

Executive Summary

- During July 2023, 32 No. Villages in District Karnal were affected from heavy flood. 3.60 lakh cusecs discharge was received in River Yamuna due to which breaches occurred at RD 41500 Garhpur Tapu and at RD 47500 Samaspur in River embankment.
- Due to high intensity of flow of River Yamuna water towards Haryana side and long duration of high flood discharge to the tune of 3.60 Lac cusecs, it hit the Dhanaura Bund directly and two No. breaches at RD 41500' & 47500' of Dhanaura Bund occurred.
- Immediately the works of plugging of Breaches were started on both the sites by deploying maximum No. of machinery, labour & other Resources. The plugged breaches were further strengthened and protected by placing earth filled EC bags in MS wire crates at the toe of river Embankment as well as pitching on river side slope.
- Due to continuous flood in river Yamuna heavy scouring occurred at Lalupura complex and big loops were formed between the existing stone studs/structures, which outflanked the existing studs and the pressure of water came on the Old Shanks and started damaging the Old Shanks/Spurs.
- However, best efforts were made by taking continuous preventive/protective measures to check scouring as given below: -
 - ❖ Strengthening of existing studs/structures by dumping loose stone boulders carried from Charkhi Dadri Quarry and Coal Boulders from NFL Panipat and Thermal Power Plant Panipat.
 - ❖ Protection of River Active edge by killa bushing with wooden ballies.
 - ❖ Protection of River Active edge by making ballie spurs between the existing studs to divert the flow of River Yamuna.
 - ❖ Laying of earth filled EC bags in MS wire crates as well as loose at scoured site.
 - ❖ Deployment of sufficient number of Pocklane/JCB Machines, Tractor Trolleys, Dumpers, other machinery and labours to protect the active river edge, river embankment for the safety of the abadi area and agriculture land at Kalsora, Nabiabad, Dabkoli, Shergarh Tapu, Modipur, Jarouli, Nabipur, Khirajpur, Kundakalan, Dhakwala, Lalupura, Sadarpur, Mundigarhi and Balhera complexes.
- Due to continuous flood in river Yamuna, scouring occurred at various complexes i.e. Kalsora, Nabiabad, Dabkoli, Shergarh Tapu, Modipur, Jarouli, Nabipur, Khirajpur, Kundakalan, Dhakwala, Sadarpur, Mundigarhi, Balhera etc.

- Due to scouring big loops were formed between the existing stone studs/structures which damaged the number of studs even outflanked the existing studs.
- For the above said flood works, expenditure of Rs. 9,69,52,654/- has been incurred for plugging the breaches in a length of 506 feet and filling of scouring portion in a length of 45,700 feet.
- The following works have been proposed after flood 2023 in 55th meeting of Haryana State Drought Relief & Flood Control Board held on 30.10.2023:-

Sr. No.	Description of work	Estimated cost. in lakhs
1.	Providing protection to Dhanaura embankment of river Yamuna by providing brick pitching on inner side slope from RD 41300 to 41700 & 47290 to 47730 for protection of the village abadi and agriculture land .	22.00
2.	Providing protection to Kalsora Complex of River Yamuna by repairing 03 No. old damaged stone studs and construction of 1500' new stone revetment to protect the agriculture land.	400.00
3.	Providing protection to Nabiabad complex by repairing of 08 No. old damaged stone studs and construction of stone revetment of 600' to protect the agriculture land on river Yamuna	300.00
4.	Providing protection to Jarauli complex by constructing 04 No. new stone stud to protect agricultural land .	125.00
5.	Providing protection to Khirajpur complex by constructing 490' Stone Revetment and repairing of 4 No. old Stone studs to protect river embankment and abadi area	400.00
6.	Providing protection to Kundakalan Complex by constructing 03 No. new stone studs and 600' stone revetment and repair of 7 No. old damaged stone studs to protect abadi area	450.00
7.	Providing protection to Dhakwala complex by constructing 02 No. new Stone Studs and 2139' Stone Revetment to protect the abadi area and agriculture land..	450.00
8.	The work of providing protection to Lalupura Complex of river Yamuna by repairing 07 No. old damaged stone studs and construction of 02 No. new stone studs(As per design adopted by Irrigation Deptt. of Uttar Pradesh state) and 3300' new stone revetment.	1200.00
9.	The work of providing protection to Sadarpur Complex of river Yamuna by repairing 02 No. old damaged stone studs and construction of 675' new stone revetment to protect abadi area and agriculture land.	130.00
	Total Estimated Amount	3477.00

