

Analysis results of Surface water monitoring under NWMP for the month of December, 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 us/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	13/12/18	SW 229	ZO Lab Ldh	7.66	8.6	<1	215	170	31	0.015	0.18	0.13	B	S
2	River Satluj at D/S NFL	1380	13/12/18	SW 231	ZO Lab Ldh	7.76	8.4	<1	265	210	46	0.042	0.24	0.14	B	S
3	River Sutej at 100m D/s PACL Nangal	2915	13/12/18	SW 232	ZO Lab Ldh	7.81	8.3	<1	262	210	49	0.035	0.26	0.17	B	S
4	River Satluj at D/s Nangal	1018	13/12/18	SW 230	ZO Lab Ldh	7.98	8.4	<1	234	150	43	0.040	0.17	0.24	B	S
5	River Satluj at Kiratpur Sahib	1814	17/12/18	SW 238	ZO Lab Ldh	7.86	8.1	<1	246	940	310	0.054	0.28	0.22	C	S
6	Ropar Head-Works	1019	17/12/18	SW 235	ZO Lab Ldh	7.13	7.9	<1	253	1400	630	0.001	0.34	0.13	C	S
7	River Satluj D/S of Rishab-Paper Mills	1293	17/12/18	SW 234	ZO Lab Ldh	7.86	7.3	1.6	460	2100	1100	0.081	1.12	0.29	C	S
8	River Satluj U/S Buddha Nallah	1690	18/12/18	SW 244	ZO Lab Ldh	7.14	7.0	1.4	436	3200	1300	0.002	1.07	0.16	C	S
9	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	18/12/18	SW 246	ZO Lab Ldh	7.07	3.6	26	723	7,90,000	3,30,000	BDL	2.41	0.25	E	N
10	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	19/12/18	SW 261	ZO Lab Ldh	7.03	5.2	9	542	94,000	43,000	BDL	0.67	0.22	D	N
11	River Satluj at D/s East Bein	1381	17/12/18	SW 162	ZO Lab Jal.	7.7	3.8	10.2	610	35000	17000	0.252	1.06	0.12	E	N
12	River Satluj at Harike	1022	17/12/18	SW 163	ZO Lab Jal.	8.1	6.2	4.2	306	14000	7900	0.221	0.38	0.15	D	N
13	Harike Lake D/S from canal	1382	17/12/18	SW 164	ZO Lab Jal.	7.9	7.5	1.8	234	3500	1700	0.090	0.19	0.20	C	S
14	D/S Harike lake	1297	17/12/18	SW 165	ZO Lab Jal.	7.7	7.4	2.0	242	3300	1700	0.054	1.04	0.14	C	S
15	U/S Hussainiwala H/W Ferozepur	1691	19/12/18	SW 262	ZO Lab Ldh	7.20	6.9	1.0	268	2200	930	0.011	0.28	0.10	C	S
16	D/S Hussainiwala H/W Ferozepur	1692	19/12/18	SW 263	ZO Lab Ldh	7.41	7.0	1.1	275	2100	920	0.018	0.29	0.14	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

