



MEMO via email

TO: Melissa Evers, Environmental Specialist
Maine Department of Environmental Protection (DEP)

CC: Interlocal Stormwater Working Group (ISWG) Representatives

FROM: Robyn Saunders, Cumberland County Soil and Water Conservation District (CCSWCD)
Jami Fitch, CCSWCD – ISWG Facilitator
Damon Yakovleff, CCSWCD Watershed Analyst

RE: Maine Statewide Nonpoint Source (NPS) Pollution TMDL

On behalf of the 14 ISWG representatives, we would like to thank DEP for this opportunity to provide **comments** for your consideration as it pertains to the draft of the Total Maximum Daily Load (TMDL) report for thirty (30) waters in the State of Maine with dissolved oxygen and/or aquatic life impairments associated with NPS pollution.

Please note that major subject areas where additional clarification is needed are indicated in **bold**. Quotes from the proposed TMDL are *indicated in italic font*. Proposed revisions and/or comments to the TMDL report are indicated in **emboldened underlined italic**. The comments are twofold: (1) general comments on process and financial impacts; and (2) technical comments on methodology and other considerations.

PART A. General Comments on process and financial impacts

General Comment #1: Watershed Selection. What process and/or criteria were used to guide DEP's selection of the list of 30 watersheds?

For example, in the proposed TMDL report, at least eight (8) of the 30 watersheds are located within the Greater Portland ISWG region, and five (5) are partially or completely in Windham, more than any other single community in the state. Specifically, there are:

- **5 watersheds listed in Windham**
 - The Town of Windham is subject to the DEP's Municipal Separate Storm Sewer System (MS4) permit, which has the potential to make this TMDL enforceable within the regulated urbanized area.
 - If this TMDL is approved by DEP and EPA, Windham is faced with developing 4 new Watershed Management Plans (WMPs) to maintain compliance with Clean Water Act requirements.
 - A WMP has already been developed for the Pleasant River, but it is almost 5 years old already and may need to be updated before implementation.
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- The cost of a WMP ranges from \$50K to \$150K depending on complexity within the watershed.
 - The \$200K to \$600K needed to develop WMPs doesn't cover the cost of implementing the retrofits and other watershed enhancements that will be identified through the development of the WMPs.
 - Furthermore, development of these WMPs does not guarantee that water quality standards (ultimate goal of Clean Water Act) will be achieved in these watersheds.
- **3 watersheds listed in Gorham** – However, upon further examination of the maps and data provided in the DEP's proposed TMDL, only one of these 3 watersheds is actually located within Gorham.
 - **Inkhorn Brook** watershed is located in Windham and Westbrook (not Windham and Gorham, as listed by DEP on Page iii).
 - **Pleasant River** is located in Windham, Gray and Raymond, (not Windham and Gorham, as listed by DEP on Page iii).
 - **Gorham, like Windham, is subject to the DEP's MS4 permit**, which has the potential to make this TMDL enforceable within the regulated urbanized area.

Furthermore, understanding the DEP's criteria for watershed selection will provide insight into preventing or avoiding additional watersheds being added to the NPS TMDL list, as is intended and/or indicated by DEP on the bottom of page 5 "Future TMDL Applicability." **We respectfully request that DEP provide information on the process and criteria for selecting the watersheds affected by this NPS TMDL.**

General Comment #2: Coordination of Watershed Sampling. What is DEP's protocol for coordinating and proactively communicating with municipalities and landowners on these TMDL efforts?

For communities that are subject to MS4 permit requirements (e.g., Windham, Gorham, Cumberland, Falmouth, Lewiston, Berwick, etc.), coordination and communication with DEP would be helpful for the following reasons:

- To allow for local input on factors that may affect sampling results, watershed description (e.g., see comment above regarding correction to Inkhorn and Pleasant river communities), land use data (e.g., ensuring agricultural use designations are appropriate) and other parameters for the model/loading analysis (e.g., presence of local overboard discharge permits, sanitary sewers, etc.);
- To raise awareness of watershed priorities on the local level;
- To improve communication regarding DEP efforts and priorities to conserve, protect and restore each community's natural resources; and
- To avoid the element of surprise, specifically for municipalities that may be compelled to comply with this TMDL and develop a WMP due to MS4 permit applicability.

Because these points are analogous to the initial steps in developing a WMP, and if WMP development is DEP's end goal for this TMDL, it would seem important to coordinate and communicate with the municipality during these efforts (e.g., watershed selection, sampling,

summaries, etc.). **We respectfully request that DEP provide the protocol for coordinating and proactively communicating with municipalities and landowners on these TMDL efforts (selection, sampling, outreach, etc.). If no protocol exists, please comment on how DEP plans to coordinate and communicate future watershed sampling efforts with stakeholders, specifically the MS4 communities through the responsible party listed in the MS4 Annual Progress Reports sent to DEP each year.**

General Comment #3: Unintended Consequences. Has DEP evaluated the possible unintended consequences of this TMDL and other regulatory requirements that could be contributing?

For example:

- There is a **tremendous disparity between non-regulated and MS4-regulated** municipalities compelled to comply with this TMDL (e.g., Windham, Gorham, Cumberland, Falmouth, Lewiston, Berwick, etc.).
 - Because of MS4 applicability for this TMDL, it should be **viewed as a rulemaking change and require financial impact assessment by DEP** to understand the impacts to affected municipalities and landowners alike.
 - Furthermore, MS4-regulated communities are expected to become the **“enforcer” for state water quality standards** that the USEPA (through the Clean Water Act) has delegated to DEP, without providing the municipality with the means (e.g., staffing, funding, other resources, etc.) to effectively communicate and enforce these requirements (i.e., develop and implement WMPs) within the community.
- On Page 11, the proposed TMDL identifies *“NPS runoff primarily from anthropogenic activities”* as the source of impairment within each watershed. How DEP goes from this general statement to specifically targeting *“agricultural and some suburban land uses”* as the culprit for impairment is not clear.
- In MS4 communities where the TMDL will be enforceable, the **end of the family farm may become a reality** if WMP-identified requirements are too costly for most to implement. Some of the farms identified in these watersheds will not be eligible for Farm Bill funding or technical assistance through USDA Farm Service Agencies (e.g., NRCS, Rural Development, etc.). Many of these farmers may have no choice but to sell their land for development rights, which in the end may be more deleterious to the watershed than the current agricultural land use.
- Requiring development of a WMP does not guarantee attainment of state water quality standards, which is the ultimate goal of any TMDL and Clean Water Act.

We respectfully suggest that DEP comment on the unintended consequences of this TMDL, including: (1) generalizing agricultural land use effects on water quality; (2) the change of land use from agriculture to developed area; and (3) possibility of not attaining state water quality standards as part of the implementation plan for this TMDL. Specifically, how does DEP reconcile that the amount of land used for agriculture is on the decline, but water quality is still impaired?

General Comment #4: Communicating Financial Implications. How can lines of communication regarding natural resource priorities and financial implications be improved?

