

Analysis results of Surface water monitoring under NWMP for the month of October, 2018

River Satluj

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 μ 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	River Satluj at U/S Nangal	1017	16/10/18	203	ZO Lab Ldh	7.35	8.6	<1	225	220	30	0.006	1.26	0.12	B	S
2	River Satluj at D/S NFL	1380	16/10/18	205	ZO Lab Ldh	7.66	8.0	<1	264	250	90	0.012	1.24	0.19	B	S
3	River Sutej at 100m D/s PACL Nangal	2915	16/10/18	206	ZO Lab Ldh	7.57	8.1	<1	267	450	130	0.015	1.31	0.14	B	S
4	River Satluj at D/s Nangal	1018	16/10/18	204	ZO Lab Ldh	7.46	8.4	<1	232	300	70	0.006	1.13	0.24	B	S
5	River Satluj at Kiratpur Sahib	1814	16/10/18	211	ZO Lab Ldh	7.70	8.4	<1	312	800	270	0.018	1.40	0.29	C	S
6	Ropar Head-Works	1019	16/10/18	209	ZO Lab Ldh	7.63	8.7	<1	293	1100	500	0.015	1.15	0.23	C	S
7	River Satluj D/S of Rishab-Paper Mills	1293	16/10/18	208	ZO Lab Ldh	7.52	8.6	<1	376	1400	600	0.016	1.32	0.37	C	S
8	River Satluj U/S Buddha Nallah	1690	23/10/18	217	ZO Lab Ldh	7.68	7.0	<1	452	3400	1700	0.024	1.14	0.20	C	S
9	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	23/10/18	219	ZO Lab Ldh	7.52	3.2	33	660	790000	330000	0.04	2.58	0.33	E	N
10	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	23/10/18	226	ZO Lab Ldh	7.24	6.8	8	368	94000	32000	0.012	1.37	0.17	D	N
11	River Satluj at D/s East Bein	1381	25/10/18	99	ZO Lab Jal.	7.7	7.5	5.8	533	14000	6300	0.136	2.01	0.14	D	N
12	River Satluj at Harike	1022	25/10/18	100	ZO Lab Jal.	7.6	7.0	3.2	320	8400	2600	0.080	0.085	BDL	D	N
13	Harike Lake D/S from canal	1382	25/10/18	101	ZO Lab Jal.	7.8	7.8	1.6	270	4100	1400	0.08	0.93	0.09	C	S
14	D/S Harike lake	1297	25/10/18	102	ZO Lab Jal.	7.6	7.6	1.8	280	4700	1500	0.07	0.82	BDL	C	S
15	U/S Hussainiwala H/W Ferozepur	1691	23/10/18	227	ZO Lab Ldh	7.92	8.0	<1	292	920	200	0.04	1.06	0.11	C	S
16	D/S Hussainiwala H/W Ferozepur	1692	23/10/18	228	ZO Lab Ldh	7.84	8.0	<1	328	1000	200	0.021	1.07	0.15	C	S

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, N means Not Satisfactory)

