

**Crown of the Continent
Adaptive Management Initiative
Funded Projects 2014**

1) Linking collaboratives to empower communities and stakeholders in adaptive management across the Crown.

Stephen Legault, Initiative Coordinator, CCCI, Unit 200, 1240 Railway Ave, Canmore, Alberta. stephen@crownconservation.net. 403.609.2965.

Summary: This project will take the next step with the Adaptive Management Initiative to strategically link our “individual collectives” by connecting the innovative work on climate change among our existing entities. Specifically, this project brings together two Crown-wide collaboratives working on climate adaptation, the Crown Managers Partnership (CMP) and the Crown of the Continent Conservation Initiative (CCCI), with the on-the-ground lessons and successes of a prominent Crown sub-regional forest restoration/adaptation effort, the Southwestern Crown of the Continent collaborative (SWCC). Altogether, these projects aim to address climate change at both the Crown of the Continent and sub-regional scale by defining and implementing adaptive management strategies for climate change, overcome jurisdictional barriers, and create an important precedent of effective climate adaptation implementation through the Flathead Forest Plan revision process. Cross-pollination of best practices and lessons learned across the entire Crown is an integral part of these efforts in the wake of newly established working relationships through the Crown Roundtable and AMI process this past year.

2) Engaging communities in ecosystem monitoring and promoting regional discussions on climate change impacts.

Brenda Lindlief-Hall, Executive Director, Clearwater Resource Council (CRC), Seeley Lake, MT. (406) 677-0069, blh@crcmt.org.

Summary: This project will expand existing efforts and partnerships through “citizen science” monitoring as a means to engage and inform local communities about climate and natural resource issues, and the importance of building resiliency into the landscape and communities by promoting climate adaptation strategies. Coordinators will work directly with students and community members to monitor water quality/quantity and forest conditions. These efforts will then become integral pieces of ongoing community discussions started this year by Blackfoot Challenge and TWS in the Southwestern Crown. It will emphasize implications of a changing climate to long-term resilience of local systems. The requested funding will provide support for a single year of monitoring, but it will also establish a monitoring prototype that will be maintained, refined, and expanded throughout the Crown in the future.

3) Climate change be dammed: Using beavers as a tool for climate change adaptation.

Rachelle Haddock, Miistakis Institute, Room U271, 4825 Mount Royal Gate SW, Calgary, AB, T3E 6K6, www.rockies.ca, 403-440-8444.

Summary: Beavers keep water on the landscape, leading to landscape stability and resiliency which benefits ecosystems, land owners and land managers. This project will tailor a workshop geared toward landowners, land managers and other watershed stewards in the Crown of the Continent profiling beaver reintroduction as a tool for climate change adaptation. The creation of the workshop will build upon ongoing collaborative efforts by

sharing knowledge, increasing education and communication, and building capacity for the use of beavers as a climate change adaptation tool in the Crown of the Continent.

4) Whitefish Range Partnership: USFS planning for landscape, lifestyle and livelihood.

Michael Jamison, National Parks Conservation Association: PO Box 4485 Whitefish, MT 59937. mjamison@npca.org, 406.862.6722.

Summary: The National Parks Conservation Association (NPCA) convened the Whitefish Range Partnership (WRP) in 2012, with the purpose of crafting public-land management policies that achieve climate adaptation at a landscape scale. Goals include delivering the US Forest Service a unanimous and community-driven land-use recommendation for the Whitefish Range, and securing that recommendation through an ongoing forest planning process. Tactics include partnerships resulting in on-the-ground projects to protect cultural values, increase access to public lands, and broaden the community of support for conservation. The goals of this program are twofold: 1) enable the WRP to achieve large-scale climate adaptation and land management goals with the US Forest Service (USFS), and 2) enable WRP to meet the needs of its partners and thereby maintain the cooperation required to ensure conservation outcomes.

5) Moving with change: advancing adaptive management by helping wildlife to cross

Highway 3. Jennifer Hoffman, Yellowstone to Yukon Conservation Initiative (Y2Y) Suite 200, 1240 Railway Ave., Canmore, AB T1W 1P4 Canada. 403.609.2666, x4, jennifer@y2y.net.

Summary: Keeping landscapes and wildlife populations connected, and facilitating the ability of wildlife to expand their ranges to alternate habitats are the most recommended strategies for enabling adaptation to climate change. Highway 3, across southern Alberta and BC is a major barrier to wildlife movements. Y2Y and its public and private partners have identified 31 linkages for a variety of species along a 125 km/75 mi stretch of the Highway. We have successfully advocated to Alberta Transportation for the implementation of mitigation measures at two high priority sites. This project will help ensure a sustainable and resilient future for the Crown of the Continent by transferring the lessons of our efforts in Alberta to BC.

6) Enhancing resiliency of native plant communities via Rocky Mountain front

integrated weed management. Mark Korte, Executive Director, PO Box 663, Choteau, MT 59422. (406) 466-2090. noxious.weeds@gmail.com.

