



**Results of Marine Water Harbour Basin - April 2021 To January 2022**

Characteristics Test	Unit	Protocol	Apr	May	Jun	Aug	Sep	Oct	Nov	Dec	Jan
Date of Sampling			20.04.2021	28.05.2021	18.06.2021	17.08.2021	20.09.2021	20.10.2021	17.11.2021	23.12.2021	19.01.2022
Latitude:			N 10°49'54.5136"	N 10°50'17.2365"	N 10°50'08.062"	N 10°50'0.34"	N 10°49'55.47"	N 10°50'04.71"	N 10°49'53.42"	N 10°49'58.23"	N 10°49'56.43"
Longitude:			E 79°50'57.1345"	E 79°51'34.4238"	E 79°50'54.531"	E 79°50'55.85"	E 79°51'1.04"	E 79°50'55.22"	E 79°50'53.74"	E 79°50'58.4"	E 79°50'49.35"
Salinity	%	By Argentometric Titration	3.69	3.59	3.57	3.68	3.61	2.32%	2.28%	2.68	3.09
pH @ 25°C	-	IS:3025 Part 11-1983 (Reaff:2017)	7.96	8.21	8.02	8.21	8.06	8.12	8.04	8.32	8.05
Temperature	°C	IS:3025 Part 9-1984 (Reaff:2017)	31	31.2	29	27	27	27	25	27	27
Electrical Conductivity	µmhos/cm	IS:3025 Part 14- 2013	54700	52100	49200	50789	48064	54200	41860	48400	42740
Turbidity	NTU	IS:3025 Part 10-1984 (Reaff:2017)	1.2	1.6	1.9	1.8	1.7	1.6	1	2	1.9
Total Suspended Solids	mg/l	IS:3025 Part 17-1984 (Reaff:2017)	12	15	18	17	9	11	10	8	14
Total Dissolved Solids	mg/l	IS:3025 Part 16-1984(Reaff:2017)	43481	45912	44142	43989	42684	44179	32210	34752	31280
Dissolved Oxygen	mg/l	IS:3025 Part 38-1989 (Reaff:2014)	5.9	7.6	6.7	6.8	6.4	6.7	7.1	7	7.2
BOD @ 27°C for 3 days	mg/l	IS:3025 Part 44-1993 (Reaff:2014)	5	4.1	3.4	5.1	4	4	4	5	3
COD	mg/l	IS:3025 Part 58-2006 (Reaff:2017)	13	16	12	19	16	14	12	18	15
Chloride as Cl	mg/l	IS:3025 Part 32-1988 (Reaff:2014)	22397	21917	22078	22679	20846	23215	21791	16803	16803
Sulphate as SO4	mg/l	IS:3025 Part 24-1986 (Reaff:2014)	2444	2096	2184	2269	2084	2152	2120	2628	1328
Sodium as Na	mg/l	IS:3025 Part 45 - 1993 (Reaff:2014)	11429	10067	10237	11789	10947	10020	10018	9640	9340
Calcium as Ca	mg/l	IS:3025 Part 40-1991 (Reaff:2014)	412	486	474	461	492	521	501	377	578
Magnesium as Mg	mg/l	IS:3025 Part 46-1994 (Reaff:2014)	1327	1238	1243	1264	1298	1727	1677	1045	1337
Potassium as K	mg/l	IS:3025 Part 45 -1993(Reaff:2014)	448	479	495	518	571	542	542	560	365
Oil & Grease	mg/l	IS:3025 Part 39-1991 (Reaff:2014)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Iron as Fe	mg/l	IS:3025 Part 53:2003 (Reaff:2014)	0.04	0.05	0.06	0.07	0.21	0.05	0.257	0.06	0.395
Zinc as Zn	mg/l	IS:3025 Part 2-2004 (Reaff:2014)	BDL	BDL	BDL	BDL	0.188	BDL	0.217	BDL	0.349
Manganese as Mn	mg/l	IS:3025 Part 2:2004 (Reaff:2014)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cadmium as Cd	mg/l	IS:3025 Part 2-2004 (Reaff:2014)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chromium as Cr	mg/l	IS:3025 Part 2-2004 (Reaff:2014)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Mercury Hg	mg/l	IS:3025 Part 48 -1994(Reaff:2014)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nitrite as NO2	mg/l	IS:3025 Part 34-1988 (Reaff:2014)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nitrate as NO3	mg/l	IS:3025 Part 34-1988 (Reaff:2014)	9.00	8.00	12.00	20.00	16.00	25	22	8.19	7.10
