

## Quality of Water of Polluted River stretches in Punjab for the month of October, 2021

### 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	12.10.2021	SW 24	ZO Lab Ldh	7.6	7.6	BDL	221	2600	1300	BDL	0.18	0.23	C	S
2	River Satluj D/S of Rishab- Paper Mills	1293	12.10.2021	SW 25	ZO Lab Ldh	7.7	8.1	BDL	210	2700	1700	BDL	0.14	0.28	C	S
3	River Satluj U/S Buddha Nallah	1690	13.10.2021	SW 27	ZO Lab Ldh	7.1	6.0	2.0	257	4700	2100	BDL	0.32	0.52	C	S
4	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	13.10.2021	SW 29	ZO Lab Ldh	6.9	BDL	15	493	46,00,000	17,00,000	BDL	1.14	0.68	E	U
5	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	14.10.2021	SW 31	ZO Lab Ldh	7.1	2.7	6	346	8,40,000	4,30,000	0.001	0.89	0.40	E	U
6	River Satluj at D/s East Bein	1381	14.10.2021	SW 32	ZO Lab Ldh	7.1	2.6	7	438	9,40,000	4,90,000	0.002	1.04	0.35	E	U
7	River Satluj at Harike	1022	14.10.2021	SW 33	ZO Lab Ldh	7.5	6.3	2.8	285	4700	2200	0.028	0.55	0.28	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> P mg/l	F mg/l	Na mg/l	K mg/l
1	Ropar Head-Works	1019	12.10.2021	SW 24	ZO Lab Ldh	BDL	17	26	129	115	9	7	104	25.6	9.7	92	BDL	BDL	1.5	BDL	BDL	0.30	4.2	1.2
2	River Satluj D/S of Rishab- Paper Mills	1293	12.10.2021	SW 25	ZO Lab Ldh	BDL	21	37	123	106	5	5	96	23.2	9.2	90	BDL	BDL	1.7	BDL	BDL	0.39	3.2	1.3
3	River Satluj U/S Buddha Nallah	1690	13.10.2021	SW 27	ZO Lab Ldh	16	105	150	156	132	9	8	126	31.2	11.7	114	BDL	1.3	2.0	1.7	0.22	0.27	8.2	1.7
4	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	13.10.2021	SW 29	ZO Lab Ldh	64	120	241	299	235	46	31	168	41.6	15.6	172	BDL	3.4	2.2	4.5	1.86	0.43	34	5.3
5	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	14.10.2021	SW 31	ZO Lab Ldh	50	90	124	238	196	39	26	150	36	14.6	132	BDL	2.3	1.9	2.9	0.34	0.24	25	3.1
6	River Satluj at D/s East Bein	1381	14.10.2021	SW 32	ZO Lab Ldh	58	95	132	273	216	44	29	156	36.8	15.6	144	BDL	3.9	1.7	5.0	0.68	0.26	30	3.7
7	River Satluj at Harike	1022	14.10.2021	SW 33	ZO Lab Ldh	24	110	170	186	156	21	20	102	25.6	9.2	130	BDL	1.4	1.5	1.8	BDL	0.28	12.7	2.1

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, 2021 (Metal/Pesticides)

