Surface Water Quality Standards

N. J. A. C. 7:9B

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

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STATE OF NEW JERSEY
Jon S. Corzine, Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Lisa P. Jackson, Commissioner

SURFACE WATER QUALITY STANDARDS

Authority

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CHAPTER 9B  SURFACE WATER QUALITY STANDARDS

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.

7:9B-1.2 Construction

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

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.

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 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.

"Best management practices" or "BMPs" means the methods, measures, or practices to
prevent or reduce the amount of pollution from point or non-point sources, including
structural and nonstructural controls, and operation and maintenance procedures.

"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.

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

"Carcinogen" means a toxic substance capable of inducing a cancer response, including
Group A (human carcinogen), Group B (probable human carcinogen) or Group C
(possible human carcinogen) categorized in accordance with the USEPA Guidelines for
reference, as amended or supplemented.

"C1" means Category One waters.

"C2" means Category Two waters.

"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 twenty five percent (25%) 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 μm 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.

"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.

"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 ten 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.

"Non-carcinogen" means a toxic substance not categorized as a carcinogen, including Group D (not classifiable as to human carcinogenicity) or Group E (evidence of non-carcinogenicity for humans) categorized in accordance with the USEPA Guidelines for Carcinogen Risk Assessment, 51 Fed. Reg. 33992, 1986 incorporated herein by reference, as amended or supplemented.

"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 nontroat 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.


"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 effect ratio" or "WER" means the ratio of an acute (or chronic) toxicity value derived from a site study to the acute (or chronic) toxicity value derived from a laboratory study for a particular toxic substance. The WER is multiplied by the aquatic life protection criterion for a given toxic substance to derive a site-specific aquatic life protection criterion.

"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 mainstem Delaware River and Delaware Bay.

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 in freshwaters due to consumption of fish and water, and in saline water due to consumption of fish. For carcinogens, the criteria have been established at levels which would result in no greater than a one-in-one-million lifetime excess cancer risk. For non-carcinogens, the criteria have been established which would result in no appreciable risk of deleterious effect.
6. Existing uses shall be maintained and protected. Designated uses shall, as soon as technically and economically feasible, be attained wherever these uses are not precluded by natural conditions. Where existing criteria are inadequate to support the existing or designated uses, the criteria shall be changed to support the existing uses.

7. The restoration of saline waters to levels which permit unrestricted shellfish harvesting is an objective of the Department.

(b) Interstate waters policies are as follows:

1. The designated uses and water quality criteria for the fresh and saline waters under the jurisdiction of the Delaware River Basin Commission shall be as established in accordance with N.J.A.C. 7:9B-1.13, 1.14(c), through (g).

2. The designated uses and water quality criteria for waters under the jurisdiction of the Interstate Environmental Commission in the New Jersey/New York metropolitan area shall be as established in this subchapter, or in accordance with the prevailing Water Quality Regulations of the Interstate Environmental Commission, including all amendments and future supplements thereto, whichever are more stringent.

(c) General technical policies are as follows:

1. The natural water quality shall be used in place of the promulgated water quality criteria of N.J.A.C. 7:9B-1.14 for all water quality characteristics that do not meet the promulgated water quality criteria as a result of natural causes.

2. Water quality criteria are expected to be maintained during periods when nontidal or small tidal stream flows are at or greater than the MA7CD10 flow, except as provided below:

   i. For acute aquatic life protection criteria, the design flow shall be the MA1CD10 flow;
   ii. For chronic aquatic life protection criteria for ammonia, the design flow shall be the MA30CD10 flow; and
   iii. For human health criteria for carcinogens listed at N.J.A.C. 7:9B-1.14(f)7, the design flow shall be the flow which is exceeded 75 percent of the time for the appropriate “period of record” as determined by the United States Geological Survey.

3. Water quality criteria are expected to be maintained in intermittent streams during all natural flow conditions. When an intermittent stream does not
contain natural flow of sufficient magnitude to determine water quality, the criteria to be maintained in the intermittent stream will be those pertaining to the measurable natural flow immediately downstream of the intermittent stream.

4. All analytical data to be incorporated by the Department in water quality monitoring or other activities shall be from laboratories approved or certified by the Department for the analysis of those specific parameters. If certification is not offered for the specific parameter, the laboratory performing the analysis shall, at a minimum, hold certification in the category of certification covering that type of parameter.

5. The Department shall utilize the parameter specific criteria contained in N.J.A.C. 7:9B-1.14 in the development of chemical specific water quality-based effluent limitations for point source discharges. Whenever parameter specific criteria have not been adopted, the Department will utilize the best available scientific information in the development of chemical specific water quality-based effluent limitations for point source discharges. Ambient criteria published by the United States Environmental Protection Agency pursuant to section 304(a) of the Federal Clean Water Act represent the minimum acceptable best scientific information to be used in the development of water quality-based effluent limitations for point source discharges.

6. Unless a metal translator is developed based on a site-specific water quality study or approved by USEPA as part of a watershed study or TMDL, the following metal translators shall be used for developing effluent limitations or expressing aquatic life criteria in the equivalent total recoverable form:

<table>
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<th>Name of the Metal</th>
<th>Freshwater Acute</th>
<th>Freshwater Chronic</th>
<th>Saline Acute</th>
<th>Saline Chronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Arsenic</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>ii. Cadmium</td>
<td>0.944*</td>
<td>0.909*</td>
<td>0.994</td>
<td>0.994</td>
</tr>
<tr>
<td>iii. Chromium III</td>
<td>0.316</td>
<td>0.860</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>iv. Chromium VI</td>
<td>0.982</td>
<td>0.962</td>
<td>0.993</td>
<td>0.993</td>
</tr>
<tr>
<td>v. Copper</td>
<td>0.960</td>
<td>0.960</td>
<td>0.83</td>
<td>0.83</td>
</tr>
<tr>
<td>vi. Lead</td>
<td>0.791*</td>
<td>0.791*</td>
<td>0.951</td>
<td>0.951</td>
</tr>
<tr>
<td>vii. Mercury</td>
<td>0.85</td>
<td>N/A</td>
<td>0.85</td>
<td>N/A</td>
</tr>
<tr>
<td>viii. Nickel</td>
<td>0.998</td>
<td>0.997</td>
<td>0.990</td>
<td>0.990</td>
</tr>
<tr>
<td>ix. Selenium</td>
<td>N/A</td>
<td>N/A</td>
<td>0.998</td>
<td>0.998</td>
</tr>
<tr>
<td>x. Silver</td>
<td>0.85</td>
<td>N/A</td>
<td>0.85</td>
<td>N/A</td>
</tr>
</tbody>
</table>
**Zinc**

| 0.978 | 0.986 | 0.946 | 0.946 |

*Conversion factors for cadmium and lead are hardness dependent. Values shown are at a hardness of 100 mg/L of calcium carbonate.*

- Cadmium Acute Metal Translator = \(1.136672 - [\ln(\text{hardness})(0.041838)]\)
- Cadmium Chronic Metal Translator = \(1.101672 - [\ln(\text{hardness})(0.041838)]\)
- Lead Acute and Chronic Metal Translator = \(1.46203 - [\ln(\text{hardness})(0.145712)]\)

**N/A** Not applicable

7. The Department shall utilize a geometric mean to assess compliance with the bacterial quality indicators at N.J.A.C.7:9B-1.14(d)1ii-iii. The geometric mean shall be calculated using a minimum of five samples collected over a thirty-day period. The single sample maximum shall be used for beach notification in accordance with N.J.A.C. 8:26 and to identify where additional ambient water quality sampling is needed to calculate a geometric mean.

8. Temperature criteria at N.J.A.C. 7:9B-1.14(d) apply unless an alternative effluent limitation is approved in accordance with Section 316(a) of the Clean Water Act, 33 U.S.C. 1326(a).

   i. Properly treated wastewater discharge shall be deemed in compliance with the temperature criteria if the ambient stream temperature measured outside the regulatory heat dissipation area does not increase by more than:
   
   - (1) 0.6°C (1°F) in FW2-TP waters
   - (2) 1.1°C (2°F) in FW2-TM waters
   - (3) 2.8°C (5°F) in FW2-NT waters
   - (4) 2.2°C (4°F) in SE and SC waters from September through May
   - (5) 0.8°C (1.5°F) in SE and SC waters from June through August

   ii. Thermal alterations to lakes, ponds, or reservoirs shall not be permitted unless it can be shown to be beneficial to the designated and existing uses.

(d) Antidegradation policies are as follows:

1. These antidegradation policies apply to all surface waters of the State.

2. Existing uses shall be maintained and protected. Designated uses shall be maintained or, as soon as technically and economically feasible, be attained wherever these uses are not precluded by natural conditions.

3. No irreversible changes may be made to existing water quality that would impair or preclude attainment of the designated uses of a waterway.
4. No changes shall be allowed in waters which constitute an outstanding National or State resource or in waters that may affect these outstanding resource waters.

5. Where water quality exceeds levels necessary to support the designated uses, including but not limited to, propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the Department finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the Department’s continuing planning process as set forth in the Statewide Water Quality Management Plan (see N.J.A.C. 7:15), which includes, but is not limited to, the NJPDES Regulations (N.J.A.C. 7:14A), that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.

6. These antidegradation policies shall be applied as follows:

   i. The quality of nondegradation waters shall be maintained in their natural state (set aside for posterity) and shall not be subject to any manmade wastewater discharges. The Department shall not approve any activity which, alone or in combination with any other activities, might cause changes, other than toward natural water quality, in the existing surface water quality characteristics.

   ii. For Pinelands waters, the Department shall not approve any activity which alone or in combination with any other activities, might cause changes, other than toward natural water quality, in the existing surface water quality characteristics. This policy shall apply as follows:

      (1) This policy is not intended to interfere with water control in the operation of cranberry bogs or blueberry production.

      (2) Dischargers holding valid NJPDES permits as of May 20, 1985, shall be allowed to continue discharging under the terms of their existing NJPDES permits provided that the discharge is not creating any water quality problems and that the designated uses are being attained. If a water quality problem has been created or the designated uses are not being attained, the NJPDES permit shall be modified to eliminate the water quality problem or attain the designated uses.

      (3) Existing dischargers shall be subject to all the provisions of this subchapter when they apply for modification or expansion of their existing discharge.
iii. Category One Waters shall be protected from any measurable changes (including calculable or predicted changes) to the existing water quality. Water quality characteristics that are generally worse than the water quality criteria, except as due to natural conditions, shall be improved to maintain or provide for the designated uses where this can be accomplished without adverse impacts on organisms, communities or ecosystems of concern.

iv. For Category Two Waters, water quality characteristics that are generally better than, or equal to, the water quality standards shall be maintained within a range of quality that shall protect the existing/designated uses, as determined by studies acceptable to the Department, relating existing/designated uses to water quality. Where such studies are not available or are inconclusive, water quality shall be protected from changes that might be detrimental to the attainment of the designated uses or maintenance of the existing uses. Water quality characteristics that are generally worse than the water quality criteria shall be improved to meet the water quality criteria.

7. Where a lower classification of water (including the different antidegradation waters) may impinge upon a higher classification of water the Department shall ensure that the quality and uses of the higher classification water are protected.

8. A waterway or waterbody from which raw water is transferred to another waterway or waterbody shall be treated as a tributary to the waterway or waterbody receiving the transferred water.

9. Modifications of water quality-based effluent limitations established to implement this antidegradation policy may be granted pursuant to N.J.A.C. 7:9B-1.8 and 1.9.

(e) Water quality-based effluent limitation policies are as follows:

1. Water quality-based effluent limitations may be established so as to minimize total expenditures, subject to social and environmental constraints, so that the provisions of the water quality standards (which includes the antidegradation policies) are met. This policy may result in the assignment of different levels of treatment to different dischargers where this proves more beneficial on a study area basis.

2. Modifications of water quality-based effluent limitations established to implement the water quality standards (which includes the antidegradation policies) granted pursuant to N.J.A.C. 7:9B-1.8 and 1.9 , shall provide for effluent limits at least as stringent as those required pursuant to sections 301, 306, and 307 of the Federal Clean Water Act or the minimum BOD5
effluent standards at N.J.A.C. 7:14A-12.4, where applicable, whichever are more stringent.

3. Water quality-based effluent limitations developed in accordance with N.J.A.C. 7:14A-13.6 shall not interfere with the attainment of the Surface Water Quality Standards, including the antidegradation policies.

4. When a discharge is made to a tidal waterway in the reach where the salinity varies from less than 3.5 ppt. to greater than 3.5 ppt., or the salinity data are inconclusive, the Department shall establish as water quality-based effluent limitations the more stringent of the limitations, on a parameter specific basis, required for the upstream, FW, waters or the downstream, SE, waters.

5. Where the effluent limitations developed pursuant to N.J.A.C. 7:14A-13.6 are below the level of detectability of the procedures in N.J.A.C. 7:18 the Department will use an effluent limitation of nondetectable in any NJPDES permit.

6. Compliance schedules may be issued in accordance with N.J.A.C. 7:14A-6.4 when it is demonstrated by a discharger that new or revised water quality-based effluent limitations, based on ambient criteria adopted or revised after July 1, 1977, cannot be consistently met with the facility's existing treatment process. No schedule of compliance may be allowed for parameter specific water quality-based effluent limitations where the parameter specific ambient water quality criterion, which was the basis for developing that limitation, was adopted prior to July 1, 1977, and has not been revised since adoption.


(f) Bioassay and biomonitoring policies are as follows:

1. Bioassay test species selection criteria follow:
i. The objective of the Department is to use test species for toxicity testing bioassays that are representative of the more sensitive aquatic biota from the different trophic levels of the waters in question.

ii. Test species need not be indigenous to, nor occur in the waters in question.

iii. When the bioassay test protocol being utilized falls under the scope of N.J.A.C. 7:18 the Department shall designate the approved representative species considered to be the most sensitive to the discharge.

2. Acute definitive bioassay tests, in accordance with N.J.A.C. 7:18, will normally be utilized in determining the toxicity of a discharge to the aquatic biota.

3. The Department, in order to further characterize the toxicity of a discharge, may allow or require the use of other procedures including, but not limited to:

   i. Bioaccumulation testing;

   ii. Mutagenicity testing; and

   iii. Measures of the structure and function of the aquatic community in the receiving waters.

4. Parameter specific water quality criteria for toxic substances in a waterbody may be established by the Department when adequate data, from appropriate bioassays or scientific literature, are available as follows:

   i. Appropriate bioassays, for purposes of this policy, shall include both acute definitive and chronic definitive bioassays; and

   ii. The amount of bioassay data or scientific literature needed to support adoption of a parameter specific criterion in a given waterbody will be determined by the Department on a case-by-case basis.

(g) Nutrient policies are as follows:

1. These policies apply to all FW waters of the State.

2. Except as due to natural conditions, nutrients shall not be allowed in concentrations that cause objectionable algal densities, nuisance aquatic vegetation, abnormal diurnal fluctuations in dissolved oxygen or pH,
changes to the composition of aquatic ecosystems, or otherwise render the waters unsuitable for the designated uses.

3. The Department may establish watershed or site-specific water quality criteria for nutrients in lakes, ponds, reservoirs or streams, in addition to or in place of the criteria in N.J.A.C. 7:9B-1.14, when necessary to protect existing or designated uses. Such criteria shall become part of these Water Quality Standards.

4. The Department shall establish water quality-based effluent limits for nutrients, in addition to or more stringent than, the effluent standard in N.J.A.C. 7:9-5.7, as necessary to meet the quality criteria.

5. Activities resulting in the non-point discharge of nutrients shall implement the best management practices determined by the Department to be necessary to protect the existing or designated uses.

6. The Department may allow or require the use of algal biostimulation assays, to determine the limiting nutrient in a lake, pond, reservoir or stream.

(h) A permittee may request that a regulatory mixing zone be established by the Department for applicable criteria except as otherwise provided in this section. Regulatory mixing zones may be evaluated as part of the development of water quality-based effluent limitation(s) to provide for the initial dispersion of the effluent in the receiving water body at or near the discharge point.

1. The following are the general conditions for establishing regulatory mixing zones:

   i. Regulatory mixing zones shall be established in accordance with this subsection;

   ii. Water quality criteria may be exceeded within the regulatory mixing zone; however, surface water quality criteria must be met at the edge of the regulatory mixing zone;

   iii. The regulatory mixing zone shall be no larger than that portion of the receiving water where complete mixing occurs;

   iv. Regulatory mixing zones shall not be used for, or considered as a substitute for, minimum treatment technology required by the Federal and State Acts or other applicable Federal or State laws or regulations;

   v. Regulatory mixing zones shall be established to assure that significant mortality does not occur to free swimming or drifting organisms;
(1) In individual regulatory mixing zones, discharges which meet acute effluent toxicity of LC$_{50} \geq 50\%$ shall be deemed to comply with this requirement.

(2) In cases of extended regulatory mixing zones resulting from multiple, conjoined individual regulatory mixing zones, site-specific studies to demonstrate no significant mortality shall be required, taking into account factors including, time of travel, concentration, and the toxicity of the parameters in question;

vi. The existing and designated uses outside the regulatory mixing zone shall not be adversely affected;

vii. The total area and volume of a waterbody assigned to a regulatory mixing zone shall be limited to that which will not adversely affect beneficial uses or interfere with biological communities or populations of important species (for example, commercially or recreationally significant species; or threatened or endangered species);

viii. Regulatory mixing zones, including those for shore hugging plumes, shall not extend into recreational areas, potable surface water intakes (1,500 feet upstream and 500 feet downstream or to the farthest point of backwatering due to the intake, whichever is more protective), shellfish harvesting areas, threatened or endangered species habitat, and other important biological or natural resource areas;

ix. The regulatory mixing zone shall not inhibit or impede the passage of aquatic biota; and

x. Overlapping regulatory mixing zones shall not inhibit or impede the passage of aquatic biota.

2. Spatial limitations for regulatory mixing zones delineate the maximum area in which the initial mixing may occur. A site-specific study performed in accordance with (h)3 below will be used to determine dilution in tidal water bodies and in nontidal water bodies where mixing is not shown to be rapid and complete. A maximum area shall be applied in any one of the following four situations:

i. Heat dissipation areas shall be established as follows:
   (1) For discharges to FW2-NT, FW2-TM, and SE waters, not more than one-quarter (1/4) of the cross section and/or volume of the water body at any time or more than two-thirds (2/3) of the surface from shore to shore at any time.
(2) For discharges to lakes, ponds, reservoirs, bays or coastal waters, the heat dissipation areas shall be developed on a case-by-case basis.

(3) A discharger may be granted a larger heat dissipation area pursuant to 33 U.S.C. 1326(a) Section 316(a) of the Clean Water Act.

ii. For discharges to tidal water bodies:

(1) Regulatory mixing zones for chronic and human health criteria are limited to one fourth of the distance between the discharge port closest to the shoreline and the shoreline during average tidal conditions, or 100 meters, whichever is greater; and

(2) Regulatory mixing zones for acute criteria are limited by the distances calculated in accordance with the USEPA “Technical Support Document For Water Quality-Based Toxics Control” USEPA, EPA/505/2-90-001, March 1991, incorporated herein by reference. In no case shall a regulatory mixing zone for acute criteria extend more than 100 meters from the discharge point or include more than five percent of the total surface area of a water body based on critical ambient tidal conditions during low slack, astronomical spring tide for the applicable exposure period.

iii. For discharges to non-tidal water bodies:

(1) Regulatory mixing zones for chronic and human health criteria shall be based on the design flows at (c)2 above. If rapid, complete mix is demonstrated, the entire available design flow may be used in dilution calculations. If rapid, complete mix is not demonstrated, only that portion of the design flow that can be demonstrated to mix with the effluent within 100 meters from the discharge point may be used in dilution calculations; and

(2) Regulatory mixing zones for acute criteria shall be based on the MA1CD10 design flow. If rapid, complete mix is demonstrated, the entire available design flow may be used in dilution calculations. If rapid, complete mix is not demonstrated, only that portion of the design flow that can be demonstrated to mix with the effluent within a downstream distance calculated in accordance with the USEPA “Technical Support Document For Water Quality-Based Toxics Control” USEPA, EPA/505/2-90-001, March 1991 may be used. In no case shall a regulatory mixing zone for acute criteria extend more than 100 meters from the discharge point or include more than five percent of the total surface area of a water body based on the design flow.
iv. Site-specific spatial dimensions of the regulatory mixing zone for an approved multiport diffuser shall be determined by the Department. The dimensions of the site-specific regulatory mixing zone and the allowable dilution at the edge of the regulatory mixing zone may be established using appropriate diffuser models (for example, CORMIX, PLUMES), tracer studies, or other field studies approved by the Department in accordance with (h)3 below.

3. A regulatory mixing zone study shall be conducted in accordance with a workplan pre-approved by the Department. General protocols for conducting mixing zone studies are described in the USEPA “Technical Support Document For Water Quality-Based Toxics Control” USEPA, EPA/505/2-90-001, March 1991. In addition, the following principles apply:

   i. The design flows to be used in calculating available dilution in nontidal waters shall be based on the design flows specified at (c)2 above; and

   ii. In tidal waters, the regulatory mixing zone for an acute criteria shall be based on critical ambient tidal conditions during low slack, astronomical spring tide for the applicable exposure period. Regulatory mixing zones for chronic and human health criteria shall be based on average conditions during a normal tidal cycle.

4. In order to determine waste load allocations and NJPDES/DSW permit effluent limitations that will comply with the regulatory mixing zone requirements, instream pollutant concentrations at the boundary of the regulatory mixing zone shall be determined as follows:

   i. The instream concentrations shall be determined using either a general mass balance equation or a mathematical model, if available; or the information generated during the course of a study as described at (h)2 above.

   ii. If the regulatory mixing zone is based upon the guidance and procedures in the USEPA “Technical Support Document For Water Quality-Based Toxics Control” USEPA, EPA/505/2-90-001, March 1991, the Technical Support Document will also be used to determine instream concentrations at the boundary of the regulatory mixing zone.

5. Regulatory mixing zones are prohibited as follows:

   i. For indicators of pathogenic quality, including fecal coliform and enterococci;

   ii. In intermittent streams;
iii. For new or increased discharges to lakes, ponds, and reservoirs;


v. For heat dissipation areas in FW2-TP waters;

vi. For heat dissipation areas within 1,500 feet of the shoreline in SC waters;

vii. For new discharges of the following pollutants:

   (1) alpha-BHC (alpha-HCH);
   (2) beta-BHC (beta-HCH);
   (3) gamma-BHC (gamma HCH / Lindane);
   (4) Chlordane;
   (5) 4,4'-DDD (p,p'-TDE);
   (6) 4,4'-DDE;
   (7) 4,4'-DDT;
   (8) Dieldrin;
   (9) Hexachlorobenzene;
   (10) Hexachlorobutadiene;
   (11) Mercury;
   (12) Mirex;
   (13) Pentachlorobenzene;
   (14) Polychlorinated biphenyls (PCBs);
   (15) 1,2,4,5-Tetrachlorobenzene;
   (16) 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD); and
   (17) Toxaphene;

viii. For new or expanded discharges, within 1,500 feet upstream of a potable surface water intake (including any reservoir) and 500 feet downstream or to the farthest point of backwatering due to the intake, whichever is more protective.

7:9B-1.6 Establishment of water quality-based effluent limitations

(a) For Category One waters, as defined in N.J.A.C. 7:9B-1.4, water quality-based effluent limitations shall be assigned to a point source discharge so as to protect
the existing water quality from any measurable or calculable changes. The Department shall establish water quality-based effluent limitations, as appropriate, for those parameters contained in N.J.A.C. 7:9B-1.14, as well as any other parameters the Department believes may have a detrimental effect on the designated or existing uses.

(b) For Category Two waters, as defined in N.J.A.C. 7:9B-1.4, draft water quality-based effluent limitations shall be assigned to a point source discharge so as to:

1. Maintain water quality characteristics that are generally better than or equal to the water quality standards at a level that will protect the existing and designated uses; and

2. Bring water quality characteristics that are generally worse than the water quality criteria, except as due to natural conditions, up to the water quality criteria or to levels corresponding with wasteload allocations established pursuant to N.J.A.C. 7:15-7.6.

(c) Water quality-based effluent limits for chlorine produced oxidants based on the criteria in N.J.A.C. 7:9B-1.14(f) are not applicable where:

1. The aquatic community of a waterbody is exposed to one or more point source discharges of non-contact cooling water that is intermittently chlorinated to control condenser biofouling;

2. The total period of such exposure to chlorinated wastewater is two hours per day or less; and

3. The maximum concentration of chlorine produced oxidants in the effluents of such discharges shall not exceed 200 μg/L.

7:9B-1.7 Waterway loadings in areawide water quality management plans

Any total maximum daily load, wasteload allocation, or load allocation established as an amendment to an areawide water quality management plan under N.J.A.C. 7:15-3.4 shall be consistent with all of the provisions of this subchapter.

