GOVERNMENT OF THE PUNJAB

IRRIGATION DEPARTMENT

FLOOD FIGHTING PLAN FOR THE YEAR 2026

KASUR DIVISION DCC, KASUR

DEPALPUR CANAL CIRCLE, LAHORE

LAHORE IRRIGATION ZONE, LAHORE

April 2026

INDEX

FLOOD FIGHTING PLANS-2026

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PART-A

CHAPTER – 1

SALIENT FEATURE OF KASUR DIVISION DCC, KASUR.

1.1 LOCATION

Location of Kasur Division falls along the South – West Indo – Pak border between right bank of Sutlej River and left bank of Sukh Bias Naullah up to B.S Link Canal.

Area of Kasur Division is affected by floods in Sutlej River. Flood Bunds and Spurs have been constructed to protect area of District Kasur and Okara.

FLOOD PROTECTION BUNDS ON RIVER SUTLEJ

The jurisdiction of Kasur Division starts from Sehjra enclave and Dhaya bund (Right Bank of River bias) opposite Rohiwal village and this Division is responsible for the maintenance of flood bunds along with the right bank of River Sutlej upto outfall of B.S. Link upstream Sulemanki Head Works.

The location of these bunds is falling in Kasur Division with salient features as shown on the plan of River Sutlej which are as under:-

1. DHAYA BUND RD.0+000 TO 11+090 (2.22 MILES)

This bund joins Right Marginal Bund at RD.35600 which was constructed to prc orm the spill of Rohi Naulla diversion. The bund has been raised by Defence Authorities by taking of earth from River side as per their proposals and putting the bund unsafe against Hydraulic pressure of flood water. The design data of this bund is given as under:-

Top width (RD.0-11090)	=	25.0 ft

SIDE SLOPES

River Side	=	3:1
Country Side	=	2:1
Free Board from H.F.L.	=	6.0 ft
H.F.L. 1988.	=	664.00

At present, the shape of bund is not safe. It is perforated by army authorities by constructing bunkers.

2. RIGHT MARGINAL BUND RD.22+500 TO 35+600 (2.62 MILES)

This portion of Right Marginal Bund of Ferozepur Head Works falls in Pakistan territory. The bund at present is being maintained on the following design data:-

Top width	=	25.0 ft

SIDE SLOPES

River Side.	=	1:3
Country Side	=	1:2
Free Board	=	6.0 ft
H.F.L. 1988.	=	660.35 ft

3. LINK BUND RD.0+000 TO 17+800 (3.56 MILES)

This Bund along with Right Marginal Bund and Railway Guide Bund are very important for the protection of large area. Great difficulties were faced during exceptionally high flood as a nominal free board of 1.0’ was remained. The work of rasing of this bund was got executed in different financial years. The designed parameters of this bund are tabulated as under:-

Top width	=	25.0 ft

SIDE SLOPES

River Side.	=	1:3
Country Side	=	1:2
Free Board	=	6.0 ft
H.F.L. 1988.	=	660.35 ft

4. RAILWAY GUIDE BUND RD.0+000 TO 7+500 (1.50 MILES)

Railway shading was provided from Ganda Singh Wala to Ferozepur Head Works for carriage of stone. After partition, the track was removed and the formation was converted into a regular flood bund. As a result of breach at nose during super flood 1988, a Mole Head Spur was constructed to avoid further damage to nose and to protect Sanda Ranger Post and adjoining area. The design parameters of bund are as under:-

Top width	=	25.0 ft
SIDE SLOPES		
River Side.	=	1:3
Country Side	=	1:2
Free Board	=	6.0 ft
H.F.L. 1988.	=	660.35 ft

5. RIGHT RETIRED EMBANKMENT RD.0+000 TO 7+500 (1.5 MILES)

Since Right Marginal Bund falls in India, Right Retired Embankment was constructed in a set back position. Subsequently, the maintenance of this bund was done with the following design parameters:-

Top width	=	25.0 ft
SIDE SLOPES		
River Side.	=	1:3
Country Side	=	1:2
Free Board	=	6.0 ft
H.F.L. 1988.	=	660.35 ft

6. LOOP BUND RD.0+000 TO 1+750 (0.35 MILES)

Due to Indian action of demolishing same portion of Right Marginal Bund and other allied spur on right side of River Sutlej falling in Indian Territory, a loop bund was constructed to join Sufaida Bund with right retired embankment according to the following data.

Top width	=	25.0 ft
SIDE SLOPES		
River Side.	=	1:3
Country Side	=	1:2
Free Board	=	6.0 ft
H.F.L. 1988.	=	660.35 ft

7. SUFAIDA BUND RD.0-2+342 (0.47 MILES)

The design parameters of bund are as under:-

Top width	=	25.0 ft
SIDE SLOPES		
River Side.	=	1:3
Country Side	=	1:2
Free Board	=	6.0 ft
H.F.L. 1988.	=	660.35 ft

8. FLOOD EMBANKMENT ALONG WITH LOWER GANJA MINOR RD.0-TAIL (42+850) (8.57 MILES)

Left Bank of Lower Ganja Minor from Head to tail has been converted into flood embankment to Protect Large area from spills of River Sutlej which falling on Right Side of Minor. The embankment is being maintained according to following data:-

Top width.	=	8.0 ft
Side Slope River Side	=	3:1
Free Board from H.F.L. 1988	=	2.0 ft

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9. FLOOD EMBANKMENT ALONG WITH LOWER GANJA SUB MINOR RD.0+000 TO 10+ 200 (2.04 MILES).

The flood embankment along with left bank of lower Ganja Sub Minor from RD.0-10200 was constructed during 1989 to check the spill of River Sutlej and to save Sub Minor from damage. The embankment is being maintained as follows:-

Top width.	=	15.0 ft

SIDE SLOPES

River Side.	=	3:1
Country Side	=	2:1
Free Board	=	2.5 ft
H.F.L. 1988	=	624.44

10. FLOOD EMBANKMENT ALONG WITH LEFT BANK OF UPPER DEPALPUR CANAL RD.136-156+860 (4.17 MILES).

Upper Depalpur Canal runs parallel to Sutlej River at a short distance to save the Channel and area during floods on the right bank. The left bank of Upper Depalpur Canal from RD.136000 to 156860 was converted into flood embankment with the following data:-

Top width.	=	25.0 ft with dowel
Slope on either side.	=	2:1
Free Board	=	5.0 ft
H.F.L. 1988	=	625.00

11. FLOOD EMBANKMENT ALONG WITH FATEH MUHAMMAD DISTY RD.0+000 TO 88+600 (17.72 MILES).

River Sutlej has been meandering towards Pakistan since 1952 consequently, some portions of Fateh Muhammad Disty were washed away during different times and diversions had to be made in set back position. Subsequently, left bank of the channel was converted into flood embankment and further extended to join with Lalluguddar Disty at RD.32+200 with the following design data:-

Top width	=	25.0 ft

SIDE SLOPES

River Side.	=	3:1
Country Side	=	2:1
H.F.L. 1988	=	617.88
Free Board from H.F.L. 1988	=	6 ft

1.2 GENERAL DESCRIPTIONS

Sutlej River starts from Hamaliya range of mountains (Tibbat China) and flow towards Punjab (India) and enters into Pakistan territory 10 miles upstream Ferozepur Headworks.

It is perennial and Major River in subcontinent. The River Bias meets with Sutlej upstream of Herike Headworks in India. River Sutlej runs parallel to the Indo – Pak International Boarder from Ferozepur Head Works upto Sulemanki Headworks. This reach of River is about 50 Miles. As there is no structure / Bridge on the River up to Sulemanki so behavior of this River is very un-predictable. Normally River becomes in flood during moon soon season from July to October. As per record, almost major floods have been observed during 15 September to 15 October. Due to construction of different Spurs and Embankments from defence point of view, this reach of Sutlej needs immediate attention in even low supplies.

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DAMES ON SUTLEJ RIVER:-

Following 02 No Dams exists at sutluj river which are in torritorial jurisdicran of indian.

1. The **BHAKRA DAM** was constructed on Sutlej River in 1935 to 1954 for flood control, irrigation, electricity and fish development purpose. The measurement and technical data of said dam is as under:-

Height of this dam 750 ft. and it was highest dam in the world at the time of construction. The length on top of weir is 1700 ft. and 325 ft. at bottom in "V" shape gorge in Shivalik Hills. Thickness of foundation at bottom is 1320 ft. and tapered to 30 ft at top with road facilities. Maximum depth of dam is 740 ft and minimum is 300 ft. The name of reservoir is Gobind Sagar with its 90 miles length.

2. The **Nungle Dam** was constructed at 8 miles downstream of Bhakra Dam for Hydel power generation, its height is 95 ft and length is 1000 ft. It is a gate operated weir (29 No. gates with 30 ft each span). The Nungle Hydel Canal off takes from left side of Sutlej River, it is concrete lined channel in the length of 40 miles.

HEADWORKS OF RIVER SUTLEJ:-

1. ROPER HEADWORKS

Roper Headworks was constructed in 1867-1872 and only Sirhund Canal off takes from left side of Sutlej River.

2. HERIKE HEADWORKS

Herike Headworks was constructed by Indian Government after independence near about 1965 to regulate the River Sutlej and canals off taking from Ferozepur Headworks without any fear by Pakistan in case of war. It is also a meeting point of River Bias with Sutlej.

3. FEROZEPUR HEADWORKS

Ferozepur Headworks was construced in 1916-27 ans is in jurisdiction of Indian teritory. Depalpur Canal as off takes from right side of Bikaner, Eastern Canals off takes from left side of Ferozepur Head Works. The water supply in Depalpur Canal was disconnected by India after partition. Pakistan restored the supply in Depalpur Canal through BRBD Link Canal. The reach RD. 0-18500 Depalpur Canal has abandoned forever.

4. SULEMANKI HEAD WORKS

Sulemanki Headworks was constructed in 1916-27 and is in jurisdiction of Pakistan teritory is about 126 Km. down stream from Frozepur Headworks. Pakpattan Canal off take from Sulemanki Headworks right & Eastern Sadqia and Fordwah Canal off take from left of this Headworks.

5. ISLAM HEAD WORKS

Islam Headworks was constructed in 1916-27 and is in jurisdiction of Pakistan teritory is about 99 Km. down stream from Sulemanki Headworks. Malsi Canal off takes from right, Bahawalpur Canal and Qaimpur Canal off takes from left of this Head works.

6. PUNJNAD HEAD WORKS

Punjnad Headworks was constructed in 1916-27 and is in jurisdiction of Pakistan teritory is about 215 Km. down stream from Islam Headworks. This Head work was constructed under the same project Punjnad and Abasia Canals off takes from this Head works.

1. FLOOD BUND AROUND GANDA SINGH WALA

The protection measures of flood bunds in Kasur Division are concerned with the discharge in Sutlej River and diversion portion of Rohi Naullah was constructed in 1960 which outfalls in River Sutlej upstream of Ferozepur Headwork's during flood period. Gauge Reader is appointed / deputed at Talwar Post for observation of gauges during Flood Season. As soon as the gauge rises to 6.0 (W.L. 652.000), Sub Engineer Ganda Singh wala section will shift his head quarter to Talwar post, for which properly equipped watching staff comprising of 30 No. Beldars and 3 No. Mates in three shift of 8.0 hours each will be engaged. This establishment will watch Dhaya Flood Bund and R.M.B. 30-35600.

When the gauge at Kikar Ranger post raises above 8.0 (RL 654.00), the Sub Divisional Officer Chunian will shift his camp at Ganda Singh Wala and supervise the watching of bunds around Ganda Singh Wala with the assistance of Sub Engineer Chorkot Section and Zilladar Khudian Section alongwith the watching staff.

2. UPPER DEPALPUR CANAL R.D. 136+000 TO 156+860. (4.17 MILES)

The Sutlej River runs almost parallel to Upper Depalpur Canal System up to Sulemanki Hedwork's. During flood period, the water spills and starts attacking the left bank of Upper Depalpur Canal.

As soon as the River gauge at Bakerke Gauge station raises above 17.70 feet, the Sub Divisional Officer Khudian will shift his camp at Bakerke Rest House along with Sub Engineer, Jajjal and Zilladar Jajjal for his assistance in order to watch the channel day / night. Sub Engineer Bakerke Section will also be present in section.

3. FATEH MUHAMMAD DISTY. R.D. 0-86+600 (17.72 MILS)

As already stated that River Sutlej runs parallel to the Irrigation Channels and has changed its course towards Pakistan territory. The old creek has become active with the result that the channel remains under direct hit during the flood period. The channel has been shifted back many times in the past. In order to guard against damage to the channel, as and when River gauge at Bakerke rises up to 15.00 feet, the Sub Divisional Officer Kanganpur will shift his camp at Fateh Muhammad Canal Rest House. The Sub Engineer Kanganpur, Hira Singh, and Zilladar Fateh Muhammad will assist him day and night.

