CHAPTER-1

SALIENT FEATURES OF JHELUM CANAL DIVISION

1.1 LOCATION

Upper Jhelum Canal off takes from Mangla Dam at 33°07' 16" N Latitude & 73°38' 24" Longitude and passes through the Districts Mirpur *(RD 0+000 to 77+106),* Bhimber *(RD 77+106 to 90+000)*, Gujrat *(RD 90+000 to 240+779) and RD 252+840 to 440+000)* and Mandi Bahauddin (240+779 to 252+840) before it out falls in the River Chenab U/S Khanki Barrage at Latitude 32° 27' 45" N and Longitude 74°01' 26" E.

1.2 GENERAL DESCRIPTION

Jhelum Canal Division has been entrusted with the maintenance of Upper Jhelum Canal from RD 27+500 to 440+000 (134 KM). The length of Flood embankment in the jurisdiction is 56.61 KM. Jhelum Canal Division is affected by the Floods in River Jhelum, River Kahan, River Chenab and Bhimber Nullah.

i. RIVER JHELUM

Jhelum River originates from occupied territories of Jammu and Kashmir and after traversing a long distance in the hilly areas of Gilgit and Azad Kashmir it enters Mangla Dam Reservoir.

Mangla Head works was constructed on River Jhelum in the year 1915 at a distance of about 23 miles in the Northern direction of Jhelum City. It remained in operation till the construction of Mangla Dam. River Jhelum flows parallel to the UJC in reach RD. 27+500 to 243+000 and poses a threat to the safety of Canal in the reach RD 27+500 to 41+000. Following structures / river training works have become abandoned due to reasons mentioned against each structure.

Sr. No.	Name of Bund or Stud	Top width	Length	Side Slope	Remarks
1.	C.D. Bund	20 Ft	2260 Ft	3:1 inner & 2:1 outer	Structures from Sr. No. 1 to 8 are useless due to construction of Jhelum city flood bund in front of them.
2.	G.H. Bund	20 Ft	840 Ft	3:1 inner & 2:1 outer	
3.	Stud No.1	24 Ft	1365 Ft	2:1 inner & 2:1 outer	
4.	Stud No.2	24 Ft	790 Ft	2:1 inner & 2:1 outer	
5.	Stud No.3	24 Ft	725 Ft	2:1 inner & 2:1 outer	
6.	Stud No. 'X'	20 Ft	130 Ft	2:1 on either side	
7.	Stud No. 'Y'	30 Ft	165 Ft	2:1 on either side	
8.	Stud No. 'Z'	20 Ft	185 Ft	2:1 on either side	

ii. KAHAN RIVER

It is a hill torrent. Maximum discharge of 1,20,000 Cs was noticed during the flood of 1992. It outfalls into River Jhelum, D/S of Jhelum Cantonment near Village Naugran, after traversing a long distance in District Jhelum. As it is a hill torrent and carries flashy discharge due to very steep slope, it causes erosion to the lands and abadies of District Jhelum.

iii. BHIMBER NULLAH

Bhimber Nullah is a tributary of River Chenab and flows along the left bank of Upper Jhelum Canal from RD. 414+000 to 425+000 and then both merge before it outfalls into River Chenab, upstream of Khanki Headwork's. This reach of the channel, where Nullah is in closed vicinity has been protected by properly designed stone pitching, however, the channel is kept under watch during flood season.

iv. NULLAH BUNAHAN

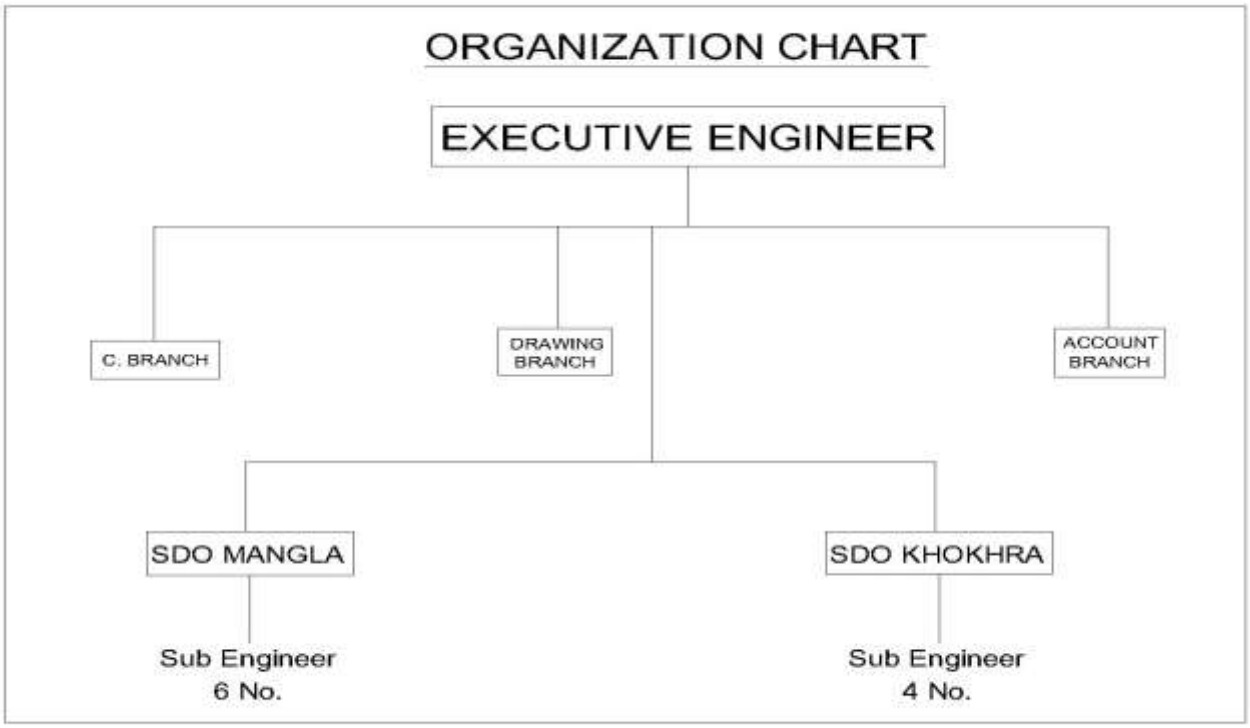
Nullah Bunahan is tributary of River Jhelum which originates from boundary of District Chakwal and falls in River Jhelum U/S Rasul Barrage. The Discharge of Nullah Bunahan is 75000 Cs which causes inundation of crop and abadies of Village Bhambar and water spreads over Jhelum-PD Khan Road as well. Now Bhamber Flood Bund has been constructed along left bank of Nullah Bunahan upto 7473 Ft to safeguard crops and village abadi.

1.3 ADMINISTATIVE SETUP

The Jhelum Canal Division operates under the Executive Engineer and is structured into two sub-divisions for efficient management. The administrative hierarchy is as follows:

- Executive Engineer, Gujrat Canal Division, Gujrat
- Sub Divisional Officer, Mangla Canal Sub-Division, Mangla
- Sub Divisional Officer, Khokhra Canal Sub Division, Rasul
- Seven (07) Sub Engineers

Organization Chart of the division is shown in the figure-01.


ORGANIZATION CHART
EXECUTIVE ENGINEER
C. BRANCH
DRAWING BRANCH
ACCOUNT BRANCH
SDO MANGLA
SDO KHOKHRA
Sub Engineer
6 No.
Sub Engineer
4 No.

Mangla Canal Sub Division RD 27+500 to 150+000			
Sr. No	**Name of Section**	**Jurisdiction**	**Structures**
1.	**MANGLA SUB DIVISION FROM RD 27+500 TO RD 149+880**		
1	Bong Section	27+500 to 40+875	Bong level crossing (RD 27+500)
2	Jatli Section	40+876 to 80+000	Jatli level crossing (RD 78+695)
3	Rehmanpur Section	80+000 to 107+000	Rehmanpur level crossing (RD 89+149)
4	Jaggu Section	107+000 to 150+000	Jaggu level crossing (RD 123+050)
5	Jhelum Section	River Jhelum from Mangla to Nullah Bunhan	Bunds, Studs, spurs etc
6	Mechanical Section	Mechanical workshop	
2.	**KHOKHRA CANAL SUB DIVISION RD 150+000 to 440+000**		
7	Rajor Section	150+000 to 216+000	
8	Khokhra Section	216+000 to 293+000	Khokhra Cross Regulator (RD 255+080)
9	Puranwala Section	293+000 to 366+000	
10	Shadiwal Section	366+000 to 440+000	

1. The Head Quarter of Jhelum Canal Division is at 46-A Sarwar Road Jhelum Cantt.
2. Mangla Sub Division with Office of the SDO stationed at WAPDA Colony Mangla is responsible for maintaining Upper Jhelum Canal from RD. 27+500 to 150+000, flood bunds along River Jhelum from Mangla to G.T Road bridge and flood bunds along River Kahan from Malot Bridge to Jhelum Cantt and Nallah Bunhan.

3. Khokhra Sub Division at Rasul is responsible to maintain Upper Jhelum Canal from RD. 150+000 to RD. 440+000 (tail) and flood bunds/ guide walls along River Jhelum from G.T Road Bridge to Rasul Head Works.

CHAPTER-2

FLOOD PROTECTION AND RIVER TRAINING WORKS

2.1. DESIGN PARAMETERS OF TRAINING WORKS

S. No.	Name of Bund or Stud	Top width	Length	Side Slope	Remarks
i	**RIVER JHELUM (Mangla Canal Sub Division)**				
1	Protection Bund near RD.33 UJC.	25 Ft	1500 Ft	2:1 on either side	Mirpur
2	Jabbar Bund	20 Ft	4200 Ft	3:1 on either side	Mirpur
3.	Stud No. 1 near village Sheikhupur .	15 Ft	75 Ft	2:1 on either side	1994-95
4.	Stud No. 2 near village Loharian	15 Ft	75 Ft	2:1 on either side	Stud No.1 to 7 in Dina
5.	Stud No. 3 near village Khatana.	15 Ft	75 Ft	2:1 on either side	
6.	Stud No. 4 near village Dulyal	15 Ft	75 Ft	2:1 on either side	
7.	Stud No. 5, near village Dulyal	15 Ft	75 Ft	2:1 on either side	
8.	Stud No. 6, near village Dulyal	15 Ft	75 Ft	2:1 on either side	
9.	Stud No. 7 near village Budhar	15 Ft	75 Ft	2:1 on either side	Washed away during Flood 2014. Reconstructed in 2023
10.	Stud No.8 near Pind Rajwal	15 Ft	75 Ft	2:1 on either side	Stud No.8 to 17 in Jhelum
11.	Stud No.9 near village Chak Balian	15 Ft	75 Ft	2:1 on either side	
12.	Stud No.10 U/s village Bhoundnan Gakhran	15 Ft	75 Ft	2:1 on either side	
13.	Stud No.11 near village Pindi Khaira	15 Ft	75 Ft	2:1 on either side	Washed away during flood 2014 and Restoration work is in progress
14.	Stud No.12 near village Pindi More	15 Ft	75 Ft	2:1 on either side	Stud No.8 to 17 in Jhelum
15.	Stud No.13 near village Chak Daulat	15 Ft	75 Ft	2:1 on either side	
16.	Stud No.14, near village Chak Daulat	15 Ft	75 Ft	2:1 on either side	
17.	Stud No.15, near village Chak Daulat	15 Ft	75 Ft	2:1 on either side	
18.	Stud No.16, near village Chak Daulat	15 Ft	75 Ft	2:1 on either side	
19.	Stud No.17 near village Masumpur	15 Ft	205 Ft	2:1 on either side	150+55 Ft
20.	Solid Stone Spur Pakhwal & Tawakal Pakhwal	20 FT	410 Ft	1½:1 on either side	410 Ft
21.	Jhelum Cantt Protection Bund	25 Ft	2500 Ft	2:1 on either side	"Extending cantonment Flood Bund downstream G.T Road Bridge along right bank of Jhelum River" in length of 29500 ft has been framed amounting to Rs. 7800 million for extension of Jhelum Cantt bund.

