

# Vermont Town Forest Census Update

FEMC Conference

December 12, 2024

Burlington, Vermont

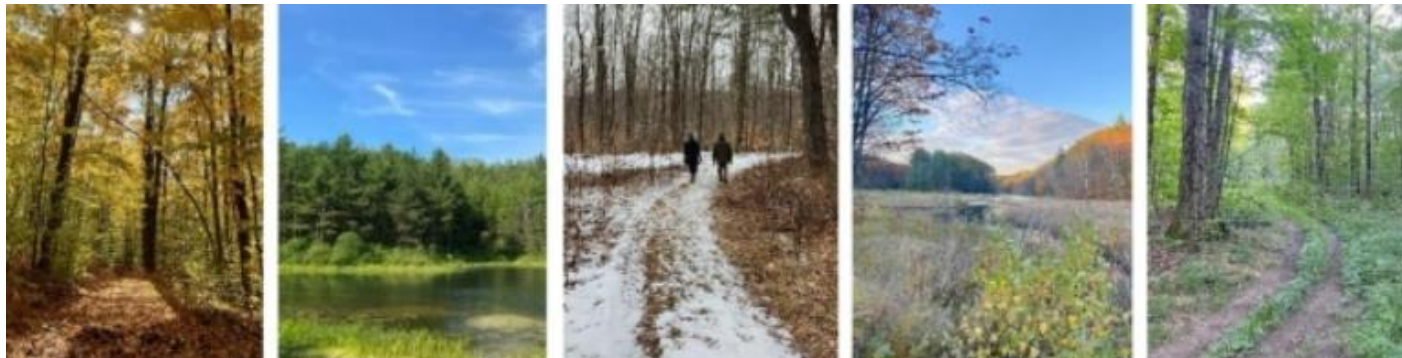
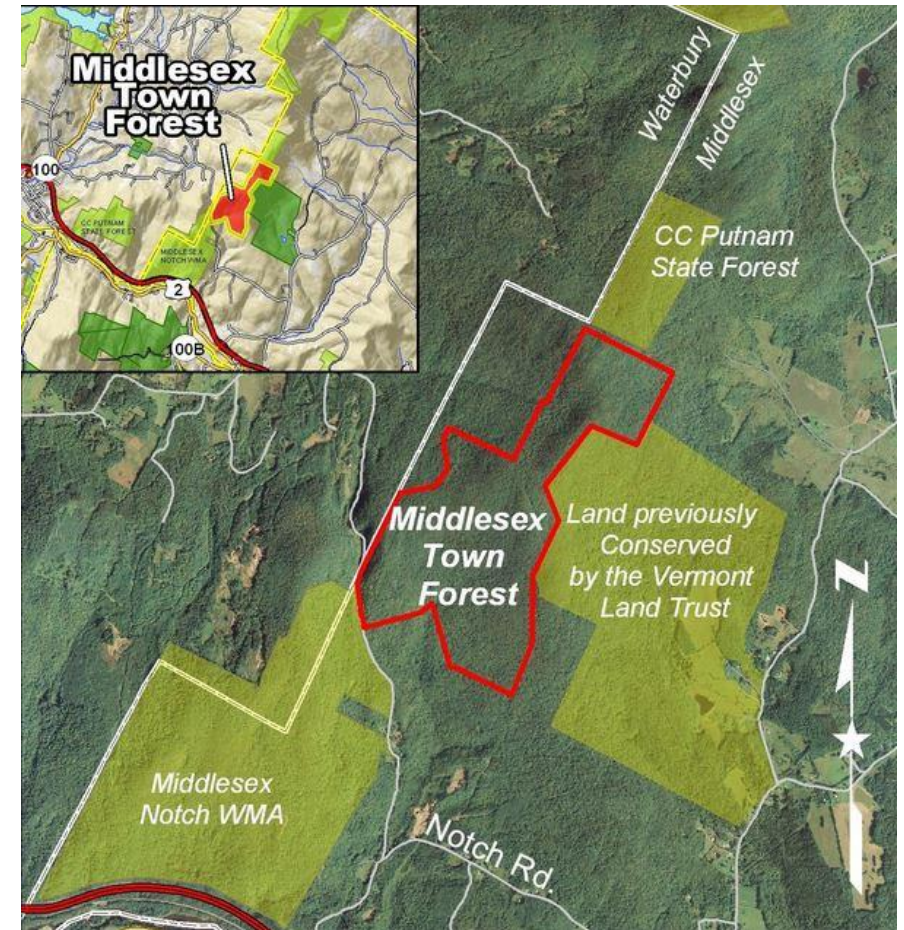
By Dr. Cecilia Danks on behalf of the UVM Team

