
DEPARTMENT OF ENVIRONMENTAL PROTECTION

LAND USE MANAGEMENT

WATER MONITORING AND STANDARDS

Surface Water Quality Standards

Proposed Amendments to N.J.A.C. 7:9B-1.4 and 1.15

Authorized By:	Lisa P. Jackson, Commissioner, Department of Environmental Protection
Authority:	N.J.S.A. 58:10A-1 *et seq*., 58:11A-1 *et seq*., N.J.S.A. 13:1D-1 *et seq*.
Calendar Reference	See Summary below for explanation of exception to calendar requirement.
DEP Docket Number:	11-07-04/557
Proposal Number:	

Public hearing concerning this proposal will be held on **June 28, 2007** from

3:00 PM to 5:00 PM or close of testimony which ever occurs first and
6:00 PM to 7:00 PM or close of testimony which ever occurs first
at

Rutgers EcoComplex
Environmental Research and Extension Center
1200 Florence-Columbus Rd.
Bordentown, NJ 08505-4200
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Submit written comments by July 20, 2007 to:

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New Jersey Department of Environmental Protection
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The New Jersey Department of Environmental Protection (Department) requests that commenters submit comments on disk or CD as well as paper. Submission of a disk or CD is not a requirement. The Department prefers Microsoft Word 6.0 or above. MacIntosh formats should not be used. Each comment should be identified by the applicable N.J.A.C. citation, the commenter's name and affiliation following the comment.

Copies of this rule proposal can be downloaded electronically from the Department's web page at http://www.state.nj.us/dep/rules.

The agency proposal follows:

SUMMARY

As the Department has provided a 60-day comment period on this notice of proposal, this proposal is excepted from the rulemaking calendar requirement pursuant to N.J.A.C. 1:30-3.3(a)5.

The Department is proposing amendments to the Surface Water Quality Standards (SWQS) at N.J.A.C. 7:9B. Among proposed amendments, the Department is proposing to amend N.J.A.C. 7:9B-1.4 to revise the definition of "category one waters" and introduce new definitions for "Exceptional Ecological Significance", "Exceptional Fisheries Resource(s)", "Exceptional Water Supply Significance", and "HUC 14". Proposed amendments would additionally upgrade the antidegradation designation of various waterbodies, as described in more detail below. As a result of these upgrades, the total river miles designated as Category One will increase by approximately 910 river miles. Other amendments are additionally proposed as discussed in the more detail below.

The Department administers the SWQS for the protection of high quality water and to restore impaired waters. The Department develops and administers the SWQS pursuant to the Water Quality Planning Act (WQPA), N.J.S.A. 58:11A-1 *et seq*. and the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 *et seq*. The SWQS are further developed and

administered in conformance with requirements of the Federal Water Pollution Control Act, 33 U.S.C. §1251 *et seq*., commonly known as the Clean Water Act (CWA), and the Federal regulatory program established by the United States Environmental Protection Agency (USEPA) at 40 CFR Part 131. The SWQS include general requirements, use designations, classifications, antidegradation categories, and water quality criteria applicable to the surface waters of the State. The SWQS are established to address the Department's responsibilities to conduct a continuous planning process pursuant to Section 303 of the CWA, 33 U.S.C. § 1313, and the WQPA, N.J.S.A. 58:11A-1 *et seq*. The SWQS establish the designated uses to be achieved for individual waterbodies and specify the water quality criteria necessary to achieve these uses. Designated uses include drinking water, propagation of fish and wildlife, recreation, agricultural and industrial supplies, and navigation. As part of this process, the Department establishes stream classifications and an antidegradation designation for each waterbody. Changes to the stream classification, designated uses, water quality criteria, and antidegradation designation are accomplished through rulemaking.

New Jersey has three levels of antidegradation protection in its Surface Water Quality Standards. The antidegradation designation of a waterbody determines if any lowering of water quality toward criteria may be allowed.

The first, most protective tier of antidegradation protection is assigned to waterbodies that qualify as Outstanding National Resource Waters (ONRW). ONRW include freshwater in preserved open space (FW1 or nondegradation waters) and Pinelands waters (PL). FW1 or nondegradation waters are maintained in their natural state and not subject to any man-made wastewater discharges or increases in runoff from anthropogenic activities. PL waters are maintained in their natural state and the Department is not allowed to approve any activity which, alone or in combination with any other activities, might cause changes, other than toward natural water quality.

The second tier of antidegradation protection is Category One. These waters are protected from measurable changes in water quality due to their unique characteristics as will be described further below.

The third tier antidegradation protection is Category Two. The same water quality criteria are applicable to Category One and Category Two waters. While some level of lowering of existing quality better than criteria based upon a social and/or economic justification may be allowed in Category Two waters, in all cases existing and designated uses must be protected and waterbodies that are generally worse than criteria must be improved to meet water quality criteria. All waterbodies not designated as ONRW or Category One receive the Category Two antidegradation designation.

The SWQS are implemented through the New Jersey Pollutant Discharge Elimination System (NJPDES) rules at N.J.A.C. 7:14A, Freshwater Wetlands Protection Act rules at N.J.A.C. 7:7A, Coastal Zone Management rules at N.J.A.C. 7:7E, Flood Hazard Area Control rules at N.J.A.C. 7:13, and Water Quality Management Planning rules at N.J.A.C. 7:15.

Category One waters are defined as waters protected 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 resources. Most of the Category One waters were designated in 1985 and did not specify the basis for the upgrades. Between 1985 and 2002, the Department designated waterbodies as Category One based on trout production.

Since 2002, in addition to protecting waters with the higher protection afforded by Category One designation based upon the presence of trout production, the Department has more closely analyzed waters for Category One designation under the other characteristics delineated in the definition. In several rulemakings since that time, the Department has upgraded the

antidegradation designation of several waterbodies based upon a finding of exceptional ecological significance. These upgrades have been based upon utilization of an integrated ecological assessment of data including benthic macroinvertebrate data, instream habitat, fish community, chemical water quality data, and sightings and habitat of aquatic-dependent endangered and threatened species (see, for example, 35 N.J.R 2264(b), 36 N.J.R 3565(c)). The Department has additionally upgraded several streams and reservoirs based upon exceptional water supply significance (see, for example, 35 N.J.R 2264(b), 37 N.J.R 2251(a)).

Based upon the experience gained in the review and analysis of waterbodies for potential Category One designation, the Department is proposing to establish new definitions. These new definitions better define the data and criteria utilized to identify waterbodies that qualify for consideration for upgrade to Category One designation. These definitions are data driven and will better serve to identify waters that are truly exceptional. The Department is proposing amendments to the definition of "category one waters" and introducing new definitions for "Exceptional Ecological Significance", "Exceptional Fisheries Resource(s)", "Exceptional Water Supply Significance", and "HUC 14".

A discussion of the specific amendments proposed follows:

N.J.A.C. 7:9B-1.4 - Definitions

At N.J.A.C. 7:9B-1.4, the Department is proposing to amend the definition of "category one waters". The current definition has not been revised in any significant way since it was adopted in 1985. The Department is proposing to retain the first portion of the definition, "Category One Waters means those waters designated in the tables in N.J.A.C. 7:9B-1.15(c) through (g), 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." The only amendment proposed to this portion to the definition is to the citation where Category One waters are identified in the classification tables. The existing citation to N.J.A.C. 7:9B-1.15(c) through (h) is being corrected to refer to (c) through (g) because the table in (h) contains a list of FW1 waters and

does not include any Category One waters. The Department is reorganizing the definition of "category one waters" because it believes it is necessary to clarify the purpose and bases for designating waters as Category One. The definition will continue to include "exceptional ecological significance", "exceptional water supply significance", "exceptional fisheries resource(s)", and exceptional recreational resource(s)" as the basis for Category One designation. The category one definition will retain the purpose for designating waters as Category One, which is to protect the aesthetic value which includes color, clarity and scenic setting. In addition, the Department is adding "ecological integrity" as another purpose for designating waters as Category One. The Department is also proposing to delete portions of the definition which include examples of the types of waters that can be upgraded. The proposed new definition provides a more complete description of the characteristics that qualify a waterbody for consideration for Category One upgrade.

To better define the types of waters that the Department considers may qualify for Category One designation, the Department is proposing several new definitions of terms contained within the existing and amended definition of "category one waters". As indicated above, these new definitions include: "Exceptional Ecological Significance", "Exceptional Fisheries Resource(s)", and "Exceptional Water Supply Significance".

Exceptional Ecological Significance

The Department is proposing a new definition for "exceptional ecological significance." Exceptional ecological significance includes two ecological bases that a waterbody may satisfy to be considered for Category One protection. The first is based on the documented presence of a listed endangered or threatened species and its habitat. The second is based on the presence of an exceptional aquatic community. These two ecological bases rely on different data and information to demonstrate exceptional ecological significance, as further explained below.

The primary objective of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Waterbodies that support and maintain a

balanced community of organisms having species composition, diversity, and functional organization comparable to that of the natural habitat of the region achieve this goal. Therefore, the Department has determined that waterbodies with optimal habitat, good water quality, and biological integrity are waterbodies of exceptional ecological significance and should be protected and maintained because of these qualities.

Endangered or Threatened species may occur in a waterbody which does not meet the conditions listed above. The natural conditions present that support the Endangered or Threatened species may represent a different but also exceptional ecological condition. Therefore, the Department has determined that it is appropriate to consider waterbodies which support an endangered or threatened species as a waterbody of exceptional ecological significance to be protected from measurable changes in water quality independent of other water quality characteristics.

Exceptional Ecological Significance - Endangered or Threatened Species (E&T)

The Department is now proposing that a waterbody with the presence of suitable habitat verified by the Department to support Bog Turtle, Dwarf Wedgemussel, Brook Floater, Triangle Floater, Green Floater, Eastern Pondmussel, or Eastern Lampmussel, with a documented occurrence(s) of at least one of these species verified by the Department are eligible for consideration for Category One antidegradation designation upgrade. To qualify for consideration for Category One status as a waterbody of exceptional ecological significance, requires that the waterbody have suitable habitat verified by the Department to support on of these aquatic dependent E&T species and documented occurrence(s) verified by the Department. These species include several freshwater mussels and Bog Turtle. Water quality, water quantity and in-stream habitat may adversely affect the growth, reproduction and feeding of these species and if not maintained could lead to the extirpation of these endangered or threatened species. The Department believes that the designation of waterbodies that support these species will maintain the existing water quality and therefore, continued viability of these species. For a detailed description of each species and its habitat see: http://www.nj.gov/dep/fgw/ensphome.htm.

To qualify for consideration for Category One status as a waterbody of exceptional ecological significance based upon endangered or threatened species, the waterbody must have suitable habitat verified by the Department to support Bog Turtle, Brook Floater, Dwarf Wedgemussel, Eastern Pondmussel, Eastern Lampmussel, Green Floater, and/or Triangle Floater and documented occurrence(s) of at least one of these species verified by the Department.

The use of a waterbody by E&T species is an existing use that must be protected. The United States Fish and Wildlife Service (USFWS), in cooperation with the United States Environmental Protection Agency (USEPA), are evaluating existing aquatic life criteria to ensure the protection of Federally listed E&T species. Until a determination is made that the existing criteria do not adequately protect a Federally listed species, the Department and the USEPA believe that the existing water quality criteria are adequate. However, for certain aquatic dependent E&T species, the development of water quality criteria to ensure and protect growth, reproduction and feeding of these species will be extremely difficult due to the rarity of the species. The Department is now proposing that a waterbody with the presence of suitable habitat verified by the Department to support Bog Turtle, Dwarf Wedgemussel, Brook Floater, Triangle Floater, Green Floater, Eastern Pondmussel, or Eastern Lampmussel, with a documented occurrence(s) of at least one of these species verified by the Department are eligible for consideration for Category One antidegradation designation. Visit http://www.nj.gov/dep/fgw/ensphome.htm for a detailed description of each species and its habitat. The Department may determine and incorporate through rulemaking other E&T species that warrant this level of protection in the future.

The occurrence of endangered or threatened species is verified by the Department and entered into the Natural Heritage Database. The Natural Heritage Database is a continuously updated inventory of rare plants and animal species and representative ecological communities in New Jersey. It is the State's most comprehensive, centralized source of information on rare plants, animals, and natural communities. The Database is a compilation of information from a

broad range of sources including museum and herbarium collection records, publications, knowledgeable experts, and fieldwork. It contains information collected by the Department's Office of Natural Lands Management on rare plants, animals, and ecological communities as well as data on rare animals provided by the Department's Endangered and Nongame Species Program (ENSP). More information is available at: http://www.nj.gov/dep/parksandforests/natural/heritage/index.html. The public may report rare wildlife sightings to the ENSP. For additional information, visit www.nj.gov/dep/fgw/ensp/.

The occurrence information from the Natural Heritage Database is used by the Department to develop the Landscape Maps. The Landscape Maps delineate the presence of documented habitat for endangered, threatened, and priority nongame species. Habitat is ranked based on the conservation status of the relevant species and occurrences. Information on documented occurrences, as well as reviewing the locations of suitable habitat as described in the Landscape Maps, determine whether each waterbody supports an endangered or threatened species. Information on the Landscape Maps can be found at http://www.njfishandwildlife.com/ensp/landscape/index.htm.

Information on documented occurrences and locations of suitable habitat verified by the Department to support Bog Turtle, Dwarf Wedgemussel, Brook Floater, Triangle Floater, Green Floater, Eastern Pondmussel, or Eastern Lampmussel will be sufficient and no other data is necessary to support a Category One upgrade.

Exceptional Ecological Significance - Exceptional Aquatic Community

Where there are no documented occurrences of Bog Turtle, Dwarf Wedgemussel, Brook Floater, Triangle Floater, Green Floater, Eastern Pondmussel, or Eastern Lampmussel, a waterbody may still qualify for consideration for Category One status as waterbody of exceptional ecological significance based on the waterbody's ability to support an exceptional aquatic community. A waterbody's ability to support a wide variety of aquatic species is a good indication of a healthy aquatic ecosystem.

The Department determined that a variety of physical, chemical, and biological data are necessary to demonstrate if a stream segment exhibits characteristics of an exceptional aquatic community. Accordingly, the proposed definition for "exceptional ecological significance," requires analysis of several measures of healthy ecosystem before a waterbody can be considered for upgraded based on an exceptional aquatic community. Particularly, in all cases the benthic macroinvertebrate community must be classified as nonimpaired as measured by the Department's Rapid Bioassessment Protocols, further explained below. In addition, to receiving a nonnimpaired benthic macroinvertebrate rating, the waterbody must demonstrate exceptional ecological value in two of the following factors: Instream habitat, fish community, water quality, or impervious surface. Table A describes the ecological factors and the results which indicate exceptional value.

Table A. Exceptional Aquatic Community

Ecological Values		
Factor/Indicator	**Exceptional**	**Not Exceptional**
Benthic macroinvertebrate	Nonimpaired	Moderately or Severely Impaired
Instream Habitat	Optimal	Suboptimal, Marginal, or Poor
Fish community	Excellent	Good, Fair, or Poor
Water Quality (DO, Temp., TP, & TSS)	All parameters meeting SWQC	One or more parameters not meeting the surface water quality criteria
Impervious Surface	HUC-14 ≤ 5 sq. miles drainage areas = ≤ 2% IS HUC-14 > 5 sq. miles drainage areas = < 10% IS	HUC-14 ≤ 5 sq. miles drainage areas = > 2% IS HUC-14 > 5 sq. miles drainage areas = ≥ 10% IS

Benthic Macroinvertebrates

The biological health of New Jersey's wadeable streams can be assessed based upon the resident in-stream benthic macroinvertebrate community. Benthic macroinvertebrates are primarily benthic (bottom-dwelling) fauna easily viewed with the naked eye. These fauna are generally ubiquitous in freshwater and estuarine environments, and play an integral role in the aquatic food web. Insects (largely immature forms) are especially characteristic of freshwaters; other major groups include worms, mollusks (snails, clams) and crustaceans (scuds, shrimp,

water fleas, etc.). Species comprising the in-stream community occupy various niches, based on functional adaptation or feeding mode (for example, predators, filter or detritus feeders, scavengers, etc.). Their presence and relative abundance is governed by environmental conditions (which may determine available food supply), and by pollution tolerance levels of the respective species. Benthic macroinvertebrate communities integrate the effects of short-term environmental variations and provide an ecological measure of fluctuating environmental conditions. Since benthic macroinvertebrates have limited migration patterns, or a sessile mode of life, they are particularly well-suited for assessing site-specific ecosystem health. Benthic macroinvertebrate assemblages are made up of species that constitute a broad range of trophic levels and pollution tolerances, thus providing strong information for interpreting cumulative effects. Sampling is relatively easy, requires few people and inexpensive gear, and has minimal detrimental effect on the resident biota. This makes benthic macroinvertebrate assemblages good indicators of localized conditions.