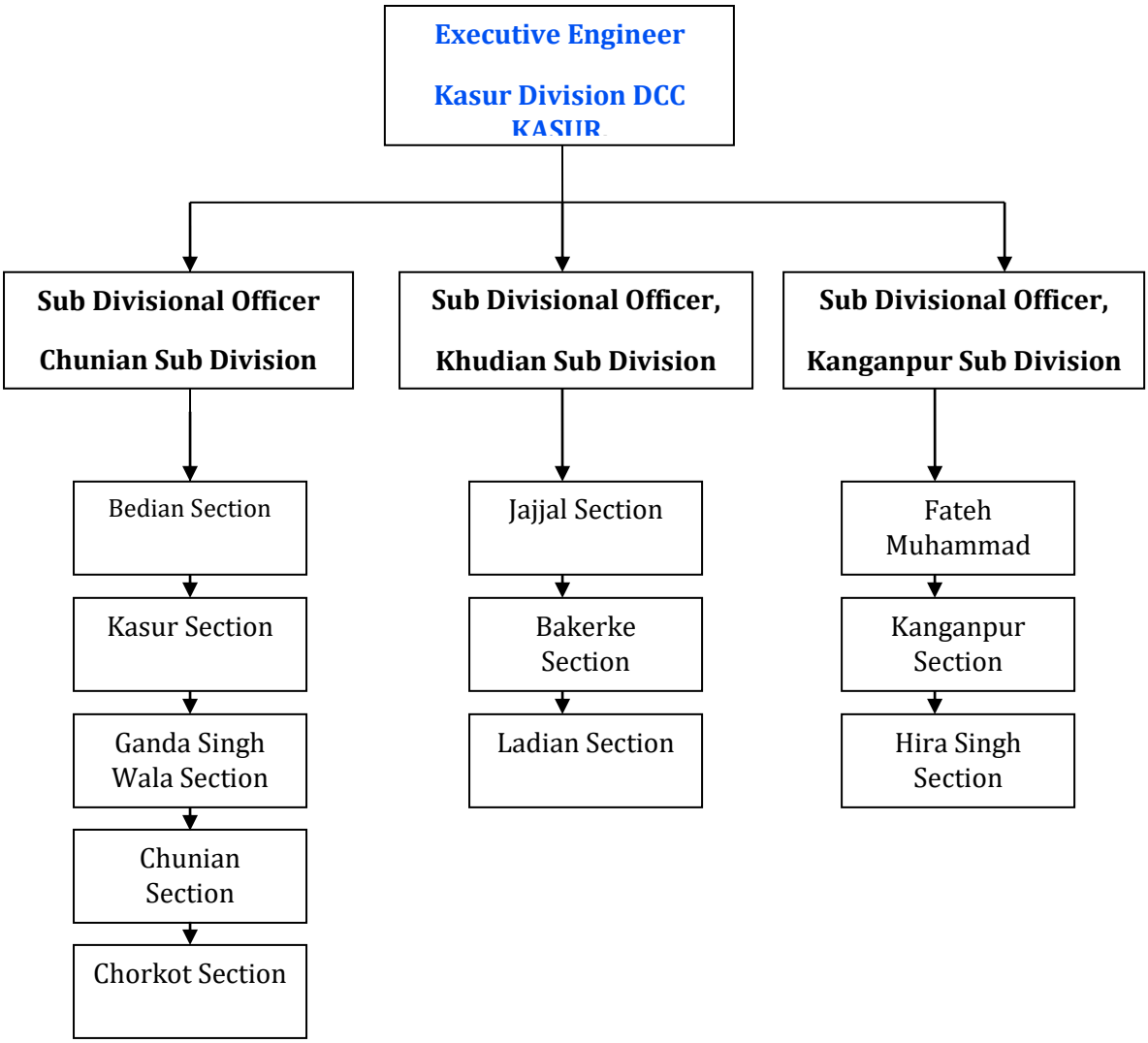
4. LALLUGUDDAR DISTY R.D. 32+500-94+500 (TAIL) (12.40 MILES)

This channel, like Lalluguddar disty comes under direct hit during flood period and the safety of the canal is endangered. In order to check and guard against damage to the channel during flood period, the Sub Engineer Fateh Muhammad Section and Zilladar Kanganpur will supervise, watching of the canal day and night with a gang of 18 No. mates and 152 No. Beldars in shifts of 8 hours each.

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1.3 ADMINISTRATIVE SETUP

The Administrative setup of Kasur Division DCC Kasur is as under:-



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CHAPTER – 2

FLOOD PROTECTION AND RIVER TRAINING WORKS

2.1 NAME AND DESIGN PARAMETER OF TRAINING WORKS

1. DHAYA BUND RD.0-11+090 (2.22 MILES)

Top width (RD.0-11090)	=	25.0 ft

SIDE SLOPES

River Side.	=	3:1
Country Side	=	2:1
Free Board from H.F.L	=	6.0 ft
H.F.L	=	664.00

2. RIGHT MARGINAL BUND RD.22+500-35+600 (2.62 MILES)

Top width	=	25.0 ft

SIDE SLOPES

River Side.	=	1:3
Country Side	=	1:2
Free Board	=	6.0 ft
H.F.L	=	660.35 ft

3. LINK BUND RD.0-17+800 (3.56 MILES)

Top width	=	25.0 ft

SIDE SLOPES

River Side.	=	1:3
Country Side	=	1:2
Free Board	=	6.0 ft
H.F.L	=	660.35 ft

4. RAILWAY GUIDE BUND RD.0-7+500 (1.50 MILES)

Top width	=	25.0 ft

SIDE SLOPES

River Side.	=	1:3
Country Side	=	1:2
Free Board	=	6.0 ft
H.F.L	=	660.35 ft

5. RIGHT RETIRED EMBANKMENT RD.0-7+500 (1.5 MILES)

Top width	=	25.0 ft

SIDE SLOPES

River Side.	=	1:3
Country Side	=	1:2
Free Board	=	6.0 ft
H.F.L	=	660.35 ft

6. LOOP BUND RD.0-1+750 (0.35 MILES)

Top width	=	25.0 ft

SIDE SLOPES

River Side.	=	1:3
Country Side	=	1:2
Free Board	=	6.0 ft
H.F.L	=	660.35 ft

7. SUFAIDA BUND RD.0-2+342 (0.47 MILES)

Top width	=	25.0 ft

SIDE SLOPES

River Side.	=	1:3
Country Side	=	1:2
Free Board	=	6.0 ft
H.F.L	=	660.35 ft

8. J-HEAD SPUR AT PANDOKI OUT FALL RD 0+000 TO 4+530 (0.91 MILES)

Top width	=	25.0 ft
Side Slope U/S	=	2:1
Side Slope D/S	=	3:1
Free Board above H.F.L	=	5.0 ft

9. J-HEAD SPUR OPPOSITE VILLAGE ATTAR SINGH WALA RD 0+000 TO 4+700 (0.94 MILES)

Top width	=	25.0 ft
Side Slope U/S	=	2:1
Side Slope D/S	=	3:1
Free Board above H.F.L	=	5.0 ft

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10. **FLOOD EMBANKMENT ALONG WITH LOWER GANJA MINOR RD 0-42+850 (8.57 MILES)**

Top width.	=	8.0 ft
Side Slope River Side	=	2:1
Free Board from H.F.L	=	2.0 ft

11. **FLOOD EMBANKMENT ALONG WITH LOWER GANJA SUB MINOR RD 0-10+200 (2.04 MILS)**

Top width.	=	15.0 ft

SIDE SLOPES

River Side.	=	3:1
Country Side	=	1½:1
Free Board	=	2.5 ft
H.F.L	=	624.44

12. **FLOOD EMBANKMENT ALONG WITH LEFT BANK OF DEPALPUR CANAL RD.136-156+860 (4.17 MILES).**

Top width.	=	25.0 ft with dowel
Slope on either side.	=	2:1
Free Board from H.F.L 1988	=	5.0 ft
H.F.L	=	625.00

13. **FLOOD EMBANKMENT ALONG WITH FATEH MUHAMMAD DISTY RD.0-88+600 (17.72 MILES).**

Top width	=	25.0 ft

SIDE SLOPES

River Side.	=	3:1
Country Side	=	2:1
H.F.L	=	617.88
Free Board from H.F.L	=	6 ft

14. **J- HEAD SPUR AT RD. 30+300 OF FATEH MUHAMMAD DISTY RD. 0+000 TO 4+700 (0.94 MILES)**

Top width	=	25.0 ft
Side Slope U/S	=	2:1
Side Slope D/S	=	3:1
Free Board above H.F.L	=	5.0 ft
H.F.L	=	611.00
Top R.L	=	616.00

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15. **J-HEAD SPUR AT RD. 50+400 OF FATEH MUHAMMAD DISTY RD. 0+000 TO 3+850 (0.77 MILES)**

Top width	=	30.0 ft
Side Slope U/S	=	2:1
Side Slope D/S	=	3:1
Free Board above H.F.L	=	5.0 ft
H.F.L	=	607.65
Top R.L	=	612.65

16. **SLOPING SPUR AT RD. 54+460 OF FATEH MUHAMMAD DISTY RD. 0+000 TO 0+950 (0.19 MILES)**

Top width	=	30.0 ft
Side Slope U/S	=	3:1
Side Slope D/S	=	3:1
Free Board above H.F.L	=	5.0 ft
H.F.L	=	606.85
Top R.L	=	611.85

17. **FLOOD EMBANKMENT ALONG WITH LALUGUDDAR DISTY RD.32+500 TO 94+500(12.40 MILES) AND KANDA MINOR RD.0+000 TO 14+300 (2.86 MILES) TOTAL =17.36 MILES**

Top width	=	25.0 ft
Side Slope (Inner)	=	2:1
Side Slope (Outer)	=	1.50:1
Free Board	=	6 ft

18. **ATTARI MOLE-HEAD SPUR AT RD. 3+380 KANDA MINOR RD 0+000 TO 4+560 (0.91 MILES)**

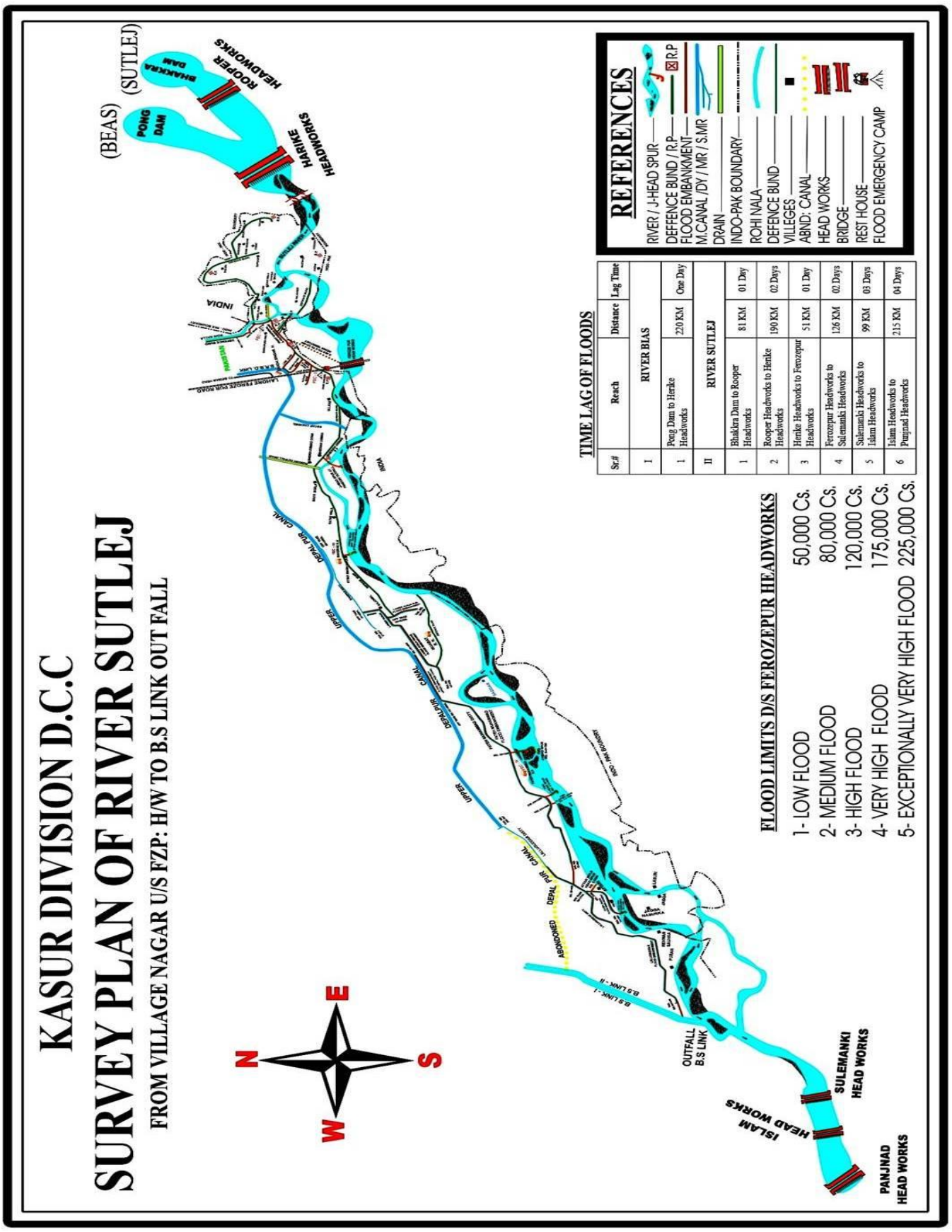
Top width	=	25.0 ft
Side Slope U/S	=	2:1
Side Slope D/S	=	3:1
Free Board above H.F.L	=	5.0 ft
H.F.L	=	600.50
Top R.L	=	605.50

19. **J-HEAD SPUR OF KANDA MINOR TAIL AT RD. 0+000 TO 5+400 (1.08 MILES)**

Top width	=	30.0 ft
Side Slope U/S	=	2:1
Side Slope D/S	=	3:1
Free Board above H.F.L	=	5.0
H.F.L	=	600.00
Top R.L	=	605.00
Length	=	5400 ft

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2.2 LOCATION MAP



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CHAPTER-3

BRIEF HISTORY OF PAST FLOOD EVENTS

The Sutlej River was in spate in the year 1947 with 313700 Cusecs Discharge. Severe floods synchronized in Sutlej River in 1950 with Peak Discharge as 353937 Cusecs. The said River was in-spite in 1951 with Peak Discharge as 360000 Cusecs. In 1955 the River Sutlej was in high flood and registered highest discharge on record as 836764 Cusecs at Ferozepur Headworks through weir & breaches. The said River was in-spite in 1961 again with Peak discharge as 309925 Cusecs. The River Sutlej was again in high flood during September 1988 with Peak Discharge as 525450 Cusecs. The River Sutlej was once again in exceptionally high flood during August 2023 with Peak Discharge as 278297 Cusecs. The River Sutlej once again in exceptionally high flood during August 2025 reached 385,569 cusecs with **the longest sustained exceptionally high flood in history**.

