GOVERNMENT OF THE PUNJAB

IRRIGATION DEPARTMENT

FLOOD FIGHTING PLAN 2026

HAKRA CANAL DIVISION BAHAWALNAGAR

Bahawalnagar Canal Circle
Bahawalnagar

Bahawalpur Irrigation Zone
Bahawalpur

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FLOOD FIGHTING PLAN 2026

HAKRA CANAL DIVISION

PART "A"

CHAPTER NO. 1
SALIENT FEATURES OF HAKRA DIVISION

LOCATION.

River Sutlej flows at a distance of 70 Km (approx) on the north side from head of Hakra Branch. The flood water hardly hits Hakra Branch System directly. During 1988, an unprecedented flood was experienced in river Sutlej which entered Hakra Branch through Estern Sadiqia Canal. The excessive flood water damaged the prism of the Branch & over topped the banks at several places. The damages so caused were restored under 1988 flood damages restoration project.

River Ghagra from India enters into Pakistan territory in between border pillars No. 364 to 367. Following bunds are located within the vicinity of Fortabbas area. The responsibility to maintain and upkeep lies with Sub Divisional Officer Fortabbas Sub Division of Hakra Division. The protection bunds which were built around the vicinity of Fortabbas town are in the old bed of Ghagra River.

1.2 GENERAL DESCRIPTION.

Hakra Division Bahawalnagar mainly consists of Hakra Branch RD: 0-Tail (RD: 286+920) and it has off-taking channels i.e. Distributaries, Minors & Sub Minors. Hakra Branch, a part of Sutlej Valley Canal Project & off takes from Eastern Sadiqia Canal at Jalwala head regulator. It irrigates vast fertile area of Tehsil Bahawalnagar, Haroonabad & Fortabbas of Bahawalnagar District. Tail reach comes across unpredictable Ghagra River.

Executive Engineer
Hakra Canal Division
Bahawalnagar

1	Total Design Discharge	3068 Cs
2	Total Area GCA Total Area CCA	645358 Acres 570058 Acres
3	Water Allowance	3.6 Cs per 1000 Acre
4	Total Length of Network	463 Mile
5	Total Length of Branch	56 Mile
6	Total Length of Disty & Minor	407 Mile
7	Total No. of Disty & Minor	44 No.
8	Total No. of Tails	45 No.
9	Total No. of Outlets	1541 No.
10	Sanctioned Intensity	48% (Kharif) 32% (Rabi)
11	Average Existing Intensity	160 %
12	B.C.D Flood Bund RD: 0+000 to 28530	5.71 miles
13	E.F Flood Bund RD : 33+900 to 49+950	3.21 miles
14	G.H Flood Bund RD: 59+800 to 64+200	Converted into Defense Bund by Pak Army now it is not being maintains by irrigation Department (0.88 Miles)
Total Length of 3 Nos. Flood Bunds		**9.80 miles**

The location Map of Hakra Division is attached at Annexure-I

The detail of distribution system of Hakra Branch showing Flood Bunds, Minors & Sub minor is depicted in the index plan.

1.3 ADMINISTRATIVE SETUP.

The Hakra Canal Division Bahawalnagar is the administration unit of Bahawalnagar Canal Circle, consisting of 3 numbers Canal Sub Division with one Deputy Collector.

Executive Engineer
Hakra Canal Division
Bahawalnagar

CHAPTER NO. 2

FLOOD PROTECTION AND RIVER TRAINING WORKS.

Following flood protection bunds have been constructed by the Government of the Punjab, Irrigation Department, on River Ghagra.

2.1 DESIGN PARAMETERS OF TRAINING WORKS.

S.#	Name of bund	Length in Mile	Top Width	Side slopes		Free board over HFL (1985)	Vulnerable Reaches
				Right inner side	Left outer side		
1	B.C.D Flood Bund Rd. 0+000 to 28530	5.71	15’	3:1	2:1	4 feet	6000 To 8000
2	E.F Flood bund Rd.33900 to 49950	3.21	15’	3:1	2:1	4 feet	41000 To 42000
3	**G.H Flood Bund Bund Rd: 59+800 to 64+200**	**0.88**	15	3.1	2.1	4 Feet	Converted into Defense Bund by Pak Army Now it is not being maintained by the irrigation Department (0.88 Miles)
	Total	**9.80**					

2.2 LOCATION MAP

Location map is attached Page No. **10**

Executive Engineer
Hakra Canal Division
Bahawalnagar

CHAPTER NO. 3

BRIEFING HISTORY OF PAST FLOOD EVENTS.

