

Small Residential Lot (Less than 1.0 acre of disturbed area) Soil Erosion and Sediment Control Plan Template*

This template satisfies the *RI Stormwater Design and Installation Standards Manual - Minimum Standard 10: Construction Activity Soil Erosion, Runoff, Sedimentation, and Pollution Prevention Control Measure Requirements*



RI Department of
Environmental Management

*Credit:
EPA 830-K-15-001
December 2015

Purpose of This Template

Introduction

To comply with the *RI Stormwater Design and Installation Standards Manual (RISDISM)- Minimum Standard 10 – Construction Activity Soil Erosion, Runoff, Sedimentation, and Pollution Prevention Control Measure Requirements*, all construction operators are required to develop a “Soil Erosion and Sediment Control Plan” (or “SESC Plan”). Refer to [Section 3.2.10 and 3.3.7 of the RISDISM](#) for additional information. The requirement to develop a SESC Plan applies equally to small-scale construction projects as it does to large-scale construction projects, but the level of detail may vary depending on the nature of a given project. A SESC Plan for the construction of a single residential lot may require less detail because such projects are often easily managed with basic control measures (CMs). Moreover, these projects are relatively small and are usually completed relatively quickly. Where documentation is required, it can be done in a relatively concise manner, as described in this document. With that in mind, RI DEM has developed the *Small Residential Lot SESC Plan Template*, based on US EPA’s December 2015 “Small Residential Lot Stormwater Pollution Prevention Plan Template (EPA 830-K-15-001).

This template is not intended to be an all-inclusive document. It is intended to be used for installation, inspection, and maintenance of those most common control measures expected to be found on a small site. More specific details addressing planning, design, and applicability of control measures can be found in the *Rhode Island Soil Erosion and Sedimentation Control Handbook* (found at <http://www.dem.ri.gov/programs/water/permits/ripdes/stormwater/stormwater-manual.php>).

Purpose

The *Small Residential Lot SESC Plan Template* is a tool to help operators of small residential lot projects develop SESC Plan documents that are consistent with requirements in the *RISDISM- Minimum Standard 10*. The template was designed with small residential lot projects (less than 1.0 acre of disturbed area) in mind and therefore is not appropriate for other types of construction projects.

Use of this template is optional. Any operator of a small residential lot project may choose to complete a SESC Plan without using this template. If you determine that this template is appropriate for your small residential lot construction project, you are still held responsible for meeting the conditions of the *RISDISM- Minimum Standard 10*.

Using the Small Residential Lot SESC Plan Template

This template is presented as an editable document file so one can easily add tables and additional text, and delete unneeded or non-applicable fields. Each section of the Small Residential Lot SESC Plan Template includes prompts (in blue) to insert information about your project. You must complete all sections of this template in order to comply with *RISDISM- Minimum Standard 10*. Once completed, this Template will serve as your project’s SESC Plan, and must be retained on site while construction activity is underway.

Tips for ensuring that the minimum permit requirements are met:

- Read through this template and the *RISDISM- Minimum Standard 10* thoroughly before preparing your SESC Plan to ensure that you have a working understanding of all underlying requirements.
- Complete this SESC Plan template *prior* to submitting your application to the RI DEM or CRMC.
- Once you obtain your RI DEM or CRMC permits include these documents as attachments to the SESC Plan.

While RI DEM has made every effort to ensure the accuracy of all instructions and guidance in this template, the actual obligations of regulated construction activities are determined by the relevant provisions of the *RISDISM* and applicable regulations, not by the template. In the event of a conflict between this template and any corresponding provision of the *RISDISM- Minimum Standard 10*, you must comply with the requirements in the *RISDISM- Minimum Standard 10*. A link to the *RISDISM* and additional guidance are available at <http://www.dem.ri.gov/programs/water/permits/ripdes/stormwater/stormwater-manual.php>

Small Residential Lot Soil Erosion and Sediment Control Plan (SESC Plan)

For Construction Activities At:

Insert Project/Site Name
Insert Project Site Location/Address
Insert City, State, Zip Code
Insert Project/Site Telephone Number

SESC Plan Prepared For:

Insert Company or Organization Name
Insert Name
Insert Address
Insert City, State, Zip Code
Insert Telephone Number
Insert Fax/Email

SESC Plan Prepared By:

Insert Company or Organization Name
Insert Name
Insert Address
Insert City, State, Zip Code
Insert Telephone Number
Insert Fax/Email

SESC Plan Preparation Date:

[Click here to enter a date.](#)

SESC Plan Revision Date (if applicable):

[Click here to enter a date.](#)



Before proceeding, be advised that you will need to complete the following steps before finalizing your Small Residential Lot SESC Plan.

- ✓ **STEP 1:** Review the RISDISM – Minimum Standard 10.
- ✓ **STEP 2:** Fill out all sections of this template.
- ✓ **STEP 3:** Print and attach applicable CM specification sheets [see Appendix] for the following three categories:

Appendix A: Erosion and Sediment Control Measure Specifications

Appendix B: Stabilization Control Measure Specifications

Appendix C: Pollution Prevention and Good Housekeeping Specifications

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Part 1: Site and Activity Description

Instructions: Complete Sections A, B, and C.

- Provide summary details of your project, including the number of homes to be built, the size of the lot on which construction will occur, and the total area of disturbance.
- Provide your best estimate of the dates that construction will start and finish.
- Specify who will be the lead individual(s) at the project who will make sure that you are in compliance with the permit, and have them verify that they have read and understand the permit.

1. A. Nature of construction activities at this site

1. This project will result in the construction of [insert project scope description here](#).

Lot Address	Total Lot Size (Acres)	Maximum Area of Construction Disturbance (Acres)
1.		
2.		
3.		
4.		
5.		
		Total maximum disturbed area (must be < than one acre):

1. B. Estimated dates that construction will take place

1. Construction activities on this project will begin on or about: [Click here to enter a date](#). (Note: once the actual date is known, correct the estimated date)
2. All construction activities on this project will be completed on or about: [Click here to enter a date](#). (Note: once the actual date is known, correct the estimated date)

1. C. Contacts for Stormwater Compliance

Identify person(s) responsible for compliance with this permit. These persons constitute the stormwater team.

Name	Responsibilities	I Have Read the CGP And Understand the Applicable Requirements
1. Insert name of responsible person	Insert responsibility	<input type="checkbox"/> Yes Date: Click here to enter a date .
2. Insert name of responsible person	Insert responsibility	<input type="checkbox"/> Yes Date: Click here to enter a date .

Part 2: Allowable Non-Stormwater Discharges

Instructions:

Identify whether any of the following allowable discharges (referred to as “allowable non-stormwater discharges”) may occur at your site. Note: If there will be additional types of non-stormwater discharges at your site, those discharges must be covered under a separate Rhode Island Pollutant Discharge Elimination System (RIPDES) permit.

List of Allowable Non-Stormwater Discharges Present at the Site

Type of Allowable Non-Stormwater Discharge	Likely to be Present at Your Site?
Discharge from emergency fire-fighting activities	<input type="checkbox"/> YES <input type="checkbox"/> NO
Fire hydrant flushings	<input type="checkbox"/> YES <input type="checkbox"/> NO
Landscape irrigation	<input type="checkbox"/> YES <input type="checkbox"/> NO
Water used to control dust	<input type="checkbox"/> YES <input type="checkbox"/> NO
Potable water including uncontaminated water line flushings	<input type="checkbox"/> YES <input type="checkbox"/> NO
Routine external building wash down that does not use detergents	<input type="checkbox"/> YES <input type="checkbox"/> NO
Pavement wash waters provided spills or leaks of toxic or hazardous materials have not occurred (unless all spill material has been removed) and where detergents are not used.	<input type="checkbox"/> YES <input type="checkbox"/> NO
Uncontaminated air conditioning or compressor condensate	<input type="checkbox"/> YES <input type="checkbox"/> NO
Uncontaminated, non-turbid discharges of ground water or spring water	<input type="checkbox"/> YES <input type="checkbox"/> NO
Foundation or footing drains where flows are not contaminated with process materials such as solvents or contaminated ground water	<input type="checkbox"/> YES <input type="checkbox"/> NO



Note: You are reminded of the requirement to identify the likely locations of any allowable non-stormwater discharges on site map(s) within PART 7: SITE MAPS AND DRAWINGS. Use the list of checked items above to populate Map #2: Control Measures.

Part 3: Erosion and Sediment Control Measures

During the course of my project I will use the following control measures to minimize erosion and sediment discharges in stormwater. These controls will be designed, installed, maintained, and removed in accordance with the specifications in [Appendix A: Erosion and Sediment Control Measure Specifications](#). Location on site for each of these control measures is depicted in the attached site maps in Part 7: Site Maps and Drawings.

Instructions:

Choose which erosion and sediment control measures will be used at your site. You must comply with the specifications for design, installation, maintenance, and removal of each CM in [Appendix A: Erosion and Sediment Control Measure Specifications](#). If you wish to outline alternative erosion and sediment control measures, please do so within this section.



(Required for all sites) – Indicates control measure is required by the *RISDISM – Minimum Standard 10* or the *RI Soil Erosion and Sediment Control Handbook (RI SESC Handbook)*.

(Required based on site characteristics) – Indicates control is dependent on site characteristics. Review *RISDISM – Minimum Standard 10* or the *RI SESC Handbook* to determine whether this control measure applies to your site.

3. A. Preserve Native Topsoil (required based on site characteristics)

Regulatory requirement: You must preserve native topsoil on your site, unless infeasible. [RISDISM 3.3.7.4 – Preserve Topsoil](#). To comply with this requirement, I will do the following (select one):

- I will preserve some portion of the topsoil I remove so that it can be re-applied for vegetative stabilization.** I will use the following soil preservation control measures to manage and preserve native topsoil on site for later use in stabilizing the site:
 - Stockpile and Staging Area Management**
 - Minimize Disturbed Area: Preserving Soils & Vegetation**
- It is infeasible to preserve topsoil at my site.** [Provide explanation.](#)

3. B. Perimeter Controls (required for all sites – choose at least one)

Regulatory requirement: You must install controls along the perimeter of your site that will receive stormwater from your construction activities. [RISDISM 3.3.7.9 – Establish Sediment Barriers](#).

To comply with [RISDISM 3.3.7.9](#), I will use the following type of perimeter control(s) at my site (select at least one):

- Limit of Work and Site Access Control**
- Silt Fence**
- Straw Wattles, Compost Tubes, and Fiber Rolls**
- Other:** [\(If you select "Other", describe type of perimeter control that you will use.\)](#)

3. C. Sediment Track-Out (required for all sites)

Regulatory requirement: You must minimize the track-out of sediment onto off-site streets, other paved areas, and sidewalks from vehicles existing your construction site. RISDISM 3.3.7.14 and RI SESC Handbook – Construction Entrances.

To comply with RISDISM 3.3.7.14 and the RI SESC Handbook, I will use the following type of sediment track out control at my site:

- Construction Entrances**

3. D. Minimize Dust (required for all sites)

Regulatory requirement: You must minimize the generation of dust to avoid pollutant discharges to the extent feasible through application of water or other dust suppression techniques. RISDISM 3.3.7.14 and the RI SESC Handbook – Dust Control.

To comply, I will use the following type of dust control at my site:

- Dust Control** (describe specific dust control measures here)

3. E. Minimize Soil Compaction (required based on site characteristics)

Regulatory requirement: In areas of your site where final vegetative stabilization will occur or where infiltration practices will be installed, you must minimize soil compaction. RISDISM 3.3.7.1 – Avoid and Protect Sensitive Areas and Natural Features and RISDISM 3.3.7.2 – Minimize Area of Disturbance.

To comply with RISDISM 3.3.7.1 and RISDISM 3.3.7.2, I will use the following practices from the RI SESC Handbook to minimize soil compaction (select at least one):

- Soil Preparation & Topsoiling**
- Minimizing Disturbed Area: Preserving Soils & Vegetation**
- Other:** (If you select "Other", describe type of control that you will use.)

3. F. Storm Drain Inlet Protection (required based on site characteristics)

Regulatory requirement: If you discharge to a storm drain inlet that you have access to, you must install protection measures that remove sediment from your stormwater discharge. RISDISM 3.3.7.6 – Protect Storm Drain Inlets and RI SESC Handbook – Inlet Protection.

This control is required on my site:

- Yes, because stormwater that leaves my property flows into a storm sewer inlet (without first flowing to a storm pond or other larger-scale control) that I have access to.
- No, because stormwater will not flow into a storm sewer inlet that I have access to, or because it flows first into a storm pond or other large-scale control

If "Yes" is checked above, to meet RISDISM 3.3.7.6, I will use the following type of sewer inlet protection measures (select at least one if required).

- Inlet Protection**
 - Excavated Drop**
 - Fabric Drop**
 - Stone and Block Drop**
 - Curb Drop**
 - Manufactured Inlet Filters**
 - Other:** Specify.

3. G. Other Erosion and Sediment Controls (required based on site characteristics)

Regulatory requirement: You must design, install, and maintain erosion and sediment controls that minimize the discharge of pollutants from your site. RISDISM 3.2.10 and 3.3.7.

If you plan to use other erosion and sediment controls on your site that do not fall under any of the areas already covered above, describe them below:

Type of stormwater control measure: Describe any other stormwater control present at your site.

Date of installation: Select date - must be prior to start date of construction

Location on site: The attached site map shows where this control will be placed.

Design, installation, maintenance, and removal specifications: Describe installation, maintenance and removal procedures.

Date of installation: Select date - must be prior to start date of construction

Repeat "other controls" text as necessary.

Part 4: Site Stabilization

During the course of my project I will use the following controls for temporary and permanent stabilization on my site. These controls will be designed, installed, maintained, and removed in accordance with the specifications in [Appendix B: Stabilization Control Specifications](#). Location on site for each of these practices is depicted in the attached site maps in Part 7: Site Maps.

Instructions:

Choose which temporary and permanent stabilization controls will be used at your site. You must comply with the specifications for design, installation, maintenance, and removal of each CM in [Appendix B: Stabilization Control Specifications](#). If you wish to outline alternative site stabilization practices, please do so within this section.

[RISDISM 3.3.7.5 – Stabilize Soils]

Regulatory Requirement: Where work on any area of bare soil on your site will not occur for 14 or more days, stabilization measures must be initiated immediately. Stabilization is required when work will permanently cease in this area, or if the cessation of work is only temporary, and construction work in this area will continue in the future. RISDISM 3.3.7.5 – Stabilize Soils.

4. A. Type of soil stabilization (check all that apply)

- Vegetative Cover: Temporary** (select specific type from options below):
 - Seeding for Temporary Vegetative Cover
- Vegetative Cover: Permanent** (select specific type from options below):
 - Seeding for Permanent Vegetative Cover
 - Sodding
- Non-Vegetative Cover** (select specific type from options below):
 - Erosion Control Blankets (ECBs)
 - Mulching
- Landscape Planting
- Other type of vegetative or non-vegetative stabilization measure not listed above: [Specify type.](#)

4. B. Deadlines to initiate and complete stabilization

- **Deadline to initiate soil stabilization:** Where work will not occur for 14 or more days in any area of bare soil on my site, I will initiate stabilization on the 1st day that work stops. Stabilization must be completed using vegetative stabilization measures or using alternative measures whenever vegetative measures are deemed impracticable or during periods of drought. All disturbed soils exposed prior to October 15th shall be seeded by that date. Any such areas which do not have adequate vegetative stabilization by November 15th must be stabilized through the use of non-vegetative erosion control measures. If work continues within any of these areas during the period from October 15th through April 15th, care must be taken to ensure that only the area required for that day's work is exposed, and all erodible soil must be restabilized within 5 working days. [RISDISM 3.3.7.5](#)

Any of the following activities qualifies as initiating stabilization:

1. Prepping the soil for vegetative or non-vegetative stabilization
 2. Applying mulch or other non-vegetative product to the area of bare soil
 3. Seeding or planting the exposed area
 4. Starting any of the activities in 1, 2, or 3 on a portion of the area to be stabilized, but not on the entire area
 5. Finalizing arrangements to have stabilization product fully installed
- **Deadline to complete soil stabilization:** Check the appropriate box below and follow the deadlines that correspond to that box:

The project is located in a drought-stricken area, and construction will occur during the seasonally dry period or during a period in which a drought is predicted to occur, and you are using vegetative stabilization measures.

