ENVIRONMENTAL PROTECTION

WATER RESOURCE MANAGEMENT

WATER MONITORING AND STANDARDS

Surface Water Quality Standards

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

Authorized By: Catherine R. McCabe, Commissioner, Department of Environmental Protection.

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

Calendar Reference: See Summary below for explanation of exception to calendar requirement.

DEP Docket Number: 01-19-01.

Proposal Number: PRN 2019-028.

A **public hearing** concerning this notice of proposal will be held on Monday, April 8, 2019, at 1:00 P.M. at:

New Jersey Forensic Science Technology Center Auditorium

1200 Negron Drive

Hamilton, NJ 08691

Directions to the New Jersey Forensic Science Technology Center Auditorium are available at https://www.nj.gov/dep/enforcement/pcp/bpo/directions/directions-
https://www.nj.gov/dep/enforcement/pcp/bpo/directions/directions-
https://www.nj.gov/dep/enforcement/pcp/bpo/directions/directions-

Submit comments by May 3, 2019, electronically at www.nj.gov/dep/rules/comments.

Each comment should be identified by the applicable N.J.A.C. citation, with the commenter's

name and affiliation following the comment.

The Department encourages electronic submittal of comments. In the alternative,

comments may be submitted on paper to:

Gary J. Brower, Esq.

Attn.: DEP Docket Number: 01-19-01

Office of Legal Affairs

New Jersey Department of Environmental Protection

401 East State Street, 7th Floor

Mail Code 401-04L

PO Box 402

Trenton, NJ 08625-0402

Written comments may also be submitted at the public hearing. It is requested (but not

required) that anyone submitting oral testimony at the public hearing provide a copy of any

prepared text to the stenographer at the hearing.

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Courtesy copies of this notice of proposal, as well as the basis and background document containing technical detail in support of the proposed amendments, may be viewed or downloaded from the Department's website at https://www.state.nj.us/dep/rules/.

The agency proposal follows:

Summary

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

The Department is proposing amendments to the Surface Water Quality Standards (SWQS), N.J.A.C. 7:9B, to upgrade 749 river miles to Category One (C1) antidegradation designation based on exceptional ecological significance and exceptional fisheries resource. The upgrades based on exceptional ecological significance protect waterbodies with suitable habitat verified by the Department to support specified Endangered and Threatened species and exceptional aquatic communities. The Department is additionally proposing to reclassify waters based on trout sampling data. The Department is also proposing administrative changes discussed further below.

The Department presented the surface waters proposed to be upgraded to Category One (C1) antidegradation designations to stakeholders at a meeting on January 17, 2019. The invited

stakeholders included representatives from environmental groups, regulated entities, municipal and county planning boards, academia, and Federal regulators.

SWQS Background

The Department administers the SWQS for the protection of the surface water quality of the waters of the State. The SWQS designate uses for the waters of the State, as well as the water quality criteria for specified substances, such as dissolved oxygen, pH, temperature, total suspended solids, and toxics, that are necessary to support those uses. These designated uses inform the establishment of surface water classifications for individual waterbodies. The SWQS establish the designated uses to be achieved for individual waterbodies and specify the water quality criteria necessary to achieve those uses. Designated uses include public potable water supply (after conventional treatment); recreation; fish consumption; shellfish harvesting; maintenance, migration, and propagation of fish; agricultural and industrial water supplies; and any other reasonable uses. The Department assigns classifications to the surface waters to identify the designated uses applicable to each surface waterbody in New Jersey based on the type of waterbody and designated use of the waterbody.

New Jersey has both fresh and saline waters. Freshwaters (FW) are classified as FW1 waters (not subject to any man-made wastewater discharges) and FW2 waters (all other freshwaters, except Pinelands waters). FW1 waters are non-degradation waters set aside for posterity because of their unique ecological significance. FW2 waters are further classified based on their ability to support trout, which thrive in cooler stream temperatures. Trout classifications include trout production (FW2-TP), trout maintenance (FW2-TM), and nontrout (FW2-NT). Saline

waters are classified as saline estuarine (SE) and saline coastal (SC). SE waters are further classified as SE1, SE2, and SE3 waters based on their ability to support recreation, shellfish harvesting, and warm water fish species. Waters within the Pinelands Protection and Preservation areas (which may be either freshwater or saline water) are classified as Pinelands waters (PL) unless they are classified as FW1 waters. Some waters near the coast have dual classifications (for example, FW2-NT/SE1), which indicate that the waters change from freshwater to saline water as they drain into the estuary or ocean.

Additionally, the SWQS establish antidegradation policies for all intrastate surface waters. There are three tiers of antidegradation designations: Outstanding national resource waters (ONRW), Category One (C1) waters, and Category Two (C2) waters. ONRW is the most protective tier and applies to surface waters classified as FW1 waters, also known as non-degradation waters, and to PL waters. These waters must be maintained in their natural state. The only changes to water quality allowed in these waters are those that result in changes toward natural water quality. Category One waters are protected from any measurable change to existing water quality because of their exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, or their significance as an exceptional fisheries resource. Category One waters have more stringent antidegradation requirements than Category Two waters. Lowering of existing water quality may only be allowed in Category Two waters based on social and/or economic justification. However, all existing and designated uses of the Category Two waters must be protected in all cases, and waterbodies that are generally not meeting criteria must be improved to meet the water quality criteria specified in the SWQS.

Surface Water Classifications - Category One Upgrades

As referenced above, "Category One waters" are defined at N.J.A.C. 7:9B-1.4 as "those waters designated in the tables at N.J.A.C. 7:9B-1.15(c) through (i), for purposes of implementing the antidegradation policies set forth at N.J.A.C. 7:9B-1.5(d), for protection from measurable changes in water quality based on exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, or exceptional fisheries resource(s) to protect their aesthetic value (color, clarity, scenic setting) and ecological integrity (habitat, water quality and biological functions)."

Pollution allowed in State waters now may result in future restoration costs. Restoring surface waters, once they become impaired, is a difficult, time consuming, and expensive process. It is generally more cost effective to prevent degradation through water quality protections, such as upgrading waters to Category One designations, than to restore the waters after they become degraded.

The Department is proposing Category One protection for waters totaling approximately 749 river miles based upon the waters being of exceptional ecological significance and/or constituting exceptional fishery resources. The waters proposed for Category One designation upon these two bases include 734 river miles that are of exceptional ecological significance and 53 river miles that are an exceptional fishery resource with approximately 38 of these river miles qualifying both as waters of exceptional ecological significance and exceptional fishery resources. The stream classifications (FW2-NT, FW2-TM, FW2-TP, SE1, and SE2) for these proposed Category One upgrades will remain the same.

The waters proposed for upgrade and the basis for upgrade are identified and described in detail below. The surface water classifications for the waters of the State are codified in the SWQS at N.J.A.C. 7:9B-1.15. The classification tables at N.J.A.C. 7:9B-1.15(c) through (g) use a place name shown in the rule text in parenthesis to aid the user in identifying the referenced waterbody. The place names for the waters discussed below are reflected in the rule text portion of this notice of proposal. These names have been extracted from the United States Geological Survey (USGS) topographic maps. Topographic maps show a wide variety of information, including generalized land use, roads and railroads, streams, political boundaries, and the locations of many kinds of named features, among other things. Since many of these named locations are locally familiar names, they can serve to orient the user to the map display. This information is available as a Geographic Information System (GIS) coverage at https://www.nj.gov/dep/gis/.

Surface water classifications are applicable to all waters of the State, including waters not specifically listed in N.J.A.C. 7:9B-1.15. The classification assigned to unlisted and unnamed waters is specified in N.J.A.C. 7:9B-1.15(b)5. Pursuant to N.J.A.C. 7:9B-1.15(b)5iii, unlisted freshwater lakes, ponds, and reservoirs less than five acres in surface area that are upstream of, and contiguous with, FW2-TP or FW2-TM streams and which are not located entirely within the Pinelands Area boundaries are classified as FW2-TM. All other freshwater lakes, ponds, and reservoirs that are not otherwise classified are classified as FW2-NT. Accordingly, the Department is proposing to identify in the rule, only those lakes, ponds, and reservoirs that are classified differently than the stream that flows into, or out of, the lake. If a stream is classified

as FW2-NT, and a lake is classified as FW2-TM, the Department will identify the stream and the lake individually. If a stream is classified as FW2-NT(C1), any lake, pond, or reservoir that is contiguous with the stream and not listed in the tables at N.J.A.C. 7:9B-1.15(c) through (g) will also be designated as Category One. In addition, in accordance with the definition of "category one waters," all waters designated as Category One are identified in the classification tables at in N.J.A.C. 7:9B-1.15(c) through (g).

Exceptional Ecological Significance

In accordance with the definition of "exceptional ecological significance" at N.J.A.C. 7:9B-1.4, a waterbody is considered to be of exceptional ecological significance, and, thus, appropriately designated for Category One protection, if it satisfies one of two identified criteria. The first is based on the presence of suitable habitat for one or more of seven identified endangered or threatened species and a documented occurrence of at least one of the species. The second is based on the presence of an exceptional aquatic community. These two ecological bases rely on different data and information to demonstrate exceptional ecological significance, as further explained below.

Waters Proposed for Category One Antidegradation Designation Based upon Exceptional Ecological Significance - Endangered or Threatened (E&T) Species

The Department is proposing to upgrade to Category One protection approximately 137 river miles based on the presence of suitable habitat verified by the Department to support Bog Turtle, Brook Floater, Dwarf Wedgemussel, Eastern Pondmussel, Eastern Lampmussel, Green Floater, and/or Triangle Floater, with a documented occurrence(s) of at least one of these species

verified by the Department. Water quality and in-stream habitat may adversely affect the growth, reproduction, and feeding of these species and, if not maintained, could lead to the extirpation (elimination of the local population of the endangered or threatened species) of these endangered or threatened species. The designation of waterbodies that support these species and their habitat as Category One waters will maintain the existing water quality and habitat, and, therefore, support the continued viability of these species. A detailed description of each of these species and its habitat is available at https://www.nj.gov/dep/fgw/ensphome.htm.

Additionally, the use of a waterbody by endangered and threatened species is an existing use that must be protected as mandated by the Federal Water Quality Standards regulations at 40 CFR 131.12(a)1. The Federal regulations define existing uses as " ... those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards." (see 40 CFR 131.3(e)).

The occurrence of endangered or threatened animal species is verified by the Department and entered into the Biotics database. The Biotics database is an Oracle/GIS-based database where the Department maintains rare plant, animal, and ecological community occurrence data. Developed by NatureServe, an online encyclopedia of life (web application), the Biotics software provides established scientific standards for biological inventory and biodiversity data management used by most states, Canada, Latin America, and the Caribbean, for tracking species. The Department's Endangered and Nongame Species Program (ENSP) utilizes the Biotics database to verify the occurrence of endangered and threatened species. Location records of

endangered or threatened animal species are verified by the Department and entered into the Biotics database. Imperiled and special concern animal species records within the Biotics database are based on field observations from a variety of sources including reports from the general public, the New Jersey Endangered and Nongame Species Program's surveys, and other professional surveys, including those conducted by government agencies and environmental consultants. All records undergo rigorous evaluation by staff biologists for inclusion into the system according to an established protocol to ensure reliability. More information is available at https://www.state.nj.us/dep/fgw/ensp/landscape/lp-report-3-3.pdf. The public may report wildlife sightings ENSP. additional information, rare to the For visit https://www.njfishandwildlife.com/ensphome.htm.

The occurrence information from the Biotics database is used by the Department to develop the Landscape Maps. The Landscape Maps delineate the presence of documented habitat for endangered, threatened, and special concern animal species. Habitat is ranked based on the conservation status of the relevant species and occurrences. Information on documented occurrences, as well as reviewing the locations of suitable habitat as described in the Landscape Maps, determine whether each waterbody supports an endangered or threatened species. Information the Landscape Maps be found on can at https://www.njfishandwildlife.com/ensp/landscape/index.htm. It should be noted that some occurrences upon which Category One recommendation are based are not reflected in the current version of the Landscape Maps because there is always a lag time involved in processing and uploading the data. This review and upload process may take up to two years.

The waters proposed for upgrade to Category One protection based upon exceptional ecological significance due to the presence of suitable habitat for one or more of the above identified species and a documented occurrence of that species are discussed below. Exceptional ecological significance also includes waters supporting Endangered and Threatened species habitat and waters based on the presence of an exceptional aquatic community. The Department is proposing to extend the Category One antidegradation designation to all tributaries flowing into the proposed stream segment. This extension of Category One antidegradation designation to the tributaries provides additional protection needed to maintain the continued existence of the species and its habitat in the proposed stream segment.

While the proposed upgrades are based upon the presence of suitable habitat for, and the occurrence of, the species identified in the definition of "exceptional ecological significance," in some cases the proposed upgrade in antidegradation designation and corresponding increased water quality protection that the proposed upgrade would provide will also benefit other endangered and threatened species, as well as species of special concern present in the waterbodies proposed for upgrade. While not part of the basis for upgrade, information on these additionally benefitted species is provided as part of Table A below. Table A, which appears subsequent to that discussion, summarizes the stream segments proposed for upgrade, the current stream classification, the river miles proposed for Category One upgrade, the endangered and threatened qualifying species upon which upgrade is based, any other aquatic dependent endangered and threatened species or species of special concern that are also present in the waterbody, municipalities through which the stream flows and any potential New Jersey

Pollutant Discharge Elimination System (NJPDES) permitted discharges that may be affected by the upgrade.

As indicated above, some waterbodies (particularly, segments of the Pequest River, Lamington River, and Wallkill River) qualify for Category One designation on more than one basis. Those waterbody segments will also be discussed below in portions of this summary related to qualification based upon exceptional ecological significance – exceptional aquatic community, and exceptional fishery resource, and are also reflected in Tables D and E, respectively, summarizing the waterbodies proposed for upgrade on those separate bases. In addition, a digitized version of proposed stream segments can be seen in an interactive map at https://www.state.nj.us/dep/wms/bears/swqs-rules.htm.

N.J.A.C. 7:9B-1.15(d) - Upper Delaware River Basin

Brookaloo Swamp: The Department is proposing Category One designation for the entire length of the Brookaloo Swamp between Beaver Brook and Honey Run, which is currently classified as FW2-TM. The Department has confirmed the presence of Bog Turtle within the stream segment of Brookaloo Swamp and identified suitable habitat to support this State endangered and Federally threatened species. Therefore, the Department is proposing to upgrade the entire length of this stream to Category One status based on this exceptional ecological significance.

Paulins Kill: The Department is proposing Category One designation for the FW2-NT segment of Paulins Kill West Branch, from Warbase Junction Road to the confluence with East Branch, as well as for the FW2-TM segment of Paulins Kill mainstem, from the confluence of East

and West Branches to Route 15 bridge (bench mark 507), including all unnamed tributaries. The Department has confirmed the presence of Triangle Floater within the stream segment of the Paulins Kill and identified suitable habitat to support this State threatened species. Therefore, the Department is proposing to upgrade these stream segments of Paulins Kill to Category One status based on this exceptional ecological significance. The change to Paulins Kill West Branch, from Warbase Junction Road to the confluence with East Branch is reflected under the Lafayette listing of the Paulins Kill's West Branch. The change to Paulins Kill mainstem, from the confluence of East and West Branches to Route 15 bridge (bench mark 507), including all unnamed tributaries, is reflected under the Blairstown listing of the mainstem of Paulins Kill at N.J.A.C. 7:9B-1.15(d).

Additionally, the Department is proposing Category One designation for the FW2-TM segment of the Paulins Kill mainstem from Paulins Kill Lake dam to the Delaware River including all tributaries. The Department has confirmed the presence of Eastern Lampmussel, Triangle Floater, and Bog Turtle within this stream stretch of the Paulins Kill and identified suitable habitat to support these State endangered and threatened species and Federally threatened species. Therefore, the Department is proposing to upgrade this segment of the river to Category One status based on this exceptional ecological significance. This segment of Paulins Kill mainstem from Paulins Kill Lake dam to the Delaware River, including all tributaries is covered under the Paulins Kill Lake listing of Paulins Kill Main Stem at N.J.A.C. 7:9B-1.15(d). Blair Creek and Pond Brook are excepted from this listing because Blair Creek and Pond Brook include waters that are classified as FW2 NT. However, these waterbodies are being proposed to Category One

antidegradation designation as described under waters designated for Category One antidegradation protection based on exceptional aquatic community and exceptional fisheries resources.

The listing for the Paulins Kill in N.J.A.C. 7:9B-1.15(d) includes separate listing of several unnamed tributaries to the mainstem of the stream. Additionally, the Paulina Creek is a named tributary to the Paulins Kill that is separately listed in N.J.A.C. 7:9B-1.15(d). The Department is proposing to delete the separate listing for Paulina Creek, as well as the unnamed tributaries listed under the header "Tributaries, Main Stem" identified in the table as Blairstown, E. of Hainesburg Station, E. of Vail, and Stillwater and amend the portion of the mainstem listing covering the segment from the Paulins Kill Lake dam to Delaware River to include all tributaries not otherwise specifically identified. As a result, the tributaries proposed for deletion from the table will be included under the listing for this portion of the mainstem of the Paulins Kill with antidegradation designation of Category One.

In addition to qualifying for Category One designation based upon endangered and threatened, some portions of the proposed segments of Paulins Kill support an exceptional aquatic community as discussed below under proposed Category One based on this exceptional ecological significance-exceptional aquatic community.

Pequest River: The Department is proposing Category One designation for two FW2-NT segments of the Pequest River. The first proposed segment is from the Long Bridge Road northern crossing to an unnamed tributary that flows into the river on its eastern side just below Route 80 in Warren County, including all unnamed tributaries. The Department has confirmed

the presence of Dwarf Wedgemussel and Triangle Floater within this stream segment of the Pequest River and identified suitable habitat to support these State endangered and threatened species and Federally endangered species. Therefore, the Department is proposing to upgrade this segment of the Pequest River to Category One status based on exceptional ecological significance. This segment of the Pequest River is included under the Vienna listing of the Pequest River at N.J.A.C. 7:9B-1.15(d).

Other portions of the Pequest River qualify for Category One designation based upon the presence of an exceptional aquatic community. Those other segments proposed for upgrade on that basis are discussed below in the portion of the summary describing waters proposed for Category One protection based on exceptional ecological significance-exceptional aquatic community.

The second segment proposed for upgrade is from Route 46 crossing to the Lehigh and Hudson River railway bridge in Warren County. As with the first proposed segment, the Department has confirmed the presence of Dwarf Wedgemussel and Triangle Floater within the stream segment of the Pequest River and identified suitable habitat to support these State endangered and threatened species and Federally endangered species. Therefore, the Department is proposing to upgrade this segment of the Pequest River to Category One status based on this exceptional ecological significance. Additionally, the Pequest River from the Lehigh and Hudson River Railway bridge to the upstream most boundary of the Pequest Wildlife Management Area is currently classified as FW2-NT(C1). This segment of the Pequest River is included under the upstream Townsbury listing of the Pequest River at N.J.A.C. 7:9B-1.15(d).

N.J.A.C. 7:9B-1.15(e) - Lower Delaware River Basin

Cohansey River: The Department is proposing Category One designation for the FW2-NT segment of the Cohansey River from Finely Road to Loper Run in Cumberland County, including all unnamed tributaries. The Department has confirmed the presence of Eastern Pondmussel within this stream segment of the Cohansey River and identified suitable habitat to support this State threatened species. Therefore, the Department is proposing to upgrade this segment of the river to Category One status based on this exceptional ecological significance. The remaining portion of the stream segment, including its tributaries, currently classified as FW2-NT will continue to be classified as FW2-NT.

Cooper River: The Department is proposing Category One designation for the FW2-NT segment of the Cooper River from the Route 30 crossing to the confluence with the Delaware River in Camden County. The Department has confirmed the presence of Eastern Pondmussel within this segment of the Cooper River and identified suitable habitat to support this State threatened species. Therefore, the Department is proposing to upgrade this segment of the Cooper River to Category One status based on the exceptional ecological significance.

Crystal Creek: Crystal Creek, a currently unlisted waterbody is classified as FW2-NT pursuant to N.J.A.C. 7:9B-1.15(b)5. The Department is proposing Category One designation for the FW2-NT segment of the Crystal Creek from Route 130 to the Delaware River in Burlington County. The Department has confirmed the presence of Eastern Pondmussel within this segment of the Crystal Creek and identified suitable habitat to support this State threatened species. Therefore, the Department is proposing to add a new listing of Crystal Creek and upgrade Crystal

Creek from Route 130 to the Delaware River to Category One status based on exceptional ecological significance.

Maurice River: The Maurice River mainstem between its source and Union Lake Dam is currently divided into five segments. While all five segments are classified as FW2-NT, two segments, the one between Willow Grove Road and the Green Branch and the segment between the boundary of the Union Lake Wildlife Management Area and the confluence with Blackwater Branch, are designated as Category One waters. The other three segments of the Maurice River mainstem are Category Two (C2) waters.

Currently, the most upstream segment of the main stem of the Maurice River runs from the source to Willow Grove Road. This segment is comprised of Still Run and Scotland Run. The Department is proposing to add a new separate listing for Still Run, a portion of which is being proposed for Category One designation based on exceptional aquatic community. The Department is additionally proposing a new, separate listing to include Scotland Run at N.J.A.C. 7:9B-1.15(e). Both Still Run and Scotland Run will be separately listed, the Department is proposing to delete the listing for the most upstream segment of the Maurice River.

The Department is proposing Category One designation for the FW2-NT segment of Maurice River from West Sherman Avenue to Union Lake Dam in Cumberland County. The Department has confirmed the presence of Eastern Pondmussel within this segment of Maurice River and identified suitable habitat to support this State threatened species. Therefore, the Department is proposing to upgrade a portion of this segment of Maurice River currently classified as FW2-NT with a Category Two antidegradation designation to Category One status

based on exceptional ecological significance. Portions of Maurice River, between Willow Grove Road and Sherman Avenue, are currently designated as Category One. With the proposed upgrade between Sherman Avenue and Union Lake Dam, in conjunction with upgrades to other segments between Willow Grove Road and Sherman Avenue based on exceptional aquatic community as described below, the Category One designation would be extended from Willow Grove Road to Union Lake Dam.

As the proposed expanded FW2-NT(C1) listing under Willow Grove includes all segments of the mainstem from Willow Grove Road to the Union Lake Dam, with the exception of separately listed unnamed tributaries, the current listings of segments of the mainstem of the Maurice River in Brotmanville and Vineland are proposed for deletion as these segments are included under the expanded Willow Grove stream segment.

Other portions of Maurice River qualify for Category One designation based upon the presence of an exceptional aquatic community. Those other segments proposed for upgrade on that basis are discussed below in the portion of the summary describing waters proposed for Category One protection based on exceptional ecological significance-exceptional aquatic community.

North Run: North Run is a tributary of Crosswicks Creek classified as FW2-NT by default pursuant to N.J.A.C. 7:9B-1.15(b)5, for the entire length outside of Pineland Area Boundary. The Department is proposing Category One designation for a segment of the FW2-NT tributary to North Run that originates North East of Wrightstown Borough in Burlington County, from source to the Pinelands Area Boundary. The Department has confirmed the presence of Bog Turtles

within this stretch of North Run Tributary and identified suitable habitat to support this State endangered and Federally threatened species. Therefore, the Department is proposing to upgrade this segment of the tributary to Category One status based on exceptional ecological significance.

Raccoon Creek: The Department is proposing Category One designation for the entire length of the FW2-NT tributary to Raccoon Creek that originates at South Harrison in Gloucester County, including Lake Basgalore and all tributaries. The Department has confirmed the presence of Bog Turtles within this tributary to Raccoon Creek and identified suitable habitat to support this State endangered and Federally threatened species. Therefore, the Department is proposing to upgrade this tributary to Category One status based on exceptional ecological significance.

Salem River: The Salem River is currently divided into four segments, including two segments in Woodstown. The second Woodstown segment runs from Slabtown Road to the confluence with Nichomus Run. This segment of the Salem River is currently classified as FW2-NT. The Department is proposing Category One designation for a portion of this segment and also a tributary to the most downstream segment of the Salem River in Pilesgrove.

First, the Department proposes to upgrade a portion of the Woodstown segment of the river described above to Category One antidegradation designation. Particularly, it is proposed that the existing segment be broken into three segments with the center portion running from Mill Street to Chestnut Run be designated as C1. The upstream segment from Slabtown Road to Mill Street and the downstream segment from Chestnut Run to Nichomus Run are proposed to continue to be classified as FW2-NT with a Category Two antidegradation designation. The

Department has confirmed the presence of Triangle Floater within the segment of Salem River, from Mill Street to Chestnut Run, and has identified suitable habitat to support this State endangered species. Therefore, the Department is proposing to upgrade this segment of the tributary to Category One status based on exceptional ecological significance.

The second segment proposed to receive a Category One antidegradation designation is an FW2-NT/SE1 tributary that originates at Pilesgrove in Salem County, including all tributaries. The Department has confirmed the presence of Bog Turtle within this Salem River Tributary and identified suitable habitat to support this State endangered and Federally threatened species. Therefore, the Department is proposing to upgrade this tributary to Category One status based on exceptional ecological significance.

Woodbury Creek: Woodbury Creek is a tributary to the Delaware River that is included in the Brooklawn listing of Delaware River Tributaries and is currently classified as FW2-NT/SE2 at N.J.A.C. 7:9B-1.15(e). The Department is proposing Category One designation for the FW2-NT/SE2 segment of Woodbury Creek from Hessian Run to the Delaware River including all tributaries in Gloucester County based on the presence of endangered and threatened species and their habitat. The Department has confirmed the presence of Eastern Pondmussel within this segment of Woodbury Creek and identified suitable habitat to support this State threatened species. Therefore, the Department is proposing to add a new listing of Woodbury Creek and proposing to upgrade this segment of the creek to Category One status based on exceptional ecological significance.

N.J.A.C. 7:9B-1.15(f) – Passaic, Hackensack, and New York Harbor Complex Basin

Ramapo River: The Ramapo River between the State line and its confluence with the Pompton River is currently divided into three segments with the middle segment, from its confluence with Fox Brook to the Patriots Way bridge in Mahwah classified as FW2-NT with a Category One antidegradation designation. The upstream and downstream segments are both classified as FW2-NT with a Category Two antidegradation designation. The Department is proposing to expand the center segment to include the portion of the Ramapo River from Patriots Way bridge to Little Pond Brook in Bergen County, including all unnamed tributaries, thus providing this additional segment with Category One protection. The Department has confirmed the presence of Eastern Lampmussel within this portion of the Ramapo River and identified suitable habitat to support this State threatened species. Therefore, the Department is proposing to upgrade this portion of the river to Category One status based on exceptional ecological significance. The remaining portion of the downstream segment from Little Pond Brook to the Pompton River would continue to be classified as FW2-NT with a Category Two antidegradation designation.

