Southeast Alberta Conservation Offset Pilot

2011-2015

Alberta Agriculture and Forestry

Final Report 2015

This report on the multi-stakeholder, Southeast Alberta Conservation Offset Pilot (SEACOP) is in fulfillment of strategy 3.16. of the South Saskatchewan Regional Plan and is intended to inform future work on
conservation offset initiatives.

The views and opinions expressed in this publication are those of the participants and do not necessarily reflect the official policy or position of the Ministry of Agriculture and Forestry nor the Government of Alberta.

Alberta Government

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Background

Over the last two decades, conservation offsets have become an important option for conserving biodiversity. Societies acknowledge economic growth and production of raw commodities means consumption of biologic resources (land, water, biodiversity) in locations of homes, highways, factories, farms and mines. Some impacts are permanent resulting in irreversible losses of biological resources (for example asphalt highways or downtown city buildings). Others, such as parks and farms, are permanent but only partially change biologic resources. Other impacts, such as mines, gravel pits and well sites, may be in place for decades and then reclaimed/restored back to some original or changed ecosystem.

The goal of a conservation offset is to enhance or conserve biologic resources/ecosystems in one location to 'offset' impacts on biologic resources/ecosystems in another area caused by human developments. The concept has evolved in various parts of the world with developments of standards, guidelines and expectations of performance. For example, a global initiative, the Business and Biodiversity Offset Program (BBOP), was initiated in 2004 by wildlife and conservation organizations along with a wide range of global mining and industrial companies to promote best practises for biodiversity offsetting. Conservation offsets in other jurisdictions have helped industry, land owners, and government to reduce and mitigate the impacts of land development, thus promoting biodiversity, species at risk habitat and healthy ecosystems. Countries such as Australia[1], Scotland[2] and the USA[3] have implemented offset programs in regions or for special purposes (e.g. specific landscapes, water quality). In many cases regulations were enacted to drive the need for offsets and were not voluntary.

There has been national momentum in Canada to develop conservation offsets as a viable option to manage the impacts of land disturbance. In the approval of the Josylin Mine (2011, Total S.A.) in northeastern Alberta, Environment Canada stated conservation offsets are an allowable tool to mitigate mining impacts. In the approval of the Jackpine Mine expansion project (2013, Shell) Environment Canada further recommended conservation offsets as one of the few mitigation measures to offset mine impacts. Environment Canada released a guidance document in 2012 ("Operational Framework for Use of Conservation Allowances").

Alberta gained experience with offsets in the greenhouse gas offset system introduced in 2007 as part of the Specified Gas Emitters Regulation of the climate change policy. The *Alberta Land Stewardship Act* 2009) identified conservation offsets as one of four conservation tools the Alberta Government would explore and develop. The South Saskatchewan Regional Advisory Council recommended the use of

[1] http://www.environment.nsw.gov.au/biobanking/
[2] http://www.sup.org.uk/pdf/biodiversity-offset-schemes-in-the-borders-290212.pdf
[3] http://willamettepartnership.org/; https://www.epa.gov/chesapeake-bay-tmdl/trading-and-offsets-chesapeake-bay-watershed

conservation offsets to achieve conservation and stewardship outcomes on private agricultural land in the South Saskatchewan basin. In 2011 the Alberta Land Use Secretariat approached Alberta Agriculture and Rural Development (now Alberta Agriculture and Forestry) to develop a pilot to test conservation offsets in the South Saskatchewan River basin. The purpose of the pilot was to identify and test key principles of a voluntary offset system on a local scale before being tested more broadly on a provincial scale. The results and information resulting from the pilot would identify any gaps or challenges and support future development of offsets in Alberta.

The overall intent of the pilot was to offset new industrial impacts to native prairie in the Dry Mixedgrass Subregion of Alberta through the purchase of offsets provided by private landowners. Landowners would provide offsets through the conversion of marginal cropland to native perennials for a minimum of 10 years with preference for longer contracts. The intent was to tie the length of impact directly to the provision of the offset with an obligation for the offset to be relinquished following the companies' receipt of a reclamation certificate from the provincial government. The intent of the pilot was to test a voluntary approach that would not be required by government, but rather government facilitating and enabling the participation of offset purchasers, suppliers and aggregators in offset markets by developing the principles, tools and approaches needed to support valid and verifiable offset transactions.

