IMPLEMENTING VERMONT CONSERVATION DESIGN

UPDATE ON HOW THE COMMUNITY RESILIENCE AND BIODIVERSITY PROTECTION ACT IS HELPING US ACHIEVE AN ECOLOGICALLY FUNCTIONAL FUTURE.

Jens Hilke
Gannon Osborn
Bob Zaino
Trey Martin

VERMONT
AGENCY OF NATURAL RESOURCES

Vermont Housing & Conservation Board

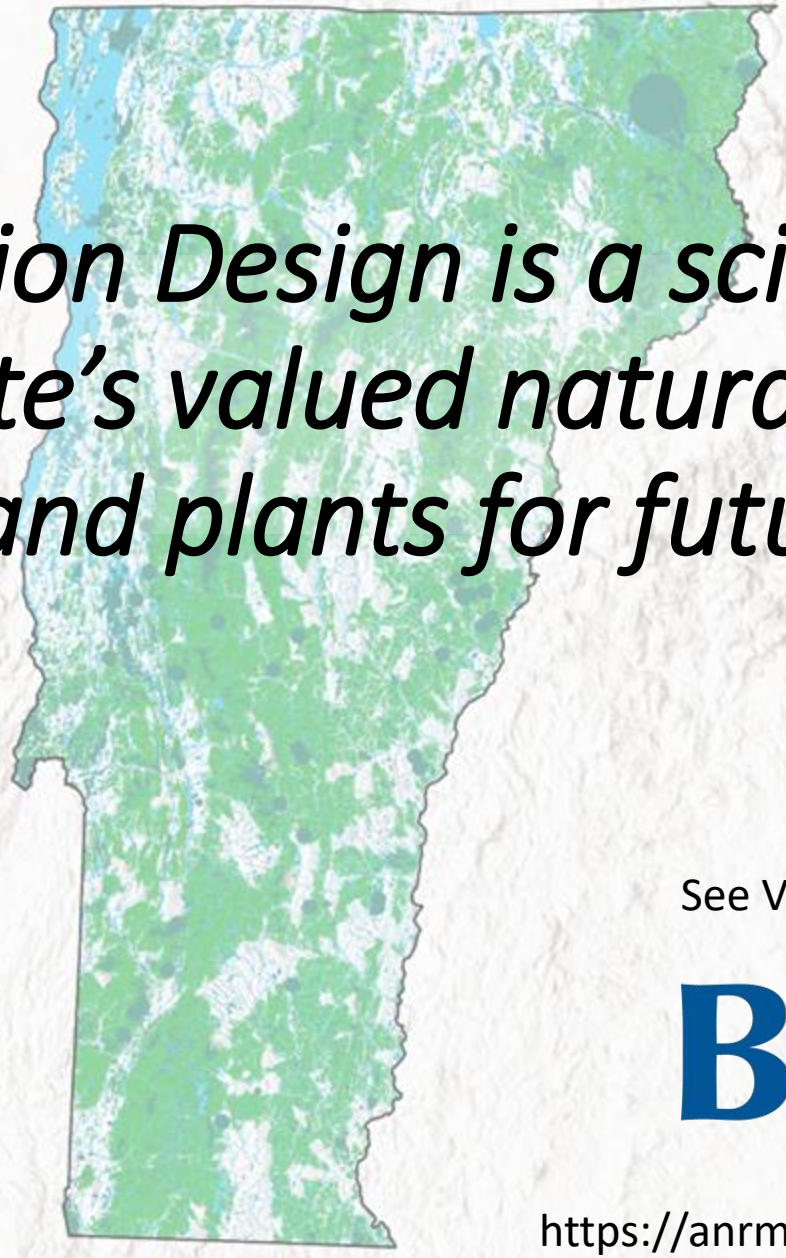
PRESENTATION AGENDA

Implementing Vermont Conservation Design

- Vermont Conservation Design (VCD) & How it's used in land use planning *(Jens Hilke)*
- Using VCD in land conservation *(Gannon Osborn)*
- How does VCD overlap with the ACT 59 Inventory and where does the Design point us? *(Bob Zaino)*
  - Putting the analysis to use in the future of Act 59 *(Trey Martin)*

VERMONT CONSERVATION DESIGN (VCD) & HOW IT'S USED IN LAND USE PLANNING

Jens Hilke, Conservation Planner



Vermont Conservation Design is a science-based vision to sustain the state's valued natural areas, forests, waters, wildlife, and plants for future generations

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VERMONT FISH & WILDLIFE

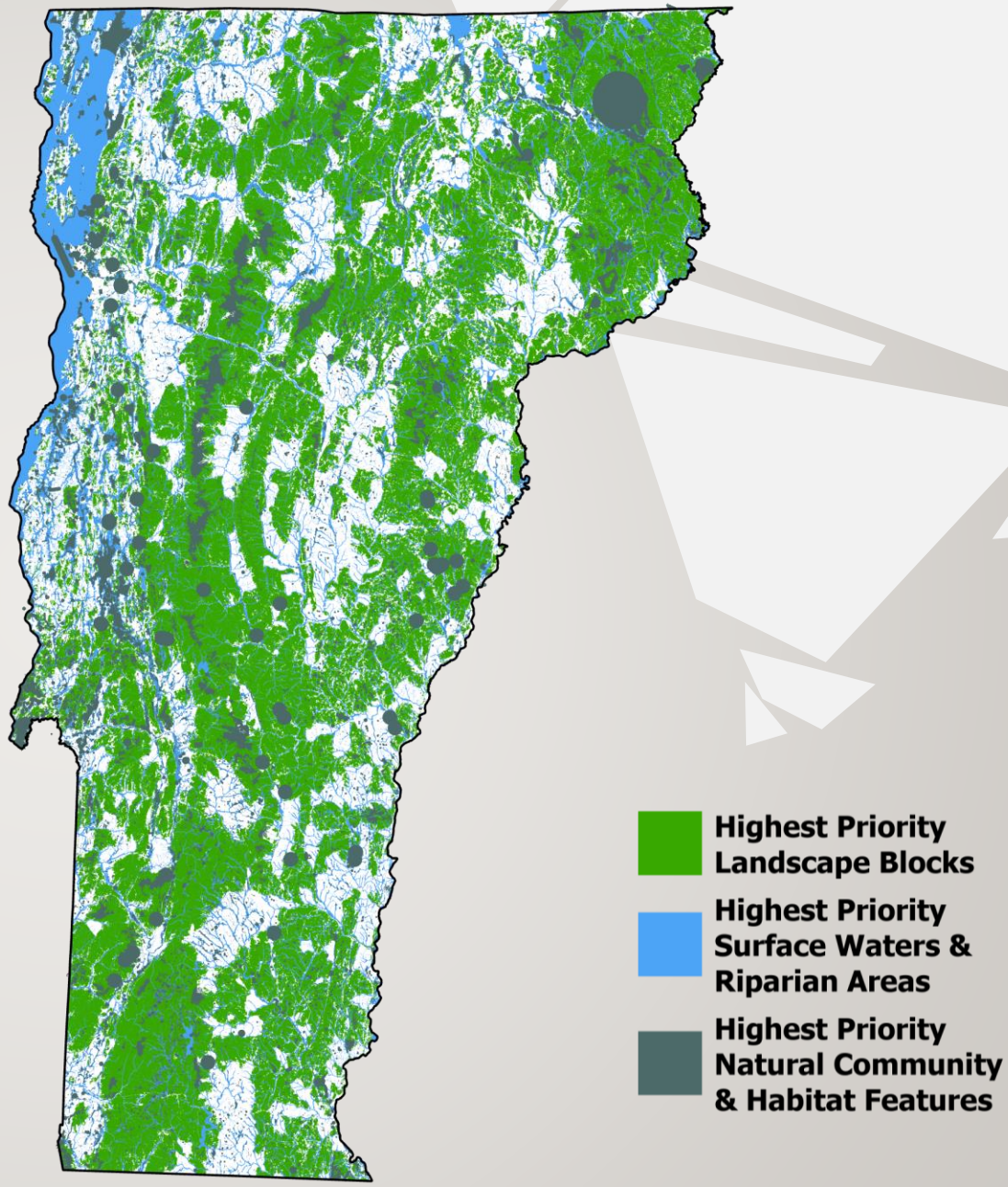
See VCD on

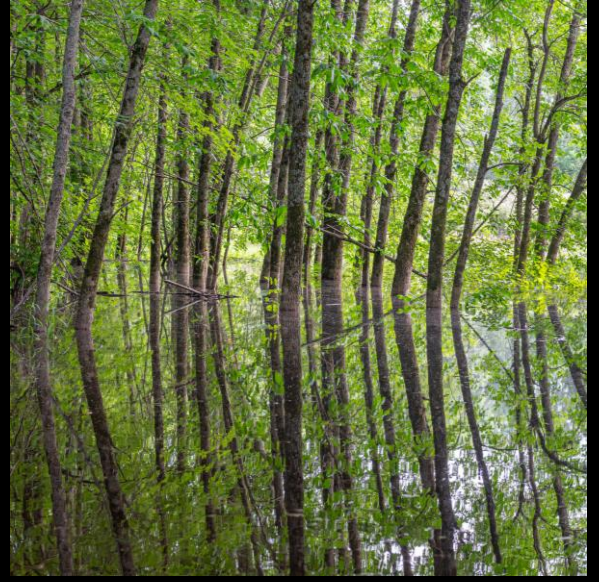
BioFinder™

https://anrmaps.vermont.gov/websites/BioFinder4/

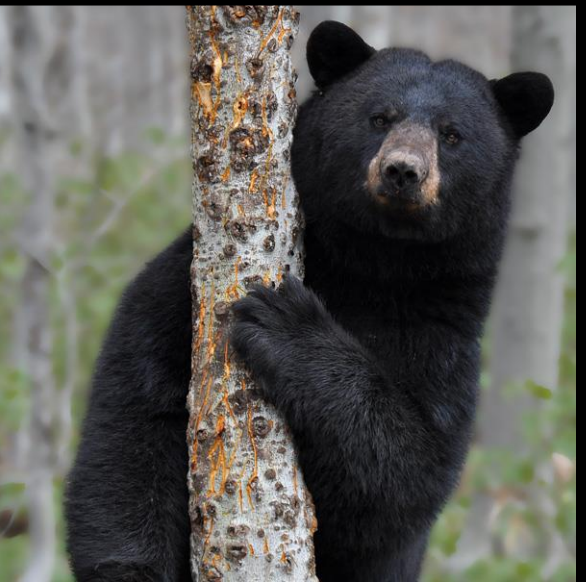
VERMONT CONSERVATION DESIGN

- IDENTIFIES THE ECOLOGICALLY MOST-IMPORTANT LANDS AND WATERS
- MAINTAINS NATURE AND THE BENEFITS IT PROVIDES,
- IS OUR CONSERVATION FRAMEWORK



Ecological Function is the degree to which an ecosystem can function under natural processes – allowing all its plants and animals to thrive, reproduce, migrate, and move in response to environmental change.

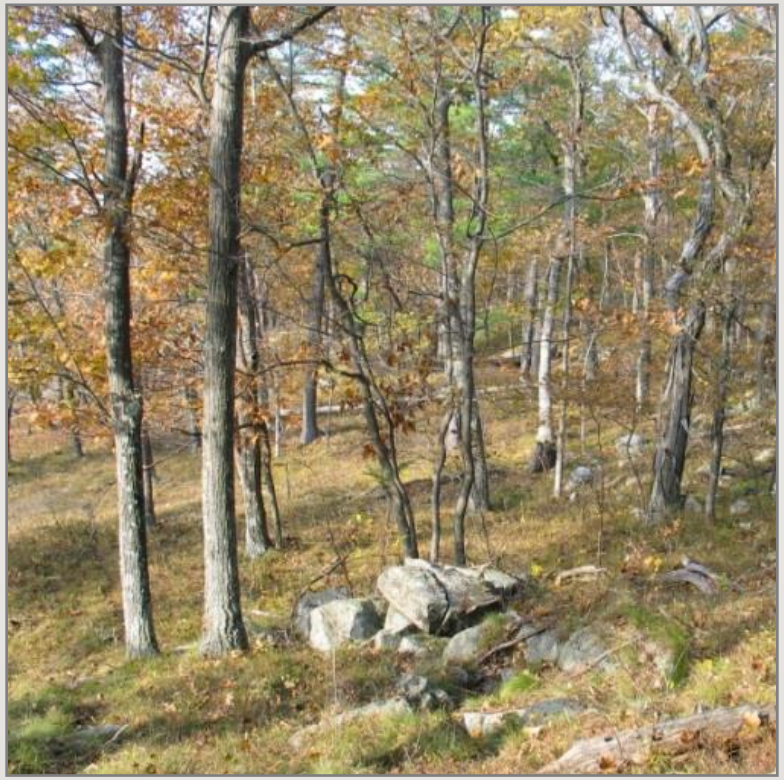



CONSERVATION DESIGN AT THREE SCALES

Landscapes

- Interior Forest Blocks
- Connectivity Blocks
- Geological Diversity Blocks
- Surface Waters and Riparian Areas
- Riparian Areas for Connectivity

Natural Communities



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

Species

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

STATEWIDE COORDINATION, LOCAL ACTION

VCD is a Statewide Prioritization that allows for the coordination of efforts between:

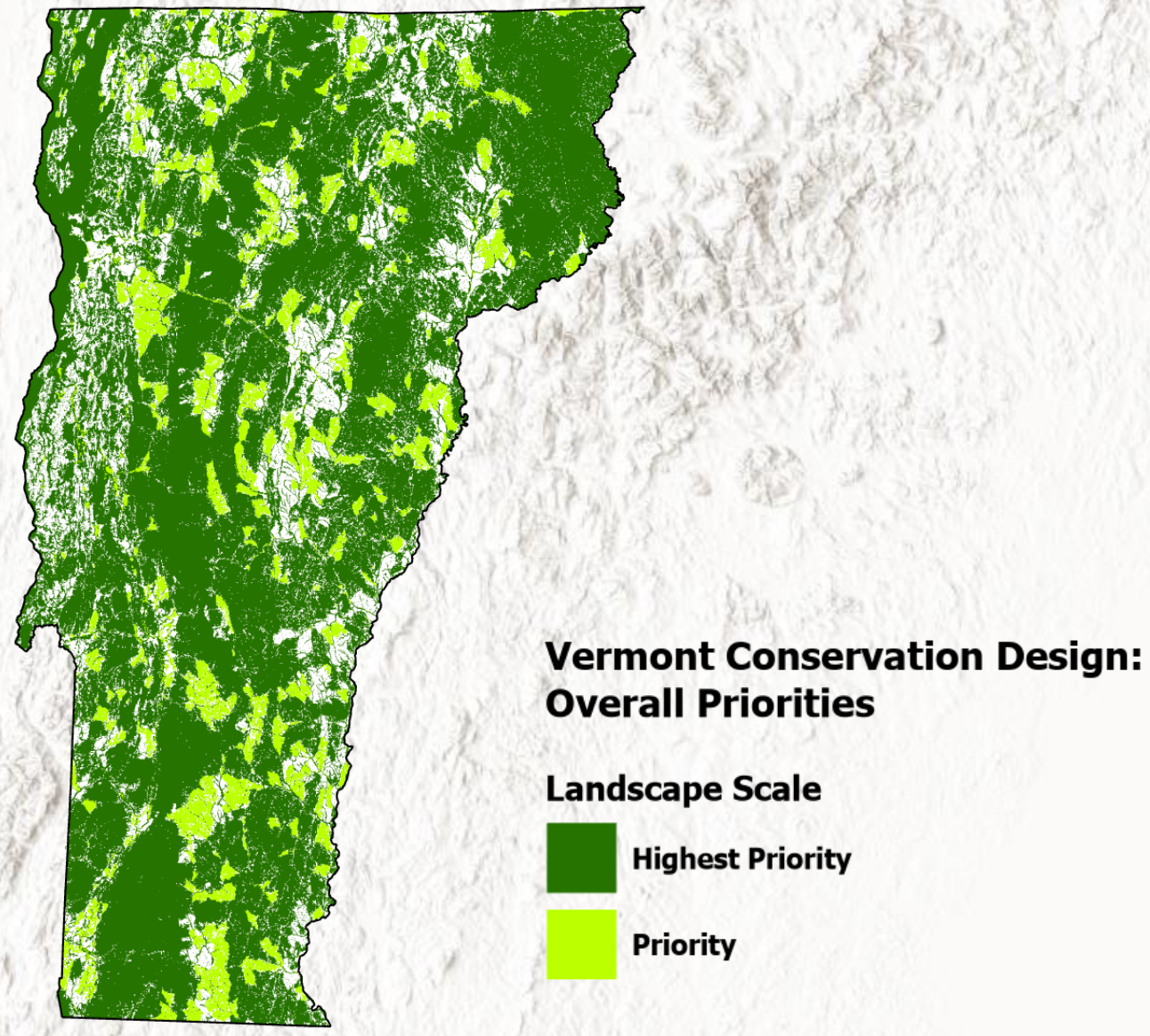
- State Government Agencies
- Land Trusts and Conservation Non-Profits
- Municipalities
- Volunteer and Local Action Groups
- Individual Landowners

APPLYING VCD AT THE TOWN LEVEL

- 1. Understand the larger context:
  - VCD Overall Priorities: Landscape Level
- 2. Understand the landscape-level component patterns:
  - Interior Forest Blocks, Connectivity Blocks, etc.
- 3. Identify the smaller-scale elements mapped in your area:
  - VCD Community & Species Level Components (recognize limitations)
  - Draw upon local knowledge & inventory
- 4. Take local action:
  - **Preserve** landscape-level patterns
  - **Protect** significant community & species level components.

