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

April 26, 2010

Andrew Fisk
Maine Department of Environmental Protection
#17 State House Station
Augusta, Maine 04333-0017

SUBJECT: **Notification of Approval of Dudley Brook TMDL**

Dear Mr. Fisk:

Thank you for Maine's submittal of the Dudley Brook Total Maximum Daily Load (TMDL) for total phosphorus, total nitrogen, and sediment. This Class A waterbody is included on Maine's 2008 303(d) list. The purpose of the TMDL is to address aquatic life impairment due to excessive nutrient and sediment loading from nonpoint source pollution.

The U.S. Environmental Protection Agency (EPA) hereby approves Maine's April 15, 2010 Dudley Brook TMDL. EPA has determined that this TMDL meets the requirements of §303(d) of the Clean Water Act (CWA), and of EPA's implementing regulations (40 CFR Part 130). Attached is a copy of our approval documentation.

We are very pleased with the quality of your TMDL submittal. Your staff have done an excellent job of site investigation and use of the regionally-calibrated modeling tool (AVGWLF), resulting in a comprehensive and informative TMDL report for this NPS-impaired stream in Aroostook County. My staff and I look forward to continued cooperation with the ME DEP in exercising our shared responsibility of implementing the requirements under Section 303(d) of the CWA.

Sincerely,

/s/

Stephen S. Perkins, Director
Office of Ecosystem Protection

cc (electronic):
David Courtemanch, ME DEP
Melissa Evers, ME DEP

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04/26/10

EPA NEW ENGLAND'S TMDL REVIEW

TMDL: **Dudley Brook**, Aroostook County, Maine
HUC: ME 0101000412, ME ID# 140R02 located in Castle Hill, T11 R4 WELS, Mapleton, and Chapman, ME.
2008 303(d) listings: benthic macroinvertebrates; 2008 TMDL development.

STATUS: Final

IMPAIRMENT/POLLUTANT: **Dudley Brook**: Aquatic life use impairment measured by aquatic life criteria for Class A stream (benthic macroinvertebrate bioassessments); potential sources include agricultural runoff from cropland. TMDLs are calculated for **phosphorus**, **nitrogen**, and **sediment**.

BACKGROUND: The Maine Department of Environmental Protection (ME DEP) submitted to EPA New England the final *Dudley Brook TMDL* report electronically with a transmittal letter dated April 12, 2010, and a revised final report on April 15, 2010. All of EPA's June 2, 2009 comments (on the July 2008 draft TMDL) were taken into account in the final submission.

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: Jennie Bridge (617-918-1685) e-mail: bridge.jennie@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 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 chlorophyll a and phosphorus loadings for excess algae.

Dudley Brook is approximately 6.4 miles in length, beginning in an area known as Dudley Swamp in the Town of Castle Hill, Maine, traveling briefly through the unorganized territory of T11 R4 WELS, Mapleton, and terminating at its confluence with Presque Isle Stream just east of West Chapman Road in Chapman, ME in Aroostook County. The entire length of this Class A stream is impaired for nonattainment of aquatic life criteria, based on benthic macroinvertebrate assessment (page 4 TMDL report).

With a watershed area of 4,059 acres (1,643 ha), the stream is impaired by nutrients and sediments transported by nonpoint source runoff primarily associated with agricultural land use (cropland). The document describes the primary pollutants of concern (**total phosphorus, total nitrogen, and sediment**), and the magnitude and location of potential sources based on land use analysis (page 5 TMDL report). The northern portion of the watershed is predominantly forested, with some hay/pasture land, and low-density residential development along Dudley Road and Turner Road. The southern portion of the watershed is primarily cultivated land, with smaller areas of hay/pasture land, and low-density residential development along Haystack Road, West Chapman Road, and Dudley Road. Nutrient enrichment and general degradation of the stream habitat due to sedimentation and physical alterations are the prime contributors to impairment (page 7, TMDL).

ME DEP provides an explanation and analytical basis for assessing the TMDL for aquatic life impairment through the use of surrogate pollutants (phosphorus, nitrogen, and sediments), a watershed model (GWLF) to simulate nonpoint source pollutant loading, and reference stream approach to develop numeric endpoints. (See also section 2 below, which documents ME's water quality standards.) It was not possible to separate natural background from nonpoint sources because of the limited and general nature of available information (page 8 TMDL report).

Assessment: EPA New England concludes that the ME DEP has done an adequate job of describing the TMDL waterbody segment, pollutants of concern, and identifying and characterizing sources of impairment.

