

# AGRICULTURE

Growing a Strong Agriculture Sector in Campbell River **NOW**



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**THE CITY OF CAMPBELL RIVER** – The City of Campbell River has overseen and funded in part the production of this Agriculture Plan. This Plan has been developed as part of a suite of community plans including the Sustainable Official Community Plan, Community Energy and Emmissions Plan, and the Transportation Plan.



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**CONSULTING TEAM** - The consulting team who led the process and development of the Campbell River Agriculture Plan are:



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## **The members of the Agriculture Steering Committee are:**

Morgan Ostler (Chair)	Writer & Community Advisory	Campbell River
Mary Storry	Council Liaison	Campbell River
Lorrie Bewza	Former Acting CAO	Rivercorp
Kira DeSorcy,	Youth Representative	Campbell River
Neil Hamilton	Iron River Cranberry Farm	Campbell River
Jill Hatfield	Regional Agrologist	Ministry of Agriculture
Keith Hudson	Hudson Farm	Campbell River
Frank Limshue	Director of Planning & Zoning	Couverdon
Mike Pickford	Former Youth Representative	Campbell River
Beth Rees	Parks & Planning Manager	Strathcona Regional District
Steve Ross	Blueberry Farmer	Campbell River
Ron Shann	Berry Farmer	Campbell River
Michelle White	Blueberry Farmer	Campbell River

## **The Agriculture Plan Project Team includes:**

Ross Blackwell	Land Use Services Manager	City of Campbell River
Amber Zirnhelt	Sustainability Manager	City of Campbell River
Janine de la Salle	Project Manager	HB Lanarc Consultants Ltd.
Darryl Harrison	GIS and Mapping	HB Lanarc Consultants Ltd.
Gary Rolston	Professional Agrologist	From the Ground Up Consulting



The Agriculture Plan has been created in conjunction with a suite of community plans to maximize synergies and to comprehensively plan for sustainability in Campbell River. Artwork has been created by the Campbell River Arts Council.

# 1. The Big Picture

Growing a significant agriculture sector from the ground up in Campbell River requires a unique approach that builds the basics from which agriculture may prosper. This calls for an understanding of the land base potential, water, soil and climate assets to make strategic choices around partnerships, investment opportunities, and priority actions, which are all basic elements of this Agriculture Plan (AP).



Agriculture is re-establishing itself on Vancouver Island. Some communities have been very successful in developing their agriculture sectors through strategic approaches to land use management, marketing and communications, and linking to the specific attributes and assets of the local areas.

As in many BC communities, the City of Campbell River has experienced a downturn in its resource-based economy. The community has identified agriculture as an opportunity to diversify the local economy while utilizing the significant natural land based resources in the community for food production. Accordingly, it has undertaken a process to develop the Campbell River Agriculture Plan (AP) to guide the development of a strong agriculture sector.

Agricultural producers and investors are not the only ones who stand to benefit from the recommendations in this Plan; restaurants, farm supply and service providers, and residents are all well-positioned to benefit from a healthy agriculture sector.

The most successful agriculture sectors on Vancouver Island not only manage their land base to support agriculture, they also have the infrastructure in place to process/value-add and distribute both locally and off-Island. This Plan considers how processing facilities, farmers markets, farm-equipment and supply stores etc. all contribute to a resilient agriculture sector. As much of the Agricultural Land Reserve (ALR) in Campbell River is forested, this Plan outlines opportunities associated with the establishment of farm infrastructure such as land clearing, fencing, draining, irrigating and power and water servicing as the foundation for developing and enhancing the agricultural land base. This Plan also identifies opportunities for urban scale agriculture and hobby farming.

There is significant opportunity and latent potential for agriculture in Campbell River. With over 5000 hectares of land in the ALR, favourable climates, good soils, and attractive land prices, Campbell River is well-positioned to dramatically increase the amount and variety of what is currently being produced in the area. This represents opportunity for an emerging industry.

The purpose of the AP is to establish a vision, objectives and potential actions that can guide the City and other organizations towards creating an attractive and welcoming environment for the growth and resiliency of agriculture in Campbell River.



Image 1 Bees are important crop pollinators



Image 2 – The City of Campbell River.

## 1.1 Vision and Objectives

Over the past year, stakeholders and the community have contributed to crafting a vision for agriculture in Campbell River. The resulting vision statement has provided overall guidance for developing the AP, and the objectives and action areas presented in this document work to support and achieve this vision.

### 2031 Vision for Agriculture in Campbell River

In 2031, Campbell River has the capacity to produce 10% of its own food and the agriculture sector directly contributes significant value to the local economy.

Agriculture in Campbell River is characterized by:

- ❖ A robust network of agricultural operations producing a variety of goods is a highly visible characteristic of the City.
- ❖ Farmers grow and raise healthy local food that is sold fresh to Campbell River residents and businesses, as well as visitors and purchasers from outside of the area.
- ❖ Farming takes many forms, including artisan, niche and value-added operations, is largely focused on local and regional serving distribution networks, utilizes agricultural innovations to add competitive advantages, and provides livelihoods for a new generation of farmers, agricultural producers, and food entrepreneurs.
- ❖ Commercial agriculture is part of a vibrant regional agricultural industry and promotes its status as a specialized agricultural region in Canada.
- ❖ Residents have great pride in their food and farming culture, and practice backyard and community gardening as well as composting.
- ❖ Students of all ages learn about food and agriculture inside and outside of the classroom.
- ❖ The agriculture sector is a pillar of community resilience and helps propel Campbell River toward a sustainable future.

Based on the vision, technical, policy, and trend analysis of agriculture conditions, seven key objectives have been identified. These plan objectives work together to create the basic conditions to support an emerging agriculture sector in Campbell River. The seven key AP objectives are:

### Primary Objectives of the Campbell River Agriculture Plan

- 1) Develop resource capacity including land, labour, and infrastructure.
- 2) Increase the economies of scale of agriculture.
- 3) Improve access to markets.
- 4) Encourage young farmers and attract new farmers.
- 5) Strengthen communications.
- 6) Integrate agriculture within the community.
- 7) Reinforce relationship with regional agriculture in the Comox Valley.

## 1.2 Linking the Agriculture Plan to Other Community Plans

In addition to the Agriculture Plan (AP), the Sustainable Official Community Plan (SOCP), which is the City's overarching policy document that sets directions in areas ranging from land use to infrastructure, has been developed in conjunction with the AP to position the City to move toward greater overall sustainability. The SOCP supports the AP in areas over which local governments have jurisdiction (e.g. infrastructure, maintaining and enhancing agriculture, etc.) Please refer to the SOCP food and agriculture section. The SOCP also includes land use policies that support the objectives and directions in the AP, and provides additional policies that support the local food and agriculture system.

Specifically, the AP addresses the following SOCP priorities:

Table 1: How the AP supports the SOCP Priorities

	<b>Climate &amp; Energy</b>	<b>Supporting agriculture innovation and exploring how to use waste heat for green house production</b> (E.g. Wastes to fertilizer, waste heat recovery for green house etc.)
	<b>Ecosystem Integrity</b>	<b>Communicating provincial guidelines around environmental farm planning and farming with care to protect watersheds and Environmentally Sensitive Areas</b> (e.g. education regarding use of low impact or non-chemical pest control techniques)
	<b>Local Economy</b>	<b>Attracting investment and jobs to the community through food and agriculture.</b> (E.g. pursuing innovation in agricultural practices/commodities)
	<b>Skilled Workforce</b>	<b>Creating new jobs in agriculture and spin-off industries. Education and mentoring on agricultural production</b>
	<b>Food Self-Sufficiency</b>	<b>Targeting 10% food self-sufficiency by 2031</b>
	<b>Identity &amp; Culture</b>	<b>Bringing food and agriculture into the community identity and culture through food and agriculture oriented celebrations as well as communications strategies</b>
	<b>Individual Health</b>	<b>Increasing access to fresh local foods to residents as well as physical and mental benefits associated with food production.</b>

In addition to being integrated with the SOCP, the AP is part of a larger, integrated planning process that includes an Integrated Community Sustainability Plan, Community Energy and Emissions Plan, Planning and Governance Strategy, a Marine Foreshore Habitat Assessment, and Master Transportation Plan.

## 1.3 How to Use This Plan

The AP is divided into five main sections that are each focused on a target audience, presenting relevant information specific to that audience.

- **Section 1: The Big Picture**-- Orients users to the background and rationale for the AP, and presents vision and objectives.
- **Section 2: Agriculture in Campbell River**-- Presents the key information on farming opportunities in the community. This section is targeted towards farmers, farm businesses, and agriculture investors.
- **Section 3: Planning Considerations** Summarizes the global trends in food and agriculture systems and how this Plan responds. Section 3 also discusses how this plan is unique and provides a rationale for setting capacity for self-sufficiency targets.
- **Section 4: How the City of Campbell River can Support Agriculture**—Sets out a framework to guide the City in supporting agriculture.
- **Section 5: How the Community Can Support Agriculture**— Identifies organizations, groups, and institutions that support agriculture. This section target individuals and groups in the community that have a role in growing the agriculture sector.

This Plan is the culmination of two previous reports containing technical and trend analysis and opportunity assessment. Both the *Background Report* and the *Opportunities Report* are companion documents and go into detail on many of the analysis and assessment summarized in this plan.



Image 3: Farm Gate Stands are an important part of direct sales for farmers who earn three times more selling directly.

## 2. Agriculture in Campbell River

There is significant opportunity and latent potential for agriculture in Campbell River. With over 5000 hectares of land in the Agricultural Land Reserve (ALR), favourable climates, good soils, strong regional location, and attractive land prices, Campbell River is well-positioned to dramatically increase the amount and variety of what is currently being grown in the area, representing great investment/development potential in an evolving industry sector. This section provides the basic information around the farming opportunity in Campbell River.



## 2.1 Current Agricultural Context

Campbell River is now home to more than 31,000 people. Of these, 325 are involved in the agriculture, food and beverage industry - a decrease of 20% from 2001. There are another approximately 340 residents involved in fishing and fish products (BC Stats, 2006). Despite the relatively small nature of the existing agriculture sector, the number of people involved in the sector indicates that there is some local knowledge and capacity in farming and agriculture. While the City itself may not have a strong agricultural presence currently, the wider region is increasingly well known for its food and agriculture activities. To the south,

the Comox Valley has gained a reputation as “the New Provence,” largely due to the same kind of rapid growth seen in France, with high-quality locally grown vegetables, cheeses, grass-fed meats and wines that boosted local restaurants and markets (Zukowski, 2008). Further south, the Cowichan Valley has a similar reputation, contributing to its moniker of “Napa of the North” arising from the artisanal food, beer and wine produced there (Biro, 2009). With Campbell River being proximate to both of these areas, partnerships, collaborative planning, and marketing or other initiatives, should draw on the knowledge and resources both Comox and Cowichan.

As depicted in Figure 1, the City of Campbell River is defined by its municipal boundaries (in red). The City is part of the Strathcona Regional District. Campbell River is also in Electoral Area D (black dotted line)- this is the area used by the Agriculture Census 2006 information.

Although outside of the scope of this agriculture plan, the role of aquaculture in Campbell River must be recognized. Aquaculture is viewed as a key industry for Campbell River representing a significant generator of employment and contributor to the local economy. Locationally, Campbell River is well positioned to support the continued growth of this sector.

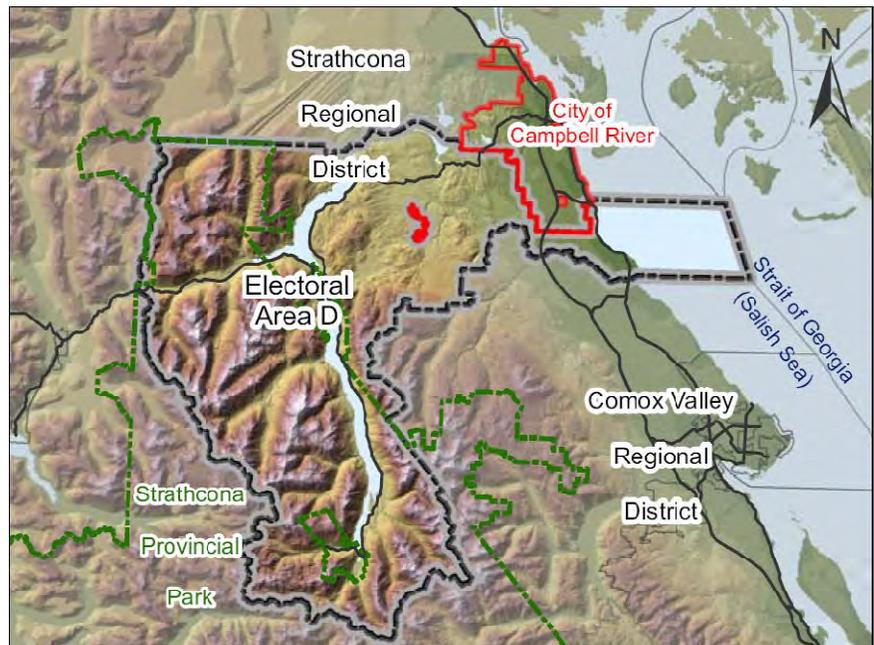


Figure 1 - Regional Context Map. Courtesy of the Strathcona Regional District.

