# **DEPARTMENT OF ENVIRONMENTAL PROTECTION**

# LAND USE MANAGEMENT WATER MONITORING AND STANDARDS Surface Water Quality Standards N.J.A.C. 7:9B Surface Water Classifications Proposed Amendment: N.J.A.C. 7:9B-1.15

Authorized By:	Bradley M. Campbell, 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 <i>et seq</i> .	
Calendar Reference:	See Summary below for explanation of exception	
	to calendar requirement	
DEP Docket Number:	23-03-10/412	

Proposal Number:

Public hearings concerning this proposal will be held at the following location and times:

#### December 15, 2003

3 PM to 5 PM or close of testimony which ever occurs first and 6:30 PM to close of testimony Department of Environmental Protection 401 East State Street Public Hearing Room First Floor Trenton, NJ 08625

Submit written comments by January 2, 2004, to: Gary J. Brower, Esq. Attn. DEP Docket Number 23-03-10/412 Office of Legal Affairs New Jersey Department of Environmental Protection P.O. Box 402 Trenton, NJ 08625-0402 The Department requests that commenters submit comments on 3.5-inch diskettes as well as paper. Submission of a diskette is not required. The Department prefers Microsoft Word or Word Perfect 5.x or 6.0, but can convert and review many other formats as well. MacIntosh formats should not be used.

Text enhancements such as underlines, bold, etc., are often not converted correctly between software documents. Therefore, when suggesting text revisions, commenters should show the text, as they desire to see it in the rule.

Comments on the proposal summary should be included with comments on the pertinent section of the rule text, wherever possible, to eliminate duplicative comments and facilitate the Department's task of organizing and responding to comments. Since comments will be sorted electronically, the following format should be used for each comment:

Citation (tab)COMMENT: Comment text (Company Name). For example,

7:9B-1.4 COMMENT: ABC Corp. believes that the definition of "criteria" should also refer to the Ground Water Quality Standards. (ABC Corp.)

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

The agency proposal follows:

The Department is proposing amendments to the Surface Water Quality Standards (SWQS) at N.J.A.C. 7:9B, to upgrade the antidegradation designation for seven streams including both named and unnamed tributaries based upon "exceptional ecological significance". Significant drainage areas of the Manasquan River, Metedeconk River and natural drainage to the Oradell Reservoir are also being proposed for upgrade in antidegradation designation based upon "exceptional water supply significance". In addition, the stream classification for two

streams segments will be upgraded to FW2-Trout Production (TP). Category One antidegradation designation would apply to the stream segments reclassified as FW2-TP. As a result of these upgrades, the total river miles designated as Category One will increase by approximately 500 river miles. The Department is also proposing to upgrade South Branch Rockaway Creek from FW2-TM(C1) to FW2-TP(C1) based on the trout production status. The South Branch Rockaway Creek was previously upgraded to a Category One antidegradation designation (see 35 N.J.R. 2264(b) May 19, 2003).

The Department administers the SWQS for the protection of surface water quality of the waters of the State. 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 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 are intended to aid the Department's implementation of 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, Stormwater Management rules at N.J.A.C. 7:8, and Water Quality Management Planning rules at N.J.A.C. 7:15.

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.

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

Governor McGreevey announced a plan to improve protections of key drinking water sources on Earth Day of 2002. He indicated that over-development and sprawl that threaten to destroy both the water supplies and the quality of life should be stopped. Protecting water supplies must be an ongoing priority as part of the Governor's smart growth agenda. As part of the State's efforts to better protect its water resources, the Department has embarked on an initiative to comprehensively review available data and information for the waters of the State to determine which waters qualify for additional water quality protection as Category One.

The Department has already taken action to better protect water resources. On May 19, 2003, the Department adopted amendments to the Surface Water Quality Standards upgrading six stream segments to Category One antidegradation designation based upon "exceptional ecological significance" and nine reservoirs based on "exceptional water supply significance" (see 35 N.J.R. 2264(b)). Elsewhere in this issue of the New Jersey Register, an additional seven waterbodies received the upgraded antidegradation designation of Category One (see ---N.J.R.-----, November 3, 2003); six stream segments based on fish assemblage sampling data and one stream segment based on "exceptional ecological significance".

The Department has additionally taken action to develop further data and gain public input on waterbodies deserving increased protection. On March 3, 2003, the Department published a Notice of Opportunity for Public Comment on both the Blueprint for Intelligent Growth (BIG) Map and potential candidate waterbodies for Category One antidegradation designation (see 35 N.J.R. 1308(b)). The public comment period closed on April 25, 2003. The Department received several hundred nominations for Category One antidegradation designation in response to this request for public comment.

The waterbodies being proposed for Category One antidegradation designation are based upon the Department review of available information. The public nominated many of these waterbodies.

In the past, the Department identified small stream segments that were confirmed to support trout production, streams located within public lands/open space, and water supply reservoirs for upgrade to Category One antidegradation designation. Through this rule proposal, the Department is proposing Category One antidegradation designation for waterbody segments including tributaries that may result in entire subwatersheds (HUC 14), and in some cases several subwatersheds within a watershed (HUC11) being protected by Category One designation. The decision on the scope of the designation is based upon the unique characteristics of the waterbody. This approach represents a more holistic approach to water resource protection and ensures that the critical resources being protected through the Category One designation are not adversely impacted by activities upstream.

The SWQS definition for "Category One Waters" at N.J.A.C. 7:9B-1.4 states that this term,

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

- 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 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;
- 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."

The Department's goal for watershed and water quality management is to protect existing and designated uses, including endangered and threatened (E&T) species. The Department's antidegradation policies are used to protect Category One waters from measurable changes (including calculable or predicted changes) to the existing water quality. A fact sheet explaining New Jersey's antidegradation policies and Category One implementation is available at http://www.state.nj.us/dep/wmm/sgwqt/c1factsheet.pdf.

# Proposed Category One antidegradation designation based on Exceptional Ecological Significance:

The Department utilizes a variety of water quality, biological survey, and environmental indicator information to determine if a stream segment exhibits characteristics that are of "exceptional ecological significance" and, thus, should be protected as a Category One waterbody. The information used includes:

- aquatic physical and chemical monitoring data collected in the USGS/NJDEP Cooperative Ambient Surface Water Monitoring Network,
- aquatic benthic macroinvertebrate biological monitoring and in-stream habitat quality data collected in the Department's Ambient Biological Monitoring Network,
- fish species data collected in the Department's Fish Index of Biotic Integrity Network,
- information on endangered and threatened species, and
- riparian habitat assessments.

The Department refers to the evaluation of this scientific data as an "Integrated Ecological Assessment".

One source of ecological assessment data was the USGS/NJDEP Cooperative Ambient Surface Water Monitoring Network, which was established in 1976 to determine status and

trends of ambient surface waters in New Jersey. The network currently consists of 115 stations. A wide range of conventional parameters, metals, pesticides/volatile organic chemicals and sediments are monitored in this program. Network data is available from the following sources:

- The <u>USGS</u> computerized data system, <u>NWISWeb</u>, available at the following websites: <u>http://wwwnj.er.usgs.gov/</u>, and <u>http://waterdata.usgs.gov/nwis</u>
- 2. EPA's computerized data system, <u>STORET</u>, available at http://www.epa.gov/storet/dbtop.html, and
- 3. USGS's annual reports Water Resources Data-New Jersey.

The Department assessed physical/chemical monitoring data listed above and published its findings in the 2002 Integrated Water Quality Monitoring and Assessment Report. As part of this process, the Department also assessed physical/chemical monitoring results provided by other sources such as Pequannock River Coalition, Hudson Regional Health Commission, and Delaware River Basin Commission. More information on the other sources of data and monitoring results considered in the development of the Integrated List is available at http://www.state.nj.us/dep/wmm/sgwqt/wat/index.html.

Another source of ecological assessment data utilized by the Department is the information generated through sampling data from the Ambient Biological Monitoring Network (AMNET). The biological health of New Jersey streams is assessed based upon the resident instream benthic macroinvertebrate community using the USEPA Rapid Bioassessment Protocol (RBP). Macroinvertebrates are larger-than-microscopic, primarily benthic (bottom-dwelling) fauna, which 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. The overall community thus holistically reflects the

conditions in its environment. Each AMNET sample is analyzed using the USEPA RBP. This statistical methodology provides a consistent view of stream community health. Stations are ranked and classified as impaired, moderately impaired and non-impaired.

The Department also evaluates the quality of in-stream habitat as it relates to viable populations of benthic macroinvertebrates. The physical attributes of habitat play an integral role in the health of the 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 AMNET sampling site. 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. The Department samples over 800 stations, distributed in a stratified random pattern over every sub-watershed, once every five years. A detailed description of the monitoring program and copies of result reports are available from the Department's website at <a href="http://www.state.nj.us/dep/wmm/publications.html">http://www.state.nj.us/dep/wmm/publications.html</a>.

The Fish Index of Biotic Integrity (IBI) is another ecological assessment tool utilized by the Department. The Fish IBI is an ecological indicator of environmental health based upon a statistical evaluation of fish species observed at selected stream stations. The Fish IBI is an index that measures the health of a stream based on multiple attributes of the resident fish assemblage. The current Fish IBI measures the following metrics:

- 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).

