

# Western Region BMP Newsletter Update

## Skid Trail Stabilization Study Results

A study in south central Virginia, led by Virginia Tech, shows the differences in how much sediment is captured from different types of skid trails, when using different methods of stabilization ground cover. One set of skid trails was cut-in with a bulldozer blade ("Bladed"), as often occurs in the foothills and mountains. The other set of skid trails was created by simply driving the equipment atop of the ground surface ("Overland"). The results were dramatic, as seen in the table below.

The take-home message is that applying leftover logging slash or laps can dramatically reduce sediment erosion. This method of skid trail stabilization is often less costly than purchasing and applying seed, mulch, fertilizer, and lime. For an electronic copy of a leaflet from the Forest Resources Association summarizing this study, contact [forestry.npsunit@ncagr.gov](mailto:forestry.npsunit@ncagr.gov). The table below is excerpted from FRA Technical Release No. 14-R-11, May 2014, "Skid Trail Stabilization Research and Logger Training."

### Inside this issue:

Skid Trail BMP Study	1
BMP Focus: Site Prep	1,2,3
New Seedling Catalog	4
Learn More on Site Prep	4
District BMP Contacts	4

Closure Treatment	Sediment Collected (tons/acre/year)		Sediment Reduction	
	Bladed	Overland	Bladed	Overland
Water bar only (control)	61.2	12.3	-	-
Water bar and seed	14.0	9.7	77%	21%
Water bar and hardwood slash	3.9	1.0	94%	92%
Water bar and pine slash	2.6	0.5	96%	96%
Water bar, seed, and straw mulch	1.3	0.8	98%	93%

### UPCOMING EVENTS

JULY 16-18 and AUG. 20-22:  
Asheville/Brevard area.  
Woodland Owner Stewards Series.  
Contact NCSU FEOP.

JULY 22 - 24 @ Asheville:  
Introduction to Aquatic Insect  
Ecology and Taxonomy. Contact  
NCSU Stream Restoration Program

AUG. 27 @ Statesville:  
Biomass Harvesting Workshop.  
Contact NCSU Forestry Extension.

SEPT. 8-10 @ Asheville:  
Water Education Summit.

SEPT. 11 @ Asheville: Level 1  
Erosion & Sediment Control and  
Stormwater Inspector training.  
Contact NCSU Soil Science.

SEPTEMBER 5 to 14 @ Fletcher:  
NC Mountain State Fair.  
Stop by and see Smokey Bear!

## **BMP Focus: Summertime means... Site Preparation**

**BMPs aren't just for logging.**

**If you are serious about reforestation, then summer is the time to prepare your tract for planting with seedlings this coming winter.**

**Forestry site preparation (site prep) can occur in different ways: pushing debris with dozers, tilling the soil, applying herbicide, and/or using prescribed fire. In all cases, there are BMPs to protect water quality, prevent erosion, and conserve the soil.**

{ Continued on Page 2 }

## **BMP Focus: Site Prep**

### **How Logging Affects Site Prep**

Site prep removes or collects excess debris leftover from logging, and in some cases, ameliorates the soil conditions to improve tree seedling survival and growth potential.

When loggers use an in-woods chipper, we usually see better utilization of trees, which reduces the amount of wasted leftover debris that would otherwise need to be piled, burned, or moved out of the way to plant seedlings or allow on-site seedlings to sprout. A cleanly-executed logging job can eliminate the need to re-enter the site with more heavy equipment, thus reducing the risk of additional BMP concerns from more site disturbing work.



*This 'completed' logging job requires substantial site prep to get it ready for reforestation. How much will it cost the forest owner to regenerate this site? How much additional soil disturbance is likely to occur?*

For a forest owner, it may be in his or her best interest to work with the logger, possibly even paying the logger, to cut all residual stems that cannot be utilized, and leaving the site as cleanly cut as possible. Taking this 'outside-the-box' approach may result in better conditions for seedlings and lower costs to the forest owner.



Using self-propelled grinders or mulching machines can be a low-impact method to accomplish site prep. This method usually does not disturb the soil as much as traditional bulldozer pushing.

Even when a clean logging job is accomplished, there is usually a need and benefit for the forest owner to have a herbicide application done (with or without a follow-up prescribed burn) to temporarily control weeds and prevent undesirable tree sprouts from choking out the desirable new seedlings. { Continued on next page }



## **BMP Focus: Site Prep**

### **Site Prep in the Mountains**

Steeper slopes, along with closer proximity to and frequency of streams and shallow soils, all contribute to the same higher risk BMP concerns when conducting mechanical site prep; as when conducting a logging job.

**Reducing overall soil disturbance is key.** Getting a clean logging job done, which eliminates or reduces the need to re-enter and re-disturb the site, may be the best solution in many cases to accomplish site prep. And, anything that can be done to avoid having to construct new roads, or re-disturb stable roads, will go a long way to avoiding BMP risks.

