GOVERNMENT OF THE PUNJAB
IRRIGATION DEPARTMENT
SARGODHA IRRIGATION ZONE
SARGODHA

FLOOD FIGHTING PLAN
2026

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Flood Fighting Plan 2026
In Details

PART -------A

CHAPTER–1

1. Salient features of Bhalwal Canal Division LJC

1.1. Location:

Bhalwal Canal Division falls in Chaj Doab, comprising part of Lower Jhelum Canal Sargodha, which off-takes from left bank of River Jhelum, having its jurisdiction, upto right bank of River Chenab, in District Mandi Bahauddin and Sargodha.

There are four Branch Canals and one Escape Channel in the jurisdiction of this Division, which are as under: -

Sr. No.	Channels	Reduced Distance (ft)		Discharge (Cs)
1	Northern Branch	0+000	170+000	2065
2	Southern Branch	0+000	104+300	1285
3	Southern Feeder	0+000	35+800	348
4	Khadir Feeder	0+000	117+220	365
5	Chenab Escape	0+000	63+000	400

Table 1 Salient features of Bhalwal Canal Division LJC

There are three Sub Divisions, controlled by the respective Sub Divisional Officers under the executive control of Executive Engineer Bhalwal Canal Division LJC.

Names and locations of Sub Divisional Offices are given below.

Sr. No.	Name of Sub Division	Location (Head Quarter)
1	Bhalwal Canal Sub Division	Bhalwal (Sargodha)
2	Hujjan Canal Sub Division	Uppi Canal Rest House, Tehsil Kot Momin
3	Bhabra Canal Sub Division	Hilalpur Canal Rest House, Tehsil Kot Momin

Table 2 Sub Divisional Offices of Bhalwal Canal Division

The network of four major canals namely Northern Branch, Southern Branch, Southern Feeder and Khadir Feeder systems is controlled by this Division to provide gravity flow perennial irrigation with various intensities viz 75% & 40% to feed an overall C.C.A 337670 acres. Discharge supplemented by river supplies from Mangla Dam reservoir through Lower Jhelum Canal, off-taking at Rasul Barrage commissioned in 1967.

1.2. General Description:

This Division falls in Chenab-Jhelum (Chaj) Doab. Detail description of its Canal Systems and River reaches are as per following.

1. Northern Branch System:

This Canal System off-takes form tail of Lower Jhelum Canal at Head Faqirian with designed discharge of 2065 Cs. Its jurisdiction starts from Head Faqirian village and consists of 21 No’s irrigation channels.

2. Southern Branch System:

This Canal System off-takes form tail of Lower Jhelum Canal at Head Faqirian. Kirana and Lalian Distributaries off-take from Southern Branch Tail near Ghullapur Canal Rest House, i.e., RD 104+300. Khadir Feeder off-takes at RD 53300/L of Southern Branch at Head Wan.

3. Southern Feeder System:

This Canal System off-takes from tail of Lower Jhelum Canal at Head Faqirian. Southern Feeder irrigates the Channels of Hujjan Canal Sub Division. Its jurisdiction starts from Head Faqirian.

4. Khadir Feeder System:

This Canal System off-takes from Southern Branch, RD 53300/L, at Head Wan with designed discharge of 365 Cs. Its jurisdiction starts from head Wan. It consists of 10 No's, irrigation channels.

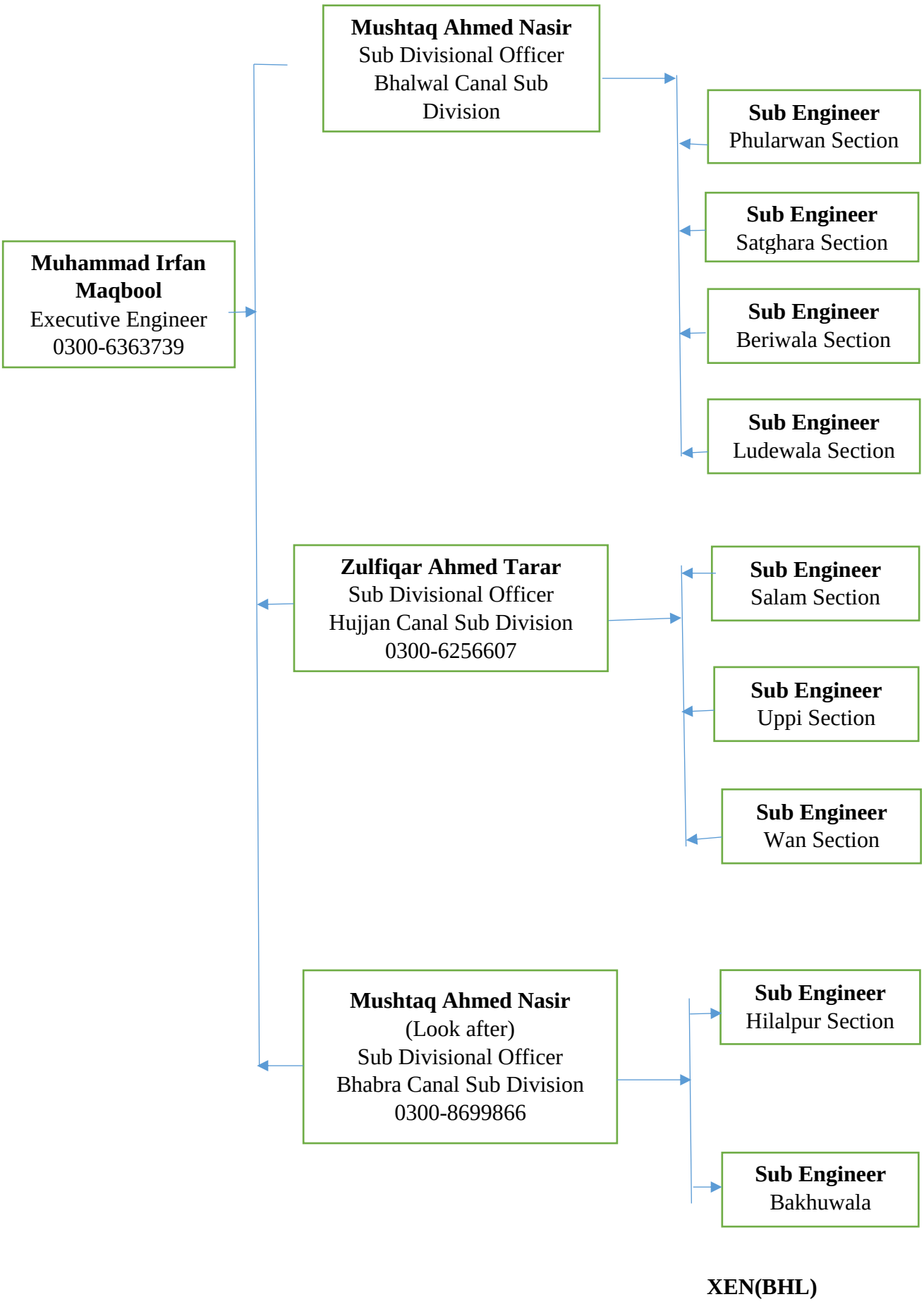
This System is protected by Kot Naja Flood Bund which starts near village Hilalpur and ends by joining at RD 66000-67000 of Khadir Disty and L.B.N Drain.

Total length of the bund is 132500 ft. The KNFB from RD 0+000 to 91+440 on the upstream side of Motorway, falls in the jurisdiction of Bhalwal Canal Division while the remaining portion from RD 91+440 to 132+500 on the downstream side of Motorway, falls in the jurisdiction of Kirana Canal Division.

This flood Bund protects the Khadir Irrigation System, agriculture lands, local Abadie's and infrastructures from floods in River Chenab, on right side of River Chenab.

1.3. Administrative Setup:

Administrative Plan of Bhalwal Division LJC



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CHAPTER - 2

2. Flood Protection and River Training Works

2.1. Design Parameter of Training Works:

The flood protection bund & river training works falling within jurisdiction of this Division are as under: -

I- **Flood Embankment:**

a) Kot Naja Flood Bund RD 0-91+440 (18.288 Mile)

II- **River Training Work:**

a) 9 No Solid Stone Studs at Mauza Muradwala & Sikdey

Design Parameters:

I- **Flood Embankment:**

Description	Length	Top Width (ft)		Side Slope		Year of Construction
	(Mile)	RD	Width	R/S	L/S	
Kot Naja Flood Bund RD 0+000 -91+440	18.288	0-91440	25	3:1	2:1	1905

Table 3 Design Parameters of Flood Embankment

I- River Training Works:

9 No Solid Stone Studs at Muradwala & Sikdey				
Description	Length (ft)	Top Width (ft)	Side Slope	Year of Construction
Stud No.1	50	15	1:01	2020
Stud No.2				
Stud No.3	20			2018
Stud No.4				
Stud No.5				
Stud No.6				
Stud No.7				
Stud No.8				
Stud No.9				

Table 4 Design Parameters of River Training Works

2.2. Location Map:

Location Map is attached at page - 39

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CHAPTER-3

3. Brief History of Past Flood Events:

Floods disrupt the social system of countries and cause enormous economic losses to both urban and rural communities. During flood of 1995-96, the river Chenab spilled with 644397& 853231 cs discharges respectively along Kot Naja Flood Bund in reaches RD 63000-90000, no damages occurred.

In 1997 the river Chenab was at its peak on 28.08.1997 with discharge of 873443 cs. On 13-14.03.2007, heavy rains in catchment area in the territory of Jammu & Kashmir caused high flood in river Chenab, this unexpected flood was recorded as 289000 Cs.

During flood of 2014, the spill of river Chenab was 903504 cs. Discharges also touched Kot Naja Flood Bund in reach RD 49000 to 71000 and damages occurred in reach RD 70000-71000, which were filled with the help of dozers of Agriculture Department.

