GOVERNMENT OF THE PUNJAB

IRRIGATION DEPARTMENT

FLOOD FIGHTING PLAN
FOR THE YEAR 2026

SHAHDARA CANAL DIVISION,
SHAHDARA

UPPER CHENAB CANAL CIRCLE
LAHORE

IRRIGATION LAHORE ZONE
LAHORE

I N D E X

Flood Fighting Plan 2026

Chapter	PART (A)	Page No
1	**Salient feature of Shahdara Canal Division**	
1.1	Location	
1.2	General Description	
1.3	Administrative setup	
2	**Flood Protection and River Training Works**	
2.1	Design parameter of Training Works	
2.2	Location Map	
3	**Brief history of past flood events**	
4	**Design Data, History peak flood data and previous five years flood data of Head Works/Barrage and or other control points**	
4.1	Flood Limits	
4.2	Time Lags of Floods	
4.3	Highest Floods	
4.4	Peak Discharges	
5	**Flood Fighting Strategy**	
6	**Flood Damages Restoration Works**	
7	**Flood Fighting Watching Arrangements**	
7.1	Pre-flood Arrangements	
7.2	Watching Establishment	
7.3	Arrangement at Sensitive sites	
7.4	Watching Material	
7.5	Arrangement for Sounding & Probing	
7.6	Lightening Arrangement	
7.7	Ration Arrangement	
7.8	P.O.L Arrangements	
7.9	Transportation	
7.10	Law & Order	
7.11	Medical Arrangement for Labour	

7.12	Liaison with other Department	
7.13	Role of Army	
7.14	Duties of Telephone Attendant	
7.15	Wireless Arrangements	
8	**Detail of Encroachment**	
9	**Duty roaster / Flood Fighting Programme**	
10	**Emergency Telephone Numbers**	
11	**Standard operating procedure(SOP) for Breaching Sections**	
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 along with detail of their training etc.	
11.5	Detail of mechanical means as a standby 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 the villages likely to be inundated in case of breach	
11.9	Announcement and detail of evacuation arrangements	
11.10	Details of coordination with Civil/Army Authorities	
11.11	Parallel communication arrangements	
11.12	Index plan	
Chapter	**PART (B)**	
12	**Vulnerable sites on flood Bund Structures**	
12.1	Apprehended breaches in Flood Bund/Structures	
12.2	Operation of Breaching sections	
12.3	Breaches due to rise of flood water, deterioration of flood bunds	
13	**Emergency Contingency Plan for vulnerable site No. 1.**	
13.1	Plan showing route of Flood Water coming out of the breach supported with levels.	
13.2	Detail 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 (SITE-I) **13.3.7** Flood Fighting Material Available (SITE-I)	
13.4	Detail Of Other Infrastructure Like Electric, Sui Gas, Telephone Installations, Road Network, Other Buildings, Canals And Drainage Network.	
	Emergency Contingency Plan for vulnerable site No. 2.	
13.1	Plan showing route of Flood Water coming out of the breach supported with levels.	
13.2	Detail 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 (SITE-II) **13.3.7** Flood Fighting Material Available (SITE-II)	
13.4	Detail Of Other Infrastructure Like Electric, Sui Gas, Telephone Installations, 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	Development Machinery (Normal to Low Flood)	
14.4	Development Machinery (Medium to high flood)	
14.5	Development Machinery (Very high to exceptionally high	

	flood)	
14.6	Police development plan	
14.7	Detail of synthetic bags with capacity of 500 kg and 1000 kg	
14.8	Details of polythene sheet of black colour to protect upstream slope against wave action and to control seepage through embankments to p	
15	**Back up division (In case of breach)**	

PART – A

CHAPTER-1

SALIENT FEATURE OF SHAHDARA CANAL DIVISION

CHAPTER-1

SALIENT FEATURE OF SHAHDARA CANAL DIVISION

1.1 LOCATION

Shahdara Canal Division falls in Civil Districts of Gujranwala, Sialkot, Sheikhupura and partially in Lahore. Canal water is supplied to cultureable commanded area of 6.18 Lac Acres.

1.2 GENERAL DESCRIPTION

409.33 miles long network of canals irrigates the aforementioned vast commanded area. Main features i.e. length of canals, discharges, detail of area and water allowances / intensity are given below:-

TOTAL LENGTH OF CHANNELS

a)	Main canal and Branches	=	11.9 Miles.
b)	Major Distys and Minors	=	397.43 Miles.
	Total:	**=**	**409.33 Miles.**

BRIEF 0F DISCHARGE SUPPLY COMPONENTS

SHAHDARA CANAL DIVISION offtakes from BRBD & M.R Link Canal system.

There are following major canal, systems off taking from BRBD Link & M.R. Link.

1.	Sadhoke Disty.	=	Non Perennial
2.	Muridke Branch.	=	Non Perennial
3.	Muridke Disty		Non Perennial
4.	Sohal Disty.	=	Non Perennial
5.	Shahdara Disty	=	Non Perennial
6.	Begumpur Disty	=	Non Perennial
7.	Badomalhi Disty	=	Non Perennial

INTENSITY AND WATER ALLOWANCES
Upper Chenab Canal System

Non Perennial

Intensity	=	25%
Water Allowance	=	3.79 Cs %o Acres.

.

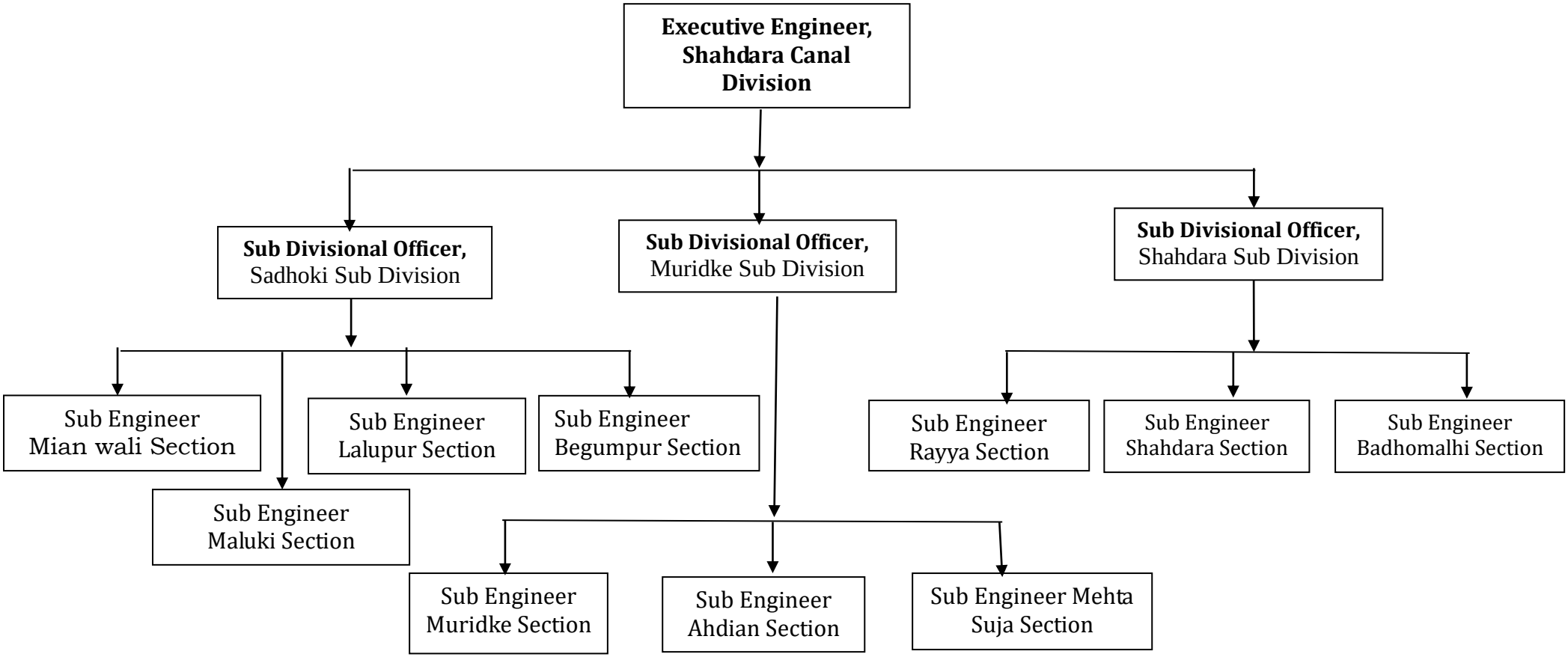
CIVIL JURISDICTION

The civil jurisdiction of the Sub Divisions is as under: -

S.#	Name of Sub Division		District
1.	Sadhoke Sub Division UCC	=	Gujranwala, Sialkot, Sheikhupura
2.	Muridke Sub Division UCC	=	Sheikhupura.
3.	Shahdara Sub Division UCC.	=	Sheikhupura , Lahore& Narowal.

1.3 **ADMINISTRATIVE SETUP:**

The Executive Engineer, Shahdara Canal Division is administrative head of the Shahdara Canal Division. The organization chart is as under:-



CHAPTER-2

FLOOD PROTECTION AND RIVER TRAINING WORKS

CHAPTER-2

FLOOD PROTECTION AND RIVER TRAINING WORKS

2.1 DESIGN PARAMETER OF TRAINING WORKS

Shahdara Canal Division Shahdara is the 2nd Division of the Upper Chenab Canal Circle.

