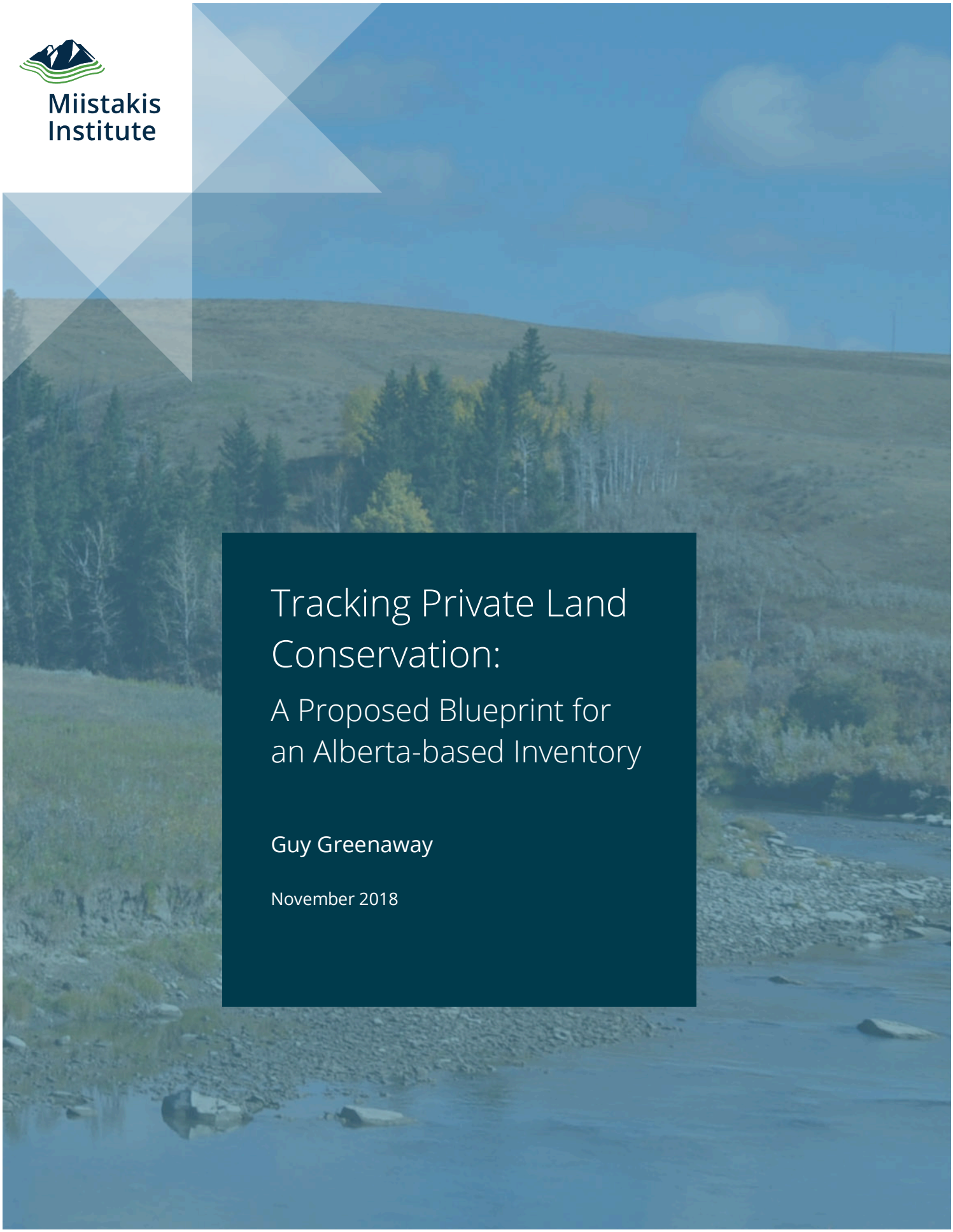

Miistakis Institute

Tracking Private Land Conservation:

A Proposed Blueprint for an Alberta-based Inventory

Guy Greenaway

November 2018

This work was made possible through a grant from Alberta Environment and Parks.

Miistakis is deeply appreciative of this support, as well as the respectful autonomy afforded to us by AEP that allowed us to pursue this analysis as an independent research institute.

Tracking Private Land Conservation:

A Proposed Blueprint for an Alberta-based Inventory

Prepared by Guy Greenaway
November 2018

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Executive Summary

As Canada ramped up to meet its commitment to protect 17% of the country's lands, the long-existing challenge of how to account for privately-conserved land became more acute. In response, the Miistakis Institute initiated a project to support a fundamental in change how we assess privately-conserved lands, while at the same time better supporting Government of Alberta, land trusts, and Pathway to Target 1 biodiversity conservation efforts. The conclusion of that work is that a properly conceived private land conservation database, can address most, if not all, of the issues that have arisen in trying to account for privately-conserved land.

This work recognizes that a tension exists between traditional, publicly-protected areas and privately-conserved areas, a tension with understandable roots, but which has led to an unfortunate sense of competition versus complementarity.

The Miistakis Institute is proposing that Alberta needs an approach to cataloguing, assessing, and representing private land conservation activity which:

Provides a
- Sustainable, accessible Alberta-based database
- Catalogue of all private land conservation efforts in Alberta
- Credible representation of both private protected areas and private OECMs
- Viable validation process

Supports
- A variety of Government of Alberta conservation initiatives
- The needs of Alberta land trusts / conservancies
- Municipal conservation planning

Integrates with
- National and international conservation-area accounting systems
- Other private land conservation data gathering efforts

Recognizes the
- Data collection capacity of partners
- Need for a description of biodiversity conservation
- Pivotal role of the land trust community
- Concerns and needs of protected areas community

and Considers the
- Inevitability of changes in the conserved land base
- Implications of mixed use, industrial land uses, and sub-surface rights
- Potential replicability for other provincial / territorial jurisdictions

This proposal would require a strategic consideration of the database fields (a proposed slate of which we have developed), a revised screening approach (also proposed in draft form), and a shared definition of biodiversity conservation.

Miistakis believes the Government of Alberta (Alberta Environment and Parks) is well-positioned to take the lead on this effort, and suggest their next steps would be:

Near-Term

- Adopt the proposed process as a starting point
- Test the proposed process with key stakeholders
- Secure support for development of this system
- Create a preliminary database

Medium-Term

- Convene a land trust forum
- Develop a viable audit process for the system
- Resolve the information privacy issue
- Resolve the sub-surface rights / expropriation issue
- Confirm a definition of biodiversity conservation
- Identify the thresholds of acceptable change
- Derive information from existing ce database

Long Term / On-going

- Develop Alberta-based targets for private land conservation
- Support the maintenance of this database

Contents

Introduction

As Canada ramped up to meet its commitment to protect 17% of the country's terrestrial lands and inland waters for biodiversity, the long-existing challenge of how to account for privately-conserved land became more acute. While there has been broad recognition that the concept of conservation areas that protect biodiversity needed to expand beyond our traditional consideration of parks and publicly-protected areas, tensions have arisen. Protected areas agency personnel have taken the lead on assessing the worth of privately-conserved areas, clearly holding them in low esteem[1]. Private land conservation organizations have mostly been absent from the discussion, largely because they perceive little value in participating in a government-led accounting exercise.

The Miistakis Institute initiated this project because we believe that there is, in fact, value to private land conservation organizations in participating, but there is also a need to fundamentally change how we assess privately-conserved lands. Miistakis also believes that by making these changes, it will better support a myriad of biodiversity conservation efforts undertaken by the Government of Alberta, Alberta's land trusts, and the national Pathway to Target 1 initiative.

This document represents the synthesis of that work, and the concluding proposal that a stand-alone database of private land conservation activity in Alberta, properly conceived, can address most, if not all, of the issues that have arisen in trying to account for privately-conserved land.