As a result of the multi-metric analysis, stations are ranked and classified as either excellent, good, fair, or poor. A qualitative habitat assessment, similar to the assessment conducted for the AMNET program and based on a version of the USEPA RBP calibrated for New Jersey streams, is also performed at each of the Fish IBI stations. A detailed description of the monitoring program and copies of result reports are available from the Department's website at <a href="http://www.state.nj.us/dep/wmm/publications.html">http://www.state.nj.us/dep/wmm/publications.html</a>.

The stream's ability to support water-dependent endangered and threatened species, such as bog turtle, wood turtle, long-tailed salamander and dwarf wedgemussel was a significant factor in determining whether a stream qualifies as a waterbody of "exceptional ecological significance". The Department reviewed records contained in the Natural Heritage Database. The Natural Heritage Database (NHD) is a continuously updated inventory of rare plants and animal species and representative natural communities in New Jersey maintained by the Department's Division of Parks and Forestry. It is the State's most comprehensive, centralized source of information on rare plants, animals, and natural communities. The NHD 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 on documented occurrences of endangered or threatened species verified by the Department. General information on the status, identification, habitat and conservation plans for endangered and threatened species are available on the Department's website at http://www.nj.gov/dep/fgw/ensphome.htm. Information on the Natural Heritage Database is available on the Department's website at

http://www.nj.gov/dep/parksandforests/natural/heritage/.

The Department also reviewed Landscape Maps it developed to assist in the identification of suitable habitat for endangered and threatened species for the purposes of breeding, feeding, resting or shelter. The Landscape Maps delineate the presence or documented habitat for endangered, threatened and priority nongame species. Habitat is ranked based on the conservation status of the relevant species and occurrences. The Department has reviewed the 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 an endangered or threatened species. Information on the Landscape Maps can be found at <a href="http://www.njfishandwildlife.com/ensp/landscape/index.htm">http://www.njfishandwildlife.com/ensp/landscape/index.htm</a>.

The Department's Endangered and Nongame Species Program also reviewed records of other aquatic-dependent species of special concern associated with the selected sections of these waterbodies. "Species of Special Concern" status applies to species that are not listed as endangered or threatened but may warrant special attention because of evidence of decline, inherent vulnerability to environmental deterioration, or habitat modification that would result in the species becoming threatened. This status can also be applied to species that meet the above criteria and for which there is little understanding of their current population status in the State. Identifying a species as a "special concern" is usually the first step in the process which, may ultimately result in listing a species as "threatened or endangered". Information on "species of special concern" is also identified on the Department's Landscape Maps. The Department has listed "species of special concern" as part of its assessment but has not relied solely on their presence to make a finding of "Exceptional Ecological Significance".

The Department has summarized the data considered in determining whether a waterbody qualifies for Category One designation based on "exceptional ecological significance". This information is presented in Tables A through D. The integrated ecological assessment for each waterbody is presented below:

#### **Delaware River Basin**:

Alexauken Creek (Lambertville) - The Department is proposing a Category One antidegradation designation for the entire length of the Alexauken Creek including all named and unnamed tributaries based on "exceptional ecological significance".

Data on the health of the benthic macroinvertebrate community in Alexauken Creek indicate low stress (non-impaired) to the aquatic community with a good diversity of intolerant organisms. The in-stream habitat quality assessment indicates an exceptional (optimal) habitat

quality (see Table C). The Alexauken Creek received a good Fish IBI rating with 16 different species identified in the stream and a suboptimal habitat assessment rating (see Table D).

The Alexauken Creek is a waterbody of "exceptional ecological significance" based on the non-impaired aquatic community with an optimal habitat quality, therefore, the Department is proposing to upgrade the antidegradation designation for the entire length of Alexauken Creek, including all named and unnamed tributaries, from Category Two to Category One.

**Harihokake Creek** (Alexandria) - The Department is proposing a Category One antidegradation designation to the entire length of the Harihokake Creek, including all named and unnamed tributaries, based on "exceptional ecological significance". The use classifications, such as FW2-NT and FW2-TM, applicable to different segments of the Creek remain the same as indicated at N.J.A.C. 7:9B-1.15(d).

Data on the health of the benthic macroinvertebrate community in Harihokake Creek indicate low stress (non-impaired) (see Table C) to the aquatic community with high percentage and good diversity of intolerant organisms. The in-stream habitat quality assessment indicates optimal to slightly less than optimal habitat quality at different locations throughout creek (see Table C). The Harihokake Creek received a good Fish IBI rating with 13 different species identified in the stream and an optimal habitat assessment rating (see Table D).

With respect to endangered and threatened species, Harihokake Creek has reported wood turtle sightings, primarily in the upper portions of the drainage. In addition, Harihokake Creek is a cool, clear forested rock stream with shale/argillite-underlain substrate, which provides a good habitat for the State threatened long-tailed salamander. Little Nishisakawick Creek, Nishisakawick Creek, and Wickecheoke Creek drainage areas, which are also proposed for upgrade as part of this proposal, are also cool, clear forested, rock streams with shale/argilliteunderlain substrates which support the second largest concentration of State threatened longtailed salamander, next to the limestone regions of Warren and Sussex counties. Harihokake

Creek provides a suitable habitat for the long-tailed salamander similar to that found in Little Nishisakawick Creek, Nishisakawick Creek, and Wickecheoke Creek.

Harihokake Creek supports a non-impaired aquatic community with optimal to suboptimal habitat quality, and a good Fish IBI rating. In addition, the creek provides a suitable habitat for State threatened wood turtle and long-tailed salamander. Therefore, the Department has determined that the Harihokake Creek is a waterbody of "exceptional ecological significance" and is proposing to upgrade the antidegradation designation for the entire length of Harihokake Creek including all named and unnamed tributaries from Category Two to Category One.

**Little Nishisakawick Creek** (Frenchtown) - The Department is proposing a Category One antidegradation designation for the entire length of the Little Nishisakawick Creek based on "exceptional ecological significance".

Data on the health of the benthic macroinvertebrate community in Little Nishisakawick Creek indicate low stress (non-impaired) to the aquatic community with a high percentage and good diversity of intolerant organisms. The in-stream habitat quality assessment indicates a slightly less than optimal (sub-optimal) habitat quality (see Table C).

Sightings of the State threatened long-tailed salamanders have been reported in the Little Nishisakawick Creek (Table A). Little Nishisakawick Creek along with Nishisakawick Creek and Wickecheoke Creek contain the second largest concentration of the State threatened long-tailed salamander populations in the State, next to the limestone regions of Warren and Sussex counties. The State threatened long-tailed salamanders are primarily associated with cool, clear forested, rock streams.

Little Nishisakawick Creek supports a non-impaired aquatic community with suboptimal habitat quality and a good Fish IBI rating. In addition, sightings of the State threatened long-tailed salamanders have been reported in the Little Nishisakawick Creek. Therefore, the Department has determined that the Little Nishisakawick Creek is a waterbody of "exceptional

ecological significance" and is proposing to upgrade the antidegradation designation for the entire length of Little Nishisakawick Creek including all named and unnamed tributaries from Category Two to Category One.

**Lockatong Creek** (Kingwood) - The Department is proposing a Category One antidegradation designation for the entire length of the Lockatong Creek based on "exceptional ecological significance". The use classifications such as FW2-NT and FW2-TM, applicable to different segments of the Creek remain the same as indicated at N.J.A.C. 7:9B-1.15(d).

An assessment of the physical/chemical monitoring data demonstrated that the water quality of the Lockatong Creek meets standards except for temperature and phosphorus (see Table B). The temperature and phosphorus impairments will be addressed in accordance with the Total Maximum Daily Load (TMDL) schedule. Additional information is available on the Department's website at <u>http://www.nj.gov/dep/watershedmgt/tmdl.htm</u>. Data on the health of the benthic macroinvertebrate community in Lockatong Creek indicate low stress (non-impaired) to the aquatic community (see Table C). The in-stream habitat quality assessment indicates a less than optimal (sub-optimal) habitat quality (see Table C). The Lockatong Creek received a good Fish IBI rating with 15 different species identified in the stream and a suboptimal habitat assessment rating (see Table D).

While Lockatong Creek is listed as impaired on the 2002 Integrated List for temperature and phosphorus, the biological data indicates a non-impaired aquatic community with suboptimal habitat quality and a good Fish IBI rating. Therefore, the Department has determined that the Lockatong Creek is a waterbody of "exceptional ecological significance" and is proposing to amend the antidegradation designation for the entire length of Lockatong Creek including all named and unnamed tributaries from Category Two to Category One.

**Nishisakawick Creek** (Frenchtown) - The Department is proposing a Category One antidegradation designation for the entire length of the Nishisakawick Creek based on "exceptional ecological significance".

An assessment of the physical/chemical monitoring data demonstrated that the water quality of the Nishisakawick Creek meets standards except for fecal coliform (see Table B). The Department has proposed Total Maximum Daily Loads (TMDL) for Nishisakawick Creek to evaluate different options to meet the elevated levels of fecal coliform. Additional information is available on the Department's website at http://www.nj.gov/dep/watershedmgt/tmdl.htm. Data on the health of the benthic macroinvertebrate community in this stream segment of Nishisakawick Creek indicate low stress (non-impaired) to the aquatic community with a high percentage and good diversity of intolerant organisms. The in-stream habitat quality assessment indicates an exceptional (optimal) habitat quality (see Table C). The Nishisakawick Creek received a good Fish IBI rating with 12 different species identified in the stream and an optimal habitat assessment rating (see Table D).