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 Dudley Brook TMDL report describes the applicable water quality standards for aquatic life use (narrative and numeric), designated uses (including habitat for fish and aquatic life), and antidegradation policy (see pages 8-9 TMDL report). Dudley Brook is listed as a Class A water. Maine's water quality standards specify that discharges to Maine Class A waters "shall be of sufficient quality to support all aquatic species indigenous to the receiving water without detrimental changes in the resident biological community. Habitat shall be characterized as natural." [Title 38 MRSA465(2)(A)]

Maine DEP uses three pollutants of concern (phosphorus, nitrogen, and sediments) as surrogate measures of nonpoint source impacts resulting in violation of the State's biocriteria for Class A streams. Since Maine does not have numeric standards for the surrogate pollutants, numeric nutrient and sediment targets for Dudley Brook were established by comparing the Dudley Brook watershed to attainment watersheds, Moose Brook and B Stream, in the same geographical region. Both attainment streams are designated Class B streams, but are documented to attain Class A standards for aquatic life and dissolved oxygen (see Table 3, page 9 TMDL report). A comparative attainment approach requires identical modeling procedures be applied to all watersheds in the analysis, which is documented in Appendix 1 (pages 21-33 TMDL report).

Assessment: EPA New England concludes that ME DEP has properly presented its water quality standards and has made a reasonable interpretation of the narrative water quality criteria in the standards when setting the numeric water quality targets by using watersheds that attain Class A water quality standards. EPA has reviewed the modeling report in appendix 1 and believes that ME DEP's selection of reference watersheds is based on reasonable and appropriate technical criteria.

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 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.

The loading capacities of Dudley Brook for nutrients and sediment are set at numeric target levels using the two reference streams. The following target for each pollutant represents an average of the unit area loads for the two reference streams because the loading results were so similar for both watersheds: **total phosphorus** (0.21 kg/ha/year), **total nitrogen** (4.8 kg/ha/year) and **sediment** (0.02 ton/ha/year). The loading capacities are expressed as annual unit area loads rather than daily loads in order to "normalize the spatial and temporal variation associated with instream nonpoint source pollutant concentrations." (page 9 TMDL report)

These loading capacities are set to protect water quality and support uses during critical conditions, which are defined as environmental conditions that induce a stress response in aquatic life (page 11 TMDL report). These stressful conditions may occur throughout the year, at various flows, and depend on the biological requirements of the life stage of resident aquatic organisms. Complexities of critical conditions in flowing water impaired by NPS runoff is a major consideration in expressing the TMDL in terms of **annual loads**. The TMDL loads are also expressed in terms of **daily maximum loads** (see Table 4, 1st footnote, page 10 TMDL report).

The Generalized Watershed Loading Function (GWLF) model was used to estimate existing pollutant loadings of phosphorus, nitrogen, and sediment associated with each of the two unimpaired reference streams, and with the impaired portion of Dudley Brook. For each pollutant of concern, the differences between the reference watershed average and Dudley Brook represent the loading reductions needed to achieve water quality criteria for all nonpoint source pollutants of concern (page 10 TMDL report).

The GWLF model is an established midrange modeling tool that uses hydrology, land cover, soils, topography, weather, pollutant discharges, and other critical environmental characteristics to model sediment and nutrient (TN and TP) transport within a watershed and to compute flow and pollutant loads. In this case, GWLF was used as the core watershed simulation model, and Northeast AVGWLF (GWLF with an ArcView geographic information systems (GIS) interface (see appendix 1, page 21-33 TMDL report) was used to model the watershed landuses at a screening level of model evaluation for planning level estimates rather than exact prediction of loads entering streams. All model simulations (for both the impaired watershed, Dudley Brook, and for the two attainment watersheds, B Stream and Moose Brook) were conducted over a 15-year period (1990-2004) to capture sufficient hydrologic and weather conditions to account for

typical variations in nutrient loading conditions.

ME DEP explains the assumptions, strength and limitations of the analytical process involving the GWLF model and comparative reference stream approach to evaluating loading capacities (pages 10-11 TMDL report). These analytical methods are widely recognized as appropriate for NPS-impaired stream TMDL assessment.

Assessment: Since nonpoint source runoff occurs throughout the year, with different environmental effects, at both low and high flows, critical conditions for aquatic life protection are not limited to particular flow conditions or time of year. EPA concludes that critical conditions are adequately accounted for because the TMDL reduction targets directly address the effect of nonpoint source runoff in the watershed, and thus the range of impacts under varying critical conditions at different flows. EPA New England concludes that the loading capacities have been appropriately set at levels necessary to attain and maintain applicable water quality standards. The TMDLs are based on a reasonable and widely accepted approach for establishing the relationship between pollutant loading and water quality in nonpoint source-impaired streams.

