



# City of Richmond

## Report to Committee

**To:** Parks, Recreation and Cultural Services Committee      **Date:** May 24, 2024

**From:** Marie Fenwick, Director, Arts, Culture and Heritage Services      **File:** 11-7000-01/2024-Vol 01

**Re:** **Richmond Arts Strategy 2025–2029**

### Staff Recommendations

1. That the current Council-endorsed Richmond Arts Strategy 2019–2024 Vision and Guiding Principles be reaffirmed to guide the development of the updated Richmond Arts Strategy 2025-2029; and
2. That the proposed scope of work for the updated Richmond Arts Strategy 2025–2029 as presented in the report titled, “Richmond Arts Strategy 2025–2029”, dated May 24, 2024, from the Director, Arts, Culture and Heritage Services, be endorsed.

*CM Fenwick*

Marie Fenwick  
 Director, Arts, Culture and Heritage Services  
 (604-276-4288)

<b>REPORT CONCURRENCE</b>	
<b>CONCURRENCE OF GENERAL MANAGER</b>	
<i>[Signature]</i>	
<b>SENIOR STAFF REPORT REVIEW</b>	<b>INITIALS:</b>
	<i>[Signature]</i>
<b>APPROVED BY CAO</b>	
<i>[Signature]</i>	

## Staff Report

### Origin

The Richmond Arts Strategy 2019–2024 (the current Strategy) will be expiring at the end of this year. Building on the success of the past five years, staff recommend that the current Strategy be updated. This update will build on the success of the current Strategy while considering the current Council Strategic Plan, other Council plans and strategies that have been adopted since 2019, current demographics, emerging best practices and current trends.

An updated Richmond Arts Strategy 2025 -2029 (the Strategy) will provide a blueprint for the delivery of arts services over the next five years enabling the broadest possible access to, and awareness of, the City’s diverse arts opportunities.

This report supports Council’s Strategic Plan 2022-2026 Focus Area #1 Proactive in Stakeholder and Civic Engagement:

*1.3 Increase the reach of communication and engagement efforts to connect with Richmond’s diverse community.*

This report supports Council’s Strategic Plan 2022-2026 Focus Area #6 A Vibrant, Resilient and Active Community:

*Vibrant, resilient and active communities supported by a wide variety of opportunities to get involved, build relationships and access resources.*

*6.1 Advance a variety of program, services, and community amenities to support diverse needs and interests and activate the community.*

*6.3 Foster intercultural harmony, community belonging, and social connections.*

*6.5 Enhance and preserve arts and heritage assets in the community.*

### Background

The City of Richmond recognizes that the arts are integral to vibrant communities. Creativity and imagination inspire innovation and contribute to a higher quality of life. Participation in the arts helps to create a sense of community, build intercultural awareness and understanding, and positively impacts health and overall well-being for children, youth, adults and seniors alike.

Over the past five years, the current Strategy has served to guide and advance the arts in Richmond. The purpose of the Strategy is to:

- understand the current state of the arts in Richmond;
- to guide decision making around the development of programs and services that enable the broadest possible access to, and awareness of, opportunities that will enrich quality of life through engagement with the arts;
- provide strategies to integrate the arts into the broader community with a collaborative plan that strengthens arts groups to meet community needs; and

- through engagement, access the wisdom of the broader community to champion the provision of arts activities, facilities and opportunities as integral and essential to a healthy society.

Details regarding the progress of the current Strategy are presented to Council annually in the Arts Services Year in Review which is distributed to community stakeholders and posted online for the public.

## **Analysis**

### Guiding Principles

The following Guiding Principles for the Richmond Arts Strategy 2019–2024 were adopted by Council on July 23, 2018:

- Striving for **EXCELLENCE** among all who participate in and contribute to the artistic life of Richmond from City services to community organizations to individuals of all ages and skill levels.
- **SUSTAINABILITY** to ‘future-proof’ the arts through funding, education, infrastructure, mentorship and the integration of the arts into the everyday fabric of our city.
- Expressing **CREATIVITY** through experimentation and fostering collaboration among diverse voices.
- Providing broad **ACCESSIBILITY** to arts experiences and advancing **INCLUSIVITY** to connect people through the arts.
- **COMMUNITY-BUILDING** through creative engagement and dialogue, and honouring the spirit of Reconciliation.
- **CELEBRATION** to showcase and inspire Richmond’s artistic vibrancy.

These guiding principles remain relevant and valid and staff seek confirmation that Council continues to endorse these guiding principles.

### Richmond Arts Strategy 2019–2024

On July 8, 2019, Council adopted the current Strategy, which was the result of an 18 month process involving extensive stakeholder and community participation supported by the considerable involvement of a 25-member task group representing various aspects of community life in Richmond. Throughout 2018, feedback and ideas were gathered through an online bilingual survey, more than 30 pop-up kiosks and sounding boards, as well as workshops and interviews. More than 600 individuals provided input through the survey and 500 additional pieces of feedback were gathered through various engagement activities.

The result was the current Strategy with the following vision:

*Richmond's thriving arts scene animates our city everyday; offers rich arts education and experiences, festivals and events, fosters social connections and wellness; builds arts and culture leadership; and provides creative spaces.*

This vision remains relevant and valid and staff seek confirmation that Council continues to endorse this vision.

The work of the Strategy is framed by five major strategic directions:

1. Ensure affordable and accessible arts for all;
2. Promote inclusivity and diversity in the arts;
3. Invest in the arts;
4. Increase public awareness and participation in the arts; and
5. Activate public spaces through (and for!) the arts.

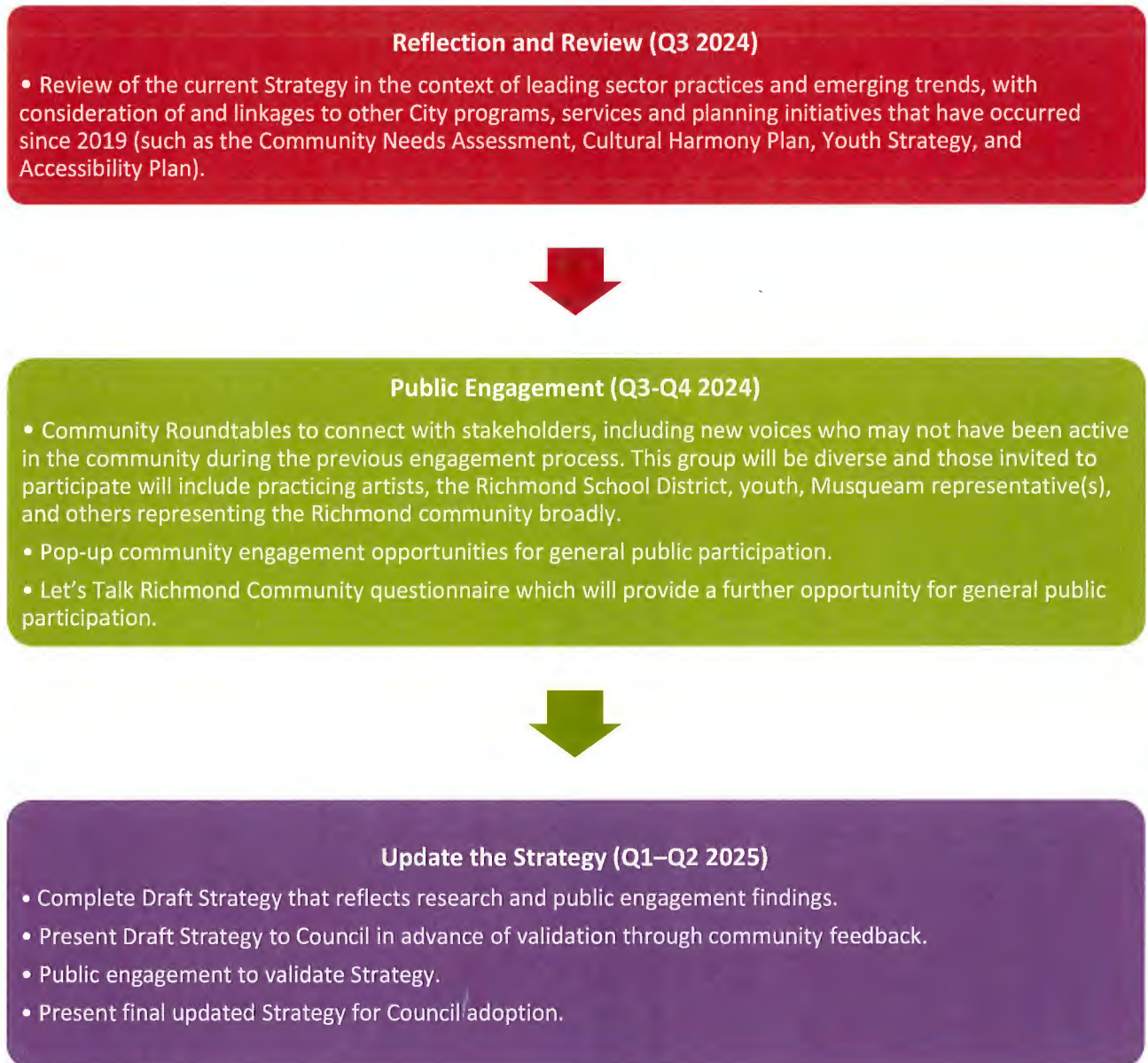
While the current Strategy continues to provide direction, staff recommend an update that considers the current Council Strategic Plan, other Council plans and strategies that have been adopted since 2019, current demographics, emerging best practices, and current trends.

