EXPOSED SOIL = POLLUTION GUIDE
How You Can Save 100 Feet of Chesapeake Bay Tributaries in an Hour by Halting Construction Site Mud Pollution

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THE ESSENCE OF THIS PUBLICATION IS THIS...

As long as exposed soil exists on a construction site, pollution of nearby waters will occur even if the site has silt fence and other perimeter controls.

WHAT TO LOOK FOR IS EQUALLY SIMPLE...

Once the initial 2- to 4-week clearance/earth-moving phase has ceased, all exposed soil on a construction site must be covered with straw mulch, grass or stone sufficiently that no underlying soil can be seen.

AND YOU CAN SAVE 100 FEET OF DOWNSTREAM WATERS PER HOUR BY...

Adding your findings to the ES=P database and signing the ES=P petition.

INTRODUCTION

Enough soil can erode from a typical construction to pollute three miles of downstream waters. Recovery of these polluted waters can take a century.\(^1\) With the use of the right protection measures this pollution can be eliminated. And the most effective safeguard is to prevent erosion in the first place by protecting exposed soil with straw mulch, grass, or other "stabilization" measures. This is because other measures, like the black silt fence pictured to the right, simply can't keep enough mud on the site to prevent pollution. In fact, whenever you see exposed soil on a construction site, you can assume a nearby waterway will be polluted come the next storm producing runoff from the site. It is this reason that USEPA and most Chesapeake Bay watershed states require stabilization of all disturbed soils within 3 to 14 days from the date when site clearance and active disturbance ends. However, compliance with this vitally important law is far below 100\% in many parts of the Bay watershed.

Until we can improve compliance, efforts to restore the Chesapeake Bay and many other degraded waterways will be in jeopardy. After all, it does little good to have tough pollution laws or carry out restoration projects if poor clean water law enforcement prevents us from reaping the benefits of these actions. This is where you come in and how you can save a hundred feet of waterway with just an hour of your time.

**THE EXPOSED SOIL = POLLUTION MESSAGE**

We want to inform all Bay watershed residents that exposed soil on a construction site means pollution of the nearest waterway with each rain. Our goal is to get people to react to exposed construction site soil with the same concern triggered by littering or aggressive driving. As this perception spreads we believe the extent of exposed construction site soil will diminish through voluntary actions on the part of the development and construction community.

This publication is intended to help volunteers and other watershed advocates identify construction sites that could benefit from greater use of stabilization measures. The identification is done from roads, parking lots and other public areas in view of a site. There is no need to trespass onto a construction site. In fact, we ask you not to trespass since it is dangerous and illegal.

We do ask that whenever you pass by a construction site you take a moment to complete the simple checklist at the end of this publication then add your findings to the Exposed Soil = Pollution database at: [ceds.org/espreport](http://ceds.org/espreport). As explained on the next page, adding your findings to the database will be a big help.

You also have the option of reporting exposed soil to an inspection agency. Hopefully, the agency will direct the contractor to enhance protection of local waters and the Bay by reducing exposed soil through mulching, seeding and other stabilization measures. However, a disturbing number of inspection agencies seldom enforce stabilization laws to the degree needed to protect nearby waters. So please don’t feel frustrated if your report results in minimal improvement. Advice for identifying the agency covering your area is provided later in this publication, in the section headed *Laws & Inspection Agencies*.

We realize some folks may find these notifications intimidating. As explained in the next paragraph, your findings can still serve a very important purpose even if you opt not to notify the inspection agency.

At the end of this publication you will find a *ES=P: Clearing Our Waters Survey Form*. Use the paper version of the checklist to record your findings while observing a construction site. Once you have access to a computer, add your findings to the *ES=P Database* at: [ceds.org/espreport](http://ceds.org/espreport). *Please do not mail the paper forms to us.* Again, simply adding your findings to the database will help considerably, even if you don’t take further action.
HOW ADDING YOUR FINDINGS TO THE DATABASE WILL HELP
With the findings provided by you and many others, the database will eventually contain enough information to allow Chesapeake Bay advocacy groups to identify those counties, towns, cities and even states doing particularly well at stabilizing exposed construction site soils. These jurisdictions will be commended for their success and used as models for helping others do better. We also hope the database will contain the information needed to commend those development companies which make full use of stabilization measures.

