Air Quality Monitoring Results

Air Quality Monitoring Results for

Contract No. SPW 07/2020

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

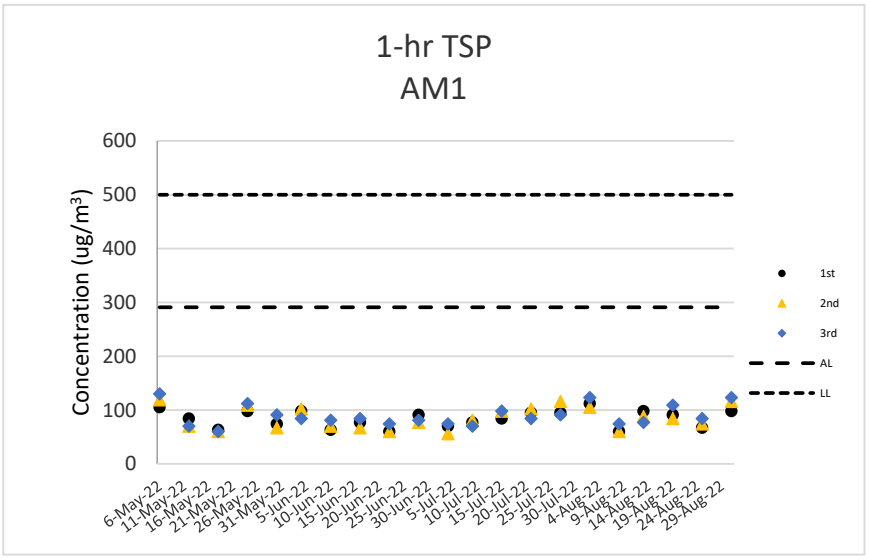
AM1 - Topfine Machinery (China) Co. Ltd.

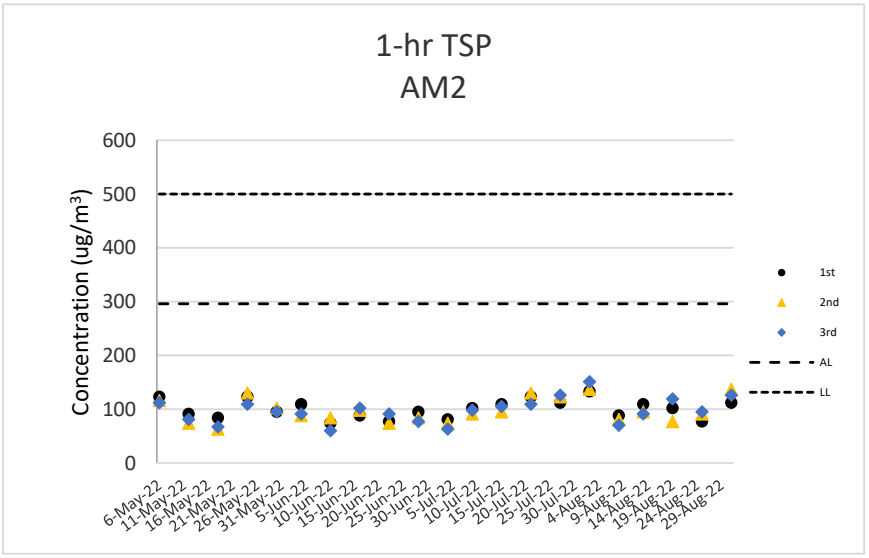
Date	Weather Condition	Start Time	1-hour TSP (µg/m³) 1st Measurement	2nd Measurement	3rd Measurement	Action Level (ug/m^3)	Limit Level (ug/m^3)
2-Aug-22	Fine	8:34	112	105	123	291	500
8-Aug-22	Cloudy	8:31	60	60	74		
13-Aug-22	Fine	8:36	98	88	77		
19-Aug-22	Cloudy	8:31	91	84	109		
25-Aug-22	Cloudy	14:16	67	74	84		
31-Aug-22	Cloudy	8:36	98	116	123		
		Min	60				
		Max	123				
		Average	91				

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)
2-Aug-22	Fine	8:47	133	137	151	296	500
8-Aug-22	Cloudy	8:40	88	81	70		
13-Aug-22	Fine	8:48	109	95	91		
19-Aug-22	Cloudy	8:40	102	77	119		
25-Aug-22	Cloudy	14:28	77	91	95		
31-Aug-22	Cloudy	8:47	112	137	126		
		Min	70				
		Max	151				
		Average	105				

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





Air Quality Monitoring Results

Noise Monitoring Results

Noise Monitoring Results 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)
2-Aug-22	11:18	53	56	50	0.1	Fine	75
8-Aug-22	10:08	55	57	51	0.1	Cloudy	75
19-Aug-22	10:08	54	56	52	0.2	Cloudy	75
25-Aug-22	15:57	55	58	53	0.4	Cloudy	75
31-Aug-22	10:14	53	55	51	0.1	Cloudy	75
	Max	55					
	Min	53					

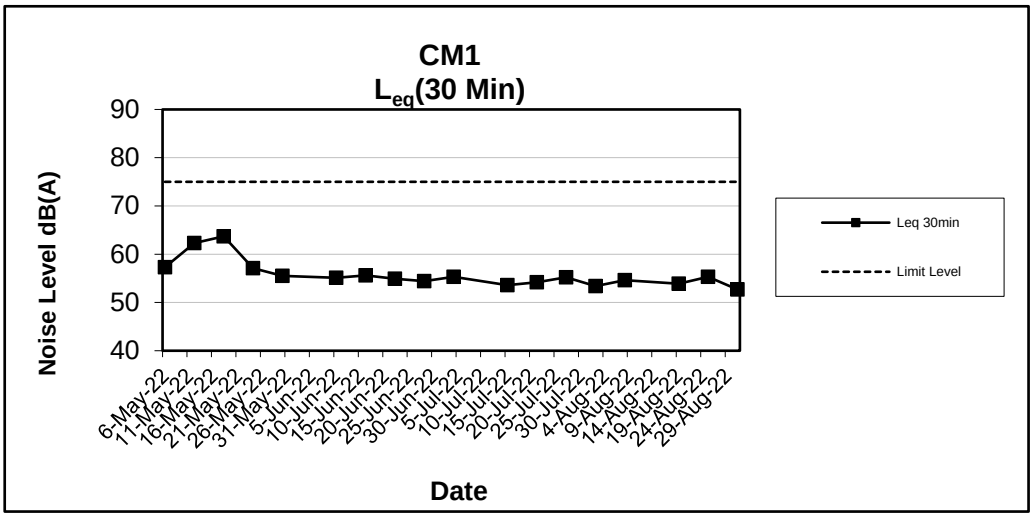
CM2 - Squatter house to the west of YLSTW

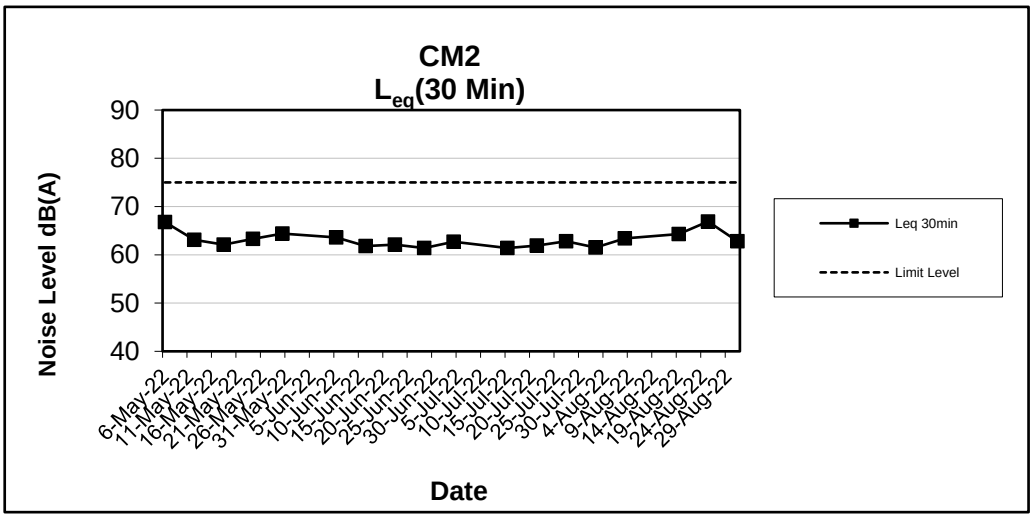
Date	Start Time	L_{eq} 30min dB(A)	L_{10} dB(A)	L_{90} dB(A)	Wind Speed (m/s)	Weather	Limit Level dB(A)
2-Aug-22	8:54	62	64	55	0.3	Fine	75
8-Aug-22	8:45	63	66	56	0.2	Cloudy	75
19-Aug-22	8:45	64	68	56	0.3	Cloudy	75
25-Aug-22	14:34	67	70	58	0.5	Cloudy	75
31-Aug-22	8:53	63	66	56	0.2	Cloudy	75
	Max	67					
	Min	62					

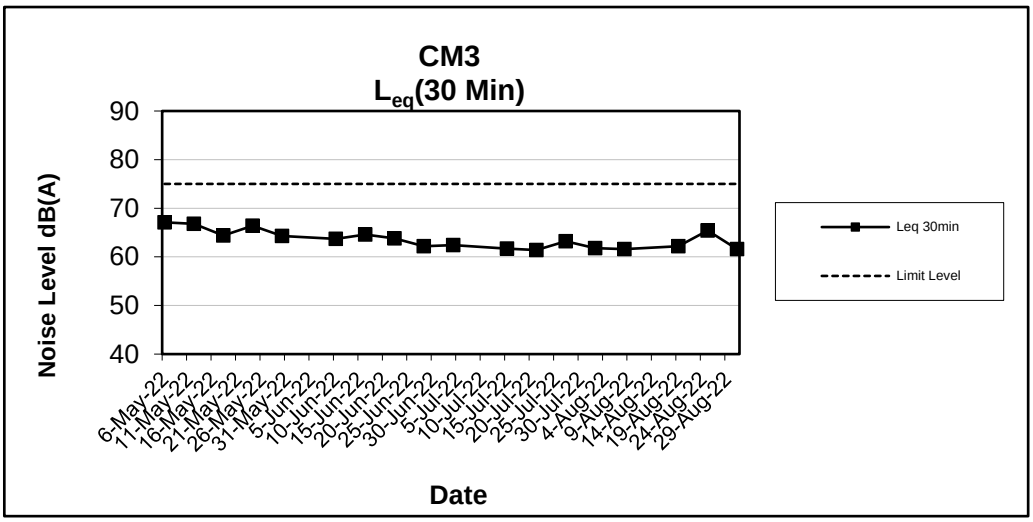
CM3 - Squatter house to the east of YLSTW

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)
2-Aug-22	13:05	62	64	56	0.2	Fine	75
8-Aug-22	11:26	62	65	55	0.3	Cloudy	75
19-Aug-22	11:25	62	65	56	0.3	Cloudy	75
25-Aug-22	17:18	65	69	58	0.5	Cloudy	75
31-Aug-22	13:04	62	65	55	0.1	Cloudy	75
	Max	65					
	Min	62					

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.







Noise Monitoring Results

Water Quality Monitoring Results

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

Water Quality Monitoring Results

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	2/8/2022	Mid-Flood	Fine	Calm	10:02	2.4	M	1.2	1	0.316	257	7.82	7.83	4.35	4.36	30.17	30.18	80.2	80.4	5.77	5.79	28.0	27.5	18	18
M1	2/8/2022	Mid-Flood	Fine	Calm	10:02	2.4	M	1.2	2			7.84		4.36		30.19		80.6		5.81		27.0		17	
M2	2/8/2022	Mid-Flood	Fine	Calm	10:21	1.2	M	0.6	1	0.332	275	7.69	7.69	3.72	3.73	30.86	30.86	84.4	84.1	6.11	6.08	21.4	21.5	24	24
M2	2/8/2022	Mid-Flood	Fine	Calm	10:21	1.2	M	0.6	2			7.68		3.74		30.85		83.7		6.05		21.7		23	
M3	2/8/2022	Mid-Flood	Fine	Moderate	9:57	1.4	M	0.7	1	0.059	70	7.62	7.62	3.55	3.55	31.62	31.63	81.7	81.6	5.89	5.86	37.6	37.6	30	30
M3	2/8/2022	Mid-Flood	Fine	Moderate	9:57	1.4	M	0.7	2			7.61		3.54		31.64		81.4		5.83		37.6		30	
M1	2/8/2022	Mid-Ebb	Fine	Calm	16:55	2	M	1	1	0.348	242	7.61	7.61	2.59	2.58	34.48	34.48	90.3	90.5	6.41	6.43	29.3	29.6	30	30
M1	2/8/2022	Mid-Ebb	Fine	Calm	16:55	2	M	1	2			7.61		2.57		34.47		90.7		6.44		29.8		30	
M2	2/8/2022	Mid-Ebb	Fine	Calm	16:37	1.2	M	0.6	1	0.375	203	7.56	7.56	2.93	2.93	33.91	33.92	92.2	92.5	6.54	6.56	26.0	26.0	28	29
M2	2/8/2022	Mid-Ebb	Fine	Calm	16:37	1.2	M	0.6	2			7.55		2.92		33.92		92.7		6.57		25.9		29	
M3	2/8/2022	Mid-Ebb	Fine	Moderate	16:50	1.2	M	0.6	1	0.055	203	7.74	7.73	4.04	4.06	31.04	31.03	88.9	88.7	6.43	6.41	41.8	41.6	11	12
M3	2/8/2022	Mid-Ebb	Fine	Moderate	16:50	1.2	M	0.6	2			7.71		4.07		31.02		88.4		6.39		41.4		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. Limit 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. Limit 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
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

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

Water Quality Monitoring Results

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	4/8/2022	Mid-Flood	Fine	Moderate	11:38	1.2	M	0.6	1	0.074	115	7.07	7.07	1.86	1.84	27.41	27.42	56.2	57.0	4.03	4.05	21.1	21.1	18	19
M1	4/8/2022	Mid-Flood	Fine	Moderate	11:38	1.2	M	0.6	2			7.06		1.81		27.42		57.7		4.06		21.1		19	
M2	4/8/2022	Mid-Flood	Fine	Moderate	11:52	1.4	M	0.7	1	0.065	75	7.11	7.13	1.97	1.97	27.86	27.85	60.1	60.2	4.26	4.27	23.1	23.1	18	18
M2	4/8/2022	Mid-Flood	Fine	Moderate	11:52	1.4	M	0.7	2			7.14		1.96		27.84		60.3		4.27		23.2		18	
M3	4/8/2022	Mid-Flood	Cloudy	Smooth	11:28	0.4	M	0.2	1	0.235	94	7.47	7.47	0.86	0.87	27.38	27.39	67.9	68.3	5.30	5.33	38.6	38.1	9	10
M3	4/8/2022	Mid-Flood	Cloudy	Smooth	11:28	0.4	M	0.2	2			7.47		0.88		27.39		68.6		5.35		37.6		10	
M1	4/8/2022	Mid-Ebb	Fine	Moderate	18:01	1.1	M	0.55	1	0.082	307	7.44	7.45	2.23	2.24	29.47	29.47	69.1	69.3	4.71	4.74	29.2	29.2	10	11
M1	4/8/2022	Mid-Ebb	Fine	Moderate	18:01	1.1	M	0.55	2			7.46		2.24		29.46		69.4		4.76		29.2		11	
M2	4/8/2022	Mid-Ebb	Fine	Moderate	17:42	1	M	0.5	1	0.046	74	7.34	7.33	1.97	1.97	29.59	29.57	68.7	68.8	4.64	4.65	26.9	26.9	14	14
M2	4/8/2022	Mid-Ebb	Fine	Moderate	17:42	1	M	0.5	2			7.31		1.96		29.54		68.8		4.66		26.9		13	
M3	4/8/2022	Mid-Ebb	Cloudy	Smooth	17:43	0.4	M	0.2	1	0.252	267	7.57	7.57	0.25	0.25	28.16	28.16	74.5	74.3	5.89	5.88	44.8	44.3	16	16
M3	4/8/2022	Mid-Ebb	Cloudy	Smooth	17:43	0.4	M	0.2	2			7.56		0.24		28.15		74.1		5.86		43.9		15	