The exceptionally high flood 2025, in river Chenab The maximum discharge recorded D/S Qadirabad Barrage 1077951 Cs 27.08.2025, on which enters in Bhalwal jurisdiction from Mouza Takhat Hazara. Second fleshed received on 04.09.2025 with peak discharge of 558683 Cs D/S Qadirabad. The Talibwala bridge on river Chenab created the afflux on upstream side of river which caused significant water level to rise along with the Flood bund from RD 91+440 to 65+000. Significant seepage was observed between RD: 63+000 to 77+000 and 81+000 to 91+000 during peak flow that covered through machinery and staff.

The machinery was deployed at Kot Naja Flood bund to control seepage and strengthen the weak sites. Sloughing action was observed on country side of Kot Naja Flood bund during receding phase of flood. There are no. of water crossing underneath the flood bund which are most critical / vulnerable sites, which were properly plugged before occurrence of Flood. The road Crossing ramps of Kot Naja Flood Bund were closed before Flood. The efforts were made by locals to cut the flood bund to get relief, which was made impossible though round the clock monitoring and watching through staff and with the help of police.

EROSION SITE AT NEAR VILLAGE SIKDEY & MURADWALA

During flood season 2017, the site condition of river flow U/S and D/S Motorway has been physically changed, with threat of flood on U/S River near village Sikdey & Muradwala etc.,& D/S Motorway had been diverted, the change of main stream on right side rapidly eroded the valuable agriculture land, houses and moved towards "Imambargah. So, it created emergent situation at site. Keeping in view the emergency the matter was put for expert opinion of Departmental Committee and meeting was held on 11.07.2017. The work namely **"Protection of Abadie's of Mouza Muradwala & Sikdey from erosive action of river Chenab in Tehsil Kot Momin District Sargodha"** was started, on 29.07.2017, after approval from the Worthy Secretary Irrigation Lahore on 24.07.2017, under Para 2.89 of PWD Code. Later on, on the direction of the Worthy Secretary, Irrigation vide canal wire No.1404 dated 14.09.2014 the emergent work was stopped on 30.09.2017.

During the 2018-19 flood season, the department encountered similar erosion threats near Imambargah in Muza Muradwala & Sikdey and the existing 7 No's solid stone stud's site.

On 25.06.2019, the Executive Engineer of Kirana Division (LJC) Sargodha and Superintending Engineer of Lower Jhelum Canal Circle Sargodha conducted a joint site inspection and expressed serious concerns regarding potential damage to nearby Abadi's (settlements), and the existing 7 No's stone studs. To mitigate these risks, they recommended constructing 2 additional stone studs with revetment as a protective measure. Subsequently, the department executed the project titled "Protection of 7 No. Solid Stone Studs near Mauza Muradwala and Sikdey from Erosive Action of River Chenab, Tehsil Kotmomin, District Sargodha" (as illustrated in Fig. showing 9 stone studs constructed during 2017-19 at right bank of River Chenab in Moza Muradwala and Sikdey, Sargodha).



Proposal

In Exceptional high flood 2025, the river during the recession phase started erosion on the right side and damaged the stud # 1 and upstream revetment (approximately 300ft.) at site as reported by the Sub Divisional Officer Bhabra and the Executive Engineer Bhalwal Canal vide Canal Wire No. 1696 dated 09.09.2025. The agenda was placed before Departmental Expert Committee meeting held on 23-02-2026 under the Chairmanship of the Chief Engineer (Research), Irrigation Research Institute, Lahore which proposed to construct 3 No. studs with revetment wall to stabilize the river edge for further submission to District Administration / DDMA for implementation at their expense.

EROSION SITE ON THE RIGHT SIDE NEAR THE VILLAGE GHURNA PATHANA IN TEHSIL KOT MOMIN

The erosive action of the River Chenab is causing erosion on the right side near the village Ghurna pathana in Tehsil Kot Momin, District Sargodha. The River Chenab is causing erosion at the right side specifically nea the Graveyard of Ghurna Pathan, its agricultural lands and the local derajat/ houses, upstream of Talibwala Bridge, near Sialmore interchange M2 motorway in Tehsil Kot Momin, District Sargodha. The residents of the aadjoining area/ mouzas, i.e., Ghurna Pathan, muradwala, Jariwala, Kot shabel, nawa astana and Ghurna Colony, are making hue and cary at different forums i.e., Irrigation Department and District Administration as well as political representatives to safe the said graveyard, local abadies and agricultural lands.

On 11.08.2024, a delegation of local residents appeared before Deputy Commissioner Sargodha for safeguarding the graveyards and public prosperities. The Deputy Commissioner, Sargodha forwarded the application of residents to the Executive Engineer Bhalwal vide letter No. 4496 dated 11.09.2024 to address the grievances of public as per rules.

The satellite images of the Chenab River from 2019 and 2023 were analyzed to observe the morphological changes, which revealed significant changes in the river's morphology. The river is shifting towards the right, moving closer to the graveyard gradually over time. In the satellite imagery from May 2019(fig.1), the distance between the river's edge and the graveyard was 2,450 fee. However, by September 2023 (fig.2), this distance had decreased to just 430 feet, with the river edge now nearly touching the graveyard. This indicates that the graveyard will be in a vulnerable condition in the coming years if remedial measures are not taken in time. Therefore, protective measures must be implemented before the flood season 2026 to prevent further damage. The scheme has

already been approved by District Development Committee DDC on 24.10.2025 as per recommendation of Departmental Expert Committee for construction of 4 No. studs.



Figure 1: Satellite Image (MAY- 2019)



Figure 2: Satellite Image (SEPTEMBER- 2023

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CHAPTER-4

4. Design Data, Historic Peak Flood Data and Previous Five Years Flood Data of Head Works/ Barrages and or other Control Points

4.1. Flood Limits:

4.1 Flood limits of river Chenab are as below: -

Head Works	Lac Cs				
	Low	Medium	High	Very High	Exceptionally High
Marala	1.00 to 1.50	1.50 to 2.00	2.00 to 4.00	4.00 to 6.00	More Than 6.00
Khanki	1.00 to 1.50	1.50 to 2.00	2.00 to 4.00	4.00 to 6.00	More Than 6.00
Qadirabad	1.00 to 1.50	1.50 to 2.00	2.00 to 4.00	4.00 to 6.00	More Than 6.00
Source: Federal Flood Commission Islamabad					

Table 5 Flood limits of river Chenab

4.2. Time Lags of Floods:

Following are the times lags for high flood condition in river Chenab: -

Location		Distance (KM)	Time Lags (Hour)		Remarks
From	To		Range	Indicative Average	
Marala	Khanki	56	10-14	12	i) Indicative average time lag values may vary in view of condition/factors prevalent at the time of flood flows. ii) These values are for high flood conditions and may be used by the concerned agencies for rescue/ evacuation purpose.
Khanki	Qadirabad	30	6-10	7	
Qadirabad	Miana Hazara	40	12-20	16	
Maina Hazara	Chiniot Bridge	80	18-30	24	
Qadirabad	Trimmu	214	60-84	72	
Source: Federal Flood Commission Islamabad					

Table 6 Time Lags of Floods of river Chenab

4.3. Highest Floods:

The highest Flood discharges recorded downstream Qadirabad Barrage during last five years as under: -

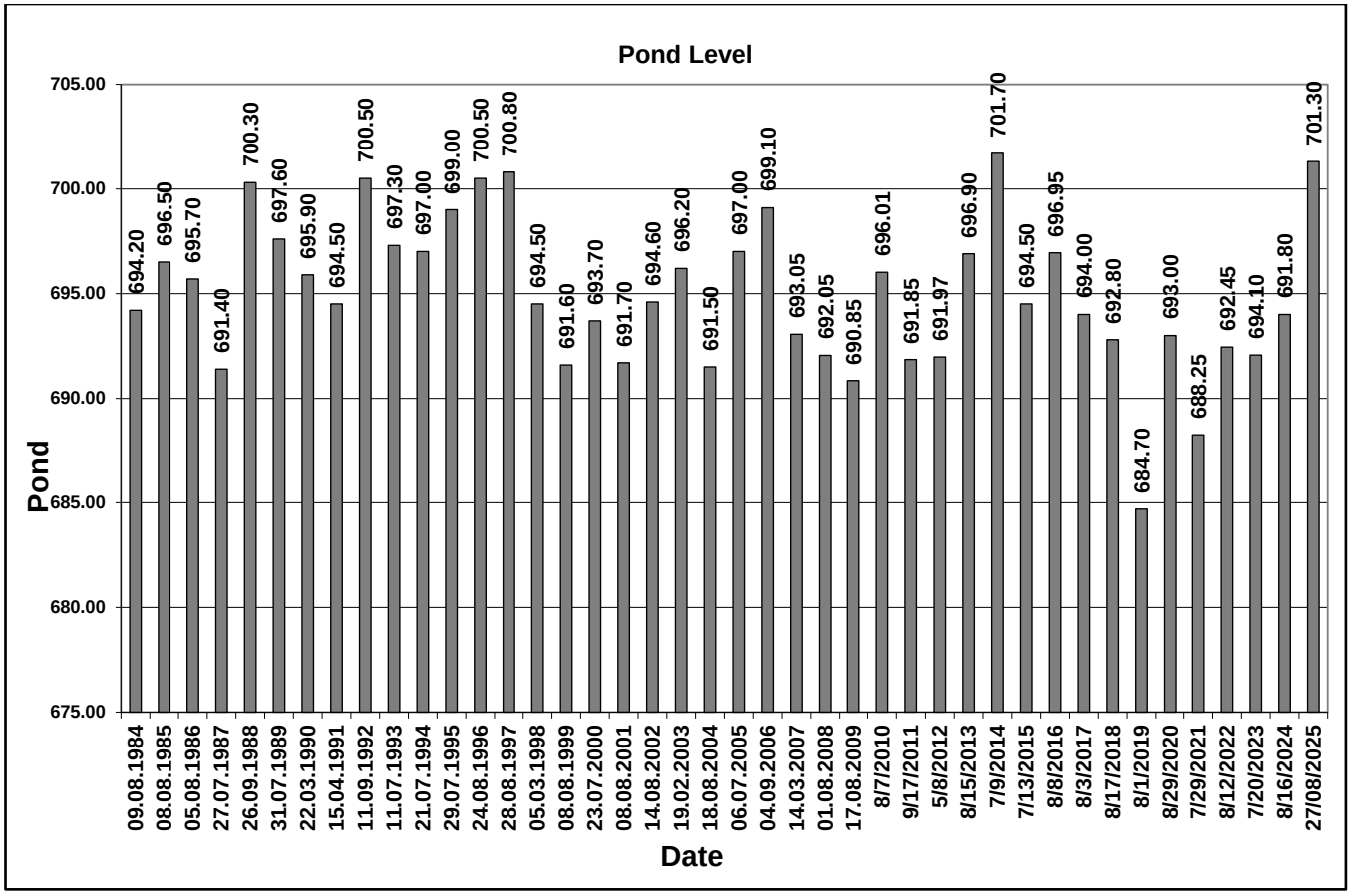
Year	D/S Qadirabad Discharge (Cs)
2020	258954
2021	167812
2022	193577
2023	185749
2024	145219
2025	1077000