## 2.2 Profile and Location of Existing Agriculture Areas

In 2009, there were 19 properties with Farm Classification in the City of Campbell River, with a total area of 70.7 ha (175 acres). The land use and approximate area cultivated, or in use for agriculture, is shown below in Table 2. It is interesting to note that 11 (57.9%) of the 19 parcels are **not** in the ALR.

There are 5017 ha (12,392 acres) of land in the Agricultural Land Reserve (ALR) within the City of Campbell River. Only 0.4% of the ALR land base is cleared and used for any type of agricultural production. Figure 2 depicts the agricultural context in Campbell River including ALR lands, serviced areas, watersheds, farm parcels, and environmentally sensitive areas (Please refer to Appendix C for a full sized map).

Table 2: Farm Area in Campbell River			
CCR Farms	Total Farms	Cleared Area	Total Area
<b>Farms within the ALR</b>	8	18.7 ha	41.2 ha
<b>Farms outside the ALR</b>	11	16.2 ha	29.5 ha
<b>Total Farm area</b>	19	34.9 ha	70.7 ha

The Agricultural Land Reserve in Campbell River is characterized and quantified as follows:

- **Active farming:** 18.7 ha (86 acres), or less than 0.4%, of the area in the ALR is cleared and actively farmed. Note: all of this cleared area is within the properties with Farm Classification shown in Figure 2.
- **Sensitive Ecosystems:** 835.0 ha (2062 acres) or 16.6%, of Sensitive Ecosystems including 146.8 ha of designated wetlands are located within the ALR.
- **Tree Cover:** 4163.3 ha (the remaining ALR land), or 83%, in forest cover at various stages of re-growth.

## 2.3 Environmental Conditions for Agriculture

**2.3.1 Sensitive Ecosystems** As noted above, roughly 17% of ALR land in the area is identified as Sensitive Ecosystems. This includes almost 150 ha of watercourses and wetlands; other than a small area in the vicinity of Hudson's Farm, these all have "confirmed fish presence". Some of these lands could be developed for agricultural use, but development would be subject to acceptable farm practices as defined by the *Federal Fisheries Act*. The BC Ministry of Agriculture has a series of factsheets related to Habitat Management intended to provide a useful tool to farmers in protecting habitat on farms (Habitat Management, 2004). Farmers who follow these farm practices are legally protected from under the Strengthening Farming Initiative (*Right to Farm Act*), but are still subject to the *Federal Fisheries Act*.

### 2.3.2 Elevation and Micro Climates

Elevation is a key consideration in the discussion of agriculture in the Campbell River area. The majority of existing farms are located below 100m. Elevation above this mark shortens the growing season as it is about 2C° cooler than lower-lying areas under 100m for field crops but is conducive for forage crops and grazing. Higher elevation farming has been successful in other communities at similar elevations who have successfully farmed crops adapted to these conditions. For example, the Iron River Cranberry Farm is a successful farm business above 100m.

Producers who want to grow fruit and vegetable crops should evaluate the microclimate of the site they want to use at any elevation. It is quite likely that there are south facing slopes and other microclimate areas, closer to the water and/or at lower elevations, that will have more favourable climatic conditions. There are areas along the mountains where cold air draining down off of the mountains can result in cooler, wetter microclimates. In some cases, cool air drains into bottom lands which can create frost pockets, shortening the localized growing season.

### 2.3.3 Slopes

South facing slopes provide warmer microclimates that extend the growing season and allow production of a wider range of crops. Generally, the City of Campbell River is sloped towards the northeast. There are a few areas with true south facing slopes and there are some favourable southeast facing slopes in the ALR area immediately north of the Campbell River. In addition to aspect, the gradient of the slope effects viability: i.e. Steep slopes are not ideal for cultivation and may be difficult to operate machinery on. To protect against erosion, the native vegetation should be left in place and crops should be selected to suit the slope and aspect of the land.

### **2.3.4 Soils**

The majority of ALR land north of the Campbell River is improvable to Class 3 or better (i.e. prime agricultural land). Mapping for the area south of the River shows much smaller blocks of soil with a greater variation in soil capability, i.e. small blocks of land that are improvable to Class 2, interspersed with blocks of land that is Class 5 and is unimprovable or improvable to Class 5. These areas are sandy, gravelly soils, well-suited to conifer production, grazing/forage crops, which generally is their current land use.

Most soils in the Campbell River area have a hardpan layer at a depth of 80 to 100 cms. This means that even sandy soils can have drainage problems. Rain percolates down to the hardpan and the water table rises as the season gets wetter. Winter water tables are at or near the surface which can cause roots to rot. Often this can be alleviated by digging a drainage ditch down to the hardpan along the contour at the top end of the property, and redirecting the water that is flowing along the hardpan around the perimeter. Alternatively, it can be corrected with a properly designed drain tile system.

Generally, Vancouver Island soils have a pH of about 5.0 to 5.5. Some crops such as potatoes, berries, perennial grasses are acid tolerant and do well at this pH. Other crops such as tree fruits, alfalfa, some vegetables, prefer higher pH so liming is necessary to achieve reasonable yields and improve disease resistance. Fertilizer may need to be used strategically as some nutrients are not readily available at a low pH.

### **2.3.5 Water**

Many of the soils in the area require irrigation to improve their capability and the range of crops that can be grown. Drinking water is required for livestock enterprises. Generally, there are adequate supplies of water to develop agriculture anywhere within the City Limits. However, there are areas that require the development of agriculture to provide water and power for pumping. There are not necessarily appropriate distribution systems and, in some areas, there is no access to electricity required for pumping.



Image 4: Blueberries are a suitable crop for Campbell River.

## 2.4 Growing Season and Climate

Campbell River has a very moderate Pacific Marine climate. The area has warm dry summers and moderate, wet winters. The average daily temperature is 8.6°C with an average daily maximum of 13.5°C and average daily minimum of 3.8°C. There are 258.9 days of the year when the minimum temperature is above 0°C. The average annual precipitation in Campbell River is 1451.5 mm,

consisting of 1344.1 mm of rainfall and 109 cm of annual snowfall. However, 73% of the annual

precipitation occurs between October 1 and March 31. The summers are relatively dry and irrigation is needed for most crops. A rule of thumb for calculating irrigation requirements is 1 acre-foot per acre (i.e. one acre of water, 1 foot deep which is equivalent to 43,560 ft.<sup>3</sup> of water per year per acre).

From an agricultural perspective, degree-days and/or heat units are important. Degree-days are a measure of the total length of time, during the year, that the temperature is above a specific level—most commonly 10°C. It is essentially an indicator of the length of the growing season. Heat units are derived from daily minimum temperatures and daily maximum temperatures. Cumulative degree-days affect how quickly crops will reach maturity. In Campbell River, there is an advantage for agricultural production at lower elevations and nearer to the water due to the slight increase in cumulative degree-days and growing season.

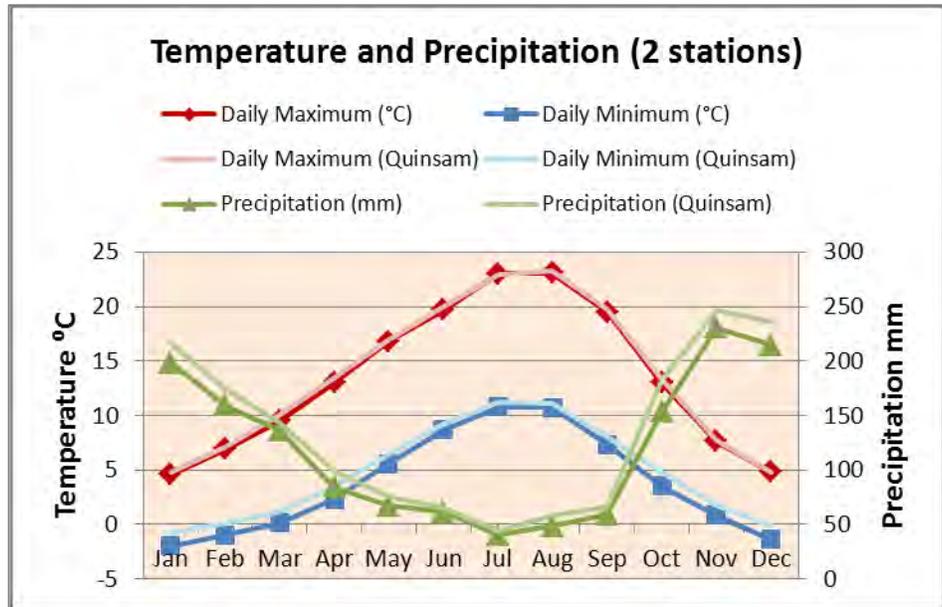


Figure 2 - Temperature and precipitation at two long term weather stations in Campbell River – Campbell River airport (elevation 106 m) and Quinsam Hatchery (elevation 46 m).

## 2.5 Current Types of Farming Activity in the Area

The most common current use of agricultural land is pasture land. At present, only a small amount of farming activity is in horticultural crops. Horticultural crops include small areas of mixed vegetables, berries, nursery stock and Christmas trees on 9 different properties. The largest area is in Christmas trees: 2 farms totalling 1.2 ha, or 50% of the horticultural production. The types of farming activity in Campbell River as determined by windshield surveys, examination of aerial photos, and BC Assessment data, are shown in Table 3.

Farming Activity	Hectares	Percentage of total
Hay and Silage	5.13	15%
Pasture	27.29	78%
Horticultural Crops	2.45	7%
Total Cultivation	34.87	100%

## 2.6 Value of Electoral Area D Crops and Commodities

The estimated gross farm receipts in Campbell River from the production noted below is \$128,913 per year, giving average revenue of \$6,784 per farm (based on average annual yields and prices for the crops noted using values determined by *From the Ground Up* for land use inventory analysis in the Comox Valley, 2008.)

The statistics for Area D include several large farms outside the City limits: Iron River (cranberry) Farm, Shelter Point Farms (formerly the UBC Farm at Oyster River), Emerald Acres, Elk Meadows Farm, and Fiesta Greenhouse, among others. Collectively, these farms likely represent at least 95% of the total gross farm receipts reported in 2006. Unfortunately, detailed census information is not available for Campbell River as a distinct census area. However, Table 4 does provide important context and summarizes the 2006 Agriculture Census Data for Area D including Campbell River.

Table 4: Electoral Area D Statistics - 2006 Census of Agriculture

Overview		
41 farms reporting – 1.4% of Vancouver Island’s farms		
\$1,219,830 Gross Farm Receipts – 0.7% of Vancouver Island total		
\$29,751 average revenue per farm compared to BC average of \$133,640		
Farm Sales		
Farms with sales of:	# of farms	Cumulative Revenue
<\$10,000	24	\$240,000 max
\$10,000-\$24,999	10	\$240,000 max
\$25,000-\$49,999	2	\$100,000 max
\$50,000-\$99,999	2	\$100,000 max
\$100K - \$249,999	2	\$500,000 max
\$250K to \$500K	1	\$250,000 min
Area Farmed		
Total area farmed	475 ha (1174 acres)	
Average farm size	11.4 ha (28 acres) – Vancouver Island is 18.8 ha (46.4 acres) 22 farms are under 10 acres	
Land in crops	22 farms with 147 ha (364 acres) in crops	
Hay (tame hay/fodder)	11 farms with 65 ha (161 acres)	
Vegetables	5 farms with 4 ha (11 acres)	
Berries	6 farms with unreported area	
Nursery, sod, Xmas trees	5 farms with 3 ha (8 acres)	
Greenhouse products	6 farms with 5,118 sq m (55,090 sq ft)	
Irrigation	12 farms irrigating 11 ha (27 acres)	
Certified organic	1 farm reporting certified organic hay	
Land in Livestock	7 farms with 48 cattle and calves	
Beef	1 with unreported number of animals (Elk Meadows)	
Dairy	No dairy farms reporting in 2006	
Pigs	5 farms with 68 animals	
Sheep and Lambs	3 with unreported totals	
Horses	12 farms with 81 horses	
Goats	3 with unreported totals	
Hens and Chickens	20 farms with 1463 birds	
Laying hens	17 farms with 594 birds	
Broilers	9 farms with 756 birds. Total broiler production for 2005 -10 farms producing 2832 kgs (6,243 lbs) \$25000	
Turkeys	5 farms with 88 birds	

## 2.7 Agricultural Development Potential

The highest suitability for agriculture in Campbell River is in areas that are cleared, serviced with power, water and roads, and situated at lower, warmer elevations. Strategic areas that are in the ALR and are currently forested have also been considered. There are several areas that fulfill these characteristics:

- **The area north of the Campbell River and ending at Duncan Bay Road.** Soils are improvable to Prime for the most part. Access and location for marketing purposes are quite good. This land is below 100 m so it should have a generally favourable climate.
- **Properties adjacent to the Jubilee Parkway, east of the Island Highway.** These lands are at lower elevations. They probably have favourable climates. Soils are not as consistent as the area north of the river, but the combination of soil and climate should allow a fairly wide range of production opportunities. The location is great for marketing. Water is very likely available.
- **Properties in the vicinity of Willis Road & Highway 19.** Soil quality in this area is high. Some properties do not have developed road access and lack access to water and electricity, but presumably, these could be developed with reasonable ease if the landowner wishes to sell and/or make these properties available for agricultural development. Exposure for marketing purposes would be excellent. The elevation is approximately 100 m but temperatures in this area are probably not influenced by cold air drainage off the mountains as much as the areas to the south. The land in this area is also very close to level; it appears that it would be relatively easy to clear and put into production.
- **Strategic Agricultural Development Area.** These areas are within the ALR, are forested and are privately owned. An outcome of this planning process has been to begin the feasibility work on specifying what areas are most suitable for agriculture and what barriers exist to agricultural development.