Remark

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4. Limit 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. Limit 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
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

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

Water Quality Monitoring Results

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	6/8/2022	Mid-Flood	Fine	Moderate	14:04	1.3	M	0.65	1	0.033	266	7.76	7.75	1.82	1.83	27.96	27.95	94.1	94.2	7.37	7.38	26.0	26.0	14	15
M1	6/8/2022	Mid-Flood	Fine	Moderate	14:04	1.3	M	0.65	2			7.74		1.83		27.94		94.2		7.38		26.0		16	
M2	6/8/2022	Mid-Flood	Fine	Moderate	13:45	1.1	M	0.55	1	0.048	18	7.81	7.82	1.79	1.77	27.89	27.87	95.0	95.1	7.45	7.45	24.6	24.6	10	10
M2	6/8/2022	Mid-Flood	Fine	Moderate	13:45	1.1	M	0.55	2			7.82		1.74		27.84		95.1		7.44		24.6		9	
M3	6/8/2022	Mid-Flood	Cloudy	Smooth	13:42	0.4	M	0.2	1	0.191	81	7.52	7.52	1.51	1.52	30.35	30.35	61.7	61.3	4.62	4.59	32.9	33.3	37	36
M3	6/8/2022	Mid-Flood	Cloudy	Smooth	13:42	0.4	M	0.2	2			7.51		1.52		30.34		60.9		4.56		33.7		35	
M1	6/8/2022	Mid-Ebb	Fine	Moderate	7:29	0.9	M	0.45	1	0.062	121	7.41	7.43	2.14	2.15	28.58	28.56	77.7	77.8	6.02	6.03	30.1	30.0	25	26
M1	6/8/2022	Mid-Ebb	Fine	Moderate	7:29	0.9	M	0.45	2			7.44		2.15		28.54		77.9		6.04		30.0		26	
M2	6/8/2022	Mid-Ebb	Fine	Moderate	7:48	0.8	M	0.4	1	0.046	78	7.51	7.52	2.39	2.38	28.07	28.06	81.2	81.3	6.21	6.23	30.2	30.2	18	19
M2	6/8/2022	Mid-Ebb	Fine	Moderate	7:48	0.8	M	0.4	2			7.52		2.37		28.04		81.4		6.24		30.3		19	
M3	6/8/2022	Mid-Ebb	Cloudy	Smooth	7:29	0.6	M	0.3	1	0.224	248	7.36	7.37	0.68	0.69	26.11	26.12	53.3	52.8	3.99	3.96	21.2	20.9	12	13
M3	6/8/2022	Mid-Ebb	Cloudy	Smooth	7:29	0.6	M	0.3	2			7.37		0.70		26.13		52.3		3.92		20.7		13	

Remark

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4. Limit 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. Limit 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
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

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

Water Quality Monitoring Results

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	9/8/2022	Mid-Ebb	Cloudy	Smooth	11:25	2.2	M	1.1	1	0.301	217	7.17	7.18	5.77	5.78	28.19	28.18	55.8	56.1	4.20	4.22	23.6	23.4	33	32
M1	9/8/2022	Mid-Ebb	Cloudy	Smooth	11:25	2.2	M	1.1	2			7.19		5.78		28.17		56.3		4.23		23.3		30	
M2	9/8/2022	Mid-Ebb	Cloudy	Smooth	11:43	1.2	M	0.6	1	0.284	189	7.25	7.26	5.91	5.92	28.95	28.95	59.8	60.1	4.48	4.51	19.9	19.7	22	22
M2	9/8/2022	Mid-Ebb	Cloudy	Smooth	11:43	1.2	M	0.6	2			7.26		5.93		28.94		60.4		4.53		19.5		21	
M3	9/8/2022	Mid-Ebb	Cloudy	Smooth	11:16	0.4	M	0.2	1	0.269	255	7.34	7.34	5.68	5.68	28.66	28.66	74.5	74.7	5.62	5.64	30.2	30.4	15	15
M3	9/8/2022	Mid-Ebb	Cloudy	Smooth	11:16	0.4	M	0.2	2			7.33		5.68		28.65		74.9		5.65		30.7		14	

Remark

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4. Limit 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. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.
7. Typhoon Signal No. 3 was hoisted on 9/8/2022. Due to safety concerns, the water quality monitoring on 9/8/2022 (Mid Flood (19:02)) has been cancelled.

For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
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

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

Water Quality Monitoring Results

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	11/8/2022	Mid-Flood	Cloudy	Smooth	20:56	2	M	1	1	0.327	239	7.47	7.48	2.08	2.09	26.04	26.05	68.1	67.9	5.39	5.37	33.6	33.1	21	20
M1	11/8/2022	Mid-Flood	Cloudy	Smooth	20:56	2	M	1	2			7.48		2.10		26.05		67.7		5.35		32.7		18	
M2	11/8/2022	Mid-Flood	Cloudy	Smooth	20:36	1	M	0.5	1	0.306	301	7.40	7.41	1.75	1.75	25.21	25.21	71.5	71.3	5.61	5.60	30.8	30.6	10	10
M2	11/8/2022	Mid-Flood	Cloudy	Smooth	20:36	1	M	0.5	2			7.41		1.74		25.21		71.1		5.58		30.4		10	
M3	11/8/2022	Mid-Flood	Cloudy	Smooth	20:37	0.4	M	0.2	1	0.282	95	7.33	7.33	1.87	1.88	25.78	25.78	61.6	61.3	4.82	4.80	41.4	41.6	21	21
M3	11/8/2022	Mid-Flood	Cloudy	Smooth	20:37	0.4	M	0.2	2			7.32		1.89		25.77		60.9		4.77		41.7		20	
M1	11/8/2022	Mid-Ebb	Cloudy	Smooth	13:11	2.2	M	1.1	1	0.404	206	7.28	7.28	0.91	0.92	27.67	27.67	59.3	59.1	4.63	4.61	24.4	24.7	10	11
M1	11/8/2022	Mid-Ebb	Cloudy	Smooth	13:11	2.2	M	1.1	2			7.27		0.92		27.66		58.8		4.59		25.1		11	
M2	11/8/2022	Mid-Ebb	Cloudy	Smooth	13:26	1.2	M	0.6	1	0.419	226	7.31	7.30	1.16	1.16	27.32	27.32	51.7	51.3	4.09	4.06	23.6	22.9	15	15
M2	11/8/2022	Mid-Ebb	Cloudy	Smooth	13:26	1.2	M	0.6	2			7.29		1.15		27.31		50.9		4.03		22.3		15	
M3	11/8/2022	Mid-Ebb	Cloudy	Smooth	13:18	0.6	M	0.3	1	0.311	264	7.14	7.15	0.97	0.98	26.94	26.95	56.5	56.9	4.41	4.44	37.2	36.8	28	28
M3	11/8/2022	Mid-Ebb	Cloudy	Smooth	13:18	0.6	M	0.3	2			7.15		0.99		26.95		57.3		4.47		36.4		28	

Remark

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For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
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

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

Water Quality Monitoring Results

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	13/8/2022	Mid-Flood	Fine	Moderate	22:19	1.3	M	0.65	1	0.052	83	7.61	7.62	3.91	3.92	27.43	27.42	63.8	63.8	4.56	4.56	29.4	29.4	27	28
M1	13/8/2022	Mid-Flood	Fine	Moderate	22:19	1.3	M	0.65	2			7.62		3.92		27.41		63.7		4.55		29.4		28	
M2	13/8/2022	Mid-Flood	Fine	Moderate	21:58	1	M	0.5	1	0.067	72	7.42	7.43	3.86	3.87	27.82	27.86	58.7	58.5	4.28	4.29	29.1	29.1	21	22
M2	13/8/2022	Mid-Flood	Fine	Moderate	21:58	1	M	0.5	2			7.44		3.88		27.89		58.3		4.29		29.1		23	
M3	13/8/2022	Mid-Flood	Fine	Calm	21:51	0.6	M	0.3	1	0.297	78	7.59	7.60	1.47	1.47	27.13	27.14	58.7	58.5	4.57	4.55	27.6	28.0	21	22
M3	13/8/2022	Mid-Flood	Fine	Calm	21:51	0.6	M	0.3	2			7.61		1.46		27.14		58.2		4.53		28.3		23	
M1	13/8/2022	Mid-Ebb	Fine	Moderate	14:54	1.1	M	0.55	1	0.063	123	7.43	7.44	2.43	2.46	27.46	27.48	68.2	68.5	5.62	5.66	27.5	27.5	31	31
M1	13/8/2022	Mid-Ebb	Fine	Moderate	14:54	1.1	M	0.55	2			7.44		2.48		27.49		68.7		5.69		27.5		30	
M2	13/8/2022	Mid-Ebb	Fine	Moderate	15:11	0.9	M	0.45	1	0.053	91	7.49	7.49	2.61	2.62	27.03	27.04	71.3	71.4	6.08	6.08	26.1	26.1	29	28
M2	13/8/2022	Mid-Ebb	Fine	Moderate	15:11	0.9	M	0.45	2			7.48		2.63		27.05		71.4		6.07		26.1		27	
M3	13/8/2022	Mid-Ebb	Fine	Calm	14:48	0.8	M	0.4	1	0.426	281	7.44	7.43	0.72	0.72	30.06	30.07	66.4	66.1	5.19	5.17	38.8	38.6	24	24
M3	13/8/2022	Mid-Ebb	Fine	Calm	14:48	0.8	M	0.4	2			7.42		0.72		30.08		65.7		5.14		38.3		24	

Remark

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For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
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

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

Water Quality Monitoring Results

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	16/8/2022	Mid-Flood	Cloudy	Calm	10:23	2.2	M	1.1	1	0.318	287	7.73	7.72	7.02	7.02	30.14	30.15	54.4	54.3	4.27	4.26	28.1	28.8	25	24
M1	16/8/2022	Mid-Flood	Cloudy	Calm	10:23	2.2	M	1.1	2			7.71		7.01		30.15		54.1		4.25		29.5		23	
M2	16/8/2022	Mid-Flood	Cloudy	Calm	10:42	1.2	M	0.6	1	0.286	320	7.79	7.80	6.55	6.55	30.71	30.72	52.2	52.6	4.11	4.14	27.0	26.6	19	19
M2	16/8/2022	Mid-Flood	Cloudy	Calm	10:42	1.2	M	0.6	2			7.80		6.55		30.73		52.9		4.17		26.2		19	
M3	16/8/2022	Mid-Flood	Cloudy	Calm	10:14	0.6	M	0.3	1	0.245	92	7.61	7.61	5.85	5.86	29.67	29.68	49.5	49.3	3.98	3.97	32.4	32.1	39	40
M3	16/8/2022	Mid-Flood	Cloudy	Calm	10:14	0.6	M	0.3	2			7.60		5.86		29.69		49.1		3.95		31.9		40	
M1	16/8/2022	Mid-Ebb	Cloudy	Calm	17:06	2	M	1	1	0.345	248	7.41	7.41	4.84	4.83	31.79	31.80	73.9	74.3	5.78	5.81	27.6	27.4	16	16
M1	16/8/2022	Mid-Ebb	Cloudy	Calm	17:06	2	M	1	2			7.41		4.82		31.81		74.6		5.83		27.2		16	
M2	16/8/2022	Mid-Ebb	Cloudy	Calm	16:47	1.2	M	0.6	1	0.296	232	7.59	7.58	4.35	4.36	32.31	32.30	66.3	66.6	5.27	5.29	23.8	23.6	10	11
M2	16/8/2022	Mid-Ebb	Cloudy	Calm	16:47	1.2	M	0.6	2			7.57		4.36		32.29		66.8		5.31		23.3		11	
M3	16/8/2022	Mid-Ebb	Cloudy	Calm	16:38	0.6	M	0.3	1	0.259	260	7.46	7.47	4.09	4.10	32.71	32.72	64.7	64.4	5.12	5.10	30.0	29.4	23	25
M3	16/8/2022	Mid-Ebb	Cloudy	Calm	16:38	0.6	M	0.3	2			7.47		4.10		32.73		64.1		5.08		28.9		26	

Remark

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For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
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

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

Water Quality Monitoring Results

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	18/8/2022	Mid-Flood	Cloudy	Calm	11:50	2	M	1	1	0.299	279	7.21	7.22	1.09	1.10	29.64	29.65	48.8	48.5	3.78	3.76	29.1	29.3	17	19
M1	18/8/2022	Mid-Flood	Cloudy	Calm	11:50	2	M	1	2			7.23		1.11		29.65		48.1		3.73		29.6		21	
M2	18/8/2022	Mid-Flood	Cloudy	Calm	12:09	1.2	M	0.6	1	0.267	293	7.18	7.18	0.82	0.83	30.11	30.11	52.9	53.1	4.10	4.12	27.2	27.5	20	22
M2	18/8/2022	Mid-Flood	Cloudy	Calm	12:09	1.2	M	0.6	2			7.17		0.83		30.10		53.3		4.13		27.9		23	
M3	18/8/2022	Mid-Flood	Fine	Moderate	11:55	1.2	M	0.6	1	0.056	265	7.14	7.13	2.17	2.18	28.81	28.81	42.6	42.7	3.61	3.63	26.6	26.6	23	24
M3	18/8/2022	Mid-Flood	Fine	Moderate	11:55	1.2	M	0.6	2			7.11		2.18		28.81		42.8		3.64		26.6		24	
M1	18/8/2022	Mid-Ebb	Cloudy	Calm	17:55	2	M	1	1	0.286	241	7.37	7.37	0.59	0.60	30.79	30.79	71.0	70.6	5.44	5.41	31.7	31.5	19	21
M1	18/8/2022	Mid-Ebb	Cloudy	Calm	17:55	2	M	1	2			7.36		0.61		30.78		70.2		5.38		31.3		22	
M2	18/8/2022	Mid-Ebb	Cloudy	Calm	17:40	1.2	M	0.6	1	0.252	216	7.40	7.41	0.48	0.47	31.41	31.41	65.2	64.9	5.06	5.04	25.8	26.3	25	26
M2	18/8/2022	Mid-Ebb	Cloudy	Calm	17:40	1.2	M	0.6	2			7.41		0.46		31.41		64.5		5.01		26.8		26	
M3	18/8/2022	Mid-Ebb	Fine	Moderate	17:38	1	M	0.5	1	0.048	144	7.23	7.24	2.64	2.65	29.24	29.23	53.1	53.1	4.06	4.05	32.5	32.5	26	27
M3	18/8/2022	Mid-Ebb	Fine	Moderate	17:38	1	M	0.5	2			7.25		2.66		29.21		53.0		4.04		32.5		27	

