

MINISTRY OF ENVIRONMENT, HUMAN RESOURCE DEVELOPMENT & EMPLOYMENT

Department of Environment

*Guidelines for coastal water quality*

The following guidelines are hereunder published for the information of the public with regards to coastal water quality requirements for various activities around the Republic of Mauritius.

<i>Classification</i>	<i>Principal beneficial uses/objectives</i>
<b>Category A – Conservation</b>	
Class A1 – Conservation of coral community	A1 – Conservation of coral community
Class A2 – Conservation of natural areas	A2 – Conservation of natural areas such as mangroves, sea grass, wildlife habitat and marine spawning, nursing and feeding grounds.
<b>Category B – Recreation</b>	
Class B1 – Primary contact	B1 – Water sports like swimming, diving, surfing where there is direct contact.
Class B2 – Secondary contact	B2 – Water sports such as boating, fishing and other activities involving less body contact or where direct contact with water may occur but the probability of body immersion is minimal.
<b>Category C – Fisheries</b>	
Class C1 – Aqua-culture	C1 – Propagation of marine life such as fish, crabs, shrimps, and other marine fauna.
Class C2 – Shellfish	C2 – Culture of shellfish - oysters, mussels, clams.
<b>Category D – Industrial</b>	
Class D – Industrial and others	D – Natural water resources used as a receiving water body for industrial and agricultural discharges (harbour, power station and other industrial activities). There should be no unpleasant odour to people residing nearby.

Each activity requires different water quality and this is indicated underneath.

Category A is meant for the conservation of the coral community and natural areas.

Class A1 is intended for the coral ecosystem and requires seawater quality that will not hamper healthy coral growth.

Class A2 is for the conservation of natural areas as mentioned in the table above and requires a slightly less stringent water quality.

Category B is intended for recreation purposes.

Class B1 defines the water quality needed for sports such as swimming, diving, surfing, etc. where there is maximum body contact with the water. For this class the potential health hazards due to pathogenic micro-organisms have been considered.

Class B2 is intended for water sports such as boating, fishing, etc. where there is likely to be minimal body contact with water, and so the quality of the water is less stringent especially with regards to pathogenic micro-organisms.

Category C concerns fisheries.

Class C1 is intended for the production of fish, crabs, shrimps, etc.

Class C2 is for the culture of shellfish where the requirements for pathogenic organisms are very stringent.

Category D comprises the remaining coastal areas, which act as receiving body for industrial and agricultural discharges and include the harbour, power generating plants, and other industrial activities. No limits are imposed for pathogenic micro-organisms but there should be no unpleasant odour to people residing nearby.

Coastal water quality requirements for various categories

CATEGORY		A Conservation		B Recreation		C Fisheries		D Industrial
Class		A1 Coral Community	A2 Natural Areas	B1 Primary Contact	B2 Secondary Contact	C1 Aqua- culture	C2 Shellfish	D Industrial & others
Parameters	Unit							
pH	-	7.5 - 8.5	7.5 - 8.5	7.5 - 8.5	7.5 - 8.5	7.0 - 8.5	7.0 - 8.5	7.0 - 9.0
Temperature	°C	ambient	ambient	ambient	ambient	ambient	ambient	ambient
Suspended Solids	mg/l	5	5	5	10	15	15	15
Dissolved Oxygen	mg/l	>5	>5	>5	>5	>5	>5	>2
Chemical Oxygen Demand <sup>1</sup>	mg/l	1	2	3	3	5	5	5
Total Coliforms	CFU/100ml	1000	1000	1000	5000	1000	70 <sup>2</sup>	—
Faecal Coliforms	CFU/100ml	200	200	200	1000	200	14 <sup>2</sup>	—
Nitrate-nitrogen	mg/l	0.2	0.3	0.8	0.8	0.8	0.8	1.0
Phosphate	mg/l	0.04	0.05	0.08	0.08	0.08	0.08	0.1
Oil & Grease	mg/l	Not detectable by N-hexane extraction method						
Phenol	mg/l	0.05						
Arsenic	mg/l	0.05						
<del>Cadmium</del>	mg/l	0.01						
Cyanide	mg/l	0.01						
Chromium	mg/l	0.05						
Copper	mg/l	0.05						
Lead	mg/l	0.05						
Total Mercury	mg/l	0.0005						

<sup>1</sup> by alkaline potassium permanganate method

<sup>2</sup> organisms per 100 ml by MPN method

<sup>3</sup> CFU : Colony Forming Unit

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