GREAT NORTHERN LCC
U.S. FISH & WILDLIFE SERVICE NATIONAL WILDLIFE REFUGE SYSTEM PROJECT PROPOSAL

Project Title: Piloting a Strategic Approach to Conservation Planning and Design for the National Wildlife Refuge System in the Columbia Plateau Ecoregion.

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Project Team: Kevin O'Hara, USFWS Conservation Planner, USFWS; Steve Caicco, USFWS Conservation Planner; Khem So, USFWS Conservation Planner; Charles Houghten, USFWS Planning Division Chief; Erin Stockenberg, USFWS Inventory and Monitoring; Mike Green, USFWS Migratory Birds Program; Dave Drescher, USFWS Refuge Information Branch Chief, all National Wildlife Refuges within the Columbia Plateau Ecoregion.

Partners: We will partner with The Nature Conservancy, USGS Gap Analysis Program (GAP, Joint Ventures, other State and Federal programs and non-governmental organizations (NGOs) within the Columbia Plateau. At the national level, we anticipate to work closely with the National Wildlife Refuge System (NWRS) Implementation Teams, and the Great Northern Landscape Conservation Cooperative (GNLCC).

Project Summary:
The Pacific Region National Wildlife Refuge System will develop a strategic approach to identify region-wide land/habitat conservation priorities. This approach will be piloted in the Columbia Plateau Ecoregion and will result in a high-level landscape-scale conservation design. Working closely with conservation partners in the region, we will develop a data management and analysis model that builds from existing data sets and can be shared easily with other partners.

Background and Need: In December 2011, the Region 1 Refuge System led a two-day workshop on landscape-scale planning in support of the President's America's Great Outdoors (AGO) initiative. A key recommendation generated from that workshop was to "Partner with LCCs to develop the data and decision support tools to facilitate strategic habitat conservation for refuge planning at landscape scales, with particular emphasis on climate change and connectivity."[1] A second recommendation was to develop of a pilot project to initiate a new landscape approach to planning the NWRS. This model for landscape assessment will facilitate future conservation design and delivery efforts in a strategic manner.

Developing the internal capacity of the USFWS Refuge System and other Regional Programs to determine landscape scale priorities is needed for the following reasons:

[1] "Recommendations for Landscape Scale Refuge Conservation Planning in USFWS Region 1, With emphasis on spatially explicit planning and decision support methods", a two-page summary of needs developed by the Planning and Refuge Information Branches of Region 1.

- To identify new areas for land protection planning and use of land protection tools such as acquisition of conservation lands in fee, easement or cooperative agreement;
- To determine which and to what level existing refuges or units are prioritized for acquisition, an ancillary-spatial component to the Land Acquisition Priority System (LAPS).
- To promote conservation at the ecosystem level and increase the efficiency of conservation delivery within the GNLCC;
- To evaluate the existing NWRS lands in relation to their purposes and the anticipated effects of climate change;
- To provide the landscape-scale framework for the next generation of Comprehensive Conservation Plans (CCPs);
- To provide a means to collaborate with conservation partners on conservation data and analysis at the landscape scale;
- To sharing conservation prioritization data with other land protection agencies and partners to assist in determining appropriate roles and geographic areas for individual agency focus
- To provide a data resource for other organizations to explicitly include USFWS priority resources in their landscape scale planning.

Goals and Objectives:

The Region seeks to implement a Strategic Habitat Conservation (SHC) approach towards conservation design and delivery. Our primary goal is to have a documented case study on implementing strategic conservation design for the refuge system, which can serve as a model and be applied to other geographic areas. We aim to develop a clear picture of landscape scale priorities in the Columbia Plateau, along with data and decision support tools to support the NWRS mission at the landscape scale, to be shared with partners. Important relationships with other GNLCC partners will be forged for next steps in determining the NWRS role in landscape scale conservation throughout the GNLCC and North Pacific LCC.