Certain tributaries to the Ramapo River support a naturally reproducing trout population.

As part of this rulemaking, the Department is proposing to add an additional unnamed tributary qualifying for Category One protection on that basis. That proposed upgrade is discussed below in the portion of the summary addressing proposed Category One upgrades based on exceptional fisheries resources.

N.J.A.C. 7:9B-1.15(g) - Upper Raritan River Basin

Lamington River: The mainstem of the Lamington River (Black River) is currently divided into six segments, with one tributary in Ironia separately listed. All six river segments are classified as FW2, with the first (most upstream) and last (most downstream) segments classified as nontrout (NT), the third segment, running from the confluence with Rinehart Brook to the Camp Brady bridge in Bedminster, classified as trout production waters, and the other three segments classified as trout maintenance waters. All but the segment downstream of the trout production waters, running from the Camp Brady bridge to the confluence with Cold Brook, are protected by Category One antidegradation designation. The Department is proposing Category One designation to an FW2-TM segment of the Lamington River from Camp Brady Bridge to the confluence with Cold Brook in Hunterdon County, including all tributaries. The Department has confirmed the presence of Brook Floater within this segment of the Lamington River and identified suitable habitat to support this State endangered species. Therefore, the Department is proposing to upgrade this segment of the Lamington River to Category One status based on exceptional ecological significance.

In addition to qualifying for Category One antidegradation protection based upon the occurrence of Brook Floater and its habitat, this segment and additional portions of the Lamington River support exceptional aquatic community and a naturally reproducing trout population. Segments proposed for upgrade on those separate bases are discussed below in the portions of the summary addressing proposed upgrades to Category One antidegradation protection based on exceptional aquatic community and exceptional fisheries resources.

N.J.A.C. 7:9B-1.15(i) - Wallkill River Basin

Wallkill River: The Wallkill River mainstem between its source and the State line is currently divided into four segments, with classifications separately listed for three tributaries. The Department is proposing to upgrade to Category One antidegradation designation of one segment of the Wallkill River and add an additional separately listed tributary with a Category One designation.

There are currently two Wantage segments of the Wallkill River; the first running from the outlet of Franklin Pond to the confluence with Beaver Run, and the second running from the confluence with Beaver Run to the State line. The classification and antidegradation designation of the first segment is FW2-NT(C1) while the second downstream segment is classified as FW2-NT with a Category Two antidegradation designation. The Department is proposing to upgrade to Category One antidegradation designation a portion of the second stream segment of Wallkill River, between Glenwood road to the confluence with Wantage Brook in Sussex County, including all unnamed tributaries based on the confirmed presence of Eastern Lampmussel and Triangle Floater within this segment of Wallkill River and identified suitable habitat to support these State endangered and threatened species. Therefore, the Department is proposing to upgrade this segment to Category One status based on exceptional ecological significance.

This segment of the Wallkill River and additional stream segments qualify for Category One status based upon the presence of an exceptional aquatic community. Segments proposed for upgrade on those separate bases are discussed below in the portions of the summary addressing proposed upgrades to Category One antidegradation protection based on exceptional aquatic community and exceptional fisheries resources. These upgrades are included under the

upstream Wantage listing from outlet of Franklin Pond to the confluence with Wantage Brook at N.J.A.C. 7:9B-1.15(i).

In addition to the above proposed upgrade to the Wallkill River itself, the Department is proposing to separately list as FW2-NT(C1) to the entire length of standalone tributary that is located South of Pimple Hills in Sussex County. The Department has confirmed the presence of Bog Turtle within this standalone tributary and identified suitable habitat to support this State endangered and Federally threatened species. Therefore, the Department is proposing to upgrade this segment of the tributary to Category One status based on exceptional ecological significance.

Table A. Category One Waters based on Exceptional Ecological Significance – Endangered and Threatened Species

(Proposed Category One River Miles – approximately 136)

Waterbody	Existing	River	Aquatic-	Supporting	Potential	Potentially
	Classification	Miles	dependent T&E	Aquatic	Municipalities	affected major
			species	Dependent.	Affected	and minor NJPDES
				T&E and		facilities
				species of		
				Special Concern		
	U	lpper Del	aware River Basin			
Brookaloo Swamp - Entire length	FW2-TM	5.2	Bog Turtle	Wood Turtle	Hope (Warren)	NA
Paulins Kill West Branch (Lafayette)-	FW2-NT	17.9	Triangle floater	Creeper, Wood	Lafayette	NJ0005711.001A
Warbase Junction Rd to Confluence	FW2-TM			turtle	(Sussex)	Schering
of East and West branches						Corporation (B-m)
Paulins Kill (Lafayette) – Confluence						
of East and West branches to Rt. 15						

bridge (bench mark 507), including all						
tributaries						
Paulins Kill* (Paulins Kill Lake) -	FW2-TM	49.8	Eastern	Creeper, Wood	Fredon,	NA
Paulins Kill Lake to Delaware River,			lampmussel,	turtle, Harpoon	Stillwater	
except tributary described below,			Triangle	clubtail, Yellow	(Sussex)	
including all tributaries			Floater, Bog	lampmussel,	Blairstown,	
			Turtle	Spotted Turtle	Frelinghuysen,	
					Hardwick,	
					Knowlton	
					(Warren)	
Pequest River ** (Allamuchy) – Long	FW2-NT	5.5	Dwarf	Creeper	Allamuchy	NA
Bridge Road northern crossing to			wedgemussel,		(Warren)	
tributary below Route 80, including			Triangle floater			
all tributaries						

Pequest River (Independence) – Rt.	FW2-NT	2	Dwarf		Independence,	NJ0020605.001A
46 to Lehigh and Hudson River			wedgemussel,		Liberty,	Allamuchy
railway bridge			Triangle floater		Mansfield	Township MUA (A-
					(Warren)	m)
	l	ower Del	aware River Basin]		
Cohansey River (Upper Deerfield) -	FW2-NT	3.6	Eastern		Upper Deerfield,	NJ0062731.002A,
Finely Road to Loper Run, including			pondmussel		Hopewell	NJ0062731.004A,
all unnamed tributaries					(Cumberland)	NJ0062731.005A
						Clement Pappas
						Co Inc. (B-m)
						NJ0033006.001A
						Seabrook Brothers
						& Sons (B-m)
Cooper River (Camden) – Rt. 30	FW2-NT	1.3	Eastern	Tidewater	Camden City	NA
crossing to Delaware River			pondmussel	mucket, Yellow	(Camden)	

				lampmussel,		
				Shortnose		
				sturgeon,		
				Atlantic		
				sturgeon		
Crystal Creek (Bordentown) - Rt. 130	FW2-NT	0.5	Eastern	Tidewater	Bordentown,	NA
to Delaware River			pondmussel	mucket, Wood	Mansfield	
				turtle,	(Burlington)	
				Shortnose		
				sturgeon		
Maurice River (Millville) - Sherman	FW2-NT	6.3	Eastern	Tidewater	Millville,	NA
Ave. to Union Lake dam			pondmussel	mucket	Vineland City	
					(Cumberland)	

North Run Tributary (NE of	FW2-NT	5.8	Bog Turtle		North Hanover	NA
Wrightstown) Entire length, including					(Burlington)	
all tributaries						
Raccoon Creek-Basgalore Lake	FW2-NT	6.7	Bog Turtle		South Harrison,	NA
Tributary (South Harrison) Entire					Woolwich	
length, including Basgalore Lake and					(Gloucester)	
all tributaries						
Salem River (Woodstown) - Mill	FW2-NT	0.3	Triangle floater	Creeper	Woodstown	NJ0022250.001A
Street to confluence of Chestnut Run					Boro. (Salem)	Woodstown SA (A-
						m)
Salem River Pilesgrove Tributary	FW2-NT/SE1	4.2	Bog Turtle		Pilesgrove	NA
(Pilesgrove) - Entire length, including					(Salem)	
all tributaries						

Woodbury Creek (National Park) –	FW2-NT/SE2	3.3	Eastern	Tidewater	National Park	NA
Hessian Run to Delaware River,			pondmussel	mucket	Boro., West	
including all tributaries					Deptford	
					(Gloucester)	
Passaic, Hackensa	ck and New Yorl	(Harbor	Complex Basin			
Ramapo River (Oakland) – Patriots	FW2-NT	5.5	Eastern		Oakland Boro.	NJ0053112.001A
Way bridge to Little Pond Brook,			lampmussel		(Bergen)	Oakland Boro -
including all unnamed tributaries						Chapel Hill Estates
						(A-m)
						NJ0027774.001A
						Oakland Boro -
						Oakwood Knolls
						(A- m)
U						

Lamington River * (Bedminster) –	FW2-TM	9.5	Brook floater		Bedminster	NA
Camp Brady bridge to confluence					(Somerset)	
with Cold Brook, including all					Tewksbury	
tributaries					(Hunterdon)	
	Wallkill River Basin					
Wallkill River ** (Vernon/Wantage) -	FW2-NT	8.0	Eastern	Creeper, Wood	Vernon,	NJ0085561.001A
Glenwood Road to Wantage Brook			lampmussel,	turtle	Wantage	Ames Rubber
including all unnamed tributaries			Triangle floater		(Sussex)	Corporation (B-m)
Wallkill River Tributary (N of Sparta	FW2-NT	1	Bog Turtle		Sparta (Sussex)	NA
Station) - Entire length (Stand-alone)						

- * Also qualified for Category One as being the waterbodies of exceptional fishery resource based upon the waterbodies supporting trout production.
- ** Also qualified for Category One as being waterbodies of exceptional ecological significance based upon the waterbodies supporting an exceptional aquatic community.

A – domestic surface water discharge

B – industrial/commercial/thermal discharge

m - minor

Waters Proposed for Upgrade to Category One Based on Exceptional Ecological Significance-

Exceptional Aquatic Community

The Department is proposing several waterbodies for Category One antidegradation designation based on the waterbodies being of exceptional ecological significance due to the waterbody supporting an exceptional aquatic community. A waterbody's ability to support a wide variety of aquatic species is a good indication of a healthy aquatic ecosystem. A variety of physical, chemical, and biological data is utilized to determine if a stream segment exhibits characteristics considered to be sufficiently supportive of an exceptional aquatic community. The analysis conducted by the Department to determine if a waterbody qualifies based on exceptional ecological significance, requires analysis of several measures indicative of a healthy ecosystem before a waterbody can be considered for upgrade based on the exceptional aquatic community portion of the definition of "exceptional ecological significance" at N.J.A.C. 7:9B-1.4. These measures are applied at a Hydrologic Unit Code 14 (HUC 14) subwatershed level. A HUC 14 means an area within which water drains to a particular receiving surface waterbody (see N.J.A.C. 7:9B-1.4). Particularly paragraph 2 of the definition of "exceptional ecological significance" specifies:

A waterbody supporting an exceptional aquatic community as demonstrated by a nonimpaired benthic macroinvertebrate community as measured by the Department's Rapid Bioassessment Protocol (see

https://nj.gov/dep/wms/bfbm/rbpinfo.html
and at least two of the following factors:

- i. Optimal habitat as measured by the Department's Stream Habitat Assessment (see https://nj.gov/dep/wms/bfbm/rbpinfo.html);
- ii. Excellent fish community as measured by the Fish Index of Biotic Integrity (see https://nj.gov/dep/wms/bfbm/ibipagemain.htm);
- iii. Water quality data that demonstrates compliance with aquatic life criteria pursuant to N.J.A.C. 7:9B-1.14(d) for dissolved oxygen, temperature, total phosphorus, and total suspended solids; or
- iv. Impervious surface that is:
 - (1) Less than two percent for a HUC 14 of five square miles; or
 - (2) Less than or equal to 10 percent for a HUC 14 of greater than or equal to five square miles.

The ecological factors considered in reaching a determination as to whether a waterbody qualifies as being of exceptional ecological significance under paragraph 2 of the definition of that term are described in detail below. Table D below presents the findings that must be present for each of the factors for that factor to be determined to support a finding of exceptional ecological significance. Finally, each of the waterbodies proposed for upgrade on the basis of the outcome of this analysis are separately discussed.

Benthic Macroinvertebrates

The biological health of New Jersey's non-tidal wadeable streams is assessed based upon the resident instream benthic macroinvertebrate community. Benthic macroinvertebrates are primarily benthic (bottom-dwelling) faunae easily viewed with the naked eye. These faunae 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 instream community occupy various niches, based on functional adaptation or feeding mode (for example, predators, filter or detritus feeders, scavengers, etc.). Their presence and relative abundance is governed by environmental conditions (which may determine available food supply), and by pollution tolerance levels of the respective species. Benthic macroinvertebrate communities integrate the effects of short-term environmental variations and provide an ecological measure of fluctuating environmental conditions. Since benthic macroinvertebrates have limited migration patterns (a sessile mode of life), they are particularly well-suited for assessing site-specific ecosystem health. Benthic macroinvertebrate assemblages are made up of species that constitute a broad range of trophic levels and pollution tolerances, thus providing strong information for interpreting cumulative effects. Sampling is relatively easy, requires few people and inexpensive gear, and has minimal detrimental effect on the resident biota. This makes benthic macroinvertebrate assemblages good indicators of localized conditions.

Each benthic macroinvertebrate sample is collected using the methods described in the Bureau of Freshwater and Biological Monitoring, "Standard Operating Procedures Ambient

Biological Monitoring Using Benthic Macroinvertebrates Field, Lab, and Assessment Methods," which can be found at: https://www.nj.gov/dep/wms/bfbm/download/AMNET_SOP.pdf. These procedures are based on guidance as outlined in USEPA's Rapid Bioassessment Protocols (RBP) for Use in Wadeable Streams and Rivers. Each sample is analyzed to determine the number of individuals identified to the lowest practicable taxonomic level.

The Department's Ambient Biomonitoring Network (AMNET) employs a multi-metric index approach for assessment of biological condition, and regulatory thresholds for use attainment. New Jersey benthic macroinvertebrate communities can be statistically grouped into three distinct structures based on geographic regions: high gradient (above the Fall Line), low gradient (Coastal Plain, excluding the Pinelands), and Pinelands. To accurately assess biological condition, an index was developed for each distinct region using guidelines outlined in the <u>USEPA's Rapid Bioassessment Protocols (RBP) for Use in Wadeable Streams and Rivers</u>. The indices assess sites from two perspectives: the condition of the macroinvertebrate community and the regulatory use attainment. An assessment framework was outlined to address both concerns, and a development report was prepared for each index: <u>High Gradient Macroinvertebrate Index (HGMI)</u>, <u>Coastal Plain Macroinvertebrate Index (CPMI)</u>, and the Pinelands Macroinvertebrate Index (PMI).

The Category One upgrades proposed as part of this rulemaking are in both the high gradient areas and the low gradient areas. Therefore, the macroinvertebrates were assessed using the HGMI and CPMI for their respective areas. Two forms of the index were developed for HGMI, one for application with genus level taxonomy (HGMI_{gen}) and one for family level data

(HGMI_{fam}). The HGMI_{gen} is more precise than the HGMI_{fam} and, therefore, HGMI_{gen} is discussed below.

For the HGMI_{gen}, seven metrics are calculated and scored for inclusion in the index:

- Total number of genera,
- · Percent of genera that are not insects,
- Percent of Ephemeroptera (mayflies), Plecoptera (stoneflies), and Trichoptera (caddisflies) (EPT; three orders of aquatic insects that are common in the benthic macroinvertebrate community) individuals (excluding Hydropsychidae, including Diplectrona),
- · Number of scraper genera,
- · Hilsenhoff Biotic Index,
- Number of attribute 2 genera (highly sensitive and uncommon taxa), and
- Number of attribute 3 genera (sensitive and common taxa).

The CPMI was also developed with the genus level taxonomy and uses five metrices in the calculation and scoring of the index, including:

- Total number of genera
- Total number of EPT genera
- Percent Ephemeroptera genera
- Hilsenhoff Biotic Index
- Percent Clinger genera

The resolution of index scoring thresholds was further enhanced by establishing a graphical relationship between the scores for each index and the tiers these scores represent in the context of a Biological Condition Gradient (BCG). The final index scoring thresholds serve to assess each site from two perspectives: the condition of the macroinvertebrate community and the attainment of regulatory designated use of the waterbody. The HGMI thresholds are tabulated in Table B below and the CPMI thresholds are tabulated in Table C Below:

Table B. Descriptive and regulatory thresholds for Fresh Water

High Gradient Macroinvertebrate Index (HGMI)

Assessment category	Index Score	Regulatory Threshold
Excellent	63 - 100	Full Attainment
Good	42 - <63	Full Attainment
Fair	21 - <42	Non-Attainment
Poor	<21	Non-Attainment

Table C. Descriptive and regulatory thresholds for Fresh Water

Coastal Plain Macroinvertebrate Index (CPMI)

Assessment category	Index Score	Regulatory Threshold
Excellent	30 - 22	Full Attainment

Good	20 - 12	Full Attainment
Fair	10 - 6	Non-Attainment
Poor	<4	Non-Attainment

The Department's Water Monitoring and Standards Program samples more than 750 stations for benthic macroinvertebrates and instream habitat of which 436 are high gradient sites. New Jersey's surface waters are divided into five water regions: Atlantic Coastal, Raritan, Lower Delaware, Upper Delaware, and Northeast. These regions are sampled once every five years on a rotating schedule. A detailed description of the monitoring program and copies of available from the Department's website resulting reports are at https://www.state.nj.us/dep/wms/bfbm/index.html. However, there may be waterbodies not yet sampled. In such a case, the Department will consider data generated by other groups provided that information has been or will be submitted pursuant to the data solicitation notice for the development of the Integrated Water Quality Assessment Report (Integrated Report) and meets the data collection requirements applicable to such submission. The data collected for submission in response to a solicitation for development of the Integrated Report must be collected in accordance with a Quality Assurance Project Plan (QAPP), which is approved by the Department, USEPA, United Geological (USGS) or States Survey (https://www.state.nj.us/dep/wms/bears/cwm vm.htm).

In addition to the AMNET data collected by the Department, the Department also uses macroinvertebrate monitoring data from the Raritan Headwaters Association (RHA), which

followed the Department's protocol, as explained above, in sampling and scoring the data collected.

The RHA conducts monitoring in the Raritan River watershed and the data is submitted to the Department for use in developing the biennial Integrated Report. Each summer, a team of RHA staff members and citizen volunteers collect benthic macro invertebrate samples, which are used to assess the streams' health, at more than 50 sites on streams and rivers in Hunterdon, Morris, and Somerset counties. RHA used the HGMI index, which is appropriate for northern New Jersey, above the geologic fall-line. The RHA stream monitoring program collected high quality data to support the assessment of surface water quality and the overall health of the Raritan River watershed. The Department used macroinvertebrate data, collected from 2012 to 2017, to identify non-impaired waterbodies in the Raritan River watershed region to support the Category One designation process.

In order for a waterway to qualify for Category One designation based upon exceptional ecological significance, a benthic macroinvertebrate sample is mandatory, and the result must indicate a nonimpaired benthic macroinvertebrate community (full use attainment), which is assessed and scored as either excellent or good. A waterbody assessed as nonimpaired is characterized by a diverse benthic macroinvertebrate community, balanced taxa groups (no taxa being overly dominant), and a relative abundance of pollution intolerant taxa. For further information on the process used to evaluate the health of the benthic macroinvertebrate community, see https://www.state.nj.us/dep/wms/bfbm/rbpinfo.html). If the benthic macroinvertebrate results indicate an impaired condition, the waterbody segment will not be

considered for Category One designation (see Table B for an explanation of eligible ecological factors).

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

Instream Habitat Assessment

In assessing the condition of the benthic macroinvertebrate community, it is important to analyze the habitat to determine whether it is healthy enough to continue to sustain the benthic macroinvertebrate community. The physical attributes of habitat play an integral role in the health of the benthic macroinvertebrate community. Stream habitat assessment includes the evaluation of the instream substrate, channel morphology, bank structural features, and riparian vegetation. The assessment encompasses an area of 100 to 200 feet around each benthic macroinvertebrate sampling site. The matrix used to assess habitat quality is based on key physical characteristics of the waterbody and surrounding land, particularly the subwatershed of the site under investigation. All habitat parameters evaluated are related to overall aquatic life use and are a potential source of limitation to the aquatic biota. The qualitative habitat assessment, based on a version of the USEPA RBP calibrated for New Jersey streams, results in each station being assigned one of four condition categories; optimal, sub-optimal, marginal, or poor (see https://www.state.nj.us/dep/wms/bfbm/rbpinfo.html).

Instream habitat is sampled as indicated in the discussion of benthic macroinvertebrates above. The Department will consider data generated by other groups that has been or will be submitted pursuant to the data solicitation notice for the development of the Integrated Report provided the Department data collection requirements are met. This includes community water monitoring which is the collection of scientific water quality data by concerned citizens working in partnership with professional scientists and government decision-makers (https://www.state.nj.us/dep/wms/bears/comm_water_monitoring.htm).

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

In addition to the habitat data collected by the Department, the Department also used the data collected by the RHA. RHA followed the USEPA RBP for sampling and scoring the data collected, identical to the Department's protocol. The Department received habitat data collected from 2012 to 2017, which was used to identify non-impaired waterbodies in the Raritan River watershed region to support the Category One designation process.

Fish Community

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

The Department's Division of Water Monitoring and Standards, in cooperation with the Division of Fish and Wildlife, developed a Fish Index of Biotic Integrity (FIBI) to evaluate the fish community. The FIBI is another ecological indicator used by the Department to evaluate the environmental health of a waterbody. FIBI is based upon a statistical evaluation of fish species observed at selected stream stations and measures the health of a stream based on multiple attributes of the resident fish assemblage. The FIBI measures the following as part of the multimetric analysis:

- 1. Total number of fish species;
- 2. Number of benthic insectivorous species;
- 3. Number of trout and/or sunfish species;
- 4. Number of intolerant species;
- 5. Proportion of individuals as white suckers;
- 6. Proportion of individuals as generalists;
- 7. Proportion of individuals as insectivorous cyprinids;

- 8. Proportion of individuals as trout or proportion of individuals as piscivores (top carnivores)- excluding American Eel;
- 9. Number of individuals in the sample; and
- 10. Proportion of individuals with disease or anomalies (excluding blackspot disease).

The Department's Division of Water Monitoring and Standards established three fish networks of 300 monitoring stations consisting of 229 fixed sites, 50 probabilistic sites, and 21 sentinel sites located in Highlands, Piedmont, Ridge, and Valley, and Inner Coastal Plain physiographic provinces of New Jersey. Fixed and probabilistic stations are sampled once every five years on a rotating basin schedule, while sentinel sites are sampled routinely every two years. As a result of the multi-metric analysis, stations are ranked and classified as excellent, good, fair, poor, or very poor. A detailed description of the monitoring program and copies of reports are available Department's from the website at https://www.nj.gov/dep/wms//bfbm/ibipagemain.htm. Once all fish, crayfish, and amphibians from sample collections have been identified, counted, examined for disease and anomalies, and recorded, an IBI score is calculated using the appropriate Northern IBI, Southern IBI, or Headwaters IBI metrics. Assessments are performed using a multimetric index, calibrated to major physiographic regions of the State, using recognized methods.

Under the exceptional aquatic community component of the exceptional ecological significance definition, only waterbodies with an excellent fish community based on the FIBI can be used as part of the justification for Category One upgrade. An excellent FIBI rating is assigned to a waterbody with minimal human disturbance, with regionally expected species for the habitat

and stream size, pollution intolerant families, and a balanced trophic structure. If the FIBI represents something less than excellent conditions, then other ecological factors (water chemistry, fish IBI, and/or impervious surface) are necessary to support the Category One designation (see Table D for an explanation of eligible ecological factors).

Chemical Water Quality Monitoring Data

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

The Department's Division of Water Monitoring and Standards collects water samples at monitoring stations located throughout the State and compares these monitoring results with the adopted water quality criteria as described in the Integrated Water Quality Monitoring and

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

The Department considers data generated by other agencies and stakeholders who have a Quality Assurance Project Plan (QAPP) approved by the Department, USEPA, or USGS. This data must be submitted pursuant to the data solicitation notice for the development of the Integrated Report.

Under the exceptional aquatic community part of the "exceptional ecological significance" definition, if water quality data indicates an exceedance for dissolved oxygen, temperature, total phosphorus, or total suspended solids, the ecological value is not considered exceptional and cannot be used as part of the justification for Category One antidegradation designation based on exceptional ecological significance (see Table D below for a summary of the findings that must be present for this and the other ecological factors identified in the definition to serve as part of the justification for a waterbody to be considered of exceptional ecological significance based upon it supporting an exceptional aquatic community).

Impervious Surfaces

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

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

Goetz et al., indicated "... the overall proportion of impervious cover throughout the watershed was the overriding factor in predicting the health of streams in small watersheds." (Goetz, Scott J., Wright, Robb K., Smith, Andrew J., Zinecker, Elizabeth, and Schaub, Erika. 2003. IKONOS Imagery for Resource Management: Tree Cover, Impervious Surfaces, And Riparian Buffer Analyses in the Mid-Atlantic Region. Elsevier Inc. Remote Sensing of Environment, 88

195-208). In addition, Snyder et al., indicated "When considering only the composition of land cover within a watershed, the percent ISA (impervious surface area) was the primary predictor of stream health." (Snyder, Marcia N., Goetz, Scott J., and Wright, Robb K. June 2005. Stream Health Rankings Predicted by Satellite Derived Land Cover Metrics. Journal of American Water Resources Association. 41 (3): 659-677). These are but a few of the many studies that similarly concluded the importance of the percentage of impervious surface to the health and sustainability of aquatic systems and their biota. In general, the greater the amount of impervious surface in the subwatershed, the more likely the aquatic community is adversely affected.

