

CHAPTER 9B
SURFACE WATER QUALITY STANDARDS

Authority

N.J.S.A. 58:10A-1 et seq., 58:11A-1 et seq. and 13:1D-1 et seq.

Source and Effective Date

R.1998 d.234, effective April 17, 1998.
See: 29 N.J.R. 5128(a), 30 N.J.R. 1778(a).

Chapter Expiration Date

The expiration Date of Chapter 9B, Surface Water Quality Standards, was extended by gubernatorial directive from April 17, 2003 to April 17, 2005. See: 35 N.J.R. 2264(a).

Chapter Historical Note

Chapter 9B, Surface Water Quality Standards, was recodified from N.J.A.C. 7:9-4 by R.1993 d.610, effective December 6, 1993. See: 24 N.J.R. 3983(a), 24 N.J.R. 4471(a), 25 N.J.R. 404(a), 25 N.J.R. 5569(a).

Pursuant to Executive Order No. 66(1978), Chapter 9B, Surface Water Quality Standards, was readopted as R.1996 d.87, effective January 18, 1996. See: 27 N.J.R. 3521(a), 28 N.J.R. 1202(a). Notice of Determination to Not Adopt Proposed Amendments to Surface Water Quality Standards. See: 29 N.J.R. 1691(b).

Pursuant to Executive Order No. 66(1978), Chapter 9B, Surface Water Quality Standards, was readopted as R.1998 d.234, effective April 17, 1998. See: Source and Effective Date. See, also, section annotations. Administrative correction. See: 30 N.J.R. 3267(a).

Petition for Rulemaking. See: 34 N.J.R. 3651(b), 3652(a).

Cross References

Flood control, storm water systems, degradation of water quality, see N.J.A.C. 7:13-2.8.

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SUBCHAPTER 1. SURFACE WATER QUALITY STANDARDS

7:9B-1.1 Scope of subchapter

Unless otherwise provided by rule or statute, this subchapter shall constitute the rules of the Department of Environmental Protection governing matters of policy with respect to the protection and enhancement of surface water resources, class definitions and quality criteria, use designation and quality criteria for the mainstem of the Delaware River including the Delaware Bay, the classification of surface waters of the State, procedures for establishing water quality-based effluent limitations, modification of water quality-based effluent limitations, procedures for reclassifying specific segments for less restrictive uses and procedures for reclassifying specific segments for more restrictive uses pursuant to N.J.S.A. 13:1D-1 et seq., the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., and the Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq.

Amended by R.1993 d.610, effective December 6, 1993.
See: 24 N.J.R. 3983(a), 25 N.J.R. 5569(a).
Amended by R.1998 d.234, effective May 18, 1998.
See: 29 N.J.R. 5128(a), 30 N.J.R. 1778(a).

7:9B-1.2 Construction

This subchapter shall be liberally construed to permit the Department and its various divisions to discharge their statutory functions.

Amended by R.1993 d.610, effective December 6, 1993.
See: 24 N.J.R. 3983(a), 25 N.J.R. 5569(a).

7:9B-1.3 Severability

If any subchapter, section, subsection, provision, clause, or portion of this chapter, or the application thereof to any person, is adjudged unconstitutional or invalid by a court of competent jurisdiction, such judgment shall be confined in its operation to the subchapter, section, subsection, clause, portion, or application directly involved in the controversy in which such judgment shall have been rendered and it shall not affect or impair the remainder of this chapter or the application thereof to other persons.

New Rule, R.1993 d.610, effective December 6, 1993.
See: 24 N.J.R. 3983(a), 25 N.J.R. 5569(a).

7:9B-1.4 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

“Acute toxicity” means a lethal or severe adverse sublethal effect (for example, immobilization of daphnids) to an organism exposed to a toxic substance for a relatively short period of time. Acute toxicity is measured by short-term bioassays, generally of 48 or 96 hour duration.

"Agricultural water supply" means water used for field crops, livestock, horticulture, and silviculture.

