FERNIE FOOD ACTION STRATEGY

2021

Community Energy Association

wildsight

EXECUTIVE SUMMARY

The Fernie Food Security Strategy (FFAS) is rooted in the urgent need to better understand our food system, identify vulnerabilities and weaknesses, and design policy and community action that will strengthen the local food system for the environmental, social and economic betterment of our community. The need has existed for years, but local community awareness and demand for better long-term planning for local food security and food system resilience has been elevated by the Covid-19 pandemic. Public reactions to the pandemic have highlighted the fragility of both our local food systems and commercial supply chains that primarily rely on importation of food and other goods.

Greater awareness of the vulnerability of our food system has resulted from the pandemic, and communities across the globe are innovating for effective policy and local actions to address the issue. The Elk Valley is no different, and we have seen a surge in interest from local residents in the topics of food supply chains, food know-how, self-reliance and resilience. This is an opportunity for local government and civil society to learn from the responses in other jurisdictions, and to design a strategy that cultivates a thriving and resilient food system in the Elk Valley sub-region of the East Kootenay, addressing both food security and climate change adaptation.

After reviewing key food systems literature, engaging with nearly 150 Fernie residents and consulting with City of Fernie (COF) staff, we developed four initial recommendations. These recommendations align with already identified COF policy and priorities from both the 2014 Official Community Plan (OCP) and 2016 Fernie Water Smart Plan, as well as the 2014 RDEK Agricultural Plan.

4 RECOMMENDATIONS

PROMOTE GROWING FOOD NOT LAWNS

ALLOW BACKYARD HENS CITYWIDE

ENCOURAGE RAINWATER UTILIZATION

SUPPORT LOCAL COMMERCIAL AGRICULTURE

The development of this strategy as a community-led initiative is a first step in deliberately improving the food system resiliency and climate adaptation in our community. The work will continue through further engagement of stakeholders, including the COF, to determine, and follow through with, the next steps to implementation of the recommendations. This momentum will continue to strengthen our local food system by improving actions in food literacy, access and economies.

ACKNOWLEDGEMENTS

We would like to acknowledge the contributions of the many individuals and organizations whose knowledge, expertise and dedicated time have aided the completion of the Fernie Food Action Strategy.

Ktunaxa Amakis
We are living in, and discussing the future of Ktunaxa Amakis, the traditional territory of the Ktunaxa First Nation. For thousands of years the Ktunaxa people have had an intimate understanding of the plants, animals, and unique ecologies of this place, as stewards of this region and its bounty.

Project Sponsors
Funding for this project was made possible by the Real Estate Foundation of British Columbia.

Community Engagement Participants
Many thanks to the almost 150 Fernie residents who completed the Fernie Food Action Survey and participated in the Community Engagement online session.

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CONTENT

INTRODUCTION

PURPOSE

The Fernie Food Action Strategy (FFAS) seeks solutions for removing barriers to local food production and moving toward a resilient community-level local food system. The strategy aims to provide solutions-focused recommendations for our local government, broadly applicable to the Elk Valley region, and to support a strong local food system and climate change adaptation.

The goals and recommended actions represent those that may have the greatest potential to have a positive, immediate impact on the food-related issues facing our community based on review of other community actions, public engagement results, and consultation with COF staff. The potential solutions included in the strategy could be directly influenced by our local government's jurisdiction; for example, through food-positive, enabling bylaws, planning, policies, and land-use decisions.

The strategy builds from the good work of other local food system policy, charters, plans and actions. It looks to other communities that are already doing this work, often with similar rural, mountainous contexts as the Elk Valley, and that provide innovative strategies to address food system resilience.

The strategy aligns with some of the plans already in place in the COF and the Regional District of the East Kootenay (RDEK). For example, in Fernie's 2014 OCP, section 4-G identified opportunities to review and adjust policies to ensure barriers are minimized or eliminated for local food production or processing, and that lands be identified to support those initiatives. Fernie's 2016 Water Smart Action Plan identifies water conservation objectives. In 2014 the RDEK produced a comprehensive agriculture plan that has yet to be impemented. This strategy is a first step toward a more comprehensive action plan that will analyze the broader local food system, and vulnerabilities that threaten its resilience, and our community's ability to adapt to shocks, such as we witnessed through the ongoing pandemic of 2020.

DEVELOPMENT PROCESS

The FFAS planning process involved both research and community engagement at various levels.

Phase 1 - Project Definition & Funding
In 2018 COF Council and Interior Health provided letters of support for the Wildsight Elk Valley branch to develop a Food Action Strategy for Fernie. In 2020, with Funding from the Real Estate Foundation of British Columbia, Wildsight Elk Valley partnered with the Community Energy Association to bring this project to life.

Phase 2 - Community Engagement
Community engagement took place between August 27th and October 31st 2020, with over 145 Fernie residents participating. 131 respondents completed the approximately 20-minute online survey, 16 people attended the hour long, in-depth online engagement discussion. See Appendix A for a compilation of input gathered through the community engagement process.

Phase 3 - Food Systems Literature Review
Research and data collection helped identify best practices and promising approaches from other jurisdictions. Review of food security plans, charters and direction allowed identification of 'quick-win' opportunities balanced with long-term enabling policies that will strengthen opportunities into the future.

Phase 4 - Strategy Development
Compiled opportunities with potential to reduce barriers and increase community food resiliency. Engaged with the local community on key opportunities desired by residents and with COF staff about potential solutions that reflect and support municipal priorities.

Phase 5 - Stakeholder & Advisor Input
Request feedback from multiple local stakeholders who are involved in regional and local food systems. Our strategy reviewers and contributors represent a food systems policy expert, local producers, Interior Health, COF planning staff, farmer's market vendors, and others.

Phase 6 - Strategy Launch
Present the FFAS to COF Mayor and Council, as well as three other local governments in the Elk Valley, in March 2021. Invite discussion on the future direction of this initiative and its recommendations.

Phase 7- Implementation
In 2021 and beyond, work with stakeholders, including the COF, to determine the next steps to implement the recommended actions to continue strengthening our local food system by improving food literacy, food access and food economies (Figure 1). Seek additional financial support for the continuation of this community-led initiative.

CONTEXT

FOOD HISTORY IN FERNIE

Fernie is situated in Ktunaxa Amakis, the traditional territory of the Ktunaxa people who have occupied the lands adjacent to the Kootenay and Columbia Rivers and the Arrow Lakes of BC for more than 10,000 years. During this time, the Ktunaxa seasonally migrated throughout Ktunaxa amakis to follow vegetation and hunting cycles. They obtained all their food, medicine, and materials for shelter and clothing from these local ecosystems - hunting, fishing and gathering throughout the territory, across the Rocky Mountains and on the prairies in what is now Canada and the United States.

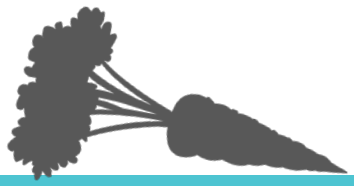
Since European settlement of the area more than 100 years ago, agriculture has been an integral part of the way of life in the East Kootenay (RDEK, 2014). In the early 1900s most Fernie homes were surrounded by vegetable gardens and many had hens and rabbits. Families grew food to enhance their diets and to leave money to buy necessities. Many Canadian towns have a strong agricultural history, but today there is a sense of disconnect between producers and consumers as a higher proportion of the population move to urban centers. Many producers feel there is declining public support for agriculture and that consumers have lost their connection to the land and to farmers (RDEK, 2014).

REBIRTH OF LOCAL FOOD MOVEMENT

The value of a sustainable, resilient food system is again becoming apparent and planning approaches have begun to emerge in response to citizen action and demand. This is demonstrated through the development of food system planning and policy implemented by many cities.

Urban food production is becoming increasingly popular as food costs continue to rise. Many people have been inspired to start gardening again to help reduce costs, environmental impact and to have more control in how their food is grown. The Canada's Food Price Report by the Agri-food Analytics Lab at Dalhousie University reports on overall food prices and expects the average cost to feed a family to rise 3-5% in 2021. The pandemic, wildfires and changing consumer habits will drive up grocery bills to the highest increase ever predicted by an annual food price report.