<https://site.uvm.edu/vermonttownforestcensus/>



# Importance of VT Town Forests

- 67,000+ acres in 168 municipalities in VT ( as of 2007/2015)
- Outsized influence on
  - private forest management,
  - health and recreation, esp. for local residents
  - connectivity and ecosystem health





# Purposes of VT Town Forest Census

## Overarching goal:

To provide information to assist ...

- Agencies & universities (USFS, ANR, FPR, UCF, UVM)
- land trusts, non-profit organizations, and
- peer-learning efforts among towns themselves...

In their efforts to enhance ...

- local capacity
- for sustainable stewardship
- and inclusive governance
- of new and existing town forests.

# Standing upon the shoulders of recent town and community forest surveys

- [VT Town Forest Governance Project](#)
- NFC New Hampshire town forest survey
- USFS nationwide “community forest” survey

## Concerns:

- Typically the highest capacity town forests are the ones which fill out the survey.
- Town forests are dynamic and growing, more every year.

## Needs:

- Comprehensive dataset with best contacts
- Plan and process to update data periodically and easily



# VT Town Forest Governance Project 2021

## Data collection:

- 3 surveys: community members, consultants, county foresters (15 to 49 ques)
  - Community survey had good response rate with **sufficient data from 77 towns**
- 3 focus groups: County foresters, wildlife professionals, other professionals

## Under “Key data points to consider:”

- “The survey and discussion groups did not reach everyone who is doing town forest governance, but hopefully the results represent a cross-section of all communities.
- “From this limited survey, it appears that town forests in Vermont range in size from under 200 acres to over 1,000 acres. Future research could deliver exact data.
- Likewise results here show over fifty towns have their town owned land protected using some conservation tool; more research needs to be completed to get the entire picture”

# Census vs. Survey

## A **survey**

- Typically “samples” a subset of a population
- Needs to account for variability in the population in order to have a “representative” or unbiased sample.
  - Sample methods, size and selection (e.g. stratified sample)
  - Statistics based on variability in the population
  - Nonresponse bias testing

## A **census**

- Tries to get a response from **every** member of a population
- Typically repeated on a regular schedule
- To facilitate responses, planning a short census form (~ 20 questions)

# Why a census now?

- **Update lists of forest areas owned by local governmental entities.**
  - Build on past work – 2007/2015 list from UVM SAL and 2021 TF Governance Survey by Julie Evans
  - Capture growth and usage in recent years
    - Covid / post covid recreation boom
    - Federal funding: Community Forest Program enacted 2008 and initiated 2012
  - 30 x 30, AVCC, others looking for such lists
- **Get perspectives from communities themselves**
  - What they are grappling with
  - What help they might need
  - What they are proud of
  - Context of Increasing demands on public lands at all scales
- **Build community, share information, and lay groundwork for peer learning**
  - Identify key contacts per forest
  - Build listserv
  - Start website with resources

