

Analysis results of Surface water monitoring under NWMP for the month of October, 2019

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 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	River Satluj at U/S Nangal	1017	09.10.19	SW 935	ZO Lab Ldh	8.06	8.9	<1	192	270	78	BDL	0.09	BDL	B	S
2	River Satluj at D/S NFL	1380	09.10.19	SW 936	ZO Lab Ldh	8.08	8.4	<1	214	700	170	BDL	0.15	BDL	C	S
3	River Sutej at 100m D/s PACL Nangal	2915	09.10.19	SW 937	ZO Lab Ldh	8.13	8.5	<1	220	790	220	BDL	0.18	BDL	C	S
4	River Satluj at D/s Nangal	1018	09.10.19	SW 938	ZO Lab Ldh	8.22	8.8	<1	210	840	260	BDL	0.12	BDL	C	S
5	River Satluj at Kiratpur Sahib	1814	11.10.19	SW 944	ZO Lab Ldh	8.03	8.6	<1	192	630	260	BDL	0.10	0.17	C	S
6	Ropar Head-Works	1019	11.10.19	SW 941	ZO Lab Ldh	7.94	9.1	<1	221	1100	330	BDL	0.18	0.14	C	S
7	River Satluj D/S of Rishab-Paper Mills	1293	11.10.19	SW 940	ZO Lab Ldh	8.29	8.5	<1	232	1700	490	BDL	0.14	0.17	C	S
8	River Satluj U/S Buddha Nallah	1690	14.10.19	SW 952	ZO Lab Ldh	8.08	8.6	<1	242	3300	1700	BDL	0.29	0.19	C	S
9	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	14.10.19	SW 954	ZO Lab Ldh	7.57	4.2	9.2	320	79,000	27,000	BDL	0.61	0.23	D	U
10	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	16.10.19	SW 956	ZO Lab Ldh	7.52	5.0	3.6	308	21,000	11,000	BDL	0.39	0.28	D	U
11	River Satluj at D/s East Bein	1381	16.10.19	SW 957	ZO Lab Ldh.	7.37	5.2	3.8	292	13,000	7900	BDL	0.43	0.33	D	U
12	River Satluj at Harike	1022	16.10.19	SW 958	ZO Lab Ldh.	7.28	5.6	2.4	332	7000	3300	BDL	0.58	0.25	D	U
13	Harike Lake D/S from canal	1382	13/10/2019	SW 674	ZO Lab Jal.	7.6	7.2	1.1	216	1500	400	0.021	0.39	0.19	C	S
14	D/S Harike lake	1297	13/10/2019	SW 675	ZO Lab Jal.	7.5	7.3	1.1	242	2000	380	0.020	0.10	0.15	C	S
15	U/S Hussainiwala H/W Ferozepur	1691	17.10.19	SW 961	ZO Lab Ldh	8.26	7.8	1.2	202	1100	490	BDL	0.30	0.19	C	S
16	D/S Hussainiwala H/W Ferozepur	1692	17.10.19	SW 962	ZO Lab Ldh	8.13	7.6	1.2	212	1700	700	BDL	0.41	0.18	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, U means Unsatisfactory)
4. U/s means Upstream , D/s means 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	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	River Satluj at U/S Nangal	1017	09.10.19	SW 935	ZO Lab Ldh	<5	4	BDL	113	102	5	10	94	24	8.3	66	BDL	BDL	0.7	BDL	BDL	0.23	2.0	3.1
2	River Satluj at D/S NFL	1380	09.10.19	SW 936	ZO Lab Ldh	<5	2	BDL	132	118	9	12	110	28.8	9.2	72	BDL	BDL	1.2	BDL	BDL	0.25	3.7	2.4
3	River Sutej at 100m D/s PACL Nangal	2915	09.10.19	SW 937	ZO Lab Ldh	<5	6	BDL	136	121	8	5	114	30.4	9.2	76	BDL	BDL	0.9	BDL	BDL	0.20	4.4	2.3
4	River Satluj atD/s Nangal	1018	09.10.19	SW 938	ZO Lab Ldh	<5	3	BDL	132	118	8	6	114	28	10.7	78	BDL	BDL	1.4	BDL	BDL	0.24	3.0	2.1
5	River Satluj at Kiratpur Sahib	1814	11.10.19	SW 944	ZO Lab Ldh	<5	5	BDL	122	108	7	5	100	28	9.7	64	BDL	BDL	1.7	BDL	BDL	0.26	2.3	2.3
6	Ropar Head-Works	1019	11.10.19	SW 941	ZO Lab Ldh	<5	10	16	126	116	14	5	114	28.8	10.2	76	BDL	BDL	0.98	BDL	BDL	0.24	4.5	2.1
7	River Satluj D/S of Rishab-Paper Mills	1293	11.10.19	SW 940	ZO Lab Ldh	<5	48	44	135	120	10	9	118	28	11.7	80	BDL	BDL	1.6	BDL	BDL	0.44	3.4	2.3
8	River Satluj U/S Buddha Nallah	1690	14.10.19	SW 952	ZO Lab Ldh	<5	54	68	138	120	12	6	112	30.4	8.7	82	BDL	BDL	1.0	BDL	BDL	0.29	7.0	2.9
9	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	14.10.19	SW 954	ZO Lab Ldh	28	80	109	191	167	26	6	122	32	10.2	98	BDL	BDL	2.12	BDL	0.17	0.68	15.6	3.7
10	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	16.10.19	SW 956	ZO Lab Ldh	18	62	58	183	167	20	8	146	35.2	14.1	94	BDL	BDL	1.2	BDL	0.11	0.31	10.7	3.2
11	River Satluj at D/s East Bein	1381	16.10.19	SW 957	ZO Lab Ldh	22	58	64	175	153	17	6	134	34.4	11.7	96	BDL	BDL	1.0	BDL	0.09	0.22	11.5	3.4
12	River Satluj at Harike	1022	16.10.19	SW 958	ZO Lab Ldh	16	35	39	209	182	23	7	142	36	12.6	94	BDL	BDL	0.90	BDL	0.18	0.21	15.9	4.5
13	Harike Lake D/S from canal	1382	13/10/2019	SW 674	ZO Lab Jal.	9	36	18	148	112	28	16	104	27	9	94	BDL	0.6	0.8	1.3	0.07	0.12	9.1	3.3
14	D/S Harike lake	1297	13/10/2019	SW 675	ZO Lab Jal.	10	33	22	138	100	18	18	107	30	8	93	BDL	0.8	0.7	1.4	0.10	0.14	2.3	2.4
15	U/S Hussainiwala H/W Ferozepur	1691	17.10.19	SW 961	ZO Lab Ldh	6	16	26	128	108	12	5	100	28	7.3	90	BDL	BDL	0.96	BDL	0.06	0.23	6.9	3.5
16	D/S Hussainiwala H/W Ferozepur	1692	17.10.19	SW 962	ZO Lab Ldh	7	17	30	135	112	14	5	100	27.2	7.8	92	BDL	BDL	1.0	BDL	0.06	0.25	9.4	4.4