Strategy 3.16 in the finalized South Saskatchewan Regional Plan (2010), identified "The development and evaluation of the southeast Alberta Conservation Offset Pilot" as a deliverable for the region in, supporting stewardship and conservation on private land. This report outlines the development process of the South East Conservation Offset Pilot (SEACOP) from 2011 to 2015, the results of the pilot, and a summary of learnings and recommendations.

Project Team Membership and Support

The project team managers realized at the outset that a multi-stakeholder approach was needed to reflect the diversity of expertise in disciplines that would be required to support offsets, as well as the involvement of the potential offset buyers and offset providers (industry, farmers and ranchers). They also recognized the value of operational field experience in implementing policy and applying appropriate tools. A consensus and team based approach was undertaken.

Membership in the Southeast Alberta Conservation Offset Pilot Team included Alberta Agriculture and Forestry, Alberta Conservation Association, Environment and Parks (Fish and Wildlife, Lands, Rangeland), Alberta Innovates Technology Futures, University of Calgary, Alberta Biodiversity Monitoring Institute (in the initial stages) and LandWise Inc.
Facilitation and technical support were provided by Agriculture and Forestry in cooperation with Environment and Parks, Alberta Conservation Association (ACA), Alberta Innovates Technology Futures

(AITF), University of Calgary (U of C), University of Alberta (U of A) and LandWise Inc. Alberta Conservation Association ACA), active in Southeast Alberta with demonstrated success in conservation efforts with private landowners was to demonstrate the role of a third party that could facilitate contracts with landowners as well as develop and manage offset projects to a verifiable standard with a goal of better understanding verification and the development of protocols.

Additional expertise, research and evaluation were provided through, Prasino Group, LandWise Inc., University of Calgary, University of Alberta, Alberta Innovates Technology Futures and Bio Solutions, Miistakis Institute, Pilot Team members and supporting government ministry staff.

A wide range of expertise and capacities was represented by this group including wildlife biology, land use planning, industry permitting and processes, rangeland ecology and management, soils, policy, species at risk management, economics , offset markets and payments for ecosystem services, biodiversity, restoration of native prairie habitat, extension, and on-site monitoring.

Funding was provided by, Environment and Parks, Agriculture and Forestry, Land Use Secretariat and Alberta Innovates Bio Solutions. Substantial in kind support was provided by all pilot team member participants and industry representatives and landowners.

Pilot Area

The choice of the pilot area in Southeast Alberta was based on a number of factors including:

- complementary to existing conservation efforts ongoing in area
- area where land prices are lower and industrial activity present
- opportunity for compatible land use changes with landowners
- industry and landowner familiarity and involvement with species at risk issues, and
- availability of spatial data

The offset definition underlying our approach was agreed to as: Conservation offsets are compensatory actions that address the unavoidable ecological losses arising from development. Offsets are the third step in the mitigation hierarchy to address any residual development impacts following avoidance and onsite mitigation.

The area of priority was in the southeast corner of Alberta (south of Medicine Hat) comprised of about 3000 square miles (Figure 1, black dashed boundary line). It was realized early on that there might not be enough new industrial activity in the zone to create enough projects for this ‘receiving area’ so the eligible ‘sending area’ was enlarged to include the Dry Mixedgrass Subregion (Figure 1, blue boundary line)within the South Saskatchewan Regional planning area.