**Note for Pad
Starred Assembly Question No. 23**

It is submitted that during July 2023, heavy flood to the tune of 3.60 lakh cusecs discharge was received in River Yamuna due to which breaches occurred at RD 41500 Garhpur Tapu and at RD 47500 Samaspur in River embankment. The flood affected 32 No. Villages in District Karnal i.e. Chaugaon, Nabiabad, Chandraon, Japti Chappra, Said Chhapra, Nangal, Kalsora, Labkari, Randoli, Nangal, Biana, Garhpur Tapu, Dera Sikligar, Nagli and Kamalpur Gadrian, Hansu Majra, Khirajpur, Kundakalan, Jammukhala, Lalupura, Mustafabad, Nagli, Smaspur, Mussepur, Gheer, Biana, Dabkoli, Choupura, Halwana, Mughal Majra etc.

The detail of breaches is as under: -

- **Breaches at RD 41500' & 47500', Dhanaura Bund:** - Due to high intensity of flow of River Yamuna water towards Haryana side and long duration of high flood discharge to the tune of 3.60 Lac cusecs, it hit the Dhanaura Bund directly and two No. breaches at RD 41500' & 47500' of Dhanaura Bund occurred. Immediately the works of plugging of Breaches were started on both the sites by deploying maximum No. of machinery, labour & other Resources. The plugged breaches were further strengthened and protected by placing earth filled EC bags in MS wire crates at the toe of river Embankment as well as pitching on river side slope.
- **Scouring at Lalupura complex of river Yamuna in District Karnal:** - Due to continuous flood in river Yamuna heavy scouring occurred at Lalupura complex and big loops were formed between the existing stone studs/structures, which outflanked the existing studs and the pressure of water came on the Old Shanks and started damaging the Old Shanks/Spurs.

However, best efforts were made by taking continuous preventive/protective measures to check scouring as given below: -

- ❖ Strengthening of existing studs/structures by dumping loose stone boulders carried from Charkhi Dadri Quarry and Coal Boulders from NFL Panipat and Thermal Power Plant Panipat.
- ❖ Protection of River Active edge by killa bushing with wooden ballies.

- ❖ Protection of River Active edge by making ballie spurs between the existing studs to divert the flow of River Yamuna.
 - ❖ Laying of earth filled EC bags in MS wire crates as well as loose at scoured site.
 - ❖ Deployment of sufficient number of Pocklane/JCB Machines, Tractor Trolleys, Dumpers, other machinery and labours to protect the active river edge, river embankment for the safety of the abadi area and agriculture land at Kalsora, Nabiabad, Dabkoli, Shergarh Tapu, Modipur, Jarouli, Nabipur, Khirajpur, Kundakalan, Dhakwala, Lalupura, Sadarpur, Mundigarhi and Balhera complexes.
- **Scouring at other various complexes of river Yamuna in District Karnal:** - Due to continuous flood in river Yamuna heavy scouring occurred at various complexes i.e. Kalsora, Nabiabad, Dabkoli, Shergarh Tapu, Modipur, Jarouli, Nabipur, Khirajpur, Kundakalan, Dhakwala, Sadarpur, Mundigarhi, Balhera etc. Due to scouring big loops were formed between the existing stone studs/structures which damaged the number of studs even outflanked the existing studs.
- For the above said flood works, expenditure of Rs. 9,69,52,654/- has been incurred for plugging the breaches in a length of 506 feet and filling of scouring portion in a length of 45,700 feet.

