UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
1 Congress Street, Suite 1100
BOSTON, MA 02114-2023

September 20, 2007

Mr. Paul Currier, P.E.
Administrator, Watershed Management Bureau
New Hampshire Department of Environmental Services
29 Hazen Drive
P.O. Box 95
Concord, NH 03302-0095

Dear Mr. Currier:

Thank you for your final submittal of 158 acid impaired pond TMDLs. The U.S. Environmental Protection Agency (EPA) has determined that the 158 TMDL's meet the requirements of Section 303(d) of the Clean Water Act (CWA), and of EPA's implementing regulations (40 CFR Part 130). Enclosed is a copy of our approval documentation.

My staff and I look forward to continued cooperation with the NHDES in exercising our shared responsibility of implementing the requirements under Section 303(d) of the CWA. Please feel free to contact me or my staff if you have any questions or comments on our review.

Sincerely,

/S/ SIGNATURE ON FILE

Stephen S. Perkins, Director
Office of Ecosystem Protection

Enclosure

cc: NHDES: Gregg Comstock, Peg Foss, Bob Estabrook
EPA: Steve Silva, Al Basile

Table 1 Assessment Units (AUs) Impaired Due to Low pH (i.e. Acid Impaired Ponds)

AU Count	AUID	AUName	Town
1	NHIMP700061403-04	POWWOW POND	KINGSTON
2	NHLAK600020202-01	FALLS POND	ALBANY
3	NHLAK600020302-01-01	ECHO LAKE	CONWAY
4	NHLAK600020303-03	IONA LAKE	ALBANY
5	NHLAK600020303-05	BIG PEA PORRIDGE POND	MADISON
6	NHLAK600020303-06	MIDDLE PEA PORRIDGE POND	MADISON
7	NHLAK600020303-07-01	PEQUAWKET POND	CONWAY
8	NHLAK600020303-09	WHITTON POND	ALBANY
9	NHLAK600020604-03	MOORES POND	TAMWORTH
10	NHLAK600020701-02	LOWER BEECH POND	TUFTONBORO
11	NHLAK600020701-04	UPPER BEECH POND	WOLFEBORO
12	NHLAK600020702-01	DAN HOLE POND	TUFTONBORO
13	NHLAK600020703-03	PINE RIVER POND	WAKEFIELD
14	NHLAK600020703-04	WHITE POND	OSSIPEE
15	NHLAK600020801-01	BLUE POND	MADISON
16	NHLAK600020801-05	MACK POND	MADISON
17	NHLAK600020801-06-01	SILVER LAKE	MADISON
18	NHLAK600020802-04-01	OSSIPEE LAKE	OSSIPEE
19	NHLAK600020803-01-01	LOWER DANFORTH POND	FREEDOM
20	NHLAK600020803-01-02	MIDDLE DANFORTH POND	FREEDOM
21	NHLAK600020803-03	UPPER DANFORTH POND	FREEDOM
22	NHLAK600020803-08	SHAW POND	FREEDOM
23	NHLAK600020804-01-01	BERRY BAY	FREEDOM
24	NHLAK600020804-01-02	LEAVITT BAY	OSSIPEE
25	NHLAK600020804-01-03	BROAD BAY	FREEDOM
26	NHLAK600020902-01	PROVINCE LAKE	EFFINGHAM
27	NHLAK600021001-01	BALCH POND	WAKEFIELD
28	NHLAK600030403-02	HORN POND	WAKEFIELD
29	NHLAK600030601-05-01	SUNRISE LAKE	MIDDLETON
30	NHLAK600030602-03	ROCHESTER RESERVOIR	ROCHESTER
31	NHLAK600030605-01	NIPPO POND	BARRINGTON
32	NHLAK600030704-02-01	PAWTUCKAWAY LAKE	NOTTINGHAM
33	NHLAK600030802-01	HUNT POND	SANDOWN
34	NHLAK700010104-02	LOON POND	LINCOLN
35	NHLAK700010205-01	MIRROR LAKE	WOODSTOCK
36	NHLAK700010304-04	MCCUTCHEON POND	DORCHESTER
37	NHLAK700010304-05	POUT POND	DORCHESTER
38	NHLAK700010401-03	CONE POND	THORNTON
39	NHLAK700010402-03	LOWER HALL POND	SANDWICH
40	NHLAK700010402-05	UPPER HALL POND	SANDWICH
41	NHLAK700010402-08	LITTLE PERCH POND	CAMPTON
42	NHLAK700010501-01	BARVILLE POND	SANDWICH
43	NHLAK700010501-02	INTERVALE POND	SANDWICH
44	NHLAK700010501-03	KUSUMPE POND	SANDWICH

