CONNECTING HABITATS, PROTECTING COMMUNITIES

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WHY IT MATTERS

Virginia is at a critical moment. Rapid population growth and sprawling development are fragmenting natural landscapes, making it harder for wildlife to move freely and access the habitat they need to survive. Roads and undersized culverts increasingly act as barriers that isolate and weaken wildlife populations.[1,2] These barriers make roads more dangerous by forcing wildlife onto roadways, increasing the risk of vehicle-wildlife collisions, which cost an estimated $533 million annually in Virginia.[3] Without strategic investments to maintain habitat connectivity, Virginia risks more wildlife-vehicle collisions, declining **biodiversity**, and the loss of benefits that healthy landscapes provide to communities.

Many road crossings that block wildlife movement also function as drainage infrastructure. Undersized and aging culverts are increasingly vulnerable to washouts, costly repairs, and road closures during storms.[4] For example, Hurricane Helene caused an estimated $132 million in damage to infrastructure and significant disruption to transportation networks.[5] Designing crossings to accommodate both wildlife movement and flood waters can improve infrastructure resilience, reduce maintenance costs, and support safe passage for people and wildlife.

A **Virginia Transportation Research Council (VTRC)** analysis found that adding wildlife fencing to existing bridges or underpasses can reduce wildlife-vehicle collisions by preventing animals from entering roadways and guiding them to safe crossing points while also providing significant return on investment through minimizing vehicle damage and related injuries.[6] VTRC also estimated that applying this approach consistently at high-risk locations could result in approximately $16 million in cumulative avoided crash costs over 10 years.[7] These savings could add up quickly in Virginia where we consistently rank as one of the top ten most dangerous states in the nation for wildlife-vehicle collisions.[8] Wildlife crossings improve road safety, reduce damage to vehicles and infrastructure, strengthen flood resilience, and reconnect habitat for both terrestrial and aquatic species (*see Reconnecting Rivers, page 11*).[9,10]

CURRENT LANDSCAPE

Virginia has made meaningful progress to advance habitat connectivity through new investments, planning tools, and funding programs. Virginia was among the first eastern states to develop a **Wildlife Corridor Action Plan (WCAP)**, which provides a statewide framework for identifying and conserving wildlife corridors that support species movement and adaptation to development and environmental changes. This year, the WCAP will be further improved with new data and mapping tools.[11] These additions will help state and local planners prioritize the most urgently needed wildlife crossing and connectivity projects.

Virginia is also investing directly in implementation. In 2025, the General Assembly appropriated $450,000 for a wildlife crossing project, marking an important step toward translating planning into on-the-ground action.[12] Building on that momentum, lawmakers established the **Wildlife Corridor Grant Fund** in 2026, a voluntary donation-based program designed to support projects identified through the WCAP.[13]

The WCAP identifies **Wildlife and Biodiversity Resilience Corridors**, which are the highest quality, connected habitats that support native biodiversity.[14] These corridors are irreplaceable and vital for wildlife to move and adapt in response to a changing climate. State-funded programs like the **Virginia Land Conservation Fund (VLCF)** and land protection organizations help keep these critical corridors intact by using WCAP corridor mapping to prioritize land conservation acquisitions and easements.[15]

Through these planning and funding efforts, Virginia has laid important groundwork for advancing habitat connectivity statewide. The challenge now is ensuring that WCAP priorities are consistently incorporated early into transportation, resilience, and land-use decision-making across the Commonwealth, and translated through continued investment into on-the-ground projects.

OPPORTUNITIES

Connectivity projects can deliver multiple public benefits: improved road safety for communities, stronger climate resilience, and healthier ecosystems, particularly when they are integrated early into transportation planning through state agency infrastructure standards and funding prioritization protocols.[10] In Virginia, tools such as WCAP already identify key wildlife corridors, providing a strong scientific foundation for action.Using WCAP priorities early in planning, with input from a diverse array of partners, can help ensure connectivity is included in project design from the beginning.

Routine infrastructure upgrades, especially bridge and culvert replacements designed to improve flood capacity, offer a practical and cost-effective opportunity to support people and wildlife.[16] For instance, larger culverts can be designed to help aquatic life—and even land animals—move freely and safely under

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roads. When these considerations are included early in transportation planning, project costs are considerably less.[17] Wildlife crossings can deliver flood resilience for communities, safer roads for drivers, and connectivity for wildlife all in a single project.[18,19]

Land protection remains an important complement to wildlife crossings by helping maintain the habitat connections that wildlife depend upon. Programs such as VLCF have played an important role in protecting these landscapes, but demand exceeds available funding. Sustained and increased investment in both wildlife crossings and land conservation will help Virginia maintain landscape connectivity, reduce conflicts between people and wildlife, and support broader regional wildlife migration and resilience goals.

TOP TAKEAWAYS

Virginia has laid the groundwork and is ready to begin fully integrating wildlife passages into transportation, resilience, and land-use decisions at this critical moment.

Many projects can be designed to deliver multiple benefits at once, improving flood resilience for communities, creating safer roads for drivers, and ensuring safe passage for wildlife.

Early project planning and working with partners through a more collaborative process can reduce costs and maximize public investment by avoiding expensive modifications later.

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