

Comox-Strathcona Land Use Inventory, Summer 2002

Report compiled September 2005

Table of Contents

LIST OF TABLES.....	I
LIST OF FIGURES.....	I
INTRODUCTION	1
ACKNOWLEDGEMENT.....	1
SURVEY AREA.....	1
SURVEY METHOD	1
DESCRIPTION OF DATA	2
GENERAL CONDITION OF ALR LAND WITH RESPECT TO AGRICULTURE.....	3
DESCRIPTION OF CATEGORIES.....	3
<i>Rows 1 and 2</i>	3
<i>Row 3</i>	3
<i>Row 4</i>	3
<i>Row 5</i>	4
PARCEL SIZE COMPARISON – FARMED AND NOT FARMED.....	7
INTENSITY OF AGRICULTURAL USE	8
DOMINANT IMPROVED AGRICULTURAL CAPABILITY.....	10

List of Tables

TABLE 1: SIZE OF FARMED PARCELS	7
TABLE 2: SIZE OF UNFARMED PARCELS	7
TABLE 3: AGRICULTURAL INTENSITY OF PARCELS	9

List of Figures

FIGURE 1: BREAKDOWN OF LAND IN COMOX-STRATHCONA, IN TERMS OF NUMBERS OF PARCELS	5
FIGURE 2: BREAKDOWN OF LAND IN COMOX-STRATHCONA, IN TERMS OF NUMBERS OF HECTARES	6
FIGURE 3: INTENSITY OF AGRICULTURAL USE, BY NUMBER OF PARCELS.....	9
FIGURE 4: INTENSITY OF AGRICULTURAL USE, BY TOTAL AREA OF PARCELS	9

Introduction

In 2002, the Regional District of Comox-Strathcona, Ducks Unlimited Canada and the BC Ministry of Agriculture and Lands (formerly the Ministry of Agriculture, Food and Fisheries) partnered to develop an Agricultural Land Use Inventory for the Comox Valley. The purpose of the project was to coordinate efforts on collecting information on agricultural land uses in the area. Before the project, there was no one organization that had detailed land use information on agriculture in the rural areas. The goal of this project was to collect detailed land use information and convert the data into digital layers that could reside in the Regional District of Comox Strathcona GIS System.

Acknowledgement

The Regional District of Comox-Strathcona is the custodian of the land use dataset presented here and may not be copied in whole or in part without written consent. Users assume the risk associated with the accuracy of the contents of this dataset and other supporting text and digital information. All inquiries should be directed to the Regional District of Comox-Strathcona at 1-800-331-6007. The Custodian is not responsible for any damages resulting from omissions, deletions or errors that may be contained in the Information.

Survey Area

The survey area included the Regional District of Comox Strathcona, Electoral Areas A, B, C and the part of Electoral Area D that contains the U.B.C research farm at Oyster River. The shoreline provides the eastern boundary and the Agricultural Land Reserve provides the western perimeter of the study area.

Within the survey's Agricultural Land Reserve (ALR) there were 1758 parcels. The sum of their areas is 25199 hectares. This total includes portions of parcels that fall outside the ALR boundary, for parcels which are bisected by the ALR.

Survey method

Survey maps were produced by the Regional District of Comox-Strathcona. They included property boundaries, property ID's, field boundaries, the ALR boundary as well as aerial photography.

Using the survey maps, a team of two surveyors conducted a "windshield" survey. One surveyor was a contractor hired by Ducks Unlimited and the other was a coop student employed by the Ministry of Agriculture and Lands. Together the surveyors drove to every property in the study area and examined its land use. The recorder entered the land use information directly into Access database tables on a laptop computer, using a data entry form. The data tables were then linked to a GIS cadastre layer of the survey area.

Description of data

Two types of information were recorded during the survey according to MAL's survey methodology; land covers and land use activities. Land covers include such things as buildings, structures, vegetated areas and crops. For the Comox-Strathcona land use inventory, digitized crop boundaries were provided by Ducks Unlimited. This information was incorporated into the database as land covers.

Land use activities refer to the overall land uses of the parcel as determined from the land covers. These include general land use activities such as "Agriculture", "Residential Use", or "Industrial Use", as well as the specific agricultural activities. Up to three general land use activities were recorded for each parcel in order of declining economic importance. These are referred to as the primary, secondary and tertiary land use activities. A parcel was recorded with "Agriculture" as the primary land use activity if farming was the only observed use or was considered to be the most important use.

"Hobby Farm" was recorded when farming was obviously on a small scale and of secondary economic importance to the residential use, and not likely the major source of income to the residents. This includes most small equestrian facilities, and smaller properties with a small number of mixed livestock. Hobby farm designation is not lot size dependant. Residential use is implied and therefore is not recorded separately as another land use activity.

For each parcel in the study area with "Agriculture" as a land use activity, up to four specific agricultural activities were recorded, in order of decreasing importance. The primary agricultural activity is the one which is likely the greatest source of income. In some cases this was difficult to determine, so the distinction between primary, secondary, tertiary and quaternary agricultural activity was, at times, a best guess.

General Condition of ALR Land with Respect to Agriculture

This analysis is based on methodology developed for the report “Farmland Use in Abbotsford and the Potential for Future Growth”, produced by MAL in 2004. The analysis is meant to examine how much land within the ALR is being farmed, how much has the potential to be farmed, and how much is unavailable for farming. Numbers are reported here in the following two flowcharts, which show the number of parcels in each category, and the hectares within those parcels.

Description of Categories

Following is a row-by-row explanation of how parcels were categorized in the flowchart.