Sr. #	Year	Discharge
1	2015	3780 Cs
2	2016	NIL
3	2017	NIL
4	2018	NIL
5	2019	NIL
6	2020	NIL
7	2021	NIL
8	2022	NIL
9	2023	NIL
10	2024	NIL
11	2025	NIL

This Flood Events during 2025 did not affect any human life, areas, animals and crops etc.

Executive Engineer
Hakra Canal Division
Bahawalnagar

CHAPTER NO. 4

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

4.1 FLOOD LIMITS.

There is no any control point whereas tentative height of the bunds is 13ft including 4 ft free board and bank width is 15ft.

4.2 TIME LAGS OF FLOODS.

Head of Ghagra River is in India and they release the water any time without any intimation.

4.3 HIGHEST FLOODS.

No significant flood appeared during previous years.

4.4 PEAK DISCHARGE.

1. Peak discharge to the magnitude of 3780 Cs was experienced during the year 2015.
2. The history of flood for the period 2015 to 2025 is given at page No. 10

Executive Engineer
Hakra Canal Division
Bahawalnagar

CHAPTER NO. 5

FLOOD FIGHTING STRATEGY.

No significant flood has been observed during previous year however in case of flood emergency, the following steps will be taken up:-

1- Peoples will be informed through loud speaker.

2- Watching of flood Bunds Day & Night.

3- All the Concerned Departments will also be informed.

4- Possible facilities will be provided to the affected persons.

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Hakra Canal Division
Bahawalnagar

CHAPTER NO. 6

FLOOD DAMAGES RESTORATION WORKS.

No flood damages restoration work has been carried out during 2025.

Executive Engineer
Hakra Canal Division
Bahawalnagar

CHAPTER NO. 7

FLOOD FIGHTING WATCHING ARRANGEMENT.

7.1 PRE-FLOODS ARRANGEMENT.

There must be some pre-flood arrangements; even then the division has not expected any flood since long.

7.2 WATCHING ESTABLISHMENT CRITERIA.

Normal flood season - 1 person/2mile (1 Shift)
Low flood- 1 person/mile (1 Shift)
Medium / High flood 2 person/mile/shift (2 Shift)
Very High / Exceptionally High 5 person/mile/shift (2 Shift)

- Beldar should be provided hand tools (1 Kassie, 1 Axe and 1 Rechargeable Torch for night shift in case of flood above low flood limit)
- The activities of staff during normal flood season should be included but not limited to:
  - Removing Jungle and bushes from slopes and toe of embankment
  - Filling of rain cuts/Gharas
  - Dressing of slopes
  - Filling porcupine and rat holes
  - Keeping the track motor able

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

Sr. No.	Structure Name	Length (Miles)	Flood Limits							
			Normal Flood Season		Low Flood		Medium/High Flood		Very High/ Exp. High Flood	
			Men	Shift	Men	Shift	Men	Shift	Men	Shift
			1 Person/ 2 mile/Shift (1 Shift)		1 Person/ mile/Shift (1 Shift)		2 Person/ mile/Shift (2 Shift)		5 Person / mile/ Shift (3 Shift)	
1	BCD Bund	5.71	2	1	5	1	10	2	25	3
2	EF Bund	3.21	1		3		6		15	
TOTAL Per Shift :-			**3**		**8**		**16**		**40**	
Total			**3**		**8**		**32**		**120**	
No. of Mates			**-**		**-**		**3**		**10**	

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

Executive Engineer
Hakra Canal Division
Bahawalnagar

7.3 ARRANGEMENT AT SENSITIVE SITES.

Sr No.	Structure Name	Length (Miles)	Vulnerable sites		No. of camps established Expect 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	B.C.D Flood bund	5.71	6000 to 8000	1	-	-	-
2	E.F Flood bund	3.21	41000 to 42000	1	-	-	-

Total = 2

7.4 WATCHING MATERIAL.

The watching material will be arranged before 15.06.2026

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

Sr. No.	Item	Unit	Total Required Quantity	Available Quantity	Balance Quantity	Remarks
1	Shouldari / Tent	No.	01	0	01	Will be Purchased before coming of Flood Season 2026
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 Sheets	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	Walke Talkie Set	Set	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.	1	0	1	
27	Wire crates (3x3x3) (at only those camp near river action and reserve stock exists)	No.	100	0	100	

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

Sr. No.	ITEM	UNIT	Total Required Qty	Sr. No.	ITEM	UNIT	Total Required Qty
1	Shouldari / Tent	No.	01	2	Walke Talkie Set	Set	01
3	Chairs	No.	06	4	Raincoats	No.	10
5	Table	No.	01	6	LED Flood Light	No.	10
7	Generator (2-3 KVA)	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 ARRANGEMENT FOR SOUNDING & PROBING

Not applicable.

