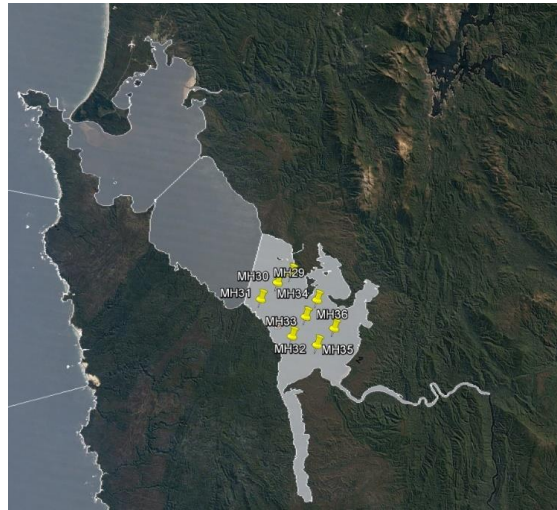
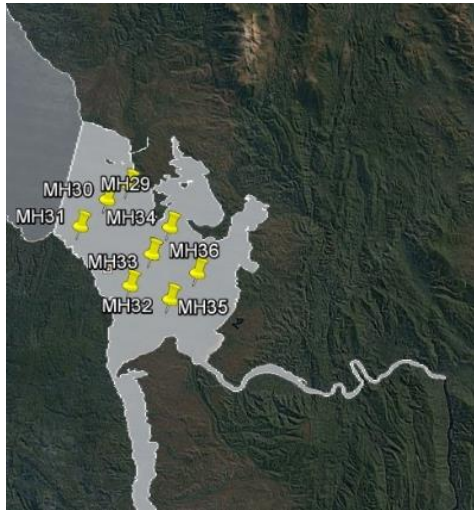


## Macquarie Harbour – Segment 119

The interim default guideline values (DGVs) for aquatic ecosystems presented herein have been derived from site specific information in accordance with the National Water Quality Management Strategy ([NWQMS](#)).



**Water Body Name:** Macquarie Harbour

**Segment:** 119

**IMCRA Mesoscale Region:** Franklin

**IMCRA Provincial Region:** Tasmanian Shelf

**Ecosystem Classification:** Slightly to Moderately Disturbed Ecosystem

**Data Provider:** EPA

**EPA Sites:** MH29, MH30, MH31, MH32, MH33, MH34, MH35, and MH36

**Period of record:** 05/05/1993 to 14/10/2009.

### Interim Default Guideline Values

Data from eight locations (as listed above) have been used in the derivation of the interim default guideline values (DGVs) presented here in. For each site field-based measurements and laboratory-based data from near the surface, at the halocline and approximately 1 metre from bottom have been used for this analysis.

The following tables display the combined data as percentiles for the surface, halocline and bottom of the water column. The surface figures apply to the top 2 metres of the water column. The halocline figures apply to the interface between the surface freshwater layer and marine water dominated layer where salinity is approximately 20 PPT. The bottom water figures apply to the bottom metre or so of the water column. Annual interim DGVs have also been derived for the depth ranges of 6-10 m, 11-15 m, 16-20 m and 21-25 m for field based measurements only as well as seasonal values for dissolved oxygen. The laboratory data for the halocline and bottom waters can be considered for nutrient interim DGVs for these depth ranges. The shaded values represent the interim DGVs for aquatic ecosystems for the depth or position indicated on an annual or seasonal basis. These can be applied as interim DGVs for aquatic ecosystems of waters encompassed within Segment 119 (as highlighted above). The interim DGVs for aquatic ecosystems are summarised in Appendix A.

Where there is insufficient data available to provide a 95% confidence interval for the guideline value for a parameter from the individual segment, data from the three sections within Macquarie Harbour (Segments 119, 120, and 121) is used. The following links provide Information on the [IMCRA spatial network](#) and the Interim [Default guideline values for Coastal and Marine waters](#) of Tasmania.

**Annual interim DGVs for Aquatic Ecosystems for Surface waters (Shaded)**

Parameter	5th %ile	10th %ile	20th %ile	Median	80th %ile	90th %ile	95th %ile	Sample Number
Dissolved Oxygen (mg/L)	8.5	8.7	9.3	10.3	11.0	11.5	11.9	376
Dissolved Oxygen (%)	92.5	94.3	95.9	98.9	103.7	109.4	113.0	384
Salinity (PPT)	1.0	1.7	2.6	5.5	8.3	9.7	11.0	389
SpCond (µS/cm)	1889	3106	4748	9685	14300	16589	18673	389
pH field - sensor TC	6.6	6.7	6.9	7.3	7.6	7.7	7.8	385
Temperature (Celsius)	8.2	8.8	9.7	12.7	17.1	18.2	19.9	389
Turbidity (NTU)	1.0	1.4	2.5	6.1	15.9	25.9	50.6	243
Redox (mV)	263	268	298	330	370	385	401	274
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	1.0	1.0	1.0	3.0	6.0	10.0	16.0	266
Nitrite and Nitrate as N µg/L^	2.7	5.0	8.0	15.0	36.2	56.6	71.0	215
Nitrate as N µg/L^	3.0	5.0	7.6	13.0	23.0	29.0	33.6	109
Nitrite as N µg/L^	1.0	1.0	1.0	2.0	2.0	3.0	3.0	326
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	1.0	1.0	2.0	3.0	4.0	326
TSS (mg/L)	0.5	1.0	3.3	6.8	9.9	12.6	16.8	145

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected.