Each benthic macroinvertebrate sample is collected using the methods described in the Department's Rapid Bioassessment Protocols (RBP). For more information see http://www.state.nj.us/dep/wms/bfbm/rbpinfo.html. Each sample is analyzed to determine the number of individuals by family, genus, and species. The data analysis scheme uses five biometrics to calculate a New Jersey Impairment Score (NJIS). Biometrics are predictable measures of the benthic macroinvertebrate community's response to stress, including water quality changes and habitat degradation. Each biometric measures a different component of community structure and has a different range of sensitivity to pollution stress. The Department's current NJIS (Table 1 – Rapid Bioassessment Protocol) is based on family-level taxonomy and uses the following metrics:

1. **Total Taxa or Taxa Richness** (number of families) - an index of community diversity; the number usually increases with increasing water or habitat quality.
2. **Percent Contribution of the Dominant Family** (to the total number of families) - dominance by relatively few species/families would indicate environmental stress.

3. **Number of EPT Families** — the number of families represented within the orders Ephemeroptera (mayflies), Plecoptera (stoneflies) and Trichoptera (caddisflies), which are generally pollution-sensitive.
4. **Percent EPT** (of the total number of individuals) — would increase with increasing water quality.
5. **Hilsenhoff (Family) Biotic Index** — tolerance values of 0 - 10 are assigned to individual families (zero = most intolerant); these values are used in the formula for calculating the Biotic Index which summarizes the overall pollution tolerance of the entire benthic macroinvertebrate community with a single value.

Each biometric is scored a 6, 3, or 0. The scores for each biometric are then added together to calculate the New Jersey Impairment Score. A sample result with a NJIS of 24 to 30 is classified as nonimpaired. Results indicating an NJIS score of 6 or less are classified as severely impaired, while results with an NJIS score between 9 and 21 indicate moderate impairment. The Department is developing new indices which assess the biological condition with greater precision. These new indices will be calculated using genus-level taxonomy, reflect ecoregional differences, and in some cases, are corrected to address variation in stream order (headwaters vs. large streams). As these new indices are finalized, the Department will also identify the scoring ranges which classify the relative biological condition of the benthic community within the stream.

The Department's Water Monitoring and Standards Program, samples over 800 stations for benthic macroinvertebrates and instream habitat. Streams are sampled once every five years on a rotating basin schedule. A detailed description of the monitoring program and copies of resulting reports are available from the Department's website at http://www.state.nj.us/dep/wms/bfbm/. However, there may be waterbodies not yet sampled and the Department will consider data generated by other groups provided that information has been or will be submitted pursuant to the data solicitation notice for the development of the Integrated Water Quality Monitoring and Assessment Report (Integrated Report) discussed below. The

Department will also consider data that meets the requirements specified for Tier D under the New Jersey Watershed Watch Network (http://www.nj.gov/dep/watershedmgt/volunteer_monitoring.htm).

To qualify for Category One designation based upon exceptional ecological significance, a benthic macroinvertebrate sample is mandatory and the result must indicate a nonimpaired benthic macroinvertebrate community. A nonimpaired benthic macroinvertebrate is characterized by a diverse macroinvertebrate community, balanced taxa groups (no taxa being overly dominant) and good representation of pollution intolerant taxa. If the benthic macroinvertebrate results indicate an impaired condition, no further evaluation will be conducted (see Table A for an explanation of eligible ecological factors).

In addition to possessing a nonimpaired benthic macroinvertebrate community to qualify for consideration as Category One designation, a waterbody must demonstrate exceptional value in two of the following factors, instream habitat, fish community, chemical water quality, and/or impervious surface. These factors are discussed in more detail below.

In-stream Habitat Assessment

In addition to determining the condition of the benthic macroinvertebrate community, it is important to analyze the health of the habitat available to continue to sustain the benthic macroinvertebrate community. The physical attributes of habitat play an integral role in the health of the benthic macroinvertebrate community. Stream habitat assessment includes the evaluation of the in-stream substrate, channel morphology, bank structural features, and riparian vegetation. The assessment encompasses an area of 100 to 200 feet around each benthic macroinvertebrate sampling site. The matrix used to assess habitat quality is based on key physical characteristics of the waterbody and surrounding land, particularly the subwatershed of the site under investigation. All of the habitat parameters evaluated are related to overall aquatic life use and are a potential source of limitation to the aquatic biota. The qualitative habitat assessment, based on a version of the USEPA RBP calibrated for New Jersey streams, results in

each station being assigned one of four condition categories; optimal, sub-optimal, marginal, or poor (see http://www.state.nj.us/dep/wms/bfbm/rbpinfo.html).

Instream habitat is sampled as indicated in the discussion of benthic macroinvertebrates above. The Department will consider data generated by other groups that has been or will be submitted pursuant to the data solicitation notice for the development of the Integrated Report. This includes volunteer data that meets the requirements specified for Tier D under New Jersey Watershed Watch Network (http://www.nj.gov/dep/watershedmgt/volunteer_monitoring.htm).

Under the exceptional aquatic community part of the exceptional ecological significance definition, an in-stream habitat which represents an optimal condition can be used as part of the justification for Category One designation based on exceptional ecological significance. An optimal habitat is identified by a variety of habitats within the stream, stable banks with little siltation or channelization, a variety of velocities and stream depths, a riparian zone covered by native vegetation where plants are allowed to grow naturally, and an unimpacted riparian zone. If the habitat assessment indicates a result less than optimal, then other ecological factors are necessary to support the Category One designation (see Table A for an explanation of eligible ecological factors).

Fish Community

Fish are good indicators of long-term stream health and broad habitat conditions because they are relatively long-lived and mobile. Fish assemblages generally include a range of species that represent a variety of trophic levels (omnivores, herbivores, insectivores, planktivores, piscivores). Fish tend to integrate effects of lower trophic levels; thus, fish assemblage structure is reflective of integrated environmental health.

The Department's Water Monitoring and Standards Program, in cooperation with the Division of Fish and Wildlife developed a Fish Index of Biotic Integrity (FIBI) to evaluate the fish community. The FIBI is another ecological indicator used by the Department to evaluate the

environmental health of a waterbody. FIBI is based upon a statistical evaluation of fish species observed at selected stream stations and measures the health of a stream based on multiple attributes of the resident fish assemblage. The current FIBI measures the following metrics as part of the multi-metric analysis:

1. total number of fish species,
2. number of benthic insectivorous species,
3. number of trout and/or sunfish species,
4. number of intolerant species,
5. proportion of individuals as white suckers,
6. proportion of individuals as generalists,
7. proportion of individuals as insectivorous cyprinids,
8. proportion of individuals as trout or proportion of individuals as piscivores (top carnivores)- excluding American Eel,
9. number of individuals in the sample, and
10. proportion of individuals with disease or anomalies (excluding blackspot disease).

The Department's Water Monitoring and Standards Program established a network of 100 fixed stations located in Northern New Jersey. Data are currently being collected for the planned expansion of the network to include both portions of southern New Jersey and the State's headwater streams with the goal of having a statewide 200 station network. These stations will be sampled once every five years on a rotating basin schedule. As a result of the multi-metric analysis, stations are ranked and classified as excellent, good, fair, or poor. A detailed description of the monitoring program and copies of reports are available from the Department's website at http://www.state.nj.us/dep/wms/bfbm/fishibi.html.

Under the exceptional aquatic community part of the exceptional ecological significance definition, only waterbodies with an excellent fish community based on the FIBI can be used as part of the justification for Category One upgrade. An excellent FIBI rating is assigned to a waterbody with minimal human disturbance, with regionally expected species for the habitat and stream size, pollution intolerant families, and a balanced trophic structure. If the FIBI represents something less than excellent conditions, then other ecological factors are necessary to support the Category One designation (see Table A for an explanation of eligible ecological factors).

Chemical Water Quality Monitoring Data

To implement the Clean Water Act, the Department has established water quality standards. These standards are aimed at translating the broad goals of the CWA into waterbody-specific objectives. Water quality criteria specify the acceptable levels of individual pollutants that, if met, will generally protect the designated use of the water. The Department has established water quality criteria at levels that protect aquatic life use. Accordingly, a violation of an aquatic life criterion can have a negative impact and threaten viability of the aquatic community and is not consistent with an exceptional waterbody. For purposes of determining whether a waterbody supports an exceptional aquatic community, the Department has decided to consider the water quality parameters of dissolved oxygen, temperature, total phosphorus, and total suspended solids. These parameters are important to maintain a healthy and balanced aquatic life and are readily monitored. Because of their importance, the Department has determined that criteria for all of these parameters must be met for this data to serve as part of the basis for upgrading the waterbody to Category One status.

The Department's Water Monitoring and Standards Program samples water quality at monitoring stations located throughout the State and compares these monitoring results with the adopted water quality criteria as described in the Integrated Water Quality Monitoring and Assessment Methods Document. This document describes the number of samples, frequency of collection, and the conditions necessary to assess compliance with water quality criteria. The Department publishes its findings in the Integrated Water Quality Monitoring and Assessment Report. If monitoring and assessment indicate that a waterbody is impaired by one or more pollutants, it is placed on the Impaired Waters List, also known as the 303(d) List. The Department is required to develop a strategy for those waterbodies identified as impaired, that will lead to attainment of water quality criteria. More information on other sources of data used to develop the Integrated Report, monitoring results and assessment decisions is available at http://www.state.nj.us/dep/wms.

The Department will consider data generated by other agencies that has been or will be submitted pursuant to the data solicitation notice for the development of the Integrated Report as well as volunteer data that meets the requirements specified for Tier D under New Jersey Watershed Watch Network (http://www.nj.gov/dep/watershedmgt/volunteer_monitoring.htm).

Under the exceptional aquatic community part of the exceptional ecological significance definition, if water quality data indicates an exceedence for dissolved oxygen, temperature, total suspended solids, or total phosphorus, the ecological value is not considered exceptional and can not be used as part of the justification for Category One based on exceptional ecological significance (see Table A for an explanation of eligible ecological factors).

Impervious Surfaces

Impervious surfaces are identified largely, but not exclusively, as roadways, parking lots, and rooftops. Impervious surfaces impede the infiltration of rainfall into the soil and by doing so increase the amount of stormwater runoff from the land. Typical detrimental impacts associated with increasing amounts of impervious surface include: higher peak stream flows resulting in increased stream bank erosion, channel enlargement and sediment production; lower stream base flows resulting in biological impairment and poor aquatic community integrity; elevated stream temperatures due to runoff from heated pavement and rooftops; and the introduction of a variety of pollutants into the receiving waterbody, including such things as petroleum products, metals, nutrients, and pesticides and herbicides.

Impervious surface was selected as an additional evaluation factor because researchers have consistently shown a strong relationship between the percent impervious surface in a watershed and the watershed's overall health. Ten percent imperviousness, typically yields demonstrable loss of aquatic system function. (Booth and Jackson (1994), *Urbanization of aquatic systems-degradation thresholds and the limits of mitigation. Effects of Human Induced Changes on Hydrologic Systems.* American Water Resources Association. June 1994, 425 – 434).

Goetz et al., indicated "…the overall proportion of impervious cover throughout the watershed was the overriding factor in predicting the health of streams in small watersheds." (Goetz, Scott J., Wright, Robb K., Smith, Andrew J., Zinecker, Elizabeth, and Schaub, Erika. 2003. *IKONOS Imagery For Resource Management: Tree Cover, Impervious Surfaces, And Riparian Buffer Analyses In The Mid-Atlantic Region*. Elsevier Inc. Remote Sensing of Environment, 88 195-208). In addition, Snyder et al., indicated "When considering only the composition of land cover within a watershed, the percent ISA (impervious surface area) was the primary predictor of stream health." (Snyder, Marcia N., Goetz, Scott J., and Wright, Robb K. June, 2005. *Stream Health Rankings Predicted by Satellite Derived Land Cover Metrics.* Journal of American Water Resources Assoc. 41 (3): 659-677). These are but a few of the many studies that similarly concluded the importance of the percent impervious surface to the health and sustainability of aquatic systems and their biota. In general, the greater the amount of impervious surface in the subwatershed, the more likely the aquatic community is adversely affected.

Subwatersheds less than five square miles in size are considered headwaters whose biological populations have been found to differ from those in larger (greater than five square miles) watersheds. Some of the biological populations in these smaller, headwater stream watersheds have been shown to be more sensitive to lower levels of impervious surface. Other research found that brook trout were not present when the watershed had greater than two percent impervious surface. (Boward, D., Kazyak, P., Stranko, S., Hurd, M., and Prochaska, A. 1999. *From the mountains to the sea: The state of Maryland's freshwater streams*. U.S. Environmental Protection Agency. Office of Research and Development. EPA/903/R-99/023. 54pp).

This calculation of impervious surface can be conducted at a Subwatershed level (Hydrologic Unit Code (HUC) 14) or even smaller tributary watershed. A watershed's overall "ecological infrastructure," which includes waterways, would most likely still be intact, and

therefore remain of exceptional ecological value when the impervious surface is relatively low. Any amount of impervious surface will begin to have some effect on a watershed, but the evidence of such impacts may be more subtle and initially much less noticeable in larger subwatersheds. Because of the relationship between the impacts of impervious surface and watershed size, the Department has proposed the establishment of two thresholds for impervious surface based on the watershed size.

The Department has determined that the ecological factor based on impervious surface must be two percent or less for subwatersheds (HUC 14) located in headwaters with drainage less than five square miles. For subwatersheds (HUC 14) with drainage greater than five square miles, the ecological factor based on impervious surface must be 10 percent or less. Impervious surface data is available in the Department's latest land use land cover layer which can be downloaded from the Department's Website at http://www.nj.gov/dep/gis/.

Under the exceptional aquatic community part of the exceptional ecological significance definition, if the impervious surface is more than two percent for a subwatershed (HUC 14) which is less than five square miles or more than 10 percent for a HUC 14 which is greater than five square miles, impervious surface is not considered exceptional and can not be used as part of the justification for Category One based on exceptional ecological significance (see Table A for an explanation of eligible ecological factors).

Exceptional Fisheries Resource(s)

The Department is proposing a new definition for "exceptional fisheries resource(s)." Trout production waters have historically been upgraded to Category One based on the existing definition of Category One. The new definition of exceptional fisheries resource(s) includes waterbodies confirmed by the Department as supporting trout production and classified as FW2-TP. Waterbodies where trout can complete their life cycle, including reproducing, in a natural habitat are classified by the Department as FW2-TP. Wild trout tend to be more colorful, challenging to catch and provide a more desirable trout angling opportunity without the stocking

and hatchery rearing costs. The Department has determined that streams classified as FW2-TP are exceptional fisheries resources and qualify for Category One designation.

Exceptional fisheries resource(s) may also include waterbodies approved by the Department for unrestricted shellfish harvest pursuant to the Shellfish Growing Water Classification rules at N.J.A.C 7:12. Shellfish harvest classifications are established based on water quality monitoring conducted by the Department's Water Monitoring and Standards Program. The State of New Jersey has invested heavily in the upgrade of wastewater treatment in its coastal waters. The water quality improvements achieved as a result of these upgrades, enabled the Department to reclassify waters as fully approved for shellfish harvest. The shellfish industry represents a significant portion of New Jersey's coastal economy with an estimated dockside value of 80 million dollars per year. Therefore, the Department has determined that fully approved shellfish areas qualify are exceptional fisheries resources and qualify for Category One designation.

Exceptional Water Supply Significance

The Department is proposing a new definition for "exceptional water supply significance." Exceptional water supply significance includes water supply systems that serve a population greater than 100,000, including any reservoirs and their natural tributaries from the source to the reservoir.

The population in New Jersey is expected to increase by nearly one million in the next 20 years and by nearly two million in the next 40 years. Some of this population increase can be expected to be in close proximity to the reservoirs and their feeder streams. As the State's population increases in the decades ahead, the demand for a safe and plentiful supply of drinking water will also increase.

Experience dictates that with increases in population, increases in point and nonpoint source pollutant loadings to the waters of the State are expected. Previous investigations have

concluded that anthropogenic sources of pollutants negatively affect the quality of water in reservoirs. Some of the State's purveyors are not allowed to divert water from the rivers during the summer months due to low flow conditions. Some purveyors also choose not to divert water from their primary available river supply due to less-than-desirable quality and, as a result, have become more reliant on higher quality, but less plentiful, sources. It is essential that initiatives are put into place to protect the State's drinking water supplies.

Impairment of existing reservoirs and their feeder streams would result in the premature need for alternative water supplies. In New Jersey, development of new water supply reservoirs is unlikely as the land most conducive to reservoir development has already been developed. Thus it is essential that, in addition to protecting existing reservoirs, maximum protection be provided to the natural tributaries and feeder streams of the reservoirs as well.

Category One Waters

The existing and amended definition of "category one waters" both recognize exceptional recreational significance as one of the bases that may warrant consideration for Category One upgrade. The Department is not proposing a definition for exceptional recreational significance or identifying any factors that may make a waterbody eligible for an upgrade as a waterbody of exceptional recreational significance at this time. The Department is seeking input on factors that may be considered for inclusion in such a definition. Inclusion of any factors determined to be appropriate and would be the subject of future rulemaking. Factors that might be utilized to identify waterbodies for Category One designation based on exceptional recreation significance could include the presence of open space, designated bathing beaches, water quality fish stocking events, canoe, kayak, and/or boat rentals, fishing piers, boat launches, and designation as a National Wild and Scenic River. Until a definition is adopted for waters that qualify for Category One based on exceptional recreational significance, the Department will not upgrade waters based on this basis.

