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Making Landscape-Scale Forest Stewardship Accessible to All

Most Vermonters choose to live in areas identified as Rural Residential Landscape Zones (*2010 Vermont Forest Action Plan*), based on housing parcel sizes between 5 to 27 acres. This area represents about 59% of Vermont's land base. The forested portion of this area contains most of Vermont's highly productive forest lands. It includes the majority of forests tapped for maple syrup production and has a high percentage of Use Value Appraisal (UVA) enrollments supporting forested woodlots +/-25 acres. Forests located in the Forested RRZ are at high risk from invasive species because of proximity to dispersal vectors and disturbed sites. The high number of landowners in fragmented landscapes makes monitoring, evaluation, and control of invasives difficult. Houses and related development result in larger areas of impervious surfaces, a major cause of stormwater runoff pollution into Vermont's waters. Planning for forested buffers and low impact development in developing areas is critical to managing runoff. Smaller parcels of forest land are also more vulnerable to over-browsing by deer because hunting opportunities become limited due to the small size of parcels and the increase in posting by landowners.

"Making Landscape-Scale Forest Stewardship Accessible to All" connected eight of Vermont's Regional Planning Commissions (RPCs) with the Vermont Department of Forests, Parks, and Recreation (FPR). This was Phase 2 of a multi-year effort to apply geographic information system (GIS) technology and a stakeholder engagement process to inventory and assess forest resources, identify forest landscape types, and produce strategies to assist regions, municipalities, and forest landowners in keeping forests as forests.

The partners developed tools that towns and regions can use to address priority forest landscapes. Enabling landowners and municipalities to access and understand relevant forest data is a powerful tool to enact big-picture change. Landscape-scale forest stewardship data was made publicly accessible through a State of Vermont Agency of Natural Resources web-based mapping system, the Forest Stewardship Atlas. Significant outreach and education resulted in local legislative bodies, planning commissions, consulting foresters, and private landowners working together on regional and municipal plans, zoning bylaws, and other regulatory and non-regulatory projects. Volunteer town boards learned about forest management issues, such as invasive pest preparedness, and emerging trends in the forest products industry like backyard saw mills, to prepare for changing forest management conditions and forest industry trends.

Enclosed in this package are final deliverables summarizing the work completed under this USDA Forest Service Redesign Grant (12-DG-11420004-249). The package is divided into four components of the project as identified in the initial Scope of Work: Web Platform, Public and Private Outreach, Regional Strategies, and Municipal Action.

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- Municipal & Regional Planning • Transportation Planning • Emergency Preparedness Planning •
 - GIS Mapping Services • Grant Administration • Census Data •

EXECUTIVE SUMMARY: WEB PLATFORM

The first component of the Forest Stewardship Phase 2 project was the development of a web-based mapping platform called the Forest Stewardship Atlas. The purpose of the Forest Stewardship Atlas is to provide access to geographic data related to forests. Participating RPCs collaborated with Vermont Agency of Natural Resources to develop the new web platform providing access to over 50 forest-related datasets organized into six themes - Productivity, Ecological Resources, Water Resources, Scenic and Recreational Resources, Human and Environmental Constraints, and Stewardship. Existing statewide trails and recreation sites datasets were augmented with more recent regional data, and a forest products dataset was developed. The site is accessed from this url:

<http://anrmaps.vermont.gov/websites/ForestStewardship>.

The site allows you to view, identify and query the datasets; print and export maps, and output summary reports for selected geographic areas and layers. Prior to public release, the site was tested by regional stakeholders and feedback received through an online survey (attached). Based on the feedback, the site was adapted by incorporating suggested improvements where feasible. The public rollout of the site has been accompanied by significant outreach and education to assist town boards, consulting foresters, and private landowners to learn about and use the data. The RPC delivered trainings listed below reached 141 participants.

RPC	Targeted Organization	Date of Training	Number of Participants
ACRPC	Addison County Regional Planning Commission	2/11/2015	20
BCRC	Town of Sandgate	5/19/2015	8
BCRC	Bennington County Conservation District	7/22/2015	7
CCRPC	Plainfield Conservation Commission	5/28/15	4
LCPC	Stowe Conservation Commission	5/6/2015	8
LCPC	Forestry Roundtable	6/18/2015	25
NRPC	NRPC's Plan and Project Review Committee	5/13/2015	6
NRPC	Cold Hollow to Canada Forest Link Project	5/18/2015	13
SWCRPC	Reading Planning Commission	5/4/2015	3
SWCRPC	West Windsor Town Forest Committee	5/7/2015	4
TRORC	Linking Lands Alliance RCP	4/7/15	4
TRORC	Woodstock Conservation Commission	4/15/15	8
WRC	Foresters	6/4/15	5
WRC	Guildford Conservation Commission	6/10/15	13
WRC	Whitingham Planning Commission	6/15/15	8
WRC	Jamaica Town Office – for general public	6/30/15	5

A useful “Quick Guide,” providing information about the site navigation and features, was developed by SWRPC and can be accessed from the site. A “Metadata” document with information about the datasets is also available. Besides the numerous forest data layers, this platform provides links to reports and other websites with useful information about forests.

We received a lot of great feedback from the meetings, below is a summary of the suggestions/comments.

- Map legend contains many technical terms; suggest changing some to more layman terms (ex. Esites, Metadata) or spell out acronyms (ex. EAB).
- Add a disclaimer – that no data may just mean the information has not yet been collected versus not present. Example with the invasive species map.
- Search tool – create a search tool based on key word to find layers.
- Track use – potential to track use of layers (when it is activated) to help know what information people are interested in. Those not used may not be of interest or users are not clear on purpose of information it shows.
- Contact information on page for questions/issues with Atlas
- Guide for tool use - create a you-tube video tutorial or post a “how to” guide for use. Again with the general public as the audience.
- Metadata PDF: write out SARS/SAP first time
- Thicker parcel lines (NR Atlas has them a little thicker)
- Have two or three habitat block categories on the Forest Report (we have one on the report now, looks like there is space for one or two more (the group wants a lot but I do not think we can fit))
 - o 50-100, >100
 - o 50-100, 100-300, >300
- On a mac in Safari: slides to dim the base map layers were missing

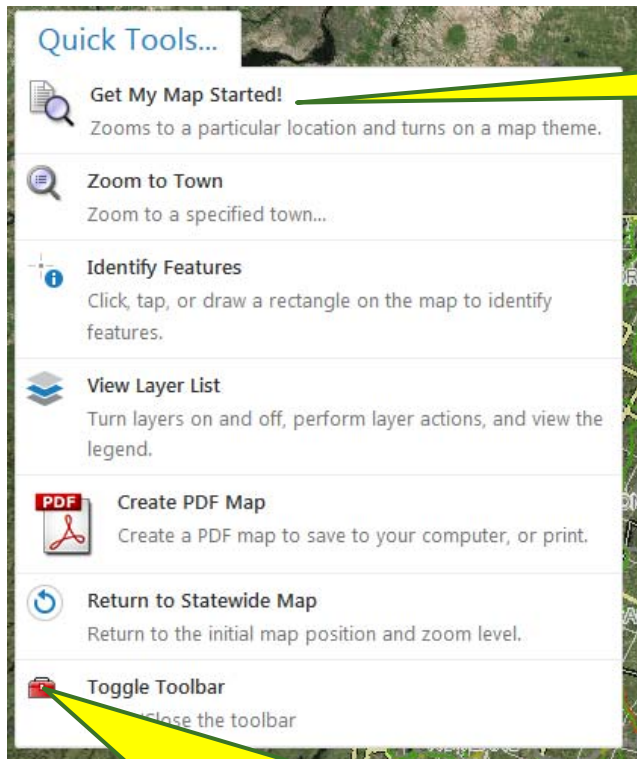
Some of these requested improvements have been implemented, others will be addressed as resources allow. Web accessible forest stewardship data will help landowners, towns and forest managers to inventory and assess forest resources in order to more effectively manage these resources. Having better access to and understanding of landscape scale data will assist in keeping forest land intact to maintain habitat connectivity, forest health and productivity, ecosystem quality and strong forest products based economic activities.



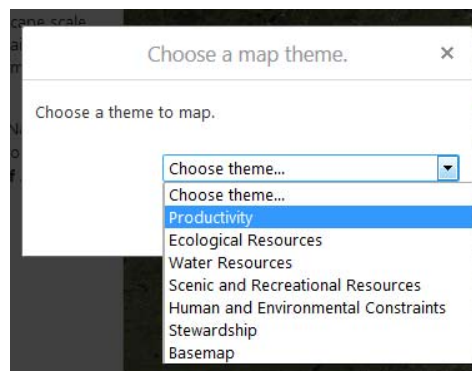
Quick Guide to Forest Stewardship Atlas

Vermont's RPCs and ANR have developed a new online map/ atlas which provides access to a wide variety of forest data for across the state. Web accessible forest stewardship data will help landowners, towns and forest managers to inventory and assess forest resources in order to more effectively manage these resources. Check it out at <http://anrmaps.vermont.gov/websites/ForestStewardship/>

Digging into the Atlas



Best place to get started...And it guides you into the Atlas – selecting location, theme



Themes are a group of data that are useful to see together

Caution: when you are looking at a lot of land area (eg an entire town), some data may not show on the map. Zoom in a little and the data will start to show.

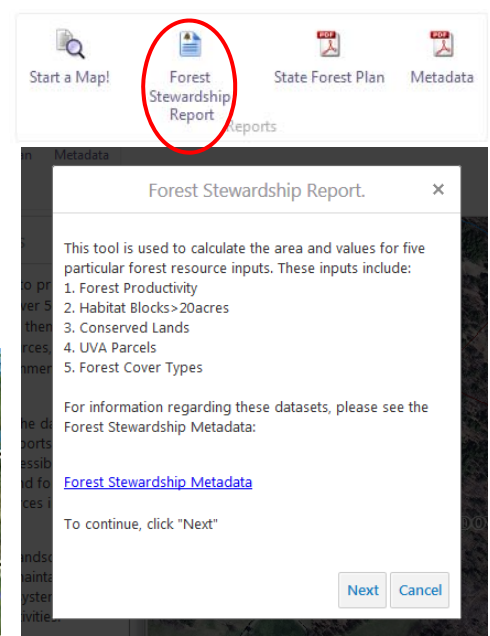
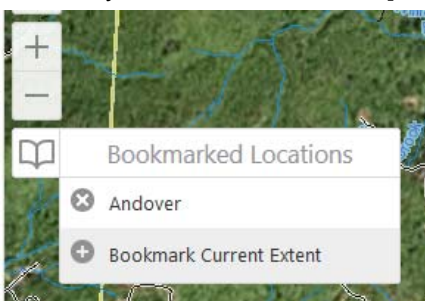
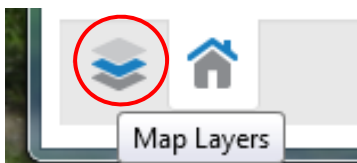
Remember to “turn on” what you want to see in the “Layers List” so that it shows on the map and in the “Legend”

Useful toolbar which appears at the top of the Atlas, including ability to print, identify data and measure

Some useful buttons explained

In general, just click on a button or hover your mouse over the button and it will tell it what it can do. Here are some useful ones to get you started:

- Forest Stewardship Report – Allows you to calculate information about a certain study area (Town, County, Watershed, etc)
- Map Layers – where you can see what symbols can be shown]
- Bookmarked Locations – you can save what area the map is showing (“Current Extent”)



Key Words

Base Maps – the map shown behind all the data – aerial/ orthophoto, topographic, simple grey canvas (with roads)

Current Extent – What area the map is currently showing

Layer – Can mean two things – either a group of data in a map (eg ANR Natural Resources Atlas) or how data is viewed (usually referring to a GIS type .lyr).

Legend – Also known as the “Key” – ie the color/ symbols on the map explained

Metadata – Data about the data – ie information about what your data shows, who collected it, when it was last updated, and other things you might want to know

Orthophoto – also known as aerial photo

Toggle Toolbar – Useful toolbar which appears at the top of the Atlas, including ability to print, identify data and measure

Theme – A group of data that are useful to see together

What data can I see in the Atlas?

For more information about any of this data, see the “Metadata”.

I. PRODUCTIVITY

- a. Forest Productivity (SARS Map 15) Forest blocks greater than 500 acres were ranked according to their predicted forest productivity as either lower or higher productivity, based on the following inputs – geology (30%), elevation (25%), hardness zones (15 %), landforms (15%), slope (10%) and precipitation (5%)

II. ECOLOGICAL RESOURCES

- a. Species Datasets
 - i. Bobcat
 - ii. Bear
 - iii. Amphibian and Reptile
 - iv. Moose
- b. Deer Wintering Areas
- c. Rare Species and Communities
- d. Wildlife Habitat Blocks
- e. Climate Change Refugia (SARS Map 31)
- f. The Nature Conservancy (TNC) Matrix Blocks – large areas with minimal fragmentation by roads that were selected as the best locations for conservation of the dominant forest natural community types
- g. Biophysical Region (SARS Map 4) – divides Vermont on the basis of bedrock geology, gross physiography, climate, and broad-scale patterns of potential natural vegetation.
- h. Land Type Association (SARS Map 5) – subdivisions defined by similar patterns of characteristics such as: glacial land forms, depth to bedrock, bedrock type, topographic roughness, soil parent material, regional hydrology, and presettlement vegetation.
- i. Percent Forested (SARS Map 6)
- j. Forest Cover Types (SARS Map 7)

III. WATER RESOURCES

- a. Surface Waters
- b. Priority Aquatic Features
- c. Wetlands
- d. Flood and Fluvial Erosion Hazard Areas
- e. Vermont Major Watersheds (SARS Map 34)

- f. Source Protection Area (SARS Map 35)
- g. Vermont Headwater Land Class (SARS Map 36)
- h. Ability to Produce Clean Water (SARS Map 37)

IV. SCENIC AND RECREATIONAL RESOURCES

- a. Forest Recreation Sites
- b. Trails

V. HUMAN AND ENVIRONMENTAL CONSTRAINTS

- a. Areas of Forest Decline (SARS Map 23)
- b. Sensitivity to Acid Deposition (SARS Map 24)
- c. Vermont Wildfire Risk (SARS Map 32)
- d. Susceptibility to Emerald Ash Borer (EAB) (SARS Map 27)
- e. Asian Longhorned Beetle (ALB) Risk (SARS Map 28)
- f. Hemlock Woolly Agedid (HWA) Risk (SARS Map 29)
- g. Number of Invasive Species Observed (SARS Map 30)
- h. Density of E-Site (Housing Density)

VI. STEWARDSHIP

- a. Conserved Lands (SARS Map 11)
- b. Percent of Land Area Conserved by Town (SARS Map 12)
- c. Percent of Town Acres in Use Value Appraisal (UVA, otherwise known as Current Use) (SARS Map 13)
- d. UVA Average Parcel Acres by Town (SARS Map 14)
- e. Priority Urban Forest Enhancement (SARS Map 39)
- f. University of Central Florida's (UCF) Index of priority areas for urban tree canopy enhancements – Medium to Medium/High (SARS Map 40)
- g. Stewardship Potential (SAP - Spatial Analysis Project)

Other Useful Links

SWCRPC Resources

- <http://swcrpc.org/gis-mapping/> - every so often add link to a new resource as it becomes available
- <http://swcrpc.org/forest-stewardship/> - Includes the work SWCRPC has done since 2013 on Landscape-Based Forest Stewardship

Online Resources

- VT BioFinder Mapping Tool - <http://biofinder.vermont.gov/biofindermap.htm>
- ANR Natural Resources Atlas - <http://anrmaps.vermont.gov/websites/anra/>
 - Includes several "Layers" which are related data grouped together in a map
 - "FloodReady Map" – known as "[Floodplain Management](#)" layer
- Wide variety of mapping apps for your tablets/ smartphone – for some examples and reviews see http://vcqi.vermont.gov/sites/vcqi/files/event_archive/Webinar_Smartphones_Dec2013.pdf

Other Forest Resources

- NOAA Coastal Change Analysis Program (CCAP) Land Cover Atlas - <http://www.coast.noaa.gov/ccapatlas/>
- U.S. Forest Service Geodata Clearinghouse - <http://data.fs.usda.gov/geodata/>
- U.S. Forest Service Forest Inventory Data Online (FIDO) - <http://apps.fs.fed.us/fia/fido/index.html>
- Vermont Division of Forestry – Forest Resource Harvest Summary - http://www.vtfpr.org/util/for_utilize_harvsumm.cfm
- USDA National Agriculture Statistics Service – Quick Stats Adhoc Query Tool - <http://quickstats.nass.usda.gov/>
- Vermont Natural Resources Council Informing Land Use Planning and Forestland Conservation Through Subdivision and Parcelization Trend Information - <http://www.vnrc.org/subdivisionreport/index.html>
- Vermont Forest Resources Plan (including SARS maps) http://anrmaps.vermont.gov/websites/sars_data/

Forest Stewardship Atlas - Feedback Survey

Q1 How do you primarily intend to use this site? (for what purpose, project or group)

Answered: 11 Skipped: 0

#	Responses	Date
1	Inventory and analysis	1/13/2015 12:28 PM
2	bird conservation with National Audubon Society will also use for town Conservation Commission activities	1/13/2015 11:43 AM
3	Mostly for personal curiosity. Could be helpful for occasional consulting.	1/13/2015 11:10 AM
4	Stewardship layers will be used for town planning and individual property owners may also use the layers for information	1/12/2015 10:30 AM
5	Not sure if I will use it	1/8/2015 2:22 PM
6	As a County Forester I would use this tool primarily to share with landowners and show people how they can obtain a plethora of information about their land.	1/5/2015 3:03 PM
7	To view and retrieve data on forest/natural resources to assist municipalities with plan updates, mapping and local forest stewardship or other natural resource projects.	12/31/2014 12:14 PM
8	For the Barnard Conservation Commission, siteing recreation trails, wetland monitoring, wildlife corridor ID.	12/31/2014 11:09 AM
9	As coordinator of the informal citizen's group we call Friends of Fairlee Forests, I would hope I and other group members could continue to add to your database of ecological assets in our town, especially in the Town Forest. We have already collaborated with neighboring organizations on a habitat inventory of the wetland system within the Fairlee Town Forest, which is included in the site. We have also mapped (and sign-posted) a network of forest roads and recreational trails through this area which we would be glad to have entered on the site. And, as citizen scientists, we could continue to expand your inventory of significant plant and animal habitats.	12/30/2014 9:42 PM
10	Town planning	12/28/2014 2:08 PM
11	Location of habitats and water resources for forest planning	12/23/2014 1:48 PM

Forest Stewardship Atlas - Feedback Survey

Q2 Have you previously used other web mapping tools? If so, which tools, and for what purpose?

