

How Permitted Non-Farm Uses Impact Agriculture in the Agricultural Land Reserve:
An Assessment in Six Greater Vancouver Municipalities

by

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A Thesis Submitted to the Faculty of Social and Applied Sciences
in Partial Fulfilment of the Requirements for the Degree of

MASTER OF ARTS IN ENVIRONMENT AND MANAGEMENT

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DECEMBER, 2022



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Abstract

An Agricultural Land Reserve (ALR) was established in British Columbia, Canada, by provincial legislation in 1973 with the objective of protecting agricultural lands and encouraging its use for agriculture. The regulation restricts the use of reserves lands to agriculture and related purposes, but approval for permitted non-farm uses can be granted by the reserve's oversight body, the Agricultural Land Commission. This study assessed whether permitted non-farm use activities serve to enhance or detract from agricultural use of the land subject to the decision. A methodology to track and assess agricultural land use post non-farm use approval was developed and applied. This included a review of documentation related to approved non-farm use decisions in six contiguous municipalities in the greater Vancouver region of British Columbia, Canada, from 1997 to 2016. followed by contemporary land use assessment and data analysis. As such the study comprised three stages.

Overall, approved non-farm use applications do not lead to more or less agricultural use of ALR lands. Most parcels not farmed prior to approval of non-farm use, remained not farmed and those used for farming continued to be farmed. As such, the analysis indicates that on balance there was neither a positive or negative outcome. Study results provide a snapshot of a period of time and are not intended to suggest a causal relationship. This study contributes to a greater understanding of the impacts of approved non-farm use decisions on land designated for agriculture.

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Acknowledgements

I would like to sincerely thank my thesis team for their incredible support and guidance. Dr. Wallapak Polasub, I appreciate your kindness, empathy, and patience. Your mentorship and encouragement throughout these years has been incredibly important and I could not have made it this far without you. Dr. Kent Mullinix, thank you so much for your support and guidance along the way. I've learned so much from both of you and am incredibly grateful to have had the opportunity to work with you. I would also like to thank all the members of the ISFS team who have helped support this project from start to finish. Thank you.

I dedicate this thesis to my family. Thank you for encouraging me to pursue this opportunity and for continuing to support me through the ups and downs of this journey. To Lucas for always being there for me, for your patience and your unwavering belief that I can do this. To my parents who provided immeasurable help every step of the way. To Finn and Freya for being my inspiration.

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Chapter 1: Introduction

While the globalized industrial food system has been successful in providing North America abundant and inexpensive food, industrialized farming practices have placed a strain on our land, waterways, and oceans, threatening the viability of our contemporary food-production systems (Behnassi 2013; FAO, 2017; Food Secure Canada, 2017; Kristensen et al., 2016; Rockstrom et al., 2009; Webb et al., 2017). Despite the benefits of the contemporary global food system, food insecurity persists for many across the globe while a third of the annual food production is wasted every year (Behnassi 2013; FAO, 2010; Food Secure Canada, 2017; Foresight, 2011; Kristensen et al., 2016). Across Canada approximately 10% of the population experience food insecurity. More than one in ten households in British Columbia (BC) experienced some level of food insecurity between 2005 and 2012 (Provincial Health Services Authority, 2016). In response to such concerns, interest in strengthening and rebuilding regional food systems is on the rise. An ideal regional food system according to Clancy and Ruhf (Clancy et al., 2015) is one in which “As much food as possible to meet the population’s needs is produced, processed, distributed, and purchased at multiple levels and scales within the region, resulting in maximum resilience, minimum importation, and significant economic and social return to all stakeholders in the region”. Organizations around the world are looking into and pursuing innovative ways to advance regional food systems (Kristensen et al., 2016; Westley, 2011) and to increase their resiliency while addressing vulnerability. Vulnerability can be defined as a system’s susceptibility to harm and lack of adaptive capacity from environmental or socio-economic stresses (Queiroz et al, 2021). Regional food systems not only contribute to local economic activity and reduce environmental impacts, but they also help to ensure that local

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populations have access to food during uncertain times (Blay-Palmer et al, 2013; Christensen, 2016; Deller, 2017; McFadden et al, 2016, Mullinix et al, 2016; Mullinix et al. 2020). A positive outcome of a regional food systems is increased resiliency (Clancy et al, 2015).

A critical component of any regional food system is the farmland required to support food production activities. The ability to produce food locally is threatened as farmland is lost to urban sprawl and other non-farm activities (Caldwell et al, 2017). Across BC, early settlement patterns were often directly associated with areas of prime agriculture land resulting in the expansion of urbanization onto superior farmland, particularly in the southwestern region (Caldwell et al, 2017). Threats of urban, industrial, and other non-farm development continue to persist across the region. In response to concerns over the loss of productive farmland, numerous studies and policies were implemented and introduced to measure and protect farmland (Rawson, 1976; Runka, 1977). In BC, under the *Agricultural Land Commission Act (ALCA)*, the Agricultural Land Reserve (ALR) was established in 1973 with the intention of preserving the province's limited agricultural land base in the face of rapid urban expansion and non-farm related development. The ALR's total land base has remained fairly consistent since its inception (Campbell, 2019). However, 90% of land added to the reserve has been in Northern BC, while 72% of the land lost has been in Southern BC, where more productive farmland is found (Campbell, 2019).

While there has been concern over the loss of prime agricultural land through removal of ALR designation, it has been posited that a potentially greater threat to the long-term protection of agricultural land is the incremental loss and diminished production capacity over time due to

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permitted non-farm uses. Within the ALR, farming is encouraged and non-agricultural activities and uses are controlled. The Agricultural Land Reserve Use regulation identifies permitted farm uses as well as non-farm uses that support agriculture and our food system. Despite there being regulations in place to protect agricultural land, there is no requirement to actively farm the land. The 2016 Metro Vancouver Agricultural Land Use Inventory (ALUI) revealed that only 60.9% (34,834 ha) of the region's land within the Agricultural Land Reserve was actively used for farming. Another 22.5% has potential for farming but is unfarmed; the remaining 16.5% is unavailable for farming (Ministry of Agriculture, 2016).

Under the ALCA, landowners can apply to use their ALR land for purposes other than farming while still retaining ALR status. Generally, the ALC allows non-farm use activities on a case-by-case basis if they are shown to generally support agriculture or are not anticipated to result in adverse impacts to the agricultural capability of the land. Local governments play an important role in the process authorizing (or rejecting) exemptions. Applications to the ALC for non-farm use must first be reviewed and determined by the local government to be consistent with their long-term plans, policies, and bylaws. The local government where the non-farm use activity is proposed to take place is responsible for reviewing information submitted by the applicant and providing a referral to the ALC if not rejected. If the municipality rejects the application, it does not proceed to the ALC. Non-farm use applications can be submitted by individual landowners, non-governmental entities, and local governments themselves. Applications submitted by individual landowners and non-governmental entities are generally associated with non-farm activities intended for private benefit (e.g., facilities that support agricultural activities, commercial, non-profit, and residential uses), while applications submitted

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by government are generally associated with non-farm use activities intended for public benefit (e.g., recreation, transportation, and/or utility).

Some permitted non-farm use activities (such as processing facilities, on-farm food service establishments and housing for farm workers) may increase landowners' farm business viability and their operational capacity. Other activities (such as non-farm related commercial businesses and second residences) may not enhance agriculture from the outset or may over time cease contributing to agriculture and the food system. Therefore, accepted non-farm use activities could potentially contribute to the effective "loss" of ALR land in the long term, and may subsequently contribute to arguments for taking the land out of the ALR. Once a parcel of land is excluded from the ALR, it is likely to be developed with little possibility of supporting agricultural activity in the future. Therefore, there is the need to understand more about these non-farm use applications: What types of uses are proposed? What is the outcome: are the lands currently used for farming? Do approved non-farm use activities on agricultural land result in agricultural utilization of ALR lands? This study sought to answer these questions for the significant agricultural area in the Lower Mainland of BC, focusing on approved non-farm uses within six representative agricultural municipalities located in Metro Vancouver: City of Delta, City of Maple Ridge, City of Pitt Meadows, City of Richmond, City of Surrey, and Township of Langley. These municipalities were selected because they represent 94% of Metro Vancouver's farmland.

Agricultural activities within Metro Vancouver contribute significantly to the BC economy. In 2015, farms in Metro Vancouver accounted for 25.6% of total gross farm receipts

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for the province (Canadian Census, 2016). A total of 15 non-farm use decisions were made in the South Coast region during the 2020 to 2021 reporting period. Of the 15 decisions, 13 applications (80%) were approved and two were rejected (ALC, 2021). Seventy-six percent of all non-farm use applications across the province decided in 2020-2021 were approved (ALC, 2021). Since inception of the ALR, the outcome of decisions for non-farm use activities have not been tracked to evaluate if these activities ultimately enhanced or detracted from agricultural use of the land. This constitutes a critical knowledge gap impeding upon oversight of the ALR. Understanding whether approved non-farm uses on ALR land enhance or detract from agriculture is surely valuable to better understand the strengths and weaknesses of the current agricultural land protection system in BC. Therefore, in this study I aimed to develop and pilot a methodology to track and assess the agricultural use of ALR lands which have been approved for non-farm use activities in the ALR in select Metro Vancouver municipalities from 1997 to 2016. The study sought to explore and answer the question: “Do permitted non-farm use activities serve to enhance or detract from agricultural use of the land subject to the decision?”.

Literature Review

Farmland is a critical component of food systems and understanding the trends and drivers of farmland loss is imperative for informing an effective response. While the rates, trends and drivers of farmland loss differ across geographical locations around the world (Azadi et al., 2010; Paudel et al., 2020; Tahmasebi et al., 2020), studies indicate that shifts in land use resulting in farmland loss have been primarily caused by socio-economic and biophysical drivers (Tahmasebi et al., 2020). There are many different socio-economic factors that influence

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decisions to convert farmland to non-farm uses (Olson and Lyson, 1999; Hansen and Francis, 2007). Economic growth, urbanization, road infrastructure development, and economic development policies are examples of socio-economic drivers (Azadi et al., 2010; Tahmasebi et al., 2020), while climate variability and climate change represent biophysical drivers of farmland loss (Adazi et al, 2018; Tahmasebi et al., 2020).

The integrity of local and regional food systems is increasingly threatened as farmland is converted, fragmented, or paved over. Over the last 20 years, the United States has lost more than 11 million acres of farmland to development (Freedgood et al, 2020). One major threat to agricultural land use in the US is urbanization driven by population growth. Infrastructure development, such as road construction represents another threat to agricultural land in most countries, including Canada and the US (Azadi et al, 2010). The rapid expansion of urban areas to support population growth puts pressure on farmland. Both industrial and residential development activities encroach on farmlands which are often located on flat terrain, close to water sources. Also associated with industrial and residential development activities is the need for reliable and efficient transportation infrastructure. Studies have shown road construction to support urbanization and industrial development also encroaches on farmland (Azadi et al, 2010). The uncontrolled expansion of urban areas, known as urban sprawl, puts pressures on food systems (Hatab et al, 2019). The loss of high-quality farmland located near urban centres results in increased costs necessary to increase the quality of farmland, greater transportation costs to get products to increasingly distant markets, and loss of valuable ecosystem services (Francis et al, 2012).

