

REMARKABLE BEYOND BORDERS

People and Landscapes in the Crown of the Continent



Sonoran Institute Mission and Vision

The Sonoran Institute inspires and enables community decisions and public policies that respect the land and people of western North America. Facing rapid change, communities in the West value their natural and cultural resources, which support resilient environmental and economic systems.

Founded in 1990, the Sonoran Institute helps communities conserve and restore those resources and manage growth and change through collaboration, civil dialogue, sound information, practical solutions and big-picture thinking.

The Sonoran Institute is a nonprofit organization with offices in Tucson and Phoenix, Arizona; Bozeman, Montana; Glenwood Springs, Colorado; Cheyenne and Sheridan, Wyoming and Mexicali, Baja California, Mexico. For more information, visit www.sonoraninstitute.org

The Sonoran Institute, *Shaping the Future of the West*

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People and Landscapes in the Crown of the Continent

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PREFACE

This report offers options to shape the future of the Crown of the Continent—a remarkable region shared by Canada, the United States, First Nations, Native American tribes, and diverse communities and stakeholder groups. The Crown has long inspired action by committed individuals and forward-looking organizations, whose good work provides a solid foundation for shaping a future based on healthy landscapes and communities.

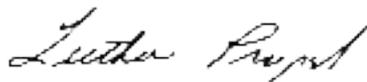
The common currency in addressing issues that spread across a region as large and diverse as the Crown is *collaboration*—that is, working across boundaries with people and organizations that have diverse

interests and shared values for the well-being of the landscape they call home. Accordingly, this report was prepared jointly by the Center for Natural Resources and Environmental Policy at The University of Montana, the Sonoran Institute, and the Lincoln Institute of Land Policy. The authors solicited and received substantive reviews of report drafts from many leaders in the Crown, including those involved in the Roundtable on the Crown of the Continent and others. The strategic options outlined here reflect their input but represent only the opinions of the authors.

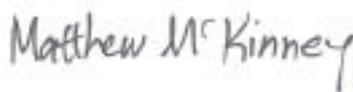
Our goal is to highlight the exciting opportunities before us now to address

regional issues on a landscape scale—to showcase the Crown of the Continent as a place in which people of different backgrounds and affiliations are striving to work together to address shared challenges. We celebrate many collaborative groups working in the Crown, and we present many ways to strengthen, link, and expand their initiatives.

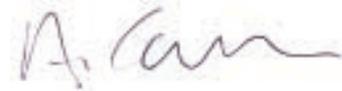
This report will provide a starting point for dialogue at the first annual Conference on the Crown of the Continent in Waterton Lakes on September 23–24, 2010. We welcome and encourage your participation in that program and in the larger conversation about the future of this remarkable region.



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Executive Director
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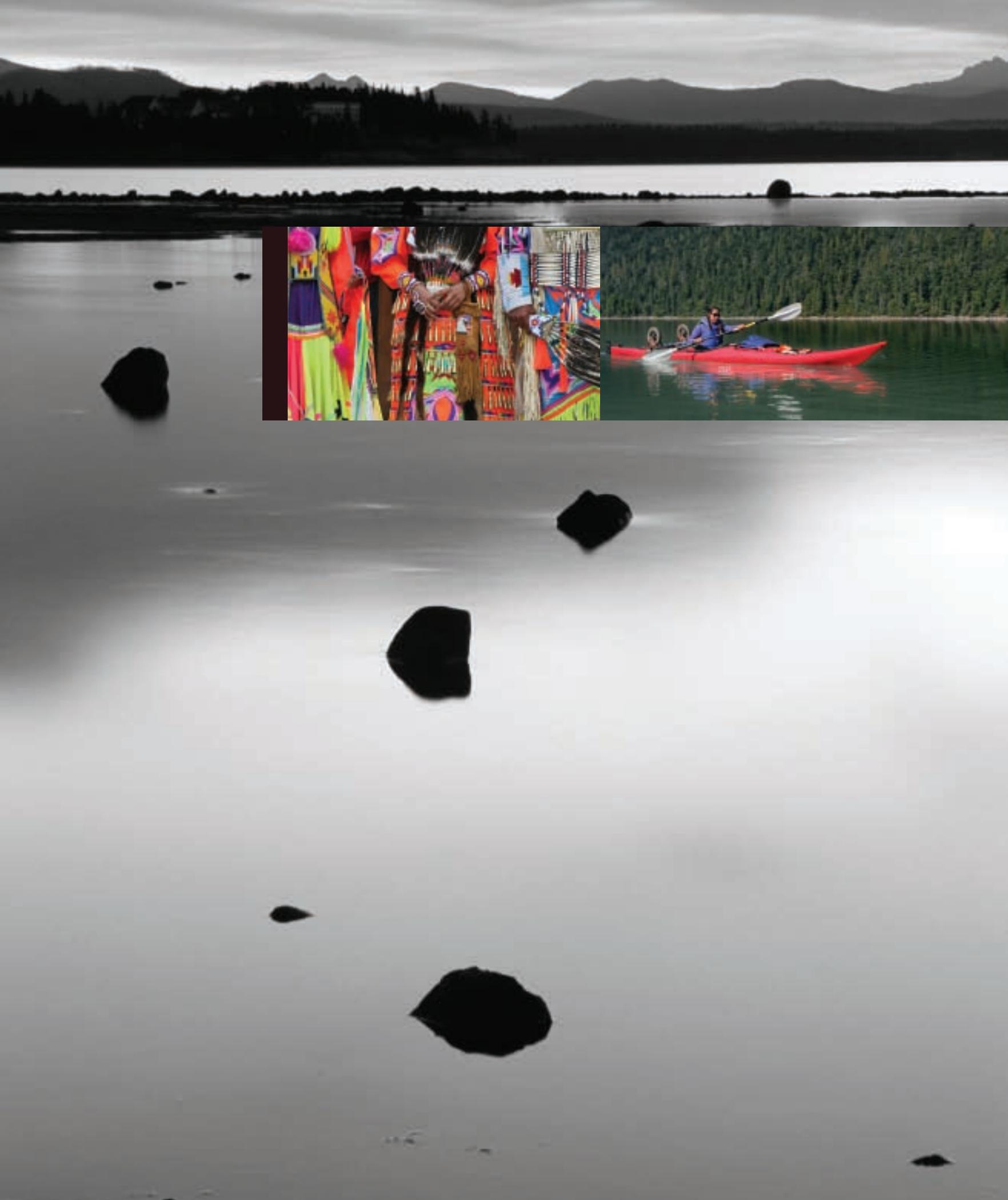


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EXECUTIVE SUMMARY

The Crown of the Continent is one of the last places in North America that still hosts all of its native large predators—a sign of a landscape that remains remarkably intact. Across this vast landscape, indigenous cultures also have thrived for thousands of years. At the core of the region are Waterton Lakes and Glacier national parks, designated by the U.S. Congress and Canadian Parliament in 1932 as the world's first international peace park. More than 21 federal, Tribal, First Nations, state, and provincial agencies strive to cooperatively manage the Crown's wildlands, wildlife, timber, minerals, oil and gas, recreation, and other resources. Diverse communities offer economic opportunities linked to these natural resources and unparalleled quality of life.

All of this makes the Crown a rare and special place, a vibrant home to approximately 194,000 people, and a destination for millions of visitors from around the globe. It is an extraordinary landscape worthy

of long-term stewardship for present and future generations.

This report tells the story of this shared landscape and highlights some of the challenges and opportunities facing its residents today and tomorrow. Some of the changes are good for the region: improved access to education and healthcare services, regional and global markets, technology, and financial resources. However, both casual observation and scientific investigation tell us that some current trends present challenges for the future: loss and fragmentation of wildlife habitat; increased demands for water, land, and energy resources; and social turbulence, as economies diversify from a base of natural resource use to knowledge-industry and amenity-oriented growth.

The common currency in addressing issues that spread across a region as large and diverse as the Crown of the Continent is *collaboration*—that is, working across

human-drawn artificial boundaries with people and organizations that have diverse interests and shared values for the well-being of the landscape they call home. While there is no single model for collaboration on a large scale, successful efforts seem to share these key elements:

- » Catalyst, which may be a recognized opportunity or perceived crisis
- » Leadership among people and organizations in the region willing to act together
- » Representation of affected interests
- » Regional fit between the scale of the problem and people's interest in engaging
- » Governance to provide decision-making and other support
- » Learning processes, both scientific and public

- » Strategic vision, expressing shared goals, and aspirations
- » Implementation plan to move from vision to action
- » Outcomes, including agreements, policies, programs, and accomplishments
- » Adaptation in response to monitoring and ongoing evaluation

Practitioners and community leaders apply these elements on a case-by-case basis to create homegrown processes and solutions for particular places. As demonstrated by a number of examples discussed in the report and detailed in the Appendix, there is increasing movement toward regional or landscape-scale collaboration in the Crown of the Continent, ranging from watershed groups to subregional and region-wide initiatives.

The primary challenge in the Crown is to build on the accomplishments of existing collaborative initiatives and to knit together the emerging capacities throughout the region to sustain the natural and cultural heritage of this remarkable transboundary region. This report offers a menu of strategic options as we see them today, organized around four broad goals. In brief, these include:

1 Coordinate policy and planning

- » Establish the Crown as a pilot project to align the growing number of state, provincial, and federal climate adaptation and landscape conservation planning efforts focused on the region.
- » Designate the Crown as a region of special climate change concern.
- » Affirm and strengthen the Crown Managers Partnership as an ongoing forum for intergovernmental cooperation.
- » Encourage state, provincial, and federal governments to consider the value of lands adjacent to their particular jurisdictions as they develop and implement land and resource management plans.
- » Reconcile federal, state, and provincial endangered species policies across the Crown to the greatest extent possible.

2 Expand conservation funding and finance strategies

- » Aggregate currently independent initiatives into a regional conservation package.
- » Enhance federal funding for land and water conservation.

- » Expand the use of conservation easements when and where appropriate.
- » Pursue strategies to improve conservation financing on tribal lands in the Crown.
- » Experiment with different strategies to enhance conservation-oriented development.

3 Facilitate scientific and public learning

- » Establish a Crown of the Continent Science Consortium to coordinate scientific research on climate change and conservation biology.
- » Develop tools to inform, mobilize, and engage the public.

4 Build regional capacity

- » Sustain a regional forum to exchange ideas, build relationships, and explore opportunities to work together.
- » Craft a regional vision and statement of principles for landscape stewardship linked to community development.
- » Convene a regular summit on cultural traditions and history.

Some of these options build on existing initiatives; some are new or ideas that other people are exploring. These aim at linking

existing efforts, nourishing them with sustained financial and political support, and seeking every opportunity to reach across

divisions and barriers to ensure that this remarkable landscape continues to sustain and inspire people for generations to come.



Crown of the Continent

“As the first Americans, we (Indian People) created the first tourism bureaus. We love this beautiful earth, in all its mystique and we are honored to share it with others. We have been playing good hosts for the past 500 years, a way of life grounded in the generosity of the Indian spirit. A spirit that can still be experienced when you visit our homelands.”

~ Henri Mann, Ph.D.
Endowed Chair, Native American
Studies, Montana State University



A LANDSCAPE LINKED TO HISTORY

The 18-million-acre Crown of the Continent is a rare and special place, an ecological crossroads where plant and animal communities from the Pacific Northwest, eastern prairies, southern Rockies, and boreal forests mingle. This spine of uplifted and glacier-carved mountains is also the headwaters for North America, where pristine rivers originate and flow to the Pacific Ocean, Gulf of Mexico, and Hudson Bay. Nowhere else on the continent retains its full complement of native habitat and native predators—wolves, grizzly and black bears, cougar, coyote, fox, wolverine, bobcat, and lynx—as well as large populations of moose, elk, bighorn sheep, pronghorn, and deer.

The Crown is also a place where nations and cultures meet. Humans have traveled through the Crown of the Continent since the last great ice sheets retreated about 11,500 years ago. Ancestors of the Blackfeet, Kainaiwa, Ktunaxa, Salish, and Kootenai peoples were among the first to hunt, fish, and gather plants for food and fiber here. These first inhabitants interacted with the landscape in many ways—using fire to replenish grasslands, funneling bison over cliffs, wearing trails and roads into the earth, and establishing camps and villages in favorable sites. By the early 1800s, when the first white explorers and trappers arrived, much of the region was already settled, with tribal

territories, hunting grounds, and travel routes well established.

The Kainaiwa lived across the prairie of today's southern Alberta, wintering near the mountains along the Belly and Highwood rivers. The Blackfeet ranged over some of this same territory, along the Rocky Mountain Front from the North Saskatchewan River in Alberta and south as far as the Yellowstone River in Montana. The Salish and Kootenai peoples shared parts of southern British Columbia, northern Idaho, and northwestern Montana, ranging into Alberta to hunt bison. The territory of the Ktunaxa included the Kootenay region of southeastern British Columbia and parts of Alberta, Montana,



11,500 years ago

Ancestors of the Blackfeet, Kainaiwa, Ktunaxa, Salish, and Kootenai peoples were the first inhabitants

Early 1800s

First white explorers and trappers arrive to the region, already settled with tribal territories



Washington, and Idaho. Not bounded by lines on a map, these territories overlapped and blended, enabling people to hunt and trade throughout the region.

Explorer and fur trader David Thompson was the first non-Indian to come into contact with the Native people of this region in the early 1800s. The promise of beaver and other furs brought French, English, and Spanish trappers, while other explorers came through searching for a trade route to the Pacific. In July 1806, returning to St. Louis, Meriwether Lewis and a handful of the Corps of Discovery followed the Nez Perce trail along the Blackfoot River eastward, crossing onto the plains at today's

Lewis and Clark Pass in Montana. They soon turned north, following the Marias River deeper into Blackfeet country to within 20 miles of the area that is today's Glacier National Park.

As ever more trappers, traders, and miners came to the region, they depleted the once innumerable bison herds and other wildlife that native peoples depended on for survival. The newcomers also began parceling up the land; the Oregon Treaty of 1846 established the 49th Parallel as the boundary between the United States and Canada. By 1855, treaties in both Canada and the United States drew boundaries around tribal lands throughout the Crown

region. In coming years, those boundaries would grow ever tighter as more people competed for land and resources.

In 1858, British military Lieutenant Thomas Blakiston broke off from the Palliser expedition in Alberta to look for a low mountain pass suitable for railroad passage over the continental divide. Credited as the first European to travel through what is now Waterton Valley, Blakiston named the lakes here in honor of Sir Charles Waterton, a British naturalist. He mapped the area and reported on its scenic beauty and abundant resources.

In 1883, Fredrick Godsal leased 20,000 acres for grazing cattle between the north



July 1806

Lewis and Clark follow the Marias River on their way back east

1846

Oregon Treaty of 1846 established the 49th parallel as border between US and Canada

1858

Lieutenant Thomas Blakiston traveled to Waterton Lakes

1883

Fredrick Godsal drafted a letter to Canada's Superintendent of Mines to protect the region's values

1891

Great Northern rail line completed over Marias Pass

1895

Canada created a Forest Park around Waterton Lakes

and south forks of the Oldman River. An avid outdoorsman, Godsall recognized the recreational and scenic values of the nearby mountains. In September that year, Godsall drafted a letter to his good friend, William Pearce, Canada's Superintendent of Mines, urging the government to protect these public values. Pearce forwarded the letter, with an enthusiastic letter of his own, to the Department of the Interior in Ottawa. On May 30, 1895, Canada's Governor General T. Mayne Daly created a "Forest Park" around today's Waterton Lakes.

The Great Northern Railway line over Marias Pass was completed in 1891, bringing homesteaders into the valleys

west of the pass and miners looking for gold and copper. In 1895, under pressure from miners, the U.S. government acquired from the Blackfeet the mountains east of the continental divide within today's Glacier National Park and Lewis and Clark National Forest. Further north, the Canadian Pacific Railway Company completed its line over Crowsnest Pass in 1898, opening the pass and Elk River valley west of the divide to logging and coal mining. With two cross-continental rail lines, the region saw rapid growth in population and development.