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

Calculation of the percentage of impervious surface can be conducted at a subwatershed level, Hydrologic Unit Code 14 (HUC 14), or even smaller tributary watershed. A watershed's overall "ecological infrastructure," which includes waterways, is most likely to be still intact, and, therefore, remain of exceptional ecological value, when less impervious surface is present in the

watershed. Any amount of impervious surface will begin to have some effect on a watershed, but the evidence of such impacts may be subtle and initially much less noticeable in larger subwatersheds. Because of the relationship between the impacts of impervious surface and watershed size, as indicated in the definition of "exceptional ecological significance," the Department analyzes whether the level of impervious surface should be considered as a factor confirming the ability of a waterbody to support an exceptional aquatic community utilizing two thresholds for impervious surface based on the watershed size, with the applicable percentage of impervious surface depending upon whether the HUC 14 is less than or equal to five square miles in area or if its area is greater than five square miles.

As indicated in the definition, in order for the level of impervious surface to be considered a factor supporting a waterbody being determined to be of exceptional ecological significance, the percentage of impervious surface must be less than two percent for subwatersheds (HUC 14) located in headwaters with drainage less than or equal to five square miles. For subwatersheds (HUC 14) with drainage greater than five square miles, the percentage of impervious surface must be 10 percent or less for impervious surface to be considered as a factor supporting the water qualifying as being of exceptional ecological significance. Impervious surface data is available in the Department's 2012 land use land cover geographical information system layer, which can be downloaded from the Department's website at https://www.ni.gov/dep/gis/. A summary of the findings that must be present for this and the other ecological factors identified in the definition to serve as part of the justification for a waterbody to be considered of exceptional ecological significance based upon it supporting an exceptional aquatic community is presented in Table D.

Table D. Exceptional Aquatic Community

Ecological Values				
Factor/Indicator	Exceptional	Not Exceptional		
Benthic macroinvertebrate	Nonimpaired	Moderately or Severely Impaired		
Instream Habitat	Optimal	Suboptimal, Marginal, or Poor		
Fish community	Excellent	Good, Fair, or Poor		
Water Quality (Dissolved Oxygen, Temperature, Total Phosphorus, & Total Suspended Solids)	All parameters meeting SWQS	One or more parameters not meeting the surface water quality criteria		
Impervious Surface (IS)	HUC 14 < 5 square miles drainage areas: < 2 per cent IS	HUC 14 < 5 square miles drainage areas: ≥ 2 per cent IS HUC 14 ≥ 5 square miles drainage		
	HUC 14 ≥ 5 square miles drainage areas: ≤ 10 per cent IS	areas: > 10 per cent IS		

The Department is proposing to upgrade approximately 600 river miles to the Category One status based on the waterbody qualifying as being of exceptional ecological significance as a result of the waterbody supporting an exceptional aquatic community. Table E below provides an overview of the waterbodies proposed to be upgraded on this basis. The table identifies each stream segment proposed for upgrade, its current stream classification, the approximate number of river miles proposed for Category One upgrade, AMNET Stations providing information on the waterbody's water quality, and the rating applicable to the waterbody, habitat ratings, Fish IBI ratings, water chemistry data, the percentage of impervious surface present in the HUC14, and the HUC14 subwatersheds and municipalities that the stream flows through. A description of each of the waterbodies proposed for upgrade under this basis is provided below.

N.J.A.C. 7:9B-1.15(c) - Atlantic Coastal Basin

Tuckerton Creek: The Department is proposing to add Tuckerton Creek as a new waterbody to the list of waters of the Atlantic Coastal Basin. Tuckerton Creek originates in the Pinelands area. Outside of the Pinelands area, Tuckerton Creek is classified as FW2-NT/SE1 pursuant to N.J.A.C. 7:9B-1.15(b)5. The Department is proposing Category One antidegradation designation for a FW2-NT/SE1 segment of Tuckerton Creek, from the Pinelands Area Boundary to Pohatcong Lake including all tributaries, based on its exceptional ecological significance as the waterbody supports an exceptional aquatic community. All applicable data is summarized below in Table E.

This segment of Tuckerton Creek supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment of the creek was assessed to have optimal habitat. Additionally, the water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the subwatershed through which this segment flows. Furthermore, the impervious surface is below the 10 percent threshold value for a subwatershed that is 5.1 square miles. Therefore, the Department is proposing to upgrade this segment of Tuckerton Creek to a Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, exceptional water quality, and low percentage of impervious surface.

Westecunk Creek: The Department is proposing to add Westecunk Creek as a new waterbody to the list of waters of the Atlantic Coastal Basin. The Westecunk Creek originates in

the Pinelands area. Outside of the Pinelands area, Westecunk Creek is classified as FW2-NT/SE1 pursuant to N.J.A.C. 7:9B-1.15(b)5. The Department is proposing Category One antidegradation designation for a FW2-NT/SE1 segment of Westecunk Creek, from the Pineland Area boundary to Uriah Branch (a tributary to Westecunk Creek), including all tributaries, based upon its exceptional ecological significance as the waterbody that supports an exceptional aquatic community. All applicable data is summarized in Table E below.

This segment of Westecunk Creek supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Additionally, the water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the subwatershed through which the creek flows. The impervious surface is below the 10 percent threshold for a subwatershed that is 9.3 square miles. Accordingly, the Department is proposing to upgrade this segment of Westecunk Creek to a Category One status based on its non-impaired macroinvertebrate community, exceptional water quality, and a low percentage of impervious surface.

N.J.A.C. 7:9B-1.15(d) - Upper Delaware River Basin

Beaver Brook: The entire length of Beaver Brook, except for one tributary east of Mununka Chunk, is currently classified as FW2-NT. The separately listed tributary is classified as FW2-TM. The Department is proposing Category One antidegradation designation for a segment of Beaver Brook, from Honey Run to the Pequest River. The Department is additionally proposing Category One antidegradation designation to the tributary East of Mununka Chunk. Both waters

are proposed for upgrade based upon their exceptional ecological significance as each supports an exceptional aquatic community. All applicable data is summarized below in Table E.

The Honey Run to the Pequest River segment of the Beaver Brook, as well as the unnamed tributary east of Mununka Chunk, support a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this proposed segment of Beaver Brook and the tributary east of Mununka Chunk both support optimal habitat. Additionally, the water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the subwatershed through which these segments flow. Furthermore, the impervious surface present is below the 10 percent threshold for a subwatershed that is 9.1 square miles. Accordingly, the Department is proposing to upgrade this segment of Beaver Brook and the tributary east of Mununka Chunk to Category One status based on their non-impaired macroinvertebrate community, optimal instream habitat, exceptional water quality, and low percentage of impervious surface.

Blair Creek: Blair Creek is currently classified as FW2-NT from source to Bass Lake and FW2-TM from Bass Lake to Paulins Kill. The Department is proposing Category One antidegradation designation for the entire length of Blair Creek, including all tributaries, based on its exceptional ecological significance as a waterbody that supports an exceptional aquatic community. All applicable data is summarized in Table E below.

Blair Creek supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. In addition to a healthy macroinvertebrate

community, it also supports an excellent fish community. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 14.5 square miles. Accordingly, the Department is proposing to upgrade the entire length of Blair Creek, including all tributaries, to Category One antidegradation designation based on its non-impaired macroinvertebrate community, excellent fish community and low percentage of impervious surface.

Furnace (Oxford) Brook: Furnace Brook in Oxford is currently classified as FW2-TP(C1) from its source to the railroad bridge at Oxford, and FW2-NT from the railroad bridge to the Pequest River. The Department is proposing to upgrade the FW2-NT segment, including all tributaries, to Category One antidegradation designation based upon its exceptional ecological significance as a waterbody that supports an exceptional aquatic community. All applicable data is summarized below in Table E.

This segment of the brook supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. The water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the subwatershed through which this segment flows. Additionally, the percentage of impervious surface is below the 10 percent threshold for a subwatershed that is 7.7 square miles. Accordingly, the Department is proposing to upgrade this segment of Furnace Brook to Category One status based on its non-impaired macroinvertebrate community, exceptional water quality, and low percentage of impervious surface.

Jacksonburg Creek: Jacksonburg Creek is currently classified as FW2-TM for its entire length running from its source to its confluence with Paulins Kill. The Department is proposing Category One antidegradation designation for the entire length of Jacksonburg Creek, including all tributaries, based upon its exceptional ecological significance as a waterbody that supports an exceptional aquatic community. All applicable data is summarized below in Table E.

Jacksonburg Creek supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this creek was assessed to have optimal habitat. In addition to a healthy macroinvertebrate community, this stream segment also supports an excellent fish community. Furthermore, the percentage of impervious surface is below the 10 percent threshold for a subwatershed that is 8.5 square miles. Accordingly, the Department is proposing to upgrade this segment of Jacksonburg Creek to Category One status based on its non-impaired macroinvertebrate community, excellent fish community, optimal instream habitat, and low percentage of impervious surface.

Jacobs Creek: Jacobs Creek in Hopewell is currently classified as FW2-NT for its entire length. The Department is proposing Category One antidegradation designation for a segment of Jacobs Creek, from its source to Woolsey Brook, including all tributaries, based upon its exceptional ecological significance as a waterbody that supports an exceptional aquatic community. All applicable data is summarized below in Table E.

This segment of Jacobs Creek supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the

Department's habitat assessment, this segment of the creek was assessed to have optimal habitat. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 5.5 square miles. Accordingly, the Department is proposing to upgrade this segment of Jacobs Creek to Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, and low percentage of impervious surface.

Lubbers Run: The entire length of Lubbers Run is currently classified as FW2-TM. The segment of Lubbers Run from Lackawanna Lake downstream to the confluence with the Cowboy Creek is subject to Category One antidegradation designation, with the rest of the waterbody designated for Category Two protection. The Department is proposing to expand the Category One antidegradation designation to the entire length of Lubbers Run based upon its exceptional ecological significance as the waterbody that supports an exceptional aquatic community. The Category One designation would be applicable to all tributaries. Cowboy Creek, which is a tributary to Lubbers Run, is also proposed for upgrade to Category One designation based on presence of exceptional aquatic community. However, because Cowboy Creek is being proposed to be reclassified to FW2-NT from FW2-TM as discussed below, Cowboy Creek is proposed to be separately listed. In addition, all lakes, classified as FW2-NT, on Lubbers Run are being upgraded to Category One antidegradation protection based on exceptional aquatic community. Applicable data is summarized below in Table E.

Cowboy Creek does not currently have a designation separate from that of Lubbers Run.

Because the Department proposes to reclassify Cowboy Creek as FW2-NT based on the trout

sampling data (see discussion in the summary section for Exceptional Fisheries Resources and other Waterbodies Proposed for Reclassification Based upon Fish Sampling Data) and a Category One designation based on the presence of an exceptional aquatic community, the Department also proposes to give Cowboy Creek its own, specific listing.

Lubbers Run, including all lakes, support a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, these segments were assessed to have optimal habitat. Furthermore, the impervious surface is below the 10 percent threshold value for subwatersheds that are eight and 10 square miles. Accordingly, the Department is proposing to upgrade Lubber Run, including all tributaries, Cowboy Creek and all lakes along Lubbers Run to Category One antidegradation designation based on its non-impaired macroinvertebrate community, optimal habitat and low percentage of impervious surface.

Mountain Lake Brook: Mountain Lake Brook is currently classified as FW2-TM from its source to Mountain Lake and as FW2-NT from Mountain Lake dam to the Pequest River. The Department is proposing to upgrade a portion of the Mountain Lake Brook FW2-NT segment, running from the Lake Bog Preserve Boundary to the Pequest River, to Category One antidegradation designation based upon its exceptional ecological significance as this waterbody segment supports an exceptional aquatic community. All applicable data is summarized below in Table E. The upstream portion of the existing segment from Mountain Lake dam to the Lake Bog Preserve would continue to be classified as FW2-NT subject to Category Two protection.

This segment of the Mountain Lake Brook supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment of the brook was assessed to have optimal habitat. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 6.1 square miles. Accordingly, the Department is proposing to upgrade this segment of Mountain Lake Brook to a Category One antidegradation designation based on its non-impaired macroinvertebrate community, optimal instream habitat, and low percentage of impervious surface.

Paulins Kill: As discussed above, in addition to portions of the Paulins Kill qualifying for Category One antidegradation protection as being of exceptional ecological significance based on the presence of documented occurrence of specifically identified endangered and threatened species, segments of this waterbody additionally qualify for Category One antidegradation designation based upon its exceptional ecological significance as these waterbodies support an exceptional aquatic community. The Department is proposing Category One designation on this basis for two segments of Paulins Kill.

The first segment, which runs from the Balesville dam to Parson road, is currently classified as FW2-NT. This proposed segment is directly downstream from a segment currently classified as FW2-NT(C1). To reflect the proposed upgrade, the upstream segment already subject to Category One protection, which currently runs from the Route 15 bridge to the Balesville dam, is proposed to be expanded to include the segment proposed to be upgraded to

Category One protection with the new downstream boundary to be Parson Road. Accordingly, this proposed segment would run from Route 15 bridge to Parson Road.

The second segment of Paulins Kill proposed for upgrade to Category One antidegradation designation runs from Paulins Kill Lake dam to Jacksonburg Creek, including all tributaries except Blair Creek and Pond Brook (discussed separately), is currently classified as FW2-TM. All applicable data on these two segments is summarized below in Table E.

The Balesville dam to Parson road segment supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. Additionally, the water quality parameters that are important to maintaining healthy and balanced aquatic life are being meet throughout the subwatershed through which this segment flows. Moreover, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 8.5 square miles. Accordingly, the Department is proposing to upgrade this segment of Paulins Kill to Category One antidegradation designation based on its non-impaired macroinvertebrate community, optimal instream habitat, exceptional water quality, and low percentage of impervious surface.

The Paulins Kill Lake dam to Jacksonburg Creek segment, including all tributaries except Blaire Creek and Pond Brook, also supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. Furthermore, the percentage of impervious surfaces in the area is below the 10 percent threshold

value applicable to subwatersheds that are 10.3, 19.2, 14.5, and 19.8 square miles in area. Accordingly, the Department is proposing to upgrade this segment of Paulins Kill to Category One antidegradation designation based on its non-impaired macroinvertebrate community, optimal instream habitat, and low percentage of impervious surfaces.

It is noted that the Paulins Kill Lake dam to Jacksonburg Creek segment of the Paulins Kill also supports Endangered and Threatened species and is being proposed for Category One status as being of exceptional ecological significance on that basis. Segments proposed for upgrade on this separate basis are discussed above in the portions of the summary addressing proposed upgrades to Category One antidegradation protection based on exceptional ecological significance, Endangered and Threatened Species. As a result of these proposed upgrades and the upgrades to Waters proposed for Category One antidegradation designation based upon Exceptional Ecological Significance - Endangered or Threatened (E&T) Species, the Department is proposing to delete Paulina Creek, and several tributaries (Blairstown, E. of Hainesburg Station, E. of Vail, and Stillwater) listed under mainstem of Paulins Kill as they are all included as part of the tributaries to the mainstem.

Pequest River: The Department is proposing Category One designation for two segments of the Pequest River based upon exceptional ecological significance as waterbodies that support an exceptional aquatic community. The first segment runs from Kymer Brook to Trout Brook, including all tributaries and has two different classifications; Kymer Brook to Tranquility Bridge is classified as FW2-TM and Tranquility Bridge to Trout Brook is classified as FW2-NT. The second segment of Pequest River proposed for Category One upgrade based upon the segment

supporting an exceptional aquatic community runs from the downstream most Pequest Wildlife

Management Area boundary to the Delaware River. All applicable data is summarized below in

Table E.

The first proposed segment, from Kymer Brook to Trout Brook, supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Additionally, the water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the subwatershed through which this segment flows. Furthermore, the percentage of impervious surfaces is below the 10 percent threshold value for a subwatershed that is 8.7 square miles. Accordingly, the Department is proposing to upgrade this segment of Pequest River to Category One status based on its non-impaired macroinvertebrate community, exceptional water quality, and low percentage of impervious surfaces.

As discussed above in the summary, other portions of the Pequest River also support Endangered and Threatened species and are being proposed for Category One status as being of exceptional ecological significance on that basis (see discussion in the section of the summary entitled exceptional ecological significance — Endangered and Threatened Species above). Particularly, the segment from Long Bridge Road northern crossing to an unnamed tributary below Route 80, which overlaps with the segment from Tranquility bridge to Trout Brook as described above, is proposed to be upgraded to Category One designation based on the presence of endangered and threatened species. The combination of these two proposed upgrades result

in two segments reflected in the proposed rule text as Kymer Brook to Tranquility bridge and Tranquility bridge to eastern tributary below Route 80.

The second segment proposed for upgrade to Category One antidegradation designation, from the downstream most Pequest Wildlife Management Area boundary to the Delaware River, also supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. The water quality parameters that are important to maintaining healthy and balanced aquatic life are being met in all the subwatershed through which this segment flows. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 8.3 square miles. Accordingly, the Department is proposing to upgrade this segment of Pequest River to Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, exceptional water quality, and low percentage of impervious surfaces.

As a result of this upgrade, the Department is proposing to delete the Janes Chapel listing under the Pequest River Tributaries which includes the unnamed tributary, which is currently classified as FW2-TM(C1). This current listing is unnecessary as this tributary would be included in the Townsbury section of the Pequest River from the most upstream boundary of the Pequest Wildlife Management Area to the Delaware River, including all unnamed tributaries as FW2-TM(C1).

Pond Brook: Pond Brook is currently classified as FW2-NT. The Department is proposing Category One antidegradation designation for the entire length of Pond Brook, from Swartswood

Lake to the Paulins Kill, based upon its exceptional ecological significance as this waterbody supports an exceptional aquatic community. All applicable data is summarized below in Table E.

This waterbody segment supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment of water was assessed to have optimal habitat. Additionally, the water quality parameters that are important to maintaining healthy and balanced aquatic life are being meet throughout the subwatersheds through which this segment flows. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for subwatersheds that are 9.8 and 6.8 square miles. Accordingly, the Department is proposing to upgrade this segment of Pond Brook to Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, exceptional water quality, and low percentage of impervious surfaces.

N.J.A.C. 7:9B-1.15(d) currently identifies Pond Brook as running from Swartswood Lake to its confluence with Trout Brook, with the segment between the confluence of Trout Brook and Pond Brook and the Paulins Kill, incorrectly identified as part of Trout Brook. However, Pond Brook continues beyond the confluence with Trout Brook and flows into Paulins Kill. Therefore, the Department is correcting the listing to indicate that the portion of Pond Brook from Swartswood Lake outlet to its confluence with Paulins Kill is part of Pond Brook. Accordingly, the Department is proposing to delete the Middleville listing, under Trout Brook, from confluence with Pond Brook to Paulins Kill classified as FW2-NT.

Swartswood Creek: The entire length of Swartswood Creek is currently classified as FW2-TM with a Category Two antidegradation designation. The Department is proposing to upgrade the antidegradation designation of the entire length of the creek, including all tributaries, to Category One based upon its exceptional ecological significance as this creek and its tributaries support an exceptional aquatic community. The Department is additionally proposing to provide Category One antidegradation protection to six separately listed lakes (Crandon Lake, Lower Crandon Lake, Mecca Lake, Plymouth Pond, Quick Pond, and Willow Crest Lake). These lakes would all be classified as FW2-NT(C1). All applicable data is summarized below in Table E.

Swartswood Creek supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this waterbody was assessed to have optimal habitat. The percentage of impervious surfaces is below the 10 percent threshold value for subwatersheds that are 7.3 and 9.8 square miles. Accordingly, the Department is proposing to upgrade Swartswood Creek, its tributaries, and the six lakes identified above to Category One antidegradation designation based on their non-impaired macroinvertebrate community, optimal instream habitat, and low percentage of impervious surfaces.

Weldon Brook: Weldon Brook is currently classified as FW2-TM from its source to, but not including, Lake Shawnee. The Department is proposing to upgrade this segment of the brook and its tributaries to Category One antidegradation designation based upon its exceptional ecological significance as a waterbody that supports an exceptional aquatic community. All applicable data is summarized below in Table E.

Weldon Brook supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment of the brook was assessed to have optimal habitat. Furthermore, the percentage of impervious surfaces is below the 10 percent threshold value for a subwatershed that is 6.4 square miles. Accordingly, the Department is proposing to upgrade this segment of Weldon Brook, as well as its tributaries, to Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, and low percentage of impervious surfaces.

N.J.A.C. 7:9B-1.15(e) - Lower Delaware River Basin

Blackwater Branch: Although it has a name, Blackwater Branch is not currently listed separately; its classification of FW2-NT is derived from the classification of the mainstem Maurice River, into which it flows. The Department proposes to give it a separate listing, as it is also proposing to upgrade one of its segments to Category One antidegradation designation. The segment to be upgraded runs from Pine Branch to the Maurice River and includes the tributaries to that segment. The change in designation and listing is based upon exceptional ecological significance as this segment supports an exceptional aquatic community. All applicable data is summarized below in Table E.

This segment of Blackwater Branch supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. Additionally, the water quality parameters that are important to maintaining healthy and

balanced aquatic life are being meet throughout the subwatershed through which this segment flows. Accordingly, the Department is proposing to upgrade this segment of Blackwater Branch to Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, and exceptional water quality. The segment of Blackwater Branch running from its source to Pine Branch, will be listed as FW2-NT and is proposed to continue to be designated as a Category Two water.

Burnt Mill Branch: The Department is proposing to add Burnt Mill Branch as a new listing to the Lower Delaware River Basin. Burnt Mill Branch, a tributary of the Maurice River's mainstem located in Newfield, is currently classified as FW2-NT pursuant to N.J.A.C. 7:9B-1.15(b)5 and designated as Category Two. The Department is proposing Category One antidegradation designation for a segment of this tributary running from Burnt Mill Pond to its confluence with the Maurice River, including all tributaries to this segment, based upon its exceptional ecological significance as a waterbody that supports an exceptional aquatic community. All applicable data is summarized below in Table E.

This segment of the tributary supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. In addition to a healthy macroinvertebrate community, it also supports an excellent fish community. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 8.6 square miles. Accordingly, the Department is proposing to upgrade this segment of Burnt Mill Branch to Category One status based on its non-impaired macroinvertebrate community, excellent fish community, and low percentage of impervious surfaces. The segment

of Burnt Mill Branch running from its source to Burnt Mill Pond, will remain as FW2-NT and to continue to be designated as a Category Two water.

Fishing Creek: The Department is proposing to add Fishing Creek as a new listing to the Lower Delaware River Basin. Fishing Creek in the Township of Fishing Creek is currently classified as a FW2-NT/SE1 pursuant to N.J.A.C. 7:9B-1.15(b)5, from its source to the Delaware Bay, and is designated as Category Two. The Department is proposing Category One antidegradation designation for a segment running from the source of the creek to Fulling Mill Stream, including all tributaries, based upon these waters' exceptional ecological significance as waterbodies that supports an exceptional aquatic community. All applicable data is summarized below in Table E.

This segment of Fishing Creek and all its tributaries support a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. The water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the subwatershed through which this segment flows. Furthermore, the percentage of impervious surface present is below the 10 percent threshold value for a subwatershed that is 8.7 square miles. Accordingly, the Department is proposing to upgrade this segment of Fishing Creek to Category One antidegradation designation based on its non-impaired macroinvertebrate community, exceptional water quality, and low percentage of impervious surface. The segment of Fishing Creek running from Fulling Mill Stream to Delaware Bay, will be listed as FW2-NT/SE1 and would continue to be designated as a Category Two water.

Green Branch: The Department is proposing to add Green Branch as a new listing to the Lower Delaware River Basin. Green Branch in Brotmanville, a tributary along the mainstem of the

Maurice River, is currently classified as FW2-NT pursuant to N.J.A.C. 7:9B-1.15(b)5. In addition to adding this waterbody as a new listing, the Department is proposing to upgrade the antidegradation designation of the entire length of the waterbody, and all tributaries including Endless Branch, to Category One based upon these waters' exceptional ecological significance as waterbodies that supports an exceptional aquatic community. All applicable data is summarized below in Table E.

Green Branch and all the tributaries, including Endless Branch, supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, these segments were assessed to have optimal habitat. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is with 7.8 square miles. Accordingly, the Department is proposing to upgrade Green Branch, including Endless branch and all tributaries, to Category One antidegradation designation based on its non-impaired macroinvertebrate community, optimal instream habitat, and low percentage of impervious surface.

Indian Run: The Department is proposing to add Indian Run as a new listing to the Lower Delaware River Basin. Located in Palatine, Indian Run is currently classified as FW2-NT pursuant to N.J.A.C. 7:9B-1.15(b)5 and assigned the Category Two antidegradation designation. In addition to adding this waterbody as a new listing, the Department is proposing to upgrade the antidegradation designation to Category One for a segment running from Olivet Road to the confluence with Muddy Run, including all tributaries, based upon its exceptional ecological significance as a waterbody that supports an exceptional aquatic community.

Indian Run, including all of its tributaries, supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. Additionally, the water quality parameters that are important to maintaining healthy and balanced aquatic life are being meet throughout the subwatershed through which this segment flows. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 9.7 square miles. Accordingly, the Department is proposing to upgrade this segment of Indian Run, as well as its tributaries, to Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, exceptional water quality, and low percentage of impervious surface. The segment of Indian Run running from its source to Olivet Road will be listed as FW2-NT and would continue to be designated as a Category Two water.

Little Robin Branch: The Department is proposing to add Little Robin Branch as a new listing to the Lower Delaware River Basin. Little Robin Branch in Vineland, a tributary along Maurice River's mainstem, is currently classified as FW2-NT pursuant to N.J.A.C. 7:9B-1.15(b)5. In addition to adding this waterbody as a new listing, the Department is proposing Category One antidegradation designation for the entire length of Little Robin Branch, based upon the tributary being of exceptional ecological significance as a waterbody that supports an exceptional aquatic community. All applicable data is summarized below in Table E.

Little Robin Branch supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's

habitat assessment, this waterbody was assessed to have optimal habitat. Additionally, the water quality parameters that are important to maintaining healthy and balanced aquatic life are being meet throughout the subwatershed that this waterbody flows through. Accordingly, the Department is proposing to upgrade Little Robin Branch to a Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, and exceptional water quality.

Manantico Creek: The entire length of Manantico Creek, with the exception of the segment within the boundaries of the Manantico Ponds Wildlife Management Area, is currently classified as an FW2-NT and subject to Category Two antidegradation designation. The segment within the Manantico Ponds Wildlife Management Area is subject to a Category One antidegradation designation. The Department is proposing the segment of Manantico Creek running from Mays Landing Road to the confluence with Berryman Branch, including all tributaries, for Category One antidegradation designation based upon its exceptional ecological significance as a waterbody that supports an exceptional aquatic community. All applicable data is summarized below in Table E.

