

#### Appendix 4.5.1 Water Quality Modelling Results for Seawater Intakes

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

\* These represent the maximum values over the entire 1-year simulation period. The actual levels would be lower than these maximum values for most of the times, refer to the contour plots and time series plots in appendices.

Indicator Point (see Figure 4.4)	Name	Scenario	Mid-Depth								Minimum DO (mg/L)
			Maximum *								
			Salinity (ppt)	UIA (mg/L)	<i>E.coli</i> (no./100mL)	NH <sub>3</sub> -N (mg/L)	NO <sub>3</sub> -N (mg/L)	NO <sub>2</sub> -N (mg/L)	SS (mg/L)	BOD <sub>5</sub> (mg/L)	
<b>WSD Seawater Intakes</b>											
<b>Assessment Criteria</b>			N/A	N/A	≤20,000	≤ 1	N/A	N/A	≤ 10	≤10	≥ 2
F7	Tai Po	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	33.2	0.010	1,296	0.13	0.14	<0.01	9.5	5.6	5.3
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	33.2	0.024	1,296	0.27	0.48	<0.01	<b>11.2</b>	8.5	5.2
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	33.2	0.023	<b>36,500</b>	0.24	0.14	<0.01	9.5	5.6	5.3
F8	Sha Tin	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	33.5	0.011	2,071	0.23	0.12	<0.01	<b>10.9</b>	8.4	5.1
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	33.5	0.024	2,071	0.26	0.37	<0.01	<b>12.3</b>	9.4	5.1
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	33.5	0.011	2,071	0.23	0.12	<0.01	<b>10.9</b>	8.4	5.1
<b>Seawater Intake for Mariculture</b>											
<b>Assessment Criteria</b>			Change <± 2	<0.05	<10,000	<0.2	<0.5	<0.05	<20	N/A	>5
E1	CUHK Marine Science Laboratory	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	33.5	0.006	721	0.13	0.09	<0.01	11.2	5.6	5.4
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	33.5	0.017	722	0.19	0.31	<0.01	11.2	7.1	5.3
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	33.5	0.006	721	0.13	0.09	<0.01	11.2	5.6	5.4
<b>Cooling Water Intake</b>											
<b>Assessment Criteria</b>			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C16	Hong Kong Science Park	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	33.5	0.006	413	0.12	0.09	<0.01	12.3	5.2	5.3
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	33.5	0.013	414	0.14	0.27	<0.01	12.4	7.4	5.3
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	33.5	0.006	413	0.12	0.09	<0.01	12.3	5.2	5.3

### Appendix 4.5.2 Water Quality Modelling Results for Fisheries Resources, Ecological Resources, Typhoon Shelter and Beach

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

\* These represent the maximum values over the entire 1-year simulation period. The actual levels would be lower than these maximum values for most of the times, refer to the contour plots and time series plots in appendices.

