

Chapter 4

Inspection of Construction Sites

This chapter provides information about inspecting erosion control, sediment control and stormwater management practices during the construction period. It covers inspections using visual procedures that can be evaluated by trained individuals. It does not cover inspections that involve water sampling or testing. It does not cover the installation of the practices or measures that may be used for erosion and sediment control and stormwater management.

The information in this chapter should be considered generic with the recognition that state and local regulations may provide very specific requirements related to inspector credentials, frequency of inspections, report format, submission of reports to permitting authorities, and retention of reports.

Requirements for Inspectors

Inspections should be made by persons that understand how practices are to be properly installed, how they should perform, and how practices should be maintained. Inspectors should have enough knowledge about each practice used to determine if it is effective and whether or not it needs maintenance or repair. Inspectors should know enough about the practices to realize that there may need to be an additional practice or a different practice in a problem area. However, changes in the plan are the responsibility of the design professional.

Inspectors do not have to understand how a practice is designed, although the more a person knows about a practice the better the person will understand how the practice should be maintained. Inspectors should also know how to read site plans and understand the relationship of the erosion and sediment control practices and other stormwater management activities with the overall plan.

Inspectors need communications skills so they can explain installation and maintenance problems to the contractor or owner and anyone else that “needs to know”. Also, inspectors must provide written reports to appropriate persons for their information or follow-up actions. Actions may include maintenance, repair or a request for a qualified design professional to assist, or for reporting to meet permit requirements. In summary, both written and verbal communication skills and an understanding of report requirements are essential tools for the inspector.

The credential requirement for inspecting construction sites in Alabama is stated in the NPDES General Permit for Construction administered by the Alabama

Department of Environmental Management. Local government regulations may require that persons providing inspection services have additional credentials or training to be designated as an inspector.

How Often Should Inspections be Made

In general, inspections should be made frequently and after major rain events. Since rainfall triggers inspections on permitted sites, a rain gauge is required.

Practices that can be damaged by construction activities need to be inspected on a regular basis, at least weekly and in some cases daily so the practices will be repaired or maintained and in good condition when a major rain event occurs. During periods of major rain events, practices need inspection daily.

Practices that are not normally affected by construction activities after installation need inspecting after each major rain event and as a minimum on a monthly basis. For vegetative practices, inspections should be made during early growth stages, regardless of rainfall events, to determine if reseeding is needed to ensure an adequate vegetative cover. Newly vegetated areas damaged by rainfall events should be repaired immediately after the area is determined to need repair.

The frequency requirement for inspecting construction sites in Alabama is stated in the NPDES General Permit for Construction administered by the Alabama Department of Environmental Management. Local governments may require inspections more frequently than is required by the State General Permit.

How are Practices Inspected

Visual evaluations are made of practices to determine their condition. Also, discharge points are reviewed to determine if sediment and turbid water are leaving the construction site.

Inspectors must know enough about the practices being inspected to make sound judgments about the need for repairs and maintenance. If there is any doubt about a situation, a more knowledgeable person should be requested to assist in the determination of appropriate actions. A good example of requesting another person for expert guidance is when a permanent seeding appears borderline and there is time to reseed before the recommended planting period ends.

Inspectors and others involved in erosion and sediment control activities must understand that erosion and sediment control plans are dynamic and usually need revising if construction involves more than a large lot and the construction period extends more than a few weeks. Inspectors should be encouraged to ask for assistance of design professionals if there are any reservations that a plan needs modifying.

Suggestions for Inspectors

- Study the erosion and sediment control and stormwater management plan. Identify the practices and schedule. Participate in pre-construction and construction conferences whenever possible.
- Review the site and practices with the plan in hand according to a predetermined schedule and the predetermined triggers.
- Determine if the practices planned are installed properly and in the correct sequence.
- Determine if the practices appear in good condition (Do the practices need maintenance or repair?). This should be an objective comparison of what will be needed when major rain events occur.
- Determine if the system of practices appears to be effective for the construction site by examining discharge points. Evidence of ineffectiveness may be muddy or turbid water leaving the site or sediment deposits in the runoff conveyance system practices such as check dams and channels (swales).
- Determine if practices are effective during or immediately following a rain event. This is the best time to determine the effectiveness of the system and particularly to determine if turbid water is leaving the site.
- Determine if the site is managed to prevent a problem with debris, trash, petroleum products and chemicals (Are Groundskeeping and Spill Prevention practices used or needed?).
- Document relevant site information with photography.
- Complete or draft the appropriate inspection documents while on the site.

Discharge points should be examined objectively to determine if sediment deposits exist at adjacent off-site areas. Deposition of sediment indicates that erosion and sediment control may not be effective. An absence of deposits at discharge points (just below the outfall) where there is an opportunity for sedimentation to occur is a good indicator of an effective system. On the other hand, lack of sediment deposits at a point with high flow velocities will be less meaningful.