Project Background

Project Intent

The initial project proposal laid out the following audience-specific goals and intended outcomes:

Project Challenge

[1] See, for example, MacKinnon, D, C. J. Lemieux, K. Beazley, S. Woodley, R. Helie, J. Perron, J. Elliott, C. Haas, J. Langlois, H. Lazaruk, T. Beechey, P. Gray. 2015. *Canada and Aichi Biodiversity Target 11: understanding 'other effective area-based conservation measures' in the context of the broader target*. Biodiversity Conservation (24): 3559–3581.

As our province's biological diversity has faced mounting threats from increasingly expansive and intensive land uses, we have worked to be more active and strategic in protecting biodiverse areas from conversion and loss. It is widely recognized that much of the Alberta land base that is not designated as "protected" contributes to the maintenance of the province's biological heritage.

The challenges, then, are to:

1) Understand the nature of that contribution from non-protected areas, given the mix of 'use-oriented' and 'conservation-oriented' land use practices; and
2) Develop an evolved conception of what is "protected" that accounts for different tools, and different and more functional conceptions of 'protection.'

Intended Outcomes

The key outcome of this research project will be policy-level[2] advice to address the two challenges listed above. That advice will be both research-informed and practical, and will lead to:

- Improved understanding of the contribution of private land conservation to biodiversity conservation;
- Enhanced understanding of how private land conservation can contribute to initiatives like Pathway to Target 1
- Better-informed inclusion of private land conservation in regional planning initiatives; and
- Increased ability of land trusts to promote their work and secured additional biodiverse lands.

Key Partners

It was understood that the project would be dependent on the involvement of land trusts in Alberta, Alberta Environment and Parks (AEP), and Environment and Climate Change Canada. From the outset, the project sought to actively engage these partners through workshops, webinars, face-to-face meetings, review of interim products, and active involvement in the creation of recommendations.

Audience-Specific Goals

Alberta Land Trusts

[2] "Policy-level" in this context is intended to mean guidance that influences the overall direction of a public decision-making body, and may include guidelines, regulations, administrative practices, and programs undertaken by those bodies.

- Information to support land trusts' ability to represent the value of the work they do and the contribution their conservation efforts make to protecting Alberta's biological diversity; and
- Recommendations for how adjustments in their methods could increase the ability of Alberta land trusts to contribute to broader biodiversity conservation calculations.

Alberta Environment and Parks (AEP)

- Information to support Alberta Environment and Park's ability to understand the biodiversity value of the private land conservation efforts in Alberta;
- Recommendations for how adjustments in provincial legislation or policy could increase the ability of Alberta land trusts to contribute to broader biodiversity conservation calculations.

Pathway to Target 1 (Environment and Climate Change Canada, Canadian Wildlife Service)

- Research findings that can support the on-going efforts to understand the biodiversity value of the private land conservation efforts in Alberta and beyond;
- Practical policy recommendations for improving how private land conservation's biodiversity conservation contributions are assessed; and
- Practical policy recommendations for improving private land conservation's practices, regulations, and protocols in support of biodiversity conservation.

Project Catalyst

While the goals of this project are broad, the catalyst was very narrow. The national initiative to protect 17% of Canada's terrestrial land base and inland waters by 2020 (*Conservation2020* or *Pathway to Target 1*[3]) was begun with targets adopted in 2015. This naturally led to a series of 'domino' questions: How much was already protected? What counts as 'protected'?

Direction from the Convention on Biological Diversity (CBD) said we were to think beyond traditional protected areas, which brought focus on – among other things – private land conservation. Unfortunately, the attempt to measure the contribution of private land conservation to Target 1 suffered from the lack of a solid frame of reference, and measurement efforts tended to simply assess how similar a privately-conserved parcel was to a traditional park.

Course Correction

[3] 'Target 1' refers to Canada's version of the Convention on Biological Diversity's (CBD's) 17% target. See http://www.conservation2020canada.ca/the-pathway/ for more information.

As often happens in a project of this scope, unforeseen occurrences had a material impact on the original project plan.

First, the project was predicated on the assumption that an accurate Alberta-based database of private land conservation activity was about to be released by the Government of Alberta; this turned out to not be the case. Second, the FPT[4] environment ministers' meeting occurred shortly after the initiation of the project. Third, the Nature Conservancy of Canada's (NCC's) national office, supported by the Max Bell Foundation and led by Lisa McLaughlin, began a project at the national level to inform how privately protected areas would be accounted for in the Pathway to Target 1 initiative.

As a result, this project re-oriented its activities to adapt to these circumstances. First, a large portion of project resources were re-directed at the beginning to develop 'Interim Recommendations' as quickly as possible, to be in the hands of Alberta's Minister of Environment and Parks in time for the FPT ministers' meeting. Second, this project sought to work directly with NCC by regularly exchanging information, reviewing each other's products to identify opportunities for alignment, and meeting in Ottawa with their project team. Finally, greater focus was directed to structuring a process that would concurrently allow Alberta to catalog the private land conservation information it needed for a variety of purposes, while still being in alignment with the national Pathway to Target 1 program.

This proposal document represents the results of that amended work plan.

Activities to date

The project involved the following activities:

Meeting with Alberta Environment Minister

Alberta's Minister of Environment and Parks is also the co-chair of the national Pathway to Target 1 initiative. Miistakis met with Minister Phillips to outline what we saw as the issues involved in including private land conservation in both the Alberta and the national accounting exercises. Her most pointed question was whether this work would result in policy recommendations that she could use

Literature review and background research

An extensive effort was undertaken to understand how private land conservation is currently being accounted for in Canada, as well as exploration of how that task is approached in other countries (specifically the United States and Australia). As well, we

[4] FPT = Federal / Provincial / Territorial

analyzed the direction on Other Effective Area-based Conservation Measures, protected areas, and privately protected areas emanating from the Convention on Biological Diversity, the IUCN, the Canadian Council on Ecological Areas, and the Pathway to Target 1 initiative. Finally, we analyzed the legislative certainty around publicly protected areas relative to privately-protected areas.

Discussions with Environment and Climate Change Canada

Miistakis maintained on-going conversations with personnel from Environment and Climate Change Canada who were directly involved in the Pathway to Target 1.

Land trust engagement

Miistakis worked actively to engage the land trusts in Alberta. This included regular updates on our work, a one-day workshop to glean insight from the community regarding the issues and the proposed approaches. Interim documents were circulated for review, an update webinar was convened, and document and video records of these proceedings were circulated. As well, Miistakis reached out to land trusts across the country to understand the needs specific to other provincial jurisdictions.

Meetings with Alberta Environment and Parks (AEP)

As well as our primary contact via the Alberta Environment and Parks grant that supported this work, Miistakis has met with several senior and middle-level AEP personnel from the Parks Division and Policy and Planning Division who play key roles in Alberta's response to the national Pathway to Target 1.

Meeting in Ottawa with NC group

Personnel from the Pathway to Target 1 connected Miistakis with an initiative led by the Nature Conservancy of Canada's National Office with a focus on assessing and certifying private protected areas. Miistakis has maintained on-going communication with that endeavour to actively pursue areas of alignment.

Interim reports

A series of interim reports were created early in the project, and circulated for comment (including to the Alberta Minister of Environment and Parks). These focused on early issue assessment and interim recommendations. A second set of reports was created that focused on how the current national Conservation Areas Reporting and Tracking System

(CARTS) could be adapted to appropriately accommodate privately-conserved land. These also were circulated for comment.

This proposal

As noted above, a fundamental shift in this project occurred when it was clear that no viable database of private land conservation activity was imminent. Resources were re-directed to applying the gathered information and insights to structuring a comprehensive proposal for addressing this; i.e., this report.

Situational Analysis

The Tension Between Traditional Protected Areas and Private Land Conservation

We have an odd situation in biodiversity conservation in Canada right now.

The effective assessment of private land conservation community's contribution to biodiversity conservation is falling into an abyss created by the desire on the part of protected area agencies to do better at conserving biodiversity.

