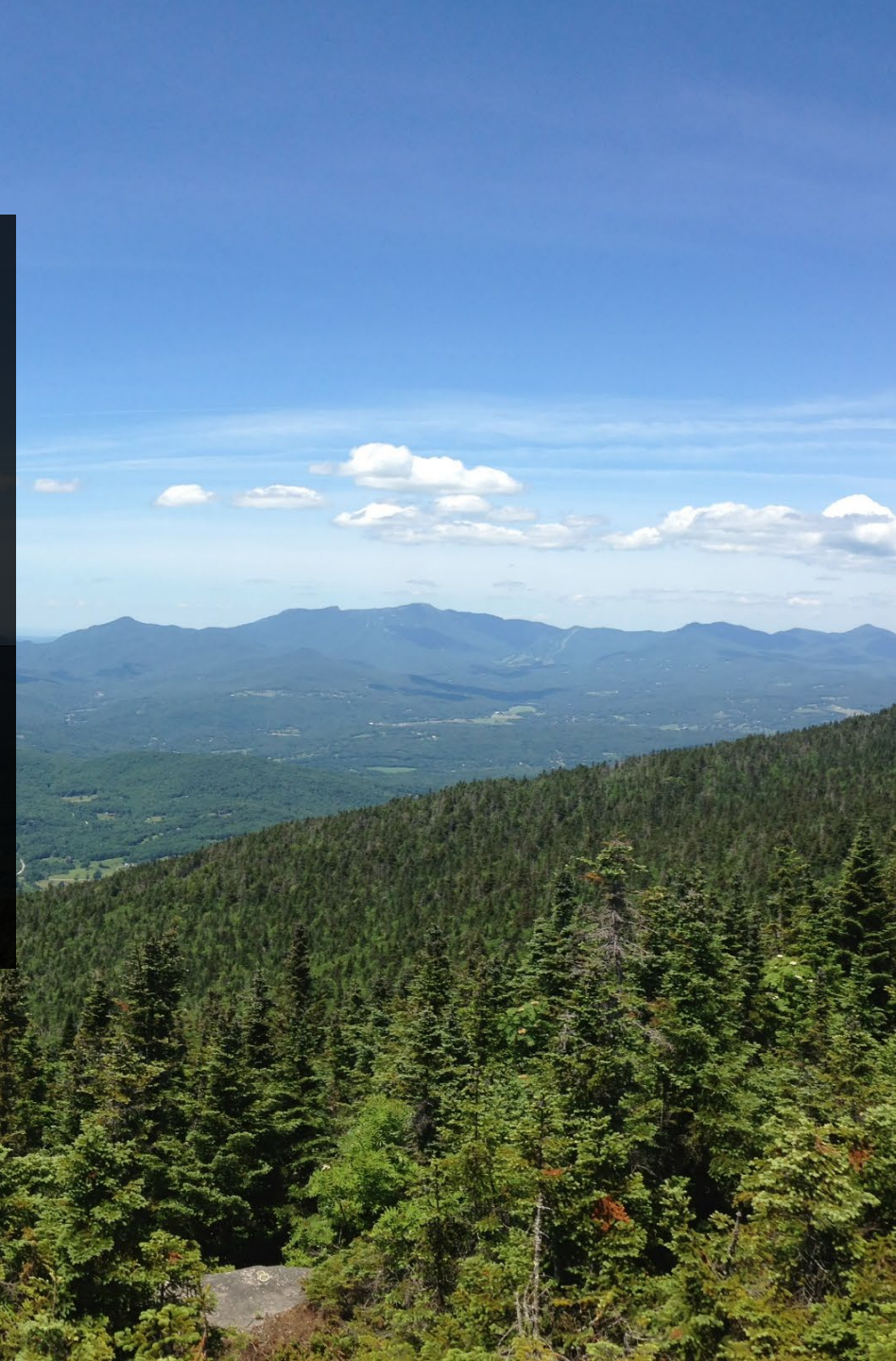




Natural Resources Inventories

Jens Hilke | Conservation Planning Biologist

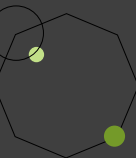
Vermont Fish & Wildlife Department





AGENDA

- What is a Natural Resources Inventory?
- Using existing data & collecting new data
- Inventories at three scales
- Cost & other logistics
- Making it come alive!



The Vermont Fish & Wildlife Department

The mission of the Vermont Fish & Wildlife Department is the conservation of our fish, wildlife, plants and their habitats for the people of Vermont





What We Conserve



Natural Communities



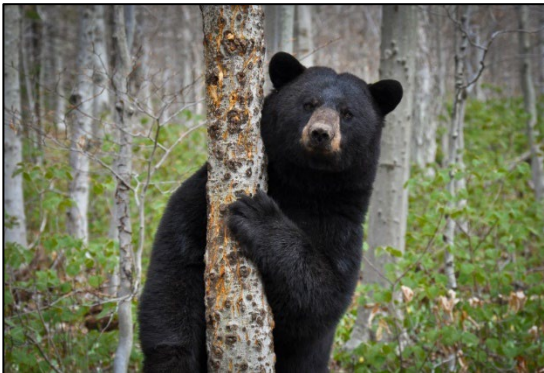
Fish



Habitat



Invertebrates



Wildlife



Plants





Who We Serve



Wildlife Watchers



Future Generations



Anglers



Hunters and Trappers



Communities



Landowners





Community Wildlife Program



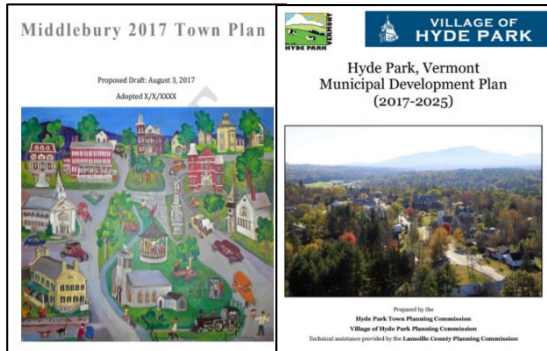
Presentations & Workshops



Support for Planning



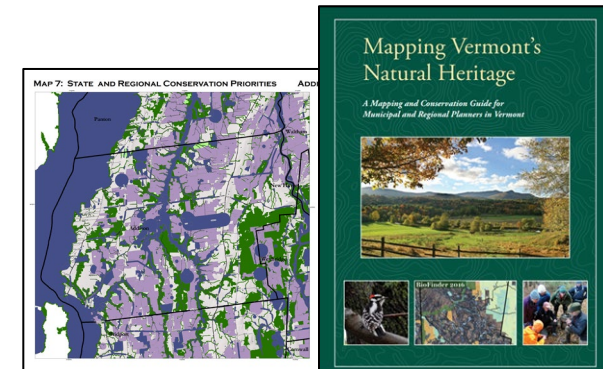
Support for Conservation



Connecting Communities to Each Other



Understanding Ecological and Community Context



Creation/Interpretation of Resources



Building Local Conservation Capacity

<p>Start a Conservation Commission</p>	<p>Assemble your team</p>
<p>Conduct a Natural Resources Inventory</p>	<p>Figure out your ecological & community priorities</p>
<p>Start a Conservation Fund</p>	<p>Work with partners to pay for conservation</p>

What is a Natural Resources Inventory?

Survey of noteworthy natural resources

- Wetlands & Vernal Pools
- Natural Communities
- Rare/Threatened/Endangered/Uncommon Species
- Special Wildlife Habitats
- Wildlife Corridors
- Habitat Blocks
- Wells and groundwater resources
- And More...



Why Do You Need One?

- Improve planning.
- Inform land management.
- Identify targets for conservation and/or restoration.
- Understand how town fits into broader context.
- Educational opportunity to raise awareness in town.
- Increase connection between residents, landowners, and natural feature.
- Revise outdated or imprecise data.



Getting Your People Together

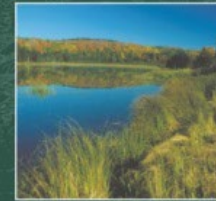
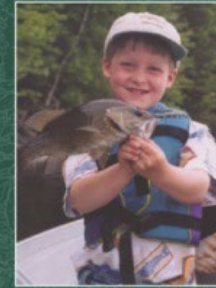
- Assemble a diverse team to steer the process.
- Seek out different perspectives and expertise.
- Create a structure for how the Inventory will happen and how it fits into other planning.



Figuring Out What You Need

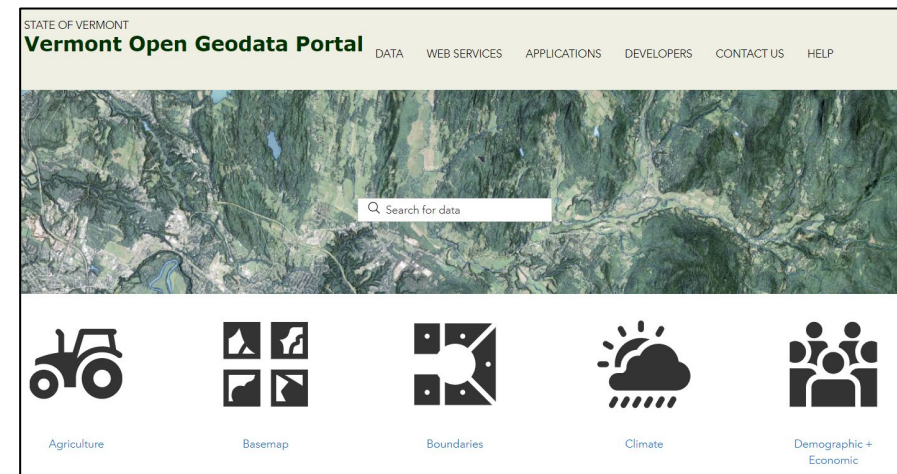
Conserving Vermont's Natural Heritage

*A Guide to
Community-Based Planning
for the Conservation of
Vermont's Fish, Wildlife,
and Biological Diversity*

