

APPENDICES

BEAVER HILLS BIOSPHERE RESERVE

Nomination Application



A Submission to:
UNESCO
Man and the Biosphere (MAB) Program

By:
Beaver Hills Initiative
Sherwood Park, Alberta, Canada



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APPENDIX A. LIST OF LAND USE AND MANAGEMENT PLANS

Federal

Elk Island National Park Management Plan (2011)

Provincial

Miquelon Lake Provincial Park Management Plan (2002)

Wildlife Management Plan – Ministik Lake Game Bird Sanctuary (1989)

Ministik Lake Game Bird Sanctuary Wildlife Management Plan Implementation Strategy (1989)

Blackfoot PRA Management Plan (1996)

Municipal

Beaver County: *Municipal Development Plan (2011)*
 Land Use Bylaw (2011)

Camrose County: *Municipal Development Plan (2004)*
 Land Use Bylaw (2008)

Lamont County: *Municipal Development Plan (2007)*
 Land Use Bylaw (2007)

Leduc County: *Municipal Development Plan (2004)*
 Land Use Bylaw (2008)

Strathcona County: *Municipal Development Plan (2007)*
 Land Use Bylaw (2001)

Beaver Hills Initiative

BHI Land Management Framework (2015) – This document is too large for inclusion here. Please see the website link for the LMF document

(http://www.beaverhills.ca/media/resources/BHI_LMF_DRAFTMay2015.pdf) and its associated [GIS web-based viewer at http://geo.solsticecanada.com:8080/solsticemap/indexBHI_All.html](http://geo.solsticecanada.com:8080/solsticemap/indexBHI_All.html)

APPENDIX B. CASE STUDIES DEMONSTRATING THE VALUE OF BHI PROJECTS

Since it was formed more than a decade ago, the Beaver Hills Initiative, through its Working Groups and partnerships, has undertaken a number of projects to promote understanding of different aspects of the moraine. Several of these projects are showcased in the case studies that follow, demonstrating how such collaborations have benefitted the BHI, its members, and those that live, work and recreate in the moraine. Additionally, a number of case studies were developed in conjunction with the recent update of the BHI Land Management Framework. These case studies reference more specific, applied benefits of the BHI collaboration, and can be referenced in the web version of the document (http://www.beaverhills.ca/media/resources/BHI_LMF_DRAFTMay2015.pdf).

The case studies provided here document results of a structured survey of the outcomes, value and benefits that partner organizations and groups have already achieved through their participation in the BHI. Describing the benefits to their respective organization from a specific collaborative project within the BHI, respondents then used that experience to suggest benefits and value of future participation in the Beaver Hills Biosphere, and in the global network of biosphere reserves. Each case study provides the response to the specific questions posed in the survey. In some cases, the case studies compile the perspectives of the respective BHI partner organizations. Of particular relevance to the nomination proposal are questions 3 and 4, which asked about the benefits that could be derived from their participation in the Beaver Hill Biosphere and the potential contribution that they and the BHI could make to the global biosphere reserve program and network. The Research and Monitoring Group compiled their cumulative organizational experiences into a summary document, also included here as Case Study #6, to describe specific value to the research and monitoring community.

CASE STUDY #1: ALBERTA PARKS AND UNIVERSITY OF ALBERTA-AUGUSTANA CAMPUS MOU

1. Please describe the projects undertaken. Include the goals of the project, the partnering organizations and differences in approach relative to how your organization would normally attempt such projects.

First, the Augustana Campus of the University of Alberta (UofA) and Alberta Parks, East Central Region have established a Memorandum of Understanding (MOU) that facilitates interdisciplinary teaching and research experiences for the undergraduate campus, and addresses research and management needs of Alberta Parks. The MOU has reinforced existing, long-term relationships of Augustana faculty members with the BHI and its partner organizations, and drawn in new potential partner agencies and researchers. This has fostered new teaching and research opportunities and plans, which helps further the University's educational and research objectives. Second, the Augustana Miquelon Lake Research Station in Miquelon Lake Provincial Park represents a tangible benefit of this collaboration. This project in turn has helped engage municipalities, members of the public and local businesses in the potential opportunities arising from such a partnership, thus expanding the network of research partners to include moraine communities.

The partnership has enabled Alberta Parks to harness the expertise and capacity of the UofA to conduct research in support of the parks mandate and management needs. While past parks related research has largely focussed on the natural sciences, the university is well positioned to assist with a new strong policy move towards enhanced social science research. Parks are being challenged to examine and re-define their role and relevance in society in the face of rapid change on many fronts (social, technological, political etc.) and the university affiliation taps into expertise and capacity that is very much needed. Alberta Parks' justification for the MOU investment, and subsequent UofA Augustana Miquelon Lake Research Station (inside Miquelon Lake Provincial Park), was leveraged significantly on the strength of the BHI community and future prospect of a Biosphere Reserve. The momentum and collaborative context of the BHI clearly set a stage rich with opportunities that would not be possible without strong partners. The presence and growing synergy of the BHI community made it an obvious place to invest in this particular UofA partnership.

2. Did the outcomes of the project change how your organization acts, governs or sees new opportunities?

The Augustana campus is an 11,000 student undergraduate campus in the liberal arts and sciences tradition of education. From Augustana's perspective, there are many benefits of the BHI and the potential partnership within it. First, the campus is only 30 km from the Beaver Hills, and thus a natural destination for teaching-related field trips, study sites and summer employment for undergraduate students. Second, the protected areas and working landscapes of the Beaver Hills provide valuable opportunities for comparative research within the same ecosystem. Travel time to an equivalent Dry Mixedwood Boreal Forest natural sub-region in northern Alberta is 2-2.5 hours. Third, the opportunities for natural science and social science projects are exciting to instructors and researchers at Augustana, given our interdisciplinary focus of teaching and research. Fourth, Augustana faculty members have a

long-term working relationship with the BHI and its partner organizations; those relationships can nourish comprehensive plans for future teaching and research. Fifth, there are important research needs in the Beaver Hills that can be met by researchers at Augustana. Our professors have also developed strong research programs in the Beaver Hills region that are devoted to protected area management, wetland and wildlife ecology, environmental education, environmental history. Involvement in projects with Alberta Parks has highlighted the synergies among the BHI partners and our organization, and generated creative ideas about future projects.

The Parks - UofA MOU has significantly altered how Alberta Parks looks at accomplishing some of the research that we will never have the capacity/resources to develop internally. Current fiscal/political realities have made it clear that our goals will only ever be accomplished through partnerships such as that with Augustana Campus. A good example of our new approach is illustrated by Alberta Parks' funding to the UofA to conduct a research priorities identification exercise. The Parks' research program is young and at a point where possible and desired topics had to be prioritized. The UofA was able to conduct such an exercise for the whole of the Alberta Parks system as well as smaller scale exercises to identify region-specific priorities. The collaborative exercise with Augustana faculty facilitated further alignment of our institutional mandates and a mutual understanding of needs, interests and capacities. A significant realm of opportunity is clearly opening through early stages of this partnership and the UofA MOU is held up as a model for research partnerships within the Alberta Parks Division.

3. Assuming that designation as a Biosphere Reserve might expand the network of potential partners, or reinforce commitment of existing BHI partners, what future benefits can you see coming from participation in the UNESCO Biosphere Reserve network?

Designation of the moraine as a biosphere reserve would only add to the relevance of research and teaching opportunities for the UofA. It could also attract interest of potential research funding agencies and other national and international research partners. The research station has already generated substantial interest and support from regional governments, members of the public and business, which can only help further the aims of the biosphere reserve.

From Alberta Park's perspective, designation would provide a strong endorsement of the BHI and provide further credibility and legitimacy to its mission. This enhanced "currency" is expected to attract and leverage greater participation and investment from other institutions. From a Government of Alberta (GOA) perspective, it is expected that the will and motivation to invest further in the partnership will be enhanced, especially in light of the Province's ambitious Land Use Framework planning exercise that is seeking strategies for sustainable and balanced development. A biosphere reserve in the province's capital city region would be extremely well positioned for attracting cutting edge land use and sustainability research. An added strength of the Beaver Hills region is that its diversity of land uses, ranging from heavy industry to conservation, provides an excellent microcosm of the forces at play across the province. Alberta Parks, as well as other government departments, will surely get a sound return on investment given the congruence between the BHI's mission and Alberta's struggle for achieving greater sustainability and balance.

4. How do you foresee both internal and external partnering relationships changing as a result of the Beaver Hills becoming a Biosphere Reserve? For example, what are you prepared to do now and what aspects would you need more time to develop and implement in the future in order to enhance partnering opportunities with existing members of the BHI as well as other agencies and organizations, including other Biosphere Reserves within Canada and the wider global network?

Designation as a biosphere reserve will enhance internal partnerships as the status and concerns of the Beaver Hills become more visible to all parties currently involved. In particular, Augustana Campus hopes to act on the research priority-setting exercise conducted by Alberta Parks regarding hoped-for research outcomes in this region. We would need more time to implement comparative research projects that cut across several jurisdictions (e.g. national parks, provincial parks, private land). Designation as a biosphere reserve will also enhance external partnerships as colleagues from around the world seek to conduct research and observe sustainability practices in the region. We would hope to learn from colleagues with biosphere reserve experience from across Canada and around the world, just as we would hope to share our own sustainability experiences with those same colleagues. These conversations may involve researcher exchanges, conferences, and research collaboration.

Designation will also strengthen and diversify partners coming to the BHI table. Within the GOA there is strong support for departments/disciplines to work much more closely together to tackle and reflect the true interconnected nature of society and environment. The shift to an integrated paradigm of governance is in its early stages, so much remains to break down and move past the deeply entrenched silos and mindsets that prevent us from effectively responding to our contemporary challenges and problems.

One example of a future initiative is a greater integration of public health delivery with other departments such as Parks. As research continues to reveal the positive benefits of nature interaction/connection and outdoor recreation, it is becoming clear that there are tremendous alternatives to the costly acute health care approach to illness and health promotion. Alberta Parks is naturally well positioned to provide a health promotion venue once a bridge is built with Alberta Health. This level of innovation is a radical departure from traditional thinking and practice so it will take some time to evolve. However, one significant and unprecedented indication that the shift has begun is revealed in one of the Alberta Government's "Pods". Pods were implemented by the province to promote cross-departmental discourse and policy development. Alberta Parks has historically been lumped in with the "natural resource" departments of Environment and Sustainable Resource Development, which always failed to give recognition to the potential social contribution/function of Alberta Parks (and to something beyond conservation and land management). Alberta Parks now has been placed in a Pod alongside the departments of Health and Education, indicating a long overdue recognition of mandate overlaps and shared client groups.

Parks and nature as a complementary source of health and wellness promotion is an avenue that needs to be developed and will take some time to establish. The holistic perspective of a biosphere reserve lends itself strongly to supporting this integration and the physical proximity of the BHI to the provincial capital makes it a perfect venue for creating a new nature-based branch of the healthcare system.

**CASE STUDY #2: STRATHCONA WILDERNESS CENTRE: WORLD SNOW DAY,
SUBMITTED BY JEAN FUNK**

1. Please describe the projects undertaken. Include the goals of the project, the partnering organizations and differences in approach relative to how your organization would normally attempt such projects.

Strathcona Wilderness Centre, the largest municipal park in Strathcona County, operates a full service cross country ski area in the winter. The Centre annually hosts the International Ski Federation's (FIS) "World Snow Day" event. The goal of World Snow Day is to bring children to the snow and to help them to enjoy winter. Celebrated in downhill and cross-country ski recreation facilities globally, it aims to encourage skiing as a healthy leisure recreation choice, and raise awareness of environmental stewardship, and the health benefits and safety requirements of skiing (for more information see <http://world-snow-day.com/en/WSD>).

In past events, the Strathcona Wilderness Centre event focussed on promoting outdoor activity, the health benefits of winter sports, and safety through learn-to-ski lessons, snowshoe walks, cooking tasty treats around the campfire and prize draws. Environmental stewardship was promoted mainly through interpretive material available at the Centre. In 2014, members of the Beaverhills Initiative Stewardship Engagement Working Group partnered with the Centre to feature the environmental goal through the first World Snow Day - Beaver Hills BioBlitz. The 2014 partners included:

- International Ski Federation: international sponsor and coordinator for World Snow Day
- Strathcona Wilderness Centre, Strathcona County: venue and host ski club
- Alberta Chapter of The Wildlife Society (ACTWS): coordinator of resource scientists, equipment and display materials, and recruiter of event volunteers. Secured draw prizes from community partners such as the Alberta Conservation Association.
- Nature Alberta: the Junior Naturalist program volunteers and participants
- Alberta Innovates Technology Futures: Instructed their winter mammal tracking program workshop for student citizen scientists
- University of Alberta, Augustana campus: students attended the winter mammal tracking workshop and volunteered at the event
- The Beaverhills Initiative: promotional support and funding support for the event food and supplies

The 2014 program promotions encouraged participants to participate in World Snow Day and to "Meet a Biologist" at the Centre. Volunteers from the ACTWS gave short talks and demonstrations highlighting wildlife species (including live animal displays) and management and monitoring techniques applied within the Beaver Hills, as well as offering short wildlife skills sessions. The Centre offered ski lessons, equipment rentals and snacks and refreshments that helped encourage activity on trails and in facilities. Participants and volunteers from the Nature Alberta Junior Naturalists program helped promote the event, and provided an additional, core audience.

From the perspective of the ACTWS, a founding partner, the goal was to raise the profile of wildlife biology in the public sphere, and create an event where biologists could share and celebrate what they do with the public. Many of the scientist presenters are well-versed in public presentation of the science related to their jobs, but lack opportunities for public engagement. They wanted to develop an awareness event for a broad cross-section of the public. The group had run Bioblitz events before and thought this event might fit well with World Snow Day and the excellent facility of the Strathcona Wilderness Centre. As event planning proceeded and Nature Alberta and other partners joined the initiative, we were able to develop a creative, dynamic program that offered diverse opportunities that our group would not have been able to provide alone. Further, key partners provided knowledge, experience and funding that were beyond reach of any single partner. Our group is now looking forward to the 2015 event, and volunteers are already signing up to help.

2. Did the outcomes of the project change how your organization acts, governs or sees new opportunities?

The public enjoyed the interactions with the scientists, and the scientists in turn appreciated the direct contact with participants. The enthusiasm and interest of participants was an important boost to the scientists, as this was an unusual public opportunity for them to discuss the importance of research in understanding our nature world, and to be able to discuss questions that the public asked. With the success of our 2014 partnership, we will work with our partner groups to build the event offerings further in 2015. A future goal is to conduct a full BioBlitz, which includes inventory of select wildlife species, annually on World Snow Day.

By focussing on the strengths of each partner, this first Beaver Hills BioBlitz event was able to economically host a unique event with strong community participation that no partner alone could have offered. During this first event, the partners engaged in a detailed planning process that enabled each person to share resources, ideas and to build a successful event template that can be carried forward to future events. This was the first outdoor winter event hosted by the BHI Stewardship Engagement Working Group (now the Communications and Outreach Working Group), and helped raise awareness of the potential to partner for this and other events at the Strathcona Wilderness Centre. The Centre, as host venue, now has new programming partners, and organizations without venues now have a home to co-host their events.

The public response to the event rejuvenated the ACTWS membership, and created a new awareness of the power in partnerships. Like many not-for-profit organizations, they have been challenged to take on events like this due to lack of resources, including volunteers. This partnership was a positive collaborative experience that reinforced the benefits of working together with other groups with similar mandates. It also provided a tangible example of the benefits of partnering with other groups to support a new strategic direction that the ACTWS developed last year.

3. Assuming that designation as a Biosphere Reserve might expand the network of potential partners, or reinforce commitment of existing BHI partners, what future benefits can you see coming from participation in the UNESCO Biosphere Reserve network?

As FIS is an international organization, it provides the local Beaver Hills partners with a unique international partnership opportunity. The international partners of the biologist professional organizations, governments, and environmental groups may provide opportunities for future “think global, act local” events. By becoming part of a Biosphere Reserve, we can partner with other Biospheres on World Snow Day to create social media and internet links with speakers and other sites.

As part of UNESCO, we can extend our partnerships to other Biosphere Reserves, and connect the research activities of local scientists nationally and internationally. We can use World Snow as a feature opportunity to make these connections and connect participants electronically. Successful events within the Beaver Hills Biosphere may attract the interest of other Biosphere Reserves and researchers and provide an opportunity to share and learn from this and others’ experiences. Research and learning opportunities could be particularly important in terms of converting public interest into public engagement and stewardship, the next step intended of events like World Snow Day and Bioblitz events.

4. How do you foresee both internal and external partnering relationships changing as a result of the Beaver Hills becoming a Biosphere Reserve? For example, what are you prepared to do now and what aspects would you need more time to develop and implement in the future in order to enhance partnering opportunities with existing members of the BHI as well as other agencies and organizations, including other Biosphere Reserves within Canada and the wider global network?

The Beaverhills Initiative partners currently host the annual Dark Sky Event on the Sunday of the Labour Day weekend each fall. Miquelon Lake Provincial Park also hosts a World Snow Day event annually. By seeing these events as key opportunities to build working partnerships, to jointly promote the members and partners of the Beaver Hills, and by intentionally including in each event a national and international connection, the event organizers, operators, resource people and participants can experience a hands-on local-national-international experience. Government agencies and NGOs in the environmental and outdoor recreation sectors confront similar resource problems to those organizations involved in this successful event. The potential to achieve collective goals through cooperation are likely to attract new groups, so that the Beaver Hills Snow Day/Bioblitz event or Dark Sky events can help build a momentum of interest in the moraine, the Biosphere Reserve and stewardship opportunities. The challenge will be ensuring that the public, once engaged through such events can remain involved, if they choose.

By building these goals into each event, new internal and external partnerships will develop. Each partner can then further pursue these connections for the benefit of their own agency and their clientele, and to build strategic international projects that interconnect partners internationally. Within the BHI, these events will provide a strong mechanism to experiment with the increasing focus on nature based play and other activities into society. With the provincial parks focus on linking experiences in nature to health initiatives, World Snow Day and other events are key opportunities to show case new provincial policy changes.

CASE STUDY #3: NATURE CONSERVANCY OF CANADA, SUBMITTED BY JAIMÉE DUPONT

1. Please describe the projects undertaken. Include the goals of the project, the partnering organizations and differences in approach relative to how your organization would normally attempt such projects.

The two main activities undertaken within the Beaver Hills by the Nature Conservancy of Canada (NCC) are Conservation Securement and Conservation Stewardship. Both of these activities are continually growing and evolving within the Beaver Hills landscape. While specific projects have closed, it seemed more relevant to address these questions utilizing a landscape level approach.

Our goals within the Beaver Hills include;

1. To maintain and enhance the functional ecological linkage between Elk Island National Park, Ministik Wildlife Sanctuary and Miquelon Lake Provincial Park.
2. To maintain, enhance and restore the health of native grasslands/shrubland and Dry Mixedwood Boreal Forest.
3. To maintain and recover habitat for viable populations of Species at Risk.
4. To enhance community support and understanding of the ecological value of the Cooking Lake Moraine Natural Area (CLMNA) and to promote community participation in its conservation.
5. To maintain the ecological integrity of the CLMNA through conservation partnerships.
6. To maintain and enhance the health of riparian areas and associated wetlands and streams.
7. To restore drained wetlands.

**Please note that NCC internal language utilizes the name “Cooking Lake Moraine” interchangeably with “the Beaver Hills”.*

Securement

The Nature Conservancy of Canada has identified several key natural areas across the province (and the country) through our conservation planning science processes. One of these natural areas includes the Beavers Hills. The Beaver Hills (also known as the Cooking Lake Moraine) Natural Area is an inspiring example of conservation partnerships. Due to the extensive Dry Mixedwood Boreal Forest habitat and moraine landscape, the Cooking Lake Moraine Natural Area serves as a critical source of surface and ground water recharge, supports a high diversity of rare species and globally significant concentrations of migratory birds, and plays a key role in ecological linkages. Local landowners continue to take pride in being associated with such a well-managed landscape with healthy ecosystems and viable species populations sustained by partnerships in conservation.

The Nature Conservancy of Canada has conserved approximately 3000 acres of land in the Beaver Hills to date through fee simple purchasing. Joining with partners in our conservation activities allows us to do more conservation work in the area. Several of our key partners in the Beaver Hills include:

- i. Alberta Fish and Game Association
- ii. Ducks Unlimited
- iii. Alberta Conservation Association
- iv. Edmonton & Area Land Trust
- v. Beaver Hills Initiative
- vi. Strathcona County

Conservation Easements are one of the tools NCC utilizes to conserve land. A conservation easement is a legally binding agreement placed on title of a property between the NCC and the landowner to limit development and activities on the landscape to preserve the natural heritage for future generations and the continued benefit of wildlife and nature. Landowners are compensated fair market value for the conservation easement. The partners on the conservation easement are the landowner themselves. They steward the land, and with a strong desire to see it preserved into the future. A strong working relationship with landowners is important to the Nature Conservancy. Approximately 740 acres of land has been conserved in the Beaver Hills area utilizing conservation easements.

Stewardship

The Nature Conservancy of Canada's goals in the Beaver Hills also relate to our Stewardship of the conservation lands. At a property level, our stewardship objectives are done through five year property management plans in which achievable outcomes are undertaken to improve health and increase the quality of habitat. This is done by reducing invasive species, increase range condition or changing fencing to suit the needs of wildlife to name a few. The NCC also works with our partners and engages the public to achieve these goals.

It is important that the NCC reach out and engage the public in our work and what we do. This is primarily done through Conservation Volunteers (CV) Program. Conservation volunteer events assist in achieving the NCC's annual stewardship actions on conservation properties, and they allow volunteers and partners engage in conservation work, share experiences and pass along knowledge. The latter is extremely important to the Beaver Hills area which has so many protected areas, organizations, and research projects working together.

The individuals who participate in our Conservation Volunteers Events include but are not limited to:

- vii. Members of the Public
- viii. Academic Experts
- ix. Land Stewards
- x. Partner Organizations Members/Staff
- xi. Students

2. Did the outcomes of the project change how your organization acts, governs or sees new opportunities?

Since our conservation work (securement and stewardship) is ongoing in the Beaver Hills area there are no direct changes. However every time we are able to conserve more land or host a volunteer event it allows us to engage more partners, to allow more members of the public to get their hands dirty and really showcase the unique landscape found in the Beaver Hills. These activities always create new opportunities through partners and people we meet, and often create openings for future work.

3. Assuming that designation as a Biosphere Reserve might expand the network of potential partners, or reinforce commitment of existing BHI partners, what future benefits can you see coming from participation in the UNESCO Biosphere Reserve network?

The UNESCO Biosphere Reserve designation would provide a larger stage for NCC and all of the BHI partners to showcase the great work and partnerships already built within the Beaver Hills area, and allow for greater opportunities in future projects.

The Biosphere Reserve nomination will also provide a validation of the work already done to protect this unique landscape. It will likely engage more landowners in the area to consider conservation for the future of their lands, and create more partnerships to allow us to protect and steward these lands for future generations.

4. How do you foresee both internal and external partnering relationships changing as a result of the Beaver Hills becoming a Biosphere Reserve? For example, what are you prepared to do now and what aspects would you need more time to develop and implement in the future in order to enhance partnering opportunities with existing members of the BHI as well as other agencies and organizations, including other Biosphere Reserves within Canada and the wider global network?

I foresee an increase in partnership activity within the BHI, and the Beaver Hills area as a whole. A Biosphere Reserve nomination will heighten the awareness of this area, and the need to conserve it. The potential for new partners and conservation land acquisition is nearly assured with the additional recognition and networking opportunities the biosphere reserve would allow for.

NCC's current limitations to partner within the BHI are available staff time. With the BHI and partnerships being a small component of the local staff's job description, that is the biggest time limit. However with the Biosphere Reserve nomination and potential future activities and growth with Conservation and NCC in the Edmonton area, the capacity to participate may expand. NCC is a national organization, and has the potential to celebrate the success of this Biosphere Reserve nomination nationwide through social media, our blog and website and updates to our donors and our board.

CASE STUDY #4. MESOCARNIVORE PROJECT

1. Please describe the projects undertaken. Include the goals of the project, the partnering organizations and differences in approach relative to how your organization would normally attempt such projects.

The mesocarnivore project uses trap cameras and hair traps to non-invasively sample the distribution of mid-sized carnivores in relationship to land use/land cover in the Beaver Hills Moraine. The project examines many species, with a particular focus on Fisher populations, as this species was reintroduced onto this landscape within the last few decades. The main goals of the project are to: (1) measure mesocarnivore diversity within this mixed multi-use landscape; (2) relate species occurrence to habitat composition and connectivity; and, (3) test for connectivity with adjacent landscapes by examining the genetic structure of the recently established Fisher population in the region.

The mesocarnivore project is a collaborative effort of many organizations, either as funders or as research partners; these include Alberta Parks, Alberta Innovates - Technology Futures, Alberta Conservation Association, Alberta Environment and Sustainable Resource Development (Fish and Wildlife), Elk Island National Park, Friends of Elk Island Society, Friends of Blackfoot Society, Beaver Hills Initiative, University of Alberta and University of Victoria. More information about the project is available at www.mesocarnivore.weebly.com.

If the BHI were to attempt this project on its own, a much greater investment in terms of money, people, and other resources would be necessary. This would include not only planning and implementing the research, but soliciting information from experts in the appropriate fields to ensure the research was credible, a non-trivial task. It is much more efficient and effective for the BHI to act in a collaborative and facilitation role for projects of this type by supplying some funding, GIS support, and the opportunity to liaise with other organizations involved with the BHI.

2. Did the outcomes of the project change how your organization acts, governs or sees new opportunities?

This project is ongoing, and has not yet completed its first year. However, the highly-collaborative approach being used could serve as a template for future projects in the region. Particularly interesting is the inclusion of citizen-science groups in supportive roles such as checking sampling sites (Friends of Elk Island) or providing transportation and assistance in protected areas (Friends of Blackfoot).

3. Assuming that designation as a Biosphere Reserve might expand the network of potential partners, or reinforce commitment of existing BHI partners, what future benefits can you see coming from participation in the UNESCO Biosphere Reserve network?

Designation as a Biosphere Reserve would enhance the profile of the Beaver Hills region and the research being done there. More attention to the area should increase the number of researchers interested in addressing a wide range of ecological questions. Increased profile related to the designation should also increase the desire of potential funders to be seen to contribute to the Beaver Hills as a Biosphere

Reserve, as this will increase their social licence to operate. At the same time, it may be possible to influence the management decisions and strategies of industry in the region given the public scrutiny of activities in the region, which may be enhanced by the biosphere designation.

4. How do you foresee both internal and external partnering relationships changing as a result of the Beaver Hills becoming a Biosphere Reserve? For example, what are you prepared to do now and what aspects would you need more time to develop and implement in the future in order to enhance partnering opportunities with existing members of the BHI as well as other agencies and organizations, including other Biosphere Reserves within Canada and the wider global network?

There are likely to be more opportunities for partnerships after the Beaver Hills becomes a Biosphere Reserve. It seems likely that some of these partnerships could easily be accommodated now, as they will probably take the form of requests for data or the chance to link up with other organizations working within the Beaver Hills. More involved collaborations would require more significant investment in terms of staff time or resources (including funding). As it stands, the BHI is understaffed for handling extensive data requests, administrative assistance, etc., and also does not possess the financial wherewithal to make extensive funding available for projects. However, the BHI can supply relatively small amounts of funding, and some level of data support, that proponents can use to leverage other funding/data sources for their projects. If becoming a Biosphere Reserve results in enhanced ability for the BHI to attract funding to support its programs, there may be more funds and personnel available in the future to assist with research and other activities (e.g. outreach) in the region.

CASE STUDY #5. BENEFITS OF THE BHI AND A BEAVER HILLS BIOSPHERE RESERVE FOR ELK ISLAND NATIONAL PARK

The Beaver Hills Initiative (BHI) came together in 2002 from a collective recognition of the discrete and recognizable nature of the Beaver Hills/Cooking Lake moraine natural region east of Edmonton and the several communities that are found around and within it that use and enjoy its resources. Three levels of government as well as academia, industry, and locally-active environmental groups have agreed that for this ecosystem to remain sustainable, growth and development must consider the shared resource and its sensitivity to development. The Beaver Hills Initiative values the region for its natural beauty and quality of life, and supports co-operative efforts to sustain quality of water, land, air, natural resources, enjoyment opportunities, and community development. Over 30 organizations have participated in the Beaver Hills Initiative, including Parks Canada's Elk Island National Park, a national park that is over a century old and is located at the heart of the moraine ecosystem.

When the BHI began planning to nominate the Beaver Hills as a UNESCO Biosphere Reserve, Parks Canada was already well integrated into the Man and the Biosphere program with eight national parks and one national marine conservation area identified as core protected areas within Canadian biosphere reserves. More than 50% of the biosphere reserve network in Canada has a Parks Canada managed property as the core protected area.

Parks Canada has historically recognized biosphere reserves as desirable and valuable support and context to protected areas. The functions Parks Canada values in biosphere reserves include conservation, sustainable development and support for research, monitoring, education and training. Additionally, the relationships forged through the collaborative planning and cooperation inherent in a biosphere reserve are immensely valuable for national parks as a way of connecting to local and regional communities as well as to biosphere reserve members.

Elk Island National Park is a small national park with a small staff and a strong mandate for conservation, public education, and facilitating enjoyable visitor experiences in the park. Park staff must focus as a priority on in-park activities: working externally happens most effectively through partnered activities and collaborative means that extend our reach. Elk Island National Park has benefited greatly from its participation in the Beaver Hills Initiative through the ability to strengthen and augment its voice on a regional level, and by providing a vehicle for contributions to sustainability initiatives in the region that support the park's mandate for conservation, outreach and public education to Canadians.

Benefits well-recognized by Parks Canada as accruing from Biosphere Reserve designation include the following:

- The ecosystem-based approach and harmonized conservation initiatives coordinated within a biosphere reserve will support the integrity of the greater park ecosystem.
- Data-sharing, the improvement of regional monitoring activities, and facilitation of cooperative research contribute to better and stronger science.
- Visitors' and residents' appreciation and understanding can be enhanced by the high international profile of the Biosphere Reserve program, leading to a better understanding of the role of the core protected area.

- Most of all, a Biosphere Reserve is a useful link for the park, as the Beaver Hills Initiative has been, with regional stakeholders and the community.

The establishment of the biosphere reserve will further enhance the park's ability to participate in tourism development based on the international designation; to work regionally to resolve human-environmental issues; and potentially increase regional employment and capacity in the environmental and tourism fields. Elk Island National Park is able to tap the experiences of the other national parks in the Parks Canada system to both contribute as a core protected area in the biosphere reserve and to benefit from the ideas, advice and collaborations of the many organizations that are involved with the BHI and that will inform the biosphere reserve.

The demonstrated success of the Beaver Hills Initiative, working collaboratively and with many regional partners on sustainability activities, sets a solid foundation for operating as a biosphere reserve. Elk Island National Park is confident of the continued and increasing benefits of continuing to work with the BHI, through to the nomination and hoped-for designation of the unique Beaver Hills/Cooking Lake moraine natural region and its surrounding communities as a UNESCO biosphere reserve.

CASE STUDY #6. BHI RESEARCH AND MONITORING WORKING GROUP

Prior to submitting specific case studies, the Research and Monitoring Working Group had prepared an initial list of the benefits of being part of the BHI and the value of becoming a Biosphere Reserve.

Benefits of being part of the BHI:

- Establishment of the research station in Miquelon Lake Provincial Park as part of the Augustana campus of the University of Alberta provides opportunities for collaboration;
- Cross-jurisdictional networks and exchange of expertise and multi-disciplinary collaboration;
- Open forum for discussion and sharing of information, and learning of participants;
- Leveraging of research funding and networking through the BHI;
- The existence of the BHI as an entity attracts researchers and funding to work in the region;
- The BHI builds champions of the natural environment and sustainable management through interaction across protected areas, NGOs, government agencies and individuals;
- The Beaver Hills is a landscape feature which crosses jurisdictional boundaries and promotes an holistic approach to living and working on the landscape;
- Municipalities involved in the BHI can assist each other in terms of resources and knowledge, and as a larger entity may access resources not available or affordable to each county on its own;
- The BHI was a model of regional planning before current regional planning efforts in the province focussing on the environment, economy, and social factors even began;
- If individual municipalities were to embark on specific projects or activities, they would lack the leverage power that the BHI has as a whole;
- The BHI can access resources such as GIS data, etc., more cost-effectively than would one county on its own; and
- The BHI has proven itself in terms of the quality of data and programs that it has developed over the past decade; as a result, there has been a transformation in the way the BHI promotes itself from internally-focussed to focussed on informing the public about the BHI and seeking feedback from the public on BHI activities. This has driven the need to explain the benefits of the BHI to a larger audience.

Why we want to be part of the Biosphere Reserve Network:

- Being part of the Biosphere Reserve will enhance the profile of research done within the Beaver Hills, and promote international collaboration;
- Enhance the international reputation of the Beaver Hills as a sustainably managed area, recognizing the needs of the core, buffer, and transition areas;
- Enhance community pride, educational opportunities, sense of place;

- Recognition for ongoing efforts to promote sustainable development in line with existing Biosphere Reserve principles;
- To attract new partners, strengthen and re-establish relationships, and enhance and build partnerships within the Beaver Hills;
- Strengthen long-term conservation efforts by sharing research outcomes related to activities such as incentive programs, conservation initiatives, and citizen science from the Beaver Hills with other members of the Biosphere Reserve Network;
- Provide access to knowledge gained through the management of other Biosphere Reserves around the globe to maintain position at the leading edge of research and technological advances related to landscape management, climate change, and other current challenges;
- Need to transform and continue to promote long-term sustainable visioning as opposed to short-term, unsustainable development and short;
- Becoming part of the Canadian network of Biosphere Reserves would re-enforce (or re-instate) the importance of the network and the need for funding and support at the national level for this progressive and proactive initiative. The BHI would be willing to cooperate to promote Biosphere Reserves provincially, nationally and internationally; and
- The Beaver Hills would serve as a cutting-edge model of Biosphere Reserve management, as the BHI has long promoted forward thinking in terms of holistic land management and regional land use planning. The Beaver Hills would be only the second Biosphere Reserve within Alberta, and the 16th in Canada.



Beaver Hills Initiative
2012 – 2015 Business Plan
Work Book
Success Indicators

Approved by BHI Board
January, 2012

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Executive Summary

The Beaver Hills, a geomorphological feature created by glacial retreat, lies east of Edmonton in the Beaver Hills/Cooking Lake Beaver Hills and crosses the boundaries of five rural municipalities: Strathcona, Leduc, Beaver, Lamont and Camrose Counties. Elk Island National Park (EINP), along with several provincial parks and protected areas-including the Ministik Bird Sanctuary, Cooking Lake – Blackfoot Grazing, Wildlife and Provincial Recreational Area and Miquelon Lake Provincial Park, are also found within the Beaver Hills. This ecologically-significant region encompasses 1,572 km² or 607 miles² and forms a raised landscape feature raised approximately 750 m above sea level: the area is distinctly visible from the surrounding agricultural lands. The Beaver Hills is a critical source of both surface and ground water, and a large proportion of lands, both public and private, remain in a natural, extensively treed, state.

The knob and kettle terrain of the Beaver Hills has prevented extensive clearing of land, allowing it to retain its natural features. The area is characterized by complex hummocky terrain that forms a patchwork of depressional areas, many of which support wetlands and small lakes. The uplands support aspen-dominated boreal mixedwood forest habitat which, along with lakes and wetlands supports a high diversity of plant and animal life. The combination of hummocky terrain and soil conditions has limited past agricultural clearing, with the result that approximately 43% of the Beaver Hills remains in its natural condition. Approximately 25% of the area is presently under some level of protected area designation (total area protected is 39,869.55 ha).

Like all areas of Alberta, the Beaver Hills is experiencing increasing land use pressure from recreation, urban and country residential development, industry and agriculture, which places increasing demands on the ecosystem of the area. In order for the ecosystem to remain sustainable, decision makers must consider the natural resources of the area and their sensitivity to development when reviewing growth and development plans.

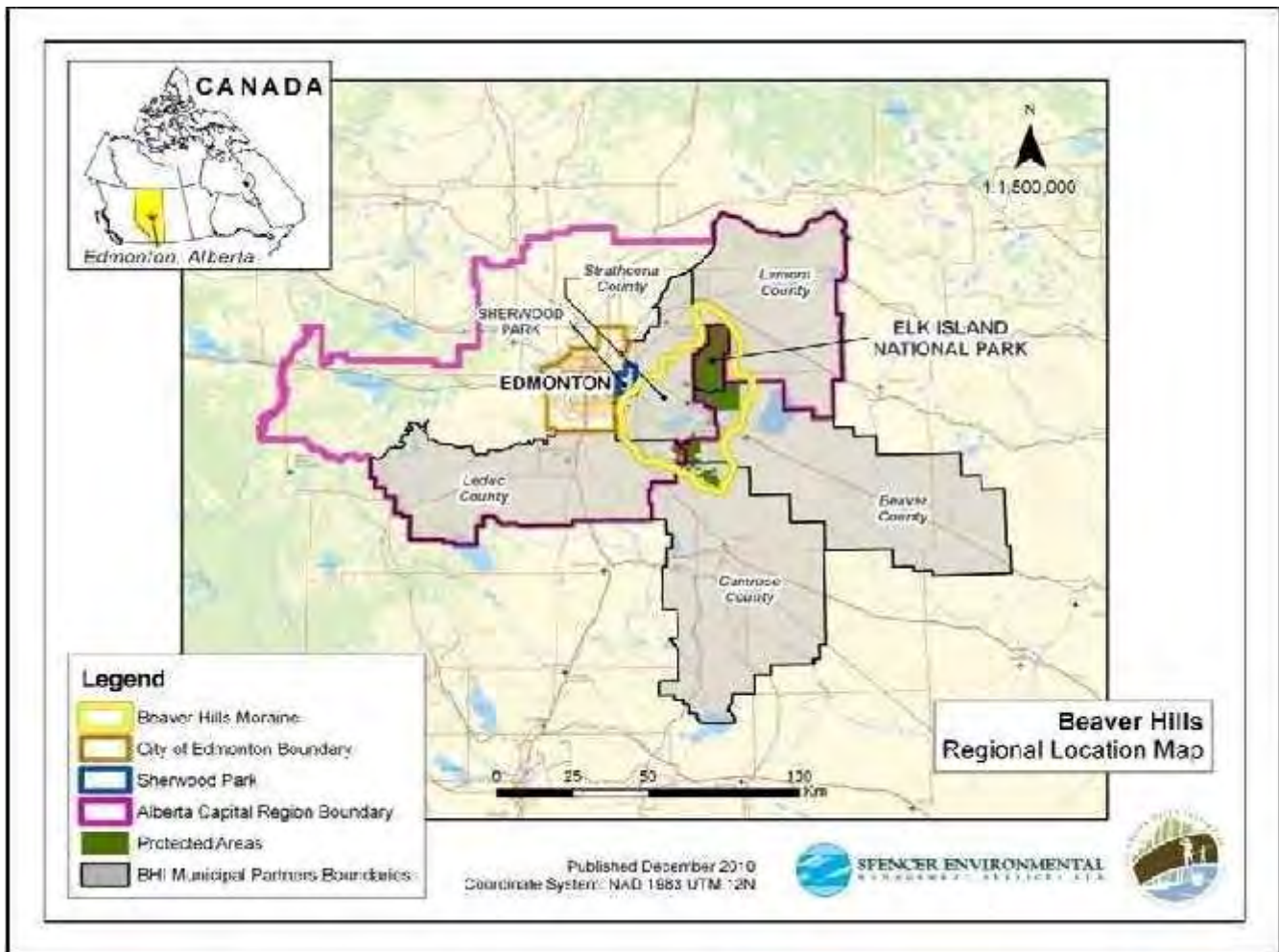
To help decision makers balance the social, economic, environmental, heritage and cultural goals of the Beaver Hills area a number of organizations - including municipal, provincial and federal governments, industry, non- government organizations and academia - came together in 2002 and formed what is today known as the Beaver Hills Initiative (BHI). See www.beaverhills.ca for a complete list of partners.

Shortly after forming the BHI began working towards creating a sustainable region in the Beaver Hills to be accomplished through shared initiatives and coordinated action, and providing, sound science and, land management recommendations on bioregional management and the total landscape approach to land use planning. Bioregional planning has been informed by convincing international evidence that conserving biodiversity and “natural capital” is a prerequisite to sustainable development. The conservation of this unique landscape in the Beaver Hills results in a “public good” (a natural capital asset of value). In this context, bioregional management provides a means of addressing the tension between development and the conservation of biodiversity at the regional level.

Funding of the BHI, (over two million dollars since 2002, including successful grant applications), has come from all three levels of government as well as a variety of private foundations. Representatives of over 30 agencies form the BHI Collaborative (Board of Directors) and/or individual Working Groups: these in-kind contributions and expertise have totalled over three million dollars since 2002. The BHI is not a registered agency, but rather is fiscally managed through Strathcona County. Board Policies exist, and have been updated for the BHI 2012– 2015 Business Plan.

Many of the current BHI partners were also founding members of the organization: establishment of new partnerships is used to further strengthen the solid foundation initially laid down by the founding members. The BHI wishes to foster regional cooperation through a common land management framework that will help to conserve the moraine now and into the future.

Land use in the area is administered by municipal, provincial and federal agencies. The Beaver Hills lies within five counties (Strathcona, Leduc, Beaver, Lamont and Camrose). Several federal and provincial protected areas are located entirely within the Beaver Hills. In addition, Municipal governments in the area manage the lands under their jurisdiction mainly by regulating land use at the local (parcel) and regional scales. Land use on the individual parcel is managed through the land development approval process by municipalities through Municipal Development Plans and Land Use By-laws.



In July 2006 Spencer Environmental, IMI Strategics and ISL Group were commissioned to develop the BHI Land Management Framework (LMF), a systematic approach to identify key environmental resources in areas under consideration for development, and to identify the means to manage those resources sustainably. The LMF is based on up-to-date information regarding the environmental resources that contribute to the essential landscape character of the moraine, described in the LMF in text and maps.

The specific tools contained within the LMF help land use planners manage environmental resources of the moraine consistently and sustainably. Electronic versions of the LMF maps will allow planners to determine the resources present at the parcel scale and at the broader regional scale. A checklist helps the Planners identify potential concerns and the appropriate Best Management Practices to apply as approval conditions to ensure development is sustainable. Together, these tools are intended to assist Planners in applying the BHI Land Management Principles adopted by the partner municipalities in their regular planning duties and available to all partners.

With more than nine years of experience the BHI successfully continues to successfully facilitate joint initiatives among the 30+ partners, including the uncommon partnering of federal and provincial parks with university researchers and industry and municipalities with Non-Government Organizations, to tackle a variety of conservation initiatives. This represents an overwhelming show of support for preserving this unique landscape and the natural, social and cultural values it holds. Ultimately, however, the importance of a natural landscape is reflected in the level of commitment that people are willing to contribute to it.

New to the 2012 – 2015 Business Plans will be a review of all projects associated with the different Working Groups using an approved Project Assessment Checklist based on the BHI's Vision, Mission, Guiding Principles, and Landscape Statements. The Checklist assigns scores for proposed projects based on Project Management, Conservation, Human Dimension, Methodology, Outreach as well as urgency and reality of capacity by the BHI to complete the projects. (BHI Work Book-Strategic Planning)

A number of other recent developments confirm not only the importance of the work that the BHI is now pursuing, but also the significance of the Beaver Hills area in terms of its natural qualities and landscape value. In September 2006, designation of the Beaver Hills Dark Sky Preserve by the Royal Astronomical Society of Canada recognized the importance of its nocturnal habitats and the values of the night sky as a cultural and natural heritage for present and future generations.

Currently, the BHI is preparing a nomination for designation of the Beaver Hills as a Biosphere Reserve under the Man and Biosphere Program (MAB) of the United Nations Education, Scientific and Cultural Organization (UNESCO). Designation as a Biosphere Reserve will provide international recognition not only of the biodiversity and ecological integrity of the protected areas within the region, but also the way in which land-use planning and environmental management practices promote sustainable development. Biosphere Reserve designation and demonstrate the way in which humans can live and work in harmony with nature. Biosphere Reserve designation will also enable the BHI to become a more active participant and contributor to finding environmental stewardship solutions to global challenges such as climate change, the provision of ecosystem services, and the impact of urbanization on rural landscapes. The BHI exemplifies the benefits of a bioregional approach to conservation and responsible land-use planning and management. For example value of the partnership with BHI and the importance of the potential designation of the Beaver Hills as a Biosphere Reserve form the foundation of ongoing management goals set out in the 2011 Elk Island National Park Management Plan.

Should the designation of the Beaver Hills as a Biosphere Reserve be successful, ongoing work with Federal and Provincial protected areas, research and monitoring, policy development, communication and education identified in the BHI LMF will be reviewed by the Board of Directors and all working groups to ensure the goals and objectives of the Biosphere Reserve designation are linked within the BHI Land Management Framework and Business Plan. Designation as a Biosphere Reserve will elevate the level of commitment by land use decision makers and managers and further partnership building, involvement of the community, and implementation of new policies.

Pilot projects such as Transferable Development Credits (TDC), Tourism Development Opportunities Assessment (TDOA) implementation strategy, State of the Moraine Report and extensive Wetland Inventory are key deliverables within the 2012-2015 Business Plan. Sustainable Tourism Development with a focus on Nature Based Tourism, Agri-Tourism and Heritage/Cultural Tourism has been assessed in partnership with Provincial Tourism Parks and Recreation (TPR), Federal Parks Canada (EINP), municipalities and local operators in the BHI area. The new business cases identify in the 2011 TDOA document for the Beaver Hills and goals and objectives found in the network of International Biosphere Reserves will be brought to the Beaver Hills. As the trend for local and heritage food securement and food systems planning continue to evolve the BHI will engage with partnering municipalities to promote and highlight the unique value of the diverse agriculture found in the Beaver Hills.

The 2012-2015 Business Plan, and implementation of the updated BHI LMF framework, will continue to assist municipalities and BHI partners make land use and management decisions within the Beaver Hills based on a consistent goal: to review social, economic, environment, heritage and cultural factors equally supporting the quality of life valued by residents and visitors to the area today and for future generations to enjoy. In this sense, successful implementation of the framework may be one of the most significant activities of the BHI partners, and a key step forward in sustainable management of the Beaver Hills.

2012 – 2015 Business Plan

Vision

The Beaver Hills Initiative values the region for its natural beauty and quality of life, and supports cooperative efforts to sustain the quality and quantity of water, land, air, natural resources and community development in the region.

Mission

Working together for a sustainable region, through shared initiatives and coordinated action.

Guiding Principles

- Foster long-term land use planning with clear consistent goals and objectives.
- Promote regional coordination by reflecting the regional vision in all municipal land use policies, plans and actions.
- Ensure success through community participation, input and support. We are stronger together than acting separately.
- Integrate economic forces with environmental concerns (people's needs, economy, and environment).
- Conserve, enhance, and monitor improvements or impacts to the environment.
- Ensure success through commitment and leadership from all levels of government.
- Strive for a common level of data (identify critical data needed, improve access and share where appropriate).
- Determine habitat required and strive toward maintaining the optimum amount of habitat.
- Respect social and cultural history.
- Focus on contribution and credit, rather than on concerns and criticism.
- Recognize that each partner area has a responsibility to the integration of environmental, social, economic and cultural well being of the region.

Primary Client

The primary clients of the BHI are land use decision makers and land managers

Goal 1 – Data Sharing

Land use decision makers and land managers have consistent, current data on resources and recommendations to support land management decisions

1.1 Objectives

1. Remote sensing and GIS - LiDAR Implementation Strategy contribute to enhancement of the GIS Library and 2012 Data Management Plan
2. Inventory and identify vegetation cover and wetland types in the BHI area
3. Implement landscape conservation planning models (e.g., Marxan Model)
4. Develop a State of the Beaver Hills Report - parameters that may be monitored include (a) biological air monitoring, (b) focal species (e.g. beavers, amphibians), (c) invasive species and pest monitoring, (d) riparian zone health, and (e) effectiveness of policy
5. Develop BHI Organization Report - evaluation of impacts, benefits, challenges, and sustainability of the BHI organization
6. Update the BHI Land Management Framework integrating all project data
7. Establish Climate Change Adaptive Management data, addressing drought, soil erosion and/or flood management

1.2 Activities – Short Term (2011-2012)

1. Revise GIS Data Management Plan: assess status, identify gaps, recommend strategic focus
2. Discuss scope of data collection and develop budget for considerations
3. Collect data for landscape conservation planning models and incorporate into modeling further to Marxan Model proof of concept
4. Evaluate and link working groups roles and data needs and provide annual report to Executive Director (input provided by each working group)

1.3 Activities – Long-term (2012-2014)

1. Ongoing update of data acquisition and integration, geospatial modeling, stakeholder accessibility
2. Acquire data to monitor land change, identify areas for conservation and restoration and assist with the develop fire management strategies jointly with the municipalities
3. Update landscape conservation planning models (e.g., Marxan) as needed
4. Acquire data to assist Research and Monitoring Working Group (RMWG) with State of the Beaver Hills Report
5. Acquire data to assist RMWG with Developing Climate Change Adaptive Management Strategy

1.4 Outcomes

1. Land use decision makers have access to current and consistent data resources and policies to support decisions
2. Decisions are based upon the best sources of information and science based data available
3. Land use planners and decision makers incorporate information and data from the BHI into their land management and municipal planning processes
4. Ongoing data management, data sharing and model development is occurring

5. A baseline is established by the RMWG for monitoring biodiversity, fire protection, and assessing human activity impact (e.g., land use change implications)
6. Outputs of landscape conservation planning models for the BHI are adopted and implemented by BHI partners
7. Monitoring data will be used to make conservation land management decisions
8. Validation of the effectiveness of the BHI as a land management entity and as a forum for promoting research and education in the Beaver Hills is established; BHI Organization Report
9. Climate Change Adaptive Management Strategy is developed and adopted

1.5 Measures

1. Established data sharing system between Municipal, Federal and Provincial Governments
2. Wetland/vegetation inventory completes necessary dataset for BHI LMF
3. A landscape conservation planning model for the Beaver Hills based on ecological, social, cultural and economic factors has been developed
4. Established monitoring and measuring strategies for the BHI
5. Each WG has evaluated their work to date and identified the impacts, benefits, challenges and sustainability of the activities in their areas
6. Agriculture Framework is established
7. All components of a Climate Change Adaptive Management Strategy are identified, evaluated and addressed
8. Citizen science and increased conservation and stewardship is occurring in the Beaver Hills

Goal 2 – Strategic Business and Land Management Planning

Support Municipal Councils, planners and partner agencies in their decision making through strategic coordination of land management and BHI Business Planning.

2.1 Objectives

1. Implement 2012-2015 Business Plan/Governance and Long Term Sustainability Framework for operations of the BHI
2. Implement Sustainable Tourism Development Opportunity Strategy
3. Implement Transfer of Development Credit (TDC) Framework
4. Implement updated BHI LMF
5. Fire Management for the Beaver Hills
6. Planning for connectivity of Astotin Lake, Elk Island National Park, North Saskatchewan River Valley
7. Provincial Land Use Framework – Link to North Saskatchewan Regional Plan
8. Stewardship Engagement Strategy including Citizen Science

2.2 Activities – Short Term (2011 -2012)

1. Establish a strategy basis for project, budgeting and funding request
2. Establish BHI Sustainable Tourism Development project implementation strategy

3. The TDC pilot link to University of Alberta ecological modeling and landscape conservation planning applications/outputs; higher priority for education and communication to expand mechanisms for learning and extension, initial discussions on helping to build the TDC regulations and policy for the BHI, ongoing work to promote best management practises and develop programming for everything from offsets to compensation ratios
4. Share BHI data and information with the Provincial Land Use Secretariat
5. Subdivision Development Information Design sheet is used as a communications tool; updated models are completed; update BHI LMF to include current Provincial legislation and regulations ; review by Planners Working Group (PWG)
6. Stewardship Engagement Strategy is developed as key collaboration with stewardship organizations and citizens

2.3 Activities – Long Term (2012-2015)

1. Annual BHI organizational, business plan and budget review
2. Municipalities adopt the updated BHI LMF, changes incorporated in each municipality MDP
3. BHI LMF and mapping is input into the Provincial Land Use Framework for the North Saskatchewan Regional Plan

2.4 Outcomes

1. 2012-2015 Business Plan is accepted and implemented by the BHI Board
2. Sustainable, Nature-Based Tourism opportunities, resources, attributes and impacts are well defined and communicated.
3. Implementation of TDC Pilot
4. Municipalities implement BHI Updated Land Management Framework in statutory documents
5. Land use planners and decision makers evolve the Working Groups and BHI Board of Directors to develop a land management advisory team and forum for discussion for partners of the BHI

2.5 Measures

1. Business Plan goals are reached, monitored and evaluated, providing a clear direction, governance structure, roles and responsibilities
2. BHI TDOA implemented
3. TDC process in use in municipalities in the BHI
4. Updated BHI LMF provides increased, valuable guidance for land use decisions to planners and decision makers
5. LMF is incorporated into statutory documents, citizens in BHI area are informed
6. Stewardship Engagement Strategy is implemented
7. Development and implementation of (a) a Fire Management Plan, (b) Restoration of a habitat corridor to reconnect Aston Lake with the Saskatchewan River Valley and, (c) a Vegetation Restoration plan for the Beaver Hills

Goal 3 – Partnership Building

Build partnerships leveraging funding, collaborative projects, work sharing and ongoing monitoring of the BHI area.

