Title: Assessing wildlife connectivity within the Crown of the Continent Ecosystem

Background: One of the fundamental changes in conservation science that occurred during the 1980's was the realization that population connectivity is vital to natural demographic processes. There was a concurrent realization that many terrestrial species, particularly large carnivores, have extremely large home ranges. The application of modern animal tracking methods has reinforced this knowledge. Movements of large carnivores, including bears, wolves, lynx, and wolverine, are often measured at regional rather than local scales. For example, wolves originally radio-collared in Glacier National Park have been tracked to Jasper National Park in northern Alberta and south into southern Idaho. Also, wolverines trapped in Glacier have gone west nearly to Idaho and south into the Bob Marshall Wilderness. Recognition of climate change has become the new lens through which scientists evaluate the movement needs of wildlife. In this context, Glacier cannot function in isolation from the remainder of the Crown of the Continent Ecosystem (CCE). While there has been long acknowledgement that GNP may be an important source area for large carnivores throughout the CCE, it is now apparent that interchange is the important process.

Purpose and need: The long-term survival of many species in the CCE – which includes Glacier National Park – such as bears, wolves, goats and wolverines, is tied to identifying and protecting movement corridors between protected areas. Movement of animals between Glacier and the Bob Marshall Wilderness to the south and the Canadian Rockies to the north continues to be threatened by development and increasing traffic. The added pressure of climate change further increases the importance of maintaining opportunities for animals to move in response to changing distributions of life requisites. While some work has been completed, particularly along US Highway 2, much remains to be done. In order to preserve movement corridors, they must be identified and protected, and they may be species specific.

Methods: Movement corridors for a suite of carnivore and ungulate species (bears, wolves, wolverine, mountain goats, and elk) will be identified through a mix of tracking methods; winter track surveys, cameras, and GPS collars. Assessment of connectivity can be accomplished using DNA and GIS technology. By definition, this project will be an interagency effort. GNPF funds will be leveraged with other partner agencies to achieve common objectives.

Cost: $100,000 x 3 years = $300,000 **Contact:** John Waller GNP