**Summer interim DGVs for Aquatic Ecosystems for Surface waters (Shaded)**

Parameter	5 <sup>th</sup> %ile	10 <sup>th</sup> %ile	20 <sup>th</sup> %ile	Median	80 <sup>th</sup> %ile	90 <sup>th</sup> %ile	95 <sup>th</sup> %ile	Sample Number
Dissolved Oxygen (mg/L)	8.2	8.4	8.6	9.2	10.2	10.5	10.7	105
Dissolved Oxygen (%)	92.2	94.8	96.0	99.1	106.4	111.6	113.7	113
Salinity (PPT)	1.7	2.5	5.1	7.7	10.3	11.6	11.9	113
SpCond (µS/cm)	3140	4544	9060	13380	17549	19625	20087	113
pH field - sensor TC	6.4	6.7	6.9	7.5	7.7	7.7	7.8	113
Temperature (Celsius)	13.0	13.8	15.3	17.5	19.7	21.0	22.0	113
Turbidity (NTU)	1.3	2.2	3.9	11.4	20.3	28.1	48.8	69
Redox (mV)	258	262	281	312	380	395	412	87
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	1.0	1.0	1.0	2.5	5.0	7.5	10.3	76
Nitrite and Nitrate as N µg/L^	1.0	1.0	4.8	9.0	14.0	15.1	18.2	40
Nitrate as N µg/L^	2.0	3.0	4.0	8.0	10.0	13.0	14.8	45
Nitrite as N µg/L^	1.0	1.0	1.0	2.0	2.0	3.0	3.0	87
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	1.0	1.0	2.0	3.0	3.0	87
TSS (mg/L)	1.7	3.0	4.8	8.1	13.5	16.2	17.9	42

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected.

**Autumn interim DGVs for Aquatic Ecosystems for Surface waters (Shaded)**

Parameter	5th %ile	10th %ile	20th %ile	Median	80th %ile	90th %ile	95th %ile	Sample Number
Dissolved Oxygen (mg/L)	8.9	9.2	9.7	10.3	10.7	11.1	11.4	94
Dissolved Oxygen (%)	93.4	94.3	96.1	99.1	104.1	110.2	112.4	94
Salinity (PPT)	0.7	1.3	2.1	4.9	7.5	8.4	10.0	96
SpCond (µS/cm)	1243	2485	3770	8743	13072	14506	17120	96
pH field - sensor TC	6.6	6.7	7.0	7.2	7.5	7.7	7.8	92
Temperature (Celsius)	9.8	10.2	10.8	13.0	15.2	16.8	17.7	96
Turbidity (NTU)	1.3	1.7	2.8	6.3	15.0	29.9	46.5	66
Redox (mV)	267	271	321	340	382	391	407	69
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	1.0	1.0	1.0	3.0	7.2	9.6	14.6	55
Nitrite and Nitrate as N µg/L^	1.5	4.0	7.0	14.0	22.0	26.0	32.5	71
Nitrate as N µg/L^	13.7	16.8	18.4	22.5	31.6	34.3	35.3	18
Nitrite as N µg/L^	1.0	1.0	1.0	2.0	3.0	3.0	4.0	89
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	1.0	1.0	2.4	3.2	4.0	89
TSS (mg/L)	2.6	3.2	3.6	6.0	7.9	9.8	20.1	37

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected.

**Winter interim DGVs for Aquatic Ecosystems for Surface waters (Shaded)**

Parameter	5 <sup>th</sup> %ile	10 <sup>th</sup> %ile	20 <sup>th</sup> %ile	Median	80 <sup>th</sup> %ile	90 <sup>th</sup> %ile	95 <sup>th</sup> %ile	Sample Number
Dissolved Oxygen (mg/L)	10.0	10.0	10.6	11.0	11.8	12.7	13.0	91
Dissolved Oxygen (%)	90.1	93.0	94.5	98.4	102.0	108.8	116.7	91
Salinity (PPT)	0.7	1.2	2.1	3.9	6.0	7.1	8.2	91
SpCond (µS/cm)	1328	2269	3790	6927	10642	12420	14230	91
pH field - sensor TC	6.7	6.8	6.9	7.1	7.5	7.7	8.1	91
Temperature (Celsius)	7.7	7.9	8.3	9.2	9.9	10.1	10.3	91
Turbidity (NTU)	0.8	1.0	1.4	3.7	11.9	26.0	52.1	58
Redox (mV)	287	291	311	322	343	351	373	63
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	1.0	1.0	2.0	5.0	12.4	20.4	26.6	69
Nitrite and Nitrate as N µg/L^	5.6	7.1	11.0	39.5	65.0	76.5	82.9	72
Nitrate as N µg/L^					ND			
Nitrite as N µg/L^	1.0	1.0	1.0	2.0	2.0	2.0	2.0	72
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	1.0	1.0	2.0	3.0	4.5	72
TSS (mg/L)	0.5	0.7	1.0	5.0	7.7	8.7	9.3	33

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected.

**Spring interim DGVs for Aquatic Ecosystems for Surface waters (Shaded)**

Parameter	5th %ile	10th %ile	20th %ile	Median	80th %ile	90th %ile	95th %ile	Sample Number
Dissolved Oxygen (mg/L)	9.2	9.4	9.7	10.3	11.0	11.5	11.9	86
Dissolved Oxygen (%)	94.5	95.3	96.3	99.2	101.9	104.0	106.2	86
Salinity (PPT)	1.4	2.4	2.9	5.1	7.3	8.5	9.0	89
SpCond (µS/cm)	2604	4376	5251	9100	12824	14675	15487	89
pH field - sensor TC	6.6	6.7	6.9	7.3	7.5	7.6	7.6	89
Temperature (Celsius)	8.7	9.2	9.8	11.9	14.3	14.9	15.3	89
Turbidity (NTU)	1.2	1.7	2.6	6.1	14.9	21.8	32.5	50
Redox (mV)	262	265	269	334	365	373	392	55
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	1.0	1.0	1.0	2.0	3.0	4.0	4.0	66
Nitrite and Nitrate as N µg/L^	8.0	11.2	13.2	22.0	27.8	30.7	37.4	32
Nitrate as N µg/L^	8.0	10.0	11.0	19.0	27.0	30.0	36.0	46
Nitrite as N µg/L^	1.0	1.0	1.0	2.0	2.0	3.0	3.0	78
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	1.0	1.0	2.0	3.0	4.0	78
TSS (mg/L)	0.5	0.6	1.8	7.0	10.0	10.6	12.0	33

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected.