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

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	13/12/18	SW 229	ZO Lab Ldh	<5	5.6	07	135	122	9.0	7.0	116	34.4	7.3	84	BDL	0.5	0.50	0.9	0.08	0.17	4.4	2.0
2	River Satluj at D/S NFL	1380	13/12/18	SW 231	ZO Lab Ldh	6.4	7.0	10	162	145	11	11	139	40	9.5	96	BDL	1.2	2.65	2.6	0.13	0.17	6.4	2.4
3	River Sutej at 100m D/s PACL Nangal	2915	13/12/18	SW 232	ZO Lab Ldh	5.6	6.4	08	160	144	12	10	134	38.8	9.0	94	BDL	1.0	2.19	2.2	0.11	0.19	6.9	2.7
4	River Satluj atD/s Nangal	1018	13/12/18	SW 230	ZO Lab Ldh	<5	6.0	08	149	134	11	9	130	38	8.5	88	BDL	0.8	0.63	1.4	0.10	0.17	4.5	2.1
5	River Satluj at Kiratpur Sahib	1814	17/12/18	SW 238	ZO Lab Ldh	7.2	8.0	10	156	140	14	10	134	36.8	10.2	92	BDL	1.2	0.48	2.1	0.14	0.16	7.5	2.5
6	Ropar Head-Works	1019	17/12/18	SW 235	ZO Lab Ldh	6.4	10	09	160	142	17	13	125	35.2	9.0	92	BDL	1.2	0.52	2.3	0.12	0.17	8.7	3.2
7	River Satluj D/S of Rishab- Paper Mills	1293	17/12/18	SW 234	ZO Lab Ldh	13	14	13	290	252	36	22	184	41.6	19.4	160	BDL	1.8	0.86	2.8	0.17	0.20	35	7.6
8	River Satluj U/S Buddha Nallah	1690	18/12/18	SW 244	ZO Lab Ldh	12	24	16	270	228	34	21	180	46.8	15.3	148	BDL	3.2	1.24	4.6	0.20	0.19	33	5.6
9	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	18/12/18	SW 246	ZO Lab Ldh	104	53	62	470	394	56	36	225	62.8	16.5	270	BDL	10.6	1.29	14	0.58	0.25	83	12
10	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	19/12/18	SW 261	ZO Lab Ldh	36	26	30	338	294	46	28	202	56.8	14.6	210	BDL	5.6	1.15	8.4	0.30	0.20	22	9.3
11	River Satluj at D/s East Bein	1381	17/12/18	SW 162	ZO Lab Jal.	42	69	30	350	260	68	38	114	34	7	160	BDL	8.4	1.4	15.2	0.48	0.20	26	4.9
12	River Satluj at Harike	1022	17/12/18	SW 163	ZO Lab Jal.	28	40	26	196	154	26	24	107	37	4	106	BDL	3.4	0.8	6.4	0.28	0.16	9	3.0
13	Harike Lake D/S from canal	1382	17/12/18	SW 164	ZO Lab Jal.	16	32	28	166	116	20	22	87	29	3	111	BDL	2.0	0.7	3.0	0.18	0.14	4	2.5
14	D/S Harike lake	1297	17/12/18	SW 165	ZO Lab Jal.	18	36	24	184	128	22	16	118	36	7	129	BDL	1.8	0.8	3.4	0.16	0.12	26	4.6
15	U/S Hussainiwala H/W Ferozepur	1691	19/12/18	SW 262	ZO Lab Ldh	9.6	08	10	172	154	19	11	119	38	5.8	116	BDL	1.1	0.48	1.6	0.12	0.14	6.9	3.9
16	D/S Hussainiwala H/W Ferozepur	1692	19/12/18	SW 263	ZO Lab Ldh	10.4	8.2	11	177	159	20	13	120	38.8	5.6	118	BDL	1.2	0.50	1.8	0.12	0.14	7.3	4.0

