

## Operational Phase Water Quality at Seawater Intakes - Annual

Note: Shaded and Bolded - value exceeded the WSD criteria  
N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Mid-Depth						
			Maximum						Minimum
			UIA (mg/L)	Total P (mg/L)	E. coli (no./100mL)	NH <sub>3</sub> -N (mg/L)	SS (mg/L)	BOD <sub>5</sub> (mg/L)	DO (mg/L)
<b>WSD Saltwater Intakes</b>									
<b>Assessment Criteria</b>									
			N/A	N/A	≤ 20,000	≤ 1	≤ 10	≤ 10	≥ 2
C5	Tuen Mun (WSD)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.009	0.072	572	0.288	9.01	0.92	4.28
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.009	0.073	574	0.287	8.95	0.91	4.28
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.009	0.077	586	0.280	8.93	1.08	3.93
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.009	0.073	574	0.287	8.95	0.91	4.28
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.009	0.072	572	0.287	8.97	0.90	4.29
C6	Lok On Pa (WSD)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.070	68	0.289	8.73	0.88	4.28
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.071	68	0.289	8.70	0.87	4.28
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.010	0.076	70	0.286	8.68	1.04	3.70
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.071	68	0.289	8.70	0.87	4.28
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.010	0.070	68	0.289	8.69	0.86	4.29
C11	Tung Chung	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.006	0.077	3,084	0.237	<b>10.75</b>	2.15	5.44
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.006	0.078	3,082	0.235	<b>10.77</b>	2.11	5.42
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.006	0.080	3,126	0.235	<b>10.75</b>	2.33	5.39
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.006	0.078	3,082	0.235	<b>10.77</b>	2.11	5.42
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.006	0.077	3,084	0.235	<b>10.76</b>	2.11	5.41
C14	Sunny Bay (WSD)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.013	0.075	337	0.311	9.66	1.00	4.29
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.013	0.075	338	0.311	9.59	0.99	4.29
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.013	0.078	338	0.309	9.57	1.12	3.79
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.013	0.075	338	0.311	9.59	0.99	4.29
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.013	0.075	338	0.311	9.60	0.99	4.30
C19	Near Butterfly Beach	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.009	0.071	93	0.285	8.75	0.87	4.30
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.009	0.071	93	0.284	8.69	0.86	4.30
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.009	0.074	96	0.278	8.67	1.02	3.91
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.009	0.071	93	0.284	8.69	0.86	4.30
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.009	0.071	92	0.284	8.71	0.85	4.31
C20	Near LRT Terminus	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.072	1,326	0.287	8.99	1.03	4.30
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.072	1,317	0.286	8.94	1.02	4.31
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.010	0.077	1,317	0.280	8.92	1.20	3.95
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.072	1,317	0.286	8.94	1.02	4.31
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.010	0.072	1,322	0.286	8.95	1.01	4.32
<b>Cooling Water / Seawater Intakes</b>									
<b>Assessment Criteria</b>									
			N/A	N/A	N/A	N/A	≤ 700	N/A	N/A
C2	CLP Black Point Power Station	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.013	0.149	1,245	0.446	19.62	2.08	4.42
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.013	0.150	1,252	0.445	19.52	2.13	4.42
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.014	0.152	1,272	0.475	19.51	2.12	4.36
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.013	0.150	1,252	0.445	19.52	2.13	4.42
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.013	0.149	1,245	0.449	19.50	2.13	4.41

Remark: The annual mean results presented in this Appendix 5.7 should not be used for assessing the impacts of the short-term maintenance or emergency discharge

## Operational Phase Water Quality at Seawater Intakes - Annual

Note: Shaded and Bolded - value exceeded the WSD criteria  
N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Mid-Depth						
			Maximum						Minimum
			UIA (mg/L)	Total P (mg/L)	E. coli (no./100mL)	NH <sub>3</sub> -N (mg/L)	SS (mg/L)	BOD <sub>5</sub> (mg/L)	DO (mg/L)
C3	Castle Peak Power Station	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.088	89	0.299	12.45	1.11	4.03
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.088	92	0.297	12.35	1.11	4.03
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.010	0.090	95	0.290	12.32	1.32	3.77
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.088	92	0.297	12.35	1.11	4.03
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.010	0.088	89	0.297	12.37	1.09	4.03
<b>Cooling Water / Seawater Intakes</b>									
<b>Assessment Criteria</b>			N/A	N/A	N/A	N/A	N/A	N/A	N/A
C1	Future Sludge Treatment Facilities	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.014	0.176	11,426	0.510	21.88	3.00	4.66
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.014	0.177	11,455	0.509	21.77	3.06	4.67
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.015	0.180	11,564	0.556	21.75	3.05	4.68
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.014	0.177	11,455	0.509	21.77	3.06	4.67
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.014	0.176	11,452	0.515	21.74	3.07	4.68
C4	Shiu Wing Steel Mills	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.087	91	0.301	12.37	1.14	4.20
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.088	85	0.299	12.30	1.14	4.20
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.009	0.090	91	0.293	12.26	1.34	3.90
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.088	85	0.299	12.30	1.14	4.20
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.010	0.087	89	0.299	12.29	1.14	4.21
C7	Future Airport (East)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.084	87	0.302	12.11	0.97	4.48
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.084	86	0.302	12.05	0.96	4.47
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.010	0.085	87	0.301	12.02	1.13	4.29
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.084	86	0.302	12.05	0.96	4.47
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.010	0.084	87	0.301	12.03	0.95	4.46
C8	Airport (North)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.082	88	0.300	11.74	0.97	4.30
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.083	88	0.300	11.67	0.96	4.30
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.010	0.083	88	0.300	11.64	1.14	4.05
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.083	88	0.300	11.67	0.96	4.30
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.010	0.082	88	0.299	11.66	0.95	4.24
C9	Airport (South)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.006	0.083	1,598	0.246	11.22	1.98	4.81
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.006	0.084	1,599	0.244	11.24	1.94	4.82
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.006	0.085	1,641	0.246	11.23	2.25	4.78
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.006	0.084	1,599	0.244	11.24	1.94	4.82
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.006	0.083	1,600	0.243	11.23	1.94	4.79
C10	Future HKBCF	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.011	0.079	75	0.301	10.97	0.93	4.35
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.011	0.079	75	0.301	10.82	0.92	4.35
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.011	0.080	76	0.300	10.88	1.11	4.04
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.011	0.079	75	0.301	10.82	0.92	4.35
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.011	0.079	75	0.300	10.84	0.91	4.27

Remark: The annual mean results presented in this Appendix 5.7 should not be used for assessing the impacts of the short-term maintenance or emergency discharge

## Operational Phase Water Quality at Seawater Intakes - Annual

Note: Shaded and Bolded - value exceeded the WSD criteria

N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Mid-Depth						
			Maximum						Minimum
			UIA (mg/L)	Total P (mg/L)	<i>E.coli</i> (no./100mL)	NH <sub>3</sub> -N (mg/L)	SS (mg/L)	BOD <sub>5</sub> (mg/L)	DO (mg/L)
C12	Future Tung Chung East	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.008	0.075	535	0.277	10.19	1.97	4.75
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.008	0.075	536	0.276	10.19	1.93	4.75
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.008	0.077	551	0.274	10.18	2.23	4.76
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.008	0.075	536	0.277	10.19	1.93	4.74
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.008	0.075	535	0.277	10.18	1.93	4.76
C15	Future Sunny Bay Development	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.071	76	0.299	8.98	0.74	4.26
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.072	76	0.299	8.94	0.74	4.26
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.010	0.077	76	0.296	8.92	0.88	3.57
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.072	76	0.299	8.94	0.74	4.26
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.010	0.071	76	0.299	8.94	0.73	4.25
C18	China Cement Plant	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.083	91	0.297	11.75	1.04	4.12
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.084	93	0.296	11.69	1.03	4.12
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.009	0.088	96	0.291	11.66	1.22	3.83
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.084	93	0.296	11.69	1.03	4.12
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.009	0.083	90	0.296	11.67	1.02	4.11

Remark: The annual mean results presented in this Appendix 5.7 should not be used for assessing the impacts of the short-term maintenance or emergency discharge

Operational Phase Water Quality at Bathing Beaches, Typhoon Shelter and Estuary - Annual

Note: Shaded and Bolded - value exceeded the WSD criteria  
N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Bottom				Depth Averaged									
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)	10%ile DO (mg/L)	GM <i>E. coli</i> (no./100mL)	Range (min. - max.)		Mean Salinity (ppt)	Change %	BOD <sub>5</sub> (mg/L)	TIN (mg/L)	UJA (mg/L)	TP (mg/L)	TN (mg/L)	SS (mg/L)
<b>Beaches</b>																
<b>Assessment Criteria (for North Western WCZ)</b>																
			≥ 2	N/A	≥ 4	≤ 180	±10% ambit	N/A	≤ 10	N/A	≤ 0.5	≤ 0.021	N/A	N/A	N/A	
B1	Butterfly	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.32	56.62	4.51	39	14.4 - 31.5	25.5	-	0.6	<b>0.61</b>	0.008	0.050	0.82	5.4	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.32	56.47	4.51	39	14.4 - 31.5	25.4	0.0%	0.6	<b>0.61</b>	0.008	0.049	0.82	5.4	
		Scenario 3 - 12 days maintenance of NWN Tunnel	4.30	56.50	4.50	39	14.4 - 31.5	25.5	0.3%	0.6	<b>0.60</b>	0.007	0.050	0.80	5.3	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.32	56.47	4.51	39	14.4 - 31.5	25.4	0.0%	0.6	<b>0.61</b>	0.008	0.049	0.82	5.4	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.31	56.90	4.50	39	14.4 - 31.5	25.4	0.0%	0.6	<b>0.60</b>	0.008	0.049	0.81	5.4	
B2	Gazetted Beaches at Tuen Mun	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.51	41.91	4.79	34	14.4 - 31.6	24.6	-	0.6	<b>0.62</b>	0.007	0.048	0.83	5.2	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.50	41.70	4.79	34	14.4 - 31.6	24.6	0.0%	0.6	<b>0.62</b>	0.007	0.047	0.83	5.2	
		Scenario 3 - 12 days maintenance of NWN Tunnel	4.50	41.75	4.80	33	14.4 - 31.6	24.7	0.3%	0.6	<b>0.61</b>	0.007	0.048	0.81	5.2	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.50	41.70	4.79	34	14.4 - 31.6	24.6	0.0%	0.6	<b>0.62</b>	0.007	0.047	0.83	5.2	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.51	41.91	4.79	34	14.4 - 31.6	24.6	0.0%	0.6	<b>0.61</b>	0.007	0.047	0.82	5.2	
B3	Golden Beach	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.51	45.93	4.77	29	14.4 - 31.6	24.6	-	0.6	<b>0.62</b>	0.007	0.048	0.83	5.2	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.51	45.82	4.77	29	14.5 - 31.6	24.6	0.0%	0.6	<b>0.62</b>	0.007	0.047	0.83	5.2	
		Scenario 3 - 12 days maintenance of NWN Tunnel	4.51	45.87	4.78	28	14.5 - 31.6	24.7	0.3%	0.6	<b>0.61</b>	0.007	0.048	0.81	5.2	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.51	45.82	4.77	29	14.5 - 31.6	24.6	0.0%	0.6	<b>0.62</b>	0.007	0.047	0.83	5.2	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.51	45.87	4.77	29	14.4 - 31.6	24.6	0.0%	0.6	<b>0.61</b>	0.007	0.047	0.82	5.2	
<b>Typhoon Shelter</b>																
<b>Assessment Criteria (for North Western WCZ)</b>																
			≥ 2	N/A	≥ 4	N/A	±10% ambit	N/A	≤ 10	N/A	≤ 0.5	≤ 0.021	N/A	N/A	N/A	
T1	Tuen Mun	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	3.57	30.06	4.94	735	17.2 - 30.7	24.9	-	0.9	<b>0.59</b>	0.007	0.043	0.83	4.9	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	3.60	29.99	4.93	735	17.2 - 30.7	24.9	0.1%	0.9	<b>0.59</b>	0.007	0.043	0.83	4.9	
		Scenario 3 - 12 days maintenance of NWN Tunnel	3.66	30.03	4.98	729	17.2 - 30.7	25.0	0.3%	0.9	<b>0.57</b>	0.006	0.043	0.81	4.8	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	3.60	29.99	4.93	735	17.2 - 30.7	24.9	0.1%	0.9	<b>0.59</b>	0.007	0.043	0.83	4.9	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	3.69	30.05	4.97	733	17.2 - 30.7	24.9	0.0%	0.9	<b>0.58</b>	0.007	0.042	0.82	4.9	
<b>Tai O Estuary</b>																
<b>Assessment Criteria (for North Western Supplementary WCZ)</b>																
			≥ 2	N/A	≥ 4	N/A	±10% ambit	N/A	≤ 10	N/A	≤ 0.5	≤ 0.021	N/A	N/A	N/A	
S1	Tai O	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.33	107.74	4.70	238	10.8 - 30.9	23.6	-	0.6	<b>0.53</b>	0.004	0.042	0.71	6.4	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.34	109.92	4.70	238	10.7 - 30.9	23.6	0.1%	0.6	<b>0.53</b>	0.004	0.041	0.71	6.4	
		Scenario 3 - 12 days maintenance of NWN Tunnel	4.33	110.56	4.72	238	10.7 - 30.9	23.6	0.1%	0.6	<b>0.52</b>	0.004	0.042	0.70	6.3	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.34	109.92	4.70	238	10.7 - 30.9	23.6	0.1%	0.6	<b>0.53</b>	0.004	0.041	0.71	6.4	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.32	110.65	4.69	237	10.9 - 30.9	23.6	0.0%	0.6	<b>0.52</b>	0.004	0.041	0.71	6.4	

Remark: The annual mean results presented in this Appendix 5.7 should not be used for assessing the impacts of the short-term maintenance or emergency discharge

**Operational Phase Water Quality at Ecological Resources and Observation Points - Annual**

Note: Shaded and Bolded - value exceeded the WSD criteria  
 N/A - Not Available

ID (index_E_wet: Figure 3.2)	Indicator Point	Scenario	Bottom		Depth Averaged										
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)	10%ile DO (mg/L)	GM E.coli (no./100mL)	Range (min. - max.)		Mean Salinity (ppt)	Change %	BOD <sub>5</sub> (mg/L)	TIN (mg/L)	Mean		
							min. (ppt)	max. (ppt)					UJA (mg/L)	TP (mg/L)	TN (mg/L)
			≥ 2	≤ 200	≥ 4	N/A	±10% ambit	N/A	N/A	N/A	≤ 0.5	≤ 0.021	N/A	N/A	≤ 30% ambt
<b>Ecological Resources</b>															
<b>Assessment Criteria (Corals in North Western WCZ)</b>															
E3	Sham Shui Kok (Coral Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.30	7.71	4.51	11	14.6 - 32.0	29.7	-	0.6	<b>0.61</b>	0.008	0.050	0.82	5.6
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.30	7.52	4.51	11	14.6 - 32.0	29.7	0.1%	0.6	<b>0.61</b>	0.008	0.049	0.81	5.6
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.28	7.61	4.49	11	14.6 - 32.0	29.8	0.1%	0.6	<b>0.60</b>	0.007	0.050	0.80	5.5
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.30	7.52	4.51	11	14.6 - 32.0	29.7	0.1%	0.6	<b>0.61</b>	0.008	0.049	0.81	5.6
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.28	7.58	4.49	11	14.6 - 32.0	29.7	0.1%	0.6	<b>0.60</b>	0.008	0.049	0.81	5.6
E4	The Brothers (Coral Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.36	8.00	4.55	10	14.2 - 31.9	29.5	-	0.6	<b>0.62</b>	0.008	0.051	0.83	5.8
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.36	7.95	4.55	10	14.2 - 31.9	29.5	0.1%	0.6	<b>0.62</b>	0.008	0.050	0.83	5.8
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.34	7.97	4.54	10	14.2 - 31.9	29.6	0.1%	0.6	<b>0.61</b>	0.007	0.051	0.81	5.8
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.36	7.95	4.55	10	14.2 - 31.9	29.5	0.1%	0.6	<b>0.62</b>	0.008	0.050	0.83	5.8
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.34	7.93	4.53	10	14.2 - 31.9	29.5	0.1%	0.6	<b>0.62</b>	0.008	0.050	0.82	5.8
E6	Tung Chung East (Coral Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.53	6.72	4.75	3	14.5 - 29.5	28.4	-	0.7	<b>0.66</b>	0.007	0.052	0.87	6.2
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.53	6.66	4.75	3	14.5 - 29.4	28.3	0.1%	0.7	<b>0.66</b>	0.007	0.051	0.87	6.1
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.54	6.68	4.76	3	14.5 - 29.5	28.4	0.0%	0.7	<b>0.64</b>	0.007	0.051	0.85	6.1
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.53	6.66	4.75	3	14.5 - 29.4	28.3	0.1%	0.7	<b>0.66</b>	0.007	0.051	0.87	6.1
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.53	6.66	4.72	3	14.5 - 29.5	28.3	0.1%	0.7	<b>0.65</b>	0.007	0.051	0.86	6.1
E7	Tung Chung (Coral Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	5.86	7.71	6.11	105	16.2 - 29.2	28.4	-	1.3	<b>0.59</b>	0.004	0.056	0.87	7.5
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	5.82	7.57	6.07	104	16.2 - 29.2	28.4	0.2%	1.3	<b>0.58</b>	0.004	0.055	0.86	7.4
		Scenario 3 - 12 days maintenance of NWNT Tunnel	5.90	7.66	6.13	100	16.2 - 29.2	28.4	0.1%	1.3	<b>0.58</b>	0.004	0.055	0.86	7.4
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	5.82	7.57	6.07	104	16.2 - 29.2	28.4	0.2%	1.3	<b>0.59</b>	0.004	0.055	0.87	7.4
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	5.83	7.58	6.07	103	16.2 - 29.2	28.4	0.1%	1.3	<b>0.58</b>	0.004	0.054	0.86	7.4
<b>Assessment Criteria (for North Western WCZ)</b>															
E2	Yam O Wan (Mangrove, Seagrass & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.55	5.19	4.79	1	19.6 - 30.9	30.1	-	0.5	<b>0.57</b>	0.007	0.043	0.77	4.6
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.54	5.14	4.78	1	19.6 - 30.9	30.1	0.1%	0.5	<b>0.57</b>	0.007	0.042	0.77	4.5
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.54	5.16	4.78	1	19.6 - 30.9	30.1	0.0%	0.5	<b>0.56</b>	0.007	0.043	0.76	4.5
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.54	5.14	4.78	1	19.6 - 30.9	30.1	0.1%	0.5	<b>0.57</b>	0.007	0.042	0.77	4.5
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.54	5.15	4.77	1	19.6 - 30.9	30.1	0.1%	0.5	<b>0.57</b>	0.007	0.042	0.77	4.5
E5	Tai Ho Wan and Tai Ho Stream SSSI (Mangrove, Seagrass & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.60	5.52	6.23	1	15.7 - 29.0	28.5	-	2.3	0.44	0.003	0.048	0.83	8.0
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.65	5.46	6.20	1	15.7 - 28.9	28.5	0.2%	2.3	0.44	0.003	0.047	0.82	8.0
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.80	5.50	6.27	1	15.7 - 29.0	28.5	0.2%	2.3	0.43	0.003	0.047	0.81	8.0
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.65	5.46	6.20	1	15.7 - 28.9	28.5	0.2%	2.3	0.44	0.003	0.047	0.82	8.0
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.73	5.44	6.21	1	15.7 - 28.9	28.5	0.2%	2.3	0.43	0.003	0.047	0.82	7.9
E8	Tung Chung Wan and San Tau Beach SSSI (Mangrove, Seagrass & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	6.10	0.00	6.18	1957	16.2 - 29.2	28.4	-	3.0	<b>0.67</b>	0.007	0.098	1.11	11.5
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	6.05	0.00	6.14	1960	16.2 - 29.1	28.4	0.2%	3.0	<b>0.67</b>	0.008	0.097	1.11	11.5
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.13	0.00	6.23	1886	16.2 - 29.2	28.4	0.2%	3.0	<b>0.66</b>	0.007	0.097	1.10	11.5
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.05	0.00	6.14	1960	16.2 - 29.1	28.4	0.2%	3.0	<b>0.67</b>	0.008	0.097	1.11	11.5
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	6.05	0.00	6.14	1935	16.3 - 29.2	28.4	0.1%	3.0	<b>0.66</b>	0.007	0.096	1.10	11.5
E9	Hau Hok Wan (Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	5.31	5.33	5.60	59	15.3 - 29.1	28.4	-	1.3	<b>0.58</b>	0.004	0.056	0.86	7.6
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	5.30	5.28	5.57	59	15.2 - 29.1	28.3	0.2%	1.3	<b>0.58</b>	0.004	0.055	0.86	7.6
		Scenario 3 - 12 days maintenance of NWNT Tunnel	5.33	5.31	5.62	56	15.2 - 29.1	28.3	0.2%	1.3	<b>0.58</b>	0.004	0.055	0.85	7.5
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	5.30	5.28	5.57	59	15.2 - 29.1	28.3	0.2%	1.3	<b>0.58</b>	0.004	0.055	0.86	7.6
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	5.28	5.27	5.57	58	15.3 - 29.1	28.3	0.2%	1.3	<b>0.57</b>	0.004	0.054	0.85	7.6
E10	Sha Chau and Lung Kwu Chau Marine Park / Lung Kwu Chau, Tree Island and Sha Chau SSSI A	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.47	10.77	4.69	7	10.1 - 28.4	25.9	-	0.7	<b>0.72</b>	0.007	0.059	0.93	8.5
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.47	10.68	4.69	7	10.1 - 28.3	25.8	0.3%	0.7	<b>0.72</b>	0.007	0.059	0.93	8.5
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.47	10.81	4.71	6	10.1 - 28.3	25.9	0.0%	0.7	<b>0.71</b>	0.006	0.058	0.91	8.4
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.47	10.68	4.69	7	10.1 - 28.3	25.8	0.3%	0.7	<b>0.72</b>	0.007	0.059	0.93	8.5
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.44	10.64	4.68	7	10.2 - 28.3	25.9	0.2%	0.7	<b>0.72</b>	0.007	0.058	0.92	8.5
E11	Sha Chau and Lung Kwu Chau Marine Park / Lung Kwu Chau, Tree Island and Sha Chau SSSI B	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.30	10.66	4.50	20	9.2 - 30.3	26.2	-	0.8	<b>0.73</b>	0.008	0.063	0.94	8.6
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.30	10.60	4.50	20	9.2 - 30.3	26.1	0.3%	0.8	<b>0.72</b>	0.007	0.062	0.94	8.6
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.29	10.64	4.49	18	9.2 - 30.3	26.2	0.1%	0.7	<b>0.71</b>	0.007	0.062	0.92	8.5
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.30	10.60	4.50	20	9.2 - 30.3	26.1	0.3%	0.8	<b>0.72</b>	0.007	0.062	0.94	8.6
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.27	10.31	4.47	19	9.2 - 30.3	26.1	0.2%	0.8	<b>0.72</b>	0.007	0.061	0.93	8.6
E16	Sha Lo Wan (Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.79	6.72	5.15	26	14.7 - 29.1	28.4	-	1.1	<b>0.59</b>	0.004	0.053	0.84	7.2
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.78	6.65	5.14	26	14.7 - 29.1	28.3	0.2%	1.1	<b>0.59</b>	0.004	0.052	0.84	7.2
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.82	6.69	5.17	25	14.7 - 29.1	28.3	0.2%	1.0	<b>0.58</b>	0.004	0.052	0.82	7.1
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.78	6.65	5.14	26	14.7 - 29.1	28.3	0.2%	1.1	<b>0.59</b>	0.004	0.052	0.84	7.2
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.78	6.63	5.13	26	14.7 - 29.1	28.3	0.2%	1.1	<b>0.58</b>	0.004	0.051	0.83	7.2