Indicator Point (see Figure 4.4)	Name	Scenario	Bottom		Middle	Surface	Depth Averaged			All Depth Max *	
			Maximum * Sedimentation (g/m <sup>2</sup> /d)	Minimum DO (mg/L)	Minimum DO (mg/L)	Minimum DO (mg/L)	Annual Mean			Annual Geometric Mean E.coli (no./100mL)	max 5-day moving mean Chlorophyll-a (µg/L)
							UIA (mg/L)	TIN (mg/L)	SS (mg/L)		
<b>Fisheries Resources</b>											
<b>Assessment Criteria (for Harbour Subzone in Tolo Harbour &amp; Channel WCZ)</b>			N/A	≥ 2	≥ 4	≥ 4	N/A	N/A	N/A	≤ 610	≤ 20
FC1	Yim Tin Tsai Fish Culture Zone (FCZ)	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	51	5.2	5.3	5.6	0.004	0.09	2.7	5	18
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	56	5.2	5.2	5.5	0.004	0.08	2.8	5	<b>49</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	52	5.2	5.3	5.6	0.004	0.09	2.7	5	18
<b>Assessment Criteria (for Buffer Subzone in Tolo Harbour &amp; Channel WCZ)</b>			N/A	≥ 3	≥ 4	≥ 4	N/A	N/A	N/A	≤ 610	≤ 10
FC2	Yim Tin Tsai (East) FCZ	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	16	5.6	5.8	5.9	0.003	0.06	1.8	1	<b>15</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	17	5.6	5.8	5.8	0.003	0.05	1.9	1	<b>16</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	16	5.6	5.8	5.9	0.003	0.06	1.8	1	<b>15</b>
<b>Assessment Criteria (for Channel Subzone in Tolo Harbour &amp; Channel WCZ)</b>			N/A	≥ 4	≥ 4	≥ 4	N/A	N/A	N/A	≤ 610	≤ 6
FC3	Lo Fu Wat FCZ	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	15	5.1	5.5	5.9	0.002	0.06	0.9	1	<b>11</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	16	5.1	5.5	5.9	0.002	0.06	0.9	1	<b>12</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	15	5.1	5.5	5.9	0.002	0.06	0.9	1	<b>11</b>
FC4	Yung Shue Au FCZ	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	29	5.5	5.6	5.8	0.002	0.05	1.5	1	<b>14</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	31	5.4	5.6	5.8	0.002	0.05	1.6	1	<b>15</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	29	5.5	5.6	5.8	0.002	0.05	1.5	1	<b>14</b>
<b>Ecological Resources (Corals)</b>											
<b>Assessment Criteria (for Harbour Subzone in Tolo Harbour &amp; Channel WCZ)</b>			≤ 100	≥ 2	≥ 4	≥ 4	N/A	N/A	N/A	≤ 610	≤ 20
CR1	Tai Po Industrial Estate	Scenario 3 – UDS "With Project" Condition (Normal Operation with Overflow at TPSTW Only)	54	5.2	5.4	5.6	0.004	0.08	3.1	50	<b>31</b>
		Scenario 4 – UDS "With Project" Condition (THEES Maintenance Discharge from TPSTW and CSTW)	59	5.1	5.4	5.6	0.004	0.09	3.3	51	<b>60</b>
		Scenario 5 – UDS "With Project" Condition (Emergency Sewage Discharge from TPSTW)TW	54	5.2	5.4	5.6	0.004	0.08	3.1	55	<b>31</b>
CR2	Shuen Wan Golf Course	Scenario 3 – UDS "With Project" Condition (Normal Operation with Overflow at TPSTW Only)	32	5.2	5.5	5.8	0.005	0.11	2.6	9	20
		Scenario 4 – UDS "With Project" Condition (THEES Maintenance Discharge from TPSTW and CSTW)	40	5.2	5.5	5.7	0.005	0.11	2.7	9	<b>55</b>
		Scenario 5 – UDS "With Project" Condition (Emergency Sewage Discharge from TPSTW)TW	32	5.2	5.5	5.8	0.005	0.11	2.6	9	20

### Appendix 4.5.2 Water Quality Modelling Results for Fisheries Resources, Ecological Resources, Typhoon Shelter and Beach

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Indicator Point (see Figure 4.4)	Name	Scenario	Bottom		Middle	Surface	Depth Averaged			All Depth Max *	
			Maximum * Sedimentation (g/m <sup>2</sup> /d)	Minimum DO (mg/L)	Minimum DO (mg/L)	Minimum DO (mg/L)	Annual Mean			Annual Geometric Mean E.coli (no./100mL)	max 5-day moving mean Chlorophyll-a (µg/L)
							UIA (mg/L)	TIN (mg/L)	SS (mg/L)		
<b>Ecological Resources (Corals)</b>											
<b>Assessment Criteria (for Harbour Subzone in Tolo Harbour &amp; Channel WCZ)</b>			≤ 100	≥ 2	≥ 4	≥ 4	N/A	N/A	N/A	≤ 610	≤ 20
CR3	Providence Bay	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	37	5.2	5.3	5.5	0.003	0.07	2.5	15	<b>22</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	45	5.1	5.3	5.5	0.003	0.07	2.6	15	<b>39</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	37	5.2	5.3	5.5	0.003	0.07	2.5	15	<b>22</b>
CR4	Ma Liu Shui	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	24	5.1	5.4	5.2	0.003	0.08	2.5	251	<b>27</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	30	5.1	5.3	5.2	0.003	0.08	2.6	252	<b>34</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	25	5.1	5.4	5.2	0.003	0.08	2.5	251	<b>27</b>
CR5	Sha Tin Hoi	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	17	5.2	5.3	5.1	0.003	0.08	3.1	<b>673</b>	<b>33</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	22	5.2	5.3	5.1	0.004	0.09	3.2	<b>676</b>	<b>49</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	17	5.2	5.3	5.1	0.003	0.08	3.1	<b>673</b>	<b>33</b>
<b>Assessment Criteria (for Buffer Subzone in Tolo Harbour &amp; Channel WCZ)</b>			≤ 100	≥ 3	≥ 4	≥ 4	N/A	N/A	N/A	≤ 610	≤ 10
CR7	Yeung Chau	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	12	5.5	5.6	5.8	0.002	0.05	1.7	5	<b>14</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	14	5.5	5.6	5.8	0.002	0.05	1.8	5	<b>15</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	12	5.5	5.6	5.8	0.002	0.05	1.7	5	<b>14</b>
CR8	Tai Mei Tuk	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	33	5.3	5.6	5.8	0.002	0.06	1.6	3	<b>14</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	37	5.3	5.5	5.8	0.002	0.05	1.6	3	<b>16</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	33	5.3	5.6	5.8	0.002	0.06	1.6	3	<b>14</b>
CR9	Ma Shi Chau	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	17	5.2	5.7	5.9	0.003	0.06	1.4	1	<b>13</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	19	5.2	5.7	5.9	0.002	0.06	1.4	1	<b>18</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	17	5.2	5.7	5.9	0.003	0.06	1.4	1	<b>13</b>
CR18	Pak Sha Tau	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	17	4.8	5.0	5.8	0.003	0.08	1.1	1	<b>13</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	18	4.9	5.1	5.8	0.003	0.07	1.1	1	<b>20</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	17	4.8	5.0	5.8	0.003	0.08	1.1	1	<b>13</b>
CR6	Whitehead Peninsula	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	17	5.1	5.5	5.7	0.003	0.07	1.8	94	<b>20</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	19	5.1	5.5	5.7	0.003	0.08	1.9	96	<b>39</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	17	5.1	5.5	5.7	0.003	0.07	1.8	94	<b>20</b>