HUC 14

The Department is proposing a new definition for "HUC 14" or "hydrologic unit code 14." This term refers to a specific hydrologic area as delineated within New Jersey by the United States Geological Survey (USGS). The hydrologic code system starts with the largest possible drainage area and progressively smaller subdivisions of the drainage area are delineated and numbered in a nested fashion. A HUC 14 is a drainage area or subwatershed with a hydrologic unit code designation with 14 numbers. There are currently over 900 HUC 14 subwatersheds in New Jersey.

N.J.A.C. 7:9B-1.15 Surface water classifications for the waters of the State of New Jersey

The Department is proposing Category One protection for several waters totaling approximately 910 river miles based on exceptional ecological significance, exceptional fisheries resource, and exceptional water supply significance. The stream classifications (FW2-NT, FW2-TM, and FW2-TP) for these proposed Category One upgrades will remain the same.

Portions of Oldmans Creek, Salem River, and Toms River are being upgraded to Category One based on freshwater benthic macroinvertebrates or freshwater E&T species. The SE classification applies to waterbodies with salinity concentration greater than 3.5 parts per thousand at mean high tide. Since the benthic macroinvertebrates or E&T species documented for these upgrades are freshwater species and are not present in saline conditions, the Department is proposing to delete the saline classification (SE1) from the FW2-NT/SE1 classifications. These waterbodies will be classified as FW2-NT. Downstream of the Category One designation in the Oldmans Creek, Salem River, Toms River, and Wrangel Brook (a tributary of Toms River), the stream classification will remain FW2-NT/SE1.

The classification tables at N.J.A.C. 7:9B-1.15(c) through (g) use a place name shown in the rule text in parenthesis to aid the user in identifying the appropriate waterbody. These names have been extracted from the United States Geological Survey (USGS) topographic maps. Topographic maps show a wide variety of information, including generalized land use, roads and railroads, streams, political boundaries and the locations of many kinds of named features,

among other things. Since many of these named locations are locally familiar names, they can serve to orient the user to the map display. This information is available as a GIS coverage at http://www.nj.gov/dep/gis/.

Pursuant to N.J.A.C. 7:9B-1.15(b)5iii, unlisted 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 are classified as FW2-TM. All other freshwater lakes, ponds and reservoirs that are not otherwise classified are classified as FW2-NT. Accordingly, the Department is proposing to identify in the rule only those lakes, ponds, and reservoirs that are classified differently than the stream that flows into or out of the lake. If a stream is classified as FW2-NT, and a lake is classified as FW2-TM, the Department will identify the stream and the lake individually (for example, see Green Pond and Green Pond Brook at proposed N.J.A.C. 7:9B-1.15(e)). If a stream is classified as FW2-NT(C1), any lake, pond, or reservoir that is contiguous with the stream and not listed in the tables at N.J.A.C. 7:9B-1.15(c) through (g) will also be designated as Category One. In addition, in accordance with the definition of "category one waters" all waters designated as Category One are identified in the classification tables at in N.J.A.C. 7:9B-1.15(c) through (g).

Exceptional Ecological Significance – Endangered and Threatened Species:

The Department is proposing several waterbodies for Category One based on the proposed definition of exceptional ecological significance. The following waters are being proposed for Category One designation based on the documented occurrences of Bog Turtle, Dwarf Wedgemussel, Brook Floater, Triangle Floater, Green Floater, Eastern Pond Mussel, or Eastern Lampmussel and their habitat.

In order to determine the appropriate waterbodies for upgrade on this basis, the Department reviewed information on documented occurrences as well as reviewing the locations of suitable habitat as described in the Landscape Maps to determine whether each waterbody supports one of the endangered or threatened species that qualifies as a waterbody of exceptional

ecological significance. In addition, the Department's Endangered and Nongame Species Program (ENSP) also reviewed records of other E&T species, as well as species of special concern associated with the selected sections of these waterbodies. While these species do not qualify a waterbody as waterbody of exceptional significance, these species will also benefit from the Category One designation. The Department has identified other aquatic-dependent species in Table B below.

As a result of this analysis, the Department is proposing Category One designation for portions of Black Creek, Lamington River, Lubbers Run, Maurice River, Musconetcong River, Oldmans Creek, Pequest River, Pompeston Creek, Ramapo River, Salem River, Stony Brook, and Wallkill River based on aquatic-dependent E&T species (see Table B for a list of waterbodies and the E&T species present). Proposed Category One designation based on the E&T species was applied to the specific stream segment and any unnamed and unlisted tributaries to the stream segment recommended by the ENSP based on the documented sightings.

Black Creek: Pochuck Creek, Town Brook, and a tributary at Vernon Valley: The Department is proposing to upgrade to Category One designation a portion of Black Creek from McAfee tributary to Pochuck Creek, including Town Brook, a tributary at Vernon Valley, and all unnamed tributaries not currently designated as FW1 or Category One (see Table B for specific stream segment and the species list). Black Creek, a tributary to the Wallkill River which flows through Vernon Township, provides ideal habitat for the State Threatened Triangle Floater in addition to several other freshwater mussel species. This low gradient stream is bordered by a wide, undeveloped flood plain and is of the highest habitat quality. The streams' stability has been conducive to the development of a healthy substrate regime which benefits freshwater mussels. As with other Wallkill tributaries, Bog Turtles are present within this segment. Therefore, the Department is proposing a Category One designation to Black Creek from McAfee tributary to Pochuck Creek, Town Brook, a tributary at Vernon Valley and all unnamed and unlisted tributaries based on exceptional ecological significance.

Lamington River: The Department is proposing to upgrade the Category One designation of a portion of Lamington River from its confluence with Cold Brook to the North Branch Raritan River, including all unnamed and unlisted tributaries (see Table B for specific stream segment and the species list). This portion of Lamington River flows through Bedminster, Readington, and Tewksbury Townships and contains intact riparian areas, good water quality, and abundance of host fishes. It provides one of most important State Endangered Brook Floater habitats in the State. Brook Floaters prefer well-oxygenated, fast moving water and numerous riffle areas with rocky substrate which are present in these waters. Therefore, the Department is proposing a Category One designation to Lamington River from the confluence with Cold Brook to North Branch, Raritan River, including all unnamed and unlisted tributaries based on exceptional ecological significance.

Lubbers Run: The Department is proposing to upgrade to Category One designation a portion of Lubbers Run from Luckawanna Lake downstream to the confluence of Cowboy Creek in Byram Township (see Table B for specific stream segment and the species list). Lubbers Run provides ideal habitat for the State Threatened Triangle Floater. Triangle Floaters are found throughout this segment in high numbers. Wide riparian areas, good water quality, an abundance of host fishes and a combination of suitable substrates make Lubbers Run one of the best streams for Triangle Floaters in the State. Therefore, the Department is proposing a Category One designation to Lubbers Run from Luckawanna Lake downstream to the confluence of Cowboy Creek based on exceptional ecological significance.

Maurice River: The Department is proposing to upgrade to Category One designation a portion of Maurice River from Willow Grove Road to the confluence with Green Branch (see Table B for specific stream segment and the species list). This portion of Maurice River flows through Pittsgrove Township and Vineland City. The Maurice River at the outlet of Willow Grove Lake provides exceptional habitat for the State Threatened Eastern Pondmussel. The Eastern Pondmussel population in this segment of the river is thriving and considered one of the best known locations for the species in the State. Therefore, the Department is proposing a Category

One designation to Maurice River from Willow Grove Road to the confluence with Green Branch based on exceptional ecological significance.

Musconetcong River: The Department is proposing to upgrade to Category One designation Musconetcong River from Hances Brook to Valley Station Road south of West Portal Creek, including all unnamed and unlisted tributaries within the portion (see Table B for specific stream segment and the species list). This portion of Musconetcong River which flows through Mansfield Township, Washington Township (Morris County), Washington Township (Warren County), Lebanon Township, Franklin Township, and Bethlehem Township, supports the State Threatened freshwater Triangle Floater, and Long Tail Salamander. Therefore, the Department is proposing a Category One designation to Musconetcong River from Hances Brook to Valley Station Road south of West Portal Creek, including all unnamed and unlisted tributaries based on exceptional ecological significance.

Other portions of Musconetcong River are proposed for Category One based on exceptional ecological significance due to the presence of an exceptional aquatic community. Those upgrades are discussed with the other waterbodies proposed for Category One designation under exceptional aquatic communities.

Oldmans Creek: The Department is proposing to upgrade to Category One designation a portion of Oldmans Creek from Harrisonville Lake Wildlife Management Area to Kings Highway by Porches Mill, including all unnamed and unlisted tributaries (see Table B for specific stream segment and the species list). This portion of Oldmans Creek flows through Woolrich Township. Southern New Jersey's most researched and managed Federally Threatened and State Endangered Bog Turtle site is within the riparian edge of the Oldman's Creek. Long known to support a viable population of Bog Turtles, this site is the model to which all other southern sites are compared. A loss of this site would be detrimental to the health of Gloucester County's Bog Turtle population as a whole. Oldman's Creek is also home to the State Threatened Triangle Floater. Triangle Floater abundance is usually low in occupied areas.

Therefore, the Department is proposing a Category One designation to Oldmans Creek from Harrisonville Lake Wildlife Management Area to Kings Highway by Porches Mill based on exceptional ecological significance.

Pequest River: Andover Junction Brook, Andover Pond, Bear Creek, Gardners Pond, Hidden Valley Lake, Iliff Lake, Kymer Brook, Lenape Lake, New Wawayanda Lake, Trout Brook, Tarhill Brook, and Valentines pond: The Department is proposing to upgrade to Category One designation several portions of Pequest River and its tributaries. These portions are as follows: Pequest River from the source to the Conrail railway tracks south of Turtle Pond, including Andover Junction Brook, Bear Creek, Kymer Brook, Trout Brook, and Tarhill Brook and all tributaries and lakes that are not currently designated as FW1 or C1. In addition, Andover Pond, Gardners Pond, Hidden Valley Lake, Iliff Lake, Lenape Lake, New Wawayanda Lake, and Valentines pond, are also being proposed for Category One (see Table B for specific stream segment and the species list). These portions of Pequest River flow through Allamuchy, Andover, Byram, Fredon, Frelinghuysen, and Green Townships. Several highly viable Federally Threatened and State Endangered Bog Turtle sites are in the immediate floodplains of the Pequest River and its tributaries making the protection of this waterway critical to the overall health of Bog Turtle habitat within this watershed, which represents well over 80 percent of the remaining habitat for this species in Warren County. Nutrient fluctuations at a Bog Turtle site can leave it susceptible to colonization by invasive vegetative species. The ENSP's primary goal over the last six years has been combating the degradation of bog turtle habitat by invasive plants. The Category One upgrade will help maintain the integrity of water bodies that may impact the turtle's critical habitat. Therefore, the Department is proposing a Category One designation to portions of Pequest River including, Andover Junction Brook, Bear Creek, Kymer Brook, Trout Brook, and Tarhill Brook based on exceptional ecological significance.

Pompeston Creek: The Department is proposing Category One designation for a portion of Pompeston Creek from the Route 130 to the Broad Street Bridge, including unnamed and unlisted tributaries (see Table B for specific stream segment and the species list). This portion of

Pompeston Creek flows through Cinnaminson and Riverton Townships. Pompeston Creek, a tributary of the Delaware River, provides ideal tidal habitat for the State Threatened Eastern Pondmussel. Pompeston Creek is one of the few locations supporting the Eastern Pondmussel in the State, most of the other locations are either in the Delaware River or its tributaries. The species is often associated with tidewaters and fine sediment. As with all mussels, this species is dependent on water quality. Normal tidal fluctuations in Pompeston Creek provide Eastern Pondmussels with well oxygenated water, despite heavy development in the surrounding area. Bog turtles have also been reported in the area. Therefore, the Department is proposing a Category One designation to Pompeston Creek from the Route 130 to the Broad Street Bridge, including all tributaries based on exceptional ecological significance.

Ramapo River: The Department is proposing Category One designation for a portion of Ramapo River from its confluence with Fox Brook to the Patriots Way Bridge in Oakland Township, including all unnamed and unlisted tributaries to this segment (see Table B for specific stream segment and the species list). The Ramapo River is home to the State Threatened Eastern Lampmussel and Triangle Floater. The river provides critical habitat for the State Threatened Triangle Floater. Freshwater mussels are among the most rapidly declining groups in the country. Since they have a low tolerance for water borne pollutants, they are excellent indicators of water quality and overall stream health. Like all freshwater mussels, these species are heavily dependent on water quality. Therefore, the Department is proposing a Category One designation to Ramapo River from the confluence with Fox Brook to the Patriots Way Bridge, including all unnamed and unlisted tributaries based on exceptional ecological significance.

Salem River: Major Run and Nichomus Run: The Department is proposing Category One designation for two portions of Salem River in Upper Pittsgrove Township. These include a portion of Salem River from the source to Slabtown Road, including all tributaries to that segment, and a portion from Nichomus Run to Major Run, including both Nichomus and Major Runs (see Table B for specific stream segment and the species list). The Salem River, its tributaries and surrounding watershed provide the most occupied Bog Turtle habitat in southern

New Jersey. As many of the known sites exist directly in the floodplain riparian corridors of the waterways, these habitats can suffer greatly from alterations to water quality or flow rates. Therefore, the Department is proposing a Category One designation to Salem River from the source to the Slabtown Road, including all tributaries and from Nichomus Run to Major Run, including both Nichomus and Major Runs based on exceptional ecological significance.

Stony Brook: The Department is proposing Category One designation for a portion of Stony Brook from Pennington Hopewell Road to the Pumping Station south of West Road, including all unnamed and unlisted tributaries to that segment (see Table B for specific stream segment and the species list). This portion of Stony Brook flows through Hopewell, Lawrence, and Princeton Townships. This segment of the Stony Brook provides critical habitat for several of the State's important freshwater mussel species, including the State Endangered Brook Floater, the State Threatened Triangle Floater and Eastern Pondmussel. In addition, it is the location of the last known sighting of the State Endangered Green Floater. These species require clean, well oxygenated water, and are susceptible to infrequent periods of low flow, especially during the summer. Therefore, the Department is proposing a Category One designation to Stony Brook from Pennington Hopewell Road to the Delaware and Raritan Canal, including all unnamed and unlisted tributaries based on exceptional ecological significance.

Wallkill River: Beaver Run, Blue Heron Lake, Clove Book, Franklin Pond, Franklin Pond Creek, Hamburg Creek, Mohawk Lake, Mud Pond, Papakating Creek, Silver Lake, Saginaw Lake, Wantage Brook, Wildwood Lake and Willow Brook: The Department is proposing Category One designation for the entire length of Wallkill River, including its tributaries Beaver Run, Clove Book, Franklin Pond Creek, Hamburg Creek, Papakating Creek, Wantage Brook, and Willow Brook not currently designated as FW1 or C1 (see Table B for specific stream segment and the species list). Several lakes, including, Mud Pond (Hamburg), Blue Heron Lake (Sparta), Franklin Pond (Hamburg), Silver Lake (Hamburg Mountain.), Saginaw Lake (Sparta), Mohawk Lake (Sparta), and Wildwood Lake (Hamburg Mountain) are also being proposed for Category One upgrade. The Wallkill River and its tributaries flow

through Frankford, Hardyston, Lafayette, Sparta, Vernon, and Wantage Townships. The Wallkill River, its tributaries, and much of its floodplain provide the best habitat for Bog Turtles in the State. Many of the individual sites for Bog Turtle are highly viable and have benefited from extensive surveys, research and management conducted by the ENSP over the years. Negative primary or secondary impacts to Bog Turtle habitat along the Wallkill could incur a loss of up to 35 percent of the number of documented individual turtles in New Jersey. The Wallkill River also provides critical habitat for the State Threatened Eastern Lampmussel. The Eastern Lampmussel has been sighted in only a few locations in New Jersey and is more prevalent in lakes than in flowing waterways. In addition, the Wallkill River is home to the State Threatened Triangle Floater. Triangle Floaters are never abundant at occupied locations. These species, like all freshwater mussel species, are dependent on clean water. Therefore, the Department is proposing a Category One designation to the entire length of Wallkill River, including its tributaries and lakes indicated above based on exceptional ecological significance.

