IMPLEMENTING ACT 171

LAND USE PLANNING TO ADDRESS FOREST FRAGMENTATION



Monica Przyperhart Community Wildlife Program Vermont Fish & Wildlife Department

The Vermont Fish & Wildlife Department

The mission of the Vermont Fish & Wildlife Department is the

conservation of our fish, wildlife, plants and their habitats

for the people of Vermont



What we conserve



Natural communities



Fish



Habitat







Wildlife

Plants

Who we serve



Wildlife watchers



Hunters and trappers



Future generations



Communities



Anglers



Landowners

Community Wildlife Program



Presentations & Workshops

Connecting Communities to Each Other



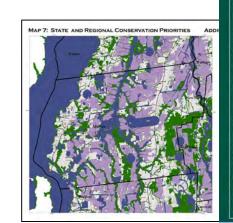
Support for Planning



Understanding ecological and community context



Support for Conservation



Mapping Vermont's Natural Heritage A Mapping and Conservation Guide for Municipal and Resional Planaers in Vermons





Creation/Interpretation of Resources

ACT 171 PLANNING PROVISIONS

New land use planning goal:

to manage Vermont's forestlands so as to maintain and improve forest blocks and habitat connectors.

ACT 171 PLANNING PROVISIONS

Requires town and regional plans to:

- indicate those areas that are important as forest blocks and habitat connectors
- plan for land development in those areas to minimize forest fragmentation and promote the health, viability, and ecological function of forests.

Act 171 ANR Guidance Document

http://anr.vermont.gov/Planning/Forest_Blocks_And_Habitat_Connectors



Economic benefits of recreation and tourism \$\$\$ Prevent erosion and reduce flooding \$\$\$

Provide working lands and jobs for forest products industry \$\$\$

Benefits of Large Forests

Clean air & water

Scenery

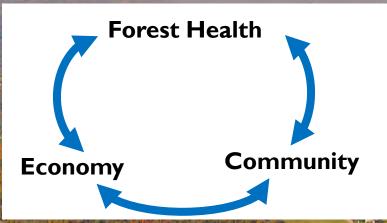
Biological diversity

Provide land for hunting, fishing, wildlife viewing \$\$\$

Transmit fewer tickborne illnesses

Mitigate climate change

WORKING FORESTS

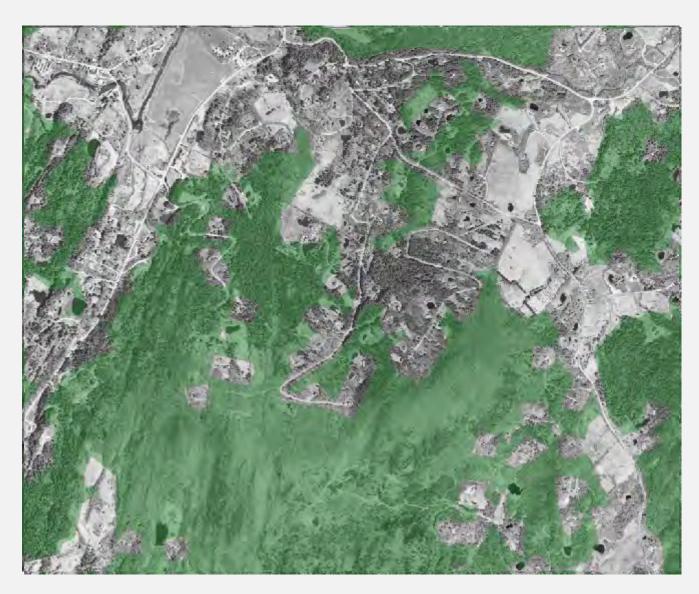


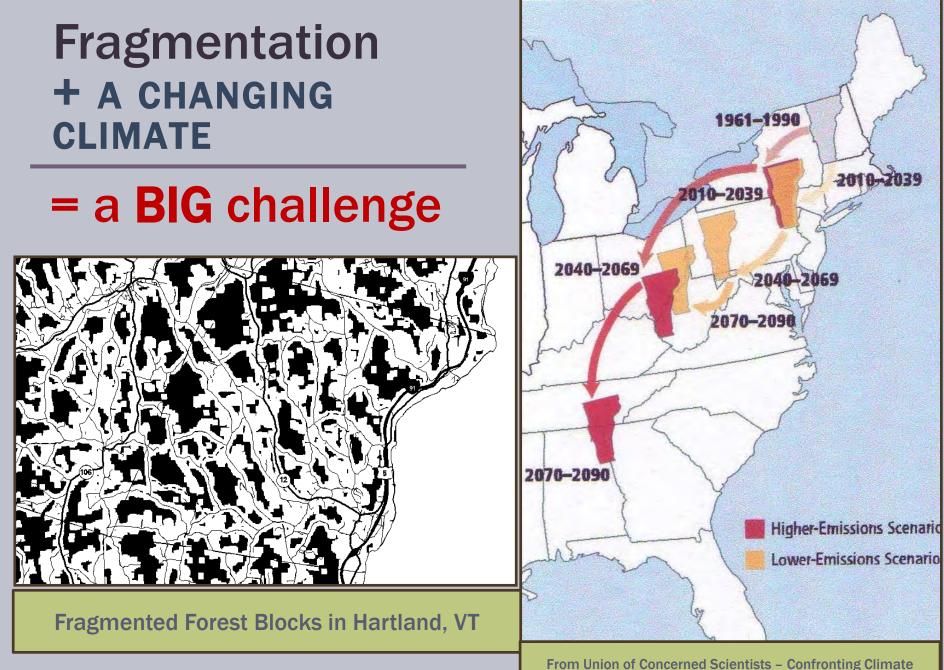
Goal: To Maintain Function

(Ecological, Economic and for Community Values)