How has such a good intention led to this circumstance? There are a number of factors that have conspired.

First, government agencies in charge of ecological protected areas are currently searching to find ways of better managing protected areas (e.g., PAME). This means the academic effort to better measure and plan for 'effective' protected areas is gaining speed. When a conversation about measuring the effectiveness of private land conservation arises — something outside the ken of most protected areas practitioners — it is these theoretical frameworks that are referenced, meaning we are comparing the 'theory' of protected area management with the 'reality' of private land conservation.

Second, private land conservation uses a fundamentally different approach to protection, characterized by a different set of protection tools, a more complex land use matrix, and voluntary/contractual relationships, all of which create square-peg-round-hole dilemmas for assessing their contribution to biodiversity protection using the same frameworks as those for protected areas.

Third, there is a desire on the part of protected area practitioners and academics not to lose ground, and to maintain both the protected areas that exist, but also the territory gained in the understanding the *value* of protected areas. This has always been challenging,

and these agencies have had to fend off many counterintuitive policies (promoting recreation at the expense of ecology, siting large infrastructure in parks, using protected areas as economic development assets, etc.).

Fourth, all this happens in a resource-constrained fiscal environment, where arguing for more resources to manage, acquire, and improve the protected areas system competes with various government austerity measures that view protected areas as a nice-to-have, but not part of core government functions.

Fifth, that same neoliberal fiscal view constantly seeks efficiencies (reductions) in the delivery of all kinds of services. Privatization of various government services and functions is an oft-turned-to and often ineffective approach. An unrealistic view emerges in the mind of some people of 'private' land conservation as a way to offload government or societal responsibility for conservation onto the private sector's voluntary benevolence.

The result is that private land conservation gets painted at one extreme as a dangerous rot that will undermine real biodiversity protection by allowing inappropriate human activity, and at the other extreme as a panacea, creating low-cost, private parks that can slip the surly bonds of government inefficiency and fiscal limitations. Of course, neither is accurate.

Conserving Apples and Oranges

Perhaps the most significant challenge in this context is that private land conservation uses a completely different set of protection tools and a different paradigm versus traditional public protected areas. While most people recognize this, many tend to think that implies that government protected areas disallow use, but privately protected areas accept mixed use.

In fact, the paradigm differences are more significant and include:

- Private land conservation views recreation as a significant challenge to ecological values; parks agencies generally accept it as part of a dual mandate;
- Private land conservation relies on private contracts (such as conservation easements); publicly protected areas rely on legislative gazetting and Ministerial discretion;
- Private land conservation relies on detailed up-front conservation assessments and on-going monitoring; traditional protected areas rely on up front business cases, and use of on-site conservation staff for active management.

For each difference, there are significant benefits in both approaches, but they are fundamentally apples and oranges when it comes to assessing 'effectiveness.'

A False Choice

And yet, a conversation has emerged as to whether we should rely on traditional public protected areas ***OR*** private land conservation. Ironically, this has occurred almost entirely without the private land conservation community's involvement. It tends to be an academic and agency conversation.

The land base we seek to protect in Canada today is very different from 100 years ago, when our traditional approaches to protected areas took flight; there are no 'untouched' landscapes today, as every square inch is affected by industrial activity, development, recreation, and/or climate change. Our biodiversity is seeking to survive in a much more complex land use matrix, with ever more competitors for its limited capacity. The opportunities to draw a stark line and prevent impactful activities are getting fewer.

That makes a compelling case for more private land conservation, ***and*** it makes a compelling case for the importance of traditional protected areas. It is not an exaggeration to say that biodiversity in Canada cannot thrive if we abandon either of these approaches, ***or*** if we rely on *only* one of them as we move forward. Both are necessary, but insufficient alone. Large-scale, government-enforced action is required, as is the array of small-scale, community-based voluntary actions.

Canada's Commitment

Into this milieu lands the international Convention on Biological Diversity (CBD) and the national Pathway to Target 1, both seeking to see 17% of the terrestrial land base and inland waters protected for biodiversity.

Both initiatives are seeking to go beyond traditional protected areas, and recognize and promote conservation of biodiversity on private land, and through 'Other Effective Area-based Conservation Measures.'

Unfortunately, Canada's efforts to undertake this nation-wide accounting have — for the reasons listed above — inadvertently edged private land conservation towards a conservation no man's land by assessing how similar it is to publicly protected areas.

The Dilemma of Measuring Protection vs. Conservation

A fundamental dilemma in measuring the biodiversity conservation effectiveness of both private land conservation and traditional protected areas is that we have tended to focus on measuring 'protection' rather than 'biodiversity conservation'.

'Protection' can be thought of as the restrictions, the prohibitions, the limitations on human activities in favour of conservation. 'Biodiversity conservation,' on the other hand, can be thought of as conserving and maintaining the natural systems that support the diverse assemblage of he world's species and functions. The distinction is important because it is quite possible to strictly 'protect' something that has very little biodiversity value.

Even in the cases where this is realized, we tend to focus on defining 'biodiversity' versus 'biodiversity *conservation*.' The simple existence of a biodiverse landscape does not imply its persistence.

Therefore, measuring how effectively a conservation area protects biodiversity cannot simply be a function of measuring the strength of its protective actions, nor just measuring its biodiversity. *Biodiversity conservation* is a set of actions, explicitly aimed at protecting the systems, features, and functions of the natural world. The effectiveness of a conservation area must be measured against these biodiversity conservation actions.

The Myth of Perfect Protection

The paradigm of the traditional protected areas has inconsistencies and drawbacks. Parks and protected areas have extensive disposition allowance provisions that override the legislation and can see any type or level of activity occur. Boundaries of parks are routinely redrawn to accommodate industrial activity. Many of the most impactful activities (roads, trails, disperse human activity) are allowed, and even actively encouraged in protected areas. Numerous activities harmful to biodiversity are allowable at the discretion of a minister or superintendent, and are routinely created in these areas.

The paradigm of private land conservation has inconsistencies and drawbacks. Private land conservation parcels may have no biodiversity goals at all. Subsequent landowners of conserved parcels may be opportunistic and have limited conservation interest. Conservancies have limited controls on their activities. Sub-surface rights may be exercised to the detriment of surficial biodiversity. Agreements may have limited terms out of sync with long-term conservation needs.

In both cases, the list could go on. Neither paradigm is water-tight and perfect. Yet both have been shown, when conscientiously deployed, to be very capable of effectively conserving biodiversity. Again, the choice is not an 'either-or' decision. Each approach takes advantage of a different set of opportunities. Specific instances of each must be assessed critically, but realistically

Privacy and Private Property

Underlying every large-scale conservation vision is an assumption that we can measure activity and progress. This is based on a public-land model, where basic information about public land parcels is accessible and there are few if any philosophical barriers to distributing or serving that information.

This is not the case with private property, and by extension private land conservation. All land trusts and conservancies commit to protecting the privacy of the landowners with whom they work. They ride a knife-edge here.

Information about conservation easements and full-title properties owned by land trusts are all publicly available, and those organizations have no control over that fact. Both conservation easements and property ownership are registered on title, and that information is available to anyone from the Land Titles office. However, that information is only available via a parcel-specific title search, and payment of a fee, keeping the access to this information quite limited. In reality, what land trusts are committing to is a promise not to do any independent disclosure of landowner information.

It is an open question as to whether this level of privacy is necessary, or even desired. It is even likely that land trusts, by offering this secrecy up front, feed the belief that something nefarious will occur if it were to be released. Concerns about land values skyrocketing on adjacent parcels, and real estate speculation have not been supported in general research, nor even local anecdote.

What is a certainty is that hidden data is unused data; land use planning and development continues apace for the most part completely unaware of the private land conservation activity that may have occurred in the area.

