



**VERMONT**  
LAND USE REVIEW BOARD

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**Figure 3: Rare (S-2) Natural Communities Present in the Addison Region**

## BLACK SPRUCE SWAMP

Black Spruce Swamps occur in the coldest regions of Vermont, commonly in topographic depressions that receive cold air drainage. This community is closely related to both Black Spruce Woodland Bog and Spruce-Fir-Tamarack Swamp, and it may occur in association with either or both of these communities. Black spruce dominates the canopy, which varies substantially in the degree of closure from swamp to swamp. In the Northeastern Highlands, Black Spruce Swamps provide breeding habitat for many species of boreal birds.



## BLACK SPRUCE WOODLAND BOG

Spindly and scattered black spruce with tufted “lollipop” tops, dense heath shrubs, and spongy sphagnum mounds characterize these acidic, nutrient and mineral-poor peatlands. In Vermont, Black Spruce Woodland Bogs are transitional between Dwarf Shrub Bogs and Black Spruce Swamps and often occur in association with one or both of these communities.



## CLAYPLAIN FOREST (SAND-OVER-CLAY, MESIC, & WET)

The clayplain forest ecosystem covered nearly 220,000 acres of the post-glacial lake and marine plain of the Champlain Valley prior to European settlement. The predominately clay soils of these forests formed from sediments deposited in the Champlain Valley during and following the Pleistocene glaciation, both when the valley was flooded by a large freshwater lake, and later when salt water invaded the basin from the north. These deep, fertile, stone-free soils have been prized for agriculture, and the majority of the clayplain forest has been cleared since the time of European settlement. The most well-drained areas of the clayplain were preferentially cleared for agriculture and the clayplain forests remnants that are left are generally on the moister sites, although they typically contain a mosaic of wet and mesic areas.

The Addison Region contains two types of clayplain forest: **mesic** and **wet**. Mesic clayplain forest is the most widespread of the clayplain forest types. It typically occurs on slightly elevated or sloping parts of the clayplain and has moderately well drained to somewhat poorly drained soil. Mesic clayplain forest is considered the matrix forest of the Champlain Valley, even though it no longer functions as a matrix forest as a result of conversion and fragmentation. Wet clayplain forests most commonly occur as small wetland patches within surrounding, larger areas of mesic clayplain forest. Wet clayplain forests have the most diverse assemblages of tree species of any swamp or wet forest in Vermont. Sand-Over-Clay Forests occur in the Champlain Valley, where they form large patches along and near the mouths of several rivers, including Otter and Little Otter Creeks. Unlike mesic and wet clayplain forest types, sand-over-clay forest always has a sand layer of sufficient depth to allow an upland forest community to develop, even though some of these soils are classified as poorly or very poorly drained.



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## DRY CHESTNUT OAK WOODLAND

Dry Chestnut Oak Woodlands, with their widely spaced trees and grassy lawns, evoke distant savannahs and seem far removed from the typical Vermont woods. They occur on south-facing upper hillslopes in southwestern Vermont. Soils are acidic, excessively drained, and often very rocky. The overstory oaks are short in stature, and the crowns frequently appear gnarled, with abundant low, spreading branches. The trees are farther apart than in typical forests, and the canopy is more open. Midstory or understory trees and shrubs are widely scattered.



## DWARF SHRUB BOG

Dwarf Shrub Bogs are open peatlands with acidic water (pH of 3.5 to 5.0) that is very low in dissolved minerals and nutrients. Dwarf Shrub Bogs have well-developed microtopography, with tall hummocks and moist hollows. The dominant vegetation of bogs is sphagnum moss, which forms a continuous carpet over hummocks and hollows, and provides a substrate for other plants. In many cases, trees and tall shrubs are sparse or nearly absent.



## HEMLOCK-SPHAGNUM BASIN SWAMP

Hemlock-Sphagnum Basin Swamps usually occur at elevations under 1,500 feet and are found in the warmer regions of Vermont. Hemlock-Sphagnum Basin Swamps have dense hemlock canopies, deep peat, sphagnum-dominated hummocks and hollows, and little surface water. The dense evergreen canopy of Hemlock-Sphagnum Basin Swamps provides winter cover for white-tailed deer. The hemlock canopy also provides nesting habitat for several species of birds, including northern waterthrush, Canada warbler, northern parula, and northern saw-whet owl.



## INTERMEDIATE FEN

Intermediate Fens are recognizable from a distance by their tall and swaying fine-leaved sedges. They may look like inviting grassy lawns, but a step into one of these fens quickly reveals the quaking and unstable peat surface. Intermediate Fens typically have deep peat deposits that range from three feet to over 13 feet.