#### River Satluj

S.N.	Point of Sample Collection	Code	Date of receipt in lab	Lab Sample No.	T.Cr (mg/l)	Fe (mg/l)	Ni (mg/l)	Zn (mg/l)	Pb (mg/l)	Cd (mg/l)	Cu (mg/l)	Hg (mg/l)	As (mg/l)
6	Ropar Head-Works	1019	12.10.2021	SW 24	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
7	River Satluj D/S of Rishab-Paper Mills	1293	12.10.2021	SW 25	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
8	River Satluj U/S Buddha Nallah	1690	13.10.2021	SW 27	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
9	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	13.10.2021	SW 29	BDL	3.70	0.19	0.47	BDL	BDL	BDL	BDL	BDL
10	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	14.10.2021	SW 31	BDL	2.0	0.12	0.83	BDL	BDL	BDL	BDL	BDL
11	River Satluj at D/s East Bein	1381	14.10.2021	SW 32	BDL	1.26	BDL	0.95	BDL	BDL	BDL	BDL	BDL
12	River Satluj at Harike	1022	14.10.2021	SW 33	BDL	0.72	BDL	BDL	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, 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, 2021**  
**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	6/10/21	SW 5241	H/o Lab Patiala	7.8	6.2	7	415	17000	1700	0.25	1.75	0.30	D	U
2	Ghaggar at Bhankarpur	1295	6/10/21	SW 5242	H/o Lab Patiala	7.8	3.0	15	543	22000	2700	0.30	1.66	0.45	E	U
3	Ghaggar at Chattbir	1698	6/10/21	SW 5243	H/o Lab Patiala	7.6	3.1	16	602	24000	3400	0.24	1.75	0.33	E	U
4	Ghaggar at U/s Jharmal Nadi	1702	6/10/21	SW 5244	H/o Lab Patiala	7.8	4.0	12	490	22000	2600	0.33	1.66	0.29	D	U
5	Ghaggar at D/s Jharmal Nadi	1701	6/10/21	SW 5245	H/o Lab Patiala	7.6	3.3	15	566	28000	3800	0.25	1.66	0.50	E	U
6	Ghaggar at U/s Dhakanshu Nallah	1699	6/10/21	SW 5247	H/o Lab Patiala	7.6	4.0	10	510	22000	3200	0.25	1.59	0.50	D	U
7	Ghaggar at D/s Dhakanshu Nallah	1700	6/10/21	SW 5248	H/o Lab Patiala	7.6	3.1	14	602	24000	3400	0.26	1.81	0.60	E	U
8	Ghaggar at Rattanheri	1473	13/10/21	SW 5265	H/o Lab Patiala	7.9	3.5	13	568	28000	3800	0.63	1.85	0.45	E	U
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	13/10/21	SW 5266	H/o Lab Patiala	7.8	3.6	12	552	28000	3800	0.47	1.86	0.33	E	U
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	13/10/21	SW 5267	H/o Lab Patiala	7.9	3.2	14	597	28000	4000	0.59	1.81	0.29	E	U
11	Ghaggar at Khanauri	1024	13/10/21	SW 5270	H/o Lab Patiala	7.9	3.3	13	553	28000	3900	0.61	1.98	0.50	E	U
12	Ghaggar at Moonak	1703	13/10/21	SW 5272	H/o Lab Patiala	7.9	3.1	15	614	35000	4900	0.64	2.01	0.51	E	U
13	Ghaggar at U/s Sardulgarh	1705	18/10/21	SW 5273	H/o Lab Patiala	7.6	5.9	7	404	17000	2200	0.19	1.59	0.59	D	U
14	Ghaggar at D/s Sardulgarh	1704	18/10/21	SW 5274	H/o Lab Patiala	7.8	5.1	10	426	21000	2400	0.28	1.63	0.99	D	U