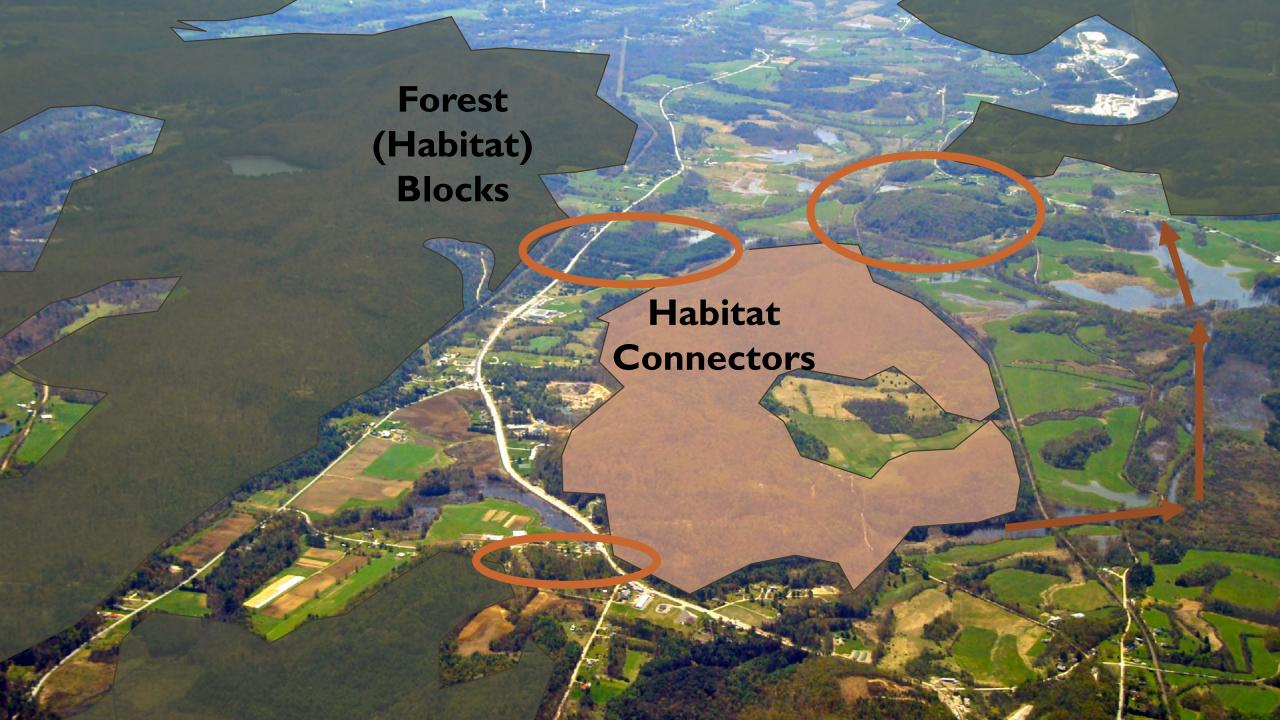
LOSING WILDLIFE HABITAT & WORKING FOREST



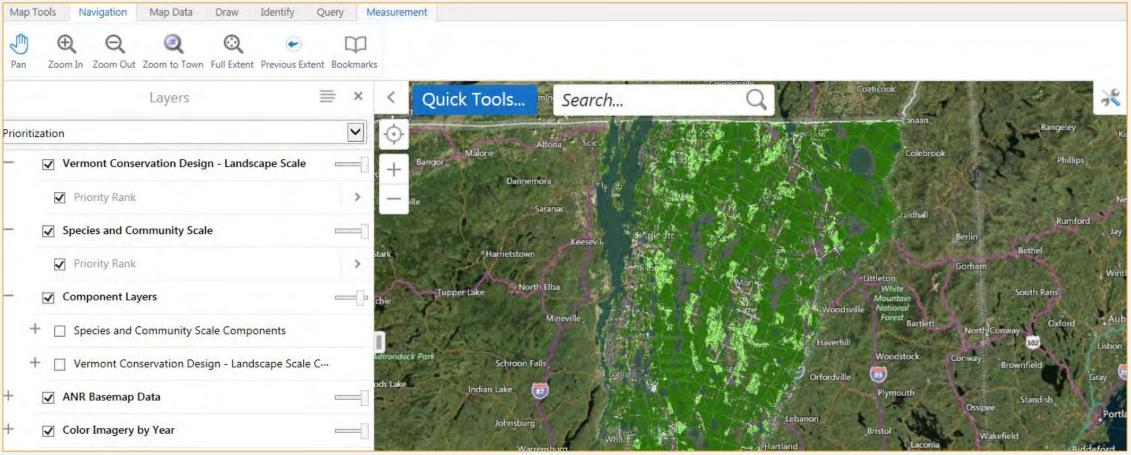




Change in the Northeast (NECIA 2007)







Accessible to everyone!

biofinder.vt.gov/

Vermont Conservation Design

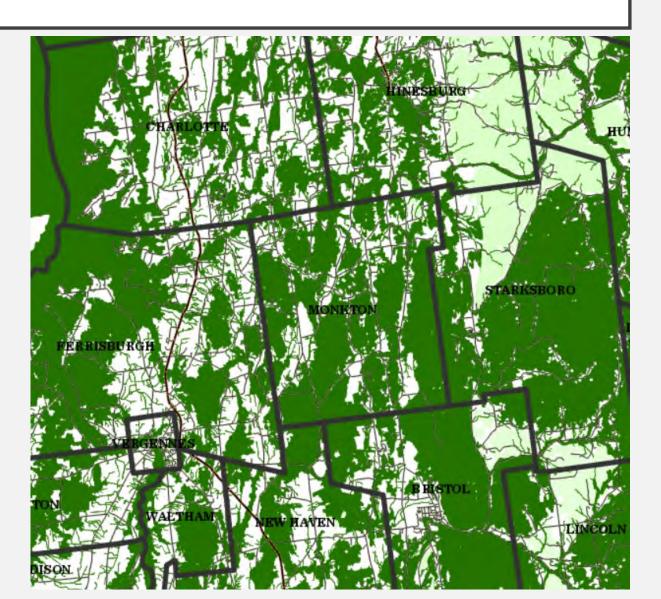
Ecological Function:

The ability of plants and animals to interact as needed in order to thrive, reproduce, migrate, and move even as the climate changes.

EXAMPLE: HERE!

Vermont Conservation Design assigns an overall **priority rank**.





BioFinder





Vermont Conservation Design - Landscape Scale
🗹 🚉 Priority Rank
HIGHEST PRIORITY
PRIORITY

Encourage support for businesses that use local forest products. Institute a local products purchasing policy for municipal purchases.