## LAKESIDE BUTTONBUSH SWAMP

Lakeside Buttonbush Swamps are Vermont's wettest shrub swamps. They occur adjacent to larger lakes and ponds or are associated with lake-influenced oxbow ponds and backwater depressions in the floodplains of and near the mouths of our larger rivers. Because of its remarkable tolerance for flooding, buttonbush is often the only woody plant occurring in these swamps. Buttonbush seeds can be an important source of food for waterfowl and shorebirds, and buttonbush flowers provide nectar for many species of bees.



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## LIMESTONE BLUFF CEDAR-PINE FOREST

The twisted and upswept northern white cedars that hug the clifftops along Lake Champlain make Limestone Bluff Cedar-Pine Forests one of Vermont’s most distinctive natural communities. This community occurs on bluffs or outcrops of limestone, shale, or dolostone. It usually occupies a narrow band along the top of the bluff, although it may extend several hundred feet inland. Limestone Bluff Cedar-Pine Forests are one of the few predominantly coniferous forest habitats along the shore of Lake Champlain, so they provide unusual wildlife habitat. White-tailed deer use these forests for cover and they also browse on cedar during the winter months.



## OPEN TALUS

Open Talus is the accumulation of rockfall below cliffs, such as at Bristol Cliffs. Soil is often sparse in open talus communities and as a result few vascular plants grow in these areas. Often, the only visible vegetation in the talus may be lichens and mosses growing on the surface of the rocks. Open talus provides important winter hibernation habitat for many species, especially snakes.



## POOR FEN

Poor Fens are closely related to Dwarf Shrub Bogs, but Poor Fens are wetter and typically have water levels at or near the surface of the hollows for much of the growing season. These open peatlands are dominated by sphagnum mosses, sedges, and heath shrubs. Poor Fen waters are acidic, but unlike bogs, they are slightly enriched by ground or surface water, which delivers a low concentration of dissolved minerals to the fen surface. Although small in total area, Poor Fens support an astonishing assortment of animals. A combination of factors, including openness, saturated moss, and standing water in hollows or associated small peatland ponds, makes these wetlands especially important wildlife habitat.



## RED PINE FOREST

Red Pine Forests are uncommon in Vermont and almost always occur as very small patches in the landscape. They are most common on dry rocky ridgetops or lake bluffs where competition from other species is minimal because of fire, shallow soils, acidity, and drought. Red Pine Forests have open to closed canopies dominated by red pine. Blueberries, huckleberries, wintergreen, and trailing arbutus are all commonly found in the understory and herbaceous layers.



## SUGAR MAPLE FLOODPLAIN FOREST

Sugar Maple Floodplain Forests are associated with our higher energy, higher gradient rivers, or less commonly, floodplain terraces above lower gradient rivers and streams. Soils are well-drained to moderately well-drained fine sandy loams. Sugar maple is the dominant tree in the relatively closed canopy, but white ash is abundant at some sites. Basswood usually occurs in relatively low abundance, but it is characteristic of these forests. The herbaceous layer is diverse, and includes many species not found in other floodplains.



## The Community Resilience and Biodiversity Protection Act (Act 59)

Stakeholders across Vermont celebrated the passage of the Community Resilience and Biodiversity Protection Act (Act 59) in June 2023. The Act establishes a statewide vision for maintaining an ecologically functional landscape that sustains biodiversity, supports working farms and forests, strengthens community resilience, and preserves Vermont’s historic pattern of compact villages surrounded by rural lands and natural areas. **To advance this vision, Act 59 sets ambitious conservation goals—protecting 30 percent of Vermont’s landscape by 2030 and 50 percent by 2050—and directs the Vermont Housing & Conservation Board (VHCB), in coordination with the Agency of Natural Resources (ANR), to prepare the Vermont Conservation Plan (available at <https://vermontconservationplan.com/>).**

**The Vermont Conservation Plan is organized around three key objectives:**

1. Support communities in conservation. This objective focuses on strengthening connections between people, communities, and the land, and advancing conservation in ways that benefit Vermonters while protecting natural and working lands.
2. Center Vermont Conservation Design (VCD). This objective emphasizes protecting, restoring, and maintaining an ecologically functional and connected landscape across natural and working lands.
3. Strengthen conservation capacity. This objective seeks to expand the conservation community’s ability to sustainably protect and steward land over the long term.

