

Analysis results of Surface water monitoring under NWMP for the month of September, 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	11/9/18	168	ZO Lab Ldh	7.92	8.6	<1	260	210	36	0.020	0.48	0.14	B	S
2	River Satluj at D/S NFL	1380	11/9/18	169	ZO Lab Ldh	7.48	8.0	<1	304	410	93	0.012	0.45	0.21	B	S
3	River Sutej at 100m D/s PACL Nangal	2915	11/9/18	170	ZO Lab Ldh	7.62	8.0	<1	306	470	100	0.015	0.45	0.15	B	S
4	River Satluj at D/s Nangal	1018	11/9/18	171	ZO Lab Ldh	7.90	8.2	<1	280	400	68	0.018	0.46	0.20	B	S
5	River Satluj at Kiratpur Sahib	1814	12/9/18	176	ZO Lab Ldh	7.80	8.3	<1	403	930	370	0.021	0.68	0.26	C	S
6	Ropar Head-Works	1019	12/9/18	174	ZO Lab Ldh	7.86	8.7	<1	373	1400	680	0.027	0.50	0.29	C	S
7	River Satluj D/S of Rishab-Paper Mills	1293	12/9/18	173	ZO Lab Ldh	7.64	8.5	<1	415	1700	680	0.015	0.91	0.33	C	S
8	River Satluj U/S Buddha Nallah	1690	13/9/18	182	ZO Lab Ldh	7.60	7.0	<1	440	3300	1000	0.030	0.93	0.24	C	S
9	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	13/9/18	184	ZO Lab Ldh	7.44	3.0	39	712	700000	310000	0.021	1.34	0.31	E	N
10	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	14/9/18	191	ZO Lab Ldh	7.34	7.0	8	403	35000	11000	0.010	1.43	0.21	D	N
11	River Satluj at D/s East Bein	1381	25/9/18	52	ZO Lab Jal.	7.9	6.6	6.0	382	35000	22000	0.279	0.94	0.11	D	N
12	River Satluj at Harike	1022	25/9/18	53	ZO Lab Jal.	7.4	6.2	2.6	320	14000	7900	0.045	0.90	0.10	D	N
13	Harike Lake D/S from canal	1382	25/9/18	54	ZO Lab Jal.	7.5	7.4	1.6	268	2800	1700	0.040	0.91	0.13	C	S
14	D/S Harike lake	1297	25/9/18	55	ZO Lab Jal.	7.6	6.3	1.7	265	2800	1300	0.045	0.79	0.06	C	S
15	U/S Hussainiwala H/W Ferozepur	1691	14/9/18	192	ZO Lab Ldh	7.89	7.6	<1	257	910	180	0.036	0.90	0.14	C	S
16	D/S Hussainiwala H/W Ferozepur	1692	14/9/18	193	ZO Lab Ldh	7.70	7.6	<1	287	1000	200	0.024	0.86	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, N means Not Satisfactory)