3.1 Objectives

1. Develop and submit the a Biosphere Reserve Nomination
2. Develop a Biosphere Reserve Implementation Strategy
3. Develop an Integrated Communication and Education Strategy
4. Build relationships with Regional/Provincial/Federal Agencies
5. Foster a working GIS partnership with the Provincial Land Use Framework and the Capital Region Board
6. Develop and implement Stewardship Engagement Strategy

3.2 Activities – Short Term (2011 -2012)

1. Complete Biosphere Reserve nomination
2. Develop an information sharing strategy: to having greater stakeholder participation in each municipality through their elected officials and citizen engagement
3. Establish North Saskatchewan Regional Planning partnerships
4. Expand datasets over the Beaver Hills Sub Watershed, practicing integrated watershed management

3.3 Activities – Long Term (2013-2015)

1. Develop plans to annually celebrate successes and share with the community
2. Complete communication and education binder with all communication and education materials available to partners
3. Implement the North Saskatchewan Regional Plan within BHI data
4. Implement integrated watershed management planning process within the Beaver Hills
5. Ensure tours and stewardship programs are available to partners; volunteerism, conservation, stewardship and citizen science increases in the Beaver Hills

3.4 Outcomes

1. Biosphere Reserve designation received, strategy implemented
2. Integrated Communication and Education Plan, upgraded website and, web mapping tools, increased exposure and recognition of the BHI is used and promoted by BHI partners
3. Protected Areas Cooperation Plan is implemented
4. Exchange of information and ongoing cooperation between protected areas is enhanced
5. Stewardship Engagement Strategy enhances ecological health of the Beaver Hills and awareness of the BHI

3.5 Measures

1. BHI reports on Biosphere Reserve commitments every 10 years, maintains designation
2. Integrated Communication and Education strategy implemented raising awareness of the Beaver Hills and BHI
3. Municipalities develop light efficient policies and practice dark sky lighting
4. Protected Areas Cooperation Plan increases linkages and data sharing between protected areas
5. Coordination of BHI projects incorporated into updated BHI LMF
6. BHI is recognized by citizens as an active participant in land conservation, stewardship and awareness building

Strategic Priorities Work Program – NOW (2012)

PRIORITY/Desired Outcome	SHORT Term Action (NOW)	LONG Term Direction
BUSINESS PLAN: Update (BoD) * Plan 2012 – 15 & 2011 Priorities <ul style="list-style-type: none"> • Alignment among all members • Accountability to partners • Basis for budgeting & funding requests • Manage expectations within BHI resources 	1. Business Plan - January 2. Review Mandate - June 3. 2013 Budget - September 4. Annual Report - November each year	1. Update Business Plan after Biosphere designation 2. Establish annual joint presentation to partnering Councils
BHI ORGANIZATION: Review (BoD) * Governance Framework <ul style="list-style-type: none"> • Governance structure • Roles & Responsibilities • Governance Policies • Organizational Success Indicators • Executive Director Performance Plan • Mandate review • Decision Making tools • Meeting procedures & agenda 	1. Governance Structure - January 2. Governance Policy - June 3. ED Performance Plan - September 4. BHI Funding sustainability planning September	1. Board and Working Group Policy update as needed
NATURE BASED TOURISM: Strategy (TWIG) * Stakeholder supported strategy <ul style="list-style-type: none"> • Promote sustainable nature based tourism opportunities • Resources & attributes are defined • Impacts are communicated • Develop partnerships • Environmental areas protected • Public appreciation for unique ecosystem 	1. Presentation of Plan - January 2. Implementation Strategy Developed February 2012 - November 2013	1. Jointly Implement a sustainable nature based tourism product
TRANSFER OF DEVELOPMENT CREDITS: Model (PWG) * Model & Tool Kit <ul style="list-style-type: none"> • Model for Ecological Goods and Services implementation • Transfer of Development Credits Model • Transfer of Development Credits process • TDC used by municipalities • User friendly tools • Public awareness & support 	1. Update on progress - February 2. Presentation of Model - October 3. Draft policy options - October 4. Develop tool kit - December	1. Implementation plan 2. Pilot case study 3. Marketing campaign - public 4. Marketing campaign - municipalities
BIOSPHERE RESERVE: Application (PAWG) <ul style="list-style-type: none"> • World class recognition • Access to new support levels • Monitoring requirements 	1. Prepare application - January 2. Obtain signatures - September 3. Submit application - December	1. Celebration of designation 2. Checklist for status compliance

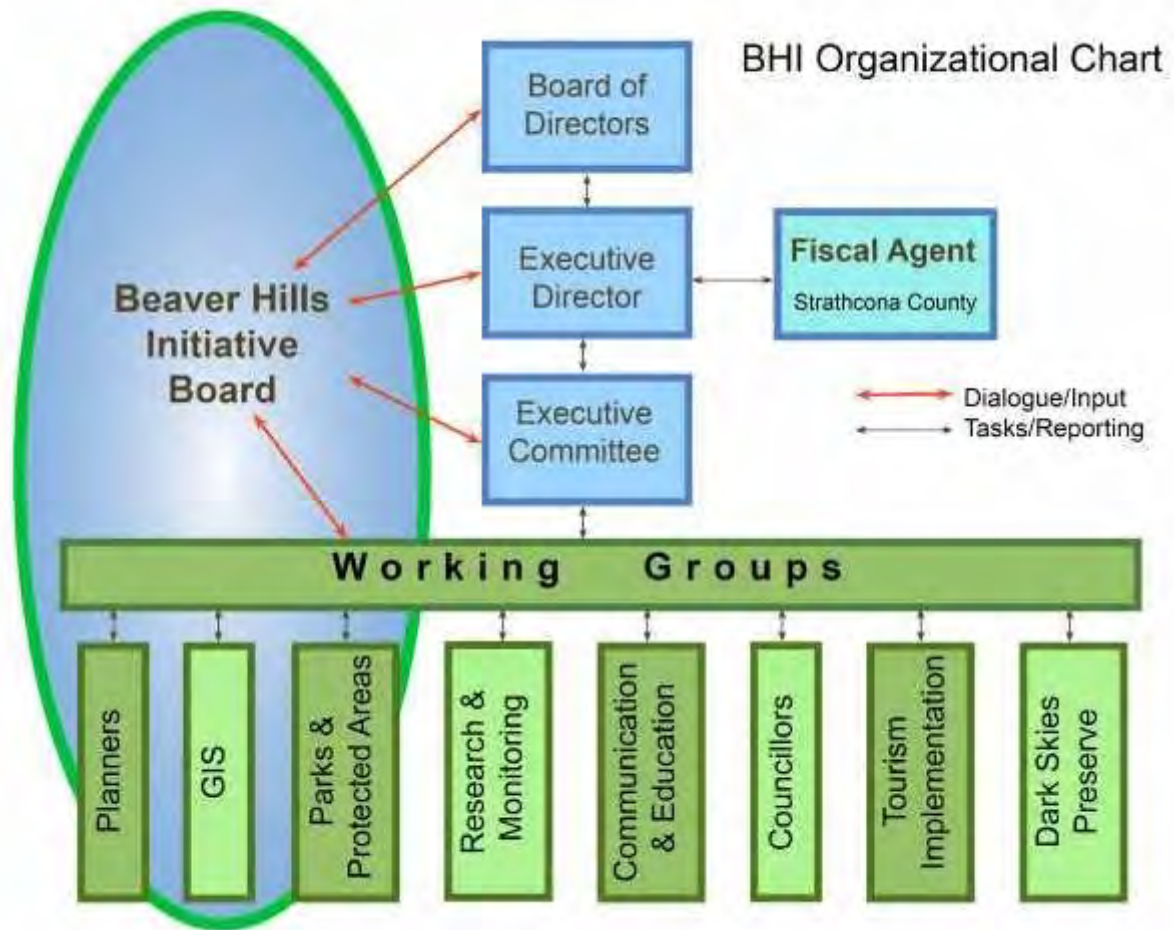
Strategic Priorities Work Program – NEXT/LATER (2013 – 2015)

PRIORITY/Desired Outcome	SHORT Term Action (NOW)	LONG Term Direction
<p>LAND MANAGEMENT FRAMEWORK (PWG) * Information for consideration</p> <ul style="list-style-type: none"> • Tools for land use planners • Policy guidance for decision makers • LMF is incorporated into statutory documents • Community and stakeholders input • Municipal consideration of LMF • Provincial support & regard • What are the key gaps? 	<ol style="list-style-type: none"> 1. Discuss scope 2. Prepare Terms of Reference 3. Budget consideration 4. Link to Province Land Use Framework 	<ol style="list-style-type: none"> 1. Integrate all projects into BHI LMF 2. Set process for ongoing review and update 3. Establish PWG as forum for discussion and advisory to municipal planners
<p>VEGETATION INVENTORY/MAP (GIS) * GIS-Based Information</p> <ul style="list-style-type: none"> • Biosphere designation requisite • Monitoring biodiversity base • Land use planning information • Fire protection information • Historical perspective • Project land development implications • Assess human activity impact 	<ol style="list-style-type: none"> 1. Discuss scope 2. Prepare Terms of Reference 3. Budget consideration 	<ol style="list-style-type: none"> 1. Monitor changes 2. Identify areas for remedial attention 3. Identify areas for protection
<p>STATE OF THE BEAVER HILLS REPORT (RMWG) * Baseline data</p> <ul style="list-style-type: none"> • Focus - Air Quality, focal/invasive species & riparian • Monitoring within Federal and Provincial Parks • Establish benchmarks • Monitoring in Municipalities (public/ private lands) • Policy impacts 	<ol style="list-style-type: none"> 1. Discuss scope 2. Prepare Terms of Reference 3. Budget consideration 4. Create baseline 5. Develop monitoring mechanisms 	<ol style="list-style-type: none"> 1. Monitoring tools 2. Functional monitoring program 3. Report every 5 years
<p>LiDAR/MARXAN MODEL (PWG/GIS/RMWG) * Solid base system</p> <ul style="list-style-type: none"> • Necessary data for Land Management Framework • Established data sharing system • Accurate and comprehensive data • Link to Federal and Provincial Parks • Ongoing data management and sharing 	<ol style="list-style-type: none"> 1. Assess status 2. Identify gaps 3. Recommend strategic focus 	<ol style="list-style-type: none"> 1. Regular updating 2. Stakeholder accessibility
<p>BHI REPORT CARD (BoD) * Success indicators</p> <ul style="list-style-type: none"> • Value for money accountability • Public reporting • Are we making a difference? 	<ol style="list-style-type: none"> 1. Discuss scope 2. Prepare Terms of Reference 3. Budget consideration 	<ol style="list-style-type: none"> 1. Annual reporting

Strategic Priorities Chart (December 1, 2011)

<p>NOW</p> <ol style="list-style-type: none"> 1. BHI Business Plan : January 2012 + 2012 Budget Final February 2. BHI Organizational Review: February – May 2012 3. Sustainable Tourism Development Opportunity Strategy Approval: February 2012 4. TDC Pilot Update: February 2012 5. Biosphere Reserve Application: Submission December 2012 	
<p>NEXT (with a Working Group)</p> <p>BHI Land Management Framework BHI Communication and Education Strategy BHI Biodiversity Report Card BHI Wetland/Veg Inv./Marxan/LiDAR BHI Organizational Report Card Citizen Science/Stewardship Project</p>	<p>LATER (when resources are available)</p> <p>Agriculture Framework Joint Fire Management Guidelines Climate Change Strategy North Saskatchewan Corridor Pilot Biosphere Reserve Implementation Strategy</p>
<p>ORGANIZATIONAL EXCELLENCE</p> <ol style="list-style-type: none"> 1. Strategic Priorities Chart Review and Business Plan – Final Draft January 2012 2. Priority Setting Guidelines – Final Draft January 2012 3. 2012 Budget – Final Draft May 2012 4. Organizational Success Guidelines – June 2012 	
<p>OPERATIONAL STRATEGIES</p>	
<p>PLANNERS (PWG)</p> <ol style="list-style-type: none"> 1. Land Management Framework TOR June 2012 2. TDC: Tool Kit - October 2012 3. TDC Sustainable Tourism Policy development - December 2012 	<p>GEOGRAPHIC INFORMATION SYSTEM (GISWG)</p> <ol style="list-style-type: none"> 1. Wetland/Vegetation Inventory/LiDAR/Marxan - October 2012 2. Data Management Plan Update - November 2012
<p>RESEARCH & MONITORING (RMWG)</p> <ol style="list-style-type: none"> 1. Biodiversity report <ul style="list-style-type: none"> • Scope out content for report card - May 2012 • Deliver Report Card December 2012 	<p>COMMUNICATION & EDUCATION (CEWG)</p> <ol style="list-style-type: none"> 1. Communication Strategy <ul style="list-style-type: none"> • 10TH Anniversary Program Outline - May 2012 • Communication questionnaire - May 2012 • Website review and redesign - September 2012
<p>PROTECTED AREAS (PAWG)</p> <ol style="list-style-type: none"> 1. Biosphere Reserve Application 2. Submission 	<p>TOURISM IMPLEMENTATION (TWIG)</p> <ol style="list-style-type: none"> 1. Sustainable Tourism Development Strategy - February 2012 2. Develop and implement strategy for sustainable tourism outreach - October 2012 3. Establish project parameters - October 2012
<p>BOARD CHAIR/COUNCILLORS (CWG)</p> <ol style="list-style-type: none"> 1. Public outreach strategy (link to CEWG) 	<p>EXECUTIVE DIRECTOR (Brenda)</p> <ol style="list-style-type: none"> 1. Business Plan: Final January 2012 2. Business Plan Budget: Final May 2012 3. Organizational Review: Final June 2012

BHI Organizational Chart (January, 2012)



BHI Workbook – Strategic Planning

A. Project Priority Setting Guidelines

This guideline focuses on enabling the Collaborative, Executive Director and Working Groups of the Beaver Hills Initiative to regularly set, monitor and adjust short-term strategic priorities. A priority is a definitive action-oriented project or task that has a start and end date versus a broader, longer-term goal/objective and ongoing, day-to-day activities or function. The importance of priority setting as part of the strategic or work program planning process is premised on the understanding that organizations have limited capacity to pursue multiple goals, objectives or projects. Their virtual ‘capacity box’ is not readily visible but it has limitations or boundaries determined by:

- Policy – procedures that define the BHI mandate
- Financial – net fiscal resources available
- Culture – norms that delineate acceptable behaviours
- Risk – tolerance for organizational image and legal exposure
- Work Program – capacity beyond day-to-day activities and functions
- Human – availability and skills of staff and Working Group members

These ‘capacity box’ elements are impacted by dynamic internal and external factors:

- Funding – available funding beyond day-to-day operations
- Scrutiny – level of visibility for organizational actions
- Demands – diverse requests from shareholders and members
- Environment – external conditions that impact the organization
- Support – legitimacy and trust among shareholders
- Atmosphere – degree of internal stress and cooperation

The process of priority setting involves evaluating the merits of multiple priority candidates given an accurate assessment of the organization’s ‘capacity box’ to handle only a few. Each priority candidate is considered strategically important, but some require more urgent attention than other choices, given a limited capacity. Priority setting involves four steps:

1. Determine Relevance – What makes the priority candidate a contribution to the BHI mandate? Project Evaluation Checklist score out of 50. If above 25 or higher proceed to Reality Checklist.
2. Conduct Reality Check – Can it be achieved with available resources? Reality Checklist out of 30. If above 15 or higher proceed to Urgency Checklist.
3. Determine Urgency – Does it require more immediate attention than others in the short-term? Urgency Checklist out of 20. If 10 or higher all scores added together and a Now, Next or Later priority is assigned.
4. Decide Whose Priority – Within this process determine who needs to deal with the emerging candidate to ensure role clarity and workload capacity?

Each priority setting step is described in terms of purpose, process and criteria

A.1 DETERMINE RELEVANCE – Determine Suitability

Purpose:

To determine the suitability of a priority project relative to its potential contribution to the BHI mandate and therefore viability as a priority project in the priority setting process.

Process:

1. Review the Proposal Evaluation Matrix (Chart 1) to assess the project’s relevance.
2. Assess each project using all criteria and determine its overall relevance as YES – achieves most criteria; MAYBE - around 50%; and NO – few criteria.
3. If a project is LOW, there are two choices to be made:
 - a) Do not consider it further
 - b) Change its aims and address deficiencies to improve its relevance
4. If the relevance is HIGH or MEDIUM move the project to the next step

CHART 1 - Proposal Evaluation Matrix

	Order	Criteria	Description	Scoring	Max score
Project management	1	Relevant to BHR	Is the project relevant to the BHR Principles? These are: 1. Quality of Life - Essential Character, Property Rights 2. Biodiversity- Wetlands, Native Upland Habitat and Corridors, Species of Concern 3. Water – Watersheds, Water Quality 4. Land - Land Use 5. Air - Air Quality	No relevance: 0 points, relevant to one Principle: 2 points, relevant to two or more Principles: 6 points	6
	2	Informs policy	Does the project have potential to inform a policy relevant to the BHR, including environmental, social, and economic related policies?	No: 0 points, Yes, indirectly (requires further development before the outcome of the research can be implemented as policy): 2 points, Yes, directly: 6 points	6
	3	Addresses critical data/information gap	Does the project address a specific data/information gap identified by a BHR stakeholder or the Board?	Project does not address a specific data or information gap: 0 points, addresses a specific data or information gap: 6 points	6
	4	Leverages funding	Is there a potential for this project to leverage funding from other sources?	No: 0 points, Yes: BHR contribution >50%: 2 points, BHR contribution <50%: 4 points	4
	5	Supported by partner	Is the project proposed by, or supported by, a BHR partner? Support should be documented by a letter of support.	Project proposal unrelated to BHR partners: 0 points, project proposal coming from a BHR partner or supported by a BHR partner: 3 points	3
Conservation	6	Relevant to restoration/conservation of landscape	Is the project promoting restoration and/or conservation of native landscapes and/or natural capital within the BHR? Natural capital acknowledges that certain types of land use (e.g. agriculture) still promote ecological function and have value for native plants and wildlife.	Does not promote restoration and/or conservation of landscape/natural capital: 0 points, contributes to the restoration and/or conservation of the landscape/natural capital: 3 points	3
	7	Addresses protected species or communities	Is this project addressing species listed under the Inland NARA Act, provincial Wildlife Act, or as a species/community of conservation concern by Alberta Conservation Information Management System (ACIMS), formerly ANECC? This includes species listed as data deficient, of special concern, threatened, endangered, or extirpated.	Project not related to either listed species or species/community of conservation concern: 0 points, addresses conservation of one or more listed species: 2 points, addresses conservation of one of more listed species: 3 points	3
Human dimensions	8	Addresses quality of life and well-being	Does the project address the quality of life, well-being, and experiences of individuals, communities, and/or visitors to the Beaver Hills?	No: 0, Yes: 3 points	3
	9	Addresses human dimensions of conservation and land-use change	Does the project address the sustainability of the character of the Beaver Hills, including social, historical, economic, and cultural aspects from a human dimensions standpoint.	No: 0, enhances the character of the Beaver Hills from a human dimensions standpoint: 3 points	3
Methodology	10	Builds on existing research/knowledge	Does the project build on existing data and/or knowledge (i.e., making use of previously collected data or applying consistent methods)?	Does not build on previous work: 0 points, project builds on existing knowledge from within the BHR, but continued research in this line is not considered critical: 1 point, project builds on existing knowledge from within the BHR and continued development in this area is desirable: 2 points	2
	11	Methods are innovative or established	Are methods used in this project original or are they proven methods applied to projects within the BHR (especially important if there are no existing effective methods being applied already within BHR)? New methods must offer an improvement over proven existing methods in terms of accuracy, efficiency, cost-effectiveness, etc.	Methods are neither innovative/original nor do they apply proven methods within the BHR: 0 points, methods are innovative/original or apply proven methods within the BHR: 2 points	2
	12	Sampling site distribution	Is the distribution of relevant sampling sites sufficiently representative of the BHR?	Project has an insufficient number of study sites: 0 points, the project has a sufficient number of study sites to be representative of the BHR: 2 points	2
	13	Geo-spatial component	Will data, analysis and mapping outputs relevant to the project be supplied to the BHR at the end of the project?	No geospatial data will be shared: 0 points, minimal data will be shared (e.g. only study site locations): 1 point, extensive datasets will be shared (e.g. landscape classifications, LIDAR products, etc.): 2 points	2
	14	Peer reviewed	Has this proposal been peer reviewed; letters from two reviewers should be provided with the proposal.	No: 0 points, Yes, by non-academic professional: 1 point, yes, by academic professional: 2 points	2
Outreach	15	Includes outreach component	How will the results of this project be communicated to partners, stakeholders, and the public?	No communication plan: 0 points, limited communication plan (e.g. one planned presentation or publication): 1 point, extensive communication plan (e.g. multiple planned presentations and/or publications): 3 points	3
Total					50

A.2 CONDUCT A REALITY CHECK – Determine Feasibility

Purpose:

To determine requirements for a priority candidate to be implemented and its feasibility as a viable priority candidate in the priority setting process given BHI’s capacity.

Process:

1. Review the ‘Reality Checklist’ (Chart 2) to assess the project’s feasibility.
2. Assess each project using all criteria and determine its overall feasibility as HIGH – achieves most criteria; MEDIUM - around 50%; and LOW – few criteria.
3. If a candidate is LOW, there are three choices to be made:
 - a) Do not consider it further as is not feasible at this time
 - b) Change its action plan or resource requirements to improve its feasibility
 - c) Continue to consider the item knowing its implementation constraints
4. Proceed to the next priority setting step with feasible priority candidates.

CHART 2 – Reality Checklist

Criteria	Capacity	
	Rating	Score Low = 1, Medium = 2, High = 3
1. Legislative ease	no – maybe – yes	
2. Contractual ease	no – maybe – yes	
3. Political will	uncertain – neutral – high	
4. Timeframe for results	unrealistic – challenging – reasonable	
5. Success likelihood	uncertain – medium – high	
6. Community support	low – average – high	
7. Fiscal Resources	difficult – available – confirmed	
8. Human resources	no – some – yes	
9. Expertise	uncertain/no – available – in house	
10. Consequences/Risk	negative – uncertain – none	
Total Score (out of 30)		

A.3 DETERMINE URGENCY – Short Term or Longer Term

Purpose:

To determine which candidates require immediate attention based on the notion that NOW - urgent or reactive imperatives must be dealt with before NEXT or LATER - important or proactive items.

Process:

1. Review the ‘Urgency Checklist’ (Chart 3) to assess the candidate’s urgency.
2. Assess each candidate using all criteria and determine its overall urgency as:
 - NOW – to be worked on immediately - achieves most criteria
 - NEXT – to consider when some of the ‘now’ items are removed - around 50%
 - LATER – to be addressed in the longer term - few criteria
3. Proceed to step 4 with NOW items.

CHART 3 – Urgency Checklist

Criteria	Urgency	
	Rating Low to High	Score Low = 1, Medium = 3, High = 5
Financial – impact of not acting	manageable – extraordinary impact	
Visibility – implications to organization	neutral or no visibility – negatively charged	
Timeliness – opportunity alignment	frequent occurrence – unique event	
Obligation – commitment to others	casual arrangement – contractual	
Total Score (out of 20)		

A.4 DECIDE WHOSE PRIORITY

Purpose:

To assign responsibility according to the priority’s requirements and appropriate authority.

Process:

1. Review the ‘Responsibility Criteria’ to decide who should lead the NOW priority.
2. Assess each candidate using all criteria and determine its assignment as:
 - Board – requires strategic directions and policies
 - Working Group – requires occasional direction form Board

BHI Workbook – Project Assessment Summary

Outcomes in Chart 4 based on strategic planning workshops in March and May 2011 and have not been evaluated in detail with the proposal evaluation matrix, reality and urgency checklists. New projects will be evaluated using the matrix and checklists, the letter scores will be replaced by numerical scores. The scores will be summed to produce a total project score out of 100, which will be used to rank projects by priority (Now, Next and Later).

CHART 4 – Project Assessment Summary (spring 2011)

Project	Status*	Proposal Evaluation Matrix Score (50)	Reality Checklist Score (30)	Urgency Checklist Score (20)	Now Next Later	Lead
1. Climate change strategy	New	M	L		Later	RMWG
2. LIDAR Tool Kit	IP	H	H		Next	GISWG
3. Biodiversity report card	New	M	L		Next	RMWG
4. BHI impact score card	New	H	L		Next	Board
5. Agriculture framework	New	H	L		Later	RMWG
6. Wetland/vegetation inventory	New	H	M		Next	RMWG
7. Information package for fire departments	New	L	L		Later	RMWG
8. Woodlot management guidelines	New	L	L		Later	RMWG
9. North Saskatchewan corridor pilot	New	M	L		Later	RMWG
10. Sustainable Tourism strategy	IP	H	H		Now	TWIG
11. TDC Pilot	IP	H	H		Now	PWG
12. BHI land management framework	New	H	M		Next	PWG
13. BHI business plan update	New	NA	H		Now	Board
14. Marxan model applied	IP	H	H		Next	GISWG
15.10th anniversary	New	L	M		Next	CWG
16. Biosphere reserve application	IP	H	H		Now	PAWG
17. BHI organizational review	New	NA	L		Now	Board
18. Communication & education strategy	New	H	M		Next	CEWG

* Status: New = new idea, IP = in progress; Proposal Evaluation Matrix, Reality and Urgency Scores: L=Low, M=Medium, H=High;

B. STRATEGIC PRIORITIES CHART

Purpose:

To create one page of NOW strategic priorities to guide day-to-day decisions and activities.

Process:

1. Review the 'Responsibility Criteria' to decide who should lead the NOW priority.
2. Assess each candidate using all criteria and determine its assignment as:
 - Board – requires strategic directions and policies
 - Working Group – requires occasional direction from Board

STRATEGIC PRIORITIES CHART (DEVELOPED MAY, 2011)	
NOW 1. 2. 3.	
NEXT (with a Working Group)	LATER (when resources are available)
ORGANIZATIONAL EXCELLENCE 1. 2. 3.	
OPERATIONAL STRATEGIES	
PLANNERS (PWG) 1.	GEOGRAPHIC INFORMATION SYSTEM (GISWG) 1.
RESEARCH & MONITORING (RMWG) 1.	COMMUNICATION & EDUCATION (CEWG) 1.
PROTECTED AREAS (PAWG) 1.	TOURISM IMPLEMENTATION (TWIG) 1.
BOARD CHAIR/COUNCILLORS (CWG) 1.	EXECUTIVE DIRECTOR 1.

C. ONGOING PROCESS

Strategic planning documents used infrequently can quickly become out of date. The key to effectively managing priorities using the Strategic Priorities Chart is to recognize that they should change:

- Emerging projects, because of changing external and internal influences, must be compared against existing priorities through a continuous priority setting process. Consequently, existing 'NOW' priorities may move to 'NEXT' status.
- Completed 'NOW' items are 'done' or incorporated into day-to-day operations making way for 'NEXT' items or new candidates. Don't forget to celebrate accomplishments to reinforce the utility of the priority setting system.
- New Information about an existing priority may make it less urgent or irrelevant thereby deferring its status to 'NEXT' or 'LATER' (or even 'No'). Likewise, internal capacity issues may impact how many priorities can be addressed.

If there is insufficient room in the box to deal with strategic priorities then BHI should review its operations or day-to-day activities with a view to increasing organizational efficiency and effectiveness to make some room in the 'box' for strategic priorities.

Some hints for the ongoing management of strategic priorities include:

- Actively use and update the one page 'Strategic Priorities Chart' (previous page) as part of every Board and Working Group meeting. Place it as the last page of every meeting agenda. The visibility of the 'Chart' serves as a constant reminder of the strategic priorities.
- Conduct a 'Strategic Priorities Update' every three months by the Board to report on progress, celebrate results and make changes. The Strategic Priorities Chart is a visual means to assess individual workloads. Adjustments can be made by changing day-to-day functions, obtaining additional help or deferring the priority.
- Conduct a Strategic Priorities Review annually by assessing the organization's capacity and re-evaluating strategic priorities. A 'NOW' priority (prior to the budget process or otherwise) without assigned resources should be moved to 'NEXT' or later status.
- A new priority project can be introduced at any time. It should be referred to staff or a Working Group to collect relevant information for Board decision.
- 'Request for Decision (New Project)' or 'Request for Approval for Change in Project Direction (Current Project)' for major decisions should refer to impact of the pending decision on the Strategic Priorities. The reference to strategic priorities causes decision-makers to consider the implications of all decisions (following page).

REQUEST FOR DECISION (NEW PROJECT)

<p>Subject: Title</p> <p>Recommendation: Clear decision-making resolution answering what, who, how, when</p> <p>ED Comments: Any additional comments regarding the reason for the recommendation</p>
<p>RECOMMENDATION:</p> <p>Key Issue(s)/Concepts Defined: Define the topic, reference background material and state question to be answered</p> <p>Relevant Policy: Cite existing policies, practices and/or legislation</p> <p>Strategic Relevance: To goals or priorities of the BHI Business Plan</p> <p>Deliverables:</p> <p>Response Options: Possible ways to achieve objectives(s)</p>
<p>IMPLICATIONS OF RECOMMENDATION:</p> <p>General: Consequences to community, overall organization and/or other agencies</p> <p>Organizational: Policy change or staff work load requirements</p> <p>Financial: Current and/or future budget impact</p> <p>Communication: Strategy to inform, consult or involve stakeholders</p> <p>Other Comments: By others reviewing this Request for Decision</p>
<p>SUBMITTED BY:</p> <p>Reviewed by:</p> <p>Endorsed by:</p> <p>Reviewers:</p>

REQUEST FOR APPROVAL FOR CHANGE IN PROJECT DIRECTION (CURRENT PROJECT)

<p>Subject: Title</p> <p>Suggested Change:</p> <p>ED Comments: Any additional comments regarding the reason for the suggested change</p>
<p>BACKGROUND:</p> <p>Initial Project Approval On:</p> <p>Project Description:</p> <p>Justification for Change:</p>
<p>Benefits and Risks of Change?</p> <p>Please include pertinent information</p>
<p>Response Options: Possible ways to achieve objectives(s)</p>
<p>SUBMITTED BY:</p> <p>Reviewed by:</p> <p>Endorsed by:</p> <p>Reviewers:</p>

BHI Success Indicators

ORGANIZATIONAL SUCCESS GUIDELINES (BHI Report Card)

This guideline focuses on enabling the Executive Director and the Board to regularly review organizational and governance effectiveness. This assessment process is guided by ‘positive’ success indicators to avoid a ‘negative’ focus on past events. The following success indicators, effectiveness factors, questions and procedures to guide organizational success discussions are based on four core functions of an effective organization:

1. Strategic Direction - overall roadmap to guide organizational activities
2. Policy Choices - decisions that allocate resources and organizational effort
3. Service Delivery – provision of programs and services to the members
4. System Coordination – requirements for organizational sustainability

Strategic DIRECTION Vision & Mission Shared Values Long Term Goals Specific Objectives	Policy CHOICES Budget Allocations Policy Decisions Contract Commitments Short Term Priorities
Systems COORDINATION Personnel Practices Information Systems Financial Accountability Resource Deployment	Service DELIVERY Data Acquisition Land Planning Partnerships Information Sharing

SUCCESS INDICATORS

Key success indicators are intended to describe the ‘ideal state’ of:

- Governance Effectiveness – decision making realm of the Board
- Organizational Effectiveness - administrative realm involving management and staff

Success indicators provide a framework to identify ‘what is working well’. This type of positive discussion encourages celebration of effort and results. It is also a reminder of the strengths and assets that the organization should reinforce, and certainly not lose.

Success indicators also help to identify ‘areas for attention’. Critical analysis can identify concerns and gaps where the organization is falling short of its desired benchmarks. It is important an issue be discussed to clarify perspectives and facts before it is validated for further consideration.

ORGANIZATIONAL SUCCESS INDICATORS

1. Adherence to defined roles and responsibilities.
2. Efforts to develop and achieve strategic directions.
3. Ability to develop a smooth transition of plans into action.
4. Attention to monitor and recognize organizational and staff performance.
5. Facilitation of a positive and productive organizational environment.
6. Accountability for the efficient use of organizational resources.
7. Ensure complete information and discussion to arrive at good decisions.
8. Member and Board satisfaction with internal and external communication.
9. Consistent attention to external communications.
10. State of organizational stability amidst changing conditions and issues.
11. Evaluation of the member satisfaction levels and efficiency of services.
12. Development and maintenance of partnerships and partnerships.
13. Honour the principles of transparent processes.

SUCCESS DISCUSSIONS

Ideally, success indicators are adopted by the Board following each municipal election. It may wish to conduct such a review upon the arrival of a new Executive Director or Board member.

The 'Organizational Success Discussion' should be done in an 'in camera' meeting because it involves the performance of staff requiring the protection of their privacy. The Chairperson guides this discussion and is expected to refer any discussion that is not appropriate for the "in camera" venue to a regular meeting of the Board.

The Organizational Success Discussions should be regularly scheduled and involve the Executive Director who can follow up on matters raised.

The discussions should reflect a 'two way' dialogue about how administration is impacting the decision making realm and likewise how Board activities affect the administrative realm.

APPENDIX D. PUBLIC AND ABORIGINAL ENGAGEMENT CAMPAIGN

The BHI initiated a public and aboriginal engagement campaign through 2014-2015 to raise awareness about the Beaver Hills, UNESCO's biosphere reserve program and the Beaver Hills Biosphere nomination process. The communication plan described below outlines the key messages and strategies used to promote awareness and solicit support for the nomination.

BEAVER HILLS UNESCO NOMINATION COMMUNICATION PLAN

The goals of this plan were three-fold:

- To share information, raise awareness and educate people about the Beaver Hills, the BHI and the UNESCO Biosphere Reserve nomination including:
 - what makes the Beaver Hills region ecologically distinct and culturally significant;
 - the work being done by the BHI in the moraine;
 - what a UNESCO Biosphere is and its importance;
 - why it matters to Albertans, Canadians and world citizens that the Beaver Hills is designated UNESCO Biosphere.
- To gather support for the Beaver Hills UNESCO Biosphere Reserve nomination via individuals' signatures and organizations/governments' letters of support.
- Establishing the foundation for individuals', organizations' and governments' on-going support and involvement in the sustainable development of, education about and enjoyment of the Beaver Hills.

These goals were met through three strategic objectives.

- A broad-based media strategy.
- Using the BHI website and social media as BHI portals.
- Using intentional outreach to inform and raise awareness through meetings, presentations, information booths at public events, and classroom presentations.

Target audiences were identified under each strategic objective. Each audience also falls into one, two or all three of the following themes, which were themes used in some of the communications materials about the Beaver Hills, the BHI and the UNESCO Biosphere Reserve nomination.

- "Live"
 - residents in the five counties that make up the Beaver Hills Area – the Counties of Strathcona, Lamont, Beaver, Camrose and Leduc
 - residents of Edmonton, the closest major urban centre to the Beaver Hills Area
- "Work"
 - representatives of and workers in the oil and gas industries
 - business leaders and owners/operators
 - political representatives at all three levels of government
 - community leaders

- “Play”
 - recreational clubs and organizations
 - annual athletic events in both summer and winter sports
 - community events
 - schools in and around the area

Importantly, many of the meetings and presentations involved people who represent a much larger number of individuals. These representatives were asked to ‘spread the word’ about this initiative to their membership, and also signed support for the UNESCO Biosphere Reserve nomination on behalf of members. School representatives were interested in following the nomination, and incorporating the biosphere reserve in future course discussions.

Aboriginal Engagement

Based on advice from the Confederacy of Treaty Six First Nations the BHI dealt directly with the Confederacy, as opposed to engaging with individual Chiefs. Treaty Six represents 50 Nations across Alberta, Saskatchewan and Manitoba, 18 of which are in Alberta. Ongoing communication with the Confederacy over an 18 month period resulted in the Confederacy offering a letter of support for the UNESCO Biosphere Reserve initiative. This letter was provided with both parties (the Confederacy and the BHI) committing to proceed in a different way; to set aside the western ‘rules of engagement’ and work to start developing an understanding of indigenous relationship to the land and what that entails. That is the first step to determining what future opportunities and involvement the Confederacy and the BHI might have in furthering awareness of the cultural significance of the Beaver Hills.

From the Métis perspective, the strategy was similar. Engagement with the Métis Nation of Alberta (MNA) began in February 2014. Through connecting with the MNA, the BHI was reaching out with all Métis in the province. The MNA is very receptive to opportunities for collaboration in raising awareness of Métis culture, history and ties to the Beaver Hills; however as with many organizations, capacity for initiatives remains a challenge. Dialogue with the MNA continues, and representatives are particularly interested in developing a traditional land use study within the moraine to help document cultural connections to this landscape.

On a smaller scale the approach has been to reach out to schools: principals of Amiskwaciy and Ben Calf Robe, and other schools with particularly high First Nations student populations, and to Sharon Morin of the Musée Heritage. The intent in part is similar: to determine if there is willingness to work together in the future to identify opportunities for learning, education, or other appropriate initiatives. It is also to teach students of all heritages about the Beaver Hills and the importance of this area to our communities.

The strategic intent of this engagement process is to open doors for learning and understanding: most importantly about each other, and the needs all parties have in developing a deeper understanding of the cultural significance of the moraine to past generations and to those ahead of us. This will pave the way to future identification of opportunities for initiatives, projects and innovative collaborations.

Communications Materials

Various communication tools were developed and used to help ‘tell the story’ of the Beaver Hills and the UNESCO Biosphere nomination, including postcards, FAQs, one-page information sheets, bookmarks, a Facebook page, a Twitter account, an updated BHI website, a banner and posters.

Table 1. Public and Aboriginal Engagement Presentations and Meetings

Audience	Specific Group/ Media Outlet	Date	Geographic Scope
Traditional Media Engagement	Story on Alberta Prime Time (TV current affairs show)	May-12	Provincial
	CBC News covers Beaver Hills story about bears in Elk Island NP	23-Jul-14	Edmonton Region
	BHI on CBC TV's Our Edmonton	May-15	Edmonton Region
	Coverage of Beaver Hill's 2015 Biosphere Bid Launch - Edmonton Journal	12-Jan-15	Edmonton Region
	Coverage of Beaver Hill's 2015 Biosphere Bid Launch - Vancouver Sun	12-Jan-15	Provincial
	Coverage of Beaver Hill's 2015 Biosphere Bid Launch - The Province (BC)	12-Jan-15	Provincial
	Coverage of Beaver Hill's 2015 Biosphere Bid Launch - Ottawa Citizen	11-Jan-15	Provincial
	Sherwood Park News on Beaver Hills area (Opinion article by Glen Lawrence)	23-Jan-09	BH Moraine
	Leduc Rep on Ministik Lake Game Bird Sanctuary	16-Feb-12	BH Moraine
	Media tour for Lamont Leader/Tofield Mercury	16-Mar-12	BH Moraine
	Sherwood Park News	19-Jan-15	BH Moraine
	Tofield Mercury	27-Jan-15	BH Moraine
	Fort Saskatchewan Record	05-Mar-15	Edmonton Region
	Beaumont News	28-Mar-15	Edmonton Region
	Leduc Rep Newspaper	01-Apr-15	BH Moraine
	Beaver County News website provided direct link to nomination	15-Mar-15	BH Moraine
	Reporters from rural weekly newspapers were contacted and offered Beaver Hills tours in their respective counties. In April 2015, Camrose Canadian and Tofield Mercury (in Lamont County) will be toured by BHI staff and Board Member.	Apr-15	BH Moraine
	Interview about biosphere reserve nomination on CBC Radio One morning Show	January 15, 2015	Edmonton Region
Town of Bruderheim website has link to BHI website and short paragraph describing BHI activities and mission		BH Moraine	

Audience	Specific Group/ Media Outlet	Date	Geographic Scope
Traditional Media Engagement	Information & Volunteer Centre for Strathcona County put info about the Beaver Hills into the 150 New Resident packages they distribute every month to new Sherwood Park and Strathcona County residents		BH Moraine
	Info about Beaver Hills nomination played on a loop in public TV screens in Strathcona County Hall and civic centre		BH Moraine
	Edmonton bureau reporter John Cotter	Communication Initiated/Future Possibilities	Edmonton Region
	Globe and Mail - Edmonton based reporter Justin Giovannetti	Communication Initiated/Future Possibilities	Edmonton Region
Social Media Engagement - Organizations who have posted about the nomination on their Facebook pages and our linked to BHI's include:	10,590 people reached via Facebook page and posts.	14-Apr-15	Provincial
	Nature Alberta	14-Apr-15	Provincial
	Canadian Parks and Wilderness (Northern Alberta)	14-Apr-15	Provincial
	Edmonton Nature Club	14-Apr-15	Edmonton Region
	Alberta Chapter of the Wildlife Society	14-Apr-15	Provincial
	River Valley Alliance	14-Apr-15	Edmonton Region
	U of A Outdoors Club	14-Apr-15	Edmonton Region
Social Media Engagement - Organizations who have tweeted and re-tweeted key messages and links include:	A collective 167,400 people reached through Twitter account.	14-Apr-15	Provincial
	Nature Alberta	14-Apr-15	Provincial
	CPAWS	14-Apr-15	Provincial
	Nature Conservancy of Canada	14-Apr-15	Provincial
	North Saskatchewan Watershed Alliance	14-Apr-15	Provincial
	Edmonton and Area Land Trust	14-Apr-15	Edmonton Region
	Alberta Chapter of the Wildlife Society	14-Apr-15	Provincial
Social Media Engagement - Organizations that posted letters and links to websites include:	Waskahegan Trail Association newsletter		Provincial
	U of A Outdoor Club Facebook page		Edmonton Region
	Alberta TrailNet website		Provincial
	Canadian Birkebeiner newsletter		Provincial
	Crooked Creek Conservancy website		Provincial
	Edmonton Native Plant Group		Edmonton Region
	Canadian Parks and Wilderness (Northern Alberta chapter) blog (members)		Provincial
	Nature Alberta posted on main website		Provincial

Audience	Specific Group/ Media Outlet	Date	Geographic Scope
	Edmonton Master Naturalists posted article on their blog about the nomination		Edmonton Region
	Alberta Recreation and Parks Association brief notice plus link to website in their electronic April newsletter		Provincial
Re-Engaging Existing Partners			
Social Media Engagement	Final Stewardship Engagement Strategy Workshop	11-May-12	Edmonton Region
	North Saskatchewan Watershed Association Newsletter, report on BHI citizen science and stewardship activities	Nov/Dec-13	Provincial
	Presentation at Alberta Parks and Recreation Association Forum	Mar-13	Provincial
	NSWA presentation on stewardship by Brian Eaton	07-Nov-13	Provincial
	Canadian Parks and Wilderness Society (CPAWS), Southern Alberta website lists Beaver Hills Biosphere nomination as a key part of the North Saskatchewan Regional Plan		Provincial
	Friends of Elk Island “The lens of science: Wildlife cameras in the Cooking Lake Moraine” in Sherwood Park (short BHI/UNESCO intro)	03-Dec-14	BH Moraine
	Mind Fuel (formerly Science Alberta Foundation) featured the Beaver Hills area as a prime example of how human needs are balanced with the ecosystem in video that was shown to 714 students in the Calgary area	Dec-14	Provincial
	CPAWS shared table with BHI/UNESCO info at the North Saskatchewan Watershed Alliance’s ‘Headwaters Forum’ in Edmonton.	05-Feb-15	Edmonton Region
	BHI/UNESCO mentioned by Nature Conservancy of Canada at their Speaker Series presentation “Rethinking Carnivores” at the Telus World of Science in Edmonton.	12-Feb-15	Edmonton Region
	BHI at Alberta Recreation and Parks Association forum (presenting and booth)	12-14-Mar-15	Provincial
Friends of Elk Island “Birders of a Feather Flock Together: The Importance of Volunteer Bird Monitoring Programs” in Sherwood Park (short BHI/UNESCO intro)	18-Mar-15	BH Moraine	

Audience	Specific Group/ Media Outlet	Date	Geographic Scope
	BHI at Alberta Chapter of the Wildlife Society Conference	20-Mar-15	Provincial
Social Media Engagement	Article by BHI Chair Glen Lawrence in Stewards of Alberta's Protected Areas Association newsletter	Apr-15	Provincial
	Nature Conservancy of Canada and Edmonton & Area Land Trust follows BHI on Twitter, has re-tweeted key messages		Provincial
Social Media Engagement -Engaging Industry and Business	BHI at Industrial Heartland Stakeholder's Luncheon	22-Jan-15	Edmonton Region
	Glen Lawrence presented at Sherwood Park Chamber of Commerce meeting	19-Feb-15	BH Moraine
	Glen Lawrence spoke at Sherwood Park Rotary Club Breakfast	25-Feb-15	BH Moraine
	Strathcona Industrial Association	11-Mar-15	BH Moraine
	Strathcona County Councillor Fiona Beland-Quest spoke at the Alberta Industrial Heartland Association Ambassador Tour. See comment on participants attending.	13-Mar-15	Provincial
	Energy Exploration Committee, Strathcona County	18-Mar-15	BH Moraine
	Guy Swinnerton spoke to Nisku-Leduc Rotary Club	02-Apr-15	BH Moraine
	Great Canadian Trade Fair – Sherwood Park	10-12- Apr-15	BH Moraine
Tourism/Recreation Engagement	Presentation by Glen Lawrence to Rotary Club of Camrose	15-Jun-15	BH Moraine
	BHI presentation on nature-based tourism, ARPA forum	Mar-13	Provincial
	2014 Strathcona County Traveler booklet – 2000 distributed with Beaver Hills tourism info inside	2014	BH Moraine
	BHI listing on Kalyna Country's website	Jan-14	Edmonton Region
	Winter City YEG re-tweeted BHI info and links to support	Jan-Feb-2015	Edmonton Region
	GOEast re-tweeted info about BHI presence at community events		Edmonton Region

Audience	Specific Group/ Media Outlet	Date	Geographic Scope
	BHI piece in 2015 Go East Tourism Brochure - 13,000 to 14,000 copies distributed	2015	Edmonton Region
	Canadian Birkebeiner e-newsletter	Jan-15	Provincial
Tourism/Recreation Engagement	Presentation to Strathcona County Economic Development and Tourism Advisory Committee	19-Mar-15	BH Moraine
	Links to BHI website and nomination support in Strathcona County's Economic Development and Tourism department e-newsletter	Mar-15	BH Moraine
	BHI Posters and Postcards on display and available at: Ukrainian Heritage Village, Strathcona Wilderness Centre, Elk Island National Park, and Miquelon Lake	2015	BH Moraine
Community Meetings and Events	Meeting of Joint Fire Chiefs , presentation data	11-Apr-12	Provincial
	Friends of Black Foot Presentation	10-May-12	BH Moraine
	100 Black Foot Recreation Area Celebration	02-Jun-12	BH Moraine
	International Symposium of Sustainable Resource Management (Tour of the Beaver Hills)	19-Jun-12	Provincial
	Canada Day Elk Island National Park	01-Jul-12	Provincial
	Communities in Bloom Strathcona County Wilderness Center	2012	BH Moraine
	Beaver Hills Dark Sky Preserve Celebration Miquelon Lake Provincial Park	03-Sep-12	BH Moraine
	BHI 10 year celebration	06-Sep-12	BH Moraine
	Elk Island National Park 100 year celebration	Mar-13	Provincial
	Beaver Hills Bioblitz Day	18-Jan-15	Provincial
	Canadian Birkebeiner Nordic Fair	13-Feb-15	Provincial
	Antler Lake/Uncas Family Day Celebration	16-Feb-15	BH Moraine
	Hypothermic Half Marathon	22-Feb-15	Edmonton Region

Audience	Specific Group/ Media Outlet	Date	Geographic Scope
	Strathcona County Library Bookmobile, info and postcards placed on Bookmobile	Mar-15	BH Moraine
	Grant MacEwan Hiking Club Presentation	04-Mar-15	Edmonton Region
Community Meetings and Events	Sherwood Park Farmers' Market	11-Mar-15	BH Moraine
	Seedy Sunday in Sherwood Park, poster and postcards	29-Mar-15	BH Moraine
	Waskahegan Trail Association AGM	17-Apr-15	Edmonton Region
	University of Alberta Augustana Campus with Miquelon Lake Group residents	10-Apr-15	BH Moraine
	Alberta Trail Riding Association meeting	04-May-15	Provincial
	Beaver Hills Dark Sky Preserve Star Party - The star party will be at Miquelon Lake Provincial Park and at Elk Island National Park	5-6-Sept-15	Provincial
	Trail Opening	Summer 2015	Edmonton Region
	Leduc Farmers' Market	Communication Initiated / Future Possibilities:	BH Moraine
	Camrose Farmers' Market	Communication Initiated / Future Possibilities:	BH Moraine
	Tofield Farmers' Market	Communication Initiated / Future Possibilities:	BH Moraine
School and School Board Presentations and Engagement	Madonna Catholic Elementary Earth Club, Sherwood Park, Gr 1-4, 40 students **letter of support from teacher signed and sent**	05-Mar-15	BH Moraine
	Hillview School, Edmonton, Gr 6, 22 students **letter of support from teacher and students signed and sent**	09-Mar-15	Edmonton Region
	Norwood School Gr 4, Edmonton, 30 students	10-Apr-15	Edmonton Region

Audience	Specific Group/ Media Outlet	Date	Geographic Scope
	Sweetgrass School, Edmonton, Gr 4, 45 students	15-Apr-15	Edmonton Region
	Keheewin School, Edmonton, Gr 4, 46 students	17-Apr-15	Edmonton Region
School and School Board Presentations and Engagement	Alberta School Board Association, Zone 2/3* Meeting *school boards across central Alberta including public and separate from Elk Island, Edmonton, St. Albert, Parkland County	24-Apr-15	Provincial
	Michael A. Kostek, Edmonton, Gr 5, 63 students	06-May-15	Edmonton Region
	Baturyn School, Edmonton, Gr 5, 48 students	15-May-15	Edmonton Region
	Oliver School , Edmonton, Gr 5+6, 29 students	20-May-15	Edmonton Region
	Youngstown Elementary, Edmonton, Gr 4/5, 80 students	22-May-15	Edmonton Region
	Also posted on Edmonton Science website, a site dedicated to scientific educational opportunities for schools in Edmonton and Area		Edmonton Region
	Presentation to Alberta School Boards Association, Zone 4 *school boards across central Alberta including public and separate from Wetaskiwin, Red Deer, Wild Rose, Clearview, Chinook's Edge, Battle River, Wolf Creek	Sept-15 Communication Initiated / Future Possibilities	Provincial
	Presentations to Board of Trustees at Elk Island Public and Catholic school boards	Communication Initiated / Future Possibilities	BH Moraine
	Uncas School, Grades 1 – 6, Strathcona County	Communication Initiated / Future Possibilities	BH Moraine

Audience	Specific Group/ Media Outlet	Date	Geographic Scope
	Fultonvale School, Grades 1 – 6, Strathcona County	Communication Initiated / Future Possibilities	BH Moraine
	Wye School, Grades 1 – 6, Strathcona County	Communication Initiated / Future Possibilities	BH Moraine
	Ministik School, Grades 1 – 6, Strathcona County	Communication Initiated / Future Possibilities	BH Moraine
School and School Board Presentations and Engagement	Janice Aubry, Director of Curriculum and Resource Support, Edmonton Public Schools. Potential for future meeting re: incorporation of the biosphere reserve into school curriculum materials / links to UNESCO education initiatives	Communication Initiated / Future Possibilities	Edmonton Region
Aboriginal Support and Engagement	BHI members at Indigenous Awareness Training Workshops	24-Feb-15 & 26-Mar-15	BHI Moraine
	Confederacy of Treaty 6 First Nations Meeting	25-Mar-15	Provincial
	Métis Nation of Alberta	15-Apr-15	Provincial
	Amiskwaciy Academy, Edmonton – student involvement /presentations	Communication Initiated / Future Possibilities:	Edmonton Region
	Ben Calf Robe School, Edmonton – student involvement/presentations	Communication Initiated / Future Possibilities:	Edmonton Region
	Musée Heritage, St Albert – museum involvement with Beaver Hills	Communication Initiated / Future Possibilities:	Edmonton Region
Political Support and Engagement	Stewardship Engagement Working Group	13-Jan-12	Edmonton Region/ BH Moraine
	Beaver County Joint Jurisdictional Meeting	29-Jan-12	BH Moraine
	Alberta Rural Development Network Presentation	12-Oct-12	Provincial

Audience	Specific Group/ Media Outlet	Date	Geographic Scope
	City of Leduc's Leduc Environmental Advisory Board (LEAB)	10-Feb-15	BH Moraine
	Strathcona County Council Priorities Meeting	17-Feb-15	BH Moraine
	City of Fort Saskatchewan Council Meeting	24-Feb-15	Edmonton Region
	Beaver County Council presentation	06-Mar-15	BH Moraine
	City of Camrose Committee of the Whole Council Meeting	02-Mar-15	BH Moraine
	Beaver County Committee of the Whole meeting	06-Mar-15	BH Moraine
	Lamont County Council Meeting	10-Mar-15	BH Moraine
Political Support and Engagement	Leduc County Council meeting	10-Mar-15	BH Moraine
	Camrose County Council presentation	10-Mar-15	BH Moraine
	Town of Beaumont Council Meeting	24-Mar-15	Edmonton Region
	Strathcona County Environmental Advisory Committee	25-Mar-15	BH Moraine
	Town of Bruderheim	15-Apr-15	BH Moraine
	Village of Ryley *requested*	21-Apr-15	Edmonton Region
	City of Leduc	27-Apr-15	BH Moraine
	Town of Lamont	28-Apr-15	BH Moraine
	Town of Tofield	11-May-15	BH Moraine
	Kevin Sorenson, MP for Crowfoot (Camrose County)	Communication Initiated / Future Possibilities	BH Moraine
	Tim Uppal, MP Edmonton-Sherwood Park (Strathcona County)	Communication Initiated / Future Possibilities	BH Moraine

Audience	Specific Group/ Media Outlet	Date	Geographic Scope
	Leon Benoit, MP Vegreville-Wainwright (Beaver and Lamont County) (letter promised)	Communication Initiated / Future Possibilities	BH Moraine
	James Rajotte, MP Leduc (Leduc County)	Communication Initiated / Future Possibilities	BH Moraine
Political Support and Engagement - Public endorsements from politicians on Twitter include:	Bonnie Riddell, Strathcona County Councillor, Ward 7		BH Moraine
	Carla Howatt, Strathcona County Councillor, Ward 4		BH Moraine
	Dave Anderson, Strathcona County Councillor, Ward 2		BH Moraine
Political Support and Engagement - Public endorsements from politicians on Twitter include:	Sherwood Park Mayor Roxanne Carr has re-tweeted key messages with links to supporting nomination		BH Moraine
	Sherwood Park MLA Dave Quest has re-tweeted key messages and links to nomination		BH Moraine
	Edmonton Mayor Don Iveson commented positively on Edmonton Journal article about Biosphere nomination on Twitter		Edmonton Region

APPENDIX E. PAST AND CURRENT RESEARCH AND MONITORING PROJECTS

PAST AND CURRENT RESEARCH PROJECTS					
Abiotic Research [Climatology, Hydrology, Geomorphology, Etc.]					
Project Name	Partnering Agencies	Year Started	Year Ended	Project Details	Ph.D. / M.Sc.
The wetlands of EINP: Survey from saline marshes to bogs (B. Nicholson)	University of Alberta, EINP	1993	Complete	A quantitative study of wetland habitats within EINP	PhD.
Fire regime and wildfire risk assessment of Beaver Hills	Alberta TPR	2005	On-going since 2006	Fire history study for the Beaver Hills-Cooking Lake Moraine	
Miquelon Lake Provincial Park water quality monitoring	Alberta TPR; Alberta Lake Management Society	1991	Ongoing	Water quality monitoring for Miquelon Lake	
Biotic Research [Flora, Fauna]					
Project Name	Partnering Agencies	Year Started	Year Ended	Project Details	Ph.D. / M.Sc.
Range health assessment in seeded pastures within Blackfoot PRA	Alberta TPR	Unknown	Unknown	Range health monitoring	
The effect of fire disturbance level on plant re-establishment in EINP (B. Johnson)	EINP, University of Alberta	1981	Complete	Fire and its effect on vegetation	M.Sc.
Selection of winter food by beaver (D. Skinner)	Alberta Fish and Wildlife	1981	1984	Beaver ecology	M.Sc.
Dynamics of ungulate populations in EINP (C. Blyth)	University of Alberta	1985	1995	Ungulate population dynamics	M.Sc.
Blackfoot Ungulate/Grazing Consultant Study (C.S. Wallace and C.J. Richardson)	Alberta TPR	1987	1989	Winter utilization of developed pastures by elk and deer	
Molecular characterization of Bison (A. Bork)	University of Alberta	1987	1990	Bison genetics	M.Sc.
Physiological indices of wapiti and moose in EINP (N. Cool)	University of Alberta	1989	1992	Evaluation of metabolic indicators to assess body condition of moose and elk	M.Sc.
Herbivory and fire in EINP (E. Bork)	EINP, University of Alberta	1993	Complete	The effect of fire and herbivory on vegetation	M.Sc.
Floristic and rare plant survey – Blackfoot PRA (Dr. G. C.D. Griffiths, D. E. Griffiths and R. Priddle)	Alberta TPR	1996	1997	Rare plant survey	
Floristic, rare plant, and vegetation survey- Blackfoot Uplands (Dr. K. Timoney and A. Robinson)	Alberta TPR	1997	1998	Rare plant survey	
Coyotes and habitat preference (S. Pruss)	EINP, University of Alberta	1999	Complete	Using radio collars to track coyotes	Ph.D.