S. No.	Name of Bund or Stud	Top width	Length	Side Slope	Remarks
22.	Jhelum City Bund	25 Ft	20000 Ft	2:1 River side & 3:1 Country side	2018
23.	Protecting Sarai Alamgir Abadies between Railway and G.T Road Bridge on Left Bank of River Jhelum.	25 Ft	1800 Ft	2:1 River side & 3:1 Country side	Sarai Alamgir
24.	Shah Madar guide wall	25 Ft	1847 Ft	2:1 on either side	Sarai Alamgir (M)
	Khokhra Canal Sub Division				
25.	Paharwal guide wall	25 Ft	2299 Ft	2:1 on either side	Sarai Alamgir
26.	New Paharwal Guide wall	25 Ft	1980 Ft	2:1 on either side	
27.	Khaderiala guide wall	25 Ft	2182 Ft	2:1 on either side	
28.	Kharka Guide wall	25 Ft	1444 Ft	2:1 on either side	
29.	Gurha Jattan Guide wall	25 Ft	2105 Ft	2:1 on either side	
KAHAN RIVER (Mangla Canal Sub Division)					
1.	Stud No.1	15 Ft	250 Ft	2:1 on either side	1986-90
2.	Stud No.2	15 Ft	330 Ft	2:1 on either side	
3.	Stud No.3	15 Ft	200 Ft	2:1 on either side	
4.	Stud No.4	15 Ft	350 Ft	3:1 on either side	
5.	Stud No.5	15 Ft	300 Ft	2:1 on either side	
6.	Stud No.6	15 Ft	700 Ft	2:1 on either side	
7.	Gurha Ahmed Bund (R)	25 Ft	10900 Ft	2:1 on either side	An ADP scheme of extension of Gurha Ahmed flood bund to length of 1850 ft amounting to Rs. about 120 million must be included in ADP 2026-27.
8.	Naugran Flood Bund (L)	20 Ft.	19500 Ft	2:1 on either side	An ADP scheme of "Rehabilitation and extension of Naugran Flood Bund" has been prepared including pitching and apron amounting to Rs.1150/- million which must be included in ADP for proper repair of Bund.
BHIMBER NULLAH (Khokhra Canal Sub Division)					
1.	UJC Protection Bund RD.293-299/L	25 Ft	6000 Ft	1½:1 on either side	
2.	UJC Protection Bund RD.305-320/L	25 Ft	15000 Ft	1½:1 on either side	
3.	UJC Protection Bund RD.418-438/L	25 Ft	20000 Ft	1½:1 on either side	
4.	UJC Protection Bund RD.427-440/R	25 Ft	13000 Ft	1.½:1 on either side	

1.	**Nullah Bunahan (Mangla Canal Sub Division)**				
Sr. No.	**Name of Bund or Stud**	**Top width**	**Length**	**Side Slopes (River Side / Country Side)**	**Remarks**
1.	Bhamber Flood Bund on Nullah Bunahan (L)	20 Ft	7400 Ft	2:1 on either side	An ADP scheme of "Extending Bhamber flood bund to protect agriculture land and village abadies of Bhamber, Mamyan, Rasool Nagar, Qudrat abad and Khurd etc on left bank of river bunhan distt Jhelum" to length of 20000 ft amounting to Rs. about 485 million must be included in ADP 2026-27.

BUNDS ALONG LEVEL CROSSINGS.

1.	**BONG LEVEL CROSSING (Mirpur)**				
i	U/S Right Bund	20 Ft	300 Ft	Pitched 1.5:1/2:1	
ii.	U/S Left Bund	20Ft	2500 Ft	Pitched 1.5:1/2:1	
iii.	D/S Right Bund	20 Ft	150 Ft	Pitched 1.5:1/2:1	
iv	D/S Left Bund	20 Ft	2900 Ft	Pitched 1.5:1/2:1	
2.	**JATLI LEVEL CROSSING (Mirpur)**				
i.	U/S Right Bund	30Ft	925 Ft	Pitched 1.5:1/2:1	
ii.	U/S Left Bund	30 Ft	4550 Ft	Pitched 1.5:1/2:1	
iii.	D/S Right Bund	30 Ft	1250 Ft	Pitched 1.5:1/2:1	
iv.	D/S Left Bund	30 Ft	1250 Ft	Pitched 1.5:1/2:1	
3.	**REHMANPUR LEVEL CROSSING (Mirpur)**				
i.	U/S Right Bund	30 Ft	6000 Ft	Pitched 1.5:1/2:1	
ii.	U/S Left Bund	30 Ft	1000 Ft	Pitched 1.5:1/2:1	
iii.	D/S Right Bund	30 Ft	1000 Ft	Pitched 1.5:1/2:	
iv.	D/S Left Bund	30 Ft	1000 Ft	Pitched 1.5:1/2:	
4.	**JAGGU LEVEL CROSSING (Sarai Alamgir)**				
i.	U/S Right Bund	25 Ft	4750 Ft	Pitched1.5:1/2:1	
ii.	U/S Left Bund	25 Ft	2705 Ft	Pitched 1.5:1/2:1	
iii.	D/S Right Bund	20 Ft	1000 Ft	Pitched 1.5:1/2:1	
iv.	D/S Left Bund	25 Ft	1000 Ft	Pitched 1.5:1/2:1	
	TOTAL		**176415 Ft**		
	G.TOTAL		**56.61 KM**		

2.2 LOCATION MAP

Location Map is attached as **Annex-A**

CHAPTER-3

BREIF HISTORY OF PAST FLOOD EVENTS

RIVER JHELUM.

Since construction of Mangla Dam, flood discharges in River Jhelum D/S Mangla are very low, however, in 1992, an exceptionally high flood of 10,50,000 Cs. was experienced in River Jhelum. The abadies along River Jhelum on both banks were affected. Jhelum City was inundated with heavy loss to lives and properties. Vast lands of villages U/S Jhelum city on right bank were eroded. Consequently 17 No. Studs were constructed in 1994-95 for the protection of these villages against erosion.

The tendency of River flow D/S G.T. Road Bridge was towards left Bank and eroded away the abadies and agricultural land of villages Chak Sikandar, Kharka, Gurha Jattan, Bhalwal Gharbi, Paharwal. 6 No. Guide walls were constructed to safeguard these villages.

KAHAN RIVER

Normally 60,000 to 70,000 Cs. discharge is experienced in River Kahan, but in 1992 about 1,20,000 Cs. was recorded. The velocities are very high due to steeper slope. Six No. spurs for protection of village Chak Almas, Kalwantpur, Shahmadpur, Bagh, Rajupindi and Chah Gunja were constructed during 1986-87 and 1989-90 to save these abadies against erosion. A flood embankment for protection of village Gurha Ahmed has been constructed in a length of 10900 ft. in the year 1994-95 and 2016-17. Another flood embankment namely, “Naugran Flood Protection Bund” was constructed in the year 1929 by District Council Jhelum and has been rehabilitated under ADP up to length of 19500 Feet without pitching and apron for which ADP scheme amounting to Rs. 1300/- million has been framed.

BHIMBER NULLAH

Bhimber Nullah is a tributary of river Chenab and directly hits the left bank of UJC at RD 414-425.

CHAPTER-4

DESIGN DATA HISTORIC PEAK FLOOD DATA AND PREVIOUS YEARS FLOOD DATA OF HEAD WORKS/ BARRAGES AND / OR OTHER CONTROL POINTS.

Mangla Dam

Crest Level = 1264 ft amsl
Normal Pond Level (NPL) = 1242 ft amsl
Critical Level for flood = 1232 ft amsl
Critical Level for preparation = 1220 ft amsl
Dead Storage Level (DSL) = 1050 ft amsl
Maximum storage at 1242 = 7.277 MAF

4.1 FLOOD LIMITS

River Jhelum at Railway Bridge

1.	Low flood.	0.75 lac to 1.10 lac Cs.
2.	Medium Flood	1.10 lac to 1.50 lac Cs.
3.	High Flood	1.50 lac to 2.25 lac Cs.
4.	Very High Flood	2.25 lac and above.

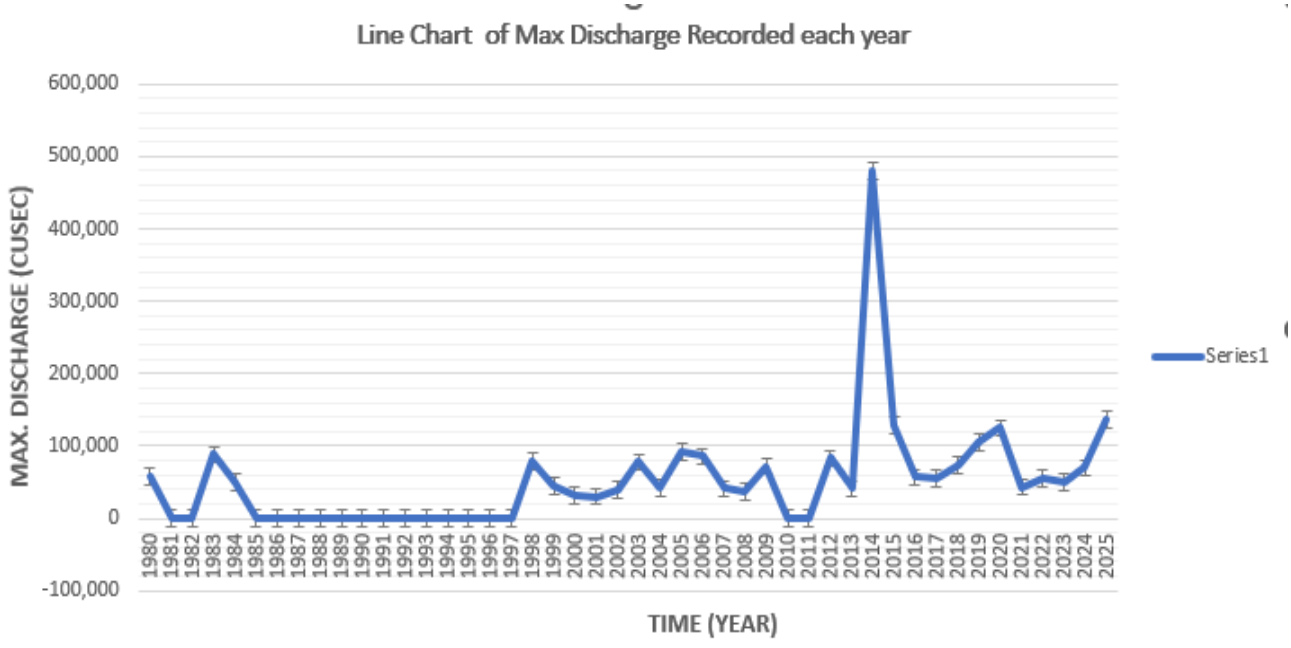
4.2 TIME LAGS OF FLOODS

The flood water from Mangla to Railway Bridge Jhelum reaches in 7 hours after traversing a distance of 20 miles whereas from Railway Bridge to Rasul Barrage also takes 7 hours.

4.3 HIGHEST FLOODS

YEAR	Max. Discharge (in Cs.)
1988	2,53,000
1992	10,50,000
1995	2,80,000
1997	4,64,000
2010	2,26,000
2014	4,80,000

4.4 PEAK DISCHARGES AT JHELUM RIVER



YEAR	Max. Discharge (in Cs.)	YEAR	Max. Discharge (in Cs.)
1980	58,146	2015	129000
1981	-	2016	56700
1982	-	2017	55000
1983	88,445	2018	73792
1984	49,993	2019	105000
1985	-	2020	125000
1986	1,03,085	2021	43000
1987	1,35,000	2022	55000
1988	2,53,000	2023	50000
1989	1,53,174	2024	70000
1990	1,25,247	2025	136079
1991	1,04,692		
1992	10,50,000		
1993	1,00,000		
1994	1,03,430		
1995	2,80,000		
1996	1,45,336		
1997	4,64,000		
1998	79,500		
1999	45,000		

2000	31,000		
2001	30,000		
2002	40,000		
2003	78,000		
2004	42,000		
2005	92,000		
2006	86,000		
2007	41,000		
2008	37,000		
2009	72,000		
2010	2,26,000		
2011	1,20,000		
2012	82,950		
2013	41,000		
2014	480,000		

