



NON-REGULATORY

4. Conservation Planning

Overview

Conservation planning occurs at all levels of government, and represents a powerful tool for communities to ensure the long-term viability of local and regional forest resources. At the local level, planning for forestland and other natural resources often begins with the planning commission, which develops and updates municipal plans and bylaws. The municipal plan (or “town plan”) typically includes a natural resources section that identifies natural resources and issues, and can articulate conservation planning goals. However, the town plan may be supplemented by more detailed “open space” or “conservation” plans (often prepared by or in association with the local conservation commission or other groups) that focus more specifically on the town’s natural resource base, including the community’s forestlands and wildlife.

Whether a community develops a conservation plan, addresses natural resources in a municipal plan, or tackles more general conservation planning activities, the main idea is to engage in targeted planning that: (a) identifies the location and extent of important resources; (b) sets priorities for resource protection; and (c) recommends strategies for conserving forestlands that are needed to support forestry, wildlife habitat, watershed protection, recreation, and other public values.

Statutory Authority

Communities that update and adopt municipal plans are required, under Chapter 117, to address state planning goals to protect “the long-term viability” of forestlands and related natural resources (24 V.S.A. §4302), and to include local policies and objectives for the protection of the environment and the preservation of “rare and irreplaceable natural areas.” In practice, municipalities look broadly at important resources across the landscape, not just at “rare and irreplaceable” ones. The plan must also include a land use section and map that indicates those areas proposed for “forests, recreation...and open space reserved for floodplains,

More Information

The Department of Fish & Wildlife has an excellent publication that addresses various aspects of wildlife and natural heritage conservation planning: *Conserving Vermont's Natural Heritage: A Guide to Community-Based Planning for the Conservation of Vermont's Fish, Wildlife, and Biological Diversity*. Check it out at: http://www.vtfishandwildlife.com/library/maps/Community_Wildlife_Program/complete.pdf.

wetlands protection or other conservation purposes” (24 V.S.A. §4382), along with recommended programs to implement the plan. Municipal plans serve as the basis for local land use regulations, ordinances and conservation programs, including forest, conservation and overlay district zoning (24 V.S.A. §4414) and local programs for the purchase of development rights or conservation easements (24 V.S.A. §4431). These plans also serve as the basis for municipal participation in Act 250 and Public Service Board

proceedings.

Municipal plans may reference, but generally do not include, more specific parcel or resource-based information needed to identify community conservation priorities and action steps. For this reason, separate “supporting plans” (including open space or forest conservation plans) can be used to guide both public and private conservation strategies (24 V.S.A. §4432). A forest conservation plan, for full effect, should be incorporated by reference in the municipal plan, or adopted as an amendment to the plan. This helps ensure that the supplemental plan is referenced and considered in Act 250 or other proceedings.

Implementation

Mapping and Inventorying Important Resources and Features

Maps and inventories of natural features form the basis for local conservation planning. For forest conservation, it is important to map: natural communities, forest productivity, the location and extent of forest blocks, significant forest and natural resource features, wildlife habitat and travel corridors, parcel boundaries, and the location of conservation easements and lands enrolled in the Current Use Program.

Mapped information needs to be adequately interpreted and adapted for use in the planning process. Often, the intricacies of a given natural resource dataset are not readily apparent to a planning commission and technical assistance from a natural resource professional is helpful in translating specific scientific data into actionable knowledge for the

NON-REGULATORY

commission. Bringing mapped scientific data into a form that is usable for land use planning is critically important.

Coarse or statewide focused datasets should be supplemented by more detailed field surveys and local inventories as budgets permit. These are typically conducted by trained professionals, such as consulting foresters, ecologists, and wildlife biologists. However, local residents, with some training, can also help with field inventory and monitoring work. This type of “citizen science” can be useful for projects, such as water quality testing or wildlife roadside tracking, if carried out for several seasons. Field inventories

on private land require the written consent of willing landowners. Accordingly, landowner outreach is an important (and often time consuming) part of this process.

