

Appendix - II

**Tolerance Limits for Inland Surface Waters* Subject to Pollution
(IS : 2296 - 1982)**

Parameter	Class-A	Class-B	Class-C
pH	6.5-8.5	6.5-8.5	6.5-8.5
Dissolved Oxygen(mg/l),Min	6	5	4
BOD (5 days at 20 °C)(mg/l), Max	2	3	3
Total Coliforms (MPH/100m) Max	50	500	5000
Total Hardness (as mg/l of CaCO ₃) Max	300	-	-
Fluorides (mg/l), Max	1.5	1.5	1.5
Cr (VI) mg/l, Max	0.05	0.05	0.05

* Classification of Water (Designated Best Use):

Class A : Drinking Water Source without conventional treatment but after disinfection.

Class B : Outdoor Bathing

Class C : Drinking Water Source with conventional treatment but after disinfection.

Standards for Drinking Water

Parameter	Ministry of Works & Housing (India)*	United States Public Health Standards**	Soviet State Standards***
pH	7.0-8.5	6.0-8.5	6.5-8.5
Dissolved Oxygen (mg/l) Min	-	-	-
Total Dissolved Solids (mg/l), Max	500	500	1000(dry residue)
Total Hardness (as mg/l of CaCO ₃), Max 200	-	-	-
Chlorides (mg/l), Max	200	250	350
Sulphates (mg/l), Max	200	250	500

Ideally, drinking water should not contain any coliform group of organisms.

* Manual on Water Supply & Treatment, Ministry of Works and Housing, New Delhi, 1976

** Water and Waste Water Technology, M.J. Hammer, John Wiley & Sons, 1986, p. 156.

*** Chemistry of Water & Microbiology, N.F. Voznaya, Moscow, 1981.

Water Quality Criteria for Fesh Water Classification

Criteria	A*	B*	C*	D*	E*
Dissolved Oxygen (DO), mg/l, Min.	6	5	4	4	-
Biochemical Oxygen demand (BOD), mg/l, Max.	2	3	3	-	-
Total coliform organisms**, MPN/100 ml, Max.	50	500	5000	-	-
pH value	6.5- 8.5	6.5- 8.5	6.0- 9.0	6.5- 8.5	6.0- 8.5
Free ammonia (as N), mg/l, Max.	-	-	-	1.2	-
Electrical conductivity, micromhos/cm Max.	-	-	-	-	2,250
Sodium absorption ratio, Max.	-	-	-	-	26
Boron, mg/l, Max.	-	-	-	-	2

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* Use classes : (A) drinking water source without conventional treatment but after disinfection; (B) outdoor bathing - organised; (C) drinking water source with conventional treatment followed by disinfection. (D) propagation of wild-life, fisheries; (E) irrigation, industrial cooling, controlled waste disposal.

** If the coliform is found to be more than the prescribed tolerance limits, the criteria for coliforms shall be satisfied if not more than 20 per cent of samples show more than the tolerance limits specified, and not more than 5 per cent of samples show values more than 4 times the tolerance limits. There should be no visible discharge of domestic and industrial wastes into Class A waters. In case of Classes B and C, the discharges shall be so regulated/treated as to ensure maintenance of the stream standards.

Source : Central Pollution Control Board, New Delhi.