Nishisakawick Creek has reported State threatened wood turtle sightings, primarily in the upper portions of the drainage. Sightings of the State threatened long-tailed salamanders have been reported in the Nishisakawick Creek throughout the upper and lower portions of the drainage. Nishisakawick Creek, along with Little Nishisakwick Creek and Wickecheoke Creek, contain the second largest concentration of long-tailed salamander populations in the State, next to the limestone regions of Warren and Sussex counties. The State threatened long-tailed salamanders are primarily associated with cool, clear forested, rock streams.

While Nishisakawick Creek is listed as impaired on the 2002 Integrated List for fecal coliform, the biological data indicates a non-impaired community with optimal habitat quality, and a good Fish IBI rating. In addition, sightings of State threatened wood turtle and long-tailed salamander have been reported. Therefore, the Department has determined that the Nishisakawick Creek is a waterbody of "exceptional ecological significance" and is proposing to amend the antidegradation designation for the entire length of Nishisakawick Creek including all named and unnamed tributaries from Category Two to Category One.

**Pohatcong Creek** (Washington) - The Department is proposing upgrade the antidegradation designation for the tributaries of Pohatcong Creek from source to Karrsville bridge which is

classified as FW2-TP(C1) through previous rulemaking from Category Two to Category One. Department is also proposing to upgrade the antidegradation designation of Pohatcong Creek from Karrsville Bridge to Rt. 519 Bridge, including Shabbecong Creek (described below) and unnamed tributaries to Pohatcong Creek that are not already designated as Category One, from Category Two to Category One based on "exceptional ecological significance". In addition, as explained below, a portion of Pohatcong Creek from Route 519 bridge to the Delaware River, including all tributaries, is also being upgraded from FW2-TM(C2) to FW2-TP(C1) based on the fish assemblage sampling data. With the proposed amendment, the entire length of the Pohatcong Creek would be designated as Category One.

An assessment of the physical/chemical monitoring data demonstrated that the water quality of the Pohatcong Creek meets standards except for phosphorus, temperature, pH, and fecal coliform (see Table B). The Department has proposed TMDLs for Pohatcong Creek to evaluate different options to meet the elevated levels of fecal coliform. The phosphorus, temperature, and pH impairments will be addressed in accordance with the TMDL schedule. Additional, information is available on the Department's website at http://www.nj.gov/dep/watershedmgt/tmdl.htm. Data on the health of the benthic macroinvertebrate community gathered at various locations along the Pohatcong Creek indicate low to moderate stress (non-impaired to moderately impaired) to the aquatic community with a mixture of tolerant to intolerant organisms. The in-stream habitat quality assessment indicates a less than optimal (sub-optimal) habitat quality (see Table C). The Pohatong Creek received a good Fish IBI rating with 22 different species identified in the stream and a suboptimal habitat assessment rating (see Table D).

The upper reaches of the Pohatcong Creek in the vicinity of Karrsville support a robust population of State-threatened wood turtles, which prefer clean, clear, well-oxygenated brooks that are frequently associated with trout production and/or trout maintenance streams. Wood turtles have been sighted throughout the Pohatcong drainage, from its headwaters to the confluence of the Delaware River; however, the largest concentration of sightings is the portion east of Route 31. There have been three documented sightings of long-tailed salamanders in

Pohatcong Creek. One of the sightings was made this year. The State threatened long-tailed salamander is primarily associated with cool, clear forested, rock streams. The Pohatcong Creek provides a good habitat for the State threatened long-tailed salamander where the stream is fast moving and rocky.

While Pohatcong Creek is listed as impaired on the 2002 Integrated List for phosphorus, temperature, pH, and fecal coliform, the biological data indicates a non-impaired to moderately impaired aquatic community with suboptimal habitat quality, and a good Fish IBI rating. In addition, sightings of State threatened wood turtle and long-tailed salamander have been reported. Therefore, the Department has determined that the Pohatcong Creek is a waterbody of "exceptional ecological significance" and is proposing to upgrade the antidegradation designation for the entire length of Pohatcong Creek including all named and unnamed tributaries from Category Two to Category One.

**Shabbecong Creek**, a tributary to the Pohatcong Creek is currently classified as FW2-TM (Category Two). Based on the above analysis of the Pohatcong Creek, the Department determined that the Shabbecong Creek qualifies for "exceptional ecological significance" and is proposing to upgrade the antidegradation designation from Category Two to Category One.

**Wickecheoke Creek** (Stockton) - The Department is proposing a Category One antidegradation designation for the entire length of the Wickecheoke Creek, including Plum Brook (as described below) and unnamed tributaries based on "exceptional ecological significance". The use classifications, such as FW2-NT and FW2-TM, applicable to different segments of the Wickecheoke Creek remain the same as indicated at N.J.A.C. 7:9B-1.15(d).

An assessment of the physical/chemical monitoring data demonstrated that the water quality of the Wickecheoke Creek meets standards except for temperature, phosphorus, and fecal coliform (see Table B). The Department has proposed TMDLs for Wickecheoke Creek to evaluate different options to meet the elevated levels of fecal coliform. The temperature and phosphorus impairments will be addressed in accordance with the TMDL schedule. Additional

## information is available on the Department's website at

http://www.nj.gov/dep/watershedmgt/tmdl.htm. Data on the health of the benthic macroinvertebrate community gathered at various locations along the Wickecheoke Creek indicate low to moderate stress (non-impaired to moderately impaired) to the aquatic community with a mixture of tolerant to intolerant organisms. The in-stream habitat quality assessment indicates an exceptional (optimal) habitat quality (see Table C). The Wickecheoke Creek received a good Fish IBI rating with 10 different species identified in the stream and a suboptimal habitat assessment rating (see Table D).

Wickecheoke Creek has also reported State threatened wood turtle sightings, primarily in the upper portions of the drainage. Sightings of the State threatened long-tailed salamanders have been reported in the Wickecheoke Creek throughout the upper and lower portions of the drainage. The State threatened long-tailed salamander is primarily associated with cool, clear forested, rock streams. Wickecheoke Creek along with Little Nishisakwick Creek and Nishisakawick Creek contain the second largest concentration of long-tailed salamander populations in the State, next to the limestone regions of Warren and Sussex counties.

Basin	Waterbody	Current Classification	Proposed Classification	E&T Species/	Supplemental Information on Aquatic Community Health / Habitat Quality		
	Proposed streams segments based on Exceptional Ecological Significance						
DE	Alexauken Creek (Lambertville) - Entire length	FW2-TM	FW2-TM(C1)		<ul><li>Non-impaired benthic macroinvertebrate community with optimal habitat quality.</li><li>Good FIBI with suboptimal habitat rating</li></ul>		
	Harihokake Creek (Alexandria) - Source to Rt. 519 bridge, including all tributaries (Frenchtown) - Rt. 519 bridge to Delaware River, including all tributaries	FW2-NT FW2-TM	FW2-NT(C1) FW2-TM(C1)	Longtail salamander, Wood turtle	<ul> <li>Non-impaired benthic macroinvertebrate community with varied (optimal to suboptimal) habitat quality.</li> <li>Good FIBI with optimal habitat rating</li> <li>Good habitat for longtail salamader</li> <li>Limited habitat for Wood turtle</li> </ul>		
A W	Little Nishisakawick Creek (Frenchtown) - Entire length	FW2-NT	FW2-NT(C1)	Longtail salamander	<ul> <li>Non-impaired benthic macroinvertebrate community with suboptimal habitat quality.</li> <li>Good habitat for Longtail salamander</li> </ul>		
A R	Lockatong Creek (Kingwood) - Source to Idell Bridge (Raven Rock) - Idell Bridge to Delaware River	FW2-NT FW2-TM	FW2-NT(C1) FW2-TM(C1)		<ul> <li>Non-impaired benthic macroinvertebrate community with suboptimal habitat quality.</li> <li>Good FIBI with suboptimal habitat rating</li> </ul>		
EB	Nishisakawick Creek (Frenchtown) - Entire length	FW2-NT	FW2-NT(C1)	Longtail salamander, Wood turtle	<ul> <li>Non-impaired benthic macroinvertebrate community with optimal habitat quality.</li> <li>Good FIBI with optimal habitat rating</li> <li>Excellent habitat for Longtail salamander</li> <li>Limited habitat for wood turtle</li> </ul>		
A S I N	Pohatcong Creek (Pohatcong) - Karrsville Bridge to Rt. 519 Bridge Shabbecong Creek (Washington) – Entire length	FW2-TM FW2-TM	FW2-TM(C1) FW2-TM(C1)	Wood turtle, Longtail salamander	<ul> <li>Varied (non-impaired to moderately-impaired) benthic macroinvertebrate community with suboptimal habitat quality.</li> <li>Good FIBI with suboptimal habitat rating</li> <li>Top wood turtle population in State</li> <li>Good habitat for Longtail salamader</li> </ul>		
	Wickecheoke Creek (Locktown) - Source to confluence with Plum Brook (Stockton) - Confluence with Plum Brook to Delaware River Plum Brook (Sergeantsville) - Entire length	FW2-NT FW2-TM FW2-TM	FW2-NT(C1) FW2-TM(C1) FW2-TM(C1)	Longtail salamander, Wood turtle	<ul> <li>Varied (non-impaired to moderately-impaired) benthic macroinvertebrate community with optimal habitat quality.</li> <li>Good FIBI with suboptimal habitat rating</li> <li>Good habitat for Longtail salamader</li> <li>Limitad habitat for wood turtle</li> </ul>		

# Table A - Data for the Proposed Upgrades Based on Exceptional Ecological Significance

While Wickecheoke Creek is listed as impaired on the 2002 Integrated List for temperature, phosphorus, and fecal coliform, the biological data indicates a nonimpaired to moderately impaired aquatic community, and a good Fish IBI rating. In addition, sightings of State threatened wood turtle and long-tailed salamander have been reported. Therefore, the Department has determined that the Wickecheoke Creek is a waterbody of "exceptional ecological significance" and is proposing to upgrade the antidegradation designation for the entire length of Wickecheoke Creek including all named and unnamed tributaries from Category Two to Category One.