7.6 LIGHTING ARRANGEMENT

Temporary lighting arrangements will be taken at site with Generators and Chargeable Electric Lights.

7.7 RATION ARRANGEMENT.

Deputy Commissioner is responsible for Ration Supply and Department will timely inform to concerned authority.

7.8 P.O.L ARRANGEMENT FOR VEHICLE.

Deputy Commissioner is responsible.

7.9 TRANSPORTATION.

Deputy Commissioner is responsible.

7.10 LAW AND ORDER.

Law and order would be maintained by civil administration.

Executive Engineer
Hakra Canal Division
Bahawalnagar

7.11 MEDICAL ARRANGEMENT FOR LABOUR

District Health Officer is responsible to provide Medical facilities to labor and flood effected persons.

7.12 LIAISON WITH OTHER DEPARTMENT.

Write briefly the relevant information.

7.13 ROLE OF THE ARMY.

Constitution of Islamic Republic enjoins upon the armed forces, to aid and assist the civil administration in times of need. Accordingly, forces, army may be requisitioned in aid of civil administration, as and when necessary, depending upon the nature and gravity of the situation. Headquarters 57 Brigade Bahawalnagar /Headquarters Bahawalpur will nominate liaison officers, who will coordinate with the Deputy Commissioner and the DFRO Bahawalnagar during times of emergency. The military officers will be expected to maintain constant liaison with the District Govt. and to provide troops as well as flood fighting equipment /boats, to the Deputy Commissioner who will arrange accommodation for Army troops and will provide all necessary facilities e.g. telephone lines etc, for communication/ operational purposes. Depending upon the past experience, available boats may be kept at Ghagra Gauge station. Sector Officer concerned will forward requests through proper channel and secure requisite number of boats from River Ghagra Gauge Station, after indicating specific requirements/resources. TMO Fortabbas will be responsible for transportation of boats. In addition to troops from Division, Rangers already deputed at Bahawalnagar, may also be called to further assist the civil administration, during all Rescue, Relief and Rehabilitation Operations.

7.14 DUTIES OF TELEPHONE ATTENDANT.

There must be Telephone and Wireless facilities while briefly.

7.15 WIRELESS ARRANGEMENTS.

There must be Telephone and Wireless facilities while briefly.

CHAPTER NO.8

DETAIL OF ENCROACHMENT.

There is no encroachment site in this Division.

Total No. of Encroachment	Remove Encroachment	Balance Encroachment	To Taken action of Encroachment
NIL	NIL	NIL	NIL

Executive Engineer
Hakra Canal Division
Bahawalnagar

CHAPTER NO. 9

DUTY ROSTER/ FLOOD FIGHTING PROGRAMME.

The Sub Divisional Officer Fortabbas and concerned Sub Engineer will remain present at site for 24 hours.

- The information is not adequate.
- It is correct that any reason has not previously bear explained.
- But even then there must be flood fighting Program and duty roster must be maintained because nothing can be said about occurrence of natural calamity.

Executive Engineer
Hakra Canal Division
Bahawalnagar

Chapter No. 10

EMERGENCY TELEPHONE NO'S.

S.#	Designation	Phone No. Office	Phone Res.	Fax no.
1	District Co-Ordination Officer	063-9240201	063-9240203	
2	E.D.O Revenue	063-9240205	063-9240206	
3	D.O Revenue	063-9240209	063-9240210	
4	D.D. O Revenue	063-9240212		
5	District Food Controller	063-9240089		
6	District Officer Civil Defence Bahawalnagar	063-9240096		
7	District Police Officer Bahawalnagar	063-9240055	063-9240066	
8	Deputy Superintendent Police Fortabbas.	063-2510912		