4.4.2. BHIMBER NULLAH RECORDED AT RAILWAY CROSSING G.T. ROAD GUJRAT

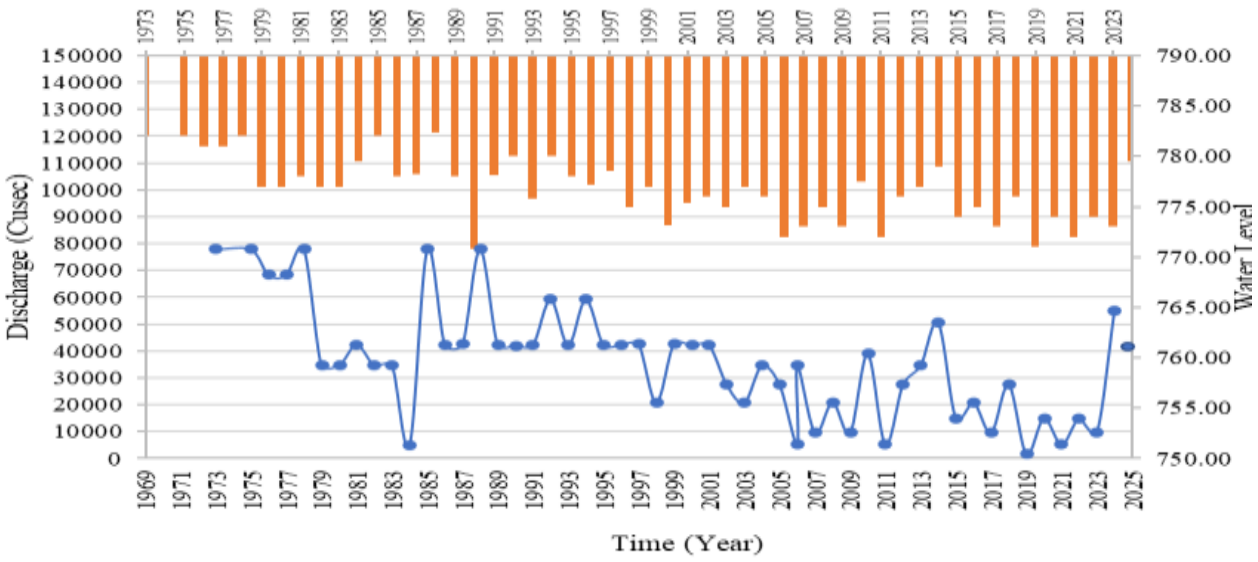


Figure 1: Hydrograph and water level of Bhimber Nullah

Table 1: Year wise discharge and water level of Bhimber Nullah

Sr.No.	Year	Maximum	Approximate discharge
1	1973	782.00	77898
2.	1975	782.00	77898
3.	1976	781.00	68367
4.	1977	781.00	68367
5.	1978	782.00	77898
6.	1979	777.00	34709
7.	1980	777.00	34706
8.	1981	778.00	42402
9.	1982	777.00	34709
10.	1983	777.00	34706
11.	1984	779.50	51300
12.	1985	782.00	77898
13.	1986	778.00	42404
14.	1987	778.20	42600
15.	1988	782.40	77938
16.	1989	778.00	42402
17.	1990	770.80	42009
18.	1991	778.10	42407
19.	1992	780.00	59256
20.	1993	775.80	42282
21.	1994	780.00	59256
22.	1995	778.00	42402
23.	1996	777.20	42358
24.	1997	778.50	42538
25.	1998	775.00	20951
26.	1999	777.00	42834
27.	2000	773.10	9737

28.	2001	775.40	42260
29.	2002	776.00	27541
30.	2003	775.00	20951
31.	2004	777.00	34706
32.	2005	776.00	27542
33.	2006	772.00	5300
34.	2006	777.00	34706
35.	2007	773.03	9737
36.	2008	775.00	20951
37.	2009	773.00	9737
38.	2010	777.50	38991
39.	2011	772.00	5300
40.	2012	776.00	27541
41.	2013	777.00	34706
42.	2014	779.00	50596
43.	2015	774.00	14991
44	2016	775.00	20951
45	2017	773.00	9737
46	2018	776.00	27541
47	2019	771.00	1874
48	2020	774.00	14991
49	2021	772.00	5300
50	2022	774.00	14991
51	2023	773.00	9737
52	2024	779.50	54926
53	2025	778.00	42402

CHAPTER-5

FLOOD FIGHTING STRATEGY

In order to combat the flood, following plan is to be put in operation for each River or Nullah and protective works as discussed under: -

RIVER JHELUM

Due to construction of Mangla Dam, there is very rare flood trouble in Jhelum River downstream Mangla. However, any flood warning will be tackled as under.

i) Low Flood (0.75 lac to 1.10 lac Cs.)

The Sub Engineer Mangla will remain present at Head quarter during the low floods. Sub Engineer Jhelum will remain present at Jhelum Spurs with watching establishment. Sub Engineer Rajar will remain present at Rajar and shall keep the guide wall along left bank of River Jhelum under watch.

ii) Medium Flood (1.10 lac to 1.50 lac Cs.)

The Sub Engineer Mangla will remain present at Head quarter during the low and medium floods. Sub Engineer Jhelum will remain present at Jhelum Spurs with watching establishment. Sub Engineer Rajar will remain present at Rajar and shall keep the guide wall along left bank of River Jhelum under watch.

iii) HIGH FLOOD (1.50 lac to 2.25 lac Cs)

On receipt of high flood warning, Sub Divisional Officer, Mangla will be stationed at office of Jhelum Canal Division at Jhelum and Sub Engineer Bong will patrol right bank of UJC from RD. 27+500 to 41+000. He will be responsible to watch and report any unusual behavior of River Jhelum as far as its tendency to move closer to UJC in reach RD. 27+000-41+000. Sub Engineer Jhelum with watching establishment, shall watch all the flood works around Jhelum City.

iv) VERY HIGH FLOOD (2.25 lac and above)

On receipt of very high flood warning, downstream Mangla, the Sub Divisional Officer Mangla will keep Executive Engineer, Jhelum Canal Division and Project Director, Small dams Circle-II, Jhelum informed through telephone regarding the situation of Jhelum protection works. He will supervise flood works on River Jhelum. All the flood works will be kept under day & night watch with flood fighting material to meet any emergency. Sub Divisional Officer Khokhra will supervise day and night watching of guide bunds and will keep Executive Engineer, Jhelum Canal Division and Project Director, Small dams Circle-II, Jhelum informed about the latest situation.

RIVER CHENAB AT KHANKI BARRAGE

Flood warnings from Marala Headworks and Khanki Headworks will be transmitted through telephone to flood information center, Jhelum as well as Sub Divisional Officer, Khokhra Canal Sub Division.

i). Low Floods (1 to 1.50 Lac Cs.)

Sub Engineer, Shadiwal section, will shift to Shahdiwal Rest house and will inform Sub Divisional Officer, Khokhra Canal Sub Division about flood situation in Chenab River.

ii) Medium Floods (1.50 to 2 Lac Cs.)

Sub Engineer, Shadiwal section, will shift to Shahdiwal Rest house and will inform Sub Divisional Officer, Khokhra Canal Sub Division about flood situation in Chenab River.

iii) HIGH FLOOD (2 to 4 Lac Cs)

Sub Divisional Officer, Khokhra Canal Sub Division will supervise watching operations of banks of Upper Jhelum Canal from RD 150 to Tail.

iv) Very High Flood (4 to 6.0 Lac Cs)

Sub Divisional Officer, Khokhra Canal Sub Division and will supervise watching operations of banks of Upper Jhelum Canal from RD 150 to Tail at RD 440+000. Deputy Commissioner and Superintendent of Police, Gujrat will be approached to assist the Department in case of any emergency.

v) Exceptionally High Floods (6.0 Lac Cs and above)

Full mobilization of all resources shall be done. All the flood works will be kept under day and night watch.

Bhimber Nullah along Tail reach UJC, RD. 414+000 to 425+000.

Sub Engineer Shadiwal will remain present, watch and transmit gauges of Bhimber to all concerned round the clock during floods. Sub Divisional Officer Khokhra shall also supervise the operation.

CHAPTER-6

FLOOD DAMAGES RESTORATION WORKS

During heavy /abnormal rainfall event in night of 16-17 July 2025, in district Jhelum and Gujrat a condition of flash flooding occurred in the area that caused heavy damage to infrastructure in the jurisdiction of Jhelum Canal Division, Jhelum. Moreover, whole monsoon season 2025 has caused many damages to the structures which are required to be rectified on emergent basis for the safety and smooth running of irrigation infrastructure in order to avoid any, misshape in future. Structure wise details of damage in Jhelum Canal Division are discussed below:

DUMBIWALA CULVERT

Location: - This culvert is located at RD 236+671 of Upper Jhelum Canal and outfalls on left bank of River Jhelum in Sarai Alamgir District Gujrat at a distance of 26 km from GT Road towards Mandi Bahauddin.
No. Of Barrels: 1
Design Capacity: 2016 cs

DAMAGE OCCUERED AND DAMAGE ASSESMENT

The Dumbiwala culvert situated at RD 236+671 of Upper Jhelum Canal UJC has design capacity of 2016 Cs. Jhelum river flows parallel to UJC in reach RD 27+500 to 243+00, and it is just 1600 ft away from Dumbiwala culvert at RD 236+671. The outfall structure has been badly damaged due to heavy rain fall in this year & previous years as well. The design length of water carrying channel is 200 ft, out of which 140 ft length has already been damaged and still progressing towards right bank of Upper Jhelum Canal. Both end brick work walls have been washed away, and it is apprehended that the complete structure may wash away in coming rainy days endangering the safety of UJC. RCC channel has been partly settled, and some parts have completely broken into pieces.

This deteriorated condition of outfall channel would create un-safety for structure. In present condition, cross drainage work is not functioning properly. The heavy rainfall in the upper catchments area will directly hit the D/S floor / RCC channel resultantly will further exaggerate the problem. These damages are required to be rectified on emergent basis for the safety and smooth running of UJC to avoid any mishap in future. It is pertinent to mention here that work is in progress and will be completed before flood season 2026.

KHADRIALA GUIDE WALL

Location: - The Khadriala Guides wall is located on left bank of River Jhelum near village Khadriala in Tehsil Sarai Alamgir, District Gujrat at a distance of 10 km from N-5 GT Road towards Mandi Bahauddin.
No. of RDs : 2+182
Design Capacity: 500,000 cs

DAMAGE OCCUERED AND DAMAGE ASSESMENT

The river's tendency to shift towards the left bank downstream of the Jhelum GT Road has led to erosion of settlements and agricultural lands in villages such as Paharwal, Kharka, Khadriala, Chak Sikander, Gurah Jattan, and Bhalwal Gharbi. To mitigate this, five guide walls were constructed in 2006-2007. Apron of Khadriala guide wall was damaged in flood season 2014 and the problem is being aggravated during each successor flood season. It is pertinent to mention here that Kahan Nullah, a tributary of River Jhelum directly hits Khadriala Guide wall. In 1992 a flood of 120,000 cs was observed in Nullah Kahan. Last year a flood of more than 60,000 cs was passed which also breached Nougran Flood bund. Similarly, this year many freshets were passed from Nullah Kahan and directly hit khadriala guide wall causing aggravation of damage.

Flood inspection teams and Hydraulic safety evaluation unit have already directed many times for repair of Khadriala guide wall but no funds were provided. Last year Mangla dam attained its maximum conservation level (1242 ft amsl) and Pakistan Metrological Department also issued many warning of category I flood (3 lakh to 5 lakh cs). This situation posed risk of further damage and collapsing of structure. The local population is urgently seeking restoration of the guide walls to their designed specifications to prevent further damage from the river's abnormal behavior. The guide walls were designed to withstand discharges of up to 500,000 cusecs with a unit discharge of 200 cft/rft and a minimum apron top width of 20 feet.These damages are required to be rectified on emergent basis to avoid the untoward situation and for the safety of local Abadies. It is pertinent to mention here that work has been awarded and will be completed before flood season 2026.

NOUGRAN FLOOD BUND

Location: - Naugran Flood Bund is situated on left bank of Nullah Kahan, a tributary of River Jhelum which originates from foothills of district Jhelum and Chakwal and falls into River Jhelum near Village Naugran Tehsil & District Jhelum at a distance of 10 km from N-5 GT Road towards Pind Dadan Khan.

Top width : 20 ft
Length : 19+500 ft
Side Slope : 2: 1 on either side

DAMAGE OCCUERED AND DAMAGE ASSESMENT

Naugran Flood Bund is situated on left bank Nullah Kahan, a tributary of River Jhelum originates from foot hills of District Jhelum and Chakwal falls into River Jhelum near Village Naugran Tehsil & District Jhelum. A No. of villages, Jhelum City and Combined Military Hospital is situated on left bank of Nullah Kahan. A scheme was administratively approved by DDSC in its meeting held on 10.10.2009 amounting to Rs 129.620 million. Work was not completed by contractor.