GOAL: SUPPORT WORKING FORESTS

Encourage management plans and/or Current Use

Connect landowners to incentives programs

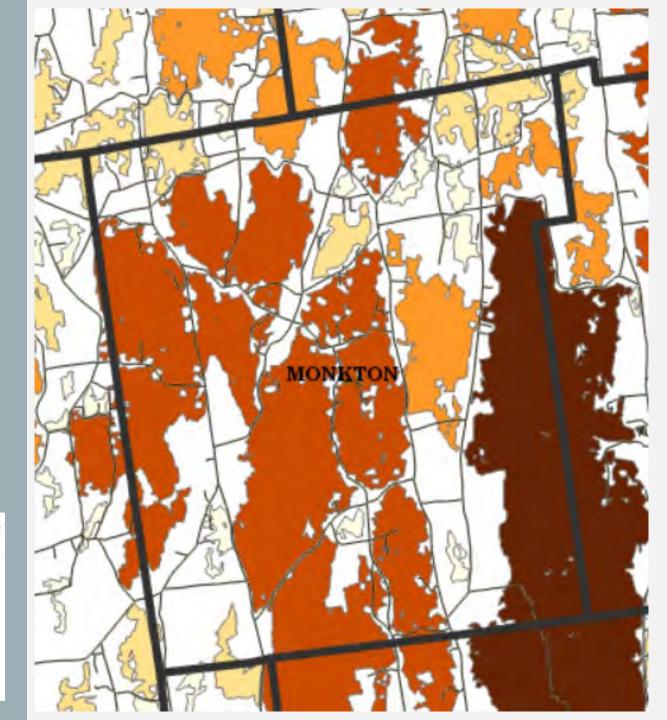
Forest Blocks

FOREST/HABITAT BLOCKS

Areas of natural cover

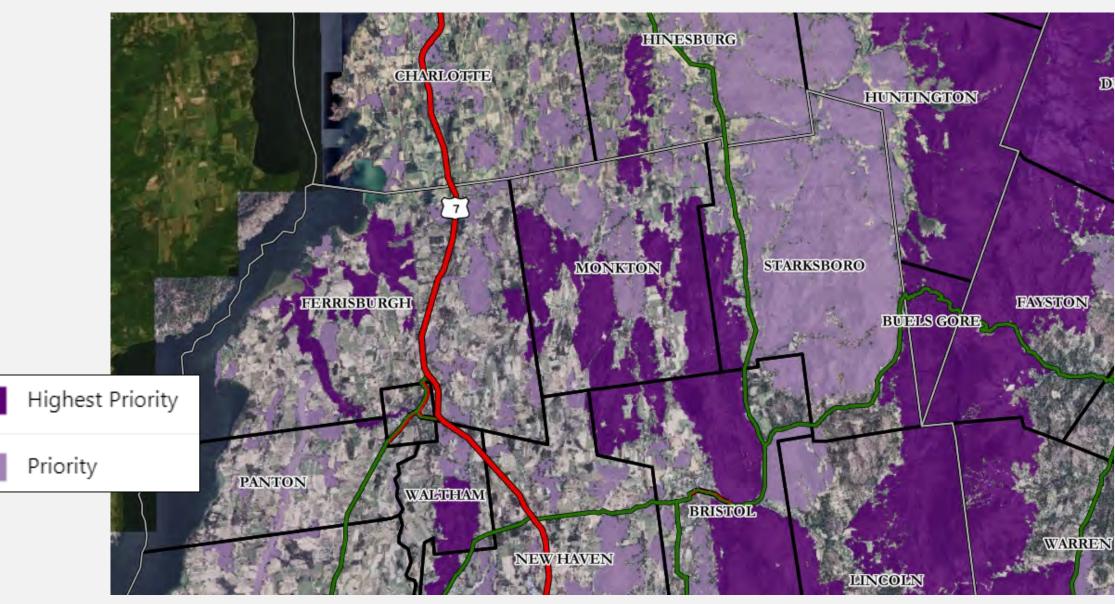
(no roads or development)





Interior Forest





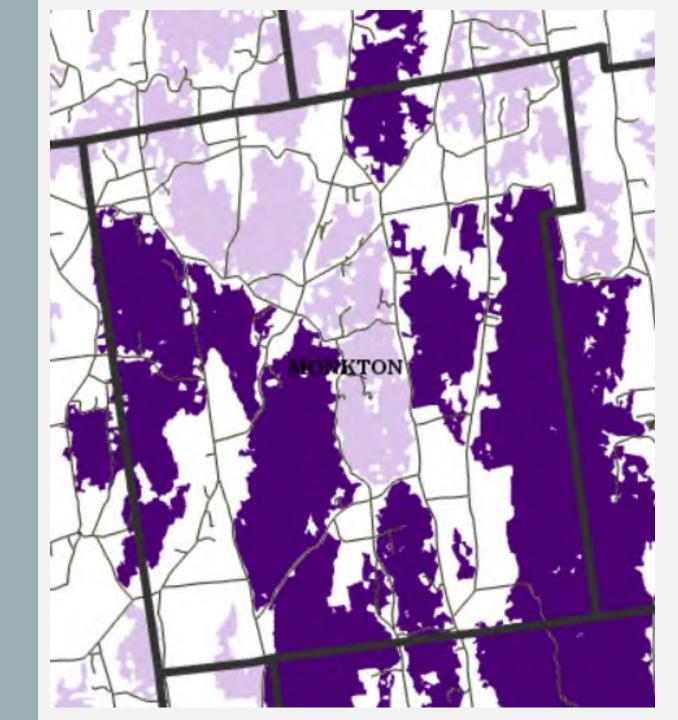
INTERIOR FOREST BLOCKS

Habitat Blocks

Most Important as FOREST HABITAT

✓ Highest Priority Interior Forest Blocks

Priority Interior Forest Blocks



Where possible, keep development to the edges rather than penetrating into the middle of blocks.

Adopt or evaluate subdivision regs.

Encourage land conservation in important areas.

GOAL: MAINTAIN LARGE FOREST BLOCKS

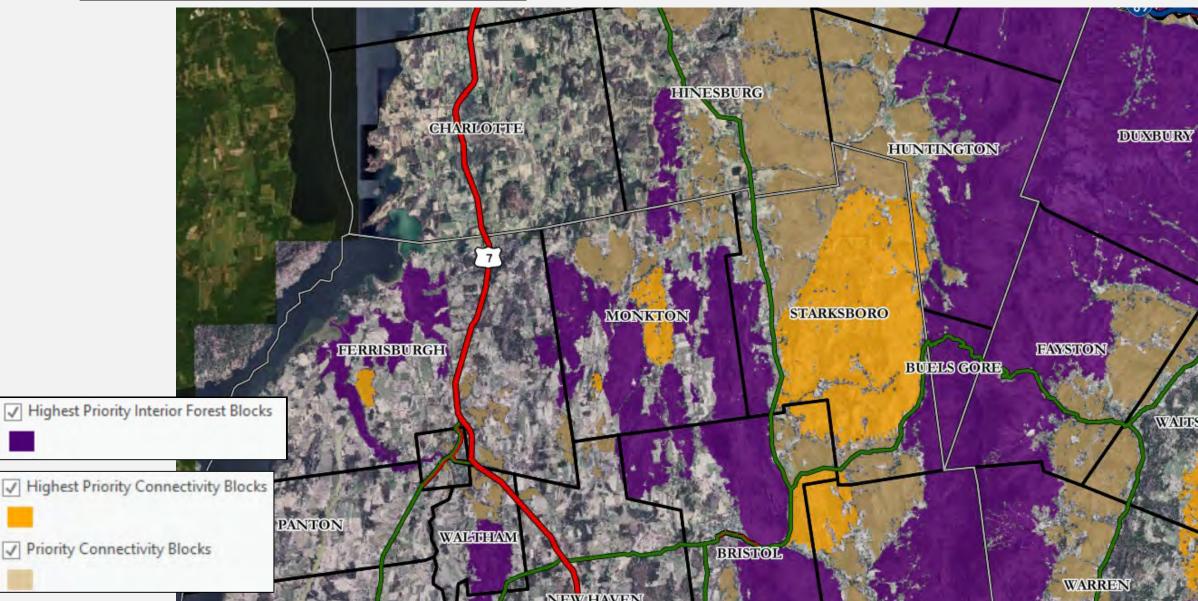
Consider a conservation, forest or overlay district.