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	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	11/9/18	168	ZO Lab Ldh	<5	7	10	124	115	20	16	55	13.6	5.04	42	BDL	0.4	0.6	1.2	0.4	0.4	8.18	4.0
2	River Satluj at D/S NFL	1380	11/9/18	169	ZO Lab Ldh	<5	9	13	149	136	22	18	60	14.4	5.76	54	BDL	0.6	0.8	1.6	0.8	0.6	8.01	4.77
3	River Sutej at 100m D/s PACL Nangal	2915	11/9/18	170	ZO Lab Ldh	<5	10	14	148	134	24	20	70	17.6	6.24	52	BDL	0.6	0.8	1.8	1.0	0.6	8.68	4.12
4	River Satluj at D/s Nangal	1018	11/9/18	171	ZO Lab Ldh	<5	8	12	128	118	20	18	65	15.2	6.48	48	BDL	0.4	0.6	1.4	0.8	0.4	8.51	3.19
5	River Satluj at Kiratpur Sahib	1814	12/9/18	176	ZO Lab Ldh	<5	12	10	242	221	28	22	80	20	7.2	68	BDL	0.6	0.8	1.6	1.0	0.6	13.88	5.13
6	Ropar Head-Works	1019	12/9/18	174	ZO Lab Ldh	<5	14	12	224	204	22	16	76	17.6	7.68	64	BDL	0.6	0.8	1.6	0.6	0.4	9.92	4.27
7	River Satluj D/S of Rishab- Paper Mills	1293	12/9/18	173	ZO Lab Ldh	6	16	20	249	223	26	18	78	19.2	7.2	70	BDL	0.6	1.0	1.8	0.8	0.5	18.40	5.52
8	River Satluj U/S Buddha Nallah	1690	13/9/18	182	ZO Lab Ldh	<5	17	21	254	236	24	20	80	20	7.2	60	BDL	1.2	1.2	2.8	0.8	0.4	19.13	4.80
9	River Satluj at 100 mts D/s after Budha Nallah confluence, Ludhiana	1020	13/9/18	184	ZO Lab Ldh	140	34	68	420	388	70	50	140	32	14.4	74	BDL	1.4	3.6	5.8	2.2	1.2	36.36	8.79
10	River Satluj at Boat Bridge, Dharamkot Nakodar Road	1021	14/9/18	191	ZO Lab Ldh	28	17	26	242	204	26	20	72	18.4	6.24	56	BDL	1.0	1.2	3.0	1.4	0.2	27.75	6.92
11	River Satluj at D/s East Bein	1381	25/9/18	52	ZO Lab Jal.	36	40	128	264	220	48	32	124	41	5	145	BDL	6.2	1.1	10.4	0.32	0.28	24	7.2
12	River Satluj at Harike	1022	25/9/18	53	ZO Lab Jal.	18	36	178	198	160	28	20	102	33	5	130	BDL	3.0	1.4	5.0	0.18	0.13	21	6.9
13	Harike Lake D/S from canal	1382	25/9/18	54	ZO Lab Jal.	15	34	196	178	124	20	16	100	32	5	124	BDL	2.0	1.3	3.0	0.16	0.15	21	7.0
14	D/S Harike lake	1297	25/9/18	55	ZO Lab Jal.	15	28	156	182	140	22	18	96	26	8	130	BDL	0.14	1.5	1.8	0.06	0.14	1300	18
15	U/S Hussainiwala H/W Ferozepur	1691	14/9/18	192	ZO Lab Ldh	6.0	13	14	154	142	18	12	62	15.2	5.76	46	BDL	0.8	1.0	2.4	0.8	0.1	16.20	3.81
16	D/S Hussainiwala H/W Ferozepur	1692	14/9/18	193	ZO Lab Ldh	8.0	14	22	172	158	20	14	64	15.2	6.24	48	BDL	0.8	1.0	2.4	0.8	0.3	15.83	3.73