"Ambient temperature" means the temperature of a waterbody beyond the portion of the waterbody that is affected by the localized heated waste discharge or discharge complex; or the temperature of a waterbody that would exist without the addition of heated discharges.

"Anadromous fish" means fish that spend most of their life in saline waters and migrate to fresh waters to spawn.

"Aquatic substrata" means soil material and associated biota underlying the water.

"Bioaccumulation" means the increase of the concentration of a substance within the tissues of an organism, to levels in excess of that substance's ambient environmental concentration, directly from the water or through the ingestion of food (usually other organisms).

"Bioassay" means a toxicity test using aquatic organisms to determine the concentration or amount of a toxic substance causing a specified response in the test organisms under stated test conditions.

"Bioconcentration" means the net accumulation of a substance by an aquatic organism, as a result of uptake directly from the ambient water, through the gill membrane or other external body surfaces.

"Biota" means the animal and plant life of an ecosystem; flora and fauna collectively.

"C1" means Category One waters.

"C2" means Category Two waters.

"Calculable changes" means changes to water quality characteristics as demonstrated by any acceptable mathematical, predictive method.

"Category one waters" means those waters designated in the tables in N.J.A.C. 7:9B-1.15(c) through (h), for purposes of implementing the antidegradation policies set forth at N.J.A.C. 7:9B-1.5(d), for protection from measurable changes in water quality characteristics because of their clarity, color, scenic setting, other characteristics of aesthetic value, exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, or exceptional fisheries resource(s). These waters may include, but are not limited to:

1. Waters originating wholly within Federal, interstate, State, county, or municipal parks, forests, fish and wildlife lands, and other special holdings that have not been designated as FW1 at N.J.A.C. 7:9B-1.15(h) Table 6;
2. Waters classified at N.J.A.C. 7:9B-1.15(c) through (g) as FW2 trout production waters and their tributaries;

3. Surface waters classified in this subchapter as FW2 trout maintenance or FW2 nontrout that are upstream of waters classified in this subchapter as FW2 trout production;

4. Shellfish waters of exceptional resource value; or

5. Other waters and their tributaries that flow through, or border, Federal, State, county, or municipal parks, forests, fish and wildlife lands, and other special holdings.

"Category two waters" means those waters not designated as Outstanding National Resource Waters or Category One at N.J.A.C. 7:9B-1.15 for purposes of implementing the antidegradation policies set forth at N.J.A.C. 7:9B-1.5(d).

"Chlorine produced oxidants" means the sum of free and combined chlorine and bromine as measured by the methods approved under N.J.A.C. 7:18. In fresh waters the oxidants measured are comprised predominantly of hypochlorous acid (HOCl), hypochlorite ion (OCl⁻), monochloramine and dichloramine. In saline waters the oxidants measured are comprised predominantly of the oxidants listed for fresh waters plus hypobromous acid (HOBr), hypobromite ion (OBr⁻) and bromamines.

"Chronic toxicity" means death or other adverse impacts that affect the growth, survival, or reproductive success of an organism or its progeny after a relatively long exposure period to toxic substances. Chronic toxicity is measured using intermediate-term or long-term bioassays.

"Complete mix" means a 25 percent or less variation in concentration across the transect of the water body.

"Criteria" means those elements of the Surface Water Quality Standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use. When the criteria are met, water quality will generally protect the designated use.

"Department" means the New Jersey Department of Environmental Protection.

"Designated use" means those surface water or ground water uses, both existing and potential, that have been established by the Department for waters of the State.

"Diadromous fish" means fish that spend most of their life in one type of water, either fresh or saline, and migrate to the other type to spawn.

"Disinfection" means the removal, destruction, or inactivation of pathogenic and indicator organisms.

"Dissolved metal" means the concentration of metal that passes through a 0.45 μ m membrane filter (as defined in "Methods for Chemical Analysis of Water and Wastes," EPA-600/4-79-020, March 1979).

“DRBC” means Delaware River Basin Commission.

“EC50” means the median effective concentration of a toxic substance expressed as a statistical estimate of the concentration that has a specified adverse effect on 50 percent of the test organisms under specified test conditions, based on the results of an acute bioassay.