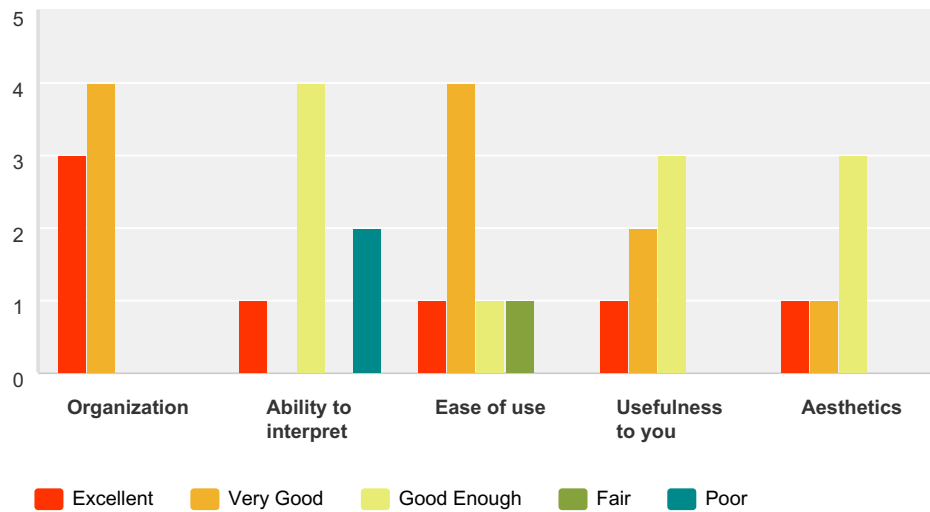
Answered: 11 Skipped: 0

#	Responses	Date
1	Yes, ANR Atlas for inventory and analysis	1/13/2015 12:28 PM
2	ArcGIS online, Soil Surveys Same purpose as above	1/13/2015 11:43 AM
3	Just Terrain Navigator and Google Earth	1/13/2015 11:10 AM
4	lots - The best one that provides a report is the Web Soil Survey by the NRCS	1/12/2015 10:30 AM
5	biofinder	1/8/2015 2:22 PM
6	ANR Atlas, Map My Land, BioFinder - the sweet of ANR mapping tools	1/5/2015 3:03 PM
7	Yes, the VT Energy Atlas and the ANR Atlas for obtaining data for mapping purposes.	12/31/2014 12:14 PM
8	I have used Google Earth for the purposes stated above.	12/31/2014 11:09 AM
9	In producing the first edition of our Fairlee Forest Trails Map in 2012, I explored earlier generations of a layered GIS map of the area but could only find data on forest cover and winter deer yards, much of it out of date and no longer accurate. I wasn't able to access arcGIS data or learn how to use it, but I was excited about the possibilities for doing what you are now doing here. A woman with GIS expertise who has since moved next door converted our trail data to arcGIS format for the 2nd edition of the map, published last summer.	12/30/2014 9:42 PM
10	Not really	12/28/2014 2:08 PM
11	yes see 1 above, also locating boundaries via tax maps	12/23/2014 1:48 PM

Forest Stewardship Atlas - Feedback Survey

Q3 Rate the map layers and themes:

Answered: 10 Skipped: 1

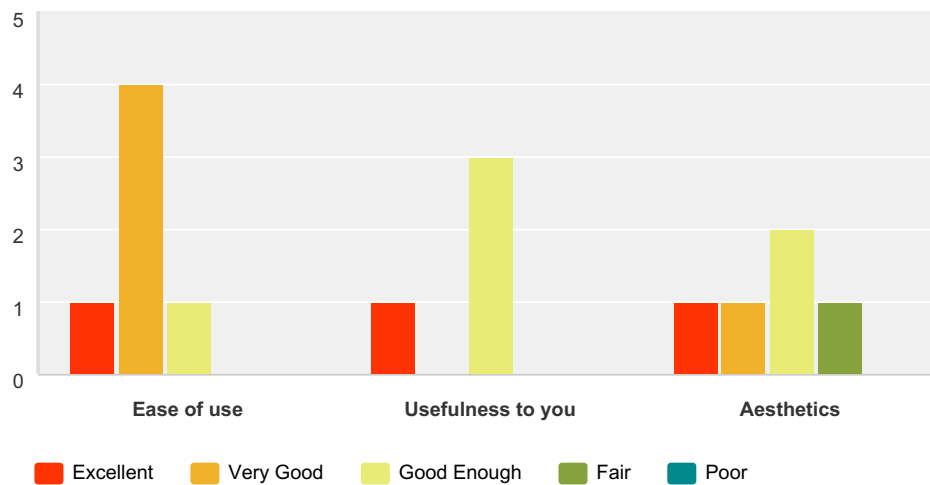


	Excellent	Very Good	Good Enough	Fair	Poor	Total	Weighted Average
Organization	42.86% 3	57.14% 4	0.00% 0	0.00% 0	0.00% 0	7	1.00
Ability to interpret	14.29% 1	0.00% 0	57.14% 4	0.00% 0	28.57% 2	7	1.00
Ease of use	14.29% 1	57.14% 4	14.29% 1	14.29% 1	0.00% 0	7	1.00
Usefulness to you	16.67% 1	33.33% 2	50.00% 3	0.00% 0	0.00% 0	6	1.00
Aesthetics	20.00% 1	20.00% 1	60.00% 3	0.00% 0	0.00% 0	5	1.00

#	Comments	Date
1	A link to the Stewardship Report and the State Forest Plan would help to clarify the layer sources and any weighting steps that were used in their development.	1/12/2015 10:50 AM
2	The information included is amazing, it is just really hard to understand what you are looking at and where information is located. Labels on the map itself would be helpful (i.e. roads and streams). Some of the map layers are difficult to read the layer name, or have non-descriptive names, making layer names user friendly would be helpful. Having basic, and simplified meta data for the more complex layers might be helpful, for example it would be helpful if you could hold your cursor over a layer like "Climate Change Refugia" in the Evolofical Resources theme, and get a brief description of what this was.	1/5/2015 3:50 PM
3	The question above only allows you to place 2 checks and not evaluate each theme individually. This is an error in the way the question was set up.	12/31/2014 12:39 PM
4	above does not seem to work, Checking in same column removes check mark above.	12/31/2014 11:13 AM
5	The above rating program seems inappropriate for this kind of survey. Isn't this only for ranking categories, not rating them? I would check Excellent or Very Good for all categories if it let me, but it won't.	12/30/2014 10:01 PM
6	Only one check box can be checked under each category above. These are very good, but some sugar houses are missing for Monkton and some conserved areas for wildlife.	12/28/2014 2:14 PM

Q4 Rate the map creation tool (located in “Analysis” tab):

Answered: 7 Skipped: 4

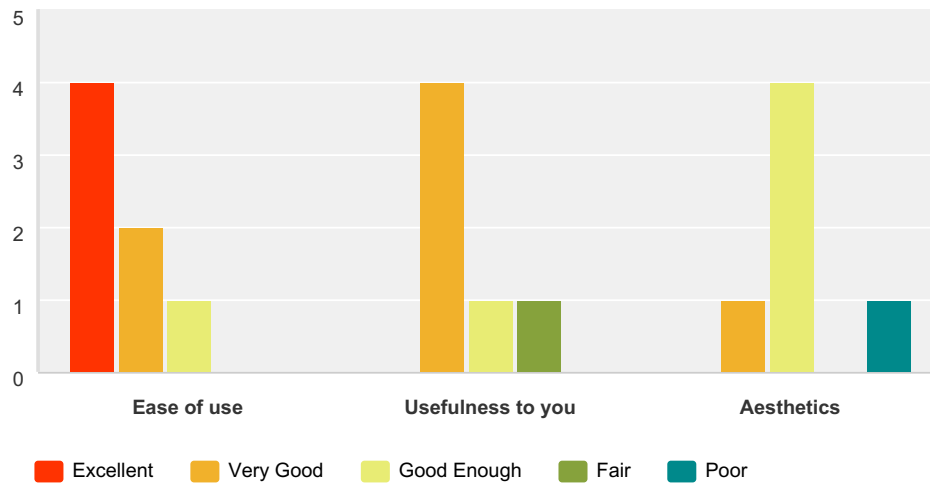


	Excellent	Very Good	Good Enough	Fair	Poor	Total	Weighted Average
Ease of use	16.67% 1	66.67% 4	16.67% 1	0.00% 0	0.00% 0	6	1.00
Usefulness to you	25.00% 1	0.00% 0	75.00% 3	0.00% 0	0.00% 0	4	1.00
Aesthetics	20.00% 1	20.00% 1	40.00% 2	20.00% 1	0.00% 0	5	1.00

#	Comments	Date
1	I had trouble getting this to work.	1/12/2015 10:50 AM
2	The locus map seems funky, especially at smaller scales (i.e. 1: 50,000 - it was just a red dot on a white backdrop).	1/5/2015 3:50 PM
3	? Didn't notice an Analysis tab or Map Creation tool other than saving a PDF of selected map area and layers.	12/30/2014 10:01 PM
4	Not sure what you are talking about here. I did not see an analysis tab. It took me a while to figure out how to get the layers to show up. But once I did it was easy.	12/28/2014 2:14 PM

Q5 Rate the Forest Stewardship Report tool (in "Analysis" tab):

Answered: 7 Skipped: 4



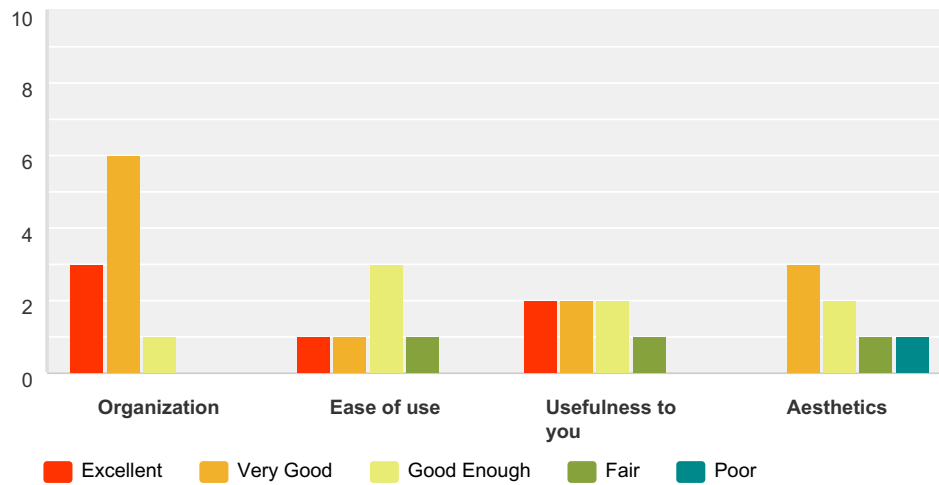
	Excellent	Very Good	Good Enough	Fair	Poor	Total	Weighted Average
Ease of use	57.14% 4	28.57% 2	14.29% 1	0.00% 0	0.00% 0	7	1.00
Usefulness to you	0.00% 0	66.67% 4	16.67% 1	16.67% 1	0.00% 0	6	1.00
Aesthetics	0.00% 0	16.67% 1	66.67% 4	0.00% 0	16.67% 1	6	1.00

#	Comments	Date
1	report did not include name of AOI, in my test case a town	1/13/2015 11:44 AM
2	This is a great tool that needs some more polish, but that will come with more time. The pdf map report needs the study area to be highlighted and a total acreage should be provided.	1/12/2015 10:50 AM
3	For ideas on reporting you might want to check out how Washington State did this: http://publiclands.smartmine.com/#Map They used some pretty intuitive interactive graphics. The significant figures in the report are way more than what is needed. One decimal place likely far exceeds the accuracy of the data.	1/5/2015 3:50 PM
4	Please note that these survey questions do not allow a person to rate the above categories the same. I'm not able to check say "Very Good" for both Ease of Use and Usefulness to me.	12/31/2014 12:39 PM
5	Looked again for "Analysis" tab and couldn't find it.	12/30/2014 10:01 PM
6	Did not use this part of the tool.	12/28/2014 2:14 PM
7	have not used it	12/23/2014 1:49 PM

Forest Stewardship Atlas - Feedback Survey

Q6 Rate the overall platform:

Answered: 10 Skipped: 1



	Excellent	Very Good	Good Enough	Fair	Poor	Total	Weighted Average
Organization	30.00% 3	60.00% 6	10.00% 1	0.00% 0	0.00% 0	10	1.00
Ease of use	16.67% 1	16.67% 1	50.00% 3	16.67% 1	0.00% 0	6	1.00
Usefulness to you	28.57% 2	28.57% 2	28.57% 2	14.29% 1	0.00% 0	7	1.00
Aesthetics	0.00% 0	42.86% 3	28.57% 2	14.29% 1	14.29% 1	7	1.00

#	Comments	Date
1	Links to reports would help explain the data.	1/12/2015 10:50 AM
2	This tool has huge potential. Currently the navigation around the tool is a bit clunky, and the reports are not the most aesthetically pleasing. The use of pie graphs and a more artistic font would go a long way in visually improving these graphs.	1/5/2015 3:50 PM
3	Functionality of the platform could be improved to allow for users to create more specific overlay maps that may include multiple topics (ex: water resources and ecological resources). When clicking the "Give Me Everything" option many layers didn't reload or were not visible. Many layers such as certain water resources were only visible when zooming in to say the Town level. When using the distance tool it's hard to see the measurement label over the map features. It would be great if there was an obvious option on the platform that allowed users to download data in shapefile format.	12/31/2014 12:39 PM
4	Again, I would rate all Good Enough or above but this survey tool doesn't allow it. Basically, this is light years more user friendly than any arcGIS platform I've seen to date -- though I'm a total novice and so not a good judge.	12/30/2014 10:01 PM
5	Again I could only check Very Good once--the rest would be very good.	12/28/2014 2:14 PM

Forest Stewardship Atlas - Feedback Survey

Q7 Do you have any suggestions for improving the Forest Stewardship Atlas?

Answered: 9 Skipped: 2

#	Responses	Date
1	The "Find Me" geolocation option did not place me properly, not even in the right town. This will be a great tool for natural resource professionals and others with interest. Thanks!	1/13/2015 11:45 AM
2	See earlier comments.	1/12/2015 10:51 AM
3	The meaning of the data categories can be a bit confusing. For example, what is an area of forest decline, and what does it mean on the ground?	1/8/2015 2:39 PM
4	See previous page. What would be really neat is to have more visually appealing reports that included visual graphics that brook out figures of common data, like forest type.	1/5/2015 3:51 PM
5	See comments to last question.	12/31/2014 12:39 PM
6	Need more time to work with it. But so far is seem like a great tool.	12/31/2014 11:13 AM
7	--More questions than suggestions. Like, will users be allowed to enter new data themselves? Will there be a formal procedure for those with new data to contribute? Will you be collating and incorporating similar data layers from individual Forest Management Plans within your jurisdiction so yours becomes a Master Atlas for the state? Will you create a layer that shows which parcels in the state have had forest and ecological resource inventories done and which have not? Will there be an effort to update some of the now incorrect data imbedded in boundary and environmental layers generated decades ago and carried forward without re-examination? And since much of this kind of data is fluid, do you have a plan for continually updating the atlas? Will you actively disseminate, or promote, the data in this atlas to county, town, and private forestry organizations so they can bring their forest databases into alignment with it, or use it as a point of departure for their local plans -- or will it simply be available if they want to use it? It's an ambitious project and will be a terrific resource to the extent that it is locally accurate. Kudos!	12/30/2014 10:34 PM
8	Simple instruction tabs, sort of an "I want to add xyz" that do not require a lot of reading/searching for. A way to allow towns to improve the map. Several items were missing for Monkton, such as Linehan's sugar house, and Pond Brook Wetlands.	12/28/2014 2:20 PM
9	no	12/23/2014 1:49 PM

EXECUTIVE SUMMARY: PUBLIC / PRIVATE OUTREACH

The second component of the Forest Stewardship Phase 2 project built connections between public and private parties. RPCs researched and gathered a list of existing outreach programs. This information was compiled into a list of statewide, regional, and local programs. This information was used by partners developing the Vermont Forestry Outreach and Education Initiative, an online web portal providing forest stewardship information to landowners, municipalities, educators, and natural resource professionals, including foresters.

LCPC worked collaboratively with partners to develop the Vermont Forestry website, a site that will “go live” in early 2016. The website can be accessed by visiting:

<http://www.uvm.edu/extension/environment/forestry/initiative/>

Partners involved in developing the site layout and content include:

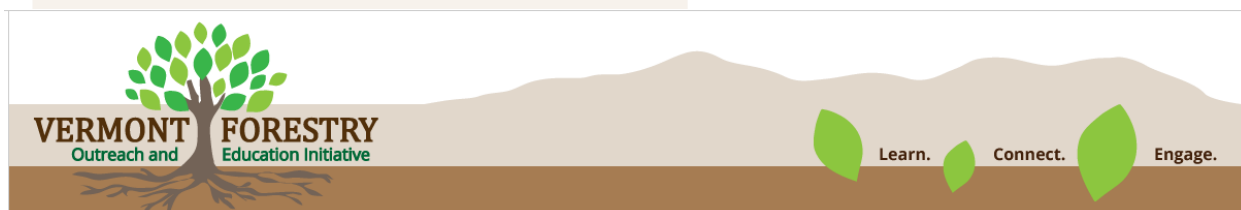
- Vermont Department of Forests, Parks, and Recreation
- University of Vermont Extension
- Vermont Urban and Community Forestry
- Vermont Natural Resources Council
- Vermont Coverts
- Center for Northern Woodlands Education
- Vermont Woodlands Association

Attached is the “Existing Forest Programs List” as compiled by seven RPCs. The list was shared with the Vermont Forestry partners to further refine the scope of that web portal.

Notifying the public about the Forest Stewardship project is important to building that public/ private linkage. A press release was submitted to news outlets across the state. Attached are the press release and list of outlets that received the press release.