Some folks are comfortable evaluating construction sites on their own. Others prefer to work as part of a group. Either option works.

If you are a loner then this publication provides all the background needed to get started. We think you’ll find the evaluation procedures both simple and straight-forward. Furthermore, we believe you’re about to embark on what could be one of the more satisfying experiences available these days. Through your efforts you will see significant improvements in construction site pollution control.

For watershed organizations and others who prefer to work in groups, we can schedule a one-hour Saturday morning training session in your area. After a half-hour presentation we’ll look at several active construction sites near the training location. This one-hour training session will enable you to evaluate sites on your own. But its likely you’ll meet others at the training session with whom you can form a team. We can help you divide the watershed up into areas covered by specific teams.

So, how does all this allow you to save a hundred feet of waterway for each hour you volunteer to this effort? Well, we figure it’ll take you no more then an hour to evaluate a site and report your findings. We also figure that for each hour invested you will make it possible to win stabilization of enough exposed construction site soil to save an average of a hundred feet of downstream waters.

HOW CONSTRUCTION SITE MUD POLLUTION DAMAGES THE ENVIRONMENT
Much of today’s erosion and sediment control began in 1970 when Maryland adopted the first statewide law in the U.S. Few of our present environmental protection laws existed then. At that time all the vegetation could be removed from a construction site, regardless of steepness of slope or susceptibility to soil erosion. In fact, streams, wetlands and other waters could even be filled in. This resulted in massive amounts of sediment washing into all waters.

Early scientific studies showed that construction activity was having a devastating impact upon Maryland aquatic resources. A paper published in 1967 provided the wake-up call for many Marylanders. This study documented that construction soil losses could be 6,000 times
that of forest and 300 times greater than for agricultural watersheds. In 1974, Patuxent River researchers found it takes a decade to a century for a waterway to recover from the sediment released from construction activity. These studies and others showed that a typical construction site, measuring 20 acres in area, could damage three miles of downstream waters with recovery taking up to a century.

In the early 1970s a bridge was built over Severn Run, a few miles west of Annapolis. At that time Severn Run was the leading Yellow Perch spawning stream in Maryland. A major storm occurred during the peak of the spring spawning season while the bridge construction site was open. Enough mud washed into Severn Run to kill 100 million Yellow Perch eggs and larvae. Between continued construction and increasing impervious area in the watershed, the Severn Run Yellow Perch population has never fully recovered.

The reason why erosion control is essential to aquatic life preservation is simple: Clay. As shown in the figure to the right, soil is made up of three particle sizes: sand, silt and clay. Clay is the smallest and the hardest to remove once it has been eroded from the soil surface and entrained in runoff. One might think that the small size renders clay particles harmless. In some respects the opposite is true.

Much of the nutrients, pesticides, and other pollutants washing from construction sites travel attached to clay particles. Many fish eggs have a slightly sticky coating and clay can adhere so thickly to the egg surface that oxygen flow is blocked suffocating the developing fish embryo. Clay is the most expensive particle to remove from drinking water sources.

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4 For further detail see: [http://dnr2.maryland.gov/fisheries/Pages/FHEP/severnriver.aspx](http://dnr2.maryland.gov/fisheries/Pages/FHEP/severnriver.aspx)


7 [Costs of Water Treatment Due to Diminished Water Quality: a Case Study in Texas](http://agecon2.tamu.edu/people/faculty/mccarl-bruce/papers/535.pdf), available online at: [http://agecon2.tamu.edu/people/faculty/mccarl-bruce/papers/535.pdf](http://agecon2.tamu.edu/people/faculty/mccarl-bruce/papers/535.pdf)
other fine suspended particles are responsible for a large portion of the turbidity which blocks sunlight and has greatly diminished the extent of submerged aquatic vegetation (SAV) throughout the Chesapeake Bay and other Maryland waters.\(^8\)

The graph to the right shows that no land use generates more clay pollution and the turbidity it causes than poorly stabilized construction sites. The graph also shows that only straw mulch, grass and other erosion stabilizing measures can reduce clay and the turbidity it causes to the degree needed to protect aquatic resources. The studies providing the data presented in the graph are provided in: [http://ceds.org/esp/Turbidity+LandUse.pdf](http://ceds.org/esp/Turbidity+LandUse.pdf).