Due to constant heavy rainfall with high intensity throughout the vast area as well as in District Jhelum to the tune 104 mm on 30.08.2024, breaching of 5 No. local mini-Dams and receiving of run off from vast catchment area starting from Gujar khan, a heavy freshet entered into Bakrala Nullah the tributary of Kahan Nullah. Furthermore, breaching of 05 No. local mini Dams situated in vicinity of Domeli and Sohawa, besides excessive spilled out water of Tain pura Dam No.I & II, Domeli Dam, Gurha Uttam Singh Dam and Salial Dam caused devastating flooding. Resultantly, all excessive rain / flood water entered into Kahan River and

directly hit the flood bund. Ultimately, the Kahan Nullah could not bear the huge pressure of rain / flood water and the Naugran flood bund could not sustain the such pressure due to burrowing animals like rats / porcupine holes and breached between RD.14-15, and also directly hit the bund between RD.9-10 and RD.13-14 which was timely controlled by tree launching.

Due to continuous monitoring and timely interventions, the situation was brought under control, and the potential widespread destruction was mitigated. But the bund is still in dangerous condition for which proper repair is necessary to its designed criteria. The flow of nullah has become parallel with flood bund which is an earthen bund. The velocity in this hill torrent is in the range of 14 to 15 ft / sec which causes serious erosion of this earthen bund. Furtherance, the measurable dangerous gharas were also developed on top of Bund as well as deep rain cuts / ruts developed on slopes of Bund. Similarly, this year many freshets were passed from Nullah Kahan which caused further damage to Nougran flood bund.

Moreover, the locals are making hue & cry over the protection of their lives, precious land and costly infrastructures, as a No. of Villages, agricultural land, Jhelum City and Combined Military Hospital are situated on left bank of Nullah Kahan. It is therefore necessary to rehabilitate the existing bund alongwith pitching and apron to protect agricultural land, many villages and Infrastructure of Pak Army etc. It is pertinent to mention here that work is in progress and will be completed before flood season 2026. Moreover, an ADP scheme of "Rehabilitation and extension of Naugran Flood Bund" has been prepared including pitching and apron amounting to Rs.1150/- million which must be included in ADP for proper repair of Bund.

STUD NO. 11 (River Jhelum)

Location: - Stud No. 11 is situated on right bank of River Jhelum, at a distance of about 14 km downstream of Mangla dam to protect land erosion of village Pindi Khaira.

Top width : 15 ft
Length : 75 ft
Side Slope : 2: 1 on either side

DAMAGE OCCUERED AND DAMAGE ASSESMENT

Since construction of Mangla Dam, flood discharges in River Jhelum D/S Mangla are very low, however, in 1992, an exceptionally high flood of 10,50,000 Cs. was experienced in River Jhelum. The abadies along River Jhelum on both banks were affected. Jhelum city was inundated with heavy loss to lives and properties. Vast lands of villages U/S Jhelum city on right bank were eroded. Consequently 17 No. Studs were constructed in 1994-95 for the protection of these villages against erosion.

A flood of 480,000 cs passed in 2014 from River Jhelum D/S Mangla Dam which caused many damages to irrigation infrastructures. Stud No. 11 was washed during flood 2014 which is meant to protect village Pindi Khaira. Flood inspection teams and Hydraulic safety evaluation unit have already directed many times for repair of Stud No.11 but no funds were provided. Last year Mangla dam its maximum conservation level (1242 ft amsl) and Pakistan Metrological Department also issued warning of category I flood (3 lakh to 5 lakh cs). This situation has posed risk of further damage and erosion of agriculture land and abadies. The local population is urgently seeking restoration of Stud No.11 to designed specifications to prevent further damage from the river's abnormal behavior. It is pertinent to mention here that work is in progress and will be completed before flood season 2026.

CHAPTER-7

FLOOD FIGHTING WATCHING ARRANGEMENT

7.1 PRE FLOOD ARRANGEMENT

The material as detail attached shall be stored at the following sites.

STATUS OF RESERVE STOCK

Sr. No.	Name of Division	Reserve Stock Limit (As per Yard Stick)	Quantity available	Balance Required	Tentative Cost of Stone (Rs. In Million)	Remarks
1	2	3	4	5	6	7
1	Jhelum	5.20	1.258	3.942	66.58	Procurement of reserve stock against minimum requirement has been tried by this division, but no success has so far been achieved

Detail is as under: -

Sr. No.	Name of Structure	Reserve Stock (Lac Cft)			Remarks
		Limit	Available	Required	
1.	Old Paharwal Guide Wall on Left Bank of River Jhelum	1.00	0.20	0.80	Will be procured before the Flood Season on receipt of funds.
2.	Kharka Guide Wall on Left Bank of River Jhelum	1.00	0.00	1.00	
3.	Gurha Jattan Guide Wall on Left Bank of River Jhelum	1.00	0.00	1.00	
4.	Malo Kas on Left Bank of River Jhelum.	0.20	0.00	0.20	
5.	New Paharwal Guide Wall on left Bank of River Jhelum.	0.40	0.00	0.40	
6.	Khaderiala Guide wall on Left Bank of River Jhelum.	0.40	0.20	0.20	
7.	Gurha Ahmed Bund on Kahan River.	0.30	0.324	0.00	
8.	Jhelum Cantt: Bund on Right Bank of River Jhelum.	0.20	0.174	0.08	
9.	Jhelum Protection works & studs on Right Bank of River Jhelum.	0.50	0.36	0.14	
10.	Spurs on Kahan River.	0.20	0.00	0.20	
	Total	**5.20**	**1.258**	**3.942**	

RIVER JHELUM

1. Jhelum city flood bund.	For watching Protection works around Jhelum city
2. Khaderiala guide wall	For watching/Flood fighting on Guide Bunds at Paharwal, Khaderiala and Shah Madar etc

KAHAN RIVER

3. Naugran Flood Bund	For watching Naugran flood bund on Kahan River.
4. Gurha Ahmed Bund.	For watching Gurha Ahmed Bund on Kahan River

BUNHAN NULLAH

5. Bhamber Flood Bund	For watching of Bhamber flood bund

BHIMBER NULLAH

6. Qasimabad flood bund	For watching of left bank and right bank of UJC from RD.418+000 to 440+000 and back flow through River Chenab U/S Khanki Barrage

7.2 Watching Establishment Details

Following watching establishment will be engaged during the flood season for watching and general maintenance of flood works on monthly basis. However, in case of very high flood or in real emergency, the strength of watching establishment will be increased with the express permission of Executive Engineer, Jhelum Canal Division.

Sr. No.	Structure Name	Length (Miles)	Flood Limits							
			Normal Flood Season		Low Flood		Medium/High Flood		Very High/ Exp. High Flood	
			Men	Shift	Men	Shift	Men	Shift	Men	Shift
			1 Person/ 2 mile/Shift (1 Shift)		1 Person/ mile/Shift (1 Shift)		2 Person/ mile/Shift (2 Shift)		5 Person / mile/ Shift (3 Shift)	
1	City Flood Bund	4.86 miles	2	1	5	1	9	2	23	3
2	Cantt Flood Bund									
3	Sarai Alam Gir Flood Bund									
4	Naugran Flood Bund	6.18 miles	3		6		12		30	
5	Gurah Ahmed Flood Bund									
6	Bhamber Flood Bund	1.48 miles	1		1		3		7	
7	Studs No. 1 to 18	0.33 miles	1		1		2		3	
8	Bong Level Crossing	1.17 miles	1		1		2		6	
9	Jatli Level Crossing	1.614 miles	1		2		3		7	
10	Rehmanpur Level Crossing									
11	Jaggu Level Crossing	0.80 miles	1		1		2		5	
12	6 No. Guide walls (Shahmdar, Pharwala, New Pharwal, Khaderiala, Kharkha, Gurha Jattan (Rajar Section)	2.36 miles	1		2		4		10	
13	2 NO. of UJC Protection Bunds (RD.293-299/L, RD.305-320/L) (Puranwala section)	4 miles	2		4		8		20	
14	2 NO. of UJC Protection Bunds (RD.418-438/L, RD.427-440/R) (Shadiwal section)	7 Miles	3		7		14		35	
TOTAL Per Shift :-			**16**		**30**		**59**		**146**	
Total			**16**		**30**		**118**		**438**	
No. of Mates			**1**		**2**		**10**		**36**	

Note: 01 No. Mate is for every 12 No. Beldar.

7.3 Established Camps Details

Sr. No.	Structure Name	Length (Miles)	Vulnerable sites		No. of Camps Established Except Vulnerable Points		
					Normal Flood season/ Low Flood	Medium/ High Flood	Very High/Exp. High Flood
			Reach	No. of Camps	15 Miles	7 Miles	5 Miles
1	City Flood Bund	4.86 miles	RD 17-18	1	-	-	-
2	Cantt Flood Bund						
3	Sarai Alam Gir Flood Bund						
4	Naugran Flood Bund	6.18 miles	RD 11-13	1	-	-	-
5	Gurah Ahmed Flood Bund		RD 3-4	1	-	-	-
6	Bhamber Flood Bund	1.48 miles	RD 0-1	1	-	-	-
7	Studs No. 1 to 18	0.33 miles	-	-	-	-	-
8	Bong Level Crossing	1.17 miles	-	-	-	-	-
9	Jatli Level Crossing	1.614 miles	-	-	-	-	-
10	Rehmanpur Level Crossing		-	-	-	-	-
11	Jaggu Level Crossing	0.80 miles	-	-	-	-	-
12	6 No. Guide walls (Shahmdar,Pharwala, New Pharwal, **Khaderiala,** Kharkha, Gurha Jattan (Rajar Section)	2.36 miles	RD 1-2	1	-	-	-
13	2 NO. of UJC Protection Bunds (RD.418-438/L, RD.427-440/R) ()	4 miles	RD 428-430	1	-	-	-
14	Qasimabad flood bund 2 NO. of UJC Protection Bunds (RD.418-438/L, RD.427-440/R) (Shadiwal section)	7 Miles					
Total				6	-	-	-

7.4 WATCHING MATERIAL

(2.1)Minimum requirement of Flood Fighting Materials for Permanent Camp (15 Milis)

S.No.	ITEM	Required Quantity	Available Quantity	Balance Quantity	Remarks
1.	Tent/ Shouldari	1 No.	NIL	1 No.	Quantity is not available
2.	Chair	6 No.	NIL	6 No.	
3.	Table	1No.	NIL	1No.	
4.	Generator (2-3 KVA)	1 No.	NIL	1 No.	
5.	Pedestal Fans	1 No.	NIL	1 No.	
6.	Charpois	2 No.	NIL	2 No.	
7.	Symbolic Jackets	50 No.	NIL	50 No.	
8.	Polyethene Sheet	100 Set.	NIL	100 Set.	
9.	Bamboos (4” dia and 10 ft Long)	100 No.	NIL	100 No.	
10.	Water Coller	1 No.	NIL	1 No.	
11.	Portable Umbrella	2 No.	NIL	2 No.	
12.	Life Jackets	5 No.	NIL	5 No.	

13.	Utensils (10 person serving)	01 No.	NIL	01 No.	
14.	Jute/ Plastic bags	1000 No.	NIL	1000 No.	
15.	Walki Talkie Set	02 Sets	NIL	02 Sets	
16.	Raincoats	10 No	NIL	10 No	
17.	LED flood light	10 No	NIL	10 No	
18.	Extension Cable (10 ft)	02 No	NIL	02 No	
19.	Rechargeable torches	20 No	NIL	20 No	
20.	Kassi	20 No	NIL	20 No	
21.	Axes	20 No.	NIL	20 No.	
22.	G.I Buckets	05 No.	NIL	05 No.	
23.	7/44 cable	500 Ft	NIL	500 Ft	
24.	Sutli	02 Kg	NIL	02 Kg	
25.	Sewing Needles	10 No	NIL	10 No	
26.	Emergency Medical kit	01No	NIL	01No	
27.	Wire Crates (3x3x3) (at only those camp near river action and reserve stock exists)	100 No	NIL	100 No	

(2.2) Minimum Requirement of Flood Fighting Materials for Temporay Camp. (7 or 5 miles during medium to exceptionally high flood to be outsourced)

S.No.	ITEM	Required Quantity
1.	Tent/ Shouldari	1 No.
2.	Walki Talkie Set	1 Set.
3.	Chair	6No.
4.	Raincoats	10 No.
5.	Table	1 No.
6.	LED flood light	10 No.
7.	Generator (2-3 KVA)	01 No.
8.	Extension Cable (10 ft)	02 No.
9.	Pedestal Fans	01No.
10.	Rechargeable torches	20 No.
11.	Charpois	02 N0.
12.	Kassi	20 No.
13.	Symbolic Jeckets	50 No.
14.	Axes	20 No.
15.	Water Coller	01 No.
16.	G.I Buckets	05 No
17.	Portable Umbrella	02 No
18.	7/44 cable	500 Ft
19.	Utensils (10 person serving)	01 No.
20.	Sutli	02 Kg
21.	Jute/ Plastic bags	500 N0.
22.	Sewing Needles	10 No

7.5 ARRANGEMENT FOR SOUNDING AND PROBING

Sub Divisional Officer concerned will be responsible for making necessary arrangement for observing soundings/ probing of structures in his jurisdiction with the help of Sub Engineers concerned.

