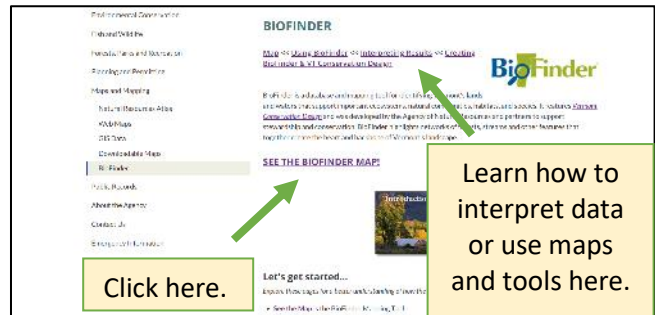


BIOFINDER 3.0 Tips and Tools

Getting Started

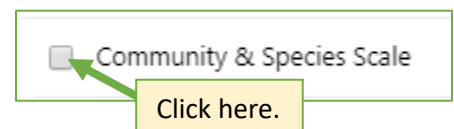
Go to <http://biofinder.vermont.gov>.
Click [SEE THE BIOFINDER MAP](#) to launch the mapping tool.



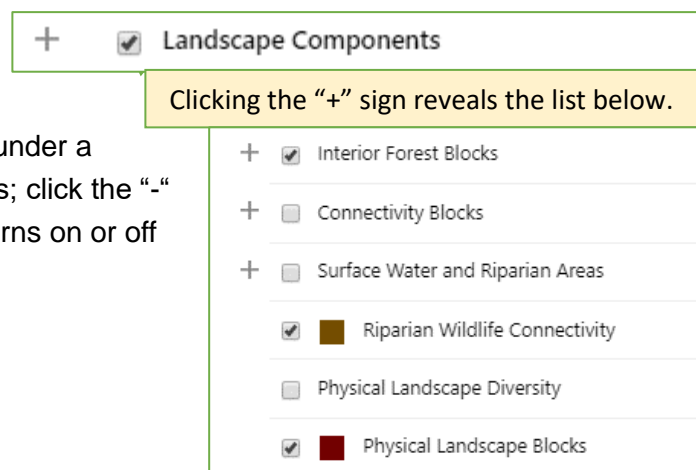
When BioFinder launches, a map displays on the right. On the left, the Layers menu lists all datasets available for display.

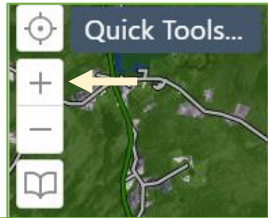


You can build a map to suit your needs by clicking the box next to each layer name to turn that layer on or off. A “√” appears next to all layers displayed on the map.



In some cases, several layers are listed together under a common heading. Click the “+” to display all layers; click the “-” to collapse the list. The box next to the heading turns on or off all associated layers that have been checked.





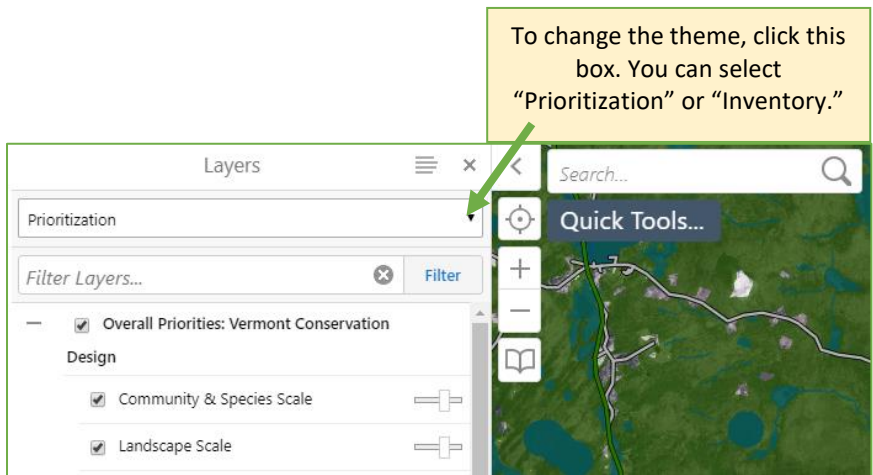
You can also zoom in or out using the zoom tool on the map. The bookmarks tool appears below the zoom tools; click the book symbol to bookmark a location you might revisit another time.

