


AGENDA ITEM NO: 7.19.

MEETING DATE: June 21, 2022

**STAFF REPORT – COVER SHEET**

SUBJECT: ARAC Recommendation Vertical Farming DATE: June 7, 2022

DEPARTMENT: Planning & Strategic Initiatives PREPARED BY:  Gillian Villeneuve

**1. SUMMARY OF ISSUE:**

At their meeting on June 6, 2022 the Agricultural and Rural Advisory Committee (ARAC) received information concerning the Agricultural Land Commission’s recent announcement that the *Agricultural Land Reserve Use Regulation* would be amended to permit “Controlled Environment Structures” (ie: vertical farming). Previous to the regulatory change, a non-farm use approval from the ALC would have been required to permit this type of operation on Agricultural Land Reserve (ALR) parcels. Local government controls can still apply to such developments, much like how the City enforces setbacks for agricultural buildings; however, these controls are limited. Within Chilliwack, the development of a vertical farm would need to meet the setback requirements of an “other agricultural building” as outlined in applicable agricultural zones but there are no other applicable development standards (ie: lot coverage maximums or height restrictions) for this type of farm use.

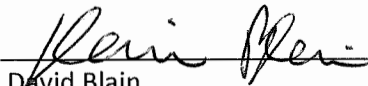
While local governments have limited tools to govern development of vertical farms, the Committee expressed a desire for staff to study the issue further and begin drafting development standards for vertical farming operations in keeping with the ALR Use Regulations. Committee members expressed concern regarding such issues as light pollution, exhaust fans, and water discharge impacts to neighbouring properties associated with vertical farming operations. As such the following recommendation was made:

*That Council consider directing staff to review and prepare development standards for vertical farming operations to be incorporated within Zoning Bylaw 2020, No. 5000.*

A copy of the detailed memo provided to ARAC outlining vertical farming as a farm use within the ALR is attached as “Schedule A” to this report.

**2. RECOMMENDATION:**

That Council support the Agricultural and Rural Advisory Committee recommendation regarding vertical farming operations as a farm use and direct staff to review and prepare development standards to be incorporated within Zoning Bylaw 2020, No. 5000.

  
\_\_\_\_\_  
David Blain  
Director of Planning and Strategic Initiatives

**3. CHIEF ADMINISTRATIVE OFFICER’S RECOMMENDATION/COMMENTS:**

Supports recommendation.

  
\_\_\_\_\_  
Peter Monteith, CAO

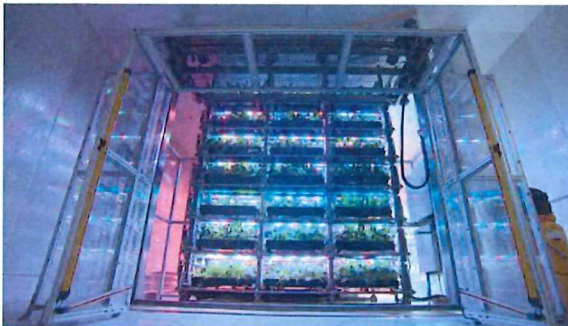
## APPENDIX A

# MEMO

**TO:** Agricultural and Rural Advisory Committee (ARAC)  
**FROM:** Seamus McConville, Planner I  
**DATE:** May 26, 2022  
**RE:** Vertical Farming Within the Agricultural Land Reserve (ALR)

## Introduction

- [Vertical Farming](#) is a form of “AgriTech,” which involves crops grown in stacked layers within a climate-controlled housing.
  - Such developments are similar to traditional hydroponic growing methods, with LED lighting, climate and humidity controls to allow farmers to control growing conditions.
- Elsewhere in Canada, vertical farming setups have been established in industrial areas, and in some cases proposed as a tool of urban revitalization for run-down factories or buildings in urban cores.
- As demonstrated below, vertical farming can occur in buildings such as warehouses, or in retrofitted metal storage containers.