In 2019, the Federal Government released a Canadian food policy that aims to help build a healthier and more sustainable food system and now we have a new Canadian Food Policy Advisory Council. The policy addressed four significant areas for short- and long-term action, including: boosting community access to healthy food, making Canadian food a top choice domestically and internationally, supporting food security in northern and Indigenous communities and reducing food waste. The FFAS especially aligns with the first area listed, community access to healthy food.



"How did we live here year round 100 years ago? We canned and preserved. Eating local is now considered 'gentrified ' almost and a lifestyle choice, instead of simple food security."
- FFA Survey Respondent

"This is something we have moved away from in the last 40 years. We are ignorant of how much we rely on the trucks and no longer see canning and preserving as part of our lifestyle" .
- FFA Survey Respondent

COVID PANDEMIC

The COVID-19 pandemic has highlighted the fragility of both our local food systems and commercial supply chains that primarily rely on the importation of food and other goods.It has led to border and facility closures, shifted consumer demand and caused unemployment, as well as changes in production, manufacturing, distribution and retailing practices to enhance safety — all of which impacted food prices. An oil price war and the devaluation of the Canadian dollar were also significant impacts that occurred during the pandemic (Agrifoods Analytic Lab, 2021).

Fernie residents witnessed grocery chains rationing sales of both food and hygiene products, and experienced first-hand the unease of food insecurity to greater or lesser extents. Our community has seen a surge of interest from local residents about food supply chains, food know-how, self-reliance and resilience. The FFAS Community Online Engagement results (Appendix A) showed that 62% of participants bulk purchased grains and 42% made bulk meat purchases due to the pandemic and resulting uncertainties of food supply.

This global crisis offers us an opportunity to work together in a meaningful way to implement new innovative solutions, to learn from the responses in other jurisdictions, and to customize a strategy that will cultivate a thriving and resilient food system in the Elk Valley sub-region of the East Kootenay.

CLIMATE CHANGE

While the pandemic has brought immediate attention to the vulnerability of our supply chains and our local food systems, the reality is that we are all experiencing an even greater impending, de-stabilizing. global crisis --climate change.

Climate change and its impacts are already being felt and are anticipated to accelerate over the next century. Both the 2014 RDEK Agricultural Plan and a 2017 climate change report by the Columbia Basin Trust (CBT) outline probable impacts to the Columbia Basin Boundary Region. Regional agricultural production and crop selection will need to be resilient to:

- higher average annual temperature
- longer growing season, with increased growing-degree days
- increased variability of temperature and precipitation
- hotter, drier summers and warmer, wetter winters
- increased frequency of extreme precipitation events
- increased variability of temperature and precipitation

For more information about climate change specific to the Columbia Basin Boundary Region, see the "Columbia Basin Climate Source" website created by Selkirk College and CBT (https://basinclimatesource.ca/

Observed climate change is already affecting food security through increasing temperatures, changing precipitation patterns, and greater frequency of extreme events. (International Panel on Climate Change, 2019)

CURRENT FOOD SYSTEM ASSETS

The City of Fernie, and community as a whole, has shown leadership and commitment to working to create a healthy, just and sustainable local food system. Some examples of current local food systems assets include:

COF Official Community Plan - Section 4-G identifies actions to support food security.

COF Edible Landscaping - Edible species planted in City Hall gardens for hunger relief.

Cold Climate Seed Library - Preserve and shares seed varieties that have adapated to the unique growing conditions of our valley. A Wildsight Elk Valley project.

Community EcoGarden - Located on COF land in Prentice Park. Started in 2003. A Wildsight Elk Valley project.

Down to Earth: Cold-Climate Gardens and their Keepers - 2014 book by local authors Jennifer Heath & Helen McAllister with stories, tips, and recipes.

Fernie Family Garden - Community garden on private land. Started in 2018. A Holy Family Parish project.

Fernie Fresh Food Share & Food Bank - Food recovery that redirects surplus food from local restaurants and grocery stores. A Salvation Army program.

Fernie Secondary School - Student garden boxes built by teacher Harmony Lloyd.

Garden2Market - Sells produce grown at the Community EcoGarden at the weekly farmers market. A Wildsight Elk Valley project.

Keeping Food Real - Cold climate online gardening course. A Wildsight Elk Valley program.

Little Sprouts - Garden education program for children, six and under, and their caregivers. Operated at the EcoGarden during July & August. A Wildsight Elk Valley program.

Local Food Store - Sells local produce and products, year round, from local farmers and producers. A Wildsight Elk Valley social enterprise.

Mountain Market - Fernie farmers' market that operates in Rotary Park on Sundays throughout the summer. A British Columbia Association of Farmers Markets member.

ToolShare -Tool library focused on providing food processing tools including apple presses, ladders, dehydrators and more. A Wildsight Elk Valley project.

A RESILIENT LOCAL FOOD SYSTEM: A VISION

One September day Andrea and her three preschool children make their daily morning visit to their five backyard hens. The kids know the routine and are happy to help. To feed the birds, one carries some grain from the garage, another, yesterday's household food scraps, and the last, a little basket, to collect four or five eggs. Their mom unlatches the coop and the six hens contentedly strut into the fenced backyard to greet the day. To clean the coop, Andrea carries the old bedding and manure a short distance by wheelbarrow to her backyard compost pile. This will soon turn into rich natural fertilizer for her vegetable garden, herbs, berry bushes and fruit trees.

Andrea feels grateful that during parts of the year when making her own compost is difficult, such as in winter, she can put this material into Fernie's new curbside organic composting program instead. Fall is a time of particular abundance, and she and her neighbours have planned to help each other harvest this evening. They will work together to harvest ripe apple, pear and sour cherry trees in each other's yards and share the harvest amongst themselves. Some of the lower quality fruit will go to Andrea's hens, and some will go to a local farmer for their pigs and larger flock of chickens. If there is any leftover, it will all go into the City's curbside composting program, ensuring that the bounty does not later attract wildlife. The composting program, in addition to more responsible management of all wildlife attractants throughout the City via a citizen education campaign and more bylaw enforcement, has allowed Fernie to gain a designation as a "Bear Smart" community. This accomplishment has been favourable for the tourism industry, and great for the wildlife.

The City uses processed municipal compost for their own gardens, which have been augmented with edible plants and pollinator-friendly species, and which are primarily irrigated using rainwater collected and stored from adjacent buildings. Andrea's son tells stories about the field trip his class went on last week. Fernie schools use the community gardens throughout the city as outdoor classrooms and harvest food to use in school programming. Andrea books the ToolShare apple presses and plans a day with her friend to process some of her apples into juice. Because so many public and private landowners are now collecting and storing rain water, the storm water system is rarely overcapacity in spring, resulting in measurable improvement of downstream water quality during the spring freshet and fewer water-use restrictions in late summer.

Since the opening of Fernie's "Local Store", a social enterprise dedicated to selling products and produce from local farmers, combined with the easing of restrictions around accessory structures on front lawns, more small urban-farms have popped up around town selling fresh vegetables, microgreens, and even fish produced through aquaculture from inside of 4-season passive-solar greenhouses. These and other producers utilize the community commercial kitchen to make value-added products like pickles and other preserves to sell and to store for their own use in winter months . The kitchen is also a gathering and educational space, where people of all ages come to learn traditional skills such as cooking, preserving, and storing food, improving their own household food security and food knowledge as they do so.

Compared to just a few years ago, many more Elk Valley residents are aware of their local food system. Multiple new local food-based businesses are thriving. Residents buy local whenever possible, produce a little (or a lot) of their own food, and have built relationships with local producers. More than ever, people understand the importance of local food and their connection to it, and the region is reaping economic, social, and environmental benefits. If natural disaster, economic shock, or another pandemic strikes, Fernie and its residents are more ready than ever to provide for themselves in ways that would not have been possible even a short time ago.