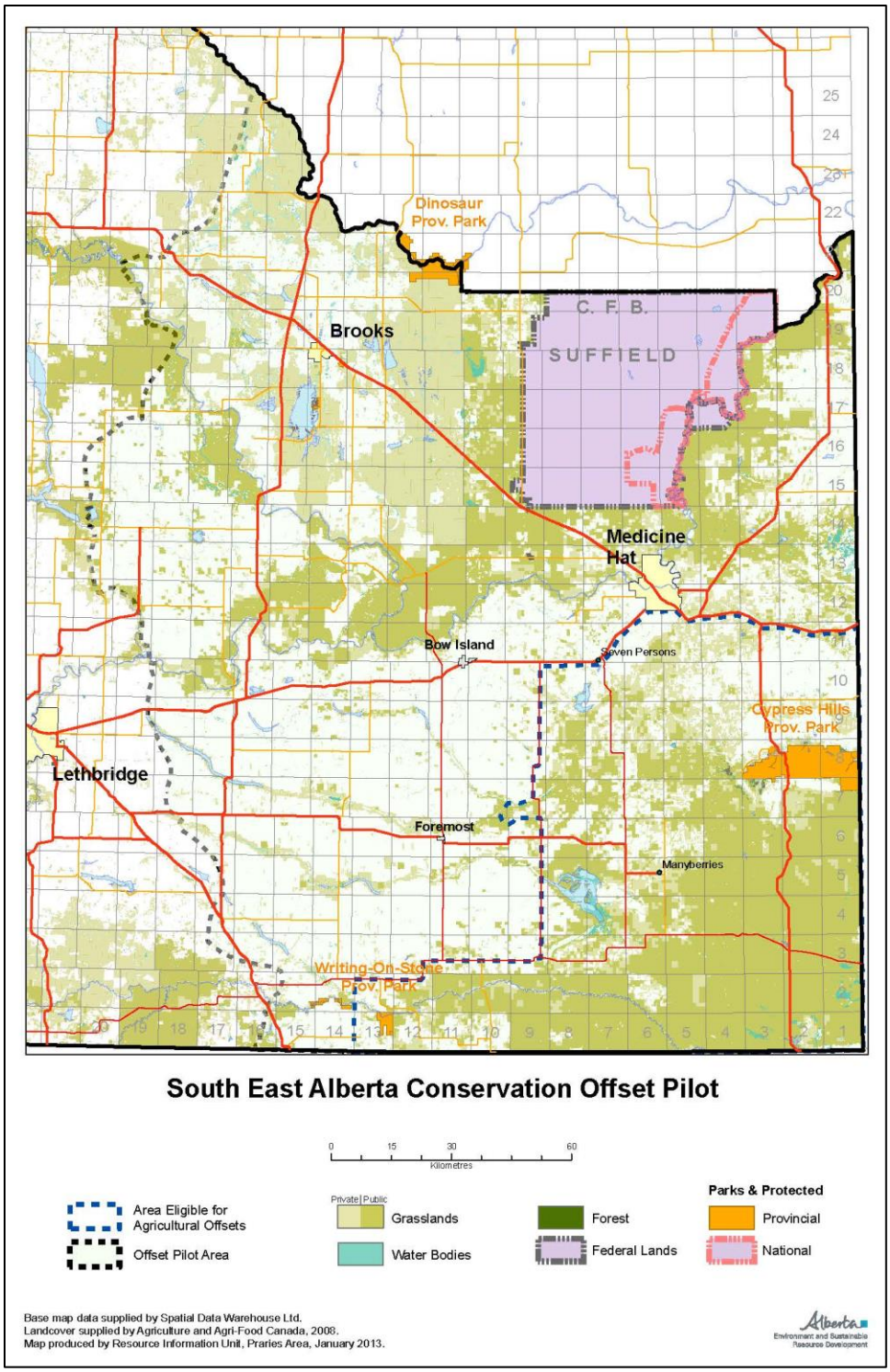

Figure 1. Southeast Alberta Conservation Offset Pilot Project Area

Objectives

Specific pilot objectives agreed to by the working committee were:

1. Develop an approach to quantify the offset requirements for industrial developments.
2. Develop an approach to target voluntary offsets on private agricultural land parcels with the best potential to improve landscape level native wildlife habitat.
3. Determine agricultural landowner willingness to provide verifiable offsets through third party contracts, including costs and barriers to participation.
4. Determine the roles and costs for a qualified third-party to facilitate agricultural landowner project development and associated conservation offset obligations (including planning, validation, contracting and on-site monitoring).

Process

Following an extensive literature review and evaluation of key principles used in other jurisdictions, Agriculture and Forestry staff engaged with key personnel within and outside of government and assembled the Southeast Alberta Conservation Offset Pilot Team. Over the course of the pilot, the team engaged with industry, landowners, academia, government, non-government organizations and a local contractor to build and test key components of a voluntary offset approach.