- **Forest block and productive forest maps** can be used to promote the retention of working forests by guiding non-regulatory efforts such as encouraging private landowners to adopt forest management plans and enroll in the Current Use Program, and to promote projects with land trusts and other conservation organizations.
- **Habitat connectivity maps** can help promote land conservation where appropriate and guide local management decisions on various issues, such as new road construction, the placement of guardrails, and other road maintenance issues.
- **Ecological inventories** can provide useful information on rare and threatened species, natural communities, critical wildlife habitat, wetlands, and other important resources. Such information can assist with the development of bylaws and regulatory review processes, and can also be valuable for prioritizing non-regulatory conservation and education efforts.

Mapping Tools

- **BioFinder:** This is a web-based mapping tool that was developed by the Vermont Agency of Natural Resources for identifying Vermont's lands and waters that support high priority ecosystems, natural communities, habitats, and species. You can use the BioFinder Mapping Tool to explore the distribution and richness of Vermont's biodiversity and help secure Vermont's natural heritage for future generations. You can also download data as shapefiles if you have mapping capabilities. Learn more at: <http://biofinder.vermont.gov/>.
- **Natural Resources Atlas:** This is a web-based mapping tool that was developed by the Vermont Agency of Natural Resources to provide geographic information about environmental features and sites that the agency manages, monitors, permits, or regulates. It is a good place to start in developing local maps for this purpose and you can download shapefiles if you have in-house mapping capabilities. Learn more at: <http://anrmaps.vermont.gov/websites/anra/>.
- **Basic Natural Resources Inventory:** This Vermont Fish & Wildlife Department website gives an overview of the types of data that should be including when developing a natural resources inventory and accompanying maps. Please note that this website provides useful guidance about inventories in general and the Agency of Natural Resources' mapping tools. Learn more at: http://www.vtfishandwildlife.com/cwp_inventory.cfm.

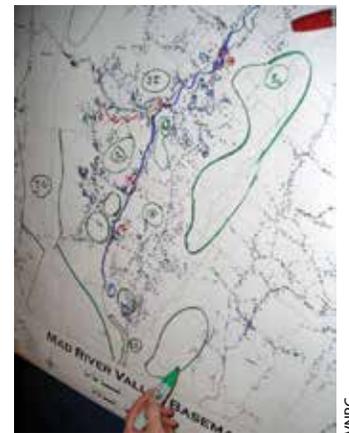
For municipalities with in-house mapping capacity, the Vermont Center for Geographic Information (www.vcgi.org) has most information needed for initial inventories of mapped resources. This information is also available through Regional Planning Commissions(www.vapda.org).

Community Values Mapping

In addition to baseline inventory information, it is also important to understand what forest resources are important to community members.

Interested community members might include foresters, hunters, anglers, birders, hikers and other outdoor enthusiasts who are intimately familiar with their own neck of the woods.

One way to engage these residents is through “values mapping,” an exercise in which participants are asked to identify areas on a map that are important for recreation, timber production, wildlife habitat, hunting, watershed protection, etc. Other useful information to map might include wildlife sightings or known high roadkill areas. Once collected, this information can be overlaid on top of other mapped information to understand and help prioritize parcels for inclusion in both regulatory and non-regulatory conservation and management strategies. The Community Wildlife Program at the Vermont Fish and Wildlife Department can help communities organize a values mapping exercise.



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NON-REGULATORY

Prioritizing Forestland and Natural Resource Features

Once a community has collected field data and/or conducted a values mapping exercise, it can be helpful to prioritize resources as a way to focus both regulatory and non-regulatory projects, as well as outreach. For example, a municipality can create a Conservation Focus Areas Map, which demonstrates where there are overlapping features of interest. This type of map can help the community decide where to target their conservation and management efforts.