The following works have been proposed after flood 2023 in 55th meeting of Haryana State Drought Relief & Flood Control Board held on 30.10.2023: -

Sr. No.	Description of work	Estimated cost. in lakhs
1.	Providing protection to Dhanaura embankment of river Yamuna by providing brick pitching on inner side slope from RD 41300 to 41700 & 47290 to 47730 for protection of the village abadi and agriculture land .	22.00
2.	Providing protection to Kalsora Complex of River Yamuna by repairing 03 No. old damaged stone studs and construction of 1500' new stone revetment to protect the agriculture land.	400.00
3.	Providing protection to Nabiabad complex by repairing of 08 No. old damaged stone studs and construction of stone revetment of 600` to protect the agriculture land on river Yamuna	300.00
4.	Providing protection to Jarauli complex by constructing 04 No. new stone stud to protect agricultural land .	125.00

Sr. No.	Description of work	Estimated cost. in lakhs
5.	Providing protection to Khirajpur complex by constructing 490' Stone Revetment and repairing of 4 No. old Stone studs to protect river embankment and abadi area	400.00
6.	Providing protection to Kundakalan Complex by constructing 03 No. new stone studs and 600' stone revetment and repair of 7 No. old damaged stone studs to protect abadi area	450.00
7.	Providing protection to Dhakwala complex by constructing 02 No. new Stone Studs and 2139' Stone Revetment to protect the abadi area and agriculture land.	450.00
8.	The work of providing protection to Lalupura Complex of river Yamuna by repairing 07 No. old damaged stone studs and construction of 02 No. new stone studs(As per design adopted by Irrigation Deptt. of Uttar Pradesh state) and 3300' new stone revetment.	1200.00
9.	The work of providing protection to Sadarpur Complex of river Yamuna by repairing 02 No. old damaged stone studs and construction of 675' new stone revetment to protect abadi area and agriculture land.	130.00
	Total Estimated Amount	3477.00

पैड के लिए नोट
विधानसभा तारांकित प्रश्न संख्या 23

यह प्रस्तुत किया गया है कि जुलाई 2023 के दौरान, यमुना नदी में 3.60 लाख क्यूसेक डिस्चार्ज की भारी बाढ़ आई थी, जिसके कारण नदी के तटबंध बुर्जी संख्या 41500 गढ़पुर टापू और बुर्जी संख्या 47500 समसपुर पर टूट गए थे। बाढ़ से करनाल जिले के 32 गांव प्रभावित हुए हैं, जिनमें चौगांव, नबियाबाद, चंद्रांव, जप्ती छपड़ा, सैद छपड़ा, नंगल, कलसोरा, लबकरी, रंडोली, नंगल, ब्याना, गढ़पुर टापू, डेरा सिकलीगर, नगली और कमालपुर गडरियन, हंसू माजरा, खिराजपुर, कुंडकलां, जम्मुखाला, लालूपुरा, मुस्तफाबाद, नगली, समसपुर, मुस्सेपुर, घीड़, ब्याना, डबकोली, चौपुरा, हलवाना, मुगल माजरा आदि शामिल हैं।