7.6 LIGHTING ARRANGEMENT

During peak flood hours, flood fighting operations are carried out round the clock. Torches and rechargeable emergency lights will be arranged, which will facilitate the field formation for successful flood fighting operation. Regular field staff is required to be trained properly and thoroughly to carry out flood watching operations during odd hours. Material will be issued through proper indents.

7.7 RATION ARRANGEMENT

Necessary arrangements will be made for ration for the flood watching/ fighting establishment.

7.8 POL ARRANGEMENT FOR VEHICLE

In case the petrol, Oil and lubricants are in short supply on account of disruption for communication elsewhere in the country, the Executive Engineer Incharge will make timely arrangements for having adequate P.O.L reserve at conveniently places at one or more petrol pumps at Dina, Sarai Alamgir, Jhelum and Mandi Bahauddin in consultation with concerned Deputy Commissioner/ Deputy District Revenue Officers.

7.9 TRANSPORTATION

Already allocated vehicles to the Division will be used during flood season. In case of an exceptionally high flood in River Jhelum, Deputy Commissioner, will be requested to supply additional vehicles for the Supervisory staff and for transportation of labour as well as flood fighting material to the sites of work. A Tractor along with Front & rear blade and trolley has allotted to Jhelum Canal Division for transportation of material etc. Sand Bag filling Machine are also available for any emergency situation on Flood protection works in Jhelum Canal Division.

7.10 LAW AND ORDER

Experience shows that whenever any flood emergency arises, inhabitants of the area try to cut the protection bund at upstream to divert the flood threat from their locality. In such a situation it would be necessary for District Administration to provide.

a) Day and night patrolling to guard against any attempt to cut a bund or structure.

b) Provision of Police Force for any open and defiant attempt of breaching the bund at any place.

In these situations, the Deputy Commissioner and District Police Officer of the respective District would be expected to promptly provide adequate police force accompanied with a Magistrate on being apprised of the situation by Executive Engineer In-charge.

7.11 MEDICAL ARRANGEMENT FOR LABOUR

Medical arrangements will be made with the help of District Government / District Health Officer.

7.12 LIASON WITH OTHER DEPARTMENTS

The Deputy Commissioner and District Police Officer will be contacted in advance and a list of volunteers will be prepared who can be contacted during emergency. The list containing the names of such volunteers and the village Lumbardars made responsible by the Civil Authorities will also be maintained.

7.13 ROLE OF ARMY

Role of Army Authorities during pre flood and in the flood, season is very important. Army Authorities have visited all the flood protection works along with the departmental inspection team. During flood and in emergency, Army is always available to assist the civil departments fully equipped with all kinds of machinery and man power.

7.14 DUTIES OF TELEPHONE ATTENDANT

Sr. #	Name of Official	Period	Time		Ph. #	Remarks
			From	To		
1	Muhammad Riaz Head Signaller	Flood Season	Overall Incharge		0304-8633098	Telegraph Office will be opened 24 Hours in Flood season.
2.	Hafiz Ghulam Murtaza Signaller	Flood Season	6.00	14.00	0331-9606258	
3.	Saqlain Haider operator Signaller	Flood Season	6.00	14.00	0315-3685100	
Sr. #	**Name of Official**	**Period**	**Time**		**Ph. #**	**Remarks**
			From	**To**		
4.	Hafiz Waqar Naib Qasid	Flood Season	6.00	14.00	0345-5699889	Telegraph Office will be opened 24 Hours in Flood season.
5.	Asjad Mehmood Telephone Attendent	Flood Season	14.00	22.00	0322-6745997	
6.	Adeel Ali Naib Qasid	Flood Season	14.00	22.00	0348-5524092	
7.	Sajid Mehmood	Flood Season	22.00	6.00	0302-5621164	

Flood Control Centre will be setup in Canal Colony Jhelum from 1st July 2025 to 15th October 2025, which will remain open round the clock and is well equipped with telephone, whatsapp etc. to receive / pass important messages from all flood related quarters and will be

responsible for supplying flood information to all concerned as well as public (Telephone numbers 0544-9270330).

7.15 WIRELESS ARRANGEMENTS

The wireless communication network does not exist with the Jhelum Canal Division and important flood messages are received through Mobile phone / WhatsApp etc.

CHAPTER-8

DETAIL OF ENCROACHMENT

River Jhelum

A- Normal

Total No. Encroachment	No. of Encroachment removed during last Year	Balance Encroachment	Remarks
NIL	NIL	NIL	NIL

B- Critical Encroachment

Total Encroachments	Removed	Remaining	Remarks
NIL	NIL	NIL	NIL

9. DUTY ROSTER FLOOD FIGHTING PROGRAM.

| SITE | | |

CHAPTER-10

EMERGENCY TELEPHONE NUMBERS

Sr. No.	Name	Designation	Office	Residence / Mobile
1.	Muhammad Kazim Ali Pirzada	Minister Irrigation	042-99212809-10	0321-6359999
2.	Dr. Wasif Khurshid	Secretary, Irrigation Department	042-99212117 042-99212118	042-99212117
3.	Khuram Amin	Additional Secretary (Tech:)	042-99212128	0331-7112756
4.	Kashif Shamim	Additional Secretary (OP)	042-99213612	0333-4136600
5.	Jaweria Maqbool	Deputy Secretary (Admn)	042-99212126	0333-9355993
6.	Hamad Ali	Deputy Secretary (OP)	042-99212127	
7.	Muhammad Usman	Deputy Secretary (Dev)	042-99212129	0342-446676
8.	Ammar Fasheen	Section Officer Flood	042-99212134	

POTOHAR IRRIGATION ZONE RAWALPINDI/ISLAMABAD

1.	Muhammad Nawaz batti	Chief Engineer, Potohar Zone Islamabad	051-9255749	0300-6763112
2.	Tabraiz Ahmed	Project Director-II Jhelum	0321-5442494	0321-5442494
3.	Ali Haider	Executive Engineer (OP), Islamabad	051-9255781	0333-8880654
4.	Mubashir Majeed	Executive Engineer, Jhelum Canal Division, Jhelum	0544-9270331 Fax-9270311	03325449212
5.	Muhammad Tahir	Sub Divisional Officer, Mangla		03238008007
6.	Muhamad Hussain	Sub Divisional Officer, Khokhra (Rasul)		0303-9776126
7.	Muhammad Riaz	Flood Control Centre Irrigation Jhelum	0544-9270330	0343-6186708

DISTRICT ADMINISTRATION JHELUM

1.	Mir Raza Ozgen	Deputy Commissioner Jhelum	0544-9270081	0304-0920071
2.	Shafiq Ahmed	District Police Officer Jhelum	0544-9270042 0544-9270258	0300-9521434
3.	Aliza Rehian	Assistant Deputy Commissioner (G) Jhelum	0544-9270109	0300-2031062
4.	Aftab Ashraf	Assistant Commissioner Jhelum	0544-9270012	0331-6564968
5.	Muhammad Tahmoor	Assistant Commissioner Dina	0544-280371	0333-3509944
6.	Razala Asghar	Assistant Commissioner Sohawa	0544-224036	0340-4372804

DISTRICT ADMINISTRATION GUJRAT

1.	Safdar Hussain Virk	Deputy Commissioner Gujrat	053-9260010	053-9260011 0304-0920066
2.	Mastansar Atta	District Police Office Gujrat	053-9260026	053-9260026
3.	Khizer Hayat bhatti	Assistant Deputy Commissioner (General) Gujrat	053-9260300	053-9260061
4.	Bilal Zubair	Assistant Commissioner Gujrat	053-9260063	0331-4964919
5.	Ahmad Shair Gondal	Assistant Commissioner Kharian	053-9240212	0343-7546426
6.	Farooq Azam	Assistant Commissioner Sarai Alamgir	0544-284530	0345-4917495

DISTRICT ADMINISTRATION M.B.DIN

1.	Dr.Muhammad Faisal Saleem	Deputy Commissioner M.B Din	0546-504220	0546-504220 0304-0920068
2.	Waseem Riaz	District Police Office M.B Din	0546-502324	0546-502324 0323-595999
3.	LT.(R) Muhammad Ahmed Zaheer	Assistant Deputy Commissioner (General) M.B Din	0546-506488	0335-3733034
4.	Nadeen Blooch	Assistant Commissioner M.B Din	0546-650224	0546-650224 0314-2615656
5.	Riaz Ahmad	Assistant Commissioner Malikwal	0546-591276	0300-4487417
6.	Fazail Mudasser	Assistant Commissioner Phalia	0546-596460	0316-6805291

FLOOD CONTROL CENTRE PUNJAB, LAHORE

1.	Flood Warning Centre 46-Jail Road Lahore.	042-99205157	
2.	Flood Cell I & P Secretariat Lahore.	042-99212134	042-9212116
3.	Police Wireless Control, Jail Road Lahore.	042-99205156	-
4.	Flood Emergency Board of Revenue	042-9204408-9	042-9204405
5.	National Flood Forecasting Bureau Lahore.	042-99200139	
6.	Senior Meteorologist.	042-99200208	042-99200144
7.	Chief Engineer (D&F) Zone Lahore.	042-35291304	042-5900049
8.	Director Flood D & F Zone Lahore	042-99231614 0300-4777120	042-6653943
9.	Flood Cell I & P Secretariat Lahore.	042-99212134	-

MILITARY ENGINEER'S TELEPHONE NUMBERS

1.	Headquarter Engineer 30-Corps Gujranwala Cantt.	0553-269/2353	-
2.	11-Engineer Battalion Sialkot Cantt.	052-571/5186	-
3.	Headquarter Engineer 1-Corps Kharian Cantt	053-59/2364	-

CHAPTER-11

STANDARD OPERATING PROCEDURE (SOP) FOR BREACHING SECTION.

11.1 HISTORY OF BREACHING SECTION

There is no breaching section in this Division.

11.2 LOCATION, DESIGN, QUALITY AND VARIETY OF THE EXPLOSIVE REQUIRED FOR DETONATION

Not applicable.

11.3 ARRANGEMENT OF EXPLOSIVE STORES

Not applicable.

11.4 LIST OF THE SECURITY STAFF ALONGWITH DETAIL OF THEIR TRAINING ETC.

Not applicable.

11.5 DETAIL OF MACHENICAL MEANS AS A STANDBY ARRANGEMENT IN CASE OF DETONATION FAILURE.

Not applicable.

11.6 DUTY ROSTER IN CASE OF CRITICAL SITUATION

Please see Ch-9.

11.7 BREACHING COMMITTEE WITH THEIR ACTION PLAN

Not applicable.

11.8 LIST OF THE VILLAGES LIKELY TO BE INUNDATED IN CASE OF BREACH

Not applicable.

11.9 ANNOUNCEMENT AND DETAIL OF EVACUATION ARRANGEMENT

Not applicable.

11.10 DETAIL OF COORDINATION WITH CIVIL/ ARMY AUTHORITIES

Please see Ch-10.

11.11 PARALLEL COMMUNICATION ARRANGEMENTS

Not applicable.

11.12 INDEX PLAN

Not applicable.

Project Director Small Dam Circle-II Jhelum	Chief Engineer Irrigation Photohar Zone Islamabad	Executive Engineer Jhelum Canal Division Jhelum

PART-B

CHAPTER-12

VULNERABLE SITES ON FLOOD BUNDS / STRUCTURES

12.1 APPREHENDED BREACHES IN FLOOD BUNDS / STRUCTURES

RIVER JHELUM

1. Jhelum City may breach at RD 17-18
2. Khaderiala guide wall may breach at RD 1-2

RIVER KAHAN

3. Naugran flood bund can breach between RD. 11+000 to 13+000.
4. Gurha Ahmed Flood Bund on River Kahan can breach from RD.3+000- 4+000.

BUNHAN NULLAH

5. Bhamber Flood Bund on River Bunhan can breach from RD.0+000- 1+000.

BHIMBER NULLAH

6. Qasimabad flood bund on River Bhimber / Chenab can breach from RD.428+000-430+000.

12.2 OPERATION OF BREACHING SECTIONS.

NIL

12.3 BREACHES DUE TO RISE OF FLOOD WATER, DETERIORATION OF FLOOD BUNDS.

NIL

CHAPTER-13

CONTINGENCY PLAN 2025

(COMING MONSOON SEASON)

1. EMERGENCY CONTINGENCY PLAN FOR VULNERABLE SITE NO.1: JHELUM CITY FLOOD BUND

13.1 PLAN SHOWING ROUTE OF FLOOD WATER COMING OUT OF THE BREACH SUPPORTED WITH LEVELS.

35-a.

