



**Government of Pakistan
Ministry of Water Resources
Office of Chief Engineering Advisor/
Chairman, Federal Flood Commission**

6-Attaturk Avenue, G-5/1, Islamabad
Fax No. 051-9244621 & www.ffc.gov.pk

**FFC's
DAILY WEATHER & FLOOD SITUATION REPORT
SUNDAY AUGUST 21, 2022**

Rivers & Reservoirs Situation:

Continued rainfall in the catchment areas of River Indus yesterday (**August 20, 2022**) has resulted in **High Flood Situation** at **Taunsa Barrage** (upstream of Guddu) where the outflow recorded at 1500 hours was **510,000 cusecs**. It was in **“Medium Flood”** at 0600 hours today (**Ref: Annexure-I**). Also **River Indus** is in **“Medium Flood”** at **Guddu** (downstream Taunsa) and in **Guddu-Sukkur** and **Sukkur-Kotri** reaches. It is in **“Low Flood”** at **Tarbela, Kalabagh, Chashma & Kotri**.

2. Further to above, **River Kabul** (a tributary of River Indus downstream Tarbela) is also flowing in **“Medium Flood”** at **Warsak** and **“Low Flood”** at **Nowshera**. Other main Rivers i.e. Jhelum, Chenab, Ravi & Sutlej are in Normal Flow Conditions. For main rivers inflows/ outflows at important control structures, reservoirs storage position and Skardu temperature, **Annexure-I** may be seen.

3. **Tarbela** reservoir has attained its Maximum Conservation Level (MCL) of **1550.00 feet** yesterday (**20th August 2022**) and is being maintained at the same level today. Present Combined Live Storage of Tarbela, Chashma & Mangla reservoirs is **8.861 MAF** (i.e. **65.83 %** of **13.461 MAF**). **Tarbela Reservoir Operating Authorities who are fully alert are advised to take utmost care and exercise extra vigilance in the reservoir further operation (filling/ release of water) and strictly follow SOPs and associated Dam Safety Guidelines while managing the upstream inflows and releasing downstream discharges.**

Prevalent Meteorological Situation (Source: FFD, Lahore):

4. Yesterday's **Low-Pressure Area** over Jacobabad (Sindh) remained stationary. Also **Deep Depression**, yesterday over **North Orissa (India)** has moved **West-Northwestwards** and today lies over **Northwestern Chattisgarh** and adjoining **Madhya Pradesh (India)** as **Depression**. It is likely to move further in the same direction. Trough of **Westerly Wave** continues to prevail over Northern parts of the Pakistan while **Seasonal Low** continues to persist over **Northwestern Balochistan**.

5. **Moderate Moist** currents from Arabian Sea are penetrating into **Southern Punjab, Sindh** and **Balochistan** up to 6000 feet.

Weather & Rainfall Forecast (Next 24 hours):

6. According to FFD, Lahore, **Scattered to Widespread Thunderstorm/Rain** with **“Heavy Falls”** at **Isolated** places and **“Very Heavy Falls”** at one or two places is expected over **Central & Upper Sindh, Eastern Balochistan** including over **Punjab (D.G. Khan Division) & Khyber Pakhtunkhwa (D.I. Khan Division)** during the next 24 hours.

7. Also **Scattered Thunderstorm/Rain** of **Moderate Intensity** with **isolated “Heavy Falls”** is expected over the upper catchments of all the major rivers including **Islamabad, Rawalpindi, Sargodha, Gujranwala, Lahore & Bahawalpur Divisions (Punjab), Peshawar, Kohat & Bannu Divisions (Khyber Pakhtunkhwa)**, in addition to **Isolated Thunderstorm/Rain** of **Light to Moderate Intensity** over the rest of the country during the same period.

8. During the past 24 hours **Very Heavy Rainfall** has been experienced over **Sindh (Moin-Jo-Daro=125 mm, Khairpur=79 mm)**. Complete rainfall details for the past 24 hours may be seen at **Annexure-II**.

Weather Outlook & Flood Forecast, 23rd-26th August 2022:

9. Based on further developing Meteorological Situation, FFD, Lahore, has reported that a fresh **Strong Monsoon activity** is likely to start over **Sindh, Balochistan, Southern Punjab and Khyber Pakhtunkhwa (D.I. Khan Division)** from **23rd to 26th August, 2022**.
10. As a consequence:
- **Moderate to Heavy Flash Flooding** is expected in the **Rivers/Nullahs of Eastern Balochistan** during the next 24 hours.
 - **Very High to Exceptionally High Level Flooding** is likely in the **Hill Torrents of D.G. Khan Division** during the next 24 hours and from **23rd to 26th August, 2022**.
 - As a result of flood flows generated from the **Hill Torrents of D.G. Khan Division, River Indus at Taunsa Barrage** is likely to attain **High to Very High Level Flood** during the next 24 hours and also from **23rd to 26th August, 2022**.