Limit driveway length or establish building envelopes/clearing standards

Encourage estate planning.

Connectivity Blocks





CONNECTIVITY BLOCKS (+ INTERIOR FOREST BLOCKS)

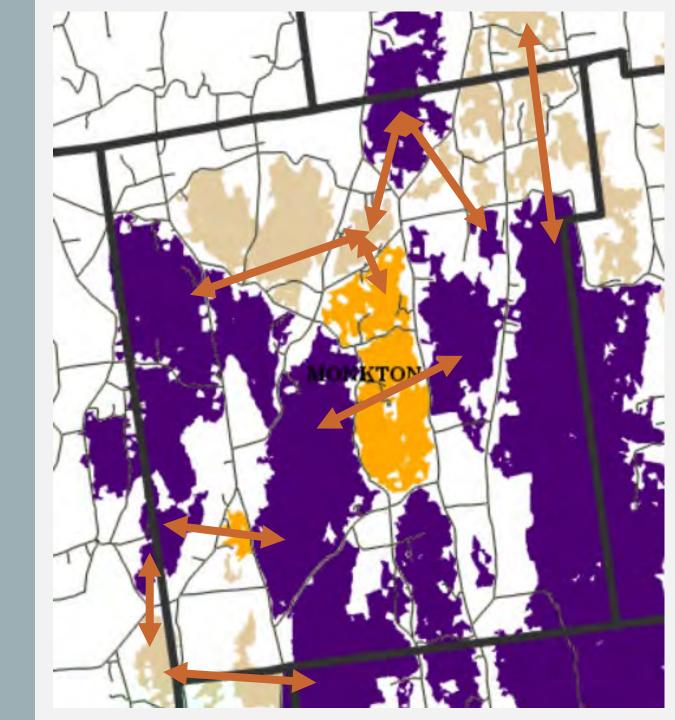
Habitat Blocks

Most Important for CONNECTIVITY



✓ Highest Priority Connectivity Blocks

Priority Connectivity Blocks



Encourage estate planning.

Consider in conjunction with habitat conjunctors.

Adopt or evaluate subdivision regs.

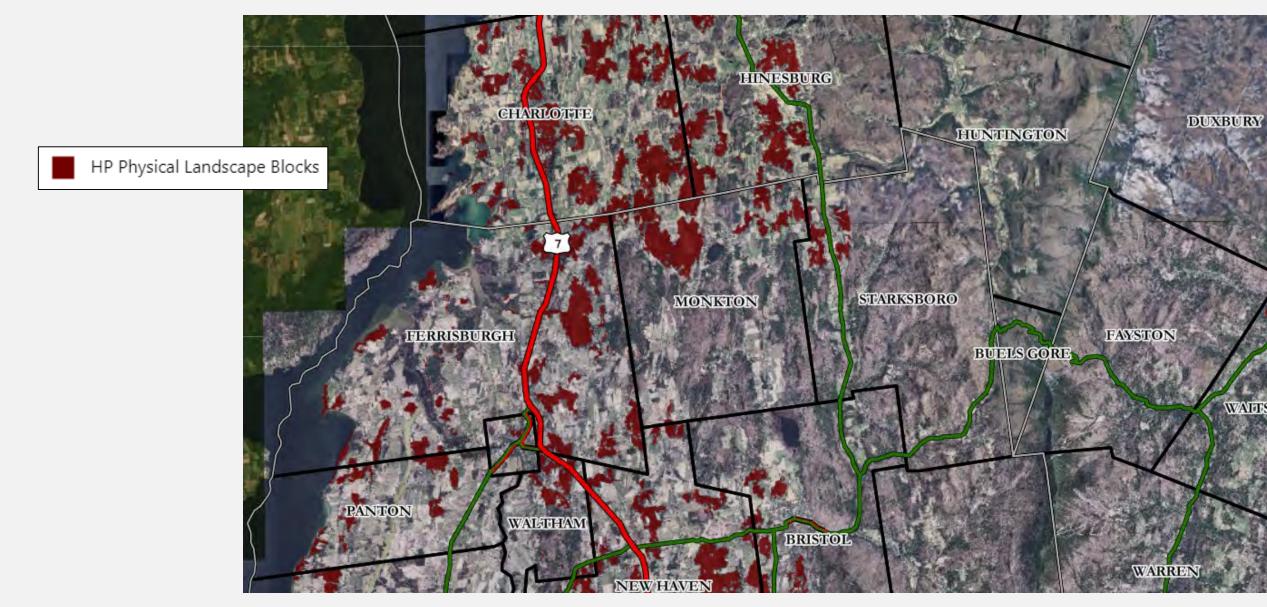
GOAL: MAINTAIN CONNECTIONS BETWEEN BLOCKS

Encourage land conservation in important areas. Limit driveway length or establish building envelopes/clearing standards.

Consider a conservation, forest, or overlay_district.

Physical Landscape Diversity Blocks



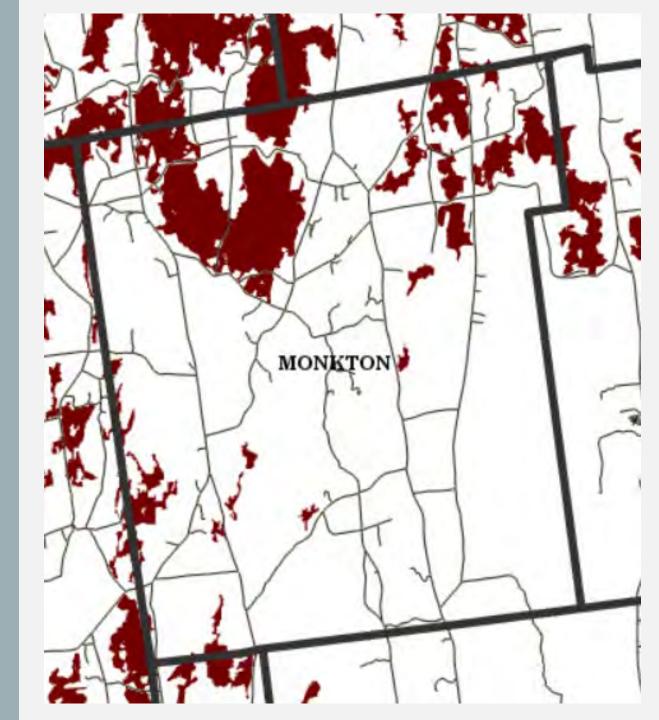


PHYSICAL LANDSCAPES

Habitat Blocks

Most Important for BIODIVERSITY

HP Physical Landscape Blocks



Encourage estate planning.