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Another threat to agricultural land in the US, not associated with population growth, is the rise in low-density residential land use which includes large-lot housing development on open agricultural land that is adjacent to or surrounded by development, and where individual houses or subdivisions are spread out along rural roads (Freedgood et al, 2020).

Low-density large-lot housing development on agricultural land also requires infrastructure (e.g., driveways, roads, ditches) to support residential use that render portions of the property not easily amenable to agriculture (Mullinix et al, 2013). The expansion of low-density residential land use in agricultural areas disrupt agricultural activities on a larger scale by fragmentating farmland over time. Low-density residential development has been found to drive up land prices, making it harder for farmers to buy property (Freedgood et al, 2020).

Farmland loss due to urbanization is similarly a concern in Canada. Many Canadian urban centres began as small agricultural trading centres located near productive and fertile agricultural land and markets. Urban centres in Canada with the highest population concentration were the areas that historically had the best conditions for settlement. These conditions included conducive climate, proximity to major waterways and fertile land for agriculture (McQuaig and Manning, 1982). As cities continue to grow, urban centres increasingly encroach on agricultural land beyond their urban boundary. Additionally, land uses such as golf courses, gravel pits and recreational areas are often located on agricultural land adjacent to urban areas. As such, the effects of urban areas on proximal agriculture lands often extend beyond their physical boundaries (Francis, 2012).

Despite the existence of legislation protecting agricultural land, more than 34,000 ha of agricultural land were excluded from the ALR between 1974 and 2009 in the Okanagan Valley,

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Lower Mainland and Southern Vancouver Island where highly productive farmland is located. During the same time, more than 68,000 ha were included in the ALR in the northern regions of the Peace River, Kitimat Stikine, Fraser Fort George and Bulkley Nechako (Agricultural Lands Report, 2009). This resulted in a net increase in the amount of agricultural land in the province, however farmland in the northern regions is not considered to be as productive or as suitable for a wide range of crops as is the land excluded in the southern regions (Campbell, 2019).

Different policy approaches have been used by governments to prevent farmland losses. In the United States, property tax relief and laws are often used to enable local governments to plan and adopt land use policies to offset development pressure on farmland (Freedgood et al, 2020). Leasing of State-owned farmland available to farmers and ranchers is also a common approach to conserving farmland; many US states have implemented such land leasing programs. Many European countries have regulations relating to farmland leasing, while in Canada and the US, leases are less regulated and are treated as a matter of contract. One of the most frequently used tools in the US is differential land valuation with greenbelts around cities. These are designed to allow for a differential valuation of land to be used for agriculture and allow local governments to assess land for its agricultural value rather than for the present fair market value for other uses. This tool is intended to support farmers being economically viable via lower property taxes. Also, commonly used in the US and Canada, including British Columbia, are Right-to-Farm laws which legally protect farmers from conflicts with urban neighbours. Agricultural zoning is used to identify areas with farming as the principal land use.

Property tax relief is intended to improve farming and ranching profitability by offsetting the increase in land value and property taxes that result from non-farm use competition for land.

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Thirteen states in the US require minimum income requirements and independent verification of active agricultural use to ensure that farmland enrolled in the program is actively used for agriculture (Freedgood et al, 2020). Over half of the states impose penalties for a change in use through roll back taxes or a conversion tax to discourage or disincentivize non-farm use.

In British Columbia, land under the ALR is assigned a preferential (i.e., reduced) land tax, a common agricultural land protection strategy in North America (Stobbe et al, 2011). The goal of preferential land taxes is to make agricultural use of the land more attractive in the hopes of preventing or delaying development (Stobbe et al, 2011). Research indicates, however, that taxation on its own is not an effective method of preserving agricultural land (Conklin and Leshner 1977; Anderson 2012). Preferential taxation of land distorts property values and subsidizes speculation on farmland allowing landowners- speculators to hold out for the highest price (Blewett and Lane 1988; Nelson 1992). While studies have shown that tax policies have the potential to increase net farm income, they do not on their own encourage farmers to make their land more productive (Stobbe et al, 2008).

Other policy tools include farmland conversion tax, ownership restrictions, and urban growth boundaries. Farmland conversion tax schemes levy a fee for the conversion of farmland to non-farm use. The tool is used to deter the development and loss of agricultural land. To be effective, the fee must be significant enough to offset the potential value-lift from development. Many jurisdictions, including five Canadian provinces have implemented farmland ownership restrictions which legally restrict who can own farmland, based on residency and citizenship. BC does not restrict individuals, companies, trusts, or other legal entities from purchasing farmland (Sussman et al, 2016). Urban Growth Boundaries (UGBs) are used to limit urban

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development, promote compact community planning and efficient delivery of services. UGBs are used to communicate a region's commitment to protect agricultural land and limit the appeal of speculative buying and selling of farmland.

Policies that support UGBs include regional growth strategies, Official Community Plans, and development permit areas that reinforce where agricultural land is protected.

In tandem with provincial agricultural zoning, municipalities institute zoning bylaws and policies to restrict how agricultural land can be used. One of the main purposes for establishing zoning for exclusive agricultural use is to keep agricultural land prices low for farming. However, zoning for exclusive agricultural use can encourage speculation on potentially developable land and create an incentive to seek exclusions and variances to the zoning regulations (Blewett and Lane, 1988).

In addition to the exclusion of productive farmland in southern regions of B.C., another concern is the actual usage of farmland for agricultural purposes (Mullinix, et al. 2013). In several agricultural regions, the number of ALR parcels used for residences exceeds those used for agriculture (BC Ministry of Agriculture, n.d.). A threat to agricultural viability is the persistent underutilization of farmland. The market value of agricultural land is not based on its intended use or potential farm business income, but rather on its value for other uses such as industrial and residential development. As a result, agricultural land often sells much higher than its assessed value and is cost prohibitive to those wanting to farm (Sussmann et al, 2016). The high price of farmland makes it inaccessible to many farmers and contributes to the unprofitability of agricultural pursuits (Curran and Stobbe, 2010; Sussmann et al., 2016). By virtue of its excessive valuation, agriculture land is "effectively lost" (Mullinix et al. 2012).

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Metro Vancouver, the region in which this study takes place, has limited developable land and unused farmland is an attractive commodity to those seeking an opportunity for low-density rural estate development near urban amenities.

Overview of ALC, ALR and Non-farm Use Application Process

The Agricultural Land Reserve (ALR) is a provincial land use designation in which agriculture is recognized as the priority use. Farming within ALR designated lands is encouraged and non-agricultural uses are restricted. The Agricultural Land Commission (ALC) is an independent administrative tribunal responsible for administering the *Agricultural Land Commission Act*, S.B.C. 2002, c. 36 (ALCA). The purposes of the ALC as set out in Section 6 of the ALCA are:

- a) To preserve agricultural land.
- b) To encourage farming on agricultural land in collaboration with other communities of interests.
- c) To encourage local governments, First Nations, the government, and its agents to enable and accommodate farm use of agricultural land and uses compatible with agriculture in their plans, bylaws and policies.

The ALCA sets the legislative framework for the establishment and administration of the agricultural land preservation program. The ALCA also sets out the processes to be followed when making decisions under the Agricultural Land Commission Act of 2002 and ALR regulations for exclusion, inclusion, non-farm use, non-adhering residential use, soil and fill use,

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subdivision, and transportation, utility and recreational trail uses in the ALR. The procedures for applications to the ALC are set out in the Agricultural Land Reserve General Regulation (General Regulation). Permitted land uses are defined in the Agricultural Land Reserve Use Regulation (Use Regulation).

The ALC is composed of up to 19 Commissioners appointed by Ministerial Order. The ALC reviews all applications under the Agricultural Land Commission Act of 2002 and ALR regulations. The Commission on average reviews and decides on more than 400 applications each year (ALC, 2019). The ALR has six Administrative Regions: South Coast; Interior; Island; Kootenay; North; and Okanagan. Each Administrative Region has a decision-making panel, responsible for applying the ALC Act and regulations in making decisions on applications made within their respective regions. Applications are evaluated by the decision-making panel and considered against the purpose of the ALC as stated in the ALCA.

While permitted land uses are defined in the Use Regulation, ALC Policies provide further interpretation of activities and uses permitted within the Agricultural Land Reserve. The policies are intended to assist in the interpretation of the ALCA and related regulations. Permitted non-farm uses are defined in the Agricultural Land Reserve Use Regulation (2019). Permitted non-farm uses are those that may or may not be directly linked to agriculture, are deemed compatible with agriculture, and have low impacts on the land base. Some non-farm uses that are permitted by the ALC are prohibited by local governments. Many non-farm uses are subject to conditions, thresholds, or other requirements.

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Permitted non-farm uses include, but are not limited to:

- Home based businesses
- Temporary sawmill
- Pet kennels and breeding facilities
- Production, storage, and application of Class A compost
- Production and development of biological products used in integrated pest management
- Aggregate extraction less than 500 m³
- Conservation and passive recreation and open land parks
- Education and research (not school campuses)
- Force mains, trunk sewers, gas and water pipelines within an existing right-of-way

The revised Act and new Regulation divide land uses into 4 broad categories: farm uses, non-farm uses, soil and fill uses, and residential uses (Agricultural Land Commission Act, 2002 and BC Regulation 30/2019). The regulation also includes a series of conditional uses which qualify certain activities as farm use. Activities which may not be prohibited include farm structures driveways, utilities, parks, and temporary gatherings of 150 or less. Prior to the 2019 amendments, residential uses were considered a non-farm use. Residential use has now been added as a new category on its own rather than nested under the non-farm use category. This distinction means that residential use is now neither a farm use nor a non-farm use. An amendment in July 2021 permits a primary residence and one secondary residence on ALR parcels based on certain conditions (Ministry of Agriculture, Food and Fisheries, 2021).

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The regulatory regime responsible for conserving BC's farmland and encouraging its use for farming continues to shift and change to address challenges and perceived shortcomings.

Exemption application process.

Each application for non-farm use is considered on a case-by-case basis within the context and purposes of the ALC. Under the current legislation, ALR landowners are required to apply to the ALC if they wish to pursue non-farm uses. Landowners apply to their municipality for initial review. The municipality, upon review, decides whether to reject the application or refer it to the ALC. Once referred to the ALC, the application is reviewed by the Commission and either approved or rejected. The approval of a non-farm use must ultimately be granted by the ALC and usually include discourse on whether the proposed non-farm use activities will encourage or enhance agriculture or agri-business in the short and/or long term, or otherwise impact agriculture. The ALC considers whether the proposed activities described in the application be accommodated on lands outside the ALR or on an alternative site within the ALR that is less capable or suitable for agriculture. When reviewing an application, the ALC considers a broad range of information, including but not limited to: whether the property is currently used for agriculture; the agricultural capability of the land under consideration; previous agricultural improvements or enhancements to the property; suitability for agriculture land use; and surrounding land use (Agricultural Land Commission, 2012).

The ALC also considers whether the proposed activities impact future agricultural use of the land. The ALC will consider how the proposed non-farm activity relates to the local government's Agricultural Plans, Official Community Plan, and bylaws and recommendations

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from the Board/Council, Agricultural Advisory Committee, Advisory Planning Committee, and Planning Staff of the local government. The approval of a non-farm use activity may be subject to a specific period after which the approval expires, and the non-farm use activity must cease.

