.10	399.260	665942	24528	29069	526234	14 Nos 12 Nos	15 14	555303	579831
	6.00 Am	587.10	399.260	622966	24528	29151	526234	14 Nos 12 Nos	15 14	555385	579913
	7.00 AM	587.20	399.577	666615	24528	29151	526822	14 Nos 12 Nos	15 14	555973	580501
	8.00 AM	587.30	399.880	667197	24534	29151	527400	14 Nos 12 Nos	15 14	556551	581085
	9.00 AM	587.40	400.190	667736	24537	29110	527978	14 Nos 12 Nos	15 14	557088	581625
	10.00 AM	587.40	400.190	581869	24537	29354	527978	14 Nos 12 Nos	15 14	557332	581869
	11.00 AM	587.40	400.190	581625	24537	29110	527978	14 Nos 12 Nos	15 14	557088	581625

Date	Time	Level	Storage	Inflow in	Total discharge through	Discharge through Main Bowor	Discharge over Crest	Gate opening position		Total discharge into river to Prakasam Barrago in	Total outflow from Reservoir
		inteet	III IMC	Cusecs	canals in Cusecs	House in Cusecs	in Cusecs	Nos.	Height in ft	Cusecs (Col.10 +Col.11)	(Col.9 +Col.14)
1	2	3	4	5	6	7	8	9	10	11	12
	12.00 Noon	587.30	399.880	581541	24534	29029	527978	14 Nos 12 Nos	15 14	557007	581541
	1.00 PM	587.30	399.880	582069	24534	29557	527978	14 Nos 12 Nos	15 14	557535	582069
	2.00 PM	587.30	399.880	581450	24534	29516	527978	14 Nos 12 Nos	15 14	557494	582028
	3.00 PM	587.30	399.880	581450	24534	29516	527978	14 Nos 12 Nos	15 14	557494	582028
	4.00 PM	587.40	400.195	658606	24534	29516	527978	14 Nos 12 Nos	15 14	557494	582028
	5.00 PM	587.40	400.195	577565	24537	25050	527978	14 Nos 12 Nos	15 14	553028	577565
	6.00 PM	587.40	400.195	581788	24537	29273	527978	14 Nos 12 Nos	15 14	557251	581788
	7.00 PM	587.40	400.195	581788	24537	29273	527978	14 Nos 12 Nos	15 14	557251	581788
	8.00 PM	587.50	400.500	668178	25543	29232	528570	14 Nos 12 Nos	15 14	557802	583345
	9.00 PM	587.50	400.500	582304	24543	29191	528570	14 Nos 12 Nos	15 14	557761	582304
	10.00 PM	587.50	400.500	547647	24543	29232	493872	16 Nos 10 Nos	14 13	523104	547647
	11.00 PM	587.50	400.500	543546	24543	25131	493872	16 Nos 10 Nos	14 13	519003	543546
	12.00 PM	587.60	400.810	633961	24546	29079	494234	16 Nos 10 Nos	14 13	523313	547859

Annexure – C PRAKASAM BARRAGE

Time	Level over crest in ft.(crest +45.05ft)	In flow in Cusecs	Out flow in Cusecs	Gates position
02.10.2009				
6.00 AM	12	63 830	49 750	20 x 2, 30x1, 20 Closed
7.00 AM	12	63 830	49750	20 x 2, 30x1, 20 Closed
8.00 AM	11.8	70 030	55950	30 x 2, 20x1, 20 Closed
9.00 AM	11.2	73 040	58960	44 x 2, 4x1, 22 Closed
10.00 AM	10.5	80 657	66735	15 x3, 30x2, 25 Closed
11.00 AM	10.5	80 657	66735	25 x3, 30x2, 25 Closed
12.00 Noon	10	77 801	64500	15 x3, 30x2, 25 Closed
1.00 PM	10	77 531	64500	15 x3, 30x2, 25 Closed
2.00 PM	10	87 831	64500	15 x3, 30x2, 25 Closed
3.00 PM	9	72 408	60465	15 x3, 30x2, 25 Closed
4.00 PM	8.5	69 993	58050	15 x3, 30x2, 25 Closed
5.00 PM	8.5	69 993	58050	15 x3, 30x2, 25 Closed
6.00 PM	8.5	69 564	58050	15 x3, 30x2, 25 Closed
7.00 PM	8.5	69 564	58050	15 x3, 30x2, 25 Closed
8.00PM	8.5	1 22 104	110600	70 x 3ft
9.00 PM	8.7	1 23 798	112700	70 x 3ft
10.00 PM	8.7	1 40 948	129850	70 x 3ft
11.00 PM	8.7	1 52 813	141715	35 x 4, 35 x 3.5ft
12.00 Midnight	8.7	1 91 628	180530	70 X 5ft
03.10.2009				
1.00am	9	217948	206850	70 Nos.x 6.00ft
2.00 am.	10	303208	292110	70 Nos. clear
3.00am.	10.8	347098	336000	70 Nos. clear
4.00am.	11.2	369848	358750	70 Nos. clear
5.00am	12	408348	397250	70 Nos. clear
6.00am	13	463651	450240	70 Nos. clear