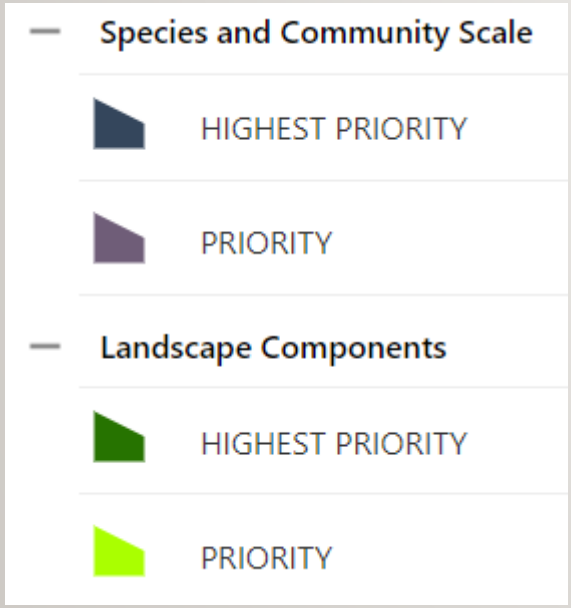
Vermont Conservation Design uses two levels of priority to rank its component ecological features across three scales of conservation

Components are combined to produce an overall statewide ecological prioritization



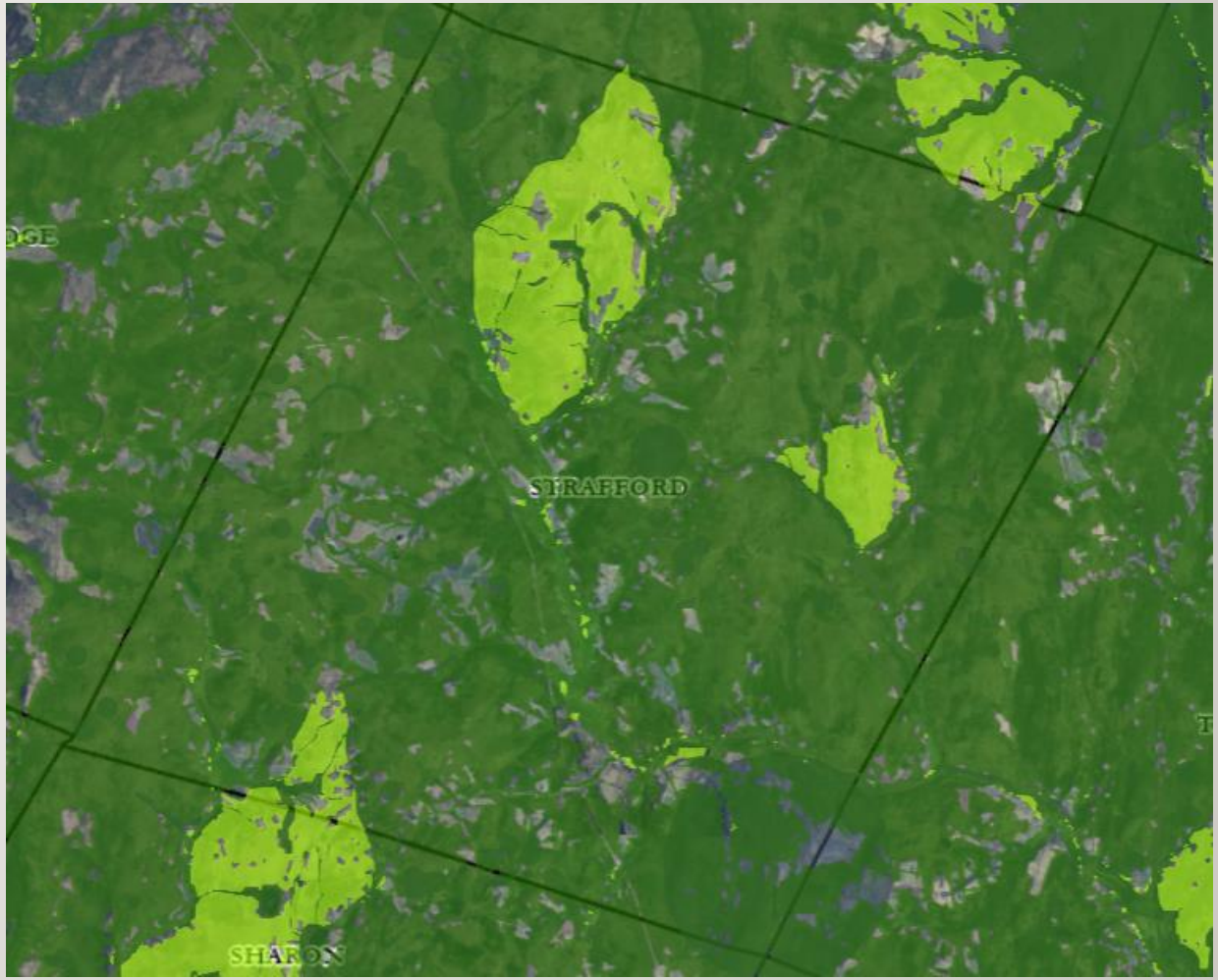
CASE STUDY: ADDISON

The VCD Overall Priorities layer helps us understand the larger context within which your town exists:



CONTRAST: STRAFFORD

How is this pattern of Overall Priorities different?



Healthy Forests, Healthy Economy

Healthy Community


QUESTIONS?

THE IMPLEMENTATION OF VCD THROUGH LAND CONSERVATION: WHAT HAVE WE ACHIEVED TO DATE?

Gannon Osborn, Land Conservation Program Manager

FORESTS, PARKS & RECREATION
VERMONT
AGENCY OF NATURAL RESOURCES

WHAT DO WE MEAN BY LAND CONSERVATION?

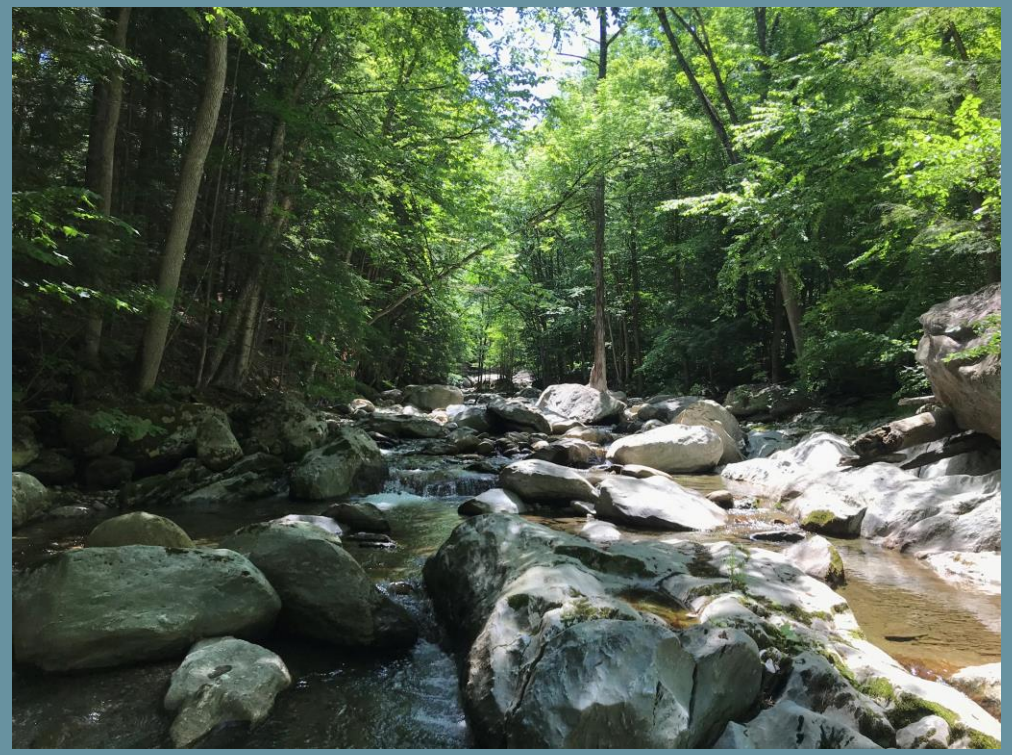
- Permanent protection through a qualified conservation tool.
- Ongoing management by a qualified conservation entity.
- Protecting identified conservation value(s).
- 10 V.S.A. Chapter 155

(6) "Conserved" means permanently protected and meeting the definition of ecological reserve area, biodiversity conservation area, or natural resource management area as defined in this section for purposes of meeting the 30 percent goal in subsection 2802(b) of this title. For purposes of meeting the 50 percent goal of subsection 2802(b) of this title, "conserved" primarily means permanently protected and meeting the definition of ecological reserve area, biodiversity conservation area, or natural resource management area as defined in this section, although other long-term land protection mechanisms and measures that achieve the goals of Vermont Conservation Design that are enforceable and accountable and that support an ecologically functional and connected landscape may be considered.

Definition of "conserved" from the Community Resilience and Biodiversity Protection Act

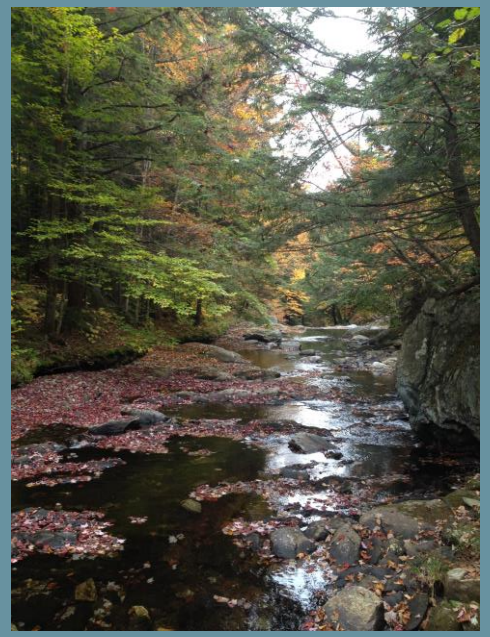
WHAT ARE LAND CONSERVATION TOOLS?

- Fee Simple
  - Full property interest / rights
  - Ownership and management by a qualified conservation entity



Ridley Brook Conservation Project, Fee simple addition to Camel's Hump State Park, Duxbury

- Conservation Easement
  - Less than fee simple interest held and enforced by a qualified conservation entity
  - Land remains in private ownership
  - Legal agreement to permanently limit the use of an area to protect conservation values



Worcester Woods I, Conservation Easement Acquisition, Worcester and Elmore

WHAT IS A QUALIFIED CONSERVATION ENTITY?

- Municipality of this State
- State agency
- Qualified organization
  - a non-profit organization "being principally engaged in the preservation of undeveloped land."

BURLINGTON VERMONT

Richmond VERMONT

FORESTS, PARKS & RECREATION VERMONT
AGENCY OF NATURAL RESOURCES

Vermont Land Trust

Upper Valley Land Trust

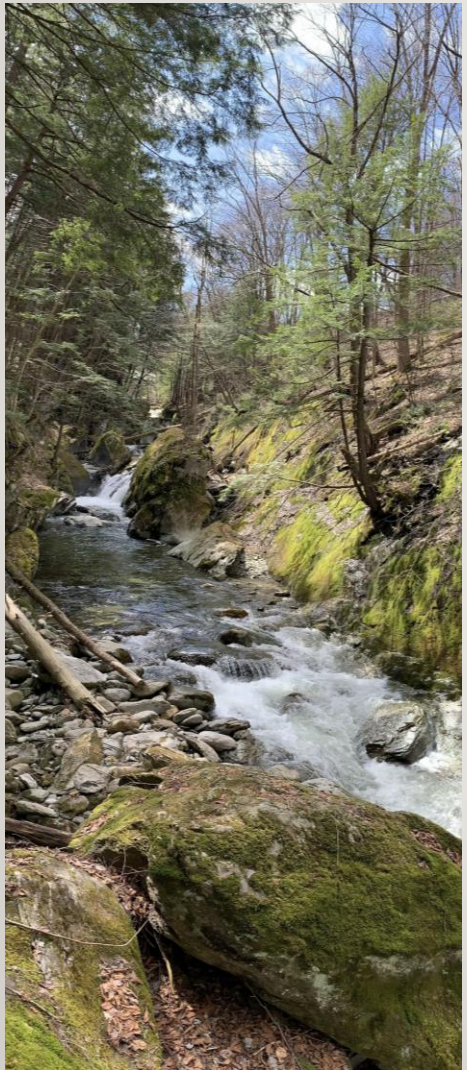
STOWE LAND TRUST

The Nature Conservancy

CONSERVATION VALUES

- Undeveloped Land

- Scenic Natural Resources



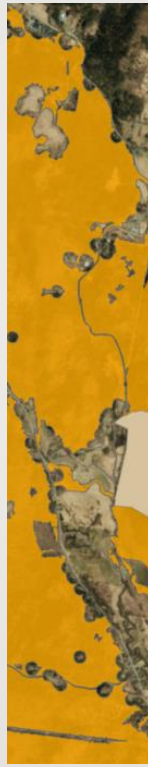
- Working Forestland

- Agricultural Land

- Recreation

HOW DO WE USE VCD IN LAND CONSERVATION?