A Forest Land Evaluation and Site Assessment (FLESA), provides another parcel-based method to identify and rank forestlands for conservation. Developed by the Vermont Department of Forest Parks and Recreation in association with UVM Extension, a FLESA is based in part on the Land Evaluation and Site Assessment (LESA) system that was used to identify and rank significant farmland. The FLESA (as a LESA) includes two parts: a “land evaluation” based on physical site characteristics (including acreage, soil and forest type) and a “site assessment” that takes into account other site criteria as defined by the community. Each parcel is then evaluated, weighted and ranked using a point system. This

analysis can be done without a GIS-based overlay; however, having an overlay will make the work easier. Because of the focus on parcel-level data, outreach and public participation are essential so that it is clear how information is – and isn’t – being used. Several Vermont municipalities have developed FLESA’s with the assistance of their regional planning commissions.

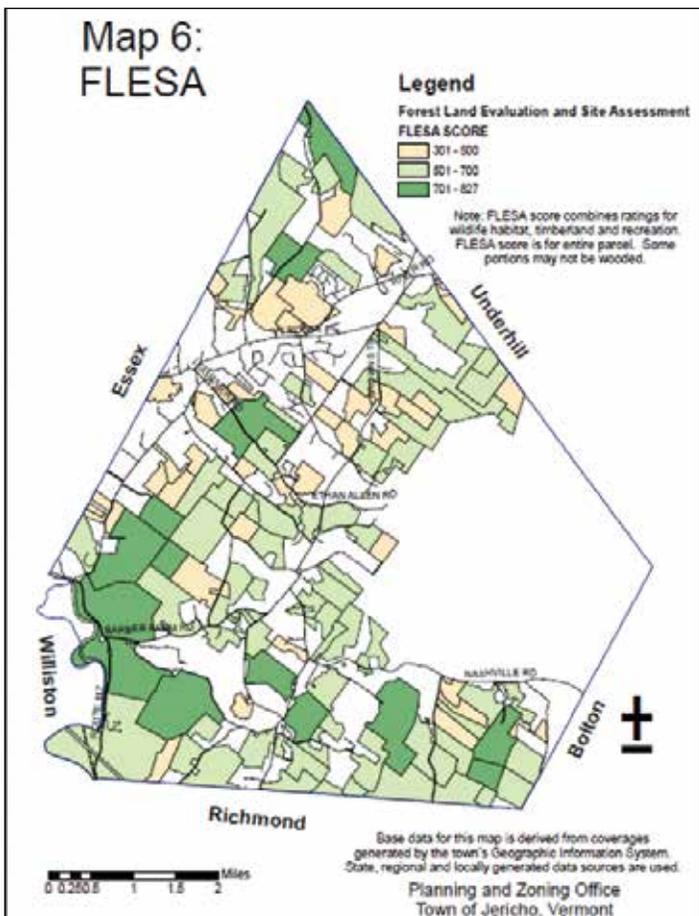
Vermont’s 1991 FLESA publication, *Planning for the Future Forest: A Supplement to the Planning Manual for Vermont Municipalities*, is no longer in print, but an updated version, *Planning for the Future of Local Forests*, is now available. This new version was developed by the New Hampshire Natural Resource and Conservation Service and is based on the Vermont model. It includes information and recommended criteria for conducting forestland evaluations, and timber, wildlife, recreation, and scenic resource site assessments. The new version is available at <ftp://ftp-fc.sc.gov.usda.gov/NH/FLESA/FLESAmanual.pdf>.

Build-out Models

Build-out models can be a helpful tool for weighing management decisions that could impact forestland. Build-out scenarios allow planners to discern how much development is allowed under current zoning standards and compare with other hypothetical situations (e.g. if those standards were changed or if new standards were put in place). Output from a build-out study can be analyzed by comparing raw data (i.e. either the maximum, or an average number of allowable units under different scenarios) or through a mapped display (a so-called “measles” map, that places points representing each potential new unit under different scenarios). The latter can be viewed along with mapped natural resource information to help identify where resources are most threatened by potential development, or may be impacted by current or proposed policies and standards.