कटाव (breaches) का विवरण इस प्रकार है:—

- **धनौरा बांध की बुर्जी संख्या 41500 और बुर्जी संख्या 47500 पर कटाव:** — हरियाणा की ओर यमुना नदी का पानी का प्रवाह की उच्च तीव्रता और 3.60 लाख क्यूसेक की लंबी अवधि के उच्च बाढ़ निर्वहन के कारण, सीधे धनौरा बांध से टकराया और धनौरा बांध के बुर्जी संख्या 41500 और बुर्जी संख्या 47500 पर टूट गया। तुरंत ही अधिकतम मशीनरी, श्रम और अन्य संसाधनों को तैनात करके दोनों साइटों पर बांध को भरने का काम शुरू कर दिया गया। नदी के तटबंध के सिरे पर एमएस वायर क्रेट में मिट्टी से भरे बैग रखकर और साथ ही नदी के किनारे ढलान पर पिचिंग करके, बांधों को और अधिक मजबूत और संरक्षित किया गया।
- **जिला करनाल में यमुना नदी के लालूपुरा कॉम्प्लैक्सों पर कटाव:** — यमुना नदी में लगातार बाढ़ के कारण लालूपुरा कॉम्प्लैक्स पर भारी कटाव हुआ और मौजूदा पत्थर के स्टड/संरचनाओं के बीच बड़े-बड़े लूप बन गए, जो मौजूदा स्टड से बाहर निकल गए और पानी का दबाव ओल्ड शैंक्स पर आ गया और पुराने शैंक्स/स्पर्स को नुकसान पहुंचाना शुरू कर दिया।

हालाँकि, नीचे दिए गए अनुसार कटाव को रोकने के लिए निरंतर निवारक/सुरक्षात्मक उपाय करके सर्वोत्तम प्रयास किए गए: —

- ❖ चरखी दादरी खदान से लाए गए पत्थर (बोल्डर) और एनएफएल पानीपत और थर्मल पावर प्लांट पानीपत से कोयला पत्थर (बोल्डर) को डंप करके मौजूदा स्टड/संरचनाओं को मजबूत किया गया।
- ❖ लकड़ी की बल्लियों के साथ झाड़ी लगाकर नदी के सक्रिय किनारे की सुरक्षा की गई।

- ❖ यमुना नदी के प्रवाह को मोड़ने के लिए मौजूदा स्टडों के बीच बल्ली स्पर बनाकर नदी के सक्रिय किनारे की सुरक्षा की गई।
 - ❖ एमएस वायर क्रेट्स में मिट्टी से भरे ईसी बैग बिछाए और साथ ही कटाव हुए स्थान पर लगाए गए।
 - ❖ कलसोरा, नबियाबाद, डबकोली, शेरगढ़ टापू, मोदीपुर जरौली, नबीपुर, खिराजपुर, कुंडाकलां, ढाकवाला, लालपुरा, सदरपुर, मुंडीगढ़ी और बल्हेरा परिसर में आबादी क्षेत्र और कृषि भूमि की सुरक्षा के लिए सक्रिय नदी किनारे, नदी तटबंध की सुरक्षा के लिए पर्याप्त संख्या में पॉकलेन/जेसीबी मशीनें, ट्रैक्टर ट्रॉली, डंपर, अन्य मशीनरी और मजदूरों की तैनाती की गई।
- **जिला करनाल में यमुना नदी के अन्य विभिन्न परिसरों में कटाव:** – यमुना नदी में लगातार बाढ़ के कारण विभिन्न कॉम्प्लैक्सों यानी कलसोरा, नबियाबाद, डबकोली, शेरगढ़ टापू, मोदीपुर, जरौली, नबीपुर, खिराजपुर, कुंडाकलां, ढाकवाला, सदरपुर, मुंडीगढ़ी, बल्हेरा आदि में भारी कटाव हुआ। कटाव के कारण मौजूदा पत्थर के स्टड/संरचनाओं के बीच बड़े-बड़े लूप बन गए, जिससे क्षतिग्रस्त हुए और मौजूदा स्टड अपनी जगह से खिसक गए।
- उपरोक्त बाढ़ कार्य हेतु 506 फीट की लंबाई में तटबंध को भरने और 45,700 फीट की लंबाई में कटाव वाले हिस्से को भरने के लिए 9,69,52,654/- रुपये खर्च किए गए हैं।

