

Summary of water quality statistics for typhoon shelters in 2005

Parameter	Tuen Mun NT1	Cheung Chau ST1	Hei Ling Chau ST3	Aberdeen (South) WT1	Aberdeen (West) WT3	Rambler Channel VT8
Number of samples	6	6	6	6	6	6
Temperature (°C)	23.3 (16.0 - 28.5)	23.3 (15.7 - 29.4)	23.3 (15.7 - 29.1)	22.7 (15.5 - 28.0)	22.7 (15.6 - 27.8)	23.0 (16.0 - 27.3)
Salinity	26.9 (17.0 - 32.6)	31.4 (29.3 - 32.8)	30.9 (26.9 - 32.8)	31.3 (27.7 - 33.1)	31.1 (26.1 - 33.1)	29.0 (21.5 - 32.7)
Dissolved Oxygen (mg/L)	6.3 (5.3 - 6.9)	6.6 (4.8 - 7.6)	7.4 (6.3 - 9.8)	5.9 (4.7 - 6.6)	6.1 (5.3 - 7.1)	6.2 (5.4 - 7.9)
Bottom	N.M.	6.5 (4.6 - 7.6)	7.1 (5.0 - 9.6)	5.7 (3.5 - 6.6)	6.1 (5.2 - 7.1)	6.2 (5.3 - 8.0)
Dissolved Oxygen (% Saturation)	86 (66 - 97)	92 (71 - 106)	104 (91 - 144)	82 (68 - 95)	85 (76 - 108)	85 (73 - 113)
Bottom	N.M.	91 (67 - 105)	99 (73 - 140)	79 (50 - 95)	85 (73 - 107)	86 (75 - 114)
pH	8.1 (7.8 - 8.3)	8.2 (7.9 - 8.6)	8.2 (7.9 - 8.7)	8.1 (8.0 - 8.3)	8.1 (7.9 - 8.2)	8.2 (8.0 - 8.4)
Secchi Disc Depth (m)	1.4 (1.2 - 1.8)	1.4 (1.0 - 1.8)	1.7 (1.1 - 2.5)	2.5 (1.7 - 4.5)	2.0 (1.1 - 2.8)	1.3 (1.0 - 2.0)
Turbidity (NTU)	12.5 (6.2 - 17.3)	11.0 (5.8 - 13.9)	10.1 (2.3 - 15.3)	9.2 (5.4 - 12.7)	9.2 (4.8 - 12.0)	13.2 (7.8 - 18.2)
Suspended Solids (mg/L)	8.1 (4.9 - 13.0)	15.1 (3.0 - 66.7)	4.5 (2.7 - 8.5)	3.0 (1.7 - 6.2)	3.9 (1.9 - 7.1)	11.1 (5.3 - 20.0)
5-day Biochemical Oxygen Demand (mg/L)	1.0 (0.4 - 1.7)	1.3 (0.6 - 3.3)	1.1 (0.6 - 2.2)	0.7 (0.3 - 1.5)	1.0 (0.5 - 1.7)	1.1 (0.5 - 1.9)
Ammonia Nitrogen (mg/L)	0.14 (0.08 - 0.22)	0.09 (0.05 - 0.14)	0.08 (0.03 - 0.15)	0.07 (0.03 - 0.14)	0.09 (0.07 - 0.16)	0.14 (0.07 - 0.20)
Unionised Ammonia (mg/L)	0.006 (0.004 - 0.008)	0.006 (0.003 - 0.009)	0.005 (0.001 - 0.008)	0.004 (0.001 - 0.009)	0.005 (0.002 - 0.011)	0.009 (0.006 - 0.013)
Nitrite Nitrogen (mg/L)	0.07 (0.02 - 0.15)	0.02 (<0.01 - 0.04)	0.03 (0.01 - 0.05)	0.02 (0.01 - 0.04)	0.02 (0.01 - 0.05)	0.05 (0.01 - 0.07)
Nitrate Nitrogen (mg/L)	0.40 (0.11 - 1.20)	0.13 (0.04 - 0.29)	0.17 (0.05 - 0.48)	0.14 (0.03 - 0.34)	0.15 (0.04 - 0.40)	0.27 (0.10 - 0.57)
Total Inorganic Nitrogen (mg/L)	0.61 (0.25 - 1.44)	0.24 (0.11 - 0.41)	0.28 (0.08 - 0.59)	0.23 (0.09 - 0.53)	0.26 (0.12 - 0.61)	0.46 (0.32 - 0.78)
Total Kjeldahl Nitrogen (mg/L)	0.32 (0.25 - 0.35)	0.29 (0.21 - 0.50)	0.24 (0.19 - 0.30)	0.18 (0.11 - 0.24)	0.22 (0.13 - 0.31)	0.31 (0.28 - 0.40)
Total Nitrogen (mg/L)	0.78 (0.39 - 1.69)	0.44 (0.28 - 0.57)	0.44 (0.27 - 0.80)	0.34 (0.18 - 0.62)	0.39 (0.23 - 0.69)	0.64 (0.45 - 0.95)
Orthophosphate Phosphorus (mg/L)	0.03 (0.01 - 0.04)	0.02 (0.01 - 0.03)	0.02 (<0.01 - 0.03)	0.01 (0.01 - 0.02)	0.02 (0.01 - 0.02)	0.02 (0.01 - 0.03)
Total Phosphorus (mg/L)	0.04 (0.04 - 0.06)	0.05 (0.02 - 0.13)	0.03 (0.02 - 0.04)	0.02 (0.02 - 0.03)	0.03 (0.02 - 0.04)	0.05 (0.03 - 0.06)
Silica (as SiO ₂) (mg/L)	2.1 (0.8 - 3.9)	0.9 (0.2 - 1.6)	0.9 (0.2 - 1.7)	0.8 (0.4 - 1.6)	0.9 (0.5 - 1.6)	1.4 (0.8 - 2.8)
Chlorophyll- <i>a</i> (µg/L)	7.6 (0.6 - 25.0)	7.1 (0.6 - 21.5)	9.2 (0.8 - 29.0)	2.5 (0.9 - 5.9)	3.5 (0.9 - 7.9)	5.1 (0.5 - 16.0)
<i>E. coli</i> (count/100mL)	390 (90 - 4000)	56 (9 - 170)	3 (1 - 15)	250 (53 - 860)	1900 (530 - 26000)	3900 (420 - 16000)
Faecal Coliforms (count/100mL)	2200 (440 - 76000)	180 (42 - 630)	7 (2 - 69)	720 (82 - 2600)	3700 (700 - 44000)	8200 (620 - 34000)