MAINTENANCE/ UPKEEPING OF RIVER TRAINING WORKS

The Kasur Division DCC, Kasur is responsible for the maintenance /up keeping and safety of following Flood Embankments and River Training Works on Right side of River Sutlej.

1) Dhaya bund RD.0-11090 (2.22 miles)
2) Right Marginal Bund RD.22500-35600 (2.62 miles)
3) Link Bund RD.0-17800 (3.56 miles)
4) Railway Guide Bund RD.0-7500 (1.50 miles)
5) Right Retired Embankment RD.0-7500 (1.5 miles)
6) Loop Bund RD.0-1750 (0.35 miles)
7) Sufaida Bund RD.0-2342 (0.47 miles)
8) J-Head Spur at Pandoki out fall RD 0-4+530 (0.91 miles)
9) J-Head Spur opposite village Attar Singh Wala RD 0-4+700 (0.94 Miles)
10) Flood Embankment along with Lower Ganja Minor RD.0-tail (42850) (8.57 miles)
11) Flood Embankment along with Lower Ganja Sub Minor 0-10200 (2.04 mils)
12) Flood Embankment along with left bank of Depalpur Canal RD.136-156860 (4.17 miles).
13) Flood Embankment along with Fateh Muhammad Disty RD.0-88600 (17.72 miles).
14) J- Head Spur RD. 30+300 of Fateh Muhammad Disty RD. 0-4700 (0.94 miles)
15) J-Head Spur at RD. 50+400 of Fateh Muhammad. Disty RD. 0-3850 (0.77 miles)
16) Sloping Spur at RD. 54+460 of Fateh Muhammad Disty RD. 0-950 (0.19 miles)
17) Flood Embankment along with Lalluguddar Disty RD.32+500-94+500(12.40 miles) and Kanda minor RD.0-14300 (2.86 miles) (Total 15.26 miles)
18) Attari mole-Head Spur at RD. 3+380 Kanda minor RD 0-4+560 (0.91 miles)
19 J-Head Spur at Tail of Kanda Minor RD 0-5400 (1.08 miles)

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CHAPTER – 4

DESIGN DATA, HISTORIC PEAK FLOOD DATA AND PREVIOUS 5 YEARS FLOOD DATA OF HEADWORKS / BARRAGES AND OR OTHER CONTROL POINTS

4.1 FLOODS LIMITS

Flood limits down stream Ferozepur Head Works and at Bakarke Gauge sites on River Sutlej as observed in the past are as under;-

Location	Flood Limits	Zero Level	Low Ft.	Medium Ft	High Ft.	Very High Ft.	Exceptionally High Ft.
D/S Ferozepur Head Works / Ganda Singh Wala	Gauge	623.45	18.00	19.75	20.75	21.80	22.55
Bakerke	Gauge	609.80	15.00	17.70	19.50	22.50	24.50

From Ferozpur Head Works Ganda Singh Wala

1.	Low Flood	18.00 ft.	50000 Cs.
2.	Medium Flood	19.75 ft.	80000 Cs.
3.	High Flood	20.75 ft.	120000 Cs.
4.	Very High Flood	21.80 ft.	175000 Cs.
5.	Exceptionally very High Flood	22.55 ft	225000 Cs. & above

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4.2 TIME LAG OF FLOODS

Sr. No.	Reach	Distance	Lag Time
i.	Lag time of flood water in River Bias is as under:-		
1.	Dera Gopi to Herike Headworks	220 KM	One Day
ii.	Lag time of flood water in River Sutlej is as under:-		
1.	Bhakra Dam to Roper Headworks	81 KM	One Day
2.	Roper Headworks to Herike Headworks	190 KM	Two Days
3.	Herike Headworks to Ferozepur Headworks	51 KM	One Day
4.	Ferozepur Headworks to Sulemanki Headworks	126 KM	Two Days
5.	Sulemanki Headworks to Islam Headworks	99 KM	Three Days
6.	Islam Headworks to Punjnad Headworks	215 KM	Four Days

4.3 PREVIOUS HIGHEST FLOOD

In the River Sutlej, the highest floods in various period is tabulated as under:-

Sr.No.	Highest Flood Year	Discharge D/S Ferozepur Head Works
1	1947	313700 Cusecs
2	1950	353937 Cusecs
3	1951	360000 Cusecs
4	1955	836764 Cusecs
5	1961	309925 Cusecs
6	1988	525450 Cusecs
7	2023	278297 Cusecs
8	2025	385569 Cusecs

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4.4 PEAK DISCHARGES D/S FEROZEPUR HEAD WORKS(in Cusecs)

Year	August	September	October
1988	95050	525450	320000
1989	27025	NIL	NIL
1990	1814.80	4455.74	195.75
1991	743.03	797.40	NIL
1992	2725.35	4252.85	NIL
1993	161.58	142.38	NIL
1994	4843.11	3263.09	34.97
1995	2327.93	180097.49	165.23
1996	1779.71	1533.24	267.11
1997	1647.81	1276.62	106.78
1998	711.89	2440.77	1085.79
1999	747.48	124.57	106.78
2000	355.94	NIL	NIL
2001	658.48	NIL	NIL
2002	NIL	NIL	NIL
2003	284.76	320.35	NIL
2004	NIL	NIL	NIL
2005	35000	9000	2000
2006	15000	25000	600
2007	13000	11000	2000
2008	53000	45000	11000
2009	16000	8000	2000
2010	50000	50000	50000
2011	74600	43020	3620
2012	3620	7741	687
2013	83700	11971	2000
2014	01507	10543	00033
2015	61820	5890	360
2016	9591	1507	219
2017	19166	2000	77
2018	2810	36560	3620
2019	60340	11019	1211
2020	2000	NIL	NIL
2021	1014	NIL	NIL
2022	4755	2810	77
2023	278297	59287	6048
2024	19659	5436	NIL
2025	385569	335591	115046

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CHAPTER – 5

FLOOD FIGHTING STRATEGY

Flood start from 1st July. One shift of watching staff will be employed @ one beldar for 2 miles (01 Shift) for normal maintenance purpose of flood embankment and during low flood 01 beldar for 01 mile (01 shift) . As soon as the gauge rises up to 6.0 ft. at Talwar Post the strength of watching staff will be increased up to 02 beldar for 01 mile (02 shift) during medium & high flood stage, 05 beldars for one mile in 3 shifts will be employed during very high & exp. High floods, one mate for 12 No. Beldars will be employed for management purpose. Sub Engineer Ganda Singh Wala will shift his headquarter at Talwar Post.

As soon as the information is received from flood forecasting centre regarding Flood, Sub Divisional Officer Chunian will shift his camp at Ganda Singh Wala Rest House, similarly Sub Divisional Officer Khudian & Kanganpur will shift their camps at Bakerke & Fateh Mohammad Rest House. They will make arrangement for engaging watching staff locally or through contractor. Executive Engineer Kasur Division DCC, Kasur will be overall incharge of the flood Fighting strategy and will keep liaison with District Administrator. Telegraph Office Kasur will remain open during flood season round the clock.

1. During Low Flood

When the gauge rises from 13 ft. to 18.00 ft. the river will be flowing in Low Flood. The Flood Emergency Center will established No.01on the R.M.B at Talwar Post, No.02. D/S Ferozpur Head Works at Kikar Post No.03. at Bakarke Canal Rest House and No.04 at Fateh Muhammad Canal Rest House. Every things relating to flood emergency will be available and ready round the clock at the mentioned sites.

2. During Medium Flood

When the gauge rises from 18.00 to 19.75 ft. the river will be flowing in Medium Flood. All the necessary machinery will be stand by round the clock at the critical sites.

3. During High Flood

when the gauge rises 19.75 to 20.75 ft. the river will be flowing in High Flood all the machinery will be ready and in quick response position for facing any situation which and when created by the floods round the clock.

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CHAPTER – 6

Events of theFlood Season 2025.

6.1 Comparison between Flood 2023 and Flood 2025

	FLOOD 2023	FLOOD 2025
Max Discharge D/S Ferozepur Headworks (Kikar Post)	278297 Cs.	385569 Cs.
Max Guage at Kikar Post	23.20	24.50
Max Guage at Talwar Post U/S Ferozepur headworks	12.2	12.8
Duration	Medium Flood= 09 Days High Flood= 06 Days Very High Flood= 01 Day Exceptionally Very High Flood= 03 Days	Medium Flood= 14 Days High Flood= 05 Days Very High Flood= 01 Days Exceptionally Very High Flood= 16 Days

6.2 Preparedness (Before Flood)

All the bunds and structures were regularly inspected throughout the year. Maintenance of bunds as per available funds is also done including filling of rain gharas etc.

It is pertinent to mention here that no official information about rainfalls, inflows and status of dams on Sutlej is received from Indian or Pakistans's side. Unofficial and unreliable information through media and other sources is used and further the gauges are monitored to observe the condition in the River.

6.3 Response during flood (flood Timeline 2025)

Flood water entered Pakistan territory near Sehjra on 14 August 2025 at low levels. Discharge crossed medium flood on 20 August (83,456 cusecs) and high flood on 23 August 2025. On 26 August 2025, discharge exceeded exceptionally high flood (>225,000 cusecs) and continued for over 15 days, peaking at 385,569 cusecs at the Ganda Singh Wala gauge. The 2025 flood is unprecedented in duration and continuity, making it one of the longest and most challenging exceptionally high floods in the history of Sutlej/Beas, even though the peak discharge was lower than the floods of 1955 or 1988. In comparison, the 1955 flood reached 836,764 cusecs, 1988 reached 525,450 cusecs, and 2025 reached 385,569 cusecs, but with **the longest sustained exceptionally high flood in history**.

6.4 Issues at Embankments, and Critical Sections Upstream Ferozpur Headworks.

6.4.1 Challenges Faced

The flood situation was aggravated by exceptionally prolonged high floods and unpredictable discharge patterns resulting from upstream regulation in India. The existing flood bunds were not originally designed to withstand such sustained parallel flows. Prolonged flood pressure altered the behavior of the bunds, initiating piping action similar to that observed in dam structures.

Excessive seepage and sand boiling were recorded up to 400 feet from the bund toe towards the countryside, indicating significant structural stress. In addition, the presence of defence bunkers and ditches, constructed to meet border security requirements, further weakened the bund slopes. The breach of Indian bunds across the border caused sudden and intense parallel flows directed towards the irrigation bunds in Pakistan. Moreover, there is no Irrigation Bund available downstream of Ferozepur Headworks up to the Lower Ganja Minor, leaving this stretch particularly vulnerable.

Operational challenges were compounded by communication and access constraints in sensitive border areas. Furthermore, extensive sand lifting in adjoining regions increased the risks of seepage and piping, thereby endangering the overall stability of the flood protection infrastructure.

6.4.2 Initial Critical Locations (Before Indian Side Breach – 23 to 28 August):

Dhaya Bund and Right Marginal Bund (breach in 1988) faced seepage, leakage, sand boiling, and parallel flow near the toe. Immediate flood-fighting measures by Kasur Division, Irrigation department included the construction of earthen pushtas, deployment of sufficient machinery on each site, thousands of sandbags, tree launching at vulnerable points, and round-the-clock monitoring with manpower deployment. These continuous day-and-night efforts ensured that both Dhaya Bund and RMB were stabilized before any further escalation.

6.4.3 28 August 2025 – Indian Side Breach

In India, the Bund on Ferozepur Headwork's right side breached due to continuous exceptionally high flood, unable to withstand the flow. Flood water from the Indian breach started parallel flow along the defense bund and breached the defense bund within hours and started parallel flow along Link Bund, Railway Guide Bund, Right Retired Embankment and Loop Bund, threatening the irrigation structures. Continuous flood-fighting by Kasur Division protected these bunds despite ponding, seepage, and parallel flow, for which the bunds are not originally designed. Efforts included plugging bunkers, elongating the path of flow to avoid direct impact on the embankment, closing and plugging ditches at crossing points, plugging weak points of ditches, deployment of more than 50,000 sandbags, construction of ring bunds around seepage, leakage, and sand boiling points, tree launching on the river side to avoid erosive action of parallel flow, soil dumping with heavy machinery for additional strengthening of bunds, and round-the-clock manpower deployment.

6.4.4 Breach of Road near JCP & Defence Bunds:

Every possible effort was made to save the irrigation infrastructure, as with every passing minute, pressure on the bunds was increasing and discharge was also rising, nearly reaching 385,569 cusecs. It was likely that some irrigation bunds could have breached where parallel flow existed, as bunds are not designed for such conditions. Irrigation department immediately deployed staff from surrounding divisions and sufficient machinery (18 no. Excavators, 16 no. tractor trolleys, 4 no. dumpers, 1 no. loader, 14 no. front blade tractors on every vulnerable sites along with around 600 labor/beldars etc.) to maximize flood-fighting capacity and protect all bunds. By the grace of Allah, the bunds were successfully saved. The water could not break the embankments but breached the more robust structure of Ferozepur Road near JCP, flowing along another defense bund near the road that also could not hold the pressure and breached within hours. It is noteworthy that Irrigation Department's day-and-night efforts using machinery, manpower, and technical decisions successfully saved the bunds, whereas on the Indian side, the Right Bunds on Ferozepur Headworks (India) breached. Even though these bunds have faced continuous pressure for over 20 days, every possible effort by the department continues to protect them, and the structures remain intact till date.