To zoom in, click the “+” sign on the map, beneath the Quick Tools menu.

Changing the Theme

The theme allows you to switch between raw inventory information and prioritized map layers.

BioFinder categorizes information into two *themes*, each with a different list of map layers. The default theme *Prioritization* appears when you open the map tool.



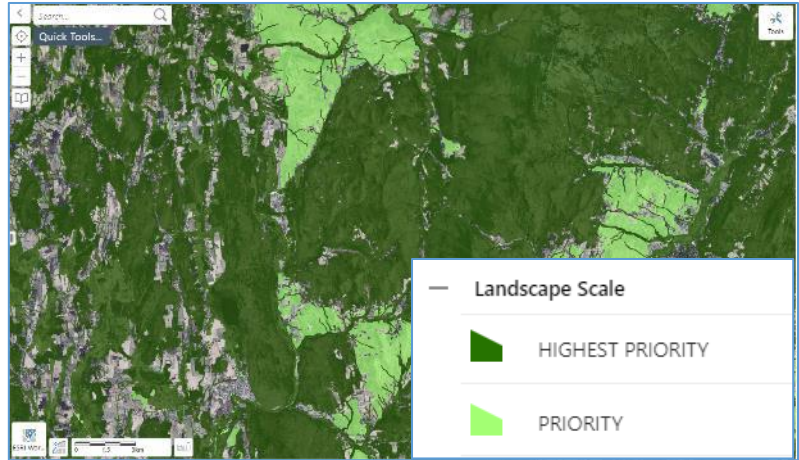
Prioritization Theme

Highlights the locations of highest ecological importance.

The “Prioritization” theme identifies ecological priorities based on their contribution to **ecological function** — the ability of habitats, plants and animals to interact as needed to thrive, reproduce, migrate, and move, even as the climate changes.

This theme considers components at two scales—the Landscape scale (large blocks of forest, water networks, *etc.*) and the “Community & Species” scale (individual wetlands, wildlife road crossings, vernal pools, *etc.*)

Overall Priorities: Vermont Conservation Design — Landscape Scale priorities include the forest networks, waterways, and physical landforms that provide habitat to *most* Vermont species. This map lumps all landscape components together to provide a single dataset of overall priorities.



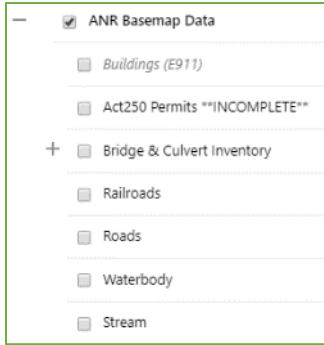
Overall Priorities: Vermont Conservation Design — Community & Species Scale priorities are important to individual species or groups of species with known conservation value in Vermont. These habitats are smaller in size but equally important. This layer includes habitat for rare species, vernal pools, locations where wildlife are most likely to cross roads, and more.



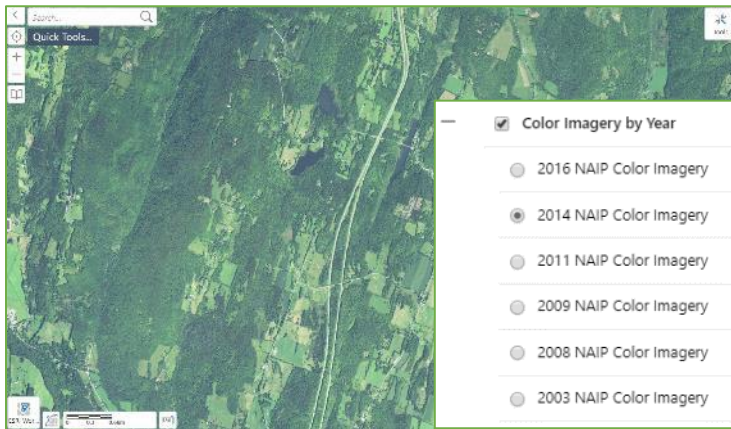
Component Layers: You can also see the components of the overall priority layers above *individually*. Click the “+” next to “Community & Species Components” or “Landscape Components” to see the full list of components.

* **Uncheck** boxes next to Overall Priorities: Vermont Conservation Design—Community & Species Scale and Landscape Scale to see the individual components. The Overall Priorities maps display *on top of* the individual component layers, meaning they need to be turned off to see the individual components.





