

Water Quality Regulatory Governance of Silviculture (in Wetlands)



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...or, "whatchya gotta know"...

Swift Creek, Craven Co., NC

So Many Questions...

Is forestry ("silviculture") allowed in wetlands?

{ yes }

Are permits required?

{ no,... maybe }

Who regulates wetlands?

{ USEPA, US Army Corps of Engineers, individual states }

What qualifies as a "wetland" ?

{ good question }

Why should you even care about all of this?

{ it's the right thing to do... stay out of jail & off the radar... }

Water Law History for \$500, Alex.

Roman Law: doctrine of "usufructuary": owners of land abutting streams are entitled to certain rights of water use.

1601 & 1604: Crown grants... *jus publicum*... *jus privatum*...

1824: First US Army Corps of Engineers water resource project.

1894 Shively v. Bowlby: unencumbered private ownership ends at the high water line or landward limit of navigability.

1899: Rivers & Harbors Act

1948: Federal Water Pollution Control Act, as amended

1972: Coastal Zone Management Act, 1990 CZARA amendment

"Renewable Resource Policy: The Legal-Institutional Foundations."
1993. David A. Adams. 557pp. Island Press. ISBN 1-55963-225-9

The Rules: just the facts...

1899 Rivers & Harbors Act

Assigns authority to US Army Corps of Engineers to protect navigable waterways:

Sec. 9 - must obtain permit to bridge or dam navigable waters of the US

Sec. 10 - must obtain permit to dredge, fill, or build upon navigable waters of the US

Sec. 13 - must not deposit refuse or trash in navigable waters of the US

***Not a frequent issue for silviculture, but...there are no exemptions, so...
...permanent bridge or culvert on a forest road ...crossing a navigable waterway?***



The Rules: just the facts...

Federal Water Pollution Control Act / Clean Water Act

“the policy of Congress to recognize, preserve, and protect the primary responsibilities and rights of the States in controlling water pollution”

Amended in 1965... 1972... 1977... 1987... This is what we call today the “Clean Water Act” (CWA)

Section 404:

[*paraphrasing...*] a permit from the Corps is required for discharging dredged or fill material (soil, debris) into a water (or wetland) of the United States.

Except...

- Normal [established, ongoing] silviculture is exempt from Sec.404 permitting.
- Timber Harvesting... Roads... Skid Trails... Site Prep... Minor Drainage.

But there are conditions that must be met (strings attached...) to maintain the “silvicultural exemption”:

Section 404 Silvicultural Exemption

- ✓ The silvicultural activity must not gradually or immediately convert the wetland to non-wetland (*eg: minor drainage*).
- ✓ The silvicultural activity must not result in a change-in-use of the land.
- ✓ Must comply with 15 federally-required BMPs for roads in a wetland; and forest road stream crossing of a water of the US.
- ✓ By default, must comply with 6 federally-recognized baseline BMPs for mechanical site prep to establish pine plantations in wetlands.
- ✓ NOTE: There may be other requirements assigned by Corps Districts...
 - Regional Permits, Regulatory Guidance Letters, misc. guidance/information docs

Timber Harvesting



Silviculture Exemption in Bottomland Swamps

“normal... established... ongoing”

Growth cycles are 80, 100, 120 years. *How to demonstrate “ongoing”?**

**These are some ideas...not endorsed by any agency...subject to check...*

- *Forest management plan, with provisions for regeneration*
- *Tract is enrolled in a forestry-use property tax abatement program*
- *Retention of suitable seed source trees*
- *Suitable harvesting method (shovel logging)*
- *Retention of stumps, in general (not clearing the land)*
- *Boundary line maintenance*
- *Periodic inventory, monitoring of trees*
- *Intermediate silvicultural treatments (?) -- TSI*
- *Road maintenance (?)... or abandonment (?)*

Documentation... Record-Keeping...





Forest Roads

15 required BMPs, codified in federal rule.

Reference your state forestry BMP manual.
Reference individual state laws/rules.

Roads are often a flag... They draw attention.

--Is it for "silviculture" purposes?

--Is it genuinely needed?
--Is it installed properly?



Forest Roads : 15 required BMPs

- (i) Permanent roads (for farming or forestry activities), temporary access roads (for mining, forestry, or farm purposes) and skid trails (for logging) in waters of the U.S. shall be held to the **minimum feasible number, width, and total length** consistent with the purpose of specific farming, silvicultural or mining operations, and local topographic and climatic conditions;
- (ii) All roads, temporary or permanent, shall be located **sufficiently far from streams** or other water bodies (except for portions of such roads which must cross water bodies) to minimize discharges of dredged or fill material into waters of the U.S.;
- (iii) The road fill shall be bridged, culverted, or otherwise designed to **prevent the restriction of expected flood flows**;
- (iv) The **fill shall be properly stabilized and maintained** during and following construction **to prevent erosion**;
- (v) Discharges of dredged or fill material into waters of the United States to construct a road fill shall be made in a manner that **minimizes** the encroachment of trucks, tractors, bulldozers, or other heavy **equipment within waters** of the United States (including adjacent wetlands) that lie outside the lateral boundaries of the fill itself;
- (vi) In designing, constructing, and maintaining roads, **vegetative disturbance** in the waters of the U.S. shall be **kept to a minimum**;
- (vii) The design, construction and maintenance of the road crossing **shall not disrupt** the migration or other movement of those species of **aquatic life** inhabiting the water body;