4. U/s means Upstream , D/s means Downstream

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

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River Satluj

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	River Satluj at U/S Nangal	1017	16/10/18	203	ZO Lab Ldh	<5	7	8	135	130	22	16	58	14.4	5.28	42	BDL	0.4	0.4	0.8	0.4	0.2	19	3.9
2	River Satluj at D/S NFL	1380	16/10/18	205	ZO Lab Ldh	<5	8	10	169	161	22	18	62	15.2	5.26	50	BDL	0.4	0.6	1.0	0.6	0.4	24	3.5
3	River Sutej at 100m D/s PACL Nangal	2915	16/10/18	206	ZO Lab Ldh	<5	9	12	166	158	24	18	64	15.2	6.24	54	BDL	0.6	0.6	1.0	0.8	0.4	30	3.8
4	River Satluj at D/s Nangal	1018	16/10/18	204	ZO Lab Ldh	<5	8	10	139	134	20	18	60	16.0	4.8	48	BDL	0.4	0.4	0.8	0.4	0.4	22	3.0
5	River Satluj at Kiratpur Sahib	1814	16/10/18	211	ZO Lab Ldh	<5	12	11	190	179	28	22	76	19.2	6.72	62	BDL	0.6	0.6	1.2	0.8	0.6	26	4.3
6	Ropar Head-Works	1019	16/10/18	209	ZO Lab Ldh	<5	16	10	182	170	22	18	70	16.8	6.72	60	BDL	0.6	0.6	1.2	0.4	0.5	28	3.9
7	River Satluj D/S of Rishab- Paper Mills	1293	16/10/18	208	ZO Lab Ldh	<5	16	18	241	232	26	20	74	17.6	7.20	68	BDL	0.8	0.8	1.4	0.8	0.5	31	4.6
8	River Satluj U/S Buddha Nallah	1690	23/10/18	217	ZO Lab Ldh	<5	16	20	270	264	24	18	84	20.0	8.16	56	BDL	0.8	0.8	1.6	0.6	0.3	44	5.0
9	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	23/10/18	219	ZO Lab Ldh	132	30	64	396	354	68	54	132	31.2	12.96	66	BDL	2.2	3.0	4.0	2.0	0.8	132	7.8
10	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	23/10/18	226	ZO Lab Ldh	32	16	21	220	202	28	22	80	20.0	7.2	66	BDL	1.2	1.2	3.0	1.2	0.4	80	6.2
11	River Satluj at D/s East Bein	1381	25/10/18	99	ZO Lab Jal.	34	16	38	362	290	54	46	137	45	6	147	BDL	6.8	1.3	11.6	0.26	0.26	41	8.7
12	River Satluj at Harike	1022	25/10/18	100	ZO Lab Jal.	20	14	36	198	164	22	24	127	44	4	113	BDL	3.2	1.4	5.4	0.20	0.18	13	4.9
13	Harike Lake D/S from canal	1382	25/10/18	101	ZO Lab Jal.	15	12	40	191	152	24	18	125	41	6	88	BDL	2.2	1.3	3.4	0.16	0.16	40	8.8
14	D/S Harike lake	1297	25/10/18	102	ZO Lab Jal.	16	08	26	185	144	20	22	111	35	6	126	BDL	2.6	1.3	3.6	0.15	0.14	13	4.8
15	U/S Hussainiwala H/W Ferozepur	1691	23/10/18	227	ZO Lab Ldh	<5	12	16	174	161	20	14	66	17.6	5.76	48	BDL	0.8	0.8	1.4	1.0	0.1	25	3.7
16	D/S Hussainiwala H/W Ferozepur	1692	23/10/18	228	ZO Lab Ldh	6	12	21	196	182	20	16	68	16.0	6.24	48	BDL	0.6	1.0	1.6	1.2	0.2	27	3.9

Note. 1. BDL means Below Method Detection Limit
2. U/s means upstream, D/s downstream

