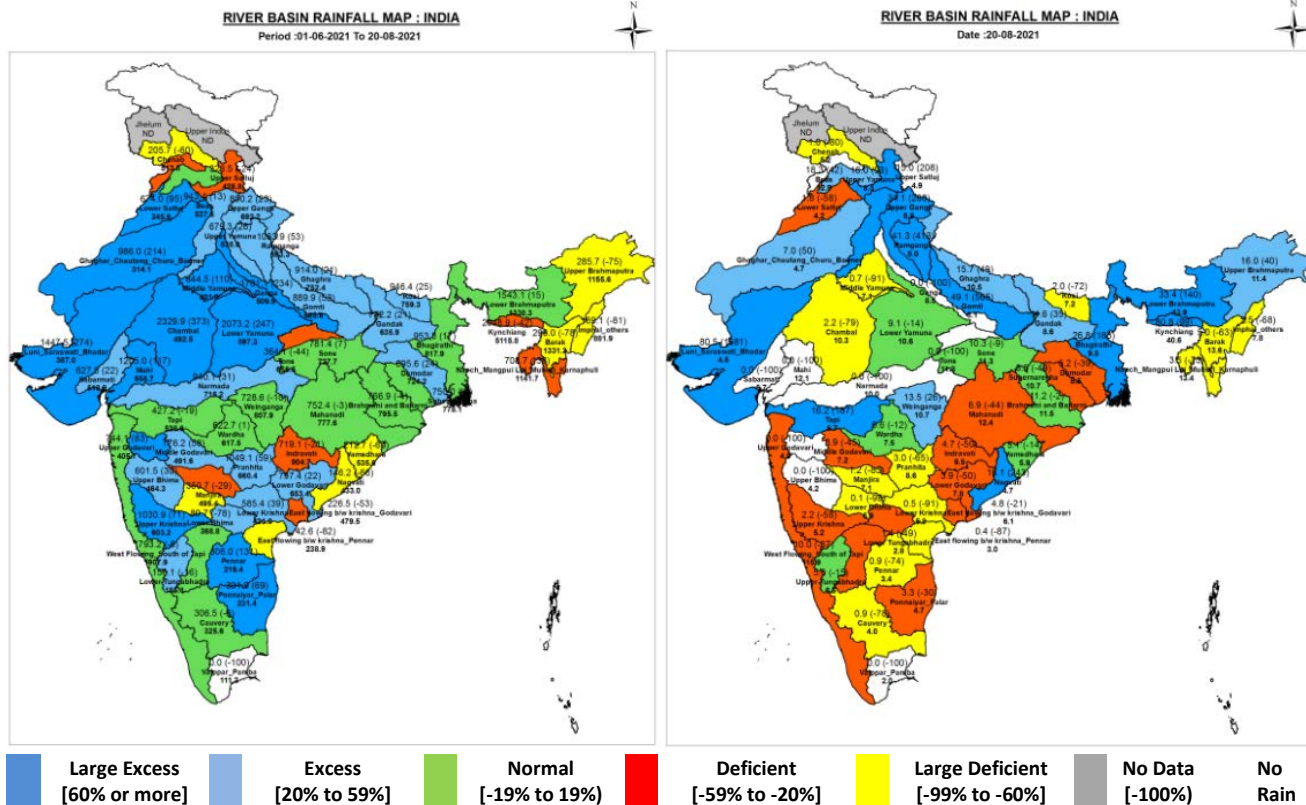




Central Water Commission
Daily Flood Situation Report cum Advisories
20-08-2021

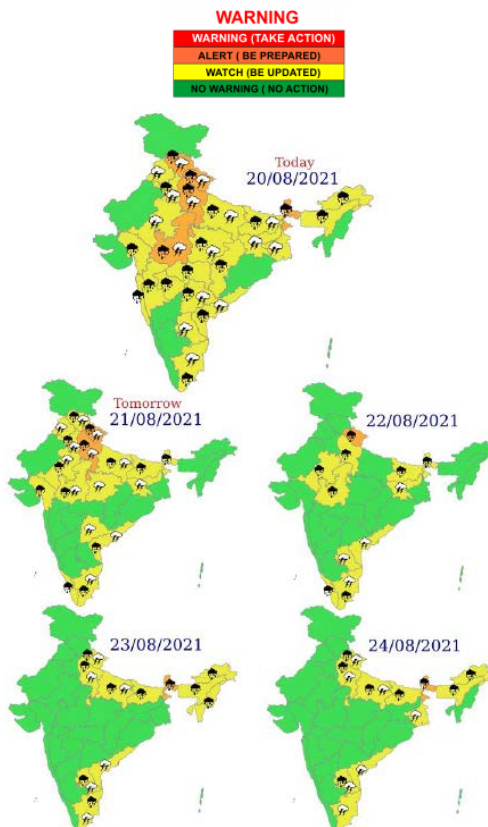
1.0 Rainfall Situation

1.1 Basin wise departure from normal of cumulative and daily rainfall



Notes: a) Small figures indicate actual rainfall (mm), while bold figures indicate Normal rainfall (mm)
b) Percentage departures of rainfall are shown in brackets.