Several in-person meetings of the pilot team were held in Lethbridge to identify and discuss key barriers and concerns as well as key areas of agreement and the potential to develop an offset approach. The agreed definition and overall intent as well as four key outcomes were identified for the pilot in additional to the initial scope of the pilot area through consensus. Frank discussions on all points occurred; dissenting opinions were explored and led to a better understanding amongst members and more specific outcomes. The underlying principles of the pilot teams' approach was a scientifically credible, transparent, pragmatic approach that could be readily implemented and which required the engagement of industry and landowners. We intentionally and actively used the expertise and existing evaluation tools available in the development of the pilot to ensure we were not building a new wheel but rather enhancing an existing one. For more in depth information on the pilot process and alignment with generally agreed offset principles please see the report: "Southeast Alberta Conservation Offset Pilot: Linking Decisions and Assumptions with Generally Accepted Offset Principles". http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/sag14846/$FILE/seacop-gap-report-miistakis.pdf

Industry and Landowner Engagement

The pilot team decided to engage with industry first to determine if there was interest in participating in the development of offset parameters and metrics with the intent to purchase offsets in the future. The pilot team felt that if industry was not interested in participating it would preclude engaging with

landowners as there would be no reason to pursue the supply side of the offset equation. Through contacts within government, the academic and the non-government organization(NGO) community and with the participation of staff in Environment and Parks (Fish and Wildlife and Land Management) that were involved in the Sage Grouse Recovery project and the Sage Grouse Conservation and Development Zones development, we engaged with industry representatives through in-person meetings. The group later expanded to include other companies in the pilot area. Following the interest and engagement of industry (oil and gas, utilities, wind energy) the pilot team engaged local landowners to gauge their interest and receive their input. The initial group of landowners were farmers and ranchers involved with the Sage Grouse Recovery Team and expanded to include other farmers and ranchers, municipal councillors and Alberta Beef Producers representatives in the pilot area through meetings and workshops. As we met and explored options and approaches with team members, industry and landowners, we refined our pilot scope and approaches through incorporation of the feedback we received.

In addition to our regular pilot team, industry and landowner meetings and workshops we struck sub-committees for industry metrics, the conversion to native perennials protocol and landowner contracts. The committee work and results were brought forward to the larger groups for feedback and further changes were incorporated as required. Both scientific and practical business information was actively sought and utilized.

Industry included representatives from the oil and gas, utilities and wind energy sectors. They are all subject to different regulatory and approval processes and regulatory bodies and wanted to ensure the approach taken reflected a level playing field for all industries. Industry feedback during initial workshops identified an approach whereby they could pool their offset requirements annually for an area versus on a project by project basis as this would reduce transaction costs, be more efficient and address their impacts in a specific Subregion (in this case the Dry Mixedgrass natural Subregion). As with the pilot team members and landowners; industry supported a more holistic habitat based approach to avoid duplication of efforts and to minimize playing one species off against the other. The pilot team held specific workshops on developing an industry metric for calculation of offsets and also to gain greater understanding of industry processes and challenges to minimize any duplication of regulatory requirements. Industry feedback also included that any ratio or metric be consistent with other current requirements such as the Wetlands Policy. Ensuring that any metric tested within the pilot was also open for revision following testing was also a key request and consistent with our iterative approach and that of landowners as well. The option to revisit and revise created a more open environment for testing different approaches.

With active engagement from Industry, the pilot team expanded our engagement with landowners in the pilot area through meetings and workshops to identify their business needs and constraints as well as develop the approach for supplying offsets. Native grasses are recognized as the “bread and butter” of this area so there was support for this type of offset. Landowners liked that they were involved early on and were part of the offset development process.

Landowners were supportive of the approach as long as it did not diminish opportunities for agriculture in the future or lead to large tracts of land being purchased and removed from agriculture use or management, including grazing. Having a holistic, habitat based approach similar to that of the Multiple Species at Risk (MULTISAR) program was preferable to a species specific approach. They felt a habitat based approach reduced the potential for valuing species in isolation or in competition with one another which would lead to more integrated solutions. Another overall concern that was identified related to the many groups (NGOs) with different agendas competing on the same land base.

Landowner participants suggested targeting areas that are eligible, with specific criteria such as near existing habitat and based on soil type. They preferred that a third party with expertise carry out the contracting and seeding of the native species. This would help ensure success and reduce risk. This would allow their bids to focus on the opportunity costs for providing an offset and their ongoing management. They identified a need for training and support in providing bids for offsets and were supportive of conservation being considered as part of their income stream as they can provide biodiversity, but are presently paid for wheat and other commodities. They also asked how we define and measure success and what standards the conversion to native perennials would be held to, such as the current reclamation standards. We also discussed other options for offsets provided by agriculture and they provided additional feedback.

Landowners also identified that an offset pilot or program should be developed in a way to not unduly burden the oil and gas industry thereby diminishing their ability to operate; as municipal taxes and jobs provided by industry were integral to rural communities and their financial stability. They felt there was a middle option to respect the needs of both, yet still achieve ecological offset outcomes. Landowners preferred a third party or dealing directly with industry, versus with government, for an offset program.