OUR FOOD SYSTEM

WHOLISTIC FOOD SYSTEMS

The 2018 report “Working with Local Government on Food Policy: A toolkit for civil society” conceptualizes food systems into three intersecting categories of activities: food access, economies and literacy (Figure 1).

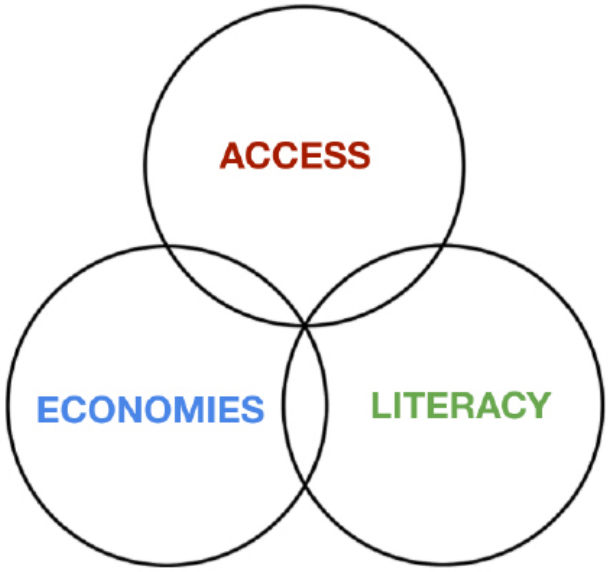


Figure 1: Categories in a food system. Apapted from Brynne 2018

Food Access: matters relating to individual and community access to food in the immediate and long term.

Food Economies: the activities that enable the growing, fishing, raising, exchange (monetarily or otherwise) and consumption of food.

Food Literacy: promotion of a deeper understanding of food quality, provenance, uses and role in promoting health of the individual, environment and community.

FOOD SYSTEM RESILIENCE

Food systems resilience is the capacity over time of a food system to provide sufficient, adequate and accessible food to all in the face of various and even unforeseen disturbances (Tendall et al., 2015). Disturbances to the system could include, but are not limited to, climate change induced natural disasters like forest fires and floods, economic downturns and pandemics.

This initiative is a first step in moving our region toward a greater awareness and achievement of food system resilience. The part of the food system that is being addressed is medium and long-term food systems issues at a community-scale. This strategy does not intend to address immediate crises such as household hunger, or community wide poverty reduction.

LOCAL FOOD SYSTEMS

Global trade routes have existed for millennia, but until about a century ago most people relied on their local food systems. In their 2020 report, "Growing Resilience and Equity: A Food Policy Action Plan in the Context of COVID-19", Food Secure Canada states that building resilient, ecological local food systems requires shortening and diversifying food chains, ensuring greater access to healthy and fresh foods, and supporting low-emissions food systems that waste fewer resources and have greater resiliency to shocks.

A local food system (Figure 2) is one that shortens the distance between food producers and consumers. When we address all three categories of activity of a food system (access, economies, literacy) we have a chance to improve the food system resilience of the region. Our local food system affects the environment, public health, land use, economy and quality of life in our community.

There are many different ways that "local" is defined and understood across the food system. "local" means as geographically close to the community and consumer as possible. Living in Fernie, a cold-climate, mountainous region, it would be challenging if not impossible to secure all of our food from our immediate surroundings. When considering what regions our local food shed should reasonably include, we might expand the geographic scope to include the fruit-growing region of Creston to the west and the grain and livestock producing prairie regions to the east and south.

Figure 2: Image adapted from Local Food Peterborough

Most of us rely on commerce or the marketplace to source food.

There are those, however, who rely on their own skills and work to obtain at least a portion of their food.

To augment food security for Indigenous people, wherever they may be able to practice traditional ways, we must ensure that they have access to the places and waterways from which they can source their foods and medicines.

For those who raise and grow food in their backyards or fields, we must ensure that local bylaws encourage and enable such practices.

And for those of us who rely on commerce to obtain food in exchange for money, we must rebuild our local food systems.

- Brynne, 2020

INFLUENCE OF THE MUNICIPALITY

Cities around the world are recognizing the opportunity provided by a more thoughtful consideration of food and its relationship to local community development. The benefits of local sustainable food and agriculture systems are increasingly understood to be an integral part of planning practice. While decision-makers traditionally have been focused on concerns such as roads and infrastructure, water, waste, and land use, the pressing concerns of sustainability are encouraging municipal governments to think more proactively and creatively about issues of community resilience and livability (Falkenberg, 2012).

The city, or regional, food system is embedded within the wide municipal, provincial and federal policy context. Municipalities have limited jurisdictional authority over the food system, yet they are faced with the consequences of the loss of agricultural land, the local effects of pollution and climate change, food affordability, public health problems associated with inadequate diets, shrinking local food infrastructure, reduced employment and the loss of tax revenues from food-related businesses (Food Secure Canada, 2013). Food system assets such as community gardens and farmers markets contribute to vibrant, healthier communities. There is an opportunity for the COF to increase quality of life and local food production, thereby becoming an important lever for achieving other planning goals and strategies. Also, in a world increasingly concerned with climate change and peak oil, local sustainable food systems also present a “lighter footprint” in terms of carbon use in both production and distribution. See Appendix B: Municipal Role in Food Systems, for examples of local food systems actions that coud be integrated into existing municipal services and activities (Central Kootenay Food Policy Council, 2021).

The municipal role in the food system is related to their jurisdictional responsibilities. As identified in the 2011 Metro Vancouver Regional Food System Strategy, including:

- governing land use through Official Community Plans and related zoning bylaws that specify how food producers, business involved in the food industry and homeowners can use their properties
- deciding how to use municipally-owned lands
- developing plans for municipal infrastructure, buildings and properties like composting facilities, community centres and parks that can be utilized to support community food security
- supplying drinking water, solid waste collection, stormwater management, drainage, diking systems, and enforcing riparian regulations,
- developing community economic development plans to increase agriculture or other food sector business.

ALIGNMENT WITH CITY OF FERNIE PLANNING DOCUMENTS

The Fernie Food Strategy's goals and recommendations align with several of the COF's identified priorities and policy directions found in its current planning documents. Specifically, the 2014 OCP, section 4-G, addresses food security and the 2016 Water Smart Action Plan addresses prioritizing water conservation for achieving climate resilience, among other goals.

OFFICIAL COMMUNITY PLAN

The OCP states: "Fernie recognizes the importance of building a better local food system and supports programs and initiatives to achieve it. It goes on to say,"Communities throughout BC, Canada and around the world are encouraging local food production to improve community resilience and wellbeing. Local food security was identified as a major concern by 30% of respondents to the OCP survey. As a city that imports the vast majority of its food, Fernie is particularly vulnerable and should work to address this important issue."

WATER SMART ACTION PLAN

As a signatory to the Columbia Basin Water Smart Charter, the COF has demonstrated a commitment to water conservation and management. The 2016 City of Fernie Water Smart Action Plan recommends continued prioritization of water conservation and implementing summer-time peak demand management. This aligns with this strategy's recommendation to encourage utilization of rainwater for the purpose of local food production, explained in the recommendations section of this document.

"The scope of food policy within the authority of local government is narrower than that of the provincial or federal government. Nevertheless, local government frequently offers greater opportunities for citizens to be engaged, build relationships and influence policy. And it is in communities where the possibilities for good public policy and the repercussions of poor public policy are most tangible."

-Brynne, 2018

"Together, civil society and local government can have a powerful influence over food systems."

- Working with Local Government on Food Policy 2018

"The moment clearly calls for visionary and bold structural change rather than piecemeal approaches grounded in "more of the same."

- Growing Resilience & Equity - Food Secure Canada

"A number of current zoning bylaws regulations are viewed as being too restrictive and therefore a barrier to agricultural development and diversification. Cited examples include: prohibitions on backyard animal production (rabbits, chickens, goats and sheep); restrictions on housing development and subdivision for farm family members; and limitations on types and sizes (square footage) of on-farm business developments."