1.2 Rainfall forecast for next 5 days issued on 20th August, 2021 (Midday) by IMD



- Very heavy rainfall over Sub-Himalayan West Bengal & Sikkim on 20th, 23rd & 24th August; over Uttarakhand during 20th – 24th; over Himachal Pradesh and West Madhya Pradesh on 20th; over West Uttar Pradesh on 20th & 21st August, 2021.

2.0 Flood Situation and Advisories

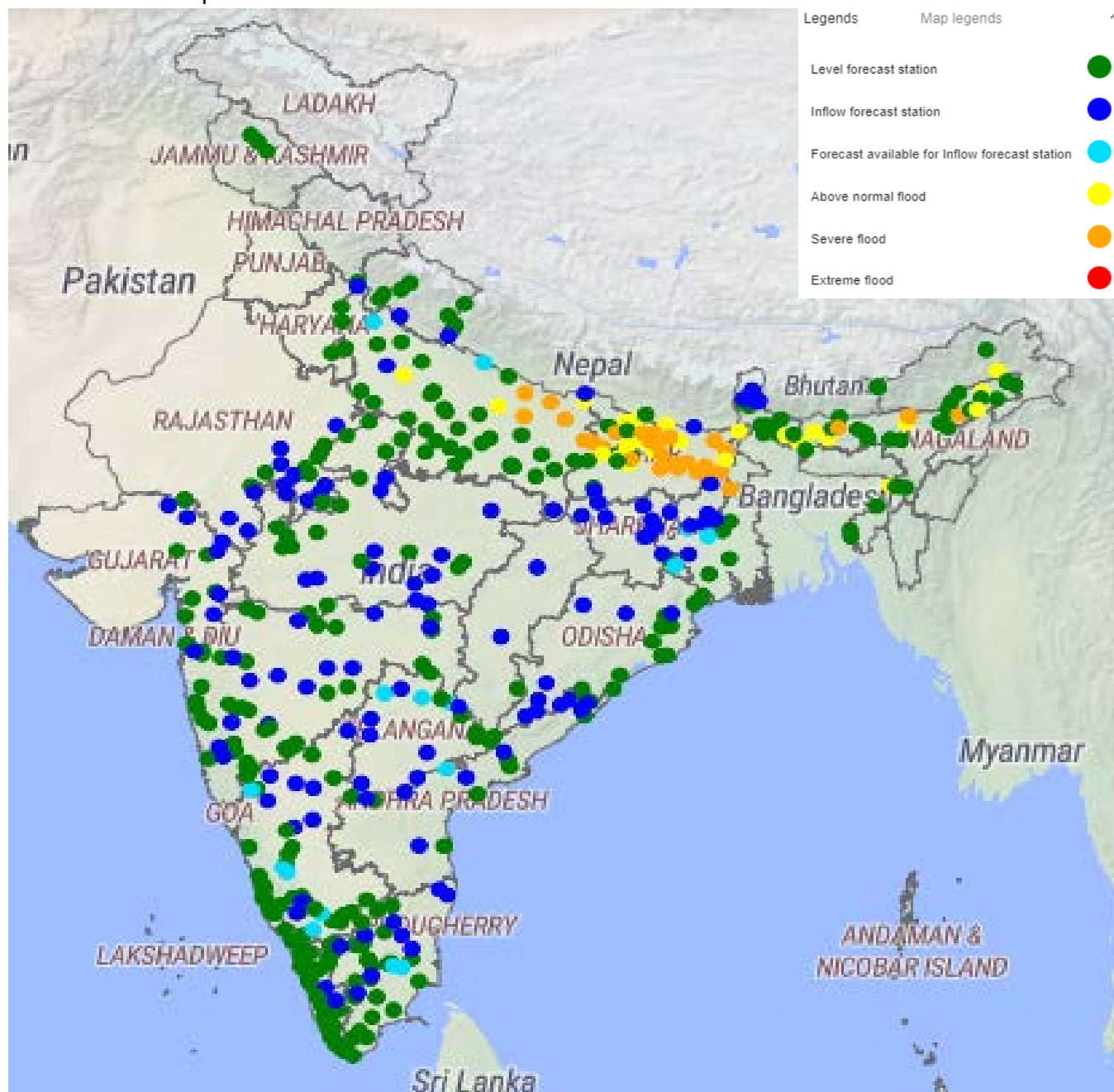
2.1 Summary of Flood Situation as per CWC Flood Forecasting Network