Summary: The Weed Roundtable is receiving project funding to: 1) support the Executive Director to carry out collaborative and extensive drainage-based, volunteer-oriented weed management on the Rocky Mountain Front portion of the Crown of The Continent (COTC) with a matching NRCS Conservation Innovation Grant, and 2) enhance the resiliency of native plant communities in the face of climate change through biological control purchase, release, and monitoring. The Rocky Mountain Front constitutes the biological stronghold for eastern portion of the COTC in Montana, supporting imperiled grizzly bear, vast herds of elk, deer, bighorn sheep, antelope, and imperiled grassland bird species, such as long-billed curlew, Sprague's pipit, and ferruginous hawks. Management of noxious invasive weeds is critical to maintaining native plant diversity and resiliency in the face of climate change – the very plant communities and habitat that will support a fully functioning natural system

here. Native plant communities in the Rocky Mountain Front portion of the COTC region are already experiencing, and expected to be further altered by, shifting patterns of susceptibility to invasive plant species, decreased snowpack, warming temperatures and more frequent and intense wildfires. (Bay et al. 2011¹) Forested areas affected by climate stresses, for example, would likely recede upslope and be replaced by drier native shrub/steppe and grassland communities at lower elevations. Transitional plant communities can quickly backfill with diversity-altering and aggressive non-native noxious weeds that, in turn, affect the diversity and well-being of native bird and animal communities.

7) Building capacity to implement and evaluate the Headwaters Action Plan for the Oldman Watershed. Shannon Frank, Executive Director, Oldman Watershed Council 100, 5401 – 1st Avenue South, Lethbridge, Alberta T1J 4V6 Phone: 403-382-4239, Shannon@oldmanbasin.org.

Summary: The Oldman Watershed Council (OWC) initiated the process to complete a Headwaters Action Plan (HAP) to set specific targets for each of 3 chosen indicators for headwaters health; 1) the presence, absence and abundance of native fish, 2) aquatic invasive species, and 3) the density of linear features. The HAP is focused on specific indicators and targets that can be evaluated and that, through adaptive management, will be responsive to changes over time. The plan identifies actions and recommendations to decision-makers to help achieve the agreed-upon targets. The Adaptive Management Initiatives grant will help the OWC build on the momentum and collaboration of multiple projects to have a larger cumulative impact on headwaters health, resiliency to climate change and sustainability. The implementation of the plan will improve resiliency to and help mitigate impacts from climate change, improve water quality and wildlife habitat, conserve land, water and native fish species, educate about headwaters issues and health, encourage and facilitate individuals, organizations and industry to adopt beneficial management practices, and teach us more about the natural system so that we can manage it well.

8) Reforming forest management in the Canadian Crown of the Continent. Katie Morrison, Conservation Director Canada Olympic Park, 88 Canada Olympic Road S.W., Calgary, AB T3B 5R5. Phone: (403) 232-6686 Email: kmorrison@cpaws.org.

Summary: This program of CPAWS SAB and Wildsight, working in collaboration with Northwest Connections and other partners, will address the impacts of forestry and forest land use activities on the ability of the Canadian Crown of the Continent to adapt to climate change. Effective models of restoration logging, recreation and amenity improvement, fire and other disturbance mitigation and watershed and ecosystem monitoring are occurring throughout the forested land base of the Crown. This program will bring together multi-stakeholder groups including industry, government and environmental non-governmental organizations (ENGOS), facilitating an exchange of knowledge and the development of a plan

¹ L. Bay, L. Broberg, A. Carlson, M. Cross, K. Deuel, D. Hanna. 2011. A Climate-impacts Assessment of the Crown of the Continent. Crown of the Continent Conservation Initiative.

to export successful models – such as the Southwest Crown Collaborative – to the Alberta and BC regions of the Crown.

9) Tribal and First Nations climate adaptation network. Lea Whitford, Blackfoot Confederacy, Center for Large Landscape Conservation, P.O. Box, Bozeman, MT. 59718. lea@bfcc.edu.

Summary: This project will focus on locating and identifying a person or persons from each respective tribal nation in the Crown to serve as a point of contact for the Crown Roundtable and other Crown of the Continent activities, particularly climate adaptation. The PI Lea Whitford and Project Coordinator Terry Tatsey along with other CRT and AMI members will identify participants and coordinate efforts of developing individual and tribal adaptation surveys and initiatives.

10) Crown of the Continent Sustainable Business Leadership training program.

Mayre Flowers, Citizens for a better Flathead, P.O. Box 771, 35 4th. St. West, Kalispell, MT 59903. Phone: (406) 756 8993, 406-756-8991, Citizens@flatheadcitizens.org.

Summary: The Crown of the Continent Sustainable Business Leadership Training Program seeks to educate public and private organizations on the resource capacity limits in the region while engaging these constituents to implement measureable on-the-ground adaptation strategies related to a changing climate. Our instructors and leadership team provide the tools and mentorship to ensure that these organizations will see quantifiable changes in their natural resource use while empowering them to become sustainability leaders in their communities, industries, and in the Crown of the Continent region. This two-year programmatic approach has been derived from a successful program in the Greater Yellowstone region, *UnCommon Sense: Business Leadership for a Sustainable Future*, and is being adapted to meet the needs of organizations and communities in the Crown of the Continent.

