CityLAB Project Agreement Winter 2024

The role of the project agreement is to document the expectations for the project, define objectives, clarify constraints or limitations, and outline responsibilities to ensure clarity for the project.

CityLAB can help you and your partner complete this document, feel free to reach out for support at any time. Email us at citylab@hamilton.ca

Project Title: Tree Data Collection and Tweeting Pilot Project

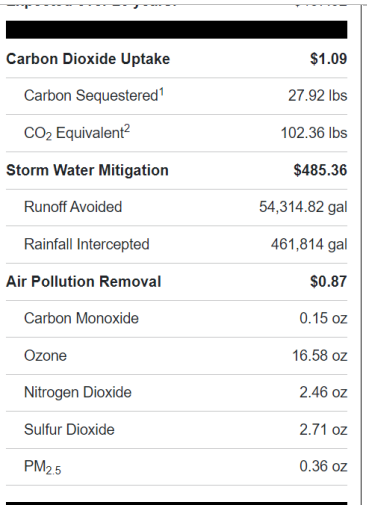
Is this project continuing from a previous CityLAB project?

☐ Yes

☒ No

If yes, what was the project title:

Challenge summary Please summarize the challenge you wish to work on solving in plain language in one sentence.	To generate interest and create awareness of the role trees play in mitigating climate change.
Project Description What is the problem you are trying to solve and what is the context? If applicable, use the original challenge description found on www.citylabhamilton.com/challenges.	**Scope:** • Tree Tweeting: 2 trees (one well established, one young) will tweet to each other about their growing environment. This will have a climate change lens on the tweets. • Data collection: Using the dendrometer, soil life sensor, sap flow sensor and RH/Temperature monitors data will be collected and visible on a dashboard. • Data sharing: All collected data will be made available through OpenData Hamilton • Webpage: Webpage will host easy to understand and meaningful metrics collected through the sensors. Will also include a “tree benefit calculator” through iTree and provide metrics from the trees that have been selected to Tweet based on iTree values.

Carbon Dioxide Uptake	**$1.09**
Carbon Sequestered[1]	27.92 lbs
CO_2 Equivalent[2]	102.36 lbs
Storm Water Mitigation	**$485.36**
Runoff Avoided	54,314.82 gal
Rainfall Intercepted	461,814 gal
Air Pollution Removal	**$0.87**
Carbon Monoxide	0.15 oz
Ozone	16.58 oz
Nitrogen Dioxide	2.46 oz
Sulfur Dioxide	2.71 oz
$PM_{2.5}$	0.36 oz

Background Research (optional) What kind of research will be required to pursue the challenge?	
Communication Plan How frequently will partners from different institutions communicate, in what method and who will initiate.	Communication: Choose an item. Frequency Choose an item. Initiator Choose an item.
Timeframe Will the project run for one or two terms?	

City Staff Information

City staff details	City staff name: Katie Mayne City staff email: Katie.Mayne@hamilton.ca City staff department: Public Works City staff position: Senior PM Forestry & Horticulture
Additional City staff If applicable include names, emails, and positions of additional staff supporting the project.	

Intended Outcomes How will this work be used by City Staff once the project has been completed?	**Public Interest:** Provides a fun and educational opportunity for residents to better understand the role that trees play in our environment and in mitigating climate change. They will also better understand the challenges trees face in urban environments and why it is important to protect our heritage trees. **Urban Forest Strategy:** Aligns with the launch of the urban forest strategy and provides valuable data that can be used by Staff and by external researchers. **Climate Change:** Provides an opportunity to engage residents on the current pressures of climate change that often go unnoticed but are certainly impacting our urban forest and the many ecosystems in Hamilton. Provides valuable data of the like.

Instructor / Course Information

Instructor and student details	Instructor name: Mark Yendt Course name: Software Engineering Project Number of students: 3
In Scope Clarify the components of the project that are feasible for this course/term.	**The Software components of the projects including the UI/UX design that will provide an overview of the health of the Tree Canopy**
Out of Scope (optional) Clarify the components of the project that are **not** feasible for the course/term.	**Connecting the software to actual sensors may not get completed.**
Student Learning Objectives (optional) By the end of this project/term, students should be able to:	**Hopefully build out a dashboard that can be connected to the hardware components once developed.**

Project Deliverables, Timelines, and Strategic Priorities

For the below table, please select all options that apply to your project. The dropdown boxes contain common checkpoints and milestones to help you envision the partnership. Please use the notes column for extra detail as needed and feel free to add in your own relevant items.

Timeline	Notes	Date
Choose an item.		

Choose an item.		
Choose an item.		
Choose an item.		
Choose an item.		
Final Deliverables – Please select from the drop-down menus below		
Choose an item.		
Choose an item.		
Choose an item.		
Choose an item.		
CityLAB Deliverables		
Infographic and 3-minute Video		TBD
Presentation and/or video at Project Showcase **		TBD
Alignment with City of Hamilton Strategic Plan Priorities:		
☐Community Engagement and Participation ☐Economic Prosperity and Growth ☒Healthy and Safe Communities ☒Clean and Green ☐Built Environment and Infrastructure ☐Culture and Diversity ☐Our People and Performance		

Please submit your project agreement to CityLAB by emailing citylab@hamilton.ca before January 2024 for Winter semester projects.

CityLAB Deliverables and Semester Schedule

**PLEASE NOTE: If you are completing a project over two consecutive terms, students will only be required to participate in one of the Project Showcases.

Project Agreements Due	January 5, 2024
Mid-Semester Check-in (CityLAB and faculty)	February 19-23, 2024
Project Showcase Materials Due	TBD
Project Showcase	TBD

Project Data and Reports due (final day of classes)	TBD
Exit Surveys sent to faculty and City staff (to be completed by staff and faculty)	TBD
Post-Project Check-in with City staff	April 15-19, 2024