There are numerous drains and nullah's around the canal system of Shahdara Canal Division. Rain and flood water flows to these nulláh' s and drains. Major nullah is known as Deg Nullah and it falls into River Ravi. These Nullahs are under administrative control of Rechna Drainage Division, Sheikhupura and Gujranwala Drainage division. The Bunds fall under the jurisdiction of Shahdara Canal Division as under:-

i).DETAIL OF BUNDS ALONG DEG NULLAH WITH DESIGNED DATA

a).	**Sadhoke Sub Division**	**Length**	**Top Width**	**Side slope**	
				River Side	**Country Side**
i)	Ananta Minor Bund RD. 0+000 to 19+500.	19500 ft	15 ft	3:1	1.5:1
ii)	Ghulab Singh Minor Bund RD. 9+750 to 33+500.	23750 ft	15 ft	3:1	1.5:1
iii)	Dandian Disty Bund RD. 45+500 to 64+000.	18500 ft	15 ft	3:1	1.5:1
iv)	Begumpur Disty Bund 0+000 to 13+000	13000 ft	25 ft	3:1	2:1
v)	Talwandi Disty Bund 0+000 to 30+000	30000 ft	25 ft	3:1	2:1
vi)	Ratta Minor RD. 0+000 to 20+500	20500 ft	25 ft	3:1	2:1
b).	**Muridke Sub Division**				
1.	Chakian Bund RD. 0+000 to 9+000	9000 Ft	15 ft	3:1	1.5:1

ii_. DETAIL OF BUNDS ALONG RIVER RAVI WITH DESIGNED DATA

a) The hydraulic data of the Shahdara Disty Flood Bund from RD. 0+000 – 72+000 is as under:-

Reach RD	**Top Width**	**Free Board**	**Side Slope**	
			River Side	**Country Side**
0+000 to 65+000	25 ft.	6.00' above H.F.L of 1988	3:1	2:1
65+500 to 72+000	20 ft.	3.00' above H.F.L of 1973	3:1	2:1

b) The hydraulic data of J-Head Spur Babakwal off-taking from RD. 39+000/L of Shahdara Disty Flood Bund is as under :-

Reach RD	**Top Width**	**Free Board**	**Side Slope**	
			U/S Side	**D/S Side**
RD 0+000 to 5+400	25 ft.	6.00' above H.F.L of 1988	3:1	2:1

No doubt that all the flood bunds are very important but specially Shahdara Disty Flood Bund is the most important as it envisages the safety of the Shahdara / Lahore City and the allied structure of' River Ravi.

Executive Engineer,
Shahdara Canal Division,
Shahdara.

IRRIGATION DEPARTMENT PUNJAB

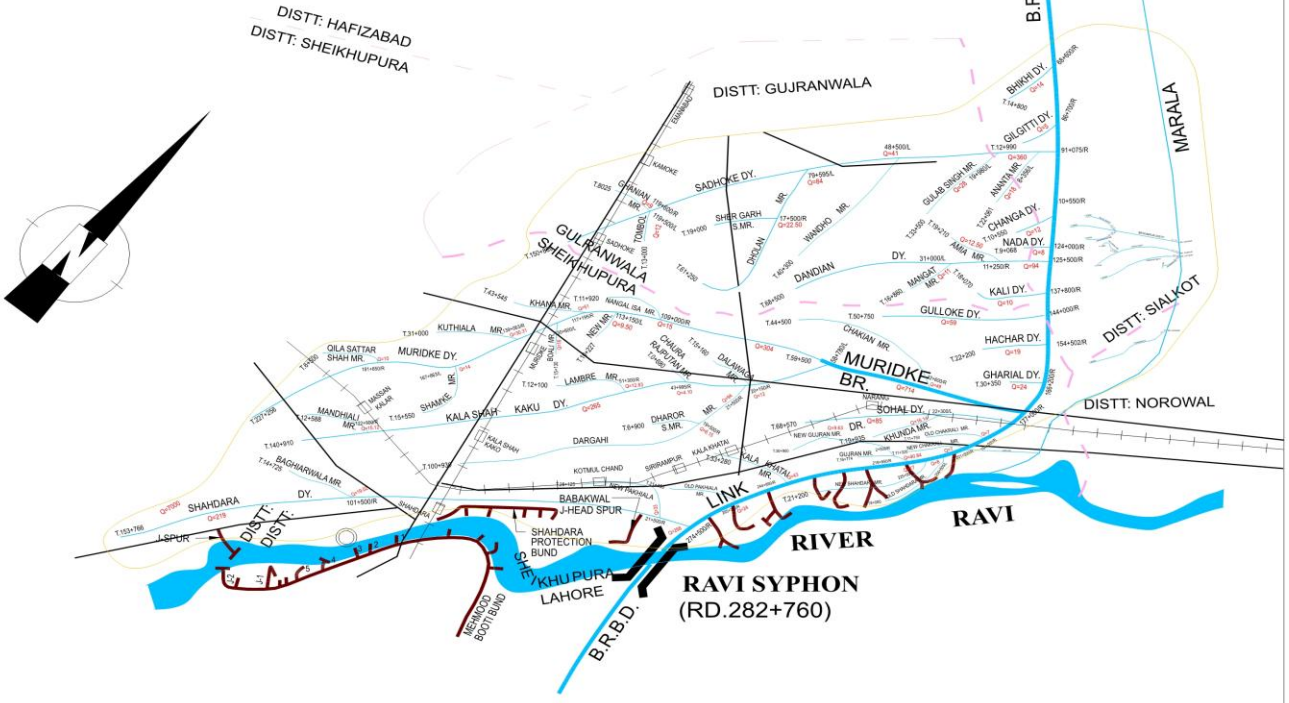
INDEX PLAN OF SHAHDARA CANAL DIVISION SHAHDARA

4 2 0 4 8 16 MILES

SCALE

LEGEND:

- RIVER
- RAILWAY LINE WITH RAILWAY STATION
- ROAD
- BARRAGE/HEADWORKS
- BUNDS
- MAIN & BRANCH CANAL
- FEEDER & LINK
- ESCAPE
- DISTRIBUTARY & MINOR
- IRRIGATION DIVISIONAL BOUNDARY
- DISTRICT BOUNDARY



CHAPTER-3

BRIEF HISTORY OF PAST FLOOD EVENTS

CHAPTER-3

BRIEF HISTORY OF PAST FLOOD EVENTS

Shahdara Disty Flood protection bund consists of embankment from RD. 0+000 to 72+000 along the Shahdara Disty and a J-Head Spur off-taking at RD. 39+000/L of Shahdara Disty Flood Protection Bund, which has been constructed to protect Shahdara Disty and the adjoining area on right side of the Disty.

FLOOD 2008 & 2009

During flood season 2008-09 & 2009-10, the River changed its meandering and directly attacked D/S shank of the Spur and badly damaged the shank of spur and tried to bisect spur into two parts but timely measures were taken and the spur was saved.

FLOOD 2024

River Ravi is a meandering River of incised character. Due to these meandering phenomena, the river creates serious problem in its entire length. During the flood season 2024, the maximum discharge passed at Shahdara on 21.07.2024 was 31250 Cusecs which falls in the category of medium flood.

FLOOD 2025

The maximum discharge passed at Shahdara on the River Ravi during the 2025 flood season occurred in late August, with the peak reaching approximately **220,000 (cusecs)**. This historic discharge was recorded on **August 28, 2025**, marking the highest flood level the river had experienced in nearly four decades. The scale of the flood significantly surpassed the "exceptionally high" threshold, as the river swelled to levels not witnessed since the catastrophic flood of 1988, when flows exceeded 467,000 cusecs. Reports from various news outlets and the Provincial Disaster Management Authority (PDMA) confirmed that discharges at Shahdara fluctuated between **199,600 cusecs** and **217,660 cusecs** during this critical period, solidifying the event's classification as exceptionally high and extremely dangerous. The severity of this discharge overwhelmed the river's carrying capacity, which experts estimate is safe only up to 50,000 cusecs due to neglected infrastructure and encroachments, leading to widespread inundation of low-lying areas such as Farrukhabad, Aziz Colony, and several housing societies near Shahdara. This event was triggered by intense monsoon rains and water releases from upstream catchments, demonstrating the meandering and incised character of the Ravi, which exacerbates flood risks by limiting the river's ability to contain high-velocity flows within its narrow, deep channel, causing water to spill over into adjacent floodplains and populated areas.

Executive Engineer,
Shahdara Canal Division,
Shahdara.

CHAPTER-4

DESIGN DATA, HISTORY PEAK FLOOD DATA AND PREVIOUS FIVE YEARS FLOOD DATA OF HEAD WORKS/BARRAGE AND OR OTHER CONTROL POINTS

CHAPTER-4

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

DESIGN DATA OF SHAHDARA DISTY FLOOD PROTECTION BUND

The hydraulic data of the Shahdara Disty Flood Bund from RD. 0+000 to 72+000 is as under:-

Reach RD	Top Width	Free Board	Side Slope	
			River Side	Country Side
0+000 to 65+000	25 ft.	6.00' above H.F.L of 1988	3:1	2:1
65+500 to 72+000	20 ft.	3.00' above H.F.L of 1973	3:1	2:1

DESIGN DATA OF BUND ALONG DEG NULLAH

a) Sadhoke Sub Division

S.#	Name of Bund	Length	Top Width	Side slope	
				River Side	Country Side
i)	Ananta Minor Bund RD. 0+000 to 19+500.	19500 ft	15 ft	3:1	1.5:1
ii)	Ghulab Singh Minor RD. 9+750 to 33+500.	23750 ft	15 ft	3:1	1.5:1
iii)	Dandian Disty Bund RD. 45+500 to 64+000.	18500 ft	15 ft	3:1	1.5:1
iv)	Begumpur Disty RD. 0+000 to 13+000	13000 ft	25 ft	3:1	2:1
iv)	Talwandi Disty RD. 0+000 to 30+000	30000 ft	25 ft	3:1	2:1
v)	Ratta Minor RD. 0+000 to 20+500	20500 ft	25 ft	3:1	2:1

b) Muridke Sub Division

S.#	Name of Bund	Length	Top Width	Side slope	
				River Side	Country Side
i)	Chakian Bund RD. 0+000 to 9+000	9000 ft	15 ft	3:1	1.5:1

PREVIOUS FIVE YEAR FLOOD DATA

S.#	Date	HFL at Zero gauge critical level 693.50	HFL at RD. 65000 junction point of SDR Disty Flood Bund (Critical level 699.00')	Discharge of River Ravi at Shahdara (Cs)
1.	28.08.2020	-	676.50	34531
2.	21-07-2021	-	776.90	36477
3.	02.08.2022	-	676.20	31415
4.	29-07-2023	-	677.10	38060
5.	21.07.2024	-	676.15	31250
6.	28.08.2025	-	691.70	219770

4.1 FLOOD LIMITS

S.#	Category of Flood	Ravi at		Shahdara Railway Bridge	Deg at Qila Soba Singh
		Jassar	Ravi Syphon		
		Cs. In Lacs	Cs. In Lacs	Cs. In Lacs	Cs. In Lacs
1.	**Low Flood**	0.50	0.40	0.40	0.036
2.	**Medium Flood**	0.75	0.65	0.65	0.075
3.	**High Flood**	1.00	0.90	0.90	0.150
4.	**Very High Flood**	1.50	1.35	1.35	0.300
5.	**Super High Flood**	2.00	1.80	1.80	0.350