Municipalities understand that protecting and restoring natural resources are important to healthy economies. Opening channels of communication with DEP to discuss natural resource priorities is important for both municipalities and landowners alike. A similar surrogate TMDL was adopted several years ago, which targeted impervious cover (IC) and primarily affected the more urbanized municipalities. The lessons learned through that stakeholder process would be helpful to incorporate here, including:

- **Expand the duration of time allowed for stakeholders to review and comment on the proposed TMDL.** By releasing this NPS TMDL around the year-end holidays, it has limited the amount of time that stakeholders, specifically the MS4 municipalities, have had to review, understand, coordinate and comment. **We respectfully request that the DEP allow additional time for review, as was allowed for the MS4 municipalities affected by the surrogate IC TMDL. Specifically, has DEP considered conducting outreach to potentially affected MS4 communities to discuss the TMDL, next steps, and implementation (i.e., WMP development and DEP expectations)? Furthermore, more time is needed to review the data DEP is relying on in this draft TMDL report (see Technical Comment #4).**
- **Complete the standard financial impact assessment that is required for rulemaking changes.** By approving this TMDL, there will be financial implications that have not been evaluated for stakeholders, specifically MS4-regulated municipalities and farms. A community like Windham with multiple watersheds will be required to spend upwards of \$200K to \$600K on WMP development without directly addressing the water quality standards. Implementation of the best management practices prescribed in the WMP can be even more costly – in the millions of dollars for implementation per WMP. For this reason, we respectfully request that DEP complete the financial impact assessment for this NPS TMDL since it serves as a rulemaking change for MS4 municipalities, like Windham, who will be required to develop WMPs with no guarantee of achieving water quality standards. **We respectfully request that DEP conduct financial impact assessment for this TMDL, as would be done for any other DEP rulemaking. Perhaps it could be done by DEP while providing more time for the affected communities to review and respond to this proposed draft statewide TMDL.**

Part B. Technical Comments

This section constitutes a summary of technical comments and suggestions regarding the NPS TMDL methodology and expand on the general comments (above).

Technical Comment #1: Use of MapShed. Has DEP used this model before in ME?

We understand that MapShed is a non-proprietary GIS-based watershed modeling system that was developed in PA and has been regionally calibrated in the northeastern US (circa NY). DEP used this 3-component model to generate the estimated loads for each watershed. Concerns regarding an overreliance on this model to estimate loads are as follows:



- **A model is only as good as the data input.** While a respectable amount of data was collected in the field and input into the model, many gaps still exist as follows:
 - While the land uses were reviewed in the field, DEP did not make any changes to the GIS-land use coverage. These two things are very different. Classification of true agricultural use is extremely difficult, as residential and conserved open space lands are often classified as agriculture through errors of commission. Obvious errors are present in the classification of agricultural land uses in the maps supplied for Windham in the TMDL draft.
 - The models assume all land uses have the same phosphorus and nitrogen loading coefficients, which ignores good housekeeping programs as well as the vast diversity in land uses within each subtype. In short, not all agricultural land uses (e.g., farms) are the same, nor do they have the same impact. For example, a hop farm in a meadow with a forested buffer does not have the same impact as a livestock farm along a moderately sloping riverbank.
 - The census of livestock input into the model was collected using remote sensing or field-based techniques. Community-based survey techniques may provide more accurate counts for model input.
- **A model must be carefully calibrated with all assumptions listed.** Not considering attainment streams (see Comment below), the methodology to calibrate the model is not clear. Based on a brief literature search, extensive efforts have been made to calibrate MapShed to NY conditions from the original model scenarios in PA. Whether or not the same level of effort may be required for Maine-based analysis, understanding the calibration methodology and assumptions would be greatly appreciated.

We respectfully request that DEP consider providing more information on limitations associated with the model and the data. Unless DEP plans to correct some of the observable errors before finalizing this TMDL, the model limitations, assumptions and calibration should be clearly expressed and included in these draft watershed reports. Because DEP will now be relying on other individuals and organizations for TMDL implementation, all information should be made available for review. Similar to the outreach that DEP conducted for the IC TMDL, we respectfully request that DEP reach out to each of the communities to correct the obvious errors in this draft TMDL report. This will allow (1) the communities more time to review, comment and understand the proposed TMDL; and (2) DEP more opportunity to gather and share information.

DEP has very technical expertise to share on the next steps for these 30 watersheds. If one-one outreach to the communities is not undertaken, how does DEP plan to share and distribute the watershed-specific information with for each watershed and community (e.g., municipalities, land trusts, conservation districts, etc.)? What does DEP see as their role in this data distribution effort?

In the event that other watersheds are added to the list of 30, how does DEP plan to make the public aware of the addition to the list of watersheds? What are the public notice requirements for adding watersheds to the list of 30 in the future?

Technical Comment #2: Selection of attainment streams. How did DEP choose the number and location of the 5 attainment sites?

The list of 5 attainment streams is not representative of streams throughout the state, nor is it a large enough sample size. Deriving the loading values by using MapShed for the attainment streams necessarily raises many of the same methodological challenges as when it is used for the allegedly NPS-impaired watersheds.

We respectfully request that DEP provide the basis for the number and location of attainment sites for this study. Will additional attainment sites be considered in the future, especially if additional streams are added to the existing list of 30 NPS-impaired watersheds?

Technical Comment # 3: Water quality (WQ) monitoring stations. Where are the WQ monitoring stations located within the watersheds? What was the rationale for choosing the monitoring station locations?

None of the WQ monitoring stations are labeled on the maps provided in the draft report. The current maps are grainy and have layout issues.

Unless the electronic data will be available immediately (url or ftp site), we respectfully request that these maps should be finished to professional standards and provided at higher resolution with adequate labeling to identify monitoring stations accordingly.

We understand that monitoring must be done where sampling is easily accessible (road crossings, public right-of-way, etc.).

What criteria did DEP use to select the monitoring stations? Were these based on ease of access or where the data would be most representative of the stream, NPS impacts or some other rationale? We respectfully request that DEP provide the rationale for choosing the locations for monitoring stations and comment on the limitations associated with site selection for each station (i.e., what would be the optimal location/conditions for a monitoring station).

Technical Comment # 4: WQ monitoring data.

Non-attainment for dissolved oxygen (DO) is based on data taken at some point between 2007-2011 for four (4) streams in Windham (Otter Brook, Colley Wright Brook, Inkhorn Brook and Black Brook). For each of these streams, only 1 or 2 monitoring stations were sampled. This data is not provided with the TMDL – it should be included as an appendix or made publically available immediately.

The most recent data used is now 5 years out of date. Much more monitoring needs to be performed in order to confirm impairment of these streams according to these parameters.

No date is given in the draft TMDL reports for the biological assessments conducted by DEP – all data should be publically available immediately.

A large amount of data is missing from the report for the Pleasant River. No years or stations showing DO impairment are given, and a significant amount of the periphyton data referenced is greater than 16 years out of date.

We respectfully request that (1) all data referenced in this draft TMDL report be provided immediately for review; and (2) additional time be provided for review and comment on the water quality data used to support this draft TMDL report. Furthermore, for future reference, instructions on how to access all water quality data should be provided, as well.

Technical Comment # 5: TMDL calculation and assumptions. Why are natural background sources omitted from DEP's TMDL calculation equation?