Methods:

A significant amount of landscape scale data development and conservation planning has occurred in the Columbia Plateau ecoregion. We will build from these plans and data to address NWRS conservation goals and objectives. We will thoroughly review existing plans and mine the existing databases and projects. We hope to use several recent datasets for climate change, connectivity, bird density estimates, and fisheries to inform conservation design. Face-to-face meetings are proposed with state wildlife agencies, the GNLCC, other federal agencies, land trusts, Joint Ventures, Bird Observation Laboratories, and others engaged in conservation efforts in each region to discuss their priorities, future actions, and to explore how the Service could assist in meeting shared goals. This process will provide an articulation of focal species and habitats within 4 key NWRS conservation concerns: 1) inter-jurisdictional fisheries, 2) bird species of concern, 3) threatened and endangered species, and 4) habitat fragmentation and connectivity.

An important aspect of our proposed partnerships will be to understand the state of the data to identify biologically measureable outcomes as part of a Strategic Habitat Conservation approach. Parallel to reviewing existing plans, we will conduct a workshop on the best available data in the region. The purpose of the workshop will be to get a handle on the state of landscape scale data for the 4 key conservation concerns listed above. The outcome of the workshop and plan review will be a data gap analysis for NWRS species and habitats of concern.

Key data sets will be collected and synthesized into a conservation database. Part of this project will be to identify the best data management protocols for storing and sharing data that we synthesize. For example, organizations like TNC have developed data management systems and tools that facilitate cross-organization sharing.

Using the data, we will use the conservation planning tool, Marxan, to identify various spatial alternatives for meeting NWRS conservation goals in the Columbia Plateau. Marxan identifies good spatial designs for meeting conservation goals. The key drivers of our conservation design will be resiliency to climate change, a focus on unfragmented habitats, and connectivity. This project plans to mine several of the recent climate change related data sets to drive the Marxan-based conservation design. In particular, we plan to synthesize the considerable amount of planning work already completed in the region including studies funded by the CGNLCC, such as the Vulnerability Assessment Tools to Plan for Climate Adaptation project conducted by Josh Lawler and the Washington Connected Landscapes project completed by the Washington Wildlife Habitat Connectivity Working Group.

Outcomes and Deliverables:

The following is a list of outcomes and deliverables to be completed within one year.

- A completed pilot project in landscape scale planning for the Columbia Plateau Ecoregion which identifies NWRS priority species and places for further land protection planning.
- The data infrastructure, decision support tools and a process for landscape scale planning that can be shared with partners in the region.
- A spatially explicit conservation database developed in coordination with other agencies, universities, and NGOs.
- Workshops convened with state, federal, and NGO conservation partners to discuss conservation goals and data needs.
- An assessment of existing data to meet SHC-based goals for determining biologically measureable outcomes, as well as climate change vulnerability and connectivity.
- All data collected and synthesized and Marxan-based analyses will be made available to partners via LC-MAP.
- Supporting documentation for Regional land protection priorities which will aid in approval of Regional and National land protection proposals and plans.
- A final report that describes lessons learned and best practices for strategic conservation design, data management, and partner collaboration at the landscape scale.
- A scope of work to continue this process in other ecoregions within USFWS Region 1.
- Outreach to partners in the region regarding the findings of our assessment.

The potential impact on the NWRS at the national scale is significant. Similar discussions are occurring with the NWRS nationally and in all regions. This pilot project will provide a case study for other regions and LCCs to follow.

GNLCC Priorities

The project directly relates to two of the CNLCC's priorities of landscape-scale connectivity and function within the Columbia Basin and the sage-steppe ecotype. Priority areas for protection will be identified for key USFWS conservation targets within the Columbia Plateau. A key conservation target will be sage grouse, which has experienced dramatic population declines in the Columbia Plateau. Using the best available data, this project will articulate the role of the NWRS in maintaining and enhancing landscape resilience to climate change and habitat fragmentation, as well as the role of the NWRS in enhancing connectivity among key habitat for species of concern. Thus, a direct outcome of this project will be a document that articulates NWRS priorities for conservation delivery in the Columbia Plateau ecoregion.

This project will highlight the role of data synthesis to inform conservation design and delivery. Furthermore, we envision this project to be highly collaborative with State and Federal Agencies working in the region, as well as partnerships on data management with TNC and other landscape-scale conservation NGO's.

Schedule

	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13
Project Planning													
Workshops													
Review Existing Plans													
Database Development													
Marxan Analysis													
Partner Outreach													

Assuming a start date in July 2012, we anticipate all deliverables will be complete by July 2013.