I will complete the following by the deadlines below:

- Within 14 calendar days of when work has ceased in the affected area, install temporary, non-vegetative stabilization measures to the extent necessary to prevent erosion, and
- As soon as practicable given conditions or circumstances at the site, complete all activities necessary to initially seed or plant the area to be stabilized.
- To achieve final stabilization, the area must be seeded or planted to provide established vegetation that covers 80% vegetative surface cover, controls soil erosion, and withstands severe weather conditions ([RISESC Handbook – Seeding for Temporary Vegetative Cover](#)). In addition, non-vegetative erosion controls that provide cover for must be installed. RISDISM 3.3.7.5

All other construction projects, other than those described above.

I will complete the following as soon as practicable, but no later than 14 calendar days after initiating stabilization measures:

- For vegetative stabilization, complete all activities necessary to initially seed or plant the area to be stabilized. To achieve final stabilization, vegetation must provide 95% vegetative surface cover, control soil erosion, and withstand severe weather conditions ([RISESC Handbook – Seeding for Permanent Vegetative Cover](#)).
- For non-vegetative stabilization, complete the application of all non-vegetative measures to the area to be stabilized. RISDISM 3.3.7.5

The site map in Part 7 of this SESC Plan shows where stabilization will occur on this site. For installation, maintenance, and removal specifications for each CM, see [Appendix B: Stabilization Control Measure Specifications](#).

Part 5: Pollution Prevention and Good Housekeeping

Instructions:

Identify potential pollutants and choose which pollution prevention practices will be used at your site. You must comply with the specifications for design, installation, maintenance, and removal in [Appendix C: Pollution Prevention and Good Housekeeping Specifications](#). If you wish to outline alternative pollution control practices, please do so within this section.

[RISDISM 3.3.7.14 – Construction Activity Pollution Prevention Control Measures and the RI SESC Handbook – Section Three: Pollution Prevention and Good Housekeeping]

5. A. Potential Pollutants at this Project Site

Identify the potential pollutant sources on the site (check all that apply)

- | | |
|---|--|
| <input type="checkbox"/> Sediment | <input type="checkbox"/> Wastewater from concrete washout/cleanout |
| <input type="checkbox"/> Paint | <input type="checkbox"/> Wastewater from stucco washout/cleanout |
| <input type="checkbox"/> Fertilizers | <input type="checkbox"/> Lime |
| <input type="checkbox"/> Plaster | <input type="checkbox"/> Fuel and oil |
| <input type="checkbox"/> Solid waste | <input type="checkbox"/> Portable toilet waste |
| <input type="checkbox"/> Treated lumber | <input type="checkbox"/> Roofing materials |
| <input type="checkbox"/> Pesticides, Herbicides | |

In addition to the above, the following chemicals, compounds, or other pollutant sources will be located at my site during construction (identify any not included in the list above):

5. B. Prohibited Discharges

The following discharges are prohibited without a separate RIPDES Permit, and are considered a violation should any occur.

1. Contaminated groundwater.
2. Wastewater from washout of concrete, and from washout and cleanout of stucco, paint, from release oils, curing compounds and other construction materials.
3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.
4. Soaps, solvents, or detergents used in vehicle and equipment washing
5. Toxic or hazardous substances from a spill or other release. [RIPDES Regulations](#)

In the event that one of these discharges occurs, I will take corrective action consistent with Part 6.c of this SESC Plan.

5. C. Pollution Prevention and Good Housekeeping

During the course of my project, I will implement the following practices to minimize pollutant discharges from my site. These controls will be designed, installed, maintained, and removed in accordance with the specifications in Appendix C: Pollution Prevention and Good Housekeeping Specifications. The location on site for each of these practices is depicted in the attached site maps in: Site Maps and Drawings. Where a practice does not apply to my site because the type of pollutant will not be present during any part of the project, I have indicated that this practice is "N/A" (Not Applicable).

Note: By checking the "Applicable to My Site" box below, you are committing to following the corresponding practice specifications outlined in Appendix C: Pollution Prevention and Good Housekeeping Specifications. If you wish to outline alternative pollution control practices, please do so within this section.

Pollutant Sources	Pollution Prevention Practice <i>(See Appendix C for specifications)</i>	Applicable to My Site?
Building products, materials, and wastes	Stockpile and Staging Area Management Waste Management	<input checked="" type="checkbox"/> Yes(required) <input type="checkbox"/> Yes <input type="checkbox"/> N/A
Pesticides, herbicides, insecticides, and fertilizers	Spill Prevention & Control Plans Waste Management	<input type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> N/A
Diesel fuel, oil, hydraulic fluids, other petroleum products, and other chemicals	Vehicle Fueling, Maintenance and Washing Spill Prevention & Control Plans	<input type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> N/A
Hazardous or toxic waste	Waste Management Spill Prevention & Control Plans	<input type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> N/A
Construction and domestic waste	Waste Management	<input checked="" type="checkbox"/> Yes (required)
Sanitary waste	Waste Management	<input type="checkbox"/> Yes <input type="checkbox"/> N/A
Washwater from paint, concrete, or other applicators and containers	Concrete Washout	<input type="checkbox"/> Yes <input type="checkbox"/> N/A

Describe any other pollution prevention practices to be implemented at the site: [Insert text here.](#)

For any pollution prevention requirements that you indicated are not applicable ("N/A") in the table above, describe why they are not applicable: [Insert text here.](#)

Insert project specific spill plan and response procedures if applicable.

Part 6: Procedures for Maintenance, Inspections, and Corrective Actions

Instructions:

Identify appropriate procedures for maintenance, inspections, and corrective actions at your site, consistent with the requirements in the [Section 3.3.7.15 of the RISDISM entitled "Control Measure Installation, Inspections, Maintenance, and Corrective Actions"](#).

6. A. Inspections

Regulatory requirement: You must conduct a site inspection once every 7 calendar days and within 24 hours of the occurrence of a storm event of 0.25 inches of rainfall per twenty-four (24) hour period and/or after a significant amount of runoff. RISDISM 3.3.7.15.

Areas to be inspected: During each inspection, I will inspect the following areas of my site, as required by the permit:

- Cleared, graded, or excavated areas of the site;
- Stormwater controls (e.g., perimeter controls, exit points) and pollution prevention practices (e.g., pollution prevention practices for vehicle fueling/maintenance and washing, construction product storage, handling, disposal) at the site;
- Equipment storage and maintenance areas;
- Areas where stormwater flows within the site;
- Stormwater discharge points; and
- Areas where stabilization has been implemented.

Inspection report: I will complete an inspection report within 24 hours of completing any site inspection consistent with the report template found at:

<http://www.dem.ri.gov/programs/water/permits/ripdes/stormwater/stormwater-manual.php>

Note: Be sure to attach completed inspection reports to the SESC Plan.

6. B. Maintenance

Regulatory Requirement: You must ensure that all erosion and sediment controls and pollution prevention practices remain in effective operating condition during permit coverage and are protected from activities that would reduce their effectiveness. RISDISM 3.3.7.15

If I find a problem with a stormwater or pollution control measure, I will:

- ✓ Initiate work to fix the problem immediately after discovering the problem, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance; and
- ✓ Install a new or modified control and make it operational, or complete the repair, by no later than 7 calendar days from the time of discovery where feasible whenever the installation of a new erosion or sediment or pollution prevention control is needed. If infeasible to complete the installation/repair within 7 days, I will document why it is infeasible to complete the installation or repair and the modified schedule.

6. C. Corrective Action.

Regulatory Requirement: You must complete corrective actions in accordance with the timeframes listed in Part 6.b of this SESC Plan. RISDISM 3.3.7.15

Required Corrective Action(s): I will immediately take all reasonable steps to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational, including cleaning up any contaminated surfaces so that the material will not discharge in subsequent storm events. I will conduct corrective action(s) for each of the following triggering conditions should they occur at my site.

- ✓ A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements of the permit
- ✓ I became aware that discharges are not meeting applicable water quality standards
- ✓ A prohibited discharge is occurring or has occurred
- ✓ A regulatory authority requires corrective actions as a result of a permit violation found during a compliance inspection

Corrective action report: For each corrective action taken, I will complete a corrective action report consistent with the corrective report template found at

<http://www.dem.ri.gov/programs/water/permits/ripdes/stormwater/stormwater-manual.php>

Note: Be sure to attach completed corrective action reports to the SESC Plan.

6. D. Training.

Regulatory Requirement: Prior to the commencement of earth-disturbing activities or pollutant generating activities, you must ensure that personnel responsible for compliance with the SESC Plan understand their specific responsibilities with respect to these requirements.

Documentation for Completed Training:

Name (printed)	Title	Click here to enter a date.
Name (printed)	Title	Click here to enter a date.

Part 7: Site Maps and Drawings

Instructions:

For each map template, include a depiction of each bulleted item, as applicable.

The [RI SESC Handbook](#) requires operators to provide a map or series of maps identifying property boundaries, locations of earth-disturbing activities, locations of final structures and surfaces that will be left impervious upon completion of project, locations of all surface waters within the immediate vicinity of the site, stormwater discharge locations, locations of potential pollutant-generating activities, locations of erosion and sediment controls, stormwater control measures, and other CMs as part of the SESC Plan.

[[RI SESC Handbook – Part D. Soil Erosion and Sediment Control Plans](#)]

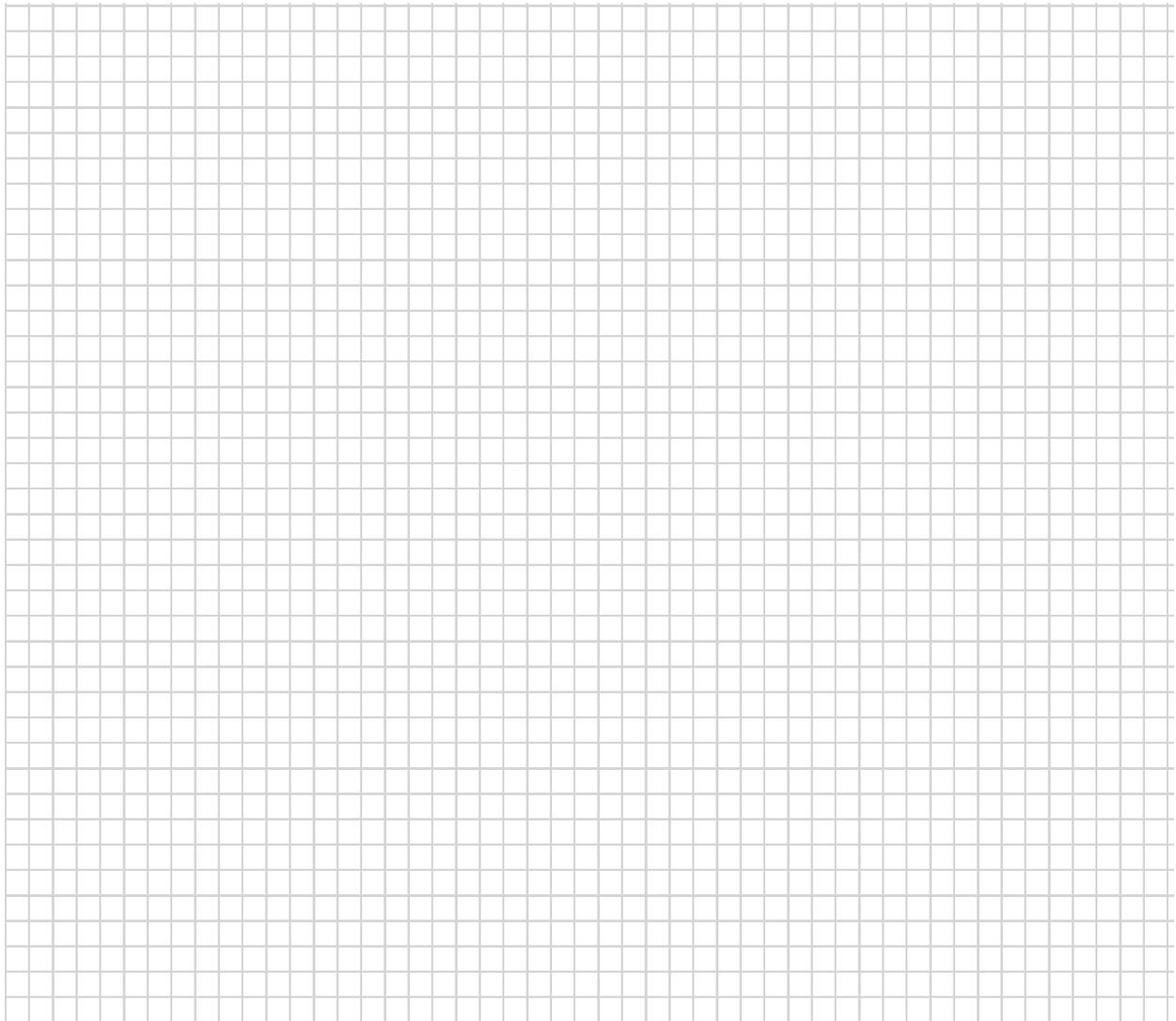


Before you continue, be sure to review the series of **EXAMPLE SITE MAPS** provided in APPENDIX D of this guide.

