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Potable Water Standards.



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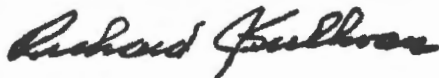
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NEW JERSEY
STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

POTABLE WATER STANDARDS

Pursuant to authority vested in it by the Revised Statutes, and Chapter 33, P.L. 1970 the State Department of Environmental Protection of the State of New Jersey has established the following Potable Water Standards for employment in the administration of the laws and regulations of this State relating to any waters used for drinking or culinary purposes. All prior rules, regulations or standards relating to potable water quality in this State as may have been established or adopted on various dates by the Department of Health of the State of New Jersey are hereby rescinded.

State Department of Environmental Protection
of the State of New Jersey



Richard J. Sullivan
State Commissioner of Environmental Protection

Filed with the Secretary of State: August 21, 1967

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POTABLE WATER STANDARDS

SECTION 1 — DEFINITIONS

- 1.1 The Coliform group of organisms shall mean and include all aerobic and facultative anaerobic gram-negative non-spore-forming bacilli which ferment lactose with gas formation. The procedures for demonstration of this group of organisms shall conform either to those of the "completed test" of the Multitube Fermentation Technique, or with the Membrane Filter Technique, as set forth in "Standard Methods for the Examination of Water and Wastewater," current edition, prepared, approved and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation.
- 1.2 The standard sample for the bacteriological test shall consist of five (5) standard portions of ten milliliters (10 ml.) when the Multitube Fermentation Technique is used; or of one (1) portion of one hundred milliliters (100 ml.) when the Membrane Filter Technique is used.
- 1.3 Public Potable Water Supply — A municipally or privately owned water supply, approved by the New Jersey State Department of Environmental Protection, under the provisions of Article 1, Chapter 10 of Title 58 and Article 1, Chapter 11 of Title 58 of the Revised Statutes, which is distributed to consumers through a public water supply system.
- 1.4 Public Water Supply System — A municipally or privately owned system comprising structures which operating alone or with other structures result in the derivation, conveyance (or transmission) or distribution of water for potable or domestic purposes to consumers in twenty or more dwellings or properties; this definition does not include a public water treatment plant.
- 1.5 Semipublic Water Supply System — A semipublic water supply is a water supply system from which water is supplied for potable or domestic purposes to consumers in more than one but less than twenty dwellings or properties OR from which water from other than a public potable water supply as defined in these standards is used or made available for potable or domestic purposes to employees, tenants, members,

guests, or the public at large in commercial offices, industrial, multiple dwellings or semipublic buildings, such as: rooming and boarding houses, hotels, motels, tourist cabins, mobile home parks, restaurants, camps of all types, day and boarding schools, clubhouses, hospitals and other institutions, or is used in connection with the manufacture or handling of ice, dairy products, food or drinks.

SECTION 2 — BACTERIOLOGICAL QUALITY

2.1 Sampling Frequency

- a. The owner of each public water supply system shall assure that the water therefrom is routinely sampled, and examined for bacteriological quality, in accordance with the following table. For populations between those shown, interpolation may be used.

Population Served	Minimum Number of Samples/ Month	Population Served	Minimum Number of Samples/ Month
1,000 or less	1	80,000	58
2,000	2	90,000	64
3,500	3	100,000	70
5,000	4	125,000	80
7,000	6	150,000	90
10,000	8	175,000	100
12,500	10	200,000	110
15,000	12	300,000	130
17,500	14	400,000	150
20,000	16	500,000	170
30,000	24	600,000	185
40,000	32	700,000	200
50,000	40	800,000	215
60,000	46	900,000	230
70,000	52	1,000,000	245

- b. The minimum frequency of routine bacteriological sampling from each semipublic water supply system, unless a differing frequency is required by other specific statutes, codes, or rules and regulations promulgated by the New Jersey State Department of Environmental Protection, the New Jersey State Department of Health, or ordinances promulgated by the municipality or the local board of

health, shall be four (4) samples per year taken at quarterly intervals.

- c. Samples taken in compliance with this Subsection shall be taken from points at various locations within the distribution system so as to determine the quality of water being distributed to consumers. Samples taken at the source of supply, or for water treatment plant control purposes, shall not be included in computing the total number of samples examined.
- d. In determining the number of samples taken and examined monthly, those taken by the local board of health may be included, provided all results are assembled and available for inspection, and that the bacteriological tests have been performed in accordance with these Standards.
- e. All results of samples taken in compliance with this subsection shall be assembled, recorded, and maintained by the owner of the water supply system for inspection by the New Jersey State Department of Environmental Protection, the New Jersey State Department of Health or the local board of health.

