GOVERNMENT OF THE PUNJAB

IRRIGATION DEPARTMENT

FLOOD FIGHTING PLAN 2026

SIDHNAI HEADWORKS DIVISION, SIDHNAI

TRIMMU CANAL CIRCLE, TRIMMU

MULTAN IRRIGATION ZONE, MULTAN

INDEX
FLOOD FIGHTING PLAN SIDHNAI HEADWORKS DIVISION

PART –A			
Chapter #		**Description**	**Page**
1	**Salient features of Sidhnai Headworks.**		1-5
	1.1	Location.	
	1.2	General Description.	
	1.3	Administration.	
2	**Flood Protection and River Training Works.**		6-11
	2.1	Design parameters of Training Works.	
	2.2	Location Map.	
3	**Brief History of Past Flood Events.**		12
4	**Design Data, Historic peak flood data and previous five years flood data of Head Works / Barrages and other control points.**		13-14
	4.1	Flood Limits.	
	4.2	Time Lags of floods.	
	4.3	Highest Floods.	
	4.4	Peak Discharges.	
5	**Flood fighting Strategy.**		15-16
6	**Flood Damages Restoration Works.**		17
7	**Flood Fighting Watching Arrangement.**		18-23
	7.1	Pre-Flood Arrangement.	
	7.2	Watching Establishment.	
	7.3	Arrangement at Sensitive Sites.	
	7.4	Watching Material.	
	7.5	Arrangement for sounding & probing.	
	7.6	Lighting Arrangement.	
	7.7	Ration arrangement.	
	7.8	POL Arrangement for Vehicle.	
	7.9	Transportation.	
	7.10	Law and Order.	
	7.11	MedicalAarrangement for Labour.	
	7.12	Liaison with other Department.	
	7.13	Role of the Army.	
	7.14	Duties of Telephone Attendant.	
	7.15	Wireless Arrangements.	
8	**Detail of Encroachment.**		24-45

9	**Duty Roaster / Flood Fighting Program.**		46
10	**Emergency Telephone Numbers.**		47-48
11	**Standard Operating Procedure (SOP) for Breaching Sections.**		49-55
	11.1	History of the Breaching Section.	
	11.2	Location, Design, Quantity and Variety of the Explosive required for detonation.	
	11.3	Arrangement of explosive and security of explosive stores.	
	11.4	List of the Security staff alongwith detail of their training etc.	
	11.5	Detail of mechanical means as a stand by arrangements in case of detonation failure.	
	11.6	Duty Roster in Case of critical situation.	
	11.7	Breaching committee with their action plan.	
	11.8	List of Villages Likely to be undated in case of breach.	
	11.9	Announcement and details of evacuation Arrangements.	
	11.10	Details of coordination with civil / Army Authorities.	
	11.11	Parallel communication arrangements.	
	11.12	Index Plan.	
PART – B			
12	**Vulnerable Sites on Flood Bund / Structures.**		56-57
	12.1	Apprehended breaches in flood Bunds / Structures.	
	12.2	Operation of Breaching Sections.	
	12.3	Breaches due to rise of flood water, deterioration of flood bunds etc.	
13	**Emergency Contingency Plan for vulnerable site (sites).**		58-66
	13.1	Plan showing route of flood water coming out of the expected breaching point supported with levels.	
	13.2	Details of villages, abadies likely to be affected and this should also be shown on the plan.	
	13.3	Strategy and action taken be explained in detail. This may include:	
	13.3.1	Arrangements.	
	13.3.2	Establishment of Flood Fighting Camps.	
	13.3.3	Duties of Officers / Officials and their camp sites.	
	13.3.4	Departmental Machinery available.	
	13.3.5	Machinery available from Private Source.	
	13.3.6	Flood fighting Material required.	
	13.3.7	Flood fighting Material available.	
	13.4	Detail of other infrastructure like Electric, Sui Gas, Telephone installation, Road network, other Buildings, Canals and Drainage network.	

14	**Action Plan**		
	14.1	Re-shuffling / Recouping plan of reserve stone Departmentally.	
	14.2	Detail of inlet / outlet crossing along with closing methodology.	
	14.3	Deployment of Machinery (Normal/Low Flood).	
	14.4	Deployment of Machinery (Medium/High).	
	14.5	Deployment of Machinery (Verey Hig /Exceptionally High).	67-72
	14.6	Police Deployment Plan.	
	14.7	Details of synthetic bags with capacity of 50 kg and 100 Kg.	
	14.8	Details of polythene sheet of black color to protect upstream slope against wave action and to control seepage through embankments.	
	14.9	Any other details as per SOP's approved by the Administrative Department	
15	**Backup Divisions (In case of Breach)**		73

Last page of Part-A & Part-B be signed by the concerned Superintending Engineer and Chief Engineer in token of correctness of the Flood Fighting Plan.

PART – A

Chapter - 1

SALIENT FEATURES OF SIDHNAI HEADWORKS

1.1 Location

1. In 1960, Indus Water Treaty gave water rights of Eastern Rivers (Ravi, Sutlej, Beas) to India and rights of Western Rivers (Indus, Chenab and Jhulem) were given to Pakistan. In order to overcome the scarcity of 30 MAF water, World Bank assistance was valuebale both on the technical and finance side as well as its role as a guarantor of the Massive structures known as Indus Basin Project. The Indus Basin Project comprises of construction of two Dams (Mangla and Tarbela), construction of five new Barrages and eight major link canals to pour 20 MAF water from the Indus and Jheulm to Ravi and Sutlej Irrigation command area.

2. Sidhnai Barrage was also constructed as one of the component of Indus Basin Project. It has been constructed about 6 miles upstream of the old Sidhnai weir almost 5 kilometers from Abdul Hakim city.

1.2 General Description

1. SIDHNAI BARRAGE

The meaning of the word "SIDHNAI" is Straight River. A stretch of eight miles of River Ravi at Sidhnai is nearly straight and does not meander. It is thought that it could be an artificial channel excavated in the distant past to prevent flooding in the Multan area.

Before Indus Water Treaty, the old Sidhnai weir with a maximum design capacity 100,000Cs was operational. The new Sidhnai Barrage was constructed 31000 ft upstream of old Sidhnai weir with design capacity of 150,000 Cs. Downstream straight reach was excavated and widened to increase the capacity from 100,000 Cs to 150,000 Cs. River Ravi falls into River Chenab near Fazil Shah Village in Khanewal District.

Motorway M-3 brige has also been constructed at a distance of about 17000 ft downstream of Sidhnai Barrage.The object of new Sidhnai Barrage is to receive water from Chenab and Jhelum Rivers from Trimmu through T.S Link Canal and Haveli Main Line to feed off-taking canals of Sidhnai Barrage.

2. FEEDING CHANNELS.

After Indus water treaty, the water rights of all Eastern rivers were given to India that also includes river Ravi. In order the overcome the scarcity of water in river Ravi along with Haveli Main Line which is already playing a role of Feeding Channel to Sidhnai Weir, Trimmu Sidhnai Link Canal was also constructed. Hence the two feeding channels of Sidhnai Barrage are as under: -

a) Trimmu Sidhnai Link Canal
b) Haveli Main Line

a. TRIMMU SIDHNAI LINK CANAL.

T.S.Link canal was constructed to transfer River supplies of Jhelum and Chenab from Trimmu Barrage to River Ravi at Sidhnai Barrage. The total length of canal is 218,082 ft having discharge capacity of 12,500 Cs.

b. HAVELI MAIN LINE.

Haveli Main Canal, with a capacity of 5,170 Cs., also off takes from Trimmu Barrage and runs parellel to the T.S.Link and after supplying water to the distributaries, it also falls into the River Ravi giving additional supply of 3,700 Cs to the Sidhnai Barrage.

3. OFFTAKING CHANNELS

2 No channels off takes from the left flank of Sidhnai Barrage. These off taking channels irrigate the most fertile land of Multan, Khanewal, Vehari, Bahawalpur and Lodhran Districts etc.

The names of the channels are as under

a) Sidhnai Mailsi Link Canal.
b) Sidhnai Canal.

a. SIDHNAI MAILSI LINK CANAL.

It was constructed to transfer water from River Ravi to Lower Bahawal Canal through a Syphon at River Sutlej near Mailsi. Its designed capacity is 13,470 Cs with a total length of 374,983 ft. It is an unlined channel up to RD: 76+221 and lined from RD: 76+221 to Tail. This canal supplies water to fertle lands of Khanewal, Vehari, Multan, Lodhran and Bahawalpur Districts.

b. SIDHNAI CANAL

Initially Sidhnai Canal was fed from old Sidhnai weir. After the construction of new Barrage at present site, Sidhnai Feeder Canal was constructed to feed Sidhnai Canal from new Sidhnai Headworks. Now L-Section of Sidhnai Canal has been revised and Sidhnai Feeder has been merged into Sidhnai Canal. This canal supplies water to Khanewal and Multan Districts. Its designed capacity is 4005 Cs with a total length of RD:185+761ft.

4. U/S FLOOD EMBANKMENT.

In order to overcome the afflux produced due to construction of Sidhnai Headworks, 02 No. Marginal Flood Bunds i.e Left Marginal Bund and Right Marginal Bund have been constructed to channelise the river flow through the Headworks.

a. LEFT MARGINAL BUND (LMB)

The L.M.B has a length of 89,585 feet with a design top width of 25 ft with river side slope as 3:1 and country side slope as 2:1. The desiging of flood bund is based on 1988 flood. It has a free board of 6 ft. Left Marginal Bund has been provided with a ring bund starting from Bund RD:13+500 to RD:14+500. A Mole Head Spur at RD:15+000, X-Spur at RD:16+900 & RD:31+000 and J-Head Spurs at RD:20+800 & RD:38+000 have also been provided on the L.M.B. Four No.

b. RIGHT MARGINAL BUND (RMB)

The Right Marginal Bund has 115,000 feet with a design top width of 25 ft with river side slope as 3:1 and country side slope as 2:1. The desiging of flood bund is based on 1988 flood. It has a free board of 6 ft. Right Marginal Bund has been provided with J-Head Spur at RD:99+500 and X-Spur at RD:108+500.The Right Marginal Bund has also been provided with wetting channel from RD: 0+000 to RD:11+000.

5. D/S PROTECTION BUNDS.

The Left and Right embankments of old Sidhnai weir were converted into Left and Right Protection Bunds of Sidhnai Headworks. The total length of Left and Right downstream protection bunds is 31000 ft.

6. U/S GUIDE BANK.

Sidhnai Barrage has been provided with Guide Bank upstream right side. The Guide Bank is totally covered due to masking on Right side.

7. SPILL CHANNEL.

The total length of the Spill Channel is 69,602 ft. It was constructed in 1958 to reduce the flood thrust on the old Sidhnai Weir, with a design capacity of 30,000 cusecs; however, excavation was carried out only for 20,000 cusecs. After the construction of the new Sidhnai Headworks, only the head regulator of the Spill Channel was renovated to a capacity of 45,000 cusecs under the Indus Basin Scheme, while the remaining length of the channel has yet to be renovated. Consequently, since the commissioning of the new Sidhnai Headworks, the Spill Channel has never been able to pass its design discharge even during extreme flood events.