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

Note. 1.
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	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	18/12/18	SW 174	ZO Lab Jal.	7.8	7.8	1.0	186	94	49	BDL	0.29	0.11	B	S
18	River Beas at U/S Pathankot	1694	18/12/18	SW 176	ZO Lab Jal.	8.3	7.3	1.3	212	350	170	BDL	0.38	0.10	B	S
19	River Beas at D/S Pathankot	1695	18/12/18	SW 177	ZO Lab Jal.	8.0	7.5	2.0	242	490	330	0.025	0.24	0.13	B	S
20	River Beas at Mirthal Bridge Gurdaspur (Pb.)	1010	18/12/18	SW 175	ZO Lab Jal.	8.2	7.4	1.1	206	170	110	BDL	0.27	0.14	B	S
21	River Beas 1 Km D/S effluent discharge point at Mukerian	1294	18/12/18	SW 178	ZO Lab Jal.	7.7	7.4	2.1	262	840	460	0.021	0.35	0.08	C	S
22	River Beas at Bridge, village Bheate Patan Tehsil Batala Distt. Gurdaspur	4164	14/12/18	SW 156	ZO Lab Jal.	7.9	7.3	1.9	274	790	490	0.032	0.41	0.13	C	S
23	River Beas at G.T. Road, under Bridge Near Kapurthalla (Pb)	1011	14/12/18	SW 157	ZO Lab Jal.	7.8	7.4	1.6	212	630	460	0.021	0.24	0.14	C	S
24	River Beas at U/s Goindwal	1696	14/12/18	SW 158	ZO Lab Jal.	7.9	7.5	1.5	216	580	250	0.027	0.19	0.08	C	S
25	River Beas at D/s Goindwal	1012	14/12/18	SW 159	ZO Lab Jal.	7.9	8.3	1.6	232	630	330	0.036	0.18	0.10	C	S
26	Beas at Harike	1697	17/12/18	SW 161	ZO Lab Jal.	7.6	7.5	1.4	228	580	430	0.015	0.19	0.08	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
17	River Beas at Talwara H/W	1693	18/12/18	SW 174	ZO Lab Jal.	08	5.4	10	120	104	14	12	82	29	2	88	BDL	BDL	0.3	BDL	BDL	BDL	6	2.7
18	River Beas at U/S Pathankot	1694	18/12/18	SW 176	ZO Lab Jal.	12	4.8	10	150	126	18	12	118	34	5	106	BDL	BDL	0.5	BDL	0.07	0.14	9	1.9
19	River Beas at D/S Pathankot	1695	18/12/18	SW 177	ZO Lab Jal.	16	5.2	10	166	142	20	18	124	34	9	112	BDL	0.5	0.8	0.8	0.09	0.15	6	2.3
20	River Beas at Mirthal Bridge Gurdaspur (Pb.)	1010	18/12/18	SW 175	ZO Lab Jal.	8	3.5	12	134	114	16	10	93	29	5	102	BDL	BDL	0.4	BDL	BDL	0.12	6	2.5
21	River Beas 1 Km D/S effluent discharge point at Mukerian	1294	18/12/18	SW 178	ZO Lab Jal.	18	5.9	12	170	134	18	20	121	41	5	110	BDL	0.7	0.9	1.4	0.13	0.16	9	3.4
22	River Beas at Bridge, village Bheate Patan Tehsil Batala Distt. Gurdaspur	4164	14/12/18	SW 156	ZO Lab Jal.	17	24	14	186	142	18	18	136	44	6	132	BDL	0.7	1.1	1.4	0.12	0.18	11	4.1
23	River Beas at G.T. Road, under Bridge Near Kapurthalla (Pb)	1011	14/12/18	SW 157	ZO Lab Jal.	16	18	18	148	118	18	16	86	29	3	111	BDL	0.6	0.9	1.1	0.13	0.16	5	2.5
24	River Beas at U/s Goindwal	1696	14/12/18	SW 158	ZO Lab Jal.	14	16	12	144	114	18	14	90	30	3	110	BDL	0.6	0.8	1.2	0.11	0.16	4	2.5
25	River Beas at D/s Goindwal	1012	14/12/18	SW 159	ZO Lab Jal.	15	20	14	148	110	18	14	92	32	3	116	BDL	0.8	0.9	1.5	0.12	0.18	4	2.9
26	Beas at Harike	1697	17/12/18	SW 161	ZO Lab Jal.	12	28	26	152	120	20	16	90	32	2	94	BDL	0.6	0.7	1.4	0.10	0.14	4	2.4

- Note. 1. BDL means Below Method Detection Limit
 2. DBU means Designated Best Use (Class-A,B,C,D & E)
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Analysis results of Surface water monitoring under NWMP for the month of December, 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	18/12/18	SW 173	ZO Lab Jal.	7.7	8.1	BDL	206	110	146	BDL	0.54	0.09	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
27	Ravi at U/s of Madhopur H/W	1097	18/12/18	SW 173	ZO Lab Jal.	BDL	9.7	10	132	110	14	10	78	27	3	73	BDL	BDL	BDL	BDL	BDL	BDL	11	2.6

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Analysis results of Surface water monitoring under NWMP for the month of December 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 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	10/12/18	SW 973	H/o Lab Patiala	7.8	6.5	11	493	24000	3400	0.186	0.81	0.17	D	N
2	Ghaggar at Bhankarpur	1295	10/12/18	SW 974	H/o Lab Patiala	7.6	5.5	30	660	28000	6300	0.232	1.26	0.19	D	N
3	Ghaggar at Chattbir	1698	10/12/18	SW 975	H/o Lab Patiala	7.7	6.4	16	759	28000	5800	0.264	1.37	0.16	D	N
4	Ghaggar at U/s Jharmal Nadi	1702	10/12/18	SW 976	H/o Lab Patiala	7.5	4.4	10	876	22000	3900	0.20	1.50	0.17	D	N
5	Ghaggar at D/s Jharmal Nadi	1701	10/12/18	SW 977	H/o Lab Patiala	7.6	3.1	17	987	24000	4100	0.275	1.76	0.13	E	N
6	Ghaggar at U/s Dhakanshu Nallah	1699	10/12/18	SW 979	H/o Lab Patiala	7.5	3.2	14	936	17000	2100	0.180	2.08	0.25	E	N
7	Ghaggar at D/s Dhakanshu Nallah	1700	10/12/18	SW 980	H/o Lab Patiala	7.4	2.9	16	946	21000	3300	0.149	2.16	0.15	E	N
8	Ghaggar at Rattanheri	1473	13/12/18	SW 982	H/o Lab Patiala	7.8	2.6	22	981	24000	4900	0.504	2.50	0.36	E	N
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	13/12/18	SW 985	H/o Lab Patiala	7.6	3.3	14	923	21000	3800	0.335	2.22	0.19	E	N
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	13/12/18	SW 987	H/o Lab Patiala	7.7	2.9	26	985	28000	5800	0.381	2.47	0.12	E	N
11	Ghaggar at Khanauri	1024	13/12/18	SW 983	H/o Lab Patiala	7.6	2.0	54	1042	35000	8400	0.253	2.69	0.24	E	N
12	Ghaggar at Moonak	1703	13/12/18	SW 984	H/o Lab Patiala	7.4	1.3	68	1500	43000	11000	0.159	2.90	0.22	E	N
13	Ghaggar at U/s Sardulgarh	1705	24/12/18	SW 1041	H/o Lab Patiala	7.9	5.6	20	745	17000	2600	0.405	2.46	0.15	D	N
14	Ghaggar at D/s Sardulgarh	1704	24/12/18	SW 1042	H/o Lab Patiala	7.4	5.2	29	826	24000	3400	0.138	2.53	0.17	D	N