AU Count	AUID	AUName	Town
45	NHLAK700010502-04	SKY POND	NEW HAMPTON
46	NHLAK700010701-03	ORANGE POND	ORANGE
47	NHLAK700010701-05	WAUKEENA LAKE	DANBURY
48	NHLAK700010702-02	SCHOOL POND	DANBURY
49	NHLAK700010802-03-01	HERMIT LAKE	SANBORNTON
50	NHLAK700010802-04	RANDLETT POND	MEREDITH
51	NHLAK700010802-05	MOUNTAIN POND	SANBORNTON
52	NHLAK700010804-01-01	HIGHLAND LAKE	ANDOVER
53	NHLAK700010804-02-01	WEBSTER LAKE	FRANKLIN
54	NHLAK700020101-05-01	LAKE WENTWORTH	WOLFEBORO
55	NHLAK700020101-07-01	RUST POND	WOLFEBORO
56	NHLAK700020108-02-01	LAKE WAUKEWAN	MEREDITH
57	NHLAK700020108-02-02	LAKE WINONA	NEW HAMPTON
58	NHLAK700020108-04	HAWKINS POND	CENTER HARBOR
59	NHLAK700020110-02-01	PAUGUS BAY	LACONIA
60	NHLAK700020110-02-19	LAKE WINNIPESAUKEE	ALTON
61	NHLAK700020110-05	SALTMARSH POND	GILFORD
62	NHLAK700020201-05-01	LAKE WINNISQUAM	LACONIA
63	NHLAK700020202-03	POUT POND	BELMONT
64	NHLAK700020202-04	SARGENT LAKE	BELMONT
65	NHLAK700030101-08	GRASSY POND	RINDGE
66	NHLAK700030101-12	POOL POND	RINDGE
67	NHLAK700030101-13	BULLET POND	RINDGE
68	NHLAK700030103-02	TOLMAN POND	NELSON
69	NHLAK700030103-03	JUGGERNAUT POND	HANCOCK
70	NHLAK700030103-09	SPOONWOOD LAKE	NELSON
71	NHLAK700030103-10	DINSMORE POND	HARRISVILLE
72	NHLAK700030105-01-01	ZEPHYR LAKE	GREENFIELD
73	NHLAK700030105-02-01	OTTER LAKE	GREENFIELD
74	NHLAK700030105-03-01	SUNSET LAKE	GREENFIELD
75	NHLAK700030107-01	WILLARD POND	ANTRIM
76	NHLAK700030202-06	BAGLEY POND	WINDSOR
77	NHLAK700030203-02	SMITH POND	WASHINGTON
78	NHLAK700030203-03	TROUT POND	STODDARD
79	NHLAK700030204-04	LOON POND	HILLSBOROUGH
80	NHLAK700030302-02	BLAISDELL LAKE	SUTTON
81	NHLAK700030302-04-01	LAKE MASSASECUM	BRADFORD
82	NHLAK700030304-05	TOM POND	WARNER
83	NHLAK700030304-07	TUCKER POND	SALISBURY
84	NHLAK700030304-08	LAKE WINNEPOCKET	WEBSTER
85	NHLAK700030401-02	BUTTERFIELD POND	WILMOT
86	NHLAK700030402-01	CHASE POND	WILMOT
87	NHLAK700030402-02-01	PLEASANT LAKE	NEW LONDON
88	NHLAK700030403-05	HORSESHOE POND	ANDOVER