Build-out analyses of projected developments within a town or watershed can assist with conservation planning efforts and inform the need for additional strategies to limit forest fragmentation. A build-out assessment of rural residential zoning districts is a fairly simple mapping exercise and regional planning commissions can assist with this process.

Once a community has documented its natural resources and forest blocks, and identified those forest areas or resources to conserve, the next step is to identify the most appropriate regulatory and/or non-regulatory approaches and those actions needed to implement the plan, and establish the policy foundation for those strategies in the town plan.





NON-REGULATORY

Things to Consider

Don’t forget the regional landscape. Forest resources don’t stop at town boundaries; therefore, it is increasingly important to plan jointly with neighboring towns to better conserve and manage shared forest resources. Conservation plans at the local level should be developed in relation to broader regional or “landscape level” understanding, as well as coordinated with regional planning efforts. In the absence of coordinated planning and management, the efforts of one community to conserve forest resources and habitat connectivity can be undermined by the lack of similar efforts in neighboring communities. In these types of situations, the economic and ecological viability of large forest block can be threatened.

Consider creating a steering committee of representatives

from multiple towns as part of the forest conservation planning process. This committee could share baseline inventories, pool conservation or management funding, and set priorities for non-regulatory strategies that provide consistency in maintaining important forest resources across town boundaries.

Assess your municipality’s capacity. It is useful to take stock of where your municipality stands by asking these questions: How much work has been done? How much is needed? What resources are available? Municipal conservation commissions, by law, are specifically authorized to conduct inventories and studies and develop conservation plans. If your community does not have a commission, request a town vote (or ask the selectboard to vote) for the creation of one (24 V.S.A. §4501).

If baseline natural resource inventories already exist, begin

Case Study

Forests, Wildlife, and Communities in the Mad River Valley

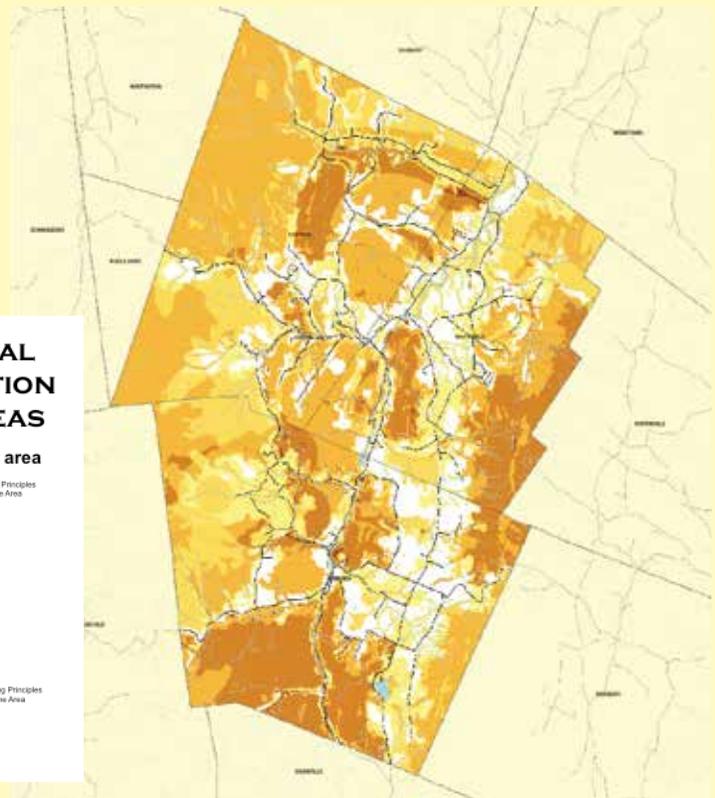
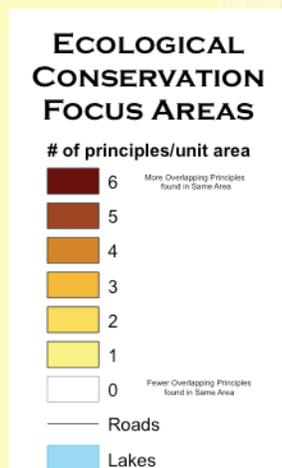
The Forests, Wildlife, and Communities (FWC) project is an exciting collaboration among towns in the Mad River Valley. Started in 2011, the project is an incubator for conservation planning with the vision of implementing a regional and landscape level approach to forestland and wildlife habitat conservation. Under the leadership of VNRC and a steering committee made up of representatives of local planning commissions, conservation commissions, state agencies (Vermont Departments of Forests, Parks, and Recreation and Fish and Wildlife), the U.S. Forest Service, local and state conservation organizations, the Mad River Valley Planning District, and local landowners, the project has accomplished numerous conservation planning initiatives.

