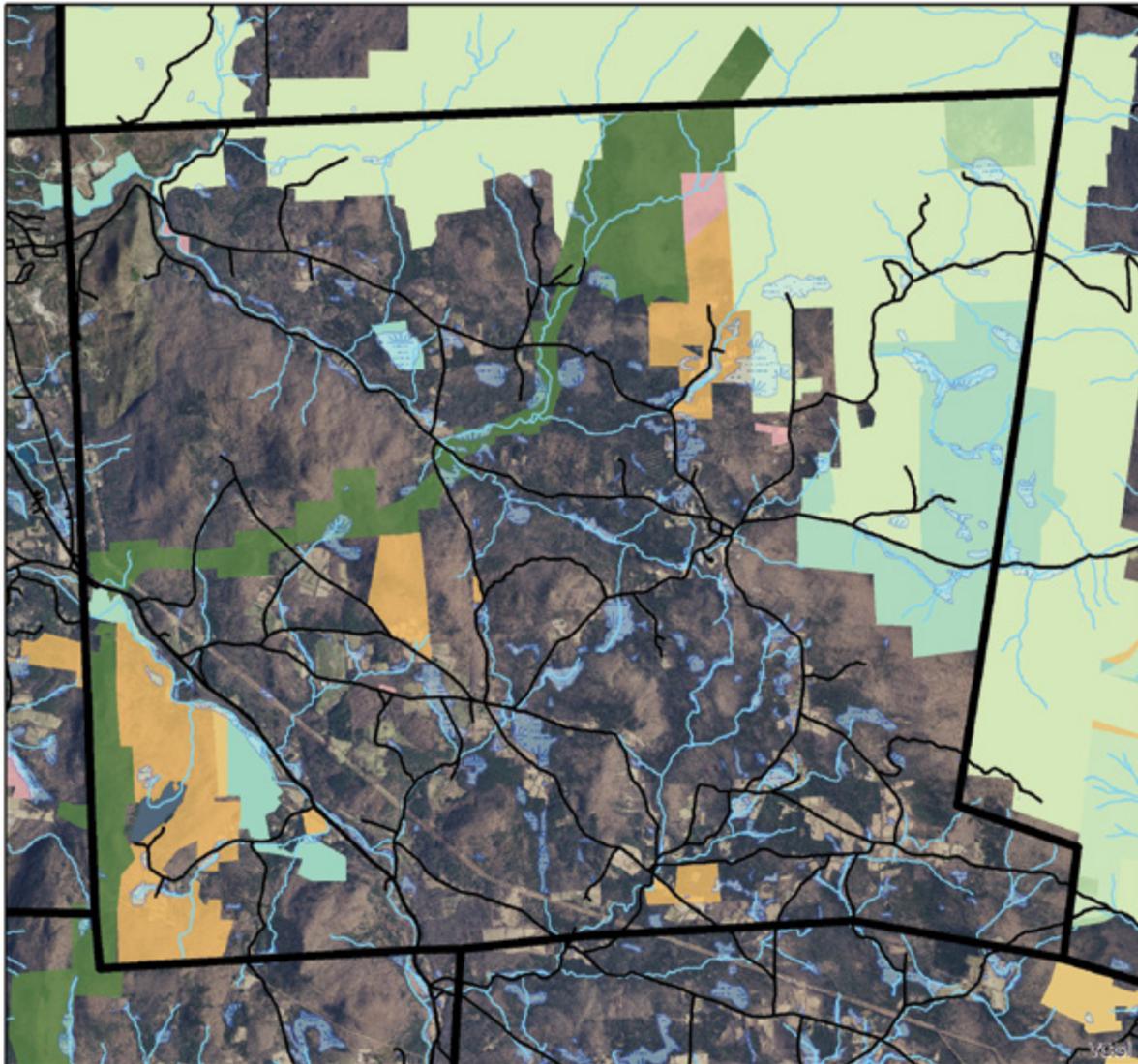


Map 1: Conservation Basemap



LEGEND

| | |
|------------------|--------------------------------------|
| Town Boundary | Conserved State Lands |
| Roads | Dept. of Fish and Wildlife |
| Primary | Dept. of Forest Parks and Recreation |
| Secondary | Conserved Federal Lands |
| Rivers & Streams | Forest Service |
| Lakes & Ponds | National Park Service |
| Wetlands | Conserved Local Government Lands |
| | Conserved Private Lands |

Data Source:
Vermont Center for Geographic Information
Vermont State Plane Projection
NAD1983 Datum
Map by Monica Przyperhart
October, 2017