- 2.5.3 RDEK Bylaws & Policy RDEK Agriculture Plan

Figure 3. FFAS Community Engagement Infographic

2020 PUBLIC ENGAGEMENT

The public input phase of the FFAS engaged over 145 Fernie residents over two months, between August 27th and October 31st, 2020. 131 respondents filled in the online survey requiring approximately 20 minutes to complete, and 16 people attended an hour-long online food system discussion. The full data gathered through the survey is available in Appendix A: FFAS Community Engagement Results, and some of these results were compiled into a summary infographic (Figure 3). The points below summarize the key themes and issues identified through our community engagement:

Local food for local people
- 95% of 131 survey respondents are full-time Fernie residents.

The Impact of the Pandemic
- Open-ended questions showed that local food systems are top of mind for many people, more so after the pandemic highlighted vulnerabilities in our food supply chains.
- A majority of participants in the online public engagement sessions indicated that since the pandemic they have changed their behaviour around food purchases and procurement (i.e. buying more staples in bulk, expanding their food gardens, and doing more food preservation).

Local Food Barriers
- 56% reported BC produce being difficult to find in grocery stores, with 37% reporting they do not know how to purchase from local farmers/vendors.
- 44% of respondents identified that a high price barrier exists, preventing them from routinely accessing local food items due to cost.
- With regards to growing, 31% identified that it was challenging to grow in Fernie due to the short growing season, with 24% also acknowledging limited gardening knowledge.
- When asked which percentage of food is consumed locally per season, the winter was predictably the most challenging with 78% reporting little to none.

Desired Opportunities
- 93% agree or strongly agree with supporting urban fruit harvesting initiatives.
- 90% agree or strongly agree with supporting edible landscaping in place of grass lawns.
- 88% agree or strongly agree with encouraging rainwater collection.
- 80% agree or strongly agree with permitting backyard hens or poultry.

Throughout the project, the Fernie Food Action Strategy webpage communityenergy.ca/foodaction/ provided project updates, timelines, engagement invitations and results, as well as presentation recordings. It will continue to house project information and be used to launch subsequent implementation phases of this initiative.

RECOMMENDATIONS

The following section introduces our four initial recommendations based on literature review, feedback from community engagement and discussions with City of Fernie staff. These are only four of many possible initial actions that would help to build momentum toward a broader vision of a more resilient local food system and recognize their implementation would be greatly assisted by coordinated accompanying communications and education programming.

For clarity, each of these four recommendations is presented separately; however, conceptually they are integrated pieces of a larger whole. Food access and literacy is addressed by the "promote growing food, not lawns" recommendation, which encompasses both the permit "city-wide urban hens" and "encourage utilization of rainwater" recommendations that follow. The fourth recommendation, "support local commercial agriculture" addresses the food economies aspect of the local food system. All four recommended action areas are viewed through the lens of improving our local food system resiliency and community climate change adaptation.

PROMOTE GROWING FOOD NOT LAWNS

Residents of Fernie have a rich history of participating in urban agriculture that traditionally provided a sizable proportion of a family's food needs. People living here still hear stories about generations of immigrant settler families that tended large vegetable and herb gardens, berry bushes and backyard micro-livestock (poultry, rabbits, etc) that consumed the entirety of their residences' front and backyards. Heath and McAllister (2014) document the continued presence of many of these gardens today. The present-day Ecole Isabella Dicken Elementary School site was once a large allotment garden for many families of the neighbourhood.

Today, Section 4-G of Fernie's OCP reinforces the municipality's desire to support a viable, sustainable local food system. Along with its many private vegetable and herb gardens, fruit trees, bee hives, and chicken coops (West Fernie), Fernie residents currently enjoy the use of two community gardens, edible landscaping in municipal flowerbeds, and additional local food system assets such as a summer farmers market, fresh food share, online cold-climate gardening education, and a newly opened year-round "local store" that sells food products exclusively from local producers.

"Grow food, not lawns" is a theme that permeates our 2020 FFAS Community Engagement results. This recommendation recognizes the possibilities our community has to produce a greater proportion of our own food, utilizing scarce resources to provide social, ecological and economic benefit. When more people connect tangibly to our local food system, yielding valuable food and other co-benefits, we improve the resilience of our food system and the community's overall opportunity to successfully adapt to climate change.

OPPORTUNITIES TO SUPPORT A RESILIENT LOCAL FOOD SYSTEM

- **Increased opportunity to access healthy food** - People grow more of their own food contributing to their household food and financial security.
- **Highest and best use of time and resources** - Greater proportion of financial, land, water and time resources put toward food growing and its many, multi-scale co-benefits, compared to the polluting, mono-culture aesthetics of grass lawns.
- **Reduced noise, air, water pollution** - Less lawn area means less lawn mowing, fertilizing, and pesticide use. Mowing grass for one hour with a gasoline-powered lawn mower creates about the same emissions as a 160 km automobile ride (Westerholm, 2001)
- **Lower food distances** - When a greater proportion of food is produced locally, we experience reduced costs and impacts from transporting food long distances.
- **Increased social cohesion** - Urban agriculture projects like community gardens can increase social bonds and networks among neighbors and the people who participate in farming (Kingsley & Townsend, 2006)
- **Increased physical activity and recreation opportunities** - In a 2001 study, gardening was the fastest growing recreational activity among Canadian urban residents (Wekerle, 2001)

- **Provide valuable habitat for native pollinators and wild bees** - There is evidence that gardens compared to lawns result in increased richness and abundance of native pollinators (Makinson, et al., 2017)
- **Gardening as a climate response** - Regenerative gardening includes reducing carbon inputs, learning to store carbon in the soil, building habitat, and incorporating plant diversity - all of which can make a difference to climate change (BC Farms & Food, 2020)

CHALLENGES

- Fernie has a limited growing season of only 90 frost-free days a year. 76% of Fernie Food Action Survey respondents stated the short growing season is a barrier to growing their own food.
- Human-wildlife conflicts are a reality in Fernie. Many of the foods we grow and landscaping choices we make are attractive to wildlife. It is important to limit animal attractants in yards to ensure preservation of wildlife while limiting their damage to urban agriculture sites.
- The City has limited suitable land available.
- Greenhouses as accessory buildings are often sited illegally on the property line in order to save yard space or to gain the most sunlight hours. This can have a big impact on the neighbours.
- Current allowance is 1 meter max fence in front yard, 2 metres allowed in the rear yard. The Wildsafe BC recommended height for deer fencing is 2.5 metres.
- Maintaining a consistent aesthetic while removing barriers to food production.
- Increased food-systems communications, education and enforcement required by COF

POLICY & PLAN EXAMPLES

VANCOUVER
1.2 in the 2013 Vancouver Food Strategy: Improve accessibility and clarity of application processes for creating or participating in community gardens and community orchards.

DAWSON CREEK
9.1.1 in the Dawson Creek 2010 Official Community Plan Policy: Encourage planting of edible plant species in lieu of landscaping in private developments, parks, utility corridors, and local right-of-ways where appropriate, or require a portion of all landscaping to include edible plant species.

CAMPBELL RIVER
4.2.1.9 in the Campbell River 2011 Agriculture Now Plan: Develop urban agriculture guidelines to provide working definitions of urban farming, urban agriculture, the benefits, opportunities, and rationale for urban farming and use policies supportive of urban farming while managing risks or challenges.

VANCOUVER
1.7 Update existing, and develop new land use policies, zoning, and other regulatory levers, such as Community Amenity Contributions, to bolster the creation of community gardens and other forms of urban agriculture.

VICTORIA
2016 City of Victoria Community Gardens Policy: To assist with finding suitable land for community gardens, the City of Victoria has prepared an inventory of City-owned sites that may be suitable for future projects

NELSON
4.4.14 in the Nelson 2013 Official Community Plan: The City will explore ways to ensure availability and accessibility of nutritious whole foods including: Permitting community gardens throughout the City, in all land use designation categories.