- Land conservation can be both proactive and reactive
- Proactively identify areas of significance
- Reactively assess conservation opportunities
- Willing buyer, willing seller
- Justify and prioritize conservation projects
- Communicate conservation benefits and values
- Apply for funding
- Informs protections and management



State of Vermont
Agency of Natural Resources
Department of Forests, Parks and Recreation
Department of Fish & Wildlife

WORCESTER RANGE MANAGEMENT UNIT LONG-RANGE MANAGEMENT PLAN

LONG-RANGE MANAGEMENT PLAN

Elmore, Vermont
Middlesex, Vermont
Stowe, Vermont
Waterbury, Vermont
Worcester, Vermont

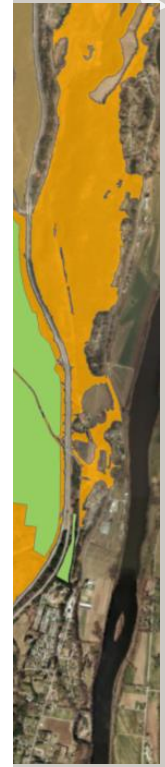
18,772 acres

Prepared by: Barre District Stewardship Team

Approved by: Danielle Fitzko — 9/26/2024
Danielle Fitzko, Commissioner — Date
Department of Forests, Parks & Recreation

Approved by: Christopher Herrick — 9/26/2024
Christopher Herrick, Commissioner — Date
Fish & Wildlife Department

Approved by: _____ — 9/26/2024
Julie Moore, Secretary — Date
Agency of Natural Resources



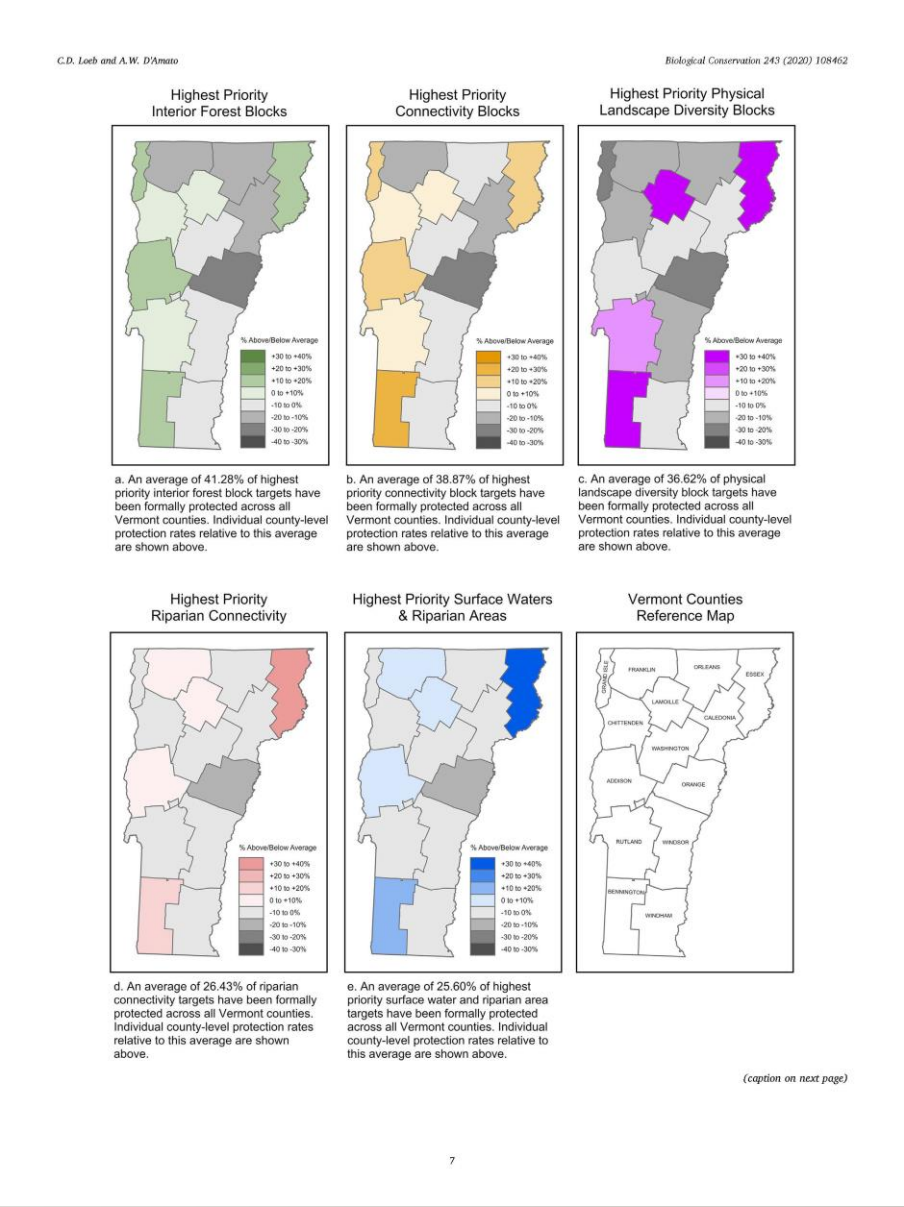
CASE STUDY: OKEMO WILDLIFE CORRIDOR CONSERVATION PROJECT

- Both proactive and reactive
- Identified as a priority parcel in the Okemo to Killington Wildlife Corridor
- Confirmed as a priority by VCD
- Used VCD to secure funding, communicate values, and inform protections and management

SO, HOW ARE WE DOING?

- 87% of conserved lands are also highest priority landscape-level targets in VCD
  - 28.9% nonprofits
  - 33.4% State
  - 34.4% Federal
- 33% of highest priority targets are protected
- High percentage of protection for interior forest blocks and connectivity blocks
- Lower percentage of protection for riparian and surface water areas
- VCD "attempting to rectify historical elevation bias."
- "the combined efforts of federal, state, and private nonprofits have made significant collective progress towards meeting large landscape conservation design targets via formally protected lands"

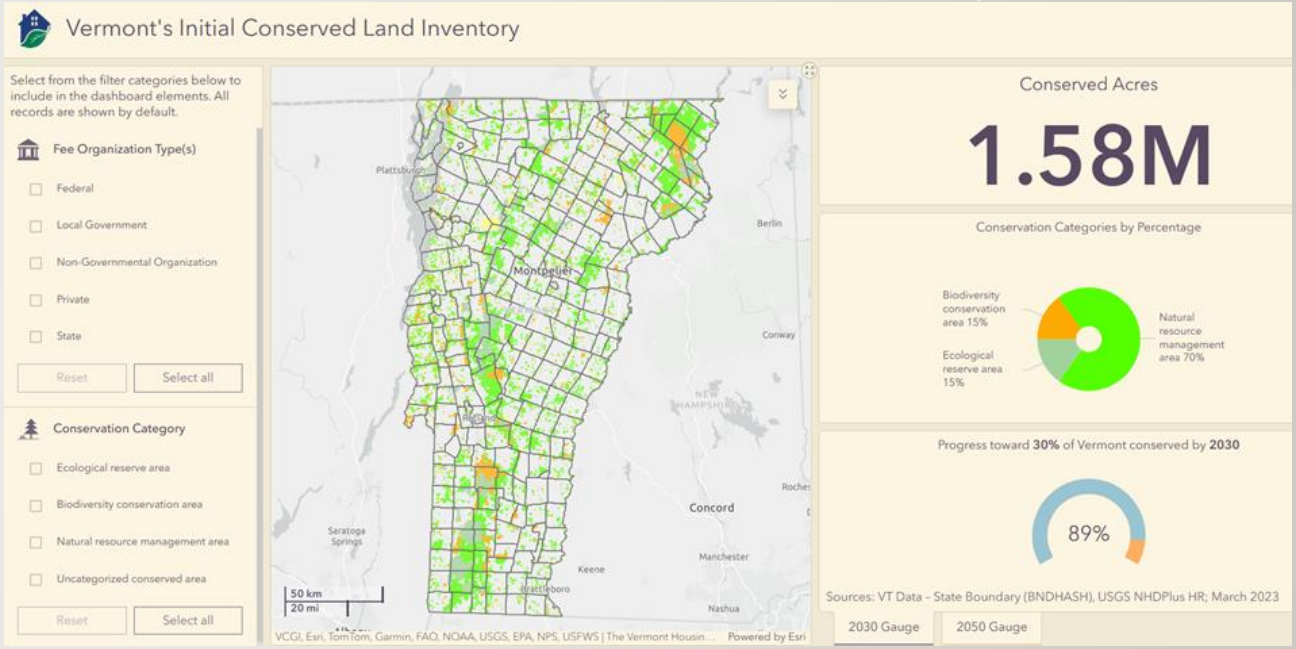
LOEB & D'AMATO (2020)



SO, HOW ARE WE DOING?

CONSERVED LAND INVENTORY (2024)

- 27% formally conserved
  - 4% protected as Ecological Reserve Areas
  - 4% protected as Biodiversity Conservation Areas
  - 19% protected as Natural Resource Management Areas
    - 16% of that is Forestland or Natural Cover
    - 3% of that is Agricultural, Open and Other Lands
- VHCB submitted full Inventory Report to legislature June 2024
  - Inventory Report



Conserved Land Inventory Dashboard

VCD AND THE CRBPA

- The CRBA calls for implementing the goals of Vermont Conservation Design
- Have made positive strides towards achieving this through past and current land conservation
- What is the next step to achieve the goals and vision of Act 59 and Vermont Conservation Design?

§ 2803. CONSERVED LAND INVENTORY

(a) On or before July 1, 2024, the Vermont Housing and Conservation Board, in consultation with the Secretary, shall create an inventory of Vermont's conserved land and conservation policies to serve as the basis of meeting the conservation goals of Vermont Conservation Design and to meet the goals established in section 2802 of this title. The inventory shall be submitted for review to the House Committees on Environment and Energy and on Agriculture, Food Resiliency, and Forestry and the Senate Committee on Natural Resources and Energy.

(5) The implementation methods that could be utilized for achieving the goals of this chapter using Vermont Conservation Design as a guide.

§ 2804. CONSERVATION PLAN

(a) On or before December 31, 2025, the Vermont Housing and Conservation Board, in consultation with the Secretary, shall develop a plan to implement the conservation goals of Vermont Conservation Design and to meet the vision and goals established in section 2802 of this title. The plan shall be submitted for review to the House Committees on Environment and Energy and on Agriculture, Food Resiliency, and Forestry and the Senate Committee on Natural Resources and Energy.

(2) the implementation methods for achieving the vision and goals of this chapter using Vermont Conservation Design as a guide;


QUESTIONS?

VERMONT CONSERVATION DESIGN & THE ACT 59 INVENTORY RESULTS

Robert Zaino, Ecologist

§ 2803. CONSERVED LAND INVENTORY

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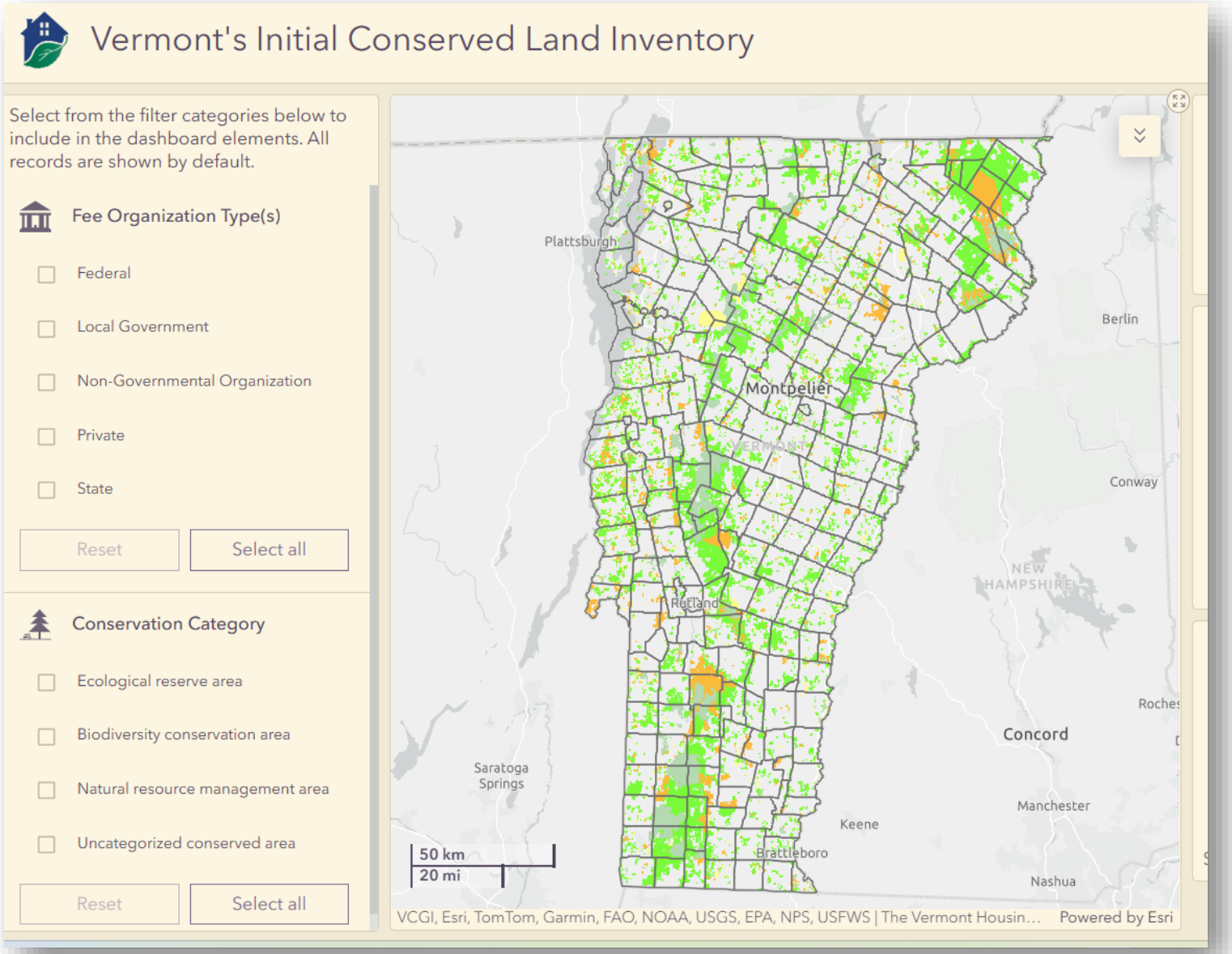
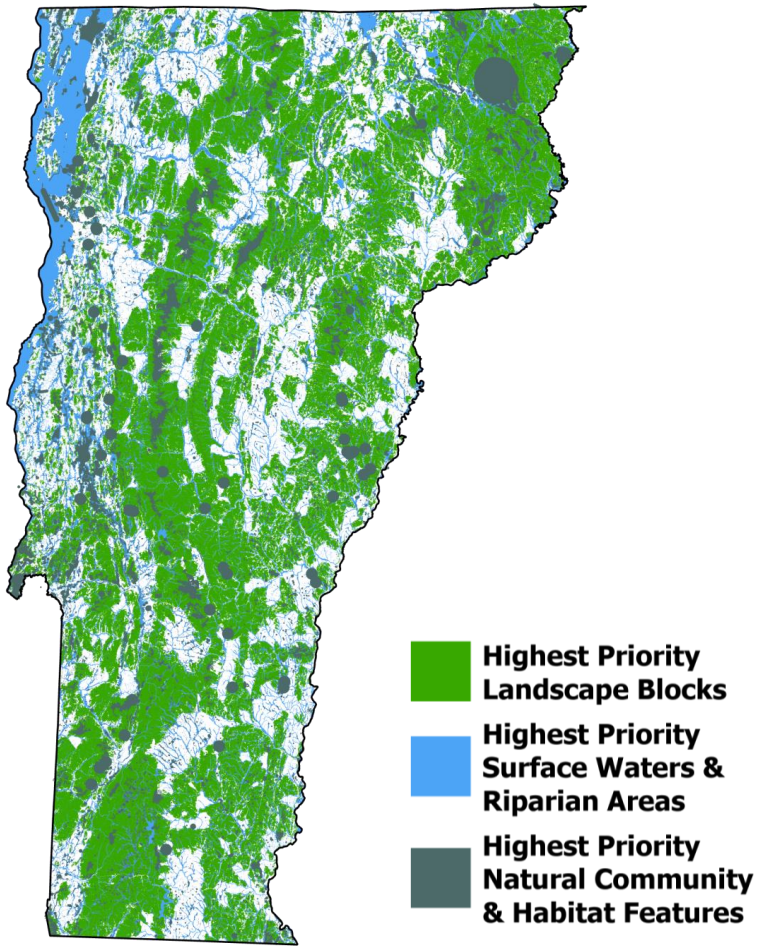


VERMONT CONSERVATION DESIGN



(And remember permanent land conservation is just one of many tools for achieving VCD.)

