



# Fresh Produce at a fraction of the Cost!

The Good Food Box program was established to encourage healthy eating while making it affordable for individuals and families alike. The program has been in our area since the fall of 2014 and offers fresh fruits and vegetables to its clients.

The program is available to anyone who is interested in taking part; no restrictions to numbers of boxes purchased or eligibility of participants.



# **Boxes can be purchased in three different sizes:**

SMALL which offers 25-30 pounds of food= \$27 MEDIUM which offers 35-40 pounds of food= \$32 LARGE which offers 45-50 pounds of food= \$37

\*There is a \$2 handling/shipping fee which is also added to the initial cost.

Each box contains the basic produce staples: potatoes, carrots, onions, apples and oranges with additional seasonal fruits and vegetables rounding out the weight.

The program is made possible because the Community Kitchens Program of Calgary (with whom we partner) bypasses the retailers and goes directly to importers and produce handlers in the province.



Participants pre-order, pay and pick up their boxes at Wheatland FCSS, Wheatland Administrative Office at the corner of Range Road 243 and Highway 1.

Upcoming 2021 order and delivery dates:

Order before 3:00 PM on:	Pickup your box on:

October 19

November 23

January 11

Ferbuary 1

March 1

March 29

October 29

December 3

January 21

February 11

March 11

April 8

Note: payment must be received two days prior to delivery date.





For additional information or to order your box, please call Wheatland FCSS at Ph: 403-934-5335 or visit www.wfcss.org

















# **Environmental Stewardship**

# AWARDS

Do you know someone who cares about their environmental footprint, or goes above and beyond to benefit our Wheatland County landscape in some way?

# Nominate them for an Award!

# **Community Stewardship Award**

This award recognizes a Wheatland County community member or group that has made an outstanding contribution to environmental sustainability in the municipality. All Wheatland County residents or community groups are eligible for this award.

# Youth Stewardship Award

This award will be given to an individual or group of individuals under the age of eighteen who have shown leadership or strong interest in environmental stewardship. Wheatland County residents, community groups, and school groups are eligible for this award.

# J. Laslo Legacy Award

This award will be given to an agricultural producer in Wheatland County who has shown leadership in the implementation of beneficial management practices. The winner is dedicated to reducing the environmental impacts of their operation, and has an interest in promoting positive efforts to others in the industry.

Award recipients will be recognized by Council at Wheatland County's Annual General Meeting, their name will be added to a plaque displayed at the County office, and they will receive a \$250 cash prize!

# **Nomination Information**

Contact the Agriculture and Environment Department:

**Ph:** 403-361-2007

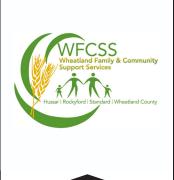
Email: AgandEnv@wheatlandcounty.ca

Submit nominations by **November 1st, 2021** 

# For more information

wheatlandcounty.ca/documents/environmentalstewardshipawards

# County Coats Exchange Program October 2021 to March 2022



We are accepting donations of gently used coats!

Looking for a gently used coat? check out our website for current inventory www.wfcss.org

Men's Women's Children

All Sizes!



Donate or Trade-in

Coats Accessories Boots

> Gently Used

Call us to arrange a drop off or pick up time
Ph: 403-934-5335
www.wfcss.org



# How do you Keep in Touch?

# Have you heard the news?

Wheatland FCSS has partnered with Strathmore FCSS to bring you a new program designed to combat isolation and connect local residents with each other. Keep In Touch (KIT) is a program developed by Volunteer Lethbridge to connect participants and volunteers on a regular basis.

KIT is more than just a phone call or conversation. It is confirmation that there is someone who cares, that someone is willing to provide support, take the time, and simply listen. The program is open to all residents in need of support and friendly conversation.

Wheatland FCSS	Strathmore FCSS
Ph: 403-934-5335	Ph: 403-934-9090
www.wfcss.org	www.strathmore.ca





# Wheatland FCSS Lunch & Learn

Fall 2021 - Spring 2022 Schedule

Pre-registration is required. Please call Ph: 403-934-5335 or visit our website at: www.wfcss.org/lunch-n-learn.html

Cost is a free-will donation, suggested \$2. Sessions start promptly at noon and are located at the Wheatland County Municipal building (242006, Rge Rd 243).

Nov 17, 2021 S...A...D...

Learning about Seasonal Affective Disorder and how it affects your body and mind. Tips on learning to prevent or cope with it.

**Dec 15, 2021** Slices of Yule Craft a Christmas ornament from wood.

Jan 19, 2022

Feb 16, 2022

Mar 16, 2022

Apr 20, 2022

May 18, 2022



# Wheatland County VOTES!

# 2021 Election Results

Division 1	Division 5
Shannon Laprise - ELECTED	Scott Klassen - ELECTED
Division 2	Division 6
Amber Link - ACCLAIMED	Glenn Koester - ELECTED
Division 3	Division 7
Donna Biggar - ACCLAIMED	Rick Laursen - ELECTED
Division 4	
Tom Ikert - ACCLAIMED	

for full election results visit wheatlandcounty.ca/municipal-election



# **COMPASS** for The Caregiver



Online

Care giving can be a stressful, isolating, and overwhelming experience. Covid-19 adds to the stress level and anxiety.

The **COMPASS for the Caregiver** program helps caregivers balance their own well-being with the challenges of care giving. Join our trained facilitators as they walk us through a 4-week virtual course. Sessions will run:

Monday, November 1st	1:30 pm to 3:30 pm
Monday, November 8 <sup>th</sup>	1:30 pm to 3:30 pm
Monday, November 15 <sup>th</sup>	1:30 pm to 3:30 pm
Monday, November 22 <sup>nd</sup>	1:30 pm to 3:30 pm

If you are a resident of Wheatland County, Hussar, Rockyford or Standard please contact Joanne Simpson at Ph: 403-361-7277 or Lynn Walker Ph: 403-934-5335 for more information and to register. Wheatland FCSS will absorb the cost of registration for local residents.

