Construction Site Monitoring Protocol

Developed by Jessica Spencer and Amy Montalbano

Parts of this protocol were adapted from *Adopt-A-Construction Site Project Procedures,* which is a part of the Maryland Chapter Sierra Club (MDE, 2001). Other portions of this protocol were developed from sections of our reading and our case study in Shermansdale, Pennsylvania.

To begin, view the site of concern without trespassing on the site. Make sure to observe both upstream and downstream sections of the construction site. Look for visible signs of soil exposure around the construction activity. Exposed areas of soil include partially vegetated and mulched soil. The effects of soil erosion due to construction sites are very often overlooked. In order to protect the aquatic environment, the correct measures of stabilization need to occur. The impact of the exposed soil during a rainfall event can cause significant erosion if the proper control methods are not put into place.

The following questions will help assess the effects of the construction activity on the surrounding environment. By using the following protocol as a guideline, you can determine if the proper pollution control is practiced on a construction site. However, when monitoring, try not to be too critical of the construction site. Construction is an earth-moving activity and in the process, will create some disturbance to the surrounding area. The main idea is to determine the obvious negligence to a site from the construction activity.

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1. Are there any exposed soils on the construction site?

YES: Go to question 2
NO: The construction activity is not visibly impacting or contributing to soil erosion at the site.

Observations/Remarks:

2. Is there any construction equipment present on site?

Construction equipment is used for earth moving and excavating activities.

Loader

Excavator

Back hoe

YES: If construction equipment is present, it is expected that there will be areas of exposed soil even if proper sediment control plan is in place. (Go to question 4.)

NO: Large scale earth-moving activity has probably ceased if there is no presence of construction equipment. Exposed soils around the site should be stabilized. It is beneficial when assessing the site to take a photograph of the area. You should indicate the date, time, photographer's name, site location, and the details of the site condition on a separate piece of paper.

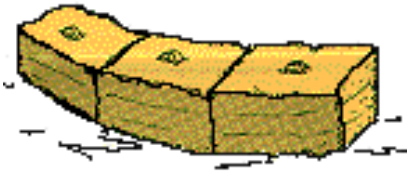
Observations/Remarks:

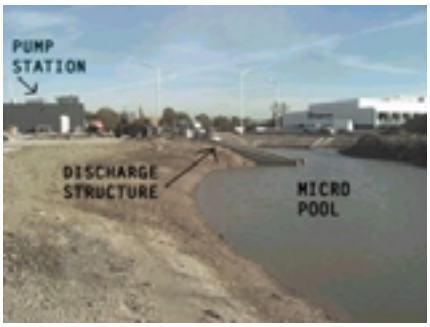
A proper sediment control plan for construction sites can include silt fences, swales, dikes, sediment traps, and sediment basins. The purpose of these devices is to trap sediment and prohibit it from entering the stream during construction activity.

Silt Fence: A black cloth fence that is buried sufficiently in the ground to prevent runoff from flowing underneath. Extends above ground to block sediment and direct runoff into other trapping devices. Look for tears or wholes in cloth that could allow runoff to flow through, and gaps where the silt fences join.

Dike: Serves same purpose as silt fence. There are two types of dikes; a straw bale dike and a perimeter swale dike. It is necessary to look for gaps in the dike that will allow runoff to flow rapidly through it.

Sediment trap/basin: These are small or large ponds that usually have a spillway constructed of stone or concrete. You need to look and see if the trap/basin is more than half full with sediment. They have an original storage volume that they must be cleaned to if sediment accumulates in the trap or basin. If trap or basin is more than half full, please contact Perry County Conservation District to report. Also you will need to make note of aquatic vegetation growing in the trap/basin. Vegetation is an indicator





that the trap/basin is more than half full with sediment and little or no soil is draining into the device. However, the presence of this vegetation is not a problem requiring corrective action. It is merely an indicator of increased soil.

Silt Fence *Straw Bale Dike* *Sediment Trap*

* Sediment trap is scaled for a large highway operation. The basins will vary in size and shape.

3. Are there proper sediment control devices in place during the construction activity?

YES: Proper devices are in place and are being effectively used
(Go to Question 4).
NO: This leaves reason for concern. Contact Perry County Conservation District.
(Wayne Demass, 717-582-3484)

Observations/Remarks:

4. Does the quality of the stream appear to be healthy based on the clarity of the water?

YES: The stream is relatively unaffected by the construction activity.
NO: If looks polluted, note the color, odor, or form of pollutant present and report to local Conservation District.

Observations/Remarks:

Please make any additional comments, concerns, or remarks regarding the construction site and surrounding environment. If camera unavailable, draw a rough sketch of the construction site.

Construction Site Ranking System

Excellent: The overall site assessment showed few to no violations of the protocol. Control devices are properly in place and preventing excess sedimentation and erosion to the stream. Quality of water is unaffected by the construction activity.

Fair: Site has some degrees of concern and further monitoring may be necessary to conclude the overall impact of the construct activity to the site. Sediment control devices may be in place, but not properly functioning, therefore allowing some sediment to reach the stream.

Poor: Site looks to be in violation of sedimentation and erosion control plan. Area looks extremely disturbed with little or no control devices present. Water appears discolored or giving off foreign odors.