PRODUCERS LEADING THE WAY

Producer Survey Findings and Recommendations

Milk River Watershed Council Canada
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Submitted to:

Milk River Watershed Council Canada

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EXECUTIVE SUMMARY

The Milk River Watershed Council Canada has been an important non-government organization in the Milk River region of Alberta since its founding in 2005. With the stated goal, “To achieve balance among a thriving community, a healthy environment and a prosperous economy through understanding, dialogue and action,” this group has been at the forefront of local initiatives directly targeted at the Milk River Watershed community. As part of these activities, the Council has undertaken this project, “Producers Leading the Way: Opportunities for Improved Native Grassland Conservation and Species at Risk Stewardship within the Milk River Watershed,” in an effort to help understand native grassland conservation in this sensitive and ecologically important area.

“Producers Leading the Way” took a new approach to cow/calf producer engagement. An online survey was deployed to all known cow/calf producers within the four local counties: Cardston, Cypress, Forty Mile and Warner. The survey focused on gathering information from producers on the following conservation topics: Conservation Easements, Conservation Tax Credits, Species at Risk programming, Ecosystem Goods and Services, Conservation Partners, and Motivators and Barriers to conservation. Additionally, five in-person meetings were held in local municipalities to ensure that producers had the opportunity to speak to the group first-hand, and increase participation rates for completion of the survey.

The results of the survey were very informative and provide a wide berth of ideas and comment on the current methodology of conservation in the Milk River Watershed, as well as thoughtful insight into where conservation progress could be made. The surveys provided a wealth of discussion topics to understand why producers may feel and act the way they do and provide context to the current mindset of producers on conservation programming in the area.

Based on the survey results, some key recommendations were established for the Milk River Watershed Council Canada. These include: building and maintaining a contact list for the producer community in the Milk River Watershed; working with necessary parties to ensure that dis-incentives to conservation of native grasslands are removed; working with the Province to ensure that leased lands are included in future conservation programming; learning to take the initiative to reach out to producers to participate in upcoming projects; and, creating projects that producers want to engage in, including revamping successful projects from the past.

There were many opportunities to advance the conservation initiative in the Milk River Watershed identified in the survey. The challenge now is to seize them.

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We would like to take this opportunity to thank the funding partners, Environment and Climate Change Canada (ECCC) for the financial support to undertake this important project, and the Milk River Watershed Council Canada for their ongoing guidance, leadership, and support of the project locally.

We would like to thank our contacts at the four Counties for their help in distributing the survey and organizing the town hall meetings: Brad Calder from County of Warner, Lisa Sulz from Cypress County, Kevin Jesske from County of Forty Mile, Stephen Bevans from Cardston County, Rodger King for helping arrange the Aden Grain Hall, Danielle MacCallum for her help with the Del Bonita Community Hall, Stacey Barrows for her help with the Foremost Community Hall, Jamie Meeks and Cathy Preston for their help with the Warner Agricultural Service Board Meeting Room, Dave Collins for his help with the Manyberries Community Hall, and Jason Rinke for his help with the advertisements through Prairie Post.

We would like to whole-heartedly thank all the producers from Cardston County, County of Warner, Cypress County and County of Forty Mile for their participation in this project. The Producers Leading the Way project is just that, us learning from you.

Disclaimer

MRWCC delineation of watershed cow/calf producers indicated in 2013 under 200 producers residing within the four rural municipalities reported here within the Milk River Watershed. Project targets were to engage up to 50% of producers, while the respondents who completed the survey was fewer than projected; we are confident based on our targeting measures outlined in this report that the survey results are largely representative of producers in the Milk River Watershed. The survey does not cover all possible land conservation tools that may be beneficial in this area. The results and interpretations are those of the author, based on the survey analysis. Results presented here should not be applied to other areas of the Canadian Prairies. Recommendations provided are simply that, recommendations, and whether or not they are implemented is voluntary. The information reported here may be shared at the discretion of the Milk River Watershed Council Canada.

1. BACKGROUND

1.1 Location

The Milk River Watershed is arguably one of the most diverse and ecologically important areas within the Province of Alberta. It is the only watershed in Alberta whose waters flow between both Alberta and Montana, with tributaries also originating in Saskatchewan, creating a truly transboundary landscape, and it is the only river in Canada that drains eventually into the Gulf of Mexico (MRWCC, 2013). Within the province, the Milk River Watershed is contained to the four southern-most counties of Alberta. From west to east, these are: Cardston County, County of Warner, County of Forty Mile and Cypress County.

Geographically, the Milk River runs from its headwaters in northern Montana in Glacier National Park, northeast into Alberta near Del Bonita, through the watershed area of southern Alberta before flowing back into Montana in the area south of Manyberries, Alberta. Many of the tributaries of the Milk River originate in Montana and Saskatchewan. The Milk River Watershed encompasses an area of 14,790,813 ac, with the portion in Alberta being 1,682,500 ac, or 11% (MRWCC, 2013). For clarity, the remainder of this report will be addressing only the Alberta portion of the Milk River Watershed.

Economically, the region is faring well, with most indicators trending in a positive direction (Table 1). Total population numbers are generally on the rise, and the median family income is rising steadily in each of the four counties. Changes presented are on an annual basis (GoA, 2022a). The caveat here is that the data presented are at a County level, and we cannot correct this to include only the Milk River Watershed. In cases such as Cypress County, which is very large and encompasses the city of Medicine Hat, this can skew the appearance of the economic situation in the Milk River Watershed. Historically, this region has seen a major contraction of services and population, and in the Milk River Watershed, this trend is the dominant one (MRWCC, 2013).

Table 1. Socioeconomic Indicators of the Milk River Watershed Counties

County	Total Population (2021)	% Change	Median Family Income (2019)	% Change
Cardston	4,721	0.9	$80,877	3.25
Cypress	7,972	0.19	$117,235	4.97
Forty Mile	3,759	0.7	$79,902	2.81
Warner	4,110	-0.41	$76,173	6.39

1.2 Environmental Significance

The Milk River Watershed is an extremely important environmental area in Alberta. It is home to both the Mixedgrass and Dry Mixedgrass prairie natural subregions, within the Grassland Natural Region (NRC, 2006). These two landscapes account for the largest amount of intact native grassland areas remaining in Alberta, providing critical habitat for native flora and fauna (Adams *et al*., 2013a; Adams *et al*., 2013b). According to the Milk River Transboundary State of the Watershed (SOW) Report (MRWCC, 2013), the main land cover in the Milk River Watershed at that time was native grassland at 65% of the watershed, with the majority of these acres occurring in Cypress, Forty Mile and Cardston Counties.

Of the Milk River Watershed land base, roughly 60% (~1,000,000 ac) are owned and operated by the Province of Alberta, as provincial grazing reserves or grazing dispositions. Other land holdings in the area include the lands divested by the Government of Canada Onefour Research Station, 2,970 ac which are now maintained as a research facility by the University of Alberta Rangeland Research Institute (MRWCC, 2014; Metella, 2016). The remaining 40% of the land (~600,000 ac), is privately owned. This makes for an interesting and unique mix of management priorities in the sensitive native grassland area.

Because of the unique feature of such a high proportion of intact native grassland, the Milk River Watershed is included in the ‘Summit to Sage’ priority place. ‘Priority Places,’ are areas across Canada that have been identified as areas of high biodiversity values, significant concentrations of Species at Risk (SAR), and hold opportunities for increased conservation effort, as stated by the Government of Canada, pan-Canadian approach to conservation (GoC, 2020). The placement of the Milk River Watershed in the Summit to Sage priority place means there are increased conservation activities, possibilities, and funding available to work with the people on the land who have the long-term knowledge of the area and are best able to adopt and deploy conservation initiatives. This project is part of that investment.

2. OVERVIEW

2.1 Producers Leading the Way

Working with the Department of the Environment and Climate Change Canada (ECCC), funding was approved for the Milk River Watershed Council Canada to put out for bid a new project, “Producers Leading the Way: Opportunities for Improved Native Grassland Conservation and Species at Risk Stewardship within the Milk River Watershed”, or, Producers Leading the Way (PLTW) for short.

The goal of the PLTW project was to survey local beef producers (hereafter known as, producers) managing cow/calf operations within the Milk River Watershed, to gain an understanding of and appreciation for where and how conservation funding dollars are best spent, and identify differences in need or interest across the watershed.

In August, 2021, Milk River Watershed Council Canada put forth an open bid Request For Proposal (RFP) for the PLTW project, and in September, 2021, awarded the contract to Kristine Dahl, O/A Arvense. Working together since that time, Arvense and Milk River Watershed Council Canada developed the producer survey, exported it out to as many beef producers in the four counties as possible, hosted five separate town-hall style meetings, and have tabulated survey results.

Key outcomes required from this project include: developing a conservation focused survey (hereafter referred to as, the survey, or, the producer survey) that identifies producer interest and ability to participate in conservation activities, including those which are not appealing to producers; a focused approach to surveying producers living and operating directly within the Milk River Watershed, as this is the area of high conservation value for a wide range of species and landscapes; compiling and tabulating the survey results in order to make educated recommendations on future funding targets and goals for the Milk River Watershed Council Canada and other conservation partners.

3. METHODS

3.1 Producer Survey

The producer survey was one of the key outcomes of the project. It was important to focus the survey on questions producers could read and understand easily and quickly with no confusion, and answer honestly. In order to achieve this, Arvense and Milk River Watershed Council Canada worked together to put together a Focus Group meeting with conservation stakeholders which may have previously or may in the future work in the Milk River Watershed. Invitees included people from all aspects of conservation in the Milk River Watershed: the four local counties, local Non-Governmental Organizations (NGOs), the provincial and federal governments, local land trust organizations, beef cattle production organizations, and members of the Milk River Watershed Council Canada board of directors. The meeting was well attended, with over 20 people from these different stakeholder groups attending the virtual meeting on October 13, 2021 to discuss issues they have experienced in working with producers on conservation initiatives. Invitees were requested to send in questions or comments they had for

the survey ahead of time for discussion, and each discussion topic was addressed fully, with a wide variety of perspectives presented. From this meeting, there was enough information gathered to proceed with the development of the producer survey.

Survey questions were initially written as a word document, and sent to the Milk River Watershed Council Canada project team for input and review. After two rounds of comments, the first version of the producer survey was created. The producer survey was created on the Microsoft 365 Forms platform, owned by Arvense, after trialling several other possible survey sites. This platform had the greatest amount of built-in variation of question types and was easy to manipulate and adjust to suit the project needs.

A point of note on the survey; while developing the survey questions and putting the form together, it was decided that because the survey was voluntary, we would not require producers to answer all questions or any questions they did not want to. As such, there are not necessarily the same number of respondents for each question. These variations will be noted where appropriate.

The initial producer survey was sent out as a Beta test on November 1, 2021 to five volunteer producers known by Arvense, as a trial for the format, length, and clarity of the survey. This was done based on a recommendation made at the Focus Group meeting that any survey be tested by a non-participant group, to ensure the questions are clear and that producers would be able to and comfortable with completing the survey. After this Beta test was complete, some small changes to sequencing and format were made and the survey was deemed ready for deployment to the target group, producers in the Milk River Watershed.

