


AGENDA
COUNCIL COMMITTEE MEETING
MUNICIPAL DISTRICT OF PINCHER CREEK
MARCH 27, 2018
9:00 AM


1. Approval of Agenda
2. Mill Rate Discussion – Part 3
 - Information will be distributed prior to the meeting
3. In-Camera (9:30 am)
 - Legal – Call Logs – FOIP Section 17
 - Labour – Snow Program – FOIP Section 19
4. Waterton Biosphere (10:30 am)
 - Jeff Bectell and Nora Manners will be attending
 - Waterton Biosphere Reserve
 - Cooperation Plan 2016-2021
 - Cardston Compost Facility Information for MD of Pincher Creek Council
 - WBRA Carnivores and Communities Program Deadstock Removal 2017
 - Draft Background Information on Ag Plastic Disposal / Recycling
5. Roundtable Discuss
6. Adjournment





Waterton Biosphere Reserve



- Designated by UNESCO in 1979
- Man and the Biosphere Program
- Model of community-based sustainable use


Network of Biosphere Reserves
18 in Canada ~ 669 in 120 countries world wide [2018]



Biosphere Reserves of Canada
Réserve de la biosphère du Canada

MD OF PINCHER CREEK

March 23, 2018

TO: Roland Milligan, Interim CAO
FROM: Janene Felker, Director of Finance
SUBJECT: **2018 Mill Rate Discussion – Part 3**

1. Origin

Using the information gained at the meeting on March 13, 2018, here is some additional information regarding two options for the 2018 mill rates for Council's consideration.

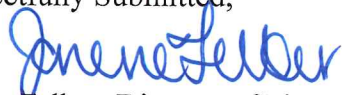
2. Discussion

The two options provided today are:

- Option 1- Farmland/Residential mill rate increase is 4.5% when compared to 2017 and the Non-Residential rate will be increased by 8.3%
- Option 2- Farmland mill rate increase is 7%, Residential increase is 6.55%, and the Non-Residential increase is 7.53%

Some additional information has been provided. A comparison of both the mill rates and assessment for the past five years and the percentage change per year. Also, please note that the school requisition mill rates for 2018 are now reflective of the actual requisition, we're now only waiting on the Foundation requisition along with a Provincial assessment levy that will be collected from all Designated Industrial Properties.

Respectfully Submitted,



Janene Felker, Director of Finance

Reviewed By: Roland Milligan, Interim CAO



Date: 2018/03/23

Mill Rate and Assessment Comparison By Category

Residential	2018 (Option 1)	2018 (Option 2)	2017	2016	2015	2014
Municipal	4.5998	4.6900	4.4017	4.1921	4.0700	3.9597
School	2.4736	2.4736	2.4216	2.4822	2.4329	2.4366
Seniors	0.2137	0.2137	0.2137	0.2083	0.2067	0.2188
Emergency Services	0.3476	0.3476	0.2000	0.1931	0.1599	0.1723
Total Mill Rate	7.6347	7.7249	7.2370	7.0757	6.8695	6.7874
% Change per Year	5%	7%	2%	3%	1%	

Assessment Base	540,272,410	513,320,260	506,317,360	496,445,480	478,483,480
	5%	1%	2%	4%	

Farmland	2018 (Option 1)	2018 (Option 2)	2017	2016	2015	2014
Municipal	6.6480	6.8070	6.3617	6.0588	5.8823	5.6007
School	2.4736	2.4736	2.4216	2.4822	2.4329	2.4366
Seniors	0.2137	0.2137	0.2137	0.2083	0.2067	0.2188
Emergency Services	0.3476	0.3476	0.2000	0.1931	0.1599	0.1723
Total Mill Rate	9.6829	9.8419	9.197	8.9424	8.6818	8.4284
% Change per Year	5%	7%	3%	3%	3%	

Assessment Base	58,788,200	58,792,100	58,824,200	58,862,500	58,862,900
% Change per Year	0%	0%	0%	0%	

Non Residential	2018 (Option 1)	2018 (Option 2)	2017	2016	2015	2014
Municipal	8.8350	8.7720	8.1578	7.6960	7.4000	6.9685
School	3.8288	3.8288	3.9317	3.7704	3.3115	3.6634
Seniors	0.2137	0.2137	0.2137	0.2083	0.2067	0.2188
Emergency Services	0.3476	0.3476	0.2000	0.1931	0.1599	0.1723
Total Mill Rate	13.2251	13.1621	12.5032	11.8678	11.0781	11.0230
% Change per Year	6%	5%	5%	7%	0%	

Assessment Base	913,617,490	966,810,040	1,024,028,410	1,036,800,370	955,074,650
	-6%	-6%	-1%	9%	