Inspections should be documented in a written report, log and/or checklist. Whatever format is used to document the inspection, the report should contain the site name, the date and time of inspection, the inspector and any other persons involved in the inspection, dates when key activities occurred (for example, grading the site and installing practices), comments or ratings concerning the success or failure of the practices, what corrective action(s) may be needed, what

repairs or maintenance was done since the last inspection and verbal communications with the contractor or owner that took place during the inspection. In addition, there may be other items required by the permit holder or contractor.

Photography can be used very effectively to document the findings during an inspection and becomes important in the future as site conditions change and the practice(s) is no longer used or issues arise over the impacts of the site. Developing a comprehensive file of photographs that supports inspections is a sound business!

There is a range of formats used for documenting inspections. Two examples of inspection report forms are provided (see Figure 4-1 and Figure 4-2). Figure 4-1 uses a detailed listing of practices to provide an efficient method for repeating the documentation at a site and may serve as a supplemental sheet to a more formal report form such as Figure 4-2. It is important to recognize that local and state regulations may require a specific inspection form and this must be completed in addition to other formats that are used.

There is usually a permit requirement that a responsible person (representing the permit holder) sign an inspection report to acknowledge that they have been informed and understand what is needed to meet requirements for erosion and sediment control and stormwater management at a specific construction site.

BMP INSPECTION REPORT

Client _____ Project name _____ and Reg. no. _____

Inspected By _____ Date and Time _____ Page __ of __

A. Phase of Development: Initial Site Grading __ Building and Construction __ Punch List __

B. <u>BMPs Applied</u> (check all that apply)	<u>Condition of BMPs (check one)</u>			Comments
	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
<input type="checkbox"/> Construction Exit	___	___	___	
<input type="checkbox"/> Barrier-Class __ Silt Fence	___	___	___	
<input type="checkbox"/> Check Dams	___	___	___	
<input type="checkbox"/> Diversion	___	___	___	
<input type="checkbox"/> Grass Swale	___	___	___	
<input type="checkbox"/> Inlet Protection	___	___	___	
<input type="checkbox"/> Outlet Protection	___	___	___	
<input type="checkbox"/> Sediment Basin	___	___	___	
<input type="checkbox"/> Temporary Seeding	___	___	___	
<input type="checkbox"/> Permanent Seeding	___	___	___	
<input type="checkbox"/> Groundskeeping	___	___	___	

C. Additional BMPs needed (potential practice and location):

D. Additional Comments:

E. Sampling: Instream sampling necessary to evaluate the effectiveness of BMP implementation based on evaluation of qualified credentialed professional. Yes __ No __

F. Significant rainfall events since last inspection (date and amounts):

G. Inspection report reviewed with responsible owner/operator

Inspector _____ Date _____

Responsible owner/operator _____ Date _____

ADEM NPDES CONSTRUCTION STORMWATER INSPECTION REPORT AND BMP CERTIFICATION

RESPOND WITH "N/A" AS APPROPRIATE. FORMS WITH INCOMPLETE OR INCORRECT ANSWERS, OR MISSING SIGNATURES WILL BE RETURNED AND MAY RESULT IN APPROPRIATE COMPLIANCE ACTION BY THE DEPARTMENT. IF SPACE IS INSUFFICIENT, CONTINUE ON AN ATTACHED SHEET(S) AS NECESSARY. PLEASE TYPE OR PRINT IN INK.

Item I.

Permittee Name:	Facility/Site Name:
Permit Number:	County:
Facility Entrance Latitude & Longitude:	Phone Number:
Facility Street Address or Location Description:	

Item II.

List name of current ultimate receiving water(s) (indicate if through MS4) and the number of disturbed acres which drains through each treatment system or BMP: Add additional sheet(s) if necessary.

Receiving Water	Disturbed Acres	Discharge Point #	Representative Outfall
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO

Item III.

- YES NO Did discharges of sediment or other pollutants occur from the site? If "Yes", please list a description of the discharge(s) and their location(s):
- YES NO Were BMPs properly implemented and maintained at the time of inspection? If "No", please provide location(s) and descriptions of BMPs that need maintenance:
- YES NO Are BMPs needed in addition to those already present onsite at the time of inspection? If "Yes" please provide a description and location of additional BMPs that are needed:
- YES NO Have any BMPs failed to operate as designed? If "Yes", please provide location(s) and description of BMP(s) that failed:
- YES NO Were there BMPs required by the CBMPP that were not installed or installed in a manner not consistent with the CBMPP? If "Yes", please provide a description and location where the BMPs were not installed or installed incorrectly:

Item IV.

The Permittee shall conduct turbidity monitoring in accordance with Part V of the permit:

- YES NO Is this facility a Priority Construction Site?
- YES NO Has the facility disturbed greater than 10 acres?
- YES NO Was the site discharging at the time of inspection?
- YES NO Samples collected, if "Yes", sampling data must be attached.

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