RECOMMENDATIONS

- **Review bylaws to remove barriers to food production** - examples: fencing height allowances for sufficient protection from wildlife, front yard setbacks for food growing infrastructure.
- **Adapt accessory building allowances** - Reduce accessory buildings minimum setback allowances for greenhouses, or less permanent hoop-houses, to allow construction closer to fence lines.
- **Identify additional, potential urban agriculture locations** - Compile an inventory of public lands in Fernie to identify suitable lands for community gardens, food forests and other urban agriculture projects in an updated Recreation and Facilities Master Plan.
- **Develop urban agriculture development process** - Provide guidance for residents who want to start a community growing space in their neighbourhood. Allow and provide supports for entrepreneurial community gardens, where growers have the ability to sell their harvest.
- **Encourage edible and medicinal landscaping** - Encourage edible and medicinal landscaping as an alternative to strictly ornamental plants in residential, commercial, institutional and parks landscaping plans in the upcoming OCP rewrite.
- **Incorporate a resilient food system and climate adaptation lens in all future planning**
- **Coordinate food systems communication & education** - Utilize the COF's communications platforms to promote action around food security and other educational content related to the local food system.

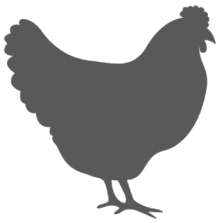
Growing your own food is like planting your own money -Ron Finley

COMMUNITY ENGAGEMENT RESPONSES TO:
What could improve community food resilience in Fernie?

"Strong city policy that encourages use of private land like lawns for food production via tax incentive. Motivate people to get rid of lawns. Also, rather than continuing to invest RMI dollars in events to increase tourism, City could direct that money into local food resilience initiatives."

"Ease restrictions on infrastructure intended for food production. (e.g. backyard greenhouses)"

"Money is a strong motivator for many. Any kind of government incentive to grow your own food or to plant flowers, food or trees and not lawns would change people's minds very quickly."



ALLOW BACKYARD HENS CITYWIDE

Through our 2020 engagement with City of Fernie (COF) residents (Appendix A: Community Engagement Results), we confirmed that having backyard poultry would be of interest to more than one third of our over 130 survey respondents, as well as to many other residents with whom we communicated. In 2011, COF Council voted against permitting backyard poultry, a growing number of communities are supporting, and seeing the benefits of, allowing backyard poultry.

Over 25 British Columbia municipalities currently permit backyard poultry, recently including the COF, in West Fernie. Table 1 summarizes some of the bylaw stipulations in a few of these communities. At least five of these BC communities have earned their official provincially-designated Bear Smart status, including Kamloops, Port Alberni, Squamish, West Vancouver, and New Denver. Of these, New Denver is the only community listed above that deals with grizzly bears, and they have strongly promoted the use of electric fencing and invested in loanable fencers for residents (Isnardy, WildSafe BC, pers. comm, 2021). These communities have taken necessary steps to responsibly, holistically manage a breadth of wildlife attractants in their communities, to ensure minimal wildlife interactions, especially with bears. The experience in West Fernie with backyard flocks demonstrates responsible management of wildlife attractants within our own municipality.

The COF has an opportunity to better align with the goals of its 2014 OCP by removing barriers to food production in City limits and giving the West Fernie urban poultry experience to more of its residents, something our community engagement shows a large number of residents desire.

OPPORTUNITIES TO SUPPORT A RESILIENT LOCAL FOOD SYSTEM

- **Poultry is already permitted** - The neighbourhood of West Fernie has successfully enacted a bylaw to guide responsible backyard hen ownership and management.
- **Desire for backyard poultry** - Many Fernie residents desire permission to have backyard hens. Over one-third of the 2020 FFA survey respondents agreed with the prompt, “I don’t have permission, but would like to have backyard hens or other micro-livestock (rabbits, etc.).
- **Improved food system literacy** - Raising hens is a tangible way to connect with where our food comes from, learn about animal care and gain a deeper connection to one’s food.
- **Added nutrition source** - Eggs are an excellent source of nutrition and are high in protein and vitamins. Eggs have a high return for calorie/energy input vs calorie/nutrition output.
- **Reduced waste** - Hens provide an opportunity to recycle food waste. Their feed can partially, consist of food scraps and foraged feed, having the potential to reduce food waste.
- **Produce natural fertilizer** - Composted chicken manure is an excellent fertilizer. Chickens can benefit backyard compost systems by quickly processing a wider variety of organic material, and create rich garden amendment in a short amount of time.
- **Year-round producers** - Hens can be managed to produce all year even in Fernie where other forms of food security are difficult or at best seasonal due to our short growing season.

CHALLENGES

- Human-wildlife conflicts are a reality in Fernie. Many of the foods we grow, and landscaping choices we make, can attract wildlife. It is important to limit animal attractants in yards to ensure preservation of wildlife while limiting damage to urban agriculture sites.
- Perceived disproportionate odour, noise and wildlife conflict. Poorly managed urban poultry could result in odours, noise complaints, or wildlife conflict, however, an appropriate bylaw and accompanying education for potential flock owners has proven sufficient in many other municipalities. For example, the noise from hens is generally less nuisance than barking neighbourhood dogs.
- Electric fencing maintenance requires regular testing and grass cutting to ensure proper functioning.
- Some backyard hens in West Fernie currently do not have the required electric fencing.
- Increased food-systems communications, education and enforcement required by COF

POLICY & PLAN EXAMPLES

REVELSTOKE
12.02 a. in Animal Control Bylaw No. 2183: An Owner who keeps hens must: a. possess a valid hen-keeping license from the City by completing and submitting a registration form and an application form issued by the City, and paying the fee as set out in the Fees and Charges Bylaw.

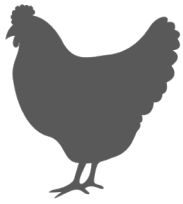
TERRACE
14.2 b. viii. Animal Control Bylaw No. 2159-19: Provide each hen with food, water, shelter, light, ventilation, veterinary care, and opportunities for essential behaviors such as scratching, dust-bathing, and roosting, all sufficient to maintain the hen in good health.

SMITHERS
6-3. d. in Animal Control and Licencing Bylaw No. 1780: Hens must be kept in a run that is: i. fenced on all sides and entirely covered from above in a manner that will keep predators and vermin from entering and hens from escaping; ii. of sufficient size to provide at least 1.0 m2 of roofed outdoor enclosure per hen.

QUESNEL
4.28.1 f. in Zoning Bylaw No. 1880: The minimum area of a hen enclosure shall be 0.37 m2 of coop space and 0.92 m2 of enclosed run space per hen.

KAMLOOPS
9.5.2 iii. in Animal Control Bylaw No. 34-11: No property owner or person owning, keeping, or harbouring hens upon a residential zoned parcel shall suffer or permit: the storage of food supply for hens to be kept in any other manner than in an airtight wildlife-resistant, pest, and vermin-proof container.

SQUAMISH
42. d. in Animal Control Bylaw No. 2124: Ensure that all Hens are kept within a secure Coop from sunset to 7:00 a.m. NOTE: Urban chickens were allowed in Squamish after they received their Bear Smart certification.



RECOMMENDATIONS

- **Permit backyard flocks city-wide** - Make the West Fernie chicken experience available to all Fernie residents in zones R1, R1B, RR, P1 & P2. For example, consider allowing hens into community gardens and other urban agriculture sites located on public lands and parks.
- **Align Fernie regulations with similar rural jurisdictions in wildlife corridors** - Revelstoke, Rossland, Smithers and Terrace all allow hens. Hens must be enclosed inside the coop from dusk until dawn. Include provisions such as registration, fee, inspection, and permit required before acquiring hens.
- **Electric fencing requirement** - Continue the requirement for properly installed electric fencing.
- **Require hygienic storage and prompt removal of manure** - No accumulation of manure greater than $1m^3$. Encourage incorporation of manure and bedding into backyard composting. If not an option for a hen keeper, a commercial curbside composting program would be able to accept bedding, manure and even hen carcasses as needed.
- **Require secure feed** - Ensure all types of feed be kept in air tight, animal proof containers and kept inside impenetrable buildings or inside the perimeter of the electric fence.
- **Become a provincially designated BearSmart Community** - Continue work to address the management of multiple wildlife attractants currently found within City limits.
- **Coordinated food systems communication & education** - Implement policy, education resources and enforcement of bylaws to support residents in managing their backyard hens in a way that reduces wildlife conflict.

