

### Analysis results of Surface water monitoring under NWMP for the month of April, 2020

#### 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 $\mu$ 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	9/4/20	SW 1276	ZO Lab Ldh	7.4	9.3	<1	257	170	45	BDL	0.12	BDL	B	S
2	River Satluj at D/S NFL	1380	9/4/20	SW 1277	ZO Lab Ldh	8.4	8.9	<1	266	210	68	BDL	0.19	BDL	B	S
3	River Sutej at 100m D/s PACL Nangal	2915	9/4/20	SW 1278	ZO Lab Ldh	8.2	8.8	<1	316	260	68	BDL	0.20	BDL	B	S
4	River Satluj at D/s Nangal	1018	9/4/20	SW 1279	ZO Lab Ldh	8.5	9.1	<1	302	250	91	BDL	0.17	BDL	B	S
5	River Satluj at Kiratpur Sahib	1814	10/4/20	SW 1281	ZO Lab Ldh	7.6	10.6	<1	254	340	92	BDL	0.11	0.10	B	S
6	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
7	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
8	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
9	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
10	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
11	River Satluj at D/s East Bein	1381	12/4/20	SW 1292	ZO Lab Ldh.	7.5	2.8	5.8	421	2,10,000	70,000	0.04	0.34	0.15	E	U
12	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
13	Harike Lake D/S from canal	1382	9/4/20	SW 175	ZO Lab Jal.	7.9	7.4	1.3	262	2700	680	0.041	0.33	0.15	C	S
14	D/S Harike lake	1297	9/4/20	SW 176	ZO Lab Jal.	7.6	8.0	1.2	264	1700	200	0.025	0.28	0.12	C	S
15	U/S Hussainiwala H/W Ferozepur	1691	12/4/20	SW 1294	ZO Lab Ldh	8.0	9.2	<1	263	630	210	BDL	0.23	0.10	C	S
16	D/S Hussainiwala H/W Ferozepur	1692	12/4/20	SW 1295	ZO Lab Ldh	8.0	9.0	<1	258	700	210	BDL	0.23	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 April, 2020

#### 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 <sub>4</sub> mg/l	TH mg/l	Ca mg/l	Mg mg/l	T.Alkn mg/l	P.Alkn mg/l	AmnN mg/l	NO <sub>3</sub> -N mg/l	TKN mg/l	PO <sub>4</sub> P mg/l	F mg/l	Na mg/l	K mg/l
1	River Satluj at U/S Nangal	1017	9/4/20	SW 1276	ZO Lab Ldh	<5	BDL	BDL	149	131	12	7	146	34.4	14.6	82	BDL	BDL	1.3	BDL	BDL	0.23	3.2	1.7
2	River Satluj at D/S NFL	1380	9/4/20	SW 1277	ZO Lab Ldh	<5	5	BDL	156	135	12	7	148	35.2	14.6	84	BDL	BDL	1.4	BDL	BDL	0.24	5.3	1.7
3	River Sutej at 100m D/s PACL Nangal	2915	9/4/20	SW 1278	ZO Lab Ldh	<5	3	BDL	187	160	15	10	190	44.8	19	100	BDL	BDL	1.3	BDL	BDL	0.22	6.4	3
4	River Satluj at D/s Nangal	1018	9/4/20	SW 1279	ZO Lab Ldh	<5	3	BDL	172	151	16	11	158	37.6	15.6	98	BDL	BDL	1.3	BDL	BDL	0.21	4.8	1.4
5	River Satluj at Kiratpur Sahib	1814	10/4/20	SW 1281	ZO Lab Ldh	<5	BDL	BDL	149	127	14	9	150	35.2	15.1	76	BDL	BDL	1.2	BDL	BDL	0.21	3.2	1.6
6	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
7	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
8	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
9	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
10	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
11	River Satluj at D/s East Bein	1381	12/4/20	SW 1292	ZO Lab Ldh	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
12	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
13	Harike Lake D/S from canal	1382	9/4/20	SW 175	ZO Lab Jal.	14	28	14	178	145	20	16	114	33	8	112	BDL	0.9	0.8	1.6	0.13	0.17	8.2	3.4
14	D/S Harike lake	1297	9/4/20	SW 176	ZO Lab Jal.	13	87	15	164	130	16	12	107	32	7	120	BDL	1.0	0.8	1.7	0.15	0.21	6.6	2.6
15	U/S Hussainiwala H/W Ferozepur	1691	12/4/20	SW 1294	ZO Lab Ldh	<5	12	12	152	135	12	6	110	27.2	10.2	104	BDL	BDL	1.2	1.1	BDL	0.21	5.6	1.9
16	D/S Hussainiwala H/W Ferozepur	1692	12/4/20	SW 1295	ZO Lab Ldh	<5	13	13	148	133	12	7	112	27.2	10.7	96	BDL	BDL	1.3	1.1	BDL	0.20	5.6	1.8