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For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
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

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

Water Quality Monitoring Results

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	20/8/2022	Mid-Flood	Fine	Moderate	15:17	1.3	M	0.65	1	0.082	265	7.44	7.46	2.54	2.55	29.26	29.26	57.1	57.2	5.24	5.25	24.9	24.9	16	16
M1	20/8/2022	Mid-Flood	Fine	Moderate	15:17	1.3	M	0.65	2			7.47		2.55		29.25		57.3		5.26		24.9		16	
M2	20/8/2022	Mid-Flood	Fine	Moderate	14:59	1	M	0.5	1	0.074	91	7.41	7.42	2.34	2.34	29.62	29.63	58.6	58.5	5.32	5.31	23.9	23.9	16	16
M2	20/8/2022	Mid-Flood	Fine	Moderate	14:59	1	M	0.5	2			7.43		2.33		29.63		58.4		5.30		23.9		16	
M3	20/8/2022	Mid-Flood	Cloudy	Calm	15:01	0.2	M	0.1	1	0.205	74	7.53	7.54	1.26	1.25	30.19	30.19	55.6	56.0	4.17	4.20	29.7	29.5	22	22
M3	20/8/2022	Mid-Flood	Cloudy	Calm	15:01	0.2	M	0.1	2			7.55		1.24		30.18		56.3		4.22		29.2		21	
M1	20/8/2022	Mid-Ebb	Fine	Moderate	7:36	1.1	M	0.55	1	0.064	136	7.03	7.03	1.60	1.62	29.66	29.65	49.8	50.5	4.82	4.86	18.8	18.8	33	31
M1	20/8/2022	Mid-Ebb	Fine	Moderate	7:36	1.1	M	0.55	2			7.02		1.64		29.64		51.1		4.89		18.8		28	
M2	20/8/2022	Mid-Ebb	Fine	Moderate	7:52	0.9	M	0.45	1	0.048	86	7.09	7.09	1.87	1.88	29.24	29.25	53.4	53.6	5.01	5.03	19.2	19.2	22	23
M2	20/8/2022	Mid-Ebb	Fine	Moderate	7:52	0.9	M	0.45	2			7.08		1.88		29.25		53.7		5.04		19.2		24	
M3	20/8/2022	Mid-Ebb	Cloudy	Calm	7:38	0.4	M	0.2	1	0.241	251	7.38	7.38	0.42	0.42	27.82	27.83	51.8	52.2	3.88	3.91	23.0	22.7	18	18
M3	20/8/2022	Mid-Ebb	Cloudy	Calm	7:38	0.4	M	0.2	2			7.37		0.41		27.84		52.5		3.94		22.5		18	

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For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
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

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

Water Quality Monitoring Results

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	23/8/2022	Mid-Flood	Cloudy	Calm	19:22	2	M	1	1	0.35	251	7.52	7.53	2.88	2.88	34.19	34.20	48.9	48.7	3.46	3.44	20.2	20.4	23	22
M1	23/8/2022	Mid-Flood	Cloudy	Calm	19:22	2	M	1	2			7.54		2.88		34.21		48.4		3.42		20.6		21	
M2	23/8/2022	Mid-Flood	Cloudy	Calm	19:03	1	M	0.5	1	0.303	337	7.41	7.42	2.53	2.52	34.49	34.48	43.5	43.1	3.13	3.10	24.5	24.7	96	94
M2	23/8/2022	Mid-Flood	Cloudy	Calm	19:03	1	M	0.5	2			7.43		2.51		34.47		42.7		3.07		24.9		92	
M3	23/8/2022	Mid-Flood	Fine	Moderate	19:02	1.2	M	0.6	1	0.056	92	7.14	7.15	1.92	1.93	32.03	32.04	50.7	50.8	5.13	5.15	17.7	17.8	21	23
M3	23/8/2022	Mid-Flood	Fine	Moderate	19:02	1.2	M	0.6	2			7.15		1.94		32.04		50.9		5.16		17.8		25	
M1	23/8/2022	Mid-Ebb	Cloudy	Calm	11:27	2.2	M	1.1	1	0.392	227	7.16	7.17	2.31	2.32	32.41	32.42	62.6	62.2	4.51	4.49	14.8	15.2	18	18
M1	23/8/2022	Mid-Ebb	Cloudy	Calm	11:27	2.2	M	1.1	2			7.18		2.32		32.42		61.8		4.46		15.5		17	
M2	23/8/2022	Mid-Ebb	Cloudy	Calm	11:47	1.2	M	0.6	1	0.335	205	7.29	7.29	1.89	1.89	32.89	32.90	56.7	56.5	4.14	4.13	22.4	22.6	30	31
M2	23/8/2022	Mid-Ebb	Cloudy	Calm	11:47	1.2	M	0.6	2			7.29		1.88		32.91		56.2		4.11		22.7		31	
M3	23/8/2022	Mid-Ebb	Fine	Moderate	11:19	0.9	M	0.45	1	0.066	188	7.03	7.04	1.79	1.79	32.50	32.49	48.4	48.3	4.76	4.75	22.0	22.0	24	23
M3	23/8/2022	Mid-Ebb	Fine	Moderate	11:19	0.9	M	0.45	2			7.04		1.78		32.47		48.1		4.74		22.0		22	

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. Limit 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. Limit 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
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

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

Water Quality Monitoring Results

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	27/8/2022	Mid-Flood	Fine	Moderate	21:19	1.1	M	0.55	1	0.067	91	7.41	7.42	1.92	1.93	28.64	28.65	45.9	45.9	3.87	3.87	28.2	28.2	19	18
M1	27/8/2022	Mid-Flood	Fine	Moderate	21:19	1.1	M	0.55	2			7.42		1.93		28.66		45.8		3.86		28.2		17	
M2	27/8/2022	Mid-Flood	Fine	Moderate	20:58	0.9	M	0.45	1	0.083	76	7.35	7.36	1.79	1.79	28.94	28.97	44.2	44.0	3.83	3.80	27.5	27.6	18	17
M2	27/8/2022	Mid-Flood	Fine	Moderate	20:58	0.9	M	0.45	2			7.36		1.78		28.99		43.7		3.76		27.7		16	
M3	27/8/2022	Mid-Flood	Fine	Calm	20:48	0.4	M	0.2	1	0.296	82	7.30	7.31	2.29	2.30	30.94	30.95	50.6	50.5	3.74	3.73	20.4	20.1	9	10
M3	27/8/2022	Mid-Flood	Fine	Calm	20:48	0.4	M	0.2	2			7.31		2.31		30.95		50.3		3.71		19.9		10	
M1	27/8/2022	Mid-Ebb	Fine	Moderate	14:02	1.2	M	0.6	1	0.065	197	7.30	7.31	5.11	5.12	30.37	30.38	53.9	54.0	3.94	3.95	17.9	17.9	17	18
M1	27/8/2022	Mid-Ebb	Fine	Moderate	14:02	1.2	M	0.6	2			7.31		5.12		30.39		54.1		3.96		17.9		18	
M2	27/8/2022	Mid-Ebb	Fine	Moderate	14:16	1	M	0.5	1	0.084	99	7.36	7.35	5.37	5.37	31.49	31.49	55.8	55.8	4.26	4.28	18.3	18.3	21	21
M2	27/8/2022	Mid-Ebb	Fine	Moderate	14:16	1	M	0.5	2			7.34		5.36		31.48		55.7		4.29		18.3		21	
M3	27/8/2022	Mid-Ebb	Fine	Calm	14:04	0.8	M	0.4	1	0.356	261	7.12	7.13	1.51	1.50	33.86	33.87	55.2	55.5	4.03	4.06	22.9	23.4	18	18
M3	27/8/2022	Mid-Ebb	Fine	Calm	14:04	0.8	M	0.4	2			7.13		1.49		33.88		55.8		4.08		23.8		18	

Remark

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For Flood Tide

Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
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

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

Water Quality Monitoring Results

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	30/8/2022	Mid-Flood	Cloudy	Smooth	9:09	2.4	M	1.2	1	0.394	221	7.67	7.67	3.71	3.72	29.62	29.63	42.3	42.7	3.12	3.15	32.2	31.9	37	37
M1	30/8/2022	Mid-Flood	Cloudy	Smooth	9:09	2.4	M	1.2	2			7.66		3.73		29.63		43.1		3.18		31.6		37	
M2	30/8/2022	Mid-Flood	Cloudy	Smooth	9:28	1.2	M	0.6	1	0.369	311	7.60	7.60	3.48	3.48	30.49	30.50	46.8	47.1	3.46	3.48	30.2	30.3	59	57
M2	30/8/2022	Mid-Flood	Cloudy	Smooth	9:28	1.2	M	0.6	2			7.59		3.47		30.50		47.4		3.50		30.4		55	
M3	30/8/2022	Mid-Flood	Cloudy	Smooth	9:14	0.8	M	0.4	1	0.353	93	7.55	7.54	3.24	3.25	30.01	30.02	50.4	50.1	3.71	3.69	34.5	34.0	45	47
M3	30/8/2022	Mid-Flood	Cloudy	Smooth	9:14	0.8	M	0.4	2			7.53		3.26		30.02		49.7		3.67		33.5		49	
M1	30/8/2022	Mid-Ebb	Cloudy	Smooth	15:55	2.2	M	1.1	1	0.415	268	7.88	7.88	2.62	2.63	33.78	33.79	60.3	60.6	4.31	4.33	29.5	29.0	33	36
M1	30/8/2022	Mid-Ebb	Cloudy	Smooth	15:55	2.2	M	1.1	2			7.88		2.63		33.79		60.9		4.35		28.5		38	
M2	30/8/2022	Mid-Ebb	Cloudy	Smooth	15:36	1.2	M	0.6	1	0.386	246	7.82	7.81	2.87	2.88	33.45	33.45	57.7	57.5	4.13	4.11	26.7	26.9	29	30
M2	30/8/2022	Mid-Ebb	Cloudy	Smooth	15:36	1.2	M	0.6	2			7.80		2.89		33.44		57.2		4.09		27.0		30	
M3	30/8/2022	Mid-Ebb	Cloudy	Smooth	15:41	0.6	M	0.3	1	0.379	272	7.71	7.71	2.45	2.45	33.26	33.26	53.1	53.5	3.85	3.88	40.3	40.1	47	50
M3	30/8/2022	Mid-Ebb	Cloudy	Smooth	15:41	0.6	M	0.3	2			7.71		2.44		33.25		53.9		3.91		39.9		53	

Remark

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For Flood Tide

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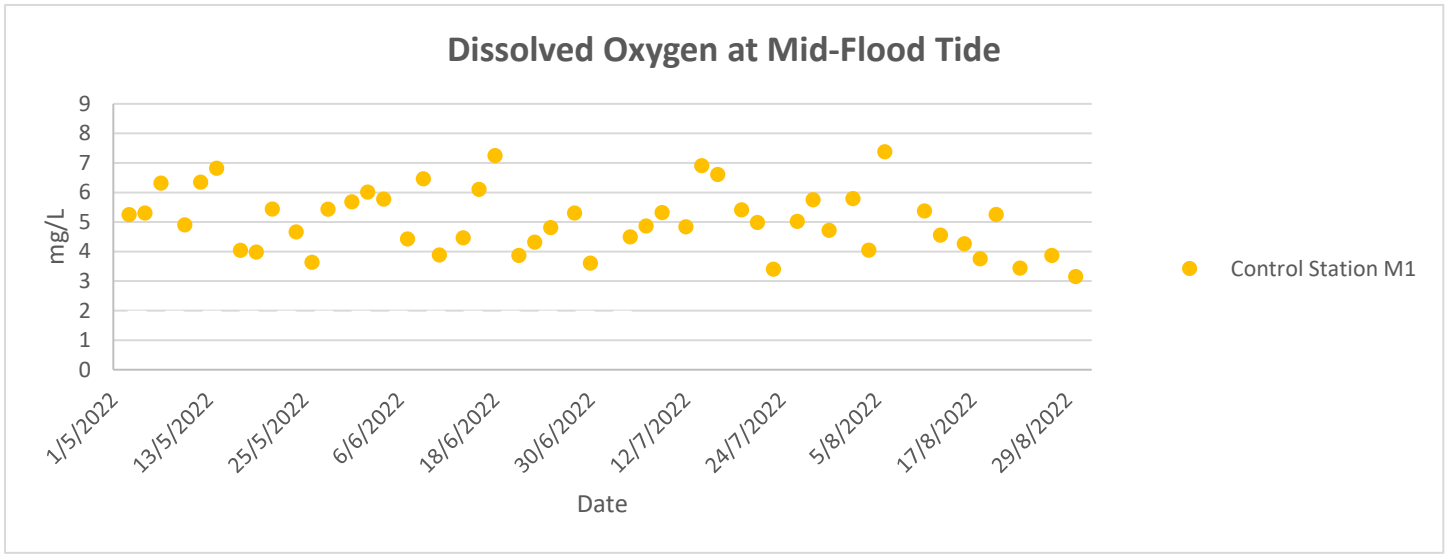
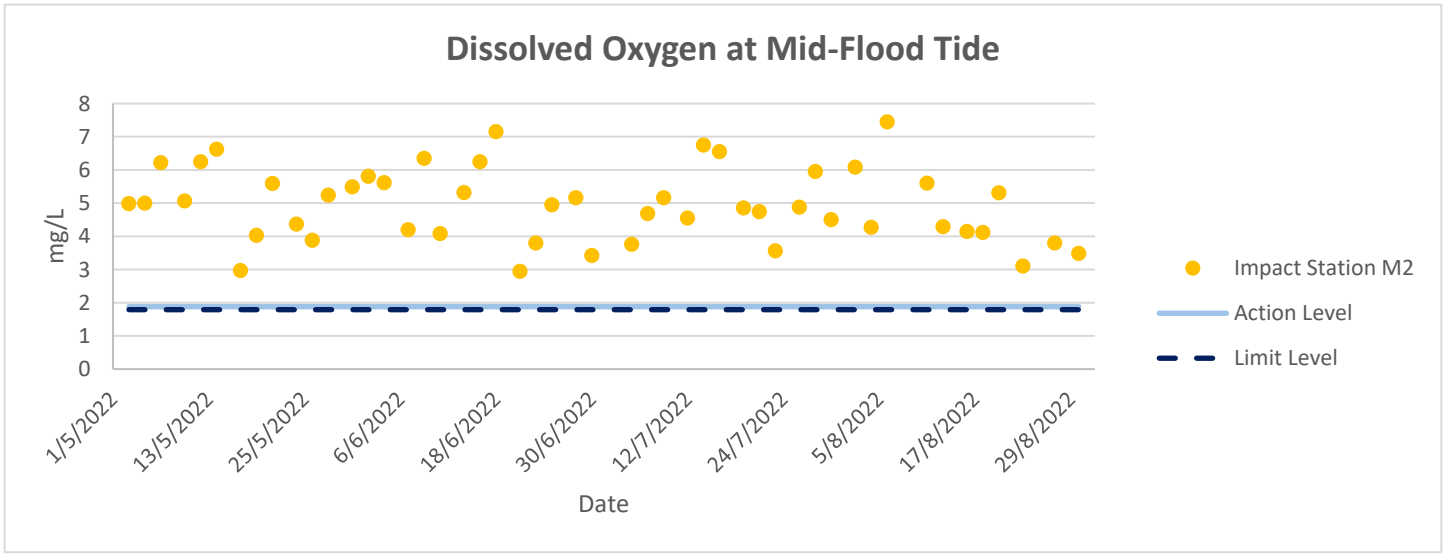
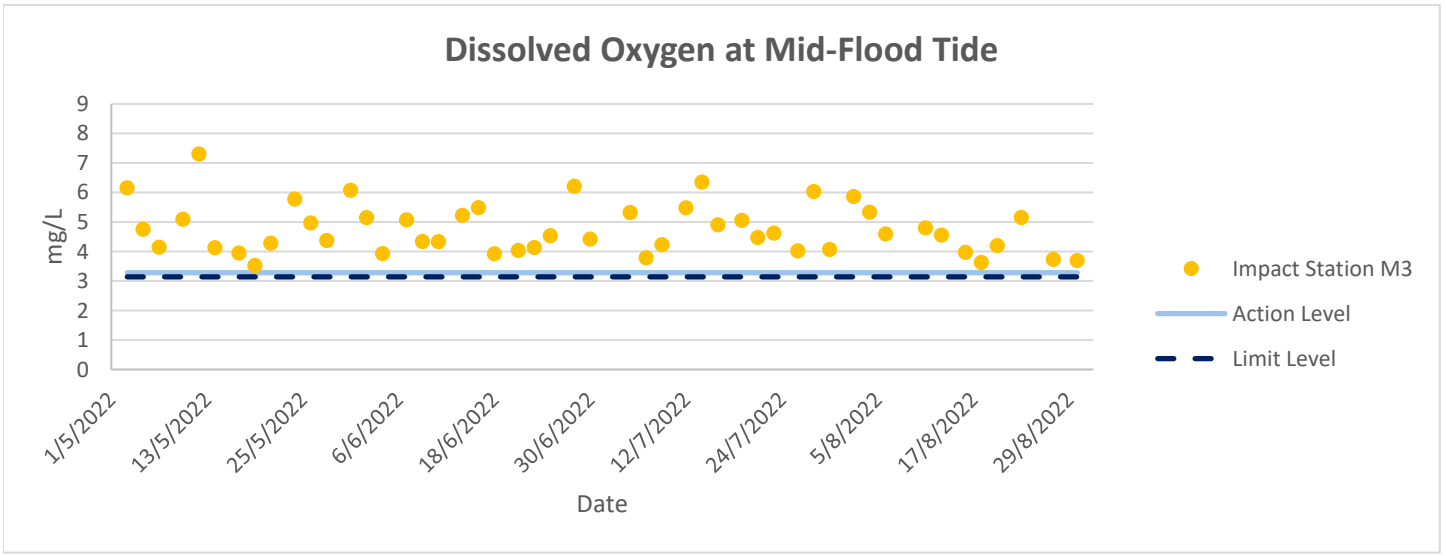
M3(Impact Station)	3.28	3.14	74.3	78.0	104	167