Adopt or evaluate subdivision regs.

GOAL: INCLUDE PHYSICAL LANDSCAPE DIVERSITY WHEN IDENTIFYING FOREST BLOCKS AND CONNECTIONS

Encourage land conservation in important areas.

establish building envelopes/clearing standards.

Limit driveway length or

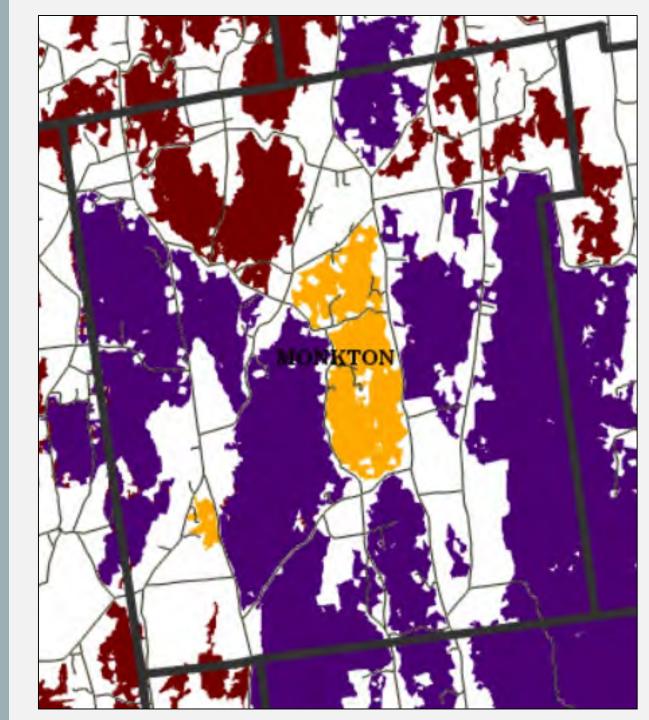
Consider a conservation or forest district.