AU Count	AUID	AUName	Town
89	NHLAK700030502-03	BEAR POND	WARNER
90	NHLAK700030505-01	CLEMENT POND	HOPKINTON
91	NHLAK700040401-01-01	MELENDY POND	BROOKLINE
92	NHLAK700040401-02-01	POTANIPO POND	BROOKLINE
93	NHLAK700060101-01	SHAW POND	FRANKLIN
94	NHLAK700060101-02-01	SONDOGARDY POND	NORTHFIELD
95	NHLAK700060201-01-01	LOON POND	GILMANTON
96	NHLAK700060201-03	NEW POND	CANTERBURY
97	NHLAK700060202-03-01	CLOUGH POND	LOUDON
98	NHLAK700060202-04	CROOKED POND	LOUDON
99	NHIMP700060302-02	HAYWARD BROOK/MORRILL POND	CANTERBURY
100	NHLAK700060401-02-01	CRYSTAL LAKE	GILMANTON
101	NHLAK700060401-06	MANNING LAKE	GILMANTON
102	NHLAK700060401-12	SUNSET LAKE	ALTON
103	NHLAK700060402-03	HALFMOON LAKE	ALTON
104	NHLAK700060402-05	HUNTRESS POND	BARNSTEAD
105	NHLAK700060403-01	BIG WILLEY POND	STRAFFORD
106	NHLAK700060403-02	LITTLE WILLEY POND	STRAFFORD
107	NHLAK700060501-03	WILD GOOSE POND	PITTSFIELD
108	NHLAK700060501-08	BERRY POND	PITTSFIELD
109	NHLAK700060502-03	CHESTNUT POND	EPSOM
110	NHLAK700060503-01	BEAR HILL POND	ALLENSTOWN
111	NHLAK700060601-01	DEERING RESERVOIR	DEERING
112	NHLAK700060601-02	DUDLEY POND	DEERING
113	NHLAK700060601-03-01	PLEASANT POND	HENNIKER
114	NHLAK700060602-02	MOUNT WILLIAM POND	WEARE
115	NHLAK700060604-01	PLEASANT POND	FRANCESTOWN
116	NHLAK700060607-03	LONG POND	DUNBARTON
117	NHLAK700060702-03	MASSABESIC LAKE	AUBURN
118	NHLAK700060802-02	LAKINS POND	HOOKSETT
119	NHLAK700060802-03	PINNACLE POND	HOOKSETT
120	NHLAK700060803-02	STEVENS POND	MANCHESTER
121	NHLAK700061002-03	HORSESHOE POND	MERRIMACK
122	NHLAK700061101-01-01	ISLAND POND	HAMPSTEAD
123	NHLAK700061203-06-01	ROBINSON POND	HUDSON
124	NHLAK700061204-02	LITTLE ISLAND POND	PELHAM
125	NHLAK700061204-03	ROCK POND	WINDHAM
126	NHLAK700061205-01	GUMPAS POND	PELHAM
127	NHLAK801010102-03	ROUND POND	PITTSBURG
128	NHLAK801010707-01-01	CHRISTINE LAKE	STARK
129	NHLAK801040201-03	LAKE TARLETON	PIERMONT
130	NHLAK801040203-01-01	POST POND	LYME
131	NHLAK801060101-03	CUMMINS POND	DORCHESTER
132	NHLAK801060101-05	RESERVOIR POND	DORCHESTER

AU Count	AUID	AUName	Town
133	NHLAK801060103-02	LITTLE GOOSE POND	CANAAN
134	NHLAK801060104-02	GRAFTON POND	GRAFTON
135	NHLAK801060401-06	EASTMAN POND	GRANTHAM
136	NHLAK801060401-08-01	KOLELEMOOK LAKE	SPRINGFIELD
137	NHLAK801060402-04-01	LITTLE SUNAPEE LAKE	NEW LONDON
138	NHLAK801060402-05-01	SUNAPEE LAKE	SUNAPEE
139	NHLAK801060402-11	MOUNTAINVIEW LAKE	SUNAPEE
140	NHLAK801060402-12-01	OTTER POND	SUNAPEE
141	NHLAK801060403-01	GILMAN POND	UNITY
142	NHLAK801060403-04-01	RAND POND	GOSHEN
143	NHLAK801060404-01	ROCKYBOUND POND	CROYDON
144	NHLAK801070201-01	CRESCENT LAKE	CRESCENT LAKE
145	NHLAK801070503-01-01	SPOFFORD LAKE	CHESTERFIELD
146	NHLAK802010102-05	BARRETT POND	WASHINGTON
147	NHLAK802010104-01	CALDWELL POND	ALSTEAD
148	NHLAK802010104-03	CRANBERRY POND	ALSTEAD
149	NHLAK802010202-02	CHILDS BOG	HARRISVILLE
150	NHLAK802010202-07	RUSSELL RESERVOIR	HARRISVILLE
151	NHLAK802010202-14	BABBIDGE RESERVOIR	ROXBURY
152	NHLAK802010302-01-01	SWANZEY LAKE	SWANZEY
153	NHLAK802010303-02	MEETINGHOUSE POND	MARLBOROUGH
154	NHLAK802010303-07	SAND POND	TROY
155	NHLAK802010303-10	WILSON POND	SWANZEY
156	NHLAK802020103-04	EMERSON POND	RINDGE
157	NHLAK802020202-01	COLLINS POND	FITZWILLIAM
158	NHIMP700060502-01	DURGIN POND OUTLET	NORTHWOOD