MAP #1 – Pre-Construction

Use this map to depict:

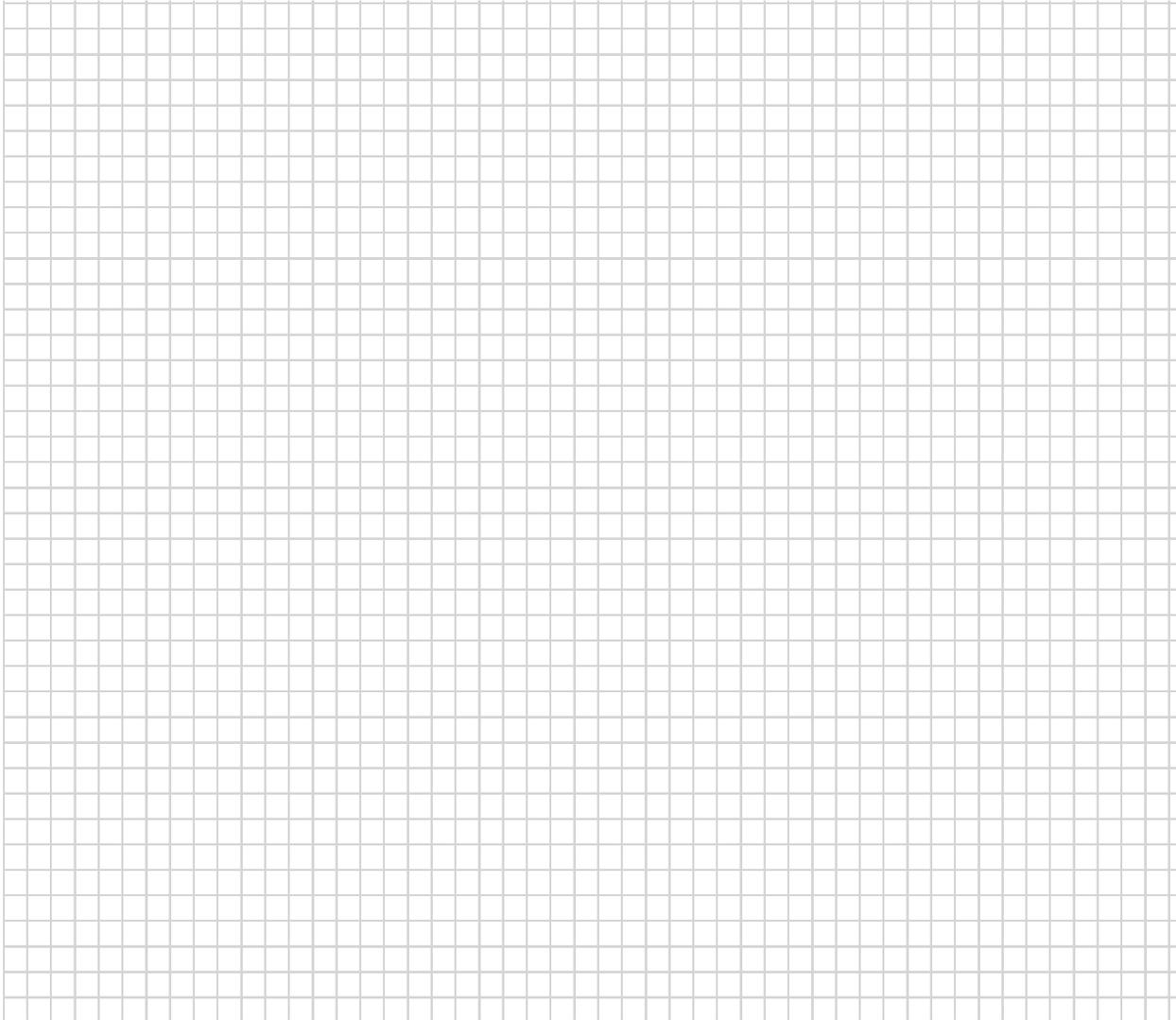
- ✓ Boundaries of your site
- ✓ Storm drain inlets
- ✓ Topography of the site, existing vegetative cover, and drainage patterns onto, over, and from the site property
- ✓ Any slope greater than 15%
- ✓ Locations where construction activities and earth-disturbing activities will occur (e.g., limits of disturbance, building footprint)
- ✓ Flowpath of stormwater across site prior to construction



MAP #2 – Control Measures

Use this map to depict:

- ✓ Location of designated areas (with clear signage in English and, as appropriate, Spanish) for **waste disposal, chemical/hazardous/construction materials storage, and stucco/concrete washout.**
- ✓ Locations of structures and/or other impervious surfaces to be constructed
- ✓ Locations of all potential pollutant-generating activities
- ✓ Locations of all erosion and sediment control measures
- ✓ Locations of all temporary and/or permanent stabilization control measures
- ✓ Locations of all pollution prevention and good housekeeping control measures
- ✓ Drainage patterns onto, over, and from the site property after major grading activities
- ✓ Allowable non-stormwater discharges (refer to Part 2 of this template)



Attachments

I have included a copy of my CRMC or RI DEM permit application and associated permits as attachments to this SESC Plan.

SESC Plan Certification

Regulatory Requirement: For all land disturbance activities that require a permit from the RI DEM or the CRMC, a qualified SESC Plan preparer shall be a Rhode Island Registered Professional Engineer, a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Professional in Storm Water Quality (CPSWQ), or a Rhode Island Registered Landscape Architect who certifies that the SESC Plan meets the Performance Criteria in Section 3.3.7 of the RISDISM and requirements of the RI SESC Handbook. The Preparer shall have the specific credentials and experience needed to select the appropriate practices for the application. If the project involves significant land grading or requires an engineered site design, then the SESC Plan must be prepared by a Professional Engineer licensed in the State of RI. RISDISM 3.2.10

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name (printed)	Title	Signature	Date

SWPPP APPENDICES

Appendix A – Erosion and Sediment Control Measure Specifications

Appendix B – Stabilization Control Measure Specifications

Appendix C – Pollution Prevention and Good Housekeeping Specifications

Appendix D – Example Site Maps

Appendix E – Copy of Applicable CRMC or RI DEM Permits

Appendix F – Copy of CRMC or RI DEM Permit Application Forms

Appendix G – Completed Inspection Reports

Appendix H – Completed Corrective Action Reports

BMP APPENDIX CONTENTS

Appendices A, B, and C provide specifications for typical small residential lot construction BMPs. Indicate which controls you selected for your site, and the date you will install and remove each selected control. Note, some controls are mandatory.

	APPENDIX A: Erosion and Sediment Control Measure Specifications	Included in this SESC Plan?	Date of Installation	Date of Removal
3.A.	Stockpile and Staging Area Management	<input type="checkbox"/> YES <input type="checkbox"/> NO		
	Minimizing Disturbed Area: Preserving Soils & Vegetation	<input type="checkbox"/> YES <input type="checkbox"/> NO		
3.B.	Perimeter Controls	<input checked="" type="checkbox"/> YES (REQUIRED)		
	• Limit of Work and Site Access Control	<input type="checkbox"/> YES <input type="checkbox"/> NO		
	• Straw Wattles, Compost Tubes, and Fiber Rolls	<input type="checkbox"/> YES <input type="checkbox"/> NO		
	• Silt Fence	<input type="checkbox"/> YES <input type="checkbox"/> NO		
3.C.	Construction Entrances	<input checked="" type="checkbox"/> YES (REQUIRED)		
3.D.	Dust Control	<input checked="" type="checkbox"/> YES (REQUIRED)		
3.E.	Soil Preparation & Topsoiling	<input type="checkbox"/> YES <input type="checkbox"/> NO		
3.F.	Inlet Protection	<input type="checkbox"/> YES <input type="checkbox"/> NO		
	APPENDIX B: Stabilization Control Measure Specifications	Included in my SESC Plan?	Date of Installation	Date of Removal
4.A.	Vegetative Controls: Temporary			
	• Seeding for Temporary Vegetative Cover	<input type="checkbox"/> YES <input type="checkbox"/> NO		
	Vegetative Controls: Permanent			
	• Seeding for Permanent Vegetative Cover	<input type="checkbox"/> YES <input type="checkbox"/> NO		
	• Sodding	<input type="checkbox"/> YES <input type="checkbox"/> NO		
	• Landscape Planting	<input type="checkbox"/> YES <input type="checkbox"/> NO		
	Non Vegetative Cover			
	• Erosion Control Blankets (ECBs)	<input type="checkbox"/> YES <input type="checkbox"/> NO		
• Mulching	<input type="checkbox"/> YES <input type="checkbox"/> NO			
	APPENDIX C: Pollution Prevention and Good Housekeeping Specifications	Included in my SESC Plan?	Date of Installation	Date of Removal
5.C.	Waste Management	<input checked="" type="checkbox"/> YES (REQUIRED)		
	Spill Prevention & Control Plans	<input type="checkbox"/> YES <input type="checkbox"/> NO		
	Vehicle Fueling, Maintenance and Washing	<input type="checkbox"/> YES <input type="checkbox"/> NO		
	Concrete Washout	<input type="checkbox"/> YES <input type="checkbox"/> NO		



Note: The specification sheets from Appendix A, B, and C included in your SESC PLAN should correspond to the controls you selected in Parts 1-7 of the RI's *Small Residential Lot SESC Plan Template*. Remove any controls not applicable to your site.

Soil Stockpiling and Topsoil Preservation



Application of silt fencing to control muddy runoff from soil stockpile. Leaving a site with quality soil encourages healthy root growth and reduces time and resources needed to care for turf and landscape plantings.

Photo credit: EPA Small Residential Lot SWPPP Template



Silt fence around soil stockpile.

Photo credit: Barry Tanning, Tetra Tech

Use: To reduce/eliminate air and stormwater pollution, and to prevent damage resulting from erosion of stockpile material.

Planning and Design Requirements:

- Ensure you maximize the distance of stockpiles from wetlands, watercourses, drainage ways, and steep slopes.
- When stockpile is located down-gradient from a long slope, divert runoff water away from/around the stockpile using diversions.
- When necessary, use an appropriate seed mix to stabilize the stockpile material based upon the length of time it is to remain stockpiled, information gathered from soil borings, and from soil delineation.

Installation:

- Protect all stockpiles from stormwater run-on using a temporary perimeter sediment barrier, such as silt fences, fiber rolls, straw bales, berms, and dikes. Install barrier approximately 10 feet from the proposed toe of the slope (See **Straw Wattles, Compost Tubes, and Fiber Rolls; Silt Fence**).
- The side slopes of stockpiled materials should be no steeper than 2:1.
- Stockpiles not to be used within 30 days need to be seeded and mulched immediately after formation of the stockpile (See **Seeding for Temporary Vegetative Cover; Seeding for Permanent Vegetative Cover; Mulching**).
- Prior to the onset of precipitation, stockpiles should be protected with a temporary perimeter sediment barrier. Stockpile should also be covered with plastic or comparable material, or protected with soil stabilization measures prior to the onset of precipitation and for all non-active stockpiles.

Inspection, Maintenance, and Removal Requirements:

- Inspect and verify that activity-based measures are in place prior to the commencement of associated activities.
- While activities associated with the measure are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued measure implementation
- Repair and/or replace perimeter controls and covers as needed to keep them functioning properly.
- After the stockpile has been removed, the site should be graded and permanently stabilized.

Minimizing Disturbed Area: Preserving Soils & Vegetation



Tree protection area clearly marked with signage.
Photo Credit: John Kosco, Tetra Tech

Use: Maintain maximum areas of mature vegetation and undisturbed soils on a construction site and at the individual lot level, through the reduction of site clearing, grubbing, and grading, and the maximization of vegetation preservation. This is accomplished through the following:

- Careful site planning addressing: sensitive areas; proposed roads, utilities and other infrastructure; building locations and elevations (to best fit the existing topography); and landscape plans.
- Construction phasing and sequencing.
- Careful delineation of limits of work.

Design and Installation Requirements:

- If state and/or local municipalities have established Minimum Disturbance/Minimum Maintenance Buffers, ensure that the site is designed to be rigorous but reasonable in terms of current feasible site construction measures, specifically for small residential lots with less than 1.0 acre of disturbed area.
- U.S. Green Building Council’s Leadership in Energy & Environmental Design Reference Guide (Version 2.0 June 2001) states: “...limit site disturbance including earthwork and clearing of vegetation to **40 feet** beyond the building perimeter, **5 feet** beyond the primary roadway curbs, walkways, and main utility branch trenches, and **25 feet** beyond pervious paving area that require additional staging areas in order to limit compaction in paved areas...”

Minimizing Construction Traffic Areas:

- Areas where temporary construction traffic is allowed should be clearly delineated and limited. These areas should be restored as previous areas following development through a required soil restoration program.

Minimizing Stockpiling and Storage Areas:

- All areas used for material storage should be clearly delineated, with the surface maintained, and subject to a soil restoration program following development.

Minimizing Clearing for New Landscape Plantings

- Such a strategy reduces soil disturbance and associated problems of erosion and sedimentation.

Maximizing Soil Restoration

- Where construction activity does require grading and filling and where compaction of soil can be expected, this disturbance should be limited. Soil treatments/amendments should be considered for such disturbed areas to restore permeability (see **Soil Preparation and Topsoiling**). If the bulk density is not reduced following fill, these areas will be considered semi-impervious after development and runoff volumes should be calculated accordingly.

Clearing and Grubbing

- Clearing and grubbing should be minimized and should occur only after limits of work, both interior and perimeter, have been installed.
- It is not acceptable to clear and grub areas that will not be active within 21 days, unless stabilized with an approved stabilization measure immediately following clearing and grubbing.

Inspection, Maintenance, and Removal Requirements

- Routinely inspect no-disturbance areas and protected areas to ensure that they are flagged, protected, and healthy
- Re-delineate and protect as necessary.
- Remove measures only once all construction has ceased and the entire site is stable.

Limit of Work and Site Access Control



Site access control measure properly used to delineate construction site perimeter.
Photo credit: Douglas County, CO

Use: A physical barrier used to establish clear limits of work and construction site boundaries, keep construction out of sensitive areas, and to limit vehicular and/or pedestrian access onto a site.

Planning and Design Requirements:

- Controls shall be composed of contractor-grade orange material at least 4 feet high.
- Controls may be chain link, plastic mesh or other approved materials.
- Do not place controls within work limits.

Installation:

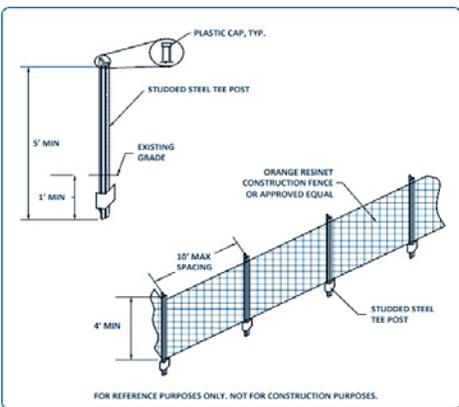
- See plan for precise location.
- Install prior to any land disturbing activities.
- Install following manufacturer’s recommendations. (See diagram for typical installations).
- Studded steel t-posts shall be used, spaced no more than 10 feet apart, and fitted with plastic caps for safety.
- Fencing material shall be securely fastened to the top, and bottom of each post.



Site access control measure used to delineate locations within the site where access is to be restricted.
Photo credit: CASQA

Maintenance/Removal:

- Frequent observations and maintenance are necessary to maintain controls in effective operating condition.
- Inspect controls each workday and maintain them in effective operating condition.
- Maintenance of controls should be proactive, not reactive.
- Where controls have been damaged, sagged, ripped, or failed, repair or replacement should be initiated upon discovery of the failure (and always within 24 hours of a storm that causes surface erosion).
- Inspections and corrective measures should be documented thoroughly.
- Controls are to remain in place until the up-gradient disturbed area is stabilized and approved by the local jurisdiction.
- When controls are removed, all disturbed areas associated with the installation, maintenance, and/or removal of the barrier/structure shall be covered with topsoil, seeded, mulched, or otherwise stabilized as approved by the local jurisdiction.



Orange safety or construction fence installation.
Photo credit: 2002 Connecticut Guidelines for Soil Erosion and Sediment Control

Silt Fence

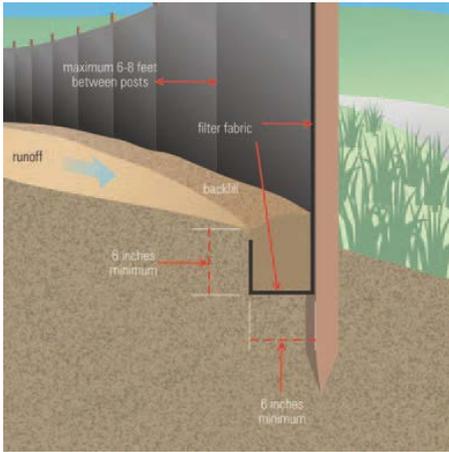


Illustration of a proper silt fence installation.
Photo Credit: EPA Small Residential Lot SWPPP Template



Site with properly installed silt fence. Note that fence posts are installed on the downhill side of the fabric.
Photo credit: Barry Tønning, Tetra Tech



Ensure silt fence is dug into ground to prevent runoff from escaping underneath.
Photo credit: John Kosco, Tetra Tech

Use: Intercept sediment laden runoff from small drainage areas of disturbed soil, break up longer slopes, reducing runoff velocity, and cause deposition of transported sediment on the site.