Project Steering Committee

- **Ginger Anderson**, Department of Forests, Parks & Recreation (Stewardship)
- **Danielle Fitzko**, Department Forests, Parks and Recreation (Urban & Community Forestry Program)
- **Taylor Foster**, Lamoille County Planning Commission (Forest Stewardship Project)
- **Rebecca Phelps**, Department Forests, Parks & Recreation (Conservation Education)
- **Lisa Sausville**, Vermont Coverts
- **Mary Sisock**, UVM Extension Forestry
- **Elise Tillinghast**, Center for Northern Woodlands Education
- **Kathleen Wanner**, Vermont Woodlands Association
- **Emma Zavez**, Vermont Natural Resource Council



Existing Forest Stewardship Programs - statewide

Organization	Program	Contact Name, #	Contact E-mail	Location	RPC	Overview
Government						
Div of FP&R	UVA Spatial mapping	Steve Sinclair		Statewide		Map UVA landowners, parcel size, natural communities, etc.
Div of FP&R and Audubon VT	"Foresters for the Birds"	Kristen Sharpless (Audubon), Nancy Patch (FP&R)	nancy.patch@state.vt.us	Statewide (spec. Stowe and Greensboro)		Landowner based; protect critical songbird habitat
			ksharpless@audubon.org			
Div of FP&R	Stewardship Forester	Tim Morton, 885-8825 or 777-6899	tim.morton@state.vt.us	Springfield	SWRPC	
Div of FP&R	Forester	Aaron Hurst, 885-8888	aaron.hurst@state.vt.us	Springfield	SWRPC	
Vermont Fish & Wildlife	Natural resources curriculum for towns- "Natural Resources 101"	Jens Hilke, (802) 476-0199	jens.hilke@state.vt.us	statewide		
Vermont Fish & Wildlife	"Hunter Access Vermont"			statewide		Database of private landowners and individuals who are seeking hunting access to private lands.
U.S. Forest Service	Green Mountain National Forest			Rutland	BCRC, RRPC	
Vermont Association of Conservation Districts	focus is on ag; support forestry programs; support district offices	Jill Arace	jill.arace@vacd.org	statewide		
White River Natural Resource Conservation District	Soil & water conservation	Abbey Willard (828-4493 x110)	abbey.willard@vt.nacdnet.net	Select locations in TRO region	TRORC	education, partnerships, projects
Lamoille County Conservation District	Lamoille Valley Farm & Forest Initiative; "Trees for Streams"; skidder bridge program;	Kim Komer, 888-9218	kimberly.komer@vt.nacdnet.net	Lamoille County	LCPC	Maintain & improve natural resources, education, collaboration
Bennington County Conservation District	Protect Green Mtns and Taconics	Shelly Stiles, 442-2275	bccd@sover.net	Bennington	BCRC	
Franklin County Conservation District		Renae Masse, 524-6505	renae.masse@vt.nacdnet.net	Franklin County	NRPC	
Grand Isle County Conservation District		Sherri Potvin, 864-0223	giconrcd@aol.com	Grand Isle County	NRPC	
Winooski Natural Resources Conservation District	Portable skidder bridge program	Rebecca Tharp	rebecca@winooskinrcd.org	Chittenden, Washington, part of Orange counties	CVRPC	
Windham County Natural Resources Conservation District	Forests, Agriculture, Water	Jolene Hamilton, 254-5323,	jolene.hamilton@vt.nacdnet.net	Brattleboro	WRC	They apply for numerous grants to do work in Forestry, Water Quality and Agriculture
Ottauquechee Natural Resources Conservation District (ONRCD)		Sue Greenhall	onrcd1@gmail.com	White River Junction	SWRPC	
Natural Resource Conservation Service (NRCS)	forest management plans; technical assistance, easements, stewardship programs, water resources	varies county to county		statewide	all	
Vermont Council on Rural Development	Working Lands Enterprise Initiative	Paul Costello, 223-5763	pcostello@vtrural.org	statewide	all	through education and outreach, and coordination between local conservation commissions and public
Windsor County Forester	County Forester	Jon Bouton, 296-7360	jon.bouton@state.vt.us	White River Junction	SWRPC	802-281-5262 (off of VTFRP website)

Windham and Windsor County Forester	County Forester	Sam Schneski, 885-8823	sam.schneski@state.vt.us	Springfield	SWRPC	

Land Trusts

Manchester Community Land Trust	Conservation	Lee Krohn, 362-4824	l.krohn@manchester-vt.gov	Manchester	BCRC	
Middlebury Area Land Trust	Conservation easements	Scott Petersen		Middlebury	ACRPC	Conserve productive, recreational, scenic land
Stowe Land Trust	Conservation easements	802.253.7221	info@stowelandtrust.org	Stowe	LCPC	
Upper Valley Land Trust	Conservation easements	Jeanie McIntyre, President of UVLT	jeanie.mcintyre@uvlt.org	Connecticut River Valley	TRORC	
Vermont Land Trust	"Mass/VT Woodland Partnership"	Joan Weir, (802) 251-6008	jweir@vlt.org	Southern VT/ northern Mass	WRC	Landowner based, focused in 6 VT towns
South Hero Land Trust	Conservation easements	Minner Hobbs, 372-3786	minner@shlt.org	South Hero, VT	NRPC	Protects farmland, woodland, natural and recreational areas, and other open spaces
Duxbury Land Trust	Conservation	Audrey Quackenbush (phone: 244-7512).		Duxbury	CVRPC	
Central Vermont Community Land Trust	Affordable Housing	Eileen Peltier (802) 476-4493		Central Vermont	CVRPC	
Northeast Wilderness Trust	conservation, landscape scale conservation plan for northern VT	Daryl Burtnett, 802.224.1000		statewide		
Orange County Headwaters Project	Conservation easements	Ben or Ginny, 439-5252 x 2	och@orangecountyheadwaters.org	Corinth and Washington	CVRPC	work closely with VLT, UPLT, and TNC

Associations

Addison County River Watch Collaborative	Ongoing stream-monitoring	Heidi Willis, 802-352-4327	redsprings@nbnworks.net	watersheds in Addison, Washington, Chittenden	ACRPC	
American Forest Foundation	"VT Tree Farm Program"; mylandplan.org	no local contact?	info@forestfoundation.org	National		buyer's guide, viability, supply of materials, etc.
Ascutney Trails Association		Steve Giroux?		Ascutney	SWRPC	
Association of Consulting Foresters of America, Inc.	Advance the practice of professional consulting forestry	no local contact		National	all	
Franklin Watershed Committee	Water quality and health	Kurt Valenta, 238-3697	mrk@exordium-adventure.com	Franklin, VT	NRPC	Technical assistance to address erosion and runoff issues
Linking Lands Alliance	Natural resource issues	Tii Mclane	elisabeth.b.mclane@valley.net	statewide		buyer's guide, manual, branding, etc.
Logger Education to Advance Professionalism (LEAP)	Logger certification	David Birdsall, LEAP Coordinator	dwbirdsall@vermontel.net	statewide		
Mad River Valley Planning District	"Forests, Wildlife & Communities Project"	Joshua Schwartz (802)496-7173	mrvpd@madriver.com	Fayston, Waitsfield, Warren	CVRPC	
Missisquoi River Basin Association	Water quality and health	933-9009	mrba@pshift.com	Missisquoi River watershed	NRPC	River restoration including streambank stabilization and riparian buffer planting

Moosalamoo Association	Moosalamoo National Recreation Area		jenny.moosalamoo@gmail.com	Brandon	ACRPC	Work w/ various stakeholders, promote sugaring, etc.
Northeastern Logger Association	Represent logging, sawmill community; safety; advocacy	Joe Phaneuf, Executive Director, 315-369-3078	jphaneuf@nothernlogger.com	Old Forge, NY	SWRPC	
Society of American Foresters, Green Mountain Division	Info/ access to resources for members	Charlie Hancock, Chair, 326-2093	northwoodsforestry@gmail.com	Montgomery	SWRPC	or contact Sam Schneski in Springfield, he is the former chair
VT Family Forests	Family forest conservation org	David Brynn, ED	david@familyforests.org	statewide		Education, joint manufacturing/marketing, access to materials, online directory
VT Forest Products Association	Represent forest community; "VT Forest Foundation"	Delwin Fielder, President, 623-7601	vtfpa@hotmail.com	statewide		"Forest Health Conservation Checklist" and other branding tools
VT Maple Sugar Makers Association	Organization for sugarmakers	Mary Croft, 802-763-7435	mcmapple@wildblue.net	statewide		management, sustainability, perpetuation, enjoyment through forestry
VT Trappers Association	conservation & preservation	Bill Pickens, 760-9032	bpickens46@aol.com	statewide		Promote native, working forests; 3rd party certification
VT Wood Manufacturer's Association	support wood processors	Michael Rainville, 388-0627	mike@maplelandmark.com	statewide		Plan, manage, provide stewardshpi for habitat and recreation
VT Wood Products Marketing Council	Promote wood products: VT Forest Heritage Trail, Sugar Tour, Maple Open House	802-747-7900	info@vermontwood.com	Addison County	ACRPC	Citizen monitoring
VT Woodlands Association	Advocate for forests	Kathleen Wanner	kmwanner@comcast.net	statewide	LCPC	controlled harvest, education, networking
VT WoodNet	Small-scale wood products	Bob Bouvier	wdubelieve@aol.com	TRO region	TRORC	Examples include habitat block and connectivity maps
Weathersfield Land Conservation Association		Steve Aikenhead		Weathersfield	SWRPC	
Wrightsville Beach Recreation District		Central Vermont Regional Planning Commission (802)229-0389		Beach Location: Middlesex VT	CVRPC	

Advocacy Organizations/ Other

2 Countries, 1 Forest	Tracking of ecological effects of land use decisions	Louise Gratton, 416-850-9038 x22	info@2c1forest.org	Northern Appalachian/ Acadian range: Green-Sutton mountain, Lake Champlain Valley	NRPC, LCPC, CCRPC, NVDA	
Audubon VT	"Forest Bird Initiative"	Jim Shallow	jshallow@audubon.org			Promote responsible use and stewardship
Bennington County Sustainable Forest Consortium	Landowners, foresters, loggers, other natural resources professionals	See BCCD		Bennington	BCRC	magazine, school programming, publications
Bonnyvale Environmental Education Community (BEEC)	Education to young and old on forests & wildlife, tracking & scat, habita	Patti Smith	grayfox@vtrocket.com	West Brattleboro	WRC	Use & protection

Center for Northern Woodlands Education	Northern Woodlands magazine, Northern Woodlands Goes to School, The Outside Story, and The Place You Call Home series	Elise Tillinghast, (802) 439-6292	mail@northernwoodlands.org	northeast US		Conservation, agriculture, recreation
Chateauguay No Town (CNT) Conservation Project	conservation and stewardship through education and partnerships	Pete Fellows, 802-457-3188 X27	pfellows@trorc.org	Barnard, Bridgewater, Killington, Stockbridge	TRORC	Conservation plan for the CNT area - work closely with TRORC
Cold Hollow to Canada Forest Link Project	"WildPaths", conservation easements, wildlife tracking, connecting land, forest cover, Landowner Resource Guide	Nancy Patch	info@coldhollowtocanada.org	Fletcher, Enosburg, Richford, Waterville, Belvidere, Bakersfield, Montgomery	LCPC, NRPC	Programs and demonstrations
Equinox Preservation Trust	Mt. Equinox		equinoxpreservationtrust.org	Manchester	BCRC	
Friends of the Mad River		Caitrin Noel(802)496-9127		Mad River Watershed	CVRPC	Ecological inventory for conservation; also, outreach and easements; Reduce fragmentation and climate change
Friends of the Winooski River		Ann Smith (802)882-8276		Winooski River Watershed	CVRPC	Advocacy, education, conservation
Fund for North Bennington	Preserving undeveloped land	Rob Woolmington	thefund@northbennington.org	Bennington, Shaftsbury	BCRC	Students work w/ orgs: inventories, management, GIS, etc.
Green Mountain Club	Long Trail; trail maintenance	Pete Antos-Ketcham, (802) 244-7037	pantosketcham@greenmountainclub.org	statewide	CVRPC	Landowner based; State agencies & related groups
Keeping Track	Wildlife habitat & connectivity	Susan Morse, (802) 434-7000	info@keepingtrack.org			Conservation, support for ag/forestry
Merck Forest and Farmland Center	Environmental education organization	Tom Ward, ED	tom@merckforest.org	Taconic Mountains	BCRC	environmental advocacy
Mount Anthony Preservation Society (MAPS)	Preserve land, recreation			Bennington, Mt. Anthony	BCRC	Examples include riparian buffers, monitoring water quality, education
North East State Foresters' Association	"Wood to Energy", pilot projects, coordinate with USFS, trainings	Steve Sinclair	steve.sinclair@state.vt.us	ME, NH, NY, VT	all	state foresters cooperating with USFS and private foresters
Northeast Wilderness Trust		Daryl Burtnett, 802.224.1000				
Northern Community Investment Corporation	"Northern Tier Farm and Forest Job Accelerator"/ Regional initiatives	Mike Welch	mwelch@ncic.org	NEK	NVDA, LCPC	
Northern Forest Center	"Community Forest Collaborative", "Regional Wood Products Consortium", biomass	Julie Renaud Evans, Director of Forestry	jevans@northernforest.org	VT, NH, ME		
Regional Conservation Partnerships	conservation	Steve Long, 802 439-6337	steve@sunnymonday.org	Statewide	all	consortium of conservation organizations and land trusts
Sierra Club	"Our Forests Our Future"	David Van Deusen, 802-522-5812	david.vandeusen@sierraclub.org	CT River - Nulhegan Basin to Green Mtns		Oversees the VT Wood Manufacturers Association
Sweet Water Trust	private foundation - grants for conservation	Eve Endicott	eveendicott@gmail.com	statewide		

The Nature Conservancy	"VT Nongame and Natural Heritage Program", "Staying Connected Initiative", "Resiliency to Climate Change"	Bob Hawk and Corrie Miller		statewide (spec. Bennington); Northern Green Mtns, Worcester Range to NEK, NEK to NH	inc. LCPC	
Trout Unlimited (Mad Dog Chapter)	"Trout in the Classroom", work with Boy Scouts	Gary West	dewey2475@me.com		CVRPC	
UVM	"Land Stewardship Program (LANDS)"	Deane Wang, 656-2694 or Emily Brodsky	Deane.Wang@uvm.edu			job training, small business development, tourism, energy
Vermont Coverts	Healthy forest stewardship, enhance wildlife habitat	802-388-3880	info@vtcoverts.org	statewide		collaborative effort between Canada and US partners
Vermont Furniture Makers Guild	represent furniture makers around VT		www.vermontfurnituremakers.com	statewide		Many furniture makers use local wood; craft, sell, market products
VT Natural Resources Council (VNRC)	"Healthy Forests Program", regulation, outreach	Jamey Fidel, General Counsel and Forest & Wildlife Program Director, 802-223-2328. *Emma Zavez (ezavez@gmail.com)	jfidel@vnrc.org	statewide		Individuals, volunteers, scientists, groups - tracking
VT Wild and Scenic Rivers	Rivers and streams study and management plan	802-393-0076	info@vtwsr.org	Upper Mississquoi and Trout Rivers	NRPC, LCPC, CCRPC, NVDA	
VT Woodworking School	woodworking instruction	802.849.2013		Fairfax	NRPC, LCPC	
White River Partnership	Water quality and health	Mary Russ, Executive Director (802) 763-7733	mary@whiteriverpartnership.org	White River watershed	TRORC	
Wildlands Network	conservation and connectivity	Eastern Program Office in East Thetford, 802.785.2838	conrad@wildlandsnetwork.org	Appalachian - work from Everglades to Quebec	statewide	Conserved over 13,000 acres in VT
Northern Vermont Resource Conservation & Development Council	skidder bridge, dry hydrants, other projects as needed to fill rural development gaps	Jarrold Becker	rcdbizmanager@hotmail.com	northern VT	LCPC, NRPC, CVRPC, CCRPC, NVDA	Includes reps from conservation districts, RPCs, etc.

Conservation Commissions

Bakersfield Conservation Commission		Dorothy Allard, 827-9779	dallard@aol.com	Franklin County	NRPC	
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Barnard Conservation Commission		Tom Platner, Chair	jkwtdp@sover.net	Barnard, VT	TRORC	
Berlin Conservation Commission		Jenn Ingersoll, 229-0407	jenningersoll@pshift.com	Central Vermont	CVRPC	
Bradford Conservation Commission		Nancy Jones, Chair, (802) 439-3562	npj@valley.net	Bradford, VT	TRORC	
Cabot Conservation Commission		Gary Gulka	gary.gulka@state.vt.us	Central Vermont	CVRPC	
Calais Conservation Commission		Steve Cusick, 229-0684		Central Vermont	CVRPC	
Cambridge Conservation Commission	Natural resource inventory	Phone: (802) 785-2838	cambridgeconservation@gmail.com	Lamoille County	LCPC	
Corinth Conservation Commission		Anne Margolis, Conservation Commission Member, 439-5630	anne.margolis@gmail.com	Corinth, VT	TRORC	
Dorset Conservation Commission		Malcolm Cooper, 867-2528		Dorset	BCRC	
Dummerston Conservation Commission	Invasives, natural resources inventory, education, forestry, wildlife	Mary Ellen Copeland	maryellen@svcable.net	Windham County	WRC	
Elmore Conservation Commission		Ken Hagget, 888-7733		Lamoille County	LCPC	
Enosburgh Conservation Commission & Forest Committee		Nancy Patch	nancy.patch@state.vt.us	Franklin County	NRPC	
Fayston Conservation Commission		Ky Koitzsch, 496-2454	faystonzoning@madriver.com	Central Vermont	CVRPC	
Georgia Conservation Commission		Rob Meader, 309-3384	gccvt@yahoo.com	Franklin County	NRPC	
Hartford Conservation Commission		Jon Bouton, Chair of Hartford Conservation Commission (and also Windsor County Forester), 296-2969	jon.bouton@state.vt.us	Hartford, VT	TRORC	
Hartland Conservation Commission		Jennifer Waite, Chair	jennifer_waite@nps.gov	Hartland, VT	TRORC	
Jeffersonville Conservation Commission	EAB, flood plain	Jean Jenkaukas	jaheba@myfairpoint.net	Jeffersonville	LCPC	
Johnson Conservation Commission	Natural resource inventory, education, programming, EAB	Lois Frey, 635-7826	loisfrey@myfairpoint.net	Lamoille County	LCPC	
Manchester Conservation Commission		Catherin Stewart, 362-2713		Manchester	BCRC	
Marlboro Conservation Commission	Wildlife corridors, forestry fragmentation	Adam Gebb	adam@culturalintrigue.com	Windham County	WRC	
Marshfield Conservation Commission		Anne Reed, 454-1324	annereed48@gmail.com	Central Vermont	CVRPC	

Middlesex Conservation Commission		Dave Shepard, 229-1744	dave.shepard@state.vt.us	Central Vermont	CVRPC	
Montgomery Conservation Commission		Charlie Hancock, 326-2093		Franklin County	NRPC	
Montpelier Conservation Commission		Roy Schiff, 223-7214	roy.schiff@aya.yale.edu	Central Vermont	CVRPC	
Morrisville Conservation Commission	Natural resource inventory	Steve Rae, 253-4896	srae@pshift.com	Lamoille County	LCPC	
Newbury Conservation Commission		Michael Thomas, <i>Chair</i>	NewburyCC@newburyconservation.org	Newbury, VT	TRORC	
Newfane Conservation Commission	Town Forest, educational kiosks	Bruce Hesselback	hesselbach@svcable.net	Windham County	WRC	
Northfield Conservation Commission		Trish Coppolino, 485-5421	northfieldconservation@gmail.com	Central Vermont	CVRPC	
Norwich Conservation Commission		Martha Graber, <i>Chair</i>	norwich.conservation.commission@gmail.com	Norwich, VT	TRORC	
Plainfield Conservation Commission		Kate Harper, 454-8461		Central Vermont	CVRPC	
Pownal Conservation Commission		Barbara Schlesinger, 823-5720		Pownal	BCRC	
Putney Conservation Commission	Wetlands	Pamela Cubbage	pla@putney.net	Windham County	WRC	
Randolph Conservation Commission		David Crosby, <i>Chair</i> , 802-431-3471	crowbar87@hotmail.com	Randolph, VT	TRORC	
Richford Conservation Commission		Annette Goyne, 933-2013		Franklin County	NRPC	
Rockingham Conservation Commisssion	Forest, Water, Invasives	Michael Ghia	rockinghamconservation@gmail.com	Windham County	WRC	
Royalton Conservation Commission		Donald Carbino <i>Chair</i>	don@riverbendpostandbeam.com	Royalton, VT	TRORC	
Sandgate Conservation Commission		Jean Eisenhart, 375-2286		Sandgate	BCRC	
Sharon Conservation Commission		Fritz Weiss, <i>Chair</i> , 763-2474		Sharon, VT	TRORC	
Stamford Conservation Commission		Lars Garrison, 694-1444		Stamford	BCRC	
Stowe Conservation Commission		Marina Meerburg, 253-1939	marina@bigplanet.com	Lamoille County	LCPC	
Strafford Conservation Comission		J.T. Horn, <i>Chair</i>	conservation@straffordvt.org	Strafford, VT	TRORC	
Thetford Conservation Commission		Li Shen, <i>Chair</i> , 785-4950	lilian.shen@dartmouth.edu	Thetford, VT	TRORC	
Vershire Conservation Commission		Rita French, 333-9296		Vershire, VT	TRORC	
Waitsfield Conservation Commission		Ted Joslin, 496-2218		Central Vermont	CVRPC	

Warren Conservation Commission		Damon Reed	conservationcommission@warrenvt.org	Central Vermont	CVRPC	
Waterbury Conservation Commission		Allan Thompson, 244-7033	aathompson@gmail.com	Central Vermont	CVRPC	
West Fairlee Conservation Commission		Peggy Willey, Chair, 333-4155	peggywilley@mytopsmail.com	West Fairlee, VT	TRORC	
Woodstock Conservation Commission		Byron Quinn <i>Chair</i>	syrupsellers@aol.com	Woostock, VT	TRORC	
Worcester Conservation Commission		Mark Powell, 229-4053		Central Vermont	CVRPC	
Weathersfield Conservation Commission		Tina Wood, 263-5217		Weathersfield	SWRPC	JR/KO
West Windsor Conservation Commission		Ted Siegler, Chair	ted@dsmenvironmental.com	West Windsor		JR
Reading Conservation Commission		Ray Johnson		Reading		JR
Cavendish Community and Conservation Association		Robin Timko, <i>President</i> , 226-7736	info@cavendishccca.org	Cavendish		
Chester Conservation Committee		Mary Beth Adler, 875-2418		Chester		Slightly different from other commissions and JR unsure of how active



Lamoille County Planning Commission

PO Box 1637

Demars Building, 52 Portland Street, Second Floor

Morrisville, Vermont 05661

www.lcpcvt.org

(802) 888-4548 • e-mail: lcpc@lcpcvt.org • fax: (802) 888-6938

Contact: Taylor Foster, LCPC Regional Planner
Or Tasha Wallis, LCPC Executive Director
802-888-4548

December 4, 2015

A statewide project focusing on Vermont's forests recently wrapped up Phase 2 of its multi-year effort. Managed by the Lamoille County Planning Commission, the Forest Stewardship project is a collaborative effort between eight Regional Planning Commissions (RPCs) and the Vermont Department of Forests, Parks, and Recreation funded through a United States Department of Agriculture Forest Service grant. "The Department of Forests, Parks, and Recreation is pleased to partner with the US Forest Service and several Regional Planning Commissions", said Director of Forests, Steven Sinclair. "We all recognize the ecological, economic and societal values of Vermont's forest and need to plan for the future".

