





2017 ENVIRONMENTAL PROGRAM UPDATE

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INTRODUCTION

In response to Wheatland County's Environmental Policy and strategic direction, and in an effort to meet increasing environmental challenges in a way that suits Wheatland County ratepayers; Wheatland County developed an Environmental Program for County operations. Meetings held in 2015 and 2016 led to the development of the new program, with a goal to provide structure, efficiency, and continual improvement to environmental planning efforts. The Environmental Program began in 2016, and is based on a mission to provide environmentally responsible services in Wheatland County, with a vision for the County to become a leader in environmental accountability. To achieve this goal, administration decided to develop and implement annual environmental action plans that could be integrated into Wheatland County operations, and continually evaluated and improved to meet evolving environmental objectives.

In 2017, the first annual Environmental Action Plan was designed and implemented. This document summarizes key achievements of the program's first years, and highlights environmentally-focused County programming. While there are always opportunities to improve, we hope that you enjoy learning about the County's environment initiatives for the benefit of current and future residents, industries, and visitors.

2. ENVIRONMENTAL POLICY

In 2016, Wheatland County made a formal commitment to environmental stewardship through the adoption of an Environmental Policy, recognizing the importance of protecting the environment for the long-term benefit and enjoyment of the Wheatland County community.

Wheatland County General Policy 3.25: Environmental Policy Effective Date: October 4, 2016, Res. 16-10-11

1. PURPOSE

The purpose of this policy is to guide Wheatland County towards leadership in environmental accountability for the benefit of its residents, industry, and visitors. This policy will establish guidelines for the provision of environmentally responsible services in Wheatland County.

2. POLICY STATEMENT

Wheatland County is committed to being a leader in environmental accountability through balancing the environment with the social and economic needs of the community; leading by example; understanding and responding to the specific environmental needs of our residents and natural environment; and engaging and enabling stakeholders to protect the value that our natural environment provides.

3. POLICY GUIDELINES

- a. The County will strive to comply with, and exceed where possible, all environmental requirements applicable to County operations and responsibilities.
- b. In all County decision making, we shall integrate environmental considerations with a goal to balance environmental value with social and economic benefits.
- c. The County will utilize stakeholder consultation and the best available scientific information to determine the environmental needs and well-being of the community.
- d. The County will strive to address the environmental needs of the community through targeted programming, with a goal to continually improve the environmentally responsible services we provide through our operations.
- e. The County will encourage contributions to environmental sustainability by seeking opportunities to enable and support community members, and to create meaningful partnerships with stakeholders to achieve mutual environmental goals.

f. The County will ensure transparency of environmental decision making and engagement of the community in the decision making process. The County will strive to increase public awareness of environmental issues through effective communications as per General Policy 3.21, Public Participation & Engagement Policy.