Forest Roads : 15 required BMPs

- (viii) **Borrow material** shall be taken **from upland** sources whenever feasible;
- (ix) The discharge shall not take, or jeopardize the continued existence of, a threatened or endangered species as defined under the **Endangered Species Act**, or adversely modify or destroy the critical habitat of such species;
- (x) Discharges into **breeding and nesting areas** for migratory waterfowl, **spawning areas**, and wetlands **shall be avoided** if practical alternatives exist;
- (xi) The discharge shall **not be located** in the proximity of a **public water supply intake**;
- (xii) The discharge shall **not occur** in areas of **concentrated shellfish production**;
- (xiii) The discharge shall **not occur** in a component of the **National Wild and Scenic River System**;
- (xiv) The discharge of material shall consist of suitable material **free from toxic pollutants** in toxic amounts; and
- (xv) All **temporary fills shall be removed** in their entirety and the area restored to its original elevation.



Mechanical Site Prep

Nov. 28, 1995 joint memo to the field, USEPA & USACE:

- *“Application of BMPs to Mechanical Silvicultural Site Prep Activities for the Establishment of Pine Plantations in the Southeast”*

Memo identifies 9 types of wetlands in which a permit is required for mechanical site prep:

1. **Permanently Flooded, Intermittently Exposed, and Semi-Permanently Flooded Wetlands**
2. **Riverine Bottomland Hardwood Wetlands**
3. White Cedar Swamps
4. Carolina Bay Wetlands
5. **Non-Riverine Forest Wetlands**
6. Low Pocosin Wetlands
7. **Wet Marl Forests**
8. Tidal Freshwater Marshes
9. Maritime Grasslands, Shrub Swamps, and Swamp Forests

This memo outlines 6 baseline BMPs for mech. site prep.
Presumption is: these BMPs must be implemented,
to retain silvicultural exemption under Sec.404.

The Federalist System of Government: VA

Timber Harvest Notification Law

Silvicultural Water Quality Law

Debris in Streams Laws

Submerged Aquatic Lands Law

Chesapeake Bay Preservation Act



The Federalist System of Government: **NC**

Forest Practice Guidelines Related to Water Quality (FPGs)

Coastal Zone Dredge & Fill Law
Coastal Area Management Act

River Basin & Watershed Riparian Buffer Rules

State Water Quality Standards, for (isolated) wetlands

Stream & Ditch Obstruction Laws
Ditch Maintenance Rules

U.S. Army Corps of Engineers:
• Permitting; Road Guidance



The Federalist System of Government: **SC**

South Carolina Pollution Control Act

South Carolina Coastal Tidelands and Wetlands Act

Coastal Zone Management Program

Forestry MOU with U.S. Army Corps of Engineers



The Federalist System of Government: **GA**

Water Quality Control Act

Wetlands Protection Act

Coastal Management Act

Erosion and Sediment
Control Act

River Corridor Protection Act

Local Regulation of
Floodplains



The Federalist System of Government: **FL**

ERP = Environmental Resource Permit.

NOI = Notice of Intent to implement silvicultural BMPs, with presumption of compliance to state water quality standards.

WMD = Water Management Districts

- *No Fee Noticed Exemptions for Construction, Operation, Maintenance, Alteration, Abandonment, or Removal of Minor Silvicultural Surface Water Management Systems*
- silvicultural BMPs referenced by state rule



Things to Consider

Influence of private-sector, market-driven forest / environmental sustainability certification programs:

- ATFS... FSC... ISO... PEFC... SFI...

Future land availability for forestry?

- “higher & better use” ... population growth, *RalCharGreenLantingham*
- ag commodity prices <<>> solar arrays <<>> wind turbine arrays
- dynamics of salt water / fresh water / groundwater interface
- changing demographics of next heirs generation

Summary

- ✓ Silviculture in wetlands is viable & allowable → *Tread Lightly!*
- ✓ There are permitting exemptions... but they are conditional.
- ✓ Know the rules: federal, state, local(?).
- ✓ Understand there is room for interpretations, and consistency may be challenging.
- ✓ These rules should, and do, conserve these special areas (wetlands). But, policy decisions should be based on science-supported facts..., avoid conjecture or misguided intentions.



After Hours

5:30 - 7:30: Poster Session & Social @ Riverview Terrace

6:00 - 6:45: Dr. Stahle talk @ Carolina Room



No Tricks... Just Treats!