TMDL: FY07 TMDLs for Acid Impaired Ponds in New Hampshire

Introduction: New Hampshire has requested approval of 158 TMDLs that address pH impairments in 158 ponds. The TMDLs establish critical loads of acidity that will result in attainment of the State's pH criterion of 6.5 SU.

Date of Review: September 19, 2007

REVIEW ELEMENTS OF TMDLs

Section 303(d) of the Clean Water Act (CWA) and EPA's implementing regulations at 40 C.F.R. § 130 describe the statutory and regulatory requirements for approvable TMDLs. The following information is generally necessary for EPA to determine if a submitted TMDL fulfills the legal requirements for approval under Section 303(d) and EPA regulations, and should be included in the submittal package. Use of the verb "must" below denotes information that is required to be submitted because it relates to elements of the TMDL required by the CWA and by regulation.

1. Description of Waterbody, Pollutant of Concern, Pollutant Sources and Priority Ranking

The TMDL analytical document must identify the waterbody as it appears on the State/Tribe's 303(d) list, the pollutant of concern and the priority ranking of the waterbody. The TMDL submittal must include a description of the point and nonpoint sources of the pollutant of concern, including the magnitude and location of the sources. Where it is possible to separate natural background from nonpoint sources, a description of the natural background must be provided, including the magnitude and location of the source(s). Such information is necessary for EPA's review of the load and wasteload allocations which are required by regulation. The TMDL submittal should also contain a description of any important assumptions made in developing the TMDL, such as: (1) the assumed distribution of land use in the watershed; (2) population characteristics, wildlife resources, and other relevant information affecting the characterization of the pollutant of concern and its allocation to sources; (3) present and future growth trends, if taken into consideration in preparing the TMDL; and, (4) explanation and analytical basis for expressing the TMDL through *surrogate measures*, if applicable. *Surrogate measures* are parameters such as percent fines and turbidity for sediment impairments, or chlorophyl *a* and phosphorus loadings for excess algae.

A. Description of Waterbody

A description of each waterbody including location and drainage area is included in the TMDL report.

B. Pollutant of Concern

The TMDL document identifies the pollutant of concern, acidic inputs. Acid deposition occurs when emissions of sulfur dioxide (SO_2) and nitrogen oxides (NO_X) react in the atmosphere with water, oxygen and oxidants to form acidic compounds. These compounds are carried varying distances from their source and are deposited as precipitation (rain, snow), as fog or as dry particles (dust). For purposes of TMDL development, the loadings from both sulfur and nitrogen compounds were combined to derive a total allowable acidic input for each lake.

C. Pollutant Sources

The document describes the sources of acidic inputs, namely sulfuric and nitrogen compounds from atmsopheric deposition. These compounds come primarily from upwind out-of-state sources, such as industrial and fossil fuel emissions in the mid-west.

D. Priority Ranking

All of the ponds listed in the TMDL report appear on the 2006 303(d) list as a low priority, however, due to a number of factors (including available funding), the State decided to accelerate the TMDL schedule for this group of waters.

Assessment: EPA concludes that the TMDL document satisfies the requirements of the above category.

2. Description of the Applicable Water Quality Standards and Numeric Water Quality Target

The TMDL submittal must include a description of the applicable State/Tribe water quality standard, including the designated use(s) of the waterbody, the applicable numeric or narrative water quality criterion, and the antidegradation policy. Such information is necessary for EPA's review of the load and wasteload allocations which are required by regulation. A numeric water quality target for the TMDL (a quantitative value used to measure whether or not the applicable water quality standard is attained) must be identified. If the TMDL is based on a target other than a numeric water quality criterion, then a numeric expression, usually site specific, must be developed from a narrative criterion and a description of the process used to derive the target must be included in the submittal.

