County partnering in watershed planning

I am a bit late in getting the spring newsletter out. However, it has very timely information in regards to Growing Forward 2 and other funding possibilities. There is Roadside Spraying information and two pages discussing spotted and diffuse knapweed of which both are considered Prohibited Noxious in Alberta. Please remember that under the Weed Control Act, Prohibited Noxious weeds in Alberta must be destroyed if they are on your property. I also wanted to help everyone in Lethbridge County understand the role the Oldman Watershed Council (OWC) has as our Watershed Planning and Advisory Council (WPACS) in Alberta.

Instead of dedicating a full page to explain which programs are available in the Growing Forward 2 Program, I am including a small blurb here. Unfortunately the following programs are the only programs accepting funding applications for the remainder of the GF2 Program. There will be a new program starting in 2018, so I would suggest when it is released, folks should try to get on board as soon as possible instead of waiting. As we know these programs become oversubscribed very quickly.

**Animal Health and Welfare Emergency Preparedness Delivery Agent**

The purpose of the Growing Forward 2 Animal Health and Welfare Emergency Preparedness Delivery Agent Program is to improve the ability and capacity of the industry to prepare for, detect and respond effectively to large scale emergency situations that cause large mortalities or other significant impacts on livestock health and welfare in the agricultural sector.

**Irrigation Efficiency**

This program helps producers invest in new or upgraded low-pressure centre pivot (LPcp) irrigation equipment for their operations, improving the efficiency of energy and water use on Alberta farms.

**Livestock Welfare Processor**

This program is to help meat processors improve animal handling and ensure humane slaughter at provincially or federally licensed meat and poultry facilities.

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Riparian fencing and off-stream watering in the SMRID

SMRID has accessed funding through the Watershed Resiliency and Restoration Program (WRRP) to implement off-stream watering and install riparian fencing. The project will be implemented in the County of Lethbridge at the Malloy Drain and Stafford reservoir as well as in the MD of Cypress at Sauder Reservoir. The goal of the project is to improve water quality and bank stability through a reduction in shoreline erosion and nutrient loading by reducing cattle from watering directly from the waterways.

It is proposed to fence off areas on the perimeter of drains and reservoirs that fall under SMRID Right of Way, re-establish vegetation and install off stream watering systems for cattle. Grazing on the buffer strip will be allowed through a controlled strategy.

The riparian fencing on the Malloy is being done downstream of the channel improvements completed recently by the County of Lethbridge in partnership with the SMRID and the Town of Coaldale on the downstream end of the Malloy drain. The construction focused on areas that historically impeded flow and caused flooding. The downstream 1.6 km reach of the Malloy, where the drain enters Stafford becomes a naturalized coulee and the SMRID owns approximately 70 acres of ROW that will be fenced to create a riparian area with controlled grazing.

For more information contact Trevor Helwig at thelwig@smrid.ab.ca
FIELD SCHOOL

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Spotted Knapweed
Centaurea maculosa

Overview:
Primarily a biennial plant – producing a rosette the first year and a flowering bolt the second – but can also be a short-lived perennial, blooming for a few years before dying. Spotted knapweed can self-pollinate and is also cross-pollinated by insects.

A prolific seed producer – individual plants can produce over 140,000 per year – control is extremely difficult on established infestations.

Knapweeds have become well known because of their almost wholesale degradation of large tracts of rangeland in the northwestern US and parts of southern BC. Knapweed contaminated hay or plant skeletons caught in vehicle undercarriages often contribute to spread. In winter plant skeletons break off and tumble in the wind, spreading seed.

Spotted knapweed roots exude a chemical that inhibits the root growth of other plants.

Habitat:
Native to Eastern Europe, spotted knapweed is commonly found on well-drained, light to coarse textured soils, but is intolerant of dense shade. It prefers moister habitats than Diffuse knapweed, but is intolerant of constant moisture. Infestations often form monocultures and can even extend into relatively undisturbed plant communities, displacing forage for wildlife and livestock.

Identification:
Stems: Upright and branched, growing up to 1.5 m tall. There may be one or a few stems per plant.
Leaves: Rosettes are up to 15 cm long and deeply lobed. On bolting stems, the leaves alternate and become pinnately divided (feather-like) and can be slightly hairy.
Flowers: Borne singly at the ends of branches. The flowers are pinkish-purple, can occasionally be a creamy white. Bracts on the flower’s base have black tips, distinguishing it from other knapweed species.

Seeds: The brown, oval seeds are 1/16 to 1/8 inch long, with pale longitudinal lines and a short fringe on one end.

Prevention:
Producers should exercise caution when using hay from road ditches, especially primary roadways, and when purchasing hay from known infested areas.

Grazing:
Despite having an extremely bitter taste, livestock and wildlife will graze knapweed. However this compounds the problem as viable seed is distributed in their droppings and manure. Grazing when the plant is in the rosette stage is most effective when combined with herbicide treatments.

