

CityLAB Project Agreement 2020-2021

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 help! Email us at Patrick.Byrne@hamilton.ca

Project Title:

Is this project continuing from a previous CityLAB project?

- Yes
 No

If yes, what was the project title:

City staff details

City staff name: Christina Cholkan (Project Manager, Hamilton Water)

City staff email:
 City staff phone number:

Instructor and student details

Instructor name: Dr. Zobia Jawed
 Instructor email:
 Instructor phone number:
 Course name: Master's Engineering Design Project (October-August)
 Number of students: 2
 Student names (if known):

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. Please make any changes as needed or simply leave as is.

Rehabilitating our urban river systems from centuries of human impact is highly beneficial from a triple bottom line perspective, yet complex to achieve. Pollutant discharges to the environment can occur from a variety of sources, including storm sewers, combined sewers, and from unknown sanitary sewer cross-connections. To improve the water quality in the urban river systems, it is important to identify, regulate, and minimize sources of pollutants to each receiver. The identification of the pollutant sources is key - like 'contact tracing' of a virus. Confirming the

	<p>precise sources is important, so that there is certainty in knowing that the effort you put into eliminating the source will be worth the time and cost.</p> <p>For this challenge, we are looking for new ideas to help improve the Chedoke Creek subwatershed by better tracing the contributing pollutants. The developed solutions should however consider flexible application in any of Hamilton's subwatersheds.</p>
<p>Challenge summary (summarize the challenge in plain language)</p> <p>If applicable, use the original challenge summary found on www.citylabhamilton.com/challenges. Please make any changes as needed or simply leave as is.</p>	<p>Develop or research and recommend emerging water quality technology to monitor pollutants of concern at pipe outfalls or in-creek, preferably remotely and/or in near real-time.</p>
<p>In Scope (from original project description)</p> <p>Clarify the particular elements that you will be taking on in this project. The more particular the better!</p>	<p>Research and design framework to monitor and track selected contaminants as outlined in the SLR Ecological Risk Assessment report. Determine which of the noted contaminants are selected and why (provide a case for the selection).</p> <p>Review related documents such as the City's sewer use by-law or policy documents to determine how they may impact the proposed framework.</p> <p>Field work is included in this scope if it is deemed necessary through preliminary research stage.</p>
<p>Out of Scope (from original project description)</p> <p>Clarify the particular elements that this project won't take on. Be explicit, even if it might seem obvious!</p>	<p>Production of prototype due to time-constraint</p>

<p>Background Research (what research will be required to pursue the challenge?)</p>	<p>Chedoke Creek Spill (including related publicly available reports) Combined Systems and CSOs Methodologies to track and trace contaminants of concerns</p>
<p>Goals (what are the objectives you aim to achieve within the timeframe?)</p>	<p>To design a framework to monitor and track selected contaminants in Chedoke Creek, improving on existing conditions.</p>
<p>Timelines (Planning, Implementation, Installation, Report, Presentation, Reflection)</p>	<p>Student Recruitment: September Project Starts: October Background/Planning: October to November Jurisdiction Scan: December to February Design Framework: March-June Design Improvements with Stakeholders: July-August Project Report: August</p>
<p>Learning Objectives</p>	<p>To research and design a framework that can support tracking of contaminants</p>
<p>How we will work together</p>	<p>Meeting Frequency: Initially biweekly then monthly</p>
	<p>Communication: e-mail, MS Teams (preferred), Zoom Platform, WebEx</p>
	<p>Conflict Resolution: Faculty lead and City Staff communicate to resolve any conflicts</p>
<p>Roles</p>	<p>Students: Responsible for completing the project and submitting deliverables</p>
	<p>City Staff: Providing data and stakeholder input City to determine available budget (guideline of \$5K max at this time) for items such as test kits if required, as well as timelines for budget approval.</p>
	<p>Instructors: Supporting Students and Reviewing work, Facilitate discussions between students</p>

	and stakeholders related to scope, schedule and budget.
	Stakeholders: Providing input/opinions (if applicable, no external stakeholders at this time)
<p>Project Deliverable for the City of Hamilton</p>	<p>Alignment with City of Hamilton Strategic Priorities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Community Engagement and Participation <input checked="" type="checkbox"/> Economic Prosperity and Growth <input checked="" type="checkbox"/> Healthy and Safe Communities <input checked="" type="checkbox"/> Clean and Green <input checked="" type="checkbox"/> Built Environment and Infrastructure <input type="checkbox"/> Culture and Diversity <input type="checkbox"/> Our People and Performance <p>Deliverable(s) (e.g. size and type):</p> <p>Report</p> <ul style="list-style-type: none"> • analysis to be developed and presented using a triple bottom line approach and infographics where sensible • include actionable recommendations for City <p>Presentation</p> <ul style="list-style-type: none"> • visually-based pitch to the City summarizing methodology and actionable recommendations <p>Where will the work go and what will it be used for:</p> <p>Work is for the Water and Wastewater Systems Planning team (and also therefore Hamilton Water). It will be used to inform of further potential actions to improve the condition of Chedoke or other local creeks.</p>

Please submit your project agreement to CityLAB by emailing to Patrick.Byrne@hamilton.ca before September 1, 2020 for Fall semester projects.