Planning and Design Requirements:

- Determine areas where erosion may occur, and areas where sediment has the potential to exit the property or enter an environmentally sensitive area.
- A silt fence may be used where maximum drainage area for overland flow to the silt fence does not exceed $\frac{1}{4}$ acre per 100 feet of fence, with maximum ponding depth of 1.5 feet behind the fence, where erosion would occur in the form of sheet erosion, or where there is no concentration of water flowing to the barrier.
- Fence Posts (for fabricated units): The length shall be a minimum of 36 inches long. Wood posts will be of sound quality hardwood with a minimum cross sectional area of 3 square inches. Steel posts will be standard T and U section weighing not less than 1 pound per linear foot.
- Posts shall be set at a minimum of 8 feet on center.
- Wire Fence (for fabricated units): Wire fencing shall be a minimum 14 gage with a maximum 6 inch mesh opening, or as approved.
- Design computations are not required for installations of 1 month or less.
- All silt fence shall be placed as close to the areas as possible, but at least 10 feet from the toe of a slope to allow for maintenance and roll down.
- The area beyond the fence must be undisturbed or stabilized.
- Sensitive areas to be protected by silt fence may need to be reinforced by using heavy wire fencing for added support to prevent collapse.

Installation:

- Silt fence should be buried at least 6 inches deep.
- Termination points should be extended uphill at least 6 feet.
- Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

Inspection, Maintenance, and Removal Requirements:

- Remove all devices once permanent erosion control measures are in place and functioning unless devices are designed to remain in place.
- Inspect regularly for water undercutting and bypassing of devices.
- Inspect for damage and replace or repair damaged sections as needed.
- Remove sediment when it reaches $\frac{1}{2}$ the height of the device.
- Silt fence will not be left to rot in place. The silt fence may be removed only when the adjacent exposed area is stabilized, i.e., the area has an established grass or stone cover or has been paved, and is free from future uncontrolled discharges.
- Immediately upon removal of the silt fence the remaining exposed areas will be finished as specified in plans.

Straw Wattles, Compost Tubes, and Fiber Rolls

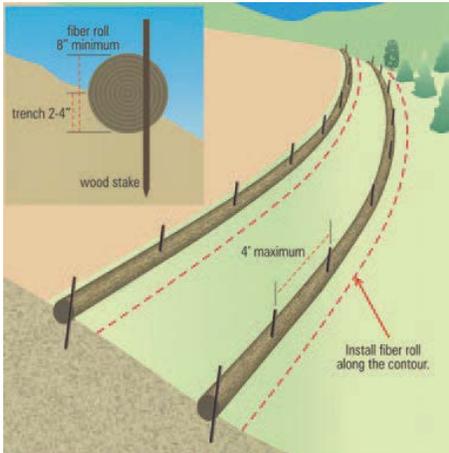


Illustration of filter log installation.

Photo Credit: EPA Small Residential Lot SWPPP Template



Drive stakes every 3-4 feet along the filter log.

Photo credit: Barry Tanning, Tetra Tech.



Make sure filter log stakes are spaced to prevent undercutting or bypasses. Leave stake tops extended along sections to prevent drive-overs.

Photo credit: Barry Tanning, Tetra Tech

Use: Tubular filtration devices used to intercept and contain sediment laden runoff from small drainage areas of bare soil and/or other disturbed areas, break up longer slopes, reduce runoff velocity, and cause deposition of transported sediment.

Planning and Design Requirements:

- Determine areas where erosion may occur, and areas where sediment has the potential to exit the property or enter an environmentally sensitive area.
- May be used where erosion would occur in the form of sheet erosion, and/or where there is no concentration of water flowing to the barrier.

Straw Wattles and Fiber Rolls:

- Can be used in areas of low shear stress.
- Suitable along the toe, top, face, and at-grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow; at the end of a downward slope where it transitions to a steeper slope; along the perimeter of a project to control runoff or runoff surface flows; as temporary 'check dams' in unlined ditches; downslope of exposed soil areas; and around temporary stockpiles.
- Determine the vertical spacing for slope installations on the basis of the slope gradient and soil type, a good rule of thumb is:

1:1 slopes = 10 feet apart

2:1 slopes = 20 feet apart

3:1 slopes = 30 feet apart

4:1 slopes = 4 feet apart

- Wattles and fiber rolls at the toe of slopes greater than 5:1 must be at least 20 inches in diameter. Stacked smaller-diameter fiber rolls can be used to achieve a similar level of protection.
- Should not be used on slopes subject to creep, slumping, or landslide.

Compost Tubes:

- Drainage areas do not exceed 0.25 acre per 100 feet of device length and flow does not exceed one cubic foot per second.
- Compost Tubes may be used, subject to the slope conditions listed on the next page.
- Compost Tubes socks on steeper slopes with faster flows if they are spaced more closely, stacked beside and/or on top of each other, made in larger diameters, or used in combination with other runoff and sediment control measures.
- Larger diameter compost tubes and coarser compost products are recommended for areas subject to high rainfall and runoff conditions.
- Useful in protecting areas where trenching is difficult.

Installation Requirements:

Straw Wattles and Fiber Rolls:

- On slopes, install along the contour with a slight downward angle at the end of each row.
- Turn the ends of each roll upslope to prevent runoff from flowing around the roll.
- For soft, loamy soils, install in shallow trenches dug 3 to 5 inches deep and place rows closer together.
- For hard, rocky soils, install in shallow trenches dug 2 to 3 inches deep and place the rows farther apart.
- Stack wattles and rolls securely into the ground with biodegradable wood stakes or willow cuttings and orient them perpendicular to the slope.

Appendix A – Erosion and Sediment Control Specifications

Slope %	Maximum slope length above compost filter sock in ft (m)			
	Diameter of compost filter sock required			
	8-inch (200-mm)	12-inch (300-mm)	18-inch (450-mm)	24-inch (600-mm)
2 (or less)	300 (90)	375 (110)	500 (150)	650 (200)
5	200 (60)	250 (75)	275 (85)	325 (100)
10	100 (30)	125 (35)	150 (45)	200 (60)
15	70 (20)	85 (25)	100 (30)	160 (50)
20	50 (15)	65 (20)	70 (20)	130 (40)
25	40 (12)	50 (15)	55 (16)	100 (30)
30	30 (9)	40 (12)	45 (13)	65 (20)
35	30 (9)	40 (12)	45 (13)	55 (18)
40	30 (9)	40 (12)	45 (13)	50 (15)
45	20 (6)	25 (8)	30 (9)	40 (12)
50	20 (6)	25 (8)	30 (9)	35 (10)

Recommended spacing and diameter requirements for compost filter socks.

Photo credit: RISESCH

- Drive stake through the middle of the roll, and deep enough to anchor the roll in place.
- About 3 to 5 inches of the stakes should stick out above the roll, and spaced 3 to 4 feet apart.
- Alternatively stakes can be placed on the downstream side of the wattle, tube, or roll.
- A 24 inch stake is recommended for soft, loamy soils, and an 18 inch stake for hard, rocky soil

Compost Tubes:

- Shall be placed over the top of the ground, anchored to the ground with wooden stakes driven through the middle of the tube.
- Remove heavy vegetation and grade uneven surfaces to ensure uniform contact with the ground surface.
- Drive stakes through the center of the tube at regular intervals, or placed on the downstream of the tube.
- Turn the ends of each tube upslope to prevent runoff from flowing around the tube.
- Compost tubes can be installed on frozen ground, pavement, or cement. Concrete blocks can be used to place to hold tube in place.

Inspection, Maintenance, and Removal Requirements:

- Remove all devices once permanent erosion control practices are in place and functioning unless devices are designed to remain in place (i.e. compost filter socks with seed).
- Sediment removal and disposal are still required in areas where sediment accumulates to at least one-half the distance between the top of the fiber roll or wattle and the ground surface.
- Compost filter socks should be inspected regularly, as well as after each rainfall event, to ensure that they are intact and the area behind the sock is not filled with sediment.
- If the filter sock was overtopped during a storm event, consider installing an additional filter sock on top of the original, placing an additional filter sock farther up the slope, or using an additional control measures in conjunction with the sock(s).
- Remove sediment that builds up behind the sock before it interferes with the functionality of the sock.
- Deposit the removed sediment within the project limits or dispose of legally so that the sediment is not subject to erosion by wind or by water.
- Repair or replace split, torn, or unraveling socks.
- Replace broken or split stakes.
- Sagging or slumping compost socks must be repaired with additional stakes or replaced.
- Repair or replace at locations where rills and other evidence of concentrated runoff have occurred beneath the socks.

Construction Entrances

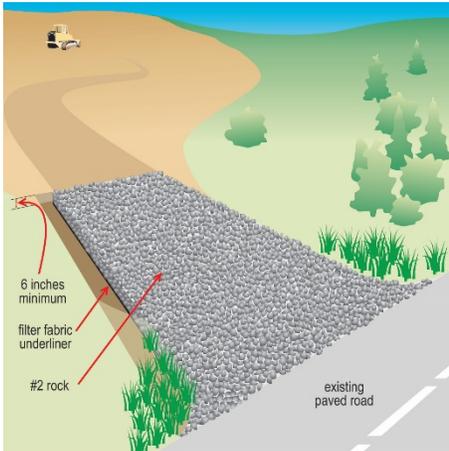


Illustration of stabilized exit pad.
Photo credit: EPA Small Residential Lot SWPPP Template

Square Mesh Sieves	RIDOT 2" Crushed Stone or Gravel % Finer	ASTM C-33 No. 2 % Finer	ASTM C-33 No. 3 % Finer
2-1/2 inches	100	90-100	100
2 inches	95-100	35-70	90-100
1-1/2 inches	30-55	0-15	35-70
1-1/4 inches	0-25	-	-
1 inch	0-5	-	0-15
3/4 inch	-	0-5	-
1/2 inch	-	-	0-5
3/8 inch	-	-	-

Gradations of stone sizes for construction entrances.
Photo credit: 2002 Connecticut Guidelines for Soil Erosion and Sediment Control

Use: A stone stabilized pad, ‘mud rack’, or other measures located at points of vehicular ingress and egress on a construction site to reduce the tracking or flowing of sediment onto adjacent areas and paved surfaces.

Planning and Design Requirements:

- Located to provide for maximum utility by all construction vehicles.
- At poorly drained locations, subsurface drainage should be installed before installing the stabilized construction entrance.
- **Thickness:** not less than 4 inches.
- **Width:** not less than full width of pints of ingress or egress.
- **Length:** 50 feet minimum where the soils are sands or gravels or 100 feet minimum where soils are clays or silts, except where the traveled length is less than 50 or 100 feet, respectively.
- **Aggregate Size:** Use ASTM C-33, size No. 2 or 3, or RIDOT 2" size crushed stone or gravel.
- If washing is used, provisions must be made to intercept the wash water and trap the sediment before it is carried off-site.
- Wash water must be carried away from the entrance and must be treated in a sediment basin or alternative control that provide equivalent or better treatment prior to discharge.
- The settling are must be sized to hold the volume of water used during any 2-hour period.
- A wash rack may also be used to make washing more convenient and effective.

Installation Requirements:

- At poorly drained locations, install subsurface drainage insuring the outlet to the drains are free flowing.
- A road stabilization filter cloth must be placed on the subgrade prior to the gravel placement. Unroll the geotextile in a direction parallel to the roadway centerline in a loose manner permitting it to conform to the surface irregularities when stone is placed.
- Place the stone to the specified dimensions. Keep additional stone available or stockpile for future use.
- If the grade of the construction entrance drains to the paved surface and it exceeds 2%, construct a water bar within the construction entrance at least 15 feet from its entrance on the paved surface, diverting runoff water to a settling or filtering area.
- Construct any drainage and settling facilities for washing operations. If wash racks are used, install according to the manufacturer’s specifications.

Inspection, Maintenance, and Removal Requirements

- Provide periodic top dressing with additional stone or additional length as conditions demand.
- Repair any measures used to trap sediment as needed.
- Immediately remove all sediment spilled, dropped, washed or tracked onto paved surfaces.
- Roads adjacent to a construction site shall be left clean at the end of each day.
- If the construction entrance is being properly maintained and the action of a vehicle traveling over the stone pad is not sufficient to remove the majority of the sediment, then either: (1) increase the length of the construction entrance, (2) modify the construction access road surface, or (3) install washing racks and associated settling area or similar devices before the vehicle enters a paved surface.
- At the completion of construction all entrance and exit points to the site must be restored in accordance with the approved plans.

Dust Control



Straw mulch can be used to both prevent erosion and minimize dust from a site.

Photo credit: Barry, Tonning, Tetra Tech



Good application of water on unpaved travel way to reduce the movement of dust.

Photo credit: RISESCH

Use: Prevent/reduce wind erosion and the movement of dust from construction sites, material stockpiles and other un-vegetated areas.

Planning and Design Requirements:

- Limit the amount of exposed soil by phasing construction to reduce the area of land disturbed at any one time by using stabilization measures such as **Mulching; Seeding for Temporary Vegetative Cover; Seeding for Permanent Vegetative Cover; Sodding; and/or Landscape Planting.**
- Undisturbed vegetative buffers left between graded areas and areas to be protected can be very effective in maintaining natural vegetation.
- Identify and address sources of dust generated by construction activity.
- Paved surfaces require mechanical sweepers to remove soil/dust that has been deposited onto the pavement.
- On unpaved travel ways, use construction entrance stabilization measures and/or water as needed.
- Use fine water sprays to control stationary sources of dust.
- Pumping from stream, ponds, etc. may require approval from the RI DEM Freshwater Wetlands Program.
- Identify and address sources of wind generated dust.
- Consider breaking up long reaches with temporary windbreaks (i.e. Silt Fence or Straw Bales).
- Plan on stabilizing slopes early.
- Mulch for seed will require anchoring when used.
- Consider water quality when selecting the method and/or materials used for dust control.

Installation Requirements:

- Water treatment should be applied until the surface is moist. It needs to be repeated as often as required to maintain moisture.
- Devices, barriers and fences should be installed in accordance with manufacturers' guidelines.
- Application rates for dust control treatment agents such as calcium chloride, polymers and tackifiers vary greatly. Follow manufacturer's written instructions to assure appropriate application rates.

Inspection, Maintenance, and Removal Requirements:

- Treatments using water, polymers, tackifiers, etc. need to be maintained and repeated as required by wet and dry conditions and product longevity.
- Areas with dust control measures in place should be inspected daily.
- Physical structures such as barriers and fences should be regularly inspected and repaired as needed.

Soil Preparation & Topsoiling



Use of a tractor power rake to properly condition topsoil and prepare ground for seeding. Removes all rock and debris from the soil, and promotes seed to soil contact.

Photo Credit: forddistributing.com

Compost Parameter	Acceptable Range
Humified organic matter	35% to 65%
Carbon to nitrogen ratio	25:1
Soil texture	loamy sand to silty loam, screened (100% by volume must pass a 2 inch screen, 95% by volume must pass a 3/4 inch screen), loose and friable
pH	6.0 – 8.0
Moisture Content	between 35% and 55%
Soluble salts	<6.0 mmho/cm (mmho measures conductance)
Bulk Density	40 to 50 lbs/cu ft

Acceptable compost specifications.

Photo credit: 2002 Connecticut Guidelines for Soil Erosion and Sediment Control

Use: To preserve, restore, and/or amend soils in the post-development landscape to ensure that important biological, chemical, and physical functions of the soil are maintained so that the area may be stabilized by vegetation.

Planning and Design Requirements:

- Topsoil for turf application must:
 - Have a minimum organic matter content of 5% organic matter dry weight (DW) content in turf areas,
 - Have a minimum thickness of 4 inches (recommended that up to 8 inches of topsoil be used for turf applications), and
 - The subsoil should be scarified at least 4 inches with some incorporation of the import topsoil, prior to placement of the topsoil layer.
- Topsoil for planting applications must:
 - Have a minimum organic matter content of 10% dry weight (DW), and
 - Be spread evenly upon the prepared subgrade surface to the specified depth for all planting beds or to a minimum thickness of 2 inches of organic material.
- If needed, compost shall meet the definition of Class “A” Compost, as defined in Section 8.01 of the Solid Waste Regulations No. 8 from the State of Rhode Island, Department of Environmental Management, Office of Waste Management.
- Prior to developing a site development plan, inventory and map the existing soil resources following procedures found in Standards and Procedures for Site Specific Soil Mapping in Rhode Island.
- Site investigations should be made to determine if there is sufficient topsoil of good quality to justify stripping.
- The application of topsoil must be scheduled so as not to delay seeding or sodding applications.
- Calculating Topsoil and Compost needs located in RISESCH Section 4: Erosion Control Measure, **Soil Preparation and Topsoiling**.