6.4.5 Flow Towards Upper Depalpur Canal:

This breached water flowed parallel to Sufaida Bund and finally towards the Upper Depalpur Canal, creating ponding. On 31 August, discharge temporarily fell to 250,000 cusecs and surged again to 327,000 cusecs, causing longitudinal cracks on some bunds due to sudden fluctuation. The cracks were immediately stabilized through soil dumping and compaction along with sandbagging, highlighting rapid, coordinated flood-fighting efforts. The exceptionally high flood continues, embankments are fully saturated, and flood-fighting efforts remain ongoing. Structures are currently under pressure but intact. Irrigation Department technical interventions are still continuing to maintain the integrity of all Irrigation Bunds. Despite parallel flows, continuous seepage/leakage, and sand boiling, and while working daily in the rain, the Irrigation Department's tireless day-and-night efforts, along with Allah's blessing, successfully protected its bunds against flooding. Even during 20 days of exceptionally high floods, which tore the JCP Ferozepur Road, Breaching Defense bunds on several locations and breach in the Indian side headworks bund, whereas, the Irrigation department's bunds were kept intact.

6.5 Issues at Embankments, and Critical Sections Downstream Ferozpur Headworks.

6.5.1 3rd September J head Spur Tail Kanda Minor Bund

On September 3rd, a section of the J head spur at the tail of Kanda Bund experienced pitching slippage, resulting in a 140ft length of apron launching. The river's flow changed directions along the structure, creating a swirling action. Immediate action was taken by dumping sandbags at the site. The Chief Engineer and Zonal Expert Committee were promptly informed and visited the site, directing stone dumping and tree launching to protect the spur. The District Administration was engaged due to the high risk of breach, which threatened 26 villages and approximately 40,000 people. Resources were rapidly mobilized, utilizing available stock and quarry supplies. Thanks to these efforts, the spur was stabilized, and a potential breach was averted.

6.5.2 14th September- Kanda Minor J head Spur RD 3-5

A creek developed at the shank of the J head spur on Kanda Road (RD 3-5) due to low flood flows, resulting in toe scouring and serious cracks. The earthen slope of the shank was subsequently washed away. Immediate action was taken by dumping sandbags at the site, and the Chief Engineer and Zonal Expert Committee were informed, who then visited the site and oversaw tree launching and sandbag placement to mitigate the issue. However, remodeling of the structure is essential as the creek is likely to remain active, and construction of a prong stud is recommended for permanent protection.

6.5.3 29th September- Fateh Muhammad Bund (RD 33+000 to 34+000)

The River Sutlej changed course near the Fateh Muhammad Rest House under Pakistan Rangers, triggering erosive action that scoured the high edge towards the Fateh Muhammad Bund and putting the village of Rukanpura at direct risk. Continuous erosion could endanger the Fateh Muhammad Bund, with the distance between the bund and the developing creek measuring approximately 440 feet. The Zonal Expert Committee visited the site and directed close monitoring of the situation. To ensure permanent protection, construction of studs is recommended before the next flood season.

6.6 Incident Response and Management.

6.6.1 Crisis Management & Innovations

The Kasur Division jurisdiction lies just along the border with left bank of the river in Indian side in most of the region. Therefore, use of drones or any kind of surveillance is prohibited on certain levels. Furthermore, the division does not receive any kind of official authentic inflows data of Sutlej river, data of dams, data regarding rainfall in catchment of Sutlej River. This makes it difficult to adapt proactive measures for flood fighting and flood protection measures.

Camps were established at around 10 locations where situation was critical and as per Flood Fighting Plan. Sufficient machinery along with manpower (Department beldars and labor through contractor) was deployed to undertake critical tasks. These included plugging critical strategic bunkers, filling rainwater gharas, Strengthening of embankments, Widening of critical locations, strengthening of slopes of flood bunds, ring bunds & pushtas to cater seepage issues. Coordination with the district administration was maintained, particularly regarding concerns of intentional breach. Vigilance operations were conducted with the district police, followed by monitoring with the Pak Rangers and Pak Army (AMX Camp) on subsequent days. Temporary bunds were also constructed to ensure the safe passage of water towards the river. All locations were under 24/7 monitoring with continuous manpower deployment until the passage of flood (i.e. till second half of September). These efforts paid off and resultantly all the structures remained intact.

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6.7 Post Flood Actions

Flood in Sutlej River went till October first week, However, Kasur Division had already started river surveying and analysis of all of his structures. Furthermore, departmental expert committees were called several times on different critical locations for solution before next flood season. Base line data with proposals have been analyzed and prepared for further action. These include restoration of flood damaged structures, remodeling of structures already present considering the issues faced throughout & rehabilitation of bunds and structures as per Federal Flood Commission parameters.

Operational challenges were compounded by communication and access constraints in sensitive border areas. Furthermore, extensive sand lifting in adjoining regions increased the risks of seepage and piping, thereby endangering the overall stability of the flood protection infrastructure.

6.8 Outcome / Success Story

Despite facing the historically longest and exceptionally high flood, all major Irrigation Infrastructures — including Dhaya, RMB, Link, Railway Guide, RRE, Loop, and Sufaida Bunds — remained intact. Similarly, the J-Head Spur at Pandoki Outfall and the J-Head Spur at Attar Singh Wala withstood the flood pressures owing to continuous and dedicated flood-fighting efforts until the safe passage of the flood. The Head Spur at the tail of Kanda Bund experienced erosive action due to changes in the river pattern; however, timely intervention and effective management measures successfully stabilized the structure. As a result, Kasur City and the surrounding villages remained completely safe from flooding.

Round-the-clock flood-fighting operations were maintained throughout the duration of the unprecedented high flood in the Sutlej River. On the Indian side, bund breaches occurred on the sixth day of the exceptionally high flood, and several defence bunds failed at multiple locations. This contrast underscores the effectiveness and resilience of the Kasur Division’s flood defense operations and preparedness strategy.

6.9 Lessons Learnt

The 2025 flood event demonstrated that the Sutlej River must now be treated as an active river system, as significant flood incidents occurred in both 2023 and 2025 — within a short span of two years. River flows continue to exhibit unpredictable behavior due to upstream regulation and control in India, emphasizing the need for adaptive management strategies.

While the border defence strategy, including the construction of bunkers and ditches, is unavoidable for security reasons, these structures have an adverse impact on the integrity of flood bunds and contribute to their gradual weakening. Additionally, the practice of sand lifting by local residents from adjoining lands accelerates the piping process, making seepage more prominent and increasing the risk of structural instability.

Experience from the recent flood also revealed that the highest erosion risk occurs during the receding phase of the flood, necessitating continuous 24/7 monitoring of critical structures during this period. The Defence Bunds located downstream of Ferozepur Headworks, which provide essential protection to the Upper Depalpur Canal, should be rehabilitated and strengthened in accordance with Federal Flood Commission (FFC) parameters. Lastly, effective and timely flood management in the sensitive border zone requires close coordination between the Irrigation Department, District Administration, and Pakistan Army to prevent both intentional and accidental breaches and to ensure a unified emergency response.

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6.10 Recommendations

In light of the challenges and observations from the 2025 flood event, it is recommended that the flood bunds of Kasur Division be comprehensively remodeled and restored, taking into account the issues experienced during the recent flood.

Technical interventions should be designed and implemented to effectively mitigate seepage, leakage, and related structural vulnerabilities observed along the flood embankments. The execution of all proposed restoration and strengthening works should be prioritized and completed before the onset of the next flood season to ensure preparedness and minimize risk. Furthermore, the Defence Bunds should be rehabilitated and upgraded in accordance with Federal Flood Commission (FFC) parameters to enhance their resilience and ensure long-term protection of critical infrastructure and adjoining communities.

Additionally, the rivers should be allowed to follow their natural course, and floodplains should be cleared in accordance with established rules and regulations to maintain flow efficiency and reduce the likelihood of obstruction-related flood damage.

TENDERS HAS BEEN CALLED ON 27.04.2026 FOR THE FOLLOWING WORKS FOR RESTORATION OF THE FLOOD BUNDS / EMBANKMENTS.

- **REMODELING AND PROTECTION OF FLOOD BUNDS AND RIVER TRAINING WORKS DOWNSTREAM FEROZEPUR HEADWORKS IN KASUR DIVISION**

- **REMODELING AND PROTECTION OF FLOOD EMBANKMENTS UPSTREAM FEROZEPUR HEADWORKS IN KASUR DIVISION.**

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CHAPTER – 7

FLOOD FIGHTING / WATCHING ARRANGEMENTS

7.1 PRE- FLOOD ARRANGEMENTS

SCHEDULE OF FLOOD PREPAREDNESS ACTIVITIES FOR FLOOD SEASON 2026

Sr: #	Activities	Target Dates
I.	**Preparation of Flood Fighting Plans**	
	a) Submission of Draft Divisional Plans by Zonal Chiefs to Chief Engineer, D&F (after scrutiny by SEs/CEs)	Done
	b) Review by Chief Engineer D&F	---
	c) Final submission of Flood Fighting Plans	will be circulated as per schedule
II.	**Inspection of Flood Infrastructure**	
	a) By XENs.	Done
	b) By SEs/CEs	Done
	c) By Departmental & Army Teams	Done
III.	**Indication of Encroachments on bunds and spurs to the Civil Administration**	NIL
IV.	**Painting Gauges, RD Marks, Data Boards and Repairs to Flood Bunds etc.**	In Progress
V.	**Replenishment of Reserve Stock of Stone and Flood Fighting Material**	
	a) Identification of needs	Completed
	b) Funding / Procurement Arrangements	underway
	c) Procurement, stacking prescribed field checks	underway
VI.	**Installation of Wireless Sets**	will be done
VII.	**Opening of Zonal Flood Cells**	
	a) Duty Roster	---
	b) Operative	---

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(A) STATUS OF STONE STRUCTURE WISE

Sr. No.	Description	Reserve Stock Limit(lac/cft)	Quantity of stone available at site(lac/cft)	Balance Qty of stone to be procured	Remarks
CHUNIAN SUB DIVISION					
1	**Defence Flood Bund Opposite village Ullake**	0.52610	0.52610	Nil	-
2	**Village Rajiwala**	0.22365	0.22365	Nil	-
3	**RRE Flood Bund**	0.25513	0.25513	Nil	-
4	**J-Head Spur Pandoki Out Fall**	0.980	0	0.980	
	Total:-	**1.98488**	**1.00488**	0.980	
KHUDIAN SUB DIVISION					
1	**J-Head Spur Attar Singh Wala**	0.970	0	0.970	
KANGANPUR SUB DIVISION					
1	**J-Head Spur RD.30+300 FMD Disty & Flood Embankment along with FMD Disty RD.27-31**	0.99011	0.20211	0.788	-
2	**J-Head Spur at RD 50+400 of Fateh Muhammad Disty**	0.990	0	0.990	
3	**Sloping Spur at RD 54+460 of Fateh Muhammad Disty**	0.210	0	0.210	
4	**Attari Mole Head Spur at RD 3+380 Kanda Minor**	0.270	0	0.270	
5	**J-Head Spur at Tail of Kanda Minor**	1.260	0	1.260	
	Total:-	3.720	0.20211	3.518	
	G. Total:-	**6.674**	**1.207**	**5.468**	

(B) CONSOLIDATED STATUS OF STONE

Reserve Stock Limit of total consolidated stones(Lac/cft)	Quantity of stone available at site(Lac/cft)	Balance Qty of stone to be procured
6.674	**1.207**	**5.468**

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7.2 WATCHING ESTABLISHMENT

Camps are established on all vulnerable sites to monitor the situation during flood season. Cell Phones are provided and generator sets are installed at important / vulnerable reaches. The flood watching material is procured and shifted to the camps sites.

To provide swift acquisition and disposal of any information related to flood situation in order to intiate prompt action, Gauge Readers will be appointed at Talwar Post, Kikar Post U/S &D/S Ferozepur Head Works. Keeping in view the possibility of receiving floods, precautionary measures will be taken from 1st july 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 Sutlej.

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	Dhaya Bund	2.22	1	One	2	One	4	Two	11	Three
2	Right Marginal Flood Bund	2.62	1	One	3	One	4	Two	13	Three
3	Link Bund	3.56	2	One	4	One	7	Two	18	Three
4	Railway Guide Bund	1.5	1	One	2	One	3	Two	8	Three
5	Right Retired Embankment	1.5	1	One	2	One	3	Two	8	Three
6	Loop Bund	0.35	1	One	1	One	1	Two	2	Three
7	Sufaida Bund & UDC	8.47	4	One	8	One	17	Two	42	Three
8	J-Head Spur Pandoki out fall	0.94	1	One	1	One	2	Two	5	Three
9	Flood embankment along Lower Ganja Minor	8.57	4	One	9	One	17	Two	43	Three
10	Flood Embankment along Lower Ganja Sub Minor	2.04	1	One	2	One	4	Two	10	Three
11	Flood Embankment along left bank of Upper Depalpur Canal	4.17	2	One	4	One	8	Two	21	Three
12	J-Head Spur Attar Singh wala	0.94	1	One	1	One	2	Two	5	Three
13	Flood Embankment along Fateh Mohammad Disty	17.72	9	One	18	One	35	Two	89	Three
14	J- Head Spur RD. 30+300 of Fateh Mohammad Disty	0.94	1	One	1	One	2	Two	5	Three
15	Flood embankment along Laluguddar Disty and Kanda Minor	14.5	7	One	15	One	29	Two	73	Three
		2.86	1	One	3	One	6	Two	14	Three
16	J-Head Spur at Tail of Kanda Minor	1.08	1	One	1	One	2	Two	5	Three
17	Attari Mole Head Spur at RD: 3+380 Kanda Minor	0.91	1	One	1	One	2	Two	5	Three
18	J-Head Spur at RD. 50+400 of Fateh Muhammad Disty	0.77	1	One	1	One	2	Two	4	Three
19	Sloping Spur at RD. 54+460 of Fateh Muhammad Disty.	0.19	1	One	1	One	1	Two	1	Three
TOTAL :-		**75.85**	**42**	One	**80**	One	**151**	Two	**382**	Three
G. TOTAL :-			**42**		**80**		**302**		**1146**	

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7.3 ESTABLISHED CAMPS DETAILS

As per the TOR's Committee costituted by the Administrative Department vide No. SO(Floods)VII-22/2017 dated 26.12.2025.