As the population grew, some saw development as a threat to the region's natural

abundance and beauty. In the late 1890s, the editor of *Forest and Stream* magazine, George Bird Grinnell, and others lobbied Congress to establish a national park south of the Canadian border. In a series of articles, Grinnell referred to the region as the "Crown of the Continent." A forest preserve was set aside in 1897, but the area remained open to mining and logging. Grinnell and other conservationists continued lauding the area's unique features, and finally, in 1910, President Taft signed a bill creating Glacier National Park.

Local Rotary clubs in Alberta and Montana rallied around the idea of a transboundary peace park, and in 1932 the governments of



1898

Canada Pacific rail line opened across Crowsnest Pass

1897

Grinnell coined the term, "Crown of the Continent"

"The Crows Nest Pass and Waterton Lakes have been for years a common resort for the surrounding neighbourhood for camping and holiday making, and there being but few such places in the country, I think they should be reserved forever for the use of the public, otherwise a comparatively small number of settlers can control and spoil these public resorts."

~ **Fredrick Godsall**, letter to William Pearce (Sep. 1883)]



1910

President Taft created Glacier National Park

1932

Governments of the US and Canada designated Waterton-Glacier International Peace Park

1976

UNESCO designated Glacier National Park as a Biosphere Reserve

1979

World Heritage Site designation

1995

British Columbia established Akamina-Kishinena Provincial Park

2010

British Columbia and Montana announce an agreement to manage the headwaters of the Flathead River

both Canada and the United States voted to designate the parks as Waterton-Glacier International Peace Park—the world’s first such designation. The United Nations Education, Scientific, and Cultural Organization named Glacier National Park as a Biosphere Reserve in 1976, and recognized Waterton Lakes with the same designation in 1979. Comprising about 1.3 million acres, the two parks were named a World Heritage Site in 1995, acknowledging the area’s rich ecological and cultural values.

Stateside, about 1.6 million acres of federally protected wilderness extend around the outskirts of Glacier National Park. In 1986, the Canadian government designated more than 10,000 hectares as a recreation area adjacent to Waterton and Glacier National Parks, and in 1995, British Columbia established the Akamina-Kishinena

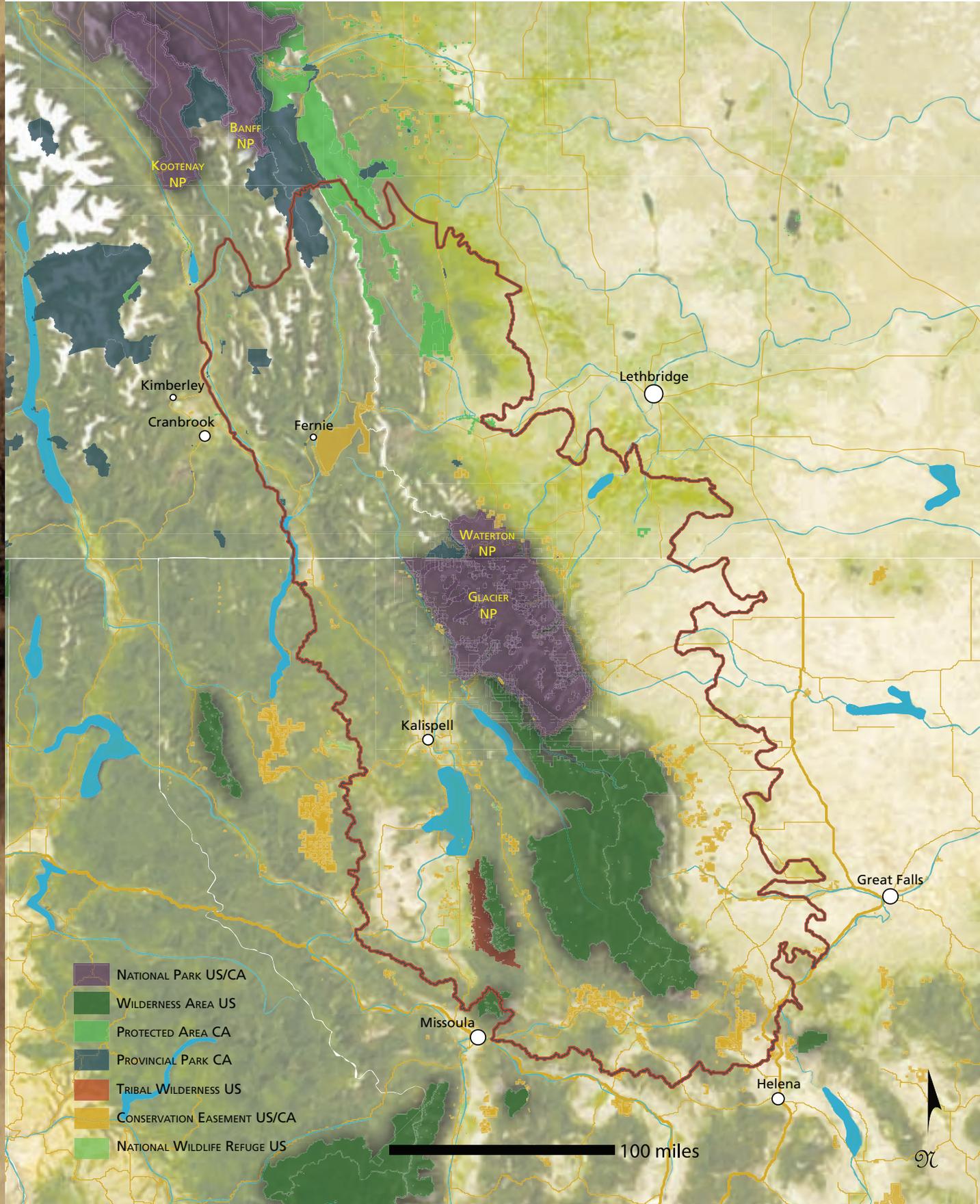
Provincial Park, protecting the narrowest point of the Rocky Mountains. Many additional acres of working landscapes are protected under conservation easements, under which lands remain in private ownership with restrictions on development rights in order to preserve their essential natural characteristics.

More recently, in February 2010, government leaders in British Columbia and Montana announced an agreement to manage the headwaters of the Flathead River Basin for existing types of forestry, recreation, guided outfitting, and trapping uses. British Columbia Lt. Gov. Steven Point declared the Canadian portion of the Flathead River Valley off limits to mining and energy extraction, and Montana Governor Brian Schweitzer vowed to seek federal help to permanently retire mineral leases

on the U.S. side of the border. Although a number of details are yet to be determined, this initial accord was an important move toward resolving decades of controversy over proposed development in the headwaters of the Flathead River Basin.

Thanks to this remarkable and ongoing history of stewardship, the Crown of the Continent endures today as a natural oasis in an increasingly developed world. More than a hundred agencies and community-based organizations are working today to conserve these natural resources and quality of life and guide the Crown’s future. Their work builds upon the legacy of visionaries in the past century who recognized the link between a healthy landscape and thriving communities.

Protected Public, Private, and Tribal Lands



CHALLENGES
AND
OPPORTUNITIES
FOR A REGION
IN TRANSITION

The Crown of the Continent is a region in transition, shaped by internal and external forces that both exert pressure and present new opportunities. Community members and elected officials alike need to think broadly about these changes—and collaborate with one another in responding appropriately—in order to preserve the intimate and enduring link between the region’s land and its people.

Some of the changes are good for the region: improved access to education and healthcare services,

regional and global markets, technology, and financial resources. However, both casual observation and scientific investigation tell us that some current trends present challenges for the future: loss of wildlife habitat; increased demands for water, land, and energy resources; and social turbulence, as economies diversify from a base of natural resource use to knowledge-industry and amenity-oriented growth.

Most changes present themselves at a scale that crosses jurisdictional

and cultural boundaries. While these boundaries delineate ownership and management authority, they also act as dividers between disparate cultures, attitudes, goals, and values. Such divisions stymie efforts to address shared challenges in a coordinated manner. People who care about the Crown and its future are increasingly looking to bridge these jurisdictional and cultural barriers to address the challenges they collectively face at the scale at which they are occurring.





Time Series: 1910–2008
Grinnell Glacier, Glacier National Park
Source: USGS, Climate Change in Mountain Ecosystems, Repeat Photography Project

Top: 1910
Fred Kiser
Courtesy of GNP Archives

Bottom: 2008
Lisa McKeon
Source: USGS

Climate Change

Perhaps nowhere is the rate of change or the range of uncertainty as great as with climate change. Milder winters may make this region more attractive for new residents and may extend growing seasons, but changes in the region's climate will likely also result in drier conditions that could increase the threat of fire and decrease crop yields. Most dramatically, the region's emblematic glaciers are rapidly shrinking. Some climate models predict that glaciers may disappear altogether by 2030.

In short, climate change impacts challenge policy leaders, resource managers, and others who depend on the region's natural resources to understand and plan for conditions that cannot be predicted with certainty. Responding to this uncertainty requires both ongoing learning and flexible policies that can adapt to evolving circumstances.

The Crown of the Continent is well positioned to serve as a laboratory for observing and predicting climate change impacts. The region encompasses the intersection of three major climate zones and a broad array of microclimates. This unique topography presents a distinct opportunity for researchers in the Crown to play a leading role in global efforts to investigate climate change impacts across a range of climate types and at differing elevations.

Significant efforts to understand these dynamics are already underway. Researchers in Glacier National Park, for example, are building on its existing monitoring infrastructure to record

changing weather condition trends and corresponding markers of ecosystem health, including soil moisture levels, water chemistry, fuel and fire behavior, number and distribution of pests and invasive species. Through the National Park Service's Crown of the Continent Learning Center, this information is linked to studies, best practices, and comparative data from throughout the country.

Policy changes are a bit slower to develop, but there has been progress in the region. For example, British Columbia, Montana, the Ktunaxa Nation, and the Confederated Salish and Kootenai Tribes signed an agreement in February, 2010, that recognizes the environmental and economic impacts of climate change on shared waters, ecosystems, protected areas and jurisdictions and commits signatories to work together to capture the new employment and investment opportunities that action on climate change will create.

Additionally, prominent conservation groups from throughout the Crown developed a Crown of the Continent Conservation Initiative aimed at addressing climate change related impacts in four strategic areas: (1) compilation, analysis, and application of climate science; (2) a Crown policy framework; (3) a communications and outreach strategy; and (4) a capacity building and enhancement plan.

Because climate is a defining element of a region's character, changes in the Crown's climate necessarily influence other changes taking place in the region, including changes in water flow and supply, impacts on habitat, wildlife health, and agricultural production, and ultimately, our communities and economies.

A Warmer Forecast for the Crown of the Continent

Climate change scientists caution that the most definite prediction they can make is that conditions will be far less certain in coming decades. Nonetheless, current scientific studies project the following changes and impacts in the Crown:

PREDICTED CHANGES

- » Increase in temperature of 1.5–2.1 degrees Celsius (1.7 to 3.7 degrees Fahrenheit) by 2050
- » More rain in the winter instead of snow
- » Increased number of snow-free days
- » Possible extreme weather events
- » Lower streamflows in the summer and fall
- » Reduced soil moisture levels
- » Longer and warmer summers and fewer days of hard freezing in the winter
- » Increase in frequency and severity of drought; possible increase in duration of drought

ANTICIPATED IMPACTS

- » Increased frequency and intensity of forest fires
- » Increased frequency and severity of insect and disease outbreaks
- » Changes in aquatic life, including an increase in lake trout and a decline in native bull trout and Westslope cutthroat trout populations
- » Increased demand for water storage to address lower summer and fall streamflows
- » Longer growing seasons
- » Impacts on agricultural production and hydropower from changed flow patterns
- » Challenges to public agencies charged with natural resource management and preservation of land and water resources

Sources: Crown Managers Partnership; Clark Fork Coalition; Province of British Columbia's Climate Action Plan; Province of Alberta's Climate Action Strategy; Montana Climate Change Action Plan



Water Resources

“Today, the biggest issue for the Blackfoot nations is clean drinking water and our legal water rights. We continue to negotiate with the government to protect our water. We understand that we ultimately are responsible for the protection of our territory, water, and the retention of our language and culture.”

~ **Earl Old Person**, Former Chief of the Blackfeet Nation, MT, during negotiations over reserved water rights

“Truly, the Crown is the water tower of the continent, and the water is as clean as any on the planet.”

~ **Jack Stanford**, Director
University of Montana
Flathead Lake Biological Station

The abundant, high quality waters that flow from the Crown’s majestic peaks to its valley floors cross political and jurisdictional boundaries, connecting diverse communities and users. As headwaters of the Saskatchewan, Columbia, and Missouri river systems, the Crown plays a significant role in supplying water across the North America continent.

Changing conditions in the Crown present both challenges and opportunities for water managers and all who depend on the Crown’s water resources. The leading pressures today include:

- » Increased demand from a growing number of users;
- » Changes in water supply and quality due to the region’s changing climate, discussed above; and
- » Unresolved issues regarding water rights and jurisdiction involving Native American tribes in the U.S. and First Nations in Canada.

Although abundant, the Crown’s water resources are stretched thin in some areas by competing demands from communities, agriculture, and industry as well as by the need to maintain and restore streamflows for fish and recreational uses. In some cases, this competition will result in limitations on new uses or restrictions for existing water users.

For example, in the South Saskatchewan River, water requirements to honor existing licenses, protect the aquatic environment, and meet new growth demands recently exceeded the amount of water available (see figure). In response, the Government of Alberta initiated a planning process characterized by considerable community and stakeholder engagement, which produced the Water Management Plan for the South Saskatchewan River Basin in August, 2006. Under this plan, Alberta Environment no longer accepts water applications for new water allocations in the Bow, Oldman, and South Saskatchewan sub-basins.

Water resources have always shaped the settlement patterns of many people in the region. Native American tribes’ treaties with the U.S. government recognized their essential relationship with rivers, guaranteeing continued access to water in return for ceding parts of their traditional homelands for non-Indian settlers. The seminal U.S. court decision regarding these “reserved” water rights arose in the Milk River of Montana and Alberta, a tributary of the Missouri River. Litigation and negotiations continue today to quantify the water rights guaranteed to the tribes under these treaties, raising concerns among other water users about the reliability of their water rights. In some cases, new wells and water diversions are prohibited until all unresolved water rights are sorted out.