Since Council's endorsement in 2019, Richmond has continued to be a cultural leader, delivering comprehensive arts and culture programs, including initiatives to improve accessibility, grow media programs for youth, increase programming that involves work by Musqueam and other Indigenous artists, provide multi and inter-generational opportunities to engage with the arts, establish HowArtsWorks.ca as a go-to resource for the arts community, and complete the conversion of the Minoru Place Activity Centre into the Richmond Cultural Centre Annex to address the growing demand for arts programs and exhibition spaces.



Scope of Work

The following proposed scope of work includes a community engagement process that will reflect on the Strategy and adapt it to innovate and ensure alignment with new or updated City plans and strategies, while remaining based on the intensive research that was completed in 2019.



This work will be completed within existing budgets and will result in an updated strategy that will guide and inspire the delivery of arts programs and services to enrich quality of life through engagement with the arts.

Members of the community will also be engaged simultaneously to inform the development of the Arts Facilities Needs Assessment and staff will ensure that these two projects inform one another.

**Financial Impact**

None.

**Conclusion**

The arts contribute to quality of life and health, as well as the wellness of everyone who lives, works and plays in Richmond. A collaborative and inclusive approach to engaging the Richmond community, combined with consideration of current Council plans and strategies, best practices and emerging trends, will inform the development of an updated Richmond Arts Strategy 2025–2029. This new strategy, combined with the findings of the Arts Facilities Needs Assessment, will guide the development and delivery of arts programs and services for the next five years.



Liesl Jauk  
Manager Arts Services  
(604-204-8672)



# Kwantlen Polytechnic University

Department of Sustainable Agriculture

## KPU Farm @ Garden City Lands 2023 Activity Report

City of Richmond Department of Parks, Recreation, and  
Cultural Services Committee

June 2024



# Introduction



Kwantlen Polytechnic University has now completed six growing seasons at the KPU Farm on the Garden City Lands. The first three hectares (Phase 1) were certified organic by the BC Association for Regenerative Agriculture in April of 2021, upon completion of the three-year organic transition period. We have continued to develop the production fields on the site and exploring new ways to provide information with the

Highlights of 2023:

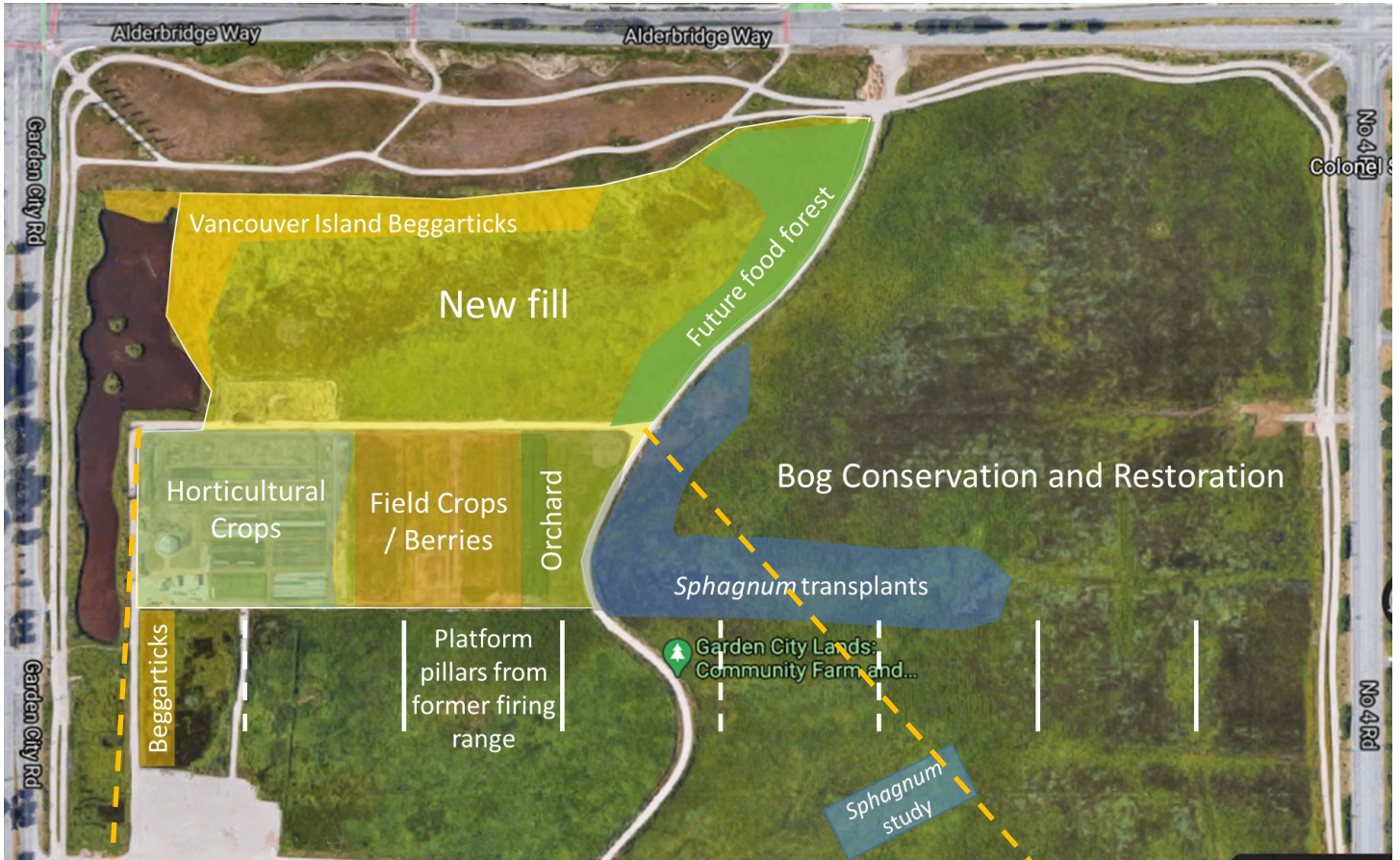
- In 2023 we harvested 13 metric tonnes of certified organic produce from the site, with a retail value of 95 thousand dollars. This was sold at a Tuesday afternoon Kwantlen St. Farmers Market across from City Hall, through a variety of wholesale channels, or donated to the Richmond Food Bank.
- The KPU Farm was awarded a \$300,000 grant from TD Bank to support its community outreach efforts.
- The City of Richmond's Parks Department was selected to receive KPU's 2023 Community Impact Award to honour the success of the partnership that enables the KPU Farm.
- Regeneration Canada featured the KPU Farm as part of its Stories of Regeneration series.
- The learning garden was expanded.