Table B. Proposed Waterbodies Based on Endangered or Threatened Species

Waterbody / River miles	Stream Segment/Tributary	Existing Class.	Proposed Class.	Aquatic-dependent E&T species	Other supporting E&T and Species of Special Concern
Black Creek 18.42	Black Creek (Vernon) – Confluence with McAfee tributary to Pochuck Creek, including all unnamed and unlisted tributaries	FW2-NT	FW2-NT(C1)	Triangle Floater, Bog Turtle	Brook Snaketail
	(Vernon Valley) - Tributary at Vernon Valley	FW2-NT	FW2-NT(C1)		
	Town Brook (Vernon) - Entire length, including all tributaries	FW2-TM	FW2-TM(C1)		
Lamington River 15.55	Oldwick – Confluence with Cold Brook to the Route 523 bridge	FW2-TM	FW2-TM(C1)	Brook Floater	Creeper, Rapids Clubtail
	(Burnt Mills) – Route 523 bridge to confluence with North Branch, Raritan River	FW2-NT	FW2-NT(C1)		
Lubbers Run 1.5	(Byram) - Luckawanna Lake downstream to the confluence of Cowboy Creek	FW2-TM	FW2-TM(C1)	Triangle Floater	
Maurice River 3.33	(Willow Grove) – Willow Grove Road to confluence with Green Branch	FW2-NT	FW2-NT(C1)	Eastern Pondmussel	Banner Clubtail, Robust

					Baskettail, Allegheny River Cruiser
Musconetcong River 27.26	Hances Brook to Valley Station Road south of West Portal Creek, including all unnamed and unlisted tributaries	FW2-TM	FW2-TM(C1)	Triangle Floater	Long Tail Salamander, Wood Turtle
Oldmans Creek 22.44	Harrisonville - Harrisonville Lake Wildlife Management Area to Kings Highway by Porches Mill, including all tributaries	FW2-NT/SE1	FW2-NT(C1)	Bog Turtle, Triangle Floater	Creeper
Pequest River 56.57	Andover Junction Brook	FW2-TM	FW2-TM(C1)	Bog Turtle	Long Tail Salamander, Blue Spotted Salamander, Wood Turtle
	Andover Pond	FW2-NT	FW2-NT(C1)		
	Valentines pond	FW2-NT	FW2-NT(C1)		
	Bear Creek – Entire length, but not including existing FW1	FW2-TM	FW2-TM(C1)		
	Gardners Pond	FW2-NT	FW2-NT(C1)		
	Hidden Valley Lake	FW2-NT	FW2-NT(C1)		
	Iliff Lake	FW2-NT	FW2-NT(C1)		
	Kymer Brook	FW2-TM	FW2-TM(C1)		
	Lenape Lake	FW2-NT	FW2-NT(C1)		
	New Wawayanda Lake	FW2-NT	FW2-NT(C1)		
	Pequest River - Source to Conrail railway tracks south of Turtle Pond, including all unnamed and unlisted tributaries that are not currently designated as FW1 or C1	FW2-TM	FW2-TM(C1)		
	Tarhill Brook	FW2-TM	FW2-TM(C1)		
	Trout Brook	FW2-NT	FW2-NT(C1)		
Pompeston Creek 2.61	(Riverton) – Route 130 to Broad Street bridge, including all tributaries	FW2-NT	FW2-NT(C1)	Eastern Pondmussel, Bog Turtle	
Ramapo River 3.0	(Mahwah) - Confluence with Fox Brook to Patriots Way bridge, including all unnamed and unlisted tributaries	FW2-NT	FW2-NT(C1)	Eastern Lampmussel, Triangle Floater	Creeper
Salem River 19.68	(Upper Pittsgrove) – Source to Slabtown Road, including all tributaries	FW2-NT/SE1	FW2-NT(C1)	Bog Turtle	
	(Sharptown) – Nichomus Run to Major Run, including both Nichomus Run, Major Run, and their tributaries	FW2-NT/SE1	FW2-NT(C1)		
Stony Brook 41.68	(Hopewell) – Pennington Hopewell Road to the Pumping Station south of West Road, including all tributaries	FW2-NT	FW2-NT(C1)	Brook Floater, Triangle Floater, Eastern Pondmussel, Green Floater	Creeper
Wallkill River 257.08	Beaver Run - (Wantage) - Entire length, including all tributaries	FW2-NT	FW2-NT(C1)	Bog Turtle, Eastern	Long Tail Salamander,

	Blue Heron Lake (Sparta)	FW2-NT	FW2-NT(C1)	Lampmussel, Triangle Floater	Wood Turtle
	Clove Brook – (Wantage) - Source to Clove Acres Lake (Sussex) - Clove Acres Lake to Papakating Creek	FW2-TM FW2-NT	FW2-TM(C1) FW2-NT(C1)		
	Franklin Pond Creek (Hamburg) - Pond and its unnamed and unlisted tributaries	FW2-NT	FW2-NT(C1)		
	Hamburg Creek (Hamburg Mtn.) - Source to Rt. 517 bridge (Hardistonville) - Rt. 517 bridge to Wallkill River	FW2-TM FW2-NT	FW2-TM(C1) FW2-NT(C1)		
	Hawthorne Lake (Sparta)	FW2-NT	FW2-NT(C1)		
	Heaters Pond (Ogdensburg)	FW2-NT	FW2-NT(C1)		
	Mohawk Lake (Sparta)	FW2-NT	FW2-NT(C1)		
	Morris Lake (Sparta)	FW2-NT	FW2-NT(C1)		
	Mud Pond (Hamburg)	FW2-NT	FW2-NT(C1)		
	Papakating Creek (Frankford) - Source to Rt. 629 bridge (Wantage) - Rt. 629 bridge to Wallkill River	FW2-TM FW2-NT	FW2-TM(C1) FW2-NT(C1)		
	Saginaw Lake (Sparta)	FW2-NT	FW2-NT(C1)		
	Silver Lake (Hamburg Mtn.)	FW2-NT	FW2-NT(C1)		
	Summit Lake (Hardyston)	FW2-NT	FW2-NT(C1)		
	Sunset Lake (Sparta)	FW2-NT	FW2-NT(C1)		
	Tamaracks Lake (Hardyston)	FW2-NT	FW2-NT(C1)		
	Wallkill River (Sparta) - Source to confluence with Sparta Glen Brook (Franklin) - Sparta Glen Brook to, but not including, Franklin Pond, including all unnamed and unlisted tributaries (Wantage) - Outlet of Franklin Pond to State line, including all unnamed and unlisted tributaries	FW2-NT FW2-TM FW2-NT	FW2-NT(C1) FW2-TM(C1) FW2-NT(C1)		
	Wallkill River Tributary at Ogdensburg – Entire length	FW2-TP	FW2-TP(C1)		
	Wantage Brook (Wantage) - Entire length, including all tributaries	FW2-NT	FW2-NT(C1)		
	White Lake (Sparta)	FW2-TM	FW2-TM(C1)		
	Wildwood Lake (Hamburg Mountain)	FW2-NT	FW2-NT(C1)		
	Willow Brook (Quarryville) Brook (Wantage) - Entire length, including all tributaries	FW2-TM	FW2-TM(C1)		

Exceptional Ecological Significance – Exceptional Aquatic Community

The Department is proposing several waterbodies for Category One upgrade based on exceptional ecological significance – exceptional aquatic community. Utilizing the criteria

described above in the summary of the definition of exceptional ecological significance, the Department reviewed and identified subwatersheds that indicated non-impaired benthic macroinvertebrate communities. For these waters, the Department has also evaluated instream habitat, fish community, chemical water quality data and impervious surface (see Table A for an explanation of eligible ecological factors). The Department is proposing portions of Musconetcong River and Toms River for Category One upgrade as described below.

Musconetcong River: Hatchery Brook and Bowers Brook: The Department is proposing to upgrade the Musconetcong River from Saxton Lake to the Delaware River to Category One based on exceptional ecological significance. Portions of Musconetcong River proposed for Category One based on exceptional aquatic community is discussed here, while the portion based on the documented occurrence of E&T species is discussed above.

The Musconetcong River from Saxton Lake to Hances Brook, including all unnamed and unlisted tributaries, is being proposed for upgrade to Category One. In addition, Hatchery Brook and a portion of Bowers Brook, tributaries to this portion of Musconetcong River, are also being proposed for Category One. This portion of the Musconetcong River which flows through Allamuchy, Hackettstown, Independence, Mansfield and Washington contains non-impaired benthic macroinvertebrates and optimal habitat condition. All chemical water quality parameters within this segment are meeting water quality standards. All data applicable to Musconetcong River is shown in Table C. Because this segment contains, non-impaired benthic macroinvertebrates, optimal habitat condition, and chemical water quality data, the Department is proposing a Category One designation to Musconetcong River from Saxton Lake to Hances Brook, including Hatchery Brook and Bowers Brook that are not already designated as Category One based on exceptional ecological significance.

Musconetcong River from Valley Station Road south of West Portal Creek to the Delaware River, including all unnamed and unlisted tributaries is also being proposed for Category One upgrade based upon the presence of an exceptional aquatic community. This

portion of Musconetcong River flows through Bethlehem, Bloomsbury, Franklin, Greenwhich, Holland, and Pohatcong Townships. This portion of the Musconetcong River contains non-impaired benthic macroinvertebrate and optimal habitat conditions. Chemical water quality parameters are meeting water quality standards for dissolved oxygen, total phosphorus, total suspended solids, however the temperature criteria is exceeded in one of the subwatersheds. The portion of Musconetcong River located in subwatersheds or HUC 14 near the mouth of the Delaware River did not meet temperature criteria, therefore the Department evaluated the percentage of impervious surface in the subwatershed. This subwatershed is approximately 7.5 square miles with an impervious surface of 3 percent. Because all portions of this segment contain a non-impaired benthic macroinvertebrate community, optimal habitat condition, and chemical water quality data or impervious surface, the Department is proposing a Category One designation to Musconetcong River from Valley Station Road south of West Portal Creek to the Delaware River, including all unnamed and unlisted tributaries, based on exceptional ecological significance.

Toms River: On November 1, 2006, the Department received a petition for rulemaking from the Rutgers Environmental Law Clinic on behalf of American Littoral Society, Environment New Jersey, New Jersey Audubon Society, New Jersey Environmental Federation, Pinelands Preservation Alliance, Save Barnegat Bay and Sierra Club–New Jersey. The petition requested that the antidegradation designation of portions of the Toms River, as well as its tributaries, not currently designated as Category One or Pinelands waters, be upgraded to Category One. Notice of receipt of the petition was published in the New Jersey Register on December 18, 2006 at 38 N.J.R. 5415(a).

An initial Notice of action providing for further deliberation of the petition was published in the New Jersey Register on February 5, 2007 at 39 N.J.R. 566(b).

Pending the Department's decision on the petition for rulemaking, comments were received from the New Jersey Builders Association (NJBA) requesting the Department to deny

the petition for rulemaking on Toms River and to defer decision on the petition to allow further time for comment. Toms River-Ocean County Chamber of Commerce submitted resolution additionally urging the Department to deny the petition. The Township of Manchester submitted resolution in support of the Category One designation for Toms River.

Comments received from the NJBA indicated that existing surface water quality standards applicable to Category Two waters are adequately protective of all existing uses and that the petitioners offered no evidence that a change in the antidegradation category of Toms River is needed to protect existing water quality. It was further asserted that the water quality data presented in the petition suggests that larger buffers are not needed to protect water quality. NJBA asserted that assumption that a Category Two designation is the equivalent of something less than clean, protected waters is patently wrong. NJBA further asserted that the petitioners did not present any evidence to demonstrate how reclassifying the entire Toms River and its tributaries to Category One would result in an increase for use for recreational purposes.

The petitioners submitted responsive filings disputing the NJBA comments and indicating among other things, that Category One protection is appropriate to preserve pristine streams and to restore the water quality of streams that used to be or could be pristine or otherwise "exceptional." Petitioners further asserted that the requested upgrades were consistent with prior upgrades and that if a new method for reviewing upgrade requests was to be used, it should be subject to notice and comment through rulemaking. The petitioners further asserted that the Pinelands Commission's Barnegat Bay Watershed Report (2006) supports an upgrade of the Toms River to Category One in order to protect the amazing assemblage of native flora and fauna. Additionally, petitioners asserted that the Category One designation is exactly what the Department needs to help protect and reverse the trend towards degradation of the waters of the Toms River.

The comments received from the Toms River-Ocean County Chamber of Commerce (Chamber) indicated that the requirement of 300 foot buffer from stream is redundant. The

Chamber asserted that most streams within the Toms River watershed are protected by wetlands and wetlands buffers. The Chamber further indicated that much of the area within Toms River Township is located within the proposed Coastal Area Facility Review Act (CAFRA) Center and that a requirement of stream buffers will obviate advances provided by CAFRA Center designations.

The Department denied this petition because the Department was in the process of reassessing the criteria used to determine waterbodies that qualify for Category one antidegradation designation.

The Department reviewed the most recent data available on ecological factors for Toms River and its tributaries that are not currently designated as Category One or Pinelands waters to determine if any waterbodies requested by the petitioner qualify for Category One based on exceptional ecological significance. The Department determined that some portions of the main stem of Toms River, and portions of Dove Mill Branch, Wrangel Brook, and tributary west of Pleasant Grove qualify for Category One. Each portion proposed for Category One upgrade is discussed in detail below.

The Department reviewed other sections of the Toms River and other tributaries to the Toms River recommended by the petitioners for upgrade to Category One and determined that these sections did not qualify for Category One based on exceptional ecological significance, exceptional water supply significance, or exceptional fisheries resource or that sufficient data was not available to make a determination. As indicated above, the Department is seeking input on criteria appropriate for evaluating exceptional recreational significance and is not upgrading waterbodies based on exceptional recreational resources until a definition is adopted. However, it should be noted that while there are several bathing beaches located on the Toms River, these beaches are subject to frequent water quality based closures.

Toms River: Dove Mill Branch, Wrangel Brook, and a tributary west of Pleasant Grove: The Department is proposing Category One designation for two portions of Toms River from Cassville Road to the Pinelands boundary and from the New Jersey Central Railroad tracks to the Route 37 Bridge including all tributaries to this portion of the River. This portion of Toms River flows through Jackson, Manchester, and Toms River Townships and has non-impaired benthic macroinvertebrates and optimal habitat. The chemical water quality data meet water quality criteria for all parameters. Because these waters contain a non-impaired benthic macroinvertebrates, optimal habitat condition, and chemical water quality data (see Table C for available data), the Department is proposing a Category One designation to Toms River from the Cassville Road Bridge to Pinelands boundary and from the New Jersey Central Railroad tracks to the Route 37 Bridge based on exceptional ecological significance.

The Department is also proposing Category One designation for a tributary of the Toms River west of Pleasant Grove from the source to the Pinelands boundary, including all tributaries. This tributary flows through Jackson Township and has non-impaired benthic macroinvertebrates and optimal habitat. Data on fish community and chemical water quality data are not available for this tributary. The tributary is located in a subwatershed that is approximately 7.5 square miles. The impervious surface for this subwatershed was determined to be 6 percent. Because these waters contain a non-impaired benthic macroinvertebrates, optimal habitat condition, and impervious surface (see Table C for available data), the Department is proposing a Category One designation to the tributary west of Pleasant Grove from the source to Pinelands boundary, based on exceptional ecological significance.

The Department is also proposing a Category One designation for the Dove Mill Branch of the Toms River from the source to Bunker Hill Lake, including all tributaries within the portion not currently designated as Category One. Dove Mill Branch, a tributary of Toms River, flows through Jackson Township and has non-impaired benthic macroinvertebrates and optimal habitat. Data on fish community and chemical water quality data are not available for this portion of Dove Mill Branch. Dove Mill Branch is located in a subwatershed that is

approximately 8 square miles. The impervious surface for this subwatershed was determined to be 7 percent. Because these waters contain a non-impaired benthic macroinvertebrates, optimal habitat condition, and impervious surface (see Table C for available data), the Department is proposing to amend Dove Mill Branch from the source to Bunker Hill Lake based on exceptional ecological significance.

The Department is also proposing Category One designation for Wrangel Brook from the source to Green Branch and all tributaries not currently designated as Category One or PL. Wrangel Brook flows through Manchester Township and has non-impaired benthic macroinvertebrate community and optimal habitat. Data on fish community and chemical water quality data are not available for this portion of the Wrangel Brook. Wrangel Brook is located in a subwatershed that is approximately 5.5 square miles. The impervious surface for this subwatershed was determined to be 0.1 percent. Because these waters contain a non-impaired benthic macroinvertebrates, optimal habitat condition, and impervious surface (see Table C for available data), the Department is proposing a Category One designation to Wrangel Broom from the source to the Green Branch based on exceptional ecological significance.

Table C. Proposed Waterbodies Based on Exceptional Ecological Significance and the Available Data

Waterbody	Existing Class.	Proposed Class.	River Miles	AMNET	Habitat Score	Fish IBI	Water Quality data	% IS	HUC 14 (Sq. miles)
Musconetcong River (Hackettstown) - Saxton Lake to Hances Brook, including all unnamed and unlisted tributaries	FW2-TM	FW2-TM(C1)	18.66	AN0069-Nonimpaired AN0069H-Nonimpaired	Optimal Optimal	FIBI058-Fair	DO, Temp. TSS, & TP - meeting		
Tributaries									
Bowers Brook (Hackettstown) – Rt 517 to confluence with Musconetcong River	FW2-TM	FW2-TM(C1)							
Hatchery Brook (Hackettstown) – Entire length	FW2-TM	FW2-TM(C1)							
Musconetcong River (Changewater) – Valley Station Road south of West Portal Creek to the Delaware River, including all unnamed and unlisted tributaries	FW2-TM	FW2-TM(C1)	23.88	AN0073-Nonimpaired AN0073B-Nonimpaired AN0073C-Nonimpaired	Optimal Optimal Optimal	FIBI005-Good FIBI061-Fair	DO, Temp. TSS, & TP - meeting		
				AN0074-Nonimpaired	Optimal		DO, TSS, & TP -meeting. Temp.- impaired	3	7.5
Toms River (Cassville) – Cassville Road bridge to Pinelands boundary, including all tributaries	FW2-NT	FW2-NT(C1)	12.05	AN00519-Nonimpaired	Optimal	No station	DO, Temp. TSS, & TP- meeting		
(Manchester) - NJ Central Railroad tracks to Rt. 571 bridge, including all tributaries	FW2-TM	FW2-TM(C1)	10.25	AN00524-Nonimpaired	Optimal	No station	DO, Temp. TSS, & TP- meeting		
(Toms River) - Rt. 571 bridge to the Route 37	FW2-NT/SE1	FW2-NT(C1)	4.34	AN00535-Nonimpaired	Optimal	No station			
Tributaries: (West of Pleasant Grove) – Source to Pinelands boundary, including all tributaries	FW2-TM	FW2-TM(C1)	12.25	AN00520-Nonimpaired	Optimal	No station		6	7.5
Dove Mill Branch (Van Hiseville) - Source to Bunker Hill Lake, including all tributaries not currently designated as C1	FW2-NT	FW2-NT(C1)	7.0	AN0522-Nonimpaired	Optimal	No station		7	7.9
Wrangel Brook (Manchester) – Source to Green Branch and all tributaries not currently designated as C1 or PL	FW2-NT/SE1	FW2-NT(C1)	5.13	AN0536-Nonimpaired	Optimal	No station		0.1	5.5

Exceptional Fisheries Resource(s):

Proposed waterbodies based on trout production:

Pequannock River Tributary at Maple Lake: The Department is proposing to upgrade the antidegradation of the Pequannock River tributary at Maple Lake to Category One based upon exceptional fisheries resource(s). When waterbodies are surveyed and found to contain naturally reproduced trout in their first year of life (young of the year or YOY), they are classified as trout production waters or FW2-TP. Proposed Category One designation based on trout production was applied to the entire length and all unnamed and unlisted tributaries recommended by the Department's Fish and Wildlife Service (see Table D).