One of the challenges of the PLTW project was understanding the number of cow/calf producers in the Milk River Watershed (Table 2). There are two sets of data from the Census of Agriculture (2016), which is the most recent available. One set of data reports on the Number of Farms (GoA, 2022a), and the other, the Number of Farm Operators (StatsCan, 2022). The Number of Farms percent change is from the previous Census of Agriculture in 2011, from data collected every five years. Both sets are only available at the County level, and we are not able to correct this for a true understanding of the number of farms and/or producers in the Milk River Watershed.

Table 2. Number of Farms Operators, Average Ages, and Number of Farms by County (2016)				
County	**Number of Farm Operators**	**Average Age**	**Number of Farms**	**% Change**
Cardston	685	57.2	475	-4.43
Cypress	1,120	55.4	805	-2.66
Forty Mile	695	52.6	498	-4.96
Warner	620	55.0	462	-5.33

Because the area the survey was meant to cover is so large, yet the number of targeted producers relatively low, we had to deploy several methods to engage with producers and encourage participation in the survey, which was hosted online. As an enticement for producers to complete the survey, we offered a chance to win one of 20 gift cards in the amount of $100 each at UFA.

The first and primary form of contact initiated with producers was through a targeted email. We used the Milk River Watershed Council Canada contact list as the primary method of contacting producers. We also recruited the help of the four local counties to send out our invitation via email and regular mail to producers on their contact lists. Because of privacy concerns, we were not able to access these lists ourselves and therefore we cannot be certain exactly how many producers in the watershed were contacted. Additionally, we were aided by Cypress County staff by their mailing out of hard-copy surveys to the known producers in the county on our behalf, and the collection and delivery of those surveys back to us for data entry.

We followed up our initial email survey invite with reminder emails starting roughly one month later, and then followed up weekly. Producers were invited to fill out the survey directly through the link provided, but were also offered the choice to print a form and mail it in, or to phone in responses to Arvense directly. Further to these approaches, we used the local newspapers, Prairie Post East and West, to run print ads on January 7 and 14, 2022, advertising the survey and the upcoming town hall meetings.

A final step to engage with producers and encourage survey completion was to advertise the survey on social media. The Milk River Watershed Council Canada has a Facebook page as well as a Twitter page that were both used to share the survey link and encourage survey completion. Due to the open nature of the reach of these methods to encourage producers to complete the survey, we are not able to say with any certainty how many producers in the Milk

River Watershed specifically knew of the survey, and therefore we cannot know exactly the participation rate.

The survey was closed to responses on January 31, 2022 at 6:00 pm.

3.2 Town Hall Meetings

Town hall style meetings were included in the project timeline as a means to engage with producers directly, in an area familiar to them, where candid discussions could be had and surveys completed in person. Initially, these were intended to be held in November or December of 2021, but due to various timeline constraints and public comfort, they were postponed until January 2022.

Five town hall meetings were held, in order at Manyberries, Foremost, Aden, Warner and Del Bonita, Alberta. They occurred on January 17 at 10 am and 3 pm, January 18 at 10 am and 3 pm, and January 19 at 10 am, respectively. Advertising of these meetings was done through the weekly email reminders, on social media, and through the advertising on the Prairie Post East and West publications. As an enticement to encourage producers to attend, we offered a $25 gift card to UFA to every attendee, in addition to the chance to win a $100 gift card in the draw, and we provided a free simple meal and coffee with snacks at each event. The agenda for each meeting included an introduction of the Milk River Watershed Council Canada by a member of the council, to highlight some of the work being done by the council in the area, followed by an introduction of Kristine Dahl of Arvense, who then gave a presentation of the intent and process of the PLTW project. This was followed with time to complete the survey for those who had not, and later by a question and answer period, where producers could bring up issues related to conservation they were concerned with.

Attendance at the town hall meetings was less than optimal, with a total of 14 producers attending the five events. The intimate nature of these small events allowed for a natural flow of discussion and back and forth ideas sharing for people in the same localities, often experiencing the same challenges. Due to the conversational nature of the meetings, the ideas and concerns brought up therein are not included in the analysis of the survey results and will be presented separately.

4. RESULTS

The survey was set up in eight sections, each discussing and asking producers about themselves or a different option regarding native grassland conservation. The first section was centred

around collecting general demographic information from each producer; questions about age, land base, education, etcetera. The second was focused on their knowledge of and interest in conservation easements as an approach to native grassland conservation. The third section explored the idea of a conservation tax credit to increase conservation. The fourth section talked about species at risk planning and management, while the fifth section addressed the understanding and importance of Ecosystem Goods and Services. In the sixth section, the concept of conservation partners was addressed, and the seventh section touched on more personal aspects of farm and ranch management and personal conservation values and priorities. The final section was contact information at the conclusion of the survey. Due to the limited number of responses especially by county, we cannot extrapolate the data presented here as representative of the wider cow/calf producer population.

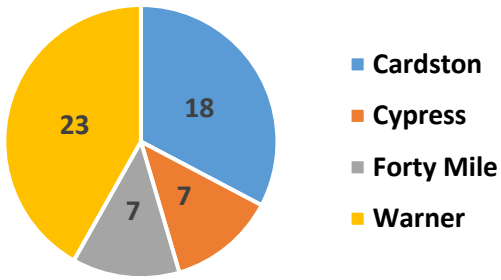
4.1 General

The survey had 55 unique responses when closed on January 31, 2022. Each of these were confirmed to come from a unique individual with no repeat participants. The Representation by County is as follows: Cardston County: 18 (32%), Cypress County: 7 (13%), County of Forty Mile: 7 (13%), and County of Warner: 23 (42%) (Table 3; Figure 1).

Table 3. Response and Representation by County

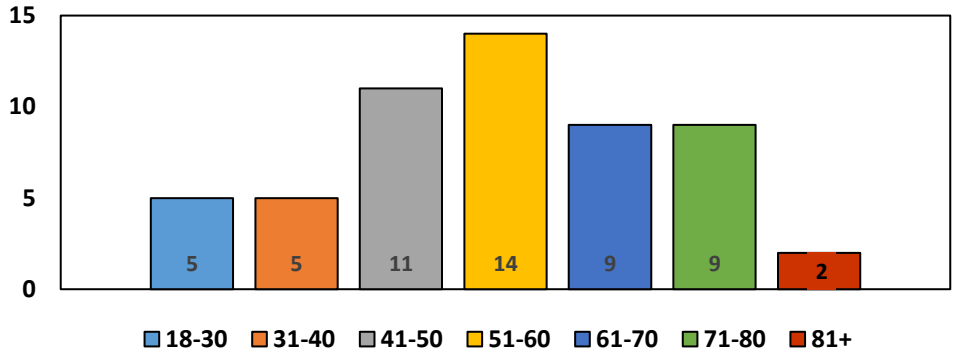
County	Survey Mail-Out	Number of Responses	Response Rate (%)	Representation by County (% of total)
Cardston	126	18	14	32
Cypress	42	7	17	13
Forty Mile	18	7	39	13
Warner	69	23	33	42
TOTAL	**255**	**55**	**Average: 25%**	**100%**

Figure 1. Response Rate by County



The variation in age range among participants followed a typical generational trend, with the highest number of participants at 14 in the 51 – 60 years range, with 21 in the age brackets 18 – 50 and 20 in the age brackets 61 – 80+ (Figure 2).

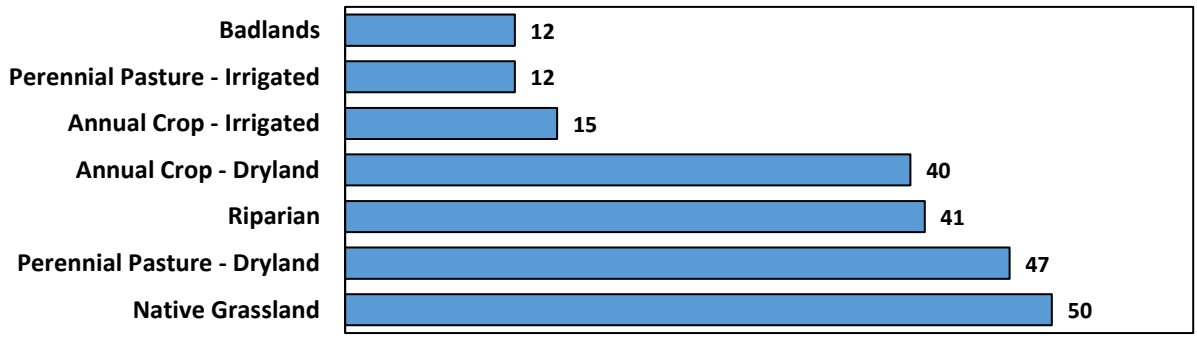
Figure 2. Age Range of Respondents



Just under half of respondents (49%) had at minimum a college level diploma, while an additional 25% had a bachelors or graduate level degree. The strong majority of respondents with 46, (84%) were coming from a multigenerational family farm organization, with new farmer or a corporate farming operation both having 4 responses (7%) each. There was one response indicating a cooperative or multi-family operation, otherwise understood to indicate a Hutterite Colony.

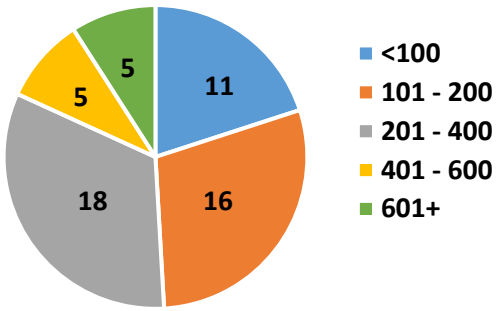
Producers were asked to indicate what types of land base and uses they had in their operation, and were free to indicate as many types as needed. 51 of 55 respondents (93%) indicated deeded land on their land base, 37 of 55 (67%) indicated leased land (Public Land), and 23 of 55 (42%) indicated rented land. Among the land uses listed, native grasslands at 50 of 55 (91%) were the greatest land use, with dryland perennial pasture the next greatest at 47 of 55 (85%). All the other land types were selected in varying amounts (Figure 3).

Figure 3. Land Types in the Milk River Watershed



In regards to the typical herd size, it is well documented that southern Alberta has a larger than average herd size, which was supported in the answers of this survey. In Alberta, the typical beef herd was roughly 84 cows in 2017, up from 76 in 2010 (Gracey, 2017). In our survey, the results show that 11 of 55 responses (20%) indicated a cow herd of less than 100 animals, while all the rest, 44 of 55 (80%) were greater and in some cases, much greater at more than 600 animals (Figure 4).

