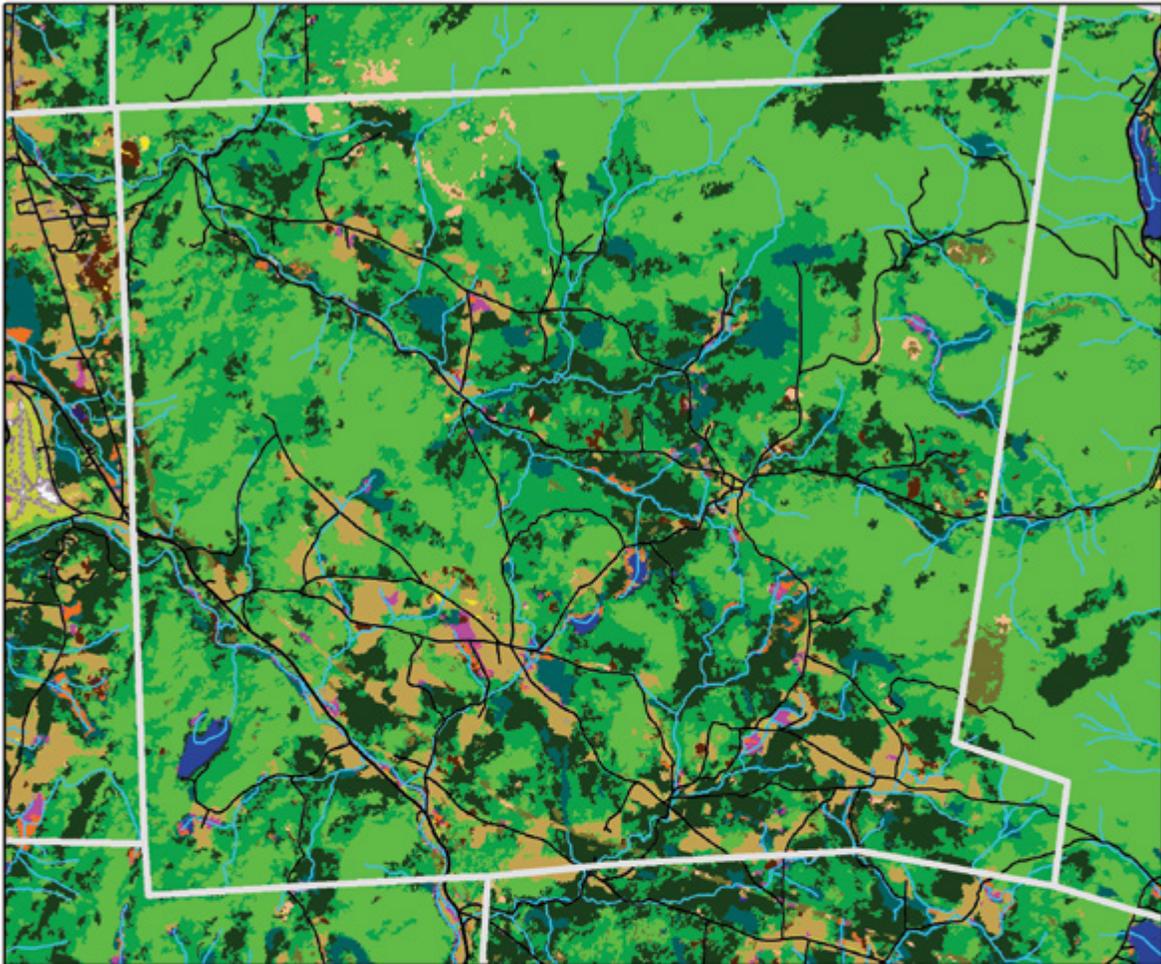


Map 2: Land Cover

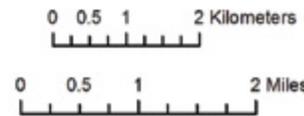


LEGEND

<p>Land Cover</p> <ul style="list-style-type: none"> □ Developed, High Intensity ■ Developed, Medium Intensity ■ Developed, Low Intensity ■ Developed, Open Space ■ Cultivated Crops ■ Pasture/Hay ■ Grassland/Herbaceous ■ Deciduous Forest 	<ul style="list-style-type: none"> ■ Evergreen Forest ■ Mixed Forest ■ Scrub/Shrub ■ Palustrine Forested Wetland ■ Palustrine Scrub/Shrub Wetland ■ Palustrine Emergent Wetland ■ Bare Land ■ Open Water ■ Palustrine Aquatic Bed 	<ul style="list-style-type: none"> ■ Town Boundary <p>Roads</p> <ul style="list-style-type: none"> - Interstate - Primary - Secondary - Trail
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Data Source:
 Vermont Center for Geographic Information
 Vermont State Plane Projection
 NAD1983 Datum
 Map by Monica Przyperhart
 October, 2017



Map 2 Land Cover



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This map is useful for seeing patterns of natural land cover and land use.

Inventory Layers (Described Below)	Base Layers