Table D. Proposed Waterbodies based on Exceptional Fisheries Resource

Waterbody	Current classification①	Proposed classification	Young of the year (trout species)
Pequannock River Tributary (Maple Lake) - Entire length, including all tributaries	[FW2-TP]	FW2-TP(C1)	Brown trout

① Brackets indicate that the waterbody was not previously identified, although the classification was determined pursuant to N.J.A.C. 7:9B-1.15(b).

Proposed Category One Waters Based on Exceptional Water Supply Significance:

The Department is proposing a Category One designation to all natural tributaries that are currently not designated as FW1 or Category One to Wanaque Reservoir, Boonton Reservoir, and Swimming River Reservoir and several tributaries of Pequannock River upstream of Charlottesburg Reservoir. In addition, Canistear Reservoir, Oak Ridge Reservoir, and Split Rock Reservoir are also being proposed for Category One based on exceptional water supply significance.

Pequannock River: Canistear Reservoir, Dunker Pond Brook, Oak Ridge Reservoir, Pacock Brook, and Timber Brook: The Pequannock River and most of its tributaries are currently designated as Category One. Through this rulemaking, the Department is proposing to

upgrade to Category One designation Canistear Reservoir, Oak Ridge Reservoir, Pacock Brook, Dunker Pond Brook, Timber Brook, and tributaries of Pequannock River upstream of Charlottesburg Reservoir that are currently not designated as Category One. These proposed reservoirs and streams flow through Hardyston, Jefferson, Kinnelon, Rockaway, Vernon, and West Milford Townships and are part of Passaic and Hackensack drainage basin listed in Table 3 at N.J.A.C. 7:9B-1.15(e). The Newark Water Department operates a series of reservoirs in the Pequannock River watershed including, Canistear Reservoir, and Oak Ridge Reservoir which are proposed for Category One designation. The Department believes that the institution of Category One antidegradation designation to the entire system above the surface water intake downstream of the Charlottesburg Reservoir would protect water quality for more than 275,000 people who depend on the Newark Water Department for their drinking water. Therefore, the Department is proposing Canistear Reservoir, Oak Ridge Reservoir, Pacock Brook, Dunker Pond Brook, Timber Brook, and tributaries of Pequannock River upstream of Charlottesburg Reservoir that are currently not designated as Category One for Category One (See Table E - Proposed Waterbodies Based on Exceptional Water Supply Significance).

Rockaway River

The Department received a petition for rulemaking seeking amendment of the Department's Surface Water Quality Standards regarding Rockaway River from the Rockaway River Watershed Association on January 25, 2007. Specifically, the petition requests that the antidegradation designation of Rockaway River and its tributaries above the Boonton Reservoir be upgraded to Category One. Notice of receipt of the petition was published in the New Jersey Register on March 5, 2007 at 39 N.J.R. 800(b). On March 23, 2007, the Department received a request from the New Jersey Builders Association requesting that the Department defer decision on the petition to allow further time for comment. Similar to the Toms River petition referenced above, the Department denied this petition because the Department was in the process of reassessing the criteria used to determine waterbodies that qualify for Category one antidegradation designation. Based on the new definition of exceptional water supply

significance, the Department is proposing to upgrade all of the waterbodies requested by the petitioner to Category One.

Rockaway River: Ames Lake, Beaver Brook, Burnt Meadow Brook, Den Brook, Durham Pond, Emma Lake, Girl Scout Lake, Green Pond, Green Pond Brook, Hibernia Brook, Jackson Brook, Mill Brook, Russia Brook, Split Rock Reservoir, Stephens Brook, Stony Brook and Telemark Lake: The Department upgraded the antidegradation designation of the Boonton Reservoir to Category One on May 19, 2003 at 35 N.J.R. 2264(b). At this time, the Department is proposing to similarly upgrade the antidegradation designation of the Rockaway River from its source to the Boonton Reservoir including Beaver Brook, Burnt Meadow Brook, Den Brook, Green Pond Brook (including Green Pond), Hibernia Brook (including Ames Lake, Emma Lake, Girl Scout Lake, and Telemark Lake), Jackson Brook, Mill Brook, Russia Brook, Stephens Brook, and Stony Brook and all unnamed and unlisted tributaries that are currently not designated as FW1 or Category One are being proposed for Category One. In addition, Split Rock Reservoir, which is also part of the Boonton Reservoir drainage, and its natural tributaries that are not already listed as Category One are also being proposed for Category One. Boonton Reservoir and Split Rock Reservoirs are used by the United Water Jersey City. This water system provides drinking water for a population of 229,000. The segment of the Rockaway River proposed for upgrade, its tributaries as listed above, and Split Rock Reservoir flow through Boonton, Boonton Town, Denville, Dover, Hardyston, Jefferson, Kinnelon, Montville, Parsipanny-Troy Hills, Rockaway, Roxbury, Sparta, and Wharton Borough Townships. These waterbodies are part of Passaic and Hackensack drainage basin listed in Table 3 at N.J.A.C. 7:9B-1.15(e). (See Table E - Proposed Waterbodies Based on Exceptional Water Supply Significance).

Wanaque Reservoir tributaries: Blue Mine Brook, Cupsaw Brook, Erskine Brook, Erskine Lakes, Meadow Brook, Rickonda Lake, and Ringwood Creek: The Wanaque Reservoir is already designated as Category One (see 34 N.J.R. 3889(a)). The Department is proposing to

upgrade the antidegradation designation to all natural tributaries and lakes upstream of the Wanaque Reservoir that are currently not designated as Category One to Category One based on exceptional water supply significance. These waterbodies include, Blue Mine Brook, Cupsaw Brook, Erskine Brook, Erskine Lakes, Meadow Brook, Rickonda Lake, Ringwood Creek, and Wanaque Reservoir tributaries. Wanaque Reservoir is part of the North Jersey District Water Supply Commission. Making the Category One designation applicable to the entire system would protect water quality for the 1,000,000 people who depend on the North Jersey District Water Supply Commission for drinking water. The proposed Wanaque Reservoir tributaries as listed in Table E flow through Ringwood Township and Wanaque Borough and are part of Passaic and Hackensack drainage basin listed in Table 3 at N.J.A.C. 7:9B-1.15(e). (See Table E - Proposed Waterbodies Based on Exceptional Water Supply Significance).

Swimming River Reservoir Tributaries: Big Brook, Mine Brook, Raminessin/Hop Brook, Willow Brook, and Yellow Brook: The Department upgraded the antidegradation designation of the Swimming River Reservoir to Category One on May 19, 2003 at 35 N.J.R. 2264(b). All natural tributaries to Swimming River Reservoir, including Big Brook, Mine Brook, Raminessin/Hop Brook, Willow Brook, and Yellow Brook, including all tributaries, are being proposed for Category One designation based on exceptional water supply significance. Swimming River Reservoir is operated by New Jersey American Water Company which uses the reservoir to serve a population of 302,000. Therefore, the Department is proposing to amend all natural tributaries of Swimming River Reservoir for Category One designation. The tributaries of Swimming River Reservoir proposed for upgrade flow through Colts Neck, Freehold, Holmdel, Howell, and Marlboro Townships and are part of Raritan drainage basin listed in Table 4 at N.J.A.C. 7:9B-1.15(f). (See Table E - Proposed Waterbodies Based on Exceptional Water Supply Significance).

Table E. Proposed Waterbodies Based on Exceptional Water Supply Significance

Name of the	Stream segment	Existing	Proposed River

Waterbody		Class.	Miles /Acres
Pequannock River	Charlottesburg Res. Tributaries	FW2-TP	26.18
	Charlottesburg Res. Unnamed lake on southeastern tributary	FW2-NT	
	Dunker Pond Brook (West Milford Township) - Entire length, including Dunker Pond and all tributaries, except Lud-Day Brook classified as FW1	FW2-NT	
	Pacock Brook - (Canistear) – Brook including Marshall Pond upstream of Canistear Reservoir located outside the boundaries of the Newark Watershed -(Stockholm) – Outlet stream of Canistear Reservoir to Pequannock River	FW2-NT FW2-NT	
	Pequannock River (Newfoundland) - Outlet of Oak Ridge Reservoir downstream to Charlottesburg Reservoir, including all unnamed tributaries, but not including Charlottesburg Reservoir	FW2-TP	
	Timber Brook (Kitchell) - Entire length, including all tributaries	FW2-NT	
Oak Ridge Res.	Reservoir and the southwestern tributary to the Reservoir	FW2-TM	465 Acres
Canistear Res	Reservoir	FW2-TM	318 Acres
Rockaway River	Ames Lake (Hibernia)	FW2-NT	172.30
	Beaver Brook (Denville) - Meriden Road Bridge to Rockaway River, including Mount Hope and White Meadow Lakes and all unnamed and unlisted tributaries	FW2-NT	
	Burnt Meadow Brook (Green Pond) - Source downstream to confluence with Green Pond Brook, including Lake Denmark and all tributaries	FW2-NT	
	Den Brook (Randolph) - Entire length, including all tributaries and lakes	FW2-NT	
	Durham Pond (Rockaway)	FW2-NT	
	Emma Lake (Hibernia)	FW2-NT	
	Girl Scout Pond (Hibernia)	FW2-NT	
	Green Pond Brook (Wharton) - Outlet of Picatinny Lake to the confluence with the Rockaway River, including all tributaries	FW2-NT	
	Green Pond (Rockaway)	FW2-TM	
	Hibernia Brook (Rockaway) – Entire length, including all tributaries and lakes	FW2-TM	
	Jackson Brook (Dover) - Hurd Park to Rockaway River	FW2-NT	
	Mill Brook (Randolph) - Rt. 10 bridge to Rockaway River	FW2-TM	
	Rockaway River (Wharton) - Source to Washington Pond, including all unnamed and unlisted tributaries (Boonton) - Rt. 46 bridge to but not including Jersey City Reservoir	FW2-NT FW2-NT	
	Russia Brook (Sparta) - Source to Lake Hartung dam, including all tributaries (Milton) - Lake Hartung dam to, but not including, Lake Swannanoa, including all tributaries	FW2-NT FW2-TM	
	Stephens Brook (Roxbury) - Entire length, including all tributaries, except FW21 segment described separately, below	FW2-NT	
	Stony Brook (Boonton) – Entire length, including all tributaries	FW2-NT	
	Telemark Lake (Hibernia)	FW2-NT	
Split Rock Reservoir	Reservoir	FW2-TM	562 acres
	Split Rock Reservoir tributaries	FW2-TP	

Wanaque Res. Tribs	Blue Mine Brook (Wanaque) Lower Snake Den Road bridge to confluence with Wanaque Reservoir	FW2-TM	24.35
	Cupsaw Brook (Skylands) - Entire length, including all tributaries and Cupsaw Lake	FW2-NT	
	Erskine Brook (Ringwood) – Entire length	FW2-TM	
	Erskine Lakes (Ringwood)	FW2-NT	
	Meadow Brook (Wanaque) - Skyline Lake and its outlet stream to E. Belmont Ave., including all tributaries	FW2-NT	
	Rickonda Lake (Ringwood)	FW2-NT	
	Ringwood Creek (Ringwood) - Entire length, including all tributaries	FW2-TM	
	Wanaque Reservoir Tributaries (Wanaque Reservoir) - All unnamed and unlisted tributaries that drain into Wanaque Reservoir	FW2-TM	
Swimming River Res. Tributaries	Big Brook (Vanderberg) - Entire length, including all tributaries and lakes	FW2-NT	122.37
	Mine Brook (Colts Neck) - Entire length, including all tributaries	FW2-NT	
	Raminessin/Hop Brook (Holmdel) - Entire length, including all tributaries	FW2-TM	
	Swimming River Res. tributaries (Swimming River Reservoir) – All unnamed and unlisted tributaries to Swimming River Reservoir	FW2-NT	
	Willow Brook (Holmdel) - Entire length, including all tributaries	FW2-NT	
	Yellow Brook (Colts Neck) - Entire length, including all tributaries	FW2-NT	

Proposed stream reclassifications based on trout sampling:

Sidney Brook

The Department is proposing to reclassify Sidney Brook from FW2-NT(C1) to FW2-TM(C1) based on the documented trout maintenance use classification (see Table F). Sidney Brook was designated as Category One based on exceptional ecological significance (see 35 N.J.R. 2264(b)).

The portion of Sidney Brook proposed to be reclassified from nontrout to trout maintenance is identified in Table D below. Stream sampling (fish survey) data are used by the Department to determine whether a waterway should be classified to protect the trout production (TP) or trout maintenance (TM) uses. When waterbodies are surveyed and found to have naturally reproduced trout in their first year of life (young of the year or YOY), they are classified as trout production waters or FW2-TP. When adult trout are found in a waterbody, and YOY trout are absent, the classification of the stream as trout maintenance (FW2-TM) or nontrout (FW2-NT) depends upon the stream's total fish population.

A classification system was developed which utilizes a table of Incidence of Occurrence (I.O.), of other fish species associated with trout, based on data from a statewide survey of freshwater streams. A value of 100 percent was assigned to each trout species found during the survey. Other nontrout species were assigned an I.O. value based on the percentage of the time that the individual species was found in the presence of trout. A figure of 20 percent was selected by the Department's Bureau of Freshwater Fisheries as the minimum occurrence with trout that would classify a species as being trout "associated." This 20 percent figure was also selected as the cutoff figure for determining whether a stream should be classified as FW2-TM. The individual percentage figures for an individual stream are added and averaged, with the resulting value serving as the basis for the classification. If the average I.O. value is greater than 20 percent, the stream segment would be classified as trout maintenance, if the average I.O. value is less than 20 percent, the stream segment would be classified as nontrout.

The IO analysis was completed for this segment of Sidney Brook. The results indicate an IO of 21.1 percent which provides the reclassification of this segment of Sidney Brook to trout maintenance.

Table F. Proposed Waterbodies based on Trout Sampling

Waterbody	Current classification①	Proposed classification	Young of the year (trout species)	I.O.②	River miles
Sidney Brook (Grandin) – Headwaters downstream to the Route 513 bridge, including all tributaries	FW2-NT(C1)	FW2-TM(C1)	N/A	21.1	9.25

② Incidence of Occurrence (values more than 20 are indicative of a TM classification and less than 20 are indicative of NT classification).

Other Administrative Changes:

At N.J.A.C. 7:9B-1.15(b)vi, the Department is proposing to delete the language that indicates that the Department's maps should be consulted to determine if a waterbody is designated as Category One and replacing it with an indication that the stream classification table at N.J.A.C. 7:9B-1.15(c) through (g) should be consulted. In addition, the stream classifications

are digitized on the Department's GIS and the proposed Category One upgrades will be posted on its website along with the rule proposal.

At N.J.A.C. 7:9B-1.15(c) the Department is proposing several administrative changes such as correcting place names, spelling errors, and other editorial changes. Amendments are also being proposed to several waterbodies as follows:

Miry Run

The spelling and listing of Miry Run are being clarified. The Department is correcting the spelling of Miry Run to correctly read as Mirey Run as listed on the United States Geological Survey (USGS) quadrangle map. The classification of Mirey Run is also being corrected because the existing listing does not identify the portion of Mirey Run that flows through the Pinelands Protection and Preservation Area. The portion within the Pinelands Protection and Preservation Area has a higher antidegradation designation than the rest of the Run. Therefore, the Department is correcting the listing of Mirey Run as follows: "Entire length, except the portion within the boundaries of Pinelands Protection and Preservation Area" and will be classified as FW2-NT(C1). The portion within the Pinelands Protection and Preservation Area will be classified as PL.

Toms River

The Department is proposing to delete the SE classification of Toms River from the Route 571 bridge to the Route 37 bridge based on the freshwater benthic macroinvertebrate results which indicate this segment of the River is not saline. The FW2-NT/SE1 classification will be retained for the portion of Toms River from the Route 37 Bridge to Barnegat Bay.