Remark: The annual mean results presented in this Appendix 5.7 should not be used for assessing the impacts of the short-term maintenance or emergency discharge

**Operational Phase Water Quality at Ecological Resources and Observation Points - Annual**

Note: Shaded and Bolded - value exceeded the WSD criteria  
N/A - Not Available

ID (Index_E wet: Figure 3.2)	Indicator Point	Scenario	Bottom		Depth Averaged																	
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)	10%ile DO (mg/L)	GM E.coli (no./100mL)	Range (min. - max.) (ppt)	Mean Salinity (ppt)	Change %	Mean												
										BOD <sub>5</sub> (mg/L)	TIN (mg/L)	UUA (mg/L)	TP (mg/L)	TN (mg/L)	SS (mg/L)							
													≥ 2	N/A	≥ 4	N/A	≤10% ambt	N/A	N/A	N/A	≤ 0.5	≤0.021
E17	The Brothers Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.34	8.04	4.50	11	14.8 - 32.2	29.7	-	0.6	<b>0.61</b>	0.008	0.051	0.81	5.7							
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.34	7.94	4.50	11	14.8 - 32.2	29.7	0.1%	0.6	<b>0.61</b>	0.008	0.050	0.81	5.7							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.31	7.96	4.50	11	14.8 - 32.2	29.8	0.1%	0.6	<b>0.60</b>	0.007	0.051	0.80	5.7							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.34	7.94	4.50	11	14.8 - 32.2	29.7	0.1%	0.6	<b>0.61</b>	0.008	0.050	0.81	5.7							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.31	7.97	4.50	11	14.9 - 32.2	29.7	0.1%	0.6	<b>0.60</b>	0.008	0.050	0.81	5.7							
E18	Fishing/Spawning Grounds in North Lantau	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.31	9.07	4.47	34	12.7 - 31.0	28.2	-	0.7	<b>0.67</b>	0.008	0.057	0.89	7.1							
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.31	9.01	4.47	34	12.7 - 30.9	28.1	0.2%	0.7	<b>0.67</b>	0.008	0.056	0.88	7.0							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.28	9.02	4.47	33	12.7 - 30.9	28.2	0.0%	0.7	<b>0.66</b>	0.008	0.057	0.87	6.9							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.31	9.01	4.47	34	12.7 - 30.9	28.1	0.2%	0.7	<b>0.67</b>	0.008	0.056	0.88	7.0							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.28	8.98	4.46	34	12.7 - 30.9	28.1	0.1%	0.7	<b>0.66</b>	0.008	0.056	0.88	7.0							
E19	Artificial Reefs	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.62	8.38	4.72	4	11.9 - 29.1	26.7	-	0.7	<b>0.68</b>	0.006	0.056	0.88	8.1							
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.62	8.16	4.73	4	11.8 - 29.0	26.6	0.3%	0.7	<b>0.68</b>	0.006	0.055	0.88	8.1							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.64	8.27	4.74	4	11.8 - 29.1	26.7	0.0%	0.7	<b>0.67</b>	0.006	0.055	0.87	8.0							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.62	8.16	4.73	4	11.8 - 29.0	26.6	0.3%	0.7	<b>0.68</b>	0.006	0.055	0.88	8.1							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.61	8.27	4.71	4	11.9 - 29.1	26.6	0.2%	0.7	<b>0.67</b>	0.006	0.055	0.88	8.1							
E20	Sham Wat Wan (Mangrove & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.35	8.08	4.84	1	13.3 - 30.0	28.8	-	0.6	<b>0.55</b>	0.004	0.041	0.73	6.1							
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.35	7.96	4.84	1	13.3 - 29.9	28.8	0.2%	0.6	<b>0.55</b>	0.004	0.041	0.73	6.0							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.36	8.06	4.88	1	13.3 - 30.0	28.8	0.0%	0.6	<b>0.54</b>	0.004	0.041	0.72	6.0							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.35	7.96	4.84	1	13.3 - 29.9	28.8	0.2%	0.6	<b>0.55</b>	0.004	0.041	0.73	6.0							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.34	7.94	4.83	1	13.4 - 30.0	28.8	0.1%	0.6	<b>0.54</b>	0.004	0.040	0.73	6.0							
<b>Assessment Criteria (for North Western Supplementary WCZ)</b>			≥ 2	N/A	≥ 4	N/A	≤10% ambt	N/A	N/A	N/A	≤ 0.5	≤0.021	N/A	N/A	≤30% ambt							
E21	Tai O (High Production of Capture Fisheries & Mangrove Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.31	6.34	4.62	2	14.4 - 31.8	30.4	-	0.5	0.45	0.004	0.039	0.63	6.2							
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.31	6.30	4.61	2	14.4 - 31.7	30.3	0.1%	0.5	0.45	0.004	0.038	0.63	6.2							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.29	6.32	4.61	2	14.4 - 31.7	30.4	0.0%	0.5	0.45	0.004	0.039	0.62	6.1							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.31	6.30	4.61	2	14.4 - 31.7	30.3	0.1%	0.5	0.45	0.004	0.038	0.63	6.2							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.29	6.29	4.60	2	14.3 - 31.7	30.3	0.1%	0.5	0.45	0.004	0.037	0.63	6.2							
E22	Yi O (Mangrove & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.36	5.87	4.73	1	11.4 - 31.3	30.5	-	0.5	0.47	0.004	0.034	0.64	5.2							
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.36	5.78	4.73	1	11.5 - 31.3	30.4	0.2%	0.5	0.47	0.004	0.033	0.64	5.1							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.36	5.84	4.74	1	11.5 - 31.3	30.5	0.0%	0.5	0.46	0.004	0.034	0.63	5.1							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.36	5.78	4.73	1	11.5 - 31.3	30.4	0.2%	0.5	0.47	0.004	0.033	0.64	5.1							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.36	5.79	4.72	1	11.2 - 31.3	30.4	0.1%	0.5	0.46	0.004	0.032	0.64	5.1							
E23	Potential Marine Park / Marine Reserve for Southwest Lantau	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.03	7.02	4.24	1	20.7 - 32.8	31.4	-	0.3	0.35	0.004	0.033	0.52	5.2							
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.02	6.97	4.24	1	20.7 - 32.8	31.4	0.1%	0.3	0.34	0.004	0.031	0.51	5.2							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	3.97	6.99	4.19	1	20.7 - 32.8	31.4	0.0%	0.3	0.34	0.003	0.033	0.50	5.1							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.02	6.97	4.24	1	20.7 - 32.8	31.4	0.1%	0.3	0.34	0.004	0.031	0.51	5.2							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.01	6.97	4.22	1	20.8 - 32.8	31.4	0.1%	0.3	0.34	0.003	0.030	0.51	5.2							
<b>Observation Points</b>			≥ 2	N/A	≥ 4	N/A	≤10% ambt	N/A	N/A	N/A	≤ 0.5	≤0.021	N/A	N/A	≤30% ambt							
P1	The Brothers Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.30	7.40	4.43	7	18.6 - 32.6	30.8	-	0.5	<b>0.55</b>	0.008	0.047	0.75	4.9							
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.30	7.39	4.43	7	18.6 - 32.6	30.8	0.1%	0.5	<b>0.55</b>	0.008	0.046	0.75	4.9							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.26	7.42	4.40	7	18.6 - 32.6	30.8	0.1%	0.5	<b>0.54</b>	0.008	0.048	0.74	4.9							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.30	7.39	4.43	7	18.6 - 32.6	30.8	0.1%	0.5	<b>0.55</b>	0.008	0.046	0.75	4.9							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.29	7.34	4.42	7	18.6 - 32.6	30.8	0.1%	0.5	<b>0.55</b>	0.008	0.046	0.75	4.9							
P2	The Brothers Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.32	10.37	4.49	37	13.3 - 31.3	28.4	-	0.7	<b>0.66</b>	0.008	0.056	0.88	6.9							
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.31	10.31	4.49	37	13.3 - 31.3	28.3	0.2%	0.7	<b>0.66</b>	0.008	0.056	0.88	6.8							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.29	10.32	4.48	37	13.3 - 31.3	28.4	0.1%	0.7	<b>0.65</b>	0.008	0.056	0.86	6.8							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.31	10.31	4.49	37	13.3 - 31.3	28.3	0.2%	0.7	<b>0.66</b>	0.008	0.056	0.88	6.8							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.30	10.26	4.47	37	13.3 - 31.3	28.4	0.1%	0.7	<b>0.66</b>	0.008	0.055	0.87	6.8							
P3	The Brothers Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.41	7.75	4.59	125	15.5 - 31.2	28.9	-	0.7	<b>0.64</b>	0.008	0.052	0.85	6.0							
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.41	7.76	4.58	124	15.5 - 31.2	28.9	0.2%	0.7	<b>0.64</b>	0.008	0.051	0.85	6.0							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.39	7.78	4.57	123	15.5 - 31.2	28.9	0.0%	0.7	<b>0.62</b>	0.007	0.052	0.83	5.9							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.41	7.76	4.58	124	15.5 - 31.2	28.9	0.2%	0.7	<b>0.64</b>	0.008	0.051	0.85	6.0							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.39	7.66	4.56	124	15.5 - 31.2	28.9	0.1%	0.7	<b>0.63</b>	0.008	0.051	0.84	5.9							
P4	Sha Chau and Lung Kwu Chau Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.23	10.78	4.47	24	8.9 - 30.1	26.4	-	0.7	<b>0.72</b>	0.008	0.062	0.93	8.6							
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.23	10.53	4.47	24	8.9 - 30.0	26.3	0.3%	0.7	<b>0.72</b>	0.008	0.062	0.93	8.6							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.22	10.59	4.46	21	8.9 - 30.1	26.4	0.1%	0.7	<b>0.70</b>	0.007	0.061	0.91	8.5							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.23	10.53	4.47	24	8.9 - 30.0	26.3	0.3%	0.7	<b>0.72</b>	0.008	0.062	0.93	8.6							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.20	10.72	4.43	23	8.9 - 30.1	26.3	0.2%	0.7	<b>0.71</b>	0.008	0.061	0.93	8.6							

Remark: The annual mean results presented in this Appendix 5.7 should not be used for assessing the impacts of the short-term maintenance or emergency discharge

