

Act 171 big change and connects with VT Conservation Design goals

STATE PLANNING GOALS – 24 V.S.A. §4302

These guide local planning process and related policies in addition to regional and state planning efforts. Vermont's goal of maintaining and improving natural resources now specifically calls for management to maintain and improve forest blocks and habitat connectors.

RELEVANT AND NEW LANGUAGE

(6) To maintain and improve the quality of air, water, wildlife, forests, and other land resources.

....

(C) Vermont's forestlands should be managed so as to maintain and improve forest blocks and habitat connectors.



MUNICIPAL PLANS - 24 V.S.A. §4382

For municipalities that choose to plan, Chapter 117, (24 V.S.A. §4382), requires the plan include 12 elements, many related to natural resources. Municipal Plans adopted after January 1, 2018 must now include a map that identifies forest blocks and habitat connectors.

RELEVANT AND NEW LANGUAGE

(2) A land use plan, which shall consist of a map and statement of present and prospective land uses, that:

(A) Indicates those areas proposed for forests, recreation, agriculture (using the agricultural lands identification process established in 6 V.S.A. §8), residence, commerce, industry, public, and semi-public uses, and open spaces, areas reserved for flood plain, and areas identified by the State, the regional planning commission, or the municipality that require special consideration for aquifer protection; for wetland protection; **for the maintenance of forest blocks, wildlife habitat, and habitat connectors**; or for other conservation purposes.

....

(D) Indicates those areas that are important as forest blocks and habitat connectors and plans for land development in those areas to minimize forest fragmentation and promote the health, viability, and ecological function of forests. A plan may include specific policies to encourage the active management of those areas for wildlife habitat, water quality, timber production, recreation, or other values or functions identified by the municipality.



PLANNING: A Key Step Towards Protecting Forest and Wildlife Resources

12/14/17 DRAFT

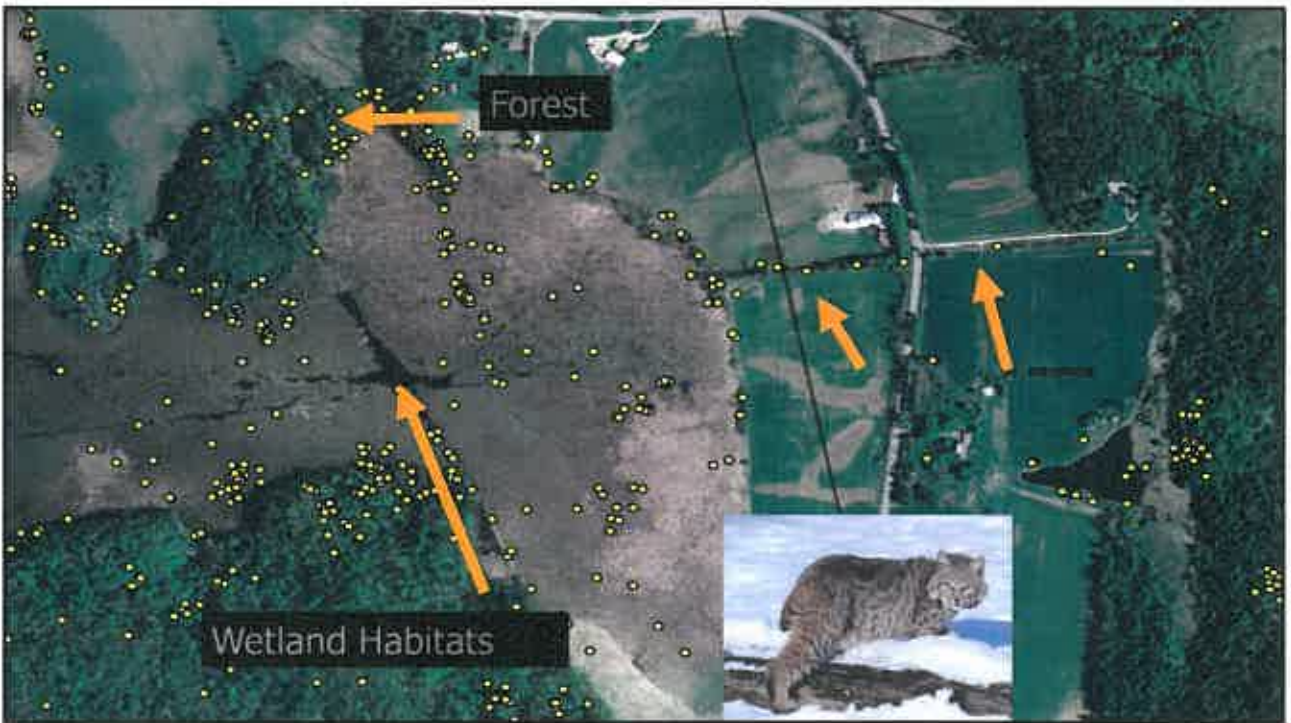
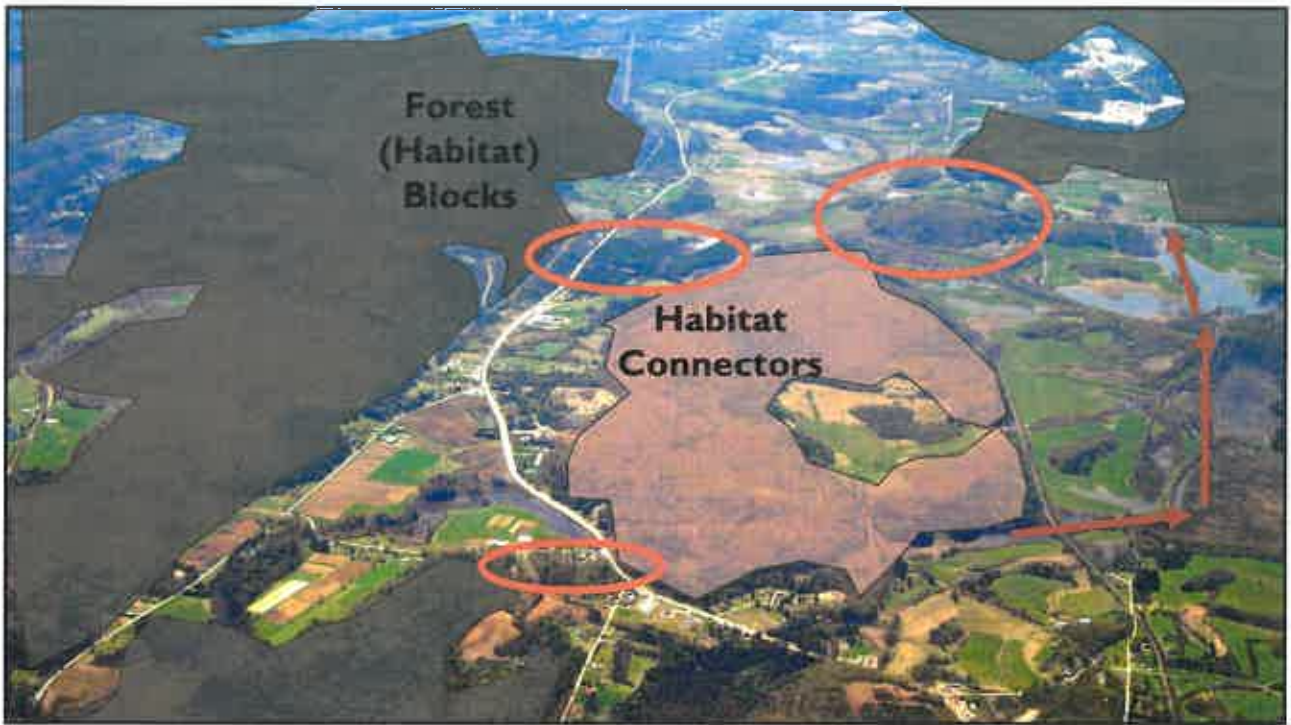
ACT 171 GUIDANCE