This segment of Manantico Creek, including all its tributaries support a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 9.5 square miles. Therefore, the Department is proposing to upgrade this segment of Manantico Creek to Category One antidegradation

designation based on its non-impaired macroinvertebrate community, optimal instream habitat, and low percentage of impervious surface.

Maurice River: The entire length of Maurice River, with the exception of the segment running from Union Lake Dam to Delaware Bay, is currently classified as an FW2-NT. Currently two segments of Maurice River upstream of the Union Lake Dam are designated as Category One waters; the first segment running from Willow Grove Road to the confluence of Green Branch and the second segment running from the Boundary of the Union Lake Wildlife Management Area to the confluence of Blackwater Branch. The Department is proposing to expand the first segment currently designated as a Category One water, to include an additional segment running from the confluence with Green Branch to Sherman Avenue (downstream of Union Lake Wildlife Management Area), including all unnamed tributaries, based upon its exceptional ecological significance as a waterbody that supports an exceptional aquatic community. A portion of this segment from Green Branch to Sherman Avenue includes the segment within the Union Lake Wildlife Management Area that is already designated as Category One. As a result, in conjunction with proposed upgrades discussed in the portion of the summary above describing proposed upgrades on the basis of endangered and threatened species, the proposed upgrade of the segment from the confluence with Green Branch to Sherman Avenue would result in the current Category One segment expanding to run from Willow Grove Road to the Union Lake Dam. This proposed segment of Maurice River encompasses the segment of Maurice River that is already designated as Category One within the Union Lake Wildlife Management Area. All applicable data is summarized below in Table E.

The Maurice River running from Willow Grove Road to Sherman Avenue, including all unnamed tributaries to this segment, supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. Additionally, the water quality parameters that are important to maintaining healthy and balanced aquatic life are being meet throughout the subwatersheds through which this segment flows. Accordingly, the Department is proposing to upgrade this segment of Maurice River to a Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat and exceptional water quality. The Department is proposing to delete the first listings of Willow Grove, Brotmanville, and the two Vineland under Maurice River Main Stem because these segments are either renamed or included within the proposed Category One segment of the Maurice River as result of upgrading Maurice River to Category One antidegradation designation based upon exceptional ecological significance - endangered or threatened species and exceptional aquatic community.

As discussed above in the summary, other portions of the Maurice River also support Endangered and Threatened species and are being proposed for Category One status as being of exceptional ecological significance on that basis (see discussion in the section of the summary entitled exceptional ecological significance – Endangered and Threatened Species above). As a result of the amendments proposed discussed here, in conjunction with those discussed above based upon endangered and threatened species, the Department is proposing to delete the existing initial Willow Grove listing, as well as the Brotmanville and Vineland listings under

Maurice River Main Stem because these segments are either renamed or included within the proposed Category One segment of the Maurice River.

Muddy Run: The Muddy Run, a tributary to the Maurice River, is an FW2-NT water. Currently three segments of the Muddy Run are designated as Category One waters: the portion within Elmer Lake Wildlife Management Area, the portion within Parvin State Park, and the portion within the Union Lake Wildlife Management Area. All other portions of the Muddy Run are designated as Category Two waters. The Department is proposing Category One designation for two additional segments of Muddy Run based upon exceptional ecological significance as these segments support exceptional aquatic communities. All applicable data for these two segments is summarized below in Table E.

The first segment, from Olivet Road to Parvin State Park, including Centerton Pond and all unnamed tributaries, supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat Additionally, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 9.9 square miles. Therefore, the Department is proposing to upgrade this segment of Muddy Run to a Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, and low percentage of impervious surface. As this segment is adjacent to the portion of Muddy Run in Parvin State Park that is already designated as a Category One water, the Department proposes to list one segment that includes both the proposed waters and

the waters already designated as Category One within the park, with the existing separate listing for the portion of the Run within Parvin State Park deleted as unnecessary.

The second segment runs from Landis Avenue to the Maurice River outside the Union Lake Wildlife Management Area (which, as indicated above, is already designated as Category One), supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Additionally, the water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the subwatersheds through which this segment flows. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 5.7 square miles. Accordingly, the Department is proposing to upgrade this segment of Muddy Run to Category One status based on its non-impaired macroinvertebrate community, exceptional water quality, and low percentage of impervious surfaces. As the proposed listing to reflect the upgrade of these waters specifically includes the portion of the Run within the Union Lake Wildlife Management Area, the existing separate listing for that portion of the Run is proposed for deletion.

The existing listing specifies that the entire length of Muddy Run is classified as FW2-NT and designated as Category Two, with the exception of the three specific segments. As a result of the proposed changes summarized above, the listing for Muddy Run would be amended to reflect FW2-NT classification with Category Two antidegradation designation is limited to the waters from the source to Olivet Road, except the portion within the Elmer Lake Wildlife Management Area.

Oldmans Creek: Oldmans Creek, a tributary of the Delaware River, is classified as FW2-NT from its source to Main Street in Oldmans Township. Within this FW2-NT portion of the creek, the segment from the eastern boundary of the Harrisonville Lake Wildlife Management Area to Kings Highway by Porches Mill, including all tributaries, is currently designated as a Category One waterbody; the remainder of this segment of the creek is subject to Category Two antidegradation protection. The downstream portion of the creek, from Main Street to the Delaware River, is classified as FW2-NT/SE1. The Department is proposing Category One antidegradation designation for a segment of Oldmans Creek running from its source to the eastern boundary of the Harrisonville Lake Wildlife Management Area based upon its exceptional ecological significance as a waterbody that supports an exceptional aquatic community. All applicable data is summarized below in Table E.

This segment of Oldmans Creek supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, the segment of Oldmans Creek from its source to Rt. 581 was assessed to have optimal habitat. The water quality parameters that are important to maintaining healthy and balanced aquatic life are being meet throughout the subwatersheds through which this segment flows. The percentage of impervious surface in the subwatershed that surrounds the headwaters of Oldmans Creek, running from its source to Route 581, is above the two percent threshold value where negative effects on water quality start to become noticeable within a subwatershed smaller than five square miles. The percentage of impervious surfaces in the subwatershed surrounding the segment of Oldmans Creek downstream, running

from Route 581 to the eastern boundary of the Harrisonville Lake Wildlife Management Area, is below the 10 percent threshold value for a subwatershed that is 5.8 square miles. Therefore, the Department is proposing to upgrade this segment of Oldmans Creek to a Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, exceptional water quality, and low percentage of impervious surfaces.

Because the segment proposed for upgrade to Category One is adjacent to a segment of the creek that is already subject to Category One antidegradation protection, the Department is proposing to expand that listing to incorporate this upstream segment with the existing listing covering this segment proposed for deletion.

Old Robins Branch: The Department is proposing to add Old Robins Branch as a new listing under the Lower Delaware River Basin. Old Robins Branch is an unlisted freshwater tributary to Dennis Creek that is currently classified as FW2-NT/SE1 in areas outside the Pinelands Area boundary in accordance with N.J.A.C. 7:9B-1.15(b)5. Within the Pinelands Area boundary, Old Robins Branch is classified as PL in accordance with N.J.A.C. 7:9B-1.15(b)5. In addition to adding a new listing for this waterbody, the Department is proposing to upgrade the entire segment of Old Robins Branch that is outside the Pinelands Area boundary to Category One antidegradation designation based upon its exceptional ecological significance as a waterbody that supports an exceptional aquatic community. All applicable data is summarized below in Table E.

Old Robins Branch supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's

habitat assessment, this segment was assessed to have optimal habitat. Additionally, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 12.3 square miles. Therefore, the Department is proposing to upgrade this segment of Old Robins Branch to Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, and a low percentage of impervious surfaces.

Still Run: The Department is proposing to add Still Run as a new listing under the Lower Delaware River Basin. Still Run is currently classified as FW2-NT pursuant to N.J.A.C. 7:9B-1.15(b)5 and is subject to Category Two antidegradation designation. In addition to adding this waterbody as a new listing, the Department is proposing Category One antidegradation designation to the segment running from its source to Silver Lake, including all tributaries, based upon its exceptional ecological significance as a waterbody that supports an exceptional aquatic community. All applicable data is summarized below in Table E.

This segment of Still Run supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. The water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the subwatershed through which this segment flows. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 6.6 square miles. Accordingly, the Department is proposing to upgrade this segment of Still Run to a Category One status based on its non-impaired macroinvertebrate community, exceptional water quality, and low percentage of impervious surfaces.

N.J.A.C. 7:9B-1.15(f) - Passaic, Hackensack and New York Harbor Complex Basin

Whippany River: The Whippany River is an FW2 water that includes segments classified as trout production (TP), segments classified as trout maintenance (TM), and segments classified as nontrout (NT). The Department is proposing Category One designation for a segment of the Whippany River from Whitehead Road bridge to Gillespie Hill tributary, including all tributaries to that segment, as a waterbody of exceptional ecological significance based upon its support of an exceptional aquatic community. This segment of Whippany River includes areas that are classified as FW2-NT and other areas classified as FW2-TM. In addition, the portions of FW2-TP unnamed tributaries upstream from this section are also being upgraded to Category One based on exceptional ecological significance by supporting an exceptional aquatic community. All applicable data is summarized below in Table E.

The segment of Whippany River proposed for upgrade is within a subwatershed that supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. The water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the subwatershed through which this segment flows. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 6.3 square miles. Therefore, the Department is proposing to upgrade this portion of Whippany River, which includes segments classified as FW2-TP, FW2-TM, and FW2-NT, to a Category One status based on its non-impaired macroinvertebrate community, exceptional water quality, and low percentage of impervious surfaces. As a result, the Department is proposing amendments at N.J.A.C. 7:9B-1.15(f) to

upgrade the Category One designation to this segment of Whippany River however, the classification will remain the same.

N.J.A.C. 7:9B-1.15(g) - Upper Raritan River Basin

Lamington River: The Lamington River is an FW2 water that includes segments variously classified as trout production, trout maintenance, and nontrout. With the exception of one segment running from Camp Brady bridge to the confluence with the Cold Brook, all listed segments of the Lamington River, as well as the one currently separately listed tributary are designated as Category One waters. The Department is proposing Category One antidegradation designation for all unnamed tributaries along the Lamington River between the Route 206 bridge and the confluence of Rinehart Brook, which are classified as FW2-TM, based upon these waters being of exceptional ecological significance as waterbodies that support an exceptional aquatic community. All applicable data is summarized below in Table E.

These unnamed tributaries of Lamington River support healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, these tributaries were assessed to have optimal habitat. The water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the subwatersheds that these tributaries flow through. Furthermore, the percentage of impervious surface in the area is below the 10 percent threshold value for subwatersheds that are 6.0 and 8.9 square miles. Accordingly, the Department is proposing to upgrade these unnamed tributaries of Lamington River to a Category

One antidegradation designation based on its non-impaired macroinvertebrate community, optimal instream habitat, exceptional water quality, and low percentage of impervious surface.

In addition to the tributaries described above, other segments along the Lamington River which are proposed for Category One status based on the waterbodies being of exceptional ecological significance as they support Endangered and Threatened species as well as segments qualifying for Category One status as exceptional fisheries resources. Those segments of the Lamington River are described in the section of the summary entitled Exceptional Ecological Significance – Endangered and Threatened Species above and the section entitled Exceptional Fisheries Resources, below.

Neshanic River: The Neshanic River is an FW2-NT water, the entire length of which is currently subject to a Category Two antidegradation designation. The Department is proposing Category One antidegradation designation to the segment of the Neshanic River running from Back Brook to South Branch Raritan River, including all tributaries, based upon its exceptional ecological significance as a waterbody that supports an exceptional aquatic community. All applicable data is summarized below in Table E.

This segment of the Neshanic River supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 13.1 square miles. Therefore, the Department is proposing to upgrade this segment of Neshanic River to Category One designation based on its non-impaired

macroinvertebrate community, optimal instream habitat, and low percentage of impervious surfaces.

In addition, the Department is proposing to upgrade a tributary of the Neshanic River known as the Third Neshanic River, which is classified as FW2-NT, to Category One antidegradation designation based upon its exceptional ecological significance as a waterbody that supports an exceptional aquatic community as described below. The entire length of Third Neshanic River, including all tributaries, except the tributary originating east of Sergeantsville, is proposed for a Category One upgrade. All applicable data is summarized below in Table E.

Third Neshanic River supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. Additionally, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 5.2 square miles. Accordingly, the Department is proposing to upgrade to add a new listing of Third Neshanic River under Neshanic River and upgrade to Category One antidegradation designation based on its non-impaired macroinvertebrate community, optimal instream habitat, and low percentage of impervious surface.

Pleasant Run: Pleasant Run is an FW2-NT water, the entire length of which is subject to a Category Two antidegradation designation. The Department is proposing Category One designation for a segment of the Pleasant Run based on the segment being of exceptional ecological significance as a result of it supporting an exceptional aquatic community. This segment of the Pleasant Run runs from its source in Readington to Old York Road. The Category

One designation would additionally be applicable to all tributaries to this segment. All applicable data is summarized below in Table E.

This segment of Pleasant Run supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. The water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the subwatershed through which this segment flows. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 10.8 square miles. Therefore, the Department is proposing to upgrade this segment of Pleasant Run to Category One status based on its non-impaired macroinvertebrate community, exceptional water quality, and low percentage of impervious surface. The remaining segment of Pleasant Run from Old York Road to the South Branch Raritan River will remain as FW2-NT with a Category Two antidegradation designation.

Prescott Brook: The Department is proposing to upgrade to Category One antidegradation designation the entire length of Prescott Brook, classified as FW2-TM, including all tributaries to the brook, based on the brook being of exceptional ecological significance due to it supporting an exceptional aquatic community. All applicable data is summarized below in Table E.

Prescott Brook supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed

that is 11.3 square miles. Therefore, the Department is proposing to upgrade Prescott Brook to Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, and low percentage of impervious surface.

Raritan River

North Branch Raritan River: The Department is proposing Category One antidegradation designation for a segment of the North Branch Raritan River based on its exceptional ecological significance as a waterbody that supports an exceptional aquatic community. This segment of the North Branch Raritan River, from Route 512 bridge to Mine Brook, including all tributaries is classified as FW2-NT. All applicable data is summarized below in Table E.

This segment of the North Branch Raritan River supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. The water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the subwatershed through which this segment flows. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 8.4 square miles. Therefore, the Department is proposing to upgrade this segment of Raritan River North Branch to a Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, exceptional water quality, and low percentage of impervious surface.

In addition, other segments upstream and downstream are being proposed for an upgrade to Category One status based on their being exceptional fisheries resources as described below in the section of this summary entitled exceptional fisheries resources.

South Branch Raritan River: The Department is proposing Category One designation for two segments of the South Branch Raritan River based upon their exceptional ecological significance as they each support an exceptional aquatic community. The first segment, running from the County Route 512 Bridge to Spruce Run, including all tributaries, is currently classified as FW2-TM. This segment of the River also includes Lake Solitude classified as FW2-NT. The second segment of South Branch Raritan River, from County Route 613 bridge on Main Street between Raritan and Readington Townships, to the confluence of the Neshanic River, including all tributaries, is classified as FW2-NT. All applicable data is summarized below in Table E.

This first segment of South Branch Raritan River consists of two distinct sections, the portion from County Route 512 Bridge to and including Lake Solitude, and the portion from Lake Solitude downstream to its confluence with Spruce Run. The entire length of the segment is classified as FW2-TM except for Lake Solitude classified as FW2-NT. This portion of the South Branch Raritan River is mostly designated as Category Two except the segment that flows through Ken Lockwood Gorge Wildlife Management Area is designated as Category One. The County Route 512 Bridge to Spruce Run segment supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. The Department's habitat assessment found optimal habitat. The water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the

subwatersheds through which this segment flows. Furthermore, the percentage of impervious surface in the area is below the 10 percent threshold value for a subwatershed that is 7.9 square miles. Therefore, the Department is proposing to upgrade this portion of the South Branch Raritan River from County Route 512 Bridge to downstream boundary of Lake Solitude to Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, exceptional water quality, and low percentage of impervious surface. This segment of the river is included under the Washington listing of South Branch Raritan River at N.J.A.C. 7:9B-1.15(g).

In addition to qualifying for upgrade as being of exceptional ecological significance based upon its support of an exceptional aquatic community, the South Branch Raritan River from the tributary Southwest of Budd Lake to Lake Solitude are being proposed for an upgrade to Category One based upon these segments qualifying as exceptional fisheries resources, as discussed further in the section of this summary entitled Exceptional Fisheries Resources and Waterbodies proposed for Reclassification based upon Fish Sampling Data.

The second portion of the first segment of the South Branch Raritan River, from Lake Solitude downstream to Spruce Run, supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. In addition to a healthy macroinvertebrate community, this segment of river also supports an excellent fish community as indicated by the excellent FIBI rating. The habitat within this portion of the river segment is optimal for the inhabiting species. Therefore, the Department is proposing to upgrade this segment of South Branch Raritan River to Category One status based on its non-impaired

macroinvertebrate community, optimal instream habitat, and an excellent fish community. The Department is also proposing to separately list Lake Solitude at N.J.A.C. 7:9B-1.15(g). Lake Solitude is not a trout maintenance water but is classified as FW2-NT(C1).

The second segment of the South Branch Raritan River, from Main Street (County Route 613) bridge to Neshanic River, including all tributaries supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. The percentage of impervious surface in these subwatersheds is below the 10 percent threshold value for a subwatershed that is 11.9 square miles. Accordingly, the Department is proposing to upgrade this segment of South Branch Raritan River to Category One status based on its non-impaired macroinvertebrate community, an optimal instream habitat, and low percentage of impervious surface.

Rock Brook: Rock Brook is an FW2-NT water, the entire length of which is currently subject to a Category Two antidegradation designation. The Department is proposing Category One designation for an upstream segment, running from its source to Camp Meeting Road in Montgomery Township, including all tributaries to this segment of the brook based on this segment being of exceptional ecological significance as it supports an exceptional aquatic community. All applicable data is summarized below in Table E.

This segment of Rock Brook supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. The water quality parameters that are important to maintaining healthy and balanced aquatic life are being met

throughout the subwatershed through which this segment flows. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 6.1 square miles. Therefore, the Department is proposing to upgrade this segment of Rock Brook to Category One status based on its non-impaired macroinvertebrate community, exceptional water quality, and low percentage of impervious surface. The downstream portion of the brook, from Camp Meeting Road to the confluence with Beden Brook, will continue to be classified as FW2-NT subject to Category Two antidegradation protection.

Turtleback Brook: Turtleback Brook in Middle Valley is classified as FW2-NT and subject to Category Two antidegradation designation. The Department is proposing Category One designation for the entire length of Turtleback Brook based upon its exceptional ecological significance as a waterbody that supports exceptional aquatic community it supports. All applicable data is summarized below in Table E.

Turtleback Brook supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. The percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 14.9 square miles. Therefore, the Department is proposing to upgrade Turtleback Brook to Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, and low percentage of impervious surface.

N.J.A.C. 7:9B-1.15(i) - Wallkill River Basin

Beaver Run: Beaver Run is an FW2-NT water with a Category One antidegradation designation for its entire length. However, the Category One designation does not apply to tributaries that originate in Wantage Township, which are classified as FW2-NT with a Category Two antidegradation designation. The Department is proposing to expand the Category One designation to include all tributaries to Beaver Run, including those originating in Wantage Township. As discussed below, Beaver Run has been determined to be of exceptional ecological significance based upon the waterbody supporting an exceptional aquatic community. All applicable data with reference to the proposed amendment is summarized below in Table E.

The tributaries to Beaver Run originating within Wantage Township support a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for a subwatershed that is 6.5 square miles. Therefore, the Department is proposing to upgrade these tributaries of Beaver Run to Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, and low percentage of impervious surface. With this proposed upgrade to Category One, the entire length of Beaver Run, including all tributaries, is being proposed for Category One designation; however, there is no change is being proposed to FW2-NT classification.

Clove Brook: Clove Brook is currently divided into three listings in N.J.A.C. 7:9B-1.15(i). The upper portion, from its source to Clove Acres Lake, with the exception of the portions of two northernmost tributaries located entirely within High Point State Park east of Lake Marcia, is

classified as FW2-TM subject to Category Two antidegradation protection. The segment from Clove Acres Lake to Papakating Creek is classified as FW2-NT, again subject to Category Two antidegradation protection. The portions of the two tributaries within High Point State Park referenced above are classified as FW1(tp). As indicated above, FW1 waters receive the highest level of protection and are to be maintained in their natural state, not subject to any manmade discharges or increases in runoff from anthropogenic activities. The Department is proposing Category One antidegradation designation for an FW2-TM segment of Clove Brook running from the source of the brook to its confluence with an unnamed tributary originating from south of Mt. Salem, including all tributaries, based upon its exceptional ecological significance as a waterbody that supports an exceptional aquatic community. All applicable data is summarized below in Table E.

This segment of Clove Brook supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. Additionally, the percentage of impervious surface in this area is below the 10 percent threshold value for a subwatershed that is 20.1 square miles. Accordingly, the Department is proposing to upgrade this segment of Clove Brook to Category One status based on its non-impaired macroinvertebrate community, optimal instream habitat, and low percentage of impervious surface.

The Department is proposing to add a new listing of Wantage under Clove Brook to describe the tributary originating from south of Mt. Salem to Clove Acres Lake to retain the classification of FW2-TM.

West Branch Papakating Creek: Currently the West Branch of the Papakating Creek from its source to the Libertyville Tributary is classified as FW2-NT waters. Except for the two tributaries immediately west of Plumbsock, this segment of West Branch Papakating Creek is currently designated as Category One. The segment of West Branch Papakating creek from Libertyville tributary to Papakating Creek is classified as FW2-NT pursuant to N.J.A.C. 7:9B-1.15(b)5. The Department is proposing to upgrade the antidegradation designation of West Branch Papakating Creek from Libertyville tributary to its confluence with Papakating Creek, as well as the two tributaries immediately west of Plumbsock to Category One based upon the Department's determination that these waters constitute waters of exceptional ecological significance supporting an exceptional aquatic community. As a result of these proposed upgrades, the Department is proposing the entire length of West Branch, including all tributaries, to Category One antidegradation designation. All applicable data is summarized below in Table E.

West Branch Papakating Creek supports healthy benthic macroinvertebrate communities, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. The water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the subwatersheds that this creek flows through. Furthermore, the percentage

of impervious surface is below the 10 percent threshold value for subwatersheds that are six and 5.5 square miles. Therefore, the Department is proposing to upgrade the entirety of West Branch Papakating Creek, including all tributaries, to Category One status based on its non-impaired macroinvertebrate community, an optimal instream habitat, exceptional water quality, and low percentage of impervious surface. As a result of these proposed upgrades, the Department is proposing to delete the Libertyville tributary listing under West Branch Papakating Creek as it is a tributary to the creek and will, therefore, be included within the proposed West Branch Papakating Creek listing.

Rutgers Creek: Currently one portion of a tributary to Rutgers Creek is listed in N.J.A.C. 7:9B-1.15(i), particularly, the Cedar Swamp headwaters of the tributary to Rutgers Creek located entirely within the boundaries of High Point State Park is listed as an FW1 water. Most of the Rutgers Creek is within New York State. Some headwaters of unnamed tributaries are within New Jersey. These waters are currently classified as FW2-NT pursuant to N.J.A.C. 7:9B-1.15(b)5, and are subject to a Category Two antidegradation designation. The Department is proposing Category One designation for all the tributaries of Rutgers Creek based on their exceptional ecological significance as these waters support an exceptional aquatic community. All applicable data is summarized below in Table E.

Rutgers Creek tributaries support a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. Based on the Department's habitat assessment, this segment was assessed to have optimal habitat. Furthermore, the percentage of impervious surface is below the two percent threshold value for a subwatershed

that is 3.4 square miles. Therefore, the Department is proposing to include a new listing with a location reference of Mt. Salem. This segment includes all unnamed tributaries of Rutgers Creek from source to the State line and is proposed to be upgraded to Category One status based on the tributaries' non-impaired macroinvertebrate community, optimal instream habitat, and low percentage of impervious surface.

Wallkill River: The segment of the Wallkill River from its confluence with Beaver Run to the New Jersey/New York State Line is currently classified as FW2-NT and subject to Category Two antidegradation designation. The segment of the Wallkill River immediately upstream of Beaver Run to the State Line segment is classified as FW2-NT with a Category One antidegradation designation. The Department is proposing to upgrade to Category One designation a segment of Wallkill River from Beaver Run to the Papakating Creek based upon it qualifying as a water of exceptional ecological significance supporting an exceptional aquatic community. This upgrade would be reflected in N.J.A.C. 7:9B-1.15(i) through the expansion of the upstream segment to include this and adjacent waters proposed for upgrade on other bases, as discussed elsewhere in this summary. All applicable data is summarized below in Table E.

This segment of Wallkill River supports a healthy benthic macroinvertebrate community, which indicates low stress on the environmental conditions instream. The water quality parameters that are important to maintaining healthy and balanced aquatic life are being met throughout the subwatersheds through which this segment flows. Furthermore, the percentage of impervious surface is below the 10 percent threshold value for subwatersheds that are 9.1 and 9.2 square miles. Accordingly, the Department is proposing to upgrade this segment of Wallkill

River to Category One status based on its non-impaired macroinvertebrate community, exceptional water quality, and low percentage of impervious surface.

This segment of the Wallkill River also qualifies for upgrade to Category One status based on it being of exceptional ecological significance as it supports an endangered or threatened species. The extent of the Wallkill River proposed for upgrade on that basis, as well as the species involved is described above in the section of the summary entitled exceptional ecological significance - Endangered or Threatened Species (E&T). As a result of these two bases for upgrade, the downstream limit of the expanded FW2-NT(C1) segment is proposed to be the confluence with Wantage Brook.