Free Ammonia NH3	mg/l	IS:3025 Part 34-1988 (Reaff:2014)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Kjeldahl Nitrogen	mg/l	IS:3025 Part 34-1988 (Reaff:2014)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Inorganic Phosphate	mg/l	IS:3025 Part 31-1988 (Reaff:2014)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Phosphate	mg/l	IS:3025 Part 31-1988 (Reaff:2014)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Silica as SiO2	mg/l	IS:3025 Part 35-1988(Reaff:2014)	0.53	0.68	0.66	0.51	1.89	0.36	0.4	0.45	0.55
Total Coliform	MPN/100ml	APHA 23 <sup>rd</sup> Edn 2017:9221 B	320	350	350	350	<1.8 MPN/100ml	430	280	220	280
Faecal Coliform	MPN/100ml	APHA 23 <sup>rd</sup> Edn 2017:9221 E	120	90	58	<1.8 MPN/100ml	<1.8 MPN/100ml	<1.8	<1.8	<1.8	<1.8
<b>PHYTOPLANKTON</b>											
Total Cell Count	Nollit		26,900	27,600	29,100	30,400	31,900	26,800	27,800	27,500	27,800
Total Genus	Nos		8	8	8	8	8	8	8	8	8
Genus		Anabena	Anabena	Anabena	Anabena	Anabena	Anabena	Anabena	Anabena	Anabena	Anabena
		Dianophysis	Dianophysis	Dianophysis	Dianophysis	Dianophysis	Dianophysis	Dianophysis	Dianophysis	Dianophysis	Dianophysis
		Leptocylindrus	Leptocylindrus	Leptocylindrus	Leptocylindrus	Leptocylindrus	Leptocylindrus	Leptocylindrus	Leptocylindrus	Leptocylindrus	Leptocylindrus
		Scillatoros	Scillatoros	Scillatoros	Scillatoros	Scillatoros	Scillatoros	Scillatoros	Scillatoros	Scillatoros	Scillatoros
		Triceratium sp	Triceratium sp	Triceratium sp	Triceratium sp	Triceratium sp	Triceratium sp	Triceratium sp	Triceratium sp	Triceratium sp	Triceratium sp
		Bacillaria sp	Bacillaria sp	Bacillaria sp	Bacillaria sp	Bacillaria sp	Bacillaria sp	Bacillaria sp	Bacillaria sp	Bacillaria sp	Bacillaria sp
		Cyclotellasp	Cyclotellasp	Cyclotellasp	Cyclotellasp	Cyclotellasp	Cyclotellasp	Cyclotellasp	Cyclotellasp	Cyclotellasp	Cyclotellasp
		Podosiras p	Podosiras p	Podosiras p	Podosiras p	Podosiras p	Podosiras p	Podosiras p	Podosiras p	Protopeiridinim sp	Protopeiridinim sp
<b>ZOOPLANKTON</b>											
Total Cell Count	Nollit		21,200	21,300	22,500	23,100	25,900	20,900	23,100	23,800	22,900
Total Genus	Nos		5	5	5	5	5	5	5	5	5
Genus		Protozoa	Protozoa	Protozoa	Protozoa	Protozoa	Protozoa	Protozoa	Protozoa	Protozoa	Protozoa
		Arrow worm	Arrow worm	Arrow worm	Arrow worm	Arrow worm	Arrow worm	Arrow worm	Arrow worm	Arrow worm	Arrow worm
		Acartia	Acartia	Acartia	Acartia	Acartia	Acartia	Acartia	Acartia	Acartia	Acartia
		Rotifera	Rotifera	Rotifera	Rotifera	Rotifera	Rotifera	Rotifera	Rotifera	Rotifera	Rotifera
		Oithonasp	Oithonasp	Oithonasp	Oithonasp	Oithonasp	Oithonasp	Oithonasp	Oithonasp	Oithonasp	Oithonasp
<b>ZOOPLANKTON</b>											
Population	No.m <sup>3</sup>		24,100	25,900	26,300	27,800	29,300	25,100	26,800	26,400	25,800
Faunal Groups	Nos		5	6	6	6	5	5	5	5	5
Major Groups		Polychaete larvae	Polychaete larvae	Polychaete larvae	Polychaete larvae	Polychaete larvae	Polychaete larvae	Polychaete larvae	Polychaete larvae	Copepodnauplii	Copepodnauplii
		Fish eggs	Fish eggs	Fish eggs	Fish eggs	Fish eggs	Fish eggs	Gastropod	Fish eggs	Polychaete larvae	Polychaete larvae
		Crab zoea	Crab zoea	Crab zoea	Crab zoea	Crab zoea	Crab zoea	Crab zoea	Crab zoea	Crab zoea	Crab zoea
		Protozoa	Protozoa	Protozoa	Protozoa	Protozoa	Protozoa	Protozoa	Protozoa	Protozoa	Protozoa
		Gastropod	Gastropod	Gastropod	Gastropod	Gastropod	Copepodnauplii	Copepodnauplii	Copepodnauplii	Gastropod	Gastropod
			Copepodnauplii	Copepodnauplii	Copepodnauplii	Copepodnauplii					