Link

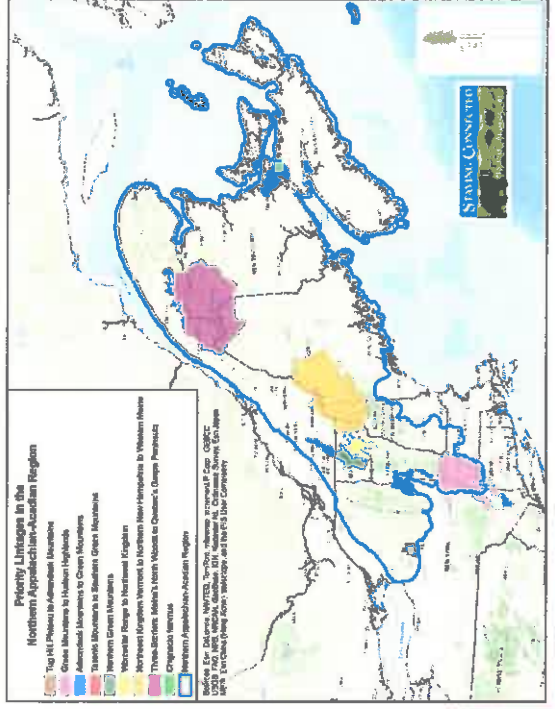
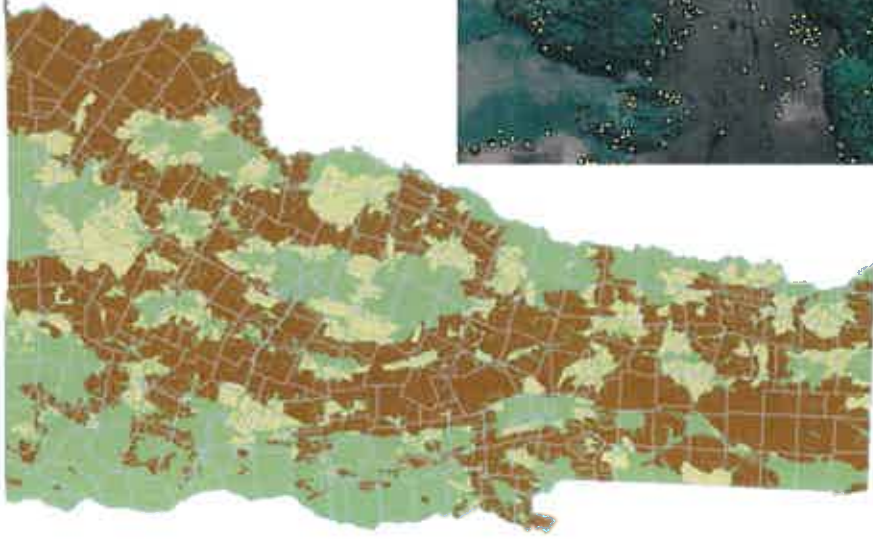
[http://anr.vermont.gov/Planning/Forest Blocks and Habitat Connectors](http://anr.vermont.gov/Planning/Forest%20Blocks%20and%20Habitat%20Connectors)