## **Core Research Team**

**Cecilia Danks**  
**UVM Associate Professor**

**Laura Edling**  
**UVM Lecturer**

**Elise Schadler**  
**VT FPR, Urban and  
Community Forestry**

**Keith Thompson**  
**VT FPR, Private Lands  
Program**

**Julie Frost, UVM MS Student**

**Matt Fischetti, UVM FOR**  
**Sophie Jacobson, UVM FOR**

## **Advisory Committee and Ad Hoc Advisors**

**Julie Evans – Northern Forest Center**

**Elissa Schuett – FEMC**

**Ali Kosiba – UVM Extension**

**Kim Coleman – UVM Associate Professor**

**Bob McCullough – UVM Historical Preservation**

**Andrea Shortsleeve – VT F&W**

**Chris Company – ED Windham RPC**

**Melissa Levy – Community Roots**

**Rich Holschuh – Comm on Native American Affairs**

**Nick Bennett – ED VMBA, VTGC Chair**

**Claire Polfus – VT FPR Rec Program Manager**

**Bob Heiser – Vermont Land Trust Project Director**

**Kate Forrer – ED Vermont Woodlands Association**

**Tessa McGann – VT F&W Rutland Co Forester**

**Noel Dodge – VT FPR Biologist**

**Jens Hilke – VT F&W**

**Jared Ulmer – VT DOH Climate Health Program**

**Bill Jewell – UCF Council**

**Darren Schibler – Chittenden RPC**

**Sean MacFaden – UVM Spatial Analysis Lab**



# Multi-Step Process

- Develop Advisory Committee
- Definitions and focus
  - Greater than 5 acres, “mostly forested,” owned by local units of government ( municipalities, districts) and tribes (follows USFS Community Forest Program)
  - Unit of Analysis: the Forest (not the municipality)
- Census form developed in Qualtrics with iterative review
  - 22 multi-part questions
- Outreach to every VT town: How many forests? Who is “steward” for each?
- Deploy Census by forest, in cohorts
- Match mapping efforts when Census are returned

# Prelim findings from Cohort 1

- Census sent to about 135 forests on Oct 15, 2024
- 78 responses to date: 17,426 acres,
  - avg 223 acres per forest
  - Min: 7 acres
  - Max: 1650 acres

## Preliminary Analysis Highlights:

- Challenges stewards face
- Assistance needs/interests
- Post-covid trends
- If time: Casting too wide a net for “Town forest” focus? Pros & Cons

15a. How challenging are the following issues and activities in the stewardship of this forest?

	major challenge	minor challenge	not a challenge	unsure	not applicable
Balancing public access and ecological integrity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community's awareness of forest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constructing, maintaining, or managing trail network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engaging the public in planning processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitating meetings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finding volunteers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	major challenge	minor challenge	not a challenge	unsure	not applicable
Ensuring access for all abilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing conflicts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mapping, survey, and GIS capacity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obtaining legal advice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# Challenges

“How challenging are the following **issues & activities** in the stewardship of this forest”

	major challenge	minor challenge	not a challenge	unsure	not applicable
Protecting ecological features and functions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	major challenge	minor challenge	not a challenge	unsure	not applicable
Road access	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Securing funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Securing paid staff support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing management, stewardship and/or monitoring plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# Challenges

“How challenging are the following **issues & activities** in the stewardship of this forest” (Numbers = # of forests checking that box, n= 78)

## Averages

Major: 8

Minor: 22

Not a challenge: 24

Unsure: 5

NA: 14

### Top challenges (Major)

- Ensuring access for all : 29
- Constructing, maintaining or managing trail network: 21
- Securing funding: 10
- Everything else: single digits

### Top Challenges (Minor)

- Protecting ecological features & functions: 34
- Managing conflicts: 33
- Finding volunteers: 32
- Community’s awareness of forest: 30
- Constructing, maintaining or managing trail network: 28
- Securing funding: 26
- Balancing public access & ecological integrity: 25
- Engaging public in planning: 25
- Writing plans: 25
- Parking: 21

### Not a Challenge

- Road access: 47
- Obtaining legal advice: 43
- Mapping, GIS capacity: 37
- Facilitating meetings: 32
- Parking: 32
- Community’s awareness of forest: 29
- Engaging public in planning: 26
- Protecting ecological features & functions: 23
- Writing plans: 21