Rows 1 and 2

The 4068 parcels in the entire study area refers to the sum of all parcels shown on the maps. Over half of these parcels, 2296, are outside the ALR. Fourteen parcels were classified with “Indian Reserve” as an activity. Although there may be agriculture occurring on Indian Reserve Land, for the purposes of this analysis parcels that are part of an Indian Reserve are placed in a separate category. They are under a different jurisdiction than the rest of the ALR.

The remaining 1758 parcels are either completely or partially within the ALR. The entire area of parcels is included in the sum of 25 199 hectares, including portions outside the ALR for parcels that the ALR bisects. For all parcels in this analysis, the entire area of the parcel has been included in one category; parcels are not divided up by land use. The percentages listed in the two flowcharts refer to the percent of land in the ALR.

Row 3

Land *not available for farming*, also known as alienated land, is defined as farmable land within the ALR that cannot be used for agricultural purposes. The reporting of land alienated from agriculture was done to ensure we are dealing with a realistic picture of land actually available for farming.

Land devoted to mineral extraction is considered *currently unavailable* for agriculture, and so is dealt with as a separate category. All other land is considered available for farming.

Row 4

The area counted as *not available* for farming is further broken down according to the reason it is not available. *Small residential* parcels are those less than 4000 square meters in size with only “Residential Use” as an activity. Many of these are likely to be home-site severances. Parcels

considered to be not available due to *other land use* had a primary activity of “Park”, “Commercial/service use”, “Transportation and communications”, “Recreational use”, “Institutional use”, “Utility”, “Golf course”, “Mobile home park” or “Industrial use”.

Ideally, this analysis would include land not available to agriculture due to topography, for parcels which cannot be developed because the land is too steep or too wet to be farmed. In future land use inventories, natural areas will be classified as either “Undeveloped – Natural Area” or “Marginal Land”, depending on whether they could be developed in the future. For this inventory however, all parcels without human activity were called “Not in Use” and appear as *Undeveloped* in this analysis.

The *Currently available for farming* land is further broken down to determine how much is already developed with regards to agriculture and how much is available for agri-business expansion. Parcels are considered *Farmed* if they have “Agriculture” as a land use activity. An exception is parcels where “Residential Use” was the primary activity and “Agriculture” was listed as a secondary or tertiary activity; these parcels were grouped with those classified as “Hobby Farms”. Similarly, where “Unused farmland” was listed before “Agriculture” as an activity, the parcel was considered *Not Farmed*.

The figure of 18 161 hectares of *Farmed* land includes portions of farmed properties which are devoted to other uses, such as residential use or areas with natural trees. Most parcels have several different types of land uses occurring (i.e. a primary, secondary and tertiary land use activity), so the sum of parcel sizes does not necessarily reflect the total amount of land devoted to a particular land use.

The *Not Farmed* parcels represent areas where new agriculture operations could potentially be located.

Row 5

Hobby – amenity use refers to parcels categorized as “Hobby Farms” as well as those which had “Agriculture” secondary to “Residential Use. *Large residential* parcels had “Residential Use” as their only activity but were large than 4000 square metres and so theoretically are large enough that they could support some form of agricultural activity. The nine parcels categorized as *Land in transition* were undergoing a land use change at the time of the survey. Some of these may have been converting to agricultural use and others to non-agricultural use. *Undeveloped* parcels had some or all of their area in a natural state. Some of these could theoretically support agricultural development in the future. Twelve parcels had “Unused farmland” as an activity and so could easily be developed for agriculture in the future.