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

\* These represent the maximum values over the entire 1-year simulation period. The actual levels would be lower than these maximum values for most of the times, refer to the contour plots and time series plots in appendices.

Indicator Point (see Figure 4.4)	Name	Scenario	Bottom		Middle	Surface	Depth Averaged			All Depth Max * max 5-day moving mean Chlorophyll-a (µg/L)	
			Maximum * Sedimentation (g/m <sup>2</sup> /d)	Minimum DO (mg/L)	Minimum DO (mg/L)	Minimum DO (mg/L)	Annual Mean				Annual Geometric Mean <i>E.coli</i> (no./100mL)
							UIA (mg/L)	TIN (mg/L)	SS (mg/L)		
<b>Ecological Resources (Corals)</b>											
<b>Assessment Criteria (for Channel Subzone in Tolo Harbour &amp; Channel WCZ)</b>			≤ 100	<sup>3</sup> 4	<sup>3</sup> 4	<sup>3</sup> 4	N/A	N/A	N/A	≤ 610	≤ 6
CR10	Wong Wan Tsui	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	9	4.5	4.6	5.9	0.003	0.07	0.8	1	<b>9</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	9	4.5	4.7	5.9	0.003	0.07	0.8	1	<b>15</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	9	4.5	4.6	5.9	0.003	0.07	0.8	1	<b>9</b>
CR11	Lo Fu Wat	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	7	5.1	5.5	5.9	0.002	0.06	0.6	1	<b>9</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	7	5.1	5.5	5.9	0.002	0.06	0.6	1	<b>12</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	7	5.1	5.5	5.9	0.002	0.06	0.6	1	<b>9</b>
CR12	Gruff Head	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	10	4.4	4.7	5.8	0.003	0.07	0.8	1	<b>8</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	10	4.4	4.7	5.8	0.003	0.07	0.8	1	<b>13</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	10	4.4	4.7	5.8	0.003	0.07	0.8	1	<b>8</b>
CR16	South Wong Chuk Kok Tsui	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	8	4.9	5.3	5.6	0.002	0.06	0.6	1	<b>8</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	8	5.0	5.3	5.7	0.002	0.06	0.6	1	<b>12</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	8	4.9	5.3	5.6	0.002	0.06	0.6	1	<b>8</b>
CR17	Wong Chuk Kok Tsui	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	11	4.2	4.9	5.6	0.002	0.06	0.5	1	<b>8</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	11	4.2	4.9	5.7	0.002	0.06	0.5	1	<b>8</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	11	4.2	4.9	5.6	0.002	0.06	0.5	1	<b>8</b>
CR14	Hoi Ha Wan Moon Island	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	14	4.8	5.3	5.8	0.002	0.06	0.6	1	<b>8</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	14	4.8	5.4	5.8	0.002	0.06	0.6	1	<b>9</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	14	4.8	5.3	5.8	0.002	0.06	0.6	1	<b>8</b>
CR13	Hoi Ha Wan Coral Beach	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	16	5.0	5.5	6.0	0.002	0.05	0.7	1	<b>9</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	16	5.0	5.6	6.0	0.002	0.05	0.7	1	<b>9</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	16	5.0	5.5	6.0	0.002	0.05	0.7	1	<b>9</b>
CR15	Hoi Ha Wan Pier	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	24	4.9	5.3	5.8	0.002	0.04	0.8	1	<b>11</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	24	4.9	5.3	5.7	0.002	0.04	0.8	1	<b>11</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	24	4.9	5.3	5.8	0.002	0.04	0.8	1	<b>11</b>

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\* These represent the maximum values over the entire 1-year simulation period. The actual levels would be lower than these maximum values for most of the times, refer to the contour plots and time series plots in appendices.