ANR Basemap Data: This set of layers provides additional information often used for navigation or for finding landmarks, such as roads, streams, rivers, and the locations of buildings and parcels.

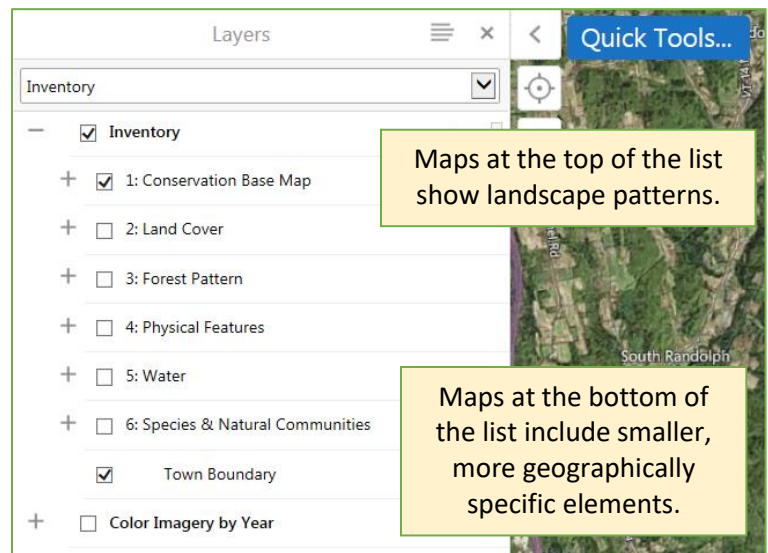


Color Imagery: These layers allow you to change the background to aerial photographs taken in different years — between 2003 and 2016 — to see changes to the landscape over time.

Inventory Theme

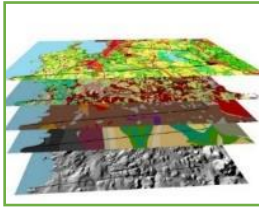
Answers the question: What's here?

The "Inventory" theme presents basic information about the location of features and natural resources often used in conservation planning. While information in the "Prioritization" theme was chosen by Vermont Fish & Wildlife Department biologists to represent *the most important* ecological locations for conservation planning, most "Inventory" information has not been interpreted in any way. Information in this theme is displayed as a series of already-compiled maps, each showing a different aspect of the landscape.

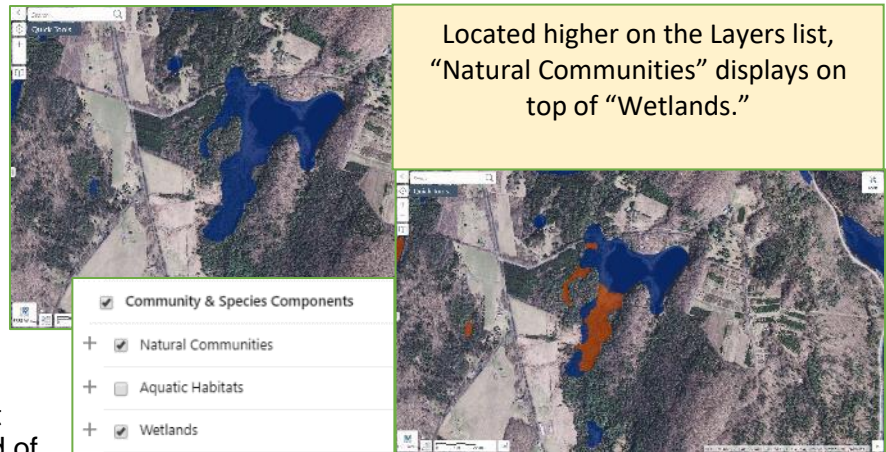


Using Multiple Layers Together

In general, a map found *higher* on the Layer menu is drawn *on top of* a layer found lower on the list. The stack of layers you create can highlight interesting overlaps of features on the



