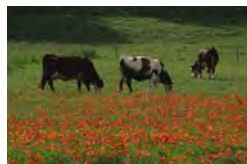


# DISTRICT OF SALMON ARM

## **AGRICULTURAL AREA PLAN** *Background Report*



476-121

*December 2003*

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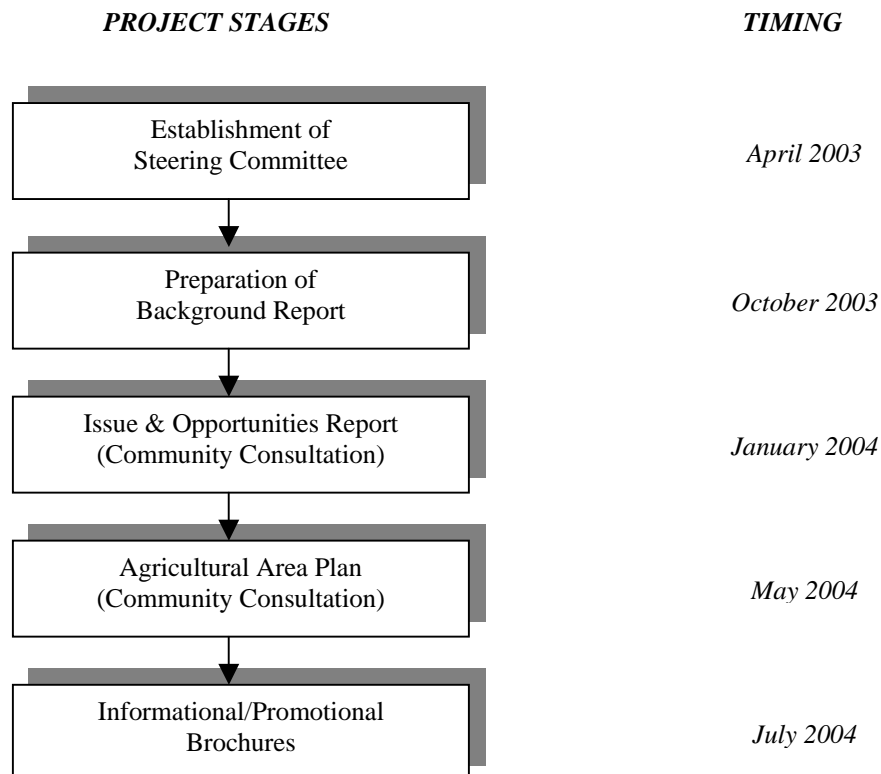
Figure 4.1: Active Use of Farmland in ALR..... 28

### 1.1 Plan Context

The plan area is presented in Map 1. The plan area is defined by the lands designated as Salmon River Valley Agricultural and Acreage Reserve in the Official Community Plan (OCP). The total area covered by the Agricultural Area Plan is approximately 7,800 ha. Approximately 5,900 ha, or 75% of the plan area, is located in the Agricultural Land Reserve (ALR).

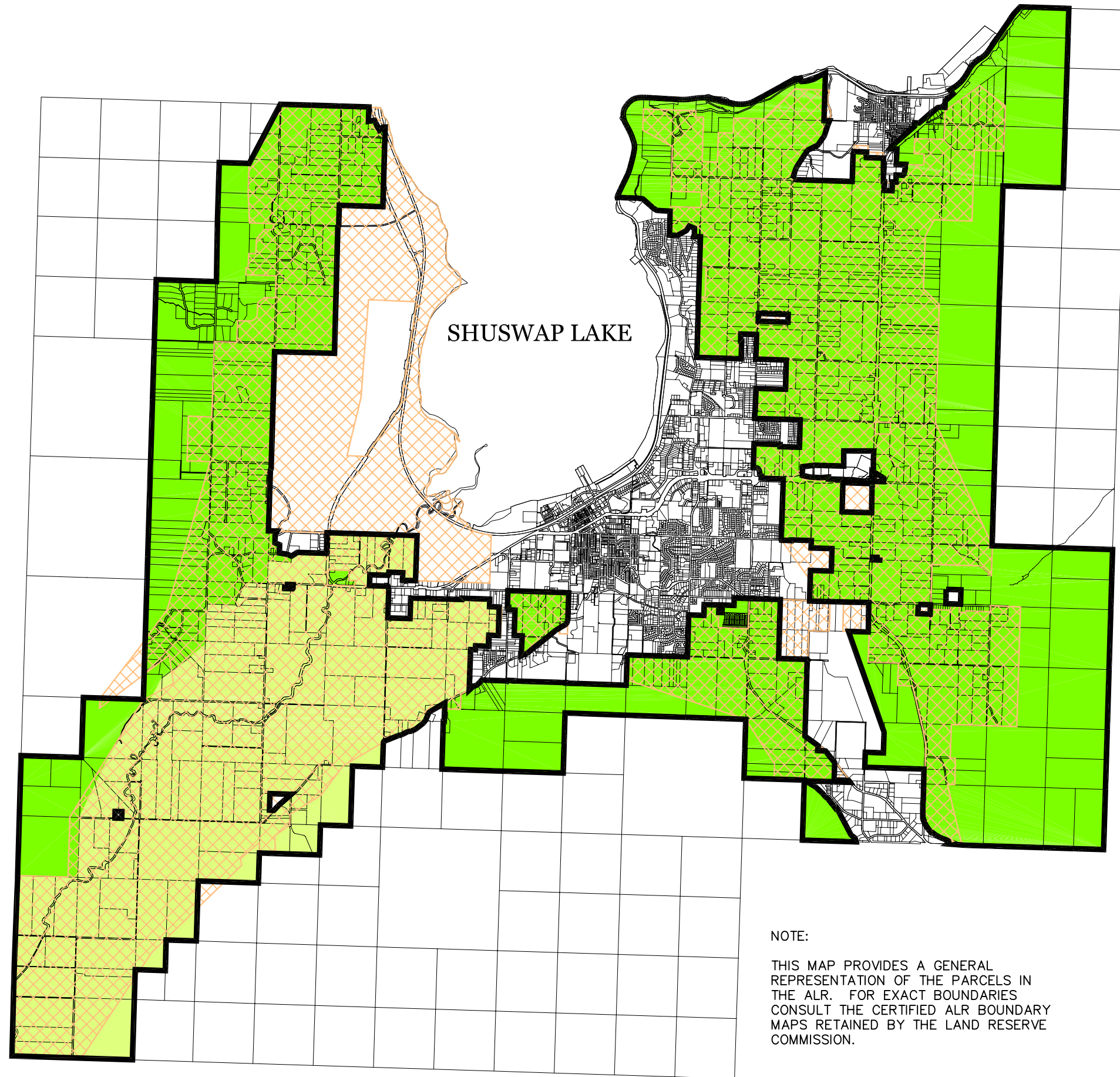
Agriculture in this region extends beyond District boundaries, particularly following the Salmon River Valley in the Columbia Shuswap Regional District (CSRD). The CSRD does not presently have a Regional Growth Strategy or policy direction for neighbouring agricultural areas. With the absence of a connecting administrative framework, the District of Salmon Arm has directed that this planning exercise focus on lands within District boundaries only.





### 1.2 Planning Process



# Agricultural Area Plan

Study Area  
Map 1



-  Agricultural Area Plan Boundary
-  Acreage Reserve
-  Salmon River Valley Agricultural
-  Agricultural Land Reserve

NOTE:

THIS MAP PROVIDES A GENERAL REPRESENTATION OF THE PARCELS IN THE ALR. FOR EXACT BOUNDARIES CONSULT THE CERTIFIED ALR BOUNDARY MAPS RETAINED BY THE LAND RESERVE COMMISSION.



Scale 1:60,000



### **1.3 Steering Committee**

Terms of Reference for an Agricultural Area Plan Steering Committee were adopted by Council on January 12, 2003. Membership on the Steering Committee is as follows:

Farm Community:

Margie Child, Wintergreen Farms  
James Hanna, Hanna & Hanna Orchards  
Ken McLeod, McLeod Farms

Municipal Council:

Rene Verwey, Councillor

Staff Appointments (advisory):

Carl Bannister, Director Development & Planning  
Jon Turlock, Planning & Development Officer

Provincial Agencies:

Martin Collins, Land Reserve Commission  
Stan Combs, Ministry of Agriculture and Food

Committee meetings were open to the public. Caroline Grover of the Salmon Arm Economic Development Corporation attended some Committee meetings.

Funding assistance for this project was provided by the District of Salmon Arm, the Ministry of Agriculture and Food and the Agriculture Foundation.

## 2.1 History of Agriculture

Early settlers were drawn to the Salmon Arm area by the favourable growing conditions and the attractive natural setting. In *The Centennial History of Salmon Arm 1971*, Ernest Doe recounts the early development of the Farmers' Association and the Agricultural Association.

Salmon Arm developed a strong agricultural sector that supported organization of the Salmon Arm and Shuswap Lake Fall Fair Association (1898); the Farmers Exchange (1907); and the Salmon Arm Cooperative Creamery Association in 1945. The Salmon Arm and Shuswap Lake Fall Fair Associations acquired a 10 ha (25 acre) site and opened their fair building in 1914. At the outset there were discussions about the use of the fair ground for other non agricultural activities (Doe, 1971).

The Farmers' Exchange was established to coordinate the market of fruit produce. Although there were only a few fruit farmers, exchange members felt that independent fruit sales were not an efficient method of marketing local fruit. The Fruit Exchange operated from a variety of locations with a large packing plant constructed in 1946 in Canoe. The following is a list of the produce handled through the exchange in 1912 and 1941 to illustrate the range of produce grown in the region.

<i>Produce</i>	<i>Boxes Packed</i>	
	<i>1912</i>	<i>1941</i>
➤ apples	21,188	160,568
➤ crabapples	n/a	2,466
➤ plums and pears	2,260	14,125
➤ cherries	n/a	1,472
➤ berries and currents	n/a	1,476

The Exchange had a peak year of operation in 1949 followed by a period of industry decline. In 1953, it was decided that the apple packing function should be undertaken in Vernon. The Exchange was also involved in apple box production, including the operation of a sawmill. This sawmill, located in Canoe, was sold to Federated Co-operative.

This brief overview of significant events associated with the history of agriculture in Salmon Arm indicates that there was a strong agricultural sector that was firmly linked to the economic and social fabric of the community.

## 2.2 Regional Setting

### 2.2.1 Temperature

Salmon Arm’s climate varies slightly due to geography (i.e. elevation differences between areas of the city). The warmest month is July, with a mean daily maximum temperature of 27.3 degrees Celsius. The coldest month is January, with a mean daily minimum temperature of -7.7 degrees Celsius.

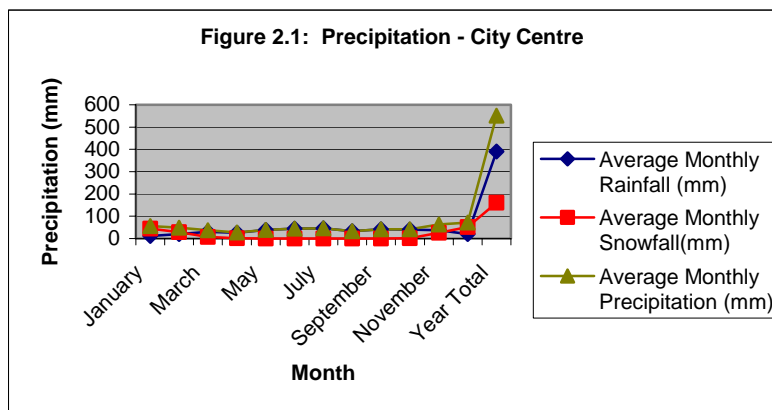
Mean Temperature and Precipitation Range			
Month	Mean Daily Maximum	Mean Daily Minimum	Precipitation
January	-1.5	-7.7	56.3mm
July	27.3	11.3	46.2mm

### 2.2.2 Precipitation

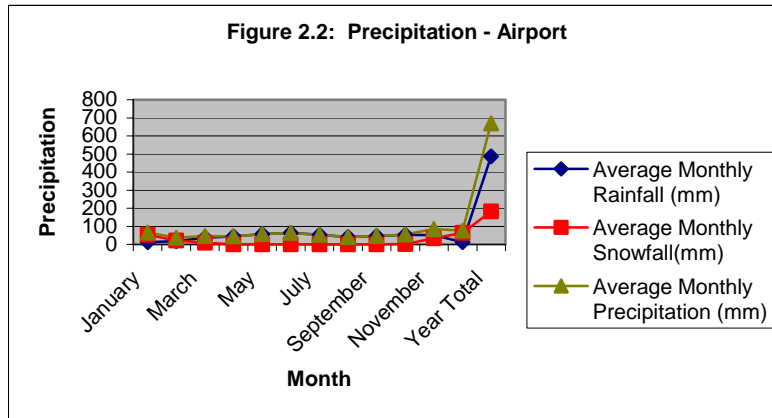
Annual precipitation averages 551.2mm in the Town Centre of Salmon Arm (Figure 2.1). The average at Salmon Arm’s airport, located at a higher elevation (527.3m), is 669.4mm (Figure 2.2).

Precipitation falls fairly evenly throughout the year. From December through February, precipitation mainly falls as snow. The highest monthly snowfall occurs in December. Rainfall is highest in June, July, September, and October.

(Source: <http://www.msc-smc.ec.gc.ca/climate>)







### 2.2.3 Soil Capability and Terrain Conditions

Map 2 presents the Agricultural Capability Classification for the District of Salmon Arm. Soil capabilities correlate well with topographical conditions, with areas of higher agricultural capability located at lower elevations in the river valleys (e.g. Canoe Creek and Salmon River Valley).

Appendix A includes Maps 6.1 and 6.2 from the District of Salmon Arm Liquid Waste Management Plan (2003), as additional geographic information relating to District's agricultural areas. In particular, the Salmon River and Canoe River are identified as problem areas for ground disposal because of high water table, poor soils, old systems or small lots (Figure 6.1). As well, the Salmon River Valley and the Highway 97 corridors are located over the District's aquifers (Figure 6.2).

