

**Quality of Water of Polluted River stretches in Punjab for the month of October, 2020**  
**Satluj : Roop Nagar to Harike Bridge : Priority I**

S.N.	Point of Sample Collection	Code	Date of receipt in lab	Lab Sample No.	Sample Collected & Analyzed by	pH	DO mg/l	BOD mg/l	Cond $\mu$ s/Cm	T.Coli MPN/100ml	F. Coli MPN/100ml	Free Amm. mg/l	SAR	B mg/l	Quality of water as per DBU	Water Quality Index
1	Ropar Head-Works	1019	07.10.20	SW 1640	ZO Lab Ldh	7.5	8.5	<1	213	930	200	BDL	0.12	0.10	C	S
2	River Satluj D/S of Rishab- Paper Mills	1293	07.10.20	SW 1641	ZO Lab Ldh	7.4	8.5	<1	204	920	360	BDL	0.10	0.29	C	S
3	River Satluj U/S Buddha Nallah	1690	08.10.20	SW 1643	ZO Lab Ldh	7.4	6.7	1.2	221	5800	1100	0.014	0.13	0.13	D	U
4	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	08.10.20	SW 1645	ZO Lab Ldh	6.8	2.8	10	423	17,00,000	8,40,000	BDL	0.79	0.38	E	U
5	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	12.10.20	SW 1667	ZO Lab Ldh	7.4	4.5	3.8	337	1,40,000	70,000	0.020	0.44	0.24	D	U
6	River Satluj at D/s East Bein	1381	09.10.20	SW 1648	ZO Lab Ldh	7.2	4.1	4.8	390	1,70,000	68,000	0.020	0.39	0.30	D	U
7	River Satluj at Harike	1022	09.10.20	SW 1649	ZO Lab Ldh	7.3	7.2	2.2	345	4600	1100	0.011	0.39	0.34	C	S

S.N.	Point of Sample Collection	Code	Date of receipt in lab	Lab Sample No.	Sample Collected & Analyzed by	COD mg/l	Turb NTU	TSS mg/l	TDS mg/l	FDS mg/l	Cl mg/l	SO <sub>4</sub> mg/l	TH mg/l	Ca mg/l	Mg mg/l	T.Alkn mg/l	P.Alkn mg/l	AmnN mg/l	NO <sub>3</sub> -N mg/l	TKN mg/l	PO <sub>4</sub> as P mg/l	F mg/l	Na mg/l	K mg/l
1	Ropar Head-Works	1019	07.10.20	SW 1640	ZO Lab Ldh	<5	3	BDL	123	110	6	10	94	20.8	10.2	78	BDL	BDL	1.4	BDL	BDL	0.30	2.7	1.1
2	River Satluj D/S of Rishab- Paper Mills	1293	07.10.20	SW 1641	ZO Lab Ldh	<5	11	13	115	104	6	11	80	18.4	8.3	74	BDL	BDL	1.6	BDL	BDL	0.39	2.1	1.0
3	River Satluj U/S Buddha Nallah	1690	08.10.20	SW 1643	ZO Lab Ldh	7	70	85	129	112	8	16	94	23.2	8.7	72	BDL	0.9	1.9	1.5	BDL	0.27	2.9	1.4
4	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	08.10.20	SW 1645	ZO Lab Ldh	48	80	134	247	199	40	27	118	26.4	12.6	106	BDL	3.2	2.0	4.1	0.45	0.43	19.7	4.5
5	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	12.10.20	SW 1667	ZO Lab Ldh	22	65	112	198	162	21	20	108	24	11.7	104	BDL	1.3	1.7	1.8	0.36	0.24	10.6	3.0
6	River Satluj at D/s East Bein	1381	09.10.20	SW 1648	ZO Lab Ldh	29	90	148	218	181	28	25	110	24	12.2	108	BDL	2.0	1.1	2.4	0.32	0.26	9.5	3.1
7	River Satluj at Harike	1022	09.10.20	SW 1649	ZO Lab Ldh	14	100	155	188	159	22	23	114	24.8	12.6	92	BDL	1.1	1.6	1.5	0.16	0.28	9.6	3.5