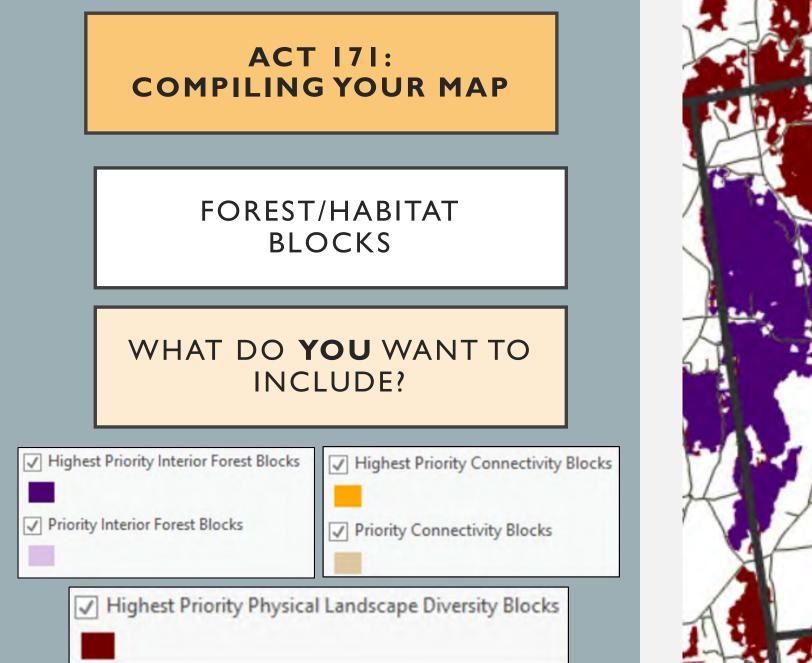
INTERIOR FOREST + CONNECTIVITY BLOCKS + PHYSICAL DIVERSITY

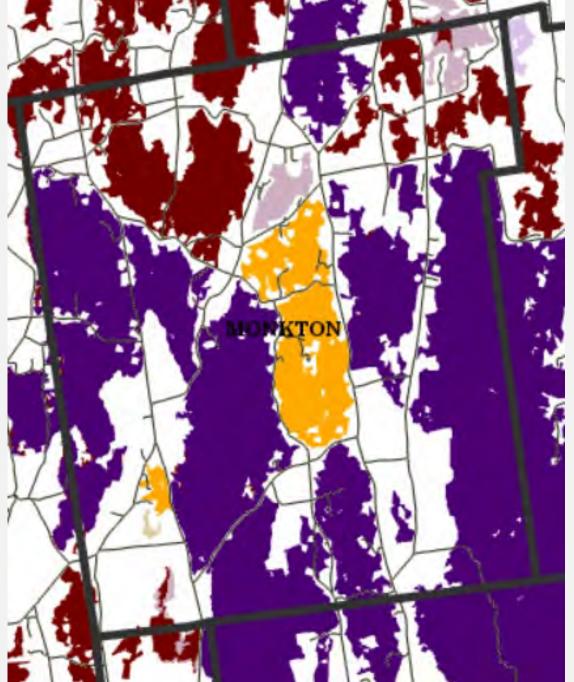
Highest Priority Interior Forest Blocks

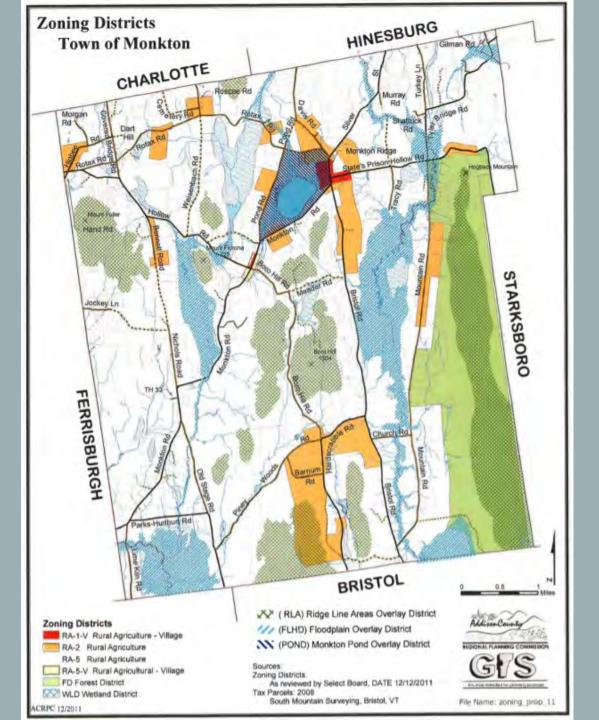
✓ Highest Priority Connectivity Blocks

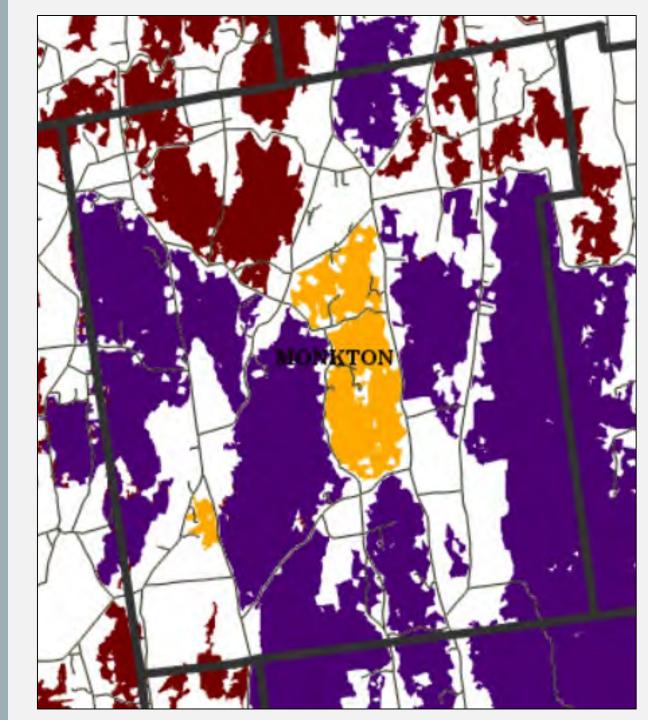
✓ Highest Priority Physical Landscape Diversity Blocks

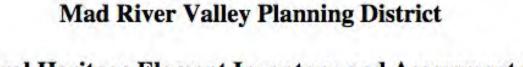












Natural Heritage Element Inventory and Assessment for Waitsfield and Fayston, Vermont April 13, 2007

USE LOCAL DATA!

BUELLS GOP

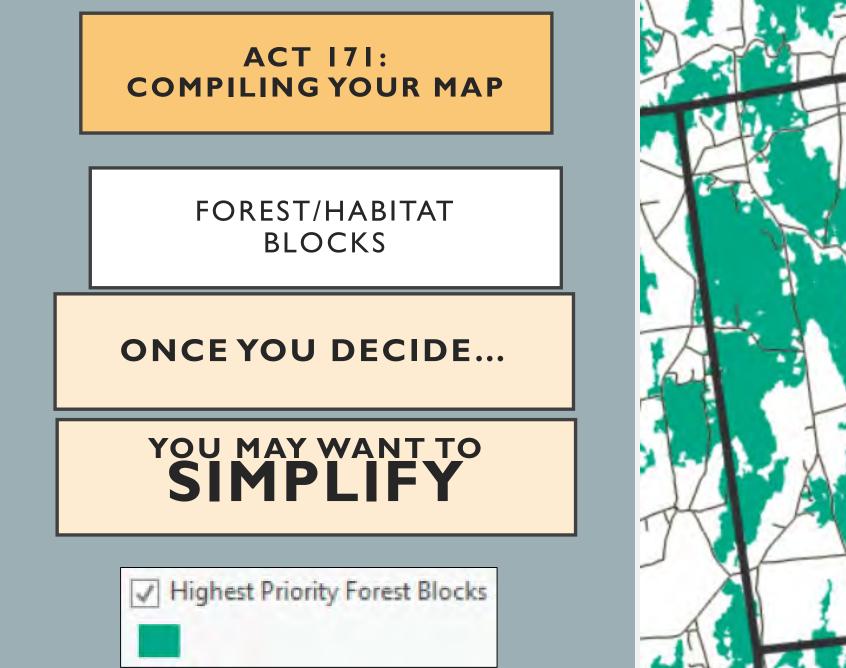


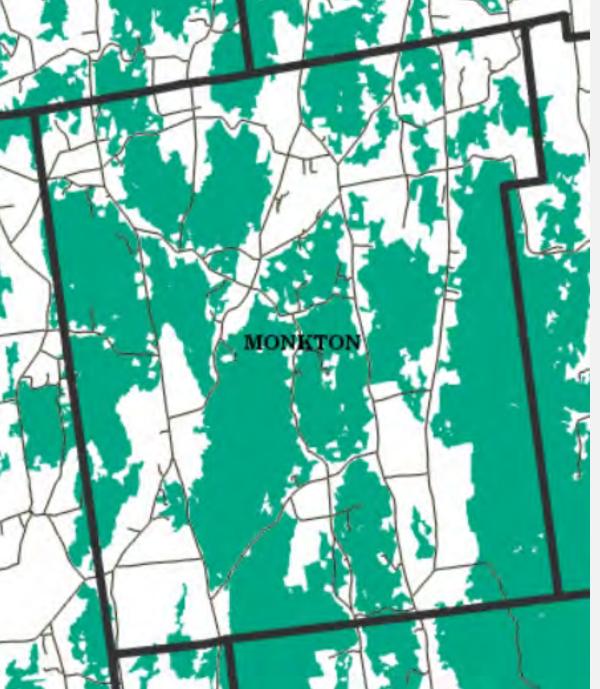
Made possible by a Municipal Planning Grant awarded by the Vermont Agency of Commerce and Community Development



CONSIDER COMMUNITY VALUES!







Habitat Connectors

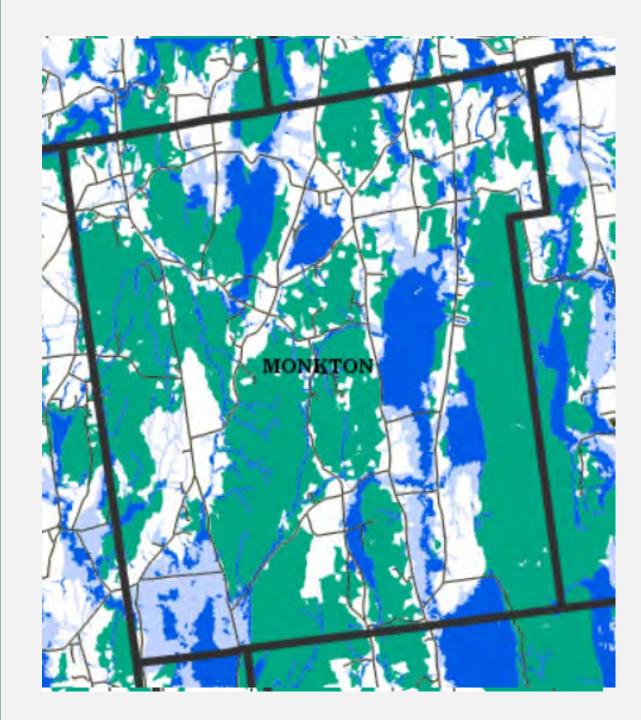
SURFACE WATERS & RIPARIAN AREAS

Streams, Rivers, Lakes, Ponds

and their surrounding vegetation

Riparian Wildlife Connectivity

✓ Highest Priority Surface Water and Riparian Areas



Maintain/enhance vegetation along streams and rivers

God

Recommend or require forested buffers and/or minimum setbacks from waterways in standards.