The TMDL document includes a description of the applicable water quality standards, designated uses, the numeric water quality criterion, and the antidegradation policy.

The water quality goal for each of the lakes is to meet the State's numeric criteria for pH (6.5 SU). For purposes of water quality modeling, a target Acid Neutralizing Capacity (ANC) of 6.24 mg/L $CaCO_3$ was found to correlate with a pH of 6.5 SU.

Assessment: EPA concludes that the TMDL document satisfies the requirements of the above category.

3. Loading Capacity - Linking Water Quality and Pollutant Sources

As described in EPA guidance, a TMDL identifies the loading capacity of a waterbody for a particular pollutant. EPA regulations define loading capacity as the greatest amount of loading that a water can receive without violating water quality standards (40 C.F.R. § 130.2(f)). The loadings are required to be expressed as either mass-per-time, toxicity or other appropriate measure (40 C.F.R. § 130.2(i)). The TMDL submittal must identify the waterbody's loading capacity for the applicable pollutant and describe the rationale for the method used to establish the cause-and-effect relationship between the numeric target and the identified pollutant sources. In most instances, this method will be a water quality model. Supporting documentation for the TMDL analysis must also be contained in the submittal, including the basis for assumptions, strengths and weaknesses in the analytical process, results from water quality modeling, etc. Such information is necessary for EPA's review of the load and wasteload allocations which are required by regulation.

In many circumstances, a *critical condition* must be described and related to physical conditions in the waterbody as part of the analysis of loading capacity (40 C.F.R. § 130.7(c)(1)). The critical condition can be thought of as the "worst case" scenario of environmental conditions in the waterbody in which the loading expressed in the TMDL for the pollutant of concern will continue to meet water quality standards. *Critical condition*s are the combination of environmental factors (e.g., flow, temperature, etc.) that results in attaining and maintaining the water quality criterion and has an acceptably low frequency of occurrence. *Critical conditions* are important because they describe the factors that combine to cause a violation of water quality standards and will help in identifying the actions that may have to be undertaken to meet water quality standards.

The Steady State Water Chemistry Model (SSWC) was used to quantify the maximum amount of acidity (or critical load) that each lake could receive and still maintain an ANC value of 6.24 mg/L $CaCO_3$ and minimum pH of 6.5 SU. This model has been used widely for critical load determinations in Canada and northern Europe where acid deposition is a major problem. The SSWC model calculates critical loads (i.e., loading capacity) based on in-lake water chemistry and also accounts for annual surface runoff and a user specified ANC limit. Critical loads for each lake are presented in Table 3 of the TMDL report.

The use of the SSWC model for critical load determination has many benefits. First, the model has a successful track record in northern Europe and Canada supporting establishment of source reduction targets. Second, the inputs for the model were readily available. Third, the model has flexibility to adapt to the user-specific ANC target. This flexibility allows the direct output of the necessary critical loads without additional extrapolation.

The primary weakness of the model is that it cannot predict the timing of responses to reduced deposition. The model does not take into account future climate-based changes such as weathering

rates and soil base cation depletion which can affect the speed of lake recovery. Therefore, while the model estimates critical loading limits based on current data, it cannot predict how long the recovery process may take.

The Critical Condition for these lakes occurs during springtime when annual acidity loads peak due to snowmelt runoff events. Since there was not enough data from the spring time-period to develop TMDLs for these lakes, New Hampshire combined data from spring-summer-fall to determine annual average critical loads for each lake. It is acknowledged in the TMDL report that critical loads calculated using this approach may not be fully protective for the worst case conditions of springtime. To address this issue, the State added an explicit Margin of Safety (MOS) of 10%.

Assessment: EPA concludes that the TMDL document satisfies the requirements of the above category.

4. Load Allocations (LAs)

EPA regulations require that a TMDL include LAs, which identify the portion of the loading capacity allocated to existing and future nonpoint sources and to natural background (40 C.F.R. § 130.2(g)). Load allocations may range from reasonably accurate estimates to gross allotments (40 C.F.R. § 130.2(g)). Where it is possible to separate natural background from nonpoint sources, load allocations should be described separately for background and for nonpoint sources.