Act 59 Conservation Categories

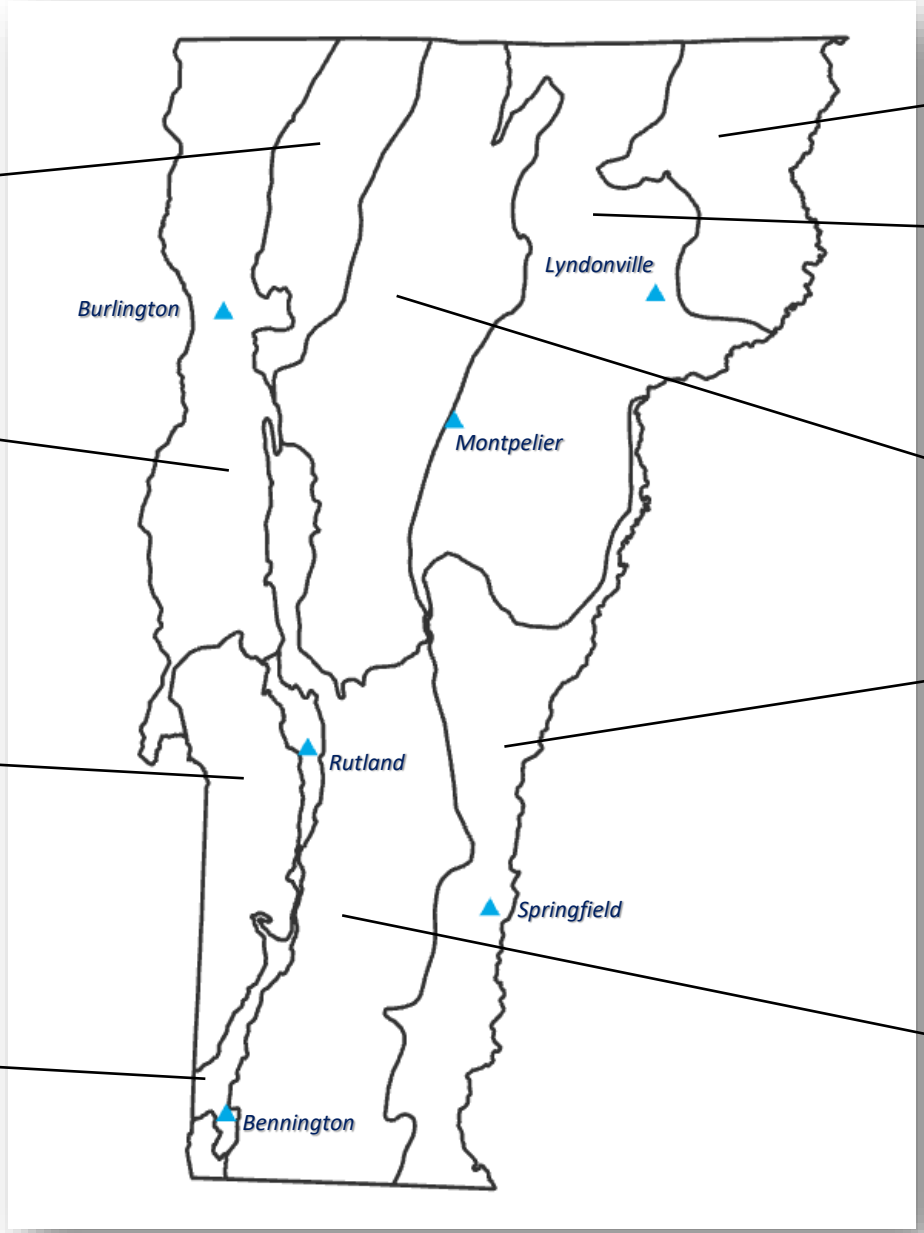
- **Ecological Reserve Area** – natural processes predominate
- **Biodiversity Conservation Area** – management for outcomes to benefit particular species and habitats
- **Natural Resource Management Area** – most conserved lands that are not ERA, BCA, or uncategorized. (*For this analysis, ag fields are separated below*)
- **Natural Resource Management Area: Ag Field** – NRMA areas that are agricultural fields
- **Uncategorized / Not Conserved** – no known permanent land protection

Statewide Results of Conserved Lands Inventory, by Conservation Category

Conservation Category	Acres	Percent of VT Land Area
Ecological Reserve Area	238,626	4.04%
Biodiversity Conservation Area	232,138	3.93%
Natural Resource Management Area	950,733	16.08%
Natural Resource Management Area - Ag Field	140,602	2.38%
Uncategorized / Not Conserved	*4,349,867*	*73.58%*

**These numbers vary slightly from those presented in the VHCB Inventory Report. The data here reflect the GIS analysis I used.*

Vermont Biophysical Regions



Champlain Hills

Champlain Valley

Taconic Mountains

Vermont Valley

Northeastern Highlands

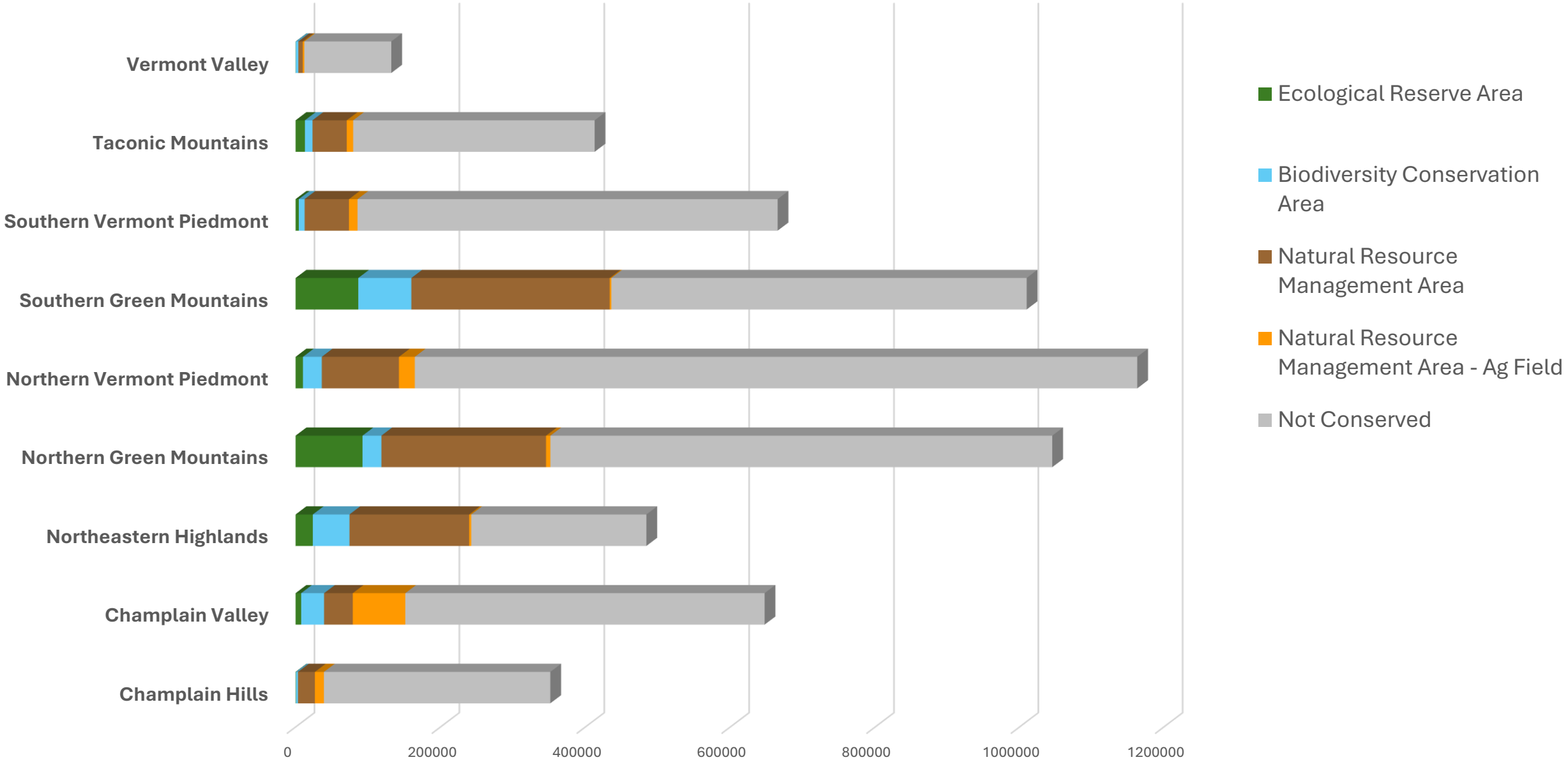
Northern Vermont Piedmont

Northern Green Mountains

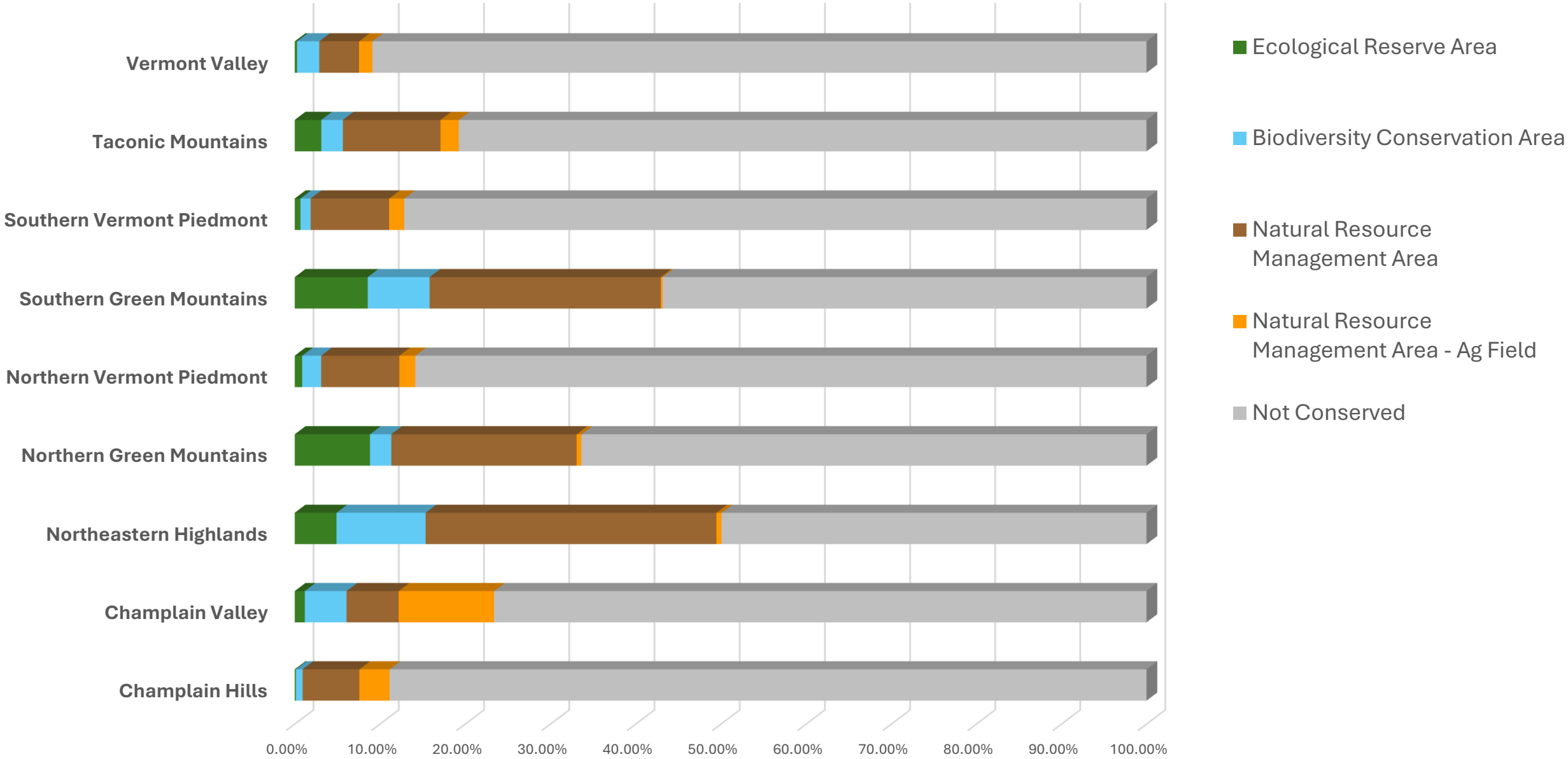
Southern Vermont Piedmont

Southern Green Mountains

Acres of Conserved Land, by Conservation Category, in each Biophysical Region

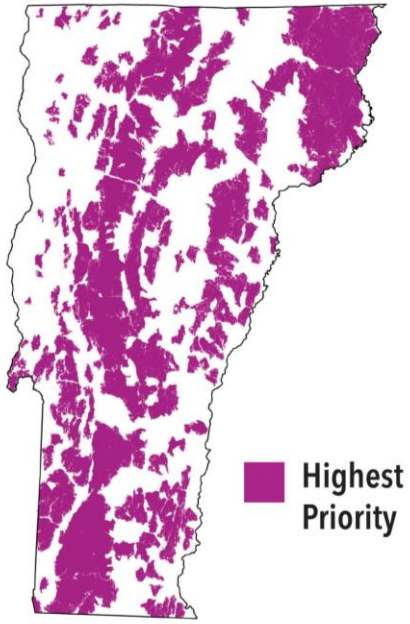


Percent of each Biophysical Region that is conserved, by Conservation Category

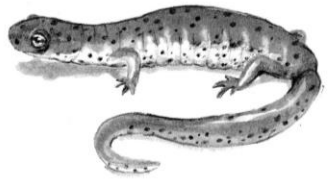


VCD
Forest Blocks

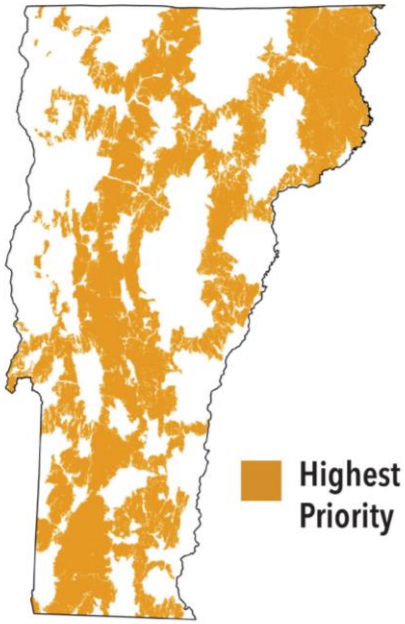
INTERIOR FOREST



The largest forest blocks in each biophysical region. These are areas of contiguous forest and other natural communities and habitats (such as wetlands, ponds, and cliffs) that are unfragmented by roads, development, or agriculture.

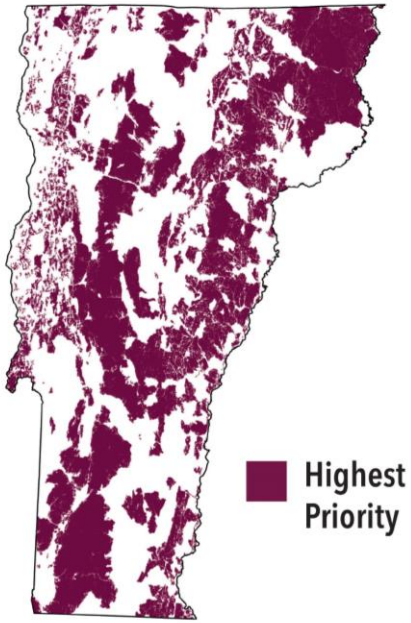


CONNECTING FOREST

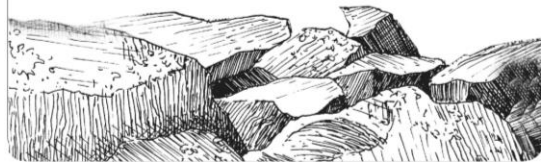


The network of forest blocks that together provide terrestrial connectivity at the regional scale (across Vermont and to adjacent states and Québec) and connectivity with surface waters and areas of geological diversity.