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2. Data presented are annual arithmetic means of the depth-averaged results except for *E. coli* and faecal coliforms which are annual geometric means.
3. Data in brackets indicate the ranges.
4. N.M. – not measured.

Summary of water quality statistics for typhoon shelters in 2005 (continued)

Parameter	Government Dockyard VT12	Yau Ma Tei VT10	Causeway Bay VT2	To Kwa Wan VT11	Kwun Tong VT4	Sam Ka Tsuen VT3
Number of samples	6	6	6	6	6	6
Temperature (°C)	23.2 (16.4 - 27.3)	23.0 (16.2 - 27.0)	22.8 (15.9 - 27.3)	22.4 (16.0 - 26.3)	22.6 (16.2 - 26.2)	22.8 (15.8 - 27.5)
Salinity	29.8 (25.7 - 32.0)	30.0 (26.1 - 32.2)	30.2 (25.2 - 32.2)	31.2 (27.6 - 32.7)	30.0 (27.6 - 31.5)	30.7 (25.4 - 32.6)
Dissolved Oxygen (mg/L)	5.7 (4.6 - 7.0)	4.8 (3.6 - 6.7)	4.9 (3.6 - 7.2)	6.1 (3.7 - 8.0)	4.3 (2.9 - 6.7)	5.4 (3.3 - 7.4)
Bottom	5.7 (5.0 - 6.8)	4.8 (3.5 - 6.6)	4.9 (3.6 - 7.1)	6.1 (3.8 - 7.7)	4.7 (3.2 - 5.5)	5.7 (3.3 - 7.9)
Dissolved Oxygen (% Saturation)	79 (60 - 103)	66 (53 - 96)	68 (53 - 103)	85 (55 - 115)	60 (37 - 97)	75 (48 - 109)
Bottom	79 (65 - 98)	66 (52 - 95)	68 (53 - 102)	84 (56 - 110)	64 (47 - 72)	80 (48 - 116)
pH	8.1 (7.9 - 8.4)	8.1 (7.9 - 8.2)	8.1 (7.9 - 8.3)	8.2 (8.0 - 8.4)	8.0 (7.7 - 8.1)	8.2 (8.0 - 8.5)
Secchi Disc Depth (m)	1.4 (1.0 - 1.8)	1.7 (1.0 - 2.2)	1.9 (1.5 - 2.9)	1.7 (1.0 - 2.2)	1.2 (0.7 - 1.7)	1.6 (1.0 - 2.5)
Turbidity (NTU)	12.6 (6.6 - 15.6)	10.1 (5.8 - 11.9)	8.8 (5.0 - 9.9)	8.8 (5.6 - 10.7)	8.6 (4.9 - 9.8)	8.7 (4.8 - 10.3)
Suspended Solids (mg/L)	10.8 (6.0 - 15.9)	5.7 (3.9 - 10.1)	5.8 (3.0 - 13.8)	4.4 (1.3 - 7.3)	2.6 (1.3 - 3.9)	5.1 (2.7 - 11.0)
5-day Biochemical Oxygen Demand (mg/L)	1.6 (0.8 - 3.6)	1.8 (1.0 - 3.6)	1.6 (1.2 - 2.9)	1.5 (0.7 - 3.4)	2.1 (1.4 - 4.4)	1.8 (0.8 - 4.9)