FFA COMMUNITY ENGAGEMENT RESPONSES TO:
What could improve community food resilience in Fernie?

"Permit backyard animals and provide safe guidelines to discourage wildlife conflict as well as promote safe harvesting."

"I am a farmer and I think if people wanted to raise chickens or have bees there should be an information package for them . So we don't get inexperienced people harming the fowl in the winter time. It is a challenge to keep chickens dry and warm in the winter"

"Electric fencing is very safe to use and there are no known records of people being fatally injured by modern CSA approved equipment. Not using electric fencing exposes people to the increased risk of predators in a community. Electric fencing has been widely and successfully used throughout the Kootenays to prevent bears and accessing attractants when they are well-maintained and installed correctly. However there is always a risk when keeping livestock that it will attract predators such as bears, coyotes, lynx, fox and even cougars."

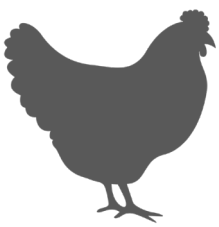
- Vanessa Isnardy, WildSafeBC Provincial Coordinator

Table 1. Overview of Chicken related bylaws in British Columbia

	Min # hens	Max # hens	Feed storage restriction	Coop size restrictions	Registration required	Inspection required	Manure restrictions	Electric Fencing Required
Revelstoke	-	5	y	y	$50 one time	y	n	n
Smithers	-	6	y	y	$15 one time	n	<0.8 m3	n
Terrace	-	4	n	y	$0	n	Can't sell	n
Dawson Creek	-	6	n	y	$20 one time	n	<3 m3	n
New Denver	-	12	n	n	n	n	n	n
Quesnel	-	4	n	y	n	n	n	n
Rossland	-	15	y	y	n	n	n	n
Merritt	2	6	n	y	$0	n	n	Not unless problem arises
Houston	-	8	y	Guidelines only	n	n	y	n
Williams Lake	3	4	y	y	$15 annual	n	n	n
West Fernie	-	6	n	y	n	n	n	y

"WildSafeBC understands and supports the concepts of local food security and we recognize that the raising of chickens and urban animal husbandry can be a part of a local food strategy. At the same time we would recommend that any production of food be done in a manner that is environmentally responsible and sustainable. Part of that responsibility lies in ensuring local food production does not create attractants for local wildlife and lead to conflict. WildSafeBC does not take a stance on whether or not animal husbandry (keeping of chickens, goats, pigs, bees, etc.) should be allowed in a municipal setting. If a municipality does allow for it, then we encourage the adoption of bylaws that set out the following standards by which the practice can be undertaken. Please note that the recommendations are not meant to be exhaustive but only address those issues around reducing human-wildlife conflicts." We then offer recommendations including the use of bear-resistant containers, fencing and electric fencing.

- WildSafeBC: https://wildsafebc.com/learn/grow/



ENCOURAGE RAINWATER UTILIZATION

Increasing human activities, population growth and climate change are placing pressure on fresh water supplies in the Columbia Basin. From 2009 to 2016, the region experienced some of the most extreme temperature and precipitation conditions since record-keeping began over a century ago (COF, 2016). As our climate changes, communities and residents will need to adopt new norms around water use and implement water conservation strategies.

Rainwater harvesting is the practice of collecting and storing rainwater for future use. Depending on the design and level of water treatment, harvested rainwater can be used for outdoor irrigation, domestic purposes, and even potable uses. It is one of many strategies used for green stormwater management (Capital Regional District, 2020).

Like many Canadian municipalities, Fernie often experiences high rain volumes and storm-water run-off in the spring and water reservoir shortages in late summer. Water is one of the first requirements of growing food. If gardeners and urban farmers in Fernie harnessed a greater proportion of their own water demand from rainwater, this would not only improve food system resiliency by reducing dependence on the already stretched municipal supplies, but also create co-benefits such as reduced storm-water run-off during periods of high flow in spring.

OPPORTUNITIES TO SUPPORT A RESILIENT LOCAL FOOD SYSTEM

- **Columbia Basin Water Smart Charter Signatory** - The City of Fernie signed the Charter and had previously set targets to reduce gross community water demand by up to 20% by 2015.
- **Improved irrigation option** - Rainwater is the best irrigation option for plants as it is naturally soft and devoid of minerals. It does not contain chemicals found in treated water such as fluoride and chloramines (chlorine).
- **Supplementing municipal water demand** - Reduce dependence on the City's reservoir, and municipality's treated water, especially in times of drought and water restrictions.
- **Recharge of ground water** - Using harvesting rainwater for irrigation, or directing overflow into landscape features such as rain gardens, will help to replenish groundwater stores.
- **Highest and best use of a scarce resource** - Rainwater harvesting helps reduce peak demands during summer months, saving treated water for more important and appropriate water uses.
- **Reduction in the volume of water entering the stormwater system** - Slowing, sinking and storing rainwater helps to protect watersheds, streams, creeks by reducing the volume of water entering the stormwater system.
- **Utilize untreated water for gardens** - Rainwater is closer to 7 pH (or just below) so it is benefit most garden plants that prefer a 6.5 pH soil. Ground and surface water in the Elk Valley is closer to 8-8.4pH due to the surround geology.

CHALLENGES

Residents might not yet understand that water quality and quantity is an important issue in Fernie, and therefore will require education to appreciate the issue more fully, and as it relates to resilient local food systems.

- 66% of survey respondents stated they believe encouraging rainwater collection for watering lawns/gardens could help increase the growing, fishing, raising, exchange and consumption of local food in Fernie
- Higher summer seasonal tourist populations result in greater demand on stretched municipal treated water supply from the Fairy Creek reservoir and James White Park well.
- Food production benefits from high-quality, mineral and chemical-free water.
- Seasonal peak water demand coincides with the lowest supply in late summer, resulting in water use restrictions, boil water advisories, and other ecological concerns related to water scarcity.
- Increased food-systems communications, education and enforcement required by COF
- Summers are becoming hotter and drier as the climate changes (columbiabasinclimatesource)

POLICY & PLAN EXAMPLES

CRANBROOK
As part of a water conservation initiative, Cranbrook's rain barrel rebate program offers $50 per household for installing a rain barrel to collect rainwater from buildings and rooftops.

REGIONAL DISTRICT OF NANAIMO
5.1.2 in the Drinking Water and Watershed Protection Action Plan for 2020-2030, emerging priorities include: make progress towards rainwater management commitments and increase rebate/ stewardship funding. Incentives may be available for: rainwater harvesting, greywater use, rain gardens and infiltration swales, water meters, xeriscaping and more.

FERNIE
Section 7 in the 2014 Official Community Plan supports the implementation of water conservation including: C.1 Work to actively promote, coordinate and implement water conservation practices and C.8 Encourage best practices for water conservation at the residential level.

KAMLOOPS
5.1.1 in the 2015 Kamloops Food and Urban Agriculture Plan: Support the use of rain barrels, cisterns, and other catchment systems for stormwater management and food production through development approval proency glattnercess. 5.1.2: Build awareness and support for the use of residential rain barrels through distribution of barrels at affordable rates or a coupon program.

OKOTOKS
The Town of Okotoks' "Water Conservation Rebate Program" incentivizes water conservation efforts by providing rebates for the the following: xeriscaping (drought tolerant groundcover or turf, plants, shrubs and trees); mulch, rain barrels, automated "rain sensor" irrigation controllers, water timers, residential rainwater harvesting system (minimum 4546 L collection capacity).