4. ALIGNMENT WITH POLICY

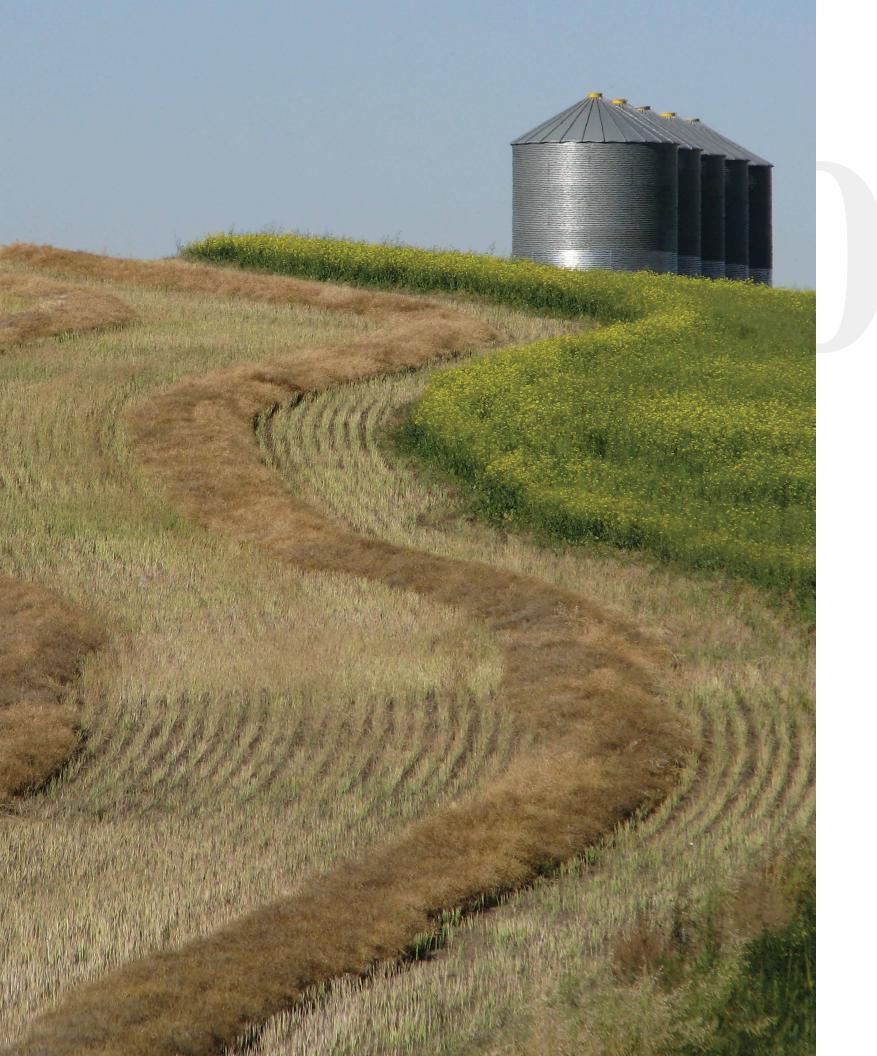
This policy commitment will be considered in all plans, strategies, and services, and will be incorporated into new and existing municipal directives where appropriate.

This policy commitment will support compliance with regulatory and non-regulatory environmental requirements that are applicable to Wheatland County's operation. These requirements include, but are not limited to:

- Alberta Agricultural Operation Practices Act
- Alberta Environmental Protection and Enhancement Act
- Alberta Land Stewardship Act
- Alberta Municipal Government Act
- Alberta Public Lands Act
- Alberta Soil Conservation Act
- Alberta Water Act
- Alberta Water for Life Strategy
- Alberta Weed Control Act
- Alberta Wetlands Policy
- Alberta Wildlife Act
- Calgary Region Airshed Zone Particulate Matter and Ozone Management Plan
- Canadian Environmental Protection Act
- Canadian Fisheries Act
- Canadian Migratory Birds Convention Act
- Canadian Navigation Protection Act
- Canadian Species at Risk Act
- South Saskatchewan Regional Plan







ENHANCING ENVIRONMENTAL COMMUNICATIONS AND SHARING INFORMATION



In 2017, Wheatland County strived to improve communications about environmental initiatives, expand community access to environmental education and information, and promote environmental successes. Here's what we achieved:







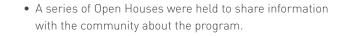
• An "Environment Program" page was added to the website, giving information about the Environmental Policy, Program, recent successes achieved by the County, and the current Environmental Action Plan.



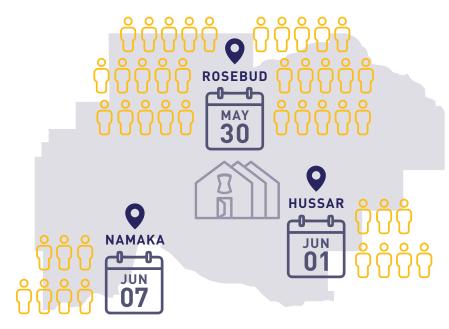
• County Connector newsletters throughout the year contained information about landowner water management, the Alberta Water Act and Wetland Policy, Wheatland County's wetland inventory, and tile drainage considerations. Keep reading the County Connector for more environmental information of relevance to the Wheatland County community!