**Annual interim DGVs for Aquatic Ecosystems for Halocline (Shaded)**

Parameter	5 <sup>th</sup> %ile	10 <sup>th</sup> %ile	20 <sup>th</sup> %ile	Median	80 <sup>th</sup> %ile	90 <sup>th</sup> %ile	95 <sup>th</sup> %ile	Sample Number
Dissolved Oxygen (mg/L)	6.5	6.9	7.2	7.9	8.6	9.1	9.6	148
Dissolved Oxygen (%)	74.5	76.8	79.4	86.3	92.0	95.9	99.5	151
Salinity (PPT)	14.0	15.8	18.9	20.2	21.7	23.2	24.2	154
SpCond (µS/cm)	23135	25962	30721	32400	34470	36419	37869	154
pH field - sensor TC	6.8	7.0	7.2	7.5	7.6	7.7	7.8	153
Temperature (Celsius)	10.7	11.0	11.7	13.5	15.7	16.6	17.0	154
Turbidity (NTU)	0.9	1.1	1.9	4.0	13.3	15.7	17.6	114
Redox (mV)	267	274	295	349	387	407	411	91
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	1.0	1.0	3.0	5.0	9.0	11.0	14.0	273
Nitrite and Nitrate as N µg/L^	8.0	13.0	17.0	35.0	54.8	79.0	88.4	187
Nitrate as N µg/L^	9.0	11.1	18.2	29.5	46.6	52.0	56.9	92
Nitrite as N µg/L^	1.0	1.0	1.0	2.0	3.0	3.0	3.0	279
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	1.0	2.0	3.0	3.0	4.0	279
TSS (mg/L)	2.8	4.2	7.6	13.8	19.1	23.9	27.6	133

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected.

**Summer interim DGVs for Aquatic Ecosystems for Halocline (Shaded)**

Parameter	5th %ile	10th %ile	20th %ile	Median	80th %ile	90th %ile	95th %ile	Sample Number
Dissolved Oxygen (mg/L)	6.4	6.5	6.8	7.3	7.9	8.2	8.4	42
Dissolved Oxygen (%)	74.1	76.0	78.2	83.2	88.0	91.9	93.6	45
Salinity (PPT)	14.9	17.5	19.4	20.3	22.1	23.1	23.8	45
SpCond (µS/cm)	24560	28526	31187	32600	35071	36598	36960	45
pH field - sensor TC	6.9	7.1	7.2	7.6	7.7	7.8	7.8	45
Temperature (Celsius)	12.9	13.7	14.4	16.2	16.7	17.1	17.8	45
Turbidity (NTU)	0.8	1.1	2.5	8.4	15.2	16.6	17.9	35
Redox (mV)	270	273	285	334	394	410	416	30
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	1.0	2.3	3.0	4.0	9.0	9.0	10.0	64
Nitrite and Nitrate as N µg/L^	8.0	8.7	12.2	29.5	40.0	43.6	49.6	28
Nitrate as N µg/L^	7.8	8.6	10.2	18.0	28.0	29.0	29.0	37
Nitrite as N µg/L^	1.0	1.0	2.0	2.0	2.0	2.0	3.0	65
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	1.0	1.0	2.0	2.0	3.0	65
TSS (mg/L)	5.4	6.0	12.3	15.0	23.7	25.8	28.0	41

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected.

**Autumn interim DGVs for Aquatic Ecosystems for Halocline (Shaded)**

Parameter	5th %ile	10th %ile	20th %ile	Median	80th %ile	90th %ile	95th %ile	Sample Number
Dissolved Oxygen (mg/L)	6.9	7.0	7.3	7.9	8.5	8.8	9.3	42
Dissolved Oxygen (%)	76.1	78.0	81.9	88.0	93.6	98.1	104.5	42
Salinity (PPT)	14.7	18.3	18.9	20.1	21.3	22.6	24.0	44
SpCond (µS/cm)	24378	29684	30776	32292	34024	35902	37814	44
pH field - sensor TC	6.9	7.0	7.1	7.5	7.6	7.7	7.8	43
Temperature (Celsius)	12.4	12.7	12.9	14.6	15.7	15.8	16.7	44
Turbidity (NTU)	1.0	1.1	1.5	3.7	13.4	16.3	18.2	35
Redox (mV)	278	289	336	363	384	403	408	23
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	1.0	1.0	1.0	5.0	10.0	12.0	14.0	78
Nitrite and Nitrate as N µg/L^	11.3	13.6	18.6	28.0	44.0	46.7	57.4	64
Nitrate as N µg/L^	24.8	26.6	28.4	34.0	39.0	40.6	43.8	17
Nitrite as N µg/L^	1.0	2.0	2.0	2.0	3.0	3.0	5.0	81
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	1.0	1.0	3.0	3.0	4.0	81
TSS (mg/L)	1.5	3.5	8.0	13.1	17.9	20.8	27.7	34

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected.

**Winter interim DGVs for Aquatic Ecosystems for Halocline (Shaded)**

Parameter	5 <sup>th</sup> %ile	10 <sup>th</sup> %ile	20 <sup>th</sup> %ile	Median	80 <sup>th</sup> %ile	90 <sup>th</sup> %ile	95 <sup>th</sup> %ile	Sample Number
Dissolved Oxygen (mg/L)	7.3	7.5	7.7	8.4	9.1	9.4	9.7	31
Dissolved Oxygen (%)	79.4	80.1	81.7	87.6	92.5	95.0	97.3	31
Salinity (PPT)	12.4	18.1	19.5	20.3	21.6	24.4	25.1	31
SpCond (µS/cm)	20600	29400	31365	32500	34333	37192	38345	31
pH field – sensor TC	6.8	6.9	7.1	7.3	7.5	7.6	7.7	31
Temperature (Celsius)	10.1	10.3	10.8	11.5	12.1	12.6	12.6	31
Turbidity (NTU)	0.5	0.9	1.7	4.2	7.1	9.4	12.6	18
Redox (mV)	308	318	329	353	365	386	392	20
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	1.0	1.0	4.0	8.0	13.2	20.0	32.4	70
Nitrite and Nitrate as N µg/L^	10.3	14.0	16.8	47.5	83.2	90.1	93.1	70
Nitrate as N µg/L^					ND			
Nitrite as N µg/L^	1.0	1.0	1.0	2.0	2.0	2.0	2.0	70
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	1.0	2.0	3.0	3.0	5.6	70
TSS (mg/L)	2.2	3.0	5.8	12.2	15.9	17.5	18.0	31

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected.