# Agricultural Area Plan

## Canada Land Inventory (CLI)

### Agriculture Capability Classification

#### Improved

#### Map 2



- CLASS 1
- CLASS 2
- CLASS 3
- CLASS 4
- CLASS 5
- CLASS 6
- CLASS 7
- URBAN
- District of Salmon Arm
- Parcels
- Railway
- Streams
- Lake/River
- Swamp

CLI Classification system groups land into 7 classes according to its potentials and limitations for agricultural use.

The classification system is based upon the inherent soil and climate characteristics of the land. Class ratings indicate the relative range of crops that can be grown, as well as the specific soil or climate limitations that downgrade the agriculture capability of the land.

\*The CLI agriculture capability ratings give no indication of specific crop suitability, productivity, or present land use.

The land capability classification for agricultural has two main components; the capability class and the capability subclass. The class identifies potential for agriculture. The subclass identifies limitations or special management practices needed to improve the soil.

#### Agriculture Capability Classes

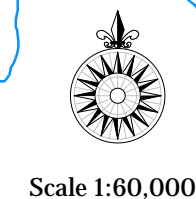
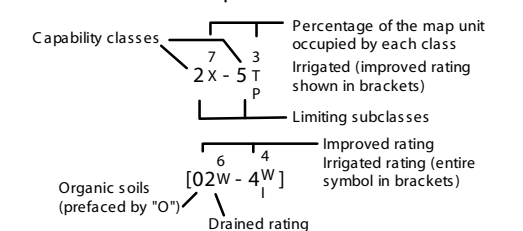
- Class 1** land is capable of producing the very widest range of crops. Soil and climate conditions are optimum, resulting in easy management.
- Class 2** land is capable of producing a wide range of crops. Minor restrictions of soil or climate may reduce capability but pose no major difficulties in management.
- Class 3** land is capable of producing a fairly wide range of crops under good management practices. Soil and/or climate limitations are somewhat restrictive.
- Class 4** land is capable of a restricted range of crops. Soil and climate conditions require special management considerations.
- Class 5** land is capable of production of cultivated perennial forage crops and specially adapted crops. Soil and/or climate conditions severely limit capability.
- Class 6** land is important in its natural state as grazing land. These lands cannot be cultivated due to soil and/or climate limitations.
- Class 7** land has no capability for soil bound agriculture.

#### Agriculture Capability Subclasses

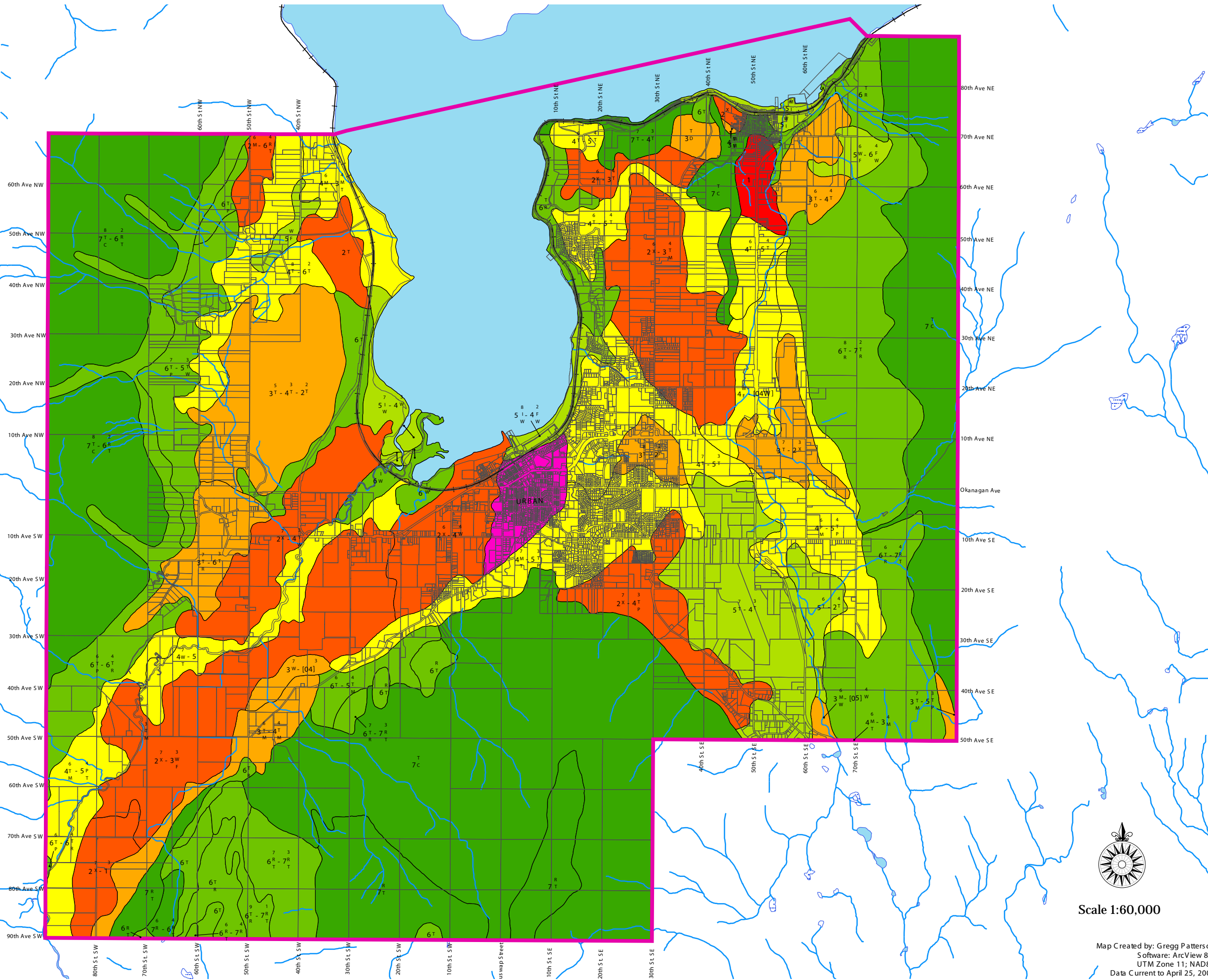
<b>A &amp; M</b>	soil moisture deficiency	<b>N</b>	salinity
<b>C</b>	adverse climate (excluding precip)	<b>P</b>	stoniness
<b>D</b>	undesirable soil structure outcroppings	<b>R</b>	shallow soil over bedrock &/or bedrock topography
<b>E</b>	erosion	<b>T</b>	excess water (groundwater)
<b>F</b>	low fertility	<b>W</b>	cumulative and minor adverse characteristics
<b>I</b>	inundation (flooding by streams, etc.)	<b>S &amp; X</b>	

The land capability classification usually gives land two ratings: unimproved and improved. Unimproved ratings describe the land in its native condition without any improvements to the soil. Improved ratings indicate the land's potential once the appropriate management practice identified by the subclass, such as irrigation, stone removal or drainage, has been implemented.

#### Example Classifications



Map Created by: Gregg Pattersor  
Software: ArcView 8.2  
UTM Zone 11; NAD83  
Data Current to April 25, 2003



Appendix A also provides a map of natural watercourses and fish bearing streams (Figure 6.4) in the District of Salmon Arm. It is apparent from this map that environmental management, particularly in terms of fisheries, is a significant aspect in the management of agricultural areas. For example, in the Salmon River Valley, storm water drainage is managed through a series of ditches along agricultural properties. These ditches are generally dry except during periods of peak run-off. During peak runoff there are occasions when streams and creeks backflow into drainage ditches. When backflow connects ditches with natural watercourses there may be concerns related to the management of the fisheries if fish are inhabiting the flooded ditches. Management issues, for example, may include both the protection of riparian areas and the dredging of ditches to maintain storm water flows.

Agricultural activities in Salmon Arm are regulated and influenced by a number of legislative and policy provisions through federal, provincial, regional and municipal administration. It is important to recognize the nature and scope of these parameters in considering means by which the local agricultural community can be supported and enhanced.

### **3.1 Federal Policy & Legislation**

Federal legislative provisions cover a range of national and international interests that affect activities of the local agricultural industry.

#### ***World Trade Organization (WTO)***

The WTO is the primary multilateral institution established to address cross-border trade agreements, negotiations, dispute resolution, trade policy monitoring and technical assistance for its membership. The WTO Agreement on Agriculture, ratified in 1995, focused on the establishment and maintenance of a fair and market-oriented international trading system for agricultural goods<sup>1</sup>.

#### ***North American Free Trade Agreement (NAFTA)***

NAFTA is a trilateral agreement established in 1994 between Canada, United States and Mexico to encourage and facilitate increased trade and investment between the member nations, and to work toward the elimination of all tariff and non-tariff trade barriers. Many agricultural interests were addressed in a Canada-U.S. agreement signed in 1998, which provided for the bilateral removal of tariffs on most goods. Also, a Canada-Mexico agreement signed in 1994 provides for the graduated removal of tariffs between those countries by 2003, with notable exceptions including dairy, poultry, egg products and sugar<sup>2</sup>.

#### ***Canadian Agricultural Products Act***

The Canadian Agricultural Products Act, under the umbrella of the Ministry for Agriculture, Foods and Fisheries, regulates the import, export and interprovincial trade marketing of agricultural products. This Act standardizes agricultural grading and inspecting procedures across Canada<sup>3</sup>.

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<sup>1</sup> See [http://www.agr.gc.ca/itpd-dpci/english/trade\\_agr/wto.htm](http://www.agr.gc.ca/itpd-dpci/english/trade_agr/wto.htm)

<sup>2</sup> See [http://www.agr.gc.ca/itpd-dpci/english/trade\\_agr/nafta.htm](http://www.agr.gc.ca/itpd-dpci/english/trade_agr/nafta.htm)

<sup>3</sup> See <http://www.agf.gov.bc.ca/resmgmt/fppa/refguide/appendix1.htm>

### ***Canada-British Columbia Implementation Agreement (2003)***

The Canada-British Columbia Implementation Agreement was adopted in 2003 as a roadmap for the implementation of the national Agricultural Policy Framework (APF) within British Columbia. The Agreement addresses a broad range of issues including risk management, food safety and food quality, science and innovation, environment and renewal management.

### ***Species at Risk Act (2003)***

The Species at Risk Act was enacted as Federal legislation in 2003 to encourage protection of endangered fish and wildlife species. The possibility of including a mechanism within the Act that would allow for provision of compensation to farmers who are affected by conservation agreements is currently under consideration

### ***Fisheries Act***

The Canadian Fisheries Act addresses the protection of fish habitats and outlines measures for pollution prevention. The Act stipulates that agricultural applications such as fertilizers, pesticides, fuel, manure or suspended solids must not adversely affect fish habitats, and that farming activities must not damage or obstruct any fish-bearing waterways.

Additional federal legislation that address various aspects of the agriculture industry include: Canada Grain Act; Canada Wildlife Act; Consumer Packaging and Labeling Act; Customs Act; Export and Import Permits Act; Feeds Act; Fertilizers Act; Food and Drugs Act, Health of Animals Act; Migratory Birds Convention Act; Pest Control Products Act; Plant Protection Act; Seeds Act; Transportation of Dangerous Goods Act; and, Wildlife Act.

## **3.2 Provincial Policy & Legislation**

British Columbia legislation is in place that influences many agricultural practices and procedures in the province.

### ***Local Government Act***

The Local Government Act addresses regional growth strategies (Sec. 849), Official Community Plans provisions (Div. 2, 875-884), Development Permit designations, and Use of Land for Agricultural Operations (Div. 9, Sec. 919-920(1)) and the limits of local

government by-laws in relation to farming (Sec. 915-918). This Act provides a basis for local government enactment of rural land-use bylaws to support the agriculture industry.

### ***Land Title Act***

The Land Title Act governs the overall disposition of land within British Columbia. Approving officers are now permitted to consider the impact on agricultural activities by proposed adjacent subdivisions. The potential intrusion impact of roadways accessing new development and abutting agricultural lands is also considered in the process of subdivision (Sec. 86).

### ***Agricultural Land Commission Act***

The Agricultural Land Commission Act was enacted in 1973 (with major amendments in 2002) with the goals of preserving agricultural land, encouraging farming, and encouraging local governments, to accommodate farm use of agricultural land and uses compatible with agriculture in their plans, bylaws and policies. This Act supports the maintenance of a healthy farm sector in communities across British Columbia. The Agricultural Land Commission recently restructured its organization to create six regional panels to work in closer collaboration with local governments. The ALR Act also provides for the Commission to enter into agreements to delegate decision making authority in the ALR for non farm use and subdivision applications.

### ***Agricultural Land Reserve Use, Subdivision and Procedure Regulation (2002)***

This regulation defines activities designated as farm uses; establishes permitted non farm uses in the Agricultural Land Reserve; regulates soil removal and the placement of fill within the ALR; establishes what types of applications are filed directly with the Commission; defines subdivisions permitted without application; sets process and notification requirements for local government, landowner and commission applications for inclusion, exclusion and non farm uses; and sets criteria for fees and penalties.

The Agricultural Land Commission has also established policies which address homesite severance for landowners who owned their property before the establishment of the ALR; and which clarify and expand on existing regulations pertaining to agri-tourism; farm retail sales; on farm processing; wineries and cideries; and additional dwellings for family members or farm help.

### ***Farm Practices Protection (Right to Farm) Act***

The Farm Practices Protection (Right to Farm) Act was enacted as Provincial legislation in 1996 to afford protection to farm businesses from nuisance complaints resulting from dust, odour, noise or other occurrences arising from normal farm operating practices.

The Act established the Farm Industry Review Board, which serves as a forum to hear complaints concerning farming activities<sup>4</sup>.