A TMDL is defined by EPA (<http://www3.epa.gov/region6/water/npdes/tmdl/definitions.htm>) as "the sum of the individual wasteload allocations (WLA) for point sources and load allocations (LA) for nonpoint sources and natural background" sources. In mathematics, it is expressed as the sum of 3 terms plus a margin of safety, such as:

$$TMDL = \sum WLA + \sum LA + (natural\ background\ sources) + (margin\ of\ safety)$$

DEP has included a margin of safety (MOS) in the TMDL equation on page 19 of the draft TMDL report, but not included the natural background sources. Nitrogen, phosphorus and sediment loading are omnipresent in many land uses and are not specific to agriculture. **We respectfully request that DEP comment on potential natural background sources for nitrogen, phosphorus and sediment. Please explain why the expression of natural background sources are not considered in this TMDL.**

Technical Comment # 6: TMDL implementation.

As stated in DEP's TMDL vision, a limitation of this surrogate TMDL is that there is no implementation plan for a surrogate TMDL like this proposed NPS TMDL.

We respectfully request that DEP provide information on how water quality standards (WQS) are expected to be attained through the proposed implementation. What happens if a WMP is developed as proposed in this draft TMDL report, but WQS are not achieved?

Town of Falmouth
Public Works Department
101 woods Road
Falmouth, Maine 04105
207-781-3919



January 29, 2016

Melissa Evers, Environmental Specialist
Maine Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017

Dear Ms. Evers,

This letter is in response to the open public comment period regarding the newly published Total Maximum Daily Load (TMDL) assessment. In the report, Hobbs Brook in Falmouth and Cumberland is listed as impaired with a listing cause due to Dissolved Oxygen levels.

As I understand, The Town of Cumberland is also providing comments on this subject with the technical assistance of Integrated Environmental Engineering. In addition, comments are also being provided regarding Hobbs Brook (and other streams) from the Cumberland County Soil and Water Conservation District(CCSWCD)/Interlocal Stormwater Working Group(ISWG).

Based on Falmouth's review of the TMDL, and review of draft comments being provided by the aforementioned groups, Falmouth offers the following:

- Falmouth is in concurrence with the concerns outlined in the ISWG draft comment letter dated January 15, 2016. In particular, the following areas are of most concern that are worthy of additional comment:
 - The expectation that the municipality is the 'enforcer' for state and water quality standards. There are no ways or means (funding, staffing, local ordinances, etc.) in place to achieve this.
 - The financial implications are significant when developing and implementing a watershed management plan. It is my understanding that a financial impact assessment may be required in order to facilitate the proposed rule change (approving the TMDL report).
 - The impacts on family farming activities are unknown at this time, however, Falmouth is supportive of these activities (centuries-old land use, preserving large tracts of land, not developing them into larger impervious surfaces, and not introducing other sources of non-point pollution).
- More importantly, Falmouth is concerned that the methodology and techniques utilized to classify Hobbs Brook may not be fully suitable.
 - Modeling techniques are just that, a model, and may not show actual field conditions. This is due to the utilization of 'assumptions'. It appears the models/assumptions apply to:
 - Agricultural Land Use

- Sediment Load
- Livestock Estimates
- Nitrogen and Phosphorous Loads

It also appears the modeling may not account for stream buffers in excess of 75-feet.

- There were only 5 streams utilized to determine the average TMDL amounts, which is the baseline for attainment or non-attainment. This small sampling does not represent a full outlook of stream qualities throughout the State and the amounts/averages used change the results/outcome when comparing it to Hobbs Brook.

With these concerns present regarding the methodology and techniques associated with the assessment of Hobbs Brook, Falmouth respectfully requests that MaineDEP delay/defer the approval and or adoption of this TMDL until further analysis is performed that supports and confirms the modeling results.

Respectfully Submitted,



Jay Reynolds
Public Works Director

Attachment: ISWG/CCSWCD Memo

Cc: Nathan Poore, Town Manager

Town of Windham

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January 25, 2016

VIA EMAIL

Melissa Evers, Environmental Specialist
Maine Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017

Re: Maine Statewide Nonpoint Source (NPS) Pollution TMDL

Ms. Evers:

This letter is in response to the notice seeking public comment on a Total Maximum Daily Load (TMDL) report for thirty (30) waters in the State of Maine with dissolved oxygen and/or aquatic life impairments associated with NPS pollution. Of the thirty (30) waters included in the report, eight (8) are in Cumberland County, and five (5) are partially or completely in Windham, more than any other community in the state.

Because Windham is subject to the DEP MS4 permit, which has the potential to make TMDLs enforceable, at least in the urbanized area, the proposed TMDL report presents a number of serious concerns and questions for the Town:

1. How were the waters/watersheds selected? What process and/or criteria did DEP use in its selection of the waters/watersheds?

If this report is approved, Windham would be faced with developing four (4) new watershed management plans, which could cost an estimated \$200,000 to \$600,000 not including remediation and watershed enhancements identified in the WMP, and still not guarantee that Clean Water Act standards could be achieved.

The Town needs to understand the DEP's criteria for watershed selection to prevent or avoid having additional watersheds added to the NPS TMDL list, as is intended and/or indicated by DEP on the bottom of page 5 "Future TMDL Applicability."

Melissa Evers, Environmental Specialist
Maine Department of Environmental Protection
Re: Maine Statewide Nonpoint Source (NPS) Pollution TMDL

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We respectfully request that DEP provide information on the process and criteria for selecting watersheds affected by this NPS TMDL.

2. What is DEP's protocol for coordinating and proactively communicating with municipalities and landowners on these TMDL efforts? For communities subject to MS4 permit requirements (such as Windham, Gorham, Cumberland, Falmouth, Lewiston, Berwick, etc.), coordination and communication with DEP would be helpful:
 - To allow for local input on factors that may affect sampling results, watershed description (the Inkhorn Brook watershed is in Windham and Westbrook, not Gorham; the Pleasant River watershed is in Raymond, Gray, and Windham), land use data (e.g., ensuring agricultural use designations are appropriate) and other parameters for the model/loading analysis (e.g., presence of local overboard discharge permits, sanitary sewers, etc.);
 - To raise awareness of watershed priorities on the local level;
 - To improve communication regarding DEP efforts and priorities to conserve, protect and restore each community's natural resources; and
 - To avoid the element of surprise, specifically for municipalities that may be compelled to comply with this TMDL and develop a WMP due to MS4 permit applicability.

Because these points are analogous to the initial steps in developing a WMP, and if WMP development is DEP's end goal for this TMDL, it would seem important to coordinate and communicate with the municipality during these efforts (e.g., watershed selection, sampling, summaries, etc.).

We respectfully request that DEP coordinate and communicate future watershed sampling efforts with stakeholders, specifically the MS4 communities through the responsible party listed in the MS4 Annual Progress Reports sent to DEP each year.

3. Has DEP evaluated the possible unintended consequences of this TMDL and other regulatory requirements that could be contributing? For example:
 - There is a tremendous disparity between non-regulated and MS4-regulated municipalities that are compelled to comply with this TMDL (e.g., Windham, Gorham, Cumberland, Falmouth, Lewiston, Berwick, etc.).
 - Because of MS4 applicability for this TMDL, it should be viewed as a rulemaking change and require financial impact assessment by DEP to understand the impacts to affected municipalities and landowners alike.