4.2 TIME LAGS OF FLOODS

River	Site		Design Capacity (Cs)	Low Flood (Cs)	Med: flood (Cs)	High Flood (Cs)	Very High Flood (Cs)	Ex: high Flood (Cs)	Time lag (Hrs)
	From	To							
Ravi	Kot Naina	Jassar	2.75	0.50	0.75	1.00	1.50	2.00	12
	Jassar	Ravi Siphon	4.5	0.40	0.65	0.90	1.35	1.80	18
	Ravi Siphon	SDR	2.5	0.40	0.65	0.90	1.35	1.80	8

4.3 HIGHEST FLOODS

S.#	Date	HFL at RD. 65000 junction point of SDR Disty Flood Bund (Critical level 699.00')	Discharge of River Ravi at Shahdara (Cs)
1.	21.09.1950	691.80	193000
2.	06.10.1955	695.00	527315
3.	11.08.1973	693.02	237380
4.	27.09.1988	694.70	326100
5.	28.08.2025	691.70	219770

4.4 PEAK DISCHARGES

S.#	Date	HFL at RD. 65000 junction point of SDR Disty Flood Bund (Critical level 699.00')	Discharge of River Ravi at Shahdara (Cs)
1.	19.08.2019	677.00	37200
2.	28.08.2020	676.50	34531
3.	21-07-2021	676.90	36477
4.	02.08.2022	676.20	31415
5.	29-07-2023	677.10	38060
6.	21.07.2024	676.15	31250
7.	28.08.2025	691.70	219770

Executive Engineer,
Shahdara Canal Division,
Shahdara.

CHAPTER-5

FLOOD FIGHTING STRATEGY

CHAPTER-5

FLOOD FIGHTING STRATEGY

FLOOD CLASSIFICATION CRITERIA AT SHAHDARA GAUGE: -

Flood Category	Discharge at Shahdara (Cusecs)
Low Flood	40,000 – 70,000
Medium Flood	70,001 – 150,000
High Flood	150,001 – 200,000
Very High Flood	200,001 – 250,000
Extra / Extremely High Flood	Above 250,000

Design Capacity Reference: A record 345,000 cusecs of river flow was recorded at Shahdara in 1988, which was approximately 100,000 cusecs above the design capacity of the irrigation structures, causing widespread destruction due to accidental breaching. (The Friday Times)

EARLY WARNING & MONITORING SYSTEM: -

Gauge Reading Schedule: -

- Gauge readings shall be taken every 3 hours during normal monsoon period
- Readings shall be taken every 1 hour when discharge exceeds 70,000 cusecs
- Continuous monitoring when discharge exceeds 150,000 cusecs

Communication Chain: -

Level	Authority	Action Trigger
XEN / SDO	Punjab Irrigation Department	Discharge > 40,000 cusecs
PDMA Punjab	Provincial Disaster Management Authority	Discharge > 70,000 cusecs
NDMA	National Disaster Management Authority	Discharge > 150,000 cusecs
DC Lahore / Commissioner	Civil Administration	Discharge > 100,000 cusecs

Upstream Gauge Correlation: -

- Flood warning at Shahdara must be correlated with upstream readings:
- Jassar Gauge (upstream): at Jassar, flow reaching 229,700 cusecs is categorized as extremely high flood level, which gives

approximately 6–8 hours of advance warning before the peak reaches Shahdara.
- Ravi Siphon Gauge: Used for secondary confirmation of discharge volume.

OPERATIONAL STRATEGY — FLOOD STAGES: -

STAGE 1: LOW FLOOD (40,000–70,000 cusecs): -

- Activate patrol parties along entire bund length.
- Inspect all VPs — report status every 6 hours.
- Pre-position material at highest-risk VPs.
- Inform PDMA and DC Lahore.
- Place machinery on standby.

STAGE 2: MEDIUM FLOOD (70,001–150,000 cusecs): -

- Double patrol frequency — inspection every 2 hours
- All VPs to be manned continuously
- Deploy emergency labour reserve at camp
- Commence sand-bagging at identified weak sections
- Activate civil administration: emergency control rooms, Rescue 1122, and disaster response teams should be on standby to assist and inform the public.
- Issue public warnings through mosque loudspeakers in flood-prone settlements

STAGE 3: HIGH / VERY HIGH FLOOD (150,001–250,000 cusecs): -

- All available manpower deployed on bund
- Continuous inspection of bund crest and riverside toe
- Deploy machinery for emergency earthwork
- Round-the-clock monitoring of all vulnerable points with declaration of "critical vigilance" (The Express Tribune)
- Request Army/Rangers assistance if required
- Evacuate population in low-lying areas immediately
- Use mosque announcements to warn residents in low-lying areas to evacuate (The Express Tribune)

STAGE 4: EXTRA HIGH FLOOD / EMERGENCY (Above 250,000 cusecs): -

- XEN personally present on bund — no departure without SDO coverage
- Request controlled breach authority from Chief Engineer if bund integrity is at risk
- Initiate controlled breaches of flood bunds only on orders of competent authority to divert surging waters.
- Coordinate with NDMA/Army for helicopter rescue if settlements are cut off.
- Activate breaching sections (if pre-designated) only upon written orders.

BUND BREACH RESPONSE PROCEDURE

In the event of a bund breach or imminent breach: -

- Immediately report to XEN, SDO, and PDMA Control Room
- Dispatch emergency labour with sand bags and earthfill material to breach point
- Construct temporary closure using sand-filled gunny bags in herringbone pattern
- Place heavy stone pitching / rip-rap at toe to prevent further scouring
- If breach is uncontrollable, evacuate downstream population immediately
- Deploy rescue boats for stranded persons
- Document breach location (GPS coordinates, time, water level) for record.

Executive Engineer,
Shahdara Canal Division,
Shahdara.

CHAPTER-6

FLOOD DAMAGES RESTORATION WORKS

CHAPTER-6

FLOOD DAMAGES RESTORATION WORKS

No Such Work

Executive Engineer,
Shahdara Canal Division,
Shahdara.

CHAPTER-7

FLOOD FIGHTING WATCHING ARRANGEMENTS

CHAPTER-7

FLOOD FIGHTING WATCHING ARRANGEMENTS

7.1 PRE-FLOOD ARRANGEMENT

1. Pre-Flood inspections of Flood Bunds have been carried out by the Departmental inspection team and concerned Executive Engineer, and Sub Divisional Officer.
2. Purchase of Flood Fighting Material is under process.
3. Repair to defective Liners of Breaching Section is under way.
4. Repairing & painting of gauges and critical gauge will be done before flood season.

Site	Sanctioned Limit (Lac Cft)	Available (Lac Cft)	Balance (Lc Cft)
J-Head Spur RD.39000	1 .0	0.78	0.22
Shahdara Disty Bund	2.50	2.00	0.50
Total	3.50	2.78	0.72

7.2 WATCHING ESTABLISHMENT DETAILS

Sr. No.	Structure Name	Length (Miles)	Flood Limits							
			Normal Flood Season		Low Flood		Medium/High Flood		Very High/ Exp. High Flood	
			Men	Shift	Men	Shift	Men	Shift	Men	Shift
			1 Person/ 2 mile (1 Shift)		1 Person/ mile (1 Shift)		2 Person/ mile (2 Shift)		5 Person/ mile (3 Shift)	
1	J-Head Spur RD.39000	1.02	-	-	1	1	2	2	5	3
1	Shahdara Disty Bund	13.66	7	1	14	1	28	2	70	3
	TOTAL :-	**14.68**	**7**		**15**		**60**		**225**	

NOTE:

1. The Executive Engineer Shahdara Canal Division may employ work charge establishment as per site situation after obtaining approval from Superintending Engineer Upper Chenab Canal Circle Lahore.

2. S.D.O Shahdara was employ watching establishment as per strength mentioned above subjected to approval from competent authority.

3. In case of very high flood, the strength of establishment was increased with express permission of Executive Engineer.

From the first of June watching of the bund is started with following scale:

7.3 ESTABLISHED CAMPS DETAILS

Sr. No.	Structure Name	Length (Miles)	Vulnerable Sites		No. of Camps Established Except Vulnerable Points		
					Normal Flood season/ Low Flood	Medium/ High Flood	Very High/Exp. High Flood
			Reach	No. of Camps	15 Miles	7 Miles	5 Miles
1	J-Head Spur RD.39000	1.02	-	-	-	-	-
2	Shahdara Disty Flood Bund RD. 0-72+000	12.5	RD. 47-48 RD: 49-53	2	1	2	2
Total				**2**	1	**2**	**2**

7.4 WATCHING MATERIAL.

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

Sr. No.	Items	Unit	Required Quantity	Available Quantity	Balance Quantity	Remarks
1	Shouldari/Tent	No	01	0	01	A little Quantity of some items of
2	Chairs	No	06	0	06	

3	Table	No	01	0	01	T&P articles is available mostly items has been used during flood 2025 & balance Quantity will be purchased before flood 2026
4	Generator (2-3 KVA)	No	01	0	01	
5	Pedestal Fans	No	01	01	00	
6	Charpois	No	02	02	0	
7	Symbolic Jackets	No	50	0	50	
8	Polyethylene Sheet	Kg	100	0	100	
9	Bamboos (4" dia and 10 ft long)	No	100	0	100	
10	Water Cooler	No	01	0	01	
11	Portable Umbrella	No	02	0	02	
12	Life Jackets	No	05	0	05	
13	Utensils (10 person serving)	No	01	0	01	
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	20	05	15	
20	Kassi	Kg	20	10	10	
21	Axes	No	20	0	20	
22	G.I. Buckets	No	05	0	05	
23	7/44 cable	Feet	500	0	500	
24	Sutli	Kg	02	0	02	
25	Sewing Needles	No	10	0	10	
26	Emergency Medical Kit	No	1	0	01	
27	Wire crates (3x3x3) (only at those camps near river action and where reserve stock exists)	No	100	0	100	

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

Sr. No.	Items	Unit	Required Quantity	Available Quantity	Balance Quantity	Remarks
1	Shouldari / Tent	No	01	0	01	Balance Quantity will be
2	Walke Talkie Set	Sets	01	0	01	

3	Chairs	No	06	0	06	purchased before flood 2026
4	Raincoats	No	10	0	10	
5	Table	No	01	0	01	
6	LED Flood light	No	10	0	10	
7	Generator (2-3KVA)	No	01	0	01	
8	Extension Cable (10 ft)	No	02	0	02	
9	Pedestal Fans	No	01	01	0	
10	Rechargeable torches	No	20	05	15	
11	Charpois	No	02	02	02	
12	Kassi	No	20	0	20	
13	Symbolic Jackets	No	50	0	50	
14	Axes	No	20	0	20	
15	Water Cooler	No	01	0	01	
16	G.I Buckets	No	05	0	05	
17	Portable umbrella	No	02	0	02	
18	7/44 cable	Feet	500	0	500	
19	Utensils (10 person serving)	No	01	0	01	
20	Sutli	Kg	02	0	02	
21	Jute/Plastic bags	No	500	0	500	
22	Sewing Needles	No	10	0	10	

7.5 **ARRANGEMENT FOR SOUNDING AND PROBING**

i). Arrangement of boats for observation of Sounding & Probing in case of critical situation against rising of rivers.

ii). Provision of sounding rods

7.6 **LIGHTING ARRANGEMENT**

Executive Engineer LESCO Shahdara Division and S.D.O Electricity G.T Road Sub Division Shahdara shall ensure smooth and sustained flow of electricity during flood emergency. Standby Generator will also made available at bund.