FLOOD MANAGEMENT

7.00am	13.1	469251	455840	70 Nos. clear
8.00am	13.3	480451	467040	70 Nos. clear
9.00am	13.5	492602	478380	70 Nos. clear
10.00am	13.8	509892	495670	70 Nos. clear
11.00am	14	521512	507290	70 Nos. clear
12.00noon	14.1	521436	513590	70 Nos. clear
1.00 PM	14.3	538416	524930	70 Nos. clear
2.00 PM	14.5	550246	536760	70 Nos. clear
3.00 PM	14.8	568861	554750	70 Nos. clear
4.00 PM	15.1	587131	573020	70 Nos. clear
5.00 PM	15.3	599381	585270	70 Nos. clear
6.00 PM	15.7	622029	610120	70 Nos. clear
7.00 PM	15.8	628259	616350	70 Nos. clear
8.00PM	15.9	634419	622510	70 Nos. clear
9.00pm	16.1	648968	635320	70 Nos. clear
10.00 pm	16.3	661708	648060	70 Nos. clear
11.00pm	16.4	668148	654500	70 Nos. clear
12.00 midnight	16.5	674588	660940	70 Nos. clear
04.10.2009				
1.00am	407			
neeam	16.7	687288	6 73 820	70 Nos. Clear
2.00am	16.7 16.7	687288 687288	6 73 820 6 73 820	70 Nos. Clear 70 Nos. Clear
2.00am 3.00 am	16.7 16.7 16.9	687288 687288 700378	6 73 820 6 73 820 6 86 910	70 Nos. Clear 70 Nos. Clear 70 Nos. Clear
2.00am 3.00 am 4.00 am	16.7 16.7 16.9 17	687288 687288 700378 706888	6 73 820 6 73 820 6 86 910 6 93 420	70 Nos. Clear 70 Nos. Clear 70 Nos. Clear 70 Nos. Clear
2.00am 3.00 am 4.00 am 5.00 am	16.7 16.7 16.9 17 17.2	687288 687288 700378 706888 720128	6 73 820 6 73 820 6 86 910 6 93 420 7 06 650	70 Nos. Clear 70 Nos. Clear 70 Nos. Clear 70 Nos. Clear 70 Nos. Clear
2.00am 3.00 am 4.00 am 5.00 am 6.00 am	16.7 16.7 16.9 17 17.2 17.4	687288 687288 700378 706888 720128 733348	6 73 820 6 73 820 6 86 910 6 93 420 7 06 650 719880	70 Nos. Clear 70 Nos. Clear 70 Nos. Clear 70 Nos. Clear 70 Nos. Clear 70 Nos. Clear
2.00am 3.00 am 4.00 am 5.00 am 6.00 am 7.00 am	16.7 16.9 17 17.2 17.4	687288 687288 700378 706888 720128 733348 753438	6 73 820 6 73 820 6 86 910 6 93 420 7 06 650 719880 739970	70 Nos. Clear 70 Nos. Clear 70 Nos. Clear 70 Nos. Clear 70 Nos. Clear 70 Nos. Clear 70 Nos. Clear
2.00am 3.00 am 4.00 am 5.00 am 6.00 am 7.00 am 8.00 am	16.7 16.7 16.9 17 17.2 17.4 17.7	687288 687288 700378 706888 720128 733348 753438 753438	6 73 820 6 73 820 6 86 910 6 93 420 7 06 650 719880 739970 739970	70 Nos. Clear 70 Nos. Clear
2.00am 3.00 am 4.00 am 5.00 am 6.00 am 7.00 am 8.00 am 9.00am	16.7 16.9 17 17.2 17.4 17.7 18	687288 687288 700378 706888 720128 733348 753438 753628 773800	6 73 820 6 73 820 6 86 910 6 93 420 7 06 650 719880 739970 739970 759850	70 Nos. Clear70 Nos. Clear
2.00am 3.00 am 4.00 am 5.00 am 6.00 am 7.00 am 8.00 am 9.00am 10.00am	16.7 16.9 17 17.2 17.4 17.7 18 18.1	687288 687288 700378 706888 720128 733348 753438 753628 773800 780380	6 73 820 6 73 820 6 86 910 6 93 420 7 06 650 719880 739970 739970 759850 766430	70 Nos. Clear70 Nos. Clear
2.00am 2.00am 3.00 am 5.00 am 6.00 am 7.00 am 8.00 am 9.00am 10.00am 11.00am	16.7 16.7 16.9 17 17.2 17.4 17.7 18.1 18.4	687288 687288 700378 706888 720128 733348 753438 753438 753628 773800 780380 800260	6 73 820 6 73 820 6 86 910 6 93 420 7 06 650 719880 739970 739970 759850 766430 786310	70 Nos. Clear70 Nos. Clear
2.00am 2.00am 3.00 am 5.00 am 6.00 am 7.00 am 8.00 am 9.00am 10.00am 11.00am 12.00 Noon	16.7 16.9 17 17.2 17.4 17.7 18.1 18.4 18.5	687288 687288 700378 706888 720128 733348 753438 753628 773800 780380 800260 807887	6 73 820 6 73 820 6 86 910 6 93 420 7 06 650 719880 739970 739970 759850 766430 786310 792890	70 Nos. Clear70 Nos. Clear
2.00am 3.00 am 4.00 am 5.00 am 6.00 am 7.00 am 8.00 am 9.00am 10.00am 11.00am 12.00 Noon 1.00Pm	16.7 16.9 17 17.2 17.4 17.7 18.1 18.4 18.5 18.6	687288 687288 700378 706888 720128 733348 753438 753628 773800 780380 800260 807887 813997	6 73 820 6 73 820 6 86 910 6 93 420 7 06 650 719880 739970 739970 759850 766430 786310 792890 799000	70 Nos. Clear70 Nos. Clear
2.00am 2.00am 3.00 am 4.00 am 5.00 am 6.00 am 7.00 am 8.00 am 9.00am 10.00am 11.00am 12.00 Noon 1.00Pm 2.00 Pm	16.7 16.9 17 17.2 17.4 17.7 18.1 18.1 18.4 18.5 18.6 18.8	687288 687288 700378 706888 720128 733348 753438 753628 773800 780380 800260 807887 813997 827767	6 73 820 6 73 820 6 86 910 6 93 420 7 06 650 719880 739970 739970 759850 766430 786310 792890 799000 812770	70 Nos. Clear70 Nos. Clear
2.00am 2.00am 3.00 am 4.00 am 5.00 am 6.00 am 7.00 am 8.00 am 9.00am 10.00am 11.00am 12.00 Noon 1.00Pm 2.00 Pm 3.00Pm	16.7 16.7 16.9 17 17.2 17.4 17.7 17.7 18.1 18.4 18.5 18.6 18.8 19	687288 687288 700378 706888 720128 733348 753438 753628 773800 780380 800260 807887 813997 827767 841301	6 73 820 6 73 820 6 86 910 6 93 420 7 06 650 719880 739970 739970 759850 766430 786310 792890 799000 812770 826000	70 Nos. Clear70 Nos. Clear

4.00 Pm	19.1	848301	833000	70 Nos. Clear
5.00 Pm	19.2	855301	840000	70 Nos. Clear
6.00 Pm	19.4	869433	854000	70 Nos. Clear
7.00Pm	19.5	880433	865000	70 Nos. Clear
8.00pm	19.6	883433	868000	70 Nos. Clear
9.00pm	19.7	890624	875000	70 Nos. Clear
10.00pm	19.8	897624	882000	70 Nos. Clear
11.00pm	19.9	904624	889000	70 Nos. Clear
12.00 midnight	20	911624	896000	70 Nos. Clear
05.10.2009				
1.00am.	20.3	932624	9 17 000	70 Nos. Clear
2.00am.	20.5	946624	9 31 000	70 Nos. Clear
3.00am.	20.6	953624	9 38 000	70 Nos. Clear
4.00am.	20.7	960624	9 45 000	70 Nos. Clear
5.00am	20.8	967624	9 52 000	70 Nos. Clear
6.00am	20.9	974702	9 59 000	70 Nos. Clear
7.00am	21	981702	9 66 000	70 Nos. Clear
8.00am	21.1	988800	9 73 000	70 Nos. Clear
9.00a.m.	21.2	1016847	1001000	70 Nos. Clear
10.00a.m.	21.3	1061249	1045424	70 Nos. Clear
11.00a.m.	21.4	1068 269	1052422	70 Nos. Clear
12.00 Noon	21.5	1075536	1059422	70 Nos. Clear
1.00 PM	21.6	1082536	1066422	70 Nos. Clear
2.00 PM	21.7	1089536	1073422	70 Nos. Clear
3.00 PM	21.7	1089536	1073422	70 Nos. Clear
4.00 PM	21.7	1089536	1073422	70 Nos. Clear
5.00 PM	21.8	1096536	1080422	70 Nos. Clear
6.00 PM	21.8	1096536	1080422	70 Nos. Clear
7.00 PM	21.9	1103536	1087422	70 Nos. Clear
8.00PM	21.9	1103536	1087422	70 Nos. Clear
9.00pm	21.9	1103536	1087422	70 Nos. Clear
10.00 pm	21.9	1103536	1087422	70 Nos. Clear
11.00pm	22	1110404	1094422	70 Nos. Clear
12.00 midnight	22	1110404	1094422	70 Nos. Clear
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06.10.2009				
2.00 am.	21.9	1103404	10 87 422	70 Nos. Clear
3.00 am.	21.9	1103404	10 87 422	70 Nos. Clear
4.00am.	21.9	1103404	10 87 422	70 Nos. Clear
5.00am	21.9	1103404	10 87 422	70 Nos. Clear
6.00am	21.9	1103670	10 87 422	70 Nos. Clear
7.00am	21.9	1103670	10 87 422	70 Nos. Clear
8.00am	21.9	1103670	1087422	70 Nos. Clear
9.00a.m.	21.9	1103670	1087422	70 Nos. Clear
10.00a.m.	21.8	1096670	1080422	70 Nos. Clear
11.00a.m.	21.8	1096670	1080422	70 Nos. Clear
12.00 Noon	21.8	1096670	1080422	70 Nos. Clear
1.00 pm	21.7	1088270	1072022	70 Nos. Clear
2.00 pm	21.6	1079870	1063622	70 Nos. Clear
3.00 PM	21.6	1080088	1063622	70 Nos. Clear
4.00 PM	21.5	1071688	1055222	70 Nos. Clear
5.00 PM	21.4	1055079	1038482	70 Nos. Clear
6.00 PM	21.3	1055079	1038482	70 Nos. Clear
7.00 PM	21.1	1038279	1021682	70 Nos. Clear
8.00PM	21	1029879	1013282	70 Nos. Clear
9.00pm	20.8	1013196	996482	70 Nos. Clear
10.00 pm	20.6	9 96 396	979682	70 Nos. Clear
11.00pm	20.3	9 71 196	954482	70 Nos. Clear
12.00 midnight	20	9 45 996	929282	70 Nos. Clear
07.10.2009				
1.00am	10.8	0.20.106	0 12 /82	70 Nos Clear
1.00am	10.7	9 29 190	9 12 402	
2.00 am.	19.7	9 20 796	9 04 082	
3.00am.	19.4	9 29 196	8 78 882	70 Nos. Clear
4.00am.	19.2	9 29 196	8 62 082	70 Nos. Clear
5.00am	19	8 61 996	8 45 282	70 Nos. Clear
6.00am	18.4	861446	844732	70 Nos. Clear
7.00am	18	8 13 562	797650	70 Nos. Clear
8.00am	17.9	8 06 947	791350	70 Nos. Clear
9.00am	17.5	7 80 242	764338	70 Nos. Clear
10.00am	17	7 46 795	731220	70 Nos. Clear
11.00am	16.7	7 27 530	711620	70 Nos. Clear
12.00noon	16.3	6 78 130	661692	70 Nos. Clear
1.00 pm	16.1	6 64 787	648349	70 Nos. Clear
2.00 pm	15.8	6 44 302	6 27 864	70 Nos. Clear