Residents outside of Wheatland County will pay \$45 for registration fee and manual.



# What is a Certificate of Compliance?

A Certificate of Compliance is a letter issued by the County's Planning & Safety Codes Services Department indicating that a property either complies or does not comply with the regulations of the current County's Land Use Bylaw with respect to setbacks and confirming if valid Development Permits are in place with the use of the property or improvements shown on the Real Property Report.

# A Certificate of Compliance does not:

a) Identify, regulate, or enforce any Alberta Building Code or other Safety Code Act matter.

### Certificate of Compliance **Application** Requirements

When requesting a Certificate of Compliance, the Applicant must submit:

- a) a minimum of two (2) original, current copies of a Real Property Report ("RPR"), prepared by a licensed Alberta Land Surveyor (confirmed by County staff) identifying all developments on the property (i.e. buildings, decks, sheds. parking, etc.) and dated within two (2) years of date of application submission;
- b) a completed Certificate of Compliance Application form; and
- c) all appropriate fees as outlined in the County's Master Schedule of Fees.

# The RPR is a legal document. The County will not accept:

- a) photocopies of the RPR,
- b) scanned copes of the RPR, or
- c) RPR's older than two (2) years.

Certificate of Compliance Process 5. County staff endeavor to complete a request for a Certificate of Compliance within two (2) weeks of submission of an application.



# CERTIFICATE OF COMPLIANCE APPLICATION FORM

REQUIRED DOCUMENTATION  Prior to accepting payment, the following documentation must accompany this application:	Office Use Only Date Received
☐ A minimum of two (2) original Real Property Report (RPR) that is current within two (2) years of date of application submission. Surveys older than 2 years will not be accepted. Must be submitted in paper form, electronic version not accepted. Plant of Residential Compilance Request, 575.00 (No GST), OR ☐ Payment of Commercial/Industrial/Other, Compilance Request, 5100.00 (No GST).	FeeRoll ifLand Use District
NOTE  The County will review the Real Property Report to determine Report meet the requirements of the Land Use Bylaw. A stamp	

- requirements are met. If there are non-compliant structures/developments, the County will prooutlining the issue(s) and return all RPR's and letter to applicant.
- to duming the Society and Jecurial nink as an interest to applicant.

  The Compliance Certificate letter issued by the County may confirm the zoning of the parcel and that the use of the land or structures are in accordance with the regulations of the Land Use Bylaw. The Compliance Certificate letter may also indicate the setback requirements and specify if any development permits have been issued for
- The County does not accept Statutory Declaration Form as proof of compliance. A new Real Property Report is

et u				
PROPERTY LOCATION				
Alberta Township Grid System:	LSDSection	TWP	Range	W4M
Legal Land Description: Lot	Block:	Pla		



# The ideal place to grow your business

Less than 30 minutes from Calgary International Airport, Wheatland County is located in the heart of the Western Irrigation District. Farmers in the County cultivate 830,000 acres of field crops yearly including wheat, canola, barley, oats, field peas, and lentils. There is also a large livestock industry with over 150,000 head of cattle and 95,000 pigs.

Getting your product to market is convenient in Wheatland County. The County is easily accessible from Calgary via Highways 1, 22X or 564 and connected north south via Highways 21 and 56. Highway 2 that forms part of the CANAMEX corridor is a short distance away. The CP Rail Calgary to Saskatoon line runs through the county and there is a CN Rail spur at Lyalta.

With excellent transportation options, abundant feedstocks and the lowest land costs in the region, Wheatland County is the natural location to grow your business!

# Great news for large investors!

Wheatland County Council recently passed a Non-Residential Tax Incentive Bylaw to attract large non-residential and machinery and equipment investors and to promote substantial expansions. This creates an excellent opportunity for investors to build their next processing plant, warehouse, or production facility in the county. In addition to tax incentives Wheatland County has competitive tax rates, low land prices, proximity to large urban centres, good transportation options and a pro-business climate. Wheatland County is your first choice in southern Alberta!

For more information visit www.wheatlandcounty.ca

# Advantages of doing business in Wheatland County

Lowest agricultural and industrial land costs in the region

Two industrial areas: Origin Business Park and Goldfinch Industrial ASP area

Low municipal tax rates

Irrigated lands in western part of county

Access to agricultural feedstocks (830,000 acres of farmland)

Good transportation options (rail and highway access)

Close to transportation and logistics hub (road, rail, and air) in Calgary

Available labour at competitive rates

Proximity to urban centres (Strathmore, Chestermere, Calgary)

Developed industrial cluster

For more information on investing in Wheatland County contact Economic Development Officer Jamie Kramble at

jamie.kramble@ wheatlandcounty.ca



Ducks Unlimited Canada's Marginal Areas Program (MAP) is a solution to unproductive land within annually cropped fields. This program is just one way DUC is partnering with Alberta growers to increase the profitability of their land.

### THE INCENTIVE

- \$125/acre payment for converting cultivated acres to grass
- Bonus Pollinator Power Pak offered at no charge to participating co-operators

# THE ELIGIBILITY

- Field(s) must fall within Ducks Unlimited Canada's Alberta pilot area to qualify
- No acre minimum
- Maximum of 40 acres per quarter section
- Spring and dormant seeding are both eligible

# **THE TERMS**

- 10-year term agreement with pro-rated buyout option
- Contract is not tied to land title
- No restrictions on use can graze, hay, mow, or leave idle
- Co-operators retain management decisions for lands outside of identified program parcels
- Touch-up seeding is permitted during the 10-year term
- Seed to be sourced through the retailer of your choice