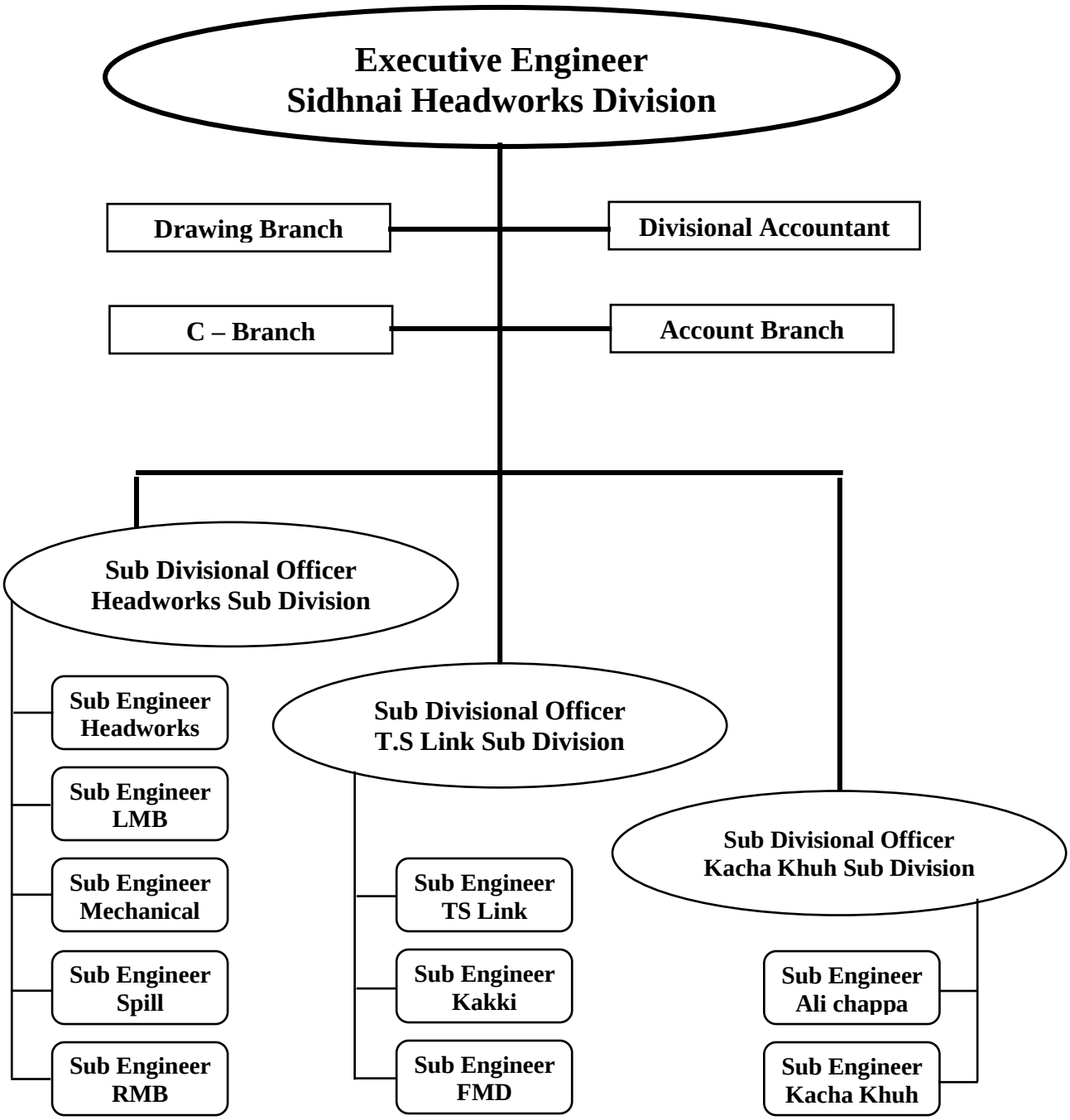
The maximum flood discharge that ever flowed through the Spill Channel was 21,968 cusecs in 1988, during which its left and right banks breached at several locations. This clearly indicates the need for comprehensive rehabilitation of the Spill Channel on the basis of proper hydraulic and physical model studies. In this regard, a detailed PC-II has already been submitted to the higher authorities for the rehabilitation of the Spill Channel.

8. BREACHING SECTION.

A breaching section was approved between RD:15-16 R.M.B. A critical gauge has been provided at RD:10+000 Left Marginal Bund to watch the thrust of the flood. On achieving the flood level as 478.00 at this critical gauge and while the river is still in raising position, the breaching section at RD:16+000 Right Marginal Bund is activated. It has been estimated that a discharge of about 45,000 Cs will pass through breaching section, if operated. This breaching section was operated during 1973, 1976, 1988 and 2025 to pass the excessive discharge. Location plan of breaching section is attached.

1.3 ADMINISTRATION.

Sidhnai Headworks Division, Sidhnai has three Sub Divisions located at Sidhnai Headworks, Shorkot Cantt: and Kacha Khuh. The Administrative Setup of Sidhnai Headworks Division, Sidhnai is as under: -



Chapter - 2

2.1 FLOOD PROTECTION AND RIVER TRAINING WORKS

A- DESIGN PARAMETERS OF TRAINING WORKS.

Sr. No.	Name of bunds/spurs	Length (ft)	Top width	Side slope		Free board
1	Left Marginal bund (LMB)	89585	25'.0	3:1	2:1	6'.0 above HFL 1988
2	Ring Bund LMB RD:13500 to 14500	2355	15'.0	3:1	3:1	6'.0 above HFL 1988
3	Mole Head spur LMB RD:15000	1465	25'.0	3:1	3:1	6'.0above HFL 1988
4	X-spur left LMB RD:-16900	840	15'.0	3:1	3:1	6'.0above HFL 1988
5	J-Head spur LMB RD:20800	5200	25'.0	3:1	3:1	6'.0above HFL 1988
6	X-spur LMB RD:-31000	900	15'.0	3:1	3:1	6'.0above HFL 1988
7	J-Head spur LMB RD:38000	6800	25'.0	3:1	3:1	6'.0above HFL 1988
8	Right Marginal bund (RMB)	115000	25'.0	3:1	2:1	6'.0above HFL 1988
9	Wetting channel RMB	11000	6'.0	3:1	2:1	3'.0above HFL 1988
10	J-Head spur RMB RD:99500	7200	25'.0	3:1	3:1	6'.0above HFL 1988
11	X-spur RMB RD:108500	150	20'.0	3:1	3:1	6'.0above HFL 1988
12	Left D/S Protection Bund	31000	25'.0	3:1	2:1	6'.0above HFL 1988
13	Right D/S Protection Bund	31000	25'.0	3:1	2:1	6'.0above HFL 1988
14	Right Guide Bund	650	30'.0	3:1	3:1	3'.0above HFL 1988
15	Spill Channel	69602	25'.0	3:1	2:1	3'.0 above F.S.L

Total length of flood protection structures including Spill Channel = 71 miles.

B- DESIGN PARAMETERS BARRAGE AND ITS ALLIED STRUCTURE.

1. Designed flood capacity of Barrage		1,50,000 Cs
2. Max: capacity of structure		1,87,105 Cs
3. Max: discharge observed before construction of the Barrage		1,95,000 Cs
4. Max: discharge observed after construction of Barrage		3,30,210 Cs
5. Unit Discharge for Design of Apron		252.8 Cs/ Ft
6. Loseness Factor		24.8 %
7. Maximum Head Across		30 Ft
8. Length of Divide Wall		230 Ft
9. Width of Divide Wall		08 Ft
10. Length of Impervious Floor U/S		30 Ft
11. Length of Impervious Floor D/S		105.67 Ft
12. Design Water way 15 x 40		600.00 Ft
i). Water Way Main Weir 11 x 40	440.00 Ft	
ii). Water Way Undersluice 2 X 40	80.00 Ft	
iii). Water Way Silt Excluder 2 X 40	80.00 Ft	
13. Existingl Water Way **(Due to Masking)**		600-120=**480 Ft**
14. No of Pier		14
15. Width of Pier		08 Ft
16. Length of Bridge B/W Abutment		712 Ft
17. No of Gates on Headwortks		15 Nos
18. Type of Gate		Vertical Lift Gate Type
19. Lift of Gate		Vertical Lift

20. Factor of safety against sliding:	1.40
21. Lacey factor for apron U/S:	1.25
22. Lacey factor for apron D/S:	1.75

Reduce Level of

22. Crest of main weir	+454.00 Ft
23. Crest of under sluices (Pocket)	+449.50 Ft
24. Crest of Head regulator of Sidhnai Canal	+458.00 Ft
25. Crest of Head Regulator of Sidhnai Mailsi Link	+458.00 Ft
26. Floor of U/S Main weir	+446.00 Ft
27. Floor of D/S Main weir	+437.50 Ft
28. Top of Bridge service road	+484.00 Ft
29. Top R.L of Divide Wall:	+472.00 Ft
30. Top R.L of Splay Wall D/S	+477.00 Ft
31. High flood level upstream (1,50,000 Cs)	+476.30 Ft
32. High flood level downstream (1,50,000 Cs with Eroded Bed)	+470.00 Ft
33. F.S.L Koranga Aqueduct at Barrage Left Abutment	+477.25 Ft
34. F.S.L Koranga Aqueduct at Barrage Right Abutment	+476.30 Ft
35. Normal pond level	+467.00 Ft
36. Max (Emergency): pond level	+468.00 Ft
37. Top of gates level (Barrage)	+469.00 Ft

General

38. Width of crest	5.00ft
39. D/S Left protection Bund	31000.00ft
40. D/S Right protection Bund	31000.00ft
41. Height of Barrage Gate	15.0 ft
42. Height of Sidhnai Feeder Gate	11.0 ft
43. Height of S.M Link Canal Gate	11.0 ft

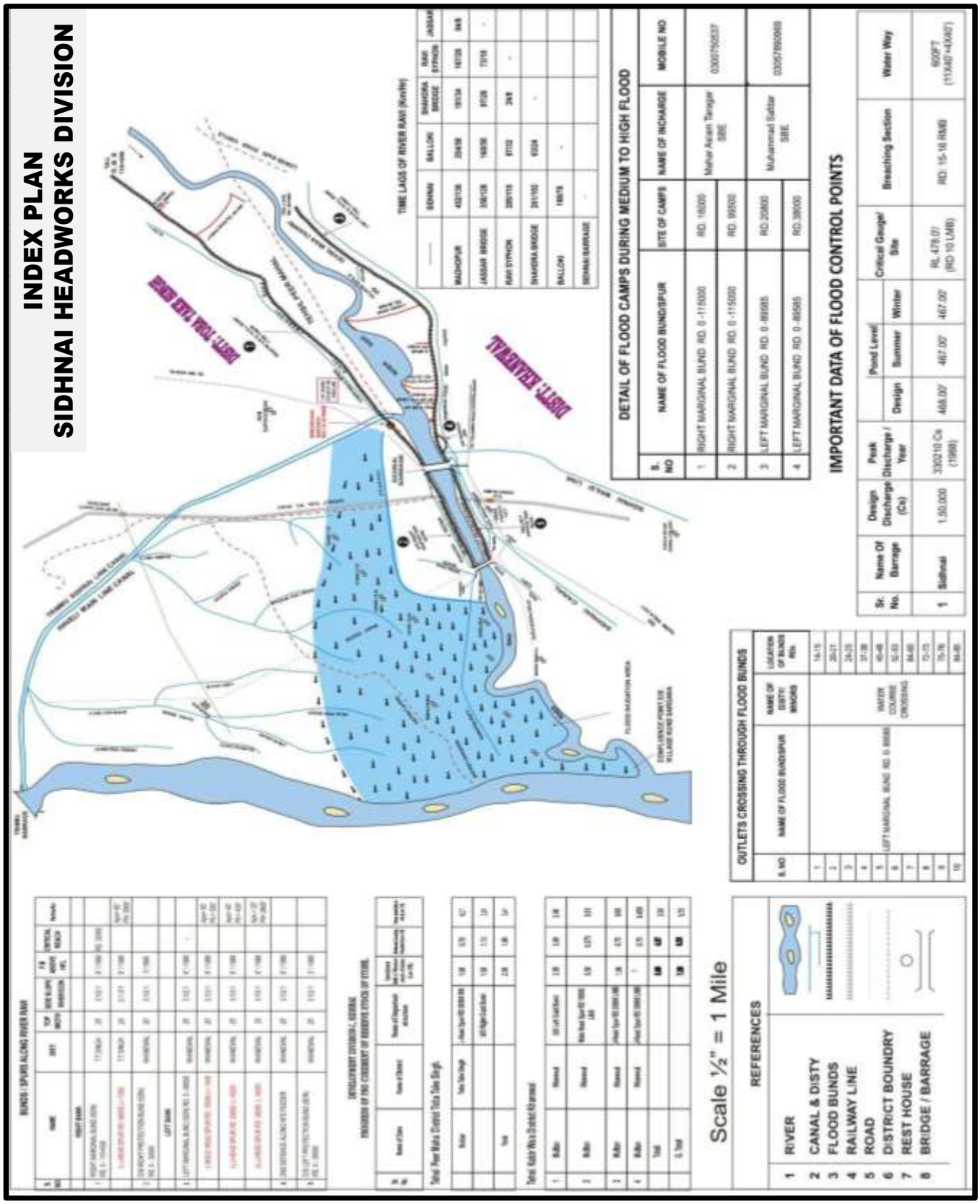
44. Time taken to raise One Gate.