7.7 **RATION ARRANGEMENT**

District Administration is responsible for providing ration arrangements for evacuated / displaced peoples.

7.8 **P.O.L ARRANGEMENT FOR VEHICLE**

The requirements of H.S Diesel oil at Shahdara Disty Flood Protection Bund shall be 300 liters during flood season.

7.9 **TRANSPORTATION**

One No. Govt. Tractor Trolley will be required for the transportation of Flood Fighting Material and labour in case of emergency.

7.10 **LAW AND ORDER**

Maintenance of Law and order is the responsibility of District Administration and law enforcing agencies of District Sheikhupura.

7.11 **MEDICAL ARRANGEMENT FOR LABOUR**

Necessary medicines will be arranged from the Health Department to combat with the out breaks of expected epidemics.

7.12 **LIAISON WITH OTHER DEPARTMENT**

Executive Engineer, Shahdara Canal Division Shahdara and Sub Division Officer, Shahdara Sub Division will keep liaison with their counterparts of other Department as well as the Higher Authorities of the parent Department.

7.13 **ROLE OF THE ARMY**

Pakistan Army (16 Engineering Corps Lahore) is responsible for blow up of Breaching Section as and when the operating Committee takes decision for its operation.

7.14 **DUTY OF TELEPHONE ATTENDANT**

Telephone attendants will perform their duty for 24 hours during flood season at Divisional Telegraph Office No. 04299333439

7.15 **WIRELESS ARRANGEMENTS**

Wireless Station established at Police Head Quarter at Sheikhupura during flood season and will communicate the flood situation to all concerned.

Executive Engineer,
Shahdara Canal Division,
Shahdara.

CHAPTER-8

DETAIL OF ENCROACHMENT

CHAPTER-8

DETAIL OF ENCROACHMENT

Sr. No.	Total Encroachments	Removed	Remaining	Remarks
1	NIL	NIL	NIL	NIL

DETAIL OF CRITICAL ENCROACHMENT

Sr. No.	Total Critical Encroachments	Removed	Remaining	Remarks
1	NIL	NIL	NIL	NIL

Executive Engineer,
Shahdara Canal Division,
Shahdara.

CHAPTER-9

DUTY ROASTER / FLOOD FIGHTING PROGRAMME

CHAPTER-9

DUTY ROSTER/FLOOD FIGHTING PROGRAM

Executive Engineer, Shahdara Canal Division is over all in charge of flood management and to control all the flood fighting operation on flood embankments.

Under the normal condition, Sub Divisional Officer, Shahdara Sub Division alongwith Sub Engineers will supervise the flood bunds and channels.

As & when the discharge in River Ravi at Jassar Reach 1.0 Lac cusec and in rising, mode the supervisory staff will shift their camps at following locations:-

S.#	Officer / Official	Camp Site	Duties
1	Sub Divisional Officer, Muridke Sub Division	Babakwal Rest House RD. 39+000	To watch & check flood fighting arrangements along Shahdara Disty Flood Bund and its spur from RD. 0+000 to 40+000 and to receive flood gauges along bund and spur.
2	Sub Divisional Officer, Shahdara Sub Division	Haji Kot Hut RD. 61+200	To watch & check flood fighting arrangements along Shahdara Disty Flood Bund and its spur from RD. 40+000 to 72+000 and to receive flood gauges along bund and spur.

CHAPTER-10

EMERGENCY TELEPHONE NUMBERS

CHAPTER-10

EMERGENCY TELEPHONE NUMBERS

Designation of Officers	Office	Fax	Mobile	Residence
Secretary Irrigation Department	042-991212117-18	042-99212116		
Chief Engineer Drainage & Flood Zone	042-99233551		0321-8409386	0321-8409386
Chief Engineer, Irrigation Lahore Zone	042-99212085-86	042-99212084	0300-4017310	0300-4017310
S.E Upper Chenab Canal Circle	042-99250333	042-99250332	0333-6289951	0333-6289951
Director Flood	042-99233552	-	0300-4399884	0300-4399884
Flood Warning Center Lahore	042-99205372	042-99205371	-	-
Police Wireless Center Lahore	042-99205373	-	-	-
Canal Telegraph Office Secretariat Lahore	042-99212166	-	-	-
Head Quarter Engineer 4-Corps 108 Battalian Lahore Cantt	042-366992360 042-36373315	-	-	-
16 Engineer 4-Corps Lahore	042-669995186	-	-	-
23 Engineer Battalian 4-Corps Lahore	042-66995184	-	-	-
DC Sheikhupura	056-9200150-51	056-9200152	0304-0920061	056-9200153-54
DC Gujranwala	055-9200051-52	055-9200043	0304-0920064	0304-0920064
XEN Irrigation Shahdara	042-99333439	042-99333439	0344-0754050	0344-0754050
XEN Marala	052-3502102	052-3502120	0346-4132454	0346-4132454
XEN Pasrur Link Sialkot	052-9250088	052-9250089	0321-4116234	0321-4116234

T.M.A Ferozewala	042-37944124	-	0308-8081965	0308-8081965
SDO Shahdara	-	-	0321-6662221	0321-6662221
SDO Muridke	-	-	0333-7375014	0333-7375014

CHAPTER-11

STANDARD OPERATING PROCEDURE (SOP) FOR BREACHING SECTIONS

CHAPTER-11

Standard Operation Procedure (SOP) for Breaching Sections

11.1 HISTORY OF BREACHING SECTION

The Critical gauge level is 699.00 which is fixed at RD 65+000 of Shahdara Disty Flood Bund.

The breaching section is operated by the committee authorized by the Government when the water level reaches the critical gauge R.L 699.00 with reference to mean sea level and is in rising position at the Flood Bund.

LOCATION

There are five number approved breaching sections.

1. At RD. 64-65
2. At RD. 63-64
3. At RD. 59-60
4. At RD. 58-59
5. At RD. 55-56

There are 5 No Sections having a length of 1000 Ft at 4000 Ft interval is to be ballasted at each Breaching Section.

These Breaching sections were operated during the years 1950, 1955, 1973, 1975, 1978 and 1988.

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

The site of breaching section is located at RD. 55+000 to 65+000 Shahdara Disty Flood Protection Bund in 5 segments having length 800 ft and quantity as under :-

S.#	Description	Location RD.	PVC Linner 5 inches Dia 6 ft long	PVC Linner 5 inches Dia 4 ft long	Linner Cover	Total Liner
1	Breaching Section-I	64 – 65	60	40	100	100
2	Breaching Section-II	63 – 64	60	40	100	100
3	Breaching Section-III	59 – 60	60	40	100	100
4	Breaching Section-IV	58 – 59	50	20	50	50
5	Breaching Section-V	55 - 56	50	20	50	50
Total			**280**	**160**	**400**	**400**

11.3 ARRANGEMENT OF EXPLOSIVES AND SECURITY OF EXPLOSIVE STORE

Considering law & order situation, the whole material as mentioned above is lying in the supervision of Army personals at Lahore Cantt: as they being the experts, know much better than Irrigation establishment about the condition of explosive material and its safety.

In case of emergency of breaching, the following materials are required:-

Name of Explosive	Qty required	Qty available	Deficient Qty	When deficient Qty will be procured
Detonators No. 8 Plain	10	10	-	Nothing is deficient for operation of breaching section.
Safety Fuses	225 Meters	225 Meters	-	
Liquid Explosive	14 Drums	14 Drums	-	
P.E Pipe 5 Ft Long	78	78	-	
P.E Pipe 7 Ft Long	117	117	-	
Wabox (25 Kg)	70	70	-	
Wabo Cards in Meter	3200 Meter	3200 Meter	-	
Det Instant	40	40	-	
Det Delay	1	1	-	
Det Instant Electric	37	37	-	
PE-3A	653.9 Kg	653.9 Kg	-	
Wabox	1750 Kg	1750 Kg	-	

11.4 LIST OF THE SECURITY STAFF WITH DETAIL OF THEIR TRAINING

As the explosive material, has since been shifted from Babakwal explosive Store to Lahore Cantonment in the Army custody. 2 No. sappers / retired Army persons have been appointed for security of explosive of Shahdara Breaching Section lying in the custody of Army Authority.

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

One number dozer from Agriculture Department Sheikhupura will be engaged at the breaching section as a stand by arrangements in case of detonation failure.

11.6 DUTY ROSTER IN CASE OF CRITICAL SITUATION

Independent Sub Divisional Officer (S.D.O Shahdara Sub Division) and Sub Engineer (Shahdara Section) have been deputed at the breaching section.