Sediment is one of three pollutants targeted for substantial reduction by the Chesapeake Bay Total Maximum Daily Load (TMDL) document.\(^9\) The other two are nitrogen and phosphorus. As shown in the graph on the next page, no other land use generates more nitrogen and phosphorus pollution per acre than construction sites.

The three pollutants act in concert to impair not only submerged aquatic vegetation but many other aquatic organisms as well. And as with nutrients, no other land use in the Chesapeake Bay watershed can release as much sediment as construction sites.\(^10\) There may be 132 square miles of construction sites active in the Bay watershed at any given point in time. This could mean as many as 8,450 sites active throughout the 64,000 square mile Bay watershed. The Chesapeake Bay Program has set a target of stabilizing an average of 66\% of a typical construction site.\(^11\) As will be seen later in this report, the actual stabilization rate in the Greater Baltimore region must increase three-fold to achieve the 66\% goal. **We believe the goal should be much closer to 100\%.**

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\(^8\) Chesapeake Bay Total Maximum Daily Load (TMDL), available online at: [http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html](http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html)

\(^9\) Ibid.


\(^11\) Ibid.
Construction Sites Have Highest Per Acre Nutrient Loads

Source: Chesapeake Assessment Scenario Tool (http://cast.chesapeakebay.net) WIP2 Scenario

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Nitrogen Load</th>
<th>Phosphorus Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>22.27</td>
<td>3.34</td>
</tr>
<tr>
<td>Row Crops</td>
<td>22.24</td>
<td>0.58</td>
</tr>
<tr>
<td>Impervious Surfaces</td>
<td>12.04</td>
<td>0.56</td>
</tr>
<tr>
<td>Pasture</td>
<td>8.26</td>
<td>0.77</td>
</tr>
<tr>
<td>Lawn</td>
<td>6.75</td>
<td>0.75</td>
</tr>
<tr>
<td>Forest</td>
<td>1.59</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Pounds Per Acre Per Year
Sand and coarse silt can be kept on a construction site with silt fence, sediment traps and other perimeter control measures. These perimeter measures mostly rely upon settling to remove sediment from runoff. The larger particles settle fairly quickly while days or weeks may be required for clay and finer silts to settle from suspension. So, the most effective way of keeping clay on a construction site is to prevent erosion, which means minimizing the exposure of soil to the erosive force of rainfall and runoff. This, in turn, means protecting soil as quickly as possible following disturbance with a layer of stone or straw mulch and grass.

**EROSION CONTROL IS VERY COST EFFECTIVE**

It’s no coincidence that all the Chesapeake Bay watershed jurisdictions require rapid use of stabilization measures. Erosion control is one of the most cost-effective pollution control programs we have. For example, in Maryland an unprotected construction site might erode at a rate of 40 tons/acre/year, which is six times the rate for cropland, and 80-times that of forest. It costs $800 to $1500 to apply mulch and grass seed to an acre of construction site. These practices reduce erosion by 90% to 99%. So, assuming a typical construction site is active for a year, mulch and seeding would keep 36- to 39-tons of sediment on each acre at a cost of $20 to $42 per ton.

In terms of the benefit of aquatic resource damages avoided, Maryland has 470 miles of trout streams, each mile of which adds about $35,000 per year to the state and local economy. A single 20-acre construction site could destroy three miles of trout stream for a decade to a century. That would work out to an economic loss of at least $1.1 million. It would cost $25,000 to apply erosion control measures which would keep 780 tons of sediment out of the trout stream. So the ratio of cost to benefit would be 1:42 ($25,000 cost:$1,050,000 benefit).

But the benefits don’t end at the mouth of the trout stream. Eventually each ton of sediment deposited in the trout stream would travel downstream causing additional damages. If


16 See: [http://www.dnr.state.md.us/irc/docs/00006468.pdf](http://www.dnr.state.md.us/irc/docs/00006468.pdf)


the sediment came to rest in a navigable channel the removal cost would be $6 to $28 per ton.\textsuperscript{19}
The cost to remove sediment from Columbia, MD lakes runs around $175 per ton.\textsuperscript{20} These costs further increase the benefits of preventing erosion. Additional benefits would come from reduced water treatment costs, other recreational and commercial fisheries preserved, enhanced waterfront property value, and on the list could go. So, as we said, erosion control is one of our most cost effective pollution control strategies. The true cost to benefits ratio could be well in excess of $100 saved for each dollar spent.