**Noise Quality Monitoring Report - April 2021 To January 2022**

**Sampling Locations:**  
 1. Latitude: N 10°51'6.9912", Longitude: E 79°50'43.8252",  
 2. Latitude: N 10°50'02.9436", Longitude: E 79°50'21.426",  
 3. Latitude: N 10°49'22.0224", Longitude: E 79°50'33.2376"

Month	Apr-21			May-21			Jun-21			Jul-21			Aug-21			Sep-21			Oct-21			Nov-21			Dec-21			Jan-22			
Date of Sampling	19.04.2021 - 20.04.2021			28.05.2021 - 29.05.2021			17.06.2021 - 18.06.2021			13.07.2021 - 14.07.2021			16.08.2021 - 17.08.2021			21.09.2021 to 22.09.2021			18.10.2021 to 19.10.2021			17.11.2021 to 18.11.2021			23.12.2021 to 24.12.2021			18.01.2022 to 19.01.2022			
S.No	Time	1.Leq dB(A)	2.Leq dB(A)	3.Leq dB(A)	1.Leq dB(A)	2.Leq dB(A)	3.Leq dB(A)	1.Leq dB(A)	2.Leq dB(A)	3.Leq dB(A)	1.Leq dB(A)	2.Leq dB(A)	3.Leq dB(A)	1.Leq dB(A)	2.Leq dB(A)	3.Leq dB(A)	1.Leq dB(A)	2.Leq dB(A)	3.Leq dB(A)	1.Leq dB(A)	2.Leq dB(A)	3.Leq dB(A)	1.Leq dB(A)	2.Leq dB(A)	3.Leq dB(A)	1.Leq dB(A)	2.Leq dB(A)	3.Leq dB(A)			
1	07.00 AM	46.1	47.2	46.2	45.3	46.7	45.3	46.3	46.8	45.9	45.9	46.2	47.2	46.5	46.1	46.9	44.9	45.9	47.3	46.1	46.5	47.3	45.9	46.3	46.2	46.9	47.3	48.1	45.9	47.3	46.3
2	8	46.8	47.3	47.9	46.2	47.5	45.9	46.5	47.5	46.3	46.2	46.9	48.5	46.9	46.5	47.3	45.2	46.7	49.2	46.8	46.9	48.5	46.5	47.2	47.1	47.2	48.2	48.6	46.2	47.6	46.9
3	9	47.2	47.8	48.5	47.2	47.9	46.2	46.8	48.2	46.8	46.8	47.5	49.2	48.1	48.2	48.7	46.3	47.1	50.1	47.1	47.3	49.2	46.9	48.5	47.6	48.5	48.9	49.5	47.5	48.2	47.6
4	10	47.5	48.1	48.9	47.3	48.2	46.6	47.2	49.1	47.2	47.1	47.9	49.3	48.4	48.8	50.1	45.9	48.2	50.6	47.6	48.1	50.1	47.5	49.3	48.5	48.6	49.5	50.3	48.3	49.5	47.5
5	11	47.9	48.3	48.2	47.6	48.3	46.3	48.5	49.3	47.3	47.3	48.2	49.5	48.6	48.9	49.8	45.8	48.1	50.4	47.2	48.2	49.5	47.9	49.6	48.3	48.2	49.6	51.7	48.2	49.2	47.3
6	12.00 PM	48.2	47.9	48.3	47.1	48.0	46.1	48.1	49.1	46.9	47.1	48.3	48.9	48.9	49.2	50.2	46.2	47.8	50.9	47.0	47.6	49.6	47.1	49.1	48.9	48.5	49.9	50.4	48.1	49.1	47.6
7	1	47.9	47.5	48.7	47.6	47.8	45.9	47.6	49.5	47.0	46.9	48.5	48.6	48.2	48.8	50.4	46.7	47.6	51.3	46.8	47.2	50.2	47.0	48.6	48.5	48.1	49.8	50.1	48.2	48.6	48.1
8	2	48.1	48.2	49.1	48.1	47.5	45.7	47.4	48.9	47.2	46.7	48.1	48.8	48.6	48.6	50.2	47.1	48.1	52.7	46.5	47.6	50.7	46.8	48.2	47.3	47.9	50.2	49.6	47.8	48.8	48.3
9	3	47.8	48.6	48.8	47.5	47.3	46.1	48.1	48.2	47.1	46.8	48.6	49.1	48.3	48.4	49.6	47.6	47.3	51.8	47.0	47.9	49.8	47.2	48.7	47.7	48.1	50.4	49.2	47.6	49.2	48.0
10	4	47.6	48.5	48.3	47.1	47.6	46.5	48.3	48.1	46.8	47.0	48.5	49.2	47.8	48.1	49.2	46.8	47.2	51.6	47.3	48.1	49.2	47.5	49.1	47.2	48.3	49.8	50.1	47.3	49.3	47.7