If the TMDL concludes that there are no nonpoint sources and/or natural background, or the TMDL recommends a zero load allocation, the LA must be expressed as zero. If the TMDL recommends a zero LA after considering all pollutant sources, there must be a discussion of the reasoning behind this decision, since a zero LA implies an allocation only to point sources will result in attainment of the applicable water quality standard, and all nonpoint and background sources will be removed.

The Load Allocations are presented in Table 4 of the TMDL report. The Load allocations were determined by subtracting an explicit 10% Margin of Safety from the critical load for each lake.

Assessment: EPA concludes that the TMDL document satisfies the requirements of the above category.

5. Wasteload Allocations (WLAs)

EPA regulations require that a TMDL include WLAs, which identify the portion of the loading capacity allocated to existing and future point sources (40 C.F.R. § 130.2(h)). If no point sources are present or if the TMDL recommends a zero WLA for point sources, the WLA must be expressed as zero. If the TMDL recommends a zero WLA after considering all pollutant sources, there must be a discussion of the reasoning behind this decision, since a zero WLA implies an allocation only to nonpoint sources and background will result in attainment of the applicable water quality standard,

and all point sources will be removed.

In preparing the wasteload allocations, it is not necessary that each individual point source be assigned a portion of the allocation of pollutant loading capacity. When the source is a minor discharger of the pollutant of concern or if the source is contained within an aggregated general permit, an aggregated WLA can be assigned to the group of facilities. But it is necessary to allocate the loading capacity among individual point sources as necessary to meet the water quality standard.

The TMDL submittal should also discuss whether a point source is given a less stringent wasteload allocation based on an assumption that nonpoint source load reductions will occur. In such cases, the State/Tribe will need to demonstrate reasonable assurance that the nonpoint source reductions will occur within a reasonable time.

Since the source of acidity to the 158 ponds is atmospheric deposition, a nonpoint source, wasteload allocations (WLA's) were set equal to zero.

Assessment: EPA concludes that the TMDL document satisfies the requirements of the above category.

6. Margin of Safety (MOS)

The statute and regulations require that a TMDL include a margin of safety to account for any lack of knowledge concerning the relationship between load and wasteload allocations and water quality (CWA § 303(d)(1)(C), 40 C.F.R. § 130.7(c)(1)). EPA guidance explains that the MOS may be implicit, i.e., incorporated into the TMDL through conservative assumptions in the analysis, or explicit, i.e., expressed in the TMDL as loadings set aside for the MOS. If the MOS is implicit, the conservative assumptions in the analysis that account for the MOS must be described. If the MOS is explicit, the loading set aside for the MOS must be identified.

The TMDLs provided in this document include an explicit 10% margin of safety (MOS). Based on the information that is currently available, EPA believes that the MOS is adequate.

Assessment: EPA concludes that the TMDL document satisfies the requirements of the above category.

7. Seasonal Variation

The statute and regulations require that a TMDL be established with consideration of seasonal variations. The method chosen for including seasonal variations in the TMDL must be described (CWA § 303(d)(1)(C), 40 C.F.R. § 130.7(c)(1)).

According to the New Hampshire DES, the TMDLs in this report were developed to be protective

during all seasons. Since data from the critical time-period (spring) was combined with summer and fall data to obtain critical loading estimates, New Hampshire DES has added additional margin of safety (10%) to ensure that water quality standards are met during all seasons.

Assessment: EPA Region 1 concludes that seasonal variation has been adequately accounted for in the TMDL report by using data from the critical time of year.

8. Monitoring Plan for TMDLs Developed Under the Phased Approach

EPA's 1991 document, *Guidance for Water Quality-Based Decisions: The TMDL Process* (EPA 440/4-91-001), recommends a monitoring plan when a TMDL is developed under the phased approach. The guidance recommends that a TMDL developed under the phased approach also should provide assurances that nonpoint source controls will achieve expected load reductions. The phased approach is appropriate when a TMDL involves both point and nonpoint sources and the point source is given a less stringent wasteload allocation based on an assumption that nonpoint source load reductions will occur. EPA's guidance provides that a TMDL developed under the phased approach should include a monitoring plan that describes the additional data to be collected to determine if the load reductions required by the TMDL lead to attainment of water quality standards.