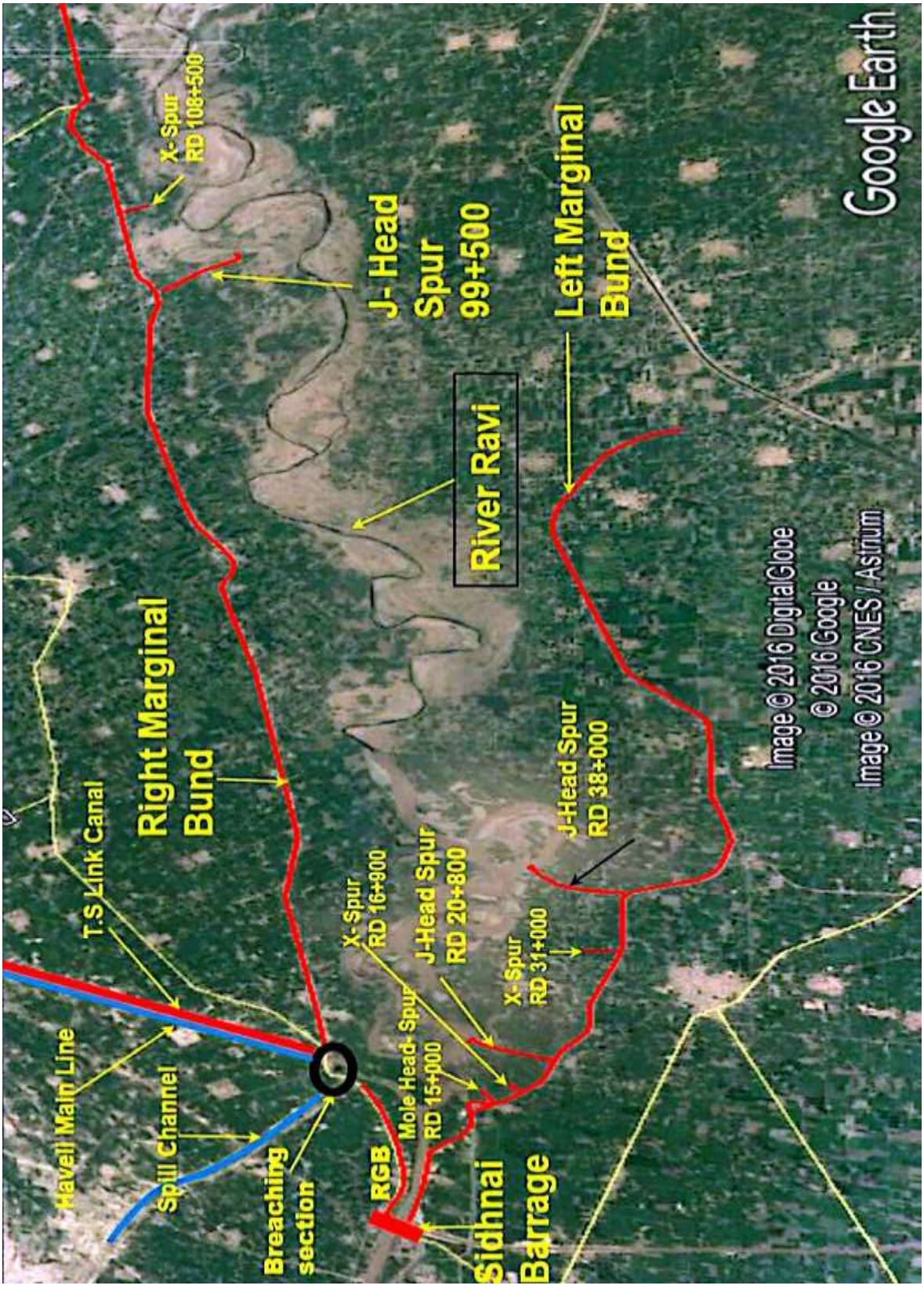
Manually = One ft in One Hour.

Electrically = Full Gate One Hour.

44. Height of super structure	10.00 ft
45. Width of Head way	24.00 ft
46. Width of Foot Path	4.50 ft
47. Total width of Head regulator of Sidhnai Feeder	118.00 ft
48. Total width of Head regulator of Sidhnai Mailsi Link	303.00 ft
49. Width of crest of Sidhnai Feeder	5.00 ft
50. Width of crest of Sidhnai Mailsi Link	5.00 ft

2.2 LOCATION MAP





LOCATION MAP OF FLOOD BUNDS / ALIED STURCTURES

Chapter - 3

BRIEF HISTORY OF PAST FLOOD EVENTS

The highest flood passed on 2-10-1988 in the history of Sidhnai Barrage at River Ravi. The total discharge U/S Barrage was 3,30,210 Cs out of which 2,55,012 Cs passed through weir of Barrage, 45,000 Cs through the Breaching Section and 21,968 Cs was passed through the Spill Channel. The H.F Level U/S of the Barrage recorded at Principle Gauge (LMB RD 10+000) was 478.20 while the HFL U/S of Sidhnai Barrage was 477.88 and D/S Gauge was 477.60. However, despite passing 2,55,012 Cs against 1,50,000 Cs design capacity, the structure of the Barrage remained safe. The flood also seriously affected the area on the right side upstream of Sidhnai Barrage particularly in Pir Mehal area. The right protection embankment of newly constructed Chichawatni Bridge had to be cut to provide relief to the bridge. The flood water from these cuts inundated the area on both sides. The downstream structure wing wall was raised by 4.00 ft after that highest flood for providing safe freeboard. During Flood 2025, all times high water levels achieved u/s 478.35 and d/s 478.20.

After the exceptionally high flood of 1988, very high floods passed through the barrage in 1995, 1996 and 2025 having discharge of 2,12,340 Cs, 1,95,362 Cs and 1,93,470 Cs respectively. During these floods, the J-Head spur at RD: 20+800 LMB, J-Head Spur at Rd 38+000 LMB and J-Head Spur 99+500 RMB were under the direct hit, which was saved through hectic flood fighting.

Breaching section was operated during the year 1973, 1976, 1988 & 2025.

R.M.B was breached during the year 1988 at RD: 40-41.

(Lac Cs.)

BREACHING HISTORY					
Year	**Weir**	**Breach**	**Spill**	**Canals**	**Total**
18.08.1973	1.80	0.15	0.15	0.00	2.10
15.08.1976	1.93	0.41	0.09	0.05	2.49
02.10.1988	**2.55**	**0.45**	**0.22**	**0.08**	**3.30**
03.09.2025	**1.93**	**0.05**	**0**	**0**	**1.98**

Chapter – 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 (DISCHARGE IN Lacs Cusec)

Limit of River Ravi at Sidhnai Headworks is 1.50 Lac Cusec

River	Sites	Low	Medium	High	Very high	Exceptionally high
Jhelum	Mangla	0.75 - 1.10	1.10 - 1.5	1.50 – 2.25	2.25 – 3.0	More Than 3.00
	Rasul	0.75 - 1.10	1.10 - 1.5	1.50 – 2.25	2.25 – 3.0	More Than 3.00
Chenab	Marala	1.0 – 1.50	1.50 –2.0	2.0 – 4.0	4.0 – 6.0	More Than 6.00
	Khanki	1.0 – 1.5	1.5 – 2.0	2.0 – 4.0	4.0 – 6.0	More Than 6.00
	Qadirabad	1.0 – 1.5	1.5 – 2.0	2.0 – 4.0	4.0 – 6.0	More Than 6.00
	Trimmu	1.5 – 2.0	2.0 – 3.0	3.0 – 4.5	4.5 – 6.0	More Than 6.00
	Punjnad	1.5 – 2.0	2.0 – 3.0	3.0 – 4.5	4.5 – 6.0	More Than 6.00
Ravi	Jassar	0.5 – 0.75	0.75– 1.0	1.0 – 1.5	1.5 – 2.0	More Than 2.00
	Shahdara	0.4 – 0.65	0.65– 0.9	0.9 – 1.35	1.35 – 1.8	More Than 1.80
	Balloki	0.4 – 0.65	0.65– 0.9	0.9 – 1.35	1.35 – 1.8	More Than 1.80
	Sidhnai	0.3 – 0.45	0.45- 0.6	0.6 – 0.9	0.9 – 1.2	More Than 1.20
Sutlej	Sulemanki	0.5 – 0.8	0.8 – 1.2	1.2 – 1.75	1.75– 2.25	More Than 2.25
	Islam	0.5 – 0.8	0.8 – 1.2	1.2 – 1.75	1.75– 2.25	More Than 2.25

4.2 TIME LAG STATEMENT OF RAVI RIVER

Sr. No.	Site	Distance in KM	Time Lag in Hour
Above 60000 Cs Discharge.			
1	Jassar to Shahdara	97	26
2	Shahdara to Balloki	63	24
3	Balloki to Sidhnai Barrage	198	78
30000 Cs to 60000 Cs Discharge			
1	Balloki to Sidhnai Barrage	198	50-60

4.3 HIGHEST FLOODS

Sr. No.	YEAR	DISCHARGE (Cusec)	GAUGE (Ft)
1	1973	210339 Cs	475.70 Ft
2	1976	249848 Cs	477.10 Ft
3	1988	330210 Cs	478.20 Ft
4	2025	198470 Cs	478.35 Ft

PEAK DISCHARGE

Date	Peak discharge passed D/S Sidhnai H/W	Withdrawal through canals	Disch: passed through breaching section	Disch: passed through Spill Channel	Total discharge U/S Sidhnai H/W	H.F.L U/S	H.F.L D/S
18.08.1973	**180650**	**-**	**15600**	**14089**	**210339**	**475.7**	**474**
15.08.1976	**193613**	**5500**	**41000**	**9753**	**249848**	**477.1**	**474.9**
02.10.1988	**255012**	**8200**	**45000**	**21968**	**330210**	**477.88**	**477.6**
08.08.1989	64857	4700	-	-	69557	467	463.8
14.09.1990	50237	15400	-	-	56637	467	462
14.08.1991	30152	15700	-	-	45852	467.5	458.4
16.09.1992	93919	1600	-	-	95510	469.2	466.2
19.07.1993	113874	6400	-	-	120274	469.2	468.5
29.08.1994	91521	14800	-	-	106321	476	465.8
12.09.1995	**212340**	**-**	**-**	**-**	**212340**	**476.1**	**475.5**
30.08.1996	**195362**	**-**	**-**	**-**	**195362**	**476**	**475**
03.09.1997	133237	-	-	-	133237	473.5	470.8
27.09.1998	55012	4200	-	-	59212	467	462
24.09.1999	22129	15700	-	-	37829	467	460
02.08.2000	37236	13900	-	-	51136	467	459.7
07.08.2001	30585	-	-	-	30585	467	459
18.08.2002	16086	14908	-	-	30994	467	459.85
09.08.2003	25486	15200	-	-	40686	467	458.6
23.08.2004	12773	14900	-	-	27673	467	456.6
11.08.2005	13238	15200	-	-	28438	467	457
02.08.2006	10696	14900	-	-	25596	467	456.8
20.08.2007	14405	15275	-	-	29680	467	457.3
24.08.2008	38696	14862	-	-	53558	467	459.9
02.08.2009	22714	7852	-	-	30566	467	458.6
05.08.2010	30206	15344	-	-	45550	467	459.85
02.09.2011	23925	6100	-	-	30025	467	459.9
14.09.2012	28627	4000	-	-	32627	467	460
23.08.2013	73504	10600	-	-	87804	467	465.4
12.09.2014	71112	14600	-	-	85712	467	465
14.09.2015	28636	10800	-	-	39436	467	460
01.08.2016	12325	13850	-	-	26175	467	456
08.08.2017	16667	15300	-	-	31967	467	458
30.09.2018	8857	15300	-	-	24157	467	456
05.09.2019	15384	14900	-	-	30284	467	458.1
01.09.2020	28214	4100	-	-	32314	467	459.65
18.09.2021	16397	17250	-	-	33647	467	458.3
29.07.2022	22843	1550	-	-	24393	467	459.5
02-08-2023	43758	14800	-	-	58558	467	463.6
30-08-2024	24711	5500	-	-	30211	467	459.6
03-09-2025	**193470**	**-**	**5000**	**-**	**198470**	**478.35**	**478.20**

Chapter – 5

FLOOD FIGHTING STRATEGY

1. LOW FLOOD

When River Ravi at Sidhnai Barrage reaches above 30,000 Cs, it is in low flood. At this stage flood water remains within the lips of the River. It does not touch any flood embankment. However, one No. Available field establishment is engaged on L.M.B and R.M.B and other flood protection structures for watching.