TMDL Time Increment / Daily Loading

EPA's November 15, 2006 guidance entitled "Establishing TMDL 'Daily' Loads in Light of the Decision by the U.S. Court of Appeals for the D.C. Circuit in Friends of the Earth, Inc. v. EPA, et al., No.05-5015, (April 25, 2006) and Implications for NPDES Permits," recommends that TMDL submittals express allocations in terms of daily time increments. In this case, the TMDLs' pollutant targets are expressed in terms of a daily increment, as well as in terms of an annual load. EPA New England concurs with expressing the TMDLs as annual loads based on the reasons provided by ME DEP (critical conditions occurring at various flows and pollutant loads throughout the year).

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.

ME DEP allocates all of each of the loading capacities for Dudley Brook as the "load allocation", a single categorical (gross) allotment, to existing and future nonpoint sources and to natural background: **phosphorus** (0.21 kg/ha/year), **nitrogen** (4.8 kg/ha/year) and **sediment** (0.02 kg/ha/year) (Table 4 page 13 TMDL report). Calculation of the necessary reductions are also provided: 25% TP, 30% TN, 50% sediment) (Figures 4 and 5 page 12 TMDL report). ME

DEP explains that it was not possible to separate natural background from non-point pollution sources in these watersheds because of the limited and general nature of the available information.

Expansion of agricultural and development activities have the potential to increase runoff and associated pollutants. To ensure that the TMDL targets are attained, future agriculture or development activities will need to meet the TMDL targets. (See page 12 TMDL report for discussion of future NPS loadings.)

Assessment: EPA New England concludes that the load allocations for total phosphorus, total nitrogen, and sediment are adequately specified in the TMDL report at levels necessary to attain and maintain water quality standards. The degrees of load reductions necessary to achieve the in-stream phosphorus, nitrogen and sediment levels are based on estimates of current loadings, and the need to address future loadings is discussed.

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.

ME DEP sets the waste load allocations for total phosphorus, total nitrogen, and sediment at **0 (zero)** for all the pollutants of concern in the runoff, and explains that no portion of the Dudley Brook watershed is designated as an urban area, and would not be subject to coverage under Maine's general permit for municipal separate stormwater sewer systems (MS4s) (page 14, TMDL report). Stormwater associated with construction site activities affecting over one acre would be subject to the MEPDES stormwater permit program, although those activities are expected to be short term and infrequent.

Assessment: EPA New England concurs that the WLA component of the TMDLs is appropriately set equal to zero based on ME DEP's determination that there are no existing point sources discharges to the impaired waterbody, including regulated stormwater, subject to NPDES permit requirements in the watershed.

6. Margin of Safety

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 Dudley Brook TMDLs include an implicit margin of safety (MOS) based on a conservative selection of numeric water quality targets, which were based on reference streams, which attain Class A water quality standards for aquatic life criteria and dissolved oxygen. There are also several conservative assumptions associated with the AVGWLF model which provide a MOS to account for uncertainty and ensure that water quality standards will be attained in Dudley Brook. For example, the modeling process did not account for existing riparian buffers, existing agricultural BMPs, instream nutrient-attenuating and sediment-settling processes, all of which reduce the pollutant load that moves through the system.

Assessment: EPA New England concludes that adequate MOS is provided. EPA believes a significant implicit MOS is provided in the modeling used to establish the numeric water quality targets, and the adequacy of this MOS is supported by in-stream data.

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)).

Seasonal variation is considered by setting the allowable annual loads of nutrients and sediment to be protective of macroinvertebrates and other aquatic life under the influence of seasonal fluctuations in environmental conditions such as flow, rainfall, and runoff (page 13, TMDL report). ME DEP explains the various seasonal fluctuations in flow which influence the concentrations of nutrients and sediment, and how the TMDLs are protective of all seasons.

Assessment: EPA New England concludes that seasonal variation has been adequately accounted for in the TMDL because the TMDL was developed to be protective year round. Seasonal fluctuations in flow, and varying contributions of nutrients and sediment from snow and rainfall runoff are taken into account. In addition, nutrient and sediment controls are expected to be in place through the year so that these controls will reduce pollution whenever sources are active.

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.

ME DEP explains that future, more detailed assessments of individual nonpoint source pollution sites will be needed to develop site-specific best management practices (BMPs), and recommends stream monitoring be conducted as part of pre- and post BMP-application assessments. As restoration plans proceed, ME DEP will check on progress towards attainment of Maine's water quality standards with both water chemistry and biological monitoring evaluations (page 14, TMDL report). Future biological monitoring will be conducted according to the Department's rotating basin sampling schedule.