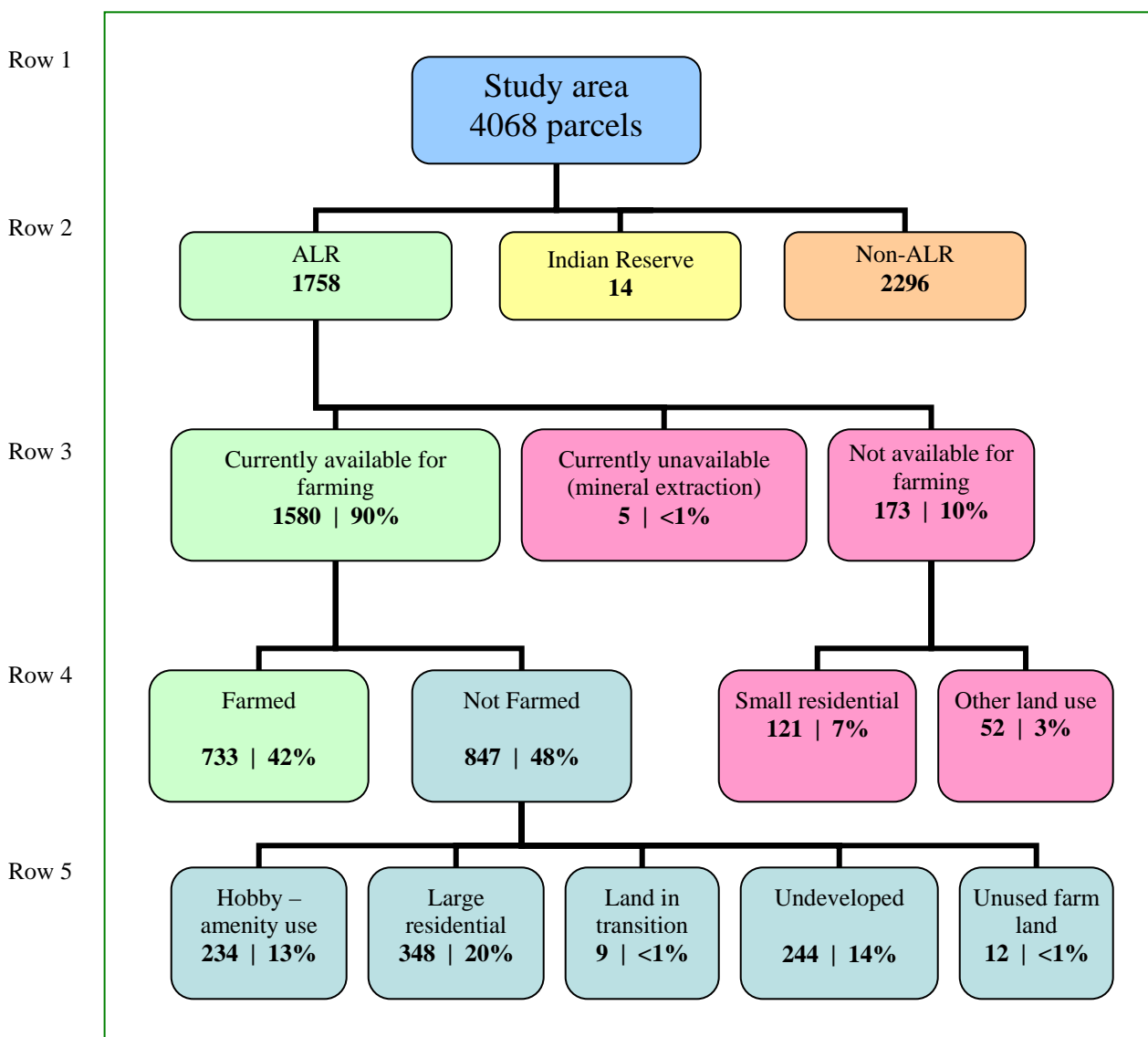
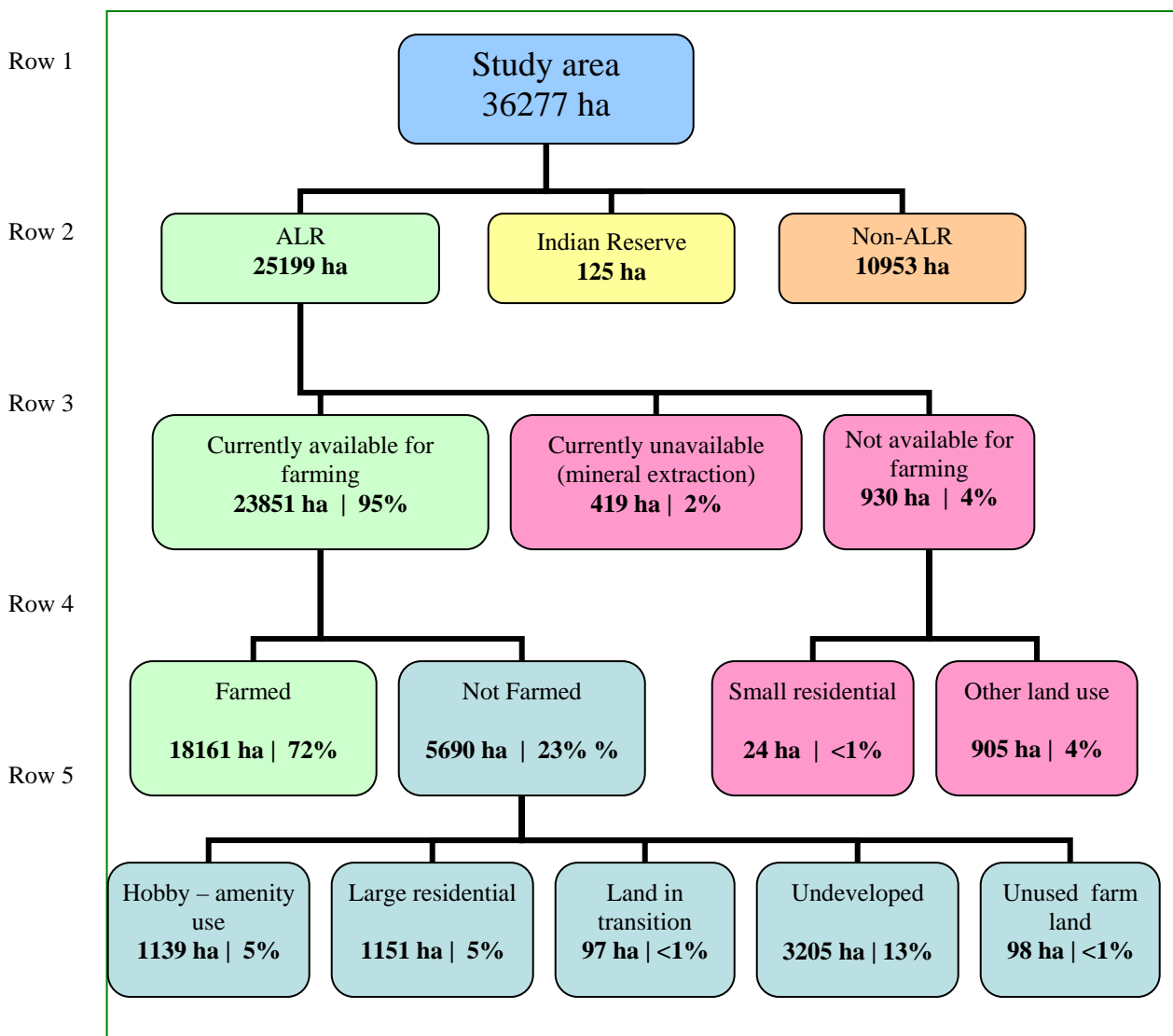
Figure 1: Breakdown of land in Comox-Strathcona, in terms of numbers of parcels

Figure 2: Breakdown of land in Comox-Strathcona, in terms of numbers of hectares

Parcel Size Comparison – Farmed and Not Farmed

Each parcel considered *Currently available for farming* was placed into a size category. The following two tables compare the breakdown of size categories for *Farmed* and *Not Farmed* parcels.