Forests in one form or another dominate the Vermont landscape. These forest lands have been important to the historical development of the area, continue to provide important resources today, and will be critical assets in the development of prosperous and sustainable communities in the future. According to the Vermont Forest Resource Fact Sheet, more than 70-percent of Vermont's 4.6 million acres of forest can be characterized as nonindustrial private forest land (NPIF). This land is divided among an estimated 88,000 landowners, independently managing their properties with unique private interests. The fragmented nature of Vermont's NPIF ownership means that forest resource planning occurs parcel by parcel.

Rather than looking at forest management on an individual parcel-by-parcel basis, this project employs a regionally-based landscape approach, allowing for more integrated planning of private and public forest lands in Vermont, with the ultimate goal of keeping forests as forests. The first phase of the multi-year project used a geographic information system (GIS) technology and a stakeholder engagement process to identify specific forest values, uses, types, and strategies across the state. Forest resources were mapped and Regional Forest Stewardship Plans were developed for each of the participating regions. Phase 2 brought the development and launch of a Forest Stewardship Atlas, an interactive web mapping tool available to the public. You can find the Atlas here: <http://anrmaps.vermont.gov/websites/foreststewardship/> RPC staff are available to demonstrate using the platform.

"The Forest Stewardship project allows each Regional Planning Commission to inventory and assess forest resources and the impacts of human change on those resources. Working together, we're developing tools and strategies for sustainable statewide planning of forest resources," said Taylor Foster, Forest Stewardship project manager for Lamoille County Planning Commission. RPCs serving Lamoille County, Addison County, Bennington County, and the Two Rivers-Ottawquechee regions participated in Phase 1. Central Vermont, Northwest, Southern Windsor County, and Windham RPCs joined in for Phase 2.

Each RPC published unique Regional Reports overseen by a Steering Committee of public and private stakeholders. The RPCs developed a series of maps demonstrating important characteristics of Vermont's

forests. The resources developed in this project support municipalities with municipal plan updates, zoning regulations, grant proposals, ridgeline plans, and other projects that strengthen forest protections. A critical component of the project was linking public and private partners by building connections and linkages between the two often disparate groups.

The *2015 Vermont Forest Fragmentation Report* highlighted a discouraging forest fragmentation trend in Vermont and the implications this may have on the 75% of Vermont that is covered by forest. Taking a landscape stewardship approach will help counter this trend by addressing fragmentation, forest health and productivity, habitat connectivity, forest products industry, and other forest resource concerns. Regional forest stewardship planning will help ensure Vermont's public and privately owned forests are managed in an environmentally responsible way. The project is anticipated to continue into a Phase 3 in future years. For more information, contact Taylar Foster at 888-4548 or Taylar@lpcvt.org.

Press Release List

Vermont and regional agencies, non-profits, and forest organizations

Vermont Natural Resources Council/ Forest Roundtable	Vermont League of Cities and Towns - newsletter
Vermont Agency of Commerce and Community Development – Strong Community Quarterly	Vermont Association of Conservation Districts - newsletter
Vermont Agency of Natural Resources – Ripples	Vermont Coverts
Vermont Housing and Conservation Board	Vermont Woodlands Association
Vermont Department of Fish and Wildlife	Regional Conservation Partners
Trust for Public Lands	US Forest Service (NE Area)
Green Mountain National Forest	UVM Extension
Vermont Association of Conservation Commissions	UVM Rubenstein School
Vermont Land Trust	Northern Forests Center
New England Society of American Foresters	Vermont Forest Legacy/ Stewardship Committee

Newspapers, TV, Radio, and Magazines

Bennington Banner - Newspaper	Vermont Standard
Brattleboro Reformer - Newspaper	Vermont Journal – online
Deerfield Valley News - Newspaper	VT Digger – online
Eagle Times - Newspaper	WCTV8 – TV
i-Brattleboro - Website	J Gregg
i-Putney - Website	Journal Opinion – newspaper
Keene Sentinel – Newspaper	Peg TV – TV
Rockingham Arts & Museum Project – Web/Email	Randolph Herald – newspaper
Rutland Herald – Newspaper	Rutland Herald – newspaper
The Commons	Valley Business Journal
The Message for the Week – Newspaper	Valley News
Town Crier – Newspaper	Vermont Business Magazine – magazine
Vermont Public Radio – Radio	Times Argus – newspaper
WKVT – Radio	News and Citizen – newspaper
WTSA - Radio	Stowe Reporter – newspaper
Addison Independent – newspaper	CATV 8 – TV
Valley Voice – newspaper	CVTV723 – TV
Manchester Journal – newspaper	Eagle Times – newspaper
Bennington Banner – newspaper	

NEWSLETTER ARTICLE

A New Online Resource Can Help You Manage Your Forestland

As part of a larger project looking at the management of forest resources in Franklin and Grand Isle Counties, NRPC worked with seven other Vermont RPCs and the Agency of Natural Resources to develop a new online map which provides access to a wide variety of forest data across the state.

The **Forest Stewardship Atlas** is an online map that provides access to many different types of data related to forests. This map portal gives an individual access to over 50 forestry-related datasets that are organized into six different themes: Productivity, Ecological Resources, Water Resources, Scenic and Recreational Resources, Human and Environmental Constraints, and Stewardship. This site allows you to view, identify and query the datasets, print and export maps, and output summary reports for selected geographic areas and layers.

This web accessible information can help landowners, towns and forest managers inventory and assess forest resources on their property to more effectively manage these resources. A key part of the Atlas is providing a view of a parcel in context with its neighbors. This landscape scale assists in keeping forest land intact to maintain habitat connectivity, forest health and productivity, ecosystem quality, and strong forest products-based economic activities.

Explore! at <http://anrmaps.vermont.gov/websites/ForestStewardship/>

To learn about the barriers our region faces in maintaining forested lands and types of strategies we need to adopt to enhance and sustain their health, check out NRPC's Landscape-Based Forest Stewardship Report at <http://www.nrpcvt.com/ForestStewardship.html>.

HANDOUT: ONLINE PLANNING RESOURCES

The following is a list of internet resources that allow users to access resource maps on a variety of subjects (for example - soils, wetlands, contiguous wildlife habitat blocks, forestland, and renewable energy potential). These websites are available to the public and allow viewing of information at a parcel, town or county level and many have a function to create and print maps.

VT Agency of Natural Resources – Forest Stewardship Atlas



<http://anrmaps.vermont.gov/websites/foreststewardship/>

The **Forest Stewardship Atlas** provides access to many different types of data related to forests. This map portal gives an individual access to over 50 forestry-related datasets that are organized into six different themes: *Productivity, Ecological Resources, Water Resources, Scenic and Recreational Resources, Human and Environmental Constraints, and Stewardship.*

This information can help landowners, towns and forest managers inventory and assess forest resources on their property to more effectively manage these resources. A key part of the Atlas is providing a view of a parcel in context with its neighbors. This landscape scale assists in keeping forest land intact to maintain habitat connectivity, forest health and productivity, ecosystem quality, and strong forest products-based economic activities.

VT Agency of Natural Resources – Natural Resources



Atlas, <http://anrmaps.vermont.gov/websites/anra>

The purpose of the **Natural Resources Atlas** is to provide geographic information about environmental features and sites that the Vermont Agency of Natural Resources manages, monitors, permits, or regulates.

In addition to standard map navigation tools, this site allows you to link from sites to documents where available, generate reports, export search results, import data, search, measure, mark-up, query map features, and print PDF maps.

VT Agency of Natural Resources – Biofinder, <http://biofinder.vt.gov>



BioFinder is a map and database identifying Vermont's lands and waters supporting high priority ecosystems, natural communities, habitats, and species. This resource contains 21 overlapping data sets representing terrestrial and aquatic biological, ecological, and natural heritage data at various scales and aspects. It also offers a function called co-occurrence analysis that identifies the locations of greatest overlap of data for priority ranking at the statewide scale. 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 with good stewardship and conservation.

USDA Natural Resources Conservation Service, Web Soil Survey, <http://websoilsurvey.nrcs.usda.gov>



To find out information about the type and quality of your soils you can use the **Web Soil Survey** (WSS), an online interactive map. Using the tools in the application you can select the area of interest (100,000 acres or less) and see a full list of the soil types and applicable land uses or limitations for the selected area based on soil properties.

Renewable Energy Atlas of Vermont, www.vtenergyatlas.com

The **Renewable Energy Atlas of Vermont** is your tool for identifying, analyzing, and visualizing existing and promising locations for renewable energy and energy efficiency projects.



EXECUTIVE SUMMARY: REGIONAL STRATEGIES

The third component of the Forest Stewardship Phase 2 project focused on the RPCs. Phase 1 RPCs returning to conduct regional strategies were Addison County Regional Planning Commission, Lamoille County Planning Commission, and Two-Rivers Ottauquechee Regional Commission. Phase 2 brought four additional RPCs onboard: Central Vermont Regional Planning Commission, Northwest Regional Planning Commission, Southern Windsor County Regional Planning Commission, and Windham Regional Commission. Bennington County Regional Commission only participated in the Forest Stewardship Atlas piece of Phase 2.

Phase 2 RPCs developed region-specific Forest Stewardship reports and updated their individual comprehensive Regional Plans to include new forest stewardship findings. As part of this process, the RPCs convened regional steering committees representing key stakeholder groups and County Foresters to inform and oversee regional efforts.

Steering Committees met to identify priority forest landscapes and regional forest-related issues. As part of the regional reports, the Steering Committees developed regional strategies to enhance forests.

After the regional reports were completed, the RPCs updated their regional comprehensive plans to include new information. The RPCs each accomplished this in ways unique to their region, with some RPCs adding language to economic development, natural resources, land use, social characteristics, and other areas as appropriate to that region. While each RPC addressed forest stewardship in their regional plans, there was no prescribed format for doing so, allowing flexibility by region to ensure future use and implementation of the relevant forest stewardship information.

Attached to this section is an Executive Summary of the four Regional Reports and each Regional Report. Inspired by the identification of regional strategies, both Phase 1 and Phase 2 RPCs utilized the opportunity to enact landscape-scale studies and projects and participate in gatherings to further their regional work. A summary of strategies, an example from Northwest Regional Planning Commission, and ideas for the Two-Rivers Ottauquechee Regional Commission are also attached.

Regional Forest Stewardship Reports: Executive Summary

The data speaks for itself: the number of forest landowners in Vermont is increasing, the size of forested parcels of land is decreasing, and the age of owners is increasing. The *2015 Vermont Forest Fragmentation Report* highlighted the discouraging forest fragmentation trend in Vermont and the implications this may have on the 75% of Vermont that is covered by forest. An effective way to address fragmentation, forest health and productivity, habitat connectivity, forest products industry, and other forest resource concerns is using a landscape stewardship approach.

The project *Landscape-Based Forest Stewardship Planning - A Regional Approach* (Phase 2) developed a methodology for forest planning based on a landscape-scale analysis, to increase the scale and pace of sustainable management of private forest lands in Vermont, with the ultimate goal of keeping forests as forests. This project was a collaboration between the Vermont Division of Forests, Parks, and Recreation and multiple Vermont Regional Planning Commissions to apply a single system – using geographic information system (GIS) technology and a stakeholder engagement process – to inventory and assess forest resources, identify specific forest landscape types, and produce strategies for each landscape type. Doing so will assist regions, municipalities, and forest landowners in the objective of keeping forests as forests. In Phase 1 of the project, four Regional Planning Commissions completed individual regional reports that melded into a unified report. In Phase 2, four more Regional Planning Commissions joined onboard: Central Vermont, Northwest, Southern Windsor County, and Windham. Lamoille County Planning Commission was responsible for the overall coordination of the project.

The 2010 Vermont State Assessment and Resource Strategies findings completed by the Division of Forests, Parks, and Recreation were combined with research conducted in Vermont utilizing forest block and ecological landscape unit analysis and existing GIS data to provide a consistent approach to a regional forest planning. Large rural forest blocks, large and small lowland forest tracts, urban and community forests, and ecologically significant landscape types formed the basis for the analysis. The objective was to identify landscape types in each region, initiate a stakeholder engagement process aimed at identifying priority forest landscapes and issues, and develop model forest plans for use by municipalities and landowners.

Each region produced maps that characterize the forest resources in their areas and, based on an analysis of that spatial data, developed descriptions of forest landscape types that provided the basis for subsequent planning. The following GIS layers were used to help characterize significant forest landscapes: land cover, elevation, soil productivity, water resources (e.g., streams, rivers, headwaters, lakes, ponds, wetlands, groundwater protection areas), wildlife habitats, rare and endangered species sites, unique natural areas, roads, recreation areas, sites, and trails, regional and town land use districts, conserved lands, and Use Value Appraisal parcels where available. In addition, layers derived from recent landscape-scale forest research in Vermont were used to help evaluate and delineate priority forest landscapes. Landscape types covered a range of conditions from large tracts of remote and

mountain forest to large and small lowland forest tracts, as well as urban and community forests, and ecologically significant forest landscapes.

To effectively represent the interests of all involved parties, this project required collaboration between federal, state, local, and private entities. Four regional stakeholder groups were established to guide local efforts. Stakeholder participants included county foresters, state lands specialists, private forest landowners, consulting foresters, local officials, representatives of forest product industries, and environmental/conservation groups. Each region convened a series of public/stakeholder work sessions to review and discuss the forest landscape maps and data and to identify issues relevant to each. Additionally, staff from all four Regional Planning Commissions, plus the four Regional Planning Commissions from Phase 1, came together regularly to discuss progress and address issues and challenges as they arose, and regular meetings were held with the Regional Planning Commissions and state partners to discuss challenges, opportunities, and trends.

The project resulted in regional, landscape-scale forest stewardship plans that will be used by the Division of Forests, Parks, and Recreation, local decision makers, Regional Planning Commissions, and forest landowners to support sustainable forests. The plans are intended to guide future work to increase the scale and pace of sustainable management of private forest lands in Vermont, reducing fragmentation and bolstering the forest products industry. The following outcomes were accomplished:

- 1) Develop and test a GIS-based methodology for forest planning based on a landscape-scale;*
- 2) Engage local and regional stakeholders in the process to insure local issues are addressed;*
- 3) Identify strategies and develop tools for regions, municipalities, and forest landowners to keep forests as forests;*
- 4) Develop a process that can be replicated across regions and landscape scales;*
- 5) Model a collaborative process across regions and agencies for forest stewardship planning.*

