**Floods / Cyclone Preparedness - Contingency Plan of Action**

1. Action is to be taken immediately before and during occurrence of cyclone as out lined in paras 3.11, 3.13, 7.1, 7.2, 7.5, 7.6 and 8.1.1 to 8.18 of cyclone contingency plan of action (extract of paras enclosed).
2. Furnishing of compliance reports before 15-06-2015 in proforma. I, II, and III and along with necessary certificates as per this office Memo cited regarding flood worthiness of flood banks, drainage system and irrigation sources (proforma enclosed).
3. The flood stores, the relevant machinery and equipment should be kept ready in good condition for meeting any contingency arising in the event of natural disasters.
4. The field offices should be alerted suitably to meet any contingency in the event of Natural Disasters consequent to the occurrence of floods of cyclone.
5. Fixing of river gauges at vulnerable reaches in the down stream of existing Major Projects and to inform the district authorities well in advance, the area likely to be submerged due to floods releases as to take necessary precautionary measures.
6. The flood control room should be set up in the unit office to function round the clock from 16-06-2015 during ensuing monsoon period. The flood officers shall be instructed to be diligent in performing their assigned duties and any lapses on their part will be viewed seriously. The Deputy Superintending Engineer should be made responsible for a effective functioning of flood control room and the relevant phone number may please be intimated to the Deputy Chief Engineer-IV, office of the Engineer-in-Chief (Irrigation), Jalasoudha, Errum Manzil, Hyderabad-500082 well in advance.
7. The receipt of this circular memo may be acknowledged in the first instance.

**Extract Of Cyclone Contingency Plan of Action**

1. Public Works Department and Panchayat Raj Officials should take action to strengthen the weak bunds of all Irrigation sources and the villagers should be instructed to patrol the weak points of the Irrigation sources to avert any breaches. The head gates of the Irrigation channels should be closed and continuous vigil of the flood conditions etc., maintained similarly arrangement for opening the surplus courses etc., to drain off any excess water should be made.
2. The Executive Engineer, Irrigation & CAD Department should obtain advance information from his counterpart in other districts regarding floods in the rivers of respective districts.

**Casualty of National Calamities - Flood Warning**

Fixing of warning levels:- Flood warning stages on all the rivers in the state will be fixed by the Chief Engineer, Major Irrigation and published. The warning stages also would be periodically reviewed at an interval of five years depending on the changes in the river conditions and revised stages published. Such a publication would include the name of river, the name of the flow where gauge reading are observed, the previous highest record level, discharges with year of occurrences distances from the important town or villages, downstream which are likely to be affected etc.,

It should also indicate levels at which yellow, Amber and Red Signals should be given. These signals would correspond the degree of preparedness expected from the concerned people namely.

 Yellow signal should indicate in advance approach of floods in the river in the reach concerned it should be only meant to alert the authorities of the probability of incoming flows.

Amber signal would indicate calling of greater alertness, Red signal should be meant for flood control and district officials indicating the approach of high flood and such an order has may cause damage to the flood protection works and in addition to a depth of water or more in the flood drain. On the hosting of the red signal, the district authorities would take action for dissemination of warning of the impending flood to the public and for organizing evacuation arrangements.

**Predetermination of areas**

1. The Chief Engineer, Major Irrigation would carry out detailed studies to predetermine areas which are likely to be affected by the various rivers at various stages above the warning stages. In case of Chronically affected areas and improvement towns or thickly populated villages the areas villages likely to be affected at different river stages would be marked in maps and published and widely circulated to all the officers to enable the civil authorities to concentrate their attention on the areas which are likely to be affected due to rise in the river level at particular place.
2. Flood warning authorities would be suitably trained to interpret flood forecasts so as to enable them to give to higher authorities a clear picture of the possible areas of flooding. For this purpose flood zone maps should be prepared and kept ready for information both for the district level and the high power committee.
3. Engineering authorities in charge of maintenance of flood control works, roads and buildings, electricity installations bridges and culverts etc., relating to Irrigation & CAD Department, Roads and Buildings, Panchayat Raj and state Electricity Board should survey all such work in their charge every year before the onset of monsoons and warn the high power standing committee and the concerned district level committee in case it becomes apparent to them that there is likelihood of failure of any of the existing works. Such warning should be issued well in advance so as to give the authorities adequate time to take necessary precautionary measures. The Chief Engineer (Major Irrigation) , Chief Engineer (R & B) Chief Engineer, Panchayat Raj and A.P. State Electricity Board should take action in this regard as per standing instructions in force.

