

Quality of Water of Polluted River stretches in Punjab for the month of April, 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 µs/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	10/4/20	SW 1284	ZO Lab Ldh	7.6	10.2	<1	269	630	210	BDL	0.18	BDL	C	S
2	River Satluj D/S of Rishab- Paper Mills	1293	10/4/20	SW 1285	ZO Lab Ldh	7.6	9.8	<1	277	840	310	BDL	0.17	0.09	C	S
3	River Satluj U/S Buddha Nallah	1690	11/4/20	SW 1287	ZO Lab Ldh	7.6	6.7	2.2	273	1300	340	BDL	0.24	0.09	C	S
4	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	11/4/20	SW 1289	ZO Lab Ldh	7.0	3.0	16	421	4,30,000	70,000	BDL	0.41	0.17	E	U
5	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	11/4/20	SW 1291	ZO Lab Ldh	7.1	4.0	4.3	385	1,40,000	31,000	BDL	0.29	0.13	D	U
6	River Satluj at D/s East Bein	1381	12/4/20	SW 1292	ZO Lab Jal.	7.5	2.8	5.8	421	2,10,000	70,000	0.04	0.34	0.15	E	U
7	River Satluj at Harike	1022	12/4/20	SW 1293	ZO Lab Ldh	7.8	5.9	2.6	318	4900	1700	0.04	0.29	0.12	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 ₄ mg/l	TH mg/l	Ca mg/l	Mg mg/l	T.Alkn mg/l	P.Alkn mg/l	AmnN mg/l	NO ₃ -N mg/l	TKN mg/l	PO ₄ as P mg/l	F mg/l	Na mg/l	K mg/l
1	Ropar Head-Works	1019	10/4/20	SW 1284	ZO Lab Ldh	<5	7	5	158	142	16	12	152	36.8	14.6	84	BDL	BDL	1.3	BDL	BDL	0.20	5.0	1.6
2	River Satluj D/S of Rishab- Paper Mills	1293	10/4/20	SW 1285	ZO Lab Ldh	<5	6	BDL	156	130	12	13	142	32.8	14.6	86	BDL	BDL	1.4	BDL	BDL	0.22	4.7	1.7
3	River Satluj U/S Buddha Nallah	1690	11/4/20	SW 1287	ZO Lab Ldh	16	26	36	163	137	13	14	136	32.8	13.1	92	BDL	BDL	1.7	1.2	0.08	0.30	6.4	2.1
4	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	11/4/20	SW 1289	ZO Lab Ldh	68	40	66	244	184	33	14	152	36	15.1	149	BDL	3.2	1.9	4.6	0.96	0.40	11.6	3.5
5	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	11/4/20	SW 1291	ZO Lab Ldh	22	52	48	230	185	17	15	154	36.8	15.1	140	BDL	1.7	1.1	2.2	0.38	0.22	8.3	3.1
6	River Satluj at D/s East Bein	1381	12/4/20	SW 1292	ZO Lab Jal.	30	24	31	260	198	32	20	168	40	16.5	154	BDL	2.2	1.3	2.8	0.72	0.21	10.2	4.3
7	River Satluj at Harike	1022	12/4/20	SW 1293	ZO Lab Ldh	16	61	55	190	165	12	8	138	32	14.1	126	BDL	1.2	1.2	1.5	0.06	0.21	7.7	2.5

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 April, 2020 (Metal/Pesticides)