GEOLOGICAL DIVERSITY



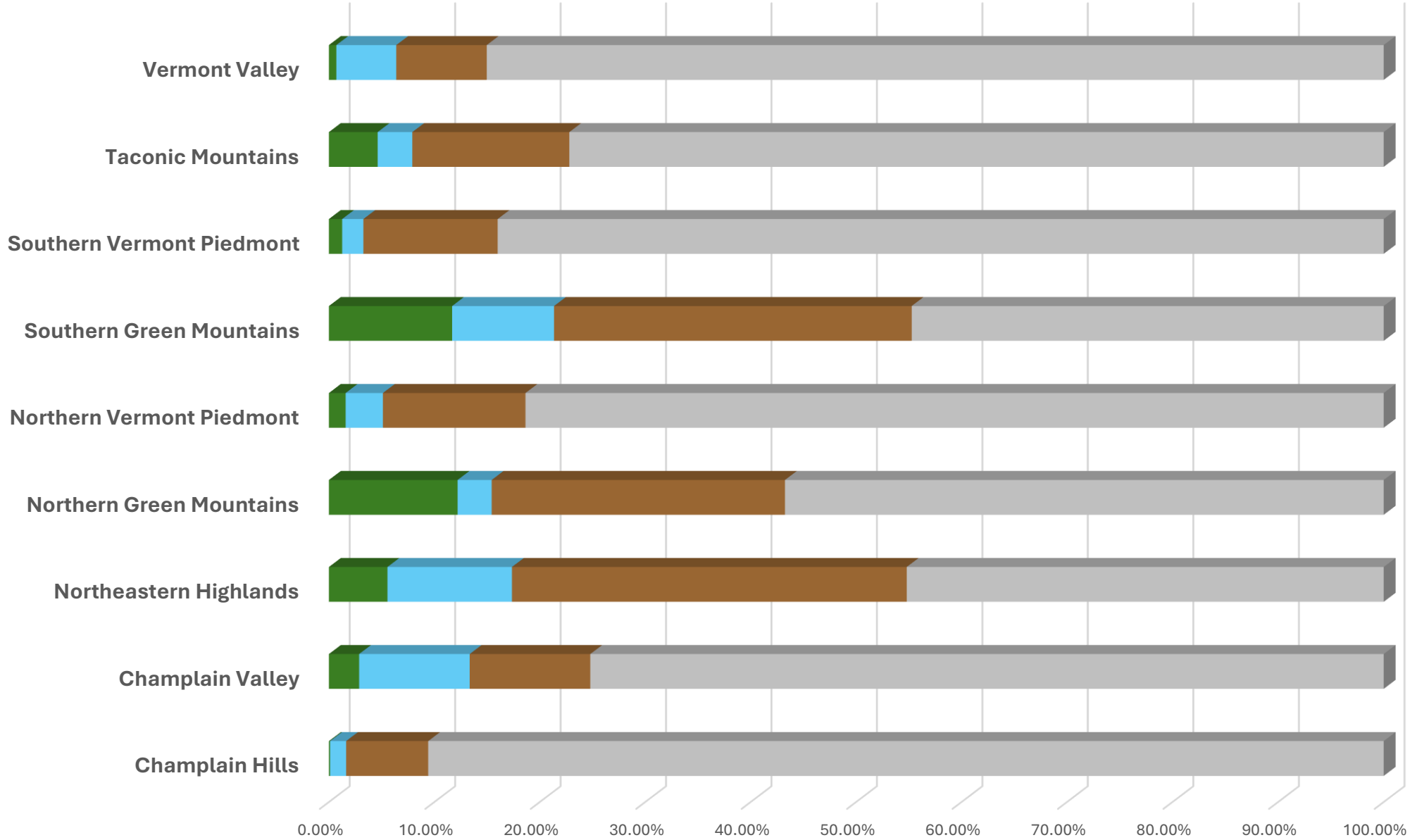
A set of forest blocks that reflect the full diversity of Vermont's bedrock, soils, elevations, and landforms (features such as slopes, ridges, flats, and coves). Diversity in the physical landscape is linked to biological diversity, and places that contribute to physical diversity will be important for biological diversity even as the climate changes.



Percent of the land in each Conservation Category that overlaps Highest Priority and Priority Forest Blocks

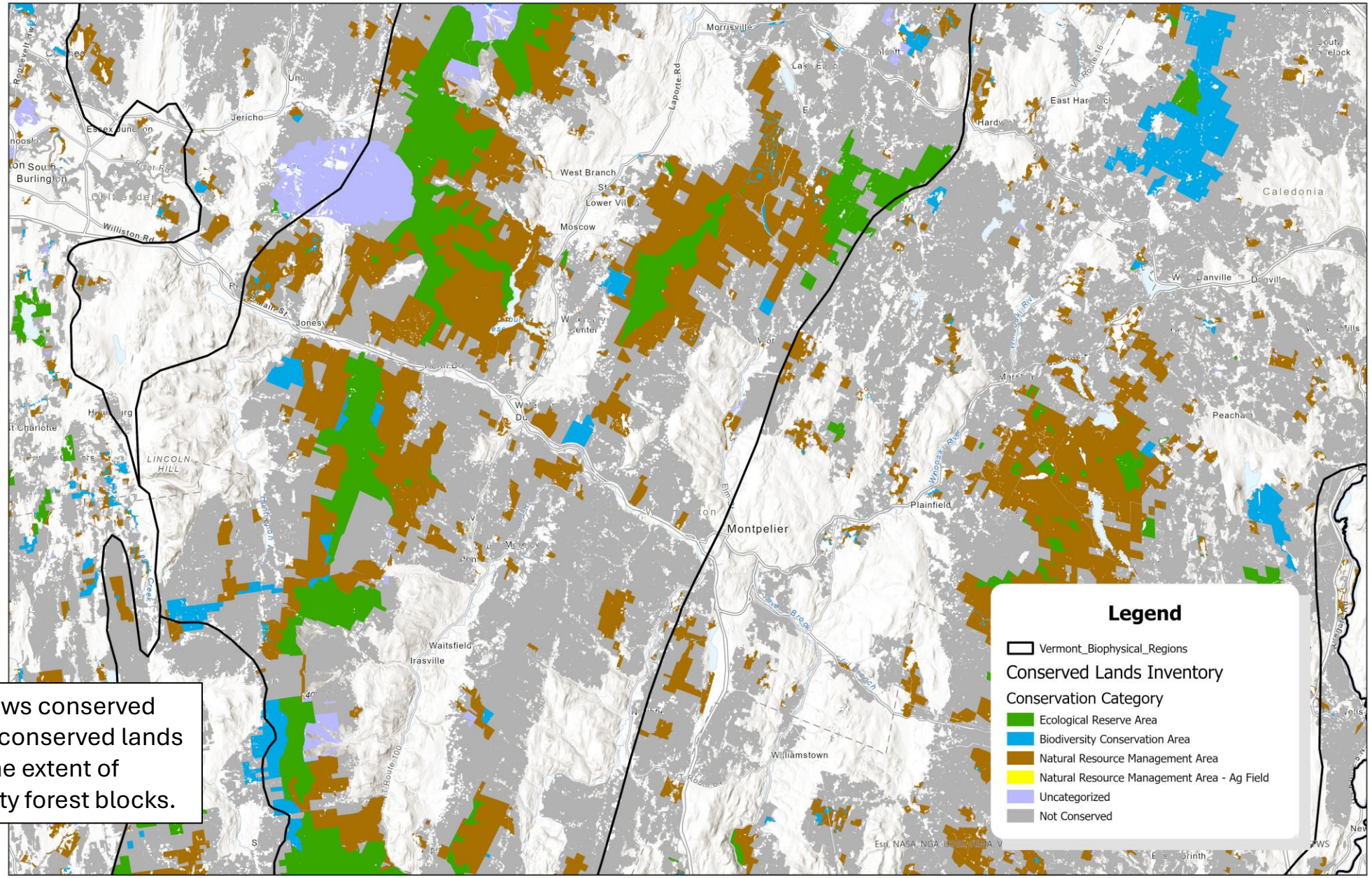
	Overlaps VCD Highest Priority Forest Blocks	Overlaps VCD Priority Forest Blocks	Does Not Overlap a VCD Forest Block Priority
Ecological Reserve Area	98.58%	0.64%	0.78%
Biodiversity Conservation Area	91.16%	3.72%	5.12%
Natural Resource Management Area (not including ag fields)	86.87%	6.48%	6.64%
Natural Resource Management Area (incl. both forest and ag)	75.68%	5.65%	18.67%

Conservation status of **all VCD Highest Priority Forest Blocks**,* by category, in each Biophysical Region



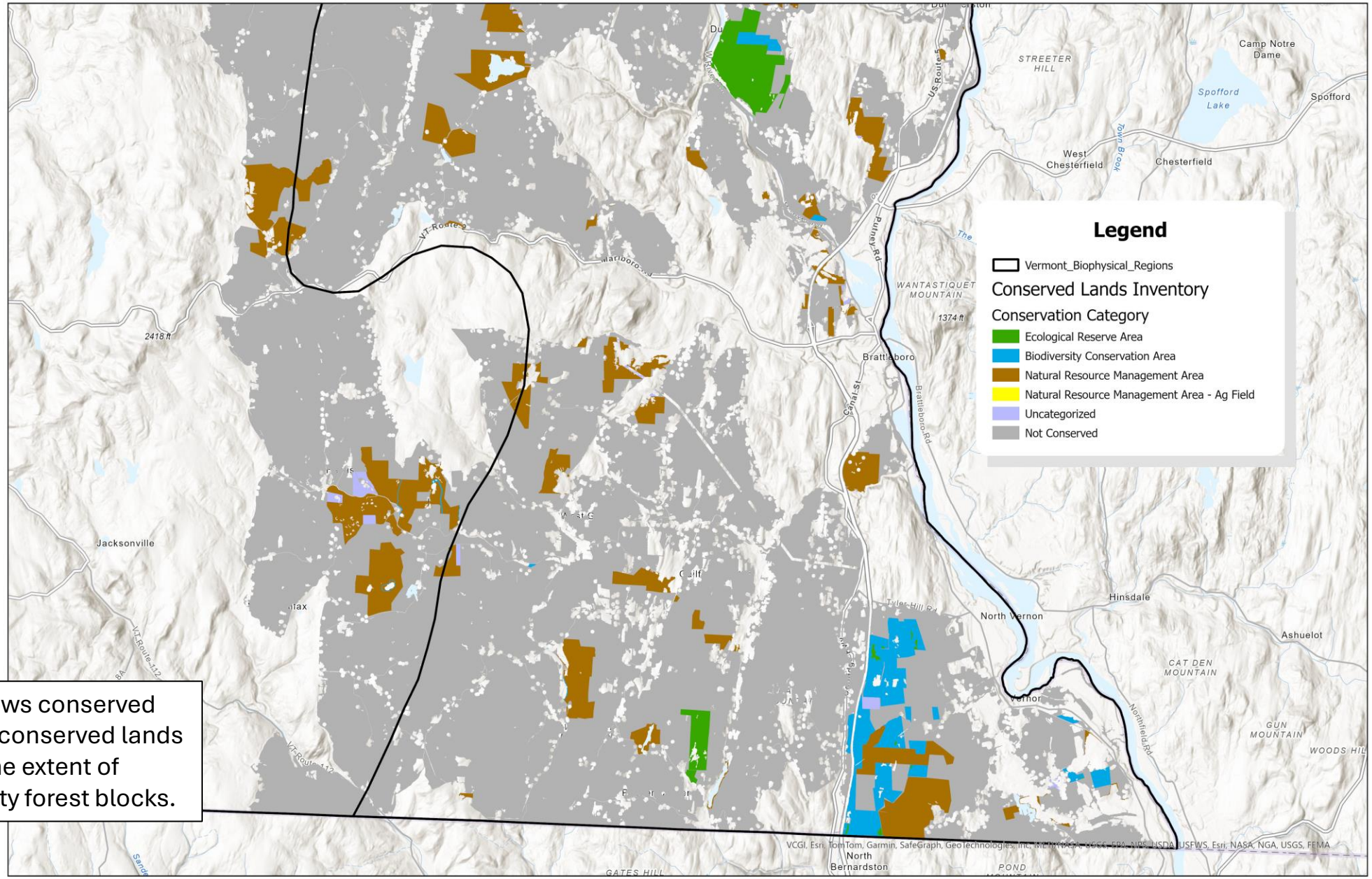
*includes Interior Forest Blocks, Connectivity Blocks, and Geological Diversity Blocks

Example Map of **all VCD Highest Priority Forest Blocks**, by Conservation Category, in central Vermont



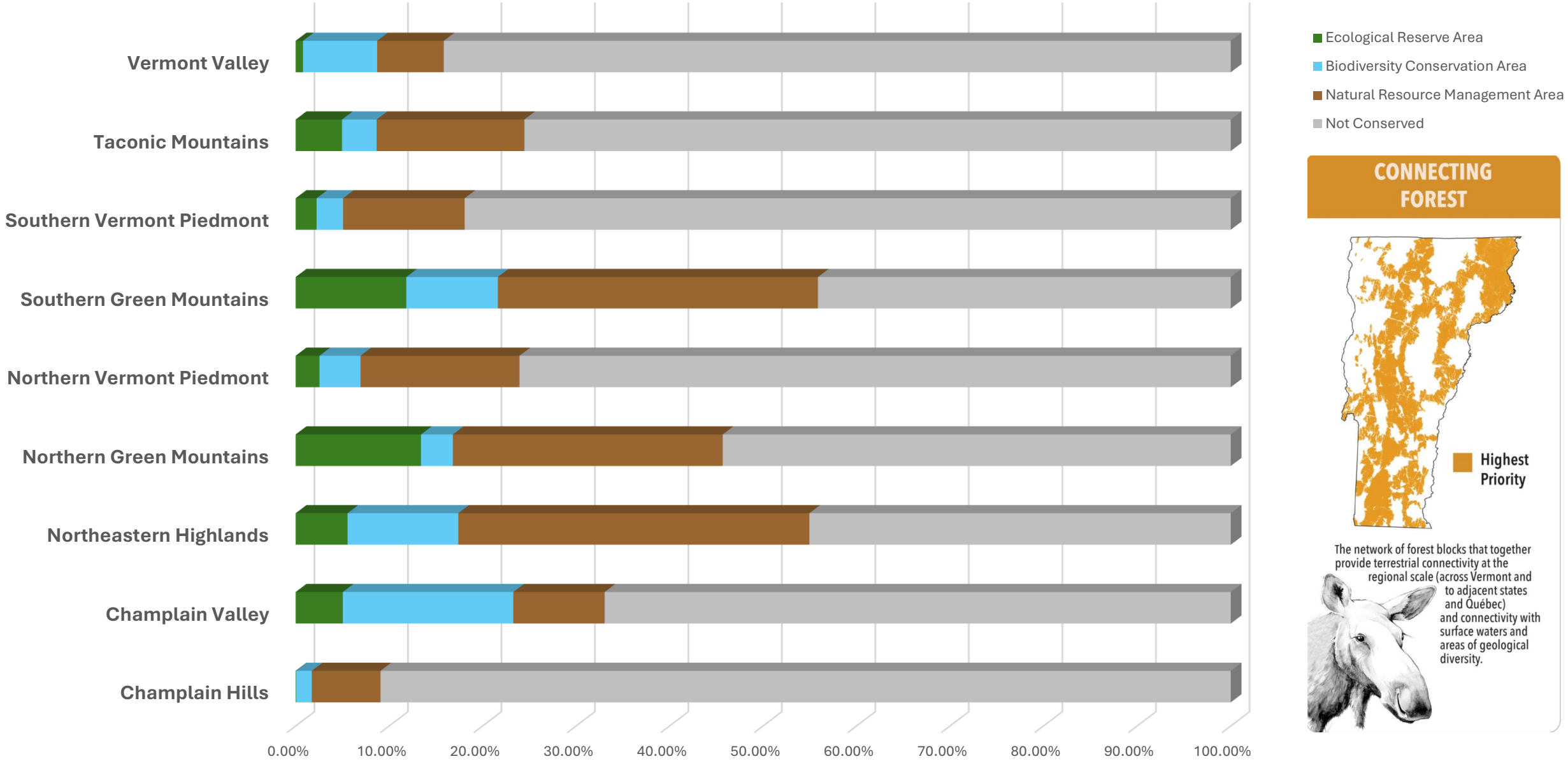
This map shows conserved lands and unconserved lands *only* within the extent of highest priority forest blocks.