Chemical: Aminopyralid (alone or in a product mix with 2,4-D or Metsulfuron-methyl) and Picloram are registered for use on spotted knapweed. Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the Pest Management Regulatory Agency. Always read and follow label directions. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: Twelve biocontrol agents have been imported to North America; 3 moths, 4 flies, 4 weevils, and a rust. Most are seed-feeders and a few are root-miners. Many of these have become very widespread throughout the northwestern US and southern BC. These agents have caused dramatic reductions in plant size, and therefore seed production in some areas.

Cultivation: Generally, knapweed is not a problem in frequently cultivated areas.

Mechanical: Cutting or pulling before flowering can be effective on small infestations to prevent seed production, but will require several years’ effort to eradicate. Remove as much of the root system as possible to prevent re-sprouting. Bare skin contact with knapweed can cause irritation, so wear gloves.
Diffuse Knapweed

Centaurea diffusa

Overview:

Diffuse knapweed is a biennial to short-lived perennial that reproduces by seed. This tap-rooted member of the Aster family is native to south-eastern Europe. It is thought to be introduced in the late 1800s via contaminated crop seed. Seeds germinate in the fall or spring and develop low lying rosettes in the first year of growth. It is a highly competitive plant that establishes quickly on disturbed sites and can also invade undisturbed plant communities. A single plant can produce 18,000 seeds.

Diffuse knapweed is an extremely tough plant that can tolerate drought, trampling, and very rocky soils. Its roots exude a chemical that inhibits the root growth of other plants.

Knapweeds have become well known because of their almost wholesale degradation of large tracts of rangeland in the northwestern US and parts of southern BC. In winter, plant skeletons break off and tumble in the wind, spreading seed.

Diffuse knapweed can sometimes be confused with spotted knapweed, which sometimes has white-pink flowers, but Diffuse plants are shorter, stiffer, prickly and more of a grey-green.

Habitat:

Diffuse knapweed thrives in semi-arid and arid environments with light, porous soils such as gravelly loam, and loamy sands. It is not tolerant of moist soils, flooding or shade.

Identification:

Stems: Single, erect stems with numerous branches, covered with short, stiff, white hairs. Plants grow up to 1 m tall and have a ball like appearance.

Leaves: Rosette and lower leaves are 5-20 cm long, rough, hairy, grayish green and highly divided. Upper leaves are stalk-less and become smaller towards the flowers.

Flowers: Urn-shaped, creamy white, occasionally pinkish purple and borne solitary or 2-3 at ends of branches. The bracts are yellowish-green and edged with small, rigid, sharp spines.

Seeds: The seeds are light brown to black and about 3 mm long.

Prevention:

Maintain healthy pastures and rangeland as Diffuse knapweed establishes & spreads quickly in disturbed/degraded plant communities. Knapweed contaminated hay or plant skeletons caught in vehicle undercarriages often contribute to spread.

Knapweed seeds have an extremely hard seed coat and can be viable for at least 5-10 years. Therefore knapweed control sites will need to be re-visited for many years. Control is extremely difficult on established infestations.

Control:

Grazing: Rarely grazed because of its spiny nature and extremely bitter taste. Invasive plants should never be considered as forage.

Cultivation: Diffuse knapweed is not a problem in frequently cultivated or irrigated areas.

Burning: Cured infestations can be burned but the degree of control achieved from burning has been conflicting.

Mechanical: Mowing prevents seed production but the remaining root will re-sprout. Digging before flowering can be effective on small infestations but will require several years’ effort to eradicate and should be accompanied by sowing desirable plants. Remove as much of the root system as possible to prevent re-sprouting. All plant material should be incinerated or bagged and sent to a waste facility. Diffuse knapweed is very abrasive and bare skin contact can cause irritation, so wear gloves and a long-sleeved shirt.

Chemical: Clopyralid, Dicamba, and Aminopyralid are registered for use on diffuse knapweed. Always read and follow label directions. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: Ten biological control agents have been imported to North America; 3 moths, 3 flies, 2 weevils, and 1 rust. Most are seed-feeders and one is a root-miner. Many of these have become very widespread throughout the northwestern US and southern BC. These agents have caused dramatic reductions in plant size and therefore seed production.
The Oldman Watershed Council (OWC) is a not-for-profit organization that is working in partnership with communities and residents to improve the Oldman River Watershed. The Council consists of members who live or work within the Oldman Basin. These members provide leadership and guidance in watershed planning and management, water quality monitoring, and stewardship promotion.

The Council is governed by a Board of Directors who are comprised of sixteen representatives from various organizations and four members at large.

The OWC was formed in September 2004, when the Oldman River Basin Water Quality Initiative (Initiative) merged with the Oldman Basin Advisory Council (BAC).

When the Province’s Water for Life strategy was released, these two groups combined to provide a diverse partnership knowledgeable in all areas of watershed management, including sustainable water management and land use practices in the Oldman Basin.

Today, the Council provides leadership and guidance in watershed planning and management, monitoring water quality and promoting stewardship. The OWC has not only carried on the work of the Initiative and the BAC, but also acts as the Oldman Watershed Planning and Advisory Council as part of the Water for Life Strategy.