1. Land Cover	Roads Town Boundaries Streams & Rivers Lakes & Ponds

This map is useful at a broad scale for seeing patterns of natural [land cover](#) and [land use](#). At a statewide scale, it is beneficial for picking out developed areas, agricultural areas, [wetland](#) complexes, and forested areas. More locally, these data can be used to locate forested blocks, predict where wildlife with wide home ranges may be able to travel through the landscape, and see where patterns of [development](#) may hinder wildlife movement. They can also be used to distinguish hardwood forests from softwood and mixed forests, which can be helpful in predicting locations of natural communities and wildlife species.

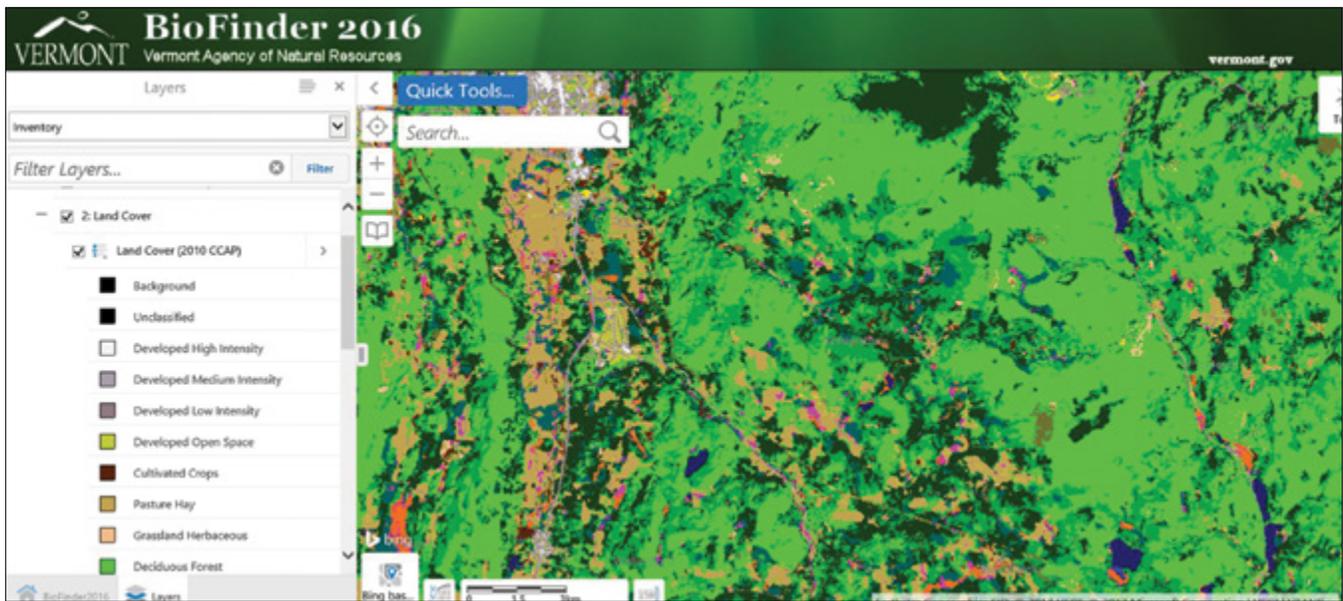
In a sense, this map is a simplified version of the base map presented in Map 1. We described that map as a snapshot of the action we see as we walk into a theater. This land cover map simplifies that snapshot, lumping raw data into categories so that we can more easily compare one place to another. Like Map 1, land