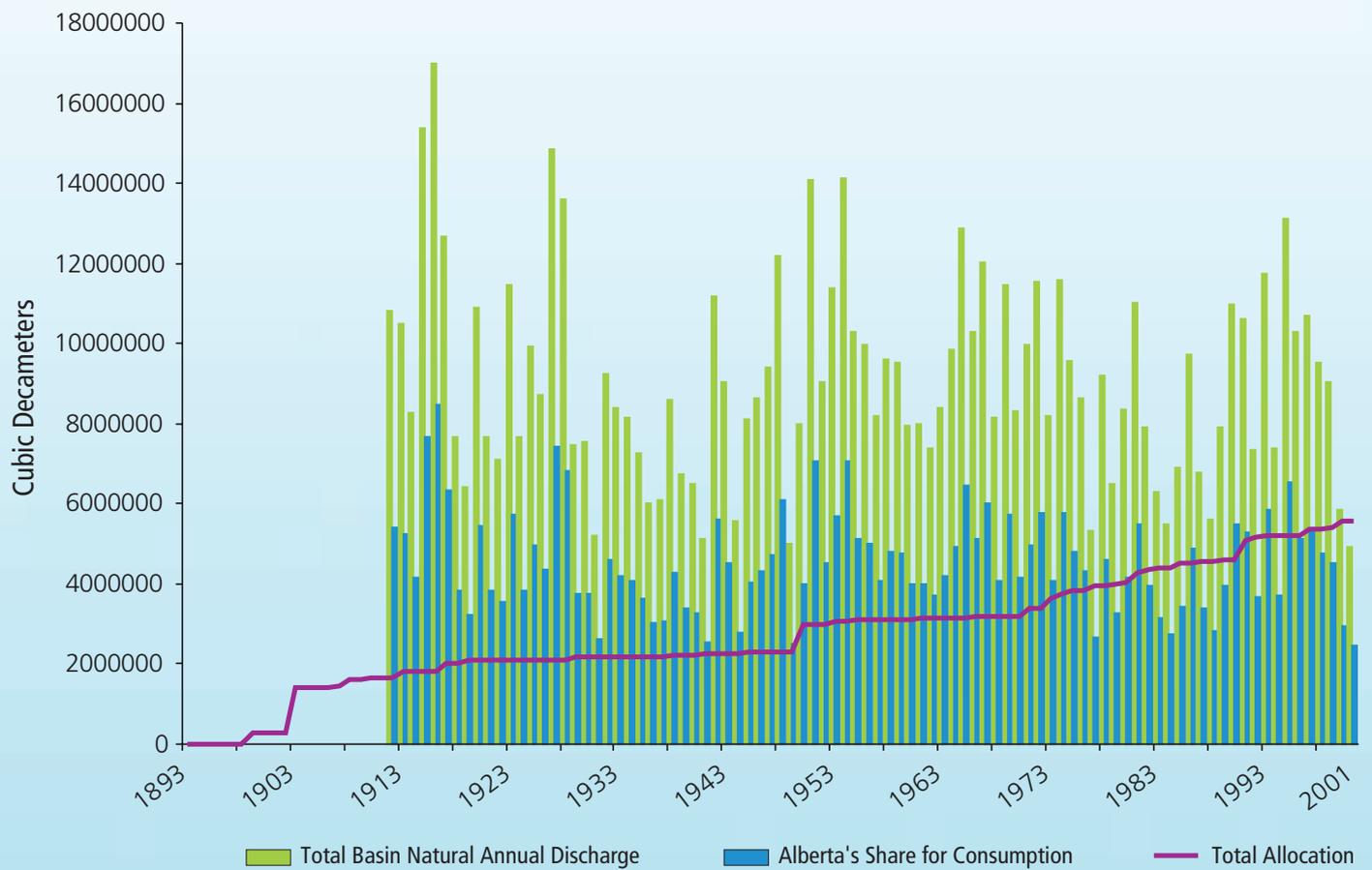
While the Blackfeet Tribe was able to reach agreement on the quantity of water re-



served for use on reservation lands, negotiations with the Confederated Salish and Kootenai Tribes continue. As Susan Cottingham of the Montana Reserved Water Rights Compact Commission explained

to a gathering of western governors in the summer of 2010, water rights in the region will remain uncertain “[u]nless and until these tribal rights are quantified.”

Similarly, under British Columbia’s treaty process, each treaty between a First Nation, Canada, and B.C. will address “jurisdiction and ownership of lands, waters and resources.” The Ktunaxa



The South Saskatchewan River Basin:

Natural discharge, Alberta’s share for consumption, and Alberta’s allocation through licensing

Because Alberta is legally obligated to allow 50% of the South Saskatchewan’s natural discharge to flow through the province, the amount of water allocated to various users now exceeds Alberta’s usable share of water in drier years. Source: Alberta Environment



Triple Divide Peak

have reached an Agreement in Principle with B.C. and Canada on the terms of its treaty and is engaged in ongoing treaty negotiations. Only three of the 47 First Nations that initiated treaty negotiations following the tripartite British Columbia Treaty Commission Agreement of 1992 have completed the six-step treaty process outlined in that Agreement.

Water, like air, is ultimately a shared resource. Conflicts about its use and management illustrate the many ways in which people throughout the Crown of the Continent are linked together. Solving water challenges requires bringing diverse users together to consider shared interests, build relationships and knowledge, and ultimately devise new and innovative methods to protect and conserve the resource.





Wildlife Corridors and Habitat Conservation

The Crown of the Continent's rich species diversity depends on varied and distinct ecosystems—boreal forests, Pacific maritime cedar rainforests, alpine tundra, windswept prairie, and dry grassland pine—which provide habitat needs for specially adapted species such as cutthroat trout, bull trout, Arctic grayling, river otter,

bobcats, fishers, martens, lynxes, and wolverines.

Protected lands such as national parks, wilderness areas, and wildlife refuges provide critical habitat, but these species often require a much larger and more complex network of landscapes and waterways in addition to these protected

lands to survive. These networks require corridors through which animals can move between protected areas, safely navigating landscapes bisected by roads, energy lines, cities and suburbs, and other hazards.

Although corridors are essential to long-term species viability, past efforts to preserve critical wildlife habitat areas



often did not incorporate these passages. For example, grizzly bears moving from the Crown of the Continent into Idaho, the Greater Yellowstone Ecosystem, and the plains along the Rocky Mountain Front must cross a patchwork of public and private, developed and undeveloped lands. Furthermore, major transportation corridors, such as Highway 2 in Montana and Highway 3 in Canada, have proven to be such formidable migration obstacles that the bears have simply stopped moving across them: researchers can differentiate between DNA from grizzlies on either side these roads.

Recent accounts of grizzlies roaming 100 miles and more onto the plains east of the Rocky Mountain Front present an especially poignant reminder of the bear's traditional range. Grizzlies on the plains were a common sight for Lewis and Clark's exploratory party in the nearly nineteenth century, but the lone wanderers today warrant excited accounts in newspapers and intense scrutiny by wildlife managers.

Importantly, preserving these corridors doesn't have to come at the expense of human needs. As the sidebar highlights, resource managers, land use and transportation planners, tribes, and private landowners developed an innovative plan to enhance traffic safety while simultaneously improving wildlife movement across U.S. Highway 93 in Montana.

HELPING THE GRIZZLY (AND OTHER CREATURES) CROSS THE ROAD

In 2004, a gathering of officials from the Confederated Salish and Kootenai Tribes, the State of Montana, and the Federal Highway ceremoniously broke the first ground on the "People's Way," an innovative and ambitious effort to improve highway safety while attending to the region's culture, landscape, and wildlife.

The project includes 41 wildlife passages along a 56-mile stretch of U.S. 93 between Evaro and Polson, Montana, and highway signs indicating geographic highlights in the Salish and Kootenai languages. The goal, as Confederate Salish and Kootenai Tribal Chairman Fred Matt related in 2004, was to "remember that the road is just a visitor" to the landscape, and to work with others to find a way for the highway to "work in harmony with the land."

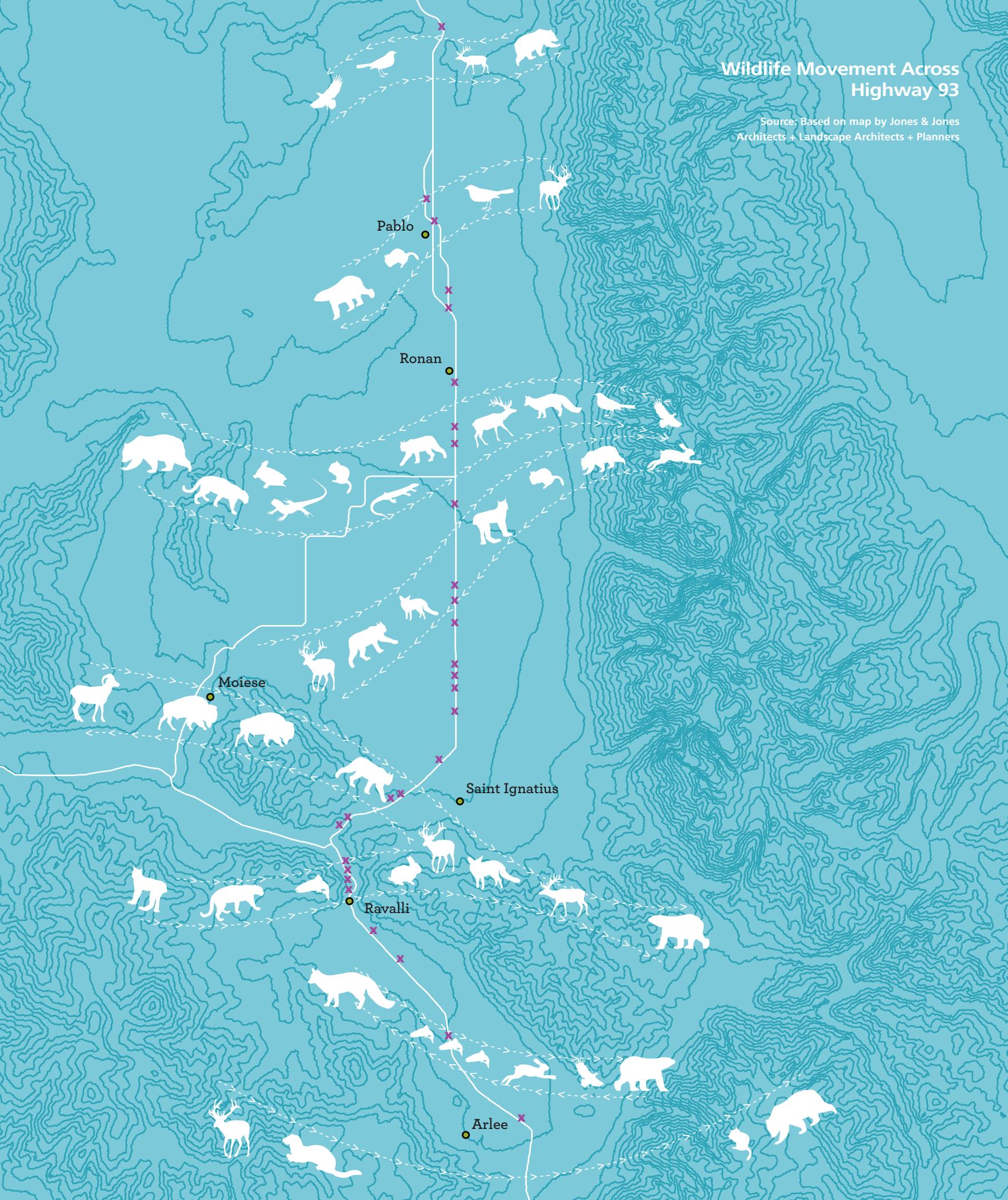
The project is notable not just for incorporating wildlife and cultural values into transportation planning, but also for how state, tribal, and federal agencies worked collaboratively over a number of years to develop a plan that addressed each of their concerns rather than prioritize some needs over others.

"Currently, there are 100–200 wildlife crossing structures in the United States. The U.S. 93 project in Montana will make a major contribution to reducing wildlife mortality by increasing the national number of wildlife crossings an amazing 25–50 percent."

~ **Mary Price**, CSKT wetlands biologist

Wildlife Movement Across Highway 93

Source: Based on map by Jones & Jones Architects + Landscape Architects + Planners





Evolving Economic Opportunities

In this report, the natural boundaries of the Crown of the Continent provide a useful delineation for thinking about river basins, wildlife habitat, and cultural influences. This geographical region, however, is more challenging when considering economic forces currently at work and how they will influence the region in the future. We have analyzed data for activity within the Crown of the Continent, but this approach excludes the influence of metropolitan areas such as Calgary and does not capture economic actors within the Crown with industrial processes and markets that extend nationally and internationally.

Historically, much of the region's economic growth depended on the Crown's abundant

natural resources. Communities formed around timber mills, rich farmland, mineral resources, and recreational destinations. Faced with the growing influence of global market forces, some of these commodities lost their competitive advantage, and the engines of economic development shifted and diversified.

Today, the region's economic opportunities relate largely to tourism, energy development, and a growing professional services sector. Importantly, non-labor sources such as investments, pensions, and public benefits now account for approximately 40 percent of personal income in the counties on the U.S. side of the Crown of the Continent.

Among wage earners, the largest single sector is in government services—that is, public sector employment ranging from local to federal—which provides approximately 13 percent of personal income in the region. And, although accounting for income related to tourism is a bit tricky, that growing sector of the economy is likely the second source of income, followed by health care and social assistance, construction, and retail trade and manufacturing.

The timber industry—forestry, logging, and wood product manufacturing—contributes 2.5 percent of the region's personal income, with earnings in a declining trend. Agricultural income provides 1.5 percent of the



regional income, and has fluctuated considerably in the Crown as elsewhere with wide swings in agricultural commodity prices.

Energy sector trends show economic forces on the future of the Crown, although current earnings from oil and gas represent just 0.1 percent of personal income in the region. As noted above, focusing on the defined Crown of the Continent excludes some important influences on the region's economy. For example, despite strong pressures to reduce greenhouse gas emissions, Alberta's abundant fossil fuels likely will remain important in the global energy sector, especially if the industry succeeds in developing more environmentally sensitive extraction alternatives.

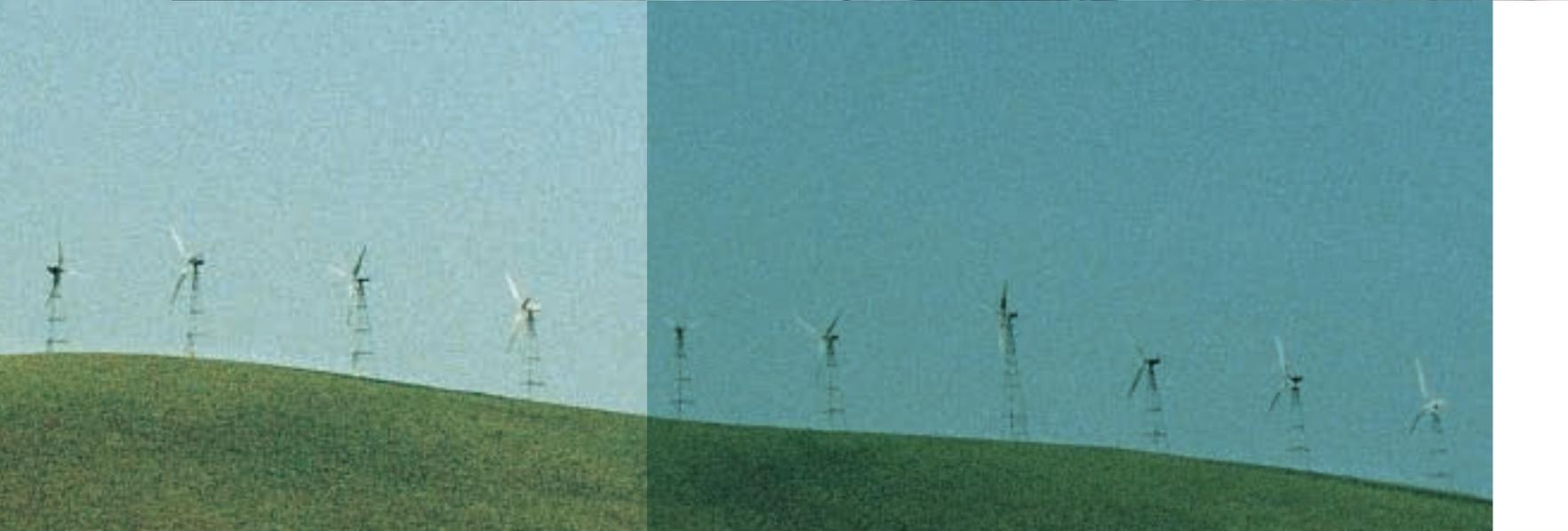
For instance, renewable sources favor wind energy generated on the Front Range of the Rocky Mountains (see sidebar), although much of the region's potential remains untapped due to the lack of suf-

A STRATEGIC APPROACH TO TOURISM

Rapidly growing public interest in visiting the Crown of the Continent prompts partnership among groups to capitalize on economic opportunities and to draw attention to the region's cultural heritage.

For example, the interactive Geotourism MapGuide for the Crown of the Continent emerged from a collaboration involving more than 50 regional conservation, business and tribal organizations, local communities, and government agencies from Montana and Alberta, B.C. Carrie Schafer, a project partner from the College of the Rockies, highlighted the spirit of the project, noting that "[p]eople from both sides of the Rockies in Montana, B.C. and Alberta poured themselves into this with an eye on creating something as unique as the people who live in the Crown of the Continent area."