**Spring interim DGVs for Aquatic Ecosystems for Halocline (Shaded)**

Parameter	5 <sup>th</sup> %ile	10 <sup>th</sup> %ile	20 <sup>th</sup> %ile	Median	80 <sup>th</sup> %ile	90 <sup>th</sup> %ile	95 <sup>th</sup> %ile	Sample Number
Dissolved Oxygen (mg/L)	6.6	7.2	7.4	8.0	8.7	9.6	9.9	33
Dissolved Oxygen (%)	70.5	76.7	78.2	86.8	91.8	98.2	100.3	33
Salinity (PPT)	14.1	15.3	16.8	20.0	21.7	22.7	22.9	34
SpCond (µS/cm)	23255	25199	27467	31984	34413	35991	36208	34
pH field – sensor TC	6.8	7.1	7.2	7.3	7.6	7.7	7.7	34
Temperature (Celsius)	10.5	10.7	11.0	12.2	13.1	13.4	13.5	34
Turbidity (NTU)	1.5	1.6	1.8	3.5	11.0	13.9	16.8	26
Redox (mV)	257	260	269	340	367	381	408	18
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	1.0	1.0	2.0	4.0	8.0	8.0	9.0	61
Nitrite and Nitrate as N µg/L^	9.2	15.2	17.8	32.0	49.0	60.4	75.2	25
Nitrate as N µg/L^	24.4	27.7	33.2	44.5	52.6	58.6	64.1	38
Nitrite as N µg/L^	1.0	1.0	1.0	2.0	3.0	3.0	3.0	63
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	1.0	2.0	3.0	3.0	4.8	63
TSS (mg/L)	3.0	4.2	7.1	11.5	19.1	24.1	31.3	27

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected.

**Annual interim DGVs for Aquatic Ecosystems for bottom waters (Shaded)**

Parameter	5th %ile	10th %ile	20th %ile	Median	80th %ile	90th %ile	95th %ile	Sample Number
Dissolved Oxygen (mg/L)	2.7	2.9	3.1	4.0	4.9	5.7	6.3	262
Dissolved Oxygen (%)	31.8	33.9	36.4	45.7	56.0	64.6	70.3	266
Salinity (PPT)	25.9	26.9	27.8	29.7	30.8	31.2	31.8	272
SpCond (µS/cm)	40450	41900	43100	45700	47200	47759	48650	271
pH field - sensor TC	7.1	7.2	7.2	7.4	7.5	7.6	7.7	268
Temperature (Celsius)	12.7	12.8	13.1	13.7	14.2	14.5	14.7	271
Turbidity (NTU)	0.7	1.2	2.5	5.0	14.1	16.0	17.8	206
Redox (mV)	270	279	311	349	395	416	428	183
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	1.0	3.0	5.0	9.0	13.0	15.0	18.0	283
Nitrite and Nitrate as N µg/L^	1.0	5.3	22.6	52.5	99.4	115.7	127.8	174
Nitrate as N µg/L^	7.0	9.0	14.4	34.0	61.2	70.6	79.0	108
Nitrite as N µg/L^	1.0	1.0	1.0	2.0	2.0	3.0	3.0	285
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	2.0	3.0	5.0	7.8	10.0	283
TSS (mg/L)	3.0	4.0	8.9	21.0	27.0	32.6	36.7	114

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected.

**Summer interim DGVs for Aquatic Ecosystems for bottom waters (Shaded)**

Parameter	5th %ile	10th %ile	20th %ile	Median	80th %ile	90th %ile	95th %ile	Sample Number
Dissolved Oxygen (mg/L)	2.9	3.0	3.2	3.9	4.7	5.3	5.4	69
Dissolved Oxygen (%)	32.2	33.7	36.5	44.4	52.9	59.1	61.8	75
Salinity (PPT)	25.5	26.2	27.5	29.1	30.3	30.9	32.0	76
SpCond (µS/cm)	39850	40800	42702	44800	46582	47401	48824	76
pH field - sensor TC	7.1	7.1	7.2	7.4	7.5	7.7	7.7	76
Temperature (Celsius)	12.7	12.8	13.1	13.5	14.1	14.3	14.6	76
Turbidity (NTU)	0.7	1.1	2.2	10.9	15.2	17.5	19.0	61
Redox (mV)	274	277	292	333	409	426	432	54
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	5.0	5.0	6.0	8.0	11.0	12.0	13.0	81
Nitrite and Nitrate as N µg/L^	1.0	1.0	1.0	36.0	56.0	72.6	84.6	35
Nitrate as N µg/L^	3.2	6.3	8.6	18.0	31.0	38.1	62.6	44
Nitrite as N µg/L^	1.0	1.0	2.0	2.0	2.0	3.0	4.0	81
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	2.0	2.0	3.0	4.0	6.0	81
TSS (mg/L)	6.3	6.9	9.3	23.4	31.6	33.1	34.5	30

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected.

## Autumn interim DGVs for Aquatic Ecosystems for bottom waters (Shaded)

Parameter	5th %ile	10th %ile	20th %ile	Median	80th %ile	90th %ile	95th %ile	Sample Number
Dissolved Oxygen (mg/L)	2.8	3.0	3.2	4.0	4.6	6.2	7.5	69
Dissolved Oxygen (%)	32.6	35.1	37.5	46.2	54.3	68.9	82.6	68
Salinity (PPT)	26.0	26.6	27.3	29.7	30.5	30.9	31.4	71
SpCond (µS/cm)	40656	41500	42400	45700	46839	47433	48032	71
pH field - sensor TC	7.2	7.3	7.3	7.4	7.6	7.7	7.8	67
Temperature (Celsius)	13.3	13.5	13.7	14.1	14.6	14.9	15.1	70
Turbidity (NTU)	1.7	2.7	3.0	4.9	12.5	16.2	17.3	54
Redox (mV)	281	313	336	362	393	416	427	48
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	1.0	1.0	3.6	9.0	14.0	15.0	15.6	69
Nitrite and Nitrate as N µg/L^	2.1	22.0	33.2	46.5	69.8	100.7	115.3	52
Nitrate as N µg/L^	26.7	32.2	42.2	50.5	67.6	72.9	75.6	18
Nitrite as N µg/L^	1.0	1.0	2.0	2.0	2.0	3.0	3.0	70
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	1.0	3.0	4.0	4.0	4.0	70
TSS (mg/L)	0.5	2.3	9.2	19.0	27.3	39.3	40.8	28

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected.