Indicator Point (see Figure 4.4)	Name	Scenario	Bottom		Middle	Surface	Depth Averaged			All Depth Max *	
			Maximum * Sedimentation (g/m <sup>2</sup> /d)	Minimum DO (mg/L)	Minimum DO (mg/L)	Minimum DO (mg/L)	Annual Mean			Annual Geometric Mean <i>E.coli</i> (no./100mL)	max 5-day moving mean  Chlorophyll-a (µg/L)
							UIA (mg/L)	TIN (mg/L)	SS (mg/L)		
<b>Ecological Resources (Mangroves / Site of Special Scientific Interest)</b>											
<b>Assessment Criteria (for Harbour Subzone in Tolo Harbour &amp; Channel WCZ)</b>			N/A	≥ 2	≥ 4	≥ 4	N/A	N/A	N/A	≤ 610	≤ 20
M1	Tolo Pond	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	44	3.8	4.4	<b>1.3</b>	0.003	0.07	4.5	602	<b>40</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	44	3.8	4.4	<b>1.3</b>	0.003	0.07	4.7	606	<b>48</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	44	3.8	4.4	<b>1.3</b>	0.003	0.07	4.5	602	<b>40</b>
<b>Assessment Criteria (for Buffer Subzone in Tolo Harbour &amp; Channel WCZ)</b>			N/A	≥ 3	≥ 4	≥ 4	N/A	N/A	N/A	≤ 610	≤ 10
M2	Shuen Wan	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	2	4.9	4.9	4.8	0.002	0.04	2.1	139	<b>16</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	2	4.9	4.9	4.8	0.002	0.04	2.2	139	<b>16</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	2	4.9	4.9	4.8	0.002	0.04	2.1	139	<b>16</b>
M3	Ting Kok	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	<1	5.2	5.2	5.1	0.002	0.04	2.2	111	<b>17</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	<1	5.2	5.2	5.1	0.002	0.03	2.3	112	<b>17</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	<1	5.2	5.2	5.1	0.002	0.04	2.2	111	<b>17</b>
M4	Sam Mun Tsai	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	1	5.8	5.8	4.9	0.002	0.04	2.0	1	<b>16</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	1	5.8	5.8	4.8	0.002	0.04	2.1	1	<b>16</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	1	5.8	5.8	4.9	0.002	0.04	2.0	1	<b>16</b>
M5	Nai Chung	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	<1	5.5	5.5	5.4	0.002	0.05	1.3	2	<b>16</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	<1	5.6	5.6	5.5	0.002	0.05	1.3	2	<b>22</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	<1	5.5	5.5	5.4	0.002	0.05	1.3	2	<b>16</b>
S1	Ting Kok	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	4	5.4	5.4	5.5	0.002	0.04	2.1	52	<b>15</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	4	5.4	5.4	5.5	0.002	0.04	2.2	52	<b>15</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	4	5.4	5.4	5.5	0.002	0.04	2.1	52	<b>15</b>
<b>Assessment Criteria (for Channel Subzone in Tolo Harbour &amp; Channel WCZ)</b>			N/A	≥ 4	≥ 4	≥ 4	N/A	N/A	N/A	≤ 610	≤ 6
M6	Sai Keng	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	1	5.9	5.9	5.9	0.002	0.04	1.8	4	<b>17</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	1	5.9	5.9	5.9	0.001	0.03	1.9	4	<b>18</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	1	5.9	5.9	5.9	0.002	0.04	1.8	4	<b>17</b>
M7	Kei Ling Ha Lo Wai	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	<1	5.3	5.3	5.3	0.001	0.03	2.0	1	<b>17</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	<1	5.3	5.3	5.3	0.001	0.03	2.0	1	<b>17</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	<1	5.3	5.3	5.3	0.001	0.03	2.0	1	<b>17</b>
M8	Kei Ling Ha Hoi	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	1	5.9	5.9	5.7	0.002	0.04	1.6	1	<b>16</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	1	5.9	6.0	5.7	0.002	0.04	1.6	1	<b>16</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	1	5.9	5.9	5.7	0.002	0.04	1.6	1	<b>16</b>

**Appendix 4.5.2 Water Quality Modelling Results for Fisheries Resources, Ecological Resources, Typhoon Shelter and Beach**

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

\* These represent the maximum values over the entire 1-year simulation period. The actual levels would be lower than these maximum values for most of the times, refer to the contour plots and time series plots in appendices.