TELEPHONE NUMBERS OF IRRIGATION DEPARTMENT

S.#	Designation	Phone No. Office	Phone Res.	Fax No.
1	Secretary I&P Department Lahore	042-99212117	042-99203037	042-99212116
2	Chief Engineer Drainage & Flood Lahore	042-99230602		04299230731
3	Director Flood Lahore	042-99231614		
4	Chief Engineer Irrigation Bahawalpur	062-9250333	0300-6746032	062-9250263
5	Superintending Engineer Bahawalnagar Canal Circle	063-9240226	0345-6500439	063-9240228
6	Executive Engineer Hakra Division Bahawalnagar	063-9240222	0300-4436614	063-9240221
7	Executive Engineer Sadiqia Division Bahawalnagar	063-9240223	0300-4436614	063-9240223
8	Executive Engineer Fordwah Division Bahawalnagar	063-9240225	0308-1891805	063-9240225
9	Sub Divisional Officer Irrigation Fortabbas.		0301-7993465	
10	Canal Telegraph Office Bahawalnagar.	063-9240232	0334-7038926	063-9240232
11	Sub Engineer Kamrani Section		0300-6336400	

Executive Engineer
Hakra Canal Division
Bahawalnagar

CHAPTER NO. 11

STANDARD OPERATING PROCEDURE (SOP) FOR BREACHING SECTIONS.

11.1 HISTORY OF THE BREACHING SECTION.

Nil

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

Nil

11.3 ARRANGEMENTS OF EXPLOSIVES AND SECURITY OF EXPLOSIVE STORES.

Nil

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

Nil

11.5 DETAIL OF MECHANICAL MEANS AS STAND BY ARRANGEMENTS IN CASE OF DETONATION FAILURE.

Nil

11.6 DUTY ROSTER IN CASE OF CRITICAL SITUATION.

Nil

11.7 BREACHING COMMITTEE WITH THEIR ACTION PLAN.

Nil

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

Nil

11.9 ANNOUNCEMENT AND DETAIL OF EVACUATION ARRANGEMENTS

Nil

Executive Engineer
Hakra Canal Division
Bahawalnagar

11.10 DETAIL OF COORDINATION WITH CIVIL / ARMY AUTHORITIES.

- Not relevant information.
- Write about coordination of irrigation department with Civil / Army Authorities.

11.11 PARALLEL COMMUNICATION ARRANGEMENTS.

Nil

11.12 INDEX PLAN.

Not related.

Executive Engineer
Hakra Canal Division
Bahawalnagar

Superintending Engineer
Bahawalnagar Canal Circle
Bahawalnagar

Chief Engineer
Bahawalpur Irrigation Zone
Bahawalpur

FLOOD FIGHTING PLAN 2026

HAKRA CANAL DIVISION

PART "B"

CHAPTER NO.12

VULNERABLE SITES ON FLOOD BUND/ STRUCTURES:-

12.1 APPREHENDED BREACHES IN FLOOD BUNDS/ STRUCTURES

RD: 6+000 To 8+000 of B.C.D Flood Bund.

RD: 41+000 To 42+000 of E.F Flood Bund.

12.2 OPERATION OF BREACHING SECTIONS

NIL

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

No. such occurrence.

Executive Engineer
Hakra Canal Division
Bahawalnagar

CHAPTER NO.13

EMERGENCY CONTINGENCY PLAN FOR VULNERABLE SITE (SITES) LISTED ABOVE. EMERGENCY CONTINGENCY PLAN MUST INCLUDE:

SITE No.1

Emergency Contingency Plan for Vulnerable Site at BCD FLOOD BUND RD. 6+000 TO 8+000

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

Plan showing route of flood water coming out of the breach is attached at Page No. 26

Executive Engineer
Hakra Canal Division
Bahawalnagar

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

Source of problem	Location of Head quarter	Area of Sector
River Ghagra	Tehsil Fortabbas	Village 243 Hakra Left.
		Village 242 Hakra Left.
		Village 241 Hakra Left.
		Village 240 Hakra Left.

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

Camp will be established at RD 7+000

Name of Sector	Name of Relief Camps & Resource Person	Area of Relief Camp (Ft2)	No, of rooms in relief Camp
Tehsil Fortabbas	G.H. Boy School at RD. 0+000 of B.C.D flood bund	1200 Sft	

13.3.3 DUTIES OF OFFICERS/ OFFICIALS AND THEIR CAMPS SITES

Site Camp No.	Officer Designation with cell number	Official Designation with cell number
1	Muhammad Asghar Sub Divisional Officer Fortabbas 0301-7993465	Ali Akbar Sub Engineer Kamrani Section 0300-6336400
		Mate 1 No. Beldar 5 No.