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	River Satluj at U/S Nangal	1017	9/4/20	SW 1276	0.10	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2	River Satluj at D/S NFL	1380	9/4/20	SW 1277	0.18	0.11	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3	River Sutej at 100m D/s PACL Nangal	2915	9/4/20	SW 1278	0.15	0.10	BDL	BDL	BDL	BDL	BDL	BDL	BDL
4	River Satluj at D/s Nangal	1018	9/4/20	SW 1279	0.24	0.15	BDL	BDL	BDL	BDL	BDL	BDL	BDL
5	River Satluj at Kiratpur Sahib	1814	10/4/20	SW 1281	0.31	0.19	BDL	BDL	BDL	BDL	BDL	BDL	BDL
6	Ropar Head-Works	1019	10/4/20	SW 1284	0.15	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
7	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
8	River Satluj U/S Buddha Nallah	1690	11/4/20	SW 1287	0.55	0.21	BDL	BDL	BDL	BDL	BDL	BDL	BDL
9	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
10	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
11	River Satluj at D/s East Bein	1381	12/4/20	SW 1292	0.85	0.34	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12	River Satluj at Harike	1022	12/4/20	SW 1293	0.79	0.23	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Harike Lake D/S from canal	1382	9/4/20	SW 175	0.15	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14	D/S Harike lake	1297	9/4/20	SW 176	0.16	0.10	BDL	BDL	BDL	BDL	BDL	BDL	BDL
15	U/S Hussainiwala H/W Ferozepur	1691	12/4/20	SW 1294	0.24	0.10	BDL	BDL	BDL	BDL	BDL	BDL	BDL
16	D/S Hussainiwala H/W Ferozepur	1692	12/4/20	SW 1295	0.63	0.21	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**