Table 1: Size of Farmed Parcels

	Farmed			
	<i>Number of Parcels</i>	<i>% of Parcels</i>	<i>Total Area of Parcels (hectares)</i>	<i>% of Area</i>
<2 hectares	71	10%	93	1%
2 - 4 hectares	92	13%	268	1%
4 - 8 hectares	121	16%	725	4%
8 - 16 hectares	156	21%	1805	10%
>16 hectares	293	40%	15270	84%
	735	100%	18217	100%

Table 2: Size of Not Farmed Parcels

	Not Farmed			
	<i>Number of Parcels</i>	<i>% of Parcels</i>	<i>Total Area of Parcels (hectares)</i>	<i>% of Area</i>
<2 hectares	327	39%	371	7%
2 - 4 hectares	229	27%	617	11%
4 - 8 hectares	112	13%	647	11%
8 - 16 hectares	92	11%	1008	18%
>16 hectares	87	10%	3047	54%
	847	100%	5690	100%

Forty percent of *Farmed* parcels are over 16 hectares in size, with these parcels accounting for 84% of the area of *Farmed* parcels. In contrast, only 10% of *Not Farmed* parcels are over 16 hectares, accounting for 54% of the area. Thirty nine percent of *Not Farmed* parcels are less than two hectares, compared to only ten percent of *Farmed* parcels.

Intensity of Agricultural Use

For the purposes of this analysis, all parcels considered *Farmed* on the flowchart were divided up into an intensity, based on the primary agricultural activity. The intensity categories are listed below, in order of most intensive to least intensive.

- **Dairy farm**
- **Forage** - hay or corn that is harvested and processed to be use for feeding livestock
- **Pasture** – a fenced field where livestock can graze
- **Field horticulture** – includes field vegetables, tree farms and nurseries, berries, turf, orchards and field flowers. *Tree Farm* implies trees as an agricultural crop, having a shorter rotation than a woodlot, such as cottonwoods and Christmas tree farms.
- **Greenhouse operation**
- **Livestock** – includes farms with horses, beef cattle, sheep, goats, poultry, swine, game
- **Equestrian facility** - includes horse boarding as well as riding rings and other organized riding activities such as lessons, trail rides, etc.
- **Woodlot** - designates managed forestland owned by the Crown or forest companies or private landowners with forest management capabilities.
- **Aquaculture**
- **Miscellaneous agriculture** – includes agri-tourism, apiaries, fallow land, on-farm bed and breakfasts, or unknown agriculture

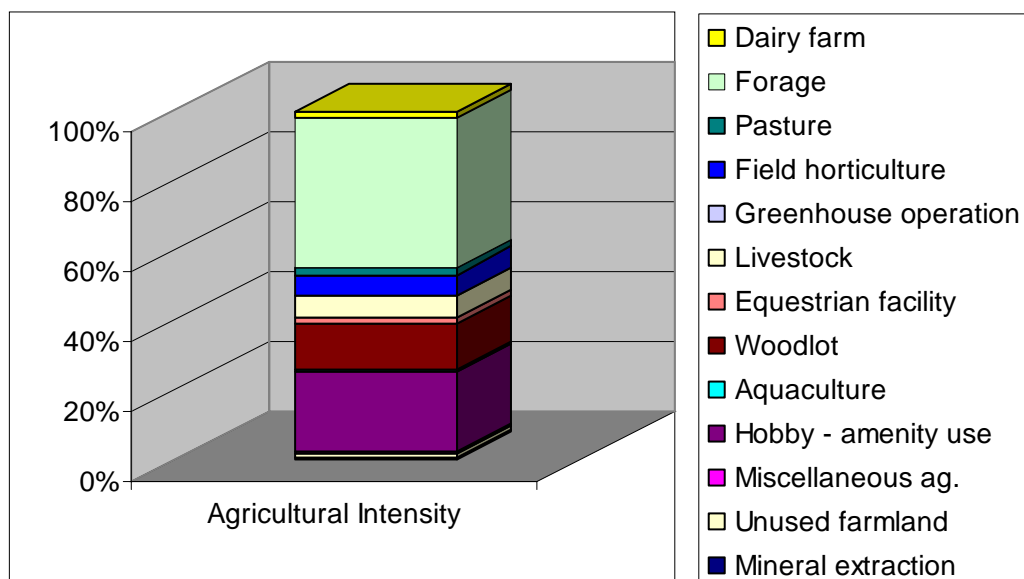
The following categories from the General Condition analysis have been added to the intensity list as well.

