

# Central Water Commission Upper Ganga Basin Organisation, Lucknow Daily Flood Situation Report Cum Advisories Date: 18 AUGUST, 2020

FSR No.57 Dated 18-08-2020

1. Weather forecast by IMD

#### I. SYNOPTIC SITUATION:

- ♦ The monsoon trough at mean sea level now passes through Bikaner, Alwar, Gwalior, Banda, Siddhi, Ranchi, Bankura, Canning and thence south-eastwards to Northeast Bay of Bengal and extends upto 1.5 km above mean sea level.
- ♦ The cyclonic circulation over south Punjab & neighbourhood now lies over northwest Rajasthan & neighbourhood and extends upto 1.5 km above mean sea level.
- ♦ The cyclonic circulation over northeast Madhya Pradesh & neighbourhood extending upto 5.8 km above mean sea level tilting southwards with height persists.
- ♦ A cyclonic circulation between 5.8 km & 7.6 km above mean sea level lies over Northeast Bay of Bengal & neighbourhood. Under its influence, a fresh Low Pressure Area is likely to form over north Bay of Bengal around by tomorrow, 19th August. It is very likely to become more marked during the subsequent 24 hours and move westwards Gradually.

#### II. a) **DETERMINISTIC FORECAST (QPF):**

			QPF (mm)	)	
Sr. No.	BASIN NAME	SUBBASIN CODE/NAME	Day-1	Day-2	Day-3
1	Alaknanda	Alaknanda	0.1-10	0.1-10	0.1-10
2	Bhagirathi	Bhagirathi	11-25	0.1-10	0.1-10
		Chhatnag to Mirzapur	11-25	11-25	0.1-10
		Narora to Phaphamau	0.1-10	0.1-10	0.1-10
3	Congo	Phaphamau to Ballia	0.1-10	0.1-10	0.1-10
3	Ganga	Gomti	0.1-10	0.1-10	0.1-10
		Sai	0.1-10	0.1-10	0.1-10
		Upper Ganga	11-25	11-25	0.1-10
		Lower Ghaghra	0.1-10	0.1-10	0.1-10
4	Ghaghra	Middle Ghaghra	11-25	11-25	0.1-10
		Upper Ghaghra	11-25	11-25	0.1-10
5	Ramganga	Ramganga	11-25	0.1-10	0.1-10
6	Rapti	Rapti	0.1-10	0.1-10	0.1-10
7.	Sharda	Sharda	11-25	11-25	0.1-10

# II (b) <u>DETERMINISTIC FORECAST (DISTRIBUTION)</u>

		SUBBASIN		ENSITY TIAL DI		UTION	(D)	
	BASIN NAME	CODE/NAME	Day-1		Day-2		Day-	3
			I	D	I	D	I	D
1	Alaknanda	Alaknanda	M	ws	M	ws	L	SCT
2	Bhagirathi	Bhagirathi	L	SCT	L	SCT	L	SCT
		Chhatnag to Mirzapur	М	ws	М	ws	L	SCT
		Narora to Phaphamau	L	SCT	М	SCT	M	FWS
	Ganga	Phaphamau to Ballia	L	SCT	L	SCT	L	ISOL
3		Gomti	М	FWS	М	ws	L	ISOL
		Sai	М	FWS	М	ws	VL	ISOL
		Upper Ganga	М	ws	М	ws	M	FWS
		Lower Ghaghra	L	SCT	М	FWS	L	ISOL
4	Ghaghra	Middle Ghaghra	L	SCT	М	ws	L	ISOL
		Upper Ghaghra	М	ws	М	ws	L	SCT
5	Ramganga	Ramganga	М	ws	М	ws	M	SCT
6	Rapti	Rapti	L	SCT	М	FWS	L	ISOL
7.	Sharda	Sharda	М	WS	M	ws	ws	SCT

QPF in Ranges (mm)	UNLISTED	0	0.1-10	11-25	26-50	51-100	>100
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# III. HEAVY RAINFALL WARNING:

	NAME OF	Day-1		Day-2		Day-3	
	SUB- BASIN	Ι	D	I	D	I	D
Alaknanda	Alaknanda	Н	ISOL	Н	ISOL		
Bhagirathi	Bhagirathi	Н	ISOL	Н	ISOL		
	Chhatnag to Mirzapur	Н	ISOL	Н	ISOL		
	Narora to Phaphamau						
Ganga	Phaphamau to Ballia						
	Gomti						
	Sai						
	Upper Ganga	Н	ISOL	Н	ISOL		
	Lower Ghaghra						
Ghaghra	Middle Ghaghra						
	Upper Ghaghra	Н	ISOL				
Ramganga	Ramganga	Н	ISOL				
Rapti	Rapti						
Sharda	Sharda	Н	ISOL	Н	ISOL	Н	ISOL

Spatial Distribution of Rainfall						
DRY Dry No Station reported rainfall						
ISOL	One or two Places	25% or less number of stations recorded rainfall 2.5 mm				
SCT	At a few Places	26%-50% number of stations recorded rainfall 2.5 mm				
FWS	At many Places	51%-75% number of stations recorded rainfall 2.5 mm				
WS	At most places	76%-100% number of stations recorded rainfall 2.5 mm				

	Intensity of Rainfall								
M.Dry.	NIL	0 cm	VL	Very Light Rainfall	Trace				
L	Light Rainfall	Upto 1 cm	M	Moderate rainfall	02-06 cm				
H	Heavy rainfall	07-11 cm	VH	Very Heavy rainfall	12-20 cm				
EH	Extremely Heavy rainfall	21 cm or More	19/10						
ExH	Exceptionally Heavy Rainfall		he month or	e near about the highest reco season. However, this term exceeds 12 cm					

## IV. PROBABILISTIC FORECAST

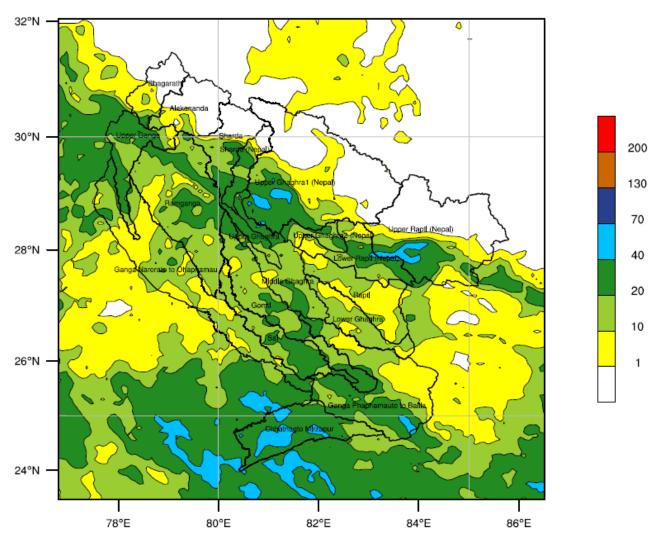
			Day-	1					Day-	-2					Day-3					
S. No.	BASIN NAME	SUBBASIN CODE/NAME	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm
1	Alaknanda	Alaknanda		50-75	25-50					50-75	25-50									
2	Bhagirathi	Bhagirathi		25-50	50-75					50-75	25-50									
		Chhatnag to Mirzapur			75-100						75-100									
		Narora to Phaphamau		75-100						50-75	25-50									
3	Ganga	Phaphamau to Ballia		75-100						75-100										
		Gomti		75-100						75-100										
		Sai		75-100						75-100										
		Upper Ganga			75-100	5-25					75-100	5-25								
		Lower Ghaghra		75-100						75-100										
4	Ghaghra	Middle Ghaghra		25-50	50-75					25-50	50-75									
		Upper Ghaghra			50-75	25-50					50-75	25-50								
5	Ramganga	Ramganga		25-50	50-75					25-50										
6	Rapti	Rapti		75-100						75-100										
7.	Sharda	Sharda			75-100	5-25					75-100	5-25								

Probability of occurrence (%)	0-5	5-25	25-50	50-75	75-100
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Init: 2020-08-18\_00:00:00 Valld: 2020-08-19\_03:00:00