Recommend or require restoration of riparian habitat in site plan or subdivision review.

Support River Corridor Easements Connect landowners to incentives programs and wildlife-friendly management practices.

> Establish River Corridor Bylaws.

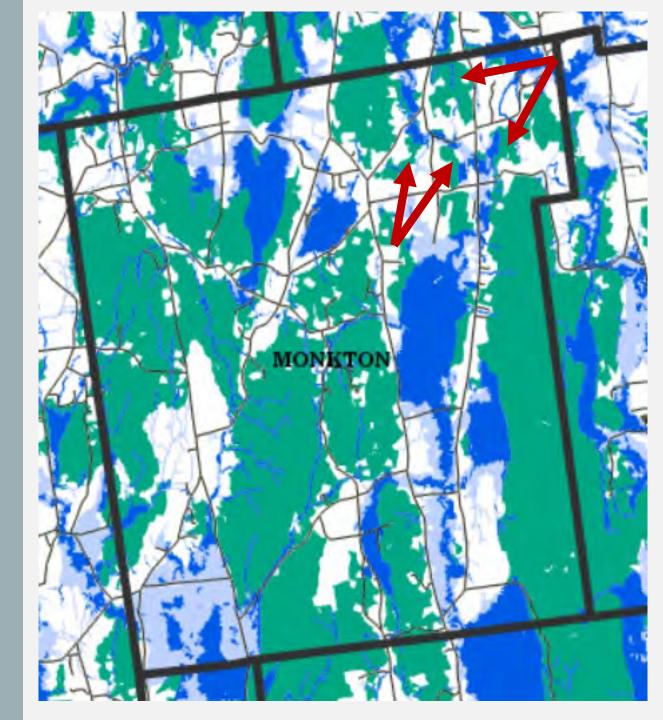
Maintain/enhance

crossing structures

Upgrade culverts and bridges to VTrans standards, with full-width

and an grade bottom

SMALLER FOREST BLOCKS



Maintain connections between larger blocks.

Adopt or evaluate subdivision regs.

Encourage land conservation in important areas. GOAL: MAINTAIN BLOCKS

Consider a conservation, forest, or overlay district.

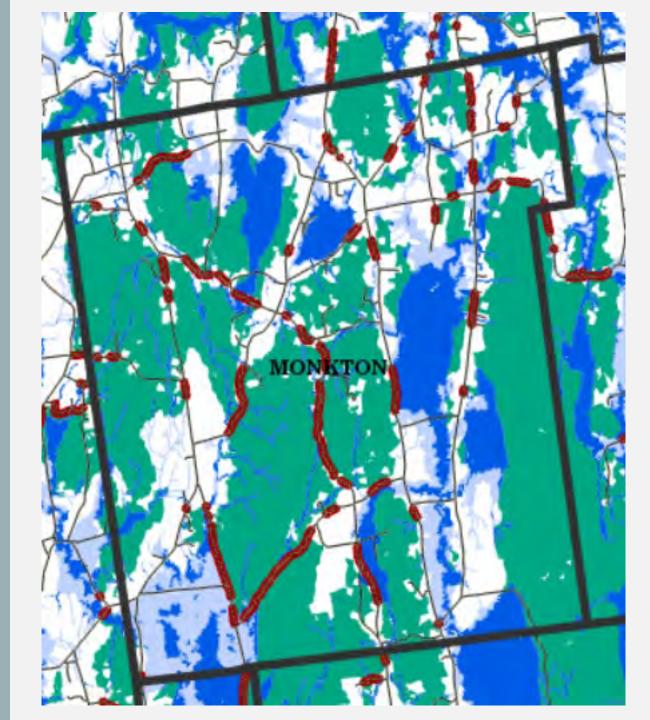
Limit driveway length or establish building envelopes/clearing standards.

Encourage estate planning.

WILDLIFE ROAD CROSSINGS

Where wildlife are MOST LIKELY to cross roads

Highest Priority Wildlife Road Crossings



GOAL: IDENTIFY CROSSINGS

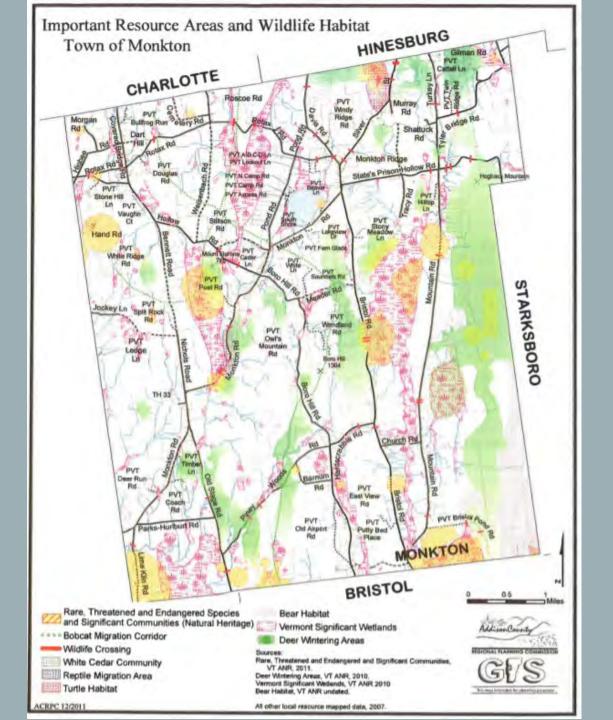
Create a monitoring program

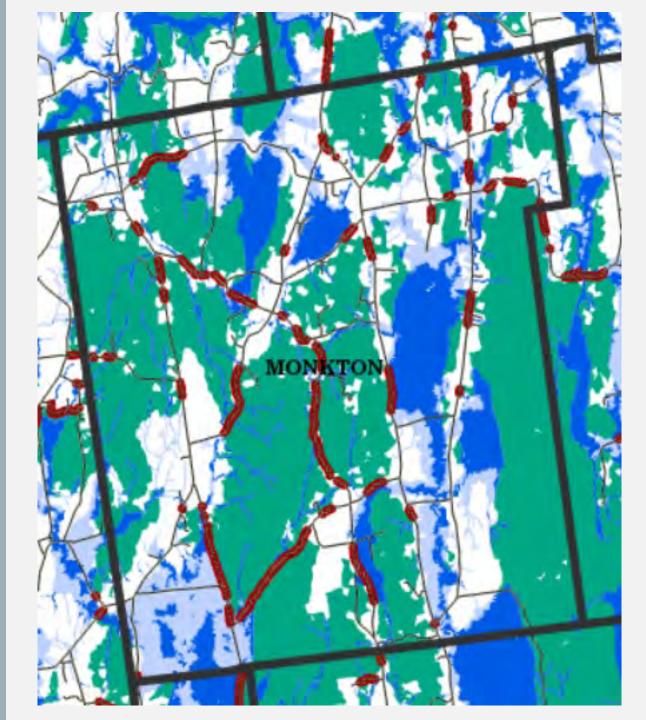
GOAL: PROTECT HABITAT AROUND CROSSINGS

Review curb cuts in standards. Establish an overlay district.