11.7 BREACHING COMMITTEE WITH THEIR ACTION PLAN

Operating Committee

A committee was constituted vide Notification No. SO(Floods) VI-33/97 dated 15.07.2015 and the following are the members of committee for operating the breaching section:-

1. District Coordination Officer, of the district in which the breaching section is located who shall also be the convener of the committee (District Coordination Officer, Sheikhupura).
2. District Coordination Officer of the district likely to be effected by the operation of breaching section or his representative
3. Representative of the department owning the structure at which the breaching section is located (not less than the rank of an Executive Engineer or equivalent)
4. Representative of C&W Department not below the rank of an Executive Engineer.
5. Executive Engineer, Shahdara Canal Division Shahdara. (Member)

6. Representative of Pakistan Army not below the rank of Lt. Colonel.

Operating Criteria

4 Engineer Corps Lahore will be responsible for the blasting operation on receiving signal from Executive Engineer, Shahdara Canal Division Shahdara, and District Co-ordination Officer, Sheikhupura, both will be present at the site. The Army Authorities are required to monitor the flood gauges at their own. As and when the discharge in River Ravi at Jassar reaches 1 Lac cusec, and if it is rising they will rush to the site and shift the explosive material from Lahore Cantt: to the breaching / blasting point, and will make all other necessary arrangements well before the critical situation arises, without any further intimation from concerned Department.

The critical reduce levels for the operation of the Breaching Section is fixed as 699 ft at RD 65+000, junction point of the Shahdara Disty Flood Bund and Shahdara Flood Protection Bund, 698 ft at the gauge site on Mehmood Booti Bund and protection bund. The Breaching Section should be operated when either of the 2 levels is attained earlier and the River Ravi is in risen trend

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

S.#	Name of Village	Teh	Distt	S.#	Name of Village	Teh	Distt	S.#	Name of Village	Teh	Distt
1	Fateh Rehan	FZW	SKP	17	Babakwal	FZW	SKP	33	Khaki	FZW	SKP
2	Garang Wala	FZW	SKP	18	Nathukot	FZW	SKP	34	Sharaqpur Khurd	FZW	SKP
3	Muhammad Pura	FZW	SKP	19	Haji Kot	FZW	SKP	35	Kot Abdul Malik	FZW	SKP
4	Goil	FZW	SKP	20	Bhart	FZW	SKP	36	Abul Khair	FZW	SKP
5	Meekhowali	FZW	SKP	21	Karol	FZW	SKP	37	Sattar Wala	FZW	SKP
6	Kot Hadayat All	FZW	SKP	22	Qazi Mirali	FZW	SKP	38	Nooraywala	FZW	SKP
7	Kot Mole Chand	FZW	SKP	23	Rangian Jhangian	FZW	SKP	39	Rana Bhatti	FZW	SKP
8	Dandian	FZW	SKP	24	Taj Colony	FZW	SKP	40	Meerpur	FZW	SKP
9	Bulkhe	FZW	SKP	25	Ferozewala	FZW	SKP	41	Satto Jhangian	FZW	SKP
10	Ferozewala	FZW	SKP	26	Kutchehry & Premises	FZW	SKP	42	Chah Hakim Singh Wala	FZW	SKP
11	Thatha Khuda Yaar	FZW	SKP	27	Imamia Colony	FZW	SKP	43	Chah Sharam Singh Wala	FZW	SKP
12	Faizpur	FZW	SKP	28	Rechna Town	FZW	SKP	44	Malik Pur	FZW	SKP
13	Nain Sukh	FZW	SKP	29	Rana Town	FZW	SKP	45	Taradday Wali	FZW	SKP
14	Kot Begum	FZW	SKP	30	Vandala Diyal Shah	FZW	SKP	46	Lurkey	FZW	SKP
15	Dhaddian	FZW	SKP	31	Dhaka Nizam Pura	FZW	SKP				
16	Latheypur			32	Badd						

11.9 **ANNOUNCEMENT AND DETAIL OF EVACUATION ARRANGEMENTS**

The District Administration, Sheikhupura will be responsible for flood warning / vacation of public and adopting all other relief measures well in time so as to minimize the flood destruction. Area likely to be inundated by the flood water in case of operation of breaching sections is appended herewith for taking timely action.

11.10 **DETAIL OF COORDINATION WITH CIVIL/ARMY AUTHORITIES**

In case of high flood, hourly flood gauges will be supplied to civil as well as Army. These three departments remain in touch through telephone and wireless system.

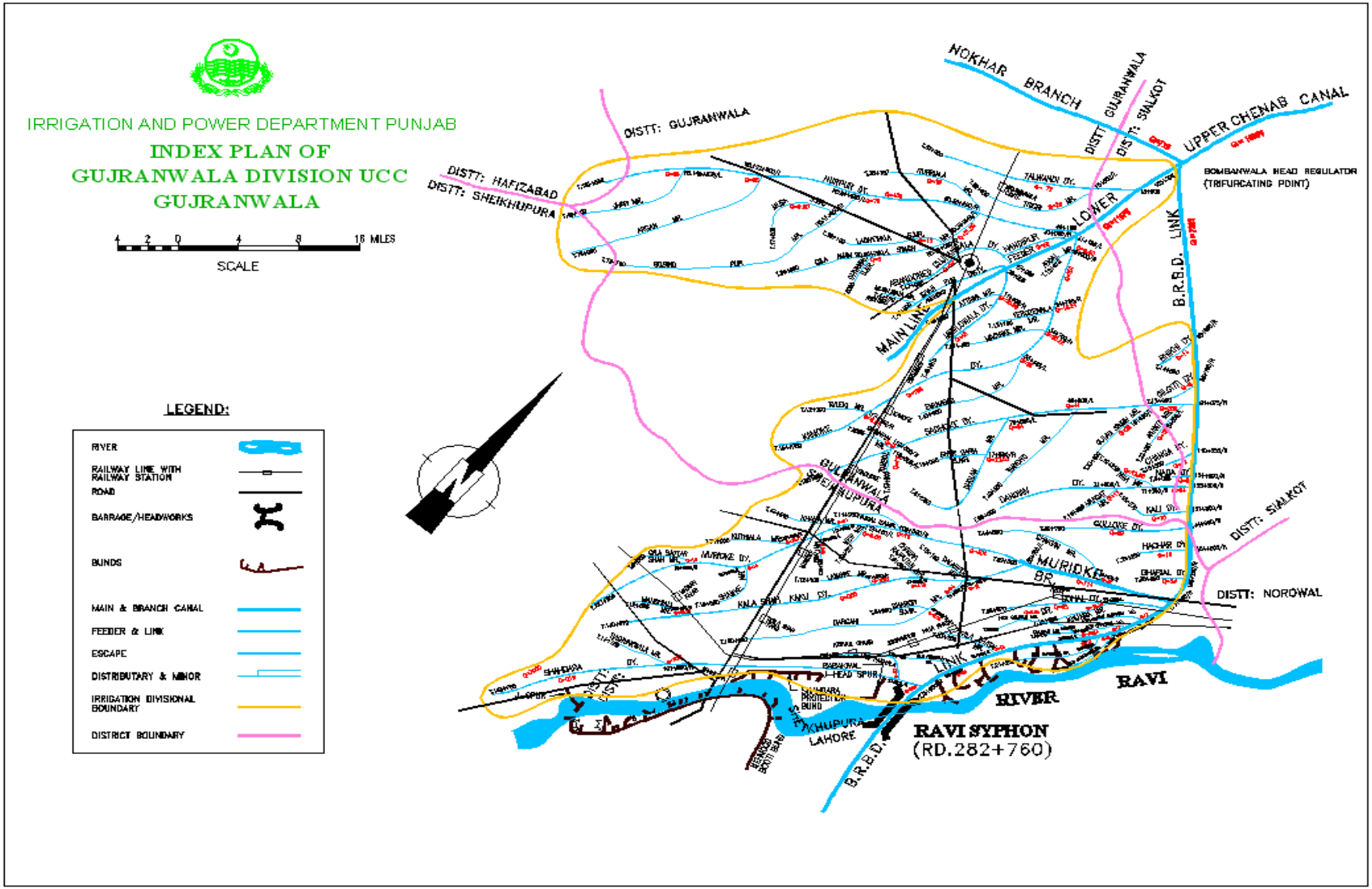
11.11 **PARALLEL COMMUNICATION ARRANGEMENTS**

Telephone and wireless system shall be the parallel arrangements for communication.

Executive Engineer,
Shahdara Canal Division,
Shahdara.

Superintending Engineer,
Upper Chenab Canal Circle,
Lahore.

Chief Engineer,
Irrigation Lahore Zone,
Lahore.


IRRIGATION AND POWER DEPARTMENT PUNJAB
INDEX PLAN OF
GUJRANWALA DIVISION UCC
GUJRANWALA
4 2 0 4 8 16 MILES
SCALE
LEGEND:
RIVER
RAILWAY LINE WITH RAILWAY STATION
ROAD
BARRAGE/HEADWORKS
BUNDS
MAIN & BRANCH CANAL
FEEDER & LINK
ESCAPE
DISTRIBUTARY & MINOR
IRRIGATION DIVISIONAL BOUNDARY
DISTRICT BOUNDARY
NOKHAR BRANCH
DISTT: GUJRANWALA
DISTT: SIALKOT
UPPER CHENAB CANAL
BOMBANWALA HEAD REGULATOR (TRIFURCATING POINT)
DISTT: HAFIZABAD
DISTT: SHEIKHUPURA
LOWER
B.R.B.D. LINK
MAIN LINK
GUJRANWALA
SHEIKHUPURA
MURIDKE
BR
DISTT: NOROWAL
RAVI
RIVER
RAVI SYPHON
(RD.282+760)
LAHORE
B.R.B.D.

PART - B

CHAPTER-12

VULNERABLE SITES ON FLOOD BUND/STRUCTURES:

CHAPTER-12

Vulnerable Sites on Flood Bund / Structure

12.1 APPREHENDED BREACHES IN FLOOD BUNDS / STRUCTURES

1. Site No. 1 Shahdara Disty Flood Bund (RD. 47-48).
2. Site No. 2 Shahdara Disty Flood Bund (RD. 49-53).

12.2 OPERATION OF BREACHING SECTIONS

4 Engineer Corps Lahore will be responsible for the blasting operation on receiving signal from Executive Engineer, Shahdara Canal Division Shahdara, and District Co-ordination Officer, Sheikhupura, both will be present at the site. The Army Authorities are required to monitor the flood gauges at their own. As and when the discharge in River Ravi at Jassar reaches 1 Lac cusec, and if it is rising they will rush to the site and shift the explosive material from Lahore Cantt. To the breaching / blasting point, and will make all other necessary arrangements well before the critical situation arises, without any further intimation from concerned Department.