## FLOOD MET OFFICE LUCKNOW

# IMD WRF Rainfall (mm) Forecast(24hr)



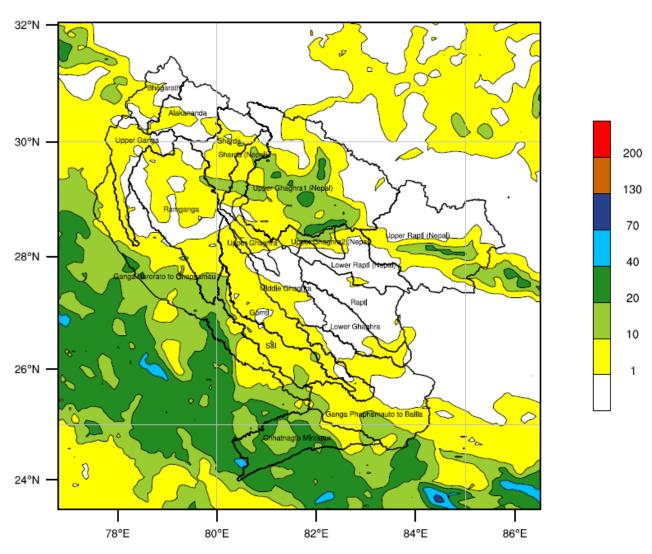
# Sub basin wise Average Rainfall Estimation

Alaknanda =	2 mm	Raptl =	10 mm
Bhaglrathl =	4 mm	Sai =	19 mm
Chhatnagto M rzapur =	34 mm	Sharda =	15 mm
Ganga Narorato Ohaphamau =	13 mm	Sharda (Nepal) =	13 mm
Ganga Phaphamauto Balia =	17 mm	Upper Ganga =	20 mm
Gomtl =	18 mm	Upper Ghaghra =	9 mm
Lower Ghaghara =	12 mm	Upper Ghaghra1 (Nepal) =	18 mm
Lower Raptl (Nepal) =	17 mm	Upper Ghaghra2 (Nepal) =	26 mm
Middle Ghaghara =	17 mm	Upper Raptl (Nepal) =	9 mm
Ramganga =	16 mm		