**Operational Phase Water Quality at Ecological Resources and Observation Points - Annual**

Note: Shaded and Bolded - value exceeded the WSD criteria  
 N/A - Not Available

ID (Index_E_wet: Figure 3.2)	Indicator Point	Scenario	Bottom		Depth Averaged											
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)	10%ile DO (mg/L)	GM E.coli (no./100mL)	Range (min. - max.)		Mean Salinity (ppt)	Change %	BOD <sub>5</sub> (mg/L)	TIN (mg/L)	UIA (mg/L)	TP (mg/L)	TN (mg/L)	SS (mg/L)
							(ppt)	(ppt)								
			Mean													
P5	Sha Chau and Lung Kwu Chau Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.34	11.83	4.55	8	8.1 - 28.7	24.6	-	0.8	0.76	0.007	0.063	0.97	9.9	
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEP	4.34	11.83	4.56	8	8.2 - 28.7	24.5	0.3%	0.8	0.76	0.007	0.063	0.96	9.9	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.33	11.87	4.56	8	8.2 - 28.7	24.6	0.1%	0.8	0.74	0.006	0.062	0.94	9.8	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	4.34	11.83	4.56	8	8.2 - 28.7	24.5	0.3%	0.8	0.76	0.007	0.063	0.96	9.9	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEP	4.29	11.65	4.54	8	8.1 - 28.7	24.6	0.2%	0.8	0.75	0.007	0.062	0.96	9.9	
P6	Sha Chau and Lung Kwu Chau Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.45	10.35	4.66	8	10.5 - 29.0	26.3	-	0.8	0.73	0.007	0.059	0.94	8.2	
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEP	4.45	10.16	4.66	8	10.6 - 28.9	26.2	0.3%	0.8	0.72	0.007	0.059	0.93	8.2	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.44	10.29	4.68	8	10.6 - 28.9	26.3	0.0%	0.8	0.71	0.006	0.058	0.92	8.1	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	4.45	10.16	4.66	8	10.6 - 28.9	26.2	0.3%	0.8	0.72	0.007	0.059	0.93	8.2	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEP	4.40	10.16	4.65	8	10.5 - 28.9	26.3	0.2%	0.8	0.72	0.007	0.058	0.93	8.2	
P7	Sha Chau and Lung Kwu Chau Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.60	8.22	4.74	2	11.4 - 29.3	27.4	-	0.7	0.64	0.006	0.053	0.84	7.7	
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEP	4.60	8.16	4.74	2	11.4 - 29.3	27.3	0.3%	0.7	0.64	0.005	0.052	0.84	7.7	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.61	8.20	4.77	2	11.4 - 29.3	27.4	0.0%	0.7	0.63	0.005	0.052	0.82	7.6	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	4.60	8.16	4.74	2	11.4 - 29.3	27.3	0.3%	0.7	0.64	0.005	0.052	0.84	7.7	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEP	4.58	8.14	4.75	2	11.4 - 29.3	27.3	0.2%	0.7	0.63	0.005	0.051	0.83	7.7	
<b>Ecological / Fisheries Resources</b>																
<b>Assessment Criteria (for Deep Bay WCZ, Inner Marine Subzone)</b>			N/A	N/A	≥ 4	N/A	±10% ambit	N/A	N/A	N/A	≤ 0.7	≤ 0.021	N/A	N/A	≤30% ambit	
E26	Mai Po Marshes SSSI	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	5.07	18.16	5.09	16	5.2 - 19.8	17.9	-	10.9	6.49	0.116	1.029	8.23	39.9	
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEP	5.06	17.98	5.09	16	5.2 - 19.6	17.7	1.0%	11.0	6.48	0.116	1.027	8.23	39.9	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	3.89	19.26	3.99	16	5.2 - 20.2	18.1	1.2%	11.0	7.36	0.153	1.106	9.16	40.5	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	5.04	18.06	5.06	16	5.2 - 19.6	17.7	1.0%	11.0	6.50	0.117	1.029	8.25	40.0	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEP	4.98	17.21	5.01	17	5.3 - 19.4	17.5	2.3%	10.9	6.47	0.117	1.038	8.38	39.0	
E27	Mai Po Inner Deep Bay Ramsar Site / Inner Deep Bay SSSI	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	5.06	0.00	5.07	28	6.1 - 21.0	19.1	-	11.0	5.85	0.116	0.703	7.77	37.3	
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEP	5.07	0.00	5.08	28	6.1 - 20.8	18.9	1.0%	11.0	5.84	0.116	0.702	7.77	37.2	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.48	0.00	4.50	27	6.2 - 21.1	19.2	0.4%	11.0	6.44	0.140	0.748	8.39	37.4	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	5.06	0.00	5.07	28	6.1 - 20.8	18.9	1.0%	11.0	5.85	0.116	0.703	7.78	37.3	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEP	5.00	0.00	5.01	27	6.2 - 20.7	18.8	1.9%	10.9	5.85	0.117	0.711	7.87	36.6	
<b>Assessment Criteria (for Deep Bay WCZ, Mariculture Subzone)</b>			N/A	N/A	≥ 5	≤ 610	±10% ambit	N/A	N/A	N/A	≤ 0.7	≤ 0.021	N/A	N/A	≤30% ambit	
E14	Ap Tsai Hang (Mangrove, Seagrass & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	5.41	3.58	5.41	11677	7.7 - 23.9	22.1	-	3.0	1.19	0.012	0.137	1.66	16.4	
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEP	5.41	3.58	5.41	11706	7.7 - 23.7	22.0	0.6%	3.0	1.18	0.012	0.137	1.66	16.3	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	5.44	3.62	5.45	11604	7.7 - 23.8	22.1	0.0%	3.0	1.20	0.013	0.138	1.67	16.3	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	5.41	3.58	5.41	11706	7.7 - 23.7	22.0	0.6%	3.0	1.18	0.012	0.137	1.66	16.3	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEP	5.41	3.55	5.42	11643	7.7 - 23.8	22.0	0.5%	3.0	1.18	0.012	0.137	1.65	16.3	
E15	Sheung Pak Nai (Mangrove, Seagrass & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	5.70	0.00	5.73	15885	7.6 - 23.0	21.6	-	4.8	1.72	0.022	0.218	2.45	21.9	
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEP	5.70	0.00	5.72	15888	7.6 - 22.9	21.4	0.8%	4.9	1.71	0.022	0.217	2.45	21.8	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	5.75	0.00	5.76	15838	7.6 - 23.0	21.6	0.2%	4.8	1.78	0.023	0.222	2.51	21.8	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	5.70	0.00	5.72	15888	7.6 - 22.9	21.4	0.8%	4.9	1.71	0.022	0.217	2.45	21.8	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEP	5.70	0.00	5.72	15852	7.6 - 22.9	21.5	0.7%	4.9	1.72	0.022	0.219	2.46	21.8	
E24	Oyster Culture Area	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	5.20	7.81	5.21	43	7.4 - 22.6	21.3	-	5.0	2.41	0.036	0.281	3.24	23.5	
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEP	5.21	7.72	5.22	43	7.4 - 22.5	21.2	0.8%	5.0	2.40	0.036	0.280	3.24	23.4	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	5.16	7.87	5.17	41	7.4 - 22.6	21.3	0.2%	5.0	2.52	0.040	0.288	3.36	23.4	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	5.20	7.72	5.21	43	7.4 - 22.5	21.2	0.8%	5.0	2.40	0.036	0.280	3.25	23.4	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEP	5.19	7.66	5.20	43	7.4 - 22.5	21.2	0.9%	5.0	2.41	0.037	0.283	3.27	23.4	
<b>Assessment Criteria (Coral in Outer Deep Bay WCZ)</b>			≥ 2	≤ 200	≥ 4	N/A	±10% ambit	N/A	N/A	N/A	≤ 0.5	≤ 0.021	N/A	N/A	≤30% ambit	
E12	Lung Kwu Sheung Tan (Coral Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.29	10.76	4.53	48	9.1 - 30.1	25.4	-	0.9	0.78	0.008	0.073	1.01	10.3	
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEP	4.29	10.64	4.53	49	9.0 - 30.0	25.4	0.3%	0.9	0.77	0.008	0.072	1.01	10.3	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.28	10.67	4.55	47	9.1 - 30.0	25.5	0.1%	0.9	0.76	0.008	0.072	0.99	10.1	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	4.29	10.64	4.53	49	9.0 - 30.0	25.4	0.3%	0.9	0.77	0.008	0.072	1.01	10.3	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEP	4.25	10.71	4.53	48	9.0 - 30.0	25.4	0.2%	0.9	0.77	0.008	0.072	1.00	10.2	

Remark: The annual mean results presented in this Appendix 5.7 should not be used for assessing the impacts of the short-term maintenance or emergency discharge

**Operational Phase Water Quality at Ecological Resources and Observation Points - Annual**

Note: Shaded and Bolded - value exceeded the WSD criteria  
N/A - Not Available

ID (index_E_wet: Figure 3.2)	Indicator Point	Scenario	Bottom		Depth Averaged										
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)	10%ile DO (mg/L)	GM E.coli (no./100mL)	Range (min. - max.) (ppt)	Mean Salinity (ppt)	Change %	Mean					
										BOD <sub>5</sub> (mg/L)	TIN (mg/L)	UJA (mg/L)	TP (mg/L)	TN (mg/L)	SS (mg/L)
E13	Tsang Tsui (Coral & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.69	13.40	4.92	798	7.7 - 27.2	23.0	-	1.5	<b>0.95</b>	0.009	0.091	1.25	12.6
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.70	13.17	4.92	807	7.7 - 27.1	22.9	0.5%	1.5	<b>0.95</b>	0.009	0.091	1.24	12.5
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.70	13.24	4.95	781	7.7 - 27.1	23.1	0.1%	1.5	<b>0.94</b>	0.009	0.091	1.24	12.4
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.70	13.18	4.92	807	7.7 - 27.1	22.9	0.5%	1.5	<b>0.95</b>	0.009	0.091	1.24	12.5
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.66	13.28	4.92	796	7.7 - 27.1	23.0	0.3%	1.5	<b>0.94</b>	0.009	0.091	1.24	12.5
<b>Mangrove</b>															
<b>Assessment Criteria (for Deep Bay WCZ, Inner Marine Subzone)</b>			N/A	N/A	≥ 4	N/A	N/A	N/A	N/A	N/A	≤ 0.7	≤ 0.021	N/A	N/A	N/A
E25	Mangrove (Inner Deep Bay)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.53	18.99	4.56	20	6.1 - 20.8	18.9	-	9.8	<b>5.70</b>	<b>0.104</b>	0.766	7.31	35.9
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.53	18.79	4.57	20	6.1 - 20.6	18.7	1.0%	9.9	<b>5.69</b>	<b>0.104</b>	0.764	7.32	35.9
		Scenario 3 - 12 days maintenance of NWNT Tunnel	3.17	19.77	<b>3.20</b>	19	6.2 - 20.9	19.1	0.9%	9.9	<b>6.49</b>	<b>0.137</b>	0.831	8.16	36.4
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.52	18.85	4.54	20	6.1 - 20.6	18.7	1.0%	9.9	<b>5.71</b>	<b>0.105</b>	0.766	7.33	35.9
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.48	18.29	4.51	21	6.3 - 20.5	18.5	2.2%	9.8	<b>5.68</b>	<b>0.105</b>	0.775	7.45	35.1
<b>Assessment Criteria (for Deep Bay WCZ, Yuen Long &amp; Kam Tin (Lower) Subzone)</b>			N/A	N/A	≥4 (min)	≤ 1,000	N/A	N/A	N/A	≤ 5.0	N/A	≤ 0.021	N/A	N/A	N/A
E28	Mangrove (along Shan Pui River)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	3.05	0.00	<b>2.87</b>	88	5.5 - 19.3	15.2	-	<b>10.7</b>	7.56	<b>0.112</b>	1.194	9.05	34.9
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	3.03	0.00	<b>2.85</b>	89	5.5 - 19.1	15.1	0.8%	<b>10.8</b>	7.56	<b>0.112</b>	1.193	9.05	35.0
		Scenario 3 - 12 days maintenance of NWNT Tunnel	2.48	0.00	<b>1.61</b>	87	5.6 - 20.0	15.4	1.2%	<b>10.8</b>	8.20	<b>0.138</b>	1.257	9.73	35.4
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	3.03	0.00	<b>2.85</b>	89	5.5 - 19.1	15.1	0.8%	<b>10.8</b>	7.57	<b>0.112</b>	1.195	9.06	35.0
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	3.03	0.00	<b>2.87</b>	88	5.5 - 18.9	14.9	2.3%	<b>10.7</b>	7.55	<b>0.112</b>	1.198	9.15	34.1

Remark: The annual mean results presented in this Appendix 5.7 should not be used for assessing the impacts of the short-term maintenance or emergency discharge



Operational Phase Water Quality at EPD Routine Monitoring Stations - Annual

Note: Shaded and Bolded - value exceeded the WSD criteria  
 N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Bottom			Depth Averaged																			
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)	10%ile DO (mg/L)	GM E.coli (no./100mL)	Range (min. - max.)		Mean Salinity (ppt)	Change %	Mean														
							(ppt)	(ppt)			BOD <sub>5</sub> (mg/L)	TIN (mg/L)	UIA (mg/L)	TP (mg/L)	TN (mg/L)	SS (mg/L)									
<b>EPD Routine Monitoring Stations</b>																									
<b>Assessment Criteria (For North Western WCZ)</b>													≥ 2	N/A	≥ 4	N/A	±10% ambit	N/A	N/A	N/A	≤ 0.5	≤ 0.021	N/A	N/A	≤ 30% ambit
NM1	EPD Routine Monitoring Station - NM1	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.25	31.51	4.40	7	20.0 - 32.7	29.1	-	0.4	0.52	0.008	0.046	0.72	4.6										
Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.30	31.27	4.39	7	20.1 - 32.7	29.1	0.0%	0.4	0.52	0.008	0.045	0.72	4.6											
Scenario 3 - 12 days maintenance of NWNT Tunnel		4.25	31.32	4.36	7	20.1 - 32.7	29.1	0.2%	0.4	0.51	0.008	0.047	0.70	4.5											
Scenario 4 - 2hr Emergency Discharge from HSKEPP		4.30	31.28	4.39	7	20.1 - 32.7	29.1	0.0%	0.4	0.52	0.008	0.045	0.72	4.6											
Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.29	31.33	4.39	7	20.1 - 32.7	29.1	0.0%	0.4	0.51	0.008	0.045	0.72	4.6											
NM2	EPD Routine Monitoring Station - NM2	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.28	32.75	4.45	7	16.9 - 32.6	26.8	-	0.5	0.58	0.008	0.049	0.78	5.2										
Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.31	32.61	4.45	7	16.9 - 32.6	26.7	0.1%	0.5	0.58	0.008	0.048	0.78	5.2											
Scenario 3 - 12 days maintenance of NWNT Tunnel		4.28	32.63	4.44	7	16.9 - 32.6	26.8	0.3%	0.5	0.57	0.008	0.049	0.76	5.2											
Scenario 4 - 2hr Emergency Discharge from HSKEPP		4.31	32.61	4.45	7	16.9 - 32.6	26.7	0.1%	0.5	0.58	0.008	0.048	0.78	5.2											
Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.30	32.72	4.44	7	16.9 - 32.6	26.8	0.0%	0.5	0.57	0.008	0.048	0.78	5.2											
NM3	EPD Routine Monitoring Station - NM3	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.26	38.45	4.43	9	15.0 - 31.7	25.6	-	0.6	0.62	0.008	0.053	0.82	6.0										
Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.29	38.26	4.42	9	15.0 - 31.7	25.6	0.1%	0.6	0.61	0.008	0.052	0.82	6.0											
Scenario 3 - 12 days maintenance of NWNT Tunnel		4.26	38.20	4.41	9	15.0 - 31.7	25.7	0.3%	0.6	0.60	0.007	0.052	0.80	5.9											
Scenario 4 - 2hr Emergency Discharge from HSKEPP		4.29	38.26	4.42	9	15.0 - 31.7	25.6	0.1%	0.6	0.61	0.008	0.052	0.82	6.0											
Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.28	38.35	4.42	9	15.0 - 31.7	25.6	0.0%	0.6	0.61	0.008	0.051	0.82	6.0											
NM5	EPD Routine Monitoring Station - NM5	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.23	63.76	4.45	16	11.4 - 30.7	23.2	-	0.7	0.69	0.008	0.060	0.90	7.7										
Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.25	63.72	4.45	16	11.4 - 30.7	23.2	0.1%	0.7	0.69	0.008	0.059	0.90	7.7											
Scenario 3 - 12 days maintenance of NWNT Tunnel		4.23	63.52	4.45	15	11.4 - 30.7	23.3	0.4%	0.7	0.67	0.007	0.059	0.88	7.6											
Scenario 4 - 2hr Emergency Discharge from HSKEPP		4.25	63.72	4.45	16	11.4 - 30.7	23.2	0.1%	0.7	0.69	0.008	0.059	0.90	7.7											
Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.22	62.48	4.43	16	11.4 - 30.7	23.2	0.1%	0.7	0.68	0.008	0.058	0.89	7.7											
NM6	EPD Routine Monitoring Station - NM6	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	3.93	69.29	4.86	1	15.1 - 29.2	22.9	-	0.6	0.58	0.005	0.039	0.76	5.2										
Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP		3.85	71.49	4.85	1	15.2 - 29.1	22.8	0.2%	0.6	0.58	0.005	0.039	0.76	5.2											
Scenario 3 - 12 days maintenance of NWNT Tunnel		3.93	72.03	4.89	1	15.2 - 29.1	22.9	0.0%	0.6	0.57	0.005	0.039	0.74	5.2											
Scenario 4 - 2hr Emergency Discharge from HSKEPP		3.85	71.49	4.85	1	15.2 - 29.1	22.8	0.2%	0.6	0.58	0.005	0.039	0.76	5.2											
Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP		3.92	70.11	4.85	1	15.2 - 29.1	22.8	0.0%	0.6	0.57	0.005	0.039	0.75	5.2											
NM8	EPD Routine Monitoring Station - NM8	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.24	99.55	4.57	1	15.1 - 31.5	24.3	-	0.5	0.51	0.004	0.047	0.69	7.4										
Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.27	103.30	4.57	1	15.1 - 31.5	24.3	0.1%	0.5	0.51	0.004	0.045	0.69	7.3											
Scenario 3 - 12 days maintenance of NWNT Tunnel		4.24	104.20	4.57	1	15.1 - 31.5	24.3	0.1%	0.5	0.50	0.004	0.046	0.68	7.3											
Scenario 4 - 2hr Emergency Discharge from HSKEPP		4.27	103.30	4.57	1	15.1 - 31.5	24.3	0.1%	0.5	0.51	0.004	0.045	0.69	7.3											
Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.23	102.67	4.56	1	15.2 - 31.5	24.3	0.0%	0.5	0.50	0.004	0.044	0.69	7.4											
<b>Assessment Criteria (For Deep Bay WCZ, Inner Marine Subzone)</b>													≥ 2	N/A	≥ 4	N/A	±10% ambit	N/A	N/A	N/A	≤ 0.7	≤ 0.021	N/A	N/A	≤ 30% ambit
DM1	EPD Routine Monitoring Station - DM1	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	3.64	90.81	4.39	55	6.5 - 21.7	13.5	-	8.7	4.91	0.092	0.580	6.37	32.5										
Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.37	90.57	4.39	56	6.5 - 21.6	13.4	1.0%	8.7	4.91	0.092	0.579	6.37	32.4											
Scenario 3 - 12 days maintenance of NWNT Tunnel		3.64	94.08	3.65	53	6.5 - 21.7	13.7	1.3%	8.8	5.46	0.114	0.623	6.96	32.8											
Scenario 4 - 2hr Emergency Discharge from HSKEPP		4.35	90.57	4.38	56	6.5 - 21.6	13.4	0.7%	8.7	4.92	0.093	0.580	6.38	32.5											
Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.34	91.51	4.36	60	6.6 - 21.5	13.3	1.1%	8.7	4.91	0.093	0.588	6.47	31.9											
DM2	EPD Routine Monitoring Station - DM2	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	3.62	58.72	3.89	1033	6.0 - 22.5	14.1	-	7.6	4.11	0.080	0.447	5.35	28.6										
Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP		3.87	58.59	3.89	1034	6.0 - 22.3	14.0	0.7%	7.6	4.10	0.080	0.447	5.35	28.6											
Scenario 3 - 12 days maintenance of NWNT Tunnel		3.62	59.44	3.63	989	6.0 - 22.5	14.1	0.3%	7.5	4.33	0.089	0.462	5.57	28.6											
Scenario 4 - 2hr Emergency Discharge from HSKEPP		3.87	58.62	3.88	1034	6.0 - 22.3	14.0	0.7%	7.6	4.11	0.081	0.447	5.35	28.6											
Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP		3.84	58.89	3.86	1025	6.1 - 22.4	14.0	0.7%	7.6	4.12	0.082	0.451	5.39	28.5											
DM3	EPD Routine Monitoring Station - DM3	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.69	64.14	4.74	57	7.1 - 23.7	15.1	-	3.3	1.80	0.026	0.194	2.36	18.1										
Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.72	63.37	4.74	57	7.1 - 23.5	15.0	0.5%	3.3	1.79	0.026	0.194	2.36	18.1											
Scenario 3 - 12 days maintenance of NWNT Tunnel		4.69	63.79	4.71	54	7.1 - 23.6	15.2	0.3%	3.2	1.85	0.027	0.197	2.41	18.0											
Scenario 4 - 2hr Emergency Discharge from HSKEPP		4.72	63.38	4.74	57	7.1 - 23.5	15.0	0.5%	3.3	1.79	0.026	0.194	2.36	18.1											
Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.72	63.87	4.73	56	7.1 - 23.6	15.1	0.4%	3.3	1.79	0.026	0.195	2.36	18.1											
<b>Assessment Criteria (For Deep Bay WCZ, Outer Marine Subzone)</b>													≥ 2	N/A	≥ 4	N/A	±10% ambit	N/A	N/A	N/A	≤ 0.5	≤ 0.021	N/A	N/A	≤ 30% ambit
DM4	EPD Routine Monitoring Station - DM4	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.51	80.34	4.84	27	6.7 - 25.0	15.7	-	1.9	1.20	0.014	0.120	1.56	14.3										
Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.53	87.52	4.83	27	6.7 - 24.9	15.6	0.5%	2.0	1.19	0.013	0.120	1.56	14.3											
Scenario 3 - 12 days maintenance of NWNT Tunnel		4.51	89.89	4.84	26	6.7 - 24.9	15.8	0.4%	1.9	1.21	0.014	0.120	1.57	14.2											
Scenario 4 - 2hr Emergency Discharge from HSKEPP		4.53	87.52	4.83	27	6.7 - 24.9	15.6	0.5%	2.0	1.19	0.013	0.120	1.56	14.3											
Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.49	87.25	4.83	26	6.7 - 24.9	15.7	0.3%	1.9	1.19	0.014	0.120	1.56	14.2											
DM5	EPD Routine Monitoring Station - DM5	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.31	85.20	4.59	19	6.6 - 29.0	18.9	-	0.9	0.80	0.008	0.068	1.02	10.0										
Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.31	87.73	4.59	19	6.7 - 28.9	18.9	0.2%	0.9	0.79	0.008	0.068	1.02	10.0											
Scenario 3 - 12 days maintenance of NWNT Tunnel		4.31	87.78	4.61	18	6.7 - 28.9	19.0	0.4%	0.9	0.78	0.007	0.067	1.00	9.9											
Scenario 4 - 2hr Emergency Discharge from HSKEPP		4.31	87.73	4.59	19	6.7 - 28.9	18.9	0.2%	0.9	0.79	0.008	0.068	1.02	10.0											
Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP		4.27	86.24	4.58	18	6.6 - 28.9	18.9	0.1%	0.9	0.79	0.008	0.067	1.01	10.0											