“Epilimnion” means the freely circulating upper region of a thermally stratified waterbody extending from the surface to the thermocline.

“Existing uses” means those uses actually attained in the waterbody on or after November 28, 1975, whether or not they are included in the Surface Water Quality Standards.

“Federal Act” means the “Federal Water Pollution Control Act” (33 U.S.C. § 1251 et seq.), commonly referred to as the Clean Water Act, including all subsequent supplements and amendments.

“Flow-through bioassay” means a toxicity test in which the test solutions flow into and out of the test chambers on a once-through basis for the duration of the test, in accordance with N.J.A.C. 7:18.

“Fresh water(s)” means all nontidal and tidal waters generally having a salinity, due to natural sources, of less than or equal to 3.5 parts per thousand at mean high tide.

“FW” means the general surface water classification applied to fresh waters.

“FW1” means those fresh waters, as designated in N.J.A.C. 7:9B-1.15(h) Table 6, that are to be maintained in their natural state of quality (set aside for posterity) and not subjected to any man-made wastewater discharges or increases in runoff from anthropogenic activities. These waters are set aside for posterity because of their clarity, color, scenic setting, other characteristic of aesthetic value, unique ecological significance, exceptional recreational significance, exceptional water supply significance, or exceptional fisheries resource(s).

“FW2” means the general surface water classification applied to those fresh waters that are not designated as FW1 or Pinelands Waters.

“Groundwater” means that portion of water beneath the land surface that is within the zone of saturation (below the water table) where pore spaces are filled with water.

“Heat dissipation area” means a mixing zone, as may be designated by the Department, into which thermal effluents may be discharged for the purpose of mixing, dispersing, or dissipating such effluents without creating nuisances, hazardous conditions, or violating the provisions of this chapter, the Surface Water Quality Standards.

“Hypolimnion” means the lower region of a stratified waterbody that extends from the thermocline to the bottom of the waterbody, and is isolated from circulation with the upper waters, thereby receiving little or no oxygen from the atmosphere.

“Important species” means species that are commercially valuable (for example, within the top 10 species landed, by dollar value); recreationally valuable; threatened or endangered; critical to the organization and/or maintenance of the ecosystem; or other species necessary in the food web for the well-being of the species identified in this definition.

“Industrial water supply” means water used for processing or cooling.

“Intermittent stream” means a stream with a MA7CD10 flow of less than one-tenth (0.1) cubic foot per second.

“Lake, pond, or reservoir” means any impoundment, whether naturally occurring or created in whole or in part by the building of structures for the retention of surface water, excluding sedimentation control and stormwater retention/detention basins and ponds designed for treatment of wastewater. Lakes, ponds, and reservoirs are characterized by a long term or permanent downgradient restriction of surface water flow from the impoundment and areas of quiescent water within the body of the impoundment. Lakes, ponds, and reservoirs are frequently characterized by greater water depths within the impoundment than either the upgradient or downgradient surface water flow and by shallow water lateral edges containing emergent or submerged plant species. For regulatory purposes, the upgradient boundary of a lake, pond, impoundment, or reservoir shall be considered to be the point at which areas of greater depth and relatively quiescent water can be differentiated from the upgradient surface water input into the impoundment under average flow conditions.

“LC50” means the median lethal concentration of a toxic substance, expressed as a statistical estimate of the concentration that kills 50 percent of the test organisms under specified test conditions, based on the results of an acute bioassay.

“Limiting nutrient” means a nutrient whose absence or scarcity exerts a restraining influence upon an aquatic biological population.

“Load allocation” means the portion of a receiving water’s total maximum daily load (TMDL) for a specific pollutant that is allocated to existing or future nonpoint sources of pollution.

“MA1CD10” means the minimum average one day flow with a statistical recurrence interval of 10 years.

“MA7CD10” means the minimum average seven consecutive day flow with a statistical recurrence interval of 10 years.

“MA30CD10” means the minimum average 30 consecutive day flow with a statistical recurrence interval of 10 years.