Assessing range resilience to herbivory in EINP (J. Best)	EINP, University of Alberta	2001	Complete	Range health in natural ungulate systems	M.Sc.
A century of vegetation changes in western Canada's boreal forest-grassland ecozone (M. Gunning)	EINP, University of Alberta	2001	Complete	Dating vegetation using charcoal	M.Sc.
The distribution and abundance of amphibians across land-use types in Alberta's Aspen Parkland.	Parks Canada Agency	2001	2004	Amphibian distribution in altered and unaltered wetlands	
	University of Alberta				
The Distribution and Abundance of Amphibians across Land use Types in Alberta's Aspen Parkland (C. Browne)	Parks Canada Agency, University of Alberta	2004	2010	Habitat Use Pattern of the Western Toad	Ph.D.
Factors Affecting the Larval Performance of the Boreal Chorus Frog (A. Whiting)	Parks Canada Agency Friends of Elk Island	2005	2010	Competitive Mechanisms between Boreal Chorus and Wood Frog Tadpoles	Ph.D.
Wandering garter snake natural history study in Miquelon Lake Provincial Park (K. Tuttle)	Alberta TPR	2005	2009	Snake habitat use	M.Sc.
Carrying capacity of bison, elk and mule deer in the Aspen Parkland of Alberta (G.W. Kuzyk)	EINP, University of Alberta	2006	2009	Ungulate management strategies	
Movement patterns, habitat use and population ecology of the Plains Garter Snake in Alberta, including EINP (Dr. P. Gregory)	EINP, University of Victoria	2006	2009	Snake ecology and distribution	
Adopt a Plant Alberta--assessment of rare plants (Dr. J. Gould)	EINP	2006	2008	Assessment of rare plant populations in Alberta's federal protected areas	
In vitro production and cryopreservation of EINP Plains bison embryos (Dr. J. Thundathil)	EINP	2006	2008	Bison reproduction and health	
Miquelon Lake Provincial Park rare bryophyte and lichen Survey (A. Robinson)	Alberta TPR	2007	2007	Rare plant survey, bryophyte and lichen survey	
Miquelon Lake Provincial Park rare vascular plant survey	Alberta TPR	2007	2007	Rare plant survey	
The impact of fire, climate, and herbivory on the configuration of riparian vegetation and maintenance of beaver ponds in EINP (G. Hood)	EINP, University of Alberta	2008	Complete	Beaver pond ecology	Ph.D.
Boreal wetland reclamation success: developing an assessment tool for the Athabasca Oil Sands Region using multivariate and multi-metric techniques (R. Rooney)	University of Alberta	2008	2010	1st steps in developing an assessment tool for the wetland reclamation in Athabasca Oil Sands Region using multivariate and multi-metric techniques	

Bat Survey at Miquelon Lake (Dr. Doris Audet)	University of Alberta, Augustana	2014			
Cyanobacteria predominance in Alberta's eutrophic lakes linked to iron scavenging strategy that uses siderophores and toxins (Lily Du)	University of Western Ontario, EINP, Friends of Elk Island National Park,	2010	2013	Examined the role of the micronutrient iron in the regulation of cyanobacteria dominance and cyanotoxicity in naturally eutrophic lakes in the Beaver Hills.	M.Sc.
Western tiger salamander (<i>Ambystoma mavortium</i>) terrestrial habitat use in the Beaver Hills (Kyle Welsh)	University of Alberta, EINP, Friends of Elk Island National Park	2012	2015	Wetlands in the Beaver Hills were sampled for tiger salamander presence and abundance to examine the effect of terrestrial habitat on salamander distribution.	M.Sc.
Moraine mesocarnivore project (Frances Stewart)	University of Victoria, Alberta Innovates – Technology Futures, EINP, Friends of EINP, Alberta TPR, AESRD, BHI, University of Alberta, Fur Institute of Canada	2013	Ongoing	Distribution and abundance of medium-sized mammals in the Beaver Hills moraine	Ph.D.
Socio-Economic Research [Demography, Economics, Traditional Knowledge, Etc.]					
Project Name	Partnering Agencies	Year Started	Year Ended	Project Details	Ph.D. / M.Sc.
Wildlife Encounters In EINP. (R. Chapman)	Parks Canada Agency	1994	1999	Wildlife behaviour/Human Interactions	Ph.D.
"National Parks, the environment and leisure" - cultural differences in leisure experience (J. Deng)	University of Alberta, EINP	N/A	2003	Comparison of leisure experiences of Canadians, recent Chinese immigrants and mainland Chinese residents	Ph. D.
Thinking like a park: effects of sense of place, perspective-taking and empathy on pro-environmental intentions (Dr. G. Walker and Dr. R. Chapman)	University of Alberta, EINP	N/A	2003	Investigations on influence of place on environmental behaviors	
Visitor motivations in EINP (Dr. G. Walker and Dr. R. Chapman)	University of Alberta, EINP	N/A	2001	Study on the motivations for park use among park visitors	

Visitor satisfaction surveys, Miquelon Lake Provincial Park	Alberta TPR	1995	2008	Periodic surveys of visitor experiences (1995, 1996, 2003, 2007, 2008)	
Changing behavior of residents of the wildland/urban interface in Strathcona County, Alberta (L. Stewart)	University of Alberta, Strathcona County	N/A	2003	Study evaluating wildfire prevention through citizen action and behaviors	M.Sc.
From reactive to proactive: Using social marketing strategies to facilitate adoption of the FireSmart Program within the Strathcona County wildland urban interface (D. Reid)	Strathcona County. Emergency Services.	N/A	2010	Use of social marketing to promote wildland fire safety strategies	
Motivations, barriers, and uses of interpretive of programs at Miquelon Lake Provincial Park (G. Hvenegaard)	Alberta TPR, University of Alberta	2011	2011	Surveys of visitors attending and not attending interpretive programs	
Toward an understanding of sustainable rural tourism: A case study of the Greater Strathcona County (J.J. Higgins)	University of Alberta	1998	1998	Reviewed the growth of rural tourism within the region with particular reference to the need for greater coordination and partnership	Final project for course based MA
Development of the BHI: Contribution of place and social factors to collaborative action (D. Patriquin)	University of Alberta, BHI	2008	2014	A study of the social and physical (place) factors contributing to the success of the BHI in voluntary policy implementation	Ph.D.
Ecological goods and services of wetlands (M. Weber and A. Hunnemeyer)	University of Alberta, Alberta Water Council, Alberta Innovates - Technology Futures, BHI	2009	2011	Assessing economic and public benefits of wetlands within the Beaver Hills sub-watershed	
Wetland biodiversity research	University of Alberta, Augustana Campus and Alberta TPR	2007	Ongoing	Abiotic and biotic factors influencing biodiversity in wetlands under agricultural and protected land use	
Hydrological and biological considerations for wetland policy (Dr. L. Foote, Dr. S. Bayley, Dr. I. Creed)	University of Alberta, University of Western Ontario, Alberta Water Council, BHI	2009	2011	Ecological and hydrological studies to develop an index of biotic integrity (IBI) for wetlands in the region	

CURRENT MONITORING PROGRAMS				
Abiotic Monitoring [Climatology, Hydrology, Geomorphology, Etc.]				
Project Name	Partnering Agencies	Year Started	Year Ended	Project Details
Water management (monitoring)	Strathcona and Lamont Counties, AB Sustainable Resource Management (Blackfoot PRA)	1985	Ongoing	Water level and beaver management in natural wetland systems
Controlled burns (management and monitoring)	EINP	1995	Ongoing	Monitoring of forest recovery of controlled burn areas
Long term contaminant loading study - bioaccumulation in leeches (G. Scrimgeour)	EINP	1995	Complete	Establishing benchmarks for lake health
Riparian condition assessment (monitoring)	EINP, Strathcona County, Alberta Sustainable Resource Management (Blackfoot PRA)	2001	Ongoing	Assessment of riparian health (using Cows and Fish riparian assessment protocols)
Assessing Indicators of Wetland Health in EINP (B. Eaton)	EINP, Alberta Innovates Technology Futures	2008	Ongoing	Establishing benchmarks for lake health
Seasonal evolution of ice and snow properties on Miquelon Lake, Alberta	Alberta TPR, University of Alberta	2008	Ongoing	Monitoring seasonal evolution of ice and snow properties for the purpose of comparison to changes in satellite imagery collected throughout the winter
Wetland diversity and distribution (monitoring)	EINP, BHI	2010	Ongoing	Remote sensing of wetlands/ spatial patterns
Effects of Land Surface (Moisture Flux) Feedbacks on Drought and Thunderstorms (Dr. G. Strong)	Drought Research Initiative	2009	2010	Quantify urban dry island effect at Edmonton and horizontal moisture gradients and vertical moisture profiles over crops
State of the Beaver Hills	BHI	2015	Ongoing	A summary of current state for 24 indicators, including indicators for land, air, water, biodiversity and quality of life. The State of the Beaver Hills will be updated every 5 years.
Biotic Monitoring				
Project Name	Partnering Agencies	Year Started	Year Ended	Project Details
Beaver abundance and distribution (monitoring)	EINP	1959	Ongoing	Yearly aerial or ground survey of active beaver lodges
Annual Christmas Bird Count (monitoring)	EINP, Canadian Wildlife Service, Friends of Elk Island Society, public	1965	Ongoing	Christmas bird count in EINP in conjunction with national program
Water bird abundance (monitoring)	EINP, AESRD (Blackfoot PRA)	1969	Ongoing	Monitoring numbers including cormorants, herons, pelicans, loons, red-necked grebes

Bison management program (monitoring)	EINP, Canadian Wildlife Service	1980	Ongoing	Annual check of bison health and population size
Ungulate aerial survey (monitoring)	EINP, Canadian Wildlife Service AESRD, (Blackfoot PRA)	1985	Ongoing	Annual to semi-annual ungulate counts in EINP and Blackfoot PRA
Trumpeter swan reintroduction program (monitoring)	EINP, Can. Wildlife Service, Alberta Fish and Wildlife Division, Friends of EINP, AESRD, (Blackfoot PRA)	1987	Ongoing	Monitoring and ongoing management of reintroduction program for trumpeter swans
Elk management program (monitoring)	AESRD (Blackfoot PRA)	1990	Ongoing	Elk population supplements and elk population monitoring in the Blackfoot PRA
Forest songbird counts (monitoring)	EINP	1990	Ongoing	Annual spring point counts to monitor local populations
Weed management and monitoring	Strathcona and Lamont Counties, AESRD (Blackfoot PRA)	1995	Ongoing	Coordinated program to map noxious weed locations and apply weed management
Forest permanent vegetation sample plots (monitoring)	EINP, Blackfoot PRA	1995	Ongoing	Forest health monitoring including forest understory
Native plant diversity and forest encroachment (monitoring)	EINP	1997	Ongoing	Rangeland reference area monitoring and fenced enclosure
Amphibian surveys (monitoring)	EINP, University of Alberta	2001	Ongoing	Amphibian health and diversity assessment
Adopt a Plant Alberta--assessment of rare plants (K. Vujnovic)	Alberta TPR	2006	Ongoing	Assessment of crested shield fern populations in Parkland Natural Area
Site-specific critical loads of acid deposition on soils in the Edmonton 83H east map sheet, Alberta (Dr. Abboud)	EINP, Alberta Innovates Technology Futures	2006	2008	A study to calculate critical loads for acid deposition in forest soils
Organic matter accumulation in boreal saline wetlands (M.J. Trites)	EINP, University of Alberta	2006	Ongoing	Wetland function and ecology
Analysis of bryophytes in EINP and surrounding areas	EINP (and other private lands in adjacent areas)	2008	Ongoing	Air quality effects on bryophytes
Assessing indicators of wetland health in the Aspen Parkland of Alberta (Dr. B. Eaton, A. Forrest)	Alberta TPR, Alberta Innovates -Technology Futures, University of Alberta	2008	Ongoing	Developing indicators for wetland health
Indicators of health in constructed wetlands (D. Raad)	Alberta TPR, University of Alberta	2007	Ongoing	Developing indicators for constructed wetland health
Ecological health assessment and monitoring	Alberta TPR	2008	Ongoing	Forest health monitoring, including forest understory
Survey and monitoring of great blue heron colony at Blackfoot Lake	Alberta TPR	2007	Ongoing	Monitoring of great blue heron colony population

Miquelon Lake Provincial Park aspen monitoring	Alberta TPR	2009	Ongoing	Tree growth monitoring
Nocturnal owl monitoring, Miquelon Lake Provincial Park	University of Alberta, Augustana Campus and Alberta TPR	2002	Ongoing	Distribution and abundance of nocturnal owls in park and adjacent lands
PAST MONITORING ACTIVITIES				
Abiotic [Cimatology, Hydrology, Geomorphology, etc.]				
Project name	Partnering agencies	Project details		
Identification areas of conservation value to BHI partners at the Beaverhills Sub-watershed and Municipality levels	EINP, Alberta TPR, Municipalities, University of Alberta, Alberta Innovates Technology Futures, BHI	Expanding on the pilot project that uses the MARXAN Program to identify areas of conservation value within the BHI boundaries		
Treating and managing waste and stormwater	Alberta TPR	Treating and managing waste and stormwater In Miquelon Lake Provincial Park		
Springs in Miquelon Lake Provincial Park	Alberta TPR	Documenting springs in Miquelon Lake Provincial Park		
Ground water studies via piezometers	Alberta TPR	Assessment of groundwater level change over time and drought impacts		
Hydrological monitoring and watershed modeling work	Alberta Environment; North Saskatchewan Watershed Alliance	Assess water yield from the North Saskatchewan River Basin (NSRB) and its variability under natural, present and future climatic conditions.		
Lake management planning activities	Alberta Environment; North Saskatchewan Watershed Alliance	Develop a framework for natural watershed health in preparation for the North Saskatchewan Regional Management Plan		
Wetland areas mapping	BHI, Alberta Environment, University of Alberta	Mapping of various kinds of wetlands, including bogs and fens		
Climate Change Adaptive Management Strategy	BHI	Develop strategic approach to manage potential impacts of climatic change on natural resources and economy within the moraine		

Drought, Soil Erosion and Flood Management Strategies	BHI	Develop strategic approaches to manage effects of drought on soil erosion and flooding potential (post-drought)
Fire management for the Beaver Hills	BHI	Develop management plan to address fire risk within the moraine
Reconnection of Astotin Lake, and North Saskatchewan River drainage systems	BHI, University of Alberta	Development of a plan to restore hydrological connections between the river, Astotin Creek and Astotin Lake in EINP
Air monitoring study (biomonitoring with lichens and moss)	BHI, EINP, University of Alberta	Continuation of a monitoring study for regional air quality using bio-indicator species
LiDAR Implementation Strategy	BHI, Alberta Environment, University of Alberta	Completion of a LiDAR dataset showing elevational contours of the moraine
Biotic [Flora, Fauna]		
Project name	Partnering agencies	Project details
Long-term biogeochemical and successional effects of beaver (<i>Castor canadensis</i>) on aspen-boreal ecosystems (Dr. N.T. Donkor)	EINP, Canadian University College	Beaver foraging behaviour
Plains Garter Snake distribution in the Beaver Hills (Dr. Cynthia Paszkowski)	EINP, University of Alberta	Snake ecology and distribution
Short-and long-term impacts of beaver foraging on forest structure (Dr. N.T. Donkor)	EINP, Canadian University College	Beaver foraging behaviour
Post construction weed inventories	Alberta TPR	Weed monitoring study
Invasive plant species control and monitoring	Alberta TPR	Weedy and invasive species monitoring
Migratory bird documentation	Alberta TPR	Migratory bird abundance and habitat use study
Miquelon Lake #2 piping plover presence survey	Alberta TPR	Sensitive species inventory
Northern leopard frog survey	Alberta TPR	Sensitive species inventory
Canadian toad survey	Alberta TPR	Sensitive species inventory
Bat surveys	Alberta TPR	Sensitive species inventory
Snake studies	Alberta TPR	Sensitive species inventory

Grazing impacts on native rangelands	Alberta TPR	Assessment of grazing effects on rangelands used as community pasture lands
Environmental impacts associated with educational projects in Alberta TPR	Alberta TPR	Assessment of programming effects on environment
Population study of aspen stands in Miquelon Lake Provincial Park	Alberta TPR	Assessment of aspen health and vitality
Invasive plant species management	BHI, EINP, Alberta TPR, municipalities	Coordination of regional management of invasive species
Riparian area monitoring: Improvement and Enhancement Strategies (K. Vujnovic, B. Eaton)	Alberta Parks, Alberta Innovates - Technology Futures	Riparian Health Inventory from Blackfoot PRA and wetland health assessment protocol
Vegetation enhancement program (T. Botic)	<u>Alberta Agriculture and Rural Development, [3] NCC, DUC, ACA, EALT</u>	Woodlot management, wetland restoration, and riparian enhancement education and awareness
Biodiversity assessment	BHI Research and Monitoring Working Group	Development of a Biodiversity Report Card documenting change in the moraine over time, based on a new monitoring program
Value of beaver on landscape	University of Alberta, Augustana Campus	Evaluation of role of beaver in maintaining aquatic habitat and biodiversity on landscape
Socio-economic [Demography, Economics and Traditional Knowledge]		
Project name	Partnering agencies	Project details
Effectiveness of existing environmental education and interpretation programs (MLPP and other parks)	Alberta TPR	Evaluation of impact of environmental programs on environmental behaviors
Evaluation of existing environmental education and interpretation programs elsewhere – Geared towards experiencing nature and addressing the social challenges of sustainable society	Alberta TPR	Evaluation of impact of environmental programs on environmental behaviors
Test of environmental education programs and their effectiveness	Alberta TPR	Evaluation of impact of environmental programs on environmental behaviors

Baseline information on traditional, passive, beach-line use vs. future backcountry use	Alberta TPR	Comparison study examining visitor experiences and market demand
Benefits of Miquelon Lake Provincial Park to Camrose (and surrounding region)	Alberta TPR	Economic benefits study regarding tourism
Public interest in limited backcountry camping within Provincial protected areas in the moraine	Alberta TPR	Market analysis of alternative tourism activities
Snowshoe destinations within Provincial protected areas of the moraine.	Alberta TPR	Market analysis of alternative tourism activities
Woodlot to Bio-energy program	Alberta Agriculture and Rural Development	Evaluation of woodlot use for bio-energy supply
Impacts, benefits, challenges and tradeoffs of the BHI	BHI	Evaluation of contributions of the BHI to sustainable management in region

[1] Where end date is unknown, but completion was confirmed, study is indicated as "complete".

[2] For some studies, starting date for the study was not available (indicated with "N/A")

[3] NCC: Nature Conservancy of Canada, DUC: Ducks Unlimited Canada, ACA: Alberta Conservation Association, EALT: Edmonton and Area Land Trust

PERMANENT SAMPLING PROGRAMS			
Plot Name	Partnering Agencies	Year Started	Year Ended
Permanent Vegetation Survey Plots - EINP	EINP	1993	Ongoing
Upland Vegetation Monitoring of Blackfoot PRA	Alberta TPR	1997	Ongoing
Upland Monitoring of Blackfoot PRA, Permanent Survey Plots (PSPs)	Alberta TPR	2008	Ongoing
Riparian Health Assessment Monitoring Program	Alberta TPR; EINP	2009	Ongoing
Aspen Forest Health Monitoring Program	Alberta TPR	2008	Ongoing

APPENDIX F. BIBLIOGRAPHY OF SELECTED PAPERS

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- Spencer Environmental Land Management Services Ltd. 2006. Beaver Hills Initiative Land Use Planning and Land Management Framework - Phase 1. Prepared for Beaver Hills Initiative, Sherwood Park, AB. 60 pp. + Appendices.
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APPENDIX G. WILDLIFE SPECIES OCCURRING IN THE BEAVER HILLS

Species list based on provincial distributions and species observations listed in:

Acorn, J. 1993. Butterflies of Alberta. Edmonton, AB: Lone Pine Publishing.

Wildlife Management Alberta Sustainable Resource Development. 2005. General Status of Alberta's Wildlife. Edmonton (AB): Alberta Sustainable Resource Development.

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Table G1. Wildlife Species Potentially Occurring in the Beaver Hills Moraine

Common Name	Scientific Name	Species Group	Provincial Status (General Status of AB Wild Species) ¹	Wildlife Act Designation and New Species Assessed by ESCC ²	COSEWIC Designation ³	SARA Designation ⁴	Residency Status ⁵	Record from Area
Amphibians and Reptiles								
Tiger Salamander	<i>Ambystoma mavortium melanostictum</i>	Amphibian	Secure		Not at Risk		Resident	Yes
Western Toad	<i>Anaxyrus boreas</i>	Amphibian	Sensitive		Special Concern	Schedule 1 (Special Concern)	Resident	Yes
Canadian Toad	<i>Anaxyrus hemiophrys</i>	Amphibian	May be At Risk	Data Deficient	Not at Risk		Resident	Yes
Wood Frog	<i>Lithobates sylvaticus</i>	Amphibian	Secure		LP Candidate		Resident	Yes
Boreal Chorus Frog	<i>Pseudacris maculata</i>	Amphibian	Secure		LP Candidate		Resident	Yes
Wandering Garter Snake	<i>Thamnophis elegans vagrans</i>	Reptile	Sensitive		LP Candidate		Resident	Yes
Plains Garter Snake	<i>Thamnophis radix</i>	Reptile	Sensitive		MP Candidate		Resident	Yes
Red-sided Garter Snake	<i>Thamnophis sirtalis parietalis</i>	Reptile	Sensitive		LP Candidate		Resident	Yes
Greater White-fronted Goose	<i>Anser albifrons</i>	Bird	Secure				Migrant	Yes
Birds								
Snow Goose	<i>Chen caerulescens</i>	Bird	Secure				Migrant	Yes
Ross's Goose	<i>Chen rossii</i>	Bird	Secure				Migrant	Yes
Brant	<i>Branta bernicla</i>	Bird	Accidental/				Visitor	

¹ Alberta's populations of all wildlife species are assessed, classified according to their vulnerability to extinction and reported at five year intervals. Species in decline or vulnerable to loss are identified with provincial status categories of At Risk, May Be at Risk, Sensitive, or Secure. Accidental / Vagrant and Exotic / Alien species are also identified, as are species for which data is deficient (Undetermined)

² In Alberta, wildlife species considered at risk can be legally protected under the Alberta Wildlife Act as Endangered or Threatened, based on assessment by the Alberta Endangered Species Conservation Committee. Other observation can be added by the ESCC, including notations where data is insufficient to determine status (Data Deficient).

³ Nationally, species considered at risk are first assessed by the Committee on the Status of Endangered Wildlife In Canada (COSEWIC) and assigned to various status categories. Endangered species are under imminent threat of extirpation or extinction and Threatened and Special Concern species risk being elevated to higher status categories (Endangered and Threatened, respectively) in the absence of management action. LP = Low priority candidate for listing. MP = Mid priority candidate for listing. HP = High Priority Candidate for listing.

⁴ COSEWIC may recommend species that require management intervention or protection. These are identified as Schedule 2 or Schedule 3 species under the federal Species at Risk Act (SARA) using their COSEWIC classifications, until they have been reassessed for federal protection status. Schedule 1 species (Endangered, Threatened species) have been reassessed and are protected under the SARA.

⁵ Residency Status Codes (Ritchie (2003)): M- migrant- no evidence of breeding; B- breeding- known or suspected to breed; W- winter- not a resident, but may move into region in winter; R- resident- year round, breed and winter in region; V- vagrant- unusual occurrence, not part of normal range; v- vagrant- recorded in Edmonton area (within 100 km of City) in Ritchie (2003); and ?- Distribution in Subregion unknown.

Common Name	Scientific Name	Species Group	Provincial Status (General Status of AB Wild Species) ¹	Wildlife Act Designation and New Species Assessed by ESCC ²	COSEWIC Designation ³	SARA Designation ⁴	Residency Status ⁵	Record from Area
			Vagrant					
Cackling Goose	<i>Branta hutchinsii</i>	Bird	Accidental/ Vagrant				Visitor	
Canada Goose	<i>Branta canadensis</i>	Bird	Secure				Breeding	Yes
Trumpeter Swan	<i>Cygnus buccinator</i>	Bird	At Risk	Threatened	Not at Risk		Breeding	Yes
Tundra Swan	<i>Cygnus columbianus</i>	Bird	Secure				Migrant	Yes
Gadwall	<i>Anas strepera</i>	Bird	Secure				Breeding	Yes
Eurasian Wigeon	<i>Anas penelope</i>	Bird	Accidental/ Vagrant				Migrant	Yes
American Wigeon	<i>Anas americana</i>	Bird	Secure				Breeding	
American Black Duck	<i>Anas rubripes</i>	Bird	Secure				Visitor	Yes
Mallard	<i>Anas platyrhynchos</i>	Bird	Secure				Breeding	
Blue-winged Teal	<i>Anas discors</i>	Bird	Secure				Breeding	Yes
Cinnamon Teal	<i>Anas cyanoptera</i>	Bird	Secure				Breeding	Yes
Northern Shoveler	<i>Anas clypeata</i>	Bird	Secure				Breeding	Yes
Northern Pintail	<i>Anas acuta</i>	Bird	Sensitive				Breeding	Yes
Garganey	<i>Anas querquedula</i>	Bird	Accidental/ Vagrant				Visitor	
Green-winged Teal	<i>Anas crecca carolinensis</i>	Bird	Sensitive				Breeding	Yes
Canvasback	<i>Aythya valisineria</i>	Bird	Secure				Breeding	Yes
Redhead	<i>Aythya americana</i>	Bird	Secure				Breeding	Yes
Ring-necked Duck	<i>Aythya collaris</i>	Bird	Secure				Breeding	Yes
Tufted Duck	<i>Aythya fuligula</i>	Bird	Accidental/ Vagrant				Visitor	
Greater Scaup	<i>Aythya marila</i>	Bird	Secure		LP Candidate		Migrant	Yes
Lesser Scaup	<i>Aythya affinis</i>	Bird	Sensitive		LP Candidate		Breeding	Yes
King Eider	<i>Somateria spectabilis</i>	Bird	Accidental/ Vagrant				Visitor	
Common Eider	<i>Somateria mollissima</i>	Bird	Accidental/ Vagrant				Visitor	
Surf Scoter	<i>Melanitta perspicillata</i>	Bird	Secure				Breeding	Yes
White-winged Scoter	<i>Melanitta fusca</i>	Bird	Sensitive	Special			Breeding	Yes

Common Name	Scientific Name	Species Group	Provincial Status (General Status of AB Wild Species) ¹	Wildlife Act Designation and New Species Assessed by ESCC ²	COSEWIC Designation ³	SARA Designation ⁴	Residency Status ⁵	Record from Area
				Concern				
Black Scoter	<i>Melanitta nigra</i>	Bird	Accidental/Vagrant				Migrant	
Long-tailed Duck	<i>Clangula hyemalis</i>	Bird	Secure				Migrant	Yes
Bufflehead	<i>Bucephala albeola</i>	Bird	Secure				Breeding	Yes
Common Goldeneye	<i>Bucephala clangula</i>	Bird	Secure				Breeding	Yes
Barrow's Goldeneye	<i>Bucephala islandica</i>	Bird	Secure				Migrant	Yes
Hooded Merganser	<i>Lophodytes cucullatus</i>	Bird	Secure				Breeding	Yes
Common Merganser	<i>Mergus merganser</i>	Bird	Secure				Breeding	Yes
Red-breasted Merganser	<i>Mergus serrator</i>	Bird	Secure				Migrant	Yes
Ruddy Duck	<i>Oxyura jamaicensis</i>	Bird	Secure				Breeding	Yes
Gray Partridge	<i>Perdix perdix</i>	Bird	Exotic/Alien				Resident	Yes
Ring-necked Pheasant	<i>Phasianus colchicus</i>	Bird	Exotic/Alien				Resident	Yes
Ruffed Grouse	<i>Bonasa umbellus</i>	Bird	Secure				Resident	Yes
Spruce Grouse	<i>Falcapennis canadensis</i>	Bird	Secure				Resident	Yes
Sharp-tailed grouse	<i>Tympanuchus phasianellus</i>	Bird	Sensitive				Resident	
Red-throated Loon	<i>Gavia stellata</i>	Bird	Secure				Migrant	
Pacific Loon	<i>Gavia pacifica</i>	Bird	Secure				Migrant	
Common Loon	<i>Gavia immer</i>	Bird	Secure		Not at Risk		Breeding	Yes
Yellow-billed Loon	<i>Gavia adamsii</i>	Bird	Accidental/Vagrant		Not at Risk		Visitor	
Pied-billed Grebe	<i>Podilymbus podiceps</i>	Bird	Sensitive				Breeding	Yes
Horned Grebe	<i>Podiceps auritus</i>	Bird	Sensitive		Special Concern		Breeding	Yes
Red-necked Grebe	<i>Podiceps grisegena</i>	Bird	Secure		Not at Risk		Breeding	Yes
Eared Grebe	<i>Podiceps nigricollis</i>	Bird	Secure				Breeding	Yes
Western Grebe	<i>Aechmophorus occidentalis</i>	Bird	Sensitive	Threatened	Special Concern		Breeding	Yes
American White Pelican	<i>Pelecanus erythrorhynchos</i>	Bird	Sensitive		Not at Risk		Breeding	Yes
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	Bird	Secure		Not at Risk		Breeding	Yes
American Bittern	<i>Botaurus lentiginosus</i>	Bird	Sensitive				Breeding	Yes

Common Name	Scientific Name	Species Group	Provincial Status (General Status of AB Wild Species) ¹	Wildlife Act Designation and New Species Assessed by ESCC ²	COSEWIC Designation ³	SARA Designation ⁴	Residency Status ⁵	Record from Area
Great Blue Heron	<i>Ardea herodias</i>	Bird	Sensitive				Breeding	Yes
Great Egret	<i>Ardea albus</i>	Bird	Accidental/ Vagrant				Visitor	
Snowy Egret	<i>Egretta thula</i>	Bird	Accidental/ Vagrant				Visitor	
Little Blue Heron	<i>Egretta caerulea</i>	Bird	Accidental/ Vagrant				Visitor	
Tricolored Heron	<i>Egretta tricolor</i>	Bird	Accidental/ Vagrant				Visitor	
Cattle Egret	<i>Bubulcus ibis</i>	Bird	Accidental/ Vagrant				Visitor	
Green Heron	<i>Butorides virescens</i>	Bird	Accidental/ Vagrant				Visitor	
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	Bird	Sensitive				Breeding	Yes
Yellow-crowned Night Heron	<i>Nyctanassa violacea</i>	Bird	Accidental/ Vagrant				Visitor	
White-faced Ibis	<i>Plegadis chihi</i>	Bird	Sensitive				Visitor	
Turkey Vulture	<i>Cathartes aura</i>	Bird	Secure				Breeding	Yes
Osprey	<i>Pandion haliaetus</i>	Bird	Sensitive				Breeding	Yes
Bald Eagle	<i>Haliaetus leucocephalus</i>	Bird	Sensitive		Not at Risk		Breeding	Yes
Northern Harrier	<i>Circus cyaneus</i>	Bird	Sensitive		Not at Risk		Breeding	Yes
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Bird	Secure		Not at Risk		Breeding	Yes
Cooper's Hawk	<i>Accipiter cooperii</i>	Bird	Secure		Not at Risk		Breeding	Yes
Northern Goshawk	<i>Accipiter gentilis atricapillus</i>	Bird	Sensitive		Not at Risk		Breeding	Yes
Broad-winged Hawk	<i>Buteo platypterus</i>	Bird	Sensitive				Breeding	Yes
Swainson's Hawk	<i>Buteo swainsoni</i>	Bird	Sensitive				Breeding	Yes
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Bird	Secure		Not at Risk		Breeding	Yes
Rough-legged Hawk	<i>Buteo lagopus</i>	Bird	Secure		Not at Risk		Migrant	Yes
Golden Eagle	<i>Aquila chrysaetos</i>	Bird	Sensitive		Not at Risk		Migrant	Yes
American Kestrel	<i>Falco sparverius</i>	Bird	Secure		LP Candidate		Breeding	Yes
Merlin	<i>Falco columbarius</i>	Bird	Secure		Not at Risk		Breeding	Yes
Gyr Falcon	<i>Falco rusticolus</i>	Bird	Secure		Not at Risk		W	Yes

Common Name	Scientific Name	Species Group	Provincial Status (General Status of AB Wild Species) ¹	Wildlife Act Designation and New Species Assessed by ESCC ²	COSEWIC Designation ³	SARA Designation ⁴	Residency Status ⁵	Record from Area
Yellow Rail	<i>Coturnicops noveboracensis</i>	Bird	Undetermined		Special Concern	Schedule 1 (Special Concern)	Breeding	Yes
Virginia Rail	<i>Rallus limicola</i>	Bird	Undetermined				Breeding	
Sora	<i>Porzana carolina</i>	Bird	Sensitive				Breeding	Yes
American Coot	<i>Fulica americana</i>	Bird	Secure		Not at Risk		Breeding	Yes
Sandhill Crane	<i>Grus canadensis</i>	Bird	Sensitive				Migrant	Yes
Common Crane	<i>Grus grus</i>	Bird	Accidental/ Vagrant				Visitor	
Whooping Crane	<i>Grus americana</i>	Bird	At Risk	Endangered	Endangered	Schedule 1 (Endangered)	Migrant	
Black-bellied Plover	<i>Pluvialis squatarola</i>	Bird	Secure				Migrant	
American Golden Plover	<i>Pluvialis dominica</i>	Bird	Secure		LP Candidate		Migrant	
Pacific Golden Plover	<i>Pluvialis fulva</i>	Bird	Accidental/ Vagrant				Visitor	
Mongolian Plover (Lesser Sand-Plover)	<i>Charadrius mongolus</i>	Bird	Accidental/ Vagrant				Visitor	
Snowy Plover	<i>Charadrius alexandrinus</i>	Bird	Accidental/ Vagrant				Visitor	
Semipalmated Plover	<i>Charadrius semipalmatus</i>	Bird	Secure				Migrant	
Piping Plover	<i>Charadrius melodus circumcinctus</i>	Bird	At Risk	Endangered	Endangered	Schedule 1 (Endangered)	Breeding	Yes
Killdeer	<i>Charadrius vociferous</i>	Bird	Secure		LP Candidate		Breeding	Yes
Black-necked Stilt	<i>Himantopus mexicanus</i>	Bird	Sensitive				Breeding	Yes
American Avocet	<i>Recurvirostra americana</i>	Bird	Secure				Breeding	Yes
Spotted Sandpiper	<i>Actitis macularia</i>	Bird	Secure				Breeding	Yes
Solitary Sandpiper	<i>Tringa solitaria</i>	Bird	Secure				Breeding	Yes
Wandering Tattler	<i>Heteroscelus incanus</i>	Bird	Accidental/ Vagrant				Visitor	
Spotted Redshank	<i>Tringa erythropus</i>	Bird	Accidental/ Vagrant				Visitor	

Common Name	Scientific Name	Species Group	Provincial Status (General Status of AB Wild Species) ¹	Wildlife Act Designation and New Species Assessed by ESCC ²	COSEWIC Designation ³	SARA Designation ⁴	Residency Status ⁵	Record from Area
Greater Yellowlegs	<i>Tringa melanoleuca</i>	Bird	Secure				Breeding	Yes
Willet	<i>Catoptrophorus semipalmatus</i>	Bird	Secure				Breeding	Yes
Lesser Yellowlegs	<i>Tringa flavipes</i>	Bird	Secure				Breeding	Yes
Upland Sandpiper	<i>Bartramia longicauda</i>	Bird	Sensitive				Breeding	
Whimbrel	<i>Numenius phaeopus</i>	Bird	Secure				Migrant	
Long-billed Curlew	<i>Numenius americanus</i>	Bird	Sensitive	Special Concern	Special Concern	Schedule 1 (Special Concern)	Visitor	
Hudsonian Godwit	<i>Limosa haemastica</i>	Bird	Secure		HP Candidate		Migrant	
Marbled Godwit	<i>Limosa fedoa</i>	Bird	Secure				Breeding	Yes
Ruddy Turnstone	<i>Arenaria interpres</i>	Bird	Secure				Migrant	
Black Turnstone	<i>Arenaria melanocephala</i>	Bird	Accidental/ Vagrant				Visitor	
Surfbird	<i>Aphriza virgata</i>	Bird	Accidental/ Vagrant				Visitor	
Red Knot	<i>Calidris canutus</i>	Bird	May Be At Risk		Endangered	Schedule 1 (Endangered)	Migrant	
Sanderling	<i>Calidris alba</i>	Bird	Secure				Migrant	
Semipalmated Sandpiper	<i>Calidris pusilla</i>	Bird	Secure		MP Candidate		Migrant	
Western Sandpiper	<i>Calidris mauri</i>	Bird	Secure				Migrant	
Red-necked Stint	<i>Calidris ruficollis</i>	Bird	Accidental/ Vagrant				Visitor	
Little Stint	<i>Calidris minuta</i>	Bird	Accidental/ Vagrant				Visitor	
Least Sandpiper	<i>Calidris minutilla</i>	Bird	Secure				Migrant	
White-rumped Sandpiper	<i>Calidris fuscicollis</i>	Bird	Secure				Migrant	
Baird's Sandpiper	<i>Calidris bairdii</i>	Bird	Secure		Not At Risk		Migrant	
Pectoral Sandpiper	<i>Calidris melanotos</i>	Bird	Secure		MP Candidate		Migrant	
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>	Bird	Accidental/ Vagrant				Visitor	
Dunlin	<i>Calidris alpina</i>	Bird	Secure				Migrant	
Curlew Sandpiper	<i>Calidris ferruginea</i>	Bird	Accidental/ Vagrant				Visitor	

Common Name	Scientific Name	Species Group	Provincial Status (General Status of AB Wild Species) ¹	Wildlife Act Designation and New Species Assessed by ESCC ²	COSEWIC Designation ³	SARA Designation ⁴	Residency Status ⁵	Record from Area
			Vagrant					
Stilt Sandpiper	<i>Calidris himantopus</i>	Bird	Secure		LP Candidate		Migrant	
Spoon-billed Sandpiper	<i>Eurynohynchus pygmeus</i>	Bird	Accidental/ Vagrant				Visitor	
Buff-breasted Sandpiper	<i>Tryngites subruficollis</i>	Bird	Secure		Special Concern		Migrant	
Ruff	<i>Philomachus pugnax</i>	Bird	Accidental/ Vagrant				Visitor	
Short-billed Dowitcher	<i>Limnodromus griseus</i>	Bird	Undetermined		LP Candidate		Breeding	Yes
Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>	Bird	Secure				Migrant	Yes
Wilson's Snipe	<i>Gallinago delicata</i>	Bird	Secure				Breeding	Yes
Wilson's Phalarope	<i>Phalaropus tricolor</i>	Bird	Secure				Breeding	Yes
Red-necked Phalarope	<i>Phalaropus lobatus</i>	Bird	Secure		Special Concern		Migrant	Yes
Red Phalarope	<i>Phalaropus fulicaria</i>	Bird	Accidental/ Vagrant				Migrant	
Pomarine Jaeger	<i>Stercorarius pomarinus</i>	Bird	Accidental/ Vagrant				Visitor	
Parasitic Jaeger	<i>Stercorarius parasiticus</i>	Bird	Accidental/ Vagrant				Migrant	
Long-tailed Jaeger	<i>Stercorarius longicaudus</i>	Bird	Accidental/ Vagrant				Visitor	
Franklin's Gull	<i>Leucophaeus pipixcan</i>	Bird	Secure				Breeding	Yes
Little Gull	<i>Hydrocoloeus minutus</i>	Bird	Accidental/ Vagrant				Visitor	
Bonaparte's Gull	<i>Chroicocephalus philadelphia</i>	Bird	Secure				Breeding	Yes
Mew Gull	<i>Larus canus</i>	Bird	Secure				Migrant	Yes
Ring-billed Gull	<i>Larus delawarensis</i>	Bird	Secure				Breeding	Yes
California Gull	<i>Larus californicus</i>	Bird	Secure				Breeding	Yes
Herring Gull	<i>Larus argentatus</i>	Bird	Secure				Breeding	Yes
Thayer's Gull	<i>Larus thayeri</i>	Bird	Secure				Migrant	Yes
Iceland Gull	<i>Larus glaucooides</i>	Bird	Accidental/ Vagrant				Visitor	

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Lesser Black-backed Gull	<i>Larus fuscus</i>	Bird	Accidental/ Vagrant				Visitor	
Slaty-backed Gull	<i>Larus schistisagus</i>	Bird	Accidental/ Vagrant				Visitor	
Glaucous-winged Gull	<i>Larus glaucescens</i>	Bird	Accidental/ Vagrant				Visitor	
Glaucous Gull	<i>Larus hyperboreus</i>	Bird	Secure				Migrant	
Great Black-backed Gull	<i>Larus marinus</i>	Bird	Accidental/ Vagrant				Visitor	
Sabine's Gull	<i>Xema sabini</i>	Bird	Secure				Migrant	
Black-legged Kittiwake	<i>Rissa tridactyla</i>	Bird	Accidental/ Vagrant				Visitor	
Caspian Tern	<i>Sterna caspia</i>	Bird	Sensitive		Not at Risk		Migrant	
Black Tern	<i>Chidonias niger</i>	Bird	Sensitive		Not at Risk		Breeding	Yes
Common Tern	<i>Sterna hirundo</i>	Bird	Secure		Not at Risk		Breeding	Yes
Arctic Tern	<i>Sterna paradisaea</i>	Bird	Secure				Migrant	
Forster's Tern	<i>Sterna forsteri</i>	Bird	Sensitive		Data Deficient		Breeding	Yes
Black Guillemot	<i>Cepphus grylle</i>	Bird	Accidental/ Vagrant				Visitor	
Long-billed Murrelet	<i>Brachyramphus perdix</i>	Bird	Accidental/ Vagrant				Visitor	
Ancient Murrelet	<i>Synthliboramphus antiquus</i>	Bird	Accidental/ Vagrant		Special Concern	Schedule 1 (Special Concern)	Visitor	
Rock Pigeon	<i>Columba livia</i>	Bird	Exotic/Alien				Resident	Yes
Band-tailed Pigeon	<i>Columba fasciata</i>	Bird	Accidental/ Vagrant		Special Concern	Schedule 1 (Special Concern)	Visitor	
White-winged Dove	<i>Zenaida asiatica</i>	Bird	Accidental/ Vagrant				Visitor	
Mourning Dove	<i>Zenaida macroura</i>	Bird	Secure				Breeding	Yes
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Bird	Accidental/ Vagrant		LP Candidate		Visitor	

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Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	Bird	Undetermined		LP Candidate		Breeding	
Barn Owl	<i>Tyto alba</i>	Bird	Accidental/Vagrant		Threatened	Schedule 1 (Special Concern)	Visitor	
Western Screech Owl	<i>Megascops kennicottii</i>	Bird	Accidental/Vagrant				Visitor	
Great Horned Owl	<i>Bubo virginianus</i>	Bird	Secure				Resident	Yes
Snowy Owl	<i>Nyctea scandiaca</i>	Bird	Secure		Not at Risk		W	Yes
Northern Hawk Owl	<i>Surnia ulula</i>	Bird	Sensitive		Not at Risk		Resident	Yes
Northern Pygmy-Owl	<i>Glaucidium gnoma gnoma</i>	Bird	Sensitive				Resident	Yes
Barred Owl	<i>Strix varia</i>	Bird	Sensitive	Special Concern			Resident	Yes
Great Grey Owl	<i>Strix nebulosa</i>	Bird	Sensitive		Not at Risk		Resident	Yes
Long-eared Owl	<i>Asio otus</i>	Bird	Secure				Resident	Yes
Short-eared Owl	<i>Asio flammeus</i>	Bird	May be At Risk		Special Concern	Schedule 1 (Special Concern)	Resident	Yes
Boreal Owl	<i>Aegolius funereus</i>	Bird	Secure		Not at Risk		Resident	Yes
Northern Saw-whet Owl	<i>Aegolius acadicus</i>	Bird	Secure				Resident	Yes
Common Nighthawk	<i>Chordeiles minor</i>	Bird	Sensitive		Threatened	Schedule 1 (Threatened)	Breeding	Yes
White-throated Swift	<i>Aeronautes saxatalis</i>	Bird	Accidental/Vagrant				Visitor	
Green Violet-ear	<i>Colibri thalassinus</i>	Bird	Accidental/Vagrant				Visitor	
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	Bird	Secure				Breeding	Yes
Black-chinned Hummingbird	<i>Archilochus alexandri</i>	Bird	Accidental/Vagrant				Visitor	
Anna's Hummingbird	<i>Calypte anna</i>	Bird	Accidental/Vagrant				Visitor	
Costa's Hummingbird	<i>Calypte costae</i>	Bird	Accidental/Vagrant				Visitor	

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Rufous Hummingbird	<i>Selasphorus rufus</i>	Bird	Secure				Breeding	
Belted Kingfisher	<i>Ceryle alcyon</i>	Bird	Secure				Breeding	Yes
Lewis's Woodpecker	<i>Melanerpes lewis</i>	Bird	Sensitive		Threatened	Schedule 1 (Threatened)	Visitor	
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Bird	Accidental/Vagrant				Visitor	
Williamson's Sapsucker	<i>Sphyrapicus thyroideus</i>	Bird	Accidental/Vagrant		Endangered	Schedule 1 (Endangered)	Visitor	
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	Bird	Secure				Breeding	Yes
Red-breasted Sapsucker	<i>Sphyrapicus ruber</i>	Bird	Accidental/Vagrant				Visitor	
Downy Woodpecker	<i>Picoides pubescens</i>	Bird	Secure				Resident	Yes
Hairy Woodpecker	<i>Picoides villosus</i>	Bird	Secure				Resident	Yes
American Three-toed Woodpecker	<i>Picoides tridactylus</i>	Bird	Secure				Resident	Yes
Black-backed Woodpecker	<i>Picoides arcticus</i>	Bird	Sensitive				Resident	Yes
Northern Flicker	<i>Colaptes auratus</i>	Bird	Secure				Breeding	Yes
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Bird	Sensitive				Resident	Yes
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Bird	May Be A Risk		Threatened	Schedule 1 (Threatened)	Breeding	Yes
Western Wood-pewee	<i>Contopus sordidulus</i>	Bird	Secure				Breeding	Yes
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	Bird	Undetermined				Breeding	Yes
Alder Flycatcher	<i>Empidonax alnorum</i>	Bird	Secure				Breeding	Yes
Willow Flycatcher	<i>Empidonax traillii</i>	Bird	Secure				Visitor	Yes
Least Flycatcher	<i>Empidonax minimus</i>	Bird	Sensitive		LP Candidate		Breeding	Yes
Gray Flycatcher	<i>Empidonax wrightii</i>	Bird	Accidental/Vagrant				Visitor	
Eastern Phoebe	<i>Sayornis phoebe</i>	Bird	Sensitive				Breeding	Yes
Say's Phoebe	<i>Sayornis saya</i>	Bird	Secure				Breeding	
Great-crested Flycatcher	<i>Myiarchus crinitus</i>	Bird	Sensitive				Breeding	Yes
Western Kingbird	<i>Tyrannus verticalis</i>	Bird	Secure				Visitor	
Eastern Kingbird	<i>Tyrannus tyrannus</i>	Bird	Secure				Breeding	Yes

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Scissor-tailed Flycatcher	<i>Tyrannus forficatus</i>	Bird	Accidental/Vagrant				Visitor	
Loggerhead Shrike	<i>Lanius ludovicianus exubitorides</i>	Bird	Sensitive	Special Concern	Threatened	Schedule 1 (Threatened)	Breeding	
Northern Shrike	<i>Lanius exubitor</i>	Bird	Secure				W	Yes
Blue-headed Vireo/ Solitary Vireo	<i>Vireo solitarius</i>	Bird	Secure				Breeding	Yes
Warbling Vireo	<i>Vireo gilvus</i>	Bird	Secure				Breeding	Yes
Philadelphia Vireo	<i>Vireo philadelphicus</i>	Bird	Secure				Breeding	Yes
Red-eyed Vireo	<i>Vireo olivaceus</i>	Bird	Secure				Breeding	Yes
Gray Jay	<i>Perisoreus canadensis</i>	Bird	Secure				Resident	Yes
Blue Jay	<i>Cyanocitta cristata</i>	Bird	Secure				Resident	Yes
Black-billed Magpie	<i>Pica hudsonia</i>	Bird	Secure				Resident	Yes
American Crow	<i>Corvus brachyrhynchos</i>	Bird	Secure				Resident	Yes
Common Raven	<i>Corvus corax</i>	Bird	Secure				Resident	Yes
Horned Lark	<i>Eremophila alpestris</i>	Bird	Secure				Breeding	Yes
Purple Martin	<i>Progne subis</i>	Bird	Sensitive				Breeding	Yes
Tree Swallow	<i>Tachycineta bicolor</i>	Bird	Secure				Breeding	Yes
Violet-Green Swallow	<i>Tachycineta thalassina</i>	Bird	Secure				Breeding	Yes
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	Bird	Secure				Breeding	Yes
Bank Swallow	<i>Riparia riparia</i>	Bird	Secure		Threatened		Breeding	Yes
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	Bird	Secure				Breeding	Yes
Barn Swallow	<i>Hirundo rustica</i>	Bird	Sensitive		Threatened		Breeding	Yes
Black-capped Chickadee	<i>Poecile atricapillus</i>	Bird	Secure				Resident	Yes
Boreal Chickadee	<i>Poecile hudsonica</i>	Bird	Secure				Resident	Yes
Red-breasted Nuthatch	<i>Sitta canadensis</i>	Bird	Secure				Resident	Yes
White-breasted Nuthatch	<i>Sitta carolinensis</i>	Bird	Secure				Resident	Yes
Pygmy Nuthatch	<i>Sitta pygmaea</i>	Bird	Accidental/Vagrant				Visitor	
Brown Creeper	<i>Certhia americana</i>	Bird	Sensitive				Resident	Yes

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Rock Wren	<i>Salpinctes obsoletus</i>	Bird	Secure				Visitor	
Carolina Wren	<i>Thryothorus ludovicianus</i>	Bird	Accidental/ Vagrant				Visitor	
House Wren	<i>Troglodytes aedon</i>	Bird	Secure				Breeding	Yes
Winter Wren	<i>Troglodytes troglodytes</i>	Bird	Secure				Breeding	Yes
Sedge Wren	<i>Cistothorus platensis</i>	Bird	Sensitive		Not at Risk		Breeding	Yes
Marsh Wren	<i>Cistothorus palustris</i>	Bird	Secure				Breeding	Yes
Golden-crowned Kinglet	<i>Regulus satrapa</i>	Bird	Secure				Breeding	Yes
Ruby-crowned Kinglet	<i>Regulus calendula</i>	Bird	Secure				Breeding	Yes
Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>	Bird	Accidental/ Vagrant				Visitor	
Northern Wheatear	<i>Oenanthe oenanthe</i>	Bird	Accidental/ Vagrant				Visitor	
Eastern Bluebird	<i>Sialia sialis</i>	Bird	Secure		Not at Risk		Visitor	
Western Bluebird	<i>Sialia mexicana</i>	Bird	Secure				Breeding	Yes
Mountain Bluebird	<i>Sialia currucoides</i>	Bird	Secure				Breeding	Yes
Townsend's Solitaire	<i>Myadestes townsendi</i>	Bird	Secure				Migrant	
Veery	<i>Catharus fuscescens</i>	Bird	Secure				Breeding	Yes
Gray-cheeked Thrush	<i>Catharus minimus</i>	Bird	Undetermined				Migrant	
Swainson's Thrush	<i>Catharus ustulatus</i>	Bird	Secure				Breeding	Yes
Hermit Thrush	<i>Catharus guttatus</i>	Bird	Secure				Breeding	Yes
Wood Thrush	<i>Hylocichla mustelina</i>	Bird	Accidental/ Vagrant				Visitor	
American Robin	<i>Turdus migratorius</i>	Bird	Secure				Breeding	Yes
Varied Thrush	<i>Ixoreus naevius</i>	Bird	Secure				Breeding	Yes
Gray Catbird	<i>Dumetella carolinensis</i>	Bird	Secure				Breeding	Yes
Northern Mockingbird	<i>Mimus polyglottos</i>	Bird	Secure				Visitor	
Brown Thrasher	<i>Toxostoma rufum</i>	Bird	Secure				Breeding	Yes
Bendire's Thrasher	<i>Toxostoma bendirei</i>	Bird	Accidental/ Vagrant				Visitor	
European Starling	<i>Sturnus vulgaris</i>	Bird	Exotic/Alien				Breeding	Yes
American Pipit	<i>Anthus rubescens</i>	Bird	Secure				Migrant	

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Sprague's Pipit	<i>Anthus spragueii</i>	Bird	Sensitive	Special Concern	Threatened	Schedule 1 (Threatened)	Breeding	Yes
Bohemian Waxwing	<i>Bombycilla garrulus</i>	Bird	Secure				W	Yes
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Bird	Secure				Breeding	Yes
Blue-winged Warbler	<i>Vermivora pinus</i>	Bird	Accidental/Vagrant				Visitor	
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Bird	Accidental/Vagrant		Threatened	Schedule 1 (Threatened)	Visitor	
Tennessee Warbler	<i>Vermivora peregrina</i>	Bird	Secure				Breeding	Yes
Orange-crowned Warbler	<i>Vermivora celata</i>	Bird	Secure				Breeding	Yes
Northern Parula	<i>Parula americana</i>	Bird	Accidental/Vagrant				Visitor	
Yellow Warbler	<i>Dendroica petechia</i>	Bird	Secure				Breeding	Yes
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	Bird	Secure				Breeding	Yes
Magnolia Warbler	<i>Dendroica magnolia</i>	Bird	Secure				Breeding	Yes
Cape May Warbler	<i>Dendroica tigrina</i>	Bird	Sensitive	In Process (see Comments)			Breeding	Yes
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	Bird	Accidental/Vagrant				Visitor	
Yellow-rumped Warbler	<i>Dendroica coronata</i>	Bird	Secure				Breeding	Yes
Black-throated Gray Warbler	<i>Dendroica nigrescens</i>	Bird	Accidental/Vagrant				Visitor	
Black-Throated Green Warbler	<i>Dendroica virens</i>	Bird	Sensitive	Special Concern			Breeding	Yes
Blackburnian Warbler	<i>Dendroica fusca</i>	Bird	Sensitive				Breeding	Yes
Pine Warbler	<i>Dendroica pinus</i>	Bird	Accidental/Vagrant				Visitor	Yes
Palm Warbler	<i>Dendroica palmarum</i>	Bird	Secure				Breeding	Yes
Bay-breasted Warbler	<i>Dendroica castanea</i>	Bird	Sensitive	In Process (see Comments)			Breeding	Yes
Blackpoll Warbler	<i>Dendroica striata</i>	Bird	Secure		LP Candidate		Breeding	Yes
Black-and-white Warbler	<i>Mniotilta varia</i>	Bird	Secure				Breeding	Yes
American Redstart	<i>Setophaga ruticilla</i>	Bird	Secure				Breeding	Yes

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Ovenbird	<i>Seiurus aurocapillus</i>	Bird	Secure				Breeding	Yes
Northern Waterthrush	<i>Seiurus noveboracensis</i>	Bird	Secure				Breeding	Yes
Kentucky Warbler	<i>Oporornis formosus</i>	Bird	Accidental/ Vagrant				Visitor	
Connecticut Warbler	<i>Oporornis agilis</i>	Bird	Secure		LP Candidate		Breeding	Yes
Mourning Warbler	<i>Oporornis philadelphia</i>	Bird	Secure				Breeding	Yes
Common Yellowthroat	<i>Geothlypis trichas</i>	Bird	Sensitive				Breeding	Yes
Hooded Warbler	<i>Wilsonia citrina</i>	Bird	Accidental/ Vagrant				Visitor	
Wilson's Warbler	<i>Wilsonia pusilla</i>	Bird	Secure				Breeding	Yes
Canada Warbler	<i>Wilsonia canadensis</i>	Bird	Sensitive		Threatened	Schedule 1 (Threatened)	Breeding	
Summer Tanager	<i>Piranga rubra</i>	Bird	Accidental/ Vagrant				Visitor	
Scarlet Tanager	<i>Piranga olivacea</i>	Bird	Accidental/ Vagrant				Visitor	
Western Tanager	<i>Piranga ludoviciana</i>	Bird	Sensitive				Breeding	Yes
Green-tailed Towhee	<i>Pipilo chlorurus</i>	Bird	Accidental/ Vagrant				Visitor	
Spotted Towhee	<i>Pipilo maculatus</i>	Bird	Secure				Visitor	
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	Bird	Accidental/ Vagrant				Visitor	
Cassin's Sparrow	<i>Aimophila cassinii</i>	Bird	Accidental/ Vagrant				Visitor	
American Tree Sparrow	<i>Spizella arborea</i>	Bird	Secure				Breeding	Yes
Chipping Sparrow	<i>Spizella passerina</i>	Bird	Secure				Breeding	Yes
Clay-colored Sparrow	<i>Spizella pallida</i>	Bird	Secure				Breeding	Yes
Field Sparrow	<i>Spizella pusilla</i>	Bird	Accidental/ Vagrant				Visitor	
Vesper Sparrow	<i>Pooecetes gramineus</i>	Bird	Secure				Breeding	Yes
Lark Sparrow	<i>Chondestes grammacus</i>	Bird	Secure				Visitor	
Black-throated Sparrow	<i>Amphispiza bilineata</i>	Bird	Accidental/ Vagrant				Visitor	

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Lark Bunting	<i>Calamospiza melanocorys</i>	Bird	Secure		HP Candidate		Visitor	
Savannah Sparrow	<i>Passerculus sandwichensis</i>	Bird	Secure				Breeding	Yes
Baird's Sparrow	<i>Ammodramus bairdii</i>	Bird	Sensitive		Special Concern		Visitor	
Le Conte's Sparrow	<i>Ammodramus leconteii</i>	Bird	Secure				Breeding	Yes
Nelson's Sharp-tailed Sparrow	<i>Ammodramus nelsoni</i>	Bird	Secure		Not at Risk		Breeding	
Fox Sparrow	<i>Passerella iliaca</i>	Bird	Secure				Breeding	Yes
Song Sparrow	<i>Melospiza melodia</i>	Bird	Secure				Breeding	Yes
Lincoln's Sparrow	<i>Melospiza lincolni</i>	Bird	Secure				Breeding	Yes
Swamp Sparrow	<i>Melospiza georgiana</i>	Bird	Secure				Breeding	Yes
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Bird	Secure				Breeding	Yes
Harris's Sparrow	<i>Zonotrichia querula</i>	Bird	Secure		HP Candidate		Migrant	
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	Bird	Secure				Breeding	Yes
Golden-crowned Sparrow	<i>Zonotrichia atricapilla</i>	Bird	Secure				Breeding	Yes
Dark-eyed Junco	<i>Junco hyemalis</i>	Bird	Secure				Breeding	Yes
McCown's Longspur	<i>Calcarius mccownii</i>	Bird	Secure		Special Concern	Schedule 1 (Special Concern)	Visitor	
Lapland Longspur	<i>Calcarius lapponicus</i>	Bird	Secure				Migrant	
Smith's Longspur	<i>Calcarius pictus</i>	Bird	Secure				Migrant	
Chestnut-collared Longspur	<i>Calcarius ornatus</i>	Bird	Secure		Threatened		Visitor	
Snow Bunting	<i>Plectrophenax nivalis</i>	Bird	Secure				W	Yes
Northern Cardinal	<i>Cardinalis cardinalis</i>	Bird	Accidental/ Vagrant				Visitor	Yes
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	Bird	Secure				Breeding	Yes
Lazuli Bunting	<i>Passerina amoena</i>	Bird	Secure				Visitor	
Indigo Bunting	<i>Passerina cyanea</i>	Bird	Accidental/ Vagrant				Visitor	
Painted Bunting	<i>Passerina ciris</i>	Bird	Accidental/ Vagrant				Visitor	