Regardless, this pervasive tendency to keep this information secret works against all efforts to catalogue private land conservation activity. Yet most large-scale conservation visions roll out referencing private land conservation, but remain unaware or unperturbed by the fact that securing even basic data on this activity faces this massive perceptional barrier.

Summary of Issues

Threaded through the situational analysis, and through the conversations undertaken during this project, are a series of underlying issues. The following is a summary of some of the preeminent ones:

- The private land conservation land base provides critical biodiversity protection

- Private land conservation is a necessary (though insufficient) condition of biodiversity conservation
- Not all private land conservation parcels are intended to conserve biodiversity, and not all that are effectively do so
- The mechanisms for protecting private land are just as effective, but different from those used with traditional public protected areas
- The land trust community is by definition a patchwork of small groups with limited capacity and disparate needs and structures
- The private land conservation community is not motivated to participate in conservation area accounting exercises in the same way as public agencies
- Assessing private land conservation against traditional protected area metrics is an apples and oranges exercise, which benefits neither
- Private land conservation cannot replace traditional protected areas; they are additive
- A fundamental challenge is the lack of accessible, standardized data, meaning key questions are currently unanswerable, including how many acres, where, conservation impact at a landscape scale, and areas of particular contribution
- Accounting for private land conservation currently suffers from an "in / out" dichotomy of assessment; there are no gradations
- Scarce resources and insecure mandates are making the debates around private land conservation versus traditional protected areas unnecessarily acrimonious
- 'Biodiversity conservation' is not being measured, only 'biodiversity' and 'protection'

Concept Description

A Proposed Blueprint for an Alberta-based Private Land Conservation Inventory

Private land conservation is becoming increasingly important to Albertans in general, and to the Government of Alberta specifically. Several provincial initiatives (Plan for Parks, regional planning, species protection plans, biodiversity management plans, etc.) explicitly note the important role of this type of biodiversity conservation approach, especially as a complement to more traditional forms of conservation. As we increasingly seek to use the same acres for ever more dense and complex land uses, this type of conservation will only become more important.

Unfortunately, even as the importance of private land conservation is increasingly emphasized, our ability to measure its effectiveness — or even count the acres — is very limited.

The Pathway to Target 1 creates both opportunities and challenges that need to be navigated. While the push to get an accurate accounting of the conserved lands in Canada creates momentum to address this issue, it also creates the potential that this long-needed system will inadvertently address the needs of only one program. This need not be the case.

The Miistakis Institute is proposing that Alberta needs an approach to cataloguing, assessing, and representing private land conservation activity which:

Provides a

- Sustainable, accessible Alberta-based database
- Catalogue of all private land conservation efforts in Alberta
- Credible representation of both private protected areas and private OECMs
- Viable validation process

Supports

- A variety of Government of Alberta conservation initiatives
- The needs of Alberta land trusts / conservancies
- Municipal conservation planning

Integrates with

- National and international conservation-area accounting systems
- Other private land conservation data gathering efforts

Recognizes the

- Data collection capacity of partners
- Need for a description of biodiversity conservation
- Pivotal role of the land trust community
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and Considers the

- Inevitability of changes in the conserved land base
- Implications of mixed use, industrial land uses, and sub-surface rights
- Potential replicability for other provincial / territorial jurisdictions

Detailed Description

The Miistakis Institute is proposing that Alberta needs an approach to developing an inventory of private land conservation activity that has the following characteristics:

PROVIDES a …

1. Sustainable, accessible Alberta-based database

At the core of this inventory scheme should be a robust but straightforward database of private land conservation activity in Alberta, that is collaboratively developed, easily updated, sustainable over time, comprised of a minimum number of fields, and freely available. This dataset should serve multiple programmatic uses, but not be designed around any one of them.

2. Catalogue of all private land conservation efforts in Alberta

While Canada's *Pathway to Target 1* initiative is aimed at efforts that conserve biodiversity, many of Alberta's private land conservation organizations and activities seek to conserve other values of land (agricultural, heritage, scenic, etc.), which are likewise important and valuable to be tracked. The array of database fields in this inventory should encompass all purposes, but allow biodiversity-focused initiatives to extract relevant data.

3. Credible representation of both private protected areas and private OECMs

Private land conservation efforts focused on biodiversity conservation may result in *Privately Protected Areas* (PPAs) or *Other Effective Area-based Conservation Measures* (OECMs); both categories need to be credibly assessed and catalogued.

4. Viable validation process

Because many users of this private land conservation inventory (e.g., funding agencies, landowners, other partners) will require certainty around the effectiveness of biodiversity conservation, a constructive validation process is needed. This should be based on clear criteria and a balance of evidence approach versus a certification approach. This system should identify valid proxies, be developed by people knowledgeable about private land conservation, and focus on validating biodiversity conservation, not simply the existence of protective measures. This process should be funded to be sustainable, and agreed to by the private land conservation community. Finally, it should include a sampling audit approach rather than detailed assessment of every initiative.

SUPPORTS …

5. A variety of Government of Alberta conservation initiatives

Alberta's Regional Plans, Biodiversity Management Frameworks, species management plans, parks plans, and other conservation plans identify the value of conserving private land for biodiversity. The data collected under this system needs to be usable for those programs.

6. The needs of Alberta land trusts / conservancies

Land trusts and conservancies in Alberta undertake varying levels of conservation planning internally for their organization, and collaboratively with other land trusts. The data collected under this system must be capable of supporting land trusts and conservancies in their land conservation planning.

7. Municipal conservation planning

Alberta's regional plans, revised Municipal Government Act, and other policies increasingly recognize the critical role municipal land use planning can play in biodiversity conservation generally, and on private lands specifically. The data collected under this system needs to be usable by local governments for land use planning.

8. National and international conservation-area accounting systems

The Pathway to Target 1 and the Conservation Areas Reporting and Tracking System (CARTS) database are informed by and contribute to the efforts of the Convention on Biological Diversity, IUCN, and World Commission on Protected Areas to catalogue our progress in protecting the earth's biodiversity. While an Alberta-specific system needs to support Alberta-based needs, it should also be aligned with these systems and their definitions, and capable of supporting them by reporting Alberta's private land conservation contribution to biodiversity protection.

9. Other private land conservation data gathering efforts

Programs like the federal Ecological Gifts program or the provincial Land Trust Grant Program gather and rely on private land conservation data and information. As well, various Alberta land trusts and conservancies track conservation information and progress. Ensuring this system can share information and 'speak' to other initiatives will provide both greater efficiency and greater conservation planning effectiveness.

RECOGNIZES the …

10. Data collection capacity of partners

Designing a one-off snapshot of private land conservation activity is straightforward, but ensuring the on-going sustainability of a cataloguing system means taking into account the limited capacity in both the private land conservation organizations and the government agencies. This system should include identification of and support for an entity to be the provincial reporting body for privately-conserved land in Alberta; this entity should be chosen by the private land conservation community.

11. Need for a description of biodiversity conservation

Although we have robust definitions of *biodiversity* and a clear list of *protective* measures, we do not have a shared description of which actions constitute *biodiversity conservation*. Biodiversity can exist without protection, and legal strength of protection can be measured irrespective of biodiversity. Private land conservation practitioners and conservation area assessors need a shared, purpose-oriented description of which actions would constitute biodiversity conservation in the Alberta context.

12. Pivotal role of the land trust community

Though the assessment and cataloguing of biodiversity conservation programs on private land are generally initiated and operated by government agencies, the private land conservation organizations are the lynch pin as they collect and hold the data. As such, they must be given a leadership role in designing this accounting system.

13. Concerns and needs of protected areas community

Assessments of privately-conserved land should not be based on criteria created for traditional public protected areas. However, efforts to catalogue private land conservation should be conscious of the potential synergies and overlaps with those efforts to catalogue public protected areas. Protected area agencies are currently working to increase their effectiveness in conserving biodiversity; they are doing so in an environment of constrained resources, protected area 'disbelievers', and often-contradictory visitor use

mandates. This system needs to be conscious that the greater the degree of congruence between traditional *protected area* effectiveness measures and *private land conservation* effectiveness measures, the stronger the case can be for both approaches.

