Air Quality Monitoring Results

1-hour TSP Monitoring Result for

Contract No. SPW 07/2020

Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

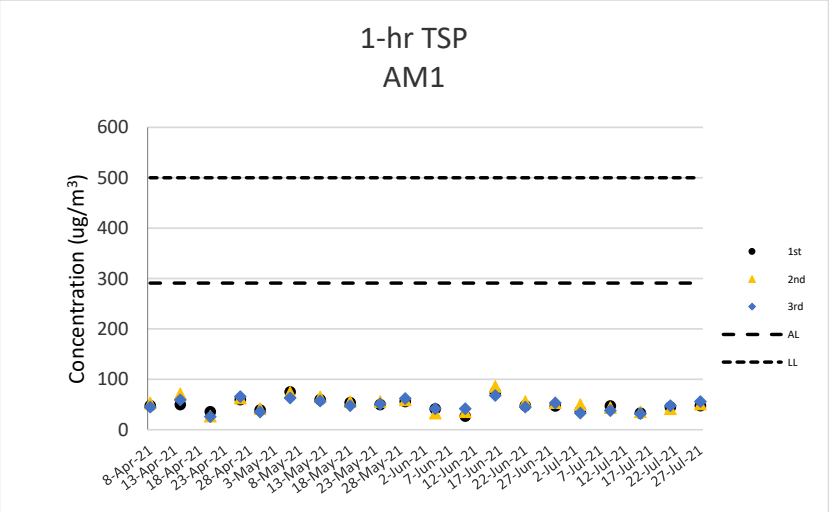
AM1 - Topfine Machinery (China) Co. Ltd.

Date	Weather Condition	Start Time	1-hour TSP (µg/m³) 1st Measurement	2nd Measurement	3rd Measurement	Action Level (ug/m^3)	Limit Level (ug/m^3)
3-Jul-21	Fine	10:02	38	50	33	291	500
9-Jul-21	Fine	10:44	47	44	38		
15-Jul-21	Fine	10:57	33	36	32		
21-Jul-21	Cloudy	12:23	45	42	48		
27-Jul-21	Cloudy	13:06	48	51	56		
		Min	32				
		Max	56				
		Average	43				

AM2 - Squatter house at the west of Yuen Long STW

Date	Weather Condition	Start Time	1-hour TSP (µg/m³) 1st Measurement	2nd Measurement	3rd Measurement	Action Level (ug/m^3)	Limit Level (ug/m^3)
4-Jun-21	Fine	09:44	48	27	45	296	500
10-Jun-21	Fine	10:08	33	38	41		
16-Jun-21	Fine	11:20	44	39	38		
22-Jun-21	Cloudy	11:34	51	38	33		
28-Jun-21	Cloudy	13:27	53	47	54		
		Min	27				
		Max	54				
		Average	42				

Note:
Underline: Exceedance of Action Level
Underline and Bold: Exceedance of Limit Level


1-hr TSP
AM1
Concentration (ug/m³)
600
500
400
300
200
100
0
8-Apr-21
13-Apr-21
18-Apr-21
23-Apr-21
28-Apr-21
3-May-21
8-May-21
13-May-21
18-May-21
23-May-21
28-May-21
2-Jun-21
7-Jun-21
12-Jun-21
17-Jun-21
22-Jun-21
27-Jun-21
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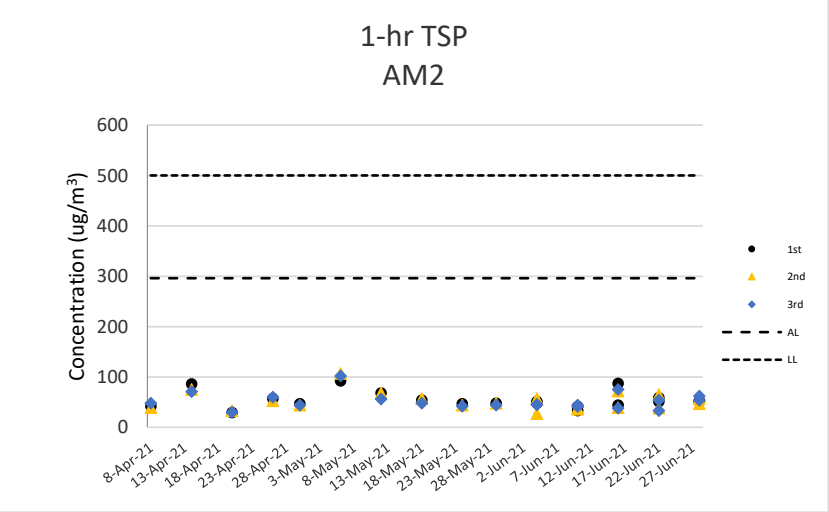
22-Jul-21
27-Jul-21
1st
2nd
3rd
AL
LL


1-hr TSP
AM2
Concentration (ug/m³)
600
500
400
300
200
100
0
8-Apr-21
13-Apr-21
18-Apr-21
23-Apr-21
28-Apr-21
3-May-21
8-May-21
13-May-21
18-May-21
23-May-21
28-May-21
2-Jun-21
7-Jun-21
12-Jun-21
17-Jun-21
22-Jun-21
27-Jun-21
1st
2nd
3rd
AL
LL

Noise Monitoring Results

Noise Impact Monitoring Result for
Contract No. SPW 07/2020
Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

CM1 - Squatter house to the north of YLSTW

Date	Start Time	L_{eq} 30min dB(A)	L_{10} dB(A)	L_{90} dB(A)	Wind Speed (m/s)	Weather	Limit Level dB(A)
9-Jul-21	10:57	65	67	61	0.8	Fine	75
15-Jul-21	11:49	54	57	51	0.1	Fine	75
21-Jul-21	14:58	68	71	64	0.9	Cloudy	75
27-Jul-21	11:19	55	58	51	0.1	Cloudy	75
	Max	68					
	Min	54					

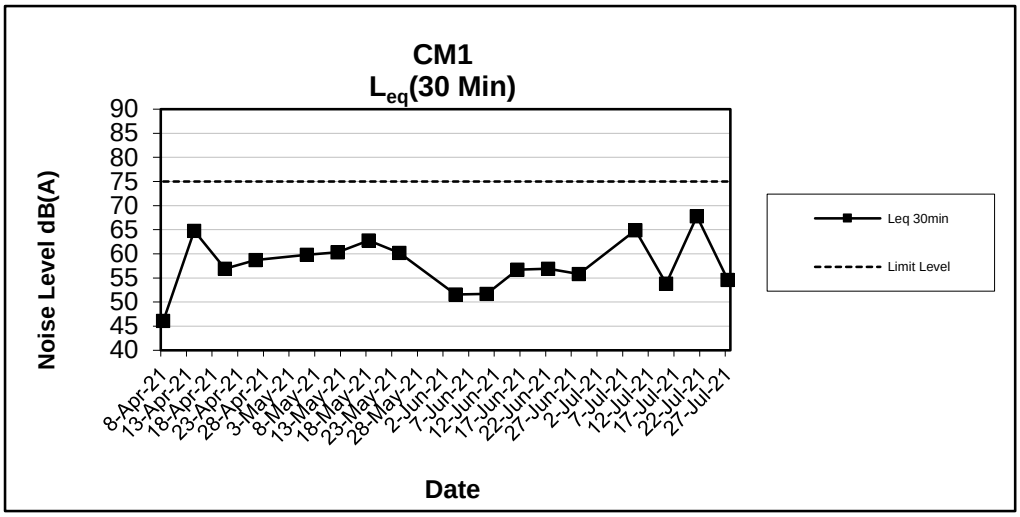
CM2 - Squatter house to the west of YLSTW

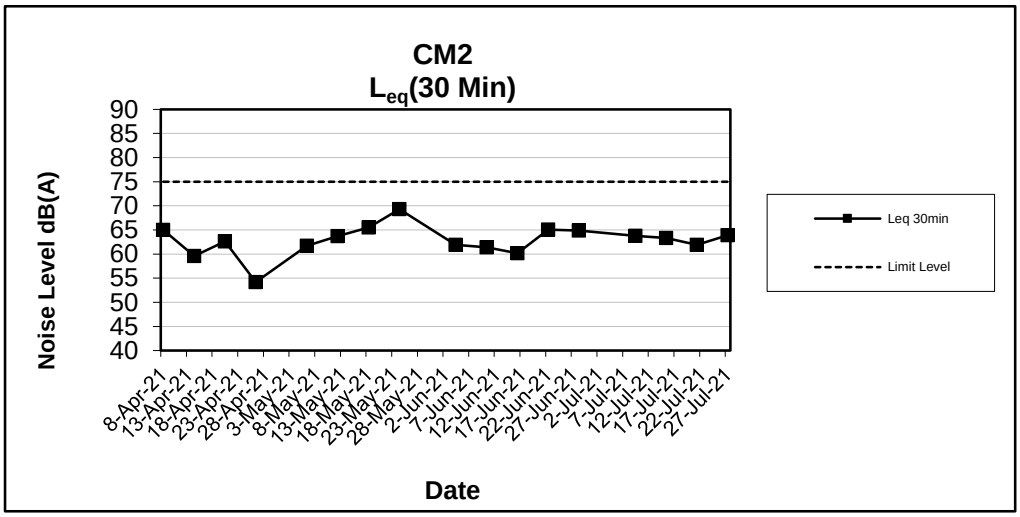
Date	Start Time	L_{eq} 30min dB(A)	L_{10} dB(A)	L_{90} dB(A)	Wind Speed (m/s)	Weather	Limit Level dB(A)
9-Jul-21	09:58	64	67	60	0.7	Fine	75
15-Jul-21	10:03	63	66	60	0.2	Fine	75
21-Jul-21	13:17	62	67	56	0.7	Cloudy	75
27-Jul-21	09:38	64	67	60	0.2	Cloudy	75
	Max	64					
	Min	62					

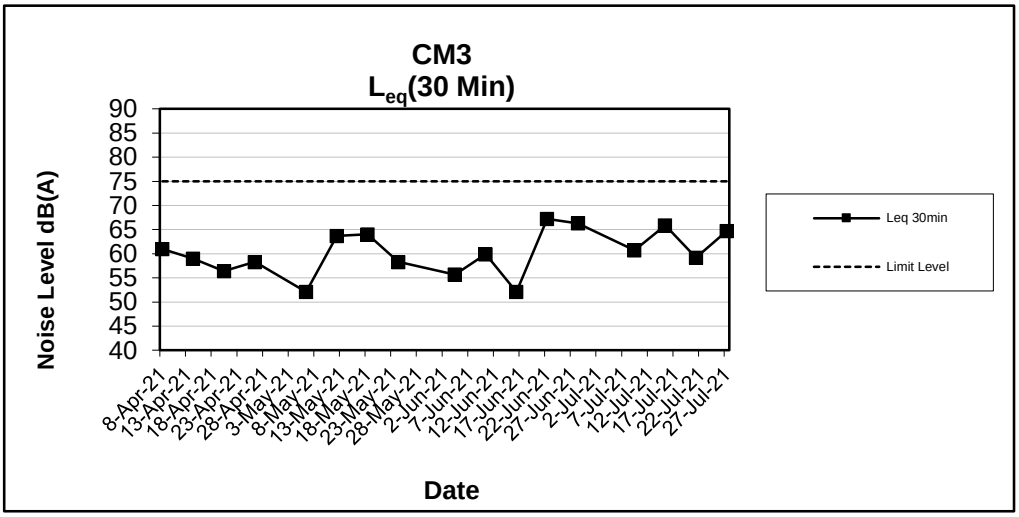
CM3 - Squatter house to the east of YLSTW

Date	Start Time	L_{eq} 30min dB(A)	L_{10} dB(A)	L_{90} dB(A)	Wind Speed (m/s)	Weather	Limit Level dB(A)
9-Jul-21	11:41	61	63	56	0.7	Fine	75
15-Jul-21	13:38	66	70	61	0.2	Fine	75
21-Jul-21	13:59	59	61	57	0.7	Cloudy	75
27-Jul-21	14:03	65	69	60	0.2	Cloudy	75
	Max	66					
	Min	59					

Note:
CM1, CM2 and CM3: Free-field measurement (+3dB(A) correction has been applied).
No raining or wind with speed over 5 m/s was observed during noise monitoring according to the onsite observation.


CM1
L_{eq}(30 Min)
Noise Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
8-Apr-21
13-Apr-21
18-Apr-21
23-Apr-21
28-Apr-21
3-May-21
8-May-21
13-May-21
18-May-21
23-May-21
28-May-21
2-Jun-21
7-Jun-21
12-Jun-21
17-Jun-21
22-Jun-21
27-Jun-21
2-Jul-21
7-Jul-21
12-Jul-21
17-Jul-21
22-Jul-21
27-Jul-21
Date
Leq 30min
Limit Level


CM2
L_{eq}(30 Min)
Noise Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
8-Apr-21
13-Apr-21
18-Apr-21
23-Apr-21
28-Apr-21
3-May-21
8-May-21
13-May-21
18-May-21
23-May-21
28-May-21
2-Jun-21
7-Jun-21
12-Jun-21
17-Jun-21
22-Jun-21
27-Jun-21
2-Jul-21
7-Jul-21
12-Jul-21
17-Jul-21
22-Jul-21
27-Jul-21
Date
Leq 30min
Limit Level


CM3
L_{eq}(30 Min)
Noise Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
8-Apr-21
13-Apr-21
18-Apr-21
23-Apr-21
28-Apr-21
3-May-21
8-May-21
13-May-21
18-May-21
23-May-21
28-May-21
2-Jun-21
7-Jun-21
12-Jun-21
17-Jun-21
22-Jun-21
27-Jun-21
2-Jul-21
7-Jul-21
12-Jul-21
17-Jul-21
22-Jul-21
27-Jul-21
Date
Leq 30min
Limit Level

Water Quality Monitoring Results

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	1/7/2021	Mid-Flood	Cloudy	Calm	12:15	2.2	M	1.1	1	0.304	193	7.30	7.31	0.84	0.84	30.85	30.86	45.1	45.0	3.35	3.35	38.7	38.7	27	29
M1	1/7/2021	Mid-Flood	Cloudy	Calm	12:15	2.2	M	1.1	2			7.31		0.84		30.86		44.9		3.34		38.6		30	
M2	1/7/2021	Mid-Flood	Cloudy	Calm	12:00	1.4	M	0.7	1	0.231	180	7.17	7.17	0.82	0.82	30.26	30.26	42.9	42.7	3.23	3.22	27.8	27.9	27	30
M2	1/7/2021	Mid-Flood	Cloudy	Calm	12:00	1.4	M	0.7	2			7.17		0.82		30.25		42.5		3.20		28.0		32	
M3	1/7/2021	Mid-Flood	Cloudy	Calm	12:31	0.6	M	0.3	1	0.019	66	7.16	7.16	0.81	0.82	30.98	30.98	47.9	47.9	3.55	3.55	25.9	25.9	33	30
M3	1/7/2021	Mid-Flood	Cloudy	Calm	12:31	0.6	M	0.3	2			7.15		0.82		30.98		47.8		3.54		25.8		26	
M1	1/7/2021	Mid-Ebb	Cloudy	Calm	07:26	1.8	M	0.9	1	0.026	279	7.12	7.12	0.74	0.74	29.97	29.90	42.0	41.8	3.18	3.17	17.9	18.1	12	13
M1	1/7/2021	Mid-Ebb	Cloudy	Calm	07:26	1.8	M	0.9	2			7.11		0.74		29.82		41.6		3.16		18.2		13	
M2	1/7/2021	Mid-Ebb	Cloudy	Calm	07:42	1.2	M	0.6	1	0.13	104	7.10	7.10	0.64	0.64	30.41	30.40	35.3	35.8	2.66	2.70	17.3	17.3	15	14
M2	1/7/2021	Mid-Ebb	Cloudy	Calm	07:42	1.2	M	0.6	2			7.10		0.64		30.38		36.2		2.73		17.2		13	
M3	1/7/2021	Mid-Ebb	Cloudy	Calm	07:50	0.7	M	0.35	1	0.024	122	7.12	7.13	0.67	0.67	28.90	28.90	30.2	29.5	2.31	2.26	26.3	25.7	13	13
M3	1/7/2021	Mid-Ebb	Cloudy	Calm	07:50	0.7	M	0.35	2			7.13		0.67		28.90		28.7		2.20		25.1		13	

Remark

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limti Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limti Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Control Station)	2.25	1.91	48.4	50.4	59	68
M2(Impact Station)	1.88	1.79	46.4	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68
M2(Control Station)	1.88	1.79	43.0	52.4	81	112
M3(Control Station)	3.28	3.14	74.3	78.0	104	167