Figure 4. Size of Cow Herd

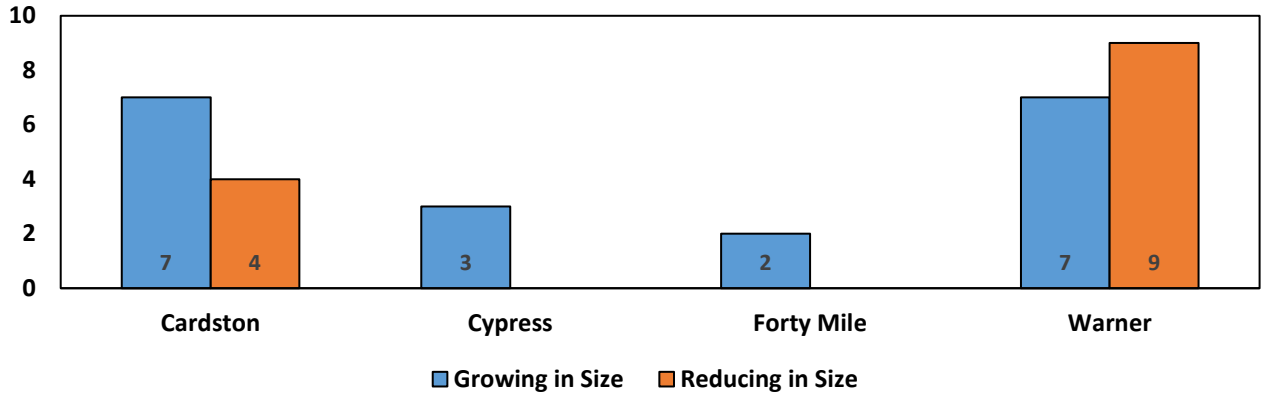


An interesting final assessment in this section, the last question was posed regarding ranch operation, asking if there was an expected change in operation on the farm, such as an increase or decrease in cow numbers, increase or decrease in land size, change in management, or any others. Responses varied widely across the spectrum between all answers and between all counties, but, upon deeper analysis, an interesting trend regarding operation expansion or contraction emerged.

"No change in cattle numbers. Transferring ownership to our son is already happening in stages."

Of the 11 producers who indicated they had fewer than 100 cows in their operation, nine of those were from the County of Warner (82%), and, of those nine, five (56%) indicated that in the future, they foresaw a reduction in the operation size, either in number of pairs or acres, and all were over the age of 51. Looking in the other direction, 19 of the 55 responses (35%) indicated they foresaw an increase in their operation, either in number of pairs or acres (Figure 5). These producers were from all Counties and of all age ranges.

Figure 5. Future Growth or Reduction in Operation Size by County



4.2 Conservation Easements

A conservation easement is a device whereby a landowner gives up certain rights or opportunities in order to protect the conservation values of all or part of their land. That "interest in the land" is granted to an eligible conservation organization or government agency. The conservation easement is typically negotiated in perpetuity, and is registered on the title of the land. The landowner retains title, and continues using the land subject to the restrictions in the easement. They are free to sell, gift or will that property, but the easement binds future landowners to the same land use restrictions. Conservation easements in general – and those land use restrictions in particular – are designed to protect a set of ecological, scenic and/or agricultural values that are catalogued and agreed upon at the outset (Environmental Law Centre, 2022). In this section of the survey, we set out to understand if producers were familiar with the idea of an easement, their interest in easements, and what interested or disinterested them in establishing an easement on their land.

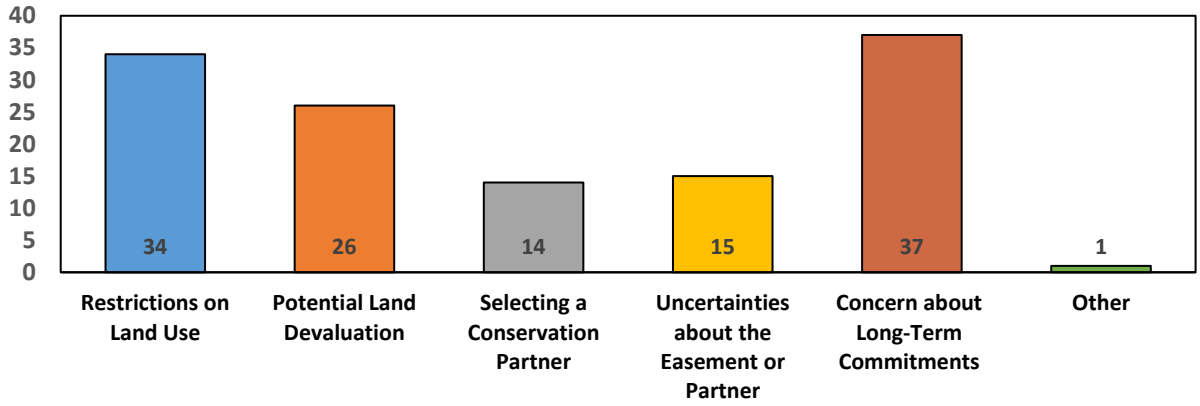
4.2.1 Milk River Watershed

Overall, the majority of respondents (85%) were familiar with the concept of a conservation easement, while the reverse was recorded in regards to having an easement on their land (85% without, 15% with an easement). When asked if an easement was included in the future plan of the operation, 74% (40 of 54 respondents) said no, while the remaining 26% (14 respondents) said yes.

Producers were asked to identify aspects of a conservation easement that were not appealing to them, and were able to select as many choices as they wanted, resulting in 127 selections from 51 producers, averaging 2.5 concerns each. Of these, 73% (37 of 51) of respondents identified ‘Concern about long-term commitments and unknowable effects in the future,’ while

67% (34 of 51) selected 'Restrictions on land use and loss of development opportunities,' and 51% (26 of 51) selected 'Potential for land devaluation or decreased gains when land with easements is sold' (Figure 6). These three responses appear to indicate an overall trend of the fear of uncontrollable or unforeseeable ramifications on the ranching operation caused by the inclusion of a conservation easement on a piece of land.

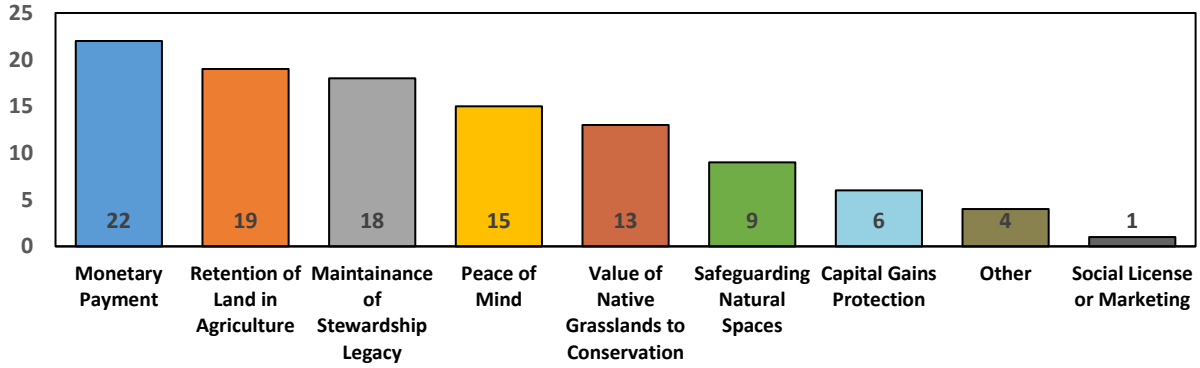
Figure 6. Deterrents to a Conservation Easement



"Not sure easements are the answer for everyone."

Alternatively, producers were asked to identify which top motivators would interest them in developing a conservation easement. 50 producers selected 107 responses, roughly two interests each, with the most popular at 44% (22 of 50) being 'Monetary payment for the limitation of development or breakage of native grassland,' followed by 'Retention of land in agricultural production' 38% (19 of 50) and 'Maintenance of a legacy of land stewardship' 36% (18 of 50) (Figure 7). The lower value of any of the popular choices, and the overall fewer number of choices made, indicate that among this group of producers, there appears to be a stronger sense of concern regarding conservation easements than an interest in participating in this style of conservation.

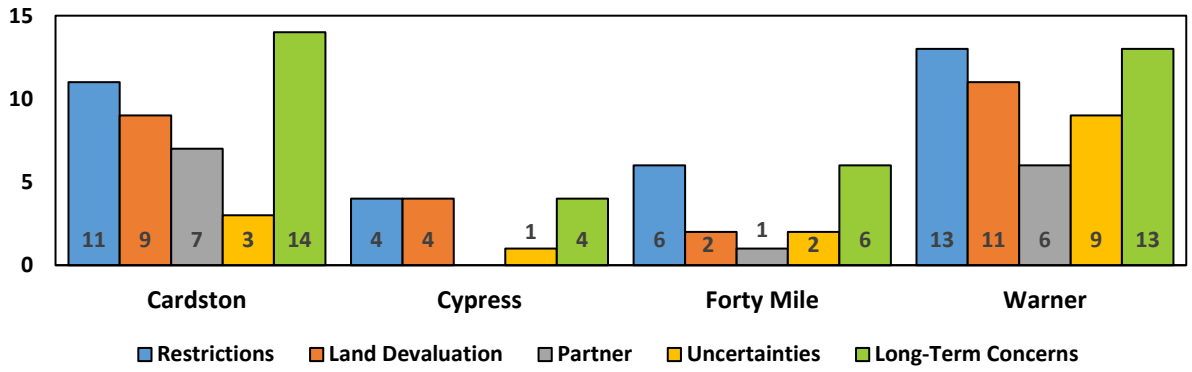
Figure 7. Motivators for a Conservation Easement



4.2.2 Variation by County

Seventeen producers answered the questions about conservation easements from Cardston County. The aspects that concerned those producers about a conservation easement were strongly 69% (11 of 16) 'Restrictions on land use and loss of development opportunities' and also 69% 'Concern about long-term commitments, and unknowable effects in the future,' and 56% (9 of 16) 'Potential for land devaluation or decreased gains when land with easements sold.'

Figure 8. Deterrents to a Conservation Easement by County



Interest in developing a conservation easement was most supported by the response, 'Monetary payment for the limitation of development or breakage of native grassland,' with 8 of 16 (50%) respondents selecting that response, with another 8 of 16 (50%) also choosing 'Retention of land in agricultural production.' Options such as, 'Safeguarding natural spaces,' and 'Peace of mind of preserving landscapes in current condition,' were chosen, but in much lower numbers.

These trends were observed among the remaining three counties in the area, with very consistent results. This indicates that as far as conservation easements are concerned, there is a fair amount of hesitation for fear of consequences further down the road for themselves or their families, and that that hesitation or skepticism far outweighs any benefit that preserving the landscape in its current form would provide.

"Interested in all of these priorities but not interested in giving an easement for any of them, thank you."

4.3 Conservation Tax Credits

One of the more broadly accepted public policy approaches to incentivizing private conservation action is by reimbursing landholders for their property tax obligations when they achieve prescribed outcomes of public value. Federal funding would be sought as a means of reimbursing

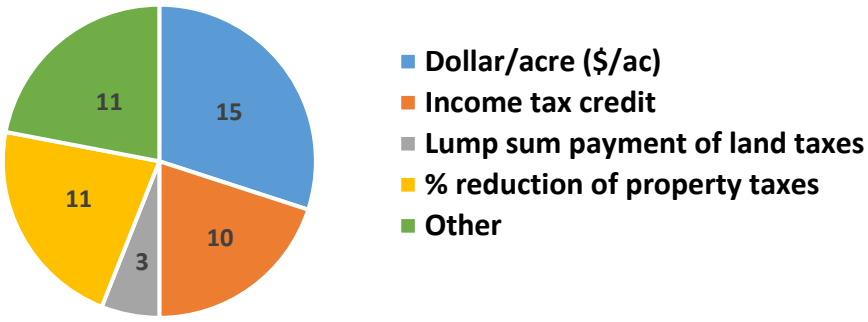
a municipality or county for the forgone tax revenue, and would be tied to the conservation of native grasslands. On private portions of grasslands incentive payments are intended to reward native habitat retention and beneficial management for wildlife. On Crown lands where habitat retention is prescribed by Provincial or Federal legislation, the intended outcome is adoption of beneficial rangeland management practices for wildlife habitat enhancement. These outcomes are confirmed with periodic assessments by third-party evaluators. Conservation tax credits have not been implemented in Alberta and thus provide the opportunity for a blank-slate approach to conservation funding programs.

