



Great Northern LCC FY15 Funding Allocation

Tribal Capacity Grants

PI	Title	Summary	Recommendation
Treasure	The Confederated Tribes of Warm Springs (CTWS) Climate Change Readiness Program	Obtain funding to support attendance and travel to climate change related events and trainings.	\$10,000
Caplins	Cross cultural capacity building: Landscape conservation and climate change adaptation with the Blackfeet Nation	The purpose of the proposed project is to increase the "cross cultural capacity" (Craig et al. 2012:241) of indigenous and non-indigenous groups to collaborate on climate adaptation in the Crown of the Continent (CoC) a sub-region of the GNLCC area. In order to achieve this purpose, the objectives of this project are to conduct a pilot study 1) to identify the necessary protocols for collaboration between the Blackfeet Nation and government and non-government agencies active, and 2) to identify the priorities of the Blackfeet Nation in climate change adaptation. The outcomes of this project will include both written and presented material on the priorities of, and protocols for working with the Blackfeet Nation, including a widely distributed public brochure, local community presentations, and national academic paper and presentations.	\$10,000
Rose	Yakama Nation participation in landscape scale conservation collaboration within the Great Northern LCC and the Columbia Basin	The Yakama Nation Department of Natural Resources is currently developing a department-wide Climate Adaptation Plan (CAP). YN staff will be integrating Traditional Ecological Knowledge with current science findings to better prepare their natural resource programs to address future climate conditions. Funding through this grant will facilitate sharing of key strategies between the CAP and the GNLCC Conservation Framework.	\$10,000
Vatland	Climate adaptation planning for Nez Perce fisheries	Here, we propose to improve the capacity of the Nez Perce Tribe to address climate change issues. This grant will facilitate Nez Perce involvement with the Great Northern Landscape Conservation Cooperative process and, in doing so, aid in building the foundation of resources and partnerships necessary to enact a successful, long-term climate adaptation strategy for Nez Perce fisheries management. Specifically, this grant will support participation in meetings, workshops, and training opportunities.	\$10,000
Snow	Stoney Nakoda Nation Cultural Awareness	To provide First Nation cultural awareness of the Rocky Mountain and Eastern Slopes areas, from a Stoney Nakoda perspective, to the Greater Northern Landscapes Conservation Cooperative. We believe that this type of First Nation history of the Rocky Mountain and Eastern Slopes areas, is important understanding historic conservation practices, and cultural uses.	\$10,000

Partner Forum Capacity Grants

PI / Forum	Title	Summary	Recommendation
Waste / Columbia Basin	Facilitation and technical support for the Columbia Basin Partner Forum of the Great Northern Landscape Conservation Cooperative	The CBPF is requesting funding to enhance partner participation, collaboration, and product development across the landscape at the intersection of the Columbia Basin and the GNLCC region. GNLCC funds will provide administrative and technical support services, as well as travel support for key partners who would otherwise not participate.	\$15,000
Reuling / Rocky Mountain	Increasing the Capacity of the GNLCC Rocky Mountain Partners Forum	The CBPF is requesting funding to enhance partner participation, collaboration, and product development across the landscape at the intersection of the Columbia Basin and the GNLCC region. GNLCC funds will provide administrative and technical support services, as well as travel support for key partners who would otherwise not participate.	\$15,000
Heller / Sage Steppe	Positioning the Sage Steppe Partner Forum as a pivotal communication tool for Sagebrush Biome conservation implementation	The Sage Steppe Partner Forum (SSPF) is requesting funding for technical support services to upgrade and enhance the Sage Steppe Partner Forum wiki and engage partners in coordinated sage-steppe conservation planning and implementation. SSPF will enhance communication resources to better serve biome-wide coordinated conservation implementation as four LCCs and partners initiate the Sagebrush Conservation Science Network.	\$15,000
Watkins / Cascadia	Strategic conservation planning for partner applications in Cascadia.	The Cascadia Partner Forum requests funding to track and foster implementation and update to conservation design for four Great Northern Landscape Conservation Cooperative (GNLCC) conservation targets underway towards completion currently while initiating conservation design on two new conservation targets (Canada lynx and bull trout) to contribute to Cascadia-wide climate adaptation strategies and provide input and integration to the courser scale GNLCC-wide Science Plan's established objectives, threats, metrics, and conservation actions for each target. Additionally we propose to continue our work to create a transboundary network of practitioners coordinating to increase the adaptive capacity of the ecosystems and species of Cascadia, while facilitating a Cascadia-wide discussion and identification of spatial priority landscapes that contribute to our resilient landscape vision.	\$15,000