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

The critical reduce levels for the operation of the Breaching Section is fixed as 699 ft at RD 65+000, junction point of the Shahdara Disty Flood Bund and Shahdara Flood Protection Bund, 698 ft at the gauge site on Mehmood Booti Bund and protection bund. The Breaching Section should be operated when either of the 2 levels is attained earlier and the River Ravi is in risen trend

CHAPTER-13

EMERGENCY CONTINGENCY PLAN FOR VULNERABLE SITES LISTED ABOVE. EMERGENCY CONTINGENCY PLAN MUST INCLUDE:-

CHAPTER-13

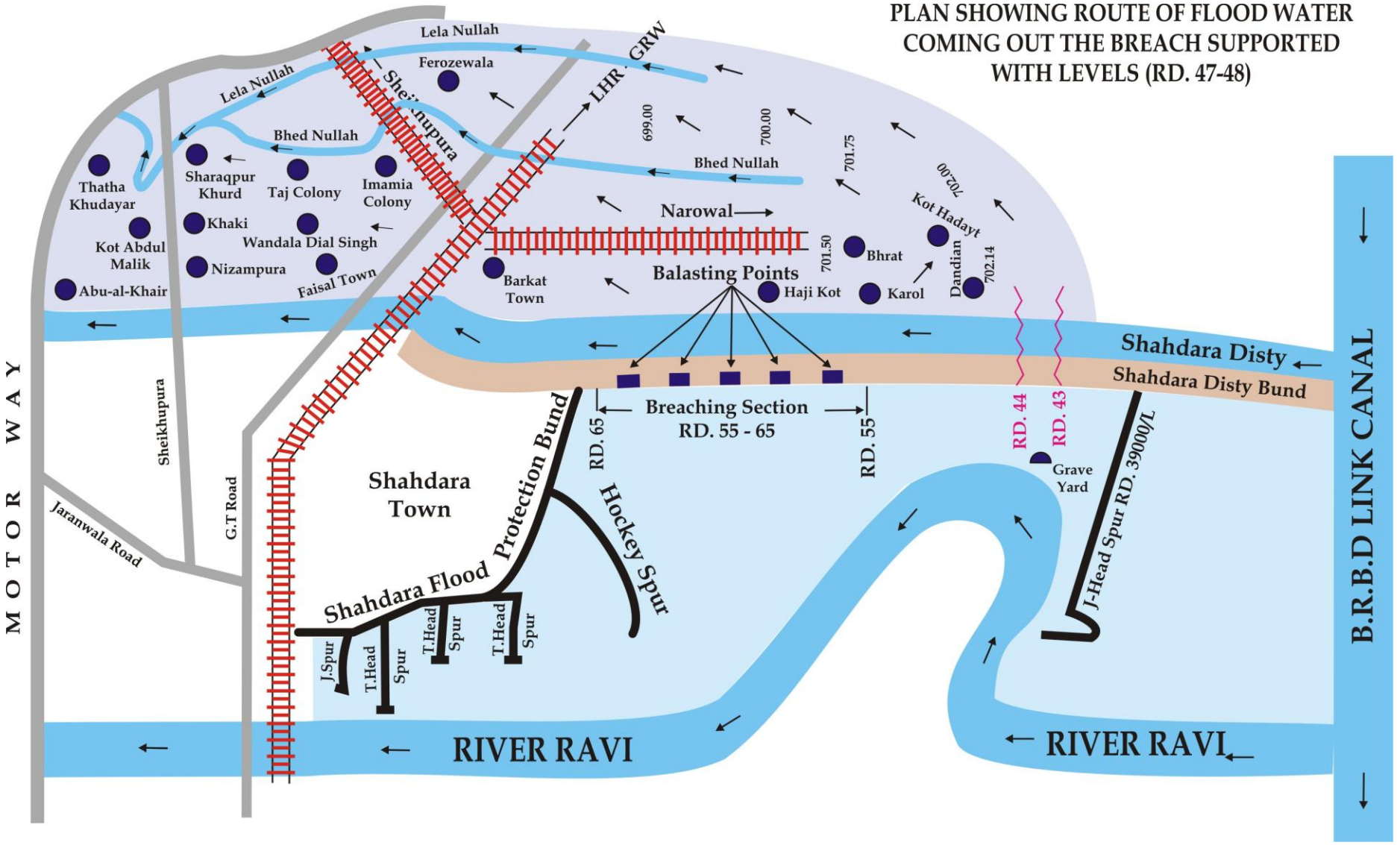
Emergency Contingency Plan for vulnerable site (sites)

SITE NO. 1 SHAHDARA DISTY FLOOD BUND (RD. 47-48)

13.1 PLAN SHOWING ROUTE OF FLOOD WATER COMING OUT OF THE BREACH SUPPORTED WITH LEVELS (RD. 47 – 48).

- Plan showing route is attached on page No. 29.

13.1 **PLAN SHOWING ROUTE OF FLOOD WATER COMING OUT OF THE BREACH SUPPORTED WITH LEVELS (RD. 47-48)**



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

S.#	Name of Villages	Teh	Distt	S.#	Name of Village	Teh	Distt
1.	Dandian	FZW	SKP	10.	Imamia Colony	FZW	SKP
2.	Kot Hadayat	FZW	SKP	11.	Faisal Town	FZW	SKP
3.	Karol	FZW	SKP	12.	Wandala Dial Singh	FZW	SKP
4.	Bhart	FZW	SKP	13.	Taj Colony	FZW	SKP
5.	Haji Kot	FZW	SKP	14.	Nizam Pura	FZW	SKP
6.	Barkat Town	FZW	SKP	15.	Khaki	FZW	SKP
7.	Ferozewala	FZW	SKP	16.	Sharaqpur Khurd	FZW	SKP
8.	Abu Alkhair	FZW	SKP	17.	Kot Abdul Malik	FZW	SKP
9.	Thatha Khudayar	FZW	SKP				

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

Executive Engineer, Shahdara Canal Division Shahdara will be overall in charge of the entire flood fighting works. He will send requisitions for help to Dist Management, Military and other Departments. Sub Divisional Officer, Shahdara Sub Division along with Sub Engineers will shift his camp at effective site and will be the in charge of restoration of bund.

13.3.1 **ARRANGEMENTS**

Sub Divisional officer, Shahdara Sub Division will arrange the machinery required for restoration of any effective reach from the private source and as well as authorities

13.3.2 **ESTABLISHMENT OF FLOOD FIGHTING CAMPS**

First camp will be established at Babakwal Rest House at RD. 39+000 of Shahdara Disty Flood Protection Bund and Sub Divisional Officer, Muridke Sub Division UCC alongwith his sub divisional staff will look after the reach of flood bund from RD. 0+000 – 40+000.

ii). 2nd camp will be established at Haji Kot hut at RD. 61+200 of Shahdara Disty Flood Protection Bund and Sub Divisional Officer, Shahdara Sub Division UCC alongwith his sub divisional staff will look after the reach of flood bund from RD. 40+000 – 72+000.

13.3.3 **DUTIES OF OFFICERS/OFFICIALS AND THEIR CAMP SITES**

Sr. No	Camp Location	Duties of Officers (Name, Designation & Mobile No)	Duties of Officers (Name, Designation & Mobile No)
1	Babakwal Rest House Rd 39+000	Muhammad Ali Dogar SDO Muridke 03038687779	1. Afzal Sandhu Sub Engineer Adian Section 03008121103 2. Jamshaid Ahmad Sub Engineer Mehta Suja Section 03074535210
2	Haji Kot Hut Rd 61+200	Sagheer Ahmad SDO Shahdara 0300-4840616	1. Umar Farooq Sub Engineer Shahdara Section 0300-0091997 2. Ameer Ali Sub Engineer Rayya Section 03026752649

13.3.4 **DEPARTMENTAL MACHINERY AVAILABLE**

Tractor with Trolley, blade and water tanker

13.3.5 **MACHINERY AVAILABLE FROM PRIVATE SOURCE**

------NIL------

13.3.6 **FLOOD FIGHTING MATERIAL REQUIRED & AVAILABLE AT SITE NO-I.**

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

Sr. No.	Items	Unit	Required Quantity	Available Quantity	Balance Quantity	Remarks
1	Shouldari/Tent	No	01	0	01	A little Quantity of some items of T&P articles is available mostly items has been
2	Chairs	No	06	0	06	
3	Table	No	01	0	01	
4	Generator (2-3 KVA)	No	01	0	01	
5	Pedestal Fans	No	01	01	00	

6	Charpois	No	02	02	0	used during flood 2025 & balance Quantity will be purchased before flood 2026
7	Symbolic Jackets	No	50	0	50	
8	Polyethylene Sheet	Kg	100	0	100	
9	Bamboos (4" dia and 10 ft long)	No	100	0	100	
10	Water Cooler	No	01	0	01	
11	Portable Umbrella	No	02	0	02	
12	Life Jackets	No	05	0	05	
13	Utensils (10 person serving)	No	01	0	01	
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	20	05	15	
20	Kassi	Kg	20	10	10	
21	Axes	No	20	0	20	
22	G.I. Buckets	No	05	0	05	
23	7/44 cable	Feet	500	0	500	
24	Sutli	Kg	02	0	02	
25	Sewing Needles	No	10	0	10	
26	Emergency Medical Kit	No	1	0	01	
27	Wire crates (3x3x3) (only at those camps near river action and where reserve stock exists)	No	100	0	100	

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 Shahdara Canal Division Shahdara, the following Irrigation and roads networks shall be affected.

- **Main Irrigation Net work.**
  - Shahdara Disty System
- **Main Road Network**

- Lahore – Gujranwala Road (G.T Road)
- Main Sheikhupura Road
- Motorway M-2 & M-3
- Eastern Bypass Lahore Sialkot Motorway

- **Railway Structures**
  - Lahore – Sheikhupura Line
  - Lahore – Rawalpindi Line
  - Lahore – Narowal Line
- **Canal & Drainage Network**
  - Leila Nullah
  - Bhed Nullah
- **Building and Allied Abadies**
  - Villages Abadies of Shahdara town and other allied abadies can be affected due to flood water.
- **Back Up Division:**
  - In case of emergency, Gujranwala Division UCC will back up Shahdara Canal Division Shahdara.

Executive Engineer,
Shahdara Canal Division,
Shahdara.

Superintending Engineer,
Upper Chenab Canal Circle,
Lahore.

Chief Engineer,
Irrigation Lahore Zone,
Lahore.