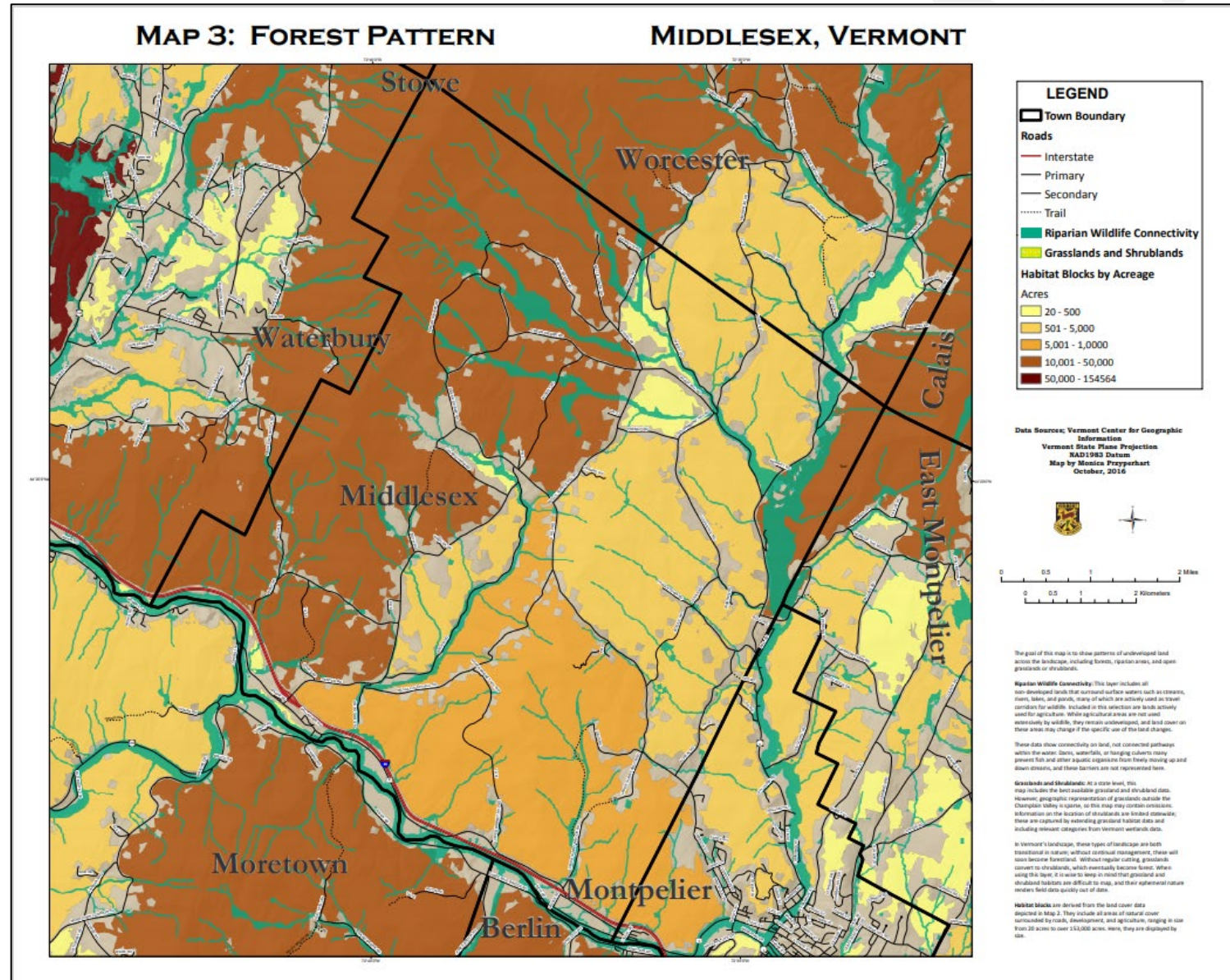
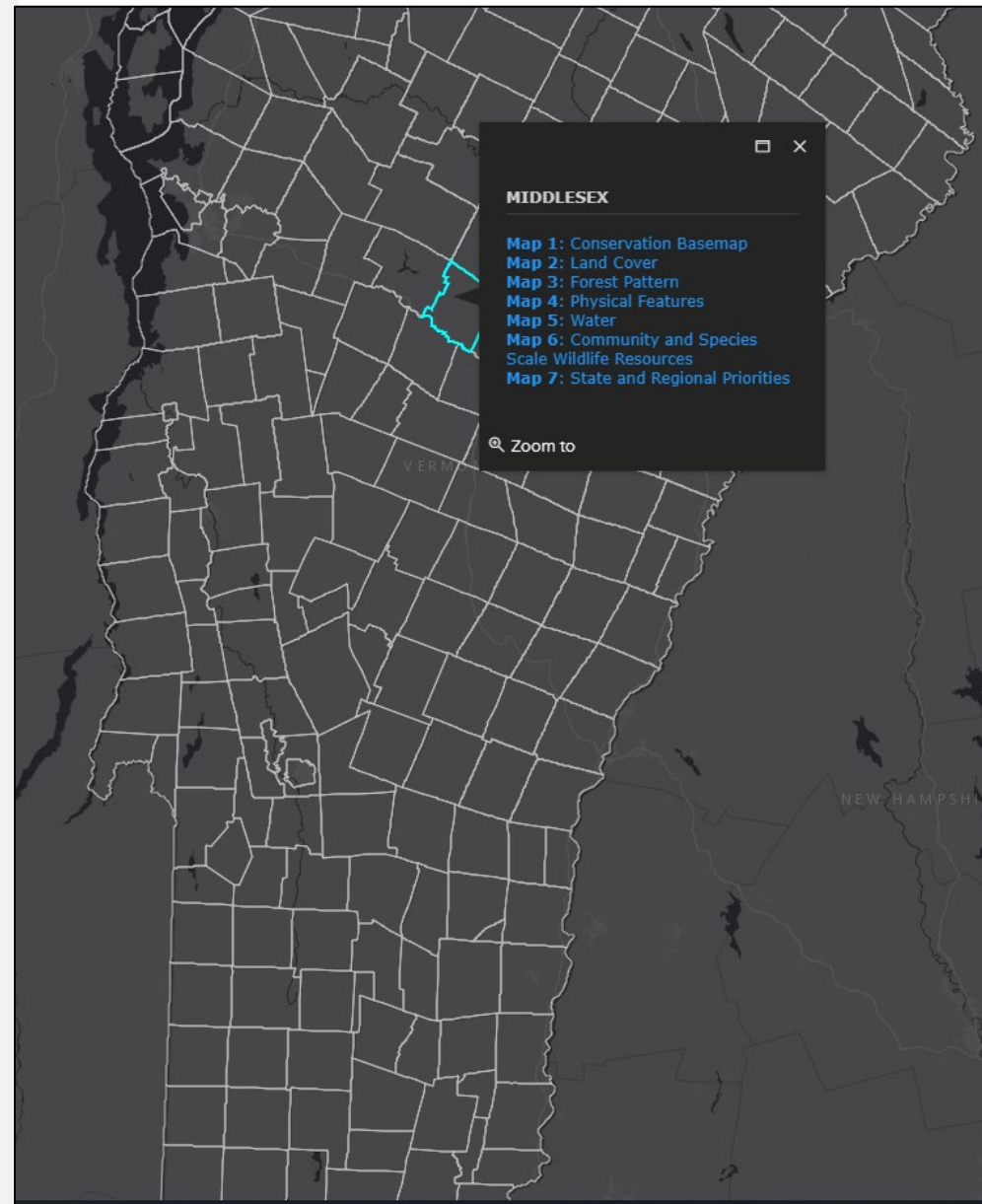


Collecting Existing Information

- VT Fish and Wildlife Data
 - Natural Heritage species
 - Natural Communities
 - Deer Wintering Areas
 - Forest blocks
 - Vermont Conservation Design
- Conserved Lands
- Land Use & Land Cover
- Prime Agricultural Soils
- Aerial Photos
- Bedrock Geology and Soils
- Water Resources and Wetlands