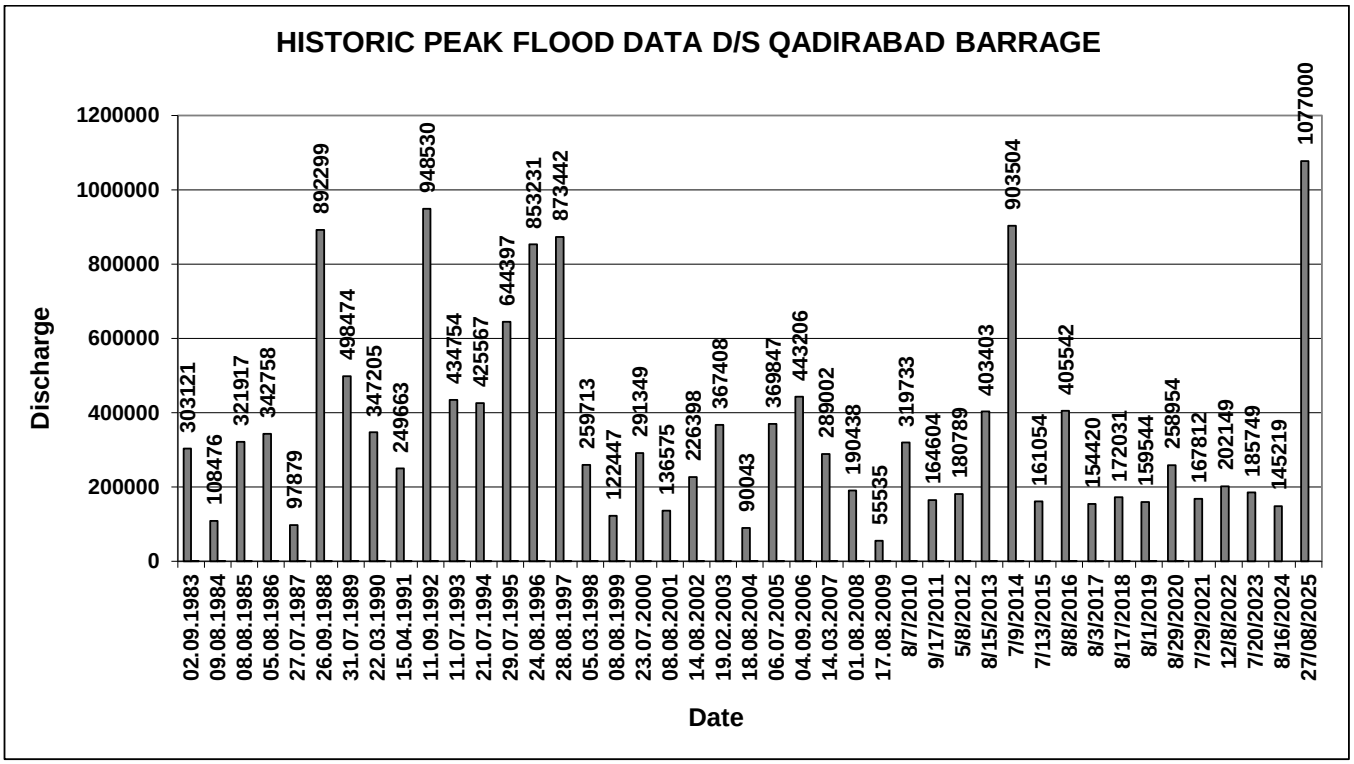
Table 7 Highest Floods of river Chenab

4.4. Peak Discharges:

Date	Discharge (Cs)	Pond Level (ft)
Downstream Qadirabad Barrage		
08.08.1985	321917	696.50
05.08.1986	342758	695.70
27.07.1987	97879	691.40
26.09.1988	**882299**	**700.30**
31.07.1989	**498474**	**697.60**
22.03.1990	347205	695.90
15.04.1991	249663	694.50
11.09.1992	**948530**	**700.50**
11.07.1993	**434754**	**697.30**
21.07.1994	**425567**	**697.00**
29.07.1995	**644397**	**699.00**
24.08.1996	**853231**	**700.50**
28.08.1997	**873442**	**700.80**
05.03.1998	259713	694.50
08.08.1999	122447	691.60
23.07.2000	291349	693.70
08.08.2001	136575	691.70
14.08.2002	226398	694.60
19.02.2003	367408	696.20
18.08.2004	90043	691.50
06.07.2005	369847	697.00
04.09.2006	**443206**	**699.10**
14.03.2007	289002	693.05
01.08.2008	190438	692.05
17.08.2009	55535	690.85
07.08.2010	319733	696.01
17.09.2011	164604	691.85
05.08.2012	180789	691.97
15.08.2013	**403403**	**696.90**
07.09.2014	**903504**	**701.70**
13.07.2015	161054	694.50
08.08.2016	**405542**	**696.95**
03.08.2017	154420	694.00
14.08.2018	172031	692.80
01.08.2019	159544	684.70
29.08.2020	258954	693.00
29.07.2021	167812	688.25
12.08.2022	202149	694.00
20.07.2023	185749	692.06
16.08.2024	145219	691.80
27.08.2025	**1077000**	**701.30**

Table 8 Peak Discharges Downstream Qadirabad Barrage


Pond Level
Pond
Date
705.00
700.00
695.00
690.00
685.00
680.00
675.00
694.20
696.50
695.70
691.40
700.30
697.60
695.90
694.50
700.50
697.30
697.00
699.00
700.50
700.80
694.50
691.60
693.70
691.70
694.60
696.20
691.50
697.00
699.10
693.05
692.05
690.85
696.01
691.85
691.97
696.90
701.70
694.50
696.95
694.00
692.80
684.70
693.00
688.25
692.45
694.10
691.80
701.30
09.08.1984
08.08.1985
05.08.1986
27.07.1987
26.09.1988
31.07.1989
22.03.1990
15.04.1991
11.09.1992
11.07.1993
21.07.1994
29.07.1995
24.08.1996
28.08.1997
05.03.1998
08.08.1999
23.07.2000
08.08.2001
14.08.2002
19.02.2003
18.08.2004
06.07.2005
04.09.2006
14.03.2007
01.08.2008
17.08.2009
8/7/2010
9/17/2011
5/8/2012
8/15/2013
7/9/2014
7/13/2015
8/8/2016
8/3/2017
8/17/2018
8/1/2019
8/29/2020
7/29/2021
8/12/2022
7/20/2023
8/16/2024
27/08/2025


HISTORIC PEAK FLOOD DATA D/S QADIRABAD BARRAGE
Discharge
Date
1200000
1000000
800000
600000
400000
200000
0
303121
108476
321917
342758
97879
892299
498474
347205
249663
948530
434754
425567
644397
853231
873442
259713
122447
291349
136575
226398
367408
90043
369847
443206
289002
190438
55535
319733
164604
180789
403403
903504
161054
405542
154420
172031
159544
258954
167812
202149
185749
145219
1077000
02.09.1983
09.08.1984
08.08.1985
05.08.1986
27.07.1987
26.09.1988
31.07.1989
22.03.1990
15.04.1991
11.09.1992
11.07.1993
21.07.1994
29.07.1995
24.08.1996
28.08.1997
05.03.1998
08.08.1999
23.07.2000
08.08.2001
14.08.2002
19.02.2003
18.08.2004
06.07.2005
04.09.2006
14.03.2007
01.08.2008
17.08.2009
8/7/2010
9/17/2011
5/8/2012
8/15/2013
7/9/2014
7/13/2015
8/8/2016
8/3/2017
8/17/2018
8/1/2019
8/29/2020
7/29/2021
12/8/2022
7/20/2023
8/16/2024
27/08/2025

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CHAPTER-5

5. Flood Fighting Strategy

In view of the experience of past year's floods history, constant watch is required during the flood season, great care and caution will be required for fixation of appropriate relief spots for flood fighting on different Canals, flood bunds and spurs.

Canal System:

Khadir Feeder System runs parallel to River Chenab. This system up to RD 67+000 of Khadir Disty is protected from the spill of river by Kot Naja flood bund. The Branch and other allied channels on left side always remain under threat of river spill and require continuous watching. The Khadir Feeder System comprises of following canals.