**Plum Brook**, a tributary to the Wickecheoke Creek is currently classified as FW2-TM (Category Two). Based on the above analysis of the Wickecheoke Creek, the Department determined that the Plum Brook qualifies for "exceptional ecological significance" and is proposing to upgrade the antidegradation designation from Category Two to Category One.

Station	Waterbody	Parameters Meeting Standards	Parameters Exceeding Standards	Parameters with insufficient data
DRBCNJ0013	Lockatong Creek	DO, pH, Nitrogen, Dissolved solids, UIA, TSS, Fecal coliform	Temperature, Phosphorus	
01458570	Nishisakawick Creek	Temperature, DO, pH, Nitrogen, Phosphorus, Dissolved Solids, UIA, TSS	Fecal coliform	
DRBCNJ0020	Nishisakawick Creek	Temperature, DO, pH, Nitrogen, Phosphorus, Dissolved Solids, UIA, TSS	Fecal coliform	
AN0055	Pohatcong Creek	pH, Nitrogen, Phosphorus, Dissolved Solids, UIA, TSS	Temperature	DO
01455200	Pohatcong Creek	DO, Nitrogen, Dissolved Solids, UIA	Temperature, pH, Phosphorus	Total suspended solids
01455200 (1995-1997)	Pohatcong Creek		pН	
DRBCNJ0027	Pohatcong Creek	Temperature, DO, pH, Nitrogen, Dissolved Solids, UIA, TSS	Phosphorus, Fecal coliform	
01461282	Wickecheoke Creek	Temperature, DO, pH, Nitrogen, Dissolved Solids, UIA, TSS	Fecal coliform, Phosphorus	
DRBCNJ0012	Wickecheoke Creek	DO, pH, Nitrogen, Dissolved Solids, UIA, TSS	Temperature, Phosphorus, Fecal coliform	

Table B - Physical/Chemical Monitoring Stations and Results

DO - Dissolved Oxygen

TSS - Total suspended solids UIA - U

UIA - Unionized ammonia

Site #	Stream Sagmont	Date	1992	Date	1997	Habitat
Sile #	Stream Segment	Sampled	Rating	Sampled	Rating	Rating
AN0052	Lopatcong Creek	9/1/1992	Non-impaired	9/9/1997	Non-impaired	Marginal
AN0055	Pohatcong Creek	8/31/1992	Moderate	8/19/1997	Moderate	Suboptimal
AN0057	Pohatcong Creek	8/31/1992	Moderate	8/19/1997	Moderate	Suboptimal
AN0058	Pohatcong Creek	8/31/1992	Non-impaired	8/21/1997	Non-impaired	Suboptimal
AN0061	Pohatcong Creek	9/1/1992	Non-impaired	9/9/1997	Non-impaired	Suboptimal
AN0078	Harihokake Creek	7/27/1992	Non-impaired	7/10/1997	Non-impaired	Optimal
AN0079	Harihokake Creek	7/27/1992	Moderate	7/10/1997	Non-impaired	Suboptimal
AN0080	Nishisakawick Creek	4/12/1993	Non-impaired	7/22/1997	Non-impaired	Optimal
AN0081	Nishisakawick Creek	1/22/1993	Non-impaired	7/22/1997	Non-impaired	Optimal
AN0082	Nishisakawick Creek	4/12/1993	Non-impaired	7/22/1997	Non-impaired	Optimal
AN0083	Little Nishisakawick Creek	7/21/1992	Non-impaired	7/10/1997	Non-impaired	Suboptimal
AN0086	Lockatong Creek	7/21/1992	Moderate	7/15/1997	Non-impaired	Suboptimal
AN0087	Lockatong Creek	7/21/1992	Non-impaired	7/15/1997	Non-impaired	Suboptimal
AN0088	Lockatong Creek	7/21/1992	Non-impaired	7/15/1997	Non-impaired	Suboptimal
AN0089	Lockatong Creek	7/21/1992	Non-impaired	7/15/1997	Non-impaired	Suboptimal
AN0090	Wickecheoke Creek	7/20/1992	Moderate	6/2/1998	Moderate	Optimal
AN0091	Wickecheoke Creek	7/20/1992	Non-impaired	7/16/1997	Moderate	Optimal
AN0092	Wickecheoke Creek	7/20/1992	Moderate	6/2/1998	Moderate	Optimal
AN0093	Wickecheoke Creek	7/20/1992	Non-impaired	7/16/1997	Moderate	Optimal
AN0094	Wickecheoke Creek	7/20/1992	Non-impaired	7/15/1997	Non-impaired	Optimal
AN0095	Wickecheoke Creek	7/20/1992	Non-impaired	7/15/1997	Non-impaired	Optimal
AN0096	Alexauken Creek	7/14/1992	Non-impaired	7/14/1997	Non-impaired	Optimal
AN0097	Alexauken Creek	7/14/1992	Non-impaired	7/14/1997	Non-impaired	Optimal
AN0098	Alexauken Creek	7/14/1992	Non-impaired	7/9/1997	Non-impaired	Optimal

## Table C - AMNET Stations and Results

**Table D - Fish IBI Stations and Results** 

Site #	Stream Segment	Date Sampled	FIBI Rating	Habitat Assessment Rating	Number of Fish Species
FIBI026	Nishisakawick Creek	7/24/2001	Good	Optimal	12
FIBI027	Lockatong Creek	7/25/2001	Good	Suboptimal	15
FIBI029	Alexauken Creek	7/12/2001	Good	Suboptimal	16
FIBI033	Pohatcong Creek	7/31/2001	Good	Suboptimal	22
FIBI034	Harihokake Creek	8/7/2001	Good	Optimal	13
FIBI035	Wickecheoke Creek	7/6/2001	Good	Suboptimal	10

## Use Classification Changes based on Fish Assemblage Sampling Data:

Stream sampling (fish survey) data are used by the Department to determine whether a waterway should be classified to protect 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 by the Department 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% was assigned to each trout species found during the survey. Other nontrout species were assigned an I.O. value based on the percentage of time that the individual species was found in the presence of trout. A figure of 20% was selected by the Department's Bureau of Freshwater Fisheries as the minimum of occurrence with trout that would classify a species as being trout "associated." This 20% figure was also selected as the cutoff figure for determining whether or not 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%, the stream segment would be classified as trout maintenance (FW2-TM). If the average I.O. value is less than 20%, the stream segment would be classified as nontrout (FW2-NT). The Department is proposing to reclassify three stream segments to trout production by finding young-of-the-year trout according to this methodology.

The Department has summarized the data considered in determining whether a waterbody qualifies for a use classification of trout production, trout maintenance or non-trout. This information is presented in Table E. The analysis for each waterbody is summarized below:

#### **Delaware River Basin**

**Lopatcong Creek** (Phillipsburg) - The Department is proposing to upgrade the use classification and the antidegradation designation of Lopatcong Creek from FW2-TM(C2) to FW2-TP(C1) from Decker Road to Route 57 bridge based on the fish assemblage data. As a result of this proposed upgrade, the description of the segment of the Lopatcong Creek classified as FW2-TP(C1) (including both the segment proposed for upgrade and a segment already classified as

FW2-TP(C1)) is amended to indicate that the FW2-TP(C1) stream classification and antidegradation designation is applicable from the source to a point 560 feet upstream of the Penn Central railroad track including all tributaries. The Department is also deleting the stream classification listing of the tributary at Uniontown at N.J.A.C. 7:9B-1.15(d) because the Lopatcong Creek listing will now include all tributaries as FW2-TP(C1). Therefore, this listing is no longer necessary.

The Department retains the use classification and the antidegradation designation of the stream segment from a point 560 feet upstream of the Penn Central railroad track to the confluence of the Delaware River (approximately one quarter of a mile) as FW2-TM(C2).

The Lopatcong Creek is being proposed for trout production status from Decker Road to Route 57 bridge based on fish assemblage sampling data. The headwaters and several downstream segments are already classified as FW2-TP(C1). As a result of previous upgrades, a section of the Lopatcong Creek classified as FW2-TM was left sandwiched in between the trout production segments. The Department sampled this segment on September 12, 2002 and found 11 species of fish, including brown trout (see Table E). Trout production was confirmed by the presence of 23 young-of-the-year brown trout.

Accordingly, the Department is proposing to amend the use classification for Lopatcong Creek from Decker Road to the Route 57 bridge from FW2-TM to FW2-TP(C1). The trout production use classification is also assigned the antidegradation designation of Category One.

**Pohatcong Creek** (Washington) - The Department is proposing to upgrade the use classification and the antidegradation designation of Pohatcong Creek from FW2-TM(C2) to FW2-TP(C1) from the Route 519 bridge to the Delaware River, including all tributaries, based on the fish assemblage sampling data. Elsewhere in this proposal, the Department is proposing to upgrade the antidegradation designation of the Pohatcong Creek from Karrsville bridge to Rt. 519 bridge, including all named (Shabbecong Creek) and unnamed tributaries that are not already designated as Category One, from Category Two to Category One based on "exceptional ecological

significance". As a result of these proposed amendments, the entire length of the Pohatcong Creek would be designated as Category One.

