DEPARTMENT OF ENVIRONMENTAL PROTECTION
WATER RESOURCES MANAGEMENT
DIVISION OF WATER MONITORING AND STANDARDS

PROPOSED AMENDMENT TO THE LOWER RARITAN/ MIDDLESEX WATER QUALITY MANAGEMENT PLAN, MERCER COUNTY WATER QUALITY MANAGEMENT PLAN, MONMOUTH COUNTY WATER QUALITY MANAGEMENT PLAN, NORTHEAST WATER QUALITY MANAGEMENT PLAN, UPPER DELAWARE, AND UPPER RARITAN WATER QUALITY MANAGEMENT PLAN

TO ESTABLISH 52 TOTAL MAXIMUM DAILY LOADS IN THE RARITAN RIVER BASIN ADDRESSING PHOSPHORUS, DISSOLVED OXYGEN, pH AND TOTAL SUSPENDED SOLIDS IMPAIRMENTS

Public Notice

Take notice that the New Jersey Department of Environmental Protection (Department) is seeking public comment on a proposed amendment to the Lower Raritan/Middlesex Water Quality Management Plan (WQMP), Mercer County WQMP, Monmouth County WQMP, Northeast WQMP, Upper Delaware WQMP, and Upper Raritan WQMP. The amendment will establish 52 Total Maximum Daily Loads (TMDLs) to address total phosphorus (TP), dissolved oxygen (DO), pH, and total suspended solids (TSS) impairments in the non-tidal Raritan River Basin. The proposed amendment includes portions of Hunterdon, Mercer, Middlesex, Monmouth, Morris, Somerset, and Union Counties, in Watershed Management Areas (WMAs) 8, 9 and 10 in the Raritan Water Region.

Background

A TMDL represents the assimilative or carrying capacity of a waterbody, taking into consideration point and nonpoint sources of pollutants of concern, natural background, and surface water withdrawals. A TMDL quantifies the amount of a pollutant a water body can assimilate without violating the State's water quality standards, allocates that load capacity to known point and nonpoint sources, and is expressed as the sum of Waste Load Allocations (WLAs) for point sources, Load Allocations (LAs) for nonpoint sources, a required Margin of Safety (MOS), and an optional Reserve Capacity (RC).

TMDLs are required, under Section 303(d) of the Federal Clean Water Act, 33 U.S.C. 1313(d), to be developed for waterbodies that cannot meet water quality standards after the implementation of technology-based effluent limitations.

The *New Jersey 2010 303(d) List of Water Quality Limited Waters* (see 44 N.J.R. 598(b), March 5, 2012) identified water quality impairments based on designated use attainment and then listed the parameters responsible for the non-attainment of the designated use. The water quality assessments were conducted for each of the seven categories of designated use, which include aquatic life, recreational use (primary and secondary contact), drinking water, fish consumption, shellfish harvesting (if applicable), agricultural water supply use and industrial water supply use. Sublists 1 through 4 include waterbodies that are generally unimpaired (Sublists 1 and 2), have limited assessment or data availability (Sublist 3), or are impaired due to pollution rather than pollutants or have had a TMDL or other enforceable management measures approved by EPA (Sublist 4). Sublist 5 constitutes the traditional 303(d) list for waters impaired or threatened by one or more pollutants, for which a TMDL may be required. For the Raritan River Basin, the *2010 303(d) List of Water Quality Limited Waters* identified 75 assessment units as impaired for TP, pH, DO, and/or TSS based on in-stream concentrations not meeting the applicable SWQS for the pollutant. An additional 17

impairments were found based on the data gathered during the TMDL study, resulting in a total of 92 impairments that were considered under the TMDL study. At the conclusion of the study, it was determined that TMDLs were not warranted or could not be prepared at this time for some of the identified impairments. The basis for these determinations is discussed more fully in the TMDL report. Through this TMDL document and supporting reports, the Department is proposing 52 TMDLs identified in Table 1 below.