Role of local governments.

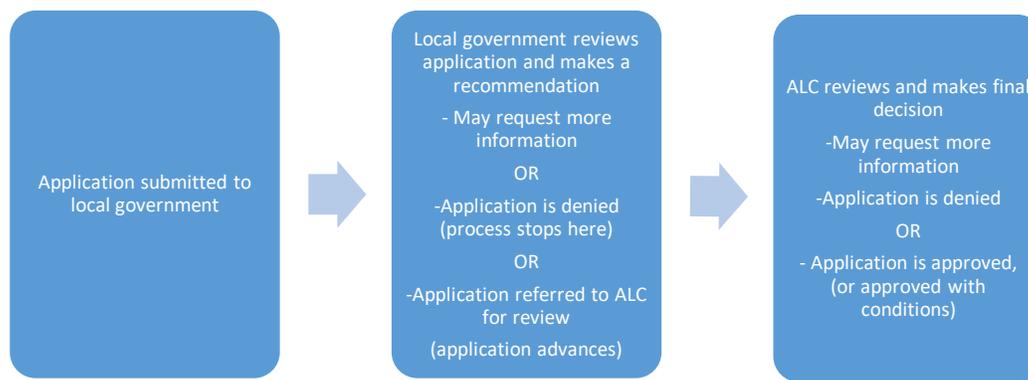
Before a decision is made by the ALC, the application must first be reviewed by the municipality in which the non-farm activity is being proposed. The municipality will either refer the application to the ALC for their decision or reject the application. Landowners begin the process by submitting application on the ALC's online portal. Once the application has been submitted, the municipality receives a notification and a link for downloading all the submitted information. The municipality is then responsible for reaching out to the landowner to discuss next steps. At this time, the municipality will identify any additional actions required by the landowner to support the application. Figure 1 provides a high-level overview of the non-farm use application process.

Municipal staff review the application and may request additional information from the landowner. The municipal review process is typically undertaken by the municipal Planning Department. Staff will review the proposed activities through the lens of relevant policy and planning documents to determine their recommendation. The Official Community Plan (OCP) is the most common tool used to influence decision-making related to agricultural land use. While municipalities may not have up-to-date Agricultural Plans to refer to, Zoning bylaws, environmental policies, building codes, transportation plans, sustainability plans etc. may be reviewed and considered in the report that will be submitted to City Council. Staff will review

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the land title to identify if there are easements or covenants that may have a bearing on the application. Staff will also circulate relevant information to different internal departments for additional technical review and comment (e.g., the Engineering Department may review the application for potential servicing, road or traffic considerations). Once all comments have been received the staff will write a report with recommendations to be reviewed by Council. Some municipalities have Agricultural Advisory Committees that will also review the report and provide additional comments and recommendations. Those comments will be incorporated into a final report that will then go to Council for review and decision. The Council will either recommend the application be referred to the ALC or be denied. If the application is denied by the local government, it will not go the ALC for review. If the application is approved by the local government for ALC referral, the ALC will begin their review process. An approved decision by the ALC does not mean that the non-farm use activity will go forward as is. The Applicant must also meet any additional requirements of the municipality. In most cases, non-farm use activities will require the landowner to go through process to apply to re-zone the property or obtain a temporary use permit. This requires additional information and steps to be taken. Landowners may also be required to meet specific environmental and engineering permit requirements. Some municipalities will wait for a decision to be made by the ALC prior to pursuing additional permitting requirements, while others will work concurrently. Timing of the review and permitting activities may also influenced the nature of the proposed non-farm activity and may vary on a case-by-case basis based on the likelihood of approval by the ALC and complexity of the application. The application process is summarized in Figure 1.

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Figure 1: Non-Farm Use Application Process

It was the purpose of this study to review previously approved non-farm use decisions by the ALC within the ALR in representative Metro Vancouver municipalities from 1997 to 2016 to address the following question: “Do permitted non-farm use activities serve to enhance or detract from agricultural use of the land subject to the decision?”. To answer this question, I looked at what types of uses are proposed, who are the principal applicants, and what is the outcome: are the lands currently used for farming? Jurisdictions the study included were City of Richmond, City of Surrey, City of Delta, City of Maple Ridge, City of Pitt Meadows, and the Township of Langley. All part of the Greater Vancouver Regional District (aka Metro Vancouver).

Chapter 2: Methodology

A mixed research approach was used: quantitative/statistical methods to measure phenomena, and qualitative methods for depth and richness of information and a more detailed understanding (Creswell, 2009). Descriptive statistics were used to help characterize, present, and summarize data in meaningful ways such that patterns related to non-farm use applications

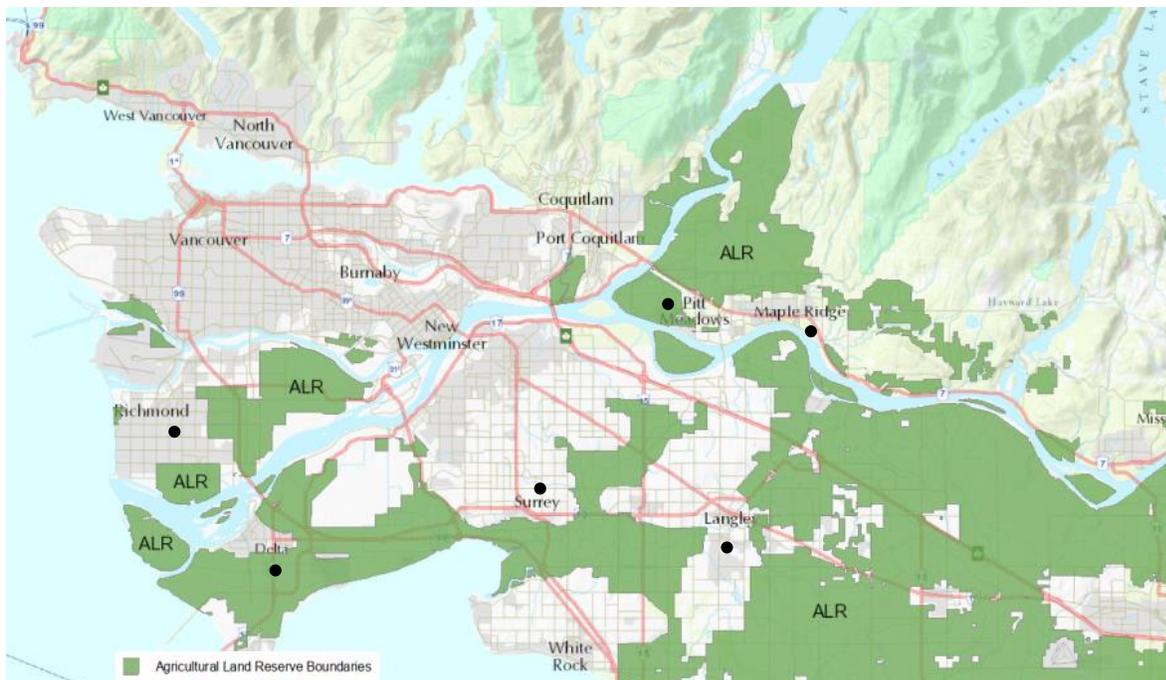
ASSESSMENT OF PERMITTED NON-FARM USES

might be detected. Research was conducted in three stages: Data collection and tabulation on approved decisions; contemporary land use assessment; and analysis of data collected.

Stage 1: Data Collection on Approved Applications

All non-farm use applications approved by the ALC from 1997 to 2016, in the study's six municipal jurisdictions, were identified, reviewed and pertinent data was extracted. The subject municipalities were selected because they represent 94% of Metro Vancouver's farmland. A map showing ALR land within Metro Vancouver, including the subject municipalities is provided in Figure 2 (ParcelMap BC, 2022)

Figure 2: Agricultural Land Reserve Land within the Greater Vancouver Regional District



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Decision documentation/records from 2006 to 2016 were publicly available at the time of this study in digital format on the Agricultural Land Commission (ALC) website (<https://www.alc.gov.bc.ca/application-decision-search/>). Decisions from 1997 to 2005 were available only in hard copy at the ALC office. Only approved decisions were provided in a hard copy format by the ALC. Both digital and hardcopy (approved) decisions were reviewed August 19, 2019 to October 4, 2019.

Approved decisions were reviewed, organized, and summarized to build a concise database. The database contains information pertaining to the following categories:

- Decision year;
- Municipality;
- Legacy number;
- ID;
- Applicant name;
- Application type (individual, government, non-government organization);
- Parcel Identification Number (PID);
- Proposal synopsis;
- ALC rationale for decision;
- Applicant type; and
- Area of impact.

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I looked at the different types of non-farm uses that were being proposed to determine what applicants were seeking approval for and categorized activities into seven different types of non-farm uses. The categories were created after thoroughly reviewing the decision letters to see what themes emerged that would allow similar activities to be grouped. Once I created the categories, each decision was assigned to a category based on the type of non-farm use described in the decision letter. Each category is described below.

1. Commercial: Any use that facilitates the operation of a non-farm related commercial or for-profit business.
2. Non-profit: Any use that facilitates the operation of non-farm, not-for-profit organizations or activities. This sub-category includes organizations such as schools, hospitals, religious institutions, and not-for-profit societies.
3. Residential: The applicant seeks approval for a pre-existing residential dwelling that is deemed illegal under the ALR regulations or is requesting approval to create a new temporary or permanent residential dwelling. These decisions include home renovations and add-ons by the owners for personal uses. It's important to note that as of December 31, 2021, secondary homes no longer require approval for non-farm use (Agricultural Land Reserve Use Regulation, 2019).
4. Support Facility or Activity: This sub-category includes non-farm activities or structures that will help support farm-related activities.
5. Recreation: This sub-category includes non-farm use for the purpose of recreation or leisure that is not directly related to a business venture. This sub-category includes biking trails, sports fields, and recreational trails.

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6. Transportation: This sub-category includes new roads or transportation corridors, or modifications to existing roads and corridors. Decisions categorized under transportation include proposals to construct or widen roads to facilitate transportation needs.
7. Utility: This sub-category includes non-farm activities related to dykes, sewers, or water systems or to modify existing utilities. Decisions categorized under utility include proposals for new dyke construction, construction or upgrade of drainage pump stations, construction or expansion of conveyance ditches, installation of sanitary sewer pipes and expanding watermain services, as well as infrastructure to support telecommunications. These proposed activities are often considered to support agriculture by supplying necessary infrastructure or improving drainage. Applications under utility are commonly submitted by local or regional government.

Next, I assigned each application an applicant type to better understand who submits applications for these non-farm use activities. I created three categories for applicant type: government; individual; and non-government.

1. Government: These were applications submitted by a government agency and they typically include non-farm use applications related to utility, transportation, recreation or dyke construction to help facilitate drainage. Non-farm activities on farmland proposed by government are typically intended for the benefit of the public.
2. Individual: These were applications submitted by individuals and include a mix of non-farm uses including residential and commercial uses and activities or facilities intended to enhance agriculture. Non-farm activities on farmland proposed by individuals or private entities are typically intended to benefit the landowner.

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3. Non-Government: These were applications submitted by non-government agencies and include a mix of commercial, non-profit, and residential activities.