The Department is proposing to merge two listings under Toms River identified by Van Hiseville and Whitesville both classified as PL(tm). The Department is proposing to expand the Whitesville listing to include the portion identified by the Van Hiseville listing. As a result, the listing for Van Hiseville is being proposed for deletion.

The Department is proposing to delete the Van Hiseville listing under Tributaries of Toms River classified as FW2-TM. The proposed tributary west of Pleasant Grove is the only tributary that was covered under the listing of Van Hiseville. The Department believes that it is more descriptive to identify the tributary as west of Pleasant Grove, therefore, the listing of Van Hiseville under Tributaries of Toms River is being deleted.

Dove Mill Branch

The Department is proposing to merge the two listings of Van Hiseville and Holmansville under Dove Mill Branch as these segments are immediately adjacent to each other and have the same classification. The existing Category One waters within the Butterfly Bogs Wildlife Management Area will now be merged with the proposed Category One waters under the listing of Van Hiseville. Therefore, the listing of Holmansville is being proposed for deletion.

Wrangle Book

The Department is proposing to delete Wrangle Book from its current codification as a separate waterbody under N.J.A.C. 7:9B-1.15 and list it under Toms River Tributaries at N.J.A.C. 7:9B-1.15(c). The proposed Wrangel Brook segment under the listing of Whiting includes the existing Category One waters within the Whiting Wildlife Management Area as well as the proposed new Category One waters. The Department is proposing to delete the SE classification of Wrangel Brook from the source to Michaels Brook based on the freshwater benthic macroinvertebrate results which indicate this segment of the brook is not saline. Under the listing of Manchester, the Wrangel Brook segment from Green Branch to the confluence with Michaels Brook that is reclassified as FW2-NT is identified. The last listing under Berkeley identifies the Wrangel Brook segment where the classification of FW2-NT/SE1 is retained. In addition, the spelling of Wrangle Brook is also being corrected to Wrangel Brook to reflect the spelling contained on the United States Geological Survey Maps.

Amwell Lakes

At N.J.A.C. 7:9B-1.15(d) the Department is proposing to add Amwell Lakes. The entire length of Alexauken Creek was designated of as Category One in 2004 (36 N.J.R. 3565(c), August 2, 2004). The Department inadvertently did not identify the Amwell Lakes when Alexauken Creek was upgraded to Category One. The three Amwell Lakes are part of the Alexauken Creek drainage and each lake is greater than 5 acres in area. Pursuant to N.J.A.C. 7:9B-1.15(b)5ii, "All freshwater lakes, ponds and reservoirs that are five or more acres in surface area, . . . that are not specifically listed as FW2-TP or FW2-TM are classified as FW2-NT." Therefore, these lakes are classified as FW2-NT(C1). Through this rulemaking, the Department is proposing to add the Amwell Lakes to the listing at N.J.A.C. 7:9B-1.15(d) and these lakes will be classified as FW2-NT(C1).

Oldmans Creek

As explained above, the Department is proposing to delete the SE1 classification of Oldmans Creek from the source to the Kings Highway by Porches Mill, and reclassify this portion as FW2-NT based on the presence of freshwater E&T species documented above Kings Highway. The Department is also merging the existing Category One water within the Harrisonville Lake Wildlife Management Area with the proposed Category One waters under the listing of Harrisonville at N.J.A.C. 7:9B-1.15(d). The stream classification of Oldmans Creek from Kings Highway by Porches Mill to the Delaware River will be retained as FW2-NT/SE1.

The Department is proposing to merge the existing Category One waters within the Whittingham Wildlife Management Area, with the proposed Category One upgrade under the listing of Springdale. Therefore the listing of Whittingham under Pequest River is proposed for deletion.

In addition, the Department is proposing to delete Oldmans Creek from its current location because it is not listed in alphabetical order, however, recodify Oldmans Creek to identify it correctly in the alphabetical listing at N.J.A.C. 7:9B-1.15(d).

Salem River

The Department is proposing to delete the SE classification of Salem River from the source to the confluence with Major Run and reclassify this portion as FW2-NT based on the presence of freshwater E&T species documented above Major Run. The Department will retain the FW2-NT/SE1 classifications of Salem River from Major Run to the Delaware River.

At N.J.A.C. 7:9B-1.15(e) the Department is proposing several administrative changes as follows:

Blue Mine Brook

The Department is proposing to delete the listing of Norvin Green State Forest under Blue Mine Brook because with the Category One upgrade proposed as part of this rulemaking for the entire Blue Mine Brook, it is not necessary to identify the same classification of FW2-TM(C1) under two listings.

Cupsaw Brook

The Department is also proposing to delete the listing of Ringwood State Park under Cupsaw Brook because with the Category One upgrade proposed as part of this rulemaking for the entire Cupsaw Brook, it is not necessary to identify the same classification of FW2-NT(C1) under two listings.

Oak Ridge Reservoir

There are two listings of Oak Ridge Reservoir, one identifying the Reservoir and the other identifying the FW1 tributary. A southwestern tributary to Oak Ridge Reservoir is being proposed as part of this rulemaking. Therefore, the Department is proposing to delete the second listing of Oak Ridge Reservoir but relocate the FW1 tributary under the proposed listing of Oak Ridge Reservoir Tributaries along with the now proposed southwestern tributary.

Ringwood Creek

The Department is proposing to delete the listing of Sloatsburg under Ringwood Creek because with the Category One upgrade proposed as part of this rulemaking for the entire Ringwood Creek, it is not necessary to identify the same classification of FW2-TM(C1) under two listings.

Rockaway River

The Department is proposing to delete the listing of Berkshire Valley under Rockaway River because with the Category One upgrade proposed as part of this rulemaking for the entire Rockaway River, it is not necessary to identify the same classification of FW2-NT(C1) of this portion of Rockaway River under two listings.

Saddle River

The listing of the Saddle River is being proposed to clarify multiple listings. The portion of the river classified as trout production has two listings under Upper Saddle River. It is not necessary to have two listing for this trout production segment. Therefore, the Department is proposing to combine the two listings into one and identify the stream stretch from State line to Pleasant Brook as FW2-TP(C1).

Timber Brook

The Department is proposing to delete one of the listing of Timber Brook. There are two listings for Timber Brook one identified by the place name Kitchell and the other with Farney State Park. The Department is proposing to merge the existing Category One waters within Farney State Park and the proposed Category One waters under the listing of Kitchell.

At N.J.A.C. 7:9B-1.15(g), the Department is proposing to delete the Pellettown listing under Papakating Creek. A tributary of Papakating Creek at Pellettown is listed separately as FW2-NT. The Department is proposing a Category One designation to Papakating Creek from route 629 to Wallkill River including all its tributaries as FW2-NT(C1), therefore, it is not necessary to identify the tributary at Pellettown separately.

Social Impact

The revised definition for Category One and the new definitions of Exceptional Ecological Significance, Exceptional Fisheries Significance, Exceptional Water Supply Significance, and HUC 14 will improve the Department's ability to identify waters that should be protected from measurable changes in water quality to ensure that the aesthetic value and the biological integrity is protected. Any upgrade in the antidegradation designation of a particular waterbody based upon a new definition would be accomplished through rulemaking. Therefore, the new definitions, by themselves, will not result in any new impacts unless the Department initiates rulemaking to upgrade a specific waterbody to Category One.

The proposed amendments to the antidegradation designations of specific waterbodies identified above will allow the Department to better protect the surface waters of the State and will, therefore, result in a positive social impact. The proposed Category One antidegradation designation for the identified streams, lakes, ponds, and reservoirs will help prevent degradation of water quality and may provide increased recreational opportunities and improved health to human and aquatic resources. The designation of Category One antidegradation protection will discourage development where it would impair or destroy natural resources and the environmental qualities vital to the health and well being of the citizens of New Jersey. The maintenance of water quality resources is important to all residents, particularly to the many communities that depend upon surface waters for public, industrial, and agricultural water supplies, recreation, tourism, fishing, and shellfish harvesting. In addition, the proposed amendments will enable the Department to maintain existing water quality for the protection of existing and designated uses of the State's waters.

Economic Impact

The revised definition for Category One and the new definitions of Exceptional Ecological Significance, Exceptional Fisheries Significance, Exceptional Water Supply Significance, and HUC 14 clarify what waters qualify for Category One designation. This may

reduce costs incurred by parties seeking an upgrade in the antidegradation designation of a particular waterbody. Because the new definitions clarify what types of data are necessary to support an upgrade to Category One, a person seeking to support an upgrade may incur additional costs to develop the documentation necessary. Where additional data collection is necessary, the petitioner may need to engage consultant services to develop a sampling plan, to monitoring and analyze water quality and biological data, and prepare a report documenting the information necessary to support the upgrade.

The proposed amendments upgrading the antidegradation designation for the identified waterbodies may result in a range of economic impacts, ranging from no economic impact to potentially significant impact. The actual impact depends on the conditions within each segment. Where there are no existing discharges to a segment being proposed for reclassification, no economic impacts are anticipated. The potentially affected dischargers within the sub-watershed (HUC 14) of each of the waterbodies proposed for upgrade are listed in Table G below.

The antidegradation provisions of the Surface Water Quality Standards are triggered when an applicant proposes a new or expanded activity that has the potential to lower water quality. Previously approved wastewater discharges authorized through the NJPDES program, as well as existing development, are not subject to the antidegradation policies described below unless a new or expanded activity is proposed.

For existing NJPDES dischargers that are not proposing an expansion, the proposed Category One antidegradation designation amendments will not automatically require an upgrade of treatment capabilities.

TABLE G. Potentially Affected NJPDES Dischargers

Name of Waterbody	NJPDES Facility
Black Creek	NJ0023949(A)-Legends Resort & Country Club
Lamington River	NJ0021865(A)-Fiddler's Elbow CC - Reynwood Inc

Musconetcong River	NJ0027821(A)-Musconetcong SA NJ0021369(A)-Hackettstown MUA, NJ0109681(B)-Garden State Truck Plaza, NJ0109682(B)-Garden State Truck Plaza, NJ0023094(B)-Garden State Truck Plaza, NJ0023094(B)-Garden State Truck Plaza, NJ0023094(B)-Garden State Truck Plaza, NJ0004448(B)-Fibermark-Warren Glen,
Pequest River	NJ0020419(A)-Andover Twp BOE - Long Pond School NJ0027065(A)-Sparta Twp BOE - Alpine School NJ0134490(A)-Sussex Properties WTP
Rockaway River	NJ0021091(A)-Jefferson Twp. High-Middle School NJ0026867(A)-Jefferson Twp.-White Rock NJ0002500(B)-US Army Picatinny NJ0002500(B)-US Army Picatinny NJ0002500(B)-US Army Picatinny NJ0002500(B)-US Army Picatinny NJ0002500(B)-US Army Picatinny NJ0002500(B)-US Army Picatinny NJ0002496(B)-Mc Williams Forge Co. NJ0002496(B)-Mc Williams Forge Co. NJ0002496(B)-Mc Williams Forge Co. NJ0002496(B)-Mc Williams Forge Co. NJ0133892(B)-Denville Technical Park NJ0035785(B)-Rockaway Twp WTP
Salem River	NJ0130915(B)-Coastal S/S 74224
Stony Brook	NJ0022110(A)-Educational Testing Service NJ0035319(A)-Stony Brook RSA – Pennington NJ0022276(A)-Stonybrook School NJ0000809(B)-Lucent Technologies Inc NJ0000809(B)-Lucent Technologies Inc
Swimming River	NJ0035718(A)-23 Main St Holmdel Associates LLC/Prudential INS CO NJ0022586(A)-Marlboro Psychiatric Hospital NJ0031771(A)-Colts Neck Inn NJ0027529(A)-Holmdel Nursing NJ0027031(A)-Holmdel BOE-Village School
Toms River	NJ0005746(B)-Heritage Minerals Inc
Wallkill River	NJ0053350(A)-Susssex County MUA-Upper Wallkill NJ0027057(A)-Sparta Twp - Sparta Plaza NJ0031585(A)-High Point Regional High School NJ0023841(A)-Vernon Twp BOE NJ0029041(A)-Regency at Sussex Apts. NJ0033472(B)-Tri-Country Water Cond. Co. NJ0085561(B)-Ames Rubber Corporation NJ0136603(B)-Morris Lake WTP
Wanaque River	NJ0032395(A)-Ringwood Plaza-Ringwood Assnt. NJ0029432(A)-Ringwood BOE Erskine School

BOA Board of Education
MUA Municipal Utilities Authority
RSA Regional Sewerage Authority
SA Sewage Authority
WTP Water Treatment Plant

Any NJPDES permit issued to a facility for a new or expanded wastewater discharge to a Category One stream segment must include effluent limitations that will ensure that existing water quality will be maintained. In calculating effluent limitations, the Department considers the size of the receiving stream, the volume of wastewater, current levels of pollutants in the receiving stream, and effluent characteristics. These site-specific conditions preclude a "one size fits all" analysis. A new or increased discharge may not be possible in all situations. An applicant would be required to determine existing water quality as part of their NJPDES application and demonstrate that the new or expanded discharge would not result in a measurable change in water quality. The Department considers potable water intakes that pump water from a stream to a reservoir to be a tributary of the reservoir. This means that a new or expanded discharge located above a water intake must meet the antidegradation requirement of "no measurable change" at the intake. The Department will require an applicant to meet the "no measurable change" at the Category One boundary, if the discharge is located above a Category One segment or a potable water intake to a reservoir with a Category One antidegradation designation.

Renewal of an existing discharge permit does not require an antidegradation analysis, unless additional flow or loading is requested as part of the renewal. As part of permit renewal (with or without increases in flow or loading) and the issuance of new permits, the Department evaluates the available information for compliance with regulatory requirements such as water quality based effluent limitations, adopted Total Maximum Daily Loads, Effluent Limitation Guidelines, and Clean Water Enforcement Act provisions. This review could result in new effluent limitations if the discharge to waterbody proposed to change from Non-trout, to Trout Maintenance or Trout Production.

Compliance with the special protection measures for Category One waters required in the Department's Stormwater Management Rule at N.J.A.C. 7:8 (see 35 N.J.R. 119(a), January 6, 2003) may generate an increased financial burden on developers and municipalities seeking to build near the waterbodies proposed for Category One antidegradation designation in this

rulemaking. The designation of a waterbody as Category One may impact the scope and extent of development potential for a parcel, but may also add value to the areas adjacent to the Category One waterbody. For municipalities, depending on the type of development and the cost of services, the proposed upgrade may or may not increase the cost to provide services to the new development. However, the cost is offset by the protection of the State's exceptional waters.

Under the Stormwater Management Rules, nonpoint sources of pollution are required to implement best management practices (BMP). Additional measures are necessary to protect the State's waterbodies designated as Category One. Particularly, Special Water Resource Protection Areas (buffers) are required as a new BMP to protect water quality in Category One waters. The buffers would be imposed adjacent to all Category One waters and upstream tributaries of Category One waters within the same sub-watershed. Under the Stormwater Management rule, the buffers would include an area extending 300 feet from the top of stream bank or center channel if the stream has no defined banks. The buffer will not affect existing development. Small development projects resulting in less than 0.25 of an acre of new impervious surface and less than one acre of site disturbance are not regulated by the Stormwater Management Rules.

The proposed amendments to the Flood Hazard Area Control Act rules at N.J.A.C. 7:13 would require riparian zones similar to the buffer requirement in the Stormwater Management rules. This chapter expands the regulated riparian zones to 300 feet along Category One waters and all upstream tributaries within the same HUC-14 watershed; 150 feet along all upstream tributaries to trout production waters, trout maintenance waters and tributaries within one mile upstream, waters flowing through areas that support certain threatened or endangered species and tributaries within one mile upstream, and waters that flow through areas that contain acid producing soils; and 50 feet along all other waters. The 300-foot riparian zone proposed under this rule, however, will apply to any activity that requires approval under this chapter, which

includes a larger set of activities than that which is regulated under the Stormwater Management rules which establish a 300-foot buffer only for a major development.

Environmental Impact

The revised definition for Category One and the new definitions of Exceptional Ecological Significance, Exceptional Fisheries Significance, Exceptional Water Supply Significance, and HUC 14 will improve the Department's ability to identify waters that should be protected from measurable changes in water quality to ensure that the aesthetic value and the biological integrity is protected. The new definitions will not result in environmental impact unless the Department initiates rulemaking to upgrade a specific waterbody to Category One. The upgrade in the antidegradation designation will enhance environmental protection for the specific waterbody.

The proposed amendments increase the number of waterbodies with Category One antidegradation designation. The same surface water quality criteria apply in Category One and Category Two streams. The additional protection provided by the Category One antidegradation designation is to prevent degradation of existing water quality of exceptional value. While Category Two does provide water quality protection, the Department has made a determination that healthy waterbodies qualifying for Category One designation deserve a greater level of protection to ensure that the aesthetic value and ecological integrity of the waterbody is maintained. Implementation of these rules through permitting and planning programs will maintain the chemical, physical, and biological integrity of the proposed Category One waters.

The proposed amendments to upgrade the antidegradation designation for the identified waterbodies based on exceptional ecological significance will ensure that the water quality necessary to maintain the existing populations of Bog Turtle, Dwarf Wedgemussel, Brook Floater, Triangle Floater, Green Floater, Eastern Pond Mussel, or Eastern Lampmussel and their habitats.