17. If resources were available (e.g. funding, technical assistance), how interested would the steward or stewardship committee be in receiving help for this forest with the following topics?

	very interested	somewhat interested	not interested	unsure
Accessibility for people with varied abilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carbon storage and sequestration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Climate change impacts and adaptation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conservation easements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ecological assessment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitation and assistance with difficult community conversations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	very interested	somewhat interested	not interested	unsure
Flooding and flood resilience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indigenous heritage and contemporary use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpretive signage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Invasive species management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Management Planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Media or online presence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	very interested	somewhat interested	not interested	unsure
Monitoring wildlife and environmental impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunities to learn from other town forests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Protecting sensitive areas and critical habitat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreation Planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sustainable harvest of wood and non-wood forest products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tracking visitors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# How interested are you/your committee receiving help on following topics:

<b>TOP Top Topics</b>	<b>Very Interested</b>	<b>Not interested</b>
Invasive species management	35	10
Monitoring wildlife and environmental impacts	33	11
Protecting sensitive areas & critical habitat	33	10
Trail and/or road maintenance // Opportunities to learn from other town forests	29	16//14
Ecological assessment	28	11

<b>BOTTOM Top Topics</b>	<b>Very Interested</b>	<b>Not Interested</b>
Media or online presence	8	29
Facilitation and assistance with difficult community conversations	10	26
Conservation easements	13	25
Sustainable harvest of wood and non-wood forest products	14	18
Flooding and flood resilience // carbon & carbon storage	15	26//15

# How interested are you/your committee receiving help on following topics:

	Very and Somewhat Interested	Not Interested	Unsure
Monitoring wildlife and environmental impacts	56	11	6
Invasive species management	55	10	7
Protecting sensitive areas and critical habitat	54	10	7
Opportunities to learn from other town forests	51	14	8
Trail and/or road maintenance	49	16	6
Climate change impacts & adaptation	48	10	13
Ecological assessment	48	11	12
Recreation Planning	48	14	9
Management planning	45	14	10

# 17 Interest in Assistance – Open-ended

- *“Assistance would be helpful in creating a system that will be sustainable for future stewards, so getting some funding and oversight would be impactful.”*
- *“There was interpretive signs installed several years ago that needs updating and repair.”*
- *“Unauthorized trail building is a big concern.”*
- *“If the forest got heavier use these issues would likely develop, but right now it's at a good balance, and it's a small forest.”*
- *“We'd welcome any way it might be protected from the whims of future select boards.”*
- *“Expertise in several areas would be helpful, including satisfying diverse opinions about human access, updating ecological understanding and general writing assistance.”*
- *“We are concerned about deer over population and the effect they could have on reducing future diverse growth. Presently, with the forest at 1800 feet, deer have not been an issue. But as our winters become warmer and less snow depth- they could impede any young growth as well as the healthy amount of hobble bush present.”*



# Post Covid-19 pandemic trends: Comparing now (2024) to before March 2020

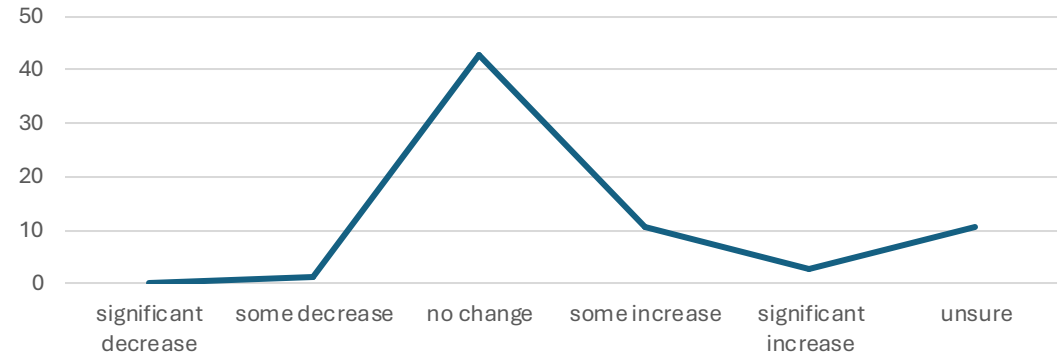
- Different types of recreation
- Events and educational programs
- Formal trail development
- Informal Trails
- Number of visitors
- Sanitation, vandalism, repairs
- Parking demand
- Quality of wildlife habitat
- Wild-crafting & gathering forest products