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	3/7/2021	Mid-Flood	Fine	Calm	14:50	1.2	M	0.6	1	0.025	230	7.24	7.23	0.68	0.68	31.76	31.80	46.0	45.9	3.30	3.29	45.8	45.9	33	36
M1	3/7/2021	Mid-Flood	Fine	Calm	14:50	1.2	M	0.6	2			7.22		0.68		31.83		45.8		3.28		45.9		38	
M2	3/7/2021	Mid-Flood	Fine	Calm	14:30	0.8	M	0.4	1	0.016	220	6.96	6.96	0.65	0.65	32.40	32.40	32.5	32.5	2.55	2.55	45.8	45.8	31	33
M2	3/7/2021	Mid-Flood	Fine	Calm	14:30	0.8	M	0.4	2			6.96		0.65		32.40		32.5		2.55		45.8		35	
M3	3/7/2021	Mid-Flood	Fine	Calm	14:46	0.5	M	0.25	1	0.019	261	7.09	7.10	0.64	0.64	32.01	32.01	63.9	63.8	4.65	4.65	39.8	39.4	34	33
M3	3/7/2021	Mid-Flood	Fine	Calm	14:46	0.5	M	0.25	2			7.10		0.64		32.00		63.7		4.64		38.9		32	
M1	3/7/2021	Mid-Ebb	Fine	Calm	09:20	1	M	0.5	1	0.054	179	7.05	7.05	0.71	0.71	31.64	31.64	35.7	35.5	2.56	2.55	46.9	45.9	72	**72**
M1	3/7/2021	Mid-Ebb	Fine	Calm	09:20	1	M	0.5	2			7.05		0.71		31.64		35.3		2.53		44.9		71	
M2	3/7/2021	Mid-Ebb	Fine	Calm	09:40	0.8	M	0.4	1	0.037	164	6.99	6.99	0.65	0.65	31.28	31.34	36.5	35.7	2.78	2.76	49.6	49.6	42	43
M2	3/7/2021	Mid-Ebb	Fine	Calm	09:40	0.8	M	0.4	2			6.99		0.65		31.39		34.9		2.73		49.6		43	
M3	3/7/2021	Mid-Ebb	Fine	Calm	09:32	0.8	M	0.4	1	0.038	77	7.15	7.16	0.65	0.65	31.22	31.21	36.2	38.6	2.67	2.85	49.8	49.8	31	31
M3	3/7/2021	Mid-Ebb	Fine	Calm	09:32	0.8	M	0.4	2			7.16		0.65		31.19		40.9		3.02		49.7		31	

Remark

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limti Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limti Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Control Station)	2.25	1.91	48.4	50.4	59	68
M2(Impact Station)	1.88	1.79	55.0	59.6	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	59.6	64.6	59	68
M2(Control Station)	1.88	1.79	43.0	52.4	81	112
M3(Control Station)	3.28	3.14	74.3	78.0	104	167

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	6/7/2021	Mid-Flood	Fine	Calm	18:52	1.3	M	0.65	1	0.043	271	7.28	7.28	0.91	0.91	32.62	32.63	66.8	67.2	4.82	4.84	49.8	48.9	50	54
M1	6/7/2021	Mid-Flood	Fine	Calm	18:52	1.3	M	0.65	2			7.28		0.91		32.63		67.5		4.86		48.0		57	
M2	6/7/2021	Mid-Flood	Fine	Calm	18:32	0.7	M	0.35	1	0.043	257	7.29	7.29	0.82	0.82	32.64	32.64	68.8	69.0	4.95	4.96	45.7	45.8	62	64
M2	6/7/2021	Mid-Flood	Fine	Calm	18:32	0.7	M	0.35	2			7.29		0.82		32.64		69.2		4.97		45.9		65	
M3	6/7/2021	Mid-Flood	Fine	Calm	18:30	0.8	M	0.4	1	0.014	221	7.19	7.19	0.53	0.53	30.11	30.11	78.7	78.8	5.62	5.62	54.2	54.1	49	47
M3	6/7/2021	Mid-Flood	Fine	Calm	18:30	0.8	M	0.4	2			7.19		0.53		30.11		78.8		5.62		54.0		45	
M1	6/7/2021	Mid-Ebb	Fine	Calm	11:50	1.2	M	0.6	1	0.262	138	7.24	7.24	1.05	1.05	32.26	32.26	47.7	47.6	3.45	3.44	58.7	58.8	64	**68**
M1	6/7/2021	Mid-Ebb	Fine	Calm	11:50	1.2	M	0.6	2			7.24		1.04		32.25		47.4		3.43		58.9		71	
M2	6/7/2021	Mid-Ebb	Fine	Calm	12:05	0.9	M	0.45	1	0.05	124	7.26	7.26	0.90	0.90	32.23	32.24	55.9	56.0	4.05	4.06	52.7	53.8	54	57
M2	6/7/2021	Mid-Ebb	Fine	Calm	12:05	0.9	M	0.45	2			7.26		0.90		32.24		56.1		4.06		54.8		60	
M3	6/7/2021	Mid-Ebb	Fine	Calm	11:35	0.3	M	0.15	1	0.008	129	7.26	7.26	0.93	0.93	32.11	32.11	50.5	50.3	3.67	3.67	46.1	46.1	44	43
M3	6/7/2021	Mid-Ebb	Fine	Calm	11:35	0.3	M	0.15	2			7.26		0.93		32.11		50.0		3.67		46.1		42	

Remark

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)
2. Red and Bold: Limit Level Exceedance (For Impact Station Only)
3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.
4. Limti Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.
5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limti Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Control Station)	2.25	1.91	48.4	50.4	59	68
M2(Impact Station)	1.88	1.79	58.7	63.6	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	59.9	64.9	60	68
M2(Control Station)	1.88	1.79	43.0	52.4	81	112
M3(Control Station)	3.28	3.14	74.3	78.0	104	167

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	8/7/2021	Mid-Flood	Fine	Calm	05:51	1.2	M	0.6	1	0.015	114.1	7.33	7.37	2.12	2.16	31.04	31.04	53.7	53.8	3.94	3.95	24.8	24.8	31	32
M1	8/7/2021	Mid-Flood	Fine	Calm	05:51	1.2	M	0.6	2			7.41		2.19		31.04		53.8		3.95		24.8		32	
M2	8/7/2021	Mid-Flood	Fine	Calm	06:04	1.1	M	0.55	1	0.024	83.3	7.29	7.29	1.76	1.77	29.97	29.98	46.1	46.2	3.37	3.36	35.2	35.2	38	41
M2	8/7/2021	Mid-Flood	Fine	Calm	06:04	1.1	M	0.55	2			7.28		1.78		29.99		46.2		3.35		35.2		44	
M3	8/7/2021	Mid-Flood	Fine	Calm	06:24	1.1	M	0.55	1	0.118	257	7.16	7.16	1.34	1.34	31.01	31.02	44.5	44.7	3.27	3.29	30.0	29.8	37	36
M3	8/7/2021	Mid-Flood	Fine	Calm	06:24	1.1	M	0.55	2			7.15		1.34		31.03		44.9		3.30		29.5		35	
M1	8/7/2021	Mid-Ebb	Fine	Calm	13:04	0.8	M	0.4	1	0.017	312	7.37	7.37	1.68	1.69	29.85	29.86	52.8	52.7	3.94	3.92	29.2	29.2	57	57
M1	8/7/2021	Mid-Ebb	Fine	Calm	13:04	0.8	M	0.4	2			7.36		1.69		29.87		52.6		3.89		29.2		56	
M2	8/7/2021	Mid-Ebb	Fine	Calm	12:50	1.1	M	0.55	1	0.019	221	7.29	7.27	1.64	1.66	30.79	30.78	56.8	56.8	4.08	4.08	32.5	32.6	54	51
M2	8/7/2021	Mid-Ebb	Fine	Calm	12:50	1.1	M	0.55	2			7.24		1.68		30.76		56.8		4.07		32.6		48	
M3	8/7/2021	Mid-Ebb	Fine	Calm	13:05	0.6	M	0.3	1	0.1	99	7.25	7.25	1.00	1.00	31.70	31.71	56.3	56.2	4.11	4.11	20.6	20.6	20	22
M3	8/7/2021	Mid-Ebb	Fine	Calm	13:05	0.6	M	0.3	2			7.25		1.00		31.71		56.1		4.10		20.6		24	

Remark

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5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limti Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Control Station)	2.25	1.91	48.4	50.4	59	68
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68
M2(Control Station)	1.88	1.79	43.0	52.4	81	112
M3(Control Station)	3.28	3.14	74.3	78.0	104	167

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	10/7/2021	Mid-Flood	Fine	Calm	06:55	2.4	M	1.2	1	0.143	213	7.32	7.32	4.05	4.06	30.06	30.06	57.2	57.2	4.08	4.08	20.6	20.7	22	20
M1	10/7/2021	Mid-Flood	Fine	Calm	06:55	2.4	M	1.2	2			7.32		4.06		30.05		57.1		4.08		20.7		18	
M2	10/7/2021	Mid-Flood	Fine	Calm	07:10	1.4	M	0.7	1	0.102	75	7.46	7.46	3.62	3.62	29.44	29.44	58.3	58.3	4.14	4.14	26.6	26.6	24	24
M2	10/7/2021	Mid-Flood	Fine	Calm	07:10	1.4	M	0.7	2			7.45		3.61		29.43		58.2		4.14		26.5		24	
M3	10/7/2021	Mid-Flood	Fine	Calm	06:47	0.8	M	0.4	1	0.006	151	7.13	7.13	1.86	1.86	31.58	31.58	50.4	50.3	3.67	3.66	43.3	43.3	33	33
M3	10/7/2021	Mid-Flood	Fine	Calm	06:47	0.8	M	0.4	2			7.13		1.86		31.58		50.2		3.65		43.3		33	
M1	10/7/2021	Mid-Ebb	Fine	Calm	14:24	2	M	1	1	0.215	241	7.53	7.53	3.40	3.40	32.34	32.35	64.7	64.7	4.61	4.61	25.7	25.8	31	30
M1	10/7/2021	Mid-Ebb	Fine	Calm	14:24	2	M	1	2			7.53		3.39		32.35		64.7		4.61		25.8		28	
M2	10/7/2021	Mid-Ebb	Fine	Calm	14:09	1.2	M	0.6	1	0.189	148	7.48	7.48	3.21	3.22	31.77	31.78	63.9	63.8	4.56	4.56	29.9	29.8	29	28
M2	10/7/2021	Mid-Ebb	Fine	Calm	14:09	1.2	M	0.6	2			7.48		3.23		31.78		63.6		4.55		29.7		27	
M3	10/7/2021	Mid-Ebb	Fine	Calm	14:10	0.5	M	0.25	1	0.014	249	7.26	7.26	7.95	7.95	32.41	32.41	73.6	73.6	3.28	3.28	26.4	26.4	31	30
M3	10/7/2021	Mid-Ebb	Fine	Calm	14:10	0.5	M	0.25	2			7.26		7.95		32.41		73.6		3.28		26.4		28	

Remark

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6. Limti Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Control Station)	2.25	1.91	48.4	50.4	59	68
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68
M2(Control Station)	1.88	1.79	43.0	52.4	81	112
M3(Control Station)	3.28	3.14	74.3	78.0	104	167

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	13/7/2021	Mid-Flood	Fine	Calm	08:50	1.3	M	0.65	1	0.023	257	7.35	7.35	6.46	6.47	31.16	31.17	51.3	51.3	3.66	3.66	34.0	37.5	55	57
M1	13/7/2021	Mid-Flood	Fine	Calm	08:50	1.3	M	0.65	2			7.35		6.47		31.18		51.3		3.66		41.0		59	
M2	13/7/2021	Mid-Flood	Fine	Calm	09:15	0.8	M	0.4	1	0.016	215	7.36	7.36	6.33	6.33	31.20	31.21	49.9	49.4	3.47	3.44	38.3	38.4	50	53
M2	13/7/2021	Mid-Flood	Fine	Calm	09:15	0.8	M	0.4	2			7.36		6.33		31.22		48.8		3.40		38.5		56	
M3	13/7/2021	Mid-Flood	Fine	Calm	08:52	1.1	M	0.55	1	0.109	263	7.37	7.37	4.55	4.55	31.11	31.12	48.8	49.1	3.53	3.55	42.2	41.9	51	51
M3	13/7/2021	Mid-Flood	Fine	Calm	08:52	1.1	M	0.55	2			7.37		4.54		31.12		49.4		3.56		41.5		50	
M1	13/7/2021	Mid-Ebb	Fine	Calm	16:17	1.2	M	0.6	1	0.008	152	7.47	7.44	5.79	5.79	31.43	31.44	54.0	53.9	3.84	3.83	24.0	23.5	30	28
M1	13/7/2021	Mid-Ebb	Fine	Calm	16:17	1.2	M	0.6	2			7.41		5.79		31.44		53.8		3.81		23.0		25	
M2	13/7/2021	Mid-Ebb	Fine	Calm	16:00	0.7	M	0.35	1	0.012	169	7.37	7.37	4.98	4.98	31.54	31.55	52.2	52.2	3.74	3.74	24.0	24.0	15	16
M2	13/7/2021	Mid-Ebb	Fine	Calm	16:00	0.7	M	0.35	2			7.37		4.98		31.55		52.2		3.74		24.0		17	
M3	13/7/2021	Mid-Ebb	Fine	Calm	16:20	1.2	M	0.6	1	0.096	109	6.57	6.58	2.30	2.30	32.64	32.64	92.0	92.2	6.57	6.58	19.4	19.6	28	27
M3	13/7/2021	Mid-Ebb	Fine	Calm	16:20	1.2	M	0.6	2			6.59		2.30		32.64		92.4		6.59		19.7		26	

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For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Control Station)	2.25	1.91	48.4	50.4	59	68
M2(Impact Station)	1.88	1.79	45.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68
M2(Control Station)	1.88	1.79	43.0	52.4	81	112
M3(Control Station)	3.28	3.14	74.3	78.0	104	167

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	15/7/2021	Mid-Flood	Fine	Calm	10:40	1.2	M	0.6	1	0.038	121	7.33	7.34	2.77	2.76	31.81	31.81	57.8	57.9	4.17	4.18	44.3	44.1	70	72
M1	15/7/2021	Mid-Flood	Fine	Calm	10:40	1.2	M	0.6	2			7.34		2.74		31.80		57.9		4.19		43.9		74	
M2	15/7/2021	Mid-Flood	Fine	Calm	10:55	1.1	M	0.55	1	0.039	113	7.31	7.33	2.89	2.89	31.12	31.37	58.1	58.2	4.18	4.19	40.2	40.3	60	61
M2	15/7/2021	Mid-Flood	Fine	Calm	10:55	1.1	M	0.55	2			7.34		2.88		31.62		58.2		4.20		40.3		61	
M3	15/7/2021	Mid-Flood	Fine	Calm	10:20	0.8	M	0.4	1	0.205	74	7.38	7.38	1.52	1.53	31.65	31.64	62.7	62.6	4.57	4.56	44.2	44.2	52	50
M3	15/7/2021	Mid-Flood	Fine	Calm	10:20	0.8	M	0.4	2			7.38		1.53		31.62		62.4		4.55		44.1		48	
M1	15/7/2021	Mid-Ebb	Fine	Calm	17:35	0.6	M	0.3	1	0.043	87	7.37	7.38	3.50	3.54	31.20	31.20	60.2	60.2	4.29	4.29	40.7	40.4	52	56
M1	15/7/2021	Mid-Ebb	Fine	Calm	17:35	0.6	M	0.3	2			7.38		3.58		31.20		60.1		4.28		40.1		59	
M2	15/7/2021	Mid-Ebb	Fine	Calm	17:20	0.9	M	0.45	1	0.038	122	7.40	7.35	3.07	3.08	31.47	31.45	55.0	54.9	4.01	3.99	42.8	42.8	46	44
M2	15/7/2021	Mid-Ebb	Fine	Calm	17:20	0.9	M	0.45	2			7.30		3.08		31.43		54.8		3.96		42.8		42	
M3	15/7/2021	Mid-Ebb	Fine	Calm	17:18	0.4	M	0.2	1	0.100	249	7.27	7.27	1.28	1.28	32.75	32.76	67.6	67.5	4.93	4.92	48.2	47.9	61	63
M3	15/7/2021	Mid-Ebb	Fine	Calm	17:18	0.4	M	0.2	2			7.27		1.28		32.76		67.3		4.91		47.6		64	

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For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Control Station)	2.25	1.91	48.4	50.4	59	68
M2(Impact Station)	1.88	1.79	52.9	57.3	86	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	54.4	59.0	64	69
M2(Control Station)	1.88	1.79	43.0	52.4	81	112
M3(Control Station)	3.28	3.14	74.3	78.0	104	167