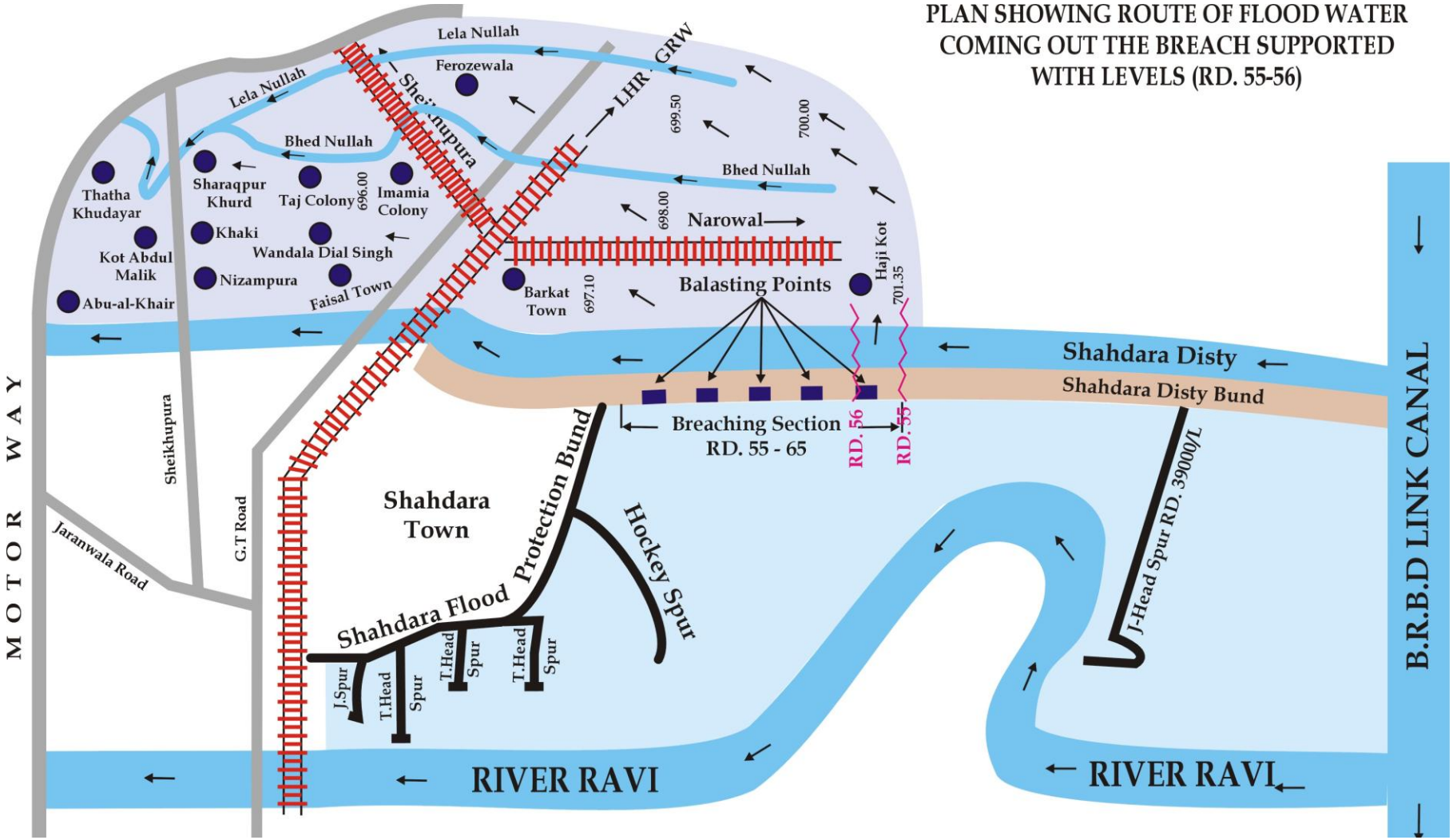
Emergency Contingency Plan for vulnerable site

SITE NO. 2 SHAHDARA DISTY FLOOD BUND (RD. 49-53)

13.1 PLAN SHOWING ROUTE OF FLOOD WATER COMING OUT OF THE BREACH SUPPORTED WITH LEVELS (RD. 49-53).

- Plan showing route is attached on next page.

13.1 **PLAN SHOWING ROUTE OF FLOOD WATER COMING OUT OF THE BREACH SUPPORTED WITH LEVELS (RD. 55-56)**



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

RD. 55 – 56

S.#	Name of Villages	Teh	Distt	S.#	Name of Village	Teh	Distt
1.	Haji Kot	FZW	SKP	8.	Wandala Dial Singh	FZW	SKP
2.	Barkat Town	FZW	SKP	9.	Taj Colony	FZW	SKP
3.	Ferozewala	FZW	SKP	10.	Nizam Pura	FZW	SKP
4.	Abu Alkhair	FZW	SKP	11.	Khaki	FZW	SKP
5.	Thatha Khudayar	FZW	SKP	12.	Sharaqpur Khurd	FZW	SKP
6.	Imamia Colony	FZW	SKP	13.	Kot Abdul Malik	FZW	SKP
7.	Faisal Town	FZW	SKP				

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

Executive Engineer, SHAHDARA CANAL DIVISION, UCC will be overall in charge of the entire flood fighting works. He will send requisitions for help to Dist Management, Military and other Departments. Sub Divisional Officer, Shahdara Sub Division along with Sub Engineers will shift his camp at effective site and will be the in charge of restoration of bund.

13.3.1 **ARRANGEMENTS**

Sub Divisional Shahdara Sub Division will arrange the machinery required for restoration of any effective reach from the private source and as well as authorities

13.3.2 **ESTABLISHMENT OF FLOOD FIGHTING CAMPS**

First camp will be established at Babakwal Rest House at RD. 39+000 of Shahdara Disty Flood Protection Bund and Sub Divisional Officer, Muridke Sub Division UCC alongwith

his sub divisional staff will look after the reach of flood bund from RD. 0+000 – 40+000.

ii). 2nd camp will be established at Haji Kot hut at RD. 61+200 of Shahdara Disty Flood Protection Bund and Sub Divisional Officer, Shahdara Sub Division UCC alongwith his sub divisional staff will look after the reach of flood bund from RD. 40+000 – 72+000.

13.3.3 **DUTIES OF OFFICERS/OFFICIALS AND THEIR CAMP SITES**

Sr. No	Camp Location	Duties of Officers (Name, Designation & Mobile No)	Duties of Officers (Name, Designation & Mobile No)
1	Babakwal Rest House Rd 39+000	Muhammad Ali Dogar SDO Muridke 03038687779	1. Afzal Sandhu Sub Engineer Adian Section 03008121103 2. Jamshaid Ahmad Sub Engineer Mehta Suja Section 03074535210
2	Haji Kot Hut Rd 61+200	Sagheer Ahmad SDO Shahdara 0300-4840616	1. Umar Farooq Sub Engineer Shahdara Section 0300-0091997 2. Ameer Ali Sub Engineer Rayya Section 03026752649

13.3.4 **DEPARTMENTAL MACHINERY AVAILABLE**

Tractor with Trolley, blade and water tanker

13.3.5 **MACHINERY AVAILABLE FROM PRIVATE SOURCE**

----------NIL------

13.3.6 **FLOOD FIGHTING MATERIAL REQUIRED AT SITE NO-II**
13.3.7 **FLOOD FIGHTING MATERIAL AVAILABLE AT SITE NO-II**

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

Sr. No.	Items	Unit	Required Quantity	Available Quantity	Balance Quantity	Remarks
1	Shouldari/Tent	No	01	0	01	A little Quantity of some items of T&P articles is available mostly items has been used during flood 2025 & balance
2	Chairs	No	06	0	06	
3	Table	No	01	0	01	
4	Generator (2-3 KVA)	No	01	0	01	
5	Pedestal Fans	No	01	01	00	
6	Charpois	No	02	02	0	
7	Symbolic Jackets	No	50	0	50	

8	Polyethylene Sheet	Kg	100	0	100	Quantity will be purchased before flood 2026
9	Bamboos (4" dia and 10 ft long)	No	100	0	100	
10	Water Cooler	No	01	0	01	
11	Portable Umbrella	No	02	0	02	
12	Life Jackets	No	05	0	05	
13	Utensils (10 person serving)	No	01	0	01	
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	20	05	15	
20	Kassi	Kg	20	10	10	
21	Axes	No	20	0	20	
22	G.I. Buckets	No	05	0	05	
23	7/44 cable	Feet	500	0	500	
24	Sutli	Kg	02	0	02	
25	Sewing Needles	No	10	0	10	
26	Emergency Medical Kit	No	1	0	01	
27	Wire crates (3x3x3) (only at those camps near river action and where reserve stock exists)	No	100	0	100	

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 Shahdara Canal Division, Shahdara the following Irrigation and roads networks shall be affected.

- **Main Irrigation Network.**
  - Shahdara Disty System
- **Main Road Network**
  - Lahore – Gujranwala Road (G.T Road)
  - Main Sheikhupura Road
  - Motorway M-2 & M-3
  - Eastern Bypass Lahore Sialkot Motorway
- **Railway Structures**

- Lahore – Sheikhupura Line
- Lahore – Rawalpindi Line
- Lahore – Narowal Line

- **Canal & Drainage Network**
  - Leila Nullah
  - Bhed Nullah
- **Building and Allied Abadies**
  - Villages Abadies of Shahdara town and other allied abadies can be affected due to flood water.

- **Back Up Division:**
  - In case of emergency, Marala Division UCC will back up Shahdara Canal Division, Shahdara.

Executive Engineer,
Shahdara Canal Division,
Shahdara.

Superintending Engineer,
Upper Chenab Canal Circle,
Lahore.

Chief Engineer,
Irrigation Lahore Zone,
Lahore.

CHAPTER-14

ACTION PLAN

14.1 RE-SHUFLING / RECOUPING PLAN OF RESERVE STOCK STONE DEPARTMENTALLY.

Re-shuffling = NIL
Reserve stock stone has been approved by Chief Engineer, Irrigation Lahore Zone Lahore vide his office letter No. _____ dated _____ however recouping plan / procurement of reserve stock of stone is as under:-

Site	Sanctioned Limit (Lac Cft)	Available (Lac Cft)	Balance (Lc Cft)
J-Head Spur RD.39000	1 .0	0.78	0.22
Shahdara Disty Bund	2.50	2.00	0.50
Total	3.50	2.78	0.72

14.2 DETAIL OF INLET / OUTLET CROSSES ALONG WITH CLOSING METHODOLOGY.

No inlet in flood reach from RD. 0+000 – 72+000 of Shahdara Disty Flood Bund

Following are the outlet which is operate-able when required.