Sr. No.	Channel Name	Head Discharge (Cusecs)	Off-Taking RD	Tail RD	Mileage
1	Khadir Feeder	365	53+300/L SB	117+220	23.44
2	Bhabra Disty	18.78	12+500/R KF	28+000	5.6
3	Dhingran Minor	4	17+000/R Bhabra Disty	5+820	1.16
4	Maira Disty	4.5	35+097/R KF	13+316	2.66
5	Mamrana Disty	5	61+000/L KF	10+670	2.13
6	Naseerpur Disty	7	66+740/R KF	32+650	6.53
7	Midh Disty	3	66+740/R KF	16+900	3.38
8	Jallop Disty	6.25	79+900/R KF	14+550	2.91
9	Badin Disty	6.25	105+517/R KF	23+050	4.81

Table 9 Khadir Feeder Canal System

- **Flood Camp Sites:**

The Department proposed to install camp stations for protection of irrigation canals on Kot Naja Flood Bund at RD 31+800, RD 85+000 and at Sikdey-Muradwala during low to high Flood on bunds and river training works.

- **During Low to High Flood**

Description	Reach RD	Length (Mile)	Battle Station
Kot Naja Flood Bund	0-40000	8	RD 31800
	40000-91440	10	RD 85000
9 No. Solid Stone Studs	At Sikdey Muradwala		

Table 10 Camp/ Sites On Bunds, Spur & River Training Works

- **During High to Exceptionally High Flood.**

Description	Reach RD	Length (Mile)	Battle Station
Kot Naja Flood Bund	0-40000	8	RD 31800
	40000-70000	5	RD 70000
9 No. Solid Stone Studs	70000-91440	4	RD 85000

Table 11: Flood Camp Sites dunring High to Exceptionally high flood

The Sub Divisional Officer, Bhabra Sub Division will be the overall in-charge for operation of Kot Naja Flood Bund, Channels on Khadir Feeder and 9 No. Solid Stone Studs.

- Above mentioned camps will be installed on the sites for supervision of the protection activities during emergency. For all spots sufficient articles of stock items will be available in all these camps.
- There are provisions for engagement of work charge establishment to supplement the efforts thought regular establishment.
- The water crossing underneath the flood bund are most critical / vulnerable sites and should be properly plugged after issuance of High Flood warning.
- The road Crossing ramps of Kot Naja Flood Bund also need proper closing after issuance of High Flood warning.
- Sub Divisional Officer, Hujjan Sub Division will remain in touch with Flood Control Office, during Flood period after receiving warning that the river is in high flood, he will immediately shift his headquarter to Kot Naja Flood Bund at RD 850000 and assist Sub Divisional Officer, Bhabra in flood protection operation.
- Executive Engineer Bhalwal Canal Division is fully competent to change duty of any Officer/Official.

Following channels are directly affected by the river Chenab spills. The channels of Bhalwal Canal Division function as flood embankment and protection to the towns, Abadie's, crops and other infrastructure, against the flood. The channels which are affected by river spills and where the channels function as flood bunds are: -

Sr. No.:	Description	Reach RD	Length (Mile)
1	Khadir Feeder	35000-117000	8
2	Mamrana Disty	0-10670 (Tail)	2.13
3	Midh Disty	0-16900 (Tail)	3.38
4	Badin Disty	0-23050 (Tail)	4.81

Table 12 Reaches of channels which are affected by river Chenab spills

In view of vulnerable location of Channels, being in the flood plain, it is essential to take up flood preparedness activities like strengthening weak and ghat sites, clearances of jungle, shrubs from banks and slopes and making them fit to face the ensuing floods. Therefore, a gang of one man per mile is employed from 1st June to 30th September, in addition to existing establishment of one Beldar in six miles' length of canal.

I- **Normal Flood Season**

No extra labor will be employed (**1 person/ 2 Mile/ 1 shift)**. The flood water flows within river bank, no extra labor will be employed.

II- **Low Flood:**

In low flood stage, **1 person / mile / shift for 1 shifts.**

III- **Medium/ High Flood:**

All activities will remain as such. The watching establishment will be raised to two men per mile on channels and **2 person / mile / shift for 2 shifts in a day** on Kot Naja Flood Bund.

IV- **Very High / Exceptionally High**

This stage warrants alarming situation. The watching labor will be raised two men per mile on channels and **5 pesron / mile / shift for 3 shifts in a day** on Bund. On receipt of exceptionally high flood warring, Deputy Collector, Bhalwal along with concerned Zilladars and Canal Patwaris will shift their camp at Bakhuwala Rest House.

CHAPTER–6

6. Flood Damages Restoration Works

The overall condition of flood protection infrastructure was satisfactory. However, no any damages to houses/lives have been reported. River erosive action was observed near Sikdey Muradwala Muaza along right Bank of river Chenab Upstream Motorway M-2 Bridge, i.e., Studs No. 1 & 2 was partially damaged & repair work will be completed at site before flood season 2026 as per availability of funds.

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CHAPTER-7

7. Flood Fighting Watching Arrangements

7.1. Pre- Flood Arrangement:

The flood activities in the jurisdiction of Bhalwal Canal Division Sargodha have been Divided into two parts under the supervision of Executive Engineer Bhalwal Canal Division Bhalwal at Sargodha and Sub Divisional Officer Bhabra Canal Sub Division. Firstly, Kot Naja Flood Bund to keep in order secondly checking of 09 No studs at Muradwala sikdy well before Flood season

Furthermore, there is no reserve stock of stone is approved in the jurisdiction of Sargodha Drainage Division Sargodha.

Sr. No.	Activities	Target Date	Compliance Report
I.	**Preparation of Flood Fighting Plan.**		
	a) Submission of Draft Divisional Plans by Zonal Chiefs to Chief Engineer Drainage & Flood (after scrutiny by SEs/CEs).	**01.03.2026**	**Submitted**
	b) Review by Chief Engineer D & F.	**15.03.2026**	
	c) Final Submission of Flood Fighting Plans	**31.03.2026**	
	d) Clearance by Chief Engineer D&F	**15.04.2026**	
II	**Inspection of Flood Infrastructure.**		
	a) By XENs	**10.03.2026**	
	b) BY SEs/CEs)	**20.03.2026**	
	c) By Departmental & Army Teams	**31.03.2026**	
III	a)Identification of encroachments on bunds and spurs to the civil administration.	**31.03.2026**	No encroachments on flood bund / spur/studs
	b) Pre-flood breaching section operation committee meeting for breaching on operation of breaching section	**30.04.2026**	
	c) Submission of clearance of critical encroachments on bund	**30.04.2026**	
IV	**Painting Gauges, RD Marks, Data boards and repair to flood bunds etc.**	**31.05.2026**	Will be completed within target date
V	**Replenishment of reserve stock of stone and flood fighting materials.**		
	a) Identification of Needs	-	Not applicable
	b) Funding / Procurement Arrangements	-	Not applicable
	c) Procurement, stacking, prescribed field checks.	-	Not applicable
VI	**Installation of wireless sets**	**15.06.2026**	Will be installed within target date
VII	**Opening of Zonal flood calls**		

	a) Duty rosters.	**01.06.2026**	Will be issued up to target date
	b) Operative	**15.06.2026**	Will be operative within target date
VIII	Completion of Operation wetting channel	**16.06.2026**	

Table 13 Pre- Flood Arrangements

Structure wise Detail of Reserve stock of Stone

_____NIL_____

7.2 Watching Establishment:

Watching Establishment Details									
Structure Name	**Length (Miles)**		**Flood Limits**						
		Normal Flood Season		**Low Flood**		**Medium/High Flood**		**Very High/ Exp. High Flood**	
		Shift	**Men**	**Shift**	**Men**	**Shift**	**Men**	**Shift**	**Men**
		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)**	
Kot Naja Flood Bund RD 0-91440	18.288 Say =18.5	1	9	1	18	2	36	3	90
9 No Solid stone studs at Sikdey Muradwala	Stud 1 = 50 Stud 2 = 50 Stud 3 = 20 Stud 4 = 20 Stud 5 = 20 Stud 6 = 20 Stud 7 = 20 Stud 8 = 20 Stud **Total = 1Mile**		1		1		2		5
TOTAL Per Shift :-			**10**		**19**		**38**		**95**
Total			**10**		**19**		**76**		**285**
No. of Mates			**0**		**1**		**6**		**23**

Total manpower requirement for watching and maintenance of flood embankment during the flood season from 15th June to 15th October (the entire flood season) as per

the following criteria:

Watching Establishment Criteria

Normal Flood Season -	1 person/2 mile	(1 Shift)
Low Flood -	1 person/mile/shift	(1 Shift)

Medium /High flood	2 person/mile/shift	(2 Shift)
Very High/Exceptionally High	5 person/mile/shift	(3 Shift)

- Beldar should be provided with hand tools (1 Kassie, 1 Axe and 1 Rechargeable Torch for night shift in case of flood above low flood limit)

- The activities of staff during normal flood season should be included but not limited to:
  - Removing Jungle and bushes from slopes and toe of embankment
  - Filling of rain cuts/ Gharas
  - Dressing of slopes
  - Filling porcupine and rat holes
  - Filling porcupine and rat holes
  - Keeping the track motorable
  - Water cross crossing under Bund
  - Road crossing from Bund with help of machinery

Mate: 1 No. for every gang of 12 Beldars at all flood ranges.

Labor During Emergency:

- Extra Man power will be arranged by the respected Deputy Commissioner in Case of emergency to meet with situation.
- S.H.O of concerned Police Station will assist Irrigation Department

7.2. Arrangement at Sensitive Sites

For all spots, sufficient quantity of flood fighting material with manpower will be made available in all these camps. Engagement of work charge establishment to supplement the efforts through regular establishment will be made in accordance with the demand of the situation.