Feedback from landowners also included the preference for more short-term contracts with an opportunity for extension versus easements in perpetuity. Landowners preferred defined contracts versus easements on title as they wanted to retain control and felt too many restrictions on title limited opportunities for future profitability. Shorter contracts of 5 to 10 years are preferred, but they recognized native re-establishment was a long-term proposition requiring at least 5 to 10 years. Landowners wanted to retain ownership and management of the land. Landowners identified the need

for clear contracts with options for length of term, payment options and management objectives for the offset requirements, as essential. Sustainable grazing of the land based on range health assessments was part of the offset and consistent with most landowners' current use although some landowners' business model was crop production only.

Government Engagement

To ensure regular communication and updates within government, the Land Use Secretariat convened regular, cross-ministry meetings whereby government pilot team members updated the group on our work and received their feedback. Representatives included staff and management from the Land Use Secretariat, Agriculture and Forestry, Environment and Parks, (specifically Fish and Wildlife) and Energy. Agriculture and Forestry executive and staff were also updated regularly on pilot progress through presentations and written briefings

Outreach and Alignment:

In the initial stages, the pilot team members sought out expertise from the Willamette Partnership and World Resources Institute staff who have experience in offset development and transactions. Informal discussions also were held with Business and Biodiversity Offsets Programme (BBOP) members on their overarching principles and implementation of offsets.

In addition to our engagement with industry and landowners, pilot team members presented work on the pilot to:

- Local Municipalities' Agricultural Service Boards,
- Local producers in Medicine Hat, including Alberta Beef Producers area representatives
- International Mountain Section of the Society for Range Management
- The Endangered Species Conservation Committee
- Alberta Prairie Conservation Forum
- The Prairie Conservation and Endangered Species Conference
- The Alberta Soil Science Workshop – Land Use Technical Session
- The Agri-Environmental Partnership of Alberta, and as an
- Invited as a panelist at the Land Use Conference 2014 in Edmonton.
- Organized an international symposium on Conservation Offsets in Action; 'A Canadian and U.S. Perspective' at the International Society for Range Management in 2014.
- Invited as a panelist for Conservation Auction discussion held by the U of A, Alberta Land Institute 2015.

Alberta Biodiversity Monitoring Institute (ABMI) and Alberta Innovates Bio-Solutions were engaged for feedback and critique on our approach and attended several workshops held by Alberta Innovates Bio-

Solutions and Environment and Parks on offsets and Ecosystem Services. University of Alberta Masters student, Warren Noga, also provided an evaluation of the approach for his thesis work. Dave Poulton of the Alberta Association of Conservation Offsets (AACO) interviewed Pilot Team members and incorporated aspects of the offset pilot into his Masters of Law Thesis (U of Calgary) on Offset Policy in Alberta.

Key documents developed over the course of the pilot can be found on Alberta Agriculture and Forestry's website at: http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/sag14846

Key Tools and Reports

An important component of the pilot was to ensure that we developed and shared key tools and reports which included:

- Conservation Offsets in Southern Alberta – Advice on Implementation, Based on Alberta's Carbon Offset Market-based Instrument. Submitted to Rob Dunn and Karen Raven, Alberta Agriculture and Rural Development by Karen Haugen-Kozyra, M.Sc., P.Ag. KHK Consulting Ltd. Senior Partner, The Prasino Group February 2012.
- Offset Factors in the Dry Mixedgrass and Mixedgrass Natural Subregions; McNeil, R. and France, K. 2014.
- Southeast Alberta Conservation Offset Pilot: Linking Decisions and Assumptions with Generally Accepted Offset Principles, Miistakis Institute and Agriculture and Forestry. http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/sag14846/$FILE/seacop-gap-report-miistakis.pdf
- Offset suitability index report http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/sag14846/$FILE/seacop-offset-suitability-index-report-March%2018%202014.pdf
- Draft conversion to native perennials and onsite monitoring protocol.
- Offset contract, Expression of Interest and eligibility criteria for, agriculture offset process.
- Draft metric for calculation of offset for industry impact to native prairie.
- Draft metric for calculation of offset quality and priority for offset provision by landowners.
- Draft aggregator implementation, management and monitoring spreadsheet for management cost documentation process.

Costs and In-kind support

Financial and in-kind support for the project enabled the work which began in late 2011, with full project years of 2012, 2013 and a partial year in 2014.