Strategic Science

PI	Title		Recommendation
Young	A rapid range-wide assessment of bull trout distributions: a crowd-sourced, eDNA-based approach with application to many aquatic species	The bull trout is an ESA-listed species that relies on cold stream environments across the Northwest and is expected to decline with climate change. Resource managers are charged with maintaining bull trout across their range, but monitoring this species is difficult and many populations have rarely or never been sampled. To reduce this uncertainty (and regulatory gridlock), we propose to coordinate a crowd-sourced field assessment of the distribution of bull trout in the U.S. by using inexpensive, reliable environmental DNA (eDNA) sampling. Samples collected by this multi-partner effort can be used to evaluate many other species (e.g., a biodiversity assessment) with no additional field costs and can serve as a multi-species baseline for future assessments.	75,000
Tabor	Conserving an Intact and Connected GNLCC Landscape	In May 2014, the GNLCC Steering Committee approved a pilot project to coordinate science-based management across the GNLCC on the connectivity goal. In this second year, we propose to (1) expand the information in the atlas (to refine existing information, and incorporate avian connectivity, aquatic connectivity, ecosystem processes, and climate change); (2) conduct regional workshops to refine the connectivity implementation strategy and explore actions for climate change adaptation; and (3) follow up on actions identified at the April 2015 managers workshop and approved by the GNLCC Steering Committee.	75,000
Whitfield	Landscape Conservation Design in the High Divide. An Analysis of Future Landscape Scenarios and Their Viability--Phase 1	The Heart of the Rockies Initiative (HOTR), on behalf of its High Divide Collaborative partners, seeks support to identify and evaluate future landscape configurations that address the needs of local communities while conserving the High Divide's unique landscape resources. In this landscape we emphasize wildlife connectivity between large protected core areas: Yellowstone, the Crown, and central Idaho (See attached map). This project builds on our prior GNLCC-funded project to deliver the latest science in connectivity and climate response and earlier stakeholder identification of lands of high conservation value (HOTR 2010). This project takes the next step by coupling socio-economic data and trends with conservation modeling in a holistic landscape conservation design process.	75,000
Moskal	Can we conserve wetlands under a changing climate? Mapping wetland hydrology across an ecoregion and developing climate adaptation recommendations	The intent of this project is to fill critical information gaps in support of wetland conservation efforts in the CP ecoregion under a changing climate. First, we will provide consistent, wall-to-wall data on wetland location, historical hydrologic dynamics, and projected climate change impacts on hydrologic dynamics. Secondly, we will work with managers in using these data to develop recommendations for climate-smart conservation of wetlands across the CP.	75,000
Gude	Wolverine metapopulation monitoring and connectivity in the U.S. Rocky Mountains and North Cascades	This project is intended to advance wolverine conservation across the Rocky Mountains and North Cascades in the contiguous United States. It will include maintaining landscape connectivity among occupied wolverine habitats, assessing the feasibility to assist wolverine distribution expansion with translocation, developing and implementing a collaborative multi-state monitoring plan to assess distribution and genetic characteristics of the metapopulation, and engaging key partners at multiple levels to prioritize habitat conservation, population connectivity, and management activities.	75,000
Al-Chokhachy	Directing conservation and restoration priorities in the Yellowstone Cutthroat Trout Prioritization Framework	As part of an ongoing collaborative conservation strategy funded by the GNLCC, we have worked with the Yellowstone Cutthroat Trout Work Group to develop a comprehensive framework for prioritizing conservation of populations of Yellowstone cutthroat trout (YCT). Through this effort, managers have specifically identified potential actions that could be taken to secure and expand populations, particularly in anticipation of climate change. Currently, there remains a paucity of empirical analyses supporting the effectiveness and/or needs of conservation actions, particularly regarding the relative threats to existing extant YCT populations. Here we look to use existing long-term datasets from two distinct regions within the historical range of YCT to demonstrate the potential risks and benefits of conservation actions and, conversely, inactions (e.g., not addressing non-native species) in the context of climate change. Integrating these results will assist in prioritizing actual threats and perceived benefits and risks from addressing such threats.	25,500
Sexton	Applying GNLCC Science to Coordinated Climate Change	We are proposing to coordinate and implement separate jurisdictional actions that align to contribute to landscape-scale outcomes. Our Climate Change Adaptation Targets include native salmonids, aquatic invasive species (AIS), terrestrial invasive weeds	75,000

