

H.126 and Vermont Conservation Design

House Committee on Environment and Energy

February 21, 2023

Eric Sorenson, ecologist



Vermont Biophysical Regions

- Climate
- Geology
- Topography
- Soils
- Natural communities
- Human history



Girton, 1998

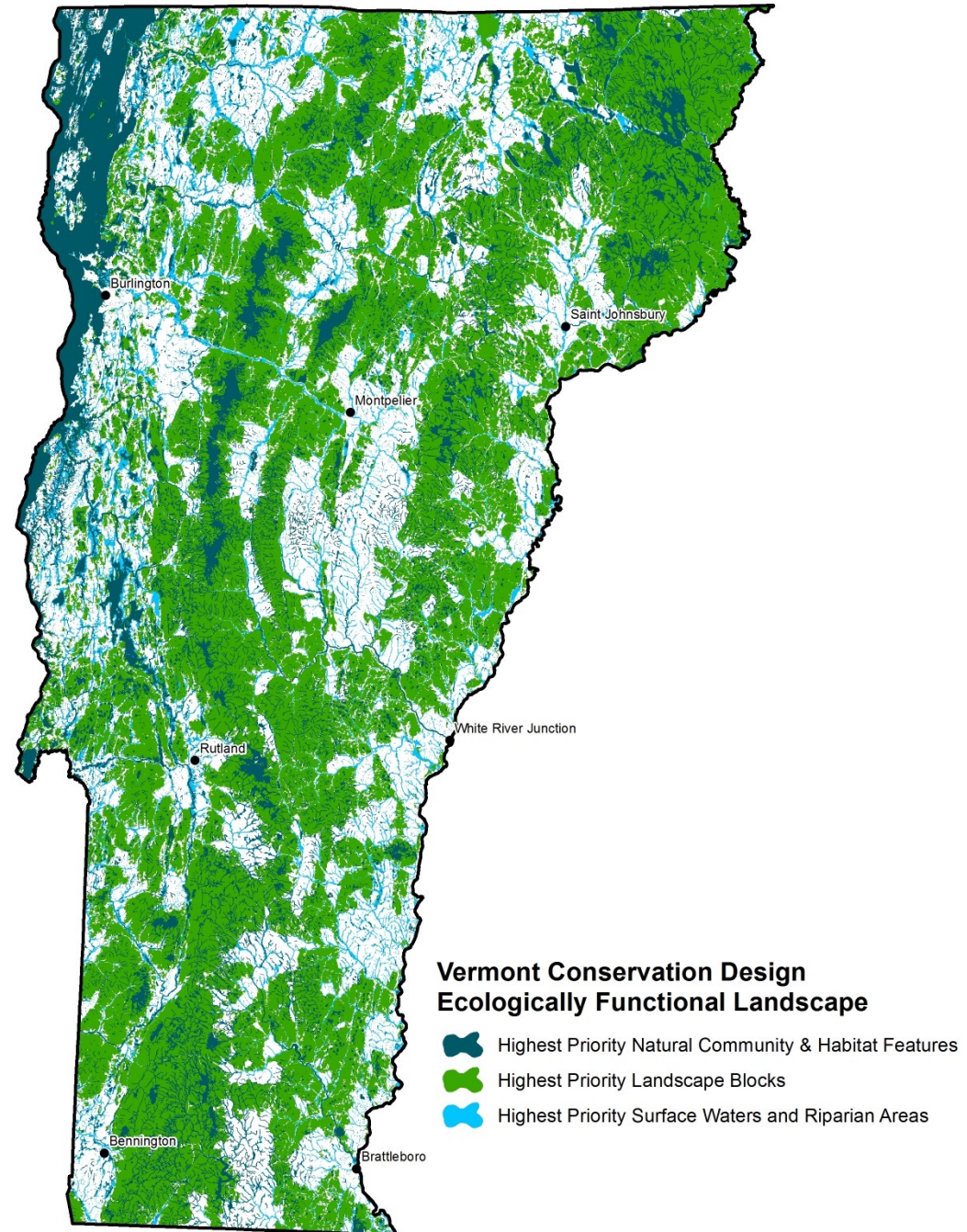
Thompson and Ferree, 2008

Vermont Conservation Design

Maintains an intact, connected and diverse natural landscape

Conserves species and natural communities

Allows nature to adapt to a changing climate



Conservation Design at Three Scales

Landscapes



Interior Forest Blocks
Connectivity Blocks
Surface Waters and Riparian Areas
Riparian Areas for Connectivity
Physical Landscapes
Wildlife Road Crossings