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River Satluj

S.N.	Point of Sample Collection	Code	Date of receipt in lab	Lab Sample No.	Sample Collected & Analyzed by	T.Cr (mg/l)	Ni (mg/l)	Fe (mg/l)	Zn (mg/l)	Cu (mg/l)	Pb (mg/l)	Cd (mg/l)	S.I.	D.I.
1	River Satluj at U/S Nangal	1017	16/10/18	203	ZO Lab Ldh	BDL	BDL	0.16	BDL	BDL	BDL	BDL	BDL	BDL
2	River Satluj at D/S NFL	1380	16/10/18	205	ZO Lab Ldh	BDL	BDL	0.18	BDL	BDL	BDL	BDL	4.2	0.5
3	River Sutej at 100m D/s PACL Nangal	2915	16/10/18	206	ZO Lab Ldh	BDL	BDL	0.21	BDL	BDL	BDL	BDL	3.0	0.4
4	River Satluj at D/s Nangal	1018	16/10/18	204	ZO Lab Ldh	BDL	BDL	0.17	BDL	BDL	BDL	BDL	3.6	0.4
5	River Satluj at Kiratpur Sahib	1814	16/10/18	211	ZO Lab Ldh	BDL	BDL	0.38	BDL	BDL	BDL	BDL	BDL	BDL
6	Ropar Head-Works	1019	16/10/18	209	ZO Lab Ldh	BDL	BDL	0.32	BDL	BDL	BDL	BDL	3.0	0.4
7	River Satluj D/S of Rishab-Paper Mills	1293	16/10/18	208	ZO Lab Ldh	BDL	BDL	0.44	BDL	BDL	BDL	BDL	BDL	BDL
8	River Satluj U/S Buddha Nallah	1690	23/10/18	217	ZO Lab Ldh	BDL	BDL	0.62	BDL	BDL	BDL	BDL	BDL	BDL
9	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	23/10/18	219	ZO Lab Ldh	0.18	0.21	4.28	0.41	BDL	BDL	BDL	BDL	BDL
10	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	23/10/18	226	ZO Lab Ldh	BDL	BDL	2.01	BDL	BDL	BDL	BDL	BDL	BDL
11	River Satluj at D/s East Bein	1381	25/10/18	99	ZO Lab Jal.	BDL	BDL	1.16	BDL	BDL	BDL	BDL	BDL	BDL
12	River Satluj at Harike	1022	25/10/18	100	ZO Lab Jal.	BDL	BDL	0.96	BDL	BDL	BDL	BDL	BDL	BDL
13	Harike Lake D/S from canal	1382	25/10/18	101	ZO Lab Jal.	BDL	BDL	2.55	BDL	BDL	BDL	BDL	2.5	0.25
14	D/S Harike lake	1297	25/10/18	102	ZO Lab Jal.	BDL	BDL	0.88	BDL	BDL	BDL	BDL	BDL	BDL
15	U/S Hussainiwala H/W Ferozepur	1691	23/10/18	227	ZO Lab Ldh	BDL	BDL	0.34	BDL	BDL	BDL	BDL	BDL	BDL
16	D/S Hussainiwala H/W Ferozepur	1692	23/10/18	228	ZO Lab Ldh	BDL	BDL	0.40	BDL	BDL	BDL	BDL	BDL	BDL

Note. . BDL means Below Method Detection Limit

Analysis results of Surface water monitoring under NWMP for the month of October, 2018