7:9B-1.8 Procedures for modifying water quality-based effluent limitations for individual dischargers to Category One waters

(a) An applicant requesting modification of a water quality-based effluent limitation, established on a case-by-case basis, must demonstrate, to the satisfaction of the Department, after public notice (including notice to affected municipalities) and a public hearing (where sufficient public interest exists), that:
1. Some change in ambient water quality should be allowed because of necessary and justifiable social or economic development;

2. Alternative effluent limitations, at least as stringent as the technology-based effluent limitations required by either sections 301, 306, and 307 of the Federal Clean Water Act, or the effluent limitations resulting from application of the minimum BOD5 effluent standards in N.J.A.C. 7:14A-12.4 (where applicable), whichever are more stringent, will not interfere nor be injurious to the existing or designated uses; and

3. Where the requested modified effluent limitations would result in contravention of the water quality criteria or the degradation of the natural water quality, whichever is less stringent:

   i. The water quality criteria are not attainable because of natural background; or

   ii. The water quality criteria are not attainable because of irretrievable man-induced conditions; or

   iii. Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or

   iv. Controls more stringent than those required by Sections 301(b) and 306 of the Federal Clean Water Act would result in substantial and widespread adverse social and economic impact.

(b) It is the responsibility of the applicant to provide the Department with all the information needed to evaluate the requested modification(s).

(c) In no case shall changes to water quality be allowed in Outstanding National Resource Waters.

(d) Modified effluent limitations may be granted for a time period not to exceed three years or the time period of the permit in which the modified effluent limitations appear, whichever is shorter.

(e) Modified effluent limitations may be renewed if the discharger demonstrates, to the Department's satisfaction, after public notice (including notice to affected municipalities) and a public hearing (where sufficient interest exists), that the basis for issuing the modification still exists and there have been no adverse impacts on the existing uses.
(f) Where water quality criteria are not currently met the Department shall not grant a modification, as set forth in this section, establishing an effluent limitation less stringent than the limitation(s) in the existing permit, unless the criteria are not met because of natural conditions.

7:9B-1.9 Procedures for modifying water quality-based effluent limitations for individual dischargers to Category Two waters.

(a) The criteria for modifying water quality-based effluent limitations established on a case-by-case basis are:

1. The applicant for modification of effluent limitations for parameters that are currently better than the water quality criteria must demonstrate, to the satisfaction of the Department, after public notice (including notice to affected municipalities) and a public hearing (where sufficient public interest exists), that:
   
   i. Some degradation of water quality parameters currently better than the water quality criteria should be allowed because of necessary and justifiable social or economic development; and
   
   ii. Alternative effluent limitations, at least as stringent as the technology-based effluent limitations required by either sections 301, 306, and 307 of the Federal Clean Water Act, or the effluent limitations resulting from application of the effluent standards (where applicable) in N.J.A.C. 7:14A-12, whichever are more stringent, will not interfere with nor be injurious to the existing or designated uses.

2. The applicant for modification of effluent limitations for parameters that are currently equal to or currently do not meet the water quality criteria in this subchapter must demonstrate, to the satisfaction of the Department, after public notice (including notice to affected municipalities) and a public hearing (where sufficient public interest exists), that:

   i. The water quality criteria are not attainable because of natural background; or
   
   ii. The water quality criteria are not attainable because of irretrievable man-induced conditions; or
   
   iii. Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the water quality criteria, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or
iv. Controls more stringent than those required by Section 301(b) and 306 of the Federal Clean Water Act would result in substantial and widespread adverse social and economic impact.

(b) Where water quality criteria are not currently met the Department shall not grant a modification, as set forth in this section, establishing an effluent limitation less stringent than the limitation(s) in the existing permit, unless the criteria are not met because of natural conditions.

(c) Modified effluent limitations may be granted for a time period not to exceed three years or the time period of the permit in which the modified effluent limitations appear, whichever is shorter.

(d) Modified effluent limitations may be renewed if the discharger demonstrates, to the satisfaction of the Department, after public notice (including notice to affected municipalities) and a public hearing (where sufficient interest exists), that the basis for issuing the modification still exists and there have been no adverse impacts on the existing uses.

7:9B-1.10 Procedures for reclassifying specific segments for less restrictive uses

(a) The Department will entertain petitions, for reclassification of specific segments to less restrictive uses, or may decide to initiate reclassification proceedings on its own, at any time.

(b) Any reclassification proceedings will include full documentation of the items contained in (d) and (e) below. The documentation will be prepared by either the Department (where the Department has initiated the reclassification on its own) or the petitioner for the reclassification.

(c) The Department shall issue public notice to all interested parties (including affected municipalities) and shall hold public hearing(s) as part of any reclassification proceeding.

(d) The Department or the petitioner, as indicated in (b) above, shall include in the reclassification documentation appropriate water quality studies and analyses, biological studies and analyses, environmental, social, and economic studies as are necessary to demonstrate the satisfaction of (e) 1 and 2 below, in addition to at least one of the remaining criteria in (e) below.

(e) The Department may establish less restrictive uses than the designated uses only after it has been demonstrated to the satisfaction of the Department that:

1. None of the uses being removed are existing uses; and
2. The uses to be removed will not be attained by implementing effluent limits required by Sections 301(b) and 306 of the Federal Clean Water Act in conjunction with implementation of cost-effective and reasonable best management requirements for nonpoint source pollution control; and

3. The existing designated use is not attainable because of natural background; or

4. The existing designated use is not attainable because of irretrievable man-induced conditions; or

5. Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or

6. Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or

7. Controls more stringent than those required by Sections 301(b) and 306 of the Federal Clean Water Act would result in substantial and widespread adverse social and economic impact.

(f) Any reclassification for less restrictive uses, established pursuant to this section shall be reviewed during each review of water quality standards pursuant to Section 303 of the Federal Clean Water Act (at least once every three years). Either the Department or the original petitioner, as indicated in (b) above, shall be responsible for supplying documentation showing that the bases for the reclassification still exist.

(g) In those cases in which a thermal discharge is involved, the procedures for reclassifying segments for less restrictive use shall be consistent with section 316 of the Federal Clean Water Act.

7:9B-1.11 Procedures for reclassifying specific segments for more restrictive uses

(a) The Department will entertain petitions, for reclassification of specific segments, pursuant to (e) below, or may decide to initiate reclassification proceedings on its own, at any time.

(b) The Department may entertain petitions for reclassification of specific segments, pursuant to (f) below, at any time.
(c) Documentation supporting the petition for reclassification for more restrictive use(s) shall be prepared by the petitioner for such reclassification, where one exists, or by the Department, where it decides to initiate such reclassification on its own.

(d) The Department shall issue public notice to all interested parties (including affected municipalities and dischargers) and shall hold public hearing(s) as part of any reclassification proceeding.

(e) A reclassification for more restrictive uses shall be made whenever:

1. It is demonstrated to the satisfaction of the Department that there are existing uses of the specific segment that are not included in the designated uses; or

2. Where a reclassification for less restrictive uses has been granted pursuant to N.J.A.C. 7:9B-1.10, the bases for the reclassification no longer exist; or

3. It is demonstrated to the satisfaction of the Department that any uses in Section 101 (a) (2) of the Federal Clean Water Act, protection and propagation of fish, shellfish, and wildlife, and recreation in and on the water, which are not included in the designated uses listed in this subchapter are attainable.

(f) A reclassification for more restrictive uses may be made when:

1. It is demonstrated to the satisfaction of the Department that the waters should be set aside to represent the natural aquatic environment and its associated biota; or

2. It is demonstrated to the satisfaction of the Department that a more restrictive use is necessary to protect a unique ecological system or threatened/endangered species.

(g) In those cases in which a thermal discharge is involved, the procedures for reclassifying segments for more restrictive uses shall be consistent with section 316 of the Federal Clean Water Act.

7:9B-1.12 Designated uses of FW1, PL, FW2, SE1, SE2, SE3, and SC waters

(a) In all FW1 waters the designated uses are:

1. Set aside for posterity to represent the natural aquatic environment and its associated biota;

2. Primary and secondary contact recreation;
3. Maintenance, migration and propagation of the natural and established aquatic biota; and
4. Any other reasonable uses.

(b) In all PL waters the designated uses are:

1. Cranberry bog water supply and other agricultural uses;
2. Maintenance, migration and propagation of the natural and established biota indigenous to this unique ecological system;
3. Public potable water supply after conventional filtration treatment (a series of processes including filtration, flocculation, coagulation, and sedimentation, resulting in substantial particulate removal but no consistent removal of chemical constituents) and disinfection;
4. Primary and secondary contact recreation; and
5. Any other reasonable uses.

(c) In all FW2 waters the designated uses are:

1. Maintenance, migration and propagation of the natural and established biota;
2. Primary and secondary contact recreation;
3. Industrial and agricultural water supply;
4. Public potable water supply after conventional filtration treatment (a series of processes including filtration, flocculation, coagulation, and sedimentation, resulting in substantial particulate removal but no consistent removal of chemical constituents) and disinfection; and
5. Any other reasonable uses.

(d) In all SE1 waters the designated uses are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;
2. Maintenance, migration and propagation of the natural and established biota;
3. Primary and secondary contact recreation; and
4. Any other reasonable uses.

(e) In all SE2 waters the designated uses are:

1. Maintenance, migration and propagation of the natural and established biota;
2. Migration of diadromous fish;
3. Maintenance of wildlife;
4. Secondary contact recreation; and
5. Any other reasonable uses.

(f) In all SE3 waters the designated uses are:

1. Secondary contact recreation;
2. Maintenance and migration of fish populations;
3. Migration of diadromous fish;
4. Maintenance of wildlife; and
5. Any other reasonable uses.

(g) In all SC waters the designated uses are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;
2. Primary and secondary contact recreation;
3. Maintenance, migration and propagation of the natural and established biota; and
4. Any other reasonable uses.

7:9B-1.13 Designated uses of mainstem Delaware River and Delaware Bay

(a) The designated uses for the mainstem Delaware River and Delaware Bay are those contained in "Delaware River Basin Commission, Water Quality Regulations, Administrative Manual - Part III," Article 3, dated October 23, 1996, including all amendments and future supplements thereto.

(b) The designated uses for other waters under the jurisdiction of the DRBC are as set forth at N.J.A.C. 7:9B-1.15(d).

7:9B-1.14 Surface water quality criteria

(a) Surface water quality criteria for FW1 waters shall be maintained as to quality in their natural state.

(b) Surface water quality criteria for PL waters are as follows:

1. These waters shall be maintained as to quality in their existing state or that quality necessary to attain or protect the designated uses, whichever is more stringent.
i. For Nitrate-Nitrogen a level of 2 mg/L shall be maintained in the surface waters unless it is shown that a lower level must be maintained to protect the existing surface water quality.

ii. A pH level between 3.5 and 5.5 shall be maintained unless it is demonstrated that a pH level outside of that range is necessary to protect the existing/ designated uses.

2. The water quality criteria for existing discharges are the water quality criteria contained in "Surface Water Quality Standards" as adopted in March 1981, except that:

i. The criteria for Nitrate-Nitrogen and pH promulgated in N.J.A.C. 7:9B-1.14(b)1 for PL waters apply instead of the 1981 criteria, and;

ii. The criteria for phosphorous, bacterial quality, and toxic substances promulgated in N.J.A.C. 7:9B-1.14(c) through (g) apply instead of the 1981 criteria, as though the freshwater portions of the PL waters were classified as FW2 and the saline portions were classified as SE1.

(c) Unless site-specific criteria are established at (g) below, State-wide criteria apply for FW2, SE, and SC waters as listed in accordance with (d) through (f) below.

(d) Surface Water Quality Criteria for FW2, SE and SC Waters:
<table>
<thead>
<tr>
<th>Substance</th>
<th>Criteria</th>
<th>Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bacterial quality (Counts/100 ml)</td>
<td>i. Shellfish Harvesting: Bacterial Indicators shall not exceed, in all shellfish waters, the standard for approved shellfish waters as established by the National Shellfish Sanitation Program as set forth in its current manual of operations.</td>
<td>Shellfish Waters</td>
</tr>
<tr>
<td></td>
<td>ii. Primary Contact Recreation:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1) Enterococci levels shall not exceed a geometric mean of 35/100 ml, or a single sample maximum of 104/100 ml.</td>
<td>SE1 and SC</td>
</tr>
<tr>
<td></td>
<td>(2) E. Coli levels shall not exceed a geometric mean of 126/100 ml or a single sample maximum of 235/100 ml.</td>
<td>All FW2</td>
</tr>
<tr>
<td></td>
<td>iii. Secondary Contact Recreation:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1) Fecal coliform levels shall not exceed a geometric mean of 770/100 ml.</td>
<td>SE2</td>
</tr>
<tr>
<td></td>
<td>(2) Fecal coliform levels shall not exceed a geometric mean of 1500/100ml.</td>
<td>SE3</td>
</tr>
<tr>
<td>2. Dissolved oxygen (mg/L)</td>
<td>i. Not less than 7.0 at any time;</td>
<td>FW2-TP</td>
</tr>
<tr>
<td></td>
<td>ii. 24 hour average not less than 6.0. Not less than 5.0 at any time (see paragraph viii below);</td>
<td>FW2-TM</td>
</tr>
<tr>
<td></td>
<td>iii. 24 hour average not less than 5.0, but not less than 4.0 at any time (see paragraph viii below);</td>
<td>FW2-NT (except as in iv below), SE1</td>
</tr>
</tbody>
</table>
### 7:9B-1.14(d) General Surface Water Quality Criteria for FW2, SE and SC Waters:
(Expressed as Maximum concentrations unless otherwise noted)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Criteria</th>
<th>Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>iv.</td>
<td>Not less than 4.0 at any time;</td>
<td>Tidal portions of FW2-NT tributaries to the Delaware River, between Rancocas Creek and Big Timber Creek inclusive.</td>
</tr>
<tr>
<td>v.</td>
<td>Not less than 5.0 at any time;</td>
<td>SC</td>
</tr>
<tr>
<td>vi.</td>
<td>Not less than 4.0 at any time;</td>
<td>SE2</td>
</tr>
<tr>
<td>vii.</td>
<td>Not less than 3.0 at any time; and</td>
<td>SE3</td>
</tr>
<tr>
<td>viii.</td>
<td>Supersaturated dissolved oxygen values shall be expressed as their corresponding 100 percent saturation values for purposes of calculating 24 hour averages.</td>
<td>FW2-TM, FW2-NT, SE1</td>
</tr>
<tr>
<td>3.</td>
<td>Floating, colloidal, color and settleable solids; petroleum hydrocarbons and other oils and grease</td>
<td>All Classifications</td>
</tr>
<tr>
<td>i.</td>
<td>None noticeable in the water or deposited along the shore or on the aquatic substrata in quantities detrimental to the natural biota. None which would render the waters unsuitable for the designated uses; and</td>
<td></td>
</tr>
<tr>
<td>ii.</td>
<td>For &quot;Petroleum Hydrocarbons&quot; the goal is none detectable utilizing the Federal EPA Environmental Monitoring and Support Laboratory Method (Freon Extractable - Silica Gel Adsorption - Infrared Measurement); the present criteria, however, are those of paragraph i above.</td>
<td>All Classifications</td>
</tr>
<tr>
<td>4.</td>
<td>pH (Standard Units)</td>
<td>FW2, All SE</td>
</tr>
<tr>
<td>i.</td>
<td>6.5-8.5</td>
<td></td>
</tr>
</tbody>
</table>
### 7:9B-1.14(d) General Surface Water Quality Criteria for FW2, SE and SC Waters:
(Expressed as Maximum concentrations unless otherwise noted)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Criteria</th>
<th>Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ii. Natural pH conditions shall prevail.</td>
<td>SC</td>
</tr>
<tr>
<td>5. Phosphorus, Total (mg/L)</td>
<td>i. Lakes: Phosphorus as total P shall not exceed 0.05 in any lake, pond or reservoir, or in a tributary at the point where it enters such bodies of water, except where watershed or site-specific criteria are developed pursuant to N.J.A.C. 7:9B-1.5(g)3.</td>
<td>FW2</td>
</tr>
<tr>
<td></td>
<td>ii. Streams: Except as necessary to satisfy the more stringent criteria in paragraph i above or where watershed or site-specific criteria are developed pursuant to N.J.A.C 7:9B-1.5(g)3, phosphorus as total P shall not exceed 0.1 in any stream, unless it can be demonstrated that total P is not a limiting nutrient and will not otherwise render the waters unsuitable for the designated uses.</td>
<td>FW2</td>
</tr>
<tr>
<td>6. Radioactivity</td>
<td>i. Prevailing regulations including all amendments and future supplements thereto adopted by the U.S. Environmental Protection Agency pursuant to Sections 1412, 1445, and 1450 of the Public Health Services Act, as amended by the Safe Drinking Water Act (PL 93-523)</td>
<td>All Classifications</td>
</tr>
<tr>
<td>7. Solids, Suspended (mg/L) (Non-filterable residue)</td>
<td>i. 25.0</td>
<td>FW2-TP, FW2-TM</td>
</tr>
<tr>
<td></td>
<td>ii. 40.0</td>
<td>FW2-NT</td>
</tr>
<tr>
<td></td>
<td>iii. None which would render the waters unsuitable for the designated uses.</td>
<td>All SE, SC</td>
</tr>
</tbody>
</table>
### 7:9B-1.14(d) General Surface Water Quality Criteria for FW2, SE and SC Waters:
(Expressed as Maximum concentrations unless otherwise noted)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Criteria</th>
<th>Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Solids, Total Dissolved (mg/L)</td>
<td>i. No increase in background which may adversely affect the survival, growth or propagation of the aquatic biota. Compliance with water quality-based WET limitations or LC$_{50}$ $\geq$ 50 percent, whichever is more stringent, shall be deemed to meet this requirement.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. No increase in background which would interfere with the designated or existing uses, or 500 mg/L, whichever is more stringent.</td>
<td>FW2</td>
</tr>
<tr>
<td></td>
<td>iii. None which would render the water unsuitable for the designated uses.</td>
<td>All SE</td>
</tr>
<tr>
<td>9. Sulfate (mg/L)</td>
<td>i. 250</td>
<td>FW2</td>
</tr>
<tr>
<td>10. Taste and odor producing substances</td>
<td>i. None offensive to humans or which would produce offensive taste or odors in water supplies and biota used for human consumption. None which would render the water unsuitable for the designated uses.</td>
<td>All Classifications</td>
</tr>
<tr>
<td></td>
<td>i. No thermal alterations which would cause temperatures to exceed 20° C (68° F) Summer seasonal average</td>
<td>FW2-TP, FW2-TM</td>
</tr>
<tr>
<td></td>
<td>(ii) No thermal alterations which would cause temperatures to exceed 27.8° C (82° F) Summer seasonal average</td>
<td>FW2-NT (small mouth bass and yellow perch waters)</td>
</tr>
<tr>
<td></td>
<td>(iii) No thermal alterations which would cause temperatures to exceed 30° C (86° F) Summer seasonal average</td>
<td>All other FW2-NT</td>
</tr>
</tbody>
</table>
### 7:9B-1.14(d) General Surface Water Quality Criteria for FW2, SE and SC Waters:
(Expressed as Maximum concentrations unless otherwise noted)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Criteria</th>
<th>Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>(iv)</td>
<td>No thermal alterations which would cause SE temperatures to exceed 29.4°C (85°F) Summer seasonal average</td>
<td>SE</td>
</tr>
<tr>
<td>(v)</td>
<td>No thermal alterations which would cause SC temperatures to exceed 26.7°C (80°F) Summer seasonal average</td>
<td>SC</td>
</tr>
</tbody>
</table>

#### 12. Toxic Substances (general)

<table>
<thead>
<tr>
<th>Subclass</th>
<th>Criteria</th>
<th>Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>None, either alone or in combination with other substances, in such concentrations as to affect humans or be detrimental to the natural aquatic biota, produce undesirable aquatic life, or which would render the waters unsuitable for the designated uses.</td>
<td>All Classifications</td>
</tr>
<tr>
<td>ii.</td>
<td>None which would cause standards for drinking water to be exceeded after appropriate treatment.</td>
<td>FW2</td>
</tr>
<tr>
<td>iii.</td>
<td>Toxic substances shall not be present in concentrations that cause acute or chronic toxicity to aquatic biota, or bioaccumulate within an organism to concentrations that exert a toxic effect on that organism or render it unfit for consumption.</td>
<td>All Classifications</td>
</tr>
<tr>
<td>iv.</td>
<td>The concentrations of nonpersistent toxic substances in the State's waters shall not exceed one-twentieth (0.05) of the acute definitive LC(<em>{50}) or EC(</em>{50}) value, as determined by appropriate bioassays conducted in accordance with N.J.A.C. 7:18.</td>
<td>All Classifications</td>
</tr>
</tbody>
</table>
### 7:9B-1.14(d) General Surface Water Quality Criteria for FW2, SE and SC Waters:
(Expressed as Maximum concentrations unless otherwise noted)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Criteria</th>
<th>Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>v.</td>
<td>The concentration of persistent toxic substances in the State’s waters shall not exceed one-hundredeth (0.01) of the acute definitive LC$<em>{50}$ or EC$</em>{50}$ value, as determined by appropriate bioassays conducted in accordance with N.J.A.C. 7:18.</td>
<td>All Classifications</td>
</tr>
<tr>
<td>13. Turbidity (Nephelometric Turbidity Unit-NTU)</td>
<td>Maximum 30-day average of 15 NTU, a maximum of 50 NTU at any time.</td>
<td>FW2, SE3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SE1, SE2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(e) Surface Water Quality Criteria for Ammonia are derived in accordance with the formulas set forth below. Acute criteria are expressed as three-hour average using MA1CD10 flow and chronic criteria are expressed as 30-day average using MA30CD10 flow. No exceedance of criteria shall be permitted at or above the design flows specified.

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Criteria</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7664-41-7</td>
<td>Ammonia, unionized (mg NH₃-N/L)</td>
<td></td>
</tr>
<tr>
<td>(1) at pH &lt; 8.30</td>
<td>0.179\times10^{0.026(Temperature-20) + 0.41 (pH-7.80)} (a)</td>
<td>FW2-TP, FW2-TM</td>
</tr>
<tr>
<td></td>
<td>0.046\times10^{0.026(Temperature-20) + 0.41 (pH-7.80)} (c)</td>
<td></td>
</tr>
<tr>
<td>at pH ≥ 8.30</td>
<td>0.179\times10^{0.026(Temperature-20) + 0.20} (a)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.046\times10^{0.026(Temperature-20) + 0.20} (c)</td>
<td></td>
</tr>
<tr>
<td>(2) at pH &lt; 8.30</td>
<td>0.201\times10^{0.026(Temperature-20) + 0.41 (pH-7.80)} (a)</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>(Summer¹)</td>
<td>0.054\times10^{0.026(Temperature-20) + 0.41 (pH-7.80)} (c)</td>
<td></td>
</tr>
<tr>
<td>(Winter²)</td>
<td>0.232\times10^{0.026(Temperature-20) + 0.41 (pH-7.80)} (a)</td>
<td></td>
</tr>
<tr>
<td>(Winter²)</td>
<td>0.060\times10^{0.026(Temperature-20) + 0.41 (pH-7.80)} (c)</td>
<td></td>
</tr>
<tr>
<td>at pH ≥ 8.30</td>
<td>0.201\times10^{0.026(Temperature-20) + 0.20} (a) (Summer¹)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.054\times10^{0.026(Temperature-20) + 0.20} (c) (Summer¹)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.232\times10^{0.026(Temperature-20) + 0.20} (a) (Winter²)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.060\times10^{0.026(Temperature-20) + 0.20} (c) (Winter²)</td>
<td></td>
</tr>
<tr>
<td>(3) at pH &lt; 8.30</td>
<td>0.238\times10^{0.026(Temperature-20) + 0.41 (pH-7.80)} (a)</td>
<td>PL</td>
</tr>
<tr>
<td></td>
<td>0.061\times10^{0.026(Temperature-20) + 0.41 (pH-7.80)} (c)</td>
<td></td>
</tr>
<tr>
<td>(4)</td>
<td>0.115(a); 0.030(c)</td>
<td>All SE</td>
</tr>
<tr>
<td>(5)</td>
<td>0.094(a); 0.024(c)</td>
<td>SC</td>
</tr>
</tbody>
</table>

1 Summer spawning period from March 1st through October 31st.
2 Winter non-spawning period from November 1st through February 28/29th.
(a) Acute aquatic life protection criterion
(c) Chronic aquatic life protection criterion
Surface Water Quality Criteria for Toxic Substances are as follows:

1. Acute aquatic life protection criteria are determined with no exceedance at or above the MA1CD10 flow and expressed as one-hour average except,
   i. for copper the criteria are expressed as 24-hour average, and
   ii. for cadmium, chromium, lead, mercury, nickel, silver, and zinc the criteria are expressed as 6-hour average.

2. Chronic aquatic life protection criteria are determined with no exceedance at or above the MA7CD10 flow and expressed as four-day average.

3. Freshwater aquatic criteria for cadmium, chromium III, copper, nickel, silver, and zinc are expressed as a function of water hardness. Criteria can be calculated at any hardness using these equations as listed below. Criteria thus calculated are multiplied by appropriate conversion factor (CF) to convert total recoverable metal into dissolved metal and by the default Water Effect Ratio (WER) of 1.0.

