AK-CESCL

Alaska Certified Erosion & Sediment Control Lead

8-Hour Recertification Training

Sponsored by:

THE ASSOCIATED GENERAL CONTRACTORS OF ALASKA

SKILL INTEGRITY RESPONSIBILITY

In Cooperation with:

Useful Websites:

Alaska Department of Environmental Conservation Stormwater:

https://dec.alaska.gov/water/wastewater/stormwater/construction

Municipality of Anchorage Watershed Management Construction:

http://anchoragestormwater.com/construction.html

Fairbanks Stormwater Management Program:

http://co.fairbanks.ak.us/pworks/StormWaterManagementProgram/

Alaska Department of Environmental Conservation MSGP:

https://dec.alaska.gov/water/wastewater/stormwater/sw-municipal

Alaska Department of Environmental Conservation SWPPP Template:

https://dec.alaska.gov/Water/wnpspc/stormwater/index.html

ADEC Excavation Dewatering Permit:

https://dec.alaska.gov/water/wastewater/stormwater/dewater-hydrostatic/#dewater

AK-CESCL Alaska Certified Erosion Control Lead website:

http://ak-cescl.com/

Plant Materials Center DNR:

http://plants.alaska.gov/

EPA National Menu of BMPs:

http://cfpub.epa.gov/npdes/Stormwater/menuofbmps/index.cfm

COURSE OBJECTIVES

Assess and manage risks of erosion and sedimentation on construction sites

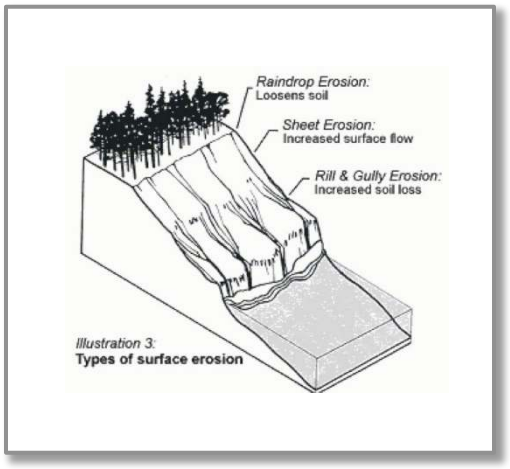
Obtain and comply with the APDES general permit for construction activities

Plan, install, monitor and maintain BMPs that comply with the Clean Water Act, EPA, & ADEC

Test score must be 70% or higher to receive the AK-CESCL certification
Test is 25 questions

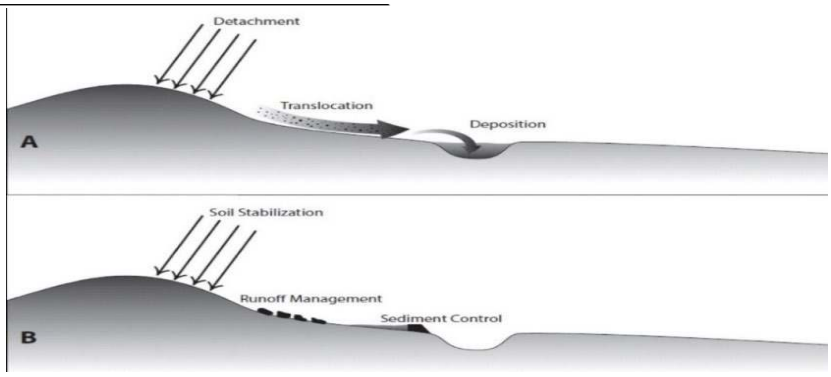
1. Erosion Processes:

