



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

September 27, 2007

Alicia Good, Assistant Director of Water Resources
Rhode Island Department of Environmental Management
Office of Water Resources
235 Promenade Street
Providence, RI 02908

SUBJECT: Approval of 9 Eutrophic Ponds and Mashapaug Pond TMDLs

Dear Ms. Good:

Thank you for your submission of Rhode Island's Total Maximum Daily Loads (TMDLs) for the 9 Eutrophic Ponds and Mashapaug Pond, for phosphorus. These water bodies are included on the State's 2006 303(d) list and were prioritized for TMDL development. The purpose of these ten TMDLs for Rhode Island waters are to address nutrient-related impairments of contact recreation and aquatic life use due to nutrients from point and nonpoint source pollution.

The U.S. Environmental Protection Agency (EPA) hereby approves Rhode Island's TMDLs for the 9 Eutrophic Ponds and Mashapaug Pond, received by EPA on September 20, 2007. EPA has determined that these TMDLs meet the requirements of §303(d) of the Clean Water Act (CWA), and of EPA's implementing regulations (40 CFR Part 130). Attached are copies of our approval documentation.

My staff and I look forward to continued cooperation with the RI DEM in exercising our shared responsibility of implementing the requirements under Section 303(d) of the CWA.

If you have any questions, please contact Stephen Silva (617-918-1561) or Steven Winnett (617-918-1687) of my staff.

Sincerely,

/s/

Stephen S. Perkins, Director
Office of Ecosystem Protection

cc Angelo Liberti, RI DEM
Elizabeth Scott, RI DEM

Cindy Hannaus, RI DEM
Scott Ribas, RI DEM
Stephen Silva, EPA
Steven Winnett, EPA

EPA NEW ENGLAND'S TMDL REVIEW

TMDL: **9 Eutrophic Ponds, Rhode Island**

Almy Pond	RI0010047L-01
Brickyard Pond	RI0007020L-02
Gorton Pond	RI0007025L-01
North Easton Pond	RI0007035L-03
Roger Williams Pond	RI0006017L-05
Sand Pond	RI0006017L-09
Spectacle Pond	RI0006017L-07
Upper Dam Pond	RI0006014L-04
Warwick Pond	RI0007024L-02

Location: Towns of Barrington, Coventry, Cranston, Middletown, Newport, Providence, and Warwick, RI

STATUS: Final

IMPAIRMENT/POLLUTANT: These nine ponds are impaired for phosphorus and a combination of excess algal growth/chlorophyll-a and low dissolved oxygen. The ponds are designated either Class A or Class B, for contact recreation, and for fish and wildlife habitat. A TMDL submission is presented for total phosphorus. RI DEM believes that limits on phosphorus will address the other, nutrient-related impairments.

BACKGROUND: The Rhode Island Department of Environmental Management (RI DEM) submitted to EPA New England the final Total Maximum Daily Load Analysis for the 9 Eutrophic Ponds (the “TMDL,” “submission,” or “Report”) with a transmittal letter dated, September 20, 2007. EPA submitted comments to RI DEM on July 13, 2007 in response to the March 2007 draft TMDL report, and RI DEM addressed those comments in its final TMDL.

The following review explains how the TMDL submission meets the statutory and regulatory requirements of TMDLs in accordance with § 303(d) of the Clean Water Act, and EPA’s implementing regulations in 40 CFR Part 130.

REVIEWERS: Steven Winnett (617-918-1687) E-mail: winnett.steven@epa.gov

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 Water Body, Pollutant of Concern, Pollutant Sources and Priority Ranking

*The TMDL analytical document must identify the water body as it appears on the State/Tribe's 303(d) list, the pollutant of concern and the priority ranking of the water body. 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 chlorophyll *a* and phosphorus loadings for excess algae.*

The nine eutrophic ponds are located in the Towns of Barrington, Coventry, Cranston, Middletown, Newport, Providence, and Warwick, RI. The Report describes the pollutant of concern, total phosphorus. The Report lists the water bodies as they appear on the State's 2006 303(d) list (TMDL pp.2-3), and explains that these waters are high priorities for TMDL development (TMDL p.3). The document also describes the TMDL study areas and their land uses (TMDL pp. 4-11).

The submission includes a detailed discussion of the nonpoint sources that contribute to the water quality impairments (TMDL pp. 29-46), as well as in-depth discussions of the water monitoring and data that indicate the condition of the water bodies (TMDL pp. 12-28). Both discussions are provided in general and individually for the nine ponds. The major sources of pollution to the watershed include stormwater outfalls, wastewater from failing septic systems and illicit sanitary connections to the stormwater system, streambank and shoreline erosion, internal loadings from sediment, atmospheric deposition, and waterfowl and other wildlife.

Assessment: RI DEM has adequately identified the water bodies, the pollutants of concern, the magnitude and location of the sources of pollution.