Ammonia Nitrogen (mg/L)	0.23 (0.11 - 0.30)	0.31 (0.25 - 0.37)	0.20 (0.18 - 0.30)	0.14 (0.06 - 0.19)	0.44 (0.26 - 0.70)	0.13 (0.07 - 0.19)
Unionised Ammonia (mg/L)	0.012 (0.007 - 0.020)	0.015 (0.008 - 0.025)	0.011 (0.005 - 0.021)	0.008 (0.004 - 0.015)	0.015 (0.007 - 0.029)	0.007 (0.004 - 0.013)
Nitrite Nitrogen (mg/L)	0.04 (0.03 - 0.06)	0.04 (0.02 - 0.06)	0.04 (0.02 - 0.05)	0.03 (0.02 - 0.05)	0.11 (0.03 - 0.22)	0.04 (0.03 - 0.06)
Nitrate Nitrogen (mg/L)	0.20 (0.14 - 0.39)	0.20 (0.11 - 0.42)	0.19 (0.11 - 0.32)	0.16 (0.09 - 0.23)	0.38 (0.22 - 0.63)	0.28 (0.10 - 0.74)
Total Inorganic Nitrogen (mg/L)	0.47 (0.35 - 0.68)	0.55 (0.46 - 0.74)	0.43 (0.35 - 0.55)	0.33 (0.27 - 0.41)	0.93 (0.63 - 1.16)	0.45 (0.28 - 0.99)
Total Kjeldahl Nitrogen (mg/L)	0.46 (0.38 - 0.60)	0.57 (0.44 - 0.67)	0.42 (0.32 - 0.51)	0.34 (0.27 - 0.39)	0.73 (0.48 - 1.03)	0.33 (0.23 - 0.48)
Total Nitrogen (mg/L)	0.71 (0.58 - 0.85)	0.81 (0.67 - 0.92)	0.65 (0.56 - 0.80)	0.53 (0.51 - 0.58)	1.23 (0.84 - 1.73)	0.65 (0.42 - 1.17)
Orthophosphate Phosphorus (mg/L)	0.04 (0.01 - 0.06)	0.04 (0.02 - 0.05)	0.04 (0.02 - 0.05)	0.03 (0.01 - 0.04)	0.18 (0.10 - 0.33)	0.03 (0.01 - 0.05)
Total Phosphorus (mg/L)	0.07 (0.06 - 0.08)	0.07 (0.06 - 0.08)	0.06 (0.05 - 0.08)	0.05 (0.04 - 0.09)	0.21 (0.13 - 0.37)	0.06 (0.04 - 0.07)
Silica (as SiO ₂) (mg/L)	1.0 (0.2 - 1.7)	1.0 (0.5 - 1.4)	1.0 (0.5 - 1.4)	0.8 (0.3 - 1.1)	1.3 (0.5 - 2.2)	0.9 (0.1 - 1.2)
Chlorophyll- <i>a</i> (µg/L)	9.8 (0.7 - 38.0)	7.3 (0.4 - 28.7)	4.3 (0.5 - 16.5)	7.3 (0.5 - 32.3)	10.6 (0.6 - 44.7)	8.2 (0.6 - 39.0)
<i>E. coli</i> (count/100mL)	500 (130 - 1800)	4000 (660 - 12000)	5200 (2300 - 12000)	690 (150 - 2800)	8200 (1500 - 26000)	1000 (590 - 2400)
Faecal Coliforms (count/100mL)	1200 (460 - 3100)	11000 (2800 - 41000)	17000 (5100 - 61000)	1900 (880 - 7200)	16000 (3200 - 50000)	2400 (930 - 6200)