Special Precautionary Measures By Concerned Organizations:

11. All concerned organizations including field formations of respective Irrigation Departments of **Punjab (in particular for Taunsa downstream)** and **Sindh (in particular from Guddu Barrage upto Kotri Barrage downstream)** are strictly advised to ensure unhalted flood fighting as and when required and remain on **“High Alert”**, take all necessary precautionary measures as per the Contingency Plan for further Flood Fighting activity and round-the-clock patrolling of river embankments and training works including irrigation & drainage network.

Specific Directions For Dam/Reservoir/Barrages Management Organizations:

12. Further to above, Managers of major dams/ reservoirs/ barrages/ headworks (**in Khyber Pakhtunkhwa, Punjab & Sindh**) are strictly cautioned to remain on **“High Alert”** to effectively manage/ route forecasted river discharges without compromising on structural safety.
13. All concerned organizations including PDMA/DDMA are also advised to remain **Fully Alert & Vigilant**, take timely actions on warnings issued by the concerned organizations (**especially in the context of flood generating hill torrents in the areas of forecast in Punjab & Sindh**) to ensure safety of communities living in low lying areas, public & private property besides irrigation, drainage & flood protection infrastructure etc.
14. Pakistan Meteorological Department (PMD) is closely monitoring the present weather system over the country in the specific context of **Low Pressure Area** over **Sindh** and **Depression** over **Northwestern Chattisgarh & adjoining Madhya Pradesh (India)** and is keeping all concerned fully informed through FFD, Lahore.


(Ahmed Kamal)
Chief Engineering Advisor/
Chairman, Federal Flood Commission

Distribution:

1. Minister for Water Resources, Islamabad.
2. Minister for Planning, Development & Special Initiatives, Islamabad.
3. Minister for Climate Change, Islamabad.
4. Secretary to the Prime Minister, Prime Minister's Office, Islamabad
5. Secretary, Ministry of Water Resources, Islamabad.
6. Secretary, Planning, Development & Special Initiatives Division, Islamabad.
7. Secretary, Ministry of Climate Change, Islamabad.
8. Secretary, Ministry of National Food Security & Research, Islamabad

Distribution:

9. Director General (Coordination-III), President's Secretariat (Public), Aiwan-E-Sadr, Islamabad.
10. Chairman, National Disaster Management Authority, Prime Minister's Office, Islamabad.
11. Chairman, WAPDA, WAPDA House, Lahore.
12. Chief Executive Officer, Pakistan Railways, Lahore.
13. Chairman, Indus River System Authority, Islamabad.
14. Pakistan Commissioner for Indus Waters (PCIW), Islamabad.
15. Chairman, National Highway Authority, Islamabad.
16. Chairman PCRWR, Ministry of Water Resources, Islamabad.
17. Director General, Pakistan Meteorological Department, Islamabad.
18. Member (Water), WAPDA, WAPDA House, Lahore.
19. Member (Infrastructure), Planning Commission, Islamabad.
20. Chief Secretary, Government of the Punjab, Lahore.
21. Chief Secretary, Government of Sindh, Karachi.
22. Chief Secretary, Government of Khyber Pakhtunkhwa, Peshawar.
23. Chief Secretary, Government of Balochistan, Quetta.
24. Chief Secretary, Government of Gilgit-Baltistan, Gilgit.
25. Chief Secretary, Government of Azad Jammu & Kashmir, Muzaffarabad.
26. Chief Commissioner, ICT, Islamabad.
27. Chairman, Capital Development Authority, Islamabad.
28. Commissioner, Rawalpindi.
29. Secretary, Irrigation Department, Government of the Punjab, Lahore.
30. Secretary, Irrigation Department, Government of Sindh, Karachi.
31. Secretary, Irrigation Department, Government of Khyber Pakhtunkhwa, Peshawar.
32. Secretary, Irrigation Department, Government of Balochistan, Quetta.
33. Secretary (Works), Gilgit-Baltistan-PWD, Gilgit.
34. Chief Engineer Merged Areas, Irrigation Department, Government of K.P, Peshawar.
35. Secretary, Irrigation & Agriculture, Government of AJ&K, Muzaffarabad.
36. General Manager, Tarbela Dam Project (TDP), WAPDA, Tarbela.
37. General Manager, Mangla Dam Organization (MDO), WAPDA, Mangla.
38. Director General, Provincial Disaster Management Authority, Government of the Punjab, Lahore.
39. Director General, Provincial Disaster Management Authority, Government of Sindh, Karachi.
40. Director General, Provincial Disaster Management Authority, Government of K.P, Peshawar.
41. Director General, Provincial Disaster Management Authority, Government of Balochistan, Quetta.
42. Director General, Gilgit Baltistan, Disaster Management Authority, Gilgit.
43. Director General, State Disaster Management Authority, Govt. of AJ&K, Muzaffarabad.
44. Director General, Irrigation & Small Dams Organization, Govt. of AJ&K, Muzaffarabad.
45. Managing Director, WASA, Rawalpindi.
46. Principal Information Officer, Press Information Department, Islamabad.
47. Director (News), Associated Press of Pakistan, Islamabad.
48. Director (News), Pakistan Television, Islamabad.
49. Flood Cell, General Staff Branch, Engineers Directorate, GHQ, Rawalpindi.
50. Chief Executive Officer, National Disaster Risk Management Fund (NDRMF), Islamabad.