Remark: The annual mean results presented in this Appendix 5.7 should not be used for assessing the impacts of the short-term maintenance or emergency discharge

## Operational Phase Water Quality at Seawater Intakes - Dry Season

Note: Shaded and Bolded - value exceeded the WSD criteria  
N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Mid-Depth						
			Maximum						Minimum
			UIA (mg/L)	Total P (mg/L)	<i>E. coli</i> (no./100mL)	NH <sub>3</sub> -N (mg/L)	SS (mg/L)	BOD <sub>5</sub> (mg/L)	DO (mg/L)
<b>WSD Saltwater Intakes</b>									
<b>Assessment Criteria</b>									
C5	Tuen Mun (WSD)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.007	0.072	572	0.288	9.01	0.63	6.33
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.007	0.073	574	0.287	8.95	0.64	6.34
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.007	0.077	586	0.280	8.93	0.64	6.33
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.007	0.073	574	0.287	8.95	0.64	6.34
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.007	0.072	572	0.287	8.97	0.64	6.34
C6	Lok On Pa (WSD)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.007	0.070	68	0.289	8.73	0.53	6.31
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.007	0.071	68	0.289	8.70	0.53	6.31
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.007	0.076	70	0.286	8.68	0.52	6.31
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.007	0.071	68	0.289	8.70	0.53	6.31
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.007	0.070	68	0.289	8.69	0.54	6.32
C11	Tung Chung	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.006	0.077	3,084	0.237	10.75	1.58	7.44
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.006	0.078	3,082	0.235	10.77	1.62	7.46
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.006	0.080	3,126	0.235	10.75	1.62	7.40
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.006	0.078	3,082	0.235	10.77	1.62	7.46
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.006	0.077	3,084	0.235	10.76	1.62	7.47
C14	Sunny Bay (WSD)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.008	0.075	173	0.311	9.66	0.69	6.36
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.008	0.075	174	0.311	9.59	0.71	6.36
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.008	0.078	174	0.309	9.57	0.70	6.34
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.008	0.075	174	0.311	9.59	0.71	6.36
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.008	0.075	173	0.311	9.60	0.71	6.37
C19	Near Butterfly Beach	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.007	0.071	92	0.285	8.75	0.55	6.42
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.007	0.071	93	0.284	8.69	0.56	6.42
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.007	0.074	96	0.278	8.67	0.55	6.40
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.007	0.071	93	0.284	8.69	0.56	6.42
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.007	0.071	92	0.284	8.71	0.56	6.43
C20	Near LRT Terminus	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.007	0.072	924	0.287	8.99	0.72	6.36
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.007	0.072	940	0.286	8.94	0.74	6.36
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.007	0.077	950	0.280	8.92	0.73	6.35
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.007	0.072	940	0.286	8.94	0.74	6.36
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.007	0.072	924	0.286	8.95	0.73	6.36
<b>Cooling Water / Seawater Intakes</b>									
<b>Assessment Criteria</b>									
C2	CLP Black Point Power Station	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.011	0.149	1,245	0.446	19.62	2.08	6.40
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.011	0.150	1,252	0.445	19.52	2.13	6.41
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.012	0.152	1,272	0.475	19.51	2.12	6.41
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.011	0.150	1,252	0.445	19.52	2.13	6.41
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.011	0.149	1,245	0.449	19.50	2.13	6.41

## Operational Phase Water Quality at Seawater Intakes - Dry Season

Note: Shaded and Bolded - value exceeded the WSD criteria  
N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Mid-Depth						
			Maximum						Minimum
			UIA (mg/L)	Total P (mg/L)	<i>E.coli</i> (no./100mL)	NH <sub>3</sub> -N (mg/L)	SS (mg/L)	BOD <sub>5</sub> (mg/L)	DO (mg/L)
C3	Castle Peak Power Station	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.007	0.088	89	0.299	12.45	0.78	6.32
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.007	0.088	92	0.297	12.35	0.79	6.33
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.007	0.090	95	0.290	12.32	0.78	6.33
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.007	0.088	92	0.297	12.35	0.79	6.33
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.007	0.088	89	0.297	12.37	0.79	6.33
<b>Cooling Water / Seawater Intakes</b>									
<b>Assessment Criteria</b>									
C1	Future Sludge Treatment Facilities	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.012	0.176	11,426	0.510	21.88	3.00	6.62
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.012	0.177	11,455	0.509	21.77	3.06	6.63
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.013	0.180	11,564	0.556	21.75	3.05	6.63
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.012	0.177	11,455	0.509	21.77	3.06	6.63
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.012	0.176	11,452	0.515	21.74	3.07	6.63
C4	Shiu Wing Steel Mills	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.007	0.087	91	0.301	12.37	0.77	6.32
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.007	0.088	85	0.299	12.30	0.78	6.32
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.007	0.090	91	0.293	12.26	0.77	6.32
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.007	0.088	85	0.299	12.30	0.78	6.32
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.007	0.087	89	0.299	12.29	0.78	6.33
C7	Future Airport (East)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.008	0.084	87	0.302	12.11	0.73	6.41
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.008	0.084	86	0.302	12.05	0.74	6.41
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.008	0.085	87	0.301	12.02	0.73	6.39
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.008	0.084	86	0.302	12.05	0.74	6.41
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.008	0.084	87	0.301	12.03	0.74	6.41
C8	Airport (North)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.008	0.082	88	0.300	11.74	0.71	6.43
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.008	0.083	88	0.300	11.67	0.72	6.43
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.007	0.083	88	0.300	11.64	0.72	6.41
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.008	0.083	88	0.300	11.67	0.72	6.43
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.008	0.082	88	0.299	11.66	0.72	6.44
C9	Airport (South)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.006	0.083	1,598	0.246	11.22	1.77	7.62
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.006	0.084	1,599	0.244	11.24	1.80	7.65
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.006	0.085	1,641	0.246	11.23	1.80	7.56
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.006	0.084	1,599	0.244	11.24	1.80	7.65
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.006	0.083	1,600	0.243	11.23	1.81	7.64
C10	Future HKBCF	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.008	0.079	75	0.301	10.97	0.68	6.41
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.008	0.079	75	0.301	10.82	0.69	6.41
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.008	0.080	76	0.300	10.88	0.69	6.39
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.008	0.079	75	0.301	10.82	0.69	6.41
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.008	0.079	75	0.300	10.84	0.70	6.41

## Operational Phase Water Quality at Seawater Intakes - Dry Season

Note: Shaded and Bolded - value exceeded the WSD criteria

N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Mid-Depth						
			Maximum						Minimum
			UIA (mg/L)	Total P (mg/L)	<i>E.coli</i> (no./100mL)	NH <sub>3</sub> -N (mg/L)	SS (mg/L)	BOD <sub>5</sub> (mg/L)	DO (mg/L)
C12	Future Tung Chung East	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.007	0.075	535	0.277	10.19	1.25	6.77
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.007	0.075	536	0.276	10.19	1.28	6.78
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.007	0.077	551	0.274	10.18	1.28	6.77
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.007	0.075	536	0.277	10.19	1.28	6.78
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.007	0.075	535	0.277	10.18	1.29	6.78
C15	Future Sunny Bay Development	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.007	0.071	76	0.299	8.98	0.59	6.36
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.007	0.072	76	0.299	8.94	0.60	6.36
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.007	0.077	76	0.296	8.92	0.59	6.33
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.007	0.072	76	0.299	8.94	0.60	6.36
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.007	0.071	76	0.299	8.94	0.60	6.36
C18	China Cement Plant	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.007	0.083	91	0.297	11.75	0.73	6.35
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.007	0.084	93	0.296	11.69	0.74	6.35
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.007	0.088	96	0.291	11.66	0.72	6.35
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.007	0.084	93	0.296	11.69	0.74	6.35
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.007	0.083	90	0.296	11.67	0.74	6.35

**Operational Phase Water Quality at Bathing Beaches, Typhoon Shelter and Estuary - Dry Season**

Note: Shaded and Bolded - value exceeded the WSD criteria  
 N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Bottom		10%ile DO (mg/L)	GM <i>E.coli</i> (no./100mL)	Depth Averaged			Mean							
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)			Range (min. - max.) (ppt)	Mean (ppt)	Change (%)	BOD <sub>5</sub> (mg/L)	TIN (mg/L)	UJA (mg/L)	TP (mg/L)	TN (mg/L)	SS (mg/L)		
			Salinity														
<b>Beaches</b>																	
<b>Assessment Criteria (for North Western WCZ)</b>																	
B1	Butterfly	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.37	7.01	6.43	91	29.0 - 31.5	30.2	-	0.5	0.71	0.007	0.064	0.93	7.5		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.37	6.96	6.43	91	28.9 - 31.5	30.1	0.1%	0.5	0.71	0.007	0.064	0.93	7.4		
		Scenario 3 - 12 days maintenance of NWN T Tunnel	6.37	6.96	6.43	92	28.9 - 31.5	30.2	0.1%	0.4	0.70	0.006	0.066	0.91	7.4		
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.37	6.96	6.43	91	28.9 - 31.5	30.1	0.1%	0.5	0.71	0.007	0.064	0.93	7.4		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.37	6.96	6.43	91	28.9 - 31.5	30.1	0.1%	0.5	0.70	0.007	0.064	0.93	7.4		
B2	Gazetted Beaches at Tuen Mun	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.38	4.73	6.43	58	29.2 - 31.6	30.3	-	0.5	0.70	0.007	0.066	0.93	7.7		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.39	4.68	6.43	60	29.2 - 31.6	30.3	0.1%	0.5	0.70	0.007	0.066	0.93	7.7		
		Scenario 3 - 12 days maintenance of NWN T Tunnel	6.38	4.70	6.42	60	29.2 - 31.6	30.3	0.1%	0.4	0.69	0.006	0.067	0.91	7.6		
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.39	4.68	6.43	60	29.2 - 31.6	30.3	0.1%	0.5	0.70	0.007	0.066	0.93	7.7		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.39	4.68	6.43	58	29.2 - 31.6	30.3	0.1%	0.5	0.70	0.007	0.066	0.93	7.7		
B3	Golden Beach	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.37	5.06	6.42	49	29.3 - 31.6	30.3	-	0.4	0.70	0.007	0.065	0.93	7.7		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.37	4.99	6.42	51	29.3 - 31.6	30.3	0.1%	0.5	0.70	0.007	0.066	0.93	7.7		
		Scenario 3 - 12 days maintenance of NWN T Tunnel	6.36	5.01	6.42	51	29.3 - 31.6	30.3	0.1%	0.4	0.69	0.006	0.067	0.91	7.6		
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.37	4.99	6.42	51	29.3 - 31.6	30.3	0.1%	0.5	0.70	0.007	0.066	0.93	7.7		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.37	5.01	6.42	49	29.2 - 31.6	30.3	0.1%	0.5	0.70	0.007	0.065	0.93	7.7		
<b>Typhoon Shelter</b>																	
<b>Assessment Criteria (for North Western WCZ)</b>																	
T1	Tuen Mun	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	7.13	5.55	7.30	1151	29.6 - 30.7	30.1	-	1.0	0.66	0.005	0.060	0.93	7.4		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	7.11	5.50	7.30	1152	29.5 - 30.7	30.1	0.1%	1.0	0.66	0.005	0.061	0.94	7.4		
		Scenario 3 - 12 days maintenance of NWN T Tunnel	7.07	5.52	7.25	1160	29.5 - 30.7	30.1	0.0%	0.9	0.66	0.005	0.062	0.92	7.2		
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	7.11	5.50	7.30	1152	29.5 - 30.7	30.1	0.1%	1.0	0.66	0.005	0.061	0.94	7.4		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	7.11	5.51	7.29	1151	29.5 - 30.7	30.1	0.1%	1.0	0.66	0.005	0.061	0.94	7.3		
<b>Tai O Estuary</b>																	
<b>Assessment Criteria (for North Western Supplementary WCZ)</b>																	
S1	Tai O	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	7.10	7.84	7.19	300	26.9 - 30.9	29.1	-	0.5	0.58	0.004	0.051	0.78	8.4		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	7.11	7.75	7.20	301	26.8 - 30.9	29.0	0.2%	0.5	0.58	0.004	0.052	0.78	8.4		
		Scenario 3 - 12 days maintenance of NWN T Tunnel	7.10	7.80	7.18	304	26.8 - 30.9	29.1	0.0%	0.5	0.57	0.003	0.053	0.76	8.3		
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	7.11	7.75	7.20	301	26.8 - 30.9	29.0	0.2%	0.5	0.58	0.004	0.052	0.78	8.4		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	7.10	7.78	7.20	300	26.8 - 30.9	29.0	0.1%	0.5	0.57	0.004	0.051	0.78	8.4		

**Operational Phase Water Quality at Ecological Resources and Observation Points - Dry Season**

Note: Shaded and Bolded - value exceeded the WSD criteria

N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Bottom			Depth Averaged										
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)	10%ile DO (mg/L)	GM E.coli (no./100mL)	Range (min. - max.)		Mean Salinity (ppt)	Change (%)	BOD <sub>5</sub> (mg/L)	TIN (mg/L)	UIA (mg/L)	TP (mg/L)	TN (mg/L)	SS (mg/L)
							(ppt)	(ppt)								
<b>Ecological Resources</b>																
<b>Assessment Criteria (Corals in North Western WCZ)</b>																
E3	Sham Shui Kok (Coral Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.41	7.71	6.43	22	27.0 - 32.0	29.7	-	0.5	0.72	0.007	0.064	0.95	7.8	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEP	6.40	7.52	6.43	22	27.0 - 32.0	29.7	0.1%	0.5	0.72	0.007	0.065	0.94	7.8	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.40	7.61	6.43	22	27.0 - 32.0	29.8	0.1%	0.5	0.72	0.007	0.066	0.93	7.7	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	6.40	7.52	6.43	22	27.0 - 32.0	29.7	0.1%	0.5	0.72	0.007	0.065	0.94	7.8	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEP	6.41	7.58	6.43	22	27.0 - 32.0	29.7	0.1%	0.5	0.72	0.007	0.064	0.94	7.8	
E4	The Brothers (Coral Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.42	8.00	6.45	17	27.0 - 31.9	29.5	-	0.5	0.73	0.007	0.066	0.96	8.1	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEP	6.42	7.95	6.44	17	27.0 - 31.9	29.5	0.1%	0.5	0.73	0.007	0.066	0.96	8.0	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.41	7.97	6.44	17	27.0 - 31.9	29.6	0.1%	0.5	0.73	0.007	0.067	0.94	8.0	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	6.42	7.95	6.44	17	27.0 - 31.9	29.5	0.1%	0.5	0.73	0.007	0.066	0.96	8.0	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEP	6.42	7.93	6.46	17	27.0 - 31.9	29.5	0.1%	0.5	0.73	0.007	0.066	0.95	8.0	
E6	Tung Chung East (Coral Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.70	6.72	6.74	3	26.9 - 29.5	28.4	-	0.6	0.78	0.006	0.067	1.00	8.6	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEP	6.71	6.66	6.74	3	26.9 - 29.4	28.3	0.1%	0.6	0.77	0.006	0.067	0.99	8.5	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.72	6.68	6.74	3	26.9 - 29.5	28.4	0.0%	0.5	0.77	0.006	0.068	0.98	8.5	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	6.71	6.66	6.74	3	26.9 - 29.4	28.3	0.1%	0.6	0.77	0.006	0.067	0.99	8.5	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEP	6.72	6.66	6.75	3	26.9 - 29.5	28.3	0.1%	0.6	0.77	0.006	0.067	0.99	8.5	
E7	Tung Chung (Coral Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	7.50	7.71	7.54	116	27.3 - 29.2	28.4	-	1.0	0.72	0.005	0.068	0.99	9.5	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEP	7.53	7.57	7.56	115	27.2 - 29.2	28.4	0.2%	1.0	0.71	0.005	0.068	0.99	9.4	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	7.49	7.66	7.52	115	27.2 - 29.2	28.4	0.1%	1.0	0.72	0.005	0.069	0.98	9.3	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	7.53	7.57	7.56	115	27.2 - 29.2	28.4	0.2%	1.0	0.71	0.005	0.068	0.99	9.4	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEP	7.53	7.58	7.56	116	27.2 - 29.2	28.4	0.2%	1.0	0.71	0.005	0.068	0.99	9.4	
<b>Assessment Criteria (for North Western WCZ)</b>																
E2	Yan O Wan (Mangrove, Seagrass & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.80	5.19	6.79	2	29.2 - 30.9	30.1	-	0.4	0.70	0.006	0.059	0.91	6.9	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEP	6.81	5.14	6.80	2	29.1 - 30.9	30.1	0.1%	0.4	0.69	0.006	0.059	0.91	6.8	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.80	5.16	6.78	2	29.1 - 30.9	30.1	0.0%	0.4	0.69	0.006	0.060	0.89	6.8	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	6.81	5.14	6.80	2	29.1 - 30.9	30.1	0.1%	0.4	0.69	0.006	0.059	0.91	6.8	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEP	6.81	5.15	6.80	2	29.1 - 30.9	30.1	0.1%	0.4	0.69	0.006	0.059	0.91	6.8	
E5	Tai Ho Wan and Tai Ho Stream SSSI (Mangrove, Seagrass & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	9.13	5.52	9.18	1	28.1 - 29.0	28.5	-	3.0	0.46	0.002	0.066	0.95	12.1	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEP	9.12	5.46	9.18	1	28.0 - 28.9	28.5	0.2%	3.1	0.45	0.002	0.067	0.95	12.2	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	9.05	5.50	9.10	1	28.0 - 29.0	28.5	0.2%	3.0	0.46	0.002	0.067	0.95	12.1	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	9.12	5.46	9.18	1	28.0 - 28.9	28.5	0.2%	3.1	0.45	0.002	0.067	0.95	12.2	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEP	9.12	5.44	9.17	1	28.0 - 28.9	28.5	0.2%	3.0	0.45	0.002	0.066	0.95	12.1	
E8	Tung Chung Wan and San Tau Beach SSSI (Mangrove, Seagrass & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	7.72	0.00	7.72	4305	27.3 - 29.2	28.4	-	2.3	0.80	0.007	0.105	1.21	11.8	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEP	7.75	0.00	7.76	4313	27.3 - 29.1	28.4	0.2%	2.3	0.79	0.007	0.105	1.21	11.8	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	7.66	0.00	7.67	4444	27.3 - 29.2	28.4	0.2%	2.2	0.80	0.007	0.106	1.21	11.6	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	7.75	0.00	7.76	4313	27.3 - 29.1	28.4	0.2%	2.3	0.79	0.007	0.105	1.21	11.8	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEP	7.76	0.00	7.77	4308	27.3 - 29.2	28.4	0.1%	2.3	0.79	0.006	0.105	1.21	11.8	
E9	Hau Hok Wan (Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	8.04	5.33	8.04	188	27.3 - 29.1	28.4	-	1.4	0.68	0.004	0.073	1.01	10.4	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEP	8.07	5.28	8.07	189	27.3 - 29.1	28.3	0.2%	1.4	0.68	0.004	0.073	1.00	10.4	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	7.99	5.31	7.99	194	27.3 - 29.1	28.3	0.2%	1.3	0.69	0.004	0.074	1.00	10.2	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	8.07	5.28	8.07	189	27.3 - 29.1	28.3	0.2%	1.4	0.68	0.004	0.073	1.00	10.4	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEP	8.08	5.27	8.07	188	27.3 - 29.1	28.3	0.2%	1.4	0.68	0.004	0.073	1.00	10.4	
E10	Sha Chau and Lung Kwu Chau Marine Park / Lung Kwu Chau, Tree Island and Sha Chau SSSI A	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.59	10.77	6.65	22	22.6 - 28.4	25.9	-	0.7	0.87	0.006	0.080	1.10	11.7	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEP	6.60	10.68	6.66	22	22.5 - 28.3	25.8	0.3%	0.7	0.86	0.006	0.080	1.09	11.6	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.61	10.81	6.67	22	22.5 - 28.3	25.9	0.0%	0.7	0.86	0.006	0.080	1.08	11.5	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	6.60	10.68	6.66	22	22.5 - 28.3	25.8	0.3%	0.7	0.86	0.006	0.080	1.09	11.6	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEP	6.59	10.64	6.66	22	22.5 - 28.3	25.9	0.2%	0.7	0.86	0.006	0.079	1.09	11.6	
E11	Sha Chau and Lung Kwu Chau Marine Park / Lung Kwu Chau, Tree Island and Sha Chau SSSI B	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.41	10.66	6.46	52	22.0 - 30.3	26.2	-	0.7	0.88	0.007	0.081	1.12	11.5	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEP	6.41	10.60	6.47	52	21.9 - 30.3	26.1	0.3%	0.7	0.88	0.007	0.082	1.12	11.5	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.42	10.64	6.48	52	21.9 - 30.3	26.2	0.1%	0.7	0.87	0.007	0.082	1.10	11.3	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	6.41	10.60	6.47	52	21.9 - 30.3	26.1	0.3%	0.7	0.88	0.007	0.082	1.12	11.5	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEP	6.41	10.31	6.48	52	21.9 - 30.3	26.1	0.2%	0.7	0.88	0.007	0.081	1.11	11.4	
E16	Sha Lo Wan (Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	7.69	6.72	7.64	92	27.4 - 29.1	28.4	-	1.2	0.68	0.004	0.070	0.97	10.1	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEP	7.70	6.65	7.65	92	27.3 - 29.1	28.3	0.2%	1.2	0.68	0.004	0.071	0.97	10.1	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	7.63	6.69	7.60	95	27.3 - 29.1	28.3	0.2%	1.2	0.69	0.004	0.071	0.97	10.0	
		Scenario 4 - 2hr Emergency Discharge from HSKPEP	7.70	6.65	7.65	92	27.3 - 29.1	28.3	0.2%	1.2	0.68	0.004	0.071	0.97	10.1	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEP	7.70	6.63	7.65	92	27.3 - 29.1	28.3	0.2%	1.2	0.68	0.004	0.070	0.97	10.1	