Table 1 - Assessment units addressed by the TMDL report

TMDL	Watershed (HUC 14)	Name of Watershed	Parameter	Priority Ranking from 2010 List*
1	NJ02030105010060-01	Raritan R SB(Califon br to Long Valley)	pH	NA**
2	NJ02030105010080-01	Raritan R SB(Spruce Run-StoneMill gage)	TP	NA**
3	NJ02030105020050-01	Beaver Brook (Clinton)	TP	H
4	NJ02030105020070-01	Raritan R SB(River Rd to Spruce Run)	TP	H
5	NJ02030105020070-01	Raritan R SB(River Rd to Spruce Run)	TSS	H
6	NJ02030105020080-01	Raritan R SB(Prescott Bk to River Rd)	TSS	H
7	NJ02030105020100-01	Raritan R SB(Three Bridges-Prescott Bk)	TP	H
8	NJ02030105020100-01	Raritan R SB(Three Bridges-Prescott Bk)	TSS	H
9	NJ02030105030060-01	Neshanic River (below FNR / SNR confl)	TP	H
10	NJ02030105030070-01	Neshanic River (below Black Brk)	TP	H
11	NJ02030105040010-01	Raritan R SB(Pleasant Run-Three Bridges)	TP	H
12	NJ02030105040030-01	Holland Brook	TP	NA**
13	NJ02030105040040-01	Raritan R SB(NB to Pleasant Run)	pH	H
14	NJ02030105040040-01	Raritan R SB(NB to Pleasant Run)	TP	H
15	NJ02030105040040-01	Raritan R SB(NB to Pleasant Run)	TSS	H
16	NJ02030105050020-01	Lamington R (Hillside Rd to Rt 10)	TP	H
17	NJ02030105050070-01	Lamington R(HallsBrRd-HerzogBrk)	TP	H
18	NJ02030105050070-01	Lamington R(HallsBrRd-HerzogBrk)	TSS	M
19	NJ02030105050070-01	Lamington R(HallsBrRd-HerzogBrk)	pH	M
20	NJ02030105050090-01	Rockaway Ck (below McCrea Mills)	TP	H
21	NJ02030105050100-01	Rockaway Ck SB	TP	H
22	NJ02030105050100-01	Rockaway Ck SB	TSS	H
23	NJ02030105060040-01	Raritan R NB (Peapack Bk to McVickers Bk)	TP	NA**
24	NJ02030105060040-01	Raritan R NB(Peapack Bk to McVickers Bk)	TSS	M
25	NJ02030105070030-01	Raritan R NB (below Rt 28)	TP	H
26	NJ02030105070030-01	Raritan R NB (below Rt 28)	TSS	H
27	NJ02030105080020-01	Raritan R Lwr (Rt 206 to NB / SB)	TP	H
28	NJ02030105080030-01	Raritan R Lwr (Millstone to Rt 206)	TP	NA**
29	NJ02030105080030-01	Raritan R Lwr (Millstone to Rt 206)	TSS	H
30	NJ02030105090050-01	Stony Bk(Province Line Rd to 74d46m dam)	TP	H
31	NJ02030105090060-01	Stony Bk (Rt 206 to Province Line Rd)	TP	H
32	NJ02030105090070-01	Stony Bk (Harrison St to Rt 206)	TP	H
33	NJ02030105090090-01	Stony Bk- Princeton drainage	TP	M
34	NJ02030105100010-01	Millstone River (above Rt 33)	TP	H
35	NJ02030105100010-01	Millstone River (above Rt 33)	TSS	H
36	NJ02030105100020-01	Millstone R (Applegarth road to Rt 33)	TP	H
37	NJ02030105100020-01	Millstone R (Applegarth road to Rt 33)	TSS	H
38	NJ02030105100030-01	Millstone R (RockyBk to Applegarth road)	TP	H
39	NJ02030105100050-01	Rocky Brook (below Monmouth Co line)	TP	H

TMDL	Watershed (HUC 14)	Name of Watershed	Parameter	Priority Ranking from 2010 List*
40	NJ02030105100060-01	Millstone R (Cranbury Bk to Rocky Bk)	DO	NA**
41	NJ02030105100060-01	Millstone R (Cranbury Bk to Rocky Bk)	TP	H
42	NJ02030105100090-01	Cranbury Brook (below NJ Turnpike)	TP	NA**
43	NJ02030105100110-01	Devils Brook	TP	NA**
44	NJ02030105100130-01	Bear Brook (below Trenton Road)	TP	NA**
45	NJ02030105100140-01	Millstone R (Rt 1 to Cranbury Bk)	TP	M
46	NJ02030105110010-01	Heathcote Brook	TSS	H
47	NJ02030105110020-01	Millstone R (Heathcote Bk to Harrison St)	TP	NA**
48	NJ02030105110050-01	Beden Brook (below Province Line Rd)	TP	M
49	NJ02030105110100-01	Pike Run (below Cruser Brook)	TP	H
50	NJ02030105120130-01	Green Brook (below Bound Brook)	TSS	M
51	NJ02030105120140-01	Raritan R Lwr(I-287 Piscatway-Millstone)	TSS	M
52	NJ02030105120180-01	Middle Brook	TSS	M