Generating Municipal Tax Revenue

Option 1

Assessment Class	Total Assessment	Mill Rate	Revenue Generated	% Change
Farmland	58,788,200	6.6480	390,824	4.50%
Residential	540,272,410	4.5998	2,485,145	4.50%
Non Residential	314,387,730	8.8350	2,777,616	8.30%
Machinery & Equipment	178,874,100	8.8350	1,580,353	8.30%
Power Generation	420,355,660	8.8350	3,713,842	8.30%
Exempt	71,186,740	0.0000	-	
	<u>1,583,864,840</u>		<u>10,947,780</u>	

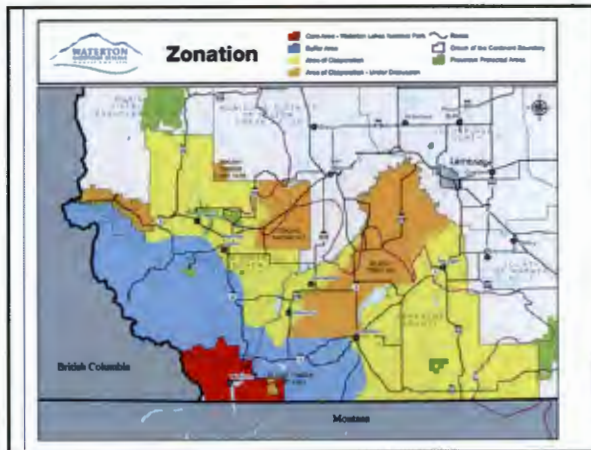
Option 2

Assessment Class	Total Assessment	Mill Rate	Revenue Generated	% Change
Farmland	58,788,200	6.8070	400,171	7.00%
Residential	540,272,410	4.6900	2,533,878	6.55%
Non Residential	314,387,730	8.7720	2,757,809	7.53%
Machinery & Equipment	178,874,100	8.7720	1,569,084	7.53%
Power Generation	420,355,660	8.7720	3,687,360	7.53%
Exempt	71,186,740	0.0000	-	
	<u>1,583,864,840</u>		<u>10,948,302</u>	

Sample Levies

Levies are inclusive of new school requisition, still waiting on Foundation requisition, so the 2017 mill rate was used

	2017 Taxes	Option 1			Option 2		
		2018 Projection	\$ Change	% Change	2018 Projection	\$ Change	% Change
Farmland							
1	1,907.46	2,008.23	100.77	5.28%	2,041.21	133.75	7.01%
2	3,187.12	3,372.41	185.29	5.81%	3,420.50	233.38	7.32%
Residential							
Agricultural							
1	2,733.33	2,959.71	226.38	8.28%	2,995.02	261.69	9.57%
2	1,834.88	1,975.86	140.98	7.68%	1,999.93	165.05	9.00%
Country Residential							
1	3,674.95	3,913.55	238.60	6.49%	3,959.78	284.83	7.75%
2	2,584.33	2,809.57	225.24	8.72%	2,842.76	258.43	10.00%
Hamlets							
1	2,078.46	2,207.96	129.50	6.23%	2,234.04	155.58	7.49%
2	3,245.79	3,425.69	179.90	5.54%	3,466.16	220.37	6.79%
Non Residential							
Commercial							
1	3,842.23	4,086.56	244.33	6.36%	4,067.09	224.86	5.85%
2	338.84	358.40	19.56	5.77%	356.69	17.85	5.27%
Industrial							
1	1,333,226.20	1,151,403.19	(181,823.01)	-13.64%	1,143,941.86	(189,284.34)	-14.20%
2	18,495.66	19,636.63	1,140.97	6.17%	19,543.09	1,047.43	5.66%
Linear							
1	675,210.91	709,755.63	34,544.72	5.12%	704,996.88	29,785.97	4.41%
2	1,486,958.45	1,567,515.85	80,557.40	5.42%	1,557,006.03	70,047.58	4.71%
3	782,485.55	875,473.94	92,988.39	11.88%	869,604.09	87,118.54	11.13%



WATERTON BIOSPHERE RESERVE

Voluntary Cooperative Areas

- No change in authority over land and water use
- No new regulations
- No new protected areas
- No restrictions on rights of citizens

WATERTON BIOSPHERE RESERVE

info@watertonbiosphere.com www.watertonbiosphere.com


Cooperation Plan 2016 - 2021

Waterton Biosphere Reserve is a special place where people work together to build resilient landscapes and communities, and where natural and cultural diversity are valued and sustained for current and future generations.



WBR Mission – Three BR Functions:



By working collaboratively with individuals, organizations, governments and others, the WBR strives to achieve a balance between conserving biological diversity, promoting sustainable use of resources, and building the capacity of local people and organizations to positively affect their communities and the environment.