River Satluj

S.N.	Point of Sample Collection	Code	Date of receipt in lab	Lab Sample No.	Fe mg/l	Zn mg/l	T.Cr mg/l	Ni mg/l	Pb mg/l	Cd mg/l	As mg/l	Hg mg/l	Cu mg/l
1	Ropar Head-Works	1019	10/4/20	SW 1284	0.15	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2	River Satluj D/S of Rishab- Paper Mills	1293	10/4/20	SW 1285	0.24	0.11	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3	River Satluj U/S Buddha Nallah	1690	11/4/20	SW 1287	0.55	0.21	BDL	BDL	BDL	BDL	BDL	BDL	BDL
4	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	11/4/20	SW 1289	1.10	0.49	BDL	BDL	BDL	BDL	BDL	BDL	BDL
5	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	11/4/20	SW 1291	0.70	0.25	BDL	BDL	BDL	BDL	BDL	BDL	BDL
6	River Satluj at D/s East Bein	1381	12/4/20	SW 1292	0.85	0.34	BDL	BDL	BDL	BDL	BDL	BDL	BDL
7	River Satluj at Harike	1022	12/4/20	SW 1293	0.79	0.23	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 April, 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 us/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	6/4/20	SW 2197	H/o Lab Patiala	7.7	7.3	5	488	11000	1400	0.26	1.43	0.32	D	U
2	Ghaggar at Bhankarpur	1295	6/4/20	SW 2198	H/o Lab Patiala	7.3	4.1	17	730	22000	2600	0.10	1.79	0.40	D	U
3	Ghaggar at Chattbir	1698	6/4/20	SW 2199	H/o Lab Patiala	7.3	4.1	8	720	17000	1700	0.12	2.14	0.34	D	U
4	Ghaggar at U/s Jharmal Nadi	1702	6/4/20	SW 2200	H/o Lab Patiala	7.4	4.6	8	677	17000	1700	0.16	1.87	0.28	D	U
5	Ghaggar at D/s Jharmal Nadi	1701	6/4/20	SW 2201	H/o Lab Patiala	7.3	3.4	10	790	21000	200	0.14	2.75	0.84	E	U
6	Ghaggar at U/s Dhakanshu Nallah	1699	6/4/20	SW 2203	H/o Lab Patiala	7.5	5.1	5	663	12000	1700	0.23	3.39	0.62	D	U
7	Ghaggar at D/s Dhakanshu Nallah	1700	6/4/20	SW 2204	H/o Lab Patiala	7.4	4.0	7	705	15000	2100	0.19	3.76	0.54	D	U
8	Ghaggar at Rattanheri	1473	7/4/20	SW 2210	H/o Lab Patiala	7.4	4.0	18	760	21000	2500	0.16	1.69	0.82	D	U
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	7/4/20	SW 2211	H/o Lab Patiala	7.6	4.2	15	748	21000	2200	0.28	2.09	0.89	D	U
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	7/4/20	SW 2212	H/o Lab Patiala	7.7	3.1	20	810	22000	2700	0.28	2.21	0.48	E	U
11	Ghaggar at Khanauri	1024	7/4/20	SW 2215	H/o Lab Patiala	7.6	4.0	12	722	17000	2100	0.22	1.97	0.29	D	U
12	Ghaggar at Moonak	1703	7/4/20	SW 2217	H/o Lab Patiala	7.8	4.2	11	702	17000	1700	0.32	1.91	0.52	D	U
13	Ghaggar at U/s Sardulgarh	1705	8/4/20	SW 2218	H/o Lab Patiala	7.5	6.2	7	612	14000	1700	0.17	1.60	0.60	D	U
14	Ghaggar at D/s Sardulgarh	1704	8/4/20	SW 2219	H/o Lab Patiala	7.6	5.8	9	740	17000	2000	0.24	1.72	0.96	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 ₄ Mg/l	TH mg/l	Ca mg/l	Mg mg/l	T.Alkn mg/l	P.Alkn mg/l	AmnN mg/l	NO ₃ -N mg/l	TKN mg/l	PO ₄ as P mg/l	F mg/l	Na mg/l	K mg/l
1	Ghaggar at Mubarikpur Rest House	1023	6/4/20	SW 2197	H/o Lab Patiala	24	312	149	293	249	29	7	96	28	6	174	BDL	8.6	1.02	14.6	0.6	0.76	32	10
2	Ghaggar at Bhankarpur	1295	6/4/20	SW 2198	H/o Lab Patiala	80	190	110	438	372	60	17	218	58	18	204	BDL	10.4	0.8	14.8	2.2	0.70	61	22
3	Ghaggar at Chattbir	1698	6/4/20	SW 2199	H/o Lab Patiala	48	61	73	432	367	58	14	186	48	16	218	BDL	12.2	0.7	16.4	0.6	0.88	67	19
4	Ghaggar at U/s Jharmal Nadi	1702	6/4/20	SW 2200	H/o Lab Patiala	44	55	64	416	345	56	13	172	45	14	202	BDL	10.4	0.5	17.2	1.5	0.74	56	44
5	Ghaggar at D/s Jharmal Nadi	1701	6/4/20	SW 2201	H/o Lab Patiala	56	60	71	474	403	72	18	262	60	27	262	BDL	14.2	0.9	17.6	1.6	1.6	102	39
6	Ghaggar at U/s Dhakanshu Nallah	1699	6/4/20	SW 2203	H/o Lab Patiala	25	25	43	398	338	44	9	128	38	8	224	BDL	11.6	0.72	16.8	0.4	0.94	88	44
7	Ghaggar at D/s Dhakanshu Nallah	1700	6/4/20	SW 2204	H/o Lab Patiala	36	31	47	423	354	52	12	156	46	10	240	BDL	12.4	0.9	19.4	2.2	0.76	108	51
8	Ghaggar at Rattanheri	1473	7/4/20	SW 2210	H/o Lab Patiala	88	40	67	456	388	58	21	28	54	18	248	BDL	10.6	1.0	16.6	1.4	0.67	56	27
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	7/4/20	SW 2211	H/o Lab Patiala	76	30	62	449	382	54	20	190	51	15	242	BDL	11.2	0.8	18.6	1.6	0.56	66	22
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	7/4/20	SW 2212	H/o Lab Patiala	100	35	69	486	413	70	24	256	66	22	250	BDL	9.4	0.7	15.4	3.3	0.34	81	39
11	Ghaggar at Khanauri	1024	7/4/20	SW 2215	H/o Lab Patiala	60	26	52	433	368	54	15	202	49	19	208	BDL	8.8	0.8	14.4	1.5	0.76	64	22
12	Ghaggar at Moonak	1703	7/4/20	SW 2217	H/o Lab Patiala	56	24	49	421	358	52	16	192	48	18	266	BDL	9.2	0.6	15.8	2.2	0.34	61	25
13	Ghaggar at U/s Sardulgarh	1705	8/4/20	SW 2218	H/o Lab Patiala	33	9	21	367	312	34	9	114	32	8	222	BDL	8.4	0.5	16.2	0.8	0.43	39	19
14	Ghaggar at D/s Sardulgarh	1704	8/4/20	SW 2219	H/o Lab Patiala	46	10	24	444	377	58	11	158	44	12	216	BDL	9.6	0.65	14.6	1.0	0.43	50	23