CONSIDERS the …

14. Inevitability of changes in the conserved land base

Private lands, even more so than public lands, are subject to constant changes in pressures, land management knowledge, adjacent land uses, etc. As such, the system needs to be able to account for and represent changes in the conserved land base in an adept and timely manner.

15. Implications of mixed use, expropriation, and sub-surface rights

The simple existence of a non-owner right (sub-surface, expropriation) does not guarantee that biodiversity is not conserved; conversely, the potential for these rights to be exercised does represent some measure of risk to in situ biodiversity. Because private land conservation exists in a complex matrix of land use rights, opportunities, and expectations, a land conservation inventory scheme must address this issue, without defaulting to simple, binary rules.

16. Potential replicability for other provincial / territorial jurisdictions

The needs and lessons learned in Alberta will, for the most part, likely be reflected in other provincial / territorial jurisdictions. As such the design phase should consult other provinces/territories, and the resulting system should be provided to those jurisdictions for voluntary adoption or adaptation.

Concept Supports

The proposed concept for an Alberta-based inventory of private land conservation relies on several supports. Three of these are introduced here. They include:

- Proposed Database Fields
- Proposed CARTS Screening Matrix
- Proposed Definition of Biodiversity Conservation

The first is a slate of proposed fields for an Alberta-based Private Land Conservation Inventory; the second is a screening matrix to be used for those conservation areas that are to be forwarded to the national CARTS database for consideration; the third is a proposed description of what actions could constitute biodiversity conservation, to allow this inventory to be used as a basis for screening, assessment, and conservation planning.

Proposed Database Fields

To begin the conversation on what an Alberta-specific inventory of private land conservation should look like, Miistakis has create a proposed set of database fields. This set of database fields was drafted based on the notion that they would provide a strong set of pillars on which other structures could be built. A minimum number of fields, selected to support the maximum number of applications.

This section contains only a simple summary of the proposed field list. *Appendix 2: Detailed Database Field List* is a more detailed presentation of the same information, including suggestions for allowable entries, and notes to be considered in developing that field.

It is important to note that an earlier version of this list of database fields was created as a proposal for the national CARTS[5] database. This revised version is expanded to include all types of private land conservation, but retains the original connection to both CARTS as a database and an ideal. This means, if data were collected in this way, it would be easily forwarded to the national database, and easily compared to the analogous information related to publicly protected areas.

Summary of Database Fields

All Private Conservation Areas

IDENTIFIERS

- Name of conservation area

[5] Conservation Areas Reporting and Tracking System

- Unique identifier number
- CARTS identifier (if intended to be forwarded to CARTS)

ZONATION

- Sub-zone of conservation area
- Sub-zone name
- Sub-zone description

LOCATION AND SIZE

- Location, Spatially explicit
- Municipality
- Area (size)

CONSERVATION INTENT

Ecological

- N/A
- Coarse ecosystem – Type
- Natural region
- Biodiversity conservation contribution

Agricultural

- N/A
- Agricultural land use type
- Agricultural land conservation contribution

Scenic

- N/A
- Viewscape – Type
- Scenic/aesthetic conservation contribution

Other

- N/A
- Other private land conservation contribution

AGENCY AND OWNERSHIP

- Conservation agency
- Conservation agency type
- Land owner type

PROTECTION AND MANAGEMENT

- Conservation area type

- Protective measures
- Effective management regime

DATA MANAGEMENT

- Date of effect
- Data provider
- Date of most recent data update
- Delisted
- CARTS listing

OTHER

- Screening Report
- General comments about conservation area

CARTS-specific Sub-Fields

(set of fields that might open based on the type of conservation area chosen under 'Protection and Management')

PRIVATELY PROTECTED AREAS (PPAS)

- Type of privately protected area
- IUCN Category for area
- Public access

OTHER EFFECTIVE AREA-BASED CONSERVATION MEASURES (OECMS)

- OECM category
- Management intent
- Public access

(suggested analog for CARTS for publicly-protected areas)

PUBLIC PROTECTED AREAS (PAS)

- *Type of publicly protected area*
- *Managing jurisdiction of area*
- *IUCN Category for area*
- *Legal status of zone*
- *Enabling legislation for zone*
- *Property owner of zone*

Proposed CARTS Screening Matrix

Not all conservation areas in the proposed Alberta-based private land conservation inventory would wold be eligible for inclusion in the biodiversity-conservation focused national database (CARTS). To assess the eligibility for that classification of conservation area, the following screening matrix is proposed.

This screening matrix is based on a thorough review of the existing CARTS database, the relevant CBD decisions, IUCN direction on protected areas, IUCN direction on OECMs, consultation with Alberta land trusts, and consideration of other resources.

The full proposed screening matrix can be found in *Appendix 3: Detailed Screening Matrix*, as well as a second table (*Screening Matrix vis-à-vis IUCN Guidance*) that shows how this matrix relates to the screening direction from the IUCN.

Proposed Definition of Biodiversity Conservation

Context

Efforts to identify and screen *Other Effective Area-based Conservation Measures* suffer from the a lack of a robust, locally-relevant definition of what is ***biodiversity conservation***.

We do have a robust definition of ***biodiversity*** from the Convention on Biological Diversity (CBD):

> *"The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems."*

However, defining ***biodiversity*** is different from describing what an effective effort to ***conserve*** it is. Recognizing this, the CBD has also produced a definition of 'in-situ conservation', one which underpins much of the guidance for identifying and screening OECMs:

> *"The conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties."*

However, while these definitions and guidance work well at a high level, it still leaves those who actually govern and manage potential OECMs with limited direction as to whether their area will qualify.

In an effort address this, the IUCN's World Commission on Protected Areas has released further guidance, stating that "*OECMs will effectively protect one or more of the following elements of native biodiversity:*

- *Rare, threatened or endangered species and habitats, and the ecosystems that support them, including species and sites identified on the IUCN Red List of Threatened Species, Red List of Ecosystems, or national equivalents.*
- *Representative natural ecosystems.*
- *High level of ecological integrity or ecological intactness, which are characterised by the occurrence of the full range of native species and supporting ecological processes. These areas will be intact or be capable of being restored under the proposed management regime.*
- *Range-restricted species and ecosystems in natural settings.*
- *Important species aggregations, including during migration or spawning.*
- *Ecosystems especially important for species life stages, feeding, resting, moulting and breeding.*
- *Areas of importance for ecological connectivity or that are important to complete a conservation network within a landscape or seascape.*
- *Areas that provide critical ecosystem services, such as clean water and carbon storage, in addition to in-situ biodiversity conservation.*
- *Species and habitats that are important for traditional human uses, such as native medicinal plants.*

Again, this direction provides an additional level of guidance, but perhaps not one sufficient to guide provincial-level screening of effective biodiversity conservation.

It is also important to recognize we are not starting at zero in this endeavour. For example, the Government of Alberta staff involved in the *Alberta Land Trust Grants Program* have done extensive work at the provincial scale identifying what conservation activity would qualify for that program. It provides an excellent basis for Alberta's efforts to reconcile 'private land conservation' and 'OECMs' as it is focused on the intersection between private land conservation activity in the province and the Government of Alberta's goals with regard to ecological conservation, and it was conceived as a screening tool.

Defining 'Biodiversity Conservation'

The need exists for a 'next-level-down' definition (or description) of biodiversity conservation that would better enable private land conservation practitioners to self-assess if their conservation area would satisfy the criteria for an OECM. This description needs to draw a line back up through the existing international and national definitions, but 1) be more applicable for the provincial context, and 2) be accessible to a private land conservation practitioners.

We offer the following proposed description of 'biodiversity conservation.' It is based on several existing articulations of biodiversity conservation, but most explicitly the WPCA guidance on OECMs and the Alberta Land Trust Grant Program screening tool.