**Operational Phase Water Quality at Ecological Resources and Observation Points - Dry Season**

Note: Shaded and Bolded - value exceeded the WSD criteria  
N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Bottom					Depth Averaged									
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)	10%ile DO (mg/L)	GM E.coli (no./100mL)	Range (min. - max.)		Mean	Change	Mean						
							Salinity				BOD <sub>5</sub> (mg/L)	TIN (mg/L)	UIA (mg/L)	TP (mg/L)	TN (mg/L)	SS (mg/L)	
							(ppt)	(ppt)									%
E17	The Brothers Marine Park	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.37	8.04	6.42	19	27.1 - 32.2	29.7	-	0.5	0.72	0.007	0.065	0.95	7.9		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.38	7.94	6.42	19	27.1 - 32.2	29.7	0.1%	0.5	0.72	0.007	0.065	0.95	7.9		
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.37	7.96	6.42	19	27.1 - 32.2	29.8	0.1%	0.5	0.72	0.007	0.067	0.93	7.8		
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	6.38	7.94	6.42	19	27.1 - 32.2	29.7	0.1%	0.5	0.72	0.007	0.065	0.95	7.9		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.39	7.97	6.43	19	27.1 - 32.2	29.7	0.1%	0.5	0.72	0.007	0.065	0.94	7.9		
E18	Fishing/Spawning Grounds in North Lantau	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.35	9.07	6.45	46	24.1 - 31.0	28.2	-	0.6	0.80	0.007	0.073	1.04	9.6		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.35	9.01	6.45	45	24.0 - 30.9	28.1	0.2%	0.6	0.80	0.007	0.074	1.04	9.6		
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.35	9.02	6.46	46	24.0 - 30.9	28.2	0.0%	0.6	0.79	0.007	0.074	1.02	9.5		
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	6.35	9.01	6.45	45	24.0 - 30.9	28.1	0.2%	0.6	0.80	0.007	0.074	1.04	9.6		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.35	8.98	6.46	45	24.1 - 30.9	28.1	0.1%	0.6	0.80	0.007	0.073	1.03	9.5		
E19	Artificial Reefs	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.74	8.38	6.74	9	24.1 - 29.1	26.7	-	0.7	0.80	0.006	0.073	1.02	11.0		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.74	8.16	6.75	9	24.1 - 29.0	26.6	0.3%	0.7	0.80	0.006	0.074	1.02	10.9		
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.75	8.27	6.75	9	24.1 - 29.1	26.7	0.0%	0.6	0.79	0.005	0.074	1.01	10.8		
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	6.74	8.16	6.75	9	24.1 - 29.0	26.6	0.3%	0.7	0.80	0.006	0.074	1.02	10.9		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.74	8.27	6.75	9	24.1 - 29.1	26.6	0.2%	0.7	0.80	0.006	0.073	1.02	10.9		
E20	Sham Wat Wan (Mangrove & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.83	8.08	7.11	1	27.4 - 30.0	28.8	-	0.5	0.61	0.004	0.054	0.81	8.7		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.80	7.96	7.11	1	27.3 - 29.9	28.8	0.2%	0.5	0.60	0.004	0.055	0.81	8.6		
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.81	8.06	7.11	1	27.3 - 30.0	28.8	0.0%	0.5	0.60	0.004	0.055	0.79	8.6		
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	6.80	7.96	7.11	1	27.3 - 29.9	28.8	0.2%	0.5	0.60	0.004	0.055	0.81	8.6		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.80	7.94	7.11	1	27.3 - 30.0	28.8	0.1%	0.5	0.60	0.004	0.054	0.80	8.6		
<b>Assessment Criteria (for North Western Supplementary WCZ)</b>			<b>10%ile</b>														
E21	Tai O (High Production of Capture Fisheries & Mangrove Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	7.21	6.34	7.21	3	28.7 - 31.8	30.4	-	0.4	0.47	0.003	0.042	0.67	7.3		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	7.21	6.30	7.21	3	28.6 - 31.7	30.3	0.1%	0.4	0.47	0.003	0.042	0.66	7.2		
		Scenario 3 - 12 days maintenance of NWNT Tunnel	7.21	6.32	7.21	3	28.6 - 31.7	30.4	0.0%	0.4	0.47	0.003	0.044	0.65	7.2		
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	7.21	6.30	7.21	3	28.6 - 31.7	30.3	0.1%	0.4	0.47	0.003	0.042	0.66	7.3		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	7.21	6.29	7.21	3	28.7 - 31.7	30.3	0.1%	0.4	0.47	0.003	0.042	0.66	7.3		
E22	Yi O (Mangrove & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	7.06	5.87	7.22	1	29.2 - 31.3	30.5	-	0.4	0.47	0.003	0.040	0.66	6.8		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	7.05	5.78	7.22	1	29.2 - 31.3	30.4	0.2%	0.4	0.46	0.003	0.040	0.65	6.8		
		Scenario 3 - 12 days maintenance of NWNT Tunnel	7.05	5.84	7.21	1	29.2 - 31.3	30.5	0.0%	0.4	0.46	0.003	0.042	0.64	6.7		
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	7.05	5.78	7.22	1	29.2 - 31.3	30.4	0.2%	0.4	0.46	0.003	0.040	0.65	6.8		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	7.05	5.79	7.22	1	29.1 - 31.3	30.4	0.1%	0.4	0.46	0.003	0.040	0.65	6.8		
E23	Potential Marine Park / Marine Reserve for Southwest Lantau	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	7.20	7.02	7.21	1	29.2 - 32.8	31.4	-	0.3	0.38	0.003	0.032	0.57	6.1		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	7.20	6.97	7.21	1	29.1 - 32.8	31.4	0.1%	0.3	0.38	0.003	0.033	0.57	6.0		
		Scenario 3 - 12 days maintenance of NWNT Tunnel	7.14	6.99	7.16	1	29.1 - 32.8	31.4	0.0%	0.3	0.38	0.002	0.035	0.55	6.0		
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	7.20	6.97	7.21	1	29.1 - 32.8	31.4	0.1%	0.3	0.38	0.003	0.033	0.57	6.0		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	7.20	6.97	7.21	1	29.1 - 32.8	31.4	0.1%	0.3	0.38	0.003	0.032	0.57	6.0		
<b>Observation Points</b>																	
<b>Assessment Criteria (for North Western WCZ)</b>																	
P1	The Brothers Marine Park	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.36	7.40	6.41	11	28.3 - 32.6	30.8	-	0.4	0.66	0.007	0.060	0.88	6.8		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.35	7.39	6.41	11	28.3 - 32.6	30.8	0.1%	0.4	0.66	0.007	0.060	0.88	6.8		
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.35	7.42	6.40	11	28.3 - 32.6	30.8	0.1%	0.4	0.66	0.007	0.062	0.86	6.7		
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	6.35	7.39	6.41	11	28.3 - 32.6	30.8	0.1%	0.4	0.66	0.007	0.060	0.88	6.8		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.36	7.34	6.41	11	28.3 - 32.6	30.8	0.1%	0.4	0.66	0.007	0.060	0.88	6.8		
P2	The Brothers Marine Park	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.35	10.37	6.44	48	24.4 - 31.3	28.4	-	0.6	0.79	0.007	0.072	1.03	9.4		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.35	10.31	6.44	48	24.3 - 31.3	28.3	0.2%	0.6	0.79	0.007	0.073	1.03	9.3		
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.35	10.32	6.44	49	24.3 - 31.3	28.4	0.1%	0.6	0.78	0.007	0.073	1.01	9.2		
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	6.35	10.31	6.44	48	24.3 - 31.3	28.3	0.2%	0.6	0.79	0.007	0.073	1.03	9.3		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.35	10.26	6.44	48	24.4 - 31.3	28.4	0.1%	0.6	0.79	0.007	0.072	1.02	9.3		
P3	The Brothers Marine Park	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.41	7.75	6.48	110	27.0 - 31.2	28.9	-	0.6	0.76	0.007	0.068	0.99	8.5		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.41	7.76	6.48	109	26.9 - 31.2	28.9	0.2%	0.6	0.76	0.007	0.068	0.99	8.5		
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.41	7.78	6.48	111	26.9 - 31.2	28.9	0.0%	0.6	0.76	0.007	0.069	0.97	8.4		
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	6.41	7.76	6.48	109	26.9 - 31.2	28.9	0.2%	0.6	0.76	0.007	0.068	0.99	8.5		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.42	7.66	6.49	110	26.9 - 31.2	28.9	0.1%	0.6	0.76	0.007	0.068	0.99	8.5		
P4	Sha Chau and Lung Kwu Chau Marine Park	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.34	10.78	6.44	62	21.4 - 30.1	26.4	-	0.7	0.87	0.007	0.080	1.10	11.3		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.34	10.53	6.45	61	21.3 - 30.0	26.3	0.3%	0.7	0.87	0.007	0.080	1.10	11.3		
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.35	10.59	6.46	60	21.3 - 30.1	26.4	0.1%	0.6	0.86	0.007	0.080	1.08	11.2		
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	6.34	10.53	6.45	61	21.3 - 30.0	26.3	0.3%	0.7	0.87	0.007	0.080	1.10	11.3		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKPEPP	6.35	10.72	6.45	62	21.3 - 30.1	26.3	0.2%	0.7	0.86	0.007	0.080	1.10	11.2		

### Operational Phase Water Quality at Ecological Resources and Observation Points - Dry Season

Note: Shaded and Bolded - value exceeded the WSD criteria  
 N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Bottom				Depth Averaged									
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)	10%ile DO (mg/L)	GM E.coli/ (no./100ml)	Range (min. - max.)		Mean Salinity (ppt)	Change %	BOD <sub>5</sub> (mg/L)	TIN (mg/L)	Mean			SS (mg/L)
							Salinity						TP (mg/L)	TN (mg/L)	UIA (mg/L)	
							(ppt)	(ppt)								
P5	Sha Chau and Lung Kwu Chau Marine Park	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.39	11.83	6.54	36	20.5 - 28.7	24.6	-	0.7	0.91	0.007	0.083	1.14	12.8	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.40	11.83	6.55	36	20.4 - 28.7	24.5	0.3%	0.7	0.91	0.007	0.084	1.13	12.7	
		Scenario 3 - 12 days maintenance of NWN Tunnel	6.42	11.87	6.57	35	20.4 - 28.7	24.6	0.1%	0.7	0.90	0.006	0.083	1.12	12.6	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.40	11.83	6.55	36	20.4 - 28.7	24.5	0.3%	0.7	0.91	0.007	0.084	1.13	12.7	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.40	11.65	6.56	36	20.5 - 28.7	24.6	0.2%	0.7	0.90	0.007	0.083	1.13	12.7	
P6	Sha Chau and Lung Kwu Chau Marine Park	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.59	10.35	6.66	24	23.8 - 29.0	26.3	-	0.7	0.86	0.007	0.079	1.09	11.3	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.59	10.16	6.67	24	23.7 - 28.9	26.2	0.3%	0.7	0.86	0.006	0.079	1.09	11.2	
		Scenario 3 - 12 days maintenance of NWN Tunnel	6.61	10.29	6.68	24	23.7 - 28.9	26.3	0.0%	0.7	0.85	0.006	0.079	1.07	11.1	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.59	10.16	6.67	24	23.7 - 28.9	26.2	0.3%	0.7	0.86	0.006	0.079	1.09	11.2	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.60	10.16	6.68	24	23.7 - 28.9	26.3	0.2%	0.7	0.85	0.007	0.079	1.09	11.2	
P7	Sha Chau and Lung Kwu Chau Marine Park	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.83	8.22	6.83	4	24.7 - 29.3	27.4	-	0.6	0.74	0.005	0.068	0.96	10.4	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.84	8.16	6.83	4	24.6 - 29.3	27.3	0.3%	0.6	0.73	0.005	0.068	0.95	10.3	
		Scenario 3 - 12 days maintenance of NWN Tunnel	6.84	8.20	6.84	4	24.6 - 29.3	27.4	0.0%	0.6	0.73	0.005	0.069	0.94	10.3	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.84	8.16	6.83	4	24.6 - 29.3	27.3	0.3%	0.6	0.73	0.005	0.068	0.95	10.3	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.84	8.14	6.84	4	24.6 - 29.3	27.3	0.2%	0.6	0.73	0.005	0.068	0.95	10.3	
<b>Ecological / Fisheries Resources</b>																
<b>Assessment Criteria (for Deep Bay WCZ, Inner Marine Subzone)</b>																
E26	Mai Po Marshes SSSI	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.13	18.16	6.05	115	15.2 - 19.8	17.9	-	12.7	8.17	0.096	1.074	10.47	49.0	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.14	17.98	6.06	116	15.0 - 19.6	17.7	1.0%	12.8	8.15	0.096	1.072	10.48	48.9	
		Scenario 3 - 12 days maintenance of NWN Tunnel	4.48	19.26	4.52	118	15.2 - 20.2	18.1	1.2%	12.7	9.06	0.116	1.161	11.45	49.9	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.09	18.06	6.02	116	15.0 - 19.6	17.7	1.0%	12.8	8.17	0.096	1.074	10.49	49.0	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.12	17.21	6.06	121	14.8 - 19.4	17.5	2.3%	12.7	8.06	0.095	1.071	10.55	48.1	
E27	Mai Po Inner Deep Bay Ramsar Site / Inner Deep Bay SSSI	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	7.70	0.00	7.71	214	17.8 - 21.0	19.1	-	12.8	8.21	0.116	0.886	10.79	48.1	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	7.73	0.00	7.74	216	17.5 - 20.8	18.9	1.0%	13.0	8.20	0.116	0.886	10.79	48.0	
		Scenario 3 - 12 days maintenance of NWN Tunnel	6.99	0.00	6.99	227	17.6 - 21.1	19.2	0.4%	12.8	8.81	0.130	0.938	11.43	48.4	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	7.72	0.00	7.72	216	17.5 - 20.8	18.9	1.0%	13.0	8.20	0.117	0.887	10.80	48.1	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	7.74	0.00	7.75	210	17.4 - 20.7	18.8	1.9%	12.9	8.16	0.116	0.889	10.84	47.6	
<b>Assessment Criteria (for Deep Bay WCZ, Mariculture Subzone)</b>																
E14	Ap Tsai Hang (Mangrove, Seagrass & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	7.99	3.58	8.01	15000	20.6 - 23.9	22.1	-	3.4	1.54	0.012	0.190	2.14	23.0	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	8.02	3.58	8.04	15064	20.6 - 23.7	22.0	0.6%	3.5	1.53	0.012	0.190	2.14	22.9	
		Scenario 3 - 12 days maintenance of NWN Tunnel	7.93	3.62	7.94	15243	20.6 - 23.8	22.1	0.0%	3.4	1.58	0.013	0.193	2.18	22.8	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	8.02	3.58	8.04	15064	20.6 - 23.7	22.0	0.6%	3.5	1.53	0.012	0.190	2.14	22.9	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	8.02	3.55	8.03	15005	20.6 - 23.8	22.0	0.5%	3.5	1.54	0.012	0.190	2.15	22.9	
E15	Sheung Pak Nai (Mangrove, Seagrass & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	8.83	0.00	8.86	18589	20.7 - 23.0	21.6	-	5.7	2.29	0.020	0.291	3.25	29.9	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	8.87	0.00	8.89	18601	20.5 - 22.9	21.4	0.8%	5.8	2.28	0.020	0.291	3.25	29.8	
		Scenario 3 - 12 days maintenance of NWN Tunnel	8.69	0.00	8.70	18843	20.5 - 23.0	21.6	0.2%	5.6	2.40	0.022	0.300	3.36	29.7	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	8.86	0.00	8.89	18601	20.5 - 22.9	21.4	0.8%	5.8	2.28	0.020	0.291	3.26	29.8	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	8.87	0.00	8.89	18597	20.5 - 22.9	21.5	0.7%	5.8	2.29	0.020	0.293	3.28	29.8	
E24	Oyster Culture Area	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	8.57	7.81	8.58	118	20.6 - 22.6	21.3	-	6.0	3.08	0.030	0.360	4.18	31.9	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	8.59	7.72	8.60	119	20.3 - 22.5	21.2	0.8%	6.1	3.07	0.030	0.361	4.18	31.8	
		Scenario 3 - 12 days maintenance of NWN Tunnel	8.32	7.87	8.33	120	20.3 - 22.6	21.3	0.2%	5.9	3.25	0.033	0.373	4.34	31.7	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	8.59	7.72	8.60	119	20.3 - 22.5	21.2	0.8%	6.1	3.07	0.030	0.361	4.18	31.8	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	8.60	7.66	8.61	118	20.3 - 22.5	21.2	0.9%	6.2	3.09	0.031	0.363	4.22	31.7	
<b>Assessment Criteria (Corals in Outer Deep Bay WCZ)</b>																
E12	Lung Kwu Sheung Tan (Coral Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.42	10.76	6.53	102	21.8 - 30.1	25.4	-	0.9	0.95	0.007	0.091	1.21	13.1	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.43	10.64	6.54	102	21.8 - 30.0	25.4	0.3%	0.9	0.94	0.007	0.092	1.20	13.0	
		Scenario 3 - 12 days maintenance of NWN Tunnel	6.44	10.67	6.56	104	21.8 - 30.0	25.5	0.1%	0.8	0.94	0.007	0.092	1.19	12.9	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.43	10.64	6.54	102	21.8 - 30.0	25.4	0.3%	0.9	0.94	0.007	0.092	1.20	13.0	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.43	10.71	6.55	102	21.7 - 30.0	25.4	0.2%	0.9	0.94	0.007	0.091	1.20	13.0	