13.2 DETAIL OF VILLAGES ABADIES LIKELY TO BE AFFECTED AND THIS SHOULD ALSO BE SHOWN ON THE PLAN.

Jhelum City.

13.3 STRATEGY AND ACTION TAKEN BE EXPLAINED IN DETAIL. THIS MAY INCLUDE:

Back flow through sewerage system will occur when discharge in River Jhelum increases upto 2 lac Cs. and may inundate Jhelum City. However, 8 No. disposal gates have recently been constructed/ Installed beneath the Jhelum City Flood Bund. Back watering will be controlled through these installed Gates.

13.3.1 ARRANGEMENTS

Necessary arrangements have been made to meet with any emergency during Flood.

13.3.2 ESTABLISHMENT OF FLOOD FIGHTING CAMPS

Flood fighting camp will be established Near Railway Bridge.

13.3.3 DUTIES OF OFFICERS/ OFFICIALS AND THEIR CAMP SITES

Camp No.	Location	Officer Name Designation Mobile #	Official Name Designation Mobile #
1	Near Railway Bridge.	Muhammad Tahir Sub Divisional Officer, Mangla 03238008007	Shahzad Hassan Sub Engineer H/Q Jhelum 0345-5559274

The Sub Divisional Officer, Mangla will shift his Head Quarter to Jhelum near Railway Bridge and will be responsible for flood fighting / restoration activities. The Sub Engineer Mangla and his establishment will assist the SDO Mangla in flood fighting activities. Mr. Amjad Mate will Act as Storekeeper.

13.3.4 DEPARTMENTAL MACHINERY AVAILABLE

1 No tractor trolley is available with this Division.

13.3.5 MACHINERY AVAILABLE FROM PRIVATE SOURCE

Private machinery including tractor trolleys, excavators and dumpers are available near village Thune and Simbly Bridge opposite RD. 153-155 UJC and will be hired as and when required.

13.3.6 FLOOD FIGHTING MATERIAL REQUIRED

(2.1)Minimum requirement of Flood Fighting Materials for Permanent Camp (15 Milis)

S.No.	ITEM	Required Quantity	Available Quantity	Balance Quantity	Remarks
1.	Tent/ Shouldari	1 No.	NIL	1 No.	Quantity is not available
2.	Chair	6 No.	NIL	6 No.	
3.	Table	1No.	NIL	1No.	
4.	Generator (2-3 KVA)	1 No.	NIL	1 No.	
5.	Pedestal Fans	1 No.	NIL	1 No.	
6.	Charpois	2 No.	NIL	2 No.	
7.	Symbolic Jackets	50 No.	NIL	50 No.	
8.	Polyethene Sheet	100 Set.	NIL	100 Set.	
9.	Bamboos (4” dia and 10 ft Long)	100 No.	NIL	100 No.	
10.	Water Coller	1 No.	NIL	1 No.	
11.	Portable Umbrella	2 No.	NIL	2 No.	
12.	Life Jackets	5 No.	NIL	5 No.	
13.	Utensils (10 person serving)	01 No.	NIL	01 No.	
14.	Jute/ Plastic bags	1000 No.	NIL	1000 No.	
15.	Walki Talkie Set	02 Sets	NIL	02 Sets	
16.	Raincoats	10 No	NIL	10 No	
17.	LED flood light	10 No	NIL	10 No	
18.	Extension Cable (10 ft)	02 No	NIL	02 No	
19.	Rechargeable torches	20 No	NIL	20 No	
20.	Kassi	20 No	NIL	20 No	
21.	Axes	20 No.	NIL	20 No.	
22.	G.I Buckets	05 No.	NIL	05 No.	
23.	7/44 cable	500 Ft	NIL	500 Ft	
24.	Sutli	02 Kg	NIL	02 Kg	
25.	Sewing Needles	10 No	NIL	10 No	
26.	Emergency Medical kit	01No	NIL	01No	
27.	Wire Crates (3x3x3) (at only those camp near river action and reserve stock exists)	100 No	NIL	100 No	

13.3.7 FLOOD FIGHTING MATERIAL AVAILABLE

Flood Fighting will be purchased before Flood season.

13.4 DETAIL OF OTHER INFRASTRUCTURES LIKE ELECTRIC, SUI GAS, TELEPHONE INSTALLATIONS, ROAD NETWORKS, OTHER BUILDINGS, CANAL AND DRAINAGE WORKS.

Electric / Telephone lines installations are there across the River Jhelum besides important Government / public infrastructure in Jhelum City Area.

2. EMERGENCY CONTINGENCY PLAN FOR VULNERABLE SITE NO.2: KHADERILA GUIDE WALL RD 1+000-2+000

13.1 PLAN SHOWING ROUTE OF FLOOD WATER COMING OUT OF THE BREACH SUPPORTED WITH LEVELS.

37-a.

13.2 DETAIL OF VILLAGES ABADIES LIKELY TO BE AFFECTED.

Khaderila village.

13.3 STRATEGY AND ACTION TAKEN BE EXPLAINED IN DETAIL.

Water may spill over across the Khaderila village and adjoining villages Area when discharge exceeds limits of very high flood in River Jhelum (2.25 lac Cs.). Flood fighting will be done using all the available resources if and when required.

13.3.1 ARRANGEMENTS

Necessary arrangements have been made to meet with any emergency during Flood.

13.3.2 ESTABLISHMENT OF FLOOD FIGHTING CAMPS

Flood fighting camp will be established at RD 1+000-2+000 of flood bund.

13.3.3 DUTIES OF OFFICERS/ OFFICIALS AND THEIR CAMP SITES

Camp No.	Location	Officer Name	Official Name
2	Khaderila Guide wall	Muhammad Hussain Sub Divisional Officer, Khokhra 0349-4898003	Sami Ullah Sub Engineer Rajor Section 0307-2073416

The Sub Divisional Officer, Khokhra will shift his Head Quarter to Khaderila guide wall and will be responsible for flood fighting / restoration activities. The Sub Engineer Rajor and his establishment will assist the SDO Khokhra in flood fighting activities. Mr. Shafqat Ullah Gauge Reader will act as Storekeeper.

13.3.4 DEPARTMENTAL MACHINERY AVAILABLE

1 No tractor trolley is available with this Division.

13.3.5 MACHINERY AVAILABLE FROM PRIVATE SOURCE

Private machinery including tractor trolleys, excavators and dumpers are available near village Thune and Simbly Bridge opposite RD. 153-155 UJC and can be hired as and when required

13.3.6 FLOOD FIGHTING MATERIAL REQUIRED

(2.1)Minimum requirement of Flood Fighting Materials for Permanent Camp (15 Milis)

S.No.	ITEM	Required Quantity	Available Quantity	Balance Quantity	Remarks
1.	Tent/ Shouldari	1 No.	NIL	1 No.	Quantity is not available
2.	Chair	6 No.	NIL	6 No.	
3.	Table	1No.	NIL	1No.	
4.	Generator (2-3 KVA)	1 No.	NIL	1 No.	
5.	Pedestal Fans	1 No.	NIL	1 No.	
6.	Charpois	2 No.	NIL	2 No.	
7.	Symbolic Jackets	50 No.	NIL	50 No.	
8.	Polyethene Sheet	100 Set.	NIL	100 Set.	
9.	Bamboos (4” dia and 10 ft Long)	100 No.	NIL	100 No.	
10.	Water Coller	1 No.	NIL	1 No.	
11.	Portable Umbrella	2 No.	NIL	2 No.	
12.	Life Jackets	5 No.	NIL	5 No.	
13.	Utensils (10 person serving)	01 No.	NIL	01 No.	
14.	Jute/ Plastic bags	1000 No.	NIL	1000 No.	
15.	Walki Talkie Set	02 Sets	NIL	02 Sets	
16.	Raincoats	10 No	NIL	10 No	
17.	LED flood light	10 No	NIL	10 No	
18.	Extension Cable (10 ft)	02 No	NIL	02 No	
19.	Rechargeable torches	20 No	NIL	20 No	
20.	Kassi	20 No	NIL	20 No	
21.	Axes	20 No.	NIL	20 No.	
22.	G.I Buckets	05 No.	NIL	05 No.	
23.	7/44 cable	500 Ft	NIL	500 Ft	
24.	Sutli	02 Kg	NIL	02 Kg	
25.	Sewing Needles	10 No	NIL	10 No	
26.	Emergency Medical kit	01No	NIL	01No	
27.	Wire Crates (3x3x3) (at only those camp near river action and reserve stock exists)	100 No	NIL	100 No	

13.3.7 FLOOD FIGHTING MATERIAL AVAILABLE

Flood Fighting Material will be purchased before Flood Season.

13.4 DETAIL OF OTHER INFRASTRUCTURES LIKE ELECTRIC, SUI GAS, TELEPHONE INSTALLATIONS, ROAD NETWORKS, OTHER BUILDINGS, CANAL AND DRAINAGE WORKS.

Electric / Telephone lines installations are there across the River Jhelum besides important infrastructure like Golf Club, Military dairy farm etc in Jhelum Cantonment Area

3. EMERGENCY CONTINGENCY PLAN FOR VULNERABLE SITE NO.3:

RD 11+000 TO 13+000 NAUGRAN FLOOD BUND

13.1 PLAN SHOWING ROUTE OF FLOOD WATER COMING OUT OF THE BREACH SUPPORTED WITH LEVELS.

39-a.

13.2 DETAIL OF VILLAGE ABADIES LIKELY TO BE AFFECTED.

Village Naugran, Kotla Faqir and CMH Jhelum

13.3 STRATEGY AND ACTION TAKEN BE EXPLAINED IN DETAIL.

Day & Night watching will be done through Field Establishment especially when discharge exceeds limits of high flood in River Kahan. Back Water effects from River Jhelum may cause threats to Village Abadi of Naugran & Kotla Faqir, thus, Flood fighting will be done using all the available resources if and when required.

13.3.1 ARRANGEMENTS

Necessary arrangements have been made to meet with any emergency during Flood.

13.3.2 ESTABLISHMENT OF FLOOD FIGHTING CAMPS

Flood fighting camp will be established at RD 11+000 of flood bund.

13.3.3 DUTIES OF OFFICERS/ OFFICIALS AND THEIR CAMP SITES

Camp No.	Location	Officer Name Designation Mobile #	Official Name Designation Mobile #
3	NAUGRAN FLOOD BUND. RD 11+000 to 13+000	Muhammad Tahir Sub Divisional Officer, Mangla 03238008007	Shehzad Hassan Sub Engineer H/Q Jhelum 0345-5559274

The Sub Divisional Officer, Mangla will shift his Head Quarter to Naugran Flood Bund and will be responsible for flood fighting/ restoration activities. Sub Engineer Jaggu, and his establishment will assist the SDO Mangla in flood fighting activities. Mr. Muhammad Amjad Mate will act as Storekeeper.

13.3.4 DEPARTMENTAL MACHINERY AVAILABLE

1 No tractor trolley is available with this Division.

13.3.5 MACHINERY AVAILABLE FROM PRIVATE SOURCE

Private machinery including tractor trolleys, excavators and dumpers are available near village Thune and Simbly Bridge opposite RD. 153-155 UJC and can be hired as and when required.

13.3.6 FLOOD FIGHTING MATERIAL REQUIRED

(2.1)Minimum requirement of Flood Fighting Materials for Permanent Camp (15 Milis)

S.No.	ITEM	Required Quantity	Available Quantity	Balance Quantity	Remarks
1.	Tent/ Shouldari	1 No.	NIL	1 No.	Quantity is not available
2.	Chair	6 No.	NIL	6 No.	
3.	Table	1No.	NIL	1No.	
4.	Generator (2-3 KVA)	1 No.	NIL	1 No.	
5.	Pedestal Fans	1 No.	NIL	1 No.	
6.	Charpois	2 No.	NIL	2 No.	
7.	Symbolic Jackets	50 No.	NIL	50 No.	
8.	Polyethene Sheet	100 Set.	NIL	100 Set.	
9.	Bamboos (4” dia and 10 ft Long)	100 No.	NIL	100 No.	
10.	Water Coller	1 No.	NIL	1 No.	
11.	Portable Umbrella	2 No.	NIL	2 No.	
12.	Life Jackets	5 No.	NIL	5 No.	
13.	Utensils (10 person serving)	01 No.	NIL	01 No.	
14.	Jute/ Plastic bags	1000 No.	NIL	1000 No.	
15.	Walki Talkie Set	02 Sets	NIL	02 Sets	
16.	Raincoats	10 No	NIL	10 No	
17.	LED flood light	10 No	NIL	10 No	
18.	Extension Cable (10 ft)	02 No	NIL	02 No	
19.	Rechargeable torches	20 No	NIL	20 No	
20.	Kassi	20 No	NIL	20 No	
21.	Axes	20 No.	NIL	20 No.	
22.	G.I Buckets	05 No.	NIL	05 No.	
23.	7/44 cable	500 Ft	NIL	500 Ft	
24.	Sutli	02 Kg	NIL	02 Kg	
25.	Sewing Needles	10 No	NIL	10 No	
26.	Emergency Medical kit	01No	NIL	01No	
27.	Wire Crates (3x3x3) (at only those camp near river action and reserve stock exists)	100 No	NIL	100 No	

13.3.7 FLOOD FIGHTING MATERIAL AVAILABLE

Flood Fighting Material will be purchased before Flood Season .

