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Essay: Enhancing Connectivity in Florida's Wildlife Corridor

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Florida's rapid growth is reshaping the landscape, creating big challenges for wildlife that rely on natural corridors to move safely across the state. As urban development expands, critical areas in the Florida Wildlife Corridor (FLWC)—an 18-million-acre network of lands—are increasingly squeezed, making it hard for species like black bears and Florida panthers to navigate safely. My project, the Corridor Bottlenecks Pilot Project (CBPP), is designed to tackle this issue by focusing on some of the corridor's most vulnerable "bottlenecks" where fragmentation is highest.

CBPP will analyze key sites within these bottlenecks to identify factors impacting wildlife movement and develop a framework for protecting these pathways. The plan includes both field studies and GIS mapping to capture a full picture of each site, from the land cover types and wildlife behaviors to developmental pressures. With this information, we can pinpoint priority areas needing immediate action, like creating new wildlife crossings or improving ones already in place. To make these solutions realistic, CBPP aims to involve local stakeholders, conservation partners, and private landowners from the start, ensuring collaboration on multiple levels.

Alongside CBPP, my work on the Wildlife Crossing Performance Analysis (WCPA) will evaluate how well existing crossings are working and offer insights on improvements for future designs. This combined approach—targeting both vulnerable bottlenecks and fine-tuning existing wildlife crossings—will help enhance connectivity and reduce road-related wildlife deaths in key areas.

One unique aspect of CBPP is its adaptive monitoring framework, which utilizes both previously collected and new data to guide strategy adjustments at these key sites. By integrating ongoing observations with historical data, we can stay on top of changes in wildlife behavior and shifting development pressures. This approach allows us to prioritize conservation efforts where they're most urgently needed, making the project resilient and impactful over time.

With this data-driven foundation, CBPP and WCPA together aim to create a scalable model for corridor conservation across Florida. By identifying where the corridor faces the greatest risks and strengthening existing wildlife crossings, we're working toward a connected, navigable landscape for Florida's wildlife. This project is ultimately about preserving the space and paths that Florida's species need to survive and thrive while building a conservation approach equipped to support the state's evolving landscape.