Assessment: This is not a phased TMDL, but the TMDL report includes a description of a monitoring plan designed to measure attainment of water quality standards.

9. Implementation Plans

On August 8, 1997, Bob Perciasepe (EPA Assistant Administrator for the Office of Water) issued a memorandum, "New Policies for Establishing and Implementing Total Maximum Daily Loads (TMDLs)," that directs Regions to work in partnership with States/Tribes to achieve nonpoint source load allocations established for 303(d)-listed waters impaired solely or primarily by nonpoint sources. To this end, the memorandum asks that Regions assist States/Tribes in developing implementation plans that include reasonable assurances that the nonpoint source load allocations established in TMDLs for waters impaired solely or primarily by nonpoint sources will in fact be achieved. The memorandum also includes a discussion of renewed focus on the public participation process and recognition of other relevant watershed management processes used in the TMDL process. Although implementation plans are not approved by EPA, they help establish the basis for EPA's approval of TMDLs.

Assessment: Addressed, though not required. EPA is taking no action on the implementation discussion.

10. Reasonable Assurances

EPA guidance calls for reasonable assurances when TMDLs are developed for waters impaired by both point and nonpoint sources. In a water impaired by both point and nonpoint sources, where a point source is given a less stringent wasteload allocation based on an assumption that nonpoint source load reductions will occur, reasonable assurance that the nonpoint source reductions will happen must be explained in order for the TMDL to be approvable. This information is necessary for EPA to determine that the load and wasteload allocations will achieve water quality standards.

In a water impaired solely by nonpoint sources, reasonable assurances that load reductions will be achieved are not required in order for a TMDL to be approvable. However, for such nonpoint source-only waters, States/Tribes are strongly encouraged to provide reasonable assurances regarding achievement of load allocations in the implementation plans described in section 9, above. As described in the August 8, 1997 Perciasepe memorandum, such reasonable assurances should be included in State/Tribe implementation plans and "may be non-regulatory, regulatory, or incentive-based, consistent with applicable laws and programs."

Assessment: These are nonpoint source TMDLs, therefore, reasonable assurance is not required.

11. Public Participation

EPA policy is that there must be full and meaningful public participation in the TMDL development process. Each State/Tribe must, therefore, provide for public participation consistent with its own continuing planning process and public participation requirements (40 C.F.R. § 130.7(c)(1)(ii)). In guidance, EPA has explained that final TMDLs submitted to EPA for review and approval must describe the State/Tribe's public participation process, including a summary of significant comments and the State/Tribe's responses to those comments. When EPA establishes a TMDL, EPA regulations require EPA to publish a notice seeking public comment (40 C.F.R. § 130.7(d)(2)).

Inadequate public participation could be a basis for disapproving a TMDL; however, where EPA determines that a State/Tribe has not provided adequate public participation, EPA may defer its approval action until adequate public participation has been provided for, either by the State/Tribe or by EPA.

In addition to a 30-day public comment period posted on the State's website, emails were sent to members and active participants on the DES Water Quality Standards Advisory Committee (WQSAC) notifying them of the opportunity to comment on the draft TMDL report. The WQSAC and nonmembers who regularly attend meetings include representatives from more than 2 dozen agencies/organizations.

During the public comment period, NHDES received acknowledgement of the emails informing recipients of the Public Notice. However, no public comments were received.

Assessment: EPA Region 1 concludes that NHDES has provided adequate opportunities for the public to comment on the TMDL report.

12. Submittal Letter

A submittal letter should be included with the TMDL analytical document, and should specify whether the TMDL is being submitted for a *technical review* or is a *final submittal*. Each final TMDL submitted to EPA must be accompanied by a submittal letter that explicitly states that the submittal is a final TMDL submitted under Section 303(d) of the Clean Water Act for EPA review and approval. This clearly establishes the State/Tribe's intent to submit, and EPA's duty to review, the TMDL under the statute. The submittal letter, whether for technical review or final submittal, should contain such information as the name and location of the waterbody, the pollutant(s) of concern, and the priority ranking of the waterbody.

Assessment: NHDES's letter of September 12, 2007 states that the TMDLs are being formally submitted for EPA approval.