- **Total 2012/2013 budget** for SEACOP $24,100 which included 8 workshops (producer, industry and pilot team) and contracts for professional support.
    - $13,500 was provided by the Land Use Secretariat to support the pilot.
    - The remaining $10,600 was provided by Alberta Agriculture and Rural Development (now Agriculture and Forestry).
- **Total 2013/14 budget** was somewhat higher at $28,000 and Agriculture and Forestry funded the majority of this work for workshops with stakeholders on pilot metrics, agricultural business decision making related to offset participation, contract development and on site monitoring protocols.
    - $10,000 was provided by Alberta Innovates Bio-Solutions to fund Economist, Marian Weber's (Alberta Innovates Technology Futures) work on the pilot.
- The budget does not include in kind support (staff time) from Alberta Conservation Association (ACA), government pilot team members, Alberta Innovates Technology Futures and Alberta Biodiversity Monitoring Institute (ABMI) who participated in the initial pilot team meetings; nor the substantial in kind support contributed by industry and agricultural producers.
- $100,000 was provided by Environment and Sustainable Resource Development (now Environment and Parks) to help purchase and fund the establishment of a project site, to pool with other industry resources for a reverse auction bid and the establishment of an offset project site.

Results and Outcomes

1. An approach to **quantify the offset requirements** for industrial developments.
   We worked with Industry to identify (through several iterations) an approach for offset requirements for industry. Though there was still debate over the actual ratios to be applied for calculating an offset, industry wanted to go ahead and try the approach as long as there was an opportunity to revise the ratios to be consistent with other offset approaches (wetlands) or based on information found through the testing phase. We ensured our approach was fair across industries participating (oil and gas, utilities and wind energy) based on their input.
2. An approach to **target voluntary offsets** on private agricultural land parcels with the best potential to improve landscape level native wildlife habitat.
   We successfully developed and tested an approach to target offsets using a transparent and science-based approach. Dr. Cormack Gates from the University of Calgary led us through the process and pilot team members, GIS specialists and AF staff helped facilitate the final process

document and map of priority areas as well as the follow up on the ground-truthing. This approach has received a lot of interest and we are currently working with two municipalities to develop this tool for their own use in prioritizing conservation efforts. More details can be found in the SEACOP Offset Suitability Index Report located at: http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/sag14846/$FILE/seacop-offset-suitability-index-report-March%2018%202014.pdf

3. **Determine agricultural landowner willingness** to provide verifiable offset through third party contracts, including costs and barriers to participation.
   Through our engagement and specific workshops with landowners we were able to gauge their willingness to participate as well as potential barriers and costs. Landowners were very forthright in their feedback which was very helpful in developing an approach. Land owners were willing to provide offsets if there was a reputable third party to facilitate the offset transaction with industry purchasers, a clear contract (versus an easement) with their obligations and management goal clearly stated and third party expertise in seeding to native species. Through their feedback we developed a clear contract for use in an offset purchase for conversion of marginal cropland to native perennials. Additionally, landowners preferred contracts and could support a ten-year minimum with option for extension. Landowners wanted to retain management and options for their children and be able to respond to a changing market while understanding the significant investment required for an offset of this type. Included in the contract were the specific repayment requirements should the owner opt out. Landowners were more supportive of an offset where they retained ownership and management versus outright purchase and management by an aggregator of the lands as they did not want to remove options for continued ownership. The approach of holding an auction where landowners bid on the opportunity to provide the offset was met with caution, but a willingness to try it if the opportunity was transparent and funded appropriately with industry buy-in. Landowners are comfortable with some risk but the parameters of any agreement or process needed to be clearly laid out. Land owners indicated that they would like to have a follow up meeting with industry following an offset transaction and implementation to share experiences and provide input for improvement.
   Land owner cost discovery was an unmet goal. Landowners indicated that without full support and buy in by industry for a full scale pilot project auction they would prefer to wait. We did follow up with local newspaper advertising for an expression of interest, but there was insufficient demand to warrant such an auction.
4. Determine the **roles and costs for a qualified third-party** to facilitate agricultural landowner project development and associated conservation offset obligations (including planning, validation, contracting and monitoring).

Through engagement with Alberta Conservation Association (ACA) management and staff, we identified key actions and roles and to developed a spreadsheet that described and listed actions required through all stages of the offset in order to track staff time; test what those overall costs would be and have a clear record of actions for other reputable aggregators to use in the future. This follow up work is not funded, although ACA is tracking their time related to the offset parcel purchased and their regular management actions.