**Explore the rich information available at the Crown of the Continent Geotourism MapGuide website:
<http://www.crownofthecontinent.net/map.php>**



TAPPING INTO “THE SAUDI ARABIA OF WIND”

The global appetite for energy continues to grow while concerns over global warming are tempering the appeal of traditional fossil fuel resources. The Crown is well positioned to respond to these dynamics. Wind energy developers and utilities across the globe increasingly seek the world-class wind resources on the eastern slopes of the Rockies. In Montana, for example, a San Diego-based utility is poised to invest \$600 million toward a proposed 309 MW wind farm in Glacier and Toole Counties. Across the border in Alberta, Mainstream Renewable Power, a renewable energy development corporation based in Ireland, launched a \$840 million (Canadian dollars) joint venture with Alberta Wind Energy Corporation in March 2009 to add over 400 MW of wind energy to existing capacity. Critical infrastructure developments linking these wind resources to the electricity grid are also underway, including the construction of a 214-mile Montana-Alberta Tie power line as well as a new transmission line linking Pincher Creek to Lethbridge.

Full realization of the region’s wind resources will require completion of new transmission lines to connect the dispersed generating sites with distant users. As Montana Gov. Brian Schweitzer told his fellow western governors in June, 2010, “We don’t develop any of the alternative sources until you get transmission. You can’t put electricity in a bottle and send it down the river.” Transmission line siting forces hard choices on those concerned both with landscape protection and renewable energy generation, as outlined in “Smart Lines,” a 2008 report by Western Resource Advocates.

efficient transmission lines to connect these dispersed sources with national energy markets. Montana, for example, is ranked fifth among U.S. states in wind resources yet 18th in installed wind generating capacity. Taking actions that position the region to use these wind resources in an environmentally responsible way could help citizens and communities take advantage of the growing “green sector,” which has seen greater job growth than the economy as a whole over the past decade.

These and other trends have diversified the Crown’s economy and demanded a more educated and skilled workforce. In response, local businesses have linked with Tribal and community colleges to shape curricula and programs, helping both retrain workers and prepare the region’s next generation to be competitive in tomorrow’s economy. This assistance is necessary to ensure that better, high-paying jobs are available to young people living in the Crown as well as experienced workers whose skills no longer match the demands of the market.



Patterns of Growth and Development

Over the past several decades, growing communities and shifting land uses have reshaped the ring of human development that surrounds the protected areas at the Crown's core.

Three notable trends are currently playing out: (1) larger towns and cities have grown considerably in population over the past

30 years and are projected to experience continued growth; (2) smaller towns and more rural locations have seen little population growth and in many instances have declined in population over the past 30 years; (3) an increasing number of land use efforts seek to accommodate concentrated growth in and around populations centers while preserving important environmental,

natural resource, aesthetic, and agricultural values. The table provides a brief overview of population dynamics in the Crown from 1980-2009.

Not surprisingly, development in the region is closely tied to economic opportunities. Prior to the economic downturn beginning in 2008, the amenity-rich

Population Change in and around the Crown of the Continent (1980-2009)

	1980	1990	2000	2009	% change
1980–2009					
Browning	1,276	1,170	1,065	1,079	-15.4
Calgary	560,618	692,885	860,749	1,065,455	90.1
Choteau	1,798	1,741	1,781	1,718	-4.4
Cranbrook	15,915†	16,447†	18,756	19,161	20.4
Fernie	5,444†	5,012†	4,653	4,415	-18.9
Kalispell	10,698	11,917	14,223	21,640	102.3
Lethbridge	53,135	60,614	68,712	85,492	55.1
Missoula	33,351	42,918	57,053	68,876	106.5
Pincher Creek	3,825	3,800	3,659	3,712	-3.0

†: Fernie and Cranbrook statistics for 1980 and 1990 are from B.C. census data for 1981 and 1991

Sources: Montana Census and Economic Information Center; B.C. Stats; Alberta Municipal Affairs.

communities in the Crown were growing quickly. Much of the new development sprawled into surrounding farmland and the woods close to the borders of protected public lands.

This growth was fueled in part by new technology that allowed people to conduct business in more remote locations, as well as by a booming market in second homes. For example, Montana's Flathead County, which supports the largest economic center and greatest number of residents in the Crown, grew from 59,218 residents in 1990 to 89,624 in 2009, a 51 percent increase in just two decades.

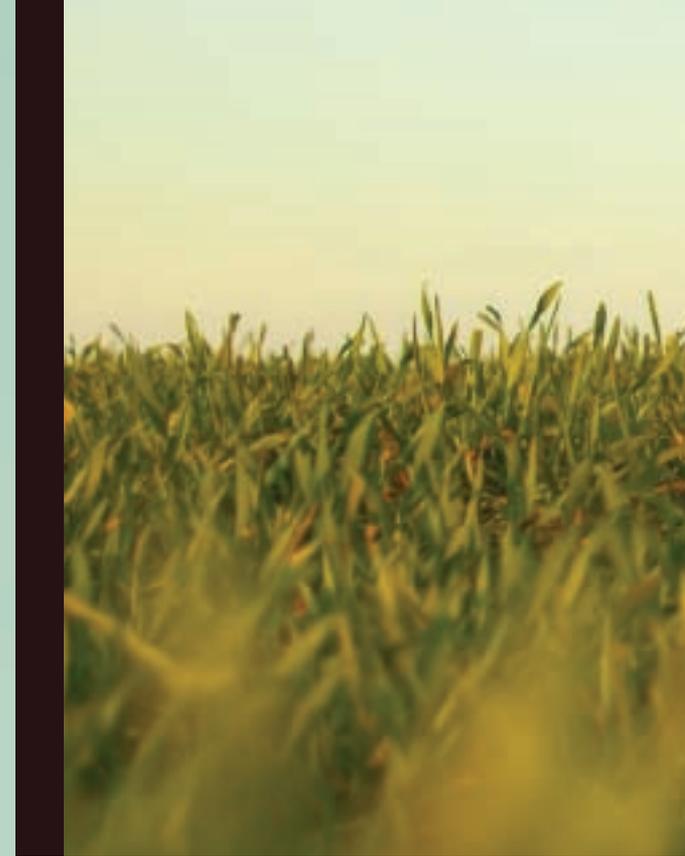
The same is true north of the border. Calgary, the closest major city to the Crown, grew by 90.1 percent from 1980-2009; nearby Lethbridge grew by 55 percent over the same period. As part of the new Alberta land use planning process, community and provincial leaders identified the following challenges resulting from growth in southwest Alberta:

- » pressure to expand urban boundaries to accommodate associated residential, commercial, and industrial development;

- » greater demand for residential developments in rural areas;
- » greater demand on recreational facilities and sites; and
- » greater demand for natural resource development.

While population centers have put increasing pressure on valued landscapes in some areas of the Crown, they also contribute resources and expertise that have led to a number of innovative land use practices and conservation tools. Some new developments use sustainable resources, preserve natural and historic resources, engage others in the community during the planning process, and focus on economic viability. Additionally, there is a growing awareness of the hazards associated with rural residential development in fire prone areas.

One growing trend is the use of conservation easements. Conservation easements are voluntary agreements between a landowner and a private entity or public agency, whereby the "use rights" to a property are purchased for conservation purposes. As shown on the following map,



conservation easements have been put in place in many places in the Crown, with the effect of providing both economic benefit to landowners and helping achieve conservation objectives.

In addition to conservation easements, efforts are underway in the Crown to protect important landscapes and resources through land purchases and exchanges. The Montana Legacy Project is the most notable effort to purchase land outright for conservation purposes: The Trust for





Protected Private and Public Lands

Public Land and The Nature Conservancy, with the assistance of the U.S. government, will buy 310,000 acres from Plum Creek Timber Company in the southern part of the Crown.

Existing and evolving land use and planning regulations add to this suite of options (see the sidebar for a summary in the Crown). The most notable land use planning effort currently underway in the region is in Alberta, where a new Land Use Framework and Land Stewardship



Act provide additional tools to citizens and government officials in response to significant growth in the province. These include additional opportunities for using conservation easements (may now be used

for purposes including environmental education, research or scientific use, open space, or recreational use); new conservation directives (prescriptive government directives that can be used to preserve

and conserve critical conservation values); and the establishment of a transfer of development rights program. As noted in a recent Miistakis Institute report about the new Alberta Land Use Framework, these



practices and tools “help reconcile conservation of valued landscapes and resources, and appropriate sustainable development of resources to support Alberta’s communities and our economy.”

With expected future growth likely to follow the same pattern—significant urban growth but little growth in rural areas—the task ahead will be to build on these existing frameworks and practices with

additional tools and resources that shape development patterns to focus growth near services, protect natural areas, preserve and conserve working landscapes, and enhance the Crown’s special quality of life.



GUIDING GROWTH IN THE CROWN OF THE CONTINENT

Many jurisdictions in the Crown benefit from land use frameworks that governments and citizens have devised to guide growth and development decisions within a given jurisdiction. The following list provides a sampling of these plans at different levels of government.

FEDERAL AGENCIES

- » National Park Service, Glacier National Park’s General Management Plan
- » U.S. Forest Service, Flathead National Forest Plan
- » Parks Canada, Waterton Lakes National Park, Management Plan 2010

STATE, TRIBAL, AND PROVINCIAL GOVERNMENTS

- » British Columbia’s Local Government Act and Community Charter

- » Alberta’s Land Use Framework, Land Stewardship Act, and Municipal Government Act
- » Montana’s Land Resources and Use statutes (Title 76, Montana Code Annotated)
- » Flathead Reservation’s Comprehensive Resources Plan and Draft Land Use Plan

LOCAL GOVERNMENTS

- » Flathead County Growth Policy
- » City of Fernie’s Official Community Plan
- » Town of Cardston Land Use Bylaw

COLLABORATIVE
CONSERVATION:
WORKING
AT THE
RIGHT SCALE

The issues facing the Crown of the Continent challenge people and organizations with diverse interests to work as partners to avoid fragmented planning and “death by a thousand decisions.” Regional networking and a variety of partnerships will be essential to sustain this treasured landscape and the communities it sustains.

Networks are based on self-interest, as people usually join together for their own benefit and to leverage their own work. Networks tend to

have fluid membership; people move in and out of them based on how much they personally benefit from participating. As people exchange ideas, learn together, and develop a common sense of purpose, suddenly and surprisingly a new system emerges at a greater level of scale.

Based on our practical experience and study of hundreds of regional initiatives in North America, we see a continuum of approaches—from informal networks, to more

formal partnerships, to regional institutions. Thinking in terms of this continuum reveals that these approaches overlap in some ways and that the differences among them are often subtle. Large landscape conservation initiatives also tend to follow a progression from informal to more formal governance and implementation.

Years of experience and observation reveal no single model for collaboration on this scale. Indeed, regional collaboration is more like a political



NETWORKS

- » Build Relationships
- » Exchange Information
- » Identify Common Interests

PARTNERSHIPS

- » Coordinate Existing Institutions
- » Negotiate Compacts

REGIONAL INSTITUTIONS

- » Create Intermediary Organizations¹
- » Create Regulatory Agencies

¹ Intermediary Organization: an agent who acts as a link between parties.

Source: Based on conceptual graphic by Center for Natural Resources and Environmental Policy, University of Montana, August 9, 2010

campaign than rational planning. Thus, working across boundaries does not necessarily happen through some logical, predetermined path, or through the efforts of a single agency or organization. Rather, regional collaboration often happens as networks of relationships form among people who discover they share a common cause and vision of what's possible.

We can look at emerging strategies in the Crown of the Continent in terms of their scale, ranging from the most local to those that extend to the whole region and beyond. As illustrated by the selected examples that follow (and the more comprehensive list included in the Appendix), landscape-scale conservation initiatives with the Crown of the Continent are nested within one another at varying geographical scales. This situation accentuates the difficulties in defining what we mean by large landscape conservation; yet each case represents its appropriate “problemshed” that inevitably crosses geographical and political borders.

This growing and dynamic network of initiatives represents a natural foundation for sharing knowledge, practices, and commitments to change. At times, and typically in response to a threat or opportunity, a unified voice will emerge organically by people with common interests and visions, sharing ideas, information, and working together. The strategies profiled here represent important markers of the region's emerging identity and leadership network. We don't necessarily lack for a sense of place, but we are just beginning to articulate a workable—and adjustable—sense of scale.



KEY INGREDIENTS FOR REGIONAL COLLABORATION

- » **Catalyst**—the crisis, threat, or opportunity that compels people to think and act regionally
- » **Leadership**—the need for different types of leaders to catalyze, enable, and sustain action
- » **Representation**—the people, organizations, and jurisdictions needed to achieve the desired outcome
- » **Regional fit**—the tension of matching the “problemshed” with people's interest
- » **Governance**—the degree of decision-making authority, along with mechanisms for funding and dispute resolution
- » **Learning**—the process of facilitating scientific and public learning
- » **Strategy**—the formulation of a vision, goals, and aspirations
- » **Implementation**—a plan to move from vision to action
- » **Outcomes**—the agreements, policies, programs, and on-the-ground accomplishments achieved
- » **Adaptation**—the ongoing process of monitoring, evaluating, and adapting as needed

Source: McKinney, Matthew, Lynn Scarlett, and Daniel Kemmis. 2010. *Large Landscape Conservation: A Strategic Framework for Policy and Action*. Lincoln Institute of Land Policy. pp. 52.



Watershed Groups

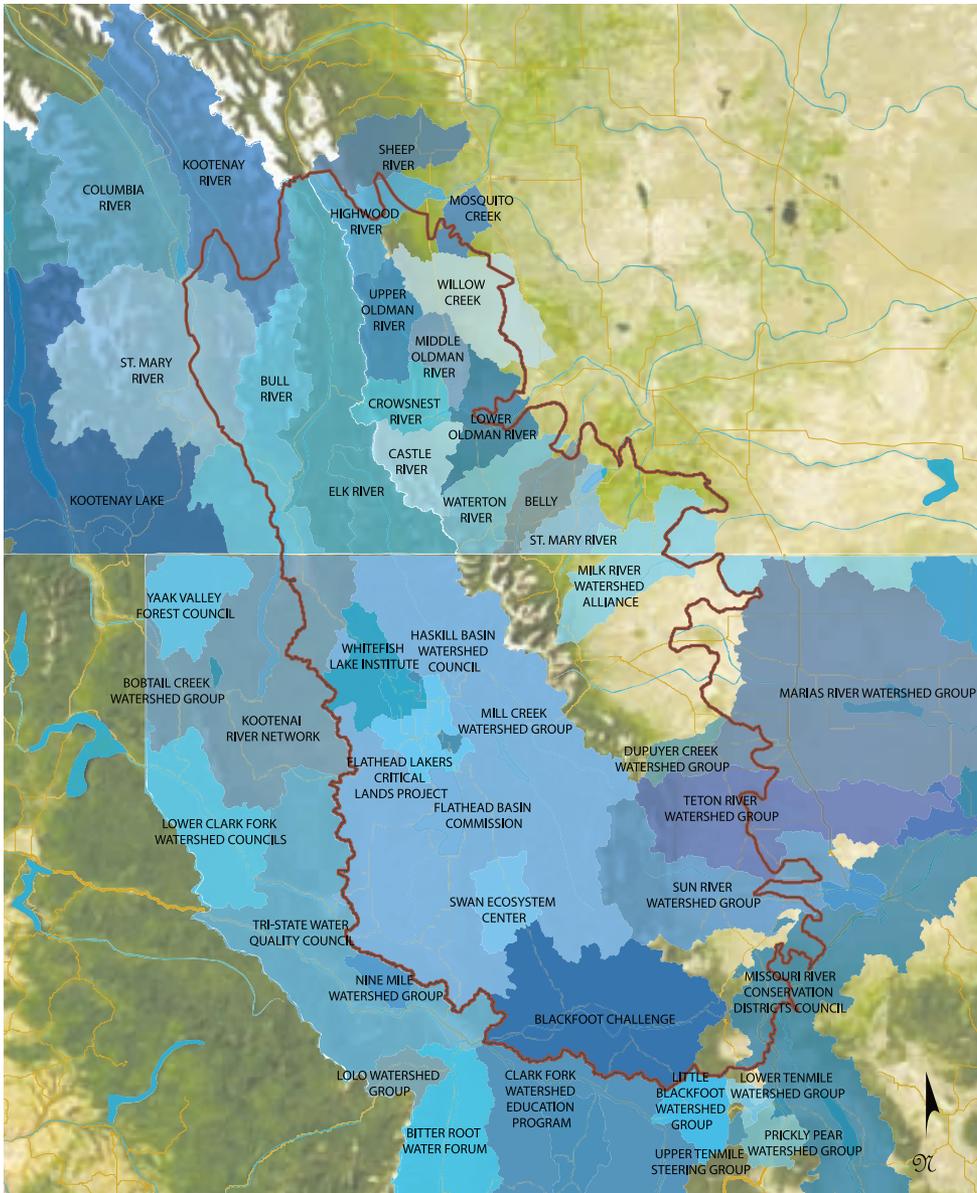
Starting with the strategies that focus closest to home, dozens of watershed groups in the region engage private landowners, conservationists, public resource managers, and others—including those whose livelihoods are linked to sustainable use and enjoyment of natural resources—to identify and develop practical solutions. Watershed groups restore water quality, fisheries, and wildlife habitat. They combat invasive weeds, educate user groups, conserve water, and strive to maintain working ranches and forests in the face of growing pressure to fragment working landscapes for rural subdivisions and residential acreages.