Installation:

- Before topsoiling, establish erosion and sediment control measures.
- Stripping confined to the immediate construction area and equipment should avoid compacting areas that are not to be altered by construction.
- A 4-6 inch stripping depth is common.
- Stripped topsoil should be stockpiled for the shortest period possible (see **Stockpile and Staging Area Management** for further detail).
- After topsoiling, is complete, final grades should match approved plan.
- Where pH is 6.0 or less, spread ground agricultural limestone (in accordance with recommendations from soil test results) to attain a pH 6.0 to 6.5, or a pH required by vegetative establishment measure being used.
- Topsoil should not be installed over compacted subsoil or hardpan. Hardpan must be scarified prior to spreading topsoil to ensure adequate bonding.
- When required, incorporate uniformly one to three inches of compost within the top four to six inches of the soil profile.
- Prior to spreading the topsoil, the subgrade should be loosened by discing, scarifying, or tracking to a depth of at least 2 inches to ensure bonding of the topsoil and subsoil.
- Distribute topsoil uniformly to a minimum compacted depth of 4 inches.
- For slopes 2:1 through 5:1, slope tracking is required prior to the placement of topsoil to improve bonding
- Topsoil should not be placed while in frozen or muddy condition, when the subgrade is excessively wet, or in a condition detrimental to proper grading or proposed sodding or seeding.

Appendix A – Erosion and Sediment Control Specifications

- Topsoil should be planted and mulched as soon as possible after installation.
- Compact the topsoil enough to ensure good contact with the underlying soil and to obtain a uniform firm seedbed.
- Immediately protect the topsoil from erosion by either sodding, seeding, and/or mulching.
- Water thoroughly after seeding or sodding.
- Newly seeded areas can be top-dressed with a fine compost (<3/8 inch), and then watered.

Inspection:

- Inspection may be made by qualified individuals who submit signed certification that the approved SMP had been implemented.

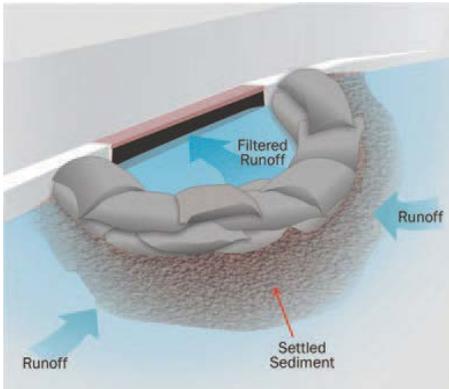
Preferred Inspection Schedule and Tasks

- Pre-Grading Inspection: Prior to the commencement of site work, contact the Applicant (Owner/Operator) to provide an inspection to verify the delineation and protection of native soils and vegetation to remain undisturbed per the SMP, and to verify the proposed location for topsoil and material stockpiling.
- Grading Progress Inspection: Prior to the placement of soil amendments, contact the Applicant (Owner/Operator) to provide an inspection to verify that specified erosion control methods have been implemented, the location of stockpiled soil and materials follow the Soil Management Plan, and that subgrades are consistent with the Soil Management Plan.
- Post-Construction Inspection: Prior to planting, contact the Applicant (Owner/Operator) to provide an inspection to verify that the placement of amendments and soil preparation is consistent with the SMP. Verify appropriate soil compaction, scarification and amendment incorporation by digging at least one 12 inch deep test hole per acre for turf and at least one per acre for planting beds using a garden spade driven solely by inspector's weight (less than 80 psi) or 10 locations per landscaped acre using a simple "rod penetrometer" (a 4 foot long 3/8th inch diameter stainless steel rod, with and a 30 degree bevel cut). Rod must penetrate to 12" depth driven solely by inspector's weight – less than 80 psi.
- At the completion of planting, contact the Applicant (Owner/Operator) to provide a review to verify that mulch has been installed as specified.
- Secondary Verification for Failing Sites: If the Applicant (Owner/Operator) determines that the installation does not meet the conditions of the approved SMP, additional testing by an independent certified soil consultant will be ordered by the Applicant (Owner/Operator).

Maintenance:

- Once topsoiling has been established, these areas should be protected from compaction such as from heavy equipment operation and soil loss by erosion.

Inlet Protection



Typical inlet protection that allows sediment to settle out before stormwater is discharged to the storm drain.

Photo credit: EPA Small Residential Lot SWPPP Template



Well-installed Fabric Drop Inlet Protection.

Photo Credit: Ohio DOT

Use: A temporary, somewhat permeable barrier, installed around inlets in the form of a fence, berm or excavation around an opening, trapping, and filtering water and thereby reducing unwanted sediment from entering storm drains and waterways.

Design Criteria:

- Inlet protection measures must be installed to ensure that flows do not bypass inlet protection and enter the storm drain without treatment.
- However, designs must also enable the inlet to function without completely blocking flows in a manner that causes localized flooding.
- The drainage area for storm drain inlets shall not exceed one acre.
- There are several types of effective inlet protection measures that vary according to their function, location, drainage area, and availability of materials.
- Excavated Drop Inlet Protection:
 - Excavated side slopes shall be no steeper than 2:1.
 - The minimum depth shall be 1 foot and the maximum depth 2 feet as measured from the crest of the inlet structure.
 - Shape the excavated basin to fit conditions with the longest dimensions oriented toward the longest inflow area to provide maximum trap efficiency.
 - The capacity of the excavated basin should be established to contain 900 cubic feet per acre of disturbed area.
- Fabric Drop Inlet Protection:
 - Land area slope immediately surrounding this device should not exceed 1 percent.
 - The maximum height of the fabric above the inlet crest shall not exceed 1.5 feet unless reinforced.
 - The top of the barrier should be maintained to allow overflow to drop into the drop inlet and not bypass the inlet to unprotected lower areas.
 - Support stakes for fabric shall be a minimum of 3 feet long, spaced a maximum 3 feet apart. They should be driven close to the inlet so any overflow drops into the inlet and not on the unprotected soil.
 - Improved performance and sediment storage volume can be obtained by excavating the area.
- Stone and Block Drop Inlet Protection:
 - The stone barrier should have a minimum height of 1 foot and a maximum height of 2 feet. Do not use mortar. The height should be limited to prevent excess ponding and bypass flow.
 - As an optional design, the concrete blocks may be omitted and the entire structure constructed of stone, ringing the outlet.
- Curb Drop Inlet Protection:
 - The wire mesh must be of sufficient strength to support the filter fabric and stone with the water fully impounded against it.
 - Stone is to be 2 inches in size and clean.
 - The filter fabric must be of a type approved for this purpose with an equivalent opening size (EOS) of 40-85.
 - The protective structure will be constructed to extend beyond the inlet 2 feet in both directions.
 - Traffic safety shall be integrated with the use of this measure.
- Manufactured Inlet Filters:
 - External devices include filter bags that encase the drain gate. These devices are fitted to the specific drainage opening size. Raised or pop up filter devices are likewise manufactured to custom fit over various drainage opening sizes.
 - Internal manufactured inlet filters are also fitted to the specific drain opening size. These devices are placed inside the drainage structure and under the drain

Appendix A – Erosion and Sediment Control Specifications

grate. They can be composed of a metal frame and filter bag, while other devices are manufactured using fabric only.

Installation Requirements:

- Excavated Drop Inlet Protection:
 - Shape the excavated basin to fit conditions with the longest dimension oriented toward the longest inflow area to provide maximum trap efficiency.
 - Weep holes, protected by fabric and stone, should be provided for drainage the temporary pool.
- Fabric Drop Inlet Protection:
 - If straw bales are used in lieu of filter fabric, they should be placed tight with the cut edge adhering to the ground at least 3 inches below the elevation of the drop inlet. Two anchor stakes per bale shall be driven flush to bale surface.
- Stone and Block Drop Inlet Protection:
 - Recess the first course of blocks at least 2 inches below the crest opening of the storm drain for lateral support. Subsequent courses can be supported laterally if needed by placing a 2x4 inch wood stud through the block openings perpendicular to the course. The bottom row should have a few blocks oriented so flow can drain through the block to dewater the basin area.
 - The stone should be placed just below the top of the blocks on slopes of 2:1 or flatter. Place hardware cloth of wire mesh with ½ inch openings over all block openings to hold stone in place.
 - If concrete blocks are omitted and the entire structure constructed of stone, the stone should be kept at a 3:1 slope toward the inlet to keep it from being washed into the inlet. A level area 1 foot wide and 4 inches below the crest will further prevent wash. Stone on the slope toward the inlet should be at least 3 inches in size for stability and 1 inch or smaller away from the inlet to control flow rate. The elevation on the top of the stone crest must be maintained 6 inches lower than the ground elevation down slope from the inlet to ensure that all storm flows pass over the stone into the storm drain and not past the structure. Temporary diking should be used as necessary to prevent bypass flow.
- Curb Drop Inlet Protection:
 - Assure that storm flow does not bypass the inlet by installing temporary dikes (such as sand bags) directing flow into the inlet.
 - Make sure that the overflow weir is stable.
- Manufactured Inlet Filters:
 - Install manufactured inlet filter devices in accordance with manufacturer's written installation instructions.

Inspection, Maintenance, and Removal Requirements:

- Inspect and maintain inlet protection devices every rain event and/or weekly as required.
- Dispose of sediment properly.
- Remove all inlet protection devices within 30 days of permanent site stabilization.
- Excavated Drop Inlet Protection:
 - Inspect and clean the excavated basin after every storm.
 - Sediment should be removed when 50 percent of the storage volume is achieved. This material should be incorporated into the site in a stabilized manner.
- Fabric Drop Inlet Protection:
 - Inspect the fabric barrier after each rain event and make repairs as needed.
 - Remove sediment from the pool area as necessary with care not to undercut or damage the filter fabric.
 - Upon stabilization of the drainage area, remove all materials and unstable sediment and dispose of properly. Bring the adjacent area of the drop inlet to grade, smooth and compact and stabilize in the appropriate manner to the site.
 - If straw bales are used in lieu of filter fabric, straw bales will be replaced every 4 months until the area is stabilized.
- Stone and Block Drop Inlet Protection:

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- The barrier should be inspected after each rain event and repairs made where needed.
- Remove sediment as necessary to provide for accurate storage volume for subsequent rains.
- Upon stabilization of contributing drainage area, remove all materials and any unstable soil and dispose of properly. Bring the disturbed area to proper grade, smooth, compact and stabilized in a manner appropriate to the site.
- Curb Drop Inlet Protection:
 - Any sediment should be removed and disposed of on the site.
 - Any stone missing should be replaced.
 - Check materials for proper anchorage and secure as necessary.
- Manufactured Inlet Filter:
 - Inspect external devices for damage and clean as necessary.
 - Lift internal inlet filters carefully from the drainage structure. Remove any accumulated sediment and reinsert device into the drain opening.
 - Remove all accumulated sediment and dispose of properly.

Vegetative Cover: Temporary – Seeding for Temporary Vegetative Cover



Photo Credit: EPA Small Residential Lot SWPPP Template



Site temporarily seeded to stabilize soil prior to construction activity.
Photo Credit: RIDEM

Use: Establishment of temporary vegetative cover on soils exposed for a period greater than one month but less than 12 months, to stabilize soil and reduce damage from wind and/or water erosion and sedimentation.

Planning and Design Requirements:

- Plan to use species appropriate for the site, soil, and climatic conditions.
- Only use seed labeled in accordance with the provisions of the Rhode Island Seed Act of 1956 (Volume 8, Title 2, Chapter 6) and its amendments.
- Seeding rates and methods will include species that will establish quickly and seed has been germination tested within the past 12 months, and germination percentage is within the acceptable range for the species.

Installation Requirements:

- Grade as needed and feasible to permit the use of equipment for seedbed preparation, seeding, mulch application, and mulch anchoring.
- Loosen the soil to a depth of 3 to 4 inches with a slightly rough surface (accomplished by raking, discing, dragging a section of chain link fence and/or traversing the area with tracked equipment).
- Apply limestone and fertilizer according to soil test recommendation such as those offered by the University of Rhode Island Soil Testing Laboratory or other reliable sources. A pH range of 6.2 to 7.0 is optimal for plant growth of most grass species.
- If soil testing is not feasible on small sites, or when timing is critical, fertilizer may be applied at the rate of 300 pounds per acre, or 7.5 pounds per 1,000 square feet using fertilizer of the following analysis:
 - 10 percent available Nitrogen (N)
 - 10 percent available Phosphoric Acid (P)
 - 10 percent available Potassium (K)
- Select seed using recommendation given in **Seeding for Temporary Vegetative Cover: Figure 2 (RISESCH)**.
- Apply seed uniformly by hand, cyclone seeder, drill, cultipacker type seeder or hydroseeder, achieving good seed to soil contact.
- Hydroseeding, which includes mulch, may be left on the soil surface.
- Seeding rates must be increased 10 percent when hydroseeding.
- Apply mulch according to **Mulching**.
- Irrigation/watering should not exceed the application rate of the soil and result in erosion.

Inspection, Maintenance, and Removal Requirements:

- Seeded areas should be inspected at least once per week and within 24 hours following a precipitation event with a rainfall amount of 0.25 inch or greater for erosion and seed and mulch movement.
- If wind is the cause of movement, the erosion damage should be repaired (reseed and re-mulched) and supplemented with a mulch anchor.
- If concentrated runoff is the cause of the failure, additional measures to control water and sediment movement should be installed, the erosion damage repaired, and the area reseeded with the new mulch and anchoring or use temporary **Erosion Control Blanket**.
- Temporary vegetative cover shall not be considered established until ground cover (approximately 80% vegetative surface cover) controls soil erosion and withstands severe weather conditions.

Vegetative Cover: Permanent – Seeding for Permanent Vegetative Cover



Site properly prepared and top-soiled for permanent seeding.

Photo Credit: RIDEM

Use: Establishment of permanent vegetative cover by seeding and mulching exposed soils following site preparation and topsoiling to permanently stabilize disturbed or erodible soils and to prevent the separation and transport of sediment.

Planning and Design Requirements:

- Plan to use native species when appropriate, or adapted species recommended in the RISESCH for the site conditions, soil and climatic conditions.
- Only use seed that is labeled in accordance with the provisions of the Rhode Island Seed Act 1956 (Volume 8, Title 2, Chapter 6) and its amendments.

Installation Requirements:

- Choose a permanent seed mixture identified in **Seeding for Permanent Vegetative Cover: Figure 1 and 3 (RISESCH)**.
- For non-native species, the recommended seeding dates are: April 1 through June 15 and August 15 through September 30. The final seeding dates may be extended 15 days in Newport County. For native species, seeding dates for best results are August to September.
- Prepare the site in accordance with **Soil Preparation and Topsoiling**.
- Permanent seeding should not occur on slopes steeper than 2:1.
- To ensure soil stability, a site investigation is necessary to determine if other measures are needed prior to seeding.
- Loosen the soil to a depth of 3 to 4 inches with a slightly rough surface (accomplished by raking, discing, dragging a section of chain link fence and/or traversing the area with tracked equipment).
- Apply limestone and fertilizer according to soil tests, such as those offered by Soil Testing Laboratories at the University of Connecticut and the University of Massachusetts or other reliable source.
- If soil testing is not feasible on small sites, or when timing is critical, slow release fertilizer may be applied at the rate not to exceed 1500 pounds per acre or 36 pounds per 1,000 square feet using the following percentages by weight:
 - 10% available Nitrogen (N)
 - 20% available Phosphoric Acid (P)
 - 20% available Potassium (K)
- A pH of 6.2 to 7.0 is optimal for plant growth of most grass species.
- Apply ground limestone using rates given in **Seeding for Permanent Vegetative Cover: Figure 2 (RISESCH)**.
- Work lime and fertilizer into the soil as practical to a depth of 4 inches with suitable equipment.
- Remove all stones 2 inches or larger, as well as any other debris, from the surface.
- Areas not to be mowed can be tracked with cleated earthmoving equipment perpendicular to the slope.
- Seed with a permanent seed mixture within seven days following the establishment of final grade or when grading work within the limit of disturbance is to be suspended for a period of more than one year.
- Apply selected seed at rates provided in **Seeding for Permanent Vegetative Cover: Figure 3 (RISESCH)** uniformly by hand, cyclone seeder, drill, cultipacker type seeder or hydroseeder, achieving good seed to soil contact.
- Seed mix No. 1 is recommended for areas to be seeded where the purchase of large volumes of seed are unnecessary.
- Normal seeding depth is from 0.25 to 0.5 inch.
- Apply mulch according to **Mulching**.
- Irrigation/ watering should not exceed the application rate of the soil and result in erosion.

