



## GREAT NORTHERN LCC IDAHO FISH AND GAME PROJECT PROPOSAL

**Project Title:** Development of a transboundary decision support system to guide and implement conservation, land use, energy, transportation, and climate change management and monitoring.

**Project Coordinator:** Gregg Servheen, Wildlife Program Coordinator, Idaho Department of Fish and Game, 600 South Walnut Street, Boise, ID 83707, 208-287-2713, [gregg.servheen@idfg.idaho.gov](mailto:gregg.servheen@idfg.idaho.gov)

**Partners:** Western Governors' Association, 1600 Broadway, Suite 1700, Denver, CO 80202, 303-623-9378, [mwest@westgov.org](mailto:mwest@westgov.org); NatureServe, 4001 Discovery Drive, Suite 2110, Boulder, CO 80303, 703-908-1800; Wildlife Conservation Society, 301 North Willson Avenue, Bozeman, MT 59715, 406 522-9333 (applied); Washington Department of Fish and Wildlife; Oregon Department of Fish and Wildlife; and Montana Department of Fish, Wildlife, and Parks; U.S. Fish and Wildlife Service; Bureau of Land Management; U.S. Forest Service, U.S. Geological Survey

**Project Summary:** The project is the combination of two pilot projects initiated and funded by the Western Governors' Association (WGA) for development of a Decision Support System (DSS). The project will establish a useful and consistent source of mapped biological information that decision makers and the public can use to identify and understand crucial wildlife habitats and corridors. This information will be compiled so as to be available and useful to anyone assessing proposed energy, land use, transportation, and climate change management and monitoring decisions and strategies.

**Need:** The thrust of this project is to address growing energy, land, and transportation development and conservation need through use of the best and most consistent technical and scientific information concerning fish and wildlife resources to affect management decisions for fish and wildlife benefit. In 2007, the WGA unanimously approved policy resolution 07-01, *Protecting Wildlife Migration Corridors and Crucial Wildlife Habitat in the West*. As a result, the Western Wildlife Habitat Council (WWHC) was established to implement the *WGA Wildlife Corridors Initiative Report*, coordinate needed policy options and tools for preserving wildlife corridors and habitats, and to help establish a DSS within each state. The WGA has funded eight DSS pilot projects, two of which (Idaho – Montana Divide, Idaho – Oregon – Washington Arid Lands/Columbia Plateau) the Department is seeking supplemental funding through the Great Northern Landscape Conservation Cooperative to leverage WGA and other funding and expand the capacity of these two pilots to reach a fully developed DSS.

The geography of the project proposal area includes the entire state of Idaho as defined by Bailey's Ecoregional Sections. For the Idaho – Montana Divide project, this includes the Beaverhead Mountains, Idaho Batholith, Bitterroot Mountains, and Flathead Valley sections. For the Arid Lands/Columbia Plateau project, this includes the Northwest Basin and Range, Snake River basalts, Owyhee Uplands, High Lava Plains, and Columbia Basin sections.

This project is important because recent wind and transmission line development across the project area require support in siting and mitigation efforts to ensure the connectivity of wildlife, conservation of crucial habitats, and adaptation to climate change. As of June 2009, 1,366 megawatts (MW) of wind energy have come online in Washington State since 2001, an additional 812 MW are already approved, and over 2,500 MW are in some stage of proposal or permitting (Renewable Northwest Project). Idaho and Montana have several ongoing energy projects requiring similar information. These include Mountain States Intertie (MSTI), a 500 kV electric transmission line proposed by Northwestern Energy; Chinook, a 500 kV electric transmission line proposed by TransCanada; and Northern Lights (Celillo), a 500 kV

electric transmission line undergoing a feasibility study by TransCanada. In Idaho, the arid lands of the Snake River plain to the west into Oregon are now subject to 2 large transmission line proposals, Gateway West and Boardman/Hemingway, each a 500 kV electric line being developed by Idaho Power.

This project will enable existing data and information that is not currently incorporated into GIS to be adapted to such formats to increase best available science into the DSS and will rectify existing data sets such that they form an edge matched layer that is transboundary among four different states. Updated information will be incorporated into existing models and predictive tools to describe and map wildlife connectivity, linkage, human footprint, conservation priorities, and climate change.

The proposed project will assist in adoption of standards for future data collection and QA/QC that are compatible between the cooperating states and lead, over time, to increasingly seamless fish and wildlife data presented in a spatial context suitable at local, regional, and landscape levels. All outcomes will be incorporated into and assist with the updating of the Comprehensive Wildlife Conservation Strategies in Idaho, Montana, Oregon, and Washington and help ensure they seamlessly join, especially where focal habitats and species are concerned.

The project will reach out to all potential sources of fish, wildlife, and plant data and information relevant to the pilot project areas. These will include agencies, universities, Stream Net, research projects, Natural Heritage Programs, NGOs, U.S. Geological Survey, and others who may have or are developing and storing fish and wildlife data and information relevant to this project.

## **Objectives:**

### **Phase 1**

1. Develop and compile natural resource spatial data that is compatible across the four-state project area.
2. Complete a connectivity/linkage plan for the project area to implement in Phase 2.
3. Select a transboundary subset of species and habitats for Beaverhead Mountains section and Arid Lands project area.
4. Define a transboundary compatible model of unfragmented habitats for Beaverhead Mountains section and Arid Lands project area.
5. Complete a climate change plan identifying steps, data and outcomes to incorporate results of Pacific Northwest Climate Change Vulnerability and Water Resources in a Changing Climate assessments into the draft DSS.
6. Collect technical and public input to assist in development of the DSS.