4.3.1 Milk River Watershed

Within the Milk River Watershed, not surprisingly, most producers were not familiar with a conservation tax credit, 34 of 53 (64%). This is not surprising given that no such program exists in Alberta, as stated above. However, the majority of producers indicated a willingness to support the development of a tax credit program in their municipality/county, 41 of 52 (79%), and another strong majority favoured the idea of a reduction or elimination of property taxes for conservation efforts, 39 of 51 (76%).

Preference for the style of tax credit to be developed was widely mixed (Figure 9), and what producers felt would be fair compensation just as much so. This is not surprising, as without any programs in place in the province to learn from, the variation can be substantial. There were a fair amount of responses in the Other category, and while most of those comments were along the lines of “More information needed”, two that stood out as valid points to consider were, “Should apply to leased lands as well not only deeded,” and, “Land taxes are minimal and not a realistic value for conservation.”

Figure 9. Preferred System of Tax Credit



The comment about tax credits applying to leased lands as well as deeded lands is a solid one. Many producers in this area, 67% (37 of 55) had leased lands included in their land base, and in

some cases, these leased areas can provide a significant proportion of the land used by the producer for their grazing needs. Leased lands are part of producers long-term plans for their operations, and are managed as part of their land base, so to treat them as 'other' or separate from the deeded lands is not appropriate. While it is true that producers are not allowed to manage leased acres the same as deeded acres, they are responsible for them, and the number of acres in the watershed that are public lands is substantial. Therefore the argument can be made in the development of a tax credit, to treat leased acres as part of the land base of the producer, either under the same set of criterion as deeded lands or a separate guideline for public lands, but in either case, included in the equation.

The second comment about the value of lands taxes not being high enough is also warranted. In many rural municipalities, land taxes are not a major expense of an operation, and so offering this as a tax credit option would not necessarily motivate producers to conserve based on taxes alone.

Producer comments focused on the need for more information, with the commonality that land values, size of parcel and conservation requirements would need to be confirmed.

"This is tough because rangelands with higher AUMs raise less beef but are probably higher in conservation value."

4.3.2 Variation by County

While the idea of a conservation tax credit is a novel one, the idea itself has some support in two counties. Both Cardston and Forty Mile had very positive responses in support of developing a conservation tax credit in their county. Cardston County had 15 of 18 (83%) producers indicate they would support developing a tax credit program, while County of Forty Mile had 6 of 7 (86%, with one abstention).

Cypress and Warner Counties had a more mixed result of responses, with Cypress indicating 4 of 7 in favour (57% with one abstention) and Warner indicating 16 of 24 (67% with one abstention).

"It's all economics."

4.4 Species at Risk

Due in part to the uniqueness of this area of southern Alberta being the northernmost reach of the Great Plains Ecosystem, and part of the Grassland Natural Region, many species found there are endemic to the area and only locally abundant or occasionally occurring (MULTISAR, 2022; WWF, 2022). This has resulted in a variety of species preservation programs being implemented in the area over many decades, with mixed results and producer engagement.

4.4.1 Milk River Watershed

The survey queried producers about their preference of approach to Species At Risk (SAR) programming and conservation projects. The overwhelming majority, 81% (44 of 54) responded that their preferred interest in conservation projects would be as 'Habitat conservation (entire grassland ecosystems, including cattle, plants, soils and wildlife,' over the other options 'Species specific; Multi-species, or, None of the above,' which all together interested 10 of 54 producers.

4.4.2 Variation by County

The survey then questioned producers if there were specific SAR programs/approaches they did not agree with. Here we can see a clear split between the four counties. While most producers responded 'No' (75%, or 39 of 52), those who responded 'Yes' (25%, or 13 of 52) had different experiences depending on the county they were from.

Cardston County

Producers from Cardston County responded that there was an SAR approach they did not agree with, and those producers provided the detailed reply of concern with the Grizzly Bear protection program. Grizzly Bears were designated a threatened species in Alberta in 2010, with an increase in protections and management protocols developed and implemented since that time (GoA, 2022b). Cardston County is the westernmost county of the Milk River Watershed, and as such has an increased potential of wildlife such as the Grizzly Bear moving in from the eastern slopes of the Rocky Mountains.

"Grizzly bear protections are not balanced and favour Grizzly bears over all else and at all costs."

Warner, Forty Mile and Cypress Counties

The three eastern counties of the Milk River Watershed, Warner, Forty Mile and Cypress, had 11 producers of 52 (21%) respond 'Yes' that they were concerned with a specific approach to SAR management. Again there was a clear consensus among the detailed responses, with 7 of 11 (64%) responses indicating a disagreement with the execution of the Greater Sage-Grouse Environmental Protection Order (EPO) of 2013. For context, this EPO was, according the Government of Canada (GoC, 2016), 'a necessary condition for the survival of the Greater Sage-Grouse,' and had a wide range of conditions imposed on producers in the area, for the stated incremental benefit of the 'continuation of an existence value for the species.'

The area affected by the EPO covered 1,672 km^2 of provincial crown lands in Alberta and Saskatchewan. Private lands were not affected (GoC, 2016). It is interesting that producers in the County of Warner also expressed concern for this program, as the area affected did not encroach into their County, however it is likely that given the amount of leased land affected, producers from County of Warner would have also been affected for use of their grazing leases as well as those from Forty Mile and Cypress Counties. The EPO remains in effect to this day.

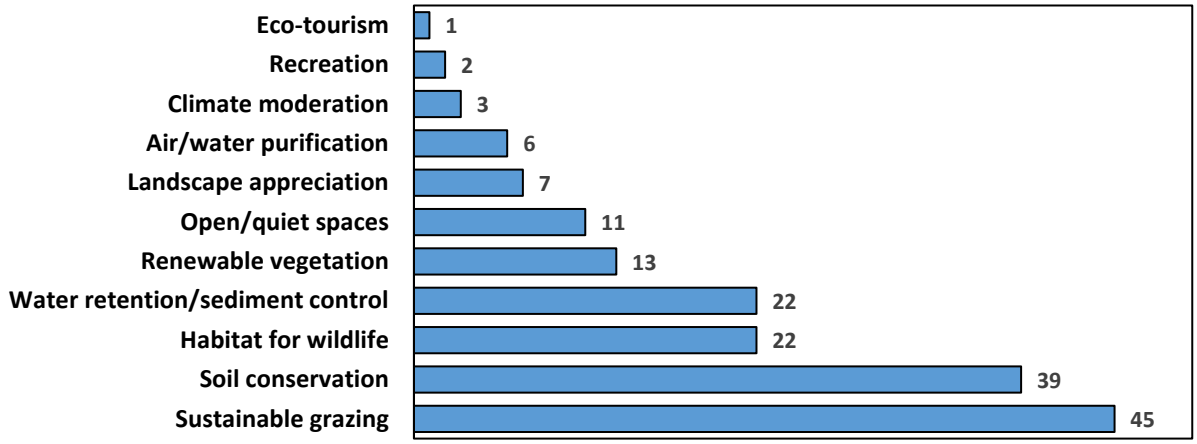
"Very concerned with how the Sage Grouse protection in our area is focusing on only one specific species, I would rather see a complete habitat protection overview."

4.5 Ecosystem Goods and Services

Ecosystem Goods and Services (EG&S) take a wide variety of forms. Generally, they describe the ability of the land to provide ecosystem services such as: air and water purification, water retention and sediment control, renewable forage and vegetative resources, climate moderation, sustainable grazing, landscape appreciation, soil conservation, quiet/open spaces, recreational opportunities, habitat for wildlife, opportunities for eco-tourism, and many others (Sinclair-Desgagné, 2008). We asked the producers three questions about their appreciation of the EG&S provided by their native grasslands, and their interest in promoting and/or protecting them.

Fifty-three producers responded to the main question asking what were the most important EG&S to them. These 53 producers made a total of 168 selections for an average of 3 selections each, with every option being chosen at least once. This indicates a firm appreciation for the variety of services native grasslands provide beyond the obvious choice of sustainable grazing, which was in fact the most popular choice (Figure 10).

Figure 10. EG&S Provided by Native Grasslands to Producers

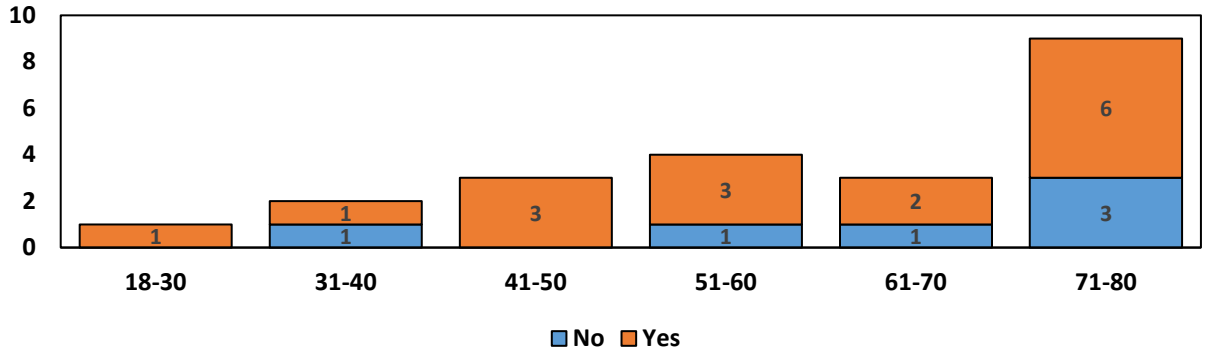


The next two questions asked if producers included EG&S as part of their management planning, and whether or not they would be interested in working with a conservation partner to increase or recognize the value of EG&S on their lands. To the first question, a strong majority, 77% (41 of 53) responded that they did include EG&S in their management planning. To the second question, a smaller majority, 61% (31 of 51) indicated an interest in working with a conservation partner on developing the EG&S on their lands. An interesting outcome of this question is that just because a producer indicated planning for EG&S, that did not necessarily result in those producers indicating a willingness to work with a partner to develop those EG&S. Of those 41 producers who indicated planning for EG&S, only 29 (71%) responded with an interest in working with a conservation partner on EG&S.

4.5.2 Variation by County

As 77% of producers indicated that they included EG&S in their planning, it was interesting to look at those producers who did not. While the number of producers who said ‘no’ was normal for the response rate per county, it was curious to note that in County of Warner, which had 6 of 22 (27%) producers say no, of those, 5 were in the upper age range categories: 51 – 80, with three in the 71 – 80 range (50%) (Figure 11). It could be that the concept of EG&S is not a familiar one with the older generation of producer, and this could explain the trend in this case, but we cannot know for certain. Especially when we counter this with the high trend of ‘yes’ choices in the same age range in the same county. It is of note that between the four counties, Warner had all of the producers identified in the 71 – 80 age range, 9 of 9 (100%).