For Ebb Tide

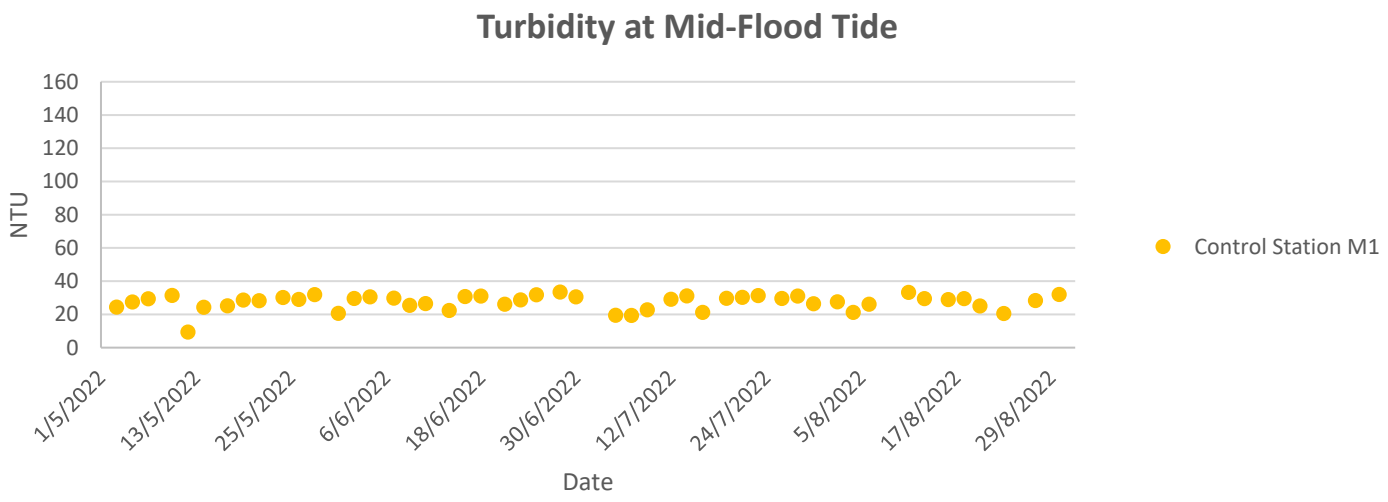
Monitoring Location	DO		NTU		SS	
	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68