- Furthermore, MS4-regulated communities are expected to become the “enforcer” for state water quality standards that the USEPA (through the Clean Water Act) has delegated to DEP, without providing the municipality with the means (e.g., staffing, funding, other resources, etc.) to effectively communicate and enforce these requirements (i.e., develop and implement WMPs) within the community.
- On Page 11, the proposed TMDL identifies “NPS runoff primarily from anthropogenic activities” as the source of impairment within each watershed. How DEP goes from this general statement to specifically targeting “agricultural and some suburban land uses” as the cause of impairment is not clear.
- In MS4 communities where the TMDL will be enforceable, family farms could be further imperiled if WMP-identified requirements are too costly for most to implement. Some of the farms identified in these watersheds will not be eligible for Farm Bill funding or technical assistance through USDA Farm Service Agencies (e.g., NRCS, Rural Development, etc.). Many of these farmers may have no choice but to sell their land for development rights, which in the end may be more deleterious to the watershed than the current agricultural land use.
- Requiring development of a WMP does not guarantee attainment of state water quality standards, which is the ultimate goal of any TMDL and Clean Water Act.

We would also respectfully suggest that DEP comment on the unintended consequences of this TMDL, including (1) generalizing agricultural land use effects on water quality; (1) the change of land use from agriculture to developed area; and (2) possibility of not attaining state water quality standards as part of the implementation plan for this TMDL.

4. How can lines of communication regarding natural resource priorities and financial implications be improved? Municipalities like Windham understand that protecting and restoring natural resources are important to healthy economies. Opening channels of communication with DEP to discuss natural resource priorities is important for both municipalities and landowners alike. A similar surrogate TMDL was adopted several years ago, which targeted impervious cover (IC) and primarily affected the more urbanized municipalities. The lessons learned through that stakeholder process would be helpful to incorporate here, including:
 - Expand the duration of time allowed for stakeholders to review and comment on the proposed TMDL. By releasing this NPS TMDL around the year-end holidays, it has limited the amount of time that stakeholders, specifically the MS4 municipalities, have had to review, understand, coordinate and comment.

We respectfully request that the DEP allow additional time for review, as was allowed for the MS4 municipalities affected by the surrogate IC TMDL.

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Maine Department of Environmental Protection
Re: Maine Statewide Nonpoint Source (NPS) Pollution TMDL

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- Complete the standard financial impact assessment that is required for rulemaking changes. By approving this TMDL, there will be financial implications that have not been evaluated for stakeholders, specifically MS4-regulated municipalities and farms. A community like Windham with multiple watersheds will be required to spend upwards of \$200,000 to \$600,000 on WMP development alone, without directly addressing the water quality standards. Implementation of the best management practices prescribed in the WMP can be even more costly ó in the millions of dollars for implementation per WMP.

For this reason, we respectfully request that DEP complete the financial impact assessment for this NPS TMDL since it serves as a rulemaking change for MS4 municipalities, like Windham, who will be required to develop WMPs with no guarantee of achieving water quality standards.

Thank you for the opportunity to provide public comment. We would appreciate and welcome DEP's response and any questions with regard to the Town's comments.

Sincerely,



Anthony T. Plante
Town Manager



TOWN OF GRAY

24 Main Street
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dcabana@graymaine.org

1738
First Settled

January 27, 2016

VIA E-Mail and U.S.P.S.

Melissa Evers, Environmental Specialist
Maine Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017

RE: Maine Non-Point Source Pollution (NPS)
Comments regarding Total Maximum Daily Load (TMDL)
Pleasant River Watershed in Gray, Raymond, and Windham

Dear Ms. Evers,

I write on behalf of the Town of Gray in response to public comment on the TMDL report for thirty (30) waters in the State of Maine with dissolved oxygen and/or aquatic life impairments with NPS pollution. Given that well over half of the municipality of Gray is in the Pleasant River Watershed, we are concerned about the significant potential implications of the draft TMDL summary.

Although Gray is not currently required to be regulated by Maine's MS4 standards, consistent population increases over the past few decades indicate this may change in the near future. The Town is concerned once it is subject to MS4 requirements, that the many MS4 permitting implications will become effective immediately. The Town of Gray will need ample time to ensure that we are adequately prepared in the event that the Town is required to adhere to MS4 standards.

The Town first became aware of the TMDL summary and its implications earlier this week when we received a copy of the 1/25/16 letter from Windham's Town Manager. Upon researching the newly discovered issue, we were surprised by the extensive implications, as well as, the commenting period ending this Friday. We are grateful that Windham kindly made us aware of the draft TMDL summary and support the concerns raised in their letter.

Although we have not had ample time to review all of the inter-related elements of the draft TMDL Pleasant River summary that affect Gray, it is clear that several sub-watersheds of the Pleasant River are included such as the Thayer Brook. This sub-shed includes the entirety of Gray's Village and there are a host of implications associated with implementing the TMDL pollutant load reductions. For example, Table 8 (page 14) details that the Thayer Brook watershed targets three specific TMDL reductions; sediment load (59%), nitrogen load (35%), and phosphorus load (34%).

Melissa Evers, Environmental Specialist
Maine Department of Environmental Protection
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One of the few effective means to work towards these TMDL target pollutant load reductions is to implement a watershed plan with specific technical standards. As Windham's 1/25/16 letter points out, there are significant costs incurred in crafting such plans. Even after watershed plans are established, there are on-going costs of administering the watershed plans. The budgetary implications for Gray to implement and administer watershed standards for more than half the Town are immense and need to be planned for well in advance when and/or if they are to be required.

Like many predominantly rural Cumberland County municipalities, Gray has a long-standing history of agricultural and farming practices that extend back many generations. The Town is on the "front lines" of working with individual residents, one by one, to practically implement increasingly stringent standards for uses on their property. While we respect the intentions of the Federal Clean Water Act and MaineDEP's administrative efforts, we submit that relatively small communities such as Gray need sufficient time and resources to meet the constantly changing role of government and additional regulations.

Particularly over the past decade or so, Gray has consistently attempted to work collaboratively to foster a positive rapport with MaineDEP staff. Due to this, the Town of Gray is both surprised and concerned that MaineDEP did not take more pro-active steps to keep all of the effected Towns' staff apprised of the TMDL summaries. Given that the the Pleasant River watershed covers portions of three municipalities together with the long-term implications, we would have expected MaineDEP to, at a minimum, ask for a meeting with *all three* Towns to outline the status and parameters of this matter. FEMA, for instance, has done an excellent job from our perspective of ensuring that Town staff is apprised of relevant information regarding the forthcoming updated floodplain maps; we have found this to be extremely helpful.

Lastly, we thank you for the opportunity to provide input at this stage. Ideally, we would have liked to have more thoroughly reviewed the draft TMDL summaries. However, due to the limited time remaining in the comment period, we wanted to ensure our initial input was received. If you or any MaineDEP staff has follow up questions or clarifications, please do not hesitate to contact me here at Gray Town Hall.

Sincerely,


Deborah Cabana, Town Manager

Cc: Gray Town Council
Mr. Anthony Plante, Windham Town Manager
Mr. Don Willard, Raymond Town Manager

Town of Gorham

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January 27, 2016

Melissa Evers, Environmental Specialist
Maine Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017

Re: Maine Statewide Nonpoint Source Pollution TMDL.

Dear Ms. Evers:

This letter is intended to respond to the public comment period for Total Maximum Daily Load (TMDL) report for 30 water bodies in the State of Maine with dissolved oxygen and for aquatic life impairments associated with NPS. In the report, three (3) of the water bodies are listed as being in Gorham. However, Inkhorn Brook and the Pleasant River are not located in Gorham; only Mosher's Brook is within the Town of Gorham.