On 20th August, 2021, 30 Stations (20 in Bihar, 5 in Uttar Pradesh, 3 in Assam and 1 each in Jharkhand & West Bengal) are flowing in Severe Flood Situation and 27 stations (12 in Bihar, 8 in Assam, 4 in Uttar Pradesh, 2 in West Bengal and 1 in Arunachal Pradesh) are flowing in Above Normal Flood Situation. Inflow Forecast has been issued for 16 Barrages & Dams (5 in Karnataka, 3 in Telangana, 2 each in Jharkhand, Tamil Nadu & Uttar Pradesh and 1 each in Andhra Pradesh & West Bengal).

FLOOD SITUATION SUMMARY		
PART - I: LEVEL FORECAST		
S.No.	Flood Situations	Numbers of Forecasting Sites
A	Extreme Flood Situation: (Site (s) where the previous Highest Flood Level (HFL) is exceeded or equalled)	0
B	Severe Flood Situation: (Site (s) where water level is touching or exceeding the Danger Level but below Highest Flood Level (HFL))	30
C	Above Normal Flood Situation: (Site (s) where water level is touching or exceeding the Warning Level but below Danger Level)	27
Total number of sites above Warning Level (A+B+C)		57
PART - II: INFLOW FORECAST		
Number of sites for which inflow forecasts issued: (Where Inflows are equal or exceed the specified Threshold Limit for a particular reservoir / barrage)		16

Details are given at link: http://cwc.gov.in/sites/default/files/cfrcwcdfb-20.08.2021-2_5.pdf

2.1.1 Flood Situation Map



2.2 CWC Advisories

2.2.1 Ganga Basin- Uttarakhand, Uttar Pradesh, Bihar, Jharkhand & West Bengal

Due to forecasted heavy to very heavy rainfall over Uttarakhand from 20th – 21st August 2021, there is likelihood of rise in water levels in rivers such as Bhagirathi, Alaknanda, Mandakini, Ganga, Ramganga, Sharda, Sarju etc. There is likelihood of flash floods in some of the hill districts in association with cloud burst. Necessary precautions have to be taken for possible landslides and blockages of river flows due to landslides in high ranges of the state. Hence alert may be kept in **all hill districts of Uttarakhand**.

Main Ganga river is flowing in above normal to severe flood situations in districts Budaun, Ballia (U.P), Patna, Munger, Bhagalpur (Bihar), Sahibganj (Jharkhand) & Murshirabad (West Bengal) with falling trends.

River Ghaghra in **Barabanki, Ayodhya, Ballia (Uttar Pradesh)** and **Siwan (Bihar)** districts it is flowing in above normal to severe flood situations. River Rapti is flowing in severe flood situations in **Balrampur, Siddharth Nagar & Gorakhpur districts (U.P)**.

Currently, River Kosi in **Supaul, Khagaria & Katihar (Bihar)**, River Sone and Punpun in **Patna**, River **Bagmati** in **Sitamarhi, Muzzafarpur & Darbhanga (Bihar)**, River **Gandak** in **Kushinagar (U.P), Gopalganj, Muzaffarpur & Vaishali (Bihar)**, River Parman in **Araria (Bihar)**, River **Adhwara** in **Darbhanga**, Rivers **Kamla & Kamlabalan** in **Madhubani**, River **Burhi Gandak** in **Purba Champaran, Samastipur & Khagaria**, River **Mahananda** in **Kishanganj, Purnia & Katihar** in Bihar are flowing in severe to above normal flood situations. Flood situations may exist in the lower reaches of these rivers in the coming days.