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Dickcissel	<i>Spiza americana</i>	Bird	Accidental/ Vagrant				Visitor	
Bobolink	<i>Dolichonyx oryzivorus</i>	Bird	Sensitive		Threatened		Breeding	
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	Bird	Secure				Breeding	Yes
Eastern Meadowlark	<i>Sturnella magna</i>	Bird	Accidental/ Vagrant				Visitor	
Western Meadowlark	<i>Sturnella neglecta</i>	Bird	Secure				Breeding	Yes
Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	Bird	Secure				Breeding	Yes
Rusty Blackbird	<i>Euphagus carolinus</i>	Bird	Sensitive		Special Concern	Schedule 1 (Special Concern)	Breeding	Yes
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	Bird	Secure				Breeding	Yes
Common Grackle	<i>Quiscalus quiscula</i>	Bird	Secure				Breeding	Yes
Brown-headed Cowbird	<i>Molothrus ater</i>	Bird	Secure				Breeding	Yes
Baltimore Oriole	<i>Icterus galbula</i>	Bird	Sensitive				Breeding	Yes
Brambling	<i>Fringilla montifringilla</i>	Bird	Accidental/ Vagrant				Visitor	
Pine Grosbeak	<i>Pinicola enucleator</i>	Bird	Secure				Resident	Yes
Purple Finch	<i>Carpodacus purpureus</i>	Bird	Secure				Breeding	Yes
House Finch	<i>Carpodacus mexicanus</i>	Bird	Secure				Resident	Yes
Red Crossbill	<i>Loxia curvirostra</i>	Bird	Secure				Resident	Yes
White-winged Crossbill	<i>Loxia leucoptera</i>	Bird	Secure				Resident	Yes
Common Redpoll	<i>Carduelis flammea</i>	Bird	Secure				W	Yes
Hoary Redpoll	<i>Carduelis hornemanni</i>	Bird	Secure				W	Yes
Pine Siskin	<i>Carduelis pinus</i>	Bird	Secure				Resident	Yes
American Goldfinch	<i>Carduelis tristis</i>	Bird	Secure				Breeding	Yes
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Bird	Secure				Resident	Yes
House Sparrow	<i>Passer domesticus</i>	Bird	Exotic/Alien				Resident	
Mammals								

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Masked Shrew	<i>Sorex cinereus</i>	Mammal	Secure				Resident	
Hayden's Shrew/Prarie Shrew	<i>Sorex haydeni</i>	Mammal	Secure				Resident	
Dusky Shrew	<i>Sorex monticolus</i>	Mammal	Secure				Resident	
Water Shrew	<i>Sorex palustris</i>	Mammal	Secure				Resident	Yes
Arctic Shrew	<i>Sorex arcticus</i>	Mammal	Secure				Resident	
Pygmy Shrew	<i>Sorex hoyi</i>	Mammal	Secure				Resident	
Little Brown Bat	<i>Myotis lucifugus</i>	Mammal	Secure		Endangered	Schedule 1 (Endangered)	Resident	Yes
Northern Bat	<i>Myotis septentrionalis</i>	Mammal	May be At Risk	Data Deficient	Endangered	Schedule 1 (Endangered)	Resident	
Long-eared Bat	<i>Myotis evotis</i>	Mammal	Secure				Resident	
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	Mammal	Sensitive				Resident	
Big Brown Bat	<i>Eptesicus fuscus</i>	Mammal	Secure				Resident	
Red Bat	<i>Lasiurus borealis</i>	Mammal	Sensitive				Resident	
Hoary Bat	<i>Lasiurus cinereus</i>	Mammal	Sensitive				Resident	
Nuttall's/ Mountain Cottontail	<i>Sylvilagus nuttallii</i>	Mammal	Secure		Not at Risk		Resident	
Snowshoe Hare	<i>Lepus americanus</i>	Mammal	Secure				Resident	Yes
White-tailed Jack Rabbit	<i>Lepus townsendii</i>	Mammal	Secure				Resident	Yes
Least Chipmunk	<i>Tamias minimus</i>	Mammal	Secure				Resident	Yes
Woodchuck	<i>Marmota monax</i>	Mammal	Secure				Resident	
Richardson's Ground Squirrel	<i>Spermophilus richardsonii</i>	Mammal	Secure				Resident	Yes
Thirteen-lined Ground Squirrel	<i>Spermophilus tridecemlineatus</i>	Mammal	Undetermined				Resident	Yes
Franklin's Ground Squirrel	<i>Spermophilus franklinii</i>	Mammal	Undetermined				Resident	
Red Squirrel	<i>Tamiasciurus hudsonicus</i>	Mammal	Secure				Resident	Yes
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	Mammal	Secure				Resident	Yes
Northern Pocket Gopher	<i>Thomomys talpoides</i>	Mammal	Secure				Resident	Yes
American Beaver	<i>Castor canadensis</i>	Mammal	Secure				Resident	Yes

Common Name	Scientific Name	Species Group	Provincial Status (General Status of AB Wild Species) ¹	Wildlife Act Designation and New Species Assessed by ESCC ²	COSEWIC Designation ³	SARA Designation ⁴	Residency Status ⁵	Record from Area
Deer Mouse	<i>Peromyscus maniculatus</i>	Mammal	Secure				Resident	Yes
Bushy-tailed Woodrat	<i>Neotoma cinera</i>	Mammal	Secure				Resident	
Southern Red-backed Vole	<i>Clethrionomys gapperi</i>	Mammal	Secure				Resident	Yes
Heather Vole	<i>Phenacomys intermedius</i>	Mammal	Secure				Resident	
Meadow Vole	<i>Microtus pennsylvanicus</i>	Mammal	Secure				Resident	Yes
Long-tailed Vole	<i>Microtus longicaudus</i>	Mammal	Secure				Resident	
Prairie Vole	<i>Microtus ochrogaster</i>	Mammal	Secure				Resident	
Muskrat	<i>Ondatra zibethicus</i>	Mammal	Secure				Resident	
Northern Bog Lemming	<i>Synaptomys borealis</i>	Mammal	Secure				Resident	Yes
House Mouse	<i>Mus musculus</i>	Mammal	Exotic/Alien				Resident	Yes
Meadow Jumping Mouse	<i>Zapus hudsonius</i>	Mammal	Secure				Resident	Yes
Western Jumping Mouse	<i>Zapus princeps</i>	Mammal	Secure				Resident	Yes
Common Porcupine	<i>Erethizon dorsatum</i>	Mammal	Secure				Resident	Yes
Coyote	<i>Canis latrans</i>	Mammal	Secure				Resident	Yes
Northern Gray Wolf	<i>Canis lupus occidentalis</i>	Mammal	Secure		Not at Risk		Resident	Yes
Red Fox	<i>Vulpes vulpes</i>	Mammal	Secure				Resident	Yes
Black Bear	<i>Ursus americanus</i>	Mammal	Secure		Not at Risk		Visitor	Yes
American Marten	<i>Martes americana</i>	Mammal	Secure		Threatened	Schedule 1 (Threatened)	Resident	Yes
Fisher	<i>Martes pennanti</i>	Mammal	Sensitive				Resident	Yes
Long-tailed Weasel	<i>Mustela frenata</i>	Mammal	May be At Risk		Not at Risk		Resident	Yes
Ermine	<i>Mustela erminea</i>	Mammal	Secure				Resident	Yes
Least Weasel	<i>Mustela nivalis</i>	Mammal	Secure				Resident	Yes
Mink	<i>Mustela vison</i>	Mammal	Secure				Resident	Yes
American Badger	<i>Taxidea taxus taxus</i>	Mammal	Sensitive	Data Deficient	Special Concern		Resident	Yes
Striped Skunk	<i>Mephitis mephitis</i>	Mammal	Secure				Resident	Yes
Mountain Lion/Cougar	<i>Felis concolor</i>	Mammal	Secure				Resident	Yes
Canada Lynx	<i>Lynx canadensis</i>	Mammal	Sensitive		Not at Risk		Resident	
Wapiti/Elk	<i>Cervus elaphus</i>	Mammal	Secure				Resident	Yes
Moose	<i>Alces alces</i>	Mammal	Secure				Resident	Yes
Mule Deer	<i>Odocoileus hemionus</i>	Mammal	Secure				Resident	Yes

Common Name	Scientific Name	Species Group	Provincial Status (General Status of AB Wild Species) ¹	Wildlife Act Designation and New Species Assessed by ESCC ²	COSEWIC Designation ³	SARA Designation ⁴	Residency Status ⁵	Record from Area
White-tailed Deer	<i>Odocoileus virginianus</i>	Mammal	Secure				Resident	Yes
Plains Bison	<i>Bison bison bison</i>	Mammal	Extirpated/ Extinct		Threatened		Resident	Yes
Wood Bison	<i>Bos bison athabasca</i>	Mammal	At Risk	Endangered- IP*	Special Concern	Schedule 1 (Threatened)	Resident	Yes
Invertebrates								
Arctic Blue	<i>Agriades glandon</i>	Lepidoptera	Secure				Breeding	
Common Roadside Skipper	<i>Amblyscirtes vialis</i>	Lepidoptera	Secure				Breeding	
Meadow Fritillary	<i>Boloria bellona</i>	Lepidoptera	Secure				Breeding	
Bog Fritillary	<i>Boloria eunomia</i>	Lepidoptera	Secure				Breeding	
Freija Fritillary	<i>Boloria freija</i>	Lepidoptera	Secure				Breeding	
Frigga Fritillary	<i>Boloria frigga</i>	Lepidoptera	Secure				Breeding	
Silver-Bordered Fritillary	<i>Boloria selene</i>	Lepidoptera	Secure				Breeding	
Brown Elfin	<i>Callophrys augustinus</i>	Lepidoptera	Secure				Breeding	
Western Pine Elfin	<i>Callophrys eryphon</i>	Lepidoptera	Secure				Breeding	
Hoary Elfin	<i>Callophrys polia</i>	Lepidoptera	Secure				Breeding	
Arctic Skipper	<i>Carterocephalus palaemon</i>	Lepidoptera	Secure				Breeding	
Spring Azure	<i>Celastrina ladon</i>	Lepidoptera	Secure				Breeding	
Common Wood-Nymph	<i>Cercyonis pegala</i>	Lepidoptera	Secure				Breeding	
Common Ringlet	<i>Coenonympha tullia</i>	Lepidoptera	Secure				Breeding	
Queen Alexandra's Sulphur	<i>Colias alexandra</i>	Lepidoptera	Undetermined				Breeding	

APPENDIX H. PLANT SPECIES OF THE BEAVER HILLS

A Note about the Alberta Conservation Information Management System (ACIMS): List of All Vascular Plant Elements (Kemper, J.T. 2009. Alberta Natural Heritage Information Centre Vascular and Non-vascular Plant Tracking and Watch Lists. ATPR, Parks Division, Edmonton, Alberta)

ACMIS collects, evaluates and makes available information on the elements of environmental diversity of Alberta. Native vascular plants represent a significant component of Alberta's biological diversity. This list contains all currently known vascular plant taxa (2082, including sub-specific taxa) that occur, potentially occur, or have been thought to occur in Alberta's natural habitats. It includes 458 rare plant taxa currently tracked by ACIMS and 63 taxa that are on the ACIMS's watch list. It also accounts for about 299 plant taxa that are considered non-native to our province (may be native to nearby regions), hybrids, potentially existing taxa (with no persuasive documentation), those taxa that were reported falsely, and one taxon that is believed to be extirpated from our province (*Machaeranthera tanacetifolia*).

The list is organized alphabetically by Scientific Name, and it also includes Common Name, Provincial Rank (S Rank), Global Rank (G Rank), Tracking Status, Element Code (E Code - same for all jurisdictions, to compare the elements if they do not have the same S Name). Scientific name follows NatureServe (2006) and Kartesz (1999) in most instances. Ongoing work, particularly the Flora of North America project, is resulting in taxonomic revision and nomenclatural changes to many of the vascular taxa occurring in Alberta. We are incorporating these changes into the database, as information becomes available. The S Name reflects these changes where possible. Common names mostly follow Ealey (1993). Explanation of provincial and global ranks can be found on the ACIMS website:

<http://www.tpr.alberta.ca/parks/heritageinfocentre/plants/vascularbryophytes/default.aspx>

In the process of creating and updating this list with all the associated information, numerous references were consulted. Various other sources of information include published and unpublished documents, field surveys, herbarium specimens, rare plant files and discussions with knowledgeable individuals. The Provincial Ranks have been assigned with the assistance of experts and the use of published/non-published data. The Global Ranks were provided by NatureServe. Both Provincial and Global Ranks are reviewed and updated periodically. This most recent version of the tracking list was updated in 2009.

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Table H1. Plant Species of the Beaver Hills Moraine

Scientific name	Authority	Common Name	Family	Provincial Status (S rank) ⁶	Global Status (G rank) ⁷	Origin	Distribution Confidence ⁸	Current Presence / Absence	Boreal Forest	Park land	Observed ? (ACIMS) ^c
<i>Abies balsamea</i>	(L.) Mill.	Balsam fir	Pinaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Abies balsamea x lasiocarpa</i>		Balsam x subalpine fir	Pinaceae						X		
<i>Abies lasiocarpa</i>	(Hook.) Nutt.	Subalpine fir	Pinaceae						X		
<i>Achillea millefolium</i>	L.	Common yarrow	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Achillea sibirica</i>	Ledeb.	Many-flowered yarrow	Asteraceae	S5	G5?	Native	Confident; reported and confirmed	Present	X	X	
<i>Acorus americanus</i>	(Raf.) Raf.	Sweet flag	Acoraceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Actaea rubra</i>	(Ait.) Willd.	Red and white baneberry	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Adoxa moschatellina</i>	L.	Moschatel	Adoxaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Agastache foeniculum</i>	(Pursh) Ktze.	Giant hyssop	Lamiaceae	S4	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Agoseris glauca</i>	(Pursh) Raf.	Yellow false dandelion	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Agrimonia striata</i>	Michx.	Agrimony	Rosaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	

⁶ Although federally, plants may be listed and protected under the Species at Risk Act (SARA), none of the species with ranges in the Beaverhills Moraine have been designated for protection under SARA. The province does not have legislation guiding conservation of plant species, but it does track population status and identifies species that may be at risk or in need of management to prevent declines. The resulting classification is mainly based on known range within the province, supplemented by records of population observations provided through site-specific studies by professional biologists (in government and industry). No comprehensive inventory exists for the province, or the Beaverhills Moraine. In its tracking system, Alberta ranks its plant species on a global, national and sub-national scale of 1 to 5, following the system developed by The Nature Conservancy. G1 (Global 1) indicates that a species of high conservation concern at the global scale due to rarity, endemism and / or threats, and a rank of G5 (Global 5) indicates a species that is widespread and abundant (ACIMS, 2010). A rank of N1 (National 1) or S1 (Sub-National 1) indicates high conservation concern at the national or state / provincial level, respectively. For management purposes, species of rank S3 or lower are generally considered sensitive in Alberta and in need of management attention. Specifically, the codes used in Alberta correspond to the number of recorded population occurrences listed below.

G1 S1: < 5 occurrences or only a few remaining individuals.

G2 S2: 6-20 occurrences or with many individuals in fewer occurrences.

G3 S3: 21 -100 occurrences may be rare and local throughout its range or in a restricted range (may be abundant in some locations or may be vulnerable to extirpation because of some factor of its biology).

G4 S4: apparently secure under present conditions, typically >100 occurrences but may be fewer with many large populations; may be rare in parts of its range, especially peripherally.

G5 S5: demonstrably secure under present conditions, > 100 occurrences may be rare in parts of its range, especially peripherally.

GNR SNR: unranked or under review

GH SH: historically known, may be relocated in the future.

GNA SNA: conservation status not applicable (includes exotic species)

⁷ Distribution confidence is a reference to the confidence in the understanding of the range of the plant within Alberta. Plants with well documented distributions are listed as “reported and confirmed”.

⁸ Species that have been observed in the province are listed in the Alberta Conservation Information Management System (ACIMS), a database used to track and report on plant species in the province.

Scientific name	Authority	Common Name	Family	Provincial Status (S rank) ⁶	Global Status (G rank) ⁷	Origin	Distribution Confidence ⁸	Current Presence / Absence	Boreal Forest	Park land	Observed ? (ACIMS) ^c
							confirmed				
<i>Agroelymus bowdenii</i>	Boivin		Poaceae						X		
<i>Agroelymus hirtiflorus</i>	(A.S. Hitchc.) Bowden		Poaceae						X		
<i>Agroelymus turneri</i>	Lepage		Poaceae							X	
<i>Agrohordeum macounii</i>	(Vasey) Lepage	Macoun's wild rye	Poaceae						X	X	
<i>Agropyron albicans</i>	Scribn. & Smith	Awed northern wheat grass	Poaceae	S3	G5?	Native	Confident; reported and confirmed	Present		X	
<i>Agropyron dasystachyum</i>	(Hook.) Scribn.	Northern wheat grass	Poaceae							X	
<i>Agropyron smithii</i>	Rydb.	Western wheat grass	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Agropyron spicatum</i>	(Pursh) Scribn. & Smith	Bluebunch wheat grass	Poaceae						X	X	
<i>Agropyron trachycaulum</i>	(Link) Malte	Slender wheat grass	Poaceae						X	X	
<i>Agrostis scabra</i>	Willd.	Rough hair grass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Alisma gramineum</i>	Lej.	Narrow-leaved water-plantain	Alismataceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Alisma plantago-aquatica</i>	L.	Broad-leaved water-plantain	Alismataceae	SNA	G5	Unknown / Undetermined	Reported but false	Absent	X	X	
<i>Allium cernuum</i>	Roth	Nodding onion	Liliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Allium geveeri</i>	S. Wats.	Geyer's onion	Liliaceae	S2	G4G5	Native	Confident; reported and confirmed	Present		X	
<i>Allium schoenoprasum</i>	L.	Wild chives	Liliaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Allium textile</i>	Nels. & Macbr.	Prairie onion	Liliaceae	S5	G5?	Native	Confident; reported and confirmed	Present	X	X	
<i>Alnus crispa</i>	(Ait.) Pursh	Green alder	Betulaceae						X	X	
<i>Alnus tenuifolia</i>	Nutt.	River alder	Betulaceae						X	X	
<i>Alopecurus aequalis</i>	Sobol.	Short-awned foxtail	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Alopecurus geniculatus</i>	L.	Water foxtail	Poaceae	SNA	GNR	Unknown / Undetermined	Reported but false	Unknown / Undetermined		X	
<i>Alopecurus</i>	Scribn. &	Alpine foxtail	Poaceae							X	

Scientific name	Authority	Common Name	Family	Provincial Status (S rank) ⁶	Global Status (G rank) ⁷	Origin	Distribution Confidence ⁸	Current Presence / Absence	Boreal Forest	Park land	Observed ? (ACIMS) ^c
<i>occidentalis</i>	Tweedy										
<i>Amaranthus albus</i>	L.	Tumbleweed	Amaranthaceae	S3	GNR	Native	Confident; reported and confirmed	Present	X	X	
<i>Amaranthus californicus</i>	(Moq.) S. Wats.	Californian amaranth	Amaranthaceae	S1S2	G4	Native	Confident; reported and confirmed	Present		X	
<i>Amaranthus graecizans</i>	L.	Prostrate amaranth	Amaranthaceae	S3	G4G5	Native	Confident; reported and confirmed	Present		X	
<i>Ambrosia artemisiifolia</i>	L.	Common ragweed	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Amelanchier alnifolia</i>	Nutt.	Saskatoon	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Andromeda polifolia</i>	L.	Bog rosemary	Ericaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Androsace septentrionalis</i>	L.	Northern fairy candelabra	Primulaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Anemone canadensis</i>	L.	Canada anemone	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Anemone cylindrica</i>	A. Gray	Long-fruited anemone	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Anemone multifida</i>	Poir.	Cut-leaved anemone	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Anemone parviflora</i>	Michx.	Small wood anemone	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Anemone patens</i>	L.	Prairie crocus	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Anemone riparia</i>	Fern.	Tall anemone	Ranunculaceae	S3S4	G5T4T5	Native	Confident; reported and confirmed	Present	X	X	
<i>Angelica arguta</i>	Nutt.	White angelica	Apiaceae	S3S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Angelica dawsonii</i>	S. Wats.	Yellow angelica	Apiaceae	S3	G4	Native	Confident; reported and confirmed	Present		X	
<i>Angelica genuflexa</i>	Nutt.	Kneeling angelica	Apiaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Antennaria anaphaloides</i>	Rydb.	Tall everlasting	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Antennaria aprica</i>	Greene	Low everlasting	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Antennaria neglecta</i>	Greene	Broad-leaved everlasting	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Antennaria parvifolia</i>	Nutt.	Small-leaved everlasting	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Antennaria pulcherrima</i>	(Hook.) Greene	Showy everlasting	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Antennaria rosea</i>	Greene	Rosy everlasting	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	

Scientific name	Authority	Common Name	Family	Provincial Status (S rank) ⁶	Global Status (G rank) ⁷	Origin	Distribution Confidence ⁸	Current Presence / Absence	Boreal Forest	Park land	Observed ? (ACIMS) ^c
							confirmed				
<i>Apocynum androsaemifolium</i>	L.	Spreading dogbane	Apocynaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Apocynum cannabinum</i>	L.	Indian hemp	Apocynaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Apocynum x medium</i>	Greene	Intermediate dogbane	Apocynaceae	SNR	GNA	Unknown / Undetermined	Confident; reported and confirmed	Present	X	X	
<i>Aquilegia brevistyla</i>	Hook.	Blue columbine	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Arabis divaricarpa</i>	A. Nels.	Purple rock cress	Brassicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Arabis drummondii</i>	A. Gray	Drummond's rock cress	Brassicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Arabis glabra</i>	(L.) Bernh.	Tower mustard	Brassicaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Arabis hirsuta</i>	(L.) Scop.	Hairy rock cress	Brassicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Arabis holboellii</i>	Hornem.	Reflexed rock cress	Brassicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Arabis lyrata</i>	L.	Lyre-leaved rock cress	Brassicaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Arabis nuttallii</i>	Robinson	Nuttall's rock cress	Brassicaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Aralia nudicaulis</i>	L.	Wild sarsaparilla	Araliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Arceuthobium americanum</i>	Nutt.	Dwarf mistletoe	Viscaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Arctagrostis arundinacea</i>	(Trin.) Beal	Polar grass	Poaceae	S1	G5T5	Native	Confident; reported and confirmed	Present	X		
<i>Arctostaphylos rubra</i>	(Rehder & Wils.) Fern.	Alpine bearberry	Ericaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Arctostaphylos uva-ursi</i>	(L.) Spreng.	Common bearberry	Ericaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Arnica chamissonis</i>	Less.	Leafy arnica	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Arnica cordifolia</i>	Hook.	Heart-leaved arnica	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Arnica fulgens</i>	Pursh	Shining arnica	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Arnica lonchophylla</i>	Greene	Spear-leaved arnica	Asteraceae	S4	G4	Native	Confident; reported and confirmed	Present	X		
<i>Arnica sororia</i>	Greene	Twin arnica	Asteraceae	S3	G4G5	Native	Confident; reported and confirmed	Present		X	

Scientific name	Authority	Common Name	Family	Provincial Status (S rank) ⁶	Global Status (G rank) ⁷	Origin	Distribution Confidence ⁸	Current Presence / Absence	Boreal Forest	Park land	Observed ? (ACIMS) ^c
<i>Artemisia biennis</i>	Willd.	Biennial sagewort	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Artemisia campestris</i>	L.	Plains wormwood	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Artemisia cana</i>	Pursh	Silver sagebrush	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Artemisia dracunculus</i>	L.	Dragonwort	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Artemisia frigida</i>	Willd.	Pasture sagewort	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Artemisia longifolia</i>	Nutt.	Long-leaved sagewort	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Artemisia ludoviciana</i>	Nutt.	Prairie sagewort	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Artemisia tilesii</i>	Ledeb.	Herriot's sagewort	Asteraceae	S2	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Asclepias ovalifolia</i>	Dene.	Low milkweed	Asclepiadaceae	S3	G5?	Native	Confident; reported and confirmed	Present		X	
<i>Aster alpinus</i>	L.	Alpine aster	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Aster ascendens</i>	Lindl.	Western aster	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Aster borealis</i>	(T. & G.) Prov.	Marsh aster	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Aster brachyactis</i>	Blake	Rayless aster	Asteraceae	S4	G5T5	Native	Confident; reported and confirmed	Present	X	X	
<i>Aster campestris</i>	Nutt.	Meadow aster	Asteraceae	S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Aster ciliolatus</i>	Lindl.	Lindley's aster	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Aster conspicuus</i>	Lindl.	Showy aster	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Aster eatonii</i>	(A. Gray) Howell	Eaton's aster	Asteraceae	S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Aster ericoides</i>	L.	Tufted white prairie aster	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Aster falcatus</i>	Lindl.	Creeping white prairie aster	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Aster hesperius</i>	A. Gray	Western willow aster	Asteraceae	S5	G5T5?	Native	Confident; reported and confirmed	Present	X	X	
<i>Aster laevis</i>	L.	Smooth aster	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Aster modestus</i>	Lindl.	Large northern aster	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	

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<i>Aster pauciflorus</i>	Nutt.	Few-flowered aster	Asteraceae	S2	G4	Native	Confident; reported and confirmed	Present	X		
<i>Aster puniceus</i>	L.	Purple-stemmed aster	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Aster sibiricus</i>	L.	Arctic aster	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Aster umbellatus</i>	Mill.	Flat-topped white aster	Asteraceae	S2	G5	Native	Confident; reported and confirmed	Present		X	Yes
<i>Astragalus aboriginum</i>	Richards.	Indian milk vetch	Fabaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Astragalus alpinus</i>	L.	Alpine milk vetch	Fabaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Astragalus americanus</i>	(Hook.) M.E. Jones	American milk vetch	Fabaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Astragalus bisulcatus</i>	(Hook.) A. Gray	Two-grooved milk vetch	Fabaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Astragalus bodinii</i>	Sheldon	Bodin's milk vetch	Fabaceae	S1	G4	Native	Confident; reported and confirmed	Present	X	X	
<i>Astragalus canadensis</i>	L.	Canadian milk vetch	Fabaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Astragalus crassicarpus</i>	Nutt.	Ground-plum	Fabaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Astragalus dasyglottis</i>	Fisch. ex DC.	Purple milk vetch	Fabaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Astragalus drummondii</i>	Dougl. ex Hook.	Drummond's milk vetch	Fabaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Astragalus eucosmus</i>	Robins.	Milk vetch milk vetch	Fabaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Astragalus flexuosus</i>	Dougl. ex G. Don	Slender milk vetch	Fabaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Astragalus gilviflorus</i>	Sheldon	Cushion milk vetch	Fabaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Astragalus miser</i>	Dougl. ex Hook.	Timber milk vetch	Fabaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Astragalus missouriensis</i>	Nutt.	Missouri milk vetch	Fabaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Astragalus pectinatus</i>	Dougl. ex Hook.	Narrow-leaved milk vetch	Fabaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Astragalus robbinsii</i>	(Oakes) A. Gray	Robbins' milk vetch	Fabaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Astragalus striatus</i>	Nutt.	Ascending purple milk vetch	Fabaceae	S5	G5T5	Native	Confident; reported and confirmed	Present	X	X	
<i>Astragalus tenellus</i>	Pursh	Loose-flowered milk vetch	Fabaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	

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<i>Athyrium filix-femina</i>	(L.) Roth	Lady fern	Pteridaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Atriplex argentea</i>	Nutt.	Silver saltbush	Chenopodiaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Atriplex canescens</i>	(Pursh) Nutt.	Saltbush saltbush	Chenopodiaceae	SU	G5	Unknown / Undetermined	Reported but unconfirmed	Unknown / Undetermined		X	
<i>Atriplex nuttallii</i>	S. Wats.	Nuttall's atriplex	Chenopodiaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Atriplex powellii</i>	S. Wats	Powell's saltbush	Chenopodiaceae	S1	G4	Native	Confident; reported and confirmed	Present		X	
<i>Atriplex subspicata</i>	(Nutt.) Rydb.	Spearscale saltbush	Chenopodiaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Balsamorhiza sagittata</i>	(Pursh) Nutt.	Balsamroot	Asteraceae	S4	G4G5	Native	Confident; reported and confirmed	Present		X	
<i>Beckmannia syzigachne</i>	(Steud.) Fern.	Slough grass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Berberis repens</i>	Lindl.	Creeping mahonia	Berberidaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Besseyia wyomingensis</i>	(A. Nels.) Rydb.	Kittentails	Scrophulariaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Betula glandulosa</i>	Michx.	Bog birch	Betulaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Betula neoalaskana</i>	Sargent	Alaska birch	Betulaceae	S1S2	G4G5	Native	Confident; reported and confirmed	Present	X	X	Yes
<i>Betula occidentalis</i>	Hook.	Water birch	Betulaceae	S4	G4G5	Native	Confident; reported and confirmed	Present		X	
<i>Betula papyrifera</i>	Marsh.	White birch	Betulaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Betula pumila</i>	L.	Dwarf birch	Betulaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Bidens cernua</i>	L.	Nodding beggarticks	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Boschniakia rossica</i>	(Cham. & Schlecht.) Fedtsch.	Ground-cone	Orobanchaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Botrychium ascendens</i>	W.H. Wagner	Ascending grape fern	Ophioglossaceae	S2	G2G3	Native					Yes
<i>Botrychium campestre</i>	W.H. Wagner	Field grape fern	Ophioglossaceae	S1	G3G4	Native	Confident; reported and confirmed	Present		X	
<i>Botrychium dusenii</i>	(Christ) Alston	Grape fern	Ophioglossaceae	SNA	G3G4	Unknown / Undetermined	Reported but false	Unknown / Undetermined	X	X	

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<i>Botrychium lanceolatum</i>	(Gmel.) Aongstr	Lance-leaved grape fern	Ophioglossaceae	S2	G5	Native					Yes
<i>Botrychium lunaria</i>	(L.) Sw.	Moonwort	Ophioglossaceae	S4S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Botrychium minganense</i>	W.H. Wagner	Field grape fern; prairie moonwort	Ophioglossaceae	SU							Yes
<i>Botrychium multifidum</i>	(Gmel.) Rupr.	Leather grape fern	Ophioglossaceae	S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Botrychium pallidum</i>	W.H. Wagner	Pale moonwort	Ophioglossaceae	S3							Yes
<i>Botrychium pinnatum</i>	H. St. John	Northwestern grape fern	Ophioglossaceae	S1							Yes
<i>Botrychium simplex</i>	E. Hitchc.	Dwarf grape fern	Ophioglossaceae	S2	G5	Native	Confident; reported and confirmed	Present		X	Yes
<i>Botrychium virginianum</i>	(L.) Sw.	Virginia grape fern	Ophioglossaceae	S4S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Bouteloua gracilis</i>	(HBK.) Lag.	Blue grama	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Bromus altissimus</i>	Pursh	Canada brome	Poaceae							X	
<i>Bromus anomalus</i>	Rupr. ex Fourn.	Nodding brome	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Bromus ciliatus</i>	L.	Fringed brome	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Bromus inermis</i>	Leyss.	Awnless brome	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Bryum cyclophyllum</i>	Schwaegr	Bryum moss	Bryaceae	S2							Yes
<i>Bupleurum americanum</i>	Coult. & Rose	Thorough-wax	Apiaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Calamagrostis canadensis</i>	(Michx.) Beauv.	Bluejoint	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Calamagrostis inexpansa</i>	A. Gray	Northern reed grass	Poaceae	S5	G5T5	Native	Confident; reported and confirmed	Present	X	X	
<i>Calamagrostis montanensis</i>	Scribn.	Plains reed grass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Calamagrostis purpurascens</i>	R.Br.	Purple reed grass	Poaceae	S3	G5?	Native	Confident; reported and confirmed	Present	X		
<i>Calamagrostis stricta</i>	(Timm) Koeler	Narrow reed grass	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Calamagrostis stricta</i>	(Timm) Koeler	Narrow reed grass	Poaceae	S4	GNR	Native	Confident; reported and confirmed	Present	X	X	
<i>Calamovilfa longifolia</i>	(Hook.) Scribn.	Sand grass	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Calla palustris</i>	L.	Water arum	Acoraceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	Yes

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<i>Callitriche hermaphroditica</i>	L.	Northern water-starwort	Callitrichaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Callitriche verna</i>	L.	Vernal water-starwort	Callitrichaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Caltha natans</i>	Pallas	Floating marsh-marigold	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Caltha palustris</i>	L.	Marsh-marigold	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Calypto bulbosa</i>	(L.) Oakes	Venus'-slipper	Orchidaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Campanula rotundifolia</i>	L.	Harebell or bluebell	Campanulaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Campylium radicale</i>	P. Beauv	Campylium moss	Amblystegiaceae	S2							Yes
<i>Cardamine parviflora</i>	L.	Small bitter cress	Brassicaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Cardamine pensylvanica</i>	Muhl.	Bitter cress	Brassicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Cardamine pratensis</i>	L.	Meadow bitter cress	Brassicaceae	S1S2	G5	Native	Confident; reported and confirmed	Present	X		
<i>Carex adusta</i>	Boott	Browned sedge	Cyperaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Carex aenea</i>	Fern.	Silvery-flowered sedge	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Carex aquatilis</i>	Wahlenb.	Water sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex arcta</i>	Boott	Narrow sedge	Cyperaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Carex atherodes</i>	Spreng.	Awned sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex athrostachya</i>	Olney	Long-bracted sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Carex aurea</i>	Nutt.	Golden sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex backii</i>	Boott	Back's sedge	Cyperaceae	S2	G4	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex bebbii</i>	Olney ex Fern.	Bebb's sedge	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex brevior</i>	(Dewey) Mack.	Slender-beaked sedge	Cyperaceae	S4	G5?	Native	Confident; reported and confirmed	Present		X	
<i>Carex brunnescens</i>	(Pers.) Poir.	Brownish sedge	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex buxbaumii</i>	Wahlenb.	Brown sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		

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<i>Carex capillaris</i>	L.	Hair-like sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex chordorrhiza</i>	L.f.	Prostrate sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Carex concinna</i>	R.Br.	Beautiful sedge	Cyperaceae	S5	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex crawei</i>	Dewey	Crawe's sedge	Cyperaceae	S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Carex crawfordii</i>	Fern.	Crawford's sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex curta</i>	Good.	Short sedge	Cyperaceae						X	X	
<i>Carex deweyana</i>	Schwein.	Dewey's sedge	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex diandra</i>	Schrank	Two-stamened sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex disperma</i>	Dewey	Two-seeded sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex douglasii</i>	Boott	Douglas sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Carex eburnea</i>	Boott	Bristle-leaved sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex gynocrates</i>	Wormsk.	Northern bog sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex heleonastes</i>	Ehrh.	Hudson Bay sedge	Cyperaceae	S2	G4	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex hookerana</i>	Dewey	Hooker's sedge	Cyperaceae	S2	G4?	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex houghtoniana</i>	Torr.	Sand sedge	Cyperaceae	S2	G5	Native	Confident; reported and confirmed	Present	X		
<i>Carex interior</i>	Bailey	Inland sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex lacustris</i>	Willd.	Lakeshore sedge	Cyperaceae	S2	G5	Native	Confident; reported and confirmed	Present	X	X	Yes
<i>Carex lanuginosa</i>	Michx.	Woolly sedge	Cyperaceae							X	
<i>Carex lasiocarpa</i>	Ehrh.	Hairy-fruited sedge	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex leptalea</i>	Wahlenb.	Bristle-stalked sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Carex limosa</i>	L.	Mud sedge	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex livida</i>	(Wahlenb.) Willd.	Livid sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Carex loliacea</i>	L.	Rye-grass sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		

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<i>Carex maritima</i>	Gunn.	Seaside sedge	Cyperaceae							X	
<i>Carex microptera</i>	Mack.	Small-winged sedge	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex norvegica</i>	Retz.	Norway sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex obtusata</i>	Lilj.	Blunt sedge	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex oligosperma</i>	Michx.	Few-fruited sedge	Cyperaceae	S1S2	G5?	Native	Confident; reported and confirmed	Present	X		
<i>Carex pachystachya</i>	Cham.	Sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Carex parryana</i>	Dewey	Parry's sedge	Cyperaceae	S1S2	G4	Native	Confident; reported and confirmed	Present		X	
<i>Carex pauciflora</i>	Lightf.	Few-flowered sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex paupercula</i>	Michx.	Bog sedge	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex peckii</i>	Howe	Peck's sedge	Cyperaceae	S4	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex pensylvanica</i>	Lam.	Sun-loving sedge	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex praegracilis</i>	W. Boott	Graceful sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex prairea</i>	Dewey	Prairie sedge	Cyperaceae	S3	G5?	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex praticola</i>	Rydb.	Meadow sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex pseudocyperus</i>	L.	Cyperus-like sedge	Cyperaceae	S2					X	X	Yes
<i>Carex raymondii</i>	Calder	Raymond's sedge	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex retrorsa</i>	Schwein.	Turned sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex richardsonii</i>	R.Br.	Richardson's sedge	Cyperaceae	S3	G4	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex rossii</i>	Boott	Ross' sedge	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex rostrata</i>	Stokes	Beaked sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex sartwellii</i>	Dewey	Sartwell's sedge	Cyperaceae	S4	G4G5	Native	Confident; reported and confirmed	Present		X	
<i>Carex saxatilis</i>	L.	Rocky-ground sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Carex scirpoidea</i>	Michx.	Rush-like sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	

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							confirmed				
<i>Carex siccata</i>	Dewey	Hay sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex sprengelii</i>	Dewey	Sprengel's sedge	Cyperaceae	S4	G5?	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex stenophylla</i>	Wahl.	Low sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex stipata</i>	Muhl. ex Willd.	Awl-fruited sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex sychnocephala</i>	Carey	Long-beaked sedge	Cyperaceae	S3	G4	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex tenera</i>	Dewey	Broad-fruited sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex tenuiflora</i>	Wahlenb.	Thin-flowered sedge	Cyperaceae	S3S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex tinctoria</i>	Fern.	Tinged sedge	Cyperaceae	SU	G4G5	Unknown / Undetermined	Reported but doubtful	Unknown / Undetermined	X	X	
<i>Carex torreyi</i>	Tuckerm.	Torrey's sedge	Cyperaceae	S3	G4	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex trisperma</i>	Dewey	Three-seeded sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Carex umbellata</i>	Schk.	Umbellate sedge	Cyperaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Carex utriculata</i>	Boott	Small bottle	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex vaginata</i>	Tausch	Sheathed sedge	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex vulpinoidea</i>	Michx.	Fox sedge	Cyperaceae	S2	G5	Native					Yes
<i>Carex viridula</i>	Michx.	Green sedge	Cyperaceae	S3S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Carex xerantica</i>	Bailey	White-scaled sedge	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Castilleja cusickii</i>	Greenm.	Yellow paintbrush	Scrophulariaceae	S3	G4G5	Native	Confident; reported and confirmed	Present		X	
<i>Castilleja lutescens</i>	(Greenm.) Rydb.	Stiff yellow paintbrush	Scrophulariaceae	S3	G4G5	Native	Confident; reported and confirmed	Present		X	
<i>Castilleja miniata</i>	Dougl. ex Hook.	Common red paintbrush	Scrophulariaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Castilleja raupii</i>	Pennell	Purple paintbrush	Scrophulariaceae	S4	G5?	Native	Confident; reported and confirmed	Present	X		
<i>Catabrosa aquatica</i>	(L.) Beauv.	Brook grass	Poaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	

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<i>Cerastium arvense</i>	L.	Field mouse-ear chickweed	Caryophyllaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Cerastium nutans</i>	Raf.	Long-stalked mouse-ear chickweed	Caryophyllaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ceratophyllum demersum</i>	L.	Hornwort	Ceratophyllaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Chamaedaphne calyculata</i>	(L.) Moench	Leatherleaf	Ericaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Chamaerhodos erecta</i>	(L.) Bunge	Chamaerhodos	Rosaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Chenopodium atrovirens</i>	Rydb.	Goosefoot	Chenopodiaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Chenopodium berlandieri</i>	Moq.	Berlandier goosefoot	Chenopodiaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Chenopodium capitatum</i>	(L.) Aschers.	Strawberry blite	Chenopodiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Chenopodium gigantospermum</i>	Aellen	Maple-leaved goosefoot	Chenopodiaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Chenopodium pratericola</i>	Rydb.	Goosefoot	Chenopodiaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Chenopodium rubrum</i>	L.	Red goosefoot	Chenopodiaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Chenopodium salinum</i>	Standl.	Oak-leaved goosefoot	Chenopodiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Chimaphila umbellata</i>	(L.) Bart.	Prince's-pine	Pyrolaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Chrysosplenium iowense</i>	Rydb.	Golden saxifrage	Saxifragaceae	S3	G3	Native	Confident; reported and confirmed	Present	X	X	
<i>Chrysosplenium tetrandrum</i>	(Lund) T. Fries	Green saxifrage	Saxifragaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Cicuta bulbifera</i>	L.	Bulb-bearing water-hemlock	Apiaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Cicuta maculata</i>	L.	Water-hemlock	Apiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Cicuta virosa</i>	L.	Narrow-leaved water-hemlock	Apiaceae	S3	G4G5	Native	Confident; reported and confirmed	Present	X		
<i>Cinna latifolia</i>	(Trev.) Griesb.	Drooping wood-reed	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Circaea alpina</i>	L.	Small enchanter's nightshade	Onagraceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Cirsium drummondii</i>	T. & G.	Drummond's thistle	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Cirsium flodmanii</i>	(Rydb.) Arthur	Flodman's thistle	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	

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<i>Cirsium scariosum</i>	Nutt.	Thistle	Asteraceae	SU	G5	Unknown / Undetermined	Reported but unconfirmed	Unknown / Undetermined		X	
<i>Cirsium undulatum</i>	(Nutt.) Spreng.	Wavy-leaved thistle	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Clematis ligusticifolia</i>	Nutt.	Western clematis	Ranunculaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Clematis occidentalis</i>	(Hornem.) DC.	Purple clematis	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Cleome serrulata</i>	Pursh	Bee plant	Capparidaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Collomia linearis</i>	Nutt.	Narrow-leaved collomia	Polemoniaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Comandra umbellata</i>	(L.) Nutt.	Bastard toadflax	Santalaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Conardia compacta</i>	C. Müll	Compact conardia moss	Amblystegiaceae	S2							Yes
<i>Convolvulus sepium</i>	L.	Wild morning-glory	Cuscutaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Coptis trifolia</i>	(L.) Salisb.	Goldthread	Ranunculaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Corallorhiza maculata</i>	Raf.	Spotted coralroot	Orchidaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Corallorhiza striata</i>	Lindl.	Striped coralroot	Orchidaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Corallorhiza trifida</i>	Chatelain	Pale coralroot	Orchidaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Corispermum hyssopifolium</i>	L.	Bugseed	Chenopodiaceae	SNR	GU	Unknown / Undetermined	Confident; reported and confirmed	Present		X	
<i>Cornus canadensis</i>	L.	Bunchberry	Cornaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Cornus stolonifera</i>	Michx.	Red-osier dogwood	Cornaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Corydalis aurea</i>	Willd.	Golden corydalis	Fumariaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Corydalis sempervirens</i>	(L.) Pers.	Pink corydalis	Fumariaceae	S5	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Corylus cornuta</i>	Marsh.	Beaked hazelnut	Betulaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Crataegus chrysoarpa</i>	Moench	Round-leaved hawthorn	Rosaceae	S3	G5	Native				X	
<i>Crepis elegans</i>	Hook.	Youngia	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	

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<i>Crepis intermedia</i>	A. Gray	Intermediate hawk's-beard	Asteraceae	S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Crepis nana</i>	Richards.	Dwarf hawk's-beard	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Crepis occidentalis</i>	Nutt.	Small-flowered hawk's-beard	Asteraceae	S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Crepis runcinata</i>	(James) T. & G.	Scapose hawk's-beard	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Cryptantha fendleri</i>	(A. Gray) Greene	Fendler's cryptanthe	Boraginaceae	S4	G4	Native	Confident; reported and confirmed	Present		X	
<i>Cryptantha macounii</i>	(Eastw.) Payson	Macoun's cryptanthe	Boraginaceae	S2	G3G5	Native	Confident; reported and confirmed	Present		X	
<i>Cryptantha nubigena</i>	(Greene) Payson	Clustered oreocarya	Boraginaceae							X	
<i>Cuscuta gronovii</i>	Willd.	Common dodder	Cuscutaceae	S1	G5	Native	Confident; reported and confirmed	Present		X	
<i>Cynoglossum boreale</i>	Fern.	Wild comfrey	Boraginaceae							X	
<i>Cypripedium acaule</i>	Ait.	Stemless lady's-slipper	Orchidaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Cypripedium calceolus</i>	L.	Yellow lady's-slipper	Orchidaceae						X	X	
<i>Cypripedium passerinum</i>	Richards.	Sparrow's-egg lady's-slipper	Orchidaceae	S4	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Cystopteris bulbifera</i>	(L.) Bernh.	Bulblet bladder fern	Pteridaceae	SNA	G5	Unknown / Undetermined	Reported but false	Unknown / Undetermined	?	?	
<i>Cystopteris fragilis</i>	(L.) Bernh.	Fragile bladder fern	Pteridaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Cystopteris montana</i>	(Lam.) Desv.	Mountain bladder fern	Pteridaceae	S2	G5	Native	Confident; reported and confirmed	Present	X		
<i>Danthonia californica</i>	Boland	California oat grass	Poaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Danthonia parryi</i>	Scribn.	Parry oat grass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Danthonia spicata</i>	(L.) Beauv.	Poverty oat grass	Poaceae	S1S2	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Delphinium bicolor</i>	Nutt.	Low larkspur	Ranunculaceae	S4	G4G5	Native	Confident; reported and confirmed	Present		X	
<i>Delphinium glaucum</i>	S. Wats.	Tall larkspur	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Delphinium nuttallianum</i>	Pritz. ex Walp.	Nuttall's larkspur	Ranunculaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Deschampsia</i>	(L.) Beauv.	Tufted hair grass	Poaceae	S5	G5	Native	Confident; reported and	Present	X	X	

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<i>cespitosa</i>							confirmed				
<i>Descurainia pinnata</i>	(Walt.) Britt.	Green tansy mustard	Brassicaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Descurainia richardsonii</i>	(Sweet) O.E. Schulz	Grey tansy mustard	Brassicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Desmatodon heimii</i>	Hedw.	Desmatodon moss	Pottiaceae	S2							Yes
<i>Dicanthelium leibergii</i>	(Vasey) Freckman	Leiberg's millet	Poaceae							X	
<i>Dicanthelium oligosanthes</i>	(Schultes) Gould	Sand millet	Poaceae							X	
<i>Disporum trachycarpum</i>	(S. Wats.) B. & H.	Fairybells	Liliaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Distichlis stricta</i>	(Torr.) Rydb.	Salt grass	Poaceae	S4	GNR	Native	Confident; reported and confirmed	Present	X	X	
<i>Dodecatheon conjugens</i>	Greene	Mountain shooting star	Primulaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Dodecatheon pulchellum</i>	(Raf.) Merr.	Saline shooting star	Primulaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Draba aurea</i>	Vahl	Golden whitlow-grass	Brassicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Draba nemorosa</i>	L.	Annual whitlow-grass	Brassicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Draba reptans</i>	(Lam.) Fern.	Whitlow-grass	Brassicaceae	S1S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Dracocephalum parviflorum</i>	Nutt.	American dragonhead	Lamiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Drepanocladus crassicosatus</i>	Jans.	Drepanocladus moss	Amblystegiaceae	S2							Yes
<i>Drosera anglica</i>	Huds.	Oblong-leaved sundew	Droseraceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Drosera linearis</i>	Goldie	Slender-leaved sundew	Droseraceae	S2	G4	Native	Confident; reported and confirmed	Present	X		
<i>Drosera rotundifolia</i>	L.	Round-leaved sundew	Droseraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Dryopteris assimilis</i>	S. Walker	Broad spinulose shield fern	Pteridaceae	S3	GNRQ	Native	Confident; reported and confirmed	Present	X		
<i>Dryopteris carthusiana</i>	(Vill.) H.P. Fuchs	Narrow spinulose shield fern	Pteridaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	Yes
<i>Dryopteris cristata</i>	(L.) A. Gray	Crested shield fern	Pteridaceae	S1	G5	Native	Confident; reported and confirmed	Present		X	
<i>Elaeagnus commutata</i>	Bernh. ex Rydb.	Silverberry	Elaeagnaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Elatine triandra</i>	Schk.	Waterwort	Elatinaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		

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<i>Eleocharis acicularis</i>	(L.) R. & S.	Needle spike-rush	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Eleocharis ovata</i>	(Roth) R. & S.	Engelmann's spike-rush	Cyperaceae							X	
<i>Eleocharis palustris</i>	(L.) R. & S.	Creeping spike-rush	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Eleocharis quinqueflora</i>	(F.X. Hartm.) O. Schwarz	Few-flowered spike-rush	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Eleocharis tenuis</i>	(Willd.) Schultes	Slender spike-rush	Cyperaceae	SU	G5	Unknown / Undetermined	Reported but unconfirmed	Unknown / Undetermined	?	?	
<i>Ellisia nyctelea</i>	L.	Waterpod	Hydrophyllaceae	S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Elodea longivaginata</i>	St. John	Canadawaterweed	Hydrocharitaceae	SNA	G4G5	Unknown / Undetermined	Reported but false	Unknown / Undetermined		X	
<i>Elymus canadensis</i>	L.	Canada wild rye	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Elymus glaucus</i>	Buckl.	Smooth wild rye	Poaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Elymus innovatus</i>	Beal	Hairy wild rye	Poaceae						X	X	
<i>Elymus piperi</i>	Bowden	Giant wild rye	Poaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Empetrum nigrum</i>	L.	Crowberry	Empetraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Epilobium angustifolium</i>	L.	Common fireweed	Onagraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Epilobium ciliatum</i>	Raf.	Northern willowherb	Onagraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Epilobium halleanum</i>	Hauskn.	Willowherb	Onagraceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Epilobium lactiflorum</i>	Hauskn.	Willowherb	Onagraceae	S2	G5	Native	Confident; reported and confirmed	Present	X		
<i>Epilobium leptophyllum</i>	Raf.	Narrow-leaved willowherb	Onagraceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Epilobium palustre</i>	L.	Marsh willowherb	Onagraceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Epilobium paniculatum</i>	Nutt. ex T. & G.	Annual willowherb	Onagraceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Equisetum arvense</i>	L.	Common horsetail	Equisetaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Equisetum fluviatile</i>	L.	Swamp horsetail	Equisetaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	

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<i>Equisetum hyemale</i>	L.	Common scouring-rush	Equisetaceae	S5?	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Equisetum laevigatum</i>	A.Br.	Smooth scouring-rush	Equisetaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Equisetum palustre</i>	L.	Marsh horsetail	Equisetaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Equisetum pratense</i>	Ehrh.	Meadow horsetail	Equisetaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Equisetum scirpoides</i>	Michx.	Dwarf scouring-rush	Equisetaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Equisetum sylvaticum</i>	L.	Woodland horsetail	Equisetaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Equisetum variegatum</i>	Schleich.	Variiegated horsetail	Equisetaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Erigeron acris</i>	L.	Northern daisy fleabane	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Erigeron annuus</i>	(L.) Pers.	Whitetop	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Erigeron caespitosus</i>	Nutt.	Tufted fleabane	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Erigeron canadensis</i>	L.	Horseweed	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Erigeron compositus</i>	Pursh	Compound-leaved fleabane	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Erigeron elatus</i>	Hook.	Tall fleabane	Asteraceae	S4	G4?	Native	Confident; reported and confirmed	Present	X	X	
<i>Erigeron glabellus</i>	Nutt.	Smooth fleabane	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Erigeron hyssopifolius</i>	Michx.	Wild daisy fleabane	Asteraceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Erigeron lonchophyllus</i>	Hook.	Hirsute fleabane	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Erigeron philadelphicus</i>	L.	Philadelphia fleabane	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Erigeron pumilus</i>	Nutt.	Hairy fleabane	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Erigeron speciosus</i>	(Lindl.) DC.	Showy fleabane	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Eriogonum flavum</i>	Nutt.	Yellow umbrella-plant	Polygonaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Eriophorum brachyantherum</i>	Trautv.	Close-sheathed cotton grass	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Eriophorum chamissonis</i>	C.A. Mey.	Russett cotton grass	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	

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<i>Eriophorum gracile</i>	Koch	Slender cotton grass	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Eriophorum polystachion</i>	L.	Tall cotton grass	Cyperaceae	S4	G5T5	Native	Confident; reported and confirmed	Present	X	X	
<i>Eriophorum vaginatum</i>	L.	Sheathed cotton grass	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Eriophorum viridicarinatum</i>	(Engelm.) Fern.	Thin-leaved cotton grass	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Erysimum asperum</i>	(Nutt.) DC.	Prairie rocket	Brassicaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Erysimum cheiranthoides</i>	L.	Wormseed mustard	Brassicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Erysimum inconspicuum</i>	(S. Wats.) MacM.	Small-flowered rocket	Brassicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Erythronium grandiflorum</i>	Pursh	Glacier lily	Liliaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Eupatorium maculatum</i>	L.	Spotted Joe-pye weed	Asteraceae	S1S2	G5	Native	Confident; reported and confirmed	Present	X		
<i>Euphorbia glyptosperma</i>	Engelm.	Ridge-seeded spurge	Euphorbiaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Euphorbia serpyllifolia</i>	Pers.	Thyme-leaved spurge	Euphorbiaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Eurotia lanata</i>	(Pursh) Moq.	Winter-fat	Chenopodiaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Festuca altaica</i>	Trin. ex Ledeb.	Northern rough fescue	Poaceae	S2	G5	Native	Confident; reported and confirmed	Present	X		
<i>Festuca idahoensis</i>	Elmer	Bluebunch fescue	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Festuca occidentalis</i>	Hook.	Western fescue	Poaceae	S1	G5	Native	Confident; reported and confirmed	Present		X	
<i>Festuca rubra</i>	L.	Red fescue	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Festuca saximontana</i>	Rydb.	Rocky Mountain fescue	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Festuca scabrella</i>	Torr.	Rough fescue	Poaceae						X	X	
<i>Fragaria vesca</i>	L.	Woodland strawberry	Rosaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Fragaria virginiana</i>	Duchesne	Wild strawberry	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Gaillardia aristata</i>	Pursh	Gaillardia	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Galium boreale</i>	L.	Northern bedstraw	Rubiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Galium</i>	Wieg.	Labrador bedstraw	Rubiaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	

Scientific name	Authority	Common Name	Family	Provincial Status (S rank) ⁶	Global Status (G rank) ⁷	Origin	Distribution Confidence ⁸	Current Presence / Absence	Boreal Forest	Park land	Observed ? (ACIMS) ^c
<i>labradoricum</i>							confirmed				
<i>Galium trifidum</i>	L.	Small bedstraw	Rubiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Galium triflorum</i>	Michx.	Sweet-scented bedstraw	Rubiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Gaultheria hispidula</i>	(L.) Bigel	Creeping snowberry	Ericaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Gaura coccinea</i>	Pursh	Scarlet butterflyweed	Onagraceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Gentiana affinis</i>	Griseb.	Prairie gentian	Gentianaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Gentiana aquatica</i>	L.	Marsh gentian	Gentianaceae	SNA	G4	Unknown / Undetermined	Reported but false	Unknown / Undetermined		X	
<i>Gentianella amarella</i>	(L.) Borner	Felwort	Gentianaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Gentianella crinita</i>	(Froel.) G. Don	Fringed gentian	Gentianaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Gentianella detonsa</i>	(Rottb.) G. Don	Northern fringed gentian	Gentianaceae						X		
<i>Geocaulon lividum</i>	(Richards.) Fern.	Northern bastard toad-flax	Santalaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Geranium bicknellii</i>	Britt.	Bicknell's geranium	Geraniaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Geranium carolinianum</i>	L.	Carolina wild geranium	Geraniaceae	S1	G5	Native	Confident; reported and confirmed	Present	X	X	Yes
<i>Geranium richardsonii</i>	Fisch. & Trautv.	Wild white geranium	Geraniaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Geranium viscosissimum</i>	Fisch. & Mey.	Sticky purple geranium	Geraniaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Geum aleppicum</i>	Jacq.	Yellow avens	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Geum macrophyllum</i>	Willd.	Large-leaved yellow avens	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Geum rivale</i>	L.	Purple avens	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Geum triflorum</i>	Pursh	Three-flowered avens	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Glaux maritima</i>	L.	Sea milkwort	Primulaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Glyceria borealis</i>	(Nash) Batchelder	Northern manna grass	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Glyceria grandis</i>	S. Wats. ex A. Gray	Common tall manna grass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	