The proposed TMDL applies to a 2.03 mile section of Mosher Brook with the entire area impacting 1.26 square miles or 806 acres. Approximately 40% is forested area and 36% of the Mosher Brook watershed is comprised of agricultural land with actively working farms potentially impacted by new regulations. Any new regulations could severely impact these landowners who are already struggling to continue as working farms, potentially forcing them to sell their land for residential or commercial development. **Would you please advise me about the efforts that have been made to communicate directly with landowners that could be adversely impacted by these new regulations?**

In addition, the Town of Gorham would like to know what process and criteria was used to select the particular watersheds to study. **Please provide me with a copy of that information.**

The Town of Gorham is very concerned with the report. If the TMDL is approved for the Mosher's brook watershed, the Town will be faced with a new unexpected expense, estimated between \$50,000 and \$150,000. Those funds will come from the property tax payers in our community, adding even more pressure on Farmers who are in the Mosher Brook watershed to sell out for residential or commercial development.

In considering the significant impact that these new regulations may have, does the DEP engage in a cost/benefit analysis to determine whether the cost of the regulations is greater than the benefits? **If that analysis was completed please provide a copy of that report to me.**

Finally, the report was released near the end of the year when many people are preoccupied with the pending holidays. That almost certainly limited the ability of landowners who will be adversely impacted by any new regulations to understand their impact and respond, as well as not providing sufficient time for the impacted municipalities to review the report. **I am requesting that the DEP provide additional time for a reasonable review period to be undertaken.**

Thank you.

Sincerely,

A handwritten signature in dark ink, appearing to read "David Cole". The signature is fluid and cursive, with a long horizontal stroke at the end.

David Cole
Town Manager

CC: Senator Amy Volk
Representative Linda Sanborn
Representative Andrew McLean
Gorham Town Council

Albert Mosher
424 Mosher Road
Gorham, Maine 04038

MEMO
via email

TO: Melissa Evers, Environmental Specialist
Maine Department of Environmental Protection (DEP)

CC: Cumberland County Soil & Water Conservation District

FROM: Albert Mosher, Farmer

RE: Maine Statewide Nonpoint Source (NPS) Pollution TMDL

I would like to thank DEP for this opportunity to provide comments for your consideration as it pertains to the draft of the Total Maximum Daily Load (TMDL) report for Mosher Brook the Town of Gorham with dissolved oxygen and/or aquatic life impairments associated with NPS pollution.

I am 87 years old, and operate the Mosher Farm in Gorham. I produce feed hay and sweet corn on the farm. I want to tell you about my concerns regarding the conclusions of your TMDL report, and provide information regarding Mosher Brook.

- The farm maintains a 700-800 foot undisturbed vegetated set back area from the Mosher Brook.
- No manure is used on the farm since the cows were sold in 1987.
- No fertilizer is used on the surrounding hayland for the last 15 years.
- The Brook does not flow year-round. In summer, it frequently runs dry.
- I believe most of the pollution getting to the Brook is coming from Route 237.

I'd like to ask what process and/or criteria were used to in the selection of the Mosher Brook watershed? In the proposed TMDL report, at least eight (8) of the 30 watersheds are located within the Greater Portland area. Gorham, like Windham, is subject to the DEP's MS4 permit, which has the potential to make this TMDL enforceable by the town.

I respectfully request that DEP provide information on the process and criteria for selecting the watersheds affected by this NPS TMDL.

General Comment #1: Coordination of Watershed Sampling. What is DEP's protocol for coordinating and proactively communicating with landowners on these TMDL efforts?

For communities that are subject to MS4 permit requirements (e.g., Windham, Gorham, Cumberland, Falmouth, Lewiston, Berwick, etc.), coordination and communication with DEP would be helpful for the following reasons:

- To allow for local input on factors that may affect sampling results, watershed description (e.g., see comment above regarding correction to Inkhorn and Pleasant river communities), land use data (e.g., ensuring agricultural use designations are appropriate) and other parameters for the model/loading analysis (e.g., presence of local overboard discharge permits, sanitary sewers, etc.);
- To raise awareness of watershed priorities on the local level;
- To improve communication regarding DEP efforts and priorities to conserve, protect and restore each community's natural resources; and
- To avoid the element of surprise, specifically for municipalities that may be compelled to comply with this TMDL and develop a WMP due to MS4 permit applicability.

Because these points are analogous to the initial steps in developing a WMP, and if WMP development is DEP's end goal for this TMDL, it would seem important to coordinate and communicate with the municipality during these efforts (e.g., watershed selection, sampling, summaries, etc.).

I respectfully request that DEP provide the protocol for coordinating and proactively communicating with landowners on these TMDL efforts (selection, sampling, outreach, etc.). If no protocol exists, please comment on how DEP plans to coordinate and communicate future watershed sampling efforts with stakeholders, specifically the agricultural communities.

Also, in the event that other watersheds are added to the list of 30, how does DEP plan to make the public aware of the addition to the list of watersheds? What are the public notice requirements for adding watersheds to the list of 30 in the future?

General Comment #2: Unintended Consequences. Has DEP evaluated the possible unintended consequences of this TMDL and other regulatory requirements that could be contributing?

For example:

- On Page 11, the proposed TMDL identifies "NPS runoff primarily from anthropogenic activities" as the source of impairment within each watershed. How DEP goes from this general statement to specifically targeting "agricultural and some suburban land uses" as the culprit for impairment is not clear.
- In town where the TMDL will be enforceable, the **end of the family farm may become a reality** if WMP-identified requirements are too costly for most to implement. Some of the farms identified in these watersheds will not be eligible for Farm Bill funding or technical assistance through USDA Farm Service Agencies (e.g., NRCS, Rural Development, etc.). Many of these farmers may have no choice but to sell their land for development rights, which in the end may be more deleterious to the watershed than the current agricultural land use.
- Requiring development of a WMP does not guarantee attainment of state water quality standards, which is the ultimate goal of any TMDL and Clean Water Act.

I respectfully suggest that DEP comment on the unintended consequences of this TMDL, including: (1) generalizing agricultural land use effects on water quality; (2) the change of land use from agriculture to developed area; and (3) possibility of not attaining state water quality standards as part of the implementation plan for this TMDL. Specifically, how does DEP reconcile that the amount of land used for agriculture is on the decline, but water quality is still impaired?

General Comment #3: Communicating Financial Implications. How can lines of communication regarding natural resource priorities and financial implications be improved?