3.00 pm	15.7	6 37 689	621331	70 Nos. Clear
4.00a pm	15.5	6 24 975	608195	70 Nos. Clear
5.00 pm	15.4	6 18 372	601582	70 Nos. Clear
6.00 pm	15.3	6 12 118	597269	70 Nos. Clear
7.00 pm	15.2	6 05 655	5 88 806	70 Nos. Clear
8.00 pm	15	5 92 496	5 75 647	70 Nos. Clear
9.00 p.m.	15	5 92 449	5 75 647	70 Nos. Clear
10.00 pm	14.5	5 63 106	5 46 304	70 Nos. Clear
11.00 pm	14.5	5 63 106	5 46 304	70 Nos. Clear
12.00 Midnight	15.4	5 63 106	5 46 304	70 Nos. Clear
08.10.2009				
1.00am	14.5	5 63 106	5 46 304	70 Nos. Clear
2.00 am.	14.5	5 63 106	5 46 304	70 Nos. Clear
3.00am.	14.5	5 63 106	5 46 304	70 Nos. Clear
4.00am.	14.6	5 67 137	5 50 335	70 Nos. Clear
5.00am	14.6	5 66 890	5 50 335	70 Nos. Clear
6.00am	14.5	5 66 859	5 46 304	70 Nos. Clear
7.00am	14.5	5 66 859	5 46 304	70 Nos. Clear
8.00am	14.4	5 54 334	5 37 779	70 Nos. Clear
9.00am	14.4	5 54 334	5 37 779	70 Nos. Clear
10.00am	14.4	5 54 581	5 37 779	70 Nos. Clear
11.00am	14.4	5 54 581	5 37 779	70 Nos. Clear
12.00am	14.4	5 54 581	5 37 779	70 Nos. Clear
1.00 pm	14.3	5 48 584	531596	70 Nos. Clear
2.00 pm	14.2	5 41 846	525343	70 Nos. Clear
3.00 pm	14.2	5 41 846	525343	70 Nos. Clear
4.00a pm	14.2	5 41 846	525343	70 Nos. Clear
5.00 pm	14.1	5 361 53	519650	70 Nos. Clear
6.00 pm	14.1	5 36 153	519650	70 Nos. Clear
7.00 pm	14.1	5 36 153	519650	70 Nos. Clear
8.00 pm	14.1	5 36 332	519650	70 Nos. Clear
9.00 p.m.	14.1	5 36 332	519650	70 Nos. Clear
10.00 pm	14	5 29 729	513047	70 Nos. Clear
11.00 pm	14	5 29 729	513047	70 Nos. Clear
12.00 Midnight				70 Nos. Clear

09.10.2009				
1.00am	14	5 29 729	5 13 047	70 Nos. Clear
2.00 am.	14	5 29 729	5 13 047	70 Nos. Clear
3.00am.	13.9	5 23 616	5 06 934	70 Nos. Clear
4.00am.	13.9	5 23 616	5 06 934	70 Nos. Clear
5.00am	13.9	5 23 616	5 06 934	70 Nos. Clear
6.00am	13.9	5 23 605	5 06 934	70 Nos. Clear
7.00am	13.9	5 23 605	5 06 934	70 Nos. Clear
8.00am	13.9	5 23 605	5 06 934	70 Nos. Clear
9.00am	13.9	5 23 605	5 06 934	70 Nos. Clear
10.00am	13.8	5 17 499	500821	70 Nos. Clear
11.00am	13.7	5 11 379	494708	70 Nos. Clear
12.00am	13.7	5 11 379	494708	70 Nos. Clear
1.00 pm	13.6	5 05 257	488665	70 Nos. Clear
2.00 pm	13.4	4 96 111	4 79 519	70 Nos. Clear
3.00 pm	13.1	4 75 306	458870	70 Nos. Clear
4.00a pm	12.8	4 57 667	441231	70 Nos. Clear
5.00 pm	12.4	4 34 615	418179	70 Nos. Clear
6.00 pm	12.1	4 17 536	410100	70 Nos. Clear
7.00 pm	12	4 13 680	397250	70 Nos. Clear
8.00 pm	12	3 31 436	315000	70 Nos. Clear
9.00 p.m.	12	3 03 436	287000	70 Nos. Clear
10.00 pm	12	2 70 186	253750	70 Nos. Clear
11.00 pm	12	2 70 18 <mark>6</mark>	253750	70 Nos. Clear
12.00 Midnight	12	2 70 186	253750	70 Nos. Clear

Annexure – 6 FORECAST REPORTS

Annexure – A Meteorological Centre, Hyderabad

(from 29th September to 3rd October 2009)

Government of India, India Meteorological Department Meteorological Centre, Hyderabad Daily Weather Report for Andhra Pradesh Tuesday, the 29 September 2009 / 7 Asvina 1931 (SAKA) Summary of observations recorded at 0830 hours IST Yesterdays low pressure area over west central Bay of Bengal and neighbourhood has became well marked over the same area, today 29/0830 hours IST. Southwest monsoon has been active over Telangana, Coastal Andhra Pradesh & Rayalaseema. The stations recorded heavy rainfall in cm are: Cuddapah 9, Nandval, Alampur (Mahabubnagar dist), Ichapuram (Srikakulam dist), 8 each, Wanaparthy (Mahabubnagar dist) 7. The other chief amounts of rainfall recorded in cm are Kamalapuram (Cuddapah dist), Mandasa (Srikakulam dist) 6 each, Bapatla, Kurnool, Nalgonda, Vijayawada AP. Allagadda (Kurnool dist), Palasa & Sompeta (both Srikakulam dist) 5 each, Nandigama, Addanki & Cumbum (both Prakasam dist), Kalwakurthy (Mahabubnagar dist), Nizamsagar (Nizamabad dist), Parkal (Warangal dist), Proddatur (Cuddapah dist), Tiruvuru (Krishna dist) 4 each, Hakimpet AP, Kalingapatnam, Mahabubnagar, Visakhapatnam AP, Atmakur & Srisailam (both Kurnool dist), Avanigadda & Paleru Bridge (both Krishna dist), Bhongir & Nagarjunasagar Dam (both Nalgonda dist), Darsi (Prakasam dist), Jammalamadugu & Lakkireddipalli (both Cuddapah dist), Jurala Project (Mahabubnagar dist), Kamareddy (Nizamabad dist), Karimnagar & Sircilla (both Karimnagar dist), Khanapur, Luxettipet, Mudhol & Nirmal (all Adilabad dist), Macherla (Guntur dist), Madhira (Khammam dist), Narayanakhed (Medak dist), Tekkali (Srikakulam dist), Vinjamur (Nellore dist) 3 each. 01 Oct 2009 Forecast & Farmers' weather bulletin valid until the morning Moderate to rather heavy rain or thundershowers are likely to occur at most places over Telangana and in the districts of Srikakulam, Vizianagaram, Visakhapatnam and East & West Godavari of Coastal Andhra Pradesh and at many places over Ravalaseema and in the remaining districts of Coastal Andhra Pradesh. Heavy Rainfall Warning Isolated heavy to very heavy rain is likely to occur over Telangana and in the districts of Srikakulam, Vizianagaram, Visakhapatnam and East & West Godavari of Coastal Andhra Pradesh and Isolated heavy rain is likely to occur over Rayalaseema and in the remaining districts of Coastal Andhra Pradesh during next 48 hours. Increase in rainfall. Outlook for subsequent two days 01 Oct 2009 Forecast for Hyderabad City & N'Hood valid until the morning Cloudy sky. Spells of rain or thundershowers likely at times heavy. Maximum and minimum temperatures are likely to be around 29 & 20 degrees Celsius respectively.