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, 2019 (Metal/Pesticides)

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)
1	River Satluj at U/S Nangal	1017	09.10.19	SW 935	ZO Lab Ldh	BDL	BDL	0.08	BDL	BDL	BDL	BDL
2	River Satluj at D/S NFL	1380	09.10.19	SW 936	ZO Lab Ldh	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3	River Sutej at 100m D/s PACL Nangal	2915	09.10.19	SW 937	ZO Lab Ldh	BDL	BDL	BDL	0.38	BDL	BDL	BDL
4	River Satluj at D/s Nangal	1018	09.10.19	SW 938	ZO Lab Ldh	BDL	BDL	BDL	BDL	BDL	BDL	BDL
5	River Satluj at Kiratpur Sahib	1814	11.10.19	SW 944	ZO Lab Ldh	BDL	BDL	0.34	BDL	BDL	BDL	BDL
6	Confluence point of Sarsa Nadi with river Satluj	4161	11.10.19	SW 942	ZO Lab Ldh	BDL	BDL	1.32	BDL	BDL	BDL	BDL
7	Ropar Head-Works	1019	11.10.19	SW 940	ZO Lab Ldh	BDL	BDL	0.21	0.14	BDL	BDL	BDL
8	River Satluj D/S of Rishab- Paper Mills	1293	14.10.19	SW 952	ZO Lab Ldh	BDL	BDL	0.33	BDL	BDL	BDL	BDL
9	River Satluj U/S Buddha Nallah	1690	14.10.19	SW 954	ZO Lab Ldh	BDL	BDL	0.67	BDL	BDL	BDL	BDL
10	Point Source B/N	2914	16.10.19	SW 956	ZO Lab Ldh	0.10	0.09	15.2	1.49	BDL	BDL	BDL
11	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	16.10.19	SW 957	ZO Lab Ldh	BDL	BDL	1.76	0.10	BDL	BDL	BDL
12	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	16.10.19	SW 958	ZO Lab Ldh	BDL	BDL	0.91	BDL	BDL	BDL	BDL
13	River Satluj at D/s East Bein	1381	17.10.19	SW 961	ZO Lab Ldh	BDL	BDL	1.42	0.07	BDL	BDL	BDL
14	River Satluj at Harike	1022	17.10.19	SW 962	ZO Lab Ldh	BDL	BDL	1.29	0.37	BDL	BDL	BDL
15	U/S Hussainiwala H/W Ferozepur	1691	17.10.19	SW 961	ZO Lab Ldh	BDL	BDL	0.52	BDL	BDL	BDL	BDL
16	D/S Hussainiwala H/W Ferozepur	1692	17.10.19	SW 962	ZO Lab Ldh	BDL	BDL	0.98	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 in all the samples

