

## Wildlife Road Crossings

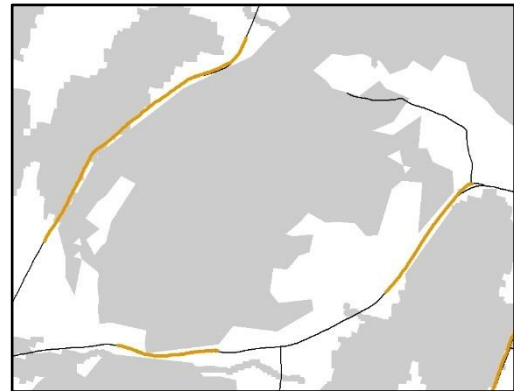
Landscape-scale connectivity and the ecological functions it provides depend on the ability of species to travel between forest blocks or along riparian corridors. Roads represent a barrier to wildlife movement and dispersal of many other species, including some plants.

### *Ecological Functions*

Sections of roads that have suitable habitat on both sides are more likely to allow wildlife movement and dispersal of other species and, therefore, these sections of roads are critical components of maintaining or enhancing an interconnected, ecologically functional landscape. Wildlife road crossings that provide connectivity over or under roads are critically important between adjacent forest blocks and along linear riparian area networks. In addition, allowing for the passage of aquatic organisms through bridges or culverts is critical for the functioning of the network of rivers and streams.

### *Highest Priority Features and Guidelines for Maintaining Ecological Function*

Vermont Conservation Design identifies a set of wildlife road crossings that are highest priority for maintaining connections between highest priority forest blocks, and that are highest priority for maintaining permeable riparian corridors.



*Map 5. Highest Priority Wildlife Road Crossings connect forest blocks and riparian areas.*



Structural connectivity across identified wildlife road crossings is provided by the presence of forest cover, wetlands, or other natural habitats. Maintaining or restoring natural vegetation on both sides of identified road crossing segments will maximize the effectiveness of the road crossing for connectivity.

Forest management that maintains forest cover

adjacent to the road is compatible with this function. Roadside development that further restricts animal movement is detrimental to connectivity. Road and highway structures that allow or promote fish and wildlife movement, such as bridges and oversized culverts, and limiting the use of fences and roadside barriers that impede movement, are all effective in promoting wildlife passage.

For more information on wildlife road crossings in Vermont Conservation Design, see the following sections in the Part 1 Vermont Conservation Design Technical Report:

- Wildlife Road Crossings
- Connectivity Blocks
- Riparian Areas for Connectivity (Riparian Corridors)

## Natural Community and Habitat Features

While landscape features such as forest blocks and riparian areas are foundational for ecological function, they are greatly enhanced when combined with finer scale features. In this section, we identify the highest priority natural communities and habitats that—when conserved in conjunction with the landscape features—are necessary to maintain and enhance an ecologically functional landscape in Vermont. These finer-scale features together occupy a much smaller land area than the landscape features. However, they are closely associated with more specific environmental settings or ecological conditions that are not fully reflected by the landscape features. Many plant and animal species depend on the combination of the landscape features and these specific natural communities and habitats.

We can fully describe the natural communities and habitats that are needed for an ecologically functional landscape, but we cannot necessarily map them all. Some, such as young forests or shrublands are temporary on the landscape, and shift locations over time. Others, such as natural communities and wetlands have incomplete inventory across the state, and mapping reflects the best current knowledge. The descriptions provided here should help planners and land managers determine if an unmapped, unassessed feature meets the criteria of being highest priority.