River Beas

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 μ 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
17	River Beas at Talwara H/W	1693	12/10/18	88	ZO Lab Jal.	7.6	7.6	1.0	203	84	33	BDL	0.66	BDL	B	S
18	River Beas at U/S Pathankot	1694	12/10/18	90	ZO Lab Jal.	7.6	7.6	1.4	208	430	210	0.013	0.61	0.06	B	S
19	River Beas at D/S Pathankot	1695	12/10/18	91	ZO Lab Jal.	7.2	7.4	1.8	224	540	350	0.006	0.66	0.07	C	S
20	River Beas at Mirthal Bridge Gurdaspur (Pb.)	1010	12/10/18	89	ZO Lab Jal.	7.5	7.8	1.0	212	140	94	BDL	0.60	0.05	B	S
21	River Beas 1 Km D/S effluent discharge point at Mukerian	1294	12/10/18	92	ZO Lab Jal.	7.6	7.1	2.0	310	920	540	0.015	0.84	BDL	C	S
22	River Beas at Bridge, village Bheate Patan Tehsil Batala Distt. Gurdaspur	4164	18/10/18	93	ZO Lab Jal.	7.4	7.2	1.7	340	680	450	0.008	0.96	BDL	C	S
23	River Beas at G.T. Road, under Bridge Near Kapurthalla (Pb)	1011	18/10/18	94	ZO Lab Jal.	7.4	7.4	1.5	268	560	370	0.009	0.87	BDL	C	S
24	River Beas at U/s Goindwal	1696	18/10/18	95	ZO Lab Jal.	7.5	7.6	1.3	254	430	280	0.010	0.78	BDL	B	S
25	River Beas at D/s Goindwal	1012	18/10/18	96	ZO Lab Jal.	7.6	7.4	1.6	268	550	360	0.015	0.83	BDL	C	S
26	Beas at Harike	1697	25/10/18	98	ZO Lab Jal.	7.6	7.8	1.4	248	430	350	0.010	0.77	BDL	B	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
17	River Beas at Talwara H/W	1693	12/10/18	88	ZO Lab Jal.	8	5	22	136	110	14	8	85	31	2	81	BDL	BDL	0.6	BDL	BDL	BDL	11	4.8
18	River Beas at U/S Pathankot	1694	12/10/18	90	ZO Lab Jal.	14	4	26	154	128	16	10	128	40	7	96	BDL	0.5	1.4	0.10	0.10	0.12	18	3.9
19	River Beas at D/S Pathankot	1695	12/10/18	91	ZO Lab Jal.	16	6	28	168	144	18	14	138	41	9	104	BDL	0.6	1.6	0.14	0.14	0.13	14	4.1
20	River Beas at Mirthal Bridge Gurdaspur (Pb.)	1010	12/10/18	89	ZO Lab Jal.	10	4	24	142	112	14	8	109	35	4	92	BDL	BDL	0.8	BDL	BDL	0.11	16	4.7
21	River Beas 1 Km D/S effluent discharge point at Mukerian	1294	12/10/18	92	ZO Lab Jal.	18	12	32	195	160	20	24	105	33	6	109	BDL	0.6	1.8	0.15	0.15	0.15	18	4.2
22	River Beas at Bridge, village Bheate Patan Tehsil Batala Distt. Gurdaspur	4164	18/10/18	93	ZO Lab Jal.	16	8	34	224	182	24	28	128	36	7	104	BDL	0.5	1.2	0.14	0.14	0.14	26	6.4
23	River Beas at G.T. Road, under Bridge Near Kapurthalla (Pb)	1011	18/10/18	94	ZO Lab Jal.	14	10	24	185	156	22	16	122	44	3	117	BDL	0.6	1.0	0.16	0.16	0.13	12	4.3
24	River Beas at U/s Goindwal	1696	18/10/18	95	ZO Lab Jal.	12	6	22	165	138	20	14	127	37	8	102	BDL	0.5	1.1	0.13	0.13	0.12	12	4.5
25	River Beas at D/s Goindwal	1012	18/10/18	96	ZO Lab Jal.	14	8	24	188	164	22	16	131	43	6	109	BDL	0.6	1.2	0.15	0.15	0.14	26	6.7
26	Beas at Harike	1697	25/10/18	98	ZO Lab Jal.	12	7	28	159	134	18	12	104	36	3	89	BDL	0.4	1.2	0.11	0.11	0.14	13	4.6

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, N means Not Satisfactory)