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	Dhaya Bund	2.22	B/W RD. 3-9	1	-	-	-
2	Right Marginal Flood Bund	2.62	Talwar Post	1	-	-	-
3	Link Bund	3.56	-	-	-	-	-
4	Railway Guide Bund	1.5	-	-	-	-	-
5	Right Retired Embankment	1.5	B/W RD 2-3	1	-	-	-
6	Loop Bund	0.35	-	-	-	-	-
7	Sufaida Bund & UDC	8.47	-	-	-	1	1
8	J-Head Spur Pandoki out fall	0.94	-	-	-		
9	Flood embankment along Lower Ganja Minor	8.57	-	-	-	1	1
10	Flood Embankment along Lower Ganja Sub Minor	2.04	-	-	-	-	1
11	Flood Embankment along left bank of Upper Depalpur Canal	4.17	-	-	-	1	1
12	J-Head Spur Attar Singh wala	0.94	-	-	1	1	1
13	Flood Embankment along Fateh Mohammad Disty	17.72	-	-	1	2	3
14	J- Head Spur RD. 30+300 of Fateh Mohammad Disty	0.94	-	-	0	0	0
15	Flood embankment along Laluguddar Disty and Kanda Minor	14.5	-	-	1	2	3
		2.86	-	-	0	0	0
16	J-Head Spur at Tail of Kanda Minor	1.08	Tail of Kanda Minor	1	0	0	0
17	Attari Mole Head Spur at RD: 3+380 Kanda Minor	0.91	-	-	0	0	0
18	J-Head Spur at RD. 50+400 of Fateh Muhammad Disty	0.77	-	-	0	0	0
19	Sloping Spur at RD. 54+460 of Fateh Muhammad Disty.	0.19	-	-	0	0	0
Total		**75.85**		**4**	**3**	**8**	**11**

7.4 WATCHING MATERIAL

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

As per the TOR's Committee costituted by the Administrative Department vide No. SO(Floods)VII-22/2017 dated 26.12.2025.

Sr. No.	Item	Unit	Approved Quantity
1	Shouldri / Tent	No	01
2	Chairs	No	06
3	Table	No	01
4	Generator (2-3 KVA)	No	01
5	Pedestal Fans	No	01
6	Charpois	No	02
7	Symbolic Jackets	No	50
8	Polythene Sheet	KG	100
9	Bamboos (4" Dia and 10 ft long)	No	100
10	Water Coller	No	01
11	Portable Umbrella	No	02
12	Life Jackets	No	05
13	Utensils (10 Person Serving)	No	01
14	Jute / Plastic Bags	No	1000
15	Walkie Talkie Set	Sets	02
16	Raincoats	No	10
17	LED Flood Light	No	10
18	Extension Cable (10 ft)	No	02
19	Rechargeable Torches	No	20
20	Kassi	No	20
21	Axes	No	20
22	G.I Buckets	No	05
23	7/44 Cable	Feet	500
24	Sutli	KG	02
25	Sewing Needles	No	10
26	Emergency Medical Kit	No	01
27	Wire Crates (3x3x3) (at only those camps near river action and reseve stck exists)	No	100

XEN KASUR

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

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

7. 5 ARRANGEMENTS FOR SOUNDING & PROBING

Sounding / probing arrangements are available at site.

7.6 LIGHTING ARRANGEMENTS

Adequate lighting arraignments are available at site with a stand by Generator and Torches.

7.7 RATION ARRANGEMENTS

The ration arrangements will be made by civil administration.

7.8 P.O.L ARRANGEMENTS FOR VEHICLE

The P.O.L arrangements for departmental vehicle will be arranged by Irrigation Department and other Departments will arrange P.O.L for their vehicles by Civil Administration.

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7.9 TRANSPORTATION

The transportation for flood emergency / relief works will be provided by Civil Administration.

7.10 LAW AND ORDER

Law and order situation will be tackled by the by Civil Administration, Pak Ranger and Pak Army.

7.11 MEDICAL ARRANGEMENTS FOR LABOUR

Health Department will have its own arrangements to provide all such of the medical facilities at the spot.

7.12 LIAISON WITH OTHER DEPARTMENT

The Sub Divisional Officer Chunian will act as Liaison Officer for District Kasur and Sub Division Officer Kanganpur for District Okara. The Executive Engineer will act as Coordinator for all other Departments. The Liaison Officer will keep informed about the River gauges with passing discharge at various points in their jurisdiction to Civil as well as the Departmental Offices.

7.13 ROLE OF ARMY

Besides arrangements of watching staff by Irrigation Department, additional volunteers will be requisitioned from the Pak Army on special request. They will also take position for the rescue of the peoples and live stock of flood effected areas on request of Civil Administration.

7.14 DUTIES OF TELEPHONE ATTENDANT

During the flood days as communication is important one, so the communication is recommended at the Divisional Office Kasur as base station with police communication at the following stations.

Talwar Post, Kikar Post, Bakerke Rest House, Fateh Muhammad Canal Rest House and Attari Ranger Post. The telephone attendant will communicate the massages of flood emergency to Pak Army and other departments at 24 Hours.

7.15 WIRELESS ARRANGEMENTS

Base Stations at Kasur, Khudian, Kanganpur and Hira Singh Wala will be established and Mobile Wireless will be installed on Govt. Vehicles during Flood Season. Also Wireless Stations will be established by Police at Talwar Post, Kikkar Post , Bakerke Rest House and Fateh Muhammad Rest House.

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CHAPTER – 8

DETAIL OF ENCROACHMENTS

There is no encroachment on embankments bunds in Kasur Division DCC, Kasur.

TOTAL ENCROCHMENT	REMOVED	REMARKS
Nil	Nil	Nil

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CHAPTER – 9

DUTY ROSTER / FLOOD FIGHTING PROGRAME At Low flood

0600 Hrs to 1400 Hrs	1400 Hrs to 2200 Hrs	2200 Hrs to 0600 Hrs

Sr. No.	Sub Division Section	Reach of Flood Bunds	Incharge of Watching Staff	W.C. Staff	Incharge of Watching Staff	W.C Staff	Incharge of Watching Staff	W.C Staff
1	2	3	4	5	6	7	8	9
I. U/S FEROZEPUR HEAD WORKS								
1.	CHUNIAN GSW	Dhaya Bund with a Gauge of above 6.0 ft at Talwar Post	Sub Engineer Ganda singh wala	Mate 01 Nos Beldars 05 Nos.	Zilladar Khudian	Mate 01 Nos Beldars 05 Nos.	Sub Engineer Bedian	Mate 01 Nos Beldars 05 Nos.
2.	CHUNIAN GSW	Flood Bunds arround Ganda Singh Wala	Sub Engineer Ganda singh wala	Mate 01 Nos Beldars 05 Nos.	Zilladar Chunian	Mate 01 Nos Beldars 05 Nos.	Sub Engineer Bedian	Mate 01 Nos Beldars 05 Nos.
3.	CHUNIAN GSW	J –Head spur at pandoki out fall	Sub Engineer Ganda singh wala	Mate 0 No Beldars 05 No	Zilladar Chunian	Mate 0 No Beldars 05 No	Sub Engineer Kasur	Mate 0 No Beldars 05 No
Total Field Establishment Required at Low Flood (For 03 Shifts)			**01 No. Sub Engineers**	**Mate 02 No Beldars 15 No**	**02 No. Zilladars**	**Mate 02No Beldars 15 No**	**02 No. Sub Engineers**	**Mate 02No Beldars 15 No**
G. Total			**Total Sub Engineers. 03 + Zilladar. 02 + Mate. 06 + Beldar. 45= 56**					
II. D/S FEROZEPUR HEAD WORKS								
4.	KHUDIAN Bakerke	RD.136-156 +860 Depalpur Canal & Lower Ganja Minor RD.0+000to42+850&Lower Ganga sub minor RD. 0+000to10+200	Sub Engineer Bakerke	Mate 0 No Beldars 05 No.	Sub Engineer Jajjal Section	Mate 01 No Beldars 05 No.	Sub Engineer Chunian	Mate 0 No Beldars 05 No.
5.	KHUDIAN Bakerke	J-Head spur opposite villege Atter singh wala	Sub Engineer Bakerke	Mate 01 No Beldars 05 No.	Sub Engineer Jajja Section	Mate 01 No Beldars 05 No.	Sub Engineer Chunian	Mate 01 No Beldars 05 No.
6.	KANGANPUR FMD	Fateh Muhammad Disty RD.0-88+600	Sub Engineer Fateh Mohd	Mate 01No Beldars 08 No.	Sub Engineer Ladian Section	Mate 01No Beldars 08 No.	Sub Engineer Hira Singh Section	Mate 01No Beldars 08 No.
7.	KANGANPUR FMD	Lallugudar Disty RD.32+000-94+500 & Kanda Minor RD.0+000-14+300	Sub Engineer Fateh Mohd	Mate 01No Beldars 08 No..	Sub Engineer Ladian Section	Mate 01No Beldars 08 No..	Sub Engineer Hira Singh Section	Mate 01No Beldars 08 No..
8.	KANGANPUR FMD	J-Spur at RD.30+300 FMD (RD 0-4700 ft)	Sub Engineer Fateh Mohd	Mate 0 No Beldars 05 No.	Sub Engineer Ladian Section	Mate 0 No Beldars 05 No.	Sub Engineer Hira Singh Section	Mate 0 No Beldars 05 No.
9.	KANGANPUR FMD	J-Spur at RD.50+400 FMD (RD 0-3850 ft)	Sub Engineer Fateh Mohd	Mate 0 No Beldars 03 No.	Sub Engineer Chorkot section	Mate 0 No Beldars 03 No.	Sub Engineer Hira Singh Section	Mate 0 No Beldars 03 No.
10.	KANGANPUR FMD	Sloping Spur at RD.54+460 FMD (RD 0-950 ft)	Sub Engineer Fateh Mohd	Mate 0 No Beldars 04 No.	Sub Engineer Chorkot section	Mate 0 No Beldars 04 No.	Sub Engineer kanganpur Section	Mate 0 No Beldars 04 No.
11.	KANGANPUR FMD	J-Spur at RD.30+300 FMD (RD 0-4700 ft)	Sub Engineer Fateh Mohd	Mate 01 No Beldars 05 No.	Sub Engineer Chorkot section	Mate 01 No Beldars 05 No.	Sub Engineer kanganpur Section	Mate 01 No Beldars 05 No.
12.	KANGANPUR FMD	Attari Mole-Head spur at RD.3+380 Kanda Minor (RD0-5090 ft)	Sub Engineer Fateh Mohd	Mate 01 No Beldars 05 No.	Sub Engineer Chorkot section	Mate 01 No Beldars 05 No.	Sub Engineer kanganpur Section	Mate 01 No Beldars 05 No.
13.	KANGANPUR FMD	J-Head Spur of Kanda Minor at tail (0-5400 ft)	Sub Engineer Fateh Mohd	Mate 01 No Beldars 05 No.	Sub Engineer Chorkot section	Mate 01 No Beldars 05 No.	Sub Engineer kanganpur Section	Mate 01 No Beldars 05 No.
Total Field Establishment Required at Low Flood (For 03 Shifts)			**02 No. Sub Engineers**	**Mate 06 No Beldars 53 No**	**03 No. Sub Engineers**	**Mate 07 No Beldars 53 No**	**03 No. Sub Engineers**	**Mate 06 No Beldars 53 No**
G. Total			**Total Sub Engineers. 08 + Mate. 19 + Beldar. 159= 186.**					
Note:- In case of very high exceptionally flood extra-ordinary establishment and material for flood fighting will be arranged through contractor.								

