



# Maryland

## Department of the Environment

Larry Hogan, Governor  
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary  
Horacio Tablada, Deputy Secretary

February 1, 2022

Mr. Paul Mantello, Town Manager  
Town of Boonsboro  
21 N. Main Street  
Boonsboro, MD 21713

Dear Mr. Mantello:

The Maryland Department of the Environment, Water and Science Administration (Department) has completed a review of the Town of Boonsboro's Progress Report under the National Pollutant Discharge Elimination System (NPDES) General Permit No. 13-IM-5500 for Discharges from Small Municipal Separate Storm Sewer Systems (MS4). The report reflects progress made to meet permit conditions during the period July 1, 2020 through June 30, 2021.

The restoration target remained an estimated 30 acres. The restoration activity schedule identified water quality projects to restore 53 acres, and 15 acres have been completed to date. Other accomplishments include coordinating efforts with neighboring jurisdictions and holding a public tree giveaway event. The Department's review is attached. As noted, several updates requested by the Department were not submitted. These are essential permit requirements and not completing them puts the Town at risk of noncompliance.

The Department wishes to discuss the Town's progress on these activities:

- Standard operating procedures (SOP) for screening outfalls, and annual screening results.
- Maintenance checklists and SOPs for best management practices (BMPs).
- A summary of maintenance for the MS4 system including outfalls and pipes.

Please contact me at your earliest convenience to discuss these concerns. The remaining comments in the attachment shall be addressed in the next progress report due on October 31, 2022, in accordance with Appendix D of the permit. Sections I and II are also due at that time including activities during years 3 and 4 for the minimum control measures (MCMs). The Department recognizes the significant effort necessary to implement a stormwater program and commends the Town for its commitment and progress. If you have any questions or concerns, please contact me at 410-537-3547 or [Michelle.Crawford1@Maryland.gov](mailto:Michelle.Crawford1@Maryland.gov), or Deborah Cappuccitti at [Deborah.Cappuccitti@Maryland.gov](mailto:Deborah.Cappuccitti@Maryland.gov) or 410-537-3533.

Sincerely,

Michelle Crawford  
Natural Resources Planner  
Water and Science Administration

Attachment

**Town of Boonsboro**  
**Small Municipal Separate Storm Sewer System (MS4) Permit**  
**Maryland Department of the Environment (Department) Review of**  
**Fiscal Year (FY) 2021 MS4 General Permit Progress Report**

**Reporting**

1. The Town of Boonsboro submitted a completed Progress Report Form, responses to comments in the prior year's review, a signature for the appropriate responsible personnel, and contact information. This information is required to be updated annually.
2. The next Progress Report is due on October 31, 2022 and must include Sections I and II of the Progress Report, updates to the impervious area restoration program, and responses to comments outlined below. Reporting on the minimum control measures (MCMs) in Section II must cover program activities for both years 3 and 4.
3. Resources related to MS4 program development and guidance for compliance with permit requirements are available on the Department's website at:  
[mde.maryland.gov/programs/Water/StormwaterManagementProgram/Pages/NPDES\\_MS4\\_New.aspx](https://mde.maryland.gov/programs/Water/StormwaterManagementProgram/Pages/NPDES_MS4_New.aspx)

**Section I: Impervious Area Restoration Reporting**

4. Boonsboro calculated an impervious area restoration target of 30 acres based on a total untreated impervious area of 148 acres, unchanged from the previous year. The Town identified potential restoration projects that will treat 53 acres. This included 15 acres of completed projects, of which four acres were completed prior to the current permit term (2018). An additional 39 acres is planned by 2022.
5. The Work Plan was submitted in the required format and included an updated description of activities related to implementing restoration over the five-year permit term. The plan included beginning to install various projects in the next reporting year, exploring alternative best management practices (BMP), and seeking funding sources.
  - a. The Town provided further information and photographs on recently completed restoration projects including stream restoration, wetland creation, and reforestation, as well as begin working with the U.S. Army Corps of Engineers to update the stormwater infrastructure inventory. The Town also described its efforts to coordinate with neighboring jurisdictions including the County, the State Highway Administration, and the Washington Soil Conservation District on restoration efforts. The Town is commended for all these efforts.
  - b. Future plans should include a strategy to ensure long term BMP inspection and maintenance.
  - c. Please see below additional Minimum Control Measures activities the Town must implement by the next progress report.
6. A Restoration Activity Schedule (RAS) was submitted in the required format. Please correct the following:
  - a. Adjust the credit for the following BMPs based on the rates listed in Table B.4 of the permit:
    - i. BO20BMP000007 (STRE): Credit = linear feet \* 0.03 = 3.6.
    - ii. BO20BMP000008, BO20BMP000009, BO21BMP000010, BO21BMP000011:  
Credit = trees planted \* 0.01 \* 0.38 = 0.57, 1.9, 3.8, and 3.4.

