United Kingdom Technical Advisory Group (UKTAG) – Standards for Transitional and Coastal Waters

UKTAG DO Standard in Transitional and Coastal			
Status class	**Freshwater**	**Marine**	**Description**
	5 percentile (mg/l)		
High	7	5.7	Protects all life-stages of salmonid fish
Good	5-7	4.0 - 5.7	Resident salmonid fish
Moderate	3-5	2.4 - 4.0	Protects most life-stages of non-salmonid adults
Poor	2-3	1.6 - 2.4	Resident non-salmonid fish, poor survival of salmonid fish
Bad	2	1.6	No salmonid fish. Marginal survival of resident species.

UKTAG DIN			
Area	**Salinity**	**Winter Mean**	**Winter Mean**
		High- Good	**Good-Moderate**
Offshore	> 34.5	12µmol/l	15µmol/l
Coastal (at salinity 32psu)	30 - 34.5	12µmol/l	18µmol/l
Transitional (at salinity 25psu)	< 30	20µmol/l	30µmol/l
If a transitional water fails the Good boundary, look at the turbidity and type …			
Tirnidity and type of transitional water (at salinity 25)	Salinity	Winter Mean	99-percentile
		Good-Moderate	
Very turib, TW1, TW3	< 30	30µmol/l	270µmol/l
Medium Turbidity, TW2, TW4		30µmol/l	180µmol/l
Intermediate/Clear, TW5, TW6		30µmol/l	70µmol/l

Irish Environmental Quality Standards (EQS) for coastal waters

Biological quality element	Classification system	Ecological quality ratio		High-good boundary	Good-moderate boundary
Phytoplankton		High - good	Good - moderate	Chlorophyll (µg/l)[1]	
	Phytoplankton biomass (Chlorophyll)	0.66	0.33	2.5 (median value) and 5.0 (90 percentile value)[2] 5.0 (median value) and 10.0 (90 percentile value)[3]	5.0 (median value) and 10.0 (90 percentile value)[2] 10.0 (median value) and 20 (90 percentile value)[3]
	Phytoplankton composition	0.84	0.43	Percentage of single taxa counts above thresholds	
				20	39

[1]Growing season March to September
[2]Cold acetone extraction method
[3]Hot methanol extraction method

THERMAL CONDITIONS

Thermal conditions	River water body	Lake water body	Transitional water body	Coastal water body
Temperature	Not greater than a 1.5°C rise in ambient temperature outside the mixing zone			

OXYGENATION CONDITIONS CONTINUED (DISSOLVED OXYGEN)

Oxygenation conditions	River water body	Lake water body	Transitional water body (Summer)	Coastal water body (Summer)
Dissolved oxygen lower limit	95%ile >80% saturation		(0 psu[1]) 95%ile >70% saturation (35 psu) 95%ile >80% saturation	(35 psu) 95%ile > 80% saturation
Dissolved oxygen upper limit	95%ile <120% saturation		(0 psu) 95%ile <130% saturation (35 psu) 95%ile <120% saturation	(35 psu) 95%ile <120% saturation

[1]psu: The Practical Salinity Unit defines salinity in terms of a conductivity ratio of a sample to that of a solution of 32.4356 g of KCL at 15°C in I kg of solution. A sample of seawater at 15°C with a conductivity equal to this KCL solution has a salinity of exactly 35 practical salinity units.

NUTRIENT CONDITIONS

Nutrient conditions	River water body	Lake[1]	Transitional water body	Coastal water body
Total Ammonia (mg N/l)	High status ⩽0.040 (mean) or ⩽0.090 (95%ile) Good status ⩽0.065 (mean) or ⩽0.140 (95%ile)			
Dissolved Inorganic Nitrogen (mg N/l)				Good status (0 psu [2]) ⩽ 2.6 mg N/l (34.5 psu[2]) ⩽ 0.25 mg N/l High status (34.5 psu[2]) ⩽ 0.17 mg/N/l
Molybdate Reactive Phosphorus (MRP) (mg P/l)	High status ⩽0.025 (mean) or ⩽0.045 (95%ile) Good status ⩽0.035 (mean) or ⩽0.075 (95%ile)		(0-17 psu) ⩽ 0.060 (median) (35psu) ⩽ 0.040 (median)	

[1]Total phosphorus (TP) is an important measure of lake trophic status and TP measurements are included as part of the lakes monitoring programme; TP boundary conditions are yet to be established for lakes.
[2]Linear interpolation to be used to establish the limit value for water bodies between these salinity levels based on the median salinity of the water body being assessed.