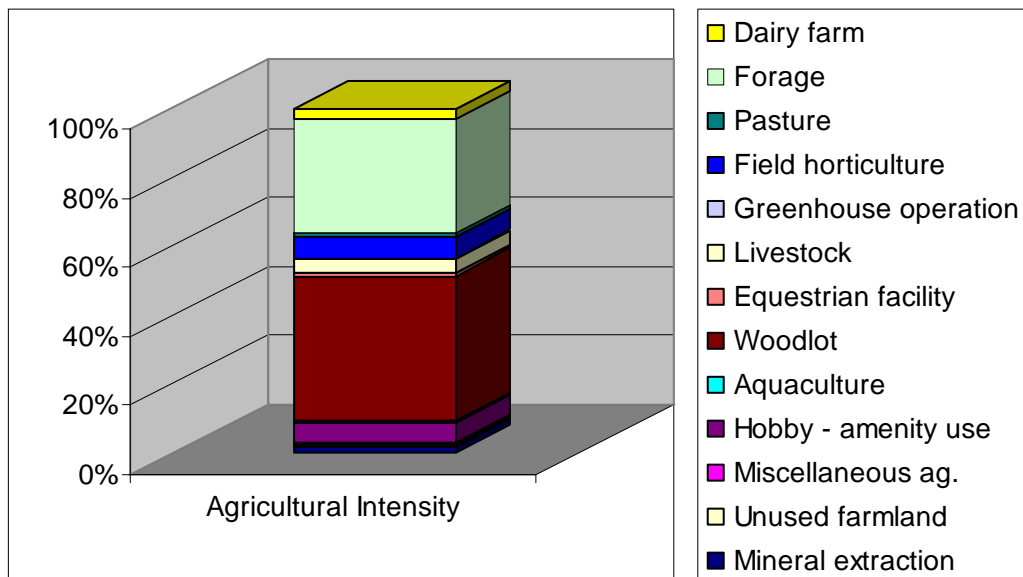
- **Hobby – amenity use**
- **Unused farmland** - usually designates abandoned farm land or farm land where the fields and possibly the buildings have not been maintained for at least a few years.
- **Mineral extraction**

The following tables shows the number of parcels in each intensity category, as well as the total area of those parcels.

Table 3: Agricultural Intensity of Parcels

Intensity	<i>Number of Parcels</i>	<i>% of Parcels</i>	<i>Total Area of Parcels (hectares)</i>	<i>% of Area</i>
Dairy farm	15	2%	546	3%
Forage	416	43%	6496	33%
Pasture	19	2%	286	1%
Field horticulture	54	6%	1258	6%
Greenhouse operation	2	0.2%	38	0.2%
Livestock	62	6%	780	4%
Equestrian facility	21	2%	241	1%
Woodlot	130	13%	8387	42%
Aquaculture	6	1%	66	0.3%
Miscellaneous agriculture	8	1%	62	0.3%
Hobby - amenity use	223	23%	1139	6%
Unused farmland	12	1%	98	0.5%
Mineral extraction	5	1%	419	2%
	973	100%	19816	100%

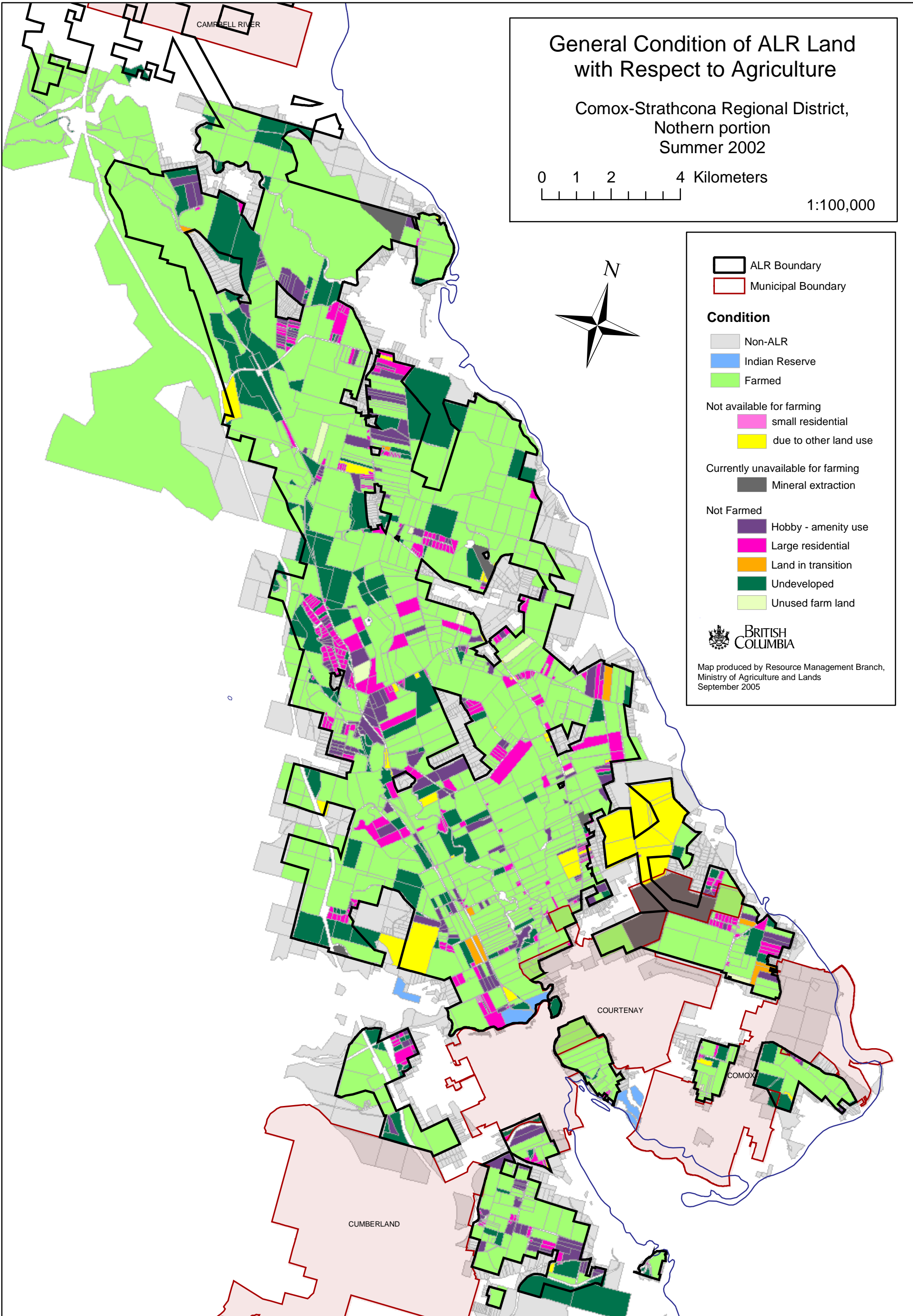
Figure 3: Intensity of Agricultural use, by number of parcels**Figure 4: Intensity of Agricultural use, by total area of parcels**