The proposed amendments to upgrade the antidegradation designation for the identified waterbodies based on exceptional water supply significance will ensure that potable water supplies, and therefore drinking water, are as pollutant-free as possible.

Federal Standards Analysis

Executive Order 27 (1994) and N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c.65) require that State agencies which adopt, readopt, or amend State regulations that exceed any Federal standards or requirements include in the rulemaking document a Federal standards analysis.

The Federal Clean Water Act (CWA), 33 U.S.C. 1251 et seq., as amended by the Water Quality Act of 1987 (PL 100-4) requires the establishment of water quality standards for all surface waters of the United States. (The Water Quality Act of 1987 amended the CWA to require the adoption of criteria for toxic pollutants identified as causing or contributing to an impairment of a waterbody's designated use(s).) Individual states are given the primary responsibility for developing and adopting surface water quality standards applicable to their waters. The USEPA is given responsibility to oversee and approve state water quality standards, provide guidance on the content of the standards and to develop water quality criteria guidance documents. Key elements of the surface water quality standards program required under the CWA are: a classification system establishing designated beneficial uses of the waters; ambient water quality criteria necessary to protect those uses; minimum uses to be attained, which reflect the fishable and swimmable goals of the CWA; and antidegradation policies and implementation procedures to prevent water quality from deteriorating. Furthermore, the CWA includes provisions requiring the USEPA to promulgate superseding Federal standards where the USEPA concludes that a State's standards are not consistent with the requirements of the CWA or where Federal requirements are necessary to meet the requirements of the CWA.

The SWQS amendments being proposed are required by and consistent with the Federal statutes, regulations and guidance. The Department has prepared the following sectional

analyses of the SWQS, which compares each section with the applicable Federal law, regulations and guidance, as required under Executive Order 27 (1994) and P.L. 1995, c. 65.

N.J.A.C. 7:9B-1.4 contains definitions of terms used within the SWQS. Most of these definitions are the same as those used by the Federal government in either the Federal Water Quality Standards Regulation at 40 CFR 131.3 or in the glossary of a guidance document for states entitled *Water Quality Standards Handbook: Second Edition* (August 1994, EPA-823-B-94-005a) (Handbook). There are a few definitions that can not be found in the Federal regulations or guidance documents however, each one of them are consistent with the Federal policies. For example, the proposed definition of "exceptional ecological significance" is not defined in the Federal regulations however, the concept is from the Federal Water Quality Standards Regulation at 40 CFR 131.12

N.J.A.C. 7:9B-1.15 contains specific waterbody classification listings and antidegradation designations, arranged by major drainage basin, and instructions for the use of the classification tables. The Federal water quality regulations at 40 CFR Part 131.10 require that states specify appropriate water uses to be achieved and protected. The Department's SWQS waterbody classification listing is a tool to identify these designated uses such as protection and propagation of fish, shellfish, and wildlife, recreation in and on water, public water supplies, agricultural, industrial, etc. Therefore, these waterbody classifications are consistent with the Federal regulations.

In addition, 40 CFR Part 131.12 establishes requirements for the states to develop and adopt antidegradation policies and implementation procedures to ensure that the level of water quality needed to protect existing uses is maintained, and that water quality better than necessary to protect existing uses is maintained and protected unless demonstrations are made in support of lowering the water quality. The proposed changes in antidegradation designation identify the level of protection and implementation procedures that must be followed. The antidegradation

designations are consistent with and do not exceed Federal standards, therefore, no further analysis is required.

Jobs Impact

Pursuant to N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c. 166), all rule proposals must contain a jobs impact statement assessing the number of jobs to be generated or lost if the proposed rule takes effect.

The revised and new definitions as well as the proposed higher use classification and/or antidegradation categories are not expected to create any additional jobs or cause any jobs to be lost. Losses of existing jobs would only occur in the event that a discharger to one of the waterbodies proposed for reclassification would curtail or cease operations rather than provide the necessary measures to abate NJPDES regulated discharges so as to comply with any new permit requirements based on the SWQS.

As discussed in the Economic Impact statement, the imposition of requirements based on the SWQS is waterbody and facility specific. Failure to implement the proposed amendments could result in lost employment opportunities in businesses and industries that are water quality dependent, such as tourism and fishing. The implementation of the SWQS through the NJPDES permitting and other Department programs will continue to result in job opportunities in analytical and environmental consulting services to assess permit compliance and evaluate and design the most cost effective abatement measures to achieve permit compliance. Should such abatement measures involve new capital improvements, job opportunities related to construction contracting services and operation and maintenance of these improvements would be created. Implementation of actions to achieve the SWQS will result in more of the State's waters achieving designated uses which will enhance job opportunities in industries and businesses that are directly and indirectly water related.

Agriculture Industry Impact

Pursuant to P.L. 1998, c.48, adopted on July 2, 1998, the Department has evaluated this rulemaking to determine the nature and extent of the impacts of the proposed rules on the agriculture industry. Agricultural operations generally do not require NJPDES permits, therefore, the proposed rules are not expected to have a significant impact upon the agriculture industry. Concentrated Animal Feeding Operations (CAFO) may have to install hydraulic controls to maintain the existing water quality of the receiving waterbody. However, the Department is not aware of any CAFOs that are located on the specific waterbodies proposed Category One antidegradation designation.

Regulatory Flexibility Analysis

The proposed amendments might affect small businesses engaging in activities that affect the quality or uses of the surface waters of the State through pollutant discharges. As a result of the proposed change in the antidegradation designation for the waterbodies covered by this proposal, new or expanded NJPDES dischargers to these waterbodies will have to demonstrate that their discharge will not impact water quality in the Category One waterbody. Additionally, new or expanded dischargers to Category Two streams upstream of the Category One waterbody will be required to demonstrate that their discharge does not impact water quality at the Category One boundary. In order to meet these more stringent standards, dischargers may have to hire consultants, provide a higher level of pollutant removal by building additional treatment units, expanding existing treatment units, or changing to a treatment technology that can remove more pollutants. In addition to any capital costs, there may be annual operating costs, such as increased use of chemicals, increased electrical costs, and increased costs for sludge handling/disposal, etc. The cost to small businesses, where there are costs incurred, is expected to vary from several thousand dollars to several million dollars depending on facility specific factors such as type of activity, size of the discharge relative to the receiving stream, classification and/or antidegradation designation of waterbody affected, and required level of pollutant reduction. Small businesses that propose expansions that result in less than 0.25 acres additional impervious surface and less than one acre disturbance are not subject to the Special Water Resource Protection measures required by the Stormwater Management Rule. The

Department has balanced the need to protect the environment and the public health and to comply with the Federal law against any expected economic impacts of the rules upon small businesses and has determined that to exempt them from any requirements or reduce the requirements for them would endanger the environment, public health, and safety.

Smart Growth

Executive Order No. 4 (2002) requires State agencies which adopt, amend or repeal any rule adopted pursuant to N.J.S.A. 52:14B-4(a) of the Administrative Procedure Act to describe the impact of the proposed rule on the achievement of smart growth and implementation of the New Jersey State Development and Redevelopment Plan (State Plan), N.J.S.A. 52:18A-196 et seq. The Department has evaluated this rulemaking to determine the nature and extent of the proposed amendments' impact on smart growth and implementation of the State Plan. Smart growth discourages development where it may impair or destroy natural resources or environmental qualities that are vital to the health and well being of the present and future citizens of New Jersey. The proposed amendments regarding the upgrading of use classifications and/or antidegradation designations will likely impact decisions concerning land use and infrastructure development because wastewater discharges will have to meet the antidegradation policies at N.J.A.C. 7:9B-1.5(d). The Department believes that the upgraded antidegradation designations for the identified waterbodies are consistent with Smart Growth and will ensure that development can occur without compromising critical environmental resources.

The amendments are intended to conserve the State's natural resources, namely, its surface waters and associated biota, which implements State Planning Goal 2: Conserve The State's Natural Resources and Goal 4: Protect The Environment. Goal 2 provides that the State's natural resources (including - rivers, fresh and saltwater wetlands, habitats of unique flora and fauna) have significant intrinsic value as critical elements of the State's quality of life. The implementing strategy calls for conserving the State's natural resources. Goal 4 provides that "A clean, safe and attractive environment is essential to assuring the health of our citizens. Sustainable supplies of clean water, clean air and an abundance of open space and recreational

opportunities also will assure a sustainable economy." The implementing strategy is to "Protect the environment by planning for growth in compact forms, at locations and densities of use that make efficient use of existing and planned infrastructure and by increasing infrastructure capacities and growth potential in areas where development will not damage water resources, critical habitats or important forests…" The proposed amendments advance the goals of the State Plan by designating waters which provide a sustainable supply of water, support unique flora/fauna, and other selected water resources, for additional protections.

These amendments will additionally discourage development where it would impair or destroy natural resources and environmental qualities vital to the health and well being of the citizens of New Jersey consistent with Executive Order No. 114(1994), Executive Order No. 4(2002), and Executive Order No. 38(2002).

Full text of the proposed amendments follows (additions indicated in boldface ***thus***; deletions indicated in brackets *[thus]*):

N.J.A.C. 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.

. . .

"Category one waters" means those waters designated in the tables in N.J.A.C. 7:9B-1.15(c) through ([h] **g**), 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,] **based on** exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, or exceptional fisheries resource(s) **to protect their aesthetic value (color, clarity, scenic setting) and ecological integrity (habitat, water quality, and biological functions)**.[These waters may include, but are not limited to:

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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.]

. . .

"Exceptional ecological significance" means:

1. waterbodies with suitable habitat verified by the Department to support Bog Turtle, Brook Floater, Dwarf Wedgemussel, Eastern Pondmussel, Eastern Lampmussel, Green Floater, and/or Triangle Floater and documented occurrence(s) of at least one of these species verified by the Department for inclusion in the Natural Heritage Program; or

2. a waterbody supporting an exceptional aquatic community as demonstrated by an nonimpaired benthic macroinvertebrate community as measured by the Department's Rapid Bioassessment Protocol (see http://www.state.nj.us/dep/wms/bfbm/rbpinfo.html) and at least two of the following factors:

i. Optimal habitat as measured by the Department's Stream Habitat Assessment (see http://www.state.nj.us/dep/wms/bfbm/rbpinfo.html);

ii. Excellent fish community as measured by the Fish Index of Biotic Integrity (see http://www.state.nj.us/dep/wms/bfbm/fishibi.html);

iii. Water quality data that demonstrates compliance with aquatic life criteria pursuant to N.J.A.C. 7:9B-1.14(d) for dissolved oxygen, temperature, total phosphorus, and total suspended solids; or

iv. Impervious surface that is:

(a) less than two percent for a HUC 14 of five square miles; or

(b) less than or equal to 10 percent for a HUC 14 of greater than or equal to five square miles.

"Exceptional fisheries resource(s)" means waterbodies confirmed by the Department as supporting trout production and classified as FW2-TP or waterbodies approved by the Department for unrestricted shellfish harvest pursuant to Shellfish Growing Water Classification rules at N.J.A.C 7:12.

"Exceptional water supply significance" means a water supply system that serves a population greater than 100,000, including any reservoirs and their natural tributaries from source to the reservoir.

. . .

HUC 14" or "hydrologic unit code 14" means an area within which water drains to a particular receiving surface water body, also known as a subwatershed, which is identified by a 14 digit hydrologic unit boundary designation, delineated within New Jersey by the United States Geological Survey.

. . .

N.J.A.C. 7:9B-1.15 **Surface water classifications for the waters of the State of New Jersey**

(a) – (No change.)

(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 – 4 (No change.)

5. To find unnamed waterways or waterbodies or named waterways or waterbodies which do not appear in the listing, use the following instructions:

i. – v. (No change.)

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] **those waterways or**

waterbodies should be checked to determine if the waterbody of interest is [mapped] **listed** as a C1 water **in the stream classification tables at N.J.A.C. 7:9B-1.15(c) through (g)**. [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. (No change.)

6. – 7. (No change.)

(c) The surface water classifications in Table 1 are for waters of the Atlantic Coastal Basin:

TABLE 1

Waterbody	Classification
. . .	
[MIRY] **MIREY** RUN (MacNamara) – Entire length, **outside the boundaries of Pinelands Protection and Preservation Area**	FW2-NT/SE1(C1)
(MacNamara) – Portion of the Run within the boundaries of the Pinelands Protection and Preservation Area	**PL**
. . .	
TOMS RIVER MAIN STEM (Holmeson) - Source to [Rt. 528 bridge,] Cassville **Road bridge** except those tributaries described separately under Tributaries below	FW2-NT
(Cassville) – Cassville Road bridge to the Route 528 bridge	**FW2-NT(C1)**

[(Van Hiseville) - Rt. 528 bridge to Rt. 547 bridge in Whitesville, except tributaries described separately, under Tributaries below	PL(tm)]
(Whitesville) – [Rt. 547 bridge] **Route 528 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.] **the Route** 571 bridge, except tributaries described separately, under Tributaries below	FW2-TM**(C1)**
(Toms River) – [Rt.]**Route** 571 bridge to **the Route 37 bridge** [Barnegat Bay], except tributaries described separately, under Tributaries below	FW2-NT[/SE1]**(C1)**
(Toms River) - Route 37 bridge to Barnegat Bay, except tributaries described separately, under Tributaries below	**FW2-NT/SE1**

TRIBUTARIES, TOMS RIVER

(Holmeson) – (No change.)	
[(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	FW2-TM]
(West of Pleasant Grove) – Source to the Pinelands Protection and Preservation Area boundary, including all tributaries	**FW2-TM(C1)**
(Toms River) - (No change.)	
(Archer's Corners) - (No change.)	

DOVE'S MILL BRANCH

(Van Hiseville) – [Entire length, except the segment described separately below] **Source to Bunker Hill Lake, including all tributaries**	FW2-NT**(C1)**
[(Holmansville) - Stream and tributaries within Butterfly Bogs Wildlife Management Area	FW2-NT(C1)]

. . .

WRANGEL BROOK	
(Whiting) – Source to Green Branch, including all tributaries but not including Green Branch and portions within the boundaries of the Pinelands Protection and Preservation Area	**FW2-NT(C1)**
(Manchester) – Green Branch to the confluence with Michaels Brook	**FW2-NT**
(Berkeley) – Michaels Brook to Toms River, except portions within the boundaries of the Pinelands Protection and Preservation Area	**FW2-NT/SE1**

. . .

[WRANGLE BROOK	
(Keswick Grove) - Entire length, except segment described below	FW2-NT/SE1
(Whiting) - Brook and tributaries within Whiting Wildlife Management Area	FW2-NT(C1)]

. . .

(d) The surface water classifications in Table 2 are for waters of the Delaware River Basin:

TABLE 2

Waterbody	Classification

AMWELL LAKES (Lambertville)	**FW2-NT(C1)**
. . .	
ANDOVER JUNCTION BROOK (Andover) - Entire length**,**	
including all tributaries	FW2-TM**(C1)**
ANDOVER JUNCTION BROOK LAKES (Andover) – All	
unlisted lakes greater than five acres	**FW2-NT(C1)**
. . .	
BEAR CREEK	
(Johnsonburg) – (No change.)	
(Frelinghuysen) - Erie-Lackawanna Railroad trestle to confluence with Pequest River**, including all unnamed and unlisted tributaries**	FW2-TM**(C1)**
. . .	
BOWERS BROOK	
(Hackettstown) (No change.)	
(Hackettstown) - Route 517 to the confluence with Musconetcong River	**FW2-TM(C1)**
. . .	
GARDNERS [LAKE] **POND** (Andover)	FW2-TM**(C1)**
. . .	
HATCHERY BROOK (Hackettstown) - Entire length	FW2-TM**(C1)**
HIDDEN VALLEY LAKE (Lake Lenape)	**FW2-NT(C1)**
. . .	

ILLIF, LAKE (Andover) FW2-TM**(C1)**

. . .

KYMER BROOK (Andover) - Entire length**, including all tributaries** FW2-NT**(C1)**

. . .

LUBBERS RUN (Byram) – Entire length**, except portion described below** FW2-TM

(Byrum) - Luckawanna Lake downstream to the confluence with the Cowboy Creek **FW2-TM(C1)**

. . .

MAURICE RIVER
MAIN STEM
(Willow['s] Grove) - Source to [the boundary of the section of Union Lake Wildlife Management Area north of Vineland] **Willow Grove Road** FW2-NT

(Willow Grove) – Willow Grove Road to the confluence with Green Branch **FW2-NT(C1)**

(Brotmanville) - Confluence with Green Branch to northern boundary of the Union Lake Wildlife Management Area **FW2-NT**

(Vineland) – (No change.)
(Vineland) - (No change.)
TRIBUTARIES, MAURICE RIVER (No change.)

. . .

MUSCONETCONG LAKE (Byram) **FW2-NT**

MUSCONETCONG RIVER

(Hackettstown) – Lake Hopatcong dam to [Delaware River] **Saxton Lake**, except tributaries described [below] **separately**	FW2-TM
(Saxton Falls) - Saxton Lake to the Delaware River, including all unnamed and unlisted tributaries	**FW2-TM(C1)**
TRIBUTARIES (No change.)	

. . .

NEW WAWAYANDA LAKE (Andover)	FW2-TM**(C1)**

. . .

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

. . .