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	17/7/2021	Mid-Flood	Cloudy	Calm	12:21	1.1	M	0.55	1	0.007	276	7.84	7.84	0.97	0.97	30.15	30.15	30.8	30.8	2.98	2.99	30.1	30.4	31	33
M1	17/7/2021	Mid-Flood	Cloudy	Calm	12:21	1.1	M	0.55	2			7.84		0.97		30.15		30.8		3.00		30.7		34	
M2	17/7/2021	Mid-Flood	Cloudy	Calm	12:40	0.8	M	0.4	1	0.015	238	7.63	7.63	0.98	0.98	30.45	30.45	29.1	29.1	2.10	2.09	34.7	34.6	7	8
M2	17/7/2021	Mid-Flood	Cloudy	Calm	12:40	0.8	M	0.4	2			7.63		0.98		30.45		29.0		2.07		34.4		9	
M3	17/7/2021	Mid-Flood	Cloudy	Calm	12:26	0.6	M	0.3	1	0.151	81	7.54	7.54	1.34	1.34	30.29	30.25	55.3	55.6	3.95	3.97	37.3	37.1	25	25
M3	17/7/2021	Mid-Flood	Cloudy	Calm	12:26	0.6	M	0.3	2			7.53		1.33		30.21		55.8		3.99		36.9		24	
M1	17/7/2021	Mid-Ebb	Cloudy	Calm	06:47	0.9	M	0.45	1	0.007	153	7.39	7.41	1.01	1.01	30.13	30.13	29.2	29.2	2.77	2.77	27.1	27.0	10	9
M1	17/7/2021	Mid-Ebb	Cloudy	Calm	06:47	0.9	M	0.45	2			7.42		1.01		30.13		29.1		2.77		26.9		8	
M2	17/7/2021	Mid-Ebb	Cloudy	Calm	07:00	0.7	M	0.35	1	0.008	158	7.44	7.44	0.99	0.99	30.15	30.29	31.4	31.6	2.88	2.88	39.4	39.4	12	11
M2	17/7/2021	Mid-Ebb	Cloudy	Calm	07:00	0.7	M	0.35	2			7.44		0.99		30.42		31.8		2.87		39.3		10	
M3	17/7/2021	Mid-Ebb	Cloudy	Calm	07:21	0.4	M	0.2	1	0.175	259	7.48	7.48	0.93	0.92	29.79	29.81	52.4	52.6	3.77	3.78	29.9	29.9	17	19
M3	17/7/2021	Mid-Ebb	Cloudy	Calm	07:21	0.4	M	0.2	2			7.48		0.91		29.83		52.7		3.79		29.8		20	

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For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Control Station)	2.25	1.91	48.4	50.4	59	68
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Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
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Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement												Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	22/7/2021	Mid-Flood	Cloudy	Calm	05:15	2.2	M	1.1	1	0.232	184	7.21	7.22	2.06	2.08	28.35	28.34	47.6	47.4	3.65	3.63	18.2	18.3	15	15
M1	22/7/2021	Mid-Flood	Cloudy	Calm	05:15	2.2	M	1.1	2			7.23		2.09		28.32		47.2		3.61		18.3		14	
M2	22/7/2021	Mid-Flood	Cloudy	Calm	05:32	1.2	M	0.6	1	0.191	29	7.17	7.17	1.81	1.81	28.04	28.04	41.1	41.0	3.11	3.11	16.1	16.1	13	14
M2	22/7/2021	Mid-Flood	Cloudy	Calm	05:32	1.2	M	0.6	2			7.16		1.80		28.04		40.9		3.10		16.1		14	
M3	22/7/2021	Mid-Flood	Cloudy	Calm	05:24	1.3	M	0.65	1	0.096	115	6.99	6.99	0.99	0.99	28.51	28.52	45.0	44.9	3.43	3.42	22.4	22.4	20	21
M3	22/7/2021	Mid-Flood	Cloudy	Calm	05:24	1.3	M	0.65	2			6.99		0.98		28.52		44.7		3.41		22.3		22	
M1	22/7/2021	Mid-Ebb	Cloudy	Calm	12:44	1.8	M	0.9	1	0.326	271	7.16	7.17	1.98	1.98	28.64	28.66	42.1	42.2	3.23	3.23	24.7	24.8	29	29
M1	22/7/2021	Mid-Ebb	Cloudy	Calm	12:44	1.8	M	0.9	2			7.17		1.98		28.67		42.2		3.23		24.8		28	
M2	22/7/2021	Mid-Ebb	Cloudy	Calm	12:26	1	M	0.5	1	0.289	203	7.58	7.59	2.02	2.02	28.70	28.70	46.1	45.7	3.53	3.50	29.5	29.9	31	32
M2	22/7/2021	Mid-Ebb	Cloudy	Calm	12:26	1	M	0.5	2			7.59		2.02		28.70		45.3		3.46		30.2		32	
M3	22/7/2021	Mid-Ebb	Cloudy	Calm	12:31	1.2	M	0.6	1	0.108	271	7.00	7.00	0.98	0.98	28.72	28.72	43.5	43.7	3.23	3.24	23.5	23.5	24	24
M3	22/7/2021	Mid-Ebb	Cloudy	Calm	12:31	1.2	M	0.6	2			7.00		0.98		28.71		43.8		3.25		23.4		24	

Remark

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5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.
6. Limti Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Control Station)	2.25	1.91	48.4	50.4	59	68
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68
M2(Control Station)	1.88	1.79	43.0	52.4	81	112
M3(Control Station)	3.28	3.14	74.3	78.0	104	167

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	24/7/2021	Mid-Flood	Fine	Calm	06:44	1.3	M	0.65	1	0.064	161	7.29	7.29	4.32	4.33	30.99	31.00	42.1	41.9	3.02	3.01	11.7	11.8	12	13
M1	24/7/2021	Mid-Flood	Fine	Calm	06:44	1.3	M	0.65	2			7.29		4.33		31.00		41.7		3.00		11.8		13	
M2	24/7/2021	Mid-Flood	Fine	Calm	07:00	1	M	0.5	1	0.057	270	7.44	7.45	4.81	4.81	31.41	31.41	46.0	45.6	3.29	3.27	10.9	11.1	12	12
M2	24/7/2021	Mid-Flood	Fine	Calm	07:00	1	M	0.5	2			7.45		4.80		31.41		45.2		3.24		11.2		12	
M3	24/7/2021	Mid-Flood	Fine	Calm	07:00	1.4	M	0.7	1	0.018	82	7.28	7.29	2.97	2.98	31.70	31.70	46.3	46.4	3.37	3.36	14.7	14.8	12	13
M3	24/7/2021	Mid-Flood	Fine	Calm	07:00	1.4	M	0.7	2			7.29		2.98		31.70		46.4		3.35		14.8		13	
M1	24/7/2021	Mid-Ebb	Fine	Calm	14:20	1.2	M	0.6	1	0.034	124	7.33	7.35	6.18	6.18	31.24	31.24	40.2	39.9	2.87	2.86	11.0	11.1	9	10
M1	24/7/2021	Mid-Ebb	Fine	Calm	14:20	1.2	M	0.6	2			7.36		6.18		31.24		39.6		2.84		11.1		10	
M2	24/7/2021	Mid-Ebb	Fine	Calm	14:01	0.8	M	0.4	1	0.049	130	7.47	7.48	5.49	5.49	31.36	31.36	43.3	42.7	3.10	3.06	11.3	11.3	11	11
M2	24/7/2021	Mid-Ebb	Fine	Calm	14:01	0.8	M	0.4	2			7.48		5.49		31.36		42.0		3.01		11.3		11	
M3	24/7/2021	Mid-Ebb	Fine	Calm	14:00	0.7	M	0.35	1	0.025	126	7.31	7.32	3.14	3.15	31.78	31.85	45.8	45.9	3.24	3.25	14.9	14.9	19	20
M3	24/7/2021	Mid-Ebb	Fine	Calm	14:00	0.7	M	0.35	2			7.32		3.15		31.92		45.9		3.25		14.9		20	

Remark

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6. Limti Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Control Station)	2.25	1.91	48.4	50.4	59	68
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68
M2(Control Station)	1.88	1.79	43.0	52.4	81	112
M3(Control Station)	3.28	3.14	74.3	78.0	104	167

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	27/7/2021	Mid-Flood	Cloudy	Calm	09:12	1.4	M	0.7	1	0.021	116	7.21	7.22	2.40	2.41	32.52	32.52	54.2	54.2	3.83	3.82	20.0	20.5	24	24
M1	27/7/2021	Mid-Flood	Cloudy	Calm	09:12	1.4	M	0.7	2			7.22		2.41		32.52		54.1		3.81		21.0		23	
M2	27/7/2021	Mid-Flood	Cloudy	Calm	09:27	1.1	M	0.55	1	0.165	123	7.19	7.19	2.39	2.39	32.30	32.65	50.7	50.7	3.64	3.64	19.4	19.4	30	29
M2	27/7/2021	Mid-Flood	Cloudy	Calm	09:27	1.1	M	0.55	2			7.18		2.38		33.00		50.6		3.63		19.4		27	
M3	27/7/2021	Mid-Flood	Cloudy	Calm	09:10	1	M	0.5	1	0.224	76	7.21	7.21	2.36	2.36	31.50	31.49	59.7	59.5	4.25	4.24	20.9	20.9	9	10
M3	27/7/2021	Mid-Flood	Cloudy	Calm	09:10	1	M	0.5	2			7.20		2.35		31.48		59.3		4.23		20.8		10	
M1	27/7/2021	Mid-Ebb	Cloudy	Calm	16:34	0.8	M	0.4	1	0.234	233	7.24	7.24	2.31	2.31	33.01	33.01	58.9	58.8	4.18	4.17	19.9	19.9	68	**70**
M1	27/7/2021	Mid-Ebb	Cloudy	Calm	16:34	0.8	M	0.4	2			7.24		2.30		33.00		58.7		4.16		19.9		72	
M2	27/7/2021	Mid-Ebb	Cloudy	Calm	16:15	0.9	M	0.45	1	0.019	244	7.25	7.25	2.40	2.40	32.22	32.23	62.7	62.6	4.46	4.44	21.8	21.8	51	53
M2	27/7/2021	Mid-Ebb	Cloudy	Calm	16:15	0.9	M	0.45	2			7.24		2.40		32.24		62.4		4.41		21.8		55	
M3	27/7/2021	Mid-Ebb	Cloudy	Calm	16:08	0.8	M	0.4	1	0.136	257	7.14	7.14	2.11	2.12	32.67	32.68	51.2	51.0	3.69	3.68	39.0	38.4	42	44
M3	27/7/2021	Mid-Ebb	Cloudy	Calm	16:08	0.8	M	0.4	2			7.13		2.12		32.68		50.8		3.66		37.8		45	

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For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Control Station)	2.25	1.91	48.4	50.4	59	68
M2(Impact Station)	1.88	1.79	43.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68
M2(Control Station)	1.88	1.79	43.0	52.4	81	112
M3(Control Station)	3.28	3.14	74.3	78.0	104	167

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	29/7/2021	Mid-Flood	Fine	Calm	10:46	2.7	M	1.35	1	0.122	228	8.59	8.59	1.58	1.58	30.71	30.72	53.4	53.3	3.96	3.95	46.8	46.8	53	52
M1	29/7/2021	Mid-Flood	Fine	Calm	10:46	2.7	M	1.35	2			8.59		1.58		30.73		53.1		3.94		46.8		51	
M2	29/7/2021	Mid-Flood	Fine	Calm	11:04	1.5	M	0.75	1	0.155	250	8.30	8.30	1.57	1.57	30.93	30.94	45.1	45.0	3.33	3.32	35.6	35.7	80	76
M2	29/7/2021	Mid-Flood	Fine	Calm	11:04	1.5	M	0.75	2			8.30		1.57		30.94		44.9		3.31		35.7		72	
M3	29/7/2021	Mid-Flood	Fine	Calm	10:50	1.2	M	0.6	1	0.015	185	7.18	7.16	1.13	1.14	31.28	31.28	44.8	44.8	3.46	3.44	35.7	35.7	30	32
M3	29/7/2021	Mid-Flood	Fine	Calm	10:50	1.2	M	0.6	2			7.14		1.14		31.28		44.7		3.42		35.7		33	
M1	29/7/2021	Mid-Ebb	Fine	Calm	17:46	2.4	M	1.2	1	0.12	188	8.85	8.85	1.29	1.29	30.83	30.85	39.3	39.2	2.91	2.90	34.7	34.1	47	48
M1	29/7/2021	Mid-Ebb	Fine	Calm	17:46	2.4	M	1.2	2			8.84		1.29		30.87		39.1		2.89		33.4		48	
M2	29/7/2021	Mid-Ebb	Fine	Calm	17:22	1.2	M	0.6	1	0.095	171	8.60	8.60	1.12	1.12	31.01	31.02	36.9	36.8	2.72	2.71	41.3	41.7	54	56
M2	29/7/2021	Mid-Ebb	Fine	Calm	17:22	1.2	M	0.6	2			8.59		1.12		31.03		36.6		2.70		42.1		58	
M3	29/7/2021	Mid-Ebb	Fine	Calm	17:40	0.9	M	0.45	1	0.026	93	7.19	7.19	1.03	1.04	31.08	31.06	46.2	46.5	3.58	3.56	41.5	41.5	55	58
M3	29/7/2021	Mid-Ebb	Fine	Calm	17:40	0.9	M	0.45	2			7.18		1.04		31.04		46.7		3.54		41.5		60	

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For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Control Station)	2.25	1.91	48.4	50.4	59	68
M2(Impact Station)	1.88	1.79	56.2	60.8	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	49.9	54.1	68	74
M2(Control Station)	1.88	1.79	43.0	52.4	81	112
M3(Control Station)	3.28	3.14	74.3	78.0	104	167

Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	In-situ Measurement														Laboratory Analysis	
										Current Speed (m/s)	Current Direction (°)	pH		Salinity (ppt)		Temperature (degree C)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total Suspended Solids (mg/L)	
										Value	Value	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	31/7/2021	Mid-Flood	Fine	Calm	12:36	1.2	M	0.6	1	0.027	216	7.44	7.43	0.31	0.32	32.10	32.10	41.7	41.3	3.21	3.20	36.7	36.7	40	39
M1	31/7/2021	Mid-Flood	Fine	Calm	12:36	1.2	M	0.6	2			7.42		0.32		32.09		40.8		3.19		36.7		38	
M2	31/7/2021	Mid-Flood	Fine	Calm	12:21	1.1	M	0.55	1	0.034	128	7.54	7.55	0.54	0.55	30.96	30.96	48.7	48.6	3.57	3.58	37.2	37.2	29	30
M2	31/7/2021	Mid-Flood	Fine	Calm	12:21	1.1	M	0.55	2			7.55		0.55		30.96		48.4		3.58		37.2		30	
M3	31/7/2021	Mid-Flood	Fine	Calm	12:27	1.4	M	0.7	1	0.121	129	7.26	7.26	1.73	1.73	31.27	31.27	60.9	61.3	4.10	4.13	18.5	18.6	17	16
M3	31/7/2021	Mid-Flood	Fine	Calm	12:27	1.4	M	0.7	2			7.26		1.73		31.27		61.7		4.15		18.6		15	
M1	31/7/2021	Mid-Ebb	Fine	Calm	06:55	0.9	M	0.45	1	0.025	172	7.34	7.35	0.53	0.54	30.28	30.28	42.7	42.8	3.41	3.42	35.9	35.9	18	20
M1	31/7/2021	Mid-Ebb	Fine	Calm	06:55	0.9	M	0.45	2			7.36		0.54		30.28		42.9		3.42		35.9		22	
M2	31/7/2021	Mid-Ebb	Fine	Calm	07:08	0.8	M	0.4	1	0.018	86	7.39	7.36	0.42	0.42	30.35	30.34	45.9	45.9	3.51	3.52	37.2	36.8	36	36
M2	31/7/2021	Mid-Ebb	Fine	Calm	07:08	0.8	M	0.4	2			7.32		0.42		30.33		45.8		3.52		36.3		36	
M3	31/7/2021	Mid-Ebb	Fine	Calm	07:06	1.3	M	0.65	1	0.099	270	7.31	7.32	1.68	1.69	31.14	31.15	53.7	54.0	3.71	3.73	16.0	16.1	14	14
M3	31/7/2021	Mid-Ebb	Fine	Calm	07:06	1.3	M	0.65	2			7.32		1.69		31.15		54.2		3.74		16.2		14	