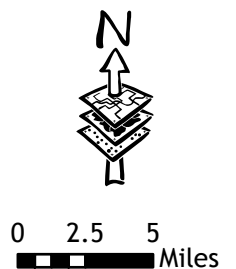
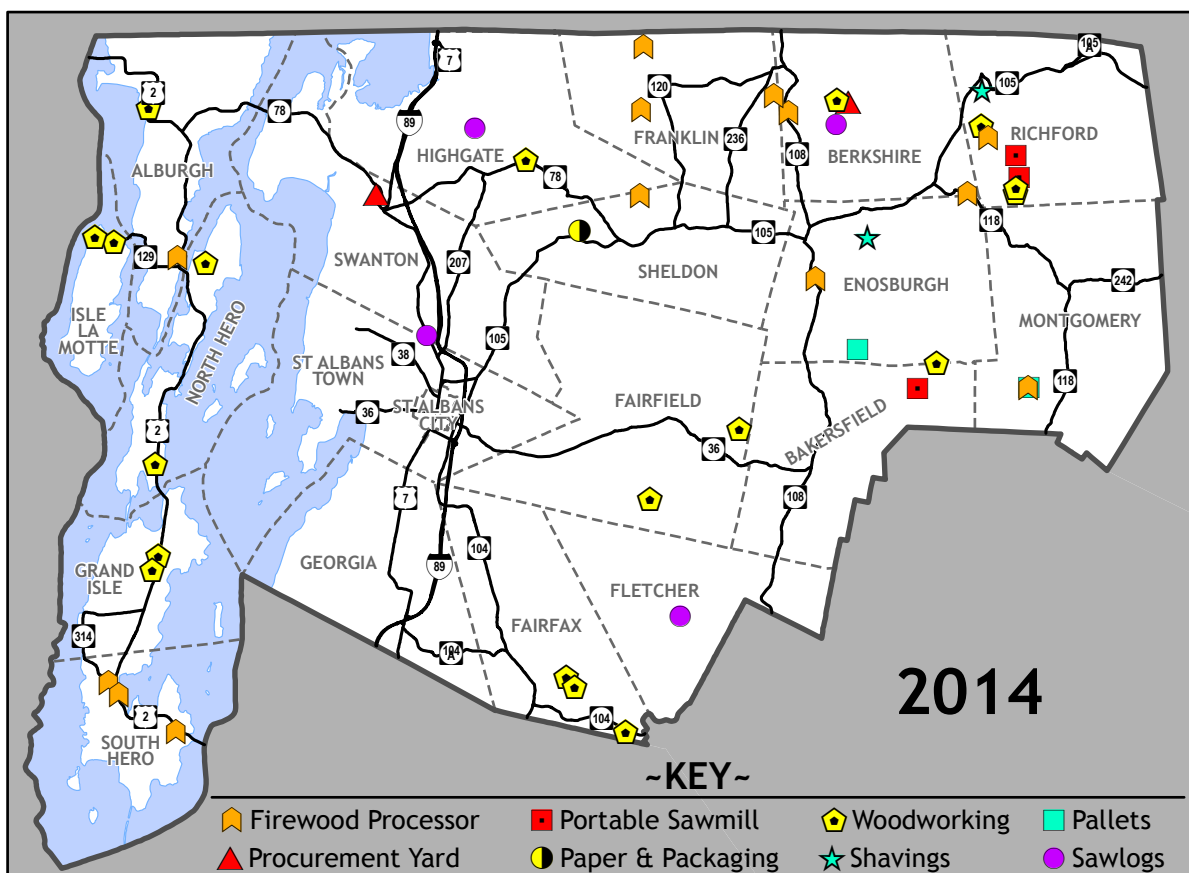
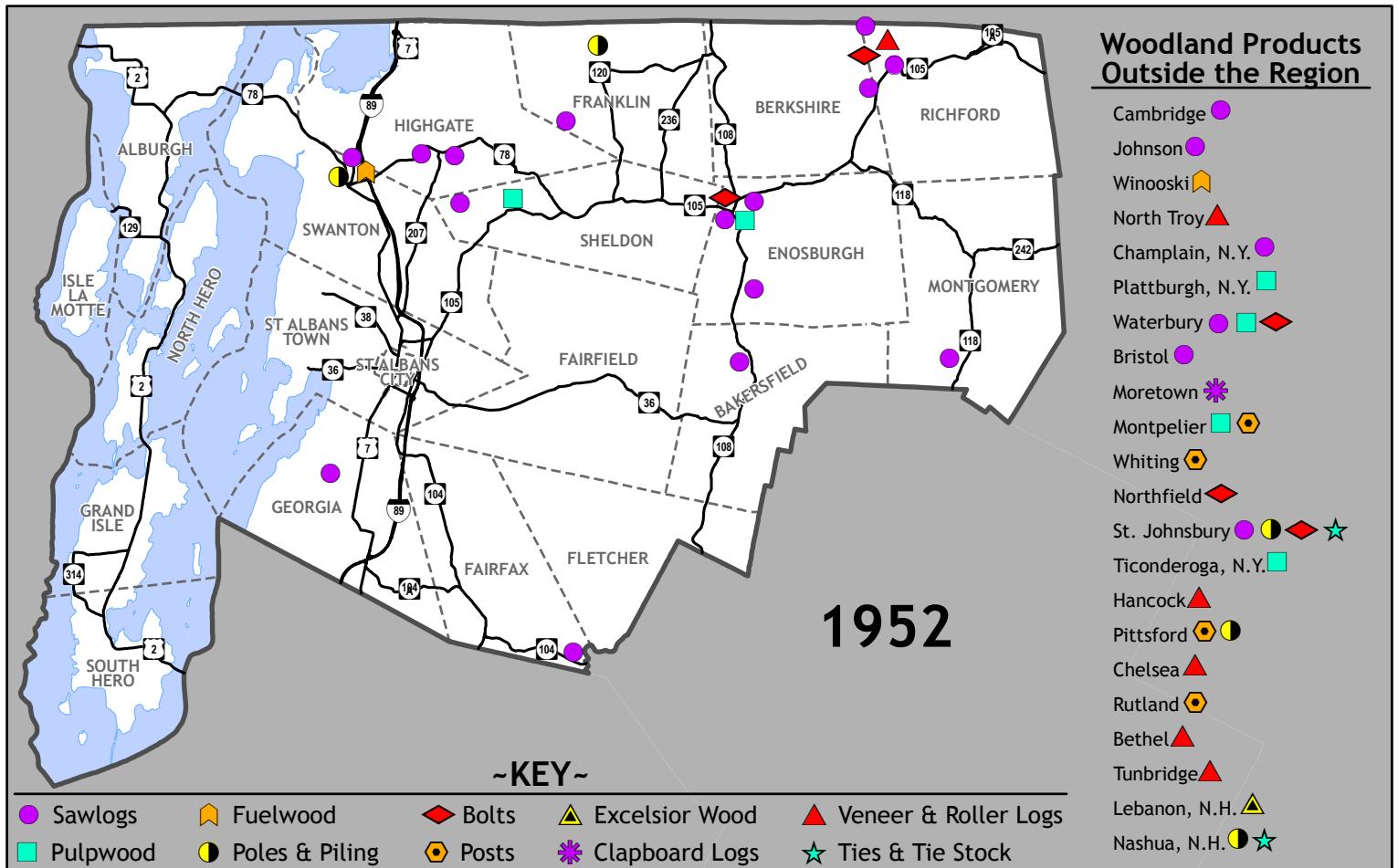
Many issues identified through the geographic analysis and stakeholder engagement process were universal among the four regions: forests are valued for their ecological, economic, recreational, scenic, and cultural richness; forest resources are threatened by increasing fragmentation, unfavorable economic conditions, and environmental factors such as climate change, invasive species, and disease. Yet, contrasts were revealed between the four regions with respect to landscape types, economic and demographic conditions, and cultural/social values that resulted in priorities and strategies unique to each region. The resulting Forest Stewardship plans reflect regional priorities and set the stage for future implementation of regional forest stewardship projects, furthering the recommendations of the statewide fragmentation report. Consequentially, the outcome of this effort should not be considered an end in itself, but a means toward the overall goal of achieving landscape-scale forest stewardship in all eight participating regions and beyond.

Other RPC Activities through Forest Stewardship Phase 2

RPC	Activity
ACRPC	ACRPC's Natural Resources Committee was reinvigorated to focus on town forest policies and activities from a regional perspective
CVRPC	Developed an online community mapping tool to assist with identifying important forest resources and places as part of its Regional Plan update. Users could add places to the map.
LCPC	Conducted Emerald Ash Borer outreach: LCPC participated in the Regional Invasive Insect Preparedness Team to coordinate efforts to prepare for EAB and hosted a regional training on EAB.
LCPC, NRPC, WRC	Attended a statewide "Summit on the Future of Vermont's Working Landscape" to celebrate the success of the Working Lands Enterprise Fund and to identify actions to encourage policymakers to continue this important work.
NRPC	To supplement its Regional Report, NRPC and the County Forester led an effort to conduct a mapping analysis of regional forest producers. The analysis compared historic changes over time in the forest products industry (see attached).
TRORC	Working with municipalities about "landscape opportunity funds", which includes: natural resource inventories, logging road maintenance (for class 4 and common access needs among multiple landowners), recreation trail maintenance, conservation easements purchase and costs, outreach costs, and micro-lending with mini-grants for skidder bridges, culverts for logging roads, lathes for cabinet makers, firewood processing equipment, greenhouses, etc.
TRORC	Participated in a "Regional Conservation Partnership", a collaborative effort between conservation groups in this part of the state to coordinate conservation efforts and strategize stewardship needs. Assisting with landowner conservation linkages between a National Historic Park and the Appalachian Trail. Held a landowner kickoff meeting in the Wrights Mountain area for landowners, legislative leaders, conservation commissioners, and planning commissioners.
WRC	Building the Forest Economy group participation; a regional initiative to educate people about the importance of the forest economy.

FRANKLIN & GRAND ISLE COUNTIES

Woodland Products



Vermont Coordinate System
Transverse Mercator, NAD 83.
For planning purposes only.

Prepared by:
Northwest Regional
Planning Commission
75 Fairfield Street
St. Albans, VT 05478
802.524.5958
www.nrpcvt.com
April, 2014.

z:/gis/projects/
foreststewardship/
woodproducts2014.mxd

Observations and Recommendations from TRORC for future stewardship

1. Need for more personal UVA outreach

- Program isn't easily understood; misconception that there are a lot more restrictions:
 - o think that must not post your land
 - o Restrictions on firewood cutting
- Tax savings not understood

2. Improve collaboration and understanding of UVA program and data

- Need more than 27 acres for management unless high quality so allowing for group logging or even combined neighborhood UVA plans with additional tax incentive
- Regional UVA maps/summaries of plans should be available with forester information,
- Track foresters by parcel/town
- Track types of management plan by parcel/town (timber, wildlife, etc.)
- Rank forest landowner interest in conservation, access, and publicity

3. Regular meetings about forestry (Forest landowners do not have farmers markets every week)

- Meeting with your forester about the UVA plan annually
- Meeting with your forester and logger about the logging project goals etc. to avoid surprises during the actual logging
- Better awareness of who to use for loggers, arborists, pruners, foresters, landscapers,
- Meeting with neighbors about logging project or plans, shared mobilization etc.
- Cross pollination between foresters and land owners

4. Town working landscape opportunity fund ("*conservation*" can be offputting)

- Town Forest needs (UVA plans, maps, access improvements, etc)
- Natural inventories
- Logging road maintenance (for class 4 or other common access needs among multiple landowners (this can be a barrier or smaller logging projects))
- Recreation Trail maintenance
- Conservation easement purchase/conservation easement due diligence costs
- Outreach costs (speakers, food, field trips etc.)
- Micro lending with mini-grants for skidder bridges, culverts for logging roads, lathes for cabinet makers, firewood processing equipment, greenhouses, etc.

5. Better understanding of the economic value of forestry

- Local decision makers such as Selectboard need to know that forestry is important way of life
- Track a tree field trips to landings, concentration yards, sawmills etc.

- Better understanding of value of different native woods
- Value of value-added product industry
- Impact of invasive species (e.g. Emerald Ash Borer on firewood industry)

6. Understand the resiliency value of forestry

- Forests provide environmental benefits not easily quantified
- Urban Tree Stewards/Inventory (improve connections to trees)
- Flood prevention
- Local non-traditional capital bank
- Local heating option
- Carbon Capture and Storage (CCS)

7. Understand the regional nature of forestry

- Participate in regional groups such as **North Atlantic Landscape Conservation Cooperative, RCP Network** (good examples:
<http://wildlandsandwoodlands.org/sites/default/files/Gathering%20Agenda%202014%20Oct%2023.pdf>)
- Engage state policymakers in forestry outreach
(e.g. Farm and Forest Viability Network)
- Work directly with RPCs, County Foresters, and Dept. of Forests, Parks, and Recreation to provide input on State Forest Resources Plan, USFS State and Private Forestry projects, and grants etc.
- Collaborate with other regional groups for service delivery such as outreach and funding (Land Trust Conservation Fund, Regional Conservation Partnerships, etc.)

8. Marketing/Office Support

- Email distribution list/ Web site or blog
 - Community values mapping (LLA and Jens)
 - [New priority mapping using regional habitat/flow/resilience/IEI- North Quabbin](http://www.wildlandsandwoodlands.org/sites/default/files/Final%20Report_NQRLP_Highsted%20Climate%20Conservation%20Pilot_March%2014%202014.pdf)
http://www.wildlandsandwoodlands.org/sites/default/files/Final%20Report_NQRLP_Highsted%20Climate%20Conservation%20Pilot_March%2014%202014.pdf
- Alternative strategies through landowner stewardship or zoning
 - Zoning examples in region
 - RCP work summaries

EXECUTIVE SUMMARY: MUNICIPAL ACTION

The fourth component of the Forest Stewardship Phase 2 project was Municipal Action. For this component, each RPC selected at minimum two municipalities (see attached for prioritization matrix) to assess, identify, and assist municipalities in revising, setting, and implementing forest stewardship goals and actions. The RPCs selected a range of municipalities to conduct this work, ranging in population sizes from 164 (Goshen) to 10,000 (Hartford). In the end, at least 19 municipalities were reached directly, with others touched through training, articles, and regional planning efforts. The approach in each RPC, and each municipality, varied. In some cases, RPCs worked with local Planning Commissions, Conservation Commissions, non-profit organizations, or legislative bodies.

Outcomes and deliverables for this component included revised plans, regulations, and ordinances and implementation of non-regulatory tools to improve effectiveness of local conservation strategies and change in knowledge about municipal forest stewardship contributions.

The process included presentations of landscape-scale forest stewardship data and reviews of the regional Forest Stewardship Reports. RPCs worked with municipalities to discuss forest uses, implications of landscape-scale stewardship, forest values, and the range of planning tools available. RPCs reviewed current municipal plans, regulations, and strategies employed by the municipalities and worked locally to develop new strategies for future implementation.

In some cases, municipalities implemented changes through the course of the project, in others, future action is pending or under consideration.

The value of each RPC selecting communities and the type of planning tools to utilize is ability to ensure implementation of the strategies. The benefit of RPC involvement in this work is an intimate knowledge of both the forest landscape and the cultural values of each municipality. Allowing flexibility in what work to pursue with each RPC's selected communities encourages municipal buy-in and involvement in future forest stewardship work.

The attached summaries of all RPC municipal action includes the following:

- Suggested and Implemented Changes to Municipal Plans through Forest Stewardship Phase 2
- Suggested and Implemented Changes to Zoning Bylaws through Forest Stewardship Phase 2
- Bylaw Definitions developed through Forest Stewardship Phase 2
- Other Municipal Strategies Implemented through Forest Stewardship Phase 2
- Sample of Municipal Strategies for the Towns of Guilford and Halifax
- Set of sample maps developed by Windham Regional Commission for Whitingham to guide the municipal plan update process focusing on forest resources

FOREST STEWARDSHIP - COMMUNITY PRIORITIZATION MATRIX

RPC:

Municipality	Landscape type	Existing programs/ partnerships?	Ability to produce regulatory results?	Ability to produce non-regulatory results?	Municipal interest	Potential for action	Total (highest out of 30)
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1 = weak / no interest / landscape not threatened

5 = strong / high interest / high risk landscape

Suggested and Implemented Changes to Municipal Plans through Forest Stewardship Phase 2

Town	Change	Specific Language
Ferrisburgh (Addison)	Conservation District, Natural Resource Chapter, and Land Use Chapter recommend changes to business and industrial zoning districts.	<p>2. Identify forestlands not included in the conservation zoning district and determine how best to preserve them as determined in VNRC's A Guide for Local Action. (refer to VNRC's 'Community Strategies for Vermont's Forests and Wildlife, 2013 report for non-regulatory and regulatory actions).</p> <p>3. Update zoning to a density-based code and require at least 50% of a development over 40 acres, to be open or forested.</p>
Ripton (Addison)	Incorporate habitat language and flood resiliency policies that also support forestland strategies. A special endangered species overlay remains in the draft.	
Goshen (Addison)	Revised series of maps including new Working Lands and Wildlife Habitat map: natural resource areas, town forest management, UVA parcels, moose collisions, and habitat areas.	

Town	Change	Specific Language
Berkshire (Northwest)	Strengthen policy language and enhance existing plan language to incorporate forest conservation and working landscape.	<p>The town encourages agricultural and forestland be maintained for viable economic use, encourages value added businesses, promotes locally grown products, and encourages the implementation of agricultural/forestry best management practices. Forest fragmentation should be minimized through the Land Use and Development Regulations. This may include defining forest fragmentation and adoption of specific zoning standards. Promote the development of a management plan for the Town Forest.</p>
Cambridge (Lamoille)	Added in new language about specific forest products (wood for energy, maple syrup, timber harvesting; forest product manufacturing); forest soils; threats to forest resources.	<p>Work with landowners and other conservation organizations to implement recommendations related to improvement of the critical wildlife corridor located at “Willow Crossings” between Hubbard Drive and the Cambridge/Johnson Town line.</p> <p>Consider incorporating standards related to the protection of core forest habitat, deer wintering areas, and bear habitat into the Cambridge Subdivision Regulations. Given the large amount of State-owned land within Cambridge, public use of this land for recreation, wildlife management (including hunting), timber management, and maple sugar production should be allowed and encouraged. Cambridge supports the efforts of the Cambridge Conservation Commission in facilitating the purchase of development rights and other conservation methods to protect land in a way that meets the objectives of this plan.</p> <p>Work with the Vermont Department of Forests, Parks, and Recreation to determine if areas of the Mount Mansfield State Forest should be open to maple sugar production. Only areas that would not degrade recreational use of the forest should be considered. If so, the Town and Department should consider piloting a test program allowing maple sugar production on State Forest land. Support efforts to promote active land management through use and growth of e-commerce and telecommunications tools such as the Vermont Fish and Wildlife Landowner/Hunter Access Registry)</p>

Suggested and Implemented Changes to Zoning Regulations through Forest Stewardship Phase 2: Elmore (Lamoille)

Town	Action	Changes to Standards	Planning Area Purpose
Elmore (Lamoille)	H. Remote Area Overlay (RAO). The Remote Area Overlay shall include all lands east of VT Route 12 and south of <u>Lacasse Road</u> , Symonds Mill Road, or Brown Hill Road (respectively) that are $\frac{1}{4}$ mile (1320 ft) or more from a State Highway or Class II or III Town Road.	Purpose: The Remote Area Overlay (RAO) District consists largely of forested areas located a substantial distance from existing public roads and public services. The purpose of the RAO is (1) to maintain existing land uses in areas far from existing public roads in a manner that preserves fragile features, including steep slopes, soils unsuitable for on-site septic disposal, large areas of intact wildlife habitat, headwater streams and associated water supplies, and scenic resources; (2) to prevent undue financial burden on Town services including emergency services, utilities, and road maintenance, by discouraging scattered development in areas with poor or limited access; (3) to protect the health, welfare, and safety of Town residents by limiting development in areas characterized by poor site conditions and the lack of public access or services; (4) to encourage traditional land uses, such as forestry, passive outdoor recreation, and wildlife management, to continue in the district while limiting incompatible uses; and (5) to minimize fragmentation of forestlands and wildlife habitat. Development within the RAO shall be subject to additional standards to provide adequate access for emergency vehicles and to ensure there is no undue adverse impact on surface waters, wetlands, significant wildlife habitat, wildlife travel corridors, and forestlands.	Selected Text: 1. Placement of Structures. Careful consideration shall be given to the location of proposed structures relative to site conditions, existing vegetation, and the location of fragile features (including, but not limited to, steep slopes, streams, and identified habitat and natural areas). The Board may limit or restrict the location of structures to ensure that development: a. Is minimally visible from public roads and properties and does not stand in contrast to surrounding landscape patterns and features or serve as a visual focal point; b. Is designed so that the height of any structures does not visually exceed the height of the adjacent tree canopy serving as the visual backdrop to the structure; c. Is located down-grade of ridgelines and prominent knolls and is designed so that the height of proposed structures will not exceed the elevation of any adjacent ridgeline; d. Will not adversely affect natural and scenic resources and fragile areas identified in the Elmore Town Plan, including wetlands, streams, significant habitat, steep slopes, areas of unstable soils and/or soil types that are generally unsuitable for development and on-site septic disposal; and, 2. Clearing and Landscaping. On wooded sites, existing forest cover shall be maintained adjacent to proposed structures to interrupt the facade of buildings, provide a forested backdrop to structures, and/or soften the visual impact of new development as viewed from public roads and properties. The DRB shall consider the location of proposed structures relative to existing vegetation and may require additional tree planting and/or limit the amount of clearing adjacent to proposed development to provide screening and maintain a forested backdrop. A plan for the maintenance of remaining and proposed trees may be required. Such a plan shall address specific measures to be taken to ensure the survival and, if necessary, replacement of designated trees during or after site development and the installation of all site improvements.

