

## 5. MANAGING WITH A FOCUS ON NATURAL COMMUNITIES

When managing significant natural communities, you should strive to maintain or enhance the characteristics of the specific natural community type.



A natural community is an interacting assemblage of plants and animals, their physical environment, and the natural processes that affect them. As these assemblages of plants and animals repeat across the landscape wherever similar environmental conditions exist, these repeating assemblages can be described as natural community types. The Vermont Fish and Wildlife Department (VFWD) recognizes 89 upland and wetland natural community types in Vermont. Natural communities provide a powerful tool for describing the landscape, developing sound management plans for land, determining conservation priorities, and increasing our understanding of the natural world.

Each community type is ranked based on how rare it is in Vermont as well as its size and condition. There are common and widespread natural communities, such as northern hardwood forest and alder swamps; uncommon types such as northern white cedar swamp and dry oak forest, and rare types such as clayplain forest and poor fen. Rarity ranks are based on the number of known examples of the type, the total area occupied by the type, and the degree of threat to the type. For example, calcareous riverside seep is a very rare wetland community type that occurs only in areas of calcareous ground water seepage over flood-scoured bedrock river shores, whereas northern hardwood forest is a common community type that occurs throughout the state at elevations below 2,500 feet.

The VFWD evaluates each natural community type by comparing it to other known examples of that natural community type. This makes it possible to objectively compare all the known examples of a type (such as poor fen) to decide which examples are the best and most important for conservation and which would benefit from specific management. This quality rank for each natural community is based on an assessment of the size and current condition of the natural community, and the landscape context in which the community occurs. Each of these three factors is assigned an appropriate weight based on the specific community type and its characteristics. Large size, condition reflecting minimal human disturbance, and a surrounding landscape with intact natural communities and minimal fragmentation are all factors that contribute to a highly ranked natural community.

Based on the rarity of the natural community type and the quality of each natural community example, the VFWD considers a subset of the best examples of each natural community type to be state-significant. Significant natural communities are mapped in the Department's Natural Heritage Database (see **Resources** for a link to more information).

Natural communities vary in their sensitivity to human alteration. Some communities are very dependent on specific conditions such as shade or water flow, and even small changes to these conditions from timber harvesting or ground disturbance can lower the value of the community for native wildlife. Other communities, such as cliffs and talus or widespread forests, are more resilient.

When managing significant natural communities, you should strive to maintain or enhance the characteristics of the specific natural community type. For rare, ecologically sensitive, and very small natural communities, such as a rich fen, or a red maple-black gum swamp, this will usually mean taking a passive approach and buffering the area

from active management. In some cases, removing nonnative invasive species or planting native species can improve the value of a degraded natural community. For significant examples of more common and larger natural communities, such as northern hardwood forest, you should have ample opportunity to balance natural community conservation with active management. To maintain or enhance ecological integrity, include forest management practices that favor native species and structural characteristics of mature natural communities, for example, allowing natural processes such as tree death and blowdown, removal or control of invasive exotic species, and restorative planting of native species.



## RESOURCES

Thompson, E.H. and E.R. Sorenson. 2005. *Wetland, Woodland, Wildland: A Guide to the Natural Communities of Vermont*. Lebanon, NH: The Nature Conservancy and the Vermont Department of Fish and Wildlife. [http://www.vtfishandwildlife.com/books/Wetland,Woodland,Wildland/\\_0i\\_to\\_\\_xi\\_frontmatter.pdf](http://www.vtfishandwildlife.com/books/Wetland,Woodland,Wildland/_0i_to__xi_frontmatter.pdf)

Maine Inland Fish and Wildlife. 2008. *Biodiversity in the Forests of Maine: Guidelines for Land Management*. Orono, ME: University of Maine Cooperative Extension.

Vermont Fish and Wildlife Department Natural Heritage Database. [http://www.vtfishandwildlife.com/nnhp\\_inventory.cfm](http://www.vtfishandwildlife.com/nnhp_inventory.cfm)

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**Figure 5.1**

Natural Community map of Victory Basin Wildlife Management Area