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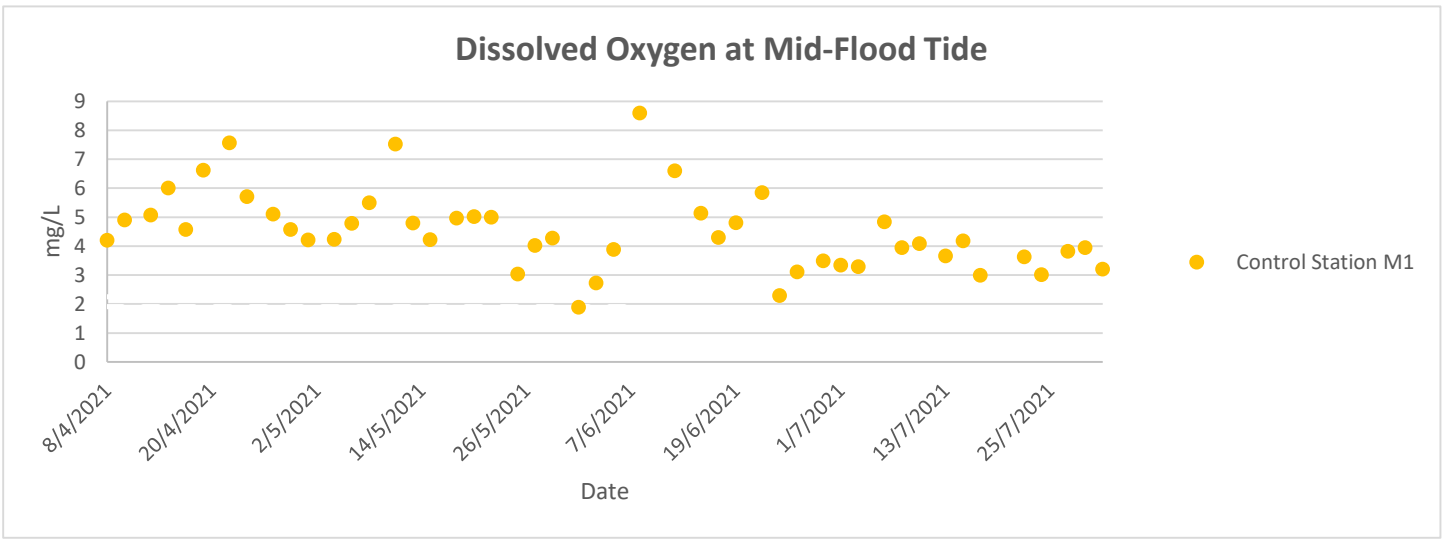
For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Control Station)	2.25	1.91	48.4	50.4	59	68
M2(Impact Station)	1.88	1.79	44.0	52.4	81	112
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68
M2(Control Station)	1.88	1.79	43.0	52.4	81	112
M3(Control Station)	3.28	3.14	74.3	78.0	104	167