Natural Communities



Natural Communities
Young and Old Forests
Aquatic Habitats
Wetlands
Grasslands/Shrublands
Underground Habitats

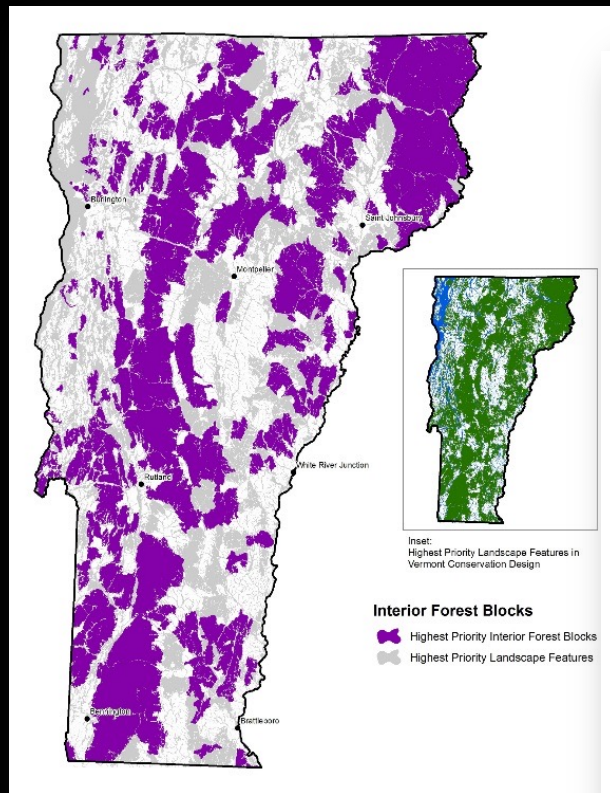
Species



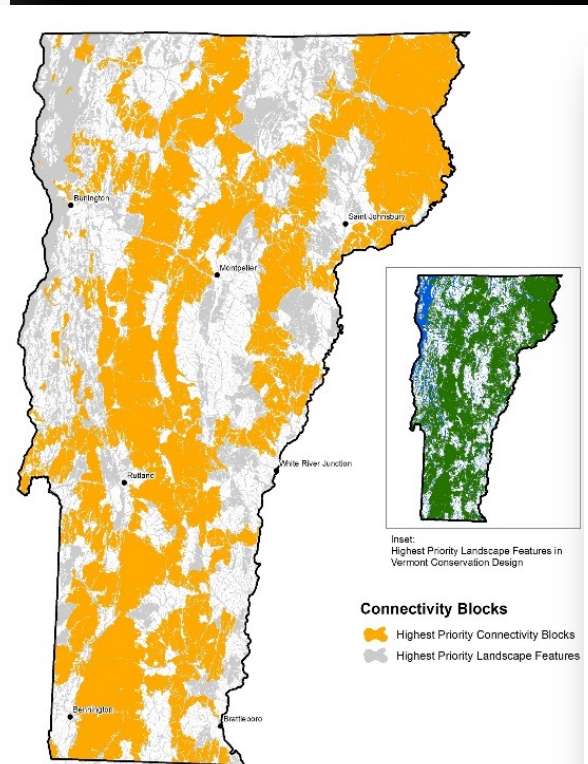
Species with very specific biological needs that will likely always require individual attention