Brown trout reproduction was found in the lower reach of Pohatcong Creek during an informal electrofishing demonstration for college students in spring of 2002. The Department revisited the stretch on August 26, 2002 and formally surveyed the lower reach of Pohatcong Creek using the standardized protocols to make the final determination on the trout production status. Fifteen species were present including brown trout. Trout reproduction was confirmed by the presence of 50 young-of-the-year brown trout. It is possible that trout reproduction is also occurring upstream and additional surveys will be conducted on upstream reaches in 2003 to determine if further upgrades to trout production are warranted.

Accordingly, the Department is proposing to amend the stream classification for the Pohatcong Creek from Route 519 bridge to Delaware River from FW2-TM to FW2-TP(C1). The trout production stream classification is also assigned the antidegradation designation of Category One.

#### Raritan River Basin:

**South Branch Rockaway Creek** (Clinton) - The Department is proposing to change the classification of South Branch Rockaway Creek from the headwaters to the Readington Township boundary, including all tributaries, from FW2-TM(C1) to FW2-TP(C1) based on fish assemblage sampling data. The Department recently upgraded the antidegradation designation of the South Branch Rockaway Creek from the headwaters to Lake Cushetunk to Category One based on "exceptional ecological significance" (see 35 N.J.R. 2264(b) May 19, 2003).

Electrofishing surveys were conducted in the upstream reach of South Branch Rockaway Creek to obtain fish population data. A reproducing brown trout population was confirmed in an initial survey conducted on August 22, 2003. However, when surveys were conducted further downstream on August 30, 2002, trout reproduction was not confirmed. The creek was then sampled in four additional locations to determine the extent of trout reproduction and to

determine an appropriate boundary between the trout production and existing trout maintenance reaches. Brown trout reproduction was confirmed at the additional four survey sites. The only readily identifiable boundary that could be used to separate the TM and TP reaches was the municipal boundary separating Clinton and Readington Townships.

Accordingly, the Department is proposing to amend the stream classification from FW2-TM(C1) to FW2-TP(C1) from headwaters to the Readington Township boundary, including all tributaries.

Basin	Waterbody	Current Classification	Proposed Classification	Young-of-the-Year Trout Present
	Proposed streams segments	based on Fish Ass	semblage Samplii	ng Data
DELAWARE BASIN	Lopatong Creek (Herkers Hollow) – Decker Road to Rt. 57 bridge,	FW2-TM	FW2-TP(C1)	Brown Trout
	Pohatcong Creek (Springtown) - Rt. 519 Bridge to Delaware River, including all tributaries	FW2-TM	FW2-TP(C1)	Brown Trout
RARITAN BASIN	South Branch Rockaway Creek (Clinton Township) – Headwaters to the Readington Township boundary, including all tributaries	FW2-TM(C1)	FW2-TP(C1)	Brown Trout

Table E - Supporting Data for the Proposed Trout Reclassifications

# Proposed Category One antidegradation designation based on Exceptional Water Supply Significance:

The Department is proposing to upgrade the antidegradation designation to Category One of several waterbodies within the Metedeconk River watershed, Manasquan River watershed, and the Hackensack River/Pascack Brook watershed based on "exceptional water supply significance". Brick Township Municipal Utilities Authority is currently constructing a new reservoir in the Metedeconk River watershed to provide potable water to 80,000 year-round residents. New Jersey Water Supply Authority operates the Manasquan Reservoir in the Manasquan River watershed. This reservoir provided potable water for 150,000 residents. United Water operates the Oradell Reservoir, which is fed by the Hackensack River and the Pascack Brook. This reservoir provides potable water for 700,000 residents. The population served by each reservoir and their water supply systems are presented in Table F.

On Earth Day of 2002, Governor McGreevey announced a plan to improve protection of key drinking water sources. As part of the initiative to improve protection of these resources, the Department adopted Category One antidegradation designation for nine reservoirs (see 35 N.J.R. 2264(b); May 19, 2003) to provide protection from further degradation. However, protecting the reservoirs from further degradation is not adequate if the streams that flow into the reservoirs are allowed to degrade. Therefore, the Department has determined that a preventive focus in the form of a more protective antidegradation designation for these feeder streams of the reservoirs or water supply intakes is necessary to preserve and manage the drinking water supplies serving the residents of New Jersey.

System Name	Reservoirs	<b>Population Served</b> <b>by System</b> (approximate)
NJ Water Supply Authority	Manasquan Reservoir	150,000
Brick Township MUA	Brick Township Reservoir	>80,000
United Water NJ - Main	Oradell Reservoir	700,000

Table F - Population Served by each 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 safe and plentiful supply of drinking water will also increase. Reservoirs will be needed to satisfy this increased demand.

Experience dictates that with increases in population come increases in point and nonpoint source pollutant loadings to the waters of the State. 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. 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 be put into place to protect the drinking water supplies serving the State's residents.

A vast majority of sites for the development of new water supply reservoirs in New Jersey have already been developed. Impairment of existing reservoirs and their feeder streams will result in the premature need for alternative water supplies. It is thus essential that in addition to existing reservoirs, maximum protection be provided to the feeder streams of the reservoirs as well.

The waterbodies and their named tributaries being proposed for upgrade to Category One antidegradation designation are presented below and summarized in Table G.

# ATLANTIC BASIN:

**Manasquan River** (Farmingdale) - The Department is proposing Category One antidegradation designation for the Manasquan River from the West Farms Road Bridge in Howell Township, to the downstream boundary of the Manasquan River Wildlife Management Area based on "exceptional water supply significance". The West Farms Road Bridge in Howell Township is the upstream boundary of the HUC 14 on the mainstem of the Manasquan River. The proposed Category One antidegradation designation applies to all the named (as listed below) and unnamed tributaries to the proposed stream segment that have not already been designated as FW1 or Category One. The Category One antidegradation designation is also being proposed for the streams that flow directly into the Manasquan Reservoir.

The Department is proposing to delete the name of the town Farmingdale that helps in the identification of the stream segment and replacing it with Howell because it is more appropriate. The "Narrows" in the vicinity of the Meadows Marina in the description of the Manasquan River classification listing at N.J.A.C. 7:9B-1.15(c) is also being deleted because the term "Narrows" is not found on the United States Geological Survey (USGS) map (USGS maps are widely used in identification of streams). Mill Run, which is a named tributary to the Manasquan River, is currently listed under Brisbane Lake. The Department is proposing to delete the listing of Mill

Run under Brisbane Lake at N.J.A.C. 7:9B-1.15(c) because it will now be listed as a tributary to the Manasquan River. The classification of Brisbane Lake remains FW2-NT(C1). The classification of Mill Run remains FW2-NT(C1) and the eastern tributary remains FW1. The Department is proposing to delete reference to (Brick) - Tributaries within Allaire State Park and Manasquan River Wildlife Management Area as these waters are included in the Mainstem Manasquan River description (Howell)- West Farm Road Bridge in Howell Township to downstream boundary of the Manasquan River Wildlife Management Area.

The water supply intake that pumps potable water to the Manasquan Reservoir is located at the Hospital Road, 1500 feet west of the Garden State Parkway in Wall Township. The Manasquan Reservoir has a capacity of four billion gallons and has a safe yield of 30 million gallons a day (MGD) and services water utilities that serve Monmouth County.

Accordingly, the Department has determined that the Manasquan River is a waterbody of "exceptional water supply significance" and is proposing Category One antidegradation designation for all segments, that are not already designated as FW1 or Category One, from the West Farms Road Bridge in Howell Township to the downstream boundary of Manasquan River Wildlife Management Area.

As a result of the Department's determination of "exceptional water supply significance", the following tributaries of Manasquan River currently listed in the SWQS at N.J.A.C.:7:9B-1.15(c) and are not currently designated as FW1 or Category One, are being proposed for an upgrade in the antidegradation designation from Category Two to Category One. Stream-specific listings and their classifications are summarized in Table G.

**Bear Swamp Brook (Howell)** - The Department is proposing Category One antidegradation designation for the Bear Swamp Brook from headwaters to the boundary of Allaire State Park. Bear Swamp Brook within the Allaire State Park is already designated as Category One. Therefore, with this proposed amendment the entire length of the Bear Swamp Brook would be classified as FW2-NT(C1).

**Long Swamp Brook (Squankum)** - The Department is proposing Category One antidegradation designation for the segment of the Long Swamp Brook outside the boundaries of Allaire State Park. The segment of the Long Swamp Brook within the Allaire State Park is already designated as Category One. Therefore, with this proposed amendment the entire length of the Long Swamp Brook would be classified as FW2-NT(C1).

**Marsh Bog Brook** (Farmingdale) - The Department is proposing Category One antidegradation designation for the segment of the Marsh Bog Brook outside the boundaries of Allaire State Park. The segment of the Marsh Bog Brook within the Allaire State Park is already designated as Category One. Therefore, with this proposed amendment the entire length of the Marsh Bog Brook would be classified as FW2-NT(C1).

**Mingamahone Brook** (Farmingdale) - The Department is proposing Category One antidegradation designation for the segment of the Mingamahone Brook outside the boundaries of Allaire State Park. The segment of the Mingamahone Brook within the Allaire State Park is already designated as Category One. Therefore, with this proposed amendment the entire length of the Mingamahone Brook would be classified as FW2-TM(C1).