U.O. No.FC-I (31)/2022, Dated 21-08-2022

Copy for information to:

Rivers and Reservoir Positions August 21, 2022 at 0600 Hours

A. River Flow Situation:

(Discharge in Cusecs)

Structures	Designed Capacity	Historic Peak Floods experienced to-date*		Last Year Flow		Today Actual Flow with Flood Classification			Comparative Danger (VHF) Classification
		Discharge	Date	Inflow	Outflow	Inflow	Outflow	Flood Classification*	
1	2	3	4	5	6	7	8	9	10
River Indus									
• Tarbela Reservoir	1,500,000	604,000	30-7-2010	121,000	95,000	264,000	269,000	Low Flood (F)	650,000
• Kalabagh	950,000	950,000	14-7-1942	176,000	169,000	263,000	259,000	Low Flood (R)	650,000
• Chashma Reservoir	950,000	1,036,673	01-8-2010	134,000	116,000	318,000	300,000	Low Flood (F)	650,000
• Taunsa	1,000,000	959,991	02-8-2010	163,000	141,000	490,000	490,000	Med Flood (F)	650,000
• Guddu	1,200,000	1,199,672	15-8-1976	195,000	152,000	403,000	403,000	Med Flood (R)	700,000
• Sukkur	900,000	1,161,000	16-8-1976	122,000	66,000	369,000	369,000	Med Flood (R)	700,000
• Kotri	875,000	981,000	14-8-1956	31,000	NIL	234,000	234,000	Low Flood (R)	650,000
River Kabul									
• Warsak	540,000				19,000		76,000	Med Flood (R)	200,000
• Nowshera		450,000	29-07-2010		23,000		60,000	Low Flood (R)	200,000
River Swat									
• Chakdara Bridge		360,000	30-07-2010		9,000		22,000	Normal	150,000
• Munda (H. Works)		355,000	29-07-2010		4,000		21,000	Normal	150,000
• Charsadda Road	150,000	360,000	30-07-2010		5,000		21,000	Normal	100,000
River Jhelum									
• Mangla Reservoir	1,060,000	1,090,000	10-9-1992	24,000	34,000	48,000	8,000	Normal	225,000
• Rasul	850,000	952,170	10-9-1992	26,000	8,000	7,000	NIL	Normal	225,000
River Chenab									
• Marala	1,100,000	1,100,000	26-8-1957	53,000	17,000	111,000	87,000	Normal	400,000
• Khanki	1,100,000	1,086,460	27-8-1959	14,000	7,000	76,000	70,000	Normal	400,000
• Qadirabad	900,000	948,530	11-9-1992	23,000	3,000	67,000	51,000	Normal	400,000
• Trimmu	875,000	943,225	08-7-1959	23,000	7,000	88,000	77,000	Normal	450,000
• Panjnad	865,000	802,516	17-8-1973	13,000	NIL	84,000	78,000	Normal	450,000
River Ravi									
• Jassar	275,000	680,000	05-10-1955		3,000		17,000	Normal	150,000
• Shahdara	250,000	680,000	22-9-1988		20,000		16,000	Normal	135,000
• Balloki	380,000	336,200	28-9-1988	30,000	1,000	32,000	5,000	Normal	135,000
• Sidhnai	150,000	330,210	02-10-1988	15,000	NIL	24,000	14,000	Normal	90,000
River Sutlej									
• Suleimanki	325,000	598,872	08-10-1955	14,000	2,000	18,000	7,000	Normal	175,000
• Islam	300,000	492,581	11-10-1955	1,000	NIL	4,000	3,000	Normal	175,000