2. MEDIUM FLOOD

Beyond 45,000 Cs and upto 60,000 Cs, River is in medium flood. At this stage, water starts touching the flood embankment. Strength of the Beldars is increased to meet with any emergency. Flood material is placed on various huts along R.M.B and L.M.B and night watching by the Sub Divisional Officer, Sidhnai H/Works Sub Division and Executive Engineer, Sidhnai H/Works Division, is carried out.

3. HIGH FLOOD

When discharge U/S increases from 60,000 Cs, the flood water is accumulated along R.M.B and L.M.B. Additional Sub Divisional Officer is deputed to assist Sub Divisional Officer, Sidhnai H/Works Sub Division for day and night watching. Beldars work in 2-shifts, each of 12-hours. Additional Sub Engineer from T.S Link Sub Division and Kacha Khuh Sub Division will work on L.M.B and R.M.B. Special night watching is carried out on J-Head spurs RD:20+800, 38+000 L.M.B and 99+500 R.M.B.

4. VERY HIGH FLOOD.

When discharge increases beyond 90,000 Cs, special day and night watching is carried out and all the officers move round the clock. Special attention is given for the protection of main Barrage, structure and gauges are observed after every one hour. Beldars work in 3-shifts, each of 8-hours. The staff present on breaching section at RD:16 R.M.B is highly alerted and keeping in view the rising condition of River Ravi D/S Balloki, liners are filled with explosive material to prepare for the operation of breaching section. During flood 2025, the mile gage at Rd 100+000 of RMB achieved 499.40 and a discharge of 198470 received at Sidhnai Headworks and the time difference was 12 hours. Executive Engineer,

LBDC Division, Khanewal is also deputed at this stage to help and assist Executive Engineer, Sidhnai Headworks Division, Sidhnai.

5. EXCEPTIONALLY HIGH FLOOD

At this stage River Ravi is in rising condition and flows with more than 120,000 Cs whereas the design capacity of the Barrage is 150,000 Cs. All the staff is alerted. Superintending Engineer, Trimmu Canal Circle, and Trimmu resides at the Barrage and critical gauge at RD: 10+000 L.M.B is continuously watched. As soon as the critical gauge reaches at the level of 478.00 ft. and is further rising, operation of the breaching section is carried out by the Pak Army, 176 Bridge Battalion, Abdul Hakim Cantt: and all the people / local inhabitants are informed well before time to vacate their dwellings. The spill channel is operated, before operating the breaching section, if the river is likely to fall when the critical gauge is going to touch the limit of 478.00. It may also be noted that during flood 2025, the critical gauge achieved 4ft i.e. from 474.00 to 478.00 in merely 4 hours. Executive Engineer, LBDC Division, Khanewal & Executive Engineer, Northern Tubewell Division (NTD) Multan is also deputed at this stage to help and assist Executive Engineer, Sidhnai Headworks Division, Sidhnai.

Chapter – 6

FLOOD DAMAGES RESTORATION WORKS

During flood 2025 no major damage caused to the flood protection structures but due to sloughing action and encroached free board, the structures needed restoration. The restoration work is under process of tendering and will be executed after following codal formalities before flood 2026.

1. Removing Bela U/s Sidhnai Barrage.
2. Strengthgening and maintaining RMB with allied structures at Sidhnai Headworks.
3. Strengthening and raising of left bank of wetting channel along RMB from Rd 0+000 to 11+000.
4. Strengthening and maintaining of LMB with allied structures at Sidhnai Headworks.
5. Strengthening and raising of J-head spur and allied studs at Rd 38+000 of LMB at Sidhnai Headworks.
6. Strengthening and raising of Ring Bund at Rd 13+500 to 14+500 of LMB at Sidhnai Headworks.
7. Strengthening and raising of Mole Head spur at Rd 15+000 of LMB at Sidhnai Headworks.
8. Remodeling and protection of critical reaches of LMB of Sidhnai Headworks.

Chapter – 7
Flood Fighting Watching Arrangement

7.1 Pre-Flood Arrangement.

All the bunds are being inspected by a Committee constituted by the Secretary to Government of the Punjab, Irrigation Department in May every year. Inspection of all bunds and spurs by the Team of Military personals will be carried out before the flood season 2026 to ensure that the bunds are safe against the coming flood season. Camps shall be established at all identified vulnerable sites to continuously monitor the situation during the flood season. The number and locations of camps shall vary according to the prevailing flood condition, as detailed below.

Keeping in view the possibility of receiving floods, precautionary measures will be taken from 15th June to 15th October. Watching establishment will be employed for the flood season as per limits of flood already fixed for various magnitude of Discharge in River Ravi.

STRUCTURE WISE RESERVE STOCK OF STONE

S.#	Name of Structure	Sanctioned Quantity (Lac Cft)	Available Quantity (Lac Cft)	Balance quantity (Lac Cft)	Remarks
1	U/S Guide Bund.	2.50	1.72	0.78	The Minimum reuired qty is available; however, the deficit qty will be recouped before flood 2026.
2.	D/S Guide Bund.	1.50	1.50	-	
3.	J-Head Spur RD: 99500 RMB.	1.00	0.46	0.54	
4.	Mole Head Spur RD: 15000 LMB.	0.50	0.35	0.15	
5.	J-Head Spur RD: 20800 LMB.	1.00	0.86	0.14	
6.	J-Head Spur RD: 38000 LMB.	1.00	0.46	0.54	
	Total	**7.50**	**5.35**	**2.15**	

7.2 WATCHING ESTABLISHMENT

Flood watching establishment will be employed as per limit of floods already fixed for various Magnitudes of discharges in the river from 15-6-2026 to 15-10-2026 as below. The Executive Engineer, Khanewal Canal Division, Khanewal, shall be responsible for providing the available field establishment whenever requested by the Executive Engineer, Sidhnai Headworks Division, Sidhnai, during flood situations. The additional required manpower shall be arranged through private hiring.

Sr. No	Structure Name	Length (Miles)	Flood Limits							
			Normal Flood		Low Flood		Medium/High Flood		Very High/Except. High Flood	
			Men	Shift	Men	Shift	Men	Shift	Men	Shift
			1 Person /2 Miles (1 Shift)		1 Person / 1 Miles (1 Shift)		2 Person / 1 Miles/ 1Shift (2 Shifts)		5 Person / 1 Miles/Shift (3 Shifts)	
1	Right Marginal Bund	21.9	11	1	22	1	44	2	110	3
2	J Head Spur Rd: 99+500 RMB	1.44	1		2		3		8	
3	Left Marginal Bund	17.06	9		17		34		85	
4	J Head Spur Rd: 20+800 LMB	0.99	1		1		2		5	
5	J Head Spur Rd:38+0000 LMB	1.29	1		1		3		7	
6	Left Protection Bund	5.9	3		6		12		30	
7	Right Protection Bund	5.9	3		6		12		30	
Total Per Shift			**29**		**55**		**110**		**275**	
Total			**29**		**55**		**220**		**825**	
No. of Mates			**2**		**5**		**18**		**69**	

Note:- 01 No. Mate is for every 12 No. Beldars

Beldar will be provided with hand tools (1 Kassie, 1 Axe and 1 Rechargeable Torcg for night shift). The Activities of staff during normal flood season will 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
- Keeping the track motorable

7.3 ARRANGEMENT AT SENSITIVE SITES

The normal strength for watching at sensitive sites along flood protection and River training works will be increased during high flood / exceptionally high flood. The establishment will be increased after consultation with Executive Engineer, Sidhnai Headworks Division, Sidhnai / Superintending Engineer, Trimmu Canal Circle, Trimmu in emergency & in accordance with site requirements.

Sr No	Structure Name	Length Miles	Vulnerable Sites		No. of Camps Established Except Vulnerable Points		
					Normal Flood / Low Flood	Medium/ High Flood	Very High/Exp. High Flood
			Reach	No. of Camps	15 Miles	7 Miles	5 Miles
1	Left Marginal Bund RD 0+000 – 89+585	17.9	Rd 47+000 to 55+000	2		1	2
			Rd 2+000 to 11+000				
2	J-Head Spur 20+800 of LMB	1.04	0+000 to 5+200	1	-	-	-
3	J-Head Spur 38+000 of LMB	1.24	0+000 to 6+800	1	-	-	-
4	Right Marginal Bund RD 0+000 – 117+000	23.4	Rd 28+000 to 40+000	1	-		1
			Rd 99+500 to 107+000	1			
			Rd 55+000 to 70+000	1			
			Rd 14+500 to 18+000	1			
Total				**8**	**-**	**1**	**3**

7.4 Watching Material

Minimum requirement for Flood Fighting material for permanent camps i.e. upto medium flood condition. (For 8 No. Camps)

Sr#	Description	Unit	Quantity Required	Quantity Available	Quantity Net (Balance)	Remarks
1	Shouldari / Tent.	No.	8	4	4	Flood fighting material will be purchase as per necessity and subject to approval of competent authority.
2	Chairs	No.	48	24	24	
3	Table.	No.	8	4	4	
4	Generator 2-3 KVA	No.	8	2	6	
5	Pedestal Fan.	No.	8	-	-	
6	Charpois	No.	16	6	10	
7	Symbolic Jackets.	No.	400	200	200	
8	Polythene sheet	Kg.	800	-	800	
9	Bamboos (4" inch dia and 10 ft long)	No.	800	-	800	
10	Water Cooler	No.	8	-	8	
11	Portable umbrella	No.	16	-	16	
12	Life jackets	No.	40	20	20	
13	Utensils (10 Person serving)	No.	8	-	8	
14	Jute / Plastic bags	No.	8000	4000	4000	
15	Walke talkie set	Sets.	16	-	16	
16	Raincoats	No.	80	-	80	
17	LED Flood light	No.	80	-	80	
18	Extension cable 10 ft	No.	16	-	16	
19	Rechargeable torches	No.	160	-	160	
20	Kassi	No.	160	72	88	
21	Axes	No.	160	72	88	

22	G.I Buckets	No.	40	-	40	
23	7/44 Cable	Feet.	4000	-	4000	
24	Sutli	Kg.	16	-	16	
25	Sewing Needles	No.	80	-	80	
26	Emergency Medical Kit	No.	8	-	8	
27	Wire crates (3x3x3) (at only those camp near river action and reserve stock exists)	No.	800	-	800	

B. Minimum requirement of Flood Fighting Materials for Temporary camp (7 or 5 Miles during medium to exceptionally high flod to be outsourced.) 1 No. Camp

Sr#	Item	Unit	Total Required Quantity	Sr#	Item	Unit	Total Required Quantity
1	Shouldari / Tent.	No.	1	2	Walke talkie set	Sets.	1
3	Chairs	No.	6	4	Raincoats	No.	10
5	Table.	No.	1	6	LED Flood light	No.	10
7	Generator 2-3 KVA	No.	1	8	Extension cable 10 ft	No.	2
9	Pedestal Fan.	No.	1	10-	Rechargeable torches	No.	20
11	Charpois	No.	2	12	Kassi	No.	20
13	Symbolic Jackets.	No.	50	14	Axes	No.	20
15	Water Cooler	No.	1	16	G.I Buckets	No.	5
17	Portable umbrella	No.	2	18	7/44 Cable	Feet.	500
19	Utensils (10 Person serving)	No.	1	20	Sutli	Kg.	2
21	Jute / Plastic bags	No.	500	22	Sewing Needles	No.	10

7.5 Arrangement for Sounding and Probing

In case of any situation on flood protection and River training works, sounding and probing arrangement will be made.