I understand that protecting and restoring natural resources are important. Opening channels of communication with DEP to discuss natural resource priorities is important for both municipalities and landowners alike. The lessons learned through a stakeholder process would be helpful to incorporate here, including:

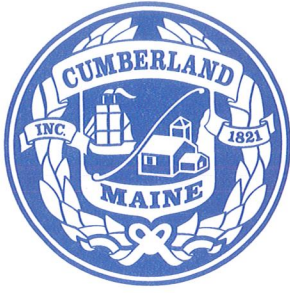
- **Expand the duration of time allowed for stakeholders to review and comment on the proposed TMDL.** By releasing this NPS TMDL around the year-end holidays, it has limited the amount of time that stakeholders, specifically the MS4 municipalities, have had to review, understand, coordinate and comment. *I respectfully request that the DEP allow additional time for review.*
- **Complete the standard financial impact assessment that is required for rulemaking changes.** By approving this TMDL, there will be financial implications that have not been evaluated for stakeholders, specifically the agriculture community. I *respectfully request that DEP conduct a financial impact assessment for this TMDL, as would be done for any other DEP rulemaking. Perhaps it could be done by DEP while providing more time for the affected communities to review and respond to this proposed draft statewide TMDL.*

Thank you for your time and consideration of this matter. I look forward to hearing from you soon,

Sincerely,



Albert Mosher
424 Mosher Road
Gorham, ME 04038



TOWN OF CUMBERLAND, MAINE

290 Tuttle Road

Cumberland Center, Maine 04021-9321

Telephone (207) 829-5559 • Fax (207) 829-2214

January 26, 2016

Via email Melissa.evers@maine.gov

Ms. Melissa Evers
Maine DEP
17 State House Station
Augusta, ME 04033-0017

Subject: Maine Statewide Nonpoint Source (NPS) Total Maximum Daily Load (TMDL) Document

Dear Ms. Evers:

The Town of Cumberland has reviewed the Maine Department of Environmental Protection document titled, "Statewide Nonpoint Source (NPS) Pollution TMDL" and is providing the following comments on the Hobbs Brook Appendix (Appendix 7-21) and the overall core document. The following are our comments on the Hobbs Brook Appendix:

1. The section titled Water Quality Data Analysis does not provide any specific water quality data nor any narrative describing how or why Hobbs Brook exhibits an aquatic life impairment. Please summarize the data that indicates the water is impaired. In particular, there are no maps in the document that show where water sampling has been conducted. The only data station referenced in the text is RPSHB05, which was assessed for dissolved oxygen, but this location is not shown on any maps. The text describes this location to be just upstream of the Gray road crossing (at source ID 4). Please update the maps to show the water quality sampling locations.
2. Has any sampling and analysis ever been done to document the phosphorous and nitrogen concentrations in the stream?
3. Table 2 Pollution Source ID Assessment for the Hobbs Brook Watershed lists 10 potential pollution source areas (ID numbers 1, 2, 3, 4, 6, 10, 11, 12, 13, and 14). These observations seem to be the basis for the modelling which provides the estimated pollutant loads for total phosphorous, total nitrogen and sediment. What were the

results for ID numbers 5, 7, 8, and 9? Were the observations from ID locations 5, 7, 8, and 9 incorporated into the estimates?

4. Please describe how the Habitat assessment, which was conducted on a 100 to 200 foot segment of Hobbs Brook near the DEP sampling station, was used in developing the pollutant reduction loading required for sediment, phosphorous and nitrogen. It does not seem reasonable to have selected the only segment that is immediately downstream of a major road crossing as the only segment that factors into the habitat assessment.
5. There are stream segments on Figure 4 that have neither more than nor less than 75 feet of vegetative buffer. Please describe how the model accounted for these segments (were they modelled assuming more than, less than or equal to 75 feet of vegetative buffer?).
6. The modelling showed that 71% of the sediment load is from hay and pasture lands. Were accommodations made in the modelling to account for the 1/3 of the stream areas that have more than 75 feet of vegetative buffer (which would remove sediment contributions)?
7. In the discussion of the Livestock estimates (which provide the basis for the 42% of the estimated nitrogen load and 44% of the estimated phosphorous load) source ID #4 is assumed to have 50 cows, but is part of the farm that is downstream (Source ID #6), where no livestock was observed. Source ID #4 appears to be coincident with the Maine DEP data station, and coincident with a portion of the stream that has more than 75 feet of vegetative buffer (Figure 4). Twenty seven (27) horses were observed at the other pollution source ID locations.
 - a. Was the modeling methodology for the nitrogen and phosphorous loads based on the 50 assumed cows and 27 horses?
 - b. If so, did the modelling account for reduced loads from the segments that have more than 75 foot vegetative buffer?
 - c. Please describe how the hay/pasture inputs contributed to nitrogen and phosphorous loads, in particular addressing any potential for doubling counting the load to due to the farm animals that are present. (Note that farm animals and hay/pasture lands each account for 44% of the phosphorous contributions).
 - d. In general, for Hobbs Brook, we have a concern that the required nitrogen and phosphorous reductions presented in Table 8 are due mostly to observations made at one location in the lower third of the watershed, where the number of farm animals present was estimated.

In addition, the Town is providing the following comment on the core document:

This document is titled, "Maine Statewide Total Maximum Daily Load Nonpoint Source Pollution". The title implies that the document does not address any point source pollution, and therefore there should be no wasteload allocations in this document. In fact, the text in the TMDL Allocations section (Page 19) goes on to say that there are no MEPDES regulated discharges in any of the 30 watersheds except for stormwater discharges regulated under the MS4 program for two of the watersheds. The text also says that these two MS4s contribute to minimal portions of the watersheds of Jock Stream and West Brook Fall (in Sabattus and South Berwick).

The discussion of Load Allocations (for non MEPDES contributions) vs. Wasteload Allocations (for MEPDES contributions) states that "TMDL=WLA=LA". This section states that it is not feasible to separate the loading contributions from nonpoint sources, non-regulated stormwater, natural background and MEDPES regulated sources. When in fact it is feasible, because the document already described the MEPDES permit holders) therefore the point source contributions are zero for all of the watersheds except Jock Stream, which is minimal. Therefore the equation should be: $TMDL = LA + WLA$ where $WLA = Zero$. Please correct the discussion of the Load Allocations vs. Wasteload Allocations. Please also provide more specific descriptions of any measures that need to be taken by entities subject to MEPDES permits, or be explicit in describing that no measures need to be taken by MEPDES permit holders. The descriptions should be included in each Watershed-specific appendix.

We appreciate the opportunity to comment on this document.

Sincerely,

A handwritten signature in blue ink, appearing to read "W. Shane", with a long horizontal flourish extending to the right.

William Shane

Town Manager, Cumberland, Maine

Evers, Melissa

From: Kristie Rabasca <krabasca@integratedenv.com>
Sent: Friday, January 29, 2016 11:28 AM
To: Evers, Melissa
Cc: Jon St. Pierre (jstpierre@sbmaine.us); Perry Ellsworth
Subject: Comments on the Maine Statewide TMDL for Nonpoint Source Pollution

Dear Ms. Evers,

Please note that page 20 of the Maine Statewide TMDL for NPS Pollution has some text that conflicts with Appendix 7-30 for West Brook.

Page 20 states that West Brook falls within the boundaries of South Berwick which is subject to coverage under Maine's general permit for municipal separate stormwater sewer systems (MS4s). It is true that portions of South Berwick are subject to the MS4 General Permit. However, the West Brook watershed boundary (Figure 3 in Appendix 7-30) touches the northeast corner of the Town of South Berwick but does not include any part of the Town of South Berwick (let alone the regulated area of South Berwick which is on the west side of Town).

Please correct the language on page 20. Please also note that this portion of the Town of South Berwick is not regulated under the MS4 General Permit and the Town would like the opportunity to review the watershed boundary if you find that the boundary was incorrect for some reason.