## Winter interim DGVs for Aquatic Ecosystems for bottom waters (Shaded)

Parameter	5th %ile	10th %ile	20th %ile	Median	80th %ile	90th %ile	95th %ile	Sample Number
Dissolved Oxygen (mg/L)	2.5	2.8	2.9	3.6	4.7	5.4	5.9	65
Dissolved Oxygen (%)	31.5	32.9	34.5	42.0	55.1	61.8	66.5	64
Salinity (PPT)	27.2	28.1	29.2	30.5	31.1	31.3	31.6	65
SpCond (µS/cm)	42231	43494	45058	46739	47638	47900	48513	64
pH field - sensor TC	7.1	7.1	7.2	7.3	7.5	7.6	7.7	65
Temperature (Celsius)	12.6	13.1	13.3	13.9	14.3	14.5	14.5	65
Turbidity (NTU)	0.6	0.8	1.4	3.5	5.5	14.4	15.0	44
Redox (mV)	292	310	327	347	364	393	409	44
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	2.0	3.0	5.0	11.0	16.0	19.0	34.7	62
Nitrite and Nitrate as N µg/L^	5.2	16.1	27.0	73.0	115.8	130.4	152.0	62
Nitrate as N µg/L^					ND			
Nitrite as N µg/L^	1.0	1.0	1.0	2.0	2.0	2.0	2.0	62
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	1.0	6.0	9.0	11.0	12.0	61
TSS (mg/L)	2.6	3.5	16.0	21.0	26.2	28.6	34.4	26

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected



**Spring interim DGVs for Aquatic Ecosystems for bottom waters (Shaded)**

Parameter	5 <sup>th</sup> %ile	10 <sup>th</sup> %ile	20 <sup>th</sup> %ile	Median	80 <sup>th</sup> %ile	90 <sup>th</sup> %ile	95 <sup>th</sup> %ile	Sample Number
Dissolved Oxygen (mg/L)	2.8	3.1	3.4	4.5	5.7	5.9	6.3	59
Dissolved Oxygen (%)	32.9	36.2	40.2	52.1	64.1	66.4	71.1	59
Salinity (PPT)	26.4	27.1	27.7	29.7	30.8	31.7	32.5	60
SpCond (µS/cm)	41103	42286	42970	45749	47219	48528	49609	60
pH field - sensor TC	7.1	7.2	7.2	7.4	7.5	7.6	7.6	60
Temperature (Celsius)	12.3	12.5	12.8	13.2	13.5	13.7	13.8	60
Turbidity (NTU)	1.1	1.9	2.6	12.2	14.3	15.1	16.2	47
Redox (mV)	264	266	271	347	368	404	419	37
Chlorophyll a (µg/L)*					ND			
TAN as N (µg/L)^	1.0	3.0	5.0	7.0	13.0	14.0	15.0	71
Nitrite and Nitrate as N µg/L^	18.0	20.8	32.6	63.0	94.4	106.2	118.2	25
Nitrate as N µg/L^	18.3	22.5	30.0	42.0	66.0	81.5	88.8	46
Nitrite as N µg/L^	1.0	1.0	1.0	2.0	3.0	3.0	3.0	72
Nitrogen (Total) as N µg/L					ND			
Phosphorus (Total) as P µg/L					ND			
DRP as P µg/L^	1.0	1.0	2.0	3.0	5.0	7.0	10.0	71
TSS (mg/L)	3.5	4.1	6.5	17.5	25.2	26.1	28.1	30

\*Integrated sample 0 to 12 metres, TAN=Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>), DRP= Dissolved Reactive Phosphorous, ^Harbour wide data, ND = No data collected.

**Annual interim DGVs for Aquatic Ecosystems for 6 to 10 metres (Shaded)**

Parameter	5 <sup>th</sup> %ile	10 <sup>th</sup> %ile	20 <sup>th</sup> %ile	Median	80 <sup>th</sup> %ile	90 <sup>th</sup> %ile	95 <sup>th</sup> %ile	Sample Number
Dissolved Oxygen (mg/L)	4.8	5.6	6.5	8.1	9.2	9.8	10.1	2478
Dissolved Oxygen (%)	55.0	63.2	73.1	87.5	93.9	96.7	99.5	2522
Salinity (PPT)	8.1	10.9	14.8	20.7	26.2	27.9	28.8	2550
SpCond (µS/cm)	13899	18480	24400	33186	40873	43200	44555	2548
pH field - sensor TC	6.9	7.0	7.1	7.4	7.6	7.7	7.7	2522
Temperature (Celsius)	10.2	10.8	11.5	13.1	14.9	15.6	16.3	2551
Turbidity (NTU)	0.1	0.7	2.0	4.9	13.7	16.1	17.5	1951
Redox (mV)	268	278	302	348	383	398	415	2070

Consider halocline and bottom waters for nutrient interim DGVs.

**Annual interim DGVs for Aquatic Ecosystems for 11 to 15 metres (Shaded)**

Parameter	5 <sup>th</sup> %ile	10 <sup>th</sup> %ile	20 <sup>th</sup> %ile	Median	80 <sup>th</sup> %ile	90 <sup>th</sup> %ile	95 <sup>th</sup> %ile	Sample Number
Dissolved Oxygen (mg/L)	3.3	3.6	4.1	5.5	6.8	7.5	8.0	1545
Dissolved Oxygen (%)	37.6	41.2	47.5	62.0	76.0	82.8	86.7	1574
Salinity (PPT)	22.1	24.0	25.6	28.3	30.0	30.6	31.2	1600
SpCond (µS/cm)	35207	37864	40026	43800	46100	46920	47746	1592
pH field - sensor TC	7.1	7.2	7.2	7.4	7.5	7.6	7.7	1594
Temperature (Celsius)	11.9	12.2	12.6	13.4	14.1	14.5	14.6	1604
Turbidity (NTU)	0.5	0.9	2.1	4.5	13.9	15.7	16.7	1238
Redox (mV)	271	281	306	348	388	404	418	1333

Consider halocline and bottom waters for nutrient interim DGVs.