- Note. 1. BDL means Below Method Detection Limit**  
**2. DBU means Designated Best Use (Class-A,B,C,D & E)**  
**3. Water Quality Index ( S means Satisfactory, U means Unsatisfactory)**  
**4. U/s means Upstream , D/s means Downstream**

### Analysis results of Surface water monitoring under NWMP for the month of October, 2020 (Metal/Pesticides)

#### River Satluj

S.N.	Point of Sample Collection	Code	Date of receipt in lab	Lab Sample No.	T.Cr mg/l	Ni mg/l	Fe mg/l	Zn mg/l	Cu mg/l	Pb mg/l	Cd mg/l
1	Ropar Head-Works	1019	07.10.20	SW 1640	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2	River Satluj D/S of Rishab-Paper Mills	1293	07.10.20	SW 1641	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3	River Satluj U/S Buddha Nallah	1690	08.10.20	SW 1643	BDL	BDL	BDL	BDL	BDL	BDL	BDL
4	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	08.10.20	SW 1645	BDL	BDL	2.00	0.14	BDL	BDL	BDL
5	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	12.10.20	SW 1667	BDL	BDL	0.95	0.04	BDL	BDL	BDL
6	River Satluj at D/s East Bein	1381	09.10.20	SW 1648	BDL	BDL	1.08	0.08	BDL	BDL	BDL
7	River Satluj at Harike	1022	09.10.20	SW 1649	BDL	BDL	1.42	0.09	BDL	BDL	BDL

**Note. 1. BDL means Below Method Detection Limit**

**2. Pesticides i.e. Alpha HCH, Beta HCH, Gama HCH, Anilophos, Chloropyrifos, 4,4' DDT, Endosulphan-1, Endosulphan-2, Dieldrin, Aldrin, Methyl Parathion & Malathion were BDL**

## Quality of Water of Polluted River stretches in Punjab for the month of October, 2020

### Ghaggar: Mubarkpur to Sardulgarh: Priority I

S.N.	Point of Sample Collection	Code	Date of receipt in lab	Lab Sample No.	Sample Collected & Analyzed by	pH	DO mg/l	BOD mg/l	Cond $\mu$ s/Cm	T.Coli MPN/ 100ml	F. Coli MPN/ 100ml	Free Amm. mg/l	SAR	B mg/l	Quality of water as per DBDU	Water Quality Index
1	Ghaggar at Mubarikpur Rest House	1023	SW 3147	07/10/2020	H/o Lab Patiala	7.7	4.2	15	625	24000	3400	0.33	1.90	0.30	D	U
2	Ghaggar at Bhankarpur	1295	SW 3148	07/10/2020	H/o Lab Patiala	7.3	3.0	26	851	28000	4900	0.14	2.38	0.45	E	U
3	Ghaggar at Chattbir	1698	SW 3149	07/10/2020	H/o Lab Patiala	7.1	3.1	16	754	28000	4000	0.005	2.31	0.33	E	U
4	Ghaggar at U/s Jharmal Nadi	1702	SW 3150	07/10/2020	H/o Lab Patiala	7.2	2.9	19	826	28000	3800	0.10	2.13	0.29	E	U
5	Ghaggar at D/s Jharmal Nadi	1701	SW 3151	07/10/2020	H/o Lab Patiala	7.3	2.7	25	1082	35000	6300	.013	2.58	0.50	E	U
6	Ghaggar at U/s Dhakanshu Nallah	1699	SW 3153	07/10/2020	H/o Lab Patiala	7.3	3.0	22	938	24000	3400	0.10	2.81	0.50	E	U
7	Ghaggar at D/s Dhakanshu Nallah	1700	SW 3154	07/10/2020	H/o Lab Patiala	7.1	2.8	26	1032	35000	4600	0.005	2.74	0.60	E	U
8	Ghaggar at Rattanheri	1473	SW 3172	09/10/2020	H/o Lab Patiala	7.3	3.0	30	1037	35000	4600	0.14	2.51	0.76	E	U
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	SW 3173	09/10/2020	H/o Lab Patiala	7.5	2.9	27	1002	35000	4000	0.28	2.53	0.72	E	U
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	SW 3174	09/10/2020	H/o Lab Patiala	7.4	2.6	28	1137	35000	4700	0.20	2.46	0.84	E	U
11	Ghaggar at Khanauri	1024	SW 3177	09/10/2020	H/o Lab Patiala	7.5	3.0	22	886	28000	4600	0.29	2.29	0.68	E	U
12	Ghaggar at Moonak	1703	SW 3179	09/10/2020	H/o Lab Patiala	7.4	2.8	24	962	35000	5800	0.22	2.44	0.70	E	U
13	Ghaggar at U/s Sardulgarh	1705	SW 3201	15/10/2020	H/o Lab Patiala	7.9	4.2	19	785	24000	3400	0.47	1.83	0.31	D	U
14	Ghaggar at D/s Sardulgarh	1704	SW 3202	15/10/2020	H/o Lab Patiala	7.8	4.0	23	857	28000	4300	0.40	1.98	0.39	D	U