• Information about the environmental program was included in AGM handouts, and 4 articles were written about the program in local newspapers.







STAFF AND COMMUNITY CONSULTATION

The Environmental Program is intended to be a community-wide initiative that covers topics and issues of relevance to the public Wheatland County community, and to internal Wheatland County operations, staff, and Council. For this reason, ongoing public, staff, and Council input are essential to the development and continual improvement of the program.

In an effort to determine the environmental interests and needs of the community for future program planning, three Open House events were held. The events took place in Rosebud on May 30, Hussar on June 1, and Namaka on June 7, 2017. The purpose was to share information with the community about the Environmental Program and collect information about environmental topics of interest to community members.



In total, 42 County residents attended.

A free barbeque was offered for guests, and various environmental stakeholder groups attended to provide information to the community including: Wheatland County Agricultural Services, Ducks Unlimited Canada, Western Sky Land Trust, Alberta Environment and Parks, Cows and Fish, and Foothills Forage and Grazing Association. Community comments were compiled and shared with the Environmental Steering Committee for future program planning.





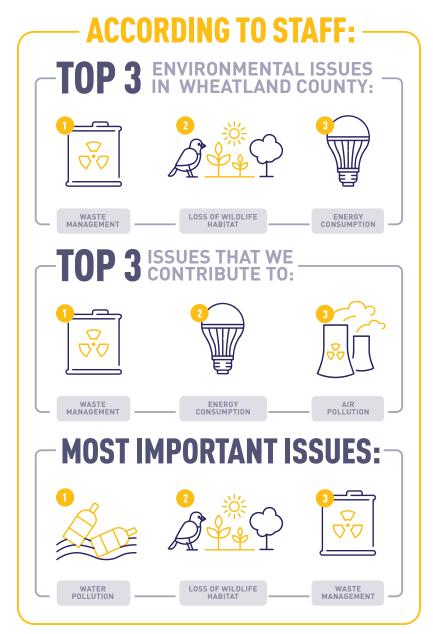




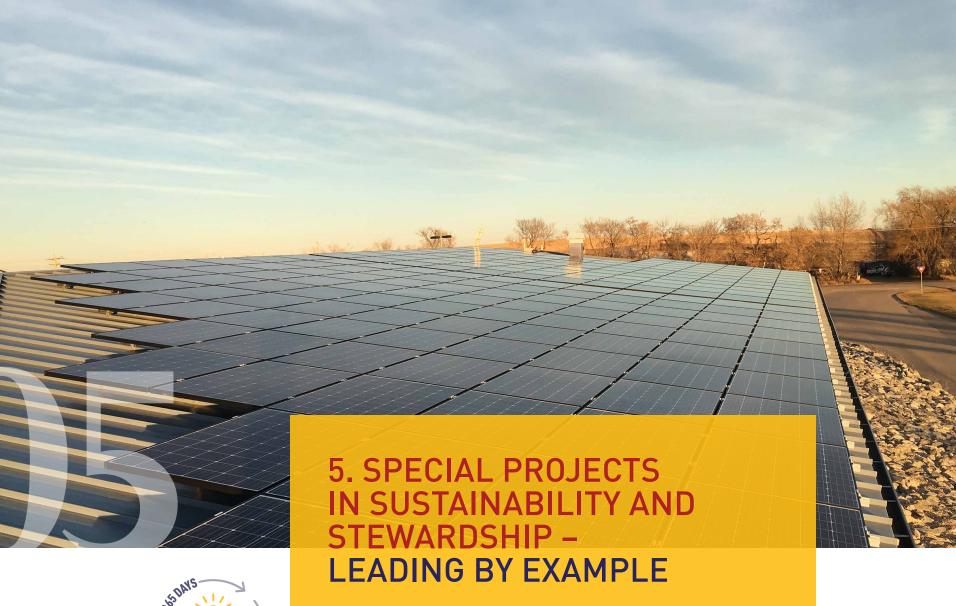




Initial staff consultation was completed in September, 2016, in the form of a survey. 92 staff members responded and a summary was prepared and reviewed during Environmental Program development, and creation of the first annual Environmental Action Plan.