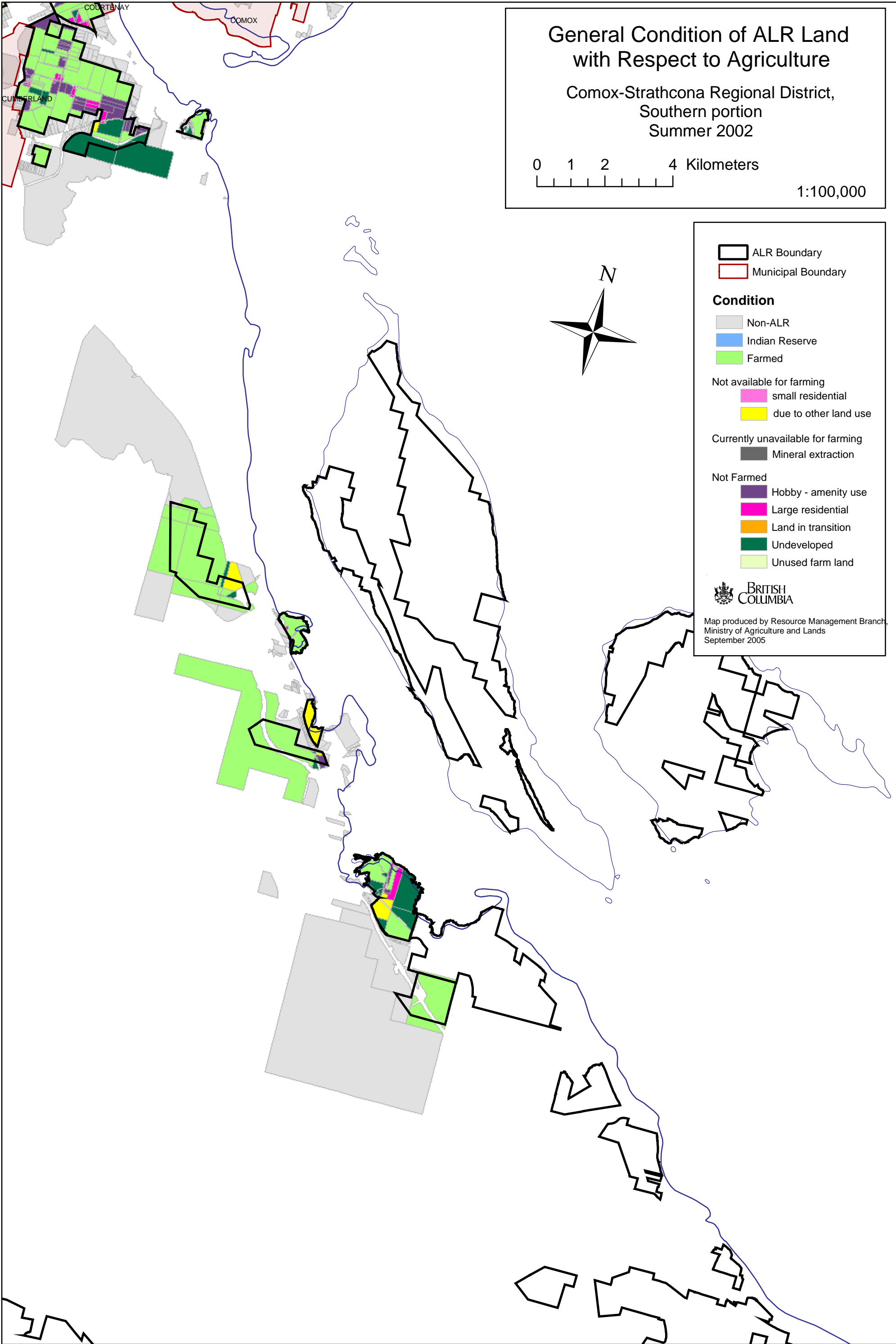
Dominant Improved Agricultural Capability

The following maps show the dominant improved agricultural capability of the soil in the Comox-Strathcona Regional District.