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13.3.4 DEPARTMENTAL MACHINERY AVAILABLE.

Departmental Machinery is not available.

13.3.5 MACHINERY AVAILABLE FROM PRIVATE SOURCE

If needed it will be arranged from private sources.

13.3.6 FLOOD FIGHTING MATERIAL REQUIRED (Site 1)
13.3.7 FLOOD FIGHTING MATERIAL AVAILABLE (Site 1)

Sr. No.	Item	Unit	Total Required Quantity	Available Quantity	Balance Quantity	Remarks
1	Shouldari / Tent	No.	01	0	01	Will be Purchased before coming of Flood Season 2026
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 Sheets	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	Walke Talkie Set	Set	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.	1	0	1	
27	Wire crates (3x3x3) (at only those camp near river action and reserve stock exists)	No.	100	0	100	

13.4 DETAIL OF OTHER INFRASTRUCTURE LIKE ELECTRIC, SUI GAS, TELEPHONE INSTALLATION, ROAD NETWORK, OTHER BUILDINGS, CANALS AND DRAINAGE NETWORK.

1.	Electric Pole	Not exist in the area.
2.	Sui Gas.	Not exist in the area.
3.	Telephone Installation.	Not exist in the area.
4.	Road Network.	Kacha / Soling.
5.	Buildings.	Not exist in the area.
6.	Canals.	Hakra Left Disty, Flood Channel, 1-AL Flood Channel & 1-L Flood Channel.
7.	Drainage Network.	Not exist in the area.

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SITE No.2

Emergency Contingency Plan for Vulnerable Site at EF Flood Bund RD. 41+000 to 42+000

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

Plan showing route of flood water coming out of the breach is attached at Page No. 32

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

Source of problem	Location of Head quarter	Area of Sector
River Ghagra	Tehsil Fortabbas	Village 243 Hakra Left.
		Village. 242 Hakra Left.
		Village. 241 Hakra Left.
		Village. 240 Hakra Left.

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

Camp will be established at RD 41+000

Name of Sector	Name of Relief Camps & Resource Person	Area of Relief Camp (Ft2)	No, of rooms in relief Camp
Tehsil Fortabbas	Canal Rest House Wallhar Fortabbas at RD.1+000 of B.C.D flood bund	1500 Sft	

13.3.3 DUTIES OF OFFICERS/ OFFICIALS AND THEIR CAMPS SITES

Site Camp No. 2	Officer Designation with cell number	Official Designation with cell number
	Muhammad Asghar Sub Divisional Officer Fortabbas 0301-7993465	Ali Akbar Sub Engineer Kamrani Section 0300-6336400
		Mate 1 No. Beldar 5 No.

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13.3.4 DEPARTMENTAL MACHINERY AVAILABLE

Departmental Machinery is not available.

13.3.5 MACHINERY AVAILABLE FROM PRIVATE SOURCE

Not Required

13.3.6 FLOOD FIGHTING MATERIAL REQUIRED (Site 2)
13.3.7 FLOOD FIGHTING MATERIAL AVAILABLE(site 2)

Sr. No.	Item	Unit	Total Required Quantity	Available Quantity	Balance Quantity	Remarks
1	Shouldari / Tent	No.	01	0	01	Will be Purchased before coming of Flood Season 2026
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 Sheets	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	Walke Talkie Set	Set	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.	1	0	1	
27	Wire crates (3x3x3) (at only those camp near river action and reserve stock exists)	No.	100	0	100	

13.4 DETAIL OF OTHER INFRASTRUCTURE LIKE ELECTRIC, SUI GAS, TELEPHONE INSTALLATION, ROAD NETWORK, OTHER BUILDINGS, CANALS AND DRAINAGE NETWORK.

1- Electric Pole	Not exist in the area.
2- Sui Gas.	Not exist in the area.
3- Telephone Installation.	Not exist in the area.
4- Road Network.	Kacha / Soling.
5- Buildings.	Not exist in the area.
6- Canals.	Hakra Left Disty, Flood Channel 1-AL Flood Channel & 1-L Flood Channel.
7- Drainage Network.	Not exist in this area.