cover information isn't intended to capture individual processes or species; it tells, very simply, what covers the ground at the present time.

Land Cover

What Is Land Cover?

Land cover records the landscape as surface components: forest, water, wetlands, urban, etc. For this guide, we have elected to use the National Oceanic and Atmospheric Association's (NOAA's) Coastal Change Analysis Program (C-CAP) as our data source, though other land cover datasets are available.¹ C-CAP produces a nationally standardized database of land cover and land change information for coastal regions and adjacent [uplands](#)—including Vermont. The image on the next page shows the data from the 2011 database.



To load Map 2 on BioFinder: Open the **Inventory** theme, then check the box next to **2: Land Cover**. To see the layers, click the + next to the layer title. For additional guidance on using BioFinder, please see Getting Started in the introduction to this guide.

Land Cover: Significance

This map provides a first look at a landscape, identifying the abundance and distribution of general habitat types for animals and plants. It also provides an initial view of [fragmentation](#)—that is, how the landscape is connected or broken apart through both human and natural divisions. Because these C-CAP land cover maps are updated routinely for all of New England and New York using a standardized methodology, planners and managers can assess larger landscapes across state lines and use these maps for comparisons across geographic space and over time.

Land Cover: Map Interpretation

Across its range, this map depicts twenty-two standard categories of land cover, including detailed information on wetland types. Within Vermont, we see the following categories:

- High Intensity Developed (Urban, with a high density of [impervious surface](#))
- Low Intensity Developed (Urban, with a low density of impervious surface)
- Cultivated land (Active agriculture, orchards, and vineyards)
- [Grassland](#) (Managed and unmanaged)
- Deciduous Forest

- Evergreen Forest
- Mixed Forest (Forest not dominated by either deciduous or evergreen species)
- Scrub/Shrub (Less than 20 feet tall)
- [Palustrine](#) Forest (Freshwater wetland forest)
- Palustrine Scrub/Shrub (Freshwater wetland scrub/shrub)
- Palustrine Emergent (Freshwater wetland with emergent species such as marsh, lilies, etc.)
- Bare Land (Bare exposed rock, sand, and soil)
- Water (Open water)
- Palustrine Aquatic Bed (Floating vegetation and algal communities)

Because the land cover dataset was created by analyzing satellite and aerial imagery, the accuracy of some features recorded is higher than others. For example, open, similar cover types such as row crops and [grasslands](#) are not always correctly differentiated; however, different wetland types are shown with a high degree of accuracy.

Land Cover: Planning Considerations

NOAA developed C-CAP land cover data to aid with identification of regional landscape patterns and major habitat types, environmental impact assessment,

urban planning, and [zoning](#) applications. For municipal planning purposes, the most useful application may be in visualizing existing landscape patterns. For example, large patches of green indicate large forests, and because we can differentiate between evergreen and deciduous forest, we can get a broad sense how habitats change across a given area. Another interesting pattern can be seen in the shape of a forest as it approaches a road. Often, forest cover gives way to more developed cover classes. Where it remains forest, the resulting shape may appear like an hourglass, as pictured in Figure 2.1. For wildlife, these areas may be important links between one forest [patch](#) and another and may represent significant road crossing areas. We can also focus on patterns of development, seeing where buildings are clustered in centers and where they spread out, creeping along road corridors into more rural areas. Because remote techniques were used to create this map, data should be field-checked before being used directly for planning or zoning.