7.6 Lighting Arrangement

Details given in the list of watching material at Sr.No 7.4 above.

7.7 Ration Arrangement

In case of high flood in Ravi River a separate evacuation plan will be prepared by the concerned District Administration and Food Department will mobilize their sources for supplying food for Human and cattle population.

7.8 P.O.L Arrangement for Vehicle

P.O.L facilities / arrangement will be made by the Irrigation Department as well as Civil Administration.

7.9 Transportation

Transportation facilities will be provided by the Civil Authorities

7.10 Law and Order

Law and order situation will be tackled by the Civil Administration with the help of Police Department.

7.11 Medical arrangement for Labour

Health Department will be responsible for mobilizing their sources for carrying out necessary operation for providing medical facilities to the labour.

7.12 Liaison with other Department.

The close liaison will be made in case of flood with the administrative department as well as other Department of the concerned Districts.

7.13 Role of the Army

176-Bridge Batalian Abdul Hakim / 2 Corp Engineering Multan will perform activities to fight flood emergency During Flood 2026.

7.14 Duties of Telephone attendent.

Duty of telephone attendent has been made round the clock.

S.No	Name of official	Period	Time	
			From	To
1	Arslan Rafique	15-06-2026 to 15-10-2026	00.00	08.00
2	Farukh Eijaz		08.00	16.00
3	Muhammad Nawaz		16.00	24.00

7.15 Wireless Arrangements

Wireless system / arrangement will be made for the vehicles under use of Officers of Sidhnai Headworks Division, Sidhnai during the period of 15 June 2026 to 10 October, 2026.

Chapter – 8

Detail of Encroachments

ORDINARY ENCROACHMENT.

Total No of Encroachments	Removed	Balance	Action to be taken
_____NIL_____			

CRITICAL ENCROACHMENT.

Total No of Encroachments	Removed	Balance	Action to be taken
_____NIL_____			

LIST OF ENCROACHMENT ON RIGHT MARGINAL BUND IN RMB SECTION.

LIST OF ENCROACHMENT ON RIGHT MARGINAL BUND (RMB)

Sr No.	Location		Nature of Encroachment	Latitude	Longitude	Remarks
	RD	Mouza				
_____NIL_____						

LIST OF ENCROACHMENT ON LEFT MARGINAL BUND OF L.M.B SECTION.

LIST OF ENCROACHMENT ON LEFT MARGINAL BUND (LMB)

Sr No.	Location		Nature of Encrochement	Latitude	Longitude	Remarks
	RD	Mouza				
_____NIL_____						

Chapter-9

Duty Roster / Flood Fighting Program.

1. Sidhnai Barrage

Flood Limits	Name Of S.D.O	Name of Sub Engineer
High Flood	S.D.O Sidhnai Barrage	Sub Engineer, Headworks & Sub Engineer Mechanical Section.
Very High Flood	-do-	-do-
Exceptionally High	-do-	-d0-

2. L.M.B AND ALLIED FLOOD PROTECTION STRUCTURES

High Flood	S.D.O Sidhnai Barrage	Sub Engineer LMB
Very High Flood	S.D.O Sidhnai Barrage -SDO Kacha Khuh	Sub Engineer LMB, Sub Engineer L.R & Sub Engineer Ali Chappa Section
Exceptionally High	-do-	Sub Engineer LMB, Sub Engineer L.R, Sub Engineer Ali Chappa Section & Sub Engineer, Kacha Khuh Section

3. RMB AND ALLIED FLOOD PROTECTION STRUCTURES

High Flood	S.D.O Sidhnai Barrage	Sub Engineer RMB Section
Very High Flood	S.D.O Sidhnai Barrage-S.D.O TS Link	Sub Engineer, RMB, Sub Engineer Kaki Section & Fareed Mehmood
Exceptionally High	-do-	Sub Engineer, RMB, Sub Engineer Kaki , Sub Engineer Farid Mehmood & Sub Engineer TS Section

4. SPILL CHANNEL.

High Flood	S.D.O Sidhnai Barrage	Sub Engineer, Spill Section
Very High Flood	S.D.O Sidhnai Barrage-S.D.O TS Link	Sub Engineer, Spill Section and Leave Reserve
Exceptionally High	-do-	Sub Engineer, Spill Section & Leave Reserve

Chapter – 10

Emergency Telephone Nos

S.#	DESCRIPTION	OFFICE	CELL/ RESIDENCE
A – IRRIGATION OFFICERS, LAHORE			
1	Secretary, Irrigation Department, Lahore.	042-99212117 042-99212118	042-99200288
2	Chief Engineer, D&F,Zone,Lahore.	042-99233551 042-35291304	
3	Director Flood, Lahore.	042-99233551	
4	Flood Warning Center, Lahore.	042-7572091 042-7572093 042-7572092-(Fax)	
5	Executive Engineer, Balloki H/Works Division	049-4610300	049-4610300
6	Deputy Director Flood, Lahore	042-99233551	
B – IRRIGATIONOFFICERS, MULTAN IRRIGATION ZONE			
1	Chief Engineer, Irrigation Multan Zone,Multan Engr. Muhammad Azeem	061-9200144	0333-5901500
2	Superintending Engineer, Trimmu Canal Circle, Trimmu. Engr. Muhammad Tahirf	047-7647051	0300-8696527
3	Executive Engineer,(OP) Flood Emergency Officer Multan Zone. Engr. Somia Mubarak	061-9200139 061-9200133-(Fax)	0304-7032344
C – DISTRICTADMINISTRATION KHANEWAL (065)			
1	Deputy Commissioner, Khanewal.	065-9200032 065-9200033(Fax)	065-9200031 065-9200033 (Fax)
2	District Police Officer, Khanewal.	065-9200171	065-9200175
3	Additional Deputy Commissioner (G), Khanewal.	065-9200030	-
4	Additional Deputy Commissioner (R), Khenewal.	065-9200069	-
5	Executive Engineer, Sidhnai Headworks Division, Sidhnai. Engr. Shehzad Umar	-	0304-5295515
6	Sub Divisional Officer, Headworks Sub Division, Sidhnai. Engr. Muhammad Haseeb	-	0306-0108696

S.#	DESCRIPTION	OFFICE	CELL/ RESIDENCE
7	Chief Officer, Kabirwala.	065-2400336	
8	Sub Divisional Officer,WAPDA,Abdul Hakim.	065-2442032	
9	Executive Engineer, WAPDA Mian Channu.	065-2661636	
10	Chief Executive Officer District Health Authority,Khanewal.	065-9200137	-
11	Army Authority, 176-Bridge Battalion, Abdul Hakim.	065-2442176	
12	District Flood Control, Khanewal.	065-9200147	-
D – DISTRICTADMINISTRATION TOBA TEK SINGH (046)			
1	Deputy Commissioner, Toba Tek Singh.	046-9201001	046-2510659
2	District Police Officer, Toba Tek Singh.	046-9201051	046-9201052
3	Additional Deputy Commissioner (G), Toba Tek Singh.	046-9201011	-
4	Sub Divisional Officer, T.S Link Sub Division, Shorkot Cantt	-	0308-7906687
5	Chief Officer, Kamalia/ Pir Mehal.	046-3413898	
6	Chief Executive Officer District Health Authority,	046-9201048 046-9201131	-
7	Assistant Commissioner Kamalia	046-3412371	
8	Assistant Commissioner Pir Mehal	046-3360333	
9	Tehsildar Pir Mehal.		

Chapter – 11

Standard Operating Procedure (SOP) for Breaching Sections

11.1 HISTORY OF THE BREACHING SECTION

In order to protect the Barrage and its auxiliary works from onslaught of the floods, the proper site for breaching section has been fixed by the Department at RD:16+000 of Right Marginal Bund of Sidhnai Barrage, after its approval by the Punjab Flood Commission during its 56th meeting held on 17th June 1974. A critical gauge has been provided at RD:10+000 Left Marginal Bund to watch the thrust of the flood. On achieving the flood level as 478.00 at this critical gauge and while the river is still in rising position, the breaching section at RD:16+000 Right Marginal Bund is activated. However before activation of the breaching section, the spill channel provided at RD:15000 Right Marginal Bund is operated to give maximum relief to the Barrage against the thrust of floods. The water flowing through the Breaching Section and the Spill Channel ultimately enters into the old course of the river and after traveling a distance of about 20 miles, it joins the river Chenab.

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

The breaching section is located at RD:16+000 of Right Marginal Bund U/S Sidhnai Barrage. There are two segments of the section, each contains 65 Nos liners. Two types of explosives can be used in the liners, one is powder explosive and other is liquid explosive.

For detonation, both types of explosives are lying in the Army magazine 176 Bridge Battalion, Abdul Hakim.

CURRENT STATUS OF EXPLOSIVE.

Name of explosive	Quantity required	Available quantity	Balance quantity	Previous outstanding dues.
Safety Fuze.	30 Mtr	-	30 Mtr	The explosive material utilized during Flood 2025 to operate Breaching Section and will be recouped before flood 2026.
Wabocard.	1500 Mtr	-	1500 Mtr	
Firing Cable.	2053 Mtr	-	2053 Mtr	
Elec Wire.	240 No	-	240 No	
Det No 8 Elec	24 No	-	24 No	
Non Elec	05 No	-	05 No	
PE-3A / Wa Box	3250 KG	-	3250 KG	
MS Electric Delay Det (3 Mtr)	105 No	-	105 No	

11.3 ARRANGEMENT OF EXPLOSIVE AND SECURITY OF EXPLOSIVE STORES.

The explosives are in the custody of the Pak Army, 176-Bridge Battalion, Abdul Hakim. Therefore, the Army Unit 176 Bridge Battalion, Abdul Hakim, is responsible for availability, arrangement and security of the explosive stores.

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

The maintenance of entire explosive and its detonation, when required, is the responsibility of the 176-Bridge Battalion Abdul Hakim.

11.5 DETAIL OF MEACHNAICAL MEANS AS A STANDBY ARRANGEMENTS IN CASE OF DETONATION FAILURE

Although there is no regular stand by arrangement of mechanical means available with the department for operation of the Breaching Section in case of detonation failure but machinery shall be arranged as per approvedSOP's.

It is proposed to keep 2 No. excavators, 1 No. Dozer and 3 No. Dumpers available at breaching section, at exceptionally high flood level. Sub Divisional Officer, Headworks Sub Division, Sidhnai, will ensure availability of the machinery and its being in perfect order.

11.6 DUTY ROSTER IN CASE OF CRITICAL SITUATION

Sub Divisional Officer, T.S Link Sub Division, Shorkot Cantt: Sub Engineer, Spill Section, and other establishment will be present at Head Spill to watch and control the situation for operating the breaching section. The Executive Engineer, Sidhnai Headworks Division, Sidhnai will supervise the situation and remain vigilant about the critical gauge, provided at RD:10+000 of Left Marginal Bund. As soon the gauge hits the critical level i.e. 478.00 and the river is still in rising condition, the requirement of operating the breaching section be established. The rising/ falling condition of the river in the forthcoming hours is assessed by receiving 3-hourly gauges from Balloki.