### ***Marketing Boards***

What is now the Farm Industry Review Board, created in 1934 under provisions of the Natural Products Marketing (B.C.) Act, is the provincial organization that oversees the activities of all commodity marketing boards or commissions, including those specific to the agriculture industry. The mandate of the British Columbia Marketing Board is to ensure the maintenance of orderly market conditions in the province by monitoring product demand, production quotas, and price structures. There are currently nine (9) Boards/Commissions in place under the umbrella of the provincial Marketing Board as follows: B.C. Broiler Hatching Egg Commission; B.C. Chicken Marketing Board; B.C. Cranberry Marketing Board; B.C. Egg Marketing Board; B.C. Hog Marketing Commission; B.C. Milk Marketing Board; B.C. Mushroom Commission; B.C. Turkey Marketing Board; and, B.C. Vegetable Marketing Commission.

### **3.3 Regional Research**

Selected studies and statistical summaries conducted by the Columbia Shuswap Regional District (CSRD) provide insight into the dynamics of individual sectors of the area.

#### ***CSRD Regional Profile, and CSRD Economic Profile and Analysis (2002)***<sup>5</sup>

The CSRD Regional Profile provides an overview of the Shuswap area including demographic indicators, infrastructure, resources and facilities, industry, and social conditions.

#### ***CSRD Tourism Opportunity Strategy (2002)***

The CSRD Tourism Opportunity Strategy, developed in 2002, includes a strength, weakness, opportunities analysis of the region's tourism industry, and identifies areas for potential growth. The report also outlines recommendations to enhance tourism activities in CSRD, including the increased development of agri-tourism opportunities.

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<sup>4</sup>See [http://www.legis.gov.bc.ca/37th3rd/3rd\\_read/gov21-3.htm](http://www.legis.gov.bc.ca/37th3rd/3rd_read/gov21-3.htm)

<sup>5</sup> See <http://www.csr.bc.ca>

### 3.4 Municipal Policy

The District of Salmon Arm has a number of plans, strategies, and bylaws in place that provide context and direction to agricultural initiatives in the community.

#### *District of Salmon Arm Official Community Plan Bylaw #3000 (effective July 29, 2002)*

The District of Salmon Arm Official Community Plan Bylaw 3000 establishes the parameters for the Urban Containment Boundary and two significant land use designations directed at supporting agricultural activities in the community. The Salmon Arm Official Community Plan also includes a recommendation to consider the development and implementation of an Agricultural Area Plan initiative for the District.

The Urban Containment Boundary is initiated to encourage a more compact community development form. Its boundary closely follows that of the Agricultural Land Reserve as shown on Map 1.

The Acreage Reserve and Salmon River Valley designations largely encompass the Agricultural Land Reserve lands and non-urban areas within the community, and provide for Rural Country residential development to complement agricultural activities.

A summary of the pertinent Official Community Plan policies that impact agricultural activities is included in Table 3.1 below.



<b>Table 3.1: District of Salmon Arm Official Community Plan Policies Affecting Agriculture</b>	
<b>Growth Management</b>	<ul style="list-style-type: none"> <li>• Recognizes importance of agriculture and protects high quality agricultural lands</li> <li>• Supports urban development within Urban Containment Boundary and sensitive integration of neighbouring natural, agricultural and residential areas</li> </ul>
<b>Environmental Management</b>	<ul style="list-style-type: none"> <li>• Encourages retention and use of wetlands as natural buffers between urban and rural uses</li> <li>• Requires obtaining required permits for altering land in Environmentally Sensitive and Passive Areas and Watercourses</li> <li>• Supports 'no net loss' to fish habitat, in accord with Federal Fisheries Act</li> <li>• Designation of Hazardous Slopes and Flood Plains designated as Environmentally Sensitive Development Permit Areas</li> </ul>
<b>Rural and Agricultural</b>	<ul style="list-style-type: none"> <li>• Requires maintenance or enhancement of the present configuration of parcels designated Acreage Reserve, Forest Reserve and Salmon River Valley Agricultural through boundary line adjustments and/or consolidation; therefore, rezoning, subdivision and/or Agricultural Land Reserve exclusion applications will not be encouraged</li> <li>• Supports subdivision or boundary realignments to facilitate public ownership for a linear park adjacent to a watercourse</li> <li>• Ensures that the District works with the appropriate agencies to permit intensive agriculture within the ALR while ensuring that urban/rural conflicts over odour, dust and noise are minimized</li> <li>• Minimizes conflict between land uses by access restrictions, fencing requirements and restricting residential development in rural areas</li> <li>• Supports home-based businesses in rural areas</li> <li>• District supports the maintenance and enhancement of agriculture uses within the ALR lands</li> <li>• Provides that municipal utilities to the Forest Reserve, Salmon River Valley Agricultural or Acreage Reserve Areas should not exceed the existing standard nor be extended</li> <li>• Allows that Country Inn Commercial Uses may be permitted within the Acreage Reserve subject to both Section 6.5.3 of the Salmon Arm Official Community Plan and the policies or approval of the Agricultural Land Commission for lands within the Agricultural Reserve</li> <li>• Stipulates that municipal servicing to Acreage Reserve areas is unlikely to be upgraded due to the potential of excessive costs to the District</li> <li>• Allows that subdivision for further rural small Acreage Reserve properties west of Salmon River and the Trans-Canada Highway may be permitted, subject to approved criteria</li> <li>• Allows that golf courses and ancillary resort residential development may be permitted in Acreage Reserve Areas</li> </ul>
<b>Urban Residential</b>	<ul style="list-style-type: none"> <li>• Provides for District minimization of conflicts between adjacent agricultural and residential land uses through use of buffering including fencing</li> </ul>

<b>Commercial</b>	<ul style="list-style-type: none"> <li>• Provides for District consideration of support for ALR Exclusion Application for lands in existing Glen Echo Commercial Area</li> <li>• Allows that Country Inn Commercial uses may be located within the Acreage Reserve designation subject to the use addressing unique site, tourist, environmental or outdoor recreational opportunities</li> <li>• Facilitates District support of Home Occupation uses in all urban residential areas as a means of accommodating independent employment and encouraging entrepreneurship and small business incubation opportunities – a maximum of 2 Home Occupations may be permitted per lot</li> <li>• Supports Bed and Breakfast operations in low density residential and agricultural areas as specified in the Zoning By-law</li> </ul>
<b>Industrial</b>	<ul style="list-style-type: none"> <li>• Supports Special Development Area for industrial purposes on current ALR lands; District may initiate ALR block exclusion application for subject lands</li> <li>• Permits zoning of lands identified as gravel deposits to permit processing (screening, crushing, mixing, asphalt manufacturing)</li> </ul>
<b>Parks, Recreation and Open Space</b>	<ul style="list-style-type: none"> <li>• Supports linear parks (greenways and bikeways) throughout Salmon Arm, including agricultural areas</li> <li>• Facilitates District minimization of conflicts between agricultural and recreational land uses through the use of buffering, including fencing of recreational areas adjacent to agricultural areas, where appropriate</li> <li>• Facilitates District promotion of heritage awareness in community</li> </ul>
<b>Transportation</b>	<ul style="list-style-type: none"> <li>• Supports development and maintenance of transportation network that reflects the various intended functions, while maintaining flexibility to changing needs</li> <li>• Supports road network, including Provincial Highway and Rural Arterial Streets in agricultural areas</li> <li>• Stipulates that Arterial Streets may be widened to accommodate cyclists and other needs, where separate facilities cannot be achieved</li> </ul>
<b>Community Services</b>	<ul style="list-style-type: none"> <li>• Supports institutional uses, including schools, churches, health care facilities, libraries and provincial and federal agencies within the Urban Containment Boundary</li> </ul>
<b>Utilities</b>	<ul style="list-style-type: none"> <li>• Allows that extensions of the water system may be supported within the Urban Containment Boundary with priority given to logically planned growth in the priority Development Area</li> <li>• Discourages establishment of new private water systems within the District</li> <li>• Allows that extensions of the sanitary sewer system may be supported within the Urban Containment Boundary with priority given to logically planned growth in the priority Development Area</li> <li>• Stipulates that septic tank and ground disposal will be the primary method of disposing of sewage effluent within the rural area – development will be prohibited where topography or soil conditions are not suitable for ground disposal</li> <li>• Provides for continued District use of the existing natural drainage pattern as the primary storm drainage system – District will continue to use stormwater detention/retention as its principal means of meeting the objective of maintaining flows at pre-development levels</li> </ul>

***District of Salmon Arm Zoning Bylaw 2303 (effective December 18, 1995)***

The District of Salmon Arm Zoning Bylaw 2303 establishes the parameters for the A1 – Agriculture Zone (minimum size 8.0 ha), A2 – Rural Holding Zone (minimum size 4.0 ha), A3 – Small Holding Zone (minimum size 2.0 ha.), M4 – Abattoir Zone, and C8 – Farm Produce Commercial Zone.

Additional items of District of Salmon Arm legislation, policy and strategy documentation that influence a range of activities of the agricultural industry include: District of Salmon Arm Economic Development Strategy (1999); District of Salmon Arm Subdivision and Servicing Bylaw; District of Salmon Arm Development Cost Charge Bylaws; District of Salmon Arm Financial Plan 2003-2007; District of Salmon Arm Taxation Annual Rate 2003 Bylaw 3289; District of Salmon Arm Tree Removal Bylaw 2305; and, Tourism Development Strategy for Salmon Arm 2002 as developed by the Salmon Arm Chamber of Commerce.

The following information is based on Census Canada data. A detailed presentation of Census Canada data on agriculture can also be found in “District of Salmon Arm Agricultural Overview” BC Ministry of Agriculture, Food and Fisheries, 2003 (Appendix B).

#### 4.1 Types of Farms

According to the 2001 Census of Agriculture, there were 195 farms<sup>6</sup> in the District of Salmon Arm, down from the 208 farms reported in 1996. Although the number of farms has dropped, there has been an increase in both the average size of farms and the total area farmed from 1996 as shown in Table 4.1.

**Table 4.1: General Farm Size Trends**

	1996	2001	% Change
➤ Total Area Farmed	3,781 ha	4,667 ha	+23%
➤ Farms Reporting	208	195	-6%
➤ Average Farm Size			
▪ Salmon Arm	19.1 ha	23.9 ha	+25%
▪ Columbia Shuswap Regional District	49.2 ha	68.6 ha	+39%
▪ Province	115.8 ha	127.5 ha	+10%
➤ Farms under 4 ha in size	43	28	
➤ Farmland Ownership			
▪ Owned	2,769 ha (73%)	3,668 ha (79%)	
▪ Rented	1,013 ha (27%)	999 ha (21%)	

<sup>6</sup> In 1996 and 2001, a Census farm was defined as an agricultural operation that produces at least one of the following products intended for sale: crops; livestock; poultry; animal products or other agricultural products.

Changes in the use of farmland from 1996 to 2001 are summarized as follows:

- increase in area used for field crops, particularly alfalfa and other tame hay with a decrease in corn for silage.
- decrease in the area used for fruits, berries and nuts.
- increase in summer fallow, managed and unmanaged pasture areas.
- decrease in the area of farms producing “other” crops.
- doubling of the number of poultry and pigs as livestock.
- 20% decrease in the number of horses and ponies.
- loss of bee colonies.

**Table 4.2: Agricultural Production**

	1996	2001	Rate of Change
<b>Crops</b>			
➤ Field crops	1540 ha	1762 ha	+14%
➤ Fruits, nuts & berries	139 ha	85 ha	-39%
➤ Vegetables	26 ha	19 ha	-27%
➤ Greenhouse Production	(1443 m <sup>2</sup> )	(1843 m <sup>2</sup> )	+27%
➤ Nursery products	14 ha	n/a	n/a
➤ Christmas Trees	25 ha	11 ha	-56%
➤ Sod Grown for sale	1 ha	0 ha	n/a
➤ Summer fallow	26 ha	46 ha	+77%
➤ Pasture (managed)	442 ha	706 ha	+60%
➤ Pasture (unmanaged)	580 ha	1257 ha	+1.17%
➤ Other	953 ha	658 ha	-31%
Net Area <sup>7</sup>	3781 ha	4667 ha	+23%
<b>Livestock</b>			
➤ e.g. hens & chickens	106,522	232,515	
➤ cattle and calves			
▪ milk	834	605	
▪ beef	632	903	
▪ sheep & lambs	301	476	
▪ pigs	42	100	
▪ horses & ponies	304	240	
▪ honey bee colonies	58	n/a	

<sup>7</sup> Columns may not sum due to census reporting standards.

Overall farming activities remained relatively consistent from 1996 to 2001, with most of the gains in farmland area achieved through the use of more land for summer fallow and pasture. These activities are not intensive uses of agricultural land and are not likely to be contributing significantly to growth in the District's agricultural economy. There is, however, evidence of continued growth in the agricultural economy in Table 4.3 which shows that farm receipts increased by 17% from 1996 to 2001. This growth is likely fueled by more intensive agricultural activities such as livestock production and field crops and greenhouse production (Table 4.2).

**Table 4.3: Gross Farm Receipts**

	1995	2000
Total Gross Farm Receipts		
➤ Salmon Arm	\$8,627,492	\$10,082,745
Average Gross Farm Receipts		
➤ Salmon Arm	\$41,478	\$51,706
➤ CSRD	\$60,015	\$55,252
➤ British Columbia	\$68,723	\$113,736

Table 4.4 indicates that 21% of the farms in Salmon Arm are reporting farm receipts over \$25,000 per annum. This rate likely increased due to gains in the number of specialized farms (e.g. beef, sheep and chicken farms).