0 0.5 1 2 Kilometers

0 0.5 1 2 Miles

Map 1 Conservation Basemap



©ERIC SORENSON

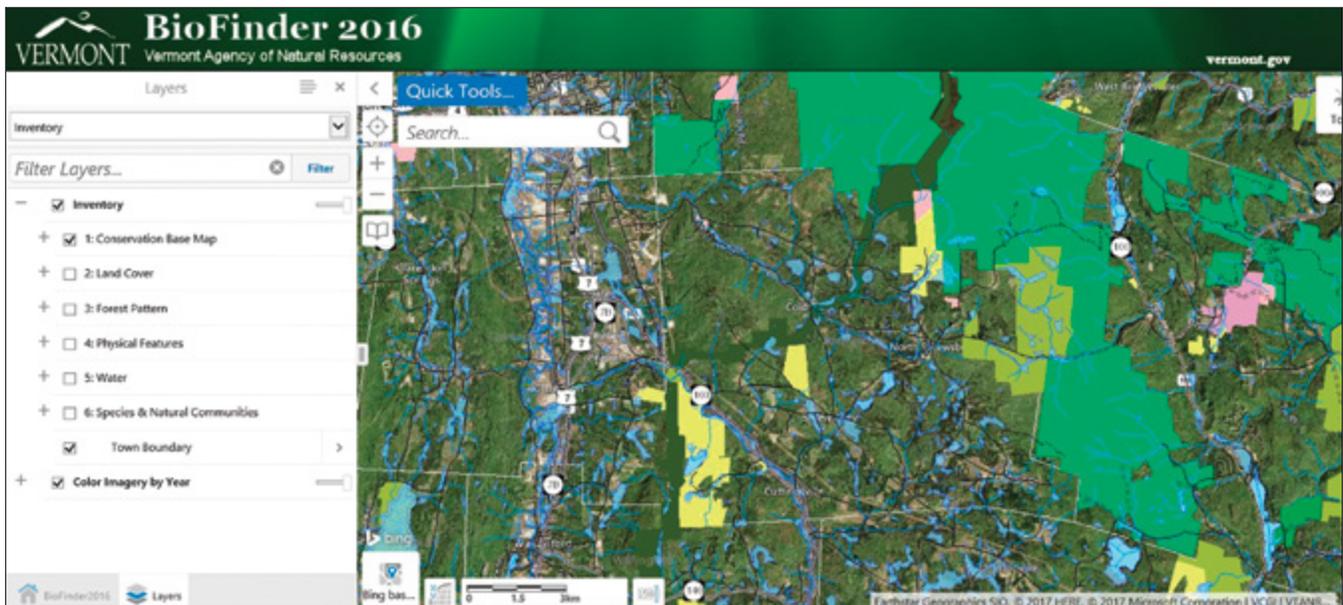
This map provides a visual overview of your community and identifies land that has been permanently conserved.

| Inventory Layers (Described Below) | Base Layers | Additional Online Data |
|------------------------------------|---|--|
| 1. Conserved Lands | Aerial Photo Streams & Rivers Lakes & Ponds Wetlands Roads Town Boundaries | Use Value Appraisal Parcel Boundaries |

Before identifying individual pieces of the landscape, let's start by getting acquainted with the landscape as a whole. This map is a snapshot of your community from afar, frozen at one point in time. It's not intended to be studied in any detail; instead, its goal is to allow us to take stock of what we have to work with and get our bearings.

The dataset highlighted on this map outlines the locations of conserved land on which [development](#) has been permanently restricted. For planners, this information provides an important starting point, because conserved lands are places for which some [land use](#) decisions have already been made. These are areas of more predictable future land use, which can help to guide planning in the surrounding areas.

Other layers on this map can be considered as base layers, and most will appear on other maps as well. The [aerial photo](#) background of this map is quite literally a snapshot, capturing anything that can be viewed from above, from a distance, unfiltered. Next, we see waterways, such as streams, rivers, lakes, ponds, and [wetlands](#). While we examine water in more detail in Map 5, we use it here to get a first glimpse of where water flows across the landscape so as to frame other resources. This map also shows roads—the conduits for human activity—and town boundaries, which provide our theater walls, permeable though they are in the natural world.



To load Map 1 on BioFinder: Open the **Inventory** theme, then check the box next to **1: Conservation Base Map**. Click the + to see all layers associated with this map.

As you move forward in this guide, remember that this map's datasets can be displayed alongside other maps in BioFinder. For geographic reference points, you could leave town boundaries and roads "on." You may also find it interesting to see where natural features in other maps are located in relation to conserved lands. For example, are large habitat blocks (Map 3) or rare species (Map 6) located on conserved land in your region?

Conserved Lands

What are Conserved Lands?