**Operational Phase Water Quality at Ecological Resources and Observation Points - Dry Season**

Note: Shaded and Bolded - value exceeded the WSD criteria

N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Bottom				Depth Averaged											
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)	10%ile DO (mg/L)	GM E.coli (no./100mL)	Range (min. - max.)			Mean	Change	BOD <sub>5</sub> (mg/L)	TIN (mg/L)	Mean			TN (mg/L)	SS (mg/L)
							(ppt)	(ppt)	%					UIA (mg/L)	TP (mg/L)			
E13	Tsang Tsui (Coral & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.59	13.40	6.76	1446	20.5	-	27.2	23.0	-	1.6	1.17	0.009	0.125	1.53	17.5	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.60	13.17	6.78	1459	20.5	-	27.1	22.9	0.5%	1.6	1.17	0.009	0.126	1.52	17.4	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.62	13.24	6.79	1465	20.5	-	27.1	23.1	0.1%	1.6	1.18	0.009	0.126	1.52	17.3	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.60	13.18	6.78	1459	20.5	-	27.1	22.9	0.5%	1.6	1.17	0.009	0.126	1.52	17.4	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.60	13.28	6.78	1446	20.4	-	27.1	23.0	0.3%	1.6	1.17	0.009	0.125	1.52	17.4	
<b>Mangrove</b>																		
<b>Assessment Criteria (for Deep Bay WCZ, Inner Marine Subzone)</b>			10%ile															
E25	Mangrove (Inner Deep Bay)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.92	18.99	6.94	125	16.3	-	20.8	18.9	-	11.1	7.33	0.088	0.875	9.42	44.8	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.94	18.79	6.95	126	16.1	-	20.6	18.7	1.0%	11.2	7.32	0.088	0.874	9.42	44.8	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	5.32	19.77	5.35	128	16.2	-	20.9	19.1	0.9%	11.2	8.14	0.106	0.950	10.30	45.6	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.89	18.85	6.92	126	16.1	-	20.6	18.7	1.0%	11.2	7.33	0.088	0.876	9.43	44.8	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.92	18.29	6.94	129	15.9	-	20.5	18.5	2.2%	11.2	7.24	0.087	0.875	9.48	44.0	
<b>Assessment Criteria (for Deep Bay WCZ, Yuen Long &amp; Kam Tin (Lower) Subzone)</b>			min.															
E28	Mangrove (along Shan Pui River)	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	5.15	0.00	4.61	325	11.9	-	19.3	15.2	-	12.4	8.69	0.089	1.178	10.67	42.5	
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	5.16	0.00	4.62	329	11.8	-	19.1	15.1	0.8%	12.5	8.68	0.089	1.176	10.67	42.5	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.03	0.00	3.49	335	11.8	-	20.0	15.4	1.2%	12.4	9.41	0.106	1.251	11.45	43.2	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	5.14	0.00	4.61	330	11.8	-	19.1	15.1	0.8%	12.5	8.69	0.089	1.178	10.69	42.6	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	5.16	0.00	4.62	324	11.7	-	18.9	14.9	2.3%	12.4	8.63	0.088	1.175	10.74	41.6	

**Operational Phase Water Quality at EPD Routine Monitoring Stations - Dry Season**

Note: Shaded and Bolded - value exceeded the WSD criteria  
N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Bottom		10%ile DO (mg/L)	GM E.coli (no./100mL)	Range (min. - max.) (ppt)	Mean Salinity (ppt)	Change %	Depth Averaged Mean												
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)						BOD <sub>5</sub> (mg/L)	TIN (mg/L)	UIA (mg/L)	TP (mg/L)	TN (mg/L)	SS (mg/L)							
<b>EPD Routine Monitoring Stations</b>																						
<b>Assessment Criteria (For North Western WCZ)</b>																						
NM1	EPD Routine Monitoring Station - NM1	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.35	6.30	6.40	15	29.7 - 32.7	31.4	-	0.3	0.63	0.007	0.06	0.85	6.2							
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.35	6.31	6.40	15	29.6 - 32.7	31.4	0.1%	0.3	0.63	0.007	0.06	0.85	6.2							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.34	6.33	6.37	15	29.6 - 32.7	31.5	0.1%	0.3	0.62	0.007	0.06	0.83	6.2							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.35	6.31	6.40	15	29.6 - 32.7	31.4	0.1%	0.3	0.63	0.007	0.06	0.85	6.2							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.36	6.25	6.41	15	29.6 - 32.7	31.4	0.0%	0.3	0.62	0.007	0.06	0.85	6.2							
NM2	EPD Routine Monitoring Station - NM2	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.34	8.23	6.39	13	27.5 - 32.6	30.5	-	0.4	0.68	0.007	0.06	0.90	7.2							
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.34	8.18	6.39	13	27.5 - 32.6	30.5	0.1%	0.4	0.68	0.007	0.06	0.91	7.2							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.34	8.20	6.38	13	27.5 - 32.6	30.5	0.1%	0.4	0.68	0.007	0.06	0.88	7.1							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.34	8.18	6.39	13	27.5 - 32.6	30.5	0.1%	0.4	0.68	0.007	0.06	0.91	7.2							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.34	8.15	6.40	13	27.5 - 32.6	30.5	0.1%	0.4	0.68	0.007	0.06	0.90	7.1							
NM3	EPD Routine Monitoring Station - NM3	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.36	7.79	6.41	22	26.9 - 31.7	29.6	-	0.5	0.73	0.007	0.07	0.96	8.1							
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.36	7.83	6.41	21	26.9 - 31.7	29.6	0.1%	0.5	0.73	0.007	0.07	0.96	8.0							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.36	7.86	6.41	22	26.9 - 31.7	29.6	0.1%	0.4	0.73	0.007	0.07	0.94	8.0							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.36	7.83	6.41	21	26.9 - 31.7	29.6	0.1%	0.5	0.73	0.007	0.07	0.96	8.0							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.37	7.70	6.41	22	26.9 - 31.7	29.6	0.1%	0.5	0.73	0.007	0.07	0.95	8.0							
NM5	EPD Routine Monitoring Station - NM5	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.34	9.87	6.43	37	22.4 - 30.7	27.5	-	0.6	0.83	0.007	0.076	1.06	10.3							
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.34	9.51	6.44	36	22.3 - 30.7	27.5	0.3%	0.6	0.83	0.007	0.077	1.06	10.2							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.35	9.55	6.45	36	22.3 - 30.7	27.5	0.1%	0.6	0.82	0.007	0.077	1.04	10.1							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.34	9.51	6.44	36	22.3 - 30.7	27.5	0.3%	0.6	0.83	0.007	0.077	1.06	10.2							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.35	9.82	6.44	36	22.4 - 30.7	27.5	0.1%	0.6	0.82	0.007	0.076	1.06	10.2							
NM6	EPD Routine Monitoring Station - NM6	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.37	8.76	6.65	1	27.6 - 29.2	28.7	-	0.6	0.65	0.005	0.057	0.85	8.3							
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.28	8.60	6.60	1	27.5 - 29.1	28.6	0.3%	0.6	0.65	0.005	0.058	0.85	8.3							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.32	8.71	6.62	1	27.5 - 29.1	28.6	0.2%	0.6	0.65	0.004	0.059	0.84	8.3							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.28	8.60	6.60	1	27.5 - 29.1	28.6	0.3%	0.6	0.65	0.005	0.058	0.85	8.3							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.27	8.61	6.59	1	27.6 - 29.1	28.6	0.1%	0.6	0.65	0.005	0.058	0.85	8.3							
NM8	EPD Routine Monitoring Station - NM8	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	7.12	8.22	7.09	1	26.9 - 31.5	29.2	-	0.5	0.57	0.004	0.051	0.77	8.6							
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	7.13	8.33	7.12	1	26.8 - 31.5	29.1	0.2%	0.5	0.56	0.004	0.052	0.77	8.6							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	7.12	8.35	7.11	1	26.8 - 31.5	29.2	0.0%	0.5	0.56	0.003	0.053	0.75	8.5							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	7.13	8.33	7.12	1	26.8 - 31.5	29.1	0.2%	0.5	0.56	0.004	0.052	0.77	8.6							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	7.13	8.10	7.11	1	26.8 - 31.5	29.1	0.1%	0.5	0.56	0.004	0.051	0.76	8.6							
<b>Assessment Criteria (For Deep Bay WCZ, Inner Marine Subzone)</b>																						
DM1	EPD Routine Monitoring Station - DM1	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	7.40	18.47	7.41	283	17.6 - 21.7	19.9	-	9.8	6.30	0.077	0.705	8.16	41.6							
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	7.43	18.27	7.44	285	17.4 - 21.6	19.7	1.0%	9.9	6.29	0.077	0.705	8.17	41.5							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.05	18.87	6.06	291	17.8 - 21.7	20.0	0.5%	9.8	6.91	0.090	0.759	8.82	42.0							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	7.40	18.29	7.42	285	17.4 - 21.6	19.7	1.0%	9.9	6.30	0.077	0.706	8.18	41.6							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	7.41	18.65	7.43	298	17.0 - 21.5	19.5	1.9%	9.9	6.25	0.077	0.709	8.24	41.0							
DM2	EPD Routine Monitoring Station - DM2	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.64	11.75	6.65	2659	19.6 - 22.5	20.8	-	8.0	4.91	0.058	0.536	6.41	36.6							
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.67	11.59	6.68	2663	19.4 - 22.3	20.7	0.9%	8.1	4.90	0.058	0.537	6.41	36.5							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.18	11.83	6.19	2687	19.5 - 22.5	20.8	0.1%	7.9	5.17	0.063	0.557	6.67	36.5							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.66	11.60	6.68	2663	19.4 - 22.3	20.7	0.9%	8.1	4.90	0.058	0.537	6.41	36.5							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.69	11.55	6.70	2661	19.3 - 22.4	20.6	1.1%	8.1	4.91	0.058	0.539	6.46	36.4							
DM3	EPD Routine Monitoring Station - DM3	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	7.23	15.00	7.27	151	20.3 - 23.7	21.7	-	3.7	2.16	0.020	0.244	2.85	24.9							
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	7.26	14.89	7.29	151	20.2 - 23.5	21.6	0.7%	3.7	2.15	0.020	0.245	2.85	24.8							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	7.18	15.02	7.21	152	20.2 - 23.6	21.7	0.1%	3.6	2.23	0.021	0.250	2.92	24.7							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	7.26	14.90	7.29	151	20.2 - 23.5	21.6	0.7%	3.7	2.15	0.020	0.245	2.85	24.8							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	7.25	14.87	7.29	151	20.2 - 23.6	21.6	0.6%	3.7	2.16	0.020	0.245	2.87	24.8							
<b>Assessment Criteria (For Deep Bay WCZ, Outer Marine Subzone)</b>																						
DM4	EPD Routine Monitoring Station - DM4	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.74	15.42	6.88	65	20.0 - 25.0	22.2	-	2.1	1.45	0.012	0.158	1.89	20.1							
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.75	15.29	6.89	65	19.9 - 24.9	22.0	0.6%	2.1	1.45	0.012	0.159	1.88	20.0							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.75	15.37	6.89	67	19.9 - 24.9	22.2	0.1%	2.1	1.48	0.012	0.160	1.91	19.9							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.75	15.29	6.89	65	19.9 - 24.9	22.0	0.6%	2.1	1.45	0.012	0.159	1.89	20.0							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.74	15.20	6.89	66	19.9 - 24.9	22.1	0.4%	2.1	1.45	0.012	0.158	1.89	19.9							
DM5	EPD Routine Monitoring Station - DM5	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	6.36	12.64	6.52	48	19.6 - 29.0	24.5	-	0.8	0.96	0.007	0.090	1.20	13.4							
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.36	12.93	6.53	48	19.5 - 28.9	24.4	0.4%	0.8	0.96	0.007	0.090	1.20	13.3							
		Scenario 3 - 12 days maintenance of NWNT Tunnel	6.40	12.98	6.55	48	19.5 - 28.9	24.5	0.1%	0.8	0.95	0.007	0.090	1.18	13.1							
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	6.36	12.93	6.53	48	19.5 - 28.9	24.4	0.4%	0.8	0.96	0.007	0.090	1.20	13.3							
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	6.37	12.32	6.53	48	19.6 - 28.9	24.4	0.2%	0.8	0.95	0.007	0.089	1.20	13.2							

## Operational Phase Water Quality at Seawater Intakes - Wet Season

Note: Shaded and Bolded - value exceeded the WSD criteria  
N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Mid-Depth						
			Maximum						Minimum
			UIA (mg/L)	Total P (mg/L)	E. coli (no./100mL)	NH <sub>3</sub> -N (mg/L)	SS (mg/L)	BOD <sub>5</sub> (mg/L)	DO (mg/L)
<b>WSD Saltwater Intakes</b>									
<b>Assessment Criteria</b>									
C5	Tuen Mun (WSD)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.009	0.058	243	0.158	7.35	0.92	4.28
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.009	0.057	242	0.158	7.33	0.91	4.28
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.009	0.057	242	0.155	7.51	1.08	3.93
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.009	0.057	242	0.158	7.33	0.91	4.28
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.009	0.055	240	0.157	7.35	0.90	4.29
C6	Lok On Pa (WSD)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.050	24	0.166	5.96	0.88	4.28
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.049	24	0.167	5.97	0.87	4.28
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.010	0.051	24	0.166	6.28	1.04	3.70
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.049	24	0.167	5.97	0.87	4.28
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.010	0.048	24	0.166	5.93	0.86	4.29
C11	Tung Chung	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.005	0.057	1,800	0.086	7.44	2.15	5.44
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.005	0.054	1,789	0.087	7.35	2.11	5.42
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.005	0.055	1,789	0.087	8.57	2.33	5.39
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.005	0.054	1,789	0.087	7.35	2.11	5.42
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.005	0.052	1,738	0.087	7.34	2.11	5.41
C14	Sunny Bay (WSD)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.013	0.046	337	0.220	5.32	1.00	4.29
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.013	0.045	338	0.220	5.30	0.99	4.29
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.013	0.047	338	0.218	5.63	1.12	3.79
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.013	0.045	338	0.220	5.30	0.99	4.29
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.013	0.044	338	0.219	5.32	0.99	4.30
C19	Near Butterfly Beach	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.009	0.052	93	0.159	6.45	0.87	4.30
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.009	0.050	93	0.159	6.40	0.86	4.30
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.009	0.052	93	0.156	6.54	1.02	3.91
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.009	0.050	93	0.159	6.40	0.86	4.30
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.009	0.050	92	0.158	6.48	0.85	4.31
C20	Near LRT Terminus	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.057	1,326	0.174	6.57	1.03	4.30
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.055	1,317	0.174	6.56	1.02	4.31
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.010	0.058	1,317	0.171	6.81	1.20	3.95
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.055	1,317	0.174	6.56	1.02	4.31
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.010	0.054	1,322	0.172	6.57	1.01	4.32
<b>Cooling Water / Seawater Intakes</b>									
<b>Assessment Criteria</b>									
C2	CLP Black Point Power Station	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.013	0.094	582	0.224	15.54	1.74	4.42
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.013	0.092	584	0.224	15.52	1.73	4.42
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.014	0.094	584	0.240	16.02	2.07	4.36
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.013	0.092	584	0.224	15.53	1.73	4.42
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.013	0.093	583	0.224	15.63	1.72	4.41

## Operational Phase Water Quality at Seawater Intakes - Wet Season

Note: Shaded and Bolded - value exceeded the WSD criteria  
N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Mid-Depth						
			Maximum						Minimum
			UIA (mg/L)	Total P (mg/L)	<i>E.coli</i> (no./100mL)	NH <sub>3</sub> -N (mg/L)	SS (mg/L)	BOD <sub>5</sub> (mg/L)	DO (mg/L)
C3	Castle Peak Power Station	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.058	10	0.165	7.25	1.11	4.03
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.057	10	0.165	7.25	1.11	4.03
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.010	0.057	10	0.162	7.36	1.32	3.77
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.057	10	0.165	7.25	1.11	4.03
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.010	0.056	10	0.164	7.29	1.09	4.03
<b>Cooling Water / Seawater Intakes</b>									
<b>Assessment Criteria</b>									
C1	Future Sludge Treatment Facilities	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.014	0.097	7,935	0.248	12.82	2.16	4.66
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.014	0.095	7,608	0.247	12.89	2.15	4.67
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.015	0.097	7,608	0.267	13.57	2.56	4.68
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.014	0.095	7,608	0.247	12.89	2.15	4.67
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.014	0.096	7,520	0.249	12.87	2.14	4.68
C4	Shiu Wing Steel Mills	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.060	28	0.163	8.81	1.14	4.20
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.058	28	0.162	8.80	1.14	4.20
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.009	0.060	28	0.159	9.11	1.34	3.90
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.058	28	0.162	8.80	1.14	4.20
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.010	0.058	29	0.161	8.83	1.14	4.21
C7	Future Airport (East)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.060	26	0.164	8.23	0.97	4.48
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.058	26	0.164	8.20	0.96	4.47
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.010	0.059	26	0.161	8.24	1.13	4.29
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.058	26	0.164	8.20	0.96	4.47
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.010	0.057	26	0.163	8.20	0.95	4.46
C8	Airport (North)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.060	36	0.171	7.78	0.97	4.30
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.058	35	0.171	7.78	0.96	4.30
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.010	0.058	35	0.170	7.98	1.14	4.05
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.058	35	0.171	7.78	0.96	4.30
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.010	0.057	36	0.169	7.78	0.95	4.24
C9	Airport (South)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.005	0.056	709	0.092	7.26	1.98	4.81
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.005	0.054	709	0.092	7.19	1.94	4.82
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.005	0.053	709	0.090	8.20	2.25	4.78
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.005	0.054	709	0.092	7.19	1.94	4.82
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.005	0.052	700	0.091	7.17	1.94	4.79
C10	Future HKBCF	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.011	0.055	44	0.187	6.65	0.93	4.35
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.011	0.054	46	0.187	6.62	0.92	4.35
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.011	0.054	46	0.186	6.60	1.11	4.04
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.011	0.054	46	0.187	6.62	0.92	4.35
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.011	0.053	44	0.186	6.64	0.91	4.27

