

**New Hampshire Small MS4
Phosphorus Source Identification Report
And
Potential Structural BMPs Report**

**Appendix H
Parts II.1.b (Year 4) and II.1.c (Year 5)**

Town of Pelham, New Hampshire

Revised in June 2023 (Year 5)

**Prepared By:
Seacoast Stormwater Coalition &
New Hampshire Lower Merrimack Stormwater Coalition**

Section 1: Phosphorus Source Identification Report (Year 4)

The purpose of this section of the document is to meet the requirement in Appendix H section II.1.b.i to create a Phosphorus Source Identification Report. Though Pelham does include both the raw municipally and privately-owned parcel data in Attachment A of this report, the information presented in this report focuses on municipally owned parcels rather than privately-owned. The reason for this focus was to still complete this Year 4 requirement but to also start to prepare for the Year 5 requirement in section II.1.c.i to evaluate all permittee-owned properties for BMP retrofit opportunities.

The requirements in Appendix H Section II.1.b.i are as follows:

1. Calculation of total MS4 area draining to the water quality limited receiving water segments or their tributaries, incorporating updated mapping of the MS4 and catchment delineations produced pursuant to Part 2.3.4.6

Pelham has calculated raw data for municipal-owned and privately-owned parcels, based on impervious cover, for the entirety of the regulated NH MS4 area. A spreadsheet containing all the Pelham raw data can be found in Attachment A.

The total MS4 area within Pelham is: 8,541.69 acres.

Pelham is using raw data that was prepared by a collaborative effort between the UNH Stormwater Center, GRANITE, and the NH Department of Environmental Services. Information contained in the raw data has been sorted to identify non-conservation parcels owned by Pelham in descending order by acreage of impervious cover, which indicates the priority rank for BMP implementation of municipally owned properties. A focus on municipally-owned properties is a priority for Pelham in order to prepare for the Year 5 requirement which states, *“Within five years of the permit effective date, the permittee shall evaluate all permittee-owned properties identified as presenting retrofit opportunities or areas for structural BMPs installation...”* Reports using the raw data, and of which have the highest total phosphorus loads, have been prepared to identify the ranking and optimal number of parcels to be treated by BMPs. The top ranked municipally owned parcels are represented as the “knee” and can be found in Attachment C. During Year 5 Pelham will complete a similar report for all privately-owned parcels located within the NH MS4 regulated area.

2. All screening and monitoring results pursuant to Part 2.3.4.7.d., targeting the receiving water segment(s)

All screening and monitoring results pursuant to Part 2.3.4.7.d for Pelham can be found in Attachment B of this report.

3. Impervious area and DCIA for the target catchment

For the purpose of this report, Pelham does not distinguish between impervious cover (IC) area and directly connected impervious area (DCIA). Pelham will assess priority parcels for treatment and will select those with verified directly connected impervious area for BMP implementation.

The total impervious cover (IC) area within the Town of Pelham is: 1,103.06 acres.

4. Identification, delineation, and prioritization of potential catchments with high phosphorus loading

A spreadsheet identifying and prioritizing the top municipally owned potential parcels with high phosphorus loading can be found in Attachment C of this report.

Pelham is using raw data that was prepared by a collaborative effort between the UNH Stormwater Center, GRANIT, and NH Department of Environmental Services. Information contained in the raw data has been sorted to identify non-conservation parcels owned by Pelham in descending order by acreage of impervious cover (IC) area, which indicates the priority rank for BMP implementation of municipally owned properties. A focus on municipally-owned properties is a priority for Pelham in order to prepare for the Year 5 requirement which states, *“Within five years of the permit effective date, the permittee shall evaluated all permittee-owned properties identified as presenting retrofit opportunities or areas for structural BMPs installation...”* Reports using the raw data, and of which have the highest total phosphorus loads, have been prepared to identify the ranking and optimal number of parcels to be treated by BMPs. The top ranked municipally owned parcels are represented as the “knee” and can be found in Attachment C. During Year 5, Pelham will complete a similar report for all privately-owned parcels located within the NH MS4 regulated area.

5. Identification of potential retrofit opportunities or opportunities for the installation of structural BMPs during redevelopment, including the removal of impervious area of permittee-owned properties

Pelham has identified potential retrofit opportunities for the installation of structural BMPs of municipally owned properties during redevelopment, including the removal of impervious cover (IC) area.

Attachment D contains the prioritized list of municipally owned parcels with consideration of multiple factors including: 1.) prioritized list of municipally owned parcels with the highest total phosphorus pollutant loads and 2.) a number of factors from section 2.3.6.e that are used to determine the potential of each parcel to be retrofitted with a stormwater BMP.

A focus on municipally owned properties is a priority for Pelham in order to prepare for the Year 5 requirement which states, *“Within five years of the permit effective date, the permittee shall evaluate all permittee-owned properties identified as presenting retrofit opportunities or areas*

for structural BMPs installation...” During Year 5 Pelham will complete a similar ranking for all privately-owned parcels located within the NH MS4 regulated area.

Section 2: Potential Structural BMPs Report (Year 5)

The purpose of this section of the document is to meet the requirements in **Appendix H Part II.1.c.i** to evaluate all permittee-owned properties for potential BMPs to reduce stormwater pollutants including phosphorus, **Part II.1.c.ii** to provide a list of BMP(s) that have been installed on permittee-owned properties, and **Part II.1.c.iii** to track and document the metrics for each of the BMPs installed within the permittees regulated area. The permittee-owned properties that are used in this evaluation are taken directly from the Town of Pelham’s Phosphorus Source Identification Report in Section 1 of this document.

