

A photograph of a dense forest with tall trees and a blue sky with light clouds. A dark, semi-transparent L-shaped frame is overlaid on the image, with the top horizontal bar on the left and the vertical bar on the right.

# FORESTS AND WATER

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WHAT DOES A  
COUNTY  
FORESTER DO  
(IN VERMONT)?





# **USE VALUE APPRAISAL PROGRAM**

**“UVA”  
“CURRENT USE”**





# **SERVICE FORESTRY**





# TOWN FORESTS

**“COMMUNITY FORESTS,”  
“MUNICIPAL FORESTS”**





# EDUCATION AND OUTREACH



3,439 acres of nonforest  
revert back to forest annually\*



12,649 acres of forest land  
convert annually\* to nonforest

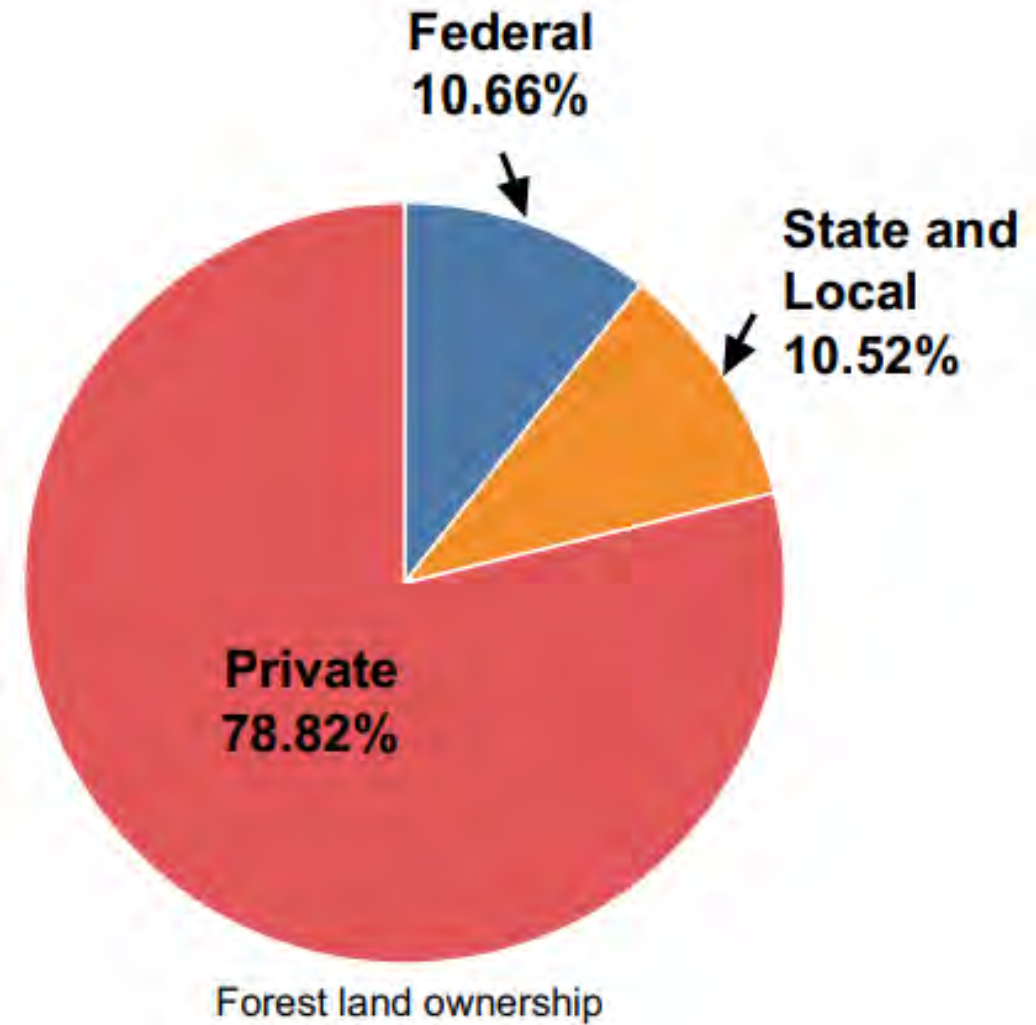


42,914 acres of forest land  
are treated by cutting  
(harvest, thinning, etc.) annually



Vermont has an estimated **4,522,888** acres of forest land.

\* Percent forest is forest area/total area. Percent forest with water removed from total area is 76%.







## What Do Most Foresters Do?

- **Consulting Foresters** – Work for private landowners on private land;
- **County Foresters** – Work for the State, administering UVA, and largely working on private land;
- **State Lands Foresters** – Work for the State on State Forests.