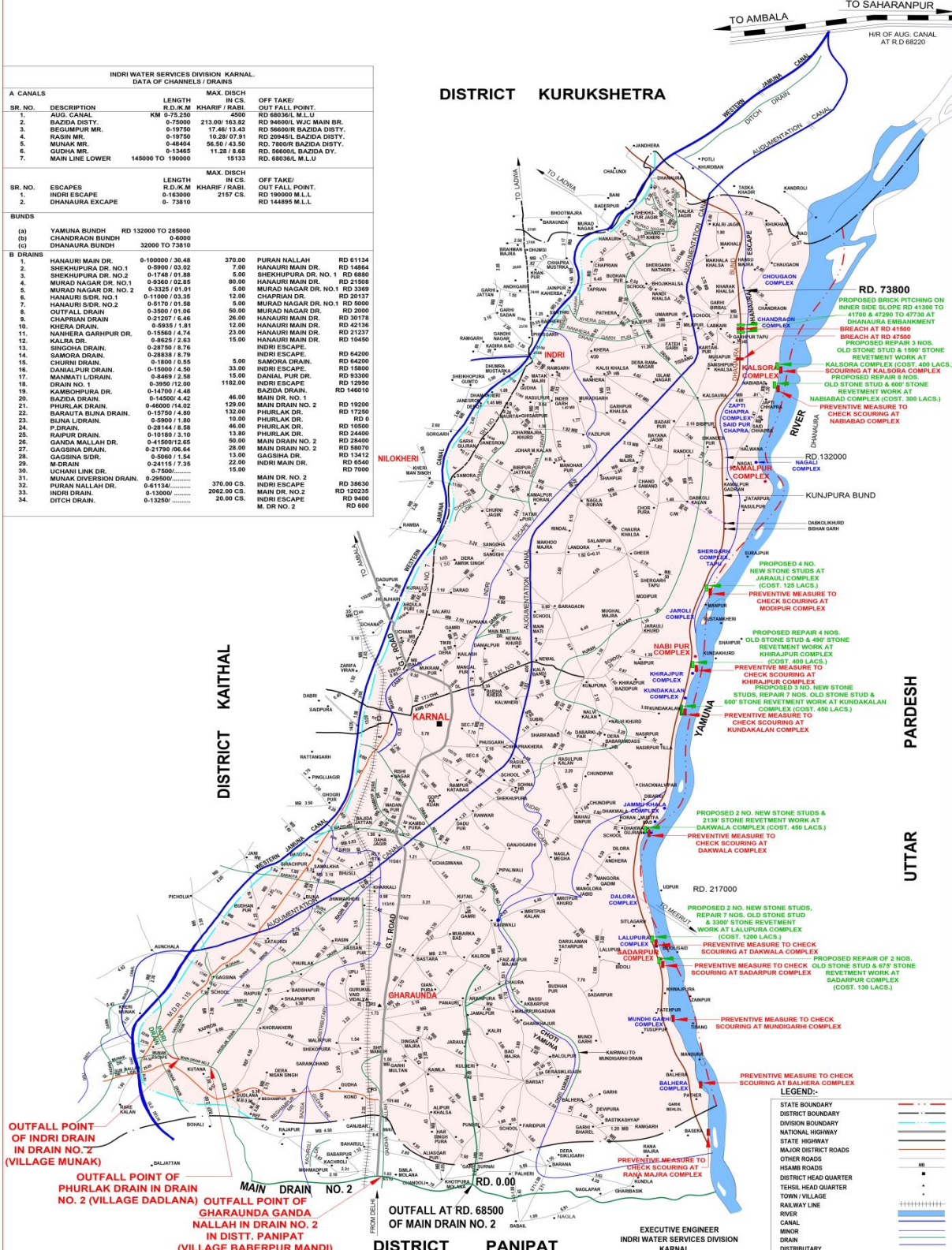
दिनांक 30.10.2023 को आयोजित हरियाणा राज्य सूखा राहत एवं बाढ़ नियंत्रण बोर्ड की 55वीं बैठक में वर्ष 2023 की बाढ़ के बाद निम्नलिखित कार्य प्रस्तावित किए गए हैं:-

