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THE USE OF HABITAT SUITABILITY INDICES (HSIs) FOR EVALUATING IMPACTS TO, AND ASSESSING MITIGATION FOR, TERRESTRIAL WILDLIFE HABITAT FOR TRANSPORTATION PROJECTS

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Abstract

Habitat Suitability Indices were used to evaluate terrestrial wildlife habitat impacts for a newly proposed 35-mile highway that runs through five different habitat types.

Typically for transportation projects, detailed impact analysis of terrestrial wildlife is limited to federally listed Threatened and Endangered species, or even State sensitive species. Terrestrial wildlife habitats are usually addressed by acreage of impacts, at best, but often only qualitatively. The quality of the habitat or the importance of the habitat is often not addressed. However, if mitigation is required for the identified impacts to these habitats, it is often difficult to quantify appropriate mitigation measures for ambiguous impacts.

For the Mountain View Corridor EIS, Habitat Suitability Indices (HSIs) were used to help quantify and qualify the terrestrial wildlife habitat the proposed 35-mile highway might impact. Utah State Division of Wildlife Resource Agency personnel and United States Fish and Wildlife Agency personnel were consulted with at the onset of the analysis to properly identify analytical methods. Together with environmental scientists, habitat types and species to represent these habitat types were identified and agreed upon.

The model provided a quick and efficient means of data collection, leading to an index of wildlife habitat quality within the project corridor. Output results were then used by the NEPA team (including agency personnel) to help shape alternatives and select alternatives to be carried through the NEPA analysis process.

If through the NEPA process, mitigation for non-federally-listed terrestrial wildlife habitat is proposed or required, this model will help establish the proper mitigation for the impacts.