Given that there are more farms outside the ALR, there are likely some very good opportunities, to accommodate appropriate forms and scale of urban agriculture and hobby farming within certain developed areas of the City.

Table 5: Criteria for Agricultural Suitability Areas	
<b>Primary agricultural suitability areas</b>	<b>Secondary agricultural suitability areas</b>
Below 100 m	Below 100 m
Serviced	Serviceable
Eliminates north facing steep slopes	Eliminates north facing steep slopes
Include rural residential	Parks and parcels >1 acre
Excludes all current industrial and commercial land uses	Excludes all industrial and commercial
Includes all existing farm parcels	



Image 5 – Equestrian farms contribute to the agriculture sector.

## 2.8 Assessing Opportunities

Opportunities should be assessed on a site by site, and individual by individual, basis. Commodities suited for one site may not be as suitable for another site based on specific conditions. Crop and product choices and assessments for farm businesses should consider:

- **Local knowledge or information.** The Internet is a good source of information but it will not always provide relevant local knowledge. For example, there may be crop varieties that are not well-suited to local or micro climates or soil conditions. Ministry of Agriculture Regional Agrologists are invaluable resources on this subject and can provide or direct users to useful information and resources.
- **Site-specific factors.** These could include: microclimates, soil texture, availability of water, drainage, frost pockets, slopes, elevations, access to utilities, environmentally sensitive areas, among others.
- **Availability of labor and/or management.** Livestock versus crop production can be used as a simple example. Livestock production requires year-round attention on a day-to-day basis, but not necessarily full-time. Crop production requires full-time attention at key times of the year but there can be long seasonal breaks between these peak periods..
- **Markets and marketing.** There are certain products that have a strong but limited market; there may be room for one producer but not two. The Farmers' Market is a good place to test products and marketing techniques. The most successful vendors are those who like the social interaction. This is different from larger commercial scale operations which typically depend on formal distribution systems.
- **Capital.** Access to capital can broaden commodity and production options. Off farm income is a key consideration when investing in agricultural enterprises that may not produce revenue for several years, such as tree fruits or some berries. Some forms of agriculture are more capital intensive than others and capital investment must be considered in the development of a business plan. The Ministry of Agriculture 'Planning for Profit" fact sheets give capital costing for a variety of crops.
- **Regulations.** There are a number of local, provincial and federal regulations that can complicate or prevent production. These range from zoning bylaw restrictions, to supply managed products, to food safety and labeling. Conversely, there are also many examples of by-laws that support agriculture in different ways such as farm gate sales.

## 2.9 What is the Predicted Future of Agriculture in Campbell River?

Based on the types of new farm starts elsewhere on Vancouver Island, it is expected that the industry in Campbell River will establish with small-lot operations on existing cleared land, producing niche market products that will primarily be sold to consumers from the farm gate or at the Farmers' Market. The current scale of the industry is such that all of the local product can be marketed directly. Future reviews of this Plan can assess the capacities for local processing, distribution and sales for local producers.

The other main area for potential development, at a larger scale, could be agricultural development of large lot lower elevation lands in the ALR, many of which are forested and would need to be cleared. Later sections of this plan outline a strategy for approaching this opportunity. Table 6 presents shows market value by product type.

Product or Farm Type	Example	Approx. market value
<b>Market Gardens:</b> Production of fresh fruits and vegetables, marketed at the farm gate or Farmers' Market– primarily using organic production systems	Small lot mixed market gardens with greenhouse or row/crop covers to extend season that complements other vendors without competing (too much), tree fruits and berries (site sensitive).	\$5,000- \$50,000/ acre
<b>Niche market and value added production</b> including high-value as well as unconventional products	Maple syrup, salsas, garlic, herbs, bedding plants, specialty mushrooms, agro-forestry products, agritourism. Wild foods such as salal and wild mushrooms are possible.	Highly variable but some businesses, especially those with value added products, of this nature exceed \$1 million in annual revenue (e.g. "Holy Crap Cereal")
<b>Specialty livestock</b> using systems that are profitable but also environmentally friendly	Management intensive grazing, pasture poultry, pheasant, duck, rabbits, specialty egg production (small scale) etc.	Large grazing animals are ~\$0-2000 per acre, and chickens are ~\$15,000 per acre

Table 6: Specific Agricultural Opportunities in Campbell River

Product or Farm Type	Example	Approx. market value
<b>Greenhouse production</b> using waste or low cost “green” heat.	Greenhouses can produce high levels of revenue on a smaller land base but some form of inexpensive energy will be needed to produce profitably	\$10 per square foot.
<b>Berries</b>	Cranberries, blueberries and raspberries are crops that are well-suited and currently planted in or near Campbell River	\$100,000 Based on a 5 acre farm with 4 acres in mixed berry production
<b>Larger-scale agricultural</b>	Forage lands, Christmas tree farms and equestrian estates may be a lower intensity production and not include food, but provide significant value in attracting farm support businesses and contribute towards the capacity for self-sufficiency target. They also may be best suited for agriculture above 100m.	Highly variable. Please see Planning for Profit sheets on the Ministry of Agriculture Website below.

**Many others.** Please visit the Planning for Profit resources <http://www.agf.gov.bc.ca/busmgmt/budgets/index.htm>

### 3.Planning Considerations

This section provides detail on the planning and policy considerations for the Agriculture Plan (AP). Further, this section describes how this AP is unique and provides rationale and methodology for setting a 10% self-sufficiency target and tracking progress over time.



## 3.1 How the Campbell River Agriculture Plan is Unique

The Campbell River AP is one of the first agriculture plans undertaken in a British Columbia community where there is very limited agriculture. This special circumstance exists because of the recognition of the significant potential behind the food and agriculture sector, and how this can provide opportunities for agricultural producers, businesses, and other residents. Other unique aspects of this plan include:

- **Synergistic Approach:** This Plan has been mindful of the synergies between the many dimensions of a strong agriculture sector and looked beyond the field and land use for strategies and actions to support agriculture (e.g. marketing, education, distribution, etc).
- **Engagement:** This AP has also involved a substantial public and stakeholder engagement component (Please refer to Appendix A for a description of the engagement process).
- **Capacity for Self-Sufficiency Target:** The 10% capacity for food self-sufficiency target is also a unique aspect of this AP. Only a small number of other communities have set a self-sufficiency target in their agriculture plans.
- **Integrated Planning:** The AP process is linked to that of the Sustainable Official Community Plan. This allows for the the recommendations from the AP to be directly transferred into the SOCP. Often such recommendations must wait until an OCP update that can take several years.
- **Urban Opportunities:** The AP addresses both urban and commercial scale agriculture opportunities. Discussions with the Investment Agriculture Foundation have resulted in an agreed upon approach to urban agriculture in this Plan as backyard farming and community gardens are still considered as a form commercial activity albeit on a very small scale. It is also recognized that urban agriculture may only contribute a small amount of product into the market but has a great deal of value in community education around agricultural awareness, production, soils, pest management, and composting, among many others. In this way, urban agriculture is an important element to this Plan as a method of changing the psychology behind food production in Campbell River.
- **Resilience:** Trends and local impacts have created a basis for identifying opportunities and actions for a resilient food and agriculture system in Campbell River.
- **Key agriculture opportunities both in and out of the ALR:** As identified in the above section, there is a great deal of small scale, lifestyle agricultural opportunity outside of the ALR located within the urban containment boundary. However, the primary emphasis involves leveraging natural land assets within the ALR to facilitate the establishment of concentrated agricultural areas – essentially agricultural industrial parks (i.e. areas with a

concentration of agricultural activity). Despite the fact that the majority of ALR is currently forested, privately owned, and not serviced, there may be an opportunity to explore options to strategically support agricultural development. As agriculture is most protected in the ALR, it is desirable to find creative strategies for encouraging ALR lands to be brought into production.

## 3.2 Food, Agriculture and Community Sustainability

Agriculture planning has been part of local government practice in British Columbia for the past twenty years. While planners and decision-makers traditionally have been focused on more familiar 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. Food and agriculture planning is among the set of tools available.

For example, the food and agriculture system impacts and is impacted by demographics, land use, transportation, economic development, infrastructure, water and waste management, cost of living, and health. Moreover, municipal governments across North America are beginning to recognize the opportunity provided by a more thoughtful consideration of food and its relationship to local community development. There is an opportunity for Campbell River to increase the quality-of-life and local food production and thereby becoming an important lever for achieving other planning goals and strategies.

Cities around the world are recognizing, creating, and capitalizing on the fundamental benefits of local sustainable food and agriculture systems as they are now understood to be an integral part of planning practice. Whether it be: the development of a “foodie” reputation that draws visitors to sample artisan food products; the peace of mind that a more resilient, self-sufficient food system can bring in the face of crisis; or the significant economic effect of food and farming, planning for the success of the food and agriculture sectors is key to securing a resilient, sustainable future. Indeed, from increased job opportunities arising from farming to food processing “value-added” products, cities are benefitting from the post-field value of food. 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.



Image 6- Berming a bed for a herb garden in Timberline's edible courtyard garden.

## 3.3 Food, Climate and Energy Connections

There are five main climate and energy considerations related to food and agriculture:

1. Conventional food production is typically energy and greenhouse gas intensive during every phase of the process: growing, processing, shipping and storage;
2. As energy prices rise, the cost of growing, processing and transporting food will rise;
3. The risk of food crops being displaced with energy crops is growing, putting further upwards pressure on food prices;
4. Global food production is projected to experience increasingly intense and unpredictable disruptions due to climate change;
5. Deep emission reductions are necessary to avoid the most catastrophic local and global impacts of climate change on food production.

Strategically focused efforts can increase the share of locally and regionally-grown and processed food, and can reduce greenhouse gases in some cases particularly given that less transportation is involved. Moreover, local food and agriculture systems can strengthen the local economy through investment and job creation and reduce some of the vulnerability to rising energy prices and global food production disruptions from climate change. This Plan begins to consider these risks. As such, it is seen to complement the City's *Community Energy and Emissions Plan*.

### **3.3.1. Local Food Does Not Necessarily Mean Lower GHGs**

Local food production will not necessarily reduce Campbell River's local greenhouse gas emissions. In fact, significant local agricultural production could increase local emissions to some degree, e.g. farm vehicles, livestock methane emissions, and food processing in addition to the clearing of land that was previously absorbing carbon dioxide at a greater rate than horticultural products. However, tackling climate change is a global challenge and low impact local farming and food systems can generally contribute to emission reduction efforts.



Image 7: The Pier St. Farmers' Market in Campbell River.

## 3.4 Trends, Impacts, and how this Plan Responds

As the food and agriculture system weaves through all geographic scales from farm to city to region and beyond, it is important to situate this Plan within the context of trends in the larger context. The following analysis of local, regional and global trends provides insight into how the opportunities for agriculture in Campbell River may be impacted and how this Plan responds.