# **PRO-RATED BUYOUT EXAMPLE**

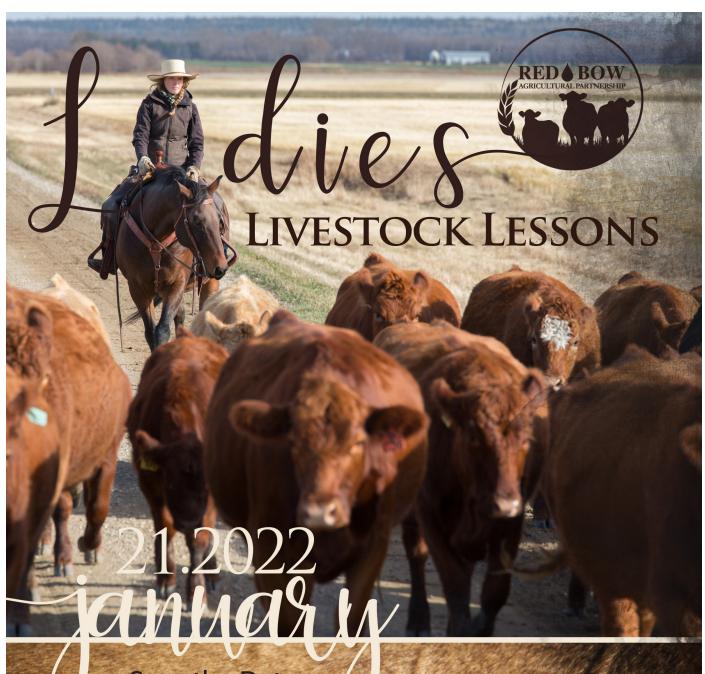
Growers may terminate the agreement by buying out the remaining portion of the contract. An incentive payment of \$3,000 for a 10-year contract with four years remaining would be calculated as  $$3,000 \times 4/10 = $1,200$ . This equals a \$1,200 buyout for the remaining term.

# Pollinator Power Pak includes...

- Sainfoin
- Emerwan Red Clover
- 919 CR/S Alfalfa
- Flax
- Frosty Berseem Clover
- Aberlasting Clover
- Perodovik Sunflower
- Fixation Balansa Clover
- Phacelia
- Persian Clover
- Kentucky Pride Crimson Clover

Let's find a solution for those unproductive acres. Call Monica at 403-489-9999 or email ducks.ab.ca@gmail.com





# Save the Date

This years sessions will include information about managing pasture for pollinators and invasive species, Small Vet, Big Cow - tips and tricks for the vertically challenged, practical solutions for managing drought, and multi species grazing.

Find out more at www.redbowag.com





Submitted by Spencer Horticultural Solutions

Winter typically arrives to the collective, resounding groans of the Canadian masses. This is despite the fact that it brings with it the opportunity for lots of our favorite activities. Regardless, since our fall season on the prairies is typically fairly abbreviated, we look at the arrival of winter as the end of all growing things and associated activities.

While it is true that we do not do much actual growing of plants in winter, at least not without special structures, there are plenty of things that we can do outside to maintain the health of our woody tree and shrub plants, as well as those perennial plants that we have, whether ornamental or edible. In many cases, a little bit of care and consideration to the health of our plants can go a long way to ensuring that they stick around for us to enjoy for decades. In fact, winter is exactly the right time to take a closer look at the woody plants, as they are in a leafless, naked condition. Without the leaves getting in the way, we can really get a good look at their trunks and branches, including their health and structure.

There are a number of things that homeowners can do to help protect and improve the health and survival of their trees and shrubs. Some of these activities actually have to happen before winter really sets in, which can be challenging. However, as is always the case, we do the best that we can, and then live with the outcomes.

Plants need water to survive in our dry climate, especially to survive our cold and dry winters. It is really important

to make sure that our woody plants go into winter with a full tank of water, which includes plenty of water in the root zone. In late fall, before things freeze solid, we need to slowly and deeply water our big trees. Watering should be focused on the areas where the most active roots are, which is quite far out from the trunk. As a general rule, if you water out around the outer edge of where the branches reach, that is close to where more of the active roots are.

Slowing down the amount of water that evaporates from the soil can ease moisture stress for woody plants (and for all perennial plants). Apply 2-4 inches (5-10cm) of bark mulch to help keep moisture levels stable, and also provide some insulation to the soil and the roots. It isn't going to keep the roots warm, but it will protect them from temperature extremes.

When it comes to actual, winter-time activities, a key activity will be ongoing monitoring of the trees. Once things are clear, take a close up look at the trees. Look for anything that seems out of place, such as broken branches, branches that are rubbing or crossing at strange angles, odd discolouration of the bark (in one spot, rather than everywhere). You should also watch for frost cracks, or other physical injuries. Throughout the winter, watch for signs of wildlife, and do what you can to discourage any of their damaging activities, such as chewing bark, nibbling on branches, and the like.

It is important to be careful what you do around the trees throughout the winter. While we tend to think that trees aren't doing anything while we scurry around near to and underneath them, many of our winter activities can impact them in the future. Piling up snow can be fine under trees, since it does provide some insulation, as well as eventual moisture, however, you have to be careful about salts. As you salt the sidewalks and driveways, eventually, that salt is going to end up in the soil, which can affect the trees.

Another caution of piled snow is to be careful not to compress snow on top of lower growing shrubs. Also, where the snow piles up deeply, be careful of physical damage to the tops of smaller trees, such as small conifers. It is easy to snap off the leader of an evergreen accidentally, which will affect the shape of that tree forever.

From there, the main activity is going to be pruning. Pruning is often done in the late winter once trees are dormant or shut down for winter. Pruning at this time is focused on removing dead or dying branches, as well as clearly diseased branches. Winter is the perfect time for pruning out common diseases like Black knot, since you can more easily see the black galls or swellings on the branches.

Overall, winter is a time for rest, for us and for the trees. If you expend a bit of effort in the fall, all you will have to do with your trees in the winter is watch them and maybe cut a branch here and there.

# BLACKKNOT



Submitted by Spencer Horticultural Solutions

It is a sad truth that you cannot go far in any town or city in Alberta without noticing a tree that has some disgusting looking black, swollen lumps on its branches. What you are seeing is one of the most common, and pervasive, diseases present in rural and urban tree and shrub plantings. It's Black knot.