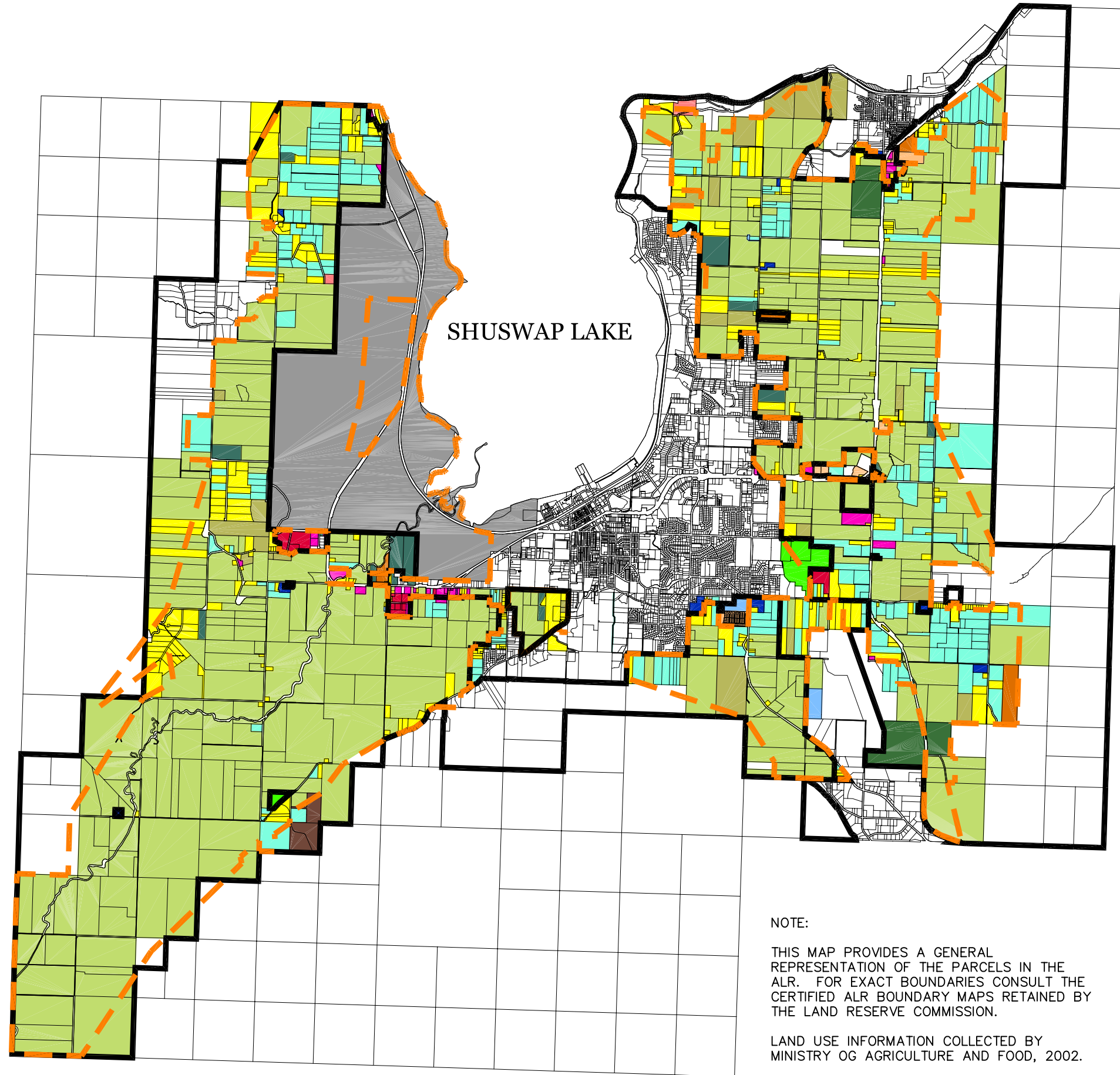
**Table 4.4: Farms by Gross Farm Receipts – 2000**

	<i>Salmon Arm</i>		<i>Columbia-Shuswap</i>		<i>B.C.</i>	
	Farms	% of S. Arm Total	Farms	% of Col-Shwp Total	Farms	% of BC Total
<\$2,500	28	15%	100	16%	2,908	14%
\$2,500 - \$24,999	125	64%	373	61%	10,605	52%
\$25,000 - \$99,999	24	12%	85	14%	3,400	17%
\$100,000 and over	18	9%	58	9%	3,377	17%
Total	195	100%	616	100%	20,290	100%

The Ministry of Agriculture, Food & Fisheries conducted a survey of agriculture in Salmon Arm and prepared two map inventories for land in the ALR in 2002. Map 3 illustrates agricultural and non-agricultural activities within the ALR. Map 4 classifies and locates different agricultural land use activities within the ALR.

# Agricultural Area Plan

Primary Land Uses in ALR  
Map 3



- Agricultural Area Plan Boundary
- Agricultural Land Reserve (ALR) Boundary
- Agriculture
- Commercial / Service Use
- Golf Course
- Hobby Farm
- Indian Reserve
- Industrial Use
- Institutional Use
- Land In Transition
- Mineral Extraction
- Mobile Home Park
- Not In Use
- Park
- Recreational Use
- Residential Use
- Unused Farm Land
- Utility
- No Information

NOTE:  
THIS MAP PROVIDES A GENERAL REPRESENTATION OF THE PARCELS IN THE ALR. FOR EXACT BOUNDARIES CONSULT THE CERTIFIED ALR BOUNDARY MAPS RETAINED BY THE LAND RESERVE COMMISSION.  
LAND USE INFORMATION COLLECTED BY MINISTRY OF AGRICULTURE AND FOOD, 2002.

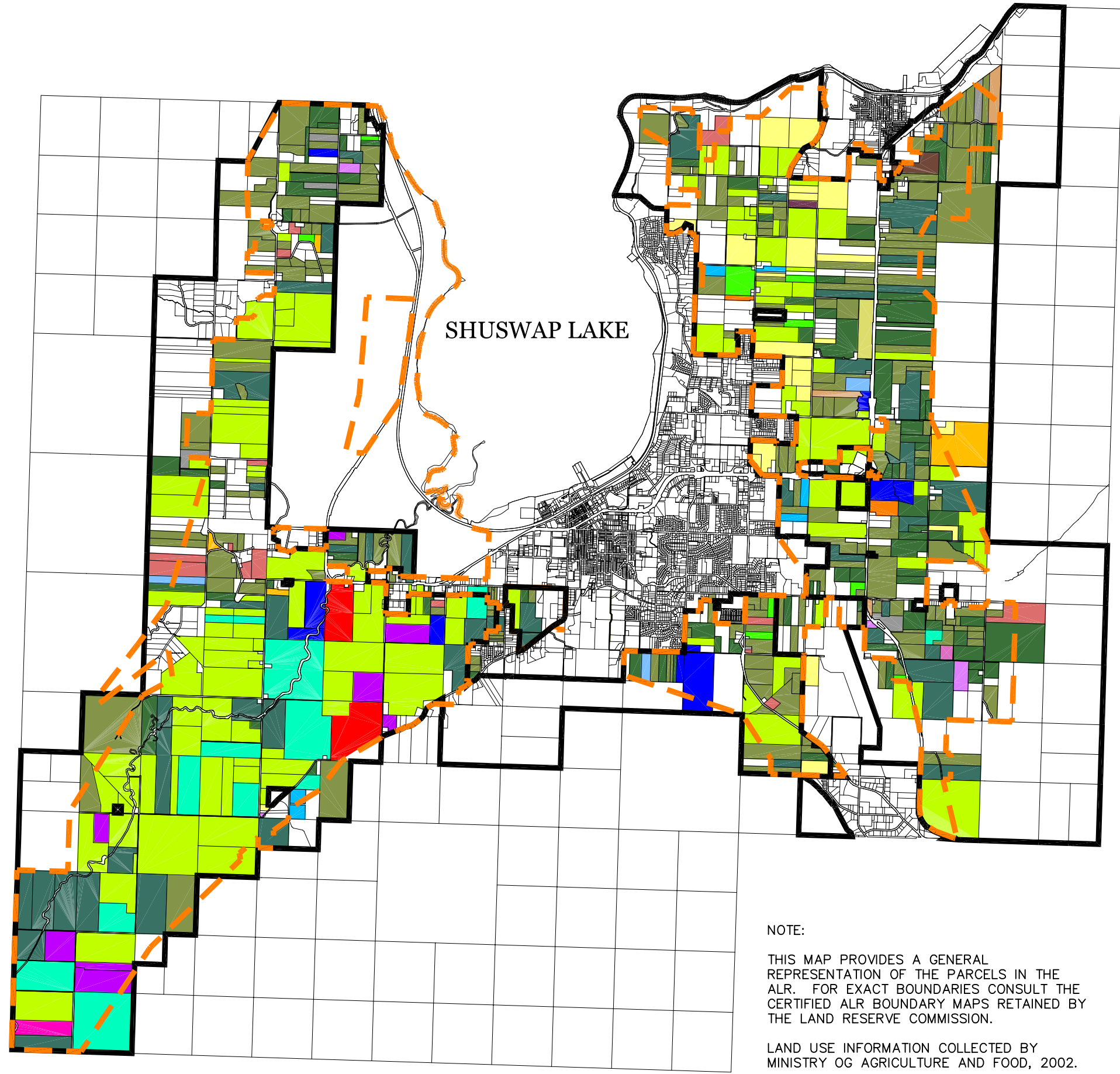


Scale 1:60,000



# Agricultural Area Plan

## Primary Agricultural Land Use Activities Map 4



- Agricultural Area Plan Boundary
- Agricultural Land Reserve (ALR) Boundary
- Beef Cattle Farm
- Horse Farm
- Pasture
- Cultivated Land
- Dairy Farm
- Forage Operation
- Feedlot
- Berry Farm
- Christmas Tree Farm
- Field Vegetable Farm
- Livestock Operation - Type Unknown
- Llama / Alpaca Farm
- Agritourism
- Mixed Livestock
- On-farm Bed and Breakfast
- Orchard
- Poultry Farm
- Poultry Farm, Free-Range
- Ratite Farm
- Sheep / Goat Farm
- Turf Farm
- Unknown
- Vineyard

NOTE:  
THIS MAP PROVIDES A GENERAL REPRESENTATION OF THE PARCELS IN THE ALR. FOR EXACT BOUNDARIES CONSULT THE CERTIFIED ALR BOUNDARY MAPS RETAINED BY THE LAND RESERVE COMMISSION.  
LAND USE INFORMATION COLLECTED BY MINISTRY OF AGRICULTURE AND FOOD, 2002.



Scale 1:60,000





The land use activities listed in Table 4.5 were identified through the Ministry of Agriculture, Food & Fisheries survey. The assessment information was linked to the District's GIS database to obtain an understanding of the relationship between land value, size and use.

Table 4.5 indicates that the 4 activities with the highest collective assessed values (beef, horse, forage and pasture farms) represent 78% of the agricultural area and 82% of the assessed value. Assessed values represent land and buildings only and do not include farm capital in machinery. This information is consistent with the 2001 census summary of farm capital as presented in Table 4.6.

**Table 4.5: Agricultural Land Use Inventory<sup>8</sup>**

<b>Primary Land Use Activities</b>	<b>Parcels</b>	<b>Area (ha)</b>	<b>Area (%)</b>	<b>Gross Value</b>	<b>Value %</b>
<b>Specialty</b>					
Agritourism	4	65.7	1.35%	19,800	0.02%
Vineyard	1	4.0	0.08%	80,500	0.08%
Christmas Tree Farm	3	19.2	0.40%	422,600	0.42%
On-farm Bed and Breakfast	2	10.3	0.21%	356,800	0.35%
Orchard	27	183.7	3.78%	3,635,500	3.59%
Turf Farm	2	15.9	0.33%	192,700	0.19%
sub-total		298.9		\$4,707,900	
<b>Field Crops &amp; Pasture</b>					
Forage Operation	131	1545.1	31.75%	23,715,000	23.43%
Pasture	225	1169.3	24.02%	35,747,500	35.32%
Cultivated Land	10	38.1	0.78%	1,319,300	1.30%
Field Vegetable Farm	14	94.9	1.95%	1,645,200	1.63%
Berry Farm	6	23.0	0.47%	735,200	0.73%
sub-total		2870.5		\$63,162,200	
<b>Poultry &amp; Livestock</b>					
Mixed Livestock (small-scale)	4	49.9	1.03%	713,400	0.70%
Sheep/Goat Farm	5	26.5	0.55%	502,600	0.50%
Poultry Farm, free-range	4	13.6	0.28%	589,100	0.58%
Poultry Farm	8	96.0	1.97%	1,712,000	1.69%
Livestock operation - type unknown	14	80.6	1.65%	2,461,600	2.43%
Dairy Farm	15	310.4	6.38%	3,270,200	3.23%
Llama/Alpaca Farm	3	18.8	0.39%	404,500	0.40%
Ratite Farm	1	3.4	0.07%	153,500	0.15%
Beef Cattle Farm	62	615.5	12.65%	7,242,000	7.16%
Horse Farm	86	453.9	9.33%	16,189,100	16.00%
Feedlot	1	16.0	0.33%	91,500	0.09%
sub-total		1684.7		\$33,329,500	
Unknown	1	13.1	0.27%		0.00%
<b>Total</b>	<b>629</b>	<b>4867.2</b>	<b>100.00%</b>	<b>\$101,199,600</b>	<b>100.00%</b>

<sup>8</sup> B.C. Assessment, 2003; Ministry of Agriculture, Food & Fisheries; Land Use Survey, 2002; District of Salmon Arm, GIS – Area Calculations, 2003.

**Table 4.6: District of Salmon Arm Farm Capital<sup>9</sup>**

	1996		2001	
	Value (\$)	% of Total	Value (\$)	% of Total
<b>Total Farm Capital</b>	\$89,085,172		\$102,204,186	
➤ Land and buildings	\$76,508,300	86%	\$85,034,500	83%
➤ Farm machinery and equipment	\$8,641,479	10%	\$11,455,805	11%
➤ Livestock and poultry	\$3,935,393	4%	\$5,713,881	6%

The Assessment data also provides information on the value of land only. Table 4.7 indicates that the assessed value of agricultural land is \$43M or 42.6% of the gross value of agricultural assessments.