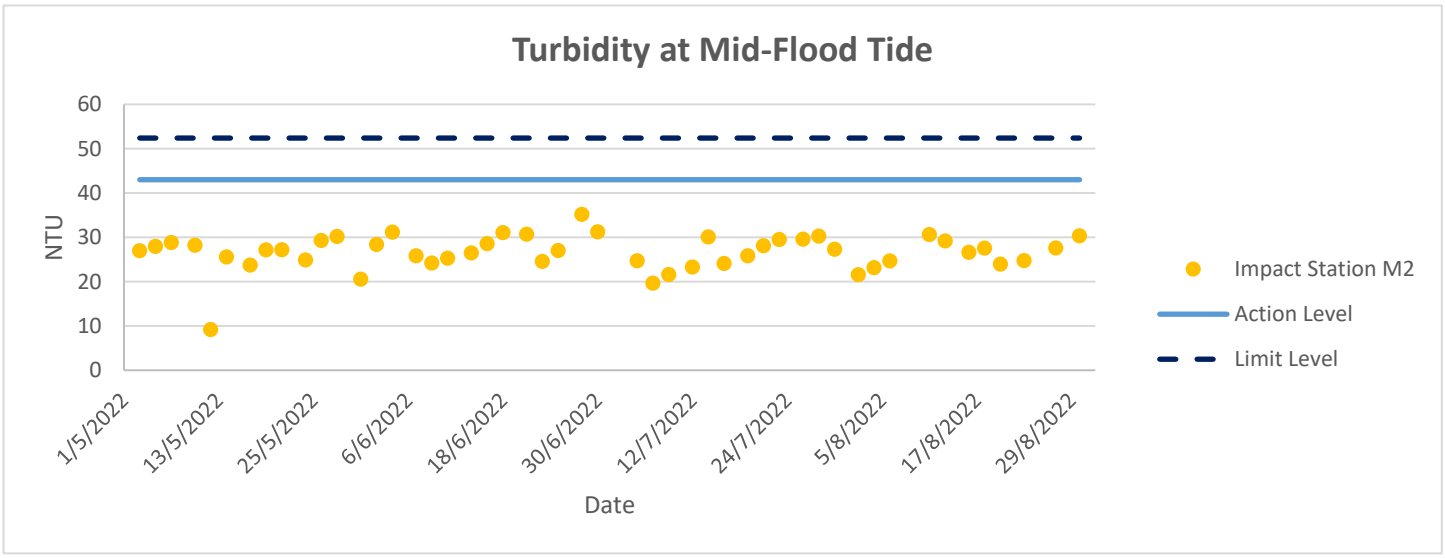


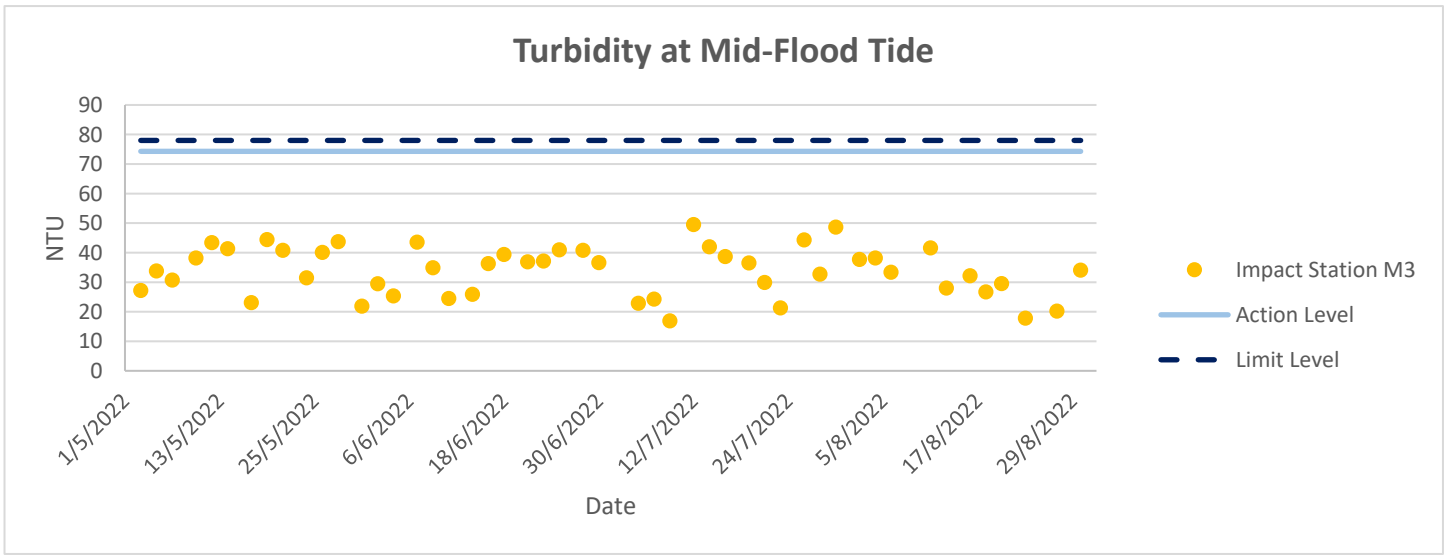




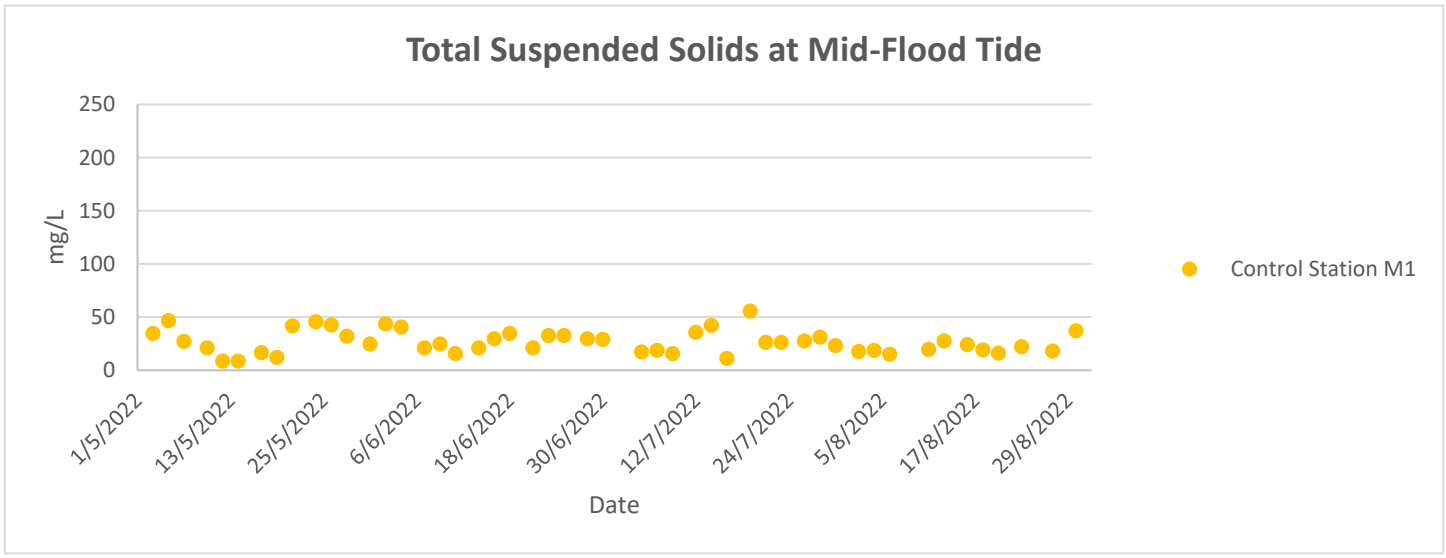
Water Quality Monitoring Results

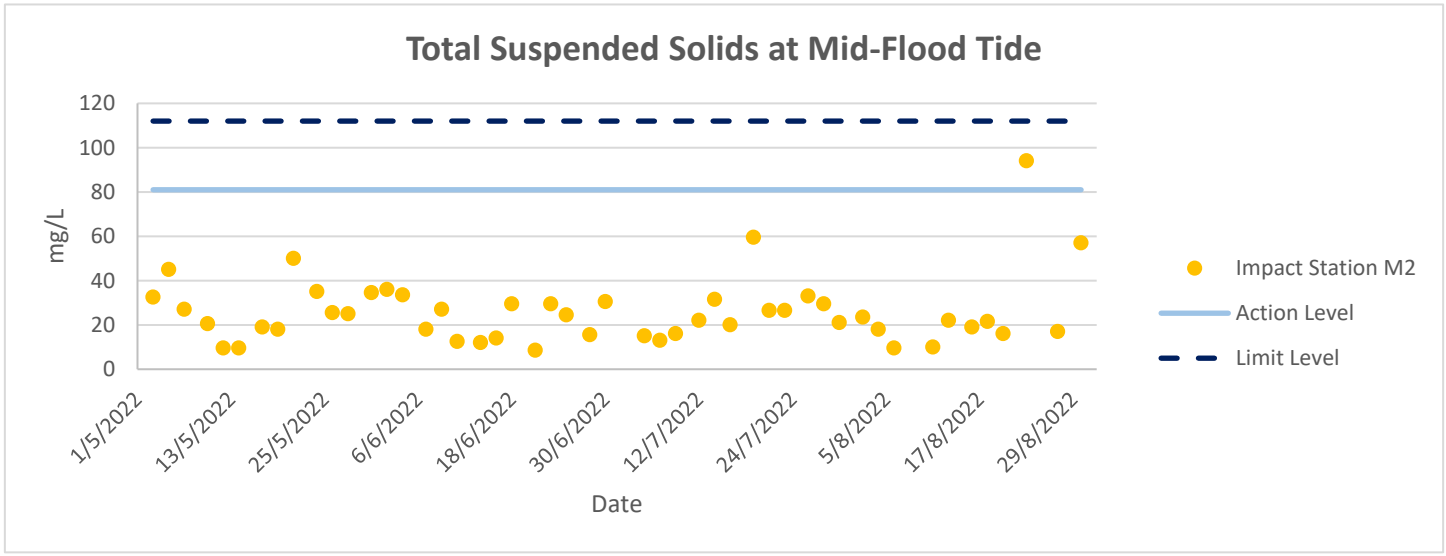


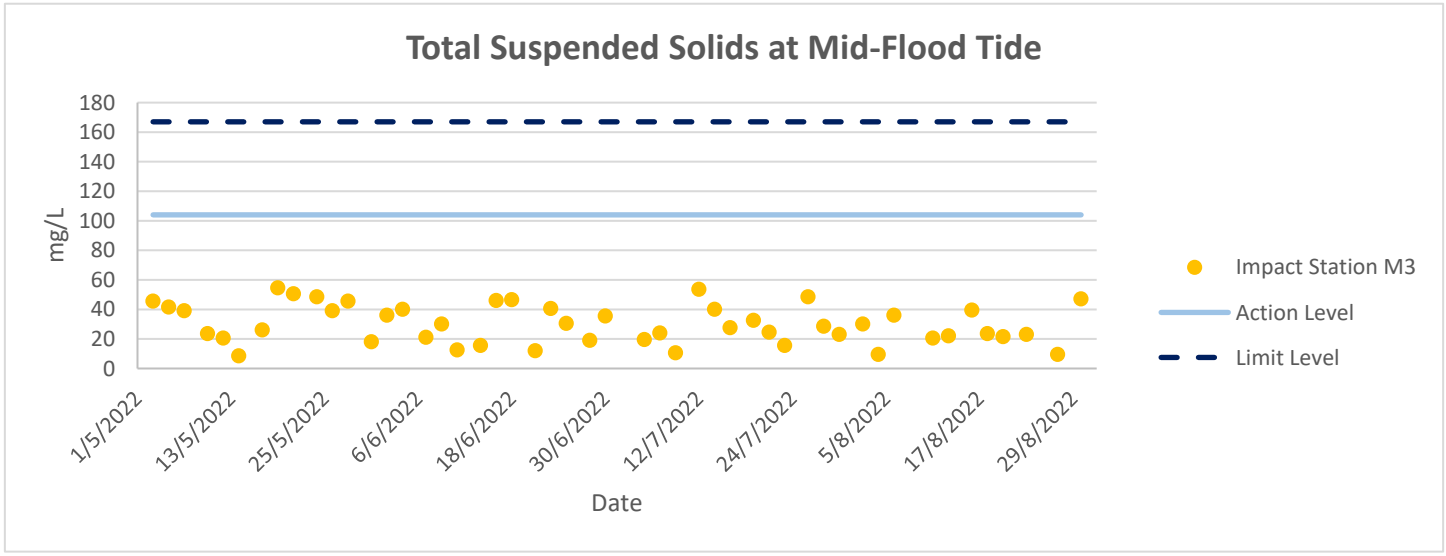




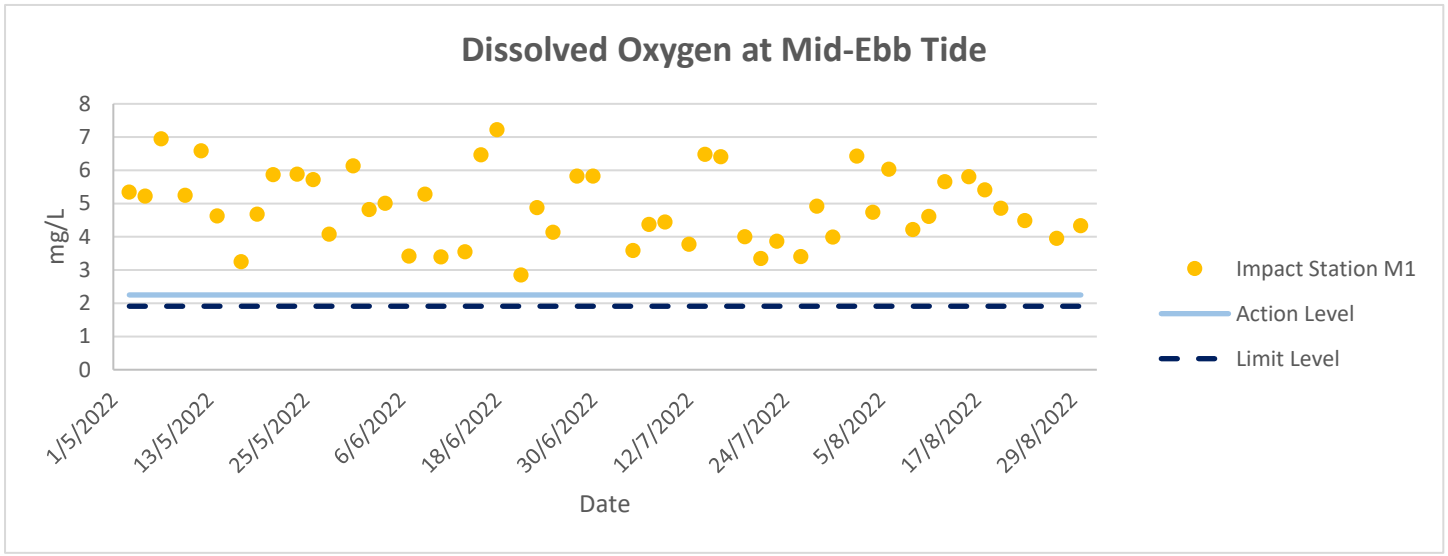
Water Quality Monitoring Results

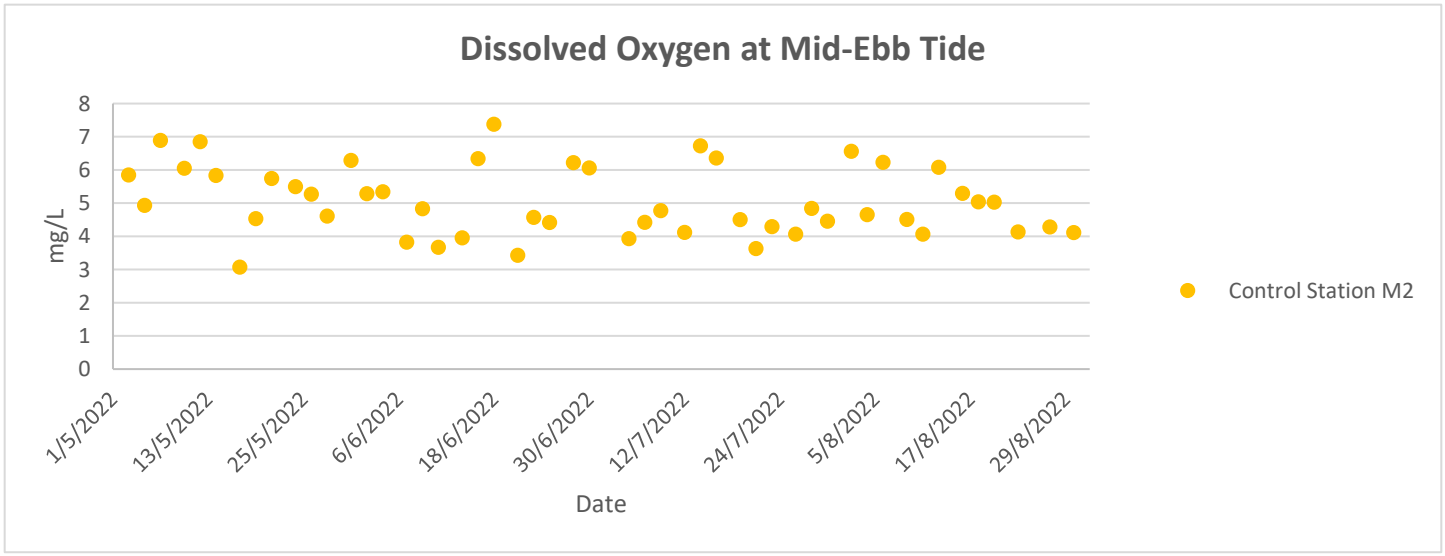


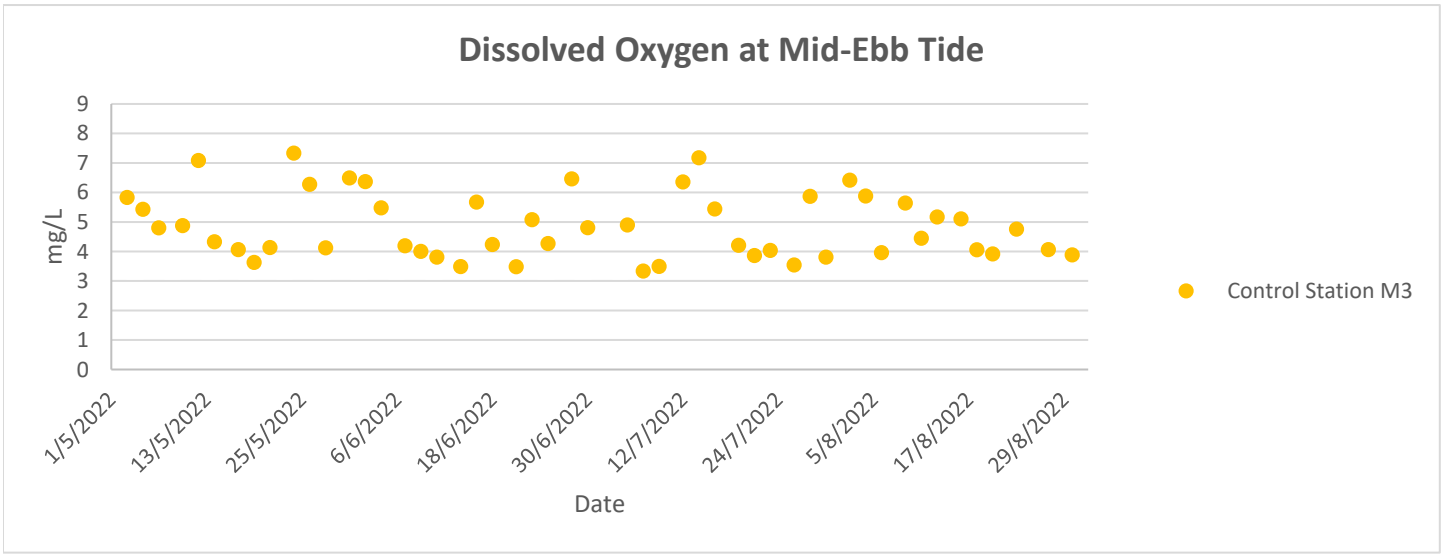




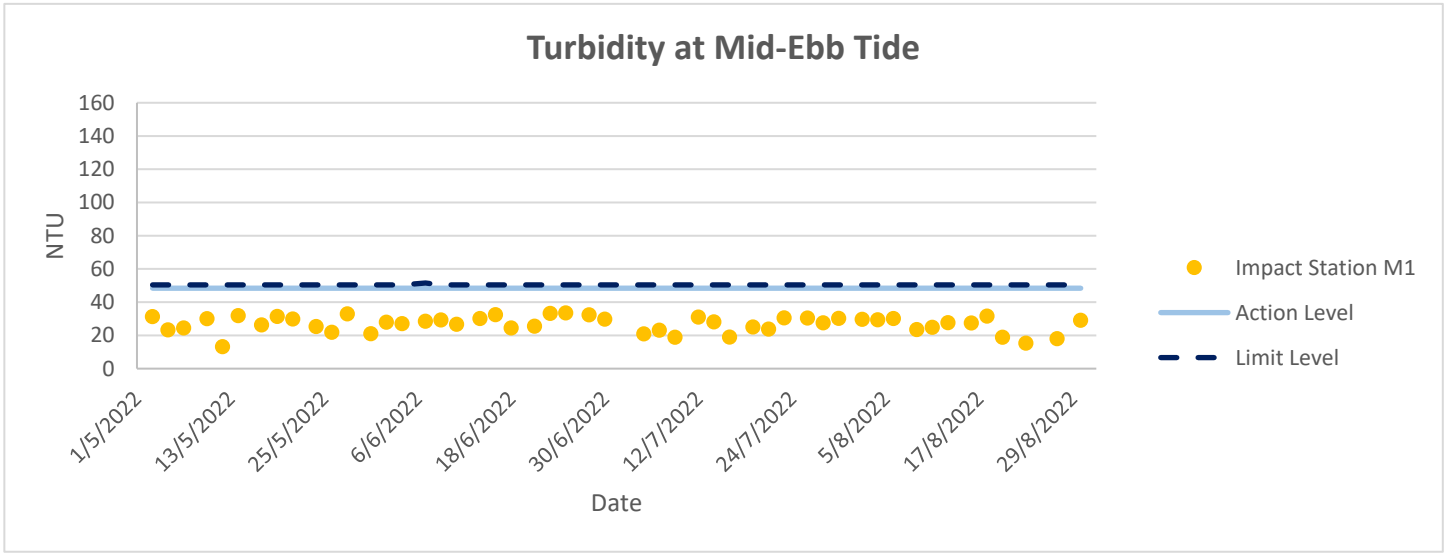
Water Quality Monitoring Results

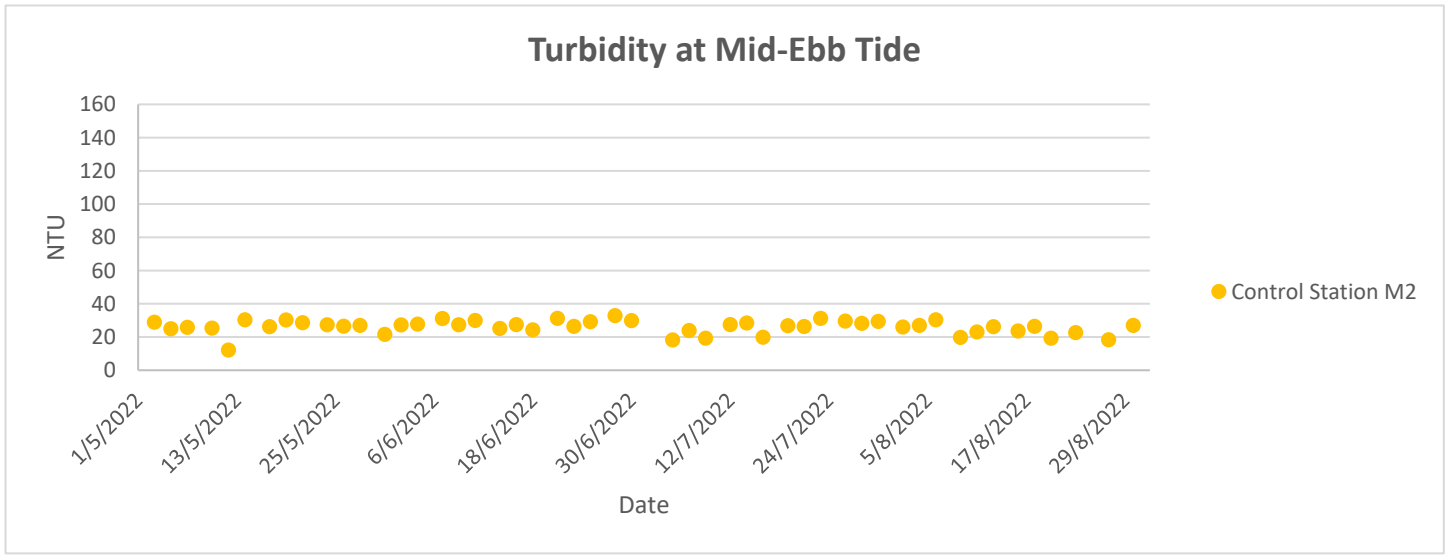


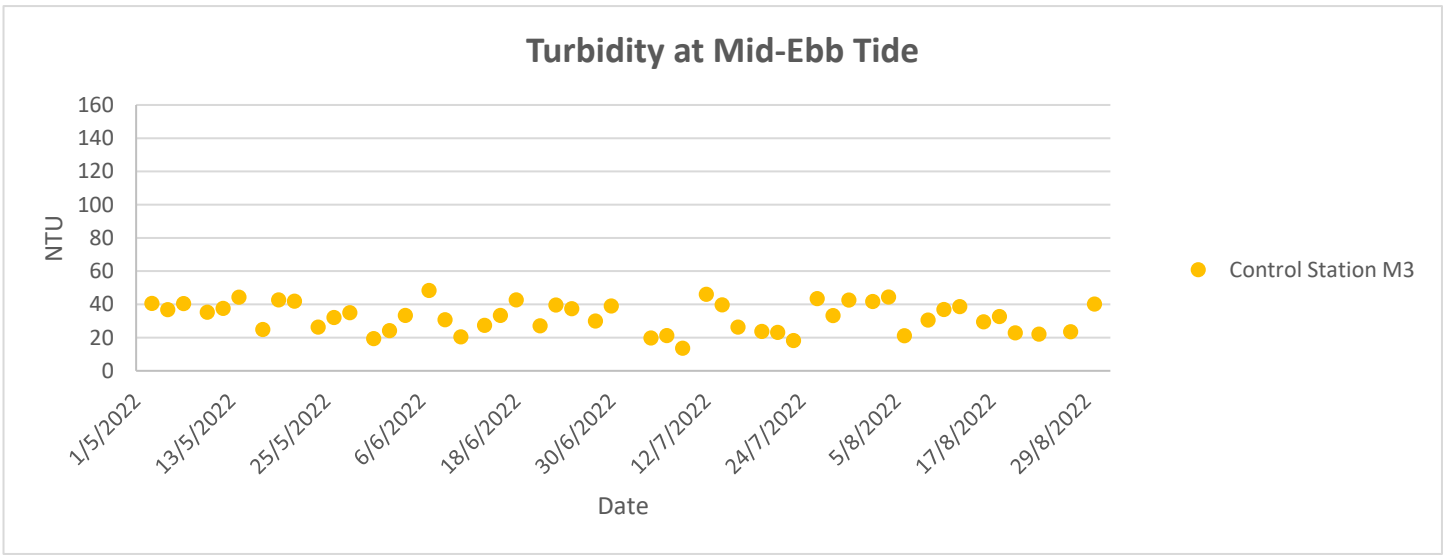




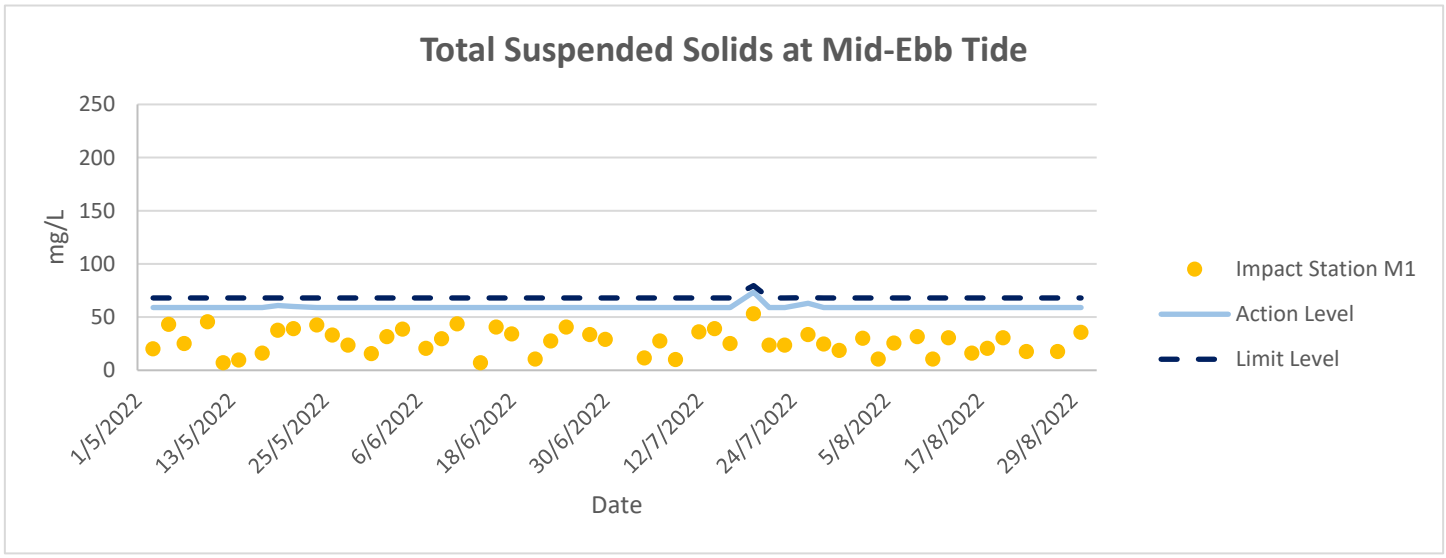
Water Quality Monitoring Results

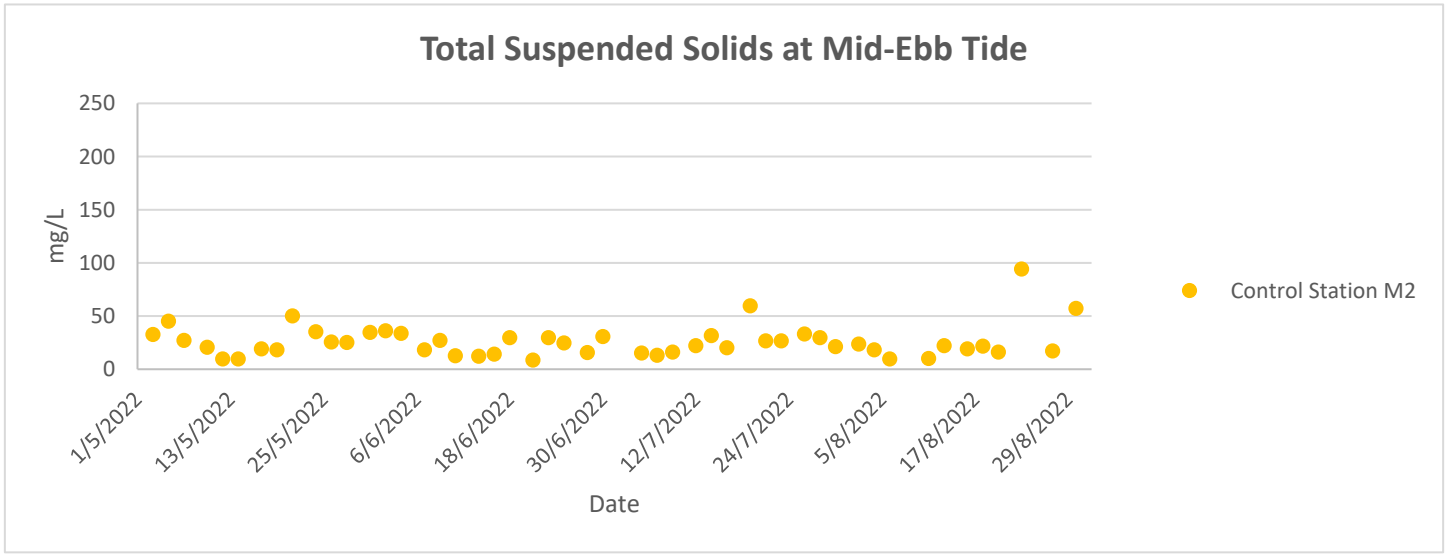


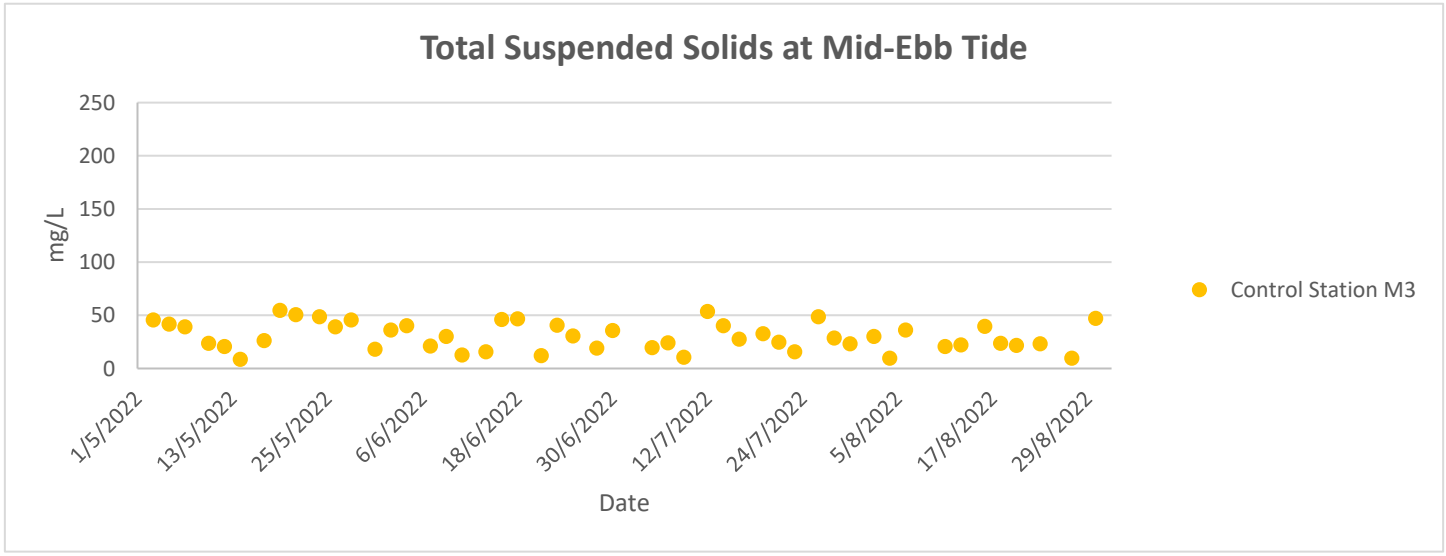




Water Quality Monitoring Results







Water Quality Monitoring Results

Ecology Monitoring Results

Ecology Monitoring Results for
Contract No. SPW 07/2020
Environmental Team for Construction of Yuen long Effluent Polishing Plant Stage 1

Appendix F.1 Ecological Bird Monitoring Result (15 August 2022)

Date (dd/mm/yyyy)	Daytime/Night time	Season	Area	Transect/Point Count	Point Count (Location)/ Transect Impact	Habitat	Common Name	Scientific Name	Abundance	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
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	In Flight	Black Kite	*Milvus migrans*	1	Common	R,WV	(RC)	Class II	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	In Flight	Barn Swallow	*Hirundo rustica*	4	Abundant	PM,SV	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Plantation-FLW	Asian Koel	*Eudynamys scolopaceus*	1	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Plantation-FLW	Azure-winged Magpie	*Cyanopica cyanus*	4	Introduced	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Plantation-FLW	Common Tailorbird	*Orthotomus sutorius*	2	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Greater Coucal	*Centropus sinensis*	1	Common	R	-	Class II	Vulnerable	LC	LC	Y	N