Black knot is a disease caused by a fungal pathogen which only affects plants within the genus Prunus. In Alberta, that includes things like chokecherries, Mayday trees, Amur cherry, Nanking cherry, pin cherry, sour cherry, plums, and almonds. Although there are other diseases out there that might make you think of Black knot, it is highly specific to this group of plants, so, if it isn't Prunus, it is not black knot.

Black knot is a problem because it only takes one infected plant to spread spores throughout a neighborhood, infecting any other host trees in the vicinity. Spores are released from mature galls in the spring, infecting the growing points at the ends of twigs, branches, or fruit spurs. Over time, a gall forms, first as a small, olive-green swelling, gradually transforming into the characteristic mature, black, tar-like galls observed throughout the canopy of the tree.

Sadly, the pathogen also spreads internally within the branches, spreading outward from the galls. Black knot galls can also form on larger limbs and the trunk of the tree, either spread through pruning, or internally from a gall.

Over time, the galls constrict the branch growth, causing the tree to become deformed, weakened, and die. While mature galls are relatively easy to see when the leaves are off the tree, the smaller, immature galls are nearly invisible. This is what makes complete management of this disease harder. "It is definitely a multi-year endeavor.

As the galls mature, they turn black and erupt/rupture,

growing to about 6 inches in length. Over time, galls stop producing spores, but a mature gall that is producing spores and one that is not producing spores are basically identical to the naked eye. In some cases, galls may become colonized by other types of fungi, some of which are brightly coloured. These galls will not be active. Unfortunately, by this point, the tree is probably pretty loaded with galls, so this is a small victory.

Black knot is mainly controlled through removal of the mature galls through careful pruning when plants are dormant. Pruning is done in the winter for a number of reasons, but the main one is convenience. Since you must see a gall in order to remove it, it is simpler to wait until the leaves have dropped off to plan your pruning.

Pruning must be carried out with care, both to preserve the shape and structure of the tree, as well as to ensure that you are not spreading the disease further throughout the tree as you make cuts. Generally, it is recommended that you cut at least 6 inches (15cm) beyond the visible edge of the gall that you are removing, preferably back in healthy wood, and at an appropriate junction point. If you cut through a gall, or wood that is infected, it is highly likely that you will transmit the disease the next time you make a cut, which in not the goal.

The earlier that galls are removed, the better chance you have of protecting and cleaning up an infected tree. If a tree is loaded with active galls and ends up having infections on the trunk or in the larger scaffold or structural limbs, clean up and salvage of the tree can be challenging, if not impossible. At this point, complete removal might be the best and only option.

Galls that are pruned out should be removed from the site and/or destroyed, either by burning or burial. It is not recommended that galls be left on the ground or in the vicinity of the tree, as theoretically they could continue to produce spores for some time.

There are some suggestions that pruning tools should be disinfected between each cut, but this can be pretty impractical, particularly for things like chainsaws. However, if you are in a high-transmission-risk situation, a dilute solution of Lysol can be used.

Even if you prune out every gall that you see, it is likely that some will be missed, or smaller, immature galls will mature and become visible the next year. It is important to remain vigilant and do the best that you can to keep things as clean as possible. It will go a long way to reducing the overall population. If everyone tries, it is possible to keep things fairly disease-free.

# Drought Wetlands a dry year with dry wetlands...



In droughts certain wetlands completely dry up and can stay dry for an extended period. Wetlands function like a sponge, releasing the water stored which helps delay the onset of droughts. Dry wetlands still provide critical wildlife habitat, store flood water, and replenish ground water, amongst other benefits. Some wetlands need to be dry for a part of the year to maintain their hydrologic cycle. Wetland substrates are very impervious and may be saline, which results in low crop productivity. When the wetlands become wet again, it will alter the previous development making the cost of seeding, draining, and cropping the wetland higher than the productivity of crop return.



A warm welcome to Alyssa Barbero our new Agriculture & Environmental Program Coordinator!

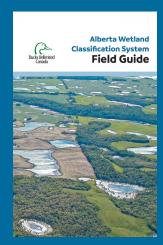
Alyssa grew up on a ranch near Beaver Mines, AB. Her family runs 300 head of Red Angus Simmental Cross cattle on the Barbero Steelhorse Ranch. She graduated with an Ecosystem Management Bachelor of Applied Science at Lethbridge College and began working with Cows and Fish

as a Riparian Technician. It was here, Alyssa soon found herself to be a plant nerd. Growing in her studies, she began a position as a Wetlands Biologist with a consulting company traveling Alberta and British Columbia. After getting engaged to her college sweetheart, Alyssa landed in Strathmore looking for opportunities to grow in the agriculture industry. Finding a position with Wheatland County was where she wanted to begin her endeavors.

In her free time, Alyssa keeps busy traveling down south to the ranch, fishing, hunting, skiing, motorcycling, or socializing with friends and family. You can always find her in the mountains scrambling up peaks, surfing behind the boat or working on the ranch. With her love for ranching, Alyssa hopes to bring new ideas to the table for Wheatland County's Agriculture and Environmental services.

# **Ducks Unlimited Canada**

# NEW ALBERTA WETLAND CLASSIFICATION SYSTEM FIELD GUIDE



# A Valuable Resource For Albertans

Based on the Alberta Wetland Classification System (Government of Alberta, 2015), this field guide provides users with an accessible and visually engaging overview of Alberta's wetlands. It includes:

- 24 detailed fact sheets for each wetland class, form, and type
- Over 250 images and illustrations of wetlands and common species
- Vegetation-based classification key and common species guide

This guide is intended for anyone interested in identifying and classifying wetlands in Alberta, and especially people whose decisions or actions impact wetlands or their functions (e.g. industry practitioners, landowners, government, Indigenous communities, etc.)

Download your free digital version or purchase a hardcopy today!

**Ducks Unlimited Canada** is pleased to announce the official release of the Alberta Wetland Classification System Field Guide. Digital and hard copies of the guide are now available.