**Head Regulators**

1. The head regulators of the Irrigation system serving the coastal areas should be closed and water allowed to pass through the river source.

**Inspection of flood banks and irrigation works**

1. The Engineering authorities in charge of the maintenance of the flood control works should survey all the works in their charge of every year before the onset of monsoon and appraise the district authorities in case it become apparent to them that there is a likely hood of the failure of the any of the existing works besides flood banks, well in advance so as to give the authorities adequate time to take necessary precautionary measures. Further, materials like empty cement bags, sand, metal, stone, ballies etc., required will have to stocked in adequate quantities in all flood stores for immediate use in times of necessary.

**Drainage**

1. There are about 20 Major sea joining drains in Krishna and Godavari Deltas, The mouths of these major drains joining the seas should be cleared every year before the onset of monsoons and should kept it fit condition to drain off the maximum flood discharges.

**Intensive Patrol of River Banks**

* 1. The village officers and sarpanches will be alerted by the revenue Department to intensify patrol of river banks and also Irrigation tanks and to bring to the notice of concerned Engineers the moment threats of break is anticipated.
	2. The flood / cyclone duty officers of Irrigation Dept, should be equipped with the sufficient number of power launches to be kept ready for placing at the disposals of the Revenue Authorities for carrying out rescue and relief operations of marooned people in lankas.

**Transmission of messages**

1. The wireless stations of the Godavari and Krishna and the canal telephone system would be made effective use for transmission of important flood / cyclone message.

 **Control rooms**

1. Control rooms should be set up round the clock in Superintending Engineer’s office.It should be informed to the control room set up in the office of the Engineer-in-Chief(Irrigation) & flood control.

**Flood stores**

1. There are 21 main flood stores in Krishna Delta and 45 flood stores in Godavari delta. Apart from the above one flood store shall be kept under the control of each district Collector. The flood stores should have empty sand bags, dewatering pumps, diesel generators, loud hailers, tarpaulins, tents, some field trace, machined boats and VHF sets. The main flood stores in Godavari and Krishna deltas also should be strengthened with the above mentioned equipment.

**Breach filling machines**

1. A pool of equipment will be maintained at 3 central places on the coast line at 1) Visakhapatnam 2) Vijayawada 3) Nellore under the control of the territorial Irrigation Superintending Engineers in order to undertake breach filling operations to Irrigation canal and drainage system without waiting for outside help and transit delays in obtaining machinery.

 The pool of machinery at each station shall comprise the following :-

|  |  |  |  |
| --- | --- | --- | --- |
| a) | Proclain excavator | : | 1 No. |
| b) | Dozer | : | 1 No. |
| c) | Tippers | : |  6 (2 of these shall be rock body) |
| d) | Jeeps with winches | : | 2 Nos. |

 The equipment should not be allotted to any other work during the vulnerable

 period of May to December and will be kept in ready to move to the affected

 areas at moments notice.

|  |  |  |
| --- | --- | --- |
| **Proforma-I** | **(Pre-Monsoon Return)** | **Year** |

**Irrigation Sources Channels**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S.No. | Name of source channel | Village | Taluk | District | Date of inspection by DEE / EE | Condition of the source | Action taken | Remarks |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|  |  |  |  |  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| **Proforma-II** | **(Pre-Monsoon Return)** | **Year** |
| S.No. | Name of source/ flood banks | Village | Taluk | District | Date of inspection by DEE / EE | Condition of the source | Action taken | Remarks |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|  |  |  |  |  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| **PROFORMA-III** | **Date :** |  |
|  | **Time :**  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S.No. | Name of river | Location of guage site / Village / TQ district | Date of inspection of guage site & its condition | Areas likely to be affected | I & II warning levels and danger level to be indicated. |
| 1 | 2 | 3 | 4 | 5 | 6 |
|  |  |  |  |  |  |