The applicant type was assigned while reviewing the decision letter and typically determined by the name of the applicant and the details of the proposed non-farm use. In most cases, it was obvious if the application was submitted by government (e.g., City of Surrey), non-governmental organization (e.g., name of a commercial business), or by an individual. The details included in the decision provided additional context to help identify the applicant type.

I looked at the permitted non-farm uses through the lens of whether the activity is intended for public benefit or private benefit. Non-farm uses for public benefit are those intended to have a material positive impact on society or public benefit, such as providing amenities or ecological services such as recreational trails and roads. I typically categorized decisions related to transportation, utility and recreation/conservation as being intended for public benefit as this was commonly used as the rationale for approval. Non-farm use activities intended for private benefit include residential, commercial, non-profit, and support facility or activity.

Stage 2: Land Use Assessment

Parcels associated with approved decisions were investigated individually to confirm information and assumptions from Stage 1. I employed three different techniques to investigate and corroborate agricultural use of the lands. The three techniques, involving both primary and secondary data collection, were orthoimage analysis, windshield survey, and BC Assessment database review. Each is described in detail in the following sub-section.

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(1) Orthoimage analysis.

Aerial imagery of parcels identified in Stage 1 were viewed and visually assessed to determine each parcel's contemporary land use. Two research assistants with background in agriculture science were trained to assist in the visual interpretation of the aerial imagery. The orthoimages (taken from March 31 to April 2, 2018) were provided by the Metro Vancouver Regional District. Using the unique PIDs of each parcel, locations of individual parcels were identified using ArcGIS software by overlaying the orthoimages with municipality maps. Municipality maps were downloaded from the ParcelMap BC database (<https://ltsa.ca/products-services/parcelmap-bc/>).

Land use outcomes for this assessment were classified into four groups – Farmed, Not farmed, Unclear, and PID not found. The “PID not found” classification was assigned when the parcel could not be located on the map. Examples of images for each land use results are shown in Figure 3 to Figure 7.

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Figure 3: Example of a land use result classified as “Farmed”



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Figure 4: Example of a land use result classified as “Not farmed” – Residential use



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Figure 5: An example of a land use result classified as “Not farmed” - Woodlot



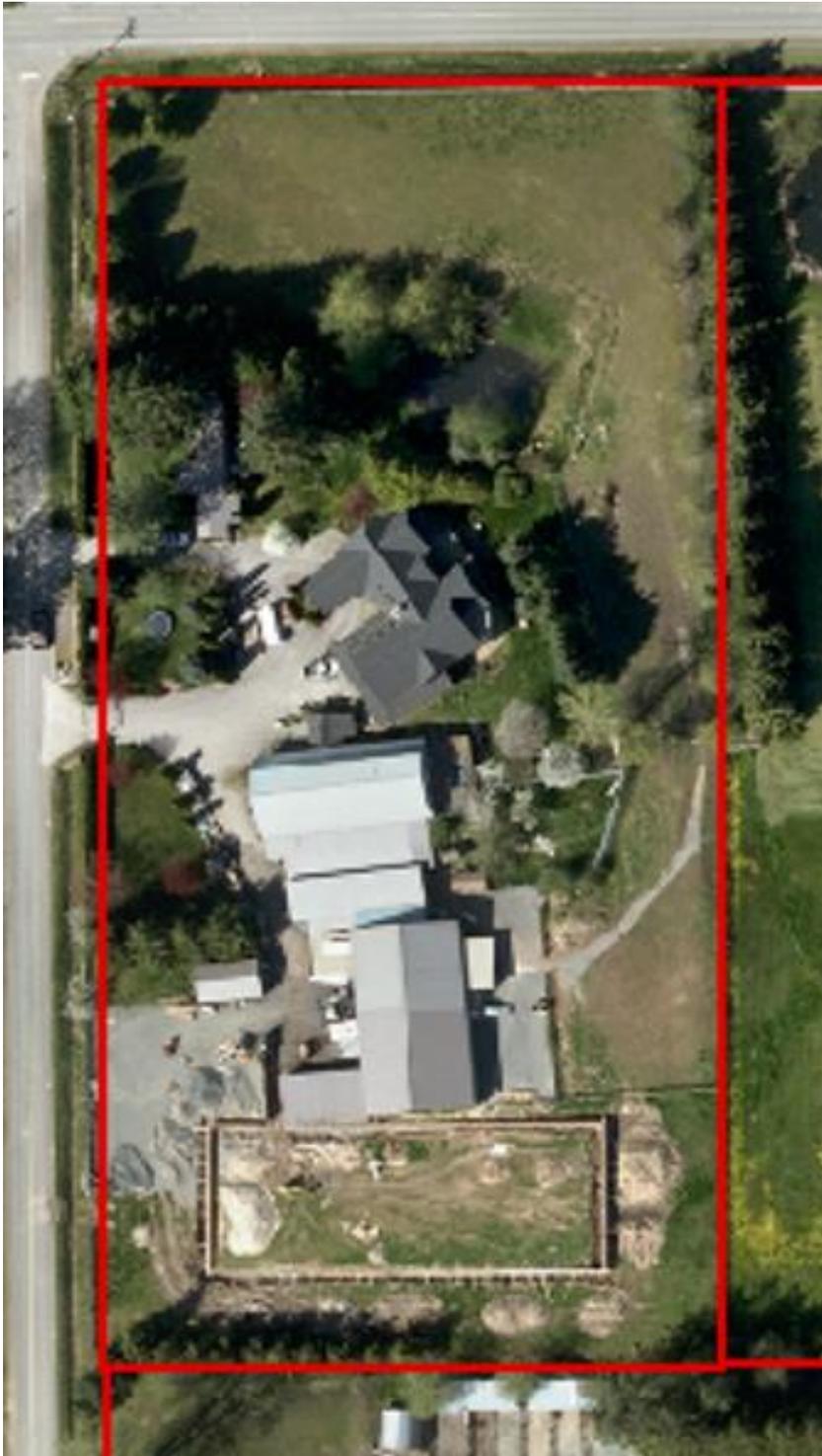
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Figure 6: Example of a land use result classified as “Unclear” with low visibility from the road



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Figure 7: Example of a land use result classified as “Unclear”- potential agricultural activity



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(2) Windshield survey.

This second land use assessment technique involved roadside observational data collection of parcels from a motor vehicle, i.e. windshield survey. Assessments were made without physically accessing the parcels or talking to the owners of the parcels. The same two research assistants that assisted in ortho image assessment were trained to conduct the windshield surveys. The research assistants drove to parcels identified on maps and made systematic observations from the roadside. Observations made during the windshield survey contributed to better understanding the current land use status of each property as livestock and crops are visible and readily identified. The windshield survey was conducted between September 2019 and November 2019.

Similar to the previous assessment technique, land use outcomes for the windshield survey were assigned one of four classifications – Farmed, Not farmed, Unclear, and Not surveyed. Due to the time and budget constraints, 200 parcels out of 382 (52%) were selected for investigation using this technique. Parcels identified as having low priority were not visited, these included parcels under decisions for transportation and utility rights-of-way. The assignment of priority was recommended by staff at the ALC as decisions involving transportation and utility rights-of-way were intended for public uses and often not submitted by private landowners.

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(3) BC Assessment database review.

The third technique compared the approved non-farm use application database built in Stage 1 to BC Assessment's property database. Each year the BC Assessment conducts property assessment which includes information on property classes of individual parcels. Property class information allowed me to determine whether the land was reported and assessed as used for agricultural purposes. The nine property classes as specified by the BC Assessment are: residential; utilities; supportive housing; major industry; light industry; business other; managed forest land; recreational property/non-profit organization; and farm.

In some cases, a property may be assigned to more than one category. For example, a property can be classified under residential and farm at the same time. As a rule of thumb, if a property is classified under a farm class (whether it is also classified under other classes), then the property is considered to be used for agricultural purposes. On the other hand, if a property has not been assigned a farm class then the property is not considered to be used for agricultural purposes. Therefore, land use outcomes from this technique are under three categories: farmed, not farmed, no data. The main reason why BC Assessment may not have property class data is because the parcels under investigation may not be subjected to property tax as is the case for Crown land or that parcels have become part of a transportation corridor or natural area for recreation or conservation. The purpose of utilizing all three techniques in conjunction to assess the land use outcome of a particular property or parcel was to increase the confidence in our land use outcome results. Additionally, though not an objective of this study, I was able to ascertain the pros and cons for each technique.

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I developed a set of rules to make an unbiased assessment of land use when comparing the three methods and assigning each parcel a single land use. These rules were:

1. When land use outcomes from all three techniques are the same for the sale parcel/property, then the final land use outcome can be stated with certainty that the land is either “Being used for agricultural purposes”, “Not being used for agricultural purposes”, or “Unclear due to lack of information”.
2. When land use outcomes from at least one technique is different than the other two, then the following steps should be followed:
 - a. Refer to BC Assessment data, if available, as the final land use outcome determinant.
 - b. If BC Assessment data is not available, then refer to the orthoimage analysis as the final land use outcome determinant.
 - c. If both BC Assessment data and orthoimage analysis are not available, then refer to the windshield survey as the final land use outcome determinant.

Stage 3: In-depth analysis of data collected.

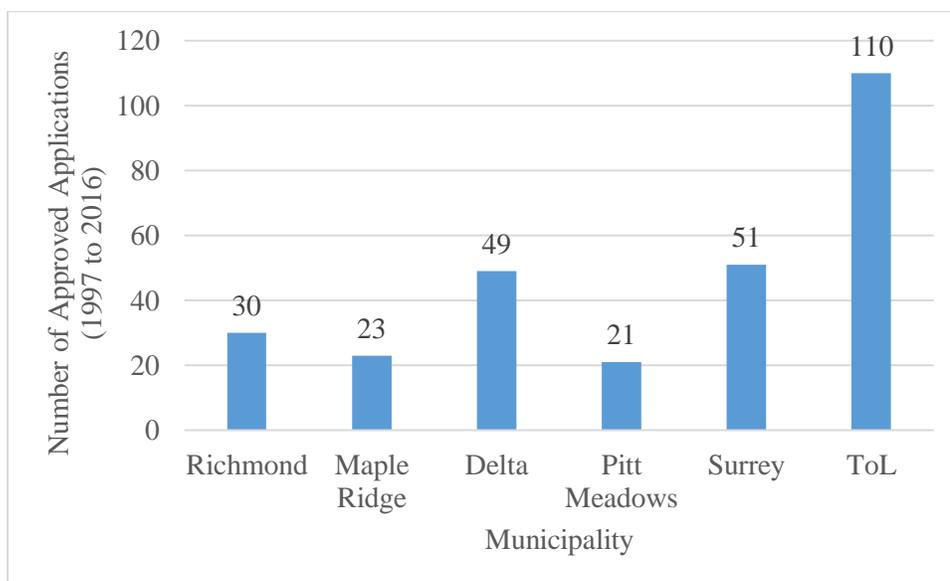
From Stage 1 and 2, I built a complete database of approved decisions and their land use outcomes. In this last stage, descriptive statistics were used to characterize, present, and summarize the data in meaningful, interpretable ways. Descriptive statistical techniques include tabulated description and graphical description.