2.2.2 Brahmaputra and its tributaries, Barak and Others – Assam, West Bengal, Sikkim, Arunachal Pradesh & Meghalaya

IMD has predicted very heavy rainfall in the catchment of Brahmaputra and its tributaries from 20th – 21st August, hence, alert may be kept in Sub-Himalayan West Bengal, Assam, Sikkim & Arunachal Pradesh. Alert to be kept in the basins of Champabati, Aie, Gurang, Manas, Teesta, Raidak, Jaldhaka, Rangpochu, Rangit, Torsa, Beki, Pagladiya, Puthimari, Subansiri, Disang, Siang, Simsang, Digaru, Myntdu rivers and in all other tributaries of Brahmaputra. Alert may be kept in district **East Kameng** (Arunachal Pradesh). Precautions have to be taken for possible landslides and blockages of river flows due to landslides in hilly districts of West Bengal.

Due to past 3 to 4 days rainfall, Brahmaputra main river is flowing in above normal flood situations to severe flood situations in Sonitpur, Goalpara, Dhubri, Dibrugarh & Jorhat districts (Assam). Also tributaries of Brahmaputra namely Gaurang river in Kokrajhar, Beki river in Barpeta district, Jia-Bharali river in Sonitpur and Sankosh river in Dhubri (Assam); Torsa river in Coochbihar, Jaldhaka river in Jalpaiguri, Desang river in Sibsagar (West Bengal) are flowing in above normal flood situations to severe flood situations.

2.2.3 Krishna basin – Andhra Pradesh, Karnataka

Most of the dams in Upper Krishna Basin are having very high storages. Hidkal Dam, Almatti Dam and Tungabhadra Dam are filled to their full capacity. Narayanpur and Bhadra Dams are 98% filled up. Malaprabha Dam on River Malaprabha is filled to 93% of its full capacity. Dams Koyana, Warna & Veer are also having high storage. Round the clock watch has to be maintained for proper reservoir operation. Releases from any of these reservoirs may be done as per rule curve and standard operating procedure.

2.2.4 Narmada, Tapi, Tributaries of Yamuna – Madhya Pradesh

Due to the prevalence of Upper air cyclonic circulation over NE-M.P and neighborhood, IMD has forecasted heavy rainfall in the catchments of Narmada river (Barwani, Khandwa dist.), Punasa & Kalisingh rivers (Ujjain, Dewa dist.), Betwa, Dhasan & Kuns rivers (Guna, Vidisha, Raisen dist.), Tapi river (Khandwa, Betul dist.) & Yamuna river (Bhind dist.) of Madhya Pradesh. So Alert may be kept.

2.2.5 River Catchments in Himachal Pradesh

Alert may be kept in districts of Himachal Pradesh such as Solan, Sirmaur (Tons river), Kangra (Beas river) & Mandi (Beas & Satiuj rivers). Necessary precautions have to be taken for possible landslides and blockages of river flows due to landslides in high ranges of the state.

2.3 Flash Flood Guidance

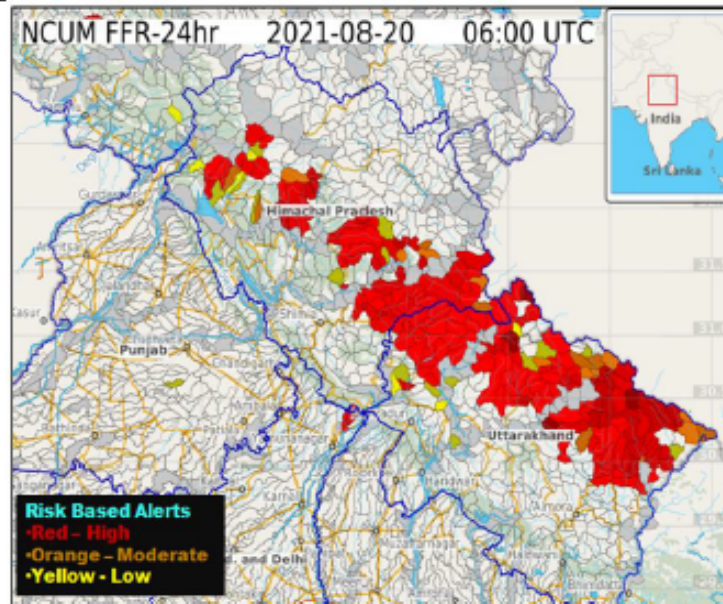
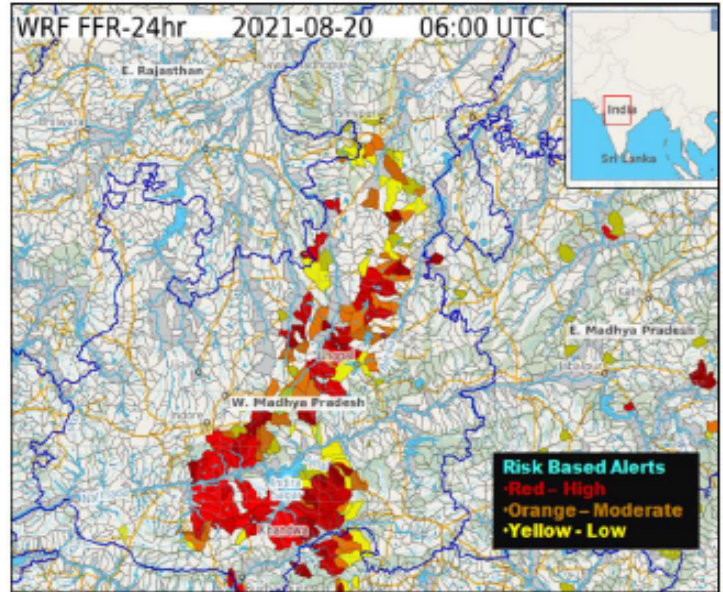
IMD has issued flash flood risk over few watersheds and neighbourhood of West Madhya Pradesh, Himachal Pradesh and Uttarakhand met subdivisions.