Table E. Category One Waters based on Exceptional Ecological Significance – Exceptional Aquatic Community

(Proposed Category One River Miles – approximately 600)

Stream Description	C1 River miles	Bio- monitoring Station	Bio- monitoring Rating	Habitat Rating	Water Quality (DO, Temp., TP, TSS)	Fish IBI / Habitat	HUC14 Area (Square miles)	HUC14 Percent Impervious Surface	HUC14	Potentially affected NJPDES Facilities	Municipality (County)
				A	tlantic Coastal E	Basin (11.2 ri	ver miles)				
Tuckerton Ck (Tuckerton)- PL boundary to Pohatcong Lake, including all tributaries - (NT/SE1)	4.0	AN0559	Excellent	Optimal	Supporting	N/A	5.1	3.5	02040301140020		Little Egg Harbor (Ocean)
Westecunk Ck (Eagleswood) - PL boundary to Uriah Branch, including all tributaries (NT/SE1)	7.2	AN0558	Excellent	Suboptimal	Supporting	N/A	9.3	3.6	02040301130060		Eagleswood, Little Egg Harbor (Ocean)
				Uppe	r Delaware Rive	er Basin (243	.5 river mil	es)			
Beaver Brook (Hope) -Honey Run to Pequest River (NT) -Trib. E. of Mununka Chunk (TM)	16.8	AN0047	Excellent	Optimal	Supporting	047- Good suboptim al NJS11- 133-Fair Subopti mal	9.1	1.4	02040105100040		Belvidere, Hope, Liberty, White (Warren)

Blair Ck. (Hardwick) Source to Bass lake, including all tributaries (NT) -Bass lake outlet to Paulins Kill River (TM)	23.9	AN0026 AN0027	Good Excellent	Suboptimal Suboptimal	Insufficient data	112- Excellent suboptim al	14.5	1.9	02040105050020	Stillwater (Sussex) Blairstown, Hardwick (Warren)
Furnace Bk. (Oxford) - Railroad bridge to Pequest River, including all tribs. (NT)	10.7	AN0042	Good	Suboptimal	Supporting	002- Fair Subopti mal	7.7	3.7	02040105090050	Mansfield, Oxford, White (Warren)
Jacksonburg Ck. (Blairstown) - source to Paulins kill, including all tributaries (TM)	17.4	AN0028 AN0029	Excellent Excellent	Optimal Suboptimal	Insufficient data	113- Excellent suboptim al	8.5	1.9	02040105050030	Blairstown, Hardwick (Warren)
Jacobs Ck. (Hopewell) - Source to Woolsey Bk., including all tributaries (NT)	16.2	AN0102 AN0105	Excellent Good	Optimal Suboptimal	Insufficient data	N/A	5.5	3.7	02040105210060	Hopewell (Mercer)
Lubbers Run (Byram) - Entire length, including all tributaries(TM) and all Lakes (NT)	42	AN0065 AN0066 AN0064	Excellent Excellent Good	Optimal Optimal Optima	Insufficient data Supporting	O50- Good Optimal 522- Good optimal 552- Good	8 10	4.1 3.6	02040105150040 02040105150050	Byram, Hopatcong, Sparta (Sussex)

Cowboy Creek (NT)****						suboptim al				
Mountain Lake Brook (White) – Lake Bog Preserve Boundary to Pequest River (NT)	1.8	AN0044A	Good	Optimal	Not Supporting	N/A	6.1	2.5	02040105090040	White (Warren)
Paulins Kill (Hampton) - Balesville dam to Parson Rd. (NT)	3.3	AN0021	Good	Optimal	Supporting	N/A	8.5	2.3	02040105040080	Hampton (Sussex)
Paulins Kill** (Paulins Kill Lake) - Paulins Kill Lake dam to Jacksonburg Ck. (TM)	42.2	AN0024A AN0025	Good Excellent	Optimal Optimal	Insufficient data Not supporting	N/A	10.3 19.2 14.5 19.8	3.2 1.8 1.9 3.5	02040105040090 02040105050010 02040105050020 02040105050050	Blairstown, Frelinghuyse n, Knowlton (Warren) Fredon, Stillwater (Sussex)
Pequest River**(Green) - Kymer Bk. to Tranquility bridge, including all tributaries (TM) -Tranquility bridge to Trout Bk., including all tributaries (NT)	17	AN0037 AN0037A	Good Good	Suboptimal Suboptimal	Supporting	063-Fair suboptim al 064-Fair suboptim al	8.7	2.8	02040105070040	Alamuchy (Warren) Green (Sussex)
Pequest River (Townsbury) - Pequest WMA	12	AN0043 AN0048	Excellent Good	Optimal Optimal	Supporting	N/A	8.3	5	02040105090060	Belvidere, White (Warren)

boundary to											
Del. River (TM)											
Pond Brook (Middleville) - Entire length, Swartswood Lake to Paulins Kill (NT)	1.1	AN0023	Good	Optimal	Supporting	N/A	9.8 6.8	1.8 1.2	02040105030020 02040105030030		Stillwater (Sussex)
Swartswood Creek (Swartswood) - Entire length (TM) - Crandon Lake, Lower Crandon Lake, Mecca Lake, Plymouth Pond, Quick Pond, and Willow Crest Lake (NT)	28.3	AN0023A	Good	Optimal	Not supporting Not supporting	012- Good Subopti mal	7.3 9.8	2.1 1.8	02040105030010 02040105030020		Frankford, Hampton, Stillwater (Sussex)
Weldon Bk. (Jefferson Township) – Source east of Bowling Green Mount. To Lake Shawnee (TM)	9.4	AN0062A	Excellent	Optimal	Not supporting	530 - Good Optimal	6.4	0.3	02040105150010		Jefferson (Morris) Sparta (Sussex)
				Lowe	er Delaware Riv	er Basin (<mark>88.</mark>	4 river mile	es)			
		_	_	1				T		T	
Blackwater Br. (Vineland) – Confluence with Pine Br. to	4.7	AN0739	Good	Optimal	Supporting	N/A	4.5	13.8	02040206140050	NJ0004499. 001A NJ0004499. 002A	Vineland City (Cumberland)

Maurice R. (NT)										NJ0004499. 004A Gerresheim er Glass Inc. (B-m)	
Burnt Mill Br. (Brotmanville) – Burnt Mill pond to Maurice R. (NT)	2.9	AN0735	Good	Suboptimal	Insufficient Data	NJS11- 252- Excellent Subopti mal	8.6	9.5	02040206140020	NJ0004103. 001B Shieldalloy Corporation (B-M)	Vineland (Cumberland)
Fishing Creek (Fishing Creek) - Source to Fulling Mill Stream, including all tributaries (NT/SE1)	7.7	AN0771	Good	Suboptimal	Supporting	N/A	8.7	8.9	02040206230050		Lower Twp., Middle Twp. (Cape May)
Green Br. (Brotmanville) - Entire length, including Endless Branch (NT)	10.8	AN0736 AN0737	Good Good	Optimal Suboptimal	Insufficient Data	N/A	7.8	2.2	02040206140030		Pittsgrove Twp. (Salem)
Indian Run (Palatine) - from Olivet Road to Muddy Run (NT)	7.7	AN0747	Good	Suboptimal	Insufficient Data Supporting	N/A	9.7	1.0	02040206150050 02040206150040		Pittsgrove Twp. (Salem), Upper Delaware Twp. (Cumberland)
Little Robin Br. (Vineland) – entire length (NT)	1.6	AN0740	Good	Optimal	Supporting	N/A	12.9	11.4	02040206140060	NJ0032182. 002A NJ0032182. 003A NJ0032182.	Vineland City (Cumberland)

										006A NJ0032182. 007A Vineland Electric Utility (B-m)	
Manatico Ck. (Millville) -Mays Landing Road to Berryman Br. (NT)	3.8	AN0762	Good	Optimal	Not Supporting	208-Fair Subopti mal	9.5	2.2	02040206180050		Vineland City, Millville City (Cumberland)
Maurice R. (Willow Grove) Main stem – Willow Grove Road to Sherman Ave. including all UNT (NT)	15.0	AN0740	Good	Optimal	Supporting	N/A	4.7 12.9	4.8 11.4	02040206140010 02040206140060		Vineland, (Cumberland) Pittsgrove Twp. (Salem)
Muddy Run (Centerton) – Olivet road to Parvin State Park (NT)	7.7	AN0745	Good	Optimal	Insufficient Data	N/A	9.9	2.9	02040206150050 02040206150040		Pittsgrove Twp. (Salem), Upper Delaware Twp. (Cumberland)
Muddy Run (Centerton) - Landis Ave. to Maurice R. outside the boundaries of Union Lake WMA (NT)	2.1	AN0749	Good	Suboptimal	Supporting	N/A	5.7	4.8	02040206150070		Pittsgrove Twp. (Salem)

Oldmans Creek (Harrisonville) - source to eastern boundary of Harrison Lake WMA (NT), including all Tribs (NT)	12.6	AN0686 AN0687	Good Good	Optimal Suboptimal	Supporting Supporting	N/A	4.8 5.8	2.1 2.5	02040202160010 02040202160020	Upper Pittsgrove Twp., Pilesgrove Twp. (Salem) Elk Twp., South Harrison Twp. (Gloucester)
Old Robins Branch, Dennis Ck. (North Dennis) - PL boundary to old boundary of Dennis Creek WMA (NT/SE1)	1.7	AN0769	Good	Optimal	Not Supporting	N/A	12.3	0.3	02040206220040	Dennis (Cape May)
Still Run (Aura) – source to Silver Lake, including all tribs (NT)	10.1	AN0729	Good	Suboptimal	Supporting	N/A	6.6	6.2	02040206120030	Glassboro Borough, Elk (Gloucester)
			Passai	ic, Hackensack	and New York	Harbor Com	plex Basin	(11.2 river mil	es)	
Whippany R (Morristown) - Source to Whitehead Rd. bridge Category Two UNTs (TP) - Whitehead Rd. bridge to Gillespie Hill Trib (NT) - E. of	11.2	AN0233	Good	Suboptimal	Supporting	074&507 -Fair Subopti mal	6.3	5.3	02030103020020	Harding, Mendham, Morris (Morris)

Brookside Trib. (TM)										
				Uppe	er Raritan Rivei	Basin (180.7	7 river mile	s)		
Lamington R (Milltown) - Rt. 206 bridge to confluence with Trout Brook (TM Category Two tribs.)	9.1	AN0358 AN0360 BR01 BR03	Good Good Excellent Excellent	Optimal Optimal Suboptimal Optimal	Supporting	NJS2016- 008- Good Subopti mal	6.0 8.9	6.0 3.5	02030105050030 02030105050040	Washington, Chester (Morris)
Neshanic R. (Hillsborough)* -Back Bk. to Confluence. with S. Br. Raritan R., including all tributaries (NT)	35.8	AN0336 NR10 NR06 AN0337 SB08	Good Good Good Good Good	Suboptimal Optimal Suboptimal Suboptimal Optimal	Not Supporting	087- Fair suboptim al	13.1	1.8	02030105030070	Hillsborough (Somerset) East Amwell (Hunterdon)
Neshanic River: Third Neshanic River (Copper Hill)* – Source to Neshanic River, including all tributaries except tributary originating E. of Sergeantsville (NT)	16.1	AN0332 NR03	Good Good	Suboptimal Optimal	Not Supporting	N/A	5.2	3.8	02030105030040	Delaware, Raritan (Hunterdon)
Pleasant Run (Readington)* - Source to Old York Rd.,	26.4	AN0339 PR15	Good Good	Suboptimal Suboptimal	Supporting	017- Good Subopti mal	10.8	4.8	02030105040020	Readington (Hunterdon)

including all tributaries (NT)										
Prescott Brook (Stanton Station)* – Entire length including all tributaries (TM)	17.8	AN0327 PS01	Excellent Good	Suboptimal Optimal	Not Supporting	N/A	11.3	2.6	02030105020090	Clinton (Hunterdon)
N. Br. Raritan R. (Far Hills)* - Rt. 512 bridge to Mine Bk. (NT), including all ponds (NT)	2.5	AN0348A AN0351 NB10	Good Good Good	Suboptimal Suboptimal Optimal	Supporting	N/A	8.4	8.2	02030105060070	Bedminster, Far Hills Boro, (Somerset)
South Branch Raritan River (Washington)** * -512 bridge to Lake Solitude except Ken Lockwood Gorge WMA (TM)	4.7	AN0316 AN0317 SB23 SB24	Good Excellent Good Good	Suboptimal Optimal Optima Optimal	Supporting	N/A	7.9	4.3	02030105010070	Califon Boro, Lebanon (Hunterdon)
South Branch Raritan River (Clinton) -Lake Solitude to Spruce Run outlet stream, including all tributaries (TM) -Solitude Lake (NT)	11.2	AN0317A SB19	Excellent Good	Optimal Suboptimal	Insufficient data	088- Excellent Subopti mal	4.6	12.1	02030105010080	Clinton, Lebanon, High Bridge Boro (Hunterdon)

South Branch Raritan River (Three Bridges)* - Main street (County Rte. 613) bridge to Neshanic River, including all tributaries (NT)	33.4	AN0329 SB07 SB08	Good Good Good	Suboptimal Optimal Optimal	Not Supporting	N/A	11.9	4.7	02030105020100 02030105040010	NJ0022047. 001A Raritan Twp. MUA (A-M)	Branchburg, Hillsborough (Somerset) Raritan, Reading (Hunterdon)
Rock Brook (Montgomery) - Source to Camp Meeting Rd. (NT)	21.1	AN0399	Good	Suboptimal	Supporting	535-Fair Subopti mal	6.1	1.7	02030105110060		Hillsborough, Montgomery (Somerset) E. Amwell (Hunterdon)
Turtleback Brook (Middle Valley)*	2.6	SB03	Good	Optimal	Insufficient Data	NJS11- 162 – Fair Subopti mal	14.9	3.3	02030105010060		Washington (Morris)
				•	Wallkill River Ba	sin (70.3 riv	er miles)				
Beaver Run (Wantage) – Entire length, including all tributaries	2.3	AN301	Good	Optimal	Insufficient Data	NJS11- 134- Marginal poor	6.5	2.5	02020007010060		Wantage (Sussex)
Clove Brook (Wantage) - Source to confluence with tributary originating	27.3	AN0309A	Excellent	Optimal	Not Supporting	056- Good Subopti mal	20.1	2.7	02020007020060		Wantage (Sussex)

from south of Mt. Salem, including all tributaries, (NT)											
W. Br. Papakating Creek (Wantage) - Entire length including all tribs (NT)	18.2	AN0305 AN0305A AN0306	Good Excellent Good	Optimal, Optimal, Suboptimal	Supporting Supporting	040-Fair Subopti mal	6 5.5	2.2 3.7	02020007020040 02020007020050		Wantage (Sussex)
Rutgers Creek (Mt. Salem) -All UNT to State line at Mt Salem (NT)	10.6	AN0309B	Excellent	Optimal	Not Supporting	N/A	3.4	0.9	02020007000010		Wantage (Sussex)
Wallkill River (Wantage)** - Confluence from Beaver Run to Papakating Ck. (NT)	11.9	AN0302	Good	Suboptimal	Supporting	099- Good Subopti mal	9.1 9.2	7.7 4.1	02020007010070 02020007030010	NJ0085561. 001A Ames Rubber Corporation (B-m)	Hardyston, Vernon, Wantage (Sussex)

- * AMNET and Habitat data provided by the Raritan Headwaters Association
- ** Also proposed for Category One based on endangered and threatened
- *** Also proposed for Category One based on trout production
- **** Cowboy Creek being proposed as nontrout, see exceptional fisheries resources for description

Exceptional Fisheries Resources and Other Waterbodies Proposed for Reclassification Based

Upon Fish Sampling Data

The Department is proposing to reclassify 32 stream segments based on trout sampling data provided by the Bureau of Freshwater Fisheries. Waterbodies where trout can complete their life cycle, including reproducing, in a natural habitat are classified by the Department as FW2-TP. Because wild trout tend to be more colorful and challenging to catch, they provide a more desirable trout angling opportunity, without the stocking and hatchery rearing costs. Of the 32 stream segments proposed for reclassification based upon trout sampling data, 25 stream segments are being reclassified to FW2-TP. As indicated in the definition of "exceptional fisheries resource(s)" at N.J.A.C. 7:9B-1.4, the Department has determined that streams classified as FW2-TP are exceptional fisheries resources. In accordance with the definition of "Category One waters," these waters qualify for Category One designation. As a result of the proposed changes, approximately 53 additional river miles would be protected by Category One antidegradation designation. Waterbodies for which trout-related reclassifications are being proposed are listed in Table F below.

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 a waterbody supports adult trout 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, including trout associated species.

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

The Department is proposing amendments to revise the classifications based on trout status and upgrade 53 river miles to the Category One status based on the exceptional fisheries resources. A discussion summarizing the basis for upgrade of each of the waterbody segments follows. Table F, which follows the discussion of the individual segments proposed for upgrade based upon stream survey data, summarizes the information analyzed for all of the waterbodies, including the stream description, current classification, trout data, the municipality through which the stream flows, the number of river miles proposed for Category One upgrade and any

potentially impacted NJPDES permittees. Amendments are being proposed to the following waterbody segments:

N.J.A.C. 7:9B-1.15(d) - Upper Delaware River Basin

Cowboy Creek: Cowboy Creek is currently classified as FW2-TM pursuant to N.J.A.C. 7:9B-1.15(b)5, as a tributary to a segment of Lubbers Run. The Department is proposing to reclassify the entire length as FW2-NT from FW2-TM and, therefore, will provide Cowboy Creek with its own, separate listing (see Table F). The trout sampling data indicates an incidence of occurrence of trout that is below the 20 percent threshold requirement, which implies that Cowboy Creek does not support trout maintenance. At the same time, Cowboy Creek is also proposed to be upgraded to Category One status based on its exceptional aquatic community, as described above under Lubbers Run. Therefore, the Department is proposing to amend the classification from FW2-TM to FW2-NT(C1) for the entire length of Cowboy Creek.

Merrill Creek Reservoir: The Department is proposing to reclassify the 650 acres of the FW2-TM Merrill Creek Reservoir as FW2-TP (see Table F). This reservoir was annually stocked with marked Lake Trout between 1988 and 2012. The trout sampling data has identified young of the year Lake Trout within this reservoir that do not possess the identifying mark of the stocked Lake Trout. Therefore, the Department is proposing to reclassify this reservoir as FW2-TP and upgrade it to Category One status based on it being an exceptional fisheries resource.

Mine Brook Tributary: The upstream portion of the Mine Brook tributary, from its source to, but not including, the Burd Reservoir, is currently classified as FW2-TP(C1). From the Burd Reservoir downstream to the confluence with Mine Brook, the tributary is classified as FW2-TM.

The Department is proposing to reclassify the FW2-TM segment of Mine Brook tributary, from the outlet at Burd Reservoir to its confluence with Mine Brook, as FW2-TP, because the sampling data indicates the presence of young of the year Brook Trout within this segment of the tributary. The Department also proposes to upgrade it to Category One. Therefore, the Department is proposing to reclassify this segment of the tributary as FW2-TP and upgraded it to Category One status based on its exceptional fisheries resource. To reflect this change in N.J.A.C. 7:9B-1.15(d), the Department is proposing to expand the description of the upstream FW2-TP(C1) segment to include the entire length of the tributary, including all tributaries, but continuing to exclude Budd Reservoir and to delete the current listing for the segment from the reservoir downstream to the confluence with Mine Brook. The Department is also proposing to add a new listing for Burd Reservoir classified as FW2-TM at N.J.A.C. 7:9B-1.15(d).

Musconetcong River Tributaries: The Department is proposing to reclassify the entire length of two unnamed tributaries of the Musconetcong River as FW2-TP(C1) (see Table F). The first tributary that flows into the Musconetcong River northwest of Stephensburg is currently classified as FW2-TM(C1). The trout sampling data indicates the presence of young of the year Brook Trout within this tributary. The second tributary that flows into the Musconetcong River south of Asbury is currently classified as FW2-TM(C1). The trout sampling data in this tributary indicates the presence of young of the year Brook and Brown Trout within this tributary. Therefore, the Department is proposing to reclassify both tributaries as FW2-TP and maintain their current Category One status. This will ensure that the exceptional fisheries resource provided by these tributaries is protected.

Pohatcong Creek: The mainstem of Pohatcong Creek is currently divided into three segments for classification purposes with the upper and lower segments classified as FW2-TP(C1) and the middle segment, running from the Karrsville bridge to the Rt. 519 bridge, except for separately listed tributaries, is classified as FW2-TM(C1). The Department is proposing to reclassify two segments of the Pohatcong Creek currently within the Karrsville bridge to the Rt. 519 bridge segment as FW2-TP(C1) (see Table F). The first segment is adjacent to the upstream trout production waters and runs from Karrsville bridge to Route 31. The trout sampling data identified young of the year Brown Trout within this stream segment. The second segment is adjacent to the downstream trout productions waters, running from Merrill Creek to the Route 519 Bridge, including all tributaries. The trout sampling data identified young of the year Brown Trout within this stream segment. Therefore, the Department is proposing to reclassify both segments as FW2-TP and maintain their current Category One status. This will ensure that the Exceptional Fisheries Resource in these segments of Pohatcong Creek are protected. To reflect the proposed reclassifications, the upstream (Mansfield) and downstream (Springtown) segments already classified as FW2-TP(C1) are expanded to include the respective segment. The Department is proposing to delete the Greenwich listing under tributaries as this stream segment is included in the second segment being proposed for reclassification, which runs from Merrill Creek to Route 519 bridge, as FW2-TP(C1).

Pophandusing Brook: The Pophandusing Brook, which runs into the Delaware River, is divided into two segments for classification purposes with the upper segment classified as FW2-TP(C1), while the segment from the Route 519 bridge to the confluence with the Delaware River

classified as FW2-TM. The Department is proposing to reclassify the FW2-TM segment. The trout sampling data identified young of the year Brown trout within this segment (see Table F). Therefore, the Department is proposing to reclassify this segment of Pophandusing Brook to FW2-TP and upgrade it to a Category One status based on it being an exceptional fisheries resource. This change will result in the entire length of Pophandusing Brook, including all its tributaries, being classified as FW2-TP(C1).

Scout Run: Scout Run is a tributary of Musconetcong River that is classified as FW2-TM pursuant N.J.A.C. 7:9B-1.15(b)5. Scout Run is already designated as Category One because it is a tributary to the mainstem of Musconetcong River, which is classified as FW2-TM and designated as Category One. The Department is proposing to reclassify the entire length of Scout Run that flows into the Musconetcong River south of Warren Glen, as FW2-TP(C1) (see Table F). The trout sampling data identified young of the year Brown Trout within the Scout Run. Therefore, the Department is proposing to add a new listing and reclassify Scout Run and all its tributaries as FW2-TP and maintain its current Category One antidegradation designation status. This will ensure that the exceptional fisheries resource in this stream is protected.

N.J.A.C. 7:9B-1.15(f) - Passaic, Hackensack, New York Harbor Complex Basin:

Bear Brook: Bear Brook is a tributary of Pascack Brook. Pascack Brook, including all its tributaries, is currently classified as FW2-NT (C1). The Department is proposing to reclassify a portion of Bear Brook, running from Spring Valley Road to Woodcliff Lake, as FW2-TM(C1) (see Table F). The trout sampling data identified an incidence of occurrence that is above the 20 percent threshold requirement, which indicates that this segment of Bear Brook supports

of Bear Brook to reclassify this segment of the brook, including all tributaries to this segment, as FW2-TM and maintain its current Category One Status. This will ensure that the exceptional fisheries resource in this segment of Bear Brook is protected.

Cresskill Brook: Cresskill Brook is currently divided into two classification segments with the segment from the source of the brook to Duck Pond Road bridge classified as FW2-TP(C1), while the downstream segment from the bridge to Tenakill Brook is classified as FW2-NT(C1). The Department is proposing to reclassify the FW2-NT(C1) stretch of Cresskill Brook from the Duck Pond Road bridge to its confluence with Tenakill Brook, as FW2-TP(C1) (see Table F). The trout sampling data identified young of the year Brook Trout within this stream segment. Therefore, the Department is proposing to reclassify this segment of Cresskill Brook, including all tributaries to this segment and Rionda's Pond, as FW2-TP and maintain its current Category One status. This will ensure that the exceptional fisheries resource in this segment of Cresskill Brook is protected. The result of the proposed amendment is to reclassify the entire length of Cresskill Brook, including Rionda's Pond and all tributaries as FW2-TP(C1), which would be reflected in N.J.A.C. 7:9B-1.15(f).

Fox Brook: Fox Brook is a tributary of Ramapo River currently classified as FW2-NT pursuant to N.J.A.C. 7:9B-1.15(b)5. The Department is proposing to reclassify the entire length of Fox Brook, from its sources to the Ramapo River, including all tributaries, as FW2-TP (see Table F). Because the trout sampling data identified young of the year Brook Trout within this FW2-NT stream segment, the Department is proposing to add a new listing of Fox Brook and reclassify the

entire length, including all tributaries, as FW2-TP and upgrade it to a Category One status as an exceptional fisheries resource.

Ramapo River Tributary West of Bald Mountain: The Department is proposing to reclassify the entire length of an unnamed tributary of the Ramapo River. This unnamed tributary is currently classified as FW2-NT pursuant to N.J.A.C. 7:9B-1.15(b)5. The Department is proposing to reclassify the entire length of this unnamed tributary, from source to the State line, including all tributaries, as FW2-TP(C1) (see Table F). The trout sampling data identified young of the year Brook trout within this tributary. Therefore, the Department is proposing to reclassify this tributary as FW2-TP and upgrading it to a Category One status based on it being an exceptional fisheries resource.

Rockaway River Tributary West of Woodstock: The Department is proposing to reclassify the entire length of an unnamed Rockaway River tributary, currently classified as FW2-NT(C1) as FW2-TP(C1) (see Table F). The unnamed tributary, which flows into the Rockaway River within the classification segment which runs from source to Washington Pond outlet. The trout sampling data has identified young of the year Brook Trout within this tributary. Therefore, the Department is proposing to reclassify this tributary as FW2-TP and maintain its current Category One status. This will ensure that the exceptional fisheries resource in this tributary is protected.

Spring (Granney) Brook: The Department is proposing to reclassify the entire length of Spring (Granney) Brook from its source to Jackson Brook, as FW2-TM(C1) (see Table F). Spring (Granney) Brook, which is a tributary to Jackson Brook, received its current FW2-TP classification when Jackson Brook was classified as a FW2-TP water. While the latest trout sampling data did

not identify any young of the year trout within this brook, it did identify an incidence of occurrence that is above the 20 percent threshold requirement, which indicates that this brook supports conditions suitable for trout maintenance. Therefore, the Department is proposing to reclassify Spring (Granney) Brook as FW2-TM and maintain its current Category One status to ensure that the exceptional fisheries resource is protected. As the Mine Hill segment of the Jackson Brook into which the Spring (Granney) Brook flows is classified, including all its tributaries, as FW2-TP(C1), the Department is also proposing to amend that listing to specifically exclude Spring (Granney) Brook from that listing as a result of the proposed reclassification to FW2-TM(C1).