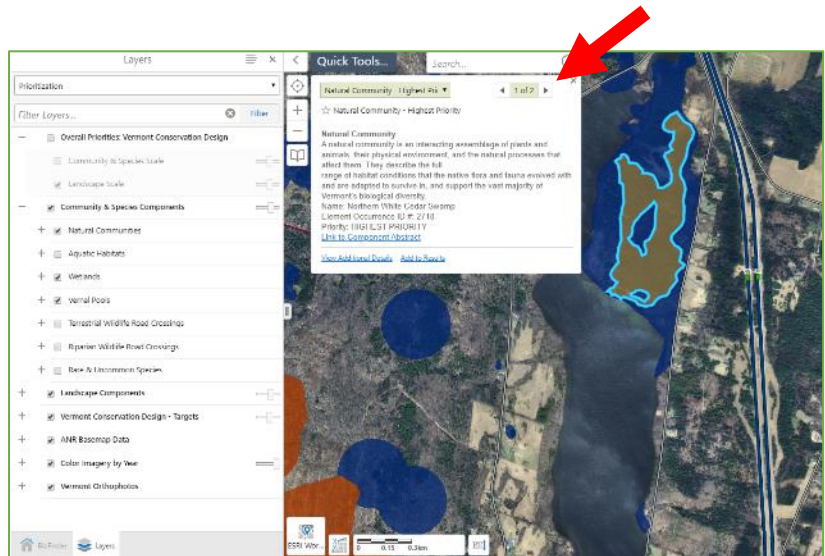
landscape, such as a natural community at the south end of a wetland.

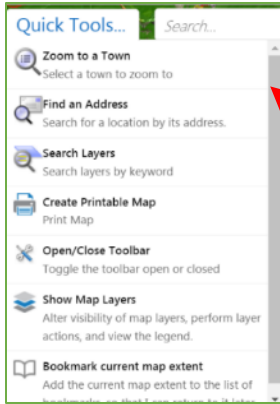


Identification Box

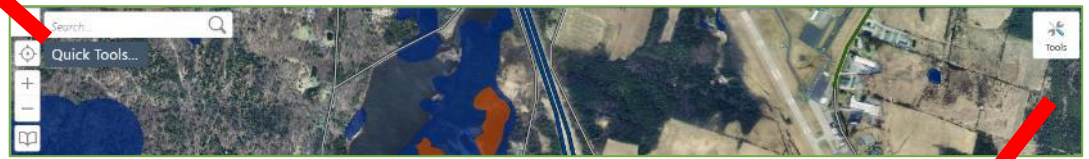
If you click on the map, a box pops up with detailed information about all the layers checked “on” in the Layers menu that are present in the location selected.

When multiple layers are found in the selected area, the Identification Box creates a separate “page” of results for each layer. In the example, three layers are present. This is indicated by the “1 of 2” box with arrows in the top, right-hand corner of the box. Click on the arrows to move between pages of results.

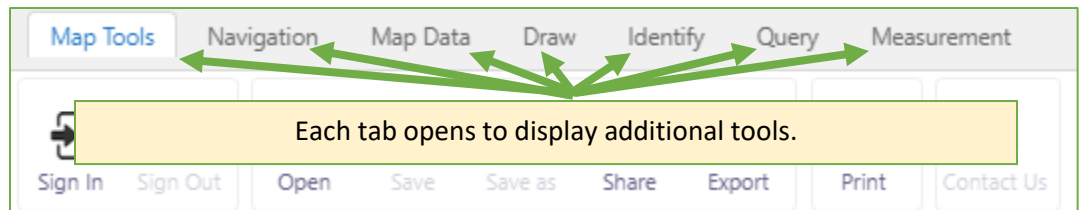




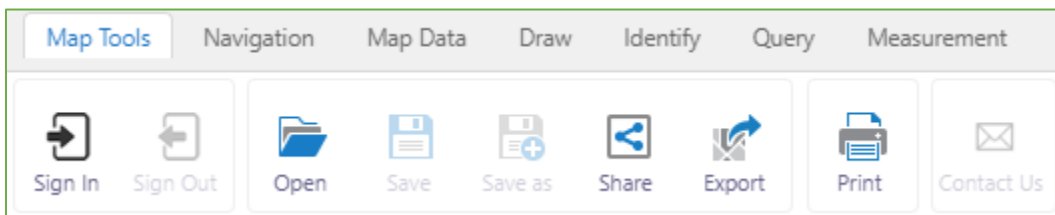
Quick Tools: A short list of useful tools for interacting with BioFinder data.



Toolbar: The toolbar can be turned on/off by clicking the wrench/screwdriver icon in the top right corner of the map screen. This provides access to seven tool tabs, each with its own menu of additional tools.