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 water body, 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 nine ponds are impaired by phosphorus and various combinations of low dissolved oxygen and excess algal growth/chlorophyll-a, as follows.

Table 1.1 Eutrophic Pond’s Water Quality Classification and 2006 303(d) Listings Addressed by this TMDL. (Table reprinted from the submitted TMDL by permission of RI DEM)

Water body	Water body ID	Size (hectares)	WQ Classification	Impairment(s) 2006 303(d) List
Almy Pond	RI0010047L-01	20.2	A	Phosphorus
Brickyard Pond	RI0007020L-02	34.0	B	Phosphorus, Low dissolved oxygen
Gorton Pond	RI0007025L-01	23.6	B	Phosphorus, excess algal growth/chl-a, low dissolved oxygen
North Easton Pond	RI0007035L-03	45.1	A	Phosphorus, excess algal growth/chl-a,
Roger Williams Park Ponds	RI0006017L-05	42.4	B	Phosphorus, excess algal growth/chl-a, low dissolved oxygen
Sand Pond	RI0006017L-09	4.9	A	Phosphorus, low dissolved oxygen
Spectacle Pond	RI0006017L-07	15.7	B	Phosphorus, excess algal growth/chl-a
Upper Dam Pond	RI0006014L-04	8.3	B	Phosphorus
Warwick Pond	RI0007024L-02	34.3	B	Phosphorus, excess algal growth/chl-a, low dissolved oxygen

RI DEM’s goals for the TMDL are to:

- Reduce total phosphorus levels to an average of 25 ug/l (0.025 mg/l) for shallow lakes (< 5 meters deep) and 20 ug/l (0.02 mg/l) for deep lakes;
- Reduce algal abundance to levels consistent with designated uses, targeting a chlorophyll-a level of approximately 9 ug/l;
- Improve instantaneous dissolved oxygen levels in the pond to the maximum extent feasible consistent with naturally occurring conditions; and
- Eliminate hypoxia (defined as a DO concentration < 2 mg/l) in the hypolimnion (lower level) to support the propagation of fish and other animal life in the ponds.

The numeric water quality targets are set for all waters at the appropriate numeric water quality standards for phosphorus (TMDL pp. 2-3). The ponds are classified as Class A or B, depending on the particular pond (TMDL, p. 2). Rhode Island has both a numeric and narrative standard for phosphorus (RI Water Quality Regulations: Rule 8.D.(2)(10)(a) and (b), respectively), which includes that average total phosphorus shall not exceed 25.0 ug/l (0.025 mg/l), and allows for lower levels as determined by the Director of RI DEM as necessary to prevent cultural eutrophication.

Assessment: EPA New England concludes that RI DEM has properly presented its water quality standards when setting a numeric water quality target.

3. Loading Capacity - Linking Water Quality and Pollutant Sources

As described in EPA guidance, a TMDL identifies the loading capacity of a water body 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 water body'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 water body 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 water body in which the loading expressed in the TMDL for the pollutant of concern will continue to meet water quality standards. Critical conditions 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.

RI DEM sets the numeric water quality targets at the applicable water quality criteria (25 ug/l) or uses a more stringent target (20 ug/l), depending on each pond's depth or stratification profile, as outlined in the TMDL report (TMDL p. 2). The more stringent target was applied to the deep and/or stratified ponds.

RI DEM describes the rationale for the methods used to establish the cause-and-effect relationship between the numeric targets (WQS) and the identified pollutant sources. Current yearly phosphorus loads (in kg/yr) to the nine ponds were established using the Reckhow model (TMDL pp. 50-52) using measured total phosphorus concentrations. Allowable loadings were then back-calculated from the model using the numeric water quality targets, and 10% margins of safety were then subtracted to determine the target loads. The required load reductions were calculated from the current loads and the TMDLs (target loads), and percent loading reductions were also calculated.

Table 5.1 Allowable Phosphorus Loads, Required Load Reductions & % Reductions to meet Water Quality Targets. (Table reprinted from the submitted TMDL by permission of RI DEM)

Water body	Current Load (kg/yr)	TMDL * (kg/yr)	Required Load Reduction (kg/yr)	Required Loading Reduction (% Percent Value)
Almy Pond	526	78	448	85
Brickyard Pond	410	117	293	71
Gorton Pond	239	77	162	68
North Easton Pond	1470	301	1169	80
Roger Williams Park Ponds	1027	282	745	73
Sand Pond	50	14	36	72
Spectacle Pond	216	68	148	68
Upper Dam Pond	71	38	33	46
Warwick Pond	185	123	62	33

* Includes a 10% Margin of Safety.

The daily load is the yearly load divided by 365.