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	Kot Naja Flood Bund RD 0-91440	18.288 Say =18.5	RD45+000-85+000	1		1	3
2	9 No Solid stone studs at Sikdey Muradwala	Stud 1 = 50 Stud 2 = 50 Stud 3 = 20 Stud 4 = 20 Stud 5 = 20 Stud 6 = 20	At Muradwala skidey	1			

		Stud 7 = 20 Stud 8 = 20 Stud **Total = 1Mile**					
Total=				**2**		**1**	**3**

7.3. Watching Material:

There will be two No. watching centers on flood embankment as well as at Muradwala structure at mentioned RDs or where suitable as per site situation which will be shared to all concerned at once in case of any change. Flood material will be arranged and stored for Flood Bund. The material will be shifted to flood fighting camp as soon as the intimation of medium / high flood limit is received

Minimum Requirement of Flood Fighting Material for Permanent Camps (15 miles)

Sr #	Items	Unit	Total Required Qty	Available Qty	Balance	Remarks
01	Shouldari / Tent	No	2	0	2	Material will be procured before flood season Subject to verification by Competent Authority
02	Chairs	No	12	0	12	
03	Table	No	2	0	2	
04	Generator (2–3 KVA)	No	2	0	2	
05	Pedestal Fans	No	2	0	2	
06	Charpois	No	4	0	4	
07	Symbolic Jackets	No	100	0	100	
08	Polyethene Sheet	Kg	200	0	200	
09	Bamboos (4" dia and 10 ft long)	No	200	0	200	
10	Water Cooler	No	02	0	02	
11	Portable Umbrella	No	4	0	4	
12	Life Jackets	No	10	0	10	
13	Utensils (10 person serving)	No	02	0	02	
14	Jute/Plastic Bags	No	2000	0	2000	
15	Walkie Talkie Set	Sets	4	0	04	
16	Raincoats	No	20	0	20	
17	LED Flood Light	No	20	0	20	
18	Extension Cable (10 ft)	No	4	0	4	
19	Rechargeable Torches	No	40	0	40	
20	Kassi	No	40	0	40	

21	Axes	No	40	0	40	
22	G.I Buckets	No	10	0	10	
23	7/44 Cable	Feet	1000	0	1000	
24	Sutli	Kg	4	0	4	
25	Sewing Needles	No	20	0	20	
26	Emergency Medical Kit	No	02	0	02	
27	Wire Crates (3x3x3) (at only those camps near river action and reserve stock exists)	No	200	0	-	

Following minimum requirement of Flood Fighting Material for Temporary Camp (7 or 5 miles during medium to exceptionally high flood to be outsourced)

Sr #	Items	Unit	Total Required Qty / Camp	Remarks
01	Shouldari / Tent	No	01	Material for temporary camps (07 or 05 miles during medium to exceptionally high flood) will be outsourced.
02	Walkie talkie set	No	01	
03	Chairs	No	06	
04	Raincoats	No	10	
05	Table	No	01	
06	Flood Light	No	10	
07	Generator (2–3 KVA)	No	01	
08	Extension cable	No	02	
09	Pedestal Fans	No	01	
10	Rechargeable torch	No	20	
11	Charpois	No	02	
12	Kassi	No	20	
13	Symbolic Jackets	No	50	
14	Axes	No	20	
15	Water Cooler	No	01	
16	G.I Buckets	No	05	
17	Portable Umbrella	No	02	
18	7/44 Cable	Feet	500	
19	Utensils (10 person serving)	No	01	
20	Sutli	Kg	02	
21	Jute/Plastic Bags	No	500	
22	Sewing Needles	No	10	

7.4. Arrangement for Sounding & Probing:

This item relates to Barrage/ Head Works Canal Davison.

7.5. Lighting Arrangement:

Lighting arrangements will be made available.

7.6. Ration Arrangement:

The establishment and supervisory staff will make their own food arrangements. However, in the event of death of commodities, the Civil Authorities will be approached to store sufficient ration.

7.7. P.O.L. Arrangement for Vehicle:

Respective Deputy District Officer, (Revenue) will be requested by the Sub Divisional Officer in-charge to provide help some reserve at the nearest Petrol pumps to keep the vehicles on. Any obstruction found there will be pointed out by the Sub Divisional Officer.

7.8. Transportation:

In general, Civil authorities have never been able to spare any vehicle for us, but we have no other cushion to depend upon. It is therefore urged that Deputy Commissioner, concerned may please ensure availability of dependable vehicle from the pool of the district.

7.9. Law & Order:

Kot Naja Flood Bund falls within the administrative jurisdiction of Tehsil Kot Momin, District Sargodha. In case of observing any sort of law-and-order situation from the public sides, it shall immediately be contacted by the Sub Divisional Officer, concerned with the respective authority of civil administration to maintain the situation at site to avoid any mishap.

7.10. Medical Arrangement for Labor:

It is responsibility of District Government to provide medical facilities in flood areas where required.

7.11. Liaison with another Department:

Executive Engineer, Bhalwal Canal Division will keep liaison with the Civil and Army Authorities and will keep the Superintending Engineer L.J.C, Sargodha fully apprised of the flood situation.

7.12. Role of the Army:

Role of the Army is very important in case of any emergent situation arising due to high floods. A continuous liaison with the Army Authorities will be maintained during floods and if required necessary help will be sought.

7.13. Duties of Telephone Attendant:

Phone and cell No of all officers/ officials have been given in Flood Fighting Plan 2026 to make immediate contact at any emergency during flood.

Sr. No.	Name of Officials	Cell No.	Time	
			From	To
Shift-1	Muhammad Akram (Signallor)	0302-6728082	7:00 AM	3:00 AM
	Muhammad Aslam (Mate)	0345-8641747		
Shift-2	Shahid Imran (Gauge Reader)	0300-5468450	3:00 AM	11:00 PM
	Mudassar Ahmad (Gauge Reader)	0303-4438695		
Shift-3	Sultan Ali (Beldar)	0306-4995526	11:00 PM	7:00 AM
	Muhammad Arshad (Beldar)	0324-8706653		
Telephone Number of Telegraph Office Sargodha ➢ Flood Emergency Center 0489-230408 ➢ Fax Number (Divisional Office) 0489-230410				

Table 14 Duties of Telephone Attendants

7.14. Wireless Arrangements:

Wireless system will be installed w.e.f. 15.06.2026 in the vehicle of Executive Engineer Bhalwal vehicle No GBA-453 and Sub Divisional Officer Bhabra Sub Division

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CHAPTER-8

A. Detail of Encroachment:

Sr. No.	Total Encroachment	Removed	Remaining	Remarks
NIL				

Table 15 Detail of Encroachment

B. Detail of Critical Encroachment:

Sr. No.	Total Encroachment	Removed	Remaining	Remarks
NIL				

Table 16 Detail of Critical Encroachment

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CHAPTER-9

9. Duty Roster/ Flood Fighting Program

Kot Naja Flood Rd 0-91+440

Flood Limits	Name of SDO	Name of Sub Engineer
High Flood	Mushtaq Ahmed Nasir	Muhammad Sulman & Umar Farooq
Very High Flood	-do-	-do-
Exceptionally	-do-	-do-

Executive Engineer, Bhalwal Canal Division, Bhalwal:

The Executive Engineer (Irfan Maqbool), is overall in-charge of flood protection activities within the jurisdiction of Bhalwal Canal Division, Bhalwal, covering District Sargodha. He is responsible for supervising and maintain flood protection measures during the flood season and coordinating with civil and military authorities, as well as the Superintending Engineer, LJC Circle Sargodha.

Sub Divisional Officer, Bhabra Canal Sub Divisoin:

Responsible for flood protection of Kot Naja Flood bund as well as 9 No studs at Muradwala sikdy TehsilKotmomin District and ensures the safety of surrounding local areas. Liaises with authorities for coordination and quick response.

- Primary Camp: Kot Naja Flood bund Rd 31+800
- Field Camp: Kot Naja Flood bund 85+000
- Communication Base: Police Station, Sargodha

Sub Engineers:

Attached at Headquarters (For Emergency Response)

- Sub Engineer, Hilalpur Section

Field Assignments

- **Hilalpur Section & Bakhu wala Section**
  i. Kot Naja Flood Bund
  ii. 09 No studs at Muradwala sikdy

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CHAPTER-10

10.Emergency Telephone Nos

Sr. No.	Name of Post & Designation	Telephone / Cell. No	
		Office	Residence
1	Minster Irrigation & Power Department, Punjab Lahore.	042-99212809 042-99211761 Fax, 042-9921810	
2	Secretary Irrigation Department, Punjab Lahore	042-99212117 042-9921218 Fax,042-99212116	042-99200285
3	Chief Engineer, Sargodha Irrigation Zone, Sargodha.	048-9230445 Fax,048-9030414	0333-6941690 048-9230451
4	Flood Emergency Officer Sargodha Irrigation Zone Sargodha.	048-9230449 Fax, 048-9230414	0300-6363739
5	Chief Engineer Drainage and Flood Zone Lahore	042-9923351 Fax, 042-99230731	0301-8448709
6	Director, Flood Drainage and Flood Zone Lahore	042-99233552	0300-6999490
7	Deputy Director, Drainage and Flood Lahore	042-99230282	-
8	Flood Warning Center Jail Road Lahore	042-99205371 Fax,042-99205372	-
9	Superintending Engineer Lower Jhelum Canal Circle Sargodha	048-9230413 Fax, 048-9230832	048-9330463 0300-7743313
10	Superintending Engineer Drainage Circle Sargodha	048-9230450	-
11	Executive Engineer Sargodha Division LJC Sargodha	048-9230409	-
12	Executive Engineer Kirana Division LJC Sargodha	Fax,048-9230918 048-9230399	0345-5165764
13	Executive Engineer Bhalwal Division LJC Sargodha	Fax,048-9230649 048-9230406	0300-6363739
14	Executive Engineer Shahpur Division LJC Sargodha	048-9230447 Fax, 048-9230836	0321-1198672
15	Executive Engineer, Rasul Division LJC., Rasul.	0546-553211	0340-7159459
16	Deputy Commissioner Sargodha	048-9230025 Fax,048-9230026	048-9230046
17	Executive Engineer Bhalwal Drainage Division Bhalwal	-	-
18	In –charge Vigilance Cell Irrigation & Power Department Punjab Lahore	042-9213157	-
19	Telegraph Office Sargodha (Flood Emergency Center Sargodha	048-9230453	-
20	Sub Divisional Officer Bhalwal Sub Division	048-9230410	-
21	Sub Divisional Officer Hujjan Sub Division	-	0300-6256607

Table 17 Emergency Telephone Nos

CHAPTER-11

11. Standard operating procedure (SOP) for Breaching Sections

11.1. History of the breaching section:

No breaching section in Bhalwal Canal Division.