Map Tools: Instructions for using each of these tools will appear upon selection.

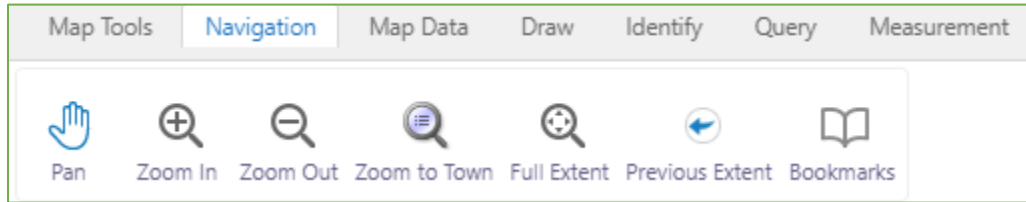


Share provides you with a URL of a particular place that you are zoomed in to and the specific layers that you have turned on or off. Note that your drawings or shapefiles you have added will NOT be included in the URL.

Export creates an image file that you can save. This option *will* include drawings that you've added or shapefiles you've uploaded.

Print creates a printable version of your map with pre-formatted titles, legends, and other useful notes you can customize.

Navigation: Offers tools to help you move around the map.



Pan allows you to click on the map and move it around with your mouse.

Zoom In and **Zoom Out** allow you to draw a box around an area of interest and change your scale.

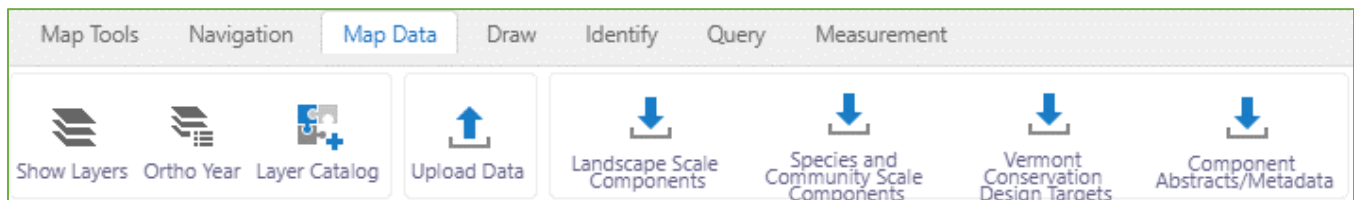
Zoom to Town allows you to center the map around any town in Vermont.

Full Extent zooms out to the scale of the world.

Previous Extent takes you back to the scale you were at before last zooming in or out.

Bookmarks allow you to pin a map area you would like to revisit.

Map Data: Upload and download information with this tab.



Show Layers turns the Layers Menu on.

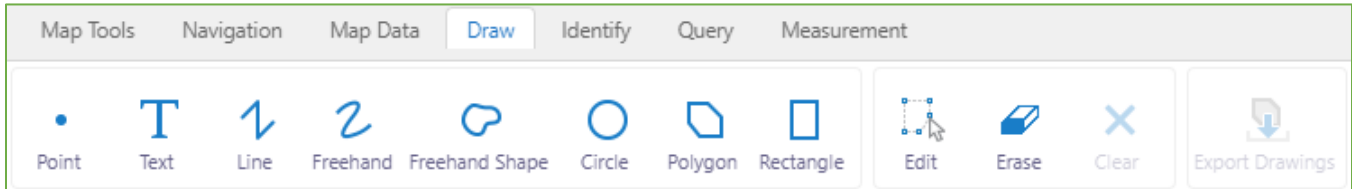
Ortho Year allows you to select a background aerial photo from a year between 2003-2014.

The **Layer Catalog tool** allows you to add other map layers from the **ANR Atlas** from the Agency of Natural Resources, or you can add GIS shapefiles of your own creation.

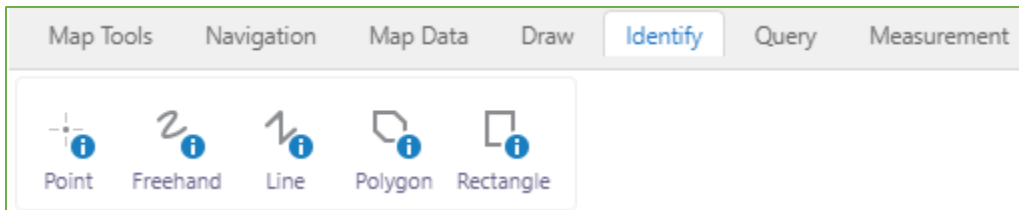
Upload Data allows you to add files stored on your computer.