TRENDS AND IMPLICATIONS	IMPORTANT LOCAL INFORMATION	HOW THE PLAN RESPONDS
<p><b>Farm Size</b> A trend toward smaller farms on Vancouver Island, many with a focus on organic or near organic production (i.e. nearly or fully organic farm practices but without Organic Certification)</p>	<p><i>In the Comox Valley there are a large number of small farms (approx. 375 generating under \$100,000 per year). And a small number of large farms (Comox Valley Gap Analysis 2008).</i></p>	<p>Areas outside the ALR have been considered for smaller scale agriculture. Medium to small agricultural operations have been identified as one of the highest potential opportunities for agriculture in the study area.</p>
<p><b>Farm Structure</b> To address farm succession, new ownership and farm management structures are being developed to improve access to land for people and families.</p>	<p><i>Organizations such as The Land Conservancy have explored ways in which new farmers may be able to access land through tenure agreements.</i></p>	<p>One of the key objectives of this plan is to “encourage young farmers and attract new farmers”. There are several opportunities including resources, tenure options, education/training and marketing designed to meet this objective.</p>
<p><b>Aging Farm Population</b> Canada is facing an aging farm population with few younger farmers entering the industry. On Vancouver Island new farmers are coming from unlikely places, such as the over 50 age cohort who have retired and have investment capital as well as university graduates not necessarily from farming backgrounds.</p>	<p><i>The average age of farmers in the Campbell River area (defined as the Comox-Strathcona Consolidated Census Subdivision by Statistics Canada) is 52.</i></p> <p><i>Statistics from the 2006 Agricultural Census indicate that there are no farmers under the age of 35 in the former Comox-Strathcona Regional District.</i></p>	<p>This plan considers what is needed to maintain a viable farm operation in Campbell River, and what actions the City can take to entice investors and agricultural producers of all kinds to take advantage of the many farming opportunities in the area. Particularly, this Plan aims to assist with new start-up operations.</p>

Table 7: Global Trends, Local Impacts and how the Plan Responds

TRENDS AND IMPLICATIONS	IMPORTANT LOCAL INFORMATION	HOW THE PLAN RESPONDS
<p><b>Local and Organic (or near organic) Food Movement</b>            There is a consumer trend toward eating organic (or near organic) foods and foods that are locally grown. This is reflected in consumer behavior in the food service and retail industry.</p>	<p><i>Organic food is the fastest growing sector in Canadian agriculture, with sales increasing 20% per year (Organic Agriculture Centre of Canada, 2006).</i>  <i>The Canadian organic retail market was valued at close to \$2 billion in 2008, representing a 66% growth from the \$1.2 billion organic retail value in 2006 (Agriculture Canada, 2010).</i></p> <p><i>British Columbia has more organic farms growing both fruits and vegetables than anywhere else in Canada (Certified Organic Association of BC, 2010).</i></p> <p><i>Out of the 2,855 farms reporting in the 2006 Census of Agriculture for Vancouver Island, 31% indicated that they had some level of organic production. However a mere 76 farms or 2.7% were certified organic.</i></p>	<p>The AP does not prescribe specific farming models. However, many action areas focus on how to support medium to small producers.</p>
<p><b>Urban agriculture, small lot agriculture, and backyard food production</b>            Growing food in the city is becoming popular among urban citizens and increasingly encouraged by local governments to address food security, improving awareness around how to grow food, and connecting people to fresh healthy food.</p> <p>Campbell River has an established community garden, and community members have expressed an interest in urban agriculture and backyard chickens.</p>	<p><i>Several precedents exist where local governments are using policies, operations, initiatives and/or partnerships to support growing and raising foods within urban boundaries. Examples include the Cities of Dawson Creek, Victoria, Colwood, and Langford</i></p>	<p>Potential action areas to support urban agriculture and farming are contained in this document.</p>

Table 7: Global Trends, Local Impacts and how the Plan Responds

TRENDS AND IMPLICATIONS	IMPORTANT LOCAL INFORMATION	HOW THE PLAN RESPONDS
<p><b>Energy Security</b> Local governments are beginning to examine the opportunities for becoming more self-reliant when it comes to energy as well as food.</p> <p>These opportunities will be supported by the City's Community Energy and Emissions Plan, as well as the Sustainable Official Community Plan which both influence the AP.</p>	<p><i>Production, transportation, packaging, processing, refrigeration, preparation, and other food system components – excluding household cooking – require 10 units of energy for every unit of energy produced in the form of food.</i></p> <p><i>Nearly one-quarter of trips in cities (most of which are done via vehicle) are associated with purchasing and consuming food (Puryis in Pothukuchi and Kaufman, 2000).</i></p> <p><i>In Campbell River, this is significant when one considers that in 2007, 67% of the City's GHG emissions came from on-road transportation sources (cars, trucks and commercial vehicles).</i></p>	<p>The AP contains action areas for supporting innovations that give agriculture a competitive advantage such as using waste heat to fuel greenhouse production.</p> <p>Also, with a 10% capacity for self-sufficiency target, long term GHG reductions associated with less transportation requirements is supported by the AP.</p> <p>Urban agriculture, backyard food production and eating local overall may help contribute to reducing unnecessary grocery/food related trips or reducing the vehicle trips and associated GHGs.</p>
<p><b>Individual and Community Health</b> Lifestyle, education, and/or lack of access to healthy food choices in Canada are related to a dramatic increase in obesity, diabetes, certain types of cancer, and cardiovascular disease.</p> <p>Impacts on urban sustainability can include reduced quality-of-life, with a growing number of unhealthy and under or "over"-nourished residents.</p>	<p><i>The treatment of diet-related illnesses is estimated at over one billion in direct costs and over three billion in indirect costs for the Canada Health System (Starky, 2005).</i></p>	<p>The AP supports local food production. Through farm product marketing, , the community will have increased access to fresh local foods. Also, through supporting community and backyard food production, residents may become more self-sufficient. This Plan also outlines actions and resources for building a greater agricultural awareness.</p>

Table 7: Global Trends, Local Impacts and how the Plan Responds

TRENDS AND IMPLICATIONS	IMPORTANT LOCAL INFORMATION	HOW THE PLAN RESPONDS
<p><b>Ecosystem Health</b> While agriculture can have negative impact on ecosystems, when managed carefully, it can be an important element of ecosystem health.</p> <p>In Campbell River, where the community is surrounded by forest and aquatic ecosystems, ensuring that agriculture is low-impact and helps play a role in habitat provision are important considerations for farmers, conservationists, the local government, and others.</p>	<p><i>The International Union for Conservation of Nature estimates that the current species extinction rate is between 1,000 and 10,000 times higher than it would naturally be; it has ranked 36% of the 47,000 species evaluated as being threatened with extinction (International Union for the Conservation of Nature, 2010).</i></p>	<p>The AP acknowledges existing environmental farm planning programs and locates high agriculture potential areas away from ecologically sensitive areas.</p>
<p><b>Agricultural Industry</b> On Vancouver Island, the agriculture industry is shifting away from conventional commodity type production (such as livestock and dairy) and moving towards niche markets, agri-tourism, and high-value direct market type farming operations.</p>	<p><i>Total dairy farm numbers on Vancouver Island have dropped from 120 to less than 50 over the past 20 years.</i></p> <p><i>Quota and processing are leaving the Island the remaining dairy farmers are intensifying production.</i></p> <p><i>Meat inspection regulations and related policies have reduced access to slaughter and increased the price of processing. However recent changes to the legislation have re-allowed more custom slaughter opportunities and new provincial slaughter regulations has also allowed BC producers to ship meat into Vancouver, Victoria and Whistler markets that were previously restricted due the need for producers to process their products in a federally inspected facility.</i></p> <p><i>The price of imported feed grains has also significantly increased in the past 20 years. As these costs and others continue to increase along with fuel prices, the competitive advantage of local food in Campbell River will increase.</i></p>	<p>The AP anticipates this trend and focuses priorities to facilitate growth of a diverse agriculture sector and identifies land and support services relevant to producers likely to farm in Campbell River.</p>

Table 7: Global Trends, Local Impacts and how the Plan Responds

TRENDS AND IMPLICATIONS	IMPORTANT LOCAL INFORMATION	HOW THE PLAN RESPONDS
<p><b>Waste recovery</b> Local governments generally have a mandate to divert organic wastes from the landfill. The challenge is to develop a processing system (which in most cases would be composting) that can economically convert the waste products into a useable fertilizer or alternatively into an energy source.</p>	<p><i>Farmers on Vancouver Island pay higher costs for fertilizer than in other areas, mainly because of the cost of freight to the Island.</i></p> <p><i>The agriculture industry, households and other industries in some cases also pay to dispose of organic wastes (e.g. red meat slaughterhouse waste).</i></p>	<p>The AP identifies how to use agricultural residue as an input for energy production as an important area for feasibility testing.</p>
<p><b>Land Values</b> The price of farmland in Campbell River is relatively low compared to many other populated South Coastal areas or the mainland.</p>	<p><i>A comparison of farmland prices over the past 18 months indicates that prices in the Comox Valley/ Campbell River area average less than 50% of the prices paid in the Central Fraser Valley, and 60% of the prices paid in the Nanaimo area.</i></p> <p><i>There were few specific sales for land in Campbell River but there are listings that indicate that Campbell River land prices are significantly lower than the Comox Valley (possibly as low as 50%) with current listing ranging from \$4000 to \$8000 per hectare.</i></p>	<p>The AP identifies lower relative land values in Campbell River as a key local advantage for agricultural investment and production.</p>
<p><b>Climate change</b> Agriculture can be a contributor to GHG emissions and lighter foot print agriculture systems can contribute to GHG reduction targets.</p>	<p><i>The impacts on agriculture by climate change include warmer climates moving north, pest migration, projected sea level rise and flooding farmland near to coastal areas.</i></p> <p><i>It is not anticipated these impacts as they are currently forecasted will dramatically affect agriculture Campbell river in the next 20 years.</i></p>	<p>The AP identifies opportunities and actions to increase energy efficiencies in order to increase the competitive advantage for local agricultural production.</p>

## 3.5 Rationale & Methodology for a Capacity for Food Self-Sufficiency Target

The self-sufficiency goal in the vision for agriculture in Campbell River is intended **to set a target for building the capacity to grow food**. It is not a literal interpretation in the sense of actually growing 10% of the food basket for Campbell River, and is not intended to suggest that the farmers in the area produce a specific mix of products that will provide a specific diet for the target portion of the population. Instead, the target is a tool for sparking interest and investment in the agriculture sector; striving to be 10% self-sufficient in Campbell River requires increased capacity in the sector overall (i.e. attracting skilled agricultural producers to start new farm businesses, farmland with roads, power and water, and developing of supportive

industries, among other things). This means that, if conditions change and the market begins to drive the feasibility of growing/raising food, local land, infrastructure, skills and related assets may be converted into food production, thereby allowing for a certain amount of self-sufficiency.



Image 8: local organic blueberry farmers

Table 8 below contains the projected revenue, water, land, and greenhouse requirements for a 10% self-sufficiency target. Other elements that combine to increase self-sufficiency capacity include:

- quality soils;
- Cleared land;
- Greenhouses;
- Power and roads to potential farm areas and road standards appropriate to service agricultural lands;
- Access to non-potable water;
- Fencing;
- Irrigation and drainage systems;
- People with appropriate production, management and marketing skills; and
- Supportive businesses, such feed, fertilizer and supply stores, among others.

Table 8: Requirements for a 10% Capacity for Self-Sufficiency Target

	<b>Current production (0.3%)</b>	<b>10% Self-Sufficiency by 2031</b>
<b>Revenue generated - gross (\$ millions)</b>	\$0.13	\$10.47
<b>Revenue generated (\$/ha ALR)</b>	\$26	\$2,088
<b>Water requirements (acre ft)</b>	6	554
<b>Water requirements (m<sup>3</sup>)</b>	7,401	683,349
<b>Cleared land required (ha)</b>	35	1,127
<b>Greenhouse area (m<sup>2</sup>)</b>	0	11,000

Table 8 is based on the area required to produce a healthy diet for one individual using a model developed by the BC Ministry of Agriculture. The model estimates that 0.524 ha are required to produce a mix of dairy, meat and alternatives, grains, vegetables and fruit that provide a healthy diet for one person. Of that area, approximately 10% would need to be irrigated. Using these values, the current level of production in the City of Campbell River is estimated at 0.3% self-sufficient.

During the consultation process, the target of 10% capacity for self-sufficiency in 20 years was considered to be appropriate, realistic and achievable. To achieve this, 1127 ha of land would need to be activated for farming and potentially cleared and put into production (compared to the current 35 ha). This would require approximately 54 acres of land to be cleared every year for 20 years. Approximately 550 acre feet of water would be required for irrigation. About 11,000 m<sup>2</sup> of greenhouse space would be needed. Using average yields and prices for the products in the estimated average diet at the 10% target level of production, the local industry would generate about \$10.47 million per year compared to the current estimated

value of \$130,000 per year. The industry would generate about \$2088 per hectare of the land in the ALR (similar to the level of intensity of agriculture in the Comox Valley).



Image 9: Fruit and nut trees are a viable commodity group for Campbell River and may be used in public realm plantings as part of an edible landscape policy.

## 4. How the City of Campbell River Can Support Agriculture

Growing a significant agriculture sector from the ground up in Campbell River requires a unique approach that builds the basics from which agriculture may build. This requires an understanding of the land base potential, water, soil and climate assets to make strategic choices around partnerships, investment opportunities, and priority actions, which are all basic elements of this Agriculture Plan (AP). The potential action areas for the City of Campbell River respond to the opportunities for agriculture within its capacity and jurisdiction as a local government. Many of these actions can be undertaken by the City's economic development function.



Potential action areas are prioritized based on significance and are designed to be iterative; one building on the momentum of the previous action. This creates an overall method for the City to use in guiding policy and land use, regulation to support potential investment in the agriculture sector.

The potential actions developed to achieve the Agriculture Plan (AP) objectives, are divided into categories that align with the corporate functions of local government including:

- Administering the process;
- Building the land base;
- Marketing the assets;
- Resourcing the industry; and
- Supporting urban agriculture and community gardens.