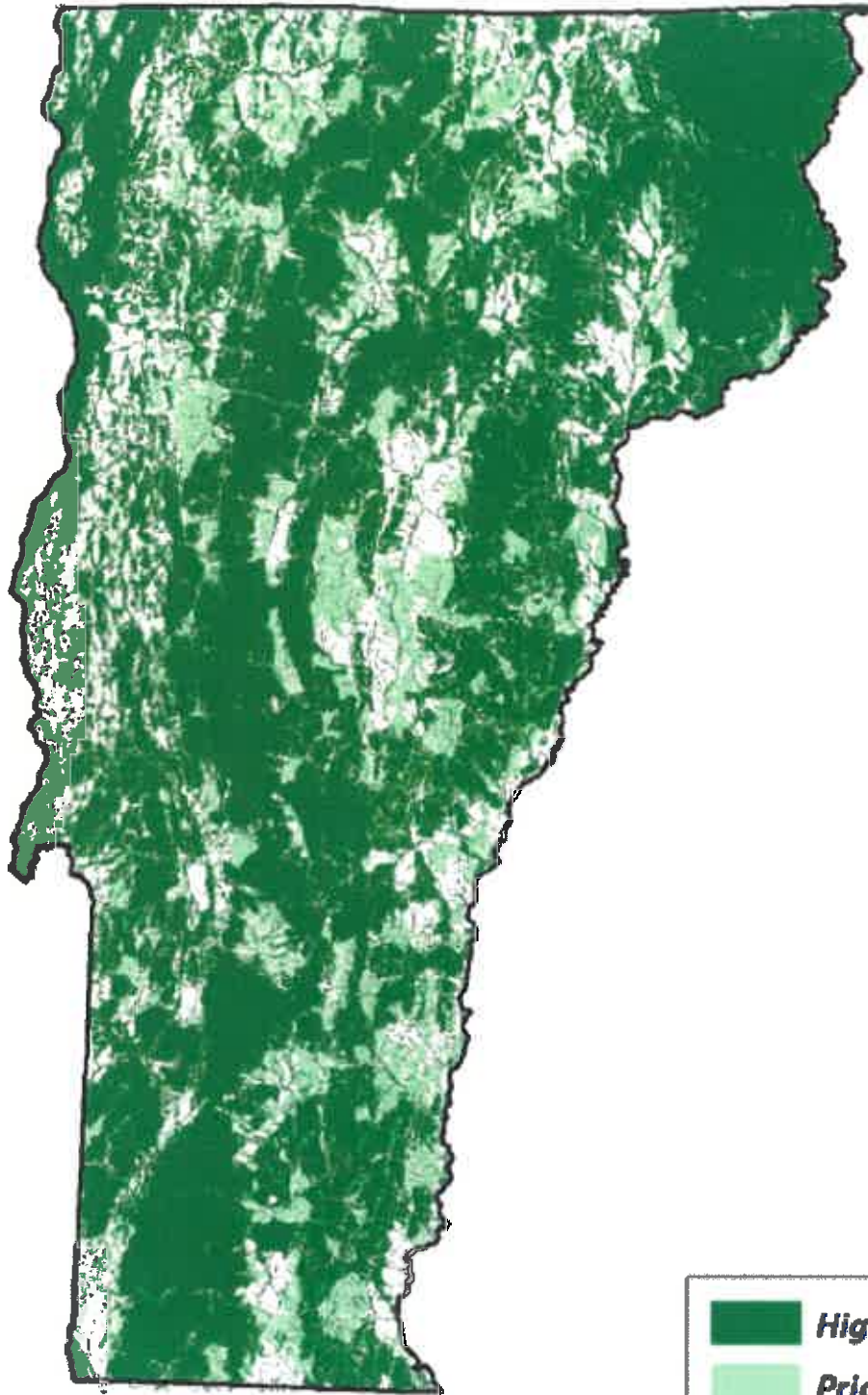




ALL SCALES MATTER!