**Analysis results of Surface water monitoring under NWMP for the month of April, 2020****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 $\mu$ 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	8/4/20	SW 164	ZO Lab Jal.	7.6	7.8	1.1	217	100	40	0.013	0.40	0.09	B	S
18	River Beas at U/S Pathankot	1694	8/4/20	SW 166	ZO Lab Jal.	7.5	7.9	1.0	248	82	36	0.014	0.66	0.13	B	S
19	River Beas at D/S Pathankot	1695	8/4/20	SW 167	ZO Lab Jal.	7.8	7.4	1.3	259	210	92	0.032	0.39	0.15	B	S
20	River Beas at Mirthal Bridge Gurdaspur (Pb.)	1010	8/4/20	SW 165	ZO Lab Jal.	7.5	7.7	1.1	252	92	45	0.014	0.58	0.12	B	S
21	River Beas 1 Km D/S effluent discharge point at Mukerian	1294	8/4/20	SW 168	ZO Lab Jal.	7.7	7.2	1.3	264	480	170	0.027	0.37	0.14	B	S
22	River Beas at Bridge, village Bheate Patan Tehsil Batala Distt. Gurdaspur	4164	8/4/20	SW 169	ZO Lab Jal.	7.6	7.7	1.1	260	260	140	0.020	0.22	0.16	B	S
23	River Beas at G.T. Road, under Bridge Near Kapurthalla (Pb)	1011	9/4/20	SW 171	ZO Lab Jal.	8.0	7.8	1.3	268	260	82	0.045	0.24	0.22	B	S
24	River Beas at U/s Goindwal	1696	9/4/20	SW 172	ZO Lab Jal.	8.1	7.9	1.1	245	220	93	0.039	0.31	0.13	B	S
25	River Beas at D/s Goindwal	1012	9/4/20	SW 173	ZO Lab Jal.	7.8	7.7	1.1	240	270	110	0.025	0.30	0.14	B	S
26	Beas at Harike	1697	9/4/20	SW 174	ZO Lab Jal.	7.7	8.0	1.0	238	320	110	0.021	0.32	0.11	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	8/4/20	SW 164	ZO Lab Jal.	12	5	BDL	158	130	14	10	84	27	4	98	BDL	0.5	0.4	0.8	0.05	0.09	8.5	2.8
18	River Beas at U/S Pathankot	1694	8/4/20	SW 166	ZO Lab Jal.	12	18	BDL	174	148	18	10	84	27	4	122	BDL	0.7	0.5	1.2	0.06	0.16	14	3.0
19	River Beas at D/S Pathankot	1695	8/4/20	SW 167	ZO Lab Jal.	14	28	12	181	152	22	12	124	34	10	118	BDL	0.9	0.8	1.4	0.06	0.12	10	2.8
20	River Beas at Mirthal Bridge Gurdaspur (Pb.)	1010	8/4/20	SW 165	ZO Lab Jal.	13	20	10	162	142	18	12	82	26	4	117	BDL	0.7	0.6	1.1	0.07	0.18	12	3.2
21	River Beas 1 Km D/S effluent discharge point at Mukerian	1294	8/4/20	SW 168	ZO Lab Jal.	13	22	14	169	140	18	14	102	29	7	120	BDL	0.9	0.7	1.3	0.09	0.14	8.5	3.4
22	River Beas at Bridge, village Bheate Patan Tehsil Batala Distt. Gurdaspur	4164	8/4/20	SW 169	ZO Lab Jal.	12	26	11	171	142	16	12	106	30	8	124	BDL	0.8	0.8	1.2	0.07	0.17	5.2	2.4
23	River Beas at G.T. Road, under Bridge Near Kapurthalla (Pb)	1011	9/4/20	SW 171	ZO Lab Jal.	13	28	15	168	135	18	13	112	32	8	120	BDL	0.9	0.7	1.3	0.06	0.18	5.8	2.7
24	River Beas at U/s Goindwal	1696	9/4/20	SW 172	ZO Lab Jal.	11	30	14	149	128	14	6	94	25	8	110	BDL	0.6	0.5	1.0	0.05	0.12	7.0	2.8
25	River Beas at D/s Goindwal	1012	9/4/20	SW 173	ZO Lab Jal.	12	28	16	154	130	16	8	100	28	7	105	BDL	0.7	0.5	1.0	0.07	0.12	6.9	2.6
26	Beas at Harike	1697	9/4/20	SW 174	ZO Lab Jal.	11	34	12	161	130	15	10	102	31	6	108	BDL	0.7	0.6	1.0	0.06	0.15	7.4	2.5

