## **Grasslands and Shrublands**

Grasslands are dominated by non-invasive (but often non-native) grasses in agricultural settings. Shrublands are old fields and other upland areas characterized by at least 50% cover of native shrub species. (Wet shrublands, such as Alder Swamps, are included under natural communities and wetlands.) Grasslands and upland shrublands are managed habitats created by humans.

## **Ecological Functions**

Grasslands and Shrublands support many wildlife species—particularly birds—that have become more abundant in Vermont since the start of widespread agriculture. In grasslands, these include bobolink, eastern meadowlark, and savannah sparrow. Shrubland species include American woodcock, brown thrasher, eastern towhee, blue-winged warbler, and eastern cottontail.

## Highest Priority Features and Guidelines for Maintaining Ecological Function

Vermont Conservation Design identifies the need to maintain these habitats and their associated species as highest priority for an ecologically functional landscape. Specifically, a total of 7,500 acres, divided between the northern Champlain Valley/Champlain Hills, southern Champlain Valley, and the Lake

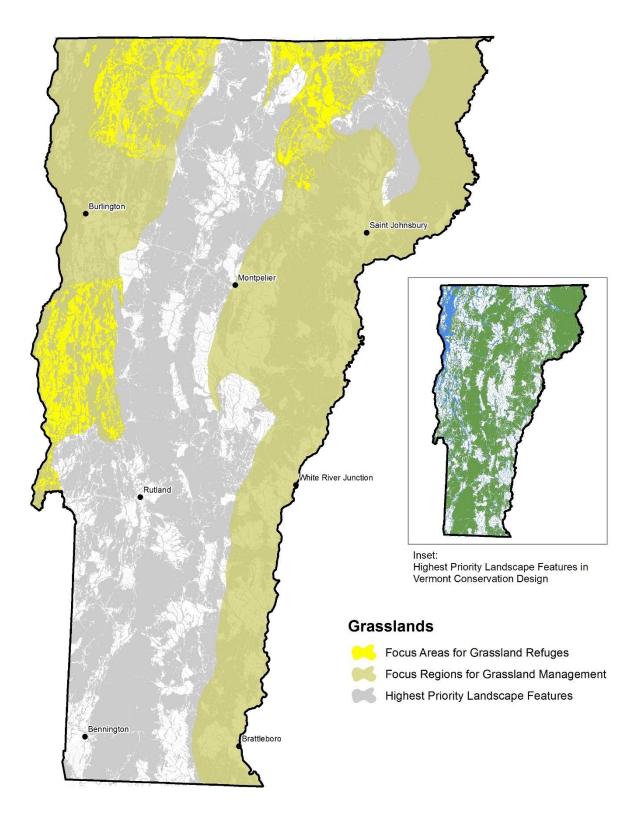


Memphremagog area, should be managed as "refuges" for grassland birds. In addition, bird-friendly practices should be promoted on active agricultural fields in the Champlain Valley, Champlain Hills, Northern Vermont Piedmont, and along the Connecticut River. Shrublands should be managed as a percentage of the undeveloped land in each biophysical region, with a target of 2-3% in the Champlain Valley and 0.5-1% in all other regions.

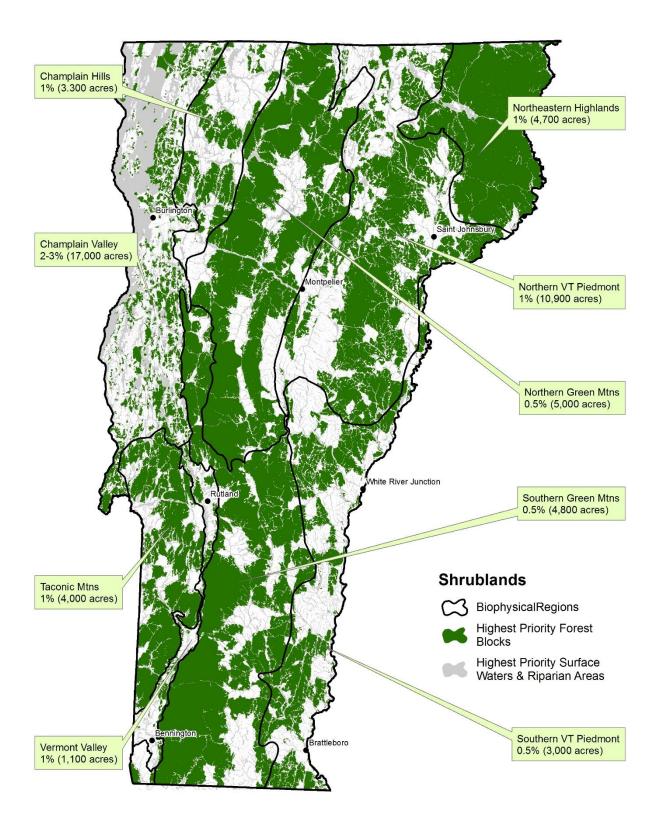
Grassland management must maintain quality grassland, while not destroying nests during the breeding season (May to early August). Mowing or other management should take place after August 1. Grassland patches should be larger than 25 acres. Patches that are blocky or circular have more interior area and support more birds. Mowing should incorporate best management practices for birds and reptiles. To avoid conflicts with other ecological functions, grasslands should be located outside of highest priority landscape features. Shrubland management (mowing, grazing, burning, etc.) should occur outside the growing season (preferably April-early May or October-November) to minimize mortality to foraging and nesting birds, reptiles, and insects. Disturbance should be regular enough to prevent trees from gaining dominance. To allow successful breeding of many shrubland birds, patches should be at least 5 acres and should be blocky or circular in shape to maximize interior area. Shrublands should be composed primarily of non-invasive vegetation.

For more information on grasslands and shrublands, see the following sections in the Part 2 Vermont Conservation Design Technical Report:

- Grasslands Refuges
- Grasslands Managed Agricultural Lands
- Upland Shrub-Forb



Map 10. Focus areas within which the Highest Priority 7,500 acres of grassland refuge could be established. Specific grasslands cannot be mapped due to a lack of spatial information. To avoid conflicts with other ecological functions, grasslands should be managed outside of the highest priority landscape features.



Map 11: Highest Priority Shrubland acreages by biophysical region. Shrubland can be created and maintained both within and outside of the highest priority landscape features, as long as it avoids conflicting with other ecological functions.