Dissolved Oxygen at Mid-Flood Tide
mg/L
0
1
2
3
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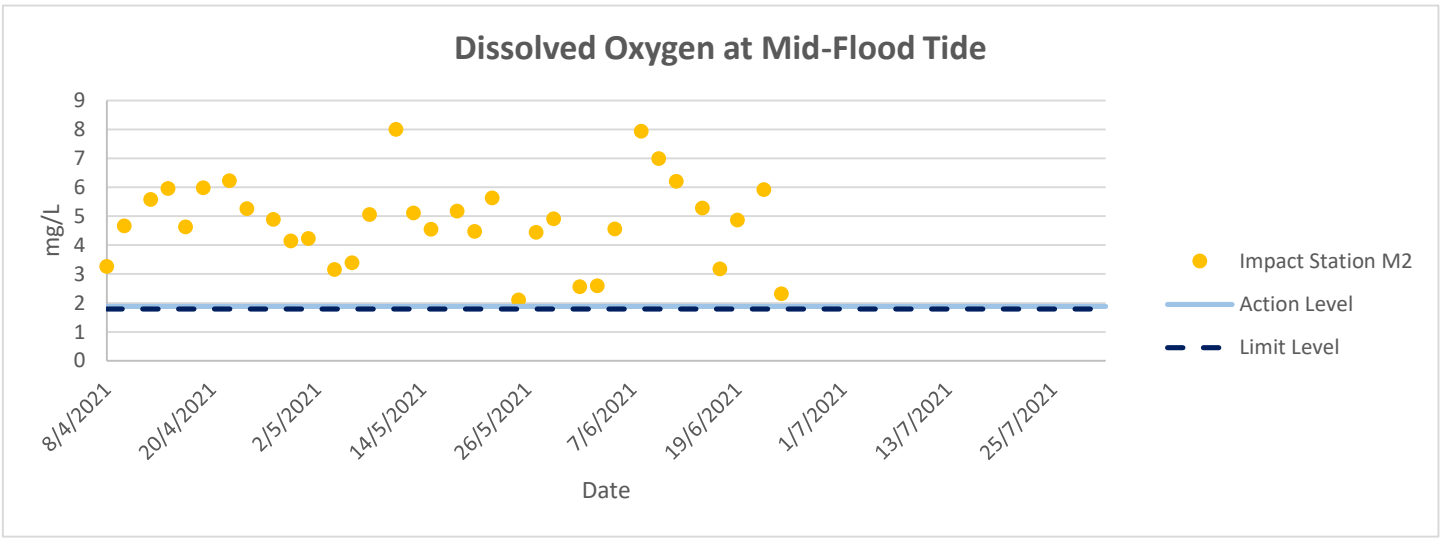
20/4/2021
2/5/2021
14/5/2021
26/5/2021
7/6/2021
19/6/2021
1/7/2021
13/7/2021
25/7/2021
Date
Control Station M1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mg/L
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Action Level
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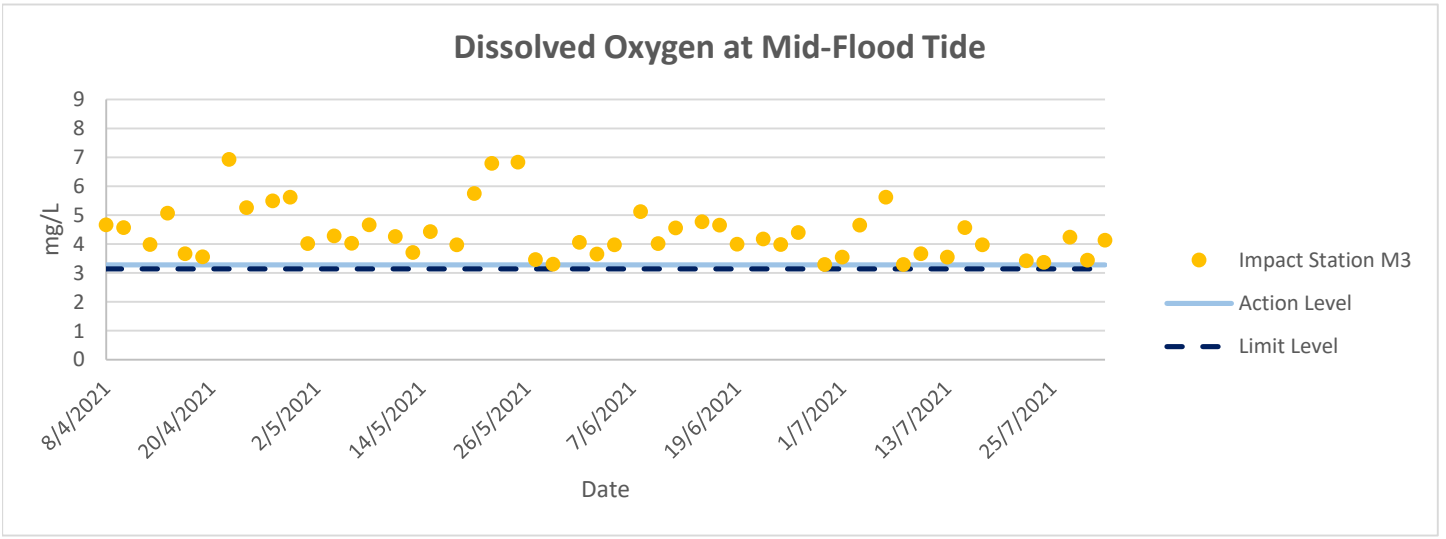
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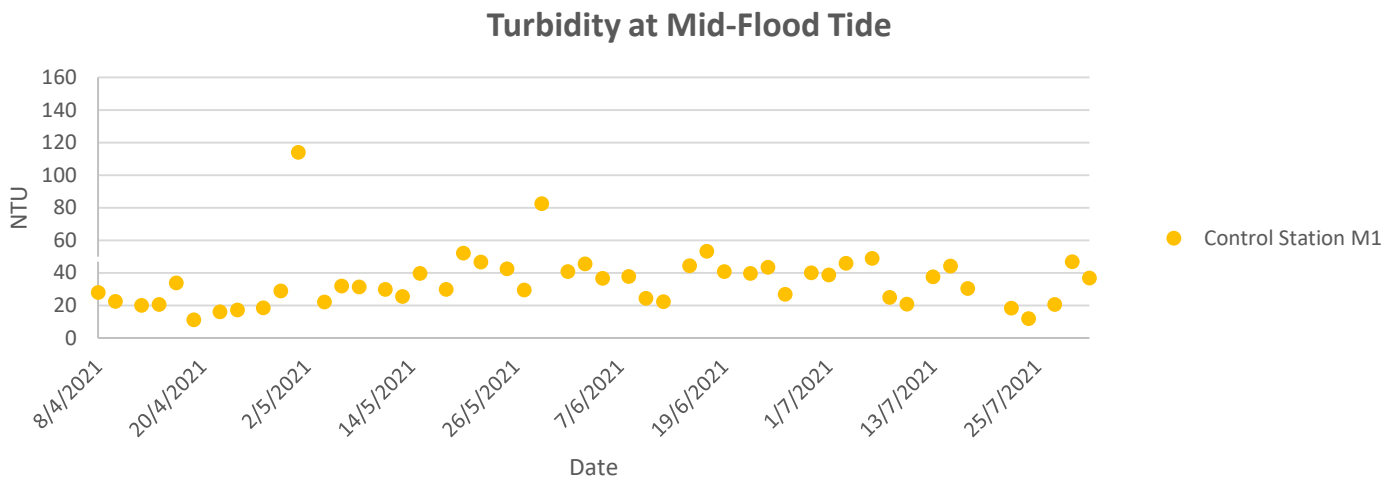
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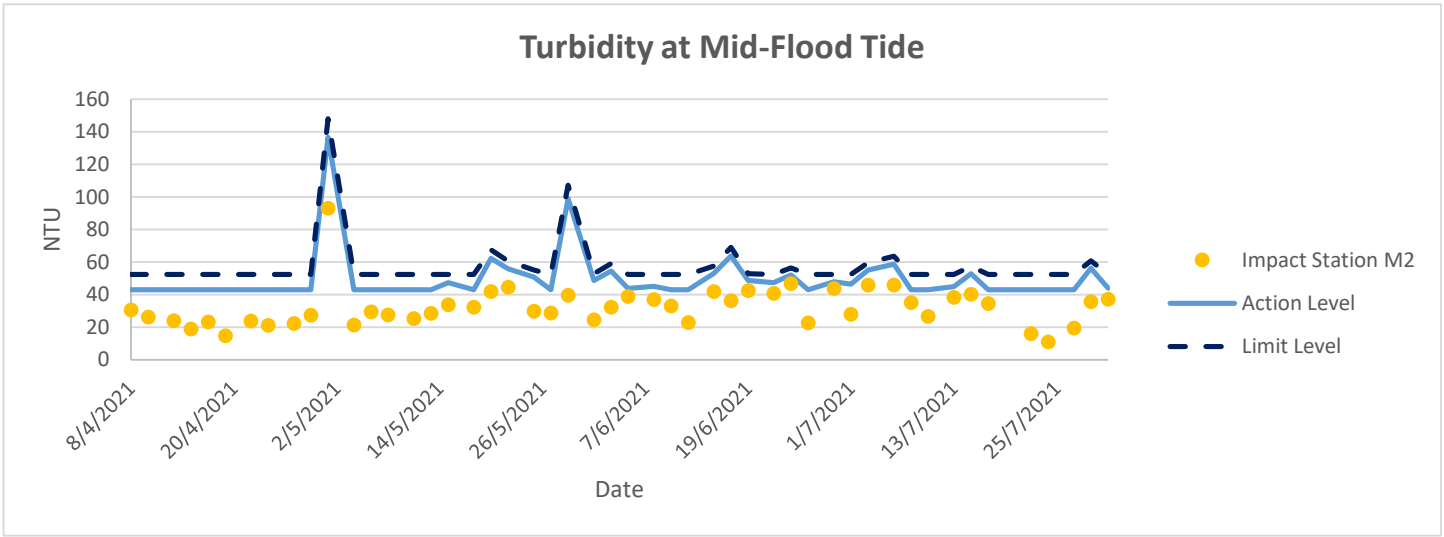
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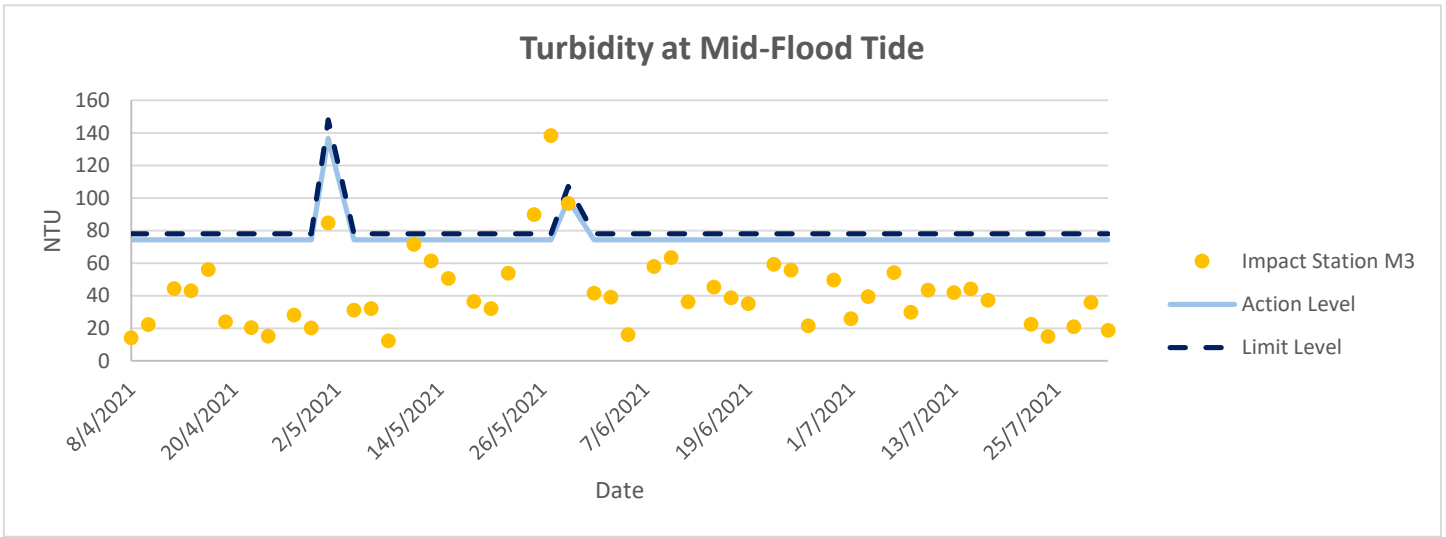
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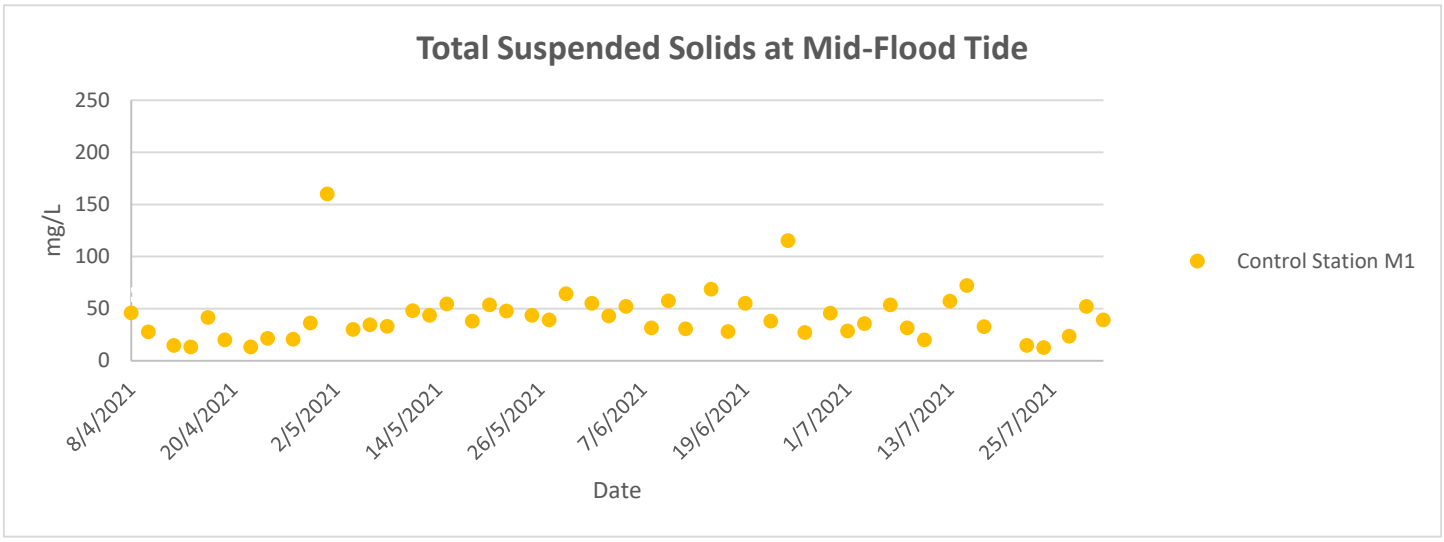
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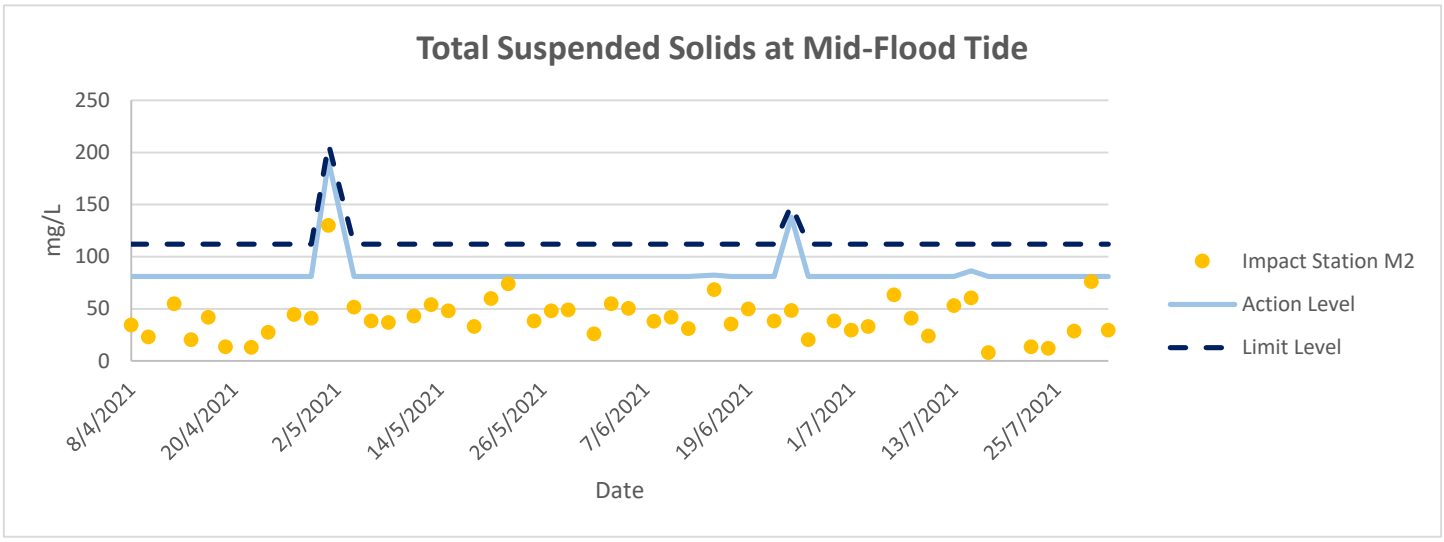
Date
Control Station M1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mg/L
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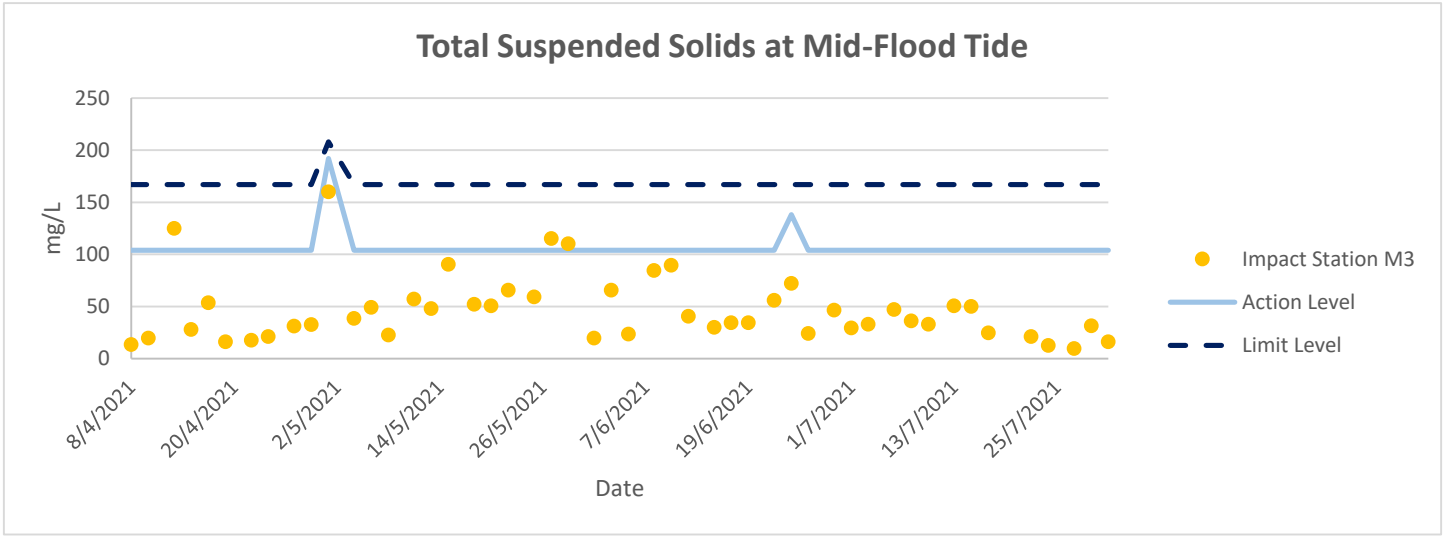
Action Level
Limit Level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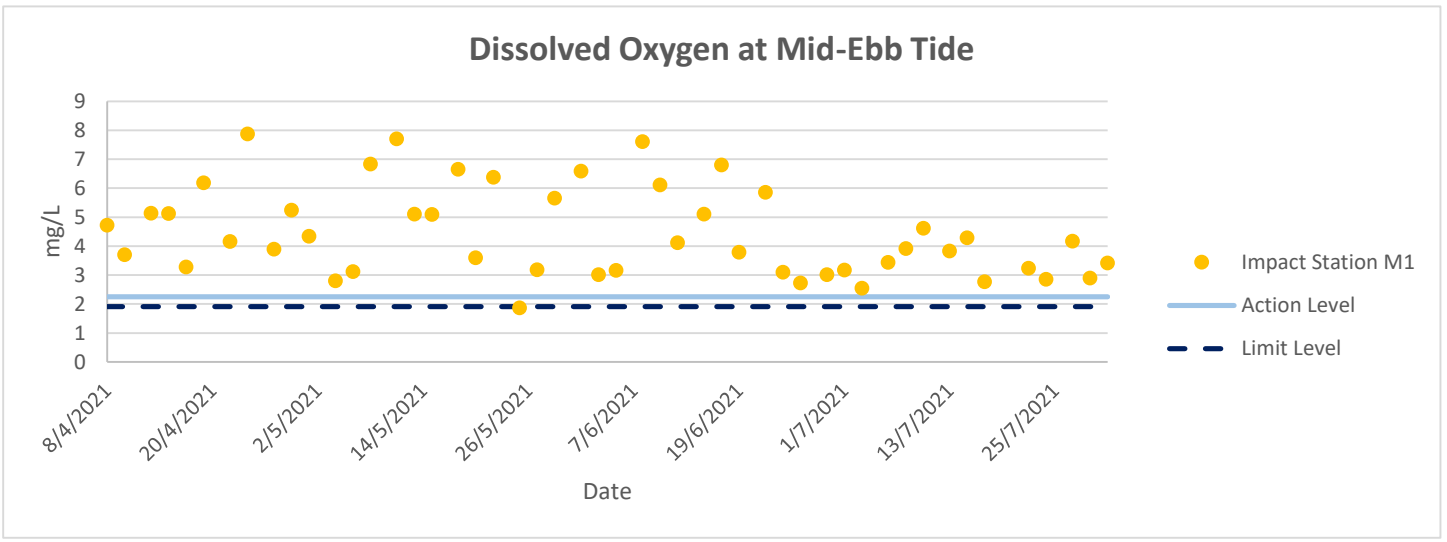
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mg/L
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Action Level
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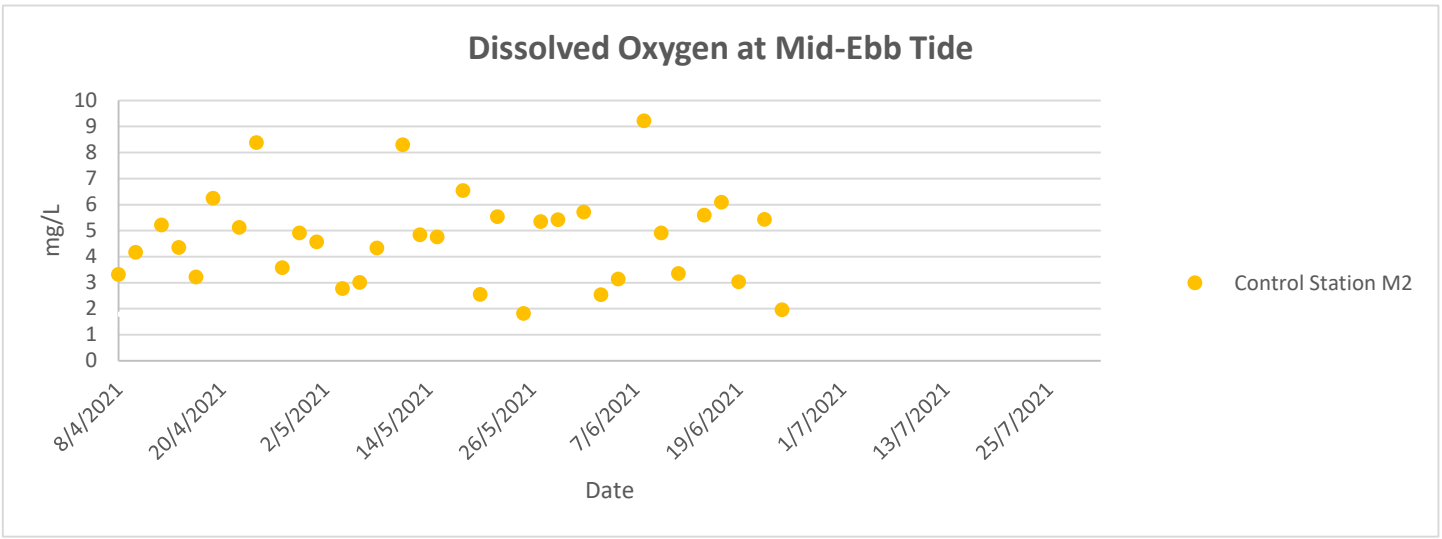
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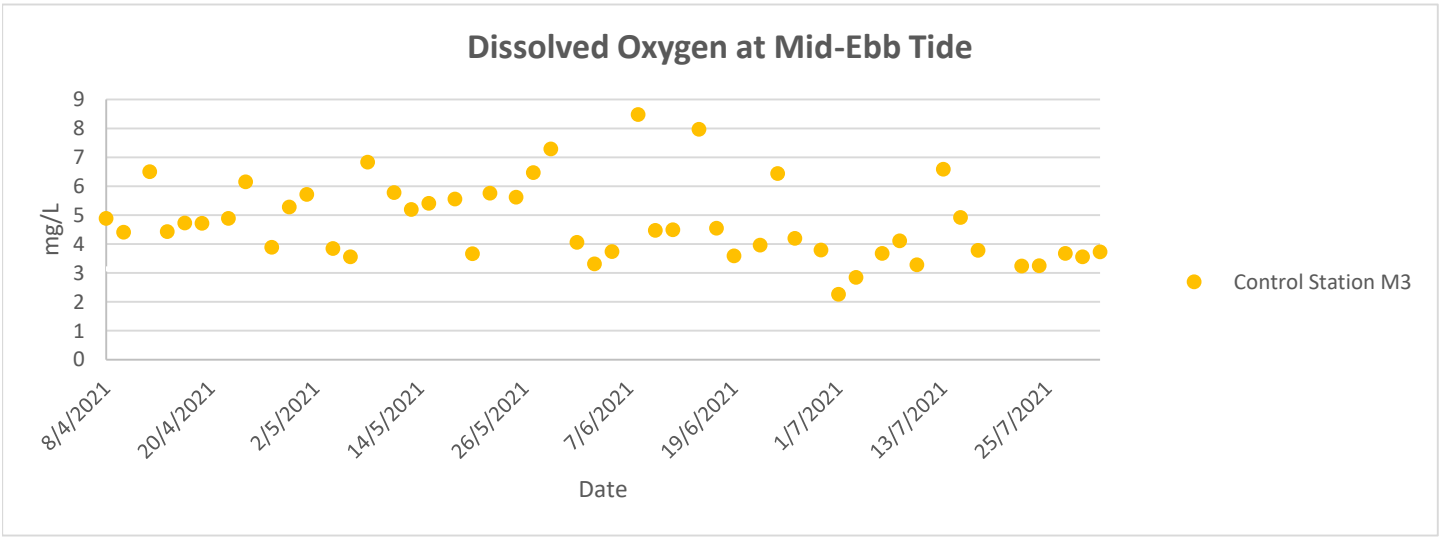
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mg/L
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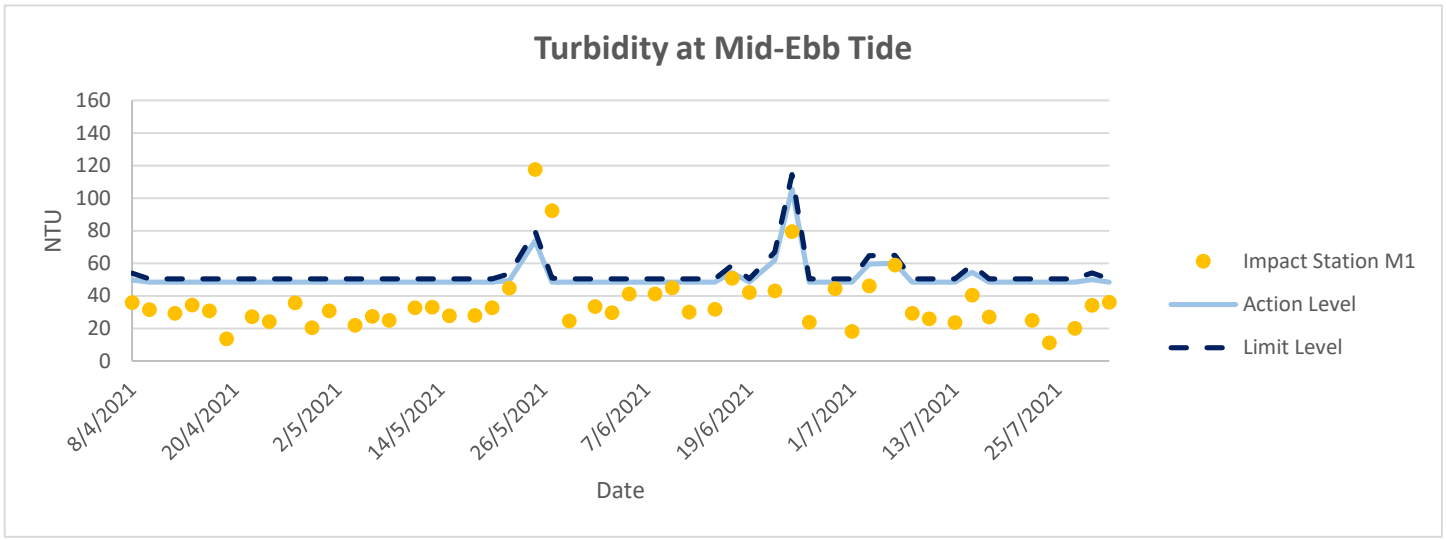
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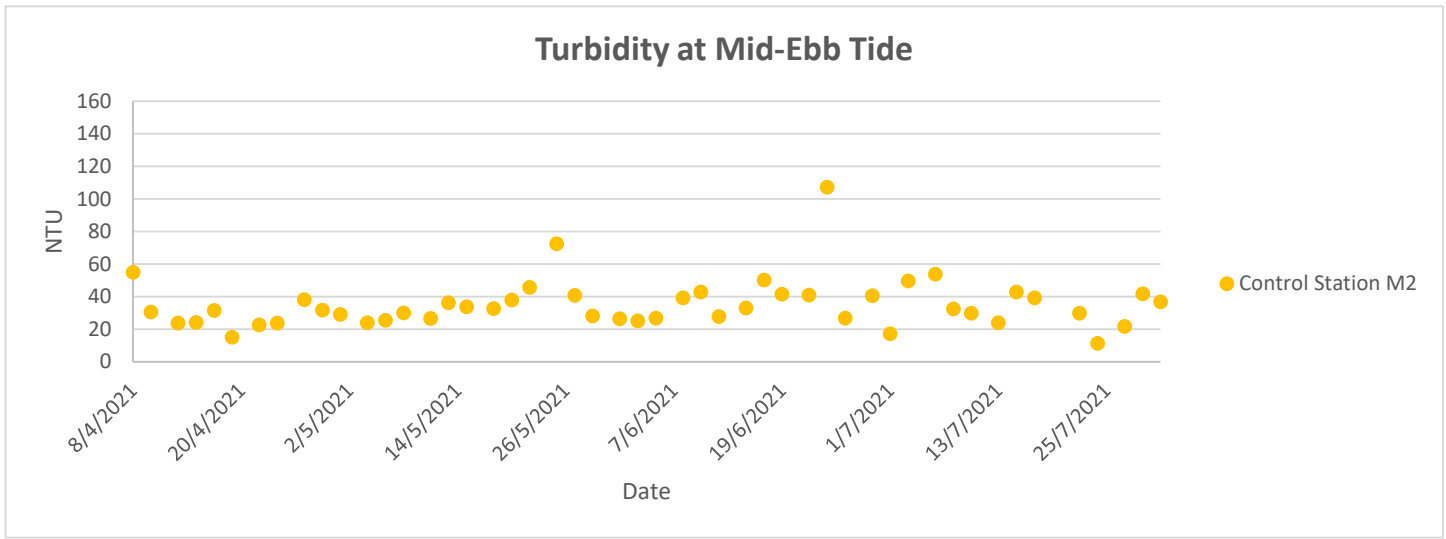
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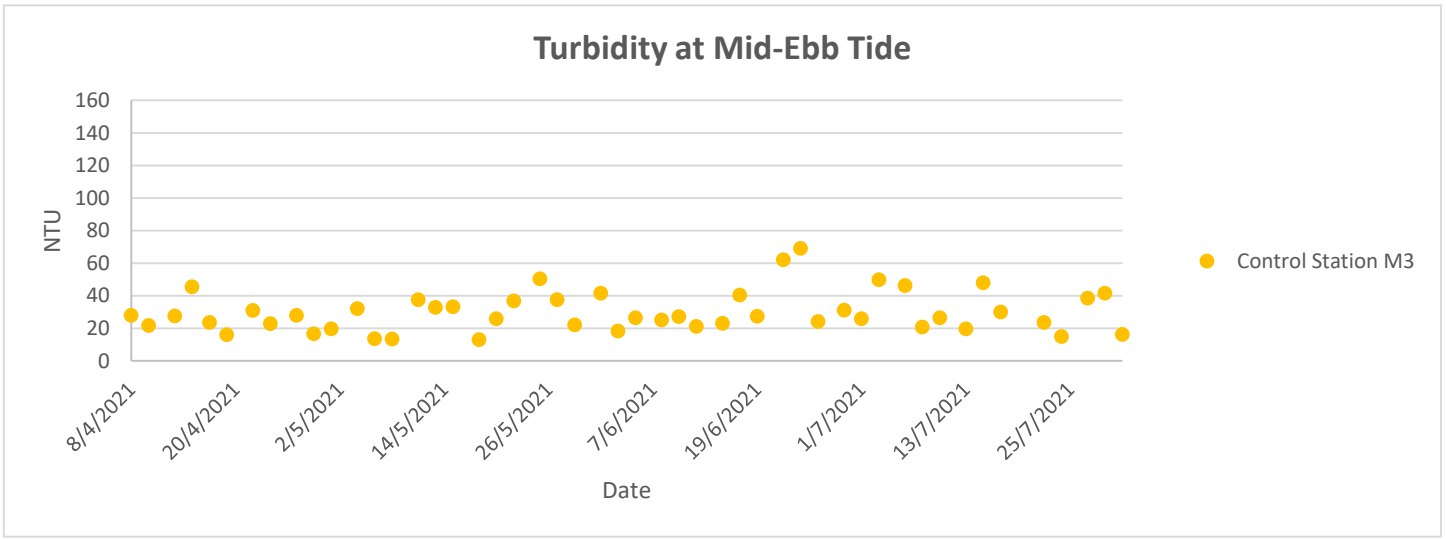
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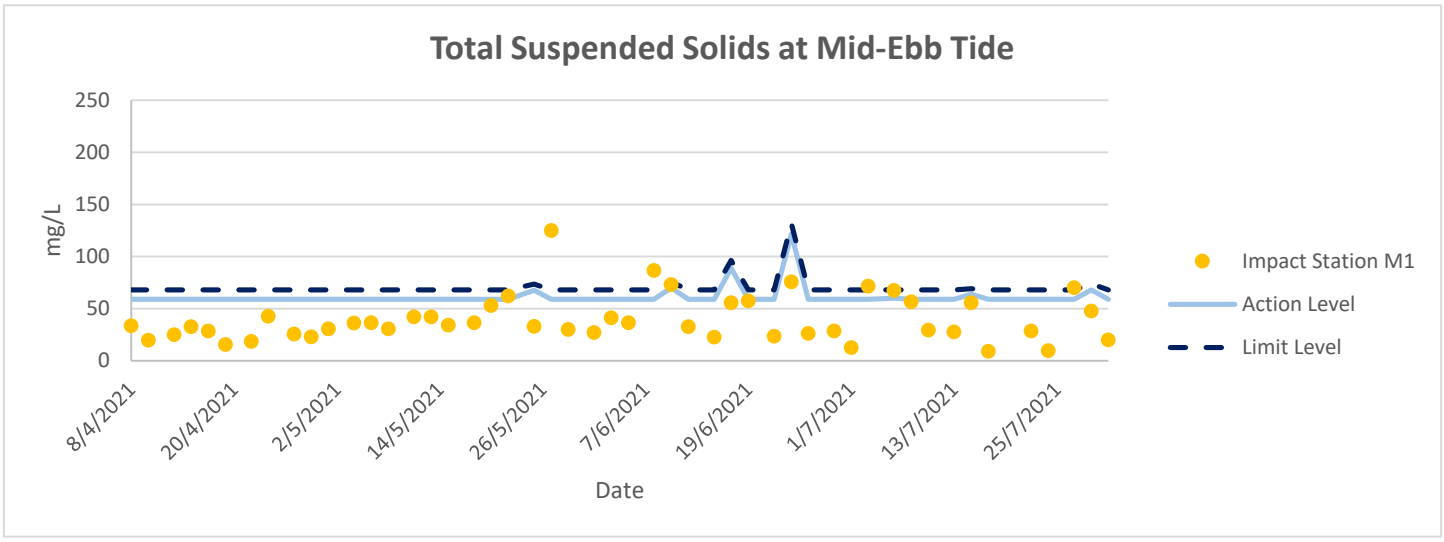
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Action Level
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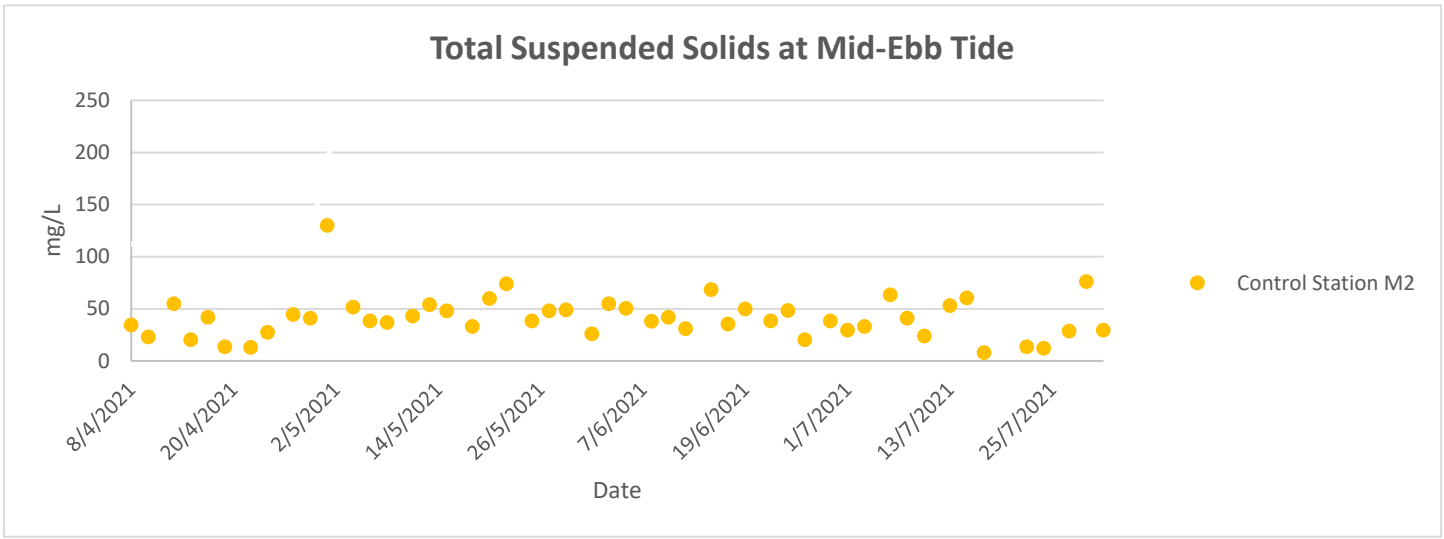
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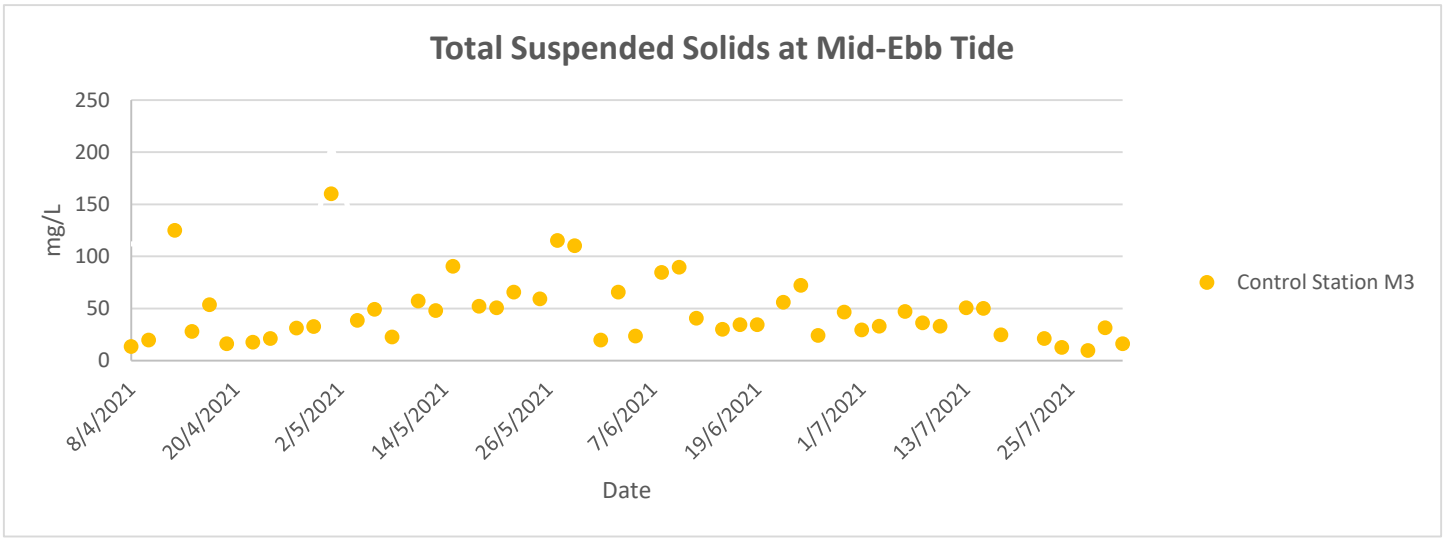
Control Station M2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25/7/2021
Date
Control Station M3