Scientific name	Authority	Common Name	Family	Provincial Status (S rank) ⁶	Global Status (G rank) ⁷	Origin	Distribution Confidence ⁸	Current Presence / Absence	Boreal Forest	Park land	Observed ? (ACIMS) ^c
<i>Glyceria pulchella</i>	(Nash) K. Schum.	Graceful manna grass	Poaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Glyceria striata</i>	(Lam.) A.S. Hitchc.	Fowl manna grass	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Glycyrrhiza lepidota</i>	(Nutt.) Pursh	Wild licorice	Fabaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Gnaphalium palustre</i>	Nutt.	Marsh cudweed	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Goodyera repens</i>	(L.) R.Br.	Lesser rattlesnake plantain	Orchidaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Gratiola neglecta</i>	Torr.	Clammy hedge-hyssop	Scrophulariaceae	S2S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Grindelia squarrosa</i>	(Pursh) Dunal	Gumweed	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Gutierrezia sarothrae</i>	(Pursh) Britt. & Rusby	Broomweed	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Gymnocarpium dryopteris</i>	(L.) Newm.	Oak fern	Pteridaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Habenaria dilatata</i>	(Pursh) Hook.	Tall white bog orchid	Orchidaceae						X	X	
<i>Habenaria hyperborea</i>	(L.) R.Br.	Northern green bog orchid	Orchidaceae						X	X	
<i>Habenaria obtusata</i>	(Pursh) Richards.	Blunt-leaved bog orchid	Orchidaceae						X	X	
<i>Habenaria orbiculata</i>	(Pursh) Torr.	Round-leaved bog orchid	Orchidaceae						X		
<i>Habenaria viridis</i>	(L.) R.Br.	Bracted bog orchid	Orchidaceae						X	X	
<i>Hackelia americana</i>	(A. Gray) Fern.	Nodding stickseed	Boraginaceae	S3	G5T5	Native	Confident; reported and confirmed	Present		X	
<i>Hackelia floribunda</i>	(Lehm.) I.M. Johnston	Large-flowered stickseed	Boraginaceae	S3	G5?	Native	Confident; reported and confirmed	Present		X	
<i>Hackelia jessicae</i>	(McGreg.) Brand	Jessica's stickseed	Boraginaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Halenia deflexa</i>	(Sm.) Griseb.	Spurred gentian	Gentianaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Haplopappus lanceolatus</i>	(Hook.) T. & G.	Lance-leaved ironplant	Asteraceae	S3	G4?	Native	Confident; reported and confirmed	Present		X	
<i>Haplopappus spinulosus</i>	(Pursh) DC.	Spiny ironplant	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Hedeoma hispidum</i>	Pursh	Pennyroyal	Lamiaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Hedysarum alpinum</i>	L.	Alpine hedysarum	Fabaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Hedysarum boreale</i>	Nutt.	Northern hedysarum	Fabaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	

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<i>Helenium autumnale</i>	L.	Sneezeweed	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Helianthus annuus</i>	L.	Common annual sunflower	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Helianthus couplandii</i>	Boivin	Coupland's annual sunflower	Asteraceae	S3	G4G5	Native	Confident; reported and confirmed	Present		X	
<i>Helianthus nuttallii</i>	T. & G.	Common tall sunflower	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Helianthus subrhomboides</i>	Rydb.	Rhombic-leaved sunflower	Asteraceae	S4	G5T5	Native	Confident; reported and confirmed	Present	X	X	
<i>Helictotrichon hookeri</i>	(Scribn.) Henr.	Hooker's oat grass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Heliotropium curassavicum</i>	L.	Spatulate-leaved heliotrope	Boraginaceae	S1	G5	Native	Confident; reported and confirmed	Present		X	
<i>Heracleum lanatum</i>	Michx. (Pursh)	Cow parnsip	Apiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Heterotheca villosa</i>	Shinners	Golden aster	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Heuchera cylindrica</i>	Dougl. ex Hook.	Sticky alumroot	Saxifragaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Heuchera parvifolia</i>	Nutt. ex T. & G.	Small-leaved alumroot	Saxifragaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Heuchera richardsonii</i>	R.Br.	Richardson's alumroot	Saxifragaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Hieracium umbellatum</i>	L.	Narrow-leaved hawkweed	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Hierochloa odorata</i>	(L.) Beauv.	Sweet grass	Poaceae						X	X	
<i>Hippophae rhamnoides</i>	L.	Sea buckthorn	Elaeagnaceae	SNA	G5	Exotic	Confident; reported and confirmed	Unknown / Undetermined	X	X	
<i>Hippuris vulgaris</i>	L.	Common mare's-tail	Hippuridaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Hordeum jubatum</i>	L.	Foxtail barley	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Houstonia longifolia</i>	Gaertn.	Long-leaved bluets	Rubiaceae						X	X	
<i>Hudsonia tomentosa</i>	Nutt.	Sand heather	Cistaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Hymenoxys acaulis</i>	(Pursh) Parker	Butte marigold	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Hymenoxys richardsonii</i>	(Hook.) Cockerell	Colorado rubber-plant	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Hypericum majus</i>	(Gray) Britt.	Large Canada St. John's-wort	Clusiaceae	S2	G5	Native	Confident; reported and confirmed	Present	X	X	

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<i>Impatiens capensis</i>	Meerb.	Spotted touch-me-not	Balsaminaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Impatiens noli-tangere</i>	L.	Western jewelweed	Balsaminaceae	S3	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Isoetes echinospora</i>	Dur.	Northern quillwort	Isoetaceae	S1	G5?	Native	Confident; reported and confirmed	Present	X		
<i>Iva axillaris</i>	Pursh	Povertyweed	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Iva xanthifolia</i>	Nutt.	False ragweed	Asteraceae	SNA	G5	Exotic	Confident; reported and confirmed	Unknown / Undetermined	X	X	
<i>Juncus albescens</i>	(Lange) Fern.	White rush	Juncaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Juncus alpinoarticulatus</i>	Chaix	Alpine rush	Juncaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Juncus balticus</i>	Willd.	Wire rush	Juncaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Juncus brevicaudatus</i>	(Engelm.) Fern.	Short-tail rush	Juncaceae	S2	G5	Native	Confident; reported and confirmed	Present	X		
<i>Juncus bufonius</i>	L.	Toad rush	Juncaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Juncus castaneus</i>	J.E. Smith	Chestnut rush	Juncaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Juncus confusus</i>	Coville	Few-flowered rush	Juncaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Juncus filiformis</i>	L.	Thread rush	Juncaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Juncus longistylis</i>	Torr.	Long-styled rush	Juncaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Juncus nodosus</i>	L.	Knotted rush	Juncaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Juncus tenuis</i>	Willd.	Slender rush	Juncaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Juncus tracyi</i>	Rydb.	Mud rush	Juncaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Juncus vaseyi</i>	Engelm.	Big-head rush	Juncaceae	S3	G5?	Native	Confident; reported and confirmed	Present	X	X	
<i>Juniperus communis</i>	L.	Ground juniper	Cupressaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Juniperus horizontalis</i>	Moench	Creeping juniper	Cupressaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Kalmia microphylla</i>	(Hook.) Keller	Mountain laurel	Ericaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Kalmia polifolia</i>	Wang.	Northern laurel	Ericaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		

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							confirmed				
<i>Koeleria macrantha</i>	(Ledeb.) J.A. Schultes	June grass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lactuca biennis</i>	(Moench) Fern.	Tall blue lettuce	Asteraceae	S2	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lactuca pulchella</i>	(Pursh) DC.	Common blue lettuce	Asteraceae	S5	G5T5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lappula occidentalis</i>	(S. Wats.) Greene	Western bluebur	Boraginaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Larix laricina</i>	(Du Roi) K. Koch	Tamarack	Pinaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Lathyrus ochroleucus</i>	Hook.	Cream-colored vetchling	Fabaceae	S5	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lathyrus venosus</i>	Muhl.	Purple peavine	Fabaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Ledum groenlandicum</i>	Oeder	Common Labrador tea	Ericaceae	S1S2	G5	Native	Confident; reported and confirmed	Present	X		Yes
<i>Ledum palustre</i>	L.	Northern Labrador tea	Ericaceae	S3S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lemna minor</i>	L.	Common duckweed	Lemnaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lemna trisulca</i>	L.	Ivy-leaved duckweed	Lemnaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lepidium bourgeauanum</i>	Thell.	Western pepper-grass	Brassicaceae	S4	G5T5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lepidium densiflorum</i>	Schrad.	Common pepper-grass	Brassicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lepidium ramosissimum</i>	A. Nels.	Branched pepper-grass	Brassicaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lesquerella arenosa</i>	(Richards.) Rydb.	Sand bladderpod	Brassicaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Liatis ligulistylis</i>	(A. Nels.) K. Schum.	Meadow blazingstar	Asteraceae	S3	G5?	Native	Confident; reported and confirmed	Present		X	
<i>Liatis punctata</i>	Hook.	Dotted blazingstar	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Lilium philadelphicum</i>	L.	Western wood lily	Liliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Limosella aquatica</i>	L.	Mudwort	Scrophulariaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Linnaea borealis</i>	L.	Twinflower	Caprifoliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Linum lewisii</i>	Pursh	Wild blue flax	Linaceae	S5	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Linum rigidum</i>	Pursh	Yellow flax	Linaceae	S4	G4G5	Native	Confident; reported and confirmed	Present		X	

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							confirmed				
<i>Listera borealis</i>	Morong	Northern twayblade	Orchidaceae	S4	G4	Native	Confident; reported and confirmed	Present	X	X	
<i>Lithospermum incisum</i>	Lehm.	Narrow-leaved puccoon	Boraginaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Lithospermum ruderale</i>	Lehm.	Woolly gromwell	Boraginaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Lobelia dortmanna</i>	L.	Water lobelia	Campanulaceae	S1	G4G5	Native	Confident; reported and confirmed	Present	X		
<i>Lobelia kalmii</i>	L.	Kalm's lobelia	Campanulaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lomatium dissectum</i>	(Nutt.) Mathias & Constance	Mountain wild parsnip	Apiaceae	S3	G4	Native	Confident; reported and confirmed	Present		X	
<i>Lomatium foeniculaceum</i>	(Nutt.) Coult. & Rose	Hairy-fruited wild parsley	Apiaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lomatium macrocarpum</i>	(Hook. & Arn.) Coult. & Rose	Long-fruited wild parsley	Apiaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Lomatium triternatum</i>	(Pursh) Coult. & Rose	Western wild parsley	Apiaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Lomatogonium rotatum</i>	(L.) Fries	Marsh felwort	Gentianaceae	S2S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lonicera caerulea</i>	L.	Fly honeysuckle	Caprifoliaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lonicera dioica</i>	L.	Twining honeysuckle	Caprifoliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lonicera involucrata</i>	(Richards.) Banks	Bracted honeysuckle	Caprifoliaceae	S5	G4G5T4T5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lupinus argenteus</i>	Pursh	Silvery perennial lupine	Fabaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Lupinus sericeus</i>	Pursh	Silky perennial lupine	Fabaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Luzula acuminata</i>	Raf.	Wood-rush	Juncaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Luzula multiflora</i>	(Retz.) Lej.	Field wood-rush	Juncaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Luzula parviflora</i>	(Ehrh.) Desv.	Small-flowered wood-rush	Juncaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Luzula rufescens</i>	Fisch. & Mey.	Reddish wood-rush	Juncaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Lycaena hyllus</i>				S2							Yes
<i>Lycopus americanus</i>	Muhl.	American water-horehound	Lamiaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	

Scientific name	Authority	Common Name	Family	Provincial Status (S rank) ⁶	Global Status (G rank) ⁷	Origin	Distribution Confidence ⁸	Current Presence / Absence	Boreal Forest	Park land	Observed ? (ACIMS) ^c
<i>Lycopus asper</i>	Greene	Western water-horehound	Lamiaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Lycopus uniflorus</i>	Michx.	Northern water-horehound	Lamiaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Lygodesmia juncea</i>	(Pursh) D. Don	Skeletonweed	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Lygodesmia rostrata</i>	A. Gray	Annual skeletonweed	Asteraceae							X	
<i>Lysimachia ciliata</i>	L.	Fringed loosestrife	Primulaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Lysimachia lanceolata</i>	Walt.	Lance-leaved loosestrife	Primulaceae	SNA	G5	Unknown / Undetermined	Reported but false	Unknown / Undetermined		X	
<i>Lysimachia thyrsoiflora</i>	L.	Tufted loosestrife	Primulaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Machaeranthera canescens</i>	(Pursh) A. Gray	Hoary aster	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Machaeranthera tanacetifolia</i>	(HBK) Nees	Tansy aster	Asteraceae	SX	G5	Native	Confident; reported and confirmed	Absent		X	
<i>Madia glomerata</i>	Hook.	Tarweed	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Maianthemum canadense</i>	Desf.	Wild lily-of-the-valley	Liliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Malaxis monophylla</i>	(L.) Sw.	White adder's-mouth	Orchidaceae	S2	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Malaxis paludosa</i>	(L.) Sw.	Bog adder's-mouth	Orchidaceae	S1	G4	Native	Confident; reported and confirmed	Present	X		
<i>Matteuccia struthiopteris</i>	(L.) Todaro	Ostrich fern	Pteridaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Melampyrum lineare</i>	Desr.	Cow-wheat	Scrophulariaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Mentha arvensis</i>	L.	Wild mint	Lamiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Mentzelia decapetala</i>	(Sims) Urban & Gilg	Sand-lily	Loasaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Menyanthes trifoliata</i>	L.	Buck-bean	Menyanthaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Mertensia lanceolata</i>	(Pursh) A.DC.	Lance-leaved lungwort	Boraginaceae	S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Mertensia paniculata</i>	(Ait.) G. Don.	Tall lungwort	Boraginaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Mimulus glabratus</i>	HBK.	Smooth monkeyflower	Scrophulariaceae	S1	G5	Native	Confident; reported and confirmed	Present		X	
<i>Mimulus guttatus</i>	DC.	Yellow monkeyflower	Scrophulariaceae	SU	G5	Unknown /	Reported but	Unknown		X	

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			eac			Undetermined	unconfirmed	n / Undetermined			
<i>Minuartia dawsonensis</i>	(Britt.) House	Dawson sandwort	Caryophyllaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Mirabilis hirsuta</i>	(Pursh) MacM.	Hairy umbrellawort	Nyctaginaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Mitella nuda</i>	L.	Bishop's-cap	Saxifragaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Moehringia lateriflora</i>	(L.) Fenzl.	Blunt-leaved sandwort	Caryophyllaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Monarda fistulosa</i>	L.	Wild bergamot	Lamiaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Moneses uniflora</i>	(L.) A. Gray	One-flowered wintergreen	Pyrolaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Monolepis nuttalliana</i>	(Schultes) Greene	Spear-leaved goosefoot	Chenopodiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Monotropa hypopitys</i>	L.	Pinesap	Monotropaceae							X	
<i>Monotropa uniflora</i>	L.	Indian-pipe	Monotropaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Muhlenbergia asperifolia</i>	(Nees & Mey.) Parodi	Scratch grass	Poaceae	S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Muhlenbergia cuspidata</i>	(Torr.) Rydb.	Plains muhly	Poaceae	S4	G4	Native	Confident; reported and confirmed	Present		X	
<i>Muhlenbergia glomerata</i>	(Willd.) Trin.	Bog muhly	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Muhlenbergia racemosa</i>	(Michx.) BSP.	Marsh muhly	Poaceae	S1	G5	Native	Confident; reported and confirmed	Present		X	
<i>Muhlenbergia richardsonis</i>	(Trin.) Rydb.	Mat muhly	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Munroa squarrosa</i>	(Nutt.) Torr.	False buffalo grass	Poaceae	S1	G5	Native	Confident; reported and confirmed	Present		X	
<i>Musineon divaricatum</i>	(Pursh) Nutt.	Leafy musineon	Apiaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Mycocalicium calicioides</i>	Nadv.	Mycocalicium calicioides	Mycocaliciaceae	S1							Yes
<i>Myrica gale</i>	L.	Sweet gale	Myricaceae	S3S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Myriophyllum exalbescens</i>	Fern.	Spiked water-milfoil	Haloragaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Myriophyllum verticillatum</i>	L.	Water-milfoil	Haloragaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Najas flexilis</i>	(Willd.) Rostk. &	Slender naiad	Najadaceae	S2	G5	Native	Confident; reported and confirmed	Present	X	X	Yes

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	Schmidt										
<i>Navarretia minima</i>	Nutt.	Pin-cushion plant	Polemoniaceae	S3	G4T4?	Native	Confident; reported and confirmed	Present		X	
<i>Nuphar variegatum</i>	Engelm.	Yellow pond-lily	Nymphaeaceae						X	X	
<i>Nymphaea tetragona</i>	Georgi	White water-lily	Nymphaeaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Oenothera biennis</i>	L.	Yellow evening-primrose	Onagraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Oenothera brevisflora</i>	T. & G.	Taraxia	Onagraceae							X	
<i>Oenothera flava</i>	(A. Nels.) Garrett	Low yellow evening-primrose	Onagraceae	S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Oenothera nuttallii</i>	Sweet	White evening-primrose	Onagraceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Oenothera serrulata</i>	Nutt.	Shrubby evening-primrose	Onagraceae							X	
<i>Onosmodium molle</i>	Michx.	Western false gromwell	Boraginaceae	S2	G4G5	Native	Confident; reported and confirmed	Present		X	
<i>Oplopanax horridum</i>	(Sm.) Miq.	Devil's-club	Araliaceae						X		
<i>Opuntia fragilis</i>	(Nutt.) Haw.	Brittle prickly-pear	Cactaceae	S4	G4G5	Native	Confident; reported and confirmed	Present	X		
<i>Orchis rotundifolia</i>	Banks ex Pursh	Round-leaved orchid	Orchidaceae						X	X	
<i>Orobanche fasciculata</i>	Nutt.	Clustered broom-rape	Orobanchaceae	S3	G4	Native	Confident; reported and confirmed	Present		X	
<i>Orobanche ludoviciana</i>	Nutt.	Louisiana broom-rape	Orobanchaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Orthilia secunda</i>	(L.) House	One-sided wintergreen	Pyrolaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Orthocarpus luteus</i>	Nutt.	Owl-clover	Scrophulariaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Oryzopsis asperifolia</i>	Michx.	White-grained mountain rice grass	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Oryzopsis canadensis</i>	(Poir.) Torr.	Canadian rice grass	Poaceae	S1	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Oryzopsis hymenoides</i>	(R. & S.) Ricker	Indian rice grass	Poaceae	S3S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Oryzopsis micrantha</i>	(Trin. & Rupr.) Thurber	Little-seed rice grass	Poaceae	S2	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Oryzopsis pungens</i>	(Torr.) A.S. Hitchc.	Northern rice grass	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	

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<i>Osmorhiza depauperata</i>	Philippi	Spreading sweet cicely	Apiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Osmorhiza longistylis</i>	(Torr.) DC.	Smooth sweet cicely	Apiaceae	S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Osmorhiza occidentalis</i>	(Nutt.) Torr.	Western sweet cicely	Apiaceae	S3	G4G5	Native	Confident; reported and confirmed	Present		X	
<i>Oxycoccus microcarpus</i>	Turez.	Small bog cranberry	Ericaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Oxycoccus quadripetalus</i>	Gilib.	Small bog cranberry	Ericaceae	S5	GNR	Native	Confident; reported and confirmed	Present	X	X	
<i>Oxytropis deflexa</i>	(Pall.) DC.	Reflexed locoweed	Fabaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Oxytropis monticola</i>	A. Gray	Late yellow locoweed	Fabaceae	S5	G5?	Native	Confident; reported and confirmed	Present	X	X	
<i>Oxytropis sericea</i>	Nutt.	Early yellow locoweed	Fabaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Oxytropis splendens</i>	Dougl. ex Hook.	Showy locoweed	Fabaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Oxytropis viscida</i>	Nutt.	Viscid locoweed	Fabaceae							X	
<i>Parnassia palustris</i>	L.	Northern grass-of-parnassus	Saxifragaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Paronychia sessiliflora</i>	Nutt.	Low whitlow-wort	Caryophyllaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Pedicularis groenlandica</i>	Retz.	Elephant's-head	Scrophulariaceae	S5	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Pedicularis labradorica</i>	Wirsing	Labrador lousewort	Scrophulariaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Pedicularis parviflora</i>	J.E. Smith	Swamp lousewort	Scrophulariaceae	S3	G4	Native	Confident; reported and confirmed	Present	X		
<i>Pedicularis sudetica</i>	Willd.	Purple rattle	Scrophulariaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Penstemon albidus</i>	Nutt.	White beardtongue	Scrophulariaceae	S3S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Penstemon confertus</i>	Dougl.	Yellow beardtongue	Scrophulariaceae	S4	G4	Native	Confident; reported and confirmed	Present		X	
<i>Penstemon eriantherus</i>	Pursh	Crested beardtongue	Scrophulariaceae	S3	G4	Native	Confident; reported and confirmed	Present		X	
<i>Penstemon gracilis</i>	Nutt.	Lilac-flowered beardtongue	Scrophulariaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Penstemon lyallii</i>	A. Gray	Large-flowered beardtongue	Scrophulariaceae	S3	G4	Native	Confident; reported and confirmed	Present		X	
<i>Penstemon nitidus</i>	Dougl. ex Benth.	Smooth blue beardtongue	Scrophulariaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Penstemon</i>	Dougl. ex	Slender blue	Scrophulariaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	

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<i>procerus</i>	Grah.	beardtongue	eae				confirmed				
<i>Perideridia gairdneri</i>	(Hook. & Arn.) Mathias	Squawroot	Apiaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Petalostemon candidum</i>	(Willd.) Michx.	White prairie-clover	Fabaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Petalostemon purpureum</i>	(Vent.) Rydb.	Purple prairie-clover	Fabaceae	S5	G5T5	Native	Confident; reported and confirmed	Present		X	
<i>Petasites palmatus</i>	(Ait.) A. Gray	Palmate-leaved coltsfoot	Asteraceae						X	X	
<i>Petasites sagittatus</i>	(Pursh) A. Gray	Arrow-leaved coltsfoot	Asteraceae						X	X	
<i>Petasites vitifolius</i>	Greene	Vine-leaved coltsfoot	Asteraceae						X	X	
<i>Phacelia franklinii</i>	(R.Br.) A. Gray	Franklin's scorpionweed	Hydrophyllaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Phacelia hastata</i>	Dougl. ex Lehm.	Silver-leaved scorpionweed	Hydrophyllaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Phalaris arundinacea</i>	L.	Reed canary grass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Phascum cuspidatum</i>	Hedw.	Toothed phascum moss	Pottiaceae	S2							Yes
<i>Phlox alyssifolia</i>	Greene	Blue phlox	Polemoniaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Phlox hoodii</i>	Richards.	Moss phlox	Polemoniaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Phragmites australis</i>	(Cav.) Trin. ex Steud.	Reed	Poaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Physaria didymocarpa</i>	(Hook.) A. Gray	Double bladderpod	Brassicaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Physcomitrium pyriforme</i>				S1							Yes
<i>Physostegia parviflora</i>	Nutt.	False dragonhead	Lamiaceae	SU	G4G5	Unknown / Undetermined	Reported but unconfirmed	Unknown / Undetermined	X	X	
<i>Picea glauca</i>	(Moench) Voss	White spruce	Pinaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Picea mariana</i>	(Mill.) BSP.	Black spruce	Pinaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Pinguicula villosa</i>	L.	Small butterwort	Lentibulariaceae	S1	G4	Native	Confident; reported and confirmed	Present	X		
<i>Pinguicula vulgaris</i>	L.	Common butterwort	Lentibulariaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Pinus banksiana</i>	Lamb.	Jack pine	Pinaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		

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<i>Pinus contorta</i>	Loudon	Lodgepole pine	Pinaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Pinus contorta x banksiana</i>		Lodgepole x jack pine	Pinaceae						X		
<i>Plagiobothrys scouleri</i>	(H. & A.) Johnston	Scouler's allocarya	Boraginaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Plantago canescens</i>	Adams	Western ribgrass	Plantaginaceae	S2	G4G5	Native	Confident; reported and confirmed	Present	X		
<i>Plantago elongata</i>	Pursh	Linear-leaved plantain	Plantaginaceae	S3	G4	Native	Confident; reported and confirmed	Present		X	
<i>Plantago eriopoda</i>	Torr.	Saline plantain	Plantaginaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Plantago maritima</i>	L.	Sea-side plantain	Plantaginaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Poa arida</i>	Vasey	Plains bluegrass	Poaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Poa canbyi</i>	(Scribn.) Piper	Canby bluegrass	Poaceae	S5	G4G5	Native	Confident; reported and confirmed	Present		X	
<i>Poa cusickii</i>	Vasey	Early bluegrass	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Poa glauca</i>	Vahl	Timberline bluegrass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Poa interior</i>	Rydb.	Inland bluegrass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Poa juncifolia</i>	Scribn.	Alkali bluegrass	Poaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Poa palustris</i>	L.	Fowl bluegrass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Poa pratensis</i>	L.	Kentucky bluegrass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Poa sandbergii</i>	Vasey	Sandberg bluegrass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Polanisia dodecandra</i>	(L.) DC.	Clammyweed	Capparidaceae	S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Polemonium acutiflorum</i>	Willd.	Tall Jacob's-ladder	Polemoniaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Polygala paucifolia</i>	Willd.	Fringed milkwort	Polygalaceae	S1	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Polygala senega</i>	L.	Seneca snakeroot	Polygalaceae	S3	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Polygonum amphibium</i>	L.	Water smartweed	Polygonaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Polygonum coccineum</i>	Muhl.	Water smartweed	Polygonaceae	S4	G5T5	Native	Confident; reported and confirmed	Present	X	X	

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<i>Polygonum douglasii</i>	Greene	Douglas knotweed	Polygonaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Polygonum erectum</i>	L.	Striate knotweed	Polygonaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Polygonum lapathifolium</i>	L.	Pale persicaria	Polygonaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Polygonum ramosissimum</i>	Michx.	Bushy knotweed	Polygonaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Polygonum viviparum</i>	L.	Alpine bistort	Polygonaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Polygonum watsonii</i>	Small	Watson's knotweed	Polygonaceae							X	
<i>Populus balsamifera</i>	L.	Balsam poplar	Salicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Populus deltoides</i>	Marsh.	Plains cottonwood	Salicaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Populus tremuloides</i>	Michx.	Aspen	Salicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potamogeton alpinus</i>	Balbis	Alpine pondweed	Potamogetonaceae	S3S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Potamogeton filiformis</i>	Pers.	Thread-leaved pondweed	Potamogetonaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potamogeton foliosus</i>	Raf.	Leafy pondweed	Potamogetonaceae	S2	G5	Native	Confident; reported and confirmed	Present	X		Yes
<i>Potamogeton friesii</i>	Rupr.	Fries' pondweed	Potamogetonaceae	S4	G4	Native	Confident; reported and confirmed	Present	X	X	
<i>Potamogeton gramineus</i>	L.	Various-leaved pondweed	Potamogetonaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potamogeton obtusifolius</i>	Mert. & Koch	Blunt-leaved pondweed	Potamogetonaceae	S2	G5	Native	Confident; reported and confirmed	Present	X		Yes
<i>Potamogeton pectinatus</i>	L.	Sago pondweed	Potamogetonaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potamogeton praelongus</i>	Wulf.	White-stem pondweed	Potamogetonaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potamogeton pusillus</i>	L.	Small-leaf pondweed	Potamogetonaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potamogeton richardsonii</i>	(Benn.) Rydb.	Clasping-leaf pondweed	Potamogetonaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potamogeton robbinsii</i>	Oakes	Robbins' pondweed	Potamogetonaceae	S1	G5	Native	Confident; reported and confirmed	Present		X	
<i>Potamogeton strictifolius</i>	Benn.	Linear-leaved pondweed	Potamogetonaceae	S2	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potamogeton vaginatus</i>	Turcz.	Large-sheath pondweed	Potamogetonaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	

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<i>Potamogeton zosteriformis</i>	Fern.	Flat-stemmed pondweed	Potamogetonaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potentilla anserina</i>	L.	Silverweed	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potentilla arguta</i>	Pursh	White cinquefoil	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potentilla bipinnatifida</i>	Dougl. ex Hook.	Plains cinquefoil	Rosaceae	S4	G5?	Native	Confident; reported and confirmed	Present	X	X	
<i>Potentilla concinna</i>	Richards.	Early cinquefoil	Rosaceae	S5	G5?	Native	Confident; reported and confirmed	Present		X	
<i>Potentilla finitima</i>	Kohli & Parker	Sandhills cinquefoil	Rosaceae	S1	G2G4Q	Native	Confident; reported and confirmed	Present		X	
<i>Potentilla fruticosa</i>	L.	Shrubby cinquefoil	Rosaceae	S5	G5T5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potentilla gracilis</i>	Dougl. ex Hook.	Graceful cinquefoil	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potentilla hippiana</i>	Lehm.	Woolly cinquefoil	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Potentilla norvegica</i>	L.	Rough cinquefoil	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potentilla palustris</i>	(L.) Scop.	Marsh cinquefoil	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potentilla pensylvanica</i>	L.	Prairie cinquefoil	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potentilla plattensis</i>	Nutt.	Low cinquefoil	Rosaceae	S1S2	G4	Native	Confident; reported and confirmed	Present		X	
<i>Potentilla rivalis</i>	Nutt.	Brook cinquefoil	Rosaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Potentilla tridentata</i>	Ait.	Three-toothed cinquefoil	Rosaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Prenanthes racemosa</i>	Michx.	White lettuce	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Prenanthes sagittata</i>	(A. Gray) A. Nels.	Purple rattlesnakeroot	Asteraceae	S2	G3G4	Native	Confident; reported and confirmed	Present		X	
<i>Primula incana</i>	M.E. Jones	Mealy primrose	Primulaceae	S5	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Primula stricta</i>	Hornem.	Erect primrose	Primulaceae	S1	G4	Native	Confident; reported and confirmed	Present	X		
<i>Prunella vulgaris</i>	L.	Heal-all	Lamiaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Prunus pensylvanica</i>	L.f.	Pin cherry	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Prunus virginiana</i>	L.	Choke cherry	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	

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<i>Psoralea argophylla</i>	Pursh	Silverleaf psoralea	Fabaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Psoralea esculenta</i>	Pursh	Indian breadroot	Fabaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Puccinellia cusickii</i>	Waetherby	Cusick's salt-meadow grass	Poaceae	SU	G3G4Q	Unknown / Undetermined	Reported but unconfirmed	Unknown / Undetermined		X	
<i>Puccinellia distans</i>	(L.) Parl.	Slender salt-meadow grass	Poaceae	SNA	G5	Exotic	Confident; reported and confirmed	Unknown / Undetermined	X		
<i>Puccinellia hauptiana</i>	(Krecz.) Kitagawa	Haupt's salt-meadow grass	Poaceae						X		
<i>Puccinellia nuttalliana</i>	(Schult.) A.S. Hitchc.	Nuttall's salt-meadow grass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Pyrola asarifolia</i>	Michx.	Common pink wintergreen	Pyrolaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Pyrola chlorantha</i>	Sw.	Greenish-flowered wintergreen	Pyrolaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Pyrola elliptica</i>	Nutt.	White wintergreen	Pyrolaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Pyrola grandiflora</i>	Radius	Arctic wintergreen	Pyrolaceae	S2	G5	Native	Confident; reported and confirmed	Present	X		
<i>Pyrola minor</i>	L.	Lesser wintergreen	Pyrolaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Ranunculus abortivus</i>	L.	Small-flowered buttercup	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ranunculus aquatilis</i>	L.	Large-leaved white water crowfoot	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Ranunculus cardiophyllus</i>	Hook.	Heart-leaved buttercup	Ranunculaceae	S5	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ranunculus circinatus</i>	Sibth.	Firm white water crowfoot	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ranunculus cymbalaria</i>	Pursh	Seaside buttercup	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ranunculus gmelinii</i>	DC.	Yellow water crowfoot	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ranunculus hyperboreus</i>	Rottb.	Boreal buttercup	Ranunculaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Ranunculus lapponicus</i>	L.	Lapland buttercup	Ranunculaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ranunculus macounii</i>	Britt.	Macoun's buttercup	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ranunculus</i>	J.E. Smith	Northern buttercup	Ranunculaceae	S4	G5	Native	Confident; reported and	Present		X	

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<i>pedatifidus</i>			e				confirmed				
<i>Ranunculus pensylvanicus</i>	L.f.	Bristly buttercup	Ranunculaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ranunculus reptans</i>	L.	Creeping spearwort	Ranunculaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Ranunculus rhomboideus</i>	Goldie	Prairie buttercup	Ranunculaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ranunculus sceleratus</i>	L.	Celery-leaved buttercup	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ratibida columnifera</i>	(Nutt.) Wooton & Standl.	Prairie coneflower	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Rhamnus alnifolia</i>	L'Her.	Alder-leaved buckthorn	Rhamnaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Rhinanthus minor</i>	L.	Yellow rattle	Scrophulariaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Rhizomnium andrewsianum</i>	Steere	Andrew's rhizomnium moss	Mniaceae	S1							Yes
<i>Rhus radicans</i>	L.	Poison ivy	Anacardiaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Rhynchospora capillacea</i>	Torr.	Slender beak-rush	Cyperaceae	S1	G4	Native	Confident; reported and confirmed	Present	X		
<i>Ribes americanum</i>	Mill.	Wild black currant	Grossulariaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ribes aureum</i>	Pursh	Golden currant	Grossulariaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Ribes glandulosum</i>	Grauer	Skunk currant	Grossulariaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ribes hirtellum</i>	Michx.	Wild gooseberry	Grossulariaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ribes hudsonianum</i>	Richards.	Northern black currant	Grossulariaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ribes lacustre</i>	(Pers.) Poir.	Bristly black currant	Grossulariaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ribes oxycanthoides</i>	L.	Northern gooseberry	Grossulariaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ribes triste</i>	Pall.	Wild red currant	Grossulariaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Ricciocarpus natans</i>	L.	Purple-fingered riccia	Ricciaceae	S2							Yes
<i>Rorippa curvipes</i>	Greene	Yellow cress	Brassicaceae	SU	G5	Unknown / Undetermined	Reported but unconfirmed	Unknown / Undetermined		X	

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<i>Rorippa palustris</i>	(L.) Besser	Marsh yellow cress	Brassicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Rorippa sinuata</i>	(Nutt.) A.S. Hitchc.	Spreading yellow cress	Brassicaceae	S1	G5	Native	Confident; reported and confirmed	Present		X	
<i>Rorippa tenerrima</i>	Greene	Slender cress	Brassicaceae	S1S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Rosa acicularis</i>	Lindl.	Prickly rose	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Rosa arkansana</i>	Porter	Prairie rose	Rosaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Rosa woodsii</i>	Lindl.	Common wild rose	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Rubus arcticus</i>	L.	Dwarf raspberry	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Rubus chamaemorus</i>	L.	Cloudberry	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Rubus idaeus</i>	L.	Wild red raspberry	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Rubus parviflorus</i>	Nutt.	Thimbleberry	Rosaceae	S3S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Rubus pubescens</i>	Raf.	Dewberry	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Rubus x paracaulis</i>	Bailey	Hybrid dwarf raspberry	Rosaceae	S1	GNA	Native	Confident; reported and confirmed	Present	X	X	Yes
<i>Rumex britannica</i>	L.	Water dock	Polygonaceae						X	X	
<i>Rumex maritimus</i>	L.	Golden dock	Polygonaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Rumex occidentalis</i>	S. Wats.	Western dock	Polygonaceae	S5	GNR	Native	Confident; reported and confirmed	Present	X	X	
<i>Rumex triangulivalvis</i>	(Dans.) Rech.f.	Narrow-leaved dock	Polygonaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Rumex venosus</i>	Pursh	Wild begonia	Polygonaceae	S3	G5?	Native	Confident; reported and confirmed	Present		X	
<i>Ruppia cirrhosa</i>	Grande	Widgeon-grass	Ruppiaceae	S1							Yes
<i>Ruppia maritima</i>	L.	Widgeon-grass	Ruppiaceae							X	
<i>Sagittaria cuneata</i>	Sheld.	Arum-leaved arrowhead	Alismataceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Sagittaria latifolia</i>	Willd.	Broad-leaved arrowhead	Alismataceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Salicornia europaea</i>	L.	Samphire	Chenopodiaceae						X	X	
<i>Salix arbusculoides</i>	Anderss.	Shrubby willow	Salicaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	

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<i>Salix athabascensis</i>	Raup	Athabasca willow	Salicaceae	S3	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix bebbiana</i>	Sarg.	Beaked willow	Salicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix brachycarpa</i>	Nutt.	Short-capsuled willow	Salicaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Salix candida</i>	Fluegge ex Willd.	Hoary willow	Salicaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix discolor</i>	Muhl.	Pussy willow	Salicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix drummondiana</i>	Barr. ex Hook.	Drummond's willow	Salicaceae	S4	G4G5	Native	Confident; reported and confirmed	Present	X		
<i>Salix exigua</i>	Nutt.	Sandbar willow	Salicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix farriae</i>	Ball	Farr's willow	Salicaceae	S4	G4	Native	Confident; reported and confirmed	Present	X		
<i>Salix glauca</i>	L.	Smooth willow	Salicaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Salix lucida</i>	Muhl.	Shining willow	Salicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix lutea</i>	Nutt.	Yellow willow	Salicaceae	S5	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix maccalliana</i>	Rowlee	Velvet-fruited willow	Salicaceae	S5	G5?	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix myrtillifolia</i>	Anderss.	Myrtle-leaved willow	Salicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix pedicellaris</i>	Pursh	Bog willow	Salicaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix petiolaris</i>	J.E. Smith	Basket willow	Salicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix planifolia</i>	Pursh	Flat-leaved willow	Salicaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix prolixa</i>	Anderss.	Mackenzie's willow	Salicaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix pseudomonticola</i>	Ball	False mountain willow	Salicaceae	S4	G4G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix pyrifolia</i>	Anderss.	Balsam willow	Salicaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix scouleriana</i>	Barr. ex Hook.	Scouler's willow	Salicaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Salix serissima</i>	(Bailey) Fern.	Autumn willow	Salicaceae	S4	G4	Native	Confident; reported and confirmed	Present	X	X	
<i>Sambucus racemosa</i>	L.	Red elderberry	Caprifoliaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	

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<i>Sanicula marilandica</i>	L.	Snakeroot	Apiaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Sarcobatus vermiculatus</i>	(Hook.) Torr.	Greasewood	Chenopodiaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Sarracenia purpurea</i>	L.	Pitcher-plant	Sarraceniaceae	S2	G5	Native	Confident; reported and confirmed	Present	X		
<i>Saxifraga tricuspidata</i>	Rottb.	Three-toothed saxifrage	Saxifragaceae	S3S4	G4G5	Native	Confident; reported and confirmed	Present	X		
<i>Scheuchzeria palustris</i>	L.	Scheuchzeria	Scheuchzeriaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Schizachne purpurascens</i>	(Torr.) Swallen	Purple oat grass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Schizachyrium scoparium</i>	(Michx.) Nees	Little bluestem	Poaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Scirpus acutus</i>	Muhl. ex Bigel.	Great bulrush	Cyperaceae						X	X	
<i>Scirpus cespitosus</i>	L.	Tufted bulrush	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Scirpus clintonii</i>	A. Gray	Clinton's bulrush	Cyperaceae						X		
<i>Scirpus cyperinus</i>	(L.) Kunth	Wool grass	Cyperaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Scirpus fluviatilis</i>	(Torr.) A. Gray	River bulrush	Cyperaceae							X	
<i>Scirpus hudsonianus</i>	(Michx.) Fern.	Hudson Bay bulrush	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Scirpus microcarpus</i>	Presl	Small-fruited bulrush	Cyperaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Scirpus paludosus</i>	A. Nels.	Prairie bulrush	Cyperaceae	S4	GNRQ	Native	Confident; reported and confirmed	Present	X	X	
<i>Scirpus pumilus</i>	Vahl	Dwarf bulrush	Cyperaceae						X		
<i>Scirpus pungens</i>	Vahl	Three-square rush	Cyperaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Scirpus validus</i>	Vahl	Common great bulrush	Cyperaceae						X	X	
<i>Scoliciosporum chlorococcum</i>	Stenh	Scoliciosporum chlorococcum	Lecanoraceae	S2							Yes
<i>Scolochloa festucacea</i>	(Willd.) Link	Spangletop	Poaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Scutellaria galericulata</i>	L.	Marsh skullcap	Lamiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Sedum lanceolatum</i>	Torr.	Lance-leaved stonecrop	Crassulaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Senecio canus</i>	Hook.	Prairie groundsel	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	

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<i>Senecio congestus</i>	(R.Br.) DC.	Marsh ragwort	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Senecio eremophilus</i>	Richards.	Cut-leaved ragwort	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Senecio foetidus</i>	Howell	Marsh butterweed	Asteraceae	S3	G4G5	Native	Confident; reported and confirmed	Present		X	
<i>Senecio indecorus</i>	Greene	Rayless ragwort	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Senecio integerrimus</i>	Nutt.	Entire-leaved groundsel	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Senecio lugens</i>	Richards.	Black-tipped groundsel	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Senecio pauperculus</i>	Michx.	Balsam groundsel	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Senecio pseud aureus</i>	Rydb.	Thin-leaved ragwort	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Senecio streptanthifolius</i>	Greene	Northern ragwort	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Shepherdia argentea</i>	Nutt.	Thorny buffaloberry	Elaeagnaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Shepherdia canadensis</i>	(L.) Nutt.	Canada buffaloberry	Elaeagnaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Silene drummondii</i>	Hook.	Drummond's cockle	Caryophyllaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Silene menziesii</i>	Hook.	Menzies' catchfly	Caryophyllaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Sisyrinchium montanum</i>	Greene	Common blue-eyed grass	Iridaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Sisyrinchium septentrionale</i>	Bicknell	Pale blue-eyed grass	Iridaceae	S2S3	G3G4	Native	Confident; reported and confirmed	Present		X	
<i>Sium suave</i>	Walt.	Water parsnip	Apiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Smilacina racemosa</i>	(L.) Desf.	False Solomon's-seal	Liliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Smilacina stellata</i>	(L.) Desf.	Star-flowered Solomon's-seal	Liliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Smilacina trifolia</i>	(L.) Desf.	Three-leaved Solomon's-seal	Liliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Solanum triflorum</i>	Nutt.	Wild tomato	Solanaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Solidago canadensis</i>	L.	Canada goldenrod	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Solidago gigantea</i>	Ait.	Late goldenrod	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	

Scientific name	Authority	Common Name	Family	Provincial Status (S rank) ⁶	Global Status (G rank) ⁷	Origin	Distribution Confidence ⁸	Current Presence / Absence	Boreal Forest	Park land	Observed ? (ACIMS) ^c
<i>Solidago graminifolia</i>	(L.) Salisb.	Flat-topped goldenrod	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Solidago missouriensis</i>	Nutt.	Low goldenrod	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Solidago mollis</i>	Bartl.	Velvety goldenrod	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Solidago multiradiata</i>	Ait.	Alpine goldenrod	Asteraceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Solidago nemoralis</i>	Ait.	Showy goldenrod	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Solidago rigida</i>	L.	Stiff goldenrod	Asteraceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Solidago spathulata</i>	DC.	Mountain goldenrod	Asteraceae						X	X	
<i>Sorbus scopulina</i>	Greene	Mountain-ash	Rosaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Sparganium angustifolium</i>	Michx.	Narrow-leaved bur-reed	Sparganiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Sparganium eurycarpum</i>	Engelm.	Giant bur-reed	Sparganiaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Sparganium glomeratum</i>	Laest.	Bur-reed	Sparganiaceae	S1	G4?	Native	Confident; reported and confirmed	Present		X	
<i>Sparganium minimum</i>	(Hartm.) Fries	Slender bur-reed	Sparganiaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Spartina gracilis</i>	Trin.	Alkali cord grass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Spartina pectinata</i>	Link	Prairie cord grass	Poaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Spergularia marina</i>	L.	Salt-marsh sand spurry	Caryophyllaceae						X		
<i>Sphaeralcea coccinea</i>	(Pursh) Rydb.	Scarlet mallow	Malvaceae	S5	G5?	Native	Confident; reported and confirmed	Present	X	X	
<i>Sphenopholis intermedia</i>	(Rydb.) Rydb.	Slender wedge grass	Poaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Sphenopholis obtusata</i>	(Michx.) Scribn.	Prairie wedge grass	Poaceae	S2	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Spiraea alba</i>	Du Roi	Narrow-leaved meadowsweet	Rosaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Spiraea betulifolia</i>	Pallas	White meadowsweet	Rosaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Spiranthes lacera</i>	(Rafinesque) Rafinesque	Northern slender ladies'-tresses	Orchidaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Spiranthes romanzoffiana</i>	Cham. & Schlecht.	Hooded ladies'-tresses	Orchidaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Spirodela polyrhiza</i>	(L.) Schleiden	Larger duckweed	Lemnaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		

Scientific name	Authority	Common Name	Family	Provincial Status (S rank) ⁶	Global Status (G rank) ⁷	Origin	Distribution Confidence ⁸	Current Presence / Absence	Boreal Forest	Park land	Observed ? (ACIMS) ^c
							confirmed				
<i>Sporobolus cryptandrus</i>	(Torr.) A. Gray	Sand dropseed	Poaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Sporobolus neglectus</i>	Nash	Annual dropseed	Poaceae	SNA	G5	Unknown / Undetermined	Confident; reported and confirmed	Unknown / Undetermined	X		
<i>Stachys palustris</i>	L.	Marsh hedge-nettle	Lamiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Stellaria arenicola</i>	Raup	Sand-dune chickweed	Caryophyllaceae	S1	G5T3	Native	Confident; reported and confirmed	Present	X		
<i>Stellaria calycantha</i>	(Ledeb.) Bong.	Northern stitchwort	Caryophyllaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Stellaria crassifolia</i>	Ehrh.	Fleshy stitchwort	Caryophyllaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Stellaria longifolia</i>	Muhl.	Long-leaved chickweed	Caryophyllaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Stellaria longipes</i>	Goldie	Long-stalked chickweed	Caryophyllaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Stephanomeria runcinata</i>	Nutt.	Rush-pink	Asteraceae	S2	G5	Native	Confident; reported and confirmed	Present		X	
<i>Stipa columbiana</i>	Macoun	Columbia needle grass	Poaceae	S4	G5T5?	Native	Confident; reported and confirmed	Present	X	X	
<i>Stipa comata</i>	Trin. & Rupr.	Needle-and-thread	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Stipa curtiseta</i>	(A.S. Hitchc.) Barkworth	Western porcupine grass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Stipa richardsonii</i>	Link	Richardson needle grass	Poaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Stipa spartea</i>	Trin.	Porcupine grass	Poaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Stipa viridula</i>	Trin.	Green needle grass	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Streptopus amplexifolius</i>	(L.) DC.	Clasping-leaved twisted-stalk	Liliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Suaeda calceoliformis</i>	(Hook.) Moq.	Western sea-blite	Chenopodiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Symphoricarpos albus</i>	(L.) Blake	Snowberry	Caprifoliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Symphoricarpos occidentalis</i>	Hook.	Buckbrush	Caprifoliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Tanacetum huronense</i>	Nutt.	Indian tansy	Asteraceae						X		
<i>Taraxacum ceratophorum</i>	(Ledeb.) DC.	Northern dandelion	Asteraceae	S3	G5T5	Native	Confident; reported and confirmed	Present	X		

Scientific name	Authority	Common Name	Family	Provincial Status (S rank) ⁶	Global Status (G rank) ⁷	Origin	Distribution Confidence ⁸	Current Presence / Absence	Boreal Forest	Park land	Observed ? (ACIMS) ^c
<i>Thalictrum dasycarpum</i>	Fisch. & Ave-Lall.	Tall meadow rue	Ranunculaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Thalictrum occidentale</i>	A. Gray	Western meadow rue	Ranunculaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Thalictrum sparsiflorum</i>	Turcz.	Flat-fruited meadow rue	Ranunculaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Thalictrum venulosum</i>	Trel.	Veiny meadow rue	Ranunculaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Thellungiella salsuginea</i>	(Pallas) Schulz	Mouse-ear cress	Brassicaceae						X		
<i>Thermopsis rhombifolia</i>	(Nutt.) Richards.	Golden bean	Fabaceae	S5	G5	Native	Confident; reported and confirmed	Present		X	
<i>Tofieldia glutinosa</i>	(Michx.) Pers.	Sticky false asphodel	Liliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Townsendia exscapa</i>	(Richards.) Porter	Low townsendia	Asteraceae	S2	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Trichophorum clintonii</i>	Gray	Clinton's bulrush	Cyperaceae	S1							Yes
<i>Trientalis borealis</i>	Raf.	Northern starflower	Primulaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Trientalis europaea</i>	L.	Arctic starflower	Primulaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Triglochin maritima</i>	L.	Seaside arrow-grass	Juncaginaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Triglochin palustris</i>	L.	Slender arrow-grass	Juncaginaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Trisetum spicatum</i>	(L.) Richt.	Spike trisetum	Poaceae	S5	G5	Native	Confident; reported and confirmed	Present	X		
<i>Typha angustifolia</i>	L.	Narrow-leaved cattail	Typhaceae	SNA	G5	Unknown / Undetermined	Reported but false	Unknown / Undetermined	?	?	
<i>Typha latifolia</i>	L.	Common cattail	Typhaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Urtica dioica</i>	L.	Common nettle	Urticaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Utricularia cornuta</i>	Michx.	Horned bladderwort	Lentibulariaceae	S1	G5	Native	Confident; reported and confirmed	Present	X		
<i>Utricularia intermedia</i>	Hayne	Flat-leaved bladderwort	Lentibulariaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Utricularia minor</i>	L.	Small bladderwort	Lentibulariaceae	S4	G5	Native	Confident; reported and confirmed	Present	X		
<i>Utricularia vulgaris</i>	L.	Common bladderwort	Lentibulariaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Vaccinium</i>	Michx.	Dwarf bilberry	Ericaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	

Scientific name	Authority	Common Name	Family	Provincial Status (S rank) ⁶	Global Status (G rank) ⁷	Origin	Distribution Confidence ⁸	Current Presence / Absence	Boreal Forest	Park land	Observed ? (ACIMS) ^c
<i>caespitosum</i>							confirmed				
<i>Vaccinium myrtilloides</i>	Michx.	Common blueberry	Ericaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Vaccinium uliginosum</i>	L.	Bog bilberry	Ericaceae	S3	G5	Native	Confident; reported and confirmed	Present	X		
<i>Vaccinium vitis-idaea</i>	L.	Bog cranberry	Ericaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Valeriana dioica</i>	L.	Northern valerian	Valerianaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Verbena bracteata</i>	Lag. & Rodr.	Carpet vervain	Verbenaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Veronica americana</i>	(Raf.) Schw.	American brooklime	Scrophulariaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Veronica catenata</i>	Pennell	Water speedwell	Scrophulariaceae	S2S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Veronica peregrina</i>	L.	Hairy speedwell	Scrophulariaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Veronica scutellata</i>	L.	Marsh speedwell	Scrophulariaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Viburnum edule</i>	(Michx.) Raf.	Low-bush cranberry	Caprifoliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Viburnum opulus</i>	L.	High-bush v	Caprifoliaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Vicia americana</i>	Muhl.	Wild vetch	Fabaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Viola adunca</i>	J.E. Smith	Early blue violet	Violaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Viola canadensis</i>	L.	Western Canada violet	Violaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Viola macloskeyi</i>	Lloyd	Macloskey's violet	Violaceae	SNA	G5	Unknown / Undetermined	Reported but false	Unknown / Undetermined	X		
<i>Viola nephrophylla</i>	Greene	Bog violet	Violaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Viola nuttallii</i>	Pursh	Yellow prairie violet	Violaceae	S4	G5	Native	Confident; reported and confirmed	Present		X	
<i>Viola pallens</i>	Banks ex Ging	Northern white violet	Violaceae	S2S3							Yes
<i>Viola palustris</i>	L.	Marsh violet	Violaceae	S4	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Viola pedatifida</i>	G. Don	Crowfoot violet	Violaceae	S2	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Viola renifolia</i>	A. Gray	Kidney-leaved violet	Violaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	

Scientific name	Authority	Common Name	Family	Provincial Status (S rank) ⁶	Global Status (G rank) ⁷	Origin	Distribution Confidence ⁸	Current Presence / Absence	Boreal Forest	Park land	Observed ? (ACIMS) ^c
<i>Viola selkirkii</i>	Pursh	Great-spurred violet	Violaceae	S3	G5?	Native	Confident; reported and confirmed	Present	X		
<i>Weissia controversa</i>	Hedw.	Green-tufted stubble moss	Pottiaceae	S2							Yes
<i>Wolffia borealis</i>	(Engelm.) Landolt	Northern duckmeal	Lemnaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Wolffia columbiana</i>	Karsten	Watermeal	Lemnaceae	S2	G5	Native	Confident; reported and confirmed	Present	X	X	Yes
<i>Woodsia oregana</i>	D.C. Eat.	Oregon woodsia	Pteridaceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Xanthium strumarium</i>	L.	Cocklebur	Asteraceae	S3	G5	Native	Confident; reported and confirmed	Present		X	
<i>Zannichellia palustris</i>	L.	Horned pondweed	Zannichelliaceae	S3	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Zigadenus elegans</i>	Pursh	White camas	Liliaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	
<i>Zizia aptera</i>	(A. Gray) Fern.	Heart-leaved Alexanders	Apiaceae	S5	G5	Native	Confident; reported and confirmed	Present	X	X	

References

ACIMS. 2015. Tracked Elements Listed by Natural Subregions. Available On-line:
<http://tpr.alberta.ca/parks/heritageinfocentre/datarequests/default.aspx>

APPENDIX I. LETTERS OF SUPPORT

Federal Government Organizations	
Agriculture & Agri-Food Canada, Science & Tech. Branch	Dr. Francois Eudes, Acting Research, Development. & Technology Director
Parks Canada, Elk Island National Park	Alan Fehr, Field Unit Superintendent, Northern Prairies Field Unit
Provincial Government Organizations	
Alberta Environment & Sustainable Resource Development – Operations Division	Matthew Machielse, Assistant Deputy Minister
Alberta Culture and Tourism, Office of the Deputy Minister	Carolyn Campbell, Deputy Minister
Alberta Culture and Tourism, Heritage – Ukrainian Cultural Heritage Village	Arnold Grandt, Director
Alberta Environment & Sustainable Resource Development – Office of Deputy Minister	Bill Werry, Deputy Minister
Alberta Environment & Sustainable Resource Development – Parks Division	Graham Statt, Assistant Deputy Minister
Alberta Government – Municipal Affairs	Brad Pickering, Deputy Minister
Municipal Government	
Beaver County	Kevin Smook, Reeve
City of Camrose	Norm Mayer, Mayor
City of Edmonton, Sustainable Development, Parks & Biodiversity	Grant Pearsell, Director
City of Fort Saskatchewan	Gale Katchur, Mayor
City of Leduc	Greg Krischke, Mayor
Environmental Advisory Committee, Strathcona County	Amanda Cooper, Chair
Lamont County	Wayne Woldanski, Reeve
Leduc County	John Whaley, Mayor
Leduc Environmental Advisory Board (LEAB)	Jaimee Morozoff, Chair
Strathcona County	Bonnie Riddell, Councillor
Strathcona County	Linton Delainey, Councillor
Strathcona County	Paul Smith, Councillor
Strathcona County	Mayor Roxanne Carr
Strathcona County, Strathcona Wilderness Centre	Jean Funk, Supervisor
Town of Beaumont	Camille Berube, Mayor
Town of Lamont	Sandi Maschmeyer, C.A.O.
Town of Bruderheim	Karl Hauch, Mayor
Town of Mundare	Colin Zyla, CAO
Town of Tofield	Harold Conquest, Mayor

Village of Holden	Don Thompson, Mayor
Village of Ryley	Janet Winsnes, CAO
Aboriginal/First Nations Organizations	
Alberta Government Aboriginal Relations	Stan Rutwind, QC, Assistant Deputy Minister
Alberta Government Aboriginal Relations – First Nations and Metis Relations	Clay Buchanan, Assistant Deputy Minister
Confederacy of Treaty Six First Nations	Bob Small, Interim Director
Metis Nation of Alberta, Office of the Provincial President	Audrey Poitras, President
Environmental Non-Government Organizations (ENGO's)	
Alberta Fish & Game Association	Wayne Lowry, President
Alberta North American Waterfowl Management Plan Partnership (NAWMP)	Michael Barr, Alberta NAWMP Coordinator
Alberta Recreation & Parks Association	Glenn Jensen, Treasurer
Alberta Recreation & Parks Association	Dean Ohnysty, Director at Large
Alberta Recreation & Parks Association	Susan Laurin, Vice President (External)
Alberta Recreation & Parks Association	Heather Cowie, Vice President (internal)
Alberta Recreation & Parks Association	Ken Luck, Region 2 Member (Central)
Alberta Recreation & Parks Association	Adam Clarkson, Region 1 (North)
Alberta Recreation & Parks Association	Dan Pagely, Past President
Alberta Recreation & Parks Association (ARPA)	Mike Roma, President
CPAWS, Canadian Parks and Wilderness Society, Northern Alberta	Alison Ronson, Executive Director
Ducks Unlimited Canada	Perry McCormick
Edmonton & Area Land Trust	Pamela Wight, Exec. Director
Edmonton Fish & Game Association	James R. Shewfelt, Hunting Chair
Friends of Blackfoot Society	James R. Shewfelt, President
Friends of Elk Island Society	Brian Eaton, Chair
Land Stewardship Centre	Brian Ilnicki, Executive Director
Nature Alberta	Ted Hindmarch, President
Nature Conservancy of Canada, Alberta Region	Bob Demulder, Regional Vice President
Stewards of Alberta's Protected Areas Association (SAPAA)	Patsy Cotterill, President
Royal Astronomical Society of Canada Edmonton Centre	Luca Vanzella, President

River Valley Alliance	Larry Wall, Executive Director
Waskahegan Trail Association	JoAnne Burek, President
Non-Government Organizations (Industry)	
Alberta Capital Airshed	Gary Redmond, Executive Director
Economic Development & Tourism Advisory Committee	Peter Scott, Chairman
Fort Air Partnership	Nadine Blaney, Executive Director
Northeast Capital Industrial Association (NCIA)	Dr. Laurie J. Danielson, Exec.Dir.
Industry	
Williams Energy Canada ULC	Ms. Kellie Johnston, Environment & Corporate Responsibility Lead
Academic/ Research	
University of Alberta	Ross Hodgetts, Professor Emeritus
Alberta Centre for Sustainable Rural Communities, University of Alberta (Augustana Campus)	Dr. Lars Hallstrom, Director
University of Alberta (Augustana Campus)	Allen Berger, PhD Dean & Exec. Off
University of Alberta, Faculty of Agricultural, Life and Environmental Sciences – Renewable Resources	Dr. Scott Nielsen, Associate Professor, Alberta Biodiversity Conservation Chair
University of Alberta – Devonian Botanic Garden	Lee Foote, Professor & Director
University of Alberta, Faculty of Physical Education & Recreation	Tom Hinch, PhD Professor
University of Alberta, Faculty of Physical Education & Recreation	Elizabeth Halpenny, PhD
University of Alberta, Faculty of Physical Education & Recreation	W. Kerry Mummery, Professor & Dean
Schools	
Hillview School	Herman Chang & Grade 6 students
Madonna Catholic School Earth Club	Sharon Mittelsteadt, Grade One Teacher & Earth Club Mentor
Community	
Nisku Leduc Rotary Club	Gary Sandercock, President
Sherwood Park Rotary Club	
Tofield Showgeese Junior Forest Wardens	Alila Schneider
Local Residents	
Bohaychuk, Denise	
Nixon, Amy	
Piekema, Treva	
Schneider, Richard and Alina	



Science and Technology Branch
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March 20, 2015

Mr. Glen Lawrence, Chair
Beaver Hills Initiative
2001 Sherwood Drive
Sherwood Park, AB
T8A 3W7

Dear Mr. Lawrence:

Re: Biosphere Reserve Nomination for Beaver Hills Initiative, Alberta

The Science and Technology Branch of Agriculture and Agri-Food Canada is pleased to provide this letter as confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

BHI's collaborative approach to innovations in integrated, place-based landscape management is acknowledged and appreciated, and since 2002, specialists from AAFC have provided technical support to your work in agro-ecological land-use planning, including food systems, ecosystem services and biodiversity enhancement. We recognize that Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of this distinct landscape and act as an endorsement of the numerous achievements of the Beaver Hills Initiative to date. Our branch is committed to continuing to work with the BHI and its partner agencies to promote research and data related to bioregional, agri-environmentally sustainable approaches to land-use and land management within Canada's working agricultural landscapes.