Figure 11. Planning for EG&S by Age Range in County of Warner



4.6 Conservation Partners

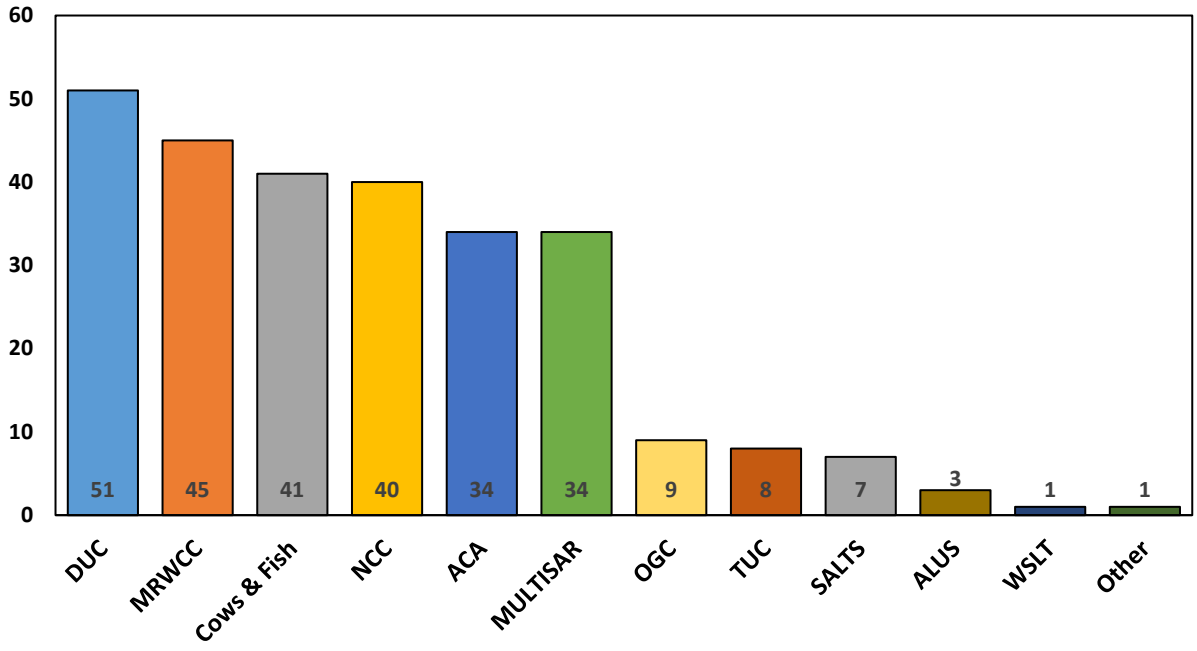
In Alberta, there are a wide variety of conservation groups at work in the province, ranging from those at the National and International level such as Nature Conservancy of Canada, to those much more regional and locally focused and based, such as the Southern Alberta Land Trust Society. In this section, we wanted to explore which groups were known to producers, which groups they were interested in working with, what types of projects they had done with these groups before, the preference of one level of organization over another, among others.

4.6.1 Milk River Watershed

All 55 producers responded to the question of which conservation groups they were aware of, and awareness of these conservation partners was generally high, with every group we had mentioned acquiring at least one selection by one producer (Figure 12). The only anomaly was a single producer who indicated in the "Other" category that they were aware of "None" of these groups. Ducks Unlimited Canada (DUC), was the top selection, with 51 of 55 producers (93%) indicating awareness of the group. DUC has been operating in Canada since 1938 (DUC, 2022), with a long history of wetland recovery strategies across the province, so awareness of this group is naturally high. The other most commonly selected conservation groups were Milk River Watershed Council Canada (MRWCC, 45 of 55 [82%]), Cows and Fish (41 of 55, [75%]), and Nature Conservancy of Canada (NCC, 40 of 55 [73%]). The Alberta Conservation Association (ACA) and MulitSAR groups both were recognized 34 of 55 times (62%).

"I have worked with NCC, MULTISAR, Cows and Fish, ACA, and all experiences have been positive."

Figure 12. Awareness of Conservation Partners



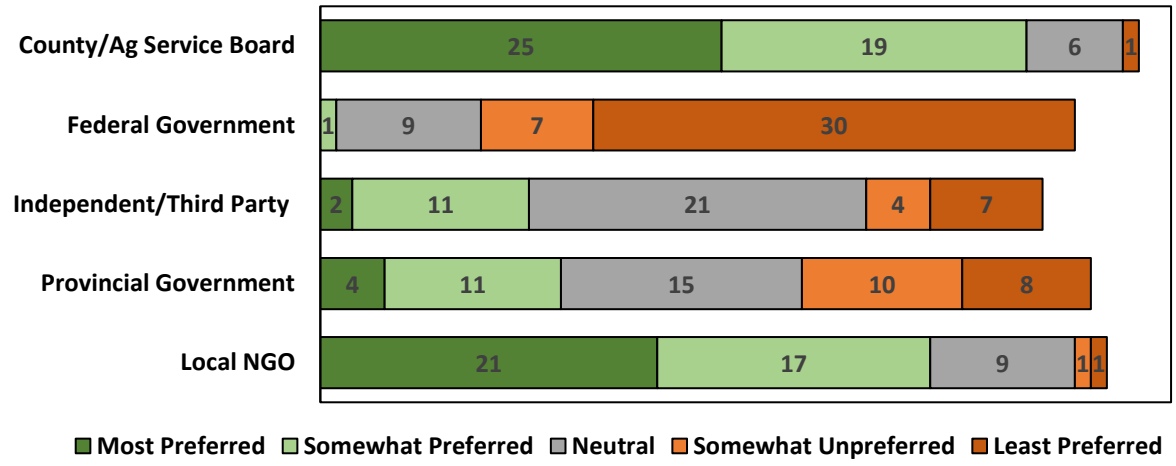
A very strong correlation was found between the next two questions, first asking if the producer had worked with a conservation group before, and second, would they do so again. Out of the 55 responses, 40 indicated they had worked with a conservation group previously, and of those, 38 indicated they would work with that conservation group again, a positivity rate of 95%.

"We have had good results with more than one organization on our property. The last instance was for pheasant feeders to maintain the wintering population."

A further insight from this section comes from the next question, where producers were asked to rank five possible choices to administer a new conservation project, from Most Preferred to Least Preferred. These were listed in no particular order so producers had to pay attention to which they were putting in what category. Not every producer ranked every choice, so there is a slight mis-match in numbers across categories. The two most preferred choices according to producer selections were the local County or Agricultural Service Board, with 44 of 51 selections in the Most Preferred (25) or Somewhat Preferred (19). By far the least preferred option was the Federal Government, with 37 of 47 selections being in the Somewhat Unpreferred (7) or Least Preferred (30) categories, and just one selection as Somewhat Preferred. Relatively neutral in the rankings were both the Provincial Government (21 neutral) and Independent/Third Party (15 neutral) options. One anomaly within the responses was a single producer who selected "Least

Preferred" for each category, perhaps indicating a lack of interest in participating in any conservation programs of any kind, regardless of who would administer it (Figure 13).

Figure 13. Preferred Administration of Conservation Projects



The final series of questions in this section asked producers about projects they had worked on in the past that had had a positive impact on their operation, and what that positive impact had been. 36 of 53 responses (68%) indicated that they had worked on a project in the past with a lasting positive impact on their operation. Of the 33 producers who chose to share what made that project a success, 30% (10 producers), included the term, "Water" in one form or another as their lasting impact, while another 27% (9 producers) included the term, "Shelterbelts" as their lasting impact. These were in many cases noted as coming from now defunct programs such as the Prairie Farm Rehabilitation Association (PFRA) which was mentioned by producers from each of the four counties. With 36 of 53 responses, these results were comparable across counties.

"Provided opportunity for protection of riparian areas, shelter belts."

4.7 Motivators and Barriers

Now more than ever, there are multiple demands put on cow/calf producers. There are societal pressures around livestock production and greenhouse gas emissions, financial pressures from all angles, family pressures to be present, have fun, and manage all of your on-farm and off-farm responsibilities. All of these and many more factors influence how and if producers have the time, money and energy to undertake conservation on their land. We cannot ignore that while there may be the interest in or desire to conserve native grasslands, sometimes the pressure to be more productive can supersede that and that there is more to conservation than simply not tilling

the land. In this section of the survey, we wanted to understand what factors helped motivate producers to conserve land, and also, what factors were barriers for them. If we do not understand these basic influences, we are not able to help producers move forward.

4.7.1 Off-Farm Income

One of the changes in the farming and ranching community over the last few decades has been an increased reliance on off-farm income to support the farming operation. Often one or both partners may take a full or part-time job off-farm to supplement the farm income and keep the operation viable. In Alberta, approximately 70% of farm families in 2013 reported off-farm employment, which has steadily increased since 2001 (GoA, 2017).

We asked producers in the Milk River Watershed how much off-farm income they brought in, in order to support their operation. Surprisingly, the majority of responses (51%, 28 of 55) indicated no off-farm income, while 29% (16 of 55) indicated 1 – 25% reliance, 11% (6 of 55) indicate 26 – 50% reliance and 9% (5 of 55) indicated greater than 50% reliance on off-farm income (Figure 14). This result is not unpredictable however, as the same Government of Alberta report (2017), mentions that proximity to a larger town or city was a contributing factor to the amount of off-farm income reported, as the proximity provides the advantage of diverse employment opportunities. In an area like the Milk River Watershed, where there are few, scattered large towns and no cities, this means fewer employment opportunities for producers.

"A rancher has to some how make a living."

Comparison by county shows an interesting trend, with Cypress County being the only one of four to show no instances of off-farm income greater than 25% (Figure 15). Whether this is due to the lack of employment possibilities in Cypress County, we cannot draw any conclusions, but it is the only county to have this result. County of Forty Mile, with the same number of responses and equally remote locality, showed a diversity in off-farm income similar to the other two counties.

Figure 14. Off-Farm Income in Milk River Watershed

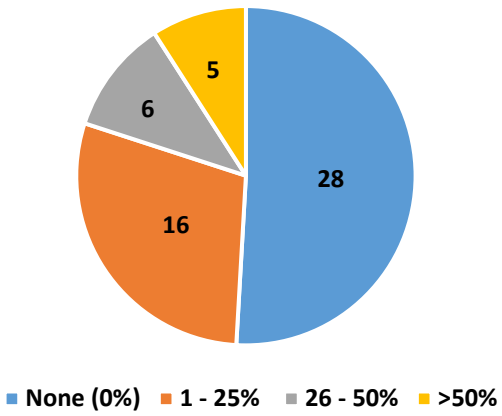
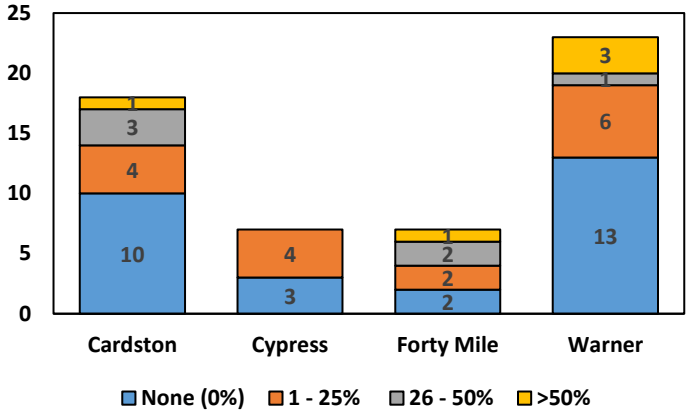


Figure 15. Off-Farm Income by County



4.7.2 Returns from Native Grasslands

Simply put, if producers do not see value in native grasslands, they will not feel the need or desire to protect them. We asked producers what value they thought the native grasslands they managed brought them. All 55 producers responded, and provided an average of 4 selections each, indicating a high level of appreciation for the values provided by native grasslands. As seen in previous responses, one producer answered only "N/A," indicating an apparent disinterest in the values provided by native grasslands.