“Measurable changes” means changes measured or determined by a biological, chemical, physical, or analytical method, conducted in accordance with USEPA approved methods as identified in 40 C.F.R. 136 or other analytical methods (for example, mathematical models, ecological indices) approved by the Department, that might adversely impact a water use (including, but not limited to, aesthetics).

“Natural flow” means the water flow that would exist in a waterway without the addition of flow of artificial origin.

“Natural water quality” means the water quality that would exist in a waterway or a waterbody without the addition of water or waterborne substances from artificial origin.

“NJPDES” means New Jersey Pollutant Discharge Elimination System.

“Nondegradation waters” means those waters set aside for posterity because of their clarity, color, scenic setting, other characteristic of aesthetic value, unique ecological significance, exceptional recreational significance, or exceptional water supply significance. These waters include all waters designated as FW1 in this subchapter.

“Nonpersistent” means degrading relatively quickly, generally having a half-life of less than 96 hours.

“Nonpoint source” or “NPS” means:

1. Any man-made or man-induced activity, factor, or condition, other than a point source, from which pollutants are or may be discharged;
2. Any man-made or man-induced activity, factor, or condition, other than a point source, that may temporarily or permanently change any chemical, physical, biological, or radiological characteristic of waters of the State from what was or is the natural, pristine condition of such waters, or that may increase the degree of such change; or
3. Any activity, factor, or condition, other than a point source, that contributes or may contribute to water pollution.

“Nontrout waters” means fresh waters that have not been designated in N.J.A.C. 7:9B-1.15(b) through (h) as trout production or trout maintenance. These waters are generally not suitable for trout because of their physical, chemical, or biological characteristics, but are suitable for a wide variety of other fish species.

“NPDES” means National Pollutant Discharge Elimination System.

“NT” means nontrout waters.

“Nutrient” means a chemical element or compound, such as nitrogen or phosphorus, which is essential to and promotes the growth and development of organisms.

“Outstanding National Resource Waters” or “ONRW” means high quality waters that constitute an outstanding national resource (for example, waters of National/State Parks and Wildlife Refuges and waters of exceptional recreational or ecological significance). Waters classified as FW1 waters and Pinelands waters are Outstanding National Resource Waters.

“Persistent” means relatively resistant to degradation, generally having a half life of over 96 hours.

“Pinelands waters” means all waters within the boundaries of the Pinelands Area, except those waters designated as FW1 in N.J.A.C. 7:9B-1.15(h) Table 6, as established in the Pinelands Protection Act (N.J.S.A. 13:18A-1 et seq.) and shown on Plate 1 of the “Comprehensive Management Plan” adopted by the New Jersey Pinelands Commission in November 1980.

“PL” means the general surface water classification applied to Pinelands Waters.

“Point source” or “PS” means any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

“Pollutant” means any dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, refuse, oil, grease, sewage sludge, munitions, chemical wastes, biological materials, medical wastes, radioactive substance (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. §§ 2011 et. seq.)), thermal waste, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, agricultural and construction waste or runoff or other residue discharged directly or indirectly to the land, ground waters or surface waters of the State, or to a domestic treatment works as defined at N.J.A.C. 7:14A-1.2. “Pollutant” includes both hazardous and nonhazardous pollutants.

“Potable surface water intake” means any structure or apparatus used to withdraw surface waters directly or indirectly that is conveyed to a potable treatment plant or is used for other potable purposes.

“Primary contact recreation” means water related recreational activities that involve significant ingestion risks and includes, but is not limited to, wading, swimming, diving, surfing, and water skiing.

“Public hearing” means a legislative type hearing before a representative or representatives of the Department providing the opportunity for public comment, but does not include cross-examination.

“Regulatory mixing zones” means areas of surface waters established pursuant to this chapter for the purpose of initial mixing, dispersion, or dissipation of wastewater effluent at or near the discharge point. Regulatory mixing zones may be established for applicable criteria.