Footnote: * The 303(d) List includes the priority ranking ("high", "medium", or "low") of these waters for TMDL development. A detailed explanation of the priority ranking process can be found in Section 8 of the 2010 Methods Document. ** Impairment identified through supplemental data review as part of the TMDL study; these did not have a 2010 303(d) List assigned priority ranking and therefore are marked as Not Applicable (NA) in the table.

Assistance in developing the model used to calculate the TMDLs was provided by Kleinfelder/Omni under contract through the Rutgers NJ EcoComplex. The Kleinfelder/Omni reports (2005 and 2013) describe the development of the integrated hydrodynamic and water quality models used to develop the TMDLs. These documents are available as described below. The water quality model used was Water Quality Analysis Simulation Program 7.1 (WASP 7.1), and the hydrologic model used was named HydroWAMIT (Hydrologic and Watershed Model Integration Tool). The latter component provides hydrodynamic and nonpoint source inputs to WASP 7.1. The study area was divided into five subbasins for which models were constructed and calibrated for nutrients, DO and TSS. The linked models were used to simulate water quality and flow in the non-tidal Raritan River and to calculate the pollutant load reductions needed to ensure attainment of SWQS for the subject parameters.

The total allowable load was disaggregated among wasteload allocations for point sources and load allocations for nonpoint sources, along with a required margin of safety. A reserve capacity was also

included, recognizing the need to allow for loads that would be associated with additional growth in the study area. The WLAs and LAs, MOS and RC are summarized in Tables 5 through 11 in Section 5.0 of the Department's TMDL document. The proposed amendment includes the TMDL document as well as the detailed reports and references that provide the technical and regulatory basis for this TMDL. These documents are available from the Department as described below, and can be found within the "New Jersey TMDLs" link on the Department website at: http://www.nj.gov/dep/wms/bear/tmdls.html.

To achieve the proposed watershed criteria, forty-five (45) wastewater treatment facilities identified in Table 2 will be assigned a wasteload allocation consistent with the effluent model input values.