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2. Data presented are annual arithmetic means of the depth-averaged results except for *E. coli* and faecal coliforms which are annual geometric means.

3. Data in brackets indicate the ranges.

Summary of water quality statistics for typhoon shelters in 2005 (continued)

Parameter	Aldrich Bay (Shau Kei Wan) ET2	Chai Wan ET1	Hebe Haven PT4	Yim Tin Tsai PT3	Sai Kung PT2	Shuen Wan TT1
Number of samples	6	6	6	6	6	6
Temperature (°C)	22.2 (16.1 - 26.1)	23.0 (16.0 - 27.9)	23.5 (15.6 - 29.6)	23.5 (15.3 - 29.7)	23.6 (15.7 - 29.4)	23.4 (16.4 - 29.0)
Salinity	32.0 (28.5 - 33.2)	31.2 (24.8 - 33.0)	31.7 (30.2 - 33.3)	32.1 (30.8 - 33.4)	31.8 (30.4 - 33.3)	31.3 (29.0 - 32.9)
Dissolved Oxygen (mg/L)	4.8 (3.7 - 5.7)	6.3 (4.6 - 8.3)	6.6 (5.3 - 7.6)	6.3 (5.1 - 7.2)	6.4 (4.9 - 8.7)	6.2 (4.7 - 7.5)
Bottom	4.0 (1.9 - 5.7)	6.3 (4.6 - 8.4)	6.7 (5.3 - 7.9)	6.1 (5.2 - 7.1)	6.7 (5.2 - 8.6)	5.9 (4.1 - 7.6)
Dissolved Oxygen (% Saturation)	66 (53 - 75)	90 (64 - 122)	93 (79 - 118)	90 (74 - 113)	90 (70 - 135)	87 (70 - 113)
Bottom	54 (27 - 80)	89 (66 - 121)	92 (76 - 122)	81 (75 - 88)	93 (76 - 134)	82 (61 - 104)
pH	8.0 (7.7 - 8.2)	8.2 (8.0 - 8.5)	8.2 (7.9 - 8.5)	8.2 (8.0 - 8.5)	8.2 (8.1 - 8.5)	8.1 (7.5 - 8.4)
Secchi Disc Depth (m)	3.2 (2.8 - 3.5)	2.5 (1.8 - 3.7)	2.3 (2.0 - 3.2)	2.7 (2.0 - 3.5)	2.5 (1.9 - 3.0)	2.2 (1.5 - 3.2)
Turbidity (NTU)	8.1 (3.9 - 9.9)	8.5 (5.4 - 9.8)	8.9 (3.4 - 13.3)	8.2 (4.3 - 9.9)	7.9 (4.1 - 9.5)	8.5 (4.7 - 11.2)
Suspended Solids (mg/L)	1.7 (1.2 - 2.3)	2.5 (1.6 - 3.5)	3.6 (1.3 - 8.1)	2.0 (1.2 - 3.0)	1.7 (1.2 - 2.3)	2.2 (1.2 - 3.9)
5-day Biochemical Oxygen Demand (mg/L)	0.7 (0.3 - 1.3)	0.8 (0.4 - 1.9)	1.1 (0.7 - 1.4)	0.7 (0.5 - 1.1)	1.0 (0.7 - 1.4)	1.9 (1.2 - 2.4)