Funding support of $100,000 from Environment and Parks as "seed money" was used to acquire project lands by ACA in the project area in the absence of being able running an offset auction. Seeding to native perennials will take place in the spring of 2016.

What worked well

Our multi-disciplinary and multi-stakeholder approach worked well as it enabled all of us to look critically at all components of the project with subject matter experts that provided a variety of professional opinions as well as an eye to practicality.

Another key factor was ensuring operational staff in addition to policy and research staff, were part of the process. This helped ensure the proposed approaches were more likely to work on the ground and with scientific rigour using existing tools as well as minimizing transaction costs through duplicated or unnecessary processes.

Engaging Industry and landowners as part of the development process was also key as we could work together to test key ideas, understand underlying business rules, needs and diversity between industries with respect to their regulatory framework. Both industry participants and landowners provided important feedback on their concerns, risks and key criteria to ensure success. Both groups were very forthcoming and helpful with respect to their expertise and flexibility to try a new approach. Both groups felt less risk with trying an approach as long as there was an opportunity to come together following testing of the initial approach and revise as appropriate.

We felt our work with industry input and building off key existing data and processes were our strengths. Many of the tools chosen for on-site monitoring were already available (such as the range health assessment) and data from multiple sources was utilized to build other key tools like the offset prioritization index. The Albert Fish and Wildlife Multispecies Conservation Values coupled with the Grassland Vegetation Inventory data (readily available to industry) were especially helpful. Our collective engagement with agricultural producers and industry (oil and gas, utilities, wind energy) for their input in developing the approaches and processes were also invaluable. We wanted to ensure the

tools and processes were compatible with business requirements in order to not build a new wheel, but rather to provide meaningful tools that participants would use and keep transaction costs reasonable.

Challenges and identified gaps

Policy

It is important to ensure that an offset policy framework with clear principles and defined outcomes that are not too prescriptive be developed, to enable implementation across the province. Ensuring a habitat based focus for offsets as they are not the appropriate tool to deal with species extinction.

Another challenging policy gap we identified was whether offsets would be required to be provided in the area of impact or if that can extend beyond to other areas of the province. We had questions from industry in the oilsands area whether they could purchase offsets for their impacts in the pilot area. Industry partners with the pilot project identified that they would prefer to target the area of impact within a defined natural sub-region and as close to the impact as possible. Landowners agreed with this as they indicated the impacts are incurred by the local communities and adjacent landowners and would more appropriately address impacts to the area and associated wildlife and plant communities.

In our discussions with the pilot team, industry and landowners on providing a quality offset over a defined period of time, the question of sub-surface rights came up time and again. If a company has purchased sub-surface rights to development, there is currently no decision or mechanism to deter or defer use to address impacts of development on an offset area. This may create a situation where industry would be in a position of having to “offset” impacts to an offset; with limited lands available this is not likely appropriate from an ecological outcome perspective.

Industry collaborators requested written confirmation from government that they would receive credit should offsets become a regulatory requirement in the future. Without having some certainty they felt they were unlikely to receive support from their executive to participate in the market as the potential costs were considerable. This essentially brought implementation of our pilot to a halt as government was reluctant to provide this guarantee into the future. Having a clear written memorandum of understanding that will survive changes within and across ministries as to their role and responsibilities would help ensure consistent support for a multi-year, multi-stakeholder pilot. Having a champion at the executive level is crucial.

Scientific

We were constantly challenged with how to measure outcomes and ensure the principles and approaches will scale to other areas. There is incomplete information on some approaches, measurement tools and impacts therefore ensuring the approach can include new information is key. Having consistency in the tools used to evaluate the offset when there are potentially several available, each with pros and cons, requires further testing. Further scientific evaluation is essential.
Our approach had one methodology to evaluate the offset requirement and another to determine the offset suitability and priority. We were challenged on this, as it was felt that they should be the same. We were looking to test which would be most appropriate and then based on results, potentially choose one. However there are also other approaches that could work depending on the desired outcome.

Other

Our outcome of increased native prairie habitat to support wildlife was able to address the issue of "additionality" (outcomes are new and additional to business as usual), yet the issues relating to determining how to quantify that improvement and how to value the offset when it has accrued that value and address risk of loss still need further work as this could not be addressed without further testing within this pilot and beyond. Banking of offset lands may be a solution, but this requires funding and clear parameters for offsets. Australia and its government has been a leader in this regard with over $30 million dollars in Conservation Auctions held and lands secured. International examples in other countries may shed further light on this.