Chapter 3: Results and Discussion

Applications by Municipality

Between 1997 and 2016, a total of 284 applications were approved across the six municipalities for non-farm use activities. The Township of Langley had the most approved decisions with 110, accounting for 39% of the total approved applications. The City of Surrey had the second most approved decisions with 51 (18%) followed by the City of Delta with 49 (17%) approved decisions. The City of Richmond had 30 (10%), the City of Maple Ridge had 23 (9%), and the City of Pitt Meadows had 21 (7%) (Figure 8).

Figure 8: Number of Approved Applications by Municipality.



According to Metro Vancouver's Agricultural Land Use Inventory, the Township of Langley has the most ALR parcels of the six municipalities with 4,807, totalling 22,269.9 ha. The City of Surrey has 1,276 parcels, totalling 8,654.1 ha, Maple Ridge has 1,469 parcels

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(3,628.6 ha), Pitt Meadows has 712 parcels (6,356.3 ha), Delta has 771 parcels (8,889.7 ha), and Richmond has 1,766 parcels (4,722.3 ha) (Ministry of Agriculture, 2016). As such, the Township of Langley having the highest number of approved decisions and the highest number of affected parcels is not unexpected. This did not, however, mean that the Township of Langley was more likely to approve non-farm uses of ALR land. Out of 52,520.9 ha of ALR land across the six municipalities, the Township of Langley represents 41% of the land and 39% of the approved decisions. It is reasonable that with the most farmland out of the six municipalities, the Township of Langley would have the most approved applications.

The total area of ALR land varies across municipalities, as do the size and number of parcels.

provides a comparison of the total area of ALR land within each municipality, the total number of ALR parcels and the total number of approved decisions by municipality.

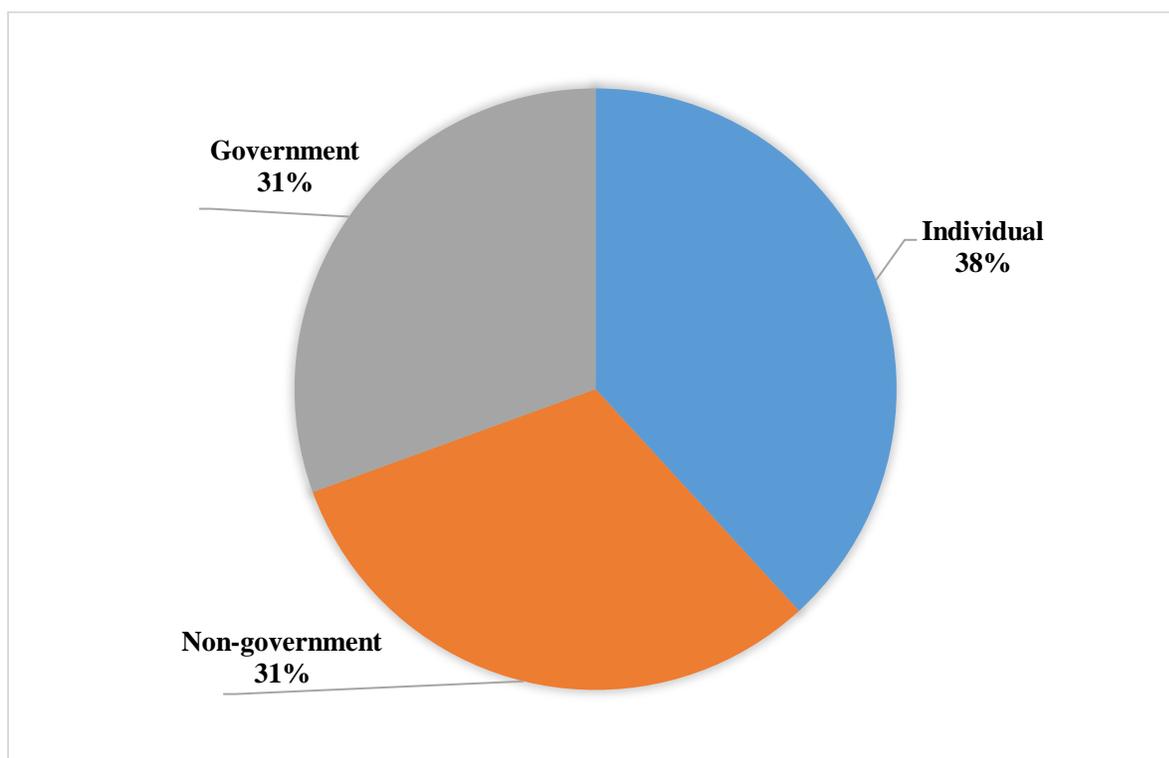
Table 1: Comparison of total ALR area and number of parcels by municipality.

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Applicant Type

A mix of applicant types were observed across the approved decisions. Of the 284 decisions, 108 applications were submitted by individuals. These represent 38% of all approved decisions and were the most common type of applicant, followed by government (31%) and non-government (31%), as demonstrated in Figure 9.

Figure 9: Number of applicants by applicant type.

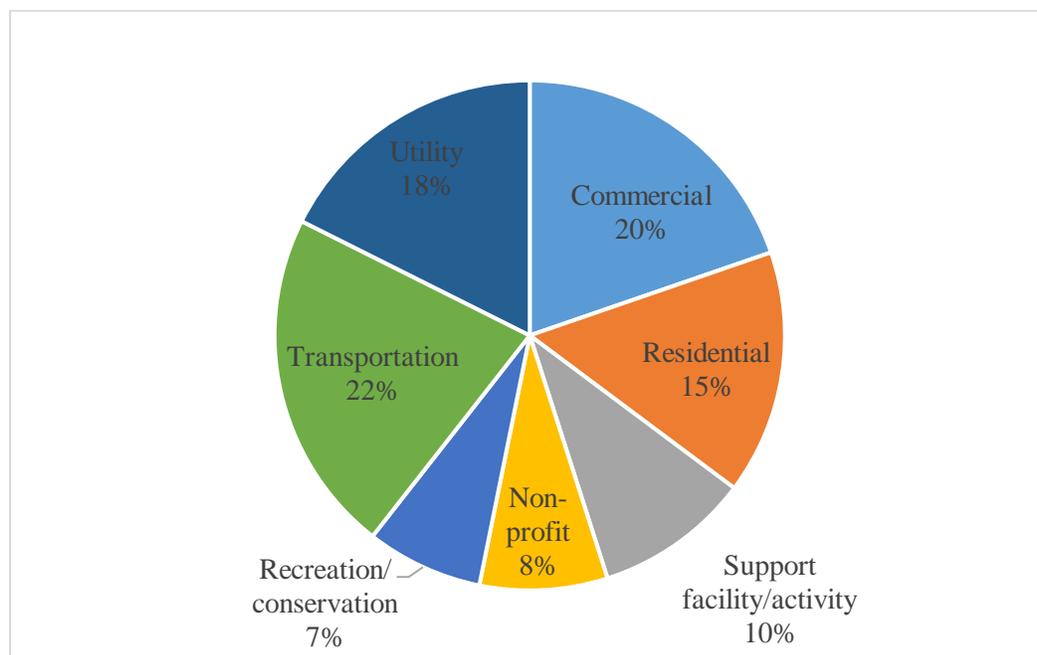


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Type of Non-Farm Use

The seven types of non-farm uses were represented in the approved decisions, as presented in Figure 10. The approved non-farm use activities were first evaluated at the local level, where the local government has the ability to stop applications from proceeding to the Commission if the proposed activity is contrary to local and regional land use planning policies and plans. The application would have been evaluated against the local government's agricultural plans, Official Community Plan, and bylaws and reviewed by City Council or a sub-committee prior to proceeding to the Commission. The Commission considers any recommendations made by the local government (e.g., mitigation measures and additional conditions for approval) and whether the proposed activity would impact the current agricultural use or the potential for future agricultural use. If the Commission approves an application, there are typically conditions associated with the approvals which must be met before the decision can be finalized. The conditions are required to minimize the impacts of the non-farm use and may include provisions such as creating a buffer between farm and non-farm-use activities. As it is the purpose of the Commission to preserve agricultural land, a proposed non-farm use activity should have minimal impacts to the long-term loss of land for agricultural use. The rationale for approving a non-farm activity does not require that the proposed activity encourage or enhance agriculture.

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Figure 10: Number of Applications by Type of Non-farm Use

A total of 56 applications were approved for commercial non-farm use activities. Of which, 29 were submitted by non-governmental organizations, these included businesses and non-profit organizations. Twenty-seven were submitted by individuals, these included businesses such as equestrian facilities, a golf course, a bed and breakfast, a winery, event space, guide dog breeding centre, dog kennel, child-care facility, and an airfield. Commercial non-farm use represented approximately 20% of the approved decisions and include a wide range of non-farm use activities considered in the decision letter to have a low impact on the land. In some cases, commercial activities on farmland have been considered key to the economic viability of agricultural activities by providing an avenue for supplemental income.

Twenty-three decisions were for non-profit non-farm uses with 17 submitted by non-governmental organizations, four by individuals, and two by government. The approved

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activities were for animal shelters, religious assembly buildings (e.g., church, temple), private medical facilities, private schools and administrative buildings, and a tourist information centre.

Forty-four decisions for residential non-farm related activities were approved. The majority of these decisions were in the Township of Langley, representing 33 of the 44 applications (75%). The applications were submitted primarily by individuals. Seven applications were submitted by a non-governmental entity.

Twenty-one decisions were approved for recreation/conservation non-farm uses. Of which, 14 were submitted by government, four by non-governmental entities, and three by individuals.

Applications under this category included a range of different activities, including non-farm uses intended to retain or enhance green spaces for public recreational uses.

Sixty-two decisions were approved under the Transportation category. The non-farm use activities were typically associated with building new roads or highways or to improve or expand existing roads.

Fifty decisions were approved under the utility category. Most of the approvals were initiated by local government to support infrastructure upgrades, address capacity issues and improve drainage.

Twenty-eight decisions were approved for support facilities/activities with 19 submitted by individuals and 9 by non-governmental entities. Applicants were typically seeking approval for business operations that would contribute to surrounding agricultural activities such storage areas to support poultry farming, expansion of a meat processing facility, facility for mixing, repackaging and sale of spilled grain, and warehouse/cold storage for agricultural products. Of

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the seven categories, support facility/activities is the only category where the nature of the proposed non-farm use activity is always intended to enhance or support agricultural use of the land. In some cases, non-farm use applications under the utility or transportation category were also intended to enhance or support agricultural use of the land (e.g., improving drainage or farm vehicle access). Out of the 284 approved non-farm use decisions, 50 (17.6%) were approved with the rationale that activity is intended to contribute to agricultural use of the land. The majority (82.3%) of proposed non-farm use activities were approved because the activity poses no adverse impact, the damage has already been done (e.g., continuation of a pre-existing non-farm use doesn't pose further harm), or the benefit of the non-farm use activity is expected to outweigh adverse impacts associated with the activity. These types of approved non-farm use activities do not enhance and were not intended to enhance agricultural use of land. The **Error! Reference source not found.** summarizes the rationale for approval for each non-farm use category.

Table 2: Rationale for approval for each non-farm use category.