Assessment: EPA New England concludes that the loading capacities, having been calculated using a water quality model well-known to EPA, and using observed concentration data and water quality targets consistent with or more stringent than numeric water quality criteria, have been appropriately set at levels necessary to attain and maintain applicable water quality standards. The TMDL is based on a reasonable approach for establishing the relationship between pollutant loading and water quality.

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 submission contains a load allocation (LA) for each pond that is expressed as a target load and corresponding load reduction required to meet the applicable water quality criteria (TMDL Tables 5.4 and 5.6, pp. 53-54). The runoff from NPDES regulated stormwater sources are considered the wasteload allocations (WLAs—see Section 5, below). The LAs are the remaining

stormwater runoff (not associated with Phase 2 permitted sources of stormwater), plus other nonpoint, or diffuse sources of pollution (calculated as the TMDLs minus the WLAs).

Assessment: EPA New England concludes that load allocations are adequately specified in the TMDLs.

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.

The submission contains waste load allocations (WLAs) that are expressed as target loads and corresponding load reductions required to meet the applicable water quality criteria (TMDL Tables 5.4 and 5.6, pp. 53-54). There are no permitted, wastewater point sources in the TMDL study areas. However, because the study areas are in Phase 2 regulated MS4 communities, sources of stormwater from developed areas which contribute to runoff through identified culverts, pipes, or other conveyances are therefore NPDES-permitted point sources. There are also three facilities (Rhode Island Airport, Rhode Island National Guard, and Freedom Yachts, Inc.) holding RIPDES Multi-Sector General Permits which discharge stormwater directly or indirectly to two of the ponds (TMDL p. 61), and a single facility, T.F. Green Airport, through its operator the RI Airport Corporation, holding Individual Industrial Stormwater Permit # RI0021598 (TMDL pp. 62-63). The submission contains wasteload allocations (WLAs) for the stormwater runoff from all permitted sources. The facilities holding Multi-Sector General Permits must demonstrate that their Storm Water Pollution Prevention Plans (SWPPPs) reduce phosphorus to the maximum feasible. T.F. Green Airport must include additional best management practices (BMPs) as specified in their RIPDES permit, identify the source of pollutants in their stormwater discharges, and ensure practices are being implemented to minimize pollutants associated with their industrial activities.

The WLAs are expressed as the loads required for the water bodies to meet the water quality standards. Because of the difficulties of determining the relative amount of point source and nonpoint source runoff, the WLAs for these TMDLs are set by estimating the percentage of the watersheds that would be expected to contribute to the point source loadings. This is done by making the relative contribution of point sources to the required load reductions equal to the

percent impervious cover of the areas discharging to the locations (TMDL Tables 5.3-5.6, pp. 53-54). This approach recognizes that stormwater from impervious cover is more likely to be collected and conveyed to the receiving waters by stormwater collection systems than non-impervious areas.

Assessment: The WLAs are based on the amount of developed land that would contribute to the stormwater runoff in these water bodies. Using the percent impervious cover of the contributing watershed areas is a reasonable way to estimate the percent of the total loads to those locations attributable to NPDES permitted, stormwater point sources. EPA New England concludes that the WLAs for this submission are acceptable and reasonable.

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.

An explicit MOS of 10% is included in the TMDLs for phosphorus loads (TMDL p. 47).

Assessment: EPA New England concurs that an adequate MOS is provided by the explicit 10% MOS for phosphorus.

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).

This TMDL addresses seasonal variation because the required reductions in phosphorus were calculated for the conditions during the critical season for contact use, May through October. Therefore, the TMDL allocations protect designated uses during the entire year.

Assessment: EPA New England concludes that seasonal variations have been adequately accounted for as the TMDLs were developed to be protective during the critical periods for phosphorus, and will therefore be more than adequately protective during the other seasons.

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), and EPA's 2006 guidance, Clarification Regarding "Phased" Total Maximum Daily Loads, recommend a monitoring plan when a TMDL is developed using the phased approach. The guidance indicates that a State may use the phased approach for situations where TMDLs need to be developed despite significant data uncertainty and where the State expects that the loading capacity and allocation scheme will be revised in the near future. EPA's guidance

provides that a TMDL developed under the phased approach should include, in addition to the other TMDL elements, a monitoring plan that describes the additional data to be collected and a scheduled timeframe for revision of the TMDL.

This is not a phased TMDL, but the document includes a description of a monitoring plan. RI DEM proposes continuing and enhancing the ongoing volunteer monitoring which has historically generated the data used in this TMDL (TMDL p. 85). Such monitoring will allow water quality improvement activities to be adjusted in a phased manner as monitoring indicates changes in the water quality of the ponds.

Assessment: Addressed, though not required.

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.