Example Map of **all VCD Highest Priority Forest Blocks**, by Conservation Category, near Brattleboro

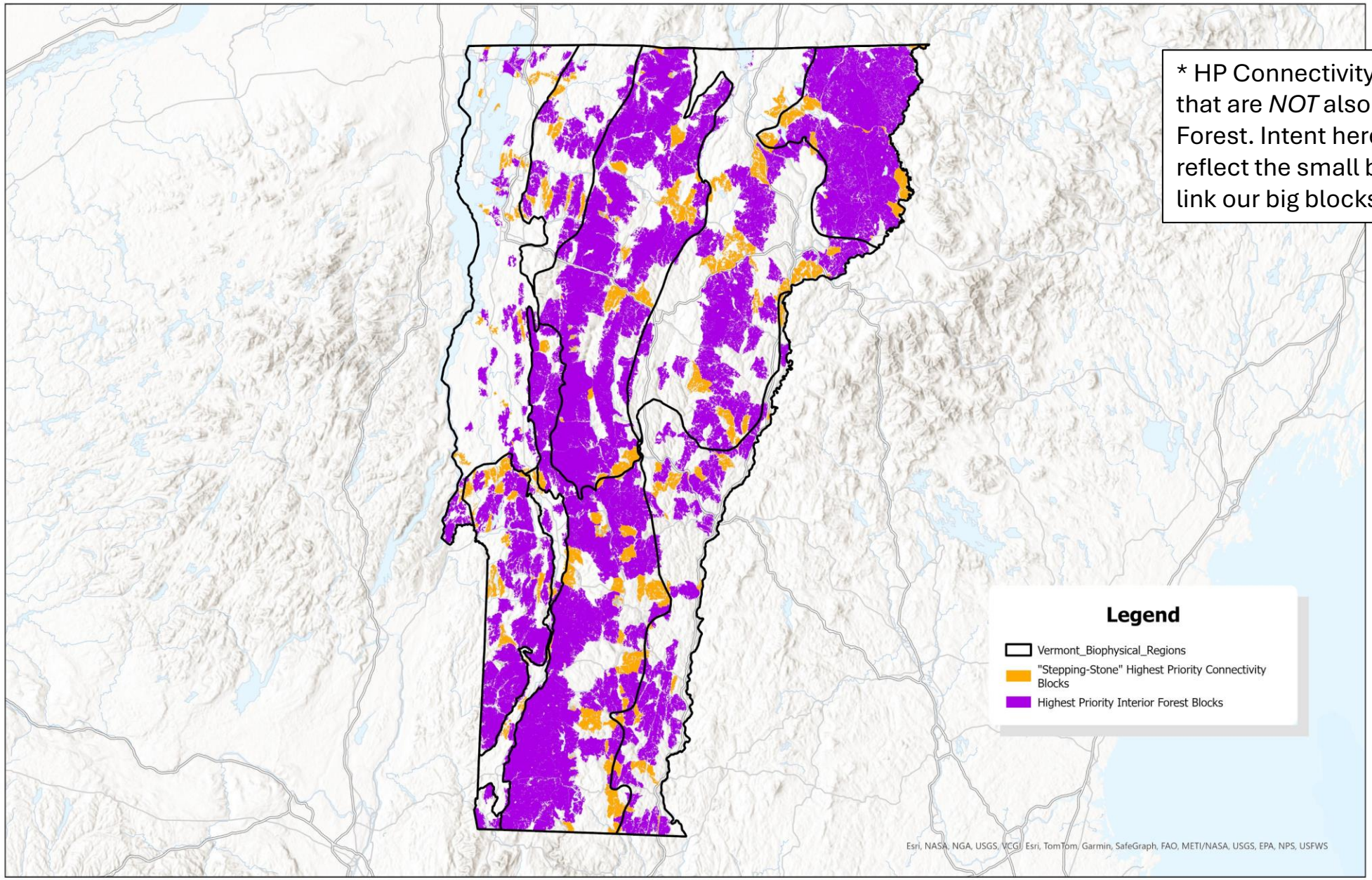


This map shows conserved lands and unconserved lands *only* within the extent of highest priority forest blocks.

Conservation Status of **VCD Highest Priority Connectivity Blocks**, by category, in each Biophysical Region

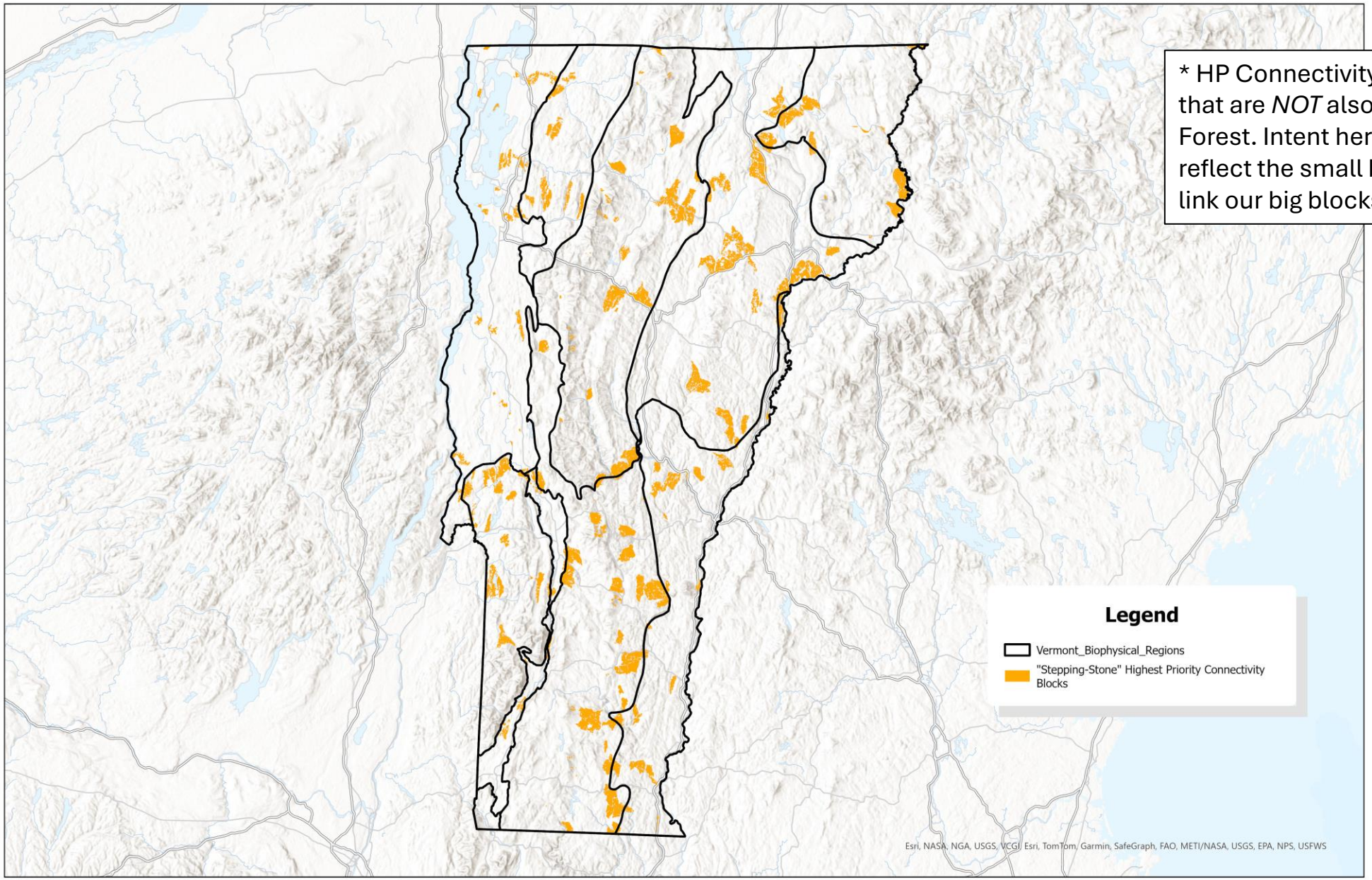


“Stepping-Stone”* Highest Priority Connectivity Blocks (shown in orange)



* HP Connectivity Blocks that are *NOT* also HP Interior Forest. Intent here is to reflect the small blocks that link our big blocks together

“Stepping-Stone”* Highest Priority Connectivity Blocks (shown in orange)



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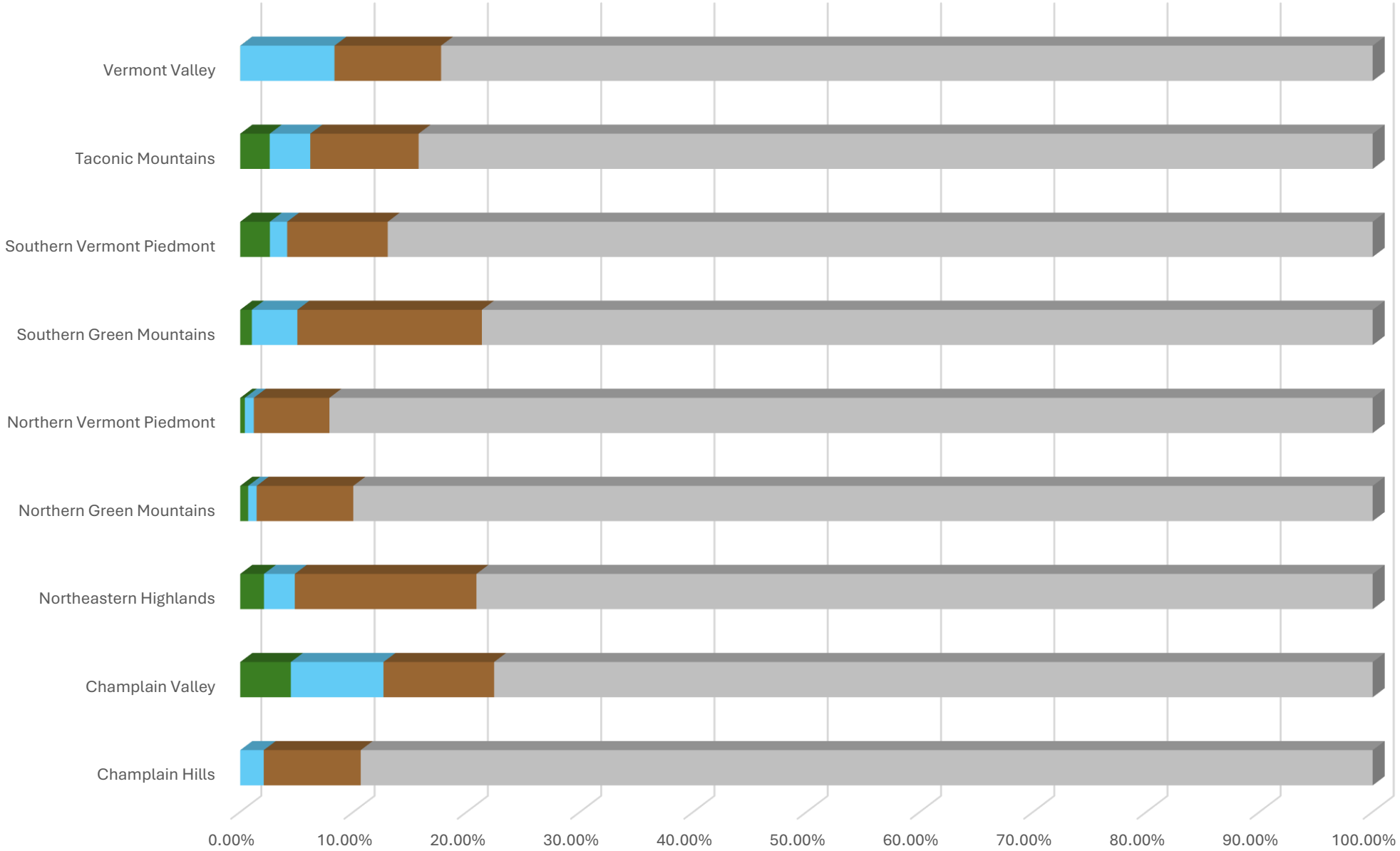
Conservation status of “Stepping-Stone”* Highest Priority Connectivity Blocks, by category and region



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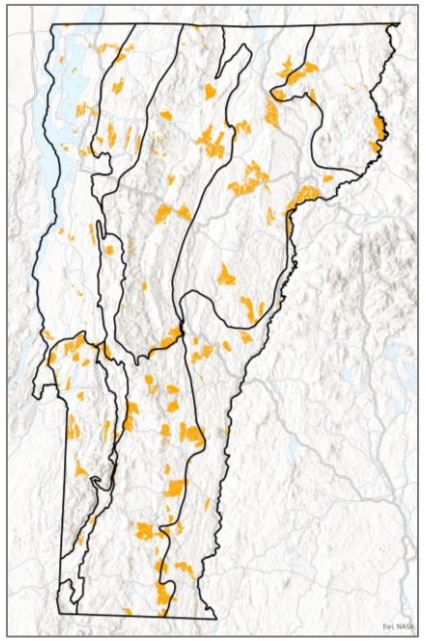
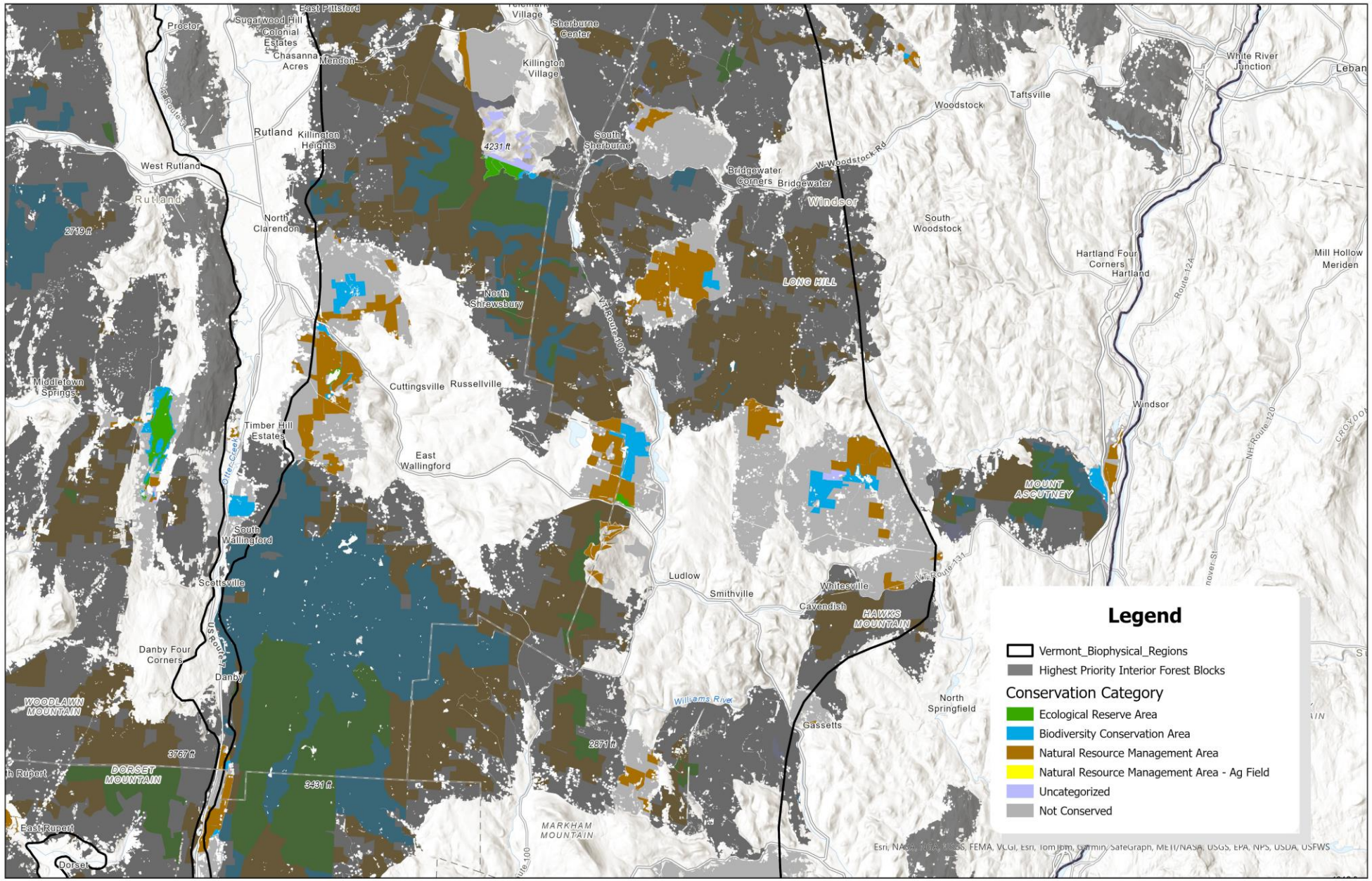
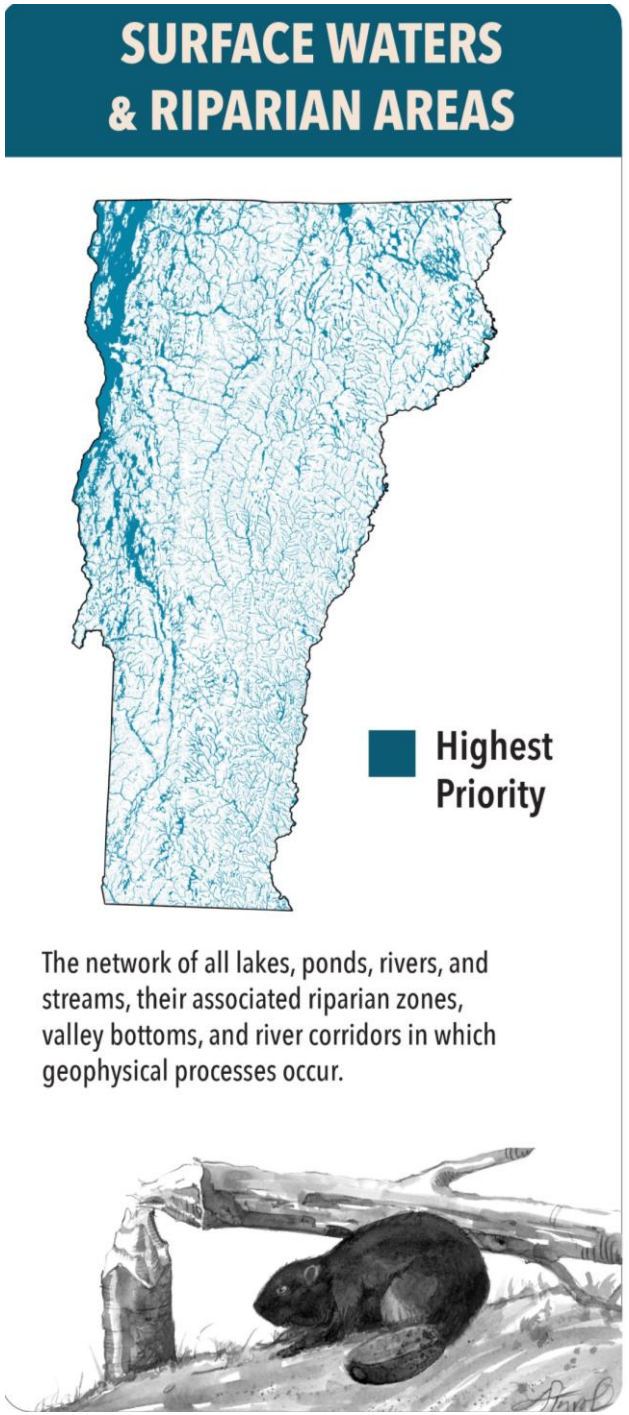