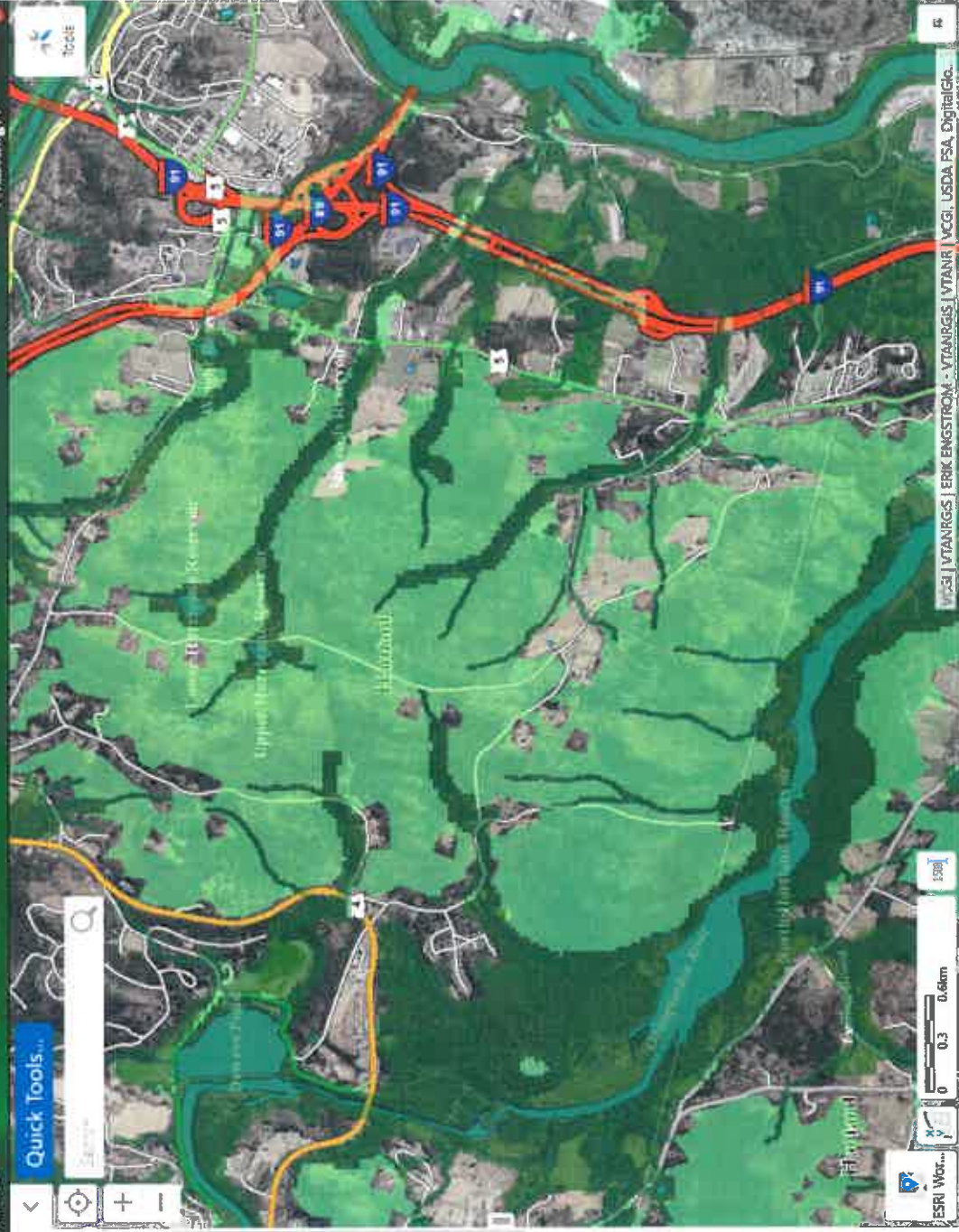
VT Conservation Design



BioFinder 2016

Vermont Agency of Natural Resources

vermont.gov



Quick Tools...

Search

Layers

Prioritization

Filter Layers

Overall Priorities: Vermont Conservation

Design

- Community & Species Scale (Components combined)

- Landscapes Scale (Components combined)