Watershed groups working in the U.S. implement projects with funds from a variety of federal and state sources in addition to donations from individuals and private foundations. In Montana, for example, primary public funding sources include:

- » Clean Water Act Section 319 (nonpoint source pollution) program, federally funded and administered by Montana Department of Environmental Quality
- » Future Fisheries program, administered by Montana Fish, Wildlife & Parks
- » Environmental Quality Incentives program of the USDA Natural Resources Conservation Service

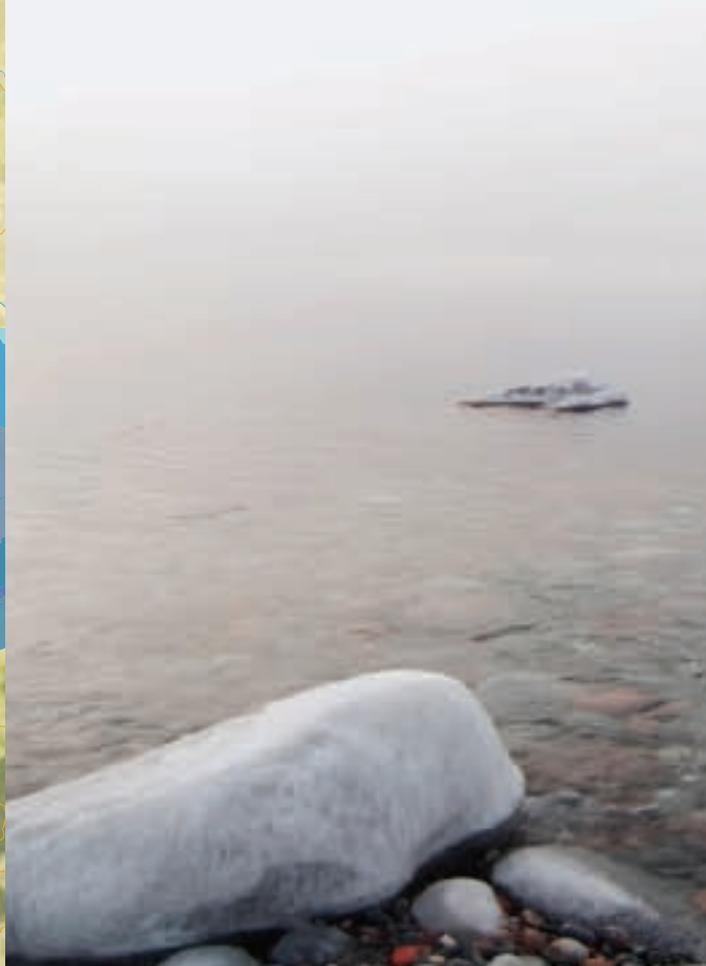
Watershed stewardship groups in Canada engage in similar activities, with support from both public and private sources. Under its provincial program titled *Water for Life: Alberta's Strategy for Sustainability*, the Government of Alberta provides funds to the Alberta Stewardship Network, which in turn, supports watershed stewardship groups.

As illustrated in the map, many examples of such local initiatives in the watersheds exist throughout the Crown. For example, Montana's Blackfoot Challenge is a landowner-based group that leverages diverse public funding sources and encourages coordinated management of the Blackfoot River, its tributaries, and adjacent public and private lands. This nonprofit, nongovernmental organization operates locally but has gained a national reputation for its success in preserving the rural character and natural beauty of a watershed. The group's charter dates back to 1993, but Blackfoot landowners have played an instrumental stewardship role since the 1970s, highlighting the benefits of conservation easement legislation, walk-in hunting areas, and recreation corridor management.



Watershed Groups

Note: Known watershed groups are indicated on the U.S. side of the border for the region; in Canada, the watersheds are delineated, but watershed groups are not identified.



Sub-Regional Partnerships

While watersheds provide the natural home for local, place-based collaborative efforts, it is often necessary to work collaboratively on a broader scale, linking several watersheds and a more complex array of stakeholders and political leaders. Such an approach defines its scale by the “problemshed” rather than any physical or political boundaries. Depending on the scale of the challenge, the geographic reach of this approach may be smaller than the region in which they are based, so we describe these initiatives as “sub-regional” in scale.

Strategies in the Crown of the Continent demonstrate the value of working sub-regionally to address issues at the appropriate scale and to leverage the skills and resources of various entities. Some of these initiatives are government sponsored, such as the Alberta



Sub-Regional Initiatives

Note: These are some representative initiatives, this list is not meant to be exhaustive.



Land Use Framework, which guides conservation and development efforts throughout the province, including the area associated with the Crown of the Continent.

In a sub-regional government initiative that reaches across the international border, a Memorandum of Understanding and Cooperation signed in 2010 by British Columbia and Montana represents, according to B.C. Lt. Gov. Steven Point, “A new partnership with Montana [to] sustain the environmental values in the Flathead River Basin in a manner consistent with current forestry, recreation, guide outfitting and trapping uses.” Under the Memorandum, British Columbia and Montana agree to work together and in partnership with their respective federal governments, the Ktunaxa Nation and Confederated Salish and Kootenai Tribes, local governments, and other community interests to address environmental protection, climate action, and renewable and low-carbon energy.

Other sub-regional initiatives emerge from the grassroots, but aim at influencing public policy. For example, the Coalition to Protect the Rocky Mountain Front in Montana formed when ranchers, conservationists, and others united to oppose oil and gas drilling on federal lands. The Coalition has evolved over time to embrace a broader range of forward-looking goals, including the Rocky Mountain Front Heritage Act, a proposal



for new federally designated wilderness and conservation management areas, as well as measures to control, prevent, and eradicate the spread of noxious weeds.

Finally, sub-regional coalitions of businesses and local government sometimes find it mutually beneficial to pool resources to attract tourists to enjoy natural and cultural resources in their part of the region, as is the case with Montana’s Glacier Country Region Tourism Commission.



Regional Initiatives

The Crown of the Continent has inspired a number of regionwide initiatives, each linking together various entities or efforts to achieve shared goals for the Crown. In 1994, Dr. William A. “Lex” Blood proposed the formation of an educational consortium to promote the importance and collective integration of educational opportunities in the bio-region. Today, individuals representing 30 different state, federal, and private conservation and natural resource organizations are part of the Crown of the Continent Ecosystem Education Consor-

tium, whose mission is to foster an understanding of environmental, social, political, and economic components and interweavings of the landscape through educational activities and projects.

The University of Montana’s and University of Calgary’s Transboundary Program offers another regional link between educational initiatives, providing student research and internship support, shared courses, and faculty exchange to explore and develop the knowledge and skills necessary to manage across domestic or

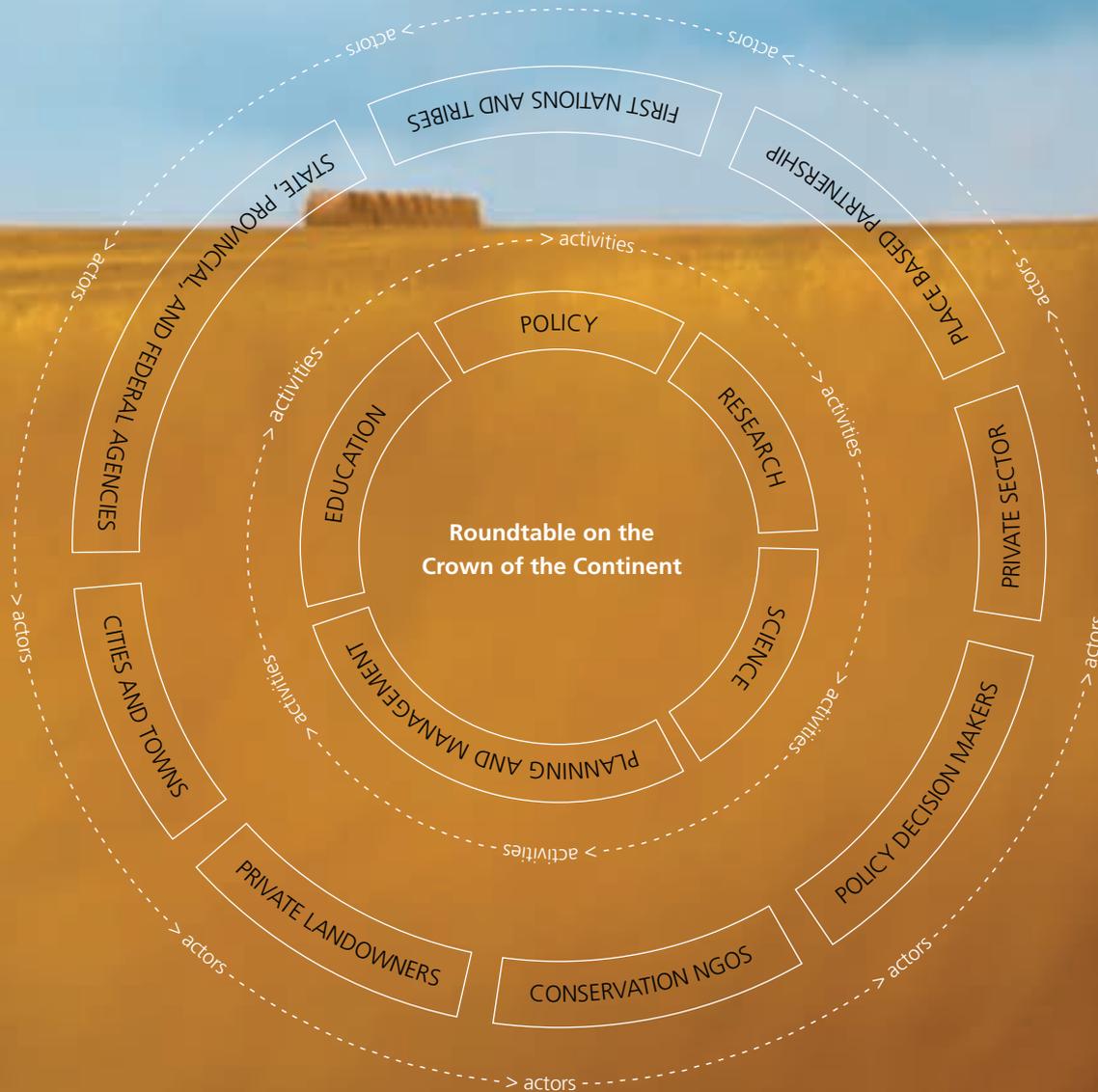
international administrative boundaries in the Crown of the Continent.

Public resource managers working around the region formed the Crown Managers Partnership in 2001 as an inter-agency forum for about 20 land management agencies in Montana, British Columbia, and Alberta. This voluntary partnership seeks to build common awareness of Crown interests and issues, shape relationships, and identify collaborative and complementary tasks that the various participating jurisdictions can pursue.

Among the regionwide initiatives in the private sector, the Crown of the Continent Geotourism Council represents a broad-based partnership among local communities, businesses, and conservationists to educate visitors about landscape stewardship, cultural heritage, and sustainable development.

Another regional approach is represented by the Roundtable on the Crown of the Continent, an ongoing forum that brings together people who share a common commitment to the region (see graphic). Through workshops, forums, policy dialogues, and conferences, the Roundtable provides an opportunity to exchange ideas, build relationships, and explore

opportunities to work together—to sustain the natural and cultural heritage of this remarkable landscape. Participation is based on self-interest. As people exchange ideas, learn together, and develop a common sense of purpose, they gradually improve their individual and collective capacity and commitment.



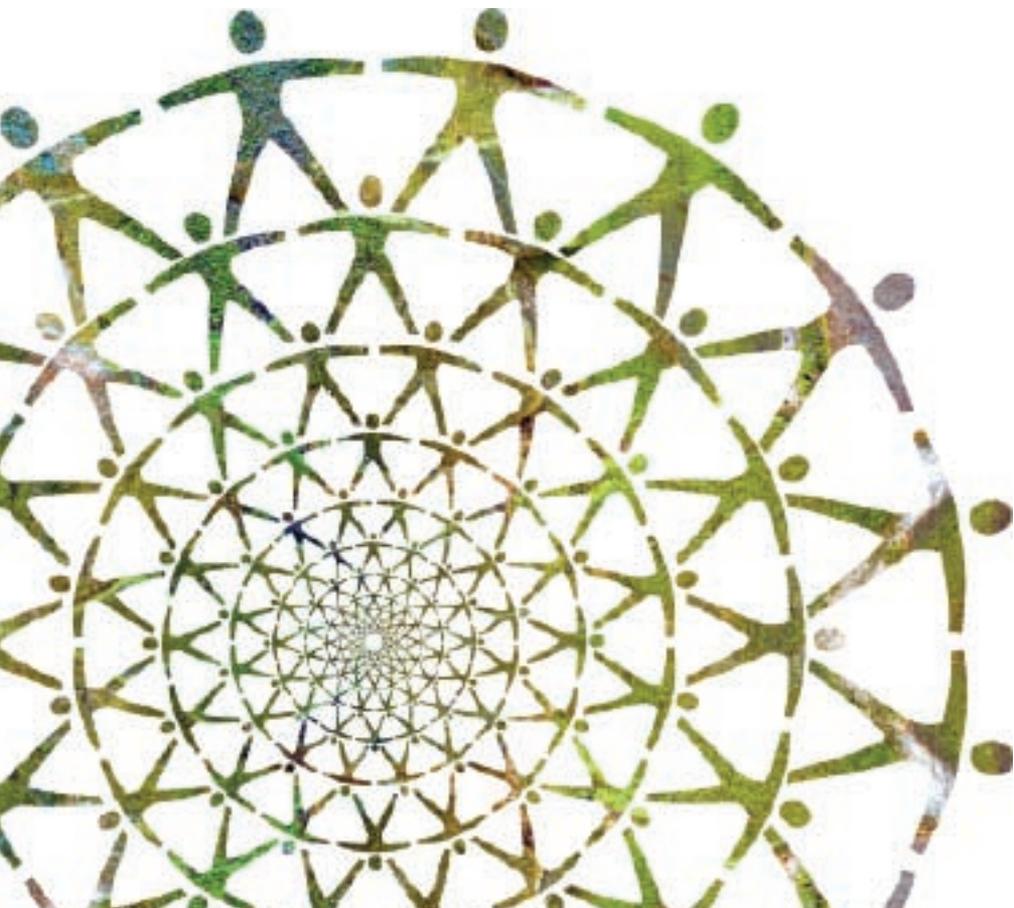
Going Beyond the Region

In some cases, the scale of issues to be addressed extends beyond a defined geographic region. In this case, the appropriate response is larger as well. This is true in the Crown of the Continent, where coalitions of conservation groups and their partners advocate coordinated responses to large transboundary issues such as climate change (Crown of the Continent Conservation Initiative) and wildlife corridors (Yellowstone to Yukon or “Y2Y” Conservation Initiative).