When the project started, three towns (Fayston, Waitsfield and Warren) had already collected baseline information through an ecological inventory conducted by environmental consultants. The FWC Steering Committee compiled information from the baseline inventory, and overlaid it with separate maps from a community values forum that was held in the first year of the project. The results showed that the areas that residents identified as important for such things as recreation, scenery, hunting, and hiking were also areas that rated high for ecological significance. Not

surprisingly, these areas included large intact forest blocks.

With assistance from the Vermont Fish and Wildlife Department’s Community Wildlife Program, the Steering

Ecological Conservation Focus Areas





NON-REGULATORY

prioritizing regulatory or non-regulatory strategies for your town, or partner with adjoining towns to work on landscape level planning. If your town does not have field data or conservation resource maps, seek funding to conduct an inventory, or consider creating a conservation fund within the town to pay for conservation planning.

Work with willing landowners. Given that most forestland is privately owned, it's important to understand and take into consideration the landowner's goals, objectives and concerns, and incorporate these into the planning process. Individual communication and a certain level of trust is necessary to build broad-based community support for recommended conservation strategies and programs that affect private land. In addition, as previously noted, landowner permission is required for most fieldwork, including ecological inventories. Anticipate more landowner outreach than you might expect.

This can be challenging, but ultimately very rewarding for both the community and the property owner.

Engage your regional planning commission. Your regional planning commission (RPC) is a key source of conservation planning, mapping, and technical assistance. There are eleven RPCs located throughout the state with staff that can assist with conducting inventories, mapping resources, developing FLESA's and build-out analyses, writing municipal plan and bylaw language, and finding funding for conservation planning.

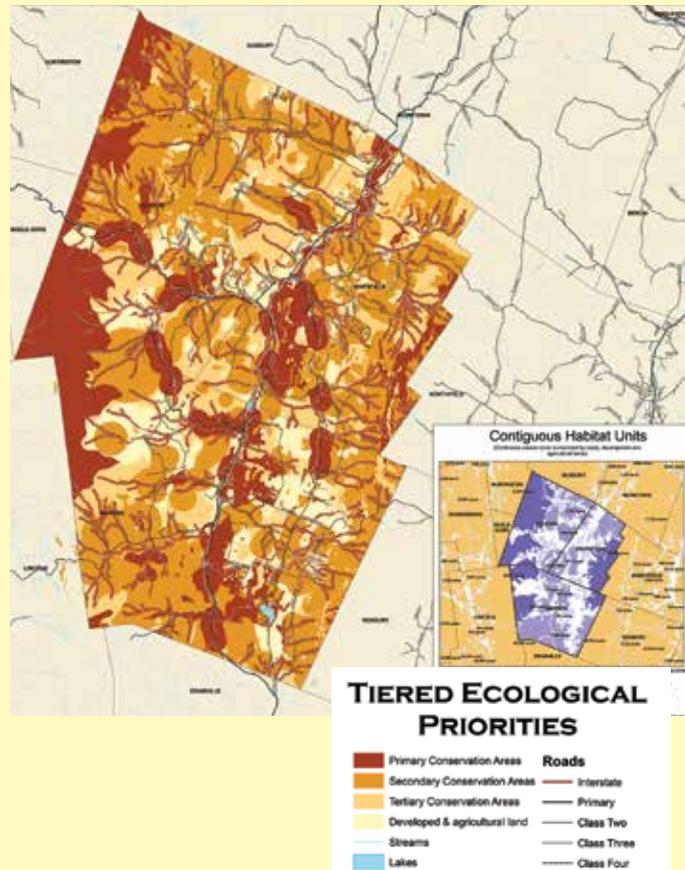
Seek funding from various sources. Municipal Planning Grants, administered through the Vermont Department of Housing and Community Development, provide funding (on a competitive basis) for inventories and planning activities. Contact your RPC for more information.