Inventory 7-map set for every town in VT



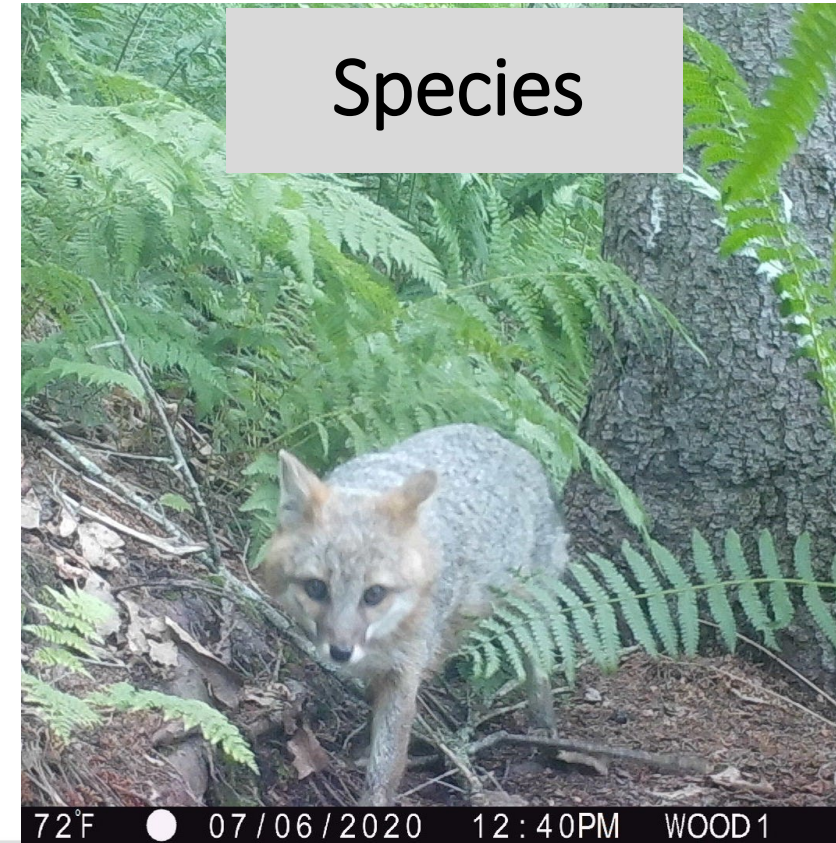
Landscapes



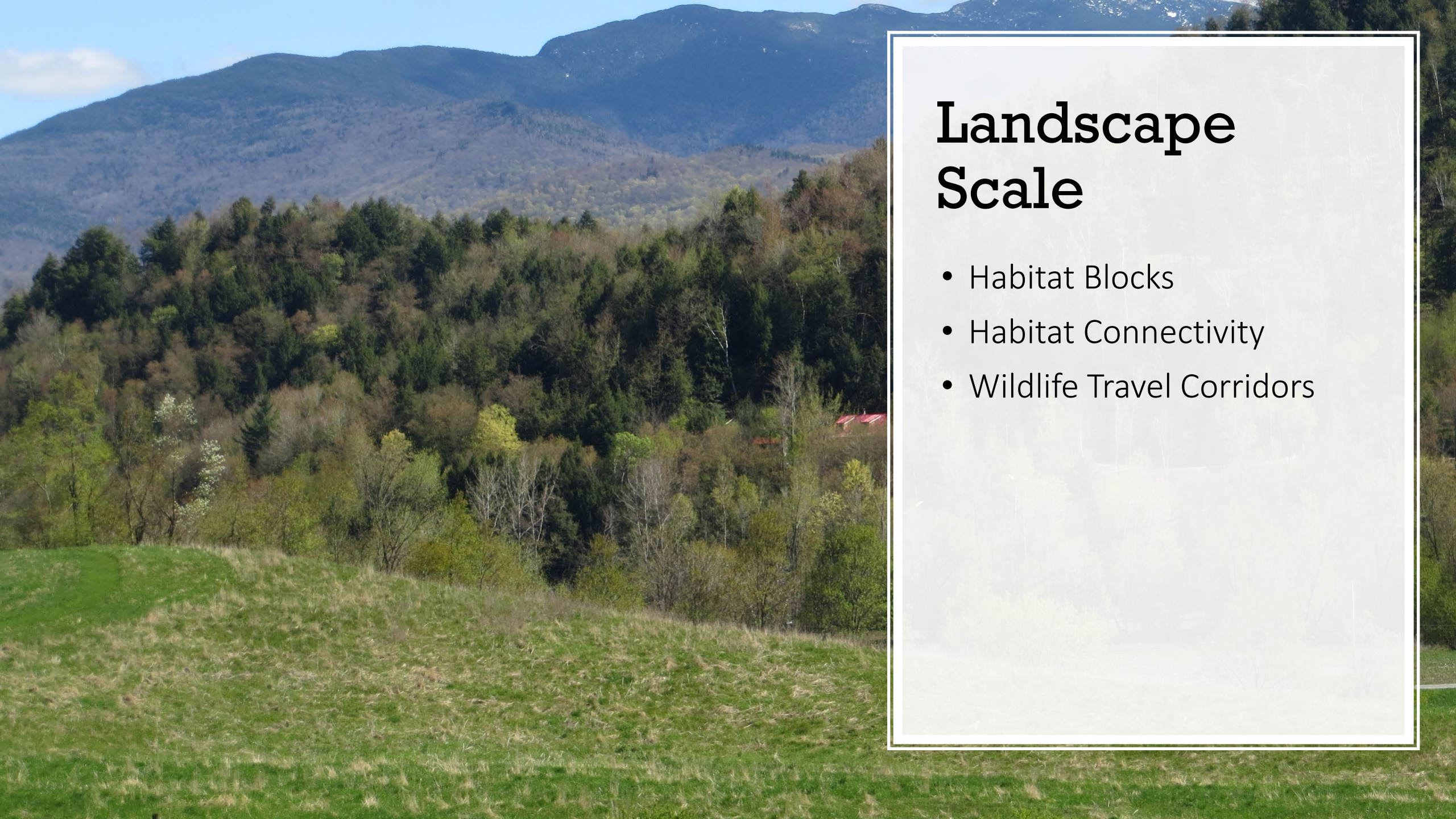
Communities



Species



Natural Resources Inventories at Three Scales

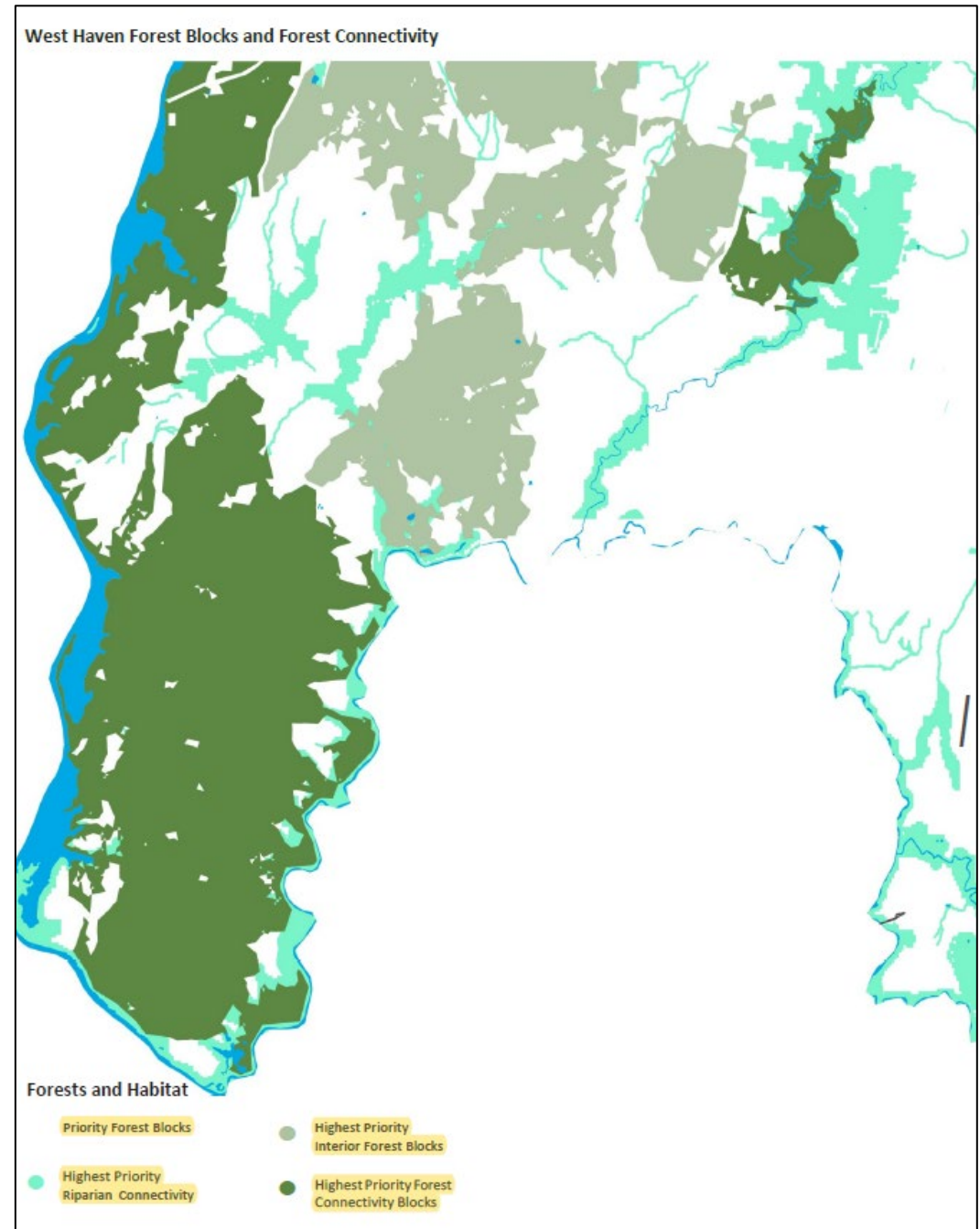
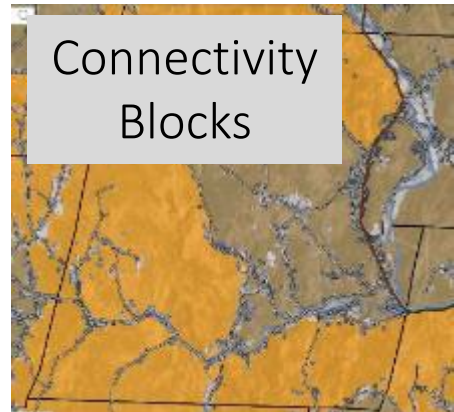
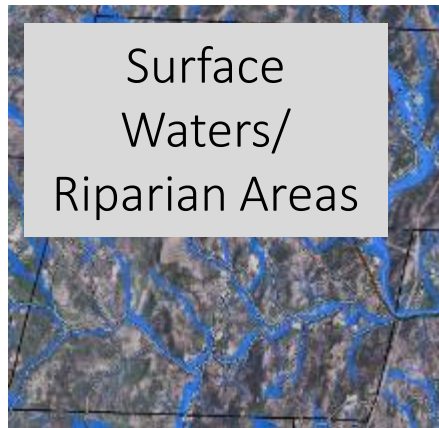
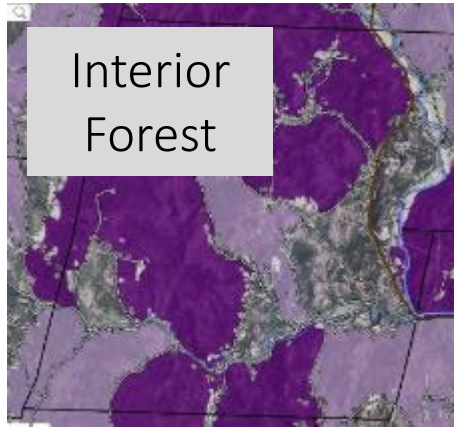