- b. The best estimate cost should be listed for all BMPs. As a reminder, the field is in \$K (thousands of dollars).
  - c. Some information and photos were provided about the Route 34 Pumping Station Project. For all completed stream restoration projects, please provide a brief narrative to verify that the credit claimed meets the qualifying criteria of the Chesapeake Bay Program expert panel protocols. Include the stream's pre-restoration conditions and the channel design approach.
7. A BMP database was submitted in the required format. Please correct the following:
- a. The Town should use its own unique BMP ID for any BMP that is not reported by the County. This will include most alternative BMPs such as outfall stabilization, stream restoration, tree planting, and street sweeping and may include other restoration BMPs that are not reviewed by the County. The Department suggests a BMP ID beginning with "WABO" in place of "BO" to indicate the BMPs are located within Washington County in the Town of Boonsboro.
  - b. Of the 60 BMPs listed in Table B.1.a "All BMPs", 39 had an up-to-date triennial inspection and a Passing status, and 21 had no inspection date. Please continue to add inspection dates for all Town owned BMPs.
  - c. In Table B.1.c "Alternative BMPs" an additional nine BMPs were listed. All BMPs listed in Table B.1.c should also be listed in Table B.1.a.

**Minimum Control Measure (MCM) Responses and Updates**

8. The following items requested in the previous Department review were not submitted with the Town's progress report. These are permit requirements and not conducting these activities puts the Town at risk for non-compliance.
- a. MCM #1: Information on staff training and public education efforts. The Town provided an update on a tree giveaway event.
  - b. MCM #3: Standard operating procedures (SOP) for screening outfalls, and annual screening results. MS4 system maintenance procedures and inspection records.
  - c. MCM #5: Copies of BMP maintenance checklists and procedures.
9. Please refer to the FY 2020 Progress Report Review in preparing the FY 2022 Progress Report to ensure reporting for the MCMs is complete.

**Financial Information**

10. The Town reported the total cost for implementing programs at this time is approximately \$89,400. The Department commends the Town for its commitment to maintaining program funding and seeking new funding sources.

**From:** Michelle L Crawford -MDE- <michelle.crawford1@maryland.gov>  
**Sent:** Thursday, March 25, 2021 11:04 AM  
**To:** Paul Mantello  
**Subject:** Re: MS4 Progress Report Review for Town of Boonsboro

Good morning Paul,

As an update on our phone call last week, Debbie informed me that the credit calculation is even simpler. Trees can be planted for a credit of 0.01 impervious acres per tree with no minimum plot size, assuming the survival rate is 100%. I'm putting this here in writing for the Town's reference.

You explained that the Town expects one to three trees planted per home, and is interested in averaging the lot size. So with this credit of 0.01 acres per tree, there would be no need to consider lot sizes. This should make your calculations more straightforward and take care of your questions below about density and tree diameter.

And as I mentioned, the Town should develop a plan to ensure these BMPs are tracked, inspected triennially, and to ensure any long-term maintenance.

Please let me know if you have further questions.

Take care,  
Michelle

On Mon, Mar 22, 2021 at 10:50 AM <[townmanager@townofboonsboro.com](mailto:townmanager@townofboonsboro.com)> wrote:

Hi Michelle,

Thanks for the phone call, Friday! Just have a couple quick follow-up questions:

1. With our tree giveaway program, we'll provide larger caliper trees and detailed care instructions. We expect a high survival rate. With MDE's 100 trees /acre implementation guidance, can we assume each tree represents 436 square feet of implementation and 166 square feet of impervious area mitigation?
2. Are there any density requirements? Or simply, 100 tree plantings equals 1 acre of Pervious Urban Reforestation?