Init: 2020-08-18\_00:00:00 Valld: 2020-08-20\_03:00:00

# FLOOD MET OFFICE LUCKNOW

# IMD WRF Rainfall (mm) Forecast(48hr)

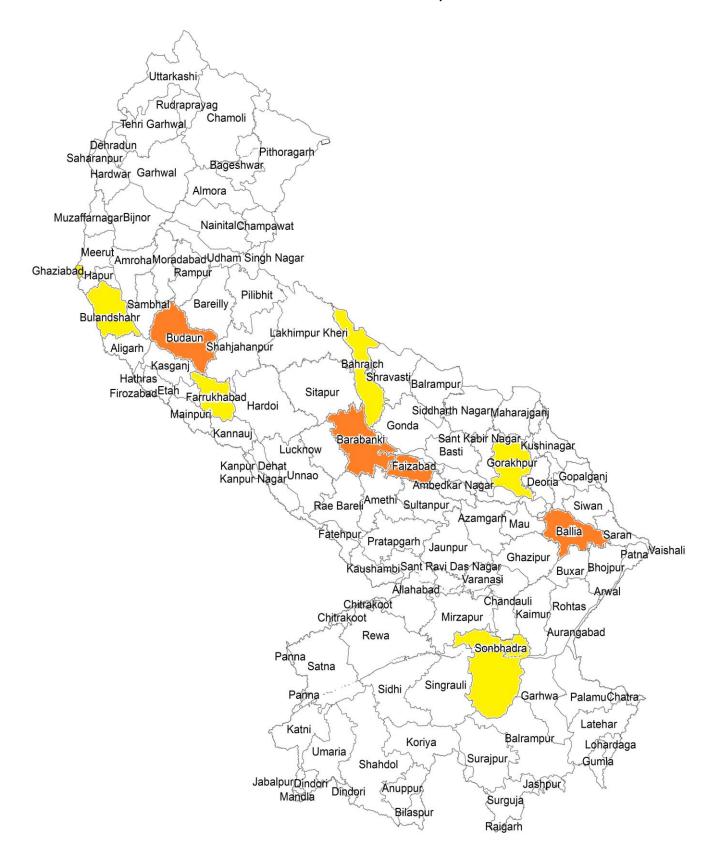


# Sub basin wise Average Rainfall Estimation

Alaknanda =	1 mm	Raptl =	0 mm
Bhaglrathl =	1 mm	Sai =	7 mm
Chhatnagto Mlrzapur =	19 mm	Sharda =	6 mm
Ganga Narorato Ohaphamau =	10 mm	Sharda (Nepal) =	3 mm
Ganga Phaphamauto Balia =	4 mm	Upper Ganga =	2 mm
Gomtl =	4 mm	Upper Ghaghra =	7 mm
Lower Ghaghara =	1 mm	Upper Ghaghra1 (Nepal) =	6 mm
Lower Raptl (Nepal) =	1 mm	Upper Ghaghra2 (Nepal) =	3 mm
Mlddle Ghaghara =	2 mm	Upper Rapti (Nepal) =	3 mm
Ramganga =	3 mm		

#### 2. Summary of flood situation as per CWC flood forecasting network

#### Flood Situation on 18 AUGUST, 2020



- 1. River Sarda at Paliakalan in KHERI district of Uttar Pradesh continues to flow in SEVERE SITUATION at 14:00 hrs today. At 14:00 hrs, it was flowing at a level of 154.54 with falling trend which is 0.44m above its Danger Level of 154.1 m and 0.78m below its previous HFL of 155.32 m (2014-07-21).
- 2. River Ghagra at Turtipar in BALLIA district of Uttar Pradesh continues to flow in SEVERE SITUATION at 14:00 hrs today. At 14:00 hrs, it was flowing at a level of 65.11m with steady trend which is 1.10 above its Danger Level of 64.01 m and 0.89 m below its previous HFL of 66.0 m (1998-08-28).
- **3.** River Ghagra at Elginbridge in BARABANKI district of Uttar Pradesh continues to flow in SEVERE SITUATION at 14:00 hrs today. At 14:00 hrs, it was flowing at a level of 106.986m with falling trend which is 0.916 m above its Danger Level of 106.07 m and 0.63m below its previous HFL of 107.616 m (2014-08-18).
- **4.** River Ghagra at Ayodhya in FAIZABAD district of Uttar Pradesh continues to flow in SEVERE SITUATION at 14:00 hrs today. At 14:00 hrs, it was flowing at a level of 93.51m with steady trend which is 0.78 m above its Danger Level of 92.73 m and 0.50 m below its previous HFL of 94.01 m (2009-10-11).
- **5.** River Ganga at Kachhlabridge in BUDAN district of Uttar Pradesh continues to flow in SEVERE SITUATION at 08:00 hrs today. At 08:00 hrs, it was flowing at a level of 162.40 m with steady trend which is 0.40m above its Danger Level of 162.0 m and 0.39 m below its previous HFL of 162.79 m (2010-09-24).

## 2.1 Rainfall Situation

# Amount of rainfall recorded at 8:30 hours IST of today ( $(\geq 50 \text{ mm or more})$

Name of Place (State)	Rainfall (in mm)
Pali (R.J)	93.4
Thal (U.K)	85.2
Chisapani (Nepal)	56.8

# 2.2 LEVEL FORECAST

	LEVEL FORECAST	
S.No.	Flood Situations	No. of Forecasting Sites
	Extreme Flood Situation:	
A.	(Site (s) where the previous Highest Flood Level (HFL) is exceeded or equalized)	0
	Severe Flood Situation :	l
В.	(Site(s) where water Level touching or exceeding the Danger Level but below Highest Flood Level(HFL)	4
	Above Normal Flood Situation:	
C.	(Site (s) where water level touching or exceeding the warning Level but below Danger Level)	3
	Total Numbers of Sites above Warning Level (A+B+C)	7
	INFLOW FORECAST	
Numbe	er of Sites for which inflow forecasts issued:	4
,	e inflow are equal or exceed the specified Threshold Limit for a particular oir/barrage)	4