Each potential action area is divided into quick start opportunities over the course of the next 5 to 10 years. While this AP has been developed with a 20 year planning horizon in mind, beyond 10 years it is difficult to know what the appropriate action steps will be and will ultimately depend on what happens in the agriculture sector over the next 10 years. As the Plan can be monitored and evaluated to measure success, it may be recalibrated to take advantage of new opportunities or reprioritize actions from lessons learned during implementation.



Image 10- Harvesting cranberries

## 4.1 The Top 3 Priorities for Campbell River

The City of Campbell River has an integral role in supporting the development of the agriculture sector. The top three priorities that the City can focus on include:

- 1. Establishing an independent agriculture advisory body** as a resource to the industry and to assist the City in aligning local government policy with an emerging agriculture sector and to steward the implementation of this plan as directed by Council. This advisory body could identify emerging opportunities and provide strategic direction to Council;
- 2. Work with interested land owners** to identify options for cost-effective leases and other tenure options that reduce barriers to industry entry;
- 3. Collaborate with or support [Rivercorp](#)** where appropriate in respect to supporting opportunities for economic development in the agriculture industry.



Image 11 - Fresh local produce at the market

## 4.2 Campbell River Potential Action Areas

The following potential action areas are jurisdictionally focused and appropriate in supporting investment in and development of the agriculture sector. Other agencies such as the Province and farming associations also have important roles to play in achieving the plan objectives, particularly at a regional scale. This plan provides guidance for these other agencies as they define their own priorities and actions.

### 4.2.1 Administering the Process

Administering the process involves fundamental internal actions that a City can take when it chooses to advance to an implementation stage. Providing administrative support, reviewing and updating policies and regulations, developing partnerships, and spearheading relevant strategic initiatives and programs all fall under the category of administering the process.

Table 9: Potential Actions for Administering the Process

<p>Short term 1–5 years</p>	<p><b>1. Establish an Independent Agriculture Advisory Group</b></p> <ul style="list-style-type: none"> <li>• Establish terms of reference for a group based on the existing Agriculture Plan Steering Committee that has guided this Plan. Membership of this group should connect to established farm organizations on the Island. This group may be named a Farmer’s Institute, Farm Advisory, Agricultural Steering Committee, or other.</li> <li>• Determine the purpose of the group. For example,             <ul style="list-style-type: none"> <li>○ Implement the AP and provide recommendations to the City</li> <li>○ Identify issues and opportunities for agriculture as they emerge</li> <li>○ Link economic development and land use into strategizing around agriculture</li> <li>○ Generally champion food and agriculture in Campbell River</li> <li>○ Coordinate community events and celebrations around food.</li> </ul> </li> </ul> <p><b>2. Align local government policy with an emerging agriculture sector</b></p> <ul style="list-style-type: none"> <li>• Consider the impacts on existing or potential agriculture in governance and land use decisions.</li> <li>• Undertake detailed agricultural capability mapping on a strategic basis.</li> <li>• Review the zoning by-law to ensure agriculture on suitable lands is permitted and supported (e.g. being allowed to sell produce off the farm or keeping of chickens, among others).</li> </ul>
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Table 9: Potential Actions for Administering the Process

	<ul style="list-style-type: none"> <li>• Determine the most effective tools for managing the agricultural interface;</li> <li>• Adopt the AP as an Area Plan of the SOCP, which is the strongest commitment to an agriculture plan.</li> </ul> <p><b>3. Promote opportunities for education in cooperation with agencies such as the Ministry of Agriculture, BC Institute of Agrologists or post secondary institutions.</b></p>
<p>Medium term 5-10 Years</p>	<p><b>4. Support regional initiatives to develop agriculture</b></p> <ul style="list-style-type: none"> <li>• Identify opportunities to support agencies or institutions that are engaged in initiatives such as attracting new farmers or skill development within the existing and emerging agriculture sector.</li> <li>• Participate in an Island agriculture show to exchange information, and network with other agriculture sector leaders.</li> <li>• Connect with Comox Valley Farmers’ Institute to seek advice and guidance on how to build a successful agriculture sector.</li> <li>• Work closely with Regional Agrologists and Ministry of Agriculture to identify potential investment educational or other resource opportunities.</li> </ul> <p><b>5. Evaluate and update the plan (See following section on plan evaluation)</b></p> <p><b>6. Develop urban agriculture guidelines to provide:</b></p> <ul style="list-style-type: none"> <li>• Working definitions of urban farming, urban agriculture, food policy, etc.</li> <li>• Benefits, opportunities, and rationale for urban farming</li> <li>• Issues and challenges of urban farming and options for addressing them.</li> <li>• Synthesis of the <i>Best Practices</i> from North America</li> <li>• Guidelines for new development to accommodate integration of food production opportunities</li> <li>• Land use policies supportive of urban farming while managing risks or challenges.</li> <li>• Development permit guidelines for agricultural interface lands primarily in relation to the ALR.</li> </ul>

#### 4.2.2 Building the Land Base

Leading from Objective 1, *Develop resource capacity including land, labour, and infrastructure*, “Building the Land Base” assesses opportunities to support the development or establishment of strategic lands for agricultural investment and production in a variety of tenure scenarios. This is a key consideration given that much of the higher value agricultural land in Campbell River is privately owned and will require collaborative and creative approaches to facilitate leasing, clearing and servicing.

Table 10: Potential Strategies for Building the Land Base

<p>Short Term 1-5 years</p>	<p><b>1. Explore tenure and subdivision options for strategic ALR areas</b></p> <ul style="list-style-type: none"> <li>• Support major ALR land owners in developing strategies in respect to land tenure options such as cost-effective leases.</li> <li>• Consider developing a feasibility study that examines the business case for the generic conversion forested ALR lands into agricultural lands as a value proposition. Identify opportunities to encourage conversion of strategically located timber lands (such as “interface lands” – for instance specific construction standards for potential “agriculture incubation” lands.</li> <li>• Identify opportunities to access external funding to support education, agricultural development etc. to build capacity.</li> <li>• Identify opportunities to facilitate cost-effective methods, resources or partnering to clear potential agriculture land in strategic areas.</li> <li>• Facilitate the establishment of a digital land bank for lease and fee simple lands</li> </ul> <p><b>2. Examine feasibility of facilitating establishment of an incubator or pilot farm site to generate interest in farming and capacity building</b></p> <ul style="list-style-type: none"> <li>• Assess opportunities with agencies such as Agriculture Canada to undertake research plots to test new product types.</li> <li>• Identify/pursue special areas standards for an agriculture incubation area to facilitate a cost effective infrastructure development</li> <li>• Engage NIC as appropriate in supporting the development of agriculture or horticulture related educational programs requiring a land</li> </ul>
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Table 10: Potential Strategies for Building the Land Base

	<p>base component.</p> <p><b>3. Consider or review opportunities for greenhouse production</b></p> <ul style="list-style-type: none"> <li>• Explore opportunities with waste heat (e.g. Elk Falls or waste water in certain areas, capturing waste heat from the sewage outlet, utilizing wood waste heat from digestion or clean-burning; connecting the co-gen plant and greenhouses, and methane capture from the land fill.) as well as other opportunities that may arise over time as technologies change and/or re-use options develop.</li> <li>• Access external funding to finance feasibility work and capital costs as using waste heat for greenhouse production would be the first of its kind on the Island and would provide an important model for other communities.</li> </ul> <p><b>4. Identify the land assets</b></p> <ul style="list-style-type: none"> <li>• Develop an agricultural land registry that includes agricultural land for lease and for sale as a tool for potential investors.</li> <li>• Review the inventory of City owned lands to determine viability of establishing community pastures or agricultural leasing opportunities.</li> </ul> <p><b>5. Support the development of agricultural nodes</b></p> <ul style="list-style-type: none"> <li>• Designate strategically located lands outside of the Urban Containment Boundary as “Agriculture” on the land use map of the OCP.</li> <li>• Consider opportunities to develop specific road and servicing standards and requirements for Agriculture Development Areas or incubation areas and/ or lands designated as “agriculture” on the land use map in the OCP.</li> </ul>
<p>Medium Term 5-10 Years</p>	<p><b>6. Support establishment of an incubator agricultural area</b></p> <ul style="list-style-type: none"> <li>• Undertake a detailed inventory of possible incubator agriculture areas in the context of a broader inventory that identifies the exact parcels and locations of potential agricultural activities.</li> <li>• Consider a strata farm model where several farmers work on independent farms on a single parcel, offering opportunities for</li> </ul>

Table 10: Potential Strategies for Building the Land Base

sharing equipment and infrastructure costs. This may require special lease agreements and could potentially be located on public lands.

- Support development of a strata farm as a pilot project. The former Evergreen School site is an example of a potential site opportunity for a pilot farm.
- Consider opportunities to establish a community pasture on suitable City owned lands.



Image 12: Farm gate sales are an important direct marketing opportunity for local producers.

### 4.2.3 Marketing the Assets

In supporting an emerging agriculture sector, communications and marketing will be important areas of focus. There is an opportunity for the City of Campbell River and Rivercorp to support marketing and communicating the assets of Campbell River’s agricultural potential.

Table 11: Potential Actions for Marketing the Assets

<p>Short Term 1-5 years</p>	<ol style="list-style-type: none"> <li><b>1. Fund a Small Farm Development Workshop</b> <ul style="list-style-type: none"> <li>• Strategically time this workshop to allow farmers to attend and use the information in the upcoming growing year.</li> <li>• Identify an instructor with experience in agrology, economic development and small farm operations to facilitate this workshop.</li> </ul> </li> <li><b>2. Encourage increased participation of agricultural product vendors at the Farmers’ Market and direct sales points for local foods.</b> <ul style="list-style-type: none"> <li>• Work with the Farmers’ Market to identify and attract farmers to the market.</li> <li>• Permit pocket markets and sales of raw agricultural products on private lands.</li> <li>• Pursue opportunities to encourage local stores and restaurants to include local/regional food products on menus and shelves.</li> </ul> </li> <li><b>3. Develop a marketing strategy to coordinate agriculture promotion</b> <ul style="list-style-type: none"> <li>• Develop a ‘made in Campbell River’ identity and brand that may be used to market Campbell River food and agriculture products, and attractions, and farmers.</li> <li>• Identify external funding opportunities for the costs of creating and implementing a communications and marketing strategy.</li> <li>• Develop a “Farming in Campbell River” website that includes key information on farming opportunities as well as creating streamlined access to agriculture sector and government resources.</li> <li>• Leverage regional, provincial, and Island-oriented marketing resources where possible and as appropriate.</li> <li>• Promote demand for and sale of agricultural products within the community such as the City food and plant procurement policy.</li> </ul> </li> </ol>
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Table 11: Potential Actions for Marketing the Assets

Medium Term  
5-10 Years

- 4. Recruit large scale agriculture.**
  - Identify opportunities through the City’s economic development function to attract large scale commercial operations as industry anchors based on inherent local advantages.
- 5. Develop a Growers Guide showing location of local farms**
  - When there is a suitable critical mass, produce a growers guide for marketing, advertising or other such purposes for the purposes of industry promotion and potential economic spinoff’s.
  - Build an online version accessible to local farms at [www.islandfarmfresh.com](http://www.islandfarmfresh.com)
  - Include the Guide on City’s website and other social media sources.
- 6. Support and promote community celebrations of agriculture and food**
  - Make community spaces ( e.g. Spirit square, indoor halls, streets) available as appropriate.
  - Declare an ‘Eat Local’ month
  - Consider street closures for special events.
  - Promote local food through local media, the City website, community organization websites etc.
  - Share information around local food and farming.
  - Coordinate with regional events.
- 7. Recruit farmers from other areas based on local opportunities and strengths**
  - Market Campbell River as a place to develop new farms.
  - Identify opportunities to attract agriculture investors or new producers with the support of local real estate and economic development organizations.
  - Access programs such as the “Provincial Nominee Program” to attract farmers.
- 8. Support product diversification**
  - Use communication and marketing strategies around food and agriculture in Campbell River to promote a unique identity for specialized crops as appropriate.
  - Collaborate with agencies and organizations to coordinate education initiatives in relation to land base opportunities and market feasibility of non-

Table 11: Potential Actions for Marketing the Assets

traditional crops such as mushrooms, salal, wild game, hops, bison etc. that may be suitable for ALR lands.

- Support where appropriate land-based aquaculture, production of herbaceous fish.

**9. Promote Campbell River Agriculture as a media focus and training and education**

- Support as appropriate opportunities to establish an agriculture or horticulture program at North Island College
- Establish a long-range newspaper reporting relationship to regularly highlight local producers and value of fresh food.
- Through the City's economic development function, identify opportunities to deliver national scale promotion of Campbell River food lands with concentration in the prairie provinces
- Collaborate with the Chamber of Commerce to build awareness and demand where possible.



Image 13- Hudson Farm

#### 4.2.4 Resourcing the Industry

The expansion of the agriculture industry in Campbell River would benefit from the City of Campbell River’s strategic actions in resourcing the industry. It is suggested that, when feasible, the City could resource the industry for a strategic period of time given that initial actions would significantly help to create momentum to facilitate the initial period of sector development.