WBR Strategic Priorities 2006-2021

- 1) Support the long-term persistence of large carnivores and ungulates by reducing human-wildlife conflict and promoting coexistence.*
- 2) Engage community and strategic partners through education and outreach initiatives related to conservation and sustainable development.*
- 3) Promote conservation of biodiversity, with a focus on issues related to species at risk and invasive species.*


WBR Strategic Priorities 2006-2021

- 4) Foster sustainable economic activities and explore opportunities for enhancement.*
- 5) Encourage consideration of the WBR mission in land use and conservation planning initiatives.*
- 6) Build organizational and financial capacity.*


WBR Further Priorities as Capacity Allows

- 7) *Collaborate with local indigenous communities on education/sharing around traditional land use, plants as food and medicine, and tribal knowledge.*
- 8) *Investigate ways to promote the development and use of small scale alternate energy (e.g. solar, wind, geothermal).*
- 9) *Promote linkages between researchers, universities, and the local community.*


Carnivores and Communities Program



LARGE CARNIVORES: IMPACTS AND MANAGEMENT
PROCEEDINGS OF THE SCIENTIFIC WORKSHOP
2008-2012


Large Carnivore Documentary



SHARING THE RANGE
WWW.SHARINGTHERANGE.COM
A STORY ABOUT LIVING WITH LARGE CARNIVORES

View at www.sharingtherange.com









Species at Risk






Northern Leopard Frog Project



It's not easy being GREEN!

Learn more about the project and conservation of the northern leopard frog in the Waterton Biosphere Reserve!



Striking Balance Documentary



Striking Balance

A Documentary / TV Series Exploring Canada's Biosphere Reserves
Narrated by Blue Ribbon's Jim Cuddy


View at www.strikingbalance.ca
or Purchase DVD \$35 Blu-Ray \$40



For more information...

Visit our website at www.watertonbiosphere.com

Nora – (403) 627-1473 nmanners@watertonbiosphere.com
 Jeff – (403) 653-2219 jbectell@watertonbiosphere.com





Thank You To Our Supporters







Thank You To Our Supporters













Cooperation Plan 2016 - 2021

Vision: Waterton Biosphere Reserve is a special place where people work together to build resilient landscapes and communities, and where natural and cultural diversity are valued and sustained for current and future generations.

Mission: By working collaboratively with individuals, organizations, governments and others, the Waterton Biosphere Reserve strives to achieve a balance between conserving biological diversity, promoting sustainable use of resources, and building the capacity of local people and organizations to positively affect their communities and the environment.

About Waterton Biosphere Reserve:

Waterton Biosphere Reserve (WBR) was designated in 1979 by UNESCO (United Nations Educational, Scientific, and Cultural Organization), and is one of 18 biosphere reserves in Canada and more than 650 biosphere reserves worldwide.



Photo credit: Andrea Morehouse

Located in the southwestern corner of Alberta, WBR encompasses some of the most spectacular and ecologically diverse landscapes in the Canadian Rocky Mountains and prairie grasslands. WBR is also nested within a much larger landscape known as the Crown of the Continent Ecosystem, internationally acclaimed as one of the largest remaining intact ecosystems in North America. The region is home to many vibrant communities, each with a rich and distinct

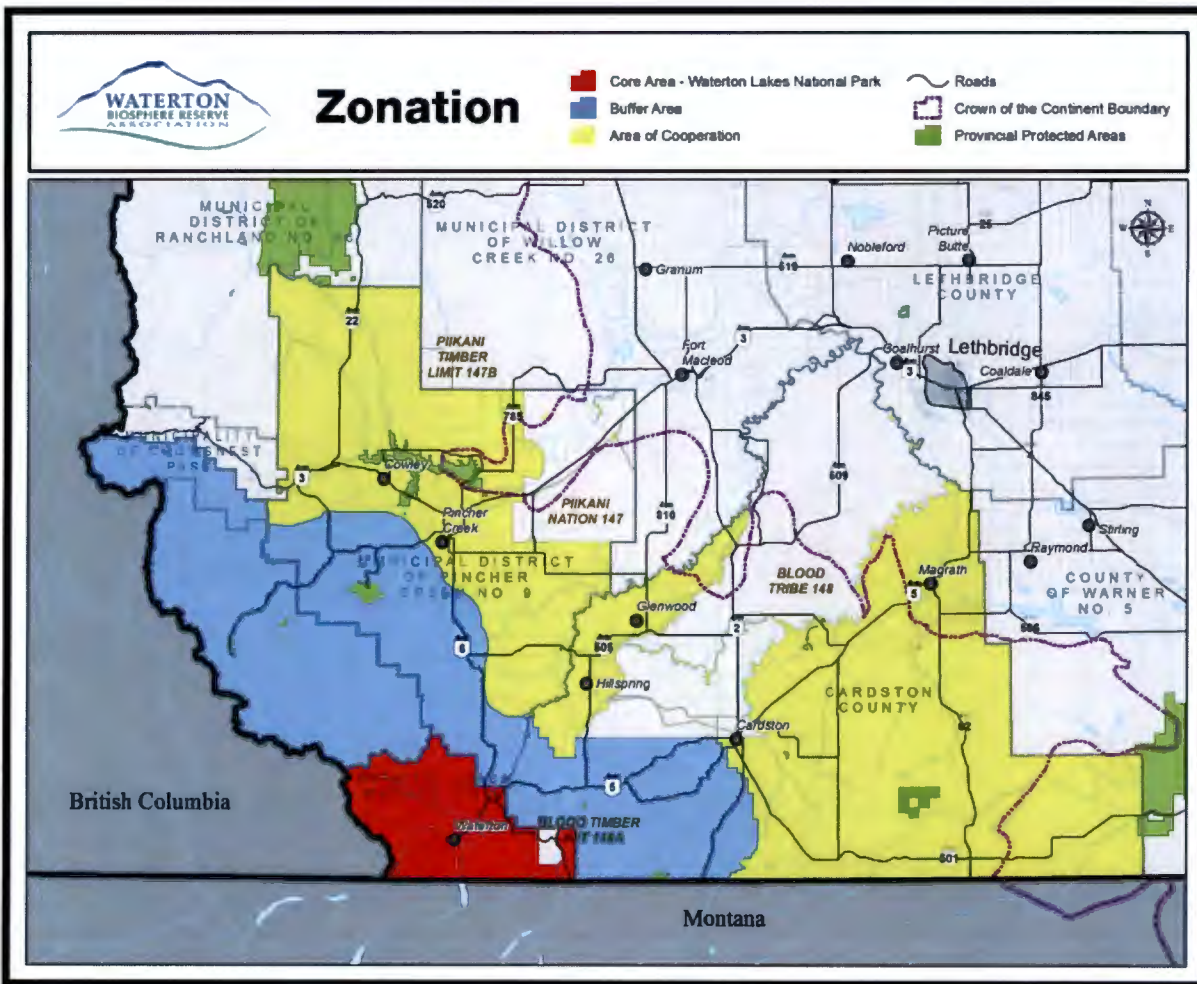
cultural history, and reliance on a wide range of economic activities. In WBR, people are actively involved with ranching, farming, tourism and recreation, wind energy, mining, the oil and gas industry, service sector occupations, and other natural-resource related activities.