### **Phase 2**

1. Complete compatible datasets for all transboundary species of greatest conservation need and those that are socially and economically important for the entire project area.
2. Complete transboundary categorization of crucial habitat areas, including wildlife linkage.
3. Complete definitions, data protocols, scales, and ranking models for all transboundary data.
4. Draft a list of best practices and management recommendations for corridors and crucial habitats.
5. Incorporate spatial representations of climate change impacts and develop recommended management actions for reducing and adapting to climate change for fish and wildlife benefit.
6. Compile public comments and input related to project efforts and shape the project accordingly.
7. Devise a web interface to deploy the draft DSS based on public and technical input.

**Methods:** Phase 1 will focus on a subset of the full complement of habitats and species of the Arid Lands/Columbia Plateau project area and the Beaverhead Mountains section of the Idaho-Montana Divide project. Scale, data categories, definitions, and data availability will be considered when selecting a subset of fish, wildlife, and plant species associated with the focus ecosystems. The set of selected species will include no less than one resident sport fish, at least one terrestrial game species from each major group

(big game, upland game, furbearers), and a group of habitat obligates of Species of Greatest Conservation Need (SGCN) as identified in our respective Comprehensive Wildlife Strategies. A layer identifying unfragmented landscapes and protected habitats will be created based on agreed upon data definitions and terms. A species richness layer using Land Cover and species associations will also be explored.

In addition, Phase 1 of the project will develop and describe a framework and process for identifying landscape connectivity crucial habitat and a framework for incorporating climate change adaptation considerations in determining and prioritizing crucial habitat. The University of Washington will be contracted to develop the climate change framework. We will evaluate connectivity tools and models in collaboration with NatureServe and the Wildlife Conservation Society's efforts to formulate connectivity best management practices as well as any ongoing connectivity efforts in each state, such as the Washington Wildlife Connectivity Working Group. The connectivity assessment will consider resilience, redundancy, species function, and suitability of habitats. Connectivity assessment tools, including Corridor Design, FunConn, and Circuitscape, will be evaluated for their relevance to our pilot project situation. A process, data layers, and assessment will be itemized for implementation in Phase 2.

All relevant federal agencies will be contacted at the initiation of the project and be requested to fully participate in terms of expertise, data and information, and comments to formulate the DSS for purposes of their use and incorporation of their data. This list will include the U.S. Forest Service, Bureau of Land Management, Natural Resources Conservation Service, Montana state departments (Transportation, Environmental Quality, and Natural Resources) Idaho state agencies (Lands, Water Resources, Transportation, Office of Species Conservation, and Environmental Quality).

#### **Deliverables:**

##### By May 2011 (Phase 1) by Objective #:

1. An inventory of GIS data for all applicable fish, wildlife, and plant occurrence and modeling data.
2. A connectivity/linkage plan to produce a connectivity data layer for the project area in Phase 2.
3. A transboundary compatible subset of focal species and land cover types for Beaverhead Mountains section and Arid Lands area.
4. A transboundary compatible layer defining unfragmented habitats for Beaverhead Mountains section and the Arid Lands area.
5. A climate change plan outlining steps and data necessary to produce a climate change assessment, data layers, adaptive management plan and management actions for the draft DSS.
6. Summary of technical and public input on DSS development.

##### By May 2012 (Phase 2) by Objective #:

1. Transboundary compatible datasets for all species of greatest conservation need and socially and commercially important species and habitats within the project area.
2. Transboundary categorization of habitats; including wildlife linkage and crucial areas.
3. Definitions, protocols, scales, and ranking models associated with project area.
4. Draft of best practices and management recommendations for project area.
5. Spatial representations of climate change impacts to wildlife and recommended management actions for reducing and adapting to climate change.
6. A summary of public and technical input related to project efforts and a final report.
7. A beta version of a mapping service and web page through which it can be deployed.

**Schedule:**

Tasks	Initiation Date	Milestones	Completion Date	Deliverables	Outyear Work
Inventory F/W data	6/1/10	Rectified state data, list of data gaps, GIS layer list	10/1/10	Complete Inventory of data for project area	Definitions, protocols, QA/QC, and scales for data updates
Develop wildlife connectivity/linkage plan	7/1/10	Selection of linkage assessment tool, focal species and habitats list	6/30/11	Process, steps, data needs, and tools for wildlife linkage in Phase 2	Wildlife linkage model and map for the entire project area
Select of subset of F/W focal species and habitats	6/1/10	List of compatible transboundary data, selection criteria, rectified data	11/30/10	Geography of subset and species and habitat list	Compatible data layers for all transboundary SGCN and game species
Model unfragmented habitats	8/1/10	List of transboundary data, model terms	2/28/11	Unfragmented habitat map for project area with definitions	None
Incorporate climate change into DSS	10/1/10	Identify steps and data needs, contract climate change expertise	6/30/11	Process, steps, data needs and recommendations for climate change in Phase 2	Maps and models representative of climate change and mgmt recommendations
Develop web interface for DSS	1/1/11	RFP for services, contract, evaluation of other DSS	6/30/11	Draft interface with list of next steps and cost to complete Beta version of DSS	Beta version of web deployed DSS providing access to all F/W information
Gather technical and public input to help formulate DSS	7/1/10	List of cooperators, TAC members, public input	6/30/11	Summary of technical and public input	Ongoing. Final summary of technical and public input

**Budget:** See separate file.