Note. 1. BDL means Below Method Detection Limit

2. DBU means Designated Best Use (Class-A,B,C,D &amp; 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 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	As mg/l	Hg mg/l
1	River Beas at Talwara H/W	1693	8/4/20	SW 164	ZO Lab Jal.	BDL	BDL	0.19	BDL	BDL	BDL	BDL	BDL	BDL
2	River Beas at U/S Pathankot	1694	8/4/20	SW 166	ZO Lab Jal.	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3	River Beas at D/S Pathankot	1695	8/4/20	SW 167	ZO Lab Jal.	BDL	BDL	0.18	BDL	BDL	BDL	BDL	BDL	BDL
4	River Beas at Mirthal Bridge Gurdaspur (Pb.)	1010	8/4/20	SW 165	ZO Lab Jal.	BDL	BDL	0.11	BDL	BDL	BDL	BDL	BDL	BDL
5	River Beas 1 Km D/S effluent discharge point at Mukerian	1294	8/4/20	SW 168	ZO Lab Jal.	BDL	BDL	0.21	0.10	BDL	BDL	BDL	BDL	BDL
6	River Beas at Bridge, village Bheate Patan Tehsil Batala Distt. Gurdaspur	4164	8/4/20	SW 169	ZO Lab Jal.	BDL	BDL	0.28	0.11	BDL	BDL	BDL	BDL	BDL
7	River Beas at G.T. Road, under Bridge Near Kapurthalla (Pb)	1011	9/4/20	SW 171	ZO Lab Jal.	BDL	BDL	0.20	0.13	BDL	BDL	BDL	BDL	BDL
8	River Beas at U/s Goindwal	1696	9/4/20	SW 172	ZO Lab Jal.	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
9	River Beas at D/s Goindwal	1012	9/4/20	SW 173	ZO Lab Jal.	BDL	BDL	0.10	BDL	BDL	BDL	BDL	BDL	BDL
10	Beas at Harike	1697	9/4/20	SW 174	ZO Lab Jal.	BDL	BDL	0.18	0.10	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.**

### Analysis results of Surface water monitoring under NWMP for the month of April, 2020

#### 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 $\mu$ 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	14/4/20	SW 187	ZO Lab Jal.	7.8	8.4	<1	185	82	37	0.011	0.11	0.11	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 <sub>4</sub> Mg/l	TH mg/l	Ca mg/l	Mg mg/l	T.Alkn mg/l	P.Alkn mg/l	AmnN mg/l	NO <sub>3</sub> -N mg/l	TKN mg/l	PO <sub>4</sub> as P mg/l	F mg/l	Na mg/l	K mg/l
27	Ravi at U/s of Madhopur H/W	1097	14/4/20	SW 187	ZO Lab Jal.	BDL	2	BDL	134	110	12	BDL	76	21	5	79	BDL	BDL	0.4	BDL	BDL	BDL	2.2	1.6

Note. 1. BDL means Below Method Detection Limit  
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 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	Ravi at U/s of Madhopur H/W	1097	14/4/20	SW 187	BDL	BDL	0.10	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.

## Analysis results of Surface water monitoring under NWMP for the month of April, 2020

## River Ghaggar

S.N.	Point of Sample Collection	Code	Lab Sample No.	Date of receipt in lab	Sample Collected & Analyzed by	pH	DO mg/l	BOD mg/l	Cond $\mu$ 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	SW 2197	6/4/20	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	SW 2198	6/4/20	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	SW 2199	6/4/20	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	SW 2200	6/4/20	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	SW 2201	6/4/20	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	SW 2203	6/4/20	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	SW 2204	6/4/20	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	SW 2210	7/4/20	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	SW 2211	7/4/20	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	SW 2212	7/4/20	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	SW 2215	7/4/20	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	SW 2217	7/4/20	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	SW 2218	8/4/20	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	SW 2219	8/4/20	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	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	6/4/20	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	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	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	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	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	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	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	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	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	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	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	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	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	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 &amp; E)