We are grateful for the partnership with the City of Richmond that allows the KPU Farm at the Garden City Lands to teach and demonstrate community-engaged sustainable agriculture.





# Farm Maps—2023



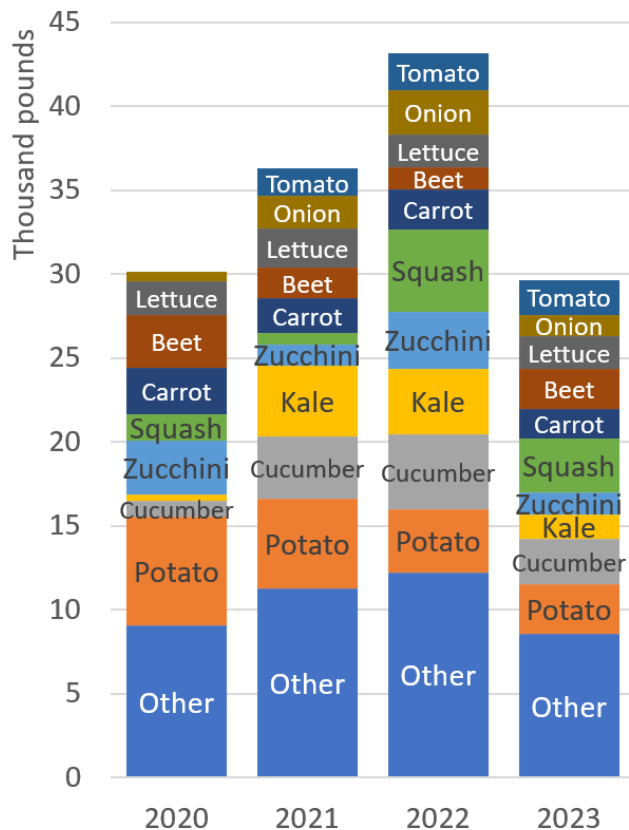
# Crop Production

The KPU Farm at the Garden City Lands produced 30 thousand pounds (13 metric tonnes) of certified organic vegetables in 2023, with a retail value of 95 thousand dollars. Yield was similar to 2020, but crop value was 25% higher. More than 40 different crops were grown. The 10 most productive are shown by the coloured slices in the Crop Yield bar graph below.

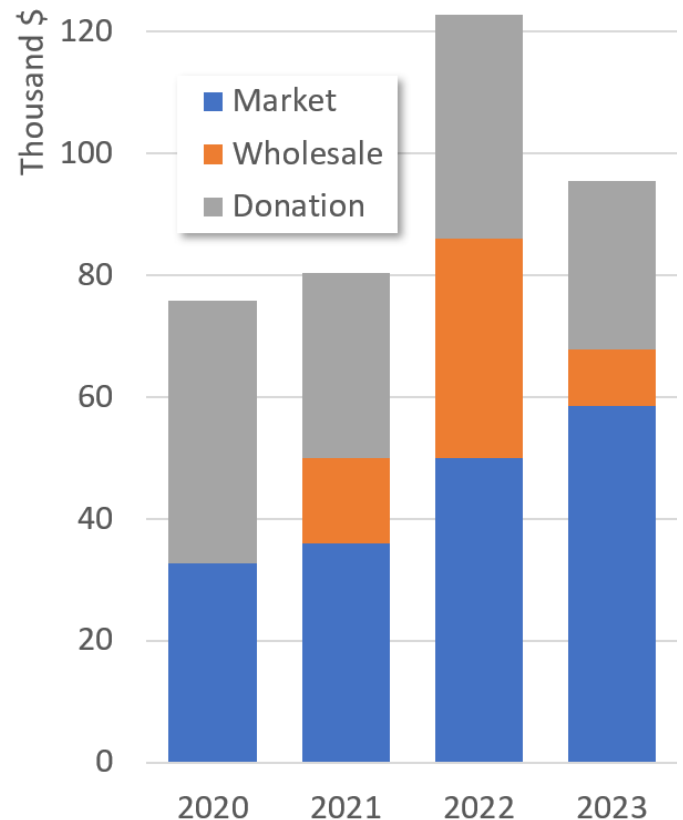
The harvested produce was either sold or donated, as shown in the Crop Value bar graph below. The Richmond Food Bank accepted more than 27 thousand dollars worth of produce donations in 2023, bringing the value of donations since 2020 to more than 137 thousand dollars. In addition to donations to the food bank, over \$7,000 worth of produce was provided to the community through the Community Fridge and the student food security program. Sales in 2023 totaled 68 thousand dollars, with 59 thousand dollars in direct sales at the Kwantlen St. Farmers Market, and nine thousand dollars from wholesale distributors that prioritize local organic produce, including Discovery Organics and the Spud. Farmers market sales reached a new high in 2023, but overall sales were down since 2022, due to a marked decline in wholesale sales.

Salad mix, tomato, and carrot were the top-selling crops at the Farmers Market, while kale, cucumber, and hot peppers led wholesale sales.

## Crop Yield



## Crop Value



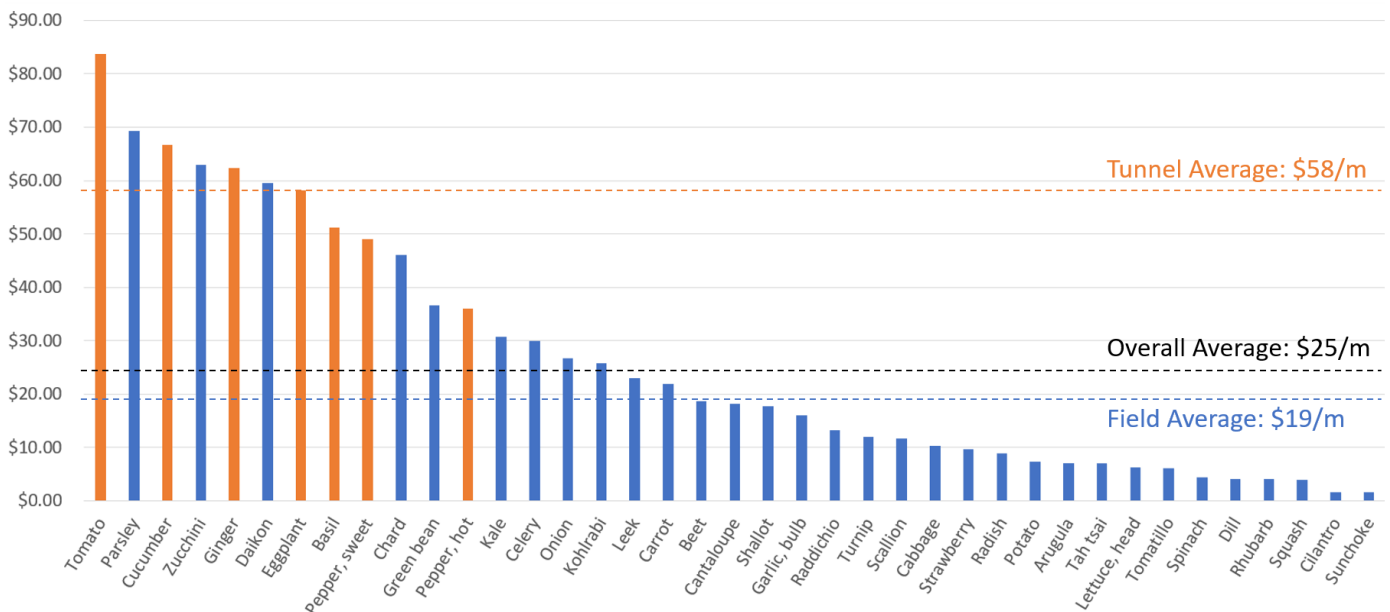
Crop yield by weight (left) and dollar value (right) from 2020 to 2023. Yield bars are divided to show 10 most productive crops. Value bars are divided to show distribution between direct-market sales, wholesale sales, and donations.



