





# PRINCIPLES & OUTCOMES

## LANGLEY URBAN AGRICULTURE DEMONSTRATION PROJECT

### PROJECT PRINCIPLES

1. Prioritize **food production** and **education** in community asset development.
2. Ensure **community fit** and **compatibility**.
3. **Educate the public** about the integration of agriculture, energy, environment and community.
4. Develop a **replicable process** for planning, design and community engagement for urban agriculture projects in right-of-way and other urban areas in the region.



### PROJECT OUTCOMES

Project outcomes reflect how the community will be served by an urban agriculture project. It also demonstrates a comprehensive approach to design and planning that aims to achieve a variety of outcomes through the implementation of this project.



#### FOOD PRODUCTION

Food production opportunities can be created for the community and local food access can be facilitated.



#### ASSET DEVELOPMENT

Design and programming elements will combine to create a unique community asset on previously underutilized public lands.



#### SOCIAL CONNECTION

Opportunities for community connection can be created through design, programming and meaningful partnerships.



#### COMMUNITY EDUCATION

Demonstration of urban agriculture will create opportunities for learning and knowledge sharing within the community.



#### FARMER TRAINING

Space for food production can build the skills and capacity of new farmers and increase awareness about agricultural career options.



#### ECOLOGICAL ENHANCEMENT

Opportunities to enhance ecological assets on and adjacent to the site increasing overall sustainability.

#### PROJECT DETAILS:

The Langley Urban Agriculture Demonstration Project is a planning and design collaboration between the City of Langley, Metro Vancouver and the Institute for Sustainable Food Systems which aims to bring urban agriculture and community amenity to a 23 acre (9.4 ha.) BC Hydro transmission right-of-way (ROW) in the City of Langley. The project planning phase has been funded by Metro Vancouver through the Sustainability Innovation Fund.

#### PROJECT PARTNERS:





# WHAT IS URBAN AGRICULTURE?

## LANGLEY URBAN AGRICULTURE DEMONSTRATION PROJECT

Urban Agriculture (UA) is any combination of activities that **produce, process, and distribute food** and other products, on land in **urban areas**, applying **intensive production methods** to yield a **diversity of crops and livestock**.



## MULTI FUNCTIONAL URBAN AGRICULTURE

The primary outcome of UA is food production, but many projects also provide multi-functional benefits that align with broader social and ecological sustainability goals.

### FOOD PRODUCTION



### EDUCATION



### CULTURE & HERITAGE



### BIODIVERSITY ENHANCEMENT



#### PROJECT DETAILS:

The Langley Urban Agriculture Demonstration Project is a planning and design collaboration between the City of Langley, Metro Vancouver and the Institute for Sustainable Food Systems which aims to bring urban agriculture and community amenity to a 23 acre (9.4 ha.) BC Hydro transmission right-of-way (ROW) in the City of Langley. The project planning phase has been funded by Metro Vancouver through the Sustainability Innovation Fund.

#### PROJECT PARTNERS:



Institute for Sustainable Food Systems

CITY OF  
LANGLEY



metrovancouver  
SERVICES AND SOLUTIONS FOR A LIVABLE REGION



# WHAT IS URBAN AGRICULTURE?

LANGLEY URBAN AGRICULTURE DEMONSTRATION PROJECT

## COMMUNITY DEVELOPMENT



## URBAN GREENING



## WASTE MANAGEMENT



## HEALTH & WELL BEING



## ECONOMIC DEVELOPMENT



## ENVIRONMENTAL CONSERVATION



### PROJECT DETAILS:

The Langley Urban Agriculture Demonstration Project is a planning and design collaboration between the City of Langley, Metro Vancouver and the Institute for Sustainable Food Systems which aims to bring urban agriculture and community amenity to a 23 acre (9.4 ha.) BC Hydro transmission right-of-way (ROW) in the City of Langley. The project planning phase has been funded by Metro Vancouver through the Sustainability Innovation Fund.

### PROJECT PARTNERS:



Institute for Sustainable Food Systems

CITY OF  
LANGLEY



metrovancover  
SERVICES AND SOLUTIONS FOR A LIVABLE REGION



# URBAN AGRICULTURE IN HYDRO ROWs

LANGLEY URBAN AGRICULTURE DEMONSTRATION PROJECT

## BC HYDRO PARTNERSHIP

The City of Langley is committed to working with BC Hydro to create an urban agriculture amenity with specific consideration to:

- public safety
- physical restrictions imposed by utility
- operations and future use of hydro utility

.....

### IS THE FOOD SAFE?

Agriculture is considered a compatible use in hydro right-of-way (ROW) areas. Both crop production and livestock grazing are commonly practiced, and there are no risks associated with consuming food produced under high-voltage powerlines.

.....

## HYDRO RIGHT-OF-WAY SAFETY

Ensuring public health and safety is a primary concern in the development of community amenities in hydro ROW areas. This ROW contains two 500 kv transmission lines and one 230 kv transmisson line.

### Exposure to Electromagnetic Fields (EMF)

Transmission power lines are an “extremely low frequency” source of electromagnetic fields (EMF). Other sources of exposure include household appliances, telecommunications infrastructure, and building wiring. EMF are becoming increasingly present in the modern environment. Most of the interest in possible health effects concern magnetic fields and is measured in milligluass (mG).