This project would not have been possible without the generous support of Alberta Innovates Water Innovation Program, Alberta North American Waterfowl Management Plan Partnership and Prairie Habitat Joint Venture. We would also like to thank all our collaborators, photo contributors and reviewers as we celebrate the release of this valuable wetland resource.

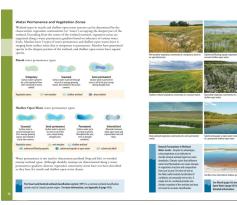
Download your field guide from or, purchase a hard copy for \$32 (shipping included) here. Please note that the field guide was updated on July 12th and we recommend anyone who downloaded it prior to this date re-download the final version.

If you have already attended a training session, we thank you for your time. We will be offering further free wetland classification training events this fall, with the possibility of a field training event. In order to determine the format and schedule for these events, we ask anyone interested to please participate in this 3 minute survey:

www.surveymonkey.com/r/XF99BTT













For information and updates on this project, stay tuned to our website or reach out at **k\_mayner@ducks.ca**.



**Grant Lastiwka** *Alberta Forage Specialist* 

From mid-summer in 2020 to most of 2021 have been dry for Alberta ranchers. In most cases in 2021 pastures and rangelands did not produce the growth needed to sustain the usual livestock numbers or grazing days planned. Under drought stress and grazing, understanding what is happening to the plants in these systems can help livestock managers make better grazing decisions for present and future plant growth. Perennial plants have perennial production that can be improved when their needs are met or reduced when needs are not met. Grazing management decisions should consider plant and ecosystem (living community and all the factors in its nonliving environment) needs prior to a drought/ and during a drought. So, once a good rain occurs future plant growth is quick and compensatory. Alternatively, when grazing management decisions are not flexibly meeting plant and ecosystem needs, some plant species can be lost, and all plant growth is reduced into next year or even for several years.

Pastures or rangelands are a complex ecosystem made up of plants, soil, water, sunlight energy, microorganisms, landscape features, other components I have missed, and of course grazing livestock. From the plant side pastures or rangelands are made up of mostly grasses, but also various amounts of legumes or other forbs. These plants production depends on roots, tillers(plants within a plant), green leaves, sunlight energy, heat, soil nutrient turnover, and water capture/storage. All these factors interact on pasture or rangeland to form and ecosystem. As a result, what happens to the pasture during drought can be quite varied. During

drought plant growth slows and stops, yet livestock still need forage to eat. How can pasture, management, and livestock come together in this challenging situation for better long-term results?

The different plants that make up these grazing acres cope in varying ways through a drought. Overall, environment impacts and management from past and present combine to impact the effect of good or poor weather conditions. On this topic I will try to briefly discuss what happens to the pasture or rangeland plants in drought to gain a better understanding of what to expect now and for next year.

Plants that are short of moisture are stressed. Each plant species is a bit different in how they respond. In general grasses produce fewer tillers, slow growth, harvest some of their older leaves, and use some food stores in crowns and roots, and roots shrink before going dormant. When dormant they use nutrient stores present in their plant tissue. The longer they are dormant the more nutrient stores will be used. Plants with shallower root systems or that have lost more of their root systems from being severely or repeatedly grazed will go through this process sooner than deeper rooted and healthy plants. Severely grazed plants that are healthy, and grazed with a short duration grazing time, will still be healthy although set back. They will draw on their vigor and the nutrient turnover from pruned roots for regrowth. That is an advantage to them and provides better regrowth now or later when moisture is present. However, those plants that were grazed frequently and closely are really set back. They are unhealthy and may die, or if surviving, have less roots, less tillers, and lack nutrients for regrowth. They will be slower to regrow with less yield now and into the future.

Pastures with less litter or residual have more bare soil. Sunlight heat intensified by being reflected off the bare soil back up on the underside of plant leaves, causes plants to experience a hotter than air temperature, so greater stress. They respire more water, slow growth, and go dormant sooner than pastures or rangelands with adequate residual and litter.

Most pastures and rangelands are dominated by grasses. The ones with legumes or forbs that often have a deeper tap root, are better than grasses at extracting water from deep in the soil. Dr. Mike Shellenberg, (retired) plant ecologist, from Agriculture and Agri-Food Canada at Swift Current said legumes will extract water during the heat of the day and release some back at night. Shallower rooted grasses can take advantage of this. As a result, biodiverse pastures of grasses and legumes have a drought advantage over just grass pastures. They find water and will grow longer into a drought and can often regrow after grazing before going dormant.

In pastures and rangelands plants are perennial so their life cycle is overlapping from one year to the next. Grasses develop buds becoming tillers (live for 12-18 months), that survive the winter to become next year's grazing forage. In grasses, the number of buds or tillers developing in later summer and fall, thereafter surviving to spring are dependent on plant nutrient stores in lower leaves and stem bases. Grass roots have relatively little carbohydrate storage. Therefore, leaving 2- 3 leaves as residual on grass tillers in fall to overwinter is crucially important to plants rebounding with earlier and higher growth in 2022.

Take stalk and make sure that pastures and rangelands where grass plants have not regrown to the 2-3 leaf stage, are given rest from grazing through fall, winter, and well into spring. The key for them is maintaining whatever lower leaves and roots they have. This will create faster regrowth after moisture comes. Although drought does make roots shrink, it is crucial to maintain them as best as possible by not frequent and close grazing. Stronger roots access more nutrients, maintain soil organism relationships for greater plant health (an thus more forage production). This is all true even in plants dormant time. Better stored or accessed nutrients by these plants, creates greater bud, tiller development and survival, plus quicker regrowth in spring, with higher yields. With management considering plant and ecosystem needs, the effect of drought will just be a one year set back to plants, pastures and rangelands, grazing days, grass/cattle managers.



The **ALUS Wheatland** program is looking to partner with producers who are intrested in resting pastures, using Adaptive Multi-Paddock grazing, long rotations or rotational grazing systems.

Annual per/acre payments are avaliable from the **Grazing Forward** program for projects that benefit the health of grasslands.