Committee also created maps that could be used in both the local planning and development review process, and in non-regulatory efforts, such as voluntary land acquisition. The first map, titled "Ecological Conservation Focus Areas" (at left) was designed to overlap ecological principles, such as maintaining large intact areas of vegetation or maintaining connectivity among wildlife habitats, in order to identify areas with multiple principles. The areas that had the greatest number of overlapping principles were identified as priority areas for non-regulatory strategies such as technical assistance to landowners or voluntary land acquisition.

A second map, titled Tiered Ecological Priorities (at right), was designed to influence land use planning and zoning. The map designates certain areas based on their importance for maintaining fish and wildlife populations and biological diversity. Areas labeled Primary Conservation Areas are areas where development impacts should be avoided. Areas identified as Secondary and Tertiary Areas encourage clustered development and limited penetration into sensitive communities. The identification of these priority areas also serves as a reference for planning commissions to designate complimentary zoning districts, such as conservation districts or overlay districts with specific development review standards.

To learn more about the FWC project, and view larger versions of the maps, please go to <http://www.mrvpd.org/fwc.php>.

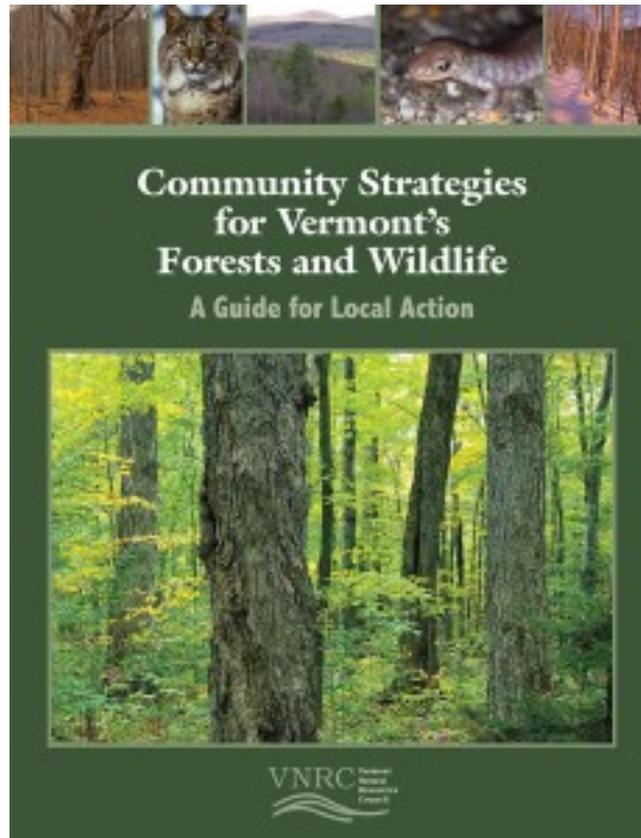
Tiered Ecological Priorities





This chapter is part of a larger publication called ***Community Strategies for Vermont's Forests and Wildlife: A Guide for Local Action***. You can download the entire publication or individual chapters (including the endnotes, resources, and credits page) for FREE at:

www.vnrc.org/programs/forests-wildlife/guide/



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