*“Increased visitor use has been minor and not a problem.”*

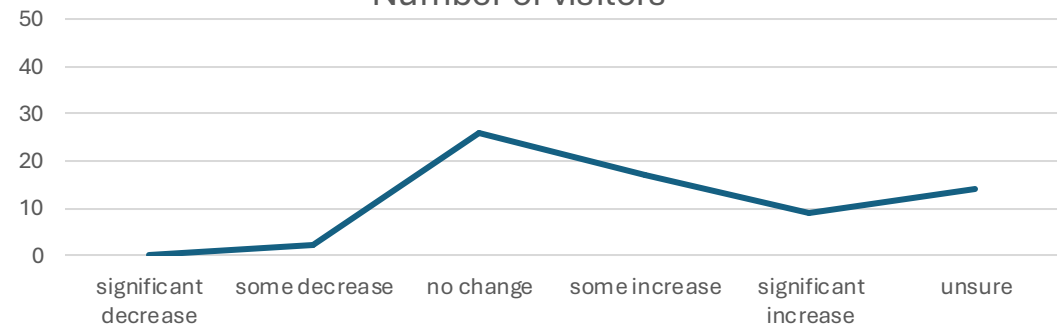
*“Pretty much back to normal. Our ATV rider moved!”*

*“Outdoor classrooms were constructed so students could meet in groups during the pandemic.”*

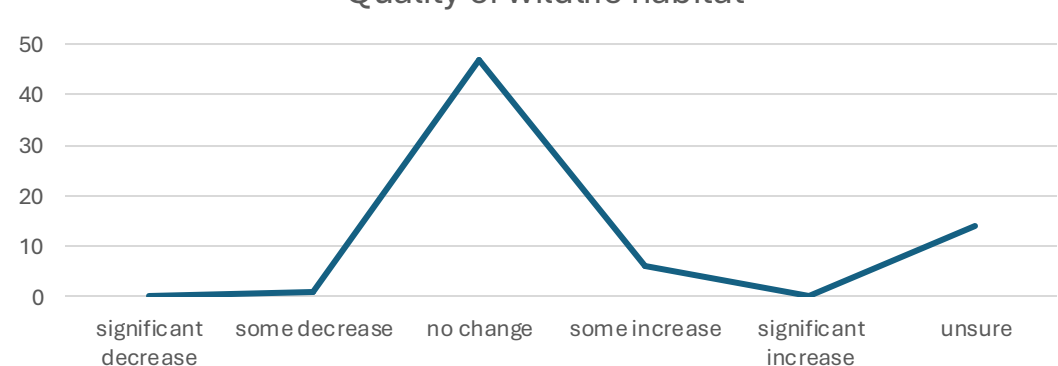
Average change in use & impacts  
pre-March 2020 and 2024



Number of visitors



Quality of wildlife habitat



# What is a town forest?

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Lots of forest land not known as “Town Forests”

- 1915 legislation
- Local definitions of town forests collected
- Parks & Conservation Areas
- What are implications?
- Towards a typology of forests owned by local governments



# Do you consider this forest a town forest?

- Yes : 65
- No: 9
- Unsure: 4

## Comments of some Nos:

*“The parcel was established as a recreation area. Most of the site consists of sports fields and courts. The forested area is highly managed, containing trails and interpretive materials. It has trees, yes, but it doesn't serve the ecological functions of a forest.”* (Howard Park, Shaftsbury, 25 ac, 1980)