As soon as the flood at Balloki reaches at a very high stage and it is still in rising position, flood situation is brought to the notice of Civil Administration and Army authorities so as to inform the public and arrange their evacuation. The operation of the breaching section will be intimated to Army authorities by the Executive Engineer, Sidhnai

Headwiorks Division at least 04-hours in advance as desired by the Commanding Engineer, 2-corps Multan for making arrangement to shift their explosive to the breaching site.

Similarly, the Civil Administration is also informed about the operation of breaching section at least 04-hours in advance.

11.7 BREACHING COMMITTEE WITH THEIR ACTION PLAN

In pursuance of Secretary, Irrigation Department, Lahore Notification No. SO (Floods) VI-33/97 dated 15-07-2015, the following breaching operation committee has been constituted who supervise and carry out physical activities for the activation of the breaching section.

1)	Deputy Commissioner, Toba Tek Singh	Convener
2)	Deputy Commissioner/ Representative Khanewal	Member
3)	Executive Engineer, Sidhnai Headworks Division, Sidhnai.	Member
4)	Representative of Highway Department/ Railway not below rank of BS-18	Member
5)	Representative of C&W Department Not below rank of BS-18	Member
6)	Representative of Pakistan Army Not below rank of a Lt. Colonol	Member

All concerned will be informed before operation of breaching section and it is duty of the Executive Engineer, Sidhnai Headworks Division, Sidhnai to inform all the concerned.

1. Secretary to Government of the Punjab, Irrigation Department, Lahore.
2. Chief Engineer, Irrigation Multan Zone, Multan.
3. Chief Engineer, Irrigation Zone, Faisalabad.
4. Chief Engineer, Drainage & Flood Zone, Lahore.
5. Flood Relief Commissioner, Lahore.
6. Superintending Engineer, Trimmu Canal Circle, Trimmu.
7. Director Floods, Lahore.
8. Executive Engineer, Trimmu Barrage Division, Trimmu.
9. Deputy Commissioner, Toba Tek Singh.
10. Deputy Commissioner, Khanewal.
11. District Police Officer, Tobe Tek Singh.
12. District Police Officer, Khanewal.
13. Executive District Officer, (Works & Services), Toba Tek Singh.

14. Executive District Officer, (Works & Services), Khanewal.
15. All Sub Divisional Officers employed on watching.
16. All Sub Engineer on duty at Sidhnai Barrage.
17. Executive Engineer, WAPDA Electricity, MEPCO Mian Channu.
18. Divisional Engineer, Telephone, Khanewal.
19. Executive District Officer, (Health), Khanewal.

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

As indicated on the map as well, water escaping from the activated breaching section & Spill Channel will flow along Right Bank of Spill Channel. Due to construction of Motorway M-3 and M-4 which will act as barrier in flood routing, expectedelly.The flood water due to obstruction would create an afflux U/S of Motorway. The higher authorities including Pak Army is on board for this issue. The decided new flood drainage structure has not been implemented at site. Hence, the Motorway authorities would be responsible for draining the flood water across M-3 and M-4.

The flood water will inundate Multan – Jhang Road at about 85-KM from Multan, breach tail portion of Koranga Disty & thus will join river Ravi after traveling a distance of about 20 miles. The flood water flowing on the right, as mentioned above, will inundate/ damage an area of about 84,000 acres & the villages, abadies and other infrastructures, like roads and embankments are detailed as under:-

1. Tahliwala
2. Chak 773, Chak 6, Chak 6-D, Chak, Chak 40, Chak 9-D, Chak, Chak 15-D, Chak 16-D, Chak 11-Gagh
3. Darkhana
4. Dangrianwala
5. Sheikhupura
6. Adda 14 Pul
7. Gagh
8. Bhera Wiran
9. Sidhupura
10. Vilayatpur
11. Ramunwala
12. Wanawala
13. Kumharanwala
14. Pariwala
15. Saiwala
16. Sasrana
17. Matliwala
18. Railway track connecting Abdul Hakim Jhang.
19. Metalled road linking Sidhnai Barrage to Pir Mehal.
20. Metalled Road linking Kabirwala-Jhang Towns.

A population of about 80000 people will be affected.

11.9 ANNOUNCEMENT AND DETAILS OF EVACUATION ARRANGEMENTS.

Since time lag for the flood water to reach from Balloki to Sidhnai Headworks is 78-hours, Irrigation Department has sufficient time to inform Civil Administration about the flood situation for warning the civil abadies, their evacuation and other protective measures.

11.10 DETAILS OF COORDINATION WITH CIVIL/ ARMY AUTHORITIES

The flood activities of Sidhnai Headworks Division, Sidhnai have been entrusted to 176 Bridge Battalion Abdul Hakim Cantt: under the control of a Lt. Colonel. The Irrigation Department has full co-ordination with the Bridge Battalian regarding all the activities of the flood.

11.11 PARALLEL COMMUNICATION ARRANGEMENTS.

Sidhnai Headworks Division, Sidhnailinked up with the Wireless system installed at Sidhnai Barrage. Independent wireless sets will be installed in the vehicles of the Executive Engineer and the Sub Divisional Officer in-charge of the Barrage. Additional wireless sets will be demanded as per requirement during emergency.

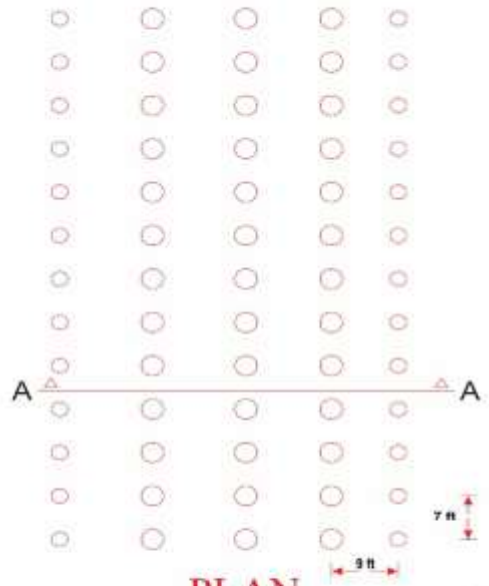
11.12 PLAN OF BREACHING SECTION

Plan of Breaching Section is attached.

SIDHNAI HEADWORKS DIVISION, SIDHNAI BARRAGE

BREACHING SECTION AT RD 15-16 RIGHT MARGINAL BUND

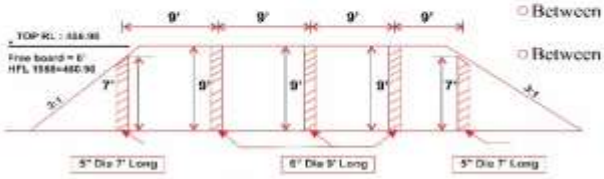
- Name of Corp = 2 Corps Multan Cantt
- Site of Explosive Store = 176 Bridge Battalion Abdul Hakeem
- Machinery required for operation of Breaching Section at camp site RD 16000 R.M.B in case of breach not operated by blast. = Excavator = 1 No, Labour = 11 Persons
- Critical Gauge = 478.00, RD 10000 L.M.B



PLAN

HOLE SPACING

- Between Rows =9 ft
- Between Holes =7 ft



SECTION AT AA

DETAIL OF EXPLOSIVE

Name Of Accessories	Quantity Required	Quantity Available
Safety Fuze	30 Mtrs	30 Mtrs
Wabocard	1500 Mtrs	1500 Mtrs
PE-3A	2100 KGs	2100 Kgs
Firing Cable	2053 Mtrs	2053 Mtrs
Det Instant	8 Nos	8 Nos
Elec Wire	240 Nos	240 Nos
Det No 8 Elec	24 Nos	24 Nos
Non Elec	05 Nos	05 Nos
Electric (Inst Zero Delay)	70 Nos	70 Nos
MS Electric Delay Det (3 Mtr)	105 Nos	105 Nos

DETAIL OF LINERS

- Length maintained for breaching section = 400 feet
- No of Sets = 2 Nos
- No of 7 ft long 5 inches dia liners= 2x13x2 = 52 Nos
- No of 9 ft long 6 inches dia liners= 2x13x3 = 78 Nos

Total = 52+78 = 130 Nos

BREACH OPERATION COMMITTEE

1. District Co-ordination Officer, Toba Tek Singh.	Convener
2. District Co-ordination Officer, Khanewal or his Representative.	Member
3. Exrcutive Engineer, Development Division No.I, Sidhnai Barrage	Member
4. Representative of Highway Department/ Railway not below the rank of BS-18	Member
5. Representative from Pakistan Army not below the rank of a Lt. Colonel.	Member

PART – B

Chapter – 12

VULNERABLE SITES ON FLOOD BUND/ STRUCTURES

12.1 Apprehended breaches in flood bunds / structures

The detail of vulnerable sites is given in 13.1.

Left Marginal Bund & Right Marginal Bund

Sr No	Structure Name	Vulnerable Sites	
		Reach	No. of Camps
1	Left Marginal Bund RD 0+000 – 89+585	Rd 47+000 to 55+000	2
		Rd 2+000 to 11+000	
2	J-Head Spur 20+800 of LMB	0+000 to 5+200	1
3	J-Head Spur 38+000 of LMB	0+000 to 6+800	1
4	Right Marginal Bund RD 0+000 – 117+000	Rd 28+000 to 40+000	1
		Rd 99+500 to 107+000	1
		Rd 55+000 to 70+000	1
		Rd 14+500 to 18+000	1

12.2 Operation of Breaching Section.

When the breaching section is operated, the embankment of Motorway M-4 will obstruct the flood water way and hence the efficiency of breaching section as well as right embankment of spill channel will directly come under threat from RD:0+000 to RD:31+000. Although National Highway Authority has submitted an undertaking that the flood structure provided by them are sufficient to drain flood water without any damage to infrastructure yet irrigation authorities has great concerns.

12.2 Breaches Due To Rising of Flood Water, Deterioration of Flood Bunds Etc.

Sidhnai Barrage has a design capacity of 150000 Cs. Since its date of construction, an earthen bela is formed on right side of Barrage and has masked up almost 3 to 5 gates of Sidhnai Barrage. It is very important to mention here that due to this bela,the

discharge capacity of barrage will definitely be reduced, resulting in raising upstream flood water and an early operationing of breaching section as compared to historical data. An estimate has been framed to mechanically remove this bela and it is expected to be removed before flood 2026.