Suggested and Implemented Changes to Zoning Regulations through Forest Stewardship Phase 2: Elmore (Lamoille, cont.)

Town	Planning Area Purpose (cont)	Specific Standards for Planning Area	Conditional Use Standards
Elmore (Lamoille)	<p>7. Fire Protection. Due to the remote location of higher elevation portions of the District, the following additional measures may be required to ensure adequate fire protection of new development: a. Any conditional use, including a single family home, shall provide adequate water storage or distribution facilities for fire protection. If the conditional use is greater than one (1) road mile from an existing dry hydrant, or where the DRB otherwise determines that existing water sources are inadequate for firefighting, the DRB may require the developer to install or fund the installation of a dry hydrant and/or fire pond. To assist the DRB in determining the adequacy of fire protection facilities, the applicant shall consult with the Elmore Fire Department. Dry hydrants and/or fire ponds required under this section shall be installed and maintained by the applicant. All dry hydrants and fire ponds must be installed to the specifications of the Elmore Fire Department. Fire ponds and dry hydrants shall be accessible for use in emergencies on other nearby properties... As an alternative to a dry hydrant and/or fire pond, the applicant may install a sprinkler system meeting the standards of the National Fire Protection Association. b. In addition to any other driveway, road, or access standards established by the Town of Elmore, the DRB may require measures to ensure access for emergency vehicles.</p>	<p>vi. Viability of Productive Forestland. Within the Rural East, Rural West, and Forest Reserve Districts, development shall be designed and located to minimize encroachment (e.g., the placement of buildings and the extension of roads, driveways and utilities) into presently undeveloped, forested areas. All feasible building sites should be considered and the development should be located as close to existing roads, other development and/or disturbed areas as practical. Conditions may be imposed as appropriate with regard to development envelopes, siting, road lengths and setbacks in order to maintain large areas of contiguous, undeveloped forest land; avoid unnecessary fragmentation of distinct timber stands; and to allow access for long-term forest management.</p>	<p>1. Significant Wildlife Habitat. Development will not result in an undue adverse impact on significant wildlife habitat. The DRB will consider available information and inventories of wildlife habitat, and may consult with the Vermont Fish & Wildlife Department or other experts to determine the presence of various habitats and to ensure that development is designed to minimize undue adverse impacts (e.g., impacts that would significantly reduce the ability of the particular habitat to continue supporting particular wildlife species that rely on that habitat for specific functions). Conditions may be imposed as appropriate with regard to development envelopes, siting, setbacks, and buffers that are adequate to protect that habitat from the impacts of development and associated activities.</p>

Suggested and Implemented Changes to Zoning Regulations through Forest Stewardship Phase 2 : Fayston (Central Vermont)

Town	Action	Changes to Standards	Subdivision Regulations
Fayston (Central Vermont)	Revise Subdivision Regulations to include protection of wildlife habitat and natural areas.	The existing Subdivision Standards indicate protections for critical wildlife habitat, contiguous forest and wildlife travel corridors, however various terms are used throughout the provisions to identify what may or may not be meant to be the same resource. The following proposed revisions, incorporating the definitions above, utilize one term for each resource it is understood that Fayston would like to protect. Provisions are also suggested allowing for flexibility on excessively constrained sites, and allowing for ongoing forest management.	(D) Protection of Wildlife Habitat and Natural Areas. Subdivision boundaries, lot layout and development envelopes shall be located and configured to minimize adverse impacts on critical wildlife habitat, wildlife travel corridors, contiguous forest, productive forest and natural areas identified in the Fayston Town Plan, by the Vermont Department of Fish and Wildlife, or through site investigation. Methods for avoiding such adverse impacts may include but may not be limited to the following: (1) development envelopes shall be located to exclude these identified features. A buffer area of adequate size shall be established to ensure the protection of critical habitat. In the event that no other land is practical for development, the development envelopes and subsequent development shall be designed to encroach upon the identified feature to the minimum extent feasible. (2) to avoid the fragmentation of natural areas and wildlife habitat, contiguous forest, and wildlife travel corridors, the DRB may require the submission of a wildlife habitat assessment, prepared by a wildlife biologist or comparable professional, to identify the function and relative value of the impacted resource and provide recommended management strategies to maintain or enhance those values and function. The DRB may also consult with Vermont Fish and Wildlife Department staff prior to issuing a decision. (3) roads, driveways and utilities shall be designed to avoid the fragmentation of identified features. (4) identified natural areas and critical wildlife habitat, wildlife travel corridors, contiguous forest and productive forest should be designated as open space. (5) The subdivision of productive forest land shall, to the extent economically and physically practical, be configured to allow for ongoing forest management of the parcel after subdivision. Lot lines, building envelopes, access driveways or roads, and utility corridors shall be laid out to avoid unnecessary fragmentation of distinct timber stands, and to allow access for long-term forest management. (6) In order to ensure the continued use of the forested parcel for harvest, development activities will be confined to the least productive part of the parcel with regard to ongoing forest management.

*New text indicated in red

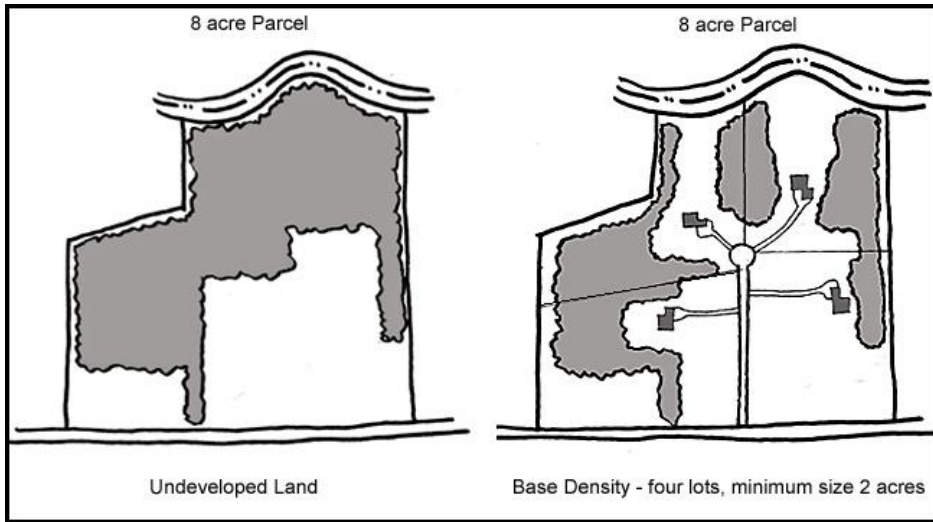
Suggested and Implemented Changes to Zoning Regulations through Forest Stewardship Phase 2: Fletcher (Northwest)

Town	Action	Changes to Standards
Fletcher (Northwest)	Clarify vague language on the protection of scenic resources as identified in the Town Plan, including slopes, open lands, and ridgelines. Expanded these from subdivision to both subdivision and zoning regulations. Revise minimum standards for size of open space per zoning district. Incorporated specific protections to minimize fragmentation of productive resources lands.	Primary Conservation Resources apply to all development and regulate slopes over 25% (among other characteristics). Secondary Conservation Resources apply to land development that requires DRB approval and regulates steep slopes between 15 - 25% grade and contiguous habitat blocks over 6,000 acres.

Suggested and Implemented Changes to Zoning Regulations through Forest Stewardship Phase 2 : Reading (Southern Windsor)

Town	Action
Reading (Southern Windsor)	Discussing a wildlife travel corridor overlay district, a ridgeline protection overlay district, and certain forest stewardship provisions including buffer language, access provisions for forest management activities, and clustering of development to avoid priority forest areas.

Suggested and Implemented Changes to Zoning Regulations through Forest Stewardship Phase 2: Wolcott (Lamoille) - Zoning Illustrations



Principle - Determining Density in PUD:
Illustration 1 - 8 acre parcel under two scenarios illustrated in side by side drawings (undeveloped land parcel of 8 acres; same parcel with conventional arrangement of 2 acre lots allowed under base density)

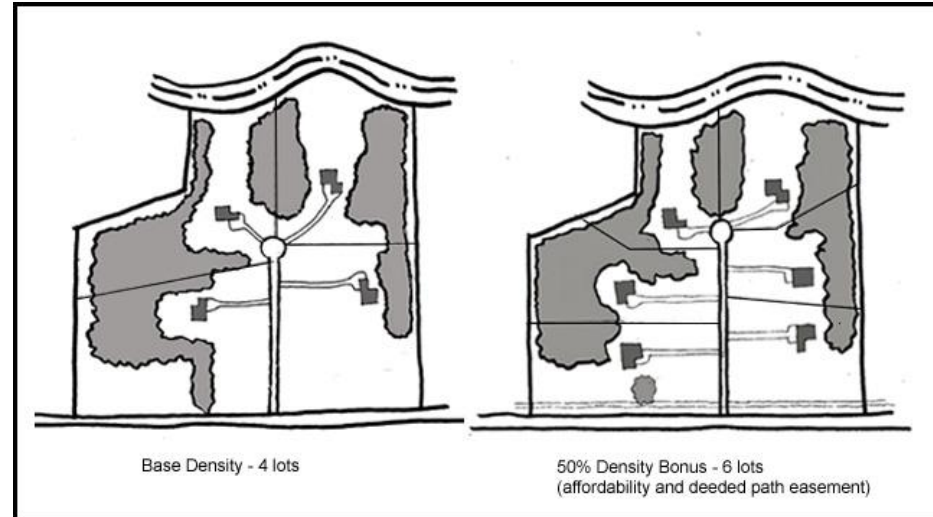


Illustration 2 - side by side showing conventional arrangement of 2 acre lots allowed under base density vs. conventional with 50% density bonus because meets affordability and deeded public access criteria

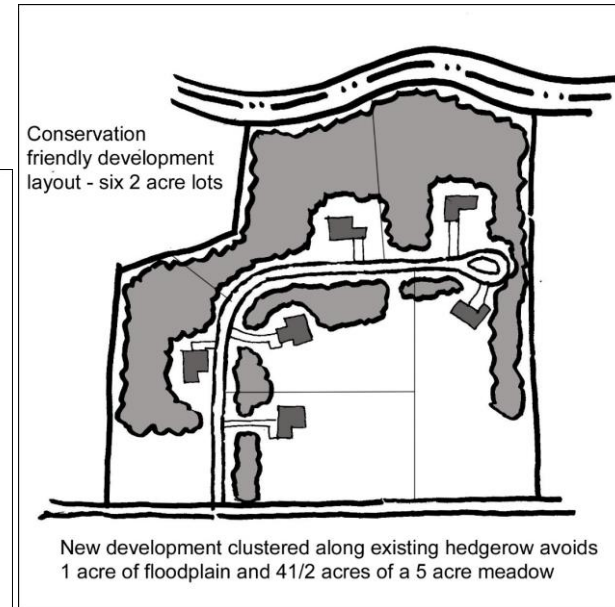
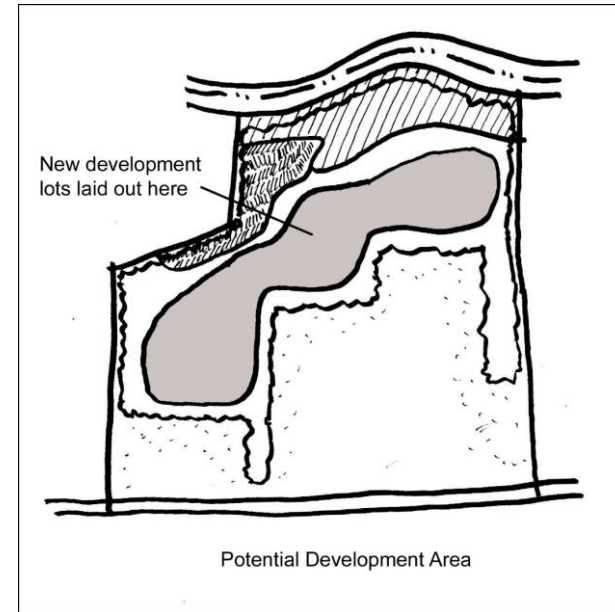
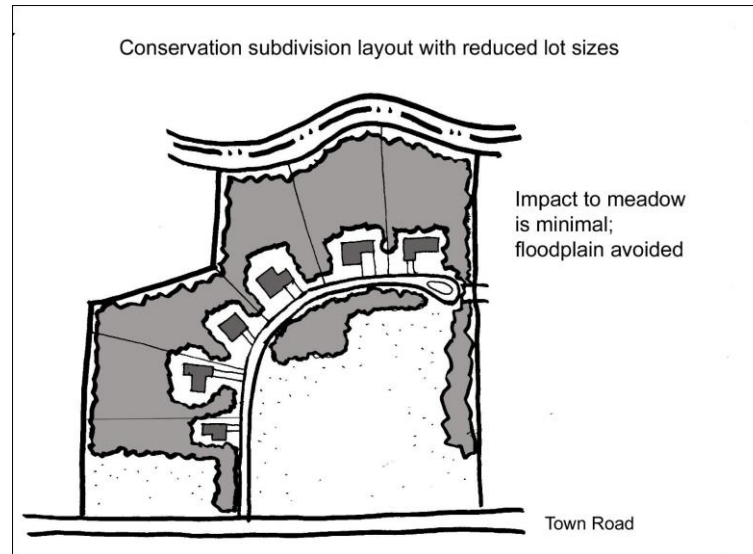
Principle - Clustering home sites on remaining land, connecting roads and trails:

Illustration 4 Subtract out primary and secondary resources and you have areas where potential development can be laid out (shown as blobs), at right.

Illustration 5 - Site A with 1 acre of floodplain avoided; 4 1/2 out of 5 acres of meadow avoided with development (2 acre house sites) clustered along existing hedgerow, bottom right.

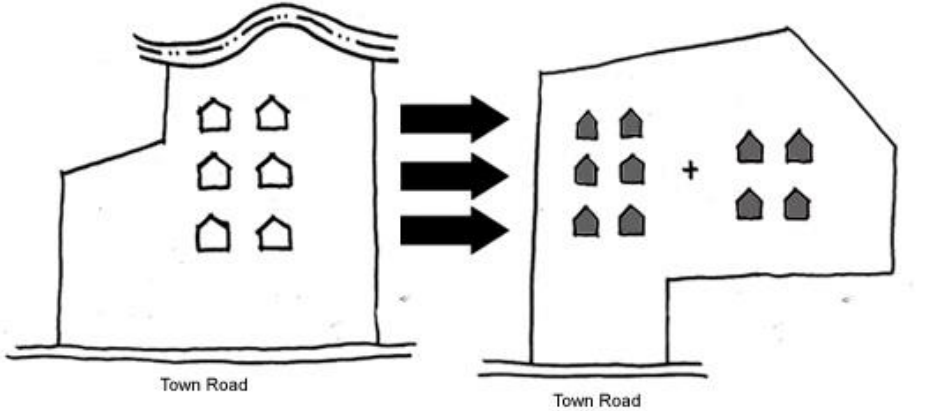
Principle - Drawing lot lines:

Illustration 6 - Same development configured with reduced lot sizes to show what this gains, ie no floodplain AND impacts to meadow further minimized (below).



Suggested and Implemented Changes to Zoning Regulations through Forest Stewardship Phase 2: Wolcott (Lamoille) - Zoning Illustrations, cont.

Transfer of Development Rights



Original 8 acre site had primary natural resources (floodplain, steep slopes)

Density is transferred to a second 8 acre site with no primary resources; original site permanently conserved

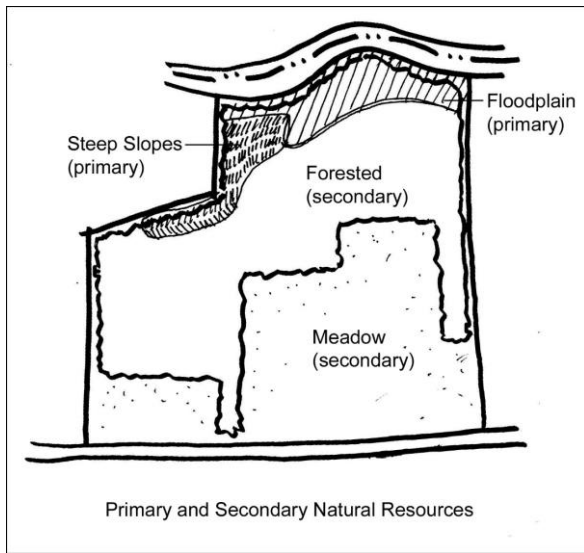
Illustration 7 – Graphic that Illustrates principle of TDR, ie “What is TDR?”, left.

Illustrations 8 & 9 – side by side of hypothetical TDR in action; Site A’s 6 lots go to Site B; Site A remains undeveloped land and total of 10 houses can be built on 8 acre Site B with majority of impacts to 6 acre meadow avoided, bottom left and center.

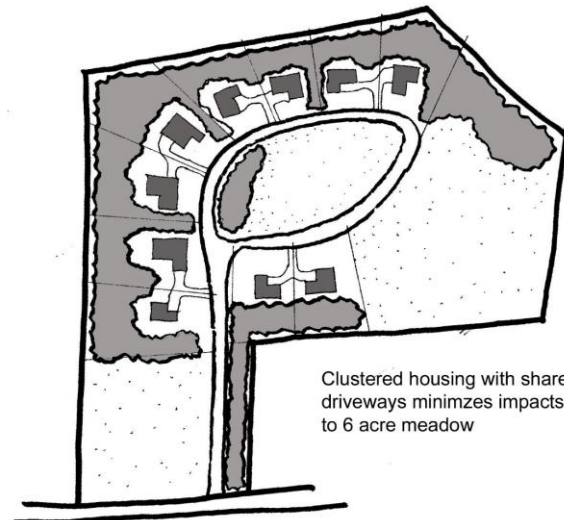
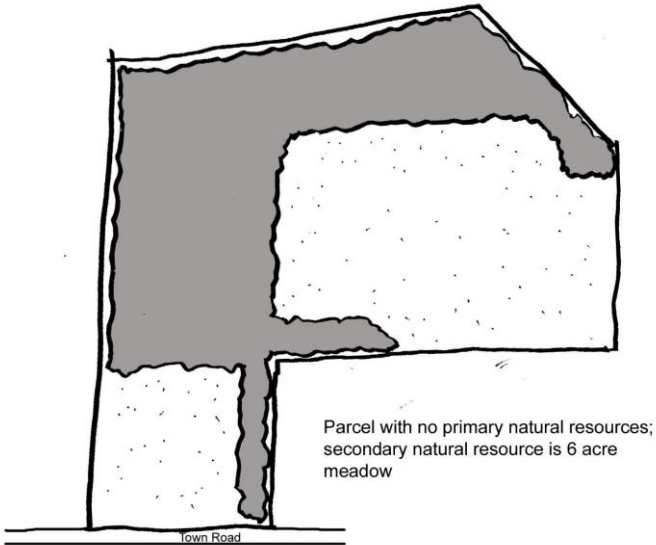
Illustration 10 – Site B with 15 houses, some of which have reduced frontages, because all meadow is conserved. Optimum use of TDR and conservation principles creates value added outcome that is efficient, compact, possibly walkable, and attractive, bottom right.