Magnetic field strength is directly related to the amount of current and diminishes quickly when you move away from the source. Thoughtful site design and layout could help to mitigate unnecessary exposure to EMF when designing UA project in hydro ROW areas.

Scientific research about the health impacts of exposure to EMF is ongoing and a variety of health outcomes have been looked at. Summarized research suggests that there is no cause-effect relationship between exposure and human health outcomes.

General guidelines for short term exposure to EMF for the general public is 2000 mG.

## HYDRO ROWs RESTRICTIONS

BC Hydro outlines site infrastructure and activities that may be restricted in ROW areas, including:

- Permanent structures
- Temporary structures over 3m
- Mature vegetation over 3m
- Metallic materials (i.e. fencing, lighting)
- Mechanical irrigation
- Commercial parking lots
- Grade changes over 0.5m
- Interference with utility work or equipment



Transmission Line Voltage	Under Transmission Lines (0m)	Edge of Right-of-Way (~20m)	Outside Right-of-Way (30m)
230 Kv	38mG	28mG	8mG
500 Kv	81mG	51mG	33mG

Source: BC Hydro, Understanding Electromagnetic Fields

Household Source of EMF	At Source (5-10 cm)	~ 1m from Source
Hair Dryer	300 mG	0.1 - 6 mG
Dish Washer	20 mG	1 mG
Washing Machine	20 mG	0.1 - 2 mG
Power Saw	200 mG	4 mG
Vacuum	300 mG	1-10 mG

Source: United States Environmental Protection Agency

### PROJECT DETAILS:

The Langley Urban Agriculture Demonstration Project is a planning and design collaboration between the City of Langley, Metro Vancouver and the Institute for Sustainable Food Systems which aims to bring urban agriculture and community amenity to a 23 acre (9.4 ha.) BC Hydro transmission right-of-way (ROW) in the City of Langley. The project planning phase has been funded by Metro Vancouver through the Sustainability Innovation Fund.

### PROJECT PARTNERS:



Institute for Sustainable Food Systems

CITY OF  
LANGLEY



metrovancouver  
SERVICES AND SOLUTIONS FOR A LIVABLE REGION



# URBAN AGRICULTURE AMENITIES

## LANGLEY URBAN AGRICULTURE DEMONSTRATION PROJECT

### URBAN AGRICULTURE AMENITIES

Urban agriculture amenities are the combined design and programming elements that will be integrated into the project site to achieve desired outcomes.

This is a comprehensive list of possible amenity options. The most appropriate amenities will be chosen based on consultation with community members and project stakeholders.

Amenity	Description	Precedents
Accessibility Garden	Elevated growing areas to make gardening accessible for those with physical disabilities and mobility challenges Usually wheelchair accessible.	
Children’s Garden	Growing space designed for children with a focus on ecological systems and/or the link to food production.	
Community Farm	A farm where production, processing, distribution of food takes place where direct connections with communities are cultivated.	
Community Garden	A piece of land divided into plots that is gardened collectively producing food for personal use or for the community.	
Community Orchard	A collection of fruit and/or trees planted in a public space where there is shared access to the open space and the food produced.	
Demonstration Garden	A garden that focuses on testing different methods and techniques for food production and horticulture (i.e. drought resistant gardening, organic production etc.)	
Ecological/ Habitat Areas	Integrated into farming landscapes these areas increase wild biodiversity and provide educational opportunities about the links between ecology and food production.	
Incubator Farm	Small farm plots accessible to new farmers to practice agricultural skills, gain experience and launch their farming businesses	
Indigenous Garden	Space for Indigenous communities to express cultural identity and educate non-Indigenous people about traditional food systems.	
Livestock	In urban farming context livestock can include; chickens, honey bees, goats, sheep, pigs or fish.	
Outdoor Classroom	Dedicated outdoor space for learning and educational programming.	
Pollinator Garden	Gardens designed to increase habitat for other wild pollinators (i.e. bees, butterflies).	
School Garden	Spaces designed and managed to connect directly to student learning objectives, often located on or adjacent to school properties.	
Training Farm	Working farms that also offer some kind of formalized training (course or program) to train people for careers in agriculture.	

#### PROJECT DETAILS:

The Langley Urban Agriculture Demonstration Project is a planning and design collaboration between the City of Langley, Metro Vancouver and the Institute for Sustainable Food Systems which aims to bring urban agriculture and community amenity to a 23 acre (9.4 ha.) BC Hydro transmission right-of-way (ROW) in the City of Langley. The project planning phase has been funded by Metro Vancouver through the Sustainability Innovation Fund.