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1	Ghaggar at Mubarikpur Rest House	1023	07/10/2020	H/o Lab Patiala	71	280	265	406	345	52	23	184	47	16	242	BDL	10.9	1.6	15.3	0.75	1.3	59	32
2	Ghaggar at Bhankarpur	1295	07/10/2020	H/o Lab Patiala	128	360	312	553	470	82	40	316	75	31	256	BDL	13.9	1.5	19.5	2.92	1.4	97	42
3	Ghaggar at Chattbir	1698	07/10/2020	H/o Lab Patiala	78	30	67	490	417	80	27	250	57	26	250	BDL	10.4	1.3	14.6	1.32	1.0	84	33
4	Ghaggar at U/s Jharmal Nadi	1702	07/10/2020	H/o Lab Patiala	96	120	126	537	456	84	33	323	73	34	258	BDL	10.2	1.4	14.3	1.39	1.3	88	37
5	Ghaggar at D/s Jharmal Nadi	1701	07/10/2020	H/o Lab Patiala	121	90	117	703	598	117	50	451	93	53	296	BDL	13.0	1.5	18.2	2.7	1.3	126	52
6	Ghaggar at U/s Dhakanshu Nallah	1699	07/10/2020	H/o Lab Patiala	110	40	66	610	519	88	34	339	78	35	287	BDL	10.3	1.4	14.4	1.7	1.2	119	49
7	Ghaggar at D/s Dhakanshu Nallah	1700	07/10/2020	H/o Lab Patiala	132	45	78	671	570	96	39	421	89	48	298	BDL	10.9	1.6	15.3	1.9	1.3	129	56
8	Ghaggar at Rattanheri	1473	09/10/2020	H/o Lab Patiala	148	35	62	674	573	104	48	440	92	51	294	BDL	14.2	1.5	19.9	2.5	1.2	121	47
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	09/10/2020	H/o Lab Patiala	132	45	75	651	553	100	45	411	87	47	289	BDL	14.0	1.5	19.6	2.3	1.3	118	46
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	09/10/2020	H/o Lab Patiala	137	40	73	682	580	107	50	452	95	52	293	BDL	13.3	1.4	18.6	2.4	1.2	120	48
11	Ghaggar at Khanauri	1024	09/10/2020	H/o Lab Patiala	112	30	50	576	490	78	43	341	77	36	286	BDL	14.4	1.3	20.1	1.9	1.2	97	39
12	Ghaggar at Moonak	1703	09/10/2020	H/o Lab Patiala	120	50	69	625	531	85	47	379	84	41	297	BDL	14.9	1.5	20.9	2.0	1.3	109	46
13	Ghaggar at U/s Sardulgarh	1705	15/10/2020	H/o Lab Patiala	96	100	113	510	434	75	30	292	69	29	273	BDL	10.5	1.2	14.7	1.5	1.1	72	38
14	Ghaggar at D/s Sardulgarh	1704	15/10/2020	H/o Lab Patiala	116	120	129	557	473	79	36	334	76	35	282	BDL	11.3	1.3	15.8	1.8	1.2	83	45

