



Piedmont 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. The table below is excerpted from FRA Technical Release No. 14-R-11, May 2014, "Skid Trail Stabilization Research and Logger Training."

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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

AUG. 6 @ NCFA, Raleigh. NCFA Safety, Logging and Transportation Committee Meeting. Contact Jack Swanner.

AUG. 13 @ NCFA, Raleigh. NC SFI State Implementation Committee Meeting. Contact Jack Swanner.

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

SEPT. 24 @ Haw River State Park: Project Learning Tree (PLT) Facilitator Workshop. Contact NCSU FEOP or Haw River S.P.

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.

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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.

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. 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.

This stand of hardwood timber shows the signs of having been high-graded multiple times, which is seen a lot in the piedmont. The remaining trees are small and have poor form. To maximize the timber utilization and reduce site prep costs, and overall site disturbance, an in-woods chipper may be a preferred option to harvest this stand and regenerate a new forest.



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.



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BMP Focus: Site Prep

Site Prep in the Piedmont

The piedmont of North Carolina is probably as diverse of an area, with respect to soils and site conditions, as any other in the state. Depending upon how you define “piedmont,” it can range from 20% slopes and rocky soils, to rolling red clay slicks, sandhills, pine flatwoods, hardwood ridges, or mucky bay-heads. Each type of site will demand a different type of method to prepare it for reforestation.

Reducing overall soil disturbance is key. Conducting a clean logging job, 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.



In the sandhills, and in areas where old pastures or fields are being planted with seedlings, the practice of furrowing and scalping are often used.

When conducting either of these site prep methods, be sure to orient the furrows or scalped trenches along the contour, and do not align them up & down the slope. Runoff from rainfall will quickly concentrate in these shallow trenches, and can rapidly erode soil.

When piling debris, be sure to minimize removal of the nutrient-rich topsoil. Do your best to just skim the shearing or piling blade along the ground surface, enough to push the debris but not accumulate soil. 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 recently logged site on the left has lots of leftover debris. Some piling site prep work is likely needed to clear away enough space for new seedlings to be established.

North Carolina Forest Service

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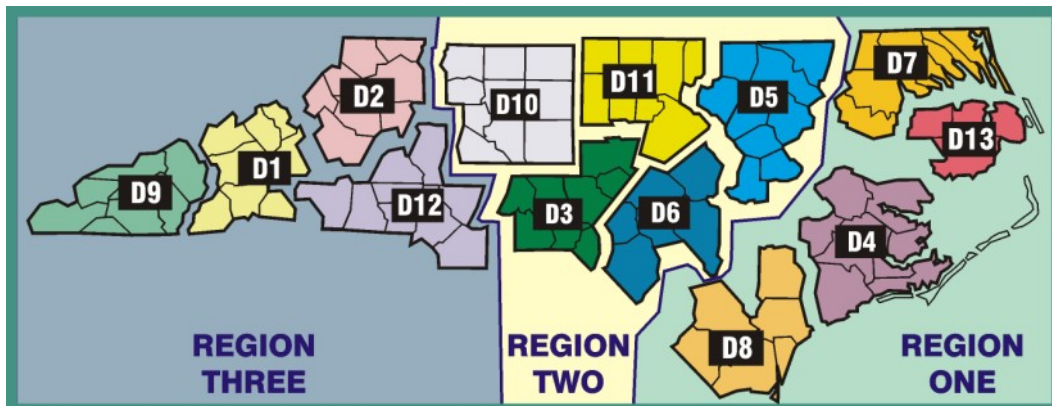
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Surf The Web

Manage and Protect Your Forest - www.ncforestservice.gov

NCDA&CS Agricultural Services - www.ncagr.gov

Keep Your Home Safe From Wildfire - www.ncfirewise.org

Go Out and Learn in the Forest - www.ncesf.org

Locate NC-Grown Farm and Forestry Products - 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. 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.

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.