CAPITAL REGIONAL DISTRICT
1.5 in the 2019 Green Stormwater Infrastructure (GSI) Guidelines: GSI facilities are designed to catch, slow, treat and store stormwater runoff directly from impervious surfaces. They mimic natural hydrology through soil-water-plant interactions, infiltration or detention.

RECOMMENDATIONS

- **Incentivise water conservation** - Support residents in improving water conservation efforts by providing rebates for drought tolerant planting, mulch, rain barrels, and water timers.
- **Encourage Green Stormwater Infrastructure installations** - Encourage residents and developers to install systems designed to catch, slow, treat and store stormwater runoff directly from impervious surfaces.
- **Develop drought-resistant landscaping on municipal property** - Establish additional City-wide drought-resistant vegetation that can produce food, medicine, or pollinator habitat.
- **Update Fernie's "Water Smart Action Plan" (COF 2021)** - Include Green Stormwater Infrastructure implementation goals, including promotion and incentivization of both public and residential rainwater collection via rain water harvest collection systems, additional bioswales, rain gardens, etc.
- **Promote utilization of rainwater** - Harnessing rainwater in greater volumes will allow municipal water to be used for other purposes.
- **Incorporate a resilient food system and climate adaptation lens in all future planning** - Carry-out all future City planning to prepare to face ecological, social or economic disturbances by embedding water conservation and capturing lost resources (i.e. rainwater) as a guiding principle.
- **Coordinated food systems communication & education** - Implement policy and education resources to support residents in growing food, not lawns, and help ensure water is used to a higher purpose.

The City of Fernie partnered with the Columbia Basin (2009 to 2016) to participate in the Water Smart Initiative to provide education to the public about the need for water conservation, reduce water demand, avoid costly increases to water storage capacity and minimize environmental impacts to surface and groundwater sources during low-water times.

The evaluation of the 7-year Water Smart Initiative reported reducing peak demand is one of the most critical water conservation challenges that Columbia Basin communities continue to face. It recommended that one of the most effective and cost effective water conservation actions that can be taken by communities is to reduce total and peak water demand which is typically driven by residential irrigation, which includes domestic vegetable production. The Water Smart Program Evaluation Report recommends "a mix of education, technological interventions, financial incentives, and bylaws should be considered to address this issue".

- Water Smart Program Evaluation Report

SUPPORT LOCAL COMMERCIAL AGRICULTURE

The above three recommendations focus largely on food access and food literacy aspects of a local food system that bolster household and communal food gardens and small-scale urban agriculture.

If Fernie, and the Elk Valley region generally, are to build a more resilient local food system, we must also address food economies (Figure 1). Supporting commercial-scale local agriculture will allow the region to better absorb shocks and supply chain disruptions, and locally source the full spectrum and volume of our daily diets.

OPPORTUNITIES TO SUPPORT A RESILIENT LOCAL FOOD SYSTEM

- **Increased understanding of food security** - The pandemic has shifted an overall increase in awareness of local food in a population that may have never thought about it previously. It is now clear to many more people that our food supply-chains are vulnerable and that "business as usual" in our globalized food system is a dangerous thing to perpetuate.
- **Prioritize food security** - As shown by the FFAS community engagement results (Appendix A), many residents are prioritizing local food. They want to establish relationships with farmers, buy local, buy in bulk and improve their household and regional food security.
- **2014 RDEK Agriculture Plan** - The COF's RDEK Board representative can advocate for the implementation of the RDEK Ag Plan, and its extensive industry engagement, analysis and recommendations.
- **Build better relationships with local producers** - Demonstrate respect and commitment to local agriculture. Draw on the expertise and time of farmers who already contributed to the 2014 RDEK Agricultural Plan. Partner with local food producers to create education and work experience to promote the development of future farmers/gardeners.
- **Agricultural Land Reserve** - Established in 1973 the Agriculture Land Reserve (ALR) is a provincial zoning designation in which agriculture is recognized as the priority use and non-agricultural uses are controlled.
- **Community food literacy** - A high proportion of FFAS survey participants identified a need for improved food-systems education (Appendix A).

81% of British Columbians indicate that farming and growing food is a top priority use for land in BC and 92% of British Columbians agree that it is very important that BC produces enough food so that we don't have to depend as much on imports from other places.

- McAllister, 2014

CHALLENGES

- Loss of local infrastructure for local food systems, the outcome of public policy going back to a 1969 Federal Task Force report that recommended that “1/2 to 2/3 of Canadian farmers be moved out of agriculture (Brynne, 2020.)
- Limited funding available to support food system policy work.
- Recommendations to increase food production are often perceived to conflict with recommendations to reduce wildlife conflict.
- Limited support for farmers who are often good at producing food but need support to build capacity for online sales, labelling, packaging, marketing and getting food to the people.
- Conflicting land-use values and priorities that continue to erode the finite suitable land base for agricultural production.
- New farmers have limited access to purchase or rent land due to the drastic increase in the region’s property values over recent years.
- Limited access to knowledge and education regarding alternative agriculture practices that would be best suited for this big region.

POLICY & PLAN EXAMPLES

VICTORIA
Zoning Regulation Bylaw No. 80-159: Schedule L - Small Scale Commercial Urban Food Production. 1. Products Subject to subsection (b), only the following items may be cultivated, harvested, kept, sorted, cleaned and packaged as part of small-scale commercial urban food production: i. fruits ii. vegetables iii. Flowers…eggs and honey.

VICTORIA
Zoning Regulation Bylaw No. 80-159: Schedule L - Small Scale Commercial Urban Food Production. 2. Sale on Lot Sale of products of small-scale commercial urban food production is permitted on a lot on which small-scale commercial urban food production occurs, regardless of whether retail use is permitted, provided it occurs: a. within a foodstand located in the front yard; or b. as a component of the following uses, where permitted: i. retail ii. restaurant iii. free standing food sales outlet…

SQUAMISH
4.3 in the Purchasing Policy #A03G-0. The District recognizes that purchasing locally can provide an overall benefit to the District. Preferences shall be given in the following order: firstly to businesses location within the District...

REGIONAL DISTRICT OF THE EAST KOOTENAY
2014 Agricultural Plan- The development and implementation of a regional agri-food system strategy that encompasses the interests of all stakeholders is a critical step in ensuring a sustainable agricultural industry in the East Kootenay… Adopt the philosophy that every agricultural product that can be readily, responsibly and economically grown (produced) here in the RDEK should be grown here in quantities sufficient to meet local demand, and that imports should be concentrated in produce required for a healthy diet that cannot be practically grown here.

RECOMMENDATIONS

- **Support commercial farming within City limits** - Review and amend zoning bylaws as necessary to ensure that commercial farming can happen on any suitable land within the city limits.
- **Ensure there is suitable zoning for food related businesses** - Undertake a gap analysis of related businesses (distribution hub, processing, commercial kitchen, abattoir) and ensure that there is zoning suitable for them in the zoning bylaws
- **Implement a Buy Local policy for all COF events** - Create and fully implement a buy local policy for all public events held by the COF, based on a dynamic and current database of area farmers and producers.
- **Advocate for implementation of RDEK Agricultural Plan** - Advocate at the RDEK level for implementation of the RDEK Agriculture Plan to increase support for commercial farmers and bolster our local food system.
- **Include food-based programming into City insurance policy** - Incorporate community gardens, food forests, farmers markets and other food-based programming on municipal land into the City insurance policy to help reduce overall costs for third party organizations managing these spaces.
- **Secure locations for food-based programming** - Ensure continuity in the location of the farmers market, community gardens and other food-based programming. Reliable locations and schedules help build the customer base over time.
- **Coordinate food systems communication & education** - Utilize the COF's communications platforms to promote action around food security and to recognize primary local food producers. Specifically highlight producer efforts to create regenerative/resilient agricultural systems.

Despite the fact there appears to be increasing demand, locally grown produce and meat comprise only a small percentage of the total market due to the limited infrastructure, resources and knowledge needed to support value-added processing and marketing, and the impacts of Federal and Provincial regulations...