Assessment: EPA New England concludes that the anticipated monitoring in cooperation with and by ME DEP is sufficient to evaluate the adequacy of the TMDL.

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.

The nutrient and sediment load reductions listed in the TMDL allocations Table 4 (and Figures 4 and 5) are intended to provide a guide for restoration plans and engineered solutions that will lower the content of nutrient and sediment in the runoff reaching the stream (pages 15-16 TMDL report). ME DEP explains that restoring a sustainable and functional aquatic community requires more than just planning and assessment. In general, ME DEP recommends a higher level of local stewardship (creation of an organized watershed group), and an effective restoration approach which looks at all potential nutrient/sediment sources, including the impact of agricultural land, impervious surfaces (roads and roofs) and residential and commercial development. ME DEP also provides a list of specific assessment and implementation recommendations (page 16 TMDL report).

Assessment: Addressed, though not required.

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."

ME DEP addresses reasonable assurances first by emphasizing that more active local watershed participation is an important component in improving water quality. The load reductions provide a guide for restoration plans and engineered solutions that will lower the content of nutrients and sediments in the runoff reaching the stream. The October 2008 Dudley Brook stakeholder meeting resulted in recommendations listed in the TMDL report that will be included in a Watershed-Based Management Plan that can be used to guide future watershed efforts (pages 15-16 TMDL report).

Assessment: Addressed, though not required, since this TMDL does not establish less stringent WLAs in reliance on greater load reductions from nonpoint sources.

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.

The public participation process for Dudley Brook TMDLs is described on pages 16-17 of the TMDL report. Paper and electronic forms of the public review draft report were made available between September 26th and October 31st, 2008. The draft was distributed by mail to interested stakeholders without electronic access, and electronically to interested individuals representing ME DEP (CRMO – Augusta, and NMRO - Presque Isle), Central Aroostook Soil & Water Conservation District, USDA/NRCS, ME Dept. of Inland Fish and Wildlife, Maine Potato Board, and the Town of Castle Hill and Chapman, Cavendish Farms, and several other

landowners (listed on page 16 TMDL report). A public meeting was held in Presque Isle on October 30, 2008 for watershed landowners. The report was also posted on the FB Environmental Internet Web site, and two notices were placed in the Star Herald on October 8th and October 28th, 2008. Following the public comment period, a follow-up planning meeting was advertized on June 8, 2009, and held on June 17, 2009 to discuss results of the TMDL and strategies for implementing the TMDL using a watershed-based management plan.

No written public comments (outside of ME DEP and EPA) were received.

Assessment: EPA New England concludes that ME DEP has done a sufficient job of involving the public during the development of the TMDL, has provided adequate opportunities for the public to comment on the TMDL, and has fully addressed comments received from EPA.

12. Transmittal 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*:* ME DEP's letter of April 12, 2010 and e-mail of April 15, 2010 (forwarding the final revised report) indicate that the TMDL is being formally submitted for EPA approval.

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Data for Entry in EPA's National TMDL Tracking System and Regional Web Page							
TMDL Water Body Name *	**Dudley Brook**						
Number of TMDLs*	3						
Type of Pollutant(s) *	Nutrients and sediment						
Number of listed causes (from 303(d) list)	1						
Any Information/prevention TMDLs (Y/N)	N						
Lead State	Maine (ME)						
TMDL Status	Final						
Individual TMDLs listed below (one line per segment-pollutant combination)							
TMDL Segment name	TMDL Segment ID #	TMDL Pollutant ID# & name	TMDL Impairment Cause(s)	Pollutant Endpoint	Unlisted ?	RIPDES Point Source & ID#	Segment still listed for something else? (Y/N)
Dudley Brook	ME 0101000412_140R02	515 (Total Phosphorus)	94 (Aquatic Life criteria)	0.21 (kg/ha/yr) phosphorus			N
Dudley Brook	ME 0101000412_140R02	511 (Total Nitrogen)	94 (Aquatic Life criteria)	4.8 (kg/ha/yr) nitrogen			N
Dudley Brook	ME 0101000412_140R02	457 (Sediment)	94 (Aquatic Life criteria)	0.02 (ton/ha/yr) sediment			N
TMDL Water Pollution Type	Nonpoint Source						
Cycle (list date)	2008						
Establishment Date (approval)*	Apr 26, 2010						
EPA Developed	No						
Towns affected*	Castle Hill, T11 R4 WELS, Mapleton, and Chapman, ME						

* = These data fields used in webpage entries