**Annual interim DGVs for Aquatic Ecosystems for 16 to 20 metres (Shaded)**

Parameter	5 <sup>th</sup> %ile	10 <sup>th</sup> %ile	20 <sup>th</sup> %ile	Median	80 <sup>th</sup> %ile	90 <sup>th</sup> %ile	95 <sup>th</sup> %ile	Sample Number
Dissolved Oxygen (mg/L)	2.8	3.0	3.2	3.9	4.6	5.2	5.7	846
Dissolved Oxygen (%)	32.5	34.3	37.1	45.1	53.0	59.5	64.1	869
Salinity (PPT)	26.2	27.4	28.5	29.9	30.8	31.4	31.9	898
SpCond (µS/cm)	40900	42600	44132	46000	47200	48000	48800	888
pH field - sensor TC	7.1	7.2	7.2	7.4	7.6	7.6	7.7	894
Temperature (Celsius)	12.7	12.8	13.1	13.6	14.1	14.3	14.5	896
Turbidity (NTU)	0.8	1.2	2.2	4.7	13.9	15.7	17.1	658
Redox (mV)	271	281	306	350	391	416	425	696

Consider halocline and bottom waters for nutrient interim DGVs.

**Annual interim DGVs for Aquatic Ecosystems for 21 to 25 metres (Shaded)**

Parameter	5 <sup>th</sup> %ile	10 <sup>th</sup> %ile	20 <sup>th</sup> %ile	Median	80 <sup>th</sup> %ile	90 <sup>th</sup> %ile	95 <sup>th</sup> %ile	Sample Number
Dissolved Oxygen (mg/L)	2.5	2.7	2.9	3.5	4.1	4.4	4.6	405
Dissolved Oxygen (%)	30.3	32.0	34.2	41.0	46.8	49.8	53.6	414
Salinity (PPT)	26.4	28.3	29.5	30.5	31.2	31.9	32.4	430
SpCond (µS/cm)	41135	43776	45400	46808	47800	48700	49409	428
pH field - sensor TC	7.1	7.2	7.2	7.4	7.6	7.7	7.8	421
Temperature (Celsius)	12.8	13.0	13.2	13.8	14.2	14.4	14.6	429
Turbidity (NTU)	1.1	1.4	2.6	4.0	13.9	15.9	17.2	316
Redox (mV)	269	277	303	346	392	415	431	329

Consider halocline and bottom waters for nutrient interim DGVs.

**Summer interim DGVs for Aquatic Ecosystems for depth ranges (Shaded)**

Parameter	Depth Range	5 <sup>th</sup> %ile	10 <sup>th</sup> %ile	20 <sup>th</sup> %ile	Median	80 <sup>th</sup> %ile	90 <sup>th</sup> %ile	95 <sup>th</sup> %ile	Sample Number
DO (mg/L)	6-10m	4.3	4.9	5.8	7.4	8.3	8.6	9.4	658
DO (%)	6-10m	48.7	55.3	65.6	82.9	91.2	94.6	96.4	704
DO (mg/L)	11-15m	3.3	3.5	3.8	5.2	6.6	7.1	7.5	407
DO (%)	11-15m	37.1	39.4	42.4	56.3	73.4	79.1	83.7	438
DO (mg/L)	16-20m	2.9	3.0	3.3	3.9	4.7	5.2	5.6	217
DO (%)	16-20m	30.0	31.6	36.0	44.6	53.1	58.9	62.8	236
DO (mg/L)	21-25m	2.9	2.9	3.0	3.8	4.1	4.3	4.5	104
DO (%)	21-25m	32.3	33.3	34.2	42.4	47.3	48.3	51.2	110

DO = Dissolved Oxygen

**Autumn interim DGVs for Aquatic Ecosystems for depth ranges (Shaded)**

Parameter	Depth Range	5 <sup>th</sup> %ile	10 <sup>th</sup> %ile	20 <sup>th</sup> %ile	Median	80 <sup>th</sup> %ile	90 <sup>th</sup> %ile	95 <sup>th</sup> %ile	Sample Number
DO (mg/L)	6-10m	3.9	4.8	5.9	7.7	8.8	9.5	10.6	563
DO (%)	6-10m	46.8	58.0	68.5	85.9	95.2	99.9	106.5	562
DO (mg/L)	11-15m	3.0	3.2	3.8	4.8	6.1	6.8	7.6	323
DO (%)	11-15m	35.0	38.3	45.6	55.8	69.8	79.0	86.5	321
DO (mg/L)	16-20m	2.9	2.9	3.2	3.9	4.5	4.8	9.8	199
DO (%)	16-20m	34.0	34.6	37.3	45.6	52.0	54.9	96.0	203
DO (mg/L)	21-25m	2.6	2.9	3.0	3.8	4.2	4.6	9.0	101
DO (%)	21-25m	31.1	34.4	35.9	43.8	47.6	53.8	88.5	105

DO = Dissolved Oxygen

**Winter interim DGVs for Aquatic Ecosystems for depth ranges (Shaded)**

Parameter	Depth Range	5 <sup>th</sup> %ile	10 <sup>th</sup> %ile	20 <sup>th</sup> %ile	Median	80 <sup>th</sup> %ile	90 <sup>th</sup> %ile	95 <sup>th</sup> %ile	Sample Number
DO (mg/L)	6-10m	5.3	6.0	6.8	8.5	9.7	10.0	10.0	697
DO (%)	6-10m	60.9	67.3	76.2	88.4	93.6	95.4	97.6	695
DO (mg/L)	11-15m	3.3	3.7	4.1	5.4	6.8	7.6	8.1	444
DO (%)	11-15m	38.1	43.6	48.2	61.4	76.0	83.2	85.9	444
DO (mg/L)	16-20m	2.8	2.9	3.0	3.7	4.3	4.6	4.8	256
DO (%)	16-20m	32.9	33.9	35.3	43.0	50.2	53.1	54.9	256
DO (mg/L)	21-25m	2.5	2.5	2.7	3.2	3.6	4.0	4.3	134
DO (%)	21-25m	29.5	29.7	32.1	37.5	42.0	46.7	49.5	133