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Little Egret	*Egretta garzetta*	4	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Scaly-breasted Munia	*Lonchura punctulata*	2	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Spotted Dove	*Spilopelia chinensis*	3	Abundant	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	White Wagtail	*Motacilla alba*	2	Common	PM,WV	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Black-collared Starling	*Gracupica nigricollis*	3	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Chinese Pond Heron	*Ardeola bacchus*	4	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Crested Myna	*Acridotheres cristatellus*	2	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Great Egret	*Ardea alba*	3	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Grey Heron	*Ardea cinerea*	1	Common	WV	PRC	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Large-billed Crow	*Corvus macrorhynchos*	2	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Masked Laughingthrush	*Garrulax perspicillatus*	5	Abundant	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	Oriental Magpie Robin	*Copsychus saularis*	1	Abundant	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Transect	FLW	Pond-FLW	White-throated Kingfisher	*Halcyon smyrnensis*	1	Common	R	-	-	-	LC	LC	N	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW1	Pond-FLW	Azure-winged Magpie	*Cyanopica cyanus*	3	Introduced	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW1	Pond-FLW	Chinese Pond Heron	*Ardeola bacchus*	2	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW1	Pond-FLW	Crested Myna	*Acridotheres cristatellus*	3	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW1	Pond-FLW	Great Egret	*Ardea alba*	2	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW1	Pond-FLW	Little Egret	*Egretta garzetta*	4	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW1	Pond-FLW	Plain Prinia	*Prinia inornata*	2	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW1	Pond-FLW	Spotted Dove	*Spilopelia chinensis*	1	Abundant	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW1	Pond-FLW	White Wagtail	*Motacilla alba*	1	Common	PM,WV	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW2	Pond-FLW	Black-collared Starling	*Gracupica nigricollis*	1	Common	R	-	-	-	LC	LC	N	N