Type of Non-Farm Use	Rationale for Approval
Commercial	The ALC rationale provided for approval of commercial activities were based on a mix of the activity as described as having no adverse impact, contributing to agriculture or due to pre-existing non-farm use. The rationale for no adverse impact was usually justified by the temporary nature of the commercial activity and lack of permanent infrastructure to support the non-farm activity. The rationale for approving activities considered to contribute to agriculture were generally due to the type of activity where the applicant successfully argued how the non-farm activity would be beneficial to agriculture (e.g., equestrian boarding facilities). Rationale for pre-existing non-farm activities are based on historic use and proximity to existing infrastructure and roads.
Non-profit	ALC rationale for approval of these activities reference no adverse impact on farmland and in several cases due to pre-existing non-

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	farm activities. ALC rationale often cited the minimal negative impact on surrounding agricultural operations while providing a needed community service. Applications for religious institutions in Richmond referenced the No. 5 Road Backlands Policy, a Policy allowing Community Institutional uses on the westerly 110 m of the properties located on the east side of No. 5 Road between Blundell Road and Steveston Highway in Richmond if the remaining portions are actively farmed. The No. 5 Road Backlands Policy was included as an amendment to the Richmond Official Community Plan in 2016.
Recreation/Conservation	ALC rationale for approval of these activities reference no adverse impact on farmland and in several cases to legitimize pre-existing non-farm activities and require actions by the landowner to mitigate exiting or potential negative impacts as a result of the recreational activities. The ALC rationale often cited the minimal negative impact on surrounding agricultural operations while providing a needed community service.
Residential	The most common rationale for approval of residential non-farm use was no adverse impact, representing 30 of the applications. Ten applications were seeking approval for pre-existing non-farm uses, and 4 were considered to contribute to agriculture (e.g., seeking approval to retain existing residence or construct new residence for farm help). In some cases, the applicant was seeking permission to use land already not being used for farming for a different non-farm use.
Support Facility/Activity	The rationale for approving activities considered to contribute to agriculture were generally due to the type of activity where the applicant successfully argued how the non-farm activity would be beneficial to agriculture (e.g. a warehouse to store produce). Rationale for pre-existing non-farm activities are based on historic use and proximity to existing infrastructure and roads.
Transportation	ALC rationale for approval was typically due to outcome being considered to be for the benefit of the public outweighing any negative impacts of non-farm use of the land.
Utility	Most of the applications were approved on recommendation from local government to support upgrades, capacity issues, the minimal impact to farmland, and individual and community needs.

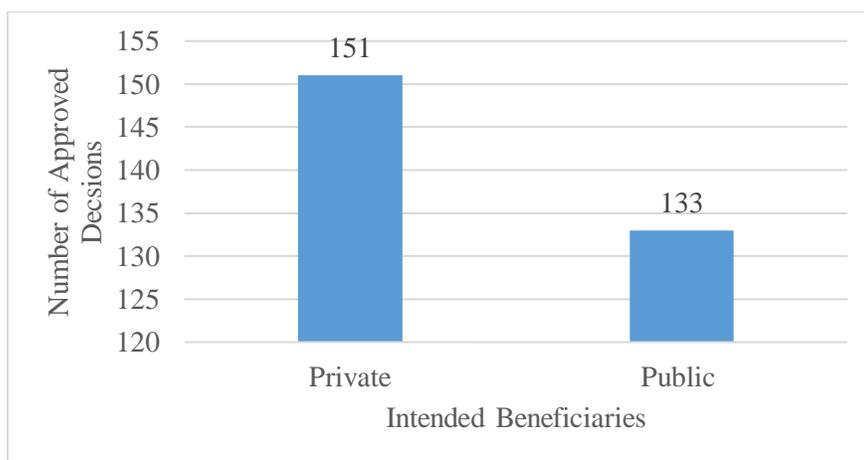
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The rationale for approving non-farm use activities varied by type of non-farm use as the type of activity is expected to effect farmland use in different ways. While each application was reviewed on a case-by-case basis, there are expected impacts associated with each category of non-farm use.

Type of Non-Farm Use by the Intended Beneficiaries

The number of decisions categorized as either intended for public benefit or private benefit are shown in Figure 11. Figure 12 further breaks down the category of activities intended for public benefit and Figure 13 breaks down the category of activities intended for private benefit.

Figure 11: Public vs. private benefit.

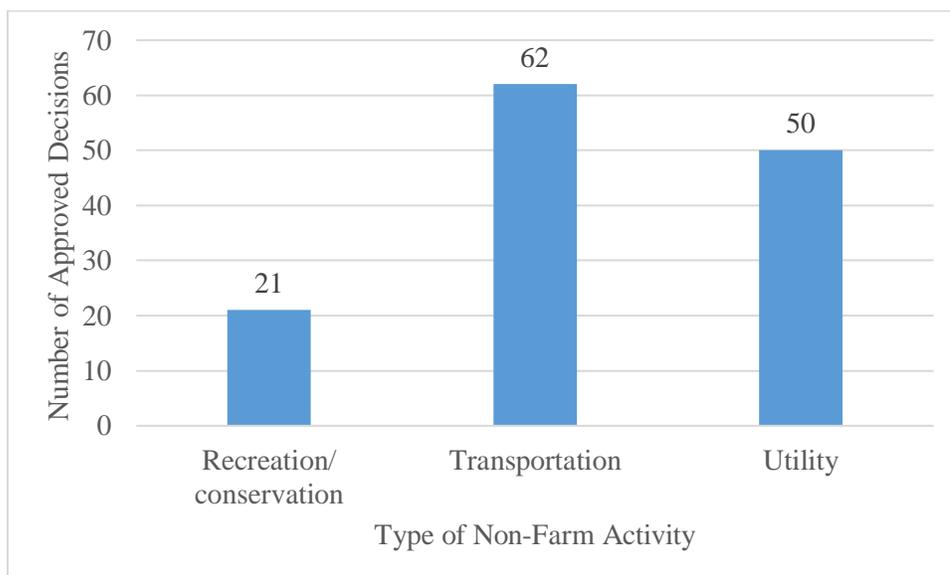


Non-farm use decisions for activities that are intended to benefit the public were usually submitted by a governmental body. Most of the proposed Transportation activities were described in the decision letter as needed to improve traffic flow and public safety (e.g., intersection improvements, road widening, and highway expansion) and therefore intended to

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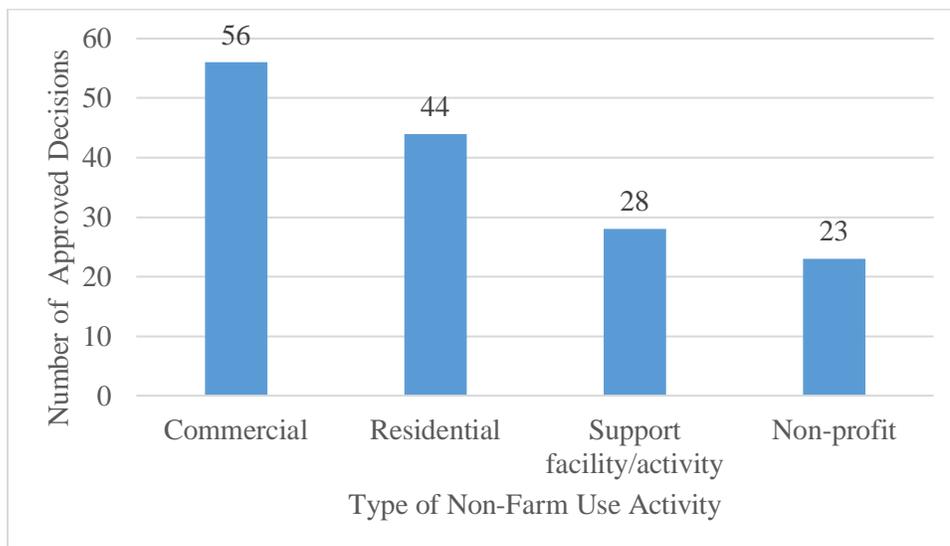
benefit the public. Approved decisions under the Transportation category that were not considered to be intended for public benefit were those where the activity described in the decision would be for the primary benefit of the landowner (e.g., a service road to access a private utility). Similarly, most approved decisions under the utility category were undertaken by municipal government (e.g., installation or replacement of a water main or culvert) that runs along a municipal right-of-way. Approved applications associated with a public right-of-way were categorized as being intended to benefit the public while those associated with a private property were categorized as being intended to benefit private interests.

Figure 12: Number of approved non-farm use decisions intended for public benefit.



Non-Farm use applications with activities that are intended to benefit private interests are generally submitted by non-governmental or individual applicant types. These activities include private businesses that allow for supplemental income for the landowner or secondary residential suites to house family members.

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Figure 13: Number of approved non-farm use decisions intended for private benefit

ALC decision-makers typically have more information to evaluate and to provide rationale in support of non-farm use activities intended for public benefit. For example, a local or regional transportation plan may provide data and rationale for the need to widen a road to increase safety, capacity, and support increased population growth. Applications for recreation or conservation may be supported by existing municipal plans and strategies and backed up by data that is already being collected. Similarly, applications submitted by government that are related to utility are typically associated with ongoing maintenance requirements or in response to an emergency that could have negative impacts to public safety or damage to property if not addressed. Non-farm use activities intended to benefit private interests are generally more subjective. These types of activities are reviewed on a case-by-case basis by each municipality with fewer tools (e.g., outdated agricultural plans, strategies, and policies) to streamline the decision to forward to the ALC for review or to decline. The rationale given for approving activities intended to benefit private interests usually describe how the activity either contributes

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to agriculture or how the activity will have minor or no detrimental or adverse impact on future agricultural use of the land.

Land Use Outcomes

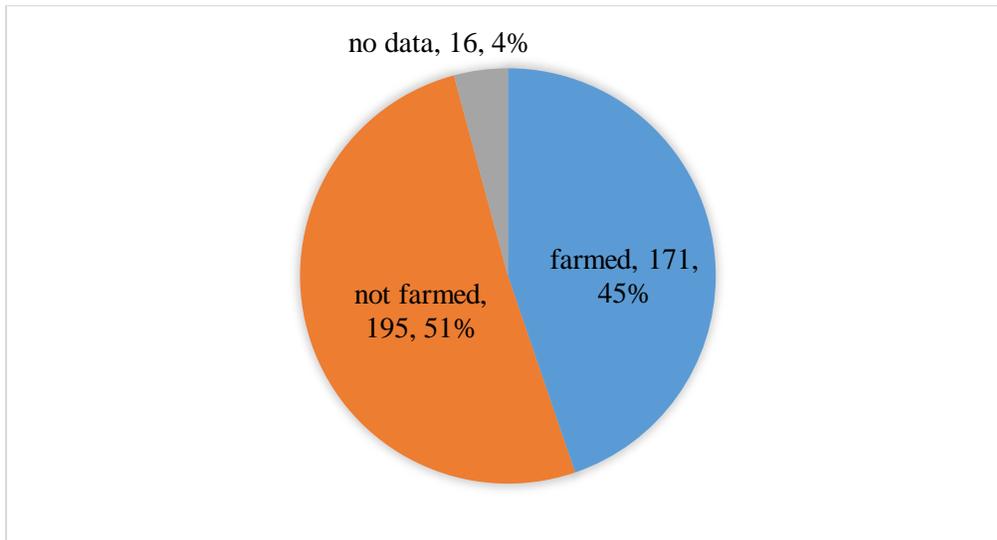
Determining the land use outcome requires investigating each individual parcel included in the approved decision. Every decision includes the parcel(s) where a non-farm use activity is proposed. In BC, every parcel is assigned a nine-digit number (PID) that uniquely identifies it in the land title registrar. Some decisions for non-farm use include more than one parcel and therefore the total number of PIDs involved are greater than the number of applications. For example, an application to build a road or a pedestrian path may require approval to impact more than one property. This is due to the nature of transportation projects, which may impact a small portion of many parcels along a linear path. For example, a linear project such as a 10 metre-wide Statutory Right-of-Way may traverse numerous parcels. Many of the applications under the transportation category were submitted on behalf of the Ministry of Transportation to facilitate multi-jurisdictional highway expansion projects.