XEN KASUR

DUTY ROSTER / FLOOD FIGHTING PROGRAME At Medium flood

0600 Hrs to 1400 Hrs	1400 Hrs to 2200 Hrs	2200 Hrs to 0600 Hrs

Sr. No.	Sub Division Section	Reach of Flood Bunds	Incharge of Watching Staff	W.C. Staff	Incharge of Watching Staff	W.C Staff	Incharge of Watching Staff	W.C Staff
1	2	3	4	5	6	7	8	9
I. U/S FEROZEPUR HEAD WORKS								
1.	CHUNIAN GSW	Dhaya Bund with a Gauge of above 6.0 ft at Talwar Post	Sub Engineer Ganda singh wala	Mate 02Nos Beldars 20 Nos.	Zilladar Khudian	Mate 02Nos Beldars 20 Nos.	Sub Engineer Bedian	Mate 02Nos Beldars 20 Nos.
2.	CHUNIAN GSW	Flood Bunds arround Ganda Singh Wala	Sub Engineer Ganda singh wala	Mate 04 Nos Beldars 40Nos.	Zilladar Chunian	Mate 04 Nos Beldars 40Nos.	Sub Engineer Bedian	Mate 04 Nos Beldars 40Nos.
3.	CHUNIAN GSW	J –Head spur at pandoki out fall	Sub Engineer Ganda singh wala	Mate 02Nos Beldars 20 Nos.	Zilladar Chunian	Mate 02Nos Beldars 20 Nos.	Sub Engineer Kasur	Mate 02Nos Beldars 20 Nos.
Total Field Establishment Required at Medium Flood (For 03 Shifts)			**01 No. Sub Engineers**	**Mate 8 No Beldars 80 No**	**02 No. Zilladars**	**Mate 08 No Beldars 80 No**	**02 No. Sub Engineers**	**Mate 08 No Beldars 80 No**
G. Total			**Total Sub Engineers. 03 + Zilladars. 02 + Mate. 24 + Beldar. 240= 269**					
II. D/S FEROZEPUR HEAD WORKS								
4.	KHUDIAN Bakerke	RD.136-156 +860 Depalpur Canal & Lower Ganja Minor RD.0+000to42+850&Lower Ganga sub minor RD. 0+000to10+200	Sub Engineer Bakerke	Mate 02 Nos Beldars 20 No.	Sub Engineer Jajjal Section	Mate 02 Nos Beldars 20 No.	Sub Engineer Chunian	Mate 02 Nos Beldars 20 No.
5.	KHUDIAN Bakerke	J-Head spur opposite villege Atter singh wala	Sub Engineer Bakerke	Mate 02 No Beldars 20 No.	Sub Engineer Jajja Section	Mate 02 No Beldars 20 No.	Sub Engineer Chunian	Mate 02 No Beldars 20 No.
6.	KANGANPUR FMD	Fateh Muhammad Disty RD.0-88+600	Sub Engineer Fateh Mohd	Mate 02Nos Beldars 36 No.	Sub Engineer Ladian Section	Mate 02Nos Beldars 36 No.	Sub Engineer Hira Singh Section	Mate 02Nos Beldars 36 No.
7.	KANGANPUR FMD	Lallugudar Disty RD.32+000-94+500 & Kanda Minor RD.0+000-14+300	Sub Engineer Fateh Mohd	Mate 03 No Beldars 32 No.	Sub Engineer Ladian Section	Mate 03 No Beldars 32 No.	Sub Engineer Hira Singh Section	Mate 03 No Beldars 32 No.
8.	KANGANPUR FMD	J-Spur at RD.30+300 FMD (RD 0-4700 ft)	Sub Engineer Fateh Mohd	Mate 02 No Beldars 20 No.	Sub Engineer Ladian Section	Mate 02 No Beldars 20 No.	Sub Engineer Hira Singh Section	Mate 02 No Beldars 20 No.
9.	KANGANPUR FMD	J-Spur at RD.50+400 FMD (RD 0-3850 ft)	Sub Engineer Fateh Mohd	Mate 01 No Beldars 14 No.	Sub Engineer Chorkot section	Mate 01 No Beldars 14 No.	Sub Engineer Hira Singh Section	Mate 01 No Beldars 14 No.
10.	KANGANPUR FMD	Sloping Spur at RD.54+460 FMD (RD 0-950 ft)	Sub Engineer Fateh Mohd	Mate 0 No Beldars 8No.	Sub Engineer Chorkot section	Mate 0 No Beldars 8No.	Sub Engineer kanganpur Section	Mate 0 No Beldars 8No.
11.	KANGANPUR FMD	J-Spur at RD.30+300 FMD (RD 0-4700 ft)	Sub Engineer Fateh Mohd	Mate 02 No Beldars 20 No.	Sub Engineer Chorkot section	Mate 02 No Beldars 20 No.	Sub Engineer kanganpur Section	Mate 02 No Beldars 20 No.
12.	KANGANPUR FMD	Attari Mole-Head spur at RD.3+380 Kanda Minor (RD0-5090 ft)	Sub Engineer Fateh Mohd	Mate 02 No Beldars 20 No.	Sub Engineer Chorkot section	Mate 02 No Beldars 20 No.	Sub Engineer kanganpur Section	Mate 02 No Beldars 20 No.
13.	KANGANPUR FMD	J-Head Spur of Kanda Minor at tail (0-5400 ft)	Sub Engineer Fateh Mohd	Mate 02 No Beldars 20 No.	Sub Engineer Chorkot section	Mate 02 No Beldars 20 No.	Sub Engineer kanganpur Section	Mate 02 No Beldars 20 No.
Total Field Establishment Required at Medium Flood (For 03 Shifts)			**02 No. Sub Engineers**	**Mate 18 No Beldars 200 No**	**03 No. Sub Engineers**	**Mate 18 No Beldars 200 No**	**03 No. Sub Engineers**	**Mate 18 No Beldars 200 No**
G. Total			**Total Sub Engineers. 08 + Mate. 54 + Beldar. 600= 662**					

Note:- In case of very high exceptionally flood extra-ordinary establishment and material for flood fighting will be arranged through contractor.

XEN KASUR

DUTY ROSTER / FLOOD FIGHTING PROGRAME At High Flood

0600 Hrs to 1400 Hrs	1400 Hrs to 2200 Hrs	2200 Hrs to 0600 Hrs

Sr. No.	Sub Division Section	Reach of Flood Bunds	In charge of Watching Staff	W.C. Staff	In charge of Watching Staff	W.C Staff	In charge of Watching Staff	W.C Staff
1	2	3	4	5	6	7	8	9
I.U/S FEROZEPUR HEAD WORKS								
1.	CHUNIAN GSW	Dhaya Bund with a Gauge of above 6.0 ft at Talwar Post	Sub Engineer Ganda singh wala	Mate 03 No Beldars 30 No	Zilladar Khudian	Mate 03 No Beldars 30 No	Sub Engineer Bedian	Mate 03 No Beldars 30 No
2.	CHUNIAN GSW	Flood Bunds arround Ganda Singh Wala	Sub Engineer Ganda singh wala	Mate 06No Beldars 60 No	Zilladar Chunian	Mate 06No Beldars 60 No	Sub Engineer Bedian	Mate 06No Beldars 60 No
3.	CHUNIAN GSW	J –Head spur at pandoki out fall	Sub Engineer Ganda singh wala	Mate 03 No Beldars 30 No	Zilladar Chunian	Mate 03 No Beldars 30 No	Sub Engineer Kasur	Mate 03 No Beldars 30 No
Total Field Establishment Required at High Flood (For 03 Shifts)			**01 No. Sub Engineers**	**Mate 12 No Beldars 120 No**	**02 No. Zilladars**	**Mate 12 No Beldars 120 No**	**02 No. Sub Engineers**	**Mate 12 No Beldars 120 No**
G. Total			**Total Sub Engineers. 03 + Zilladars. 02 + Mate. 36 + Beldar. 360= 401**					
II. D/S FEROZEPUR HEAD WORKS								
4.	KHUDIAN Bakerke	RD.136-156 +860 Depalpur Canal & Lower Ganja Minor RD.0+000to42+850&Lower Ganga sub minor RD. 0+000to10+200	Sub Engineer Bakerke	Mate 06No Beldars 60 No	Sub Engineer Jajjal Section	Mate 06No Beldars 60 No	Sub Engineer Chunian	Mate 06No Beldars 60 No
5.	KHUDIAN Bakerke	J-Head spur opposite villege Atter singh wala	Sub Engineer Bakerke	Mate 03 No Beldars 30 No	Sub Engineer Jajja Section	Mate 03 No Beldars 30 No	Sub Engineer Chunian	Mate 03 No Beldars 30 No
6.	KANGANPUR FMD	Fateh Muhammad Disty RD.0-88+600	Sub Engineer Fateh Mohd	Mate 05No Beldars 54 No	Sub Engineer Ladian Section	Mate 05No Beldars 54 No	Sub Engineer Hira Singh Section	Mate 05No Beldars 54 No
7.	KANGANPUR FMD	Lallugudar Disty RD.32+000-94+500 & Kanda Minor RD.0+000-14+300	Sub Engineer Fateh Mohd	Mate 04 No Beldars 48 No.	Sub Engineer Ladian Section	Mate 04 No Beldars 48 No.	Sub Engineer Hira Singh Section	Mate 04 No Beldars 48 No.
8.	KANGANPUR FMD	J-Spur at RD.30+300 FMD (RD 0-4700 ft)	Sub Engineer Fateh Mohd	Mate 03 No Beldars 30 No	Sub Engineer Ladian Section	Mate 03 No Beldars 30 No	Sub Engineer Hira Singh Section	Mate 03 No Beldars 30 No
9.	KANGANPUR FMD	J-Spur at RD.50+400 FMD (RD 0-3850 ft)	Sub Engineer Fateh Mohd	Mate 02No Beldars 21 No.	Sub Engineer Chorkot section	Mate 02No Beldars 21 No.	Sub Engineer Hira Singh Section	Mate 02No Beldars 21 No.
10.	KANGANPUR FMD	Sloping Spur at RD.54+460 FMD (RD 0-950 ft)	Sub Engineer Fateh Mohd	Mate 01 No Beldars 12 No.	Sub Engineer Chorkot section	Mate 01 No Beldars 12 No.	Sub Engineer kanganpur Section	Mate 01 No Beldars 12 No.
11.	KANGANPUR FMD	J-Spur at RD.30+300 FMD (RD 0-4700 ft)	Sub Engineer Fateh Mohd	Mate 03 No Beldars 30 No	Sub Engineer Chorkot section	Mate 03 No Beldars 30 No	Sub Engineer kanganpur Section	Mate 03 No Beldars 30 No
12.	KANGANPUR FMD	Attari Mole-Head spur at RD.3+380 Kanda Minor (RD0-5090 ft)	Sub Engineer Fateh Mohd	Mate 03 No Beldars 30 No	Sub Engineer Chorkot section	Mate 03 No Beldars 30 No	Sub Engineer kanganpur Section	Mate 03 No Beldars 30 No
13.	KANGANPUR FMD	J-Head Spur of Kanda Minor at tail (0-5400 ft)	Sub Engineer Fateh Mohd	Mate 03 No Beldars36 No.	Sub Engineer Chorkot section	Mate 03 No Beldars36 No.	Sub Engineer kanganpur Section	Mate 03 No Beldars36 No.
Total Field Establishment Required at High Flood (For 03 Shifts)			**02 No. Sub Engineers**	**Mate 33 No Beldars 351 No**	**03 No. Sub Engineers**	**Mate 33 No Beldars 351 No**	**03 No. Sub Engineers**	**Mate 33 No Beldars 351 No**
G. Total			**Total Sub Engineers. 08 + Mate. 99 + Beldar. 1053=1160**					

Note:- In case of very high exceptionally flood extra-ordinary establishment and material for flood fighting will be arranged through contractor.

XEN KASUR

CHAPTER – 10

EMERGENCY TELEPHONE NUMBERS

Sr. No.	Name of Officer	Telephone Numbers	
		Office	Residence
1.	Chief Engineer, Irrigaiton Lahore Zone Lahore	042-99212086 042-99212085	Fax:042-212084
2.	Chief Engineer, Drainage & Flood Lahore.	042-99230602	042-5760127
3.	Zeeshan Ashraf Shaikh , Superintending Engineer, Depalpur Canal Circle, Lahore.	042-99250307	0300-5459697
4.	Executive Engineer, (OP) Lahore Irrigation Zone Lahore.	042-99212089	
5.	Muhammad Shaban Ghulam Nabi Executive Engineer, Kasur Division DCC, Kasur.	049-9250141 049-9250201	0333-4787659
6.	Director Floods Lahore / Secretary Flood Commission Punjab, Lahore.	042-99231614	-
7.	Executive Engineer (OP) Scarp	042-99212089	-
8.	Flood Warning Centre Lahore	042-7572091-93	-
9.	Mr. Asher Latif Mehar, Sub Divisional Officer Chunian Head Quarter at Kasur	049-9250201	0334-4353036
10.	Mr. Saleem Akhter Sub Divisional Officer Khudian Sub Division	-	0306-8898365
11.	Abdul Hakeem Sub Divisional Officer, Kangnapur Sub Division.	-	0300-7745337
12.	Duty Clerk Flood Emergency Kasur Division.	049-9250141	-
13.	Mazhar Hussain Sub Engineer, Ganda Singh Wala Section	049-9250141	0300-4247845
14.	Farhan Arshad Sub Engineer Bakerke Section	-	0312-0503838
15.	Abdul Qadeer Paracha Sub Engineer, Fateh Muhammad Section	-	0334-7435101

OFFICIALS OF KASUR CANAL DIVISION

Sr. No.	Name of Officer	Telephone Numbers	
		Office	Residence
1.	Muhammad Shaban Ghulam Nabi Executive Engineer, Kasur Division DCC, Kasur.	049-9250141 049-9250201	0333-4787659
2.	Mr. Asher Latif Mehar, Sub Divisional Officer Chunian Head Quarter at Kasur	049-9250201	0334-4353036
3.	Mr. Saleem Akhter Sub Divisional Officer Khudian Sub Division	-	0306-8898365
4.	Abdul Hakeem Sub Divisional Officer, Kangnapur Sub Division.	-	0300-7745337

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CIVIL AUTHORITES

1	Deputy Commissioner, Kasur.	049-9250140	049-9250143
2	Deputy Commissioner, Okara	044-9200026	044-9200027-28
3	D.O.(R) Okara	044-9200251	044-9200460
4	Superintending Police, Okara	044-9200351	044-9200353
5	Deputy Superintending of Police Depalpur	044-540406	
6	Deputy District Officer (Revenue), Kasur.	049-9250156	-
7	Superintending Police, Kasur.	049-9250137	049-2764492
8	Police Station Ganda Singh Wala, Kasur.	049-2711420	-
9	Police Wireless Control, Kasur.	049-9250071	-

XEN KASUR

CHAPTER – 11

STANDARD OPERATING PROCEDURE(SOP) FOR BREACHING SECTIONS

11.1 HISTORY OF THE BREACHING SECTION

It is certified that there is no breaching section in Kasur Division DCC, Kasur.