	Adaptation for a Suite of Conservation Targets Across the CCE	and whitebark pine. The CMP is using GNLCC-supported science and Rocky Mountain Partner Forum (RMPF) decision-support tools to identify and prioritize climate change adaptation strategies and tactics related to our conservation targets, to coordinate implementation of these strategies at a landscape scale, and to foster collaborative learning and adaptive management. Specifically, in the coming year, we will pilot Crown-wide projects to: (i) Reduce vulnerability and increase resilience for bull trout and westslope cutthroat trout; (ii) Address AIS and terrestrial invasive weeds through collective prioritization of targeted management areas and invasive-free areas; and (iii) Initiate coordinated action for whitebark pine protection and restoration, incorporating GNLCC science. This project builds on the CMP's foundational database in which a shared template, shared science and synthesized baseline data support projects within and across jurisdictions.	
Connors	Towards developing an interagency stream temperature database and model for BC and northern half of GNLCC	Stream temperature data will be compiled from federal and provincial government agencies, as well as other data holders in British Columbia which will be housed in an interagency database. Spatial statistical models for river networks like those used for NorWeST will be used with these data to develop a consistent set of high-resolution predictions for all streams and reaches within streams for a pilot area within the Cascadia ecotypic area of the GNLCC (i.e., middle Fraser River and Okanagan River basins). The pilot area work would entail development of technical protocols so that future efforts could be scaled broadly across BC and the northern half of the GNLCC to ultimately provide a consistent set of international stream temperature scenarios for planning and vulnerability assessments for aquatic species.	38,000
Schwend	Building Large Scale Drought Resiliency in the Missouri Headwaters Basin	The White House Council for Environmental Quality has identified two national watersheds to pilot large-scale drought resiliency implementation. The Missouri Headwaters Basin within the GNLCC region and High Divide landscape is one of these national demonstration areas, and the GNLCC can advance its collective mission with this opportunity. By delivering science to management and building a learning network among watershed groups, this project will align the large-scale watershed management efforts of the GNLCC with the National Drought Resiliency Program (NDRP) and the Montana Department of Natural Resources (DNRC) to build drought resiliency into this important northern Rocky Mountain landscape.	38,000
Ireland	Evaluating management alternatives to mitigate the adverse effects of climate change on whitebark pine ecosystems in the Greater Yellowstone Ecosystem	Existing climate change science and guidance for restoring and maintaining whitebark pine forests will be evaluated using landscape simulation modeling to inform implementation of the Greater Yellowstone Coordinating Committee (GYCC) Whitebark Pine (WBP) subcommittee's "WBP Strategy". We will design a "no constraints" management scenario based on the GYCC WBP Strategy and 2015 publication Restoring whitebark pine ecosystems in the face of climate change and incorporating the latest projections of future climate suitability for WBP and other landscape stressors (mountain pine beetles, competing species, wildland fire). We will use the landscape simulation model FireBGCv2 to simulate interactions of future climate, mountain pine beetles, and wildland fire on whitebark pine dynamics under no active management, the GYCC WBP Strategy, and the "no constraints" management strategy. The results of the simulation modeling will be used to evaluate how well these management alternatives will maintain resilient whitebark pine ecosystems into the future.	38,000