Analysis results of Surface water monitoring under NWMP for the month of October, 2019

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 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
17	River Beas at Talwara H/W	1693	04/10/2019	SW 654	ZO Lab Jal.	7.7	7.6	BDL	174	94	46	BDL	0.11	0.15	B	S
18	River Beas at U/S Pathankot	1694	04/10/2019	SW 656	ZO Lab Jal.	7.8	7.8	1.2	280	110	70	BDL	0.43	0.18	B	S
19	River Beas at D/S Pathankot	1695	04/10/2019	SW 657	ZO Lab Jal.	7.8	7.4	1.3	260	430	280	0.032	0.24	0.20	B	S
20	River Beas at Mirthal Bridge Gurdaspur (Pb.)	1010	04/10/2019	SW 655	ZO Lab Jal.	7.6	7.8	1.1	256	84	46	BDL	0.36	0.17	B	S
21	River Beas 1 Km D/S effluent discharge point at Mukerian	1294	09/10/2019	SW 662	ZO Lab Jal.	7.6	7.6	1.2	256	540	240	0.021	0.29	0.20	C	S
22	River Beas at Bridge, village Bheate Patan Tehsil Batala Distt. Gurdaspur	4164	09/10/2019	SW 663	ZO Lab Jal.	7.9	7.7	1.0	210	280	170	0.018	0.09	0.24	B	S
23	River Beas at G.T. Road, under Bridge Near Kapurthalla (Pb)	1011	13/10/2019	SW 670	ZO Lab Jal.	7.8	7.6	1.2	206	220	140	0.013	0.06	0.28	B	S
24	River Beas at U/s Goindwal	1696	13/10/2019	SW 671	ZO Lab Jal.	8.0	7.8	1.1	222	240	130	0.012	0.04	0.17	B	S
25	River Beas at D/s Goindwal	1012	13/10/2019	SW 672	ZO Lab Jal.	7.9	7.9	1.1	236	280	170	0.018	0.12	0.15	B	S
26	Beas at Harike	1697	13/10/2019	SW 673	ZO Lab Jal.	7.7	7.8	1.0	212	220	140	0.032	0.09	0.13	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	SO4 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	PO4as P mg/l	F mg/l	Na mg/l	K mg/l
17	River Beas at Talwara H/W	1693	4/10/2019	SW 654	ZO Lab Jal.	8	6	BDL	116	92	11	6	80	21	7	98	BDL	BDL	BDL	BDL	BDL	BDL	2.3	2.2
18	River Beas at U/S Pathankot	1694	4/10/2019	SW 656	ZO Lab Jal.	12	17	10	154	127	18	8	85	27	4	104	BDL	BDL	BDL	BDL	BDL	BDL	9.1	3.2
19	River Beas at D/S Pathankot	1695	4/10/2019	SW 657	ZO Lab Jal.	9	18	14	165	141	13	14	118	29	11	141	BDL	0.7	0.4	1.2	0.06	0.12	5.9	2.9
20	River Beas at Mirthal Bridge Gurdaspur (Pb.)	1010	04/10/2019	SW 655	ZO Lab Jal.	10	16	10	160	136	20	8	84	28	4	102	BDL	BDL	BDL	BDL	BDL	BDL	7.8	3.1
21	River Beas 1 Km D/S effluent discharge point at Mukerian	1294	9/10/2019	SW 662	ZO Lab Jal.	10	24	16	170	130	16	16	107	31	7	143	BDL	0.6	0.4	1.1	0.07	0.10	6.8	4.1
22	River Beas at Bridge, village Bheate Patan Tehsil Batala Distt. Gurdaspur	4164	9/10/2019	SW 663	ZO Lab Jal.	8	15	14	128	108	12	14	105	26	10	90	BDL	0.5	0.6	1.0	0.05	0.11	2.2	2.4
23	River Beas at G.T. Road, under Bridge Near Kapurthalla (Pb)	1011	13/10/2019	SW 670	ZO Lab Jal.	9	38	18	140	106	16	16	97	24	9	104	BDL	0.5	0.4	1.0	0.06	0.13	1.4	2.4
24	River Beas at U/s Goindwal	1696	13/10/2019	SW 671	ZO Lab Jal.	7	28	14	126	90	11	12	98	24	9	90	BDL	0.6	0.4	1.1	0.07	0.10	1.0	2.3
25	River Beas at D/s Goindwal	1012	13/10/2019	SW 672	ZO Lab Jal.	8	39	14	136	96	13	12	100	26	8	97	BDL	0.6	0.4	1.1	0.06	0.11	2.7	2.3
26	Beas at Harike	1697	13/10/2019	SW 673	ZO Lab Jal.	8	23	15	140	106	16	14	90	24	8	85	BDL	0.7	0.6	1.2	0.05	0.13	2.0	2.4