**EROSION CONTROL ENHANCES WORKER & PUBLIC SAFETY**
In some jurisdictions, but not others, we found that most of the soils next to single family homes were well stabilized while the home was under construction. At first one might assume that applying mulch or grass seed next to a house under construction would be a waste. Between foot-traffic and material hauling equipment, grass would be killed and mulch destroyed. In reality straw mulch would be pressed down into the surface yet continue to reduce runoff and erosion. We saw sites with grass surrounding most of the house with a few paths for foot traffic. In return, the mulch and grass would reduce the area around the home that turns into a sea of mud or ice which enhances worker safety. Also, stabilization would reduce the quantity of mud washing onto public streets and creating a dangerous situation for motorists, bicyclists and pedestrians.

**HOW YOUR EFFORTS WILL HELP CURB MUD POLLUTION**
By calling attention to opportunities for stabilizing exposed soil, your efforts will help to reduce construction site mud pollution in several very important ways.

- First, we hope to instill the concept of *Exposed Soil = Pollution* in the general public. If this goal is achieved then exposed soil on a construction site may become just as politically incorrect as other taboos, like junk cars on lawns, burning leaves, or aggressive driving. Even partial success towards this goal may motivate far greater voluntary compliance then presently occurs. The more people reporting exposed soil, the more rapidly we’ll reach a threshold where voluntary compliance accelerates.

- Second, by adding your findings to the *Watershed Advocates Construction ES=P Database*, Chesapeake Bay advocacy groups will be able to monitor how well specific counties (townships and cities) are doing in complying with soil stabilization laws. By combining your reports with others we can identify those areas where additional public support is needed to help the inspection agency achieve a higher level of compliance.

- Third, in these tight budgetary times many inspection agencies lack the personnel to visit construction sites at the frequency needed to maintain a high level of compliance. Notifying the


agency of sites with significant violations will help them focus limited staff resources on those sites with serious problems. This may alert the agency to sites requiring attention which otherwise might not be noted for days or weeks or the next big storm!

In the remainder of this publication we’ll describe each of the very simple steps in evaluating a site for compliance with stabilization requirements.

EROSION & SEDIMENT CONTROL 101
As shown below, erosion and sediment control consists of a two-part approach to preventing pollution of nearby waterways.

<table>
<thead>
<tr>
<th><strong>SEDIMENT CONTROL</strong></th>
<th><strong>EROSION CONTROL - STABILIZATION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Sediment Control" /></td>
<td><img src="image2.jpg" alt="Erosion Control - Stabilization" /></td>
</tr>
<tr>
<td>Clay causes the muddy appearance of construction site runoff. The runoff is thick enough to obscure underlying soil from view throughout the treated area.</td>
<td>Straw mulch layer must be thick enough to obscure underlying soil from view throughout the treated area.</td>
</tr>
<tr>
<td>Mud-laden runoff overflowing silt fences at Key School site near Annapolis</td>
<td>Grass must cover at least 95% of soil surface.</td>
</tr>
</tbody>
</table>

Sediment control measures are usually installed along the downslope edge of a construction site to capture soil eroded from upslope areas. Silt fence along with ditches called dikes, berms or swales are used to direct the runoff to small ponds known as traps and larger basins. Erosion control consists mostly of straw mulch, grass, or stone placed over exposed soil to minimize erosion. As show in the graph below, only straw mulch, grass, stone and other erosion stabilization measures can prevent the muddiness (turbidity) released from construction sites.
All but the smallest sites must follow an erosion and sediment control plan. In general the plan will call for a construction site to be developed in the sequences depicted in Figures 1 to 3, following this page. This sequence consists of:

1. Throughout the life of a construction site there should be no point where runoff from exposed soil could leave the site without flowing to a perimeter sediment control measures such as a sediment trap (small pond), a sediment basin (large pond), silt fence, etc. To achieve the first criteria, initial site clearance is limited to a narrow swath along the downslope edge of the site.