Part II.1.c.i:

Pelham has evaluated all permittee-owned properties identified as presenting retrofit opportunities or areas for structural BMP installation under permit Part 2.3.6.e. or identified in the Phosphorus Source Identification Report that are within the drainage area of the impaired water or its tributaries. The evaluation included:

1. The next planned infrastructure, resurfacing or redevelopment activity planned for the property (if applicable) OR planned retrofit date;
2. The estimated cost of redevelopment or retrofit BMPs; and
3. The engineering and regulatory feasibility of redevelopment or retrofit BMPs.

Permittee-Owned Properties Retrofit Evaluation

Parcel	Next Planned Infrastructure Improvement	Estimated Cost	Engineering and Regulatory Feasibility of Redevelopment or Retrofit
68 Old Bridge Street	Unknown	\$470,000	Engineering and regulatory feasibility study can be found in the attached Attachment D
Main Street	Unknown	\$32,000	Engineering and regulatory feasibility study can be found in the attached Attachment D
31-74 Newcomb Field Parkway	Unknown	\$291,000	Engineering and regulatory feasibility study can be found in the attached Attachment D

6 & 14 Village Green	Unknown	\$249,000	Engineering and regulatory feasibility study can be found in the attached Attachment D
27 Muldoon Parkway	Unknown	\$206,000	Engineering and regulatory feasibility study can be found in the attached Attachment D
24 & 36 Village Green	Unknown	\$165,000	Engineering and regulatory feasibility study can be found in the attached Attachment D
Mammoth Road (Merriam Farm Conservation Area)	Unknown	\$46,000	Engineering and regulatory feasibility study can be found in the attached Attachment D
8 Nashua Road	Estimated 2024/2025	\$184,200	Engineering and regulatory feasibility study can be found in the attached Attachment D
Mammoth Road (Lot across from Gumpas Hill Road)	Unknown	\$16,000	Engineering and regulatory feasibility study can be found in the attached Attachment D
1201 Mammoth Road (Raymond Park)	Estimated 2025	\$200,000	Engineering and regulatory feasibility study can be found in the attached Attachment D
109 Veterans Memorial Parkway	Planned 2024	\$18,500+	Engineering and regulatory feasibility study can be found in the attached Attachment D

Part II.1.c.ii:

Pelham has provided a listing of planned structural BMPs and a plan and schedule for implementation in the table above.

Pelham is planning to install the following projects within the drainage area of the water quality limited water or its tributaries in Year 6 (2023/2024). Pelham will install the remainder of the structural BMPs in accordance with the plan and schedule above. This plan will be evaluated annually and will be adjusted accordingly.

Pelham will provide a listing of planned structural BMPs and a plan and schedule for implementation in the Year 5 Annual Report. Pelham will plan and install a minimum of one of the identified structural BMPs as a demonstration project within the drainage area of the water quality limited water or its tributaries within six years of the permit effective date. Pelham will

install the remainder of the structural BMPs in accordance with the plan and schedule above. This plan will be evaluated annually and will be adjusted accordingly.

**Permittee-Owned Properties Retrofit Evaluation
Planned or Estimated for Year 6 (2023/2024)**

Parcel	Next Planned Infrastructure Improvement for Year 6 (2023/2024)	Estimated Cost	Engineering and Regulatory Feasibility of Redevelopment or Retrofit
8 Nashua Road	Estimated 2024/2025	\$184,200	Engineering and regulatory feasibility study can be found in the attached Attachment D
109 Veterans Memorial Parkway	Planned 2024	\$18,500+	Engineering and regulatory feasibility study can be found in the attached Attachment D

Part II.1.c.iii:

Pelham's tracking and accounting elements associated with Part II.1.c.iii of Appendix H of the NH MS4 permit are consistent with Attachment 3 of Appendix F of the NH MS4 permit. The tracking information for each of the structural BMPs installed by Pelham in its regulated area can be found in the table below. Pelham will provide the tracking metrics for all the BMPs installed in its regulated area in the Year 5 Annual Report.

BMPs Located Within the Regulated Area Tracking Metrics

Date BMP was Implemented	Type of BMP	Total Area Treated by the BMP	Design Storage Volume of the BMP	Estimated Mass of Phosphorus Removed by the BMP Per Year
N/A	N/A	N/A	N/A	N/A

ATTACHMENT A

**Raw Municipal and Private Parcel Data in MS4
Regulated Area**

<https://tinyurl.com/536s9eyw>

ATTACHMENT B

Screening and Monitoring Results

<https://tinyurl.com/25z9nhzu>

ATTACHMENT C

Identification, Delineation and Prioritization of Potential Catchments with High Phosphorus Loading

PSIR Attachment C- Pelham identification, delineation and prioritization of potential catchments with high phosphorus loading				
Treatment Priority	Street Address	Parcel Acreage (acres)	Impervious Cover Area (acres)	Total Phosphorus Load (lb/year)
1	68 Old Bridge Street	27.01	10.20	19.87
2	Main Street	67.23	0.69	10.19
3	31-74 Newcomb Field Pkwy	24.49	6.32	10.02
4	6 & 14 Village Green	20.78	5.39	9.74
5	27 Muldoon Pkwy	57.40	4.46	9.64
6	24 & 36 Village Green	16.04	3.57	6.35
7	Mammoth Road	52.13	0.99	3.83
8	8 Nashua Road	3.97	1.02	1.73
9	Mammoth Road	1.09	0.35	0.66

ATTACHMENT D

Identification of Potential Retrofit

<https://bit.ly/3Nwzp9E>

<https://tinyurl.com/2d3zubca>

ATTACHMENT E

BMPs Located Within the Regulated Area Tracking Information

Not applicable because the Town currently does not have any BMPs on Town property that can be tracked for phosphorus removal.