# 2.3 Above Normal (Water Level touching or exceeding the warning Level but below Danger Level)

Name of	Flood			Danger	Danger Warning		Previous Highest		Actual Level			Forecast			
river	Flood Forecastin g Sites	District	State	Danger Level(m)	Level (m)	Level (m)	Date	Level (m)	Time	Trend	Level (m)	Date	Time	Trend	
Rapti	Birdghat	Gorakhpur	U.P	74.98	73.98	77.54	1998	74.24	0800	F	74.05	19.08.20	0800	F	
Ganga	Garhmukt eshwar	Ghaziabad	U.P	199.33	198.33	199.9	2010	198.70	0800	S	198.55	19.08.20	0800	F	
Ganga	Fatehgarh	Farukkhabad	U.P	137.6	136.60	138.14	2010	137.43	0800	S	137.35	19.08.20	0800	F	

# 2.4 Severe Flood Situation (Water Level touching or exceeding the Danger Level but below Highest Flood Level (HFL))

Name of river	Flood Forecasting	District	State	Danger Level(m)	Warning Level (m)	Previous	s Highest	Actu	al Level			Forecast		
	Sites					Level(m)	Date	Level(m)	Time	Trend	Level (m)	Date	Time	Trend
Ghaghra	Turtipar	Baliya	U.P	64.01	63.01	66.00	1998	65.11	0800	S	65.13	19.08.20	0800	R
Ghaghra	Elgin Bridge	Barabanki	U.P	106.07	105.07	107.616	2014	107.046	0800	S	106.90	19.08.20	0800	F
Ghaghra	Ayodhya	Faizabad	U.P	92.73	91.73	94.01	2009	93.51	0800	S	93.51	19.08.20	0800	S
Ganga	Kachhla bridge	Budaun	U.P	161.00	162.00	162.79	2010	162.40	0800	S	162.38	19.08.20	0800	F

# 2.5 Extreme Flood Situation (Water Level exceeded or equalized Highest Flood Level (HFL))

Name of	Flood		6	Danger	anger Warning —	Previo	Previous Highest		Actual Level			Forecast			
river	Forecasting Sites	District	State	Level(m)	Level (m)	Level(m)	Date	Level(m)	Time	Trend	Level (m)	Date	Time	Trend	

Note - No Station is in this situation Dated 18.08.2020

## 2.6 Inflow Forecast

						Previou	s Highest	Actu	al Level		F	orecast		
Name of river	Flood Forecasting	District	State	HFL(m)	FRL(m)	Discharge	Date	Discharge	Time	Trend		Date	Time	Trend
	Sites					(Q)		(Q)			(Q)			
Ghaghra	Katerniaghat Barrage	Bahraich	U.P.		138			5129.401	0800	S	4300.00	19.08.20	0800	F
Sharda	Narora Barrage	Bulandshahr	U.P					4363.20	0800	S	3540.00	19.08.20	0800	F
Sone	Bansagar Dam	Harda	M.P.		341.64				0800	R	2447.00	19.08.20	0800	R
Rihand	Rihand Dam	Sonbhadra	U.P.		265.18				0800	R	865.00	19.08.20	0800	R

#### Advisory on Hydro Meteorological Situation Expected from 19-08-2020 to 20-08-2020

As per rainfall pattern given in section II, Alaknanda, Bhagirathi, Ganga rivers are expected to receive light to moderate rain at scattered to widespread areas in next 48 hrs. Ghaghra, Ramganga, Sharda & Rapti river basins are expected to receive light to moderate rain at scattered to widespread areas in next 48 hours. Water level at most of CWC stations are expected to steady/fall in next 48 hours. Level forecast will be issued if the level of river at stations are likely to touch or cross warning level. From the given QPF, Severe flood like situation is expected in Ghaghra, Rapti & Sharda river basins.