3. Water Quality Index ( S means Satisfactory, U means Unsatisfactory)

### 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.

### Analysis results of Surface water monitoring under NWMP for the month of April, 2020

#### 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 $\mu$ s/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	9/4/20	SW 2221	H.O. Lab Patiala	7.9	BDL	125	3390	280000	94000	0.13	6.19	0.29	E	U
2	Tallewal Drain along with Lohgarh –Jalwana Link road near Shri Krishna rice mill Punjab	2909	9/4/20	SW 2222	H.O. Lab Patiala	8.1	BDL	65	1725	43000	12000	1.57	3.22	0.34	E	U
3	Point Source B/N	2914	11/4/20	SW 1288	Z.O. Lab, Ludhiana	6.8	0	195	1387	24,00,000	79,000	BDL	1.49	0.28	E	U
4	Kali Bein into Beas	2913	15/4/20	SW 189	Z.O. Lab Jalandhar	7.5	5.7	3.1	355	7000	1400	0.016	1.09	0.21	D	U
5	Outfall of Nag Kalan drain into Tung Dhab drain at Majitha road, Amritsar	4163	<b>Sample was not collected</b>													
6	Tungdab drain at fatehgarh churian, Amritsar	2910	14/4/20	SW 185	Z.O. Lab Jalandhar	7.1	BDL	224	1530	350000	41000	0.021	4.98	0.22	E	U
7	Hundiara drain before entering Pakistan	2907	14/4/20	SW 186	Z.O. Lab Jalandhar	7.8	BDL	110	1310	150000	38000	0.980	3.97	0.30	E	U
8	Pathlawa Drain	2911	<b>Sample was not collected</b>													
9	Ranjit Sagar Reservoir	2912	14/4/20	SW 188	Z.O. Lab Jalandhar	7.9	8.6	<1	183	91	40	0.014	0.14	0.09	B	S
	Outlet Of Nadiala Drain into Dhakanshu Nallah, Punjab	2908	6/4/20	SW 2202	H.O. Lab Patiala	7.6	2.2	16	810	35000	9400	0.12	1.89	0.46	E	U
11	Sagar Para Drain at village sagra dist.Patiala	4158	7/4/20	SW 2213	H.O. Lab Patiala	7.6	BDL	48	1224	22000	3200	0.15	1.35	0.69	E	U
12	Confluence point of sukhana Choe with River Ghaggar,vill.Mubarkpur	4162	6/4/20	SW 2208	H.O. Lab Patiala	7.3	1.4	46	874	280000	110000	0.20	2.66	0.37	E	U
13	Confluence point of Sarsa Nadi with river Satluj	4161	10/4/20	SW 1283	Z.O. Lab, Ludhiana	8.1	10.5	<1	357	400	170	BDL	0.45	0.09	B	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 April, 2020