In addition, we would like to reiterate the comment provided by the Town of Cumberland which is as follows:

This document is titled, "Maine Statewide Total Maximum Daily Load Nonpoint Source Pollution". The title implies that the document does not address any point source pollution, and therefore there should be no wasteload allocations in this document. In fact, the text in the TMDL Allocations section (Page 19) goes on to say that there are no MEPDES regulated discharges in any of the 30 watersheds except for stormwater discharges regulated under the MS4 program for two of the watersheds. The text also says that these two MS4s contribute to minimal portions of the watersheds of Jock Stream (discharges from Sabattus MS4 areas) and West Brook (mistakenly identified to be from South Berwick MS4).

The discussion of Load Allocations (for non MEPDES contributions) vs. Wasteload Allocations (for MEPDES contributions) states that "TMDL=WLA+LA". This section states that it is not feasible to separate the loading contributions from nonpoint sources, non-regulated stormwater, natural background and MEDPES regulated sources. When in fact it is feasible, because the document already described the MEPDES permit holders, therefore the point source contributions are zero for all of the watersheds except Jock Stream, which is minimal. The TMDL equation should be: $TMDL = LA + WLA$ where $WLA = Zero$. Please correct the discussion of the Load Allocations vs. Wasteload Allocations. Please also provide more specific descriptions of any measures that need to be taken by entities subject to MEPDES permits, or be explicit in describing that no measures need to be taken by MEPDES permit holders. The descriptions should be included in each Watershed-specific appendix.

Please contact me if you have any questions on this comment.



Kristie L. Rabasca, P.E., LEED AP BD +C

12 Farms Edge Road
Cape Elizabeth, Maine 04107
(207) 415-5830
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Don Willard
Town Manager
don.willard@raymondmaine.org

Town Office 655-4742
Fax 655-3024

Assessing Extension 125
Code Enforcement Extension 142

Fire/Rescue/Dispatch
(non-emergency) 655-7851

Public Works Garage
655-2018

January 28, 2016

VIA E-Mail and U.S.P.S.

Melissa Evers, Environmental Specialist
Maine Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017
melissa.evers@maine.gov

RE: Maine Non-Point Pollution (NPS)
Comments regarding Total Maximum Daily Load (TMDL)
Pleasant River Watershed in Gray, Raymond, and Windham

Dear Ms. Evers:

I write on behalf of the Town of Raymond in response to public comment on the TMDL report for thirty (30) waters in the State of Maine with dissolved oxygen and/or aquatic life impairments with NPS pollution.

Although Raymond is not currently required to be regulated by Maine's MS4 standards, consistent population increases over the past few decades indicate this may change in the near future. The Town is concerned that once it is subject to MS4 requirements, the many MS4 permitting implications will become effective immediately. The Town of Raymond will need ample time to ensure that we are adequately prepared in the event the Town is required to adhere to MS4 standards.

The Town first became aware of the TMDL summary and its implications earlier this week when we received a copy of the 01/25/16 letter from Windham's Town Manager. Upon researching the newly discovered issue, we were surprised by the extensive implications as well as the commenting period ending this Friday. We are grateful that Windham kindly made us aware of the draft TMDL summary and support the concerns raised in their letter.

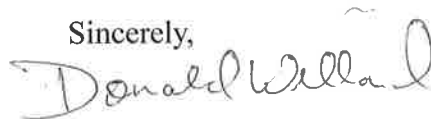
Although we have not had ample time to review all of the inter-related elements of the draft TMDL Pleasant River summary that affect Raymond, it is clear that several sub-watersheds of the Pleasant River are included, such as Thayer Brook.

Melissa Evers, Environmental Specialist
Maine Department of Environmental Protection
Page 2

Particularly over the past decade or so, Raymond has consistently attempted to work collaboratively to foster a positive rapport with Maine DEP staff. Due to this, the Town of Raymond is both surprised and concerned that Maine DEP did not take more pro-active steps to keep all the effected Towns' staff apprised of the TMDL summaries. Given that the Pleasant River watershed covers portions of three municipalities, together with the long-term implications, we would have expected Maine DEP to, at a minimum, ask for a meeting with *all three* Towns to outline the status and parameters of this matter. FEMA, for instance, has done an excellent job, from our perspective, of ensuring that Town staff is apprised of relevant information regarding the forthcoming updated floodplain maps; we have found this to be extremely helpful.

Lastly, we thank you for the opportunity to provide input at this stage. Ideally, we would have liked to have more thoroughly reviewed the draft TMDL summaries. However, due to the limited time remaining in the comment period, we wanted to ensure our initial input was received. If you or any Maine DEP staff have follow up questions or clarifications, please do not hesitate to contact me here at Raymond Town Hall.

Sincerely,



Donald Willard
Town Manager

cc: Raymond Board of Selectmen
Anthony Plante, Windham Town Manager
Deborah Cabana, Gray Town Manager

DM/msq



PUBLIC WORKS DEPARTMENT

David A. Jones, P.E., Director

January 29, 2016

Melissa Evers
Maine DEP
17 State House Station
Augusta, ME 04033-0017

Dear Ms. Evers;

On behalf of the City of Lewiston, I am submitting the following comments regarding the draft Maine Statewide Nonpoint Source (NPS) Pollution Total Maximum Daily Load (TMDL) report that was recently distributed for review.

General Comments regarding the No Name Brook and Stetson Brook Study:

1. The draft TMDL summary for No Name Brook states there are no TMDL reductions necessary for the NPS pollutants studied (Phosphorus, Nitrogen and Sediment). Likewise, the TMDL summary for Stetson Brook shows no TMDL reductions necessary for Phosphorous and Sediment and only an 8% reduction in Nitrogen. Given these findings, it is unclear as to the necessity of this TMDL study for No Name Brook and Stetson Brook and potential regulations that may come from it.

The report should clarify what is expected of streams such as these that are included in the TMDL study but do not require TMDL reductions. Furthermore, since the study shows these streams have minimal impairment, if any at all, they should not be included on the NPS priority list. At a minimum, there should be better communication between DEP and communities as to what it means for streams to be on the NPS impaired list.

2. It was unfortunate that the notification to submit a request to add or remove a waterbody from the NPS Priority Watershed list was sent out in October 2015, 3 months before the draft NPS TMDL reports were distributed for review. The TMDL reports should have been distributed first so interested parties could review the results and then submit their request for adding or removing a waterbody from the list.

Specific Comments to No Name Brook TMDL Study:

1. Table 2 is missing data from site ID's #7 and #9. Since these sites are identified on Figure 3 on the following sheet, they should be included in the Pollution Source ID table.
2. The location for Pollution Source ID #2 is incorrectly shown on Figure 3.
3. Pollution Source ID #43 is not shown on the Figure 3 map.
4. The impaired stream name needs to be inserted in the Future Loading paragraph.

Specific Comments to Stetson Brook TMDL Study:

1. Figures 6 and 7 and the associated tables are not formatted correctly.

Please do not hesitate to contact me with any questions or comments regarding this letter.