Priority Rank

- HIGHEST PRIORITY
- PRIORITY

Component Layers

Community & Species Scale Components

Landscapes

Infrastructure

Representative Values

Biological Surface Waters

Highest Priority Wildlife Crossings

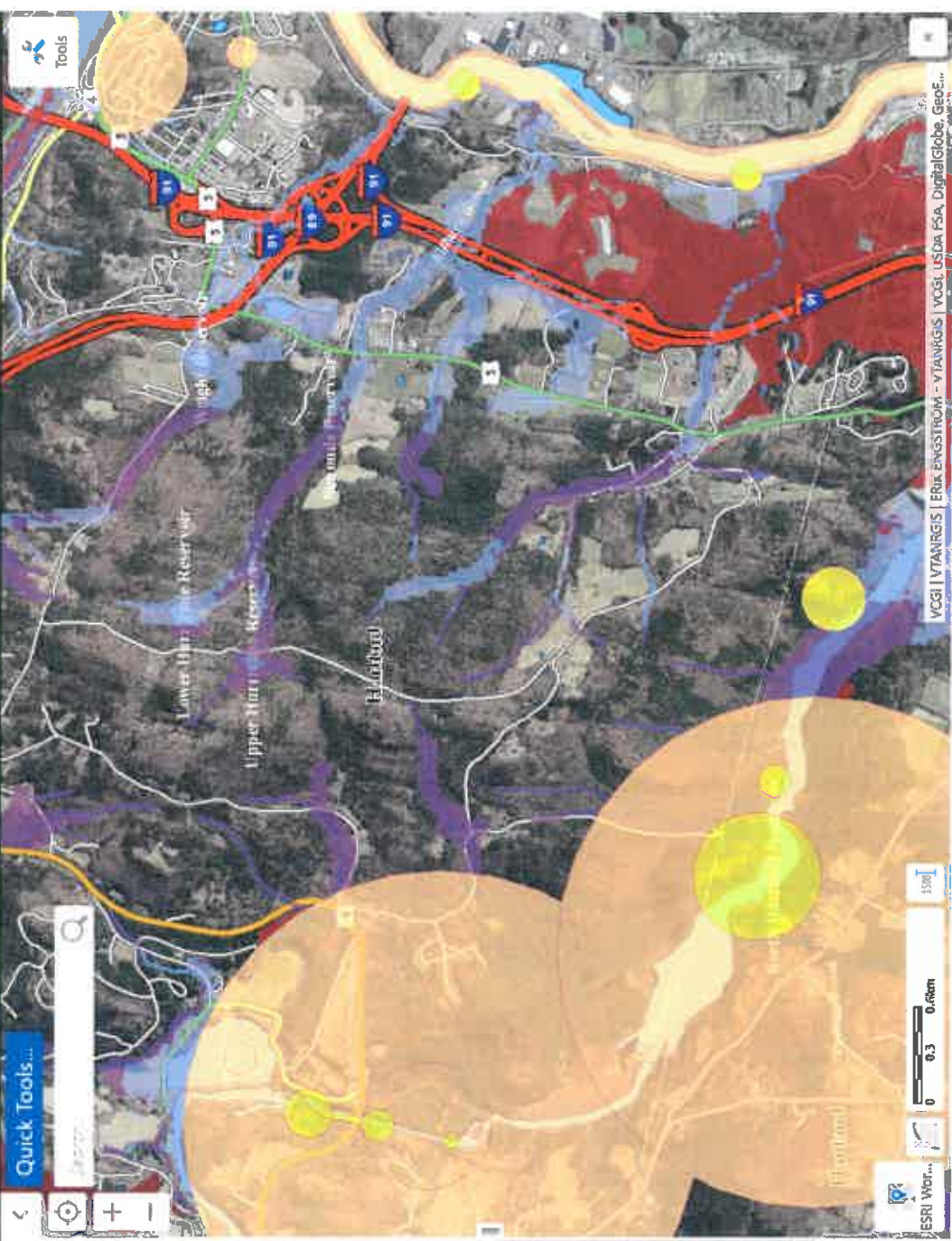
Priority Wildlife Crossings

Water Bodies

Scale 0 0.3 0.6km

ESRI Work... 1998

VCGI | VTANRGIS | ERIK ENGSTROM - VTANRGIS | VTANR | VCGI, USDA FSA, DigitalGlobe



Layers

Quick Tools...

ESRI

ESRI Work...

0 0.3 0.6km

1500

Filter Layers...

Filter

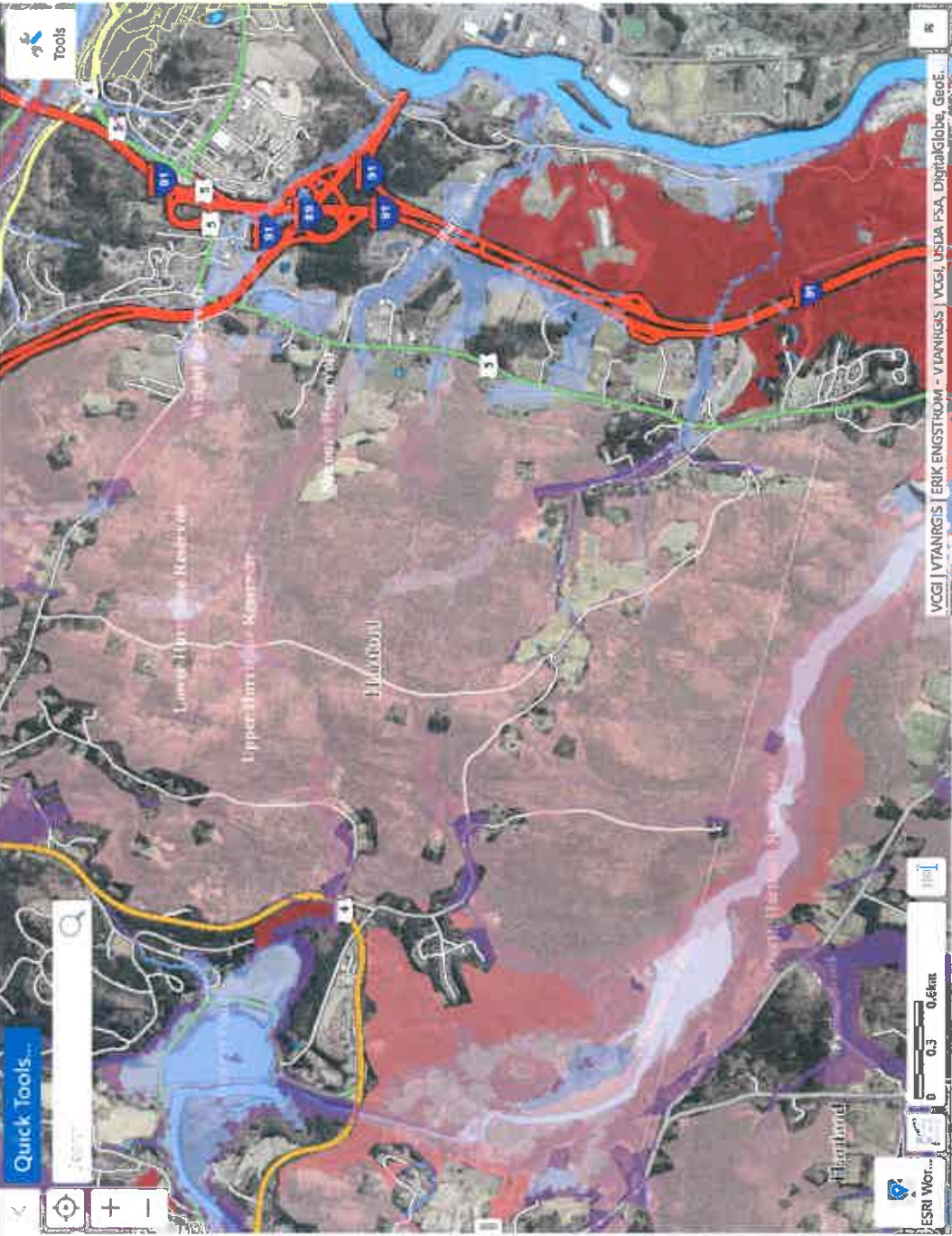
- Plant
- Uncommon Species
- Rare Natural Communities
- Uncommon Natural Communities
- Common Natural Communities
- Landscape Scale Components
- Riparian Wildlife Connectivity
- Highest Priority Surface Water and Riparian Areas
- Priority Surface Waters and Riparian Areas
- Highest Priority Interior Forest Blocks
- Priority Interior Forest Blocks
- Highest Priority Connectivity Blocks
- Priority Connectivity Blocks
- Physical Landscapes
- Rare
- Representative