Like all biosphere reserves, WBR is organized into three zones - a legally protected core area; an adjacent buffer zone with activities that are compatible with conservation objectives; and a transition zone or 'area of cooperation' where sustainable resource management practices are promoted and developed.



Photo credit: Sierra West Guest Ranch

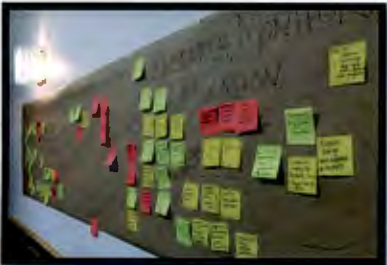
Waterton Lakes National Park has formed the core of the biosphere reserve since designation in 1979. Adjacent provincial and private lands, with high conservation value, form the buffer zone. Beyond the buffer zone lies a broad transition zone or “area of cooperation” including lands within the municipalities of Pincher Creek and Cardston County.



Cooperation, Collaboration and Community Partnerships:



The Waterton Biosphere Reserve Association (WBRA) acts as the convener organization for the WBR, bringing together local community members with government, non-government organizations, and others in carrying out the mission of the WBR.



In 2015, WBRA undertook a cooperation planning process to guide the future work and direction of the biosphere reserve. Area stakeholders including residents, businesses, industry, government, land managers, First Nations, educators, and other organizations and agencies were invited to discuss common areas of interest and opportunities for collaboration.

Stakeholders were asked to identify how WBRA could best support, facilitate, and enhance conservation, sustainability and education initiatives throughout the region, focusing on the three core functions of biosphere reserves:

- 1) Biodiversity Conservation: What initiatives can we undertake to promote conservation of landscapes, ecosystems, and species?
- 2) Sustainable Development: How can we encourage economic and human development that is socially, culturally, and ecologically sustainable (meets the needs of the present, without compromising the needs of future generations)?
- 3) Logistic Support and Capacity Building: How can we best improve the ability and capability of our communities to make sound decisions for conservation and sustainable resource use through research, monitoring, education and information exchange?

Strategic Priorities for Waterton Biosphere Reserve:

Following completion of the cooperation planning process, nine strategic priorities were identified. WBR will focus on the following six priorities within the biosphere during 2016-2021:

- 1) Support the long-term persistence of large carnivores and ungulates by reducing human-wildlife conflict and promoting coexistence.
- 2) Engage community and strategic partners through education and outreach initiatives related to conservation and sustainable development.
- 3) Promote conservation of biodiversity, with a focus on issues related to species at risk and invasive species.
- 4) Foster sustainable economic activities and explore opportunities for enhancement.
- 5) Encourage consideration of the WBR mission in land use and conservation planning initiatives.
- 6) Build organizational and financial capacity.



Photo credit: USFWS Ann Froschauer

The three remaining priorities will be the focus of efforts in future years as capacity and funding allows:

- 7) Collaborate with local indigenous communities on education/sharing around traditional land use, plants as food and medicine, and tribal knowledge.
- 8) Investigate ways to promote the development and use of small scale alternate energy (e.g. solar, wind, geothermal).
- 9) Promote linkages between researchers, universities, and the local community.