“River mile” or “R.M.” means the distance, measured in statute miles, between two locations on a stream, with the first location designated as mile zero. For example, mile zero for the Delaware River is located at the intersection of the center line of the navigation channel and a line between the Cape May Light, New Jersey, and the tip of Cape Henlopen, Delaware.

“Saline waters” means waters having salinities generally greater than 3.5 parts per thousand at mean high tide.

“SC” means the general surface water classification applied to coastal saline waters.

“SE” means the general surface water classification applied to saline waters of estuaries.

“Secondary contact recreation” means recreational activities where the probability of water ingestion is minimal and includes, but is not limited to, boating and fishing.

“Shellfish” means those mollusks commonly known as clams, oysters, or mussels.

“Shellfish waters” means waters classified as Approved, Seasonally Approved, Special Restricted, Seasonally Special Restricted or Condemned that support or possess the potential to support shellfish which are within the Coastal Area Facility Review Act (C.A.F.R.A.) zone as delineated in 1973, (excluding: 1—The Cohansey River upstream of Brown’s Run; 2—The Maurice River upstream of Route 548; 3—The Great Egg Harbor River upstream of Powell Creek; 4—The Tuckahoe River upstream of Route 50; 5—The Mullica River upstream of the Garden State Parkway) plus the adjacent areas between Route 35 (from its juncture with the C.A.F.R.A. zone just north of Red Bank to its juncture with the C.A.F.R.A. zone just south of Keyport) and the C.A.F.R.A. zone and the area from the C.A.F.R.A. zone on the south northwesterly along Route 35 to the northern shore of the Raritan River, then easterly along the northern shore of the Raritan River to the southeast point of Perth Amboy, then due east to the New

Jersey jurisdictional limit, and seaward along the jurisdictional limit to the Atlantic Ocean.

“State Act” means the New Jersey “Water Pollution Control Act,” N.J.S.A. 58:10A-1 et seq., as amended.

“Stream temperature” means the temperature of a stream outside of a designated heat dissipation area.

“Surface water classifications” means names assigned by the Department as set forth at N.J.A.C. 7:9B-1.15(b) through (h) to waters having the same designated uses and water quality criteria (for example, FW1, PL, FW2-NT, SE1, SC, Zone 1C).

“Surface Water Quality Standards” (SWQS) means the rules in this chapter, N.J.A.C. 7:9B, which set forth designated uses, use classifications, and water quality criteria for the State’s waters based upon such uses, and the Department’s policies concerning these uses, classifications and criteria.

“Surface waters” means water at or above the land’s surface which is neither groundwater nor contained within the unsaturated zone, including, but not limited to, the ocean and its tributaries, all springs, streams, rivers, lakes, ponds, wetlands, and artificial waterbodies.

“Thermal alterations” means the increase or decrease in the temperature of surface waters, above or below the natural temperature, that may be caused by the activities of man.

“Thermocline” means the plane of maximum rate of change in temperature with respect to depth.

“Tidal waters” means fresh or saline water under tidal influence, up to the head of tide.

“TM” means trout maintenance.

“Total maximum daily load” or “TMDL” means a total maximum daily load formally established pursuant to Section 7 of the Water Quality Planning Act (N.J.S.A. 58:11A-7) and Section 303(d) of the Clean Water Act, 33 U.S.C. §§ 1251 et seq. A TMDL is the sum of individual wasteload allocations for point sources, load allocations for nonpoint sources of pollution, other sources such as tributaries, or adjacent segments, and allocations to a reserve or margin of safety for an individual pollutant.

“Total recoverable metal” means the concentration of metal in an unfiltered sample following treatment with hot dilute mineral acid (as defined in “Methods for Chemical Analysis of Water and Wastes”, EPA-600/4-79-020, March 1979, incorporated herein by reference).

“Toxic substance” or “toxic pollutant” means any pollutant identified pursuant to the Federal Act, or any pollutant or combination of pollutants, including disease causing agents, which after discharge and upon exposure, ingestion,

inhalation or assimilation into any organism, either directly or indirectly by ingestion through food chains, may, on the basis of the information available to the Department, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformation, in such organisms or their offspring. Toxic pollutants shall, include but not be limited, to those pollutants identified pursuant to Section 307 of the Federal Act or Section 4 of the State Act, or in the case of "sludge use or disposal practices," any pollutant identified pursuant to Section 405(d) of the Federal Act.