- Raindrop
- Sheet
- Rill
- Gully
- Stream & Channel

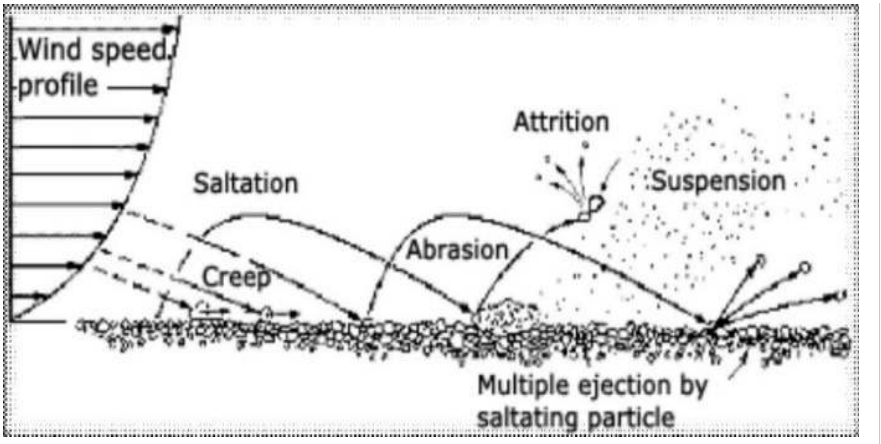


- Increased volume & velocity will cause erosion.
- Removing vegetation and topsoil will increase volumes.
- Contouring the ground can increase velocity.

✓ Stabilize Soils & Control the Flow



- Wind Erosion



2. Factors That Influence Erosion

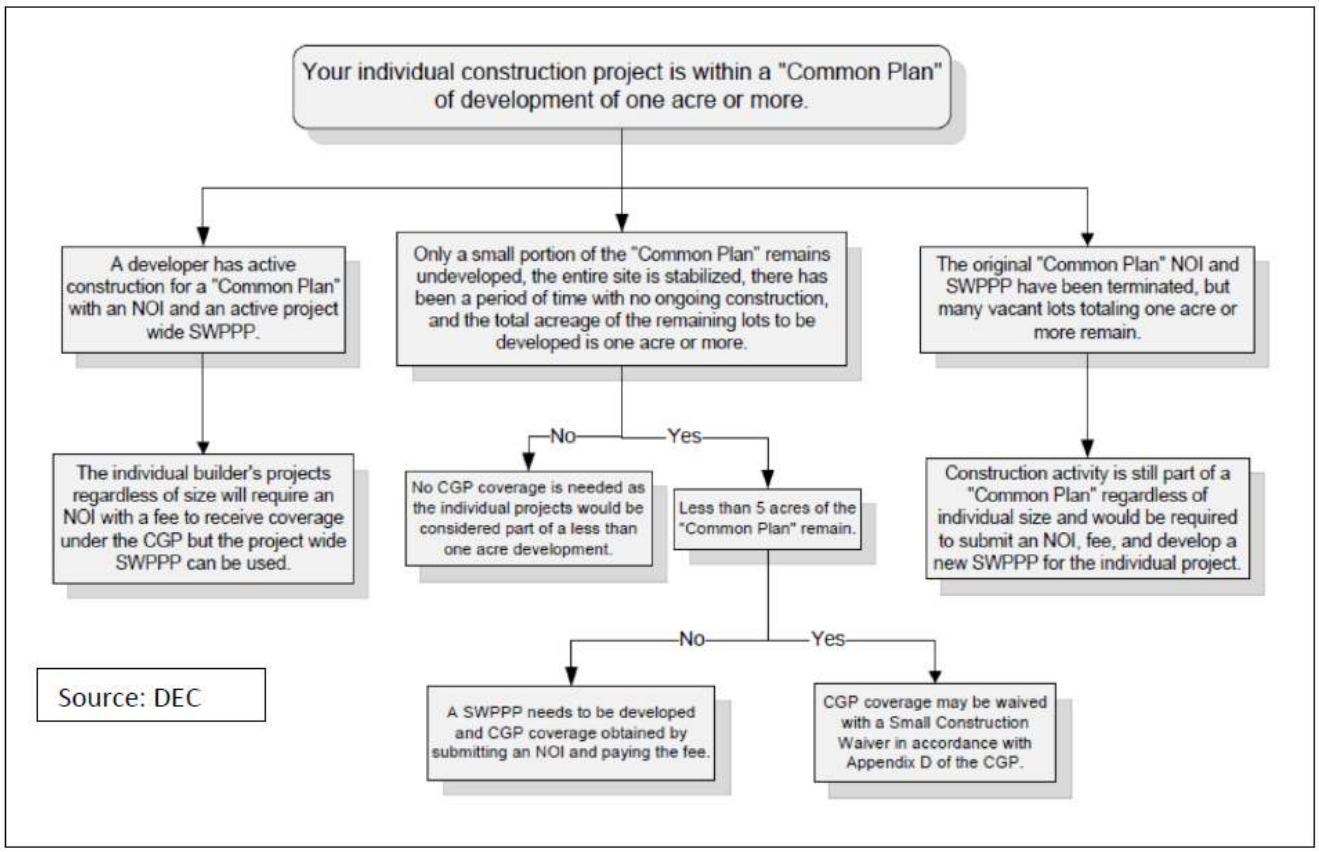
- Soils
- Precipitation
- Vegetation
- Surface area
- Slope Length
- Slope Gradient
- Surface Texture

✓ What is your site like before construction?
✓ How will it change during construction?
✓ What will it be like after construction?