2. Within this swath earth dikes (berms), swales (ditches), pipe slope drains or silt fence are installed to intercept runoff from upslope areas and direct it to sediment traps (small pond) or a basin (large pond), which are also installed within the perimeter swath.

3. Within three days of when the perimeter controls are completed, all soil surfaces must be stabilized with a blanket of straw mulch thick enough to obscure underlying soils (about...
Once Controls Are In Place Mulch & Seed Perimeter Then Clear Site Interior

Initially Clear Swath for Earth Berm, Silt Fence, Trap & Other Perimeter Controls

Site Prior To Clearance; Red Arrows Show Direction of Runoff Flow (Downhill)

Interior Has Been Cleared: Road and parking lot beds stabilized with stone base; all else with mulch and grass

North, East & South Areas of Site Stabilized With Mulch & Grass

FIGURE 1: HOW CONSTRUCTION SITE STABILIZATION IS REQUIRED TO EVOLVE
Figure 2: Has Active Grading Ended?

On most sites, active grading (filling, cutting and other earth-moving) should end within 2- to 4-weeks after site clearance begins.

The following illustrates how a site evolves from the start of clearance to the end of active grading.

Active grading has definitely ended when building foundations appear or road bed construction begins. By that point all exposed soils must have been stabilized with mulch. Mulch must completely blanket soil. More mulch must be applied when underlying soil becomes visible. During the growing season (March-October) a 95% grass cover should appear within 4- to 6-weeks from when seeding occurs. If after 8 weeks grass cover is less than 95% then reseeding is required.
When the perimeter controls were installed & stabilized the contractor was then allowed to clear the interior (upper portion) of the site. Here you see perimeter stabilization with dense mulch plus grass approaching 95% coverage.

Good Stabilization
Straw mulch completely blankets underlying soil from view.

Poor Stabilization
Soil still visible through the sparse grass and mulch.

About 30% Vegetative Cover
About 75% Vegetative Cover
About 95% Vegetative Cover
two tons/acre). Grass seed is also applied and should achieve 95% groundcover within 4- to 8-weeks during the growing season (March-October). If the 95% cover isn’t achieved then reseeding or other steps must be taken until soil can no longer be seen through the grass.

4. Once perimeter controls are stabilized the interior can be cleared of vegetation.

5. Earth-moving equipment (bulldozers, graders, etc.) are used to clear the site of vegetation and structures then fill and cut the interior of the site to bring it to rough grade, which is the point at which road, parking lot and building construction can begin.

6. On most sites rough grade can be reached within 2- to 4-weeks from the start of clearance. Once rough grade is reached all areas, except building foundations, must be stabilized within seven days. Building foundations are usually self-contained so no stabilization is needed.

7. Road and parking lot beds must be stabilized with four inches of stone (the base course).

8. All other areas of exposed soil must be stabilized, which is usually done with straw mulch and grass. The blanket of straw mulch must be thick enough to obscure underlying soils (about two tons/acre). Grass seed is also applied and should achieve 95% groundcover within 4- to 8-weeks during the growing season. Soil stockpiles must also be stabilized with mulch and grass unless they are to be frequently worked, in which case tarpaulin covers may be better stabilization, and

9. Sometimes activity will come to a halt on a site before rough grade is reached. When earth-moving will cease for an extended period the site must be fully stabilized.

LAWS & INSPECTION AGENCIES
Following are the laws adopted by each of the Bay watershed states and the District of Columbia requiring stabilization of exposed construction site soils along with a description of how to contact inspection agencies in each state. As you will see, all require essentially the same thing. Once a site reaches rough grade or remains idle for even a brief time, all exposed soils must be stabilized.

Delaware: The Delaware Sediment & Stormwater Regulations (Title 7, Section 5101) require:

All plans shall include details of temporary and permanent stabilization measures including placement of the following statement on all plans submitted for approval. Following soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within 14 calendar days as to the surface of all perimeter sediment controls, topsoil stockpiles, and all other disturbed or graded areas on the project site.
Sediment control inspection rests mostly with the local government. For contact information see: http://www.dnrec.delaware.gov/swc/Drainage/Pages/DelegatedAgencies.aspx

**District of Columbia:** Section 1.2.3, of the District of Columbia Erosion and Sediment Control Manual states:

> Immediately stabilize exposed soils. Temporary erosion control measures, such as mulches and temporary grasses, can significantly reduce erosion at a site. Figure 1.1 shows that the erosion potential from bare ground is over 15 times greater than from ground with a heavy mulch cover (2 tons per acre) and 100 times greater than from established sod. Therefore, the construction sequencing plan needs to ensure soil is stabilized as soon as possible.