Proactive Conservation for Connectivity: The Bear Corridor

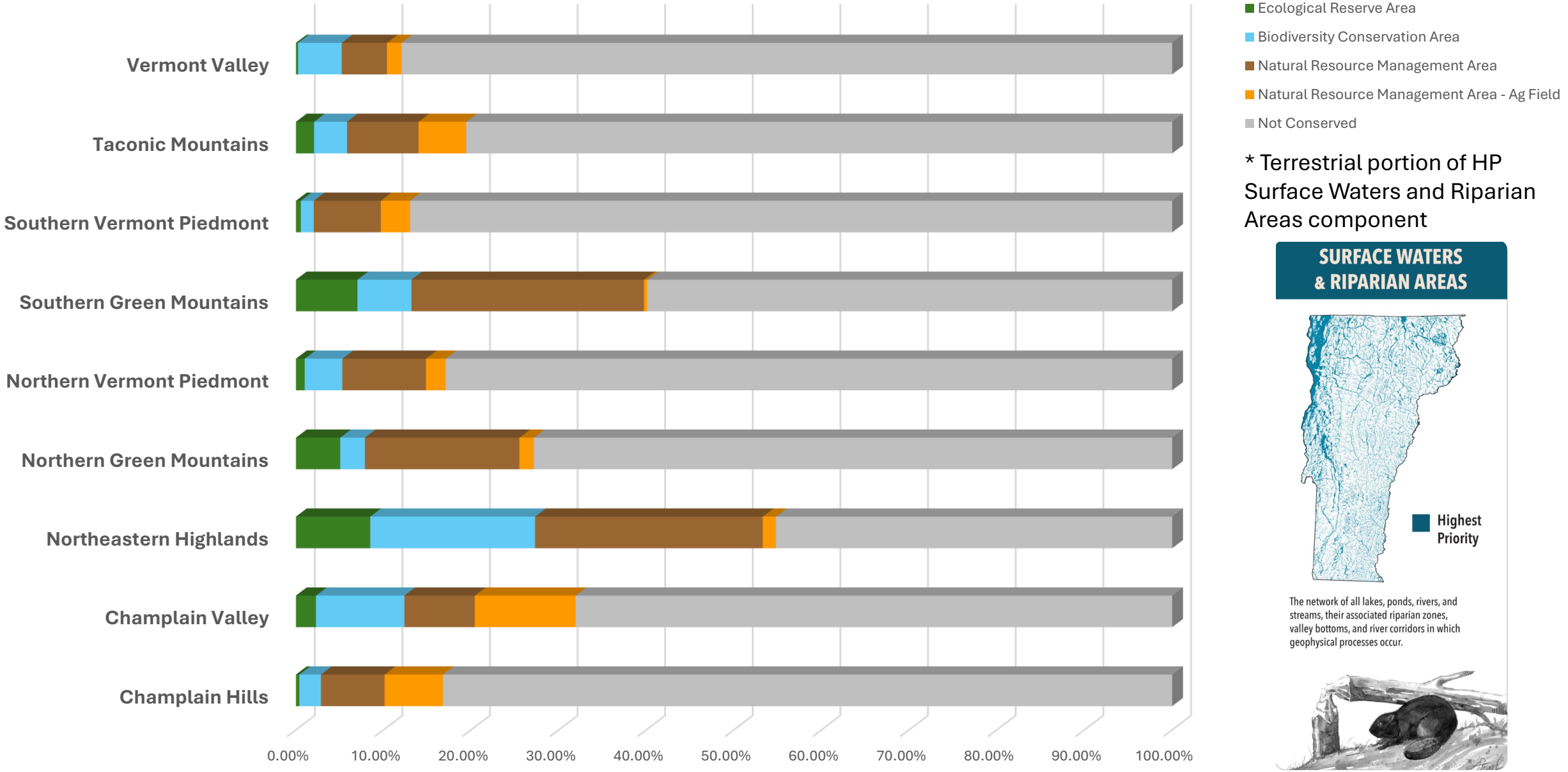


VCD Surface Waters and Riparian Areas

(In this analysis, it will just be the terrestrial riparian areas, not waters)

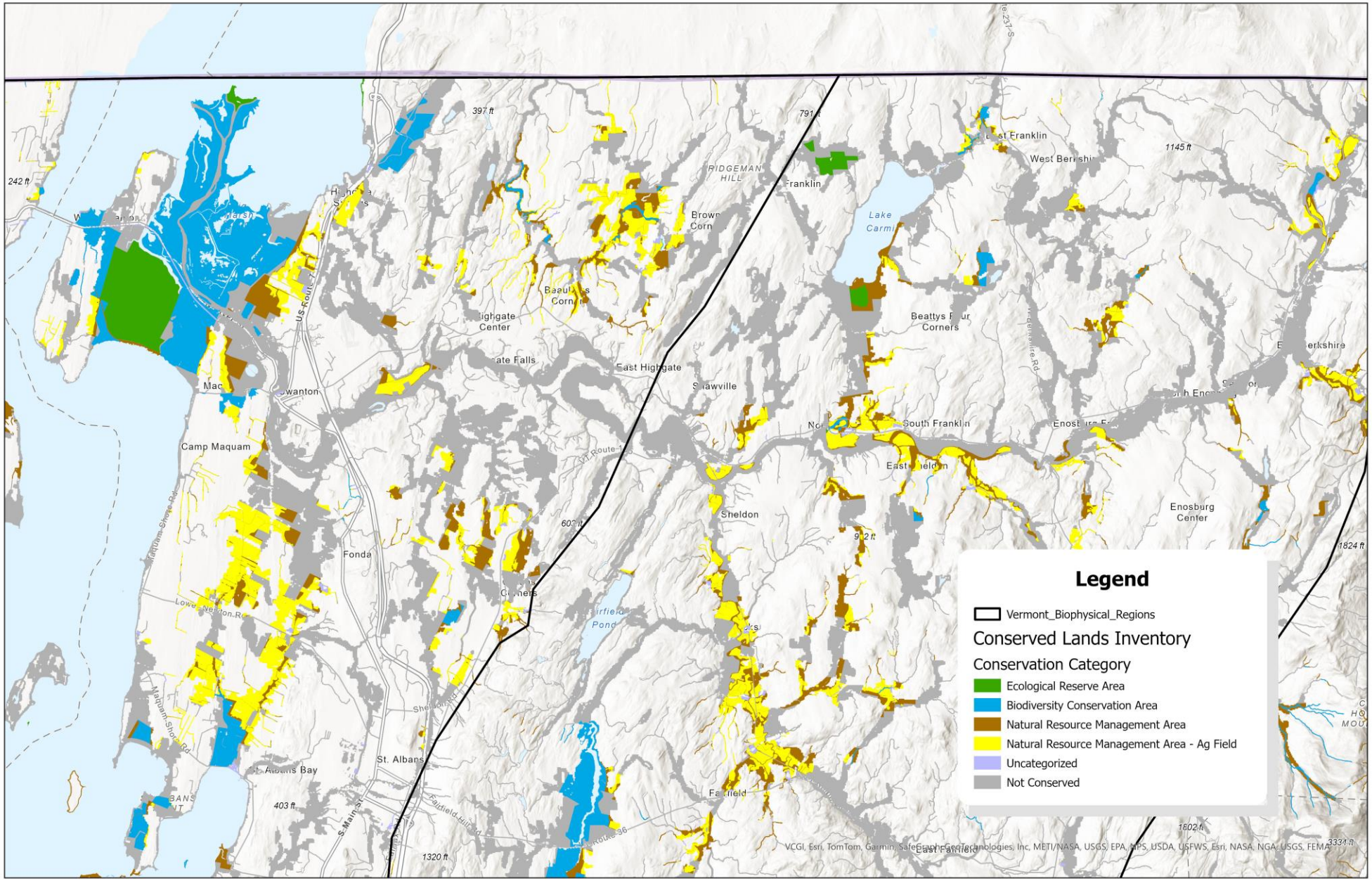


Percentage of **VCD Highest Priority Riparian Areas*** conserved, by category, in each Biophysical Region

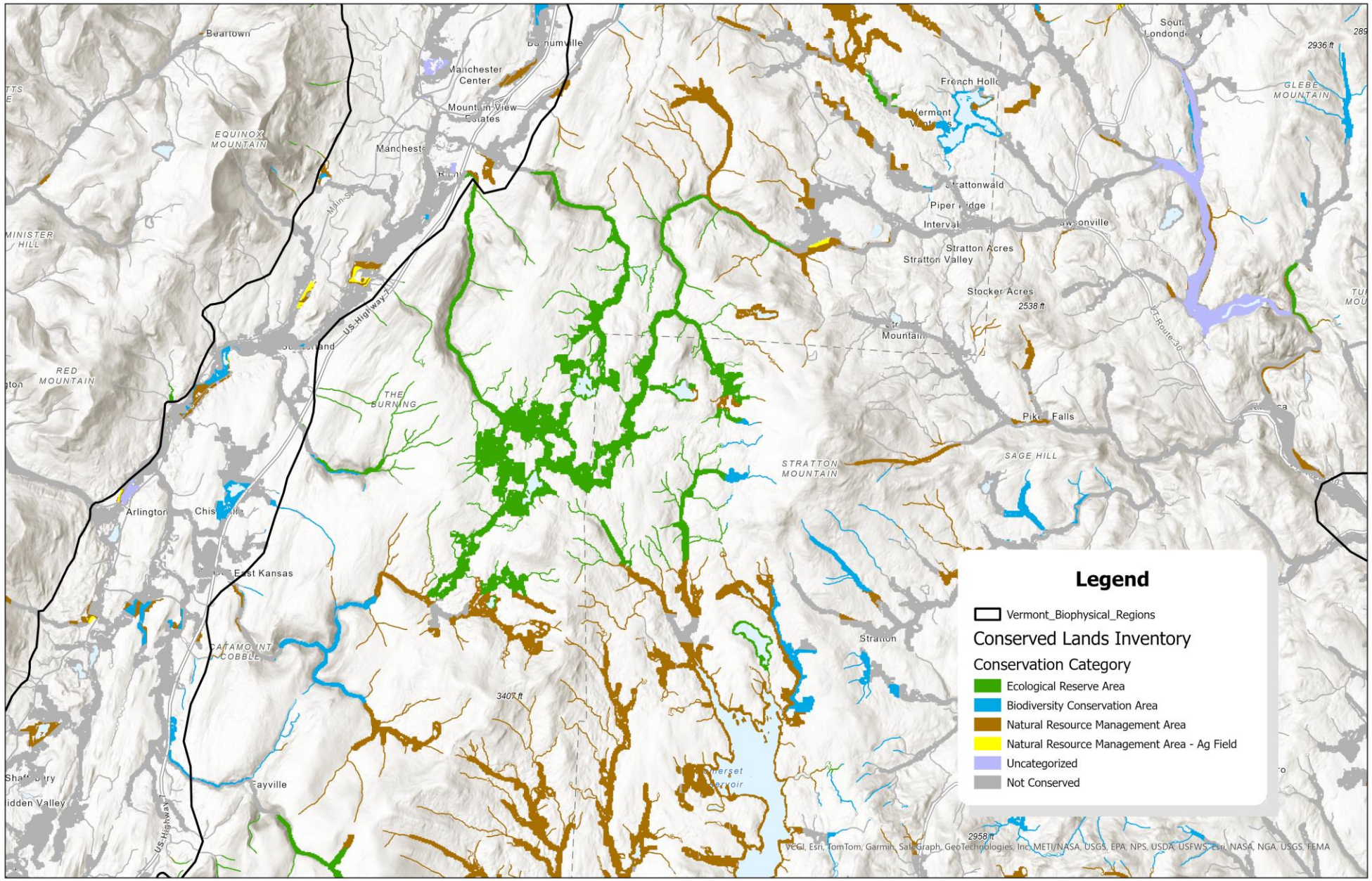


* Terrestrial portion of HP Surface Waters and Riparian Areas component

Example Map of **VCD Highest Priority Riparian Areas**, by Conservation Category, in northern Champlain Valley/Hills



Example Map of **VCD Highest Priority Riparian Areas**, by Conservation Category, around Lye Brook Wilderness




QUESTIONS?