ESRI Work... Layers

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Layers

Quick Tools

Search

Map navigation controls

ESRI WOL... Layers

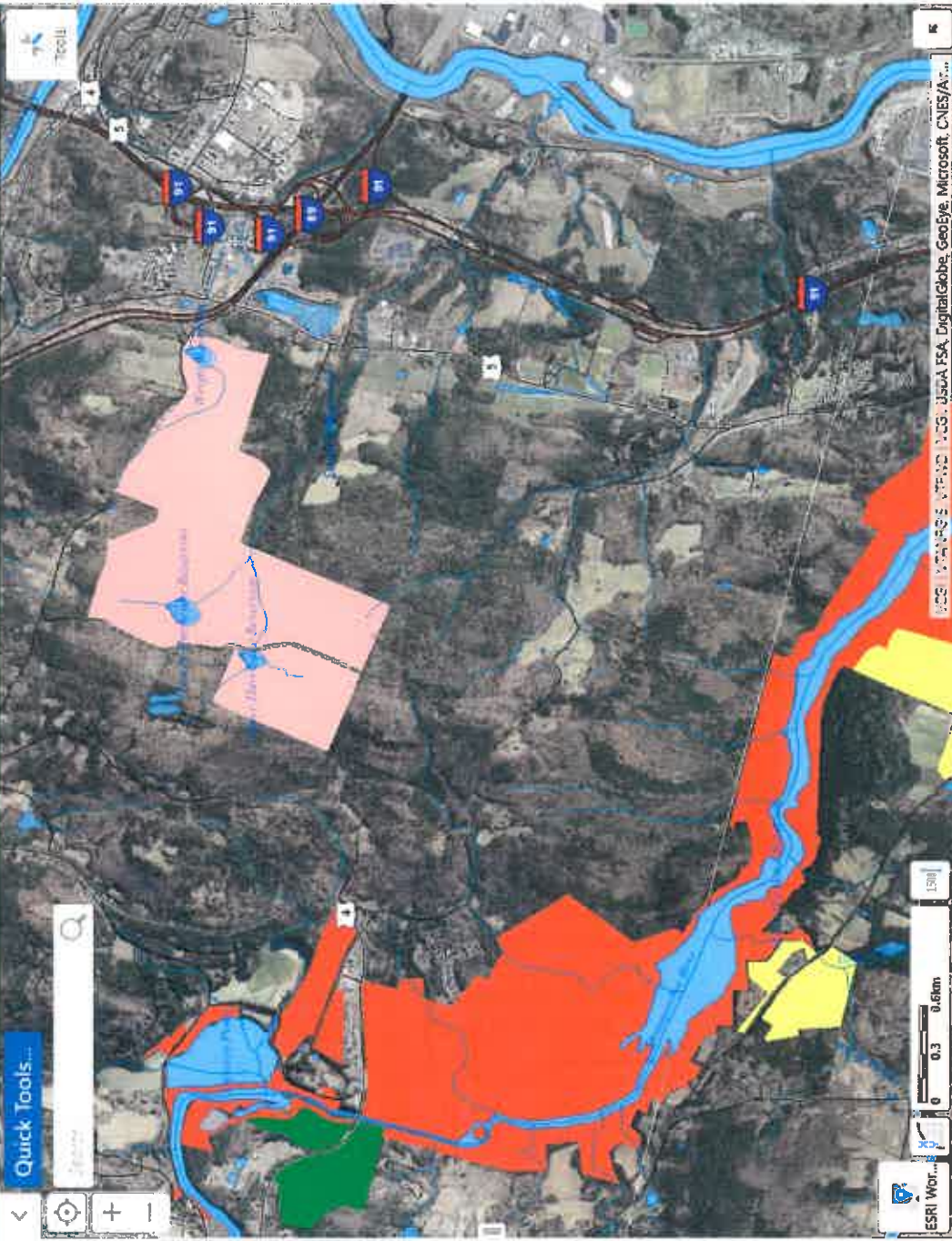
- Filter
 - Uncommon Natural Communities
 - Common Natural Communities
 - Landscape Scale Components
 - Riparian Wildlife Connectivity
 - Highest Priority Surface Water and Riparian Areas
 - Priority Surface Waters and Riparian Areas
 - Highest Priority Interior Forest Blocks
 - Priority Interior Forest Blocks
 - Highest Priority Connectivity Blocks
 - Priority Connectivity Blocks
 - Physical Landscapes
 - Rate
 - Representative
 - Responsibility
- ANR Basemap Data
- Color Imagery by Year
- Vermont Orthophotos

Scale bar: 0, 0.3, 0.6km

Layers

ESRI WOL... Layers

VCGI | VTANRGIS | ERIK ENGSTROM - VTANRGIS | VCGI, USDA, DigitalGlobe, GeoE...