Sincerely,



Justin Early, P.E.
Project Engineer
City of Lewiston

Cc: David Hediger, City Planner/Deputy Director Planning and Code Enforcement
David Jones, Director of Public Works

Midcoast Conservancy

36 Water Street, PO Box 289, Wiscasset, Maine 04578

207.389.5150

www.midcoastconservancy.org

TO: Melissa Evers, Stream Specialist, Maine Department of Environmental Protection

FROM: Garrison Beck, Watershed Protection Specialist, Midcoast Conservancy

DATE: January 29, 2016

RE: Maine DEP Draft Nonpoint Source Total Maximum Daily Load

Midcoast Conservancy is a new conservation organization formed on January 1, 2016 from the merge of four organizations: the Sheepscot Wellspring Land Alliance, Sheepscot Valley Conservation Association, Damariscotta Lake Watershed Association, and Hidden Valley Nature Center. Our mission is to support and promote healthy lands, waters, wildlife, and people in the mid-coast through conservation, education, and recreation. Our service area includes all of the Sheepscot River and Damariscotta Lake watersheds.

Included in the Maine Department of Environmental Protection's (DEP) Draft Nonpoint Source (NPS) Total Maximum Daily Load (TMDL) are six water bodies which are in the Sheepscot River watershed and of particular concern to Midcoast Conservancy. These six water bodies are: Carlton Brook, Chamberlain Brook, Choate Brook, Dyer River, Meadow Brook, and Trout Brook. Midcoast Conservancy respectfully submits the following commentary to be taken under consideration for the Maine DEP NPS TMDL.

1. Watershed Source Assessment

- a. In-field assessments were conducted during only one day for each watershed. This presents issues of data accuracy, particularly in regards to estimated livestock inventory. Multiple livestock estimates are based on either the number of animals observed that day, or on the capacity of certain barns, stables, stalls, paddocks, or other structures. As phosphorus loads may be greatly affected by livestock, accuracy of this data is paramount to determining whether or not phosphorus reductions are warranted.
- b. The field assessments for the six watersheds listed above were all conducted in early July, 2012. In the Pollution Source ID Assessments (Appendix 7, Table 2), hay fields were identified in many of these watersheds. Natural manure or artificial fertilizers are typically applied to active hay fields in late fall, after the last hay crop has been harvested. Without directly consulting landowners, it is nearly impossible to know whether natural or artificial fertilizers are applied to hay fields during a field assessment in early July.

- c. We respectfully recommend DEP develop more accurate estimates of livestock presence and natural or artificial fertilizer use at identified properties with livestock or active hay fields and revise Total Phosphorous Loads to reflect new information.

2. Accuracy of Land Use and Satellite Imagery

- a. Land use GIS data may not be accurate enough to provide reliable information at the scale of these small watersheds. Further, this data is not confirmed with on the ground information. This may lead to issues when calculating Load Estimates.
- b. Forestry activities may contribute significantly as a source of pollutants; however, land use maps generalize forested areas. Therefore, forests have relatively little impact on current pollutant load estimates. Anything other than a clear cut would be reflected as a complete forest using land use data, foregoing the possibility of woods roads and trails below the forest canopy.
- c. Unforested, green blocks of land are also primarily indicated as agriculture in the land use data. This is a broad generalization which does not account for differences between inactive fields which may contribute little or no pollutants, and active high use pastures which may have livestock grazing and fertilization.
- d. In the western region of the Carlton Brook watershed (Appendix 7-8, Figure 1), this land use map shows a relatively large block of developed land. However, close inspection of satellite imagery clearly shows this is agricultural land. As developed land is listed as a primary land use which may impact water quality in this appendix, this highlights the risk involved in relying on this remotely sensed data.
- e. We respectfully recommend a close review of land use data as it compares to current satellite imagery for accuracy, primarily in areas where large blocks of high-impact land uses may affect water quality.

3. Focus on Agriculture

- a. Runoff from agricultural sources is listed as the most likely sources of NPS pollution in all six of the above referenced watersheds. However, this is not always supported by the given data.
- b. In the Carlton Brook (Appendix 7-8) Total Sediment Loads (Tables 5-7), “Forest” is listed as the single greatest pollutant load by source in Sediment,

Total Nitrogen, and Total Phosphorus. Other watersheds also show a high proportion of source load coming from forests.

- c. While forests are not singlehandedly leading to requisite TMDL reductions, we respectfully request that DEP provide further comment on how agriculture can be presumed to be a leading cause of NPS pollution when forests seem to also contribute significantly based on these pollutant loads by source.
4. Selection of Attainment Streams
 - a. The selection of only five streams to serve as the targets for attainment on which to base all other impaired streams does not provide a large enough sample size to represent an average of unimpaired streams throughout the state.
 - b. We respectfully recommend a vast expansion of model outputs for other representative streams within the state to create a more accurate average TMDL of attainment streams.
 5. Natural Impairment
 - a. Little discussion is dedicated to the potential for natural impairment, particularly in those watersheds where wetlands may play a primary role in reducing dissolved oxygen.
 - b. We respectfully request DEP provide further comment on the potential for natural impairment of these streams, particularly in those which have no proposed TMDL reductions.
 6. Water Quality Monitoring & Data
 - a. The data used to justify non-attainment for dissolved oxygen was collected anywhere from 2005 to 2010, and in the case of Dyer River, only “historic dissolved oxygen data” was used.
 - b. The most recent data are now five years old and may not reflect current conditions, even though data is available for many of these streams through the 2015 season.
 - c. These data taken by DEP and any other supporting data from partner organizations should be included in this TMDL.
 - d. None of the DEP sampling sites are labeled on the maps in Figure 3.

- e. We respectfully request DEP use the most recently available water quality data when corroborating these impairments, and improve data transparency and identification of sample sites.

7. Watershed Reach

- a. Upon further review of the maps and data provided in this draft TMDL, the following adjustments should be made to the listed towns (Pages ii-iii and Appendix 1) containing the impaired segments of the following water bodies:
 - i. Chamberlain Brook is also located in Pittston as well as Whitefield;
 - ii. Trout Brook is also located in Wiscasset as well as Alna.

8. Watershed Management Collaboration

- a. Collection of water quality data may often be conducted in collaboration with local partners and would simultaneously keep stakeholders informed of DEP efforts and concerns regarding local water bodies. With no mention of collaborating with other stakeholders to collect water quality data, it seems the role of local stakeholders in that aspect is largely disregarded.
- b. Based on the “Next Steps” listed in each document in Appendix 7, it seems as though the primary goal of DEP, through this TMDL, is to persuade municipalities and local stakeholders to lead the management and funding effort pursuing TMDL reductions where necessary. DEP provides no guidance in this document on how a municipality or other local stakeholder may even begin this process. This may be especially useful for municipal leaders or residents who are not familiar with the applicability or severity of this TMDL and subsequent watershed management. Involvement of local stakeholders earlier in this process may also catalyze the development of a Watershed Management Plan, if necessary.
- c. We respectfully request that DEP provide guidance specifically for municipalities and stakeholders identified as contributing to pollutant loads on the applicability, severity, and enforceability of this proposed TMDL.

9. Nutrient Management Ordinance

- a. DEP indicates a task of future management should be “through the development and/or strengthening of local Nutrient Management Ordinance” (Appendix 7).

- b. DEP provides no model of such an ordinance or any resources for developing such. Maine's Nutrient Management Law only applies to agricultural operations of significant size, few of which are located in these small watersheds.
- c. It seems as though no such ordinance yet exists at a local level in Maine. Independent development of such an ordinance by either an individual municipality or group of stakeholders may prove inefficient without a guidance ordinance or proposed language.
- d. We respectfully request DEP provide further information on either: 1) where to find a model Nutrient Management Ordinance, or 2) suggested language and content of a proposed Nutrient Management Ordinance.