*“We reserve that title for the Putney Mountain land. We call this site “The Beatrice Aiken Conservation Site.” It is managed by the Conservation Commission.”* (Putney, 11 ac., 1969)

*“It was a former hill farm, and much of it remained in pasture for many years. We are managing much of it to prevent reforestation to enable the views it offers. Parts of it, too, are being managed to allow reforestation.”*  
(Boyce Hill Town Forest, Fayston, 93 ac, 2019)

# Future Analysis, Opportunities & Concerns

- Combine secondary & primary data by town
  - Demographic, size
  - Governance structure
  - Historical, cultural landscape
  - Equity mapping
- Use census findings to build map
  - Build from census findings
  - Needs town by town attention and confirmation
  - How much info to include
- “User Manuel” for next version of census
  - 5 or 10 years?
  - Permanent vs. Topical questions
  - Who to do it?

# Beyond the Census: How best to support Town Forests?

- Listserv expanded through census takers
- Advisory Committee
- How to maintain a website or online map?
- Joanne for UCF?
- Standing session in May UCF Conference (formerly Arbor Day)?
- Town Forest Summit next Fall?
- Brave Little State
- Bob McCullough's effort

# Thank you!!!

See website for more information:

<https://site.uvm.edu/vermonttownforestcensus/>

(Google” VT Town Forest Census Project)

Extra slides

# Specific topical areas identified for 1<sup>st</sup> Census:

## A. (Inclusive) Governance:

- What entities make stewardship decisions, and how do town residents participate in such decisions?
- What concerns and capacity-building needs are identified and prioritized by those responsible for town forest governance?

## B. COVID-19 pandemic:

- How has use of town forests been affected by the COVID-19 pandemic?
- What new uses, conflicts, support or needs regarding the forest are attributed to the pandemic and related shutdown measures?
- How do covid-related impacts and experiences change stewardship plans or capacity-building needs for the future?

## C. Estimating economic benefits:

- What, roughly, is the economic value of the benefits provided by of town forests individually and collectively in the state?
- What data is needed to determine economic benefits? What models or multipliers can be used to give basic estimates?

## D. Carbon market potential:

- What is the level of knowledge about forest carbon markets among those who govern the town forests?
- What is their level of interest in exploring carbon market opportunities with state assistance?
- What reasons do they give for interest or disinterest?

**Which perennial questions and which topical questions should we pursue going forward?**



# Additional topics (mentioned in proposal)

- **Land acknowledgments, traditional stewardship practices and use rights by indigenous peoples**
  - Interest? Actions? Concerns?
  - Models to share?
  - Consultations and Capacity-building needs?
- **Health Impacts of Town Forests**
  - Estimates of value?
  - Efforts to enhance health benefits? Access and Inclusivity?
  - Models to share?
  - Capacity-building needs?