Image 14: Local marketing to attract residents and visitors to the existing restaurants may be updated to include where to purchase local food.

Table 12: Potential Strategies for Resourcing the Industry

<p>Short Term 1-5 years</p>	<ol style="list-style-type: none"> <li><b>1. Explore and provide on-farm burning alternatives to support farming while minimizing the impacts on air quality.</b> <ul style="list-style-type: none"> <li>• Explore alternatives to burning, such as removal, chipping, or stump grinding, especially for application in an urban context.</li> </ul> </li> <li><b>7. Initiate a regional mentoring program</b> <ul style="list-style-type: none"> <li>• An independent agriculture committee should leverage existing provincial resources such as the Ministry of Agriculture local Regional Agrologist, to link new producers with more seasoned ones.</li> </ul> </li> <li><b>8. Support the establishment of a resource centre for farming and agriculture</b> <ul style="list-style-type: none"> <li>• Consider opportunities for the City’s Economic Development Corporation to lead the establishment of a resource centre. The purpose of such a centre would be to provide an information clearing-house for prospective farm and associated businesses to build capacity and streamline access to resources.</li> <li>• Explore industry or other external funding to establish a resource centre.</li> </ul> </li> <li><b>9. Assess opportunities and constraints to provision of irrigation water from municipal system</b> <ul style="list-style-type: none"> <li>• Test water for suitability (i.e. water quality for irrigation purposes) as needed.</li> <li>• Consider specific requirements such as special licenses (i.e. specific bulk volumes on an as-needed basis), restrict agricultural irrigation to non-peak hours, ensure all water use is well within the capacity of the municipal water system.</li> </ul> </li> </ol>
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Table 12: Potential Strategies for Resourcing the Industry

<p>Medium Term 5-10 Years</p>	<p><b>10. Support the development of cost effective inputs to increase the competitiveness of local agricultural producers</b></p> <ul style="list-style-type: none"> <li>• Explore opportunities for lower cost energy inputs or other benefits to local producers particularly for greenhousing.</li> <li>• Explore opportunities associated with: <ul style="list-style-type: none"> <li>○ Municipal composting for low-cost soil amendments;</li> <li>○ Application of bio-solids;</li> <li>○ Production of fertilizer from fish farm wastes;</li> <li>○ Co-locating greenhouses with the co-generation plant;</li> <li>○ Using crop residues (e.g. grasses grown above 100m) to generate heat and electricity;</li> <li>○ Methane capture from the landfill to use for power and heat in greenhouses.</li> </ul> </li> </ul> <p><b>11. Support development of local food distribution facilities to increase the sale of agricultural products through the Farmers’ Market or others.</b></p> <ul style="list-style-type: none"> <li>• Assist where appropriate to identify space for a permanent Farmers’ market and/or local food distribution centre. Multi-purpose, permanent indoor facilities should be considered as supply and demand grow in local food.</li> </ul> <p><b>12. Assist with design of drainage systems</b></p> <ul style="list-style-type: none"> <li>• Identify situations where soil capability and cropping options can be significantly enhanced with drainage and where private infrastructure must be connected to City drainage systems.</li> <li>• Ensure that capital drainage projects account for potential agricultural drainage areas where appropriate to ensure suitable long term pipe capacity.</li> </ul> <p><b>13. Support environmentally sustainable farm practices</b></p> <ul style="list-style-type: none"> <li>• Through a potential “Farming in Campbell River” website, streamline access to existing support resources such as the Environmental Farm Plan program<sup>1</sup> as well as any incentive programs that would benefit producers.</li> <li>• Review policy to consider the impacts of pesticide use in an urban and rural environment. For instance, the responsible application of low-grade pesticides may fit well into good management criteria.</li> <li>• Establish policy/regulatory tools to protect streams and other environmentally sensitive areas on farmlands (as these are currently exempt from the Riparian Areas Regulation and are only monitored if there are fish in the streams, where the <i>Federal Fisheries Act</i> would apply).<sup>2</sup></li> </ul>
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<sup>1</sup> <http://www.agf.gov.bc.ca/resmgmt/EnviroFarmPlanning/index.htm>

<sup>2</sup> [http://www.env.gov.bc.ca/habitat/fish\\_protection\\_act/riparian/riparian\\_areas.html](http://www.env.gov.bc.ca/habitat/fish_protection_act/riparian/riparian_areas.html)

Table 12: Potential Strategies for Resourcing the Industry

- Identify opportunities to link waste heat and energy to potential greenhouse production.
- Explore on-farm burning alternatives to remove financial burdens to agricultural producers during the industry start up phase.
- Identify and encourage alternatives to burning such as stump grinding to land clearing for a farm operation to keep carbon in the soil which is better for agriculture and the environment.

**14. Explore the feasibility of connecting greenhouses to waste heat sources such as the co-generation plant to create a unique competitive advantage in Campbell River.**

- Collaborate with the Forestry Task Force on opportunities for the co-generation plant.
- Consider selling carbon offsets to the Pacific Carbon Trust in order to pay for the capital costs of the project.
- Assess needs and requirements to establish a greenhouse and processing facility cluster.

#### 4.2.5 Urban agriculture and Community Gardens

Urban agriculture and community gardens are a way to raise the profile and awareness around food production in the community, as well as provide recreation opportunities and enhance urban biodiversity. The SOCP contains most of the policies and actions around urban agriculture and community gardens.

Table 13: Potential Strategies for Urban agriculture and Community Gardens	
Short Term 1-5 years	<b>1. Support development of urban agriculture and community gardens as “hands on” learning to increase interest in local production</b> <ul style="list-style-type: none"><li>• Assess opportunities to make strategically located outdoor public space available for urban food production activities.</li><li>• Undertake an urban agriculture land asset mapping exercise to identify all of the appropriate areas for various scales of food production in Campbell River.</li><li>• Consider developing an urban chicken by-law or other regulatory tool that enables limited keeping of chickens. Consider construction of a community demonstration garden at City Hall or on other City-owned land as a joint venture with education providers, society groups etc..</li></ul>
Medium Term 5-10 Years	<b>2. Develop urban agriculture guidelines to accommodate food production in or near the urban areas.</b> <ul style="list-style-type: none"><li>• Consult with the broader community in respect to managing food production activities in the City in a manner that respects neighbours..</li></ul>



Image 15- Urban Agriculture provides important community learning opportunities about food and farming

## 4.3 Measuring Success

Metrics are necessary for tracking progress over time and understanding how the sector is performing towards the capacity for self-sufficiency target. The City of Campbell River will be able to measure and compare the following:

- Number of new farmers;
- Number of new farms;
- Gross farm receipts;
- Area farmed;
- Land in crops;
- Land in livestock;
- Area in green house production;
- Area in grazing; and
- Area in field crops.

Given that the Agriculture Census area includes all of Electoral Area D, field reviews, examination of current aerial photographs, community surveys and BC Assessment data will provide more information specific to Campbell River. Data may be collected by City staff, agronomy consultants, and possibly student interns.

Data from other sources would also help to track the performance of the agriculture sector. For example, the following information would be helpful in understanding the impacts of this plan for the short and long term:

- Farmers' market cumulative revenue;
- Number of community gardens;
- Number of community garden members;
- Number of festivals that involve local food;
- Number of restaurants serving local food;
- Number of grocery stores selling local food;
- Number of community celebrations around food;
- Amount of agriculture product being sold at the market;
- Degree to which food and agriculture is part of elementary, secondary, post-secondary and community programs;
- Amount of land cleared for agriculture;
- Area of irrigated land; and
- Annual farm income values.
- Level of health (e.g. diabetes and obesity) in the community
- Community perceptions around the role and value of agriculture in Campbell River.

The performance of the agriculture sector should be measured against the 10% capacity for self-sufficiency target and show progress over time.

## 5 How the Community Can Support Agriculture

There are a myriad of ways that individuals can support local agriculture, beginning with choosing locally produced and/or processed food.



## 5.1 Individual Contributions

Food is a rich part of our cultural and social life. We celebrate, communicate and engage around food. With this in mind, individuals can also get involved and support local agriculture by integrating local food and farming into these aspects of their lives.

Examples include:

- Shop at the Farmers' market;
- Ask about what is local at your grocery store;
- Grow food in your backyard;
- Get involved in planning processes;
- Join Community Supported Agriculture programs;
- Volunteer at your local farm or community garden;
- Get to know your farmers;
- Host local food diners;
- Promote local agriculture to out of town visitors;
- Buy local and organic as much as possible;
- Share seeds;
- Go to local restaurants that support local, organic food;
- Attend food celebrations, events and workshops;
- Learn how to preserve your own food;
- Buy from farm stands;
- Visit and learn from farms and farmer markets in other regions;
- Share this experience with others; and
- Learn how to cook in season.



Image 16- Household composting is essential for keeping organics out of the landfill and creating high-quality soil.

## 5.2 Groups, Organizations & Institutions

There are a number of groups devoted to local food, sustainable agriculture and eating healthy in the province, region and nearby that can offer support in various ways. These are important resources that can provide education, funding, extension services, research, operations and start-up support. Below is an initial list of groups found locally, on Vancouver Island, and in the greater region that could be involved in implementing this plan.

Table 14: Local and Regional Resource Groups	
Name	Information Source
<b>Farmers' Associations</b> <ul style="list-style-type: none"> <li>Southern Vancouver Island Direct Farm Marketing Association</li> <li>BC Agriculture Council</li> <li>Wine Islands Growers Association</li> </ul>	<a href="http://www.islandfarmfresh.com/">http://www.islandfarmfresh.com/</a> <a href="http://www.bcac.bc.ca/">http://www.bcac.bc.ca/</a> <a href="http://www.wiga.ca">http://www.wiga.ca</a>
<b>Farmers' Market Associations</b> <ul style="list-style-type: none"> <li>The Pier Street Association and the Farmers' Market Committee</li> <li>BC Associations of Farmers' Markets</li> <li>Comox Valley Farmers' Markets</li> </ul>	<a href="http://www.pierstreet.com">http://www.pierstreet.com</a> <a href="http://www.bcfarmersmarket.org/">http://www.bcfarmersmarket.org/</a> <a href="http://www.comoxvalleyfarmersmarket.com/">http://www.comoxvalleyfarmersmarket.com/</a>
<b>Community Gardens/Urban Agriculture</b> <ul style="list-style-type: none"> <li>LifeCycles, Victoria BC</li> </ul>	<a href="http://lifecyclesproject.ca">http://lifecyclesproject.ca</a>
<b>Local Food Movement</b> <ul style="list-style-type: none"> <li>Vancouver Island Diet</li> <li>100 Mile Diet</li> <li>Edible Strategies Enterprises Ltd</li> </ul>	<a href="http://www.vancouverislanddiet.com">http://www.vancouverislanddiet.com</a> <a href="http://100milediet.org/">http://100milediet.org/</a>
<b>Organic Foods</b> <ul style="list-style-type: none"> <li>Certified Organic Association BC</li> </ul>	<a href="http://www.certifiedorganic.bc.ca/">http://www.certifiedorganic.bc.ca/</a>
<b>Education</b> <ul style="list-style-type: none"> <li>North Island College</li> <li>Vancouver Island University</li> <li>Foxglove Farms</li> </ul>	<a href="http://www.nic.bc.ca">http://www.nic.bc.ca</a> <a href="http://www.viu.ca/">http://www.viu.ca/</a> <a href="http://www.foxglovefarmbc.ca">http://www.foxglovefarmbc.ca</a>
<b>Food Processors</b> <ul style="list-style-type: none"> <li>Small Scale Food Processors Association</li> </ul>	<a href="http://www.ssfpa.net/">http://www.ssfpa.net/</a>
<b>Funding Support</b> <ul style="list-style-type: none"> <li>Investment Agriculture BC</li> </ul>	<a href="http://www.iafbc.ca">http://www.iafbc.ca</a>
More resources	<a href="http://www.ediblestrategies.com/links.html">http://www.ediblestrategies.com/links.html</a>

## 5.3 How These Groups May Collaborate with Campbell River

There are many ways for groups to collaborate and work together to deliver on common goals. A few of the ways community organizations may support the vision and objectives of this plan include:

- Hold workshops and conferences on relevant topics and bring in speakers;
- Provide funding for local agriculture initiatives such as events, research and farm start-up;
- Provide advice and experience for new initiatives;
- Locate and share additional local food sources to compliment the Campbell River local food sector;
- Provide business resources for agricultural operations such as lease agreements, farm classification forms;
- Provide services for community organizations and farm co-operative businesses;
- Provide training and educational for community organizations and farms;
- Offer strategic planning support;
- Provide comprehensive web resources;
- Write letters of support for fundraising and proposal development; and
- Share advice for farm operations.



Image 17: Slow Food Cycle in Agassiz promotes medium to small scale farms.