The OWC is an official Canadian Registered Charity and will issue a charitable receipt for your donation.

The Oldman Watershed Council Board of Directors is comprised of 19 people bringing diverse perspectives from many sectors and 4 Members At Large, with elections held for each position.

Individuals and organizations nominate someone from their sector to bring that perspective to the OWC Board of Directors. The nomination forms for these Board positions are available in early spring.

Under Alberta’s Water for Life strategy, Watershed Planning and Advisory Councils (WPACs) have been established for each of Alberta’s major watershed basins. These councils are regional, multi-stakeholder, not-for-profit organizations that assess watershed health and work with their greater watershed community (partners, citizens, governments, First Nations, academia, industry and non-government organizations) to develop plans, make recommendations for policy to decision-makers, and engage in adaptive management actions to benefit the health and sustainability of the watershed.

Alberta WPACs do not have regulatory authority, but through deeper engagement and sharing of information with their watershed communities, they build support for and provide recommendations to decision-makers for water and watershed policy improvements. These groups are tasked with preparing a State of the Watershed report, highlighting the current conditions of their watersheds. They will also prepare Integrated Watershed Management Plans which will achieve the goals set out in the Water for Life Strategy.

Southern Alberta’s semi-arid climate means drought is common and there is a limited amount of water available. Demand for water is high so it must be managed carefully to ensure there is enough for all users, including cities and towns, irrigators and industry, and enough to keep the river environment healthy.

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Solar energy enhancing farm practices

On-Farm Solar Photovoltaics
This On-Farm Energy Management Sub-Program provides funding towards solar photovoltaics on Alberta farms. This enables producers to conserve non-renewable fossil fuels and reduce carbon emissions, ultimately reducing the environmental footprint of Alberta’s agriculture industry.

On-Farm Water Management
This program provides technical assistance to agricultural producers to complete a Long-Term Water Management Plan (LTWMP), and shares the cost of related enhancements of their on-farm water supply management. To be eligible for funding, projects must be identified in a LTWMP approved by an AF Water Specialist prior to starting the project.

Water Act allows sharing of water among all users in success

In Alberta we have a system that allows people, companies and towns to purchase a license to use water from our streams and lakes. The Ministry of Environment manages water licenses through the Water Act and allocates or refuses water to those that apply. This process is based on principles of priority allocation where those with highest priority are ensured of water before any others. In dry years, this could mean some license holders with lowest priority may not be able to use any water because there would only be enough for those with higher priority. However, there are provisions in the Water Act that allow sharing of water among all users and this has worked well during past droughts. Priority allocation aims to cause no harm to other users while protecting those who were first in line to apply for water. Since 1894, over 20,000 water licenses have been issued in the South Saskatchewan River Basin (SSRB) - so those who applied in 1894 have first rights (senior license holders) and those who applied in 2010 have last rights (junior license holders).

The Water Management Plan for the South Saskatchewan River Basin was developed after extensive consultation and guides how the water in the Oldman watershed, as well as all the other sub-basins of the SSRB, is managed. The plan adopted recommendations made by the Oldman Basin Advisory Council to close the basin to new allocations and establish water conservation objectives that would set minimum river flows.

Because the Oldman watershed is closed to new surface water allocations, no new licenses will be issued. However, by increasing efficiency existing license holders are able to accommodate growth. The closing of surface water allocations also means there is now a greater interest in groundwater. Currently data on groundwater quality and quantity is very limited. Alberta also has an Apportionment Agreement with Saskatchewan that guarantees at least 50% of the total annual water from the South Saskatchewan Basin will flow into Saskatchewan.
Confined Feeding Operations (CFO) Extension Services

CFO Extension Specialists with Alberta Agriculture and Food (AF) provide technical expertise to livestock producers, consultants, municipalities, and other interested parties. CFO extension services ensure Alberta’s livestock industry grows in a competitively and environmentally sustainable manner.

Working in cooperation with the Natural Resources Conservation Board (NRCB), Approval Officers and Inspectors, AF CFO Extension Specialists provide clients with information and tools to support the NRCB application process. They also provide clients information on the regulatory requirements of the Agricultural Operation Practices Act (AOPA) and other relevant legislation.

What services are available?

Extension services are available to anyone requiring information about the technical requirements and application process for existing, new and expanding CFOs in Alberta.

For producers and their consultants, additional services will be provided specific to the application process.

Extension staff assist clients with the following:

- Assist with determining if a permit is required.
- Understanding the application process and regulatory requirements.
- Collecting information to determine potential site risks and initial site evaluation.
- Providing information on management options to meet regulatory requirements and address potential site risks.
- Directing clients to information and tools to help complete the application process.

Referral service

CFO Extension Specialists can refer clients to people with other areas of expertise to help them make decisions about their operation.

How can services be accessed?

AF CFO Extension Specialists provide services across the province and are located in Morinville, Red Deer and Lethbridge.