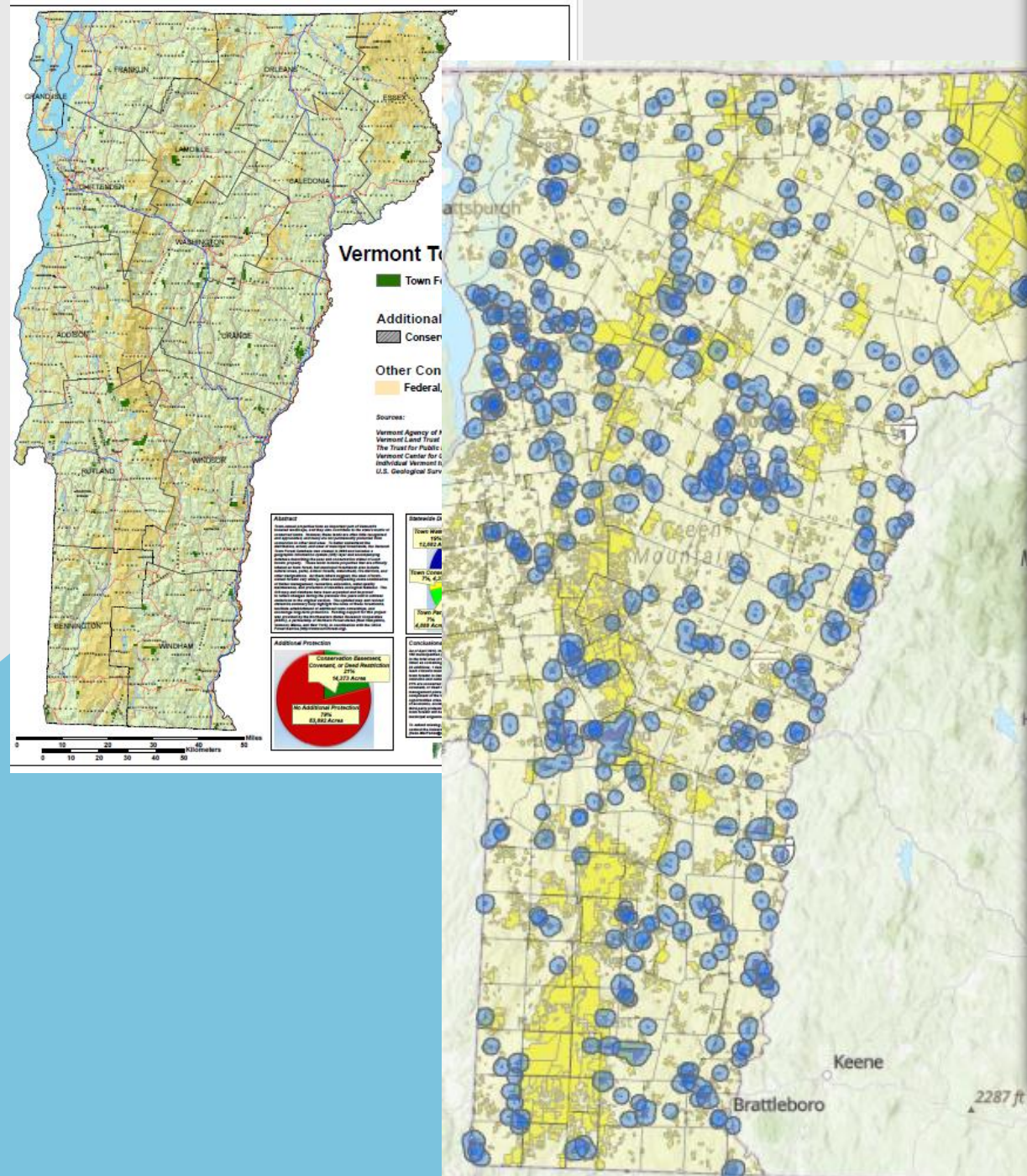
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## Under “Key data points to consider:”

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- Likewise results here show over fifty towns have their town owned land protected using some conservation tool; more research needs to be completed to get the entire picture”



As of the 2015 inventory:

347 individual town owned forests

Includes parks and other partially forested town owned land

Totals ~68,000 acres

Currently embedded in the Protected Lands Database



Westford Town Forest 2016, Photo Courtesy of Bob Heiser, VLT

# Governance of Town Forests

REPORT TO THE VERMONT DEPARTMENT OF FORESTS, PARKS, & RECREATION  
 SUBMITTED BY THE NORTHERN FOREST CENTER  
 SEPTEMBER 2021



# Specific Objectives and Deliverables

- The **census** approach
- Updated inventory and maps of ALL of Vermont's town forests and their key contacts
- Establish and conduct a **replicable**, statewide survey of ALL town forests
  - Build a baseline of key information, goals, and challenges
  - Inquire about specific, topical issues in each census cycle
  - Monitor changes over time
- Estimate economic impacts of town forests