#### **4.2 Parcelization**

The District of Salmon Arm GIS database also provided information on the parcel sizes within the ALR as summarized in Tables 4.8 and 4.9. The parcels represent titled lots, not farms. A farm could consist of several parcels.

The data presented in Tables 4.8 and 4.9 has been grouped into five geographic areas as shown on Map 5. Boundaries were drawn around similar geographic features such as the Salmon River or Canoe Creek (East Highway Corridor) and areas of similar elevation. Boundaries also define areas with relatively similar Agricultural Capability Classifications (Map 2).

Table 4.8 indicates that the community has been relatively successful in maintaining large parcel sizes. Approximately 80% of all agricultural lots are larger than 8.0 ha in size throughout the District of Salmon Arm. The percentage of parcels larger than 8.0 ha in size is even greater (>95%) for land that is actively farmed in the ALR as shown in Table 4.9.

<sup>9</sup> Statistics Canada, 2001.

**Table 4.7: Agricultural Inventory of Land Values<sup>10</sup>**

<b>Primary Land Use Activities</b>	<b>Parcels</b>	<b>Area (ha)</b>	<b>Area (%)</b>	<b>Land Value</b>	<b>Value %</b>
Ratite Farm	1	3.4	0.07%	\$9,500	0.02%
On-farm Bed and Breakfast	2	10.3	0.21%	\$13,600	0.03%
Vineyard	1	4.0	0.08%	\$14,300	0.03%
Feedlot	1	16.0	0.33%	\$24,700	0.06%
Christmas Tree Farm	3	19.2	0.40%	\$29,500	0.07%
Sheep/Goat Farm	5	26.5	0.55%	\$45,100	0.10%
Turf Farm	2	15.9	0.33%	\$49,900	0.12%
Berry Farm	6	23.0	0.47%	\$84,600	0.20%
Llama/Alpaca Farm	3	18.8	0.39%	\$163,600	0.38%
Poultry Farm, free-range	4	13.6	0.28%	\$257,300	0.60%
Poultry Farm	8	96.0	1.97%	\$265,700	0.62%
Field Vegetable Farm	14	94.9	1.95%	\$401,700	0.93%
Mixed Livestock (small-scale)	4	49.9	1.03%	\$449,800	1.04%
Cultivated Land	10	38.1	0.78%	\$585,800	1.36%
Livestock operation - type unknown	14	80.6	1.65%	\$837,700	1.94%
Dairy Farm	15	310.4	6.38%	\$934,300	2.16%
Orchard	27	183.7	3.78%	\$1,356,800	3.14%
Beef Cattle Farm	62	615.5	12.65%	\$2,472,900	5.73%
Horse Farm	86	453.9	9.33%	\$6,834,800	15.84%
Forage Operation	131	1545.1	31.75%	\$9,986,500	23.14%
Pasture	225	1169.3	24.02%	\$18,340,400	42.50%
Agritourism	4	65.7	1.35%		0.00%
Unknown	1	13.1	0.27%		0.00%
<b>Total</b>	<b>629</b>	<b>4867.2</b>	<b>100.00%</b>	<b>\$43,158,500</b>	<b>100.00%</b>

**Table 4.8: Parcelization in ALR – All Properties**

	<b>0-0.79 ha</b>	<b>%</b>	<b>0.8-1.9 ha</b>	<b>%</b>	<b>2.0-3.9 ha</b>	<b>%</b>	<b>4.0-7.9 ha</b>	<b>%</b>	<b>&gt;8.0 ha</b>	<b>%</b>	<b>Total Properties</b>
Salmon River Valley	62	26%	32	13%	28	12%	33	14%	86	36%	241
Glen Eden & Glen Echo	48	21%	30	13%	78	35%	38	17%	32	14%	226
Hillcrest	11	18%	6	10%	20	33%	17	28%	7	11%	61
Highway 97 South	17	16%	19	18%	28	26%	27	25%	15	14%	106
East Highway Corridor	40	24%	20	12%	29	18%	46	28%	30	18%	165
Broadview	26	14%	21	12%	54	30%	40	22%	39	22%	180
<b>Total</b>	<b>204</b>		<b>128</b>		<b>237</b>		<b>201</b>		<b>209</b>		<b>979</b>
<b>% of Total Parcels</b>	<b>21%</b>		<b>13%</b>		<b>24%</b>		<b>21%</b>		<b>21%</b>		

<sup>10</sup> B.C. Assessment, 2003; Ministry of Agriculture, Food & Fisheries; Land Use Survey, 2002; District of Salmon Arm, G.I.S. Area Calculations, 2003.

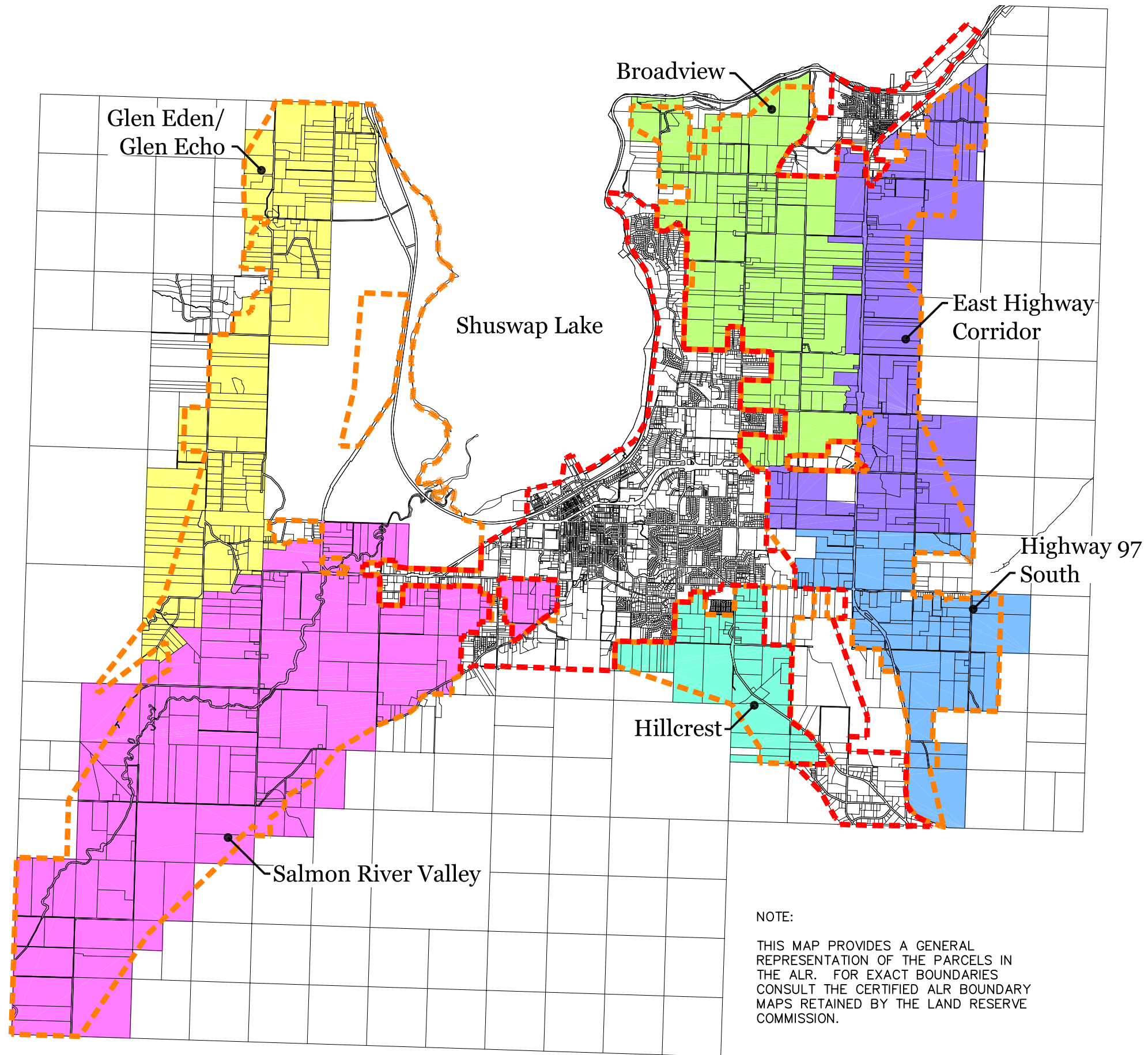
**Table 4.9: Parcelization of Active Farmland in ALR**

	0-0.79 ha	%	0.8-1.9 ha	%	2.0-3.9 ha	%	4.0-7.9 ha	%	>8.0 ha	%	Total Properties
Salmon River Valley	20	12%	13	8%	22	13%	29	18%	81	49%	165
Glen Eden & Glen Echo	3	3%	11	11%	33	32%	27	26%	28	27%	102
Hillcrest	3	6%	5	11%	17	36%	16	34%	6	13%	47
Highway 97 South	4	5%	14	19%	22	30%	22	30%	12	16%	74
East Highway Corridor	2	2%	7	7%	21	21%	41	41%	28	28%	99
Broadview	2	2%	6	6%	37	35%	30	28%	32	30%	107
<b>Total</b>	34		56		152		165		187		594
% of Total Parcels	6%		9%		26%		28%		31%		
% of Parcel Size in ALR & Actively Farmed	17%		44%		64%		82%		89%		

The number of parcels identified in Table 4.9 (594) is less than shown in Table 4.6 and 4.7 (629 properties) because not all ALR lands have more than 50% of this total area located within the planning areas (e.g. lots within the urban containment boundary with preliminary ALR exclusion approval in the industrial area).

# Agricultural Area Plan

Planning Areas  
Map 5



- - - - Urban Containment Boundary
- - - - Agricultural Land Reserve Boundaries

NOTE:  
THIS MAP PROVIDES A GENERAL REPRESENTATION OF THE PARCELS IN THE ALR. FOR EXACT BOUNDARIES CONSULT THE CERTIFIED ALR BOUNDARY MAPS RETAINED BY THE LAND RESERVE COMMISSION.



Scale 1:60,000



**Figure 4.1: Active Use of Farmland in ALR**

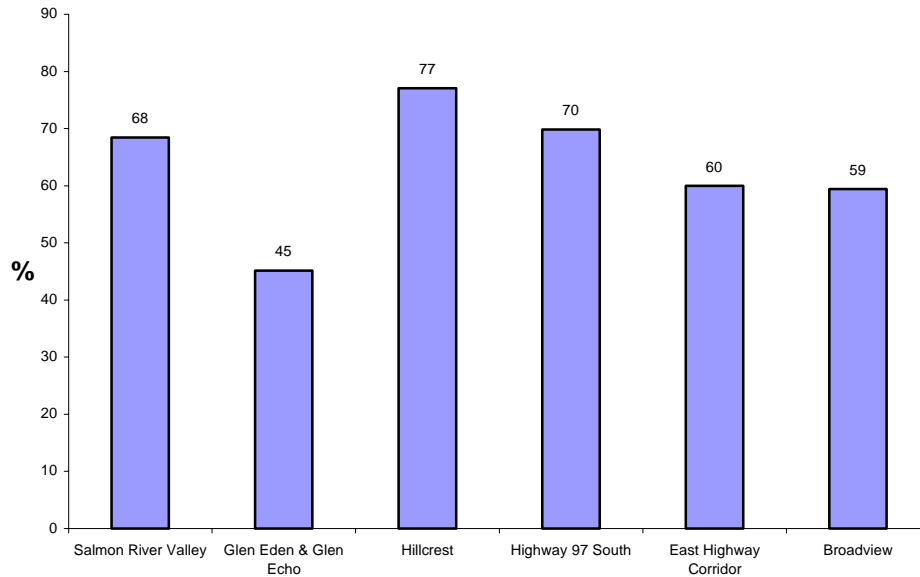


Figure 4.1 indicates that the rate of active use of farmland parcels is highest in the Hillcrest planning area.

### **4.3 Farm Management**

Table 4.10 summarizes land management practices in the District of Salmon Arm and indicates a general decrease in common management practices. Of particular note is that there has been a decline in the percentage of farmland under irrigation.

Irrigation is an important factor influencing agricultural capabilities in the District of Salmon Arm as access to water is required to enhance agricultural opportunities. The analysis of agricultural land use activities has demonstrated that 62% of agricultural land capital investment and 59% of the land area is used for field crops and pasture. The productivity of these operations can be significantly improved through irrigation. The number of hay crops, for example, could increase from one crop to three crops per annum with irrigation.

Agricultural irrigation is currently limited to private systems using independent wells or drawing from natural watercourses. The District's Water Servicing by-law restricts use of municipal water on lots over 2 ha. This policy is monitored, in part, through water meters installed on all commercial farm enterprises.

**Table 4.10: Land Management Practices**

	1996		2001	
	Hectares	% of all Farmland	Hectares	% of all Farmland
➤ Irrigation	504	13%	399	8.6%
➤ Commercial Fertilizers	1,062	28%	966	20.7%
➤ Manure	596	16%	603	12.9%
➤ Herbicides	272	7%	233	5.0%
➤ Insecticides	127 <sup>11</sup>	3%	x	n/a
➤ Fungicides	101	3%	90	1.9%
➤ Soil Erosion Control Practices: (number of farms)				

	1996	2001
Crop rotation	39	34
Permanent grass cover	110	99
Winter cover crops	6	2
Contour cultivation	8	3
Strip-cropping	3	7
Grassed waterways	3	6
Windbreaks or shelterbelts	6	6
Green manure crops for plow downs	na	10
Mechanical or hand weeding of crops	na	32

Source: Statistics Canada

#### **4.4 Economic Analysis**

As noted in the previous section, 83% of the farm capital lies in fixed, not moveable, assets of land and buildings. From 1996 to 2001, this capital increased from \$76.5 million to \$85 million, an 11% increase over 5 years. The relative share, of land and building for the same period, however, has dropped from 96% to 83% owing to a significant capital investment in livestock and poultry.