Ecology Monitoring Results

Appendix F.1 Supplemental Discussion

F.1.1 Active Ardeid Night Roost

For the final night roost, a total of 5 individuals (3 Chinese Pond Heron and 2 Little Egret) utilized the understory to canopy layers of the roosting substrate *Sonneratia apetala* and *S. caseolaris*. The night roost (ANR2) located at the northeast of the Project boundary, as noted to be active last April 2021, was not used by the ardeids during the current monitoring period, similar with the June 2021 results. This was, however, not caused by the Project's construction activities as the recorded noise level ((48.8 dB(A)) near ANR2 was lower with respect to the action limit level of 65.5 dB(A) which more likely to cause behavioural responses of some kind by the ardeids (Wright et al. 2010). Furthermore, ardeid night roosts are known for their highly changeable locations and roosting population. These roosting locations can change in temporal basis and even change from day to day on a small scale. In Hong Kong, fluctuation of roosting population, abandonment or change in locations of roosting site without major nearby environmental change has been observed in roosts and locations (HKJC, 2005; Lee et al., 2004; MTRC, 2010).

F.1.2 Ecological Monitoring of Birds

F.1.2.1 Abundance

F.1.2.1.1 All Avifauna Species

Point Count

Among the different species recorded, the Chinese Pond Heron *Ardeola bacchus* was noted with the highest abundance (37 ind.), followed by Barn Swallow *Hirundo rustica* (12 ind.); and Little Egret *Egretta garzetta* (11 ind.) and Crested Myna *Acridotheres cristatellus* (11ind.) The high abundance of Chinese Pond Heron was due to its concurrent breeding period. On the other hand, several species were noted with low abundances (only one ind.), these include the Greater Coucal *Centropus sinensis* and White-breasted Waterhen *Amaurornis phoenicurus*, among others.

Transect Walk

Among the different species recorded, the Chinese Pond Heron was noted with the highest abundance (19 ind.), followed by Eurasian Tree Sparrow *Passer montanus* (5 ind.) and Azure-winged Magpie *Cyanopica cyanus* (4 ind.).

F.1.2.1.2 Avifauna Species of Conservation Importance

Point Count

Among the different species recorded, the Chinese Pond Heron was noted with the highest abundance (37 ind.), followed by Little Egret (11 ind.). On the other hand, the remaining species such as the Great Egret *Ardea alba* (2 ind.), Common Redshank *Tringa totanus* (1 ind.) and Greater Coucal (1 ind.) and were all noted with low abundances.

Transect Walk

Among the different species recorded, the Chinese Pond Heron was noted with the highest abundance (19 ind.). The remaining species such as the Little Egret (3 ind.), Great Egret (1 ind.) and Greater Coucal (1 ind.) were noted with low abundances.

F.1.2.2 Diversity (Species Richness and Shannon Diversity Index)

F.1.2.2.1 Avifauna Species of Conservation Importance

Point Count

A significant current decline in the Shannon diversity index was noted relative to the baseline results of H'=1.36 at α=0.05. However, the significant decline was not caused by the construction works of the Project as noise levels (46.1 to 67.4 dB(A)) recorded from the different point count locations during the ecological bird monitoring are mostly low. The generally low noise levels are unlikely to cause significant impact to birds as behavioural response of some kind are more likely to occur at above 65.5 dB(A) (Wright et al. 2010). Only two stations, SP/NSW1 with 67.4 dB(A) and SP/NSW3 with 66.5 dB(A), have readings slightly above 65.5. dB(A). These stations are located across the Shan Pui River, relatively far from the construction works area; and are close to the roadsides with low to moderate traffic. During the monitoring period passing vehicles, barking dogs, and noisy insects were noted. The lower diversity during this period with respect to the baseline data could be due to the current dominance of Chinese Pond Heron in the community. The current dominance of this species was due to its concurrent breeding period. This dominant species could have decreased the performance of co-occurring species (Gilbert et al. 2009) and forced them to utilize other areas outside the survey area, thus, made the area less diverse. Furthermore, low diversity index usually results from high dominance in the community as these are inversely related (Shaukat et al., 1978).