3. Regulations & Permitting

a. EPA – National Pollutant Discharge Elimination System (NPDES)
b. DEC – Alaska Pollutant Discharge Elimination System (APDES)
c. Local Requirements

✓ Operators of constructions sites that disturb an acre or more and discharge stormwater to waters of the U.S. must obtain construction general permit coverage.



- Review the sections of the Construction General Permit

- MS4 = Municipal Separate Storm Sewer System
    a. Municipality of Anchorage (MOA)
    b. Port of Anchorage
    c. City of Fairbanks / North Pole
    d. Fairbanks North Star Borough (FNSB) in the Road Service Area
    e. Joint Base Elmendorf Richardson (JBER)
    f. Fort Wainwright
    g. Alaska DO&PF Construction Operations, Central Region

- Know the local requirements and necessary submittals.

- Multi Sector General Permit (MSGP)
    - Mining and material sources for more than one project.
- Which permit covers what?
    - Depends on how material site is developed, managed, and used will determine whether the site is regulated under the CGP or MSGP.

CGP	MSGP
Site is used for just the one construction project	Site serves multiple unrelated construction projects by different permittees
The site will open under the NOI and then terminate the NOI when the project is completed	Site is a commercial operator or landowner allowing multiple users of the site
See CGP 1.4.2.3 for support activities	See MSGP Sector J

4. Risk Management

a. Identify the sources of potential harm.
    - What will you be doing?
    - When will you be doing it?
b. Develop Strategies to manage the risks.
    - SWPPP
    - Schedule
c. Implement the plans to reduce or eliminate risks.
    - Work the plan.
    - Inspect the performance of the plan.

You can't eliminate risk but you can manage it!

5. Site Inspections & Recordkeeping

The records you keep are necessary to demonstrate compliance!

- Inspection Frequency
  - Based on one of three choices in the permit
  - Must be stated in the SWPPPP
  - Can be reduced to monthly, but must be temporarily stabilized.

- Winter Shutdown
  - All control measures must be implemented before going into winter shutdown
  - A permittee may stop inspection 14 calendar days after the projects anticipated fall freeze-up.
  - The project must resume inspections at least 21 calendar days prior to anticipated spring thaw.

- Corrective actions
  - For easily remedied must initiate within 24 hours
  - For replacement or redesign must complete within 7 days
    - Make the field match the plans
    - Fix, redesign, or replace damaged BMPs
    - Removing sediment

- SWPPP Amendments / Modifications – Complete within 7 days
  - Adding new BMPs
  - Replacing BMPs
  - Changing BMPs
  - Changing the project design
  - Altered to a reduced inspection frequency
  - NOI Modifications
  - Added a Dewatering Permit to the SWPPP

- Grading logs
  - Need to date grading activities
  - Describe grading activity and location
  - Document temporary or permanent ceased portions of the site
  - Document and describe all stabilization measures

- Weather logs
  - Document date and daily precipitation in inches

Inspection Report Exercise

Review the Plan Sheet

AK-CESCL TRAINING	EXAMPLE INSPECTION REPORT	
1.0 General Information		
1.1 Project Name	CESCL Re-CERT Exercise	
1.2 Project Location	Anywhere, Alaska	
1.4 NOI Tracking No.	AKR00DR00	
1.5a Date of Inspection		**1.5b Start/End Times:**
1.6 Inspectors' Names		
1.7 Inspectors' Titles		
1.8 Inspectors' Contact Information		
1.9a AK-CESCL Cert. No.		
1.9b AK-CESCL Exp. Date		
1.10 Describe construction activities Fine grading cut SW slope, actively working fills and grading in all areas, establishing ditch lines, pouring concrete abutments for bridge widening. Condo units under construction, parking lot final grading for pavements continues.		