Thank you for providing leadership in this important initiative. We aim to advance our partnerships in local, regional, national and international endeavors, and look forward to working with you in future.

Yours truly,

Dr. Francois Eudes
Acting Research, Development & Technology Director

cc: Dr. Gabriel Piette, Acting Director General, AAFC-STB, Saint-Hyacinthe, QC
Terry Dash, Director Knowledge and Tech Transfer, Calgary, Alberta

62585

April 15, 2015

Mr. Glen Lawrence, Chair
Beaver Hills Initiative
c/o Strathcona County
Planning and Development Services
2001 Sherwood Drive
Sherwood Park AB T8A 3W7

Dear Mr. Lawrence:

I am pleased to offer this letter of support to the Beaver Hills Initiative for its pursuit of a Biosphere Reserve designation for the Beaver Hills Moraine under UNESCO's "Man and Biosphere" Program.

Since 2002, the Government of Alberta has strongly supported the vision, mission, and guiding principles of this initiative. The Biosphere Reserve designation of the Beaver Hills Moraine will validate what this initiative has achieved to-date. The Beaver Hills Initiative has successfully promoted a sustainable approach to land-use planning and management of protected areas within the moraine area, and has demonstrated the benefits of living and working in harmony with nature.

This is a valuable opportunity for the Beaver Hills Initiative to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves.

Thank you for the opportunity to participate in this important project and I look forward to a positive outcome in this regard.

Sincerely,



Matthew Machielse
Assistant Deputy Minister

AR35811

April 28, 2015

Mr. Glen Lawrence
Chair
Beaver Hills Initiative
c/o Strathcona County
Planning and Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Lawrence:

I am pleased to extend Alberta Culture and Tourism's support for the nomination by the Beaver Hills Initiative (BHI) to designate the Beaver Hills Moraine as a biosphere reserve under UNESCO's "Man and the Biosphere" Program.

Since 2002, the Government of Alberta has supported the goals, vision and mission of the Beaver Hills Initiative. A biosphere reserve designation will give international awareness to the unique and distinctive landscape of the Beaver Hills Moraine. In addition, it will provide important international recognition of the progress towards a sustainable landscape already accomplished by the BHI.

The goal of having Albertans live, work, play and prosper in an environmentally sustainable manner is commendable and aligns well with the goals of Alberta Culture and Tourism. International status will highlight the significant tourism opportunities and provide exposure to the many recreational, historical and cultural resources in the region. This is a valuable opportunity for the BHI to become an active member of an international community of biosphere reserves, promoting conservation and sustainability.

Thank you for the opportunity to support this biosphere reserve nomination.

Sincerely,



Carolyn Campbell
Deputy Minister

April 1, 2015

Glen Lawrence, Chair
Beaver Hills Initiative
C/O Strathcona County
Corporate Planning and Intergovernmental Affairs
2001 Sherwood Drive
Sherwood Park, AB
T8A 3W7

Dear Mr. Lawrence,

RE: LETTER OF SUPPORT FOR THE BEAVER HILLS DESIGNATIONS AS A BIOSPHERE RESERVE

Please accept this letter as a formal confirmation of the Ukrainian Cultural Heritage Village's (UCHV) support of the Beaver Hills Initiative's nomination to become internationally recognized as a Biosphere Reserve under UNESCO's "Man and Biosphere" program.

Since its inception, the UCHV has strongly supported the vision, mission and guiding principles of the Beaver Hills Initiative to integrate the region's environmental uniqueness with social, economic and cultural factors. Receiving the international designation will help to raise the awareness and reputation of these partners working together to preserve the environmental significance of the region. The UCHV has been actively involved with the Beaver Hills Initiative (BHI) through our staff serving on the BHI working group.

The UCHV is a multi-award-winning provincially operated outdoor living history museum which showcases the history of east central Alberta from 1892-1930. Our open-air museum has more than 35 historic structures relocated from the surrounding community and restored to the time frame presented at the site. Costumed role players portray real pioneers who once lived in the area. The site was developed to preserve and present the cultural significance of the region as home to the largest bloc settlement of Ukrainian pioneers in Canada. Today our museum contributes in preserving and presenting the intangible cultural heritage of east central Alberta, which includes the Beaver Hills region. Today, this same region is also known as Kalyna Country Ecomuseum (heritage district), the largest in Canada and second largest heritage district in the world.

The UCHV attracts approximately 50,000 visitors annually and as an anchor attraction; we are proud to act as a springboard to encourage visitation to other area attractions and activities. Community collaboration is vital to create sustainable outcomes. Accordingly, museum staff members collaborate with other organizations such as Elk Island National Park, Strathcona Wilderness Centre, Blackfoot Grazing Reserve and the Beaver Hills Dark Sky Preserve.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,



Arnold Grandt, Director
Ukrainian Cultural Heritage Village

62585

April 14, 2015

Glen Lawrence, Chair
Beaver Hills Initiative
c/o Strathcona County
Planning and Development Services
2001 Sherwood Drive
Sherwood Park AB T8A 3W7

Dear Mr. Lawrence:

Please accept this letter as a formal confirmation of Environment and Sustainable Resource Development's support of the Beaver Hills Initiative's nomination to have the Beaver Hills Moraine designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2002, our department has strongly supported the vision, mission, and guiding principles of the Beaver Hills Initiative. The Biosphere Reserve designation of the Beaver Hills Moraine is aligned with principles and desired outcomes of Alberta's Land-use Framework. It is important that this initiative be supported to recognize the sustainable development of this area and to continue to provide Albertans with healthy ecosystems and environment that deliver recreational and cultural opportunities.

Biosphere Reserve designation of the Beaver Hills Moraine will give international recognition to the importance of the area as a distinctive landscape. It will also provide an endorsement of Beaver Hills Initiative's achievements to-date – promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature.

This is a valuable opportunity for the Beaver Hills Initiative to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves. I appreciate the importance of participating in this regionally based and anticipated internationally recognized project.

Sincerely,



Bill Werry
Deputy Minister

AR 63393

April 17, 2015

Mr. Glen Lawrence, Chair
Beaver Hills Initiative
c/o Strathcona County
Planning and Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Chairman,

I am pleased to offer this letter of support to the Beaver Hills Initiative for its pursuit of a Biosphere Reserve designation of the Beaver Hill Moraine under UNESCO's "Man and Biosphere" Program.

Since 2002, The Government of Alberta has strongly supported the vision, mission and guiding principles of the initiative. The biosphere reserve designation of the Beaver Hills will validate what the initiative has achieved to date. The initiative has successfully promoted a sustainable approach to land-use planning, and demonstrated the benefits of living and working in harmony with a natural environment. It will also provide the initiative with an opportunity to become an active contributor in finding solutions to environmentally significant global issues, as well as bringing national and international attention and recognition to the Beaver Hill Moraine.

Environment and Sustainable Resource Development is supportive of your proposal to apply to UNESCO for a biosphere reserve designation. The goal and principles of a biosphere reserve are consistent with the mandate of my department and the management of protected areas within the moraine area.

Since our current management practices already fulfil the basic requirements and criteria for a biosphere reserve, I do not anticipate any challenges with continuing as a supporting partner in the initiative. Our ongoing support remains contingent on the leadership and consensus of the member municipalities that are stepping forward to pursue a biosphere reserve designation. As a voluntary grassroots initiative, the collective will of the participating municipalities, and their commitment to the initiative, will undoubtedly remain strong.

.../2

Mr. Glen Lawrence
Page 2

My staff will continue working with the Beaver Hills Initiative, and I look forward to a positive outcome on final application.

Thank you for the opportunity to participate in this important project.

Sincerely,

A handwritten signature in black ink, appearing to read "Graham Statt", with a long, sweeping horizontal flourish extending to the right.

Graham Statt, B.A., M.A.
Assistant Deputy Minister

March 9, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman ^{Glen}

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2002, I have strongly supported the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,



Brad Pickering
Deputy Minister



BEAVER COUNTY

Box 140
Ryley, Alberta T0B 4A0

March 11, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2002, Beaver County has strongly supported the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely

Kevin Smook
Reeve, Beaver County



The City of
CAMROSE

CITY HALL, 5204-50 AVE., CAMROSE, ALBERTA T4V 0S8 PH. (780) 672-4426 FAX (780) 672-2469



March 11, 2015

File: 112

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

The City of Camrose strongly supports the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely


Norm Mayer
Mayor



SUSTAINABLE
DEVELOPMENT

MAILING ADDRESS:
5TH FLOOR,
10250 - 101 STREET NW
EDMONTON, ALBERTA
T5J 3P4

March 24, 2015

Reference No.: 169911068-001

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Lawrence:

Please accept this letter as confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program. We enthusiastically support the BHI's application to have the Beaver Hills designated as a Biosphere Reserve, knowing that such a designation will bring international recognition to the unique ecology and distinct landscape character of this outstanding area.

The City of Edmonton recognizes that our local ecological network is nested within a broader, regional system of natural areas, of which the Beaver Hills is a critical part. The fact that the Beaver Hills is situated in such close proximity to a number of urban areas presents residents within the region with a unique opportunity to experience and learn about its landscape and the plants and animals it supports. However, as demand for land for residential development and recreation increases, it also makes the Beaver Hills vulnerable to ecological fragmentation and degradation, and much in need of a focused and collaborative conservation effort. The BHI has done an exceptional job at facilitating this effort, bringing together partners across the region and drawing regional, national and international attention to this area. The opportunity and support that a Biosphere Reserve designation, and membership within the international network of Biosphere Reserves, would afford this effort cannot be overstated.

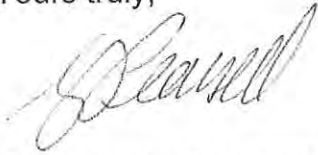
We know that the BHI is eager to contribute to the global effort to find new ways of living, working and planning in and around natural areas that support their ecological integrity while allowing enjoyment of the many benefits that these places provide.

.. /2

We commend the work of the BHI and their vision for the Beaver Hills. We hope that designation as a Biosphere Reserve will bring support and recognition to this outstanding area and its stewards.

If we can provide any additional information to support this worthy application, we would be very happy to do so.

Yours truly,

A handwritten signature in cursive script, appearing to read "Grant Pearsell".

Grant Pearsell, Director
Parks+ Biodiversity

THE
City
of
FORT SASKATCHEWAN



Gale Katchur
Mayor

10005 - 102 STREET
FORT SASKATCHEWAN, ALBERTA
CANADA T8L 2C5
TELEPHONE 780.992.6220
FAX 780.998.4774
EMAIL: gkatchur@fortsask.ca
WEBSITE: www.fortsask.ca

February 25, 2015

Mr. Glen Lawrence, Chair
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Lawrence:

Re: Letter of Support for the Beaver Hills Initiative – Biosphere Nomination

Please accept this letter of support as a formal confirmation of the City of Fort Saskatchewan's support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's (United Nations Educational, Scientific, and Cultural Organization) "Man and Biosphere" Program.

The City of Fort Saskatchewan strongly supports the vision, mission, and guiding principles of the Beaver Hills Initiative. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the Beaver Hills Initiative has achieved to date in promoting a bioregional and sustainable approach to land use planning, and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the Beaver Hills Initiative to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internally recognized project.

Respectfully,

Gale Katchur
Mayor

GSK/sae

xc: Mayor and Councillors
Kelly Kloss, City Manager
Troy Fleming, General Manager, Infrastructure & Community Services
Matthew Siddons, Current Planner



May 5, 2015

Mr. Glen Lawrence
Chair, Beaver Hills Initiative
c/o Strathcona County
Planning and Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Lawrence:

Subject: Letter of Support for the Beaver Hills Initiative (BHI) Biosphere Nomination

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under the United Nations Educational Scientific and Cultural Organization's "Man and Biosphere" Program.

At the City of Leduc, we believe in living our values through accountability, leadership and environmental sustainability. We approved an Environmental Plan in 2012; it's vision is that our natural environment is healthy and clean. Our Plan aligns closely with the vision, mission and guiding principles of the BHI.

Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to date. The designation would bring awareness to sustainability in general and to the bioregional and sustainable approach to land-use planning, while demonstrating the advantages of living and working in harmony with nature. The opportunity for the BHI to contribute to solutions to environmentally significant global issues, by becoming a member of an international network of Biosphere Reserves, is also seen as being very valuable and commendable.

Thank you for the opportunity to participate in this important regionally based anticipated internationally recognized project.

Sincerely,

Greg Krischke
Mayor



9910-103 Street, Edmonton, AB T5K 2V7
Tel: 780-483-7578
Fax: 780 483-7578
pamwight@ealt.ca
www.ealt.ca

March 2nd, 2015

Glen Lawrence, Chair
Beaver Hills Initiative
c/o Strathcona County, Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB, T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman:

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

The Edmonton and Area Land Trust has worked closely with the Beaver Hills Initiative (BHI) and other conservation organizations in this important area since 2008. Indeed, we have selected 3 properties in the BHI, to conserve them, since we understand the important ecological and other values that the area represents.

The recognition of the Beaver Hills as a Biosphere Reserve would be an important tool in our work towards further conservation of important ecosystems that thrive in the region. It will also enable the BHI to participate in an international network of Biosphere Reserves, to work towards solutions to environmentally significant global issues.

Since our formation in 2007, the Edmonton and Area Land Trust has strongly supported the vision, mission and guiding principles of the BHI and recognizes that Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinct landscape, as well as endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning, as well as demonstrating the advantages of living and working in harmony with nature.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely

A handwritten signature in blue ink that reads "Pam Wight".

Pamela Wight,
Executive Director





April 20, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Designation as a Biosphere Reserve

Dear Mr. Chairman:

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

The Strathcona County Environmental Advisory Committee strongly supports the vision, mission and guiding principles of the BHI and recognizes that Biosphere Reserve designation of the Beaver Hills Moraine. With this international recognition, it will bring the importance of the area as a distinct landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

A handwritten signature in blue ink that reads "Amanda Cooper".

Amanda Cooper
Chair, Strathcona County Environmental Advisory Committee
amanda.joan.cooper@gmail.com

Lamont County

March 10, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2002, Lamont County has strongly supported the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely



Wayne Woldanski

Reeve

Lamont County





Office of the Mayor

April 9, 2015

Glen Lawrence, Chair
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Chair Lawrence:

Letter of Support - Beaver Hills Initiative (BHI) Biosphere Nomination

Please accept this letter as confirmation, in principle, of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program. Formal support will be reviewed upon completion of your upcoming community engagement program with Leduc County residents.

Since 2002, Leduc County has strongly supported the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

John Whaley
Mayor

cc: Leduc County Council
Dean Ohnysty, Director Parks & Recreation

LEAB

**Leduc Environmental
Advisory Board**

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning and Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

March 16, 2015

Subject: Letter of Support for the Beaver Hills Initiative (BHI) Biosphere Nomination

Dear Mr. Chairman,

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

The Leduc Environmental Advisory Board (LEAB) strongly supports the vision, mission and guiding principles of BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to date in promoting a bioregional and sustainable approach to land- use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based anticipated internationally recognized project.

Sincerely,



Jaimee Morozoff, Chair

cc: LEAB Members (list attached)

LEAB

**Leduc Environmental
Advisory Board**

Board Members

Jaimee Dupont Morozoff, Chairman

Katie Oliver, Vice Chairman

Linda McDonald, Leduc Public Member

Lesley Wong, Leduc Public Member

Mathew Butler, Leduc Public Member

Shelley Lapointe, Leduc Public Member

Councillor Glen Finstad



February 26, 2015

Glen
Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Dear Mr. Chairman,

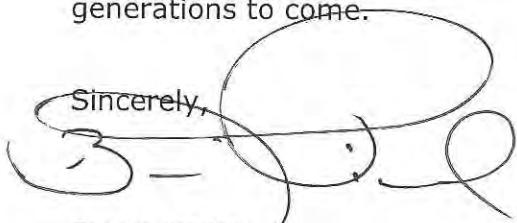
Please accept this letter as a formal confirmation of my support of the Beaver Hills Initiative's (BHI) nomination to have Beaver Hills designated as a Biosphere Reserve under UNESCO's Man and Biosphere Program (MAB). Biosphere Reserves denote special places that benefit both people and nature, and represent the only global designation and accreditation for an area demonstrating excellence in sustainable development in practice. I believe this is a designation that the work of BHI is well deserving of and the work they support and conduct aligns well with the requirements of the MAB Program.

Since 2002 Strathcona County has strongly supported the vision, mission and guiding principles of the BHI. The relatively intact natural landscape provides key ecosystem services to the region, including flood mitigation, provisioning of clean air and water, as well as cultural and aesthetic character. Within the Beaver Hill Moraine the BHI have implemented a collaborative approach to regional land-use planning to find practical solutions to conservation and sustainable development which exemplifies the intentions of Alberta's Provincial Land Use Framework. However, by becoming a member of an internationally recognized network of Biosphere Reserves the BHI has the opportunity to become an active contributor to finding solutions to environmentally significant global issues.

As the Ward 7 Councillor for Strathcona County I have the privilege that my entire ward falls within the Beaver Hills Moraine. I witness on a daily basis the impact this unique land formation has on our environment and the vibrancy of wildlife and biodiversity it bring to the County. Beaver Hills Moraine is currently a Priority Natural Area in the capital region as designated by Canada's Nature Conservancy, Ducks Unlimited and the Alberta Conservation Association.

Thank you for your consideration in designating this unique and diverse area as a Biosphere Reserve. I look forward to sharing this natural landscape with the generations to come.

Sincerely,



Bonnie Riddell
Strathcona County, Councillor Ward 7

OFFICE OF THE ELECTED OFFICIALS

2001 Sherwood Drive
Sherwood Park, Alberta T8A 3W7

780-464-8138
www.strathcona.ca



March 1, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Dear Mr. Chairman,

Please accept this letter as a formal confirmation of my support of the Beaver Hills Initiative's (BHI) nomination to have Beaver Hills designated as a Biosphere Reserve under UNESCO's Man and Biosphere Program (MAB). I believe that this designation is well deserved as the work they do aligns well with the requirements of the MAB Program.

Since 2002 Strathcona County has strongly supported the vision, mission and guiding principles of the BHI. This relatively intact natural landscape provides key eco-system services to the region, including flood mitigation, provisioning of clean air and water, as well as cultural and aesthetic character. Within the Beaver Hill Moraine the BHI have implemented a collaborative approach to regional land-use planning to find practical solutions to conservation and sustainable development which exemplify the intentions of Alberta's Provincial Land-Use Framework. By becoming a member of an internationally recognized network of Biosphere Reserves the BHI has the opportunity to become an active contributor to finding solutions to environmentally significant global issues.

As a rural Councillor for Strathcona County I have the privilege that a large portion of my ward falls within the Beaver Hills Moraine. I witness on a daily basis the impact this unique land formation has on our environment and the vibrancy of wildlife and biodiversity it brings to the County. The Beaver Hills Moraine is currently a Priority Natural Area in the capital region as designated by Canada's Nature Conservancy, Ducks Unlimited and the Alberta Conservation Association.

Thank you for your consideration in designating this unique and diverse area as a Biosphere Reserve.

Sincerely,



*Linton Delainey
Strathcona County, Councillor Ward 6*

OFFICE OF THE ELECTED OFFICIALS

2001 Sherwood Drive
Sherwood Park, Alberta T8A 3W7

780-464-8138

www.strathcona.ca



March 1, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Dear Mr. Chairman,

Please accept this letter as a formal confirmation of my support of the Beaver Hills Initiative's (BHI) nomination to have Beaver Hills designated as a Biosphere Reserve under UNESCO's Man and Biosphere Program (MAB). I believe that this is a designation that the work of BHI is well deserving of and the work they support and conduct aligns well with the requirements of the MAB Program.

Since 2002 Strathcona County has strongly supported the vision, mission and guiding principles of the BHI. The relatively intact natural landscape provides key ecosystem services to the region, including flood mitigation, provisioning of clean air and water, as well as cultural and aesthetic character. Within the Beaver Hill Moraine the BHI have implemented a collaborative approach to regional land-use planning to find practical solutions to conservation and sustainable development which exemplifies the intentions of Alberta's Provincial Land Use Framework. However, by becoming a member of an internationally recognized network of Biosphere Reserves the BHI has the opportunity to become an active contributor to finding solutions to environmentally significant global issues.

As the Ward 5 Councillor for Strathcona County I have the privilege that a large portion of my ward borders the Elk Island National park and parts of my ward fall within the Beaver Hills Moraine. I witness on a daily basis the impact this unique land formation has on our environment and the vibrancy of wildlife and biodiversity it bring to the County. Beaver Hills Moraine is currently a Priority Natural Area in the capital region as designated by Canada's Nature Conservancy, Ducks Unlimited and the Alberta Conservation Association.

Thank you for your consideration in designating this unique and diverse area as a Biosphere Reserve.

Sincerely,



Paul Smith
Strathcona County, Councillor Ward 5

OFFICE OF THE ELECTED OFFICIALS

2001 Sherwood Drive
Sherwood Park, Alberta T8A 3W7

780-464-8138
www.strathcona.ca



April 10, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Chairman,

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

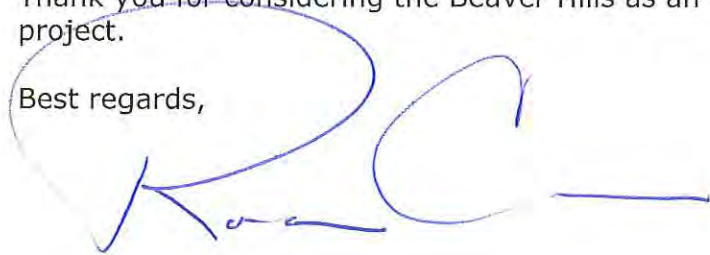
Please accept our letter as affirmation of Strathcona County's strong support for the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2002, Strathcona County has advocated for the Beaver Hills Moraine to become a leading-edge preservation area, protected for future generations. Its vision, mission and guiding principles are valuable to Strathcona County and have guided the decisions of this municipality for many years. As well, our community has been and remains a leading force on the Board and through its administrative support for the Beaver Hills Initiative. This Council and the four previous Councils have promoted and worked to ensure the region and province is aware of the value of this area.

Biosphere Reserve designation of the Beaver Hills Initiative will bring international recognition to this distinctive landscape and the achievements of the BHI. It will also promote the value of a bioregional and sustainable approach to land-use planning and demonstrate the advantages of living and working in harmony with nature. This outstanding designation would allow the BHI to become an active contributor in finding solutions to environmentally-significant global issues, within an international network of Biosphere Reserves.

Thank you for considering the Beaver Hills as an internationally, recognized project.

Best regards,



Roxanne Carr, **MAYOR**
STRATHCONA COUNTY

May 12, 2015

Glen Lawrence
Chair, Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman,

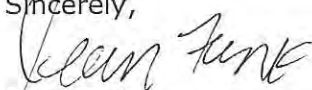
Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2002, the Strathcona Wilderness Centre has strongly supported the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape, endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning, and will demonstrate the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

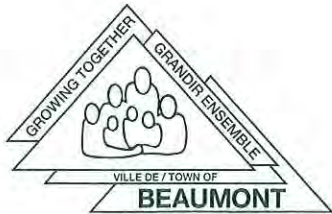
The Strathcona Wilderness Centre is Strathcona County's largest park. The Centre provides educational and recreation opportunities for people to directly experience nature. Through environmental education and outdoor skills programs for students, overnight camping in tents and a lodge, trails for wildlife viewing, hiking, cross country skiing and snowshoeing, the Centre encourages over 70,000 people annually to live in harmony with nature. We look forward to contributing to and learning from biospheres around the world.

Thank you for the opportunity to participate in this important regionally based and internationally recognized project.

Sincerely,



Jean Funk
Supervisor
Strathcona Wilderness Centre



VILLE DE/TOWN OF
BEAUMONT
OFFICE OF THE MAYOR/BUREAU DU MAIRE

5600 49 Street
Beaumont Alberta T4X 1A1
Phone: 780-929-8782
Fax: 780-929-8729
Email: admin@town.beaumont.ab.ca

April 10, 2015

Glen Lawrence, Chair
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Lawrence,

Please accept this letter as a formal confirmation of the Town of Beaumont's support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the Beaver Hills Initiative has achieved to date in promoting the advantages of living and working in harmony with nature. The opportunity that is provided for the Beaver Hills Initiative to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is very valuable and commendable.

Thank you for consideration of the Beaver Hills Initiative nomination.

Yours Truly,

Camille Bérubé, BA, FCCUI
Mayor
Town of Beaumont

jgs
L_Beaver Hills Initiative Letter of Support

Home of the Bruderheim Meteorite

April 16, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Dear Mr. Chairman:

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Please accept this letter as a formal confirmation of the Town of Bruderheim's support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Yours truly,

THE TOWN OF BRUDERHEIM



Karl Hauch, Mayor



PO Box 30 5407 50th Street
Tofield, Alberta T0B 4J0
P 780 662 3269
F 780 662 3929
E tofieldadmin@tofieldalberta.ca
W www.tofieldalberta.ca

May 13th 2015


Mr. Glen Lawrence, Chair
Beaver Hills Initiative
c/o Strathcona County
Planning and Development Services
2001 Sherwood Drive
Sherwood Park, AB
T8A 3W7

Dear Mr. Lawrence,

It is with great pleasure that the Town of Tofield provide the following letter of endorsement. The Beaver Hills Initiative provides a sustainable and bio economical purpose for Tofield, and the surrounding area. An endeavor such as this promotes the region from a new perspective on a worldwide scope. The opportunity for economic spinoff, tourism and environment sustainability are truly limitless through this venture.

Mayor, Council and Administration wish to thank you for your detailed presentation, and wish you every success on your pursuit in having the Beaver Hills designated as a Biosphere Reserve.

Sincerely,



Harold Conquest
Mayor
Town of Tofield



www.lamont.ca

BAG 330 LAMONT, ALBERTA T0B 2R0
Ph. 780-895-2010 Fax 780-895-2595

April 29, 2015

Beaver Hills Initiative
c/o Brenda Wispinski
2001 Sherwood Drive
Sherwood Park, Alberta
T8A 3W7

Dear Brenda Wispinski:

RE: Beaver Hills Initiative

At the April 28, 2015, Regular Council Meeting, Council of the Town of Lamont passed a motion supporting the Beaver Hills Initiative's UNESCO Biosphere Nomination. The Town of Lamont believes in living and working in harmony with nature and the need for sustainable socio-economic development.

Please feel free to contact me if you require further support.

Thanking you in advance for all the successful work completed to date.

Sincerely,

A handwritten signature in black ink, appearing to read "Sandi Maschmeyer".

Sandi Maschmeyer
C.A.O. Town of Lamont

SM/pa



The Village of Holden

Box 357
Holden, Alberta
T0B 2C0

Phone (780) 688-3928
Fax (780) 688-2091
www.village.holden.ab.ca
vholden@telusplanet.net

April 20, 2015

Mr. Glen Lawrence
Beaver Hills Initiative Chair
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Lawrence,

Re: Letter of Support for the Beaver Hills Designation as a Biosphere Reserve

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2011, the Village of Holden has strongly supported the vision, mission and guiding principles of the BHI and recognizes that Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinct landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

Don Thompson, Mayor

March 27, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Chairman

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination


I am pleased to submit this letter of support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also valuable and commendable.

Given the historical importance of the Beaver Hills to Aboriginal peoples, I am pleased that the BHI has committed to engaging the Confederacy of Treaty Six First Nations and the Metis Nation of Alberta Association to determine their support for the Biosphere Reserve nomination.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Yours truly,



Stan Rutwind, QC
Assistant Deputy Minister

SR/lj

March 6, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, Alberta
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative – Biosphere Nomination

Dear Mr. Chairman

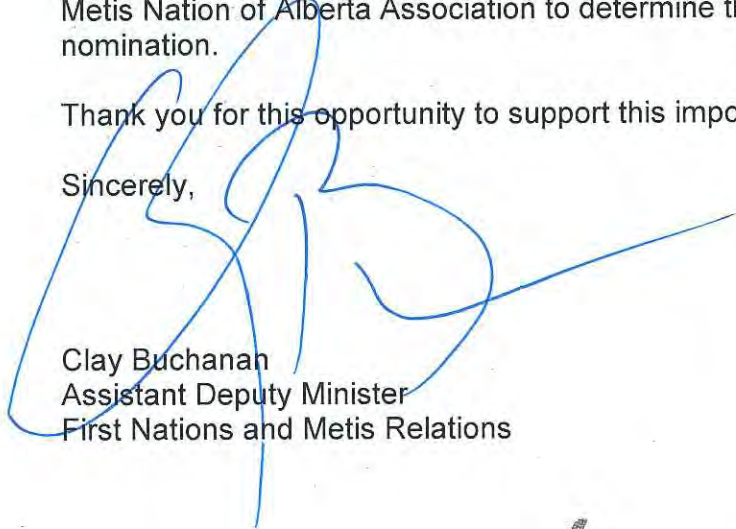
Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's (BHI) nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also valuable and commendable.

Given the historical importance of the Beaver Hills to Aboriginal peoples, I am pleased that the BHI has committed to engaging the Confederacy of Treaty Six First Nations and the Metis Nation of Alberta Association to determine their support for the Biosphere Reserve nomination.

Thank you for this opportunity to support this important internationally recognized project.

Sincerely,


Clay Buchanan
Assistant Deputy Minister
First Nations and Metis Relations



HEAD OFFICE: ENOCH CREE NATION NO. 135 P.O. BOX 270, ENOCH AB T7X 3Y3

March 23, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area's distinctive landscape, cultural heritage and history. It will provide opportunity for working together to determine future educational, research and collaborative opportunities in regards to the Beaver Hills area.

We also see the opportunity for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves as valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely

A handwritten signature in black ink, appearing to read 'Bob Small', is written over a faint background image of a beaver dam.

Bob Small
Interim Director
Confederacy of Treaty Six First Nations



Métis
Nation Of
Alberta

Office of the Provincial President

100 Delia Gray Building
11738 Kingsway Avenue
Edmonton AB T5G 0X5

Phone: 780 455 2200
Fax: 780 452 8946
Toll Free: 1 800 252 7553

www.albertametis.com

April 16, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman *Glen*

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area's distinctive landscape, cultural heritage and history. It will provide opportunity for working together to determine future educational, research and collaborative opportunities in regards to the Beaver Hills area.

We also see the opportunity for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves as valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

Audrey Poitras

Audrey Poitras, PRESIDENT
Métis Nation of Alberta



The Alberta Fish & Game Association

6924 – 104 Street Edmonton, AB T6H 2L7

Phone: (780) 437-2342 Fax: (780) 438-6872

email: office@afga.org Website: www.afga.org

Mr. Glen Lawrence, Beaver Hills Initiative Chair
c/o Corporate Planning and Intergovernmental Affairs, Strathcona County
2001 Sherwood Drive
Sherwood Park, Alberta
T8A 3W7

March 23, 2015

Re: Letter of Support - Beaver Hills designation as a Biosphere Reserve

Dear Mr. Lawrence

The Alberta Fish and Game Association (AFGA) is pleased to offer a strong letter of support for the Beaver Hills Initiative's nomination to UNESCO to have the Beaver Hills designated as a Biosphere Reserve under its "Man and Biosphere" Program.

The Alberta Fish and Game Association is one of Alberta's oldest and largest conservation organizations and can be traced back to 1908. The Association's membership now exceeds 24,000 and there are over 90 affiliated clubs distributed throughout Alberta. Our commitment is to promote through education, lobbying, and programs, the conservation and utilization of fish and wildlife, and to protect and enhance the habitat on which they depend.

The Alberta Fish and Game Association was a founding member of the Beaver Hills Initiative because our respective goals are mutually supportive and beneficial to conservation in Alberta. The Association has welcomed the on-going opportunity to contribute to the work of the Beaver Hills Initiative over the years with its commitment to ensuring that the unique landscape of the Beaver Hills, with its very significant areas of wildlife habitat, is recognized and protected for future generations. A number of the conservation sites in the proposed Beaver Hills Biosphere Reserve nomination involve the direct management of the Alberta Fish and Game Association.

The Alberta Fish and Game Association have witnessed the positive effects of the BHI towards sustaining the unique qualities of the Beaver Hills ecosystem. Consequently, the Association anticipates that the proposed Biosphere Reserve designation of the Beaver Hills will give international recognition and endorsements to what the BHI has achieved to-date and provide further encouragement to the work of the BHI in promoting a bioregional and sustainable approach to land-use planning.

Sincerely,

Wayne Lowry, President
The Alberta Fish and Game Association

cc Frank Lee



North American Waterfowl
Management Plan
*Plan nord-américain de
gestion de la sauvagine*
*Plan de Manejo de Aves
Acuáticas de Norteamérica*

March 11, 2015

To: Review Committee,

Subject: Letter of Support - Beaver Hills Initiative UNESCO Biosphere Nomination

Alberta
Agriculture,
and Rural
Development

Alberta
Environment
and
Sustainable
Resource
Development

Ducks
Unlimited
Canada

Environment
Canada

The Nature
Conservancy
Canada

The North American Waterfowl Management Plan (NAWMP) Partnership in Alberta reiterates its formal nomination support for the Beaver Hills landscape and supporting Beaver Hills Initiative (BHI) to be designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Although the AB NAWMP Partnership is not a formal member of the BHI, most of its 5 partner agencies have been since inception. NAWMP has independently designated and invested in the Beaver Hills as a continentally significant landscape owing to its abundant and diverse wetland resources. This landscape's uniqueness contrasts sharply with adjoining landscapes in that it retains much of its original wetland and associated uplands, translating into a high level of ecological function for wetland-dependent wildlife. It is a very worthy location for a UNESCO Reserve.

Equally unique is the BHI organization and its longstanding commitment to promote a bioregional and sustainable approach to land-use planning for this area. It is a vision NAWMP shares and commends the BHI in its successes.

The AB NAWMP Partnership fully endorses the BHI in its bid for Reserve status under UNESCO's "Man and Biosphere" Program.

Sincerely,


Michael Barr
Alberta NAWMP Coordinator
E: m_barr@ducks.ca
P: (780) 608-8104

abnawmp.ca

cc: Ron Bjorge, Chair AB NAWMP Board of Directors

March 28th, 2015



Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Chairman,

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Please accept this letter as a formal confirmation of my support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

I strongly supported the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

A handwritten signature in black ink, appearing to read "Glenn Jensen", is written over a large, light-colored scribble or watermark.

Glenn Jensen, Treasurer
Alberta Recreation and Parks Association Board of Directors

March 28th, 2015



Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Chairman,

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

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Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Ohnysty", is positioned below the word "Sincerely,".

Dean Ohnysty, Director at Large
Alberta Recreation and Parks Association Board of Directors

March 28th, 2015



Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Chairman,

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Please accept this letter as a formal confirmation of my support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

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Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,



Susan Laurin, Vice President (External)
Alberta Recreation and Parks Association Board of Directors

March 28th, 2015



Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Chairman,

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

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Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

A handwritten signature in black ink, which appears to read "Heather Cowie". The signature is fluid and cursive.

Heather Cowie, Vice President (Internal)
Alberta Recreation and Parks Association Board of Directors

March 28th, 2015



Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Chairman,

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

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Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ken Luck', is written over a horizontal line. The signature is stylized and fluid.

Ken Luck, Region 2 Member (Central)
Alberta Recreation and Parks Association Board of Directors

March 28th, 2015



Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Chairman,

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Please accept this letter as a formal confirmation of my support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

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Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

A handwritten signature in black ink, appearing to read "A. Clarkson", is written over the word "Sincerely,".

Adam Clarkson, Region 1 (North)
Alberta Recreation and Parks Association Board of Directors

March 28th, 2015



Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Chairman,

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

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Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

A handwritten signature in black ink, appearing to read "A. Clarkson", with a long, sweeping horizontal line extending to the right.

Adam Clarkson, Region 1 (North)
Alberta Recreation and Parks Association Board of Directors

March 28th, 2015



Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Mr. Chairman,

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Please accept this letter as a formal confirmation of my support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

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Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

A handwritten signature in black ink, appearing to be "Dan Pagely", written over a horizontal line.

Dan Pagely, Past President
Alberta Recreation and Parks Association Board of Directors

March 23, 2015



Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Dear Glen,

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

The Alberta Recreation and Parks Association (ARPA) is the professional association of parks and recreation practitioners in Alberta. Our members are found in most municipalities in Alberta and number in excess of 1,500.

Since 2002, ARPA has strongly supported the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Roma", is positioned above the typed name.

Mike Roma
President



April 21, 2015

Glen Lawrence
Chair, Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB, T8A 3W7

Re: Support for the Beaver Hills Initiative (“BHI”) – UNESCO Biosphere Nomination

Dear Mr. Lawrence,

The Canadian Parks and Wilderness Society (“CPAWS”) Northern Alberta chapter has been an active voice in conservation in northern Alberta since 1968. CPAWS Northern Alberta is a non-profit, membership-based organization dedicated to gaining greater protection for Alberta’s public lands and waters. Our work is dedicated to keeping half of Canada’s lands and waters wild, and we pride ourselves on using science-based evidence and collaborating with government, industry, and First Nations communities to find conservation-based solutions on our shared landscape.

CPAWS Northern Alberta appreciates being given this opportunity to provide support to the BHI’s nomination to UNESCO’s “Man and Biosphere” Program to have the Beaver Hills designated a UNESCO Biosphere Reserve. Please accept this letter as formal support from CPAWS Northern Alberta for this designation for the Beaver Hills.

The Beaver Hills is a unique and special area of Alberta. As part of the Dry Mixedwood Natural Subregion, it serves as a transitional zone between the southern Aspen Parkland and the northern Boreal Forest subregions of Alberta. It has been considered the most productive of the boreal subregions for wildlife, thanks to the diversity of habitats and productive shrub growth that the area provides.¹ The Cooking Lake moraine, a major

¹ W L Strong and Keith R Leggat, “Ecoregions of Alberta. Alberta Forestry, Lands, and Wildlife, Land Information Division,” *Resource Information Branch, Edmonton, Alberta, 1992.*



PO Box 52031, Edmonton, Alberta T6G 2T5
780-424-5128 x 309 • www.cpawsnab.org
Keeping Alberta Wild Since 1968

feature of the Beaver Hills, was formed during the retreat of glaciers about 9,000 years ago, and consists of over 1,500 square kilometers of “knob and kettle” terrain that supports many wetlands and small lakes. These wetlands are key breeding areas for waterfowl and other avian life. Functioning as a groundwater recharge area, the moraine transfers surface water into aquifers supplying some of the major water features of the region, including the North Saskatchewan River.

The importance of the Beaver Hills area has been known since the late 1800’s, when much of the moraine was designated a federal forest reserve. Today, the Beaver Hills contains a network of protected areas ranging in size and management intent, from the almost 200 square kilometer Elk Island National Park to the 0.025 square kilometer Antler Lake Island Natural Area. Despite current increasing land use in the area, some areas of the Beaver Hills remain heavily forested. However, the important Beaver Hills ecosystem is at risk of disappearing and requires special consideration for conservation, protection, and management, including by designation by UNESCO as a Biosphere Reserve.

During the recent land use planning processes undertaken by the government of Alberta, CPAWS Northern Alberta proposed that part of the Beaver Hills area, known as the Ministik Bird Sanctuary, be designated by the province as an Ecological Reserve. The Ministik Bird Sanctuary is an area of over 80 square kilometers of crown land that was designated a bird sanctuary in 1911. However, it has no formal legislated protection. There are limited trails and road access to the sanctuary, although private land and oil and gas developments have provided some internal public access.² The area between the Ministik Bird Sanctuary and Miquelon Provincial Park remains heavily forested and provides an important corridor for wildlife. The Ministik Bird Sanctuary falls within an Environmentally Significant Area of “International” rating, and contains nine elements of conservation concern including species such as the American white pelican, ferruginous hawk, piping plover, western burrowing owl, and northern long-eared bat.

For these reasons, CPAWS Northern Alberta supports the vision and mission of the BHI in seeking to have the Beaver Hills designated as a Biosphere Reserve. A Biosphere Reserve designation will provide international recognition and bring international attention to the importance of the area as a distinctive landscape and as habitat for sensitive species. It will also serve as an endorsement of what the BHI has achieved to-

² “Wildlife Management Plan - Ministik Lake Game Bird Sanctuary,” *Alberta Forestry, Lands and Wildlife - Fish and Wildlife Division and Ducks Unlimited Canada*, 1989.



PO Box 52031, Edmonton, Alberta T6G 2T5
 780-424-5128 x 309 • www.cpawsnab.org
Keeping Alberta Wild Since 1968

date in promoting a bioregional and sustainable approach to land-use planning, and in demonstrating the advantages of living and working in harmony with nature. This is of special importance in the Beaver Hills, which is located close to the City of Edmonton and in an area heavily impacted by agriculture, industrial activities, and residential development.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project. Should you have any questions regarding CPAWS Northern Alberta's support for the UNESCO Biosphere Reserve, please do not hesitate to contact me.

Sincerely,



Alison Ronson
Executive Director, CPAWS Northern Alberta



PO Box 52031, Edmonton, Alberta T6G 2T5
780-424-5128 x 309 • www.cpawsnab.org
Keeping Alberta Wild Since 1968



Ducks Unlimited Canada
Conserving Canada's Wetlands

March 23, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2002, Ducks Unlimited Canada has strongly supported the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature.

The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely

Perry McCormick
Manager of Provincial Operations, Alberta

edmonton fish & game association

FORMERLY - NORTHERN ALBERTA FISH AND GAME PROTECTIVE LEAGUE. EST 1920

AFFILIATED WITH THE ALBERTA FISH & GAME ASSOCIATION



"SUPPORTING MAN'S ROLE IN THE BALANCE OF NATURE"

c/o 4527 - 101 St. NW , Edmonton , Alberta , T6E 5C6
Ph. # 780 - 475-0248 email : fishandgame@shaw.ca

March 28 , 2015

Glen Lawrence , Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 - Sherwood Drive
Sherwood Park , Alta.
T8A 3W7

Letter of Support for the Beaver Hills Initiative (BHI) - Biosphere Nomination

Attention ; The Chairman

Dear Sir ;

This letter is to formally confirm the support of the Edmonton Fish & Game Association (EFGA) for the nomination to have the Beaver Hills Moraine designated as a Biosphere Reserve under the United Nations Education , Scientific and Cultural Organization (UNESCO) review and evaluation of the application put forward by the Beaver Hills Initiative (BHI) .

The Edmonton Fish & Game Association is one of the founding conservation organizations in this province , established in 1920 as The Northern Alberta Fish & Game Protective League . Since that time Fish & Game members have worked tirelessly with government departments and the public to insure that we maintain healthy fish & wildlife populations that can only exist through the availability of a healthy and sustainable environment .

Throughout the Edmonton Fish & Games history much has been accomplished in Wildlife Management issues as well as Environmental issues , recent examples would include input on the Wildlife Trust Fund and the purchasing of the Golden Ranch .

Many of our members enjoy and participate in recreations such as hunting opportunities within the Beaver Hills Moraine . Because of these interests as well as the sheer enjoyment of being able to have these natural areas to go to , Edmonton Fish & Game is in full support of designating this area as a Biosphere Reserve . We need area like this for both now and for the future . The Biosphere Designation is one way of making sure that this remains the case .

For Conservation ,

James R. Shewfelt
Hunting Chair - Edmonton Fish & Game Association

Friends of Blackfoot Society

52363 - Rge. Rd. 210
Sherwood Park , Alta.
T8G 1A6

March 26 , 2015

Glen Lawrence , Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 - Sherwood Drive
Sherwood Park , Alta .
T8A 3W7

Letter of Support for the Beaver Hills Initiative (BHI) - Biosphere Nomination

Attention to the Chairman ;

Dear Sir ;

This letter is to formally confirm the support of the Friends Of Blackfoot (FOB) Society for the Beaver Hills Initiative nomination to have the Beaver Hills Moraine designated as a Biosphere Reserve under the United Nations Education , Scientific and Cultural Organization (UNESCO) review and evaluation of the application .

We are a Not-For-Profit Society incorporated in July 1998 to act as a partner to Alberta Parks , specifically Cooking Lake / Blackfoot Provincial Recreation Area to act as a liaison for the various users and user groups of Cooking Lake / Blackfoot Provincial Recreation Area and Provincial Parks .

The FOB Society meets regularly with Parks staff & other government officials regarding management , logistical and development issues concerning Cooking Lake / Blackfoot Provincial Recreation Area .

FOB have developed an Interpretive Center and currently have an ongoing historical / educational Forest Fire Tower resurrection project being done . The Fire tower has been built and further landscaping , interpretive (historical) aspects , including the development of a trail to the actual site of the original tower are being developed .

Given the nature of the topography of this beautiful area we feel that it is important to conserve it in as much of its natural state as we can and therefore feel that the UNESCO designation of a Biosphere Reserve to this area is a very important key to making sure the area retains the natural areas it now enjoys for now and the future .

Sincerely ,



James R. Shewfelt
President - Friends Of Blackfoot Society .

February 10, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7



Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

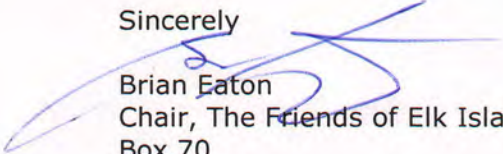
Dear Mr. Chairman

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

The Friends of Elk Island Society strongly supports the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of this distinctive landscape. Designation will also acknowledge the BHI's achievements in promoting a bioregional and sustainable approach to land-use planning and living and working in harmony with nature. The opportunity for the BHI to become an active contributor to finding solutions to environmentally significant global issues as a member of an international network of Biosphere Reserves is also very valuable and commendable.

The Friends of Elk Island Society is a grass-roots organization run by volunteers who share an interest in enjoying, understanding, and conserving nature, and in promoting positive human interactions with the natural world. The Friends take an active role in citizen science projects, leading nature-based recreational activities, and supporting research in the Beaver Hills. We thank you for the opportunity to lend our support to the Beaver Hills Biosphere Reserve nomination, and look forward to participating in this important regionally-based and soon-to-be internationally recognized project.

Sincerely



Brian Eaton
Chair, The Friends of Elk Island Society
Box 70
9920-63 Avenue
Edmonton, AB
T6E 0G9



March 27, 2015

Glen Lawrence, Chairman
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Dear Mr. Lawrence;

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Please accept this letter as a formal confirmation of Land Stewardship Centre's support of the Beaver Hills Initiative's (BHI) nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Land Stewardship Centre (LSC) is an independent, not-for-profit organization founded in 1996. LSC brings people together to work on common priorities for achieving sustainability on the landscape. We have established countless partnership relationships with all levels of government, industry and landowners over our 19 year history. At the center of this work is our ability to provide practical solutions, share knowledge and be responsive to new and emerging opportunities.

Since 2002, LSC's Board of Directors and staff have supported the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape, and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely

Brian E. Ilnicki
Executive Director



Nature Alberta

11759 Groat Road, Edmonton AB T5M 3K6

Phone: 780-427-8124 Fax: 780-422-2663

Email: info@naturealberta.ca Web: www.naturealberta.ca

Mr. Glen Lawrence
Beaver Hills Initiative Chair
c/o Corporate Planning and Intergovernmental Affairs
Strathcona County 2001 Sherwood Drive
Sherwood Park, Alberta T8A 3W7

21 March 2015

Letter of Support for the Beaver Hills Designation as a Biosphere Reserve

When the Beaver Hills Initiative submitted its first application for Biosphere Reserve designation in 2012, Nature Alberta was privileged to fully endorse that nomination process. Now under its re-submission, Nature Alberta is again proud to continue our resounding support for the Beaver Hills Initiative's (BHI) nomination to UNESCO to have the Beaver Hills designated as a Biosphere Reserve under their "Man and Biosphere" Program and to take a participating role in the work being undertaken by the Beaver Hills initiative.

Founded in 1970, Nature Alberta now represents 40 natural history and conservation related clubs across Alberta, with a total combined membership of close to 5000 individuals. These include several groups that are actively involved with outdoor and nature-oriented activities in the Beaver Hills and have become BHI partners. The creation of a Biosphere Reserve is a natural fit with Nature Alberta's vision that Alberta's natural heritage be widely enjoyed, deeply appreciated and thoroughly protected. The Beaver Hills, with its unique geology, diversity of habitat, linked parks and protected areas – combined with surrounding communities providing family livelihood and support is an optimal area to promote a sustainable biosphere environment. In this bountiful environment man and nature can evolve their best practices in areas of wildlife and habitat conservation, land-use planning, and healthy lifestyles. With the Biosphere plan, a better understanding and enjoyment of the surrounding bounties and benefits of a healthy natural environment will surely strengthen and become an example for those living within the biosphere and in the nearby urban centers. This will surely foster better appreciation and conservation of our natural heritage.

We thank the Beaver Hills Initiative group in taking the challenging leadership role in bringing a diverse community together in support of this promising and worthy proposal.

Sincerely,

Edmond (Ted) Hindmarch
President
Nature Alberta



March 23, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2002, the Nature Conservancy of Canada (NCC) has strongly supported the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

NCC will continue to support the BHI and their mission for a sustainable region, through shared indicatives and coordinated action. Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely

A handwritten signature in green ink, consisting of several loops and a long horizontal line extending to the right.

Bob Demulder
Regional Vice President
Nature Conservancy of Canada – Alberta Region





February 5, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman,

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2002, the River Valley Alliance has strongly supported the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

Larry Wall, Executive Director
River Valley Alliance

Document: 6881081



**Royal Astronomical Society of Canada
Edmonton Centre**

788, 10301 – 104 Street
Edmonton, Alberta T5J 1B9
Canada

March 25, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman,

The Royal Astronomical Society of Canada (RASC) Edmonton Centre is pleased to support the Beaver Hills Initiative's (BHI) nomination to have the Beaver Hills recognized as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program. This significant new designation will further enrich the outstanding commitment by the Beaver Hills Initiative to preserve the natural night-time environment in the Beaver Hills Dark Sky Preserve (BHDSP).

Founded in 1868, the Royal Astronomical Society of Canada is Canada's leading astronomy organization bringing together more than 4,000 enthusiastic amateurs, educators and professionals. The RASC and its Centres from coast to coast offer both national and local programming and services. The RASC is dedicated to the advancement of astronomy and allied sciences and stimulating and inspiring interest to promote and increase knowledge in astronomy and related sciences in Canada.

Since 2006, the Edmonton Centre of the Royal Astronomical Society of Canada has strongly supported the vision, mission and guiding principles of the BHI. This began with the RASC as a founding partner in the designation of the Beaver Hills Dark Sky Preserve (BHDSP). The process of establishing and developing the Beaver Hills Dark Sky Preserve has created strong, ongoing partnerships between the RASC and Elk Island National Park, Cooking Lake/Blackfoot Provincial Recreation Area, Strathcona Wilderness Centre, Ukrainian Cultural Heritage Village, Sherwood Fish and Game Ketchamoot Creek Recreation and Conservation Area, and Miquelon Lake Provincial Park. The BHI, itself formally included as a partner in BHDSP in 2014, has long been instrumental in strengthening communication between these partners by evaluating and integrating common goals.

While the Royal Astronomical Society of Canada DSP designations are primarily established to preserve pristine natural dark skies for the purpose of astronomy, the negative effects of light pollution on wildlife, fauna, human health and safety are greatly reduced when there is strong management and commitment by regional organizations.



**Royal Astronomical Society of Canada
Edmonton Centre**

788, 10301 – 104 Street
Edmonton, Alberta T5J 1B9
Canada

Through this and other initiatives, it is the RASC's objective to work toward social and legislative change that will result in more responsible lighting practices in Canada; the ultimate goal being to preserve the nighttime environment for all to enjoy.

In addition to designation as a Dark Sky Preserve, adding a Biosphere Reserve designation to the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

The RASC is proud to support this initiative to preserve both the diurnal and nocturnal environment. The night-time environment comprises half of our existence and, in the words of the great Canadian astronomer and RASC icon Helen Sawyer Hogg: "The stars belong to everyone."

Sincerely,

--
Luca Vanzella
President, RASC Edmonton Centre
<http://edmontonrasc.com>

Stewards of Alberta's Protected Areas Association (SAPAA)
c/o 7401-156 Street NW
Edmonton, Alberta
T5R 1X4

April 15, 2015

Glen Lawrence, Chair
Beaver Hills Initiative
c/o Strathcona County Planning & Development Services
2001 Sherwood Drive
Sherwood Park, Alberta T8A 3W7

Dear Mr. Lawrence:

Please accept this letter as an expression of our continuing support for the Beaver Hills Initiative (BHI)'s request for nomination as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2002, our organization, SAPAA, which provides support to volunteer stewards of provincial Protected Areas, has admired and supported the mission of the BHI. We understand the BHI's aim is to preserve a network of protected areas, both federal (centred on Elk Island National Park) and provincial, within or close to the Beaver Hills Moraine, a significant natural landscape feature and legacy of the last Ice Age. Their vision is to achieve sustainability in the region such that the biodiversity, ecosystem services and cultural and recreational opportunities provided by the Beaver Hills are preserved and benefit a surrounding working landscape of agricultural, urban and industrial uses.

For more than a decade BHI personnel have worked to characterize the environmental values of the region and to obtain the enthusiastic support and collaboration of the federal and provincial governments and the five municipalities involved. Since their first application for Biosphere Reserve designation the BHI has endeavoured to promote their objectives to a wider audience of public and aboriginal communities, recognizing that cultural acceptance by neighbours is important for managing both conserved and changing landscapes.