Appendix F.2 Ecological Bird Monitoring Results (09 & 13 July 2021)

Date (dd/mm/yyyy)	Daytime/Night time	Season	Area	Transect/Point Count	Point Count (Location)/ Transect Impact	Common Name	Scientific Name	Abundance	Habitat	Distribution in Hong Kong[2]	Principal Status[3]	Level of Concern[4]	Protection Status in China[5]	China Red Data Book [6]	Red List of China's Vertebrates [10]	IUCN Red List [7] (v.2020-3)	Species of Conservation Importance	Wetland Dependent	Remarks
09/07/2021	Nighttime	Wet	NSW	Transect	NSW	Chinese Pond Heron	*Ardeola bacchus*	3	Mangrove	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	Roosting
13/07/2021	Daytime	Wet	FLW	Transect	FLW	Chinese Pond Heron	*Ardeola bacchus*	14	Developed Area (Chinese Banyan Trees)	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	FLW	Transect	FLW	Azure-winged Magpie	*Cyanopica cyanus*	4	Developed Area (Chinese Banyan Trees)	Introduced	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Transect	FLW	Grey Wagtail	*Motacilla cinerea*	1	Plantation-FLW	Common	PM,WV	-	-	-	LC	LC	N	Y	
13/07/2021	Daytime	Wet	FLW	Transect	FLW	Spotted Dove	*Spilopelia chinensis*	2	Plantation-FLW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Transect	FLW	Crested Myna	*Acridotheres cristatellus*	2	Plantation-NSW	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Transect	FLW	Greater Coucal	*Centropus sinensis*	1	Pond-FLW	Common	R	-	Class II	Vulnerable	LC	LC	Y	N	
13/07/2021	Daytime	Wet	FLW	Transect	FLW	Eurasian Tree Sparrow	*Passer montanus*	2	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW1	Crested Myna	*Acridotheres cristatellus*	2	Pond-FLW	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW1	Chinese Pond Heron	*Ardeola bacchus*	16	Pond-FLW	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW1	Oriental Magpie Robin	*Copsychus saularis*	2	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW1	Spotted Dove	*Spilopelia chinensis*	2	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW1	Plain Prinia	*Prinia inornata*	1	Pond-FLW	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW2	Crested Myna	*Acridotheres cristatellus*	1	Pond-FLW	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW2	Chinese Pond Heron	*Ardeola bacchus*	1	Pond-FLW	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW2	Barn Swallow	*Hirundo rustica*	1	Pond-FLW	Abundant	PM,SV	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW2	Spotted Dove	*Spilopelia chinensis*	1	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW2	Red Turtle Dove	*Streptopelia tranquebarica*	1	Pond-FLW	Uncommon	PM	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW2	Plain Prinia	*Prinia inornata*	1	Pond-FLW	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW2	Common Tailorbird	*Orthotomus sutorius*	2	Pond-FLW	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW3	Chinese Bulbul	*Pycnonotus sinensis*	2	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N	

13/07/2021	Daytime	Wet	FLW	Point Count	FLW3	Spotted Dove	*Spilopelia chinensis*	1	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW3	Plain Prinia	*Prinia inornata*	2	Pond-FLW	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW4	Chinese Pond Heron	*Ardeola bacchus*	2	Pond-FLW	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW4	Barn Swallow	*Hirundo rustica*	3	Pond-FLW	Abundant	PM,SV	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW5	Chinese Pond Heron	*Ardeola bacchus*	1	Pond-FLW	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW5	Oriental Magpie Robin	*Copsychus saularis*	3	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW5	White Wagtail	*Motacilla alba*	2	Pond-FLW	Common	PM,WV	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW5	Eastern Yellow Wagtail	*Motacilla tschutschensis*	1	Pond-FLW	Common	PM,WV	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW5	Black-crowned Night Heron	*Nycticorax nycticorax*	1	Pond-FLW	Common	R,WV	-	-	-	LC	LC	N	Y	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW5	Eurasian Tree Sparrow	*Passer montanus*	3	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW6	Chinese Pond Heron	*Ardeola bacchus*	3	Pond-FLW	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW6	Little Egret	*Egretta garzetta*	4	Pond-FLW	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW6	Black-crowned Night Heron	*Nycticorax nycticorax*	1	Pond-FLW	Common	R,WV	-	-	-	LC	LC	N	Y	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW7	Crested Myna	*Acridotheres cristatellus*	2	Pond-FLW	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW7	Chinese Pond Heron	*Ardeola bacchus*	5	Pond-FLW	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW7	Greater Coucal	*Centropus sinensis*	1	Pond-FLW	Common	R	-	Class II	Vulnerable	LC	LC	Y	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW7	Masked Laughingthrush	*Garrulax perspicillatus*	3	Pond-FLW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Point Count	FLW7	Barn Swallow	*Hirundo rustica*	1	Pond-FLW	Abundant	PM,SV	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Transect	NSW	Red-throated Flycatcher	*Ficedula albicilla*	2	Modified Watercourse	Uncommon	PM,WV	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Transect	NSW	Long-tailed Shrike	*Lanius schach*	1	Modified Watercourse	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Transect	NSW	Spotted Dove	*Spilopelia chinensis*	1	Modified Watercourse	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Transect	NSW	Masked Laughingthrush	*Garrulax perspicillatus*	2	Plantation-NSW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Transect	NSW	Eurasian Tree Sparrow	*Passer montanus*	3	Plantation-NSW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Transect	NSW	Japanese White-eye	*Zosterops japonicus*	3	Pond-NSW	Abundant	R	-	-	-	LC	LC	N	N	

13/07/2021	Daytime	Wet	NSW	Point Count	NSW1	Crested Myna	*Acridotheres cristatellus*	1	Pond-NSW	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	NSW1	Chinese Pond Heron	*Ardeola bacchus*	1	Pond-NSW	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	NSW	Point Count	NSW1	Oriental Magpie Robin	*Copsychus saularis*	1	Pond-NSW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	NSW1	Masked Laughingthrush	*Garrulax perspicillatus*	5	Pond-NSW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	NSW1	Black-collared Starling	*Gracupica nigricollis*	1	Pond-NSW	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	NSW1	White Wagtail	*Motacilla alba*	1	Pond-NSW	Common	PM,WV	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	NSW1	Eurasian Tree Sparrow	*Passer montanus*	3	Pond-NSW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	NSW1	Red-whiskered Bulbul	*Pycnonotus jocosus*	2	Pond-NSW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	NSW1	White-shouldered Starling	*Sturnia sinensis*	1	Pond-NSW	Common	PM	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	NSW1	Yellow-bellied Prinia	*Prinia flaviventris*	1	Pond-NSW	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	NSW1	Yellow-bellied Prinia	*Prinia flaviventris*	1	Pond-NSW	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW1	Little Egret	*Egretta garzetta*	3	Modified Watercourse	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW1	Common Redshank	*Tringa totanus*	1	Modified Watercourse	Common	PM	RC	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW1	Crested Myna	*Acridotheres cristatellus*	2	Modified Watercourse	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW1	White-breasted Waterhen	*Amaurornis phoenicurus*	1	Modified Watercourse	Common	R	-	-	-	LC	LC	N	Y	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW1	Chinese Pond Heron	*Ardeola bacchus*	2	Modified Watercourse	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW1	Little Egret	*Egretta garzetta*	4	Modified Watercourse	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW1	Long-tailed Shrike	*Lanius schach*	1	Modified Watercourse	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW1	Spotted Dove	*Spilopelia chinensis*	2	Modified Watercourse	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW1	Common Sandpiper	*Actitis hypoleucos*	1	Modified Watercourse	Common	PM,WV	-	-	-	LC	LC	N	Y	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW1	Common Tailorbird	*Orthotomus sutorius*	2	Modified Watercourse	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW2	Crested Myna	*Acridotheres cristatellus*	1	Modified Watercourse	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW2	Chinese Pond Heron	*Ardeola bacchus*	1	Modified Watercourse	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	

13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW2	Common Tailorbird	*Orthotomus sutorius*	2	Modified Watercourse	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW2	Red-whiskered Bulbul	*Pycnonotus jocosus*	4	Modified Watercourse	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW3	Chinese Pond Heron	*Ardeola bacchus*	5	Mangrove	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW3	Crested Myna	*Acridotheres cristatellus*	2	Modified Watercourse	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW3	Great Egret	*Ardea alba*	2	Modified Watercourse	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW3	Red-throated Flycatcher	*Ficedula albicilla*	2	Modified Watercourse	Uncommon	PM,WV	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW3	Black-collared Starling	*Gracupica nigricollis*	1	Modified Watercourse	Common	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW3	Barn Swallow	*Hirundo rustica*	7	Modified Watercourse	Abundant	PM,SV	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW3	Black-crowned Night Heron	*Nycticorax nycticorax*	1	Modified Watercourse	Common	R,WV	-	-	-	LC	LC	N	Y	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW3	Japanese White-eye	*Zosterops japonicus*	3	Modified Watercourse	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	NSW	Point Count	SP/NSW3	Japanese White-eye	*Zosterops japonicus*	2	Pond-NSW	Abundant	R	-	-	-	LC	LC	N	N	
13/07/2021	Daytime	Wet	FLW	Transect	YLIE-CW	Great Egret	*Ardea alba*	1	Modified Watercourse	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	FLW	Transect	YLIE-CW	Chinese Pond Heron	*Ardeola bacchus*	2	Modified Watercourse	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	FLW	Transect	YLIE-CW	Little Egret	*Egretta garzetta*	3	Modified Watercourse	Common	R	PRC (RC)	-	-	LC	LC	Y	Y	
13/07/2021	Daytime	Wet	FLW	Transect	YLIE-CW	Common Moorhen	*Gallinula chloropus*	1	Modified Watercourse	Common	R	-	-	-	LC	LC	N	Y	

Notes:

(1) All wild birds are protected under Wild Animals Protection Ordinance (Cap. 170).

(2) AFCD (2021). Hong Kong Biodiversity Database.

(3) Carey et al. (2001): R=resident; WV=winter visitor; SV=summer visitor; PM=passage migrant; Sp=spring; A=autumn;

(4) Fellowes et al. (2002): GC=Global Concern; LC=Local Concern; RC=Regional Concern; PRC=Potential Regional Concern; PGC: Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in nesting and/or roosting sites rather than in general occurrence.

(5) List of Wild Animals Under State Protection (promulgated by State Forestry Administration and Ministry of Agriculture on 14 January, 1989).

(6) Zheng, G. M. and Wang, Q. S. (1998). China Red Data Book

(7) IUCN 2021. The IUCN Red List of Threatened Species. Version 2020-3.

(9) Wetland-dependent species (including wetland-dependent species and waterbirds).

(10) Jiang et al. (2016). Red List of China's Vertebrates

Appendix F.3.1 Ecological Bird Monitoring Diversity (All avifauna species in Point Count Method) in All Habitats (09 & 13 July 2021)

Scientific Name	Count	P	Ln(P)	P*Ln(P)	$P*Ln(P)^2$
Acridotheres cristatellus	11	0.077465	-2.55793	-0.19815	0.506853
Actitis hypoleucos	1	0.007042	-4.95583	-0.0349	0.172959
Amaurornis phoenicurus	1	0.007042	-4.95583	-0.0349	0.172959
Ardea alba	2	0.014085	-4.26268	-0.06004	0.255922
Ardeola bacchus	37	0.260563	-1.34491	-0.35043	0.471302
Centropus sinensis	1	0.007042	-4.95583	-0.0349	0.172959
Copsychus saularis	6	0.042254	-3.16407	-0.13369	0.423014
Egretta garzetta	11	0.077465	-2.55793	-0.19815	0.506853
Ficedula albicilla	2	0.014085	-4.26268	-0.06004	0.255922
Garrulax perspicillatus	8	0.056338	-2.87639	-0.16205	0.466118
Gracupica nigricollis	2	0.014085	-4.26268	-0.06004	0.255922
Hirundo rustica	12	0.084507	-2.47092	-0.20881	0.515953
Lanius schach	1	0.007042	-4.95583	-0.0349	0.172959
Motacilla alba	3	0.021127	-3.85721	-0.08149	0.314326
Motacilla tschutschensis	1	0.007042	-4.95583	-0.0349	0.172959
Nycticorax nycticorax	3	0.021127	-3.85721	-0.08149	0.314326
Orthotomus sutorius	6	0.042254	-3.16407	-0.13369	0.423014
Passer montanus	6	0.042254	-3.16407	-0.13369	0.423014
Prinia flaviventris	2	0.014085	-4.26268	-0.06004	0.255922
Prinia inornata	4	0.028169	-3.56953	-0.10055	0.358917
Pycnonotus jocosus	6	0.042254	-3.16407	-0.13369	0.423014
Pycnonotus sinensis	2	0.014085	-4.26268	-0.06004	0.255922
Spilopelia chinensis	6	0.042254	-3.16407	-0.13369	0.423014
Streptopelia tranquebarica	1	0.007042	-4.95583	-0.0349	0.172959
Sturnia sinensis	1	0.007042	-4.95583	-0.0349	0.172959
Tringa totanus	1	0.007042	-4.95583	-0.0349	0.172959
Zosterops japonicus	5	0.035211	-3.34639	-0.11783	0.394307
Total	**142**	**1**	**-103.219**	**-2.74681**	**8.627308**
Richness	**27**				
SS	**8.627308**				
SQ	**7.544967**				
H	**2.74681**				
S^2_H	**0.008267**				

Appendix F.3.2 Ecological Bird Monitoring Diversity (Avifauna species of conservation importance in Point Count Method) in All Habitats (09 & 13 July 2021)

Scientific Name	Count	P	Ln(P)	P*Ln(P)	$P*Ln(P)^2$
Ardea alba	2	0.038462	-3.2581	-0.12531	0.408277
Ardeola bacchus	37	0.711538	-0.34033	-0.24215	0.082412
Centropus sinensis	1	0.019231	-3.95124	-0.07599	0.300237
Egretta garzetta	11	0.211538	-1.55335	-0.32859	0.510419
Tringa totanus	1	0.019231	-3.95124	-0.07599	0.300237

Total	**52**	**1**	**-13.0543**	**-0.84803**	**1.601582**
Richness	**5**				
SS	**1.601582**				
SQ	**0.719155**				
H	**0.84803**				
S^2_H	**0.017709**				

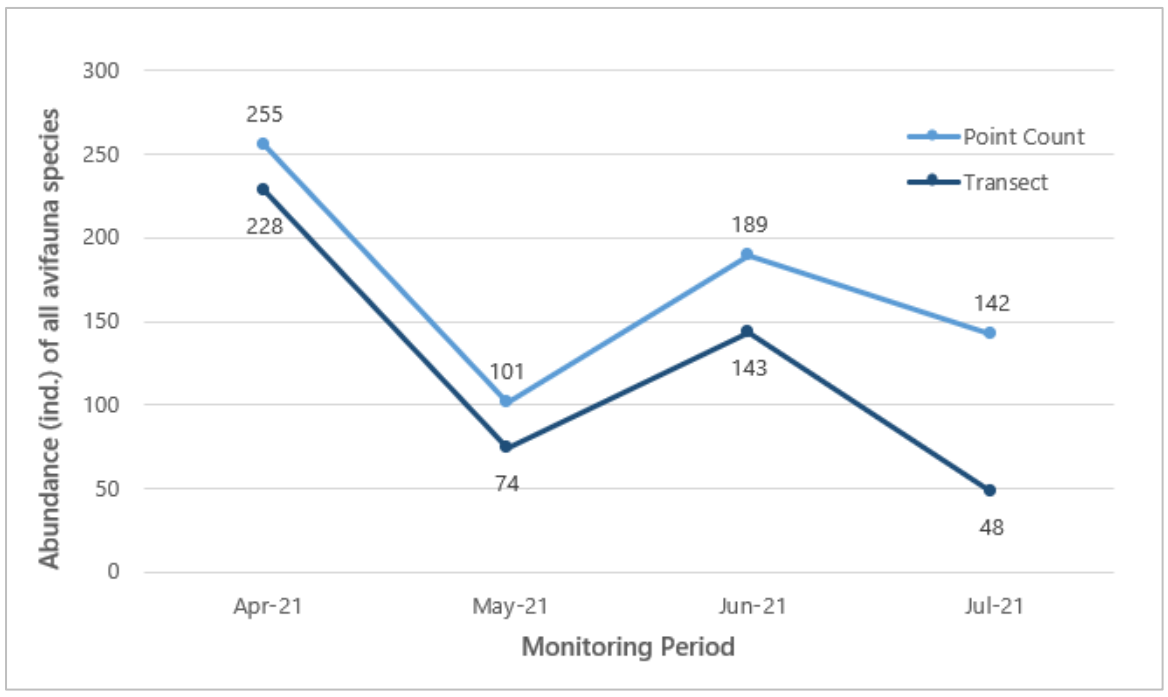
Appendix F.3.3 Appendix F.2c Ecological Bird Monitoring Diversity (All avifauna species in Transect Walk Method) in All Habitats (09 & 13 July 2021)

Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P)^2
Acridotheres cristatellus	2	0.041667	-3.17805	-0.13242	0.420834
Ardea alba	1	0.020833	-3.8712	-0.08065	0.312212
Ardeola bacchus	19	0.395833	-0.92676	-0.36684	0.339976
Centropus sinensis	1	0.020833	-3.8712	-0.08065	0.312212
Cyanopica cyanus	4	0.083333	-2.48491	-0.20708	0.514563
Egretta garzetta	3	0.0625	-2.77259	-0.17329	0.480453
Ficedula albicilla	2	0.041667	-3.17805	-0.13242	0.420834
Gallinula chloropus	1	0.020833	-3.8712	-0.08065	0.312212
Garrulax perspicillatus	2	0.041667	-3.17805	-0.13242	0.420834
Lanius schach	1	0.020833	-3.8712	-0.08065	0.312212
Passer montanus	5	0.104167	-2.26176	-0.2356	0.532872
Spilopelia chinensis	3	0.0625	-2.77259	-0.17329	0.480453
Zosterops japonicus	3	0.0625	-2.77259	-0.17329	0.480453
Motacilla cinerea	1	0.020833	-3.8712	-0.08065	0.312212
Total	**48**	**1**	**-42.8814**	**-2.12989**	**5.652337**
Richness	**14**				
SS	**5.652337**				
SQ	**4.536416**				
H	**2.12989**				
S^2_H	**0.02607**				