   General formula
   
   \[
   \text{WER} \left[ e^{(V \ln (\text{hardness}) + \ln A - V \ln Z)} \right] \times \text{CF}
   \]

   where:
   
   \( V \) = pooled slope
   \( A \) = FAV at given hardness
   \( Z \) = selected value of hardness

   Cadmium:
   - Acute dissolved criterion
     \[
     \text{WER} \left[ e^{(1.0166 \ln \text{[hardness]} - 3.924)} \right] \times 0.651
     \]
   - Chronic dissolved criterion
     \[
     \text{WER} \left[ e^{(0.7409 \ln \text{[hardness]} - 4.719)} \right] \times 0.651
     \]

   Chromium III:
   - Acute dissolved criterion
     \[
     \text{WER} \left[ e^{(0.819 \ln \text{[hardness]} + 3.7256)} \right] \times 0.277
     \]
   - Chronic dissolved criterion
     \[
     \text{WER} \left[ e^{(0.819 \ln \text{[hardness]} + 0.6848)} \right] \times 0.277
     \]

   Copper:
   - Acute dissolved criterion
     \[
     \text{WER} \left[ e^{(0.9422 \ln \text{[hardness]} - 1.7)} \right] \times 0.908
     \]
   - Chronic dissolved criterion
     \[
     \text{WER} \left[ e^{(0.8545 \ln \text{[hardness]} - 1.702)} \right] \times 0.908
     \]

   Nickel:
   - Acute dissolved criterion
     \[
     \text{WER} \left[ e^{(0.846 \ln \text{[hardness]} + 2.255)} \right] \times 0.846
     \]
   - Chronic dissolved criterion
     \[
     \text{WER} \left[ e^{(0.846 \ln \text{[hardness]} + 0.0584)} \right] \times 0.846
     \]

   Silver:
   - Acute dissolved criterion
     \[
     \text{WER} \left[ e^{(1.72 \ln \text{[hardness]} - 6.59)} \right] \times 0.85
     \]
Zinc:

Acute or dissolved criterion: \( WER \left[ e^{(0.8473 \ln [\text{hardness}]+0.884)} \right] 0.950 \)

Chronic dissolved criterion: \( WER \left[ e^{(0.8473 \ln [\text{hardness}]+0.884)} \right] 0.950 \)

4. Freshwater criteria for pentachlorophenol are expressed as a function of pH. Criteria are derived in accordance with the formula set forth below:

   Acute criterion: \( e^{(1.005[pH]-4.869)} \)
   Chronic criterion: \( e^{(1.005[pH]-5.134)} \)

5. Human health noncarcinogenic effect-based criteria are expressed as a 30-day average with no frequency of exceedance at or above the MA7CD10 flow.

6. Human health carcinogenic effect-based criteria are based on a risk level of one-in-one-million and are expressed as a 70-year average with no frequency of exceedance at or above the design flow as specified at N.J.A.C. 7:9B-1.5(c)2iii.
## 7. Surface Water Quality Criteria for Toxic Substances: (μg/L)

<table>
<thead>
<tr>
<th>Toxic Substance</th>
<th>CAS Number</th>
<th>Fresh Water (FW2) Criteria</th>
<th>Saline Water (SE &amp; SC) Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Aquatic Acute Human Health</td>
<td>Aquatic Acute Human Health</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chronic</td>
<td></td>
</tr>
<tr>
<td>Acenaphthene</td>
<td>83-32-9</td>
<td>670(h)</td>
<td>990(h)</td>
</tr>
<tr>
<td>Acrolein</td>
<td>107-02-8</td>
<td>6.1(h)</td>
<td>9.3(h)</td>
</tr>
<tr>
<td>Acrylonitrile</td>
<td>107-13-1</td>
<td>0.051(hc)</td>
<td>0.25(hc)</td>
</tr>
<tr>
<td>Aldrin</td>
<td>309-00-2</td>
<td>3.0</td>
<td>0.000049(hc)</td>
</tr>
<tr>
<td>Ammonia, un-ionized</td>
<td>7664-41-7</td>
<td>See N.J.A.C. 7:9B-1.14(e)</td>
<td>See N.J.A.C. 7:9B-1.14(e)</td>
</tr>
<tr>
<td>Anthracene</td>
<td>120-12-7</td>
<td>8,300(h)</td>
<td>40,000(h)</td>
</tr>
<tr>
<td>Antimony</td>
<td>7440-36-0</td>
<td>5.6(h)(T)</td>
<td>640(h)(T)</td>
</tr>
<tr>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>340(d)(s) 150(d)(s)</td>
<td>0.017(hc)(T)</td>
</tr>
<tr>
<td>Asbestos</td>
<td>1332-21-4</td>
<td>7x10^6 fibers/L&lt;br&gt;&gt;10μm(h)</td>
<td></td>
</tr>
<tr>
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<td>Benzene</td>
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<td>alpha-BHC (alpha-HCH)</td>
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<td>beta-BHC (beta-HCH)</td>
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<td>Cadmium</td>
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<td>Chlordane</td>
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<td>Saline Water (SE &amp; SC) Criteria</td>
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<td>Chronic</td>
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<td>chloride</td>
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<td>Toxic Substance</td>
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<td>Heptachlor</td>
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<td>Methoxychlor</td>
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<td>Methyl bromide (bromomethane)</td>
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<td>Methyl t-butyl ether (MTBE)</td>
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### Toxic Substance Criteria

<table>
<thead>
<tr>
<th>Toxic Substance</th>
<th>CAS Number</th>
<th>Fresh Water (FW2) Criteria</th>
<th>Saline Water (SE &amp; SC) Criteria</th>
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<td>Aquatic Human Health</td>
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<td>Methylene chloride</td>
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<td>Nickel</td>
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<td>Nitrobenzene</td>
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<td>2,4,5-Trichlorophenol</td>
<td>95-95-4</td>
<td></td>
<td>1,800(h)</td>
</tr>
<tr>
<td>2,4,6-Trichlorophenol</td>
<td>88-06-2</td>
<td></td>
<td>0.58(hc)</td>
</tr>
<tr>
<td>Vinyl chloride</td>
<td>75-01-4</td>
<td></td>
<td>0.082(hc)</td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Criteria as listed at (f)3 above as formula</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Criteria as listed at (f)4 above as formula</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) Criterion is expressed as a function of the Water Effect Ratio (WER). For criterion in the table, WER equates to the default value of 1.0.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(fc) Criteria expressed as free cyanide (as CN)/L</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(h) Human health noncarcinogen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(hc) Human health carcinogen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ol) Organoleptic effect-based criterion with no frequency of exceedance at or above the MA7CD10 flow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(s) Dissolved criterion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(T) Total recoverable criterion</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(g) Site-specific surface water quality criteria listed below apply to specific waterbodies that supersede the State-wide criteria listed at (d) through (f) above.

<table>
<thead>
<tr>
<th>Toxic Substance</th>
<th>CAS Number</th>
<th>Freshwater Criteria</th>
<th>Saline water Criteria</th>
<th>Waterbodies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (μg/L dissolved)</td>
<td>7440508</td>
<td></td>
<td></td>
<td>Newark Bay, Raritan Bay, Arthur Kill, Kill Van Kull, saline portions of the Passaic, Hackensack, and Hudson Rivers and saline portions of tributaries to all of these waters.</td>
</tr>
</tbody>
</table>
(h) Surface water quality criteria for waters under the jurisdiction of the DRBC:

1. Mainstem Delaware River and Delaware Bay:
   i. For parameters with criteria in "Delaware River Basin Commission, Administrative Manual - Part III, Water Quality Regulations," Article 3, dated October 23, 1996, including all amendments and future supplements thereto, the criteria contained therein are the applicable criteria.
   
   ii. For parameters without criteria in "Delaware River Basin Commission, Administrative Manual - Part III, Water Quality Regulations," Article 3, dated October 23, 1996, including all amendments and future supplements thereto, the criteria at (c) above are the applicable criteria and shall be applied as follows:

   (1) Criteria applicable to FW2-NT waters apply where salinities are less than or equal to 3.5 parts per thousand (ppt) at mean high tide;

   (2) Criteria applicable to SE waters apply where salinities are greater than 3.5 ppt at mean high tide; and

   (3) Where salinities vary from 3.5 ppt or less, to greater than 3.5 ppt, at mean high tide, the more stringent of the FW2-NT or SE criteria apply.

2. Tributaries to the mainstem Delaware River and Delaware Bay:

   i. The applicable criteria are those contained in "Delaware River Basin Commission, Administrative Manual - Part III, Water Quality Regulations," Article 3, dated October 23, 1996, including all amendments and supplements thereto; or

   ii. The criteria at (c) above, whichever are more stringent.

3. For all waters under the jurisdiction of the DRBC where criteria are not established in "Delaware River Basin Commission, Administrative Manual - Part III, Water Quality Regulations," Article 3, dated October 23, 1996, including all amendments and future supplements thereto, or at (c) above, the Department shall use criteria based upon the best available scientific information, in accordance with (d)1ii above and N.J.A.C. 7:9B-1.5(c)5, to establish water quality-based effluent limitations.
7:9B-1.15 Surface water classifications for the waters of the State of New Jersey

(a) This section contains the surface water classifications for the waters of the State of New Jersey. Surface water classifications are presented in tabular form. Subsections (c) through (g) contain surface water classifications by major drainage basin. Subsection (h) lists FW1 waters by tract within basins and subsection (i) identifies the Outstanding National Resource Waters of the State.

(b) The following are instructions for the use of Tables 1 through 5 found in N.J.A.C. 7:9B-1.15(c) through (g) respectively:

1. The surface water classification tables give the surface water classifications for waters of the State. Surface waters of the State and their classification are listed in the table covering the major drainage basin in which they are located. The major drainage basins are:
   i. The Atlantic Coastal drainage basin which contains the surface waters listed in Table 1 in (c) below;
   ii. The Delaware River drainage basin which contains the surface waters listed in Table 2 in (d) below;
   iii. The Passaic River, Hackensack River and New York Harbor Complex drainage basin which contains the surface waters listed in Table 3 in (e) below;
   iv. The Raritan River and Raritan Bay drainage basin which contains the surface waters listed in Table 4 in (f) below; and
   v. The Wallkill River drainage basin which contains the surface waters listed in Table 5 in (g) below.

2. Within each basin the waters are listed alphabetically and segment descriptions begin at the headwaters and proceed downstream.

3. To find a stream:
   i. Determine which major drainage basin the stream is in;
   ii. Look for the name of the stream in the appropriate table and find the classification;
   iii. For unnamed or unlisted streams, find the stream or other waterbody that the stream of interest flows into and look for the classification of that stream or waterbody. The classification of the stream of interest may then be determined by referring to (b)5 below. If the second stream or waterbody is also unlisted, repeat the process until a listed stream or waterbody is found. Use (b)5iv below to classify streams entering unlisted lakes.

4. To find a lake or other non-stream waterbody:
   i. Determine which major drainage basin the waterbody is in;
   ii. Look for the waterbody name in the appropriate table;
   iii. If the waterbody is not listed, use (b)5ii, 5iii, 5vi, and 5vii below to determine the appropriate classification.
5. To find unnamed waterways or waterbodies or named waterways or waterbodies which do not appear in the listing, use the following instructions:
   i. Unnamed or unlisted freshwater streams that flow into streams classified as FW2-TP, FW2-TM, or FW2-NT take the classification of the classified stream they enter, unless the unlisted stream is a PL water which is covered in (b)5vii below. If the stream could be a C1 water, see (b)5vi below.
   ii. All freshwater lakes, ponds and reservoirs that are five or more acres in surface area, that are not located entirely within the Pinelands Area boundaries (see (b)5vii below) and that are not specifically listed as FW2-TP or FW2-TM are classified as FW2-NT. This includes lakes, ponds and reservoirs on segments of streams which are classified as FW2-TM or FW2-TP such as Saxton Lake on the Musconetcong River. If the waterbody could be a C1 water, also check (b)5vi below.
   iii. All freshwater lakes, ponds and reservoirs, that are less than five acres in surface area, upstream of and contiguous with FW2-TP or FW2-TM streams, and which are not located entirely within the Pinelands Area boundaries (see (b)5vii below) are classified as FW2-TM. All other freshwater lakes, ponds and reservoirs that are not otherwise classified in this subsection or the following tables are classified as FW2-NT. If the waterbody could be a C1 water, also check (b)5vi below.
   iv. Unnamed or unlisted streams that enter FW2 lakes, ponds and reservoirs take the classification of either the listed tributary stream flowing into the lake with the highest classification or the listed tributary stream leaving the lake with the highest classification, whichever has the highest classification, or, if there are no listed tributary or outlet streams to the lake, the first listed stream downstream of the lake. If the stream is located within the boundaries of the Pinelands Area, see (b)5.vii. below; if it could be a C1 water, also see (b)5vi below.
   v. Unnamed or unlisted saline waterways and waterbodies are classified as SE1 in the Atlantic Coastal Basin. Unnamed or unlisted saline waterways which enter SE2 or SE3 waters in the Passaic, Hackensack and New York Harbor Complex basin are classified as SE2 unless otherwise classified within Table 3 in (e) below. Freshwater portions of unnamed or unlisted streams entering SE1, SE2, or SE3 waters are classified as FW2-NT. This only applies to waters that are not PL waters (see (b)5vii below). If the waterbody or waterway could be a C1 water, also see (b)5vi below.
   vi. If the waterway or waterbody of interest flows through or is entirely located within State parks, forests or fish and game lands, Federal wildlife refuges, other special holdings, or is a State shellfish water as defined in this subchapter, the Department's maps should be checked to determine if the waterbody of interest is mapped as a C1 water. If the waterway or waterbody does not appear on the United States Geological Survey quadrangle that the Department used as a base map in its designation of the C1 waters, the Department will determine on a case-by-case basis whether the waterway or waterbody should be designated as C1.
   vii. All waterways or waterbodies, or portions of waterways or waterbodies, that are located within the boundaries of the Pinelands Area established at N.J.S.A. 13:18A-11a are classified as PL unless they are listed as FW1
waters in Table 6 in (h) below. A tributary entering a PL stream is classified as PL only for those portions of the tributary that are within the Pinelands Area. Lakes are classified as PL only if they are located entirely within the Pinelands Area.

6. The following 10 classifications are used for the sole purpose of identifying the water quality classification of the waters listed in the tables in (c) through (h) below:
   i. "FW1" means those fresh waters, as designated in N.J.A.C. 7:9B-1.15(h) Table 6, and as defined at N.J.A.C. 7:9B-1.4.
   ii. "FW2-TP" means FW2 trout production.
   iii. "FW2-TM" means FW2 trout maintenance.
   iv. "FW2-NT" means FW2 non trout.
   v. "PL" means Pinelands Waters.
   vi. "SE1" means saline estuarine waters whose designated uses are listed in N.J.A.C. 7:9B-1.12(d).
   vii."SE2" means saline estuarine waters whose designated uses are listed in N.J.A.C. 7:9B-1.12(e).
   viii."SE3" means saline estuarine waters whose designated uses are listed in N.J.A.C. 7:9B-1.12(f).
   ix. "SC" means the general surface water classification applied to saline coastal waters.
   x. FW2-NT/SE1 (or a similar designation that combines two classifications) means a waterway in which there may be a salt water/fresh water interface. The exact point of demarcation between the fresh and saline waters must be determined by salinity measurements and is that point where the salinity reaches 3.5 parts per thousand at mean high tide. The stream is classified as FW2-NT in the fresh portions (salinity less than or equal to 3.5 parts per thousand at mean high tide) and SE1 in the saline portions.

7. The following water quality designations are used in Tables 1 through 5 in (c) through (g), respectively, below:
   i. "(C1)" means Category One waters;
   ii. "(tp)" indicates trout production in waters which are classified as FW1. This is for information only and does not affect the water quality criteria for those waters;
   iii. "(tm)" indicates trout maintenance in waters which are classified as PL or FW1. For FW1 waters this is for information only and does not affect the water quality criteria for those waters.
(c) The surface water classifications in Table 1 are for waters of the Atlantic Coastal Basin:

<table>
<thead>
<tr>
<th>Waterbody</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABRAMS CREEK</td>
<td></td>
</tr>
<tr>
<td>(Marmora) - Entire length, except portion outside the boundaries of the MacNamara Wildlife Management Area</td>
<td>FW2-NT/SE1(C1)</td>
</tr>
<tr>
<td>(Griscom) - Portions of the Creek and tributaries outside of the MacNamara Wildlife Management Area</td>
<td>FW2-NT/SE1</td>
</tr>
<tr>
<td>ABSECON BAY (Absecon)</td>
<td>SE1(C1)</td>
</tr>
<tr>
<td>ABSECON CREEK</td>
<td>PL</td>
</tr>
<tr>
<td>(Egg Harbor) - North and South Branches from their origins downstream to the boundary of the Pinelands Protection and Preservation Area</td>
<td>FW2-NT/SE1</td>
</tr>
<tr>
<td>(Absecon) - Entire length, except portions described above</td>
<td>FW2-NT/SE1(C1)</td>
</tr>
<tr>
<td>ARNOLD POND (Barnegat)</td>
<td></td>
</tr>
<tr>
<td>ATLANTIC OCEAN</td>
<td>SC</td>
</tr>
<tr>
<td>(Offshore) - Waters from the shoreline out to the three mile limit, except areas described below</td>
<td>SC(C1)</td>
</tr>
<tr>
<td>(Beach Haven) - Waters of the Atlantic Ocean out to the State's three mile limit from Beach Haven Inlet to Cape May Point, excluding the following waters:</td>
<td></td>
</tr>
</tbody>
</table>
| 1. (Atlantic City) - All of the Ocean waters inshore of a line that begins at the center of Convention Hall, Atlantic City bearing approximately 153 degrees T (True North) and extends 2.0 nautical miles to a point with coordinates of latitude 39 degrees 19.4 minutes N., longitude 74 degrees 25.1 minutes W., from this point, approximately 2 nautical miles offshore, the line runs parallel to the shoreline in a southwesterly direction for approximately 2.1 nautical miles to a point with coordinates of latitude 39 degrees 18.4 minutes N., longitude 74 degrees 27.5 minutes W., then bearing approximately 333 degrees T (reciprocal 153 degrees T) for approximately 1.9"
nautical miles to the outermost tip of the Ventnor City Fishing Pier located at the Boardwalk and South Cambridge Ave., City of Ventnor, then along that pier to the shore and terminating.

2. (Ocean City) - All of the ocean waters inshore of a line which begins at the City of Ocean City's Beach Patrol, First Aid and Rest Room building located on the beach at 34th Street, with coordinates of latitude 39 degrees 15.0 minutes N., longitude 74 degrees 36.6 minutes W., and bears approximately 126 degrees T (True North) for approximately 1.5 nautical miles from the shoreline to a point with coordinates of latitude 39 degrees 14.1 minutes N., longitude 74 degrees 35.0 minutes W., then bears approximately 216 degrees T along the shoreline in a southwesterly direction 1.5 nautical miles offshore, for approximately 2.3 nautical miles to a point with coordinates of latitude 39 degrees 12.3 minutes N., longitude 74 degrees 36.7 minutes W., then bears approximately 306 degrees T for approximately 1.4 nautical miles to the outermost tip of Anglers Fishing Club's Pier, 5825 Central Ave., Ocean City, then along that pier to the shoreline.

3. Seven mile beach outfall exclusion
4. Wildwood outfall exclusion

TRIBUTARIES, ATLANTIC OCEAN

(New Jersey Coast) - All those streams or segments of streams that flow directly into the Atlantic Ocean or into back bays of the Ocean which are not included elsewhere in this list, are not within the boundaries of the Pinelands Protection or Preservation Areas and are not mapped as C1 waters by the Department.

(Pinelands) - All streams or segments of streams which flow directly into the Atlantic Ocean or into back bays of the Ocean, are within the boundaries of the Pinelands Protection and Preservation Areas and are not classified as FW1 in this Table.

(New Jersey Coast) - All streams or segments of streams which flow directly into the Atlantic Ocean or into back bays of the Ocean, are mapped as C1 waters by the Department.
not trout maintenance waters, and are not classified as FW1 in this Table

<table>
<thead>
<tr>
<th>Location</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>BABCOCK CREEK (Marmora)</td>
<td>FW2-NT/SE1(C1)</td>
</tr>
<tr>
<td>BALLANGER CREEK</td>
<td>FW2-NT/SE1(C1)</td>
</tr>
<tr>
<td>(New Gretna) - Source to Pollys Ditch</td>
<td>SE1(C1)</td>
</tr>
<tr>
<td>(New Gretna) - Pollys Ditch to Bay</td>
<td></td>
</tr>
<tr>
<td>BANKS CREEK (Marmora)</td>
<td>SE1(C1)</td>
</tr>
<tr>
<td>BARNEGAT BAY</td>
<td>SE1(C1)</td>
</tr>
<tr>
<td>(Barnegat National Wildlife Refuge) - All waters within the boundaries of the Barnegat National Wildlife Refuge</td>
<td></td>
</tr>
<tr>
<td>(Barnegat Bay) - All waters of the Bay</td>
<td></td>
</tr>
<tr>
<td>(Island Beach State Park) - All freshwater ponds within the boundaries of Island Beach State Park</td>
<td></td>
</tr>
<tr>
<td>(Island Beach State Park) - All waters in the Park, not classified as FW1 above</td>
<td></td>
</tr>
<tr>
<td>BARNEGAT BAY TRIBUTARIES - See ATLANTIC OCEAN, TRIBUTARIES</td>
<td></td>
</tr>
<tr>
<td>BASS RIVER</td>
<td>FW2-NT/SE1(C1)</td>
</tr>
<tr>
<td>(Oswego Lake) - Source to Pineland Protection and Preservation Area boundary at the Garden State Parkway, except those branches described separately below</td>
<td>PL</td>
</tr>
<tr>
<td>(New Gretna) - Pineland Protection and Preservation Area boundary to the boundary of shellfish waters</td>
<td>FW2-NT/SE1(C1)</td>
</tr>
<tr>
<td>(New Gretna) - Boundary of shellfish waters to Mullica River</td>
<td>SE1(C1)</td>
</tr>
<tr>
<td>(Bass River State Forest) - Tommy's Branch from its headwaters to the Bass River State Forest Recreation Area service road</td>
<td>FW1</td>
</tr>
<tr>
<td>(Bass River State Forest) - Falkenburg Branch of Lake Absegami from its headwaters to the Lake</td>
<td>FW1</td>
</tr>
<tr>
<td>BATSTO RIVER</td>
<td>FW1</td>
</tr>
<tr>
<td>(Browns Mills) - Entire length, except waters described separately below</td>
<td>PL</td>
</tr>
<tr>
<td>(Wharton) - Skit Branch and tributaries from their headwaters to the confluence with Robert's Branch</td>
<td>FW1</td>
</tr>
<tr>
<td>(Wharton) - The easterly branches of the Batsto River from Batsto Village upstream to the confluence with Skits Branch</td>
<td>FW1</td>
</tr>
<tr>
<td>BEACH THOROFARE (Margate)</td>
<td>SE1(C1)</td>
</tr>
<tr>
<td>BEAR SWAMP BROOK</td>
<td>FW2-NT(C1)</td>
</tr>
<tr>
<td>(Howell) - Entire Length</td>
<td></td>
</tr>
<tr>
<td>BIG ELDER CREEK</td>
<td></td>
</tr>
</tbody>
</table>
BIG GRAVELING CREEK (Great Bay) - Entire length

BIG GREAVES CREEK

(MacNamara) - Segment of the Creek outside the boundaries of MacNamara Wildlife Management Area

(MacNamara) - Creek and tributaries within the boundaries of MacNamara Wildlife Management Area

BIG THOROFARE

(Tuckerton) - Source to boundary of Great Bay Blvd. Wildlife Management Area

(Tuckerton) - Segment within the boundaries of Great Bay Blvd. Wildlife Management Area

BLUEFISH BROTHERS (Stone Harbor) - Entire length

BLUEFISH CREEK (Stone Harbor) - Entire length

BOG BRANCH CREEK (Middletown) - Entire length

BRIGANTINE (Edwin B. Forsythe National Wildlife Refuge) - All waters within the boundaries of the Edwin B. Forsythe National Wildlife Refuge

BRISBANE LAKE

(Allaire State Park) - The Lake and its tributaries

BROAD CREEK (New Gretna) - Entire length

BROAD THOROFARE

(Longport) - South of Rt. 152

(Longport) - North of Rt. 152

BROTHERS CREEK (Burleigh) - Entire length

CABBAGE THOROFARE (Great Bay) - Entire length

CEDAR BRIDGE BRANCH (Lakewood) - Entire length

CEDAR CREEK

(Manahawkin) - Source to boundaries of the Manahawkin Wildlife Management Area

(Manahawkin) - Creek and tributaries within the boundaries of the Manahawkin Wildlife Management Area

CEDAR CREEK

(Cedar Crest) - Source to the boundaries of the Pinelands Protection and Preservation Area at the Garden State Parkway, except branches described separately below