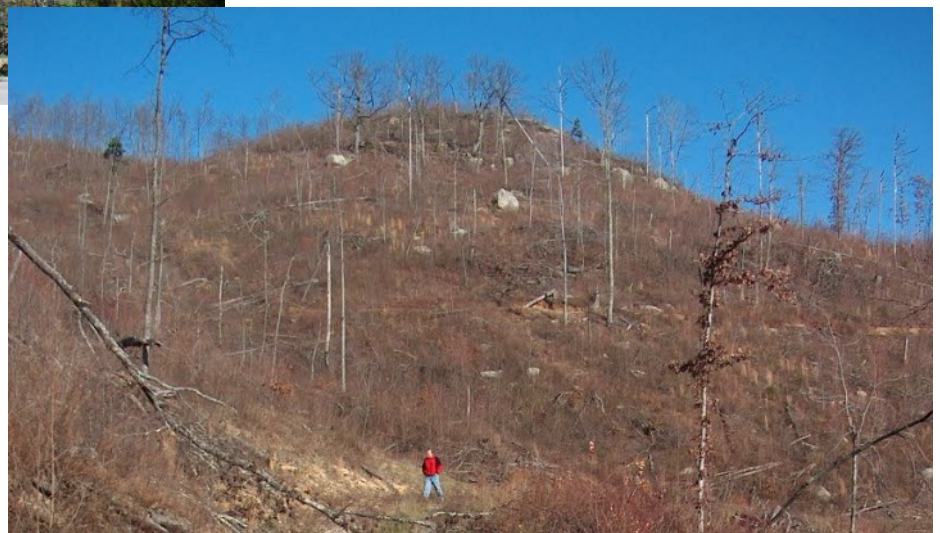
One site prep method that is somewhat unique in the mountains is hand-felling or lopping of leftover trees with chainsaws or other cutting tools. The primary BMP associated with lopping is to prevent the felled trees from entering into streams, which could result in a violation of the [FPG rules, or General Statutes on stream obstructions](#). If lopping within the SMZ, be sure to retain adequate shade over the stream water, to avoid increases of stream water temperature, which could harm the aquatic life and violate a FPG rule.

If a site prep burn will be done, [lightly install the fire control line](#) by removing just enough surface fuel from the firebreak. Digging deeply and pushing lots of soil usually aren't needed.



*The timber cutover on the left will need a lot of site prep, due to the greater amount of leftover standing trees. Also, note the extensive BMP erosion control and rehab work that is needed on the skid trails.*

*The timber cutover on the right also has residual standing trees, but they are much smaller and widely dispersed. Only minimal site prep, if any, may be needed. Lopping or herbicide application may be the best choice for this site, to minimize soil disturbance.*



# North Carolina Forest Service

Forestry Nonpoint Source Branch  
1616 Mail Service Center. Raleigh, NC. 27699-1616



## District Office BMP Contacts

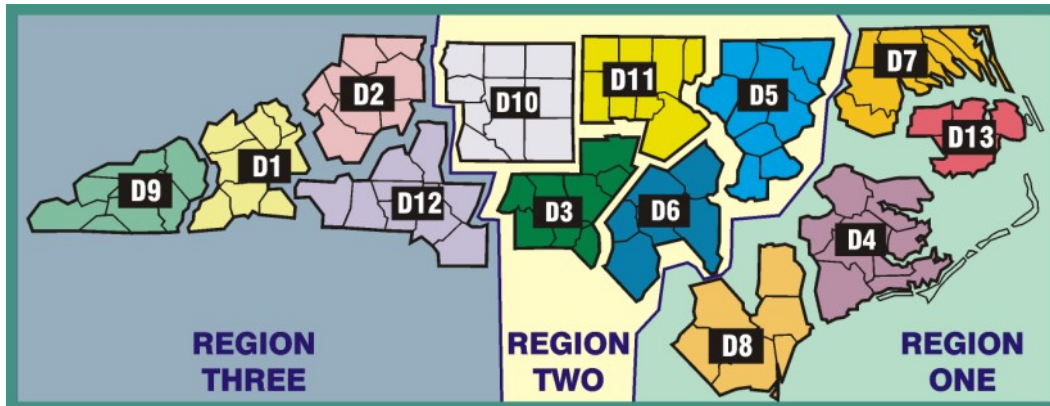
High Country, Northern Foothills: D-2  
Lenoir: 828-757-5611  
Roger Miller, Water Quality Forester

Catawba Valley, Southern Foothills: D-12  
Mount Holly: 704-827-7576  
Beth Plummer, Water Quality Forester

Central Mountains: D-1  
Asheville: 828-667-5211  
Caleb Jones, Assistant District Forester

Western Mountains: D-9  
Sylva: 828-586-4007  
Hugh Hassell, Assistant District Forester

Western Region Office: R-3  
Asheville: 828-665-8688  
Michael Cheek, Asst. Regional Forester



### Surf The Web

Manage and Protect Your Forest - [www.ncforestservice.gov](http://www.ncforestservice.gov)

NCDA&CS Agricultural Services - [www.ncagr.gov](http://www.ncagr.gov)

Keep Your Home Safe From Wildfire - [www.ncfirewise.org](http://www.ncfirewise.org)

Go Out and Learn in the Forest - [www.ncsf.org](http://www.ncsf.org)

Locate NC-Grown Farm and Forestry Products - [www.ncfarmfresh.com](http://www.ncfarmfresh.com)

## 2014-2015 NCFS Seedling Catalog Available

Obtain a copy of this year's catalog by contacting your County Forest Ranger office, or other NCFS office. You can also download a copy from our website: [ncforestservice.gov](http://ncforestservice.gov).

This year's featured tree is the Eastern Red Cedar. The NCFS provides a diversity of conifer and hardwood species that are suitable for timber management, wildlife enhancement, and water resource restoration projects.

## Learn More About Site Prep & BMPs

Chapter 10 of the NC Forestry BMP Manual outlines recommended BMPs for each common site prep method. A copy of the Manual is available from NCFS offices and the agency's website, [ncforestservice.gov](http://ncforestservice.gov).

A series of *Forestry Leaflets* describing different site prep methods is also available from the website. Look under Publications >> Forest Management >> Forestry Leaflets. Each leaflet explains the reason for using each site prep method, and the intended outcomes.