## 6 The Horizon for Agriculture in Campbell River

This Agriculture Plan has outlined the central information and potential actions towards building a viable agriculture sector in Campbell River. The implementation of this plan and the relationships that will form around agriculture as a result, will move Campbell River toward broader economic diversification and support opportunities for local food production.



By 2031 this Plan targets a 10% increase in capacity for self-sufficiency; this means growing the industry by 0.5% per year including land, water, power, and market demand must also increase by 0.5% per year. It is the aim of this Plan to establish a realistic, achievable target. However, it is entirely possible that the agriculture sector in Campbell River will experience rapid uptake and this target may be surpassed early on in the Plan horizon.

Success in building a viable agriculture sector in Campbell River provides other towns with similar attributes with a model and approach for attracting investment to the community. This direction towards actively supporting agriculture is also a way of achieving greater sustainability and resiliency in the community overall. This Plan has outlined the many trends that are revitalizing the local agriculture sector and making it possible, if not attractive, to invest in agriculture.

The AP is the first step towards giving agriculture a competitive advantage and drawing existing and new residents into the agriculture sector. This Plan is intended to drive food production, attract new farmers, increase the value of the local farm economy and provide spin-off business opportunities. The collaboration and partnerships between the City of Campbell River, Rivercorp, the existing regional agriculture sector and the broader community will work to build a strong and resilient agriculture sector in Campbell River.



Image 18- Future Campbell River Farmer

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# 8 Appendices

## 8.1 Appendix A: Milestone & Consultation Summary

Between September 2010 and March 2011, the AP project team has conducted a series of consultation activities that gathered input from residents and stakeholders. Figure 3 depicts the project milestones.



Figure 3 - AP Milestones

The public and stakeholder events held since September 2010 have been:

- **Project Launch at the Pier Street Farmers' Market:** Over 50 participants mapped where their food is grown, purchased, prepared and composted. Attendees were asked to label on maps where they grow, buy, celebrate and learn about their food. Responses included growing food in community gardens, backyards, and on farms; purchasing food at grocery stores, from Hudson Farm, and fish markets; and celebrating and learning about food in both public and private places.
- **Food systems discussion at the Sustainable Official Community Plan Community Sustainability Forum:** Approximately 15 people participated in a round table "Now, Wow, How" discussion on what works well for food and agriculture "now," what a desired future or "wow" would look like for food and agriculture in 20 years, and a discussion on "how" we would get there.
- **APS workshop:** Over 35 community members discussed priorities and challenges for food and agriculture in Campbell River.

- **A section of an SOCP survey Part 1:** Close to 500 residents of Campbell River responded to a survey that asked them to rate the importance of a range of food and agriculture areas against how they saw the current performance in this area. Survey results showed that the key priorities for the community around food and agriculture are protection of ALR land; access to healthy food; job creation in the agriculture sector; and local farming and food growing.
- **Background Report Open House:** Approximately 40 stakeholders and community members attended a Public Open House that presented highlights from the Background Report and the context for agriculture in Campbell River. A Question and Answer session on the AP followed this discussion.
- **Opportunities Report Open House:** Approximately 30 stakeholders and community members attended a Public Open House that presented the key opportunities for agriculture in Campbell River including the assets and possible locations of new farm operations. A Question and Answer session on the AP followed this discussion.
- **Meetings of the ASC:** The Agricultural Plan and Strategy Steering Committee (ASC) met a total of six times through the process of developing the AP. During these meetings, ideas and directions for the AP have been discussed and vetted. With guidance from the ASC, the project team moves forward with developing the AP.

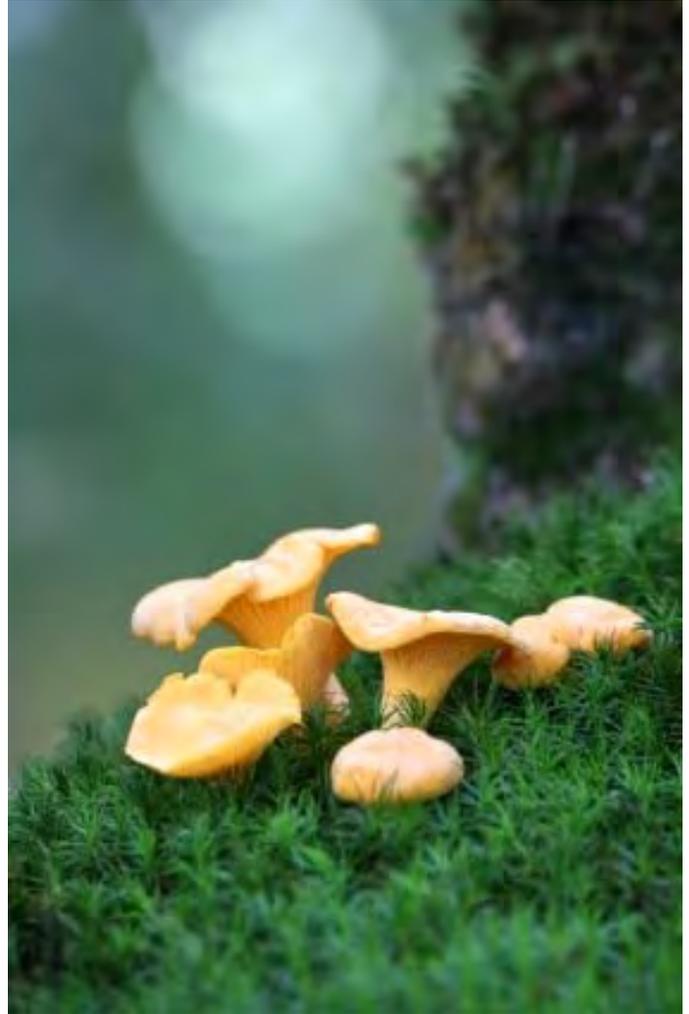


Image 19: Wild mushrooms are a high value wild crop that may be harvested from the forest

The AP has three key deliverables: Background Report, Opportunities Report, and the Plan itself, each one building on the one before it. The Figure above shows milestones and key consultation points throughout the Plan development process.

## 8.2 Appendix B: Strategic Agriculture Development Areas

During the development of the Campbell River Agricultural Plan, there were discussions about identifying one or more areas, within the ALR in Campbell River, which could be developed into a potential agriculture incubation or Agricultural Development Area or Areas (ADAs). Ultimately, blocks of land could be identified for the following uses:

- 600 to 800 acres to be used for a variety of mixed farm operations including various sizes and types and tenures of enterprises
- Greenhouse sites located close to potential sources of low-cost energy, and
- Land suitable for development into cranberries specifically.

Given their strategic land ownership, TimberWest agreed to participate in this site search, i.e. to allow key “interface” lands to be inspected for potential sites. This was not intended to be a detailed soil mapping or soil surveying exercise; it was intended to identify a general area, or areas, suitable for agriculture at the scale described above.

### **8.2.1 The Concept**

The concept flows from the premise that there is a desire to develop a strong agricultural industry in the City of Campbell River. There was fairly strong support for this during the planning process for the Agriculture Plan.

The idea is to: identify large blocks of land with agricultural potential within the city limits that can be developed, economically, into agricultural development areas. The areas would consist of a variety of parcel sizes, some available for purchase and some for long term lease. Standards for farm road access to these lots would be created.

### **8.2.2 Parameters**

There are, at least, 3 key groups who need to endorse this for it to work:

1. **Farmers or potential farmers.** The land must be well-suited for agriculture and must be available on conditions that will allow potential farmers to develop economically viable agricultural operations on the site. This implies that the soils and climate are very well suited, preferably prime soils, water is available, and individual farms can be developed relatively easily.
2. **TimberWest** – or potentially another large landowner. There must be some motivation for the current landowner. TimberWest/Couverdon has goals and policies that clearly indicate a willingness to work with partners to create sustainable communities. However, the project needs to be economically feasible and practical for the company and it should not negatively affect their core business of forestry.

3. **City of Campbell River, including Rivercorp.** If a suitable site can be found, and an appropriate model or plan can be developed, the endorsement and support of the city may be needed to ensure that the required services are available to allow it to happen.

### **8.2.3 Potential Agriculture Development Area Sites**

Four different areas within the city were inspected to identify sites that might fit the desired uses described above:

- Properties west and north of the airport. There are some soils in this general area that could be prime agricultural soils with irrigation. However, there are some distinct disadvantages that make this a lower priority area to develop an agricultural development area. Access is limited and there are no utilities near the sites. The elevation is near, or above, 100 meters so the growing season would be shorter and/or the production options would need to be customized for higher elevation.
- Properties in the Argonaut Road area. There are high capability soils in this area. The elevation is higher but the south facing slopes and favourable aspect would likely result in a competitive growing season. The challenges are that it is mainly maturing timber (not ready for harvest) so it would likely not be a preferred site, for the landowner, to convert to agriculture. It is also a protected/sensitive watershed and proximity to the market is marginal compared to other areas.
- Properties north of the river. There are some prime agricultural soils along the logging road north of the river. These are lower elevation lands with good access, utilities and proximity to markets. There is also apparent potential to access water (and potentially waste water and waste heat) in the future. Some of these lands are slated for expansion of waste disposal activities. Overall, this could be a good site for a future agricultural development area for greenhouse use (subject to the conditions described below), with mixed farm potential and possibly some cranberry<sup>3</sup> potential. The downside is that there is, at best, only 500 acres in any one contiguous block and, even that block is severed by a number of deep watercourses/ravines that would be very difficult to cross and may be considered sensitive habitat areas.
- Properties south of the Jubilee Parkway – see Mixed Farm Agricultural Development Area discussion below.

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<sup>3</sup> Traditionally cranberries have been grown in peat bogs which were typically renovated wetland areas. Some of the more recent plantings have been in sandy soils that have suitable characteristics to allow development of bogs that can be flood harvested. It is well beyond the scope of this project to fully assess or describe appropriate sites for a sand based cranberry operation, however, there is cranberry production happening on soils that are similar to some of the soils found in the northern part of the city.

#### **8.2.4 Greenhouse Production-**

Section 2.9 (Table 6) suggest a review of, and feasibility study, of opportunities for greenhouse production, specifically those with potential to use waste heat. There may be sites, in the future, that are well suited for greenhouse production using waste heat but the opportunities really do not exist yet. ALR lands, in the north part of the city, tend to slope towards the northeast so they do not have optimum sunshine hours for greenhouse production. Waste heat would need to be available at a very low cost to justify greenhouse production. If these opportunities arise, they will likely be immediately adjacent to, or on, the site where the heat is generated; the operation that generates the heat would likely capitalize on the opportunity.

#### **8.2.5 Cranberry Production**

The cranberry industry is promoting increased production; as much as 2500 additional acres of cranberries in South Coastal BC. There are areas, west of the airport, (identified as peat soils/wetlands on soils maps), that may be well-suited to cranberry production. However, cranberries require a significant volume of water for flood harvesting in September and October. There is no apparent source of water, in the vicinity of these properties, that would be adequate for flood harvesting. There may be small areas of suitable land within the Mixed Farm ADA described below and there may be sites in the north part of the city as described above.

#### **8.2.6 Mixed Farm Agricultural Development Area**

The goal, for this development area, was to find a large block of land (600 to 800 acres) with the following characteristics:

- close proximity to residential Campbell River so that utilities and services could be provided and direct farm markets could be developed
- the best possible microclimates for the area to ensure a long growing season
- relatively low elevation (which is climate related and growing season related)
- relatively high capability soil. A mixture of different soil capabilities was considered acceptable as long as there were some soils with the capability to produce higher valued intensive crops – fruits and vegetables.
- Preferably in the Agricultural Land Reserve (ALR).

A potential site for this proposed use was located on TimberWest lands, south of the Jubilee Parkway and east of the Inland Island Highway – see Figure 1. The site includes 15 parcels with a total area of 578 ha (1427 acres). Of this area, it is estimated that 330 ha (816 acres) would be suitable for mixed farm uses.

The elevation of the lands ranges from 40 m (on the East side) to 95 m (in the southwest corner).

There are a series of narrow, fairly rough, all season gravel roads throughout the properties; however, access to the area would need to be improved. The best place to improve access, from an agricultural perspective and for proximity to market, would

be to extend Dogwood Street, south, from the Jubilee Parkway intersection. There may be challenges in protecting riparian areas and developing appropriate stream crossings in the first kilometer; these are expected to be manageable.

The area would need to be serviced with water and electricity. Again, the nearest point to connect to the services would be Dogwood/Jubilee intersection. As described below, development of intensive agricultural cropping areas (i.e. vegetables, berries and fruits) would require access to enough water for irrigation. Irrigation requirements vary depending on the type of crop, soil and the system used to apply water; however, as a “rule of thumb” about 1 acre foot<sup>4</sup> of water is required to irrigate 1 acre (3046 cubic meters per ha) during a growing season. This does not imply that the proposed park area would require 816 acre feet of water but increased water availability will certainly lead to faster and more productive use of agricultural land. Currently, about 14% of the actively farmed agricultural land on Vancouver Island is irrigated; matching this level of irrigation within the proposed park would require about 120 acre feet of water per year during the peak summer season.