Sustainable land-use planning presents challenges in a province such as Alberta where economic activity is high and the human population is continually increasing. The Beaver Hills project fits well with the Province's own land-use planning framework being developed to manage such pressures. The BHI thus hopes to demonstrate solutions to local sustainability as well as to contribute to and learn from participating in the worldwide Biosphere Reserve network.

Yours sincerely,



Patsy Cotterill, President, Stewards of Alberta's Protected Areas Association



WASKAHEGAN TRAIL ASSOCIATION

P.O. Box 131
Edmonton, Alberta,
T5J 2G9
www.waskahegantrail.ca

April 12, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) Biosphere Nomination

Dear Mr. Chairman

Please accept this letter as formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2002, the Waskahegan Trail Association has strongly supported the vision, mission and guiding principles of the BHI. The Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorse what the BHI has achieved to date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. By becoming a member of an international network of Biosphere Reserves, the BHI will have the opportunity to actively contribute to finding solutions to environmentally significant global issues. This will be very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

JoAnne Burek
President, Waskahegan Trail Association

March 17, 2015

Re: Letter of Support for the Beaver Hills Designation as a Biosphere Reserve

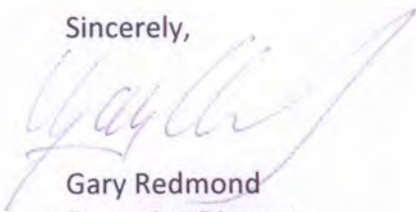
Dear Mr. Chairman,

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

The Alberta Capital Airshed, which is comprised of industry, government and non-governmental stakeholders in air quality, strongly supports the vision, mission and guiding principles of the BHI. We recognize that Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinct landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,



Gary Redmond
Executive Director

April 13, 2015

2001 Sherwood Drive,
Sherwood Park, AB
T8A 3W7

Dear Mr. Chairman:

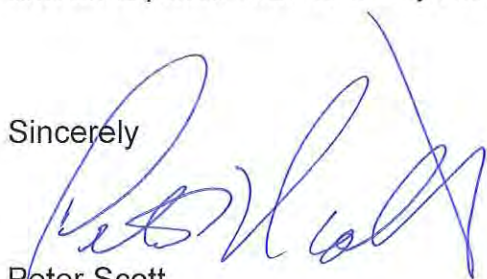
Re: Letter of Support for the Beaver Hills Designation as a Biosphere Reserve

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's (BHI) nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Strathcona County's Economic Development and Tourism Advisory Committee supports the vision, mission and guiding principles of the BHI and recognizes that Biosphere Reserve designation of the Beaver Hills will give international recognition to the area. This is important as we recognize the BHI as a distinct landscape which can provide opportunities to the Tourism operators within the BHI. Coupled with a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature, the BHI represents a wonderful area which can be utilized by residents, operators, and visitors to the area to connect scientific research, tourism operations, educational opportunities, and working landscapes in a meaningful way.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely



Peter Scott
Chairman
Economic Development and Tourism Advisory Committee
Strathcona County

Cc: Mayor Roxanne Carr, Strathcona County



March 3, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman

Please accept this letter as a formal confirmation of **the Fort Air Partnership's support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.**

Since 2002, the Fort Air Partnership (FAP) and the BHI have interacted as a result of the important connection between air quality and its impacts on non-vascular plants, such as moss and lichens. The FAP and BHI boundaries overlap to some extent, and funding was provided by FAP to BHI **in 2007 in support of BHI's involvement of the Alberta Forest Biodiversity Monitoring Program**, a monitoring program for non-vascular plants.

Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature.

The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

P. O. B O X 3 0 5 1
F O R T S A S K A T C H E W A N , A L B E R T A
T 8 L 2 T 1

FAP wishes to support BHI in this important regionally based and anticipated internationally recognized project.

Sincerely,

A handwritten signature in black ink, appearing to read 'Nadine Blaney', with a stylized flourish at the end.

Nadine Blaney
Executive Director
Fort Air Partnership

cc. Joy Wesley, Fort Air Partnership Board Chair

February 23, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Glen:

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2002, The Northeast Capital Industrial Association has strongly supported the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Regards,



Dr. Laurie J. Danielson, P.Chem.
Executive Director



WILLIAMS ENERGY CANADA ULC
600, 604 1st Street SW
Calgary, Alberta, Canada T2P 1M7
403-444-4500
403-444-4505 fax

March 3, 2015

Chairman
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood Park, AB T8A 3W7

Re: Letter of Support for the Beaver Hills Designation as a Biosphere Reserve

Dear Mr. Chairman:

Please accept this letter as formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Williams Energy Canada ULC strongly supports the vision, mission and guiding principles of the BHI and recognizes that Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinct landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

WILLIAMS ENERGY CANADA ULC



Kellie Johnston,
Environment & Corporate Responsibility Lead

KLJ/ii

R. Hodgetts
23, 26123 Twp Rd 511
Spruce Grove AB T7Y 1B9

Mar 18, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

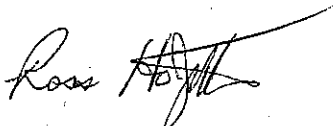
Dear Mr. Chairman

Please accept this letter as a formal confirmation of my support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2003, I have strongly supported the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,



Ross Hodgetts
Professor emeritus, University of Alberta

Augustana Campus
Camrose, Alberta, Canada T4V 2R3
Tel: 780.679.1672
Fax: 780.679.1129
acsrc@ualberta.ca
www.augustana.ualberta.ca/centres/acsrc/

April 9, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination for designation as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

The Alberta Centre for Sustainable Rural Communities (ACSRC) believes strongly in the vision, mission and guiding principles of the BHI. The ACSRC believes in resilient rural communities that hinge on informed citizens actively participating in community governance and development. This engagement is necessary in order to support and sustain the people, livelihoods, regional and local capital, economic development and long-term social viability of rural communities, communities that remain a key element of the Canadian economy, the natural environment and as home to many Canadians. The granting of Biosphere Reserve designation of the Beaver Hills will give international recognition to the area as a distinctive landscape, and will serve as an endorsement of what the BHI has achieved to-date. These achievements are particularly significant in terms of promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The ACSRC is proud to support this initiative as it will not only help to ensure the natural sustainability but also sustainability of communities throughout this region.

Thank you for this opportunity to participate in the further promotion and advancement of the Biosphere Reserves' mandate, and in the work of the BHI.

Sincerely yours,



Lars Hallstrom, PhD
Director, Alberta Centre for Sustainable Rural Communities

February 23, 2015

4901 – 46 Ave
Camrose, Alberta, Canada T4V 2R3
Tel: 780.679.1100
Fax: 780.679.1129
www.augustana.ualberta.ca

Mr. Glen Lawrence
Beaver Hills Initiative Chair
c/o Corporate Planning and Intergovernmental Affairs
Strathcona County, 2001 Sherwood Drive
Sherwood Park, Alberta T8A 3W7

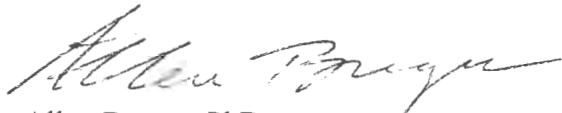
Dear Mr. Lawrence,

The University of Alberta's Augustana Campus, located in Camrose, is pleased to support the Beaver Hills Initiative's nomination to have the Beaver Hills recognized as a UNESCO Biosphere Reserve. This designation will further enrich the commitment by the Beaver Hills Initiative and Augustana to support research and education that promotes sustainable use.

Augustana is a 1100-student undergraduate campus in the liberal arts and sciences tradition of education. Augustana has strong relationships with the Beaver Hills Initiative and its partner organizations. Our campus has a Memorandum of Understanding with Alberta Parks (east-central region encompassing the Beaver Hills) that encourages research and educational activities. Professors from our campus serve on two of the BHI's working groups, one of which is charged with preparing the Biosphere Reserve nomination package. Our professors have also developed strong research programs in the Beaver Hills region that are devoted to protected area management, wetland and wildlife ecology, environmental education, and environmental history. We are establishing a research station in Miquelon Lake Provincial Park that will support research promoting the sustainability goals of the proposed Biosphere Reserve. Last, many of our students receive educational benefits from the Beaver Hills region by way of field trips, study sites, and summer employment. A Biosphere Reserve designation would undoubtedly increase opportunities for teaching and research for Augustana's professors and students.

Augustana is pleased to support this initiative to declare the Beaver Hills region a Biosphere Reserve.

Sincerely,



Allen Berger, PhD
Dean and Executive Officer, Augustana Campus

cc. Brenda Wispinski, Executive Director, BHI
cc. Guy Swinnerton, Chair, BHI Protected Areas Working Group



March 5, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman

Please accept this letter as a formal confirmation of my support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

I had the pleasure of working with the Beaver Hills Initiative a few years back on some conservation and land use planning and I was truly impressed with their strong vision, mission, and guiding principles, as well as the innovations being considered and used to address long-term sustainability. The Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

Dr. Scott Nielsen
Associate Professor, Alberta Biodiversity Conservation Chair
Department of Renewable Resources, University of Alberta
751 General Services Building
Edmonton, AB T6G 2H1
Ph: (780) 492-1656, E-mail: scotttn@ualberta.ca





Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

February 5, 2015

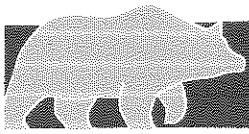
Dear Mr. Lawrence:

Central Alberta is badly in need of reference natural areas where attention is paid to the ecological and anthropogenic factors at play. The proposed Beaver Hills Biosphere Reserve Program is an excellent opportunity to ensure the discussions around land use, biodiversity, and stewardship occurs.

I currently direct a 350 acre botanic garden some 40 km southwest of the Beaver Hills and even on such a small scale see the remarkable educational potential, research activity, and public involvement that having designated land creates. Our network is a global botanic garden system; the Biosphere Reserve system speaks to larger, more diverse systems and would be a welcomed addition to Alberta to round out the variety of land uses at play while bringing the UNESCO backing to a unique area so close to the most rapidly developing region of Alberta. It is expected that 70% of Alberta's population will focus on the Edmonton-Calgary corridor with tentacles reaching east and west at the juncture with the Yellowhead Highway. This confluence borders on the BHI site so access is good and protection is paramount. The suite of land uses (urban, agricultural, national park, petroleum upgraders, rural residential) make this a natural outdoor laboratory for the evolution of exceptional planning. I strongly encourage and support the approval of the BHI initiative accepted into the Man and the Biosphere program.

Sincerely,

A. Lee Foote
Professor and Director Devonian Botanic Garden



March 12, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman

Please accept this letter as a formal confirmation of my support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

As an academic with a research program related to tourism, I appreciate the challenges of sustainable development. The Biosphere Reserve program represents an excellent mechanism for facilitating collaboration between the diverse stakeholders that exist within the Beaver Hills area. A biosphere reserve designation would highlight their shared vision that includes biodiversity, sustainable development, and urbanization. It will facilitate the on-going discussions that are needed to sustainably manage the area in a way that meets the needs and fundamental vision of all parties.

The application that your committee has developed provides compelling evidence of the unique qualities of the Beaver Hills area as a candidate for official designation as a Biosphere Reserve. On a more personal level I have found the area to be an important part of the quality of life that I enjoy as a resident of Edmonton. My children learned to ski through the programs offered at the Strathcona Wilderness Centre and my wife and I have continued to patronize this Centre for our own recreation and connection to nature. In my former position as Associate Dean for Community and International Engagement at the University, I often hosted international visitors and would often take them to Elk Island National Park. Inevitably, they have been amazed that the flora and fauna in the Park was so accessible to the residents of a large urban area like Edmonton.

The Beaver Hills region is a treasure and its designation as a biosphere reserve will help it to be managed in a sustainable way that reflects the interests of its stakeholders. Moreover, a Biosphere Reserve designation for Beaver Hills will contribute to the broader goals of global sustainability.

Best regards,

Tom Hinch, PhD
Professor



April 8, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman

Please accept this letter as a formal confirmation of my support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2006, when I moved to Alberta to assume a professorial position at the University of Alberta, I have had the opportunity to learn a great deal about the BHI and strongly support its vision, mission and guiding principles.

I research and teach in the areas of parks management and outdoor recreation provision. I have observed the importance of viable landscape-wide approaches to management that ensure effective and efficient collaboration between stakeholders. The landscape approaches to planning and management achieve goals such as enhanced community quality of life and nature conservation. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Best regards,

Elizabeth Halpenny, PhD
Associate Professor, Faculty of Physical Education and Recreation
2-130G University Hall, Van Vliet Complex, University of Alberta
Edmonton, Alberta, CANADA, T6G 2H9
Tel: 780-492-5702, Email: elizabeth.halpenny@ualberta.ca



September 12, 2012

To: Mr. Glen Lawrence
Beaver Hills Initiative Chair
c/o Corporate Planning and Intergovernmental Affairs
Strathcona County, 2001 Sherwood Drive
Sherwood Park, Alberta, Canada T8A 3W7

From: Dean and Professor Kerry Mummery, PhD
Faculty of Physical Education and Recreation
University of Alberta
Edmonton, Alberta, Canada T6G 2H9

Dear Mr. Lawrence:

The University of Alberta's Faculty of Physical Education and Recreation is pleased to support your organization's nomination to have Beaver Hills recognized as a UNESCO Biosphere Reserve.

Our Faculty has had a long-standing relationship with Beaver Hills, in terms of service, teaching, and research. For example, Professor Emeritus Guy Swinnerton has been and continues to be heavily involved in the planning aspects of this important ecological region; Assistant Professor Elizabeth Halpenny has taken numerous classroom trips to the Beaver Hills in order for her undergraduate students to learn more about parks planning and management; and Professor Gordon Walker has conducted three research studies in Elk Island National Park on visitors' motivations and environmental intentions. Two of Dr. Halpenny's PhD students are currently conducting their dissertation research in the Beaver Hills region – they are examining sustainable management in the Beaver Hills; undoubtedly other jurisdictions will be able to learn numerous lessons from this region.

In summary, I believe a Biosphere designation for Beaver Hills would be beneficial for the students and professors in the Faculty of Physical Education and Recreation, as well as for the greater University of Alberta, the city of Edmonton, and northern Alberta. The designation will provide an important context to further expand research initiatives that are designed to examine how people can live and work in harmony with nature.

Yours truly,

W. Kerry Mummery,
Professor & Dean



355 Woodvale Road East NW
 Edmonton AB T6L 5C3
 T 780-463-8108
 F 780-462-5222
 E hillview@epsb.ca
 hillview.epsb.ca

Tuesday, April 7, 2015

Glen Lawrence, Chair
 Beaver Hills Initiative
 c/o Strathcona County
 Planning & Development Services
 2001 Sherwood Drive
 Sherwood park, AB
 T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Lawrence:

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

The Grade 6 students at Hillview Shool in Edmonton, Alberta were fortunate to have a presentation on this initiative, and believes Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape.

The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,

H. Chang
Malecha
Paula Royton
Jaqueline Tyson
Wendy
Nittye Sejo
Sarah
Elijah
BALATO
Alexis
Ravneet
Daniela
Ronnie
Annie
Alycia
Ruby

Herman Chang and the Grade 6 students of Hillview School

Smreet

April 7, 2015

Glen Lawrence, Chair
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Lawrence

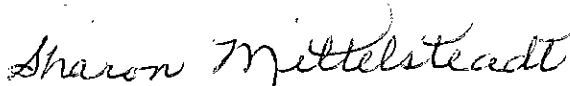
Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

The Madonna Catholic School Earth Club believes Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape.

The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely,
Sharon Mittelsteadt
Grade One Teacher and Earth Club Mentor
Madonna Catholic School
15 Main Boulevard,
Sherwood Park, Alberta
T8A 5M1





ROTARY CLUB OF NISKU-LEDUC

April 15, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman

Please accept this letter as a formal confirmation of our support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since 2002, Nisku-Leduc Rotary Club has strongly supported the vision, mission and guiding principles of the BHI. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The opportunity that is provided for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also seen as being very valuable and commendable.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely

A handwritten signature in blue ink, appearing to read "Gary Sandercock", is written over a horizontal line.

Gary Sandercock
President

March 27/15

We, Tofield Snowgeese Junior Forest
Wardens, support the designation of
Beaver Hills area as UNESCO Biosphere
Reserve.

Alina Schneider

Etienne Gagnon-Picard

Sasha Schneider

Anika Schneider

Mahon Kennedy

Nuala Kennedy

~~M Kennedy~~

Jewa Lukema

JOSEPH HILL

Jaden Hill

Jarah Hill

mam + Jenn Hill | Jenn Hill

Denise Bohaychuk
51137 RR 210
Sherwood Park, AB
T8G 1E6

Mar. 25, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative – Biosphere Nomination

Dear Mr. Chairman

We are writing to voice our support for nominating the Beaver Hills as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program, as is being proposed by the Beaver Hills Initiative.

Our family has lived in the Beaver Hills region, just east of the Ministik Bird Sanctuary, for the past 15 years. We enjoy hiking, skiing, and canoeing in the area and place a high value on the wilderness values that are maintained here. Given the loss of almost all native habitat in Alberta's Parkland Region, maintaining the oasis of wilderness that exists within the Beaver Hills is of greatest importance. The vision and sustainable approach to land-use planning that is being promoted by the Beaver Hills Initiative is therefore something we strongly endorse. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the Beaver Hills Initiative is trying to accomplish.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely

A handwritten signature in black ink, appearing to read 'D. Bohaychuk', written in a cursive style.

Denise Bohaychuk

March 31, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative (BHI) – Biosphere Nomination

Dear Mr. Chairman

Please accept this letter as a formal confirmation of my support of the Beaver Hills Initiative's nomination to have the Beaver Hills designated as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program.

Since I moved to Edmonton in 2008, the Beaver Hills area has played an important role in my life as a place to recreate in both summer and winter and as a place to experience and enjoy a unique Alberta landscape. The hummocky terrain, dotted with wetlands surrounded by upland aspen forests, is home to an incredible array of native species, including migratory waterfowl. The great diversity of species in this region reflects a unique combination of species from two of Alberta's major ecosystems: parkland species like sharp-tailed grouse and mule deer, and boreal species like black bear. These natural habitats also represent some of the best cross-country skiing, hiking and trail running central Alberta has to offer.

Together, these characteristics are in contrast to the surrounding agricultural, urban and industrial lands, where natural habitat has been reduced to smaller discontinuous patches. With soils unsuitable for farming, much of the Beaver Hills area has not been cleared or cultivated, increasing its relevance in central Alberta as a region comprised of large, relatively contiguous natural habitats. However, this landscape is under increasing pressure from development and is at risk of degradation and fragmentation of its natural features. Further compounding the influence of land use change are the challenges to ecological and community well being imposed by current and future climate change, including potentially increasing risks of invasive species and changes in the frequency and intensity of extreme weather events.

I strongly support the vision, mission and guiding principles of the BHI that bring to bear the best available data and a regional, cross-disciplinary, and coordinated approach to the challenge of balancing social, economic and ecological values to maintain the natural character of the region alongside community development. This committed, coordinated initiative is extremely well positioned to accommodate and guide land-use change in a sustainable manner, maintaining the natural integrity of the Beaver Hills, and to respond to new conservation and community planning challenges posed by a changing climate.

Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the BHI has achieved to-date in promoting a bioregional and sustainable approach to land-use planning and demonstrating the advantages of living and working in harmony with nature. The efforts and achievements of the BHI in developing their collective and collaborative approach to sustainable development are a phenomenal example that other communities and regions in Alberta, nationally, and globally can look to for inspiration and guidance. The opportunity for the BHI to become an active contributor to finding solutions to environmentally significant global issues by becoming a member of an international network of Biosphere Reserves is also extremely valuable.

Thank you for the opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely

Amy Nixon, M.Sc.

Treva Piekema
Box 4 Site 514 RR 4
Tofield, AB
T0B 4J0

Mar. 27, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative – Biosphere Nomination

Dear Mr. Chairman

I am writing to voice my support for nominating the Beaver Hills as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program, as is being proposed by the Beaver Hills Initiative.

My family has lived in the Beaver Hills region, southeast of the Cooking Lake Blackfoot Provincial Recreation Area for the past 17 years. We enjoy hiking, skiing, and canoeing in the area and place a high value on the wilderness values that are maintained here. Given the loss of almost all native habitats in Alberta's Parkland Region, maintaining the oasis of wilderness that exists within the Beaver Hills is of greatest importance. The vision and sustainable approach to land-use planning that is being promoted by the Beaver Hills Initiative is therefore something I strongly endorse. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the Beaver Hills Initiative is trying to accomplish.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely;



Treva Piekema

Richard and Alina Schneider
RR 2
Tofield, AB
T0B 4J0

Mar. 23, 2015

Glen Lawrence, Chair BHI
Beaver Hills Initiative
c/o Strathcona County
Planning & Development Services
2001 Sherwood Drive
Sherwood park, AB
T8A 3W7

Re: Letter of Support for the Beaver Hills Initiative – Biosphere Nomination

Dear Mr. Chairman

We are writing to voice our support for nominating the Beaver Hills as a Biosphere Reserve under UNESCO's "Man and Biosphere" Program, as is being proposed by the Beaver Hills Initiative.

Our family has lived in the Beaver Hills region, just east of the Ministik Bird Sanctuary, for the past 18 years. We enjoy hiking, skiing, and canoeing in the area and place a high value on the wilderness values that are maintained here. Given the loss of almost all native habitat in Alberta's Parkland Region, maintaining the oasis of wilderness that exists within the Beaver Hills is of greatest importance. The vision and sustainable approach to land-use planning that is being promoted by the Beaver Hills Initiative is therefore something we strongly endorse. Biosphere Reserve designation of the Beaver Hills will give international recognition to the importance of the area as a distinctive landscape and endorsement of what the Beaver Hills Initiative is trying to accomplish.

Thank you for this opportunity to participate in this important regionally based and anticipated internationally recognized project.

Sincerely



Richard Schneider



Alina Schneider

Document: 6881081

APPENDIX J. BHI PROTECTED AREAS COOPERATION PLAN

A Cooperation Plan for Managing Protected Areas within the Beaver Hills:
*An agreement between members of the Beaver Hills Initiative Protected
Areas Working Group*

DRAFT



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 - 3.4 Ministik Bird Sanctuary
 - 3.5 Strathcona County
 - 3.6 Nature Conservancy of Canada
 - 3.7 Ducks Unlimited Canada
 - 3.8 Alberta Conservation Association
 - 3.9 Alberta Fish and Game Association
- 4.0 Vision12
- 5.0 Challenges
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- 7.0 Goals
- 8.0 Roles and Cooperation Plan Partners
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1) Foreword

The Beaver Hills Initiative is a collaborative working group involving municipal, provincial and federal governments, private landowners, non-government groups and industry. The initiative was formed to create a sustainable region through shared initiatives and coordinated action. The Beaver Hills area is a stagnant ice moraine located east of Edmonton, Alberta, one of the fastest growing metropolis areas in Canada. Despite the fact that the area is close to a large industrial area, a large proportion of lands, both public and private, exist in their natural state.

Protected areas within the Beaver Hills include: Elk Island National Park, Cooking Lake–Blackfoot Grazing Wildlife and Provincial Recreation Area, Ministik Bird Sanctuary, Miquelon Provincial Park and many small natural areas. Beyond these, the Counties of Beaver, Camrose, Lamont, Leduc and Strathcona govern the area (Figure 1). The agency partners within the Beaver Hills Initiative hope to maintain the last remaining natural habitat corridor in east-central Alberta, to protect species in the region that are at risk or vulnerable, and maintain the viability of several protected areas.

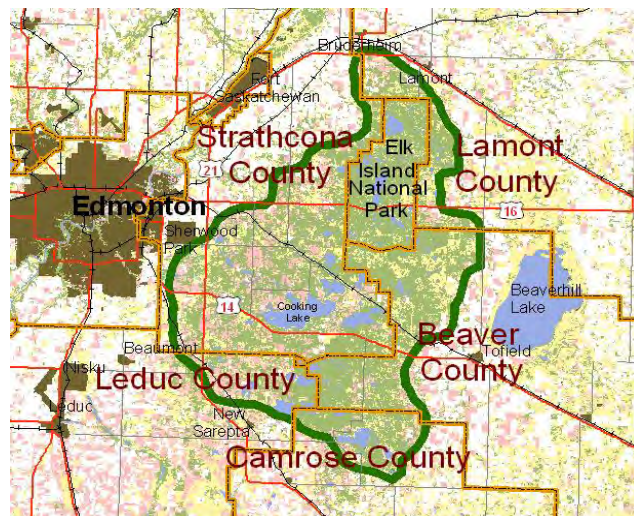


Figure 1: Beyond the protected areas, the counties of Beaver, Camrose, Lamont, Leduc and Strathcona govern the area.

Protected areas within the Beaver Hills are lands that occur in a natural state within a municipal, provincial and federal park or held by non-government groups such as Alberta Fish and Game, Alberta Conservation Association, Ducks Unlimited and the Nature Conservancy of Canada. In some cases, the lands are held by private individuals and secured through conservation easements. A protected area for the purposes of this plan is an area of land and/or water especially dedicated to the protection and maintenance of biological diversity, and the natural and associated cultural resources are managed through legal or other effective means. Protected areas therefore, include a spectrum of sites from national and provincial parks, municipal environmental reserves to private conservation easements as long as the expressed management intent and priority is to manage the site for conservation purposes. The protected areas within the Beaver Hills provide a natural feel; and these areas form part of the quality of life valued by area residents and visitors.

The Beaver Hills Initiative Protected Areas Working Group is one of several specialized working groups assembled in 2005 as part of the Beaver Hills Initiative. Members of the working group share a protected landscape management mandate to provide some or all of the following functions: environmental education

and heritage appreciation, habitat/biodiversity protection and nature-based recreation/tourism. Membership also includes an academic element to provide a board perspective.

The Beaver Hills landscape acts as a meeting ground. Nature and people have interacted to create a distinct place. The landscape provides a record of our natural and cultural history where values blend and create a sense of identity. The work undertaken by the Beaver Hills Initiative benefits the residents of the area and beyond through:

- Conservation of the currently enjoyed quality of life;
- Conservation of water and lands;
- Co-existence and balance of multiple human uses with the natural landscape;

The idea of a cooperation plan was adopted from the biosphere reserve program. There are 400 reserves across the globe, and each incorporates a variety of geographical features and human activities and demonstrates diverse conservation and sustainability approaches. Biosphere reserves are designed by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and showcase innovative approaches to living and working in harmony with nature.

The Beaver Hills area and the work done to date by the Beaver Hills Initiative fits within the principles of a Biosphere Reserve. Biosphere Reserves consists of three distinct zones: a core of protected areas, an adjacent area of country living and an outer area of cooperation where most of the residents live and work, using the natural resources of the area in a sustainable manner.

2) Introduction

The 800 km² Beaver Hills moraine is a relatively large geomorphological feature that formed when a piece of ice broke from the glacier as it retreated north. The stagnant sheet of ice then melted slowly in place gradually depositing the gravel and other unsorted soil and rock picked up by the glacier as it scraped the surface of the earth. This glacial history created a “knob and kettle” topography with numerous depressions, rich in native wetlands (figure 2) and aspen-dominated boreal mixed-wood forest habitat. The area supports a high diversity of vegetation, waterfowl, mammals and birds, and is a critical source of surface and ground water. During the settlement period the poor agricultural soil and terrain within the moraine was largely by-passed. These factors have created an area that supports native forests, grasslands and wetlands uncharacteristic of the broader agricultural landscape.

There are currently several agencies that work to protect and maintain biodiversity, natural capital, natural landscape connectivity, watersheds; and look to create nature-based environmental and stewardship education, research and monitoring, best-practices models, and tourism opportunities. However, projects involving research, restoration, interpretation, tourism and stewardship are often more successful when resources and expertise can be shared through partnerships. In this way, agencies coordinate their activities, based on a common understanding of the regional ecosystem and the role of protected areas. Another advantage to cooperation among agencies working in the same geographical area includes the implementation of conservation-oriented multi-municipal development and land-use policies which may reduce the need for ongoing negotiation, discussion and potential conflict with respect to land use issues.

What is a Biosphere Reserve?

Biosphere Reserves are areas of terrestrial and coastal ecosystems that innovate and demonstrate approaches to conservation and sustainable development by promoting solutions that reconcile the conservation of biodiversity with its sustainable use. Biosphere Reserves function to provide landscape and ecosystem conservation, to foster economic and human development that is socio-culturally and ecologically sustainable, and to provide support for research, monitoring, education and information exchange related to conservation and development (UNESCO web site).

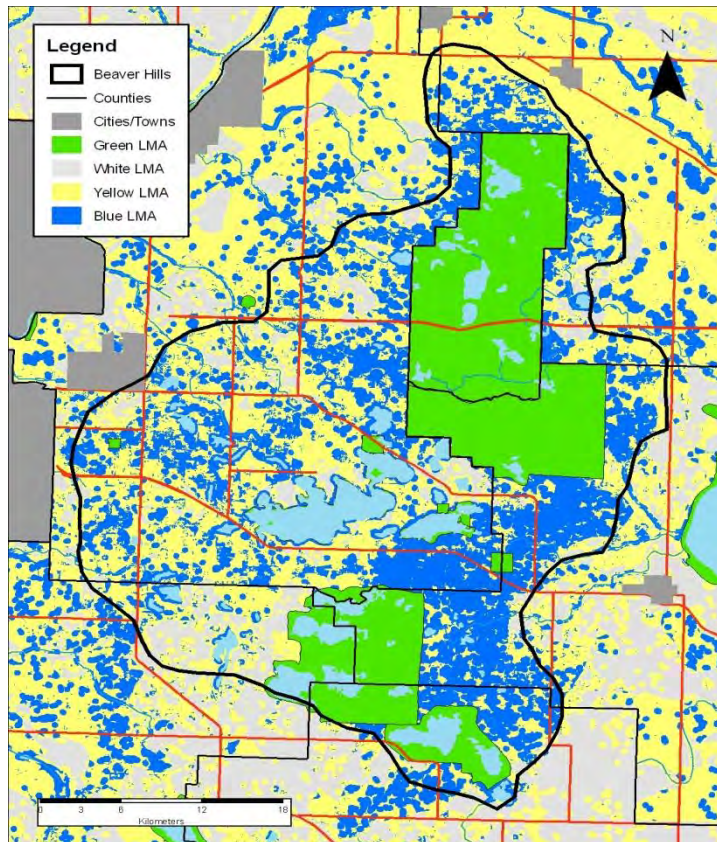


Figure 2: The protected areas are represented in green on this map, wetlands are light blue and natural forested areas are shown in blue.

Therefore, the idea of the cooperation plan is to increase the level of collaboration and coordination between member agencies. Through the cooperation plan, the Protected Areas Working Group strives to support the vision and mission of the Beaver Hills Initiative, develop cohesion and enhance the conservation and communication success of each member agency. As a result, the conservation efforts of each member agency will be more effective.

The Protected Areas Working Group members recognize that urgent action is required in the Beaver Hills area where conservation opportunities are time-sensitive and limited due to fast-paced development pressures. Unprecedented levels of cooperation between multiple jurisdictions will be required to successfully undertake the kind of coordinated and integrated landscape management that is needed to preserve the region's environmental qualities. To this end, the Protected Areas Working Group members will work together to maximize their collective conservation efficiency in order to maintain the region's natural beauty, biodiversity and quality of life.

3) Beaver Hills Protected Areas Background

This section provides background as well as an overview of the conservation mandate and function of each of the natural areas. Land use objectives and permitted uses may vary significantly between the agencies and specific sites yet the protection and maintenance of biodiversity and natural habitat integrity remains the common and underlying objective for all.

3.1 Elk Island National Park

Elk Island National Park is one of a family of over 40 national parks administered by Parks Canada. The 194 sq km park is in the northern portion of the Beaver Hills. Early in the park's history a plains bison herd was

reintroduced, and approximately 50 years later a wood bison herd was brought to the area in order to forward federal conservation goals for species at risk. Activities pursued by visitors to Elk Island National Park include hiking, camping, golfing, canoeing, kayaking, sailing, wildlife watching, picnicking, school programs, orienteering and cross-country skiing, snowshoeing, Astotin Lake Recreational Area playground activity, pleasure driving, and heritage appreciation. There are approximately 100 km of maintained trails in the park and annual visitation of approximately 200,000.

Elk Island National Park was created in 1906 as a wildlife sanctuary. It is the only National Park in Canada surrounded by an eight-foot page wire fence. The Park protects both natural and cultural heritage while recognizing ecological, social and economic factors as indicated in the 2005 park management plan as well as the *Canada National Parks Act* and a number of Parks Canada directives and policy documents. An ecosystem conservation plan is currently in place for the park and provides direction for the management of ecological integrity including the surplus of hyper-abundant elk and bison populations. A fire management plan is currently being drafted by park staff and will outline opportunities to approximate a natural fire cycle using prescribed burns.

3.2 Cooking Lake – Blackfoot Provincial Recreation Area, Miquelon Provincial Park and Five Natural Areas.

There are three distinct types of protected areas within the Beaver Hills that are administered by Alberta Tourism, Parks and Recreation. The 97 sq km Cooking Lake-Blackfoot Grazing, wildlife and Provincial Recreation Area is fenced and operates with a multiple-use recreation mandate through the *Provincial Park Act*. It is located directly south of Elk Island and in the 1880's the area was part of the Beaver Hills Timber Reserve. In 1931 the timber reserve was reduced in size and turned over to the province. Since the 1980's the area has operated with an integrated resource plan which includes grazing, wildlife protection, outdoor education and recreation. Hiking, canoeing, cross-country skiing, snowmobiling, hunting, trapping, equestrian use and mountain biking are popular activities on a 170 km trail network. A portion of the 235 Waskahagan trail goes through the provincial recreation area; this trail is managed by a volunteer association and loops from Edmonton through the Beaver Hills and back through Fort Saskatchewan.

During the 1980's approximately 32 sq km of pastures were cleared within the Cooking Lake – Blackfoot Provincial Recreation Area. Controlling the introduction and expansion of non-native and invasive species is a key management challenge that is shared by the grazing association and provincial recreation area managers. Existing commitments to the energy sector (from the time of establishment) are being honoured. However, auto-access camping facilities are not available and activities are limited to day-use with the exception of some backcountry overnight use by organized scout groups. Numerous special events are conducted annually in the recreation area; most notable is The Canadian Birkebeiner Ski Festival that typically attracts 1800 competitors and 600 volunteers each winter. Annual visitation is in the range of 150,000.

Miquelon Lake Provincial Park is located at the south end of the Beaver Hills area and was established in 1958; it also administered through the *Provincial Park Act*. The park is approximately 5 square kms (800 hectares) and its 279 site campground is a popular destination for overnight camping. The campground is an important visitor contact point for heritage appreciation and education programming. There is a 10 km trail network and recreational activities provided in the park include auto access camping, school programs, hiking, cycling, snowshoeing, cross country skiing, bird/wildlife watching, canoeing and swimming/beach activity. Annual park visitation is approximately 150,000 (60,000 campers and 90,000 day-users) and the trend is towards increased use.

Natural Areas are administered with the *Wilderness Areas, Ecological Reserves, Natural Areas and Heritage Rangelands Act*. These areas were historically established from remnant parcels of vacant Crown land that remained in a relative natural condition. Of the five Natural Areas in the Beaver Hills, the smallest is 6.25 acres and the largest is 641 acres:

- Hastings Lake Natural Area
- Edgar T. Jones Natural Area
- North Cooking Lake Natural Area
- Antler Lake Island Natural Area
- Parkland Natural Area

None of these Natural Areas have any facilities or formal trail development but they are open for public access. These locally significant natural landscapes have few or no facilities and public access tends to be random and low intensity.

3.3 Miquelon Lake Wildlands

Miquelon Lake Wildlands is a 790 acre (319 hectare) parcel of protected land that was purchased by several partners through the Alberta Sport, Recreation, Parks and Wildlife Foundation in the 1990's. This foundation is a non-profit crown corporation that provides a variety of programs to enhance activity, improve lifestyles, foster enjoyment of the outdoors and protect nature. The land was purchased for the purpose of wildlife and waterfowl conservation and is managed by Ducks Unlimited Canada. The land is managed without overnight camping or hunting and access is limited to pedestrian traffic.

3.4 Ministik Bird Sanctuary

The Ministik Bird Sanctuary was established in 1911 and is administered by Alberta Sustainable Resource Development and was the first reserve of its kind in Alberta. The sanctuary is approximately 50 sq km (8000 hectares) in size and contains a diverse array of habitat including several wetlands, grassy areas and upland forest representative of the mixed wood boreal forest. Ministik Lake is home to many threatened migratory birds such as the American white pelican and the blue heron.

3.5 Strathcona County

Within Strathcona County there are several natural areas. These include the Strathcona Wilderness Centre, Sherwood Park Natural Area, Bretona Pond and South Cooking Lake Park. During the late 1980's and early 1990's Strathcona County was involved in the *ConserAction* program with Alberta Fish and Game Association and the Alberta Department of Environment. During this period, landowners voluntarily entered into 10 year conservation management projects on their land and their efforts were recognized with "Buck for Wildlife" signs. The signs are still noticeable on the landscape and there are some ongoing conservation management practices. In 1996 conservation easements became recognized in Alberta and since that time Strathcona County has facilitated over 100 easements on approximately 800 Ha of land (Figure 3). In addition to this the county also holds environmental reserve easements and environmental reserves.

The Strathcona Wilderness Centre is located on approximately 1.4 sq km (223 hectares) and is operated by the county department of recreation, parks and culture. The mandate of this department is to generate opportunities for Strathcona County residents that enable the pursuit of healthy lifestyle choices. The Centre offers many recreational opportunities such as hiking, 12 km of cross-country ski trails, canoeing, snowshoeing, wildlife watching, orienteering and nature interpretation. It also offers school and retreat programs. There are 3 kms of maintained trail within the 0.4 sq km (65 hectares) Sherwood Park Natural Area. South Cooking Lake Park includes a boat launch, walking trails, picnic sites and

3.6 Nature Conservancy of Canada

The mission and of the Alberta Nature Conservancy of Canada is to conserve and care for Alberta's plants, animals, lands and water in order to ensure sufficient natural biodiversity exists to maintain biological functioning landscapes within the province. The Nature Conservancy works toward this mission through land purchase, conservation easements and land donations. As a result of high land prices, to date work within the Beaver Hills area has focused primarily on conservation easements. Easements are a conservation tool for landowner's who do not wish to sell their land but would like to see the land remain in its natural state.

The Nature Conservancy owns land throughout Canada and has launched a Volunteer's for Nature (VfN) program. The goal of the VfN is to engage people in the protection of Canada's biodiversity while providing a meaningful and educational experience in ecologically sensitive natural areas. Recently the Nature Conservancy identified the Cooking Lake Moraine Natural Area as one of five priority areas within Alberta. Over the next four years the objective is to secure an additional 323 Ha within the Beaver Hills area.

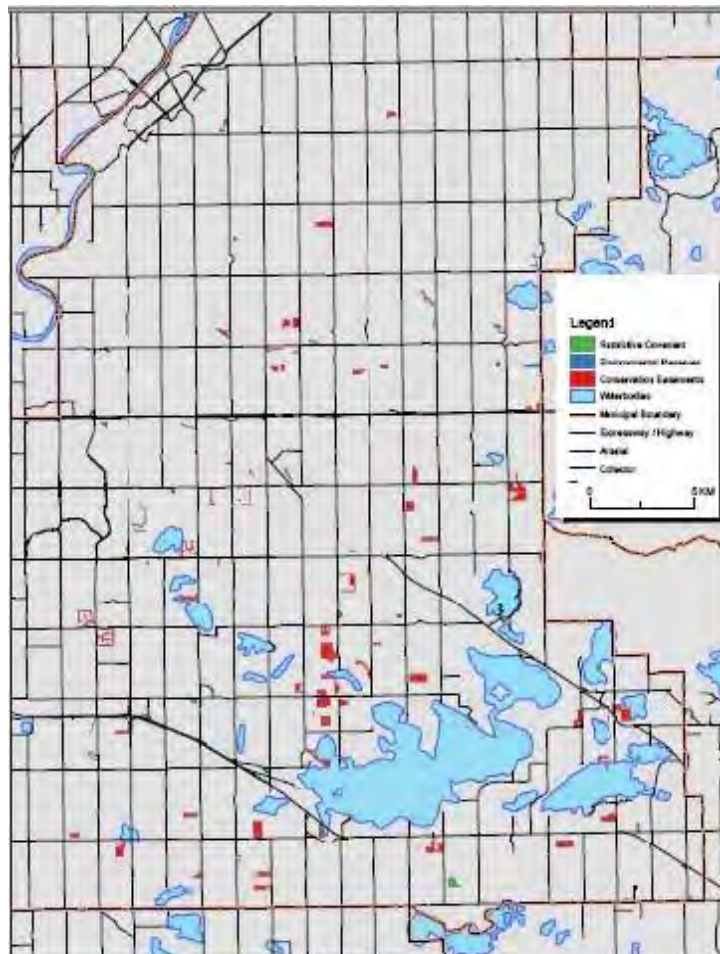


Figure 3: Map of Strathcona County with the red areas indicating Conservation Easements.

The Nature Conservancy currently owns two properties in the Beaver Hills. Public are welcome to access the land as pedestrians, however hunting is not permitted. The Campbell property is approximately 0.4 sq km (65 ha) of wetland, open tame pasture and aspen dominated uplands. The property has well-established trails. The Gray property is a similar size, 0.4 sq km (63 Ha). Both are located in Strathcona County.

3.7 Ducks Unlimited Canada

Ducks Unlimited Canada is mandated to conserve, restore and manage wetlands and associated habitats for North America's waterfowl. These habitats also benefit other wildlife and people. Ducks Unlimited is a private, not-for-profit organization that was incorporated in 1938.

In the Beaver Hills area, Ducks Unlimited has focused on partnering with private landowners who have wetlands and associated uplands on their property. Ducks Unlimited currently delivers land purchase, conservation easements and wetland restoration programs in the Beaver Hills area with a total of 35 projects that conserve approximately 4646 hectares of upland and 3600 hectares of wetland (Figure 4). Ducks Unlimited also has an extension partnership program that addresses winter cereals and woodlot management in the Beaver Hills.

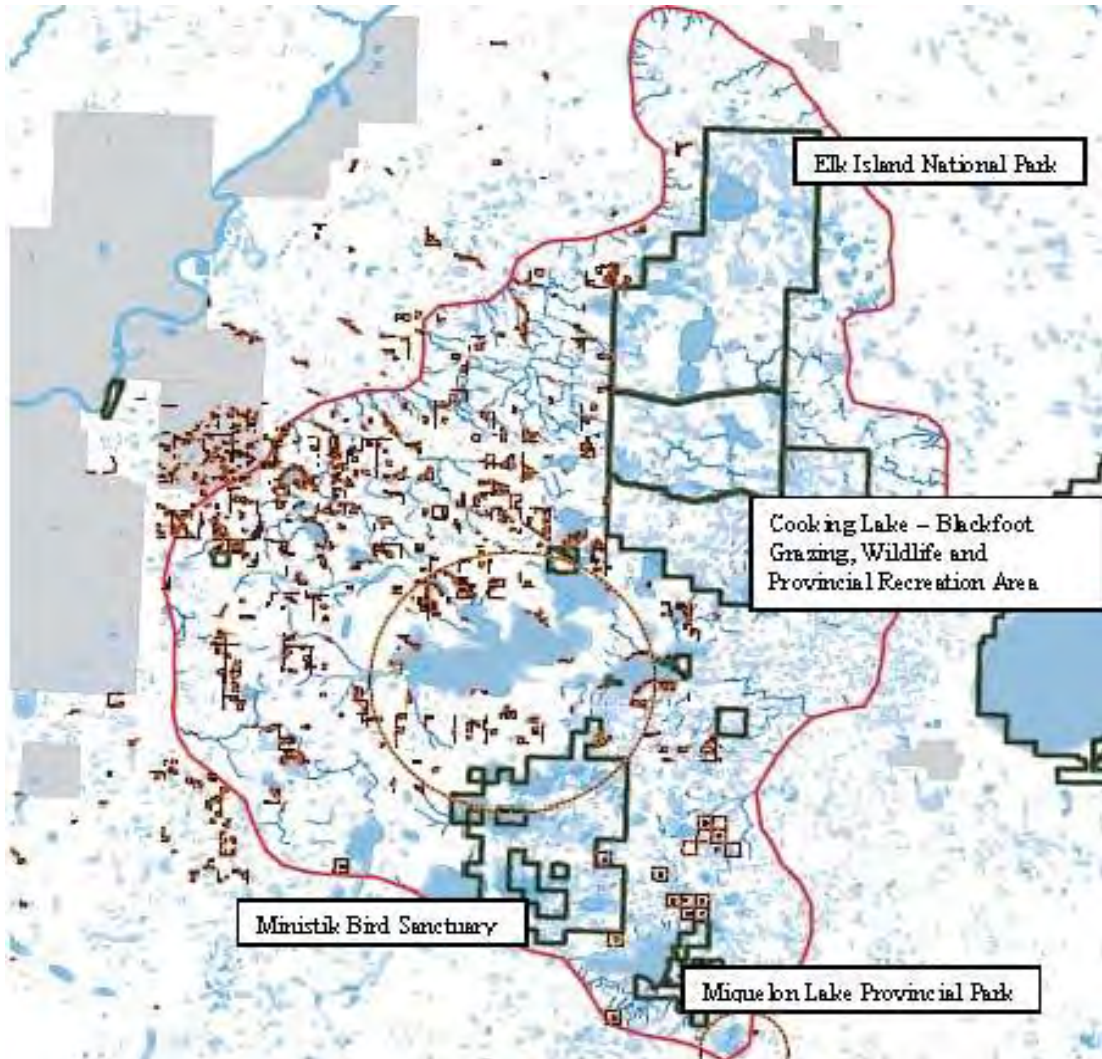


Figure 4: Map of the Beaver Hills area depicting the large protected areas including Elk Island National Park, Ministik Provincial Bird Sanctuary, and Miquelon Provincial Park. The other small green locations are Natural Areas and brown indicates conservation easements.

3.8 Alberta Conservation Association

The Alberta Conservation Association conserves, protects and enhances Alberta’s natural resources for the enjoyment of future generations. Projects, programs and services include research and data collection, hands-on project delivery in fisheries, habitat and wildlife, monitoring, analysis and evaluation, program funding, facilitation and collaboration of stakeholders and industry information and public education. The Alberta Conservation Association has been operating in Alberta since 1997 and receives revenues from the Alberta Department of Sustainable Resource Development through the sales of hunting and fishing licenses. Through the Landowner Habitat Program landowners are encouraged to retain and enhance wildlife habitat with financial incentives and 20 year contractual agreements. Currently the Alberta Conservation Association holds one conservation easement in the Beaver Hills.

3.9 Alberta Fish and Game Association

The Alberta Fish and Game Association advocates the common interests of ethical hunters, anglers and outdoor enthusiasts dedicated to responsible stewardship of Alberta’s environment. The Alberta Fish and

Game Association is a not-for-profit charitable organization that has been active since 1908 and became an Alberta Society in 1946. The Alberta Fish and Game Association promotes conservation of Alberta's natural resources, non-commercial harvest of fish and game for wildlife management programs, educational and recreational programs and activities, sound long term management of Alberta's fish and wildlife for future generations, public ownership and access to public lands, partnerships with government and industry to enhance, develop and maintain fish and wildlife habitat, and outdoor ethics and safety. The Alberta Fish and Game Association have several affiliated clubs that operate on or near the Beaver Hills. The Sherwood Park Fish and Game Association has been the most active club in the area and own 560 acres of habitat referred to as the Sherwood Park Fish and Game Association and Gun Club.

4) Vision

Life within the Beaver Hills moraine is a model of sustainability with a protected core of parks, conservation lands and natural areas, nestled within a country residential working landscape and an outer densely populated area that appreciates and respects and benefits from the natural capital of the area. Protected area managers maintain the ecological health and secure the quality of life benefits stream from these special places. Natural amenities and ecological services contribute to the health, well being and overall quality of life of residents and visitors. Through cooperation across political and cultural lines, careful planning, research, monitoring and special conservation consideration, the sense-of-place and natural landscape character will remain intact for generations to come.

5) Challenges

Nature conservation efforts in Canada continue to encounter many long-standing barriers. The National Round Table on the Environment and the Economy identified several "main systemic barriers" that commonly impede progress on conservation initiatives. Many of the barriers identified in the round table's national report, *Securing Canada's Natural Capital: A Vision for Nature Conservation in the 21st Century* (2003), are directly applicable to the Beaver Hills regional context. Most barriers to landscape-level conservation are related in one way or another to a historic lack of cooperation, coordination and collective will to take action to secure the natural capital that sustains our communities and economies. The following key barriers to progress in nature conservation were identified in the national round table's report:

- Lack of political will and accountability by governments
- Lack of conservation planning at a landscape level
- Key stewards are often not 'at the table'
- Lack of economic benefits and incentives for key stewards
- Lack of information and tools to support decision making
- Failure to integrate the true costs and benefits of nature
- Lack of financial resources to support conservation partnerships

The report also identifies a number of key challenges that specifically relate to a whole landscape approach (i.e. fully integrated land use planning):

- Conservation planning has not kept pace with other pressures on the landscape.
- Lack of coordination, integration and accountability for meeting conservation goals across government departments.
- Government departments at all levels are not working together to set conservation goals and priorities.
- Needs of local and Aboriginal communities have often been ignored.

6) Opportunities

The Beaver Hills Initiative is a collaborative initiative aimed directly at overcoming many of these key conservation barriers by organizing a forum of unprecedented cooperation and information sharing among regional stakeholders. The end goal is to vastly improve natural capital protection and management, recognizing its essential role in securing the region's future social, environmental and economic well-being.

Two broad categories of landscape protection opportunities exist in the Beaver Hills. The first is the traditional establishment of legislated parks and protected areas under provincial or federal jurisdiction. Whereas the creation of new protected areas in the Beaver Hills is neither likely nor desirable, the remaining possibility for further landscape protection by this mechanism is limited to small expansions of provincial protected areas where adjacent land might come available on the market. Land acquisition aside, the primary concern is the health and integrity of existing sites through sound management and by working with Beaver Hills Initiative partners and local residents to maintain the health and ecological function of surrounding lands.

It is in this realm of "surrounding lands" where the second category of landscape protection opportunity arises. This is the domain of non-government organizations and private citizens who employ a wide variety of innovative mechanisms to protect the ecological function and biodiversity of the working landscape. In a fast-developing landscape like the Beaver Hills, conservation on private land becomes the critical factor in determining the region's future ecological health and sustainability.

While protected areas in the Beaver Hills have had the good fortune of being ecologically connected by private lands with native cover, the future of this situation is anything but secure. Future development and conversion of these lands could quickly leave the protected areas functionally isolated, thereby diminishing long-term prospects for preserving regional biodiversity and environmental integrity. Well-placed private land conservation efforts have the potential to dramatically enhance the effectiveness of protected areas in the Beaver Hills and to improve environmental sustainability of the entire region.

In conclusion, cooperation plan partners agree that the greatest opportunities for landscape protection in the Beaver Hills are to focus on private land stewardship/conservation and the preservation of the ecological health and function of existing protected areas. It is also agreed that the group's collective success will be maximized by the strategic collaboration of Protected Area Working Group members and Beaver Hills Initiative partners.

7) Goals

Cooperation plan goals have been identified and organized around three dominant themes: biodiversity conservation, sustainable development and capacity building. These themes mirror the three priority functions that Biosphere Reserves are required to fulfil. A number of specific action items have also been identified and these have been listed under each respective goal that the action is designed to support. While the cooperation plan partners are neither bound to nor limited by the list of recommended actions, they have been identified as initial priorities that will be used to direct the development of annual action plans.

What is Natural Capital?

"Natural capital generally refers to natural assets in their role of providing natural resource inputs and environmental services for economic production. There are three main categories of natural capital: renewable and non-renewable natural resource stocks (for example, sub-soil resources, timber, fish, wildlife and water), land and ecosystems. Natural resource stocks are the source of raw materials used in the production of manufactured goods. Land is essential for the provision of space in which economic activity can take place. Ecosystems are essential for the services they provide directly and indirectly to the economy" (Securing Canada's Natural Capital, NRTEE, 2003)

Biodiversity Conservation

Maintain and enhance protected area habitat continuity and integrity

- Conduct research and/or environmental monitoring to assess the management effectiveness of existing protected areas.
- Review and assess existing and potential ecological linkages within the Beaver Hills and their connectivity to habitat beyond the immediate area (consulting with Beaver Hills municipalities).
- Identify critical threats to the biodiversity and ecological integrity of protected areas that result from land use change and land management practices in the surrounding Beaver Hills landscape.
- Identify and assess where and how potentially new “secured lands” can support and complement the role and function of existing protected areas as well as the conservation and integrated planning goals of the Beaver Hills Initiative municipalities.
- Develop an appropriate management regime for the collective and coordinated protection of all protected areas (regardless of jurisdiction) within the “urbanizing” landscape context of the Beaver Hills.
- Support and promote habitat restoration and connectivity
- Support municipalities and private landowners with restoration projects on lands identified as critical linkages or buffers.
- Participate in municipal and land use planning and support an integrated planning approach that looks at “whole landscapes”, considering the full regional spectrum of social, economic and environmental values.
- Facilitate land acquisition or establishment of conservation easements (or other tools) to restore key habitat linkages.

Sustainable Development

Promote Sustainable Tourism and Recreation

- Develop a sustainable tourism/recreation opportunity spectrum assessment (experiences and activities) of protected areas within the Beaver Hills.
- Generate “appropriate use” criteria for protected areas to guide the consistent and complementary development and promotion of recreation and tourism opportunities/activities within protected areas. (Outdoor recreation opportunities that might be complementary to, yet inappropriate inside protected areas can be directed to private land development opportunities.)
- Assess and promote the importance of protected areas and retention of the essentially natural character of the Beaver Hills to the operation of existing private/commercial tourism/recreation opportunities within the Beaver Hills.
- Initiate or participate in regional ecotourism development initiatives.
- Examine the compatibility of conservation and recreation objectives within ecological linkages (either currently or potentially protected) to determine the potential for trail development and a recreation corridor function (for example, the Waskahegan Trail)

Sustain Protected Area Contributions to Quality of Life

- Cooperation plan members will strive to ensure that the quality of life benefits provided by healthy native ecosystems will continue to be available to residents and visitors of the Beaver Hills. (Quality of life benefits derived from natural environments come in many forms that broadly include improved physical, mental, emotional and spiritual health from interacting with natural environments and clean air and water provided through ecosystem services.)

- Ensuring the long-term flow of quality of life benefits from protected area environments depends, in part, on preserving the health of surrounding lands. To this end, cooperation plan members will work with Beaver Hills Initiative partners to maximize the long-term security of this benefit stream.

Support Biosphere Reserve Designation

- Provide active support and facilitation to the Beaver Hills Initiative in the event it seeks Biosphere Reserve status and designation.
- Fulfill long-term obligations that come with being core protected area managers in a Biosphere Reserve.

Building Capacity

Provide Effective Data Management

- Collect and distribute/present research and monitoring results with cooperation plan members (and Beaver Hills Initiative members as appropriate).
- Develop compatible data management systems across all protected areas jurisdictions where collection and distribution of research and monitoring results are stored and shared.

Provide Education and Awareness

- Develop integrated education and outreach programs that promote environmental stewardship and sustainable lifestyle choices. Program delivery should be flexible and diverse (for example, delivery by Protected Area staff, community programs or teachers, in the classroom or on the Beaver Hills landscape).

Promote and Conduct Research

- Promote and facilitate post-secondary research in protected areas within the Beaver Hills, involving both the natural and social/behavioural sciences.

Promote Regional Stewardship

- Share and promote best practices in biodiversity conservation and natural capital maintenance with surrounding communities and municipalities to encourage coordinated and sound ecological management throughout the landscape.
- Promote public awareness of the concept of ecosystem services, the importance of incorporating the value of these services into land use and resource management decisions, and promote activities that maintain or restore ecosystem services whether on public or private lands.
- Promote the participation of citizens in community. Monitoring and other volunteer stewardship activities that support the viability and effectiveness of protected areas.

What are Ecosystem Services?

“The fundamental life-support services that are provided naturally by ecosystems, such as purification of air and water, detoxification and decomposition of waters, regulation of climate, regeneration of soil fertility, and production and maintenance of biodiversity.” (Securing Canada’s Natural Capital, NRTEE, 2003)

Conservation Agency Collaboration

- Cooperation plan members seek to understand and support each other in all aspects of conservation management and promotion, including planning and the delivery of tangible outcomes.

