Maryland State Highway Administration
Office of Materials Technology
Landscaping Soils Eligibility List

Soils and Aggregate Technology Division
7450 Traffic Drive
Hanover, Maryland 21076
Landscaping Soils Eligibility List

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Maryland State Highway Administration
Landscaping Soils Eligibility List

1. INTRODUCTION
Maryland State Highway Administration (the Administration) has the responsibility to effectively and efficiently assure the quality of landscaping soils used on the Maryland roadway system. Products placed must meet the system preservation, safety and environmental needs of the state's communities. The Administration is publishing this Landscaping Soils Eligibility List as a tool for providing information and guidance on how the quality of landscaping soils used on Maryland road projects can be assured.

The Landscaping Soils Eligibility List contains a list of producers which are eligible for use on the Administrations project for Furnished Topsoil and/or Bioretention Soil Mix (BSM). The eligibility list will be updated and published on a quarterly basis. The eligibility of producers will be valid for one year with an expiration date of last day in July. There will be an annual submittal period beginning forty-five days prior to the last day in July. You may become eligible at any time in the year however your eligibility will expire on the last day in July regardless of when you submit your information.

The Administration encourages producers to keep track of their records, including due dates in order to submit their requests for renewal on time. Producers are responsible for informing the Soils and Aggregate Technology Division (SATD) of any changes to producer information, such as producer name, location of stockpiles, subsidiary producer’s name, and contact information.

2. PROCESS FOR LISTING AS AN ELIGIBLE SOURCE OF LANDSCAPING SOILS

2.1 PRODUCER REQUIREMENTS
2.1.1 Submission of Written Request
The landscaping soil producer shall submit a written request to be considered as an eligible source to:

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Soils and Aggregate Technology Division
Maryland State Highway Administration
Office of Materials Technology
7450 Traffic Drive
Hanover, MD 21076 OR
dswift@mdot.maryland.gov

A. The Administration requires producers to submit their written requests no later than 45 days prior to the next landscaping soils Eligibility List publication date or at any
other time during the year. Please refer to the flow chart in Section 7 for “MDSHA Annual Quality Testing Process.”

B. Please refer to Appendix A for “Quality Test Request” Form. Producers shall complete and submit this form for each landscaping material produced (i.e. Bioretention Soil Mix and Furnished Topsoil).

2.1.2 Material Sampling and Testing
A. A soil sample shall be taken per AASHTO T2 to accurately represent the designated area within the site or stockpile. It is the producer’s responsibility to save a portion of this sample for QA testing by the Administration.

B. The sample shall be labeled with the following information:

1. Date of sampling.
2. Name of the producer and contact phone number.
3. Identify whether the sample is to be tested as furnished topsoil or BSM.

C. The Producer shall submit the labeled landscaping soil sample to an accredited soil testing laboratory recognized by the Administration for testing.

D. The list of recognized Soil Testing Laboratories can be found on the SHA Internet at the following address:

   http://www.roads.maryland.gov/Index.aspx?PageId=52

E. The testing laboratory may reduce the composite 10-pound sample, in accordance with AASHTO T 248, to a minimum of one pound.

2.2 ADMINISTRATION RESPONSIBILITIES

A. SATD will review the soil test results from the accredited lab of the producer’s choice (see link above for recognized labs) to determine if the material conforms to the Administration’s requirements (Table 1 and Table 2).

B. If the furnished topsoil test results are acceptable, SATD will send a response to the Producer indicating that the material is eligible to be tested for use on Administration projects. The response will also indicate the expiration date of that eligibility.
3 TESTING PROCEDURES

The soil testing laboratory recognized by the Administration shall determine the following:

A. Grading Analysis (R 58)
B. Textural Analysis (T 88)
C. Soils pH (D 4972)
D. Organic Matter (T 267)
E. Soluble Salts (EC1:2 (V:V))

4 TEST RESULTS SUBMISSION

The sample information required in the “Material Sampling and Testing” shall be included on the outsource laboratory test report form when submitted to the Administration.