Small farm production types at the Garden City Lands include high tunnels (top, 20 m beds); market gardens (center, 30 m beds); and field crops (bottom, 100 m beds) zones. Larger-scale systems tend to be less labour intensive and are positioned further from the entrance hub in the southwest corner of the farm.



Sales (\$) per bed meter



Farm income per bed meter by crop variety for 2023. Orange and blue bars denote warm season high tunnel and outdoor field beds, respectively. Orange and blue dashed lines show the average income per bed meter for high tunnel and outdoor field beds, respectively. Income does not include value of donated products.



# Perennial Fruit Plantings

## High Density Orchard

In 2022 a trellis system was installed at the east end of KPU's licensed area. In April 2023, the first row of apple trees were planted with 4 different varieties. An additional 2 rows of apple trees have been ordered including varieties that are both for fresh eating and cider production. The last row of the orchard will be planted to dwarf pear trees.

Due to delays in plant stock, not all trees were available to plant this year. During the 2023 season, the empty trellis space was been used by KPU's Applied Genomics Center to grow their male hops plants, which are used in their Hops Genotyping project.

## Berry Crops

There are several berry crops planted at the KPU Farm including; strawberries, fall and summer bearing raspberries, currants, gogi berries, haskaps and gooseberries. These berry crops provide diversity in both the produce we provide to our community, but also provide important habitat and biological diversity on the farm. In the coming years, there will be additional berry crops planted in both the production areas as well as in hedgerows in our existing license area. When we are able to move production into the North field, we will be planting additional berry crops in the food forest that is planned for the north field expansion and berry crops suited to acidic peat soils such as blueberries, cranberries, cloudbberries and lingonberries (See page 19) .



Students plant dwarf apple trees in the high density orchard in April 2023.



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# Seed & Fiber Projects



## Variety Trials and Seed Production

In addition to vegetable crops that are produced for sale, students learn about seed production and variety development. The KPU Farm has been a host site for the Canadian Organic Vegetable Improvement Variety (CANOVI) variety trials, a participatory breeding project that is focused on developing open pollinated vegetable varieties that are regionally suitable. In 2023, students participated in selections for an open pollinated, multi-colored carrot variety, 'Fantasia'. This provided students with the opportunity to learn about the importance of developing regionally adapted varieties of vegetables and to learn some basic skills in seed production and on-farm breeding. We have also participated in two variety evaluations for crops that have been bred and selected for organic production systems in the Pacific Northwest, a spinach variety 'Abundant Bloomsdale' and a multi-colored popcorn variety 'Maritime'.

## Flax Variety Trials and Seed Production

Flax (*Linum usitatissimum*) is grown for both linseed production as well as linen fiber. Several varieties developed in different regions were grown at the KPU Farm in 2023 to evaluate for both seed production and fibre production. Students and community members were able to observe the production, harvest and primary processing of the fibers. At the time of harvest, a community event was held on the site in collaboration with the EarthHand Gleaners Society. This was a day of learning harvest and processing techniques as well as music and a time together with the community on the farm.





# Student Research

KPU Sustainable Agriculture students completed eight research projects at the Garden City Lands in 2023.

Student	Project	Key result
Muhammad Koodoruth	Effect of intercropping wheat and rye on grain yield and protein content	Intercropping heritage wheat with rye reduced wheat yield but did not affect protein content
Manon Lee	Growing medium and fertilizer effects on microgreens	Radish microgreens performed best with compost substrate. Fertilizer didn't help.
Nhi Nguyen	Intercropping dryland rice and greens for weed suppression	Intercropping dryland rice with spinach and turnip did not improve land use efficiency or reduce weed pressure.
Oliver Rondou	Dose response of basil and kale seedlings to black soldier fly frass in growing media	Black soldier fly frass concentration in growing media is inversely correlated with seedling growth.
Amanda Tam	Using agrovoltatics to shade bok choy varieties	Electricity compensates for bok choy yield loss in agrovoltaic systems.
Wendel Vistan	Effect of flooding and paper mulch on Fraser Valley rice	Rice yield was higher in flooded paddies than dry field plots, and was unaffected by paper mulch.
Jacob Wen	Cucumber response to black and silver mulches	Black mulch favours 'Tasty Green' cucumbers; reflective favours persistent yield.
Harrison Wu	Living and non-living mulch effects on ground beetles and weeds in a new apple orchard	Alyssum living mulch suppresses weeds during orchard establishment but does not affect ground beetle biodiversity.

Project results were presented at the an annual student research symposium, jointly presented by KPU's Departments of Sustainable Agriculture and Physics, and at a KPU research showcase. Student posters and papers are available at [www.kpu.ca/agriculture/student-research](http://www.kpu.ca/agriculture/student-research).

Two UBC graduate students also conducted research at the Garden City Lands in 2023:

- Amy Mays compared vegetation and physical characteristics of the bog at the Garden City Lands to Burns Bog, the Langley Bog, and the Richmond Nature Park. Her research will contribute to her Master's thesis in Forestry.
- Megan Pawluk surveyed Vancouver Island beggarticks at the Garden City Lands. She submitted specimens to the UBC Herbarium, and survey results to the BC Conservation Data Centre. Her research on the population genetics of Vancouver Island beggarticks will contribute to a Master's thesis in Forestry.

Left to right:

Bok choy grows beneath solar panels; rice drying in dome; *Sphagnum* transplanting; popcorn assessment; living mulches