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CHAPTER NO.14

ACTION PLAN

14.1 Re-shuffling/recouping plan of reserve stone departmentally

Not Required

14.2 Detail of inlet/outlet crossing along with closing methodology

OUTLETS OF HAKRA LEFT DISTY CROSS UNDER BCD FLOOD BUND				OUTLETS OF FLOOD CHANNEL DISTY CROSS UNDER EF FLOOD BUND			
S.#	**Outlet RD**	**Side**	**Remarks**	**S.#**	**Outlet RD**	**Side**	**Remarks**
1	380	L	Under BCD Flood Bund	1	36690	L	Under EF Flood Bund
2	1380	L	Under BCD Flood Bund	2	37000	L	Under EF Flood Bund
3	3388	L	Under BCD Flood Bund	3	48353	L	Under EF Flood Bund
4	6200	L	Under BCD Flood Bund	4	42000	L	Under EF Flood Bund
5	8550	L	Under BCD Flood Bund				
6	11100	L	Under BCD Flood Bund				
7	13558	L	Under BCD Flood Bund				
8	16054	L	Under BCD Flood Bund				
9	18640	L	Under BCD Flood Bund				

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14.3 Deployment Machinery (Normal to low flood)

(Not Required)

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

14.4 Deployment of Machinery (Medium to high flood)

(Not Required)

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

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

(Not Required)

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

14.6 Police deployment plan

DUTY ROASTER FOR POLICE AND RANGERS DURING FLOOD SEASON.

S.#	Vulnerable sites used for illegal cuts during floods.	Concerned Canal Division	Concerned Police Station & District.	Police personal to be deployed		Remarks (if any)
				Inspector/SI/ASI	Constables	
1	BCD Flood Bund RD. 6+000 to 8000	Hakra Division	Fortabbas City	1 No. ASI	4 No. Constables	
2	EF Flood Bund RD: 41+000 to 42+000.	Hakra Division	Fortabbas City	1 No. ASI	4 No. Constables	

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Bahawalnagar

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

VERY HIGH EXCEPTIONALLY HIGH STAGE IN BAHAWALPUR ZONE

S.#	Vulanerane Reach	Camp Location	Site incharge by name & cell No.	Synthetic bags with a capacity of 50 Kg and 100 Kg (REQUIRED)	Plastic Sheets Black Colour (REQUIRED)	AVAILABLE
1	Rd. 6+000 to 8+000 of B.C.D Flood Bund	Rd. 6+000 to 8+000 of B.C.D Flood Bund	Muhammad Asghar Sub Divisional Officer Fortabbas 0301-7993465	100+100	200 Meter	NIL
2	RD. 41+000 to 42+000 of E.F Flood Bund	Rd. 41+000 to 42+000 of E.F Flood Bund	Muhammad Asghar Sub Divisional Officer Fortabbas 0301-7993465	100+100	200 Meter	NIL

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

VERY HIGH EXCEPTIONALLY HIGH STAGE IN BAHAWALPUR ZONE

S.#	Vulanerane Reach	Camp Location	Site incharge by name & cell No.	Synthetic bags with a capacity of 500 Kg and 1000 Kg (REQUIRED)	Plastic Sheets Black Color (REQUIRED)	AVAILABLE
1	Rd. 6+000 to 8+000 of B.C.D Flood Bund	Rd. 6+000 to 8+000 of B.C.D Flood Bund	Muhammad Asghar Sub Divisional Officer Fortabbas 0301-7993465	100+100	200 Meter	NIL
2	Rd. 41+000 to 42+000 of E.F Flood Bund	Rd. 41+000 to 42+000 of E.F Flood Bund	Muhammad Asghar Sub Divisional Officer Fortabbas 0301-7993465	100+100	200 Meter	NIL

Executive Engineer
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Bahawalnagar

14.9 Recommendations for Operation During Flood.

Recommendations for Operation During Flood

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

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

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

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

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

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

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

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

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

SE MBW

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.

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

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

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

(Imtiaz Hussain)
Member / SE, Bahawalpur Canal Circle

(Sammar Iqbal)
Member / SE, LCC(West) Canal Circle, Faisalabad

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

(Mudassar Rehan)
Member / SE Link Circle, Lahore

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

CHAPTER NO. 15

BACK UP DIVISION (IN CASE OF ANY BREACH)

In case of any eventuality/ breach, **Sadiqia Canal Division** will serve as Back up Division of Hakra Canal Division.

Executive Engineer	**Superintending Engineer**	**Chief Engineer**
Hakra Canal Division	Bahawalnagar Canal Circle	Bahawalpur Irrigation Zone
Bahawalnagar	Bahawalnagar	Bahawalpur