You can also download different data packages and written abstracts for the different BioFinder and Vermont Conservation Design layers using the four download tools.

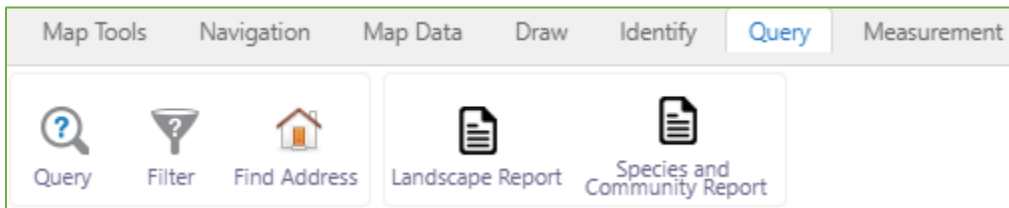
Draw: The tools under this tab help you customize your maps. The drawings you create (i.e. if you circle or mark an important spot) can be exported to create shapefiles (the geographically-specific files used by most mapping programs) and then uploaded back into BioFinder (using “Upload Data” under the Map Data tab). The advantage of turning your drawings into a shapefile is that you can easily turn them on and off without losing them.



Identify: Instructions for using each of these tools will appear upon selection. They can be used to extract map information for an area of interest.



Query: Instructions for using each of these tools will appear at the bottom of the map page upon selection. They are used to help you locate features containing criteria that you select.

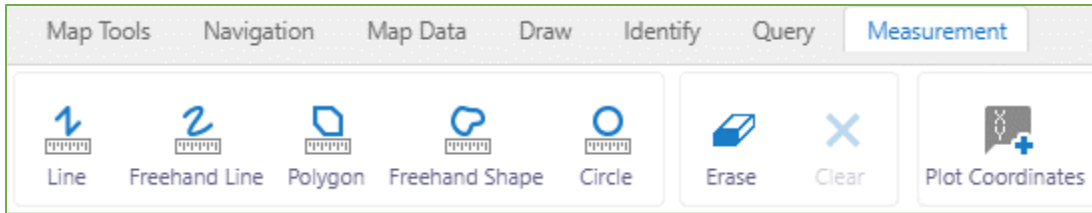


Landscape Report tool generates a report (a spreadsheet or pdf file) describing the acreage covered by each component in the Vermont Conservation Design--Landscape scale layer within an area that you've selected. This report can be used to capture a quantitative view of the Vermont Conservation Design map.

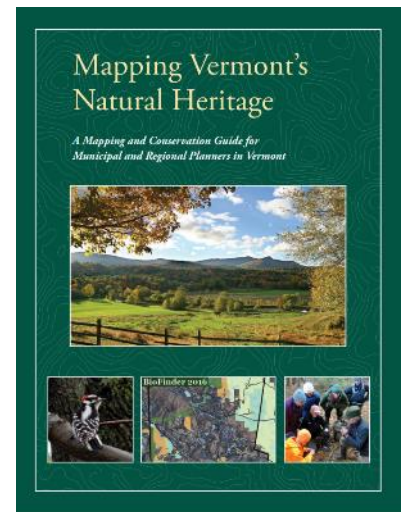
Species and Community Report tool generates a report (a spreadsheet or pdf file) describing the acreage covered by each component among species and community scale elements within an area that you've selected.



Measurement: These tools measure both distance and area on your map. Measurements are added in increments as you draw, allowing you to capture distance for each small segment that contributes to a larger distance or area.



Interested in learning more about mapping Vermont's conservation resources? Download a copy of **Mapping Vermont's Natural Heritage** at <https://anr.vermont.gov/node/986>



Looking for additional help or training with BioFinder or Vermont Conservation Design? Contact us at:



**Vermont Fish & Wildlife Department
Community Wildlife Program**

Andy Wood | Conservation Planning Specialist Andrew.Wood@Vermont.gov
Jens Hilke | Conservation Planning Biologist Jens.Hilke@Vermont.gov



BioFinder 3.0 was created by the Vermont Agency of Natural Resources. For more information, visit <http://biofinder.vermont.gov>.