Sr. No.	Description of work	Estimated cost. in lakhs
1.	Providing protection to Dhanaura embankment of river Yamuna by providing brick pitching on inner side slope from RD 41300 to 41700 & 47290 to 47730 for protection of the village abadi and agriculture land .	22.00
2.	Providing protection to Kalsora Complex of River Yamuna by repairing 03 No. old damaged stone studs and construction of 1500' new stone revetment to protect the agriculture land.	400.00
3.	Providing protection to Nabiabad complex by repairing of 08 No. old damaged stone studs and construction of stone revetment of 600' to protect the agriculture land on river Yamuna	300.00
4.	Providing protection to Jarauli complex by constructing 04 No. new stone stud to protect agricultural land .	125.00
5.	Providing protection to Khirajpur complex by constructing 490' Stone Revetment and repairing of 4 No. old Stone studs to	400.00

Sr. No.	Description of work	Estimated cost. in lakhs
	protect river embankment and abadi area	
6.	Providing protection to Kundakalan Complex by constructing 03 No. new stone studs and 600' stone revetment and repair of 7 No. old damaged stone studs to protect abadi area	450.00
7.	Providing protection to Dhakwala complex by constructing 02 No. new Stone Studs and 2139' Stone Revetment to protect the abadi area and agriculture land.	450.00
8.	The work of providing protection to Lalupura Complex of river Yamuna by repairing 07 No. old damaged stone studs and construction of 02 No. new stone studs(As per design adopted by Irrigation Deptt. of Uttar Pradesh state) and 3300' new stone revetment.	1200.00
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	Total Estimated Amount	3477.00

