North Carolina Forest Service

An agency of the N.C. Department of Agriculture & Consumer Services

Steve Troxler, Commissioner

BMP Newsletter

Best Management Practices for Water Quality & Soil Conservation

This issue's cover photo was taken at Singletary Lake State Park during the Bottomland and Swamp Forests Symposium field tour (photo credit: Barry New). Topics of discussion at this site were Carolina Bays: formation, ecological importance, and succession.

How do you think Carolina Bays were formed? A question scientists have debated for years.

Inside this issue:

Bottomland and Swamp Forests Symposium

Bottomland and swamp forests often provide crucial wetland functions such as transpiration, photosynthesis, nutrient cycling, net primary productivity, among many others. They are valued by society for their fiber production, improvement of water quality, flood storage, and aesthetic and heritage value.

In late October-early November the N.C. Forest Service and N.C. State University hosted a Bottomland and Swamp Forest Symposium in Wilmington. The friendly atmosphere showcased research results and discussed perspectives of bottomland forest management and landowner objectives. Over 150 were in attendance and representation from over 50 agencies and businesses present.

An example of a swamp forest that provides ecological functions that society values.

Attendees on day one of the Bottomland and Swamp Forest Symposium in Wilmington, NC.

Bottomland Forests and Water Quality

Historically, concerns regarding timber harvests of bottomlands and swamp areas were not water quality related, rather the concerns were regarding water movement through the stand, stand regeneration, and site productivity.

Bottomlands have long histories of repeated timber harvests and can recover from human disturbances. Silviculture within these systems can and has been sustainable, but there is not a simple 'one size fits all' prescription. Swamps vary considerably depending on how water flows through the site (stagnant vs moving), how fertile/non-fertile soils are, as well as how long and to what depth the site is flooded. Floodplain ecosystems are always changing (either rapidly or gradually).

Bald cypress stump surrounded by naturally regenerated bald cypress trees (Photo credit: Jim Slye).

Managers providing silvicultural harvest prescriptions (seed-tree, clearcuts, shelterwood, etc.) and regeneration approaches (natural vs. artificial) consider water movement at stand and landscape levels during preharvest planning to select an appropriate strategy. Maintaining the naturally existing flow system increases the likelihood of natural regeneration success.

Timber harvesting in bottomlands inherently involves BMPs. For sound forest management in bottomlands, managers should:

- Know the federal and state rules
- Know the agencies that regulate wetlands
- Know when to ask for help
- Preharvest plan
- Harvest when relatively dry
- Minimize adverse impacts on water quality, both onsite and offsite
- Protect hydrologic functions
- Protect soil physical properties
- Select tree species that fit site conditions

Use your BMP Manual!

Recent bottomland clearcut surveyed for regeneration (top). Young, naturally regenerating cohort within the same bottomland site (bottom) (Photo credit: Jim Slye).

Western Region Events

Upcoming Events

Jan. 9 @ Roaring River,
Module 18 (ProLogger)

Mar. 26-28 @ Asheville,
AWWA-WEA Symposium
Contact:
jport@ncsafewater.org

Piedmont Region Events

Upcoming Events

Jan. 20 @ Carrboro,
Backyard Stream Repair
Workshop

Jan. 23-24 @ Fayetteville,
Certified Burner Training

Jan 24-26 @ Greenville, SC
ApSAF Annual Meeting

Jan. 25-26 @ Raleigh
Stormwater BMP Training

Jan. 31-Feb 2 @ Raleigh
Southern Farm Show

Mar. 14-15 @ Raleigh,
WRRI Annual Conference

Eastern Region Events

Upcoming Events

Jan. 13 & 25 @ Dudley,
Module 18 (ProLogger)

Feb. 13 @ Plymouth,
Module 18 (ProLogger)

Mar. 21-22 @ Goldsboro,
ProLogger Base Course

The Bottomland and Swamp Forests Symposium was supported by a USDA-Forest Service grant. A summary of the presentations, poster abstracts, and speaker bios is available at the Symposium's website, http://go.ncsu.edu/bottomland-symposium.

Four field tour stops and attendees at the Bottomland and Swamp Forests Symposium field tour, November 2017.

North Carolina Forest Service

WATER RESOURCES BRANCH
1616 Mail Service Center. Raleigh, NC. 27699-1600

got to be
NC
Goodness Grows "In"
FOREST PRODUCTS
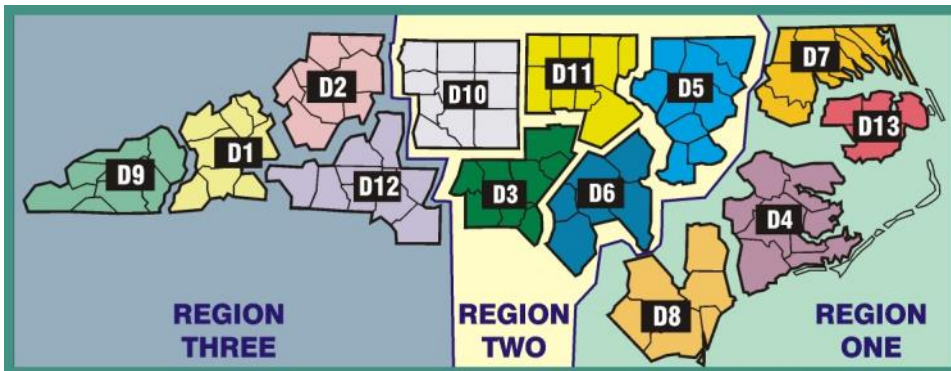
Western Region	Piedmont Region	Eastern Region

Western Mountains (D9, D1):
[vacant]
Office: 828-665-8688 (interim)

Foothills (D2, D12):
Richard Cockerham: 704-616-0747

Northern Piedmont (D5, D10, D11 [North of I-40])
Nancy Blackwood: 336-500-3661

Southern Piedmont (D3, D6, D10 [South of I-40])
Matt Vincett: 910-334-0025

**Northern Coastal Plain
(D7, D13, +Beaufort and Pitt):**
Cathy Gilkeson: 252-286-0881

**Southern Coastal Plain
(D4 [-Beaufort and Pitt], D8):**
Paul Mowrey: 252-286-0862

What's Right With This Picture?

Photo taken January 2017, Transylvania County (District 1). Photo credit: Trent Duncan (Assistant District Forester).

1. **Ample straw cover**
2. **Germinated seed**
3. **Silt fencing**
4. **Waterbar disconnecting approachway from stream**
5. **Waterbar covered with straw**
6. **Brush barrier applied**
7. **Litter layer within SMZ intact**
8. **No visible sediment reaching the waterway**