Table 2. TMDL Condition for Waste Water Treatment Plants

NJPDES #	Facility Name	Permit Flow	Effluent Concentrations and Loads Associated with TMDL Condition							
			May October				November April			
			OrthoP (mg/L)	TP (mg/L)	TP (kg/d)	TSS (mg/L)	OrthoP (mg/L)	TP (mg/L)	TP (kg/d)	TSS (mg/L)
NJ0028304	Day's Inn - Roxbury - Ledgewood Property (1)	0.04	0.08	0.50	0.08	n/a	0.11	0.50	0.08	n/a
NJ0021954	Mt Olive Twp - Clover Hill STP (1)	0.5	0.08	0.62	1.18	17.0	0.11	1.00	1.89	17.0
NJ0023493	Washington Twp-Schooley's Mt (1)	0.5	0.08	0.68	1.29	10.0	0.11	0.71	1.35	10.0
NJ0109061	Washington Twp-Long Valley (1)	0.244	0.08	1.34	1.24	30.0	0.11	1.37	1.27	30.0
NJ0028487	NJDC Youth Correct-Mt View	0.26	0.09	0.18	0.18	30.0	0.13	0.25	0.25	30.0
NJ0078018	Clinton West	0.25	0.09	0.18	0.17	30.0	0.13	0.25	0.24	30.0
NJ0035084	Exxon Research & Eng Co	0.22	0.09	0.18	0.15	30.0	0.13	0.25	0.21	30.0
NJ0020389	Town of Clinton WTP (1)	2.03	0.14	2.00	15.37	30.0	0.20	2.00	15.37	30.0
NJ0100528	Glen Meadows/Twin Oaks (1)	0.025	0.43	2.23	0.21	n/a	0.61	2.41	0.23	n/a
NJ0028436	Flemington Boro (wet weather only) (2)	3.85	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NJ0022047	Raritan Twp MUA (1)	3.8	0.14	1.31	18.90	30.0	0.20	1.86	26.75	30.0
NJ0000876	Hercules Kenvil Works Facility	0.135	0.30	0.59	0.30	n/a	0.50	1.00	0.51	n/a
NJ0022675	Roxbury Twp-Ajax Terrace	2.0	0.10	0.20	1.50	16.0	0.18	0.36	2.73	16.0
NJ0026824	Chester Shopping Center (1)	0.011	0.41	2.21	0.09	n/a	0.54	2.34	0.10	n/a
NJ0022781	Valley Rd Sewer Co - Pottersville STP (1)	0.048	0.41	2.21	0.40	n/a	0.54	2.34	0.43	n/a
NJ0021865	Fiddler's Elbow CC - Reynwood Inc (1)	0.03	0.41	2.21	0.25	n/a	0.54	2.34	0.27	n/a
NJ0102563	Route 78 Office Area – Tewkbury	0.09653	0.07	0.13	0.05	n/a	0.12	0.23	0.08	n/a
NJ0023175	Clinton BOE - Rnd Valley	0.009	1.25	2.50	0.09	n/a	1.25	2.50	0.09	n/a
NJ0098922	Readington-Lebanon SA (1)	1.45	0.14	1.40	7.66	22.0	0.18	1.44	7.90	22.0
NJ0021334	Mendham Boro	0.45	0.27	0.54	0.92	30.0	0.36	0.72	1.23	30.0
NJ0026387	Bernardsville	0.8	0.20	0.41	1.23	15.0	0.27	0.54	1.64	15.0
NJ0033995	Environmental Disposal Corporation	2.1	0.25	0.50	3.97	20.0	0.25	0.50	3.97	20.0
NJ0029475	Hightstown Boro Advanced WWTP	1.0	..	0.12	0.44	30.0	..	0.12	0.44	30.0
NJ0023787	East Windsor Twp MUA	4.5	..	0.12	1.99	30.0	..	0.12	1.99	30.0

NJPDES #	Facility Name	Permit Flow	Effluent Concentrations and Loads Associated with TMDL Condition							
			May October				November April			
			OrthoP (mg/L)	TP (mg/L)	TP (kg/d)	TSS (mg/L)	OrthoP (mg/L)	TP (mg/L)	TP (kg/d)	TSS (mg/L)
NJ0024104	Princeton Meadows STP (3)	1.64	..	0.12	0.73	30.0	..	0.12	0.73	30.0
NJ0023922	USDOE PPPL	0.637	..	0.09	0.22	n/a	..	0.09	0.22	n/a
NJ0000272	David Sarnoff Research	0.096	..	0.35	0.13	n/a	..	0.35	0.13	n/a
NJ0031445	Firmenich Inc	0.036	..	0.35	0.05	n/a	..	0.35	0.05	n/a
NJ0000795	Bristol-Myers Squibb Co	0.172	..	0.18	0.12	5.0	..	0.18	0.12	10.0
NJ0035319	Stony Brook RSA Pennington	0.445	..	0.18	0.30	5.0	..	0.18	0.30	10.0
NJ0000809	Hopewell Business Park	0.128	..	0.18	0.09	30.0	..	0.18	0.09	30.0
NJ0022110	Educational Testing Service	0.08	..	0.18	0.05	20.0	..	0.18	0.05	20.0
NJ0035301	Stony Brook RSA - Hopewell	0.3	..	0.22	0.25	5.0	..	0.54	0.61	10.0
NJ0069523	Cherry Valley STP	0.29	..	0.22	0.23	4.0	..	0.54	0.58	4.0
NJ0022390	NJDHS - N Princeton Dev Center	0.5	..	0.22	0.41	n/a	..	0.54	1.02	n/a
NJ0023663	Carrier Foundation Rehab STP	0.04	..	0.70	0.11	n/a	..	1.00	0.15	n/a
NJ0060038	Montgomery Twp-Pike Brook	0.67	..	0.23	0.59	20.0	..	0.30	0.76	20.0
NJ0026140	J & J Consumer Products	0.063	..	0.70	0.17	n/a	..	1.00	0.24	n/a
NJ0067733	Montgomery Twp - Oxbridge	0.088	..	0.20	0.07	n/a	..	1.00	0.33	n/a
NJ0031119	Stony Brook RSA-River Road	13.06	..	..	..	30.0	..	..	..	30.0
NJ0026905	Montgomery Twp-Stage II	0.48	..	..	..	30.0	..	..	..	30.0
NJ0023019	Industrial Tube Corp	0.012	..	..	..	n/a	..	..	..	n/a
NJ0050130	Montgomery Twp - Riverside	0.145	..	..	..	n/a	..	..	..	n/a
NJ0024864	Somerset Raritan SA	24.3	..	..	..	30.0	..	..	..	30.0
NJ0026727	Colorado Café	0.018	..	..	..	n/a	..	..	..	n/a