11	5	47.3	48.9	48.1	46.9	47.2	46.7	48.5	48.5	46.3	47.2	47.9	49.5	48.3	48.5	50.5	46.9	47.9	51.2	47.5	48.3	50.2	47.8	49.3	47.9	48.6	49.2	50.6	47.9	49.6	47.5
12	6	48.2	48.2	48.7	46.7	47.1	47.1	48.9	48.7	46.9	47.1	48.2	49.6	48.5	48.5	51.2	47.3	48.5	51.8	47.8	48.0	50.8	48.2	49.0	48.3	48.3	48.6	51.1	48.1	49.5	48.1
13	7	48.6	47.5	48.9	46.2	46.7	47.3	46.8	48.1	47.3	47.3	48.5	49.7	47.7	48.2	51.6	46.2	47.4	52.6	47.1	47.2	51.3	48.3	48.6	47.9	47.8	48.1	50.8	47.6	49.2	48.3
14	8	47.7	47.2	49.3	45.8	46.2	46.9	45.6	47.2	47.5	46.9	48.1	49.9	47.3	47.4	51.8	45.1	46.5	53.1	46.2	46.9	51.1	48.0	47.6	47.6	47.5	50.4	47.5	48.6	48.1	
15	9	47.3	46.3	48.5	45.2	45.3	45.7	45.2	46.5	47.2	46.2	47.6	49.6	46.4	46.9	49.6	45.2	46.2	52.9	46.0	46.3	50.4	47.2	47.3	46.2	47.2	47.2	49.3	47.2	48.1	47.6
16	10	46.5	45.9	47.3	44.9	44.8	44.9	44.9	45.9	46.1	45.8	46.7	49.2	45.2	46.1	47.5	44.9	45.9	51.7	45.8	46.1	48.6	45.6	46.9	45.5	46.7	47.3	48.7	45.4	47.6	47.2
17	11	45.3	44.8	46.2	44.2	44.6	43.9	44.2	45.1	44.9	44.9	45.2	46.3	44.9	45.5	45.4	44.1	44.8	49.6	45.2	45.9	48.1	44.9	46.1	44.3	45.3	46.5	47.6	45.3	46.9	46.9
18	12.00 AM	44.2	44.5	44.3	43.8	44.2	43.2	43.9	44.6	44.2	44.3	44.9	44.8	44.3	45.3	44.3	43.6	44.3	47.2	44.2	45.2	47.3	44.3	45.3	46.8	44.9	46.1	46.1	46.7	46.2	45.3
19	1	44.3	44.3	43.8	43.6	44.5	43.1	43.5	44.7	43.5	44.1	44.6	44.3	43.6	45.4	43.7	43.2	43.6	45.1	44.1	44.9	44.9	43.5	44.8	43.5	44.2	44.8	44.9	44.8	46.2	45.3
20	2	44.1	44.6	43.2	43.9	43.9	43.5	43.6	44.3	43.2	43.6	44.7	43.9	43.4	44.8	42.9	43.4	43.1	44.3	43.9	44.6	44.5	43.1	44.2	43.1	44.2	44.2	44.5	45.5	44.5	44.5
21	3	43.8	44.3	43.6	43.5	43.7	43.8	43.2	44.1	43.5	43.5	44.2	43.6	43.2	44.3	42.6	42.9	43.7	43.9	43.5	44.2	44.1	43.6	42.5	42.8	43.7	44.7	44.1	44.2	44.9	44.1
22	4	43.6	44.9	43.1	43.7	44.2	43.6	43.7	44.5	43.6	43.2	44.6	43.7	43.5	44.7	43.2	42.6	44.1	43.2	44.2	44.7	44.6	43.8	44.8	42.9	44.2	44.9	44.6	44.1	44.6	43.9
23	5	44.3	45.2	44.9	44.2	44.6	44.1	44.1	45.1	43.8	44.1	45.1	44.1	44.1	45.3	44.6	43.7	45.3	44.7	44.5	45.8	44.9	44.2	45.3	43.5	44.6	45.8	45.9	44.2	44.3	44.6
24	6	45.1	45.9	45.7	44.2	45.1	44.2	45.3	46.2	44.9	44.8	45.5	45.3	45.3	45.9	45.8	44.1	44.5	46.5	45.3	46.1	46.8	45.6	46.1	45.7	45.1	46.2	47.1	45.1	45.7	45.3

Note: As per the ministry of environment and forest vide gazette notification dated 14 th march 2000 and as amended in March 2010 standards for

S.No	Category of Area	Day Time dB(A)	Night Time dB(A)
1	Industrial	75	70
2	Commercial	65	55
3	Residential	55	45