Between 1997 and 2016, the 284 approved decisions for non-farm use involved approximately 382 parcels. Of the 382 parcels evaluated via orthoimage, 200 were further evaluated by windshield survey (52%) to help corroborate land use determined by orthoimage evaluation. As of 2019, out of 382 parcels, 171 (45%) were currently used for farming and 195 (51%) were not. These results were determined after applying the systematic approach to assign a consistent and replicable land use outcome described in the methodology chapter. I was unable to determine the use of 16 parcels (4%) due to insufficient data. Figure 14 shows the

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overall land use outcome for each parcel and Table 3 further breakdown the land use outcome per parcel within each municipality. The percentage of farmed parcels that have had successful non-farm use exemptions during the study's period is slightly lower than reported in the most recent ALUI report that indicates 60.9% (34,834 ha) of the region's land within the ALR is used for farming (Ministry of Agriculture, 2016). This suggests that parcels granted non-farm use may be less likely to be used for farming.

Figure 14: Land Use Outcome – Farmed, Not-Farmed, No Data



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Table 3: Land Use Outcome by Municipality

Municipality	Number of Approved Applications (1997 to 2016)	Number of Impacted Parcels (1997 to 2016)	Land Use Outcome
City of Delta	49	54	34 farmed 18 not farmed 2 No data
City of Maple Ridge	23	37	11 farmed 25 not farmed 1 no data
City of Pitt Meadows	21	26	9 farmed 13 not farmed 3 no data
City of Richmond	30	41	12 farmed 23 not farmed
City of Surrey	51	104	45 farmed 50 not farmed 8 no data
Township of Langley	110	120	52 farmed 36 not farmed 2 no data
Total	284	382	171 farmed 195 not farmed 16 no data

The location of a parcel could not always be ascertained for two reasons. First, there was no information on PIDs in the decision letter, and second, the parcel may have now become part of transportation route or natural area for recreation or conservation. The 16 parcels with no data have been omitted for the remainder of this analysis.

When I examined land use outcome by type of non-farm use, I found the non-farm use exemptions that have fewer farmed parcels are Recreation at 56%, Non-profit at 73% and Commercial activities at 65%. Recreational activities appear to have fewer farmed parcels as the

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applications typically describe activities that are intended for long-term conversion of land for recreational use. Examples include construction of sports fields, expansion of existing recreational uses, and dedicated walking trails. The activities are intended to create new or legitimize activities that have been established and supported by community members without prior approval. Applications for recreational use often require use of a whole parcel or include activities that would not necessarily encourage farming in within close proximity. Slightly more parcels approved for Support Facility or Activity (57.1%) and Utility (53.8%) related non-farm uses were farmed. This supports the idea that a support facility or activity is intended to help support agricultural activities either on the property itself or the agricultural community. In contrast, non-profit organizations, and recreational activities that are unrelated to agriculture and never intended to facilitate or increase agricultural activity unsurprisingly do not. When I looked at the non-farm use applications and their current land use outcomes (farmed and not farmed), the results imply that the non-farm use decisions did not serve to enhance agricultural use of ALR land.

Figure 15 shows the land use outcome by type of non-farm use for public benefit and Figure 16 shows the land use outcome by type of non-farm use for private benefit.

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Figure 15: Land Use Outcome by Type of Non-Farm Use Activity - Public Benefit

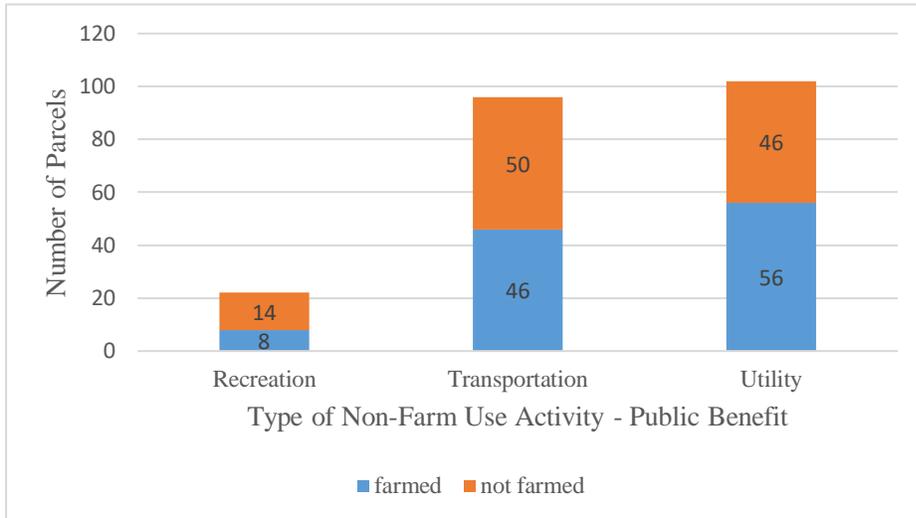
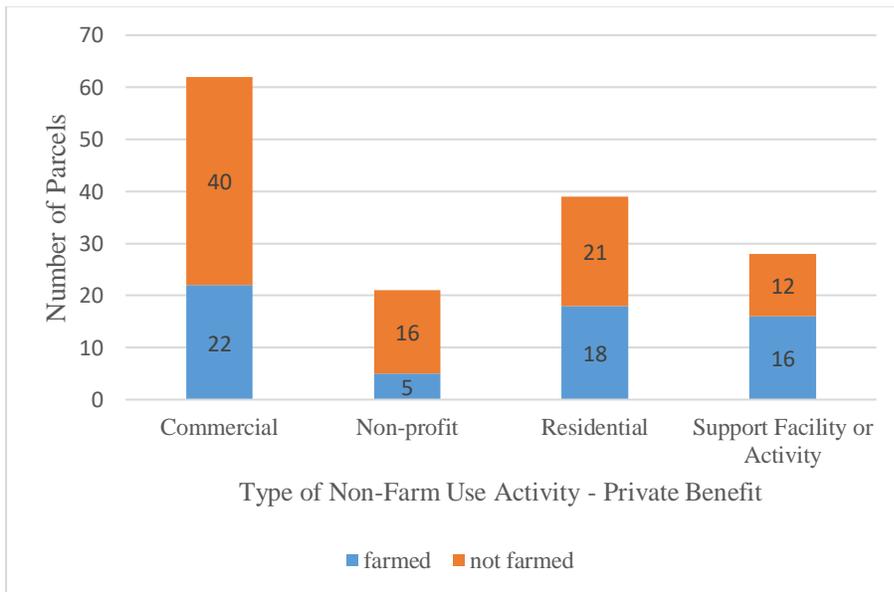


Figure 16: Land Use Outcome by Type of Non-Farm Use Activity - Private Benefit



While it is informative to evaluate current use of the land, it is also useful to determine whether the land was being used for farming prior to the approval being granted for non-farm use. Not all ALR parcels were being actively farmed when an application was approved. I wanted to see if there was a connection between approval for non-farm use and

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a change in the farm use status of the parcel, that is, did approved non-farm use decisions result in non-farmed ALR land being farmed. To explore this, I looked at the BC Assessment Farm Class Status data for 175 non-farm use decisions between 2006 and 2016 (farm class status data for parcels prior to 2006 was not available) and compared the farm class from the year the decision was approved to the farm class status in 2019, the results are presented in Table 4 and Figure 17.

Table 4: Change in farm status for non-farm use decisions (2006-2016)

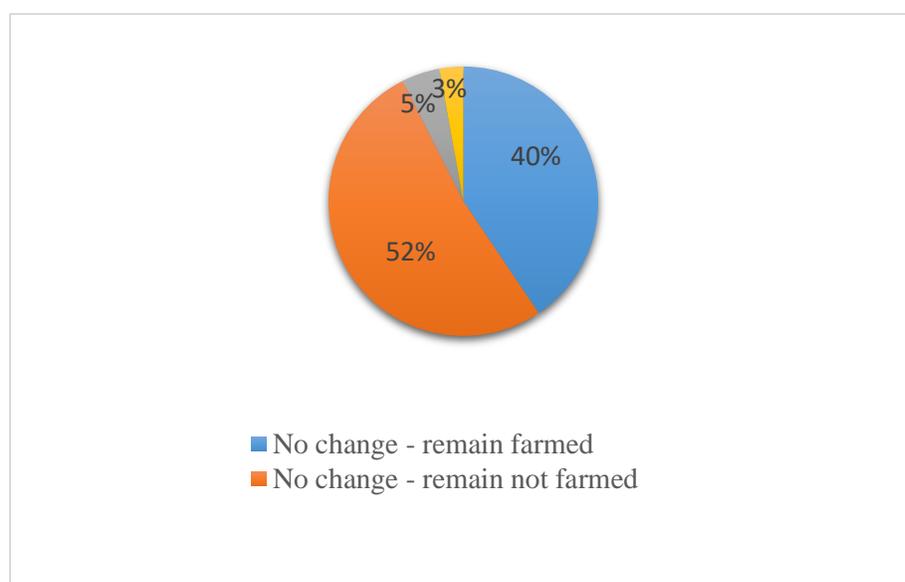
Change in farm status	Number of parcels
No change – remained farmed	71 (40%)
No change – remained not farmed	91 (52%)
Changed from farmed to not farmed	9 (5%)
Changed from not farmed to farmed	5 (3%)
Total	176 (100%)

Approved non-farm use did not result in a change in farm class status for approximately 92% of the parcels. Further, of the 80 parcels that held farm class status when the non-farm use decision was made, 11% (9 parcels) changed from farmed to not-farmed. Approximately 5% of the parcels that were not farmed when the non-farm use decision was made, changed to farmed by 2019. Only 2.8% of all the parcels included in this time changed from not farmed to farmed. While the decisions to approve non-farm use activities did not appear to detract from agricultural use of the land, they also did not enhance agricultural land use.

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Parcels with approved non-farm use did not change substantially in regard to agricultural activity. Overall, the approval of non-farm use on a parcel-to-parcel basis does not appear to create an observable long-term change in the way the land is being used or result in enhanced agricultural use of the land.