Appendix B –Stabilization Control Specifications

Inspection, Maintenance, and Removal Requirements:

- Lime according to a soil test or at a minimum every 2 to 3 years using a rate of one ton per acre (50 lbs per 1,000 sq. ft.).
- Where grasses predominate, fertilize if so indicated by a soil test. Customary applications are biennial broadcasts of 500 lbs of 10-6-4 (lawn fertilizer) or equivalent per acre (12.5 lbs per 1,000 sq. ft.). At least 30% of the fertilizer's available nitrogen must be in a slow releasing form.
- Where legumes predominate, fertilize according to a soil test or every three years, broadcast 300 lbs of 0-20-20 or equivalent per acre (7.5 lbs per 1,000 sq. ft.).
- Permanent vegetative cover shall not be considered established until ground cover (approximately 95% vegetative surface cover) controls soil erosion and withstands severe weather conditions.

Vegetative Cover: Permanent – Sodding



Photo Credit: EPA Small Residential Lot SWPPP Template



Photo of sod being installed at a residential site. Photo credit: Willowlee Sod Farms



Sod installation failure. Sod needed staples. Photo credit: Barry Tonning, Tetra Tech

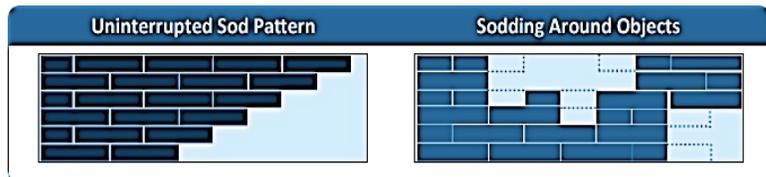
Use: To filter stormwater runoff, reduce pollution, and permanently stabilize fine-graded disturbed areas with the use of cut pieces of turf when seeding would not be recommended due to climatic or site conditions.

Planning and Design Requirements:

- Select sod grown from seed best suited for the sites to be stabilized and grown under measures conducive to quality sod that will be free of any thatch, weed, insect, disease, and other pest problems.
- Select sod that is mature enough to be handled easily as described below, but do not use sod older than 3 years. Cultivated turf grass is usually considered ready for harvest when a cut portion of sod 3 feet long by 1 to 1.5 feet wide will support its own weight when suspended vertically from the upper 10% of the section.
- Sod may be placed anytime during the year for slope stabilization, but shall not be installed on frozen ground or for waterway applications during the months of December, January or February.
- Sod shall be delivered, and installed typically within 36 hours of harvest.
- Channel velocities for the design storm should not exceed 5 fps with a duration of less than 1 hour at or near 5 fps.

Installation Requirements:

- Prior to soil preparation, bring to grade areas to be sodded in accordance with the approved plan.
- Install and/or repair other sediment control measures needed to control water movement into the area to be sodded.
- Clean soil surface of debris in excess of 1 inch in length and diameter.
- Place topsoil as needed, meeting the requirements of **Soil Preparation and Topsoiling**.
- Perform soil tests to determine the exact requirements for lime and fertilizer.
- When required, spread soil amendments evenly over the area to be sodded, and incorporate into the top 3 to 6 inches of the soil.
- Fill or level any irregularities in the soil surface resulting from topsoiling or other operations.
- If the soil is hot and/or dry, irrigate the soil immediately prior to laying the sod to cool the soil and reduce root burning and die back.
- Install the first row of sod in a straight line with subsequent rows placed parallel to and butting tightly against each other.
- Stagger lateral joints to promote more uniform growth and strength.
- Take care to ensure that sod is not stretched or overlapped and that all joints are butted tightly in order to prevent voids that would cause drying of the roots.
- When sodding around objects, or conforming to odd shapes or curves, it is best to continue to lay sod straight and square, then cut and trim the sod to fit the shape.
- On slopes 3:1 or steeper or whatever erosion may be a problem, lay sod with staggered joints perpendicular to the direction of flow and secure by pegging or other approved methods.
- As sodding is completed, roll and tamp the sod to ensure contact with the soil.
- After rolling, irrigate the sod to a depth sufficient to thoroughly wet the underside of the sod pad and the 4 inches of soil below the sod.



(Credit: 2002 Connecticut Guidelines for Soil Erosion and Sediment Control)

Appendix B –Stabilization Control Specifications

Sodded Waterway Installations

- Use a sod capable of withstanding the design velocity.
- Follow site preparation requirements listed above.
- Lay sod strips perpendicular to the direction of channel flow, taking care to butt the ends of strips tightly.
- As sodding of clearly defined areas is completed; roll or tamp the sod to ensure contact with the soil.
- Peg or staple to resist washout during the establishment period. Fasten every 3 inches on the leading edge and 1 to 2 feet laterally.
- After rolling, sod shall be irrigated to a depth sufficient to thoroughly wet the underside of the sod pad and the 4 inches below the sod.

Vegetative Cover: Permanent – Landscape Planting

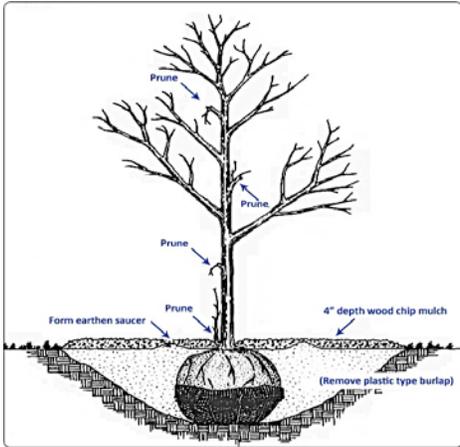


Photo Credit: 2002 Connecticut Guidelines for Soil Erosion and Sediment Control



Proper tree installation. Ensure not to plant trees too deep to avoid rot and lack of air to roots.
Photo Credit: coastalfarm.com

Use: Planting trees, shrubs, or groundcover for permanent stabilization and protection of soil, to intercept precipitation, retard runoff, and facilitate soil conservation.

Planning and Design Requirements:

- Consideration must be given to when to use grass and/or other herbaceous vegetation, or whether woody landscape plantings should be utilized.
- Grass: Advantages
 - Provides quick cover.
 - Requires periodic mowing to prevent the area from being occupied with shrubs and tree seedlings through the process of natural succession.
- Grass: Disadvantages
 - May allow for more pedestrian or vehicular travel and so allow for soil compaction, plant death, and increasing erosion potential.
 - Provides limited wildlife value and may provide an attractive feeding habitat for nuisance species such as Canada Geese.
- Woody Vegetation: Advantages
 - Provides maximum interception and uptake of rainfall.
 - Improves air quality.
 - Modifies air circulation patterns.
 - Reduces heating and cooling costs.
 - Provides shade and natural cooling of air and water.
 - Screens undesirable views and noises.
 - Calms and controls traffic.
 - Provides wildlife food and shelter.
 - Restores natural conditions to a disturbed site.
- If landscape plantings are intended, then a landscape planting plan should be developed. The landscape planting plan should identify the species, location, number of each plant to be planted, the type of planting stock (i.e. bare-root, balled and burlapped, etc.), and the timing for planting.
- Selection of trees depends on the desired function of the tree, whether it be shade, privacy screening, noise screening, appearance, enhancement of wildlife habitat or a combination of these. The following characteristics of the tree should be considered when making choices:
 - **Mature height and spread:** The eventual height of a tree must be considered in relation to planting location to avoid future problems with power lines and buildings.
 - **Growth rate:** Some trees attain mature height at an early age, others take many years. If "instant shade" is desired, rapid growth is needed. Slow-growing trees are usually less brittle and live longer.
 - **Root system:** Some trees obstruct underground drainage systems and septic systems with fibrous roots. Consult your local nursery for the appropriate separation distances for different tree species.
 - **Cleanliness:** Maintenance problems can be avoided by not selecting trees that drop seedpods, flowers or twigs in large amounts.
 - **Moisture and fertility requirements:** If good soil and drainage are not available, trees tolerant of poor growing conditions must be planted.
 - **Ornamental effects:** Some trees may be selected for their aesthetic qualities; timing and color of blooms, leaf color and shape and bark may be considerations.

Appendix B –Stabilization Control Specifications

- Evergreen vs. deciduous: Evergreens retain their leaves throughout the year and so are useful for privacy screens and noise screens. Deciduous trees drop their leaves in fall. They are preferable for shade trees.
- Wildlife food source: Many trees and shrubs produce beneficial fruits and nuts for wildlife.
- Invasiveness: Tree species which are non-native and are invasive should not be planted. Invasive species often out-compete native species which results in a reduction of biodiversity and may result in monoculture vegetative communities, both of which are disadvantageous to the natural environment.
- Stock Availability: Trees are usually available at commercial nurseries as container- grown trees or as balled-and-burlapped trees.
- A shrub is typically an upright woody plant less than 20 feet tall, usually with several stems rising from a common base. Some have the appearance of small trees, and some lie close to the ground.
- There are so many ornamental shrubs available that advising on the choice of any specific species or group is difficult, but try to choose ones that enrich or hold the soil or encourage development of wildlife habitat.
- Information on shrubs is available from nurseries, landscape architects, the Natural Resources Conservation Service and the Rhode Island Cooperative Extension.

Installation Requirements:

- Proper digging of a tree includes the conservation of as much of the root system as possible, particularly the fine roots.
- Soil adhering to the roots should be damp when the tree is dug and kept moist until planting.
- The tree should be carefully excavated and the soil ball wrapped in natural burlap and tied with rope.
- Use of a mechanical tree spade is also acceptable.
- Evergreens, or any trees which are to be transplanted for a distance, should have the branches bound in with soft rope to prevent damage.
- A rule of thumb for the width of the root ball is a minimum of 10 inches in diameter per inch of trunk diameter. Thus a 3-inch tree should have a root ball at least 30 inches in diameter.
- Generally, deciduous trees and shrubs can be planted in early spring or late fall; however, some exceptions occur, consult with your local nursery. Evergreens can be planted in early spring (optimally April 1 to May 30) and early Fall (optimally September 1-30).
- Container-grown trees can be planted at any time of year that the ground is not frozen if sufficient water is provided. They should be purchased and planted when quite young (less than 2" diameter trunk) to avoid dealing with root-bound plants. However, ideal planting conditions exist from approximately March 31 to June 1 and from August 31 to October 31.
- Trees to be planted as bare-rooted seedlings should be handled only while dormant in spring, or after leaf fall in autumn.
- Generally, ground covers can be planted in spring and fall; however, some exceptions occur, consult your local nursery. Container grown plants can be planted throughout the growing season if adequate water is provided.
- Insofar as practical, all plant material should be planted on the day of delivery.

Inspection:

- Inspect plants until they are established or at least monthly for 1 year following planting, and more frequently during hot dry periods for mulch adequacy, soil moisture and general plant condition.
- Larger plants, especially burlap balled trees which have lost a significant amount of their root systems upon transplanting will need the most attention during the initial establishment period.

Appendix B –Stabilization Control Specifications

Mulch and Water: General Guidelines:

- Apply additional landscape mulch around landscape plants as needed to keep soil covered and to inhibit weed growth.
- Water plants during hot dry periods when soil around the plants begins to dry out.
- For successful establishment of summer plantings, adequate watering during the balance of the summer and into the fall is especially important.
- New plantings in Rhode Island should receive at least 1 inch of rain per week.

Insect/Disease Control: General Guidelines:

- When a problem occurs, positive identification of the host, and then of the insect or disease problem is vital to successfully resolving the problem.
- The Rhode Island Cooperative Extension or a state licensed arborist can help identify insect and disease problems and suggest solutions.

Maintenance:

Trees:

- Young trees should receive one inch of water each week for the first two years after planting. When rain does not supply this need, the tree should be watered deeply but not more often than once per week.
- Transplanted trees should be re-fertilized annually until the tree is established.
- Some simple methods to supply fertilizer to trees are tree food spikes and holes bored around the tree drip line and filled with fertilizer.
- The recommended fertilizer formula is 5-10-10; follow the manufacturer's recommendations for application rate.
- Prune to remove only dead or damaged limbs on newly planted trees unless an arborist has recommended otherwise.
- For new roots to form from plants grown in containers, top pruning should be delayed for at least a year. Ideally, newly planted trees should not be pruned until after their third year, and then only to remove dead and weak branches, and to train the tree's future growth.

Shrubs:

- Shrubs should be properly pruned, given adequate water and fertilized annually until established. Simple methods of fertilization are recommended.
- Maintain the mulch cover or turf cover surrounding the shrubs.

Ground Covers and Vines:

- Most ground covers need once-a-year trimming to promote growth.
- Maintain mulch cover with additions of mulch where needed.
- Fertilize annually as described above.

Non-Vegetative Cover – Erosion Control Blankets (ECBs)

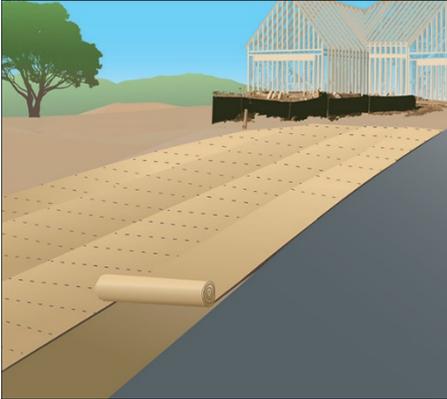


Illustration of slope stabilization using erosion control blankets.

Photo Credit: EPA Small Residential Lot SWPPP Template

Use: A biodegradable/photodegradable manufactured blanket used to provide temporary surface protection to newly seeded and/or disturbed soils to absorb raindrop impact and to reduce sheet and rill erosion and to enhance the establishment of vegetation.

Planning Considerations and Specifications:

- If blanket is not capable of developing a continuous contact with the soil then it must be applied to a fine graded surface. Some blankets will soften, and when wetted, conform to the ground.
- Temporary ECBs shall be composed of fibers and/or filaments that:
 - Are biodegradable or photodegradable within two years but without substantial degradation over the period of intended usage (5 months maximum);
 - Are mechanically, structurally, or chemically bound together to form a continuous matrix of even thickness and distribution that resist raindrop splash and when used with seedlings allows vegetation to penetrate the blanket;
 - Are of sufficient structural strength to withstand stretching or movement by wind or water when installed in accordance with the manufacturer’s recommendations;
 - Are free of any substance toxic to plant growth and unprotected human skin or which interferes with seed germination;
 - Contains no contaminants that pollute the air or water when properly applied; and
 - Provides either 80%-95% soil coverage when used as a substitute for mulch-for-seed or 100% initial soil coverage when used as a temporary soil protection measure.