11.2. Location, Design, Quantity and Variety of the explosive required for detonation:

Does not relate.

11.3. Arrangement of the explosives and security of explosive store:

Does not relate.

11.4. List of the security staff along with detail of their training etc.:

Does not relate.

11.5. Detail of mechanical means as a stand arrangement in case of detonation failure:

Does not relate.

11.6. Duty Roster in case of critical situation:

Does not relate.

11.7. Breaching Committee with their action plan:

Does not relate.

11.8. List of the Villages likely to be inundated in case of breach:

Does not relate.

11.9. Announcement and detail of evacuation arrangements:

Does not relate.

11.10. Detail of Coordination with Civil / Army Authorities:

Does not relate.

11.11. Parallel Communication Arrangements:

Does not relate.

11.12. Index Plan:

Attached.

SUB DIVISIONAL OFFICER
Bhabra Canal Sub Division
At Hialpur Rest House

EXECUTIVE ENGINEER
Bhalwal Canal Division, LJC
Bhalwal, At Sargodha

SUPERINTENDING ENGINEER
Lower Jhelum Canal Circle
Sargodha

CHIEF ENGINEER
Sargodha Irrigation Zone
Sargodha

PART -------B

CHAPTER-12

12. Vulnerable sites of Flood Bund/ Structures

12.1. Apprehended Breach Sites in Flood Bunds/ Structures:

There is one following vulnerable site along flood bund in Bhalwal Canal Division LJC Sargodha.

Sr. No.	Location	No of Site
1	Between RD 45000-85000 near village Kot Miana Tehsil Kot Momin District Sargodha	01
2	Muradwala Structures	01

Table 18 Vulnerable sites of Flood Bund/ Structures

12.2. Operation of Breaching Sections:

There is no breaching section in Bhalwal Canal Division

12.3. Breaches due to rising of Flood Water, deterioration of Flood Bunds etc.:

No such.

CHAPTER-13

13. Emergency Contingency Plan for vulnerable site (site) listed above. Emergency Contingency Plan must include: -

13.1. Plan Showing Route of Flood Water coming out the Breach Supported with levels:

A plan showing the route of expected flood water coming out of mishaps site at RD 70+000 Kot Naja Flood Bund near Village Kot Miana Tehsil Kotmomin District Sargodha. Attached page.

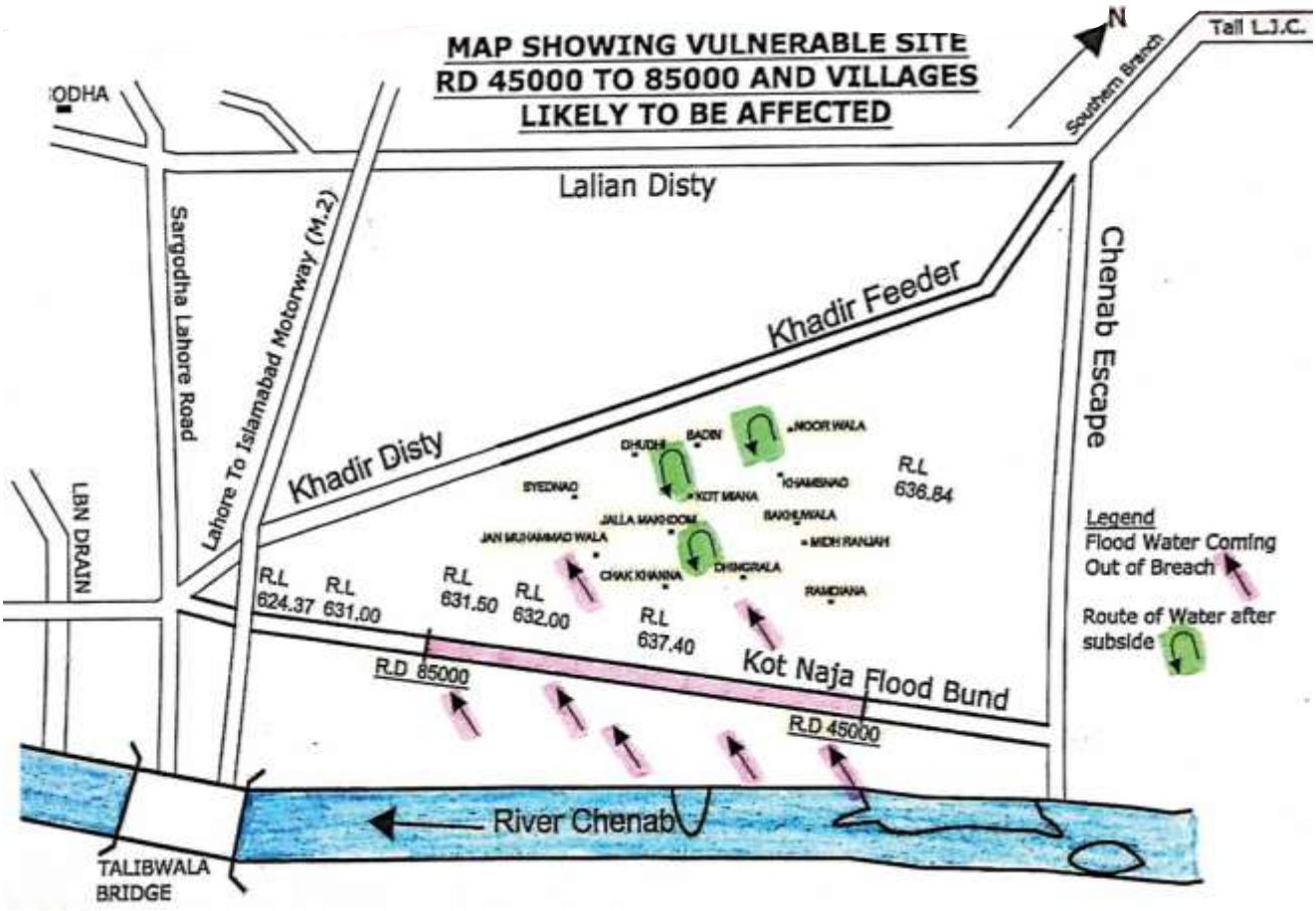


Figure 1 Plan Showing Route of Flood Water coming out the Breach Supported with levels

13.2. Detail of village, Abadie's likely to be affected and this should also be shown on the plan:

The following detail of 13 No villages of Tehsil Kot Momin District Sargodha which are likely to be inundated with different flood stages. As such the action for timely intimation, requisite evacuation, and safety/ relief measures are to be taken by Civil Authority, accordingly: -

Flood Limits				
Low	**Medium**	**High**	**Very High**	**Exceptionally High**
	Kurtuti	Midh Ranjh	Midh Ranjh	Midh Ranjha
	Syed No	Khmb Kehna	Khmb Kehna	Khmb Kehna
		KhmbNo	KhmbNo	KhmbNo
		Ramdiyana	Ramdiyana	Ramdiyana
		Chak Salman	Chak Salman	Chak Salman
		Sikdey	Sikdey	Sikdey
		Gurna Pathan	Gurna Pathan	Gurna Pathan
			Takht Hazara	Takht Hazara
			Burj Ghulam Rasul	Burj Ghulam Rasul
			Badar Ranjha	Badar Ranjha
			Thatti Budhey	Thatti Budhey
				Fattu wala qalandar
				Dulley wala
				Thatti Chaddey

Table 19 Detail of village, Abadie's likely to be affected at different Flood Limits in river Chenab

13.3. Strategy and action taken be explained in detail. This may include:

Irrigation Department will make arrangement to make liaison with other agencies/ District Administrative, Army etc. in case of inundation by Flood water. Following to be done in case of emergency.

13.3.1 Arrangements:

Out spilled water will inundate the area on right side of bund as flood water will spread up in height up to 5-6 ft damaging crops and kacha houses. The out spilled water, after flood subsides, will again fall in the river Chenab in the same way.

The in-charge Sub Divisional Officer, Bhabra Canal Sub Division and Deputy Collector of Bhalwal Canal Division LJC Sargodha taking the cognizance of situation will make liaison with the Civil Administration and Police Department and also will arrange.

i. Proclamation on loudspeakers etc., for evacuation of Abadie's inside the route of flood water.

ii. Prepare maps for the area inundated and carry out immediate survey for damages to crops and other properties.

iii. Flood hut has been proposed to be established at RD 85000 Kot Naja Flood Bund to monitor the emergent flood situation. If any obstruction is found in the way of flood water, it will be removed by deploying establishment and machines such like tractors, excavator machine and bulldozers as per situation prevailing at site. Efforts would be made that flood water may not stand in crops as well as Abadie's, to minimize the losses / damages and ultimately will fall again the same way in river Chenab from the shortest possible time.

iv. Keep a close liaison with Civil Administration, Public Representatives, Army Authorities and the Executive Engineer Sargodha Division. List of phone numbers of above authorities have been mentioned in this flood fighting plan (Chapter 10)

13.3.2Establishment of Flood Fighting Camps:

A tent would be at site and all the resources manpower and material required for controlling the situation would be immediately shifted from the shelter huts to this tent which would then become the emergency camp for carrying out all the flood fighting operations the Sub Engineer nominated by the Executive Engineer

KOT NAJA FLOOD BUND

Sr. #.	Name of Flood Bund.	Battle Station
1	Kot Naja Flood Bund	RD.85+000
2	Muradwala Structures	Muradwala

WATCHING ESTABLISHMENT.