Quick Tools...

Search

Layers

Inventory

Filter Layers... Filter

Inventory

1: Conservation Base Map

Roads

Interstate

Primary

Class 2 Town Road

Class 3 Town Road

Class 4 Town Road

National Forest - Highway, State Forest Highway, Private Road; Military Road-Trail 70

Wetlands

Rivers & Streams

Lakes & Ponds

Parcel Boundaries

Use Value Appraisal Parcels

Conserved Lands

Local Government

US Fish and Wildlife Service

US National Park Service

Layers

3/3/2016

ESRI Work

0 0.3 0.6km

1:500

Tools

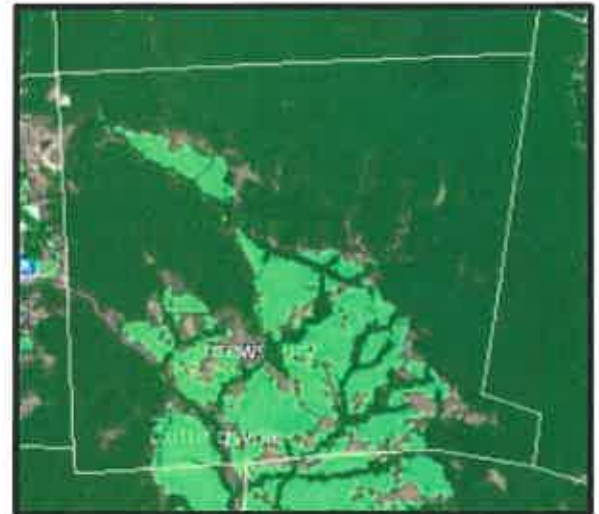
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APPENDICES

HOW TO USE BIOFINDER TO CREATE MAPS FOR ACT 171

1. Open the [BioFinder Mapping Page](#) and Zoom into your town. Find more information on [using BioFinder](#)
2. *Locate Landscape Priorities:* This map shows a network of the most important components included in the following datasets, categorized into “highest priority” and “priority” areas:
 - o Interior Forest Blocks
 - o Physical Landscape Diversity
 - o Connectivity Blocks
 - o Riparian Wildlife Connectivity
 - o Surface Waters and Riparian Areas

Use this step to examine the *network* of lands and waters necessary to maintain Vermont’s ecological function. By doing this, we can divide locations into three classes: highest priority, priority, and those that don’t contribute significantly to the network. Together, this network encompasses the majority of Vermont species and habitats and provides resilience for a changing climate.



■ Highest Priority
■ Priority

3. *Locate Community and Species Priorities:* While landscape priorities give us the network in which *most* ecological interactions occur, some species or habitats are so small or have such specialized needs that they are worth protecting where they occur, even if they are not located within the landscape network. In this step, we add those habitats important to species and communities of conservation concern in Vermont. While often small in area, these locations are equally important for maintaining regional biodiversity and healthy fish and wildlife populations. For example, wildlife crossings are locations where wide-ranging mammal species such as bear, bobcat, and fisher are most likely to traverse roads as they travel to meet daily or seasonal dietary needs or disperse to find mates. If these crossing areas do not remain available, some populations may not persist even where other habitat needs are present. The areas mapped at this scale include the following:
 - o Wildlife Road Crossings
 - o Vernal Pools
 - o Wetlands
 - o Grasslands and Shrublands
 - o Mast Stands
 - o Rare Species
 - o Uncommon Species
 - o Rare Natural Communities
 - o Uncommon Natural Communities


- o Common Natural Communities¹⁰

As you examine the locations of resources on this map, pay special attention to where they fall in relation to the landscape scale network in Step 2. When Community and Species priorities are located within larger blocks of forest or water, they can be used to elevate the priority ranking of that larger block. Many strategies for conserving the larger blocks will then benefit the Community and Species priorities, too. Where Community and Species priorities are located *outside* the network identified in Step 2, your community may want to consider separate conservation strategies. Because Community and Species priorities generally encompass much smaller acreage, they are often more vulnerable. For some, a seemingly minor change in land use could wipe out an entire patch of habitat—a vernal pool, for example, or a mast stand. And although the components themselves may cover little acreage, the *processes* altered by a single loss may change food webs, impact disease regimes, or alter migration or dispersal patterns across the ecosystem. Where Community and Species scale priorities fall outside Step 2 priorities, they are therefore generally places to consider focusing more direct conservation measures, due to their sensitivity.

4. *Identify the Components:* In Steps 2 and 3, the primary goal was to identify *locations* of ecological priority within the municipal planning area. Before identifying appropriate conservation strategies, it's now time to determine which resources are present in each important area. We can then use these resources to create a map of ecological priorities that will be more helpful for municipal planning. This is important because conservation strategies are not universally appropriate for all resources. Both riparian areas and mast stands may constitute priority locations, but we wouldn't generally conserve them using the same methods.

