



## Protect the environment and natural resources.

Vermont’s natural and historic areas are invaluable for the ecological, recreational and cultural opportunities they provide. They help make Vermont the state it is and form the backbone of the state’s economy. Natural areas also offer other values and benefits, including flood risk mitigation, erosion control, carbon absorption, wildlife habitat, and water purification – benefits that together are often called “ecosystem services.” Identifying the natural and historic areas of your town and understanding their conditions can help you develop planning strategies that preserve or improve the environment, residents’ quality of life, and the town’s resilience.

**TIPS FOR ACCURATE SCORING:**  
Review town plan, zoning, and subdivision regulations  
Consult local conservation commission, state/local/regional environmental groups, or state agencies  
Look at aerial photos on water and sewer questions

**Ecosystem services**  
Benefits that people obtain from the natural environment, such as carbon absorption by forests and water purification from wetlands. Benefits like cultural, spiritual, and intellectual enrichment are also considered services that an ecosystem provides.

### A. Which of these best describes the condition and health of water bodies in your town?

- Water bodies are clean and clear, without sediment covering the bottom. There are vegetated buffers along rivers and in the floodplain. Streams have access to the floodplain during storms.....  3
- Water is generally clean, but there are some problem areas. Many rivers lack vegetated buffers.....  2
- Waters are impaired and unsuitable for swimming, fishing, and other recreation. There are few vegetated buffers protecting the stream banks, and it is not safe to swim, wade or fish .....  1

### B. Which of these best describes the condition of your town’s forest land?

- Large blocks of forest (multiple parcels over 100 acres) are intact and not fragmented by long driveways or areas cleared for development.....  3
- Many large blocks of forest have been lost and fragmented, but some forested areas remain for recreation, forestry, and wildlife .....  2
- Few large blocks of forest remain available. Those that are left have limited usefulness for recreation, forestry, and wildlife .....  1

### C. Does your town plan include specific language about groundwater, including large withdrawals (more than 57,600 gallons per day)?

- Yes. Our town plan discusses the importance of groundwater and makes recommendations about large withdrawals and/or commercial extraction of water.....  3
- Our town plan mentions the importance of protecting groundwater, but we do not have any specific policies about large withdrawals .....  2
- Our town plan does not address groundwater issues.....  1

### D. Does your town have a flood hazard ordinance or bylaw?

- Yes, we have floodplain development regulations at the town level that control development related to both fluvial erosion hazard (FEH) areas and inundation flood hazard zones .....  3
- We have consulted with ANR’s River Management program and are integrating their advice into town polices and regulations .....  2
- We do not have any specific controls on floodplain development beyond the National Flood Insurance Program (NFIP) minimums.....  1

**E. Has your town adopted regulations requiring new construction to incorporate, maintain, or enhance riparian buffers for projects that are near lakes, rivers, and streams?**

- Yes, we require a vegetated buffer at least 50 feet wide, as well as consideration of fluvial erosion hazard areas/riparian corridors in site design.....  3
- No, but we actively encourage and educate property owners about incorporating, maintaining, or enhancing riparian buffers .....  2
- No, there has been little or no activity related to riparian buffer protection or enhancement at the town level .....  1

**F. How does your town manage stormwater runoff from snowmelt and major rain events?**

- We have permitting standards for stormwater that are more stringent than state permitting requirements .....  3
- We offer information about how property owners can maximize infiltration of stormwater (e.g., permeable pavement, rain gardens, rain barrels, vegetated buffers) .....  2
- We have no regulations beyond state permitting requirements .....  1

**G. What, if any, regulatory actions is your town taking to protect natural resources?**

- We have strong provisions to protect natural resources — such as wetlands, riparian areas, habitat, significant natural communities, and sites for rare plant and animal species — in the development review process, zoning, and/or subdivision regulations.....  3
- We have made provisions to protect some, but not all, natural areas in development review, zoning and/or subdivision regulations.....  2
- We have made no provisions to protect natural resources in our regulations.....  1

**H. What actions is your town taking to prevent the fragmentation of forestland and wildlife habitat?**

- We have strong regulations to prevent forest fragmentation and promote habitat connectivity and have a heightened standard of review for development in significant wild areas .....  3
- We have discussed forest fragmentation in our town plan, but it is not incorporated into our bylaws .....  2
- We have not discussed preventing forest fragmentation .....  1

**River dynamics and flooding**

All streams move across the landscape over time; in fact, changes in a stream’s bed and banks are a natural part of its life cycle. In the absence of development, these changes are not hazardous, but conflicts can arise when development is located in the path of ever-changing stream channels.

**Inundation hazards** occur when water levels rise and submerge land. **Fluvial erosion hazards (FEH)** occur when development is in the path of stream channel changes.

The difference between these two is important, because the National Flood Insurance Program (NFIP) covers inundation, but not the changes in river channels associated with fluvial erosion hazards. What’s more, in Vermont, two-thirds of flood damage to infrastructure and property occurs outside of NFIP mapped floodplains. Plus, FEH zones can be much larger than the NFIP mapped areas, leading to a gross underestimation of risk.

With a future that is likely to include more frequent and intense flood events, communities can build resilience by reviewing their current zoning and flood ordinances to see whether they adequately consider both kinds of risk.





**I. What non-regulatory actions is your town taking to protect natural areas and prevent fragmentation?**

- We provide assistance with building siting, and we inventory and map natural resources, encourage landowner participation in the Current Use program, promote land conservation, provide local funding, and/or discuss important natural resources in the town plan .....  3
- We do some of these, but not consistently.....  2
- We do not undertake non-regulatory approaches to natural resources ...  1

Score: \_\_\_\_\_

Scoring	Suggested Steps for Building Resilience
21-24 Resilient Community	<ul style="list-style-type: none"> <li>Address <b>fragmentation and connectivity</b> in zoning and subdivision bylaws.</li> <li>Update bylaws to limit or prohibit development in fluvial erosion hazard areas</li> </ul>
15-20 In Transition	<ul style="list-style-type: none"> <li>Review what natural resource protections exist in zoning and subdivision bylaws, and update as necessary to meet town goals.</li> </ul>
10-14 Needs Your Attention!	<ul style="list-style-type: none"> <li><b>Inventory</b> natural resources and discuss the inventory in the town plan.</li> </ul>