#### Drains

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 <sub>4</sub> Mg/l	TH mg/l	Ca mg/l	Mg mg/l	T.Alk n mg/l	p.Alkn mg/l	Amn-N mg/l	NO <sub>3</sub> -N mg/l	TKN mg/l	PO <sub>4</sub> 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	9/4/20	SW 2221	H.O. Lab Patiala	504	140	282	2034	1729	472	148	918	222	88	876	BDL	2.8	3.7	4.2	1.6	1.3	431	176		
2	Tallewal Drain along with Lohgarh –Jalwana Link road near Shri Krishna rice mill Punjab	2909	9/4/20	SW 2222	H.O. Lab Patiala	284	110	204	1035	880	144	51	638	143	68	310	BDL	24.2	1.9	34.8	2.4	1.0	187	203		
3	Point Source B/N	2914	11/4/20	SW 1288	Z.O. Lab, Ludhiana	572	118	440	846	601	94	50	340	80.8	33.5	604	BDL	16.2	3.0	24.6	6.2	0.74	63	36.4		
4	Kali Bein into Beas	2913	15/4/20	SW 189	Z.O. Lab Jalandhar	22	8	BDL	220	180	20	14	114	32	9	127	BDL	0.8	0.9	1.5	0.17	0.14	27	5.6		
5	Outfall of Nag Kalan drain into Tung Dhab drain at Majitha road, Amritsar	4163	<b>Sample was not collected</b>																							
6	Tungdab drain at fatehgarh churian, Amritsar	2910	14/4/20	SW 185	Z.O. Lab Jalandhar	560	400	240	970	710	100	90	458	114	42	440	BDL	52	3.9	90	2.9	0.48	245	29		
7	Hundiara drain before entering Pakistan	2907	14/4/20	SW 186	Z.O. Lab Jalandhar	290	112	98	810	640	108	92	322	90	24	347	BDL	34	3.3	61	2.2	0.20	164	32		
8	Pathlawa Drain	2911	<b>Drain was found dried, hence sample could not be collected</b>																							
9	Ranjit Sagar Reservoir	2912	14/4/20	SW 188	Z.O. Lab Jalandhar	BDL	4	BDL	122	100	9	BDL	72	20	6	74	BDL	BDL	BDL	BDL	BDL	BDL	2.8	1.3		
10	Outlet Of Nadiala Drain into Dhakanshu Nallah, Punjab	2908	6/4/20	SW 2202	H.O. Lab Patiala	72	80	124	490	417	74	15	284	79	21	228	BDL	4.8	1.2	6.6	1.1	0.8	73	19		
11	Sagar Para Drain at village sagra dist.Patiala	4158	7/4/20	SW 2213	H.O. Lab Patiala	192	30	42	734	624	116	33	470	112	45	290	BDL	6.0	0.4	8.8	3.1	0.4	67	30		
12	Confluence point of sukhana Choe with River Ghaggar, vill.Mubarkpur	4162	6/4/20	SW 2208	H.O. Lab Patiala	176	50	148	524	445	68	13	306	79	32	260	BDL	19.8	1.7	19.8	1.3	0.5	111	42		
13	Confluence point of Sarsa Nadi with river Satluj	4161	10/4/20	SW 1283	Z.O. Lab, Ludhiana	<5	4	8	211	183	29	22	168	40	16.5	110	BDL	BDL	1.5	BDL	0.07	0.22	13.3	1.9		

- 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	Fe mg/l	Zn mg/l	T.Cr mg/l	Ni mg/l	Cu mg/l	Pb mg/l	Cd mg/l	As mg/l	Hg mg/l
1	Dhanula Drain falling into Lasara drain, Near village, Ghunas Punjab	2906	9/4/20	SW 2221	7.29	0.46	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2	Tallewal Drain along with Lohgarh – Jalwana Link road near Shri Krishna rice mill Punjab	2909	9/4/20	SW 2222	4.11	0.28	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3	Point Source B/N	2914	11/4/20	SW 1288	3.86	0.97	BDL	BDL	BDL	BDL	BDL	BDL	BDL
4	Kali Bein into Beas	2913	15/4/20	SW 189	0.46	0.12	BDL	BDL	BDL	BDL	BDL	BDL	BDL
5	Outfall of Nag Kalan drain into Tung Dhab drain at Majitha road, Amritsar	4163	<b>Sample was not collected</b>										
6	Tungdab drain at fatehgarh churian, Amritsar	2910	14/4/20	SW 185	0.86	0.16	BDL	BDL	BDL	BDL	BDL	BDL	BDL
7	Hundiara drain before entering Pakistan	2907	14/4/20	SW 186	1.00	0.20	BDL	BDL	BDL	BDL	BDL	BDL	BDL
8	Pathlawa Drain	2911	<b>Sample was not collected</b>										
9	Ranjit Sagar Reservoir	2912	14/4/20	SW 188	0.12	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10	Outlet Of Nadiala Drain into Dhakanshu Nallah, Punjab	2908	6/4/20	SW 2202	5.31	0.14	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11	Sagar Para Drain at village sagra dist.Patiala	4158	7/4/20	SW 2213	1.51	0.14	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12	Confluence point of sukhana Choe with River Ghaggar,vill.Mubarkpur	4162	6/4/20	SW 2208	4.98	0.27	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Confluence point of Sarsa Nadi with river Satluj	4161	10/4/20	SW 1283	0.49	0.14	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.