Principle - Identifying key resources to be protected in PUD:

Illustration 3 - Side by side drawing of 8 acre parcel, showing 1) “primary natural resources” that must be removed from building envelope, and 2) primary AND secondary resources, how they interrelate, right.

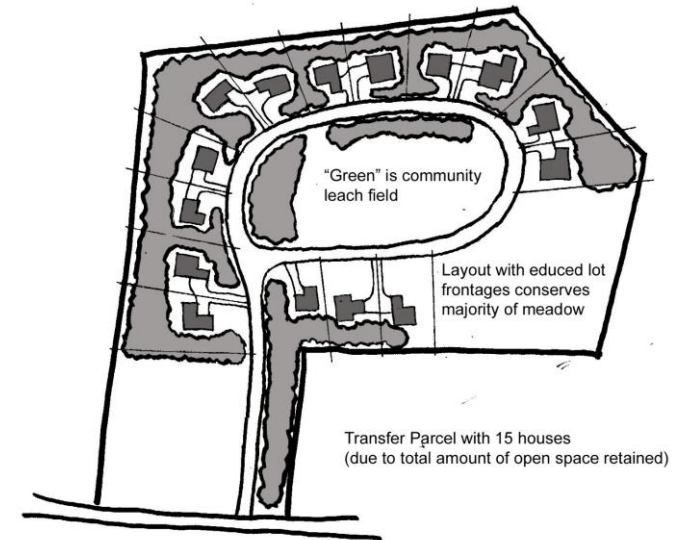


Transfer Parcel (8 acres) - Undeveloped Condition



Transfer Parcel developed with ten houses

Optimum Use of TDR and Conservation Principles



New Bylaw Definitions

Building Envelope	A specific area of a lot, delineated on a subdivision plat or site development plan, within which structures, parking and loading areas shall be located, and outside of which no structures, parking or loading areas shall be located. A development envelope shall be defined by required minimum setback and height distances, unless otherwise specified in these regulations. This also may be referred to as the 'buildable area' of a lot.
Contiguous Forest	An area of forestland comprised predominantly of one or more large parcels with either no roads or low densities of class 3 roads and little or no human development (buildings, parking areas, lawns, gravel pits, etc.)
Development or Building Envelope	The Land Use Regulations use this term in multiple provisions (see p. 74 & 78), but do not provide a definition. The terms appear to be used interchangeably, however one term should be selected for consistency. "Development Envelope" is recommended as it includes development such as parking lots and accessory structures which can contribute to forest fragmentation along with buildings.
Development Envelope	A specific area of a lot, delineated on a subdivision plat or site development plan, within which structures, parking and loading areas shall be located, and outside of which no structures, parking or loading areas shall be located. A building envelope shall be defined by required minimum setback and height distances, unless otherwise specified in these regulations. This also may be referred to as the "buildable area" of a lot.
Forest Fragmentation	The division or conversion of large tracts of contiguous forest or formerly contiguous forest into smaller pieces leaving remnant patches of forest that vary in size and isolation separated by non-forested lands or other vegetation and land use types. Fragmentation can reduce the viability of forests for forest management, hinder ecological functions such as watershed protection, disrupt wildlife corridors, and render core habitat and other habitats unsuitable for certain species of plants and animals.
Forestland, Productive	Land with soils that are capable of forestry. Vermont's Current Use program defines productive forest as forested areas on soils of Site Class I, II, or III (i.e. capable of growing 20 cubic feet of wood per acre per year or more).

Fragmentation	The division or conversion of contiguous or formerly contiguous areas of a land cover/use type or feature by different land cover/use types or features into smaller pieces, leaving remnant patches that vary in size and isolation and are separated from each other. This division, conversion and separation is usually caused by human development, activities or man-made features. Fragmentation can reduce the viability of forests and agricultural land for productive management, hinder ecological functions such as watershed protection, disrupt wildlife corridors, and render core habitat and other habitats unsuitable for certain species of plants and animals.
Primitive Camp	An occupied structure located on its own lot with no interior plumbing consisting of no more than a sink with water that is used for no more than three (3) consecutive weeks per year and no more than a total of sixty (60) days per year.
Productive Forest	Land with soils that are capable of supporting the growth of trees and commercial forestry. Vermont's Current Use Program defines productive forest as forested areas on soils of Site Class I, II, or III (i.e., capable of growing 20 cubic feet of wood per acre per year or more).
Significant Wildlife Habitat	Significant wildlife habitat are those natural features that are essential for the survival and/or reproduction of the native wildlife of Elmore. This shall include, but is not limited to, (1) deer winter habitat; (2) habitat for rare, threatened and endangered; (3) concentrated black bear feeding habitat (bear-scarred beech and oak stands); and (4) wetlands that provide critical functions for sensitive or unusual wetland-dependent wildlife such as breeding/nesting habitat for wading birds (bitterns, herons), waterfowl (ducks, geese) and otter and vernal pools".
Wildlife Travel Corridor	A large area that permits the direct travel or spread of animals or plants from one area or region to another, either by the gradual spread of a species' population along the route or by the movement of individual members of the species. Generally, this area is likely to include several specific wildlife road crossing areas and is characterized by undeveloped forested corridors, including forest cover reaching to road rights of-way, which serve to link large tracts of unfragmented forest habitat.

Other Municipal Strategies Implemented through Forest Stewardship Phase 2

Municipality	Action
Middlebury	Incorporate vegetative cove and Green Stormwater Infrastructure in town center
	Worked with Tree Board to protect urban vegetation
	Assisted with VT Urban and Community Forest grant for "Care of the Urban Forest"
Monkton	Conducted ridgeline and scenic area study: A viewshed analysis preliminary map has been created to overlay with their town zoning with a focus on Ridgeline and Forest Districts as well as the Overlay Districts identifying critical habitat and animal transit corridors.
	Held forest policies discussion incorporating many of the ideas developed under Forest Stewardship Phase 1
West Windsor	Assistance developing language for conservation easement to protect recreation area
Hartford	Worked with Conservation Commissions on habitat analysis of town forest
Strafford	Strengthening connections between conservation commission and planning commission; discussed forest stewardship goals and available web tools as well as improved communication about ongoing conservation projects in the region.

Sample of municipal strategy: Town of Guildford Key Action Items (WRC)

Goal	Action	Purpose	Lead Entity and timeline	Resources
STRENGTHEN THE LANGUAGE IN THE TOWN PLAN	Collaborate with WRC to enhance language that supports forest stewardship in the Town Plan.	To strengthen support for forest conservation and management in the Town Plan.	Planning & Conservation Commissions	WRC VNRC forest management reports
	Integrate inventory information and maps into the Town Plan as available and use the information to inform Town Plan updates.	To ensure that the Town Plan and future decisions reflect and respond to the town's existing natural resources and help to preserve special resources.	Planning & Conservation Commissions	WRC ANR Natural Resources Atlas
	Create maps of conserved lands and natural resources that include bordering towns such as Halifax, VT and Leyden, MA.	To understand and be able to prioritize regional land conservation efforts.	Conservation Commission	WRC
	Train Planning and Conservation Commission members in the use of web mapping tools such as BioFinder, VT Natural Resources Atlas, and the Forest Stewardship web platform.	To enable greater use of existing tools to assist decision makers in understanding local natural resources.	Planning & Conservation Commissions	WRC
NATURAL RESOURCES INVENTORY	Investigate potential for citizen involvement in the completion of the natural resources inventory.	To encourage citizen involvement in the inventory process and foster a deeper relationship between the community and the local natural resources.	Conservation Commission	ANR community wildlife program

COMPLETE A	Apply for a Municipal Planning Grant to complete a comprehensive natural resources inventory.	To provide the financial resources needed to complete a professionally conducted inventory.	Selectboard, Planning and Conservation Commissions	Municipal Planning Grant
	Complete a comprehensive natural resources inventory.	To gain a broad understanding of existing natural resources in order to assist in the preservation of important resources and enable more informed decision making.	Planning and Conservation Commissions	
	Post the natural resources inventory to the Guilford website.	To increase awareness of special natural resources by making the inventory publicly available.	Conservation Commission	
PUBLIC OUTREACH AND EDUCATION	Increase communication about forestry issues through the Guilford Gazette, email list (similar to the Dummerston CC), and Front Porch Forum.	To increase public, and especially landowner, awareness of the importance of forest conservation and good management practices and resources to support it.	Conservation Commission	
	Create a public repository of tools and resources on a range of land management issues such as forest management, low-impact development, and invasive species management.	To support landowners with forest conservation and management.	Conservation Commission	
	Organize a series of tours to landowners' woods to discuss common land management issues. Program could be modeled after the Vermont Coverts Program.	To build relationships among local landowners and provide a forum for education and outreach on forest-related issues, opportunities and resources.	Conservation Commission	Vermont Coverts
	Encourage participation at workshops targeting women landowners.	To provide resources and support to women landowners.	Conservation Commission	

BOLSTER	Encourage landowners to participate in forest conservation programs including conservation easements and the current use program.	To increase the quantity of protected land.	Conservation Commission	Vermont Land Trust
				Vermont UVA Program
	Educate the public about the importance of soils and soil biota through educational workshops and the distribution of media materials.	To support soil immunity and forest health.	Conservation Commission	
	Identify and connect landowners participating in Audubon's Forest Bird Initiative as well as potential participants.	To encourage increased participation and collaboration, particularly among adjacent landowners.	Conservation Commission	Forest Bird Initiative
OPPORTUNITIES	Inventory and map the public trails in Guilford.	To understand and increase public access to the Town's outdoor recreational opportunities.	Conservation Commission	WRC
	Examine the Forest Legacy Trails in Oquossoc, Maine.	To learn about and use a successful, existing model as a guide for developing Guilford's trail system.	Conservation Commission	Rangeley Lakes Heritage Trust
	Collaborate with the New England Forestry Foundation to develop educational and recreational opportunities at the Andrew Weeks Memorial Forest.	To enhance public awareness of forest stewardship through recreational opportunities.	Conservation Commission	New England Forestry Foundation

EXPAND OUTDOOR RECREATIONAL OPPORTUNITIES	Develop a recreation plan that identifies and prioritizes opportunities for improving the town's trail system. The plan could identify projects that would connect existing trails, expand the trail system, and/or improve navigation and the usability of existing trails.	To expand the town's recreational opportunities for residents and visitors.	Conservation Commission	WRC
	Educate both landowners and hunters about land ethics relating to land posting, landowner liability, and the forest threat of deer over-browse.	To improve relations between landowners and hunters and increase awareness about the threat of deer over-browse.	Conservation Commission	
	Collaborate with Halifax to develop a shared network of recreational trails and resources for residents and visitors.	To improve the recreational opportunities in the region and improve connectivity.	Conservation Commission	
LAND-BASED INDUSTRIES	Create a list of Guilford businesses participating in the forest economy. The list is primarily for internal use though a brief summary could be made public (e.g. 4 loggers, 3 truckers, 4 mills employing 9 people, etc.)	To better understand the range and relative abundance of forest industries and the contribution that the forest economy makes to the local economy.	Conservation Commission	
	Talk with loggers who meet regularly at Guilford Country Store.	To build relationships with forest industry professionals, to explore opportunities for collaboration, and to seek opportunities to support the forest economy.	Conservation Commission	

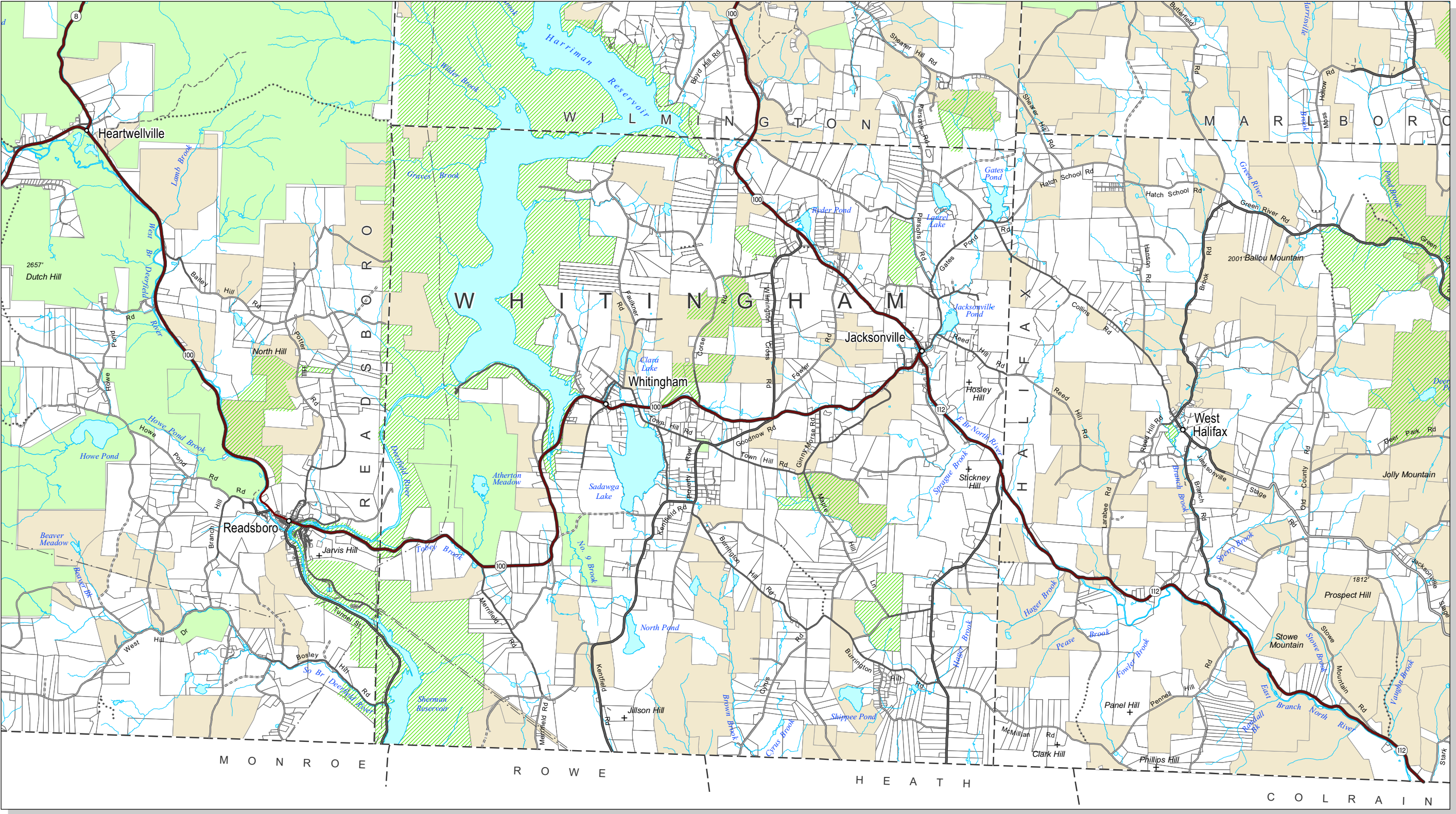
EXPAND	Investigate opportunities to support residents in developing alternative forest products.	To encourage expansion of the forest economy.	Conservation Commission	
	Distribute webinars and resources that highlight opportunities and provide information on sustainable production of forest products.	To encourage expansion of the forest economy.	Conservation Commission	

Sample of municipal strategy: Town of Halifax Key Potential Action Items (WRC)

Goal	Action	Purpose	Lead Entity and Timeline	Resources
STRENGTHEN POLICIES AND ACTIONS IN THE TOWN'S REGULATORY DOCUMENTS	Collaborate with WRC to strengthen forest stewardship language in the Town Plan.	To strengthen support for forest conservation and management in the Town Plan.	Planning Commission	WRC VNRC forest management reports
	Collaborate with WRC to strengthen regulatory language relating to forest stewardship in the Town's Zoning Bylaws.	To strengthen support for forest conservation and management in the Town Zoning Regulations.	Planning Commission	WRC VNRC forest management reports
	Work with the WRC to develop natural area maps and integrate this information into the Town Plan and Zoning updates.	To ensure that the Town Plan, Zoning and future decisions reflect and respond to the town's natural resources and help to preserve special resources.	Planning Commission	WRC ANR Natural Resources Atlas
	Create conserved lands maps that include protected parcels such as conservation easement, UVA lands, and publicly held lots.	To understand and be able to strategize regional land conservation efforts.	Planning Commission	WRC
	Work with WRC to identify existing subdivision regulations and/or model language that support forest preservation to assist with the development and adoption of such regulations.	To regulate future subdivisions, ensuring that development practices are aligned with the Town's goals.	Planning Commission	WRC

CONSERVE FORESTLANDS	Investigate opportunities and community support for forest land acquisition.	To conserve land and provide forest-based resources and recreational opportunities for residents.	Planning Commission	
	Distribute information and encourage landowner participation in conservation easement and current use programs.	To preserve forestlands and help ensure that forests remain intact, healthy and economically viable.	Planning Commission and Halifax Conservation Group	Vermont Land Trust Vermont UVA Program
IMPROVE RECREATIONAL OPPORTUNITIES	Develop and promote Halifax Gorge as an attraction.	To increase public access and appreciation for a significant natural resource in Halifax.	Planning Commission	
	Contact the landowner of Deer Park Pond about interest in negotiating an agreement to allow public access to the pond for swimming.	To create a public swimming hole.	Planning Commission	
	Collaborate with Guilford to develop a shared network of legal trails and and Class IV roads for residents and visitors.	To increase public access to recreational opportunities and improve connectivity.	Planning Commission	
ED INDUSTRIES	Convene local residents to investigate opportunities to support residents in sustainably developing the local forest economy.	To encourage the sustainable expansion of land-based industries.	Planning Commission	

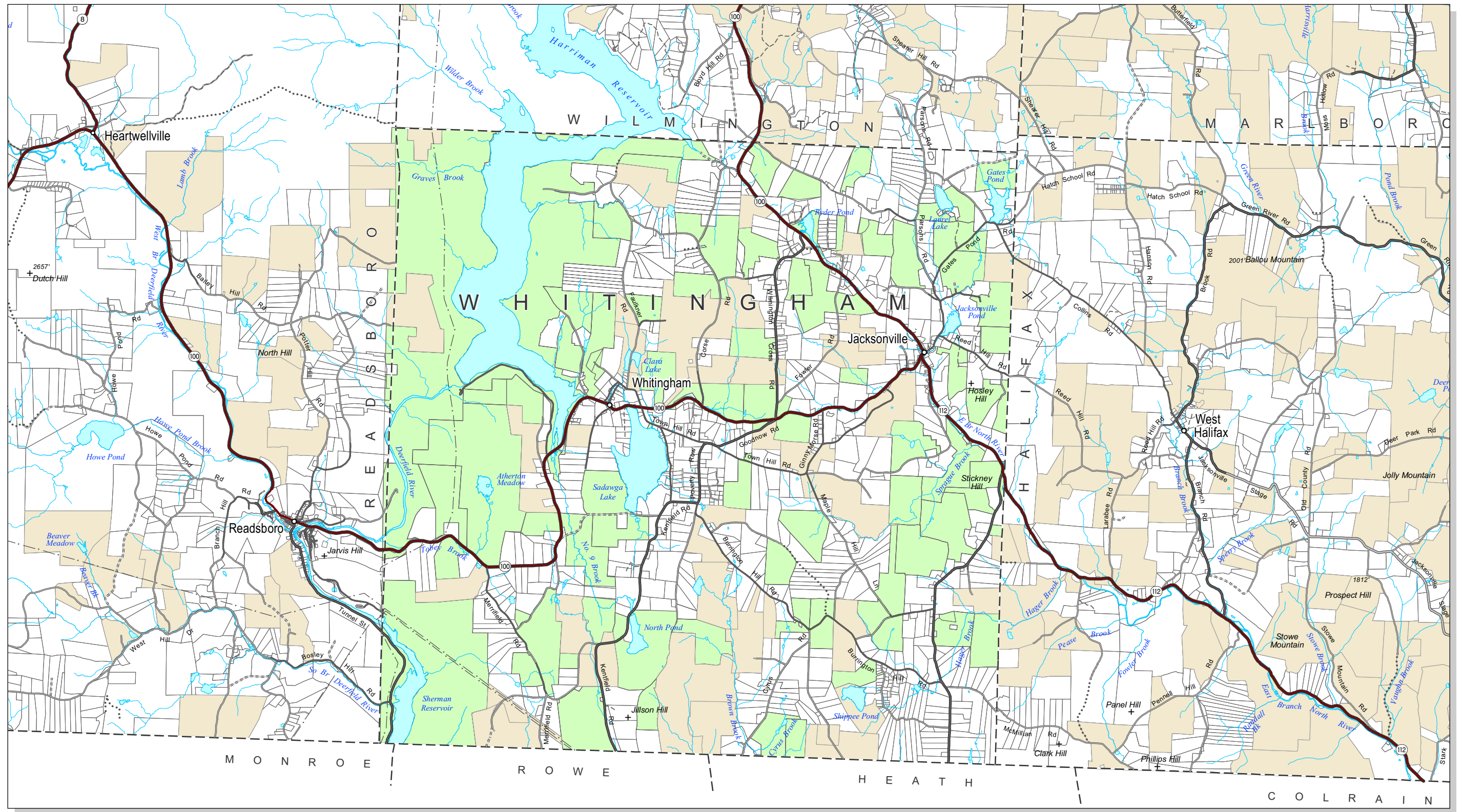
EXPAND LAND-BAS	Provide and distribute information and resources for landowners on best management practices for forests and other open spaces.	To preserve forests and their future viability through public outreach.	Planning Commission and Halifax Conservation Group	VNRC forest management reports
				Vermont Coverts



Public, Conservation, and UVA Lands
Town of Whitingham, Vt.

