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Project Title: The Washington Connected Landscapes Project: Providing Analysis Tools for Regional Connectivity and Climate Adaptation Planning

Headline Title (2-5 words): Washington Connected Landscapes

Brief Summary (Abstract):

In support of the Washington Connected Landscapes Project's effort to provide scientific analyses and tools necessary to conserve wildlife habitat, activities of this project included 1) developing tools necessary to reliably identify and prioritize areas important for connectivity conservation and restoration under current conditions and for allowing species range shifts under climate change, 2) testing and refining these tools by applying them in a Great Northern LCC funded effort to identify essential habitats and linkages for the Columbia Plateau Ecoregion where the WHCWG is currently engaged (connectivity and climate tools) and across Washington State (climate tools); and 3) releasing these tools as freely available GIS toolboxes.

Project Location: Washington with application across the NPLCC

Partners: The Washington Wildlife Habitat Connectivity Working Group (WHCWG) is a science-based collaboration of land management agencies, NGOs, universities, and Washington Treaty Tribes. The group is co-led by Washington State Departments of Fish and Wildlife (WDFW) and Transportation (WSDOT), with active participation from The Nature Conservancy (TNC), Conservation Northwest (CNW), Washington Department of Natural Resources (DNR), US Forest Service (USFS), US Fish and Wildlife Service (USFWS), Western Transportation Institute (WTI), and University of Washington (UW).

Background:

Managing for well-connected landscapes is a key strategy to enhance resilience and ensure the long-term viability of plant and animal populations. Many species will require highly permeable, well-connected landscapes both to maintain dispersal and gene flow as vegetation patterns and disturbance regimes change and to allow adaptive range shifts. Despite these needs, only a handful of regional conservation planning efforts have included connectivity. More detailed, finer-scale ecoregional analyses were needed to give land managers sufficient information to prioritize and implement conservation actions.

Project Goals:

1. Develop spatial analysis tools for ecoregional connectivity analyses and climate adaptation planning to enhance existing corridor mapping tools.



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2. Test and refine analysis tools as part of GNLCC-funded Columbia Plateau connectivity analysis.
3. Release spatial analysis tools for public use.

Strategy Goals Implemented: 1.1, 3.1, 6.1

Climate Impacts Addressed: Changes in temperature and precipitation

Status of Project Implementation (Timeline, Milestones, Next Steps): Completed December 31, 2013

Project Outcomes:

1. Built upon two connectivity modeling platforms (Linkage Mapper and Circuitscape) and developed four new mapping tools identifying corridor choke-points, barriers, centrality, and climate change shifts.
2. Conducted two phases of connectivity analyses of the Columbia Plateau Ecoregion, using the new mapping tools in the second phase, and refined the tools based on WHCWG feedback.
3. Released the tools for public use.

Funding Sources: NPLCC

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Photos/Attachments: Attached "McRae.jpg"

Photo/Figure Credits (do we have permission to print): Credit: Brad McRae/The Nature Conservancy, yes permission to print

Suggested Photo Caption: This graphic displays an example of climate gradient corridors identified in this study, showcasing connectivity between warm and cool habitats as climate changes over time.