**East Branch Tributary** of the Mingamahone Brook is classified as FW2-NT. The Department is proposing to upgrade the antidegradation designation from Category Two to Category One. Therefore, with this proposed amendment the entire length of the East Branch Tributary would be classified as FW2-NT(C1).

**Squankum Brook** (Squankum) - The Department is proposing Category One antidegradation designation for the segment of the Squankum Brook outside the boundaries of Allaire State Park. The segment of the Squankum Brook within the Allaire State Park is already designated as Category One. Therefore, with this proposed amendment the entire length of the Squankum Brook would be classified as FW2-NT(C1).

**Timber Swamp Brook** (Oak Glen) - The Department is proposing Category One antidegradation designation for the Timber Swamp Brook from Manasquan Reservoir Dam to its confluence with the Manasquan River. Therefore, with this proposed amendment the entire length Timber Swamp Brook would be classified as FW2-NT(C1).

**Manasquan Reservoir Tributaries** (Oak Glen) - The Department is proposing Category One antidegradation designation for the tributaries that flow directly into the Manasquan Reservoir from their source to the Manasquan Reservoir. Therefore, with this proposed amendment all unnamed tributaries to the Manasquan Reservoir would be classified as FW2-NT(C1).

**Metedeconk River** (Lakewood) - The Department is proposing a Category One antidegradation designation for the entire length of the Metedeconk River, including both the South and North branches and their named (as listed below) and unnamed tributaries, that are not already designated as Category One, from the source of the River downstream to Forge Pond based on "exceptional water supply significance". The use classifications such as FW2-NT and FW2-TM, applicable to different segments of the Metedeconk River remain the same as indicated at N.J.A.C. 7:9B-1.15(c).

The creation of the one billion-gallon Brick Reservoir will provide Brick Township MUA with the ability to store water when stream flows are high. The Category One antidegradation designation of the entire length of the Metedeconk River will protect the quality of water pumped into the reservoir and used for potable water. In addition, the Brick Township Reservoir increases the storage of the Coastal North Drought Region by approximately ten percent. It is expected that the Reservoir will be filled and operational by fall 2003. The water supply intake that pumps potable water to the Brick Township Reservoir is located just upstream of Forge Pond on the mainstem of the Metedeconk River.

Accordingly, the Department has determined that the Metedeconk River is a waterbody of "exceptional water supply significance" and is proposing Category One antidegradation designation for all segments along the entire length of the Metedeconk River, including the South and North branches, that are not already designated as Category One.

As a result of the Department's determination of "exceptional water supply significance", the following tributaries of Metedeconk River currently listed in the SWQS at N.J.A.C.:7:9B-1.15(c) are being proposed for an upgrade in the antidegradation designation from Category Two to Category One. Stream-specific listings and their classifications are summarized in Table G.

**Clear Stream** (Jackson) - The Department is proposing Category One antidegradation designation for the Clear Stream a tributary of the South Branch Metedeconk River. Therefore, with this proposed amendment the entire length of Clear Stream would be classified as FW2-NT(C1).

**Dicks Brook** (Larrabee's Crossing) - The Department is proposing Category One antidegradation designation for the entire length of the Dicks Brook, a tributary of the North Branch Metedeconk River. Therefore, with this proposed amendment the entire length of Dicks Brook would be classified as FW2-NT(C1).

**Hay Stack Brook** (Howell) - The Department is proposing Category One antidegradation designation for the entire length of the Hay Stack Brook, a tributary of the North Branch Metedeconk River. Therefore, with this proposed amendment the entire length of the Hay Stack Brook would be classified as FW2-NT(C1).

**Muddy Ford Brook** (Larrabee's Crossing) - The Department is proposing Category One antidegradation designation for the entire length of the Muddy Ford Brook, a tributary of the North Branch Metedeconk River. Therefore, with this proposed amendment the entire length of Muddy Ford Brook would be classified as FW2-NT(C1).

**Titmouse Brook** (Howell) - The Department is proposing Category One antidegradation designation for the entire length of the Titmouse Brook, a tributary of the North Branch Metedeconk River. Therefore, with this proposed amendment the entire length of Titmouse Brook would be classified as FW2-NT(C1).

# PASSAIC RIVER BASIN:

The Department is proposing Category One antidegradation designation for the entire natural drainage to the Oradell Reservoir. As indicated in Table F, the Oradell Reservoir provides potable water to 700,000 residents in New Jersey. The following waterbodies, which drain to the Ordell Reservoir, are being proposed for Category One antidegradation designation upgrade. Stream-specific listings and their classifications are summarized in Table G.

**Cresskill Brook -** The Department is proposing Category One antidegradation designation for the Cresskill Brook from Duck Pond Road bridge to Tennakill Brook. Therefore, with this proposed amendment the Cresskill Brook from Duck Pond Road to Tennakill Brook would be classified as FW2-NT(C1). The classification of FW2-TP(C1) of Cresskill Brook from source to Duck Pond Road bridge remains the same.

**Hackensack River** - The Department is proposing Category One antidegradation designation for the Hackensack River from the New York – New Jersey State line to the confluence with the Oradell Reservoir, including Lake Tappan and all named and unnamed tributaries draining to the Hackensack River and Oradell Reservoir above the Oradell dam based on "exceptional water supply significance".

**Pascack Brook** - The Department is proposing a Category One antidegradation designation to Pascack Brook from New York – New Jersey State line to the Oradell Reservoir, including Woodcliff Lake and all named and unnamed tributaries based on "exceptional water supply significance".

**Tennakill Brook** - The Department is proposing Category One antidegradation designation for Tennakill Brook and all named and unamed tributaries including Cresskill Brook draining to Oradell Reservoir above the Oradell dam based on "exceptional water supply significance".

**Tappan, Lake** - The Department is proposing Category One antidegradation designation for the Lake Tappan based on "exceptional water supply significance". Therefore, with this proposed amendment Lake Tappan would be classified as FW2-NT(C1).

**Woodcliff Lake** - The Department is proposing Category One antidegradation designation for the Woodcliff Lake based on "exceptional water supply significance". Therefore, with this proposed Woodcliff Lake would be classified as FW2-NT(C1).

**Oradell Reservoir Tributaries** - The Department is proposing Category One antidegradation designation for all named and unnamed tributaries that are not listed separately and naturally drain into Oradell Reservoir above the Oradell Dam based on "exceptional water supply significance".

Accordingly, the Department has determined that Hackensack River, Pascack Brook, Tennakill Brook and all natural tributaries to the Oradell Reservoir are waterbodies of "exceptional water supply significance" and is proposing Category One antidegradation designation for the entire natural drainage to the Oradell Reservoir.

Basin	Waterbody	Current Classification	Proposed Classification	Supporting Information
	Manasquan River (Wall Township) -	FW2-TM	FW2-TM(C1)	
	West Farms Road Bridge in Howell			
Α	Township to the downstream			
-	boundary of Manasquan River			EXCEPTIONAL
I	WMA, except tributaries described			
L	separately			
-	Tributaries:			
Α	-Bear Swamp Brook (Howell)-	F W 2-N I	FW2-NI(CI)	
	Leng Swamp Drock (Squarkum)	EW2 NT	EW2 $NT(C1)$	
N	-Long Swamp Brook (Squankum) -	Γ W 2-1N I	FW2-INI(CI)	WATER
-	within Allaire State Park			
•	-Marsh Bog Brook (Farmingdale) -	FW2-NT	FW2-NT(C1)	
I	Source to Yellow Brook Rd	1 11 2 111	1	
	-Mingamahone Brook (Farmingdale) -	FW2-TM	FW2-TM(C1)	
С	Entire length, except tributary			
	described separately below			
в	East Branch (Farmingdale) - Source	FW2-NT	FW2-NT(C1)	SUPPLY
B	to mainstem Mingamahone Brook			
Α	-Squankum Brook (Squankum) -	FW2-NT	FW2-NT(C1)	
	Entire length, except segments in			
S	Allaire State Park			
	-Timber Swamp Brook (Oak Glen) -	FW2-NT	FW2-NT(C1)	
I	Manasquan Reservoir dam to its			SIGNIEICANCE
N	confluence with the Manasquan			SIGNIFICANCE
	River Managawan Dagamusin Tributariag	EW2 NT	EW2 $NT(C1)$	
	(Oak Clan) All tributorios from	F W 2-1N I	FW2-INI(CI)	
	source to Manasquan Reservoir			

# Table G - Proposed Streams Segments for Category One Antidegradation DesignationBased on Exceptional Water Supply Significance