Indicator Point (see Figure 4.4)	Name	Scenario	Bottom		Middle	Surface	Depth Averaged			All Depth Max *	
			Maximum *	Minimum	Minimum	Minimum	Annual Mean		Annual Geometric Mean <i>E.coli</i> (no./100mL)	max 5-day moving mean  Chlorophyll-a (µg/L)	
			Sedimentation (g/m <sup>2</sup> /d)	DO (mg/L)	DO (mg/L)	DO (mg/L)	UIA (mg/L)	TIN (mg/L)			SS (mg/L)
<b>Ecological Resources (Mangroves / Site of Special Scientific Interest)</b>											
<b>Assessment Criteria (for Channel Subzone in Tolo Harbour &amp; Channel WCZ)</b>			N/A	≥ 4	≥ 4	≥ 4	N/A	N/A	N/A	≤ 610	≤ 6
M9	Sham Chung	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	22	5.1	5.7	5.9	0.002	0.06	1.2	1	<b>14</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	24	5.1	5.7	5.9	0.002	0.05	1.3	1	<b>15</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	22	5.1	5.7	5.9	0.002	0.06	1.2	1	<b>14</b>
M10	Lo Fu Wat	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	15	5.1	5.5	5.9	0.002	0.06	0.9	1	<b>11</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	16	5.1	5.5	5.9	0.002	0.06	0.9	1	<b>12</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	15	5.1	5.5	5.9	0.002	0.06	0.9	1	<b>11</b>
M11	Lai Chi Chong	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	8	5.3	5.7	5.9	0.002	0.06	0.9	1	<b>11</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	8	5.3	5.7	5.9	0.002	0.06	0.9	1	<b>13</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	8	5.3	5.7	5.9	0.002	0.06	0.9	1	<b>11</b>
M12	Fung Wong Wat	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	15	5.3	5.6	6.0	0.002	0.06	0.6	1	<b>10</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	15	5.3	5.7	6.0	0.002	0.06	0.6	1	<b>10</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	15	5.3	5.6	6.0	0.002	0.06	0.6	1	<b>10</b>
S2	Kei Ling Ha Mangal	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	3	5.8	5.9	5.9	0.002	0.05	1.6	77	<b>16</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	3	5.8	5.9	5.9	0.002	0.04	1.6	77	<b>16</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	3	5.8	5.9	5.9	0.002	0.05	1.6	77	<b>16</b>
S3	Hoi Ha Wan	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	9	4.5	5.0	5.7	0.002	0.06	0.7	1	<b>9</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	9	4.5	5.0	5.7	0.002	0.06	0.7	1	<b>9</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	9	4.5	5.0	5.7	0.002	0.06	0.7	1	<b>9</b>
<b>Typhoon Shelter</b>											
<b>Assessment Criteria (for Harbour Subzone in Tolo Harbour &amp; Channel WCZ)</b>			N/A	≥ 2	≥ 4	≥ 4	N/A	N/A	N/A	≤ 610	≤ 20
T6	Shuen Wan	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	83	5.5	5.8	5.9	0.002	0.06	3.1	164	<b>21</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	90	5.4	5.7	5.9	0.002	0.05	3.2	165	<b>40</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	84	5.5	5.8	5.9	0.002	0.06	3.1	164	<b>21</b>
<b>Beach</b>											
<b>Assessment Criteria (for Buffer Subzone in Tolo Harbour &amp; Channel WCZ)</b>			N/A	≥ 3	≥ 4	≥ 4	N/A	N/A	N/A	≤ 610	≤ 10
B1	Lung Mei	Scenario 3 – Baseline condition (with no THEES maintenance and no emergency discharge)	23	5.6	5.7	5.8	0.002	0.05	1.6	6	<b>14</b>
		Scenario 4 – With a 4-week THEES maintenance discharge (from TPSTW and CSTW)	27	5.5	5.7	5.7	0.002	0.05	1.6	6	<b>15</b>
		Scenario 5 – With a 3-hour emergency discharge (from TPSTW)	23	5.6	5.7	5.8	0.002	0.05	1.6	6	<b>14</b>