Conserved land refers to property on which [development](#) has been permanently restricted, including buildings, paved roads, and most commercial infrastructure. The information displayed includes both land owned by a conservation entity and private land that has been protected through a [conservation easement](#). These data were first published by the University of Vermont Spatial Analysis Lab and developed by a partnership between many federal and state agencies and departments, the University of Vermont, and several Vermont nonprofits.

To be more specific, the map includes all conservation lands owned by local, state, and federal government in Vermont. It also includes land owned by Vermont's nonprofit [land trusts](#), such as The Nature Conservancy, the Vermont Land Trust, and others, and all land on which said entities have placed a conservation easement. This final category is generally land in private ownership for which a land trust or other entity holds the development rights. Conserved land therefore does not imply public funding or public

access. The holdings of some small [land trusts](#) are not included in this dataset.

While the database is updated periodically, users should recognize that it may be a few years out of date at any given point in time.

Conserved Lands: Significance

The location of conserved lands in your community can frame other planning decisions, because these are known epicenters free from development. Even though surrounding land use may change, you can be confident that these lands will remain available as potential wildlife habitat.

Conserved lands' information may be even more useful when combined with other datasets. For example, you might look at conserved lands alongside rare species or significant natural communities (both described in Map 6 of this guide) to create a snapshot of which resources are already protected in a given area. A community may then be able to better prioritize the protection of additional [natural heritage](#) features.

In short, it can very interesting to see—at either a statewide or local scale—where the significant [natural resources](#) are located in comparison to the conserved lands. How many of your community’s wetlands are on conserved land? Your largest habitat blocks? Statewide, many important natural resources are not protected, but you can see whether this is the case in your community.

Conserved Lands: Map Interpretation

While all lands in this dataset (also called the Protected Lands Database) are permanently protected from development of some type, there are several classes of conserved lands, and the map doesn’t differentiate between them. Some conserved lands are managed strictly as [natural areas](#), with activities such as timber harvesting prohibited. Others are managed specifically for the production of timber and other natural resources but prohibit development. Others are active, working farms where normal farming activities are expected (or even required), with development greatly restricted but not prohibited. In certain cases, conserved lands allow development for particular uses, such as public recreation, as is often true with state and town parks.

The information in the Protected Lands database can be used at any scale where precise boundaries are not important. Because many maps were digitized

from paper versions that included sketch maps, deed descriptions, or old surveys that required a great deal of interpretation, no boundary line should be considered precise or used to determine protection status on a fine scale.

Because land may be conserved to protect any number of different qualities (e.g., agricultural soils, views, community resources, natural areas, historic landmarks, [water quality](#), wildlife, and many other values) no inferences should be made about habitat quality or public access on conserved lands. This database includes large, public lands with advertised recreational trails, and it also includes small, privately-owned parcels with no public access. Similarly, this map conveys no information about management goals, though some public lands have [management plans](#) available.

Conserved Lands: Planning Considerations

Just as current areas of development are unlikely to grow into forest, conserved land is unlikely to become developed. Because wildlife populations are most likely to thrive if their habitats are interconnected and large, a community may want to consider the distribution of [protected areas](#) before planning areas of future development or conservation. From a natural resource protection perspective, it is often better to expand upon prior investments in land conservation

Community Strategies for Vermont’s Forests and Wildlife: Case Studies

There are many reasons why a family, individual, or group may want to conserve land, and every conservation decision has a unique story. [Community Strategies for Vermont’s Forests and Wildlife](#) documents a few of these stories, found on page 28 of the book.



©TOM ROGERS

Growing a Town Forest

Many Vermont towns have found [town forests](#) to be community assets. In Bradford, the town began with a relatively small town forest, Wright's Mountain Conservation Area. As this area became increasingly used for recreation, education, wildlife conservation, forest management, and historic preservation, the town took opportunities to expand the conserved area, one parcel at a time. Some of this story can be found at www.uvlt.org/2011/02/bradford-extends-wrights-mountain-conservation-area/.



©MONICA PRZYPERHART

than to create a new block of conserved habitat—although there are many exceptions. While habitat quality is not represented in this dataset, the size and interconnectedness of habitat is so important to wildlife abundance that simply having a parcel conserved elevates its general importance to resource planning.

Of course, permanently protected lands are not the only places that contribute to habitat conservation. Practicing good land management or enrolling land in an established conservation incentives program can be considered conservation—at least for the short term—and these are not included on this map. As you conduct planning in your community, you may want to look further into strategies that promote [working forest](#) management or maintain larger forest blocks. For example, you could connect landowners with the US Fish and Wildlife Service's Partners for Fish & Wildlife Program or the many incentives program managed by the Natural Resources Conservation Service. Please also see the information on the next page about Vermont's [Use Value Appraisal](#) Program ("[Current Use](#)").

