Contractors Trained to Protect Water Quality

Certified Erosion and Sediment Control Training Programs

Introduction

Early in life, children learn the basics of erosion control: (1) water and dirt make mud, (2) water flows downhill, and (3) dirt and mud in the wrong place can get you in trouble!

Ecology's new construction stormwater general permit takes these early life lessons to another level and requires construction site operators to protect water quality by preventing the erosion of soil and the discharge of muddy stormwater. To achieve this goal, the permit requires each site to have an on-site pollution prevention expert, called a Certified Erosion and Sediment Control Lead (CESCL).

Problem

Recent studies show that stormwater runoff is a major source of water pollution. Most storm drains and ditches lead directly into Washington waters. Most of the pollution from construction sites is sediment-laden stormwater -- or muddy water. Muddy water comes from erosion on land that is disturbed by land development activities such as grading, clearing, and excavating. These sediments can cause immediate problems for fish by smothering eggs or damaging gills. Sediment and nutrients can also contribute to algae blooms that can consume oxygen from the water column, suffocating fish and other aquatic life. But stormwater runoff carries more than just dirt. Stormwater can also carry pollutants such as petroleum, metals, pesticides, nutrients, and bacteria. Such pollutants not only harm water quality and aquatic habitat, they make streams, lakes, rivers, or bays less suitable for recreational uses such as fishing and swimming.

Recent research also shows the amount of sediment in the water near construction sites is typically 10 to 20 times greater than before construction began. Over a short period, construction sites that do not stabilize exposed soils can contribute more sediment to streams than was deposited over the previous several decades.

The Washington Department of Ecology's (Ecology) stormwater inspectors have found that construction operators often lack the knowledge and skills to prevent erosion and protect water quality. This problem can significantly affect water quality, especially on large projects, sites with clay soils, steep slopes, or projects with wet-weather construction activity. The water quality impacts are greatest when sites discharge muddy stormwater to sensitive waters such as salmon-bearing streams or wetlands.

Project Goals

The state's new construction stormwater permit responds to these findings. To ensure that construction site operators have adequate skills and training to prevent erosion and protect water quality, the permit contains an education component. A Certified Erosion and Sediment Control Lead (CESCL) must oversee all projects. The CESCL is responsible for the proper installation, maintenance, and inspection of pollution prevention measures, called best management practices or BMPs.

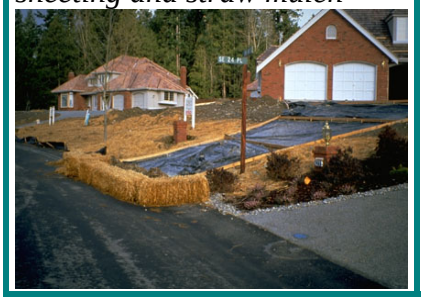
May 2007 *Ecology Publication No. 07-10-034*

WASHINGTON STATE DEPARTMENT OF ECOLOGY

The CESCL must complete training through an Ecology-approved certification program. The program teaches the principles of erosion and sediment control BMPs. It teaches the use of inspections and water quality sampling to recognize potential and actual water quality impacts. Ecology developed the CESCL course curriculum with input from a committee of experts from state and local government, private industry, the University of Washington, and the Pacific Northwest Chapter of the International Erosion Control Association. Ecology endorses the courses through a Memorandum of Agreement (MOA). A growing number of trade associations, colleges, and private consultants in both eastern and western Washington teach the courses.

The Seattle Daily Journal of Commerce, a trade paper targeted by developers, contractors, and consultants, recently featured the CESCL program: http://www.djc.com/news/en/11180867.html?query=killelea&searchtype=all.

Residential builders protect water quality with plastic sheeting and straw mulch



Milestones and Outcomes

Ecology inspectors are seeing a trend of improved pollution prevention on construction sites supervised by a Certified Erosion and Sediment Control Lead. Ecology expects this trend to continue because the general permit required all sites to have an on-site CESCL starting October 1, 2006.

This deadline created a flurry of interest in the CESCL program, and training providers are busy scheduling enough courses to meet the demand. The feedback from course participants has been positive. Even the "old pros" leave with a greater understanding of erosion control and pollution prevention. This will likely have a positive impact on water quality, not only on the CESCL's current project, but also on future projects.

Partners

The following partners have contributed to the success of the CESCL program in Washington State.

- AGC Education Foundation - *Cathy Feole, Beth Sachse, Dave Jenkins, Carl Menconi*
- University of Washington Engineering Professional Programs - *Bill Rogers, Stephanie Strom, Chris May*
- ECO-3 - *Phil Fortunato*
- Yakima Valley Community College - *Jane Twaddle, Beth Rogers*
- Northwest Erosion Control - *Paulo DaCruz*
- City of Seattle - *Rick Johnson*
- Clark County - *Maureen Knutsen, Mike Niemi*
- International Erosion Control Association Pacific Northwest Chapter - *Carol Davis, Becky Gauthier*
- Inland Northwest Associated General Contractors - *Danette Larson, Pete Vaughan*
- Creative Courses LLC - *Alex Zimmerman, Carl Menconi*
- Building Industry Association of Washington - *Jan Rohila*
- Washington State Department of Transportation - *Scott Carey, Jana Ratcliff*

Hands-on Field Exercise with Erosion Control Materials

Submitted by:
Jeff Killelea
Environmental Specialist 4
Water Quality Program Headquarters
jkil461@ecy.wa.gov
360-407-6127
http://www.ecy.wa.gov/programs/wq/stormwater/cescl.htm