Intact and Connected Forest Blocks, Surface Waters, and Riparian Areas

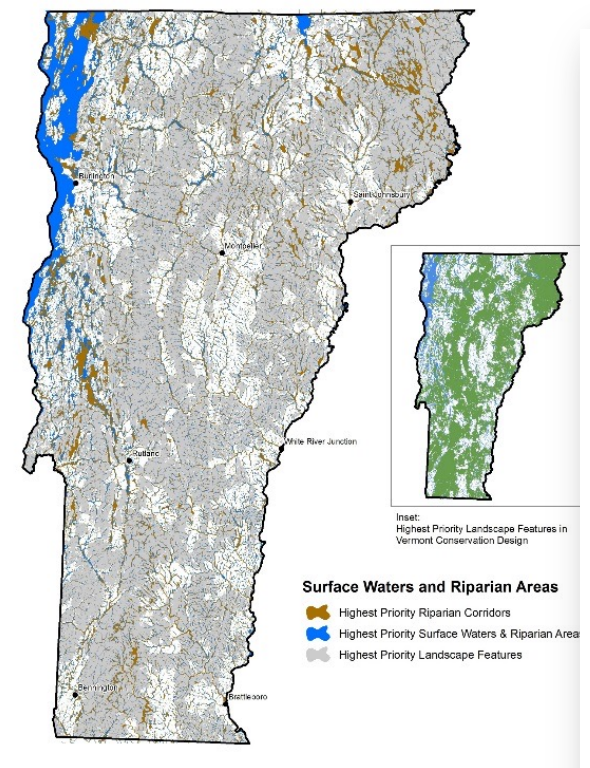
Interior Forest Blocks



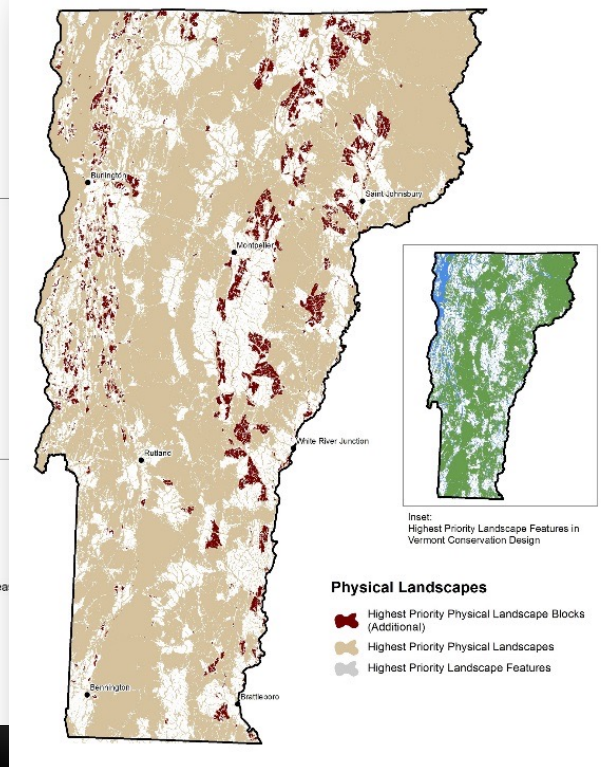
Connectivity Blocks