B. Reservoir Storage Position:

Reservoir	Maximum Conservation Level (Ft-AMSL)	Minimum Operating Level (Ft-AMSL)	Water Level (Feet-AMSL)			Live Storage (MAF)			Present Storage (%age of total storage)
			2020	2021	2022	Maximum	Last Year	Today	
1	2	3	4	5	6	7	8	9	10
Tarbela	1550.00	1398.00	1538.93	1542.11	1550.00	5.827	5.431	5.827	100 %
Chashma	649.00	638.15	646.60	648.40	642.00	0.278	0.247	0.058	20.86 %
Mangla	1242.00	1050.00	1237.75	1202.30	1176.15	7.356	4.479	2.976	40.46 %
Total Live Storage						13.461	10.157	8.861	65.83 %

C. Skardu Temperature:

Skardu Temperature	Last year 2021	Today 2022	Difference (+ / -)
Maximum	33.4 °C	34.6 °C	+ 1.2 °C
Minimum	19.1 °C	16.4 °C	- 2.7 °C

NOTES: "Mild" Categories

- Low Flood: River flowing within deep (winter) channel(s) but about to spill threatening only river islands/belas
Medium Flood: River partly inundating river islands/belas
High Flood: River almost fully submerging islands/belas and flowing upto high banks/bunds but without encroachment on the freeboards

"Danger" Categories

- Very High Flood (VHF): River flowing between high banks/bunds with encroachment on the freeboard
Exceptionally High Flood (EHF): Imminent danger of overtopping/breaching, or the high bank areas have become inundated

* Flood Classification/ Historic Peak Floods: (applied on downstream discharge/Outflow)

(R) Signifies "Rising" Flood, (F) Signifies "Falling" Flood, (S) Signifies "Stable" Flow Condition & NR stands for "Not Received"

Government of Pakistan
Ministry of Water Resources
**Office of Chief Engineering Adviser/
Chairman, Federal Flood Commission**
DAILY WEATHER AND FLOOD SITUATION REPORT
SUNDAY AUGUST 21, 2022
Significant Rainfall Events during the Past 24 Hours

Sr. No.	City/Observatory	Rainfall (mm)
A	Punjab	
1.	Murree	64
2.	DG Khan	46
3.	Attock	56
4.	Lahore	42
5.	Bhandu Wala	22
6.	Rahim Yar Khan	17
7.	Mirkhani	16
8.	Khanpur	13
9.	Haraman & Gujranwala	06 (each)
B	Sindh	
10.	Moin-Jo-Daro	125
11.	Khairpur	79
12.	Jacobabad	48
13.	Larkana	43
14.	Rohri	24
15.	Sukkur	22
C	Khyber Pakhtunkhwa	
16.	Daggar	72
17.	Kakul	68
18.	Mamad Gut	52
19.	Lower Dir	49
20.	Mohmand Dam	34
21.	Pashat-Bajaur	29
22.	Landi Kotal	26
23.	Balakot	25
24.	Pattan	23
25.	Tarbela	19
26.	Dir	18
27.	Saidu Sharif	17
28.	Ghalanai	15
29.	Kalam, Besham & Malam Jabba	13 (each)
30.	Chitral & Shinkiarri	12 (each)
31.	Parachinar	11
32.	Oghi	10
33.	Buner	07
D	Balochistan	
34.	Khuzdar	57
35.	Lasbela	41
36.	Kalat	40
37.	Barkhan	30
38.	Zhob	25
39.	Quetta	18

Government of Pakistan
Ministry of Water Resources
Office of Chief Engineering Adviser/
Chairman, Federal Flood Commission
DAILY WEATHER AND FLOOD SITUATION REPORT
SUNDAY AUGUST 21, 2022
Significant Rainfall Events during the Past 24 Hours

Sr. No.	City/Observatory	Rainfall (mm)
40.	Ziarat	15
41.	Dalbandin	14
42.	Chaman	11
43.	Sibbi	10
44.	Muslim Bagh	08
E	Gilgit-Baltistan	
45.	Astore	07
46.	Drosh & Bunji	06 (each)
47.	Bagrote	05
F	AJ&K	
48.	Dhulli	91
49.	Palandri	80
50.	Bandi Abbaspur	76
51.	Garhi Dopatta	25
52.	Rawalakot	21
53.	Hajira	20
54.	Chakothi	14

Source: FFD, Lahore (Phone No. 042 99200139)