In one of the newest large-scale responses to issues facing the Crown, the U.S. Fish & Wildlife Service launched the Great Northern Landscape Conservation Cooperative, a partnership with states, provinces, federal agencies, universities, and nongovernmental organizations to develop scientific capacity to address climate change and other stressors to wildlife species and habitats in an integrated fashion within the Northern Rockies and Columbia Basin. The Great Northern landscape, as mapped for this initiative, is larger than the Y2Y region; however, cooperative organizers have expressed interest in coordinating with and building upon the inter-agency collaboration established by the Crown Managers Partnership.



STRATEGIC OPTIONS TO MOVE FORWARD



The strategies emerging in the Crown involve landowners, communities, agencies, and advocacy groups working at various scales to address a number of issues related to the natural and human environment in this region. As we look to the future, the primary challenge in the Crown is to build on these accomplishments and knit together the capacities throughout the region to sustain the natural and cultural heritage of this remarkable transboundary region.

In this section, we offer a menu of strategic options as we see them today. These options are based on the input and advice of many, many

people and conversations over the past three years, along with our own observations about the past, present, and future of the Crown. We also draw on our research and experience on large landscape conservation throughout North America.

The options are not presented as a consensus-based set of recommendations; rather, they are more like trailheads, a place to begin exploring paths to sustain the natural and cultural heritage of the Crown. We fully expect that other people may have different—hopefully better—ideas on how to achieve conservation and related objectives within this region.

The strategic options to move forward aim to: (1) coordinate policy and planning; (2) expand conservation funding and finance strategies; (3) facilitate scientific and public learning; and (4) build regional capacity. Some of the options presented in each category build on existing initiatives; in such cases our intent is to amplify and seek additional support for them. Some options may be new, some just being explored. Once again, our purpose in presenting this menu of options is to simply catalog the range of possibilities; we do not make any presumptions about who should do what when.

Coordinate Policy and Planning

1 ESTABLISH THE CROWN as a pilot project to align the growing number of state, provincial, and federal climate adaptation and landscape conservation planning efforts focused on the region. There is a new push for landscape-level conservation management at all scales of government, as exemplified by these efforts coming online: President Obama’s America’s Great Outdoors Conservation Initiative, U.S. Fish and Wildlife Service’s Landscape Conservation Cooperatives, U.S. Bureau of Land Management’s Healthy Lands Initiative, the U.S. Department of Agriculture’s All Lands Initiative, the Western Governors’ Wildlife Corridors Initiative, the State of Montana’s Comprehensive Fish and Wildlife Conservation Strategy, and the Province of Alberta’s Land Use Framework. All these efforts could use the Crown for multijurisdictional coordination and for refining collaboration among complementary programs.

2 DESIGNATE THE CROWN as a region of special climate change concern. Few landscapes epitomize the impact of climate change as the Crown of the Continent. As federal and state efforts focus resources on regions of disproportionate impact due to climate change, the Crown could be seriously considered as a candidate area. The federal governments of the U.S. and Canada could identify discrete landscapes for climate adaptation investments; within the Rocky Mountain region, the Crown has many attributes (such as visible impacts, community interest, and potential for ecological resilience) that make it a suitable candidate for such designation. One way to start this process is to secure a cooperative agreement among local, state, and federal agencies within the United States—and to then engage Canadian and tribal governments over time.

3 AFFIRM AND STRENGTHEN the Crown Managers Partnership as an ongoing forum for intergovernmental cooperation. The Crown Managers Partnership (CMP) has demonstrated its ability to facilitate dialogue among government agencies with management responsibility in the Crown. Since its creation in 2001, the CMP has built common awareness of regional interests and issues, shaped relationships, and identified collaborative and complementary tasks that the various participating jurisdictions can pursue.

The Crown Managers Partnership is open to all public land and resource management agencies within the Crown of the Conti-

ment. While it is an excellent platform to facilitate cross-boundary conservation, the CMP might be strengthened by: (1) encouraging consistent participation by all governments and agencies and (2) securing consistent funding for staff and projects. Some people have also suggested that it would be helpful to regularly engage high-level government policy/decision makers in the Crown (in addition to managers) to facilitate understanding and working relationships as well as to lay the groundwork for joint policy decisions and commitments to implement action on the ground.

Realizing that this objective might be achieved either as part of the CMP or through some other entity, various people who reviewed drafts of this report suggested the following options:

- » The Memorandum of Understanding (MOU) signed in 2007 by the State of Montana and the Province of Alberta supports the vision and objectives of the CMP. Other governments and agencies within the region could offer similar recognition of the value of the CMP by signing the MOU, possibly fostering more consistent, broad-based participation and ability to raise the funds critical to support the work of the CMP.
- » While the CMP itself may want to explore the idea of engaging high-level government policy/decision makers on some regular basis, CMP members may also work with First Nations/Native American tribes throughout the region to convene government-to-government policy dialogues. Some of the tribes have recently expressed an interest in playing a more active role in facilitating Crown-wide conversations.
- » Another strategy to amplify the work of the CMP is to explore the idea of convening a high-level transboundary conservation summit every few years. The idea here is to engage American and Canadian governments at the state, provincial, and federal levels—including First Nations, Native American tribes, and



representation from Washington, D.C. and Ottawa, and other stakeholders—to reaffirm cooperative agreements, revise collaborative conservation strategies, develop 10-year management plans, and assess the state of shared ecological resources for the region. Once again, the CMP may organize or cooperate with others to organize such a summit.

Whatever vehicle makes sense, it is important to sustain the existing identity and effectiveness of the CMP.

4 ENCOURAGE STATE, PROVINCIAL, and federal governments to consider the value of lands adjacent to their particular jurisdictions as they develop and implement land and resource management plans. For instance, within the Province of Alberta’s Land Use Framework, the South Saskatchewan

planning region that includes part of the Crown could receive the greatest degree of resource protection given that it is adjacent to already protected lands (i.e., Waterton Lakes National Park). Such a conservation-oriented designation would also be consistent with the recommendations of the Castle Special Place initiative.

In British Columbia, provincial and federal officials might explore the feasibility of expanding Waterton Lakes National Park and/or creating a Wildlife Management Area to help implement the spirit and letter of the MOU between British Columbia and Montana regarding environmental protection, climate change, and energy in the Flathead River corridor. In the United States, Congress could likewise implement the North Fork Watershed Protection Act of 2010 as a way to facilitate consistent land use and conservation across this sub-region of the Crown.



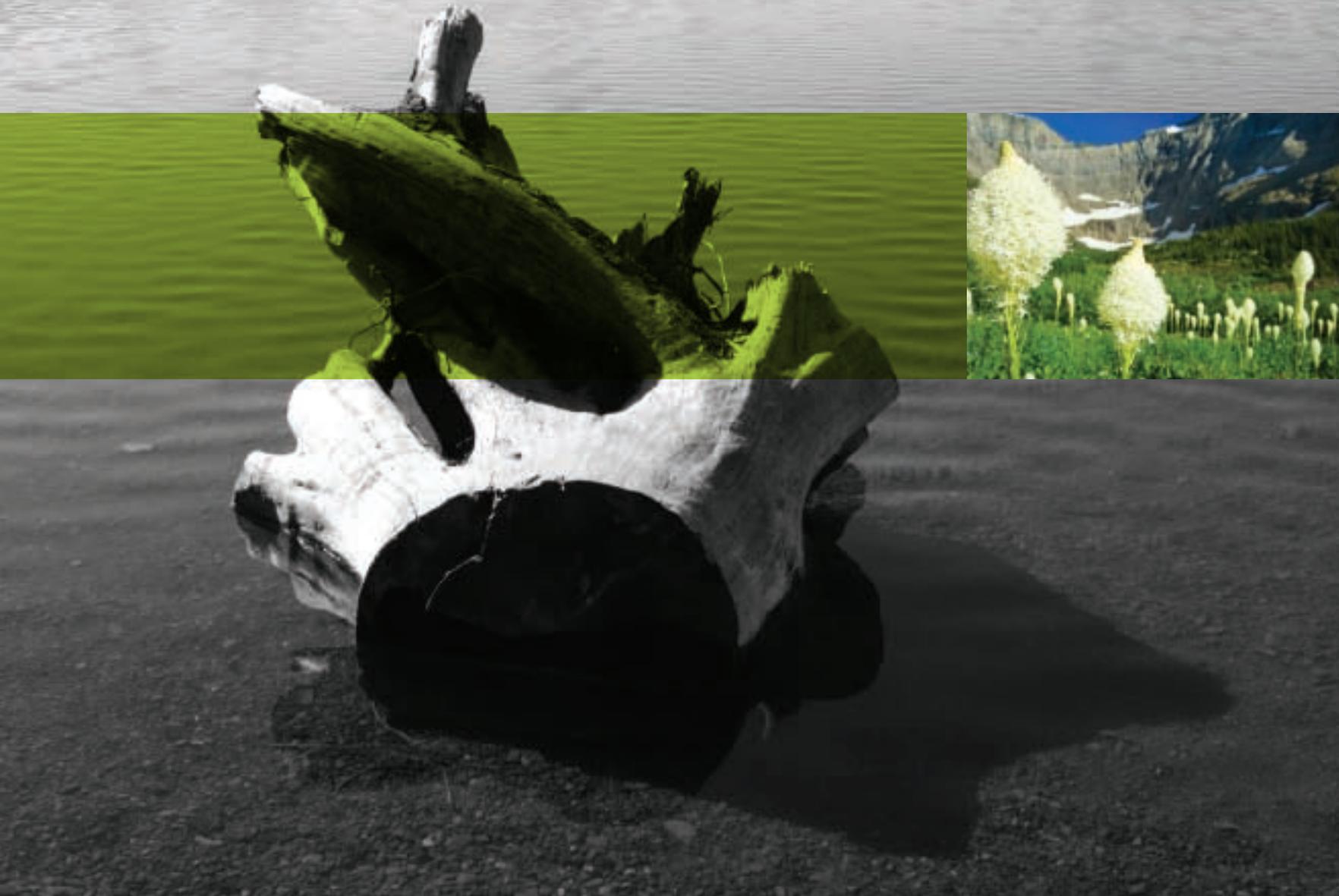
Another example of coordinating management plans among adjacent jurisdictions, Glacier and Waterton Lakes national parks could explore the possibility of creating and implementing a joint resource management plan, perhaps as an extension of the international peace parks designation.

5 RECONCILE FEDERAL, STATE, and provincial endangered species policies across the Crown to the greatest extent possible. Wildlife resources in the Crown should be viewed as a common asset. At present, certain wildlife species such as lynx, wolverines, grizzly bears, and wolves are managed under differing species management regimes that sometimes contradict one another or work at cross purposes. Many species are found in greater numbers and healthier populations in Canada, especially in areas farther north along the Canadian Rockies and into the boreal region. Yet, on the U.S. side of the border, these same species are found at the limits of their distribution.

One vehicle to implement this option is to explore the feasibility of a pilot project under the umbrella of the International Joint Commission and/or the Commission for Environmental Cooperation to align U.S. Endangered Species Act priorities and Canadian Species at Risk Act priorities for transboundary wildlife populations.

Expand Conservation Funding and Finance Strategies

6 AGGREGATE CURRENTLY INDEPENDENT initiatives into a regional conservation package. While it is critical to facilitate conservation from the ground-up, the benefits to bundling sub-regional and regional efforts into a coordinated fundraising and financing package include the ability to gain stronger support and to articulate a regional vision. Aggregat-



ing currently independent initiatives may expand organizational capacity, increase outreach, reduce project expenses, and improve fundraising success. A collective of initiatives can reach more donors across a wider range of interests.

One excellent model of this type of regional conservation financing is the Northern Sierra Partnership, a pioneering alliance dedicated to conserving land and water while enhancing communities and local economies. The Partnership jointly raises funds and works with individuals and groups to provide public benefits such as a high-quality water supply, world-class outdoor recreation, carbon sequestration, habitat for native fish and wildlife species, and a critical mass of working ranches and forests. It also helps residents make the transition to sustainable economic activities that promote community well being and help keep local towns and cities viable for the future. (For more information, see www.sbcouncil.org)

Another model of this type is the use of aggregation projects in the North Quabbin area of North Central Massachusetts, as well

Another opportunity to support conservation is through a small surcharge on outdoor recreational equipment. As hunting and fishing numbers decline, along with their associated revenues, the opportunity to tap into the non-consumptive outdoor sector grows. Other options to enhance federal funding can be found in the Lincoln Institute of Land Policy, *Large Landscape Conservation: A Strategic Framework for Policy and Action* (http://www.lincolnst.edu/pubs/1808_Large-Landscape-Conservation).

In Canada, it may be useful to critically review the federal government's Natural Areas Conservation Program (<http://www.ec.gc.ca/default.asp?lang=En&xml=782EBD4F-60D5-4895-9D7A-46-A378A100C3>) and explore how it might be applied to the Crown of the Continent.

8 EXPAND THE USE of conservation easements when and where appropriate. Conservation easements can be a valuable tool for preserving lands for their working heritage (farm and ranch land), wildlife habitat, or educational values. Since 2006, the U.S. government has allowed taxpayers a deduc-



as the Western Massachusetts Aggregation Project now being pursued by the New England Forestry Foundation.

7 ENHANCE FEDERAL FUNDING for land and water conservation. Congress could permanently dedicate full funding for the Land and Water Conservation Fund at the authorized level of \$900 million per year. Consideration could also be given to expand support for forest conservation through the Conservation Reserve Program of the Natural Resources Conservation Service and the Pittman-Robertson Wildlife Restoration Act, which provides federal funds generated by an excise tax on hunting gear for state fish and wildlife habitat restoration efforts.

tion commensurate with the value of their donated land. This incentive has been successful in conserving lands across the country and could be made permanent and possibly enhanced.

9 PURSUE STRATEGIES TO improve conservation financing on tribal lands in the Crown. Native American tribes manage significant land and water resources in the U.S.; yet have been systematically underfunded by federal wildlife, natural resources management, and conservation programs. Additionally, tribes are not currently eligible to receive funding under such important programs as the Federal Aid in Wildlife Restoration Act (Pittman-Robertson) or the Federal Aid in Sport



Fish Restoration Act (Dingell-Johnson). Tribal resource managers could be far more effective in their work if they had access to these funds and any new sources arising from future federal conservation programs.

10 EXPERIMENT WITH DIFFERENT strategies to enhance conservation-oriented development. Options may include but are not limited to the following:

- » Develop options for voluntary, negotiated, and required project mitigation. Mitigation can take several forms, including: *voluntary* mitigation of the sort undertaken by individuals and companies buying carbon credits to offset emissions of greenhouse gases; *negotiated* mitigation such as the sort agreed to by companies on a case-by-case basis in land development contexts, such as the pending agreement by Plum Creek to protect vast acreages in the vicinity of Moosehead Lake, Maine; and mitigation required under state or federal mitigation regulations, including wetland mitigation and biodiversity banking transactions handled through ecosystem service markets in states across the U.S.
- » Encourage regionally targeted investments in and incentives for residential and commercial development projects that demonstrate high conservation values and low environmental impacts.
- » Encourage regional investments in and incentives for certified sustainable commodity production. The health of our working forests and agricultural lands can be assured through programs that certify commodities are sustainably produced. For exam-

ple, timber produced under certification programs of the Forest Stewardship Council and the Sustainable Forestry Initiative is now a preferred procurement option for many major retail outlets such as Home Depot and Lowe's.