Daily Weather Report for Audhra Pradesh Wednesday, the 30 September 2009 / 8 Asvina 1931 (SAKA) Summary of observations recorded at 0830 hours IST Yesterdays well marked low pressure area over West central Bay of Bengal and neighbourhood persists. Southwest monsoon has been vigorous over Coastal Andhra Pradesh & Telangana and active over Rayalaseema. The following stations recorded very heavy to heavy rainfall in orn: Achamed (Mahabubnagar dist) 18, Kalwakurthy (Mahabubnagar dist) 2, Mayud (Krishna dist) 13, Eluru (West Godavari dist) 11, Kodangal (Mahabubnagar dist) 8, Madhira (Khamman dist) 10 each, Shadnagar (Mahabubnagar dist) 9, Mahabubnagar (ist) 8, Miryalguda (Hulgonda dist) 8, each, Yisakhapatnam, Devarakonda (Nalgonda dist), Makthaj & Wanaparthy (both Mahabubnagar dist), Paleru Bridge (Krishna dist) 8, Mathaj & Wanaparthy (both Mahabubnagar dist), Malagonda, Anakapalie (Visakhapatnam dist), Amakur (Kurnool dist), Kollapur (Mahabubnagar dist), Macheda (Gontur dist), Mahabubabad (Warangal dist), Mantalayam (Kurnool dist), Ramanapar, Halgonda A, Kalingapatnam, Kurnool, Nandigama, Rentachintala, Alampur, (Mahabubnagar dist), Amazor (Nizamabad dist), Mantralayam (Kurnool dist), Ramanapar, Halgonda A, Alira & Srisailam (all Kurnool dist), Ramanapar, Halgonda A, Alira & Srisailam (all Kurnool dist), Ramanapare, Halgonda A, P. Aliagadda, Alur & Srisailam (all Kurnool dist), Kakalur (Lin, Judinaga A, P. Aliagadda, Alur & Srisailam (all Kurnool dist), Kakalur (Lin, Lin, Judinaga A, P. Aliagadda, Alur & Srisailam (all Kurnool dist), Kakalur (Lin, Lin, Judinaga A, P. Aliagadda, Alur & Srisailam (all Kurnool dist), Kakalur (Lin, Lin, Judinaga A, P. Aliagadda, Alur & Srisailam (all Kurnool dist), Kakalur (Lin, Judinaga A, P. Aliagadda, Alur & Srisailam (all Kurnool dist), Kakalur (Lin, Judinaga A, P. Aliagadda, Alur &	overament of India, I	India Meteorological Departme	nt		
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Government of India, India Meteorological Department

Meteorological Centre, Hyderabad

Daily Weather Report for Andhra Pradesh

Thursday, the 01 October 2009 / 9 Asvina 1930 (SAKA)

Summary of observations recorded at 830 hours IST

Yesterdays well marked low pressure area over West Central Bay and adjoining North Andhra and South Orissa Coast persists. Southwest monsoon has been vigorous over Rayalaseema & Telangana and active over Coastal Andhra Pradesh. Achampet (Mahabubnagar dist) recorded exceptionally heavy rainfall of 27 cm². The following stations recorded very heavy to heavy rainfall in cm². Kollapur (Mahabubnagar dist) 24. Wanaparthy (Mahabubnagar dist) 22. Kurnool 19. Alur (Kurnool dist) 18. Alampur (Mahabubnagar dist). Atmakur, Mantralayam & Yemmiganur (all Kurnool dist). 17 each, Nagarkurhool (Mahabubnagar dist) 15. Tiruvuru (Krishna dist), 13. Jurala Project & Kalwakurthy (both Mahabubnagar dist) 12 each, Nuzvid (Krishna dist), Srisailam (Kurnool dist), 19 each, Atchampet (Guntur dist). Devarakonda (Nalgonda dist), Palasa (Srikakulam dist). 7 each, Khammam, Mahabubnagar, Chintalapudi (West Godavari dist), 16 hapuram (Srikakulam dist), Macherla & Piduguralla (both Guntur dist) 6 each.

Forecast & Farmers' weather bulletin valid until the morning 03 Oct 2009

Moderate to rather heavy rain or thundershowers are likely to occur at most places over Telangana and in the districts of Srikakulam, Vizianagaram, Visakhapatnam, East and West Godavari of Coastal Andhra Pradesh. Moderate to rather heavy rain or thundershowers are likely to occur at many places over Rayalaseema and in the remaining districts of Coastal Andhra Pradesh.

t 1,

Heavy Rainfall Warning

Heavy to very heavy rain is likely to occur at a few places over Telangana and in the districts of Srikakulam, Vizianagaram, Visakhapatnam, East and West Godavari of Coastal Andhra Pradesh and isolated heavy to very heavy rain is likely to occur over Rayalaseema and in the remaining districts of Coastal Andhra Pradesh during next 48 hours.

Outlook for subsequent two days Increase in rainfall.

Forecast for Hyderabad City & N'Hood valid until the morning 03 Oct 2009

Cloudy sky. Spells of rain or thunders are likely, at times heavy. Maximum and minimum temperatures are likely to be around 30 & 22 degrees Celsius respectively.

Meteorological Centre, Hyderabad		
Daily Weather Report for Andhra Pradesh		
Friday, the 02 October 2009 / 10 Asvina 1931 (SAKA)		
Summary of observations recorded at 830 hours IST		
Yesterdays well marked low pressure over West Central Bay Pradesh and neighbourhood now lies over Telangana and r Southwest monsoon has been vigorous over Rayalaseema a Pradesh & Telangana. The following stations recorded very heavy to heavy rainfall (Kurnool dist) 26 , Holagunda (Kurnool dist) 19 , Sompeta (S Alur (Kurnool dist) 13 , Bobbili (Vizianagaram dist) 12 , Makt dist) 11 , Cheepurupalli (Vizianagaram dist), Kanekal (Anant Anakapalle (Visakhapatnam dist), Kalyandurg (Anantapur di Terlam (both Vizianagaram dist), 8 each, Jurala Project (Ma Palasa (Srikakulam dist), Piduguralla (Guntur dist), Rayadur each. The other chief amounts of rainfall recorded in cm are (Mahabubnagar dist), Mancherial (Adilabad dist), Mandasa (Manthani (Karimnagar dist), Parkal (Warangal dist), Pathiko Venkatapuram (Khammam dist) 6 each, Achampet (Mahabu (both Anantapur dist), Mantralayam (Kurnool dist) 5 each, A Mahabubnagar, Nandigama, Rentachintala, Alampur (Maha (Kurnool dist), Chintapalli & Narsipatnam (both Visakhapatn (Srikakulam dist), Jangaon, Mulugu & Narsampet (all Warar (Vizianagaram dist), Sultanabad (Karimnagar dist) 4 each.	v and adjoining Coastal A neighbourhood. and active over Coastal A in cm: Yennmiganur Srikakulam dist) 17 . hal (Mahabubnagar sapur dist), 9 each, st), Parvathipuram & habubnagar dist), g (Anantapur dist), g (Anantapur dist), foliapur (Srikakulam dist), nda (Kurnool dist), Jbnagar dist), Gooty & Pa nantapur, Hanamakonda bubnagar dist), Atmakur am dist), Ichapuram ngal dist), Salur	undhra Andhra Andhra
Forecast & Farmers' weather bulletin valid until the mor	ping	03.0
Moderate to rather heavy rain or thundershowers are likely to over Telangana, Coastal Andhra Pradesh and Rayalaseem	to occur at many places a.	
Heavy Rainfall Warning		
Isolated heavy to very heavy rain is likely to occur over Tela Pradesh and Rayalaseema during next 24 hours.	ngana, Coastal Andhra	
Outlook for subsequent two days	Decrease in rain	ıfall
	aming	$\{0, j, l\}$
Forecast for Hyderabad City & N'Hood valid until the me	Maximum and minimum	