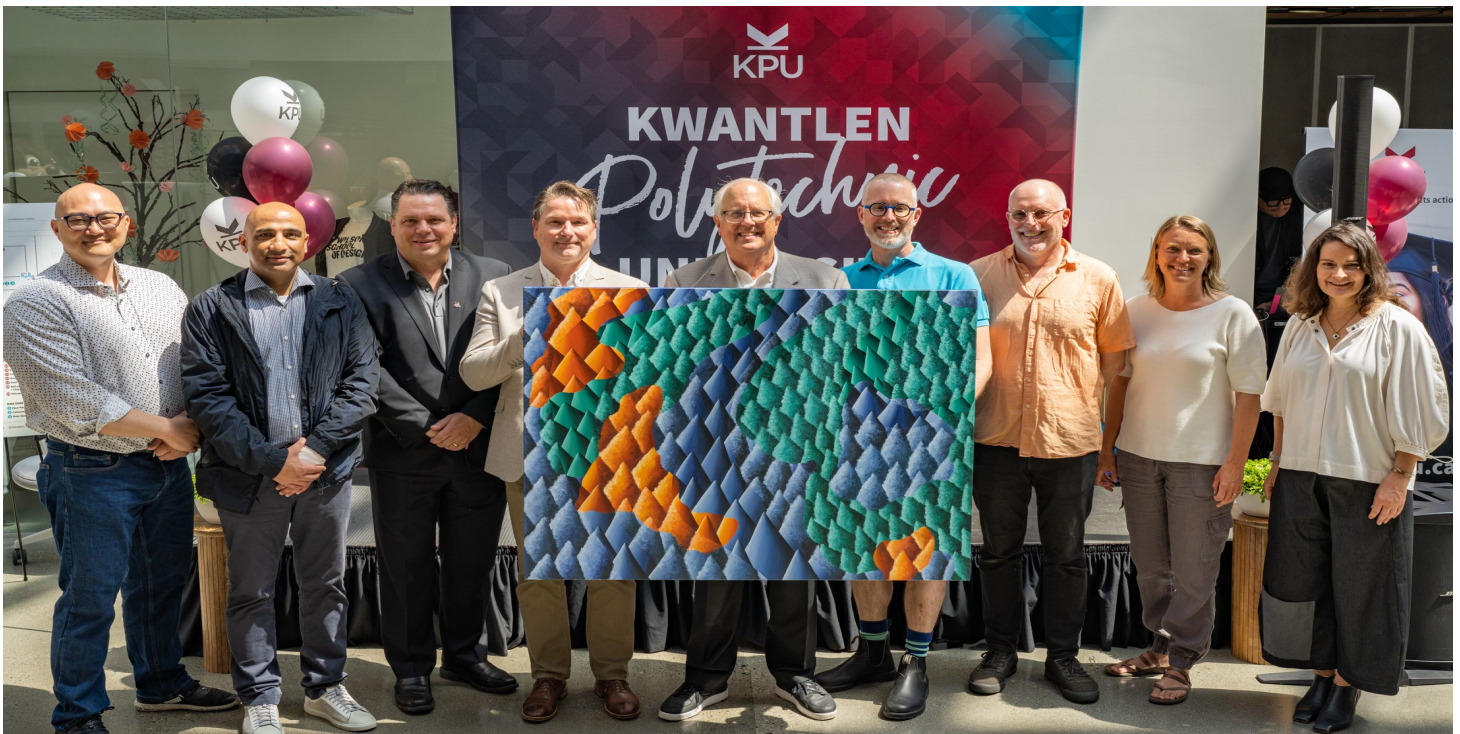
# Celebrating Community Partners

## 2023 Community Impact Award Recipient - City of Richmond, Parks Department

Presented annually, KPU's Community Impact Award recognizes individuals and organizations who are strong partners of KPU and make a difference in regional communities of relevance to the university. KPU was proud to honour, the City of Richmond's Parks Department at a ceremony at the Richmond campus. The award was to recognize the exceptional partnership between KPU and the City of Richmond Parks Department that has developed over the last 10 years.

The partnership with the City of Richmond began at the South Dyke Gilbert Road location where KPU's Institute for Sustainable Food Systems started the Richmond Farm School a non-credit outreach program that started in 2011. The partnership on this site continues to provide learning opportunities and is the site of the KPU Incubator Farm. When the Bachelor of Applied Science was established in 2012, the Department of Sustainable Agriculture began holding classes and conducting student research at the Gilbert Road site. In 2018, the Department of Sustainable Agriculture partnered with the City of Richmond on the Garden City Lands and began developing the KPU Farm which has continued to grow into an vibrant community space.

KPU is so thankful for the opportunity to serve our community together with the City of Richmond Parks Department and are delighted to recognize and honour that relationship with this award.



KPU presented the 2023 Community Impact Award at KPU Community Day on May 27, 2023 at the university's Richmond campus. Included in the presentation to the City of Richmond was a painting created by KPU alumna Alison Curtis. From left: MLA Henry Yao, MP Parm Bains, KPU Vice-President of External Affairs Randall Heidt, City of Richmond Director of Parks Services Todd Gros, Richmond Mayor Malcolm Brodie, City of Richmond Parks Programs Manager Alex Kurnicki, KPU faculty Mike Bomford, Rebecca Harbut, and Larissa Petrillo.



# Celebrating Community Partners

## KPU Farm Open House

On August 2 2023, we held an open house for community members and stakeholders to express our gratitude, take the opportunity to share about the work that is going on at the KPU Farm, and to facilitate connections with our partners. In attendance were stakeholders from government, non-profit sector, agricultural industry, and education. It was a wonderful day of sharing stories and making connections!



## Building Strong Communities Grant—TD Bank Vibrant Planet

The KPU Farm was awarded a \$300,000 grant from TD Bank to support the development of several projects on the farm. This project will provide access to agricultural green spaces, with welcoming and accessible engagement opportunities through site enhancement projects, art installation activities, and enhanced programming, designed to connect the community to nature, the history of the land, and demonstrate the critical role of sustainable urban agriculture in a secure, healthy, and sustainable food system. This grant will support the development of a Food Forest (see map on page 3), provide signage throughout the farm about activities on the farm, build a community board, provide resting spaces and interactive activities on the farm.



Announcement of \$300,000 TD Building Strong Communi-

## Regeneration Canada—Stories of Regeneration

In September 2023, Regeneration Canada came to the KPU Farm as part of their 'Stories of Regeneration' project which highlights Farms across Canada that are committed to regenerative practices. This project included a short film, podcast, webinar, and a live event at the farm for the public. The materials produced can be accessed at the [Regeneration Canada website](https://regenerationcanada.org/en/kpu-farm/) ( <https://regenerationcanada.org/en/kpu-farm/>)





# Learning Garden & Community Outreach

In January 2022, KPU provided funding to support the establishment of a Learning Garden at the KPU Farm for our local community. In May of 2023, additional funding in the form of a grant through TD Bank was provided to expand on the community outreach at the farm, this included funding to expand the Learning Garden. The garden was full of life this year with several organized activities and many informal visits from community members!



The Learning Garden extension project, with space for a willow dome, children's wildflower garden, and fruit trees.

## Henry Anderson Elementary School

50 students in grades three to four visited us to get an introduction to the farm and give the students an opportunity to spend time outside. The students did a scavenger hunt in the Learning Garden and then made seed bombs and launched them into the north field.



Students making seed bombs using cover crop seeds, clay, compost, and water.

## Richmond Youth Education Center

30 students visited the Learning Garden to learn more about sustainable food production and to help the students feel more connected to their community and the process around the foods they consume. The students participated in a tour that highlighted water, biodiversity, nutrient cycles, and energy inputs.

**The Community Volunteer Program** ran for its second year in 2023. This year we increased our reach to include community members who are outside of the KPU sphere. Many of those interested in the program are newly immigrated to Canada, and this resulted in a group with a variety of backgrounds who were thrilled to share their diverse agricultural knowledge with the group. The group grew food in the learning garden, assisted with programming on site, and helped harvest food for the farmers market, among other exciting activities.



Visitors from the Richmond Youth Education Center after their farm tour.



# Learning Garden & Community Outreach

## KPU Farm Kids Camp

- The KPU Farm hosted it's second kids camp! This camp was funded by KPU and welcomed kids for a week-long experiential learning experience.
- The kids participated in a range of activities and learning on the farm including lessons about seeds and the stories they tell and the different parts of the plant that our food comes from.
- Camp snacks were harvested from the learning garden and children were involved in the preparation of farm fresh treats like veggie wraps and sun tea!
- The camp was facilitated by KPU student leaders which provided an excellent opportunity for students to gain experience in teaching and engaging with children.

## Learning Garden Expansion

The Learning garden was expanded to create a new garden space that will be available for the community to use. This expansion will provide additional space that is accessible to the community any time and will allow more opportunities for learning and engagement.





# Community Engagement

## Farmers Market

The Kwantlen St. Market which occurs weekly on Tuesday afternoon (12-4 pm, April-November) remains a critical part of our program. This year we were thankful that the market moved from the Brighthouse Park lacrosse court, back to Minoru Plaza.

The market continues to be an important connection with our customers and it provides our students with an excellent learning opportunity. As the Kwantlen St. Market is a member of the BC Farmers Market Association, as a vendor, we are able to partner with the BC Farmers Market Nutrition Program which provides farmers' market coupons to lower-income families, pregnant people and seniors.



## Twilight Tours

The annual 'Twilight Tour' series occurring the second Tuesday of every month continued in 2023. These tours are open to the public and provide an opportunity for community members to engage with the space and learn about what is happening on the site and learn about different topics including seed saving, fruit production, bog habitat and vegetable production. This year we had several members from the Community Garden on Garden City Lands come for a tour to learn about what we are doing.



## Social Media

We have utilized social media extensively to share with the community about what is going on at the farm. Our students and staff contribute to the stories that we tell. This has been an important tool to let people know what we are about and what we are doing on the farm! Check us out at KPUAgriculture on Instagram and Facebook.