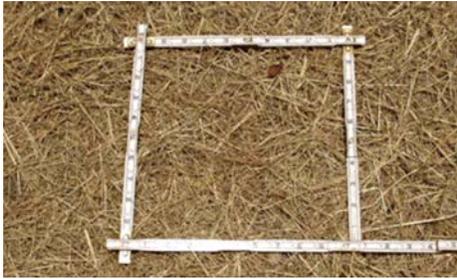
Site Preparation and Installation:

- Prepare the surface, remove protruding objects and install temporary erosion control blankets in accordance with the manufacturer’s recommendations. Ensure that the orientation and anchoring of the blanket is appropriate for the site.
- The blanket can be laid over areas where sprigged grass seedlings have been inserted into the soil.
- Where landscape plantings are planned, lay the blanket first and then plant through the blanket in accordance with **Landscape Planting** measure.
- Inspect and install to insure that all lap joints are secure, all edges are properly anchored and all staking or stapling patterns follow manufacturer’s recommendations.

Maintenance:

- Inspect temporary ECB at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater for failures:
 - 1. When soils and/or seed have washed away from beneath the blanker and the soil surface can be expected to continue to erode at an accelerated rate, and
 - 2. When the blanket has become dislodged from the soil surface, or is torn.
- If washouts or breakouts occur, reinstall the blanket after regrading and reseeding.
- When repetitive failures occur at the same location, review conditions and limitations for use and determine if diversions, stone check dams or other measures are needed to reduce failure rate.
- Repair any dislodged or failed blankets immediately.

Non-Vegetative Cover – Mulching



Example of adequate mulch coverage on 1sq.ft area.
Photo credit: Maine DOT



Slope stabilization using straw/hay mulch and mulch netting.
Photo credit: EPA Small Residential Lot SWPPP Template

Use: Provide temporary stabilization of soil, increase infiltration, prevent soil compaction and decrease surface runoff. Used in conjunction with vegetative stabilization controls such as seeding, mulching can foster vegetative growth.

Planning and Design Requirements:

- Mulches shall be biodegradable or photodegradable within 2 years, but without substantial degradation for 5 months after application.
- The most common types of mulch used for temporary soil protection, mulch for seed, and/or landscape mulch are straw/hay mulch and wood chip/shredded bark mulch.
- Straw/hay mulch’s average stem length should not be less than 4 inches.
- Straw/hay mulch requires anchoring in windy areas.
- Wood chips should have a general maximum size of 0.5 inches by 2 inches and bark chips/shredded bark’s general maximum size should be 4 inches.
- Temporary Soil Protection:
 - Straw/hay mulch is preferred over other mulches.
 - Provide 100% initial soil coverage and adheres to the soil surface.
 - Does not slip on slopes when it rains or is watered.
 - Does not blow off site.
 - Dissipates raindrop splash.
- Mulch for Seed:
 - Straw/hay mulch is recommended.
 - Provide 80%-95% initial soil coverage and adheres to the soil surface.
 - Does not slip on slope when it rains and does not blow off site.
 - Holds moisture and moderates soil temperature.
 - Does not interfere with seed growth.
- Landscape Mulch:
 - Woodchips/shredded bark mulch is recommended.
 - Provide 100% soil coverage and adheres to the soil surface.
 - Does not slip on slopes when it rains and does not blow off site.
 - Holds soil moisture and moderates soil temperature.
 - Inhibits the growth of herbaceous plants.
- Expect the need for tackifiers or netting along the shoulders of actively traveled roads, hill tops, and open slopes not protected by wind breaks (especially for straw/hay mulch).

Installation Requirements:

- Mulches can be applied by hand, blown on by equipment, hydraulically applied, or applied as a rolled product.
- When mulching for temporary soil protection, spread mulch material uniformly, resulting in 100% coverage of the disturbed soil.
- When mulching with straw/hay, apply tackifiers and/or netting either with the mulch or immediately following mulch application.
- When mulching for seed, spread immediately following seeding, uniformly, resulting in 80%-95% coverage of the disturbed soil.
- Avoid excess applications of mulch (can smother germinating seeds).
- For straw/hay mulch, anticipate application rate of 2 tons per acre.
- When applying landscape mulch, make sure to apply after installation of any weed barrier and within 7 days after planting.
- Periodic reapplication of mulch is necessary when mulch has decayed sufficiently to expose underlying soil.
- DO not pile mulch against any tree or shrub trunk.
- Avoid excessive depths on slopes where mulch could slip when saturated.
- Tackifiers are good for areas intended for mowing.

Appendix B –Stabilization Control Specifications

- Netting is generally used in areas where no mowing is required.
- Ensure netting maintains substantial contact with the mulch, and the mulch, in turn, maintains a continuous contact with the soil surface.

Inspection, Maintenance, and Removal Requirements:

- Temporary Soil Protection:
 - Inspect temporary soil protection area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater for mulch movement and rill erosion.
 - Where soil protection falls below 100%, reapply soil protection within 48 hours. Determine the cause of the failure.
 - If mulch failure was the result of wind, consider applying a tackifier or netting.
 - If mulch failure was caused by concentrating water, install additional measures to control water and sediment movement, repair erosion damage, reapply mulch with anchoring or use Temporary Erosion Control Blankets.
 - Inspections should take place until work resumes.
- Mulch For Seed:
 - Inspect mulched areas at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater until the grass has germinated to determine maintenance needs.
 - Where mulch has been moved or where soil erosion has occurred, determine the cause of the failure.
 - If it was the result of wind, then repair erosion damage (if any), reapply mulch (and seed as needed) and consider applying a netting or tackifier.
 - If mulch failure was caused by concentrating water, install additional measures to control water and sediment movement, repair erosion damage, reapply mulch and consider applying a netting or tackifier or use the Temporary Erosion Control Blanket measure.
 - Once grass has germinated, inspections should continue as required by Temporary Seeding and Permanent Seeding.
- Landscape Mulch:
 - Inspect 2 to 3 months after the first application and then once a year for mulch movement, rill erosion and decay.
 - Where mulch has been moved by concentrated waters, install additional measures to control water and sediment movement, repair erosion damage, remove any unwanted vegetation and reapply mulch.
 - If mulch has decayed exposing underlying soil, repair any erosion damage, remove any unwanted vegetation and reapply mulch.

Waste Management



Waste management area is clearly designated away from construction activity. Use of separate containers (with lids) for trash, recycled products, etc.

Photo Credit: State of Vermont

Use: Prevent the discharge of leached pollutants and contaminated runoff from construction material stockpiles, chemicals, and hazardous waste.

Planning and Design Requirements:

- Designate a waste management area(s) on the site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a waterbody.
- Ensure that containers have lids, and keep containers in a covered area whenever possible.
- Construct berms or dikes to contain stored pesticides and fertilizers in case of spillage.
- Have equipment and absorbent materials available in storage and application areas to contain and clean up any spills that occur.
- Store new and used petroleum products for vehicles in covered areas with berms or dikes in place to contain any spills.
- Use phosphorous and nitrogen containing detergents only as recommended, and limit their use on the site.

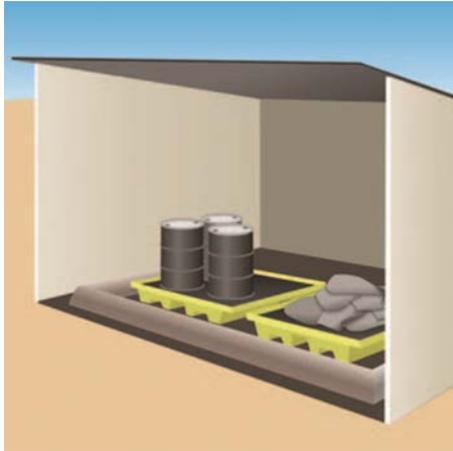
Implementation Requirements:

- Clean up spills immediately.
- For hazardous materials, follow cleanup instructions on the package. Use an absorbent materials such as sawdust or kitty litter to contain the spill.
- During the demolition phase, provide extra containers and schedule more frequent pickups.
- Collect, remove, and dispose of all construction site wastes at authorized disposal areas.
- To prevent leaks, empty and clean hazardous waste containers before disposing of them.
- Follow the manufacturer's recommended method of disposal, which should be printed on the label.
- Never mix excess products when disposing of them.
- Do not handle pesticides or fertilizers any more than necessary.
- Store pesticides and fertilizers in a dry, covered area.
- Follow the recommended application rates and methods.
- Do not dump wash water containing detergents into the storm drain system; direct it to a sanitary sewer or contain it so that it can be treated at a wastewater treatment plant.

Inspection, Maintenance, and Removal Requirements:

- All waste containers will be covered to avoid contact with wind and precipitation.
 - Waste collection will be scheduled frequently enough to prevent containers from overflowing.
 - All construction site wastes will be collected, removed, and disposed of in accordance with applicable regulatory requirements and only at authorized disposal sites.
- Inspect storage and use areas and identify containers or equipment that could malfunction and cause leaks or spills.
- Check equipment and containers for leaks, corrosion, support or foundation failure, or other signs of deterioration, and test them for soundness.
- Immediately repair or replace any that are found to be defective.

Spill Prevention & Control Plans



Shelter used to protect materials from rain. Secondary containment used to capture any spills. Photo Credit: EPA Small Residential Lot SWPPP Template

Use: Plans that clearly state practices to be implemented to prevent or allow for rapid response to spills and hazardous materials.

Planning and Design Requirements:

- When developing an SPCP, a construction site operator should identify potential spill or source areas, such as loading and unloading, storage, and processing areas; places where dust or particulate matter is generated; and areas designated for waste disposal.
- The SPCP should define material handling procedures and storage requirements and outline actions necessary to reduce spill potential and impacts on stormwater quality.
- This can be achieved by:
 - Recycling, reclaiming, or reusing process materials, thereby reducing the amount of process materials that are brought into the facility;
 - Installing leak detection devices, overflow controls, and diversion berms;
 - Disconnecting any drains from processing areas that lead to the storm sewer;
 - Performing preventative maintenance on storm tanks, valves, pumps, pipes, and other equipment;
 - Using material transfer procedures or filling procedures for tanks and other equipment that minimize spills; and
 - Substituting less or non-toxic materials for toxic materials.
- The SPCP should document the locations of spill response equipment and procedures to be used and ensure that procedures are clear and concise.
- The plan should include step-by-step instructions for the response to spills at a facility. In addition, the spill response plan should:
 - Identify individuals responsible for implementing the plan;
 - Define safety measures to be taken with each kind of waste;
 - Specify how to notify appropriate authorities, such as police and fire departments, hospitals, or municipal sewage treatment facilities for assistance;
 - State procedures for containing, diverting, isolating, and cleaning up the spill; and
 - Describe spill response equipment to be used, including safety and cleanup equipment.
- The plan can be a procedural handbook or a poster to be placed in several locations at the site.

Installation Requirements

- Training is necessary to ensure that all workers are knowledgeable enough to follow procedures outlined in the SPCP.
- Make equipment and materials for cleanup readily accessible, and mark them clearly so workers can follow procedures quickly and effectively.
- Equipment/vehicle fueling and repair/maintenance operations or hazardous material storage will not take place within any of the constraint areas located on the “Constraint Map” and will be approved by the project engineer or responsible person.

Inspection, Maintenance, and Removal Requirements

- Spills and leaks will be avoided through frequent inspection of equipment and material storage areas.
- Heavy equipment and other vehicles will be routinely inspected for leaks and repaired as necessary.
- Material storage areas will be routinely inspected for leaky containers, open containers, or improper storage techniques that may lead to spills or leaks.
- Appropriate cleanup procedures and supplies will be available on-site.

Appendix C – Pollution Prevention Practice Specifications

- Spills will be cleaned up immediately and following proper response procedures and in accordance with any applicable regulatory requirements.
- At no time will spills be cleaned and flushed down storm drains or in to any environmentally sensitive area (e.g., stream, pond, or wetland).
- Update the SPCP regularly to accommodate any changes in the site, procedures, or responsible staff.
- Conduct regular inspections in areas where spills might occur to ensure that procedures are posted and cleanup equipment is readily available.

Vehicle Fueling, Maintenance, and Washing



Vehicle washing occurring in a paved area dedicated to vehicle maintenance.

Photo credit: RISESCH

Use: Prevent untreated nutrient-enriched wastewater or hazardous wastes (from vehicle fueling and maintenance) from being discharged to surface or ground waters.

Planning and Design Requirements:

- Onsite vehicle and equipment fueling should only be used where it is impractical to send vehicles and equipment offsite for fueling.
- In order to prevent fuel spills and leaks, and reduce or eliminate contamination of stormwater, one must:
 - Enclose or cover stored fuel;
 - Use a covered, paved area dedicated to vehicle maintenance and washing;
 - Develop a spill prevention and cleanup plan;
 - Prevent hazardous chemical leaks by properly maintaining vehicles and equipment;
 - Properly cover and provide secondary containment for fuel drums and toxic material; and
 - Properly handle and dispose of vehicle wastes and wash water.

Installation:

- Vehicle fueling, maintenance and/or washing will occur off-site, or in designated areas.
- Designated areas will not be located within any of the constraint areas located on the “Constraint Map” in the SESC Plan and will be approved by the project engineer or responsible person.
- Areas will be clearly designated, and berms, sandbags, or other barriers will be used around the perimeter of the maintenance area to prevent stormwater contamination.
- Make available absorbent spill cleanup materials and spill kits in fueling areas and on fueling trucks.

Inspection and Maintenance:

- Inspect vehicles, equipment, and storage containers daily for leaks.
- Repair leaks immediately or remove problem vehicles or equipment from the project site.
- Keep ample supplies of spill cleanup materials onsite.
- Clean up spills and dispose of cleanup materials immediately.

Concrete Washout



Washout area clearly designated with a sign, conveniently located for truck access, and plastic lining is free of holes and tears.

Photo Credit: RISESCH



Concrete washout for single lot use made of straw bales and plastic. Washout is located away from pavement, storm drains, and ditches to ensure that any overflow does not move toward surface waters.

Photo credit: Barry Tinning, Tetra Tech

Use: A designated onsite washout area to prevent concrete waste from entering surface waters or groundwater.

Planning and Design Requirements:

- Locate washout area at least 50 feet from sensitive areas such as storm drains, open ditches, or water bodies, including all jurisdictional wetlands.
- Allow convenient access for concrete trucks, preferably near the area where the concrete is being poured.
- If trucks need to leave a paved area to access washout, prevent track-out with a pad of rock or stone (see **Construction Entrances**).

Construction Requirements:

- Constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations.
 - Approximately 7 gallons of wash water are used to wash one truck chute.
 - Approximately 50 gallons are used to wash out the hopper of a concrete pump truck.
- Should be constructed with a minimum length and minimum width of 10 feet, but with sufficient quantity and volume to contain all liquid and concrete waste.
- Straw bales or sandbags may be used to border the washout facility.
- Plastic lining material should be a minimum of 10 mil polyethylene sheeting, free of holes, tears, or other defects.
- Washout of concrete trucks shall be performed in designated areas only.
- Once concrete wastes are washed into the designated area and allowed to harden, the concrete should be broken up, removed, and disposed of on a regular basis.

Inspection:

- Inspect and verify that concrete washout SESC measures are in place prior to the commencement of concrete work.
- During periods of concrete work, inspect daily to verify continued performance.
- Check overall condition and performance. Check remaining capacity (% full).
- If using self-installed washout facilities, verify plastic liners are intact and sidewalls are not damaged.
- If using prefabricated containers, check for leaks.

Maintenance:

- Washout facilities shall be maintained to provide adequate holding capacity with a minimum freeboard of 12 inches.
- Washout facilities must be cleaned, or new facilities must be constructed and ready for use once the washout is 75% full.
- If the washout is nearing capacity, vacuum and dispose of the waste material in an approved manner.
- Do not discharge liquid or slurry to waterways, storm drains or directly onto ground.
- Do not use sanitary sewer without local approval.
- Place a secure, non-collapsing, non-water collecting cover over the concrete washout facility prior to predicted wet weather to prevent accumulation and overflow of precipitation.
- Remove and dispose of hardened concrete and return the structure to a functional condition.
- Concrete may be reused onsite or hauled away for disposal or recycling.
- When materials from the self-installed concrete washout are removed, build a new structure; or, if the previous structure is still intact, inspect for signs of weakening or damage, and make any necessary repairs.
- Re-line the structure with new plastic after each cleaning.