1.11a Mean Annual Precipitation: ■ 15 in. or less ■ greater than 15 in. and less than 40 in. ■ 40 in. or greater

1.11b Type of Inspection: ■ Regular ■ Post-storm Event ■ Continuous Event ■ Reduced Inspection Frequency Period

2.0 Weather Information

2.1 Describe the weather since the last inspection, or start of construction activities if first Inspection.

Check all appropriate boxes.

■ Clear ■Cloudy ■ Rain ■ Sleet ■Fog ■Snow ■ High Winds ■ Other:

2.2 Storm events. Complete storm event information if there were any storm events since the last inspection.

Storm event = rainfall event that produces ≥ 0.5 inches in 24 hrs. separated from last event by 3 days of dry weather

Estimated Start Date:								
Estimated Duration								
Approximate Amount of Precipitation (in):								

2.3 Weather at time of this inspection? ■ Clear ■Cloudy ■Rain ■Sleet ■Fog ■Snow ■High Winds ■Other:

Temperature:

3.0 Overall Site Issues

For complete instructions, please see instructions on Constructions Forms web page, by separate form

- ***Overall Site Issue*** *-- These are general site issues that must be assessed during inspections.*
- ***Implemented?*** *– If a BMP should be installed at the time of the inspection and you marked "No" in the "BMP Installed" column, then you must check "Yes" in the "BMP Action Required?" column. If there is good reason to mark "no" in the "BMP Installed" column (such as the BMP is no longer needed and was removed) then you can mark "no" in the "BMP Action Required?" column and explain in the "Comments" column.*
- ***Corrective Action Required? -*** *When maintenance or some other corrective action is required, check "Yes" in this column.*
- ***Corrective Action Required, Complete by Date -*** *When a corrective action is required, before certifying the report, fill in the date when the corrective action can reasonably be expected to be completed. When a corrective action is NOT required, leave the "Complete by Date" blank.*
- ***If Corrective Action is required, describe Action and Location*** *– Anytime you check "Yes" in the "Corrective Action Required?" column, you must fill in the "Describe Corrective Action and Location" column as well.*
- ***Corrective Action Log -*** *When a Corrective Action is required as noted in this report, you must also enter all the information for this action in the Corrective Action Log and document on the Log the actual date of completed correction.*

	Overall Site Issue	Response	Corrective Action Required?	If Corrective Action is required, describe Action and Location	Comments

	Overall Site Issue	Response	Corrective Action Required?	If Corrective Action is required, describe Action and Location	Comments
3.1	Have stabilization measures been initiated on slopes and disturbed areas not actively being worked?	■ Yes ■ No	■ Yes ■ No Complete by Date:		
3.2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) required by the SWPPP to be delineated in the field, identified with barriers or markings?	■ Yes ■ No	■ Yes ■ No Complete by Date:		
3.3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	■ Yes ■ No	■ Yes ■ No Complete by Date:		
3.4	Are storm drain inlets properly protected?	■ Yes ■ No	■ Yes ■ No Complete by Date:		
3.5	Are the construction exits preventing sediment from being tracked into the street?	■ Yes ■ No	■ Yes ■ No Complete by Date:		
3.6	Is trash/litter from work areas collected and disposed of properly?	■ Yes ■ No	■ Yes ■ No Complete by Date:		
3.7	Are washout facilities (e.g., paint, concrete) available, clearly marked, and maintained?	■ Yes ■ No	■ Yes ■ No Complete by Date:		
3.8	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other potential pollutants?	■ Yes ■ No	■ Yes ■ No Complete by Date:		

	Overall Site Issue	Response	Corrective Action Required?	If Corrective Action is required, describe Action and Location	Comments
3.9	Are materials that are potential stormwater contaminants stored inside or under cover?	■ Yes ■ No	■ Yes ■ No Complete by Date:		
3.10	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	■ Yes ■ No	■ Yes ■ No Complete by Date:		
3.11	Has Spill Response kit been used since the last inspection?	■ Yes ■ No	■ Yes ■ No Complete by Date:		
3.12	Are the NOI postings legible and do they contain the correct information?	■ Yes ■ No	■ Yes ■ No Complete by Date:		
3.13	Are any additional BMPs needed?	■ Yes ■ No	■ Yes ■ No Complete by Date:		
3.14	(Other)	■ Yes ■ No	■ Yes ■ No Complete by Date:		