(Berkeley) - Garden State Parkway to Barnegat Bay

(Greenwood Forest) - Webbs Mill Branch and tributaries located entirely within the boundaries of Greenwood Forest Wildlife Management Area
(Greenwood Forest) - Chamberlain's Branch from its origins to a point 1000 feet west of Route 539 FW1
(Greenwood Forest) - Those portions of the tributaries to Chamberlain's Branch originating and wholly contained within the boundaries of the Greenwood Forest Wildlife Management Area FW1
CEDAR HAMMOCKS CREEK (English Creek Landing) - Entire length SE1(C1)
CEDAR RUN
(Stafford) - Source to the boundaries of the Pinelands Protection and Preservation Area at the Garden State Parkway PL
(Cedar Run) - Garden State Parkway to the boundaries of the Barnegat National Wildlife Refuge FW2-NT/SE1(C1)
(Barnegat) - National Wildlife Refuge boundaries to Barnegat Bay FW2-NT/SE1(C1)
CEDAR SWAMP CREEK
(Cedar Spring) - Entire length, except segment described separately below FW2-NT/SE1(C1)
(Marmora) - Creek and tributaries within the boundaries of the MacNamara Wildlife Management Area FW2-NT/SE1(C1)
CHAMBERLAIN BRANCH - See CEDAR CREEK
CHANNEL CREEK (Barneget Bay) - Entire length SE1(C1)
CHARLEY CREEK (Marmora) - Entire length FW2-NT/SE1(C1)
CLEAR STREAM (JACKSON) - Entire length FW2-TM(C1)
COLLINS TIDE PONDS (Barneget) FW2-NT/SE1(C1)
COMMANDO CREEK (Marmora) - Entire length SE1(C1)
CRANBERRY BROOK (Monmouth) - Entire length FW2-NT/SE1(C1)
DAVENPORT BROOK
(Berkeley) - Source to the boundaries of the Pinelands Protection and Preservation Area at the Penn Central railroad tracks PL
(Toms River) - Railroad tracks to confluence with Wrangel Brook FW2-NT
DEEP CREEK (Herbstersville) - Entire length FW2-NT
DEEP RUN (Wharton) - Run and tributaries from their sources to Springer's Brook FW1
DICKS BROOK (Larrabee's Crossing) - Entire length FW2-NT(C1)
DINNER POINT CREEK (Staffordsville) - Entire length SE1(C1)
DOCK THOROFARE (Northfield) - Entire length SE1(C1)
DOUGHTY RESERVOIR (Atlantic city) FW2-NT(C1)
DOVE MILL BRANCH - See TOMS RIVER
EDWARD CREEK
(Ocean City) - Source to the boundary of Marmora Wildlife Management Area SE1
(Ocean City) - Boundary of Marmora Wildlife Management Area to Horn Creek
FALKENBURG BRANCH - See BASS RIVER
FLAT CREEK (Marmora) - Entire length
FLATTERAS CREEK (Beach Haven Heights) - Entire length
FORKED RIVER
  (Lacey) - River and branches from their sources to the boundaries of the Pinelands Protection and Preservation Area at the Garden State Parkway
  (Forked River) - Garden State Parkway to Barnegat Bay
FORTESCUE (Fortescue) - All waters within the Fortescue Wildlife Management Area
GIBSON CREEK
  (Gibson Landing) - Entire length, except segment described below
  (Marmora) - Segment and tributaries within the MacNamara Wildlife Management Area
GLENDOLA RESERVOIR (Glendola)
GO THROUGH CREEK
  (Burleigh) - Entire length, except segment described below
  (Burleigh) - Segment within the boundaries of the Marmora Wildlife Management Area
GOING THROUGH CREEK (English Creek Landing)
GREAT BAY (Brigantine) - All waters of the Bay and all natural waterways which are tributary to the Bay and all waters, including both natural and manmade channels and ponds within the boundaries of the Edwin B. Forsythe National Wildlife Refuge and the Great Bay Wildlife Management Area
GREAT EGG HARBOR RIVER
  (Berlin) - Source to confluence with Tinker Branch
  (Berlin) - Tinker Branch, the River from its confluence with Tinker Branch, and all tributaries within the Pinelands Protection and Preservation Area, downstream to the boundary at the Rt. 40 bridge in Mays Landing
  (Winslow) - All tributaries or segments of tributaries outside of the boundaries of the Pinelands Protection and Preservation Area, downstream to Rt. 40 at Mays Landing
  (Mays Landing) - Rt. 40 bridge to Great Egg Harbor, except those tributaries described separately below
(Mays Landing) - All tributaries or segments of tributaries within the boundaries of the Pinelands Protection and Preservation Areas

(Egg Harbor) - Tributaries and all other waters within MacNamara Wildlife Management Area, except tributary described below

(Tuckahoe) - Hawkins Creek and the stream adjacent to and north of Hawk's Creek, and their tributaries, from their origins to the point where the influence of impoundment begins

GREAT SOUND (Avalon) - All waters within Great Sound State Park

GREAT THOROFARE
  (Ventnor) - West of Rt. 40
  (Ventnor) - East of Rt. 40

GRISCOM CREEK (Gibson Landing) - Entire length

GUNNING RIVER
  (Barnegat) - Entire length, except segment described below
  (Barnegat) - Stream and tributaries within the boundaries of Barnegat National Wildlife Refuge

HALFWAY CREEK
  (Middletown) - Source to the boundary of the MacNamara Wildlife Management Area
  (MacNamara) - Creek and tributaries within the boundaries of the MacNamara Wildlife Management Area

HARRY POND (Barnegat)

HATFIELD CREEK (Beach Haven Heights) - Entire length

HAWKINS CREEK
  (Tuckahoe) - Source to the point where the influence of impoundment begins
  (Tuckahoe) - Downstream of the influence of impoundment

HAY STACK BROOK (Howell) - Entire length

HOSPITALITY CREEK (Longport) - Entire length

JACOVY CREEK (Stone Harbor) - Entire length

JAKES BRANCH
  (Berkeley) - Source to the boundaries of the Pinelands Protection and Preservation Area at the Garden State Parkway
  (Beachwood) - Garden State Parkway to Toms River

JAY CREEK

JIMMIES CREEK
  (Great Bay) - Source to the boundary of Great Bay Wildlife Management Area
(Parkers Landing) - Segments of the Creek outside the boundaries of Great Bay Wildlife Management Area

JOSH CREEK (Stone Harbor) - Entire length SE1
JUDIES CREEK
  (Great Bay) - Source to widening of creek SE1
  (Great Bay) - Widening of creek to mouth SE1(C1)
JUMPING BROOK (Neptune) - Entire length FW2-NT/SE1
KNOLL POND (Barneget) FW2-NT/SE1(C1)
LAKES BAY (Ventnor) SE1(C1)
LAKES CHANNEL (Ventnor) - Entire length SE1(C1)
LITTLE GREAVES CREEK (MacNamara) - Entire length SE1(C1)
LITTLE SCOTCH HUNTSEY
  (Stone Harbor) - Entire length, except segment described below SE1
  (Stone Harbor) - Segment within the boundaries of Marmora Wildlife Management Area SE1(C1)
LITTLE THOROFARF (Tuckerton) - Entire length SE1(C1)
LONG BROOK (JACKSON) - Entire length PL
LONG POINT CREEK (Marmora) - Entire length FW2-NT/SE1(C1)
LONG SWAMP BROOK
  (Squankum) - Entire length FW2-NT(C1)
LOWER LONG REACH (Stone Harbor) - Entire length SE1(C1)
LUDLAM CREEK (Marmora) - Entire length SE1(C1)
MAIN MARSH CREEK (Brigantine) - Entire length SE1(C1)
MANAHAWKIN CREEK
  (Manahawkin) - Source to the boundaries of Manahawkin Wildlife Management Area FW2-NT/SE1
  (Manahawkin) - Within the boundaries of the Wildlife Management Area FW2-NT/SE1(C1)
MANASQUAN RESERVOIR (Oak Glen) FW2-NT(C1)
TRIBUTARIES
  (Oak Glen) - All tributaries upstream of Manasquan Reservoir from source to the Reservoir FW2-NT(C1)
MANASQUAN RIVER
MAIN STEM
  (Freehold) - Source to Rt. 9 bridge, except tributaries described separately under Tributaries, below FW2-NT
  (Howell) - Rt. 9 bridge to the West Farms Road Bridge in Howell Township, except tributaries described separately under Tributaries, below FW2-TM
  (Howell) - West Farms Road Bridge in Howell Township to the downstream boundary of Manasquan River Wildlife Management Area, except tributaries described separately FW2-TM(C1)
  (Brick) - Downstream boundary of Manasquan River Wildlife Management Area to surf waters SE1
TRIBUTARIES, MANASQUAN RIVER
(Adelphia) - Entire length FW2-NT
(Allaire) - Those portions of the first and second southerly tributaries west of the Hospital Rd. which are located entirely within the boundaries of Allaire State Park FW1(tm)
(Mill Run) - Entire length of Mill Run, including Brisbane Lake and its tributaries, except easterly tributary to Mill Run described as FW1 below FW2-NT(C1)
(Allaire State Park) - The easterly tributary to Mill Run upstream of Brisbane Lake, located entirely within the Allaire State Park boundaries FW1
(Freehold) - Tributaries within the boundaries of Turkey Swamp Wildlife Management Area FW2-NT(C1)
MARMORA WILDLIFE MANAGEMENT AREA
(Strathmere) - All waters within the boundaries of Marmora Wildlife Management Area FW2-NT/SE1(C1)
MARSH BOG BROOK
(Farmingdale) - Entire length FW2-NT(C1)
MASON'S CREEK (Marmora) - Entire length SE1(C1)
MCNEALS BRANCH - See TUCKAHOE RIVER
METEDECONK RIVER
SOUTH BRANCH
(Lakewood) - Entire length, including all tributaries FW2-NT(C1)
NORTH BRANCH METEDECONK RIVER
(Freehold) - Source to Aldrich Rd., including all tributaries FW2-NT(C1)
(Lakewood) - Aldrich Rd. to Lanes Mills, except Haystack Brook listed separately FW2-TM(C1)
(Brick) - Lanes Mills to confluence with Metedeconk River, South Branch, including the westerly tributary FW2-NT(C1)
MAIN STEM METEDECONK RIVER
(Brick) - Confluence of North and South branches to Forge Pond FW2-NT(C1)
(Brick) - Forge Pond to Barnegat Bay FW2-NT/SE1
MIDDLE RIVER
(Tuckahoe) - Entire length, except the segment described below FW2-NT/SE1
(Middletown) - Segment within the boundaries of MacNamara Wildlife Management Area FW2-NT/SE1(C1)
MILE THOROFARNE (Brigantine) - Entire length SE1(C1)
MILL RUN (Allaire) - See BRISBANE LAKE
MINGAMAHONE BROOK
MAINSTEM
(Farmingdale) - Entire length, except East Branch described separately below FW2-TM(C1)
EAST BRANCH
(Farmingdale) - Source to confluence with mainstem north of Farmingdale

MIRY RUN (MacNamara) - Entire length

MOTT CREEK (Brigantine) - Entire length

MUD CREEK (MacNamara) - Entire length

MUDDY FORD BROOK (Larrabee's Crossing) - Entire length

MULBERRY THOROFARE (Northfield) - Entire length

MULLICA RIVER

(Philadelphia) - Source to Pinelands Protection and Preservation Area boundaries at the Garden State Parkway, except branches and tributaries described below

(Wharton) - Stream in the southeasterly corner of the Wharton State Forest located between Ridge Rd. and Seaf Weeks Rd., downstream to the boundaries of the Wharton State Forest

(Wharton) - Gun Branch from its headwaters to US Rt. 206

(New Gretna) - River and tributaries from the Pinelands Protection and Preservation Area boundary to Great Bay

(Wharton) - Brooks and tributaries between and immediately to the west of Tylertown and Crowleytown, from their headwaters to the head of tide at mean high water

NARROWS CREEK (Middletown) - Entire length

NORTH CHANNEL POND (Stone Harbor) - Entire length

OLDMAN CREEK (Stone Harbor) - Entire length

OTTER CREEK (Middletown) - Entire length

OYSTER CREEK

(Brookville) - Source to the boundaries of the Pinelands Protection and Preservation Area at the Garden State Parkway

(Forked River) - Garden State Parkway to Barnegat Bay

OYSTER CREEK (Great Bay) - Entire length

REEVY BRANCH - See SHARK RIVER

RING ISLAND CREEK (Stone Harbor) - Entire length

RISLEY CHANNEL (Margate) - Entire length

ROUNDABOUT CREEK (New Gretna) - Entire length

SALT CREEK (Stone Harbor) - Entire length

SCULL BAY (Linwood)

SEDGE CREEK (MacNamara) - Entire length

SHARK CREEK (Stone Harbor) - Entire length

SHARK RIVER (See also SHARK RIVER BROOK)

(Glendola) - Remsen Mill Road t to Atlantic Ocean

SHARK RIVER BROOK (See also SHARK RIVER)

(Colts Neck) - Source to Rt. 33
TRIBUTARIES

REEVY BRANCH (Reevytown) - Source to confluence with Shark River Brook  FW2-NT(C1)

ROBINS SWAMP BROOK (Neptune) - Source to confluence with Shark River Brook  FW2-TM(C1)

SARAH GREEN BROOK (Neptune) - Source to confluence with Shark River Brook  FW2-TM(C1)

SOUTH BROOK (Wall) - Source to confluence with Shark River Brook  FW2-TM(C1)

WEBLYS BROOK (Wall) - Source to confluence with Shark River Brook  FW2-NT(C1)

SHELL THOROFARE (Wildwood Gables) - Entire length  SE1(C1)

SHELTER ISLAND BAY (Margate)  SE1(C1)

SHELTER ISLAND WATERS (Margate) - Entire length  SE1(C1)

SKIT BRANCH - See BATSTO RIVER  SE1(C1)

SOD THOROFARE (Linwood) - Entire length  SE1(C1)

SOUTHEAST CREEK (Stone Harbor) - Entire length  SE1(C1)

SQUANKUM BROOK
  (Squankum) - Entire length  FW2-NT(C1)

STEELMAN BAY (Somers Point)  SE1(C1)

SWAN POND (Marmora)  FW2-NT/SE1(C1)

SWAN POND RACE (Marmora) - Entire length  FW2-NT/SE1(C1)

TAUGH CREEK
  (Whitesboro) - Entire length, except segment described below  SE1(C1)
  (Whitesboro) - Portions outside the boundaries of Marmora Wildlife Management Area  SE1

TIMBER SWAMP BROOK
  (Oak Glen) - Manasquan Reservoir dam to its confluence with the Manasquan River  FW2-NT(C1)

TINKER BRANCH - See GREAT EGG HARBOR RIVER  FW2-TM(C1)

TITMOUSE BROOK (Howell) - Entire length  FW2-TM(C1)

TOMMYS BRANCH - See BASS RIVER  FW2-TM(C1)

TOMS RIVER

MAIN STEM
  (Holmeson) - Source to Rt. 528 bridge, Cassville except those tributaries described separately under Tributaries below  FW2-NT
  (Van Hiseville) - Rt. 528 bridge to Rt. 547 bridge in Whitesville, except tributaries described separately, under Tributaries below  PL(tm)
  (Whitesville) - Rt. 547 bridge to Pinelands Protection and Preservation Area boundaries at the NJ Central Railroad tracks, except tributaries described separately, under Tributaries below  PL(tm)
(Manchester) - NJ Central Railroad tracks to Rt. 571 bridge, except tributaries described separately, under Tributaries below

(Toms River) - Rt. 571 bridge to Barnegat Bay, except tributaries described separately, under Tributaries below

TRIBUTARIES, TOMS RIVER

(Holmeson) - Tributaries within the boundaries of the Pinelands Protection and Preservation Area

(Van Hiseville) - All tributaries outside the boundaries of the Pinelands Protection and Preservation Area which enter the River between the Rt. 528 bridge, Cassville, and the Rt. 547 bridge, Whitesville, except Dove's Mill Branch described separately below

(Toms River) - All tributaries within the boundaries of the Pinelands Protection and Preservation Area

(Archer's Corners) - All tributaries outside the boundaries of the Pinelands Protection Area and within the boundaries of Colliers Mills Wildlife Management Area

DOVE'S MILL BRANCH

(Van Hiseville) - Entire length, except the segment described separately below

(Holmansville) - Stream and tributaries within Butterfly Bogs Wildlife Management Area

MAPLE ROOT BRANCH (Jackson) - Source to confluence with Toms River

TUCKAHOE LAKE (Tuckahoe)

TUCKAHOE RIVER

(Milmay) - Source to Pinelands Protection and Preservation Area boundary at Rt. 49

(Head of River) - McNeals Branch and the River within the boundaries of the Peaselee Wildlife Management Area, except tributaries within the boundaries of the Pinelands Protection and Preservation Area, described separately below

(Head of River) - Tributaries within the Pinelands Protection and Preservation Area boundaries

(Tuckahoe) - Edge of Fish and Wildlife Management Area at confluence with Warners Mill Stream to Great Egg Harbor, except segment described separately below

(Tuckahoe) - River, tributaries and all other waters within boundaries of the MacNamara Wildlife Management Area

TULPEHOCKEN CREEK
<table>
<thead>
<tr>
<th>Creek Name</th>
<th>Length and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Wharton) - Creek and tributaries from their origin to the confluence with Featherbed Branch</td>
<td>FW1</td>
</tr>
<tr>
<td>(Wharton) - The westerly tributaries and those natural ponds within the lands bounded by Hawkins (Bulltown-Hawkins) Rd., Hampton Gate (Tuckerton) Rd., and Sandy Ridge Rd.</td>
<td>FW1</td>
</tr>
<tr>
<td>TURTLE GROUND CREEK (Jeffers Landing) - Entire length</td>
<td>SE1(C1)</td>
</tr>
<tr>
<td>TURTLE GUT (Ventnor) - Entire length</td>
<td>SE1(C1)</td>
</tr>
<tr>
<td>WADING RIVER</td>
<td>PL</td>
</tr>
<tr>
<td>(Chatsworth) - Entire length, except tributaries described separately below</td>
<td>PL</td>
</tr>
<tr>
<td>(Greenwood Forest) - Westerly tributary to Howardsville Cranberry Bog Reservoir and other tributaries located entirely within the boundaries of the Greenwood Forest Wildlife Management Area</td>
<td>FW1</td>
</tr>
<tr>
<td>WARNERS MILL STREAM</td>
<td>PL</td>
</tr>
<tr>
<td>(Head of River) - Source to Pinelands Protection and Preservation Area boundary at Aetna Dr.</td>
<td>PL</td>
</tr>
<tr>
<td>(Head of River) - Aetna Dr. to boundary of the Peaselee Wildlife Management Area</td>
<td>FW2-NT/SE1</td>
</tr>
<tr>
<td>(Head of River) - Within the boundaries of the Peaselee Wildlife Management Area to the Tuckahoe River</td>
<td>FW2-NT/SE1(C1)</td>
</tr>
<tr>
<td>WEBBS MILL BRANCH - See CEDAR CREEK</td>
<td></td>
</tr>
<tr>
<td>WIGWAM CREEK</td>
<td></td>
</tr>
<tr>
<td>(Great Bay) - Source to Rt. 9</td>
<td>FW2-NT/SE1</td>
</tr>
<tr>
<td>(Great Bay) - Rt. 9 to Mott Creek</td>
<td>SE1(C1)</td>
</tr>
<tr>
<td>WINTER CREEK (New Gretna) - Entire length</td>
<td>SE1(C1)</td>
</tr>
<tr>
<td>WHIRLPOOL CHANNEL (Margate) - Entire length</td>
<td>SE1(C1)</td>
</tr>
<tr>
<td>WORLDS END CREEK (New Gretna) - Entire length</td>
<td>SE1(C1)</td>
</tr>
<tr>
<td>WRANGLE BROOK</td>
<td></td>
</tr>
<tr>
<td>(Keswick Grove) - Entire length, except segment described below</td>
<td>FW2-NT/SE1</td>
</tr>
<tr>
<td>(Whiting) - Brook and tributaries within Whiting Wildlife Management Area</td>
<td></td>
</tr>
<tr>
<td>WRANGLE CREEK (Forked River) - Entire length and all waters within Forked River Game Farm</td>
<td>FW2-NT/SE1(C1)</td>
</tr>
<tr>
<td>WRECK POND BROOK (Wall) - Entire length</td>
<td>FW2-NT</td>
</tr>
</tbody>
</table>
(d) The surface water classifications in Table 2 are for waters of the Delaware River Basin:

**TABLE 2**

<table>
<thead>
<tr>
<th>Waterbody</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEXAUKEN CREEK (Lambertville) - Entire length, including all tributaries</td>
<td>FW2-TM(C1)</td>
</tr>
<tr>
<td>ALLAMUCHY CREEK (Allamuchy) - Entire length</td>
<td>FW2-NT(C1)</td>
</tr>
<tr>
<td>ALLAMUCHY POND (Allamuchy)</td>
<td>FW2-NT(C1)</td>
</tr>
<tr>
<td>ALLAMUCHY POND TRIBUTARIES (Allamuchy) - All tributaries that are located entirely within the boundaries of Allamuchy State Park and that flow into Allamuchy Pond</td>
<td>FW1</td>
</tr>
<tr>
<td>ALLOWAY CREEK (Alloways) - Entire length</td>
<td>FW2-NT/SE1</td>
</tr>
<tr>
<td>ALMS HOUSE BROOK</td>
<td></td>
</tr>
<tr>
<td>(Hampton) - Source to, but not including, County Farm Pond</td>
<td>FW2-TM</td>
</tr>
<tr>
<td>(Frankford) - County Farm Pond to Paulins Kill</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>ANDOVER JUNCTION BROOK (Andover) - Entire length</td>
<td>FW2-TM</td>
</tr>
<tr>
<td>ASHROE LAKE (Stokes State Forest)</td>
<td>FW2-NT(C1)</td>
</tr>
<tr>
<td>ASHROE LAKE TRIBUTARIES</td>
<td></td>
</tr>
<tr>
<td>(Stokes State Forest) - Tributary to the Lake from Deer Lake and portion of southernmost tributary to Ashroe Lake outside of the Stokes State Forest boundary</td>
<td>FW2-TP(C1)</td>
</tr>
<tr>
<td>(Stokes State Forest) - Southernmost tributary to the Lake from its source to the Stokes State Forest boundary</td>
<td>FW1(tp)</td>
</tr>
<tr>
<td>ASSISCUNK CREEK</td>
<td></td>
</tr>
<tr>
<td>(Columbus) - Headwaters to confluence with Barkers Brook, including all tributaries</td>
<td>FW2-NT(C1)</td>
</tr>
<tr>
<td>(Burlington) - Confluence with Barkers Brook to the Delaware River</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>ASSUNPINK CREEK</td>
<td></td>
</tr>
<tr>
<td>(Trenton) - Source to confluence with the Delaware River, except segments described separately below</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>(Roosevelt) - Creek and those tributaries within the boundaries of the Assunpink Wildlife Management Area</td>
<td>FW2-NT(C1)</td>
</tr>
<tr>
<td>(Quaker Bridge) - Portions of the creek within the boundaries of Van Ness Refuge</td>
<td>FW2-NT(C1)</td>
</tr>
<tr>
<td>BALDRIDGE CREEK</td>
<td></td>
</tr>
</tbody>
</table>
(Salem Creek) - Entire length, except segments described below
(Salem Creek) - Segments outside the boundaries of the Supawna National Wildlife Refuge
FW2-NT/SE1(C1)
BARKERS MILL BROOK (Independence) - Entire length
FW2-TP(C1)
BAY PONDS (Egg Island)
FW2-NT/SE1(C1)
BEADONS CREEK (Fortescue) - Entire length
SE1(C1)
BEAR BROOK (Johnsonburg) - Entire length
FW2-TP(C1)
BEAR CREEK
(Johnsonburg) - Mud Pond to the Erie-Lackawanna Railroad trestle north of Johnsonburg
FW1(tm)
(Frelinghuysen) - Erie-Lackawanna Railroad trestle to confluence with Pequest River
FW2-TM
BEATTY'S BROOK (Penwell) - Entire length
FW2-TP(C1)
BEAVER BROOK (Hope) - Entire length
FW2-NT
BEAVER BROOK (Jefferson) - Source to, but not including, Lake Shawnee
FW2-NT
BEAVERDAM BRANCH
(Glassboro) - Source to boundary of the Glassboro Wildlife Management Area
FW2-NT
(Glassboro) - Within the boundaries of Glassboro Wildlife Management Area
FW2-NT(C1)
BEERSKILL
(High Point State Park) - Source to boundary of High Point State Park at 41°15'48" N, 74°45'49" W
FW1(tp)
(Shaytown) - Boundary of High Point State Park to confluence with Little Flat Brook
FW2-TP(C1)
BIG FLAT BROOK
(Montague) - Sawmill Pond to confluence with Parker Brook, except segments described under the listing for Flat Brook, below
FW2-NT(C1)
(Sandyston) - Confluence with Parker Brook, through the Blewitt Tract, to the confluence with Flat Brook, except tributaries described under the listing for Flat Brook, below
FW2-TP(C1)
(Tuttles Corner) - Outlet stream from Lake Ashroe to its confluence with Big Flat Brook
FW2-TP(C1)
BIG TIMBER CREEK (Westville) - Entire length
FW2-NT
BLACKBIRD GUT (Newport) - Entire length
SE1(C1)
BLACKS CREEK (Bordentown) - Entire length
FW2-NT
BLAIR CREEK
(Hardwick) - Source to Bass Lake
FW2-NT
(Hardwick Center) - Bass Lake outlet to Paulins Kill
FW2-TM
BOILER DITCH (Egg Island) - Entire length
FW2-NT/SE1(C1)
BOWERS BROOK (Hackettstown) - Source downstream to Rt. 517
FW2-TP(C1)
BRASS CASTLE CREEK (Brass Castle) - Entire length
FW2-TP(C1)
BROOKALOO SWAMP (Hope) - Entire length
FW2-TM
BUCKHORN CREEK (Hutchinson) - Entire length  FW2-TP(C1)
BUCKS DITCH (Mad Horse Creek) - Entire length  SE1(C1)
BUCKSHUTEM CREEK
  (Centre Grove) - Entire length, except segments described separately below  FW2-NT
  (Edward G. Bevan) - Creek and tributaries within the boundaries of Edward G. Bevan Wildlife Management Area, except those tributaries described separately below  FW2-NT(C1)
  (Edward G. Bevan) - Joshua and Pine Branches to their confluence with Buckshutem Creek  FW1
CAT GUT (Mad Horse Creek) - Entire length  SE1(C1)
CEDAR BRANCH (Manumuskin River) - Source to Manumuskin River  FW1
CEDAR BRANCH (Edward G. Bevan) - Entire length  FW1
CEDAR BRANCH (Edward G. Bevan) - See NANTUXENT CREEK
CEDAR CREEK
  (Dividing Creek Station) - Entire length, except portions described separately below  FW2-NT
  (Edward G. Bevan) - Those tributaries to Cedar Creek that originate in and are located entirely within the boundaries of Edward G. Bevan Wildlife Management Area  FW1
CEDARVILLE POND (Cedarville)  FW2-NT(C1)
CHERRY TREE CREEK (Mad Horse Creek) - Entire length  SE1(C1)
CLARKS POND (Bridgeton)  FW2-NT(C1)
CLEARVIEW CREEK (Hampton) - Source to Alms House Brook  FW2-NT
CLINT MILLPOND (Beaver Swamp)  FW2-NT(C1)
CLOVE (MILL) BROOK
  (Montague) - Lake Marcia outlet to State line, except tributaries described below  FW2-TP(C1)
  (High Point State Park) - The second and third northerly tributaries to Clove Brook, the tributaries to Steeny Kill Lake, and those tributaries downstream of Steeny Kill Lake that originate in High Point State Park downstream to their confluence with Clove Brook or to the High Point State Park Boundaries  FW1(tp)
  (High Point State Park) - Those northerly tributaries to Mill Brook that are located due west of Steeny Kill Lake, within the boundaries of High Point State Park  FW1(tp)
COHANSEY RIVER (Bridgeton) - Entire length  FW2-NT/SE1
COOPER BRANCH - See RANCOCAS CREEK
COOPER RIVER (Camden) - Entire length  FW2-NT
COOPERMINER BROOK (Pahaquarry) - Entire length  FW1
COURTENY PONDS (Egg Island)  FW2-NT/SE1(C1)
CRANBERRY LAKE (Byram)  FW2-TM(C1)
CRANBERRY LAKE OUTLET STREAM
   (Byram) - Entire length within Cranberry Lake State Park
   (Byram) - Stream outside of Cranberry Lake State Park
CRIS BROOK (Stokes State Forest) - Entire length within the boundaries of Stokes State Forest
CROSSWICKS CREEK (Bordentown) - Entire length
CROW CREEK (S. Dennis) - Entire length
CULVER'S CREEK (Frankford) - Entire length
CULVER'S LAKE (Frankford)
DEER LAKE (Sandyston)
DEER PARK BRANCH - See RANCOCAS CREEK
DEER PARK POND
   (Allamuchy) - Pond and tributaries to the pond within Allamuchy State Park, except those tributaries classified as FW1, below
   (Allamuchy) - All tributaries to the Pond and to its outlet stream that are located entirely with the boundaries of Allamuchy State Park
   (Allamuchy) - Deer Park Pond outlet stream downstream to Musconetcong River
DELAWARE CREEK
   (Delaware) - Source downstream to, but not including, Delaware Lake
   (Delaware) – Delaware Lake dam downstream to Delaware River, including tributaries
DELAWARE AND RARITAN CANAL (Lambertville) - Entire length
DELAWARE RIVER
   MAIN STEM (Interstate Waters - Classifications from Delaware River Basin Commission (DRBC))
      (State Line) - That portion of DRBC's Zone 1C from the New York-New Jersey state line to the proposed axis of the Tocks Island Dam at River Mile 217.0
      (Tocks Island) - Proposed axis of Tocks Island Dam at River Mile 217.0 to the mouth of the Lehigh River at Easton, Pennsylvania, at River Mile 183.66
      (Easton, Pa.) - Mouth of the Lehigh River at River Mile 183.66, to the head of tide at the Trenton-Morrisville Toll Bridge, Trenton at River Mile 133.4
      (Trenton) - Head of tide at the Trenton-Morrisville Bridge, Trenton, River Mile 133.4 to below the mouth of Pennypack Creek, Pennsylvania at River Mile 108.4
(Philadelphia) - River Mile 108.4 to below the mouth of Big Timber Creek, New Jersey, at River Mile 95.0  
(Gloucester) - River Mile 95.0 to the Pennsylvania-Delaware state line at River Mile 78.8  
(Marcus Hook) - Pennsylvania-Delaware state line at River Mile 78.8 to Liston Pt., Delaware at River Mile 48.2  
(Liston Point) - Delaware Bay from Liston Point, Delaware at River Mile 48.2 to River Mile 0.0 at the intersection of the centerline of the navigation channel and a line between Cape May Light and the tip of Cape Henlopen, Delaware  