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River Beas

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17	River Beas at Talwara H/W	1693	04/10/2019	SW 654	ZO Lab Jal.	BDL	BDL	0.10	BDL	BDL	BDL	BDL
18	River Beas at U/S Pathankot	1694	04/10/2019	SW 656	ZO Lab Jal.	BDL	BDL	0.20	0.09	BDL	BDL	BDL
19	River Beas at D/S Pathankot	1695	04/10/2019	SW 657	ZO Lab Jal.	BDL	BDL	0.25	0.11	BDL	BDL	BDL
20	River Beas at Mirthal Bridge Gurdaspur (Pb.)	1010	04/10/2019	SW 655	ZO Lab Jal.	BDL	BDL	0.27	0.08	BDL	BDL	BDL
21	River Beas 1 Km D/S effluent discharge point at Mukerian	1294	09/10/2019	SW 662	ZO Lab Jal.	BDL	BDL	0.24	0.12	BDL	BDL	BDL
22	River Beas at Bridge, village Bheate Patan Tehsil Batala Distt. Gurdaspur	4164	09/10/2019	SW 663	ZO Lab Jal.	BDL	BDL	0.25	0.14	BDL	BDL	BDL
23	River Beas at G.T. Road, under Bridge Near Kapurthalla (Pb)	1011	13/10/2019	SW 670	ZO Lab Jal.	BDL	BDL	0.26	0.17	BDL	BDL	BDL
24	River Beas at U/s Goindwal	1696	13/10/2019	SW 671	ZO Lab Jal.	BDL	BDL	0.10	0.06	BDL	BDL	BDL
25	River Beas at D/s Goindwal	1012	13/10/2019	SW 672	ZO Lab Jal.	BDL	BDL	0.13	0.06	BDL	BDL	BDL
26	Beas at Harike	1697	13/10/2019	SW 673	ZO Lab Jal.	BDL	BDL	0.29	0.08	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 in all the samples

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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	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
27	Ravi at U/s of Madhopur H/W	1097	04/10/2019	SW 653	ZO Lab Jal.	7.6	8.0	1.0	161	79	33	BDL	0.00	0.15	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	NO3-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	04/10/2019	SW 653	ZO Lab Jal.	8	4	BDL	112	90	12	10	80	22	6	84	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2.1

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, 2019(Metal/Pesticides)

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)
27	Ravi at U/s of Madhopur H/W	1097	04/10/2019	SW 653	ZO Lab Jal.	BDL	BDL	0.14	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 in all the samples

Analysis results of Surface water monitoring under NWMP for the month of October, 2019