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A) COUNTY OFFICE SOLAR AND BUILDING EFFICIENCY IMPROVEMENTS

In 2016, 215 solar panels were installed on the roof of the Wheatland County administration building in partnership with the Alberta Municipal Solar Program. The effort to subsidize conventional energy with renewable energy will not only reduce the impact of our operation on the environment, but will reduce operational costs. In one year, approximately 70 MWh of energy was produced by the system. This is equivalent to saving 27 tonnes of carbon emissions, or to planting 92 trees.

In 2017, a graduate student named Oksana Treacy from the University of Calgary's Sustainable Energy Development program studied the efficiency of the solar panel system. She presented her findings to Wheatland County Council on November 7, 2017.

In 2017, Wheatland County also moved to a new building management system with a goal to improve energy efficiency in the Administration Office. A programmable system has been installed that allows heat to be reduced on evenings and weekends in order to reduce energy consumption. Further, all lighting in the building has been replaced with high-efficiency, low energy bulbs. These changes reduce the cost for energy while also benefitting the environment.

B) CARSELAND FLOATING WETLANDS STUDY





filled with water from the lagoon. A graduate student from the University installed floating treatment wetlands inside the tanks, supporting vegetation growth on the surface of the water. The study found that the floating treatment wetlands contributed to a decrease in phosphate, ammonia, and nitrates in the wastewater, and helped expand scientific understanding of methods for increasing the efficiency of sewage lagoons without increasing the total volume of systems.

In 2015 and 2016, Wheatland County supported a wastewater treatment project initiated by the University of Calgary and Phosphorus Management Plan. At the Carseland wastewater lagoon, two sea-cans were installed as holding tanks and

C) LED HAMLET LIGHTS



D) ROSEBUD EROSION CONTROL



In the spring of 2017, two sites along the Rosebud River were treated for erosion with hard-armouring and bioengineering combination solutions. This work occurred at the location where Severn Creek meets the Rosebud River, and adjacent to the Rosebud campground. Reducing erosion occurring in riparian areas adjacent to important waterways, like the Rosebud River, protects against deterioration of water quality, and reduces sediment-loading.

E) WATER QUALITY TESTING AT EAGLE LAKE



In 2016 and 2017, Wheatland County Agricultural Services assisted Alberta Health Services with water quality testing in Eagle Lake. Testing occurred once a week to secure data about the growth of algal blooms and concentrations of fecal coliforms in the water.

DID YOU KNOW?

Eagle Lake is an important feature in Wheatland County for biodiversity of plant and wildlife species. It is identified as habitat for the Piping Plover, a small, sand-colored shorebird that is identified as a Species at Risk!

Photo by Mdf, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=4698896



F) COMPOSTING TRIAL

In 2017, a composting trial project was initiated at the Wheatland West Waste Transfer Site, in partnership with Huxted Waste Disposal. Huxted provided a bin at the site to collect compostable material and incorporate it into the compost program at their Strathmore location. The project went well, and the County will seek permanent and expanded options in the future.

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LEADING BY EXAMPLE







DID YOU KNOW?

Wetlands are defined as land saturated with water long enough to promote formation of water-altered soils, growth of water tolerant vegetation, and various kinds of biological activity that are adapted to wet environments. Do you have water that sits on your property for longer than a day or two after rainfall? You probably have a wetland, and the Alberta Wetland Policy would apply!