# **FORESTS AND WATER**





# **LIVING TREES**





# **WATER AND CARBON**

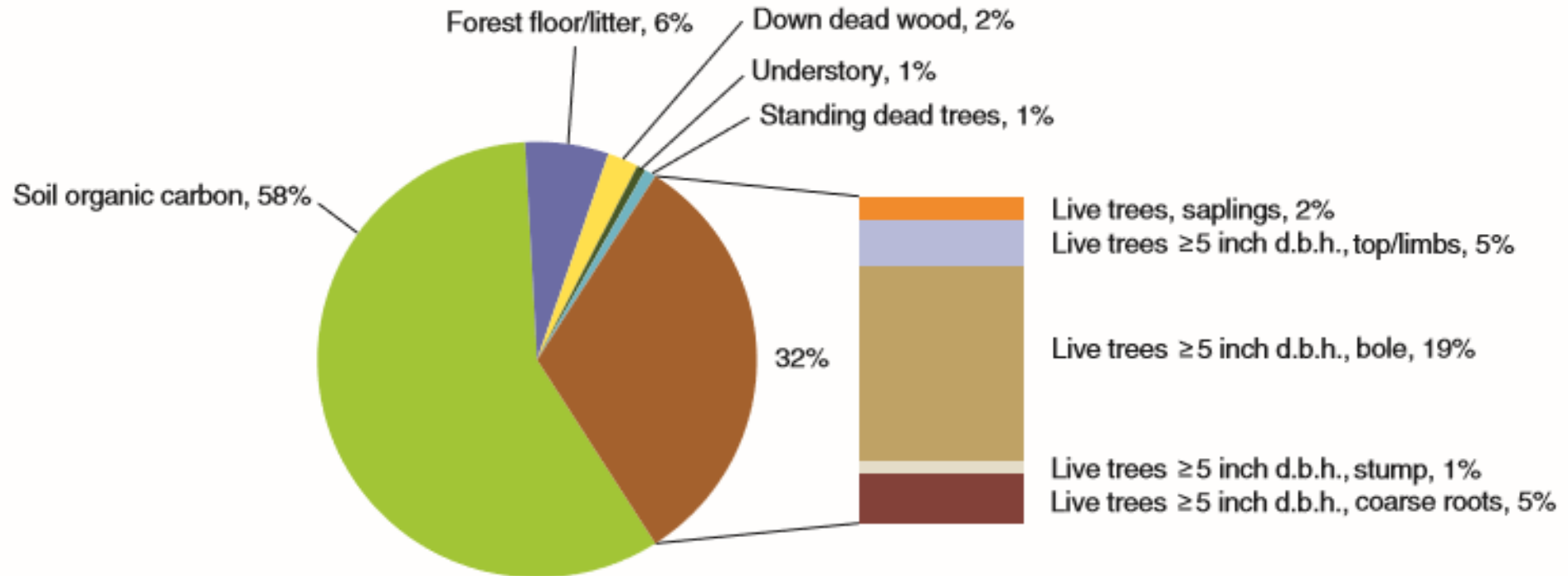


A photograph of a forest floor. A large, thick log lies horizontally across the middle of the frame, heavily covered in bright green moss. Several smaller, thinner logs and branches are scattered around it, also showing signs of moss growth. The ground is a dense carpet of green moss, with various ferns and small leafy plants growing through it. The background is filled with more trees and branches, creating a sense of a deep, lush forest. The lighting is soft and diffused, typical of a forest interior.

WHAT IS CARBON?