4. U/s means Upstream , D/s means Downstream

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

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River Beas

S.N.	Point of Sample Collection	Code	Date of receipt in lab	Lab Sample No.	Sample Collected & Analyzed by	T.Cr (mg/l)	Ni (mg/l)	Fe (mg/l)	Zn (mg/l)	Cu (mg/l)	Pb (mg/l)	Cd (mg/l)	S.I.	D.I.
17	River Beas at Talwara H/W	1693	12/10/18	88	ZO Lab Jal.	BDL	BDL	1.23	BDL	BDL	BDL	BDL	5.5	0.48
18	River Beas at U/S Pathankot	1694	12/10/18	90	ZO Lab Jal.	BDL	BDL	1.93	BDL	BDL	BDL	BDL	4.0	0.4
19	River Beas at D/S Pathankot	1695	12/10/18	91	ZO Lab Jal.	BDL	BDL	2.47	BDL	BDL	BDL	BDL	-	-
20	River Beas at Mirthal Bridge Gurdaspur (Pb.)	1010	12/10/18	89	ZO Lab Jal.	BDL	BDL	4.57	0.15	BDL	BDL	BDL	4.5	0.45
21	River Beas 1 Km D/S effluent discharge point at Mukerian	1294	12/10/18	92	ZO Lab Jal.	BDL	BDL	3.74	0.16	BDL	BDL	BDL	-	-
22	River Beas at Bridge, village Bheate Patan Tehsil Batala Distt. Gurdaspur	4164	18/10/18	93	ZO Lab Jal.	BDL	BDL	1.38	0.11	BDL	BDL	BDL	2.5	0.25
23	River Beas at G.T. Road, under Bridge Near Kapurthalla (Pb)	1011	18/10/18	94	ZO Lab Jal.	BDL	BDL	3.65	BDL	BDL	BDL	BDL	2.5	0.25
24	River Beas at U/s Goindwal	1696	18/10/18	95	ZO Lab Jal.	BDL	BDL	0.48	BDL	BDL	BDL	BDL	3.0	0.3
25	River Beas at D/s Goindwal	1012	18/10/18	96	ZO Lab Jal.	BDL	BDL	2.21	BDL	BDL	BDL	BDL	2.5	0.25
26	Beas at Harike	1697	25/10/18	98	ZO Lab Jal.	BDL	BDL	2.20	BDL	BDL	BDL	BDL	2.5	0.25

Note. . BDL means Below Method Detection Limit

Analysis results of Surface water monitoring under NWMP for the month of October, 2018

River Ravi

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 μ 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
27	Ravi at U/s of Madhopur H/W	1097	12/10/18	87	ZO Lab Jal.	7.4	8.0	BDL	199	94	43	BDL	0.70	0.05	B	S

S.N.	Point of Sample Collection	Code	DOR 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
27	Ravi at U/s of Madhopur H/W	1097	12/10/18	87	ZO Lab Jal.	BDL	4	26	139	116	12	8	56	19	2	64	BDL	BDL	0.5	BDL	BDL	BDL	10	5

Note. 1. BDL means Below Method Detection Limit

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3. Water Quality Index (S means Satisfactory, N means Not Satisfactory)

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

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River Ravi

S.N.	Point of Sample Collection	Code	Date of receipt in lab	Lab Sample No.	Sample Collected & Analyzed by	T.Cr (mg/l)	Ni (mg/l)	Fe (mg/l)	Zn (mg/l)	Cu (mg/l)	Pb (mg/l)	Cd (mg/l)	S.I.	D.I.
27	Ravi at U/s of Madhopur H/W	1097	12/10/18	87	ZO Lab Jal.	BDL	BDL	0.69	0.10	BDL	BDL	BDL	5.5	0.48

Note. . BDL means Below Method Detection Limit

Analysis results of Surface water monitoring under NWMP for the month of October, 2018