**Contact: Sarah Schumacher** 

Ph: 403-828-8466

Email:Sarah.Schumacher@wheatlandcounty.ca





**Grant Laswika** and his wife run a small grazing/cowcalf operation where Grant tests what he learns from producers, scientists and extensionists.

Grant has worked in Central Alberta with Alberta Agriculture in varying roles: Forages/Grazing/Livestock/Economics Extension for over 30 years. Those efforts are almost always related to trying to realize the value from seizing the opportunity of managing forages and grasslands to be a highly productive crop. His forage management thought is from the plant, to the soil, to the livestock, to the people, and to the consumer.

The systems he works towards are managed in ways that consider finances, the environment, the people, and the community. This Holistic Management decision making approach is done simultaneously and strives to be regenerative.

Grant is now works as a consultant, part-time with Union Forages and director of the Alberta Forage Industry Network.

# Wheatland County WY EEDUCATON Baby's BREATH

Gypsophila paniculata

# **Alberta Weed Act Designation: Noxious**

Noxious weeds have the ability to spread rapidly, cause severe crop losses and economic hardship. Under the Act the responsibility of a landowner is to control and to prevent further establishment and spread of these weeds.

Common Baby's Breath is perennial plant (grows back every year) and a member of the Caryophyllaceae (Pink) family. It was introduced from Europe as an ornamental, other names include Gypsophila and Maiden's-Breath. This plant is a highly productive seed producer.

This weed is commonly found growing in roadside ditches, pastures, as an ornamental and is often in floral displays. It is most aggressive in dry, sandy soils.

# Control

Chemical control before flowering.

Leaf

 leaves are oppositely arranged on the stem

long and narrow (3-10cm)

have a prominent mid vein

• not conspicuous when in bloom

# 2. Mature Plant

- the stems can grow up to 1m tall
- numerous branches
- swolen nodes on the stem occur at the base of the leaf

# 3. Root

Large woody root

# 4. Flower

- flowers are very numerous
- small white, star shaped flowers
- 5 petals
- sweet scent
- often used in floral arrangements







Contact George Bloom, Agricultural Services Officer for information about invasive species management in Wheatland County at Ph: 403-934-4949 or George.Bloom@wheatlandcounty.ca

Complete your

# Environmental Farm Plan

Building on a solid foundation



Why should you have an EFP for your farm? Come find out by joining one of our webinars!

Need help getting started on your EFP?

Join us for a virtual workshop

Registration is required Email: info@albertaEFP.com or PH: 587-200-2552

Upcoming EFP Workshops

November 24 9:00 am - 11:00 am

December 14 1:00 pm - 3:00 pm

To work independently with assistance or to work oneon-one with an Environmental Farm Plan Technician, contact Sarah Schumacher at Wheatland County. **Ph:** 403-333-6943

Email: Sarah.Schumacher@wheatlandcounty.ca

# **EFP Webinars**

Join us on Zoom to learn more about the Alberta Environmental Farm Plan program and why you would want to have an EFP for your farm.

> November 16 9:00 am - 9:30 am

December 7 1:00 pm - 1:30 pm











# HOW TO GET LIVESTOCK ACROSS A CREEK-WATERCOURSE CROSSING

# Why did the cow cross the creek? To get to the other side of course! Is this a problem?

Sometimes crossing streams does cause problems. Problems can originate from unrestricted or improperly constructed crossings including:

- » loss of riparian vegetation, increased erosion and sediment deposition in streams,
- » water contamination from manure or urine,
- » reduced water quality leading to reduced water intake and potential for reduced weight gain in livestock,
- » increased risk of livestock injury or death,
- » negative impacts on fish and other aquatic creatures and,
- » enforcement actions leading to fines and costly corrective actions.



Although impacts are often localized, they can severely impact downstream areas and persist for extended periods. A variety of options exist to modify or improve livestock watercourse crossing sites, limit the impacts and steward shared resources.





# Considerations for watercourse crossings:



# To cross or not to cross? This is the question.

The development of a crossing has a planning aspect as well as financial considerations, both in terms of construction and maintenance costs. There are also environmental and regulatory considerations, like increased erosion and impacts on downstream neighbors

and fish populations. It's good to first ask: Do I need a crossing? Is there a way to avoid building or using one?

If the answer is, "yes, I need to develop a crossing" then it is imperative to consider the various regulations governing watercourse crossing by both provincial and federal agencies. Provincial agencies regulate activities around permanent waterbodies including the bed and shorelines while federal agencies regulate fisheries, fish habitat and navigation. Depending on the situation, authorizations may be required under some or all of the regulations. Information and links to related Acts and Regulations are highlighted at the end of this factsheet.

Riparian areas are productive and can be reliable producers of forage, shelter, fish, wildlife and water. These areas are a buffer, an insurance policy especially useful to have when drought or flood occurs. They are part of a healthy, functioning landscape and form part of an extensive drainage basin within every watershed

Although riparian areas make up only a small fraction of our landscape, they are disproportionately important to fish and wildlife, recreation, agriculture, and society in general

Goals for a good crossing: The goal should be to get livestock across a watercourse as quickly and safely as possible while avoiding riparian and aquatic impacts, and meeting regulatory requirements. The purpose of a constructed crossing is to

maintain or improve water quality, maintain bank stability and reduce the amount of time cattle spend in the waterbody. Pasture management changes like using an off-site watering system or changing season of use to when ground and



water are frozen would help greatly reduce the impacts. If an open water crossing cannot be avoided, then other questions need to be considered.

# What is the intensity and frequency of livestock crossings?

How many livestock and how frequently they cross a watercourse will determine how much impact a crossing will have.







Daily use by large numbers will have a greater impact than periodic use by a few cows. The season of use will also determine how much of an impact livestock have on the riparian area and its ability to filter out sediment from entering the watercourse.

