
NEW GIS TOOLS FOR IMPLEMENTING BROAD-SCALE WILDLIFE CONNECTIVITY MODELS IN LAND USE PLANNING AND MANAGEMENT

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Wildlife habitat connectivity at regional scales is necessary for the conservation of wide-ranging species and to provide opportunities for species to respond to a changing climate. Conservation planning and wildlife management must incorporate a broad-scale perspective to provide the best chance for long-term persistence of complete species assemblages. Much of the crucial linkage habitat in the U.S. Northern Rockies occurs on private lands at lower elevations. Therefore, land use decisions that ultimately influence broad-scale connectivity occur at fine (parcel level) scales. The ability to integrate broad-scale conservation planning that wildlife need with the scales where decisions are made has been difficult. New GIS tools provide advances in multi-scale conservation planning. These tools assist decision makers in identifying opportunities, setting priorities, and targeting actions at very fine scales but within the context of regional planning. These tools also facilitate scenario analysis to allow practitioners to ask “what if” questions and help them understand potential outcomes of proposed actions.