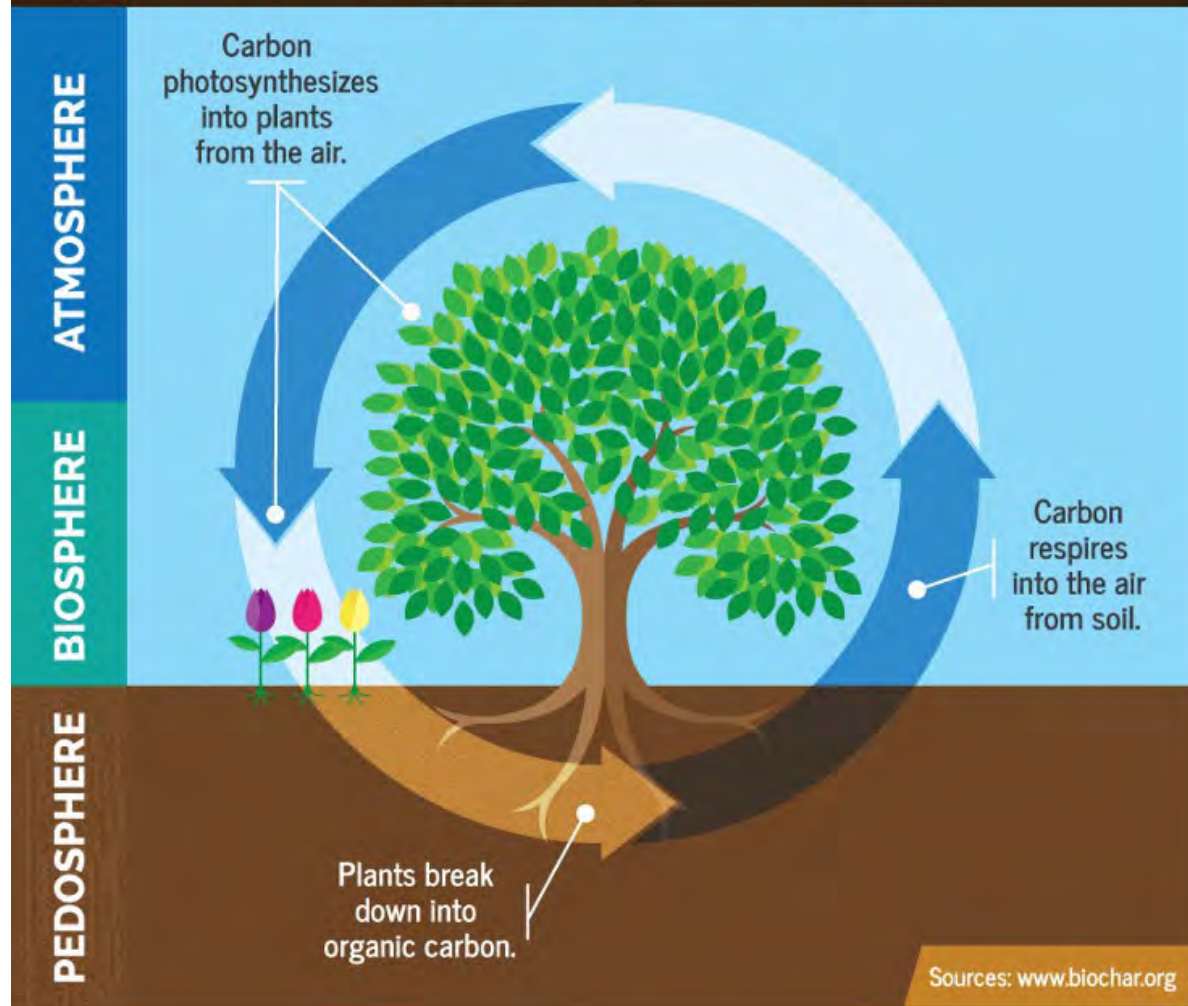
***Only ~33% of forest carbon in VT is in living trees!  
(only ~ 28% in above-ground living trees)***