Appendix C – Pollution Prevention Practice Specifications

- Materials used to construct temporary concrete washout facilities shall be removed from the site of the work and disposed of or recycled.
- Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities shall be backfilled, repaired, and stabilized to prevent erosion.

Removal:

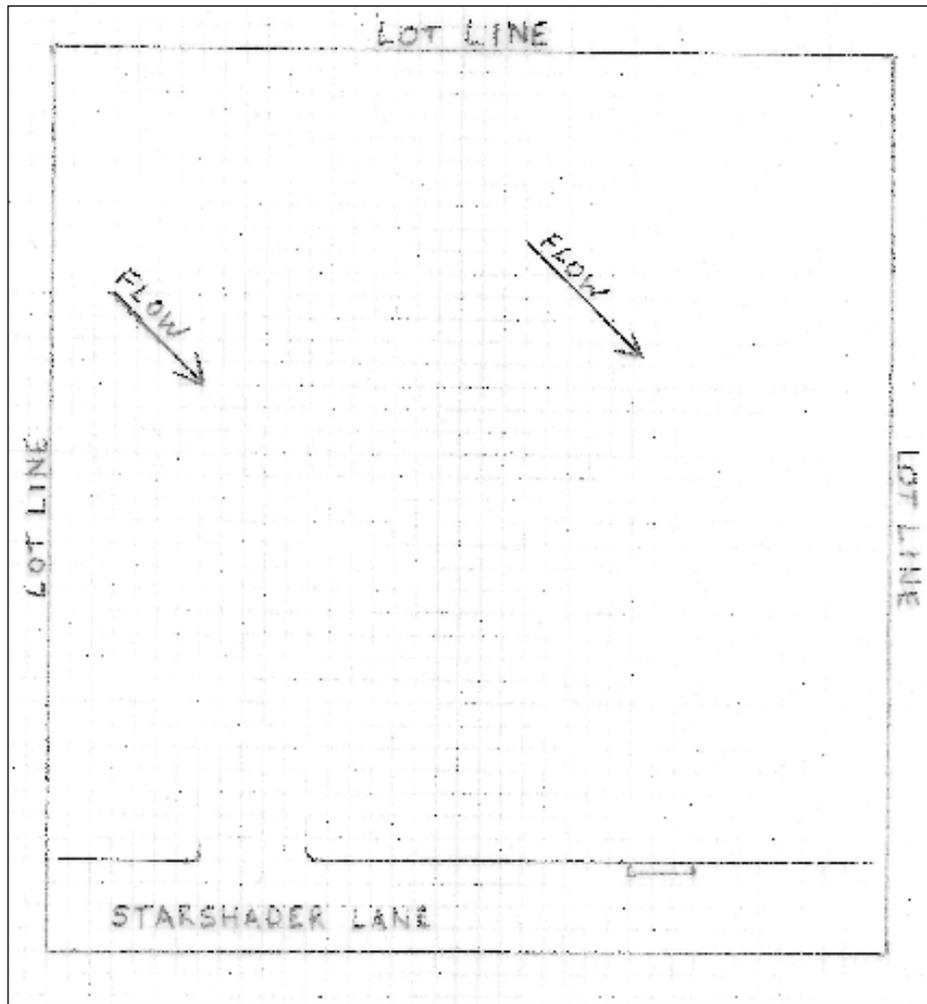
- When temporary concrete washout facilities are no longer required for the work, the hardened concrete, slurries and liquids shall be removed and properly disposed of.

APPENDIX D – EXAMPLE SITE MAPS

The following are a series of example site maps that you can use as a guide for developing your site-specific site maps in Part 7 of this template.

- 1 Site Boundaries and Layout – Pre-Construction: EXAMPLE
- 2 Potential Pollutant Sources and Discharge Locations – Pre-Construction: EXAMPLE
- 3 Control Measures – Pre-Construction: EXAMPLE
- 4 Potential Pollutant Sources and Discharge Locations – Construction Phase: EXAMPLE
- 5 Control Measures – Construction Phase: EXAMPLE

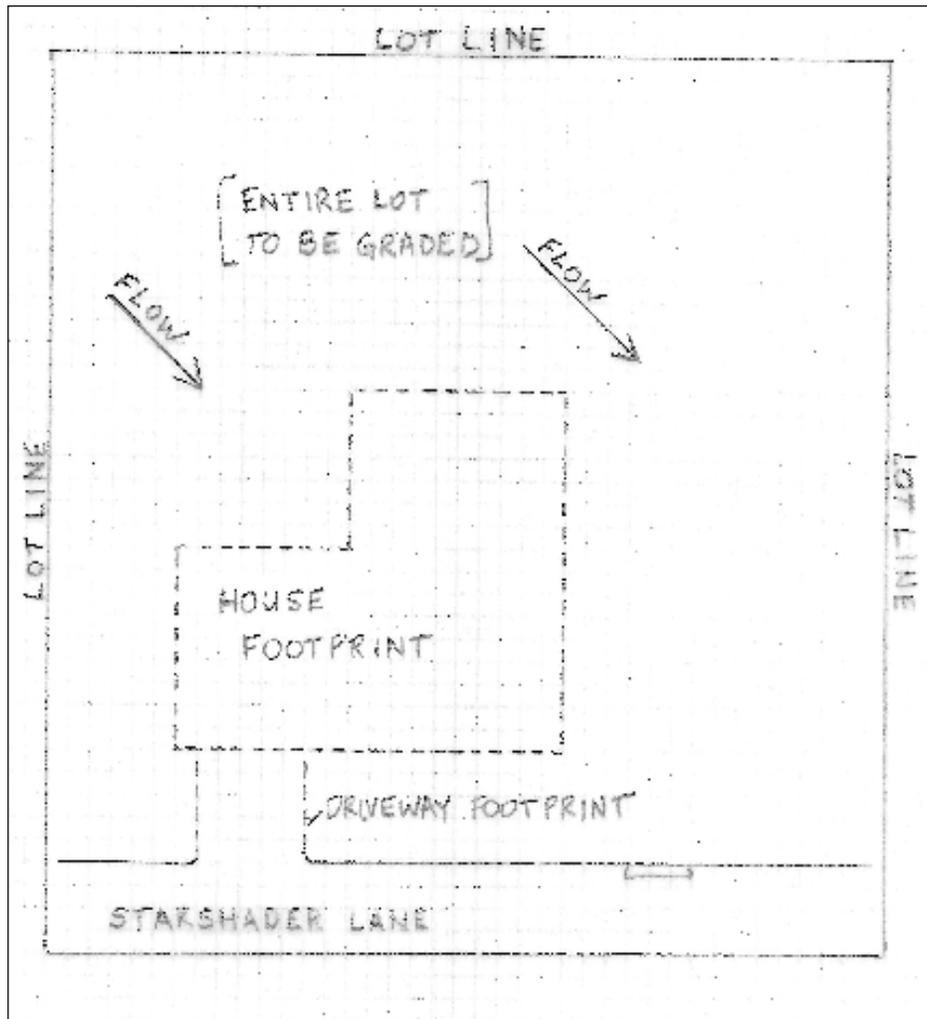
1. Site Boundaries and Layout – Pre-Construction Phase: EXAMPLE



Notes:

Site is relatively flat. No surface waters in vicinity.

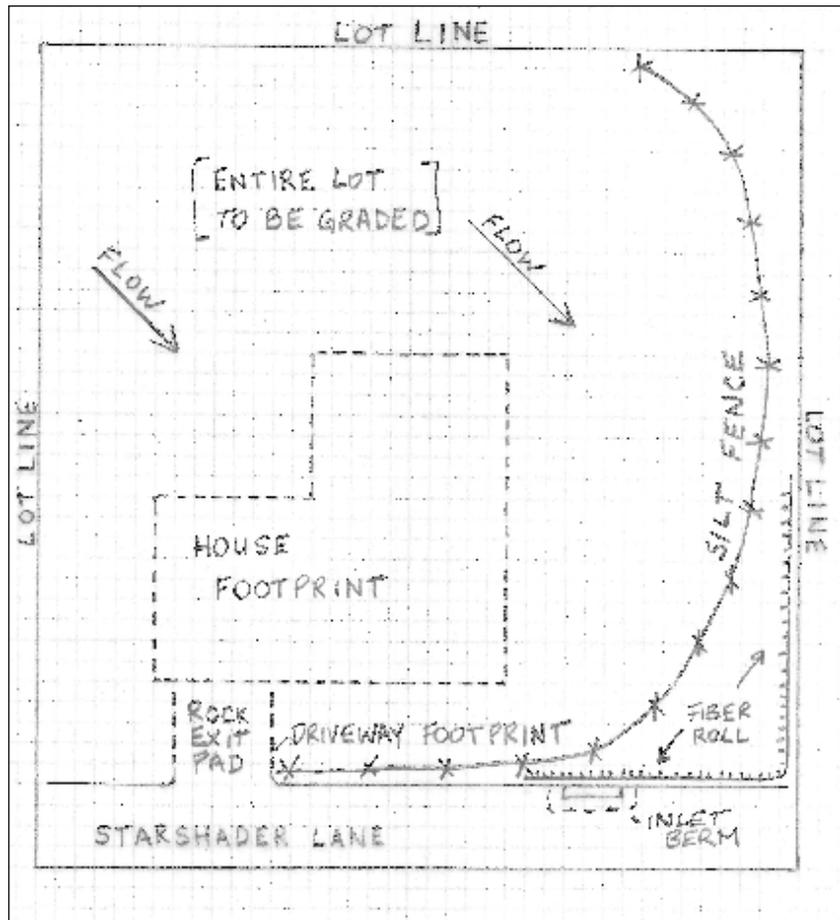
2. Potential Pollutant Sources and Discharge Locations – Pre-Construction Phase: EXAMPLE



Notes:

Entire site will be disturbed during grading.

3. Control Measures – Pre-Construction Phase: EXAMPLE

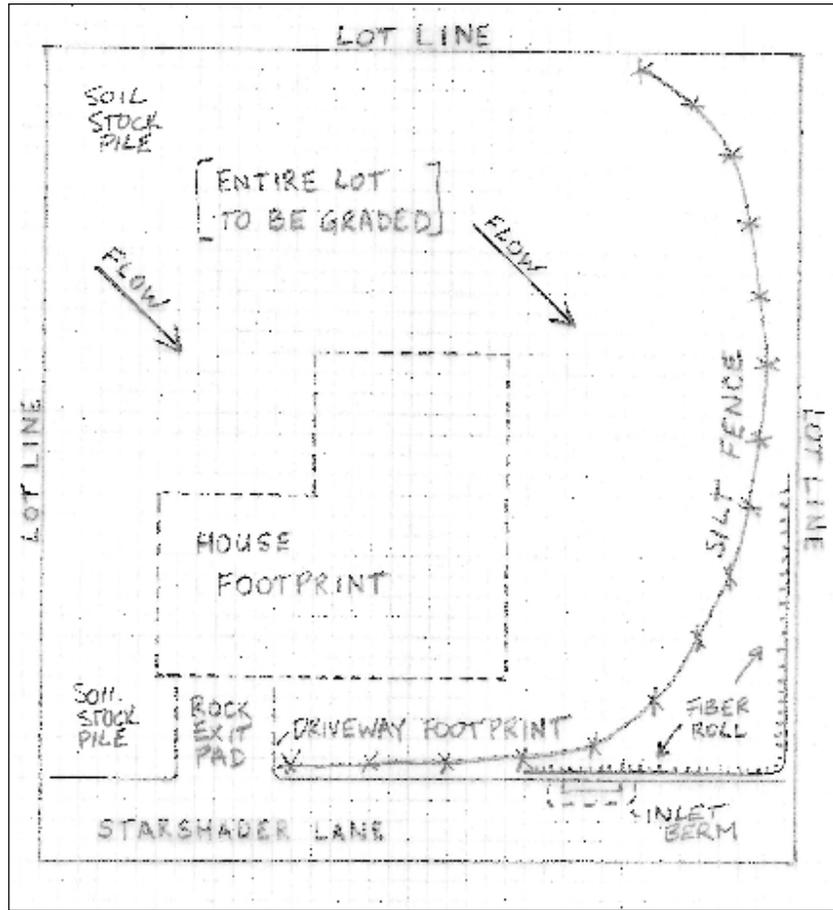


Notes:

Downgradient areas will be protected with silt fence and fiber roll.

Future driveway will serve as site exit and will be protected with rock exit pad.

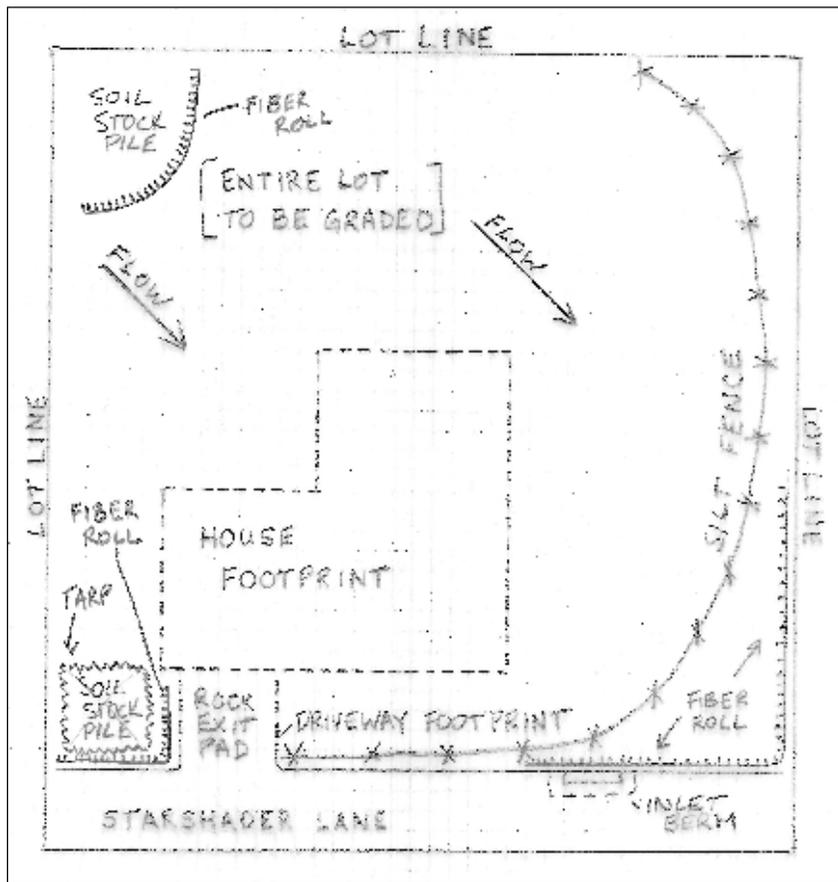
4. Potential Pollutant Sources and Discharge Locations – Construction Phase: EXAMPLE



Notes:

Site may include two soil stockpiles during construction phase.

5. Control Measures – Construction Phase: EXAMPLE



Notes:

Soil stockpiles will be covered by tarps and surrounded by fiber roll.

APPENDIX E – COPY OF ANY APPLICABLE CRMC or RI DEM PERMITS

APPENDIX F – COPY OF CRMC or RIDEM PERMIT APPLICATION FORMS

APPENDIX G – COMPLETED INSPECTION REPORTS

Attach copies of completed inspection reports.

APPENDIX H – COMPLETED CORRECTIVE ACTION REPORTS

Attach copies of completed corrective reports.