Example of vertical farm in a warehouse in Ontario.



Example of vertical farm sited in a parking lot in Boston, USA.

# Planning and Strategic Initiatives

## ALC Announcement

- In February 2022, the Agricultural Land Commission (ALC) announced that the *Agricultural Land Reserve Use Regulation* would be amended to permit “Controlled Environment Structures”.
  - This is defined as:
    - *“a structure that provides a controlled environment intended to intensify crop production, including, without limitation, (a) a vertical farming system, (b) a rotating tray system, or (c) any other structure that minimizes the use of land, controls the use of light, air, water or nutrients or relies in whole or in part on automation, but not including (d) a greenhouse, (e) a structure for mushroom production, or (f) a structure described in section 8 (1) (b) or (2) that is used for producing cannabis in accordance with section 8.”*
- Previously, a Non-Farm Use from the ALC would have been required to permit such an operation on ALR lands.
- Local Government controls can still apply to such developments, much like how the City enforces setbacks for agricultural buildings today. However, these controls are limited.
- For City of Chilliwack purposes, the development of a vertical farm would need to meet the setback requirements of an “Other Agricultural Building” as outlined in applicable agricultural zones.
  - Agricultural Zones do not have lot coverage maximums or height restrictions for agricultural uses.

## Impacts

### Positive

- Owing to the compact nature of the AgriTech systems, this use of technology can help “densify farming” especially on small lots throughout the City.
- Embracing the use of technology in farming would help the City meet its Official Community Plan Goals of promoting Chilliwack’s primary role in agriculture; as well as promoting agricultural development.
- The technology offers areas with limited growing potential (i.e. Ryder Lake) further growing opportunity, subject to water availability.

### Drawbacks

- As vertical farms have lights, climate control systems (fans) and other mechanical systems, impacts to surrounding neighbourhoods could occur as a result of these implements depending on the scale of operations.
- Depending on the structure used for the farm (metal storage container, tilt up structure, barn etc.), the form and character of the surrounding area may be impacted.



## Drawbacks Cont.

- The *Local Government Act* does not provide municipalities the power to institute a development permit to govern the form and character of agricultural buildings, only to protect farming lands.

## Local Government Review

While other Local Governments were contacted for comment on their bylaw requirements for vertical farming, only Abbotsford provided a response by deadline.

## Abbotsford

- Abbotsford is currently reviewing Zoning Bylaw standards for agricultural uses. (*AgRefresh*)
  - While not specifically considered under the scope of this review, Abbotsford intends on studying the issue of AgriTech and vertical farming further as an Official Community Plan policy, subject to Provincial Government work on the topic.
- Regardless, Abbotsford under *AgRefresh* proposes new zoning provisions as demonstrated below which apply to agricultural areas and uses, as follows:
  - 35% maximum lot coverage, as per Minister's Bylaw Standard for non-greenhouse structures (current and *AgRefresh*);
  - 15 m height maximum for buildings; 6.0 m for shipping containers (*AgRefresh*), and;
  - Agricultural Building (general) setbacks: 7.5m exterior lot line, 3.0m interior lot line, consistent with the Minister's Bylaw Standards (*AgRefresh*)
- Please note; Abbotsford intends on further review of these standards as they directly relate to vertical farming setups.

## Conclusion

- Vertical Farming (AgriTech) is a new form of farming technology, which emulates existing greenhouse and hydroponic operations, with a focus on the use of technology to optimize growing conditions.
- While these developments can help farms become resilient in the face of climate change and allow for further agricultural operations on smaller, marginal lots, the scale of such operations and use of mechanical systems may have an impact on neighbouring properties.
- Local Governments have limited tools to govern such development, with neighboring jurisdictions treating the developments as if they were general agricultural buildings.
- ARAC may wish to make a recommendation to Council for staff to study the issue further, and begin drafting standards for vertical farming operations.