Goals for a good crossing: If livestock numbers are large and they are crossing frequently, then a raised crossing such as a bridge or culvert should be used. This will prevent constant trampling of streambank vegetation and provide better,



safer access in all weather situations, while minimizing impacts. Low level crossings such as hardened fords should be reserved for situations where crossings are infrequent or by a few livestock. Culverts placed incorrectly or which are

undersized for high flows can have extensive erosion on the downstream end, leaving a large vertical gap between the culvert and stream bed, known as a hanging culvert and can prevent fish passage.

# What do I need to know about my watercourse to design a good crossing?

It's important to know what the range is between flood flows and low flows (data available from <a href="https://wateroffice.ec.gc.ca/">https://wateroffice.ec.gc.ca/</a>). The extent to which your watercourse has flooded, or could flood, provides an indication of the design capacity for a

bridge or culvert to pass flood flows. If there is any uncertainty about the magnitude of flood flows, a clear span bridge, or culvert with an open bottom and large flow capacity should be considered, to avoid loss of the structure, possible channel shifts because of the structure, expensive repairs and the possibility of increased erosion downstream. Altered flow patterns resulting from an improperly designed crossing can impact riparian health and downstream neighbors.



In fish bearing waters, any projects that change water flow, impact fish passage, or permanently alter or destroy fish habitat are subject to the *Federal Fisheries Act* and may require approval. Fisheries and Oceans Canada (DFO) has developed a tool that proponents can use to assist in determining whether a culvert can provide fish passage (<a href="http://www.fishprotectiontools.ca/index.html">http://www.fishprotectiontools.ca/index.html</a>). It is important to consult with a qualified professional to ensure the proposed crossing meets your objectives as well as any regulatory requirements.

### Tips & Tricks for Construction

- » place crossings where livestock already use a site, if it is suitable.
- » reduce the number of crossings to the bare minimum required for access,
- » locate crossings on straight sections of a watercourse, and
- » if using culverts, ensure they cause no downstream erosion, are of sufficient capacity for flood flows, and will not impede fish passage.

Stream bottom type also plays an important role in watercourse crossings. Watercourses with harder substrates such as large gravels or cobbles may provide good footing to cattle and not require much alteration or improvement. These substrates may also reduce the risk of injury for livestock.

Geotextile foundations allow for natural substrate while creating a hardened crossing. Once installed, the combined strength of the geocell plus aggregate gravel provides a stable hardened surface for low-level fords. This crossing type is ideal for a "low energy" environment with low channel velocities and minimal scour potential. Geotextile fords are primarily used in situations that have low frequency of use by cattle or vehicles.

In comparison, crossing watercourses with muddy, fine substrates can cause increased siltation downstream as the particles are easily disturbed and transported. This can affect fish by reducing egg survival, available habitat and impact downstream water quality. In these situations, a combination of a geotextile foundation with the addition of a gravel/cobble overlay is necessary.

Goals for a good crossing: Crossings should not impede or alter the natural flow regime in any way, or cause additional erosion downstream. Consideration should be given to how flows may change in conditions of heavy rainfall and fast runoff. Crossings

that occur on waterbodies with fine sediments should be constructed so that they do not increase sediment transport downstream. Each site should be considered on an individual basis and a qualified professional should be consulted to ensure that the most appropriate approach is applied.



Photo courtesy of Trout Unlimited Canada



# What is the slope of the bank at the crossing location?

Crossing sites with steep slopes are at greater risk of erosion, loss of riparian vegetation and livestock may have problems using the site.

Goals for a good crossing: Where banks are higher than 2 m (top of bank to water level) and water depth exceeds 0.6 m, a culvert crossing or bridge should be developed, but before establishing a steep crossing, look for other locations with less slope (http://www.transportation.alberta.ca/Content/doc-Type245/Production/Complete Fish Habitiat Manual.pdf). In general, crossings should not be placed along bends as this can also increase the risk of erosion and loss of the crossing during floods. Soil characteristics at the site are also important in considering crossing options. Soil type, steepness of slope and depth to a rock substrate will affect bank erosion, longevity of the crossing and future maintenance of the crossing.

### Are there fish present in the waterbody?

Fish may be present and need to be considered in the planning and construction of any watercourse crossing. It is important to note what kinds of fish are present as there are different restrictions for sportfish, non-sportfish and fish that are at risk. There are restricted instream construction periods based on the fish species present. These restricted activity periods focus construction or maintenance to certain times of the year to prevent disturbance to fish during critical reproductive periods. Fish use a variety of habitats, including as refuges during floods, for spawning or for feeding; altering the flow could reduce the amount of habitat available. The ability of fish to successfully travel upstream is also a consideration in designs. Sportfish and fish species at risk have specific requirements for water quality in order to survive, and these can be different from non-sportfish. Unplanned, poorly constructed crossings can lead to reduced amounts of riparian vegetation, increased erosion and higher water temperatures. All of these parameters affect the quality of fish habitat an influence which species are able to live in an area.

Goals for a good crossing: If the crossing is on a waterbody



that contains fish, or if you are unsure about fish presence it is wise to consult with regulatory bodies or other qualified individuals before making any changes. It may be that fish passage upstream is important.

Culvert placement needs to match the base of the streambed and slope of existing channel bed, to prevent hanging culverts, like this one, which blocks fish passage.

If so, clear-span bridges or arch rib culverts (with an open bottom) are the choices to make. Care should be taken to maintain healthy riparian vegetation along the bank and reduce activities that will cause increased erosion. Efforts to improve crossing conditions should take into account the specific requirements of the fish species present at the site as well as those downstream.

# LAWS AND REGULATIONS

There are several laws and regulations related to working in and around water.