24hours Flash Flood Risk (FFR) Outlook Till 1130 IST of 21.08.2021:

Moderate Risk over few watersheds and neighborhoods of West Madhya Pradesh met subdivisions in next 24 hours.

Moderate to High Risk over several watersheds and neighborhoods of Himachal Pradesh and Uttarakhand met subdivisions in next 24 hours.

Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as depicted in map due to expected forecasted rainfall in next 24 hours.



3.0 Storage Position in Dams where Inflow forecast is being issued by CWC as on 20thAugust, 2021

Reservoirs shown in red are having gross storage capacity more than 80% and those in orange are having gross storage greater than 60%. Close watch is to be maintained at these reservoirs whenever Very Heavy Rainfall (Orange) and Extremely Heavy Rainfall (Red) warning in next 120 hours are given below:

Storage above 85%	
Storage above 60%	

QPF categories (mm)	0	0.1-10	11-25	26-37	38-50	51-75	76-100	>100
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#	Reservoir/Dams	River/Sub-Basin /Basin	State	US/ DS District	Rainfall situation				
					Day 1	Day 2	Day 3	Day 4	Day 5
1	Pulichinthala	Krishna/Lower Krishna/ Krishna	AP	Nalgonda(Tel)/Guntoor,Krishna (AP)					
2	Srisaillam	Krishna/Lower Krishna/Krishna	AP	JogulambaGadwal (Tel), Kurnool(AP)/Nalgonda(Tel), Guntoor (AP)					
3	NagarjunaSagar	Krishna/Lower Krishna/Krishna	AP	Nalgonda(Tel), Guntoor (AP)					
4	Musi	Musi/Lower Krishna/ Krishna	Tel	Nalgonda					
5	Sri PadaYellampally	Godavari/Middle Godavari/Godavari	Tel	Mancherial/ JaishankarBhupalpally					
6	Sriramsagar Project	Godavari/Middle Godavari/Godavari	Tel	Nanded (Mah)/Nirmal (Tel)					
7	Kaddam	Kaddam/Middle Godavari/Godavari	Tel	Adilabad, Nirmal/ Mancherial					
8	PD Jurala	Krishna/ Middle Krishna/Krishna	Tel	Raichur(Kar)/Kurnool(Andhra Pradesh),JogulambaGadwal(Tel)					
10	Panchet	Damodar/Damodar East/ Ganga	Jhar	Dhanbad, Jamtara (Jhar)/ Puruliya, PaschimBardhaman, Bankura (WB)					
11	Getalsud	Damodar/Damodar/Ganga & its tributaries	Jhar	Bokaro (Jharkand)					
12	Konar	Konar/Damodar/Ganga & its tributaries	Jhar	Hazaribagh (Jharkand)					
13	Tilaiya	Barakar/Barakar/Ganga & its tributaries	Jhar	Koderma (Jharkand)					
14	Maithon	Barakar/Barakar East/Ganga	Jhar	Dhanbad, Jamtara (Jhar)/ Puruliya, PaschimBardhaman, Bankura (WB)					
15	Kabini	Kabini/Kabini/ Cauvery	Kar	Wayanad (Kerala)/ Mysuru (Kar)					
16	Harangi	Cauvery/Upper Cauvery/Cauvery	Kar	Kodagu/Mandya					
17	Karanja	Karanja/Manjira/Godavari	Kar	Bidar (Kar), Vikarabad(Tel)/Bidar(Kar)					
18	Almatti	Krishna/Upper Krishna/Krishna	Kar	Kolhapur(Mah)/ Bagalkote(Kar)					