## Community Fridge & Richmond Food Bank

Fresh food donations with a value of over \$35,500 was donated to the Richmond Food bank and other food insecurity programs. The Sustainable Agriculture Student Association has volunteered their time to provide produce to the community fridge, which provides low barrier access to fresh produce to the community as well as the food insecurity program with the Kwantlen Student Association.

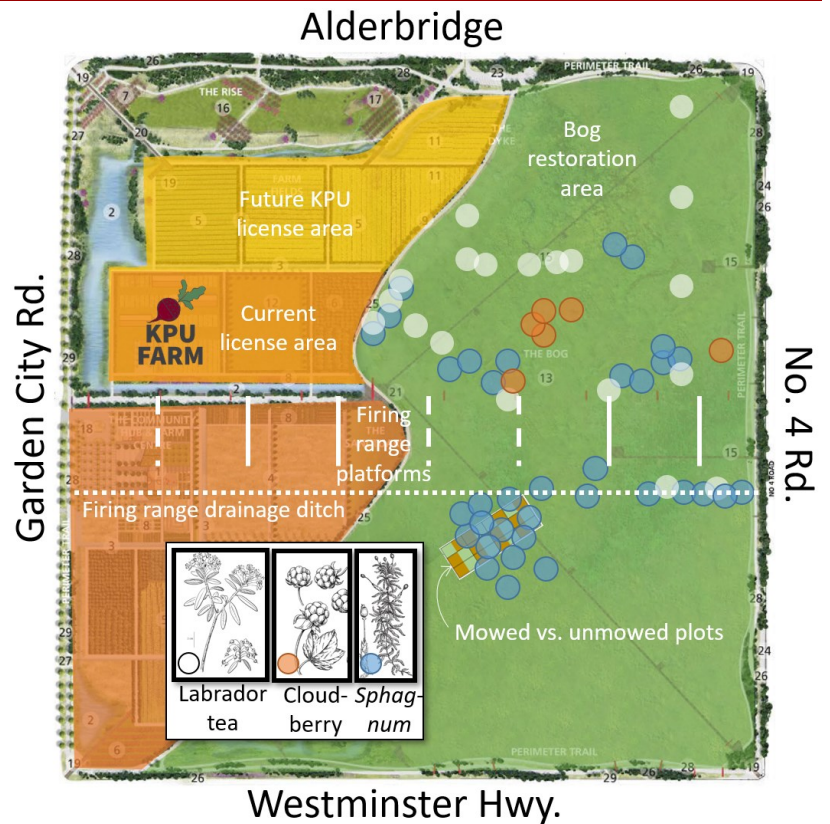
# Bog restoration

## Bog indicator plants

Most of the Garden City Lands is dedicated to peat bog restoration (see map on right). Peat soils represent a substantial carbon sink. They are usually formed by *Sphagnum* moss, which creates the uniquely acidic, anaerobic conditions that deter microbial decomposition, allowing carbon sequestered by photosynthesis to persist in peat for millennia.

Although the peat soils of the Garden City Lands demonstrate a history of *Sphagnum* growth, relatively little *Sphagnum* persists in the bog restoration area today.

Other bog indicator plants, like Labrador tea and cloudberry, are also present but relatively rare. They tend to occur in clusters north and south of the former firing range platforms, but are absent from the former line of fire. A narrow line with an unusually high concentration of bog plants occurs along a former ditch, dug more than a century ago to drain the firing range.



Most of the Garden City Lands is dedicated to bog restoration (green). Bog indicator plants include *Sphagnum* mosses (blue circles), cloudberry (orange circles), and Labrador tea (white circles). Solid white lines denote visible pillars for firing range platforms used between 1904 and 1928. Dashed lines denote buried pillars. A line of *Sphagnum* persists along a filled firing range drainage ditch.



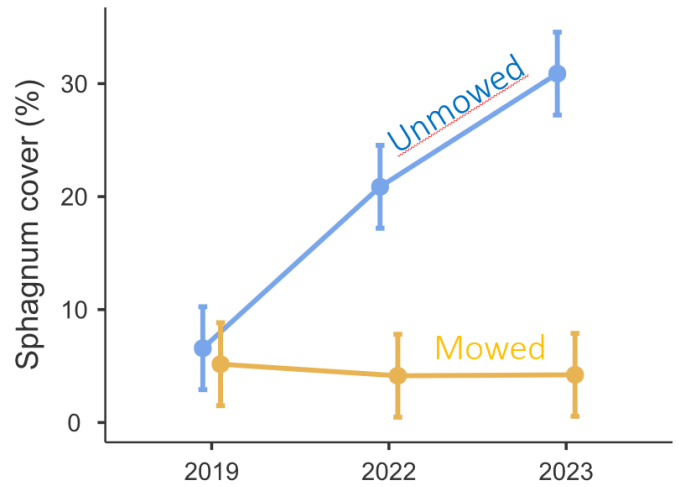
Richmond rifle range, c. 1912. Labrador tea and salal grow in the foreground, in front of a firing range platform. Platforms were spaced 100 yards apart. Marksmen fired from the platforms at targets across No. 4 Rd., on land now owned by the Department of National Defense. A line of polls to the right of the targets marks a drainage ditch installed to dry the firing range land. Photo: James Quiney (City of Vancouver Archives, public domain)



## Mowed vs. Unmowed Study

A study was initiated in 2019 to determine the impact of mowing on *Sphagnum* at the Garden City Lands. Twelve randomly selected 6 m x 6.5 m plots were mowed in October from 2019 to 2022, and another twelve plots were left unmowed.

*Sphagnum* cover increased from 6% to 30% over four years without mowing, but remained at about 5% in the mowed plots (top right). The study concluded that annual mowing inhibits *Sphagnum* regeneration.



*Sphagnum* cover in mowed and unmowed plots between 2019 and 2023. Error bars denote standard error of the mean ( $n = 12$ ).

## Bog Vegetation Survey

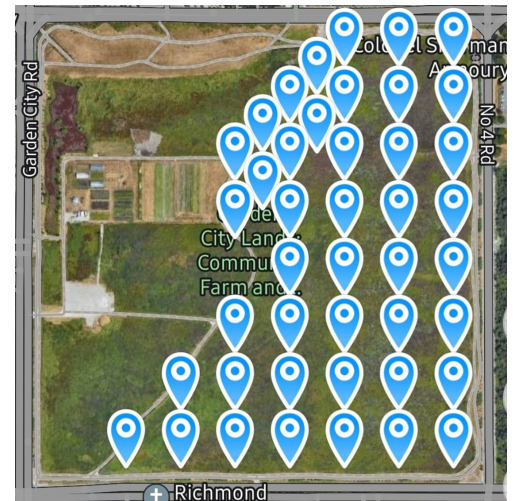
A systematic vegetation survey was conducted throughout the bog restoration area of the Garden City Lands in July and August, 2023.

Thirty-nine sample sites were geo-located on a grid with nodes spaced 95 m apart. Four additional sample sites were located between grid nodes along the dike in the northwest section, bringing the total sample sites to 43 (centre right).