DETAIL OF OTHER INFRASTRUCTURES LIKE ELECTRIC, SUI GAS, TELEPHONE INSTALLATIONS, ROAD NETWORKS, OTHER BUILDINGS, CANAL AND DRAINAGE WORKS.

Electric / Telephone lines installations are there besides important infrastructure like CMH and other Army installations.

4. EMERGENCY CONTINGENCY PLAN FOR VULNERABLE SITE NO.4: GURHA AHMED FLOOD BUND RD 3+000 TO 4+000

13.1 PLAN SHOWING ROUTE OF FLOOD WATER COMING OUT OF THE BREACH SUPPORTED WITH LEVELS.

41-a.

13.2 DETAIL OF VILLAGE ABADIES LIKELY TO BE AFFECTED.

Village Gurha Ahmed

13.3 STRATEGY AND ACTION TAKEN BE EXPLAINED IN DETAIL.

Day & Night watching will be done through Field Establishment especially when discharge exceeds limits of high flood in River Kahan. Back Water effects from River Jhelum may cause threats to Village Abadi of Gurha Ahmed, thus, Flood fighting will be done using all the available resources if and when required.

13.3.1 ARRANGEMENTS

Necessary arrangements have been made to meet with any emergency during Flood.

13.3.2 ESTABLISHMENT OF FLOOD FIGHTING CAMPS

Flood fighting camp will be established at RD 3+500 of flood bund.

13.3.3 DUTIES OF OFFICERS/ OFFICIALS AND THEIR CAMP SITES

Camp No.	Location	Officer Name Designation Mobile #	Official Name Designation Mobile #
4	GURHA AHMED FLOOD BUND RD 3+000 TO 3+500	Muhammad Tahir Sub Divisional Officer, Mangla 03238008007	Shehzad Hassan Sub Engineer H/Q Jhelum 0345-5559274

The Sub Divisional Officer, Khokhra will shift his Head Quarter to Gurha Ahmed Flood Bund and will be responsible for flood fighting / restoration activities. Sub Engineer Pauranwala and his establishment will assist the SDO Khokhra in flood fighting activities. Mr. Sufian Ahmad will act as Storekeeper.

13.3.4 DEPARTMENTAL MACHINERY AVAILABLE

1 No tractor trolley is available with this Division

13.3.5 MACHINERY AVAILABLE FROM PRIVATE SOURCE

Private machinery including tractor trolleys, excavators and dumpers are available near village Thune and Simbly Bridge opposite RD. 153-155 UJC and can be hired as and when required.

13.3.6 FLOOD FIGHTING MATERIAL REQUIRED

(2.1)Minimum requirement of Flood Fighting Materials for Permanent Camp (15 Milis)

S.No.	ITEM	Required Quantity	Available Quantity	Balance Quantity	Remarks
1.	Tent/ Shouldari	1 No.	NIL	1 No.	Quantity is not available
2.	Chair	6 No.	NIL	6 No.	
3.	Table	1No.	NIL	1No.	
4.	Generator (2-3 KVA)	1 No.	NIL	1 No.	
5.	Pedestal Fans	1 No.	NIL	1 No.	
6.	Charpois	2 No.	NIL	2 No.	
7.	Symbolic Jackets	50 No.	NIL	50 No.	
8.	Polyethene Sheet	100 Set.	NIL	100 Set.	
9.	Bamboos (4” dia and 10 ft Long)	100 No.	NIL	100 No.	
10.	Water Coller	1 No.	NIL	1 No.	
11.	Portable Umbrella	2 No.	NIL	2 No.	
12.	Life Jackets	5 No.	NIL	5 No.	
13.	Utensils (10 person serving)	01 No.	NIL	01 No.	
14.	Jute/ Plastic bags	1000 No.	NIL	1000 No.	
15.	Walki Talkie Set	02 Sets	NIL	02 Sets	
16.	Raincoats	10 No	NIL	10 No	
17.	LED flood light	10 No	NIL	10 No	
18.	Extension Cable (10 ft)	02 No	NIL	02 No	
19.	Rechargeable torches	20 No	NIL	20 No	
20.	Kassi	20 No	NIL	20 No	
21.	Axes	20 No.	NIL	20 No.	
22.	G.I Buckets	05 No.	NIL	05 No.	
23.	7/44 cable	500 Ft	NIL	500 Ft	
24.	Sutli	02 Kg	NIL	02 Kg	
25.	Sewing Needles	10 No	NIL	10 No	
26.	Emergency Medical kit	01No	NIL	01No	
27.	Wire Crates (3x3x3) (at only those camp near river action and reserve stock exists)	100 No	NIL	100 No	

13.3.7 FLOOD FIGHTING MATERIAL AVAILABLE

Flood Fighting Material will be purchased before Flood Season.

13.4 DETAIL OF OTHER INFRASTRUCTURES LIKE ELECTRIC, SUI GAS, TELEPHONE INSTALLATIONS, ROAD NETWORKS, OTHER BUILDINGS, CANAL AND DRAINAGE WORKS.

Electric lines and Roads.

5. EMERGENCY CONTINGENCY PLAN FOR VULNERABLE SITE NO.5:

RD 0+000 TO 1+000 BHAMBER FLOOD BUND

13.1 PLAN SHOWING ROUTE OF FLOOD WATER COMING OUT OF THE BREACH SUPPORTED WITH LEVELS.

43-a.

13.2 DETAIL OF VILLAGE ABADIES LIKELY TO BE AFFECTED.

Village Bhamber

13.3 STRATEGY AND ACTION TAKEN BE EXPLAINED IN DETAIL.

Day & Night watching will be done through Field Establishment especially when discharge exceeds limits of high flood in River Bunhan. Back Water effects from River Jhelum may cause threats to Village Abadi of Bhamber, thus, Flood fighting will be done using all the available resources if and when required.

13.3.1 ARRANGEMENTS

Necessary arrangements have been made to meet with any emergency during Flood.

13.3.2 ESTABLISHMENT OF FLOOD FIGHTING CAMPS

Flood fighting camp will be established at RD 0+000 of flood bund.

13.3.3 DUTIES OF OFFICERS/ OFFICIALS AND THEIR CAMP SITES

Camp No.	Location	Officer Name Designation Mobile #	Official Name Designation Mobile #
3	Bhamber Flood Bund. RD 11+000 to 13+000	Muhammad Tahir Sub Divisional Officer, Mangla 03238008007	Shehzad Hassan Sub Engineer H/Q Jhelum 0345-5559274

The Sub Divisional Officer, Mangla will shift his Head Quarter to Bhamber Flood Bund and will be responsible for flood fighting/ restoration activities. Sub Engineer Jaggu, and his establishment will assist the SDO Mangla in flood fighting activities. Mr. Muhammad Amjad Mate will act as Storekeeper.

13.3.4 DEPARTMENTAL MACHINERY AVAILABLE

1 No tractor trolley is available with this Division.

13.3.5 MACHINERY AVAILABLE FROM PRIVATE SOURCE

Private machinery including tractor trolleys, excavators and dumpers are available near village Thune and Simbly Bridge opposite RD. 153-155 UJC and can be hired as and when required.

13.3.6 FLOOD FIGHTING MATERIAL REQUIRED

(2.1)Minimum requirement of Flood Fighting Materials for Permanent Camp (15 Milis)

S.No.	ITEM	Required Quantity	Available Quantity	Balance Quantity	Remarks
1.	Tent/ Shouldari	1 No.	NIL	NIL	Quantity is not available
2.	Chair	6 No.	NIL	NIL	
3.	Table	1No.	NIL	NIL	
4.	Generator (2-3 KVA)	1 No.	NIL	NIL	
5.	Pedestal Fans	1 No.	NIL	NIL	
6.	Charpois	2 No.	NIL	NIL	
7.	Symbolic Jackets	50 No.	NIL	NIL	
8.	Polyethene Sheet	100 Set.	NIL	NIL	
9.	Bamboos (4” dia and 10 ft Long)	100 No.	NIL	NIL	
10.	Water Coller	1 No.	NIL	NIL	
11.	Portable Umbrella	2 No.	NIL	NIL	
12.	Life Jackets	5 No.	NIL	NIL	
13.	Utensils (10 person serving)	01 No.	NIL	NIL	
14.	Jute/ Plastic bags	1000 No.	NIL	NIL	
15.	Walki Talkie Set	02 Sets	NIL	NIL	
16.	Raincoats	10 No	NIL	NIL	
17.	LED flood light	10 No	NIL	NIL	
18.	Extension Cable (10 ft)	02 No	NIL	NIL	
19.	Rechargeable torches	20 No	NIL	NIL	
20.	Kassi	20 No	NIL	NIL	
21.	Axes	20 No.	NIL	NIL	
22.	G.I Buckets	05 No.	NIL	NIL	
23.	7/44 cable	500 Ft	NIL	NIL	
24.	Sutli	02 Kg	NIL	NIL	
25.	Sewing Needles	10 No	NIL	NIL	
26.	Emergency Medical kit	01No	NIL	NIL	
27.	Wire Crates (3x3x3) (at only those camp near river action and reserve stock exists)	100 No	NIL	NIL	

13.3.7 FLOOD FIGHTING MATERIAL AVAILABLE

Flood Fighting Material will be purchased before Flood Season .

DETAIL OF OTHER INFRASTRUCTURES LIKE ELECTRIC, SUI GAS, TELEPHONE INSTALLATIONS, ROAD NETWORKS, OTHER BUILDINGS, CANAL AND DRAINAGE WORKS.

Electric / Telephone lines installations are there besides important infrastructure like CMH and other Army installations.

6. EMERGENCY CONTINGENCY PLAN FOR VULNERABLE SITE NO.6: QASIMABAD FLOOD BUND RD 428+000

13.1 PLAN SHOWING ROUTE OF FLOOD WATER COMING OUT OF THE BREACH SUPPORTED WITH LEVELS.

45-a.

13.2 DETAIL OF VILLAGES ABADIES LIKELY TO BE AFFECTED.

Village Qasim abad, Jassoki, Sadoki, Tarowal and Golaki.

13.3 STRATEGY AND ACTION TAKEN BE EXPLAINED IN DETAIL.

Back flow through River Chenab and U/S Head Khanki due to heading of water exceeding River discharge 3 Lac Cs. And also, it is effected by flash flooding in Nullah Bhimber joining Upper Jhelum Canal at RD 426.

13.3.1 ARRANGEMENTS

Necessary arrangements have been made to meet with any emergency during Flood.

13.3.2 ESTABLISHMENT OF FLOOD FIGHTING CAMPS

Flood fighting camp will be established at RD 428+000 of flood bund.

13.3.3 DUTIES OF OFFICERS/ OFFICIALS AND THEIR CAMP SITES

Camp No.	Location	Officer Name Designation Mobile #	Official Name Designation Mobile #
5	QASIMABAD FLOOD BUND RD 428+000	Muhammad Hussain Sub Divisional Officer, Khokhra 0349-4898003	Imtiaz Sub Engineer, Shahdiwal 0347- 4607008

The Sub Divisional Officer, Khokhra will shift his Head Quarter to Shahdiwal rest house and will be responsible for flood fighting / restoration activities. The Sub Engineer Shahdiwal and his establishment will assist the SDO Khokhra in flood fighting activities. Mr. Shafqat Ullah Gauge Reader will act as Storekeeper.

13.3.4 DEPARTMENTAL MACHINERY AVAILABLE

1 No tractor trolley is available with this Division

13.3.5 MACHINERY AVAILABLE FROM PRIVATE SOURCE

Private machinery including tractor trolleys, excavators and dumpers are available near village Saroki Bridge opposite RD. 414385/L UJC and can be hired as and when required.