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 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	Ghaggar at Mubarikpur Rest House	1023	10/10/19	SW 1057	H/o Lab Patiala	7.5	5.6	6	358	17000	2000	0.20	1.03	0.84	D	U								
2	Ghaggar at Bhankarpur	1295	10/10/19	SW 1058	H/o Lab Patiala	7.3	4.5	16	523	24000	3300	0.13	1.36	0.78	D	U								
3	Ghaggar at Chattbir	1698	10/10/19	SW 1059	H/o Lab Patiala	7.2	4.1	22	588	28000	3800	0.9	1.61	0.80	D	U								
4	Ghaggar at U/s Jharmal Nadi	1702	10/10/19	SW 1060	H/o Lab Patiala	7.3	4.2	10	445	17000	1700	0.17	1.27	0.68	D	U								
5	Ghaggar at D/s Jharmal Nadi	1701	10/10/19	SW 1061	H/o Lab Patiala	7.3	3.6	17	632	21000	2100	0.12	1.36	0.92	E	U								
6	Ghaggar at U/s Dhakanshu Nallah	1699	10/10/19	SW 1063	H/o Lab Patiala	7.3	4.0	6	398	13000	1500	0.7	1.63	0.89	D	U								
7	Ghaggar at D/s Dhakanshu Nallah	1700	10/10/19	SW 1064	H/o Lab Patiala	7.2	2.9	14	642	24000	3400	0.9	1.74	0.95	E	U								
8	Ghaggar at Rattanheri	1473	12/10/19	SW 1078	H/o Lab Patiala	7.3	3.8	13	760	28000	3100	0.16	2.13	0.51	E	U								
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	12/10/19	SW 1079	H/o Lab Patiala	7.2	4.1	12	751	24000	3400	0.14	2.24	0.55	D	U								
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	12/10/19	SW 1080	H/o Lab Patiala	7.2	3.4	17	823	35000	4700	0.14	2.24	0.59	E	U								
11	Ghaggar at Khanauri	1024	12/10/19	SW 1083	H/o Lab Patiala	7.2	3.6	15	572	24000	2700	0.9	1.29	0.48	E	U								
12	Ghaggar at Moonak	1703	12/10/19	SW 1085	H/o Lab Patiala	.3	3.4	15	635	28000	4000	0.12	1.24	0.50	E	U								
13	Ghaggar at U/s Sardulgarh	1705	15/10/19	SW 1122	H/o Lab Patiala	7.7	5.7	9	382	12000	1700	0.30	1.39	0.39	D	U								
14	Ghaggar at D/s Sardulgarh	1704	15/10/19	SW 1123	H/o Lab Patiala	7.8	4.9	11	498	21000	2200	0.37	1.30	0.42	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	SO4 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	PO4as P mg/l	F mg/l	Na mg/l	K mg/l
1	Ghaggar at Mubarikpur Rest House	1023	10/10/19	SW 1057	H/o Lab Patiala	22	315	272	215	183	28	7	79	23	5	158	BDL	10.2	2.01	14.3	1.07	0.26	21	8
2	Ghaggar at Bhankarpur	1295	10/10/19	SW 1058	H/o Lab Patiala	81	320	248	314	267	37	16	148	41	11	211	BDL	13.4	0.90	18.7	4.6	0.32	38	13
3	Ghaggar at Chattbir	1698	10/10/19	SW 1059	H/o Lab Patiala	111	80	112	353	300	45	10	169	46	13	237	BDL	9.3	0.86	13.0	0.83	0.29	48	17
4	Ghaggar at U/s Jharmal Nadi	1702	10/10/19	SW 1060	H/o Lab Patiala	49	40	74	267	227	33	6	114	29	10	197	BDL	11.6	0.80	16.2	2.9	0.21	31	9
5	Ghaggar at D/s Jharmal Nadi	1701	10/10/19	SW 1061	H/o Lab Patiala	87	50	87	379	322	69	17	181	49	14	223	BDL	11.9	0.98	16.7	2.0	0.35	42	21
6	Ghaggar at U/s Dhakanshu Nallah	1699	10/10/19	SW 1063	H/o Lab Patiala	24	40	68	239	203	24	7	78	21	6	172	BDL	7.2	0.68	10.1	0.70	0.19	33	14
7	Ghaggar at D/s Dhakanshu Nallah	1700	10/10/19	SW 1064	H/o Lab Patiala	69	45	76	385	327	51	12	176	47	14	241	BDL	9.6	1.3	13.4	4.3	0.88	53	29
8	Ghaggar at Rattanheri	1473	12/10/19	SW 1078	H/o Lab Patiala	64	90	162	456	388	73	21	210	56	17	273	BDL	15.8	0.90	22.1	3.4	0.53	71	20
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	12/10/19	SW 1079	H/o Lab Patiala	60	110	155	450	383	66	19	208	60	14	268	BDL	14.5	0.92	20.3	2.5	0.58	74	26
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	12/10/19	SW 1080	H/o Lab Patiala	78	115	173	494	420	71	23	248	68	19	279	BDL	14.0	1.04	19.6	5.8	0.68	81	29
11	Ghaggar at Khanauri	1024	12/10/19	SW 1083	H/o Lab Patiala	69	55	102	343	292	46	13	166	43	14	241	BDL	9.9	0.83	13.9	3.0	0.36	38	11
12	Ghaggar at Moonak	1703	12/10/19	SW 1085	H/o Lab Patiala	77	50	98	381	324	50	15	207	53	18	247	BDL	11.6	0.94	16.2	4.4	0.40	41	22
13	Ghaggar at U/s Sardulgarh	1705	15/10/19	SW 1122	H/o Lab Patiala	44	20	38	229	195	24	7	72	22	4	178	BDL	10.1	0.40	14.1	1.4	0.17	27	8
14	Ghaggar at D/s Sardulgarh	1704	15/10/19	SW 1123	H/o Lab Patiala	53	25	53	299	254	31	10	122	29	12	229	BDL	10.7	0.67	15.0	2.9	0.28	33	14