15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW2	Pond-FLW	Crested Myna	*Acridotheres cristatellus*	3	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW2	Pond-FLW	Oriental Magpie Robin	*Copsychus saularis*	1	Abundant	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW2	Pond-FLW	Spotted Dove	*Spilopelia chinensis*	3	Abundant	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW2	Pond-FLW	White Wagtail	*Motacilla alba*	2	Common	PM,WV	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW3	Pond-FLW	Chinese Pond Heron	*Ardeola bacchus*	2	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW3	Pond-FLW	Crested Myna	*Acridotheres cristatellus*	2	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW3	Pond-FLW	Eurasian Tree Sparrow	*Passer montanus*	2	Abundant	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW3	Pond-FLW	Plain Prinia	*Prinia inornata*	3	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW4	Pond-FLW	Great Egret	*Ardea alba*	1	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW4	Pond-FLW	Little Egret	*Egretta garzetta*	2	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW4	Pond-FLW	Plain Prinia	*Prinia inornata*	2	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW4	Pond-FLW	White-throated Kingfisher	*Halcyon smyrnensis*	1	Common	R	-	-	-	LC	LC	N	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW5	Pond-FLW	Black-collared Starling	*Gracupica nigricollis*	3	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW5	Pond-FLW	Chinese Pond Heron	*Ardeola bacchus*	2	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW5	Pond-FLW	Cinereous Tit	*Parus cinereus*	1	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW5	Pond-FLW	Crested Myna	*Acridotheres cristatellus*	2	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW5	Pond-FLW	Grey Heron	*Ardea cinerea*	1	Common	WV	PRC	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW5	Pond-FLW	Little Egret	*Egretta garzetta*	3	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW5	Pond-FLW	Little Grebe	*Tachybaptus ruficollis*	3	Common	R	LC	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW5	Pond-FLW	White Wagtail	*Motacilla alba*	1	Common	PM,WV	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW6	Pond-FLW	Chinese Pond Heron	*Ardeola bacchus*	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW6	Pond-FLW	Crested Myna	*Acridotheres cristatellus*	2	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW6	Pond-FLW	Eurasian Collared Dove	*Streptopelia decaocto*	6	Found in Mai Po, Tsim Bei Tsui, Fung Lok Wai	-	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW6	Pond-FLW	Great Egret	*Ardea alba*	2	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW6	Pond-FLW	Grey Heron	*Ardea cinerea*	2	Common	WV	PRC	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW6	Pond-FLW	Little Egret	*Egretta garzetta*	4	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW6	Pond-FLW	Spotted Dove	*Spilopelia chinensis*	3	Abundant	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW7	Pond-FLW	Azure-winged Magpie	*Cyanopica cyanus*	5	Introduced	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW7	Pond-FLW	Chinese Pond Heron	*Ardeola bacchus*	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW7	Pond-FLW	Little Egret	*Egretta garzetta*	2	Common	R	PRC (RC)	-	-	LC	LC	Y	Y

15/08/2022	Daytime	Wet Season	FLW	Point Count	FLW7	Pond-FLW	White-breasted Waterhen	*Amaurornis phoenicurus*	1	Common	R	-	-	-	LC	LC	N	Y
15/08/2022	Daytime	Wet Season	NSW	Transect	NSW	Mangrove	Chinese Pond Heron	*Ardeola bacchus*	3	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	NSW	Transect	NSW	Mangrove	Common Sandpiper	*Actitis hypoleucos*	2	Common	PM,WV	-	-	-	LC	LC	N	Y
15/08/2022	Daytime	Wet Season	NSW	Transect	NSW	Modified Watercourse	Black-winged Stilt	*Himantopus himantopus*	4	Common	PM	RC	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	NSW	Transect	NSW	Modified Watercourse	Common Myna	*Acridotheres tristis*	2	Uncommon	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	NSW	Transect	NSW	Modified Watercourse	Common Sandpiper	*Actitis hypoleucos*	7	Common	PM,WV	-	-	-	LC	LC	N	Y
15/08/2022	Daytime	Wet Season	NSW	Transect	NSW	Plantation-NSW	Common Tailorbird	*Orthotomus sutorius*	1	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	NSW	Transect	NSW	Plantation-NSW	Eurasian Tree Sparrow	*Passer montanus*	5	Abundant	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	NSW	Point Count	NSW1	Pond-NSW	Black-winged Stilt	*Himantopus himantopus*	2	Common	PM	RC	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	NSW1	Pond-NSW	Chinese Pond Heron	*Ardeola bacchus*	2	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	NSW1	Pond-NSW	Little Egret	*Egretta garzetta*	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	NSW1	Pond-NSW	White-breasted Waterhen	*Amaurornis phoenicurus*	1	Common	R	-	-	-	LC	LC	N	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Chinese Pond Heron	*Ardeola bacchus*	4	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Common Kingfisher	*Alcedo atthis*	2	Common	PM,WV	-	-	-	LC	LC	N	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Common Moorhen	*Gallinula chloropus*	1	Common	R	-	-	-	LC	LC	N	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Common Sandpiper	*Actitis hypoleucos*	2	Common	PM,WV	-	-	-	LC	LC	N	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	Little Egret	*Egretta garzetta*	4	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW1	Modified Watercourse	White-breasted Waterhen	*Amaurornis phoenicurus*	4	Common	R	-	-	-	LC	LC	N	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW2	Mangrove	Large-billed Crow	*Corvus macrorhynchos*	2	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW2	Mangrove	Common Tailorbird	*Orthotomus sutorius*	1	Common	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Black-winged Stilt	*Himantopus himantopus*	5	Common	PM	RC	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Chinese Pond Heron	*Ardeola bacchus*	3	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Common Sandpiper	*Actitis hypoleucos*	5	Common	PM,WV	-	-	-	LC	LC	N	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Great Egret	*Ardea alba*	2	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Modified Watercourse	Little Egret	*Egretta garzetta*	7	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	NSW	Point Count	SP/NSW3	Plantation-NSW	Masked Laughingthrush	*Garrulax perspicillatus*	5	Abundant	R	-	-	-	LC	LC	N	N
15/08/2022	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Modified Watercourse	Black-winged Stilt	*Himantopus himantopus*	3	Common	PM	RC	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Modified Watercourse	Chinese Pond Heron	*Ardeola bacchus*	2	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
15/08/2022	Daytime	Wet Season	YLIE	Transect	YLIE-CW	Modified Watercourse	Common Sandpiper	*Actitis hypoleucos*	2	Common	PM,WV	-	-	-	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.2.1 Ecological Bird Monitoring Diversity (All avifauna species in Point Count Method) in All Habitats (15 August 2022)

Scientific Name	Count	P	Ln(P)	P*Ln(P)	$P*Ln(P)^2$
Acridotheres cristatellus	12	0.085106	-2.46385	-0.20969	0.516644
Actitis hypoleucos	7	0.049645	-3.00285	-0.14908	0.447658
Alcedo atthis	2	0.014184	-4.25561	-0.06036	0.256883
Amaurornis phoenicurus	6	0.042553	-3.157	-0.13434	0.424113
Ardea alba	7	0.049645	-3.00285	-0.14908	0.447658
Ardea cinerea	3	0.021277	-3.85015	-0.08192	0.315397
Ardeola bacchus	17	0.120567	-2.11555	-0.25507	0.539604
Copsychus saularis	1	0.007092	-4.94876	-0.0351	0.17369
Corvus macrorhynchos	2	0.014184	-4.25561	-0.06036	0.256883
Cyanopica cyanus	8	0.056738	-2.86932	-0.1628	0.46712
Egretta garzetta	27	0.191489	-1.65292	-0.31652	0.523179
Gallinula chloropus	1	0.007092	-4.94876	-0.0351	0.17369
Garrulax perspicillatus	5	0.035461	-3.33932	-0.11842	0.395428
Gracupica nigricollis	4	0.028369	-3.56247	-0.10106	0.360033
Halcyon smyrnensis	1	0.007092	-4.94876	-0.0351	0.17369
Himantopus himantopus	7	0.049645	-3.00285	-0.14908	0.447658
Motacilla alba	4	0.028369	-3.56247	-0.10106	0.360033
Orthotomus sutorius	1	0.007092	-4.94876	-0.0351	0.17369
Parus cinereus	1	0.007092	-4.94876	-0.0351	0.17369
Passer montanus	2	0.014184	-4.25561	-0.06036	0.256883
Prinia inornata	7	0.049645	-3.00285	-0.14908	0.447658
Spilopelia chinensis	7	0.049645	-3.00285	-0.14908	0.447658
Streptopelia decaocto	6	0.042553	-3.157	-0.13434	0.424113
Tachybaptus ruficollis	3	0.021277	-3.85015	-0.08192	0.315397
Total	141	1	-86.1051	-2.7991	8.518444
Richness	24				
SS	8.52				
SQ	7.83				
H	2.8				
S^2_H	0.01				

Appendix F.2.2 Ecological Bird Monitoring Diversity (Avifauna species of conservation importance in Point Count Method) in All Habitats (15 August 2022)

Scientific Name	Count	P	Ln(P)	P*Ln(P)	$P*Ln(P)^2$
Ardea alba	7	0.109375	-2.21297	-0.24204	0.535637
Ardea cinerea	3	0.046875	-3.06027	-0.14345	0.438996
Ardeola bacchus	17	0.265625	-1.32567	-0.35213	0.466809
Egretta garzetta	27	0.421875	-0.86305	-0.3641	0.314233
Himantopus himantopus	7	0.109375	-2.21297	-0.24204	0.535637
Tachybaptus ruficollis	3	0.046875	-3.06027	-0.14345	0.438996
Total	64	1	-12.7352	-1.48722	2.730309
Richness	6				
SS	2.73				

SQ	2.21				
H	1.49				
S^2_H	0.01				

Appendix F.2.3 Ecological Bird Monitoring Diversity (All avifauna species in Transect Walk Method) in All Habitats (15 August 2022)

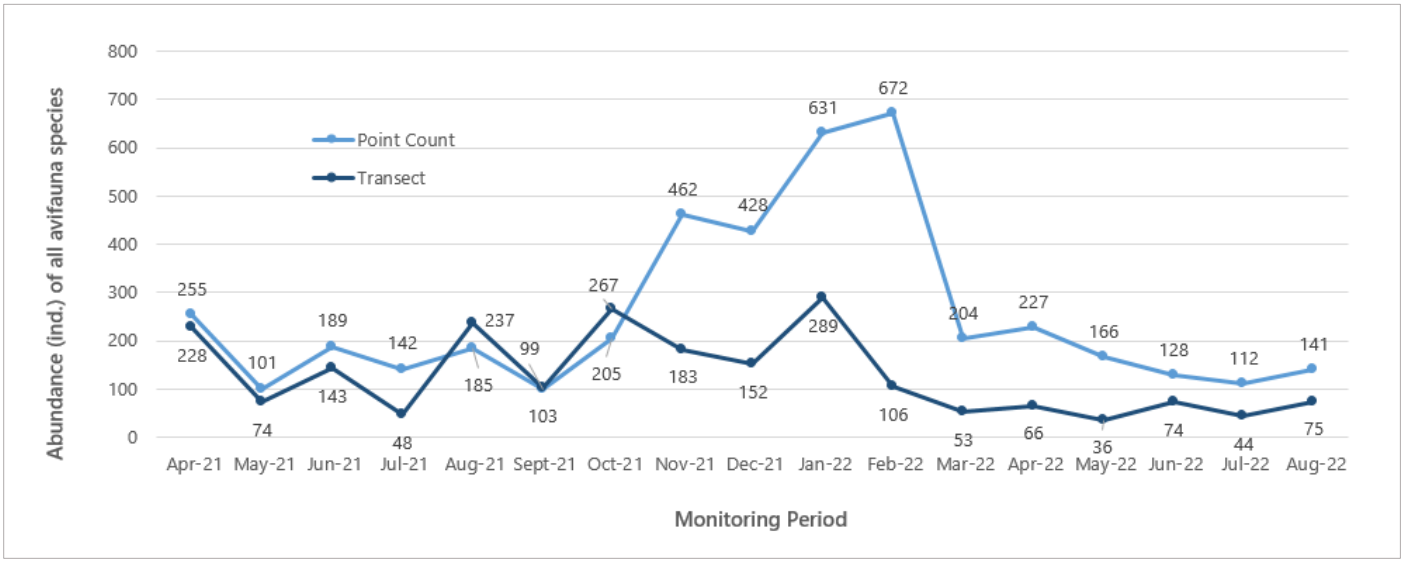
Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P)^2
Acridotheres cristatellus	2	0.026667	-3.62434	-0.09665	0.350289
Acridotheres tristis	2	0.026667	-3.62434	-0.09665	0.350289
Actitis hypoleucos	9	0.12	-2.12026	-0.25443	0.539462
Ardea alba	3	0.04	-3.21888	-0.12876	0.414446
Ardea cinerea	1	0.013333	-4.31749	-0.05757	0.248543
Ardeola bacchus	9	0.12	-2.12026	-0.25443	0.539462
Centropus sinensis	1	0.013333	-4.31749	-0.05757	0.248543
Copsychus saularis	1	0.013333	-4.31749	-0.05757	0.248543
Corvus macrorhynchos	2	0.026667	-3.62434	-0.09665	0.350289
Cyanopica cyanus	4	0.053333	-2.93119	-0.15633	0.458234
Egretta garzetta	4	0.053333	-2.93119	-0.15633	0.458234
Eudynamys scolopaceus	1	0.013333	-4.31749	-0.05757	0.248543
Garrulax perspicillatus	5	0.066667	-2.70805	-0.18054	0.488902
Gracupica nigricollis	3	0.04	-3.21888	-0.12876	0.414446
Halcyon smyrnensis	1	0.013333	-4.31749	-0.05757	0.248543
Himantopus himantopus	7	0.093333	-2.37158	-0.22135	0.524942
Hirundo rustica	4	0.053333	-2.93119	-0.15633	0.458234
Lonchura punctulata	2	0.026667	-3.62434	-0.09665	0.350289
Milvus migrans	1	0.013333	-4.31749	-0.05757	0.248543
Motacilla alba	2	0.026667	-3.62434	-0.09665	0.350289
Orthotomus sutorius	3	0.04	-3.21888	-0.12876	0.414446
Passer montanus	5	0.066667	-2.70805	-0.18054	0.488902
Spilopelia chinensis	3	0.04	-3.21888	-0.12876	0.414446
Total	75	1	-77.7239	-2.90394	8.856863
Richness	23				
SS	8.856863				
SQ	8.432865				
H	2.90394				
S^2_H	0.007609				

Appendix F.2.4 Ecological Bird Monitoring Diversity (Avifauna species of conservation importance in Transect Walk Method) in All Habitats (15 August 2022)