#### PROJECT PARTNERS:



Institute for Sustainable Food Systems

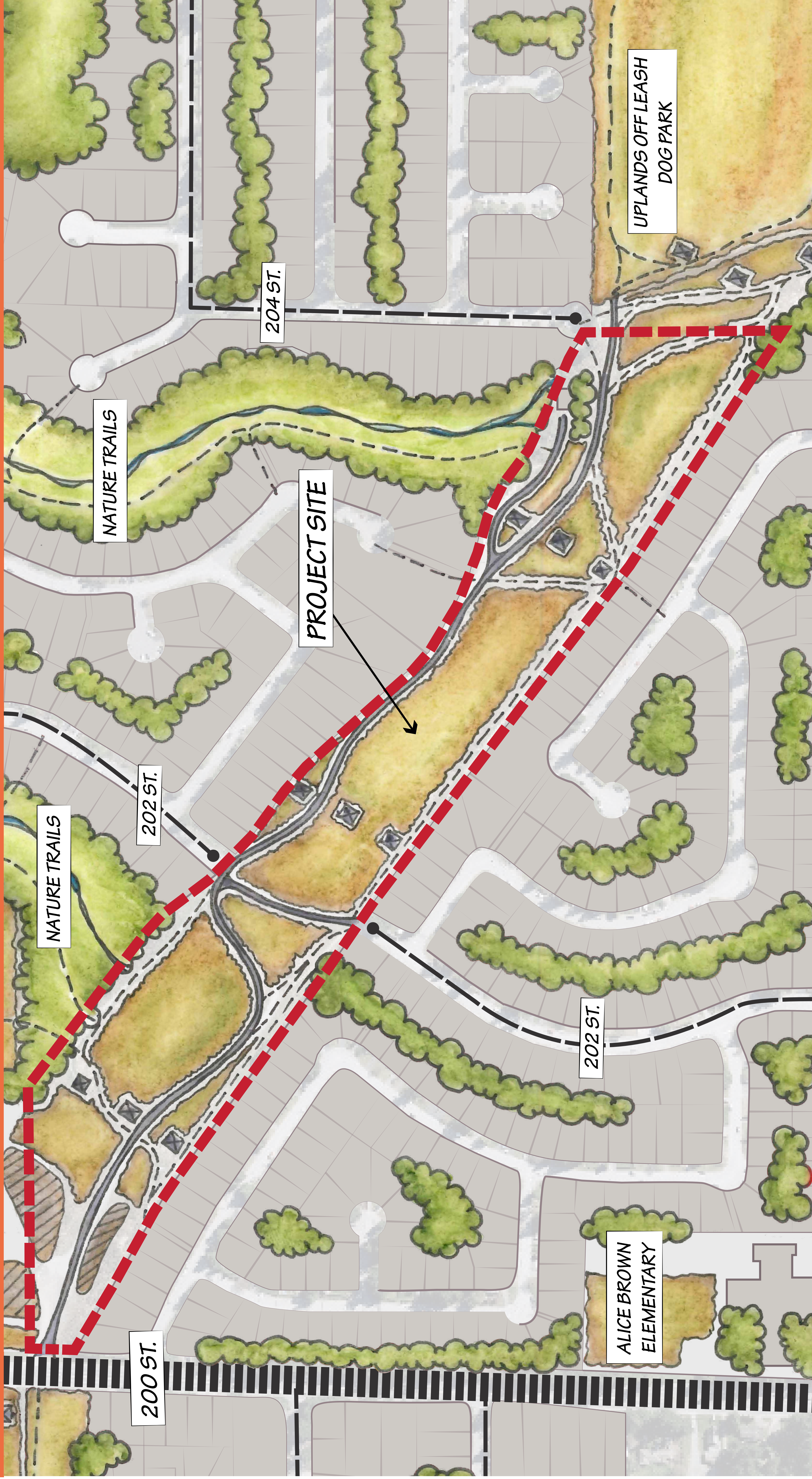






# SHARE YOUR IDEAS HERE!

We want to hear from neighbourhood residents and community stakeholders.





# NEXT STEPS

## LANGLEY URBAN AGRICULTURE DEMONSTRATION PROJECT

Thank you for your interest in the **LANGLEY URBAN AGRICULTURE DEMONSTRATION PROJECT!**



## BEFORE YOU GO...

- Complete a **Community Open House Survey**.
- Leave your email address to receive future project communications.
- Make sure you have shared all your comments and feedback about the project.

## FOR MORE INFORMATION:

### Contact:

**Roy Beddow**, Deputy Director Economic Development and Development Services, City of Langley  
[rbeddow@langleycity.ca](mailto:rbeddow@langleycity.ca)

**Emily Hansen**, Research Associate, Institute for Sustainable Food Systems - KPU  
[emily.hansen@kpu.ca](mailto:emily.hansen@kpu.ca)

### Visit the project website:

[city.langley.bc.ca/business-development/sustainability/langley-urban-agriculture-demonstration-project](http://city.langley.bc.ca/business-development/sustainability/langley-urban-agriculture-demonstration-project)

## PROJECT DETAILS:

The Langley Urban Agriculture Demonstration Project is a planning and design collaboration between the City of Langley, Metro Vancouver and the Institute for Sustainable Food Systems which aims to bring urban agriculture and community amenity to a 23 acre (9.4 ha.) BC Hydro transmission right-of-way (ROW) in the City of Langley. The project planning phase has been funded by Metro Vancouver through the Sustainability Innovation Fund.

## PROJECT PARTNERS:



CITY OF  
LANGLEY