Integral pained Control Hudson to 1	a i see of a	
veteorological Centre, Hyderabad	1000 B	
Daily Weather Report for Andhra Prade	sh	
Saturday, the 03 October 2009 / 11 Asvin:	(AXA2) 1991 (SAKA)	
Summary of observations recorded at 93	0 bours IST	
Vesterdere well media di	0 100015 151	
Yesterdays well marked low pressure area o persists. Southwest monsoon has been vigorous over Pradesh. Rain occurred at a few places over The stations recorded heavy rainfall in cm. 1 Jurala Project (Mahabubnagar dist), Tandur (Mahabubnagar dist), 8 and Luxettipet (Adila The other chief amounts of rainfall recorded dist), Kodangal (Mahabubnagar dist), Navipe dist), Sircilla (Karimnagar dist), Terlam (Vizie (Kurnool dist) 6 each, Tuni, Alampur (Mahab Huzurabad (Karimnagar dist), Ibrahimpatnar Parvathipuram & Salur (both Vizianagaram dist), I dist), Narsipatnam (Visakhapatnam dist), Pa dist) 4 each. On Friday, the maximum temperatures below temperature of 35 degrees Celsius was recorded temperatures were normal over the State. Th degrees Celsius was recorded at Aronavara	wer Telangana and its neighbourhood r Telangana and active over Coastal Andhr Rayalaseema. Makthal (Mahabubnagar dist) 12. (Rangareddy dist) 10 each, Wanaparthy bad dist) 7 in cm are, Elamanchili (Visakhapatnam et (Nizamabad dist), Sangareddy (Medak anagaram dist), Yemmiganur pubnagar dist), Cumbum (Prakasam dist), m & Pargi (both Rangareddy dist), dist) 5 each, Mahabubnagar, Asifabad Medchal & Vikarabad (both Rangareddy ulakonda & Veeraghattam (both Srikakulam w over the State. The highest maximum prode at Adilabad. The minimum he lowest minimum temperature of 19 am	a
Forecast & Farmers' weather bulletin vali	d until the monitor of	-
Moderate to rather heavy rain or thundersho over Coastal Andhra Pradesh & Telangana. are likely to occur at a few places over Rava	wers are likely to occur at many places Ught to moderate rain or thundershowers	05-0et 2009
Heavy Rainfall Warning		
Isolated heavy rain is likely to occur over Te	langana during next 48 bours	
Outlook for subsequent two days	No large chappe	
Forecast for Hyderabad City & N'Hood va	tid until the morning of	DE Col Hold
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innali 7.	R Ho	1703	1094	3100	1339	154	as sourcement	02/0/2000 10	0000	0.000		4245	4623	-	497.65	497.74	(Karnataka)
imoda 4.	de la	20K	121 0	2000	002	•	02/10/2009 18	02/0/2009 06	110.4	3059.0	88.8	149914	163267		1632.70	1633.00	T.B.Dem
D lerrala a7	2 d	079	200 00	2000	1080	41	03/10/2009 00	02/0/2009 18				17104	16709	4	317.35	318.52	(A.P.)
winhedgi 50.	Hu	573	0 741	2100	206	34	02/10/2009 18	02/:0/2009 06	0.0	110	67.3	60,000	690043		1040.62	1045.00	P.DJurnala
dgir 57.	R Ya	039	0 512	1460	626	24	03/10/2009 06	02//0/2009 18				42207	10849	L	1009.00	1010.00	Narayanpur Dan
ongaon Br. 24.	R De	443	0 388	1100	475	18	02/10/2009 18	01 000000000000000000000000000000000000	0.05	0.42.4		7184	6519	-	519.35	519.60	(Karnataka)
adakbai 42	E W	848	264	7500	224	01	81 8002/01/20	02/10/2009 06	118.8	3015	96.1	277033	230223	-	1703.90	1705.00	Aimatti Dam -
kli 50.	E Tal	50.4	282	SOON	340	40									10	W Foreca	Inflo
nayanpur 180	14 Na		4	12	11	10	0	8		IN MOM	Storage	2.	8		2	4	2
natti Dam 88.	Alr				McM	TMC	DOMMMHH	DUNAMEN	in TMC	Storage	10 %	Cunece	Cumecs		Feet	Foot	
kak 90.	mend Go	ec 1	c Gut	Gume	Volume	Malaura		-	O to a local	-	-	Ctelec	Cuoco	Steady	Inne in	Unit in	
KRISHNA BASIN	K	2/24 Hrs	r next 1	ecast fo	downs For	u	from to Hrs	Farecast Vallo						Rise/Pal	Level Level	Water Leve	Station
Rainfall in mm									-								
110																	