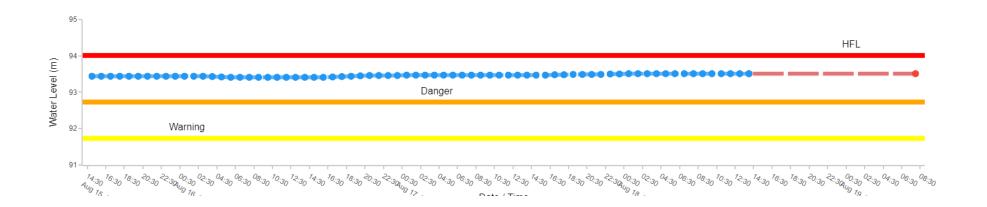
अधिशासीअभियंता

मध्य गंगा मण्डल -1 लखनऊ

#### Hydrograph view of - Ayodhya



District	Basin	River	Division
FAIZABAD	Ganga	Ghagra	Middle Ganga Division-I(MGD-I), Lucknow



#### Hydrograph view of - Birdghat



District	Basin	River	Division
GORAKHPUR	Ganga	Rapti	Middle Ganga Division-I(MGD-I), Lucknow

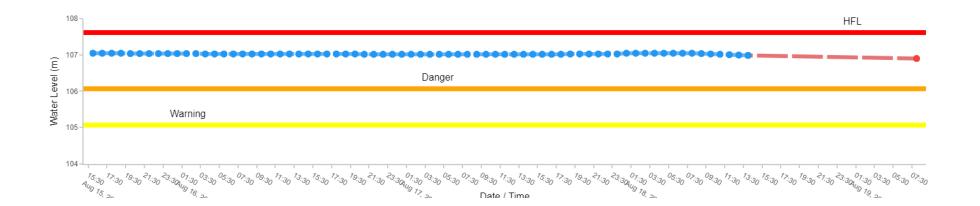
Forecasted Water Level Measured Water Level



#### Hydrograph view of - Elginbridge



District	Basin	River	Division
BARABANKI	Ganga	Ghagra	Middle Ganga Division-I(MGD-I), Lucknow

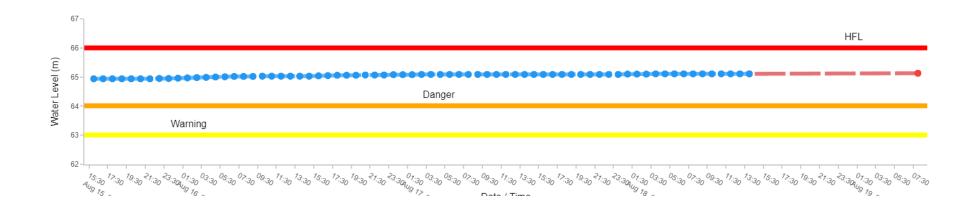


#### Hydrograph view of - Turtipar



District	Basin	River	Division
BALLIA	Ganga	Ghagra	Middle Ganga Division-I(MGD-I), Lucknow

Forecasted Water Level Measured Water Level

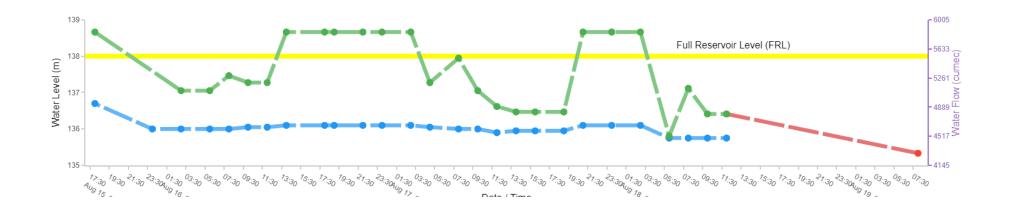


## Hydrograph view of - Katerniaghat Barrage



District	Basin	River	Division
BAHRAICH	Ganga	Ghagra	Middle Ganga Division-I(MGD-I), Lucknow