Zone 3  
Zone 4  
Zone 5  

Zone 6(C1)  

TRIBUTARIES, DELAWARE RIVER  
(Holland) - Entire length  
(Port Jervis) - Unnamed or unlisted direct tributaries that are north of Big Timber Creek, are outside of the Pinelands Protection and Preservation Areas, and are not mapped as C1 waters by the Department  
(Knowlton) - Source, north of Hope-Delaware Road, to confluence with the Delaware River 0.5 mile south of Ramseysburg  
(Titusville) - Unnamed tributaries through Washington Crossing State Park  
(Brooklawn) - Unnamed or unlisted direct tributaries, south of Big Timber Creek and north of Oldmans Creek, that are outside of the Pinelands Protection and Preservation Areas and are not mapped as C1 waters by the Department  
(Penns Grove) - Unnamed or unlisted direct tributaries, south of and including Oldmans Creek, that are outside of the Pinelands Protection and Preservation Areas and are not mapped as C1 waters by the Department  
(Pinelands) - All streams or segments of streams which flow directly into the Delaware River, are within the boundaries of the Pinelands Area and are not classified FW1 waters in this Table  

FW2-TP(C1)  
FW2-NT  
FW2-TP(C1)  
FW2-NT(C1)  
FW2-NT/SE2  
FW2-NT/SE1  

DENNIS CREEK  
(South Dennis) - Entire length, except segments described below  
(Woodbine) - All tributaries within the boundaries of the Pinelands Protection and Preservation Areas  
(Dennis Creek) - Segment of the Creek, all tributaries, and all other surface waters within the  

FW2-NT/SE1  
PL  

PL
boundaries of the Dennis Creek Wildlife Management Area

DEVILS GUT
(Mad Horse Creek) - Entire length, except tributaries described below
(Mad Horse Creek) - Tributaries outside the Mad Horse Creek Wildlife Management Area

DIVIDING CREEK
(Dividing Creek) - Entire length, except those segments described below
(Edward G. Bevan) - Those segments of tributaries that are located entirely within the boundaries of the Edward G. Bevan Wildlife Management Area

DIVISION CREEK (Dix) - Entire length

DOCTORS CREEK
(Red Creek) - Entire length, except segment described below
(Imlaystown) - Segment within Imlaystown Lake Wildlife Management Area

DONKEY'S CORNER BROOK (Delaware Water Gap) - Entire length

DRUMBO CREEK
(Dix) - Entire length, except segment described below
(Dix) - Segment within the boundaries of Dix Wildlife Management Area

DRY BROOK (Branchville) - Entire length

DUCK POND (Swartswood)

DUNNFIELD CREEK
(Del. Water Gap) - Source to Rt. I-80
(Del. Water Gap) - Rt. I-80 to Delaware River, except tributaries described below
(Worthington) - All unnamed waters that are located entirely within the boundaries of the Worthington State Forest

EAST CREEK
(Dennis) - Source to boundaries of the Pinelands Protection and Preservation Area except those portions described separately below
(Belleplain) - A stream and tributary that originate just south of East Creek Mill Rd., 1.2+ miles north-northeast of Eldora and are located entirely within the boundaries of Belleplain State Forest
(Belleplain) - All tributaries to Lake Nummi from their origins downstream to the Lake
(Eldora) - Boundary of the Pinelands Protection and Preservation Area to Delaware Bay except segment described separately below
(Dennis Creek) - Segment within the boundaries of
the Dennis Creek Wildlife Management Area
ELDER GUT (Egg Island) - Entire length
FIDDLERS CREEK (Titusville) - Entire length
FISHING CREEK (Egg Island) - Entire length
FISHING CREEK
(Canton) - Source to Mad Horse Creek Wildlife
Management Area and all tributaries outside of
the boundaries of Mad Horse Creek Wildlife
Management Area
(Mad Horse Creek) - Creek and tributaries within the
boundaries of Mad Horse Creek Wildlife
Management Area
FLAT BROOK
(Flatbrook-Roy) - Confluence of Big Flat Brook and
Little Flat Brook to the boundary of Flatbrook-Roy
Wildlife Management Area, except
segments described below
(Walpack) - Flatbook-Roy Wildlife Management Area
boundary to the Delaware River, except
segments described below
(Stokes State Forest) - Two tributaries to Flat Brook
which originate along Struble Road in Stokes
State Forest to their confluences with Flat
Brook within the boundaries of Flatbrook-Roy
Wildlife Management Area
(High Point) - All surface water of the Flat Brook
drainage area within the boundaries of High
Point State Park and Stokes State Forest,
except the following waters:
  1. Saw Mill Pond and Big Flat Brook
downstream to the confluence with
Flat Brook;
  2. Mashipacong Pond and its outlet
stream (Parker Brook) to the
confluence with Big Flat Brook;
  3. Lake Wapalanne and its outlet stream
to the confluence with Big Flat Brook;
  4. Lake Ocquittunk and waters
connecting it with Big Flat Brook;
  5. Stony Lake and its outlet stream
(Stony Brook) to the confluence with
Big Flat Brook;
  6. Kittatinny Lake, that portion of its inlet
stream outside the Stokes State
Forest boundaries, and its outlet
stream, including the Shotwell
Camping Area tributary, to the confluence with Big Flat Brook;
7. Deer Lake and its outlet stream to Lake Ashroe;
8. Lake Ashroe, portions of its tributaries outside the Stokes State Forest boundaries, and its outlet stream to the confluence with Big Flat Brook;
9. Lake Shawanni and its outlet stream to its confluence with Flat Brook;
10. Crigger Brook and tributary to its confluence with Big Flat Brook

(Del. Water Gap) - All tributaries to Flat Brook that flow from the Kittatiny Ridge and are located entirely within the boundaries of the Delaware Water Gap National Recreation Area

FW1
FORKED BROOK (Stokes State Forest) - Entire length
FW2-TP(C1)
FURNACE (OXFORD) BROOK
(Oxford) - Source to railroad bridge at Oxford
FW2-TP(C1)
(Oxford) - Railroad bridge to Pequest River
FW2-NT
FURNACE LAKE (Oxford)
FW2-TM
GARDNERS LAKE (Andover)
FW2-TM
GOOSE POND (Mad Horse Creek)
SE1(C1)
GOSHEN CREEK
(Woodbine) - Entire length except segment described below
SE1
(Dennis Creek) - Segment and all tributaries within the Dennis Creek Wildlife Management Area
SE1(C1)
GRAVELLY RUN (Edward G. Bevan) - Downstream to the Edward G. Bevan Wildlife Management Area boundaries
FW1
HAINESVILLE POND (Hainesville)
FW2-NT(C1)
HAKIHOKAKE CREEK (Milford) - Entire length, including headwaters known as Little York Creek
FW2-TP(C1)
TRIBUTARIES
(Wydner) - Source to confluence with Hahikokane Creek west of York Road
FW2-TP(C1)
HALFWAY HOUSE BROOK (Franklin) - Entire length
FW2-TP(C1)
HANCES BROOK (Rockport) - Entire length
FW2-TP(C1)
HARIHOKAKE CREEK
(Alexandria) - Source to Rt. 519 bridge, including all tributaries
FW2-NT(C1)
(Frenchtown) - Rt. 519 bridge to Delaware River, including all tributaries
FW2-TM(C1)
HARRISONVILLE LAKE (Harrisonville)
FW2-NT(C1)
HATCHERY BROOK (Hackettstown) - Entire length
FW2-TM
HIGBEE BEACH (Higbee Beach Wildlife Management Area)  
All waters within the boundaries of Higbee Beach Wildlife Management Area  FW2-NT/SE1(C1)

HIGHS BEACH (Highs Beach) - All waters within the Wildlife Management Area south of Highs Beach  FW2-NT/SE1(C1)

HONEY RUN (Hope) - Entire length  FW2-TM
HOPATCONG, LAKE (Hopatcong)  FW2-TM
ILLIF, LAKE (Andover)  FW2-TM
IMLAYSTOWN LAKE (Imlaystown)  FW2-NT(C1)

INDEPENDENCE CREEK
  (Alphano) - Source to Alphano Rd.  FW2-TP(C1)
  (Alphano) - Alphano Rd. to Pequest River  FW2-NT

INDIAN DITCH (Egg Island) - Entire length  FW2-NT/SE1(C1)
ISLAND DITCH (Egg Harbor) - Entire length  FW2-NT/SE1(C1)
JACKSONBURG CREEK (Blairstown) - Entire length  FW2-TM
JACOBS CREEK (Hopewell) - Entire length  FW2-NT
JADE RUN (Brendan T. Byrne State Forest) - Entire length  FW1
JOSHUA BRANCH - See BUCKSHUTEM CREEK

KING POND (Egg Island)  SE1(C1)

KITTATINNY LAKE (Sandyston)  FW2-NT(C1)

KITTATINNY LAKE TRIBUTARY
  (Stokes State Forest) - Source to boundary of Stokes State Forest  FW1(tp)
  (Sandyston) - State Forest boundary to Kittatinny Lake  FW2-TP(C1)

KNOWLTON BROOK (Knowlton) - Entire length  FW2-TP(C1)
KURTENBACH'S BROOK (Waterloo) - Entire length  FW2-TP(C1)
KYMER BROOK (Andover) - Entire length  FW2-NT

LAHAWAY CREEK
  (Prospertown) - Entire length, except tributaries described separately below  FW2-NT
  (Colliers Mills) - All tributaries which originate in the Colliers Mills Wildlife Management Area northeast of Archers Corners, from their sources to the boundaries of the Colliers Mills Wildlife Management Area  FW1

LAKE - See listing under Name

LITTLE EASE RUN
  (Glassboro) - Entire length, except portion described separately below  FW2-NT
  (Glassboro) - Run and tributaries within the Glassboro Wildlife Management Area, except tributary described separately below  FW2-NT(C1)
  (Glassboro) - The portion of a branch of Little Ease Run situated immediately north of Stanger Avenue, and entirely within the Glassboro Wildlife Management Area  FW1
  (Glassboro) - The first and second easterly tributaries to Little Ease Run north of Academy Road  FW1
LITTLE FLAT BROOK
  (High Point State Park) - Source to boundary of High Point State Park  FW1(tp)
  (Layton) - State park boundary to, but not including, tributary described below, to confluence with Big Flat Brook  FW2-TP(C1)
  (Flatbrook-Roy) - Tributary which originates north of Bevans-Layton Rd. downstream to the first pond adjacent to the Fish and Game headquarters building  FW1(tp)

LITTLE NISHISAKAWICK CREEK (Frenchtown) - Entire length  FW2-NT(C1)
LITTLE SHABACUNK CREEK (Lawrence) - Entire length  FW2-NT
LITTLE SWARTSWOOD LAKE (Swartswood)  FW2-NT(C1)
LITTLE YORK CREEK (Little York) - Entire length  FW2-TP(C1)

LOCKATONG CREEK
  (Kingwood) - Source to Idell Bridge  FW2-NT(C1)
  (Raven Rock) - Idell Bridge to Delaware River  FW2-TM(C1)

LOGAN POND (Repaupo)  FW2-NT(C1)
LOMMASONS GLEN BROOK (Lommasons Glen) - Entire length  FW2-TP(C1)

LONG POND (Mad Horse Creek)  SE1(C1)
LONE TREE CREEK (Egg Island) - Entire length  SE1(C1)

LOPATCONG CREEK
  (Phillipsburg) - Source to a point 560 feet (straight line distance) upstream of the Penn Central railroad track, including all tributaries  FW2-TP(C1)
  (Phillipsburg) - From a point 560 feet (straight line distance) upstream of the Penn Central railroad track downstream to the confluence with the Delaware River  FW2-TM

LOWER BROTHERS CREEK (Egg Island) - Entire length  SE1(C1)
LOWER DEEP CREEK (Mad Horse Creek) - Entire length  SE1(C1)
LUBBERS RUN (Byram) - Entire length  FW2-TM

MAD HORSE CREEK
  (Canton) - Source to the boundary of Mad Horse Creek Wildlife Management Area and all tributaries outside the boundaries of the Wildlife Management Area  FW2-NT/SE1
  (Mad Horse Creek) - Creek and all waters within the Mad Horse Creek Wildlife Management Area  FW2-NT/SE1(C1)

MALAPATIS CREEK
  (Mad Horse Creek) - Entire length, except segment described below  SE1(C1)
  (Mad Horse Creek) - Portions of the Creek beyond the boundaries of the Mad Horse Creek Wildlife Management Area  SE1

MANANTICO CREEK
(Millville) - Entire length, except segment described below

(Manantico) - Segment within the boundaries of the Manantico Ponds Wildlife Management Area

MANTUA CREEK (Woodbury) - Entire length

MARCIA LAKE
  (High Point State Park) - Entire Lake
  (High Point State Park) - Outlet stream from the Lake to the confluence with Clove (Mill) Brook

MASHIPACONG POND (Montague)

MASON CREEK
  (Springville) - Entire length, except segment described below
  (Medford) - Segment within Medford Wildlife Management Area

MASONS RUN
  (Pine Hill) - Source to Little Mill Rd.
  (Lidenwold) - Little Mill Rd. to confluence with Big Timber Creek

MAURICE RIVER

MAIN STEM
  (Willow's Grove) - Source to the boundary of the section of Union Lake Wildlife Management Area north of Vineland
  (Vineland) - Boundary of the Union Lake Wildlife Management Area to confluence with Blackwater Branch
  (Vineland) - Confluence with Blackwater Branch to Delaware Bay, except tributaries described under Tributaries below

TRIBUTARIES, MAURICE RIVER
  (Willow's Grove) - Those portion of tributaries that are within the boundaries of the Pinelands Protection and Preservation Area
  (Vineland) - All tributaries within the boundaries of the Union Lake Wildlife Management Area and within the Wildlife Management Area that borders Delaware Bay

MCCORMICK POND (Egg Island)

MACDONALD BRANCH - See RANCOCAS CREEK

MERRILL CREEK (Harmony) - Entire length, but not including Merrill Creek Reservoir

MERRILL CREEK RESERVOIR (Harmony)

MIDDLE BROTHERS CREEK (Egg Island) - Entire length

MIDDLE MARSH CREEK
  (Dix) - All fresh waters which originate in and are located entirely within the boundaries of the Dix Wildlife Management Area
MILE BRANCH - Entire length
MILL BROOK (Montague) - See CLOVE BROOK
MILL BROOK (Broadway) - Entire length
MILL CREEK
    (Carmel) - Entire length, except segment described below
    (Union Lake) - Creek and tributaries within the boundaries of the Union Lake Wildlife Management Area
MINE BROOK
    (Mt. Olive) - Source to, but not including, Upper Mine Brook Reservoir, downstream to Lower Mine Brook Reservoir outlet
    (Mt. Olive) - Lower Mine Brook Reservoir outlet downstream to Drakestown Road bridge
    (Hackettstown) - Drakestown Road bridge downstream to confluence with Musconetcong River
TRIBUTARIES
    (Drakestown) - Source downstream to, but not including, Burd Reservoir
    (Drakestown) - Burd Reservoir downstream to confluence with Mine Brook
    (Washington) - Entire length of tributary which joins Mine Brook approximately 280 yards upstream of the confluence with the Musconetcong River
MIRY RUN (Mercerville) - Entire length
MOORE CREEK (Hopewell) - Entire length
MOUNT MISHERY BROOK
    (Woodmansie) - Entire length, except segments described below
SOUTH BRANCH, MOUNT MISERY BROOK
    (Brendan T. Byrne State Forest) - All tributaries to the South Branch that are located entirely within the boundaries of Brendan T. Byrne State Forest
    (Pasadena) - The two easterly branches of the Branch which are located entirely within the boundaries of the Pasadena Wildlife Management Area
MOUNTAIN LAKE (Liberty)
MOUNTAIN LAKE CREEK
    (Liberty) - Source to Mountain Lake
    (White) - Mountain Lake dam to Pequest River
MUDDY BROOK (Hope) - Entire length
MUDDY CREEK
    (Mad Horse Creek) - Entire length, except segments described below
(Mad Horse Creek) - Segments outside of the boundaries of the Mad Horse Creek Wildlife Management Area

MUDDY RUN
(Elmer) - Entire length, except segments described below
(Elmer) - Portion of the Run within Greenwood Pond Wildlife Management Area
(Centerton) - Portion of the Run within Parvin State Park
(Pittsgrove) - Portion of the run within Union Lake Wildlife Management Area

MUD POND (Johnsonburg)

MUSCONETCUNG RIVER
(Hackettstown) - Lake Hopatcong dam to Delaware River, except tributaries described below

TRIBUTARIES
(Anderson) - Entire length
(Changewater) - Entire length
(Deer Park Pond) - See DEER PARK POND
(Franklin) - Entire length
(N. of Hackettstown) - Entire length
(Lebanon) - Entire length
(Port Murray) - Entire length
(S. of Point Mtn.)
(S. of Schooley's Mtn. Brook) - Entire length
(Waterloo) - Tributary west of Kurtenbach's Brook from source downstream to Waterloo Valley Road bridge

MUSKEE CREEK
(Port Elizabeth) - Source to boundary of Pinelands Protection and Preservation Area, except segments described separately below
(Seaselee) - The Middle Branch from its origin to the boundaries of the Seaselee Wildlife Management Area
(Seaselee) - Those portions of the tributaries to Slab Branch which are located entirely within the boundaries of the Seaselee Wildlife Management Area
(Bricksboro) - Pinelands Protection and Preservation Area boundaries to Maurice River

NANCY GUT
(Nantuxent) - Source to the boundary of Nantuxent Creek Wildlife Management Area
(Newport) - Stream and all tributaries outside of the boundaries of the Nantuxent Creek Wildlife Management Area
NANTUXENT CREEK  
(Newport Landing) - Entire length, except segment described below  
(Nantuxent) - All waters within the boundaries of Nantuxent Creek Wildlife Management Area  
FW2-NT/SE1

NEW WAWAYANDA LAKE (Andover)  
FW2-TM

NISHISAKAWICK CREEK (Frenchtown) - Entire length  
FW2-NT(C1)

OLDMANS CREEK  
(Lincoln) - Entire length, except portion described below  
(Harrisonville) - Portion within Harrisonville Lake Wildlife Management Area  
FW2-NT/SE1  
FW2-NT/SE1(C1)

OCQUITTUNK LAKE  
(Stokes State Forest) - Entire lake  
(Stokes State Forest) - From the outlet of the Lake to the confluence with Big Flat Brook  
FW2-NT(C1)  
FW2-TP(C1)

OCQUITTUNK LAKE TRIBUTARY (Stokes State Forest) - Source to Ocquittunk Lake  
FW1(tp)

ORANDAKEN CREEK  
(Fortescue) - Source to boundary of Egg Island Berrytown Wildlife Management Area  
(Egg Island) - Creek and tributaries within the boundaries of the Egg Island Berrytown Wildlife Management Area  
FW2-NT/SE1  
FW2-NT/SE1(C1)

PARGEY CREEK  
(Gibbstown) - Entire length, except segment described below  
(Logans Pond) - Segment within the boundaries of Logans Pond Wildlife Management Area  
FW2-NT/SE2  
FW2-NT/SE2(C1)

PARKER BROOK (Montague) - Entire length  
FW2-TP(C1)

PARVIN LAKE (Parvin State Park)  
FW2-NT(C1)

PATTYS FORK - See MAD HORSE CREEK

PAULINA CREEK (Paulina) - Entire length  
FW2-TM

PAULINS KILL  
EAST BRANCH  
(Andover) - Source to Limecrest quarry  
(Lafayette) - Limecrest quarry to confluence with Paulins Kill, West Branch, except tributary described below  
FW2-NT(C1)  
FW2-TP(C1)

TRIBUTARY EAST BRANCH  
(Sussex Mills) - Entire length of tributary to the East Branch at Sussex Mills  
FW2-NT(C1)

WEST BRANCH (Newton) - Entire length  
FW2-NT

MAIN STEM  
(Blairstown) - Confluence of East and West branches to Rt. 15 bridge (bench mark 507)  
(Hampton) - Rt. 15 bridge (bench mark 507) to Balesville dam  
FW2-TM  
FW2-NT(C1)
(Hampton) - Balesville dam to Paulins Kill Lake dam  FW2-NT
(Paulins Kill Lake) - Paulins Kill Lake dam to Delaware River, except tributaries described separately below  FW2-TM

TRIBUTARIES, MAIN STEM
(Blairstown) - Entire length of tributary east of Walnut Valley  FW2-TM
(E. of Hainesburg Station) - Entire length  FW2-TM
(E. of Vail) - Source downstream to confluence with outlet stream of Lake Susquehanna  FW2-TM
(Emmons Station) - Entire length  FW2-TP(C1)
(Stillwater) - Entire length  FW2-TM
(Stillwater Station) - Entire length  FW2-TP(C1)