Figure 17: Change in farm class status for parcels with approved non-farm use decision (2006 to 2016)

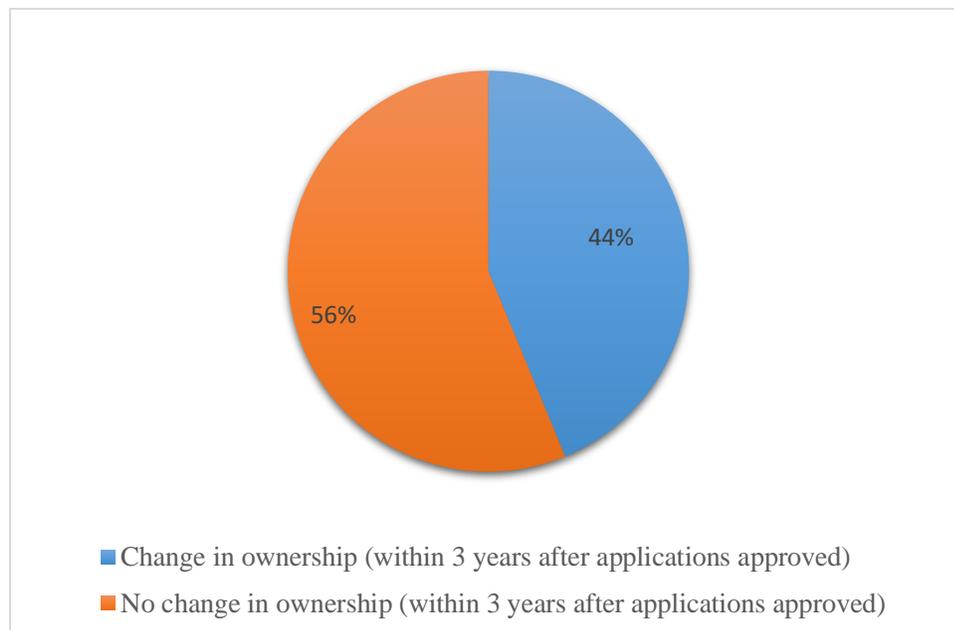


Lastly, I looked at whether a change in ownership occurred within three years of an approved non-farm use decision. I wanted to see if there were a relationship between non-farm use of the land and sale the parcel. I looked at 176 non-farm use decisions with sale information between 2006 and 2016. I found that there was a change in ownership within three years of an approved decision for 77 parcels (46%); 15 appeared to be sold to a non-family member and 62 appeared to be sold to a family member. I assumed that a sale occurred within a family if the last names of the new and previous owners were the same. There was no change in ownership for 99

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parcels (56%) within three years of the approved decision (Figure 18). Data did not reveal any a relationship between approval of non-farm use of a parcel and sale within three years.

Figure 18: Ownership change within 3 years of approved non-farm use decision



Similarly, there is no substantive change in farm class status when there was a change or there was no change in ownership. Approximately 95% of parcels that changed ownership within three years of an approved non-farm use decision did not have a change in farm class status. Only 3 parcels changed from farmed to not farmed. Where there was no change in ownership, 89% of the parcels did not have a change in farm class status. Five parcels changed from farmed to not farmed and five parcels changed from not farmed to farmed (Table 5).

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Table 5: Change in ownership and farm status

Change in farm status	Change in ownership by parcel	No change in ownership by parcel
No change – remained farmed	37	34
No change – remained not farmed	37	54
Changed from farmed to not farmed	3	5
Changed from not farmed to farmed	0	5
Total	77	93

Based on my observations of the sales history of approved non-farm use decisions, it does not appear that ownership is any more likely to change hands because of the approved non-farm use or that a change in ownership is more likely to result in a change in farm use status. This is purely speculative and it would be interesting to explore further with a larger data set.

Area of Impact

The area of impact was identified for 66 of the 284 applications. Of the 66 applications with information related to area of impact, 1124.29 ha were affected by the approved applications. The total number of parcels included in the study may not include the total number associated with the approved decisions because the total number of parcels were not always documented in the decisions letter.

Limitations

As a rule, the BC Assessment data was most reliably indicative. This was due to the level of interpretation needed to assign a classification for each technique. For example, to be assigned under ‘Farm Class’, an application must be submitted to BC Assessment providing proof of farm activity. I consider the orthoimage analysis to be the second most reliable means

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of assessment. An aerial view of the property allows the analyst to slowly and methodically review the image and make determination. A drawback of this technique is that it requires the reviewer to make assumptions regarding what they observe based on a ‘snapshot in time’ and it is open to the interpretation. Further they need to have a clear sense of what various agricultural landscapes look like in aerial view. Another challenge with using orthoimagery is that knowledge on non-agricultural land uses within rural areas is limited. Unplanned non-agricultural land uses often occur at a parcel level and may be morphologically similar to regular agricultural practices. Remote sensing and orthophotograph analyses are not always able to grasp the differences between professional agriculture and other uses. For example, orthophotographs are incapable of indicating if an open-air storage is associated with a professional farming practice or a building contractor (Verhoeve, 2015).

The windshield survey was the least reliable technique as visibility of the property can vary greatly and it is unlikely to see the entire property from the roadside. This technique can be quite helpful confirming assumptions made using the first two techniques. However, on its own, the accuracy of this technique can vary greatly.

Chapter 4: Conclusion

The ALR has, ostensibly served to protect and preserve farmland in BC. The threat of farmland loss due to exclusion from the ALR is seemingly minimal under the current Act and regulations. While we are protecting farmland in the province through the current agricultural land protection system, another important purpose of the ALC is to encourage farming. The purpose of this study is to track and assess approved non-farm use of farmland. My study set out to explore the

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impact of authorized non-farm use exemptions occurring in the ALR, in six representative Metro Vancouver Municipalities, elucidating whether non-farm use exemptions serve to enhance or detract from agricultural use of the land. Based on my observations, permitted non-farm use activities neither enhanced or detracted from agricultural use of the land subject to the decision. Thus, on balance there was neither an outright positive or negative outcome. On one hand, non-farm uses didn't lead to a shift from land being farmed to not being farmed. The majority of parcels subject to an approved non-farm use decision during the study's timeframe were already not being used for farming. This could be interpreted as a positive outcome of the non-farm use process as the process has allowed non-farm use activities to proceed while not contributing to less farming. On the other hand, the approved non-farm uses have not led to more farming and this could be perceived as a negative outcome.

With increased interest in encouraging farming within the region, this process is one that could be investigated further to see how decisions contribute to the continued underutilization of farmland. The continued underutilization of farmland as a result of non-farm use may contribute to the effective "loss" of ALR land in the long term, and subsequently contribute to arguments for taking the land out of the ALR. The results of my study reveal a minimal shift in how the land subject to an approved non-farm use decision is being used. Most parcels that were farmed, continue to be farmed. Most parcels that were not being farmed, continue to not be farmed. While there is public benefit and social and economic value to having flexibility in the agricultural land protection system, one of the main purposes of the ALC is to encourage farming on ALR land. The results of my study reveal that approved permitted non-farm uses may not be an effective mechanism to support this particular purpose of the ALC.

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Metro Vancouver is a rapidly growing regional district with competing land use priorities. The region includes more than 150,000 acres of ALR land, comprising 22% of the regional district's total land base. The results of my study link the approved non-farm use activities over nearly two decades to the current land use so that we can explore the broader impacts of decisions. I found that 55% of the parcels were already not being used for farming prior to approval for non-farm use activities and the assessment of current land use revealed that 57% were found to be not used for farming. The land use outcome for parcels included in the study, which were all parcels that have had an approved non-farm use activity between 1997 and 2016, reveal a slightly smaller percentage of parcels actively farmed when compared to the findings of the Agricultural Land Use Inventory for ALR land across Metro Vancouver. While it may seem obvious that permission to use farmland for non-farm uses is unlikely to lead to increased farming, the investigation of existing data and application of the methodology to determine current land use provides evidence to support the conjecture. More than half of the parcels included in the study remain not farmed for over the nearly two decades studied and this represents both a disappointing underutilization of farmland that also presents an opportunity for the region to increase farming in support of strengthening the regional food system.

While the provincial government is responsible for providing the regulatory framework for food systems in BC, local governments are well positioned to influence food systems through development and implementation of zoning by-laws, transportation policy, and support for local agriculture through activities such as farmers markets and direct sales. Local and regional governments are responsible for comprehensive planning for the long-term economic, social, and environmental well-being of their community. A growing number of local governments have

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included goals, objectives, and policy statements to address food security in their Official Community Plans (OCPs). OCPs include development considerations for agricultural land which may discourage subdivision without demonstrated net benefit to agriculture. Many OCPs include considerations for supporting local agriculture and necessary infrastructure. BC's Lower Mainland has some of the province's most arable ALR soils. Local governments play a very important role in whether land will be used for agricultural purposes or not. There are social and economic pressures that influence individual landowner's ability or desire to use the land for agricultural purposes and forces of urbanization and speculation continue to erode the effective use of farmland in lower mainland municipalities. The challenging economics of farming exacerbate this. Local governments can influence what happens to agricultural land within their jurisdictions. However, without strong local policy that encourages farming, there is little incentive for landowners to invest in long-term agricultural activities.

When it comes to making decisions, many municipalities have limited tools to make decisions that favor farming over other land uses. Many agricultural plans are out of date or don't exist. Without a guiding document with clear strategies, goals and actions, municipalities make decisions on a case-by-case basis which makes it hard to see any bigger picture implications over time. Each municipality decides based on their policies (or lack thereof) and the ALCA and regulations with no mechanism in place to track and monitor the area or impact of decisions. With each municipality working independently, there is a lack of consistency across the region in approaching non-farm use of agricultural land. Metro Vancouver's Regional Growth Strategy (Metro 2050) seeks to address this and identifies the need for consistent

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municipal policies and programs that protect the supply of agricultural land and discourage land uses that do not directly support and strengthen agricultural viability (Metro Vancouver, 2022).

Another challenge for local governments in the region is the lack of long-term tracking of non-farm use activities once they have been approved. Without a need to follow up or track, it can be difficult for City planners to understand what the long-term impacts from permitting non-farm uses are. The lack of data makes it difficult for municipalities to draw definitive conclusions as to the cumulative or long-term impact of approved non-farm use activities.

With my study, I set out to develop a methodology to track and assess the impact of successful non-farm use decisions on agricultural land use and look at existing data in a way that had not been done before. I hope that the observations made through this study will contribute to ongoing work of the Institute for Sustainable Food Systems, that has looked at similar data in the Okanagan as well as explored approved subdivision applications. I've identified several ideas for future studies related to the findings of my research:

- Application of the methodology in other regional districts across the province to contribute to a province-wide study to track and assess non-farm use decisions.
- Investigation of the total area of impact of non-farm use decisions. What is the area related to the proposed non-farm use activity? It is a small portion or the whole property?
- A study looking at the type of farming activity on parcels that were farmed prior to the non-farm use decision that retained their Farm Class Status. Perhaps a look at the farm receipts related to the parcel.

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- Exploration of whether the type of applicant (i.e., individual, government, or non-government) make a difference to the non-farm use application outcome.
- Investigation of the potential relationship between non-farm use and subdivision activity.
- Investigation of the potential diminished capacity of farmland due to land not being used for farming.
- Survey municipal and regional planners who review non-farm use applications within their jurisdiction to better understand gaps and opportunities within the process and to identify opportunities to improve regional and government-to-government collaboration.

The results of my study are intended to contribute to a better understanding of how decisions made over time within the regulatory framework of the ALC impact the current state of agricultural land use in BC and the effect of non-farm use decisions, particularly in a geographical area that includes some of the province's most productive land. I hope that my study and application of a new methodology to track and assess non-farm use activities will meaningfully contribute to the existing literature on the ALR and support future studies and actions to strengthen agricultural land use policy in BC.

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