Landscape Scale

- Habitat Blocks
- Habitat Connectivity
- Wildlife Travel Corridors

Landscape – Existing Data

West Haven Act 171 Map

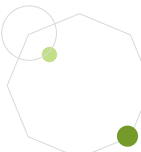
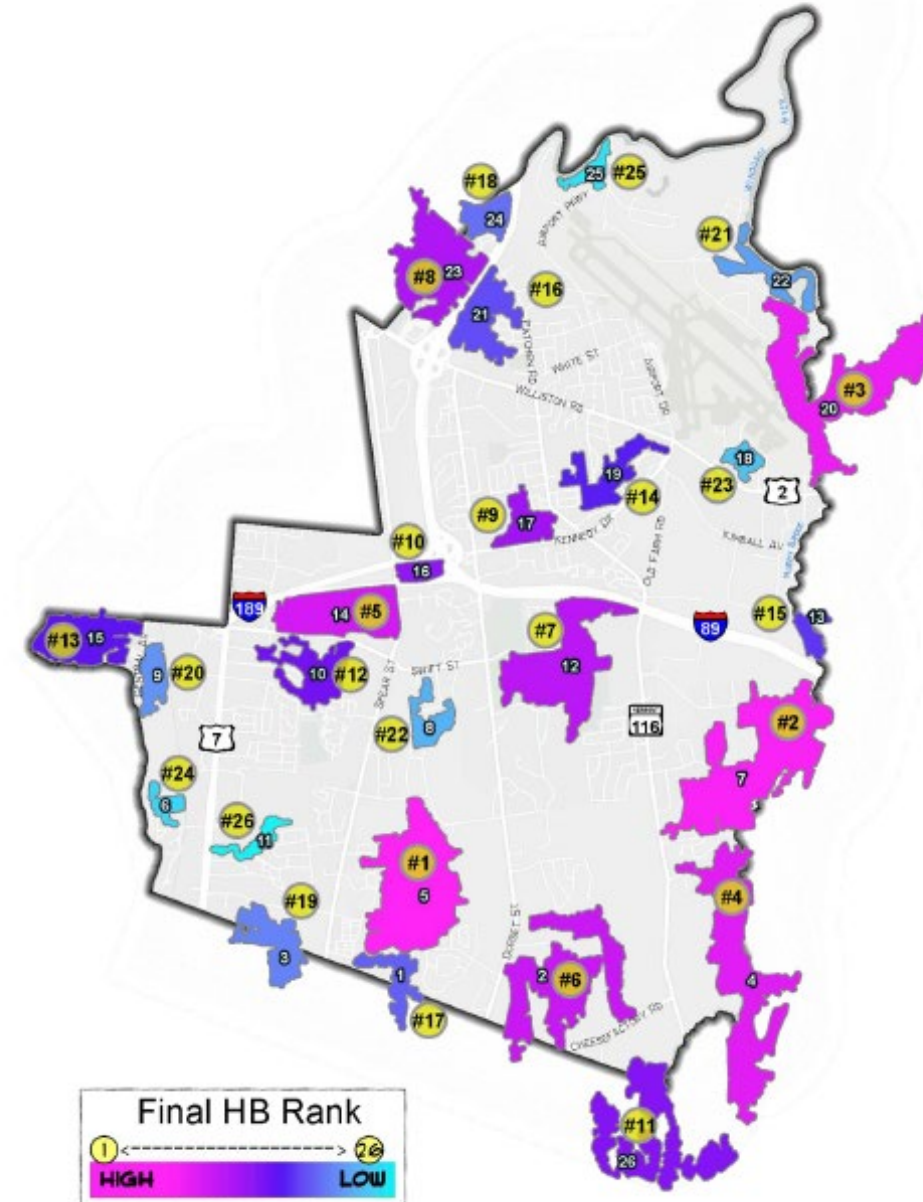
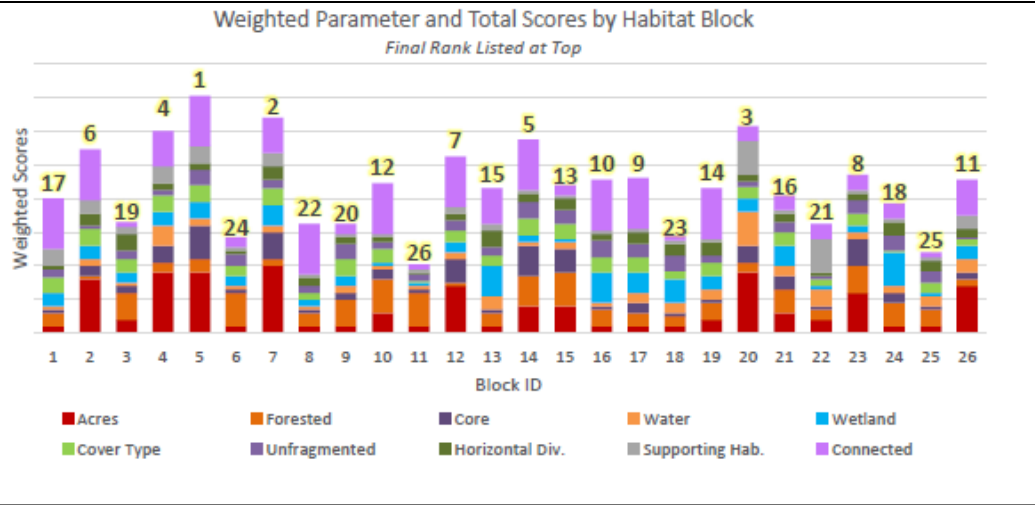


Landscape – New Data

South Burlington Habitat Block Ranking








South Burlington Habitat Block Assessment & Ranking

January 20, 2020

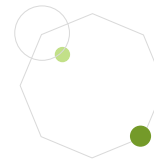
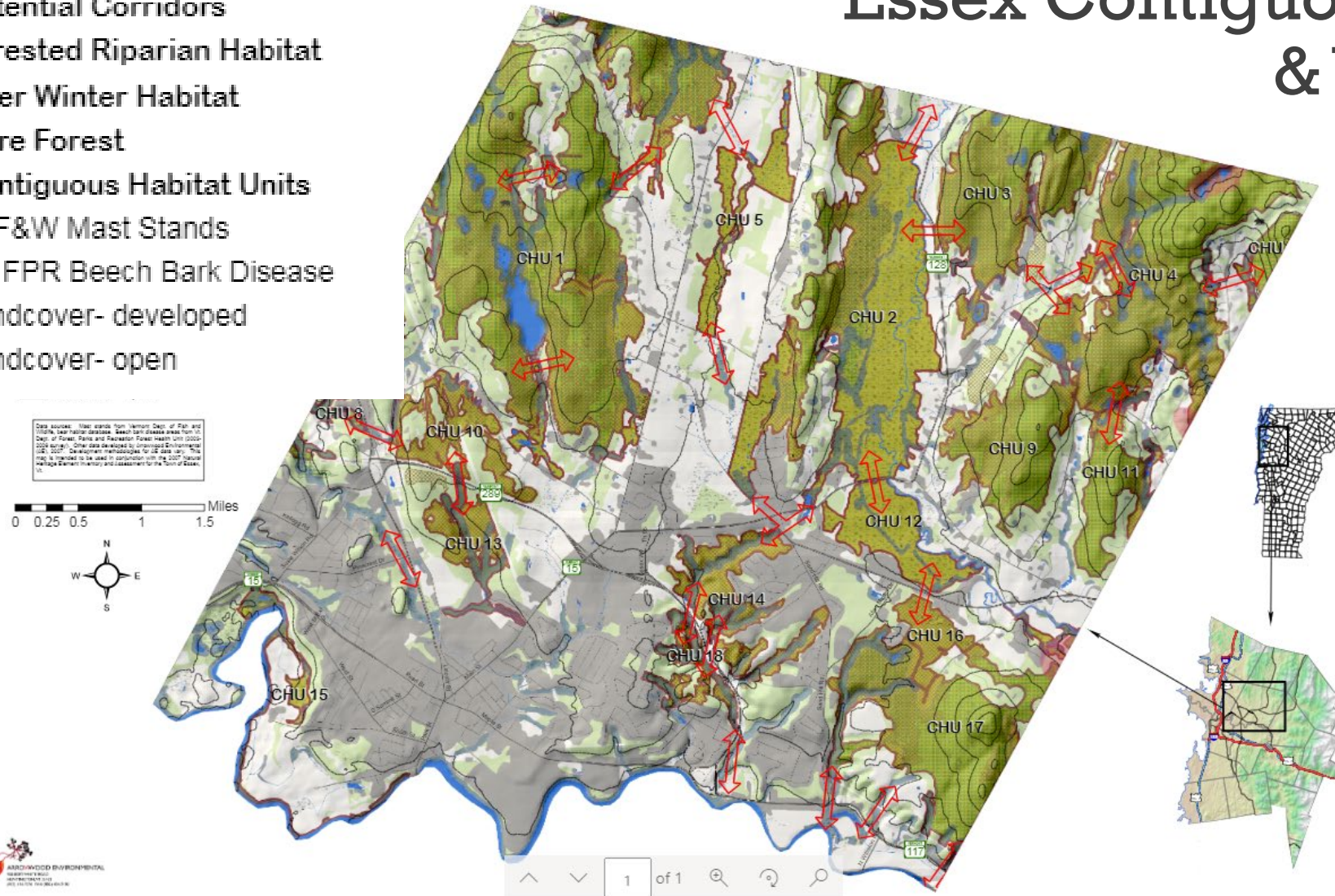


Landscape – New Data

Wildlife Habitat Features

-  Wetlands
-  Potential Corridors
-  Forested Riparian Habitat
-  Deer Winter Habitat
-  Core Forest
-  Contiguous Habitat Units
-  Vt F&W Mast Stands
-  VT FPR Beech Bark Disease
-  Landcover- developed
-  Landcover- open

Essex Contiguous Habitat Units & Wildlife Habitat



Community Scale

- Significant Natural Communities
- Wetlands & Vernal Pools
- Lakes & Ponds
- Rivers & Streams
- Riparian Areas



Community – Existing Data

Using Existing Data:

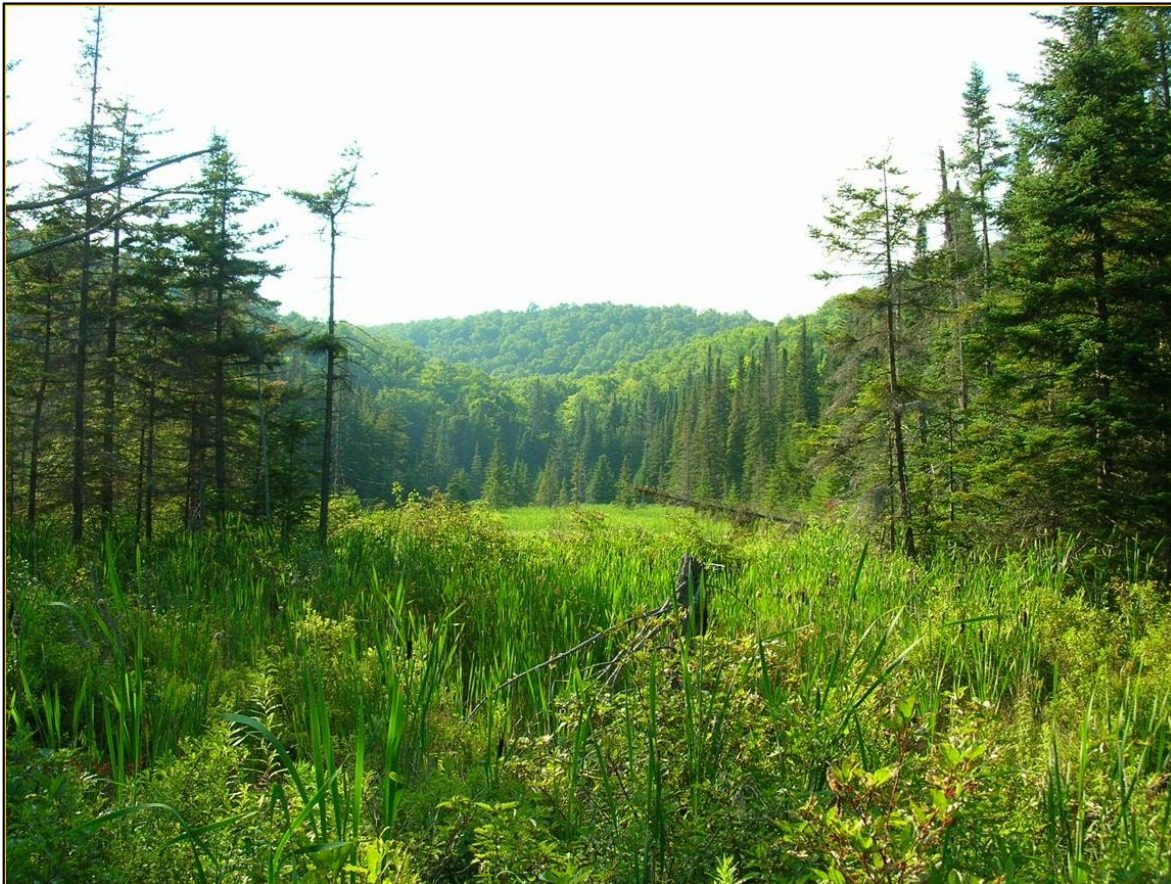
- VSWI
- Phase 2 Geomorphic Assessment
- State Significant Natural Communities
- Stream centerlines
- Lakes and Ponds

- Image of Map using existing data here
- Woodbury Lakes/Ponds?