INDEX PLAN INDRI WATER SERVICES DIVISION, KARNAL

INDRI WATER SERVICES DIVISION KARNAL. DATA OF CHANNELS / DRAINS				
A. CANALS				
SR. NO.	DESCRIPTION	LENGTH R.D./K.M.	MAX. DISCH KHARIF / RABLI	OFF TAKE/ OUT FALL POINT.
1.	AUG. CANAL	0-795.250	4500	RD 86036/L.M.L.U.
2.	BAZIDA DISTY.	0-79000	213.00/163.82	RD 86060/W.C. MAIN BR.
3.	BEGUNPUR MR.	0-19750	17.46/13.43	RD 86000/R BAZIDA DISTY.
4.	RASIN MR.	0-19750	10.26/07.91	RD 20945/L BAZIDA DISTY.
5.	MUNAK MR.	0-48424	56.50/43.50	RD 7800/R BAZIDA DISTY.
6.	GUDHA MR.	0-15465	11.25/7.58	RD 86060/L BAZIDA DY.
7.	MAIN LINE LOWER	145000 TO 150000	15133	RD 86036/L.M.L.U.
SR. NO. ESCAPES				
SR. NO.	DESCRIPTION	LENGTH R.D./K.M.	MAX. DISCH KHARIF / RABLI	OFF TAKE/ OUT FALL POINT.
1.	INDRI ESCAPE	0-163000	2157 CS.	RD 19000 M.L.L.
2.	DHANAURA ESCAPE	0-73810		RD 144895 M.L.L.
BUNDS				
(a)	YAMUNA BUNDH	RD 132000 TO 280000		
(b)	CHANDRON BUNDH	0-40000		
(c)	DHANAURA BUNDH	32000 TO 73810		
B DRAINS				
SR. NO.	DESCRIPTION	LENGTH R.D./K.M.	MAX. DISCH KHARIF / RABLI	OFF TAKE/ OUT FALL POINT.
1.	HANAURI MAIN DR.	0-10000/30.48	370.00	PURAN NALLAH RD 61134
2.	SHEKHUPURA DR. NO.1	0-5900/10.02	7.00	HANAURI MAIN DR. RD 14864
3.	SHEKHUPURA DR. NO.2	0-1748/01.88	8.00	SHEKHUPURA DR. NO.1 RD 6880
4.	MURAD NAGAR DR. NO.1	0-8360/10.25	80.00	HANAURI MAIN DR. RD 21508
5.	MURAD NAGAR DR. NO.2	0-3325/01.91	5.00	MURAD NAGAR DR. NO.1 RD 3369
6.	HANAURI SDR. NO.1	0-11000/03.35	12.00	CHAPRIAN DR. RD 20137
7.	HANAURI SDR. NO.2	0-8170/01.28	5.00	MURAD NAGAR DR. NO.1 RD 2090
8.	CUTFALL DRAIN	0-3500/01.05	50.00	MURAD NAGAR DR. NO.2 RD 2000
9.	CHAPRIAN DRAIN	0-21207/6.46	28.00	HANAURI MAIN DR. RD 30178
10.	KHERA DRAIN	0-9535/1.81	12.00	HANAURI MAIN DR. RD 42134
11.	NANHERA GARHPUR DR.	0-15580/4.74	23.00	HANAURI MAIN DR. RD 21237
12.	KALDA DR.	0-8625/2.63	15.00	HANAURI MAIN DR. RD 10450
13.	SINGOHA DRAIN.	0-28750/8.76		INDRI ESCAPE. RD 64200
14.	SAMORA DRAIN.	0-28838/8.79		INDRI ESCAPE. RD 64200
15.	CHURRI DRAIN.	0-1800/0.55	5.00	SAMORA DRAIN. RD 15800
16.	DANALPUR DRAIN.	0-18000/4.50	33.00	INDRI ESCAPE. RD 15800
17.	MANMATHI LIDRAIN.	0-8469/2.58	15.00	DANAL PUR DR. RD 83300
18.	DRAIN NO. 1	0-3950/12.00	1182.00	INDRI ESCAPE. RD 12950
19.	KAMBHUPURA DR.	0-14700/4.48	50.00	BAZIDA DRAIN. RD 140010
20.	BAZIDA DRAIN.	0-14500/4.42	46.00	MAIN DR. NO.1 RD 10200
21.	PHURLAK DRAIN.	0-46000/14.02	129.00	MAIN DRAIN NO. 2 RD 17250
22.	BARAULTA BUNA DRAIN.	0-10750/4.80	132.00	PHURLAK DR. RD 0
23.	BUNA LIDRAIN.	0-9900/1.80	10.00	PHURLAK DR. RD 0
24.	P DRAIN.	0-28144/8.58	46.00	PHURLAK DR. RD 10500
25.	RAPUR DRAIN.	0-10180/3.10	13.50	PHURLAK DR. RD 24400
26.	GANDA MALLAH DR.	0-41500/12.85	50.00	MAIN DRAIN NO. 2 RD 28400
27.	GAGSINA DRAIN.	0-21780/56.64	28.00	MAIN DRAIN NO. 2 RD 80070
28.	GAGSINA SDR.	0-5980/1.54	13.00	GAGSINA DR. RD 13412
29.	M DRAIN.	0-24115/7.35	22.00	INDRI MAIN DR. RD 6540
30.	UCHANI LINK DR.	0-7500/.....		MAIN DR. NO. 2 RD 7900
31.	MUNAK DIVERSION DRAIN.	0-29500/.....		INDRI ESCAPE. RD 38630
32.	PURAN NALLAH DR.	0-61134/.....	370.00 CS.	INDRI ESCAPE. MAIN DR. NO. 2 RD 20235
33.	INDRI DRAIN.	0-13000/.....	2062.00 CS.	INDRI ESCAPE. RD 9490
34.	DITCH DRAIN.	0-13200/.....	20.00 CS.	INDRI ESCAPE. M. DR. NO. 2 RD 600



OUTFALL POINT OF INDRI DRAIN IN DRAIN NO. 2 (VILLAGE MUNAK)

OUTFALL POINT OF PHURLAK DRAIN IN DRAIN NO. 2 (VILLAGE DADLANA)

OUTFALL POINT OF GHARAUNDA NALLAH IN DRAIN NO. 2 IN DIST. PANIPAT (VILLAGE BABERPUR MANDI)

OUTFALL AT RD. 68500 OF MAIN DRAIN NO. 2