Footnotes:

1. Eleven (11) WWTPs where Ortho P input concentration reductions were needed to meet the TMDL DO-pH endpoints. Ortho-phosphorus is the more readily available dissolved form and monitoring for achieving the model input levels within the TP WLA will be reflected in revised permit limits.
2. The actual intermittent flow reported in the Discharge Monitoring Report (DMR) was used to characterize the wet weather load contributions from Flemington Boro WWTP for both existing and TMDL conditions. Effluent quality was modeled at the 90th percentile of DMR data and a permit change is not proposed.
3. The TMDL condition for Princeton Meadows WWTP included model inputs for ammonia of 6.64 mg/l in summer and 10.33 mg/l in winter. Ammonia limits will be required there as part of this TMDL to address the DO impairment.

n/a – not applicable

The TMDL establishes the required pollutant reductions needed to attain SWQS; however TMDLs alone are not sufficient to restore impaired waters. Implementation strategies have been developed as described in the TMDL document, Section 7.0 Implementation Plan that identify the regulatory and non-regulatory tools intended to be used to achieve the identified nonpoint source reductions. These include revising NJPDES permit limits for wastewater treatment plants, implementing municipal stormwater permits, the Statewide fertilizer law and a suite of ongoing and planned measures that reduce nonpoint source pollution.

This notice is being given to inform the public that this amendment has been proposed to the Lower Raritan/Middlesex Water Quality Management Plan (WQMP), Mercer County WQMP, Monmouth County WQMP, Northeast WQMP, Upper Delaware WQMP, and Upper Raritan WQMP. All information related to this proposed amendment is located at the Department of Environmental Protection, Division of Water Monitoring and Standards, 401 East State Street, PO Box 420, Mail Code 401-03, Trenton, New Jersey 08625-0418. If you wish to receive a copy of the proposed TMDL document or supporting reports, call the Bureau of Environmental Analysis, Restoration and Standards at (609) 633-1441 or download the files from http://www.nj.gov/dep/wms.bear/tmdls.html. Select the New Jersey TMDLs link from the center of the page and refer to the files related to Raritan River Basin. The Department's file is available for inspection between 8:30 a.m. and 4:00 p.m., Monday through Friday. An appointment to inspect the document may be arranged by calling the Bureau at the above number.

Interested persons should submit comments on the proposed amendment via e-mail to frank.klapinski@dep.state.nj.us or written to:

Frank Klapinski, Environmental Scientist

New Jersey Department of Environmental Protection

Division of Water Monitoring and Standards

Bureau of Environmental Analysis, Restoration and Standards

401 East State Street, P.O. Box 420, Mail Code 401-03

Trenton, New Jersey, 08625

Each comment should be identified by the section of the TMDL document to which the comment applies, with the commenter's name and affiliation following the comment. All comments must be submitted within 30 days following the public hearing noted below. The Department shall consider all comments submitted prior to the close of the comment period in the reviewing of the amendment.

Take notice that the Department is holding a non-adversarial public hearing on the proposed amendment at the following time and location:

Date: July 16, 2014

Time: 3:00 p.m. to 5:00 p.m. or until the end of testimony, whichever is earlier.

Location: Somerset County Administration Building

20 Grove Street, 2nd Floor

Somerville, NJ 08876-2312

For directions please go to: http://www.co.somerset.nj.us/directio.html

Patricia Gardner, Director

Division of Water Monitoring and Standards

Department of Environmental Protection

5/14/14

Date