Erosion & Sediment Control Alternative/Innovative Technology Review Checklist

Updated December 2025

The Maryland Department of the Environment (Department) requires a formal application and accompanying specifications to be submitted for approval of alternative erosion & sediment control technologies. This application form must be completed and submitted with all proposals. Applications will only be accepted directly from the manufacturer of the respective alternative/innovative technology; developers, contractors, local governments or any other entity may not apply on a manufacturer's behalf. The Department's review process is outlined below and explained in more detail on pages 3-5.

1) The Department will conduct an initial review of the application and accompanying documentation.
2) The Department will then determine acceptability for a field trial (6-month minimum) to document practice effectiveness and compare to performance and criteria in the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control (the Handbook).
3) After a successful field trial, the Department may issue a provisional approval (1 to 2 years in length) to further document the performance of the innovative practice in various conditions across the State of Maryland (State).
4) The Department will then make a decision on final approval.

Contact Information and Product Details:

All official correspondence will be sent to the representative of the product manufacturer as identified in the fields below:

Product Name	Company Name
Name of Representative	Email
Street Address	Phone Number
City/State/Zip Code	Date of Submittal

Please include the following information below with your application and use the checkboxes below to signify that all required documentation has been included. An application for the

Department's consideration must contain all elements described in this checklist. If any required information is missing, the applicant will be notified, and the review will begin after a complete application is received.

- ☐ **A cover letter introducing the practice:** An overview of the innovative practice's features and intended use, a brief comparison of the innovative practice to a similar practice listed in the Handbook (please identify a practice in the Handbook that is most similar to the innovative practice), and any other information the applicant would like to convey about the innovative practice. *Please note that a live performance test of the innovative practice against the Handbook practice in a field setting will be required later in the review process (see page 3).*
- ☐ **Standards and Specifications for the practice:** These should follow the same format as the practices listed in the Handbook and provide:
  - ☐ Definition: Include a brief description of the practice and instructions on how it will be used. Clearly identify whether the innovative practice is intended to be an alternative to a specific practice in the Handbook, and if so, indicate the name of the practice.
  - ☐ Purpose: Describe the objective of the practice as it relates to soil erosion and sediment control.
  - ☐ Conditions Where Practice Applies: State the site condition or situation where the practice would be used.
  - ☐ Design Criteria: List all applicable criteria relating to the design and identify appropriate site location(s), application, site conditions, general constraints, sizing, materials, etc. Depending on the practice, this could include limitations on contributing drainage areas, slopes, lengths, shear stress, flow rates, volumes, etc.
  - ☐ Maintenance: Detail the necessary maintenance requirements and frequency. Provide enough detail in the instructions to allow maintenance in a field setting by a person unfamiliar with the practice.
  - ☐ Construction Drawing: Provide standard construction drawings of the practice, including a plan, section, and isometric views.
  - ☐ Construction Specifications: Provide direction on how to properly install the practice in a sequence format.
  - ☐ Material Specifications: Depending on whether the innovative practice is manufactured as a unit or built on-site, the extent of the material specifications will vary. At a minimum, a material specification shall be provided for all filtering components. Additional specifications for proper construction must be detailed. The specifications must be at least as stringent as those of existing similar practices in the Handbook if the product is intended to serve as an equivalent substitute for one of these practices.

☐ **Supporting documentation:** This must include: design calculations, photographs, published peer-reviewed scientific literature supporting any relevant innovative theories, approval documentation from other agencies, and any other material necessary to support the practice claims.

The sections below provide a detailed description of the Department's approval process for alternative/innovative erosion and sediment control practices, along with any associated monitoring requirements for each step. Please read these sections carefully prior to submitting an application.

1. Initial Review of Application Materials

Once all the required information above has been received, the Department will review the application and accompanying documentation for compliance with the applicable standards and specifications listed in the Handbook. If the Department has any additional concerns about the innovative practice, the applicant will be notified during this phase of the review process.

2. Field Trial Monitoring Period for the Innovative Practice

If the innovative practice meets the requirements listed above, the Department may authorize installation of the practice on a specific project as a field trial. In this case, the Department will issue a field trial authorization letter to the applicant. None of the steps listed below shall be taken until this letter is received.