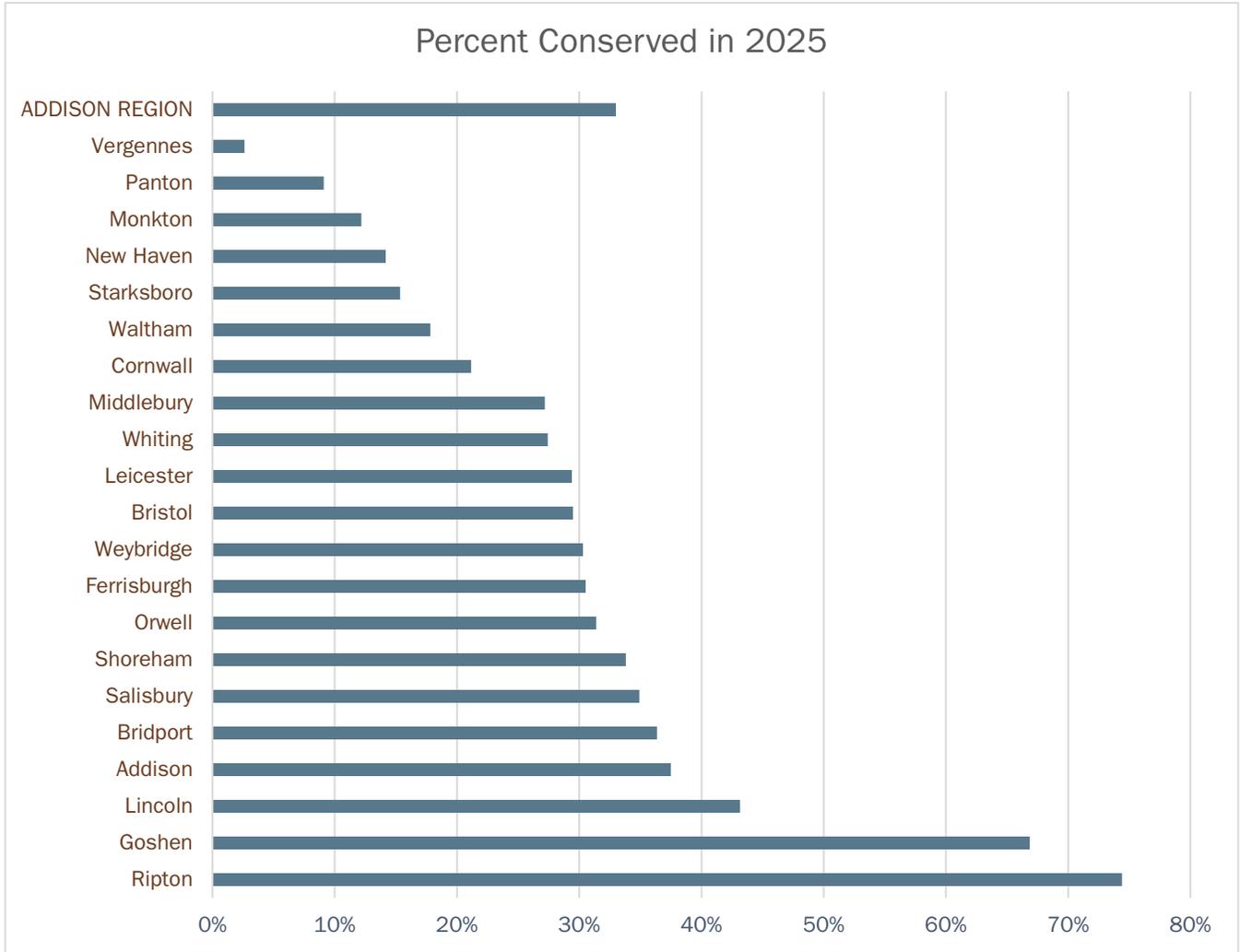
## THE ADDISON REGIONAL PLAN AND ACT 59

As of 2025, approximately 33% of the Addison Region’s total land area is already conserved under some form of protection. Conservation levels vary widely by municipality. Mountain towns have the highest percentages of conserved land, largely due to the presence of the Green Mountain National Forest (Ripton at 74.4% and Goshen at 66.9%). In contrast, smaller municipalities in the Champlain Valley have lower conservation percentages, such as Panton (9.1%) and Vergennes (2.6%).

The policies, actions, and future land use areas in this Regional Plan support the intent of Act 59 by outlining strategies to achieve the statewide goals of 30% conservation by 2030 and 50% by 2050. These strategies closely align with the three objectives of the Vermont Conservation Plan.

First, the Regional Plan supports community-based conservation by encouraging conservation by willing landowners in ways that sustain an ecologically functional and connected landscape, support sustainable working lands, and expand recreational opportunities. Second, the Plan centers Vermont Conservation Design as a primary tool for identifying priority conservation areas. As described earlier in this chapter, the Plan recommends prioritizing conservation of VCD-identified forest blocks, connectivity blocks, and ecological reserve areas to protect high-value natural communities and maintain or restore prime habitat. Finally, the Plan strengthens conservation capacity in the Region by outlining the ways in which ACRPC can support land protection and stewardship, including through regional future land use planning that minimizes habitat fragmentation, municipal consultation and technical assistance, and its role as the Basin 3 Clean Water Service Provider.

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