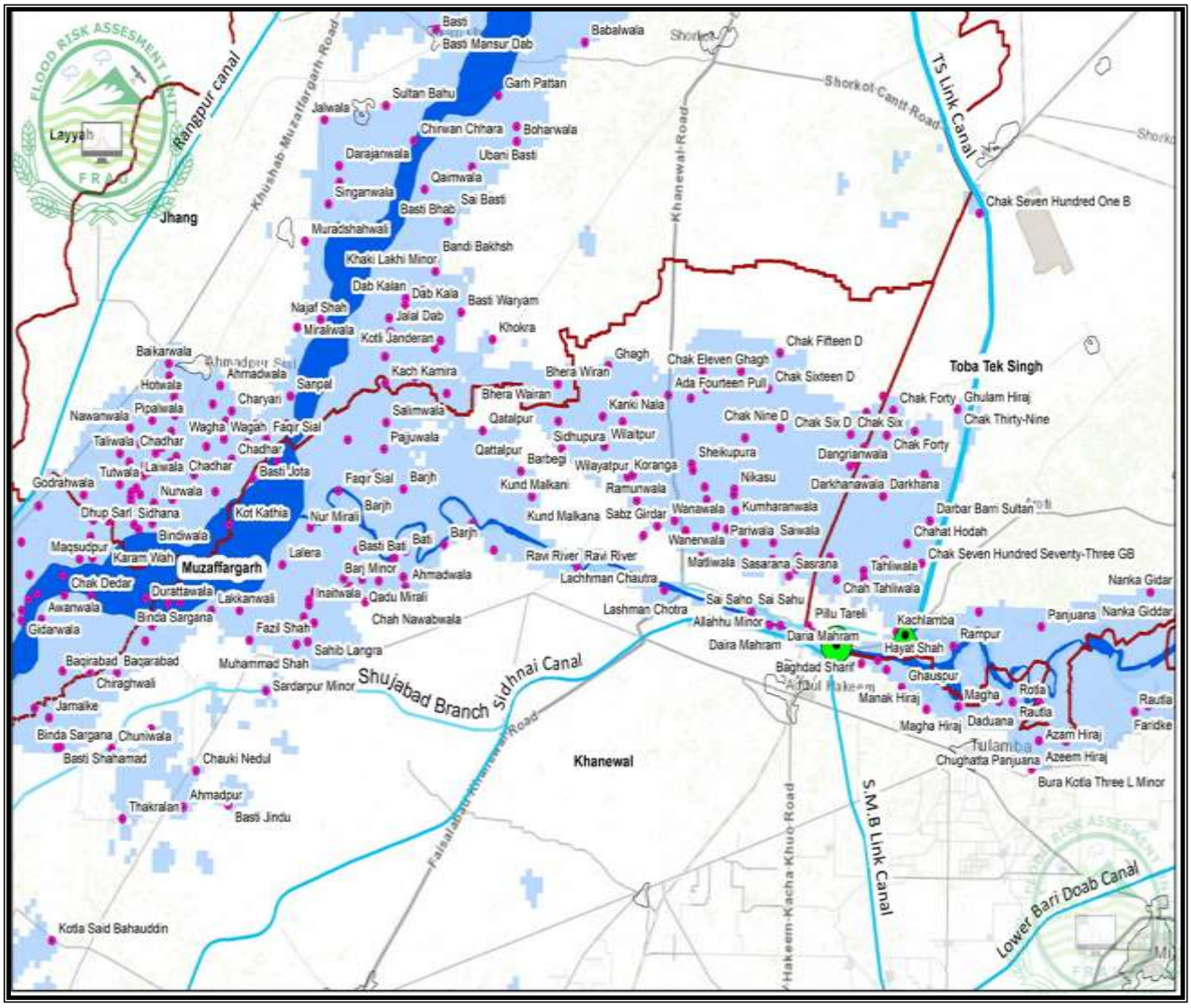
Chapter – 13

EMERGENCY CONTINGENCY PLAN FOR VULNERABLE SITE (SITES)

13.1 Plan showing route of flood water coming out of the breach Supported with levels (Experienced during Flood 2025).

Site 1:

The flood water hits directly Abdul Hakim-Faisal Abad road when breraching section is operaed. The water then flows parallel to the right bank of the spill channel till it crossed M-4 motorway. It then crosses Kabirwala-Shorkot road before it merges into the river Chenab, near the confluence point. The water flow plan is attached below.



There are several vulnerable reaches at the flood embnakments/flood protection structures of Sdinai Headworks.

Following rvulnerable reaches of LMB & Allied Structures are discussed below

1) **LMB (Reach Rd 2+000 to 11+000):** The River initiated erosive action at this reach of the embankment as soon as the river crossed very high flood. The river creek flows adjacent to the embankment at this reach. Restoration work is currently in progress at site to address the damage. A temporary flood camp will be established at this site and Flood fighting material will be available at this camp site as per the table under Site 3.
2) **LMB (Reach Rd 47+000 to 55+000):** The River initiated erosive action at this reach of the embankment as soon as the river crossed very high flood. Restoration work is currently in progress at site to address the damage. A temporary flood camp will be established at this site and Flood fighting material will be available at this camp site as per the table under Site 3.
3) **J head Spur at Rd 20+800 of LMB (Reach 0+000 to 5+200):**
   The river initiated erosive action at the nose of the J-Head Spur immediately after the river discharge exceeded low flood conditions during Flood 2025. Consequently, the apron of the spur also launched. Restoration work is currently in progress at site to address the damage. A creek has developed at the nose of the spur, due to which water continues to flow along the nose of the spur even during low flow conditions. A permanenet flood camp will be established at this site and following Flood fighting material will be available at this camp site.
4) **J Head Spur at Rd 38+000 of LMB (Reach 0+000 to 6+800):** The River initiated erosive action at the nose of the J-Head Spur immediately after the river discharge exceeded low flood conditions during Flood 2025. Consequently, the apron of the spur also launched. Restoration work is currently in progress at site to address the damage. A creek has developed at the nose of the spur, due to which water continues to flow along the nose of the spur even during low flow conditions. A permanenet flood camp will be established at this site and following Flood fighting material will be available at this camp site and Flood fighting material will be available at this camp site as per the table under Site 1.

13.2 DETAIL OF VILLAGES ABADIES LIKELY TO BE EFFECTED.

Nill

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

Strategy to be adopted has been explained in detail in chapter 5 of flood fighting plan.

13.3.1 ARRANGEMENTS

A Flood Control Centre will be established in Canal Telegraph Office of Sidhnai Headworks Division and responsible staff will be available round the clock. One base of high range wireless set will be installed at Sidhnai Headworks Office Sidhnai by the Police Department.

13.3.2 Establishment of flood fighting camps

Flood watching establishment will be employed as per limit of floods already fixed for various Magnitude of discharge in the river from 15-6-2026 to 15-10-2026.

Sr No	Structure Name	Vulnerable Sites	
		No. of Camps	RD
1	Left Marginal Bund	1	Rd 7+000
2	Left Marginal Bund	1	Rd 55+000
3	J-Head Spur 20+800 of LMB	1	Rd 5+200
4	J-Head Spur 38+000 of LMB	1	Rd 6+800

13.3.3 Duties of Officer / Officials and their camp sites.

(i) At LMB

Muhammad Haseeb SDO Sidhnai Headworks 0306-0108696 Overall Watching of LMB.		**Muhammad Muzammil Sub Engineer LMB Section 0304-5573983 overall watching of LMB**
At Rd 10+000 LMB	Rida Qadeer SDO, Kacha Khuh Sub Division 03060593436	Muhammad Rafi Sub Engineer Leave Reserve 0308-7590330
At J-Head Spur Nose RD: 20+800 LMB.	Rida Qadeer SDO, Kacha Khuh Sub Division 03060593436	Mian Shahid Sub Engineer Ali Chappa Section 0309-3191000
At J-Head Spur Nose RD: 38+000 LMB & Rd 55+000 of LMB.	Rida Qadeer SDO, Kacha Khuh Sub Division 03060593436	Muhammad Shehryar Sub Engineer Kacha Khuh section 0304-5672327

13.3.4 Departmental Machinery available.

Not Available.

13.3.5 Machinery available from private source.

Machinery will be arranged as discussed in chapter 14 if required for all the damaged locations/points from private source.

13.3.6 Flood fighting Material required.

Sr#	Description	Unit	Quantity Required	Quantity Available	Quantity Net (Balance)	Remarks
1	Shouldari / Tent.	No.	4	4	-	Flood fighting material will be purchase as per necessity and subject to approval of competent authority.
2	Chairs	No.	24	24	-	
3	Table.	No.	4	4	-	
4	Generator 2-3 KVA	No.	4	2	2	
5	Pedestal Fan.	No.	4	-	4	
6	Charpois	No.	8	6	2	
7	Symbolic Jackets.	No.	200	200	-	
8	Polythene sheet	Kg.	400	-	400	
9	Bamboos (4” inch dia and 10 ft long)	No.	400	-	400	
10	Water Cooler	No.	4	-	4	
11	Portable umbrella	No.	8	-	8	
12	Life jackets	No.	20	20	-	
13	Utensils (10 Person serving)	No.	4	-	4	
14	Jute / Plastic bags	No.	4000	4000	-	
15	Walke talkie set	Sets.	8	-	8	
16	Raincoats	No.	40	-	40	
17	LED Flood light	No.	40	-	40	
18	Extension cable 10 ft	No.	8	-	8	
19	Rechargeable torches	No.	80	-	80	
20	Kassi	No.	80	72	8	
21	Axes	No.	80	72	8	
22	G.I Buckets	No.	20	-	20	
23	7/44 Cable	Feet.	2000	-	2000	

24	Sutli	Kg.	8	-	8	
25	Sewing Needles	No.	40	-	40	
26	Emergency Medical Kit	No.	4	-	2	
27	Wire crates (3x3x3) (at only those camp near river action and reserve stock exists)	No.	400	-	400	

13.3.7 Flood Fighting Material available.

Detail of flood fighting material available has already been explained in section 13.3.6.

13.4 Detail of other infrastructure like Electric, Sui Gas, Telephone installations, Road network, other Buildings, Canals and Drainage network.

The following essential infrastructure and utilities are present in the flood-prone area.

- Sui Gas Pipeline

Site 2:

13.1 Plan showing route of flood water coming out of the breach Supported with levels (Experienced during Flood 2025).

Plan for rout of flood water coming out of breach is attached in section 13.1 of Site 1.

1) **RMB (Reach Rd 14+500 to 18+000):** The designated breaching section of Sidhnai Headworks is located at this site. Head regulator of Spill channel and Outfall structure of TS Link Canal and Haveli main Line canal also fall at this reach. During flood 2025, the backflow in the TS Link and HML Canals posed a serious threat to the canal infrastructure.

2) **RMB (Reach Rd 28+000 to 40+000):**

The river initiated erosive action at this reach of the embankment. The river creek flows adjacent to the embankment at this reach. Restoration work is currently in progress at site to address the damage.

3) **RMB (Reach Rd 55+000 to 70+000):** The River initiated erosive action at this reach of the embankment as soon as the river crossed very high flood. Restoration work is currently in progress at site to address the damage.

4) **RMB (Reach 99+500 to 107+000):**

The River initiated erosive action at this reach of the embankment as soon as the river crossed very high flood. Restoration work is currently in progress at site to address the damage.

13.2 DETAIL OF VILLAGES ABADIES LIKELY TO BE EFFECTED.

Following Abadies will be effected in case of operation of Breachin SectionThe flood water will inundate Multan – Jhang Road at about 85-KM from Multan, breach tail portion of Koranga Disty & thus will join river Ravi after traveling a distance of about 20 miles. The flood water flowing on the right, as mentioned above, will inundate/ damage an area of about 84,000 acres & the villages, abadies and other infrastructures, like roads and embankments are detailed as under:-

21. Tahliwala
22. Chak 773, Chak 6, Chak 6-D, Chak, Chak 40, Chak 9-D, Chak, Chak 15-D, Chak 16-D, Chak 11-Gagh
23. Darkhana
24. Dangrianwala
25. Sheikhupura
26. Adda 14 Pul
27. Gagh
28. Bhera Wiran
29. Sidhupura
30. Vilayatpur
31. Ramunwala
32. Wanawala
33. Kumharanwala

34. Pariwala
35. Saiwala
36. Sasrana
37. Matliwala
38. Railway track connecting Abdul Hakim Jhang.
39. Metalled road linking Sidhnai Barrage to Pir Mehal.
40. Metalled Road linking Kabirwala-Jhang Towns.
41.

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

Strategy to be adopted has been explained in detail in chapter 5 of flood fighting plan.

13.3.1 ARRANGEMENTS

A Flood Control Centre will be established in Canal Telegraph Office of Sidhnai Headworks Division and responsible staff will be available round the clock. One base of high range wireless set will be installed at Sidhnai Headworks Office Sidhnai by the Police Department.

13.3.2 Establishment of flood fighting camps

Flood watching establishment will be employed as per limit of floods already fixed for various Magnitude of discharge in the river from 15-6-2026 to 15-10-2026.