Photo credit: Fran Selt

Waterton Biosphere Reserve Action Plan 2016-2021:

The following action plan has been developed to guide work on the strategic priorities. The plan will be periodically reviewed and updated as available resources and opportunities are identified.

Priority 1: Support the long-term persistence of large carnivores and ungulates by reducing human-wildlife conflict and promoting coexistence.

Activities for 2016-2021	Partners
<p>>Complete activities as identified annually in the WBR's <i>Carnivores and Communities Program</i> work plan in order to meet the following program goals:</p> <ol style="list-style-type: none"> 1) To maintain an effective carnivore working group with strong collaborative partnerships. 2) To support the completion of landowner-driven projects & other agricultural practice change efforts that reduce human carnivore conflicts. 3) To develop a common knowledge base and effective communication strategies related to large carnivore issues. 4) To encourage development of a long-term strategy for balancing coexistence of large carnivores and humans in southwestern Alberta that recognizes the need for conflict reduction, predation compensation, and wildlife management. 5) To ensure effective project management and evaluation. <p>(see http://www.watertonbiosphere.com/projects/carnivores-communities/ for more information about the program)</p>	AEP, MDPC, CC, MDR, MDWC, NCC, landowners
<p>>Host meetings to facilitate discussion between provincial government and the community addressing conflict between agricultural producers and large ungulates, in particular elk.</p> <p>>If applicable, work with partners to implement identified solutions to reduce conflict.</p>	AEP, landowners

Priority 2: Engage community and strategic partners through education and outreach initiatives related to conservation and sustainable development.

Activities for 2016-2021	Partners
>Deliver annual Wetland Exploration Field Day event for 100 grade 5 students at Police Outpost Provincial Park.	CES, AEP
>Work with the "Environmental Education & Stewardship" working group and "Alberta Green Schools" to develop and deliver experiential outdoor education opportunities for students (part of the Livingstone Range School Division's Community Conversation on Learning initiative).	LRSD, HSSC, AEP, ACEE, OWC, CAF, NCC
>Update the WBR Communication Strategy and implement with a focus on website updates and maintenance, e-mail updates and e-newsletters, social media, presentations, and local events.	
>Host a local showing of the WBR episode of the Striking Balance documentary (www.strikingbalance.ca) with school groups, focus groups, and the general public and help to promote local viewing of the televised series.	potential partners: LRSD, HSSD, WWSD
>Continue to promote WBR's large carnivore documentary film "Sharing the Range" (www.sharingtherange.com).	

Priority 3: Promote conservation of biodiversity, with a focus on issues related to species at risk and invasive species.

Activities for 2016-2021	Partners
<p>>Seek partnerships, funding, and logistical support to complete priority projects as identified in the <i>Species at Risk Action Plan for WBR</i> (http://www.watertonbiosphere.com/wp-content/uploads/2015/06/WBR-SAR-Action-Plan-FINAL.pdf).</p>	
<p>>Implement a project to improve local wetland stewardship and work towards site-specific improvement of habitat for Northern Leopard Frogs and future reintroduction projects.</p>	<p>WLNP, NCC, ACA, CZS, landowners</p>
<p>>Work with partners to commence Five-needle Pine stewardship on privately owned land in WBR.</p>	<p>WLNP, other potential partners: AEP, SALTS, NCC, WPEF, landowners and others</p>
<p>>Expand information hosted on the WBR website about the <i>Southwest Alberta Cooperative Weed Management Area (SWACWMA)</i> and promote aquatic and terrestrial invasive species awareness, prevention, and control.</p>	<p>WLNP, MDPC, CC, AEP, NCC, BT, SC</p>

Priority 4: Foster sustainable economic activities and explore opportunities for enhancement.

Activities for 2016-2021	Partners
<p>>Build partnerships and lay the groundwork to host a sustainable tourism forum to improve literacy around tourism that is ecologically, economically, and socially sustainable. >Following the forum, work to support growth and promotion of sustainable tourism initiatives.</p>	<p>potential partners: ASWRA, TA, WCA, WNHA, WLNP, AEP, CCTA, COC, local Chambers of Commerce and other tourism initiatives</p>
<p>>Identify the most effective role for WBR and then work with partners to promote local participation in industry initiatives to certify ecologically sustainable beef production.</p>	<p>potential partners: ABP, CCA, CRSB, local beef producers</p>
<p>>Investigate the application of ecosystem services concepts to support sustainable communities in southwestern Alberta (e.g. best practices for and market mechanisms to encourage carbon sequestration in grasslands, water and air quality, habitat biodiversity etc.).</p>	<p>potential partners: AIBS, ABMI, NCC, MI, landowners</p>

Priority 5: Encourage consideration of the WBR mission in land use and conservation planning initiatives.