G) TOXIC WASTE ROUNDUP

In 2017, a toxic waste roundup was held at 2 waste transfer site locations, allowing ratepayers to drop off hazardous household wastes for disposal by an external company. 15-20 ratepayers took advantage of the opportunity, and the County will continue to pursue options like this for the safe disposal of hazardous waste in the future.

H) REDUCED COMPACTION IN RECLAMATION

Borrow pits are a common and essential component of road construction and maintenance, whereby municipalities borrow earth from nearby landowners. Such areas of disturbance require reclamation when road activities are complete, however, the equipment used to reclaim the earth is heavy and often results in higher levels of compaction than the land had previously experienced. Soil compaction makes it difficult for both native plants and crops to grow, and in both cases, it is difficult for the land to return to its previous level of productivity. In an effort to reduce the negative effects of compaction, and ease the reclamation process; in 2015 Wheatland County purchased quad track, low-compaction equipment for the purpose of replacing topsoil. This, and other improvements, are the result of an annual reclamation meeting, held for the purpose of discussing improvements that can be made to the methods used for reclamation. The County will continue to evaluate and incorporate feasible ways to reduce the environmental impact of road construction and maintenance.

I) COMPLYING WITH ENVIRONMENTAL REGULATION

Wheatland County is committed to compliance with all environmental regulations applicable to County operations and responsibilities. In 2017, Wheatland County's Transportation and Infrastructure department made changes to effectively and appropriately accommodate Alberta's Wetland Policy. The Wetland Policy requires that impacts to wetlands be avoided in that case of disturbance on the landscape. If impacts cannot be avoided, such as is sometimes the case when roads are improved for public safety, mitigation techniques must be applied to minimize negative impacts on wetlands. As a last resort, where avoidance and minimization efforts are not feasible, wetland replacement is required. Wheatland County is pleased to report that Water Act approvals and required wetland assessments are a priority for our road construction activities.

J) SUSTAINABLE PROCUREMENT

Wheatland County follows a Sustainable Procurement Policy for obtaining goods and services. As per General Policy 3.1, "All procurement staff shall identify and purchase the most environmentally and socially responsible products and services that are available for the intended purpose at a competitive price and that meet the performance requirements. Environmental and social factors that should be considered include, but are not limited to:

- Minimization of virgin material use in product or service life cycle
- Maximization of recycled products used in product or service life cycle
- Environmental cost of entire product or service life cycle
- Reuse of existing products or materials in product or service life cycle
- Recyclability of product
- Minimization of packaging
- Reduction of energy/water consumption
- Durability and maintenance requirements
- Ultimate disposal of product
- Adherence to the minimum social performance standards of the Supplier Code of Conduct."

DID YOU KNOW?

WHEATLAND COUNTY USES ENVIRONMENTALLY-FRIENDLY FIREFIGHTING FOAM!

In an emergency situation, there is no question; a firefighter will use whatever means necessary to save your life and protect your property. Municipalities like Wheatland County supply the best available materials to their emergency teams to ensure the highest level of safety and service. The traditional firefighting foam used, however, can be detrimental to the environment. In a move towards proactive environmental management, Wheatland County decided to try sustainably sourcing an alternative foam. 98% organic and 100% environmentally friendly, the new product efficiently extinguishes fire without the trade-off between emergency response and safety, and environmental damage. The product has proven to be so superior, that we've committed to its permanent use in our emergency response service.

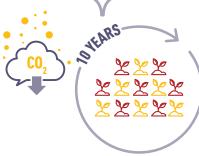
TURN ENGINE OFF WHEATLAND COUNTY CRAZ

K) INTERNAL IDLING AWARENESS AND CARPOOLING CHALLENGE

In an effort to "lead by example" and engage Wheatland County staff in the environmental program, the County decided to establish an internal reduced idling awareness campaign and fun carpooling incentive program.

CRAZ, or Calgary Region Airshed Zone, is an organization concerned with air quality in our region. Wheatland County is a member of CRAZ, and the organization is available for assistance with initiatives that are beneficial to air quality. In partnership on the initiative, CRAZ came out to speak to staff in May about the importance of reducing idling, and partnered with the County to install 20 "Idle Free" signs at County properties.