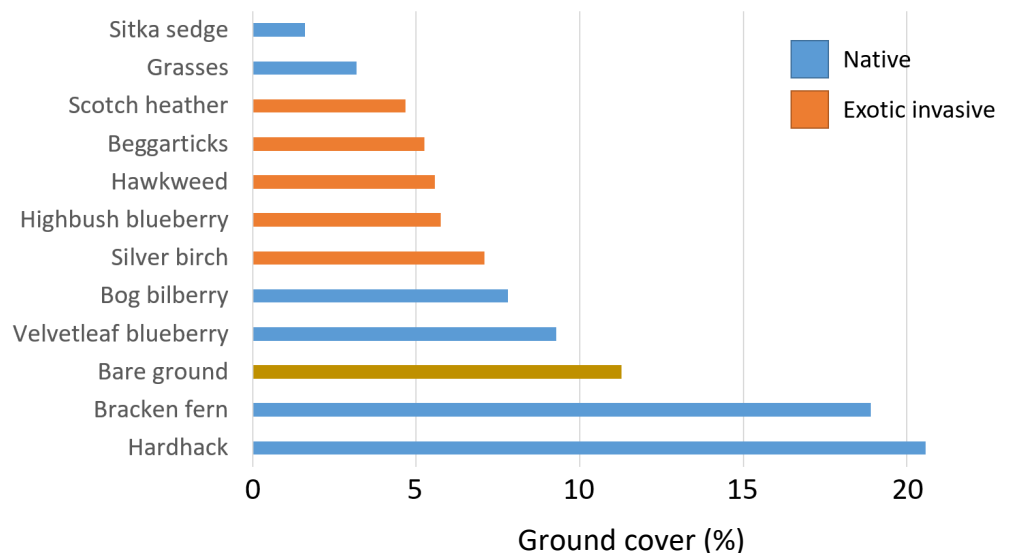
All vascular plants were identified, and the proportion of soil covered by each species was estimated within a 5 m x 5 m quadrat at each sample site.

Hardhack and bracken fern each covered about 20% of the site surface (bottom right). Two native blueberries — velvetleaf

blueberry and bog bilberry — covered more surface area than the exotic and invasive highbush blueberry. Other prominent exotic invasive plants included silver birch, hawkweed, and Scotch heather. These are mostly absent from the wettest (fen and lagg) zones. Abundance of invasive species is lower at the Garden City Lands than in other nearby bogs, likely due to annual mowing.



Sample sites for systematic vegetation survey conducted in July 2023.

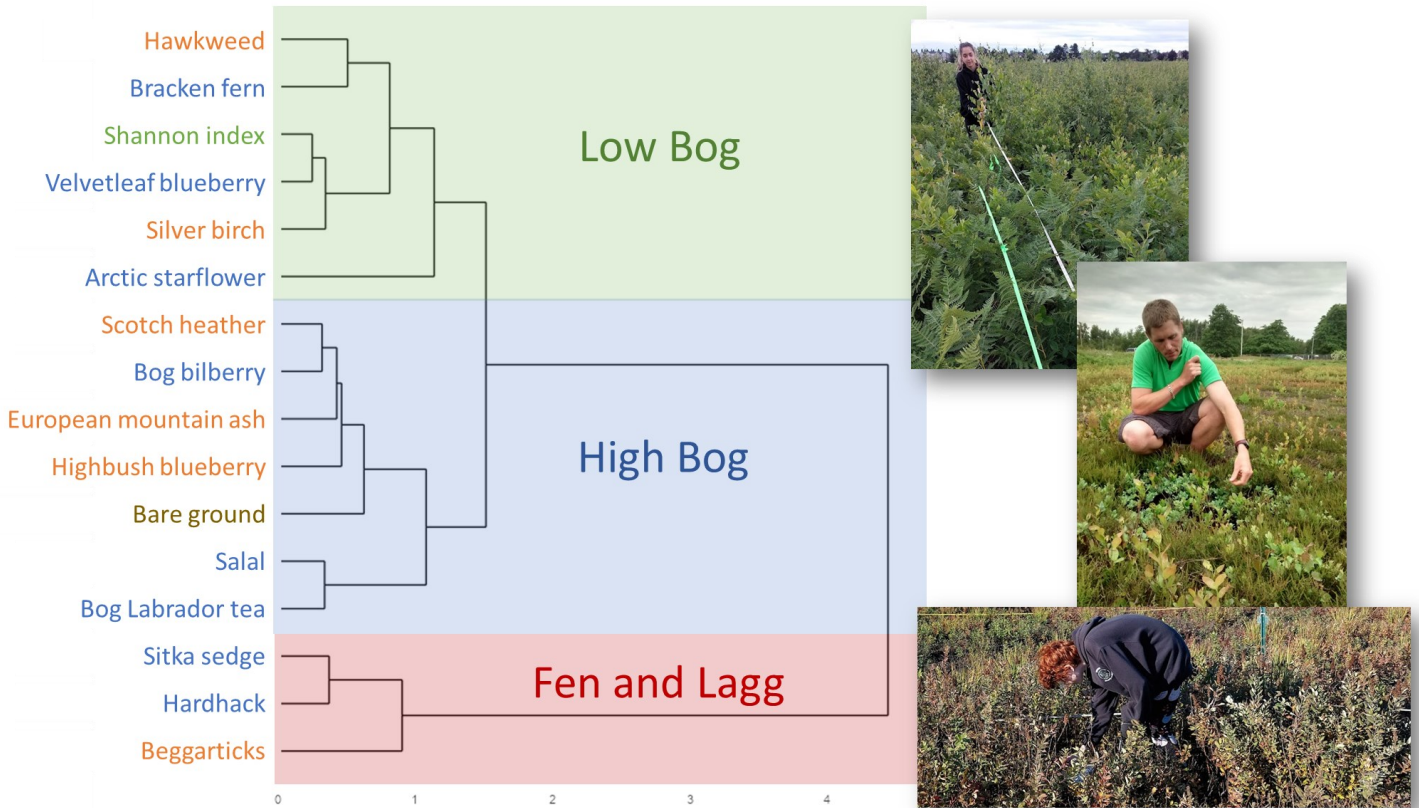


Ground cover of prominent vascular plants in the bog restoration zone of the Garden City Lands in July 2023. Blue and orange bars denote native and exotic plants, respectively.



- Fen (lowest, wettest)**  
Beggarticks, sedge
- Lagg**  
Hardhack, sedges, rushes,  
*Sphagnum*
- Low bog**  
Bracken fern, hawkweed, salal,  
silver birch, velvetleaf blueberry
- High bog (highest, driest)**  
Bog Labrador tea, bog bilberry,  
Scotch heather, highbush blueberry

Fen, lagg, low bog and high bog zones were mapped according to dominant vegetation and physical characteristics.



Dendrogram depicting the results of cluster analysis, dividing vascular plant species into three zones based on degree of similarity of dominant vegetation. Photographs on the right show characteristic vegetation within each zone. Native and exotic plant species are shown in blue and orange, respectively.



## Vancouver Island Beggarticks

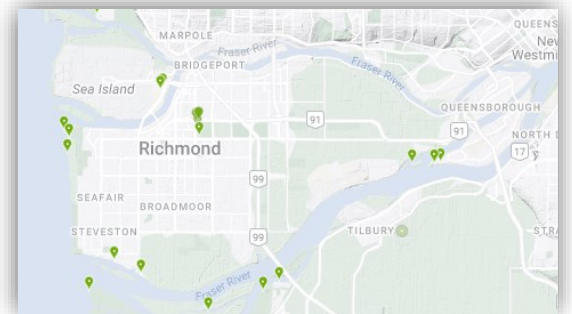
Hundreds of Vancouver Island beggarticks (*Bidens amplissima*) plants were found growing on the Garden City Lands in 2023. These plants are found almost exclusively in seasonal wetlands near the Salish Sea, between Campbell River and Tacoma (upper right). Due to its narrow range, Vancouver Island beggarticks is governed by both provincial and federal management plans for species at risk.

The 2023 observations were the first confirmed reports of Vancouver Island beggarticks at the Garden City Lands, and represent one of the region's largest populations of this rare plant. Most other sites where Vancouver Island beggarticks are found in Richmond occur outside the dike (centre right).

Vancouver Island beggarticks was found at three locations on the Garden City Lands (bottom right). It was always found in association with common beggarticks (*Bidens frondosa*), which is native to North America but has spread globally and is considered weedy or invasive in some regions. Common beggarticks outnumbered Vancouver Island beggarticks by a factor of about 10 at the base of the berm, 100 between the KPU Farm and community garden, and 1,000 in the fen at the southwest corner of the bog.



Global distribution of Vancouver Island beggarticks observations in iNaturalist.



Richmond observations of Vancouver Island beggarticks archived in iNaturalist.