8) Roles and Cooperation Plan Partners

A) Participating Members include:

Wayne Holland – Acting Lands Program Manager, Alberta Sustainable Resource Development, Lac La Biche Area

Jeanette Brooks – Heritage Appreciation Team Leader Alberta Community Development, Parks and Protected Areas Division – Hinton

Roy Schmelzeisen – Alberta Conservation Association

Laurie Guyot – Communication Manager, Elk Island National Park

Brian Ilnicki – Industry and Government Relations – Ducks Unlimited Canada

Brad Spencen – Parkland Stewardship Program Coordinator Alberta Fish and Game Association

Terry Krause – East Central Planning Team Leader Alberta Community Development, Parks and Protected Areas Division

Jean Funk – Strathcona Wilderness Centre Strathcona County Recreation Parks and Culture

Guy Swinnerton – Professor Emeritus Faculty of Physical Education and Recreation, University of Alberta

Juanna Thompson – Land Securement Representative, Alberta Parkland Region

Brenda Wispinski – Executive Director, Beaver Hills Initiative

Debbie Kilfoyle – Ecosystem Liaison Officer, Elk Island National Park

B) There are other potential members of the protected areas working group such as watershed conservation groups and others. There is also the potential to coordinate research and actions with college, university and graduate students.

9) Tools for Coordination of Protected Area Management Activities

Through the Beaver Hills Initiative the Protected Areas Working Group has access to the support services of the Executive Director. Information and data are available through the GIS technician at Elk Island National Park. In addition the Beaver Hills Initiative has undertaken the creation of a Landuse Management Framework that has outlined and mapped land use and natural lands within the area.

10) Resources to Achieve the Priority Goals

A) **Current resources** - The Protected Areas Working Group does not operate with a budget, however there is a wealth of information and capabilities among the membership. The group could apply for grants for specific actions.

B) **Lacking resources** to achieve priority goals

11) Proposed Projects or Initiatives to Achieve the Priority Goals

A) Short-term (1-2 years): Bring the idea of a Biosphere Reserve application to the Beaver Hills Initiative Board of Directors at the October meeting followed by a presentation by the Waterton Biosphere Reserve in November. Commission an analysis of natural land lost to development within the Beaver Hills area between 1996 and 2002 and between 2002 and 2008, including calculations to account for the increase in population.

Commission a survey of eco tourism and other environmentally oriented businesses in the moraine.

B) Medium-term (3-4 years): Work toward developing a monitoring program for conservation easements within the Beaver Hills area. Create awareness and understanding at the Beaver Hills Board level and among moraine residents related to the importance of private county lands to the ecological integrity of the protected areas. Undertake a plan of interpretative programs within each of the protected areas within the moraine in an effort to create complimentary programming and build on the experiences available at each location.

APPENDIX K. BHI GOVERNANCE AND POLICIES

The principles, structure and governance of the BHI are laid out in the Land Management Framework (LMF2015) and the BHI Board (and Working Group) Policies. These documents reflect the values and principles to which the BHI members have committed in their partnership model, which include:

- Maintaining a voluntary, cooperative approach to sustainable development, with the goal of conserving the natural character of the Beaver Hills moraine through shared initiatives.
- Balancing representation among the partner organizations to ensure active participation and input from all stakeholders (three levels of government, ENGOS, academic institutions and industry). As membership expands, the BHI has rebalanced representation through a consensus based process, a consideration now under discussion relative to potential for new public and aboriginal members.
- Ensuring a deliberative and consensus-based approach to decision-making and implementation of shared initiatives, at the Working Group, Executive Committee and Board level.
- Recognizing the autonomy of partner agencies, and the critical role of municipalities and protected areas in managing the moraine, each within their own contextual constraints.
- Recognizing and facilitating the significant commitments that all partners have made to the BHI (in terms of time, resources, personnel and imitative) to further the goals of the BHI and conservation of the moraine.

Based on these principles, and in particular, the voluntary and adaptive nature of this organization, the BHI has adopted a delegated approach to leadership and accountability, such that the organizational level best able to implement an initiative can assume the lead role as needed. It has also adopted a ‘decentralized’ approach to governance and operations that encourages initiative to arise from any level of the organization. New proposals are debated within appropriate Working Groups and the Executive Committee, with final ratification by the BHI Board and financial oversight by Strathcona County. New members are welcome to join Working Groups as appropriate and any member can participate in Board discussion. As a result, the BHI membership can be fluid and is thus very adaptable to changing context, but the decision-making and accountability processes remain consistent.

The Board Policies outline roles and responsibilities of the Chair and Board of Directors, Working Groups, Executive Director and fiscal agent, as well as recommended composition of each group. The BHI organizational structure describes the functional relationships and decision-making authorities of the respective levels of organization. Consensus-based decision-making is the goal at all levels of the organization and is often successful due to the respectful debate encouraged within those groups. Failing consensus, a majority vote is required.

Board of Directors: The Board of Directors is the governing board of the BHI. The key duty of the Board is to represent the members in determining and demanding organizational performance. The Board maintains a forum for discussion and formal liaison between the BHI and its members, and develops governing policies that define the organizational mandate, governance process and the Board/Executive Director Relationship. While the Board is open to all members, representation (and voting, if required) is currently shared amount municipalities, federal government agencies, provincial government agencies, ENGOS, industry organizations

and academic institutions. Other sectors, including the public and aboriginal groups can be added to this structure to ensure that all interests can participate in decision-making.

Board Chair: The role of the Chair is to ensure the integrity of the Board's process and to represent the Board to external partners and audiences. The Chair is the only Board member authorized to speak for the Board, except when he/she temporarily delegates this authority to another person. Confirmation of delegated spokesperson authority is made jointly by the Chair and the Executive Director. The Chair (and a Vice-chair) is selected from representatives on the Board of Directors, by the Board. Currently the Chair is represented by a member of the public.

Executive Director: The Executive Director (ED) is responsible for implementing all staffing actions, operational requirements, work plan activities and fulfilling reporting requirements to the Board, including financial planning and reporting. The ED is appointed by and accountable to the Board. Performance is assessed in two areas: organizational achievement of BHI mandate and policies, and organizational operation. The ED is a non-voting member of the Board and Executive Committee and an ex-officio member of all Working Groups.

Fiscal Agent (Strathcona County): The BHI does not currently hold legal status as a not-for-profit society/corporation, which has helped to minimize perceptions of a new external influence on land management. An interim Fiscal Agent (Strathcona County) has been established by agreement among the partners, which executes the legal responsibilities of the organization. The Fiscal Agent is responsible and liable for: legal requirements and responsibilities, human resources, protection from risk (insurance), and fiduciary trust. Fiscal agency has been established through a memorandum of understanding with the Board of the BHI. Future consideration of incorporation remains open to discussion.

Executive Team: The Executive Team is a Board Working Group that serves as a coordinating body to ensure consistency of purpose, shared use of resources, communications, and timely direction on specific projects. The Executive Team assists the ED and Chair to set agendas and priorities for the Board's consideration, including information for preparing the Annual Work Plan/Business Plan and Budget. Members include all Working Group Chairs, the Board Chair and Executive Director, as well as project leads on invitation by the Executive Director.

Working Groups: Working Groups (WG) are established under the Board of Directors, but work independently from the Board, reporting to the Executive Director and the Executive Team (through their Working Group Chair). The WGs are formed as needed to address emerging issues and are responsible for coordinating data collection, information-sharing and development of innovative management approaches related to that issue, as well as building awareness, understanding and support for the activities of the BHI. Membership comprises personnel from partner organizations, or the public, whose time represents an in-kind contribution to the BHI (i.e., these are not paid staff). Any additional resources required by the WGs are approved through annual business planning cycles, and by the ED and Board. Because WGs draw from all partner agencies and the public, they are the practical facilitators of inter-agency cooperation and collaboration to advance the goals and principles of the BHI.

Beaver Hills Initiative Policies & Procedures

Approved by the BHI Board
April 29, 2015

General Policies

1.1 Amendments to Policies and Procedures

The BHI recognizes that the policies in this manual will require periodic amendments.

Procedures for amending, deleting or adding policies:

1. A policy amendment, deletion or change is submitted in writing to the Executive Director or initiated by the Executive Director.
2. The Executive Director has the responsibility of forwarding suggested policy changes to the Executive Committee, who will schedule discussion of the change on the agenda of a subsequent Board meeting.
3. Policy changes will be considered by the Board, who will approve, amend or deny all policy change requests.
4. Board approved policy additions, amendments or deletions will be administered by the Executive Director, who will have the responsibility of keeping all the Policy & Procedures updated and current.

1.2 Expenditure Approval

The BHI will require quotes and approvals on the following

- Operational expenses: Board approval required for all expenditures exceeding approved budget amounts.
- Capital purchases: Three bids or quotes are required for all capital purchases exceeding \$10,000.

Procedures for approving expenditures:

1. The Executive Director will bring forward the recommendation for approval by the Board.
2. The Board will review the recommendation and make a decision.

1.3 Contracting

The BHI will not enter into a contract that places the BHI in financial jeopardy. To maintain the confidence of the public and the membership, all contracts will be awarded against the criteria outlined in the Request for Proposal. The Executive Director will review contracts to ensure that:

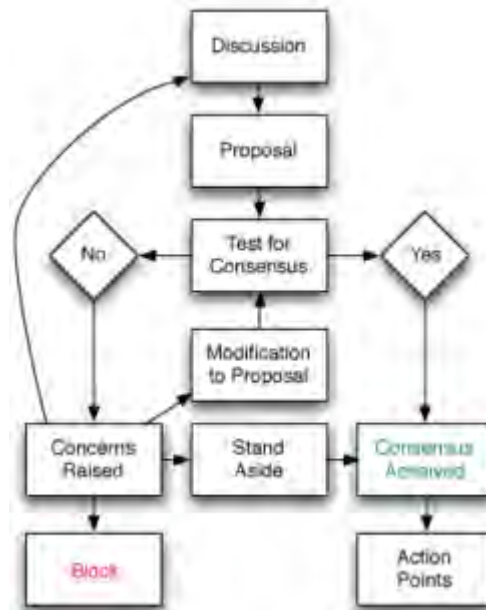
- Standard contract formats are used.
- Budgeted monies are available as outlined in the contract.
- Optional clauses are correctly outlined.

Contracts over approved budget will require Board approval.

1.4 Consensus-based Decision Making

Consensus-based decision-making is a group decision-making process that seeks the consent of all participants. Typically, each decision arising from an agenda item follows through a simple structure:

- Discussion of the item: The item is discussed with the goal of identifying opinions and information on the topic at hand. The general direction of the group and potential proposals for action are often identified during the discussion.
- Formation of a proposal: Based on the discussion a formal decision proposal on the issue is presented to the group.
- Call for consensus: The facilitator of the decision-making body calls for consensus on the proposal. Each member of the group usually must actively state whether they agree or consent, stand aside, or object, often by using a hand gesture, to avoid the group interpreting silence or inaction as agreement. The number of objections is counted to determine if this step's consent threshold is satisfied. If it is, dissenters are asked to share their concerns with proceeding with the agreement, so that any potential harm can be addressed or minimized. This can happen even if the consent threshold is unanimity, especially if many voters stand aside.
- Identification and addressing of concerns: If consensus is not achieved, each dissenter presents his or her concerns on the proposal, potentially starting another round of discussion to address or clarify the concern.
- Modification of the proposal: The proposal is amended, re-phrased or ridered in an attempt to address the concerns of the decision-makers. The process then returns to the call for consensus and the cycle is repeated until a satisfactory decision passes the consent threshold for the group.



1.5 Conflict of Interest

The BHI members and contractors will not place themselves in situations where their financial interest will benefit or conflict with those of the BHI. The BHI wishes to maintain the integrity of the organization by ensuring that all of its operations be conducted in a professional and objective manner.

Definition of conflict of interest

A conflict of interest includes a potential conflict of interest and exists when a member or employee:

- a. is themselves, party to a material contract with the BHI
- b. has an interest in; is a member of; employed by; or connected in any way, directly or indirectly with a third party that is party to a material contract with the BHI.

Procedures:

1. All conflicts of interest shall be resolved in the best interests of the BHI.
2. BHI members or employee shall report any conflict of interest, that they know of or ought reasonably to know of, as follows,
 - a. by the Executive Director to the Executive Committee
 - b. by a member of the Executive Committee to the Board Chair
3. All conflicts of interest shall be reported:
 - a. orally, as soon as is reasonable, after the conflict of interest arises; and
 - b. in written form within seven (7) days of making the initial oral report.
4. The Board Chair, acting in conjunction with the Executive Committee or the Board shall in a timely manner:
 - a. review all reports in which a conflict of interest is declared
 - b. determine whether or not a conflict of interest exists, and
 - c. decide what action, if any, is required to resolve the conflict.
5. All written reports by either the Executive Director or a member of the Board shall be forwarded the Board Chair.
6. Any conflict of interest that arises during the course of a meeting shall be reported during the meeting. Once reported, the Chair of the meeting or committee may require that the person reporting the conflict interest:
 - a. withdraw from participating in the meeting or the discussion of the issue in which they have a conflict of interest;
 - b. a conflict of interest reported during a meeting shall be recorded in the minutes of that meeting.
8. The lack of a declaration of a conflict could result in the termination of membership with the BHI as follows:
 - a. if a member, by the Executive Director;
 - b. if the Executive Director, by the Board Chair;
 - c. if a Board member, by the Board;
 - d. if the Board Chair, by the Executive Committee.

1.6 Privacy Policy

To provide services to our members and the public, the BHI may need to collect and use individual member's information. The organization will protect the privacy of individuals and will ensure that inappropriate access is prohibited.

Personal Information of BHI Members

The *Personal Information Protection Act* (PIPA) protects individual privacy by requiring the BHI to obtain consent for the collection, use and disclosure of personal information and providing individuals with a right of access to their own personal information. The collection and use of some personal information is fundamental to the BHI's operations. Personal information is any information about an individual, or is information that allows an individual to be identified.

Disclosure and Use of Personal Information of BHI Members

The BHI is responsible for all information under its control and access will be authorized only with the knowledge it is necessary for the organization or its representative to meet their responsibilities. Anyone who has access to personal information collected by the BHI must abide by this policy. Personal information will also be made available to those authorized by law to have such access. Under no circumstances shall BHI sell, trade or otherwise distribute any personal information for any other purpose than for which it was collected. Names, phone numbers and/or email addresses may be shared with BHI members to facilitate participation in programs. Email communication may be used to promote BHI events and for general communication.

The *Freedom of Information and Protection of Privacy Act* (FOIP) does not apply to private businesses, non-profit organizations or professional regulatory organizations operating in Alberta. In these cases, the *Personal Information Protection Act* (PIPA) will apply.

Accuracy

The BHI will strive to maintain accurate personal information. It is up to the individual to inform the BHI of any changes.

Storage and Protection

The BHI maintains hard copy files and electronic files of personal information in a secure manner. Personal information will be maintained only for as long as it is needed or as required by law and will be destroyed in a secure manner.

Access and Compliance

Upon written request by an individual to the BHI Executive Director, information of the existence, use and disclosure of their personal information can be accessed. Concerns or complaints about this policy or the use of personal information should be sent in writing to the BHI Executive Director.

1.7 Speaking on Behalf of the Organization

The Board Chair and/or the Executive Director or their authorized designate speaks for the organization. Authorized designate may also be delegated by the Board. The Mission and Vision of the BHI is as follows:

BHI Mission: Working together for a sustainable region, through shared initiatives and coordinated action.

BHI Vision: The Beaver Hills Initiative values the region for its natural beauty, quality of life, and supports co-operative efforts to sustain quality of water, land, air, natural resources and community development.

1.8 Representation of Affiliation

Members or contractors may not use their organizational affiliation in connection with matters or issues contrary to positions taken by the BHI. If any member or contractor is in doubt, they are asked to discuss the situation with the Executive Director and/or Board Chair. Please reference Policy 1.7.

1.9 Advocacy

Advocacy is a political process by an individual or group which aims to influence decisions within political, economic, and social systems and institutions. The BHI is not an advocacy group.

Member and Membership Policy

Purpose

The BHI believes that as a multi-stakeholder group, membership is vital to the ongoing work and growth of the organization. The Executive Director will maintain a membership list in the BHI office. The BHI needs to recognize a variety of members in order to ensure participation of a suitable range of public authorities, local communities and private interests in the development and implementation of the BHI functions. Three categories of members have been recognized:

1. organizations that participate through resources but do not provide any direct funding to the BHI
2. organizations that both participate and provide funding
3. organizations that provide funding, but do not participate

Operational Contribution

The annual operational contribution will be set by the Board based on recommendations by the Councillor Working Group (CWG).

Member Recognition

Members may be recognized in promotional materials, including, but not limited to, website, banners, organization-sponsored session or presentations.

Project Support Opportunity

The BHI values long term memberships and acknowledges short term or single project supporters.

The short term or single project support amount shall be set by the Board based on recommendations by the Research & Monitoring Working Group (RMWG) or other Working Group.

Sponsorship Level	Support Amount
Bronze (Boreal Chorus Frog)	\$0 – 1,000 annually
Silver (Beaver)	\$1,001 – 5,000 annually
Gold (Trumpeter Swan)	\$5,001 – 10,000 annually
Platinum (Bison)	\$10,001 + annually
Specific Project (Fisher)	Defined by project budget (whole or in part)
Single Donation (Damselfly)	Undefined by project budget

Procedures:

1. The Member Group (Public, Industry, Non-Government Organization, Government) in which the member shall be included will be, if applicable, determined by the Board.
2. Members are responsible for behaving in accordance with the policies and procedures of the BHI and in pursuit of the BHI's mission and vision.
3. Representatives shall be appointed by each organizational member. One individual will be designated to act as the representative of the organization at all applicable BHI meetings. Each organization shall notify the Executive Director of the name, address, telephone number, email and occupation of the representative to the BHI.
4. Any member wishing to withdraw from membership may do so upon a notice in writing to the Board through the Executive Director.
5. Any member may be expelled from membership by the Board, for any reason deemed by the Board, to be injurious to, or at odds with, the objectives of the BHI.

Board Related Policies

2.1 Board Members

The Board shall have full control and management of the BHI. The Board shall meet as often as may be required, but at least once every three months.

2.2 Quorum

Quorum is defined as the minimum number of members necessary to conduct the business of the group. Typically, quorum is described as a proportion of the total number of members. It may be “a majority”, which is a half of the total plus one, or a “special or qualified majority”, such as two-thirds of the total. Board quorum will constitute half of the total members plus one. If quorum is not met at a Board meeting, decisions can be made via email to the Board to determine if there are any Blocks (refer to Policy 1.4). Quorum is required to finalize decisions. A meeting can be held without quorum.

2.3 Meeting Protocols

The BHI has set out procedures for meetings to ensure they are efficient and effective.

Agendas

The draft agenda for Board meetings will be sent to all Board members prior to the meeting. All members shall read the agenda and any attachments prior to the meeting. In this way, proper consideration can be given to all matters of the Board at the meetings. The agenda and supporting documentation will be sent to the Board members five (5) days prior to the Board meeting.

Time and Place

Board meetings will be set for an acceptable time on a regular basis. A location for all meetings will be arranged in advance. Any changes in meetings date, time or venue need to be forwarded to all Board members as early as possible. The Working Group members will set Working Group meetings for an agreeable time on a regular basis.

Participation

All members are encouraged to actively participate in meeting discussion. In the interest of achieving the best results possible, all members are encouraged to seek to understand before seeking to be understood during discussions. Members bringing recommendations or motions to the Board should be prepared to provide background information and answer questions to give clarification.

Procedures

A consensus model will be used for decision-making (refer to Policy 1.4).

Meeting Minutes or Reports

Board and/or Working Group minutes, should be prepared and distributed in a timely manner to the identified distribution group. Copies of all reports and meeting minutes are maintained by the Executive Director and stored at the BHI office (Strathcona County Electronic Business Records Tool).

2.4 Board Chair and Vice Chair

The Board will elect one Chair and one Vice Chair with staggered terms of 2 or 3 years. Elections shall occur in November. The election shall follow the rules and procedures of an organizational meeting (as per Roberts Rules).

Financial Management

3.1 Accounting

The BHI will use an accrual basis of accounting that recognizes revenues when they have been earned and expenses when they have been incurred.

3.2 Financial Statements

Financial statement will be audited within the processes of Strathcona County.

3.3 Cheque preparation and mailing

The BHI will prepare and mail cheques for vendor payments within 30 days after the invoice date. The Executive Director, as well as one other member of the Executive Committee, will approve all expenses.

3.4 Expense reimbursements

Expense reimbursement requests for the Executive Director will be approved by the Board.

3.5 Financial Reports

The Executive Director will prepare and distribute monthly financial reports to the Board.

3.6 Financial planning and budgeting

The BHI will ensure there are budgets developed prior to the start of a new fiscal year (January 1).

The BHI will engage in a budget planning process prior to the end of the fiscal year to be approved by the beginning of the next fiscal year with input from the Working Group Chairs and other relevant individuals.

To ensure that the BHI continues to exist and stays financially sound, the Executive Director shall develop the budget, based on the mission, the Board's priorities, and the organization's long-term plan. Budgets will not place the organization in financial jeopardy, and will show acceptable levels of foresight.

1. Budgets will provide:
 - a. Enough detail to give reasonably accurate projections of revenues and expenses.
 - b. Separation of capital and operational items.
 - c. Appropriate detail for the annual fiscal audit.
 - d. Disclosure of planning assumptions.
 - e. Annual budgets will not plan to expend more funds than are conservatively projected to be received.
 - f. Budgets must be based on Board-stated priorities and on a long-term administrative plan.
 - g. Budgets must be submitted for approval a minimum of one month before the fiscal year end.
 - h. All unbudgeted expenditures must be pre-approved by the Board.

Procedures:

- a. The Board gives the intent and regulations to the Executive Director to develop the budget.
- b. The Working Groups will have input into the budget to ensure that objectives will be financially supported.

3.7 Purchasing policies

See Contracting Policy 1.3.

3.8 Records Retention

The BHI will retain records as required by law and destroy them using secure methods when appropriate.

3.9 Risk management

It is an absolute necessity that an effective back-up system for computer files is maintained and adhered to without exception; lack of effective back-up could result in an expensive and time-consuming reconstruction.

The financial records will have a back-up saved in two separate files on the computer and server and on a method that is removed from the computer, i.e. Off-site storage or the cloud.

Beaver Hills Initiative Board Members

4.1 Area of Responsibility

The Beaver Hills Initiative (BHI) Board Members (Board) is the governing board of the BHI. On behalf of its members, the Board is responsible for ensuring that the BHI be guided by its vision and mission, achieves the Business Plan goals and operates within its policies and procedures.

4.2 Key Duties

- a) Provide direction and make decisions on behalf of the members of the BHI.
- b) Implement the Business Plan.
- c) Implement the Governance Policies.

4.3 Composition

The Board is composed of representatives of local, regional, national, public, and community interest groups (Refer to Appendix A).

Beaver Hills Initiative Chair

5.1 Area of Responsibility

The role of the Chair is to ensure the integrity of the Board's processes and to represent the Board to external members and audiences. The Chair is the only Board member authorized to speak for the Board, except when he/she temporarily delegates this authority to another person. Confirmation of delegated spokesperson authority will be made jointly by the Chair and the Executive Director, verbally or in writing.

5.2 Key Duties

Ensure that the BHI Board complies with its policies and procedures, communications protocols, and business plan schedule of activities.

- a) During Board meetings, the Chair will ensure:
 - Discussions and information provided are on task.
 - Consensus-based decision making is followed.
 - Minutes are taken as assigned and sent to Board Members along with next meeting materials prior to the next Board meeting.
- b) The Chair has authority to make reasonable interpretations of Board policies and procedures and Board-Executive Director relationship, with the exception of (a) employment or termination of an Executive Director and (b) instances where the Board specifically delegates portions of this authority to others.
- c) The Chair has no authority to supervise or direct the Executive Director.
- d) The Chair may represent the Board to outside parties in communicating Board-stated positions or information.
- e) The Chair may delegate spokesperson authority, by joint decision with the Executive Director, but remains accountable.
- f) The Chair shall be an ex-officio member of all Working Groups of the Board and has signing authority on behalf of the BHI as well as the Executive Director.

5.3 Composition

The BHI Board Chair will be selected from the Board, along with a Vice-Chair who will serve in the absence of the Chair or as otherwise required.

Beaver Hills Initiative Executive Director

6.1 Area of Responsibility

The Executive Director is accountable to the Board. The Executive Director is responsible for implementing all staffing actions, operational requirements, work plan activities and fulfilling reporting requirements to the Board. The Board will review the Executive Director performance annually in alignment with Strathcona County's Performance Planning and Review. This may include feedback opportunities such as questionnaire, 360 review, and/or one-on-one sessions. Consequently, the Executive Director responsibilities are stated as performance in two areas:

- a) Organizational achievement of vision and mission and Business Plan implementation.
- b) Organizational operation and compliance with policies and procedures.

6.2 Key Duties

The Executive Director will ensure compliance with Board policies and procedures, the Business Plan, Vision, Mission, and Guiding Principles. The Executive Director will implement operational requirements under advisement of the Board, and follow instructions outlined in communications and directives from the Board.

- a) The Board will develop an annual work plan with the Executive Director to achieve targeted outcomes and the Business Plan. Within the work plan, specific projects may be identified which include detailed requirements with specific timelines in order to satisfy requirements of the Business Plan.
- b) The Executive Director will be expected to exercise reasonable, ethical and sound judgment in daily operational requirements, and in achieving the Business Plan.
- c) The Executive Director will prepare an annual budget reflecting financial requirements, project costs, and other resource requirements of the annual work plan.
- d) The Executive Director will prepare project reports or contract milestones at Board meetings.
- e) The Executive Director is a non-voting member of the Board, is an ex-officio member of all Board Working Groups and has signing authority on behalf of the BHI.
- f) The Executive Director may act a delegated spokesperson for the Chair of BHI, when required to do so, and in joint agreement with the Chair.
- g) The Executive Director reports to the Board through the Board Chair.

6.3 Composition

The BHI Board will appoint the Executive Director who will be employed under the terms laid out in the Fiscal Manager Memorandum of Understanding. As the Executive Director is a Strathcona County employee, a contingency plan for coverage will be in place if circumstances require an Acting Executive Director.

Beaver Hills Initiative Fiscal Manager

7.1 Area of Responsibility

The Fiscal Manager (Strathcona County) will execute the legal responsibilities of the organization. The Fiscal Manager is responsible and liable for:

- a) Legal requirements and responsibilities
- b) Human resources
- c) Protection from risk (insurance)
- d) Fiduciary trust

7.2 Key Duties

The Board will enter into a memorandum of understanding with the Fiscal Manager. The duties of the Fiscal Manager will be to:

- a) Provide legal authority and administrative processes to receive, hold, and expend funds
- b) Conduct all staffing actions, and provide timely and accurate payroll and benefits to staff
- c) Own property, as required, on behalf of the BHI

- d) Account for and regularly report on all income, expenditures, assets and liabilities related to BHI including audited financial statements
- e) Extend risk protection to the activities of the BHI

The Fiscal Manager acts on behalf of the BHI. The Fiscal Manager does not direct the expenditure of money or the activities of the Executive Director.

7.3 Composition

The BHI Board has agreed that Strathcona County will act as the Fiscal Manager for the BHI and enter into a memorandum of understanding that clearly outlines roles, responsibilities, timelines and limitations of the agreement.

Beaver Hills Initiative Executive Committee

8.1 Area of Responsibility

The Executive Committee is a Board Working Group that serves as a coordinating body to ensure consistency of purpose, shared use of resources, communications, and timely direction on specific projects which will assist the Executive Director and Chair to set agendas and priorities for Board consideration.

8.2 Key Duties

The Executive Committee will assist the Executive Director and Chair to:

- a) Set Board meeting agendas
- b) Establish priorities for Board consideration
- c) Coordinate activities of Working Groups
- d) Provide information to the Executive Director in preparing the annual work plan, Business Plan and budget.

8.3 Composition

The Executive Committee will be composed of:

- a) All Working Group Chairs
- b) Board Chair
- c) Executive Director

Beaver Hills Initiative Working Groups

9.1 General for All Working Groups

- a) The Board is the governing board of the BHI. On behalf of its members, it is responsible for ensuring that the BHI achieves its Business Plan goals and objectives, vision, mission and guiding principles operating within its governing policies and procedures.
- b) The Working Groups are established under the Board. The Working Groups will work independently from the Board, reporting regularly to the Board.
- c) The Chair of the Working Groups will provide updates on activities at scheduled Board meetings and Executive Committee meetings as required. The Chair of the Working Group forms part of the Executive Committee.
- d) Resources for activities of the Working Group will be in-kind time and approved funding through the Business Plan, Executive Director and the Board.
- e) The Working Groups will establish annual work plans and adjust priorities as required.
- f) The Working Groups will maintain a flexible membership policy to enable the addition of new members who share the mission and vision of the BHI and the Working Group. New member invitations will be considered and approved through a consensus among the existing Working Group members. The intent is to introduce new members to the BHI via a Working Group assignment.

- g) The Working Groups will comply with Policies 1.4 and 2.2 regarding consensus-based decision making and quorum.

9.2 Area of Responsibility

- a) Co-ordinate, update, and make data and information available to members as directed by the overall Business Plan, Board and subsequent Working Group work plans.
- b) Build awareness, understanding and support for the activities of the BHI.
- c) Strive to apply leading edge concepts, innovative and science-based approaches, and adaptive management based on the best available information to establish an understanding and appreciation of the ecological integrity and landscape character of the Beaver Hills to achieve a bioregional approach to sustainable development.
- d) Build on the foundation of Vision, Mission, and Guiding Principles approved by the Board.
- e) Optimize inter-agency cooperation and collaboration to advance the goals and principles of the BHI.

9.3 Key Duties

- a) Support the Board in the fulfillment of its responsibilities.
- b) Work with consultants when required, understanding that the project management is the responsibility of the respective Working Group Chair and/or the Executive Director.
- c) When requested by the Board, to undertake in-depth analyses of specific planning related issues and to report on the implications and alternative options for addressing these issues.
- d) Actively support and pursue fulfillment of the BHI's three Mandates and Activities:
 - Data and information sharing
 - Land Management Planning and Strategic Planning; and
 - Membership Building.
- e) Develop and implement management programs/activities that advance the BHI Vision, Mission and Guiding Principles.
- f) Increase basic knowledge, understanding, and appreciation of the Beaver Hills' unique landscape and the life it supports.
- g) Provide an advisory role for all members and stakeholders with respect to advancing natural and social science-based land-use planning, and landscape management policies and practices.
- h) Work collaboratively with other Working Groups, organizations and agencies to expand the BHI membership and advance the BHI Vision and Mission.
- i) Each Working Group Chair may speak or act on behalf of the Board when formally given such authority for a specifically defined purpose.
- j) Individual members will fully maintain their jurisdictional autonomy and are not expected to work outside the scope of their respective mandates.
- k) Working Group members are free to initiate their own projects and undertakings for the individual or mutual benefit of its member organizations. Project proposals initiated from within Working Groups will be presented to the Research and Monitoring Working Group, or other relevant Working Group, and evaluated using the Matrix process (refer to Appendix B) or other similar evaluation method. Results will be brought forward to the Executive Committee and then Board for review and endorsement.

9.4 Composition

Working Group memberships are comprised of the organizations that have significant land bases and programs within the Beaver Hills, expertise, research, interest, knowledge and desire to share a mandate to provide some or all of the following functions: environmental education, research, conservation, nature-based recreation/tourism and/or heritage appreciation services, planning policy recommendations, GIS and land management. Membership also includes an academic element to bring leading-edge protected areas management theory into the Working Groups dynamic.

Planners Working Group (PWG)

10.1 Outcomes

- a) Completion and implementation of a land use planning framework that:
 - Recognizes and protects the distinctive qualities and essential character of the Beaver Hills' environment and landscapes;
 - Supports and complements the role of protected areas in maintaining the diversity of landscape types and habitat, and associated species and ecosystems throughout the Beaver Hills; and
 - Protects and enhances the natural, social and economic capital of the Beaver Hills.
- b) Innovative development where the type, size, design and location is in harmony with:
 - The social, economic and cultural fabric of the communities concerned;
 - The environmental and ecological capacity of the area; and
 - The distinctive character of the Beaver Hills
- c) Provide an advisory service to members and stakeholders concerning land use planning, policies and practices that contribute to the objectives of the BHI.
- d) Community collaboration and participation when requested.
- e) Coordinated, consistent and complementary messaging (internal and public) among the participating organizations and through organization resources.
- f) Opportunities for local residents and visitors to appreciate, interact, and connect with nature through coordinated planning and programming involving all relevant organizations and stakeholders of the Beaver Hills.
- g) Scientific and educational activities, which contribute to the long-term well-being of residents and to the development of public support for environmental protection of the Beaver Hills.
- h) Activities and employment opportunities appropriate in type and scale to the essential qualities of the area bring benefits to the area, and contribute to the social and economic viability of the Beaver Hills.

10.2 Composition

The BHI Planners Working Group may be composed of members from all interest groups.

Communication and Outreach Working Group (COWG)

11.1 Outcomes

- a) Involvement of community collaboration and participation as needed.
- b) Coordinated, consistent and complementary messaging to the public among the participating organizations and through organization resources.
- c) Information in the form of website, newsletters, brochures, presentations, posters, coordinated with Board and Working Groups and delivered to the public and internal stakeholders.
- d) Coordinated, consistent and project specific messaging and information developed and delivered to the Board and Working Groups through the website, minutes, agendas, Business Plan, Board policies and procedures, and presentations.
- e) Coordinated planning and programming involving all relevant organizations and stakeholders of the Beaver Hills and opportunities for local residents and visitors to experience, appreciate, interact, learn and connect with nature occurs.
- f) Participation and initiation of celebrations, conference and events around the conservation and enhancement of biodiversity values that reflect and integrate the natural and cultural history of the Beaver Hills.

11.2 Composition

The BHI Communications and Outreach Working Group may be composed of members from all interest groups.

Councillor Working Group (CWG)

12.1 Outcomes

- a) Coordinated, consistent and complementary messaging (internal and public) supporting the BHI Vision, Mission, Guiding Principles, and Business Plan.
- b) Policy outcomes promoting the retention and enhancement of the ecological health, integrity, biodiversity and character of the Beaver Hills.
- c) Policy and Procedure implementation.
- d) Annual assessment of Membership fees.

12.2 Composition

The BHI Councillor Working Group will be composed of elected officials from municipal members.

Protected Areas Working Group (PAWG)

13.1 Outcomes

- a) The retention and enhancement of the ecological health, integrity, diversity and character of the Beaver Hills.
- b) The promotion of appropriate development (design and location) that is harmonized with the ecological features, function and aesthetic and cultural character of the Beaver Hills.
- c) Promote community collaboration and engage in participation processes to support the objectives of the Protected Areas Working Group and the BHI.
- d) Support the balanced integration of and environmental, social, and economic values that support sustainable conditions for all individuals and communities (e.g. vigorous and healthy human communities, a wealth of natural capital, robust environmental communities providing a range of ecological goods and services etc.).
- e) The establishment of landscape linkages that secure the ecological connectivity between core protected areas within the Beaver Hills and between the Beaver Hills and surrounding regional habitat.
- f) The protection and celebration of biodiversity values that reflect and integrate the natural and cultural history of the Beaver Hills.
- g) Coordinated, consistent and complementary messaging (internal and public) among the participating organizations.
- h) The delivery of a range of opportunities for the public to interact and connect with nature through a combined and coordinated planning and programming effort of protected area organizations in the Beaver Hills.
- i) Examine, support and promote the development of a spectrum of recreation and tourism opportunities that are in keeping with the ecological capacity and landscape character of the Beaver Hills and the principles of the BHI.

13.2 Composition

The BHI Protected Areas Working Group may be composed of members from all interest groups.

Research and Monitoring Working Group (RMWG)

14.1 Outcomes

- a) Contribute to community collaboration and participation when requested.
- b) Participate in opportunities for local residents and visitors to appreciate, interact, learn, experience and connect with nature through coordinated volunteer science based research projects.
- c) Scientific and educational activities, which contribute to the long-term well-being of residents and visitors population and to the development of public support for the environmental protection of the Beaver Hills.
- d) Activities and research opportunities that reflect and support the essential qualities of the Beaver Hills region and contribute to the social, ecological and economic viability of the Beaver Hills.

14.2 Outcomes - GIS

- a) Data integrity is ensured through standardized methods of data collection, management, analysis, and dissemination.
- b) Timely and relevant geographic information about the status and trends of the Beaver Hills is available and accessible by the members of the BHI and the public to support land use decisions.
- c) GIS advisory and technical support services are available to the members of the BHI community.

14.3 Composition

The Research and Monitoring Working Group may be composed of members from all interest groups.

Board Members (2015)

Interest Group	Member Group	Authorized Representative
Local	Beaver County	1
	Lamont County	1
	Leduc County	1
	Strathcona County	1
Regional	Alberta Government (Agriculture and Rural Development, Environmental and Sustainable Resource Development, Municipal Affairs, Culture and Tourism)	2
	Research Organization (Alberta Innovates Technology Futures)	1
	Academia (University of Alberta Main Campus, Augustana Campus)	1
	Industrial (to be determined)	n/a
National	Elk Island National Park, Agriculture and Agri-Food Canada	2
Public	Resident, Volunteer, Friends of Elk Island Society, Friends of Cooking Lake, Treaty 6 First Nation, Metis Nation of Alberta	1
Community	Non-Government Organizations (Alberta Fish and Game Association, Alberta Lake Management Society, Beaver Hills Dark Sky Preserve, Ducks Unlimited Canada, Edmonton and Area Land Trust, Land Stewardship Centre of Canada, Miistakis Institute, Nature Conservancy of Canada, North Saskatchewan Watershed Alliance, Royal Astronomical Society)	3
TOTAL		13

Beaver Hills Initiative Stewardship Engagement Strategy 2012-2015



Draft completed by the interim Stewardship Engagement Working Group on December 5, 2012.

Foreword

This document, the *Beaver Hills Initiative Stewardship Engagement Strategy*, was initially developed by Dr. Alistair Bath, of Bath and Associates, on April 30, 2012. The initial document was based on the outcomes of a series of workshops facilitated by Dr. Bath from November 2011 to May 2012 at the Strathcona Community Centre, Sherwood Park, Alberta. The objectives and outcomes of these workshops are summarized in this document, as well as the draft *Stewardship Engagement Strategy*, which is rooted in the outcomes of the workshops. The initial *Strategy*, proposed by Dr. Bath, has been modified by an interim Stewardship Engagement Working Group (SEWG), whose members are listed below. The SEWG would like to thank Dr. Bath and his colleagues for developing the first draft of the *Stewardship Engagement Strategy*, as well as all those who participated in the workshops.

Interim Stewardship Engagement Working Group:

Jean Funk, Strathcona Wilderness Centre
Marg Reine, Edmonton and Area Land Trust
Michelle Riopel, Land Stewardship Centre of Canada
Brad Marshall, Alberta Parks
Maureen Shenher, Parks Canada
Brenda Wispinski, Beaver Hills Initiative
Brian Eaton, Alberta Innovates – Technology Futures
Katrina Jansen, Alberta Innovates – Technology Futures

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1. Executive Summary of Biosphere Reserve Facilitated Workshop Series

1.1 Introduction

The Beaver Hills is a geographic area in eastern Alberta that has remained in much of its natural state. However, similar to many parts of Alberta, the Beaver Hills is experiencing increasing land use pressure from recreation, urban and rural residential development, industry and agriculture. Balancing these current and potential uses with the natural environmental and ecosystem values of the area is becoming an increasing challenge for decision-makers. In 2000, a group of individuals from various organizations including municipal, provincial and federal governments, industry, non-government organizations and academia formed the Beaver Hills Initiative (BHI) with the goal to help managers balance the social, economic, environmental, heritage and cultural values of the area. The BHI has been working toward creating a sustainable region, and most recently has been exploring possible international recognition as a Biosphere Reserve under the Man and Biosphere Program (MAB) of the United Nations Education, Scientific and Cultural Organization (UNESCO). A Biosphere Reserve designation would further enable the BHI to become a more active participant and contributor to finding environmental stewardship solutions to global challenges such as climate change, the provision of ecosystem services, and the impact of urbanization on rural landscapes.

The BHI is not a registered agency, but rather is fiscally managed through Strathcona County, Alberta. A key objective in that BHI 212-215 Business Plan is to work toward biosphere reserve status by building stronger partnerships and collaboration with various organizations and actively engaging individuals from within and the surrounding region in stewardship opportunities. It will be this grass-roots support through stewardship and engagement activities that will elevate the region to Biosphere Reserve status.

To date, there have been four facilitated workshops focused on understanding and addressing the key issues regarding achieving Biosphere Reserve Status. The first workshop was held on November 3rd, 2011. Based on the success of this first full day workshop, participants requested another workshop. This second facilitated workshop occurred on January 13th, 2012. At the end of the January workshop, participants were clearly getting excited about the progress made, and requested a third facilitated workshop that would be two full days to allow for development of ideas that have shaped this stewardship and engagement strategy. The third facilitated workshop occurred on February 22nd and February 23rd, 2012. A fourth workshop was held on May 11, 2012. Results of these workshops are available in the Workshop Report by Bath and Associates 2012, produced for, and available from, the Beaver Hills Initiative.

On November 3rd, 2011, a group of approximately 40 individuals representing a wide range of organizations and interests were invited to participate in a full day facilitated workshop with the goal of understanding and addressing the key issues in seeking Biosphere Reserve status. The group worked to identify the overall vision for the area and what obstacles and opportunities existed towards realizing the vision. The obstacles were then further characterized by the degree to which participants felt they could affect change or remove the obstacle. It became clear that while effort was purposefully made to engage a diverse audience, not all participants were at the same level of understanding of the vision, mission and goals of the Beaver Hills Initiative and of the work that has taken place to date by all of the working groups. Not surprising, this resulted in statements by participants that there was a lack of concrete actions or on the ground initiatives for the public, a desire to have more grassroots involvement in the BHI, and the identification of a general lack of long term involvement and commitment to stewardship activities. The ideas of involvement and commitment would later be used to define stewardship and engagement. One of the biggest obstacles identified by the group to achieving the vision of a Beaver Hills Biosphere was the idea of ecological illiteracy amongst the general public. This was identified as an area where measurable change could be demonstrated.

At the first workshop, participants also highlighted several positives toward addressing the key issues to becoming a Biosphere Reserve. Workshop participants expressed there was a good level of participation from a wide range of organizations and interests. In addition, the group highlighted that the BHI had existed for more than 10 years, had a strong governance structure and had gained considerable scientific knowledge

and experience within the region. There was a great willingness to cooperate and collaborate with diverse organizations and acknowledgment that some communication was occurring with new groups and interests. Participants also realized that data gaps were being recognized and steps put in place to address them. Finally, participants believed that land management was beginning at the landscape scale. Participants were encouraged with the progress to date but also realized more needed to be done to achieve the vision of becoming a Biosphere Reserve.

Workshop 2 was held on January 13th, 2012. As a result of the first workshop, the morning portion of the second workshop was spent on informing participants about what the Beaver Hills Initiative has been doing, all of the information, work and research that has taken place and finally what it means and the benefits of becoming a biosphere reserve. In the afternoon, the participants explored the causes of ecological illiteracy more in-depth. During this exploration exercise, it became apparent that a reason for ecological illiteracy was the limited awareness of opportunities to experience or to engage with nature, and thus the need to coordinate awareness and collaboration on projects to engage the public. The group then eagerly worked to anticipate the needs of the public; the group recognized the need for a broad spectrum of engagement opportunities, ranging from introductory and low commitment to more intense experiences with higher levels of commitment. There was also a need for increased number of opportunities. Behind these ideas was a strong theme that the opportunities and experiences offered must be both meaningful to the participant and have a measurable impact on the landscape. It was soon realized that the participants, now operating as a team, were ready to explore details and action items but needed a context for those thoughts. That context became the Stewardship Engagement Strategy. At the end of the January workshop, this group, representing a diversity of interests, had committed to gather again in a two day facilitated workshop with the objective of creating a skeleton stewardship engagement strategy. The result of this workshop, which was held on February 22nd-23rd, and an additional workshop held on May 11, 2012, resulted in this working document.

Why a Stewardship Engagement Strategy and Why Now?

While the Beaver Hills Initiative (BHI) has been successful in developing planning policy recommendations and foundational data and science based research for decision-makers, and gaining political support at all levels of government, workshop participants believed that the initiative had not had the opportunity to engage grass-roots organizations or the citizens of the municipalities in conservation and stewardship activities. The BHI's focus now needs to include citizen engagement and development of a Stewardship Engagement Working Group (SEWG) within its governance structure. This will also be a proactive step towards successfully preparing for the biosphere reserve designation. While not a strong priority in the formation and initial development of the BHI, the implementation of a Biosphere Reserve requires support from a broader public and needs active involvement by diverse interest groups over a larger area. In order to gain international recognition and be a worthwhile contributor to the world-wide network of Biospheres, strong community support is required. Such support isn't reached solely by increased awareness and education efforts but through a true engagement of people through stewardship opportunities. Workshop participants recognized that stewardship and engagement of local residents and interest groups is a fundamental requirement of UNESCO for consideration of biosphere status.

As workshop participants strived to understand the level of stewardship and conservation participation opportunities currently available in the Beaver Hills, they realized that the current practice of stewardship within the region needed stronger coordination and partnership connections. It was recognized that there are substantial possibilities for public engagement and a wide variety of people and groups active on the landscape, however these opportunities and possibilities are being explored in an ad-hoc manner, with little formal organization or connectivity to each other. In addition, participants understood that they needed more information about the public that wish to engage in stewardship and the opportunities that would deepen experiences, and create commitment to the environment. It was also stated that there are capacity, leadership and funding challenges to be overcome in the development of a Stewardship Engagement Program within the Beaver Hills Biosphere Reserve. The group believes that generating opportunities would

empower champions to drive a stewardship initiative forward. The conclusion was that it was the first time the BHI had an opportunity to meaningfully engage citizens. Capacity to create a Stewardship Engagement Strategy was emerging from the new interaction of the diverse interest groups during the workshop process. It was recognized that these workshops had created a strong forward momentum within the participants and their respective organizations. Creating a Stewardship Engagement Plan is the first step in carrying forward this momentum and being able to realize on the ground actions that support the landscape of the Beaver Hills and its residents.

The Stewardship Engagement vision is part of a larger vision of creating a healthy working landscape supported by local communities. The workshop participants would like to see the Beaver Hills Biosphere Reserve be world renowned for offering a diverse set of project opportunities and a long list of individual citizens and organizations willing to participate actively in such programs. As the program is well linked to other organizations, it would be sought out as the model of success. Elected officials at local levels of government are able to see the benefits of involving people in stewardship engagement opportunities and endorse such opportunities, generously participating in activities.

2. 2012 -2015 Stewardship Engagement Plan

2.1 Vision

Proudly fostering a vibrant Beaver Hills landscape where we work and play in harmony with nature.

2.2 Mission Statement

To actively encourage, promote, and facilitate stewardship in the Beaver Hills.

2.3 Definition of Stewardship

Definition of Stewardship as sourced from “A Stewardship Roadmap for Canada”¹:

In its broadest sense, stewardship is the recognition of our collective responsibility to retain the quality and abundance of our land, air, water and biodiversity, and to manage this natural capital in a way that conserves all of its values, be they environmental, economic, social or cultural.

2.4 Guiding Principles

- To actively encourage, promote and facilitate people and organizations to provide a variety of stewardship opportunities that span all abilities, capacities and interests.
- To support the development of stewards that exhibit a strong connection to the landscape, are responsible towards the environment , and serve as role models to others
- For participating individuals, stewardship should:
 - be an opportunity to learn and develop,
 - provide social interaction,
 - develop a sense of community,
 - range from a single event to ongoing involvement,
 - be positive,
 - be celebratory,
 - be enabling,
 - provide an opportunity to connect with the Beaver Hills Initiative Area, and develop a sense of place.

¹ From “A Report of the Strengthening Stewardship... Investing at Every Step Conference”, Calgary, Alberta, July 8–11, 2009”; http://www.landstewardship.org/media/uploads/September_2009_StewardshipRoadMapforCanada.pdf; accessed November 1, 2012.

- Characteristics of stewardship:
 - demonstrate and commit to engage in conservation actions.
 - demonstrate a sustainable ongoing investment for a strong personal reason, be it for the future or to improve the world around them today by creating a better quality of life.
 - can occur at any level of commitment, but supports continued motivation and growth.
 - stewards continually share their enthusiasm of working together, and welcome participation of others
 - stewards become leaders through their actions of maintaining, enhancing, and improving the state of the environment.
 - stewardship is a transcending and transformative experience. One becomes a steward for one reason but remains a steward for another. As part of this life changing experience, stewardship expands beyond a geographic area and transforms from a cause to a way of life.

- Characteristics of engagement:
 - Learn and share knowledge so that such knowledge becomes accessible to everyone.
 - Celebrate the uniqueness of our nature-filled environment
 - All-inclusive
 - Opportunities are available across a spectrum of expertise and commitment levels
 - Elected officials at all levels of government see the benefits of endorsing and participating in stewardship opportunities, and actively encourage citizen involvement

2.5 Primary Client

- The primary clients for the Stewardship Engagement Strategy are the people and organizations able to deliver stewardship opportunities in the Beaver Hills Initiative Area.

2.6 Goals

Goal 1: Establish a Stewardship Engagement Working Group (SEWG)

- Ensure that a committee tasked with stewardship engagement in the Beaver Hills Initiative Area becomes a recognized working group in the BHI Board and Working Group Structure, and a prioritized deliverable in the BHI 2012-2015 Business Plan

Objectives

1. Create a new working group focused on coordinating, enhancing and elevating Stewardship and Engagement activities in the BHI Area by supporting and promoting stewardship engagement between organizations, citizens and the BHI.
2. Develop a complete Working Group Board Policy for the SEWG, building on the draft terms of reference produced by Dr. Alistair Bath based on the four workshops he facilitated
3. Determine the membership of the working group
4. Implement the 2012-2015 Stewardship and Engagement Strategy.

Activities

Short Term (2012-2013)

1. Select members, elect two co-chairs and a secretary, and determine meeting frequency and times.
2. Develop an inventory of existing stewardship activities.
3. Develop the first year's budget relying on existing expertise and organizations for support.

Long-term (2013-2015)

1. Secure ongoing funding and capacity to ensure that implementation of activities proposed by SEWG is sustainable.
2. Develop and administer a framework that facilitates the integration and extension of these activities.

Outcomes

1. New working group created and integrated into BHI Board governance structure. The working group assumes a similar role to other working groups, with regular meetings and active implementation of the Stewardship Engagement Strategy, and a monthly progress report to the Board.
2. A framework exists to coordinate and prioritize the pursuit of grants and other sources of funding to support stewardship initiatives.
3. An inventory of current stewardship activities is developed and a framework to administer, integrate and extend these activities to local citizens is established.

Goal 2: *Strengthen the network of stewards in the Beaver Hills Initiative Area by enhancing coordination, cooperation and communication among new and existing partner organizations.*

Objectives

1. Identify and facilitate the collaborative opportunities for grassroots involvement.
 - a. Develop a mechanism to link stewardship activities with the activities of the SEWG, and to share stewardship engagement opportunities among new and existing partner organizations and individuals.
 - b. With the Communication and Education Working Group (CEWG), develop a stewardship communication strategy and a communication plan targeted at various audiences.
 - c. Enhance the network of collaborating organizations working toward stewardship and engagement opportunities.
 - d. Develop and administer a questionnaire to existing stewardship organizations identify and document stewardship opportunities.

Activities

Short Term (2012 -2013)

1. Development of a framework for categorizing existing stewardship engagement opportunities in the Beaver Hills Initiative Area according to the Mission Statement and Guiding Principles of the Stewardship Engagement Plan Mission Statement.
2. Develop a list of stewardship opportunities suitable for beginner, intermediate and advanced levels of engagement.
 - a. Promote existing programs and support relevant organizations so they can be even more successful (e.g., Christmas Bird counts, Alberta Parks volunteer programs operating in BHI, municipal parks volunteer programs, Elizabeth Beaubien's Plant Watch program, etc.)
3. Create a web-based central clearinghouse for volunteer projects with a central access point for all existing opportunities. Proposed to be housed on the BHI website, with content specific to Beaver Hills Initiative Area stewardship activities.
4. Within the website (see above) set up a calendar of events where each organization can advertise opportunities to volunteer.
5. Develop an inviting and clear web page specifically for stewardship engagement opportunities within the Beaver Hills Initiative Area.
6. Develop reciprocal links with the other agencies hosting web pages for increased networking.

Long Term (2012-2015)

1. Refresh list of activities and contact lists of various organizations annually.
2. In conjunction with other BHI working groups and other collaborators, produce stewardship engagement/citizen science tools that can be provided to the BHI partners.

Outcomes

1. Inventory and baseline of activities created to track changes in the number and type of opportunities available through time.
2. Development of easily-navigated website for all stewardship engagement activities within the Beaver Hills Initiative Area (e.g., creation of the one-stop shopping location).

3. Integration of all stewardship activities has led to an effective network of stewardship organizations within the Beaver Hills Initiative Area.

Goal 3: To increase engagement in stewardship activities within the Beaver Hills Initiative Area.

Objectives

1. Understand the motivations and expectations of those who become engaged in stewardship activities and what keeps them participating and deepens their commitment.
2. Understand the needs, skills, experience and interests of local citizens, groups, and visitors so as to create or identify appropriate stewardship engagement opportunities.
3. Understand the characteristics of successful stewardship programs so as to replicate these elements in programs within the Beaver Hills Initiative Area.
4. Act as a forum for discussion to share information to inform decision-making related to stewardship engagement activities and policies.
5. Link the activities of this working group with other BHI Working Groups and the BHI 2012 – 2015 Business Plan.
6. Create opportunities to celebrate the success and involvement of volunteers in stewardship engagement activities.

Activities

Short Term (2012-2013)

1. Begin assessment of stewardship opportunities in the Beaver Hills Initiative Area and their success, document participation numbers so change can be monitored.
2. Engage in a small demonstration project targeted at existing participants in stewardship engagement activities to explore motivations and expectations.
3. Establish a standard way to measure hours and participation in stewardship activities.
4. The Research and Monitoring Working Group will identify data from stewardship and citizen science activities that could potentially be included in the State of the Moraine Report.

Long Term (2013-2015)

1. Develop a quantitative understanding of participants currently engaged in stewardship engagement activities in terms of motivation, expectations, needs and satisfaction levels.
2. Identify gaps in stewardship opportunities and gaps on social research related to stewardship and opportunities to enhance engagement.
3. Share results of research with collaborating organizations and other interested parties.
4. Develop BHI volunteer recognition materials that complement the lead organizations' programs and materials.

Outcomes

1. BHI partner organizations better able to create stewardship engagement opportunities that encourage engagement and retention of participants.
2. Value-added information and input has been provided to partner organizations.
3. An understanding of the concerns of citizens has been developed to allow creation of targeted communication messages that address those concerns most directly related to attitude and behaviour.
4. Volunteers of BHI organizations are recognized, connected with each other and are ambassadors for stewardship opportunities in the BHI.
5. Recommendations for future social research have been made to the BHI

APPENDIX M. BHI LAND MANAGEMENT PRINCIPLES

Quality of Life

- The unique **essential character** of the Beaver Hills will be conserved in its natural beauty.
- We will enlist voluntary cooperation from landowners to manage their lands and the resources of the Beaver Hills in a sustainable manner.

Biodiversity

- Existing natural **wetlands** and their associated riparian upland margins, will be conserved both in regard to their biodiversity and functional aspects
- Development will retain **native upland habitat** (woodlands and grasslands) prominently featured within the Beaver Hills to maintain the majority of the existing green space and its associated biodiversity. Connectivity of habitat will also be retained so that continuous corridors remain within the Beaver Hills and between it and the surrounding region.
- Ensure land use and land management activities will not compromise the ability of **rare and sensitive species** or species important for human use now present to persist in the Beaver Hills.

Water

- Maintain function of **local watershed** to sustain regional surface and ground water systems
- Sustain local watersheds to maintain the **water quality** of surface and ground water systems

Land

- Support an **appropriate mix** of agricultural, industrial, recreational, and residential development in areas with lower environmental sensitivity maintaining the character of the distinctive landscape.

Air

- **Air quality** will be monitored ensuring recommendations can be presented to maintain or improve air quality.

APPENDIX N. LIST OF LEGAL DOCUMENTS

Canada Parks Act

Alberta Parks Act

Alberta Wildlife Act

Alberta Land Stewardship Act

Alberta Wilderness Areas, Ecological Reserves, Natural Areas and Heritage Rangelands Act

Parks and Natural Areas - Created through Orders in Council (not available for inclusion):

Miquelon Lake Provincial Park – various dates (OC 603/88)

Blackfoot PRA – 1997 (OC 390/97)

Antler Lake Island NA – June 3rd, 1987 (OC378/87)

Edgar T. Jones NA – July 26, 1995 (OC5194/95)

Hastings Lake Islands NA – July 26, 1995 (OC519/95)

North Cooking Lake NA – March 15, 1971 (OC454/71-6)

Parkland NA – March 6th, 1985 (OC146/85-4)

Sherwood Park NA – established March 15, 1971 (OC 416/98-54)