Following watching establishment shall 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 may be increased with the express permission of Executive Engineer, Bhalwal Canal Division

13.3.3 Duties of Officers/ Officials and their camp sites:

Camp No.	Location	Officer's (Name+ Designation+ Mobile No.)	Officials (Name + Designation + Mobile No.)
1	Kot Naja Flood Bund RD 45+000-85+000	Irfan Maqbool Executive Engineer 048-9230406 03006363739	Muhammad Salman Sub Engineer Hilalpur 0331-5282352
2	At Muradwala & Sikdey	Mushtaq Ahmed Nasir Sub Divisional Officer 0300-8699866	Umer Farooq Sub Engineer Bakhuwala (0347-6304535)

Table 20 Duties of Officers/ Officials and their camp sites

13.3.4 Departmental Machinery:

No departmental machinery available in Bhalwal Canal Division.

13.3.5 Machinery from Private Source:

If needed it will be arranged / hired from private source. Following machinery can be hired in case of emergency.

i. Excavator.
ii. Tractor Trolley.
iii. Front Blade Tractor.

13.3.6 Flood Fighting Material Required/Camp:

Sr #	Items	Unit	Total Required Qty	Available Qty	Balance	Remarks
01	Shouldari / Tent	No	1	0	1	Material will be procured before flood season Subject to verification by Competent Authority
02	Chairs	No	6	0	6	
03	Table	No	1	0	1	
04	Generator (2–3 KVA)	No	1	0	1	
05	Pedestal Fans	No	1	0	1	
06	Charpois	No	2	0	2	
07	Symbolic Jackets	No	50	0	50	
08	Polyethene Sheet	Kg	100	0	100	
09	Bamboos (4" dia and 10 ft long)	No	100	0	100	
10	Water Cooler	No	01	0	01	
11	Portable Umbrella	No	2	0	2	
12	Life Jackets	No	5	0	5	
13	Utensils (10 person serving)	No	1	0	1	
14	Jute/Plastic Bags	No	1000	0	1000	
15	Walkie Talkie Set	Sets	02	0	02	
16	Raincoats	No	10	0	10	
17	LED Flood Light	No	10	0	10	
18	Extension Cable (10 ft)	No	02	0	02	
19	Rechargeable Torches	No	2	0	2	
20	Kassi	No	20	0	20	
21	Axes	No	20	0	20	
22	G.I Buckets	No	5	0	5	
23	7/44 Cable	Feet	500	0	500	
24	Sutli	Kg	2	0	2	
25	Sewing Needles	No	10	0	10	

26	Emergency Medical Kit	No	01	0	01	
27	Wire Crates (3x3x3) (at only those camp near river action and reserve stock exists)	No	-	-	-	

Table 21 Flood Fighting Material Required

13.3.7 Flood Fighting Material Available:

Detail of flood fighting material available is given as13.3.6.

13.4Detail of Other infrastructure like electric, Sui Gas, Telephone Installation, Road network, other buildings, canals and drainage network:

No such installation like Sui Gas, Telephone etc. exist in the route of flood water from breach site.

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CHAPTER-14
Action Plan

14.1 Re-shiffting/ recouping plan of reserve stone departmentally:

Reshuffling of stone is not required. No reserved stone provision exists in Bhalwal Canal Division.

14.2 Detail of inlet/outlet crossing along with closing methodology:

Following are the water course crossings on Kot Naja Flood Bund in Bhalwal Canal Division.

Sr. No.	Water Course Crossing Between RD's	Closing Methodology
1	RD 25+400	Water Course Crossing will be plugged through earth filled gunny bags when required.
2	RD 28+600	
3	RD 30+450	
4	RD 32+700	
5	RD 35+000	
6	RD 38+100	
7	RD 39+330	
8	RD 40_+500	
9	RD 42+400	
10	RD 46+300	
11	RD 63+700	
12	RD 64+300	
13	RD 71+600	
14	RD 71+200	

14.3 Deployment of Machinery (Low Flood) River Chenab:

Deployment of Machinery (Normal to Low Flood)

Sr. No.	Structure Name	Length (Miles)	Excavators	Trolleys	Dumpers	Tractor with Front blade
1	Kot Naja Flood Bund RD 0-91440	18.288 Say =18.5	S.E shall allow deputation of one (1) excavator & four (4) Trolleys during low flood at camps/vulnerable points & LMB / RMB.		-	1
2	9 No Solid stone studs at Sikdey Muradwala	Stud 1 = 50 Stud 2 = 50 Stud 3 = 20 Stud 4 = 20 Stud 5 = 20 Stud 6 = 20 Stud 7 = 20 Stud 8 = 20 Stud **Total = 1Mile**			-	-
Total			1			

14.4 Deployment of Machinery (Medium to High Flood) River Chenab:

Deployment of Machinery (Medium to High Flood)

Sr. No.	Structure Name	Length (Miles)	Excavators	Trolleys	Dumpers	Tractor with Front blade
			1 per 7 mile reach	**4 per 7 mile reach**	**2 per 7 mile reach**	**1 per 7 mile reach**
1	Kot Naja Flood Bund RD 0-91440	18.288 Say =18.5	2	9	5	2
2	9 No Solid stone studs at Sikdey Muradwala	Stud 1 = 50 Stud 2 = 50 Stud 3 = 20 Stud 4 = 20 Stud 5 = 20 Stud 6 = 20 Stud 7 = 20 Stud 8 = 20 Stud **Total = 1Mile**				
		Total=	**2**	**9**	**5**	**2**

Payment for machinery and work charge employees subject to verification by TPM/Consultant.

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

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 reach	2 per 5 mile reach	Very High Flood	Exp. High Flood
			1 per 5 mile reach	2 per 5 mile reach			1 per 5 mile reach	2 per 5 mile reach
1	Kot Naja Flood Bund RD 0-91440	18.288 Say =18.5	4	8	15	8	4	8
2	9 No Solid stone studs at Sikdey Muradwala	Stud 1 = 50 Stud 2 = 50 Stud 3 = 20 Stud 4 = 20 Stud 5 = 20 Stud 6 = 20 Stud 7 = 20 Stud 8 = 20 Stud **Total = 1Mile**						
Total			**4**	**8**	**15**	**8**	**4**	**8**

Payment for machinery and work charge employees subject to verification by TPM/Consultant.

14.6 Police Deployment Plan

Sr. No.	Vulnerable for Illegal cuts during floods	Concerned Canal Division	Concerned Police Station & District	Police personnel to be deployed		Remarks (if any)
				Inspector / SI/ ASI	Constables	
1	Kot Naja Flood Bund at RD 45000-85000	Bhalwal	Midh District Sargodha	SI=1 ASI=2	6	-

Table 22 Police Deployment Plan

14.7 Detail of Synthetic bags with Capacity of (50 Kg) and (100 Kg)

Sr. No.	Name of Structure	Length (Miles)	Vulnerable Reach	Camp Locations	Site In charge by Name & No.	No. of Synthetic Bags				Remarks
						50 Kg		100 Kg		
FLOOD BUNDS ALONG RIVER CHENAB IN BHALWAL CANAL DIVISION LJC SARGODHA										
1	Kot Naja Flood Bund RD 0-91440	18.288	RD 45000-85000	RD: 31800	Muhammad Salman Sub Engineer Hilalpur 0331-5282352	**Required**	**Available**	**Required**	**Available**	Not available at stock and will be procured in emergency
2				RD: 85000	Umar Farooq Sub Engineer Bakhuwala 0347-6304535	200	Nil	100	Nil	

14.8 Detail of polythene sheets of black colure to protect upstream slope against wave action and to control embankments.

Sr. No.	Name of Structure	Length (Miles)	Vulnerable Reach	Camp Locations	Site In charge by Name & No.	Plastic Sheets (sft)		Remarks
FLOOD BUNDS ALONG RIVER CHENAB IN BHALWAL CANAL DIVISION LJC SARGODHA								
1	Kot Naja Flood Bund RD 0-91440	18.288	RD 45000-85000	RD: 31800	Muhammad Salman Sub Engineer Hilalpur 0331-5282352	**Required**	**Available**	Not available at stock and will be procured in emergency
2				RD: 85000	Umer Farooq (0347-6304535)	3000	Nil	

14.9 Any other details as per SOPs approved by the Administration Department.

SOPs shared vide No. SO(FLOODS)VII-22/2017 dated 26.12.2025 shall be strictly followed.

CHAPTER-15

15. Back up Divisions (in case of breach)

In case of breach or during emergency, (Shahpur Canal Division LJC, Sargodha) and his filed staff will act as sister Division.