PENNSAUKEN CREEK (Cinnaminson) - Entire length  FW2-NT

PEQUEST RIVER
(Tranquility) - Source to Tranquility bridge except segments described below  FW2-TM
(Whittingham) - Northwesterly tributaries, including Big Spring, located within the boundaries of the Whittingham Wildlife Management Area, southwest of Springdale, from their origins to their confluence with the Pequest River  FW1(tm)
(Whittingham) - Stream and tributaries within the Whittingham Wildlife Management Area, except those classified as FW1, above  FW2-TM(C1)
(Vienna) - Tranquility bridge to Lehigh and Hudson River railway bridge  FW2-NT
(Townsbury) - Lehigh and Hudson River railway bridge to the upstream most boundary of the Pequest Wildlife Management Area  FW2-NT(C1)
(Townsbury) - Upstream most boundary of the Pequest Wildlife Management Area boundary to the downstream most boundary of the Pequest Wildlife Management Area  FW2-TM(C1)
(Townsbury) - Downstream most Pequest Wildlife Management Area boundary to Delaware River  FW2-TM

TRIBUTARIES
(Janes Chapel) - Headwater and tributaries downstream to the upstream boundary of Pequest Wildlife Management Area  FW2-TM
(Townsbury) - Tributaries within the Pequest Wildlife Management Area  FW2-TM(C1)
(Petersburg) - Headwaters and tributaries downstream to Ryan Road bridge  FW2-TP(C1)

PIERSONS DITCH (Egg Island) - Entire length  FW2-NT/SE1(C1)
PINE BRANCH - See BUCKSHUTEM CREEK  FW2-NT
PLUM BROOK (Sergeantsville) - Entire length  FW2-TM(C1)
POHATCONG CREEK
MAIN STEM
(Mansfield) - Source to Karrsville bridge, including all tributaries FW2-TP(C1)
(Pohatcong) - Karrsville bridge to Rt. 519 bridge, except tributaries listed separately FW2-TM(C1)
(Springtown) - Rt. 519 bridge to Delaware River, including all tributaries FW2-TP(C1)

TRIBUTARIES
(Greenwich) - Entire length FW2-TP(C1)
(New Village) - Entire length FW2-TP(C1)
(Willow Grove) - Entire length FW2-TP(C1)

POND BROOK (Middleville) - Swartswood Lake outlet to Trout Brook FW2-NT

POPHANDUSING BROOK
(Hazen) - Source downstream to Route 519 bridge FW2-TP(C1)
(Belvidere) - Route 519 bridge downstream to confluence with the Delaware River FW2-TM

RACCOON CREEK (Logan) - Entire length FW2-NT/SE2

RANCOCAS CREEK
NORTH BRANCH
(North Hanover) - Source to boundary of the Pinelands Protection and Preservation Area at Pemberton PL
(Pemberton) - Boundary of the Pinelands Protection and Preservation Area to the Delaware River, except tributaries described below FW2-NT
(Pemberton) - Tributaries within the boundaries of the Pinelands Protection and Preservation Areas PL

SOUTH BRANCH RANCOCAS CREEK
(Southampton) - Source to Pinelands Protection and Preservation Area boundaries at Rt. 206 bridge south of Vincentown PL
(Vincentown) - Vincentown to Delaware River, except tributaries described separately below FW2-NT
(Vincentown) - All tributaries within the Pinelands Protection and Preservation Area PL

COOPER BRANCH RANCOCAS CREEK
(Woodmansie) - Entire length, except portions described separately, below PL
(Brendan T. Byrne State Forest) - Branch and tributaries downstream to Pakim Pond, and tributaries to Cooper Branch located entirely within the Brendan T. Byrne State Forest boundaries FW1

DEER PARK BRANCH RANCOCAS CREEK
(Buckingham) - Stream and tributaries near Buckingham to confluence with Pole Bridge Branch

MACDONALDS BRANCH RANCOCAS CREEK
(Woodmansie) - Entire length, except as described separately below
(Brendan T. Byrne State Forest) - Branch and tributaries located entirely within Brendan T. Byrne State Forest

SHINNS BRANCH RANCOCAS CREEK
(Brendan T. Byrne State Forest) - Branch and tributaries located entirely within the boundaries of Brendan T. Byrne State Forest, from their sources to the forest boundary

(Lebanon Lake Estates) - Forest boundary to lake

ROARING DITCH
(Heislerville) - Entire length, except segment described below
(Eldora) - Ditch and all tributaries within the Dennis Creek Wildlife Management Area boundaries

ROWANDS POND (Clementon) - Pond, inlet stream and outlet stream within Rowands Pond Wildlife Management Area

RUNDLE BROOK (Del. Water Gap) - Source to Sussex County Route 615

SALEM RIVER (Salem) - Entire length
SAMBO ISLAND BROOK (Del. Water Gap) - Entire length
SAMBO ISLAND POND (Del. Water Gap)
SANDYSTON CREEK (Sandyston) - Entire length

SAVAGES RUN (East Creek)
(Belleplain State Forest) - Entire length, except portions described separately, below
(Belleplain State Forest) - Those two tributaries and portions thereof downstream of Lake Nummi and all tributaries to Lake Nummi that are located entirely within the boundaries of Belleplain State Forest

SAWMILL POND (High Point)
SCHOOLYES MTN. BROOK (Schooley's Mtn.) - Entire length
SHABAKUNK CREEK (Ewing) - Entire length
SHABBECONG CREEK (Washington) – Entire length

SHAWANNI CREEK
(Stokes State Forest) - Headwaters and tributaries downstream to, but not including, Shawanni Lake
(Stokes State Forest) - Outlet of Shawanni Lake downstream to confluence with Flat Brook

SHAWANNI LAKE (Stokes State Forest)
SHAWS MILL POND (Cedarville)  
TRIBUTARIES  
(Edward G. Bevan) - Cedar and Mile Branches to Shaw's Mill Pond  
SHIMERS BROOK  
(Millville) - Entire length, except those segments designated FW1, below  
(High Point) - That segment of Shimers Brook and all tributaries within the boundaries of High Point State Park  
SHINNS BRANCH - See RANCOCAS CREEK  
SHIPETAUKEIN CREEK (Lawrenceville) - Entire length  
SHORE DITCH (Mad Horse Creek) - Entire length  
SILVER LAKE (Hope)  
SILVER LAKE FORK - See MAD HORSE CREEK  
SLAB BRANCH - See MUSKEE CREEK  
SLUICE CREEK  
(South Dennis) - Entire length, except segment described below  
(Dennis Creek) - Segments of tributaries that are within the Dennis Creek and the Beaver Swamp Wildlife Management Areas  
SMITH FERRY BROOK (Del. Water Gap) - Entire length  
SPARTA JUNCTION BROOK (Sparta Junction) - Entire length  
SPRING MILLS BROOK (Milford) – Entire length  
STEELE RUN  
(Washington Crossing State Park) - Source to confluence with westerly tributary  
(Titusville) - Confluence with westerly tributary to the Delaware River  
STEENY KILL LAKE (High Point)  
STEEPE RUN (Mauricetown) - Entire length  
STEPHENSBURG BROOK (Stephensburg) - Entire length  
STONY BROOK (Knowlton) - Entire length  
STONY BROOK  
(Stokes State Forest) - Source and tributaries, wholly contained within Stokes State Forest, from their origins to, but not including, Stony Lake  
(STokes State Forest) - Tributary originating approximately one mile west of the Branchville Reservoir to the confluence with Stony Brook  
(STokes State Forest) - Outlet of Stony Lake to the confluence with Big Flat Brook  
STONY LAKE (Stokes State Forest)  
TRIBUTARIES - See STONY BROOK  
STOW CREEK  
(Stow Creek Landing) - Entire length, except tributaries described separately below
(Mad Horse Creek) - Tributaries within the boundaries of the Mad Horse Creek Wildlife Management Area

STRAIGHT CREEK (Berrytown) - Entire length

SUNFISH POND (Worthington) - The pond and its outlet stream to the Delaware River

SWAN CREEK (Lambertville) - Entire length

SWARTSWOOD CREEK (Swartswood) - Entire length

SWARTSWOOD LAKE (Stillwater)

TAR HILL BROOK

(Lake Lenape) - Source to, but not including, Lake Lenape

(Lake Lenape) - Lake Lenape to Andover Junction Brook

THREE MOUTHS (Egg Island)

THUNDERGUST BROOK

(Deerfield) - Entire length, except segment described below

(Deerfield) - That segment within the boundaries of Parvin State Park

THUNDERGUST LAKE (Parvin State Park)

TILLMAN BROOK (Walpack) - Entire length

TROUT BROOK (Hackettstown) - Entire length

TROUT BROOK (Tranquility) - Entire length

TROUT BROOK (Hope) - Entire length

TROUT BROOK (Allamuchy) - Entire length

TROUT BROOK

(Middleville) - Source to confluence with Pond Brook

(Middleville) - Confluence with Pond Brook to Paulins Kill

TUNNEL BROOK (Oxford Mtn.) - Entire length, including all tributaries

TURKEY HILL BROOK (Bethlehem) - Entire length

TURNS FORK - See MAD HORSE CREEK

TUTTLES CORNER BROOK (Tuttles Corner) - Entire length

UPPER BROTHERS CREEK (Egg Island) - Entire length

UPPER DEEP CREEK (Mad Horse Creek) - Entire length

VANCAMPENS BROOK (Millbrook) - Entire length

WAPALANNE LAKE (Stokes State Forest)

WARFORD CREEK (Barbertown) – Entire length

WELDON BROOK (Jefferson Township) - From source to, but not including, Lake Shawnee

WEST CREEK

(Halberton) - Source to the boundary of the Pinelands Protection and Preservation Areas, except those portions described separately, below

(Belleplain) - The portion of the tributary that originates about 0.9 miles southeast of
Hoffman's Mill and is located entirely within the boundaries of Belleplain State Forest
(Belleplain) - Those tributaries that originate about 0.5 miles upstream of Hoffman's Mill and are located entirely within the boundaries of Belleplain State Forest
(Belleplain) - Eastern branch of the easterly tributary to Pickle Factory Pond from its origin to its confluence with the western branch
(Delmont) - Boundary of the Pinelands Protection and Preservation Area to the boundary of the Fish and Game lands
(Delmont) - Boundary of the Fish and Game lands to Delaware Bay
WEST PORTAL CREEK (West Portal) - Entire length
WHITE BROOK (Montague) - Entire length
WHITE LAKE (Hardwick)
WICKECHEOKE CREEK
   (Locktown) - Source to confluence with Plum Brook
   (Stockton) - Confluence with Plum Brook to Delaware River
WIDGEON PONDS (Egg Island)
WILLS BROOK (Mt. Olive) - Entire length
YARDS CREEK (Blairstown) - Entire length
The surface water classifications in Table 3 are for waters of the Passaic, Hackensack and New York Harbor Complex Basin:

<table>
<thead>
<tr>
<th>Waterbody</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>APSHAWA BROOK (Macopin) - Entire length</td>
<td>FW2-TP(C1)</td>
</tr>
<tr>
<td>ARTHUR KILL</td>
<td></td>
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<tr>
<td>(Perth Amboy) - The Kill and its saline New Jersey tributaries between</td>
<td></td>
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<tr>
<td>and a line connecting Ferry Pt., Perth Amboy to Wards Pt., Staten Island,</td>
<td></td>
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<tr>
<td>New York</td>
<td>SE2</td>
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<tr>
<td>(Elizabeth) - From an east-west line connecting Elizabethport with</td>
<td></td>
</tr>
<tr>
<td>Bergen Pt., Bayonne to the Outerbridge Crossing</td>
<td>SE3</td>
</tr>
<tr>
<td>(Woodbridge) - All freshwater tributaries</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>BEAR SWAMP BROOK (Mahwah) - Entire length</td>
<td>FW2-TP(C1)</td>
</tr>
<tr>
<td>BEAR SWAMP LAKE (Ringwood State Park)</td>
<td>FW2-NT(C1)</td>
</tr>
<tr>
<td>BEAVER BROOK</td>
<td></td>
</tr>
<tr>
<td>(Meriden) - From Splitrock Reservoir Dam downstream to Meriden Road</td>
<td>FW2-TP(C1)</td>
</tr>
<tr>
<td>Bridge</td>
<td></td>
</tr>
<tr>
<td>(Denville) - Meriden Road Bridge to Rockaway River</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>TRIBUTARIES</td>
<td></td>
</tr>
<tr>
<td>(Meriden) - Two tributaries located approximately three quarters of a</td>
<td>FW2-TP(C1)</td>
</tr>
<tr>
<td>mile southwest of Meriden</td>
<td></td>
</tr>
<tr>
<td>BEECH BROOK</td>
<td></td>
</tr>
<tr>
<td>(West Milford) - From State line downstream to Monksville Reservoir,</td>
<td>FW2-TP(C1)</td>
</tr>
<tr>
<td>including all tributaries</td>
<td></td>
</tr>
<tr>
<td>BELCHER CREEK (W. Milford) - Entire length</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>BERRYS CREEK (Secaucus) - Entire length</td>
<td>FW2-NT/SE2</td>
</tr>
<tr>
<td>BLACK BROOK</td>
<td></td>
</tr>
<tr>
<td>(Meyersville) - Entire length, except segment described below</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>(Great Swamp) - Segment and tributaries within the Great Swamp National</td>
<td>FW2-NT(C1)</td>
</tr>
<tr>
<td>Wildlife Refuge</td>
<td></td>
</tr>
<tr>
<td>BLUE MINE BROOK</td>
<td></td>
</tr>
<tr>
<td>(Wanaque) - Headwaters Downstream to lower Snake Den Road bridge</td>
<td>FW2-TP(C1)</td>
</tr>
<tr>
<td>(Wanaque) - lower Snake Den Road bridge to the boundary of Norvin Green</td>
<td>FW2-TM</td>
</tr>
<tr>
<td>State Forest</td>
<td></td>
</tr>
<tr>
<td>(Norvin Green State Forest) - That portion of the stream and any</td>
<td>FW2-TM(C1)</td>
</tr>
<tr>
<td>tributaries within the Norvin Green State Forest</td>
<td></td>
</tr>
<tr>
<td>BOONTON RESERVOIR - See JERSEY CITY RESERVOIR</td>
<td></td>
</tr>
<tr>
<td>BRUSHWOOD POND (Ringwood State Park)</td>
<td>FW2-TM(C1)</td>
</tr>
</tbody>
</table>
BUCKABEAR POND (Newfoundland) - Pond, its tributaries and connecting stream to Clinton Reservoir

BURNT MEADOW BROOK (Green Pond) - Source downstream to confluence with Green Pond Brook

BURNT MEADOW BROOK (Stonetown) - Entire length

CANISTEAR RESERVOIR (Vernon)

CANISTEAR RESERVOIR TRIBUTARY (Vernon) - The southern branch of the eastern tributary to the Reservoir

CANOE BROOK (Chatham) - Entire length

CEDAR POND (Postville) - Pond and all tributaries

CHARLOTTEBURG RESERVOIR (Charlotteburg)

CHERRY RIDGE BROOK (Vernon) - Tributaries not contained within Wawayanda State Park and Newark Watershed lands

(Wawayanda State Park) - Brook and tributaries upstream of Canistear Reservoir located entirely within the boundaries of Wawayanda State Park and the Newark Watershed lands

CLINTON BROOK (W. Milford) - Clinton Reservoir dam to Pequannock River

CLINTON RESERVOIR (W. Milford)

CLOVE BROOK - See STAG BROOK

COOLEY BROOK (W. Milford) - Entire length, except segments described below

(Hewitt State Forest) - Segments of the brook and all tributaries which originate and are located entirely within Hewitt State Forest

CORYS BROOK (Warren) - Entire length

CRESSKILL BROOK (Alpine) - Source to Duck Pond Rd. bridge, Demarest

(Demarest) - Duck Pond Rd. bridge to Tenakill Brook

CROOKED BROOK TRIB. (East of Sheep Hill) - Entire length

CUPSAW BROOK (Skylands) - Source to Wanaque Reservoir, except segment described below

(Ringwood State Park) - That segment of Cupsaw Brook within the boundaries of Ringwood State Park

 DEAD RIVER (Liberty Corners) - Entire length

DEN BROOK (Randolph) - Entire length

TRIBUTARY (Randolph) - Tributary west of Shongum Lake

DUCK POND (Ringwood)

ELIZABETH RIVER
(Elizabeth) - Source to Broad St. bridge, Elizabeth and all freshwater tributaries
(Elizabeth) - Broad St. bridge to mouth
FOX BROOK (Mahwah) - Entire length
GLASMERE POND (Ringwood)
GOFFLE BROOK (Hawthorne) - Entire length
GRANNEY BROOK - See SPRING BROOK
GRANNIS BROOK (Morris Plains) - Entire length
GREAT BROOK
(Chatham) - Entire length, except segment described below
(Great Swamp) - Segment within the boundaries of the Great Swamp National Wildlife Refuge
GREEN BROOK
(W. Milford) - Entire length, except those segments described below
(Hewitt State Forest) - Those segments and tributaries which originate and are located entirely within the Hewitt State Forest boundaries
GREEN POND (Rockaway)
GREEN POND BROOK
(Picatinny Arsenal) - Green Pond outlet to, but not including, Picatinny Lake
(Wharton) - Outlet of Picatinny Lake to the confluence with the Rockaway River
GREENWOOD LAKE (W. Milford)
HACKENSACK RIVER
(Oradell) - New York/New Jersey State line to Oradell dam, including Lake Tappan and all tributaries draining to the Hackensack River above Oradell Dam
(Oradell) - Main stem and saline tributaries from Oradell dam to the confluence with Overpeck Creek
(Little Ferry) - Main stem and saline tributaries from Overpeck Creek to Route 1 and 9 crossing
(Kearny Point) - Main stem downstream from Route 1 and 9 crossing
TRIBUTARIES
(Oradell) - Tributaries joining the main stem between Oradell dam and the confluence with Overpeck Creek
(Little Ferry) - Tributaries joining the main stem downstream of Overpeck Creek
HANKS POND (Clinton) - Pond and all tributaries
HARMONY BROOK (Brookside) - Entire length
HARRISON'S BROOK (Bernards) - Entire length
HAVEMEYER BROOK (Mahwah) - Entire length FW2-TP(C1)
HEWITT BROOK (W. Milford) - Entire length FW2-TP(C1)
HIBERNIA BROOK
   (Marcella) - Source to first Green Pond Road bridge downstream of Lake Emma FW2-TP(C1)
   (Hibernia) - First Green Pond Road bridge to confluence with Beaver Brook FW2-TM
TRIBUTARY
   (Lake Ames) - Source to, but not including, Lake Ames FW2-TP(C1)
HIGH MOUNTAIN BROOK (Ringwood) - Source to, but not including, Skyline Lake FW2-TP(C1)
HOHOKUS BROOK (Hohokus) - Entire length FW2-NT/SE2
HUDSON RIVER
   (Rockleigh) - River and saline portions of New Jersey tributaries from the New Jersey-New York boundary line in the north to its confluence with the Harlem River, New York SE1
   (Englewood Cliffs) - River and saline portions of New Jersey tributaries from the confluence with the Harlem River, New York to a north-south line connecting Constable Hook (Bayonne) to St. George (Staten Island, New York) SE2
TRIBUTARIES
   (Rockleigh) - Freshwater portions of tributaries to the Hudson River in New Jersey FW2-NT
INDIAN GROVE BROOK (Bernardsville) - Entire length FW2-TP(C1)
JACKSON BROOK
   (Mine Hill) - Source to the boundary of Hurd Park, Dover FW2-TP(C1)
   (Dover) - Hurd Park to Rockaway River FW2-NT
JENNINGS CREEK (W. Milford) - State line to Wanaque River FW2-TP(C1)
JERSEY CITY RESERVOIR (Boonton) FW2-TM(C1)
KANOUSE BROOK (Newfoundland) - Entire length FW2-TP(C1)
KIKEOUT BROOK (Butler) - See STONE HOUSE BROOK FW2-TP(C1)
KILL VAN KULL (Bayonne) - Westerly from a north-south line connecting Constable Hook (Bayonne) to St. George (Staten Island, New York) SE3
LAKE RICKONDA OUTLET STREAM (Monks) - That segment of the outlet stream from Lake Rickonda within Ringwood State Park FW2-TM(C1)
LAKE STOCKHOLM BROOK
   (Stockholm) - Entire length, except tributaries described separately below FW2-TP(C1)
   (Stockholm) - Portion of westerly tributary, from its origins to about 1000 feet south of the Route 23 bridge, located entirely within the boundaries of the Newark watershed FW1(tp)
(Stockholm) - Brook between Hamburg Turnpike and Vernon-Stockholm Rd. to its confluence with Lake Stockholm Brook, north of Rt. 23  

LITTLE POND BROOK (Oakland) - Entire length  

LOANTAKA BROOK  
(Green Village) - Entire length, except segment described below  
(Great Swamp) - Brook and all tributaries within the boundaries of Great Swamp National Wildlife Refuge  

LUD-DAY BROOK (Camp Garfield) - Source downstream to its confluence with the southwestern outlet stream from Clinton Reservoir just upstream of the confluence of the outlet stream and a tributary from Camp Garfield  

MACOPIN RIVER  
(Newfoundland) - Source to Echo Lake dam  
(Newfoundland) - Echo Lake dam downstream to Pequannock River  

MEADOW BROOK  
(Wanaque) - Skyline Lake to E. Belmont Ave.  
(Wanaque) - E. Belmont Ave. downstream to Wanaque River  

MILL BROOK  
(Randolph) - Source to Rt. 10 bridge  
(Randolph) - Rt. 10 bridge to Rockaway River, including the easterly tributary  

TRIBUTARIES  
(N. of Union Hill) - Entire length  

MONKSVILLE RESERVOIR (Long Pond Iron Works State Park)  

MORSES CREEK (Linden) - Entire length  

MOSSMANS BROOK (West Milford) - Source to confluence with Clinton Reservoir  

MT. TABOR BROOK (Morris Plains) - Entire length  

NEWARK BAY (Newark) - North of an east-west line connecting Elizabethport with Bergen Pt., Bayonne up to the mouths of the Passaic and Hackensack Rivers  

NOSENZO POND (Upper Macopin)  

OAK RIDGE RESERVOIR (Oak Ridge)  

OAK RIDGE RESERVOIR (Oak Ridge) - Northwestern tributary to Reservoir  

OHIO BROOK (Morris Township) - Source downstream to Morristown town line  

ORADELL RESERVOIR (Oradell)  