County staff were then challenged to reduce vehicle emissions associated with their daily commutes. Dubbed "The Wheatland County Carpool Challenge," employees were asked to carpool with fellow employees for entries into a draw for prizes. In one month, 51 trips to and from Strathmore were saved, a distance of approximately 1020 km. This is the equivalent carbon dioxide/greenhouse gas reduction that 13 tree seedlings grown for 10 years could accomplish!

The programs raised awareness about the impact that vehicles have on greenhouse gas emissions. Stayed tuned for more on this initiative in 2018!

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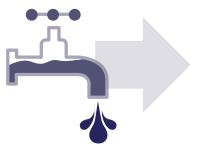


COMMUNITY FUNDING AND AWARDS

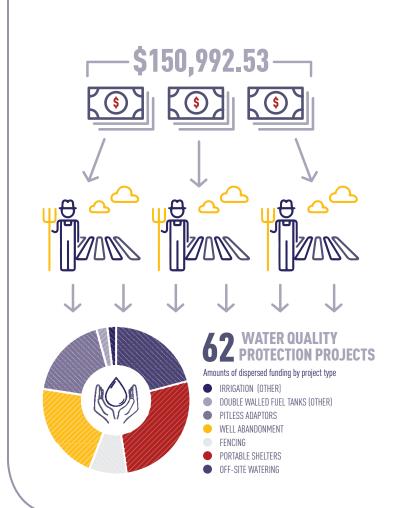
A) WATER PROTECTION INITIATIVE AND CROWFOOT CREEK WATERSHED RESTORATION AND RESILIENCY PROGRAM

Wheatland County Agricultural Services offers funding to County landowners that are interested in pursuing projects intended to conserve or improve water quality in the municipality. Since 2011, funding has been available for ratepayers to contribute to the protection of surface and/or groundwater sources by: properly decommissioning abandoned water wells; converting well pits to pitless adaptors; installing off-site watering systems for livestock; establishing riparian fencing to manage livestock access to watercourses and waterbodies; and more. Since 2011, \$150,992.53 has been distributed to Wheatland County landowners in support of 62 different water quality protection projects on private land.

In 2017, Wheatland County applied for funding to pursue specific projects along the Crowfoot Creek, and were successful! In 2018, landowners along the Crowfoot Creek will be eligible for enhanced surface water protection funding. Watch out for more information about this program, or contact the Agricultural Conservation Coordinator at 403-361-2027, or sarah. schumacher@wheatlandcounty.ca.







B) WATER REBATE PROGRAM

Since 2015, Wheatland County has provided a water rebate program to its ratepayers, in an effort to reduce water consumption in the municipality. The program supports ratepayers who retrofit water appliances to low-flow fixtures. Any ratepayer in Wheatland County is eligible for up to 3 low-flow fixtures at a rate of \$60 per fixture; they must simply fill out an application and include before and after photos of the appliance. To date, \$6000 has been spent on the program, funding approximately 100 low-flow fixtures.

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C) ENVIRONMENTAL STEWARDSHIP AWARD

The Wheatland County Agricultural Service Board presents the Environmental Stewardship Award as a way to recognize and reward notable efforts within the community to practice and promote environmental stewardship and innovation. Two Environmental Stewardship Awards are available per year in the following categories:

COMMUNITY STEWARDSHIP AWARD

The Community Stewardship Award recognizes a Wheatland County community member or group that has made an outstanding contribution to environmental sustainability in the municipality. The award will honor notable projects, programs, or activities performed by businesses, individuals, or community groups, in an effort to acknowledge the people and organizations that make Wheatland County a great place to live.