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

Not Applicable.

11.3 ARRANGEMENT OF EXPLOSIVES AND SECURITY OF EXPLOSIVE SOURS

Not Applicable

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

Not Applicable

11.5 DETAIL OF MACHINERY MEANS AS A STANDBY ARRANAGMENTS IN CASE OF DETONATION FAILURE

Not Applicable

11.6 DUTY ROSTER IN CASE OF CRITICAL SITUATION

Not Applicable

11.7 BREACHING COMMITTEE WITH THEIR ACTION PLAN

Not Applicable.

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

Saifalian, Fatti Wala, Kamalpura, Bangladesh, Bhekiwind, Sheikhupura Kohna, Sheikhpura Nau, Raji Wala, Mahalam Kalan, Bhedian Kalan, Bhedian Khurad, Ganda Singh Wala, Sanda Nizam, Churi Wala, Burjh, Doni Ullake, Kujian Wala, Jume Wala, Walay Wala, Kharapar, Noori Wala, Bhedian Usman, Attar Singh Wala, Rajowal, Nijabat, Fateh Muhammad.

11.9 ANNOUNCEMENT AND DETAIL OF EVACUATION ARRANGEMENT

All announcements regarding evacuation will be made through District Administration by electronic media radio, local Mosque and Loud speakers etc.

11.10 DETAIL OF COORDINATION WITH CIVIL / ARMY AUTHORITIES

Not Applicable.

11.11 PARALLEL COMMUNICATION ARRANGEMENTS

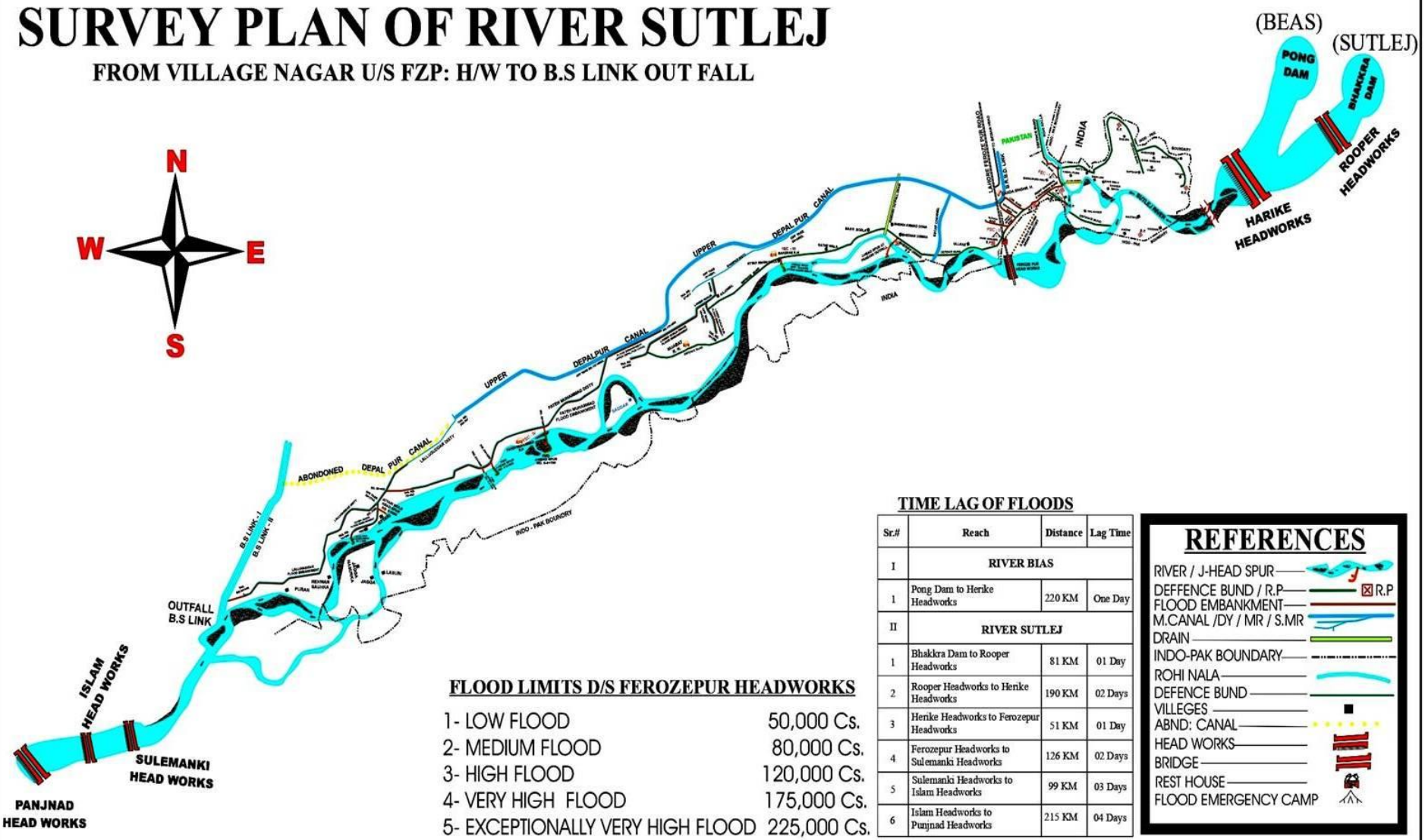
All communication will be made on wireless, special messengers and telephones mobile phones etc.

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KASUR DIVISION D.C.C

SURVEY PLAN OF RIVER SUTLEJ

FROM VILLAGE NAGAR U/S FZP: H/W TO B.S LINK OUT FALL



FLOOD LIMITS D/S FEROZEPUR HEADWORKS

1- LOW FLOOD	50,000 Cs.
2- MEDIUM FLOOD	80,000 Cs.
3- HIGH FLOOD	120,000 Cs.
4- VERY HIGH FLOOD	175,000 Cs.
5- EXCEPTIONALLY VERY HIGH FLOOD	225,000 Cs.

TIME LAG OF FLOODS

Sr.#	Reach	Distance	Lag Time
I	RIVER BIAS		
1	Pong Dam to Herike Headworks	220 KM	One Day
II	RIVER SUTLEJ		
1	Bhakkra Dam to Rooper Headworks	81 KM	01 Day
2	Rooper Headworks to Herike Headworks	190 KM	02 Days
3	Herike Headworks to Ferozepur Headworks	51 KM	01 Day
4	Ferozepur Headworks to Sulemanki Headworks	126 KM	02 Days
5	Sulemanki Headworks to Islam Headworks	99 KM	03 Days
6	Islam Headworks to Punjnad Headworks	215 KM	04 Days

REFERENCES

RIVER / J-HEAD SPUR
DEFFENCE BUND / R.P — R.P
FLOOD EMBANKMENT
M.CANAL /DY / MR / S.MR
DRAIN
INDO-PAK BOUNDARY
ROHI NALA
DEFENCE BUND
VILLEGES
ABND: CANAL
HEAD WORKS
BRIDGE
REST HOUSE
FLOOD EMERGENCY CAMP

EMERGENCY CONTINGENCY PLAN

PART – B

FLOOD FIGHTING PLAN

FOR THE YEAR 2026

Executive Engineer Kasur Division DCC Kasur	Supeintending Engineer Depalpur Canal Circle Lahore	Chief Engineer Irrigation Lahore Zone Lahore

CHAPTER.12

VULNERABLE SITES ON FLOOD BUND/STRUCTURES

12.1 - Apprehended Breaches In Flood Bunds / Structures

Following is vulnerable site on Flood Bund in Kasur Division DCC Kasur.

i. (Right Retired Embankment RD. 0+000 To 7+500 (1.5 miles.)
ii. Dhaya Bund from RD. 0+000 to 4+000 & 6+000 to 8+000.
iii. Right Marginal Bund from RD. 22+500 TO 35+600.
iv. J-Head Spur of Kanda Minor Tail.

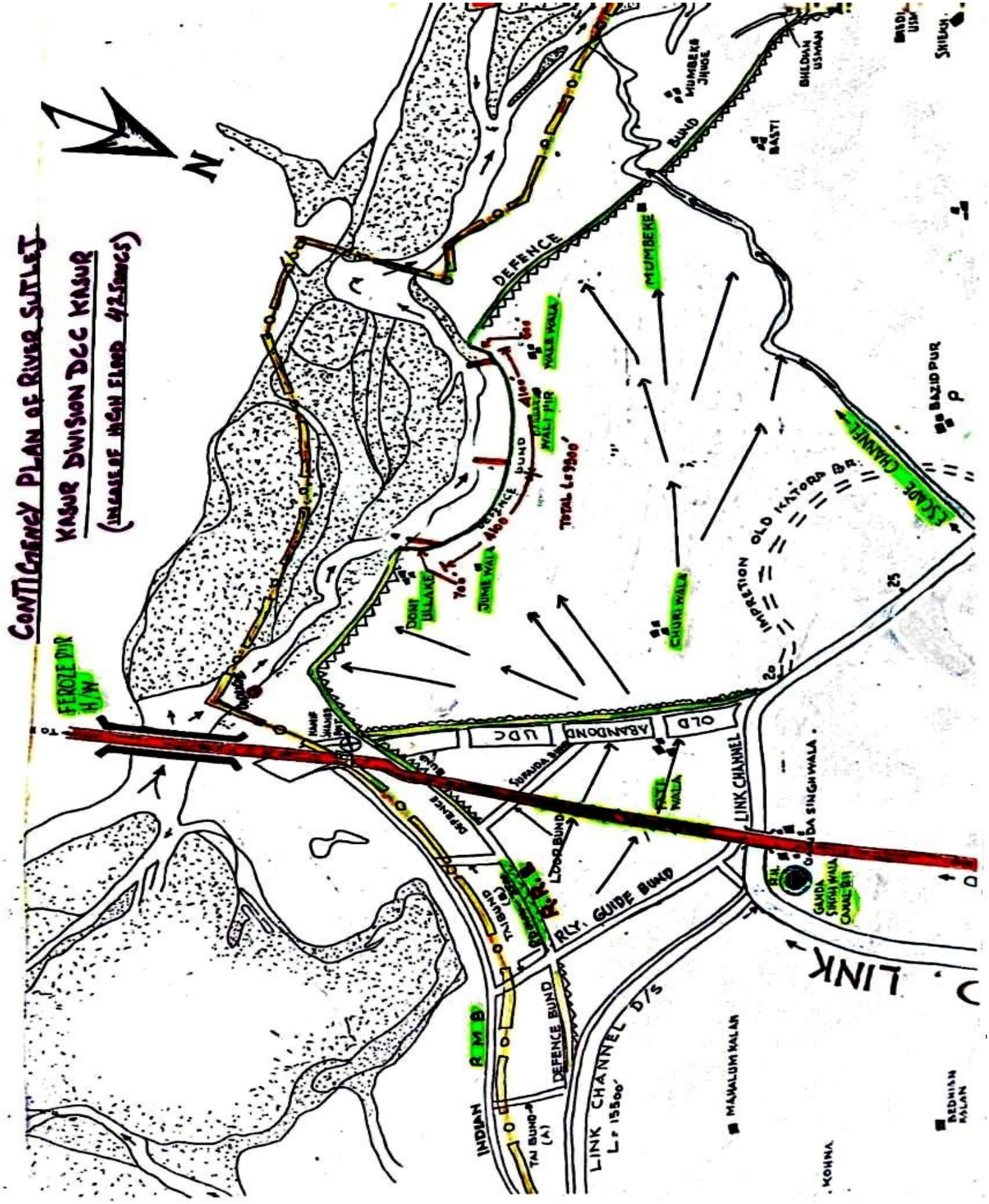
12.2 - Operation Of Breaching Section

Not Applicable.

12.3 - Breaches Due To Rise Of Floodwater, Deterioration Of Flood Bunds.

Above mentioned structure may breach in exceptionally very high floods.

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CONTINGENCY PLAN OF RIVER SUTLEJ
KASUR DIVISION DCC KASUR
(INCASE OF HIGH FLOOD 4.25 LACS)
N
FEROZE PUR
H/W
TO
DEFENCE
MUMBEKE
MUMBEKE JINDE
BUND
BASTI
BHELDAN USMAN
SHIBAN
WALE WALA
WALI PIR
DEFENCE BUND
TOTAL L=9300'
DONI WALA KE
JINNE WALA
CHURI WALA
BAZID PUR
ESCAPE CHANNEL
OLD KATORA BR.
IMPRESSION
UDC
ABANDOND
OLD
SUPAUDA BEND
LINK CHANNEL
GANDA SINGH WALA
GANDA SINGH WALA CANAL BR.
RLY. GUIDE BUND
LOOP BUND
TAJ BUND (A)
INDIAN R M B
DEFENCE BUND
LINK CHANNEL D/S
L= 15500'
MANALUM KALAN
BEDHIAN KALAN
KOHNA
LINK

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CHAPTER # 13

EMERGENCY CONTINGENCY PLAN FOR VULNERABLE SITE (SITES)

Site no.1 (Right Retired Embankment RD. 0+000 To 7+500 (1.5 miles.)