TRIBUTARIES
(Oradell) - All named and unnamed tributaries that are not listed separately, that drain into Oradell Reservoir above the Oradell Dam (FW2-NT(C1)
OVERPECK CREEK (Palisades Park) - Entire length FW2-NT/SE2
PACOCK BROOK
(Canistear) - Brook and tributaries upstream of Canistear Reservoir located entirely within the boundaries of the Newark Watershed FW1
(Stockholm) - Outlet of Canistear Reservoir to Pequannock River FW2-NT
PASCAK BROOK (Hackensack) - New York/New Jersey State line to confluence with the Oradell Reservoir, including Woodcliff Lake, and all tributaries FW2-NT(C1)
PASSAIC RIVER
(Mendham) - Source downstream to, but not including, Osborn Pond or tributaries described separately below FW2-TP(C1)
(Paterson) - Outlet of Osborn Pond to Dundee Lake dam FW2-NT
(Little Falls) - Dundee Lake dam to confluence with Second River FW2-NT/SE2
(Newark) - Confluence with Second River to mouth SE3
TRIBUTARIES
(Great Piece Meadows State Park) - Tributaries within Great Piece Meadows State Park FW2-NT(C1)
PECKMAN RIVER (Verona) - Entire length FW2-NT
PEQUANNOCK RIVER
MAIN STEM
(Vernon) - Source to confluence with Pacock Brook FW1(tp)
(Hardyson) - River and the easterly tributary from Pacock Brook to, but not including, Oak Ridge Reservoir FW2-TP(C1)
(Newfoundland) - Outlet of Oak Ridge Reservoir downstream to, but not including Charlotteburg Reservoir FW2-TP(C1)
(Charlotteburg) - Outlet of Charlotteburg Reservoir to, but not including, Macopin Reservoir or the tributaries described separately below FW2-TP(C1)
(Kinnelon) - Macopin Reservoir outlet to Hamburg Turnpike bridge in Pompton Lakes Borough FW2-TP(C1)
(Riverdale) - Hamburg Turnpike bridge in Pompton Lakes Borough to confluence with Wanaque River FW2-TP(C1)
(Pompton Plains) - Confluence with Wanaque River downstream to confluence with Pompton River FW2-NT
TRIBUTARIES
(Copperas Mtn.) - Entire length FW2-TP(C1)
(Smoke Rise) - Entire length
(Green Pond Junction) - Tributary at Green Pond Junction from its origin downstream to Route 23
(Jefferson) - Tributary joining the main stem about 3500+ feet southeast of the Sussex-Passaic County line, near Jefferson from its origin to about 2000 feet upstream of the pond
(Lake Kampfe) - Source to, but not including, Lake Kampfe
(Lake Kampfe) - Lake Kampfe to Pequannock River, except tributary described separately below
(Lake Kampfe) - Tributary within the boundaries of Norvin Green State Forest, originating west of Torne Mtn.
PILES CREEK (Grasselli) - Entire length
POMPTON LAKE (Pompton Lakes) FW2-NT
POMPTON RIVER (Wayne) - Entire length
POND BROOK (Oakland) - Entire length
POSTS BROOK
(Bloomingdale) - Source to confluence with Wanaque River, except Wanaque Reservoir and segment described below
(Norvin Green State Forest) - That segment of the stream and all tributaries within the boundaries of Norvin Green State Forest
PREAKNESS (SINGAC) BROOK
(Wayne) - Source to, but not including, Barbour Pond
(Barbour Pond) - Pond to Passaic River
PRIMROSE BROOK
(Harding) - Source to Lees Hill Road bridge
(Harding) - Lees Hill Road bridge to Great Swamp National Wildlife Refuge boundary
(Great Swamp) - Wildlife Refuge boundary to Great Brook
RAHWAY RIVER
SOUTH BRANCH
(Rahway) - Source to Hazelwood Ave., Rahway
(Rahway) - Hazelwood Ave. to mouth
MAIN STEM
(Rahway) - Upstream of Pennsylvania Railroad bridge
(Linden) - Penn. Railroad bridge to Route 1&9 crossing
(Carteret) - Route 1&9 crossing to mouth
RAMAPO LAKE (Ramapo) - Lake and all outlet streams and tributaries within the boundaries of Ramapo Mtn. State Forest
RAMAPO RIVER (Mahwah) - State line to Pompton River
TRIBUTARY (Oakland) - Entire length
RINGWOOD CREEK
(Ringwood) - Entire length, except segment described below  FW2-TM
(Sloatsburg) - Creek within Ringwood State Park  FW2-TM(C1)
RINGWOOD MILL POND (Ringwood)  FW2-NT(C1)
ROCKAWAY RIVER
(Wharton) - Source to Washington Pond outlet, excluding the segment within the boundaries of the Berkshire Valley Wildlife Management Area  FW2-NT
(Berkshire Valley) - That segment within the boundaries of the Berkshire Valley Wildlife Management Area  FW2-NT(C1)
(Dover) - Washington Pond outlet downstream to Rt. 46 bridge  FW2-TM(C1)
(Boonton) - Rt. 46 bridge to Passaic River, excluding Jersey City Reservoir  FW2-NT
RUSSIA BROOK
(Sparta) - Source to Lake Hartung dam  FW2-NT
(Milton) - Lake Hartung dam to, but not including, Lake Swannanoa  FW2-TM
TRIBUTARIES
(S. of Mt. Paul) – Entire length  FW2-TP(C1)
SADDLE RIVER
(Upper Saddle River) - State line to Bergen County Rt. 2 (Lake Street) bridge  FW2-TP(C1)
(Upper Saddle River) - Bergen County Rt. 2 (Lake Street) bridge downstream to confluence with Pleasant Brook, including all tributaries  FW2-TP(C1)
(Saddle River) - Pleasant Brook to Allendale Rd. bridge  FW2-TM
(Lodi) - Allendale Rd. bridge to Passaic River  FW2-NT/SE3
SAWMILL CREEK (Pompton Plains) - Entire length  FW2-NT
SCARLET OAK POND (Mahwah)  FW2-TM
SHEPPARD LAKE (Ringwood)  FW2-TM(C1)
SINGAC BROOK - See PREAKNESS BROOK
SLOUGH BROOK (Livingston) - Entire length  FW2-NT
SMITH CREEK (Woodbridge) - Entire length  FW2-NT/SE3
SPLIT ROCK RESERVOIR (Rockaway)  FW2-TM
SPLIT ROCK RESERVOIR TRIBUTARIES
(Farny State Park)- Three tributaries within Farny State Park  FW2-NT(C1)
SPRING (GRANNEY) BROOK (Mine Hill) - Entire length  FW2-TP(C1)
SPRING GARDEN BROOK (Florham) - Entire length  FW2-NT
STAG (CLOVE) BROOK (Mahwah) - Entire length  FW2-TP(C1)
STEPHENS BROOK
(Roxbury) - Entire length, except segment described separately, below  FW2-NT
(Berkshire Valley) - That segment north of the boundaries of the Berkshire Valley Wildlife Management Area

STONE HOUSE BROOK
(Kinnelon) - Source to Valley Road bridge
(Butler) - Valley Road bridge to confluence with Pequannock River

STONEY BROOK (Boonton) – Entire length
SURPRISE LAKE (Hewitt)
SWAN POND (Ringwood)
TAPPAN, LAKE (Old Tappan)
TENAKILL BROOK (Demarest) - Entire length, including all tributaries, except Cresskill Brook
TERRACE POND (Wawayanda)
TIMBER BROOK (Kitchell) - Entire length, except tributary described separately below
TIMBER BROOK (Farny State Park) - Headwater segment of tributary to Timber Brook within Farny State Park
TROY BROOK (Troy Hills) - Entire length
WALLACE BROOK (Randolph) - Source downstream to, but not Including Hedden Park Lake
WANAQUE RESERVOIR
WANAQUE RIVER
MAIN STEM
(Wanaque) - Greenwood Lake outlet, through Wanaque Wildlife Management Area and Long Pond Iron Works State Park, including the Monksville Reservoir, to the Monksville Reservoir dam at Stonetown Road, except tributary south of Jennings Creek (Hewitt) described separately below
(Pompton Lakes) - Wanaque Reservoir dam to Wanaque Ave. bridge including unnamed tributaries
(Pompton Lakes) - Wanaque Ave. bridge downstream to Pequannock River
TRIBUTARY
(Hewitt) - Entire length of tributary south of Jennings Creek
WEST BROOK (W. Milford) - Entire length
WEST POND (Hewitt)
WEYBLE POND (Ringwood)
WHIPANNY RIVER
(Brookside) - Source to Whitehead Rd. bridge
(Morristown) - Whitehead Rd. bridge to Rockaway River
TRIBUTARIES
(Brookside) - Entire length
<table>
<thead>
<tr>
<th>Location</th>
<th>Protection Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. of Brookside</td>
<td>FW2-TM</td>
</tr>
<tr>
<td>E. of Washington Valley</td>
<td>FW2-TM</td>
</tr>
<tr>
<td>Gillespie Hill</td>
<td>FW2-TP(C1)</td>
</tr>
<tr>
<td>Shongum Mtn.</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>WONDER LAKE (West Milford)</td>
<td>FW2-NT(C1)</td>
</tr>
<tr>
<td>WOODBRIDGE CREEK (Woodbridge)</td>
<td>FW2-NT/SE3</td>
</tr>
<tr>
<td>WOODCLIFF LAKE (Woodcliff Lake)</td>
<td>(FW2-NT(C1))</td>
</tr>
</tbody>
</table>
The surface water classifications in Table 4 are for waters of the Raritan River and Raritan Bay Basin:

**TABLE 4**

<table>
<thead>
<tr>
<th>Waterbody</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALLERTON CREEK (Allerton) - Entire length</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>AMBROSE BROOK (Piscataway) - Entire length</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>AMWELL LAKE (Syndertown)</td>
<td>FW2-NT(C1)</td>
</tr>
<tr>
<td>ASSISCONG CREEK (Flemington) - Entire length</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>BACK BROOK (Vanliew's Corners) - Entire length</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>BALDWINS CREEK (Pennington) - Entire length, except segment described separately below</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>(Baldwin) - Segment within the boundaries of Baldwin Lake Wildlife Management Area</td>
<td>FW2-NT(C1)</td>
</tr>
<tr>
<td>BARCLAY BROOK (Redshaw Corners) - Entire length</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>BEAR BROOK (West Windsor) - Entire length</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>BEAVER BROOK (Cokesbury) - Source to Reformatory Road bridge</td>
<td>FW2-TP(C1)</td>
</tr>
<tr>
<td>(Annandale) - Reformatory Rd. bridge to Beaver Ave., bridge</td>
<td>FW2-TM</td>
</tr>
<tr>
<td>(Annandale) - Beaver Ave. bridge downstream to the lower most I-78 bridge</td>
<td>FW2-TP(C1)</td>
</tr>
<tr>
<td>(Clinton) - Lower most I-78 bridge downstream to, the South Branch Raritan River</td>
<td>FW2-TM</td>
</tr>
<tr>
<td>BEDEN BROOK (Montgomery) - Entire length</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>BIG BROOK (Vanderberg) - Entire length</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>BLACK BROOK (Polktown) - Entire length</td>
<td>FW2-TP(C1)</td>
</tr>
<tr>
<td>BLACK RIVER - See LAMINGTON RIVER</td>
<td></td>
</tr>
<tr>
<td>BLACKBERRY CREEK (Oceanport) - Source to a line beginning on the easternmost extent of Gooseneck Point and bearing approximately 162 degrees True North to its terminus on the westernmost extent of an unnamed point of land in the vicinity of the western extent of Cayuga Ave. in Oceanport.</td>
<td>SE1</td>
</tr>
<tr>
<td>(Oceanport) - Creek below the line described above</td>
<td>SE1(C1)</td>
</tr>
<tr>
<td>BLUE BROOK (Mountainside) - Entire length</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>BOULDER HILL BROOK (Tewksbury) - Entire length</td>
<td>FW2-TP(C1)</td>
</tr>
<tr>
<td>BOUND BROOK (Dunellen) - Entire length</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>BRANCHPORT CREEK (Long Branch) - Source to a line beginning on the northernmost extent of an unnamed point of land lying north of Pocano Ave. in Oceanport</td>
<td></td>
</tr>
</tbody>
</table>
and bearing approximately 055 degrees True North to its terminus on the westernmost extent of the northern bulkhead at the lagoon located between France Rd. and Lori Rd. in Monmouth Beach

(Monmouth Beach) - Creek below line described above SE1(C1)

BUDD LAKE (Mt. Olive) FW2-NT(C1)

TRIBUTARIES
(E. of Budd Lake) - Entire Length FW2-TM
(W. of Budd Lake) - Entire Length FW2-NT

BURNETT BROOK (Ralston) - Entire length FW2-TP(C1)

BUSHKILL BROOK
(Flemington) – Source and tributary downstream to Rt. 31 Bridge FW2-TM
(Flemington) – Rt. 31 bridge downstream to South Branch Raritan River FW2-NT

CAPOOLOING (CAKEPOULIN) CREEK (Sydney) - Entire length FW2-TP(C1)
CEDAR BROOK (Spotswood) - Entire length FW2-NT
CHAMBERS BROOK (Whitehouse) - Entire length FW2-NT

CHEESEQUAKE STATE PARK WATERS (S. Amboy) - Fresh waters within the park upstream of the limits of tidal influence FW2-NT(C1)

CLAYPIT CREEK
(Navesink) - Source to widening of the Creek near Linden Ave. and just north to the Locust Ave. bridge in Navesink FW2-NT/SE1
(Navesink) - Widening of Creek to Navesink River SE1(C1)

COLD BROOK (Oldwick) - Entire length FW2-TP(C1)
CRAMERS CREEK (Hamden) - Entire length FW2-NT
CRANBURY BROOK (Old Church) - Entire length FW2-NT
CRUSER BROOK (Montgomery) - Entire length FW2-NT
CUCKELS BROOK (Bridgewater) - Entire length FW2-NT
DAWSONS BROOK (Ironia) - Entire length FW2-TP(C1)
DEEP RUN (Old Bridge) - Entire length FW2-NT
DEVILS BROOK (Schalks) - Entire length FW2-NT

DRAKES BROOK
(Ledgewood) - Source downstream to Hillside Avenue bridge FW2-TM(C1)
(Flanders) - Hillside Avenue bridge to confluence with the South Branch Raritan River FW2-NT(C1)

TRIBUTARY (Mt. Olive) - Source downstream to Central Railroad bridge FW2-TP(C1)

DUCK POND RUN (Port Mercer) - Entire length FW2-NT
DUKES BROOK (Somerville) - Entire length FW2-NT

ELECTRIC BROOK (Schooley's Mtn.) - Entire length FW2-TP(C1)
FLANDERS BROOK (Flanders) - Entire length FW2-TP(C1)
FLANDERS CANAL (Flanders) - Entire length FW2-NT(C1)
FROG HOLLOW BROOK (Califon) - Entire length FW2-TP(C1)
GANDER BROOK (Manalapan) - Entire length FW2-NT
GLADSTONE BROOK (St. Bernards School) - Entire length FW2-TP(C1)
GRANDIN BROOK (see SIDNEY BROOK)
GREAT DITCH (S. Brunswick) - That portion of Great Ditch and its tributaries within Pigeon Swamp State Park FW2-NT(C1)
GREEN BROOK
   (Watchung) - Source to Rt. 22 bridge FW2-TM
   (Plainfield) - Rt. 22 bridge to Bound Brook FW2-NT
GUINEA HOLLOW BROOK (Tewksbury) FW2-TP(C1)
HACKLEBARNEY BROOK (Hacklebarney) - Entire length FW2-TP(C1)
HEATHCOTE BROOK (Kingston) - Entire length FW2-NT
HERZOG BROOK (Pottersville) - Entire length FW2-TP(C1)
HICKORY RUN (Califon) - Entire length FW2-TP(C1)
HOCKHOCKSON BROOK (Colts Neck) - Entire length FW2-TM
HOLLAND BROOK (Readington) - Entire length FW2-NT
HOLLOW BROOK (Pottersville) - Entire length FW2-TP(C1)
HOOKS CREEK LAKE (Cheesequake State Park) FW2-NT(C1)
HOOPSTICK BROOK (Bedminster) - Entire length FW2-NT
INDIA BROOK (NORTH BRANCH, RARITAN RIVER)
   (Randolph) - Entire length FW2-TP(C1)
IRELAND BROOK (Paulus Corners) - Entire length FW2-NT
IRESICK BROOK (Spotswood) - Entire length FW2-NT
KRUEGER'S BROOK - (Flanders) - Entire length FW2-TP(C1)
LAMINGTON RIVER (BLACK RIVER)
   (Succasunna) - Source to Rt. 206 bridge FW2-NT(C1)
   (Milltown) - Rt. 206 bridge to confluence with Rinehart Brook FW2-TM(C1)
   (Pottersville) - Confluence with Rinehart Brook to Camp Brady bridge, Bedminster FW2-TP(C1)
   (Vliettown) - Camp Brady bridge to Rt. 523 bridge FW2-TM
   (Burnt Mills) - Rt. 523 to North Branch, Raritan River FW2-NT
TRIBUTARY (Ironia) - Source downstream to, but not including, Bryant Pond FW2-TP(C1)
LAWRENCE BROOK
   (Deans) - Source to the intake of the New Brunswick Water Department at Weston's Mill Dam FW2-NT
   (New Brunswick) - Weston's Mill Dam to Raritan River SE1
LEDGEWOOD BROOK (Ledgewood) - Entire length FW2-TP(C1)
LITTLE BROOK (Califon) - Entire length FW2-TP(C1)
LITTLE SILVER CREEK
   (Shrewsbury) - Source to a line beginning on the eastern bank of that unnamed lagoon located between Wardell Ave. and Oakes Rd. in Rumson and bearing approximately 171 degrees T (True North) to its terminus on the south shore of Little Silver Creek FW2-NT/SE1
   (Rumson) - Creek below line described above SE1(C1)
LOMERSON BROOK - See HERZOG BROOK

MANALAPAN BROOK
   (Jamesburg) - Source to Duhernal Lake dam, except tributary described separately below  FW2-NT
   (Tennent) - That portion of the tributary at Tennent along the boundary of Monmouth Battlefield State Park  FW2-NT(C1)

MATCHAPONIX BROOK (WEAMACONK CREEK)
   (Mount Mills) - Entire length, except segments described below  FW2-NT
   (Freehold) - The brook and tributaries within the boundaries of Monmouth Battlefield State Park  FW2-NT(C1)

MCGELLAIRDS BROOK
   (Englishtown) - Entire length, except tributary described separately below  FW2-NT
   (Freehold) - Tributary within Monmouth Battlefield State Park  FW2-NT(C1)

MCVICKERS BROOK (Mendham) - Entire length  FW2-TM(C1)

MIDDLE BROOK (Greater Cross Roads) - Entire length  FW2-NT

MIDDLE BROOK
   EAST BRANCH (Springdale) - Entire length  FW2-TM
   WEST BRANCH (Martinsville) - Entire length  FW2-NT
   MAIN STEM (Bound Brook) - Confluence of East and West branches to Raritan River  FW2-NT

MILFORD BROOK (Lafayette Mills) - Entire length  FW2-NT

MILLSTONE RIVER (Hightstown) - Entire length  FW2-NT

MINE BROOK (Mine Brook) - Entire length  FW2-NT

TRIBUTARIES
   (East of Mine Mt.) - Entire length  FW2-TP(C1)
   (South of Mine Mt.) - Source downstream to Douglass Road Bridge  FW2-TP(C1)

MINE BROOK (Colts Neck) - Entire length  FW2-NT

MULHOCKAWAY CREEK (Pattenburg) - Entire length  FW2-TP(C1)

NAVESINK RIVER
   (Red Bank) - Source to a line starting at a point at the northeast end of Blossom Cove, bearing approximately 142 degrees T (True North), through navigational aid C23 to the south bank near Riverview Hospital  SE1
   (Rumson) - River southeast of the line described above, except segment described below  SE1(C1)
   (Monmouth Beach) - All water south and east of a line beginning on the northwesternmost point of land on Raccoon Island (in the vicinity of the western extent of Highland Ave.) in Monmouth Beach, and bearing approximately 056 degrees T (True North) to the southernmost point of a small unnamed island, and then bearing
approximately 091 degrees T (True North) to its terminus on the northernmost point of land located at the northern extent of Monmouth Parkway in Monmouth Beach and all waters south of a line beginning on the western shoreline (just east of Monmouth Parkway in Monmouth Beach) and bearing approximately 081 degrees T (True North), intersecting Channel Marker Flashing Red 4 and Channel Marker Flashing Red 2 and terminating on the eastern shoreline of the Galilee section of Monmouth Beach.

NESHANIC RIVER (Reaville) - Entire length FW2-NT
NORTON BROOK (Norton) - Entire length FW2-TP(C1)
OAKDALE CREEK (Chester) - Entire length FW2-TP(C1)
OAKEYS BROOK (Deans) - Entire length FW2-NT
OCEANPORT CREEK
(Fort Monmouth) - Source to a line beginning on the easternmost extent of Horseneck Point and bearing approximately 140 degrees T (True North) to its terminus on the westernmost extent of an unnamed point of land located at the westernmost extent of Monmouth Boulevard in Oceanport FW2-NT/SE1
(Oceanport) - Creek downstream of line described above SE1(C1)
PARKERS CREEK
(Fort Monmouth) - Source to a line beginning on the easternmost extent of Horseneck Point and bearing approximately 000 degrees T (True North) to its terminus on Breezy Point on the Little Silver side (north) side of the creek FW2-NT/SE1
(Fort Monmouth) - Creek downstream of line described above SE1(C1)
PEAPACK BROOK (Gladstone) - Entire length FW2-TP(C1)
PETERS BROOK (Somerville) - Entire length FW2-NT
PIGEON SWAMP (Pigeon Swamp State Park) - All waters within the boundaries of Pigeon Swamp State Park FW2-NT(C1)
PIKE RUN (Belle Meade) - Entire length FW2-NT
PINE BROOK (Clarks Mills) - Entire length FW2-NT
PINE BROOK (Cooks Mill) - Entire length FW2-TM
PLEASANT RUN (Readington) - Entire length FW2-NT
PRESCOTT BROOK (Stanton Station) - Entire length FW2-TM
RAMANESSION (HOP) BROOK (Holmdel) - Entire length FW2-TM
RARITAN BAY - Entire drainage FW2-NT/SE1
RARITAN RIVER
NORTH BRANCH (Also see INDIA BROOK)
(Pleasant Valley) - Source to, but not including, Ravine Lake FW2-TP(C1)
(Far Hills) - Ravine Lake dam to Rt. 512 bridge FW2-TM
(Bedminster) - Rt. 512 bridge to confluence with South Branch, Raritan River FW2-NT

SOUTH BRANCH RARITAN RIVER
(Mt. Olive) - Source to the dam that is 390 feet upstream of the Flanders-Drakestown Road bridge and the two tributaries which originate north and east of the Budd Lake Airfield FW2-NT(C1)
(Mt. Olive) - Dam to confluence with Turkey Brook FW2-TM(C1)
(Middle Valley) - Confluence with Turkey Brook to Rt. 512 bridge FW2-TP(C1)
(Califon) - Rt. 512 bridge to downstream end of Packers Island, except segment described separately, below FW2-TM
(Ken Lockwood Gorge) - River and tributaries within Ken Lockwood Gorge Wildlife Management Area FW2-TM(C1)
(Neshanic Sta.) - Downstream end of Packers Island to confluence with North Branch, Raritan River FW2-NT

TRIBUTARIES, SOUTH BRANCH RARITAN RIVER
(Long Valley) - Entire length FW2-TP(C1)
(High Bridge) - Entire length FW2-TM
(S. of Hoffmans) - Entire length FW2-TP(C1)
(S. of Schooley’s Mt.) - Entire length FW2-TP(C1)

MAIN STEM RARITAN RIVER
(Bound Brook) - From confluence of North and South Branches to Landing Lane bridge in New Brunswick and all freshwater tributaries downstream of Landing Lane bridge. FW2-NT
(Sayreville) - Landing Lane bridge to Raritan Bay and all saline water tributaries SE1

RINEHART BROOK (Hacklebarney) - Entire length FW2-TP(C1)
ROCK BROOK (Montgomery) - Entire length FW2-NT

ROCKAWAY CREEK
NORTH BRANCH
(Mountainville) - Source to Rt. 523 bridge FW2-TP(C1)
(Whitehouse) - Rt. 523 bridge to confluence with South Branch FW2-TM

SOUTH BRANCH
(Clinton) - Headwaters to Readington Township boundary including all tributaries FW2-TP(C1)
(Clinton) - Readington Township boundary to Lake Cushman, including all tributaries FW2-TM(C1)
(Whitehouse) - Lake Cushman to its confluence with main stem Rockaway Creek FW2-TM
MAIN STEM (Whitehouse) - Confluence of North and South
Branches to Lamington River FW2-NT
ROCKY RUN - (Lebanon) - Entire length FW2-TP(C1)
ROUND VALLEY RESERVOIR (Clinton) FW2-TP(C1)
ROYCE BROOK (Manville) - Entire length FW2-NT
SANDY HOOK BAY (Sandy Hook) SE1
SHREWSBURY RIVER
   (Little Silver) - Source to Rt. 36 highway bridge SE1(C1)
   (Highlands) - Rt. 36 bridge to Sandy Hook Bay SE1
SIDNEY BROOK
   (Grandin) - Headwaters to its confluence with the human
   South Branch Raritan River, including all tributaries FW2-NT(C1)
SIMONSON BROOK (Griggstown) - Entire length FW2-NT
SIX MILE RUN
   (Franklin Church) - Entire length, except segment described below FW2-NT
   (Hillsborough) - Segment within the boundaries of Six Mile Run State Park FW2-NT(C1)
SOUTH RIVER
   (Old Bridge) - Duhernal Lake to intake of the Sayreville Water Department FW2-NT
   (Sayreville) - Below the intake of the Sayreville Water Department SE1
SPOOKY BROOK (Bound Brook) FW2-NT
SPRUCE RUN
   (Glen Gardner) - Source to, but not including, Spruce Run Reservoir FW2-TP(C1)
   (Clinton) - Spruce Run Reservoir dam to Raritan River, South Branch FW2-TM
SPRUCE RUN RESERVOIR (Union) - Reservoir and tributaries FW2-TM(C1)
STONY BROOK (Washington) - Entire length FW2-TP(C1)
STONY BROOK
   (Hopewell) - Entire length, except that segment described below FW2-NT
   (Syndertown) - Brook and tributaries within Amwell Lake Wildlife Management Area FW2-NT(C1)
STONY BROOK (Watchung) - Entire length FW2-NT
SUN VALLEY BROOK (Mt Olive) - Entire length FW2-TP(C1)
SWIMMING RIVER RESERVOIR (Red Bank) FW2-NT(C1)
SWIMMING RIVER (Red Bank) - Swimming River Reservoir dam to the Navesink River FW2-NT/SE1
TANNERS BROOK (Washington) - Entire length FW2-NT(C1)
TEETERTOWN BROOK (Lebanon) - Entire length FW2-TP(C1)
TEN MILE RUN (Franklin) - Entire length FW2-NT
TENNENT BROOK (Old Bridge) - Entire length FW2-NT
TEPEHEMUS BROOK (Manalapan) - Entire length FW2-NT
TOWN NECK CREEK
(Little Silver) - Source to a line beginning on the easternmost extent of the unnamed point of land located just east of Paag Circle on the south bank of Town Neck Creek and bearing approximately 095 degrees True North and terminating on Silver Point