Sr No	Structure Name	Vulnerable Sites	
		No. of Camps	RD
1	Right Marginal Bund	1	Rd 17+000
2	Right Marginal Bund	1	Rd 32+000
3	Right Marginal Bund	1	Rd 70+000
4	J-Head Spur at RMB	1	Rd 99+500

13.3.3 Duties of Officer / Officials and their camp sites.

(i) At RMB

Camp location	Officers (Name + designation + Mobile No)	Official (name + designation + Mobile No)
Muhammad Haseeb SDO Sidhnai Headworks 0306-0108696 Overall Watching of RMB.		**Muhammad Faraz Sub Engineer RMB Section 0323-38391145 overall watching of RMB**
At RD:17+000 & 35+000 RMB	Bilal Asghar SDO, T.S Link Sub Division 0308-7906687	Muhammad Safdar Sub Engineer Fareed Mehmood Section 0305-7890969
At RD: 70+000 RMB.	Bilal Asghar SDO, T.S Link Sub Division 0308-7906687	Muhammad Usama Sub Engineer Spill Section 0319-84144698
At RD: 103+000 RMB.	Bilal Asghar SDO, T.S Link Sub Division 0308-7906687	Muhammad Sub Engineer Kakki Section 0301-5251753

At J-Head Spur Nose RD: 99+500 RMB.	Bilal Asghar SDO, T.S Link Sub Division 0308-7906687	Muhammad Muzammil Sub Engineer TS Link Section 0304-5573983

13.3.4 Departmental Machinery available.

Not Available.

13.3.5 Machinery available from private source.

Machinery (Excavator, Dumpers, Tractors with Trolleys and Tractor with front blade) will be arranged if required for all the damaged locations/points from private source.

13.3.6 Flood fighting Material required.

Sr#	Description	Unit	Quantity Required	Quantity Available	Quantity Net (Balance)	Remarks
1	Shouldari / Tent.	No.	4	-	4	Flood fighting material will be purchase as per necessity and subject to approval of competent authority.
2	Chairs	No.	24	-	24	
3	Table.	No.	4	-	4	
4	Generator 2-3 KVA	No.	4	-	4	
5	Pedestal Fan.	No.	4	-	4	
6	Charpois	No.	8	-	8	
7	Symbolic Jackets.	No.	200	-	200	
8	Polythene sheet	Kg.	400	-	400	
9	Bamboos (4” inch dia and 10 ft long)	No.	400	-	400	
10	Water Cooler	No.	4	-	4	
11	Portable umbrella	No.	8	-	8	
12	Life jackets	No.	20	-	20	
13	Utensils (10 Person serving)	No.	4	-	4	
14	Jute / Plastic bags	No.	4000	-	4000	
15	Walke talkie set	Sets.	8	-	8	
16	Raincoats	No.	40	-	40	
17	LED Flood light	No.	40	-	40	

18	Extension cable 10 ft	No.	8	-	8	
19	Rechargeable torches	No.	80	-	80	
20	Kassi	No.	80	-	80	
21	Axes	No.	80	-	80	
22	G.I Buckets	No.	20	-	20	
23	7/44 Cable	Feet.	2000	-	2000	
24	Sutli	Kg.	8	-	8	
25	Sewing Needles	No.	40	-	40	
26	Emergency Medical Kit	No.	4	-	4	
27	Wire crates (3x3x3) (at only those camp near river action and reserve stock exists)	No.	400	-	400	

13.2.7 Flood Fighting Material available.

Detail of flood fighting material required and available is same as discussed in section 13.3.6 of Site-1.

13.4 Detail of other infrastructure like Electric, Sui Gas, Telephone installations, Road network, other Buildings, Canals and Drainage network.

On breaching of River Training / Flood Protection Works of Sidhnai Headworks Division, Sidhnai, following Irrigation and roads networks shall be effected.

Main Irrigation Net work.

- T.S.Link
- Haveli Main Line
- Kabirwala Disty
- Darkhana Disty
- Darkhana Drain
- TSMB Main Drain

Main Road Network

- Pir Mahal-Faisalabad Road
- Jhang Multan Road

Other Buildings / Structure

- Govt.High School Mai Saphoran
- RHC
- Primary school, Middle school
- P.S Haveli Koranga

Sui Gas

- Sui gas line crossing at about 17000 ft D/S Sidhnai Headworks

Chapter – 14
Action Plan.

14.1 Re-shifting / Recouping plan of reserve stone departmentally.

The sufficient quantity of the stone has been available at suitable places and will be shifted as and when the necessity arises.

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

Sr. No.	Name of Bund / Spur	RD No.	Outlet / Inlet	Existing Position
1	Left Marginal Bund	14+500	Outlet	Water crossing for irrigation purpose.
2	Left Marginal Bund	20+800	Outlet	Water crossing for irrigation purpose.
3	Left Marginal Bund	25+000	Outlet	Water crossing for irrigation purpose.
4	Left Marginal Bund	31+500	Outlet	Water crossing for irrigation purpose.
5	Left Marginal Bund	38+000	Outlet	Water crossing for irrigation purpose.
6	Left Marginal Bund	48+000	Outlet	Water crossing for irrigation purpose.
7	Left Marginal Bund	51+500	Outlet	Water crossing for irrigation purpose.
8	Left Marginal Bund	62+400	Outlet	Water crossing for irrigation purpose.
9	Left Marginal Bund	68+000	Outlet	Water crossing for irrigation purpose.
10	Left Marginal Bund	75+300	Outlet	Water crossing for irrigation purpose.
11	Left Marginal Bund	84+500	Outlet	Water crossing for irrigation purpose.
12	Left Marginal Bund	85+500	Outlet	Water crossing for irrigation purpose.

All the outlets crossing along flood bunds will be closed as soon as discharge in the river crosses 45000 cusecs.

DEPLOYMENT OF MACHINERY
(AS EXPERIENCED DURING FLOOD 2025)

The details regarding the deployment of heavy machinery are provided below. The machinery shall be mobilized and deployed immediately upon indication of rising flood levels, as per the discharge gauges are received from Balloki Headworks (Trigger Point).

14.3 Deployment of Machinery (Normal / Low Flood).

S.#	Name of structure	Length in mile	Machinery to be Deployed			
			Excavator	Tractor Trolley	Dumper	Tractor with Front Blade 1 per 15 miles
1	Left Marginal Bund / /X-Spur 16+900 LMB/X-Spur 31+000 LMB/ Mole Head Spur Rd 15+000 LMB, Ring Bund at Rd 13+500 of LMB.	18.10	S.E shall allow deputation of one (1) excavator & four (4) Trolleys during low flood at camps/vulnerable points		'	1
2	J Head Spur Rd 20+800 of LMB.	1.0			'	-
3	J-Head Spur Rd 38+000 of LMB.	1.14			'	-
4	Right Marginal Bund/Weting Channel/ RMB/X-Spur 108+500/RGB U/s Sdihnai Headworks	24.16			'	1
5	J Head Spur 99+500 of RMB.	1.37			'	1
6	Right & Left Protection Bund D/S Sidhnai Headworks,	11.81			'	1
7	Spill Channel (Right Bank Only)	13.23			'	1
Total					'	**5**

14.4 Deployment of Machinery (Medium / High).

S.#	Name of structure	Length in mile	Machinery to be Deployed			
			Excavator	Tractor Trolley	Dumper	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	Left Marginal Bund / /X-Spur 16+900 LMB/X-Spur 31+000 LMB/ Mole Head Spur Rd 15+000 LMB, Ring Bund at Rd 13+500 of LMB.	18.10	3	10	5	3
2	J Head Spur Rd 20+800 of LMB.	1.0	1	1	1	1
3	J-Head Spur Rd 38+000 of LMB.	1.14	1	1	1	1
4	Right Marginal Bund/Weting Channel/ RMB/X-Spur 108+500/RGB U/s Sdihnai Headworks	24.16	3	14	7	3
5	J Head Spur 99+500 of RMB.	1.37	1	1	1	1
6	Right & Left Protection Bund D/S Sidhnai Headworks,	11.81	2	6	3	2
7	Spill Channel (Right Bank Only)	13.23	2	8	4	2
Total			**13**	**41**	**22**	**13**

14.5 Deployment of Machinery (Very High / Exceptionally High).

S.#	Name of structure	Length in mile	Machinery to be Deployed					
			Excavator		Tractor Trolley	Dumper	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	Left Marginal Bund / /X-Spur 16+900 LMB/X-Spur 31+000 LMB/ Mole Head Spur Rd 15+000 LMB, Ring Bund at Rd 13+500 of LMB.	18.10	4	7	14	7	4	7
2	J Head Spur Rd 20+800 of LMB.	1.0	1	1	1	1	1	1
3	J-Head Spur Rd 38+000 of LMB.	1.14	1	1	1	1	1	1
4	Right Marginal Bund/Weting Channel/ RMB/X-Spur 108+500/RGB U/s Sdihnai Headworks	24.16	5	10	20	10	5	10
5	J Head Spur 99+500 of RMB.	1.37	1	1	1	1	1	1
6	Right & Left Protection Bund D/S Sidhnai Headworks,	11.81	2	5	9	5	2	5
7	Spill Channel (Right Bank Only)	13.23	3	5	10	5	3	5
Total			**17**	**30**	**55**	**30**	**17**	**30**

14.6 Police Deployment Plan.

DUTY ROSTER FOR POLICE AND RANGER DURING FLOOD SEASON.

Proforma -1

S.#	Site of breaching Section	Concerned Canal Division	Concerned Police Station & District	Police persons deployed.		Remarks if any.
				Inspection / Sub Inspection ASI	Constable	
1	Head Spill Channel and Right Marginal Bund RD: 15-16.	Sidhnai Headworks Division	Arrouti District Toba Tek Singh.	ASI = 1	4	-

DUTY ROSTER FOR POLICE AND RANGER DURING FLOOD SEASON

Proforma -2

S.#	Vulnerable sites for illegal cuts during floods.	Concerned Canal Division	Concerned Police Station & District	Police persons deployed.		Remarks if any.
				Inspection / Sub Inspection ASI	Constable	
1	Escape & Drainage Structure at RD: 195 T.S.Link.	Sidhnai Headworks Division	Arrouti District Toba Tek Singh.	ASI = 1	4	-

DUTY ROSTER FOR POLICE AND RANGER DURING FLOOD SEASON.

Proforma -3

S.#	Vulnerable sites for illegal cuts during floods.	Concerned Canal Division	Concerned Police Station & District	Police persons deployed.		Remarks if any.
				Inspection / Sub Inspection ASI	Constable	
1	Sidhnai Headworks	Sidhnai Headworks Division	Abdul Hakim District Khanewal.	ASI = 1	6	-

DUTY ROSTER FOR POLICE AND RANGER DURING FLOOD SEASON.

Proforma -4

S.#	Vulnerable sites for illegal cuts during floods.	Concerned Canal Division	Concerned Police Station & District	Police persons deployed.		Remarks if any.
				Inspection / Sub Inspection ASI	Constable	
1	Left Marginal Bund Rd 0-38+000	Sidhnai Headworks Division	Abdul Hakim District Khanewal.	ASI = 2	6	-

14.7 Details of synthetic bags with capacity of 50 kg and 100 Kg.

S.No.	Item	Total Required Qty	Available Qty	Remarks
1	Bag 50 KG capacity	100	-	Will be purchased before coming flood season 2026.
2	Bag 100 KG capacity.	50	-	

14.8 Details of polythene sheets of black color to protect upstream slope against wave action and to control seepage through embankments.

S.No.	Item	Total Required Qty	Available Qty	Remarks
1	Polythene sheet of black colour	100 KG	-	Will be purchased before onset of flood 2026.

14.9 Any other details as per SOP's approved by the Administrative Department.

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

Chapter – 15

Backup Divisions (in case of breach)

BACKUP DIVISION

In case of an emergency LBDC Division, Khanewal Division & NTD Division, Multan will act as backup Divisions.

Sub Divisional Officer
Sidhnai Headworks Sub Division
Sidhnai

Executive Engineer
Sidhnai Headworks Division
Sidhnai

Superintending Engineer
Trimmu Canal Circle
Trimmu

Chief Engineer
Irrigation, Multan Zone
Multan