The top choice of producers to this question was 'Forage production for seasonal grazing of domestic livestock,' with 41 of 55 (75%) choosing this as one of the values of native grasslands. This lines up with the Ecological Goods and Services question discussed earlier in Section 4.5. Other top choices were 'Wildlife habitat' and 'Natural landscape' (37 of 55, 67% each), while the least preferred choice was 'Recreation,' with 15 of 55 (27%).

"Most guys are interested in conservation, but what does the money say?"

4.7.3 Conservation of Deeded Native Grassland

A positive sign for the conservation of native grasslands was shown when 40 of 55 (74%) producers indicated they had not considered breaking any deeded native grassland in the previous 10 years. Cypress County had the highest number of producers indicate they had not considered breaking native grassland, with 6 of 7 (86%) producers choosing this option.

Alternatively, of the 14 producers who indicated they had thought about breaking native grassland in the last 10 years, 9 had done so (64%), and, all 9 (100%) indicated that the financial benefit of doing so was worth it.

The follow-up question, what would be the $/ac amount they would need to not break the land, answers ranged from $85/ac to $1000/ac, with one producer commenting, “25 bushels/ac canola crop or 50 bushels/ac barley value. If it can be broke[n] that’s the value for me.” This provides a sound metric by which to imagine some producers are valuing their land, and what it might therefore take to convince them not to convert. Overall, producers who did not break any native grassland also valued the land in different ways, but on average the $/ac amount most common was $100/ac.

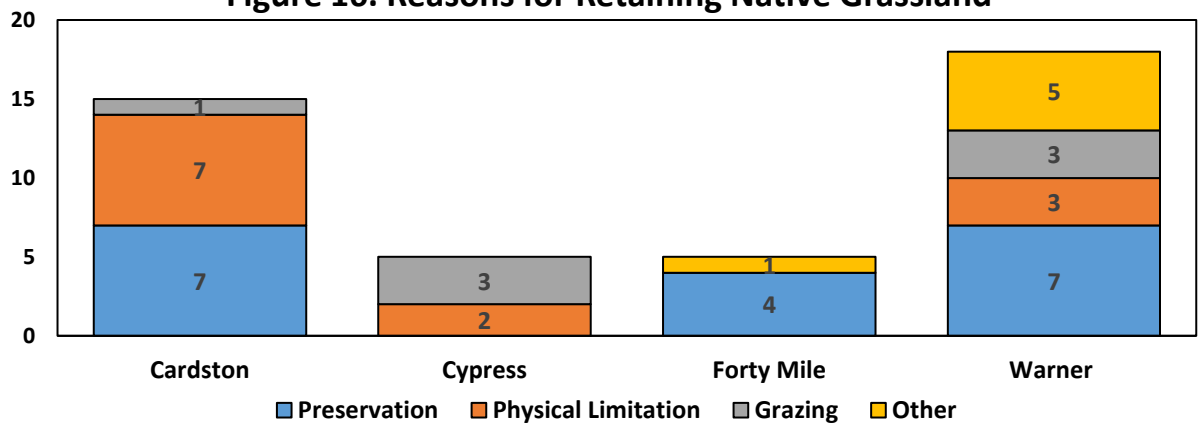
“Most of the land that is still native grass is quite sandy and wouldn’t make good farmland. But there is definitely more money to be made on farmland than with cows on the same number of acres.”

The final question of this series was asking, if no native grassland had been broken, why not? Answers were written in by producers, but even with the freedom to type anything, some clear trends were observed. Of 43 responses, three clear categories emerged: Preservation of grasslands, a Topographical or other Physical Limitation, and, need for Grazing. There is also the ‘Other’ category which catches all other random remarks.

Preservation of the grassland resource was the most mentioned reason for not breaking native grasslands, with 18 of 43 responses (42%). This was followed by Physical Limitations with 12 of 43 (28%), and lastly Grazing with 7 of 43 (16%). An interesting occurrence here, is that Cypress County and County of Forty Mile, though with the same number of answers, 5 each, had opposite reasonings. Cypress County producers listed two for Physical Limitations and three for Grazing, while Forty Mile producers responded four for Preservation and one for Other, a curious contradiction that would be worthwhile investigating (Figure 16).

“Native grassland is a necessity and natural and breaking it up disrupts nature and what the land was designed for.”

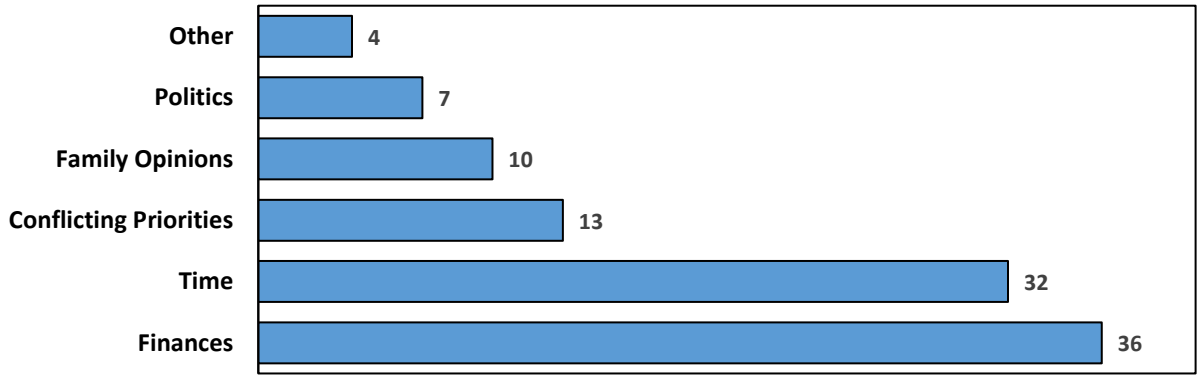
Figure 16. Reasons for Retaining Native Grassland



4.7.4 Conservation Projects

As mentioned previously, a producer may have an interest in participating in a new conservation initiative, but there is more going on in deciding on a project than purely interest. When asked about what influences producers ability to participate in conservation projects, 69% (36 of 52) chose 'Finances,' followed closely by 'Time,' with 62% (32 of 52). These were by far the most common responses, with the other options garnering only 34 total selections together (Figure 17). This result was later confirmed with the question asking what were barriers producers faced in starting a new project, to which of 52 responses, 'Finances' and 'Time' were tied for the most common choice, at 40 each (77%). Without addressing these common concerns or making conservation projects more approachable, there could be a mis-match of interest and priorities.

Figure 17. Factors Influencing Producer Participation



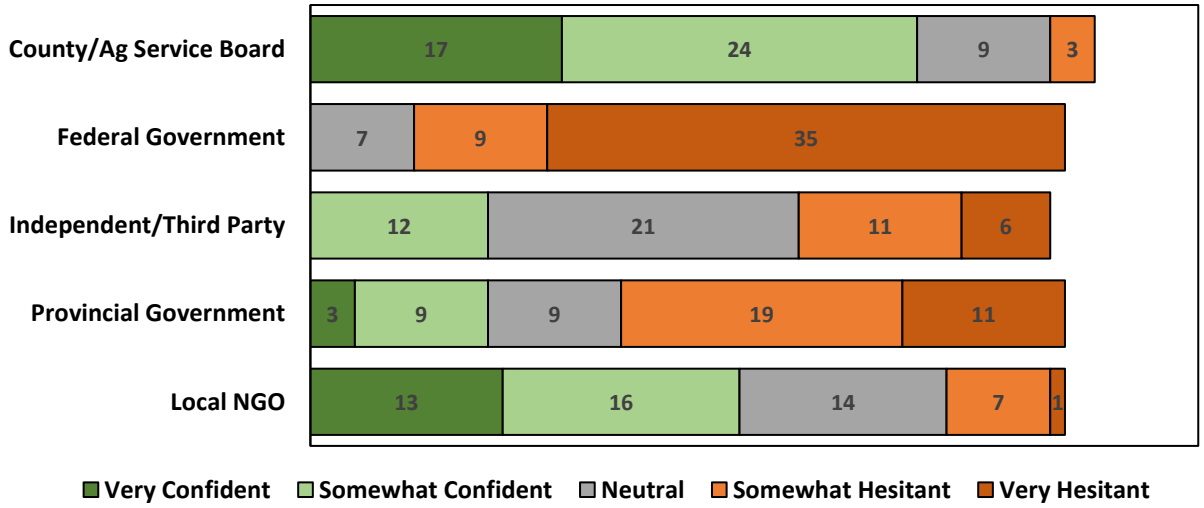
Based on the above responses, it is therefore no surprise that the most popular response to the next question asking what would make producers start a new project, 'Monetary payment' was the most popular choice at 31%, though it was followed closely by both 'Achieving set goals' (29%) and, 'Personal ethic' (27%).

"The cost-share funding projects have allowed us to make improvements and changes we may not have done."

Application processes were not a major deterrent to participation in conservation projects, but it is noteworthy that while 59% indicated that applications were not an issue, 41% (22 of 54) did. This is not a tiny minority, and if we were to extrapolate that result over the watershed and beyond, we could assume that in fact, many producers find the application process itself to be a deterrent to participating in a new project, which could limit participation rates. When thinking about participation in conservation projects, we cannot ignore the application process, which in some circumstances can be long, arduous and therefore prohibitive, especially if participation in one program depends on completion of another and so forth.

Assuming that at some point, producers move ahead with a conservation project, we asked producers which groups they were most confident in and most hesitant of working with. Not surprisingly, the local County/Ag Service Board and Local NGO were the top two choices for Very Confident, while the Federal Government was the top choice for Very Hesitant. The Federal Government did not receive any choices in the Confident categories (Figure 17). This could be related to the finding that regulatory oversight was a major deterrent for most producers, 87% (47 of 54).

Figure 18. Confidence in Conservation Partners



We then asked producers which conditions were likely to deter them from participating in a project. Given the previous results, 'Government involvement' should come as no surprise as the top choice, with 40 of 52 responses (77%). Of note however, a surprisingly high number of selections were for the next most popular choice, 'Potential for too many naturalists interested in

recreating on deeded land,' with 38 of 52 (73%). This could indicate a potentially undocumented hesitation for producers in implementing conservation options, if they fear public trespass or other ingress on their land.

Finally, producers were given a list of extension programs that could be offered to them in the future, and were asked to choose those they would be interested in. The top two choices were 'Remote watering systems,' (41 of 53, 77%) and, 'Portable fencing design and implementation' (35 of 53, 66%). Given the landscape of the watershed, with vast tracts of land with limited watering sources, and the large areas that are often fenced with only a perimeter fence, these are logical interests for producers. Watering systems and temporary fences are both sound tools for grazing management and indicate an interest by producers in making better use of the land base and increasing efficiency.