River Ghaggar

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 μ 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	Ghaggar at Mubarikpur Rest House	1023	9/10/18	SW 728	H/o Lab Patiala	7.9	5.2	6	528	24000	3400	0.08	0.90	0.08	D	N
2	Ghaggar at Bhankarpur	1295	9/10/18	SW 729	H/o Lab Patiala	7.7	4.2	11	623	35000	6300	0.14	1.38	0.10	D	N
3	Ghaggar at Chattbir	1698	9/10/18	SW 730	H/o Lab Patiala	7.7	3.3	9	606	28000	4600	0.20	1.08	0.10	E	N
4	Ghaggar at U/s Jharmal Nadi	1702	9/10/18	SW 731	H/o Lab Patiala	7.4	3.9	8	610	22000	3300	0.06	0.97	0.11	E	N
5	Ghaggar at D/s Jharmal Nadi	1701	9/10/18	SW 732	H/o Lab Patiala	7.6	3.7	10	756	28000	4700	0.16	1.92	0.09	E	N
6	Ghaggar at U/s Dhakanshu Nallah	1699	16/10/18	SW 742	H/o Lab Patiala	7.6	4.3	10	877	15000	2200	0.10	2.26	0.09	D	N
7	Ghaggar at D/s Dhakanshu Nallah	1700	16/10/18	SW 743	H/o Lab Patiala	7.5	3.9	13	898	21000	2700	0.09	2.39	0.10	E	N
8	Ghaggar at Rattanheri	1473	16/10/18	SW 744	H/o Lab Patiala	7.5	3.7	14	774	22000	3300	0.08	2.58	0.11	E	N
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	16/10/18	SW 747	H/o Lab Patiala	7.5	4.0	14	760	39000	8100	0.08	2.90	0.11	D	N
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	16/10/18	SW 749	H/o Lab Patiala	7.7	2.9	36	1069	28000	6300	0.24	3.02	0.12	E	N
11	Ghaggar at Khanauri	1024	16/10/18	SW 745	H/o Lab Patiala	7.3	3.4	42	987	35000	8400	0.08	2.40	0.10	E	N
12	Ghaggar at Moonak	1703	16/10/18	SW 746	H/o Lab Patiala	7.4	3.0	39	755	28000	7000	0.07	1.77	0.15	E	N
13	Ghaggar at U/s Sardulgarh	1705	26/10/18	SW 795	H/o Lab Patiala	7.8	3.5	9	871	21000	3200	0.18	2.31	0.14	E	N
14	Ghaggar at D/s Sardulgarh	1704	26/10/18	SW 796	H/o Lab Patiala	7.8	3.3	11	991	24000	4900	0.19	2.35	0.14	E	N

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	NO3-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	9/10/18	SW 728	H/o Lab Patiala	35	400	386	333	288	33	18	257	86	10	215	BDL	1.8	0.20	2.9	0.13	0.15	31	5
2	Ghaggar at Bhankarpur	1295	9/10/18	SW 729	H/o Lab Patiala	56	500	306	399	327	49	21	240	82	8	275	BDL	4.7	0.28	6.4	0.1	0.19	42	6
3	Ghaggar at Chattbir	1698	9/10/18	SW 730	H/o Lab Patiala	46	160	120	384	318	35	24	200	72	5	292	BDL	6.5	0.25	8.0	0.1	0.17	43	7
4	Ghaggar at U/s Jharmal Nadi	1702	9/10/18	SW 731	H/o Lab Patiala	42	200	150	387	310	34	26	234	78	9	273	BDL	4.0	0.31	5.8	0.09	0.16	42	6
5	Ghaggar at D/s Jharmal Nadi	1701	9/10/18	SW 732	H/o Lab Patiala	54	180	115	480	390	70	34	250	89	7	292	BDL	6.4	0.65	9.6	0.14	0.20	67	7
6	Ghaggar at U/s Dhakanshu Nallah	1699	16/10/18	SW 742	H/o Lab Patiala	48	90	77	556	470	87	20	281	104	5	339	BDL	4.0	0.44	5.9	0.33	0.22	81	10
7	Ghaggar at D/s Dhakanshu Nallah	1700	16/10/18	SW 743	H/o Lab Patiala	58	96	88	573	478	93	23	287	105	6	356	BDL	4.4	0.51	6.2	0.29	0.25	82	12
8	Ghaggar at Rattanheri	1473	16/10/18	SW 744	H/o Lab Patiala	60	140	142	502	412	80	46	182	63	6	294	BDL	4.1	0.62	6.8	0.33	0.27	80	14
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	16/10/18	SW 747	H/o Lab Patiala	62	50	50	491	402	85	42	162	55	6	277	BDL	4.2	0.54	6.7	0.29	0.27	77	28
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	16/10/18	SW 749	H/o Lab Patiala	202	80	59	704	576	112	51	257	81	14	406	BDL	8.0	0.56	12	0.14	0.28	118	37
11	Ghaggar at Khanauri	1024	16/10/18	SW 745	H/o Lab Patiala	209	100	63	652	532	91	47	269	94	9	402	BDL	7.6	0.60	11.6	0.52	0.25	79	49
12	Ghaggar at Moonak	1703	16/10/18	SW 746	H/o Lab Patiala	204	90	58	489	396	67	49	271	100	5	170	BDL	4.8	0.62	6.3	0.78	0.31	86	44
13	Ghaggar at U/s Sardulgarh	1705	26/10/18	SW 795	H/o Lab Patiala	50	35	35	575	462	84	38	249	90	6	333	BDL	5.0	0.59	6.7	0.29	0.29	94	19
14	Ghaggar at D/s Sardulgarh	1704	26/10/18	SW 796	H/o Lab Patiala	60	50	47	633	510	89	40	269	97	7	387	BDL	5.4	0.66	7.2	0.27	0.37	104	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, N means Not Satisfactory)