12 of the parcels are entirely in the agricultural land reserve; the other three are outside, or partially inside, but adjacent to, to the ALR.

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<sup>4</sup> 1 acre foot is 43,560 cubic feet (1233.5 cubic meters), i.e. 1 acre of water, one foot deep.

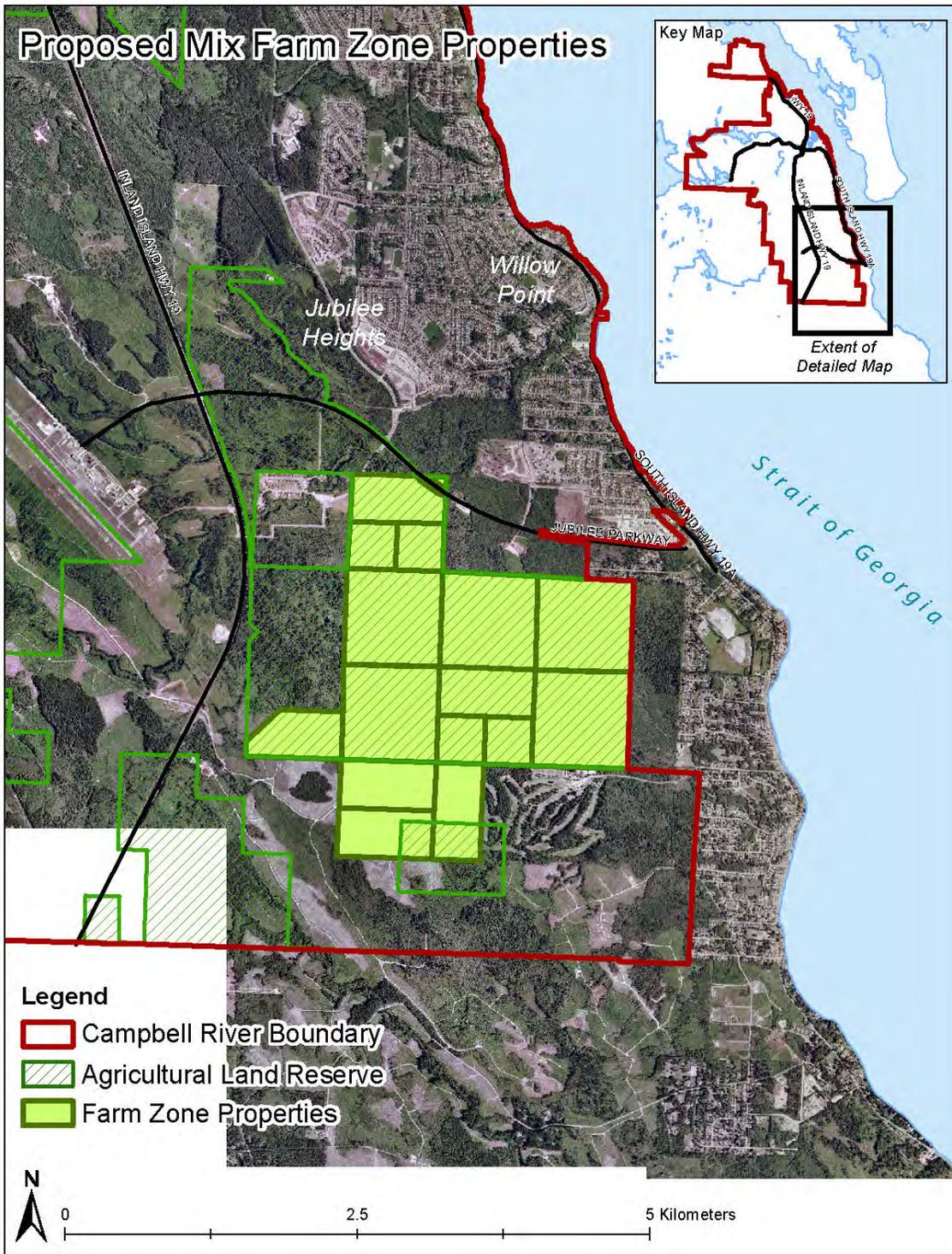


Figure 4: Proposed Mix Farm Agricultural Development Area.

## Soils

The soils in the proposed Mixed Farm Agricultural Development Area were assessed in at least 20 different locations using either a 3 inch auger or visual inspection of ditch profiles. This allows a reasonable assessment of the agricultural capability<sup>5</sup> of the overall area but more detailed assessment is recommended if this plan moves forward.

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<sup>5</sup> Agricultural capability is assessed using the Canada Land Inventory (CLI) system. Capability is described by unimproved and improved ratings for each soil. The ratings include a numeric class ranging from 1 to 7 with Class 1 to 3 being prime agricultural soils. Capability declines (or limitations increase) from Class 4 to Class 7. The limitations on each of these soils are denoted by letters. The improved rating is the capability of the soil when the main limitations are removed, i.e. a Class 4A soil can become a Class 2 soil if the A is removed by irrigating. For the sake of brevity, only the classes and limitations relevant to the soils on this property are described below.

Class 2 has limitations that cause continuous minor management problem or may cause lower crop yields compared to Class 1 land but which do not pose a threat of crop loss under good management. The soils in Class 2 are deep, hold moisture well and can be managed and cropped with little difficulty.

Class 3 has more severe limitations than Class 2 and management practices are more difficult to apply and maintain. The limitations may restrict the choice of suitable crops or affect one or more of the following practices: timing and ease of tillage, planting and harvesting, and methods of soil conservation.

Class 4 has limitations which make it suitable for only a few crops, or the yield for a wide range of crops is low, or the risk of crop failure is high, or soil conditions are such that special development and management practices are required. The limitations may seriously affect one or more of the following practices: timing and ease of tillage, planting and harvesting, and methods of soil conservation.

Class 5 is generally limited to the production of perennial forage crops or other specially adapted crops. Productivity of these suited crops may be high. Class 5 lands can be cultivated and some may be used for cultivated field crops provided unusually intensive management is employed and/or the crop is particularly adapted to the conditions peculiar to these lands. Cultivated field crops may be grown on some Class 5 land where adverse climate is the main limitation, but crop failure can be expected under average conditions.

**1.1.1. A - Soil Moisture Deficiency.** *Crops are adversely affected by aridity or droughtiness caused by low soil water holding capacity (coarse texture) or insufficient precipitation.*

**1.1.2. C - Adverse Climate.** *Generally, on Vancouver Island, these are frost pockets where cool air settles and there is not enough wind or slope for it to drain off or mix with warmer surrounding air.*

**1.1.3. D - Undesirable Soil Structure and/or Low Perviousness.** *Soils are difficult to till, require special management for seedbed preparation, pose trafficability problems, have insufficient aeration, absorb and distribute water slowly, and/or have rooting zone depth restricted by conditions other than high water table, bedrock or permafrost.*

**1.1.4.F – Fertility.** *Soils are limited by lack of available nutrients, low cation exchange capacity or nutrient holding ability, high acidity or alkalinity, high levels of carbonates, presence of toxic elements or compounds, or high fixation of plant nutrients. In this case it is the sandy texture that reduces the soil's ability to hold nutrients.*

There were three main soils, found on the site, with potential to be improved to prime agricultural land as shown in the table below. All three of these soils are stone free and all are limited by aridity or droughtiness (A), i.e. irrigation is necessary to improve their capability and increase the range of crops that can be produced. The areas are broad estimates because the entire block was not systematically assessed. It is highly likely that there are additional areas of prime soil included in the 248 ha (below) that is described as “Riparian area and other soils”. It was not possible to fully assess the entire parcel because of time constraints and accessibility.

<b>Soil Series</b>	<b>Unimproved Capability (CLI)</b>	<b>Improved Capability (CLI)</b>	<b>Area (estimated)</b>
Kye	60% 5A 40% 4A	60% 3A 40% 2AF	172 ha (425 acres)
Baynes	4A	60% 2A 40% 3A	130 ha (321 acres)
Illusion	4A	2D	28 ha (70 acres)
Prime Aq Zone Area			330 ha (816 acres)
Riparian and other			248 ha (611 acres)
<b>Total</b>			<b>578 ha (1427)</b>

## Kye Soil

About 50% (172 ha) of the 330 ha estimated area that is suitable for agriculture in this block of land is Kye soil. Kye is loamy sand to sandy loam; in this case it is loamy sand to sand. These soils are well drained which makes them very droughty in the summer. However, with adequate irrigation and fertilizer they can grow a wide range of crops.

The estimated agricultural capability of these soils is 60% Class 5A and 40% Class 4A. With irrigation, they can be improved to 60% Class 3A and 40% Class 2AF. These soils are very sandy so they do not hold water or fertilizer well. Irrigation requirements will be heavy but can be reduced over time if the organic matter in the soil can be increased.



Image 20 - Kye Soil.

## Baynes Soil

About 40% of the soils on the site are Baynes. Baynes soils are red sandy loam to loamy sand. They may have a restrictive hardpan layer at about 1 m depth which creates a high winter water table so, even though they are very sandy, drainage improvements are often needed. With adequate drainage, irrigation and fertilization, they can produce a wide range of crops. The Baynes soils on this site are mainly found along the eastern side. They have a distinct reddish-brown color and they are stone free. They are also generally at the lower elevations, within these properties, which increases the growing season and therefore the cropping options.

The estimated agricultural capability of the Baynes soils found on this property is Class 4A, improvable, with irrigation to 60% Class 2A and 40% Class 3A. Like Kye soils, the coarse sandy texture means they do not hold water or fertilizer well and require significant water for irrigation.



Image 21 - Baynes Soil.

## Illusion Soil

About 10% of the land within these properties is Illusion soil. Illusion is darker reddish-brown silt loam to loam soil. It is stone free. It is also likely to have a restrictive hardpan layer at 70 to 100 cm so drainage improvements are often required. However, with drainage and irrigation Illusion soils can produce a wide range of crops. They have better water holding, and nutrient holding capacity, than Baynes and Kye soils, so they are more productive and easier to manage. These soils are found adjacent to some of the wetland and riparian areas directly south of the Jubilee/Dogwood intersection.

The estimated capability of the Illusion soils, within these properties, is Class 4A, improvable to Class 2D. The A limitation is removed by irrigation. The D limitation, in the improved classification, indicates that the soil has some structural/texture problems associated with the silt content which can cause problems with compaction, etc. if it is not managed appropriately.



Image 22 - Illusion Soil.

### 8.2.7 Crop Options

**Baynes and Kye Soils.** All climatically adapted crops (except alfalfa and some water sensitive tree fruits) can be grown with the following:

- irrigation
- drainage system for water sensitive crops such as raspberries and tree fruits
- careful fertilizer practices
- soil conservation management practices where slopes exceed 5%

**Illusion Soils:** Beans, cereals, cole crops, corn, leaf vegetables, most forage crops, peas, and root crops can be produced with the following management inputs:

- cultivation should only be done when soils are workable to prevent compaction and structural degradation.
- soil erosion control practices are required if slopes are over 5%

Blueberries, raspberries, strawberries, and tree fruits can be grown with:

- water control system with ditches and underdrains is required to ensure long term productivity of these crops.
- soil conservation management practices
- due to imperfect drainage, an on-site soil and drainage assessment should be made before planting perennial crops.

### 8.2.8 Land Tenure Options for Agricultural Development Areas-

The Action Plan (Section 4.2) includes potential considerations for exploring lease agreements Table 10), establishing incubator or pilot farms, and improving access to utilities and resources for potential farmers. The design and implementation of the Agricultural Development Areas could accommodate this is a number of ways.

**Combination of fee simple and lease properties.** The simplest, and most conventional, would be to basically develop a subdivision plan for the identified areas and make some of the parcels available for long-term lease with an option to purchase. Other parcels would be available for sale. One of the challenges with this is the economics of it. Reduced costs for development and servicing could allow for very favourable terms on the leases which may draw potential farmers to these lands.

**Strata farm.** The concept of a strata farm has been promoted, in BC, for a few years but has not come to fruition yet. The Future Farm<sup>6</sup> concept is based on a detailed plan for one large lot, which is then divided into strata parcels, with each strata parcel being a mini farm with access to common areas and services (Access Rd., Hydro, irrigation water, drainage, if necessary, etc.). The main complex would be secured so there

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<sup>6</sup> <http://www.myvillagedesign.ca/parksville-agricultural-land-use>

would be no need for residential development within the strata farm itself. The common area and services could also include infrastructure (equipment, coolers, value added processing, marketing and distribution centers) and management support.

**Cooperatives.** There are a number of examples of agricultural industrial parks and cooperatives. Most seem to struggle because economic feasibility is not the main priority in many cases. A lot of them are based on the ideals of environmentally and socially sustainable agriculture but they are not necessarily economically sustainable.

Regardless of the structure, a detailed plan is needed to describe the business model and the governance of the development area and/or various tenures within the agricultural development area.

### 8.3 Appendix C: Campbell River Agricultural Context Map