S.#	Location	Size	Type
1	RD. 1135/L Shahdara Disty		APM
2	RD. 3859/L Shahdara Disty		APM
3	RD. 11440/L Shahdara Disty	5” dia	Steel Pipe
4	RD. 17575/L Shahdara Disty	7” dia	Steel Pipe
5	RD. 21210/L Shahdara Disty	3” dia	Steel Pipe
6	RD. 27900/L Shahdara Disty		OF
7	RD. 30870/L Shahdara Disty	6” dia	Steel Pipe
8	RD. 31650/L Shahdara Disty	9.5” dia	Steel Pipe
9	RD. 32810/L Shahdara Disty	6” dia	Steel Pipe
10	RD. 37616/L Shahdara Disty	6” dia	Steel Pipe
11	RD. 39200/L Shahdara Disty	8” dia	Steel Pipe
12	RD. 43000/L Shahdara Disty	9” dia	Steel Pipe
13	RD. 48000/L Shahdara Disty	5” dia	Steel Pipe
14	RD. 53200/L Shahdara Disty	6” dia	Steel Pipe
15	RD. 60000/L Shahdara Disty	8” dia	Steel Pipe
16	RD. 63025/L Shahdara Disty	9” dia	Steel Pipe
17	RD. 67760/L Shahdara Disty	7” dia	Steel Pipe
18	RD. 67800/L Shahdara Disty		OSM

14.3 DEPLOYMENT OF MACHINERY (NORMAL TO LOW FLOOD).

Deployment of Machinery (Normal to Low Flood)						
Sr. No.	**Structure Name**	**Length (Miles)**	**Excavators**	**Trolleys**	**Dumpers**	**Tractor with Front blade (1/15 mile)**
1	J-Head Spur	1.02	S.E shall allow deputation of one (1) excavator & four (4) Trolleys during low flood at camps/vulnerable points & LMB / RMB.		-	-
2	Shahdara Disty Flood Bund.	13.66			-	01
Total					-	**01**

14.4 DEPLOYMENT OF MACHINERY (MEDIUM TO HIGH FLOOD).

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	J-Head Spur	1.02	0	0	0	0
2	Shahdara Disty Flood Bund	13.66	2	8	4	2
Total			**2**	**8**	**4**	**2**

14.5 DEPLOYMENT OF MACHINERY (VERY HIGH FLOOD TO EXCEPTIONALLY HIGH FLOOD).

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	J-Head Spur	1.02	0	0	0	0	0	0
2	Shahdara Disty Flood Bund	13.66	3	6	12	6	3	6
Total			3	6	12	6	3	6

14.6 POLICE DEPLOYMENT PLAN

S.#	Site of Breaching Section	Concerned Canal Division	Concerned Police Station	Police Person Deployed		Remarks
				SHO/SI/ASI	Constable	
1	RD 55- 65 , Shahdara Distty Flood Bund	Shahdara Canal Division	Sagheer Ahmad SDO Shahdara Cell No. 03004840616	1 No.	3 No.	-

S.#	Venerable Sites used for illegal cuts during floods	Concerned Canal Division	Concerned Police Station	Police Person Deployed		Remarks
				SHO/SI/ASI	Constable	
1	RD 47- 48 and 55- 56, Shahdara Distty Flood Bund	Shahdara Canal Division	Sagheer Ahmad SDO Shahdara Cell No. 03004840616	1 No.	3 No.	-

Chapter-15

BACK UP DIVISION (IN CASE OF BREACH)

5 No. breaching sections exist in this Division. In case of breaching sister Division Gujranwala Canal Division, Gujranwala and all the relevant Administrative Department will informed that will be helpful to this Division.

Executive Engineer,
Shahdara Canal Division,
Shahdara.

STATEMENT SHOWING POSITION OF WATER WAYS UNDER DUAL CARRIAGE WAY (G.T ROAD) FROM SHAHDARA TO KALA SHAH KAKU BYE PASS LINK ROAD.

S.#	Distance from Shahdara Disty crossing (K.M)	(i) Water way under Shahdara – Gujranwala Road									(ii) water way under Gujranwala – Shahdara Road									Av: existing Disc: Capc:	Remarks
		Size (Ft)	Open bays		Closed Bays		Total Bays		Discharge Capacity		Size (Ft)	Open bays		Closed Bays		Total Bays		Discharge Capacity			
			No	Water Way (Ft)	No	Water Way (Ft)	No	Water Way (Ft)	Exs:	Des:		No	Water Way (Ft)	No	Water Way (Ft)	No	Water Way (Ft)	Exs:	Des:		
1	0	10	1	10	0	0	1	10	160	160	10	1	10	0	0	1	10	160	160	160	Shahdara Disty Crossing
2	0.41	12	5	60	1	12	6	72	960	1152	0	0	0	0	0	0	0	0	0	960	Both sides blocked by abadies
3	1.16	10	15	150	8	80	23	230	2400	3680	20	12	240	0	0	12	240	3840	3840	3120	Water way blocked on D/S side flow not possible Gap between railway line and road is cleared no bridge under railway line in front of road bridge
4	2.21	10	58	580	85	850	143	1430	9280	22880	10	90	900	20	200	110	1100	14400	17600	11840	U/S & D/S 50% blocked it is infornt of 100 bays railway bridge closed bays under both the roads need to be got opened
5	3.61	6	71	426	0	0	71	426	6816	6816	5.5	86	473	0	0	86	473	7568	7568	7192	Both sides of road bridge open railway bridge also existing
6	3.91	40	6	240	0	0	6	240	3840	3840	60	4	240	0	0	4	240	3840	3840	3840	Bhed Nullah x-ing bondary wall constructed on U.S side 2 No. bays on D/S side blocked by the boundary wall of Azhar Cooking oil Factory which needs to be got removed
7	4.56	10	1	10	0	0	1	10	160	160	10	1	10	0	0	1	10	160	160	160	Dargai Minor crossing
8	5.81	30	2	60	0	0	2	60	960	960	10	2	20	0	0	2	20	320	320	640	Leila Nullah Crossing
9	6.1	10.5	30	315	0	0	30	315	5040	5040	5	61	305	0	0	61	305	4880	4880	4960	Open on both sides' road cut is recommend 300' before eastern end of this bridge
Total :-			189	1851	94	942	283	2793	29616	44688		257	2198	20	200	277	2398	35168	38368	32872	Only 73.56% water way available

Note :-

1. Distance given in the column 2 of the statement are measured from Shahdara Railway Station
2. Average velocity of flood water for calculation of estimated discharge through bridge is adopted as 4.0 ft /Sec

POSITION OF WATER WAY UNDER SHAHDARA – SHEIKHUPURA RAILWAY LINE

S.#	Railway line Lahore to Sheikhupura (KM)	Water way under railway line			Estimated Discharge	Remarks
		No. of bays	Width of bays	Water ways (Ft)		
1	3.25	1	6	6	96	Proposed to be plugged
2	3.40	1	6	6	96	-do-
3	3.80	80	8.5	680	21500	-
4	7.40	5	20	100	3000	Bhed Nullah
5	8.40	5	20	100	2500	Leila Nullah
6	8.70	10	20	200	2500	-
7	9.00	6	12	72	1152	-
Total :-		**108**	**-**	**1164**	**30844**	

POSITION OF WATER WAY UNDER SHAHDARA – SHEIKHUPURA RAILWAY LINE

S.#	Distance from Shahdara Disty Crossing (K.M)	Water way under road			Estimated Discharge (Cs)	Remarks
		No.	Size	Water way (LFt)		
1	0	1	10	10	160	Shahdara Disty Crossing
2	0.5	3.3	10	30	-	U/S permanently blocked by industrial construction and D/S open plot residential construction after plot
3	1	25.24	12	294	-	D/S permanently blocked by Shirine U/S blocked by industrial construction
4	2.5	34.25	12	354	5664	Water way clear on both sides residential area after 700' on D/S
5	3.4	34.34	12	408	6528	Water way blocked
6	3.7	3.3	8	24	-	Permanently blocked by industrial growth
7	3.8	1.1	8	8	-	Permanently choked and blocked
8	4.1	3.4	42.31	126	2016	Bhed Nullah Crossing
9	4.4	1	8	8	-	Choked and plugged No culvert or cause way on SKP – SDR Road
10	4.5	42.28	12	420	6720	Scattered abadies U/S side 1 No house and 1 No. factory existing in water way
Total :-				**1672**	**20928**	

POSITION OF WATER WAY UNDER MOTORWAY
(From Shahdara – Jaranwala Road Crossing to Shahdara – Sheikhupura Road Crossing)

S.#	Distance from Jaranwala Road Crossing (K.M)	Water way under road			Estimated Discharge (Cs)	Remarks
		No. of bays	Width of bays (ft)	Water way (Ft)		
1	0.67	1	80	80	1280	Shahdara Disty
2	1.1	1	8	8	128	
3	1.28	1	8	8	128	
4	1.7	6	80	480	7680	
5	2.38	6	80	480	7680	
6	2.93	1	8	8	128	
7	4.15	10	80	800	12800	Bhed Nullah
8	5.43	2	80	160	2560	Sheikupura Road
9	4.4	1	8	8	-	Choked and plugged No culvert or cause way on SKP – SDR Road
Total :-		**29**		**2032**	**32384**	

ACTION PLAN FOR DEPLOYMENT OF LABOUR

Sr. No.	**Structure Name**	**Length (Miles)**	**Flood Limits**							
			Normal Flood Season		**Low Flood**		**Medium/High Flood**		**Very High/ Exp. High Flood**	
			Men	**Shift**	**Men**	**Shift**	**Men**	**Shift**	**Men**	**Shift**
			1 Person/ 2 mile (1 Shift)		**1 Person/ mile (1 Shift)**		**2 Person/ mile (2 Shift)**		**5 Person/ mile (3 Shift)**	
1	J-Head Spur RD.39000	1.02	-	-	1	1	2	2	5	3
1	Shahdara Disty Bund	13.66	7	1	14	1	28	2	70	3
	TOTAL :-	**14.68**	**7**		**15**		**30**		**75**	

END