Activities for 2016-2021	Partners
>Provide locally relevant input to land use and wildlife management/conservation planning initiatives (such as the Castle Parks Management Plan, Grizzly Bear Recovery Plan etc.).	work with resource and land managers including AEP, WLNP, MDPC, CC, and others.

Priority 6: Build organizational and financial capacity.

Activities for 2016-2021	Partners
>Build the capacity of the Waterton Biosphere Reserve Association (WBRA) to achieve excellence in organizational effectiveness, financial management, and long-term funding stability. *refinement of bookkeeping, budgeting, cash flow management, and reporting systems; *completion of application for charitable status (if deemed appropriate) *development of a long-term fundraising strategy *update of policy, process, procedures, and bylaws related to membership, board function, staff management, and financial management and reporting	

Partner Acronyms	
ABMI – Alberta Biodiversity Monitoring Institute	HSSD - Holy Spirit School Division
ABP - Alberta Beef Producers	LRSD - Livingstone Range School Division
ACEE - Alberta Council for Environmental Education	MDPC - Municipal District of Pincher Creek
AEP - Alberta Environment and Parks	MDR - Municipal District of Ranchland
AIBS – Alberta Innovates Bio Solution	MDWC - Municipal District of Willow Creek
ALUS – Alternative Land Use Services	MI – Miistakis Institute
ASWRD - Alberta South West Regional Alliance	NCC - Nature Conservancy of Canada
BT - Blood Tribe	OWC - Oldman Watershed Council
CAF - Cows and Fish (Alberta Riparian Habitat Management Society)	SALTS - Southern Alberta Land Trust Society
CC - Cardston County	SC - Shell Canada
CCA - Canadian Cattleman's Association	TA - Tourism Alberta
CES - Cardston Elementary School	WLNP - Waterton Lakes National Park
CCTA - Chinook Country Tourist Association	WWSD - West Wind School Division
COC - Crown of the Continent Geotourism	WCA - Waterton Community Association
CRSB - Canadian Round Table on Sustainable Beef	WNHA - Waterton Natural History Association
CZS - Calgary Zoological Society	WPEF – Whitebark Pine Ecosystem Foundation
	LRSD - Livingstone Range School Division

For more information on the Waterton Biosphere Reserve or to discuss potential collaborative opportunities please contact:

Nora Manners
 Executive Director
 Waterton Biosphere Reserve Association

P.O. Box 7 Pincher Creek, AB T0K 1W0
 Phone: 403 627 1473
 Email: info@watertonbiosphere.com

www.watertonbiosphere.com

Cardston Compost Facility Information for M.D. of Pincher Creek Council

March 22, 2018

- In Sept. 2010, a group from Southern Alberta went down to Ovando Montana (Blackfoot Challenge) to see their large carnivore work, including composting.
 - That month Cardston County council approved moving forward with a composting facility if funding could be found.
 - This was the county's initiative.
 - Trying to support rate payers in dealing with the large carnivore issues more economically. It was thought that composting could ultimately be a more cost effective long term solution than paying Southern Alberta Processors. The partnership between WBRA, and the municipalities of Ranchland, Willow Creek, Pincher Creek and Cardston for the deadstock pickup program was in place and functioning at this time.
 - AESRD committed \$60,000.00.
 - County planned to do dirt work (estimated at \$40,000.00) and provide site (in conjunction with Chief Mtn. Solid Waste Authority).
 - Initial plan included a coverall building, and it was thought it could be completed for \$60,000 plus dirt work.
 - A building was thought to be cheapest way to satisfy regulatory requirements for runoff/runoff control, and scavenging, rather than fences, pads, berms and catch basins.
 - Eventually the county decided to go with a tin building, and felt that more funding was needed to do a good job of the facility, including cement floor, and other features, which do make it a really top notch facility.
 - This was obtained in the form of a \$145,000.00 grant from Growing Forward.
 - Total capital costs then are \$245,000.00.
 - County contribution was 16.3% of that.
 - Local Pickup and composting begins in January 2013.
 - 444 carcasses in 2013.
 - 407 in first 4 months of 2014.
 - Total over 15.5 months is 851 head.
 - a. Building was very full.
 - This was one of the issues that led to the decision by Cardston County council to stop composting until the procedures for dealing with finished compost could be worked out.
 - b. 50.295 tonnes was removed (and landfilled) on Dec. 16, 2014. This is thought to be about half of what was in the building. We might assume then, that annual output might be in the neighbourhood of 100 tonne (thought to be about 134 yards) of compost.
 - c. This is manageable for reclamation as this volume (134 yards) of material would cover approximately 1/2 of

one landfill cell to a depth of 2 inches. The cells are 20 meters x 200 meters.