# Table G (Cont'd) - Proposed Streams Segments for Category One Antidegradation

Basin	Waterbody	Current Classification	Proposed Classification	Supporting Information
	S. Br. Metedeconk River (Lakewood) - Entire length, except portions within the boundaries of Turkey Swamp WMA	FW2-NT	FW2-NT(C1)	
A T	Tributary - Clear Stream (Jackson) - Entire length	FW2-TM	FW2-TM(C1)	
L A	N. Br. Metedeconk River (Freehold) - Source to Aldrich Road, including all	FW2-NT	FW2-NT(C1)	EXCEPTIONAL
N   T   I	(Lakewood) - Aldrich Road to Lanes Mills, except the tributary listed	FW2-TM	FW2-TM(C1)	
c	(Brick) - Lanes Mills to S. Br. Metedeconk River, including the westerly tributary	FW2-NT	FW2-NT(C1)	
B A	Tributaries: -Dicks Brook (Larrabee's Crossing) - Entire length	FW2-NT	FW2-NT(C1)	WATER
S I	-Hay Stack Brook (Howell) - Entire length -Muddy Ford Brook (Larrabee's Crossing) - Entire length	FW2-NT FW2-TM	FW2-NT(C1) FW2-TM(C1)	
N	-Titmouse Brook (Howell) - Entire length Mainstem Metedeconk River (Brick) - Confluence of NB and SB to Forge Pond	FW2-TM FW2-NT	FW2-TM(C1) FW2-NT(C1)	
	Cresskill Brook (Demarest) - Duck Pond Rd, bridge to Tenakill Brook	FW2-NT	FW2-NT(C1)	SUPPLY
	Hackensack River (Oradell) –NY-NJ State line to Oradell dam, including Lake Tappan and all tributaries draining to the	FW2-NT	FW2-NT(C1)	
PASSAIC, HACKENSACK, AND	Hackensack River above Oradell Dam Oradell Reservoir Tributaries (Oradell) - All named and unnamed tributaries that are not listed separately, that drain into	FW2-NT	FW2-NT(C1)	
HARBOR COMPLEX BASIN	Oradell Reservoir above the Oradell Dam Tennkill Brook (Demarest) - Entire length, including all tributaries, except Cresskill Brook	FW2-NT	FW2-NT(C1)	SIGNIFICANCE
	Pascack Brook (Hackensack) - NY-NJ State line to the Oradell Reservoir, including Woodcliff Lake and all the tributaries	FW2-NT	FW2-NT(C1)	

## **Designation Based on Exceptional Water Supply Significance**

# **Social Impact**

The proposed amendments to the stream classifications and antidegradation designations 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 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 proposed amendments concerning stream classifications and/or antidegradation designations 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 H below.

The antidegradation provisions of the Surface Water Quality Standards are triggered when an applicant proposes an activity that has the potential to lower water quality. Previously approved wastewater discharges authorized through the NJPDES program as well as existing development is 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. However, existing dischargers, upon renewal of their permit, would be

subject to any new water quality criteria, resulting from reclassifying waters from FW2-TM to

FW2-TP, which may or may not require an upgrade of wastewater treatment.

#### Table H - Potentially affected NJPDES dischargers

(Affected due to reclassification to trout production and/or Category One antidegradation designation)

Waterbody Facility				
Atlantic Basin				
Manasquan River & Tributaries NJ0053511 - Military Sealift Command				
Metedeconk River & Tributaries	NJ0035041 - Jackson Township MUA (WTP)			
	Delaware River Basin			
Alexauken Creek	NJ0036005 - Lehigh Fluid Power Inc.			
Nishisakawick Creek	NJ0023001 - Salvation Army Camp Tecumseh			
INISHISAKAWICK CICCK	NJ0027553 - Alexandria Township BOE-Wilson School			
NJ0035670 - Alexandria Township BOE-Middle School				
Pohatoong Creek	NJ0133965 - Alpha Boro Well 3			
I bliateolig creek	NJ0020711 - Warren County - Tech School			
	NJ0021113 - Washington Borough WTF			
Wickecheoke Creek	NJ0027561 - Delaware Township MUA			
Passa	aic & Hackensack River Basin			
Oradell Reservoir tributaries NJ0051373 - United Water New Jersey				
Raritan River Basin				
South Branch Rockaway Creek &	NJ0107565 - Clinton Township STP - East			
Tributaries	NJ0023175 - Clinton Township. BOE - Round Valley			

BOE - Board of Education MUA - Municipal Utilities Authority

STP - Sewage Treatment Plant

WTF - Water Treatment Facility 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 of an existing discharge permit. 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 due to the change from Nontrout, to Trout Maintenance or Trout Production.

Compliance with the proposed special protection measures for Category One waters required in the Department's proposed 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, it may or may not increase the financial costs. However, the cost is offset by the protection of the State's most sensitive and unique waters.

Under the proposed Stormwater Management Rules, nonpoint sources of pollution are required to implement best management practices (BMP). These rules establish recharge standards and stress water quality controls. New BMPs are recommended to meet the water quality

requirements. These rules require the implementation of BMPs for new development Statewide in order to reduce pollution runoff levels by 80 percent.

In addition, under the proposed Stormwater Management rules, additional measures are necessary to protect the State's Category One. The Department has proposed Special Water Resource Protection Areas (buffers) as a new BMP to meet the Category One antidegradation standard. 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 proposal, 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. However, where the buffer is already disturbed, for example by active agriculture, the width may be reduced in the disturbed area, but will not extend less than 150 feet from either bank. The buffer will not affect existing development. The buffer requirement can also be adjusted to reflect local conditions through the approval of a stream corridor protection plan as part of a regional stormwater management plan.

If adopted, the buffer will be required for new development and must be maintained in its natural state. Because the buffer is intended to cleanse stormwater through filtration, no direct discharges of stormwater are allowed through the buffer. Exceptions to these standards include redevelopment within the buffer confined to the footprint of existing impervious areas (buildings, roads, parking, etc.). Also, the buffer will not apply for five years to single-family homes being constructed on lots that received subdivision approval prior to the effective date of the Rule. Further, 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 proposed Stormwater Management Rules.

Wetlands associated with waters classified as trout production are deemed "exceptional resource value" wetlands in accordance with the Freshwater Wetlands Protection Act (FWPA) at N.J.S.A. 13:9B-1 et seq. The FWPA rules at N.J.A.C. 7:7A-2.5(d) require a 150 foot transition area for exceptional resource value wetlands.

#### **Environmental Impact**

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. While Category Two does provide water quality protection, the Department has made a determination that healthy waterbodies that represent a natural or undisturbed state qualify as waterbodies of "exceptional ecological significance" deserve a greater level of protection to ensure that the ecological integrity of the waterbody is maintained. The State's water supplies also deserve this level of protection to ensure that potable water supplies, and therefore, drinking water are as pollutantfree as possible. Implementation of these rules through permitting and planning programs will maintain the chemical, physical, and biological integrity of the proposed Category One waters.

#### **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.

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 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 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 for the waterbodies 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 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 proposed Category One antidegradation designated waterbodies.

#### **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, 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 expanses that result in less than 0.25 acres additional impervious surface and less than one acres disturbance are not subject to the Special Water Resource Protection measures required in the proposed Stormwater Management Rule (see 35 N.J.R. 119(a), January 6, 2003). In proposing these amendments, 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 Category One antidegradation designation requires that discharges are regulated to ensure that the quality of the Category One waters are protected from changes in water quality. 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. While Category Two does provide water quality protection, the Department has made a determination that healthy waterbodies that represent a natural or undisturbed state deserve a greater level of protection to ensure that the ecological integrity of the waterbody is maintained through the designation as Category One. The State's water supplies also deserve this level of protection to ensure that potable water supplies, and therefore drinking water, are as pollutant-free as possible. The Department believes that the upgraded antidegradation designations 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..." This proposed amendments advance the goals of the plan by designating waters which provide a sustainable supply of water, support unique flora/fauna, and other selected water resources, for additional protections. This also provides a database, to be used in planning, which identifies resources to be protected from the adverse impacts of growth. Finally, these proposed amendments also provide additional protections for areas identified through the State Planning process.

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).

<u>Full text of the proposal follows (additions indicated in boldface <u>thus</u>; deletions indicated in brackets [thus]):</u>

### CHAPTER 9B SURFACE WATER QUALITY STANDARDS

#### SUBCHAPTER 1. SURFACE WATER QUALITY STANDARDS

7:9B-1.15 Surface water classifications for the waters of the State of New Jersey

- (a) (No change.)
- (b) (No change.)
- (c) The surface water classifications in Table 1 are for waters of the Atlantic Coastal Basin:

# TABLE 1

# Waterbody

Classification

•••

BEAR SWAMP BROOK

<u>(Howell)- Entire Length</u>	<u>FW2-NT(C1)</u>
State Park	FW2-NT(C1)]
[(Allaire) - Segment within the boundaries of Allaire	
below	FW2-NT]
[(Squankum) - Entire length, except segment described	

...