Stone House Brook: The Department is proposing to reclassify a portion of the FW2-NT segment of Stone House Brook, from Route 23 to Valley Road Bridge, as FW2-TP (see Table F). The trout sampling data identified young of the year Brown trout within this stream segment. Therefore, the Department is proposing to reclassify Stone House Brook as FW2-TP and upgrade it to Category One status as an exceptional fisheries resource. To reflect the proposed reclassification and antidegradation upgrade, the downstream segment of Stone House Brook, which is already classified as FW2-TP(C1) water is proposed to be expanded to incorporate this segment, so that its upstream boundary of this segment will begin at the Route 23 bridge.

N.J.A.C. 7:9B-1.15(g) - Upper Raritan River Basin

Beaver Brook: The Beaver Brook is divided into four segments for classification purposes with two segments currently classified as FW2-TP(C1) and two segments classified as FW2-TM. The Department is proposing to reclassify the furthest downstream FW2-TM segment of Beaver

Brook, from the most downstream I-78 Bridge to South Branch Raritan River, as FW2-TP(C1) (see Table F). The trout sampling data identified young of the year Brown Trout within this stream segment of Beaver Brook. Therefore, the segment is proposing to be reclassified as FW2-TP and upgraded to Category One status based on it being an exceptional fisheries resource. As the segment immediately upstream of the segment being reclassified and provided Category One antidegradation designation is currently classified as FW2-TP(C1), the Department proposes to amend the downstream boundary of that segment to extend to the South Branch Raritan River, with all tributaries to additionally be subject to the same classification and antidegradation designation. With that change, the current final segment becomes unnecessary and is, accordingly, proposed for deletion.

Lamington River: The Department is proposing to reclassify two segments of the Lamington River, as well as several tributaries that flow into the river, based on the trout sampling data (see Table F).

The first segment from source of the Lamington River to Mine Hill Lake, including all tributaries, is currently classified as part of the larger Succasunna segment as FW2-NT(C1). The trout sampling data identified young of the year Brown Trout within this segment of Lamington River. Therefore, the Department is proposing to reclassify this segment as FW2-TP while maintaining its Category One status. This will ensure that this exceptional fisheries resource is protected.

The second segment is proposed for both reclassification and an antidegradation designation upgrade. This segment, which runs from the Camp Brady Bridge to River Road West,

including all tributaries, currently is included in three different classification segments of the Lamington River, with different classifications associated with each of the three existing segments, FW2-TM (Vliettown), FW2-TM(C1) (Oldwick) and FW2-NT(C1) (Burnt Mills). The trout sampling data identified young of the year Brown Trout in this stream segment of Lamington River. Therefore, the Department is proposing to reclassify the segment of the Lamington River from Camp Brady Bridge to River Road West, and all its tributaries, as FW2-TP and upgrade it to a Category One status to protect the exceptional fisheries resources present in this stretch of the Lamington River. To reflect the proposed upgrade of the Camp Brady Bridge to River Road West segment in the rule text, the existing Pottersville segment upstream of the Camp Brady Bridge to River Road West segment, which is already classified as FW2-TP with Category One antidegradation designation is proposed to be expanded so that the downstream boundary of this segment would be River Road West. The Department is proposing to delete the Vliettown, and Oldwick segments under Lamington River and propose to revise the Burnt Mills segment to include the stream segment from River Road West to North Branch Raritan River which will continue to be classified as FW2-NT(C1).

In addition, the Department is proposing to upgrade all tributaries, classified as FW2-TP, along the Lamington River, between its confluence with Rinehart Brook and Camp Brady Bridge, to Category One status. The trout sampling data identified young of the year Brown Trout within these tributaries. Therefore, the Department is proposing to upgrade these tributaries to the Category One status based on their being an exceptional fisheries resource.

The Department is also proposing to reclassify the entire length of an FW2-NT unnamed tributary that is North of Chester as FW2-TM. This tributary flows into the first segment of the Lamington River, which is classified as FW2-NT(C1) from source to 206 bridge. However, the tributaries to this segment are designated as Category Two. The trout sampling data of the unnamed tributary identified an incidence of occurrence that is above the 20 percent threshold requirement, which indicates that this tributary supports conditions suitable for trout maintenance. Therefore, the Department is proposing to reclassify this tributary of the Lamington River as FW2-TM.

Other portions of the Lamington River are proposed for upgrade to Category One status as waterbodies of exceptional ecological significance based on the presence of an endangered or threatened species of the State, as described above.

McVickers Brook: McVickers Brook is a tributary to the North Branch Raritan River that is currently classified for its entire length as FW2-TM with a Category One antidegradation designation. The Department is proposing to reclassify a segment of McVickers Brook, from its source to Pleasant Valley Lake, as FW2-TP(C1) (see Table F). The trout sampling data identified young of the year Brook Trout within this segment of McVickers Brook. Therefore, the Department is proposing to reclassify this segment of McVickers Brook, including all tributaries to this segment, except for Cromwell Lake, as FW2-TP, while leaving the Category One designation unchanged. This will ensure that the exceptional fisheries resource is protected.

Cromwell Lake will continue to be an unlisted lake. In accordance with N.J.A.C. 7:9B-1.15(b)5ii, lakes that are five acres or more in surface area, and are not specifically listed as FW2-

TP or FW2-TM are classified as FW2-NT. Therefore, Cromwell Lake will continue to be classified as FW2-NT because it is greater than five acres.

North Branch Raritan River Tributaries: The Department is proposing to add a "Tributaries, North Branch Raritan River" subsection to the North Branch portion of the Raritan River listing with this new subsection to include two tributaries proposed for reclassification (see Table F).

The Department is proposing to reclassify the entire length of the tributary, currently classified as FW2-TM in accordance with N.J.A.C. 7:9B-1.15(b)5, southeast of Ravine Lake to FW2-TP(C1). The trout sampling data identified young of the year Brown Trout within this tributary. Therefore, the Department is proposing to reclassify this tributary as FW2-TP and upgrade it to Category One status based on it being an exceptional fisheries resource.

The second tributary, southeast of Bedminster, would be upgraded from FW2-NT to FW2-TP. The proposed reclassification would apply to the entire length of this unnamed tributary, except its northeast tributary. The trout sampling data identified young of the year Brown Trout within this segment of the tributary. Therefore, the Department is proposing to reclassify this segment as FW2-TP and upgrade it to Category One status based upon it being an exceptional fisheries resource.

South Branch Raritan River: The Department is proposing to reclassify two segments of the South Branch Raritan River, as well as a tributary east of Budd Lake Airfield (see Table F).

The South Branch Raritan River is divided into six listings, two Mt. Olive segments (FW2-NT and FW2-TM) both with a Category One designation, a Middle Valley segment that is classified

as FW2-TP(C1), a Califon segment that is classified as FW2-TM, the Ken Lockwood Gorge segment that is classified as FW2-TM(C1) and the Neshanic Station segment that is classified as FW2-NT.

The Department is proposing to reclassify contiguous portions of the current Mt. Olive FW2-NT(C1) and FW2-TM(C1) segments of the South Branch Raritan River, from the confluence with the tributary south west of Budd Lake to its confluence with Turkey Brook, as FW2-TP(C)1). The trout sampling data identified young of the year Brook Trout within this segment of the South Branch Raritan River and all adjoining tributaries, except for the tributary east of Budd Lake Airfield, which is discussed below. Therefore, the Department is proposing to reclassify this segment of the South Branch Raritan River, including all tributaries except the tributary east of Budd Lake Airfield, as FW2-TP and maintain its Category One status. This will ensure that this exceptional fisheries resource is protected. This proposed stream segment is upstream of the Middle Valley segment that is classified as FW2-TP(C1).

The Department is also proposing to reclassify the contiguous Califon (FW2-TM) and Ken Lockwood Gorge (FW2-TM(C1)) segments of the South Branch Raritan River from the Route 512 bridge to Lake Solitude, including all tributaries, as FW2-TP(C1). These two segments are downstream of the Middle Valley segment classified FW2-TP(C1) and the segment that flows through Ken Lockwood Gorge is already designated as a Category One water. The trout sampling data identified young of the year Brook Trout and Brown Trout within both the Califon and Ken Lockwood Gorge segments proposed for upgrade. Therefore, the Department is proposing to reclassify this segment of the South Branch Raritan River as FW2-TP and upgrade portions of the segment not already designated for Category One antidegradation protection to Category One

status based on the segment qualifying as an exceptional fisheries resource. These proposed stream segments extend the FW2-TP classification and the Category One antidegradation designation to the entire portion of the South Branch Raritan River from the confluence with the first tributary SW of Budd Lake (including the tributary SW of Budd Lake), downstream to Lake Solitude, including all tributaries. Therefore, the Department is proposing to delete the second Mt. Olive, as well as the Middle Valley, Califon, and Ken Lockwood Gorge segments and Long Valley, High Bridge, S. of Hoffmans, and S. of Schooley's Mt. tributaries listed under Tributaries to South Branch Raritan River because all these segments are included under the proposed FW2-TP(C1) Washington listing.

In addition, as discussed above the Department is proposing to reclassify the entire length the tributary East of Budd Lake Airfield as FW2-TM(C1). The trout sampling data identify an incidence of occurrence that is above the 20 percent threshold requirement within this currently classified FW2-NT(C1) tributary, which indicates that this tributary was capable of trout maintenance. Therefore, the Department is proposing to reclassify the entire length of this tributary as FW2-TM with its current Category One status unchanged.

Other portions of South Branch Raritan Rive are proposed to be upgraded to Category

One status based on exceptional ecological significance - exceptional aquatic community as

described above.

N.J.A.C. 7:9B-1.15(i) - Wallkill River Basin

Morris Lake: The Department is proposing to reclassify Morris Lake in Sparta, which is currently classified as FW2-NT(C1), to FW2-TM(C1) (see Table F). The trout sampling data

identified trout supporting conditions within the lake, from a depth of 21 to 89 feet within the water column. Therefore, the Department is proposing to reclassify Morris Lake as FW2-TM and maintain its current Category One status.

Table F: Proposed Changes to the Stream Classifications and Exceptional Fisheries Resources Based on Stream Surveys Conducted from 2006 THROUGH 2017

(Proposed Category One waters – approximately 53 river miles)

Waterbody	Current	Proposed	Young of	1.0.2	New TP	Potential	Potential
	classification ¹	classification	the year (trout species)		Category One River miles	Municipalities Affected	Affected NJPDES Facilities
Upper Delaware River Basin							
Cowboy Creek* (Byram) – Entire length	[FW2-TM]	FW2-NT(C1)	N/A	8.6	N/A	Byram, Hopatcong (Sussex)	N/A
Merrill Creek Reservoir (Harmony)	FW2-TM	FW2-TP(C1)	Lake Trout	N/A	1.8	Harmony (Warren)	N/A
Mine Brook tributary (Drakestown) – Burd Reservoir downstream to confluence with Mine Brook	FW2-TM	FW2-TP(C1)	Brook Trout	N/A	0.7	Washington (Morris)	N/A
Musconetcong River trib. (NW of Stephensburg) - Entire length, including all tributaries	FW2-TM(C1)	FW2-TP(C1)	Brook Trout	N/A	N/A	Mansfield (Warren)	N/A
Musconetcong River trib. (S of Asbury) - Entire length, including all tributaries	FW2-TM(C1)	FW2-TP(C1)	Brook & Brown Trout	N/A	N/A	Bethlehem (Hunterdon)	N/A
Pohatcong Creek (Karrsville) – Karrsville Bridge at Valley Rd. to Route 31, including all tributaries	FW2-TM(C1)	FW2-TP(C1)	Brown Trout	N/A	N/A	Mansfield, Washington (Warren)	N/A
Pohatcong Creek (Springtown) - Merrill Creek to Rt. 519 Bridge, including all tributaries	FW2-TM(C1)	FW2-TP(C1)	Brown Trout	N/A	N/A	Greenwich, Pohatcong (Warren)	N/A

Pophandusing Brook (Belvidere) – Route 519 Bridge to Delaware River	FW2-TM	FW2-TP(C1)	Brown Trout	N/A	2.4	Belvidere, White (Warren)	N/A
Scout Run (Holland Township) – Entire length including all tributaries	[FW2-TM(C1)]	FW2-TP(C1)	Brown Trout	N/A	N/A	Holland (Hunterdon)	N/A
Passaic, Hackensack, New York Harbor Co	omplex Basin						
Bear Brook (Park Ridge) - Spring Valley Road to Woodcliff Lake, including all tributaries	FW2-NT(C1)	FW2-TM(C1)	NA	22.6	N/A	Park Ridge, Woodcliff Lake (Bergen)	N/A
Cresskill Brook (Alpine) – Duck Pond Road Bridge to Tenakill Brook including Rionda's Pond and all tributaries	FW2-NT(C1)	FW2-TP(C1)	Brook Trout	N/A	N/A	Cresskill Boro, Demarest (Bergen)	N/A
Fox Brook (Ramapo) - Entire length	FW2-NT	FW2-TP(C1)	Brook Trout	N/A	4.7	Mahwah (Bergen)	N/A
Ramapo River tributary (W. of Bald Mtn.) – Source to State line	[FW2-NT]	FW2-TP(C1)	Brook Trout	N/A	2.6	Mahwah (Bergen)	N/A
Rockaway River tributary (West of Woodstock) – Entire length	[FW2-NT(C1)]	FW2-TP(C1)	Brook Trout	N/A	N/A	Jefferson (Morris)	N/A
Spring (Granny) Brook (Mine Hill) – Entire length	[FW2-TP(C1)]	FW2-TM(C1)	N/A	27.3	N/A	Mine Hill, Warton (Morris)	N/A
Stone House Brook (Kinnelon) – Route 23 Bridge to Valley Road Bridge	FW2-NT	FW2-TP(C1)	Brown Trout	N/A	0.8	Butler (Morris)	N/A
Upper Raritan River Basin							
Beaver Brook (Clinton) - Lower most I-78 bridge downstream to, the South Branch of the Raritan River	FW2-TM	FW2-TP(C1)	Brown Trout	N/A	5.2	Clinton (Hunterdon)	
Lamington River tributary (North of Chester) – Entire length	[FW2-NT]	FW2-TM	N/A	20.1 5	N/A	Chester (Morris)	N/A

Lamington River (Black River) (Succasunna) - Source to Mine Hill Lake, including all tributaries	FW2-NT(C1)	FW2-TP(C1)	Brown Trout	N/A	N/A	Mine Hill, Roxbury (Morris)	N/A
Lamington River (Black River) (Pottersville) - Confluence with Rinehart Brook to Camp Brady bridge, including all tributaries	FW2-TP	EM/2 TD/C1)	Brown	N/0	24.5	Chester, Washington (Morris)	N/A
Lamington River (Black River) ** (Vliettown) - Camp Brady bridge to confluence with Cold Brook, including all UN tributaries	FW2-TM	FW2-TP(C1)	Trout	N/A	24.5	Bedminster (Somerset) Tewksbury (Hunterdon)	N/A
Lamington River (Black River) (Oldwick) - Confluence with Cold Brook to Route 523 Bridge, including all tributaries	FW2-TM(C1)	FW2-TP(C1)	Brown Trout	N/A	N/A	Tewksbury (Hunterdon) Bedminster (Somerset)	N/A
Lamington River (Black River) (Burnt Mills) – Route 523 bridge to River Road West, including all tributaries	FW2-NT(C1)	FW2-TP(C1)	Brown Trout	N/A	N/A	Readington, Tewksbury (Hunterdon) Bedminster (Somerset)	NJ0021865 .001A Fiddler's Elbow CC - Reynwood Inc. (A-m)
McVickers Brook (Mendham) – Source to Pleasant Valley Lake, including all tributaries, but not including Cromwell Lake	FW2-TM(C1)	FW2-TP(C1)	Brook Trout	N/A	N/A	Mendham (Morris)	N/A
Raritan River, North Branch, tributary (SE of Bedminster) – entire length except the NE Tributary	FW2-NT	FW2-TP(C1)	Brown Trout	N/A	2.4	Far Hills, Bedminster, Bernards Twp. (Somerset)	N/A

Raritan River, North Branch, tributary (SE of Ravine Lake) – Entire length	[FW2-TM]	FW2-TP(C1)	Brown Trout	N/A	3.2	Bernardsville, Far Hills, Peapack- Gladstone (Somerset)	N/A
Raritan River, South Branch, (Mount Olive) – Confluence with and including tributary south west of Budd Lake to Dam that is 390 feet upstream of the Flanders-Drakestown Road Bridge	FW2-NT(C1)	FW2-TP(C1)	Brook	N/A	N/A	Mt. Olive, Washington (Morris)	N/A
Raritan River, South Branch (Mt. Olive) - Dam that is 390 feet upstream of the Flanders-Drakestown Road Bridge to Turkey Brook	FW2-TM(C1)		Trout			Mt. Olive (Morris)	
Raritan River, South Branch ** (Califon) – 512 Bridge to Lake Solitude, except portion within Ken Lockwood Gorge	FW2-TM	FW2-TP(C1)	Brook & Brown Trout	N/A	4.7	Califon, Lebanon (Hunterdon)	N/A
Raritan River, South Branch (Ken Lockwood Gorge) – Portion within Ken Lockwood Gorge	FW2-TM(C1)	FW2-TP(C1)	Brown Trout	N/A	N/A	Lebanon (Hunterdon)	N/A
Raritan River, South Branch Trib. (E of Bud Lake Airfield) – Entire length	FW-NT(C1)	FW2-TM(C1)	N/A	21.7	N/A	Mt. Olive, Washington (Morris)	N/A
Wallkill River Basin	1		T .		T .		
Morris Lake (Sparta)	FW2-NT(C1)	FW2-TM(C1)	N/A	N/A	N/A	Sparta (Sussex)	N/A

- 1. Brackets ([]) indicate that the waterbody was not previously identified, although the classification was determined as a default classification.
- 2. Incidence of Occurrence (values more than 20 are indicative of a TM classification and less than 20 are indicative of NT classification).
- * Also qualifies for Category One based on Aquatic Community

^{**} Also qualified for Category One based on endangered and threatened

Other Proposed Changes

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

The Department is proposing to amend the definition of "exceptional ecological significance." In accordance with the existing definition, the Department must verify a documented occurrence in the waterbody of at least one of the species identified in the definition. The definition is being updated to reflect that the Department's Endangered and Nongame Species Program utilizes the Biotics database to verify the occurrence of endangered and threatened species. Location records of endangered or threatened animal species are verified by the Department and entered into the Biotics database.

The Department is making a correction to the portion of the definition of "exceptional ecological significance" that addresses the percentage of impervious surface that may be present within an HUC 14, if that factor is to be considered supportive of an upgrade based upon an exceptional aquatic community. In accordance with the definition, the percentage of impervious surface that may be present depends upon the size of the HUC 14 in square miles with five square miles being the threshold between the two standards specified. At the time this definition was added to the rule, the Department explained its intention to use five square miles as the threshold, indicating in response to comments that subwatersheds less than five square miles in size contain biological populations that differ from those in larger watersheds (see 40 N.J.R. 3630(b), Response to Comment 247). However, as adopted, in the unlikely situation a waterbody being considered under this standard was in an HUC 14 that was exactly five square miles in size, the definition is unclear as to which percentage of impervious cover would apply. Accordingly,

the Department is proposing to amend the definition to make clear that the two percent or less impervious surface standard is applicable to HUC 14s that are less than five square miles in size, with the 10 percent limit applicable to HUC 14s that are five square miles in size or greater.

Wildlife Management Area Name Change

The Department is proposing to update the name of the Marmora Wildlife Management Area that is included in several classification listings to reflect the current name of the area, the Cape May Coastal Wetlands Wildlife Management Area. The Department purchased additional areas in the region and combined Marmora Wildlife Management Area and Cape May Wetlands Wildlife Management Area and renamed them all as Cape May Coastal Wetlands Wildlife Management Area. Visit https://www.nj.gov/dep/fgw/wmaland.htm for more information. This change is reflected in amendments proposed to Big Elder Creek, Edward Creek, Go Through Creek, Little Scotch Bonnet, and Taugh Creek in the Atlantic coastal basin at N.J.A.C. 7:9B-1.15(c).

Other Amendments to Waterbody Listings

Atlantic Coastal Basin

Atlantic Ocean

The Department is proposing to delete references to waters "mapped as C1 waters by the Department" under the Atlantic Ocean listing. Waters "mapped as C1 waters by the Department" refers to the USGS quadrangle maps that the Department in the past used to keep a record of Category One waters. The reference to the USGS quadrangle maps was deleted from N.J.A.C. 7:9B-1.15(b) as part of the June 16, 2008 rule amendments (see 40 N.J.R. 3707). The

references to the quadrangle mapping were inadvertently not deleted from the Atlantic Ocean listing at that time.

Shark River Brook

The Shark River Brook currently is divided into two segments for classification purposes with four tributaries separately listed under a "Tributaries" header within the Shark River Brook listing. The Department is proposing to revise the listings of Shark River Brook to consolidate tributaries with the segment of the mainstem into which they flow where the classification and antidegradation of the tributaries and the segment into which they flow are the same. The current separately listed Weblys Brook in Wall Township flows into the upstream segment of Shark River Brook, listed as Colts Neck, which runs from the brook's source to Rt. 33. As both the tributary and the upstream segment are classified and designated as FW2-NT(C1), the upstream segment is proposed to be expanded to include all tributaries to bring Weblys Brook under the main stem listing. The current separately listed Robins Swamp Brook, Sarah Green Brook and South Brook, all listed as FW2-TM(C1) waters, flow into the Neptune segment of the Shark River Brook, which runs from Rt. 33 to Remsen Mill Road, and is also an FW2-TM(C1) water. To incorporate these named tributaries into the Neptune segment, the Department is proposing to amend the listing, which is currently indicated to include only unnamed tributaries, to include all tributaries (named and unnamed) with the exception of Reevy Branch. Reevy Branch is one of the current separately listed tributaries. As Reevy Branch is a FW2-NT(C1) water, it is proposed to continue to be separately listed. As a result of these proposed changes, the current listings

for Robins Swamp Brook (Neptune), Sarah Green Brook (Neptune), South Brook (Wall), and Weblys Brook (Wall) are all proposed for deletion, as no longer necessary.

Upper Raritan River Basin

Green Brook

The Department is proposing to revise Green Brook under the Plainfield listing. The existing listing indicates that Route 22 Bridge to Raritan River is classified as FW2-NT. Green Brook drains into Bound Brook, not the Raritan River. Therefore, the Department is proposing to amend the listing to indicate "Route 22 Bridge to Bound Brook." The stream classification remains the same.

Social Impact

The proposed amendments to the antidegradation designations of specific waterbodies identified above will allow the Department to better protect the surface waters of the State and will, therefore, result in a positive social impact. The proposed Category One antidegradation designation for the identified streams will ensure that water quality in the State's most exceptional resource waters is protected, thereby preserving the recreational opportunities, and human and aquatic health benefits these waters provide. 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, and for 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 upgrade the Category One antidegradation designation for approximately 749 river miles. New Jersey has a total of approximately 23,500 river miles, of which 6,800 river miles are currently designated as Category One. Thus, the Department is proposing to increase the number of Category One designated waters by 3.2 percent.

The proposed upgrades of these waters to Category One designation will incorporate protection from measurable changes to the existing water quality, pursuant to N.J.A.C. 7:9B-1.5(d)2iii, and will 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. The Flood Hazard Area Control Act Rules, N.J.A.C. 7:13, and the Water Quality Management Planning rules, N.J.A.C. 7:15, respectively, establish and restrict development and/or sewer service for development within the 300-foot riparian zone along any regulated water designated as a Category One water, and all upstream tributaries situated within the same HUC-14 watershed of such Category One waters. The Flood Hazard Area Control Act rules at N.J.A.C. 7:13-4.1(c)2 also establish an enhanced 150-foot riparian zone for all trout waters that are not also designated as Category One waters. Therefore, the designation of new Category One waters, and new trout waters will result in additional lands being restricted from development and excluded from sewer service.

The potential intensity of development is impacted by whether a site is within a sewer service area. Development outside the sewer service areas is limited to the use of subsurface disposal systems (septic systems), thereby also limiting potential development within those areas. As the majority of the proposed Category One waters are outside the approved sewer service areas, potential economic impacts from the Category One upgrades are reduced. However, there has been a recent interest in developing new sewage treatment plants for discharges to streams or waterways in order to accommodate properties that are currently discharging wastewater to failing septic systems. It is possible that properties with these issues could be in areas targeted for new Category One designations. The siting of a new wastewater treatment plant with an NJPDES permitted surface water discharge to a proposed Category One water would face significant economic and engineering challenges to meet the no measurable change Category One requirement.

A positive impact of the proposed upgrades will be to reduce development intensity in environmentally sensitive areas, thereby helping to maintain and enhance water quality, biodiversity, and flood control. Intense development in environmentally sensitive areas results in environmental degradation and the cost of restoration and remediation may be passed on to the public, resulting in an inefficient and costly cycle of degradation and restoration.

The Department considered the NJPDES dischargers located on, and upstream of, the proposed Category One waters and trout reclassification upgrades to identify if any discharger may be affected. Potentially affected municipal and industrial dischargers within the

subwatershed (HUC 14) of waterbodies proposed for Category One upgrade are listed in Table G below.

Table G. Potentially Affected Municipal and Industrial Dischargers

Waterbody	Potential	NJPDES -ID	Facility	Туре
	Municipalities			
	(County)			
	Affected			
Exceptional Ecolo	gical Significance – I	ndangered and Thre	eatened Species	
Pequest River	Independence,	NJ0020605.001A	Allamuchy Township	A-m
(Independence)	Liberty,		MUA	
	Mansfield			
	(Warren)			
Salem River	Woodstown	NJ0022250.001A	Woodstown SA	A-m
(Woodstown)	Boro. (Salem)			
Ramapo River	Oakland Boro.	NJ0053112.001A	Oakland Boro - Chapel	A-m
(Oakland)	(Bergen)		Hill Estates	
		NJ0027774.001A	Oakland Boro -	A-m
			Oakwood Knolls	
Exceptional Ecolo	gical Significance – I	Exceptional Aquatic	Community	
South Branch	Branchburg,			
Raritan River	Hillsborough			
(Three Bridges)	(Somerset)	NJ0022047.001A	Raritan Twp. MUA	A-M
	Raritan, Reading			
	(Hunterdon)			
Wallkill River	Hardyston,			
(Wantage)	Vernon,	NJ0085561.001A	Ames Rubber	B-m
	Wantage	NJUU85501.UUIA	Corporation	B-III
	(Sussex)			
Exceptional Fisher	ries Resources			
Lamington River	Readington,			
(Black River)	Tewksbury		Fiddler's Elbow CC -	
(Burnt Mills)	(Hunterdon)	NJ0021865.001A		A-m
	Bedminster		Reynwood Inc.	
	(Somerset)			

A – domestic surface water discharge

B – industrial/commercial/thermal discharge

M - major

m - minor

The antidegradation provisions of the SWQS for Category One waters at N.J.A.C. 7:9B-1.5(d)2iii are triggered when an applicant proposes a new or expanded activity that has the potential to lower water quality. Previously approved wastewater discharges authorized through the NJPDES program, as well as existing development, are subject to the general antidegradation policies, but are not subjected to the more stringent criteria at N.J.A.C. 7:9B-1.5(d)2iii unless a new or expanded activity is proposed. Some of the affected sewage treatment plants (STPs) serve housing developments or are for a specific business, such as Fiddler's Elbow Country Club, and are, therefore, unlikely to expand and be affected by the designation upgrade. All of the potentially affected municipal STPs are discharging below the current NJPDES permitted flow. Any development resulting in an increase in flows to the municipal STPs beyond the permitted flow will require the discharger to maintain existing pollutant loadings.