00	FOREG	ASTING	BULLET	IN FOR	KRISHN	A BASIN	7					5	03-00	t-2009	Daily Bull	eth No	111	
1	precast	Maxitum	Level	Trend	Inflow	Outlow						L					Rainfall In	mm
-7	nation	Water Level	t 0800 Hr	Riservall						Forecast Vall	d from to Hra	_	niows For	ecast for	12/24 next 12/24	H	KRISHNA BA	NIBIN
		Unit in	Unit in	Steady	Cusec	Cuec						-					Kurundwad	58.0
		Feet	Feet		Cumecs	Cunece	% of	Live	Stor-age	From	To	Volumi	volume	Gumec	Cuseo	Trend	Gokak	60.0
		Matre	Metro				Cive	in McM	SM TMC	HHMMMAD	DOVAMANHH	TMC	McM	-			Almatti Dam	58.7
	2	4	0				storage			2	0	10	11	72	13	14	Narayanpur	44.0
Alm	offi Dam	ATOPOLOGIA	1701 77		202749	100002	86.6	274D	408.2	20 00001HCU	01-00000000	0	366	W200	RCAFSF	4	Table	17.2
(Ka	mataka)	519.60	518.70	ш	5741	3'95			-	03/1/2009 18	04/10/2009 06	0	246	5000	176565	. 4	Wadakhal	30.6
Varay	Inpur Dam	1615.00	1609.84		441618	474129	77.5	673.1	31.0	03/11/2009 06	03/10/2009 18	20	518	12000	423766	s	Deongaon Br.	54.8
(Ka	rnataka)	492.25	490.68	L	12506	13426				03/1/2009 18	04/10/2009 06	39	497	11500	406100	2	Yadgir	86.0
T'd	Jurala	1046.00	1041.99		1036728	102/145	70.6	136	8.9	03/1//2009 06	03/10/2009 18	51	1339	31000	1094703	Ø	Huvinhedgi	6.0
-	A.P.)	318.52	317.60	L	29358	28189				03/10/2009 18	04/10/2009 06	39	1037	24000	847512	ц	Deosugur	NA
F	1.Dam	1033.00	1832.86		119707	121113	98.8	3054.6	110.2	03/10/2009 06	03/10/2009 18	0	130	3000	105939	Ч	P.D.Jurala	103.0
Ka	rnataka)	497.74	497.63	×	3390	3438				03/102009 18	04/10/2009 00	*	33	2300	81220	ц	Shimoga	13.4
Srita	lam Dam	002'00	894.69	1	AN	NA	100.0	3760.6	263.8	03/162009 06	03/10/2009 18	82	2246	52000	1836276	2	Honnali	15.0
-	A.P.)	269.75	172.700	×	#VALUE!	#VAIUE!		T	T	03/102009 18	04/10/2069 06	23	1944	45000	1589085	L	Harlahalli	11.0
N	B.Dam	590.00	578.00		1032908	631/19	85.0	S882.1	371.7								Marol	24.6
-	4P.)	179.83	176.17	×	29250	5823	Inflow	Outflow			NON	T APF	UCABL	L			T.B.Dam	NA
2	meast	Naming I	angler	Level	Trend		Cuseo	Cused									Oollenur	0.0
ñ .	ation n	Internet	INOI	at 0800 Hr	Rise/Fall		Cumec	Cumec									T.Ramapuram	M
Prak	sam Br.	57.00	60.00	58.33		T-H	403651	450240		03/102009 06	03/10/2008 18	24	626	14500	512039	×	Mantralayam	NA
-	(17.39	18.30	17.78	R	-	13130	12750	-	03/102009 18	04/10/2009 06	36	950	22000	776886	ж	K.Agraharam	0.0
	Level	Forecast											DATE	TIME	LEVEL	THEND	Srisailam	20.8
Deon	paon Br.	1318.90	1327.10	1317.80	(=			1				03/10/09	1800	402.20	Ľ	N.S.Dam	11.0
L La	nataka)	402.00	00.00	19.104	z	E٩	T	T					our of the			-	Wadenapalli	2.4
1	LP.)	310.00	12.00	#VALUE!		- 14		T	T				1010 1100	1800	09.215	-	Palan Bridge	3.6
Vallor	Annicat	52.20	56.70	42,48		=			T				BELOW	WARNING	1 EVEL	-	Polemnali	10
12	(.d)	15.91	17.28	12.95	s	LL L		t					BELOW	WARNING	S LEVEL	1	Prakasam BR	4.6
Ado		he Chief En	meer. Kris	hna Godave	Mi Basin, CW	/C, Hidera	bud.						U			Γ	PENNAR BASIN	
	NI	the superint	Burn Burn	Incer Krishn	a and Co-ore	sunation Cirv	cie, CWC,	Hyderabe	ġ				WATER LEVER	LAT 0200 AM	ON 82.10.2009	-	Chemur	2.0
	9 4 9	xecutive Ene	neer LKD.	CWC. Hvde	brabad.											-1-	Annamaly	NA
y Fax	51	he Secretary	1 & CAD	Dept, Gover	mment of Ani	dhra hrade.	ah, J-Bloc	k, Secreta	riat, Hyde.	rabac.((040-234	(20886)						Somasila Proi	14
	10	he Relief Co.	nmissione	r, Revenue	& Relief, A.P.	Secritaria	4, Hyderab	ad.(040-2	3451818)								Nellore Anicut	0.0
	12	he Principal	secretary.	CAD Dept,	Government	of Ardhra	Pradesh, k	Erramanjil	, Hyderabi	md.((140-233050	(191			Trend :- 1	R = Rise	A P	Vot Available	
	ല റ	ngineer- in-	Chief, Irriga	tion Departs	ment, Emun	n Marcil, Hy	yderabad.	040-2332	3203)						F = Fall	-	At 0600	
	La	he Chairmar	CIOKRIP	& Engineer	r- in- Chef, A	Idm.1 & CAL	D. Jalsaud	tha Emu	m Manzil,	Hydeabad. (040-	-2330744)							
	1 11	he Chief End	neer (Proj	n irrigation (acts), NSRS	P. Gaganvih	ar Conoley	Manzil, Hy	derabad.(040-2339. Id. Hvdero	8724) thed.040-23319	1540			AVAL HEY	S = Steady	D) = 10	Dry Bed	
	12 T	he Superinte	Iding Engli	H, (MAC)neen	Ivdro, A P GE	ENCC Vidy	ruth soudh	a .Hydera	bad.(040-	32831399,23317	(683)			LANCIE	1 ELINARIA	5		
	Z C Z	.S.P. Jaloud	a Hyderat	ANSCO H	3314323 / DA	0-23:1816	î.											
	15 1	he Chief Eng	heer, CWC	Banglore (080-233793	16)	2										Arr a	
	16 E	securive Eng	ineer Hydru	Diogical Divis	Blon, CWC, C	Chenral by	r fax. unide Ban	malore 11	1000000	SACCORD 1 NORT	1000						1010125	
	10 EI	D-nl- naineer	Ner WRDC	Anand Rac	> Circle Bang	plore (080	122872247	8 00022	204528)		(0000				2	For	Executive Engineer	
	20 CI	anaging Div	dor, Krishn Krishna E	a Bhagya Jala Bhagya Jala	Nigam UKP	VD Office /	ANNEXE, Almatti (C	K.R. Circk 18426-281	600)	a (08422210470	~				5	20	ower Krishna Divisio WC Hyderabad	ç
	22 DI	anaging Dire	ament Ra	ttaka Neerav	voni Nigem L	imited Coff	lee Board	Building D	r. Ambed	kar Viedhi Bangi	lore , (080-22386)	015						

113 •

Rainfall	t for next 12/24 Irs KRISHN	Kurundwad	umec Cusec Trend Gokak		12 13 14 Narayanpu	Cholachgue	1300 134222 F 18KII	1500 158909 F Wadakbal	1500 300161 F Deongaon	7100 250722 F Yadgir	2000 776886 F Huvinhedgi	9000 670947 F Deosugur	100 /4/10/ - P.D.Juraia	SUU 0/093 F Shimoga	TOTO BESERVE T TOTABLE		TEDam	College	T.Ramanura	5000 918138 R Mantralayan	3000 938764 R K.Agraharan	TIME LEVEL TREND Srisaliam	1800 404.60 R N.S.Dam	Wadenapall	1800 311.50 F Madhira	RNING LEVEL - Polampalli	RNING LEVEL - Prakasam B	PENNAR BA	200 AM ON 02.10.2009 Chennur Nandinaliv	Annamayya	Somasila Pre	Nellore Anic	Id :- R = Rise NA Not Available		S = Steady DB = Dry Bed	ALUE! / ####### = NA		ia i	20	alarty Typolo	C For Executive Eng	A PROPERTY AND A PROPERTY
	Inflowe Forecas		Volume Volume Ci	TMC MGM	10 11		238 238	7 194 4	74 367 8	12 307 7	36 950 23	37 821 75	2 10 20	3 82 T	20 VIOI 10		APPI ICARI F			42 1123 26	46 1210 26	DATE TI	04/10/09		04/10/09	BELOW WAI	BELOW WAI	0	WATER LEVEL AT 03			-	Tren			1N#						
-	lid from to Hrs		Ta	DDMMMHH	0		04/10/2009 18	05/10/2009 06	04/10/2009 18	05/10/2009 06	04/10/2009 18	05/10/2009 06	04/10/2009 18	90 6002/01/20	01 20020100	na sana na	NOT			04/10/2009 18	05/10/2009 06										450606)		(121)	-2330744)		9154)	(2007)			(2308)		
	Forecast Val		ge From	DOWMMINCH	8		04/10/2009 06	04/10/2009 18	0410/2009 06	0410/2009 18	0410/2009 06	0410/2009 18	0410/2009 06	81 8002/01/20			Т	Т		0410/2009 06	0410/2009 18	_	_				_				rderated.((040-23-	. (6)	abad((040-23305	zil, Hyderabad. (040	(\$28724)	erabid.(040-23315	1007,880800,0-04			255534 & 0802225	() () () () () () () () () () () () () (The present of the second
_			Ive Stor-ag	MoM			761 109.8		6.4 28.2		8.1		98.7 108.3		0.000 0.000		Manuel 410 114		mec	970	855	-			+		_		derabad.		Secretariat, Hy	(040-2345181	Imanjil, Hyder	. Emum Man	abad.(040-23	A.J.Road, Hyd	n)nangalanku			lore . (080-22	08022204528	and the second se
_			% of Sto	Live In	storago	-	88.0 23		68.7 59		43.0 8		87.0 288	1000	N'DOL	0.00	and the second second		Cumec Cur	8C7 0266C1	20955 201		-	-	+		-		le, CWC, Hy		h, J-Block, S	Hyderabad.	radesh, Erra	aribuantel.	lanzil, Hyder	6 th floor, N	, andra ut			auda Bangal	22872247 & NNEXF K R	
cuttiow		Cusec	Crmecs		4	-	230172	5669	35145	10801	911083	39082	105780	1988	101110	I I I I	COO.	Ventre	1-	Unit	5		#	Ĕ	# 19	ŧ	ŭ	VC, Hyderab	dination Circ		othn Prades	.Sureteriat.	t of Andhra F	Adm.1.8.CAD	trol Errum A	har Complex	40-1331915	40-1339301	16)	304 Vikas s	glos (080)	
Inflow		Cusec	Gumecs		0		218274	6181	397639	11260	967287	27392	80070	2281	TALAL LICE		Lacas	Turnet	Rise/Fall		ĸ			æ	60		R	ari Basin, CV	terabad.	lerabad.	mment of An	& Rollof, A.P	Government	n- in- Chiaf,	& Flood Con	SP, Gaganvil	3314323 / 0	iyderabad(D	(080-233783	RDRoom No	to Circle Ban	
Trend	rt Rice/Pall	Stendy						n	-	S	1	-		-	1		0	10000	at 0800 Hr	62.76	19.13		1324.80	403.81	311.70	42.81	13.05	shine Godav	D. CWC. Hve	D, CWC, Hyd	Dept. Gove	er, Revenue	. CAD Dept.	P & Enginee	jor Irrigation	yjects), NSR	ibed (040-2	RANSCO .	C. Banglore	Imataka . W	O Anand Ru	
Level	4 pt 0800 Hr	Unkin	Peet	Metre	10	ini i	1702.10	518.80	1607.81	490.00	1038.88	316.65	1632.16	497.48	275 820		178 16	Annone I	lavel	60.00	18.30	+	1327.10	404.50	312.00	56,70	17.26	Engineer, Krti	mineer LGC	Ingineer LKD	arr . 1 & CAD	Cerrmissione	alSecretary	an CIOKRI	ngineer, May	Ingineer (Pro	ucha Hyders	Ingineer APT	nyineer, CW	D Bovt. of Ka	Inctor Krish	COLUMN TWO IS NOT THE OWNER.
Maxium	Water Lave	Unit in	Fout	Metro	*	w Foreca	1705.00	519.60	1615.00	492.25	1045,00	318.52	1633.00	41.184	260.75	01-00-	170.83	Manho	Level	57.00	82.71	al Forecas	1318.90	402.00	310.00	62.20	15.91	The Chief b	The Superi Executive E	Executive E	The Secret	The Relief	The Princip	The Chaim	The Chief E	The Chief E	N.S.P. Jalsu	The Chief E	The Chief E	Secretary to	Engineer -It Managing D	
Forecast	Station				2	Inflo	Almatti Dam	(Kamataka)	srayanpur Dam	(Karnataka)	P.D.Jurala	(A.P.)	T.B.Dam	(Kamataka)		The Part	HIDO'CAL	Formant	Station	Prakasam Br.	(A.P.)	Love	Deongaon Br.	(Karnataka)	(AP.)	ellore Annicut	(AP.)	py to :- 1	NO	4	Fax 5	0	F 6	a	10	= =	1	1	21	11	101	:

	CASTING	BULLETI	N FOR	KRISHNA	BASIN							02-Oct	R007-	Daily Build	ON UD	2	
Termonte	an other	Laval	Trend	Inflow	Outflow	-					L					Rainfall in	nnn
Station	Water Level	at 0800 Hrs	Rico/Fall						forecast Vall	d from to Hrs	Ir.	flows Fore	scast for n	sext 12/24	12	KRISHNA BA	SIN
	Unit in	Unit in	Steady	Cusec	Clase	-									-	Kurundwad	0.8
	Feet	Foot		Cumeos	Cumeca	" 10 %	Live Storman	Stor-age	From	To	Volume	Volume	Clamoo	CUSAG	Drieut	Almatti Dam	0.0
	Metre	Metru				Live	in McM		DDMMMMH	HHAMMAGG	2 MA	A-COM	42	12	14	Narrawamour	0
2	*	D		0	2	Storago		T	20							Cholachguda	0.0
Infle	w Forecat	-		COLUMN THE PARTY	and we	0 + 0	A7.00	442.8	000000000000000000000000000000000000000	05/10/2009 18	~	194	4500	158909	u.	Takli	8.2
Almatti Dam	1706.00	1702.92	0	1//420	121030	0110	107	0.01	0510/2009 18	06/10/2009 06	0	151	3500	123596	ц	Wadskbal	0.0
(Marnataka)	09.814	619.06	Ł	9700	AT &	0.00	240.0	32.6	05/0/2000 06	05/10/2009 18	10	272	6300	222472	L.	Deongaon Br.	0.0
Narayanpur Dan	1615.00	ST.1101	2	Z10233	2-20084	B-90	0.013	0.000	FELOW INFL	OW CRITERIA	1	1	1	1	1	Yadgir	0.0
(retrated)	0.3.264	104 70		767464	706943	4.9	9.4	5.5	05/0/2009 05	05/10/2009 18	29	778	18000	635634	u.	Huvinhedgi	0.0
L'UNUTURA	318.52	315.10	Ľ	21724	21511				05/10/2009 18	06/10/2009 06	21	562	13000	459069	ч	Deosugur	٩N
T.G.Dam	1623.00	1632.34		71940	61051	97.8	3018.8	109.0	05/10/2009 06	05/10/2009 18	4.	112	2600	91814	L	P.D.Jurala	0.0
f Karnatata	497.74	497.64	Ľ	2037	104				05/10/2009 18	06/7/0/2009 06	4	66	2300	81220	H. 1	Shimoga	4.4
Srisaliam Dam	002:00	890.72		957722	14(5813	100.0	3760.6	263.8	05/10/2009 06	05/10/2009 18	47	1253	29000	1024077	-	Honnall	0.0
(A.P.)	269.75	271.490	ц	27121	4,509				05/10/2009 18	06/10/2009 06	33	804	20000	1007001	-	LIGHTERIN	3
N.S.Dam	690.00	607.10		1150173	111724	58.3	8668.8	399.6		- CIE	1000	a service a	μ			Marol	0.0
(A.P.)	179.83	178.95	Ľ	32826	3/199 ·	Inflow	Outflow			SC	ALL A	TOWNT	u			Collocure	200
Forecast	Warning	Danger	Lavel	Trend		Cianac	Cusec									T.Ramapuram	AN
Station	Level	ievel	80.91	Kiborr att	Jreit	961047	591867		05/10/2009 06	05/10/2008 18	49	1296	30000	1058330	9)	Mantralayam	NA
Prakasam br.	00 4.4	10.00	CARLENC.	0.01-0	-	97RDA	270.05		05/10/2009 18	06/10/2009 06	48	. 1296	30000	1059390	63	K.Agraharam	0.0
(A.P.)	BC'/1	10.00		202								DATE	TIME	LEVEL	TREND	Srisallam	0.0
Lev	of Lorocta		01 1001		4							05/10/09	1800	403.25	6	N.S.Dam	0.0
Deorgaon Br.	402.00	404.50	403.90	Ŀ	,ut											Wadenapalli	0.0
Mantralayam (*)	1017.05	1023.62	1020-20		ų							05/10/05	1800	310.00	u.	Madhira Polaci Bridge	0.0
(A.P.)	310.00	312.00	310.95	Ľ	MT	1						DEI OW	WINDNING	2 I EVEL		Polaminalli	
Nellore Annicut	52.20	68.70	42.62	1	ŧ	T						BELOW	MINDAW			Prakasam BR	00
(V.P.)	15.91	17.28	12.99	Ni Postn Civ	TC: Svderet	bad						11				PENNAR BASIN	
Copy to :-	* The Superio	mending End	ineer Krishn	a and Co-on	Ilmion Cir.	cle, CWC,	Hydeeabu	hd.				WATER LEVE	L AT 0209 AM	ON 02.10.2000		Chennur	0.0
	Executive E	Joineer LGD	CWC. Hyd	lerabad.												VindibueN	¥,
-	4 Executive E	Ingineer LKD	, CWC, Hyd	erabad.												Annamayya	0.0
By Fax	5 The Secret	NY . I & CAD	Dept, Gover	mment of An	dhn Prade	sh, J-Bloc	k, Search	ariat, Hyd	bruhad.((040-23-	450666)				ŗ		Natione Antorth	
	5 The Relief	Commission	er, Revenue	& Relief, A.P	Secreteria	It, Hyderal	bad.(040-	23451819	nod/ (040-23305	951)			Trend :-	R = Rise	NA	Not Available	2
	7 The Princip	Chief Inter	whon Depert	ment. Errun	n Manzil, H	vderabad.	(040-233	(53203)						F = Fall	40	At 0600	_
-	The Chairm	nim CIOKRI	P & Enginee	r-in-Chief, A	Adm.I & CA	D. Jalsau	dha , Em	m Manzil	, Hyderabad. (040	3-2330744				0 1 Observer	- 00	Day Bad	
1	O The Chief L	Eigineer, Maj	or Irrigation	& Flood Con	trol, Errum	Manzil, H	yderabad. Yr M.J.Ro	(040-233 ad. Hvden	98724) rabid.(040-23315	(124)			#VALUE	- 494999494	NA N		_
	The Superio	nending End	ineer(O/M).	HVDRO A P G	ENCO, VId	yuth soud	ha Hyder	abad. (040	1-32838388,2331	(0902)							
	N.S.P. Jals	udha - Hyden	panero H	23314323 / D	40-133191	(10										à	
- 7	5 The Chief E	ngineer,CW	C. Banglore	(080-233793	118)												
e fe	7 Secretary	Eigineer Hyd x Govt, of Ka	mataka . W	RDRoom No	Chennal E	y mx. souda Ba	ngalore .	080-222	35514 & 0802225	(2008)				Pa		2000/5	,
	a Engineer-I	Inchief WRD	O Anand Ra	ao Circle Ban tala Nigam P	WE Office	02287224 ANNEXE,	K.R. Circ	2204528 Je Banglo	re (0802221947)	(0)				Ĩ		Lower Krishna Divis	sion
	o Chief Engir	ser.,Krishna Srector, Kam	Ehagya Jali staka Neori	Nigam UK	Limbed Col	e Almatü	(08428-28 Building	1600) Dr. Ambe	dker Veedhi Banı	glore , (080-22386	3015					NAME INVESTIGATION	
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Colour Papers specification :-

