

Conserving Maine's Wildlife Habitat Connections

New resource shows high-value habitat connectors

In Maine, we are lucky to have many large and small patches of valuable habitat for wildlife. Conserving these habitat pieces is vital to ensuring that wildlife populations in the state remain healthy—but so is protecting the connections between them.

Why Habitat Connections Are Important

Just like humans, wildlife need to move to different places for different purposes. They may feed in one place, raise young in another, and winter in a third. Some animals do this over the space of many miles. Also, as our climate warms and habitats change, it will be important to provide places and ways for animals to reach new habitats as more southern conditions creep northward. To ensure a healthy future for our wildlife, we need to conserve connections between key habitats now.

Wildlife habitat connections often cross roads, which can present serious problems for sensitive species. Nonetheless, many species can move successfully across roads where there is limited or no development and low levels of traffic.

Habitat Connections: A New Resource

Maine's Beginning with Habitat program (BwH) shows the most important connections between high-value wildlife habitats on Map 3 – *Undeveloped Habitat Blocks and Habitat Connections*. These data can be used to help maintain habitat connections across the state. Landowners, towns and conservation organizations can use this information along with other BwH resources to guide future growth and conservation in their community or other areas of interest.

Habitat Connections Defined

BwH completed a computer GIS landscape analysis to identify habitat connections most likely to be used by 10 “umbrella species” of wildlife—species whose needs are similar to those of many others. The 10 species (such as bobcats and Blanding's turtles) have a range of needs, use



Wood turtles often cross roads to travel miles between breeding, resting and feeding sites—but it's a very risky venture!

different habitats, and depend on moving between habitats—often across roads—to sustain healthy populations.

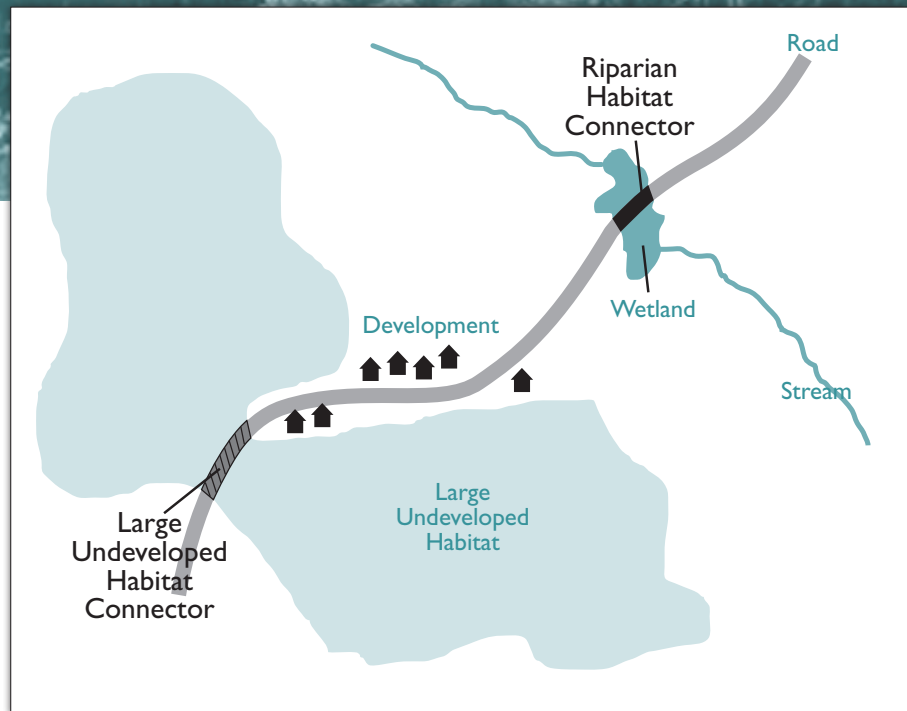
BwH determined which habitats these 10 species use and how they likely move between habitats. Using existing computer habitat data, BwH created habitat use maps for each species and then overlaid the 10 species maps on top of one another to show high-value habitats shared by multiple species.

“Habitat connectors” are shown on BwH Map 3 where high-value habitat was located on either side of a road. Some connect large blocks of terrestrial habitat while others connect wetlands, lakes, streams and rivers and the land immediately next to them (riparian habitat).

The “habitat connectors” are shown as either thin lines (under 2,000 vehicles a day) or thick lines (over 2,000 vehicles a day) because roads with greater amounts of traffic become barriers to some species that won't attempt to cross, and can significantly increase the likelihood of collisions, a hazard for wildlife and people. For some of our most sensitive species, such as wood turtles, even 500 cars a day can devastate a local population.

Please Note: Because these connectors were identified using computer GIS analysis, we recommend collecting actual information about wildlife use and habitat conditions at these sites to verify their importance.

A graphic example of a habitat connections map. Roadways separate high-value habitat. Connectors represent areas where multiple wildlife species are most likely to cross roads and places that communities may want to manage or conserve.



Using Habitat Connections

Mapped habitat connections can be used as an initial guide to the most important places for landowners, towns, and land trusts to protect in order to maintain or enhance habitat connectivity. These connections are sensitive to change—adding more cars on a roadway or encouraging more development nearby could diminish or eliminate their value to wildlife.

Strategies to Maintain and Manage Connections

1. **Protect high-value habitat around connections**—Many high-value connectors lie between relatively undisturbed habitats. Conserving those habitats on both sides of a road through purchase, easements, current use tax programs or landowner incentives can help maintain their value.
2. **Coordinate land use and transportation planning**—Encouraging growth in areas that are efficiently served by existing infrastructure and emergency services both saves money and reduces miles driven. As your town addresses future growth, rural areas where large habitat blocks remain connected across the landscape should be designated. Preserving rural character will also reduce wildlife-vehicle conflicts, better protect water quality, and support rural resource industries.

3. **Improve development designs**—Local land-use ordinances can be amended to encourage projects that reduce habitat fragmentation from new roads and incorporate conservation of high-value riparian areas, habitat blocks, and connectors early in the review process. Visit the BwH Toolbox at www.beginningwithhabitat.org for specific suggestions on how to build habitat conservation into local land-use policies.
4. **Enhance infrastructure**—Our roads and culverts are aging. As these need to be repaired or replaced, encourage local investment in new culverts, drainage pipes, fencing, and underpasses that help fish and wildlife move safely across the landscape. Enlarged culverts help fish and wildlife move up and down stream, and can help reduce damage and costs from flooding. In-depth information regarding roads and wildlife can be found in a BwH companion to this guide, *Conserving Wildlife On and Around Maine's Roads*.

For more information, see www.beginningwithhabitat.org.

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