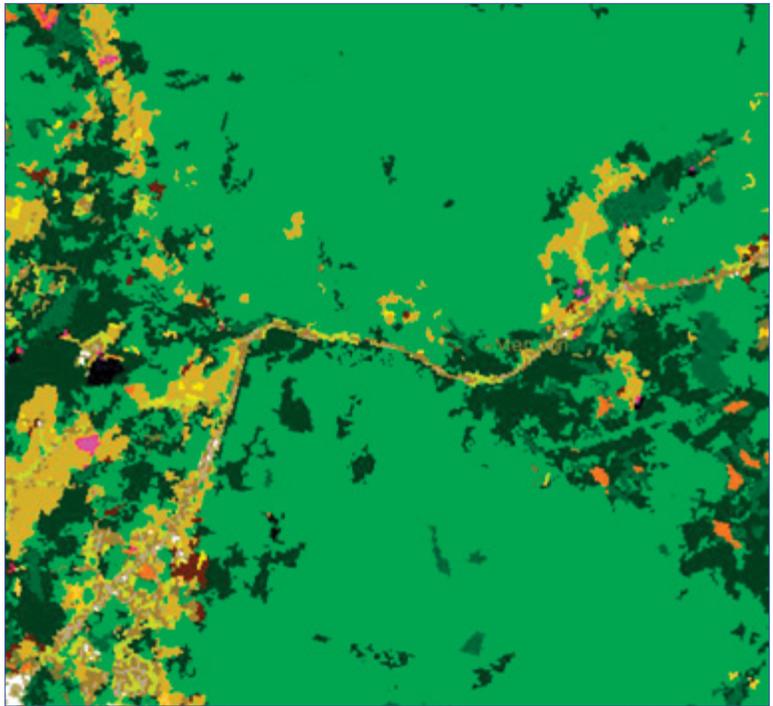


Figure 2.1 *The hourglass shape that emerges in forest cover as it crosses a road may indicate a location where wildlife are able to travel between the forests on either side.*

For More Information

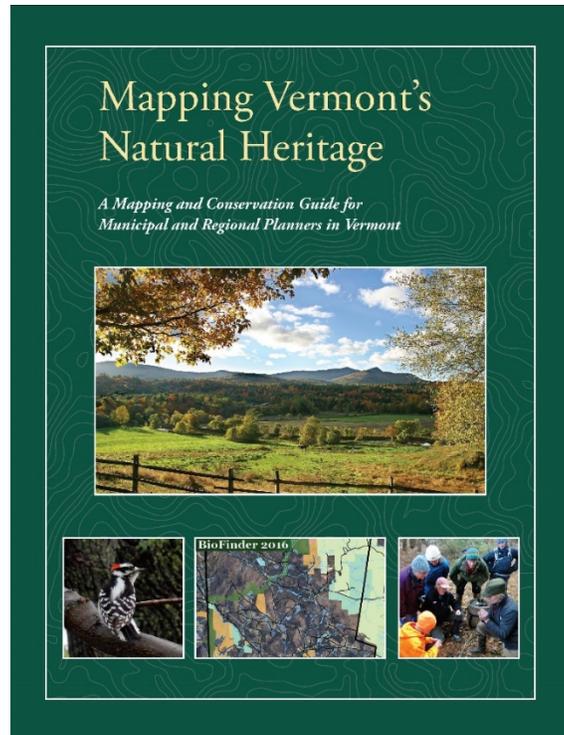
The [NOAA Coastal Change Analysis Program](#), who created the dataset described above, has a website offering additional data, products, and tools that may be useful in natural resources planning. For example, one map layer shows changes in land cover from 1996 to 2001 and from 2001 to 2006.



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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.



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