Facilitate Scientific and Public Learning

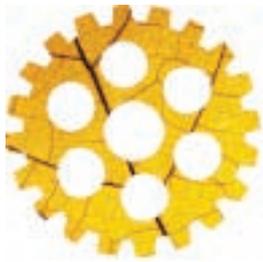
11 ESTABLISH A CROWN of the Continent Science Consortium to coordinate scientific research on climate change and conservation biology. The Crown is extremely fortunate to have a number of organizations dedicated to conducting scientific and technical studies, including but not limited to the Crown Managers Partnership, U.S. Geologic Survey, Cooperative Ecosystem Studies Unit coordinated by The University of Montana, Flathead Lake Biological Station, the Miistakis Institute at the University of Calgary, The Nature Conservancy, and the Crown of the Continent Conservation Initiative. In addition to these existing organizations, a number of additional federal initiatives are sharpening their focus on the science of climate change and conservation biology—most notably the U.S. Department of Interiors' Great Northern Large Landscape Conservation Cooperative. (These are all described in the Appendix.)

Given limited resources and the comparative advantages that each one of these organizations brings to the table, these various organizations could establish a consortium to clarify who is doing what, identify research interests and priorities, and seek funding to support a coherent package of scientific and technical studies.

12 DEVELOP TOOLS TO INFORM, mobilize, and engage the public. Surprisingly few people who live in the region immediately identify with the Crown of the Continent, despite a commonly held attachment to the landscape and cultural heritage of the region. To achieve long-term conservation and stewardship to accompany this inchoate regional identity, it is essential to increase civic will, which in turn will catalyze political will.

The Crown of the Continent Geotourism web site and its interactive map have increased the identity of the region among residents and visitors alike. As individual and collective conservation efforts move forward, it may be valuable to build on and extend the geotourism initiative by creating an interactive web-based platform to facilitate dialogue, distribute a weekly online report





of news stories in the region, and highlight relevant events and activities. It may also be useful to create a documentary film or an Internet-accessible, scenario-planning tool to highlight the past, present, and future of the region.

Build Regional Capacity

13 SUSTAIN A REGIONAL forum to exchange ideas, build relationships, and explore opportunities to work together. During the past decade, a number of independent and complementary conservation and community stewardship initiatives have emerged in the Crown (see Appendix). These are exciting times to be working on conservation and community development in this region. However, the challenge associated with this collective energy is that *while people around the Crown are connected to a common landscape, they are not connected to each other.*

In one attempt to address this need, the Center for Natural Resources and Environmental Policy (CNREP) and the Lincoln Institute of Land policy began convening a series of “roundtables” in 2006. We hoped, through these roundtables, to facilitate communication and understanding among the various regional and sub-regional initiatives in the Crown, and to explore opportunities to work together. The roundtables have included both formal and informal meetings, including multi-party workshops, government-to-government dialogues, and an ecosystem-wide conference. (For more information on the roundtables, go to www.crownroundtable.org.)

While we hope to have laid the groundwork for a “network of networks” with this work, the capacity of the University of Montana’s CNREP and the Lincoln Institute is limited. A broad-based Steering Committee provides input and advice, but it too has limited time and resources. The growing number of conservation and community-based initiatives offers an opportunity to sustain the regional roundtable and build capacity to link one land, many peoples, and infinite possibilities.

14 CRAFT A REGIONAL vision and statement of principles for landscape stewardship linked to community development. There is no commonly expressed vision for the future of the region. A common vision can help

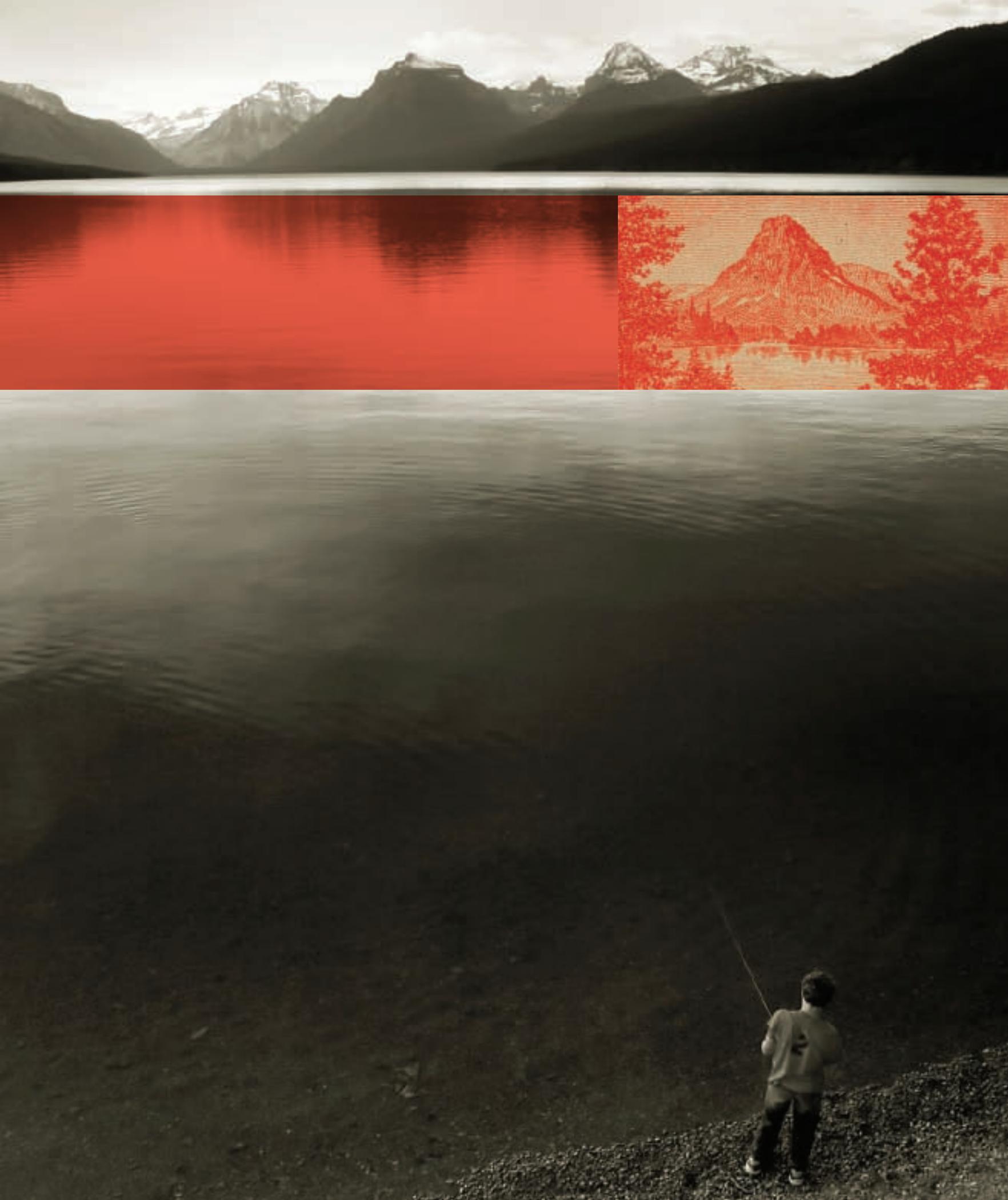
align currently independent initiatives, leverage resources, and accomplish more with limited resources.

A regional vision should link the past with the present and provide a direction for the future. It should be informed and inspired by the heritage and cultural values of people who have inhabited this landscape for over 10,000 years—the First Nations in Canada and the United States. It should strike a balance between development and preservation as well as recognize the multiple values of the Crown: ecological benefits, carbon storage and ecosystem services, socio-economic benefits, research and education, and cultural values. It should recognize and build on existing initiatives, both regional and sub-regional.

In addition to building on tribal heritage and cultural values, a common regional vision might integrate the values articulated by participants at a 2008 roundtable (see page 53). It might also take the form of a common statement of principles such as the Ecosystem Charter for the Great Lakes-St. Lawrence Basin in the Midwest. As an exemplar, this voluntary, non-binding charter articulates a shared vision for the region, along with a series of commonly held principles, findings, and action items to guide ecosystem management in the basin. Rather than creating a new policy or institution, the charter ties a common thread through the many policies, laws, and agreements in the basin, and explicitly defines objectives for an ecosystem approach to management. As the Ecosystem Charter is updated, more than 160 agencies, businesses and organizations have endorsed it, agreeing to use the Charter as guidance in the development of their work plans and priorities, as a means to enhance communication with others and to assess progress toward a shared vision for the Great Lakes-St. Lawrence Basin Ecosystem. (For information on the Charter, see <http://glc.org/ecochart/>)

15 CONVENE A REGULAR summit on cultural traditions and history. Every few years, the various Native American tribes and First Nations people surrounding the region could organize a Crown-wide cultural celebration and cross-cultural conservation summit. The Crown landscape is not only ecologically fragmented, but so are its Native American and First Nations peoples, whose history and attachment to the landscape should inform all public policy and conservation work. A periodic forum may help launch and sustain this necessary dialogue.







SHARED VALUES IN THE CROWN OF THE CONTINENT

According to interviews conducted prior to the 2008 Roundtable, 26 leaders in the Crown of the Continent identified *intact diverse ecosystem* as the most valued asset of the Crown of the Continent. This value was followed by *critical wildlife habitat, headwaters to the nation, large acreage in public ownership with protections in place, and strong community values*. Other values identified by respondents include water supply and water quality, legal protections on the landscape, tribal homeland and culture, and the opportunity to still conserve these assets. Many commented that these values are inter-related.

During the Roundtable event, the participants agreed to these additional values:

- » A place that spans an international and tribal boundaries providing the opportunity to build cross-border understanding through cooperation
- » Homeland to First Nations and Native Americans
- » A resource-rich area that supports economic activities (mining, logging, ranching, outfitting), which also fosters an appreciation and strong ties to the land
- » An area that is a compelling attraction to outsiders, creating an opportunity for sustainable tourism that reinforces our heritage and special qualities
- » A place that supports ongoing dialogue about the appropriate balance between resource use and protection, and between private and community rights and responsibilities
- » Strong, unique, rural communities that foster the Crown way of life, including ranchers and other landowners who value conservation
- » Residents living in close proximity to wilderness who want to protect it
- » Functioning institutions and infrastructure
- » Native cultures (First Nations, Native Americans) that provide a tie to the very long-term history of the Crown
- » An opportunity to learn from and share the lessons of this environment through education and research
- » A place valued for public access to public and private land to hunt, fish, and pursue other recreational activities

Source: Public Policy Research Institute, *Crown of the Continent Roundtable: Common Values, Parallel Actions* (Oct. 2008).]

SOURCES FOR MORE INFORMATION

Alberta Land Use Plan, *Profile of the South Saskatchewan Region*, (Province of Alberta, 2009), <http://www.landuse.alberta.ca/RegionalPlans/SouthSaskatchewan/documents/SSRP-ProfileOfSouthSaskatchewan-Region-Nov26-2009.pdf>

Alberta Ministry of Sustainable Resource Development (www.srd.alberta.ca)

Alberta Municipal Affairs (www.municipalaffairs.alberta.ca)

Alberta Water for Life Strategy, <http://www.waterforlife.alberta.ca/>

Alberta's 2008 Climate Change Strategy: Responsibility/Leadership/Action, <http://environment.gov.ab.ca/info/library/7894.pdf>

American Wildlands, *Priority Linkage Assessment: Crown of the Continent*, (American Wildlands, 2009), <http://wildlands.org/programs/corridors/pla/crown-continent>

Apps, Clayton D., et al., *Carnivores in the Southern Canadian Rockies: Core Areas*

and Connectivity Across the Crowsnest Highway, (WCS Canada Conservation Report No. 3, 2007), <http://www.wcscanada.org/LinkClick.aspx?fileticket=Xj%2b%2fI xvI 220%3d&tabid=2541>

Bates, Sarah, *The Legal Framework for Cooperative Conservation* (Policy Rep. # 1, Center for Natural Resources and Environmental Policy, 2006), www.cnrep.org

B.C. Stats, www.bcstats.gov.bc.ca

Blood, Lex, et al., *Crown of the Continent: Profile of a Treasured Landscape* (The Crown of the Continent Ecosystem Education Consortium, 2002).

Brick, Christine, Brianna Randall, and Deborah Oberbilling, *Low Flows, Hot Trout: Climate Change in the Clark Fork Watershed*, (Clark Fork Coalition, 2008).

British Columbia, *Climate Action Plan*, (Province of British Columbia, 2008), http://www.livesmartbc.ca/attachments/climateaction_plan_web.pdf

British Columbia, *Super, Natural British Columbia: Climate Action for the 21st Century*, (Province of British Columbia, 2010), <http://www.gov.bc.ca/copenhagen/>

British Columbia—First Nations Treaty Negotiations Information, <http://www.treaties.gov.bc.ca/>

City of Calgary, *Calgary and Region Economic Outlook*, www.calgary.ca/docgallery/bu/finance/economics/socio_economic_outlook/socio_econ_outlook_2009_2019_vol_2_econ_outlook.pdf

Crown of the Continent Conservation Initiative, *Conservation Plan* (forthcoming, 2010).

Crown of the Continent Geotourism Mapguide, <http://www.crownofthecontinent.net/>

Darrow, G.F. et al., *The Crown of the Continent Project: A New Approach for Integrated Research, Education, and Interpretation of Ecological and Human Relationships within the Crown of the Continent*

Ecosystem in Montana, British Columbia, and Alberta (Glacier National Park, 1990).

Dingwall, Paul R. & Kishore Rao, *Waterton-Glacier International Peace Park (Canada and USA): Report of the Reactive Monitoring Mission* (Sep. 2009).

Flathead County, *Demographic and Economic Information for Flathead County*, (MT Department of Labor and Industry; MT Department of Commerce, 2009), http://flathead.mt.gov/about_flathead_county/documents/3369_CF09_Flathead.pdf

Gailus, Jeff, *Bringing Conservation Home: Caring for Land, Economies, and Communities in Western Canada* (Sonoran Institute, 2000).

Glacier National Park, Biodiversity Paper No. 3: Why Preserve Biological Diversity, <http://www.nps.gov/archive/glac/resources/bio3.htm#Diversity>

Glacier National Park, Biodiversity Paper No. 7: Climate Change, <http://www.nps.gov/archive/glac/resources/bio7.htm#top>

Glenbow Museum, Niitsitapiisinni: Our Way of Life, The Story of the Blackfoot People, <http://www.glenbow.org/blackfoot/EN/html/index.htm>

Government of Alberta, *Launching Alberta's Energy Future: Provincial Energy Strategy* (December 2008).

Graetz, Rick, et al., eds., *Crown of the Continent Magazine* (The University of Montana Crown of the Continent Initiative, Spring 2009 and 2010).

Greenaway, Guy & Kimberly Good, *Filling the Toolbox: ALSA's Contribution to Land Stewardship Action* (Miistakis Institute for the Rockies, May 2010).

Hall, Myrna H. P. & Daniel B. Fagre, "Modeled Climate-Induced Glacier Change in Glacier National Park, 1850-2100," *BioScience* 53: 131-140 (2003).

Headwaters Economics, *Clean Energy Leadership in the Rockies: Competitive Positioning in the Emerging Green Economy* (June 2010), <http://www.headwaters-economics.org/greeneconomy>

Huang, Lily, "The Case of the Disappearing Rabbit," *Newsweek* (Aug. 3, 2009), <http://www.newsweek.com/id/208445>

Interagency Climate Change Adaptation Task Force, Progress Report, March 16, 2010, <http://www.whitehouse.gov/sites/default/files/microsites/ceq/20100315-inter-agency-adaptation-progress-report.pdf>

Konrad, Erica, et al., *State of the Crown of the Continent Ecosystem: Flathead/Castle Transboundary Region* (Miistakis Institute for the Rockies, January 1999).