<b>Parameter</b>	<b>Implementation Units</b>	<b>Treatment Delta (lbs)</b>	<b>BMP Load Reduction (lbs)</b>	<b>Impervious Acre Conversion Factor</b>
TN	1 acre	7.69	6.22	0.81
TP	1 acre	1.91	0.44	0.23
TSS (tons)	1 acre	0.43	0.40	0.09
<b>Average for Nutrients and Sediment:</b>				<b>0.38</b>

Thanks!

Paul Mantello

*Town Manager*

**Town of Boonsboro**

21 North Main Street

Boonsboro, MD 21713

**Office:** 301-432-7600

**Fax:** 301-432-4050

[TownManager@townofboonsboro.com](mailto:TownManager@townofboonsboro.com)

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**From:** Michelle L Crawford -MDE- <[michelle.crawford1@maryland.gov](mailto:michelle.crawford1@maryland.gov)>

**Sent:** Thursday, March 18, 2021 2:20 PM

**To:** Paul Mantello <[townmanager@townofboonsboro.com](mailto:townmanager@townofboonsboro.com)>

**Subject:** Re: MS4 Progress Report Review for Town of Boonsboro

Hi Paul,

Thanks for your patience with getting back to you about this. Yes the Town is able to get credit for this activity and it sounds like a good partnership and opportunity to get the public involved.

To calculate the credit, do you have further details on the average size of the lots and the number of trees per lot? (Is it correct that's one tree planted per lot?)

The Town would also need to track the trees and make sure they are maintained. Have you thought about a plan to do this?

Thanks,  
Michelle

On Wed, Mar 17, 2021 at 3:45 PM <[townmanager@townofboonsboro.com](mailto:townmanager@townofboonsboro.com)> wrote:

Hi Michelle,

Just wanted to follow-up on my email, below. Can you please give some guidance on our tree giveaway program and if we can count those plantings toward impervious area mitigation?

Thanks!

Paul Mantello

*Town Manager*

**Town of Boonsboro**

21 North Main Street

Boonsboro, MD 21713

**Office:** 301-432-7600

**Fax:** 301-432-4050

[TownManager@townofboonsboro.com](mailto:TownManager@townofboonsboro.com)

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**From:** [TownManager@townofboonsboro.com](mailto:TownManager@townofboonsboro.com) <[TownManager@townofboonsboro.com](mailto:TownManager@townofboonsboro.com)>

**Sent:** Friday, March 12, 2021 4:00 PM

**To:** 'Michelle L Crawford -MDE-' <[michelle.crawford1@maryland.gov](mailto:michelle.crawford1@maryland.gov)>

**Cc:** 'Deborah Cappuccitti -MDE-' <[deborah.cappuccitti@maryland.gov](mailto:deborah.cappuccitti@maryland.gov)>; '[townplanner@townofboonsboro.com](mailto:townplanner@townofboonsboro.com)' <[townplanner@townofboonsboro.com](mailto:townplanner@townofboonsboro.com)>

**Subject:** RE: MS4 Progress Report Review for Town of Boonsboro

Hi Michelle,

Thanks for the report and feedback! In 2021, we hope to speed up our progress toward compliance with our Phase-II Permit.

Speaking of which, we're working with Potomac Edison on a combined tree planting and MS4 education project. After a round of advertising/education, residents will register to have a tree planted on their property, at no cost to them, in a Fall Planting. Potomac Edison is offering \$8/tree and volunteers. The Town would cover the balance and also offer volunteers. As an Alternative BMP, how would we calculate the acres of reforested land?

If it's easier to call, please do! My cell is 301-473-3123. Have a good weekend!