Sub Divisional Officer
Bhabra Canal Sub Division
At Hilalpur Rest House

Executive Engineer
Bhalwal Canal Division
Bhalwal

Superintending Engineer
Lower Jhelum Canal Circle
Sargodha

Chief Engineer
Irrigation Sargodha Zone,
Sargodha

RD of w/c - xing	Proposed Data			Existing Data		Last Designed Data						
	Top Width	Side Slope	Top Levels with 6' FB above HFL 1973	Top Width (ft)	Top levels	Side Slope	Top Width (ft)	Height of Bank above HFL	Top RL of Bank	RL of High flood 1973	Natural Surface Levels	RD
	20' (0-85250)	2:1 (Country Side) & 3:1 (River Side)	54.20	15	651.20	2:1 (Country Side) & 3:1 (River Side)	15.0'	3.0'	651.20	648.20	649.40	0
			52.70		49.70				49.70	46.70	44.80	5000
RD 8975			51.40		48.30				48.40	45.40	45.30	10000
			49.90		46.90				46.90	43.90	42.60	15000
			48.60		45.50				45.60	42.60	42.20	20000
RD 24765			47.00		43.95				44.00	41.00	42.50	25000
RD 26185 RD 27450 RD 28500 RD 29145			45.80		42.72				42.80	39.80	38.40	30000
RD 31500 RD 32875			44.60		41.50				41.60	38.60	38.30	35000
RD 38000 RD 38875			43.60		40.50				40.60	37.60	38.40	40000
RD 42400			42.50	14	39.50				39.50	36.50	37.40	45000
RD 46300			41.50		38.40				38.50	35.50	33.80	50000
			40.90		37.70				37.90	34.90	36.40	55000
			20.20		37.00				37.20	34.20	33.80	60000
RD 63700 RD 64300			39.90		36.70				36.90	33.90	32.60	65000
			39.60		36.50				36.60	33.60	31.70	70000
RD 71600 RD 74600			38.30		35.00				35.30	32.30	32.00	75000
			36.80		33.7				33.8	30.8	30.83	80000
			35.50		32.5				31.56	28.56	27.02	85000
	39											85250
	43											85500
	44											85750
	26											86000
	20' (86000-132500)		34.56		31.5				32.5	29.5	24.37	90000
RD 95500 RD 97600 RD 99200			32.80	15	29.8				29.8	26.8	26.12	95000
RD 101400			31.40		28.4				28.4	25.4	22.43	100000
RD 105519 RD 106520 RD 107120			30.00		27				27	24	19.94	105000
RD 111721 RD 112980 RD 114010			28.45		25.45				25.45	22.45	20.22	110000
RD 117505			26.90		23.9				23.9	20.9	18.73	115000
RD 120952			25.25		22.45				22.25	19.25	18.05	120000
RD 124300			23.60	14	20.6				20.6	17.6	15.93	125000
			21.69		18.68				18.69	15.69	13.85	130000
			20.70	15	17.7				17.7	14.7	3.83	132500

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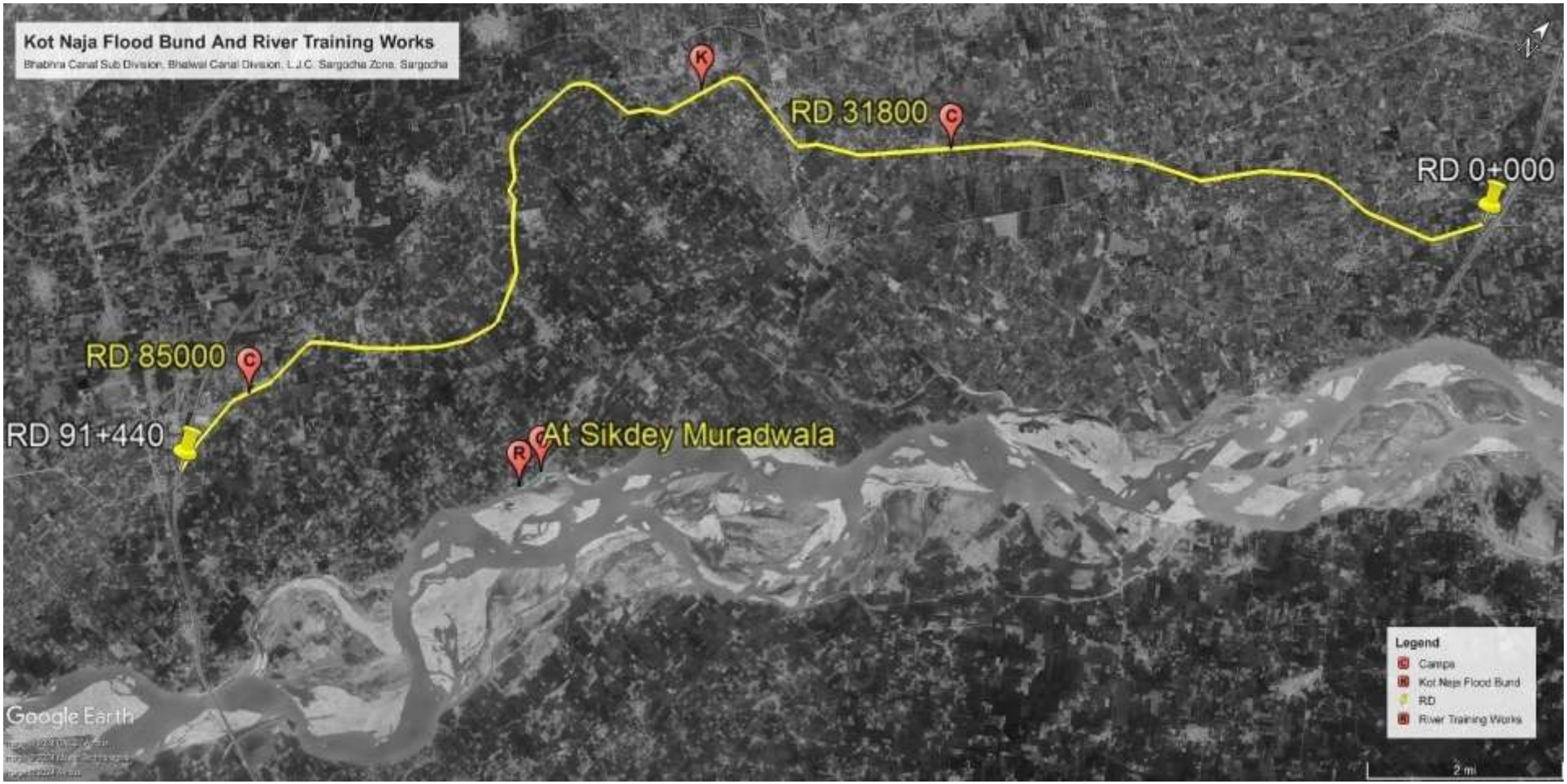


Figure 2Kot Naja Flood Bund & River Training Works

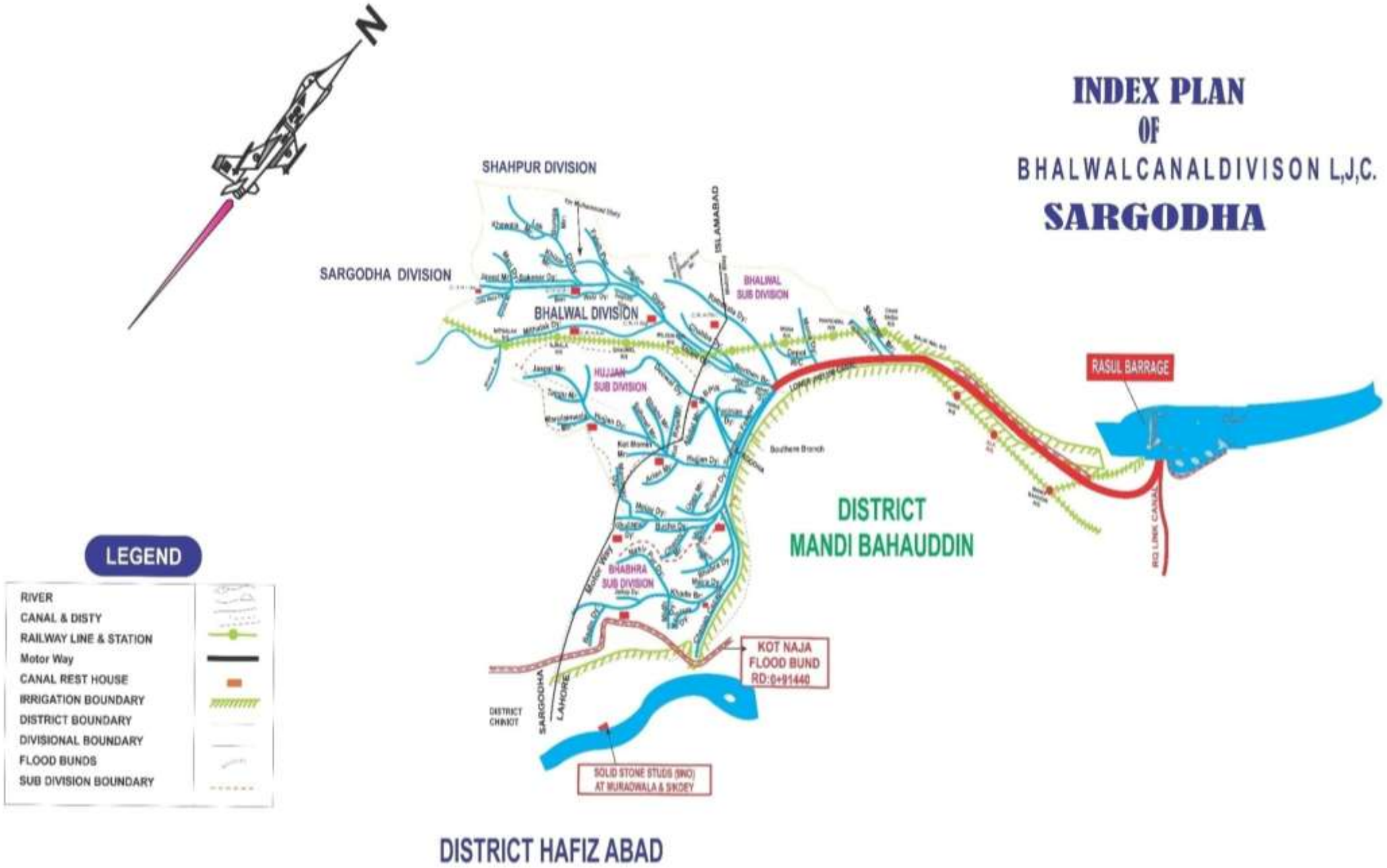


Table 23 Index Plan of Bhalwal Canal Division, LJC Sargodha Zone