**Figure 24.**—Carbon stocks on forest land by forest ecosystem component, Vermont, 2017.



# THE CARBON CYCLE







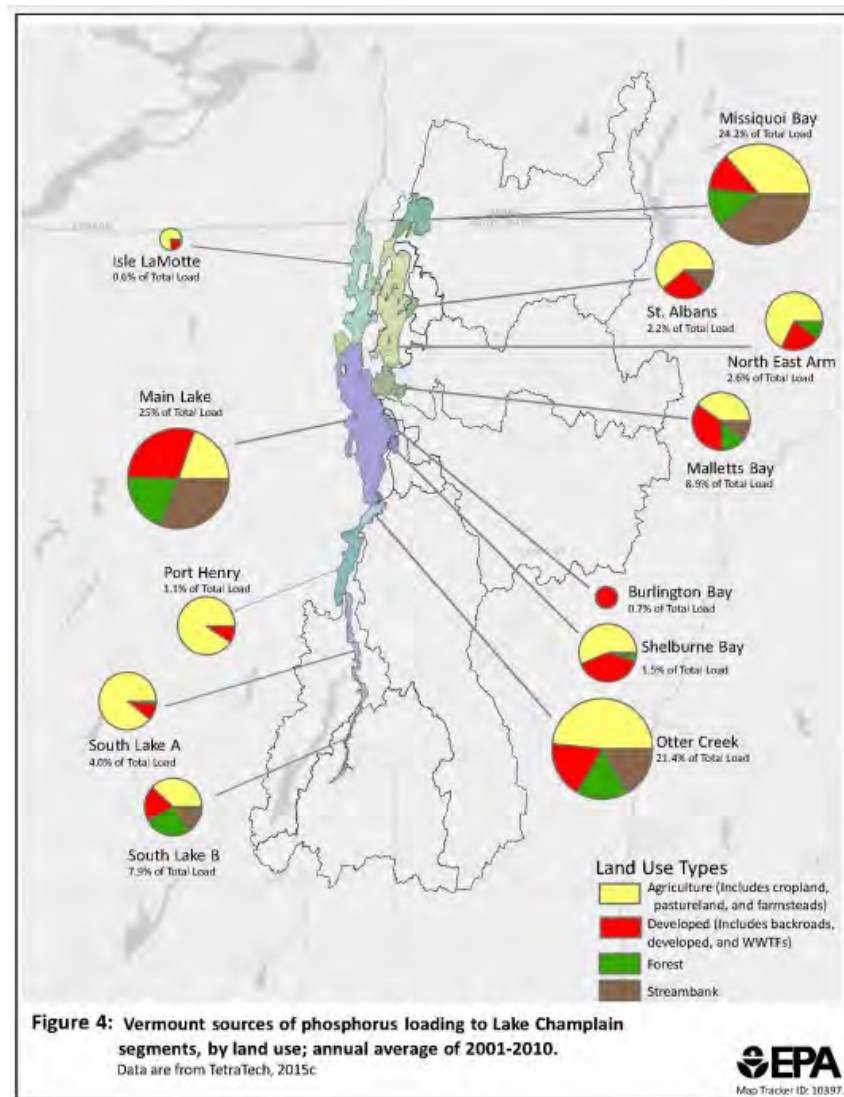




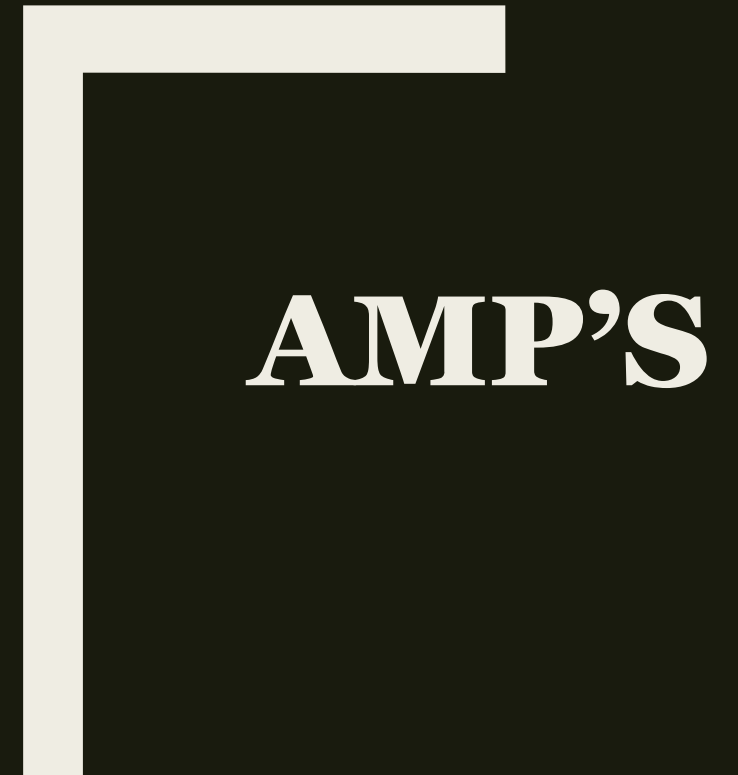
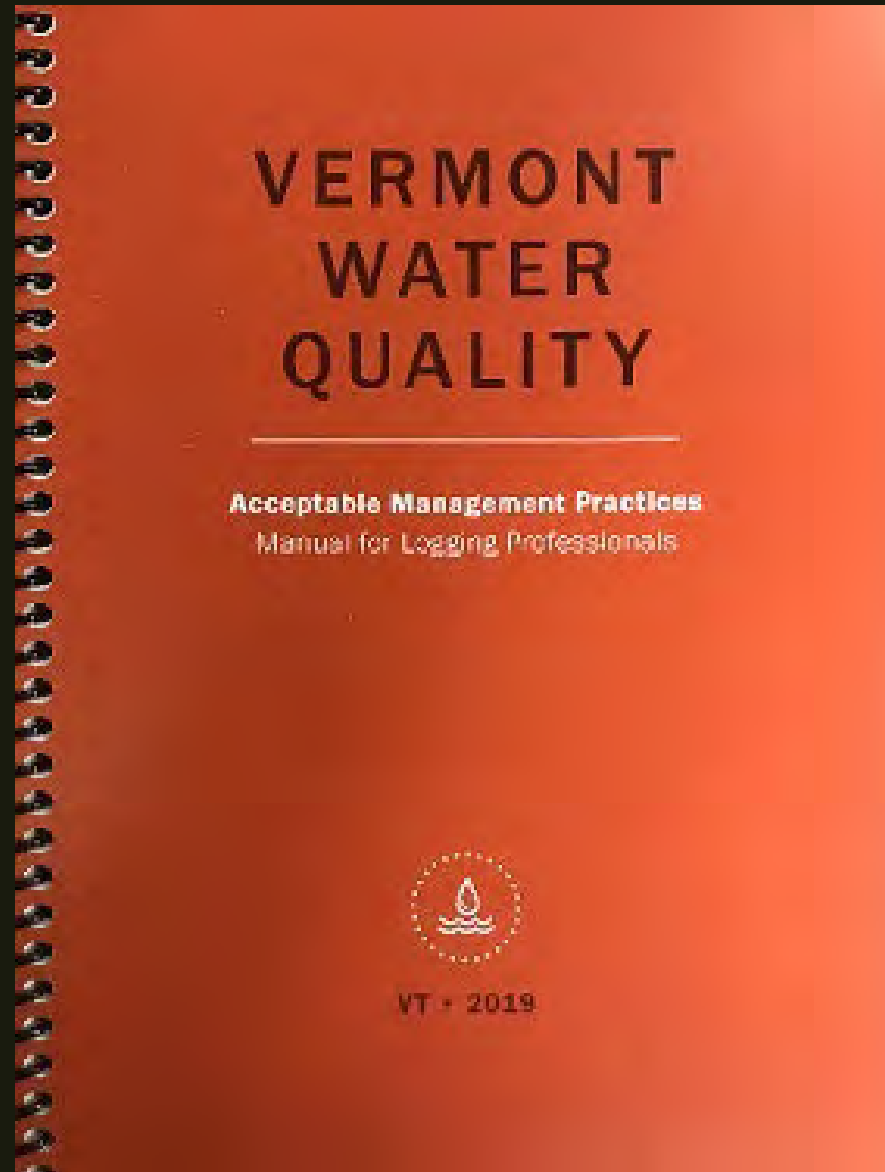
RESILIENT  
FORESTS,  
RESILIENT  
CARBON,  
RESILIENT  
WATER