4.0 Discharge Points					
	Overall Site Issue	**Response**	**Corrective Action Required?**	**If Response is Yes, describe Location. If Corrective Action is required, describe Action and Location**	**Comments**
4.1	At the time of inspection, are the discharge points and receiving waters free of pollutant discharges (sediment deposits, sediment plume or oil sheen)? (See Section 4.3 for list of discharge points)	■ Yes ■ No	■ Yes ■ No Complete by Date:		

4.2	Since the last inspection, are the discharge points and receiving waters free of evidence that pollutants had left the project site (for example, sediment deposits, oily residue)? (See Section 4.3 for list of discharge points)	■ Yes ■ No	■ Yes ■ No Complete by Date:		

4.3 Location of Discharge Points	
List the project discharge point locations	**Inspected?**
SW drain inlet	Yes No
SE Ditch	Yes No
NE Ditch via culvert	Yes No
NW Ditch	Yes No
	Yes No
	Yes No
	Yes No
	Yes No
	Yes No
	Yes No
	Yes No

5.0 Site-specific BMPs

- ***BMP Identifier*** *-- This column can be used at the inspector's option.*
- ***BMP and Location*** *- Describe and give the location of the structural and non-structural BMPs identified in your SWPPP in the BMP column below (Include areas that are required to be inspected by the CGP, such as material storage areas that are exposed to precipitation.)*
- ***BMP Installed?*** *– If a BMP should be installed at the time of the inspection and you marked "No" in the "BMP Installed" column, then you must check "Yes" in the "BMP Action Required?" column. If there is good reason to mark "no" in the "BMP Installed" column (such as the BMP is no longer needed and was removed) then you can mark "no" in the "BMP Action Required?" column and explain in the "Comments" column.*
- ***BMP Action Required?*** *- If a BMP needs repair, modification, replacement, maintenance or a new BMP is needed or a SWPPP amendment is needed, then a BMP Action is required.*
- ***BMP Action Required, Complete by Date*** *- Before certifying the report, fill in the date when the BMP Action can reasonably be expected to be completed. When a BMP Action is NOT required, leave the "Complete by Date" blank.*
- ***If BMP Action is required, describe Action and Location*** *– Anytime you check "Yes" for "BMP Action Required", then you must also fill in the "Describe BMP Action and Location" column.*
- ***Corrective Action Log*** *- When a BMP Action is required as noted in this report, you must also enter all the information for this action in the Corrective Action Log, and document on the Log the actual date of completing correction*

BMP Identifier (optional)	BMP & Location	BMP Installed?	BMP Action Required?	If BMP Action is required, describe Action and Location	Comments
1	Bridge South side Compost Sock	__Yes __No	__Yes No Complete by Date:		
2	SE Ditch Check Dam	__Yes __No	__Yes No Complete by Date:		
3	SE Ditch Straw wattle	__Yes __No	__Yes No Complete by Date:		
4	NE Ditch Culvert Inlet Protection	__Yes __No	__Yes No Complete by Date:		
5	Access Road Construction Entrance Rattle Racks	__Yes __No	__Yes No Complete by Date:		
7	Access Road Straw Wattle	__Yes __No	__Yes No Complete by Date:		
BMP Identifier (optional)	**BMP & Location**	**BMP Installed?**	**BMP Action Required?**	**If BMP Action is required, describe Action and Location**	**Comments**

8	Concrete Washout	__Yes __No	__Yes No Complete by Date:		
9	West Side Pad Silt Fence	__Yes __No	__Yes No Complete by Date:		
10	NE approach Compost Sock	__Yes __No	__Yes No Complete by Date:		
11	Bridge North side Compost Sock	__ Yes __ No	__Yes No Complete by Date:		
12	NW approach Compost Sock	__ Yes __ No	__ Yes No Complete by Date:		
13	NW embankment toe Straw Wattle	__ Yes __ No	__ Yes No Complete by Date:		
14	NW embankment toe Silt Fence	__ Yes __ No	__Yes No Complete by Date:		
		__ Yes __ No	__ Yes No Complete by Date:		
		__Yes __No	__ Yes No Complete by Date:		
		__ Yes __ No	__ Yes No Complete by Date:		
		__Yes __No	__ Yes No Complete by Date:		
		__ Yes __ No	__ Yes No Complete by Date:		

6.0 Inspection Certification		
6.1 Areas of Inspection		
Did you inspect all areas of the project that are required to be inspected by the CGP including areas disturbed by construction activity, areas used for storage of materials that are exposed to precipitation, areas where control measures are installed, areas where sediment or other pollutants have accumulated or been deposited and may have the potential for or are entering a stormwater conveyance system, locations where vehicles enter or exit the site, areas where storm water typically flows, points of discharge from the site, and portions of the site where temporary or permanent stabilization has been initiated?	■ Yes ■ No	If you did not inspect any required areas, list those locations here and explain why they weren't inspected.