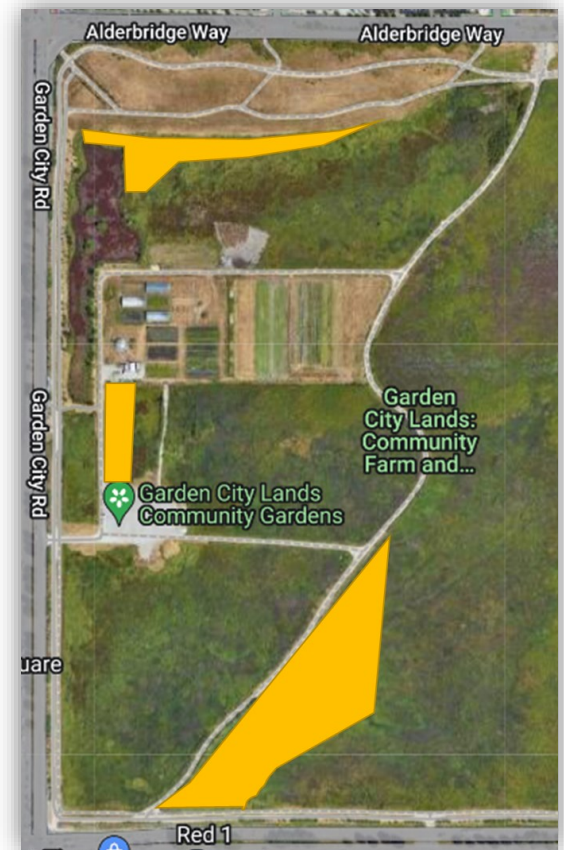


Vancouver Island beggarticks seeds and blooming plant

Common beggarticks seeds and blooming plant



PRCS - 55



Locations where beggarticks occurred on the Garden City Lands in 2023.



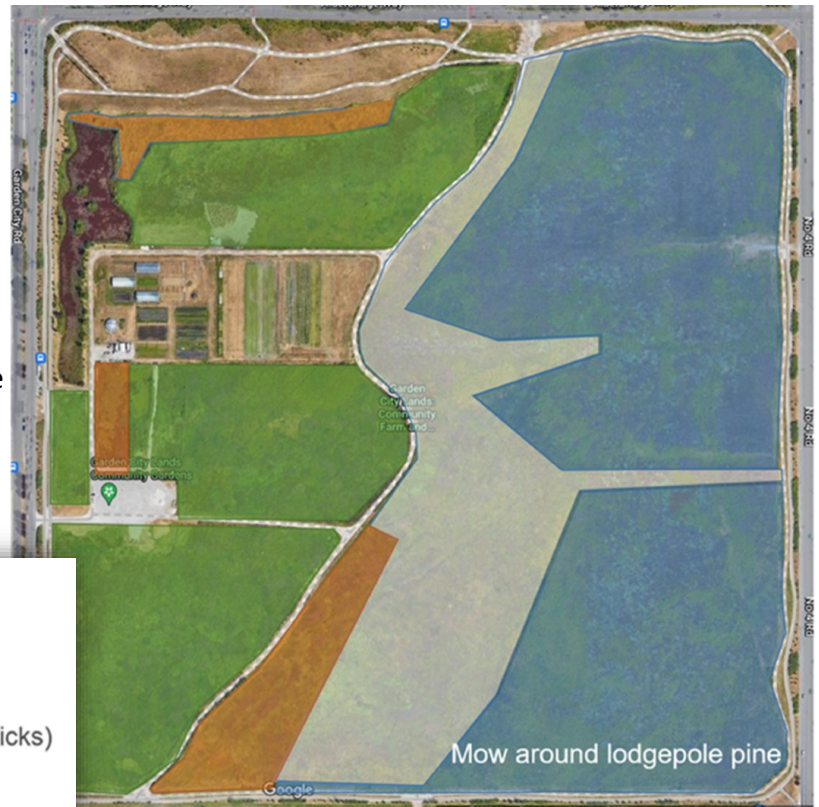
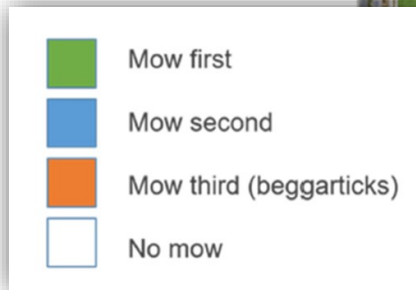
## 2023 Mowing Plan

Indigenous people probably managed trees and favoured berry bushes and medicinals using occasional controlled burns in the Lulu Island bogs. The first recorded description of the Garden City Lands is of “a cranberry swamp with low pine bush mostly deadened by fire” (Joseph Trutch, Royal Engineer surveyor, 1859).

Settlers drained the peat by building ditches and roads through the bog, creating a fire hazard and favouring tree growth. Numerous peat fires occurred in the 1930s and 40s. To prevent fires, the Lands were cleared and regular mowing began. Both the Garden City Lands and the adjacent lands owned by the Department of National Defense (DND) were mowed regularly until the mid-1970s, when mowing ceased on the latter. The DND lands have since become forested. A serious peat fire occurred there in the summer of 2017.

Annual mowing continues on most of the Garden City Lands. In 2023 City staff mowed the Lands instead of hiring external contractors. KPU worked with City staff to refine the mowing plan in consideration of the needs of the distinct plant communities at the site:

1. Agricultural zones west of the dike were mowed first (mid-September), except for areas with beggarticks.
2. The eastern portion of the bog was mowed next (late-September). Flagged lodgepole pines, lagg zones and most areas with *Sphagnum* were left unmowed. Unmowed areas have very few silver birch, posing little risk of reforestation.
3. Areas with Vancouver Island beggarticks were mowed last, after beggarticks seeds were fully mature (mid October), to promote regeneration of the rare species.



2023 mowing plan, developed in collaboration with KPU.

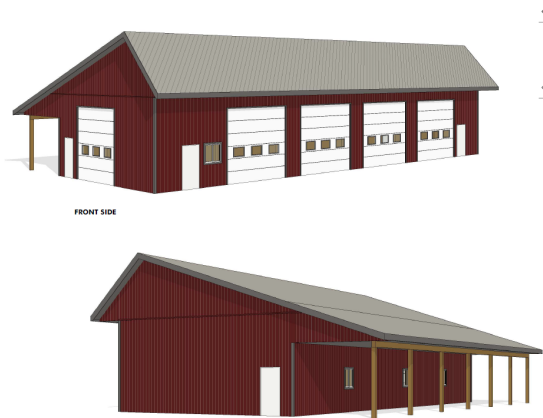


Richmond City staff mowing Garden City Lands, September 29, 2023. Forested land owned by Department of National Defense can be seen in the background.

# Farm Expansion and Next Steps

## Storage Shed

Throughout 2023 the KPU Facilities and Security team have worked to develop a plan for a storage shed that could accommodate the storage of equipment at the KPU Farm. With the support of the City of Richmond, plans were developed to build a shed in 2024. This shed will allow for the equipment that is currently stored outdoors and susceptible to theft and will improve the tidiness of the site.



## North Field Expansion

KPU continues to collaborate with the City of Richmond in the development of the North Field. As with the south field, the peat will be buried beneath clean mineral soil with the drains positioned above the peat. This strategy is intended to preserve the sequestered carbon in both the native peat and the imported peat that was added in 2022, avoiding substantial greenhouse gas emissions. Although the site is not yet ready for production, KPU has planted a cover crop on the soil that has been placed to minimize soil erosion, weed pressure and increase organic matter.

With the discovery of the Vancouver Island Beggarticks along the west and north edges of the field, as discussed on page 13, we have modified our proposed plan for the north field to accommodate the preservation of this rare plant by removing that area from the proposed production fields.

A portion of the land west of the food forest will be used to experiment with paludiculture, which couples peat conservation with agricultural production. The remaining land will be used for field crop production.



Diagram indicating the areas of the