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

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 uniform

analysis. A new or increased discharge may not be possible in all situations for discharge to a Category One waterbody. An applicant would be required to determine existing water quality as part of their NJPDES application at an additional expense and to demonstrate that the new or expanded discharge would not result in a measurable change in water quality. The Department will require an applicant to meet the "no measurable change" standard at the Category One boundary, if the discharge is located above a Category One segment.

In order to satisfy the Category One requirements, facilities may have to 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 treatment chemicals, increased electrical costs, and increased costs for sludge handling and disposal.

Renewal of an existing NJPDES surface water discharge permit does not require a no measurable change analysis, unless additional flow or loading is requested as part of the renewal. As part of permit renewal (with or without increases in flow or loading) and the issuance of new permits, the Department evaluates the available information for compliance with regulatory requirements, such as water-quality-based effluent limitations, adopted Total Maximum Daily Loads, Effluent Limitation Guidelines, and Clean Water Enforcement Act provisions. This review could result in new effluent limitations if the discharge is to a waterbody with a proposed change from nontrout to trout maintenance or trout production. Existing dischargers, upon permit renewal, would be required to meet the water quality criteria necessary to protect trout in trout maintenance or trout production waters, resulting from reclassification of waters from

freshwater nontrout (FW2-NT) to freshwater trout-maintenance or trout-production (FW2-TM/TP), or freshwater nontrout/trout maintenance (FW2-NT/TM) to freshwater trout production (FW2-TP), which may or may not require an upgrade of wastewater treatment to meet the more stringent temperature, total suspended solids, and dissolved oxygen criteria corresponding to the FW2-TM/TP classifications.

For a new or expanded facility that discharges to a waterbody that is reclassified as a result of this rulemaking, where the existing permit does not yet contain effluent limits based on the Category One designation, the Department will only issue or reissue an NJPDES permit that meets the requirements made applicable by the newly effective Category One designation or trout reclassification.

The Department's Flood Hazard Area Control Act Rules at N.J.A.C. 7:13-4.1(c)1 establish a 300-foot riparian zone adjacent to any waters designated as Category One waters pursuant to the SWQS, as well as tributaries to Category One waters within the same HUC-14 subwatershed. The Flood Hazard rules also create a 150-foot riparian zone for trout waters and tributaries that are not designated as Category One waters. (See N.J.A.C. 7:13-4.1(c)2). The Stormwater Management rules at N.J.A.C. 7:8-5.5(h) and (i) require that a major development, as defined at N.J.A.C. 7:8-1.2, located within, or discharging into, a 300-foot riparian zone, must meet the stringent riparian zone standards of the Flood Hazard Area Control Act Rules and, specifically, the requirements of N.J.A.C. 7:13-11.2(j)4. Any activity within a riparian zone or flood hazard area requires a flood hazard area approval pursuant to the Flood Hazard Area Control Act Rules.

Property owners, including municipalities, may be affected by this rulemaking if they plan

new or different activities in areas that would possess a 300-foot riparian zone as a result of the proposed new Category One designations or a 150-foot riparian zone as a result of trout reclassifications, and may be subject to additional regulatory requirements under the Flood Hazard Area Control Act Rules.

The standards for development in flood hazard areas and adjacent to surface waters contained in the Flood Hazard Area Control Act Rules are established in order to mitigate the potential for increased downstream flooding, and the damage to the environment that can be caused by such flooding. Therefore, they reduce the substantial economic cost that results from flooding.

The Department anticipates that there may be additional costs to applicants proposing regulated activities in the expanded riparian zones that would result from the proposed Category One upgrades. For example, for activities requiring an individual permit within the inner 150 feet of the 300-foot riparian zone, applicants must demonstrate that the activity has no practicable alternative that would result in fewer adverse impacts, will result in minimum alteration or impairment of the riparian or aquatic ecosystem, and is in the public interest. Those seeking to conduct activities in the inner half of the 300-foot riparian zone may have to spend more time and resources preparing an application in order to satisfy these additional requirements. If the activity does not meet the requirements, additional costs may be associated with developing alternatives or relocating the activity outside of the inner 150 feet of the 300-foot riparian zone. Additionally, most development under an individual permit in a 300-foot riparian zone requires mitigation. Additional costs will, therefore, be incurred by those conducting regulated activities

within a 300-foot riparian zone, including the cost of preparing a mitigation plan and executing that plan by onsite or offsite mitigation, or through purchasing credits through a riparian zone mitigation bank. The exact costs will depend upon factors including the area of riparian zone vegetation that is impacted, the ecological losses related to the impact to that specific property that must be compensated for, and the area of the State within which the proposed unavoidable impact is to occur.

Under the Flood Hazard Area Control Act Rules, a tightly circumscribed set of activities may be authorized through electronic application for issuance of an automated permit, known as a general permit-by-certification. The tight limitations on the activity or activities that can be authorized under this form of permit obviates the need for a case-by-case evaluation. General permit-by-certification 6 for construction of one single-family home or duplex in a tidal flood hazard area, general permit-by-certification 13 for placement of solar panels, and general permit 6 for construction of one single-family home or duplex, and one associated driveway that does not cross a regulated water also contain requirements prohibiting or limiting the amount of disturbance to riparian zone vegetation within 150 feet of top of bank in a 300-foot riparian zone. Applicants for these permits may incur additional costs associated with meeting these requirements. However, additional costs to applicants are not anticipated for other activities that have a *de minimus* impact on the environment and qualify for a permit-by-rule, general permit-by-certification, or general permit unless the activity is part of a major development, in which case, an individual permit is required.

Environmental Impact

The proposed amendments to the SWQS will have a positive environmental impact by providing appropriate levels of protection for human health, aquatic biota, and ecological systems associated with the State's waters. These amendments are part of the Department's continuing efforts to restore, maintain, and enhance the chemical, physical, and biological integrity of New Jersey's waters.

The upgrade in the antidegradation designation of the enumerated waterbody segments will enhance environmental protection for each specified waterbody. The proposed amendments increase the number of waterbodies with Category One antidegradation designation. While both Category One and Category Two waters are required to comply with the SWQS surface water quality criteria, the additional protection provided by the Category One antidegradation designation ensures that existing water quality is maintained with no measurable change. This will ensure that all waterbodies and their uses continue to be protected, with exceptional waters receiving a greater level of protection to ensure that the ecological integrity and aesthetic value of the waterbody is maintained. Implementation of these rules through permitting and planning programs will help maintain the chemical, physical, and biological integrity of the proposed Category One waters.

As stated under the Economic Impact statement, the designation of new Category One waters and new trout waters will result in additional lands being restricted from development and excluded from sewer service. This will result in a positive environmental impact by reducing

development intensity in environmentally sensitive areas, thereby helping to maintain and enhance water quality, biodiversity, and flood control.

Federal Standards Analysis

N.J.S.A. 52:14B-22 requires 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 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 primary responsibility for developing and adopting surface water quality standards applicable to their waters. The USEPA is responsible for overseeing and approving state water quality standards, providing guidance on the content of the standards, and developing 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 that 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 proposed amendments are required by, and consistent with, the Federal statutes, regulations, and guidance. The Department has prepared the following sectional analysis of the SWQS, which compares each section with the applicable Federal law, regulations, and guidance, as required by Executive Order 27 (1994) and P.L. 1995, c. 65.

N.J.A.C. 7:9B-1.4 contains definitions of terms used within the SWQS. The proposed amendment to the definition of exceptional ecological significance is a minor correction/clarification; therefore, no further analysis is required.

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

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

identify the level of protection and implementation procedures that must be followed. The antidegradation designations are consistent with and do not exceed Federal standards; therefore, no further analysis is required.

Jobs Impact

The Department evaluated the proposed amendments to Category One antidegradation designations and higher use classifications on job creation or retention in the State pursuant to N.J.S.A. 52:14B-1 et seq. The Department anticipates that the proposed Category One antidegradation designations or higher use classifications will have a limited impact on jobs.

As discussed in the Economic Impact statement, the imposition of requirements based on the SWQS is waterbody- and facility-specific. The implementation of the new Category One antidegradation designations or higher use classifications 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 engineering consulting, 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 that will enhance job opportunities in industries and businesses that are directly and indirectly water related. Failure to implement the proposed amendments

could result in lost employment opportunities in businesses and industries that are water quality dependent, such as recreation, tourism, and fishing.

As noted in Table G above, there is only one minor industrial NJPDES surface water discharge to a proposed Category One waterbody. If a facility discharging to one of the waterbodies proposed for higher antidegradation designation or reclassification seeks to expand its NJPDES permitted surface water discharge, it will only be allowed to expand if it meets the no measurable change antidegradation requirement applicable to Category One waters. There would only be an impact to existing and future jobs if the facility is not able to meet the requirement and chooses to relocate its operations out-of-State.

Agriculture Industry Impact

In accordance with N.J.S.A. 52:14B-4(a)2 and P.L. 1998, c. 48, adopted on July 2, 1998, the Department has reviewed the proposed amendments to SWQS to determine the nature and extent of the impacts of the proposed rules on the agricultural industry and has determined that there is minimal impact since most agricultural operations do not result in a discharge to surface water regulated under the NJPDES program. The majority of discharges from farms in New Jersey are regulated as NJPDES discharges to groundwater. In the event that a farm discharges to a surface water designated as a Category One water and regulated by NJPDES, that farm would incur costs to comply with its NJPDES permit including permit fees, laboratory costs for sample analysis, and potentially costs for engineering services. The total costs imposed will depend on

the requirements established in the facility's individual permit, which is based on the nature of the operation, the location of the discharge, and the volume and type of pollutants discharged.

In addition, farms that operate a "concentrated animal feeding operation" (CAFO), as described in N.J.A.C. 7:14A-2.13, are required to obtain an NJPDES permit if they discharge to surface water or groundwater. Farms that operate such CAFOs must comply with NJPDES permit conditions. The cost of complying with such conditions for CAFOs is variable and depends on a number of factors, including number and type of animals confined, existing animal waste practices at the farm, and availability of cropland and pastureland for manure application. The Department permits two CAFOs, neither of which are located near a proposed Category One water and, therefore, there will be no impact on these agricultural activities.

Regulatory Flexibility Analysis

As required by the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Department has evaluated any reporting, recordkeeping, and other compliance requirements that the proposed amendments to the SWQS would impose on small businesses. The Regulatory Flexibility Act defines the term "small business" as any business that is a resident in the State, is independently owned and operated and not dominant in its field and employs fewer than 100 full-time employees.

The Department has determined that the proposed amendments are unlikely to impact existing NJPDES small businesses. As noted in Table G above, there are potentially two NJPDES facilities that may meet the definition of a small business and discharge to one of the waterbodies

proposed for upgrade. These facilities would be potentially impacted, if, in the future, they propose a new discharge or expansion of an existing discharge.

The initial capital costs for all businesses, including small businesses, could vary depending on factors such as type of activity, classification of the waterbody affected, existing abatement methods, and required levels of pollutant reduction. As discussed in the Economic Impact statement, for new or expanding facilities that are regulated under NJPDES and operated by small businesses, the initial costs of compliance for water quality sampling, analyses, and reporting necessary to comply with their permits may increase. The NJPDES rules provide for reduced reporting requirements for minor dischargers as defined in the NJPDES rules. To the extent a small business is a minor discharger, these reduced requirements would be applicable.

Continued costs may include those associated with hiring professional services to maintain the treatment facilities or other measures necessary to comply with the NJPDES permits. For example, a small business may hire licensed professional engineers to maintain best management practices for compliance with the SWQS.

As discussed in more detail in the Economic Impact statement, any business, including a small business, could be impacted by the restrictions applicable under the Flood Hazard Area Control Act Rules on development located within the expanded riparian zones applicable to Category One waters and trout waters that would result from the proposed amendments. The development of any new small business or the expansion of any existing small business that requires an individual permit within the inner 150 feet of a 300-foot riparian zone must be in the public interest, meaning that the small business must demonstrate that the beneficial effects of

the development for the public will outweigh the adverse impacts to public health, safety, welfare, and the environment. In cases where a small business cannot meet this requirement, the applicant may incur costs associated with developing alternatives, such as the relocation or the reduction of the proposed development.

Small businesses located in the outer 150 feet of a 300-foot riparian zone or within a 150-foot riparian zone may also be subject to additional costs if an individual permit is required. For example, the development or expansion of a small business is subject to the requirements at N.J.A.C. 7:13-11.2(y), which limits the disturbance of riparian zone vegetation to 3,000 square feet outside of actively disturbed areas in both 150-foot and 300-foot riparian zones. Small businesses proposing more than 3,000 square feet of disturbance may incur costs associated with meeting this standard.

The costs potentially incurred are project and site-specific and will vary depending upon the type of activity proposed, the location of the proposed activity in relation to the Category One or trout water involved (for example, whether the proposed activity is within the 150 feet of a 300-foot riparian zone closest to the Category One water, or is in the 150-foot portion furthest away from the regulated waterbody), and the amount of riparian zone vegetation proposed to be disturbed. If the proposed regulated activity is in a 300-foot riparian zone and requires an individual permit, in most cases mitigation would be required, resulting in additional costs. These costs would include the cost of preparing a mitigation plan and executing that plan through either an onsite or offsite mitigation project, or through purchasing credits from a riparian zone mitigation bank. The exact costs of such mitigation will depend upon factors

including the area of riparian zone vegetation that is impacted, the ecological losses related to the impact to that specific property that must be compensated for, and the area of the State within which the proposed unavoidable impact is to occur. Anticipated costs to small businesses could also include additional consulting, engineering, and design costs to meet the permitting requirements and mitigative measures, as well as costs associated with performing any mitigation project required.

The proposed amendments apply equally to all businesses, including small businesses. As indicated in the Economic Impact statement, the standards contained in the Flood Hazard Area Control Act Rules for development in flood hazard areas and adjacent to surface waters are established in order to mitigate the adverse impacts to flooding and the environment that can be caused by such development. These standards additionally help reduce the substantial economic cost that results from flooding. Similarly, the requirements imposed through the NJPDES discharge to surface water program are crucial to protecting the State's water quality for the protection of public health, the aquatic ecosystem and the environment in general. In proposing these amendments, the Department has balanced the expected economic impacts of the rules upon small businesses against the need to protect the environment and public health while complying with Federal law. As referenced above, and in the Economic Impact statement, where appropriate, the Department has provided in the rules implementing these standards different reporting requirements for minor dischargers and less involved permitting processes for those proposing a regulated development having a de minimus impact on the environment. These allowances are provided to all qualifying applicants, including small businesses. The

Department has determined that any further attempt to relax the requirements for small businesses could potentially endanger public health and the environment.

Housing Affordability Impact Analysis

In accordance with N.J.S.A. 52:14B-4, as amended effective July 17, 2008, by P.L. 2008, c. 46, the Department has evaluated the proposed amendments to N.J.A.C. 7:9B for purposes of determining their impact, if any, on the affordability of housing. The CWA, 33 U.S.C. §§ 1251 et seq., as amended by the Water Quality Act of 1987 (PL 100-4), requires states to establish water quality standards for all surface waters. These standards are the Federal standards for the purposes of implementing the Clean Water Act programs. In the absence of State adopted water quality standards, the USEPA would propose and adopt standards applicable to New Jersey.

As indicated in the Federal standards analysis, New Jersey's SWQS are consistent with the recommended Federal requirements. The SWQS are implemented through other programs, including the NJPDES rules surface water discharge permitting program, in the development of water quality-based effluent limitations (WQBEL) to protect or improve existing water quality and designated uses. They are also utilized by the Department's Site Remediation Program to ensure discharges flowing to surface water comply with the SWQS. The Land Use Regulation Program, through the Freshwater Wetlands Program, the Coastal Permitting Program, and the Flood Hazard Area Control Act Program, also utilizes the SWQS to establish permit requirements. The SWQS allow for flexibility in the methods utilized to achieve water quality goals to allow the

regulated community to choose compliance measures that reduce economic impacts while ensuring that the State's waters are protected.

The proposed Category One waters will maintain water quality and provide additional protection by establishing expanded riparian zones pursuant to the Flood Hazard Area Control Act Rules. These enhanced protections afforded to the proposed Category One waters would likely provide property owners an advantage of living next to protected water bodies knowing that further growth may be restricted in the riparian zones. The Department does not anticipate that the proposed amendments will have an impact on the affordability of housing because it is extremely unlikely that the amendments will evoke a major change in the average costs associated with housing.

Smart Growth Development Impact Analysis

In accordance with N.J.S.A. 52:14B-4, as amended effective July 17, 2008, by P.L. 2008, c. 46, the Department has evaluated the proposed amendments, to determine the impact, if any, on housing production in Planning Areas 1 or 2, or within designated centers, under the State Development and Redevelopment Plan (State Plan). The Department has identified the designated centers with proposed Category One upgrades within their boundaries in Table H below. As indicated in the Economic Impact statement, the proposed amendments may restrict the use of the land within the expanded riparian zone. The proposed amendments, however, are not anticipated to have an overall impact on housing. Therefore, while these changes may impact

development, such impacts will not be large enough to evoke a change in housing production in Planning Areas 1 or 2 or within designated centers.

Table H. Designated Centers with Proposed Category One Upgrades

Center	Municipality	County	Designated Center
			Туре
Hopatcong	Hopatcong Boro	Sussex	Town
Woodstown	Woodstown Boro	Salem	Town
Millville-Vineland	Millville City, Vineland City	Cumberland	Regional Center
Green Creek	Middle Township	Cape May	Village
Rio Grande-Whitesboro-	Middle Township	Cape May	Regional Center
Burleigh			
West Creek	Eagleswood Township	Ocean	Village
Tuckerton	Tuckerton Boro	Ocean	Town
Camden	Camden	Camden	Urban Center
Bedminster	Bedminster Township	Somerset	Village
Far Hills	Far Hills Township	Somerset	Village
Норе	Hope Township	Warren	Village

Racial and Ethnic Community Criminal Justice and Public Safety Impact

The Department has evaluated this rulemaking and determined that it will not have an impact on pretrial detention, sentencing, probation, or parole policies concerning adults and juveniles in the State. Accordingly, no further analysis is required.

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

SUBCHAPTER 1. SURFACE WATER QUALITY STANDARDS

7:9B-1.4 Definitions

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

...

"Exceptional ecological significance" means:

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

database; or

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

i. - iii. (No change.)

iv. Impervious surface that is:

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

(2) (No change.)

...

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

(a) – (b) (No change.)

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

<u>Waterbody</u> <u>Classification</u>

...

ATLANTIC OCEAN

(Offshore) - Waters from the shoreline out to the three

mile limit, except areas described below

SC

(Beach Haven) - Waters of the Atlantic Ocean out to the

State's three mile limit from Beach Haven Inlet to Cape

May Point, excluding waters classified as Prohibited in

accordance with N.J.A.C. 7:12

SC(C1)

TRIBUTARIES, ATLANTIC OCEAN

(New Jersey Coast) - All those streams or segments of streams that flow directly into the Atlantic Ocean or into back bays of the Ocean which are not included elsewhere in this list, are not within the boundaries of the Pinelands Protection or Preservation Areas [and are not mapped as C1 waters by the Department] FW2-NT/SE1

(Pinelands) - All streams or segments of streams which flow directly into the Atlantic Ocean or into back bays of the

Ocean, are within the boundaries of the Pinelands

Protection and Preservation Areas, and are not classified

as FW1 in this Table

PL

(New Jersey Coast) - All streams or segments of streams which flow

directly into the Atlantic Ocean or into back bays of the Ocean,

[are mapped as C1 waters by the Department] are

not trout maintenance waters, and are not classified as FW1

in this Table

FW2-NT/SE1(C1)

...

BIG ELDER CREEK

(Sea Isle City) - Segment within the boundaries of [Marmora]

Cape May Coastal Wetlands Wildlife Management Area

SE1(C1)

(Sea Isle City) - Segment outside the boundaries of [Marmora]

Cape May Coastal Wetlands Wildlife Management Area

SE1

. . .

CAPE MAY COASTAL WETLANDS WILDLIFE MANAGEMENT AREA

(Strathmere) - All waters within the boundaries of Cape May

Coastal Wetlands Wildlife Management Area

FW2-NT/SE1(C1)

...

EDWARD CREEK

Ocean City - Source to the boundary of [Marmora] Cape May

Coastal Wetlands Wildlife Management Area

SE1

Ocean City - Boundary of [Marmora] Cape May Coastal

Wetlands Wildlife Management Area to Horn Creek

SE1(C1)

...

GO THROUGH CREEK

(Burleigh) - Entire length[, except segment described below] outside

the boundaries of the Cape May Coastal Wetlands Wildlife

Management Area

SE1

(Burleigh) - Segment within the boundaries of the [Marmora] Cape

May Coastal Wetlands Wildlife Management Area

SE1(C1)

...

LITTLE SCOTCH BONNET

(Stone Harbor) - Entire length[, except segment described below]

outside the boundaries of Cape May Coastal Wetlands Wildlife

Management Area

SE1

(Stone Harbor) - Segment within the boundaries of [Marmora] Cape May

Coastal Wetlands Wildlife Management Area

SE1(C1)

...

[MARMORA WILDLIFE MANAGEMENT AREA

(Strathmere) - All waters within the boundaries of Marmora Wildlife

Management Area

FW2-NT/SE1(C1)]

SHARK RIVER BROOK (See also SHARK RIVER)

(Colts Neck) - Source to Rt. 33, including all tributaries

FW2-NT(C1)

(Neptune) - Rt. 33 to Remsen Mill Road, including all [unnamed]

tributaries, except Reevy Branch designated otherwise FW2-TM(C1)

[TRIBUTARIES]

REEVY BRANCH (Reevytown) - Source to confluence with Shark

River Brook, including all tributaries

FW2-NT(C1)

[ROBINS SWAMP BROOK (Neptune) - Source to confluence with

Shark River Brook

FW2-TM(C1)

SARAH GREEN BROOK (Neptune) - Source to confluence with Shark

River Brook

FW2-TM(C1)

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

FW2-TM(C1)

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

FW2-NT(C1)]

. . .