Paul Mantello

*Town Manager*

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**Office:** 301-432-7600

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**From:** Michelle L Crawford -MDE- <[michelle.crawford1@maryland.gov](mailto:michelle.crawford1@maryland.gov)>

**Sent:** Monday, February 22, 2021 12:00 PM

**To:** Paul Mantello <[townmanager@townofboonsboro.com](mailto:townmanager@townofboonsboro.com)>

**Cc:** Deborah Cappuccitti -MDE- <[deborah.cappuccitti@maryland.gov](mailto:deborah.cappuccitti@maryland.gov)>; [townplanner@townofboonsboro.com](mailto:townplanner@townofboonsboro.com)

**Subject:** MS4 Progress Report Review for Town of Boonsboro

Good morning Mr. Mantello,

Enclosed please find the Department's review of the Town of Boonsboro's FY 2020 MS4 Progress Report. The report demonstrates significant commitment to implementing an impervious surface restoration program, and we thank you for your efforts toward achieving compliance with the general permit. Please review the report for further information that the Department is requesting in the next year's progress report.

If you have any questions, please contact me or Debbie Cappuccitti with the contact information listed in the attached review.

Kind regards,  
Michelle Crawford

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**Michelle Crawford**  
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Sediment, Stormwater, & Dam Safety Program  
Water and Science Administration  
Maryland Department of the Environment  
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**officemanager@townofboonsboro.com**

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**From:** Deborah Cappuccitti -MDE- <deborah.cappuccitti@maryland.gov>  
**Sent:** Wednesday, March 09, 2022 4:37 PM  
**To:** townmanager@townofboonsboro.com  
**Cc:** Michelle L Crawford -MDE-; Nora Howard -MDE-  
**Subject:** Re: Follow up on today's conversation

that was the intent yes....

On Wed, Mar 9, 2022 at 4:25 PM <[townmanager@townofboonsboro.com](mailto:townmanager@townofboonsboro.com)> wrote:

Hi Debbie,

Thanks very much! You mentioned writing a formal letter, explaining the tree planting discrepancy. At our next Mayor & Council Meeting, we'll be discussing our last review. Will your email, below, suffice?

Thanks!

Paul Mantello

*Town Manager*

**Town of Boonsboro**

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Boonsboro, MD 21713

**Office:** 301-432-7600

**Fax:** 301-432-4050

[TownManager@townofboonsboro.com](mailto:TownManager@townofboonsboro.com)

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**From:** Deborah Cappuccitti -MDE- <[deborah.cappuccitti@maryland.gov](mailto:deborah.cappuccitti@maryland.gov)>  
**Sent:** Thursday, March 3, 2022 12:08 PM  
**To:** [townmanager@townofboonsboro.com](mailto:townmanager@townofboonsboro.com)  
**Cc:** Michelle L Crawford -MDE- <[michelle.crawford1@maryland.gov](mailto:michelle.crawford1@maryland.gov)>; Nora Howard -MDE- <[nora.howard1@maryland.gov](mailto:nora.howard1@maryland.gov)>  
**Subject:** Follow up on today's conversation

Hi Paul,

Thank you for taking the time to clarify permit requirements during today's call. To summarize:

- This permit is intended to allow a ramp up period for restoration program implementation. The permit requires the Town to identify BMPs that can be implemented for restoration and develop a schedule to show that restoration goal can be completed by 2025. Based on information in the Town's annual report, progress thus far indicates that Boonsboro is meeting this requirement.
- MDE will allow past tree planting projects identified in the Town's annual report and Restoration Activity Schedule to achieve a credit of 6.5 acres.
- Moving forward crediting toward tree planting will need to be consistent with the impervious acre equivalent specified in the permit.
- The 50 linear feet of stream restoration does not meet the minimum criteria for stream restoration projects outlined in the 2014 Chesapeake Bay Program expert panel report. That report specifies that streams less than 100 linear feet do not qualify for stream restoration. However, MDE will allow the outfall stabilization credit (which can include stream stabilization) of 0.01 acres per linear foot. Therefore, at this time, based on available information, this project should only receive a credit for 0.5 acres.
- The stream restoration / or stabilization projects might be eligible for a greater credit if pre-restoration cross sections and other data are available. This is described in the Chesapeake Bay Program Outfall/Gully report - calculation is noted beginning on page 13 of report attached below.
- The Town is currently not in compliance with outfall screening requirements in the permit. The Town is going to submit information in the next annual report to meet these requirements.

Please let us know if you need additional clarity or have any questions. We look forward to continuing to work with you and setting up a meeting to look at the great work that the Town has been doing!

thanks,

Debbie

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**Deborah J. Cappuccitti**  
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