Legislation to be aware of when contemplating a livestock crossing:

# **FEDERAL**

### Fisheries Act

Any waterbody that contains fish at any time during any given year or is connected to a waterbody that contains fish at any time during any given year is subject to the Fisheries Act. Under section 35(1) of the Fisheries Act, "No person shall carry on any work, undertaking or activity that results in serious harm to fish that are part of a commercial, recreational, or Aboriginal fishery, or to fish that support such a fishery." DFO interprets serious harm to fish as the death of fish, permanent alteration to fish habitat, and destruction of fish habitat. Projects that have the potential to obstruct fish passage, modify flow, or result in the entrainment of fish may also cause serious harm to fish. Seek advice from a qualified environmental professional if you are unsure about whether your project requires a review by DFO. For more information check out DFO's "Projects near water" webpage <a href="http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.">http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.</a> html.

# Navigation Protection Act

The Navigation Protection Act is administered and enforced by Transport Canada and is designed to protect the public right of navigation. The Navigation Protection Act requires approval for any works that may affect navigation on Canada's busier navigable waters that are listed in a schedule to the Act. For more information on Transport Canada's Navigation Protection Program, please visit <a href="https://www.tc.gc.ca/eng/programs-621.html">https://www.tc.gc.ca/eng/programs-621.html</a>. More information on the proposed Canadian Navigable Waters Act can be found at <a href="https://www.canada.ca/en/services/environment/conservation/assessments/environmental-reviews/navigation-protection.html">https://www.canada.ca/en/services/environment/conservation/assessments/environmental-reviews/navigation-protection.html</a>.



# Species at Risk Act

The federal *Species at Risk Act* protects endangered and threatened species and their habitats across Canada. This act and regulations may also apply if your property is home to at risk species and/or their habitat. For more information: <a href="https://www.ec.gc.ca/alef-ewe/default.asp?lang=en&n=ED2FFC37-1">https://www.ec.gc.ca/alef-ewe/default.asp?lang=en&n=ED2FFC37-1</a>.

# **PROVINCIAL**

### Water Act

The Water Act, administered by the Alberta Ministry of Environment and Parks (AEP), regulates any activity that:

- » changes the flow or level of water,
- » changes the location of water or the direction of flow of water,
- » causes or may cause the siltation of water or the erosion of any bed or shore of a water body, or
- » causes or may cause an effect on the aquatic environment.

Under the *Water Act* a waterbody "means, for the purpose of this Code of Practice, a water body with defined bed and banks, whether or not water is continuously present, but does not include fish bearing lakes." Projects including the placement, construction, maintenance, replacement or removal of a watercourse crossing must ensure that they follow the *Water Act*'s Codes of Practice. Regulations vary depending on the type of watercourse and crossing. Watercourses in Alberta are classified according to size and fish habitat. Schedule 2 of the

Code of Practice includes standards for carrying out watercourse crossing work to ensure the risk of adverse impacts is minimized.

Maps are available from AEP [http://aep.alberta.ca/water/legislation-guidelines/water-codes-of-practice.aspx] to determine your watercourse's classification and any restricted activity periods. A qualified person, as described in the code of practice, who can assess the proposed crossing and any impacts to the fish and watercourse habitat is recommended to help you complete the application. Higher risk projects include projects that change the substrate, or alter the flow, which has potential to alter fish habitat and downstream hydrology.

Other provincial, federal and/or municipal regulations may apply in some situations, always be sure to check with local authorities before completing any work.

Overall, you should aim to maintain or restore riparian functions to ensure long-term riparian health. For more information on grazing in riparian areas please see "Caring for the Green Zone: Riparian Areas and Grazing Management" or contact Cows and Fish for more informationon riparian grazing or riparian health (<a href="https://www.cowsandfish.org">www.cowsandfish.org</a>; riparian@cowsandfish.org; 403-381-5538).

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Illustrations and photos provided by Cows and Fish.

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# **Project Opportunity**

The Agriculture and Environment Department is looking to work with producers who are interested in doing livestock crossing projects.

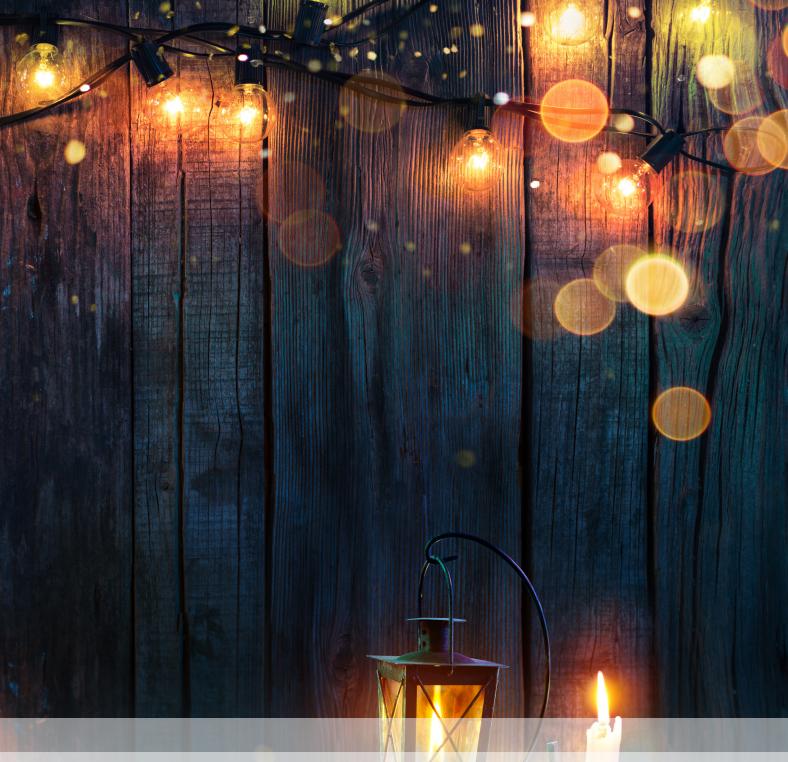
# Contact:

Sarah Schumacher PH: 403-333-6943

Email: Sarah.Schumacher@wheatlandcounty.ca







# We have a new address!

Wheatland County 242006 Range Road 243 Wheatland County, AB T1P 2C4

T: 403-934-3321 F: 403-934-4889 wheatlandcounty.ca @wheatlandcounty