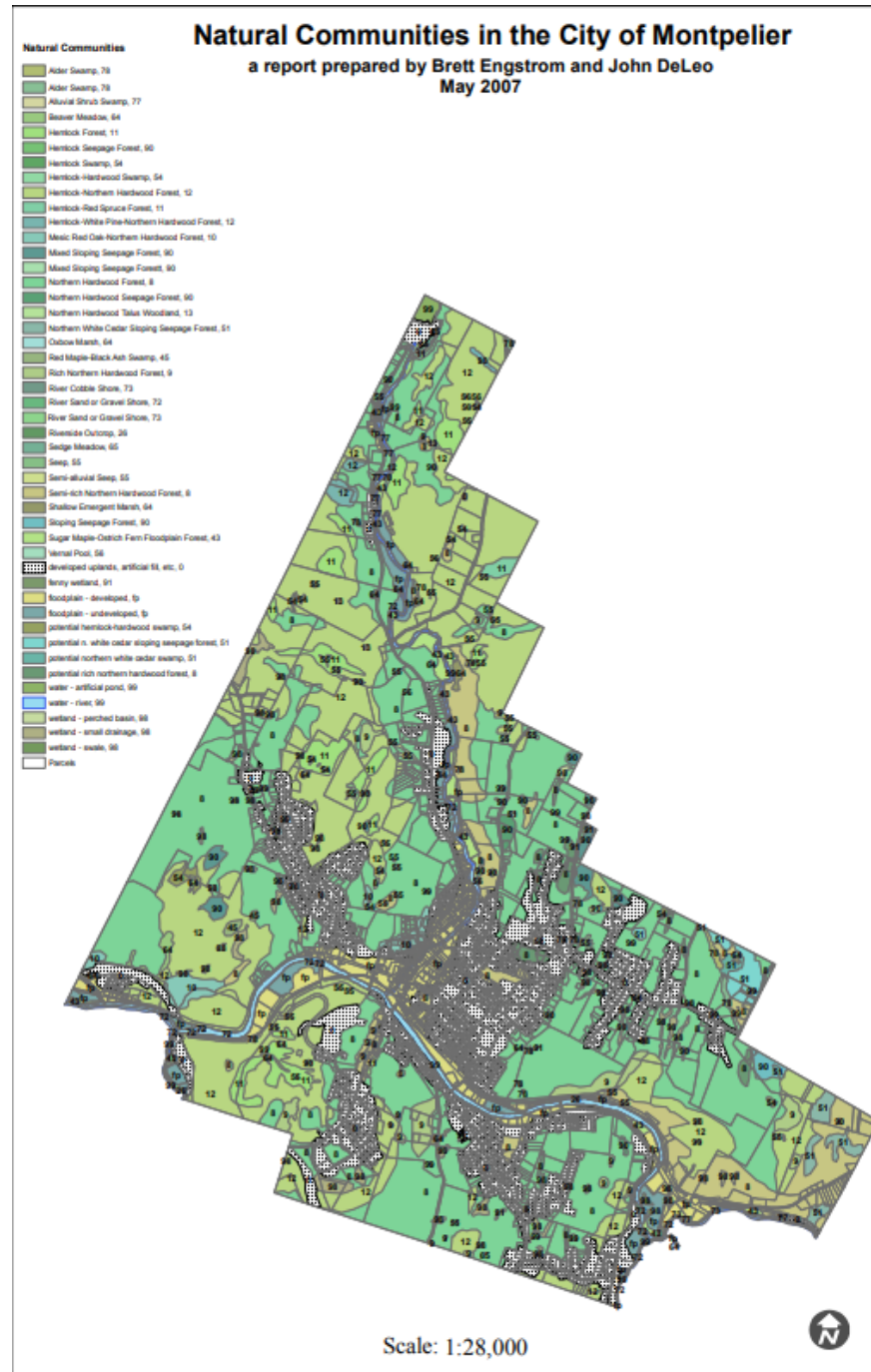
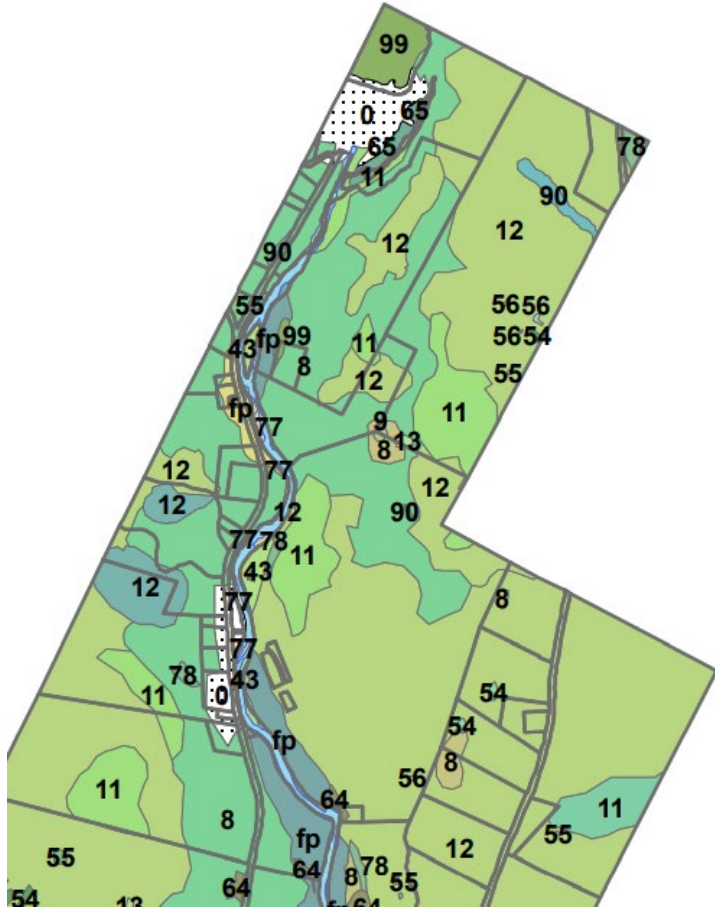
Community – New Data

Orange Co. Headwaters Wetland & Vernal Pool Inventory



Community – New Data

Montpelier Natural Community Mapping





Species Scale

- Rare/Threatened/
Endangered/Uncommon
Species
- Deer Wintering Areas
- Ledges, Cliffs, and Talus
- Mast Stands
- Early Successional Habitat
- Grassland & Shrubland