19	Narayanpur	Krishna/Upper Krishna/Krishna	Kar	Bagalkot, Vijayapura/ Raichur, Yaadgir					
20	KRS	Cauvery/Middle Cauvery/Cauvery	Kar	Mandya, Mysore					
21	Tungabhadra	Tungabhadra/Middle Tungabhadra/Krishna	Kar	Gadag/Bellary, Koppal, Raichur					
22	Hemavathy	Hemavathy/ Hemavathy/Cauvery	Kar	Hassan, Kodagu/Mandya, Mysore					
23	Bhadra	Bhadra/Upper Tungabhadra/Krishna	Kar	Chikmagaluru/Shimoga					
24	Hidkal	Ghataprabha/Ghataprabha/Krishna	Kar	Kolhapur (Mah)/ Belgaum (Kar)					
25	Malaprabha	Malaprabha/Malaprabha/Krishna	Kar	Belgaum					
26	Warana	Warana/Upper Krishna/Krishna	Mah	Kolhapur, Sangli					
27	Koyna	Koyna/ Upper Krishna/Krishna	Mah	Satara/Kolhapur, Sangli					
28	Yeldari	Purna/Purna/Godavari	Mah	Parbhani, Hingoli					
29	Totladoh	Pench/Wainganga/Godavari	Mah	Chindwara(MP)/Nagpur(Mah)					
30	Isapur	Penganga/Penganga/Godavari	Mah	Hingoli, Yavatmal/Yavatmal,Nanded					
31	Upper Wardha	Wardha/Wardha/Godavari	Mah	Wardha, Amravati					
32	Veer	Nira/Upper Bhima/Krishna	Mah	Pune, Satara					
33	Ujjani	Bhima/Upper Bhima/Krishna	Mah	Pune, Solapur					
34	Mula	Mula/Upper Godavari/Godavari	Mah	Ahmadnagar					
35	RanaPratapSagar	Chambal/Upper Chambal/Ganga	Raj	Neemuch(MP)/Dholpur,Kota, Bundi(Raj)					
36	Panchana	Gambhiri/Upper Chambal/Ganga	Raj	Karauli					
37	Gudha	Mejchambal/UpperChambal/Ganga	Raj	Bhilwara/Bundi					
38	Kalisindh	Kalisingh/Upper Chambal/Ganga	Raj	Jhalawar, Kota					
39	SomKamlaAmba	Som/Mahi B/Mahi	Raj	Udaipur/ Dungarpur					
40	Mahi Bajaj Sagar	Mahi/Mahi B/Mahi	Raj	Ratlam(MP)/Banswara, Pratapgarh,Dungapur (Raj)					

41	Vaigai	Vaigai/Upper Vaigai/EF Rivers b/w Cauvery & Kanyakumari	TN	Theni/Madurai					
42	Bhavanisagar	Bhavani/Middle Cauvery/Cauvery	TN	Palakad (Kerala), Nilgiri (TN), Coimbatore (TN)/ Erode (TN)					
43	Idukki	Periyar/Upper Periyar/West Flowing Rivers from Tadri to Kanyakumari	Kerala	Idduki/Ernakulam					
44	Edamalyar	Periyar/Upper Periyar/West flowing rivers from Tadri to Kanyakumari	Kerala	Ernakulam					
45	Bargi	Narmada/UpperNarmada/Narmada	MP	Mandla, Seoni/Jabalpur, Narsimhapur					
46	Tawa	Tawa/Middle Narmada/Narmada	MP	Betul,Hoshnabad/Sehore					
47	Gandhi Sagar	Chambal/Upper Chambal/Ganga	MP	Mandsaur,Neemuch(MP)/Dholpur(Raj)					
48	Rajghat	Betwa/Betwa/Ganga	MP	Ashoknagar(MP), Lalitpur(UP)/Shivpuri, Lalitpur(UP)					
49	Rengali	Brahmani River/Brahmani and Baitarni/Brahmani and Baitarni	Odisha	Deogarh/Angul, Dhenkanal					

Note- Based on above information, Project Authority may regulate the reservoirs as per standard operating manuals/ rule levels to avoid downstream flooding and upstream submergence.