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, 2019 (Metal/Pesticides)

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	10/10/19	SW 1057	H/o Lab Patiala	BDL	BDL	2.92	0.18	BDL	BDL	BDL
2	Ghaggar at Bhankarpur	1295	10/10/19	SW 1058	H/o Lab Patiala	BDL	BDL	2.99	0.20	BDL	BDL	BDL
3	Ghaggar at Chattbir	1698	10/10/19	SW 1059	H/o Lab Patiala	BDL	BDL	3.01	0.21	BDL	BDL	BDL
4	Ghaggar at U/s Jharmal Nadi	1702	10/10/19	SW 1060	H/o Lab Patiala	BDL	BDL	3.20	0.20	BDL	BDL	BDL
5	Ghaggar at D/s Jharmal Nadi	1701	10/10/19	SW 1061	H/o Lab Patiala	BDL	BDL	3.28	0.23	BDL	BDL	BDL
6	Ghaggar at U/s Dhakanshu Nallah	1699	10/10/19	SW 1063	H/o Lab Patiala	BDL	BDL	3.59	2.27	BDL	BDL	BDL
7	Ghaggar at D/s Dhakanshu Nallah	1700	10/10/19	SW 1064	H/o Lab Patiala	BDL	BDL	3.08	0.29	BDL	BDL	BDL
8	Ghaggar at Rattanheri	1473	12/10/19	SW 1078	H/o Lab Patiala	BDL	BDL	2.02	0.23	BDL	BDL	BDL
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	12/10/19	SW 1079	H/o Lab Patiala	BDL	BDL	2.07	0.24	BDL	BDL	BDL
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	12/10/19	SW 1080	H/o Lab Patiala	BDL	BDL	2.15	0.28	BDL	BDL	BDL
11	Ghaggar at Khanauri	1024	12/10/19	SW 1083	H/o Lab Patiala	BDL	BDL	1.88	0.29	BDL	BDL	BDL
12	Ghaggar at Moonak	1703	12/10/19	SW 1085	H/o Lab Patiala	BDL	BDL	1.75	0.32	BDL	BDL	BDL
13	Ghaggar at U/s Sardulgarh	1705	15/10/19	SW 1122	H/o Lab Patiala	BDL	BDL	1.92	0.34	BDL	BDL	BDL
14	Ghaggar at D/s Sardulgarh	1704	15/10/19	SW 1123	H/o Lab Patiala	BDL	BDL	2.02	0.36	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 in all the samples

Analysis results of Surface water monitoring under NWMP for the month of October, 2019