Background: Aerial Photo

On Map 1 (and as the default on BioFinder) the background is an [orthophoto](#), which is a patchwork of aerial photographs that have been matched with geographic coordinates to align with other map data. Orthophotos are useful in becoming oriented on a map, since we can pick out familiar features. When zoomed out, orthophotos can aid us in seeing patterns, such as places of dense or dispersed vegetation, road networks as they meander through the state, or density of development in one place compared to another. When zoomed in, we can sometimes see details such as the locations of guardrails along a road, the width or [substrate](#) of a river bank, or even differences in forest types (for example, conifer stands versus hardwoods) that are difficult data to collect through other means.

As a photograph, an orthophoto shows exactly what was present at a precise moment in time. This is raw data; it has not been interpreted in any way. It depicts the landscape, frozen in time, as it is. In fact, orthophotos are the basis for a variety of other map data; many layers described in this guide were created through the close examination of orthophotos.

Additional Online Data

When using [BioFinder](#), the following datasets can also be selected to display on Map 1:

Use Value Appraisal (Current Use)

Through Vermont's [Use Value Appraisal Program](#) (also called Current Use), eligible private lands that are managed for timber can be appraised based on the property's value for wood production rather than for its development value. The result is generally a reduction in property taxes for those enrolled in the program, which in turn often reduces the pressure on a landowner to sell. Because lands can be removed from the program (subject to a tax), this form of land conservation isn't permanent. However, data show that between 2003 and 2009, undeveloped parcels of at least 50 acres enrolled in Current Use were twice as likely to remain undeveloped than those not enrolled

([Brighton et al](#)). Enrollment suggests a willingness on the part of a landowner to play an active role in land management and an investment in maintaining the property as forest.

A map layer of lands enrolled in Vermont's Use Value Appraisal program is included in the [BioFinder](#) version of Map 1. Learn more about the program through the Vermont Department of Forests, Parks, and Recreation website at fpr.vermont.gov/forest/your-woods/use-value-appraisal.

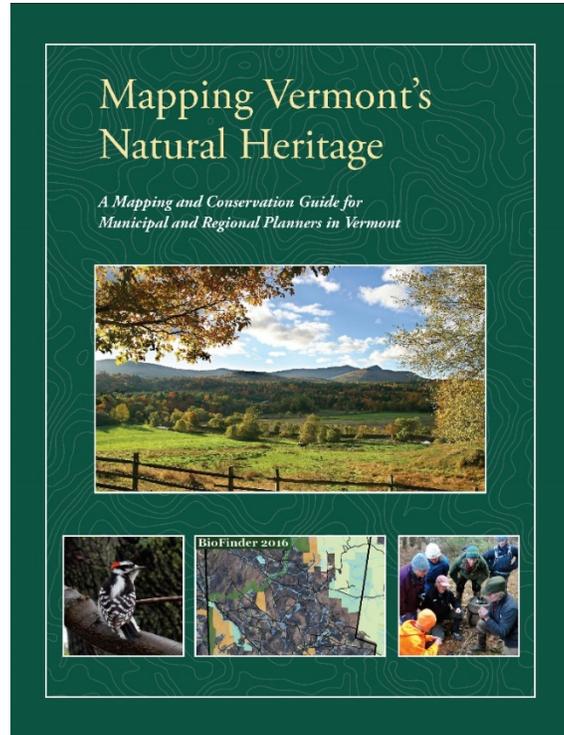
Parcel Boundaries

This layer displays the parcel boundaries in many Vermont towns. They are compiled from digitized tax maps. Most do not reflect the work of a surveyor and may contain inaccuracies, particularly when viewed at close range. All boundaries should be assumed to be approximations; for accurate parcel boundary information, please visit your local town office for recorded survey and/or deed information.



Mapping Vermont's Natural Heritage

This is one chapter of a larger publication called *Mapping Vermont's Natural Heritage: A Mapping and Conservation Guide for Municipal and Regional Planners in Vermont*. Please visit <https://anr.vermont.gov/node/986> for additional information or to see the entire guide.



Authors:

Monica Przyperhart, Fish & Wildlife Specialist
Jens Hawkins-Hilke, Conservation Planner
John M. Austin, Wildlife Biologist

Published by Vermont Fish & Wildlife Department, Agency of Natural Resources

Copyright 2018

All rights reserved

Printed in the United States of America 5 4 3 2 1

ISBN: 978-0-9772517-4-2

Check www.vtfishandwildlife.com for updates

Produced by Lilla Stutz-Lumbra, Vermont Fish & Wildlife Department

Printed by Leahy Press, Inc., Montpelier, Vermont

Cover Photos: (large image) Dennis Curran - VT Department of Tourism and Marketing
(small images) Monica Przyperhart