Table 1.3, on page 28 of the Manual calls for stabilizing steep slopes with 7 days from the last disturbance and 14 days for all other areas.

The District’s Inspection and Enforcement Branch is responsible for construction site sediment control: http://ddoe.dc.gov/service/construction-site-inspections

**Maryland:** The Code of Maryland Regulations (COMAR 26.12.17.01.07B(6)(f)(i)) states:

> The following statement on the plan: “Following initial soil disturbance or redisturbance, permanent or temporary stabilization is required within three calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven calendar days as to all other disturbed areas on the project site except for those areas under active grading.”

Local government agencies enforce erosion and sediment control laws in half of Maryland’s 23 counties and in eight of the larger cities. Phone numbers for these local enforcement agencies are provided at the bottom of the following Maryland Department of the Environment (MDE) webpage: Erosion and Sediment Control in Maryland. For all other locations in Maryland call MDE at: Week Days (410) 537-3510 or Nights/Weekends 1-866-633-4686.

**New York:** Section 2, of the New York Standards and Specifications for Erosion and Sediment Control, states:

> Where land disturbance is necessary, temporary seeding or mulching must be used on areas which will be exposed for more than 14 days.

Contact the Department of Environmental Conservation regional office for your area: http://www.dec.ny.gov/about/558.html
Pennsylvania: Title 25, Section 102.22(b), of the Pennsylvania Code states:

Upon temporary cessation of an earth disturbance activity or any stage or phase of an activity where a cessation of earth disturbance activities will exceed 4 days, the site shall be immediately seeded, mulched, or otherwise protected from accelerated erosion and sedimentation pending future earth disturbance activities.

In Pennsylvania, construction site erosion and sediment control enforcement rests with the local Soil Conservation District or the Department of Environmental Protection (DEP) regional office.

Virginia: Regulation 9VAC25-840-40, of the Virginia Code states:

Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.

Erosion and sediment control enforcement rests with 166 local county, city or town programs. To determine the enforcement agency for your area contact the Virginia Department of Conservation and Recreation Division of Soil and Water office for your region: http://www.dcr.virginia.gov/stormwater_management/swintro.shtml#regional.

West Virginia: Section 3.10 Temporary Seeding, of the West Virginia Erosion and Sediment Control Best Management Practice Manual the states:

Use this method [temporary seeding] where exposed soil surfaces are not to be fine-graded for periods longer than 21 days. Such areas include denuded areas, soil stockpiles, dikes, dams, sides of sediment basins, temporary road banks, etc.

To report a problem at a construction site contact see: https://dep.wv.gov/WWE/ee/geninfo/Pages/officelocations.aspx.

HOW TO EVALUATE A CONSTRUCTION SITE & COMPLETE THE CHECKLIST
In this section we'll walk you through each of the questions presented in the ES=P Clearing Our Waters Survey Form, which you’ll find at the end of this document

1. Construction Site Information: Please provide as much of the following information as you can, though it’s OK to leave blanks.

   a. Name of Construction Site: Usually found on a sign near the main entrance to the site.
b. **City/Town:** The borough, township, city, or postal zone in which the construction site is located.

c. **County:** Please note the county in which the site is located.

d. **State:** Note the state in which the site is located.

A principal use of these reports will be to identify cities, townships or counties deserving recognition for a job well done and where greater public support is needed to enhance compliance with water quality protection laws. This is why we ask for city, town and county info.

2. **Date You Surveyed Site:** The date you visited the site.

3. **Location:** Since most sites lack a street address, a detailed and precise description of the site location is critical. For example, describe the location with something like: *On the north side of Main Street, 1/4 mile east of First Avenue or NW corner of Main & First.* If your cell phone or car has a gps function then please note the site coordinates.