Note. 1. BDL means Below Method Detection Limit

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### Analysis results of Surface water monitoring under NWMP for the month of October, 2020 (Metal/Pesticides)

S.N.	Point of Sample Collection	Code	Date of receipt in lab	Lab Code	T.Cr mg/l	Ni mg/l	Fe mg/l	Zn mg/l	Cu mg/l	Pb mg/l	Cd mg/l	As mg/l	Hg mg/l
1	Ghaggar at Mubarikpur Rest House	1023	07/10/2020	SW 3147	BDL	BDL	2.98	0.22	BDL	BDL	BDL	BDL	BDL
2	Ghaggar at Bhankarpur	1295	07/10/2020	SW 3148	BDL	BDL	5.75	0.44	BDL	BDL	BDL	BDL	BDL
3	Ghaggar at Chattbir	1698	07/10/2020	SW 3149	BDL	BDL	4.78	0.29	BDL	BDL	BDL	BDL	BDL
4	Ghaggar at U/s Jharmal Nadi	1702	07/10/2020	SW 3150	BDL	BDL	4.80	0.25	BDL	BDL	BDL	BDL	BDL
5	Ghaggar at D/s Jharmal Nadi	1701	07/10/2020	SW 3151	BDL	BDL	5.45	0.21	BDL	BDL	BDL	BDL	BDL
6	Ghaggar at U/s Dhakanshu Nallah	1699	07/10/2020	SW 3153	BDL	BDL	6.90	0.29	BDL	BDL	BDL	BDL	BDL
7	Ghaggar at D/s Dhakanshu Nallah	1700	07/10/2020	SW 3154	BDL	BDL	6.56	0.53	BDL	BDL	BDL	BDL	BDL
8	Ghaggar at Rattanheri	1473	09/10/2020	SW 3172	BDL	BDL	0.49	0.23	BDL	BDL	BDL	BDL	BDL
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	09/10/2020	SW 3173	BDL	BDL	0.39	0.27	BDL	BDL	BDL	BDL	BDL
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	09/10/2020	SW 3174	BDL	BDL	0.50	0.30	BDL	BDL	BDL	BDL	BDL
11	Ghaggar at Khanauri	1024	09/10/2020	SW 3177	BDL	BDL	0.48	0.20	BDL	BDL	BDL	BDL	BDL
12	Ghaggar at Moonak	1703	09/10/2020	SW 3179	BDL	BDL	0.52	0.25	BDL	BDL	BDL	BDL	BDL
13	Ghaggar at U/s Sardulgarh	1705	15/10/2020	SW 3201	BDL	BDL	0.49	0.19	BDL	BDL	BDL	BDL	BDL
14	Ghaggar at D/s Sardulgarh	1704	15/10/2020	SW 3202	BDL	BDL	0.58	0.28	BDL	BDL	BDL	BDL	BDL

**Note. 1. BDL means Below Method Detection Limit**

**2. Pesticides i.e. Alpha HCH, Beta HCH, Gama HCH, Anilophos, Chloropyrifos, 4,4' DDT, OP-DDT, Endosulphan-1, Endosulphan-2, Dieldrin, Aldrin, Methyl Parathion & Malathion were BDL.**