6.2 Project Compliance

- *If there are incidences of non-compliance identified in this inspection report then you must summarize below the incidence(s) of non-compliance.*
- *If there is an Action Item described in the non-compliance box below that does not already have a "Complete by Date" assigned elsewhere in this report, then add a Complete by Date within the box.*

Non-Compliance
Incidence(s) of Non-compliance: **Action Item(s) and Complete by Date(s):**

- *Check the box below if there are no incidences of non-compliance with the CGP:*

■ **I certify that on the date of this inspection, this project was found to be in compliance with the terms of the applicable Construction General Permit.**

CERTIFICATION STATEMENT

"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."

Print name

Title

Signature

Date

AK-CESCL	Example CORRECTIVE ACTION LOG Project Name:					
No.	Date Identified [1]	Description of corrective action taken (see instructions)	>2yr, 24hr Event [2]	SWPPP Amend #	Date Complete	Name of Person Documenting Completion
	■		■			
	■		■			
	■		■			
	■		■			
	■		■			
	■		■			
	■		■			
	■		■			
	■		■			
	■		■			
	■		■			
	■		■			

RECORD OF SWPPP AMENDMENTS

Date of Revision	Section	Description

Date Grading Activity Initiated/ Initials	Description of Grading Activity and Location	Date Grading Activity Ceased (Temporary or Permanent)/ Initials	Date Stabilization Measures Initiated (Temporary or Permanent)/ Initials	Date Final Stabilization Measure Complete	Description of Stabilization Measure
		T ■ P □	T ■ P □		
		T ■ P □	T ■ P □		
		T ■ P □	T ■ P □		
		T ■ P □	T ■ P □		
		T ■ P □	T ■ P □		
		T ■ P □	T ■ P □		
		T ■ P □	T ■ P □		
		T ■ P □	T ■ P □		
		T ■ P □	T ■ P □		
		T ■ P □	T ■ P □		
		T ■ P ■	T ■ P ■		

6. SWPPP Basics

Inspectors must know the SWPPP to Inspect the SWPPP!

SWPPPs must be implemented to meet water quality standards!

The SWPPP template has 15 sections. The following are the sections discussed in the course.

- Section 1 - General Information
  Current and up to date
- Section 3 - Project Information
  - Accurate and complete
  - Site specific conditions
    - Receiving waters
    - Drainage patterns
- Section 4 - Nature of construction activities
  - Scope of work
  - Project function
  - Sequence and timing
  - Identification of all potential pollutants
- Section 5 – Site Maps
  - Site boundaries
  - Areas where construction will occur
  - Areas not to be disturbed
  - Directions of Stormwater flow after grading
  - Locations where control measures are or will be
  - Locations of soil stabilization
  - Post construction controls
  - Support activities
  - Stormwater discharge points to waters of the US
  - Discharge points to MS4 systems

- Prevent or reduce discharge of pollutants to waters of the U.S.
- Areas that have been stabilized

As an inspector always make sure that:

What's on the plan is in the field
What's in the field is on the plans!

7. SWPPP Control Measures:

- ✓ Minimum measures
- ✓ Inspecting for compliance
- ✓ Recognizing deficiencies

Erosion Controls

Focus on Source Controls!
Prevent problems from occurring!

- Prevent raindrop erosion
- Convey flows without scour
- Minimize the amount of soil exposed during construction
- Sequence & phase activities
- Maintain natural buffer areas
- Mark clearing limits
- Control Stormwater discharges and flow rates
- Protect steep slopes
- Soil stabilization

8. Sediment Controls

- Storm drain inlet protection
- Waterbody protection measures
- Downslope sediment controls
- Stabilized construction vehicle access & exit points
- Sediment basins
- Control dewatering
- Treatment chemicals

9. Good Housekeeping

- Washing of equipment and vehicles
- Washout of applicators / containers used for paint, concrete etc.
- Fueling and maintenance areas
- Staging and material storage areas
- Fertilizer or pesticide use
- Storage, handling, & disposal of construction waste
- Spill notification