- Local pickup and composting was discontinued April 30, 2014 due to a variety of issues including:
 - Regulatory Issues.
 - Staff time constraints.
 - Budget Concerns.
 - Learning curve.
- Benefits of local composting vs. removal by West Coast Reductions.
 - More frequent pick up than with SAP.
 - Possible cost savings.
 - Our figures show an average cost per carcass removed in Cardston with composting to be \$36.89, while the cost using WCR the two years following closure of the facility was \$102.01 per carcass removed.
 - Pilot project, positive for county.
 - Pick up sheep/goats.
 - local employment
- Developments since suspension of operation:
 - CFIA approved
 - Landfilling of finished/unfinished compost
 - Use of finished compost for reclamation
 - This has a specific protocol, including that animals cannot graze, nor can crops be raised for human/animal consumption for 7 years.
 - Research continues to show that the risk to human health, animal health, the environment is very low from properly managed compost.
 - Cardston County submitted an application (January 19, 2018) to AEP to reopen the facility.
- Other considerations
 - This facility was the first of its type in Canada
 - As a pilot project there were naturally some bumps in the road. It is hoped that as the facility is re-opened the opportunity to be a complete pilot/demonstration site can be realized. This would include the ability to demonstrate both the costs and processes involved in composting outside of the building on a constructed pad with berms and catch basin to provide cost/benefit comparisons for different types of facilities.
 - The opportunity to compost road killed wildlife should also be explored.
 - Municipalities may find interest in composting other materials.
 - Dead stock removal (however it is accomplished) is one part of the Carnivores and Communities Program. It has been shown to help decrease conflict with large carnivores. This is a good news story, both for the agricultural industry, and for local governments which support these efforts. Positive, proactive solutions help to maintain social license, and contribute to the overall goal of balance and sustainability.

WBRA CARNIVORES AND COMMUNITIES PROGRAM DEADSTOCK REMOVAL 2017

LOCATION	DATES	\$ SPENT in 2017	# HEAD	\$/HEAD	# PRODUCERS	\$ Jan/01/17	\$ GRANTED 2017	\$ LEFT Dec/31/17
Cardston County	Jan/01/2017 - Dec/31/2017	\$20,051.60	228	\$87.95	32	\$2,194.77	\$25,000.00	\$7,143.17
M.D. of Pincher Creek	Jan/01/2017 - Dec/31/2017	\$36,761.95	329	\$111.74	50	\$8,685.84	\$30,000.00	\$1,923.89
M.D. of Willow Creek	Jan/01/2017 - Dec/31/2017	\$2,276.00	17	\$133.88	6	\$2,215.00	\$0.00	(\$61.00)
M.D. of Ranchland	Jan/01/2017 - Dec/31/2017	\$1,032.00	5	\$206.40	4	\$3,507.00	\$0.00	\$2,475.00
Total	Jan/01/2017 - Dec/31/2017	\$60,121.55	579	\$103.84	92	\$ 16,602.61	\$55,000.00	\$11,481.06

*These figures only represent WBRA contribution, each municipality also contributed through administration etc.

*Overall, this is the highest cost year so far. 15% higher than 2016 or \$7833.09. This correlates with an increase of 11.3% in the number of head picked up (59 additional head).

Draft Background Information on Ag Plastic Disposal/Recycling

Prepared by Waterton Biosphere Reserve Association (Jeff Bectell)

- **Currently can burn (not recommended in Environmental Farm Plan), bury, landfill, stockpile, or take to Green Acres Hutterite Colony at Hussar.**
- **Landfilling**
 - Land filling fee in Cardston right now is \$95/tonne, Lethbridge is \$110/tonne, Pincher Creek is \$45.70 per tonne. Residents of Pincher Creek may bring up to 500 kg at no charge. If the load exceeds 500kg, the transporter will be charged for the entire load. Residents of the Municipal District of Pincher Creek are not subject to the 500kg limit so it is free for them, regular tipping fee in Pincher Creek is \$45.70 per tonne for regional people and \$58.30 for non-regional.
 - Pincher landfill fee schedule definitely encourages landfilling.
 - Don't know if farmers in Cardston can bring plastics to transfer station or landfill for free?
- **Burning** is cheap and legal, but not recommended.
- **Burying on farm** may be legal, would cost a little...don't have figures.
- **Stockpiling**...there it is.
- **Recycling at Green Acres (part of Merlin Plastics)**
 - <http://www.hutterites.org/news/who-recycle-bag/>
 - Mike, 403-641-2673 at the Colony
 - Darryl with Merlin Plastics 403-993-8033
 - Needs to be 'fairly clean'
 - Dirt is not a big concern, but inches of moldy grain is
 - The cleaner the better
 - A really clean bag can be shredded in 10-15 minutes, while really dirty bag can take 1 hour
 - **Must** be rolled straight and flat by a machine
 - 3' wide, by 4' diameter (depending on size of bag)
 - Delivery must be arranged in advance
 - Green Acres/Merlin Plastics pays \$80.00 to \$100.00 per tonne
 - Depends on how clean