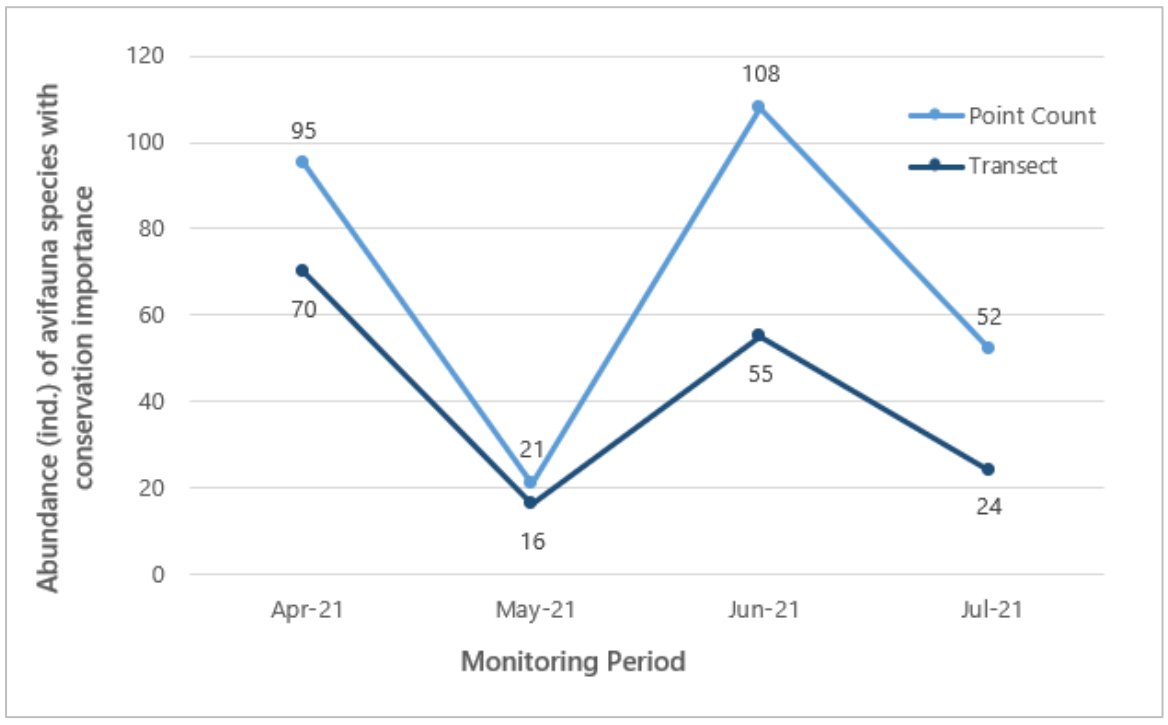
Appendix F.3.4 Appendix F.2d Ecological Bird Monitoring Diversity (Avifauna species of conservation importance in Transect Walk Method) in All Habitats (09 & 13 July 2021)

Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P)^2
Ardea alba	1	0.041667	-3.17805	-0.13242	0.420834
Ardeola bacchus	19	0.791667	-0.23361	-0.18495	0.043206
Centropus sinensis	1	0.041667	-3.17805	-0.13242	0.420834
Egretta garzetta	3	0.125	-2.07944	-0.25993	0.54051
Total	**24**	**1**	**-8.66916**	**-0.70971**	**1.425384**
Richness	**4**				
SS	**1.425384**				
SQ	**0.503693**				
H	**0.70971**				
S^2_H	**0.041008**				

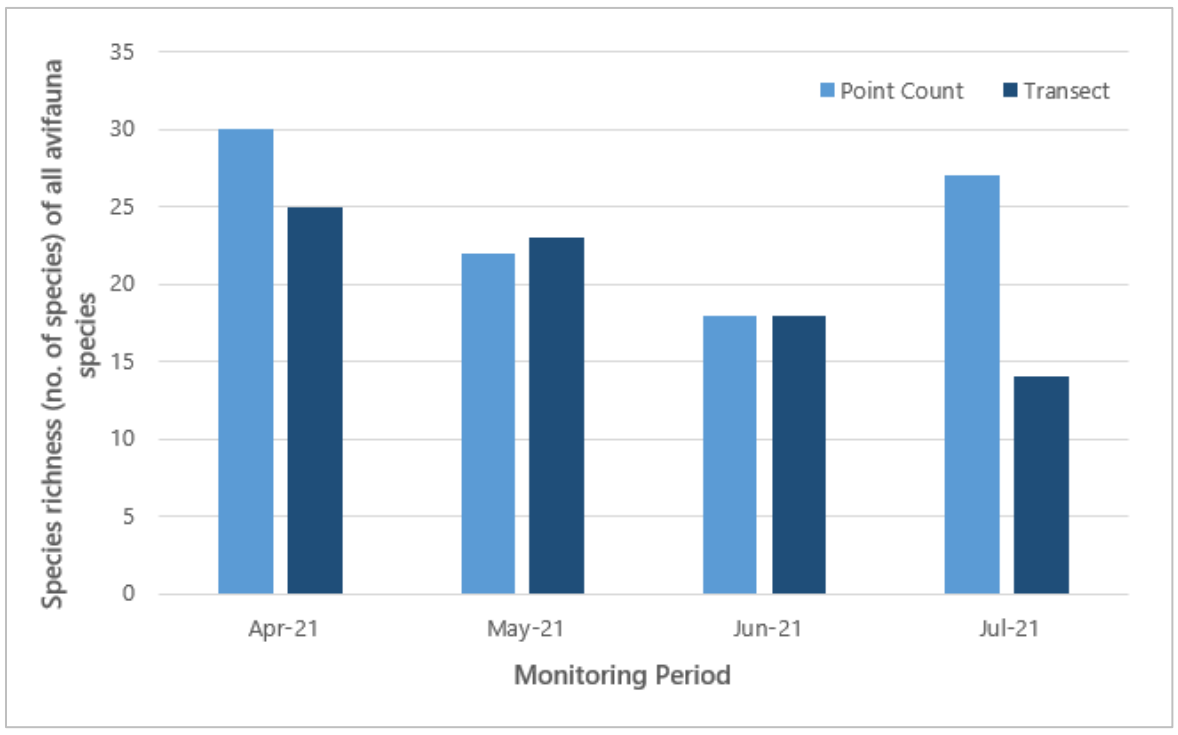
Appendix F.4.1 Abundance of all avifauna species throughout the monitoring period



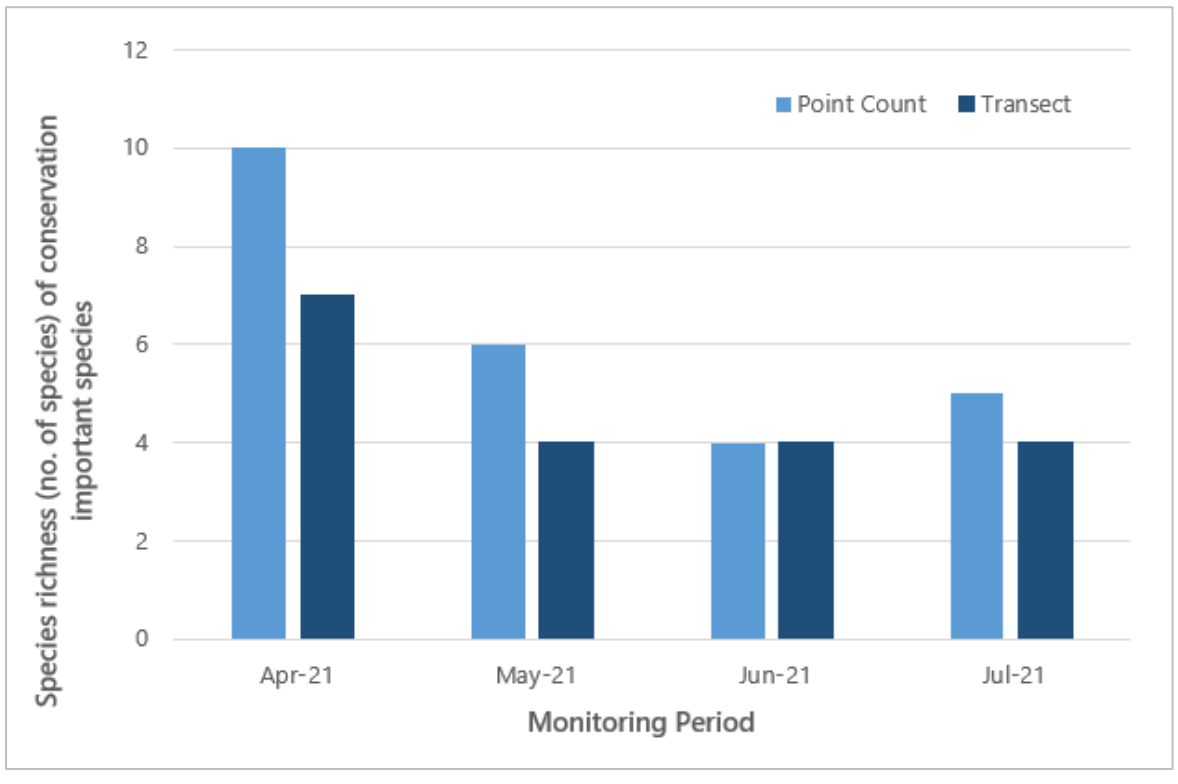
Appendix F.4.2 Abundance of avifauna species with conservation importance throughout the monitoring period



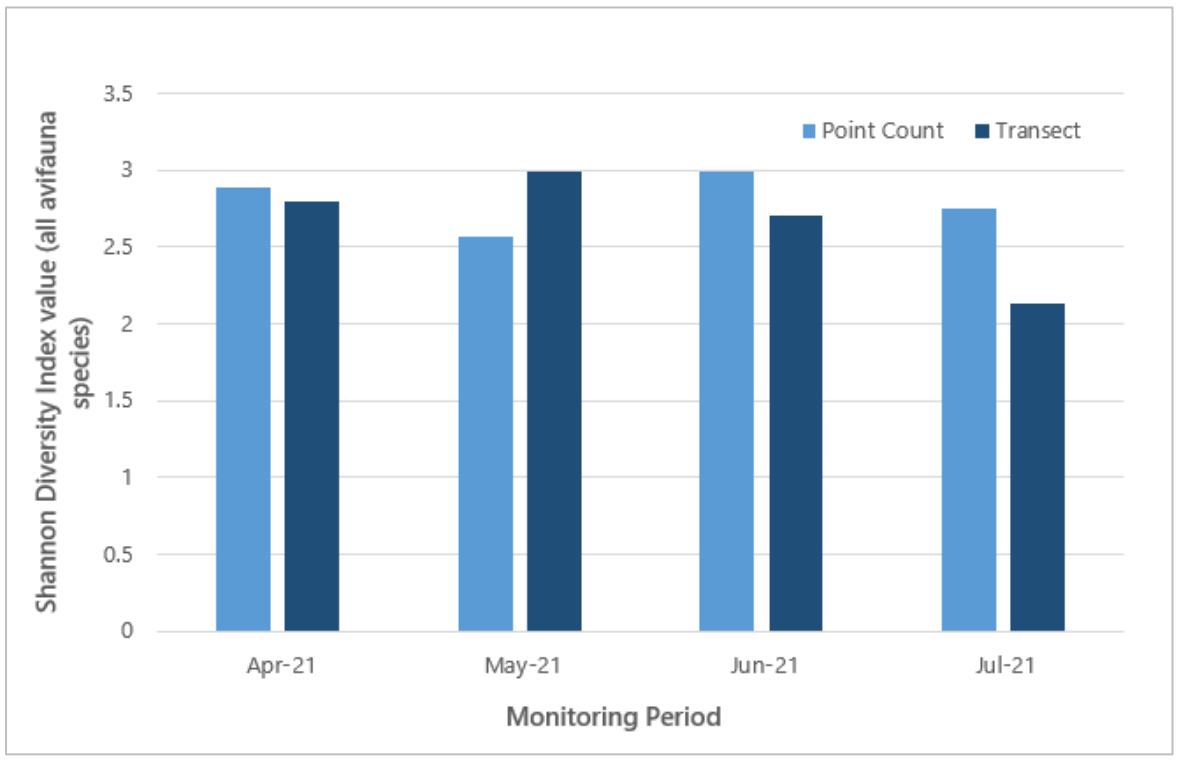
Appendix F.5.1 Species richness of all avifauna species throughout the monitoring period



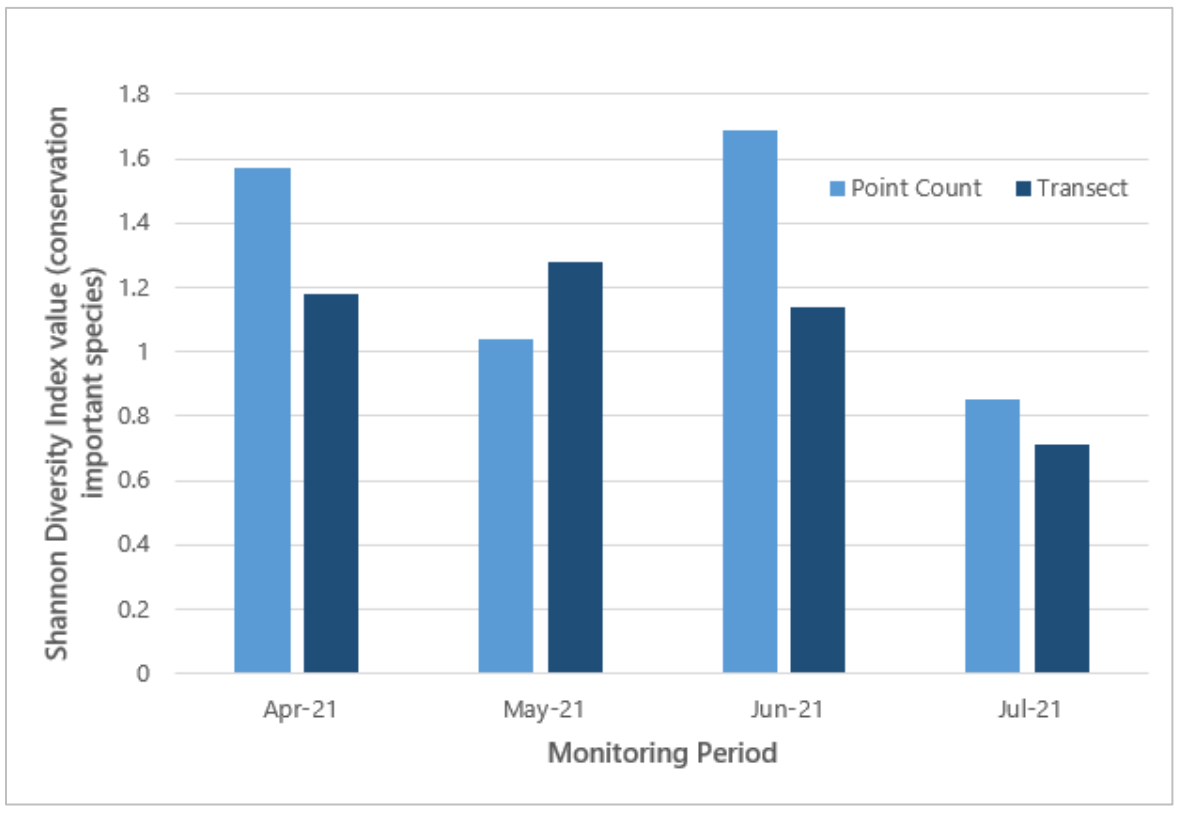
Appendix F.5.2 Species richness of avifauna species with conservation importance throughout the monitoring period



Appendix F.6.1 Shannon Diversity Index values of all avifauna species throughout the monitoring period



Appendix F.6.2 Shannon Diversity Index values of avifauna species with conservation importance throughout the monitoring period



Appendix F.7.1 T-test output table for abundance of avifauna species with conservation importance – Point Count Method

Months	July 2017	July 2021
N	24	16
df	23	15
M	3.33	3.25
SS	363.33	205
s^2	15.8	13.67
t-value	0.07	
p-value	0.95	

Appendix F.7.2 Hutcheson t-test testing method and output

Formula:

$$t = \frac{H_a - H_b}{\sqrt{s^2_{H_a} + s^2_{H_b}}}$$

Appendix F.7.2.1 Species diversity of all avifauna species – Transect Walk Method

Months	July 2017	July 2021
Total	36	48
N	18	14
H	0.93	2.13
S^2_H	0.059876	0.02607
t	4.084457	
df	65	
Crit	1.99773	
p	0.000125	
CI	0.489393	0.322921

Appendix F.7.2.2 Species diversity of avifauna species with conservation importance – Point Count Method

Months	July 2017	July 2021
Total	80	52
N	5	5
H	1.3642	0.8480
S^2_H	0.004471	0.017709
t	3.465844	

Months	July 2017	July 2021
df	78	
Crit	1.990847	
p	0.000862	
CI	0.133728	0.266153

Appendix F.7.2.3 Species diversity of avifauna species with conservation importance – Transect Walk Method

Months	July 2017	July 2021
Total	8	24
N	3	4
H	0.90	0.71
S^2_H	0.059196	0.041008
t	0.601937	
df	20	
Crit	2.093024	
p	0.554332	
CI	0.486604	0.405009