2.2 Sampling Technique

All persons taking potable water samples for examination for bacteriological quality shall conform to the following procedures:

- a. The standard samples shall be collected in sterile bottles, care being taken not to contaminate the neck of the bottle or the stopper during collection.
- b. If the water to be sampled is chlorinated, the sample shall be freed of chlorine or chloramines, and the procedure given in "Standard Methods for the Examination of Water and Wastewater," current edition, shall be followed. (All sterile 125 ml. (4 oz.) glass-stoppered bottles provided by the New Jersey State Department of Environmental Protection or the New Jersey State Department of Health and intended for the sampling of drinking water contain a dechlorinating agent. The bottles should therefore not be rinsed out prior to taking the sample.)

2.3 Bacteriological Standards

All water intended for potable purposes shall conform to the following bacteriological standards:

The presence of organisms of the Coliform group, as indicated by standard samples examined in accordance with the specified procedure, shall not exceed the following limits:

- (1) When the Multitube Fermentation Technique is used:
 - a. Organisms of the Coliform group shall be absent in all five (5) of the standard 10 ml. portions constituting the standard sample, when only on (1) single sample is examined.
 - b. In a series of samples not more than ten percent (10%) of the standard 10 ml. portions shall show the presence of organisms of the Coliform group.
- (2) When the Membrane Filter Technique is used:
 - a. Organisms of the Coliform group shall be absent in the standard portion of 100 ml. when only one (1) single standard sample is examined.
 - b. In a series of samples the arithmetical mean density of organisms of the Coliform group shall not exceed one (1) colony per 100 ml.

SECTION 3 — PHYSICAL AND CHEMICAL QUALITY

3.1 Water intended for potable purposes shall not contain impurities in concentrations which may be hazardous to the health of the consumer or be corrosive to the water supply system. Substances used in its treatment shall not remain in the water in concentrations greater than required by good practice. Substances which may have a deleterious physiological effect, or for which physiological effects are not known, shall not be introduced into the system in a manner which would permit them to reach the consumer.

3.2 Physical Characteristics

The physical characteristics of water intended for potable purposes shall not exceed the following limits:

- a. Turbidity — not to exceed 5 parts per million (Milligrams per Liter) (silica scale).
- b. Color — not to exceed 10 units (standard cobalt scale).
- c. Taste — the water shall have no objectionable taste.
- d. Odor — Cold Odor Quality shall not exceed Intensity III in accordance with the procedure given in "Standard Methods for the Examination of Water and Industrial Wastes," — tenth edition.

3.3 Chemical Characteristics

- a. The presence of the following substances in excess of the concentrations listed, in water intended for potable purposes, shall constitute grounds for the rejection of the supply.

Substance	Maximum Concentration
Arsenic (As)	0.05 ppm (Mg/L)
Barium (Ba)	1.00 " "
Cadmium (Cd)	0.01 " "
Chromium (hexavalent Cr ⁺⁶)	0.05 " "
Cyanide (CN)	0.20 " "
Fluoride (F)	2.00 " "
Lead (Pb)	0.05 " "
Selenium (Se)	0.01 " "
Silver (Ag)	0.05 " "

- b. The following chemical substances should not be present in a water intended for potable purposes in excess of, or (where applicable) below, the listed concentrations. Their presence may constitute grounds for the rejection of the supply if, in the opinion of this Department, such substances, either singly or in combination, are present in such concentrations as would render the water unduly corrosive, unpalatable, hazardous to the consumers or aesthetically objectionable.

Substance	Recommended Concentration		
	<u>Maximum</u>		<u>Minimum</u>
A.B.S./L.A.S.*	0.5	ppm (Mg/L)	
Chloride (Cl)	250.0	"	"
Copper (Cu)	1.0	"	"
Fluoride (F)	1.5	"	" 1.0 ppm (Mg/L)
Hardness (as Ca CO ₃)	150.0	"	" 50.0 " "
Iron (Fe)‡	0.3	"	"
Manganese (Mn)‡	0.05	"	"
Nitrate (NO ₃)	30.0	"	"
Phenolic Compounds (as phenol)	0.001	"	"
Sodium (Na)	50.0	"	"
Sulfate (SO ₄)	250.0	"	"
Total Dissolved Solids	500.0	"	"
Zinc (Zn)	5.0	"	"

* Alkyl-Benzene-Sulfonate and Linear-Alkyl-Sulfonate, or similar Methylene Blue Reactive Substances contained in synthetic detergents.

‡ See subsection 3.3 c.

- c. A public water supply, prior to distribution, shall be subjected to an appropriate removal process if the raw water contains concentrations exceeding 0.6 ppm iron or 0.1 ppm manganese.

SECTION 4 — BIOLOGICAL QUALITY

4.1 Water intended for potable purposes shall be free from:

- a. Visible organisms such as algae, algal diatoms, crustaceans, arachnids, and larvae.
- b. Those micro-organisms which render the water unpalatable, or unaesthetic to the consumer.