TAUGH CREEK

(Whitesboro) - Entire length[, except segment described below] within

the boundaries of Cape May Coastal Wetlands Wildlife

Management Area

SE1(C1)

(Whitesboro) - Portions outside the boundaries of [Marmora] Cape May

Coastal Wetlands Wildlife Management Area

SE1

NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OPUBLISHED IN THE MARCH 4, 2019 NEW JERSEY REGISTER. DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OFFICIAL VERSION WILL GOVERN.	SHOULD THERE BE ANY
TUCKERTON CREEK	
(Tuckerton) – Source to Pinelands Area boundary	PL
(Tuckerton) – Pinelands Area boundary to Pohatcong Lake,	
including all tributaries	FW2-NT/SE1(C1)
(Tuckerton) - Pohatcong Lake to Little Egg Harbor	FW2-NT/SE1
WESTECUNK CREEK	
(Eagleswood) - Source to Pinelands Area boundary	PL
(Eagleswood) - Pinelands Area boundary to Uriah Branch,	
including all tributaries	FW2-NT/SE1(C1)
(Eagleswood) - Uriah Branch to Little Egg Harbor	FW2-NT/SE1
(d) The following surface water classifications are for waters of the U	Jpper Delaware River
Basin:	
Waterbody	<u>Classification</u>
BEAVER BROOK (Hope) – [Entire length, except tributary described b	elow]

FW2-NT

Source to confluence with Honey Run

(Hope) - Confluence with Honey Run to Pequest River, including all	
unnamed tributaries, except tributary East of Mununka Chunk	FW2-NT(C1)
(East of Mununka Chunk) – Entire length, including all tributaries	FW2-TM (C1)
BLAIR CREEK	
(Hardwick) - Source to Bass Lake, including all tributaries	FW2-NT (C1)
(Hardwick Center) - Bass Lake outlet to Paulins Kill, including all lakes	
and tributaries	FW2-TM (C1)
BROOKALOO SWAMP (Hope) - Entire length	FW2-TM (C1)
BURD RESERVOIR (Drakestown) - Entire length	FW2-TM
COWBOY CREEK (Byram) – Entire length	FW2-NT(C1)
FURNACE (OXFORD) BROOK	
(Oxford) - Source to railroad bridge at Oxford	FW2-TP(C1)
(Oxford) - Railroad bridge to Pequest River, including all tributaries	FW2-NT (C1)
JACKSONBURG CREEK (Blairstown) - Entire length, including all tributaries	FW2-TM (C1)

FWs-NT]

JACOBS CREEK [(Hopewell) – Entire length

(Hopewell) – Source to Woolsey Brook, including all tributaries FW2-NT(C1) (Hopewell) – Woolsey Brook to Delaware River FW2-NT LUBBERS RUN [(Byram) – Entire length, except portion described below FW2-TM (Byram) – Lackawanna Lake downstream to the confluence with the Cowboy Creek FW2-TM(C1) (Byram) – Entire length, including all tributaries, except Cowboy Creek FW2-TM(C1) (Byram) - All lakes on Lubbers Run FW2-NT(C1) ... MERRILL CREEK RESERVOIR (Harmony) FW2-[TM]**TP(C1)** MINE BROOK **TRIBUTARIES** (Drakestown) – [Source downstream to] Entire length, including all **Tributaries,** but not including, Burd Reservoir FW2-TP(C1) [(Drakestown) - Burd Reservoir downstream to confluence with Mine Brook FW2-TM] (Washington) - Entire length of tributary which joins Mine Brook approximately 280 yards upstream of the confluence with

the Musconetcong River	FW2-TP(C1)
MOUNTAIN LAKE BROOK	
(Liberty) - Source to Mountain Lake	FW2-TM
(White) - Mountain Lake dam to [Pequest River] Lake Bog Preserve	FW2-NT
(White) – Lake Bog Preserve Boundary to Pequest River	FW2-NT(C1)
MUSCONETCONG RIVER	
(Hackettstown) - Lake Hopatcong dam to and including Saxton Lake,	
except tributaries described separately	FW2-TM
(Saxton Falls) - Saxton Lake to the Delaware River, including all	
unnamed and unlisted tributaries	FW2-TM(C1)
TRIBUTARIES	
(Anderson) - Entire length	FW2-TP(C1)
(Changewater) - Entire length	FW2-TP(C1)
(Deer Park Pond) - See DEER PARK POND	
(Franklin) - Entire length	FW2-TP(C1)
(N. of Hackettstown) - Entire length	FW2-TM
(Lebanon) - Entire length	FW2-TP(C1)
(Port Murray) - Entire length	FW2-TP(C1)
(NW of Stephensburg) - Entire length	FW2-TP(C1)

(S. of Asbury) - Entire length	FW2-TP(C1)
(S. of Point Mtn.)	FW2-TP(C1)
(S. of Schooley's Mtn. Brook) - Entire length	FW2-TP(C1)
(Waterloo) - Tributary west of Kurtenbach's Brook from source	
downstream to Waterloo Valley Road bridge	FW2-TP(C1)
	
[PAULINA CREEK (Paulina) - Entire length	FW2-TM]
PAULINS KILL	
WEST BRANCH	
(Newton) – [Entire length] Source to Warbase Junction Road	FW2-NT
(Lafayette) - Warbase Junction Road to confluence with East	
branches	FW2-NT(C1)
MAIN STEM	
(Blairstown) - Confluence of East and West branches to Rt. 15 bridge	
(bench mark 507), including all tributaries	FW2-TM (C1)
(Hampton) - Rt. 15 bridge (bench mark 507) to [Balesville dam] Parson	
Road	FW2-NT(C1)
(Hampton) – [Balesville dam] Parson Road to Paulins Kill Lake dam	FW2-NT
(Paulins Kill Lake) - Paulins Kill Lake dam to Delaware River, including	
all tributaries, except Blair Creek, Pond Brook, and tributaries	

FW2-TM(**C1**) described separately below TRIBUTARIES, MAIN STEM [(Blairstown) - Entire length of tributary east of Walnut Valley FW2-TM (E. of Hainesburg Station) - Entire length FW2-TM (E. of Vail) - Source downstream to confluence with outlet stream of Lake Susquehanna FW2-TM] FW2-TP(C1) (Emmons Station) - Entire length [(Stillwater) - Entire length FW2-TM] (Stillwater Station) - Entire length FW2-TP(C1) PEQUEST RIVER (Springdale) - Source to [Tranquility bridge] Kymer Brook, except FW1 segments described below FW2-TM(C1) (Green) - Kymer Brook to Tranquility bridge, including all unnamed tributaries FW2-TM(C1) (Whittingham) - Northwesterly tributaries, including Big Spring, located within the boundaries of the Whittingham Wildlife Management Area, southwest of Springdale, from their origins to their confluence with the Pequest River FW1(tm) (Whittingham) - Stream and tributaries within the Whittingham Wildlife Management Area, except those classified as FW1 above FW2-TM(C1) (Vienna) - Tranquility bridge to [Lehigh and Hudson River railway bridge]

_____<u>__</u>____

eastern tributary below Route 80, including all unnamed

tributaries FW2-NT(C1)

(Independence) - Eastern tributary below Route 80 to Route 46,

except tributary at Petersburg FW2-NT

(Townsbury) – [Lehigh and Hudson River railway bridge] Route 46

to [the upstream most boundary of the Pequest Wildlife

Management Area] Pequest Road in Townsbury, except

Barkers Mill Brook FW2-NT(C1)

(Townsbury) – Upstream most boundary of the Pequest Wildlife

Management Area boundary to [the downstream most

boundary of the Pequest Wildlife Management Area] **Delaware**

River, including all unnamed tributaries FW2-TM(C1)

[(Townsbury) - Downstream most Pequest Wildlife Management Area
boundary to Delaware River FW2-TM]

TRIBUTARIES

bridge

[(Janes Chapel) - Headwater and tributaries downstream to the

upstream boundary of Pequest Wildlife Management Area FW2-TM

(Townsbury) - Tributaries within the Pequest Wildlife Management Area FW2-TM(C1)]

(Petersburg) - Headwaters and tributaries downstream to Ryan Road

FW2-TP(C1)

...

DOLLATCONC CDEEK

POHATCONG CREEK

MAIN STEM

(Mansfield) - Source to [Karrsville bridge] Route 31, including all	
tributaries	FW2-TP(C1)
(Pohatcong) - [Karrsville bridge] Route 31 to [Rt. 519 bridge] Merrill	
Creek, except tributaries listed separately	FW2-TM(C1)
(Springtown) – [Rt. 519 bridge] Merrill Creek to Delaware River,	
including all tributaries	FW2-TP(C1)
TRIBUTARIES	
[(Greenwich) - Entire length	FW2-TP(C1)]
(New Village) - Entire length	FW2-TP(C1)
(Willow Grove) - Entire length	FW2-TP(C1)
POND BROOK (Middleville) - Swartswood Lake outlet to [Trout Brook]	
Paulins Kill	FW2-NT (C1)
POPHANDUSING BROOK	
(Hazen) - [Source downstream to Route 519 bridge] Entire length,	
including all tributaries	FW2-TP(C1)
[(Belvidere) - Route 519 bridge downstream to confluence with the	
Delaware River	FW2-TM]
SCOUT RUN (Holland Township) – Entire length, including all tributaries	FW2-TP(C1)

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···	
SWARTSWOOD CREEK	
(Swartswood) – Entire length, including all tributaries, but not	
including akes described separately below	FW2-TM (C1)
(Swartswood) – Crandon Lake, Lower Crandon Lake, Mecca Lake	,
Plymouth Pond, Quick Pond, and Willow Crest Lake	FW2-NT(C1)
TROUT BROOK	
(Middleville) – Source to confluence with Pond Brook	FW2-TP(C1)
[(Middleville) – Confluence with Pond Brook to Paulins Kill	FW2-NT]
WELDON BROOK (Jefferson Township)[, from] - From source to, but not in	ncluding,
Lake Shawnee, including all tributaries	FW2-TM (C1)
(e) The surface water classifications for waters of the Lower Delaware Riv	ver Basin:
<u>Waterbody</u>	Classification
BLACKWATER BRANCH	
(Vineland) - Source to Pine Branch	FW2-NT

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(Vineland) - Pine Branch to Maurice River, including all tributaries FW2-NT(C1)
...
BURNT MILL BRANCH

(Newfield) - Source to Burnt Mill Pond FW2-NT

(Brotmanville) - Burnt Mill Pond to Maurice River, including

all tributaries FW2-NT(C1)

...

COHANSEY RIVER

(Beals Mill) - Source to [Park Drive] Finely Road, including all tributaries

and Sunset Lake FW2-NT

(Upper Deerfield) – Finely Road to Loper Run, including all unnamed

tributaries FW2-NT(C1)

(Upper Deerfield) – Loper Run to Park Drive, including all tributaries FW2-NT

(Bridgeton) – Park Drive to the Railroad crossing FW2-NT/SE1

(Bridgeton) – Railroad crossing to Delaware Bay SE1

(Bridgeton) – All named and unnamed tributaries of Cohansey River

from Irving Road to Delaware Bay, unless otherwise classified FW2-NT/SE1

...

COOPER RIVER [(Camden) – Entire length FW2-NT]

(Camden) – Source to Route 30 FW2-NT

(East Camden) - Route 30 to Delaware River FW2-NT(C1)

NOTE: THIS IS A COURTESY COPY OF THIS RULE PROPOSAL. THE OFFICIAL VERSION WILL BE PUBLISHED IN THE MARCH 4, 2019 NEW JERSEY REGISTER. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THIS TEXT AND THE OFFICIAL VERSION OF THE PROPOSAL, THE OFFICIAL VERSION WILL GOVERN. **CRYSTAL CREEK** (Bordentown) – Source to Route 130 FW2-NT (Bordentown) – Route 130 to Delaware River FW2-NT(C1) **FISHING CREEK** (Fishing Creek) - Source to Fulling Mill Stream, including all tributaries FW2-NT/SE1(C1) (Fishing Creek) – Fulling Mill Stream to Delaware Bay FW2-NT/SE1 GREEN BRANCH (Brotmanville) - Entire length, and all tributaries, including Endless Branch FW2-NT(C1)

INDIAN RUN

(Palatine) – Source to Olivet Road FW2-NT

(Palatine) – Olivet Road to Muddy Run, including all tributaries FW2-NT(C1)

•••

LITTLE ROBIN BRANCH (Vineland) – Entire length FW2-NT(C1)

•••

MANANTICO CREEK

(Millville) – [Entire length, except segment described below] **Source**

to Mays Landing Road

FW2-NT

(Millville) – Mays Landing Road to Berryman Branch, including

all tributaries FW2-NT(C1)

(Manantico) - Berryman Branch to Maurice River, except segment

described below FW2-NT

(Manantico) - Segment within the boundaries of the Manantico Ponds

Wildlife Management Area FW2-NT(C1)

...

MAURICE RIVER

MAIN STEM

[(Willow Grove) - Source to Willow Grove Road FW2-NT]

(Willow Grove) – Willow Grove Road to [the confluence with Green

Branch] Union Lake Dam, including the portion of the river within the Union Lake Wildlife Management Area and all unnamed tributaries, except tributaries described under

Tributaries below FW2-NT(C1)

[(Brotmanville) - Confluence with Green Branch to northern boundary

of the Union Lake Wildlife Management Area FW2-NT

(Vineland) – Boundary of the Union Lake Wildlife Management Area to

confluence with Blackwater Branch FW2-NT(C1)

(Vineland) - Confluence with Blackwater Branch to the Union Lake

Dam, except tributaries described under Tributaries below FW2-NT] (Millville) - Union Lake Dam to Delaware Bay, except tributaries described under Tributaries below SE1 (Millville) – All named and unnamed tributaries of Maurice River from Union Lake Dam to Delaware Bay, except tributaries described under Tributaries below, unless otherwise classified FW2-NT/SE1 TRIBUTARIES, MAURICE RIVER (Willow Grove) - Those portion of tributaries that are within the PLboundaries of the Pinelands Protection and Preservation Area (Vineland) – All tributaries within the boundaries of the Union Lake Wildlife Management Area FW2-NT(C1) (Matts Landing) - All tributaries within the Wildlife Management Area that borders Delaware Bay FW2-NT/SE1(C1) **MUDDY RUN** (Elmer) – [Entire length] **Source to Olivet Road**, except [segments described below] the portion within Elmer Lake Wildlife **Management Area** FW2-NT (Elmer) - Portion of the Run within Elmer Lake Wildlife Management

167

[(Centerton) - Portion of the Run within Parvin State Park

FW2-NT(C1)

FW2-NT(C1)

Area

(Pittsgrove) - Portion of the run within Union Lake Wildlife Management

Area FW2-NT(C1)]

(Centerton) – Olivet Road to the downstream boundary of Parvin State

Park, including Centerton Pond and all unnamed tributaries FW2-NT(C1)

(Centerton) – Downstream boundary of Parvin State Park to Landis

Avenue FW2-NT

(Centerton) – Landis Avenue to Maurice River, including portion

within Union Lake Wildlife Management Area FW2-NT(C1)

...

NORTH RUN

(Wrightstown) – Entire length, except segments described below FW2-NT

(Wrightstown) – Portion within the boundaries of the Pinelands Area PL

TRIBUTARY

(NE of Wrightstown) - Source to Pinelands Area boundary, including

all tributaries FW2-NT(C1)

...

OLDMANS CREEK

[(Lincoln) – Source to the eastern boundary of the Harrisonville Lake

Wildlife Management Area boundary

FW2-NT]

(Harrisonville) – [Eastern boundary of the Harrisonville Lake Wildlife

Management Area] **Source** to Kings Highway by Porches Mill,

including all tributaries FW2-NT(C1)

(Oldmans) – Kings Highway by Porches Mill to Main Street FW2-NT

(Oldmans) – Main Street to the Delaware River FW2-NT/SE1

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OLD ROBINS BRANCH

(North Dennis) –Source to Pinelands Area boundary PL

(North Dennis) – Pinelands Area boundary to Dennis Creek FW2-NT/SE1(C1)

...

RACCOON CREEK

(Mullica Hill) – Source to Kings Highway, except tributary described

below FW2-NT

(Grand Sprute) - Kings Highway to Delaware River FW2-NT/SE2

TRIBUTARY

(Basgalore Lake Tributary) - Entire length, including Basgalore Lake

and all tributaries FW2-NT(C1)

...

SALEM RIVER

(Upper Pittsgrove) – Source to Slabtown Road, including all tributaries FW2-NT(C1)

(Woodstown) – Slabtown Road to the confluence with [Nichomus

Run] Mill Street FW2-NT

(Woodstown) – Mill Street to Chestnut Run FW2-NT(C1)

(Woodstown) – Chestnut Run to Nichomus Run FW2-NT (Sharptown) – Nichomus Run to Major Run, including Nichomus Run, Major Run, and their tributaries FW2-NT(C1) (Salem) – Major Run to the confluence with the Delaware River, except the tributary described below FW2-NT/SE1 **TRIBUTARY** (Pilesgrove) - Entire length, including all tributaries FW2-NT/SE1(C1) Scotland Run (Monroe) - Entire length FW2-NT **STILL RUN** (Aura) – Source to Silver Lake, including all tributaries FW2-NT(C1) (Willow Grove) - Silver Lake to Willow Grove Lake FW2-NT **WOODBURY CREEK** (National Park) – Source to Hessian Run FW2-NT/SE2 (National Park) – Hessian Run to Delaware River, including all tributaries FW2-NT/SE2(C1)

(f) The following surface water classifications are for waters of the Passaic, Hackensack, and New York Harbor Complex Basin:

<u>Waterbody</u>	Classification
BEAR BROOK	
(Washington) – Source to Spring Valley Road	FW2-NT
(Washington) – Spring Valley Road to Woodcliff Lake, including all	
tributaries	FW2-TM(C1)
CRESSKILL BROOK	
(Alpine) – [Source to Duck Pond Rd. bridge, Demarest] Entire length,	
including Rionda's Pond and all tributaries	FW2-TP(C1)
[(Demarest) - Duck Pond Rd. bridge to Tenakill Brook	FW2-NT(C1)]
FOX BROOK (Ramapo) – Entire length, including all tributaries	FW2-TP(C1)
JACKSON BROOK	
(Mine Hill) - Source to the boundary of Hurd Park, Dover, including all	
tributaries, except Spring (Granney) Brook	FW2-TP(C1)
(Dover) - Hurd Park to Rockaway River	FW2-NT(C1)

RAMAPO RIVER [(Mahwah) - State line to confluence with Fox Brook FW2-NT] (Mahwah) - State line to confluence with Fox Brook FW2-NT (Mahwah) – Confluence with Fox Brook to [Patriots Way bridge] Little Pond Brook, including all unnamed tributaries FW2-NT(C1) (Mahwah) – [Patriots Way bridge] Little Pond Brook to Pompton River FW2-NT [TRIBUTARY] **TRIBUTARIES** [(Oakland) – Entire length FW2-TP(C1)] (Oakland) - Entire length FW2-TP(C1) (W. of Bald Mtn.) – Source to State line, including all tributaries FW2-TP(C1) ... **ROCKAWAY RIVER** (Wharton) - Source to Washington Pond outlet, including all lakes and unnamed and unlisted tributaries FW2-NT(C1) (Dover) - Washington Pond outlet downstream to Route 46 bridge, including all tributaries FW2-TM(C1) (Boonton) - Route 46 bridge to, but not including, Jersey City Reservoir, including all unnamed and unlisted tributaries FW2-NT(C1) (Boonton) - Jersey City Reservoir to Passaic River FW2-NT **TRIBUTARY** (West of Woodstock) – Entire length, including all tributaries FW2-TP(C1) SPRING (GRANNEY) BROOK (Mine Hill) - Entire length [FW2-TP(C1)] **FW-2TM(C1)**

STONE HOUSE BROOK

(Kinnelon) - Source to [Valley Road] Route 23 bridge

FW2-NT

(Butler) - [Valley Road] Route 23 bridge to confluence with Pequannock

River FW2-TP(C1)

...

WHIPPANY RIVER

(Brookside) - Source to Whitehead Rd. bridge, including all tributaries FW2-TP(C1)

(Morristown) - Whitehead Rd. bridge to Gillespie Hill tributary, including

all tributaries, except E. of Brookside tributary described below FW2-NT(C1)

(Morristown) – [Whitehead Rd. bridge] Gillespie Hill tributary to Rockaway

River FW2-NT

TRIBUTARIES

[(Brookside) - Entire length FW2-TP(C1)]

(E. of Brookside) - Entire length FW2-TM(C1)

(E. of Washington Valley) - Entire length FW2-TM

(Gillespie Hill) - Entire length FW2-TP(C1)

(Shongum Mtn.) - Entire length FW2-NT

...

(g) The following surface water classifications are for waters of the Upper Raritan River and Raritan Bay Basin:

Waterbody	Classification
BEAVER BROOK	
(Cokesbury) - Source to Reformatory Road bridge	FW2-TP(C1)
(Annandale) - Reformatory Rd. bridge to Beaver Ave. bridge	FW2-TM
(Annandale) - Beaver Ave. bridge downstream to [the lower most I-78	
bridge] South Branch Raritan River, including all tributaries	FW2-TP(C1)
[(Clinton) - Lower most I-78 bridge downstream to the South Branch	
Raritan River	FW2-TM]
GREEN BROOK	
(Watchung) - Source to Rt. 22 bridge	FW2-TM
(Plainfield) - Route 22 bridge to [Raritan River] Bound Brook	FW2-NT
LAKE SOLITUDE (Clinton)	FW2-NT(C1)
LAMINGTON RIVER (BLACK RIVER)	
(Succasunna) – Source to Mine Hill Lake, including all tributaries	FW2-TP(C1)
(Succasunna) – [Source] Mine Hill Lake to Rt. 206 bridge, except Ironia	
tributary and tributary north of Chester described below	FW2-NT(C1)
(Milltown) - Rt. 206 bridge to confluence with Rinehart Brook, including	

all unnamed tributaries

FW2-TM(C1)

(Pottersville) - Confluence with Rinehart Brook to [Camp Brady bridge,

Bedminster] River Road West, including all tributaries

FW2-TP(C1)

[(Vliettown) - Camp Brady bridge to confluence with Cold Brook

FW2-TM

(Oldwick) – Confluence with Cold Brook to the Route 523 bridge, including

all tributaries

FW2-TM(C1)]

(Burnt Mills) – [Route 523 bridge] River Road West to North Branch,

Raritan River, including all tributaries

FW2-NT(C1)

[TRIBUTARY (Ironia) – Source downstream to, but not including, Bryant Pond

FW2-TP(C1)

TRIBUTARIES

(Ironia) - Source downstream to, but not including, Bryant Pond

FW2-TP(C1)

(North of Chester) – Entire length, including all tributaries

FW2-TM

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MCVICKERS BROOK

(Mendham) - [Entire length] Source to Pleasant Valley Lake, including

all tributaries, but not including Cromwell Lake [FW2-TM(C1)] FW2-TP(C1)

(Mendham) – From the outlet of Pleasant Valley Lake to North Branch

Raritan River FW2-TM(C1)

...

NESHANIC RIVER [(Reaville) – Entire length

FW2-NT]

(Reaville) - Source to Back Brook, except Third Neshanic River described

below FW2-NT (Hillsborough) - Back Brook to South Branch Raritan River, including all tributaries FW2-NT(C1) THIRD NESHANIC RIVER (Copper Hill) – Entire length, including all tributaries, except tributary originating E. of Sergeantsville FW2-NT(C1) PLEASANT RUN [(Readington) – Entire length FW2-NT] (Readington) – Source to Old York Road, including all tributaries FW2-NT(C1) (Readington) – Old York Road to South Branch Raritan River FW2-NT PRESCOTT BROOK (Stanton Station) - Entire length, including all tributaries FW2-TM**(C1) RARITAN RIVER** NORTH BRANCH (Also see INDIA BROOK) (Pleasant Valley) - Source to, but not including, Ravine Lake FW2-TP(C1) (Far Hills) - Ravine Lake dam to Rt. 512 bridge FW2-TM (Far Hills) - Rt. 512 bridge to Mine Brook, including all tributaries FW2-NT(C1) [(Bedminister)] (Bedminster) – [Rt. 512 bridge] Mine Brook to confluence with South Branch, Raritan River, except tributary SE of Bedminster described below FW2-NT TRIBUTARIES, NORTH BRANCH RARITAN RIVER

FW2-TP(C1)

(SE of Ravine Lake) – Entire length, including all tributaries

(SE of Bedminster) - Entire length, except the northeast tributary FW2-TP(C1) SOUTH BRANCH RARITAN RIVER (Mt. Olive) - Source to [the dam that is 390 feet upstream of the Flanders-Drakestown Road bridge and the two tributaries which originate north and east of the Budd Lake Airfield] confluence with first tributary SW of Budd Lake FW2-NT(C1) [(Mt. Olive) - Dam to confluence with Turkey Brook FW2-TM(C1) (Middle Valley) - Confluence with Turkey Brook to Rt. 512 bridge FW2-TP(C1) (Califon) - Rt. 512 bridge to downstream end of Packers Island, except segment described separately, below FW2-TM (Ken Lockwood Gorge) - River and tributaries within Ken Lockwood Gorge Wildlife Management Area FW2-TM(C1) (Washington) - Confluence with and including first tributary SW of Budd Lake to Lake Solitude, including all tributaries, except tributaries described below FW2-TP(C1) (Clinton) - Lake Solitude outlet to Spruce Run, including all tributaries FW2-TM(C1)

(Clinton) - Spruce Run to downstream end of Packers Island

(Clinton) - Downstream end of Packers Island to Main Street (County

Route 613)

FW2-NT

(Three Bridges) - Main Street (County Route 613) to Neshanic River,

including all tributaries FW2-NT(C1)

(Neshanic Sta.) – [Downstream end of Packers Island] **Neshanic River** to

confluence with North Branch, Raritan River FW2-NT

TRIBUTARIES, SOUTH BRANCH RARITAN RIVER

(E. of Budd Lake Airfield) – Entire length FW2-TM(C1)

[(Long Valley) - Entire length FW2-TP(C1)

(High Bridge) - Entire length FW2-TM

(S. of Hoffmans) - Entire length FW2-TP(C1)

(S. of Schooley's Mt.) - Entire length FW2-TP(C1)]

[MAIN STEM RARITAN RIVER

TRIBUTARIES, SOUTH BRANCH RARITAN RIVER

(Long Valley) - Entire length FW2-TP(C1)

(High Bridge) - Entire length FW2-TM

(S. of Hoffmans) - Entire length FW2-TP(C1)

(S. of Schooley's Mt.) - Entire length FW2-TP(C1)]

MAIN STEM RARITAN RIVER

(Bound Brook) - From confluence of North and South Branches to

Landing Lane bridge in New Brunswick and all freshwater

tributaries downstream of Landing Lane bridge FW2-NT

(Sayreville) - Landing Lane bridge to Raritan Bay and all saline water

tributaries SE1

• • •

ROCK BROOK [(Montgomery) – Entire length

FW2-NT]

(Montgomery) - Source to Camp Meeting Road, including all tributaries FW2-NT(C1)

(Montgomery) - Camp Meeting Road to the confluence of Beden Brook FW2-NT

...

TURTLEBACK BROOK (Middle Valley) - Entire length

FW2-NT(**C1**)

•••

(h) (No change.)

Waterbody Classification BEAVER RUN (Wantage) - Entire length, [except tributaries that originate in Wantage Township] including all tributaries FW2-NT(C1) • • • **CLOVE BROOK** (Wantage) - Source to[, but not including, Clove Acres Lake] confluence with tributary originating from south of Mt. Salem, including all tributaries, except those tributaries described separately below FW2-TM(C1) (Wantage) – Tributary originating from south of Mt. Salem to Clove **Acres Lake** FW2-TM (Sussex) - Clove Acres Lake to Papakating Creek FW2-NT (High Point) - Those portions of the two northern-most tributaries located entirely within High Point State Park boundaries, immediately east FW1(tp) of Lake Marcia MORRIS LAKE (Sparta) [FW2-NT(C1)] FW2-TM(C1)

⁽i) The following surface water classifications are for waters of the Wallkill River Basin:

OFFICIAL VERSION WILL GOVERN. PAPAKATING CREEK MAIN STEM WEST BRANCH (Wantage) – [Source to the confluence with Libertyville tributary] Entire **length**, including all tributaries [except the two tributaries immediately west of Plumbsock] FW2-NT(C1) [LIBERTYVILLE TRIBUTARY (Libertyville) – Entire length, except Herzenberg Lake tributary and the tributary south of Herzenberg Lake FW2-NT(C1) **RUTGERS CREEK** (Mt. Salem) – All unnamed tributaries from source to State line FW2-NT(C1) (High Point) - The Cedar Swamp headwaters of the tributary to Rutgers Creek located entirely within the High Point State Park boundaries just south of the State line FW1 WALLKILL RIVER (Sparta) - Source to confluence with Sparta Glen Brook FW2-NT(C1) (Franklin) - Sparta Glen Brook to, but not including, Franklin Pond, including all unnamed and unlisted tributaries FW2-TM(C1)

(Wantage) - Outlet of Franklin Pond to confluence with [Beaver Run]

Wantage Brook, including all unnamed and unlisted tributaries FW2-NT(C1)

(Wantage) - Confluence with [Beaver Run] Wantage Brook to State line FW2-NT

TRIBUTARIES

(Sparta) - Entire length, but not including Lake Saginaw FW2-TP(C1)

(Sparta) - Unnamed standalone stream South of Pimple Hills FW2-NT(C1)

(Ogdensburg) - Entire length FW2-TP(C1)

(East of Quarryville) – Unnamed standalone stream segment east of

Willow (Quarryville) Brook FW2-NT(C1)

...

(j)-(k) (No change.)