-  Public land
-  Conservation easement
-  Parcel enrolled in Use Value Appraisal data from 2012

0 1 2 Miles



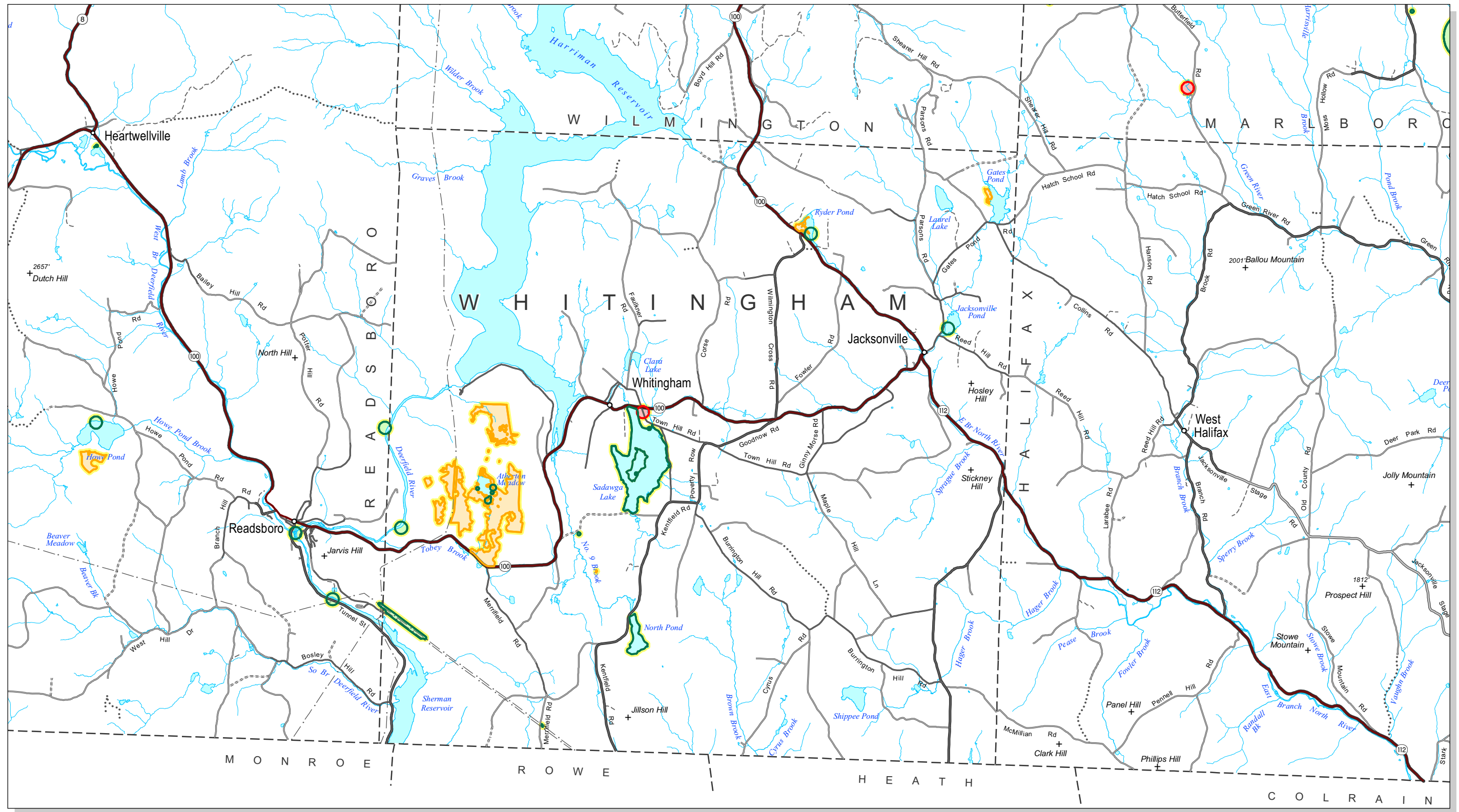
Large Parcels and UVA status

Town of Whitingham, Vt.

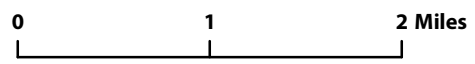
Parcel 50 acres or greater

Parcel enrolled in Use Value Appraisal

0 1 2 Miles

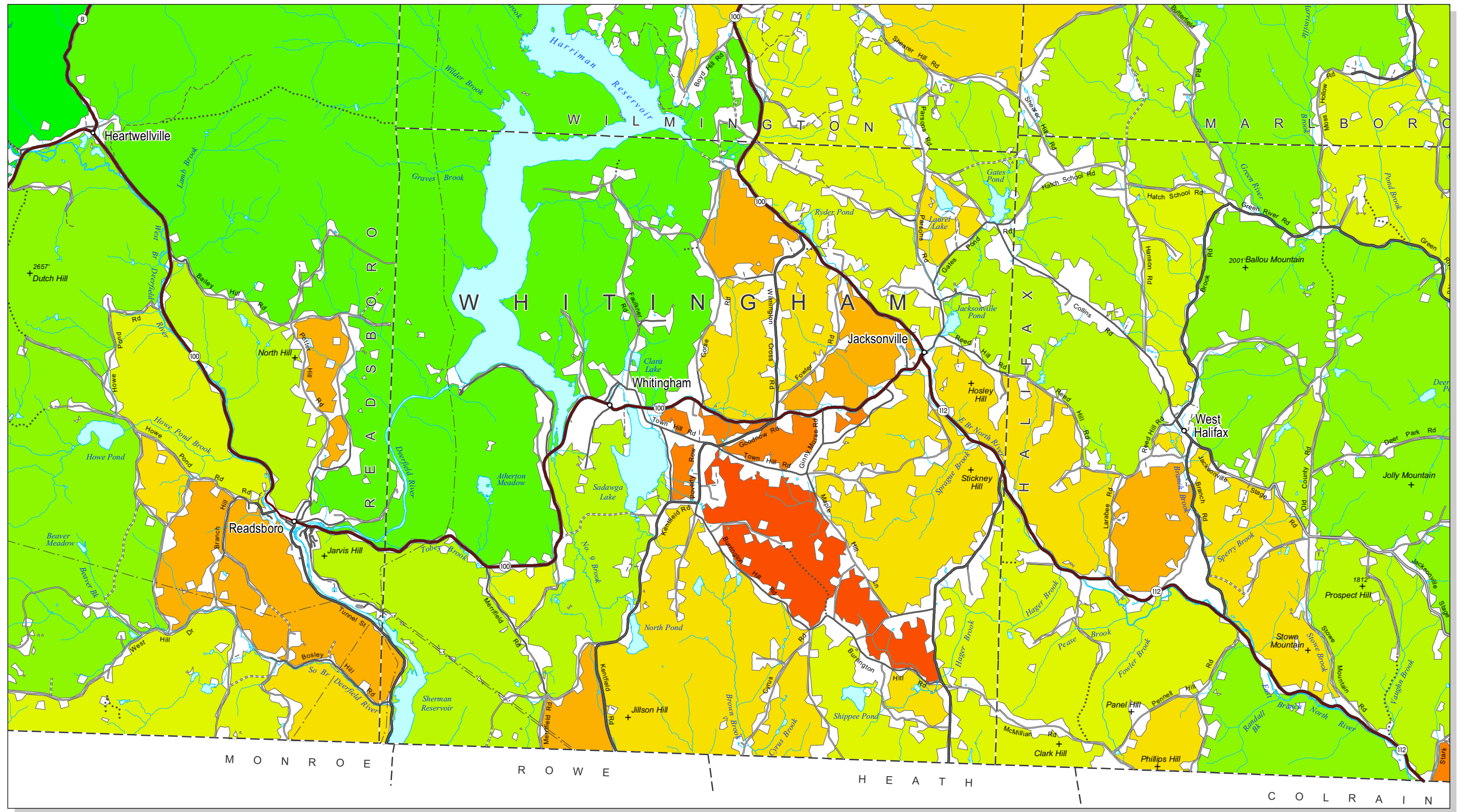


Natural Heritage Inventory record **Town of Whitingham, Vt.**



- Animal
- Plant
- Natural Community

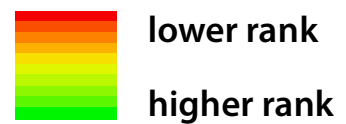
Data include rare, threatened, and endangered species, and significant natural communities. Also included are uncommon species and other features.



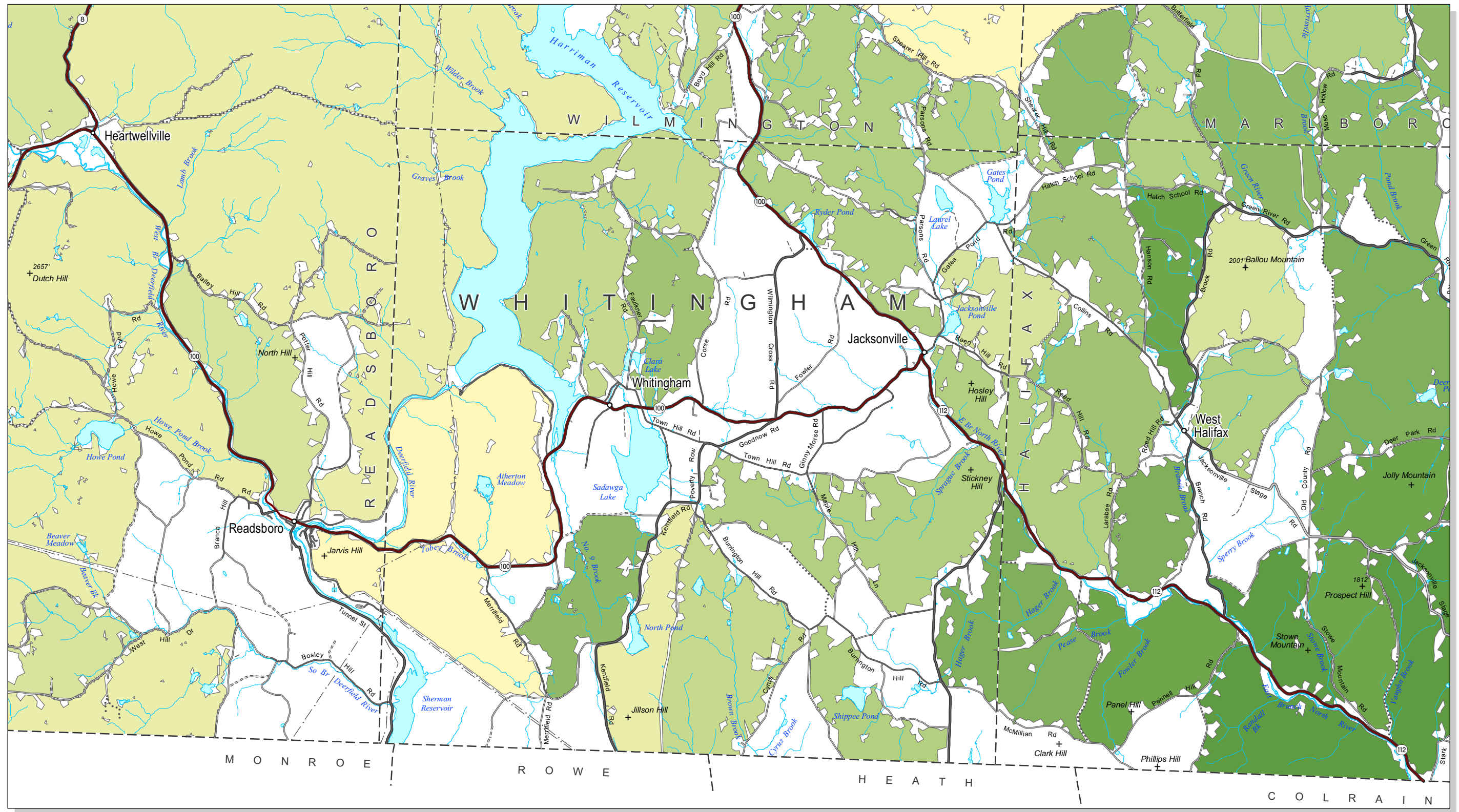
Habitat Blocks

Town of Whitingham, Vt.

0 1 2 Miles



Habitat blocks are areas of contiguous forest and other natural habitats that are unfragmented by roads, development, or agriculture. They are ranked for their biological and conservation value based on 11 biological and physical diversity factors.

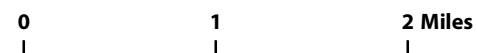


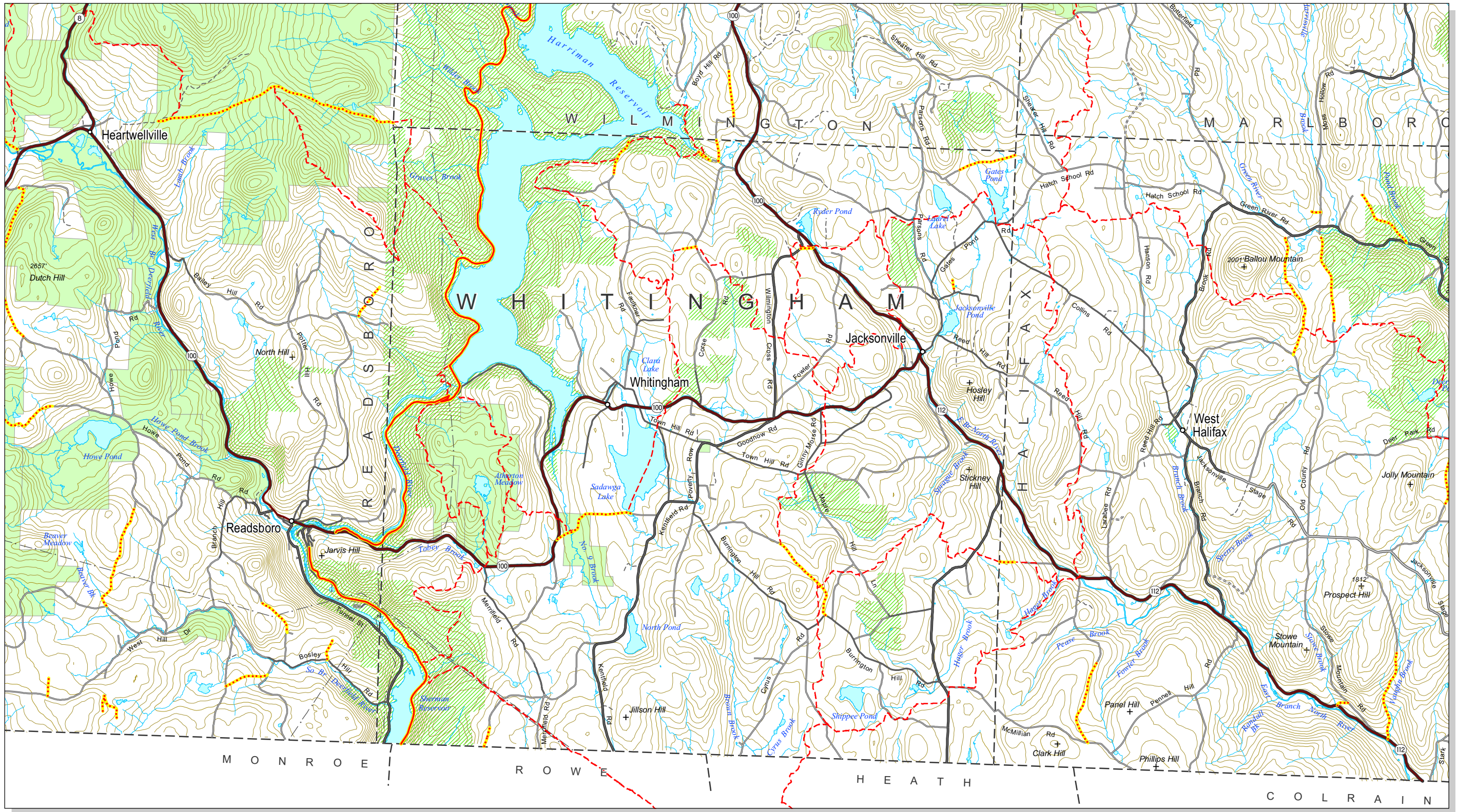
Forest Productivity

Town of Whitingham, Vt.



Maps shows habitat blocks greater than 500 acres ranked for their forest productivity. The analysis was based on, in order of importance: geology, elevation, hardness, landform, slope and precipitation.





Trails

Town of Whitingham, Vt.

0 1 2 Miles

- Designated hiking and skiing trails
- Impassable class 4 roads and legal trails
- Snowmobile trails
- Public land
- Conservation easement

Permission to use snowmobile trails does not extend to uses other than snowmobiling, unless specifically authorized. A VAST trail is a trail only during the snow season; any other use will be considered trespassing.