Encourage landowners to retain vegetation up to the road in crossing areas. Adopt road management standards for town roads.

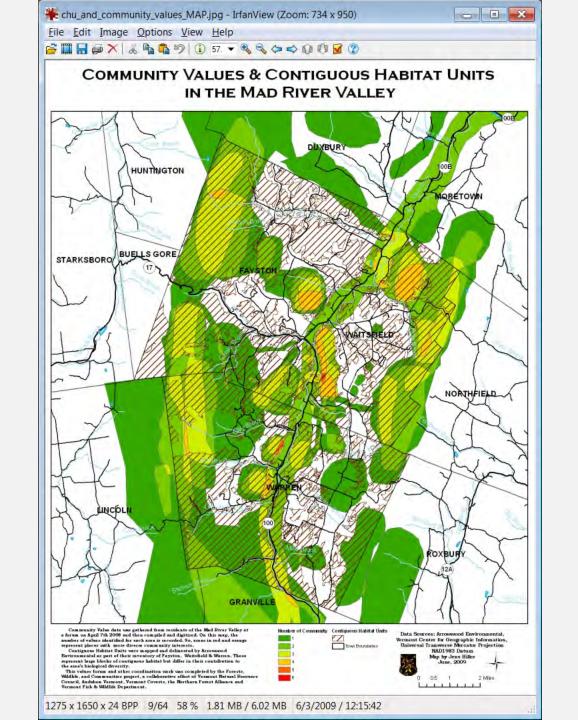
Encourage land conservation or wildlife-friendly management in important areas.





Community Values Mapping





Printed or Online

Mapping Vermont's Natural Heritage

A Mapping and Conservation Guide for Municipal and Regional Planners in Vermont









Forest/ Habitat Blocks

Goal	Conservation Strategies for Priority Habitat Blocks (by Acreage)		
	Nonregulatory Strategies	Regulatory Strategies	
Provide baseline protection	Adopt language in the town plan, including statements about the importance of large forest blocks and policies on how they should be managed, protected, and restored.	Check clarity of definitions in zoning bylaws and update if needed.	
	Provide citizen educational opportunities.	Review standards in zoning (subdivision, CU, or use standards), and update if needed.	
	Work with neighboring communities and/or the <u>regional planning commission</u> to plan for forest conservation at a regional scale.	Review purpose statements in zoning and update if needed.	
Provide stewardship of forestland	Encourage residents to work with a forester to create forest management plans. ⁸	Establish an <u>impact fee program</u> . ⁹	
	Encourage enrollment in Current Use (or local tax stabilization program). ¹⁰		
	Connect landowners with supporting organizations, such as Vermont Coverts, ¹¹ Vermont Woodlands Association, ¹² the Natural Resources Conservation Service, ¹³ or your local Natural Resources Conservation District. ¹⁴		
Avoid	Encourage residents to enroll in Current Use (or local tax stabilization program). ¹⁵	Allow a greater development density in defined growth areas (like village or commercial districts) than in rural land (through a Forest, Conservation, or Rural Residential Zoning District).	
	Encourage citizens to engage in estate planning.	Establish or expand a Wildlife Habitat or Wildlife Corridor <u>Overlay District</u> .	
	Encourage residents to conserve their forestlands in important areas. ¹⁶	Establish building envelopes, clearing standards, or limits on driveway length in bylaws to limit the impact of development.	
		Establish or improve Subdivision Regulations.	
	Create or expand a Town Forest. ¹⁷	Establish road and trail standards. ¹⁸	
		Review rural residential-type districts to determine whether lot sizes and site design requirements allow for continued function of rural land (i.e., 2- to 5-acre lot sizes can cause fragmentation even if open space remains.)	
Provide support for working forests	Encourage residents to enroll in certification programs that promote long-term support for land management. ¹⁹	Institute local forest products purchasing policy (for municipal purchases).	
	Encourage support for businesses that use local forest products.	Ensure that regulations include standards that allow for continued access to working forests and associated infrastructure (e.g., log landing areas). ²⁰	

Additional information on most strategies can be found in Community Strategies for Vermont's Forests and Wildlife.

36 / MAPPING VERMONT'S NATURAL HERITAGE

	Conservation Goal	Conservation Strategies for Wildlife Road Crossings	
and the second second second	A CONTRACTOR OF THE OWNER OWNER OF THE OWNER OWNE	Nonregulatory Strategies	Regulatory Strategies
Made 1	Seek additional information	Conduct field inventories and improve maps of roads used as wildlife crossings.	
		Adopt language in the town plan, including statements about what resources are important, and policies on how they should be managed, protected, and restored.	Check clarity of definitions in zoning bylaws and update if needed. ¹⁵
	Protect habitat around wildlife	Encourage residents to conserve their land through conservation easements, particularly when crossings are part of larger parcels that have additional conservation values. ¹⁶	Require vegetated buffers around wildlife crossings in the general standards section of your bylaws, to apply in all districts. ¹⁷
	crossings	Connect landowners to incentives programs, such as through USDA or USFWS Partners for Fish and Wildlife.	
		Encourage residents to enroll in Current Use.	Adopt road management standards to allow vegetation to remain up to the road.
Wildlife	100	Encourage residents to manage their land so as to leave vegetation right up to the road.	
	1000	Provide citizen educational opportunities.	
	1000	When conducting planning efforts, consider wildlife road crossings and connectivity blocks together.	Establish or improve a Conservation District.
Wildlife Road	Limit		Establish or improve a <u>Wildlife Corridor</u> or Wildlife Habitat Overlay District that includes both areas of habitat and important wildlife road crossings. ¹⁸
Crossings	fragmentation		Review or establish an access management plan and consider limiting curb cuts in important wildlife crossing areas through site plan review or other standards within the zoning. ¹⁹
	Reduce danger	Work with road officials to provide appropriate signage and install/remove structures (fences, guardrails, and so on) to guide animals to cross in safer areas (under bridges, on straighter road segments, and so on).	Establish traffic rules that ensure the safety of humans and wildlife along roadways in which wildlife are most likely to cross.
X	to humans and wildlife	As needed, upgrade culverts and road infrastructure to VTrans standards. VTrans requires that all crossings include full- width banks and natural, at-grade bottom substrates to facilitate aquatic and terrestrial organism passage ²⁰	Adopt road management standards to avoid guardrails, the removal of roadside vegetation, or deep roadside ditching in crossings wherever possible.

Citizen Education

Check definitions, standards, & purpose statements

PROVIDE BASELINE PROTECTION

Establish a Conservation Commission and/or Conservation Fund



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