Drains

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	FColi MPN/ 100ml	Free Amm. mg/l	SAR	B mg/l	Water quality as per DBU	Water Quality Index
1	Dhanula Drain falling into Lasara drain, Near village, Ghunas Punjab	2906	4/10/19	SW 1045	H.O. Lab Patiala	7.0	BDL	98	3798	280000	94000	BDL	5.63	0.84	E	U
2	Tallewal Drain along with Lohgarh –Jalwana Link road near Shri Krishna rice mill Punjab	2909	4/10/19	SW 1046	H.O. Lab Patiala	7.1	BDL	25	1025	38000	13000	0.001	2.04	0.78	E	U
3	Point Source B/N	2914	14.10.19	SW 953	Z.O. Lab, Ludhiana	7.14	0.0	112	1648	7,90,000	3,30,000	0.014	3.62	0.69	E	U
4	Kali Bein into Beas	2913	17/10/2019	SW 689	Z.O. Lab Jalandhar	7.8	5.2	2.2	362	4700	1500	0.017	1.04	0.85	C	S
5	Outfall of Nag Kalan drain into Tung Dhab drain at Majitha road, Amritsar	4163	Sample was not collected													
6	Tungdab drain at fatehgarh churian, Amritsar	2910	24/10/2019	SW 696	Z.O. Lab Jalandhar	7.0	BDL	154	2230	150000	63000	0.550	4.41	0.42	E	U
7	Hundiara drain before entering Pakistan	2907	24/10/2019	SW 697	Z.O. Lab Jalandhar	7.2	BDL	62	1486	140000	49000	0.390	2.92	0.47	E	U
8	Pathlawar Drain	2911	Sample was not collected													
9	Ranjit Sagar Reservoir	2912	04/10/2019	SW 652	Z.O. Lab Jalandhar	7.8	7.8	BDL	152	84	43	BDL	0.05	0.14	B	S
10	Outlet Of Nadiala Drain into Dhakanshu Nallah, Punjab	2908	10/10/19	SW 1062	H.O. Lab Patiala	7.1	BDL	35	1062	43000	12000	0.14	2.30	0.96	E	U
11	Sagar Para Drain at village sagra dist.Patiala	4158	12/10/19	SW 1081	H.O. Lab Patiala	7.3	BDL	18	665	39000	6800	0.6	1.26	0.71	E	U
12	Confluence point of sukhana Choe with River Ghaggar,vill.Mubarkpur	4162	10/10/19	SW 1068	H.O. Lab Patiala	7.0	BDL	30	795	170000	70000	BDL	2.31	0.98	E	U
13	Confluence point of Sarsa Nadi with river Satluj	4161	11.10.19	SW 942	Z.O. Lab, Ludhiana	8.08	8.4	<1	329	1700	460	BDL	0.45	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, 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, 2019

Drains

S.N .	Point of Sample Collection	Code	Date of receipt in lab	Lab Sampl e 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.Alk n mg/l	p.Alkn mg/l	Amn-N 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	Dhanula Drain falling into Lasara drain, Near village, Ghunas Punjab	2906	4/10/19	SW 1045	H.O. Lab Patiala	391	150	277	2279	1937	543	128	1015	297	66	992	BDL	7.3	2.41	18.2	5.7	0.98	412	110
2	Tallewal Drain along with Lohgarh –Jalwana Link road near Shri Krishna rice mill Punjab	2909	4/10/19	SW 1046	H.O. Lab Patiala	110	45	93	615	523	87	26	307	83	24	262	BDL	19.8	1.00	27.7	3.3	0.61	82	98
3	Point Source B/N	2914	14.10.19	SW 953	Z.O. Lab, Ludhiana	348	190	326	1048	878	340	12	334	92	25.3	550	BDL	28.9	5.32	38	4.7	0.74	152	5.2
4	Kali Bein into Beas	2913	17/10/2019	SW 689	Z.O. Lab Jalandhar	18	40	18	228	193	30	22	127	33	11	134	BDL	1.1	0.8	1.8	0.14	0.13	27	6.3
5	Outfall of Nag Kalan drain into Tung Dhab drain at Majitha road, Amritsar	4163	Sample was not collected																					
6	Tungdab drain at fatehgarh churian, Amritsar	2910	24/10/2019	SW 696	Z.O. Lab Jalandhar	340	310	148	1530	1310	184	74	586	179	33	676	BDL	22	2.4	42	0.7	0.52	245	28
7	Hundiara drain before entering Pakistan	2907	24/10/2019	SW 697	Z.O. Lab Jalandhar	160	196	92	1028	782	103	98	425	92	47	375	BDL	26	2.8	32	0.8	0.40	138	24
8	Pathlawa Drain	2911	Drain was found dried, hence sample could not be collected																					
9	Ranjit Sagar Reservoir	2912	04/10/2019	SW 652	Z.O. Lab Jalandhar	6	2	BDL	100	84	8	6	83	20	8	87	BDL	BDL	BDL	BDL	BDL	BDL	1.1	1.8
10	Outlet Of Nadiala Drain into Dhakanshu Nallah, Punjab	2908	10/10/19	SW 1062	H.O. Lab Patiala	159	200	215	637	541	91	25	337	87	29	367	BDL	13.9	1.02	19.5	4.5	0.78	97	34
11	Sagar Para Drain at village sagra dist.Patiala	4158	12/10/19	SW 1081	H.O. Lab Patiala	80	50	89	399	339	68	11	210	56	17	240	BDL	6.4	0.59	8.9	6.2	0.62	42	20
12	Confluence point of sukhana Choe with River Ghaggar,vill.Mubarkpur	4162	10/10/19	SW 1068	H.O. Lab Patiala	120	60	194	477	405	73	14	264	69	22	243	BDL	21.2	1.78	29.7	2.6	0.41	86	23
13	Confluence point of Sarsa Nadi with river Satluj	4161	11.10.19	SW 942	Z.O. Lab, Ludhiana	<5	40	66	194	176	24	6	136	36.8	10.7	108	BDL	BDL	1.02	BDL	BDL	0.27	12.1	3.2