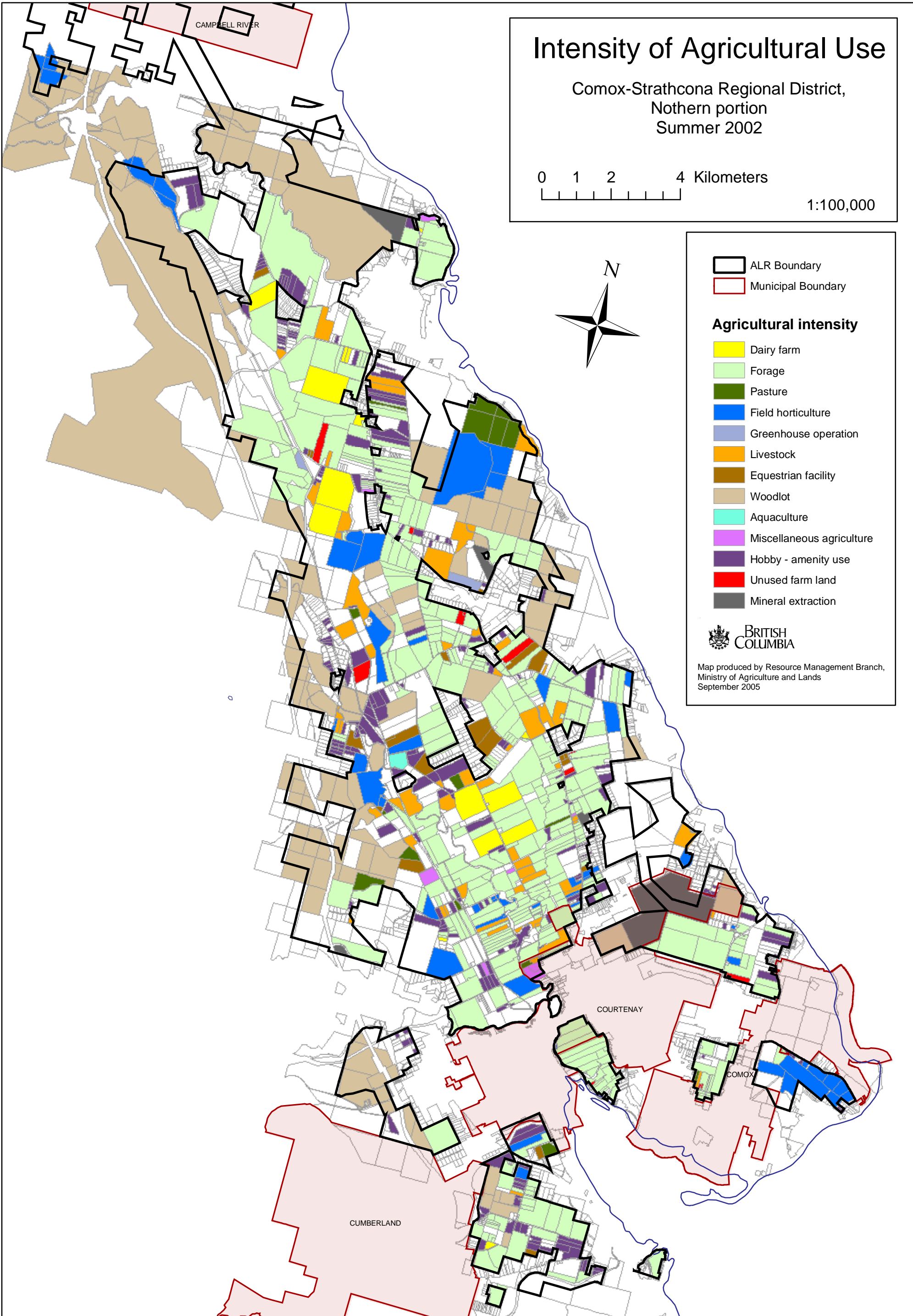
General Condition of ALR Land with Respect to Agriculture, northern portion



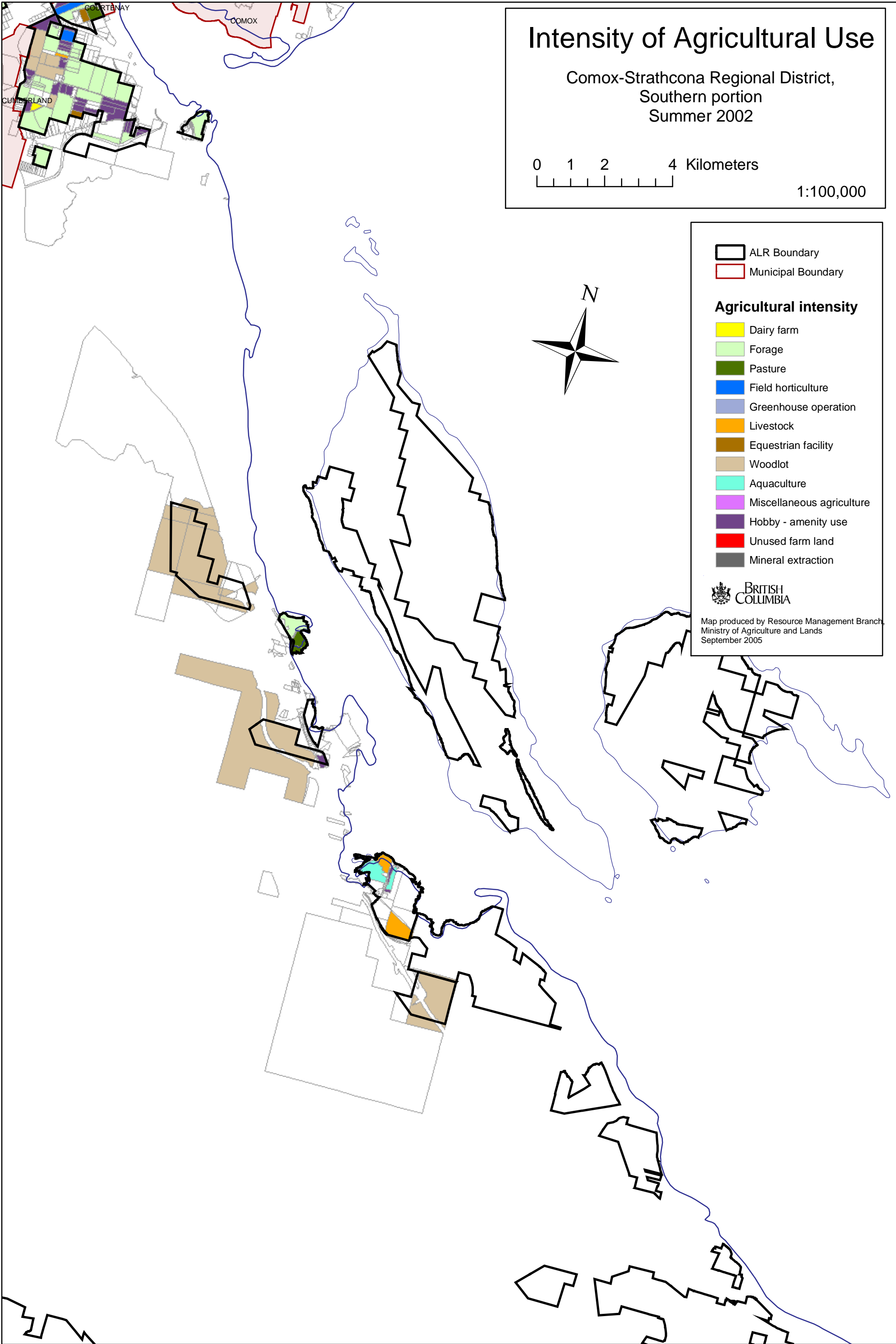
General Condition of ALR Land with Respect to Agriculture, southern portion