11) Cross cultural capacity building: landscape conservation and climate change adaptation with the Blackfoot Nation. Laura Caplins, Nature-Link Institute, Missoula, MT. 406-241-5356, laura@nature-link.org.

Summary: The purpose of this 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 (COTC). The objectives of this project are to conduct a pilot study 1) to identify the necessary protocols for collaboration between the Blackfoot Nation and government and non-government agencies active in the COTC, and 2) to identify the priorities of the Blackfoot 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 Blackfoot Nation, including a widely distributed public brochure, local community presentations, and national academic presentations. Future projects will build upon this pilot study to better adapt the project methodology to engage with other Native American and First Nation peoples about their priorities for climate change adaptation and protocols for effective collaboration within the COTC.

12) CSKT: Identifying cultural and resource priorities due to climate change.

Michael Durglo, Division of Environmental Protection and Manager Climate Change Planning Coordinator, Confederated Salish and Kootenai Tribes, P.O.Box 278 Pablo, Montana, 59855. 406-675-2700 ext 7227. Phone: 406-275-2806, 275-2806, Cskt.org.

Summary: The Confederated Salish and Kootenai Tribes has completed a *CSKT Climate Change Strategic Plan* in consultation with the Roundtable on the Crown of the Continent (COTC), which is co-directed by the Center for Natural Resources & Environmental Policy, The University of Montana and the Center for Large Landscape Conservation. CSKT will work to increase their understanding of regional and global climate change impacts to cultural and human resources. We will use our combined expertise and knowledge to help the people of the Flathead Nation and the surrounding areas adapt and mitigate climate impacts affecting us all. We will also use this knowledge to preserve and protect the cultural resources of the tribes within the COTC. A Climate Committee will be established to explore the best way to move forward with implementation of the Strategic Plan.

13) A survey of Blackfeet traditional practices. Betty Mathews or Mike McKay, Blackfeet Community College, P.O. Box 819, Browning, MT 59417-0819. (406) 338-5441 ext. 2800 or 2510. b_mathews@bfcc.edu or mmckay@bfcc.edu.

Summary: The Blackfeet Community College (BCC) agrees to continue working with a limited number of the Traditional gatherers, and local Farmers and Rancher surveyed during 2012 – 2013. BCC students gathered information about changes in the environment related to the location and timing of the collection of medicinal plants and Blackfeet traditional and contemporary agricultural practices. These surveys will serve as baseline information on local knowledge of changes occurring on the lands and water of the Blackfeet Indian Reservation and traditional territories. Should this proposed project get funded students from BCC will select 3 participants that were surveyed from gatherers, farmers and ranchers from the previous year. The students will work with those selected get more in depth information on specific changes in their practices, economic considerations and what considerations are part of their future plans.

14) Increasing our collective impact: Leveraging AMI project collaboration and learning across the Roundtable Network. Carole Stark, Water Matters Society of Alberta, P.O. Box 8386, Canmore, Alberta. T1W2V2. carole@water-matters.org. 403-679-8577.

Summary: This project will increase the impact of the AMI as a collective initiative in contributing to on-the-ground climate adaptation, by strengthening understanding, capacity and knowledge transfer for practicing effective collaboration, within the AMI grant partnerships and Roundtable community, and across the Crown. The project will develop a shared measurement system to evaluate the effectiveness of AMI project collaboration, with indicators for successful collaboration and share collaboration successes and lessons learned at Roundtable capacity building and engagement initiatives (e.g. annual conference, training events). In addition, help inform future AMI grant cycles with practical considerations for further supporting collaboration amongst grantees and across the Roundtable network.

15) Trans-boundary Crown of the Continent Adaptive Management Education

Initiative. Michael Quinn, PhD, Director and Talisman Energy Chair of Environmental Sustainability, Institute for Environmental Sustainability, Mount Royal University, 4825 Mount Royal Gate S.W., Calgary, AB T3E 6K6. (403) 440-5030, mquinn@mru.ca .

Summary: Adaptation for resilient natural and human communities in the Crown of the Continent requires the provision of good information to support evidence-based decision-making and the education of the next generation of managers and decision makers. We will develop and implement an experiential teaching, learning and research initiative for undergraduate and graduate students from Canada and the United States. The aim of the program is to build leadership capacity for adaptive management in the Crown social-ecological system, with a particular emphasis on long-term resilience.

16) Southeast BC invasive species management. Todd Larsen, Program Manager, 1902 Theatre Rd, Cranbrook BC V1C7G1, 1-888-553-5472 coordinator@ekipc.com.

Summary: The East Kootenay Invasive Plant Council (EKIPC) is a well- established non-profit organization that deals with invasive plants and animals in the Southeast region of BC using a pooled-resource delivery. Invasive species are known to reduce biodiversity, alter ecosystem functioning, and diminish wildlife habitat, along with other negative environmental, economic, and social impacts. These non-native species are spread accidentally and deliberately, and have an increased ability to become established in new environs due to physiological adaptations and altered environmental conditions (i.e. climate change). By working with neighboring collaborators across the Crown of the Continent, EKIPC will utilize funds towards preventative and eradication measures within the various habitats of this important ecosystem.