65°F



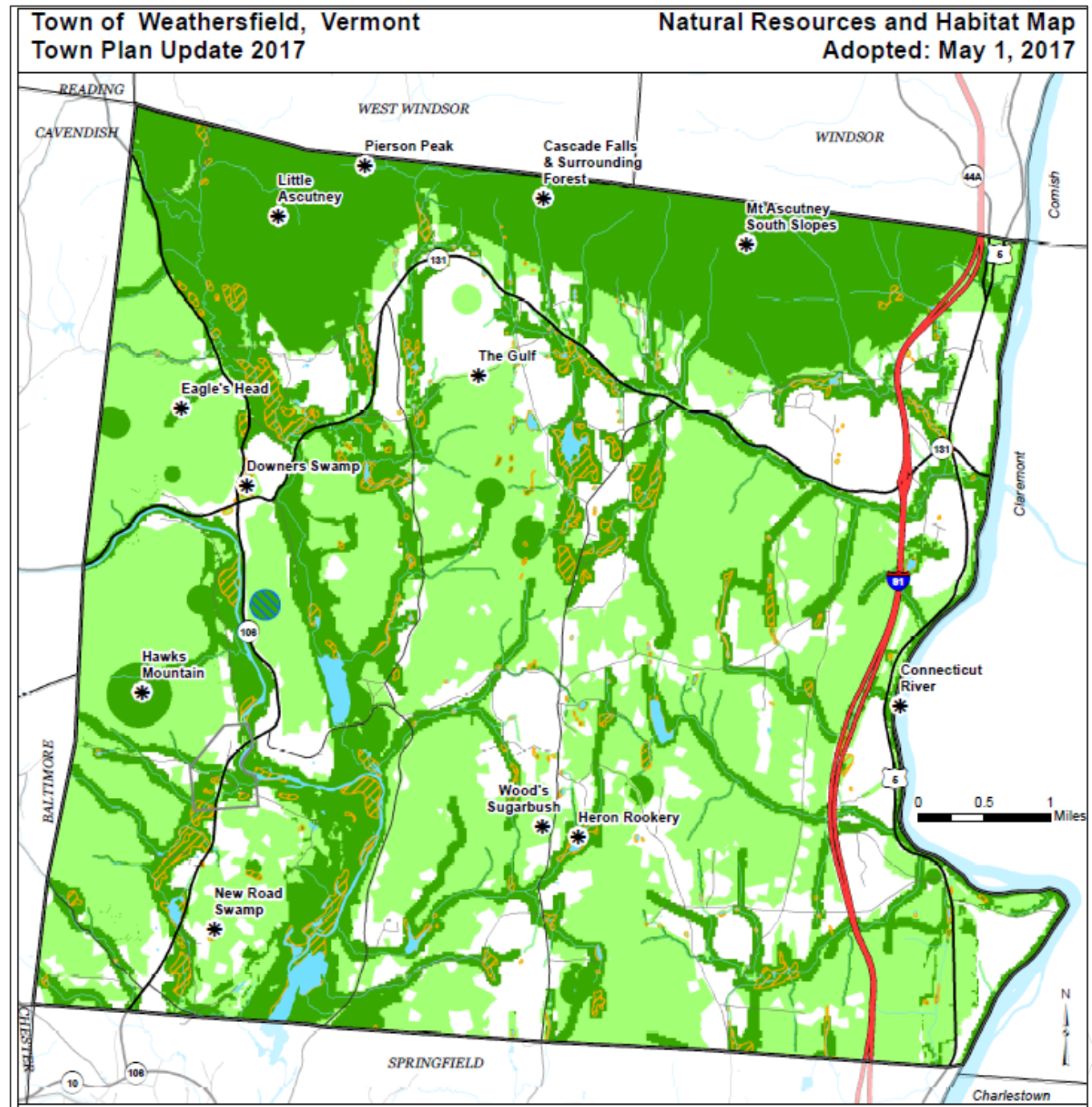
07/21/2020

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WOOD 1

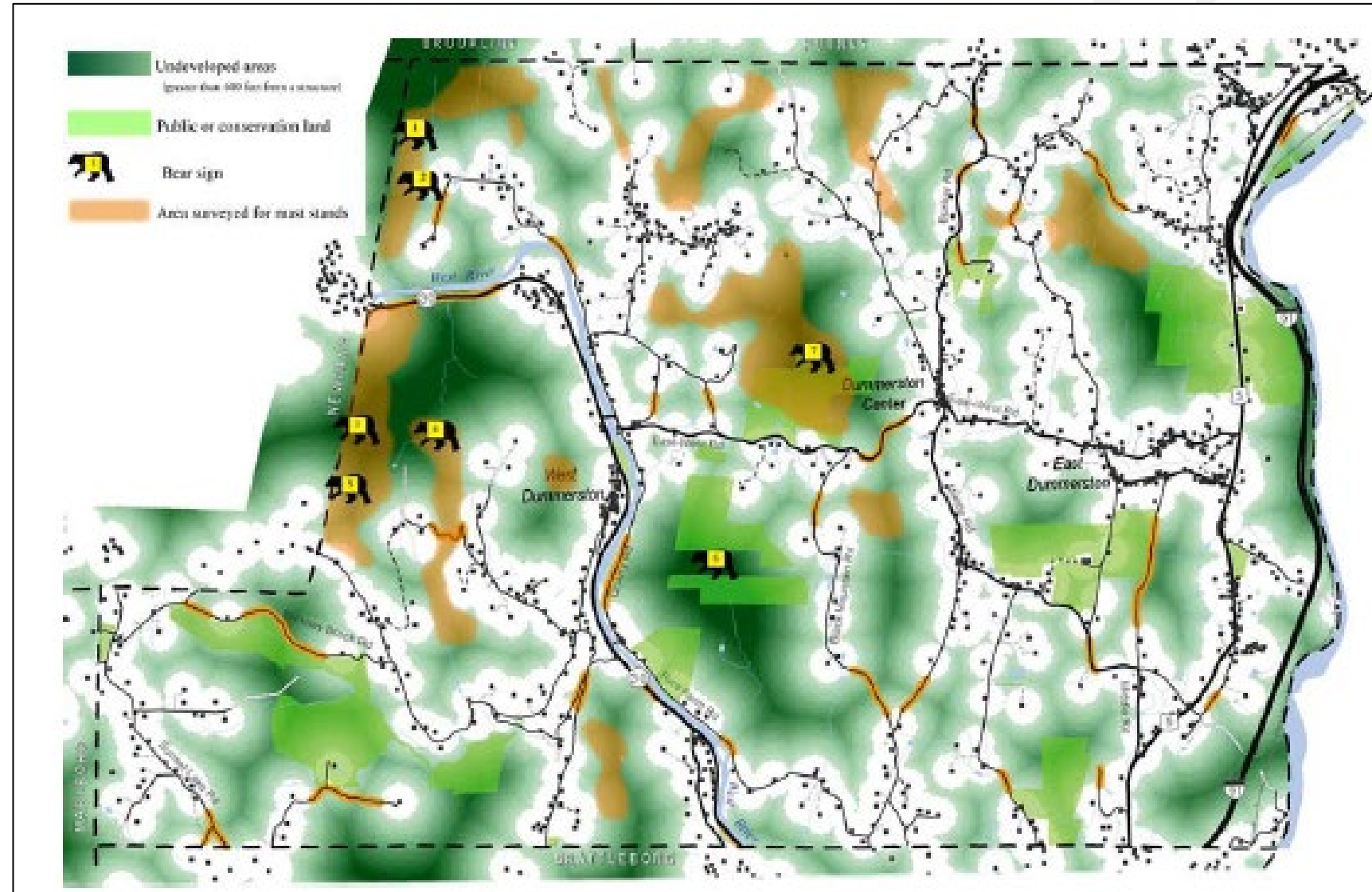
Species – Existing Data

Weathersfield Level 1 & 2 Conservation Areas



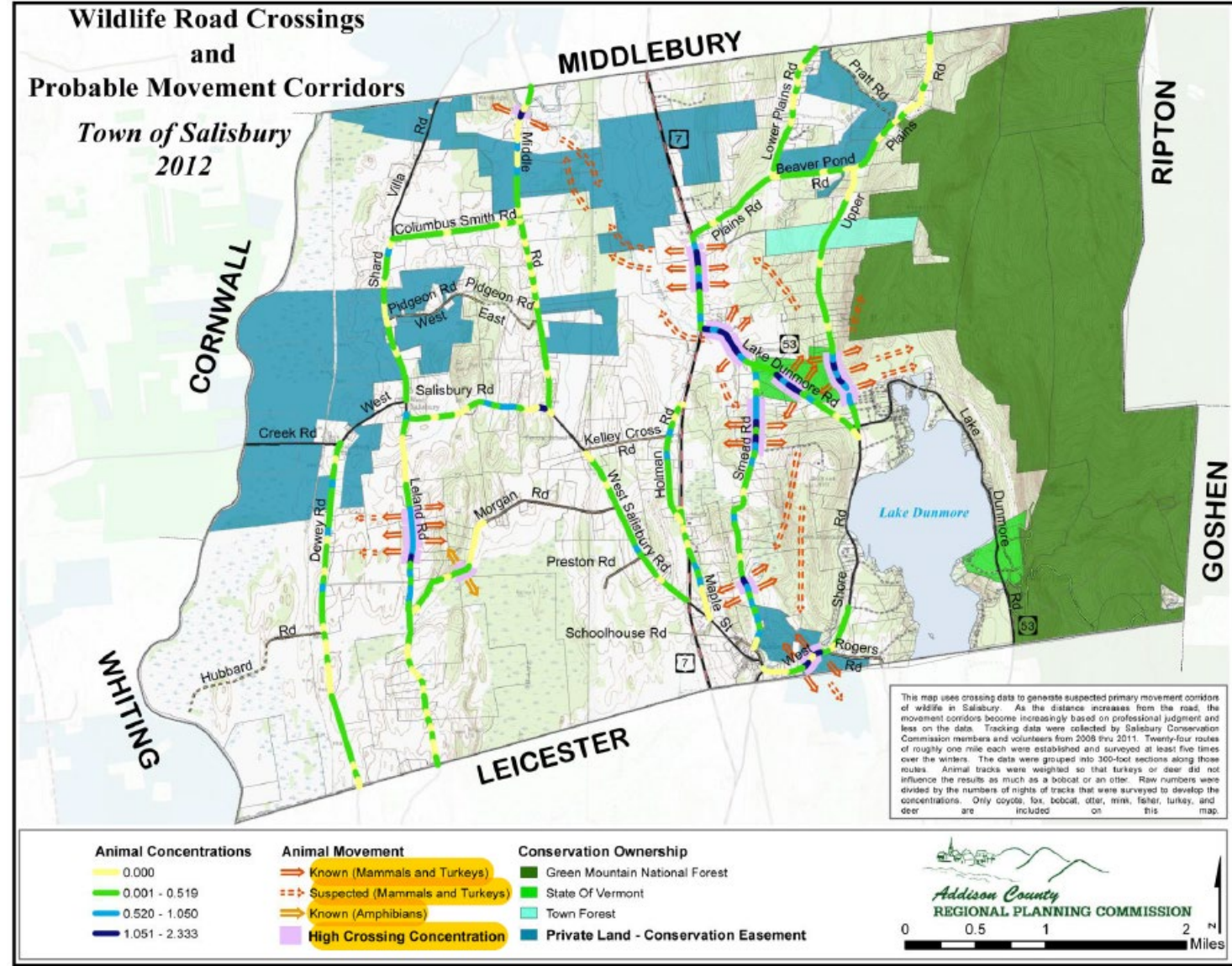
Species – New Data


Dummerston Mast Stand & Bear Sign Survey



Species – New Data

Salisbury, VT Wildlife Road Crossings & Community Tracking





Break & Questions

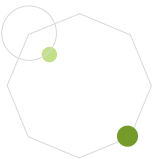
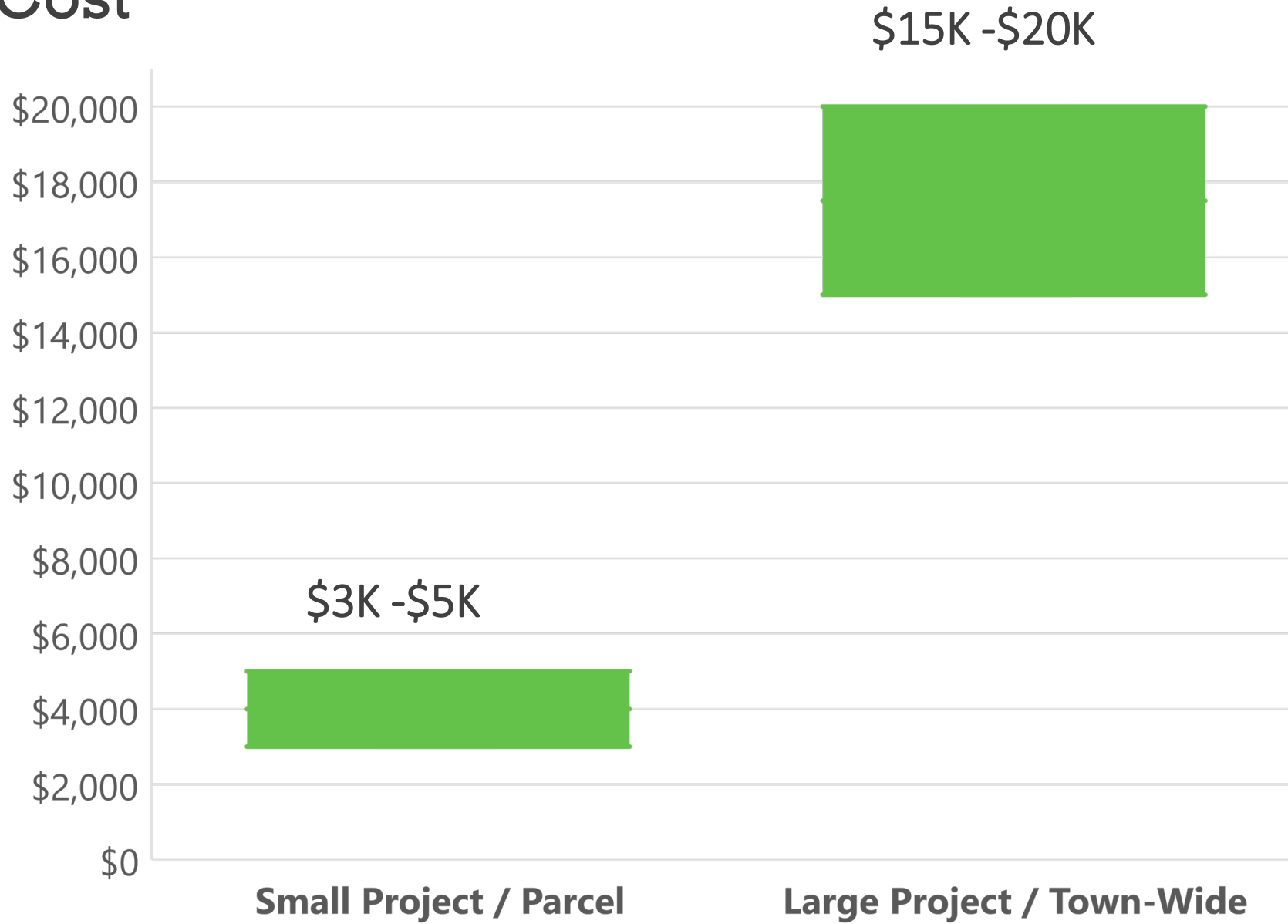
NEXT UP:
SECTION 2 OF 3



Scope and Timeline

- Focus on priorities.
- Understand future potential uses.
- Be realistic about what you can do with the assets you have.
- Seasonality Matters
 - Wetlands: May – September
 - Vernal Pools: Spring
 - Tracking: Winter
 - Natural Communities: May – Sept
 - RTE Species: Depends on species

Typical Cost



What about private property?