- Only accept grain bags, not silage plastic, not twine, not net wrap.
- They recycle the grain bags into LDPE pellets (which there is a market for) and then use those pellets to manufacture garbage bags.
- **Grain bags**
 - Largest are 500'x12'
 - Weigh about 800 kg
 - Low density polyethylene (LDPE)
 - Might fit 26 to 45 bags on a truck depending on size?
 - Important to know for economics of trucking.
 - 33 tonnes is a pretty good load, about 41 bags.
 - 16-43 Waste Management in Sask. fits 27 used bags in a 40' sea can.
- **Silage plastic**
 - Same material as grain bags.
 - Green Acres does not accept for recycling over concern of not clean enough.
 - This material is accepted for recycling in the states by Revolution Plastics. Although this company is not an option for us in Alberta, the fact that they have found a way to handle silage plastic suggests it can be done.
- **Twine**
 - Twine is polypropylene and if reasonably clean can be recycled.
 - There are programs in Alberta for accepting twine for recycling. Wheatland County has a program for its ratepayers.
- **Net Wrap**
 - There is currently no recycling of net wrap happening. Recycling Council of Alberta and others are exploring possibilities, but nothing close right now, so burning or landfilling are currently the only real options.
- **Revolution Plastics**
 - <https://www.revolutionplastics.com/index.php>
 - Low density polyethylene
 - White plastic, grain bags, silage bags, silage pit covers, bale tubes

- Collection in California, Iowa, Illinois, Minnesota, Wisconsin. This is then transported to their plant in Arkansas for recycling.
- 1 billion pounds of used plastic in US/year
- They have recycled 1 billion pounds in 20 years
 - Expect to recycle 1 billion pounds more in next 3-4 years
 - Collecting roughly 3 million pounds per month
 - Have 4400 bins on farms in the midwest
 - Free pickup and a bin if use 2000 lbs. + per year
- Not an option in Alberta, but appears to be a successful business model in the States
 - A privately held company, not relying on subsidies. Parent company is Delta plastics which manufactures poly pipe. They began recycling discarded poly pipe, and moved into the grain bags etc. They manufacture garbage bags with their recycled plastic.
- **Wheatland County Program**
 - Clean twine can be brought to collection site in a bag and is then taken for recycling.
 - Grain bags are handled by a county employee who goes to farms when called. Has a bag roller mounted on 16' car hauler trailer. Farmer must help roll the bag. Bags are collected and taken to Green Acres at Hussar for recycling, sometimes stockpiled until a larger trailer load is taken to Green Acres. No fee to farmer, the county keeps the money for delivering the bags to Green Acres.
 - This is almost a full time job for the county employee from October to May (they do not collect bags from May to October, less demand then). The employee (Sheldon) also works in the shop.
 - Collected over 600 bags last year, or about 200,000 lbs. (this is probably far more than what is currently used in Cardston and Pincher Creek).
 - This is essentially a break even program for the county with all costs covered by the funds obtained from delivering the bags to Green Acres.
- **Redberry Lake Biosphere Reserve**
 - In Saskatchewan, east of North Battleford.

- Partnership with municipalities for a waste management facility, including grain bag collection. They have plans to set up their own LDPE recycling, and set up is about \$500,000.00 (not including site and building). They hope to make money with the venture.
- <http://www.16-43wastemanagement.ca/>
 - Planning on about a 250 km radius for collection zone.
- **Regulations in Saskatchewan**
 - Saskatchewan is just beginning to implement regulations requiring recycling, including fees on purchase of grain bags (much like tire recycling fee).
 - Burning is not permitted and can result in fines.
 - There is some thought that something similar may be coming in Alberta.
- **Local Interest**
 - In personal communications with area farmers who use grain bags, there is interest in recycling of LDPE and twine etc.
 - Some would be willing to pay to have someone pick up the bags on their farm.
 - Some would not be willing to pay anything, or even to transport the used plastic to a collection site.
 - Some would be willing to transport, but not pay a fee.
 - Options may include exploring the possibility of starting a recycling facility locally, or transporting empty grain bags to Green Acres.
 - Either of these options may be more cost effective than incineration, and if that is the case, they should be explored.
 - **Transporting to Green Acres at Hussar.**
 - If a load/loads could be assembled locally of clean rolled grain bags, then trucked to Hussar, here are some potential figures to work with:
 - 41 bags @ 800kg comes to 32.8 tonnes
 - a reasonable load on a flat deck semi
 - At \$80/tonne this would bring \$2624.00 revenue.
 - Hussar is about 270 km from here, so figure an 8 hour round trip with loading and

unloading (if bags were in one location for loading).

- Assume \$150/hr for trucking, gives us a cost of \$1200.00
- **\$2624.00 - \$1200.00**
 - **\$1424.00 profit**
 - These figures suggest that there may be some opportunity to provide a service that would not cost a lot of money to provide. Possibly even on farm collection and rolling. These figures are presented to facilitate discussion.
- **Other links**
 - <http://www.cleanfarms.ca/SKGrainBag.html>
 - <https://recycle.ab.ca/>
 - Recycling Council of Alberta Christina Seidel 403-843-6563