Results for each test listed in the TESTING PROCEDURES shall be included on the submitted test report.

A copy of the landscaping soil test results shall be submitted to SATD at the following address:

Office of Materials Technology
Soils and Aggregate Technology Division
7450 Traffic Drive
Hanover, MD 21076
or
jhaider2@mdot.maryland.gov

5 Quality Assurance Requirements

At the time of sourcing of landscape soils from the eligibility list, the administration will take sample from the specified source and verify the test results as per requirements given in Table 1 and 2.
# Table 1: Furnished Topsoil Test Value Specifications

<table>
<thead>
<tr>
<th>Test Property</th>
<th>Test 1 Method</th>
<th>Test Value and Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prohibited Weeds</td>
<td></td>
<td>Free of live stems and roots of species in 920.01.01 as well as live stems and roots of Bermuda grass, Quack grass, and Yellow Nutsedge.</td>
</tr>
<tr>
<td>Debris</td>
<td></td>
<td>1.0 % or less by weight of cement, concrete, asphalt, crushed gravel or construction debris when inspected.</td>
</tr>
<tr>
<td>Grading Analysis</td>
<td>R-58</td>
<td><strong>Sieve Size</strong></td>
</tr>
<tr>
<td>Textural Analysis</td>
<td>T-88</td>
<td>Sand</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Silt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clay</td>
</tr>
<tr>
<td>Soil pH</td>
<td>ASTM D 4972</td>
<td>pH 6.1 to pH 7.2</td>
</tr>
<tr>
<td>Organic Matter</td>
<td>T-267</td>
<td>4.0 to 8.0% OM by weight</td>
</tr>
<tr>
<td>Nutrient Content</td>
<td></td>
<td>Administration will assess. Apply fertilizer per NMP for nitrogen requirement and optimum fertility index values (FIV) for phosphorus and potassium.</td>
</tr>
<tr>
<td>Soluble Salts</td>
<td>EC 1:2(V:V)</td>
<td>500 ppm (0.78 mmhos/cm) or less.</td>
</tr>
<tr>
<td>Harmful Materials</td>
<td></td>
<td>Topsoil shall not contain substances in concentrations that are harmful to human health, water quality, or plant growth. Industrial waste such as ash, slag, raw sludge, or similar materials shall not be soil components.</td>
</tr>
</tbody>
</table>
### Table 2: Bioretention Soil Mix Test Value Specifications

<table>
<thead>
<tr>
<th>TEST PROPERTY</th>
<th>TEST 1 METHOD</th>
<th>TEST VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weeds</td>
<td>—</td>
<td>Free of seed and viable plant parts of species in 920.06.02(a)(b)(c) when inspected.</td>
</tr>
<tr>
<td>Debris</td>
<td>—</td>
<td>No observable content of cement, concrete, asphalt, crushed gravel or construction debris.</td>
</tr>
<tr>
<td>Hardwood Mulch</td>
<td>—</td>
<td>20% of the loose volume of BSM when inspected.</td>
</tr>
<tr>
<td>Textural Analysis</td>
<td>T-88</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Particle</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>% Passing by Weight</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Size</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>mm</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Minimum</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Maximum</strong></td>
</tr>
<tr>
<td>Sand</td>
<td>2.0 – 0.050</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td></td>
<td>94</td>
</tr>
<tr>
<td>Silt</td>
<td>0.050 – 0.002</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Clay</td>
<td>less than 0.002</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Combined Silt and Clay</td>
</tr>
<tr>
<td>Soil pH</td>
<td>ASTM D4972</td>
<td>pH of 5.7 to 7.4.</td>
</tr>
<tr>
<td>Organic Matter</td>
<td>T-267</td>
<td>Minimum 1.5 % by weight.</td>
</tr>
<tr>
<td>Soluble Salts</td>
<td>EC 1:2(V:V)</td>
<td>500 ppm (0.78 mmhos/cm) or less.</td>
</tr>
<tr>
<td>Harmful Materials</td>
<td>—</td>
<td>920.01.01(a).</td>
</tr>
</tbody>
</table>
6 PROCESS FLOW CHARTS