- Get permissions early.
- Volunteers and town committees make contacts.
- Help people understand what the data will be used for.
- Help landowners understand what's in it for them
 - UVA/ESTA eligibility
 - NRCS funding for projects
 - Conservation opportunities
 - Learning about their land
 - Increases regulatory predictability for development review process.



Your Job as the Town

- Lead on contacting landowners
- Send a postcard to residents.
- Post on Front Porch Forum.
- Create a buzz
- Hold workshops with the consultant.
- Public Presentation of Data
- Make it a community celebration!



RPF and Bid Evaluation

- **Distribute Request for Proposal (RFP)**
 - Describe project intent & timeline
 - Available funding
 - Desired qualifications
- **Evaluate Proposals**
 - Cost & Timeline
 - Key personnel
 - Relevant project history



Boyce Hill Town Forest –Inventory/Ecological Assessment Fayston, VT

Deliverables and

Scope of Ecological Services

Funding

Project cost not to exceed \$3,800.

Anticipated Timeline

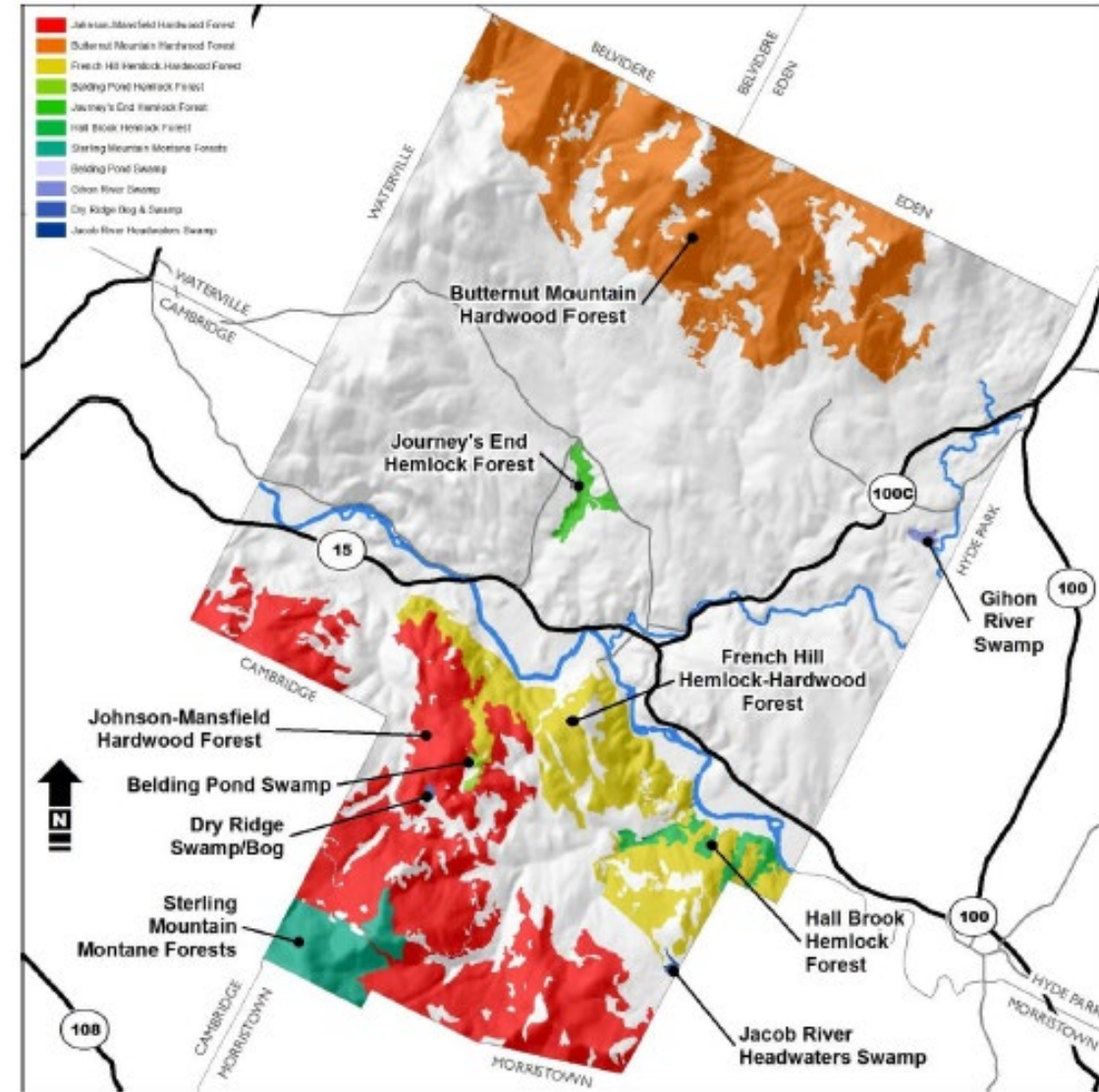
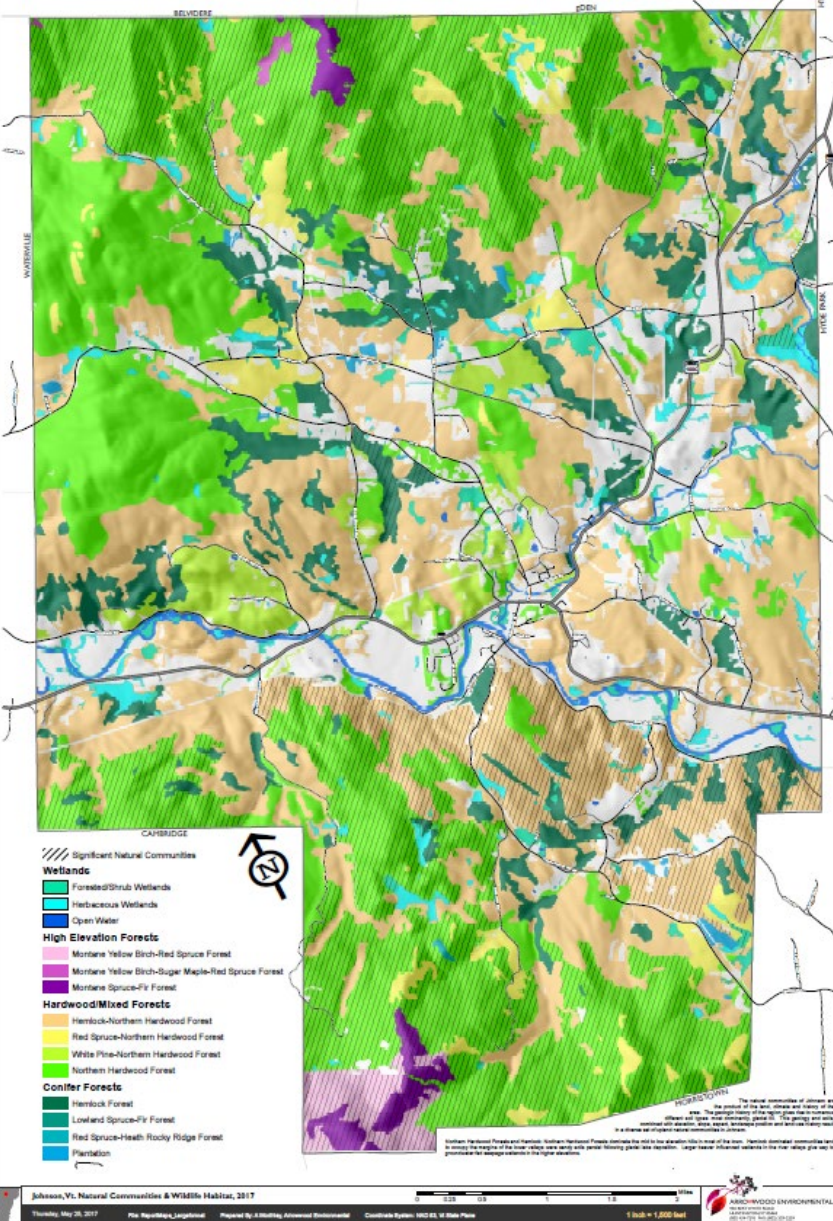
- August 27, 2020 - Letter of interest and qualifications due
- September 1, 2020 - Selection made by the FCC at their meeting, notification follows
- September 8, 2020 - Contract signed by Selectboard at their meeting. Work to begin.
Work closely with members of the FCC.
- November 2, 2020 - Final report due. If feasible, sooner is better.
- TBD - Presentation to the public.

- Rare, threatened, endangered species
- This property's role in the larger landscape - regionally and statewide



Johnson, VT Natural Resources Inventory

Johnson, Vt. Natural Communities:
Upland Forests, Wetlands and Significant Natural Communities



Local Funds

- Appropriation to Conservation Commission/ Planning Commission budget
- Town Conservation Fund
- Supplement with AVCC Tiny Grant (up to \$600)

Hinesburg, VT

2019-2020

Paid out of pocket for
Phase 1 Natural Resources Inventory



Small Grants for Smart Growth (VNRC)

- \$1,500 - \$3,500
- Can be used for NRI but must connect to some smart growth policy/regulation.

Canaan, VT

Year awarded: 2020

Canaan Naturally Connected will use its \$1,200 grant to collect public input about usage of the Canaan Community Forest in the Northeast Kingdom. This will include determining how to enhance connectivity between the forest and nearby towns.