## **BRISBANE LAKE**

(Allaire State Park) - The Lake and its tributaries [within	
the boundaries of Allaire State Park, except Mill	
Run, which is listed separately, and the	
tributary described separately below]	FW2-NT(C1)
(Allaire State Park) - The easterly tributary to Mill Run	
upstream of Brisbane Lake, located entirely	
within the Allaire State Park boundaries	FW1]
[(Mill Run) - Mill Run from its source to Brisbane Lake	FW2-NT(C1)]

[(Mill Run) - Mill Run from the outlet of Brisbane Lake	
to the Manasquan River	FW2-NT(C1)]
CLEAR STREAM (JACKSON) - Entire length	FW2-TM <u>(C1)</u>
DICKS BROOK (Larrabee's Crossing) - Entire length	FW2-NT <u>(C1)</u>
HAY STACK BROOK (Howell) - Entire length	FW2-NT <u>(C1)</u>
LONG SWAMP BROOK	
(Squankum) - Entire length[, except segment within the	
boundaries of Allaire State Park]	FW2-NT <u>(C1)</u>
[(Allaire) - Segment within the boundaries of Allaire	
State Park	FW2-NT(C1)]
MANASQUAN RESERVOIR (Oak Glen)	(No change.)
TRIBUTARIES	
(Oak Glen) -All tributaries upstream of Manasquan	
<b>Reservoir from source to the Reservoir</b>	<u>FW2-NT(C1)</u>
MANASQUAN RIVER	

## MAIN STEM

(Freehold) - Source to Rt. 9 bridge, except tributaries	
described separately under Tributaries, below	FW2-NT
[(Farmingdale)] (Howell) - Rt. 9 bridge to the ["Narrows"	
in the vicinity of the Meadows Marina] West	
Farms Road Bridge in Howell Township, except	
tributaries described separately under	
Tributaries, below	FW2-TM
(Howell) - West Farms Road Bridge in Howell	
Township to the downstream boundary of	
<u>Manasquan River Wildlife Management Area,</u>	
except tributaries described	
<u>separately</u>	<u>FW2-TM(C1)</u>
[(Meadows Marina)] (Brick) - [The "Narrows"]	
Downstream boundary of Manasquan River	
Wildlife Management Area to surf waters	SE1
TRIBUTARIES, MANASQUAN RIVER [(See also BRISBANE LAF	<b>(E)</b>
(Adelphia) - Entire length	FW2-NT
(Allaire) - Those portions of the first and second	
southerly tributaries west of the Hospital Rd. which	
are located entirely within the	
boundaries of Allaire State Park	FW1(tm)
(Mill Run) - Entire length of Mill Run, including	
<b>Brisbane Lake and its tributaries, except easterly</b>	
tributary to Mill Run described as	
FW1 below	<u>FW2-NT(C1)</u>
(Allaire State Park) - The easterly tributary to Mill Run	
upstream of Brisbane Lake, located entirely	
within the Allaire State Park boundaries	<u>FW1</u>
[(Brick) - Tributaries within the boundaries of Allaire	

State Park and Manasquan River Wildlife	
Management Area, except those designated	
FW1, above	FW2-TM(C1)]
(Freehold) - Tributaries within the boundaries of Turkey	
Swamp Wildlife Management Area	FW2-NT(C1)

...

# MARSH BOG BROOK

(Farmingdale) - [Source to Yellow Brook Rd.] Entire length	FW2-NT <u>(C1)</u>
(Allaire) - Allaire State Park boundary at Yellow Brook Rd.	
to Manasquan River	FW2-NT(C1)]

# METEDECONK RIVER

# SOUTH BRANCH

(Lakewood) - Entire length, including all tributaries	
[except segment described below]	FW2-NT <u>(C1)</u>
(Turkey Swamp) - Tributaries within the boundaries of	
Turkey Swamp Wildlife Management Area	FW2-NT(C1)]
NORTH BRANCH METEDECONK RIVER	
(Freehold) - Source to Aldrich Rd., including all tributaries	
[except segment described below]	FW2-NT <u>(C1)</u>
(Turkey Swamp) - River and tributaries within the	
boundaries of Turkey Swamp Wildlife	
Management Area	FW2-NT(C1)]
(Lakewood) - Aldrich Rd. to Lanes Mills, except	
Haystack Brook listed separately	FW2-TM <u>(C1)</u>
(Brick) - Lanes Mills to confluence with Metedeconk	
River, South Branch, including the westerly	

<u>tributary</u>	FW2-NT <u>(C1)</u>
MAIN STEM METEDECONK RIVER	
<u>(Brick) - Confluence of North and South branches to</u>	
Forge Pond	<u>FW2-NT(C1)</u>
(Brick) - [Confluence of North and South branches to]	
Forge Pond to Barnegat Bay	FW2-NT/SE1
MINGAMAHONE BROOK	
MAINSTEM	
(Farmingdale) - Entire length, except [segment]	
East Branch described separately below	FW2-TM <u>(C1)</u>
(Allaire State Park) - Brook and tributaries within the	
boundaries of Allaire State Park	FW2-TM(C1)]
EAST BRANCH	
(Farmingdale) - Source to confluence with mainstem	
north of Farmingdale	FW2-NT <u>(C1)</u>
MUDDY FORD BROOK (Larrabee's Crossing) - Entire length	FW2-TM <u>(C1)</u>
SQUANKUM BROOK	
(Squankum) - Entire length[, except segment described	
below]	FW2-NT <u>(C1)</u>
(Allaire) - Segment within Allaire State Park	FW2-NT(C1)]

...

## TIMBER SWAMP BROOK

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

...

. . .

TITMOUSE BROOK (Howell) - Entire length

FW2-TM(C1)

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

# TABLE 2

Waterbody

Classification

ALEXAUKEN CREEK (Lambertville) - Entire length, including all tributaries FW2-TM(C1)

• • •

HARIHOKAKE CREEK	
(Alexandria) - Source to Rt. 519 bridge, including	
<u>all tributaries</u>	FW2-NT <u>(C1)</u>
(Frenchtown) - Rt. 519 bridge to Delaware River, including	
all tributaries	FW2-TM(C1)

...

# LITTLE NISHISAKAWICK CREEK (Frenchtown) - Entire length <u>FW2-NT(C1)</u>

...

# LOCKATONG CREEK

(Kingwood) - Source to Idell Bridge	FW2-NT <u>(C1)</u>
(Raven Rock) - Idell Bridge to Delaware River	FW2-TM <u>(C1)</u>

...

# LOPATCONG CREEK

[(Allens Mills) - Source to Decker Rd. bridge	FW2-TP(C1)]
(Herkers Hollow) - Decker Rd. bridge to Rt. 57	
bridge	FW2-TM
(Phillipsburg) - [Rt. 57 bridge] Source to a point 560 feet	
(straight line distance) upstream of the Penn	
Central railroad track, including all tributaries	FW2-TP(C1)
(Phillipsburg) - From a point 560 feet (straight line	
distance) upstream of the Penn Central railroad	
track downstream to the confluence	
with the Delaware River	FW2-TM
[ TRIBUTARY]	
(Uniontown) - Entire length	FW2-TP(C1)]

•••

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

• • •

...

PLUM BROOK (Sergeantsville) - Entire length	FW2-TM <u>(C1)</u>
POHATCONG CREEK	
MAIN STEM	
(Mansfield) - Source to Karrsville bridge, including all	
<u>tributaries</u>	FW2-TP(C1)
(Pohatcong) - Karrsville bridge to [Delaware River]	
<b>Rt. 519 bridge, except tributaries listed</b>	
<u>separately</u>	FW2-TM <u>(C1)</u>
(Springtown) - Rt. 519 bridge to Delaware River,	
including all tributaries	<u>FW2-TP(C1)</u>
TRIBUTARIES	(No change.)
SHABBECONG CREEK (Washington) – Entire length	FW2-TM <u>(C1)</u>
WICKECHEOKE CREEK	
(Locktown) - Source to confluence with Plum Brook	FW2-NT <u>(C1)</u>
(Stockton) - Confluence with Plum Brook to Delaware	FW2-TM <u>(C1)</u>
River	

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

# TABLE 3

Classification

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#### CRESSKILL BROOK

(Alpine) - Source to Duck Pond Rd. bridge, Demarest	FW2-TP(C1)
(Demarest) - Duck Pond Rd. bridge to Tenakill Brook	FW2-NT <u>(C1)</u>

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## HACKENSACK RIVER

(Oradell) - [Source] <u>New York/New Jersey State line</u>	
to Oradell dam <u>, including Lake Tappan and all</u>	
tributaries draining to the Hackensack	
<b>River above Oradell Dam</b>	FW2-NT <u>(C1)</u>
(Oradell) - Main stem and saline tributaries from	
Oradell dam to the confluence with Overpeck	
Creek	SE1
(Little Ferry) - Main stem and saline tributaries from	
Overpeck Creek to Route 1 and 9 crossing	SE2
(Kearny Point) - Main stem downstream from Route 1	
and 9 crossing	SE3
TRIBUTARIES	(No change.)

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ORADELL RESERVOIR (Oradell) <u> TRIBUTARIES</u>	(No change.)
(Oradell) - All named and unnamed tributaries that are not listed separately, that drain into	
Oradell Reservoir above the Oradell Dam	<u>(FW2-NT(C1)</u>
PASCACK BROOK (Hackensack) - New York/New Jersey State line to confluence with the Oradell	
Reservoir, including Woodcliff Lake, and all	
tributaries	<u>(FW2-NT(C1)</u>
<u>TAPPAN, LAKE (Old Tappan)</u>	<u>FW2-NT(C1)</u>
TENAKILL BROOK (Demarest) - Entire length, including all	
<u>tributaries, except Cresskill Brook</u>	FW2-NT <u>(C1)</u>
WOODCLIFF LAKE (Woodcliff Lake)	<u>(FW2-NT(C1)</u>

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

## TABLE 4

Waterbody	<u>Classification</u>
ROCKAWAY CREEK	
NORTH BRANCH	(No change.)
SOUTH BRANCH	
(Clinton) - Headwaters to <b>Readington Township</b>	
boundary [Lake Cushetunk], including all	
tributaries	[FW2-TM(C1)] <u>FW2-TP(C1)</u>
<u>(Clinton) - Readington Township boundary to</u>	
Lake Cushetunk, including all tributaries	FW2-TM(C1)
(Whitehouse) - Lake Cushetunk to its confluence	
with main stem Rockaway Creek	FW2-TM
MAIN STEM	(No change.)

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(g) - (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 these proposed amendments. I hereby authorize this proposal.

Date:\_\_\_\_\_

Bradley M. Campbell, Commissioner Department of Environmental Protection