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	Ghaggar at Mubarikpur Rest House	1023	6/10/21	SW 5241	H/o Lab Patiala	34	430	428	271	231	26	10	109	27	10	194	BDL	7.0	1.0	9.8	1.2	1.0	42	14
2	Ghaggar at Bhankarpur	1295	6/10/21	SW 5242	H/o Lab Patiala	73	390	392	354	301	47	17	179	45	16	212	BDL	8.6	1.2	12.4	1.4	1.0	51	23
3	Ghaggar at Chattbir	1698	6/10/21	SW 5243	H/o Lab Patiala	81	300	297	392	334	52	19	222	54	21	221	BDL	9.7	1.3	13.6	1.6	1.4	60	26
4	Ghaggar at U/s Jharmal Nadi	1702	6/10/21	SW 5244	H/o Lab Patiala	61	290	228	319	272	35	14	151	39	13	204	BDL	9.4	1.1	13.2	1.4	1.2	47	22
5	Ghaggar at D/s Jharmal Nadi	1701	6/10/21	SW 5245	H/o Lab Patiala	77	310	296	369	315	49	15	200	52	17	216	BDL	9.9	1.2	13.9	1.4	1.0	54	25
6	Ghaggar at U/s Dhakanshu Nallah	1699	6/10/21	SW 5247	H/o Lab Patiala	51	210	243	329	283	41	11	158	42	13	211	BDL	10.1	1.0	14.1	1.3	1.0	46	20
7	Ghaggar at D/s Dhakanshu Nallah	1700	6/10/21	SW 5248	H/o Lab Patiala	69	230	267	393	337	51	18	215	53	20	219	BDL	10.5	1.1	14.7	1.3	1.1	61	27
8	Ghaggar at Rattanheri	1473	13/10/21	SW 5265	H/o Lab Patiala	64	220	249	369	315	45	13	180	44	17	218	BDL	13.9	1.0	19.5	1.4	1.0	57	28
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	13/10/21	SW 5266	H/o Lab Patiala	62	220	243	359	309	43	13	171	42	16	215	BDL	13.4	1.0	18.8	1.4	1.0	56	25
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	13/10/21	SW 5267	H/o Lab Patiala	68	240	257	384	329	48	15	201	49	19	223	BDL	13.1	1.1	18.3	1.5	1.0	59	29
11	Ghaggar at Khanauri	1024	13/10/21	SW 5270	H/o Lab Patiala	63	190	200	358	304	40	13	162	40	15	220	BDL	13.6	1.1	19.0	1.3	1.0	58	28
12	Ghaggar at Moonak	1703	13/10/21	SW 5272	H/o Lab Patiala	70	210	215	397	339	45	19	192	47	18	234	BDL	14.2	1.2	19.9	1.4	1.2	64	33
13	Ghaggar at U/s Sardulgarh	1705	18/10/21	SW 5273	H/o Lab Patiala	38	35	47	263	225	25	10	102	26	9	189	BDL	7.4	1.1	10.4	1.2	1.0	37	14
14	Ghaggar at D/s Sardulgarh	1704	18/10/21	SW 5274	H/o Lab Patiala	49	40	53	277	238	27	10	114	29	10	196	BDL	8.0	1.1	11.2	1.2	1.0	40	15

Note. 1. BDL means Below Method Detection Limit

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3. Water Quality Index ( S means Satisfactory, U means Unsatisfactory)

### Analysis results of Surface water monitoring under NWMP for the month of October, 2021 (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 Mubarakpur Rest House	1023	6/10/21	SW 5241	BDL	BDL	2.98	0.22	BDL	BDL	BDL	BDL	BDL
2	Ghaggar at Bhankarpur	1295	6/10/21	SW 5242	BDL	BDL	5.75	0.44	BDL	BDL	BDL	BDL	BDL
3	Ghaggar at Chattbir	1698	6/10/21	SW 5243	BDL	BDL	4.78	0.29	BDL	BDL	BDL	BDL	BDL
4	Ghaggar at U/s Jharmal Nadi	1702	6/10/21	SW 5244	BDL	BDL	4.80	0.25	BDL	BDL	BDL	BDL	BDL
5	Ghaggar at D/s Jharmal Nadi	1701	6/10/21	SW 5245	BDL	BDL	5.45	0.21	BDL	BDL	BDL	BDL	BDL
6	Ghaggar at U/s Dhakanshu Nallah	1699	6/10/21	SW 5247	BDL	BDL	6.90	0.29	BDL	BDL	BDL	BDL	BDL
7	Ghaggar at D/s Dhakanshu Nallah	1700	6/10/21	SW 5248	BDL	BDL	6.56	0.53	BDL	BDL	BDL	BDL	BDL
8	Ghaggar at Rattanheri	1473	13/10/21	SW 5265	BDL	BDL	5.75	0.44	BDL	BDL	BDL	BDL	BDL
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	13/10/21	SW 5266	BDL	BDL	4.78	0.29	BDL	BDL	BDL	BDL	BDL
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	13/10/21	SW 5267	BDL	BDL	4.80	0.25	BDL	BDL	BDL	BDL	BDL
11	Ghaggar at Khanauri	1024	13/10/21	SW 5270	BDL	BDL	6.90	0.29	BDL	BDL	BDL	BDL	BDL
12	Ghaggar at Moonak	1703	13/10/21	SW 5272	BDL	BDL	6.29	0.25	BDL	BDL	BDL	BDL	BDL
13	Ghaggar at U/s Sardulgarh	1705	18/10/21	SW 5273	BDL	BDL	6.43	0.40	BDL	BDL	BDL	BDL	BDL
14	Ghaggar at D/s Sardulgarh	1704	18/10/21	SW 5274	BDL	BDL	7.04	0.60	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.**