Hall Comment

Colour specification : 1. White Paper showing inflow upto 1 lakh cusecs.

2. Blue colour paper above 1 lakh cusecs Moderate Flood. 3. Yellow colour paper above 2 lakh cusecs High Flood. . 4. Red colour paper above 3 lakh cusecs very High Flood.

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Annexure – 7 CIOKRIP MINUTES

MINUTES OF THE TENTH MEETING (DURING THE WATER YEAR 2009-10) OF "CIOKRIP" HELD AT 4.00 P.M ON 3.10.2009 IN THE CHAMBERS OF CHAIRMAN- CIOKRIP AND THE ENGINEER-IN-CHIEF (ADMN), I & CAD DEPARTMENT, JALASOUDHA BUILDINGS, HYDERABAD.

PRESENT:

- SRI M.K.RAHAMAN, Engineer-In-Chief, Admn... I & CAD DEPARTMENT.
- 2) SRI B.S.N REDDY, Engineer – In – Chief, Irrigation I & CAD DEPARTMENT
- B.V.S.PRAKASA RAO Engineer-in-Chief, TGP
- Dr. P. RAMA RAJU Chief Engineer, ISWR
- 5) SRI Y.L.NARASIMHA RAO Chief Engineer, GRID OPERATION, A.P.TRANSCO
- 6) SRI Ch. VENKATARAJAM Chief Engineer (PROJECTS), A.P.GENCO
- SRI V.NAGESWARA RAO, Deputy Chief Engineer, Nagarjuna Sagar Project

1) CDICATI AND

MEMBER

CHAIRMAN

MEMBER

MEMBER

MEMBER

MEMBER

REPRESENTING MEMBER-CONVENOR

· ***

The Committee reviewed the flood position in Srisailam, Nagarjunasagar reservoirs and at Prakasam Barrage as on 3-10-2009 at 3.00 PM as noted below.

: 14,22,620 c/s (falling)
: 895.50 ft.
: 14,52,000 c/s
: 12,82,483 C/S (rising)
: 580.20 ft
: 9,49,150 c/s
: 30.31 tmc
: 5,68,761 c/s (rising)
: 50,000 C/S
: 14.80 ft

The Committee observed that the flood at Srisailam Reservoir is in the receding trend . The flood cushion available at Nagarjunasagar Reservoir is 30.31 tmc (upto FRL). The flood banks of Krishna River down below Prakasam Barrage is capable of taking discharge of about 10.50 lakh c/s. Therefore, it is desirable to fimit the outflows at Nagarjunasagar to 2.50 lakh c/s keeping in view of the capacity of the flood banks. After observing inflows into Srisailam Reservoir for 5 to 6 hours today, the date of next CIOKRIP meeting will be decided.

Sd/- B.S.N REDDY MEMBER & Engineer – In – Chief, Irrigation I & CAD DEPARTMENT

Sd/- B.V.S.PRAKASA RAO MEMBER & Engineer-in-Chief, TGP

Sd/- Ch. VENKATARAJAM MEMBER & Chief Engineer (PROJECTS), A.P.GENCO. Sd/-M.K.RAHAMAN CHAIRMAN & Engineer-In-Chief, Admn., I & CAD DEPARTMENT.

> Sd/- P. RAMA RAJU MEMBER & Chief Engineer, ISWR

Sd/- Y.L.NARASIMHA RAO MEMBER & Chief Engineer, GRID OPERATION, A.P.TRANSCO

// True Copy//

Deputy Chief Engineer, NS Project camp office, Hyderahad.

MINUTES OF THE ELEVENTH MEETING (DL HELD AT 9.00 P.M ON 3.10.2009 IN THE ENGINEER-IN-CHIEF (ADMN), I & CAD DEPA	JRING THE WATER YEAR 2009-10) OF "CIOKRIP" CHAMBERS OF CHAIRMAN- CIOKRIP AND THE RTMENT, JALASOUDHA BUILDINGS, HYDERABAD.
PRESENT:	
1) SRI M.K.RAHAMAN, Engineer-In-Chief, Admn., I & CAD DEPARTMENT.	CHAIRMAN
 SRI B.S.N REDDY, Engineer – In – Chief, Irrigation I & CAD DEPARTMENT 	MEMBER
 B.V.S.PRAKASA RAO Engineer-in-Chief, TGP 	MEMBER
4) Dr. P. RAMA RAJU Chief Engineer, ISWR	MEMBER
5) SRI Y.L.NARASIMHA RAO Chief Engineer, GRID OPERATION, A.P.TRANSCO	MEMBER
 SRI Ch. VENKATARAJAM Chief Engineer (PROJECTS), A.P.GENCO 	MEMBER
7) SRI V.NAGESWAKA KAO, Deputy Chief Engineer, Nagarjuna Sagar Project	REPRESENTING MEMBER-CONVENOR

The Committee reviewed the fl	ood position in Srisailam, Nagariunasagar
reservoirs and at Prakasam Barrage as	on 3-10-2009 at 8.00 PM as noted below.
1) SRISAILAM :	
Inflow into Srisailam Reservoir	: 13,22,920 c/s (falling)
Level at 8.00 pm	: 895.50 ft.
Out flow from Srisailam	: 14,52,000 c/s
2) NAGARJUNASAGAR PROJECT	
Inflow into NSP	: 13,77,366 C/S (rising)
Level at 8.00 pm	: 582.10 ft
Out flow into River	: 9,29,807 c/s
Flood cushion available (FRL)	: 24.43 tmc
3) PRAKASAM BARRAGE	
Inflow	: 6,35,419 c/s (rising)
Depth of water above crest	: 15.90 ft

The Committee reviewed the flood position at Srisailam , Nagarjunasagar an Prakasam Barrage and decided as follows:

- 1. The out flows at Nagarjunasagar is to be increased to 10.00 lakh c/ immediately.
- The out flows at Nagarjunasagar is to be increased to 10.50 lakh c/s from 4.10.2009 at 6.00 AM.

Sd/- B.S.N REDDY MEMBER & Engineer – In – Chief, Irrigation I & CAD DEPARTMENT

Sd/- B.V.S.PRAKASA RAO MEMBER & Engineer-in-Chief, TGP

Sd/- Ch. VENKATARAJAM MEMBER & Chief Engineer (PROJECTS), A.P.GENCO. Sd/-M.K.RAHAMAN CHAIRMAN & Engineer-In-Chief, Admn., I & CAD DEPARTMENT.

Sd/- P. RAMA RAJU MEMBER & Chief Engineer, ISWR

Sd/- Y.L.NARASIMHA RAO MEMBER & Chief Engineer, GRID OPERATION, A.P.TRANSCO

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Deputy Chief Engineer, NS Project camp office, Hyderabad.

Flood Control Centre

Irrigation & Command area development Department Chief Engineer Irrigation Office, IInd Floor, Jalasoudha, Erramanzil, Hyderabad - 500 082. A.P.