DO = Dissolved Oxygen

**Spring interim DGVs for Aquatic Ecosystems for depth ranges (Shaded)**

Parameter	Depth Range	5 <sup>th</sup> %ile	10 <sup>th</sup> %ile	20 <sup>th</sup> %ile	Median	80 <sup>th</sup> %ile	90 <sup>th</sup> %ile	95 <sup>th</sup> %ile	Sample Number
DO (mg/L)	6-10m	6.6	7.1	7.7	8.8	9.5	10.1	10.7	560
DO (%)	6-10m	73.4	77.6	82.8	91.2	95.2	98.5	100.8	561
DO (mg/L)	11-15m	4.3	4.7	5.2	6.3	7.3	7.9	8.3	371
DO (%)	11-15m	49.9	53.3	58.7	70.4	80.9	86.2	90.1	371
DO (mg/L)	16-20m	3.0	3.2	3.5	4.2	5.4	5.7	5.9	174
DO (%)	16-20m	35.3	37.9	40.7	48.7	61.2	64.2	65.8	174
DO (mg/L)	21-25m	2.9	2.9	3.0	3.6	4.3	4.6	5.0	66
DO (%)	21-25m	33.0	33.7	35.3	42.0	50.1	53.0	56.2	66

DO = Dissolved Oxygen

## Appendix A – Summary of interim DGVs

Surface	Physico-chemical indicators and interim default guideline values for aquatic ecosystems																				
	DO (mg/L)		DO (% sat)		Salinity	SpCond	pH		Temp (°C)		Turb	Redox	Chl a	TAN as N <sup>^</sup>	NO <sub>x</sub> as N <sup>^</sup>	NO <sub>3</sub> as N <sup>^</sup>	NO <sub>2</sub> as N <sup>^</sup>	Total N as N	Total P as P	DRP as P <sup>^</sup>	TSS
	lower	upper	lower	upper	(PPT)	(µS/cm)	lower	upper	lower	upper	NTU	(mV)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)
Annual	9.3	11.0	95.9	103.7	8.3	14300	6.9	7.6	9.7	17.1	15.9	370	ND	6.0	36.2	23.0	2.0	ND	ND	2.0	9.9
Summer	8.6	10.2	96.0	106.4	10.3	17549	6.9	7.7	15.3	19.7	20.3	380	ND	5.0	14.0	10.0	2.0	ND	ND	2.0	13.5
Autumn	9.7	10.7	96.1	104.1	7.5	13072	7.0	7.5	10.8	15.2	15.0	382	ND	7.2	22.0	31.6	3.0	ND	ND	2.4	7.9
Winter	10.6	11.8	94.5	102.0	6.0	10642	6.9	7.5	8.3	9.9	11.9	343	ND	12.4	65.0	ND	2.0	ND	ND	2.0	7.7
Spring	9.7	11.0	96.3	101.9	7.3	12824	6.9	7.5	9.8	14.3	14.9	365	ND	3.0	27.8	27.0	2.0	ND	ND	2.0	10.0

NB: DO (dissolved oxygen), SPCond (Specific conductance), Turb (turbidity), Redox (Reduction / Oxidation potential), Chl a (Chlorophyll a – Lab analysis), TAN (Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>)), NO<sub>x</sub> (Nitrite and Nitrate), NO<sub>3</sub> (Nitrate), NO<sub>2</sub> (Nitrite), DRP (Dissolved reactive phosphorous), ND = No Data, <sup>^</sup>Harbour wide data. Figures shown above are based on data collected from 05/05/1993 to 14/10/2009.

Halocline	Physico-chemical indicators and interim default guideline values for aquatic ecosystems																				
	DO (mg/L)		DO (% sat)		Salinity	SpCond	pH		Temp (°C)		Turb	Redox	Chl a	TAN as N <sup>^</sup>	NO <sub>x</sub> as N <sup>^</sup>	NO <sub>3</sub> as N <sup>^</sup>	NO <sub>2</sub> as N <sup>^</sup>	Total N as N	Total P as P	DRP as P <sup>^</sup>	TSS
	lower	upper	lower	upper	(PPT)	(µS/cm)	lower	upper	lower	upper	NTU	(mV)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)
Annual	7.2	8.6	79.4	92.0	21.7	34470	7.2	7.6	11.7	15.7	13.3	387	ND	9.0	54.8	46.6	3.0	ND	ND	3.0	19.1
Summer	6.8	7.9	78.2	88.0	22.1	35071	7.2	7.7	14.4	16.7	15.2	394	ND	9.0	40.0	28.0	2.0	ND	ND	2.0	23.7
Autumn	7.3	8.5	81.9	93.6	21.3	34024	7.1	7.6	12.9	15.7	13.4	384	ND	10.0	44.0	39.0	3.0	ND	ND	3.0	17.9
Winter	7.7	9.1	81.7	92.5	21.6	34333	7.1	7.5	10.8	12.1	7.1	365	ND	13.2	83.2	ND	2.0	ND	ND	3.0	15.9
Spring	7.4	8.7	78.2	91.8	21.7	34413	7.2	7.6	11.0	13.1	11.0	367	ND	8.0	49.0	52.6	3.0	ND	ND	3.0	19.1

NB: DO (dissolved oxygen), SPCond (Specific conductance), Turb (turbidity), Redox (Reduction / Oxidation potential), Chl a (Chlorophyll a – Lab analysis), TAN (Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>)), NO<sub>x</sub> (Nitrite and Nitrate), NO<sub>3</sub> (Nitrate), NO<sub>2</sub> (Nitrite), DRP (Dissolved reactive phosphorous), ND = No Data, <sup>^</sup>Harbour wide data. Figures shown above are based on data collected from 05/05/1993 to 14/10/2009.