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 April, 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	6/4/20	SW 2197	BDL	BDL	3.14	0.13	BDL	BDL	BDL	BDL	BDL
2	Ghaggar at Bhankarpur	1295	6/4/20	SW 2198	BDL	BDL	4.91	0.10	BDL	BDL	BDL	BDL	BDL
3	Ghaggar at Chattbir	1698	6/4/20	SW 2199	BDL	BDL	4.70	0.16	BDL	BDL	BDL	BDL	BDL
4	Ghaggar at U/s Jharmal Nadi	1702	6/4/20	SW 2200	BDL	BDL	4.81	0.17	BDL	BDL	BDL	BDL	BDL
5	Ghaggar at D/s Jharmal Nadi	1701	6/4/20	SW 2201	BDL	BDL	7.24	0.24	BDL	BDL	BDL	BDL	BDL
6	Ghaggar at U/s Dhakanshu Nallah	1699	6/4/20	SW 2203	BDL	BDL	4.00	0.16	BDL	BDL	BDL	BDL	BDL
7	Ghaggar at D/s Dhakanshu Nallah	1700	6/4/20	SW 2204	BDL	BDL	4.52	0.29	BDL	BDL	BDL	BDL	BDL
8	Ghaggar at Rattanheri	1473	7/4/20	SW 2210	BDL	BDL	0.34	0.10	BDL	BDL	BDL	BDL	BDL
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	7/4/20	SW 2211	BDL	BDL	0.31	0.10	BDL	BDL	BDL	BDL	BDL
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	7/4/20	SW 2212	BDL	BDL	0.38	0.12	BDL	BDL	BDL	BDL	BDL
11	Ghaggar at Khanauri	1024	7/4/20	SW 2215	BDL	BDL	0.33	0.10	BDL	BDL	BDL	BDL	BDL
12	Ghaggar at Moonak	1703	7/4/20	SW 2217	BDL	BDL	0.29	0.06	BDL	BDL	BDL	BDL	BDL
13	Ghaggar at U/s Sardulgarh	1705	8/4/20	SW 2218	BDL	BDL	0.30	BDL	BDL	BDL	BDL	BDL	BDL
14	Ghaggar at D/s Sardulgarh	1704	8/4/20	SW 2219	BDL	BDL	0.34	0.07	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