Lee, T., M. S. Quinn, and D. Duke. 2006. Citizen, science, highways, and wildlife: using a web-based GIS to engage citizens in collecting wildlife information. *Ecology and Society* 11(1): 11, <http://www.ecologyandsociety.org/vol11/iss1/art11/>

Lincoln Institute of Land Policy, *Large Landscape Conservation: A Strategic Framework for Policy and Action* (May, 2010), http://www.lincolnst.edu/pubs/1808_Large-Landscape-Conservation

McKinney, Matthew J. and Shawn Johnson, *Working Across Boundaries: People, Nature, and Regions* (Lincoln Institute of Land Policy, 2009).

McKinney, Matthew J., "The Realities of Regional Stewardship: From Urban Issues to Natural Landscapes," *Public Land and Resources Law Review* 29(2008): 123-140.

McKinney, Matthew and Kevin Essington, "Learning to Think and Act Like a Region," *Land Lines* 18(1): 8-13 (2006).

McKinney, Matthew J., John Parr, and Ethan Seltzer, "Working Across Boundaries: A Framework for Regional Collaboration," *Land Lines* 16(3): 5-8 (2004).

McKinney, Matthew, et al., "Regionalism in the West: An Inventory and Assessment,"

Public Land and Resources Law Review 23(2002): 101-191.

Montana Census and Economic Information Center, <http://ceic.mt.gov>

Montana Climate Change Action Plan, <http://www.mtclimatechange.us/CCAC.cfm>

Montana Climate Change Advisory Committee, <http://www.mtclimatechange.us>

Montana Legacy Project, www.themontanalegacyproject.org

MOU and Cooperation on Environmental Protection, Climate Action and Energy, Province of British Columbia, State of Montana, Confederated Salish and Kootenai Tribes, KtuNaXa Nation, <http://www.llbc.leg.bc.ca/public/pubdocs/>

[bcdocs2010/463496/2010prem0038-000178.pdf](http://www.bcdocs2010/463496/2010prem0038-000178.pdf)

National Park Service Climate Change Response Program, <http://www.nature.nps.gov/climatechange/response.cfm>

National Parks Conservation Association (NPCA), *Conservation of the Crown of the Continent Ecosystem* (Report to the Hewlett Foundation, 2008).

NPCA, *Gateway to Glacier: Emerging Economy of Flathead County* (2003), <http://www.npca.org/northernrockies/gateway/gatewaytoglacier.pdf>

NPCA, *State of the Parks: Waterton-Glacier International Peace Park* (2002), <http://www.npca.org/stateoftheparks/glacier/glacier.pdf>

The Nature Conservancy, *The Crown of the Continent* (fact sheet, 2009), http://www.nature.org/wherework/northamerica/states/montana/files/crown_fact_sheet_final.pdf

Nature Conservancy Canada, *Canadian Rocky Mountains Ecoregion Conservation Assessment* (2004), http://science.nature-conservancy.ca/resources/resources_w.php?Type=all&Region=all&Key=canadian+rocky

Pedynowski, Dena, "Prospects for Ecosystem Management in the Crown of the Continent Ecosystem, Canada-United States: Survey and Recommendations," *Conservation Biology* 17(2003): 1261–1269.

Prato, Tony and Dan Fagre, eds., *Sustaining Rocky Mountain Landscapes: Science, Policy, and Management for the Crown of*

the Continent Ecosystem (Resources for the Future, 2007).

Public Policy Research Institute, *Crown of the Continent Roundtable: Common Values, Parallel Actions* (Oct. 2008), http://crownroundtable.org/documents/Crown_of_the_Continent_Roundtable_10_09.pdf

Sax, Joseph L. and Robert B. Keiter, "Glacier National Park and Its Neighbors: A Study of Interagency Relations," *Ecology* L.Q. 12:207 (1987).

Sax, Joseph L. and Robert B. Keiter, "The Realities of Regional Resource Management: Glacier National Park and Its Neighbors Revisited," *Ecology* L.Q. 33:233 (2006).

Testa, Dan, "Western Governors Confront Increased Demand for Water, Energy,"

Flathead Beacon (June 30, 2010).

U.S. Census Bureau, www.census.gov

Waldt, Ralph, *Crown of the Continent: The Last Great Wilderness of the Rocky Mountains* (Riverbend Publishing, 2004).

Water Matters, *Source of Opportunity: A Blueprint for Securing Source Water in Southern Alberta*, (Water Matters, 2009), <http://www.water-matters.org/docs/source-of-opportunity.pdf>

Western Resource Advocates, *Smart Lines: Transmission for the Renewable Energy Economy* (2008), http://www.westernresourceadvocates.org/energy/pdf/SmartLines_Final.pdf



APPENDIX: COLLABORATIVE INITIATIVES IN THE CROWN OF THE CONTINENT

This Appendix provides a brief profile of major regional and sub-regional efforts to promote and support landscape stewardship and transboundary cooperation in the Crown of the Continent. New groups emerge frequently, so this list is an incomplete snapshot of a remarkable collection of collaborative initiatives. In addition to these regional and sub-regional efforts, there are numerous place-based partnerships and watershed groups in the Crown of the Continent.

Crown-wide Initiatives

Crown of the Continent Ecosystem Education Consortium: In 1994, Dr. Lex Blood proposed the formation of an educational consortium whose purpose would be to promote the importance and collective integration of educational opportunities in the bio-region. Today, individuals representing 30 different state, federal, and private conservation and natural resource organizations are involved in

education centered within the Crown of the Continent. COCEEC participants strive to provide a bio-regional focus and understanding of a larger ecosystem. Each organization has individual educational goals and objectives, but the group's overarching mission is to foster an understanding of environmental, social, political, and economic components and interweavings of the landscape through educational activities and projects. COCEEC meets on a biannual basis to share information, network, and learn about a new educational location or opportunity through a field-based experience. For more information about the individual participants and consortium efforts visit www.crownofthecontinentecosystem.org

University of Montana/University of Calgary Transboundary Initiative: This program, initiated in 1999 and supported by the Henry P. Kendall Foundation, offers student research and internship support, shared courses, and faculty exchange to explore and develop the knowledge and skills necessary to manage across

domestic or international administrative boundaries. It is coordinated between the Environmental Studies Program at the University of Montana and the Faculty of Environmental Design and its affiliate, the Miistakis Institute at the University of Calgary. http://www.cas.umt.edu/evst/students_grad_transboundary.htm

Crown Managers Partnership: The Crown Managers Partnership (CMP) was created in 2001 as an inter-agency forum for about 20 land management agencies in Montana, British Columbia, and Alberta. This voluntary partnership seeks to build common awareness of Crown interests and issues, shape relationships, and identify collaborative and complementary tasks that the various participating jurisdictions can pursue. <http://www.crownmanagers.org/>

Crown of the Continent Research Learning Center: Developed in 2002 and located in Glacier National Park, the CCRLC provides coordination and information sharing between scientists and land managers. CCRLC projects are carried

out through collaboration among government, academia, educational institutions, public interest groups, and private citizens, all of whom are committed to understanding and preserving the Crown's natural, social, and cultural heritage. The CCRLC has made communicating the impacts of climate change one of the highest priorities. <http://www.nps.gov/archive/glac/learningcenter/learningcenter.htm>

Heart of the Rockies Initiative: The Heart of the Rockies Initiative was launched in 2002 as a partnership of local, regional, and national land trusts with the goal of increasing the pace of strategic private land conservation in the Northern Rockies. Heart of the Rockies efforts focus on protecting high priority lands through collaborative planning, capacity building, and capital fundraising. <https://www.heart-of-rockies.org>

Crown of the Continent Geotourism

Council: This broad-based partnership of local community and business leaders formed in 2007 as an advisory committee to work with NPCA and National Geographic on the Crown of the Continent MapGuide and interactive web site. Today, the Council describes itself as “a regional network of communities, tourism bureaus, conservation and business groups, educators, First Nations, government agencies, and others working together [to provide] information about the Crown of the Continent region for visitors and residents to understand, appreciate, and help preserve its geographic character, including historical, cultural and environmental heritage. Looking forward, the Council intends to pursue cooperative projects that promote regional understanding and appreciation, encourage sustainable businesses, support

community well-being, advance landscape stewardship, and provide outstanding visitor experiences.” www.crownofthecontinent.net

Roundtable on the Crown of the Conti-

nent: The Center for Natural Resources and Environment Policy (CNREP) at The University of Montana and the Lincoln Institute of Land Policy initiated the effort in 2007. The purpose of the Roundtable is to provide a multi-stakeholder forum to exchange ideas, build relationships, identify shared values and interests, and facilitate working relationships. In addition to organizing periodic forums and workshops, CNREP and LILP will convene an annual conference beginning in 2010, and has taken the first steps to convene policy leaders representing the major jurisdictions within the Crown of the Continent to create a national pilot project on how to implement large landscape conservation. <http://www.crownroundtable.org/>

University of Montana Crown of the Con-

tinent Initiative: Led by the Department of Geography at the University of Montana, this initiative was publicly launched in 2009 and includes research coordination at UM, educational outreach, and publication of an e-magazine and e-notes with updates about activities related to the Crown. The initiative expects to publish a book in 2011 with articles, stories, photographs, and maps reflecting the diverse research underway around the Crown. <http://www.umt.edu/urelations/crown.html>

Crown of the Continent Conservation

Initiative: This coalition is led by a steering committee of 15 organizations in the U.S. and Canada. Over the past year, the CCCI developed a comprehensive Conservation

Agenda and Conservation Plan to achieve long term conservation goals and vision for the Crown in a time of climate change, as well as comprehensive and collaborative conservation strategies in four key areas: climate science, policy framework, communication/outreach, and capacity building. Climate change is the overarching theme of the CCCI. <http://www.npca.org/northern-rockies/>

Major Sub-regional Initiatives

Keeping in mind that “the whole is greater than the sum of its parts,” it is helpful to view the Crown of the Continent in four geographic regions—divided by a north-south axis (the Continental Divide) and an east-west axis (the United States-Canada border).

Alberta Sub-region

The Castle Special Place Citizen’s

Initiative: This broad-based, citizen-led initiative, which began in 2007, recently completed a proposal to protect this area north of Waterton Lakes National Park, currently being considered by the Alberta government. <http://castlespecialplace.ca/index.html>

Alberta Land Use Framework: The Alberta Ministry of Sustainable Resource Development adopted the Alberta Land-use Framework in 2008. The Framework will guide conservation and development efforts throughout the province, including the area associated with the Crown of the Continent. <http://www.landuse.alberta.ca/AboutLanduseFramework/Default.aspx>



Waterton Park Front Project: Starting with a land purchase in 1997 and expanding in subsequent years, The Nature Conservancy Canada has protected 27,000 acres of land through purchases and conservation easements between Pincher Creek, AB, to Waterton Lakes National Park. These protected lands continue to provide homes and livelihoods for ranchers and farmers, as well as habitat and scenery, comprising the largest private conservation initiative in Canadian history.

Montana's Eastside Sub-region

Coalition to Protect the Rocky Mountain Front: Organized in 2006 to oppose federal oil and gas leasing on the Rocky Mountain Front, this local coalition of landowners, sportsmen, and others in 2009 released the Rocky Mountain Front Heritage Act, a proposal for new federally designated wilderness and conservation management areas, as well as measures to control, prevent, and eradicate the spread of noxious weeds. <http://www.savethefront.org/>

Montana's Westside Sub-region

Blackfoot Clearwater Stewardship Project: A local coalition of landowners, loggers, snowmobilers, outfitters, and conservationists crafted a vision document for the Upper Blackfoot Valley in Montana. This evolved into a proposal for federal legislation (now part of Senator Tester's Forest Jobs and Recreation Act under consideration in Congress), which would include stewardship contracting, biomass development, and wilderness designation. <http://www.blackfootclearwater.org>

Blackfoot Challenge: This landowner-based group coordinates management

of the Blackfoot River, its tributaries, and adjacent lands. It is organized locally and known nationally as a model for preserving the rural character and natural beauty of a watershed. <http://www.blackfootchallenge.org>

Great Northern Environmental Stewardship Area: This partnership of private landowners, citizens, businesses, corporations, and government agencies with a presence in the Middle Fork Flathead River Corridor works collaboratively to provide for effective stewardship and to acknowledge the importance of human activities in this landscape. <http://gnsa.org>

Montana Legacy Project: In 2008, The Nature Conservancy (TNC) Montana worked with the Trust for Public Land and others to sign an agreement to purchase 310,000 acres from Plum Creek Timber. Much of the land is in the Seeley-Swan Valley, but the project reaches far beyond that valley to include lands between Libby and Yaak and other areas. As of 2009, TNC had purchased 240,000 acres, which will be conveyed to community, state, and national forest ownership for sustainable timber harvest, wildlife habitat, and public recreation access. The final portion is due to be purchased in 2010. <http://www.themontanallegacyproject.org/index.html>

Southwest Crown of the Continent Project: In August 2010, the U.S. Forest Service awarded funding to launch the Southwest Crown of the Continent Project. The project, a 10-year plan developed by a collaborative group of conservationists, timber companies, place-based initiatives, and state and federal land managers, seeks to reduce the risk of fire to rural communities, restore forest and aquatic ecosystems to their natural trajectory, and improve ecosystem sustainability in the face of

predicted climate change. According to project developers, the plan would also boost local rural economies by creating jobs and increasing small business income. The project area includes the Blackfoot, Clearwater, and Swan River watersheds.

British Columbia Sub-region

East Kootenay Conservation Program: Launched in 2002, the East Kootenay Conservation Program (EKCP) is a partnership of conservation and agricultural organizations, forestry and business, education, First Nations, and all levels of government working to conserve the landscape of the East Kootenay region. The EKCP vision is to have landscapes in the Kootenays that sustain naturally functioning ecosystems that can in turn support economic and social well-being. EKCP's purpose is to facilitate, not advocate or regulate, approaches to ecosystem conservation and stewardship on private and adjacent Crown lands. <http://www.ekcp.ca>

Memorandum of Understanding and Cooperation on Environmental Protection, Climate Action and Energy:

In 2010, British Columbia and Montana signed a Memorandum of Understanding that, according to B.C. Lt. Governor Steven Point, represents "A new partnership with Montana [to] sustain the environmental values in the Flathead River Basin in a manner consistent with current forestry, recreation, guide outfitting and trapping uses." Under the Memorandum, British Columbia and Montana agree to work together, and in partnership with federal governments, Ktunaxa Nation and Confederated Salish and Kootenai Tribes, local governments, and other community interests. The memorandum covers three components: environmental protection,

climate action and renewable and low-carbon energy. <http://www.mediaroom.gov.bc.ca/Download.axd?objectId=721>

The Crown in Context: Larger Regional Initiatives

Great Northern Landscape Conservation Cooperative: The U.S. Fish and Wildlife Service initiated a partnership with states, provinces, federal agencies, universities and NGOs to develop scientific capacity to address climate change and other stressors to wildlife species and habitats in an integrated fashion within the Northern Rockies and Columbia Basin. The Great Northern landscape, as mapped for this initiative, is larger than the Y2Y region; however, cooperative organizers have expressed interest in coordinating with and building upon the inter-agency collaboration established by the Crown Managers Partnership.

Yellowstone to Yukon (Y2Y) Conservation Initiative. The Yellowstone to Yukon Conservation Initiative (Y2Y) includes and extends beyond the Crown of the Continent in its work to protect wildlife core areas and corridors across a 500,000-square-mile landscape. Y2Y began as a network of biologists and conservationists who were concerned about populations of wildlife "blinking out," generally on a northward trend. While Y2Y focuses on wildlife corridors and connectivity, it works closely with private landowners, community leaders, and others to address a range of issues related to land use, community and economic prosperity, and wildlife management. And, while it operates as a nonprofit organization, it relies heavily on partnerships with diverse stakeholders to achieve its objectives. <http://www.y2y.net/Default.aspx?cid=4-14-101-174>

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