(Little Silver) - Creek below the line described above SE1(C1)
TROUT BROOK (Hacklebarney) - Entire length FW2-TP(C1)
TURKEY BROOK (Mt. Olive) - Entire length FW2-TP(C1)
TURTLEBACK BROOK (Middle Valley) - Entire length FW2-NT
WALNUT BROOK (Flemington) - Entire length FW2-TM
WEAMACONK CREEK - See MATCHAPONIX BROOK
WEMROCK BROOK
(Millhurst) - Entire length, except that segment described below FW2-NT
(Monmouth Battlefield State Park) - Those segments of the brook and its tributaries within the boundaries of Monmouth Battlefield State Park FW2-NT(C1)
WEMROCK POND (Monmouth Battlefield State Park) FW2-NT(C1)
WILLOUGHBY BROOK (Buffalo Hollow) - Entire length FW2-TP(C1)
WILLOW BROOK (Holmdel) - Entire length FW2-NT
YELLOW BROOK (Colts Neck) - Entire length FW2-NT
(g) The surface water classifications in Table 5 are for waters of the Wallkill River Basin:

**TABLE 5**

<table>
<thead>
<tr>
<th>Waterbody</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEARFORT WATERS (Wawayanda)</td>
<td>FW2-NT(C1)</td>
</tr>
<tr>
<td>BEAVER RUN (Wantage) - Entire length</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>BLACK CREEK</td>
<td></td>
</tr>
<tr>
<td>(McAfee) - Source to Rt. 94 bridge, except those tributaries described separately, below</td>
<td>FW2-TM</td>
</tr>
<tr>
<td>(Vernon) - Rt. 94 bridge to Pochuck Creek</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>TRIBUTARIES</td>
<td></td>
</tr>
<tr>
<td>(Hamburg) - Three tributaries to Black Creek which originate in the former Hamburg Mtn. Wildlife Management Area from their sources to the former Management Area boundaries</td>
<td>FW1(tm)</td>
</tr>
<tr>
<td>(Rudeville) - Triburaries within the former Hamburg Mtn. Wildlife Management Area not classified as FW1, above</td>
<td>FW2-TM(C1)</td>
</tr>
<tr>
<td>(McAfee) - Entire length</td>
<td>FW2-TP(C1)</td>
</tr>
<tr>
<td>(Vernon Valley) - Entire length</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>CEDAR SWAMP - See RUTGERS CREEK</td>
<td></td>
</tr>
<tr>
<td>CLOVE CREEK (Colesville) - Entire length</td>
<td>FW2-TM</td>
</tr>
<tr>
<td>CLOVE BROOK</td>
<td></td>
</tr>
<tr>
<td>(Wantage) - Source to, but not including, Clove Acres Lake, except those tributaries described separately below</td>
<td>FW2-TM</td>
</tr>
<tr>
<td>(Sussex) - Clove Acres Lake to Papakating Creek</td>
<td>FW2-NT</td>
</tr>
<tr>
<td>(High Point) - Those portions of the two northernmost tributaries located entirely within High Point State Park boundaries, immediately east of Lake Marcia</td>
<td>FW1(tp)</td>
</tr>
<tr>
<td>FRANKLIN POND CREEK</td>
<td></td>
</tr>
<tr>
<td>(Hardyston) - Source to, but not including, Franklin Pond</td>
<td>FW2-TP(C1)</td>
</tr>
<tr>
<td>(Hamburg Mtn.) - Tributaries within the Hamburg Mtn. Wildlife Management Area</td>
<td>FW2-TM(C1)</td>
</tr>
<tr>
<td>TRIBUTARY (Hamburg Mtn.) - The first tributary to Franklin Pond Creek just south of Hamburg Mountain, flowing toward the Wallkill River and located entirely within the former Hamburg Mtn. Wildlife Management Area</td>
<td>FW1(tm)</td>
</tr>
<tr>
<td>GLENWOOD BROOK (Glenwood) - Outlet of Glenwood Lake to State line</td>
<td>FW2-TM</td>
</tr>
<tr>
<td>HAMBURG CREEK</td>
<td></td>
</tr>
</tbody>
</table>
(Hamburg Mtn.) - Source to Rt. 517 bridge, Rudeville, except tributary described separately below FW2-TM
(Hardistownville) - Rt. 517 bridge to Wallkill River FW2-NT
(Hamburg Mtn.) - The third tributary just southwest of Hamburg Mtn. flowing toward the Wallkill River and located entirely within the Hamburg Mtn. Wildlife Management Area FW1

HANFORD BROOK (Hanford) - Entire length within New Jersey FW2-NT
LAKE LOOKOUT (Wawayanda) FW1
LAKE LOOKOUT BROOK (Wawayanda) - Brook and tributaries from source in Newark City holdings, through the Wawayanda State Park, to confluence with the outlet stream from Lake Wawayanda FW1
LAKE RUTHERFORD (Wantage) - The Lake and its tributaries FW1(tm)
LAUREL POND (Wawayanda) - Laurel Pond, including its outlet stream and tributaries, to the outlet stream from Lake Wawayanda FW1
LIVINGSTON PONDS (Wawayanda) - The two northwestern ponds which are within State Park lands FW2-NT(C1)
LIVINGSTON PONDS BROOK (Wawayanda State Park) - Source downstream to State line FW2-TP(C1)
LONG HOUSE BROOK
(Upper Greenwood Lake) - Source to State line, except segment described below FW2-NT
(Upper Greenwood Lake) - Segment within the boundaries of Hewitt State Forest FW2-NT(C1)
LOUNSBERRY HOLLOW BROOK
(Vernon Valley) - Outlet of Glenwood Lake to Pochuck Creek FW2-TM
MUD POND OUTLET STREAM (Hamburg) - Outlet stream from the Pond downstream to confluence with Hamburg Creek, including all tributaries FW2-TP(C1)
PAPAKATING CREEK
MAIN STEM
(Frankford) - Source to Rt. 629 bridge. FW2-TM
(Pellettown) - Entire length of tributary FW2-NT
(Wantage) - Rt. 629 bridge to Wallkill River FW2-NT
WEST BRANCH
(Wantage) - Entire length FW2-NT
PARKER LAKE (Wawayanda) FW2-NT(C1)
POCHUCK CREEK
(Vernon) - Source to State line, except segment described separately below FW2-NT
(High Point) - Segment within State Park lands FW2-NT(C1)
QUARRYVILLE BROOK - See WILLOW BROOK
RUTGERS CREEK (High Point) - The Cedar Swamp headwaters of the tributary to Rutgers Creek
located entirely within the High Point State Park boundaries just south of the State line  FW1

SAND HILLS BROOK
(Hamburg Mtn.) - The upstream portion of Sand Hills Brook, including the pond at its headwaters, located entirely within the boundaries of the Hamburg Mtn. Wildlife Management Area  FW1
(Hamburg) - Brook and tributaries beyond Management Area boundaries  FW2-NT

SAWMILL POND BROOK
(W. Milford) - Entire length, except segment described separately below  FW2-NT
(Wawayanda) - Segment within the boundaries of Wawayanda State Park  FW2-NT(C1)

SPARTA GLEN BROOK (Sparta) - Entire length  FW2-TP(C1)
SPRING BROOK (Maple Grange) - Entire length  FW2-TP(C1)
TOWN BROOK (Vernon) - Entire length  FW2-TM

WALLKILL RIVER
(Sparta) - Source to confluence with Sparta Glen Brook  FW2-NT
(Franklin) - Sparta Glen Brook to, but not including, Franklin Pond  FW2-TM
(Wantage) - Outlet of Franklin Pond to State line  FW2-NT

TRIBUTARIES
(Sparta) - Lake Saginaw dam downstream to Wallkill River  FW2-TP(C1)
(Ogdensburg) - Tributary from the outlet of Heaters Pond to the confluence with the Wallkill River  FW2-TP(C1)

WANTAGE BROOK (Wantage) - Entire length  FW2-NT

WAWAYANDA CREEK
(Vernon) - State line to Pochuck Creek, except unnamed tributary described below  FW2-TM

TRIBUTARIES
(Wawayanda) - Source to State line  FW2-NT
(Wawayanda State Park) - Segments within State Park boundaries, except Livingston Ponds Brook as noted above  FW2-NT(C1)

WAWAYANDA LAKE (Wawayanda)  FW2-TM(C1)
WHITE LAKE (Sparta)  FW2-TM
WILDCAT BROOK (Franklin) - Entire length  FW2-NT
WILLOW (QUARRYVILLE) BROOK (Wantage) - Entire length  FW2-TM
(h) FW1 waters are listed in Table 6 by tract within basins:

<table>
<thead>
<tr>
<th>ATLANTIC COASTAL PLAIN BASIN</th>
<th>ATLANTIC COASTAL PLAIN BASIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALLAIRE STATE PARK MANASQUAN RIVER WATERSHED</td>
<td>MANASQUAN RIVER WATERSHED</td>
</tr>
<tr>
<td>Those portions of the first and second southerly tributaries to the Manasquan River, which are west of Hospital Rd. and are located entirely within the boundaries of Allaire State Park</td>
<td></td>
</tr>
<tr>
<td>The easterly tributary to Mill Run upstream of Brisbane Lake, located entirely within the boundaries of Allaire State Park</td>
<td></td>
</tr>
<tr>
<td>BASS RIVER STATE FOREST BASS RIVER WATERSHED</td>
<td>BASS RIVER WATERSHED</td>
</tr>
<tr>
<td>Tommy's Branch from its headwaters downstream to the Bass River State Forest Recreation Area service road</td>
<td></td>
</tr>
<tr>
<td>Falkenburg Branch of Lake Absegami from its headwaters to the Lake</td>
<td></td>
</tr>
<tr>
<td>GREENWOOD FOREST CEDAR CREEK WATERSHED</td>
<td></td>
</tr>
<tr>
<td>WILDLIFE MANAGEMENT AREA</td>
<td></td>
</tr>
<tr>
<td>Webbs Mill Branch and tributaries, located entirely within the Greenwood Forest Wildlife Management Area boundaries</td>
<td></td>
</tr>
<tr>
<td>Chamberlain's Branch from its origins to a point 1000 feet west of Route 539</td>
<td></td>
</tr>
<tr>
<td>Those portions of the tributaries to Chamberlain's Branch originating and wholly contained within the boundaries of the Greenwood Forest Wildlife Management Area</td>
<td></td>
</tr>
<tr>
<td>WADING RIVER WATERSHED</td>
<td></td>
</tr>
<tr>
<td>Westerly tributary to the Howardsville Cranberry Bog Reservoir and other tributaries that are located entirely within the boundaries of the Greenwood Forest Wildlife Management Area</td>
<td></td>
</tr>
<tr>
<td>ISLAND BEACH STATE PARK BARNEGAT BAY WATERSHED</td>
<td></td>
</tr>
<tr>
<td>All freshwater ponds in Island Beach State Park</td>
<td></td>
</tr>
</tbody>
</table>
LESTER G. MACNAMARA WILDLIFE MANAGEMENT AREA

GREAT EGG HARBOR RIVER WATERSHED
Hawkins Creek and tributaries and the next adjacent, northern stream and tributaries that enter the Great Egg Harbor River, from their origins downstream to where the influence of impoundment begins.

TUCKAHOE PUBLIC FISHING HUNTING GROUNDS

See LESTER G. MACNAMARA WILDLIFE AND MANAGEMENT AREA.

WHARTON STATE FOREST

MULLICA RIVER WATERSHED
Deep Run and tributaries from their headwaters downstream to Springer's Brook.

Skit Branch and tributaries from their headwaters downstream to the confluence with Robert's Branch.

Tulpehocken Creek and tributaries from their sources downstream to the confluence with Featherbed Branch.

The westerly tributaries to Tulpehocken Creek and those natural ponds within the lands bounded by Hawkins (Bulltown-Hawkins) Rd., Hampton Gate (Tuckerton) Rd., and Sandy Ridge Rd.

Stream in the southeasterly corner of the Wharton State Forest, located between Ridge Rd. and Seaf Weeks Rd. downstream to the boundaries of Wharton State Forest.

Brooks and tributaries to the Mullica River between and immediately to the west of Tylertown and Crowleytown, from their headwaters downstream to the head of tide at mean high water.

The easterly branches of the Batsto River from Batsto Village upstream to the confluence with Skit Branch.

Gun Branch from its headwaters downstream to U.S. Route 206.
DELAWARE RIVER BASIN

ALLAMUCHY STATE PARK  MUSCONETCONG RIVER WATERSHED
All those tributaries to Deer Park Pond and its outlet stream, that are located entirely within the boundaries of Allamuchy State Park

PEQUEST RIVER WATERSHED
All tributaries that are located entirely within Allamuchy State Park and flow into Allamuchy Pond

BELLEPLAIN STATE FOREST  EAST CREEK WATERSHED
All tributaries to Lake Nummi from their origins downstream to the Lake.

Those two tributaries to Savages Run and portions thereof downstream of Lake Nummi, which are located entirely within the Belleplain State Forest boundaries

A stream and its tributaries that originate just south of East Creek Mill Rd., 1.2+ miles north-northeast of Eldora, and are located entirely within the boundaries of Belleplain State Forest

WEST CREEK WATERSHED
The portion of the tributary to West Creek that originates about 0.9 miles southeast of Hoffman's Mill and is located entirely within the boundaries of Belleplain State Forest

Eastern branch of the easterly tributary to Pickle Factory Pond from its origin to its confluence with the western branch

Those tributaries to the stream which enter West Creek approximately 0.5 miles upstream of Hoffman's Mill and which are located entirely within the boundaries of Belleplain State Forest

COLLIERS MILLS WILDLIFE MANAGEMENT AREA  CROSSWICKS CREEK WATERSHED
All tributaries to Lahaway Creek originating in the Colliers Mills Wildlife Management Area north-northeast of Archers Corner, from their origins downstream to the boundaries of the Colliers Mills Wildlife Management Area
DELAWARE WATER GAP NATIONAL RECREATION AREA

DELAWARE RIVER WATERSHED
All tributaries to Flat Brook flowing from the Kittatinny Ridge and located entirely within the boundaries of the Delaware Water Gap National Recreation Area

Rundle Brook upstream of Sussex County Route 615

Smith Ferry Brook

Donkey's Corner Brook

Sambo Island Brook and Pond

Coppermine Brook in Pahaquarry

Dunnfield Creek to Route I-80

DIX WILDLIFE MANAGEMENT AREA

MIDDLE MARSH CREEK WATERSHED
All fresh waters which originate in and are located entirely within the boundaries of the Dix Wildlife Management Area

EDWARD G. BEVAN WILDLIFE MANAGEMENT AREA

MAURICE RIVER WATERSHED
Joshua and Pine Branches of Buckshutem Creek to their confluences with Buckshutem Creek

Gravelly Run downstream to the boundaries of the Edward G. Bevan Wildlife Management Area

NANTUXENT CREEK WATERSHED
Cedar and Mile Branches to Shaw's Mill Pond

DIVIDING CREEK WATERSHED
Those tributaries to Cedar Creek which originate in and are located entirely within the boundaries of the Edward G. Bevan Wildlife Management Area

Those portions of tributaries to Dividing Creek, located entirely within the boundaries of the Edward G. Bevan Wildlife Management Area

FLATBROOK-ROY WILDLIFE MANAGEMENT AREA

FLAT BROOK WATERSHED
The tributary to Little Flat Brook which originates north of the Bevans-Layton Rd., downstream to the first pond adjacent to the Fish and Game headquarters building
Two tributaries to Flat Brook which originate along Struble Rd. in Stokes State Forest, downstream to the confluence with Flat Brook within Flatbrook-Roy Wildlife Management Area boundaries.

**GLASSBORO WILDLIFE MANAGEMENT AREA**

**MAURICE RIVER WATERSHED**

The portion of a branch of Little Ease Run situated immediately north of Stanger Avenue, and entirely within the Glassboro Wildlife Management Area.

First and second easterly tributaries to Little Ease Run north of Academy Road.

**HIGH POINT STATE PARK AND STOKES STATE FOREST**

**CLOVE BROOK WATERSHED**

The second and third northerly tributaries to Clove Brook, those tributaries to Steeny Kill Lake, Steeny Kill Lake, and those downstream of the Lake which originate in High Point State Park, downstream to the confluence with Clove Brook or to the boundaries of High Point State Park.

The northerly tributaries to Mill Brook due west of Steeny Kill Lake, within the High Point State Park boundaries.

**FLAT BROOK WATERSHED**

All surface waters of the Flat Brook drainage within the boundaries of High Point State Park and Stokes State Forest except the following:

1. Saw Mill Pond and Big Flat Brook downstream to the confluence with Flat Brook;
2. Mashipacong Pond and its outlet stream (Parker Brook) to the confluence with Big Flat Brook;
3. Lake Wapalanne and its outlet stream to the confluence with Big Flat Brook;
4. Lake Ocquittunk and waters connecting it with Big Flat Brook;
5. Stony Lake and its outlet stream (Stony Brook) downstream to the confluence with the Big Flat Brook;
6. Kittatinny Lake, that portion of its inlet stream outside the Stokes State Forest boundaries, and its
outlet stream, including the Shotwell Camping Area tributary, to the confluence with Big Flat Brook;

(7) Deer Lake and its outlet stream to Lake Ashroe;

(8) Lake Ashroe, the portions of its tributaries outside the Stokes State Forest boundaries, and its outlet stream to the confluence with Big Flat Brook;

(9) Lake Shawannii and its outlet stream to the confluence with Flat Brook;

(10) Crigger Brook and its tributary to the confluence with Big Flat Brook

SHIMERS BROOK WATERSHED
The portion of Shimers Brook and its tributaries that are located within the boundaries of High Point State Park

JOHNSONBURG NATURAL AREA

PEQUEST RIVER WATERSHED
Mud Pond and its outlet stream, Bear Creek, to the Erie-Lackawanna Railroad trestle, north of Johnsonburg

BRENDAN T. BYRNE STATE FOREST

RANCOCAS CREEK WATERSHED
Deer Park Branch and tributaries near Buckingham, downstream to the confluence with Pole Bridge Branch

Tributaries to the South Branch of Mount Misery Brook located entirely within the boundaries of BRENDAN T. BYRNE State Forest

Cooper Branch and tributaries downstream to Pakim Pond and those tributaries to Coopers Branch downstream of Pakim Pond that are located entirely within the boundaries of BRENDAN T. BYRNE State Forest

Shinns Branch and tributaries located entirely within the boundaries of BRENDAN T. BYRNE State Forest, from their sources to the forest boundary

Jade Run located entirely within the boundaries of BRENDAN T. BYRNE State Forest
<table>
<thead>
<tr>
<th>Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MacDonalds Branch and tributaries located entirely within the boundaries of BRENDAN T. BYRNE State Forest, from their sources to the forest boundary</td>
<td></td>
</tr>
<tr>
<td>MILLVILLE FISH AND GAME TRACT</td>
<td>See EDWARD G. BEVAN WILDLIFE MANAGEMENT AREA</td>
</tr>
<tr>
<td>PASADENA WILDLIFE MANAGEMENT AREA</td>
<td>RANCOCAS CREEK WATERSHED</td>
</tr>
<tr>
<td>PEASELEE WILDLIFE MANAGEMENT AREA</td>
<td>MAURICE RIVER WATERSHED</td>
</tr>
<tr>
<td>WASHINGTON CROSSING STATE PARK</td>
<td>STEELE RUN WATERSHED</td>
</tr>
<tr>
<td>WHITTINGHAM WILDLIFE MANAGEMENT AREA</td>
<td>PEQUEST RIVER WATERSHED</td>
</tr>
</tbody>
</table>

- The two easterly branches of the South Branch of Mount Misery Brook, located entirely within the boundaries of the Pasadena Wildlife Management Area.
- Middle Branch of Muskee Creek from its origin to the boundaries of the Peaselee Wildlife Management Area.
- Cedar Branch of the Manumuskin River, from its origin to the boundaries of the Peaselee Wildlife Management Area.
- Those portions of tributaries to Slab Branch located entirely within the boundaries of the Peaselee Wildlife Management Area.
- That portion of Steele Run, located within the boundaries of Washington Crossing State Park, to the confluence with the westerly tributary.
- Northwesterly tributaries to the Pequest River, including Big Spring, located within the boundaries of the Whittingham Wildlife Management Area southwest of Springdale, from their origins to their confluence with the Pequest River.
<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORTHINGTON STATE FOREST</td>
<td>DELAWARE RIVER WATERSHED: Sunfish Pond and its outlet stream to the Delaware River. All unnamed waters located entirely within the boundaries of the Worthington State Forest.</td>
</tr>
<tr>
<td>DUNNFIELD CREEK WATERSHED</td>
<td>Dunnfield Creek to I-80</td>
</tr>
<tr>
<td>PASSAIC RIVER, HACKENSACK RIVER, NY HARBOR COMPLEX BASIN</td>
<td></td>
</tr>
<tr>
<td>A. S. HEWITT STATE FOREST</td>
<td>WANAQUE RIVER WATERSHED: Portions of Cooley Brook and tributaries which originate and are located entirely within the boundaries of Hewitt State Forest.</td>
</tr>
<tr>
<td></td>
<td>Surprise Lake</td>
</tr>
<tr>
<td></td>
<td>Portions of Green Brook and tributaries which originate and are located entirely within the boundaries of Hewitt State Forest.</td>
</tr>
<tr>
<td></td>
<td>West Pond</td>
</tr>
<tr>
<td>BERKSHIRE VALLEY WILDLIFE MANAGEMENT AREA</td>
<td>ROCKAWAY RIVER WATERSHED: Stephens Brook north of the boundaries of the Berkshire Valley Wildlife Management Area.</td>
</tr>
<tr>
<td>CITY OF NEWARK HOLDINGS AND WAWAYANDA STATE PARK</td>
<td>PEQUANNOCK RIVER WATERSHED: Cedar Pond and all tributaries.</td>
</tr>
<tr>
<td></td>
<td>Hanks Pond and all tributaries.</td>
</tr>
<tr>
<td></td>
<td>Tributary to Pequannock River at Green Pond Junction from its origin downstream to Route 23.</td>
</tr>
<tr>
<td></td>
<td>Tributary joining the main stem of the Pequannock River 3500+ feet southeast of the Sussex-Passaic County line, near Jefferson from its origin to about 2000 feet upstream of the pond.</td>
</tr>
<tr>
<td></td>
<td>Pacack Brook and its tributaries upstream of Canistear Reservoir, located entirely within the boundaries of the Newark watershed and Wawayanda State Park.</td>
</tr>
<tr>
<td></td>
<td>Cherry Ridge Brook and its tributaries north of Canistear Reservoir, located entirely within the</td>
</tr>
</tbody>
</table>
boundaries of the Newark watershed lands and Wawayanda State Park

The southern branch of the easterly tributary to Canistear Reservoir

Pequannock River and tributaries upstream of the confluence with Pacack Brook

The northwestern tributary to Oak Ridge Reservoir

The portion of the westerly tributary to Lake Stockholm Brook, from its origins to about 1000 feet south of the Route 23 Bridge, located entirely within the boundaries of the Newark watershed

Lud-Day Brook downstream to its confluence with the southwestern outlet stream from Clinton Reservoir just upstream of the confluence of the outlet stream and a tributary from Camp Garfield

Brook between Hamburg Turnpike and Vernon-Stockholm Road, downstream to its confluence with Lake Stockholm Brook, north of Rt. 23

<table>
<thead>
<tr>
<th>RARITAN RIVER BASIN</th>
<th>NONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WALLKILL RIVER BASIN</td>
<td></td>
</tr>
<tr>
<td>CITY OF NEWARK HOLDINGS AND WAWAYANDA STATE PARK</td>
<td>LAKE LOOKOUT BROOK WATERSHED</td>
</tr>
<tr>
<td>HAMBURG MOUNTAIN WILDLIFE MANAGEMENT</td>
<td>SAND HILLS BROOK WATERSHED</td>
</tr>
<tr>
<td>Lake Lookout, Lake Lookout Brook and tributaries from its headwaters in the Newark City holdings, downstream through the State-owned Wawayanda State Park to the confluence with the outlet stream from Lake Wawayanda</td>
<td></td>
</tr>
<tr>
<td>The upstream portion of Sand Hills Brook, including the pond at its headwaters, located entirely within the boundaries of the Hamburg Mtn. Wildlife Management Area</td>
<td></td>
</tr>
</tbody>
</table>
BLACK CREEK WATERSHED
All those portions of three tributaries to Black Creek originating in the Hamburg Mtn. Wildlife Management Area, from their origin downstream to the Management Area boundaries

FRANKLIN POND CREEK WATERSHED
The first tributary to Franklin Pond Creek just south of Hamburg Mountain, flowing toward the Wallkill River and located entirely within the Hamburg Mtn. Wildlife Management Area

HAMBURG CREEK WATERSHED
The third tributary just southwest of Hamburg Mountain, which flows toward the Wallkill River and is located entirely within the Hamburg Mtn. Wildlife Management Area

HIGH POINT STATE PARK
CLOVE RIVER WATERSHED
Those portions of the two northernmost tributaries to Clove River which are located entirely within the boundaries of High Point State Park, and are immediately east of Lake Marcia

RUTGERS CREEK WATERSHED
The Cedar Swamp headwaters of the tributary to Rutgers Creek, located entirely within the boundaries of High Point State Park, just south of the New Jersey-New York state line

SUSSEX BOROUGH WATER SUPPLY LAND
LAKE RUTHERFORD WATERSHED
Lake Rutherford and tributaries, located northwest of Colesville

WAWAYANDA STATE PARK
LAUREL POND WATERSHED
Laurel Pond, and its outlet stream and tributaries downstream to the outlet stream from Lake Wawayanda

(i) The following are the Outstanding National Resource Waters of the State:

Table 7

1. FW1 Waters; and
2. PL Waters.