"TP" means trout production.

"Trout maintenance waters" means waters designated at N.J.A.C. 7:9B-1.15(b) through (g) for the support of trout throughout the year.

"Trout production waters" means waters designated at N.J.A.C. 7:9B-1.15(b) through (g) for use by trout for spawning or nursery purposes during their first summer.

"Unsaturated zone" means the subsurface volume between the land's surface and the top of the saturated zone (water table), where moisture does not fill all the pore spaces in the formation or soil.

"USEPA" means the United States Environmental Protection Agency.

"Wasteload allocation" or "WLA" means the portion of a receiving water's total maximum daily load for a specific pollutant that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation.

"Water quality-based effluent limitations" means effluent limitations established so that the quality of the waters receiving a discharge will meet the surface water quality criteria and policies of this chapter after the introduction of the effluent.

"Waters of the State" means the ocean and its estuaries, all springs, streams, wetlands, and bodies of surface or ground water, whether natural or artificial, within the boundaries of the State of New Jersey or subject to its jurisdiction.

"Wetlands" means those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation. The Department shall evaluate the parameters of hydrology, soils, and vegetation to determine the presence and extent of wetlands.

"Zone" means the general surface water classification applied to the main stem Delaware River and Delaware Bay.

Amended by R.1989 d.420, effective August 7, 1989.

See: 20 N.J.R. 1597(a), 21 N.J.R. 2302(b).

Amended by R.1993 d.610, effective December 6, 1993.

See: 24 N.J.R. 3983(a), 25 N.J.R. 5569(a).

Amended by R.1996 d.383, effective August 5, 1996.

See: 27 N.J.R. 4506(b), 28 N.J.R. 3782(b).

Added "Dissolved metal" and amended "Nondegradation waters" to include color as a criterion for set asides.

Amended by R.1998 d.234, effective May 18, 1998.

See: 29 N.J.R. 5128(a), 30 N.J.R. 1778(a).

Rewrote the section.

Administrative correction.

See: 31 N.J.R. 42(a).

Amended by R.2002 d.19, effective January 22, 2002.

See: 32 N.J.R. 4397(a), 34 N.J.R. 537(a).

Rewrote the section.

7:9B-1.5 Statements of policy

(a) General policies are as follows:

1. These Surface Water Quality Standards apply to all surface waters of the State.

2. Water is vital to life and comprises an invaluable natural resource which is not to be abused by any segment of the State's population or economy. It is the policy of the State to restore, maintain and enhance the chemical, physical and biological integrity of its waters, to protect the public health, to safeguard the aquatic biota, protect scenic and ecological values, and to enhance the domestic, municipal, recreational, industrial, agricultural and other reasonable uses of the State's waters.

3. The restoration, maintenance and preservation of the quality of the waters of the State for the protection and preservation of public water supplies is a paramount interest of the citizens of New Jersey. In order to provide adequate, clean supplies of potable water, it is the policy of the State that all fresh waters be protected as potential sources of public water supply. Therefore, point and nonpoint sources of pollutants shall be regulated to attain compliance with the Surface Water Quality Standards human health criteria outside of regulatory mixing zones.

4. Toxic substances in waters of the State shall not be at levels that are toxic to humans or the aquatic biota, or that bioaccumulate in the aquatic biota so as to render them unfit for human consumption.

5. The introduction of carcinogenic, mutagenic, or teratogenic substances into the environment is of particular concern to the Department. Human health-based ambient criteria have been established for carcinogenic substances at levels which would result in no greater than a one-in-one-million lifetime excess cancer risk for Group A and B carcinogens, under exposure assumptions appropriate for the designated uses of the waterbody. Criteria for Group C carcinogens, for which reference doses are not available, have been established at levels which would result in no greater than a one-in-one-hundred thousand lifetime excess cancer risk.