During the field trial period, the innovative practice will be field-tested alongside the appropriate standard soil erosion or sediment control practice in the Handbook, or if the innovative practice does not perform and function similarly to a Handbook practice, the product's overall effectiveness relative to manufacturer claims. The purpose of this trial period is to document the effectiveness of the innovative practice during grading activities within the State requiring an approved erosion and sediment control plan per COMAR 26.17.01. The trial must be a minimum duration of six consecutive months, and product performance must be documented during at least 12 storm events. The installation must occur on an active construction site, which will require approval from the local erosion and sediment control plan approval authority and will be subject to oversight by the applicable sediment and erosion control enforcement authority. Prior to field installation, a monitoring plan must be submitted and approved by the Department and include the following:

1. Information on the proposed site, including the names of the owner, developer, and local sediment control enforcement authority and inspector(s); the site address or coordinates; the amount of disturbed area in square feet; and a copy of the approved sediment control plans showing the approval authority signature and date of approval.

2. The proposed location of the innovative sediment control practice on the construction site, and the proposed location of a comparable approved sediment control practice.
3. The total drainage area and disturbed area to each practice (the innovative practice and the comparable approved sediment control practice) for both existing and proposed conditions. A description of site conditions, such as slopes, soils, and other site parameters that may impact practice performance.
4. A brief narrative of the steps that will be taken and the types of sediment control practices to be implemented immediately should the innovative practice fail. Also, as a failsafe, redundant sediment controls (for example, a line of super silt fence behind a test alternative filtering practice) should be in place during the trial. Only practices in the Handbook may be used in the event of a sediment discharge or failure to adequately treat or control sediment. These steps must also be outlined on the approved sediment control plans.
5. A monitoring schedule of the field installation, which includes any water quality measurements, such as turbidity, at the discharge of the practice.
6. Acknowledgement that the applicant agrees to submit field inspection reports to the Department in accordance with the deliverables noted below.

Upon approval of the monitoring plan and commencement of the trial period, an inspection report (containing the information listed below) must be submitted to the Department 3 months into the trial period and after the trial period concludes. Each report must include the following:

1. The date of each storm sampled.
2. The storm size and duration in inches of rainfall (to the nearest tenth).
3. The date of the site inspection (must be within 24 hours of the rainfall event).
4. The condition of the contributing drainage area during each storm event (active grading, unstabilized, mulched, vegetated, paved, etc.).
5. Descriptions and observations of the inspections of the innovative practice and comparison to an approved sediment control practice.
6. Photographs documenting the performance of the innovative and the comparable practice. This should include visual water quality observations (such as turbidity or color) of the discharge point of the practice. Photographs should be taken at the same point of interest for proper comparison over time.
7. An evaluation of the effectiveness (bad, fair, good, excellent) of both practices during the monitoring period.

Additionally, the following requirements apply to any field trial installation of an innovative practice:

1. The construction site must be located within 40 miles of the Department's offices at the Montgomery Park Business Center, 1800 Washington Boulevard, Baltimore, MD 21230.
2. The local erosion and sediment control plan review authority must approve the erosion and sediment control plans for the field installation. The plans should specify the

necessary redundant sediment control measures and remedial actions to be implemented in the event of failure of the innovative practice.

3. The innovative practice must be installed to the manufacturer's specifications.

3. Provisional Approval of the Innovative Practice

If results from the field trial are determined to be acceptable, the Department may issue a provisional approval for a period of one year unless otherwise indicated. This will allow for an extended period to observe the performance of the innovative practice across the State.

During the provisional approval period, the applicant must submit monitoring reports to the Department, subject to the same standards and requirements as specified above for the field trial period, for two projects of their choosing. The Department may also seek feedback from the local Soil Conservation Districts and/or the local enforcement authorities regarding the performance of the innovative practice during this period and factor such feedback into its final decision. If, by the end of the one-year provisional period, there is insufficient construction activity involving the use of the innovative practice, the required data cannot be gathered, or more information is needed by the Department to make a final decision, this period may be extended for an additional year for a total of two years.

4. Final Approval of the Innovative Practice

Upon a successful provisional approval period and acceptance by the Department, a final approval of the innovative practice will be issued. The final approval verifies the product’s use across the State, pending local jurisdiction acceptance and approval.