4. U/s means Upstream , D/s means Downstream

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

Analysis results of Surface water monitoring under NWMP for the month of October, 2018

River Ghaggar

S.N.	Point of Sample Collection	Code	Date of receipt in lab	Lab Sample No.	Sample Collected & Analyzed by	T.Cr (mg/l)	Ni (mg/l)	Fe (mg/l)	Zn (mg/l)	Cu (mg/l)	Pb (mg/l)	Cd (mg/l)
1	Ghaggar at Mubarikpur Rest House	1023	9/10/18	SW 728	H/o Lab Patiala	BDL	BDL	7.97	0.21	BDL	BDL	BDL
2	Ghaggar at Bhankarpur	1295	9/10/18	SW 729	H/o Lab Patiala	BDL	BDL	6.77	0.25	BDL	BDL	BDL
3	Ghaggar at Chattbir	1698	9/10/18	SW 730	H/o Lab Patiala	BDL	BDL	2.81	0.37	BDL	BDL	BDL
4	Ghaggar at U/s Jharmal Nadi	1702	9/10/18	SW 731	H/o Lab Patiala	BDL	BDL	4.23	0.16	BDL	BDL	BDL
5	Ghaggar at D/s Jharmal Nadi	1701	9/10/18	SW 732	H/o Lab Patiala	BDL	BDL	3.69	0.20	BDL	BDL	BDL
6	Ghaggar at U/s Dhakanshu Nallah	1699	16/10/18	SW 742	H/o Lab Patiala	BDL	BDL	2.32	0.19	BDL	BDL	BDL
7	Ghaggar at D/s Dhakanshu Nallah	1700	16/10/18	SW 743	H/o Lab Patiala	BDL	BDL	2.08	0.15	BDL	BDL	BDL
8	Ghaggar at Rattanheri	1473	16/10/18	SW 744	H/o Lab Patiala	BDL	BDL	5.72	0.17	BDL	BDL	BDL
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	16/10/18	SW 747	H/o Lab Patiala	BDL	BDL	1.96	0.25	BDL	BDL	BDL
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	16/10/18	SW 749	H/o Lab Patiala	BDL	BDL	1.58	0.19	BDL	BDL	BDL
11	Ghaggar at Khanauri	1024	16/10/18	SW 745	H/o Lab Patiala	BDL	BDL	2.22	0.16	BDL	BDL	BDL
12	Ghaggar at Moonak	1703	16/10/18	SW 746	H/o Lab Patiala	BDL	BDL	2.46	0.32	BDL	BDL	BDL
13	Ghaggar at U/s Sardulgarh	1705	26/10/18	SW 795	H/o Lab Patiala	BDL	BDL	1.09	0.14	BDL	BDL	BDL
14	Ghaggar at D/s Sardulgarh	1704	26/10/18	SW 796	H/o Lab Patiala	BDL	BDL	1.45	0.26	BDL	BDL	BDL

Note. . BDL means Below Method Detection Limit

