

## *Forest Management for Wildlife Habitat:*

### **Habitat Connectivity**

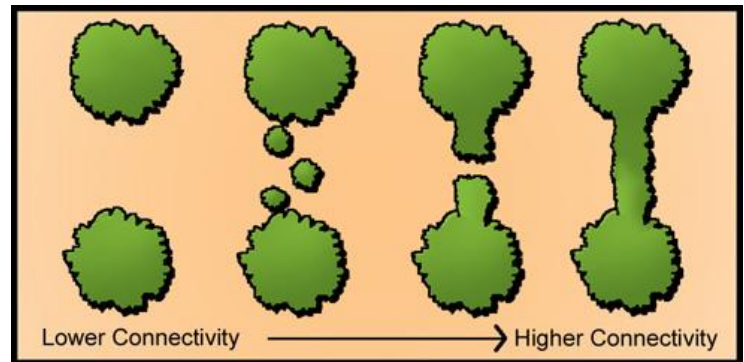
*Connectivity* describes how easily organisms are able to move throughout their environment in search of food, water, shelter, and other needs. Connectivity often considers all of the organisms in an ecosystem, from plants and animals to insects and microbes. It also considers ecological processes: seed dispersal, migration, floodplain utilization, nutrient flow, and pollination. All of these processes have co-benefits to wildlife and people. This informational sheet will focus on the benefits of habitat connectivity to wildlife.

#### **Resilience**

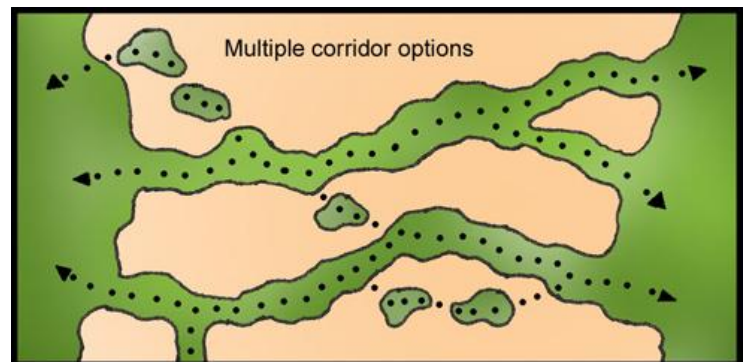
*Resilience* refers to the ability of an ecological community or individual species to respond to changes in their environment. Habitat connectivity increases the resilience of an ecosystem. Whether the changes are short-term or long-term, connectivity allows wildlife to adjust.

- \* Short-term: The snag (standing dead tree) that houses an owl falls down. A nearby forest, connected by a wide hedgerow between corn fields, contains another open snag. The owl finds a home.
- \* Long-term: Climate change causes an increase in the average temperature of an area. A bear adjusts its range each year, moving through the forest in search of cooler temperatures.

Connectivity supports resilience because it allows for movement between similar habitats and interaction between different populations of the same species.



*Graphic courtesy of the USDA National Agroforestry Center. Connectivity provides pathways for animal movement, allowing for more opportunity to forage, find shelter, or reproduce. Different species may require certain levels of connectivity in order to feel comfortable moving between habitat patches.*



*Graphic courtesy of the USDA National Agroforestry Center. A corridor is a pathway that connects patches of habitat. Multiple corridors reduces the risk of isolation: if one connection breaks there can still be movement. Multiple corridors can provide additional forage, shelter, and escape opportunities.*

## Fragmentation

Habitat *fragmentation* breaks up the landscape into small, disconnected patches. Most often, fragmentation is the result of human activity. Residential and commercial development, roadway construction, and clearing for agriculture are major drivers of habitat loss and fragmentation. There are many ways to mitigate or minimize the effects of new development on habitat. For example, wildlife road crossings or underpasses can restore connectivity across highways. Existing corridors, such as riparian buffer habitat, can be expanded with tree plantings.

### Spotlight On: *Migratory Waterfowl*

Many birds fly thousands of miles each year along their migratory pathways. Although it may seem odd, connectivity is important even on such a large scale. Migratory birds, including waterfowl, need to find patches of adequate habitat along their route. Greentree reservoir management is one way to provide habitat for migratory waterfowl that seek refuge in forested wetlands, such as wood ducks (*Aix sponsa*) and American black ducks (*Anas rubripes*).

Visit our Demonstration Network site at E. A. Vaughn Wildlife Management Area in Worcester County to learn more.



*Pictured is an example of what a greentree reservoir might look like. Here, a mature oak rises out of the flooded forest. Oak trees supply the most desirable type of food for visiting waterfowl — acorns.*



### Forest Management for Wildlife Habitat

To learn more about how forest management can benefit wildlife habitat, refer to the Links & Resources tab on our home page.

<https://dnr.maryland.gov/forests/Pages/default.aspx>