"The Feds have announced 2 billion dollars for electric car purchase subsidies – and yet the best response for my native grassland that sequesters carbon is, Reduce the cow herd."

4.8 Alternative Opportunities

The final question on the topic of grassland conservation asked producers if there were any ideas or factors regarding native grassland conservation we had not touched on that they would like to add as a comment. While most producers had nothing to add, those who did have a comment had some very insightful thoughts pertinent to the content of this report.

One comment made focused on visual conservation, which could be considered in the EG&S suite of benefits. The comment was on protecting natural landscapes, even the view, in light of the ever-increasing number of wind turbines installed in the area due to its strong and predictable wind conditions. While this may not be something actionable by this report, it nevertheless provides an insight into something that is important to some producers.

A further comment received was that we did not include any wildlife issues producers are asked to deal with, including Wolves, Bears, Elk and Cougars. It is true that producers do manage wildlife on their land in the manner they best see fit, and there are in place the 'Wildlife Damage Control Programs' (GoA, 2022c), but we could have included a few questions about interactions with wildlife as opposed to only the conservation aspect of wildlife management.

Other comments made by producers included a recognition of privacy and property, time and energy cost, the time and effort into managing native grasslands, the financial burden borne by producers, trespassing, and the need for incentives to return farmland to grassland.

"Any species that is on the fringe of their normal range should not be given high priority."

4.9 Town Hall Meetings

The town hall meetings were an informal and approachable way to interact with local producers and hear first hand their concerns regarding native grassland conservation, and other topics relevant to their lives and operations. Due to the nature of the conversations had with the producers who attended these meetings, the results are presented here separately from the survey, and are based on the notes taken by Arvense during the meetings.

Aden, Alberta

At the Aden, Alberta meeting, there were some strong opinions from the producers attending. These producers may have been the most affected by the Sage Grouse EPO, given the area they live in. As it was, there was a strong sense of fear and mistrust of the Federal government, and the term "Bureaucratic creep" was often used. This was understood to imply what producers feel to be changes to or addition of rules and regulations impacting them after an agreement has been made, which changes the ways in which they are able to manage and operate.

Producers here felt that there was little recognition for the land stewardship that is already and has always been taking place. The landscape in which they live is very unforgiving, and in order to maintain a farming or ranching operation of any kind, good land stewardship is a requirement, one most ranchers feel they learned long ago.

There is a high amount of government owned leased lands in this part of the province, and as such, the feeling was that in conservation, we cannot ignore the leased lands. These must be included in conservation programs, because producers manage them along with their deeded land.

A final two thoughts that were important to come from the discussion at Aden, were that water is critical in the conservation of rangelands, and that we are currently underestimating the pressure

being put on native grasslands due to the increase in land values in the area, pricing local producers out of the market and incentivizing the breaking of native acres for farmland.

Warner, Alberta

At the Warner, Alberta meeting, the main comment to come from the meeting was to mention that local provincial extension services that were formerly offered by the province are being missed by local producers. There used to be help for things like preparing an Environmental Farm Plan or Water Management Plans and other outreach type programs that were offered by the province, but those have been removed with budget cuts and producers do feel the impact of missing those services.

Del Bonita, Alberta

The Del Bonita, Alberta meeting had a wide variety of topics brought up. Being located along the headwaters of the Milk River, this area has much more private land and many more irrigated acres then the areas further east. A major concern for the producers who attended this meeting was the management of the water resources of the Milk River and all of the tributaries and small lakes surrounding it. There is a strong current of feeling that the water allocation with the United States is not fair and disadvantages Canadian irrigators. There is a strong feeling that the water resources in smaller lakes and rivers are not being managed appropriately and could be better utilized by irrigators in the area. The increase in gravel pits in the area recently is having a notable effect on water levels, as these pits affect recharge and drainage patterns.

Overall

Among the producers we spoke with, there were some common thoughts, and some thoughts that were more relevant to the local areas. A common trend among them all was that conservation easements of any kind should be approached with caution. There is an apparent mismatch between what producers have in the past thought they were agreeing to and what was in the contractual agreements. They interpret this as the doing of the easement partner. Transparency in contractual obligations should be key to any easement development in this area. Further common thoughts are a general mistrust of the Federal government, likely due to the Sage Grouse EPO, and, perhaps most importantly, a desire for recognition that the people managing the lands here are already stewards, looking out for the livestock, wildlife and all other factors of the rangelands they manage. These were some of the major themes of the town hall meetings.

5. DISCUSSION

Sage Grouse EPO

There is a long history at play in the Milk River Watershed. Producers have been here for a long time, with many farms and ranches in this area operating for 100 years or more. There certainly is a lot to consider when it comes to the management and day-to-day operations of these farms and ranches. With such a long history to draw on, it can be no surprise that the Sage Grouse EPO implemented by the Federal government in 2013 caused such a problem for producers that remains to this day (Section 4.4.2).

According to producers, by and large, they were well aware of the presence or absence of sage grouse and their leks on their lands. Most did their best to protect them on their own and caused no conflicts with the birds. Having the government come in and mandate very restrictive conditions on these producers has had a lasting, damaging effect on how producers feel about the Federal government and its programming. The threat of having legislation introduced that can have deleterious effects on the way producers are able to manage and operate their farms is a real one for producers, and based on the lived experience of these people. Producers are already facing extremely harsh conditions in which to survive and make a living, and face many risks that are inherent to this area. Adding the extra risk of sweeping legislative changes, for whatever intended outcome, is a significant concern for producers.

This is not something that is going away anytime soon. The erosion of trust with the Federal Government is significant and will require dedicated time and effort to mitigate. Producers are still living under the EPO, and continue to feel that it was unnecessary and totally disregarded the stewardship they had always shown towards the species.

> "Single species management and severe restrictions without compensation. The more severe the restrictions, the higher the compensation should be."

Off-Farm Income

Another consideration brought up by the survey (Section 4.7.1) included the proximity to a population centre of some kind as a means of providing off-farm income and employment to producers. As it stands, many producers in the area claim to need no off-farm income to be sustainable. This is very positive, as it would seem to indicate that the farms and ranches here are profitable enough for producers to make a go of it. However we cannot know what that looks

like financially for them, and what the benefit of additional income could do for the quality of life they experience. It is a well documented occurrence that farms are getting bigger, and small family farms are losing ground every year, and rely more heavily on off-farm income (GoA, 2017). This leads to a decrease in population and further reduction of goods and services in these areas in the long-term, thereby ever decreasing the attractiveness to young farmers to take over the family business or set up an operation of their own.

Contraction of the Beef Industry

The trend in agriculture over the last few decades has been towards larger farms, with the impact that as agricultural operations increase in size, smaller farms and ranches struggle to compete. This results in larger herd sizes and fewer farming and ranching operations across the country. As was presented in Section 4.1, there is a balance of producers both thinking to reduce and expand their herd or land base in the next few years. As producers think about reducing their herd size, the logical step to take is to market more females and keep fewer back as replacements. This falls in line with findings by Gracey (2019) that indicate a sharp increase in the number of beef heifers marketed, up 9.3% in 2019, meaning a decrease in the number of beef heifers retained as replacements. There are many possible reasons for this, but the instability of the beef market has to be considered, as well as current economic conditions and weather impacts on beef production. 2021 was a considerable drought year in the Canadian prairies, which caused a notable increase in sale numbers throughout the summer, up 34% from 2020 and up 26% above the five-year average (GoA, 2022d). Feed costs increased to double or more of normal prices, while a few years ago, feed was in abundance (Kihn, 2022). These swings in the cost of production are unpredictable and make a great impact on the sustainability of smaller operations which are especially vulnerable to fluctuations.

Ageing Producer Population

A recognized trend across Canada is the increasing age of producers (StatsCan, 2017) which rose from 54 to 55 on average in 2016 since 2011. This trend is in sync with the ageing baby boomer population. From the data presented in Section 4.1, we saw this trend among the producers responding to the survey, with the largest age bracket being the 51 – 60 years category. We noted in the Section that the County of Warner had all of producers in the 71 – 80 years age bracket, and the most producers considering reducing their operation. This finding is in-line with the ageing demographic of the area and the decrease in the number of farms presented in Section 3.1, wherein County of Warner had the highest level of decrease in farm numbers since the previous Census of Agriculture in 2011. The ageing demographic is a strong indicator of the state of the watershed as a whole, and while it is encouraging to see the number

of young producers increasing across the country, in areas like the Milk River Watershed, the reduction in the number of farms and increasing age of producers is a worrying trend.

Native Grassland Conservation as a Priority

While the focus of the survey was on native grassland conservation, and approaches to use to encourage and increase conservation, a trend that was not large, but was clear and consistent throughout the responses, was that conservation of native grasslands is not every producer's priority (Section 4.7.3). We cannot force conservation on people, some producers do not feel the same way we do about native grasslands and that is okay. A fact that we cannot argue with is that when compared to grazing livestock, farming the same number of acres would pay producers more. In an era of incredibly tight margins, livestock markets fluctuating widely, and high input costs, it should not be surprising that some producers would choose to break native grasslands to produce crops if they could. In some cases, conservation is done out of an inability to farm the land, rather than the urge to preserve it. Not everyone sees the value of native grasslands the same way. This was consistent throughout the survey results, and we should take care to respect these differences.

"[I do not agree with] Treating native grassland as though it is superior habitat to improved grasslands."

6. RECOMMENDATIONS

Funding for new conservation projects are always in the works at different levels of government year over year. What are the best ways to use this funding was one of the objectives of this project. Based on the findings of the producer survey and townhall meetings, the following recommendations are made.

6.1 Milk River Watershed Community Contact List

A top priority moving forward from this survey should be to create a complete contact list of producers in the Milk River Watershed and possibly the four counties as a whole. There were several comments made through the survey that indicated that producers are often frustrated that they are not aware of funding projects they would be interested in, or events to attend, such as the town hall meetings, often because the contact lists used to reach out to producers is incomplete or out of date.

In the time of digital media, we have more options than ever to contact people, but we cannot rest on the idea that these messages get out to everyone, as it is apparent they do not. Other forms of contact need to be included, such as cellphone numbers, landline numbers, mailing addresses and email addresses. A database should be developed to gather and organize this information, such that future information is distributed equally to everyone in either the watershed or the counties, and all producers in the area have the awareness of and opportunity to participate in future programming and projects.

"Communication as to what is available is key. Many times services are out there and we do not know about them."

6.2 Remove Dis-Incentives

The idea that there could be in place controllable mechanisms that encourage the breakage of native grasslands to another land use is surprising, but true. In a part of the province that is highly driven by irrigated agriculture, land values can be high for arable land, and therefore land taxation values can also be high on those same acres. This means that, in an area where intact native grasslands remain, but the province has mapped those areas as 'arable' there is a conflict, and not in favour of conservation. This came up as a comment from a producer, that he pays a higher land tax on his native grasslands because they could be irrigated, a direct incentive to break those acres. Working with the Provincial government, this type of contradiction of values should be addressed immediately. In fact, there is an opportunity here to create the incentive to preserve native grasslands as well, by increasing the land values of native acres to reflect the multitude of services they provide, not least of which is a well documented ability to sequester and store carbon in the soil (Schuman *et al*., 2002). If native grassland conservation is truly a priority of the Federal and Provincial governments, then this should be brought to them immediately as an actionable change to be made to the system of land taxation.