Surface Waters and Riparian Areas



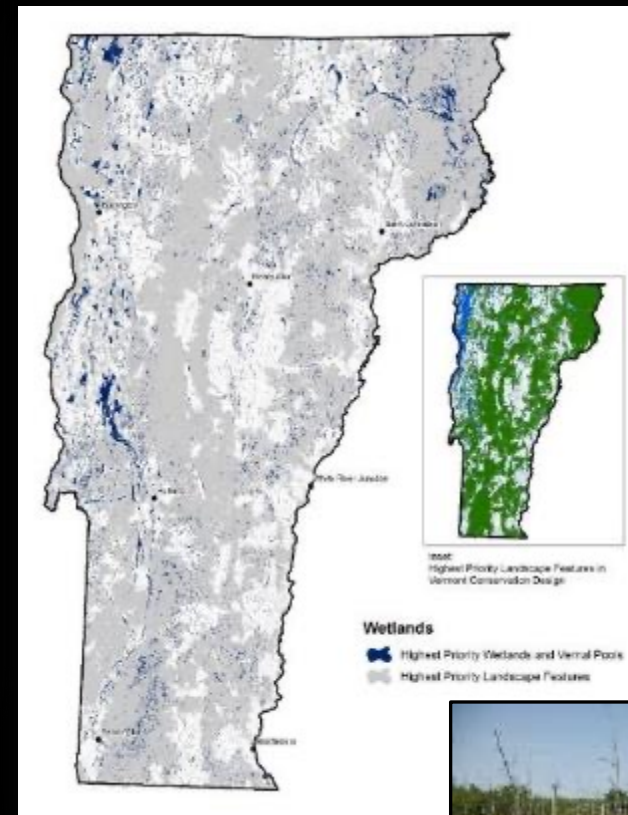
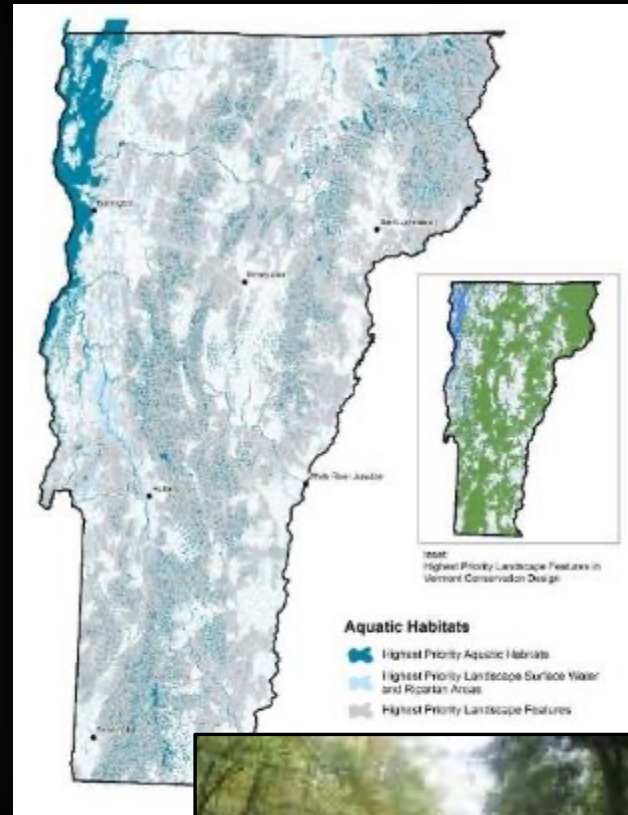
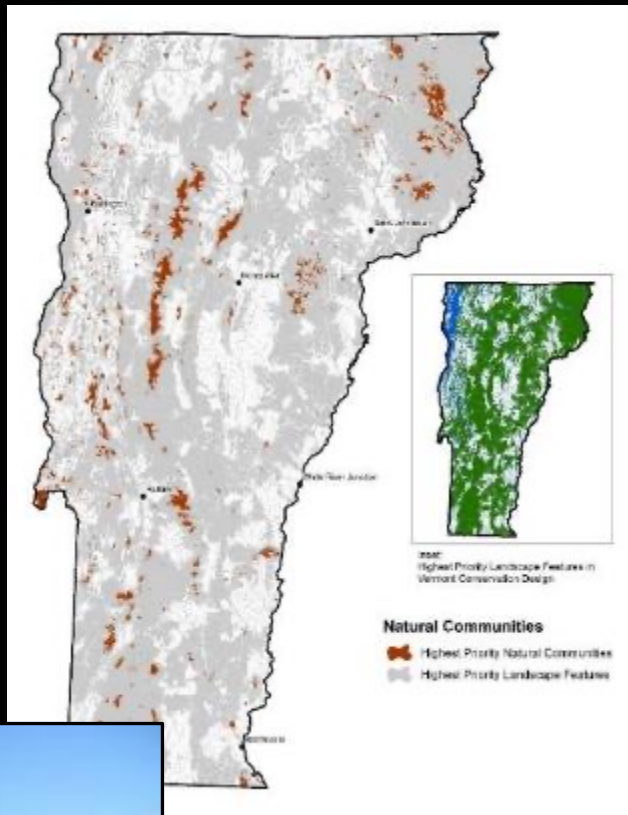
Physical Landscape Diversity