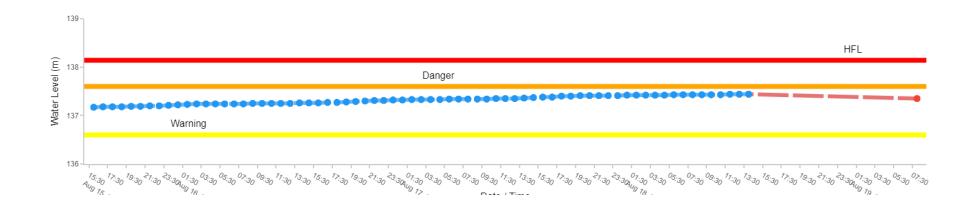


#### Hydrograph view of - Fatehgarh



District	Basin	River	Division
FARRUKHABAD	Ganga	Ganga	Middle Ganga Division-II(MGD-II), Lucknow

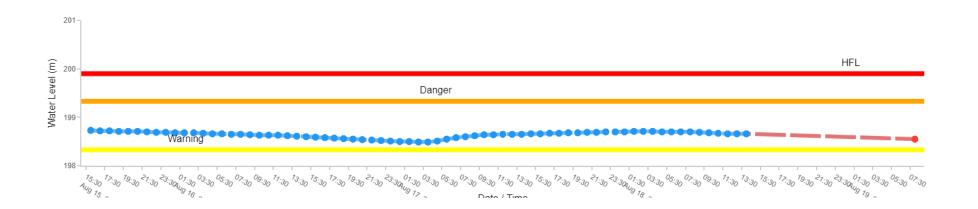
Forecasted Water Level Measured Water Level



#### Hydrograph view of - Garhmukteshwar



District	Basin	River	Division
GHAZIABAD	Ganga	Ganga	Middle Ganga Division-II(MGD-II), Lucknow

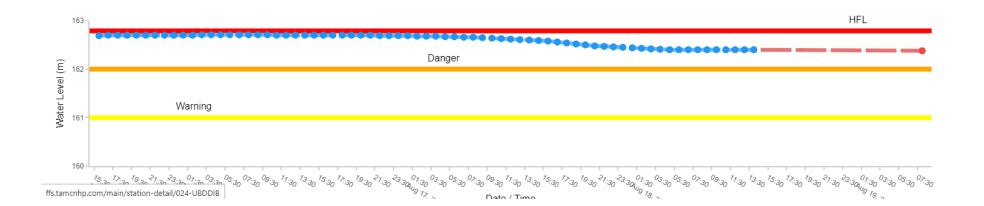


## Hydrograph view of - Kachhlabridge



District	Basin	River	Division
BUDAUN	Ganga	Ganga	Middle Ganga Division-II(MGD-II), Lucknow

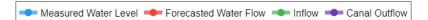
Forecasted Water Level Measured Water Level

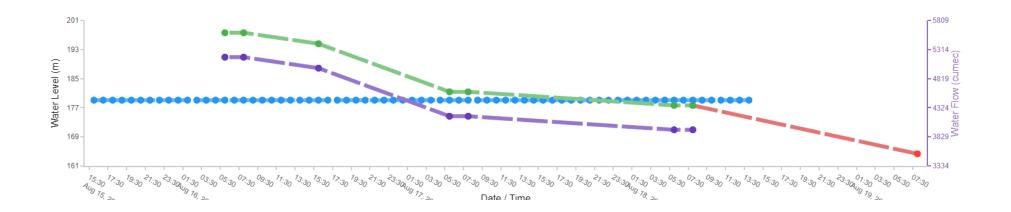


#### Hydrograph view of - NARORA Barrage



District	Basin	River	Division
BULANDSHAHR	Ganga	Ganga	Middle Ganga Division-II(MGD-II), Lucknow





# Hydrograph view of - Bansagar Dam District Basin River Division Middle Ganga Division-III(MGD-III), Varanasi HARDA Ganga Sone Measured Water Level Forecasted Water Flow 344-**-** 2692 - 2594 - 2496 - 2398 - 2300 - 2300 Maximum Water Level (MWL) Water Level (m) Full Reservoir Level (FRL) 340 L<sub>2202</sub> 0/230 0/330 1/330

#### Hydrograph view of - RIHAND DAM



District	Basin	River	Division
VARANASI	Ganga	Rihand	Middle Ganga Division-III(MGD-III), Varanasi

■ Measured Water Level ■ Forecasted Water Flow