"I love the native prairie. Some of our land is considered arable and I have to pay higher taxes on it, which is a dis-incentive to keep it prairie for most people."

6.3 Include the Province

In the Milk River Watershed, the amount of public land is truly massive as was described in the Background section of this report. Many producers mentioned through both the survey platform and the town hall meetings, the need for public land to be included in any future programming or

projects for producers to work on. Producers are often in long-term leases with the Provincial government with grazing lands they *de facto* manage as part of their grazing operations. They have to abide by the same restrictions as other leaseholders across the province, but in some cases, these leases have been held by the same family for generations, and are considered part of the land base of the operation. To consider them as separate entities that producers have no invested interest in is fallacy, and does not recognise the management and stewardship these producers have invested in these lands. The Provincial government should be brought on as a partner in future projects to open this line of communication with producers, or at least the inclusion of leased lands in future projects should be considered. This is especially true if a tax credit program is piloted in this area.

"All my native grassland is either government grazing lease land or non-arable."

6.4 Reach Out

It was very clear from the responses to the questions about previous work done with possibly defunct programs such as the PFRA that many producers had participated in conservation projects before and had had positive experiences. There is a strong potential here that some of these producers could be included in future projects, with a different approach. It would not be a waste of effort to look back in the records of these programs to reach out directly to producers who had previously participated. Since many producers feel that communication is not great between organizations and the farm/ranch community, a more direct approach is warranted. If increasing producer participation in future projects is a goal of this project, then reaching out to former participants via phone or email would be a sound investment in time and dollars spent. Project managers may also want to consider the rather novel approach of initiating contact with producers by means of a farm visit, as opposed to waiting for producers to reach out to them, as a strong number of producers preferred an in-person meeting to engage in a project than any other means of communication. This could also potentially speed up many processes and steps if the project leader is there and can aid with forms, enrollment, and questions directly.

6.5 Lean on Trusted NGO's

One thing we can say for certain from the survey results (Section 4.6.1), would be that there are clearly organizations in the Milk River Watershed which producers are familiar with and who they would prefer to work with. Future projects in this area should lean-in to this result and use it to ensure positive engagement and outcomes with producers. There were several highly regarded

NGO's in the survey results, including the Milk River Watershed Council Canada itself, and many had high praise bestowed upon them by producers for the positive experiences they had had in the past. This is very favourable information for the Milk River Watershed and ECCC to work with in both developing and deploying future conservation projects. We should be sure to engage with these groups and extend the invitation to participate in upcoming projects.

"Our local Milk River Watershed is doing a great job educating our young and upcoming community members, and they have provided producers with great tools."

6.6 Future Projects

We provided producers the opportunity to comment on different types of conservation projects they had heard of or worked on or otherwise in the survey. Their interest in these programs ranged from luke-warm to cold, and was heavily influenced by what neighbours had experienced and things they had heard.

For the purpose of this report, projects that can be safely passed on for the time being include:

- Conservation easements: these are in place all over the Milk River Watershed, with vastly mixed results, and a high degree of distrust on the part of producers. Land conservation groups can and should continue their work in this domain, but it would not be advisable for the Milk River Watershed Council Canada or other groups to get involved at this time.
- Land tax incentives: there are too many unknowns here. It would be better at this time to allow other jurisdictions in Canada and abroad test some models and develop a plan to introducer this concept later on. Land taxes on native prairie are not prohibitive as it stands, so this would be a wasted effort to pursue at this time.

"Not sure how to value a priceless commodity."

At the same time, there were clear indicators that old programs had positive results for producers and were considered worthwhile, with a strong interest in seeing some redeveloped. Recommendations for future funding programs would be in these types of projects:

- Shelterbelts: there was a strong positive reaction to the shelterbelt program of the now defunct PFRA. Many producers see a need for this type of program given the conditions of the area with strong, sustained winds and gusting. Soil stability and erosion are a major concern here. There was a noted interest in participating in a shelterbelt renewal program

and the Milk River Watershed Council Canada and partners would likely find a high number of producers interested in participating in a project that includes a component of establishment or maintenance of a shelterbelt.

- Water: it is very important to recognize the limitations of the environment and systems. Where grazing and grassland management merge, water is a pivotal focus. Producers are extremely limited on where they can graze livestock without water resources. While it is true that there are other programs in place to address this issue, the Milk River Watershed Council Canada and partners have the ability to take a locally focused and practical approach to water availability in the area and address those unique needs individually. This could be included with a fencing, dugout creation or other herding management projects to further increase the functionality of the project and increase the individuality of the results for the producer. Water is possibly the most limiting resource in the Milk River Watershed, so finding ways to mitigate this through conservation projects should be a high priority for conservation groups, with an equally high level of interest from producers.
- Other: a 'catch-all' category for a few other project possibilities. In the survey, there is mention of incentivizing returning cropland to pasture, and likewise, returning pasture to native grass. These are expensive projects and prohibitive to producers on their own, but there is an interest in those types of projects. Also, fencing projects to control invasive species such as Japanese brome were mentioned, cost-sharing projects to develop dugouts, water wells and protection of riparian areas, and a carbon credit program were all types of projects producers indicated an interest in seeing made available in the area.

Comments recorded as to why the PFRA, Greencover, and other conservation programs were so successful included, "Correct approach and implementation," "Not tied to hidden government agenda," "We were given good information," and many others. Programs offering good, solid advice for producers with limited scope on the part of the funder to interfere, while providing a valuable asset to the producer, such as dugouts, shelterbelts, grazing alternatives, and pasture management are the types of project producers want to participate in. These should be the goals of any forthcoming conservation programs offered to producers.

"Helped us get a cattle squeeze. Also helped us relocate a cattle wintering site. Good programs without a lot of strings attached."

7. CONCLUSION

Survey data from producers was not evenly distributed by municipality or municipal division at a high confidence level. As such, the results should only be treated as indicators of trend. That being said, the producers who completed the survey are stewards of the land, and need no encouragement to conserve the native landscape on their land, they do it for their own reasons, and answer only to themselves. What would happen if, instead of focusing on acres conserved in a contract, we took the approach of supportive conservation… “How can we help you?,” not, “This is what you need to do.” These days, things that were old are new again, and providing the type of programs that producers liked and remember well, and that they found to be positive and beneficial, could end up providing more conservation value than trying to develop something new.

Life in the Milk River Watershed is challenging and poses a unique set of conditions for producers to cope with. The cross-border nature of the Milk River, the diverse and challenging terrain of the area, the winds, the soils, the water, all of it have molded the people who live by the land there, and forced them to adapt to those conditions. The producers who completed the survey, and those who attended the town hall meetings, were open and honest with their thoughts and feelings, and we should take them at face value. We cannot make everyone care about native grasslands, but we can work with those who do and hope that their example spreads to others across the watershed. By providing the tools they want to work with, and limiting the extent of our reach and expectation, we can build a future of conservation directly with the people responsible for it.

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9. CERTIFICATION PAGE

I hereby certify that:

This report has been completed in compliance with the standards and ethics of the Alberta Institute of Agrologists.

Sincerely,

Kristine Dahl

Kristine Dahl MSc., P.Ag.
o/a Arvense

10. ACRONYMS

Ac – Acres

ACA – Alberta Conservation Association

ALUS – Alternative Land Use Systems

AUM – Animal Unit Month

DUC – Ducks Unlimited Canada

ECCC – Environment and Climate Change Canada

NCC – Nature Conservancy Canada

MRWCC – Milk River Watershed Council Canada

MULTISAR – Multiple Species at Risk

NGO – Non-Government Organization

OGC – Operation Grassland Community

O/A – Operating As

PFRA – Prairie Farm Rehabilitation Association

PLTW – Producers Leading the Way project

RFP – Request For Proposal

SALTS – Southern Alberta Land Trust Society

SAR – Species At Risk

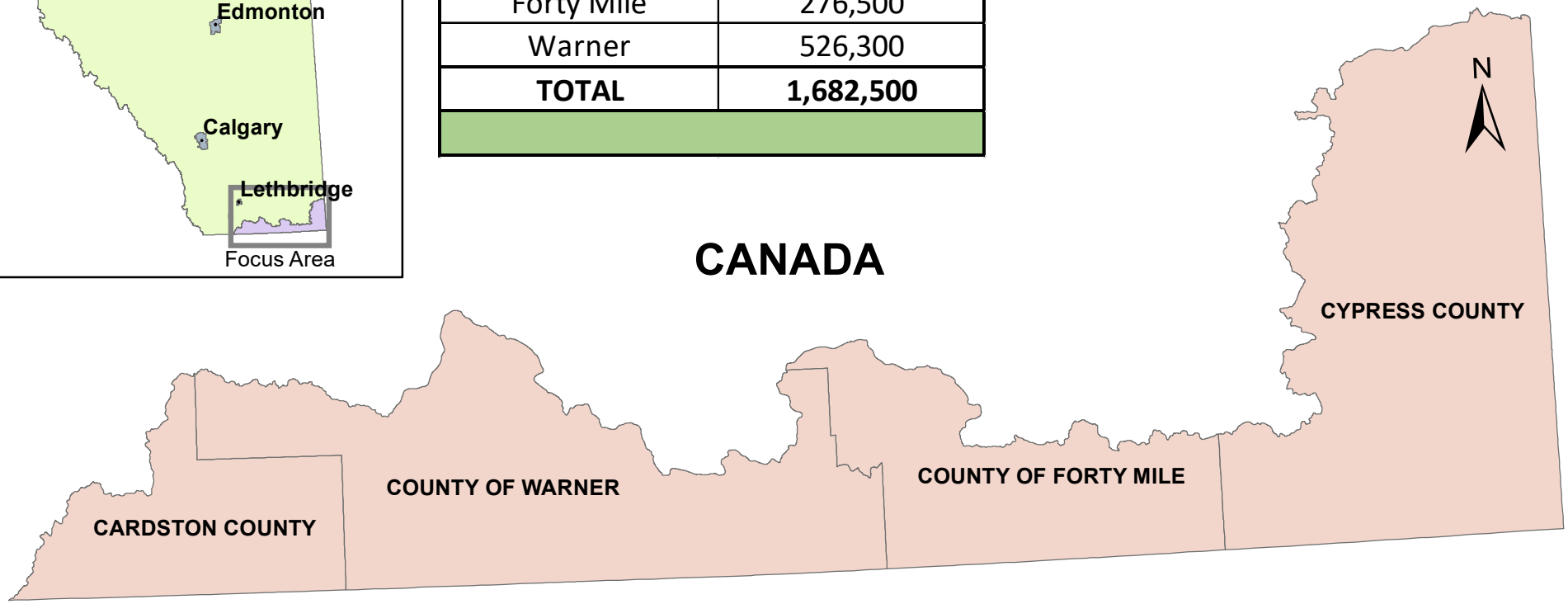
SOW – State of the Watershed report

TUC – Trout Unlimited Canada

WSLT – Western Sky Land Trust

Map 1. Milk River Watershed in Alberta

Milk River Watershed Acres in Alberta and by County	
County	**Acres**
Cardston	208,000
Cypress	671,700
Forty Mile	276,500
Warner	526,300
TOTAL	**1,682,500**



0 15 30 60 KM

Map Projection: NAD1983 10TM AEP Forest
Map Scale: 1:900,000

Map Drawn By: KDahl 2022