VERMONT CONSERVATION DESIGN (VCD) & HOW IT'S USED IN LAND USE PLANNING

Trey Martin, Director of Conservation and Rural Community Development

Vermont Housing & Conservation Board

Vermont Housing & Conservation Board

Statutory Purpose

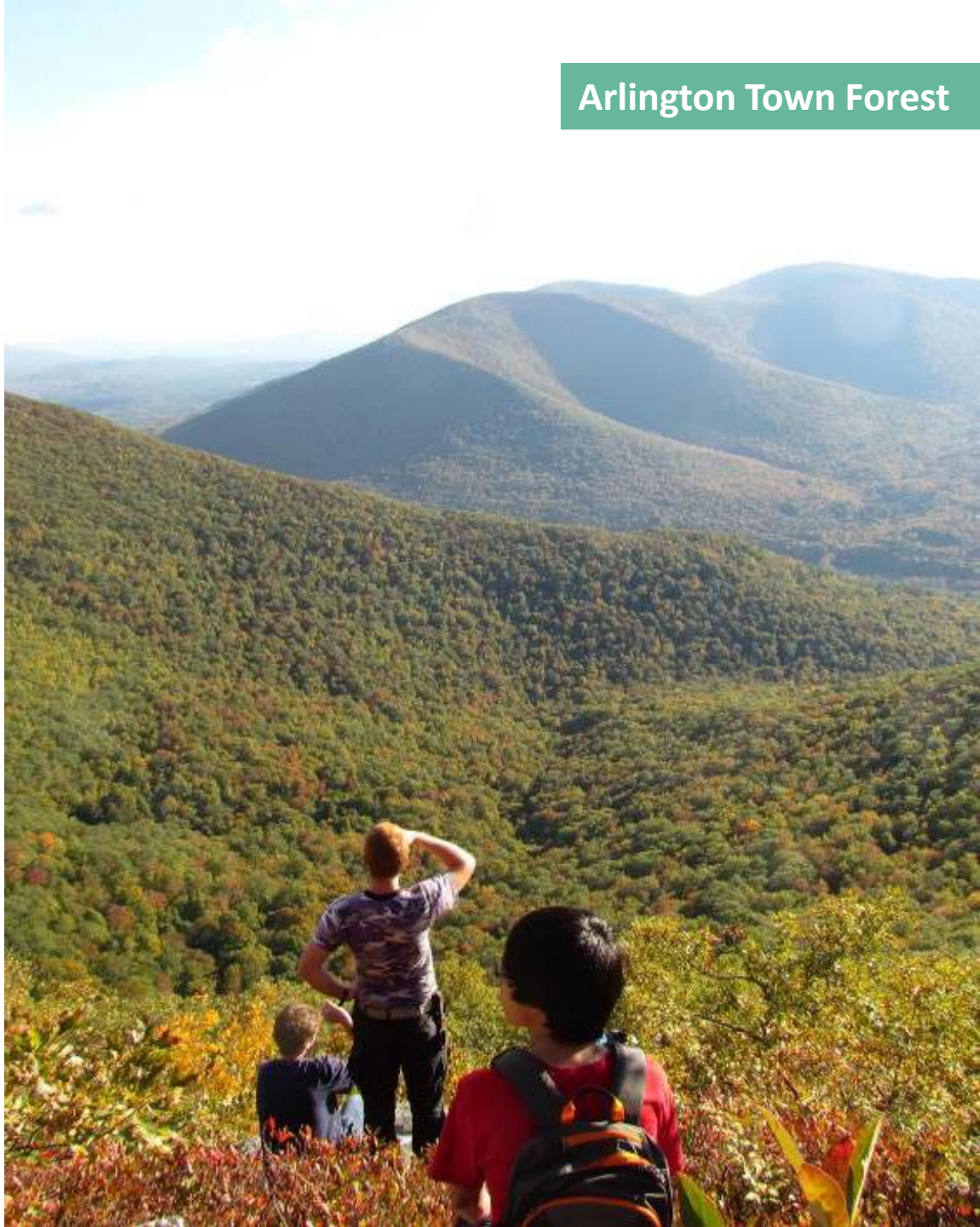
"the dual goals of creating affordable housing for Vermonters, and conserving and protecting Vermont's agricultural land, forestland, historic properties, important natural areas, and recreational lands of primary importance to the economic vitality and quality of life of the State."

10 V.S.A.15 §302

A Vision for Vermont

Act 59 of 2023, The Community Resilience and Biodiversity Protection Act, set forth a vision to maintain an ecologically functional landscape that:

- Sustains biodiversity
- Maintains landscape connectivity
- Supports watershed health
- Promotes climate resilience
- Supports working farms and forests
- Provides opportunities for recreation and appreciation of the natural world *and*
- Supports the historic settlement pattern of compact villages surrounded by rural lands and natural areas.

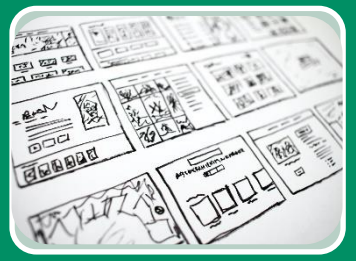


Arlington Town Forest

The Timeline

Phase 1. Conservation Inventory - completed July 2024

An assessment of existing and potential conservation data, practices, programs, equity, and funding with recommended next steps



Phase 2. Conservation Plan - due December 2025

A comprehensive strategy for achieving the vision and goals of the Community Resilience and Biodiversity Protection Act

Phase 3. Implementation. 2026 - 2050

- **30% of Land Conserved by 2030**
- **50% of Land Conserved by 2050**

47

Interviews

November ‘23 - February ‘24

Community members interviewed to complete inventory

21

Focus Groups

March ‘24 - May ‘24

Affinity-based focus groups with over **350 participants**

6

Public Meetings

Nov ‘23 - July ‘24

Meetings open to the public with opportunities for public feedback

147

Survey Respondents

November ‘23 - February ‘24

Open to the general public and on the VHCB website

4

Working Groups

November ‘23 - June ‘24

Working groups to answer three specific questions posed by the legislature

Who Contributed?

Lead Organizations:

Vermont Housing & Conservation Board

VERMONT
AGENCY OF NATURAL RESOURCES

nature for justice

Partner Organizations:

- Vermont Land Trust
- The Nature Conservancy of Vermont
- Trust for Public Land
- Audubon Vermont
- State Natural Resources Conservation Council
- Vermont Association of Conservation Districts

Inventory Highlights

Roughly **27%** of Vermont is permanently conserved (**1.58M acres of 5,889,121 total acres**)

Ecological Reserve Areas represent 240,055 acres, or **4.08%** of Vermont's land area.

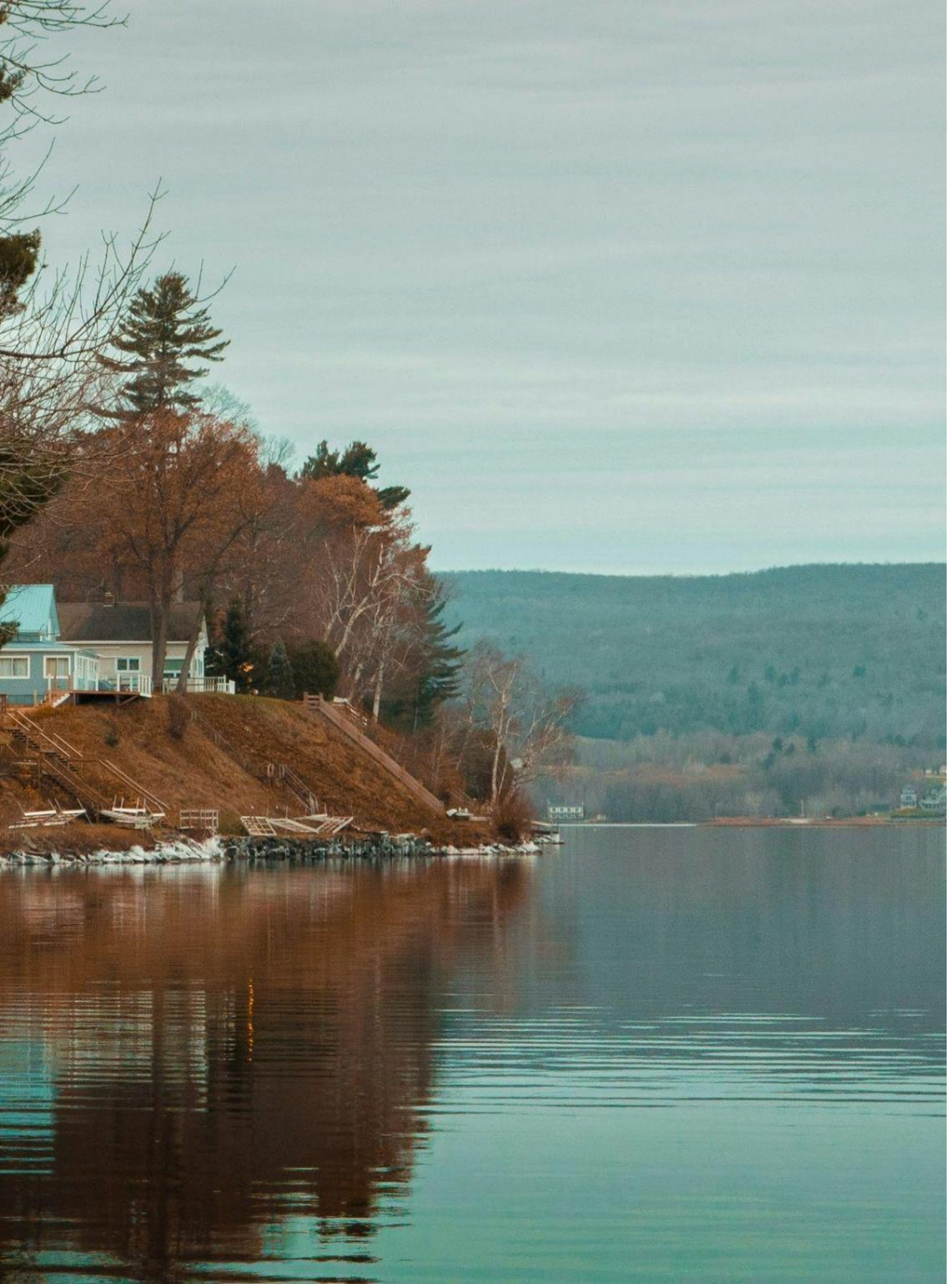
Biodiversity Conservation Areas represent **235,950 acres**, or **4.01%** of Vermont's land area.

Natural Resource Management Areas represent **1,100,778 acres**, or **18.69%** of Vermont's land area. This is further broken down as follows:

- **Forestland and Natural Cover** represents **929,431 acres** or **15.78%** of Vermont's land area.
- **Agricultural, open and other lands** represents **171,347 acres**, or **2.91%** of Vermont's land area.

In addition, we identified **47,595 acres of uncategorized conserved land** for further analysis before the next inventory is produced in 2026.

Finally, please note that **roughly 2.4 million acres** are enrolled in the Vermont Use Value Appraisal Program.



Next Steps

Fall 2024: VHCB to hire project manager (PM); form steering committee and its work groups; set foundation for regional working group sessions

Spring and Summer 2025: Steering committee and work group processes led by VHCB, ANR and PM

Fall 2025: Refine and finalize conservation plan through public meetings

Dec. 31, 2025: Release final conservation plan

Phase II Mandate

A comprehensive strategy for achieving the vision and goals of Act 59:

(1) while continuing to conserve and protect Vermont's agricultural land, working forests, historic properties, recreational lands, and surface waters

(2) using Vermont Conservation Design as a guide

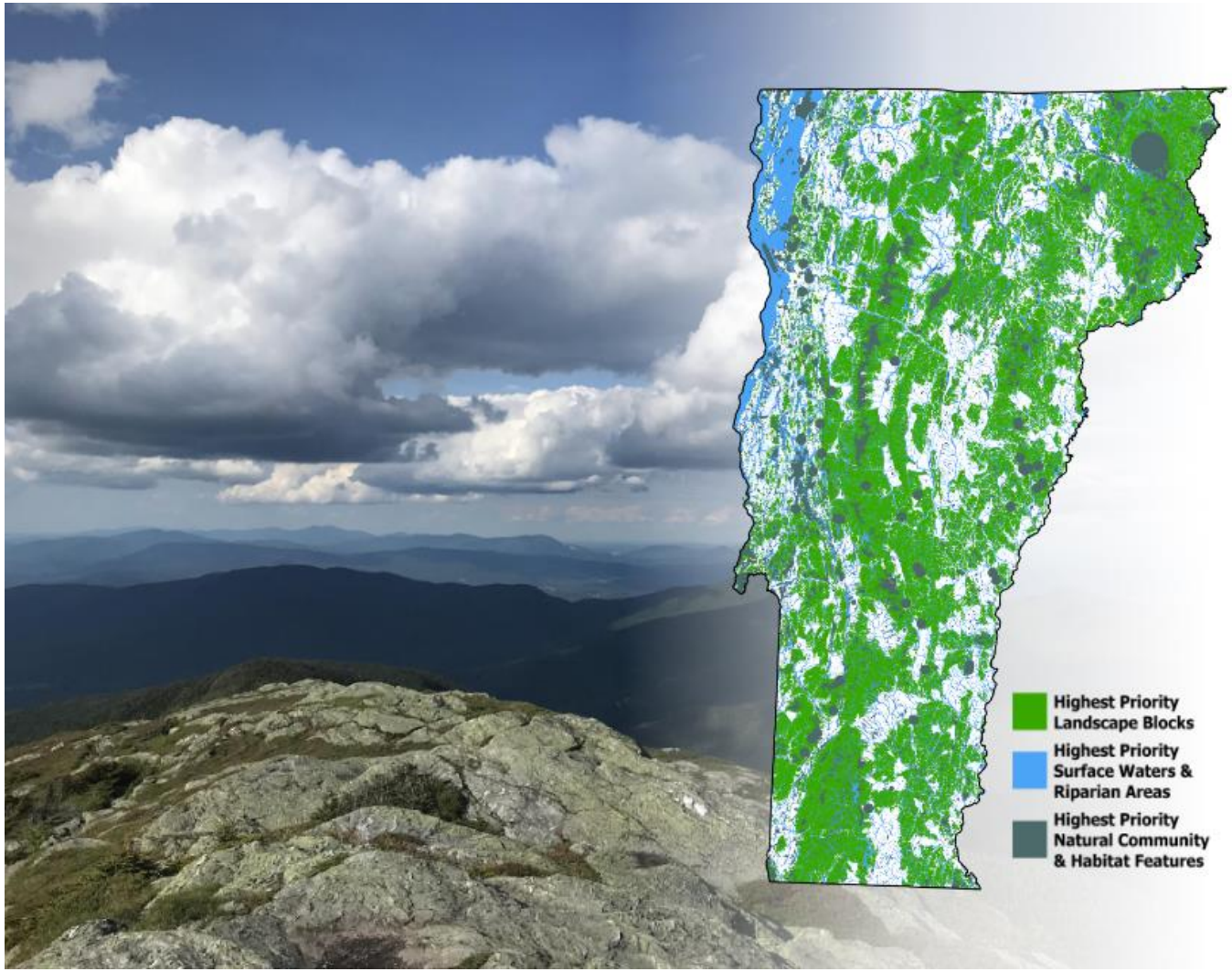
(3) in order to increase equitable access to protected and conserved lands and land-based enterprises, including recreational access to and use of conserved lands

(4) while also enhancing the State of Vermont's current investments and commitments to working lands enterprises, rural landowners, and the broad conservation mission implemented by the Secretary and VHCB, including conservation of agricultural land, working forests, historic properties, recreational lands, and surface waters

Vermont Housing & Conservation Board

Vermont Conservation Design

- Provides a science-based conservation vision for Vermont
- Identifies the most important places for maintaining an ecologically functional and resilient landscape
- Available to everyone on the BioFinder website: https://www.biofinder.vt.gov/



Mount Mansfield State Forest

Helping Communities See Act 59 As Integrated Planning Opportunity:

Green River Reservoir, Hyde Park

Regional and local plans

Hazard mitigation and transportation planning

New Flood Resilience law

New tiering system in Act 250

Act 200, Act 171

Meeting Landowner Needs, Enhancing Biodiversity

What will incent landowners to conserve?

How will Act 59 create conservation and resilience outcomes from community centers to working lands, matrix forest and receiving waters?

What are the strategies and supports needed to center VCD across the spectrum of conservation programs?


QUESTIONS?