- RDEK, 2014

A majority of the food items on store shelves are imported from other countries or other regions of Canada. Barriers to getting more locally produced foods on store shelves include the seasonality/consistency of supply; purchase decisions are often not made locally; perception of higher costs of local food; and regulatory issues.

- RDEK, 2014

NEXT STEPS

STRATEGY IMPLEMENTATION

More than 150 residents and stakeholders participated in the development of this plan through surveys and public online feedback sessions as well as community stakeholder strategy review. Successful implementation of the strategy will involve the collaboration of residents, local government, local producers, food businesses, nonprofits and public agencies in the City of Fernie, Elk Valley and the region. New opportunities and ever-changing conditions in our community will require stakeholders to consider new and innovative ideas that support the vision going forward.

Contingent upon further funding, in 2021 and beyond, this community-led initiative will work with stakeholders, including the COF, to determine the next steps to implementing the recommended actions to strengthen our local food system, with the intent to improve and integrate food literacy, food access and food economies activities (Brynne, 2018).

Areas of responsibility for advancing the Fernie Food Action Strategy:

Wildsight Elk Valley and Community Energy Association
- Seek additional funding to continue the implementation phase of this initiative.
- Communicate the work done to date, provide resources online.

City of Fernie
- Review, prioritize and take action on the FFAS's four recommendations.
- Foster an understanding of the aspects of food policy that fall within the purview of local government.
- Incorporate a resilient food system and climate adaptation lens in all future planning including upcoming OCPs, Recreation and Facilities Master Plan, and others.

Residents
- Support the local food system by buying local, growing some of your own food, and learning about personal and community-level food security strategies.
- Participate in public planning processes and encourage local governments to prioritize resilient food systems and climate change adaptation in planning and policy.

REFERENCES

Agriculture and Agri-Food Canada. 2019. Food Policy For Canada. https://www.agr.gc.ca/eng/about-our-department/key-departmental-initiatives/food-policy/the-food-policy-for-canada/?id=1597863791042 [Accessed March 16, 2021].

Agrifoods Analytic Lab. 2021. Canada's Food Price Report. Dalhousie University, Nova Scotia. https://www.dal.ca/sites/agri-food/research/canada-s-food-price-report-2021.html [Accessed Feb 2021]

BC Farms and Food. 2020. Grow a Climate Change Resilient Garden. https://bcfarmsandfood.com/grow-climate-change-resilient-garden/ [Accessed March 2021].

British Columbia Interior Health. 2018. Feasibility Study of Regional Food Security Networks

Brynne, A. 2018. Working with local government on food policy: A toolkit for civil society. BC Food Systems Network. https://gateway2.phabc.org/wp-content/uploads/sites/2/2018/08/Food-Policy-Toolkit-FINAL-1.pdf [Accessed: March 2021].

Brynne, A. 2020. Y2K was a dry run: Reflections on COVID-19 and food. Central Kootenay Food Policy Council. http://ckfoodpolicy.ca/2020/03/24/y2k-was-a-dry-run-reflections-on-covid-19-and-food/?fbclid=IwAR3QlNHAycMaVcxfl2-yjJDHEFJUi9_wl9QVJRClsxSLWuwqemrvdp3TOBY [Accessed: Feb 2021]

Capital Regional District. 2020. Rainwater Harvesting. https://www.crd.bc.ca/education/stormwater-wastewater-septic/green-stormwater-infrastructure/rainwater-harvesting [Accessed Feb 2021].

Central Kootenay Food Policy Council. 2021. Municipal Role in Food Systems. http://ckfoodpolicy.ca/wp-content/uploads/2020/12/MunicipalTable_Dec20.pdf [Accessed: Mar 2021].

City of Fernie. 2014. Official Community Plan. https://www.fernie.ca/EN/main/city/documents-publications/official-community-plan.html [Accessed: Jan 2021].

City of Fernie. 2016. Water Smart Action Plan. https://www.fernie.ca/EN/main/city/documents-publications/water-smart-action-plan.html [Accessed Feb 2021].

Columbia Basin Trust. 2017. Climate Action in the Columbia Basin. https://ourtrust.org/wp-content/uploads/downloads/2017-03_Trust_ClimateActionBooklet_Interactive_FINAL.pdf [Accessed: Mar 2021].

Columbia Basin Trust. 2018. Basin Agriculture Summary Report.

Columbia Basin Trust & Selkirk College. Columbia Basin Climate Source. https://basinclimatesource.ca/ [Accessed: March 3, 2021].

Food Secure Canada. 2020. Growing Resilience and Equity: A Food Policy Action Plan in the Context of Covid19. https://foodsecurecanada.org/2020-growing-resilience-equity [Accessed: March 2021].

Food Secure Canada. 2013. Municipal food policy entrepreneurs: A preliminary analysis of how Canadian cities and regional districts are involved in food system change. Page 2. https://

yrfn.ca/wp-content/uploads/2018/05/Municipal_Food_Policy_Entrepreneurs_Final_Report.pdf [Accessed Feb 2021].

Falkenberg, A. 2012. Edmonton's Food and Urban Agriculture Strategy. https://www.edmonton.ca/city_government/documents/FRESH_October_2012.pdf [Accessed Mar 2021].

Heath, J. & McAllister, H. 2014. Down to Earth: Cold Climate Gardens and their Keepers. Oolichan Books.

International Panel on Climate Change. 2019. Special Report on Climate Change and Land. Chapter 5: Food Security https://www.ipcc.ch/srccl/chapter/chapter-5/ [Accessed: Feb 2021].

Isnardy, V. 2021. WildsafeBC Provincial Coordinator. Personal communication.

Kingsley, J. and Townsend, M. 2006. Urban Policy and Research, 24, 525–537. 'Dig in' to social capital: community gardens as mechanisms for growing urban social connectedness.

McAllister Opinion Research, 2014. BC Public Attitudes Toward Agriculture and Food. Real Estate Foundation of British Columbia. http://www.refbc.com/sites/default/files/BC-Poll-Agriculture-and-Food-Detailed-Topline-Report-Aug-2014-PUBLIC.pdf [Accessed Feb 2021].

Makinson J.C., Threlfall C.G. and Latty, T. 2017. Urban Ecosystems, 20, 464-476. Bee-friendly community gardens: Impact of environmental variables on the... of exotic and native bees.

Provincial Health Services Authority. 2008. A Seat at the Table: A Resource Guide for Local Governments to Promote Food Secure Communities.

Regional District of Nanaimo. 2019. Drinking Water and Watershed Protection Action Plan 2.0 for 2020-2030+. https://www.rdn.bc.ca/sites/default/files/inline-files/DIGITAL%20SINGLE%20PAGES_RDN-action-plan31.pdf [Accessed Mar 2021]

Regional District of the East Kootenay. 2014. RDEK Agricultural Plan. http://www.rdek.bc.ca/web/planningbylaws/OtherPlanningFolder/RDEK%20Ag%20Plan%20Consolidation%20Oct%2014.pdf [Accessed March 2021].

Tendall, D.M., Joerin, J., Kopainsky, B., Edwards, P., Shreck, A., Le, Q.B., Kruetli, P., Grant, M., Six, J. 2015. Global Food Security 6: 27-23. Food system resilience: Defining the concept.

Town of Okotoks. 2021. The Water Conservation Rebate Program. https://www.okotoks.ca/your-community/green-living/water-conservation-rebate [Accessed Feb 2021].

Wekerle, G. 2001. Planning for Urban Agriculture in Suburban Development. UA-Magazine.

Westerholm, R. 2001. Science Daily. One hour of grass cutting equals 100 miles worth of auto pollution. https://www.sciencedaily.com/releases/2001/05/010529234907.htm [Accessed Feb 2021.]

WildSafe BC. Growing in Wildlife Country. https://wildsafebc.com/learn/grow/ [Accessed: Mar 2021].

BC FOOD POLICY DATABASE Kwantlen Polytechnic University. 2021. BC Food System Policy Database. https://www.kpu.ca/isfs/foodpolicydatabase [Accessed Feb 2021].

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