

**Appendix 6-1**  
**Statement of Water Quality Objectives**  
**(Eastern Buffer Water Control Zone)**

Table: Statement of Water Quality Objectives (Eastern Buffer Water Control Zone)

Item	Water Quality Objective	Part or Parts of Zone
<b>AESTHETIC APPEARANCE</b>		
(a)	There should be no objectionable odours or discolouration of the water	Whole Zone
(b)	Tarry residues, floating wood, articles made of glass, plastic, rubber or of any other substances should be absent	Whole Zone
(c)	Mineral oil should not be visible on the surface. Surfactants should not give rise to a lasting foam	Whole Zone
(d)	There should be no recognizable sewage-derived debris	Whole Zone
(e)	Floating, submerged and semi-submerged objects of a size likely to interfere with the free movement of vessels, should be absent	Whole Zone
(f)	The water should not contain substances which settle to form objectionable deposits	Whole Zone
<b>BACTERIA</b>		
(a)	The level of <i>Escherichia coli</i> should not exceed 610 per 100 ml, calculated as the geometric mean of all samples collected in one calendar year	Fish Culture Sub-zones
(b)	The level of <i>Escherichia coli</i> should not exceed 1 per 100 ml, calculated as the geometric mean of the most recent 5 consecutive samples taken at intervals of between 7 and 21 days	Water Gathering Ground Sub-zones
(c)	The level of <i>Escherichia coli</i> should not exceed 1000 per 100 ml, calculated as the geometric mean of the most recent 5 consecutive samples taken at intervals of between 7 and 21 days	Other Inland Waters
<b>COLOUR</b>		
(a)	Human activity should not cause the colour of water to exceed 30 Hazen units.	Water Gathering Ground Sub-zones
(b)	Human activity should not cause the colour of water to exceed 50 Hazen units.	Other Inland Waters
<b>DISSOLVED OXYGEN</b>		
(a)	The level of dissolved oxygen should not fall below 4 mg per litre for 90% of the sampling occasions during the whole year; values should be calculated as water column average (arithmetic mean of at least 3 measurements at 1 m below surface, mid-depth and 1 m above seabed). In addition, the concentration of dissolved oxygen should not be less than 2 mg per litre within 2 m of the seabed for 90% of the sampling occasions during the whole year.	Marine waters excepting Fish Culture Subzones
(b)	The level of dissolved oxygen should not be less than 5 mg per litre for 90% of the sampling occasions during the year; values should be calculated as water column average (arithmetic mean of at least 3 measurements at 1 m below surface, mid-depth and 1 m above seabed). In addition, the concentration of dissolved oxygen should not be less than 2 mg per litre within 2 m of the seabed for 90% of the sampling occasions during the whole year.	Fish Culture Subzones
(c)	The level of dissolved oxygen should not be less 4 mg per litre.	Water Gathering Ground Subzones and inland waters
<b>pH</b>		
(a)	The pH of the water should be within the range of 6.5-8.5 units. In addition, human activity should not cause the natural pH range to be extended by more than 0.2 units.	Marine waters
(b)	Human activity should not cause the pH of the water to exceed the range of 6.5-8.5 units.	Water Gathering Ground Subzones
(c)	Human activity should not cause the pH of the water to exceed the range of 6.0-9.0 units.	Other inland waters

<b>TEMPERATURE</b>		
(a)	Human activity should not cause the natural daily temperature range to change by more than 2.0 degrees Celsius.	Whole zone
<b>SALINITY</b>		
(a)	Human activity should not cause the natural ambient salinity level to change by more than 10%.	Whole zone
<b>SUSPENDED SOLIDS</b>		
(a)	Human activity should neither cause the natural ambient level to be raised by more than 30% nor give rise to accumulation of suspended solids which may adversely affect aquatic communities.	Marine waters
(b)	Human activity should not cause the annual median of suspended solids to exceed 20 mg per litre.	Water Gathering Ground
(c)	Human activity should not cause the annual median of suspended solids to exceed 25 mg per litre.	Other inland waters
<b>AMMONIA</b>		
(a)	The un-ionized ammoniacal nitrogen level should not be more than 0.021 mg per litre, calculated as the annual average (arithmetic mean).	Whole zone
<b>NUTRIENTS</b>		
(a)	Nutrients should not be present in quantities sufficient to cause excessive or nuisance growth of algae or other aquatic plants.	Marine waters
(b)	Without limiting the generality of objective (a) above, the level of inorganic nitrogen should not exceed 0.4 mg per litre, expressed as annual water column average (arithmetic mean of at least 3 measurements at 1 m below surface, mid-depth and 1 m above seabed).	Marine waters
<b>5-DAY BIOCHEMICAL OXYGEN DEMAND</b>		
(a)	The 5-day biochemical oxygen demand should not exceed 3 mg per litre.	Water Gathering Ground Sub-zones
(b)	The 5-day biochemical oxygen should not exceed 5 mg per litre.	Other Inland Waters
<b>CHEMICAL OXYGEN DEMAND</b>		
(a)	The chemical oxygen demand should not exceed 15 mg per litre.	Water Gathering Ground Sub-zones
(b)	The chemical oxygen demand should not exceed 30 mg per litre.	Other Inland Waters
<b>TOXIC SUBSTANCES</b>		
(a)	Toxic substances in the water should not attain such levels as to produce significant toxic, carcinogenic, mutagenic or teratogenic effects in humans, fish or any other aquatic organisms, with due regard to biologically cumulative effects in food chains and to interactions of toxic substances with each other.	Whole Zone
(b)	Human activity should not cause a risk to any beneficial use of the aquatic environment.	Whole Zone