Proposed Description of Biodiversity Conservation

Biodiversity Conservation means placing restrictions on, or prescriptions for, land use and management of natural areas over the long-term:

THAT …

1) Protect:
   - Ecological connectivity, including
     - Wildlife movement corridors
     - Important habitat isolates
     - Regionally important or locally important zones of connectivity
   - Important patches of terrestrial or aquatic wildlife habitat, including
     - Core habitats
     - Seasonal ranges
     - Areas important for species' life stages (e.g., feeding, breeding, mating, nesting, spawning, moulting)
     - Known ranges of native species
   - Important areas of natural vegetation, including
     - Native prairie
     - Old growth or otherwise intact forest ecosystems
     - Under-represented natural regions
   - Vulnerable, rare, or irreplaceable species and their habitat, including
     - Species listed provincially, federally, or internationally as endangered, threatened or vulnerable
     - Species at risk of local extirpation
   - Riparian, wetland and riverine systems, including
     - Riparian habitats adjacent to flowing or standing water
     - Wetlands and wetland complexes
     - Groundwater recharge areas
     - Areas of important hydrological connectivity
     - In-stream flows required for aquatic habitat

OR …

2) Reduce the negative impacts of anthropogenic disturbance, including
   - Buffering known areas of biological diversity
   - Mitigating known threats to areas of important biological diversity
   - Protecting evolutionary pathways important in the face of climate change

- Sequestering carbon above or below ground using natural vegetation communities
- Restoring ecological structure and function to a natural state

WITH CONSIDERATION …

3) That these restrictions are intended to conserve not simply individual elements and instances, but the viability and persistence of the systems on which biodiversity as a whole is dependent. Therefore, whether a given act of protection constitutes 'biodiversity conservation' must be judged by the significance of its contribution to the protection of the ecological systems of which that biodiversity element is a part.

AND THAT …

4) That satisfying any ***one*** of these criteria may be sufficient to constitute *biodiversity conservation*. However, again, whether a given act of protection constitutes 'biodiversity conservation' must be judged by the significance of its contribution to the protection of the ecological systems of which that biodiversity element is a part.

Moving Forward

Next Steps for Alberta Environment and Parks

Pieces of this proposal for an Alberta-based private land conservation inventory scheme can play out relatively quickly; others will take longer. However, the *Pathway to Target 1* process is playing out (as it must) over a relatively short time line, and is both a critical driver and critical opportunity.

The reality is that the Pathway process will address immediate issues to the greatest degree possible, establishing an overarching process, while at the same time identifying those issues that will be addressed over a longer period.

To move forward effectively on this Alberta-based system, Alberta Environment and Parks should take a similar multi-pronged approach, involving near-term, medium-term, and longer-term strategies.

The near-term strategy should involve developing a process for an Alberta-based private land conservation inventory system, confirming that system with stakeholders, securing support, and undertaking preliminary database development. The medium-term strategy would involve identifying known fundamental issues, creating a more robust database, convening land trusts to address key issues, and developing an audit process. The longer-term strategy should proceed actively and without delay, and should seek to address the identified set of wicked problems, collaboratively set provincial goals for private land conservation, and move to secure the Government of Alberta investment in private land conservation.

Near-Term Strategy

The Near-Term Strategy should seek to establish an Alberta-based inventory for private land conservation by undertaking the following tasks:

Adopt the Proposed Process as a Starting Point

The proposed process includes the following components and characteristics of the system:

- Proposed set of database fields
- Proposed database population approach (land trusts as data holders, identified support entity)

- Proposed screening, validation, audit process (evidence-based, use of proxies, OECM/PA distinction)
- Integration with other accounting systems (crosswalk with CARTS, IUCN, CBD)
- Integration with other planning contexts (GoA, municipal, land trust)

Test the Proposed Process with Key Stakeholders

Testing the proposed process would involve discussions with the following key audiences, around the following topics (in parentheses):

- Alberta land trusts
    - Determine acceptability of overall approach, proposed process, proposed database fields, capacity assumptions, validation approach, and deferred issues
- Alberta Environment and Parks
    - Determine acceptability of overall approach, proposed process, relation to public protected areas and OECMs, capacity assumptions, national integration
- Pathway to Target 1
    - Determine acceptability of overall approach, proposed process, proposed database fields, integration with CARTS, capacity assumptions, and deferred issues-
    - Coordinate with Nature Conservancy of Canada (National Office) current effort to advise Pathway to Target 1 on inclusion of privately protected areas

Secure Support for Development of this System

This system of accounting for private land conservation cannot happen without resources. In particular, testing the system with stakeholders, developing the actual database, and supporting land trusts over the long term will all require a dedication of funds.

The effort to include private land conservation in the Pathway to Target 1 process is challenging, and would benefit from this Alberta-based effort. As well, the proposed system would be easily-replicable in any other provincial or territorial jurisdiction.

For this reason, Alberta Environment and Parks should approach the Pathway to Target 1 to secure some or all of the necessary funds.

Create a Preliminary Database

Ultimately, there are several fundamental issues that must be resolved before a complete, robust private land conservation database can be created. However, that does not mean that preliminary work cannot commence. This work should include:

- Physically structuring the database, including determining what the fields would be, creating the mechanisms for data to be uploaded, and piloting the system
- Running a preliminary population of the database (low-hanging fruit; easily accessed), recognizing that it will be incomplete for now but accurate and ready for expansion
- Preliminary reporting of private land conservation in Alberta to the Pathway to Target 1 initiative, using currently-uncontested data

It should be noted that the effort to create a viable private land conservation database has bedevilled Alberta organizations for almost two decades. The Alberta Land Use Secretariat, Land Stewardship Centre, Miistakis Institute, the Alberta Land Trust Alliance, and others have all made sincere efforts to address this need. A trait common to all of these efforts has been the desire to create a 'value-added' tool including search services, program management tools, GIS support tools, and/or other audience-specific services. However, each one of these value-added tools would have benefitted greatly from have a core dataset of private land conservation as a primary input. Looking forward, this will continue to be the case.

Medium-Term Strategy

The Near-Term Strategy will identify several need to be addressed before such a system for tacking private land conservation in Alberta will be fully useful, accepted, and sustainable. To address those issues, the Medium-Term Strategy should include the following tasks:

Convene Land Trust Forum

In the Near-Term Strategy, it is proposed that the Alberta land trusts be convened to test the acceptability of several aspects of this approach. The Medium-Term Strategy identifies several issues that must be resolved, all of which require land trust buy-in. Therefore, a forum of Alberta land trusts should be convened to engage in an advanced discussion on these topics (several of which are below).

Develop a Viable Audit Process for the System

The proposed validation process includes using an audit approach (based on providing evidence around a clear set of criteria, versus an exhaustive pre-screening). Such a process needs to run a careful balance between being complex enough to provide credibility and simple enough to be acceptable and practical. The Medium-Term need is to flesh this process out more fully.

Resolve the Information Privacy Issue

A major barrier to having a complete database of private land conservation activity is the desire on the part of many parties to keep such data 'private'. Unfortunately, hidden data is unused data. The reality is that this data is already in the public realm, so the real issue is one of perception and active dissemination by land trusts. There are many precedents across North America that can be used as a model for this system, but this must be an active and transparent conversation with the land trust community.

Resolve the Sub-surface Rights / Expropriation Issue

Several threats to the biodiversity of a given parcel are not help by the landowner (sub-surface rights, expropriation). There is an on-going debate as to the impact this has on the ability of private land conservation to protect in-situ biodiversity, with well-supported opinions across the spectrum. A focused and practical conversation needs to be convened on this subject, one which includes comparisons to the same dilemma for publicly-protected areas, assessment of actual risk, and post-event responses.