Watershed Grants (VT DEC & VT FWD)

Up to \$3,500 for

- Planning
- Assessment
- Inventory
- Monitoring

Charlotte, VT

Year Awarded: 2004

\$3,200 for Natural Community Mapping
& Assessment of Thorp and Kimball
Brooks



Municipal Planning Grant (VT ACCD)

- Min \$2,500 / Max \$22,000
- Max \$35,000 for group of municipalities
- Requires 10% of grant amount matched

Johnson, VT

Year Awarded: 2016


\$14,000 for a town-wide Natural Resources Inventory

Mount Holly, VT

Year Awarded: 2008

\$15,000 for a town-wide Natural Resources Inventory



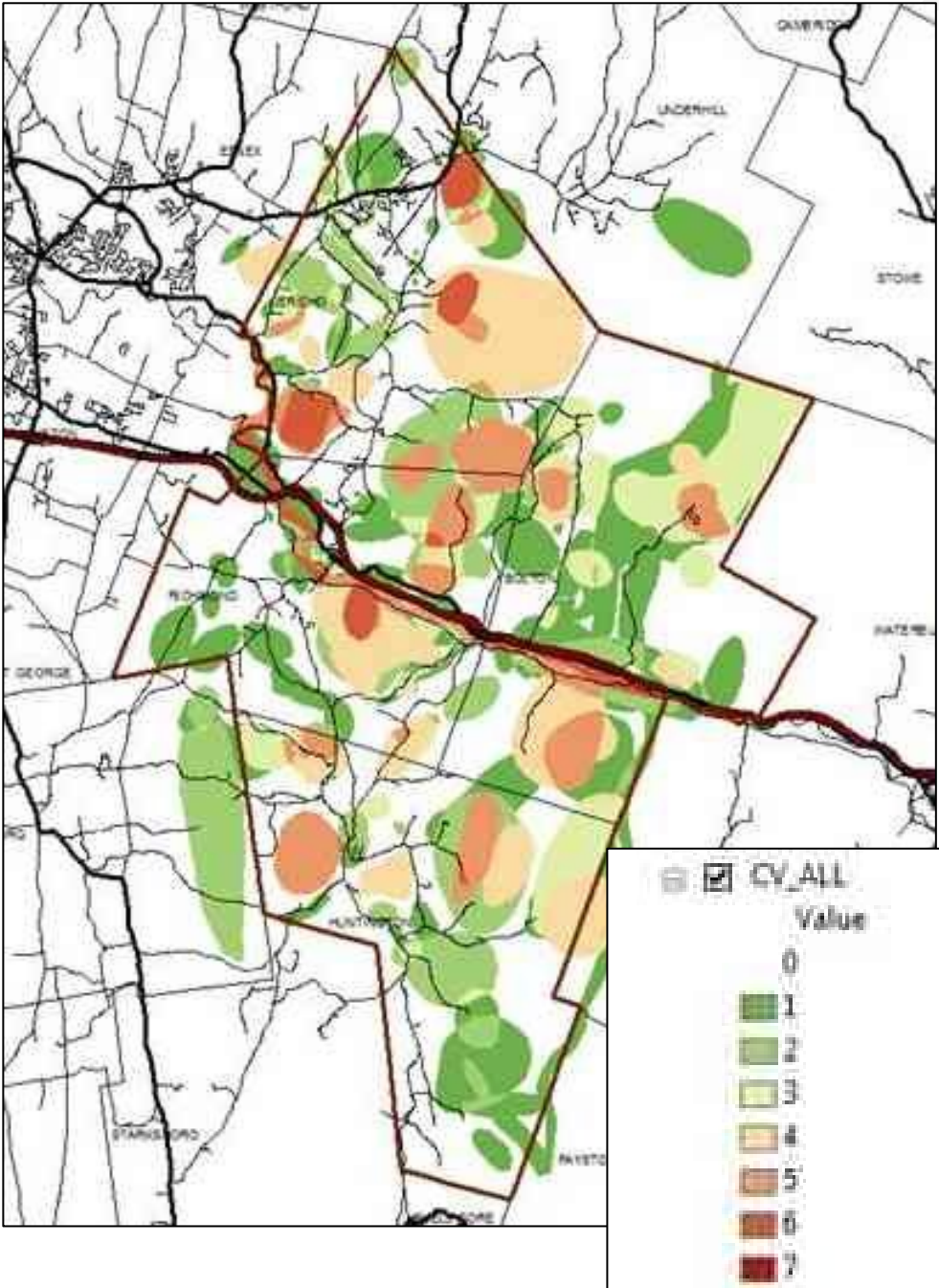


Break & Questions

NEXT UP:
SECTION 3 OF 3

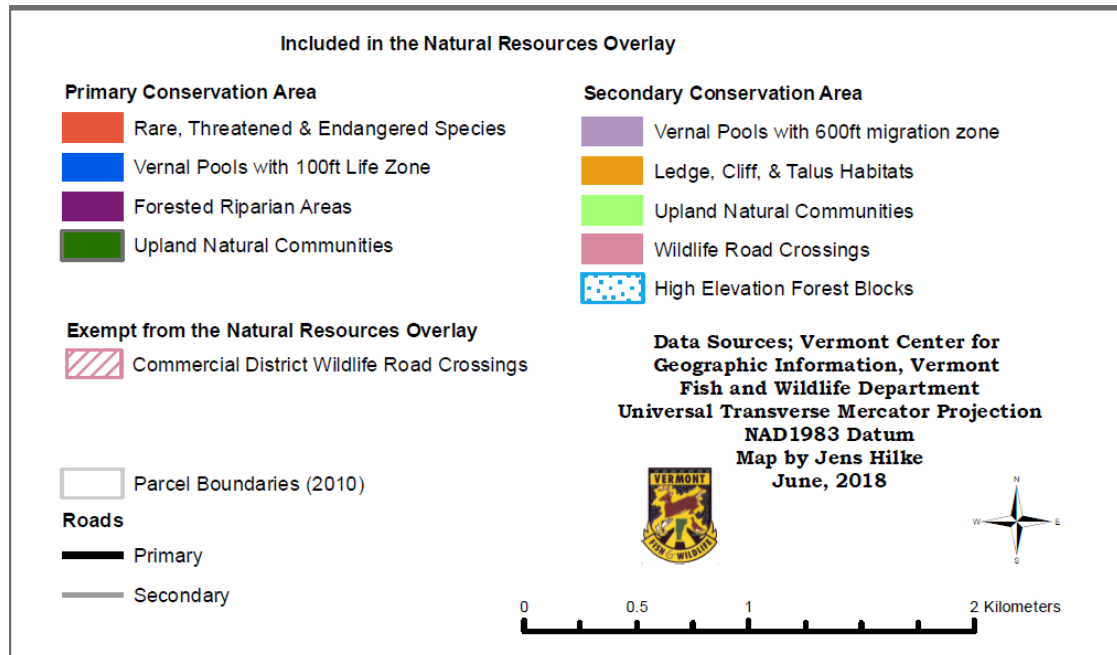
Science to Action

- Hosted series of walks and talks
- Created a buzz of celebration
- Community Values Mapping as companion engagement

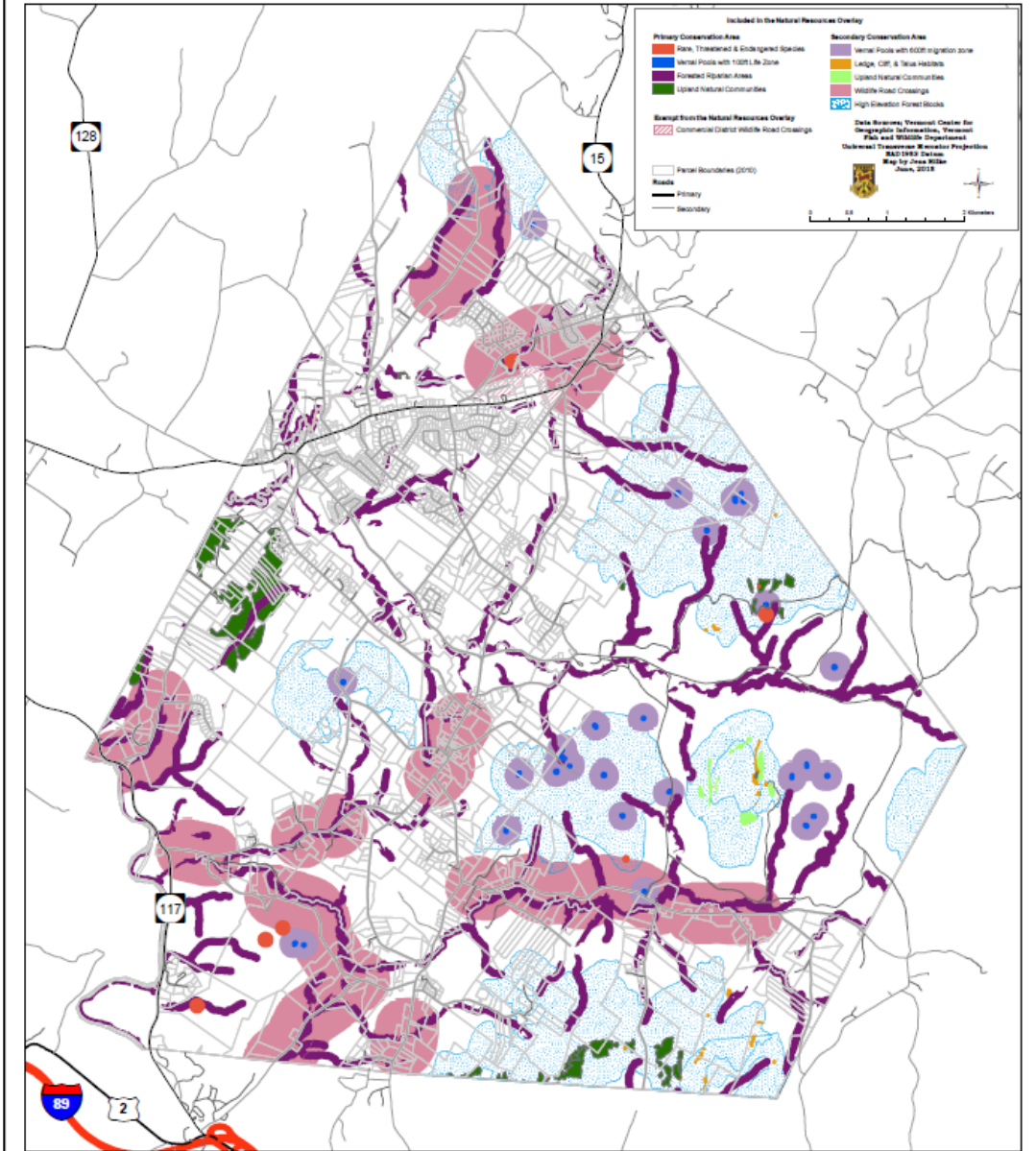


Jericho Natural Resources Overlay District

- 8 Years after Natural Resources Inventory



JERICHO'S NATURAL RESOURCES OVERLAY DISTRICT 2018



Orange Co. Headwaters

- Walks/talks on existing conserved land.
- Additional easements.





Upcoming Webinars & Trainings

- Starting A Conservation Commission
- Starting Your Town Conservation Fund
- NR 1: Vermont's Ecology & Environment
- NR 2: Caring for Natural Resources – Taking Action in Your Community

<https://anr.vermont.gov/content/trainings>



How you can support conservation in Vermont



Vermont Habitat Stamp



Nongame Wildlife Fund

<http://vtfishandwildlife.com/donate>





Thank You!

Contact Us:

Jens.Hilke@Vermont.gov

Andrew.Wood@Vermont.gov

