

Forest Management Practices to Mitigate Climate and Increase Carbon Sequestration

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Delaware Laws (The boring stuff)



Seed Tree Law



Erosion and Sediment
Control Law

What is the Seed Tree Law



A timber harvest must meet 3 requirements to be covered under the seed tree law. 1. It must be greater than 10 acres. 2. It must contain at least 25% by volume pine or yellow poplar. 3. The intended land use must be remaining as forest.



Properties that meet all 3 requirements must have either sufficient regeneration by leaving seed trees or must be reforested with either pine or yellow poplar within 2 years of the completion of the harvest.



[https://delcode.delaware.gov/title3/c010/sc05/index.html#:~:text=\(a\)%20Operators%20and%20landowners%20shall,completion%20of%20the%20cutting%20operation.](https://delcode.delaware.gov/title3/c010/sc05/index.html#:~:text=(a)%20Operators%20and%20landowners%20shall,completion%20of%20the%20cutting%20operation.)

What is the Erosion and Sediment Control Law



This is the law that permits timber harvesting in Delaware



Is a mix of voluntary and mandatory “Best Management Practices” Aka BMP’s



Also contains the regulations regarding timber harvesting in Delaware



https://agriculture.delaware.gov/wp-content/uploads/sites/108/2017/12/DE_BMPManual.pdf

What exactly is a BMP?



A BMP is any practice that helps protect from both soil loss and water quality degradation.



An example of a BMP would be installing water bars on a sloped skid trail or installing stream crossing perpendicular to the flow of water.



Many BMP's are voluntary, but important to implement to protect







Why are
BMP's
important
for Forest
Resiliency



BMP's protect against soil degradation, therefore helping to retain sequestered carbon

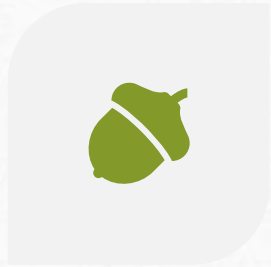


BMP's protect waterways from sedimentation, nutrient run off, and additional carbon entering the waterway.



Every timber harvest should implement BMP's!!!!

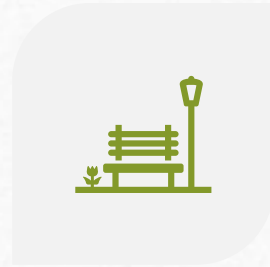
What BMP's are not voluntary in Delaware



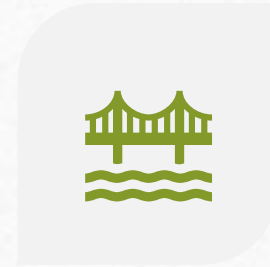
STREAM SIDE BUFFERS THAT ARE A MINIMUM OF 50FT WIDE ARE REQUIRED ON ALL HARVEST NOT COVERED BY THE SEED TREE LAW.



THESE ARE NOT NO HARVEST BUFFERS BUT MUST BE A MINIMUM OF 60SQ/FT OF BASAL AREA AFTER THE HARVEST.



TREES CAN NOT BE FELLED OR DRAGGED ACROSS ANY STREAM OR DITCH, UNLESS AT A PROPERLY INSTALLED AND FUNCTIONING CROSSING.



EVEN THOUGH MANY BMP'S ARE VOLUNTARY, SEDIMENTATION IN A WATER WAY COULD RESULT IN THE INABILITY TO OBTAIN FUTURE E&S PERMITS OR FINES.

Forest
Management
practices that
increase
forest
resiliency (the
fun stuff!!)

- Timber harvesting to reduce competition
 - This includes thinning pine stands, select harvesting of mixed hardwoods, and clearcutting.
- Prescribed fire
- Invasive Species control
- Planting Trees
- Agroforestry practices
- Keep forest as forest and create new forest when possible







A working forest is a healthy forest

Increased carbon sequestration is good for the environment

Helps to create a more resilient forest better able to withstand outside stressors such as wildfire, exotic pest, and other natural events.

Resilient forest recover faster after catastrophic events

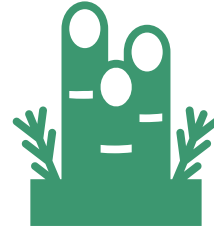
Why are these
important

Interactive tool of
different practices to
help sequester carbon
and improve forest
resiliency.

[Adaptation Workbook](#)
[| A Climate Change](#)
[Tool for Land](#)
[Management and](#)
[Conservation](#)

Northern
Institute of
Applied
Climate
Science

What
practices
would you
consider?



A pitch pine stand at Cape Henlopen State Park that contains phragmites grass in the wet areas. Also, there are some scattered Japanese Black Pines throughout the stand.



There can be multiple practices

What
practices
would you
consider?



A 2 aged yellow poplar stand at Black Bird state forest located that split by a natural stream. The higher elevations of the stand are primarily red oak that are showing some stress from Hypoxylon canker.



What practices would you chose.

What
practices
would you
consider?



Abandoned agricultural field at Redden State Forest with several hedgerows surrounding. The hedgerows are comprised of some native species but significant amount of autumn olive and privet.



What practices would you consider

What practices would you consider?

- A mixed hardwood/loblolly pine stand located at Milford Neck Wildlife area was impacted by Gypsy moth in the mid 90's. The oak died back significantly, and the holly understory has become thick enough to impact regeneration
- What practices would you consider?

Financial Assistance Resources for Delaware Landowners

- Delaware Forest Service
 - Forest Resiliency Fund – 100% or 90% match, see handout
 - State cost share program - 50% match for landowners
- USDA Natural Resources Conservation Services
 - Environmental Quality Improvement Program (EQIP)
 - Conservation Reserve Enhance Program (CREP)
 - Conservation Stewardship Program (CSP)

Forest Resiliency Fund

- Cost share payment for practices that increase carbon sequestration and increase forest resiliency as identified by the NIACS interactive tool
- Practices that were determined eligible by the Delaware Forest Service are tree planting projects, prescribed fire practices, and invasive species removal/control
- This is a new program created with money from the Inflation Reduction Act (IRA)

State Cost Share Program

- This cost share program is for traditional plantation style management practices including loblolly pine planting, woody brush control, and pre commercial thinning

NRCS-EQIP

This program funds a wide variety of timber, wildlife, and water quality protection practices

The contract rate is determined up front, and the landowner can choose to spend as little or even more than the contract price.

Applications are due at the end of the year and contracts are ratified in June. This can cause some delay in implementing practices as work can not begin before contract ratification

NRCS-CSP

- This program is for a variety of enhancements and bundles that a landowner can choose to implement. Most of these practices are related to carbon and wildlife habitat.
- There is a minimum per acre payment for this program, with a limited cost share program similar to EQIP for each enhancement installed.

NRCS-CREP



CREP is a long-term payment program with a minimum of 10-year commitment (some practices require 15) with an annual payment to the landowner



Practices can include hardwood tree planting, riparian buffer planting, filter strips and different types of native grasses to benefit wildlife.

Questions?

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