13.3.6 FLOOD FIGHTING MATERIAL REQUIRED

(2.1) Minimum requirement of Flood Fighting Materials for Permanent Camp (15 Milis)

S.No.	ITEM	Required Quantity	Available Quantity	Balance Quantity	Remarks
1.	Tent/ Shouldari	1 No.	NIL	1 No.	Quantity is not available
2.	Chair	6 No.	NIL	6 No.	
3.	Table	1No.	NIL	1No.	
4.	Generator (2-3 KVA)	1 No.	NIL	1 No.	

S.No.	ITEM	Required Quantity	Available Quantity	1 No. 2 No.	Remarks
5.	Pedestal Fans	1 No.	NIL	50 No.	Quantity is not available
6.	Charpois	2 No.	NIL	100 Set.	
7.	Symbolic Jackets	50 No.	NIL	100 No.	
8.	Polyethene Sheet	100 Set.	NIL	1 No.	
9.	Bamboos (4" dia and 10 ft Long)	100 No.	NIL	2 No.	
10.	Water Coller	1 No.	NIL	5 No.	
11.	Portable Umbrella	2 No.	NIL	01 No.	
12.	Life Jackets	5 No.	NIL	1000 No.	
13.	Utensils (10 person serving)	01 No.	NIL	02 Sets	
14.	Jute/ Plastic bags	1000 No.	NIL	10 No	
15.	Walki Talkie Set	02 Sets	NIL	10 No	
16.	Raincoats	10 No	NIL	02 No	
17.	LED flood light	10 No	NIL	20 No	
18.	Extension Cable (10 ft)	02 No	NIL	20 No	
19.	Rechargeable torches	20 No	NIL	20 No.	
20.	Kassi	20 No	NIL	05 No.	
21.	Axes	20 No.	NIL	500 Ft	
22.	G.I Buckets	05 No.	NIL	02 Kg	
23.	7/44 cable	500 Ft	NIL	10 No	
24.	Sutli	02 Kg	NIL	01No	
25.	Sewing Needles	10 No	NIL	100 No	
26.	Emergency Medical kit	01No	NIL	1 No.	
27.	Wire Crates (3x3x3) (at only those camp near river action and reserve stock exists)	100 No	NIL	6 No.	

13.3.7 FLOOD FIGHTING MATERIAL AVAILABLE

Flood Fighting Material will be purchased before Flood Season.

13.4 DETAIL OF OTHER INFRASTRUCTURES LIKE ELECTRIC, SUI GAS, TELEPHONE INSTALLATIONS, ROAD NETWORKS, OTHER BUILDINGS, CANAL AND DRAINAGE WORKS.

Electric lines and Roads.

Executive Engineer Jhelum Canal Division Jhelum	Chief Engineer Irrigation Potohar Zone Rawalpindi/Islamabad	Project Director Small Dams Circle-II Jhelum

ACTION PLAN

14.1 RE-SHUFFLING/ RECOUPING PLAN OF RESERVE STONE DEPARTMENTALLY.

Reserve stock of stone will be reshuffled through Govt. contractor in case of emergency.

14.2 DETAIL OF INLET/ OUTLET CROSSING ALONG WITH CLOSING METHODOLOGY NIL

14.3 Deployment of Machinery (Normal to Low Flood)

Sr. No.	Structure Name	Length (Miles)	Excavators	Trolleys	Dumpers	Tractor with Front blade (1 per 15 mile)
1	City Flood Bund	4.86 miles	S.E shall allow deputation of one (1) excavator & four (4) Trolleys during low flood at camps/vulnerable points & LMB / RMB.		-	1
2	Cantt Flood Bund				-	
3	Sarai Alam Gir Flood Bund				-	
4	Naugran Flood Bund	6.18 miles			-	
5	Gurah Ahmed Flood Bund				-	
6	Bhamber Flood Bund	1.48 miles			-	
7	Studs No. 1 to 18	0.33 miles			-	
8	Bong Level Crossing	1.17 miles			-	
9	Jatli Level Crossing	1.614 miles			-	
10	Rehmanpur Level Crossing					
11	Jaggu Level Crossing	0.80 miles			-	
12	6 No. Guide walls (Shahmdar,Pharwala,New Pharwal, Khaderiala, Kharkha, Gurha Jattan (Rajar Section)	2.36 miles			-	1
13	2 NO. of UJC Protection Bunds(RD .293 - 299/L, RD.305-320/L) (Puranwala section)	4 miles			-	
14	2 NO. of UJC Protection Bunds (RD.418-438/L, RD.427-440/R) (Shadiwal section)	7 Miles			-	
Total					-	**2**

Note:- Payment of Machinery and work charge Establishment subject to verification by TPM Consultants.

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14.4 Deployment of Machinery (Medium to High Flood)

Sr. No.	Structure Name	Length (Miles)	Excavators	Trolleys	Dumpers	Tractor with Front blade
			1 per 7 mile	4 per 7 mile	2 per 7 mile	1 per 7 mile
1	City Flood Bund	4.86 miles	2	8	4	2
2	Cantt Flood Bund					
3	Sarai Alam Gir Flood Bund					
4	Naugran Flood Bund	6.18 miles				
5	Gurah Ahmed Flood Bund					
6	Bhamber Flood Bund	1.48 miles				
7	Studs No. 1 to 18	0.33 miles				
8	Bong Level Crossing	1.17 miles				
9	Jatli Level Crossing	1.614 miles	2	8	4	2
10	Rehmanpur Level Crossing					
11	Jaggu Level Crossing	0.80 miles				
12	6 No. Guide walls (Shahmdar,Pharwala, New Pharwal, Khaderiala, Kharkha, Gurha Jattan (Rajar Section)	2.36 miles				
13	2 NO. of UJC Protection Bunds (RD.293-299/L, RD.305-320/L) (Puranwala section)	4 miles				
14	2 NO. of UJC Protection Bunds (RD.418-438/L, RD.427-440/R) (Shadiwal section)	7 Miles				
Total			**4**	**16**	**8**	**4**

Note:- Payment of Machinery and work charge Establishment subject to verification by TPM Consultants.

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14.5 Deployment of Machinery (Very High to Exceptionally High Flood)

Sr. No.	Structure Name	Length (Miles)	Excavators		Trolleys	Dumpers	Tractor with Front blade	
			Very High Flood	Exp. High Flood	4 per 5 mile	2 per 5 mile	Very High Flood	Exp. High Flood
			1 per 5 mile	2 per 5 mile			1 per 5 mile	2 per 5 mile
1	City Flood Bund	4.86 miles	1	2	4	2	1	2
2	Cantt Flood Bund							
3	Sarai Alam Gir Flood Bund							
4	Naugran Flood Bund	6.18 miles	1	2	4	2	1	2
5	Gurah Ahmed Flood Bund							
6	Bhamber Flood Bund	1.48 miles	1	2	4	2	1	2
7	Studs No. 1 to 18	0.33 miles						
8	Bong Level Crossing	1.17 miles						
9	Jatli Level Crossing	1.614 miles						
10	Rehmanpur Level Crossing							
11	Jaggu Level Crossing	0.80 miles						
12	6 No. Guide walls (Shahmdar,Pharwala, New Pharwal, Khaderiala, Kharkha, Gurha Jattan (Rajar Section)	2.36 miles	3	6	12	6	3	6
13	2 NO. of UJC Protection Bunds (RD.293-299/L, RD.305-320/L) (Puranwala section)	4 miles						
14	2 NO. of UJC Protection Bunds (RD.418-438/L, RD.427-440/R) (Shadiwal section)	7 Miles						
Total			**6**	**12**	**24**	**12**	**6**	**12**

Note:- Payment of Machinery and work charge Establishment subject to verification by TPM Consultants.

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14.6 DEPLOYMENT PLAN OF POLICE.

Sr. #	River Reach/ Embankment	Tehsil	Concerned Police Station
1	River Chenab Mangla Dam to G.T Road bridge Right side	Jhelum, Dina	Mangla, Jhelum Civil Line, Jhelum City
2	River Jhelum , Mangla Dam to G.T Road bridge left side	Mirpur, Bhaimber, Sarai Alamgir	Mangla, Afzalpur, Sarai Alamgir
3	G.T Road bridge to Rasul H/W right side	Jhelum PD Khan	Jhelum Sadar, Chotala
4	G.T Road bridge to Rasul H/W left side	Sarai Alamgir, M.B Din	Sarai Alamgir,M.B Din Sadar
5	Kahan River	Jhelum, Dina	Jhelum Sadar, Dina
6	Bunahan Nallah	Jhelum	Chotala

14.7 DETAIL OF SYNTHIC BAGS WITH CAPACITY OF 50 KG AND 100 KG

Sr. No.	Items	Required Qty	Available Qty	Remarks
1	Synthetic bags (50 KG Capacity)	500 No.	---	
2	Synthetic bags (100 KG Capacity)	300 No.	---	

14.8 DETAIL OF POLYTHENE SHEETS OF BLACK COLOR TO PROTECT U/S SLOPS AGAINST WAVE ACTION AND TO CONTROL SEEPAGE THROUGH EMBANKMENT

Sr. No.	Items	Required Qty.	Available Qty.	Remarks
1	Black Polythene Sheet	15,000 Sft	Nil	

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14.9 RECOMMENDATIONS FOR OPERATION DURING FLOOD

Recommendations for Operation During Flood

i. The Superintending Engineer (SE) will notify all vulnerable points on the recommendations of Executive Engineer (XEN) and if the vulnerable site falls within 15 miles of embankment, then camp will be established at vulnerable site.

ii. Superintending Engineer shall allow deputation of one (1) excavator and four (4) Trolleys during low flood at Camps/ vulnerable points and LMB/RMB.

iii. The Superintending Engineer (SE) shall approve one additional shift during low to high flood based on necessity of site but he shall clearly mention the reach where additional shift is allowed.

iv. For emergent situation when very high flood levels are attained at lower flood discharges, additional camps may also be established with the approval of Superintending Engineer.

v. The concerned division shall procure flood fighting material as per requirement of seasonal flood fighting camps.

vi. Jackets with official emblem of the PID should be purchased by the concerned Division, to be used during the worst-case scenario, i.e., for exceptionally high flood.

vii. All others camps and supplies along with establishment i.e. Beldars and mates shall be outsourced before the flood season for operational efficiency during the flood fighting activities.

viii. The above mentioned yard stick of human resource is inclusive of 100% of regular flood establishment of the division at normal and low flood and for medium and above flood situation 50% of total regular establishment of the division and backup division in Flood Fighting Plan.

ix. The **Trigger Point** upstream of a Canal Division for commencing preparations shall be mentioned in the flood fighting plan and it shall be such point upstream with lag time of 3 days / 72 hours. The division shall initiate preparation corresponding to discharge magnitude expected to receive at their jurisdiction with respect to discharge at trigger point with 2025 flood data.

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x. Superintending Engineers shall approve additional resources above the approved FFP on the recommendations of Executive Engineer based on site necessity with copy to TPM and respective Chief Engineer but must mentioned the reach and justify the reason for additional resources in approval.

xi. Executive Engineers (XEN) shall decide the location and relocation of flood camps.

xii. The machinery mentioned above should be hired to remain standby for 24/7 to fight any extreme situation. The working of deployed machinery during normal situation shall be with prior approval of Superintending Engineer.

xiii. Communication means must be arranged through the Government. It is recommended to allocate a unique frequency for irrigation department.

xiv. In the event that water levels reach the 'High Flood' threshold even if the recorded discharge remains below established benchmarks, all field preparations and personnel deployments must immediately escalate to Critical Level protocols.

(Zeeshan Ali) 19/1/26
Member/ SE, Project Circle
DG Khan

(Abdul Qayyum Qadume) 19/01
Member / SE, Mailsi Canal
Circle, Multan

(Mohib Ullah Ali) 19/01/2026
Member / SE, Sukhrawa
Canal Circle, Sahiwal

(Imtiaz Hussain) 19-01-26
Member / SE, Bahawalpur
Canal Circle

(Semmar Iqbal) 19/01/26.
Member / SE, LCC(West)
Canal Circle, Faisalabad

(Hafiz Ijaz Ahmed) 19/1/26
Member / SE, Mandi
Bahauddin Canal Circle

(Muddassar Rehan) 19/01/26
Member / SE Link Circle,
Lahore

(Khurram Amin)
Convener / Chief Engineer,
Drainage & Flood Zone, Lahore.

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CHAPER-15

BACK UP DIVISIONS (IN CASE OF BREACH)

Small Dam Division Jhelum and Chakwal Small Dams Division, Chakwal will back-up in case of emergency / Breach.

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Jhelum Canal Division
Jhelum

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