The total gross farm receipts also increased from \$8 million in 1996 to \$10 million in 2001. This revenue is small in comparison to the revenues from forestry, but involves a smaller land area and is a significant and consistent contribution to the economy. Recent



studies show that for every direct job in agriculture, 2 additional jobs are created in the local economy in support services to the industry, and in the processing and marketing of local products. In addition, for every dollar generated in agriculture, an additional 2 dollars is generated in the local economy.

<http://www.ofa.on.ca/aglibrary/Research/economic@20impact@201>)

The following list identifies some of the recently completed economic studies that have addressed agriculture in the Salmon Arm Area:

- A qualitative Research Study on Agriculture in Subdivision C, CSRD, Oct. 14, 1995.
- A Report on Secondary Research & Internet Searches for the Shuswap Agricultural Strategy, Nov. 12, 1999.
- A Report on Recommendations – Next Steps for the Shuswap Agricultural Strategy, Dec. 15, 1999.

The findings of these studies indicated that the agricultural industry in Area C of the CSRD (including the District of Salmon Arm) was “continuing the maturation and intensification identified in the 1996 census. None of the findings identified factors that would be threatening the continued health of the industry”. The reports emphasized an “on-going” search for means to enhance the farm income of the producers through value added processing, reduction of wastes or the reduction of production costs.

The Economic Development Corporation has recently updated its Economic Action Plan for Salmon Arm and provided the following strategy and objectives.

**Strategy:**

Enhance and expand support for Salmon Arm’s agricultural sector to development value-added opportunities and agri-tourism business. The British Columbia Agri-Tourism Alliance will promote a healthy and sustainable agri-tourism industry by facilitating and supporting: strategic partnerships; quality standards; marketing and product development; and education and awareness; for British Columbia’s agriculture and tourism sectors, thereby enabling them to deliver a diversity of quality visitor experiences.

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<sup>11</sup> In the 1991 Census of Agriculture Insecticides and Fungicides were grouped together but split in 1996.

### **Objectives:**

- increase awareness of agri-tourism development potential and increase recognition for the agri-tourism industry.
- encourage effective agri-tourism training programs and development of skilled agri-tourism workforce.
- support the diversification of the current agricultural industry by:
  - communicating with traditional agricultural operations.
  - researching regional associations specializing in value-added and new crop ventures.
- meet with provincial and federal agricultural departments to identify new opportunities in the agricultural industry.
- promote upcoming and new opportunities that show strong potential for success in the region.
- foster partnership development with traditional and non-traditional agricultural-related organizations.

### **Action & Responsibility:**

<b>Lead Agency</b>	<b>Action</b>	<b>Partnerships</b>	<b>Financial Need</b>	<b>Timeframe</b>
	promote strategic partnerships for the agri-tourism industry locally			2004
	encourage agri-tourism businesses to take part in BCATA agri-tourism training programs	Media, Margie Childs		On-going
EDC	increase awareness of agri-tourism development potential and increase recognition	Tourism O.S.		2003, 2004

<b>Lead Agency</b>	<b>Action</b>	<b>Partnerships</b>	<b>Financial Need</b>	<b>Timeframe</b>
EDC	<p>encourage strategic partnerships and pooling of resources for shared common goals, reduced financial risk and economies of scale</p> <p>encourage new and innovative tourism products and packages and improved product ready tourism market coverage</p> <p>foster partnership development with traditional and non-traditional agricultural-related organizations</p>	TOS implementation		03-04
	encourage product and market information and expertise exchange	Farmers Market, BCATA		On-going
	encourage effective agri-tourism training programs and development of skilled agri-tourism workforce	OUC?		
	promote upcoming and new opportunities that show strong potential for success in the region	CFDC? CSRDC?		
	<p>support the diversification of the current agricultural industry by:</p> <ul style="list-style-type: none"> <li>▪ communicating with traditional agricultural operations</li> <li>▪ researching regional associations specializing in value-added and new crop ventures</li> </ul>	BCATA, CFDC?		
	meet with provincial and federal agricultural departments to identify new opportunities in the agricultural industry	BCATA		

The results of the background research were presented to the Steering Committee in October 2003. The Background Report concludes the research phase and provides an opportunity to initiate public consultation.

Public consultation has occurred with the distribution of a community-wide survey on agricultural issues. The survey was circulated with the District's Fall Newsletter and provided the public with an opportunity to comment on agricultural issues.

The second opportunity for public consultation will occur on January 15, 2004 at a Public Open House in Salmon Arm.

Public input will be reviewed with the Steering Committee and TRUE will prepare an Issues and Opportunities Report followed by the development of a Agricultural Area Plan. There will be further opportunities for public input during the development of the Agricultural Area Plan.

## **APPENDIX A**

---

**LEGEND**

**TRIM DATA**

-  ROADS
-  WATER
-  DISTRICT BOUNDARY
-  CONTOUR (20m)


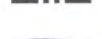
**QUATERNARY**


**U** UNDIVIDED DEPOSITS  
 POTENTIALLY SUITABLE FOR  
 SUBSURFACE EFFLUENT DISPOSAL

- A** MODERN ALLUVIUM
- F** FAN DEPOSITS
- S** LANDSLIDE DEPOSITS
- Db** DRIFT BENCHES
- FLUVIAL ENVIRONMENT
- T** TERRACE DEPOSITS
- Tk** KETTLE TERRACE DEPOSITS
- H** HUMMOCKY GRAVELS

UNLIKELY TO BE SUITABLE  
 FOR EFFLUENT DISPOSAL

- R** BEDROCK
- B** BOG DEPOSITS
- LACUSTRINE ENVIRONMENT
- L** LACUSTRINE DEPOSITS  
 UNDIFFERENTIATED
- Lt** LACUSTRINE DEPOSITS
- Lx** LACUSTRINE COMPLEX
- Lc** COLLAPSED LACUSTRINE  
 DEPOSITS
- GLACIAL ENVIRONMENT
- M** MORAINAL DEPOSITS

-  URBAN CONTAINMENT BOUNDARY
-  DISTRICT OF SALMON ARM BOUNDARY

 PROBLEM AREAS FOR GROUND DISPOSAL  
 IDENTIFIED BY SALMON ARM HEALTH UNIT  
 (HIGH WATER TABLE, POOR SOILS, OLD SYSTEMS,  
 OR SMALL LOTS)

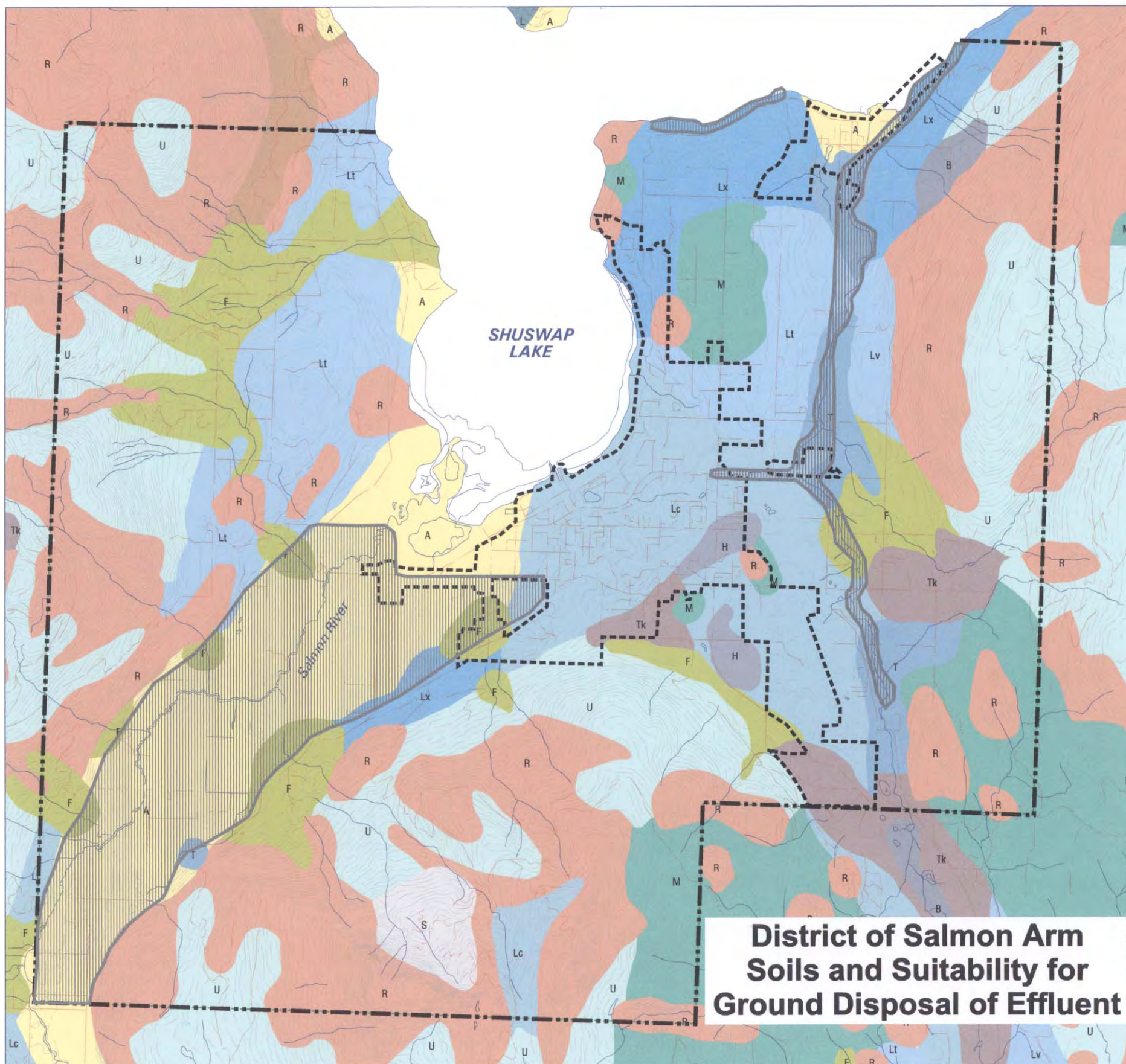
MAP CREATED BY:



Map Projection: ZONE 11 UTM NAD83  
 REFERENCE: Fulton, R.J. 1974. Surficial Geology, Shuswap Lake Map 1391A,  
 Geological Survey of Canada.



14-136 figure 6-1.cdr 02-12-31



**District of Salmon Arm  
 Soils and Suitability for  
 Ground Disposal of Effluent**



**Figure 6-1**

**LEGEND:**

**TRIM DATA**



-  ROADS
-  WATER
-  DISTRICT BOUNDARY
-  CONTOUR (20m)

**GROUND MATERIAL**

-  BEDROCK
-  UNCONSOLIDATED

**VULNERABILITY**

-  LOW
-  MODERATE
-  HIGH

-  URBAN CONTAINMENT BOUNDARY
-  DISTRICT OF SALMON ARM BOUNDARY

Map Projection: ZONE 11 UTM NAD83

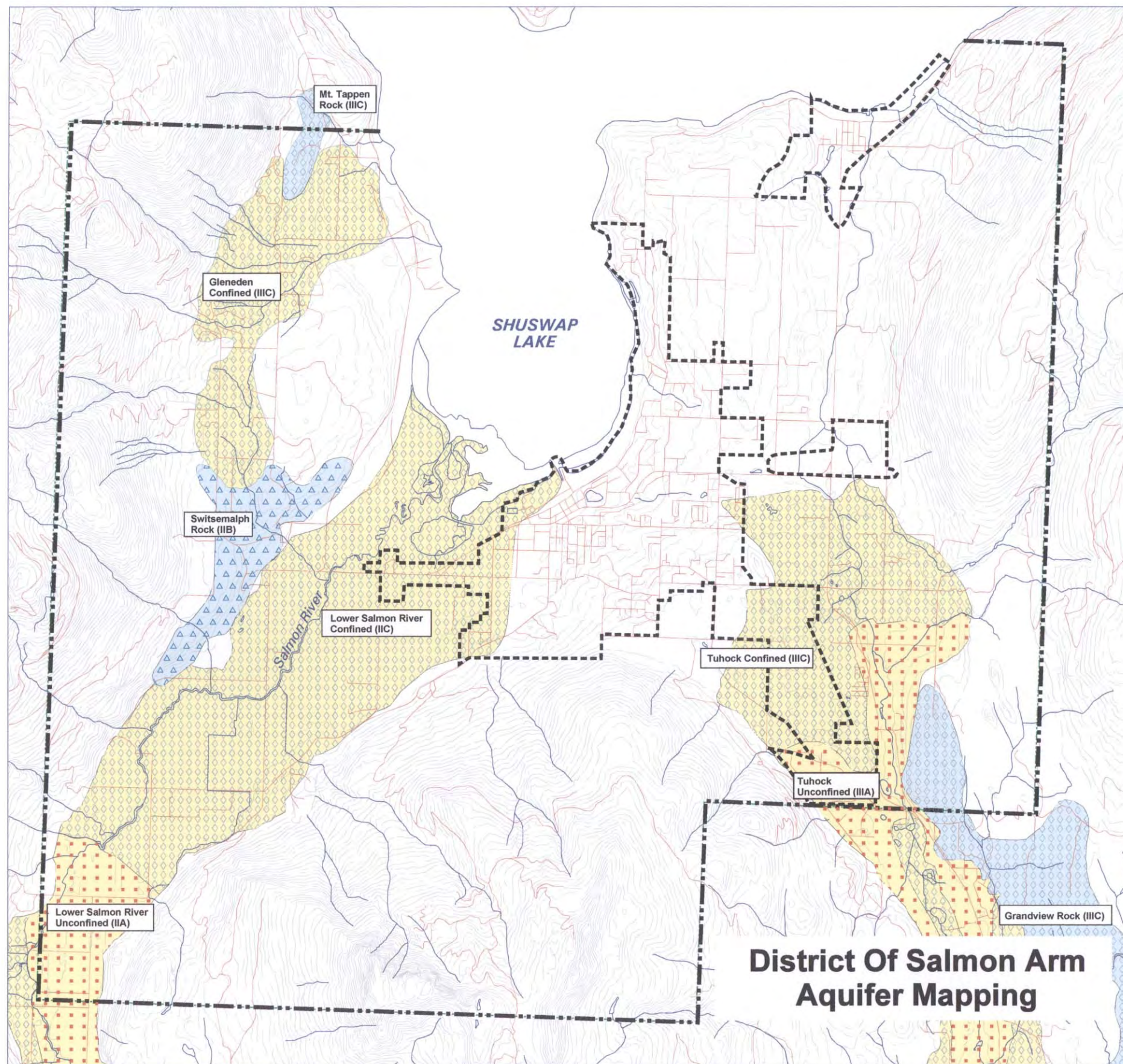
Aquifer Data: From Ministry WATER, LAND, and AIR PROTECTION