Note. 1. BDL means Below Method Detection Limit
2. DBU means Designated Best Use (Class-A,B,C,D & E)
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4. U/s means Upstream , D/s means Downstream

Analysis results of Surface water monitoring under NWMP for the month of October, 2019(Metal/Pesticides)

Drains

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)	Water quality as per DBU	Water Quality Index
1	Dhanula Drain falling into Lasara drain, Near village, Ghunas Punjab	2906	4/10/19	SW 1045	H.O. Lab Patiala	BDL	BDL	5.85	0.81	BDL	BDL	BDL	BDL	BDL
2	Tallewal Drain along with Lohgarh –Jalwana Link road near Shri Krishna rice mill Punjab	2909	4/10/19	SW 1046	H.O. Lab Patiala	BDL	BDL	4.74	0.76	BDL	BDL	BDL	BDL	BDL
3	Point Source B/N	2914	16/10/19	SW 953	Z.O. Lab, Ludhiana	0.10	0.09	15.2	1.49	BDL	BDL	BDL	BDL	BDL
4	Kali Bein into Beas	2913	17/10/2019	SW 689	Z.O. Lab Jalandhar	BDL	BDL	2.87	0.46	BDL	BDL	BDL	BDL	BDL
5	Tungdab drain at fatehgarh churian, Amritsar	2910	24/10/2019	SW 696	Z.O. Lab Jalandhar	BDL	BDL	1.53	0.22	BDL	BDL	BDL	BDL	BDL
6	Pathlawa Drain	2911	Sample was not collected											
7	Hundiara drain before entering Pakistan	2907	24/10/2019	SW 697	Z.O. Lab Jalandhar	BDL	BDL	1.92	0.25	BDL	BDL	BDL	BDL	BDL
8	Ranjit Sagar Reservoir	2912	04/10/2019	SW 652	Z.O. Lab Jalandhar	BDL	BDL	0.23	0.10	BDL	BDL	BDL	BDL	BDL
9	Outlet Of Nadiala Drain into Dhakanshu Nallah, Punjab	2908	10/10/19	SW 1062	H.O. Lab Patiala	BDL	BDL	4.17	0.89	BDL	BDL	BDL	BDL	BDL
10	Sagar Para Drain at village sagra dist.Patiala	4158	12/10/19	SW 1081	H.O. Lab Patiala	BDL	BDL	2.77	0.56	BDL	BDL	BDL	BDL	BDL
11	Confluence point of Sarsa Nadi with river Satluj	4161	Sample was not collected											
12	Confluence point of sukhana Choe with River Ghaggar,vill.Mubarkpur	4162	10/10/19	SW 1068	H.O. Lab Patiala	BDL	BDL	2.95	0.91	BDL	BDL	BDL	BDL	BDL
13	Outfall of Nag Kalan drain into Tung Dhab drain at Majitha road, Amritsar	4163	Sample was not collected											

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 in all the samples