J. LASLO LEGACY AWARD

This award is named in honor of the retirement of long-time Wheatland County employee Jim Laslo. During his career, Jim was the Agricultural Fieldman, and then General Manager of Agriculture, Community, and Protective Services. Jim's passion for education and outreach about agricultural conservation initiatives, and dedication to harnessing the power and innovation of the agricultural community, led to the implementation of many environmentally beneficial projects and the uptake of sustainable agriculture practices throughout the municipality.

The J. Laslo Legacy Award will be awarded to an agricultural producer in Wheatland County who has shown exemplary leadership in the implementation of beneficial management practices on their farm. The winner will have shown dedication to reducing the environmental impacts of their operation, and will have an interest in promoting lessons from their efforts to others in the industry.

2017 was the first year for the Environmental Stewardship Award, and winners had yet to be recognized at the time of print. Awards are presented at the Wheatland County Annual General Meeting. Stay tuned for information about winners, and nominate someone for the 2018 award!



SUPPORTING AND PROMOTING AGRICULTURE

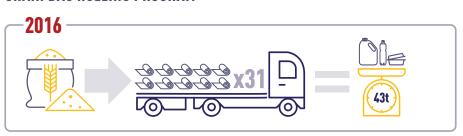
A) AGRICULTURAL PLASTICS RECYCLING AND RCA AWARD

Wheatland County Agricultural Services coordinates plastic recycling opportunities for the agricultural community. Currently, programs are available for plastic pesticide containers, twine, and grain bags.

In 2015, Wheatland County initiated a twine recycling program in partnership with the Drumheller & District Solid Waste Management Association. Twine collection bags are available at waste transfer sites so that ratepayers have easy access to them, and Drumheller has accepted approximately 3 tonnes of twine for recycling from the County since the program began.

In partnership with CleanFarms, Wheatland County developed pesticide collection sites at the Wheatland West, Standard, and Hussar Waste Transfer Site locations. Containers must be empty and rinsed, then can be dropped off at the sites.

GRAIN BAG ROLLING PROGRAM





In response to a need for better options for the disposal of plastic grain bags, Wheatland County Agricultural Services created a grain bag rolling and recycling program. In 2016 alone, the program successfully recycled 301 grain bags, a weight of 43 tonnes of plastic. Between 2015 and the end of November, 2017, the program had seen 583 bags hauled to a local business for recycling, a weight of 111 tonnes. Through the program, an agricultural services staff member is available to attend farms and assist producers in the cleaning and rolling of grain bags, before hauling them to a local business for recycling.

In 2017, Wheatland County's Grain Bag Rolling and Recycling Program received an "R's of Excellence" Award from the Recycling Council of Alberta, for outstanding rural recycling.

Agricultural plastics recycling programs are important, as they reduce the likelihood that such products will be burned or disposed of with regular garbage. By committing to providing recycling services for ratepayers, Wheatland County is protecting air quality, reducing pollution, and reducing the amount of waste that reaches the landfill. While bale net wrap is currently not accepted, as there is no accessible market for its material, Wheatland County will continue to pursue additional agricultural recycling opportunities.





B) RURAL EXTENSION EVENTS

Wheatland County has had a permanent employee dedicated to working on agricultural-environmental extension since 1991. A key component of this program is connecting Wheatland County's agricultural producers and rural residents with valuable information about environmentally beneficial practices in agriculture and land management, and advancements in the agricultural industry. This is often accomplished through the offering of events and workshops.

Wheatland County partners with other municipalities in the region to put on Ranching Opportunities and Ladies Livestock Lessons early each year. These major events bring producers together to discuss current issues in livestock industries.



- Generating Electricity from the Sun:
 A one-day workshop on grid-tie solar
 options for Alberta Farmers (Put on by
 the Solar Energy Society of Alberta)
- Jim Gerrish 3-Day Grazing School (In partnership with Foothills Forage and Grazing Association)
- Rural Innovation Forum:
 Acceleration Innovation (Put on by Sustainability Resources)
- Septic Sense: Solutions for Rural Living (In Partnership with Alberta Onsite Wastewater Management Association and Land Stewardship Centre)
- Solar Energy Workshop (In Partnership with Rocky View County)
- Off-site Waterers & Watershed
 Management (In partnership with Foothills
 Forage and Grazing Association)
- Opportunities in Irrigation (In partnership with the Western Irrigation District)
- Salinity Causes and Cures: Advice for Cropland and Pasture (In partnership with FarmersEdge, WID, and Foothills Forage and Grazing Association)
- Working Well Workshop
- And more!