4. **Could we get your contact information:** We ask for this information in case we have questions and so we can provide you with an update on what your report and that of others has accomplished. Your e-mail address is particularly important. Its far easier to communicate by e-mail than phone or snail-mail. Also, if we have your e-mail address we can forward summaries and other reports regarding the survey.

5. **Would you like us to treat this report as anonymous?** Check the box to let us know your preference.

6. **Has road, parking lot or building construction begun?** Temporary stabilization requirements kick in once the initial 2- to 4-week site clearance/filling-cutting phase brings a site up to rough grade. This point has been reached once building foundations appear, road beds or parking lots begins anywhere on the site.

7. **Of the portion of the site visible from areas open to the public, what percentage is subject to temporary stabilization requirements because they are not covered by buildings or building foundations, completed streets or parking lots, or established lawns and other landscaping?** In the aerial photo below, a construction site is bounded by a yellow-dashed line. Site development has progressed to the point that the road is paved and one house-driveway has been completed. The rest of the site is exposed soil except for the sediment basin in the upper right corner. All the areas of exposed soil are required to be treated with temporary stabilization measures, of which straw mulch, grass, or stone are the most common. The treatment must be sufficient to obscure all underlying soils from view. Clearly this site fails to comply with the temporary stabilization requirement.
Unfortunately, this site is typical of most throughout the Chesapeake Bay watershed.

8. **Of the areas subject to temporary stabilization requirements, what percentage is:**

   a. **Completely Stabilized:** While viewing a site from areas open to the public, what percentage is 70% to 100% covered with straw mulch, grass, or stone to the point that none of the underlying soil is visible?

   b. **Partially Stabilized:** What percentage is 30% to 70% covered with straw mulch, grass, or stone to the point that none of the underlying soil is visible?

   c. **Fully Exposed:** Only 0% to 30% is covered with straw mulch, grass, or stone to the point that none of the underlying soil is visible.

   See examples of these three categories on the next page.
Grass and straw mulch must be thick enough to completely obscure underlying soil from view.

Stone on driveway completely covers underlying soil.

**COMPLETELY STABILIZED** 70% to 100% of soil covered

**PARTIALLY STABILIZED** 30% to 70% of soil covered

**FULLY EXPOSED** 0% to 30% of soil covered

Soil within silt fence and to right of paved driveway is fully exposed to erosive forces.
ES=P: CLEARING OUR WATERS SURVEY FORM

All the information requested below can be obtained by viewing a site from areas open to the public, so please do not trespass. Provide as much of the requested information as possible, though it’s OK to leave one or more questions blank. The following questions focus on straw mulch, grass and other temporary stabilization measures as opposed to silt fence, sediment traps and other perimeter controls. The reason is that stabilization is far more effective in preventing pollution and is much easier to assess. For guidance on completing this form see: http://ceds.org/espguide. Please take a moment to add your findings to the ES=P Database at: http://ceds.org/espdatabase.

1. **Construction Site Information:** Please provide as much of the following information as you can.

   Name of Construction Site: ____________________________
   City/Town: ____________________________ County: ____________________________ State: ______

2. **Date You Surveyed Site:** ____________________________

3. **Location:** Since most sites lack a street address, describe the location: ____________________________

4. Could we get your contact information in case we have questions and so we can provide you with an update on what your report and that of others has accomplished?

   Name: ______________________________________________
   Email: ______________________________________________ Phone Number: ____________________________

5. **Would you like us to treat this report as anonymous?** ....... □ Yes □ No □ Doesn’t matter

6. **Has road, parking lot or building construction begun?** ................. □ Yes □ No

7. **Of the portion of the site visible from areas open to the public, what percentage is subject to temporary stabilization requirements because they are not covered by buildings or building foundations, completed streets or parking lots, or established lawns and other landscaping?**

   ______%  

8. **Of the areas subject to temporary stabilization requirements, what percentage is:**

   a. Completely Stabilized: 70% to 100% of soil obscured by mulch, grass or stone: ______%  
   b. Partially Stabilized: 30% to 70% of soil obscured by mulch, grass or stone ______%  
   c. Fully Exposed: 0% to 30% of soil obscured by mulch, grass or stone ______%  

   \[ 8a + 8b + 8c \text{ must total } 100\% \]

**COMMENTS:** ____________________________________________

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