Confirm a Definition of Biodiversity Conservation

This proposed system for a private land conservation inventory includes the supposition that a shared understanding of which actions constitute biodiversity conservation is required. Development of this shared understanding and agreement needs to occur, and involve land trusts and Alberta Environment and Parks (especially the Parks Division)

Identify the Thresholds of Acceptable Change

Private land conservation takes place within a land use matrix that tends to be more dynamic than traditional protected areas, and generally involves 'working' landscapes, meaning change will happen. A complete database of private land conservation activity will face the dilemma of accommodating this change. A conversation will need to take place that identifies what re the threshold of acceptable change — I.e., when a privately-conserved parcel no longer adequately protects the in situ biodiversity.

Derive Information from Existing CE Database

The proposed system is a 'go forward' initiative, laying out steps for future activity, but the existing private land conservation activity needs to be catalogued. In 2017, the Alberta Land Use Secretariat began developing a conservation easement database, undertaking the onerous work of taking the vague information available from the Land Titles registry, and creating a comprehensive catalogue of Alberta's conservation easements. This work was put on hiatus when key personnel were seconded from the department. This critical work should be recommenced.

Long Term / On-going Strategy

Looking forward across the coming decades, it will be vital to augment this proposed system with the following forward-focused activities:

Develop Alberta-based Targets for Private Land Conservation

Currently, there are number of Government of Alberta conservation initiatives that point to the importance of private land conservation. This importance is only likely to increase, especially when one considers the higher-use landscapes in need of protection, and the challenges of securing protection that is representative of the range of systems and species. Alberta Environment and Parks should commence a dialogue with Alberta's land trusts to discuss the development of province-wide targets for private land conservation, ones that can support both the land trusts' goals and the Government of Alberta's goals.

Support the maintenance of this database

One of the worst possible outcomes of both this Alberta-based inventory system, and the national Pathway process, would be an unsustainable snapshot of a single year, with no further data available for future conservation planning. Though the Government of Alberta has limited control over the efforts of the other FPT jurisdictions, it can and should make a commitment to maintaining the currency of this Alberta-based private land conservation dataset.

Summary

In summary, the moving-forward steps for Alberta Environment and Parks are:

Near-Term Strategy

- Adopt the proposed process as a starting point
- Test the proposed process with key stakeholders
- Secure support for development of this system
- Create a preliminary database

Medium-Term Strategy

- Convene a land trust forum
- Develop a viable audit process for the system
- Resolve the information privacy issue
- Resolve the sub-surface rights / expropriation issue
- Confirm a definition of biodiversity conservation
- Identify the thresholds of acceptable change

- Derive information from existing ce database

Long Term / On-going Strategy

- Develop Alberta-based targets for private land conservation
- Support the maintenance of this database

Appendices

Appendix 1: Associated Reports

This report was preceded by several preliminary reports which include more detail on the concepts and conclusions that evolved over the course of the project. Valuable associated reading includes:

Alberta and the Pathway to Target 1 – Interim Issues Assessment DRAFT– June 2018

Contribution of Alberta Private Land Conservation to Biodiversity Protection – Interim Recommendations DRAFT– June 2018

Integration of Private Land Conservation into CARTS Screening Matrix and Database – August 2018

Proposed Screening Matrix for Conservation Area Inclusion in CARTS – August 2018

Proposed Revised Database Fields for CARTS – August 2018

Crosswalk – Database Proposal vs. Existing CARTS Database – August 2018

Appendix 2: Detailed Database Field List

All Private Conservation Areas

All Conservation Areas	Possible Responses	Notes
Identifiers		
Name of conservation area	• Name • Name – Zone name	• If conservation area is split into 'sub-zones', each sub-zone name would start with the parent area name
Unique identifier number	• XXXXXXX • XXXXXXX – ZXX	• An identification code for each conservation area that will be unique from other conservation areas • Should be generated automatically • Would automatically add zone number if 'sub-zone' field returns TRUE
CARTS identifier	• AB - XXXXXXX • AB - XXXXXXX - ZXX	• Used only if the intent is to forward data to the CARTS system • Assumes that Alberta-based system identifier could not be transferred to CARTS; may not be the case • Nomenclature could be developed that uses first two characters for province
Zonation		
Sub-zone of conservation area	• Yes / No	• Some agencies may want to separate a single conservation area into sub-zones with different attributes • All information from that point would apply to the sub-zone rather than the whole conservation area
Sub-zone name	• [if yes]	• Added to parent name in case where 'sub-zone' field returns

	• Zone name	TRUE •
Sub-zone description	• [if yes] • Text	• E.g., wetland area, specialized grazing management area, special management areas

Location and Size

Location, Spatially explicit	• Uploaded Shapefile • KMz file	• Requires spatially-explicit description • Shapefile could auto-populate the other fields
Municipality	• Municipality (county, city, town, RM, MD, etc.)	• Shapefile could auto-populate this information
Area (size)	• Number (hectares)	• Shapefile could auto-populate this information

Conservation Intent

ECOLOGICAL		
N/A	• Binary	• Selected if this is not part of the conservation intent • Would hide all associated questions
Coarse Ecosystem – Type	• Marine - % • Terrestrial - % • Fresh water - %	• This mirrors the only ecological field currently in CARTS; were that to change, this could change as well
Natural region	• Alberta Natural Regions • Sub-regions	• Could be a different set for Alberta versus other provinces (those could be ecozones, ecoregions, ecodistricts, biogeoclimatic zones, etc.) • Shapefile could auto-populate this information
Biodiversity conservation contribution	• Ecological connectivity • Important patches of terrestrial or aquatic wildlife habitat • Important areas of natural vegetation	• [taken from screening report] • Based on proposed description of biodiversity conservation

	• Vulnerable, rare, or irreplaceable species and their habitat • Riparian, wetland and riverine systems • Buffering known areas of biological diversity • Mitigating known threats to areas of important biological diversity • Protecting evolutionary pathways important in the face of climate change • Sequestering carbon above or below ground using natural vegetation communities • Restoring ecological structure and function to a natural state	

AGRICULTURAL		
N/A	• Binary	• Selected if this is not part of the conservation intent • Would hide all associated questions
Agricultural land use – Type	• [options drafted based on consultation with land trust community]	• Could be large contiguous parcel, grazing land, crop field, tame pasture, hay field, etc.
Agricultural district	• [options drafted based on consultation with land trust community]	• Could be soil types, agricultural community type, agricultural operation type, etc.
Agricultural land conservation contribution	• [options drafted based on consultation with land trust community]	• [taken from screening report]

SCENIC		
N/A	• Binary	• Selected if this is not part of the conservation intent • Would hide all associated questions
Viewscape – Type	• [options drafted based on consultation with land trust community]	• *NB: Although this is a legislated allowable purpose for conservation easements, in 22 years the legislation has existed, it appears no CE has been registered with this purpose*.
Ecodistrict	• [options drafted based on consultation with land trust community]	•
Scenic/aesthetic conservation contribution	• [options drafted based on consultation with land trust community]	• [taken from screening report]

OTHER		
N/A	• Binary	• Selected if this is not part of the conservation intent • Would hide all associated questions
Other private land conservation contribution	•	• [taken from screening report]

Agency and Ownership		
Conservation agency	• Agency / Organization Name	• E.g., , holder of conservation easement, authority responsible for enforcing use restrictions, land management authority, community responsible for area management • Contact information • Would mirror government agency information (e.g., managing jurisdiction of park)
Conservation agency type	• Land trust / conservancy • Municipal government	• This is the type of entity responsible for ensuring that biodiversity is conserved on the property

	• Company • Community • ?	• Would mirror government agency information (e.g., Federal government or agency, Provincial government or agency)
Property owner of conservation area	• Name	• E.g., municipality, land trust, company, private owner • Would mirror government agency information (e.g., Environment and Climate Change Canada, Canadian Wildlife Service, provincial parks agency)
Land owner type	• Private individual • Company / corporation • Conservation NGO • Other NGO • Community group	• Choice of one - the most appropriate • In case of overlap, add details in 'General Comments' • Would mirror government agency information (e.g., Crown – federal, Crown – provincial, Municipality)