Bottom	Physico-chemical indicators and interim default guideline values for aquatic ecosystems																				
	DO (mg/L)		DO (% sat)		Salinity	SpCond	pH		Temp (°C)		Turb	Redox	Chl a	TAN as N <sup>^</sup>	NO <sub>x</sub> as N <sup>^</sup>	NO <sub>3</sub> as N <sup>^</sup>	NO <sub>2</sub> as N <sup>^</sup>	Total N as N	Total P as P	DRP as P <sup>^</sup>	TSS
	lower	upper	lower	upper	(PPT)	(µS/cm)	lower	upper	lower	upper	NTU	(mV)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)
Annual	3.1	4.9	36.4	56.0	30.8	47200	7.2	7.5	13.1	14.2	14.1	395	ND	13.0	99.4	61.2	2.0	ND	ND	5.0	27.0
Summer	3.2	4.7	36.5	52.9	30.3	46582	7.2	7.5	13.1	14.1	15.2	409	ND	11.0	56.0	31.0	2.0	ND	ND	3.0	31.6
Autumn	3.2	4.6	37.5	64.3	30.5	46839	7.3	7.6	13.7	14.6	12.5	393	ND	14.0	69.8	67.6	2.0	ND	ND	4.0	27.3
Winter	2.9	4.7	34.5	55.1	31.1	47638	7.2	7.5	13.3	14.3	5.5	364	ND	16.0	115.8	ND	2.0	ND	ND	9.0	26.2
Spring	3.4	5.7	40.2	64.1	30.8	47219	7.2	7.5	12.8	13.5	14.3	368	ND	13.0	94.4	66.0	3.0	ND	ND	5.0	25.2

NB: DO (dissolved oxygen), SPCond (Specific conductance), Turb (turbidity), Redox (Reduction / Oxidation potential), Chl a (Chlorophyll a – Lab analysis), TAN (Total Ammonia Nitrogen (NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>)), NO<sub>x</sub> (Nitrite and Nitrate), NO<sub>3</sub> (Nitrate), NO<sub>2</sub> (Nitrite), DRP (Dissolved reactive phosphorous), ND = No Data, ^Harbour wide data. Figures shown above are based on data collected from 05/05/1993 to 14/10/2009.

Depth Ranges (Annual)	Physico-chemical indicators and interim default guideline values for aquatic ecosystems											
	DO (mg/L)		DO (% sat)		Salinity	SpCond	pH		Temp (°C)		Turb	Redox
	lower	upper	lower	upper	(PPT)	(µS/cm)	lower	upper	lower	upper	NTU	(mV)
6-10m	6.5	9.2	73.1	93.9	26.2	40873	7.1	7.6	11.5	14.9	13.7	383
11-15m	4.1	6.8	47.5	62.0	30.0	46100	7.2	7.5	12.6	14.1	13.9	388
16-20m	3.2	4.6	37.1	53.0	30.8	47200	7.2	7.6	13.1	14.1	13.9	391
21-25m	2.9	4.1	34.2	46.8	31.2	47800	7.2	7.6	13.2	14.2	13.9	392

NB: DO (dissolved oxygen), SpCond (Specific conductance), Turb (turbidity), Redox (Reduction / Oxidation potential).  
Figures shown above are based on data collected from 05/05/1993 to 14/10/2009.

Summer	Physico-chemical indicators and interim default guideline values for aquatic ecosystems											
	DO (mg/L)		DO (% sat)		Salinity	SpCond	pH		Temp (°C)		Turb	Redox
	lower	upper	lower	upper	(PPT)	(µS/cm)	lower	upper	lower	upper	NTU	(mV)
6 – 10 m	5.8	8.3	65.6	91.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11 – 15 m	3.8	6.6	42.4	73.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16 – 20 m	3.3	4.7	36.0	53.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21 – 25 m	3.0	4.1	34.2	47.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NB: DO (dissolved oxygen), SpCond (Specific conductance), Turb (turbidity), Redox (Reduction / Oxidation potential).  
Figures shown above are based on data collected from 05/05/1993 to 14/10/2009. N/A = Not Available.

Autumn	Physico-chemical indicators and interim default guideline values for aquatic ecosystems											
	DO (mg/L)		DO (% sat)		Salinity	SpCond	pH		Temp (°C)		Turb	Redox
	lower	upper	lower	upper	(PPT)	(µS/cm)	lower	upper	lower	upper	NTU	(mV)
6 – 10 m	5.9	8.8	68.5	95.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11 – 15 m	3.8	6.1	45.6	69.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16 – 20 m	3.2	4.5	37.3	52.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21 – 25 m	3.0	4.2	35.9	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NB: DO (dissolved oxygen), SPCond (Specific conductance), Turb (turbidity), Redox (Reduction / Oxidation potential).  
Figures shown above are based on data collected from 05/05/1993 to 14/10/2009. N/A = Not Available.

Winter	Physico-chemical indicators and interim default guideline values for aquatic ecosystems											
	DO (mg/L)		DO (% sat)		Salinity	SpCond	pH		Temp (°C)		Turb	Redox
	lower	upper	lower	upper	(PPT)	(µS/cm)	lower	upper	lower	upper	NTU	(mV)
6 – 10 m	6.8	9.7	76.2	93.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11 – 15 m	4.1	6.8	48.2	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16 – 20 m	3.0	4.3	35.3	50.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21 – 25 m	2.7	3.6	32.1	42.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NB: DO (dissolved oxygen), SPCond (Specific conductance), Turb (turbidity), Redox (Reduction / Oxidation potential).  
Figures shown above are based on data collected from 05/05/1993 to 14/10/2009. N/A = Not Available.



Spring	Physico-chemical indicators and interim default guideline values for aquatic ecosystems											
	DO (mg/L)		DO (% sat)		Salinity	SpCond	pH		Temp (°C)		Turb	Redox
	lower	upper	lower	upper	(PPT)	(µS/cm)	lower	upper	lower	upper	NTU	(mV)
6 – 10 m	7.7	9.5	82.8	95.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11 – 15 m	5.2	7.3	58.7	80.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16 – 20 m	3.5	5.4	40.7	61.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21 – 25 m	3.0	4.3	35.3	50.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NB: DO (dissolved oxygen), SPCond (Specific conductance), Turb (turbidity), Redox (Reduction / Oxidation potential).  
Figures shown above are based on data collected from 05/05/1993 to 14/10/2009. N/A = Not Available.

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