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

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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	8/9/18	46	ZO Lab Jal.	7.6	7.7	1.0	198	110	70	BDL	0.62	0.06	B	S
18	River Beas at U/S Pathankot	1694	8/9/18	48	ZO Lab Jal.	7.4	7.5	1.3	242	400	220	BDL	0.64	0.08	B	S
19	River Beas at D/S Pathankot	1695	8/9/18	49	ZO Lab Jal.	7.5	7.6	1.9	250	580	310	0.010	0.82	0.24	C	S
20	River Beas at Mirthal Bridge Gurdaspur (Pb.)	1010	8/9/18	47	ZO Lab Jal.	7.6	7.6	1.2	238	170	130	BDL	0.90	0.06	B	S
21	River Beas 1 Km D/S effluent discharge point at Mukerian	1294	8/9/18	50	ZO Lab Jal.	7.6	7.4	1.7	288	630	330	0.015	0.53	0.12	C	S
22	River Beas at Bridge, village Bheate Patan Tehsil Batala Distt. Gurdaspur	4164	12/9/18	39	ZO Lab Jal.	7.5	7.3	1.8	296	790	490	0.008	1.16	0.08	C	S
23	River Beas at G.T. Road, under Bridge Near Kapurthalla (Pb)	1011	12/9/18	40	ZO Lab Jal.	7.4	7.5	1.5	242	400	220	0.009	0.50	0.2	B	S
24	River Beas at U/s Goindwal	1696	12/9/18	41	ZO Lab Jal.	7.4	7.6	1.3	239	350	220	0.006	0.53	0.07	B	S
25	River Beas at D/s Goindwal	1012	12/9/18	42	ZO Lab Jal.	7.5	7.4	1.5	248	460	330	0.010	0.77	0.07	B	S
26	Beas at Harike	1697	25/9/18	51	ZO Lab Jal.	7.6	6.7	1.4	220	460	330	0.010	0.47	0.05	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
17	River Beas at Talwara H/W	1693	8/9/18	46	ZO Lab Jal.	10	22	140	145	110	14	08	112	36	5	102	BDL	BDL	0.7	BDL	BDL	BDL	15	4.6
18	River Beas at U/S Pathankot	1694	8/9/18	48	ZO Lab Jal.	14	38	196	170	138	18	12	150	50	6	92	BDL	BDL	1.1	BDL	0.09	0.10	18	4.0
19	River Beas at D/S Pathankot	1695	8/9/18	49	ZO Lab Jal.	18	28	180	175	146	20	14	124	36	8	102	BDL	0.5	1.0	1.2	0.12	0.12	21	4.9
20	River Beas at Mirthal Bridge Gurdaspur (Pb.)	1010	8/9/18	47	ZO Lab Jal.	12	21	132	166	124	12	16	136	35	9	105	BDL	BDL	0.9	BDL	BDL	BDL	23	5.2
21	River Beas 1 Km D/S effluent discharge point at Mukerian	1294	8/9/18	50	ZO Lab Jal.	16	30	172	180	148	18	12	111	35	6	77	BDL	0.6	1.0	1.0	0.18	0.13	13	5.3
22	River Beas at Bridge, village Bheate Patan Tehsil Batala Distt. Gurdaspur	4164	12/9/18	39	ZO Lab Jal.	16	26	154	194	160	22	24	112	34	6	104	BDL	0.4	0.9	0.8	0.17	0.15	28	7.4
23	River Beas at G.T. Road, under Bridge Near Kapurthalla (Pb)	1011	12/9/18	40	ZO Lab Jal.	14	31	196	166	140	18	16	125	42	5	100	BDL	0.6	1.1	1.3	0.14	0.14	13	6.0
24	River Beas at U/s Goindwal	1696	12/9/18	41	ZO Lab Jal.	12	25	168	150	122	16	16	131	34	11	82	BDL	0.4	1.2	1.0	0.15	0.12	14	6.1
25	River Beas at D/s Goindwal	1012	12/9/18	42	ZO Lab Jal.	14	31	192	164	130	20	12	128	33	11	98	BDL	0.5	1.2	1.2	0.13	0.13	20	6.8
26	Beas at Harike	1697	25/9/18	51	ZO Lab Jal.	14	28	154	146	112	16	16	84	29	3	100	BDL	0.4	1.0	0.8	0.12	0.12	10	5.3

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 September, 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	8/9/18	45	ZO Lab Jal.	7.4	7.8	BDL	175	79	49	BDL	0.30	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	8/9/18	45	ZO Lab Jal.	BDL	14	82	124	106	16	06	104	31	6	77	BDL	BDL	0.5	BDL	BDL	BDL	7	3.6

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Analysis results of Surface water monitoring under NWMP for the month of September, 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
28	Ghaggar at Mubarikpur Rest House	1023	11/9/18	SW 576	H/o Lab Patiala	7.8	4.2	6	415	17000	2400	0.056	0.54	0.13	D	N
29	Ghaggar at Bhankarpur	1295	11/9/18	SW 577	H/o Lab Patiala	7.6	3.9	13	506	28000	4700	0.108	0.99	0.11	E	N
30	Ghaggar at Chattbir	1698	11/9/18	SW 578	H/o Lab Patiala	7.7	4.0	10	478	24000	4100	0.069	0.75	0.13	D	N
31	Ghaggar at U/s Jharmal Nadi	1702	11/9/18	SW 579	H/o Lab Patiala	7.6	4.1	8	399	24000	3400	0.045	0.78	0.12	D	N
32	Ghaggar at D/s Jharmal Nadi	1701	11/9/18	SW 580	H/o Lab Patiala	7.5	3.0	11	900	28000	4900	0.058	1.92	0.21	E	N
33	Ghaggar at U/s Dhakanshu Nallah	1699	11/9/18	SW 582	H/o Lab Patiala	7.4	2.8	9	490	22000	2600	0.038	0.96	0.18	E	N
34	Ghaggar at D/s Dhakanshu Nallah	1700	11/9/18	SW 583	H/o Lab Patiala	7.4	1.8	11	557	28000	4000	0.044	1.16	0.18	E	N
35	Ghaggar at Rattanheri	1473	18/9/18	SW 602	H/o Lab Patiala	7.1	1.0	38	924	35000	9200	0.003	1.28	0.11	E	N
36	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	18/9/18	SW 605	H/o Lab Patiala	7.4	2.0	22	654	24000	4100	0.065	1.45	0.15	E	N
37	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	18/9/18	SW 607	H/o Lab Patiala	7.4	1.7	30	774	28000	5800	0.050	2.38	0.20	E	N
38	Ghaggar at Khanauri	1024	18/9/18	SW 603	H/o Lab Patiala	7.3	2.2	15	654	24000	4900	0.032	1.53	0.16	E	N
39	Ghaggar at Moonak	1703	18/9/18	SW 604	H/o Lab Patiala	7.5	2.7	14	658	22000	4300	0.054	1.60	0.15	E	N
40	Ghaggar at U/s Sardulgarh	1705	26/9/18	SW 649	H/o Lab Patiala	7.5	2.6	14	498	24000	4100	0.032	1.37	0.13	E	N
41	Ghaggar at D/s Sardulgarh	1704	26/9/18	SW 650	H/o Lab Patiala	7.3	2.4	16	507	28000	4900	0.018	1.32	0.16	E	N