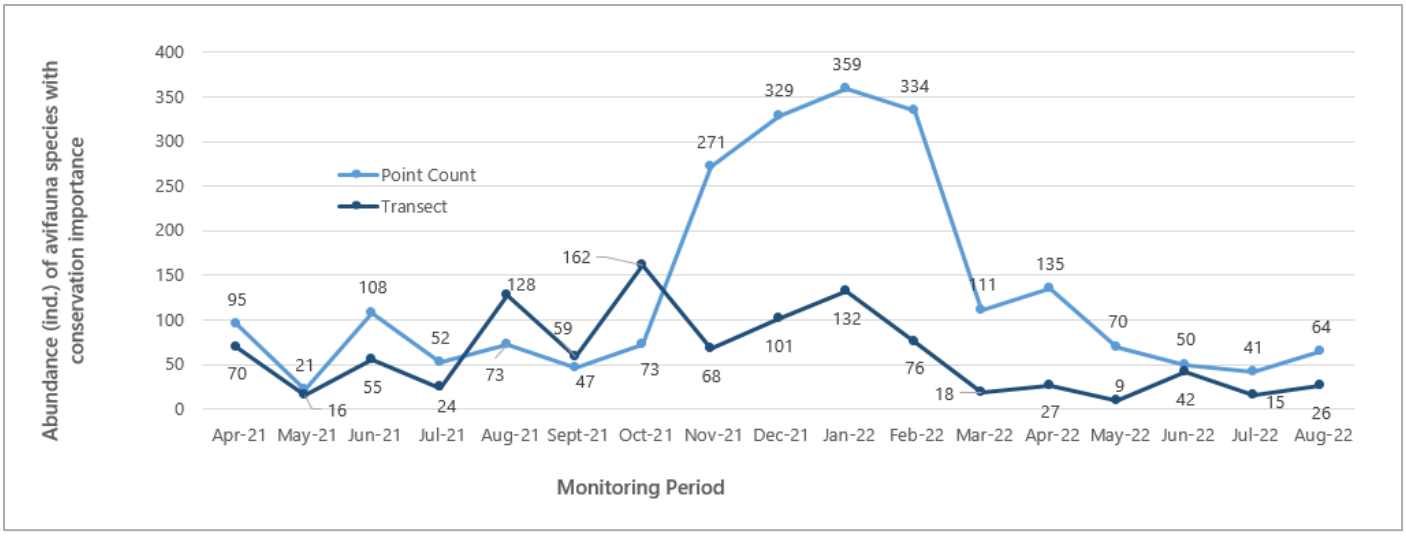
Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P)^2
Ardea alba	3	0.115385	-2.15948	-0.24917	0.538081
Ardea cinerea	1	0.038462	-3.2581	-0.12531	0.408277
Ardeola bacchus	9	0.346154	-1.06087	-0.36722	0.389579
Centropus sinensis	1	0.038462	-3.2581	-0.12531	0.408277
Egretta garzetta	4	0.153846	-1.8718	-0.28797	0.539022
Himantopus himantopus	7	0.269231	-1.31219	-0.35328	0.46357
Milvus migrans	1	0.038462	-3.2581	-0.12531	0.408277

Total	26	1	-16.1786	-1.63358	3.155083
Richness	7				
SS	3.155083				
SQ	2.668587				
H	1.633581				
S^2_H	0.023149				

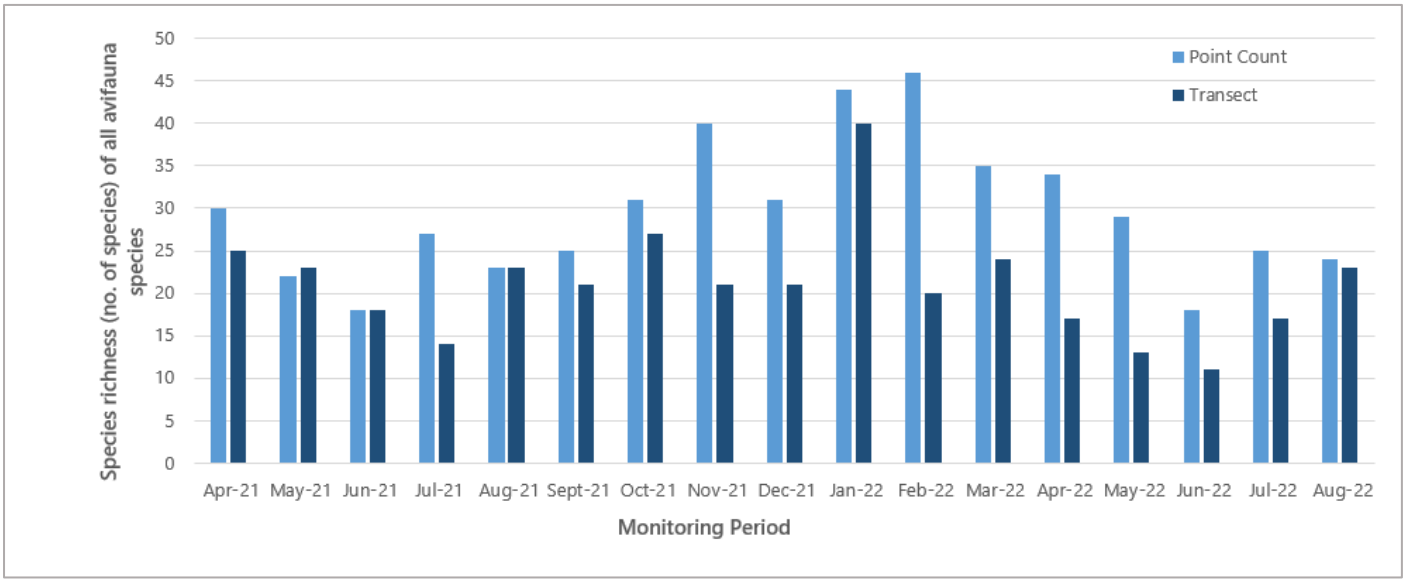
Appendix F.3.1 Abundance of all avifauna species throughout the monitoring period



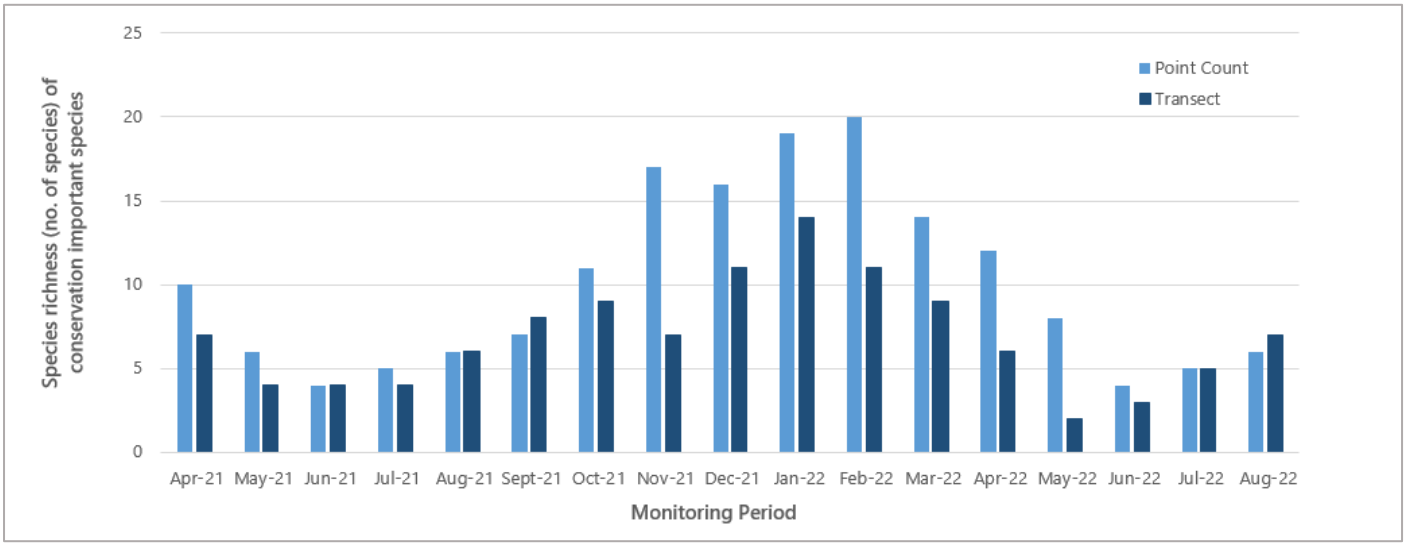
Appendix F.3.2 Abundance of avifauna species with conservation importance throughout the monitoring period



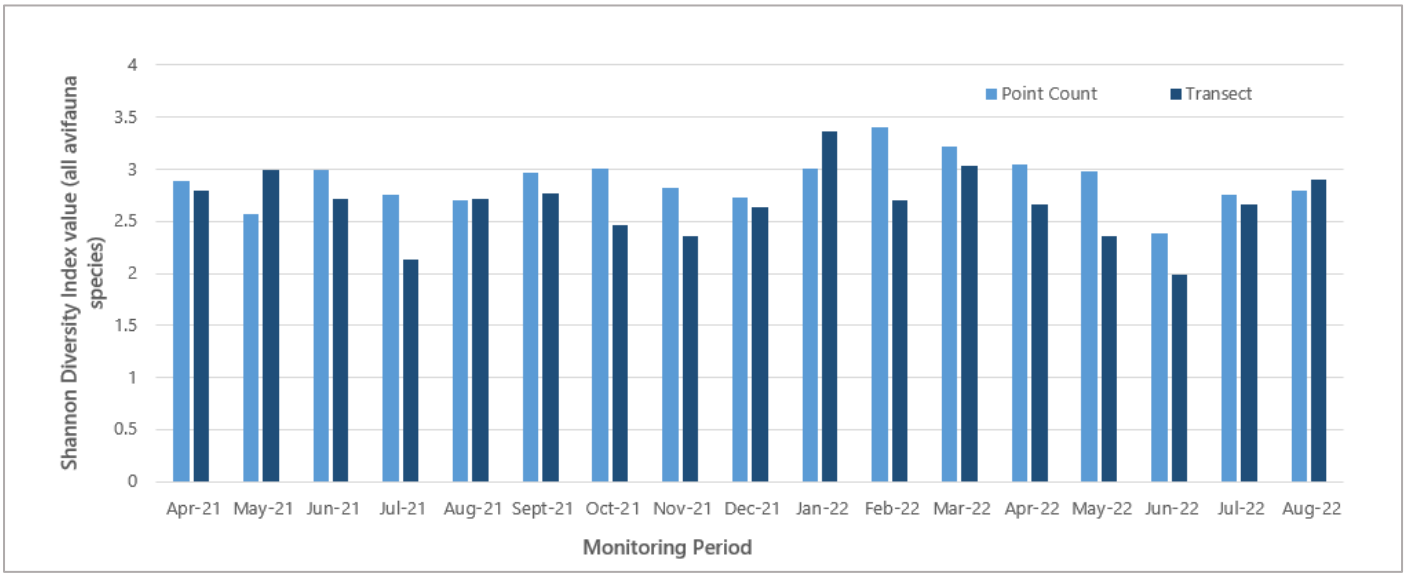
Appendix F.4.1 Species richness of all avifauna species throughout the monitoring period



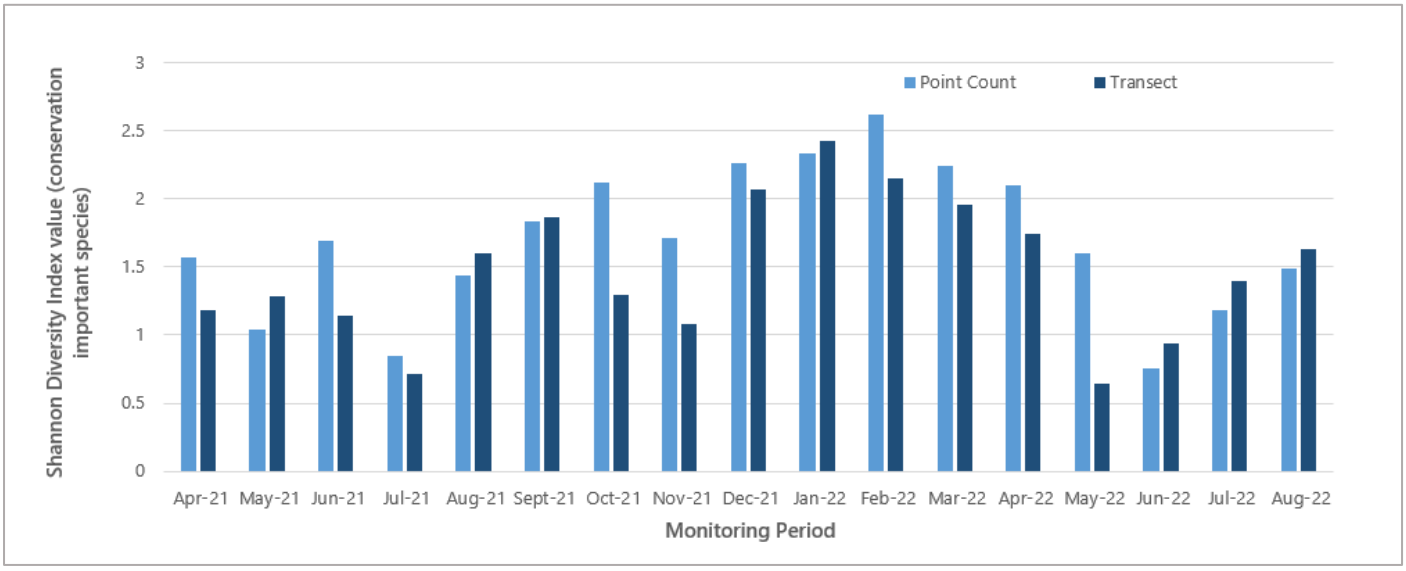
Appendix F.4.2 Species richness of avifauna species with conservation importance throughout the monitoring period



Appendix F.5.1 Shannon Diversity Index values of all avifauna species throughout the monitoring period



Appendix F.5.2 Shannon Diversity Index values of avifauna species with conservation importance throughout the monitoring period



Appendix F.6 Two-tailed Unpaired T-test

Formula:

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\left(\frac{(N_1 - 1)s_1^2 + (N_2 - 1)s_2^2}{N_1 + N_2 - 2}\right)\left(\frac{1}{N_1} + \frac{1}{N_2}\right)}}$$

Appendix F.6.1 Abundance of all avifauna species – Point Count Method

Months	August 2016	August 2022
N	63	58
df	62	57
M	2.54	2.43

Months	August 2016	August 2022
SS	801.65	112.22
S^2	12.93	1.97
t-value	0.22	
p-value	0.83	

Notes:
N: Number of samples/observation
df: Degrees of freedom
M: Mean
SS: Sum of Squares
S^2: Measure on a random sample that is used to estimate the variance of the population

Appendix F.6.2 Abundance of all avifauna species – Transect Walk Method

Months	August 2016	August 2022
N	51	29
df	50	28
M	2.75	2.59
SS	753.69	49.03
S^2	15.07	1.75
t-value	0.21	
p-value	0.83	

Notes:
N: Number of samples/observation
df: Degrees of freedom
M: Mean
SS: Sum of Squares
S^2: Measure on a random sample that is used to estimate the variance of the population

Appendix F.6.3 Abundance of avifauna species with conservation importance – Point Count Method

Months	August 2016	August 2022
N	27	25
df	26	24
M	2.44	2.56
SS	170.67	50.16
S^2	6.56	2.09
t-value	-0.20	
p-value	0.84	

Notes:
N: Number of samples/observation
df: Degrees of freedom
M: Mean

Months	August 2016	August 2022
SS: Sum of Squares S^2: Measure on a random sample that is used to estimate the variance of the population		

Appendix F.6.4 Abundance of avifauna species with conservation importance – Transect Walk Method

Months	August 2016	August 2022
N	9	10
df	8	9
M	6	2.6
SS	278	14.4
S^2	34.75	1.6
t-value	1.78	
p-value	0.09	
Notes: N: Number of samples/observation df: Degrees of freedom M: Mean SS: Sum of Squares S^2: Measure on a random sample that is used to estimate the variance of the population		

Appendix F.7. 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.7.1 Species diversity of avifauna species with conservation importance – Point Count Method

Months	August 2016	August 2022
Total	66	64
Richness	7	6
H	1.68	1.49
S^2_H	0.007	0.009
t	1.49	
df	128.43	
Crit	1.98	
p	0.14	
CI	0.17	0.19