Start with landscape priorities, as seen in Step 2. Using BioFinder which components are most prevalent in the "highest priority" network? Interior forest blocks? Surface water? Important physical landscapes? Does adding "priority" areas contribute additional components? Make a list or chart. Then repeat the process with community and species priorities.

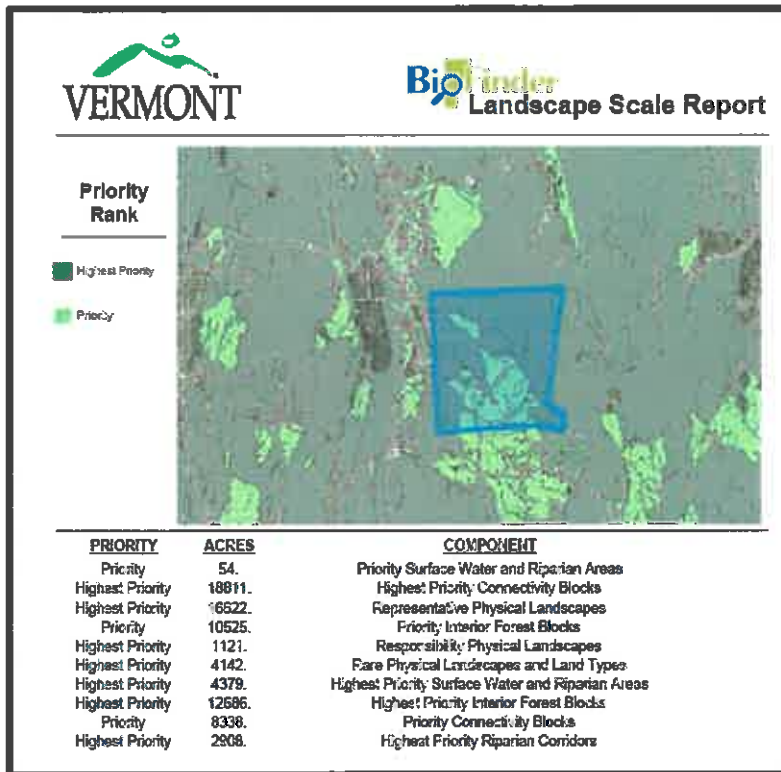
To help you with this process, BioFinder can generate reports quantifying all the components present in a defined area, such as a town.

To access these reports, open the toolbox by clicking the  symbol in the top, right-hand corner. Open the "Query" tab, where you can select either a "Landscape Report" or a "Species and Communities Report."



¹⁰ The Common Natural Communities category captures several elements that appear in Part I as their own entities, including deer wintering habitat.

In generating a report, you will be given an option to either draw an outline of your area of interest or upload a shapefile. If you already have a digitized map layer that outlines your area of interest (a shapefile), this is the easier option. However, you can also use your cursor to click around the edges of your target area until you have captured the entire area, double-clicking to finish the shape.



You can choose to see the report as a pdf or an excel file. In either case, the report lists all components present in the area outlined, the level of priority, and the acreage covered by each.

In some cases, the acreage covered by different components can give you a sense of where to focus your efforts. For example, if you have substantial acreage in Connectivity Blocks, you may want to spend some effort thinking of the best ways to avoid fragmentation of and between these blocks. However, there are some components for which acreage is an inappropriate measure of priority. For example, vernal pools are almost never large, and yet they remain an important contributor to biodiversity. Reports can therefore

be extremely helpful in simply providing a list of components to look at when considering conservation strategies. Limited attention should be placed on the acreage covered by each, particularly on the Species & Communities Report.

Once you have created your list of components, review them to be sure you understand what they are and their implications for land use, using *Conserving Vermont's Natural Heritage*, or other sources. Take extra care to understand those features that came up multiple times on your lists or cover large expanses within your community. Once you fully understand the suite of components at play in your community, it is time to create a map of ecological priorities. For many communities, these maps can be based directly on the state priorities maps, or by incorporating local data into state maps. For some communities, however, it will be important to first refine priorities. For example, the land in some communities is mapped almost entirely as "highest priority" at the landscape scale. In this case, it is important to recognize the crucial role your local lands and waters play in maintaining Vermont's ecological function. However, this information is unlikely to help you in prioritizing local conservation or planning efforts. Other towns contain few or no "highest priority" features. In either case, there are some locations in your community that play a more critical ecological role than others.

In these cases, one way to further prioritize is to place a higher priority on locations with many overlapping components. You can think of these as *hotspots*—places in which many important ecological components co-occur. Wetlands are important. Interior forests are important. Rare physical features are important.

Locations in which *all* of these important components are present may have even higher ecological value than those with just one component. If you find that the basic prioritization of Steps 2 and 3 did not provide you with as much variation as you would like, you can place the *highest* priority on these hotspots of overlap. They can also be terrific starting places around which to focus efforts or rally community support.

If you choose to re-prioritize, it is important to remember that this step focuses only on *ecological* prioritization. Human values will be incorporated in later steps. For some communities, it may be tempting to eliminate some areas from the priorities map based on a value judgment of what is most important. We encourage you to resist this temptation, ensuring that your determination of which features to include is based on a scientific process.

Before completing this step, you should have a map that outlines the ecological priorities within your community.

Need Help?

The Community Wildlife Program at Vermont Fish and Wildlife Department may be available to provide technical assistance to your community as you undertake this process. Please visit <http://www.vtfishandwildlife.com/cms/one.aspx?pageId=132648> for more information.