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28	Ghaggar at Mubarikpur Rest House	1023	11/9/18	SW 576	H/o Lab Patiala	37	800	992	270	230	22	21	234	76	11	159	BDL	1.6	0.26	2.2	0.24	0.41	19	4
29	Ghaggar at Bhankarpur	1295	11/9/18	SW 577	H/o Lab Patiala	68	700	1138	329	273	23	28	222	77	7	215	BDL	4.30	0.40	5.8	0.39	0.48	34	7
30	Ghaggar at Chattbir	1698	11/9/18	SW 578	H/o Lab Patiala	60	800	1202	311	250	21	26	226	81	6	205	BDL	2.3	0.36	3.6	0.34	0.44	26	5
31	Ghaggar at U/s Jharmal Nadi	1702	11/9/18	SW 579	H/o Lab Patiala	52	700	1524	251	214	20	22	202	63	5	157	BDL	1.8	0.28	2.9	0.30	0.47	24	5
32	Ghaggar at D/s Jharmal Nadi	1701	11/9/18	SW 580	H/o Lab Patiala	63	800	1316	596	460	94	35	476	155	21	238	BDL	2.9	0.49	3.8	0.44	0.76	96	10
33	Ghaggar at U/s Dhakanshu Nallah	1699	11/9/18	SW 582	H/o Lab Patiala	56	700	1074	314	254	27	23	253	76	15	184	BDL	2.5	0.30	3.6	0.49	0.49	35	6
34	Ghaggar at D/s Dhakanshu Nallah	1700	11/9/18	SW 583	H/o Lab Patiala	64	700	910	362	282	33	27	285	87	17	209	BDL	2.9	0.38	4.0	0.42	0.56	45	8
35	Ghaggar at Rattanheri	1473	18/9/18	SW 602	H/o Lab Patiala	160	500	540	610	472	72	42	507	173	18	308	BDL	5.3	0.64	7.4	0.64	0.64	66	14
36	Ghaggar before mixing with Sagar Para drain (U/s sagar para Drain)	4159	18/9/18	SW 605	H/o Lab Patiala	92	600	560	437	354	71	36	269	97	7	217	BDL	4.3	0.50	5.8	0.32	0.58	55	9
37	Ghaggar after mixing with Sagar Para drain (D/s Sagar Para Drain)	4160	18/9/18	SW 607	H/o Lab Patiala	120	600	304	511	390	79	44	265	81	15	263	BDL	3.3	0.56	4.8	0.34	0.52	89	17
38	Ghaggar at Khanauri	1024	18/9/18	SW 603	H/o Lab Patiala	73	700	770	431	340	49	39	293	98	11	226	BDL	3.2	0.52	1.6	0.13	0.49	60	11
39	Ghaggar at Moonak	1703	18/9/18	SW 604	H/o Lab Patiala	68	900	1346	434	341	63	31	285	94	12	213	BDL	2.7	0.43	3.8	0.29	0.41	62	9
40	Ghaggar at U/s Sardulgarh	1705	26/9/18	SW 649	H/o Lab Patiala	38	600	462	324	264	44	24	214	66	12	164	BDL	1.6	0.31	2.6	0.30	0.36	46	13
41	Ghaggar at D/s Sardulgarh	1704	26/9/18	SW 650	H/o Lab Patiala	40	700	716	330	266	46	25	218	73	9	170	BDL	1.8	0.33	3.0	0.37	0.37	45	12

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