WEB SITE: <http://wlapwww.gov.bc.ca/wat/gws>

MAP CREATED BY:



14-136 figure 6-2.cdr



**District Of Salmon Arm  
Aquifer Mapping**

Figure 6-2

# LEGEND

- DISTRICT BOUNDARY
- DOCUMENTED FISH BEARING STREAM
- SUSPECTED FISH BEARING STREAM
- DOCUMENTED NON-FISH BEARING STREAM
- SUSPECTED NON-FISH BEARING STREAM

ILP (INTERIM LOCATION POINT) NUMBER  
- SEE TABLE 6-6

EXISTING INFORMATION:

FISH OR FEATURE CODE  
REFERENCE No. (SEE  
FOOTNOTE TABLE 6-6)

- REACH BREAK
- REACH NUMBER

FISH CODES:

ANADROMOUS SALMONIDS

- CHINOOK CH
- COHO CO
- PINK PK
- SOCKEYE SK
- SALMONIDS
- BULLTROUT BT
- KOKANEE KO
- MOUNTAIN WHITEFISH MW
- RAINBOW RB

NON-SALMONIDS

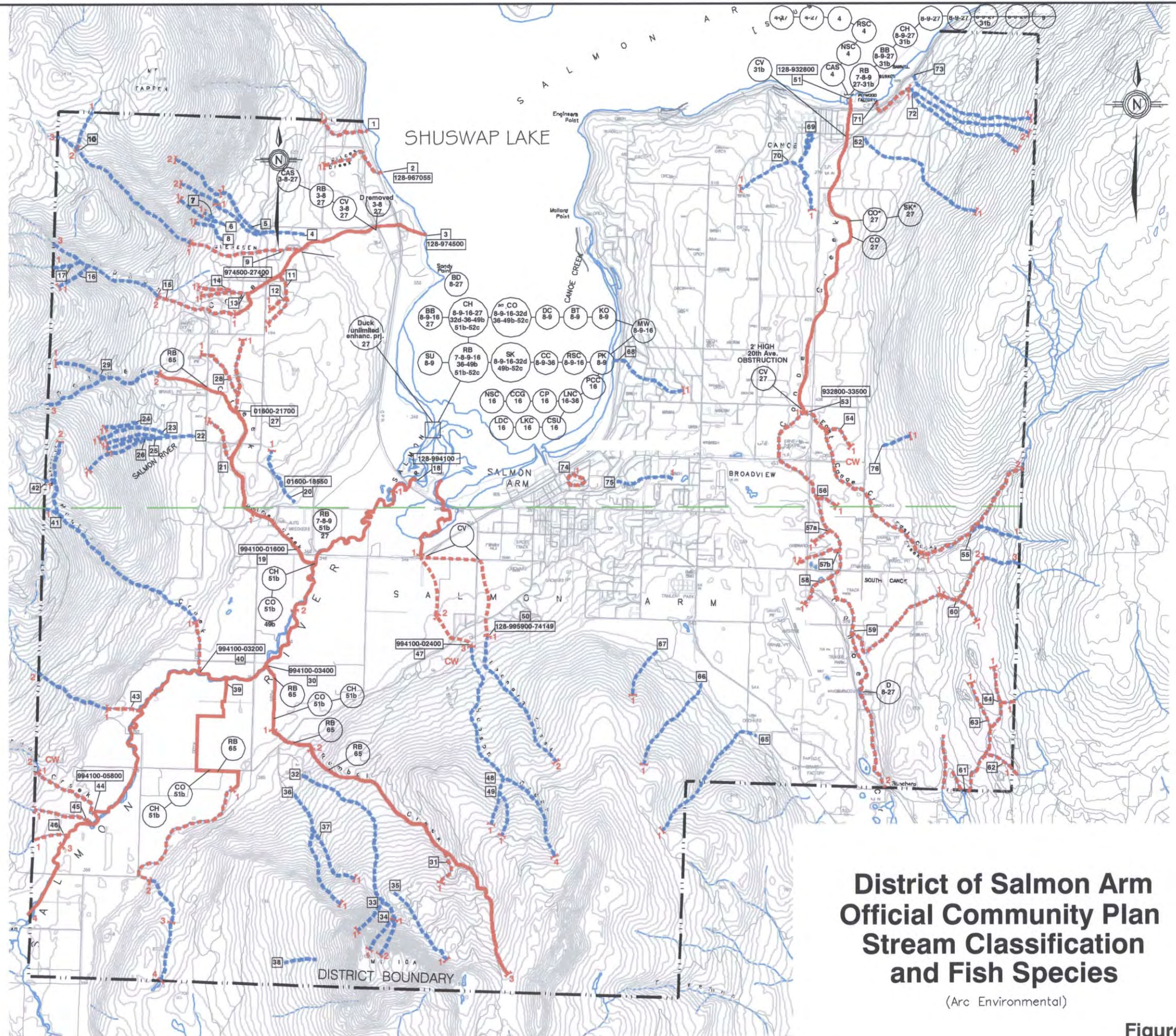
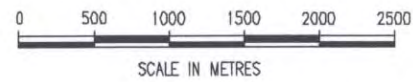
- BURBOT BB
- CARP CP
- LAKE CHUB LKC
- LARGESCALE SUCKER CSU
- LEOPARD DACE LDC
- LONGNOSE DACE LNC
- NORTHERN PIKEMINNOW NSC
- PEAMOUTH CHUB PCC
- PRICKLY SCULPIN CAS
- RESIDE SHINER RSC
- SLIMY SCULPIN CCG

FEATURE CODES:

- BD - BEAVER DAM
- CV - CULVERT
- CW - COMMUNITY WATERSHED
- D - DAM
- \* - SPAWNING

NOTE:

1. WIDTH OF ENVIRONMENTALLY SENSITIVE WATERCOURSES IS NOT TO SCALE REFER TO POLICY 3.5.1
2. ALL DESIGNATIONS ARE CONCEPTUAL ONLY. SUBJECT TO SITE SURVEY.
3. INVENTORY OF STEEP SLOPE HAZARDOUS AREAS IS NOT COMPLETE. ADDITIONAL DETAILED MAPPING IS REQUIRED.



## District of Salmon Arm Official Community Plan Stream Classification and Fish Species

(Arc Environmental)

Figure 6-4



## **APPENDIX B**

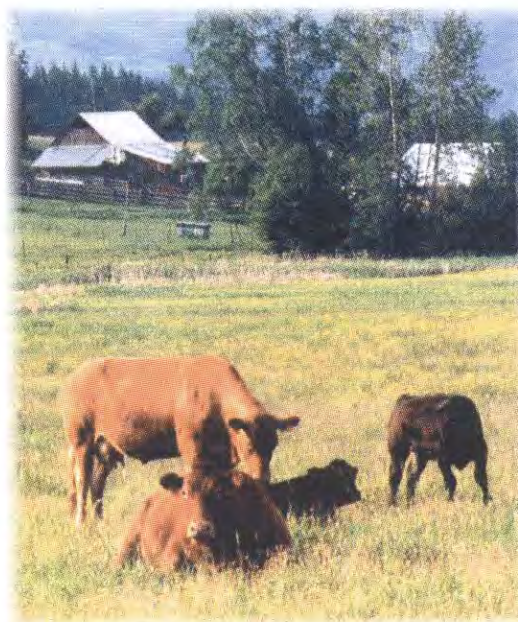
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# District of Salmon Arm AGRICULTURAL OVERVIEW

<b>Corporate Name</b>	District of Salmon Arm
<b>Municipal Hall</b>	450 – 2 Avenue NE
<b>Date of Incorporation</b>	May 15, 1905
<b>Postal Address</b>	Box 40 Salmon Arm, British Columbia V1E 4N2
<b>Phone</b>	250-832-6021
<b>Fax</b>	250-832-5584
<b>E-mail</b>	<a href="mailto:cityhall@district.salmon-arm.bc.ca">cityhall@district.salmon-arm.bc.ca</a>
<b>Internet</b>	<a href="http://www.district.salmon-arm.bc.ca">http://www.district.salmon-arm.bc.ca</a>

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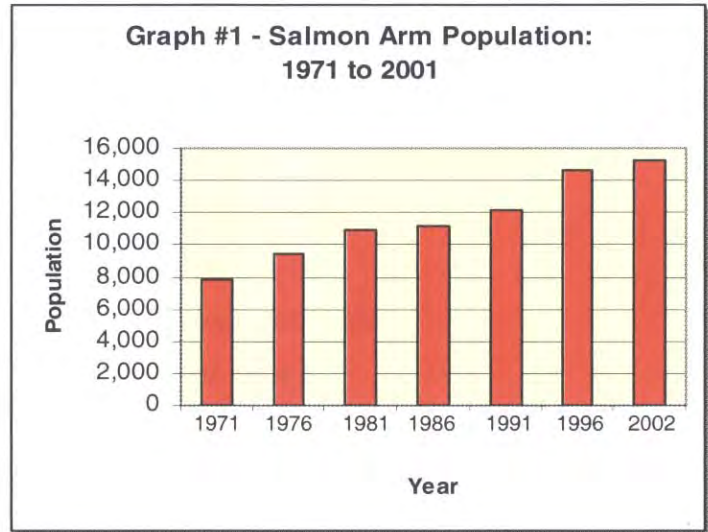
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*Looking south from 30<sup>th</sup> Avenue N.W., Salmon Arm*

• District of Salmon Arm Population - 1971 to 2001

1971	=	7,793
1976	=	9,391
1981	=	10,902
1986	=	11,199
1991	=	12,115
1996	=	14,664
2001	=	15,210

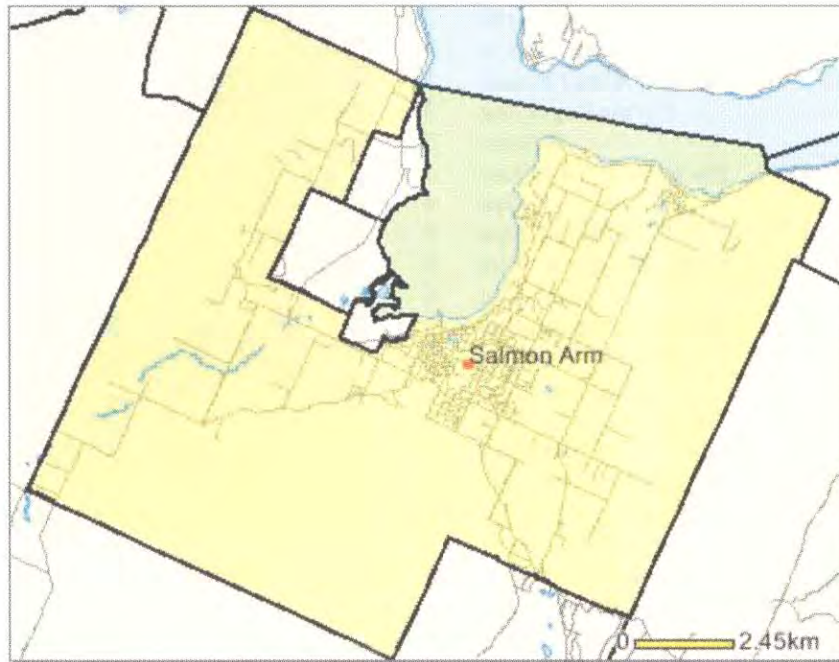


• Population Increase 1971 to 2001

= 7,417  
= 247 persons / year on average

• Jurisdictional Area

Land	=	16,584 ha.
Water	=	2,292 ha.
Total	=	18,876 ha.

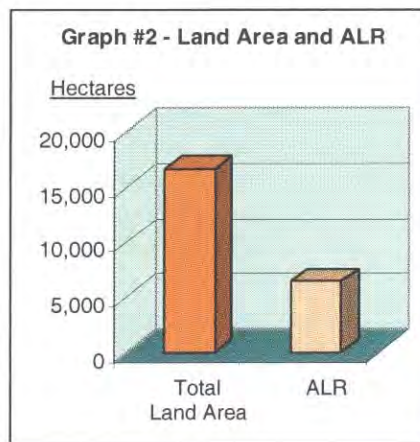


Source: Statistics Canada / Natural Resource Canada

**• Agricultural Land Reserve**

January 1, 2000 = 6,370 hectares<sup>1</sup>

*The ALR in Salmon Arm was originally designated on September 3, 1974. The Reserve accounts for about 38% of the land area of Salmon Arm.*



**• Total Area Farmed**

1996 = 3,781 hectares  
2001 = 4,667 hectares

**• Farms<sup>2</sup> Reporting**

1996 = 208  
2001 = 195

**• Average Farm Size**

	1996	2001
Salmon Arm	= 19.1 ha.	23.9 ha.
Columbia-Shuswap Regional District	= 49.2 ha.	68.6 ha.
Province	= 115.8 ha.	127.5 ha.