13.1- PLAN SHOWING ROUTE OF FLOOD WATER COMING OUT OF THE BREACH SUPPORTED WITH LEVEL

Plan attached

13.2 - DETAIL OF VILLAGES ABADIES LIKELY TO BE AFFECTED

Sanda Nizam, Fatohi Wala, Kujjian Wala, Ullake, Churiwala, Walle wala.

13.3 - STRATEGY AND ACTION TAKEN BE EXPLAINED IN DETAIL.

13.3.1- Arrangements.

Flood fighting material has been purchased and applied as per flood situation, As explained in chapter No. 7

13.3.2- Establishment of Flood fighting Camps.

F.E.C – I

As soon as the gauge rises to 6.0 (W.L 652.00), Sub Engineer Ganda Singh Wala Section will shift his head quarter from Ganda Singh Wala Canal Rest House to **Talwar Post at Right Marginal Bund.**

F.E.C – II

When the gauge at Kikar Ranger Post shell rises above 8.0 (R.L 654.00), the Sub Divisional Officer Chunian will shift his camp at **Ganda Singh Wala** and supervises the watching of Bunds around Ganda Singh Wala with assistance of Sub Engineer Chorkot Section and Zialladar Khudian along with the watching staff.

F.E.C – III

As soon as the river gauge at Bakarke Gauge Station rises above 17.70 ft., the Sub Divisional Officer Khudian will shift his camp at **Bakarke Rest House** along with Sub Engineer Bakarke Section incharge of Campus will also present in section, Sub Engineer Jajjal & Zilladar Jajjal for his assistance in order to watch the channels day / night.

F.E.C – IV

when the river gauge at Bakarke rises upto 15.0 ft., the Sub Divisional Officer Kanganpur Sub Division will shift his camp at **Fateh Muhammad Canal Rest House**. The Sub Engineer FMD will incharge of camp Sub Engineer Kanganpur, Hira Singh and Zilladar Fateh Muhammad will assist him day / night.

F.E.C – V

when the river gauge at Talwar Post rises upto 12.0 ft., the Sub Divisional Officer Chunian Sub Division will establish camp at **Dhaya Bund**, **Right Retired Embankment, Railway Guide Bund, Link Bund & Sufaida and UDC.** The Sub Engineer Kasur, Bedian, Chorkot & Chunain Section will incharge of camps, and Zilladars of Chunian Sub Division will assist him day / night.

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13.3.3- Duties of officers/Officials and their Camp Sites.

The sub Engineer Ganda Singh Wala section under the control of Sub Divisional Officer Chunian Sub Division shall be the incharge of camp site.

His contact No. is given below:-

Name: - Mazhar Hussain
Cell No. : - 0300-4247845

13.3.4 - Departmental Machinery available.

No Government Machinery is available and it may be arranged through private resources as per requirement.

13.3.5 - Machinery available from Private source.

Name of contractor: Jutt Brothers Govt Contractor.

Contact No. 0301-6839700

Location. 59-Munir Shaheed Colony, Kasur.

Excavator Machine = 04 No.

Tractor with Front Blade = 06 No.

Tractor with Trollies = 8 No

13.3.6 – Flood Fighting Material Required (for each Camp)

13.3.7 – Flood Fighting Material Available (for each camp)

Sr. No.	Item	Unit	Total Required	Available Quatity	Balance Quantity	Remarks
1.	Shouldri / Tent	No	01	0	01	
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	0	01	
6.	Charpois	No	02	0	02	
7.	Symbolic Jackets	No	50	0	50	
8.	Polythene Sheet	KG	100	0	100	
9.	Bamboos (4” Dia and 10 ft long)	No	100	0	100	
10.	Water Coller	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	0	20	
20.	Kassi	No	20	0	20	
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	01	0	01	
27.	Wire Crates (3x3x3) (at only those camps near river action and reseve stck exists)	No	100	0	100	

Note. The balance quantity will be procurred on subject to avalability of funds before on set of floood season.

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13.7 DETAIL OF OTHER INFRASTRUCTURE LIKE ELECTRIC, SUIGAS, TELEPHONE INSTALLATIONS, ROAD NETWORK, OTHER BUILDING, CANALS AND DRAINAGE NETWORK

INFRASTRUCTURES

Canals

Depalpur Canal & its System

Ferozepur Road.

Schools / Colleges

Government Boys and girls High School Ganda Singh Wala

Government Girls Middle School Fatohi Wala.

Government Boys Primary School Fatohi Wala.

Govt. Girls and Boys Primary School Kujian Wala.

Health Centre

Rural Health Centre Ganda Singh Wala

Police Station

Police Station Ganda Singh Wala

Telephone Exchanges.

Nil

Army Infrastructures

Ranger Head Quarter Kasur,

Company Headquarter Kasur

Ranger Post Sanda Nizam, Hanif Shaheed Check Post.

Grid Station.

Nil

Note: Pandoki Canal Division at Bhambha, Lahore will act as back up Division in case of emergency.

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CHAPTER - 14

ACTION PLAN

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

There is a necessity of RE-SHUFFLING / RE-STACKING OF RESERVE STOCK OF STONE on FMD J-Head spur RD 30+300 most of which has been settled under the spur.

14.2 DETAIL OF INLET AND OUTLET CROSSING ALONGWITH CLOSING METHODOLOGY.

No any inlet and outlet crossing

14.3 Deployment of Machinery (Normal to Low Flood):.

As per the TOR's Committee costituted by the Administrative Department vide No. SO(Floods)VII-22/2017 dated 26.12.2025.

Sr. No.	Structure Name	Length (Miles)	Excavators	Trolleys	Dumpers	Tractor with Front blade (1 per 15 mile reach)
1	Dhaya Bund	2.22	S.E shall allow deputation of one (1) excavator & four (4) Trolleys during low flood at camps/vulnerable points & LMB / RMB.		-	0
2	Right Marginal Flood Bund	2.62			-	0
3	Link Bund	3.56			-	0
4	Railway Guide Bund	1.5			-	0
5	Right Retired Embankment	1.5			-	0
6	Loop Bund	0.35			-	0
7	Sufaida Bund & UDC	8.47			-	1
8	J-Head Spur Pandoki out fall	0.94			-	0
9	Flood embankment along Lower Ganja Minor	8.57	S.E shall allow deputation of one (1) excavator & four (4) Trolleys during low flood at camps/vulnerable points & LMB / RMB.		-	1
10	Flood Embankment along Lower Ganja Sub Minor	2.04			-	0
11	Flood Embankment along left bank of Upper Depalpur Canal	4.17			-	0
12	J-Head Spur Attar Singh wala	0.94			-	0
13	Flood Embankment along Fateh Mohammad Disty	17.72	S.E shall allow deputation of one (1) excavator & four (4) Trolleys during low flood at camps/vulnerable points & LMB / RMB.		-	1
14	J- Head Spur RD. 30+300 of Fateh Mohammad Disty	0.94			-	0
15	Flood embankment along Laluguddar Disty and Kanda Minor	14.5			-	1
16		2.86			-	0
	J-Head Spur at Tail of Kanda Minor	1.08			-	0
17	Attari Mole Head Spur at RD: 3+380 Kanda Minor	0.91			-	0
18	J-Head Spur at RD. 50+400 of Fateh Muhammad Disty	0.77			-	0
19	Sloping Spur at RD. 54+460 of Fateh Muhammad Disty.	0.19			-	0
Total			0	0	-	4

14.4 Deployment of Machinery (Medium to High Flood):.

Sr. No.	Structure Name	Length (Miles)	Excavators	Trolleys	Dumpers	Tractor with Front blade
			1 per 7 mile reach	4 per 7 mile reach	2 per 7 mile reach	1 per 7 mile reach
1	Dhaya Bund	2.22	1	1	1	1
2	Right Marginal Flood Bund	2.62	1	2	1	1
3	Link Bund	3.56	1	2	1	1
4	Railway Guide Bund	1.5	1	1	1	1
5	Right Retired Embankment	1.5	1	1	1	1
6	Loop Bund	0.35	1	1	1	1
7	Sufaida Bund & UDC	8.47	1	5	2	1
8	J-Head Spur Pandoki out fall	0.94	1	1	1	1
9	Flood embankment along Lower Ganja Minor	8.57	1	5	2	1
10	Flood Embankment along Lower Ganja Sub Minor	2.04	1	1	1	1
11	Flood Embankment along left bank of Upper Depalpur Canal	4.17	1	2	1	1
12	J-Head Spur Attar Singh wala	0.94	1	1	1	1
13	Flood Embankment along Fateh Mohammad Disty	17.72	3	10	5	2
14	J- Head Spur RD. 30+300 of Fateh Mohammad Disty	0.94		1	1	1
15	Flood embankment along Laluguddar Disty and Kanda Minor	14.5	3	8	4	2
		2.86		1	1	1
16	J-Head Spur at Tail of Kanda Minor	1.08		1	1	1
17	Attari Mole Head Spur at RD: 3+380 Kanda Minor	0.91	1	1	1	1
18	J-Head Spur at RD. 50+400 of Fateh Muhammad Disty	0.77		1	1	1
19	Sloping Spur at RD. 54+460 of Fateh Muhammad Disty.	0.19		1	1	1
	Total	**75.85**	**19**	**47**	**29**	**22**

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

Sr. No.	Structure Name	Length (Miles)	Excavators		Trolleys	Dumpers	Tractor with Front blade	
			Very High Flood	Exp. High Flood			Very High Flood	Exp. High Flood
			1 per 5 mile reach	2 per 5 mile reach	4 per 5 mile reach	2 per 5 mile reach	1 per 5 mile reach	2 per 5 mile reach
1	Dhaya Bund	2.22	0	1	2	1	0	1
2	Right Marginal Flood Bund	2.62	0	1	2	1	0	1
3	Link Bund	3.56	1	1	3	1	0	1
4	Railway Guide Bund	1.5	0	1	1	0	0	1
5	Right Retired Embankment	1.5	0	1	1	0	0	1
6	Loop Bund	0.35	0	0	0	0	0	0
7	Sufaida Bund & UDC	8.47	2	3	6	3	2	2
8	J-Head Spur Pandoki out fall	0.94	0	1	0	0	0	1
9	Flood embankment along Lower Ganja Minor	8.57	2	3	7	3	2	2
10	Flood Embankment along Lower Ganja Sub Minor	2.04	0	1	2	1	1	1
11	Flood Embankment along left bank of Upper Depalpur Canal	4.17	1	2	3	2	1	1
12	J-Head Spur Attar Singh wala	0.94	0	1	0	0	0	1
13	Flood Embankment along Fateh Mohammad Disty	17.72	3	7	13	7	3	4
14	J- Head Spur RD. 30+300 of Fateh Mohammad Disty	0.94	0	1	0	0	0	1
15	Flood embankment along Laluguddar Disty and Kanda Minor	14.5	3	6	12	6	3	3
		2.86	0	1	2	1	0	1
16	J-Head Spur at Tail of Kanda Minor	1.08	0	1	0	0	0	1
17	Attari Mole Head Spur at RD: 3+380 Kanda Minor	0.91	0	1	0	0	0	1
18	J-Head Spur at RD. 50+400 of Fateh Muhammad Disty	0.77	0	1	0	0	0	1
19	Sloping Spur at RD. 54+460 of Fateh Muhammad Disty.	0.19	0	1	0	0	0	1
Total			**12**	**35**	**54**	**26**	**12**	**26**

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14.6 TOR's of Committee costituted by the Administrative Department vide No. SO(Floods)VII-22/2017 dated 26.12.2025.

14.6.1 Minimum Requirement of Machinery at Breaching Section

At each breaching section there should be arrangement of two (2) Excavators one Dozer and three (3) Dumpers at Exceptionally high flood

14.6.2 Recommendations for Operation During Flood

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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14.7 LIST OF LOCAL CONTRACTORS

Name of Govt. Contractor	Contact Number	Remarks
Sardar Ali & Co.	0344-4725851	Excavators and other machinery may be made available through these contractors.
SKF & Co	0306-7574888	
Jawad Enterprises	0301-6808012	
Jutt Brothers	0301-6839700	

14.8 POLICE DEPLOYMENT PLAN

Proforma – 1

Sr.	Site of Breaching Section	Concerned Canal Division	Concerned Police Station and District	Police Persons Deployed		Remarks (if any)
				Inspector / Sub Inspector / A.S.I	Constable	
Not Applicable						

Proforma – 2

Sr.	Vulnerable sites used for illegal cuts during floods	Concerned Canal Division	Concerned Police Station and District	Police Persons Deployed		Remarks (if any)
				Inspector / Sub Inspector / A.S.I	Constable	
1	Right Retired Embankment Rd. 0+000 To 7+500	Kasur Division DCC kasur.	Ganda Singh Wala Police Station Distt: Kasur	ASI=2	5	--

Proforma – 3

Sr.	Name of Barrage	Concerned Canal Division	Concerned Police Station and District	Police Persons Deployed		Remarks (if any)
				Inspector / Sub Inspector / A.S.I	Constable	
Not Applicable						

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CHAPTER - 15

BACK UP DIVISIONS (IN CASE OF BREACH)

In case of emergency Pandoki Canal Division & Chakbandi Division will be back-up division for Right Flank of River Sutlej at upstream Ganda sing wala Headworks while Lahore Canal Division & Lahore Drainage Division will be backup division for Left Flank of River Sutlej at Ganda Singh Wala Headworks with Executive Engineer, 01 Sub Divisional Officer, 02 Sub Engineers and 25 Beldars (Each Division).

Executive Engineer Kasur Division DCC Kasur	Supeintending Engineer Depalpur Canal Circle Lahore	Chief Engineer Irrigation Lahore Zone Lahore