## Operational Phase Water Quality at Seawater Intakes - Wet Season

Note: Shaded and Bolded - value exceeded the WSD criteria

N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Mid-Depth						
			Maximum						Minimum
			UIA (mg/L)	Total P (mg/L)	<i>E.coli</i> (no./100mL)	NH <sub>3</sub> -N (mg/L)	SS (mg/L)	BOD <sub>5</sub> (mg/L)	DO (mg/L)
C12	Future Tung Chung East	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.008	0.065	216	0.141	7.84	1.97	4.75
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.008	0.062	215	0.141	7.81	1.93	4.75
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.008	0.063	215	0.137	8.34	2.23	4.76
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.008	0.062	215	0.141	7.81	1.93	4.74
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.008	0.060	210	0.140	7.81	1.93	4.76
C15	Future Sunny Bay Development	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.045	69	0.174	4.98	0.74	4.26
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.044	68	0.174	4.97	0.74	4.26
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.010	0.046	68	0.171	5.23	0.88	3.57
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.044	68	0.174	4.97	0.74	4.26
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.010	0.043	68	0.172	5.00	0.73	4.25
C18	China Cement Plant	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	0.010	0.061	17	0.161	9.04	1.04	4.12
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	0.010	0.060	16	0.161	9.03	1.03	4.12
		Scenario 3 - 12 days maintenance of NWNT Tunnel	0.009	0.061	16	0.157	9.33	1.22	3.83
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	0.010	0.060	16	0.161	9.03	1.03	4.12
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	0.009	0.059	16	0.159	9.02	1.02	4.11

**Operational Phase Water Quality at Bathing Beaches, Typhoon Shelter and Estuary - Wet Season**

Note: Shaded and Bolded - value exceeded the WSD criteria  
 N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Bottom		10%ile DO (mg/L)	GM <i>E.coli</i> (no./100mL)	Depth Averaged			Mean							
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)			Range (min. - max.) (ppt)	Mean Salinity (ppt)	Change %	BOD <sub>5</sub> (mg/L)	TIN (mg/L)	UJA (mg/L)	TP (mg/L)	TN (mg/L)	SS (mg/L)		
<b>Beaches</b>																	
<b>Assessment Criteria (for North Western WCZ)</b>																	
B1	Butterfly	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.28	56.62	4.45	17	14.4 - 26.8	20.8	-	0.7	0.51	0.008	0.035	0.70	3.3		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.28	56.47	4.45	17	14.4 - 26.8	20.8	0.0%	0.7	0.51	0.008	0.034	0.70	3.3		
		Scenario 3 - 12 days maintenance of NWNNT Tunnel	4.25	56.50	4.44	16	14.4 - 26.8	20.9	0.7%	0.7	0.49	0.008	0.034	0.68	3.3		
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.28	56.47	4.45	17	14.4 - 26.8	20.8	0.0%	0.7	0.51	0.008	0.034	0.70	3.3		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.27	56.90	4.44	17	14.4 - 26.8	20.8	0.0%	0.7	0.50	0.008	0.033	0.69	3.3		
B2	Gazetted Beaches at Tuen Mun	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.43	41.91	4.73	20	14.4 - 23.5	18.9	-	0.8	0.54	0.008	0.030	0.73	2.7		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.42	41.70	4.73	20	14.4 - 23.5	18.9	0.1%	0.7	0.54	0.008	0.029	0.73	2.7		
		Scenario 3 - 12 days maintenance of NWNNT Tunnel	4.42	41.75	4.74	18	14.4 - 23.5	19.0	0.7%	0.8	0.52	0.008	0.029	0.71	2.7		
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.42	41.70	4.73	20	14.4 - 23.5	18.9	0.1%	0.7	0.54	0.008	0.029	0.73	2.7		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.43	41.91	4.74	20	14.4 - 23.5	18.9	0.1%	0.7	0.53	0.008	0.028	0.72	2.7		
B3	Golden Beach	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.44	45.93	4.72	17	14.4 - 24.0	18.9	N/A	0.8	0.54	0.008	0.030	0.73	2.8		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.44	45.82	4.72	17	14.5 - 24.0	18.9	0.1%	0.7	0.54	0.008	0.029	0.73	2.8		
		Scenario 3 - 12 days maintenance of NWNNT Tunnel	4.43	45.87	4.73	16	14.5 - 24.0	19.0	0.7%	0.8	0.52	0.008	0.029	0.71	2.8		
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.44	45.82	4.72	17	14.5 - 24.0	18.9	0.1%	0.7	0.54	0.008	0.029	0.73	2.8		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.45	45.87	4.73	17	14.4 - 24.0	18.9	0.1%	0.7	0.53	0.008	0.029	0.72	2.8		
<b>Typhoon Shelter</b>																	
<b>Assessment Criteria (for North Western WCZ)</b>																	
T1	Tuen Mun	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	3.51	30.06	4.89	469	17.2 - 22.6	19.7	-	0.9	0.51	0.008	0.025	0.72	2.4		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	3.53	29.99	4.89	469	17.2 - 22.6	19.7	0.0%	0.9	0.51	0.008	0.024	0.72	2.4		
		Scenario 3 - 12 days maintenance of NWNNT Tunnel	3.59	30.03	4.92	458	17.2 - 22.6	19.8	0.7%	0.9	0.49	0.007	0.024	0.70	2.4		
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	3.53	29.99	4.89	469	17.2 - 22.6	19.7	0.0%	0.9	0.51	0.008	0.024	0.72	2.4		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	3.62	30.05	4.91	467	17.2 - 22.6	19.7	0.0%	0.9	0.50	0.008	0.024	0.71	2.4		
<b>Tai O Estuary</b>																	
<b>Assessment Criteria (for North Western Supplementary WCZ)</b>																	
S1	Tai O	Scenario 1 - CEPT Effluent (246,000 m <sup>3</sup> /day) from upgraded San Wai STW	4.27	107.74	4.62	188	10.8 - 23.7	18.1	-	0.6	0.48	0.005	0.033	0.65	4.4		
		Scenario 2 - CEPT Effluent (200,000 m <sup>3</sup> /day) from San Wai STW + Secondary Plus Treated Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.27	109.92	4.62	189	10.7 - 23.9	18.1	0.1%	0.6	0.48	0.005	0.031	0.65	4.3		
		Scenario 3 - 12 days maintenance of NWNNT Tunnel	4.26	110.56	4.64	186	10.7 - 23.9	18.1	0.2%	0.6	0.47	0.005	0.031	0.63	4.3		
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.27	109.92	4.62	189	10.7 - 23.9	18.1	0.1%	0.6	0.48	0.005	0.031	0.65	4.3		
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m <sup>3</sup> /day) from HSKEPP	4.25	110.65	4.63	187	10.9 - 23.9	18.1	0.2%	0.6	0.47	0.005	0.030	0.64	4.4		



**Operational Phase Water Quality at Ecological Resources and Observation Points - Wet Season**

Note: Shaded and Bolded - value exceeded the WSD criteria  
N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Bottom					Depth Averaged							
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)	10%ile DO (mg/L)	GM E.coli (no./100mL)	Range (min. - max.) (ppt)	Mean Salinity (ppt)	Change %	Mean					
										BOD <sub>5</sub> (mg/L)	TIN (mg/L)	UIA (mg/L)	TP (mg/L)	TN (mg/L)	SS (mg/L)
E17	The Brothers Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.31	39.75	4.45	7	14.8 - 27.1	21.6	-	0.7	0.49	0.009	0.036	0.68	3.6
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.30	39.54	4.45	7	14.8 - 27.1	21.6	0.0%	0.7	0.49	0.009	0.035	0.68	3.6
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.25	39.59	4.44	7	14.8 - 27.1	21.8	0.6%	0.7	0.48	0.008	0.035	0.67	3.5
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.30	39.54	4.45	7	14.8 - 27.1	21.6	0.0%	0.7	0.49	0.009	0.035	0.68	3.6
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.27	39.88	4.45	7	14.9 - 27.1	21.6	0.0%	0.7	0.49	0.009	0.034	0.67	3.6
E18	Fishing/Spawning Grounds in North Lantau	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.27	48.93	4.42	26	12.7 - 25.7	19.6	-	0.8	0.54	0.009	0.040	0.73	4.5
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.27	48.93	4.42	26	12.7 - 25.7	19.6	0.0%	0.8	0.53	0.009	0.039	0.73	4.5
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.24	48.95	4.42	24	12.7 - 25.7	19.7	0.6%	0.8	0.52	0.008	0.039	0.71	4.4
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.27	48.94	4.42	26	12.7 - 25.7	19.6	0.0%	0.8	0.53	0.009	0.039	0.73	4.5
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.25	49.57	4.41	25	12.7 - 25.7	19.6	0.1%	0.8	0.53	0.009	0.038	0.72	4.5
E19	Artificial Reefs	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.56	41.11	4.68	2	11.9 - 18.8	15.1	-	0.8	0.56	0.006	0.039	0.75	5.3
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.56	39.69	4.68	2	11.8 - 18.7	15.1	0.0%	0.8	0.56	0.006	0.037	0.74	5.2
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.56	39.83	4.69	2	11.8 - 18.7	15.2	0.5%	0.8	0.55	0.006	0.037	0.73	5.2
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.56	39.69	4.68	2	11.8 - 18.7	15.1	0.0%	0.8	0.56	0.006	0.037	0.74	5.2
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.52	41.16	4.67	2	11.9 - 18.6	15.2	0.1%	0.7	0.55	0.006	0.036	0.73	5.2
E20	Sham Wat Wan (Mangrove & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.29	129.97	4.76	1	13.3 - 20.5	17.3	-	0.6	0.50	0.005	0.029	0.66	3.5
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.29	129.20	4.76	1	13.3 - 20.5	17.3	0.0%	0.6	0.50	0.005	0.027	0.66	3.4
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.29	129.98	4.79	1	13.3 - 20.5	17.3	0.1%	0.6	0.48	0.005	0.027	0.64	3.4
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.29	129.20	4.76	1	13.3 - 20.5	17.3	0.0%	0.6	0.50	0.005	0.027	0.66	3.4
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.28	133.20	4.77	1	13.4 - 20.5	17.3	0.1%	0.6	0.49	0.005	0.026	0.65	3.4
<b>Assessment Criteria (for North Western Supplementary WCZ)</b>								<b>10%ile</b>							
E21	Tai O (High Production of Capture Fisheries & Mangrove Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.26	51.94	4.53	2	14.4 - 25.4	20.0	-	0.5	0.44	0.004	0.036	0.60	5.1
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.26	50.49	4.53	2	14.4 - 25.4	20.0	0.1%	0.5	0.44	0.004	0.033	0.60	5.1
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.23	51.88	4.52	2	14.4 - 25.4	20.0	0.2%	0.5	0.42	0.004	0.033	0.58	5.0
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.26	50.49	4.53	2	14.4 - 25.4	20.0	0.1%	0.5	0.44	0.004	0.033	0.60	5.1
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.24	52.55	4.53	2	14.3 - 25.4	20.0	0.0%	0.5	0.43	0.004	0.032	0.59	5.1
E22	Yi O (Mangrove & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.28	66.07	4.60	1	11.4 - 25.5	18.1	-	0.6	0.47	0.004	0.028	0.63	3.5
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.28	66.56	4.60	1	11.5 - 25.5	18.1	0.0%	0.5	0.47	0.004	0.026	0.63	3.5
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.27	66.93	4.60	1	11.5 - 25.5	18.1	0.0%	0.6	0.46	0.004	0.026	0.61	3.5
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.28	66.56	4.60	1	11.5 - 25.5	18.1	0.0%	0.5	0.47	0.004	0.026	0.63	3.5
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.28	66.76	4.61	1	11.2 - 25.6	18.1	0.2%	0.5	0.46	0.004	0.025	0.62	3.5
E23	Potential Marine Park / Marine Reserve for Southwest Lantau	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	3.97	49.75	4.17	1	20.7 - 31.5	26.4	-	0.4	0.31	0.004	0.033	0.46	4.3
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	3.97	49.86	4.17	1	20.7 - 31.5	26.4	0.0%	0.4	0.31	0.004	0.029	0.46	4.3
		Scenario 3 - 12 days maintenance of NWNT Tunnel	3.90	50.38	4.10	1	20.7 - 31.5	26.4	0.1%	0.4	0.30	0.004	0.030	0.45	4.3
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	3.97	49.86	4.17	1	20.7 - 31.5	26.4	0.0%	0.4	0.31	0.004	0.029	0.46	4.3
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	3.96	50.28	4.16	1	20.8 - 31.5	26.4	0.0%	0.4	0.31	0.004	0.028	0.45	4.3
<b>Observation Points</b>															
<b>Assessment Criteria (for North Western WCZ)</b>															
P1	The Brothers Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.26	33.35	4.40	4	18.6 - 30.1	24.7	-	0.6	0.44	0.009	0.034	0.63	3.1
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.26	33.41	4.40	4	18.6 - 30.2	24.7	0.0%	0.6	0.44	0.009	0.033	0.63	3.1
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.05	33.48	4.32	4	18.6 - 30.2	24.8	0.4%	0.6	0.43	0.009	0.033	0.61	3.0
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.26	33.41	4.40	4	18.6 - 30.2	24.7	0.0%	0.6	0.44	0.009	0.033	0.63	3.1
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.26	33.46	4.39	4	18.6 - 30.1	24.7	0.0%	0.6	0.43	0.009	0.033	0.62	3.1
P2	The Brothers Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.28	52.81	4.44	29	13.3 - 25.5	19.7	-	0.8	0.53	0.009	0.040	0.73	4.4
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.27	52.84	4.44	29	13.3 - 25.6	19.7	0.0%	0.8	0.53	0.009	0.038	0.73	4.4
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.25	52.85	4.43	28	13.3 - 25.6	19.8	0.7%	0.8	0.52	0.008	0.038	0.71	4.3
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.27	52.84	4.44	29	13.3 - 25.6	19.7	0.0%	0.8	0.53	0.009	0.038	0.73	4.4
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.26	53.59	4.43	28	13.3 - 25.5	19.7	0.1%	0.8	0.53	0.009	0.038	0.72	4.4
P3	The Brothers Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.35	37.79	4.51	142	15.5 - 26.7	20.6	-	0.8	0.51	0.008	0.036	0.71	3.4
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.35	37.90	4.51	142	15.5 - 26.7	20.6	0.0%	0.8	0.51	0.008	0.034	0.71	3.4
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.33	38.01	4.50	138	15.5 - 26.7	20.8	0.6%	0.9	0.49	0.008	0.034	0.70	3.4
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.35	37.90	4.51	142	15.5 - 26.7	20.6	0.0%	0.8	0.51	0.008	0.034	0.71	3.4
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.34	37.91	4.50	141	15.5 - 26.8	20.6	0.1%	0.8	0.50	0.008	0.034	0.70	3.4
P4	Sha Chau and Lung Kwu Chau Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.19	66.19	4.43	9	8.9 - 23.2	16.8	-	0.8	0.57	0.008	0.044	0.76	5.9
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.19	64.92	4.43	9	8.9 - 23.2	16.8	0.0%	0.8	0.57	0.008	0.043	0.76	5.9
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.18	64.75	4.42	7	8.9 - 23.2	17.0	0.8%	0.8	0.55	0.008	0.042	0.74	5.8
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.19	64.93	4.43	9	8.9 - 23.2	16.8	0.0%	0.8	0.57	0.008	0.043	0.76	5.9
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.17	66.41	4.41	9	8.9 - 23.4	16.9	0.1%	0.8	0.56	0.008	0.042	0.75	5.9