6.1 Landscaping Producer Annual Eligibility Testing Process

1. Producer submits request to MDSHA
2. MDSHA responds to Producer within 10 working days with required tests
3. Producer collects and submits sample per Section 2.1.2 of this Bulletin and submits to Independent (SHA-Approved Lab) for testing
4. Producer submits Independent Lab test results and all worksheets/supporting documentation. See section 6.2
5. MDSHA responds to Producer within 5 working days with status of eligibility

6.2 Producers Eligibility

- SATD Reviews Test Results
  - Do the test results meet the specification in Section 920?
    - Yes
      - Producer will be notified that they will be included on the Eligibility list until the next submittal period
    - No
      - Producer will be notified that the test results do not meet the specifications in Section 920
6.3 Addressing Failures with Administration QA Testing

Does QA sample meet the specification in Section 920?

- Yes: Forward test results to LOD to develop a NMP
  - LOD shall send SATD the NMP. NMP will be valid for 3 months. SATD will forward NMP to the projects and producer.

- No: Is this the First Failure?
  - Yes: OMT to resample the material

  - No: Is this the Second Failure?
    - Yes: Split sample testing with the producer. Samples will go to OMT lab, outsourced lab and the producer’s lab of choice on approved list.
    - No: If the product from a producer fails the split sample testing, the producer will be notified that they will be removed from the eligibility list until the next submittal period.
7 LANDSCAPING SOIL TESTING FREQUENCY

The frequency of testing landscaping soils shall be in accordance with Table 3.

Table 3: Landscaping Soil Testing Frequency

<table>
<thead>
<tr>
<th>Type of Test</th>
<th>Test Methods</th>
<th>Testing Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producer Eligibility Furnished Topsoil and BSM</td>
<td>–</td>
<td>ONCE EVERY YEAR</td>
</tr>
<tr>
<td>Administration's QA sample of Furnished Topsoil</td>
<td>Section 5 Tables 1 and 2</td>
<td>If Producer has an active contract number, their soil will be tested every other month to develop a Nutrient Management Plan¹</td>
</tr>
<tr>
<td>Administration’s QA sample of BSM</td>
<td>Section 5 Tables 1 and 2</td>
<td>If Producer has an active contract number, their soil will be tested every other month to develop a Nutrient Management Plan¹</td>
</tr>
<tr>
<td>Salvaged and Other Landscaping Soils</td>
<td>Section 3</td>
<td>One Test prior to usage on a project¹</td>
</tr>
</tbody>
</table>

¹ Please note that, for quality assurance purposes, the Administration has the right to request landscaping soil testing to be performed more frequently (i.e., Quality Assurance (QA) Testing) than the testing frequency specified above.
## Landscaping Soil Producer’s Information Sheet

<table>
<thead>
<tr>
<th><strong>Name of Organization (Producer):</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Office / Facility (Subsidiary Landscaping Soils Producer):</strong></td>
<td>Same as above</td>
</tr>
</tbody>
</table>

**Supervising Office’s Mailing Address:**
- Street or P.O. Box:  
- Town / City:  
- State:  
- Zip:  
- E-Mail Address:  
- Phone No(s):  
- Fax No.:  

**Stockpile Location (Name, If Applicable):**
- Street or P.O. Box:  
- Town / City:  
- State:  
- Zip:  
- Entitled Point of Contact:  
- Title / Position:  
- E-Mail Address:  
- Phone No(s):  
- Fax No.:  

**Landscaping Soil to supply(s):** Topsoil  

Do you want this location to be listed on the Eligibility List on MD Roads? Yes  

**Stockpile Location (Name, If Applicable):**
- Street or P.O. Box:  
- Town / City:  
- State:  
- Zip:  
- Entitled Point of Contact:  
- Title / Position:  
- E-Mail Address:  
- Phone No(s):  
- Fax No.:  

**Landscaping Soil to supply(s):** Topsoil  

Do you want this location to be listed on the Eligibility List on MD Roads? Yes  

Note: Shaded areas will be published on-line.