Title

Improving mobility for wildlife and people: transportation planning for habitat connectivity in Washington State

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Improving Mobility for Wildlife and People: Transportation Planning for Habitat Connectivity in Washington State

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Abstract

Washington State's Snoqualmie Pass area supports many native habitat types and provides important linkage for wild lands between the North and South Cascades. The fragmented state of habitats in this area has made it a focal point for efforts by agencies and other organizations concerned with protecting and restoring natural habitats and wildlife populations.

Interstate 90 crosses the Cascade Mountains at Snoqualmie Pass. The Washington State Department of Transportation (WSDOT) is currently developing plans for adding lanes to Interstate 90 east of Snoqualmie Pass between Hyak and Easton. Planning for this transportation project includes consideration of the ecological needs of the area. In addition to transportation objectives, this project design also involves a major emphasis to construct the new roadway so as to improve and restore connectivity for terrestrial and aquatic species through the roadway corridor. This is a true multi-species approach which takes into consideration high- and low-mobility species, mountain terrain and climate, and landscape-level habitat linkages, as well as very localized special habitats.

This effort involves extensive coordination and partnership with state and federal agencies, as well as with environmental groups. Numerous scientific studies and inventories have been conducted in the area to provide a sound foundation and a special planning process specifically for the connectivity elements. Larger structures are planned at stream crossings to not only provide for hydrologic functions and processes, but also to allow for wildlife passage in riparian areas.

Additional upland wildlife crossing structures are planned to allow movement of terrestrial species. Seven emphasis areas, called Connectivity Restoration Areas (CRA's), have been identified in the 13-mile project. These improvements form a comprehensive approach in conjunction with compatible land management by the U.S. Forest Service and land acquisition and protection by environmental organizations. Together, these efforts represent a public investment in the hundreds of millions of dollars and constitute one of the largest restoration efforts of its kind in the country.

This presentation will discuss how the many issues related to habitat connectivity come together in the development of a large and complex transportation project. This involves the process for assessing planning aspects of the project that will improve connectivity for terrestrial and aquatic species hydrologic processes including baseline studies, GIS modeling, multidisciplinary groups for mitigation planning, analysis of connectivity needs for various species groups, and stakeholder coordination.

Future direction for habitat connectivity at the state or regional scale will also be discussed, including new Department Policies relating to connectivity, agency, and stakeholder coordination.

Note: The following posters scheduled for presentation at ICOET 2005 are related to this abstract and project:

- Combining Transportation Improvements and Wildlife Connectivity on Freeway Rebuild in Washington's Cascade Mountains (Charlie Raines, I-90 Wildlife Bridges Coalition)
- I-90 Snoqualmie Pass East Project: Linking Communities in the Natural and Built Environment (Jason Smith and Randall Giles, Washington State Department of Transportation)
- Landscape Ecology in Transportation Planning (Patricia McQueary, Washington State Department of Transportation)

Biographical Sketch: Paul Wagner is a wildlife biologist with over 20 years experience in the field, including work with red-wolf reintroduction in North Carolina and studies of seabirds in Alaska's Pribilof Islands and ice-age mammals in Arctic Alaska. He is currently the Biology Branch Manager for the Washington State Department of Transportation and manages programs responsible for policy and interagency coordination related to wetlands, fish, wildlife, and habitat issues statewide. He has a B.S. degree in Natural History from Juniata College and graduate coursework in salmon ecology at Evergreen State College. Wagner has served on committees of the National Academies of Sciences, been involved in assessing the ecological effects of roads, and has been a steering committee member of ICOET since 1998.