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PROMOTING AGRICULTURE





C) ENVIRONMENTAL FARM PLAN



The Environmental Farm Plan is a voluntary, whole farm, selfassessment tool that helps producers identify their environmental risks and develop plans to mitigate identified risks. Wheatland County's Agricultural Conservation Coordinator assists producers in completing

Environmental Farm Plans, providing support to our agricultural community for initiatives that reduce the environmental impact of their operations. At the same time, the Coordinator is able to connect producers with potential sources of funding to assist in their initiatives.

D) WEED CONTROL

Wheatland County has a dedicated Weed Inspector who not only manages weeds on County properties, but is available to assist and provide information to landowners who have weed management issues as well. Weeds are a threat to the natural environment, as major weed invasions can change natural biodiversity and affect the balance of ecological communities. Weeds also threaten agricultural production, and can outcompete many plant species. The Alberta Weed Control Act lists noxious and prohibited noxious weeds that must be managed on the land to prevent harmful impacts. Wheatland County maintains an educational approach to weed management on private land, and Agricultural Services is available for landowner support.

For Wheatland County properties, Agricultural Services practices innovative, integrated management. Mowing graders are equipped with pesticide spraying equipment that can be used to spot-treat weeds. Operators are trained to identify weeds, and turn on spraying equipment only when necessary to control weed species. An alternative to a blanket-spray method, this method reduces the use of pesticides and reduces impact to other plant species. Further, by equipping mowers with spray equipment, two jobs can be completed in one pass of the road, reducing fuel use and pressure on staff resources.







ENVIRONMENTAL AND AGRICULTURAL CONSIDERATIONS IN PLANNING AND DEVELOPMENT

Wheatland County Administration incorporate environmental and agricultural considerations into all applicable planning and development file activities. Wheatland County's Municipal Development Plan contains many policies related to preserving agriculture and protecting natural areas, and staff are careful to review the potential impacts of proposals on such features.

Wheatland County's Planning & Development department is also busy streamlining documents to make sure they are relevant according to the South Saskatchewan Regional Plan (SSRP). The SSRP is an Alberta Land-Use Framework Integrated Plan, adopted in 2014 and amended in 2017. It is a directive with legal basis ground in the Alberta Land Stewardship Act and Alberta Land-Use Framework, and sets a strategic direction for the region in which Wheatland County is located. Under the Land-Use framework, the Government of Alberta is committed to managing the cumulative effects of development on air, water, land, and biodiversity. Under the directive, local government bodies must submit a declaration of compliance with the SSRP by September 1, 2019. Compliance with the SSRP requires attention to necessary updates in policies and procedures, on the part of Wheatland County.

Specific activities undertaken by Wheatland County to address the SSRP include:

- amending area structure plans to include provisions in the SSRP;
- clarifying where environmental studies are required prior to development;
- · ensuring that environmental studies meet their purpose,
- including application of appropriate setbacks from environmentally sensitive features and identifying projects where Environmental Reserve or Environmental Reserve Easement may be appropriate tools for conservation;
- making use of mapping to identify wetlands and environmentally sensitive areas, including areas of high ecological importance or biodiversity;
- taking measures to protect environmental land from future development; and
- taking measures to protect agricultural land bases from future development.

DID YOU KNOW?

According to Wheatland County's Land Use Bylaw, development must be set back at least 100 feet, or 30.48 m, from the top of bank of any water body, such as a river, creek, or lake! It is important to leave room for sensitive environments to function naturally!