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1	Ghaggar at Mubarikpur Rest House	1023	10/12/18	SW 973	H/o Lab Patiala	58	450	558	328	229	63	18	275	97	8	172	BDL	5.3	0.28	7.5	0.10	0.13	31	4
2	Ghaggar at Bhankarpur	1295	10/12/18	SW 974	H/o Lab Patiala	117	440	740	443	377	42	22	287	102	8	331	BDL	9.3	0.32	13.0	0.80	0.14	49	8
3	Ghaggar at Chattbir	1698	10/12/18	SW 975	H/o Lab Patiala	87	410	494	480	408	53	23	307	116	4	358	BDL	8.8	0.29	12.3	0.14	0.14	55	9
4	Ghaggar at U/s Jharmal Nadi	1702	10/12/18	SW 976	H/o Lab Patiala	57	220	137	565	480	120	26	327	125	3	352	BDL	10.0	0.32	14.2	0.68	0.25	62	13
5	Ghaggar at D/s Jharmal Nadi	1701	10/12/18	SW 977	H/o Lab Patiala	84	225	131	625	531	137	30	374	141	5	360	BDL	11	0.65	15	0.68	0.21	78	15
6	Ghaggar at U/s Dhakanshu Nallah	1699	10/12/18	SW 979	H/o Lab Patiala	74	70	47	610	519	119	24	339	131	3	373	BDL	9.0	0.51	12.6	1.10	0.20	88	12
7	Ghaggar at D/s Dhakanshu Nallah	1700	10/12/18	SW 980	H/o Lab Patiala	89	60	51	614	522	102	28	345	133	3	383	BDL	9.9	0.61	14.0	1.58	0.23	92	14
8	Ghaggar at Rattanheri	1473	13/12/18	SW 982	H/o Lab Patiala	105	170	155	625	532	120	32	303	77	27	397	BDL	14.4	0.65	20.0	2.50	0.32	100	22
9	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	13/12/18	SW 985	H/o Lab Patiala	72	300	194	595	506	105	25	298	86	20	385	BDL	13.4	0.59	18.8	2.0	0.30	88	23
10	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	13/12/18	SW 987	H/o Lab Patiala	128	340	224	628	534	110	32	309	101	14	400	BDL	12.7	0.67	17.8	2.0	0.31	100	26
11	Ghaggar at Khanauri	1024	13/12/18	SW 983	H/o Lab Patiala	256	530	388	656	558	130	52	303	79	26	377	BDL	10.1	0.70	14.2	1.63	0.39	108	28
12	Ghaggar at Moonak	1703	13/12/18	SW 984	H/o Lab Patiala	330	120	150	970	825	168	58	466	141	28	534	BDL	10.6	0.69	15.0	2.0	0.31	144	104
13	Ghaggar at U/s Sardulgarh	1705	24/12/18	SW 1041	H/o Lab Patiala	80	20	31	470	400	89	23	200	77	2	286	BDL	9	0.42	12.3	2.12	0.30	80	18
14	Ghaggar at D/s Sardulgarh	1704	24/12/18	SW 1042	H/o Lab Patiala	102	30	36	520	442	97	29	251	84	10	294	BDL	9.2	0.51	12.9	1.13	0.32	92	22

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