A detailed implementation plan is provided in the submission (TMDL pp. 55-83) which specifically addresses the major identified sources of pollution and gives specific recommendations for each pond. The plan contains specific recommendations with regard to the six minimum measures that comprise the Stormwater Phase II permit program, and discusses several types of specific corrective actions, including measures to reduce stormwater runoff, control of waterfowl, and the control of phosphorus internal to the ponds. The report also discusses what responsibilities those entities holding general or individual stormwater permits have for ensuring that their activities conform to the TMDL targets and loads.

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

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 body 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.”

The only NPDES/RIPDES discharges are stormwater and no point sources are given less stringent wasteload allocations based on the assumption of future nonpoint source load reductions. Therefore, reasonable assurance is not required.

Assessment: Although not required, reasonable assurance is addressed in the implementation plan. RI DEM’s work with its watershed partners, backed up by its regulatory authority, provide reasonable assurance.

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.

RI DEM presented the draft TMDL to the public at four public meetings which were held between April 17, 2007 and May 2, 2007 in Barrington, Middletown, and Warwick, RI, and at DEM headquarters in Providence. The meetings were well publicized in the press and letters were sent to key stakeholders well in advance of the meetings. Copies of the TMDL were also made available to the public in advance of the meetings. Approximately 47 individuals attended the various meetings. The final meeting began a 30-day comment period, during which stakeholders provided written comments to the agency. The agency received several comment letters during the comment period, and addressed many verbal comments at the public meetings. The TMDL submission includes copies of all submitted comments and the Department’s responses, along with notes on the four meetings, as appendices to the final TMDL submission.

Assessment: EPA New England has reviewed all comments and the agencies’ responses to comments. EPA concludes that RI DEM involved the public during the development of the TMDL for the 9 *Eutrophic Ponds*, has provided adequate opportunities for the public to comment on the TMDL, and has provided reasonable responses to the comments received.

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 water body, the pollutant(s) of concern, and the priority ranking of the water body.

Comment: RI DEM's letter of September 20, 2007 stated that the TMDL is being formally transmitted for EPA approval.

Data for entry in EPA's National TMDL Tracking System						
TMDL (Water body) Name *		9 Eutrophic Ponds (9 segments)				
Number of TMDLs*		9				
Type of TMDLs (Pollutant)*		Nutrients				
Number of listed causes (from 303(d) list)		19				
Lead State		Rhode Island (RI)				
TMDL Status		Final				
Individual TMDLs listed below						
TMDL Segment name	TMDL Segment ID #	TMDL Pollutant ID# & name	TMDL Impairment Cause(s)	Pollutant endpoint	Unlisted?	RIPDES Point Source & ID#
Almy Pond	RI0010047L-01	515 (Total Phosphorus)	Phosphorus (29)	25 ug/l phosphorus		RIPDES MS4 General Stormwater Permit
Brickyard Pond	RI0007020L-02	515 (Total Phosphorus)	Phosphorus, low dissolved oxygen (341)	20 ug/l phosphorus		RIPDES MS4 General Stormwater Permit
Gorton Pond	RI0007025L-01	515 (Total Phosphorus)	Phosphorus, excess algal growth/chlorophyll-a (239), low dissolved oxygen	20 ug/l phosphorus		RIPDES MS4 General Stormwater Permit
North Easton Pond	RI0007035L-03	515 (Total Phosphorus)	Phosphorus, excess algal growth/chlorophyll-a	25 ug/l phosphorus		- RIPDES MS4 General Stormwater Permit - RIPDES Multi-Sector General Permit
Roger Williams Pond	RI0006017L-05	515 (Total Phosphorus)	Phosphorus, excess algal growth/chlorophyll-a, low dissolved oxygen	25 ug/l phosphorus		RIPDES MS4 General Stormwater Permit
Sand Pond	RI0006017L-09	515 (Total Phosphorus)	Phosphorus, low dissolved oxygen	20 ug/l phosphorus		RIPDES MS4 General Stormwater Permit
Spectacle Pond	RI0006017L-07	515 (Total Phosphorus)	Phosphorus, excess algal growth/chlorophyll-a	20 ug/l phosphorus		RIPDES MS4 General Stormwater Permit
Upper Dam Pond	RI0006014L-04	515 (Total Phosphorus)	Phosphorus	25 ug/l phosphorus		RIPDES MS4 General Stormwater Permit
Warwick Pond	RI0007024L-02	515 (Total Phosphorus)	Phosphorus, excess algal growth/chlorophyll-a, low dissolved oxygen	20 ug/l phosphorus		- RIPDES MS4 General Stormwater Permit - RIPDES Multi-Sector General Permits - RIPDES Individual

						Industrial Stormwater permit # RI0021598 for RI Airport Corporation
TMDL Type		Point & Nonpoint Source (Stormwater)				
Cycle (list date)		2006				
Establishment Date (approval)*		Sep 27, 2007				
EPA Developed		No				
Towns affected*		Barrington, Coventry, Cranston, Middletown,	Newport, Providence, and	Warwick, RI		