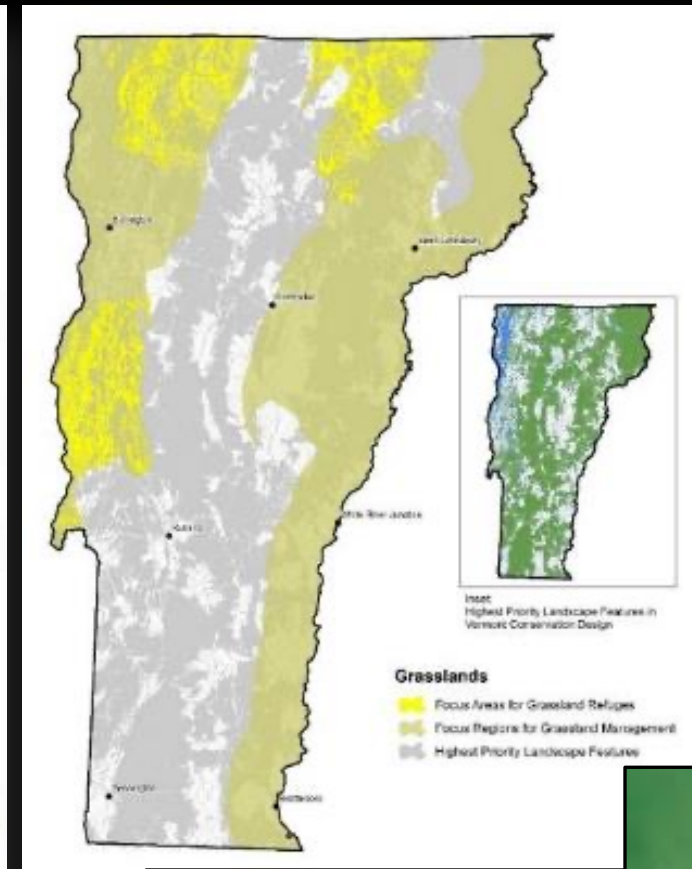
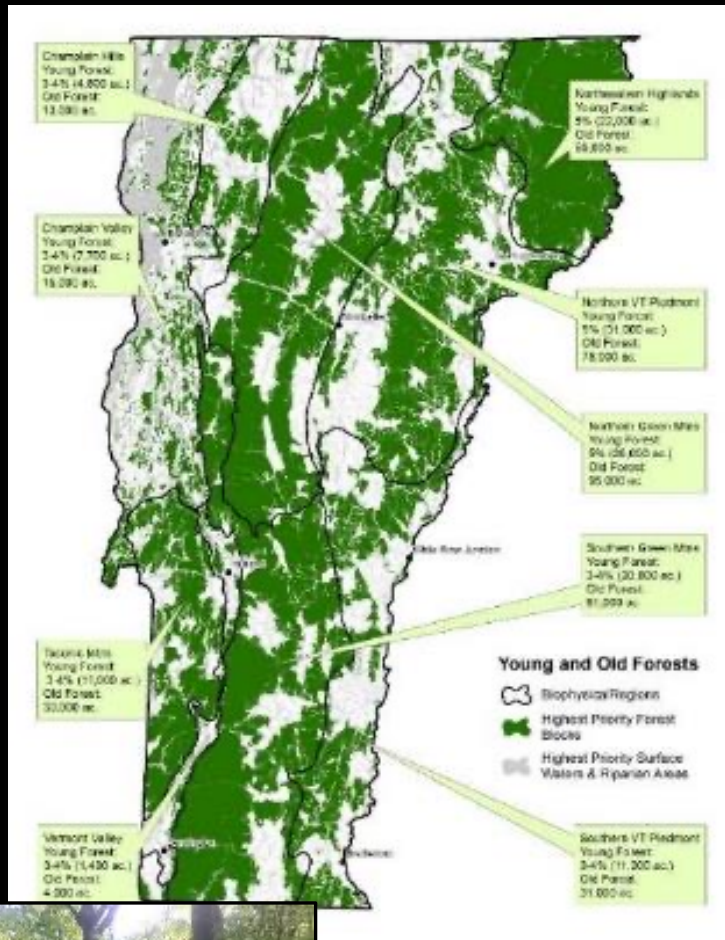
Wildlife Road Crossings

Maintain the specific functions of each element

Terrestrial Natural Communities, Aquatic Habitats, Wetlands, & Caves



Young and Old Forests, Shrublands, Grasslands



X=Feature or use is supported by this type of conservation/management
X=Feature or use may be supported by this type of conservation/management
X=Feature requires permanent, non-conversion conservation
 Blank=Feature is not supported by this type of conservation/management