Protection and Management

Conservation area type	• Privately Protected Area (PPA) • Other Effective Area-based Conservation Measure (OECM) • Other Private Land Conservation	• Choices 1 and 2 would open CARTS-specific sub-fields (see below) • Would mirror government agency information (e.g., Publicly Protected Area)
Protective measures	• Enforceable restrictions and/or prescriptions on the allowable land use activities that could significantly affect the identified ecological values • Conservation easement • Ownership by land trust or conservancy • Enduring management plan • Binding agreement with rights holders	• [taken from screening report] • Would mirror government agency information (e.g., Gazetted protected areas) • This list needs to be developed/refined with the private land conservation community

	• Community covenant	
Effective management regime	•	• [taken from screening report] • This list needs to be developed/refined with the private land conservation community • This field also needs to align with IUCN guidance

Data Management

Date of effect	• Date	• The date at which the conservation area was effectively conserved
Data provider	• Name • Contact information	• Name of organization, conservation manager, or agent who is responsible for the transmission and accuracy of the data • Contact information can and should be included
Date of most recent data update	• Date	•
CARTS listing	• N/A • Yes • Pending • Refused	• Indicates if a conservation area was submitted to CARTS, and if so what the status is

Other

Screening Report	• Downloadable document	• Summary of the screening report and decision
General comments about conservation area	• Text	•

CARTS-Specific Sub-Fields

Sub Field –	Possible Responses	Notes

Privately Protected Areas		
Type of privately protected area	• Privately owned and conserved by land trust or conservancy • Privately owned and conserved by company • Privately owned and conserved by community group • Privately owned and conserved with third-party restrictions • ?	• [need way to address that simple "ownership" does not ensure that specific parcel will endure as a protected area] • Check all that apply
IUCN Category for area	• Ia, Ib, II, III, IV, V, VI, YES, N/A	• As these are protected areas, it makes sense to use the protected area categories
Public access	• Yes • No • Limited / by permission only	• Very important to make clear to any users of this dataset whether the property is open to public access

Sub-Field - OECMs	**Possible Responses**	**Notes**
OECM category	•	• Need to develop a set of categories for OECMs akin to the range of types available for describing protected areas • These are – by definition – NOT Protected Areas, so using PA categories would not make sense
Management intent	• Ecological conservation • Range management • Cultivation • Recreation • Open space preservation • Scenic / aesthetic protection	• [taken from screening report]

	• Ecological research / environmental education • ?	
Public access	• Yes • No • Limited / by permission only	• Very important to make clear to any users of this dataset whether the property is open to public access

Appendix 3: Detailed Screening Matrix

Screening Matrix

Criterion	Possible Responses	Validation	Notes
Proxy exists	• Existing assessment by provincial or federal environmental agency	• EcoGift certification • AB Land Trust Grant Program assessment • ?	• If this exists, skip past all the other 'screening' effort, and simply gather info for the database
Geographically-defined area	• Yes • No	• Spatially-explicit description of area	• Must be Yes
Active governance	• Municipal government • Shared governance • Non-government conservation organization • Company • Indigenous people • Local community	• Any indication that the conservation and or management of the area is under active governance • Would mirror public protected areas criteria (e.g., federal government, provincial government)	• Must have at least one of the options on the list
Management intent (primary, secondary, tertiary)	• Ecological conservation • Range management • Cultivation • Recreation • Open space preservation • Scenic / aesthetic protection • Ecological research / environmental education • ?	• Management plan states goals and intent • Legislative measure identifies management intent for area • Binding agreement identifies management intent for the area • ?	• PAs, PPAs require 'ecological conservation' as primary management intent; • OECMs do not require 'ecological conservation' to be a management

Criterion	Possible Responses	Validation	Notes
			objective
Biodiversity conservation contribution	• Ecological connectivity • Important patches of terrestrial or aquatic wildlife habitat • Important areas of natural vegetation • Vulnerable, rare, or irreplaceable species and their habitat • Riparian, wetland and riverine systems • Buffering known areas of biological diversity • Mitigating known threats to areas of important biological diversity • Protecting evolutionary pathways important in the face of climate change • Sequestering carbon above or below ground using natural vegetation communities • Restoring ecological structure and function to a natural state	• Ecological inventories • Baseline Documentation Reports • Coincidence with provincial Environmental Significant Areas • Coincidence with Key Biodiversity Areas • International designation (e.g., Ramsar site • Scientific assessments by government agency confirms the ecological value • Scientific assessments by environmental NGOs confirms the ecological value • Scientific assessments by registered biologist confirms the ecological value • ?	• Need only have one item on the list, but … • Note the greater detail and qualifiers in the Appendix
Protective measures	• Enforceable restrictions and/or prescriptions on the allowable land use activities that could significantly affect the identified ecological values • Conservation easement • Ownership by land trust or conservancy	• Land ownership/title registry reference with conservation easement / covenant • Land ownership/title registry certificate showing land trust / conservancy • Long-term management plan • Covenant, agreement • Would mirror public protected areas criteria (e.g., gazetted protected areas)	• Must have at least one item in list • Check all that apply

Criterion	Possible Responses	Validation	Notes
	• Enduring management plan • Binding agreement with rights holders • Community covenant		
Effective management regime	• Regular monitoring of the identified ecological values • Regular monitoring of the effectiveness of the protective measures • Conservation of biodiversity values is directly supported by management regime	• Management plan states conservation purposes, and requires management practices to support them • Land trust or conservancy has adopted the Land Transaction Standards of the CLTA Standards and Practices • Conservation of biodiversity values is directly supported by management regime	• Must guarantee all items in list • Effective monitoring should be at least biennial, ideally annual • Monitoring reports should be publicly accessible
Long-term intent	• Conservation regime is perpetual (without end) • Seasonal measures part of year-round conservation regime	• Perpetual conservation easement • Management plan describes perpetual conservation intent • Binding agreement with landowner describes perpetual intent	•

Screening Matrix vis-à-vis IUCN Guidance

Criterion	Possible Responses	Related IUCN Guidance Principle
Proxy exists	• Existing assessment by provincial or federal environmental agency	•
Geographically-defined area	• Yes • No	• Geographically-defined space
Active governance	• Municipal government	• Governed

Criterion	Possible Responses	Related IUCN Guidance Principle
	• Shared governance • Non-government conservation organization • Company • Indigenous people • Local community	
Management intent (primary, secondary, tertiary)	• Ecological conservation • Range management • Cultivation • Recreation • Open space preservation • Scenic / aesthetic protection • Ecological research / environmental education • ?	• Managed
Biodiversity conservation contribution	• Ecological connectivity • Important patches of terrestrial or aquatic wildlife habitat • Important areas of natural vegetation • Vulnerable, rare, or irreplaceable species and their habitat • Riparian, wetland and riverine systems • Buffering known areas of biological diversity • Mitigating known threats to areas of important biological diversity • Protecting evolutionary pathways important in the face of climate change • Sequestering carbon above or below ground using natural vegetation communities • Restoring ecological structure and function to a natural state	• In-situ conservation • Biodiversity
Protective measures	• Enforceable restrictions and/or prescriptions on the allowable land use activities that could significantly affect the identified ecological values • Conservation easement • Ownership by land trust or conservancy • Enduring management plan	• Protected Area Categories • OECM Guidelines

Criterion	Possible Responses	Related IUCN Guidance Principle
	• Binding agreement with rights holders • Community covenant	
Effective management regime	• Regular monitoring of the identified ecological values • Regular monitoring of the effectiveness of the protective measures • Conservation of biodiversity values is directly supported by management regime	• Effective
Long-term intent	• Conservation regime is perpetual (without end) • Seasonal measures part of year-round conservation regime	• Long-term