Ammonia Nitrogen (mg/L)	0.15 (0.07 - 0.28)	0.09 (0.05 - 0.14)	0.04 (0.02 - 0.07)	0.03 (0.01 - 0.06)	0.03 (0.02 - 0.06)	0.07 (0.05 - 0.16)
Unionised Ammonia (mg/L)	0.005 (0.003 - 0.009)	0.005 (0.002 - 0.007)	0.002 (0.001 - 0.004)	0.002 (0.001 - 0.004)	0.002 (0.001 - 0.004)	0.004 (<0.001 - 0.007)
Nitrite Nitrogen (mg/L)	0.02 (0.01 - 0.03)	0.02 (0.01 - 0.02)	<0.01 (<0.01 - 0.01)	<0.01 (<0.01 - 0.01)	<0.01 (<0.01 - 0.01)	<0.01 (<0.01 - 0.01)
Nitrate Nitrogen (mg/L)	0.10 (0.06 - 0.14)	0.10 (0.05 - 0.18)	0.03 (<0.01 - 0.09)	0.02 (<0.01 - 0.06)	0.03 (<0.01 - 0.10)	0.04 (<0.01 - 0.15)
Total Inorganic Nitrogen (mg/L)	0.28 (0.21 - 0.35)	0.21 (0.16 - 0.26)	0.08 (0.03 - 0.15)	0.05 (0.01 - 0.12)	0.07 (0.03 - 0.16)	0.12 (0.05 - 0.32)
Total Kjeldahl Nitrogen (mg/L)	0.27 (0.13 - 0.42)	0.24 (0.19 - 0.28)	0.16 (0.14 - 0.18)	0.12 (0.11 - 0.16)	0.14 (0.10 - 0.16)	0.26 (0.23 - 0.33)
Total Nitrogen (mg/L)	0.39 (0.31 - 0.49)	0.36 (0.28 - 0.48)	0.20 (0.15 - 0.24)	0.15 (0.11 - 0.22)	0.17 (0.13 - 0.26)	0.31 (0.25 - 0.49)
Orthophosphate Phosphorus (mg/L)	0.03 (0.02 - 0.05)	0.02 (0.01 - 0.03)	0.01 (<0.01 - 0.01)	<0.01 (<0.01 - 0.01)	0.01 (<0.01 - 0.01)	0.01 (0.01 - 0.01)
Total Phosphorus (mg/L)	0.04 (0.02 - 0.07)	0.03 (0.02 - 0.05)	0.02 (0.02 - 0.03)	0.02 (0.02 - 0.02)	0.02 (0.02 - 0.02)	0.03 (0.02 - 0.04)
Silica (as SiO ₂) (mg/L)	0.9 (0.6 - 1.4)	0.6 (0.4 - 1.1)	0.8 (0.2 - 1.4)	0.7 (0.3 - 1.2)	0.7 (0.3 - 1.1)	1.0 (0.4 - 1.4)
Chlorophyll- <i>a</i> (µg/L)	1.7 (0.9 - 3.9)	5.1 (0.8 - 13.2)	3.1 (1.2 - 4.4)	1.9 (1.0 - 2.9)	2.6 (1.0 - 4.3)	5.7 (1.6 - 9.0)
<i>E. coli</i> (count/100mL)	570 (300 - 2400)	280 (63 - 990)	3 (1 - 10)	1 (1 - 7)	9 (1 - 51)	24 (9 - 120)
Faecal Coliforms (count/100mL)	1600 (730 - 7000)	800 (240 - 1600)	12 (2 - 32)	2 (1 - 9)	92 (5 - 500)	60 (26 - 180)

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3. Data in brackets indicate the ranges.