OLDMANS CREEK	
(Lincoln) –Source to the eastern boundary of the Harrisonville Lake Wildlife Management Area boundary	**FW2-NT**
(Harrisonville) –Eastern boundary of the Harrisonville Lake Wildlife Management Area to Kings Highway by Porches Mill, including all tributaries	**FW2-NT(C1)**
(Oldmans) – Kings Highway by Porches Mill to the Delaware River	**FW2-NT/SE1**

. . .

PEQUEST RIVER

([Tranquility] **Springdale**) - Source to [Tranquility bridge]	
Conrail railway tracks south of Turtle Pond, including all unnamed and unlisted tributaries, except **FW1** segments described below	FW2-TM**(C1)**
(Whittingham) – (No change.)	
[(Whittingham) – Stream and tributaries within the Whittingham Wildlife Management Area, except those classified as FW1, above	FW2-TM(C1)]
(Tranquility) - Conrail railway tracks south of Turtle Pond to Tranquility bridge	**FW2-TM**
(Vienna) - (No change.)	
(Townsbury) - (No change.)	
(Townsbury) - (No change.)	
(Townsbury) - (No change.)	
TRIBUTARIES (No change.)	

. . .

POMPESTON CREEK	
(Cinnaminson) – Entire length, except portion described below	**FW2-NT**
(Riverton) - Route 130 bridge to Broad Street bridge	**FW2-NT(C1)**

. . .

SALEM RIVER	
(Upper Pittsgrove) – Source to Slabtown Road, including all tributaries	**FW2-NT(C1)**
(Woodstown) – Slabtown Road to the confluence with Nichomus Run	**FW2-NT**
(Sharptown) – Nichomus Run to Major Run, including Nichomus Run, Major Run, and their tributaries	**FW2-NT(C1)**
(Salem) – [Entire length] **Major Run to the confluence with the Delaware River**	FW2-NT/SE1

. . .

TAR HILL BROOK	
(Lake Lenape) - Source to, but not including, Lake Lenape	FW2-TM**(C1)**
(Lake Lenape) - Lake Lenape to Andover Junction Brook	FW2-NT**(C1)**

. . .

TROUT BROOK (Allamuchy) - Entire length**, including all tributaries**	FW2-NT**(C1)**

. . .

(e) The surface water classifications in Table 3 are for waters of the Passaic, Hackensack and New York Harbor Complex Basin:

TABLE 3

Waterbody	Classification
AMES LAKE (Hibernia)	**FW2-NT(C1)**

. . .

BEAVER BROOK	
(Meriden) (No change.)	
(Denville) - Meriden Road Bridge to Rockaway River**, including Mount Hope and White Meadow Lakes and all unnamed and unlisted tributaries**	FW2-NT**(C1)**
TRIBUTARIES (No change.)	

. . .

BLUE MINE BROOK	
(Wanaque) (No change.)	
(Wanaque) - Lower Snake Den Road bridge to [the boundary of Norvin Green State Forest] **the confluence with Wanaque Reservoir**	FW2-TM**(C1)**

[(Norvin Green State Forest) - That portion of the stream and any tributaries within the Norvin Green State Forest FW2-TM(C1)]

. . .

BURNT MEADOW BROOK (Green Pond) - Source downstream to confluence with Green Pond Brook**, including Lake Denmark and all tributaries** FW2-NT**(C1)**

. . .

[CHARLOTTEBURG] **CHARLOTTESBURG** RESERVOIR – [(Charlotteburg) **(Charlottesburg)** FW2-TM(C1)

..**TRIBUTARIES**

(Charlottesburg) – All unnamed tributaries **FW2-TP(C1)**

(Charlottesburg) – Unnamed lake on the southeastern tributary to the Reservoir **FW2-NT(C1)**

. . .

CUPSAW BROOK

(Skylands) - [Source to Wanaque Reservoir, except segment described below] **Entire length, including all tributaries and Cupsaw Lake** FW2-NT**(C1)**

[(Ringwood State Park) - That segment of Cupsaw Brook within the boundaries of Ringwood State Park FW2-NT(C1)]

. . .

DEN BROOK (Randolph) - Entire length**, including all tributaries and lakes** FW2-NT**(C1)**

TRIBUTARY (No change.)

. . .

DUNKER POND BROOK (West Milford Township) - Entire length, including Dunker Pond and all tributaries, except Lud-Day Brook	**FW2-NT(C1)**
DURHAM POND (Rockaway)	**FW2-NT(C1)**

. . .

EMMA LAKE (Hibernia)	**FW2-NT(C1)**
ERSKINE BROOK (Ringwood) – Entire length	**FW2-TM(C1)**
ERSKINE LAKES (Ringwood)	**FW2-NT(C1)**

. . .

GIRL SCOUT POND (Hibernia)	**FW2-NT(C1)**
GREEN POND (Rockaway)	FW2-TM**(C1)**
GREEN POND BROOK	
(Picatinny Arsenal) (No change.)	
(Wharton) - Outlet of Picatinny Lake to the confluence with the Rockaway River**, including all tributaries**	FW2-NT**(C1)**

. . .

HIBERNIA BROOK	
(Marcella) (No change.)	
(Hibernia) - First Green Pond Road bridge to confluence with Beaver Brook	FW2-TM**(C1)**
TRIBUTARY (No change.)	

. . .

JACKSON BROOK	
(Mine Hill) - Source to the boundary of Hurd Park, Dover**, including all tributaries**	FW2-TP(C1)
(Dover) - Hurd Park to Rockaway River	FW2-NT**(C1)**

. . .

MEADOW BROOK

(Wanaque) - Skyline Lake **and its outlet stream** to E. Belmont Ave.**, including all tributaries** FW2-NT**(C1)**

(Wanaque) – (No change.)

MILL BROOK

(Randolph) Source to [Rt.] **Route** 10 bridge**, including all tributaries** FW2-TP(C1)

(Randolph) – [Rt.] **Route** 10 bridge to Rockaway River FW2-TM**(C1)**

TRIBUTARIES (No change.)

. . .

OAK RIDGE RESERVOIR (Oak Ridge) FW2-TM**(C1)**

[OAK RIDGE RESERVOIR (Oak Ridge) - Northwestern tributary to Reservoir FW1(tm)]

OAK RIDGE RESERVOIR TRIBUTARIES

(Oak Ridge) - Northwestern tributary to Reservoir FW1(tm)

(Oak Ridge) – Southwestern tributary to Reservoir FW2-TM(C1)

. . .

PACOCK BROOK

(Canistear) – (No change.)

(Canistear) – Brook including Marshall Pond upstream of Canistear Reservoir located outside the boundaries of the Newark Watershed FW2-NT(C1)

(Stockholm) – Outlet **stream** of Canistear Reservoir to Pequannock River FW2-NT**(C1)**

. . .

PEQUANNOCK RIVER

MAIN STEM	
(Vernon) (No change.)	
(Hardyston) (No change.)	
(Newfoundland) - Outlet of Oak Ridge Reservoir downstream to **Charlottesburg Reservoir, including all unnamed tributaries**, but not including [Charlotteburg] **Charlottesburg** Reservoir	FW2-TP(C1)
[(Charlotteburg)] **Charlottesburg** - Outlet of [Charlotteburg] **Charlottesburg** Reservoir to, but not including, Macopin Reservoir or the tributaries described separately below	FW2-TP(C1)
(Kinnelon) (No change.)	
(Riverdale) (No change.)	
(Pompton Plains) (No change.)	
TRIBUTARIES	
(Copperas Mtn.) (No change.)	
(Smoke Rise) (No change.)	
(Green Pond Junction) (No change.)	
(Jefferson) (No change.)	
(Maple Lake) – Entire length, including all tributaries	**FW2-TP(C1)**
(Lake Kampfe) (No change.)	
(Lake Kampfe) (No change.)	
(Lake Kampfe) (No change.)	

. . .

RAMAPO RIVER (Mahwah) - State line to [Pompton River] **confluence with Fox Brook**	FW2-NT

(Mahwah) – Confluence with Fox Brook to Patriots Way bridge	**FW2-NT(C1)**
(Mahwah) – Patriots Way bridge to Pompton River	**FW2-NT**
TRIBUTARY (Oakland) – (No change.)	
RICKONDA LAKE (Ringwood)	**FW2-NT(C1)**
RINGWOOD CREEK	
(Ringwood) - Entire length, [except segment described below] **including all tributaries**	FW2-TM**(C1)**
[(Sloatsburg) - Creek within Ringwood State Park	FW2-TM(C1)]

. . .

ROCKAWAY RIVER	
(Wharton) - Source to Washington Pond outlet, [excluding the segment within the boundaries of the Berkshire Valley Wildlife Management Area] **including all lakes and unnamed and unlisted tributaries**	FW2-NT**(C1)**
[(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]**, but not including** Jersey City Reservoir	FW2-NT**(C1)**
(Boonton) - Jersey City Reservoir to Passaic River	**FW2-NT**
RUSSIA BROOK	
(Sparta) - Source to Lake Hartung dam**, including all tributaries**	FW2-NT**(C1)**
(Milton) - Lake Hartung dam to, but not including, Lake Swannanoa**, including all tributaries**	FW2-TM**(C1)**
TRIBUTARIES (No change.)	
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) (No change.)
(Lodi) (No change.)

. . .

SPLIT ROCK RESERVOIR (Rockaway) FW2-TM**(C1)**

[SPLIT ROCK RESERVOIR] TRIBUTARIES

(Farny State Park) (No change.)

(Rockaway) - All tributaries that drain into Split Rock Reservoir outside Farny State Park **FW2-TP(C1)**

. . .

STEPHENS BROOK

(Roxbury) - Entire length**, including all tributaries**, except segment described separately, below FW2-NT**(C1)**

(Berkshire Valley) (No change.)

. . .

STONY BROOK (Boonton) – Entire length**, including all tributaries** FW2-NT**(C1)**

. . .

TELEMARK LAKE (Hibernia) **FW2-NT(C1)**

. . .

TIMBER BROOK (Kitchell) - Entire length, [except tributary described separately below] **including all tributaries** FW2-NT**(C1)**

[TIMBER BROOK (Farny State Park) - Headwater segment of tributary to Timber Brook within Farny State Park FW2-NT(C1)]

. . .

WANAQUE RESERVOIR (No change.)

TRIBUTARIES (Wanaque Reservoir) - All unnamed and unlisted tributaries that drain into Wanaque Reservoir **FW2-TM(C1)**

. . .

(f) The surface water classifications in Table 4 are for waters of the Raritan River and Raritan Bay Basin:

TABLE 4

Waterbody	Classification

. . .

BIG BROOK (Vanderberg) - Entire length**, including all tributaries and lakes** FW2-NT**(C1)**

. . .

LAMINGTON RIVER (BLACK RIVER)
(Succasunna) (No change.)
(Milltown) (No change.)
(Pottersville) (No change.)
(Vliettown) - Camp Brady bridge to [Rt. 523 bridge] **confluence with Cold Brook** FW2-TM

(Oldwick) – Confluence with Cold Brook to the Route 523 bridge	**FW2-TM(C1)**
(Burnt Mills) – [Rt.] **Route** 523 **bridge** to North Branch, Raritan River	FW2-NT**(C1)**
TRIBUTARY (No change.)	

. . .

MINE BROOK (Colts Neck) - Entire length**, including all tributaries**	FW2-NT**(C1)**

. . .

RAMANESSIN (HOP) BROOK (Holmdel) - Entire length**, including all tributaries**	FW2-TM**(C1)**

. . .

SIDNEY BROOK	
(Grandin) – Headwaters downstream to the Route 513 bridge, including all tributaries	**FW2-TM(C1)**
(Grandin) – [Headwaters] **Route 513 bridge** to its confluence with the South Branch Raritan River, including all tributaries	FW2-NT(C1)

. . .

STONY BROOK	
(Hopewell) – [Entire length] **Source to Pennington Hopewell Road**, except that segment described below	FW2-NT
(Hopewell) – Pennington Hopewell Road to the Pumping Station south of West Road, including all unnamed and unlisted tributaries	**FW2-NT(C1)**

(Syndertown) – (No change.)

. . .

SWIMMING RIVER RESERVOIR (No change.)

TRIBUTARIES (Swimming River Reservoir) – All unnamed and unlisted tributaries to Swimming River Reservoir **FW2-NT(C1)**

. . .

WILLOW BROOK (Holmdel) - Entire length**, including all tributaries** FW2-NT**(C1)**

YELLOW BROOK (Colts Neck) - Entire length**, including all tributaries** FW2-NT**(C1)**

(g) The surface water classifications in Table 5 are for waters of the Wallkill River Basin:

TABLE 5

Waterbody	Classification
. . .	
BEAVER RUN (Wantage) - Entire length**, including all tributaries**	FW2-NT**(C1)**
BLACK CREEK	
(McAfee) – (No change.)	
(Vernon) – [Rt.] **Route** 94 bridge to [Pochuck Creek] **confluence with tributary at McAfee**	FW2-NT
(Vernon) - Confluence with tributary at McAfee to Pochuck Creek, including all unnamed and unlisted tributaries	**FW2-NT(C1)**
TRIBUTARIES	
(Hamburg) – (No change.)	
(Rudeville) – (No change.)	
(McAfee) – (No change.)	

(Vernon Valley) - Entire length	FW2-NT**(C1)**
BLUE HERON LAKE (Sparta)	**FW2-NT(C1)**

. . .

CLOVE BROOK	
(Wantage) - Source to, but not including, Clove Acres Lake, except those tributaries described separately below	FW2-TM**(C1)**
(Sussex) - Clove Acres Lake to Papakating Creek	FW2-NT**(C1)**
(High Point) – (No change.)	
FRANKLIN POND (Hamburg Mtn.) Pond and its unnamed and unlisted tributaries	**FW2-NT(C1)**
FRANKLIN POND CREEK	
(Hardyston) - Source to, but not including, Franklin Pond**, including all unnamed and unlisted tributaries**	FW2-TP(C1)
(Hamburg Mtn.) – (No change.)	
TRIBUTARY (Hamburg Mtn.) – (No change.)	

. . .

HAMBURG CREEK	
(Hamburg Mtn.) - Source to [Rt.] **Route** 517 bridge, Rudeville, except tributary described separately below	FW2-TM**(C1)**
(Hardistonville) – [Rt.] **Route** 517 bridge to Wallkill River	FW2-NT**(C1)**
(Hamburg Mtn.) – (No change.)	

. . .

HAWTHONE LAKE (Sparta)	**FW2-NT(C1)**
HEATERS POND (Ogdensburg)	**FW2-NT(C1)**

. . .

MOHAWK LAKE (Sparta) – Lake and its tributaries	**FW2-NT(C1)**
MORRIS LAKE (Sparta)	**FW2-NT(C1)**
MUD POND (Hamburg)	**FW2-NT(C1)**

. . .

PAPAKATING CREEK	
MAIN STEM	
(Frankford) - Source to [Rt.] **Route** 629 bridge**, including**	
all tributaries	FW2-TM**(C1)**
[(Pellettown) - Entire length of tributary	FW2-NT]
(Wantage) – [Rt.] **Route** 629 bridge to Wallkill River**,**	
including all tributaries	FW2-NT**(C1)**
WEST BRANCH	
(Wantage) - Entire length**, including all tributaries**	FW2-NT**(C1)**

. . .

SAGINAW, LAKE (Sparta)	**FW2-NT(C1)**

. . .

SILVER LAKE (Hamburg Mtn.)	**FW2-NT(C1)**

. . .

SUMMIT LAKE (Hardyston)	**FW2-NT(C1)**
SUNSET LAKE (Sparta)	**FW2-NT(C1)**
TAMARACKS LAKE (Hardyston)	**FW2-NT(C1)**
TOWN BROOK (Vernon) - Entire length**, including all tributaries**	FW2-TM**(C1)**

. . .

WALLKILL RIVER	
(Sparta) - Source to confluence with Sparta Glen Brook	FW2-NT**(C1)**

(Franklin) - Sparta Glen Brook to, but not including, Franklin Pond**, including all unnamed and unlisted tributaries**	FW2-TM**(C1)**
(Wantage) - Outlet of Franklin Pond to State line**, including all unnamed and unlisted tributaries**	FW2-NT**(C1)**
TRIBUTARIES	
(Sparta) – **Entire length but not including** Lake Saginaw [dam downstream to Wallkill River]	FW2-TP(C1)
(Ogdensburg) – **Entire length** [Tributary from the outlet of Heaters Pond to the confluence with the Wallkill River]	FW2-TP(C1)
WANTAGE BROOK (Wantage) - Entire length**, including all tributaries**	FW2-NT**(C1)**
. . .	
WHITE LAKE (Sparta)	FW2-TM**(C1)**
. . .	
WILDWOOD LAKE (Hamburg Mountain)	**FW2-NT(C1)**
WILLOW (QUARRYVILLE) BROOK (Wantage) - Entire length**, including all tributaries**	FW2-TM**(C1)**

(h) – (i) (No change.)

Based on consultation with staff, I hereby certify that the above statements, including the Federal standards analysis addressing the requirements of Executive Order 27 (1994), permit

the public to understand accurately and plainly the purposes and expected consequences of this proposed amendments. I hereby authorize this proposal.

Date:_____

_____

Lisa P. Jackson, Commissioner

Department of Environmental Protection