**DRAFT FOR
DISCUSSION
ONLY**

	Ecological Reserve	Biodiversity Conservation Area	Natural Resources Management Areas	Conservation Easements – passive management	State and Federal Lands	Conservation Easements – farm & forest management	Use Value Appraisal	Rules and Regulations	Private Land Stewardship
Interior Forest Blocks	X	X	X	X	X	X	X		X
Connectivity Blocks	XX	XX	XX	XX	X	X	X		X
Surface Waters and Riparian Areas	XX	XX	XX	XX	X	X	X	X	X
Physical Landscape Blocks	X	X	X	X	X	X	X		X
Wildlife Road Crossings	XX	XX	XX	XX	X	X	X		X
Natural Communities	X	X	X	X	X	X	X		X
Young Forests	X	X	X	X	X	X	X		X
Old Forests	X	X	X	X	XXX				
Aquatic Habitats	X	X	X	X	X	X	X	X	X
Wetlands	X	X	X	X	X	X	X	X	X
Grasslands					X	X	X		X
Caves	X	X	X	X	X	X	X		X
Forest Products			X		X	X	X		X
Farm Products					X	X	X		X
Public Access & Recreation	X	X	XX	X	X	X	X		X

	Ecological Reserve	Biodiversity Conservation Area	Natural Resources Management Areas	Conservation Easements – passive management	State and Federal Lands	Conservation Easements – farm & forest management	Use Value Appraisal	Rules and Regulations	Private Land Stewardship
Interior Forest Blocks	X	X	X	X	X	X	X		X
Connectivity Blocks	XX	XX	XX	XX	X	X	X		X
Surface Waters and Riparian Areas	XX	XX	XX	XX	X	X	X	X	X
Physical Landscape Blocks	X	X	X	X	X	X	X		X
Wildlife Road Crossings	XX	XX	XX	XX	X	X	X		X
Natural Communities	X	X	X	X	X	X	X		X
Young Forests	X	X	X	X	X	X	X		X
Old Forests	X	X	X	X	XXX				
Aquatic Habitats	X	X	X	X	X	X	X	X	X
Wetlands	X	X	X	X	X	X	X	X	X
Grasslands					X	X	X		X
Caves	X	X	X	X	X	X	X		X
Forest Products			X		X	X	X		X
Farm Products					X	X	X		X
Public Access & Recreation	X	X	XX	X	X	X	X		X

Old Forests

- Occupied 60-70 percent of regional landscape prior to European settlement
- Old Forests:
 - Require continuity of natural ecological processes
 - Have some old trees
 - Have complex stand structure
 - Have natural canopy gaps
 - Have abundant standing and downed dead wood
 - Have diverse and complex soils and soil flora, fauna, fungi...
- Native species of Vermont have evolved in old forests.
- Complex and secure habitat for many species of plants and animals
- Resilience to climate change
- Carbon storage and sequestration
- Benchmark for understanding nature
- Numerous benefits
- Wild nature for people



General comments

- **Conservation in all its forms only occurs with willing and interested landowners. Landowner continued good stewardship and conservation is critical to maintaining an ecologically functional landscape.**
- **Vermont has had excellent conservation success through Use Value Appraisal, farm & forest conservation easements, and state lands acquisitions.**
- **Most of the conservation targets for Vermont Conservation Design features can be met through sustainable forest management, at least at the present time. Future pressures for land development may change this.**
- **Old forests and natural community conservation targets require permanence to allow for continuity of ecological processes. These conservation targets represent a relatively small percentage of the Vermont landscape. Only a couple of land trusts in Vermont focus on this work.**

Suggestions for H.126

- **Maintaining the focus on permanently conserved, non-conversion types of conservation is very important. This type of conservation is essential for some features and is underrepresented in Vermont.**
- **The conservation plan called for in H.126 has an appropriate focus on permanently conserved, non-conversion types of conservation. I am concerned about the proposed expansion of the conservation plan to include many more features.**
- **All Vermont waters are protected under the public trust doctrine. I suggest that the incredible importance of Vermont waters be recognized in H.126, but that water conservation not be included in the interim 30 by 30 goal.**

Thank you...