### Operational Phase Water Quality at Ecological Resources and Observation Points - Wet Season

Note: Shaded and Bolded - value exceeded the WSD criteria  
N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Bottom		Depth Averaged										
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)	10%ile DO (mg/L)	GM E.coli (no./100mL)	Range (min. - max.)		Mean Salinity (ppt)	Change %	Mean				
							(ppt)				BOD <sub>5</sub> (mg/L)	TIN (mg/L)	UA (mg/L)	TP (mg/L)	TN (mg/L)
P5	Sha Chau and Lung Kwu Chau Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.29	55.72	4.51	2	8.1 - 18.8	12.9	-	0.9	0.61	0.007	0.043	0.79	7.0
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HsKEPP	4.29	56.12	4.51	2	8.2 - 18.8	12.9	0.0%	0.8	0.61	0.007	0.042	0.79	7.0
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.28	56.22	4.52	2	8.2 - 18.8	13.0	0.9%	0.8	0.59	0.006	0.041	0.77	6.9
		Scenario 4 - 2hr Emergency Discharge from HsKEPP	4.29	56.12	4.51	2	8.2 - 18.8	12.9	0.0%	0.8	0.61	0.007	0.042	0.79	7.0
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HsKEPP	4.25	53.65	4.50	2	8.1 - 18.9	12.9	0.0%	0.8	0.60	0.007	0.041	0.78	7.0
P6	Sha Chau and Lung Kwu Chau Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.40	74.13	4.61	3	10.5 - 19.6	14.6	-	0.8	0.59	0.007	0.040	0.78	5.1
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HsKEPP	4.40	73.77	4.62	3	10.6 - 19.6	14.6	0.1%	0.8	0.59	0.007	0.038	0.78	5.1
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.37	73.88	4.64	2	10.6 - 19.6	14.8	0.9%	0.8	0.57	0.007	0.038	0.76	5.1
		Scenario 4 - 2hr Emergency Discharge from HsKEPP	4.40	73.78	4.62	3	10.6 - 19.6	14.6	0.1%	0.8	0.59	0.007	0.038	0.78	5.1
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HsKEPP	4.35	76.59	4.60	3	10.5 - 19.6	14.6	0.1%	0.8	0.58	0.007	0.038	0.77	5.1
P7	Sha Chau and Lung Kwu Chau Marine Park	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.53	34.55	4.70	1	11.4 - 20.0	15.6	-	0.7	0.55	0.006	0.038	0.72	5.1
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HsKEPP	4.53	39.04	4.70	1	11.4 - 20.1	15.6	0.0%	0.7	0.55	0.006	0.036	0.72	5.0
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.53	40.40	4.73	1	11.4 - 20.1	15.7	0.4%	0.7	0.53	0.006	0.035	0.71	5.0
		Scenario 4 - 2hr Emergency Discharge from HsKEPP	4.53	39.04	4.70	1	11.4 - 20.1	15.6	0.0%	0.7	0.55	0.006	0.036	0.72	5.0
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HsKEPP	4.51	38.46	4.71	1	11.4 - 20.0	15.6	0.1%	0.7	0.54	0.006	0.035	0.71	5.1
<b>Ecological / Fisheries Resources</b>															
<b>Assessment Criteria (for Deep Bay WCZ, Inner Marine Subzone)</b>						10%ile									
E26	Mai Po Marshes SSSI	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	3.84	102.04	3.86	2	5.2 - 6.9	6.5	-	9.1	4.81	0.137	0.984	5.99	30.9
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HsKEPP	3.84	101.48	3.85	2	5.2 - 6.9	6.5	0.0%	9.1	4.81	0.137	0.981	5.99	30.8
		Scenario 3 - 12 days maintenance of NWNT Tunnel	2.50	110.01	2.53	2	5.2 - 8.0	6.9	5.9%	9.4	5.66	0.190	1.051	6.88	31.0
		Scenario 4 - 2hr Emergency Discharge from HsKEPP	3.82	102.13	3.84	2	5.2 - 6.9	6.5	0.0%	9.1	4.83	0.138	0.983	6.01	30.9
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HsKEPP	3.79	103.66	3.81	2	5.3 - 7.1	6.7	2.3%	9.1	4.88	0.139	1.006	6.21	29.9
E27	Mai Po Inner Deep Bay Ramsar Site / Inner Deep Bay SSSI	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.74	0.00	4.76	4	6.1 - 7.8	6.8	-	9.1	3.49	0.115	0.520	4.75	26.4
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HsKEPP	4.75	0.00	4.77	4	6.1 - 7.8	6.8	0.0%	9.1	3.49	0.115	0.518	4.75	26.4
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.20	0.00	4.21	3	6.2 - 8.0	7.0	4.0%	9.2	4.07	0.151	0.557	5.35	26.4
		Scenario 4 - 2hr Emergency Discharge from HsKEPP	4.74	0.00	4.75	4	6.1 - 7.8	6.8	0.0%	9.1	3.50	0.116	0.519	4.76	26.4
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HsKEPP	4.69	0.00	4.71	4	6.2 - 7.8	6.9	1.7%	9.0	3.55	0.118	0.533	4.90	25.7
<b>Assessment Criteria (for Deep Bay WCZ, Mariculture Subzone)</b>						10%ile									
E14	Ap Tsai Hang (Mangrove, Seagrass & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	5.31	19.99	5.31	9090	7.7 - 11.2	9.2	-	2.6	0.83	0.013	0.084	1.17	9.8
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HsKEPP	5.31	19.95	5.31	9097	7.7 - 11.1	9.1	0.3%	2.6	0.83	0.013	0.083	1.17	9.8
		Scenario 3 - 12 days maintenance of NWNT Tunnel	5.32	20.03	5.33	8834	7.7 - 11.1	9.2	0.8%	2.6	0.81	0.013	0.082	1.16	9.7
		Scenario 4 - 2hr Emergency Discharge from HsKEPP	5.31	19.95	5.31	9097	7.7 - 11.1	9.1	0.3%	2.6	0.83	0.013	0.083	1.17	9.8
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HsKEPP	5.31	19.99	5.32	9035	7.7 - 11.2	9.2	0.0%	2.6	0.82	0.013	0.083	1.16	9.8
E15	Sheung Pak Nai (Mangrove, Seagrass & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	5.56	0.00	5.57	13574	7.6 - 10.5	8.7	-	4.0	1.15	0.023	0.144	1.65	13.9
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HsKEPP	5.56	0.00	5.57	13571	7.6 - 10.4	8.7	0.1%	4.0	1.15	0.023	0.143	1.64	13.9
		Scenario 3 - 12 days maintenance of NWNT Tunnel	5.56	0.00	5.57	13313	7.6 - 10.4	8.8	1.0%	4.0	1.16	0.025	0.144	1.66	13.9
		Scenario 4 - 2hr Emergency Discharge from HsKEPP	5.56	0.00	5.57	13571	7.6 - 10.4	8.7	0.1%	4.0	1.15	0.023	0.143	1.65	13.9
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HsKEPP	5.55	0.00	5.56	13513	7.6 - 10.5	8.7	0.0%	3.9	1.15	0.024	0.145	1.64	13.9
E24	Oyster Culture Area	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	5.13	32.78	5.14	16	7.4 - 9.9	8.2	-	3.9	1.74	0.042	0.201	2.31	15.1
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HsKEPP	5.13	32.66	5.14	16	7.4 - 9.9	8.2	0.1%	3.9	1.73	0.042	0.199	2.31	15.0
		Scenario 3 - 12 days maintenance of NWNT Tunnel	5.03	33.00	5.04	14	7.4 - 9.9	8.3	1.1%	4.0	1.80	0.046	0.203	2.37	15.0
		Scenario 4 - 2hr Emergency Discharge from HsKEPP	5.13	32.67	5.14	16	7.4 - 9.9	8.2	0.1%	3.9	1.74	0.042	0.200	2.31	15.0
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HsKEPP	5.12	32.90	5.13	15	7.4 - 9.9	8.2	0.2%	3.9	1.74	0.043	0.203	2.31	15.0
<b>Assessment Criteria (Corals in Outer Deep Bay WCZ)</b>						10%ile									
E12	Lung Kwu Sheung Tan (Coral Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.26	86.42	4.49	23	9.1 - 22.4	15.6	-	1.0	0.61	0.009	0.054	0.82	7.5
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HsKEPP	4.26	86.95	4.49	24	9.0 - 22.5	15.6	0.0%	1.0	0.61	0.008	0.053	0.82	7.5
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.25	87.07	4.50	21	9.1 - 22.5	15.7	0.9%	1.0	0.59	0.008	0.052	0.80	7.4
		Scenario 4 - 2hr Emergency Discharge from HsKEPP	4.26	86.95	4.49	24	9.0 - 22.5	15.6	0.0%	1.0	0.61	0.008	0.053	0.82	7.5
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HsKEPP	4.21	87.82	4.47	23	9.0 - 22.4	15.6	0.1%	1.0	0.60	0.009	0.052	0.81	7.5

**Operational Phase Water Quality at Ecological Resources and Observation Points - Wet Season**

Note: Shaded and Bolded - value exceeded the WSD criteria  
N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Bottom		Depth Averaged											
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)	10%ile DO (mg/L)	GM E.coli (no./100mL)	Range (min. - max.)		Mean	Change	Mean					
							Salinity				BOD <sub>5</sub> (mg/L)	TIN (mg/L)	UIA (mg/L)	TP (mg/L)	TN (mg/L)	SS (mg/L)
			(ppt)	(ppt)	%											
E13	Tsang Tsui (Coral & Horseshoe Crab Habitat)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.61	80.50	4.82	440	7.7 - 15.7	10.2	-	1.4	0.72	0.009	0.058	0.97	7.6	
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.61	78.01	4.83	447	7.7 - 15.6	10.2	0.2%	1.4	0.72	0.009	0.056	0.97	7.6	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.61	79.86	4.86	416	7.7 - 15.6	10.3	0.8%	1.4	0.71	0.009	0.056	0.95	7.5	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.61	78.01	4.83	447	7.7 - 15.6	10.2	0.2%	1.4	0.72	0.009	0.056	0.97	7.6	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.58	75.33	4.83	439	7.7 - 15.7	10.2	0.1%	1.4	0.71	0.009	0.056	0.95	7.6	
<b>Mangrove</b>																
<b>Assessment Criteria (for Deep Bay WCZ, Inner Marine Subzone)</b>					10%ile											
E25	Mangrove (Inner Deep Bay)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.44	88.08	4.46	3	6.1 - 7.5	6.8	-	8.5	4.07	0.121	0.657	5.21	27.1	
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	4.44	87.55	4.46	3	6.1 - 7.5	6.8	0.0%	8.5	4.07	0.121	0.655	5.21	27.0	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	2.92	92.85	2.94	3	6.2 - 8.4	7.1	5.2%	8.7	4.84	0.168	0.711	6.02	27.2	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	4.42	87.79	4.44	3	6.1 - 7.5	6.8	0.0%	8.5	4.08	0.122	0.657	5.23	27.0	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	4.40	89.21	4.43	3	6.3 - 7.6	6.9	2.1%	8.4	4.13	0.123	0.675	5.41	26.2	
<b>Assessment Criteria (for Deep Bay WCZ, Yuen Long &amp; Kam Tin (Lower) Subzone)</b>					min.											
E28	Mangrove (along Shan Pui River)	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	3.00	0.00	2.87	24	5.5 - 8.0	7.1	-	9.1	6.43	0.135	1.210	7.43	27.4	
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKEPP	2.98	0.00	2.85	24	5.5 - 8.0	7.1	0.1%	9.1	6.43	0.135	1.211	7.43	27.4	
		Scenario 3 - 12 days maintenance of NWNT Tunnel	2.21	0.00	1.61	23	5.6 - 8.4	7.4	3.6%	9.2	7.00	0.169	1.262	8.01	27.5	
		Scenario 4 - 2hr Emergency Discharge from HSKEPP	2.98	0.00	2.85	24	5.5 - 8.0	7.1	0.1%	9.1	6.44	0.136	1.212	7.44	27.4	
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKEPP	2.99	0.00	2.87	24	5.5 - 8.0	7.2	1.2%	9.1	6.47	0.136	1.222	7.57	26.7	

**Operational Phase Water Quality at EPD Routine Monitoring Stations - Wet Season**

Note: Shaded and Bolded - value exceeded the WSD criteria  
 N/A - Not Available

ID (Ref: Figure 3.2)	Indicator Point	Scenario	Bottom			Depth Averaged									
			10%ile DO (mg/L)	Max Sed. Flux (g/m <sup>2</sup> /d)	10%ile DO (mg/L)	GM E.coli (no./100mL)	Range (min. - max.)	Mean	Change	Mean					
							(ppt)		%	BOD <sub>5</sub> (mg/L)	TIN (mg/L)	UIA (mg/L)	TP (mg/L)	TN (mg/L)	SS (mg/L)
<b>EPD Routine Monitoring Stations</b>															
<b>Assessment Criteria (For North Western WCZ)</b>															
NM1	EPD Routine Monitoring Station - NM1	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.27	31.51	4.35	4	20.0 - 31.3	26.7	-	0.6	0.40	0.009	0.03	0.59	2.9
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEPP	4.26	31.27	4.35	4	20.1 - 31.3	26.7	0.0%	0.6	0.40	0.009	0.03	0.59	2.9
		Scenario 3 - 12 days maintenance of NWNT Tunnel	3.86	31.32	4.13	4	20.1 - 31.3	26.8	0.3%	0.6	0.39	0.009	0.03	0.58	2.9
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	4.26	31.28	4.35	4	20.1 - 31.3	26.7	0.0%	0.6	0.40	0.009	0.03	0.59	2.9
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEPP	4.26	31.33	4.35	4	20.1 - 31.3	26.7	0.0%	0.6	0.40	0.009	0.03	0.59	2.9
NM2	EPD Routine Monitoring Station - NM2	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.27	32.75	4.41	4	16.9 - 29.1	23.0	-	0.6	0.47	0.009	0.04	0.66	3.3
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEPP	4.27	32.61	4.41	4	16.9 - 29.2	23.0	0.0%	0.6	0.47	0.009	0.03	0.66	3.3
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.13	32.63	4.36	4	16.9 - 29.2	23.2	0.6%	0.6	0.46	0.008	0.03	0.64	3.3
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	4.27	32.61	4.41	4	16.9 - 29.2	23.0	0.0%	0.6	0.47	0.009	0.03	0.66	3.3
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEPP	4.26	32.72	4.41	4	16.9 - 29.2	23.0	0.0%	0.6	0.47	0.009	0.03	0.65	3.3
NM3	EPD Routine Monitoring Station - NM3	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.26	38.45	4.38	4	15.0 - 26.9	21.6	-	0.7	0.50	0.009	0.04	0.69	4.0
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEPP	4.26	38.26	4.38	4	15.0 - 26.9	21.6	0.0%	0.7	0.50	0.009	0.04	0.69	3.9
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.18	38.20	4.35	3	15.0 - 26.9	21.8	0.6%	0.7	0.48	0.008	0.04	0.67	3.9
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	4.26	38.26	4.38	4	15.0 - 26.9	21.6	0.0%	0.7	0.50	0.009	0.04	0.69	3.9
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEPP	4.25	38.35	4.38	4	15.0 - 26.9	21.6	0.1%	0.7	0.49	0.009	0.04	0.68	4.0
NM5	EPD Routine Monitoring Station - NM5	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.21	63.76	4.41	7	11.4 - 24.4	18.9	-	0.8	0.54	0.008	0.043	0.74	5.1
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEPP	4.21	63.72	4.41	7	11.4 - 24.5	18.9	0.0%	0.8	0.54	0.008	0.041	0.74	5.1
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.18	63.52	4.40	6	11.4 - 24.5	19.0	0.8%	0.8	0.52	0.008	0.041	0.72	5.0
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	4.21	63.72	4.41	7	11.4 - 24.5	18.9	0.0%	0.8	0.54	0.008	0.041	0.74	5.1
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEPP	4.19	62.48	4.38	7	11.4 - 24.5	18.9	0.0%	0.8	0.54	0.008	0.041	0.73	5.1
NM6	EPD Routine Monitoring Station - NM6	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	3.78	69.29	4.68	1	15.1 - 18.8	17.0	-	0.6	0.50	0.005	0.022	0.67	2.1
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEPP	3.78	71.49	4.67	1	15.2 - 18.8	17.1	0.1%	0.6	0.50	0.005	0.020	0.66	2.1
		Scenario 3 - 12 days maintenance of NWNT Tunnel	3.85	72.03	4.72	1	15.2 - 18.8	17.1	0.3%	0.6	0.48	0.005	0.020	0.65	2.1
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	3.78	71.49	4.67	1	15.2 - 18.8	17.1	0.1%	0.6	0.50	0.005	0.020	0.66	2.1
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEPP	3.85	70.11	4.69	1	15.2 - 18.9	17.1	0.1%	0.6	0.49	0.005	0.020	0.65	2.1
NM8	EPD Routine Monitoring Station - NM8	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.22	99.55	4.51	1	15.1 - 25.0	19.4	-	0.6	0.46	0.005	0.042	0.62	6.1
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEPP	4.22	103.30	4.51	1	15.1 - 25.1	19.5	0.0%	0.6	0.46	0.005	0.039	0.62	6.1
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.19	104.20	4.51	1	15.1 - 25.1	19.5	0.1%	0.6	0.44	0.005	0.039	0.61	6.0
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	4.22	103.30	4.51	1	15.1 - 25.1	19.5	0.0%	0.6	0.46	0.005	0.039	0.62	6.1
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEPP	4.18	102.67	4.51	1	15.2 - 25.1	19.5	0.1%	0.6	0.45	0.005	0.037	0.61	6.1
<b>Assessment Criteria (For Deep Bay WCZ, Inner Marine Subzone)</b>															
DM1	EPD Routine Monitoring Station - DM1	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.27	90.81	4.30	11	6.5 - 8.5	7.1	-	7.6	3.52	0.108	0.454	4.57	23.4
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEPP	4.27	90.57	4.30	11	6.5 - 8.5	7.1	0.0%	7.6	3.52	0.108	0.453	4.57	23.4
		Scenario 3 - 12 days maintenance of NWNT Tunnel	3.20	94.08	3.22	10	6.5 - 8.6	7.3	3.4%	7.8	4.02	0.138	0.486	5.10	23.6
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	4.26	90.57	4.28	11	6.5 - 8.5	7.1	0.0%	7.6	3.53	0.108	0.454	4.58	23.4
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEPP	4.24	91.51	4.27	12	6.6 - 8.5	7.2	1.3%	7.5	3.56	0.110	0.466	4.70	22.9
DM2	EPD Routine Monitoring Station - DM2	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	3.72	58.72	3.74	401	6.0 - 9.3	7.3	-	7.2	3.31	0.103	0.359	4.28	20.7
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEPP	3.73	58.59	3.74	402	6.0 - 9.3	7.3	0.0%	7.2	3.31	0.103	0.357	4.29	20.6
		Scenario 3 - 12 days maintenance of NWNT Tunnel	3.41	59.44	3.42	364	6.0 - 9.4	7.4	1.5%	7.2	3.48	0.115	0.367	4.47	20.7
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	3.72	58.62	3.74	402	6.0 - 9.3	7.3	0.0%	7.2	3.31	0.103	0.357	4.29	20.6
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEPP	3.70	58.89	3.71	394	6.1 - 9.3	7.3	0.5%	7.1	3.32	0.105	0.363	4.32	20.5
DM3	EPD Routine Monitoring Station - DM3	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.62	64.14	4.63	21	7.1 - 10.7	8.5	-	2.8	1.43	0.031	0.144	1.87	11.4
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEPP	4.62	63.37	4.64	21	7.1 - 10.6	8.5	0.1%	2.8	1.43	0.031	0.143	1.87	11.4
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.56	63.79	4.57	19	7.1 - 10.7	8.6	1.2%	2.9	1.46	0.034	0.144	1.90	11.3
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	4.62	63.38	4.63	21	7.1 - 10.6	8.5	0.1%	2.8	1.43	0.031	0.143	1.87	11.4
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEPP	4.62	63.87	4.63	21	7.1 - 10.7	8.5	0.1%	2.8	1.43	0.032	0.144	1.86	11.4
<b>Assessment Criteria (For Deep Bay WCZ, Outer Marine Subzone)</b>															
DM4	EPD Routine Monitoring Station - DM4	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.42	80.34	4.79	11	6.7 - 13.0	9.3	-	1.8	0.94	0.015	0.082	1.23	8.6
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEPP	4.42	87.52	4.79	11	6.7 - 13.1	9.3	0.0%	1.8	0.94	0.015	0.081	1.23	8.6
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.36	89.89	4.78	10	6.7 - 13.1	9.4	1.4%	1.8	0.94	0.016	0.081	1.23	8.4
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	4.42	87.52	4.79	11	6.7 - 13.1	9.3	0.0%	1.8	0.94	0.015	0.081	1.23	8.6
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEPP	4.36	87.25	4.79	11	6.7 - 13.1	9.3	0.0%	1.8	0.93	0.016	0.081	1.22	8.5
DM5	EPD Routine Monitoring Station - DM5	Scenario 1 - CEPT Effluent (246,000 m3/day) from upgraded San Wai STW	4.27	85.20	4.54	7	6.6 - 21.7	13.4	-	1.0	0.63	0.008	0.047	0.84	6.7
		Scenario 2 - CEPT Effluent (200,000 m3/day) from San Wai STW + Secondary Plus Treated Effluent (90,000m3/day) from HSKPEPP	4.27	87.73	4.54	7	6.7 - 21.8	13.4	0.1%	1.0	0.63	0.008	0.046	0.84	6.7
		Scenario 3 - 12 days maintenance of NWNT Tunnel	4.26	87.78	4.55	6	6.7 - 21.8	13.5	1.1%	1.0	0.61	0.008	0.045	0.82	6.6
		Scenario 4 - 2hr Emergency Discharge from HSKPEPP	4.27	87.73	4.54	7	6.7 - 21.8	13.4	0.1%	1.0	0.63	0.008	0.046	0.84	6.7
		Scenario 5 - Sensitivity Test: Tertiary Effluent (90,000m3/day) from HSKPEPP	4.23	86.24	4.52	7	6.6 - 21.8	13.4	0.1%	1.0	0.62	0.008	0.045	0.83	6.7