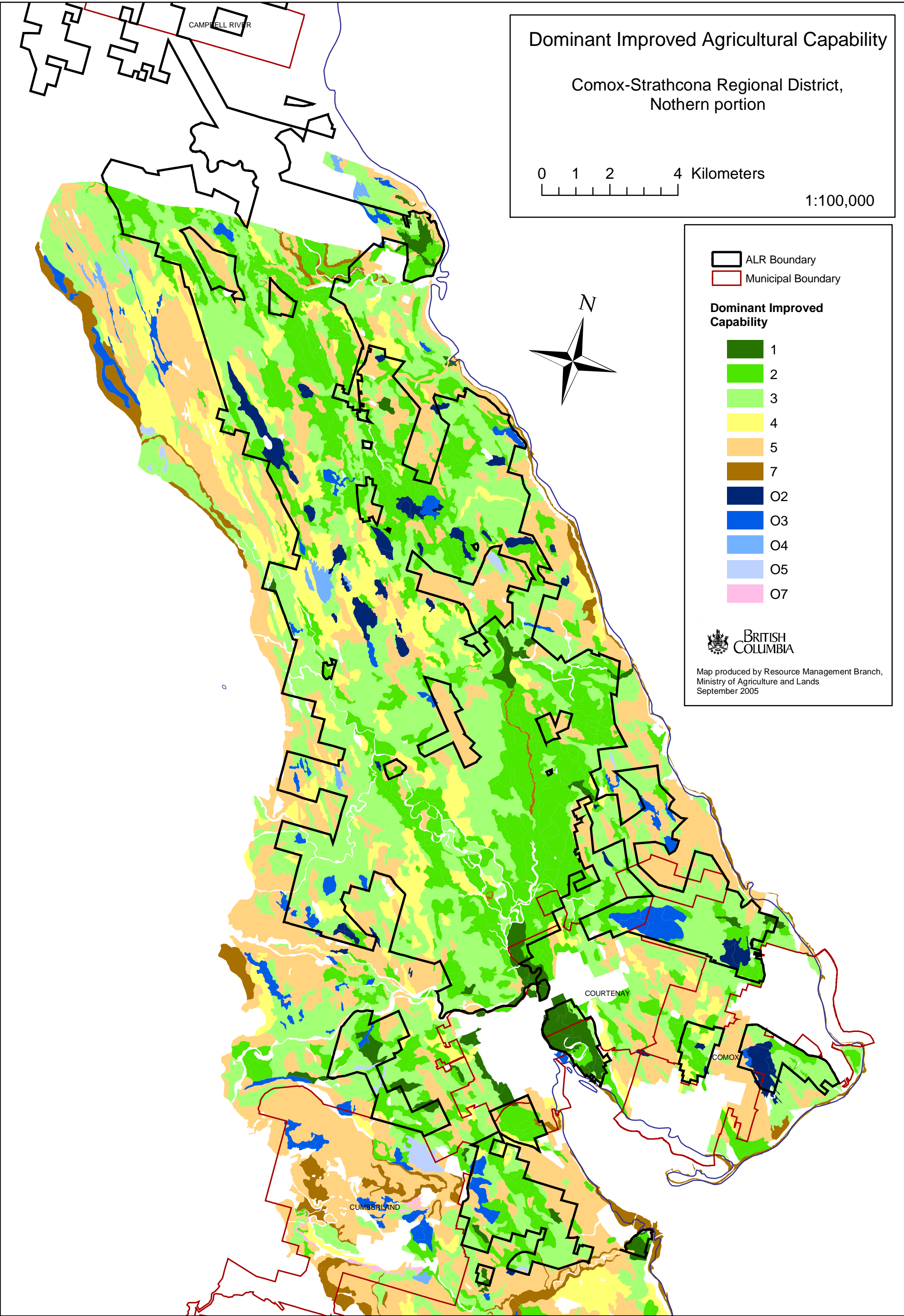
Intensity of Agricultural Use, northern portion



Intensity of Agricultural Use, southern portion



Dominant Improved Agricultural Capability, northern portion



Dominant Improved Agricultural Capability, southern portion