**• Number of Farms under 4 hectares (10 acres) in Size**

	No.	% of all Farms
1996	= 43	22%
2001	= 28	14%

**• Tenure**

	1996	2001
Farmland Owned	2,769 ha. (73%)	3,668 ha. (79%)
Farmland Leased/Rented	1,013 ha. (27%)	999 ha. (21%)
Total	3,782 <sup>3</sup> ha. (100%)	4,677 ha. (100%)

**• Farmland Leased/Rented**

From governments	240 ha. (24%)	x <sup>4</sup> x
From others	773 ha. (76%)	762 ha. (76%)
Crop shared from others	na na	x x
Total	1,013 <sup>3</sup> ha. (100%)	999 ha. (100%)

*In 2001, of the 1,061,715 hectares of farmland being leased, rented or share cropped in BC, 67% was owned by the government, 30% was privately owned and 3% was crop shared.*

<sup>1</sup> Salmon Arm's ALR figure was re-checked and updated via a GIS calculation as of May 1999.

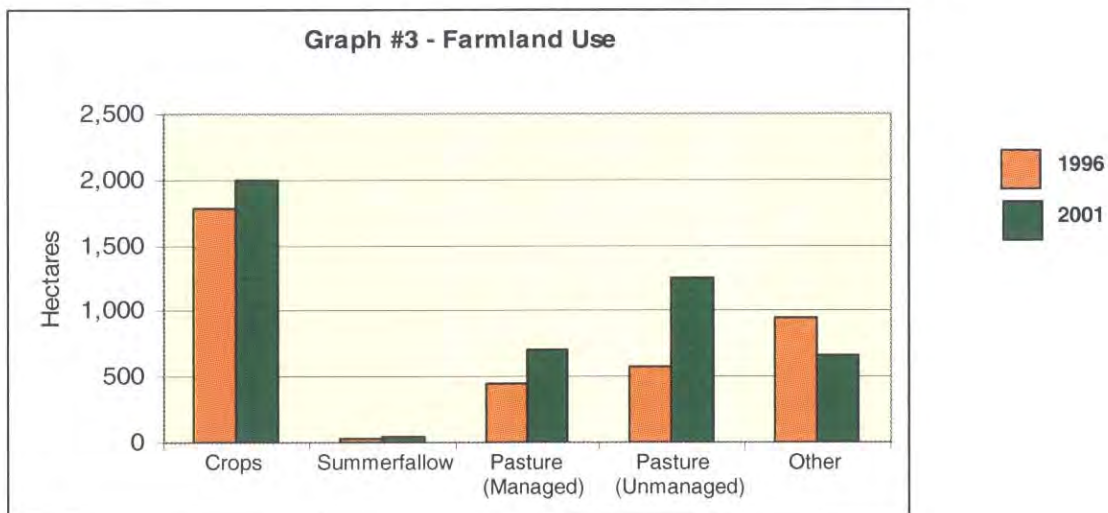
<sup>2</sup> In 1996 and 2001, a census farm was defined as an agricultural operation that produces at least one of the following products intended for sale: crops (hay, field crops, tree fruits or nuts, berries or grapes, vegetables, seed); livestock (cattle, pigs, sheep, horses, game animals, other livestock); poultry (hens, chickens, turkeys, chicks, game birds, other poultry); animal products (milk or cream, eggs, wool, furs, meat); or other agricultural products (Christmas trees, greenhouse or nursery products, mushrooms, sod, honey, maple syrup products).

<sup>3</sup> Total tenure may be rounded up due to metric conversion.

<sup>4</sup> 'x' indicates that farms reporting but information not provided due to confidentiality.

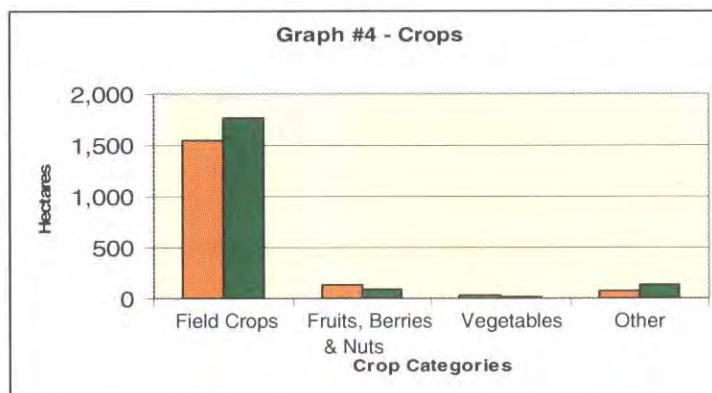
• Hectares of Farmland in:

	1996		2001	
	Farms	Hectares	Farms	Hectares
Crops	160	1,780	151	2,000
Summerfallow	12	26	16	46
Pasture (managed)	76	442	60	706
Pasture (unmanaged)	86	580	92	1,257
<u>Other</u>	<u>179</u>	<u>953</u>	<u>153</u>	<u>658</u>
Total	na	3,781	na	4667



• Crops: (hectares)

	1996	2001
Field Crops <sup>5</sup>	1,540	1,762
Tree Fruits	108	na
Berries & Grapes	31	na
Fruits, Berries & Nuts	na	85
Vegetables	26	19
<u>Other</u> <sup>6</sup>	<u>75</u>	<u>134</u>
Total <sup>7</sup>	1,780	2,000



<sup>5</sup> Note: In the case of Field Crops a 'grand' total is not provided. As a result the figures given equals the total for only those field crops in which an area figure is given.

<sup>6</sup> "Other" Crops also account for area figures not provided due to confidentiality.

	1996		2001	
	Farms	Hectares	Farms	Hectares
<b>• Field Crops</b>	<b>na</b>	<b>1,540</b>	<b>na</b>	<b>1,762</b>
Wheat	2	x	2	x
Oats	8	25	6	14
Barley	1	x	3	4
Corn for Grain	0	0	3	x
Buckwheat	1	x	0	0
Rye	1	x	1	x
Corn for Silage	11	167	8	114
Alfalfa	83	1,009	91	1,256
All other tame Hay	44	337	29	374
Potatoes	3	2	4	2
Forage seed for seed	0	0	3	x
Other field crops	1	x	0	0
<b>• Fruits Berries &amp; Nuts</b>	<b>41</b>	<b>139</b>	<b>34</b>	<b>85</b>
Apples	29	80	19	42
Pears	17	3	8	2
Plums & Prunes	24	3	13	2
Sweet Cherries	33	18	19	19
Sour Cherries	6	0	1	x
Peaches	10	1	3	x
Apricot	15	1	4	x
Other tree fruits	4	x	na	na
Strawberries	9	13	10	9
Raspberries	11	6	12	5
Blueberries	2	x	1	x
Saskatoons	0	0	1	x
Grapes	6	9	3	1
Other fruits, berries & nuts	na	na	4	x



Orchard, looking south in the Salmon Arm, NE area.

<sup>7</sup> Excluding Christmas tree area

	1996		2001	
	<u>Farms</u>	<u>Hectares</u>	<u>Farms</u>	<u>Hectares</u>
<b>• Vegetables</b>	<b>13</b>	<b>26</b>	<b>20</b>	<b>19</b>
Sweet Corn	7	5	4	1
Tomatoes	8	1	6	1
Cucumbers & Gherkins	3	0	6	1
Green Peas	3	1	4	1
Green or Wax Beans	4	0	6	x
Cabbage	3	2	2	x
Cauliflower	3	5	1	x
Broccoli	4	1	1	x
Brussels Sprouts	1	x	1	x
Carrots	5	4	6	6
Rutabagas (turnips)	1	x	0	0
Beets	5	1	3	x
Radishes	2	x	2	x
Dry Onions	3	0	1	x
Green (Bunching) Onions, Shallots	2	x	1	x
Celery	1	x	1	x
Lettuces	5	1	2	x
Spinach	3	1	2	x
Peppers	5	0	1	x
Squash, Pumpkins & Zucchini	7	1	5	x
Rhubarb	2	x	0	0
Asparagus (Producing)	1	x	2	x
Total Area - Other Vegetables	5	2	11	3

	1996			2001		
	<u>Farms</u>	<u>Sq. Metres</u>	<u>Percent of Total</u>	<u>Farms</u>	<u>Sq. Metres</u>	<u>Percent of Total</u>
Flowers	6	1,295	90%	3	x	na
Vegetables	2	x	x%	3	x	na
Other Greenhouse Products	2	x	x%	1	x	na
<u>Not in Use on date of census</u>	<u>na</u>	<u>na</u>	<u>na</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	7 <sup>7</sup>	1,443	100%	4	1,843	100%



Winter Greene Farms, Salmon Arm

<sup>7</sup> One farm may be engaged in more than one form of production.

	1996		2001	
	<u>Farms</u>	<u>Hectares</u>	<u>Farms</u>	<u>Hectares</u>
• <b>Nursery Products</b>	13	14	11	x
• <b>Christmas Trees</b>	7	25	6	11
• <b>Sod Grown for Sale</b>	1	x	0	0



• **Livestock:**

	<u>Farms</u>	<u>Livestock</u>	<u>Farms</u>	<u>Livestock</u>
Hens & Chickens	45	106,522	52	232,515
Turkeys	3	23	3	14
Total Other Poultry	15	279	18	223
Cattle & Calves	101	3,173	86	3,261
- Milk Cows	14	834	12	605
- Beef Cows	65	632	62	903
Pigs	9	42	10	100
Sheep & Lambs	12	301	16	476
Horses & Ponies	59	304	49	240
Goats	6	58	9	33
Wild Boars	0	0	1	x
Elk	0	0	1	x
Llamas & Alpacas	2	x	6	147
Rabbits	9	52	2	x
Colonies of Bees for Honey	6	58	2	x





• **Land Management Practices**

	1996		2001	
	Hectares	% of all Farmland	Hectares	% of all Farmland
• Irrigation	504	13%	399	8.6%
• Commercial Fertilizers	1,062	28%	966	20.7%
• Manure	596	16%	603	12.9%
• Herbicides	272	7%	233	5.0%
• Insecticides	127 <sup>8</sup>	3%	x	na
• Fungicides	101	3%	90	1.9%

• **Soil Erosion Control Practices:** (number of farms)

	1996	2001
Crop rotation	39	34
Permanent grass cover	110	99
Winter cover crops	6	2
Contour cultivation	8	3
Strip-cropping	3	7
Grassed waterways	3	7
Windbreaks or shelterbelts	6	6
Green manure crops for plow down	na	10
Mechanical or hand weeding of crops	na	32



*Salmon Valley from the Fly Hills Service Road*

<sup>8</sup> In the 1991 Census of Agriculture Insecticides and Fungicides were grouped together but split in 1996.

• **Total Farm Capital**

	1996		2001	
	\$89,085,172		\$102,204,186	
	Value (\$)	% of Total	Value (\$)	% of Total
• Land and buildings	\$76,508,300	86%	\$85,034,500	83%
• Farm machinery and equipment	\$8,641,479	10%	\$11,455,805	11%
• Livestock and poultry	\$3,935,393	4%	\$5,713,881	6%

*In 2001, B.C.'s total farm capital was \$15.8 billion. Provincially land and buildings accounted for 83% of the total capital value, machinery and equipment, 10% and livestock and poultry 7%.*

• **Total Gross Farm Receipts**

1996	=	\$8,627,492	(1995\$)
2001	=	\$10,082,745	(2000\$)

• **Average Gross Farm Receipts per Farm**

	1995	2000
Salmon Arm	\$41,478	\$51,706
Columbia-Shuswap Regional District	\$60,015	\$55,252
British Columbia	\$68,723	\$113,736

• **Salmon Arm Total Gross Farm Receipts**

	1995	2000
- as a percentage of Columbia-Shuswap Regional District	21.0%	29.6%

• **Number of Farms by Total Gross Farm Receipts 2000**

	Salmon Arm		Columbia-Shuswap		B.C.	
	Farms	% of S.Arm Total	Farms	% of Col-Shwp Total	Farms	% of BC Total
< \$2,500	28	15%	100	16%	2,908	14%
\$2,500 - \$24,999	125	64%	373	61%	10,605	52%
\$25,000 - \$99,999	24	12%	85	14%	3,400	17%
\$100,000 and over	18	9%	58	9%	3,377	17%
Total	195	100%	616	100%	20,290	100%



• **Total Operating Expenses**

	<u>1995</u>	<u>2000</u>
	\$8,201,720	\$9,497,716

• **Total Cash Wages Paid**

	\$1,536,213	\$1,339,960
--	-------------	-------------

• **Total Paid Labour** (weeks)

	3,169	3,108
--	-------	-------

• **Year Round vs. Seasonal Paid Labour:**

Percent Year Round (weeks)	40%	64%
Percent Seasonal (weeks)	60%	36%
Percent Year Round in B.C. (weeks)	57%	62%

• **Total Number of Farm Operators** (2001) = 300

Average Age of Farm Operators = 52.7 years



**Sources:**

- Statistics Canada, British Columbia Agriculture, 1986, Census Catalogue 96-112.
- Statistics Canada, Small Area Data British Columbia, July 1992.
- Statistics Canada, 1996 Census of Agriculture Profile Data - British Columbia.
- Statistics Canada, 2001 Census of Agriculture Profile Data - British Columbia.
- Statistics Canada, A National Overview – Population and Dwelling Counts; Catalogue No. 93-357-XPB, April 1997.
- Ministry of Municipal Affairs Recreation and Culture, Statistics Relating to Regional and Municipal Governments in British Columbia, 1990.
- Ministry of Municipal Affairs, Municipal Statistics (Including Regional Districts) (Year ending 1996), March , 1998
- Files of the Provincial Agricultural Land Commission.
- Agricultural Land Commission, Planning for Agriculture - Resource Materials, 1998

**Photos and Illustrations:**

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**WANT MORE INFORMATION ABOUT AGRICULTURE IN B.C.?**

See:

the Ministry of Agriculture, Food and Fisheries on the web at:  
<http://www.gov.bc.ca/agf/>



the Agricultural Land Commission at:  
<http://www.landcommission.gov.bc.ca/>



Agriculture and Agri-Food Canada at:  
<http://www.agr.gc.ca/>



Agriculture and Agri-Food Canada

Agriculture et Agroalimentaire Canada

and Statistics Canada at: <http://www.statcan.ca>

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Compiled by: Resource Management Branch



August 2003