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# Forest Management Regulations

- Acceptable Management Practices (AMP's);
- Heavy Cutting Law;
- Rules/Restrictions of Current Use/UVA (for enrolled parcels).

*Municipalities may not regulate forest management – this is done by the State.*





# **LOGGING VS. FOREST MANAGEMENT**





# **ECOLOGICAL FORESTRY**

**Manage forests like  
they manage  
themselves**





# Ecological Forestry

- Creating simulated natural disturbances using logging as a tool -- manage in ways that mimic natural disturbances and natural processes – leave retention and dead wood in gaps, for instance
- Create spatial heterogeneity – different shapes and sizes of openings, sizes and ages of trees, different light levels throughout the forest ;
- Leave lots of dead wood behind – don't cut up tree tops or branches at all;
- Retain some big, **old “legacy” trees forever;**
- Create pockets of early successional habitat and other unique conditions with landscape-level importance.



# Forest Management to Improve/Protect Water Quality

- Adding dead wood to the forest floor;
- Retaining **Legacy Trees** (which will someday be dead wood on the forest floor);
- Promote structural diversity/species diversity – forest resilience;
- Address forest health threats that impact forest resilience and long term health – non-native invasive plants, pests and pathogens, deer browse, etc.





## **RESILIENT INFRASTRUCTURE**



A young pine tree with a dense, starburst-like arrangement of green needles is growing out of a weathered, horizontal log. The log is surrounded by a forest floor covered in brown, dry leaves and twigs. The scene is brightly lit, casting shadows on the ground.

**MULTI-SOLVING**



A photograph of a forest floor covered in green moss. Several large, shelf-like mushrooms with yellowish-orange tops and white undersides are growing on the moss. The background is filled with various green ferns and leafy plants. The text "LINKTR.EE/CHITTENDENCOUNTYFORESTER" is overlaid in white, serif font across the center of the image.

[LINKTR.EE/CHITTENDENCOUNTYFORESTER](https://linktr.ee/chittendencountyforester)