Challenges occurred with not having consistent support and funding for the pilot from government as well as changing priorities, staff and executive interest. This slowed progress and reduced credibility with stakeholders. Industry stakeholders lost interest and willingness for financial support when further government policy support was not developed.

It may be more efficient to have pilots developed outside of government, but ensure that government members in the regulatory decision making process or whose stakeholders are impacted, are part of the team. Providing the necessary broad framework for an independently funded pilot to develop or being open to adopting a framework that has been tested as part of a pilot process would also contribute. Identifying key objectives or allowable activities or funding for a market for those outcomes and objectives, as Australia has done, would also advance this work, but in the current economic climate may be quite challenging.

Ongoing and related work

Alberta Conservation Association (ACA) in addition to their involvement with Alberta Association for Conservation Offsets (AACO), are preparing the offset parcel for seeding in the spring of 2016 and are tracking their time and costs as part of their normal process including the wildlife assessments of the property.

Agriculture and Forestry staff provided input to the biweekly cross-ministry meetings led by Environment and Parks for the development of credit for early action criteria and offset framework development initiatives.

Industry, agency and non-government organizations from the pilot team and others are members and active participants in the AACO. Environment and Parks consistently seeks input from this group in the development of offset frameworks and credit for early offset adoption.

Agriculture and Forestry is working with the Alternative Land Use Services (ALUS) program in two municipalities and developing a prioritization index for use in their voluntary offset programs on private land and potential testing of the conversion to native perennials protocol approach.

There are many related research projects underway including a multi-stakeholder pilot project led by pilot team member Marian Weber, Economist with Alberta Innovates Technology Futures, developing market based tools for an open trading platform to support the payment for Ecosystem Services related to water quality, carbon sequestration and biodiversity.

Summary

Managing risk, ensuring scientific rigour, transparency, low transaction costs and flexibility were key feedback from all participants as well as ensuring that the offset approach was based on sound principles, as well as habitat and outcome based rather than for a specific species.

Ensuring that there is a clearly defined goal or outcome and how it would be measured is key for this or any other offset and also that the issue of additionality is clearly addressed.

Our concerns and challenges with offset development relate to keeping transaction costs low yet with a balance between science and pragmatism. We felt we were able to do that, but the mechanism for achieving a clear signal from government was lacking although the intent was there. A voluntary market becomes challenging as there needs to be a clear signal to drive the need to purchase offsets or a way to provide secure funding if it is not truly market based. Another concern and challenge identified is having

an offset system and process that will meet the scrutiny of the auditor general and the public without being so onerous as to essentially become non-functioning.

There was substantial in kind contribution of staff from government and all of our pilot team members as well as industry and producer representatives. Any jurisdiction undertaking this task will need to recognize that this will be significant and needs to ensure the project is consistently well funded and supported at all levels. A challenge we encountered was threefold staff turnover at one Ministry and the loss of the project champion during times of competing government priorities. Consistency helps to maintain momentum and credibility with partners outside of government.

Overall there was a real willingness by industry and landowners to test new approaches, but some discomfort with this in some areas of government since staff and executive have changed so frequently. In the future, ensuring there are mechanisms and defined funding to allow for full testing of pilots with sufficient certainty for participants is necessary and should not be assumed.

Offsets are one tool to assist with mitigating impacts to lands in a way that engages all sectors in a market based approach. It is imperative to implement these tools prior to their need becoming obsolete. The demands on Alberta's lands are not diminishing and without viable alternatives, the potential impacts to the land and Albertans could be significant. Private landowners and industry are key partners in achieving this goal along with non-government organizations, academia and government.

Southeast Alberta Conservation Offset Pilot Team:
Karen Raven, Rob Dunn, Tom Goddard, Marian Weber, Todd Zimmerling, Brad Downey, Paul Jones, Kevin Redden, Joel Nicholson, Dale Eslinger, Dr. C. Gates, Shane Petry, Kevin France, Barry Adams, Mike Alexander, Darrin Britton and Ron McNeil

For more information contact: Karen Raven P. Ag. karen.raven@gov.ab.ca, Land Use Unit, Environmental Stewardship Branch, Alberta Agriculture and Forestry