

**Burlington Conservation Board
Open Space Subcommittee**

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2020 Burlington Open Space Protection Plan – Climate Action Addendum

I. Opening land acknowledgement

- This document serves as a compliment to the Open Space Plan to elaborate on the direct-action steps that the city is taking, and will take, in order to combat climate change. The stewardship recommendations will follow Nature Based Solutions, which will be further explained in this document. It's necessary to first acknowledge that these natural areas were part of the traditional, ancestral territory of Abénaki (a-buh-naa-kee) people, from whom the land was stolen by force. The Abénaki people were the first land stewards here and cared for it for generations before us. We cannot fully care for the land without also honoring its history.

II. Section I: Background and Context

- *Open Space in Burlington*
 - *Define (stems from prior OSPP)*
- *Reference to Burlington's Climate Action Plan document*
- *Emergent Climate adaptation need*
 - *protect restore fund - overview of why have a climate adaptation addendum*
 - *pie chart showing investment/lack of investment*
 - *this will give a visual representation of rough quantifications of how much the city is already plugging into this kind of work, and how we can/need to do more.*
 - *Table showing work that is already happening to combat climate change. This will pair with the pie chart*
 - Parkland Access, Connectivity, and Trails
 - Ongoing trails mapping and management
 - discuss City trail program and acknowledge trail networks, and the various investments, consider future structures and alignments, provide narrative on process of formalizing networks (arms process as standard)
 - Burlington Wildways - special attention here to coalition model and how that relates to addressing climate adaptation
 - New Park/Conservation Areas
 - 311 North Avenue conservation
 - Arms Forest Alignment
 - North Cove conservation (WVPD)

- Rock Point conservation
- Pomerleau Forest
- Other?
- Green Infrastructure
 - Great Streets improvements (stormwater components)
 - City Hall Park green stormwater components
 - Blanchard Beach tributary stormwater project
 - Other?
- Urban Agriculture
- Community based metrics - how much of Burlington's produce is grown in Intervale
- Urban Agriculture Task Force and recommendations
- Regulatory changes to facilitate and support urban ag
- Codification of community garden incentive in the CDO
- Other?

III. Section 2: Nature Based Solutions overview/integration (see supporting documents on NBS)

- What are NBS generally speaking? The IUCN Commission on Ecosystem Management defined them with these principals:



1. Embrace nature conservation norms (and principles);
2. can be implemented alone or in an integrated manner with other solutions to societal challenges (e.g. technological and engineering solutions);
3. are determined by site-specific natural and cultural contexts that include traditional, local and scientific knowledge;
4. produce societal benefits in a fair and equitable way, in a manner that promotes transparency and broad participation;
5. maintain biological and cultural diversity and the ability of ecosystems to evolve over time;
6. are applied at a landscape scale;

7. recognize and address the trade-offs between the production of a few immediate economic benefits for development, and future options for the production of the full range of ecosystems services; and
8. are an integral part of the overall design of policies, and measures or actions, to address a specific challenge.

○ *Based on what other communities are accomplishing/pursuing.* European cities have been using NBS in their cities for some time. We could adopt their goals and apply them in Burlington:

- Enhancing sustainable urbanism
- restoring degraded ecosystems
- developing climate change adaptation and mitigation (*which this addendum is part of doing)
- Improving risk management and Resilience.

Enhancing sustainability within our urban setting

Keep as is

Keep as is

Keep as is

Research & Innovation Agenda on Nature-Based Solutions and Re-Naturing Cities	
Goals	Research & Innovation Actions
Enhancing sustainable urbanisation	 <p>Urban regeneration through nature-based solutions</p>  <p>Nature-based solutions for improving well-being in urban areas</p>
Restoring degraded ecosystems	 <p>Establishing nature-based solutions for coastal resilience</p>  <p>Multi-functional nature-based watershed management and ecosystem restoration</p>
Developing climate change adaptation and mitigation	 <p>Nature-based solutions for increasing the sustainable use of matter and energy</p>
Improving risk management and resilience	 <p>Nature-based solutions for enhancing the insurance value of ecosystems</p>  <p>Increasing carbon sequestration through nature-based solutions</p>

Following the goals outlined on the left, we will tailor the action items (right) to fit the work of Burlington NBS with accessible, and clear language.

This table is an example of each goal, and the actions that can meet them. NBS are often location specific, and we cannot apply a broad-brush stroke answer for what specific actions will help the most overall. However, with guidelines like these, we can channel our work into specific types of action (ie. Restoration).

- *What does it mean to tackle climate change with nature-based solutions?*
 - It means that we put greater emphasis on nature based work that we are already doing, and incorporate it on a greater scale.
 - That we include citizens, partner organizations (for profit and non-profit), and other city departments in the planning and development of projects.
 - We will need creativity to develop solutions.
 - We will need good communications and outreach to engage and inform citizens
 - It means that we create a more resilient city landscape to prepare for all of the changes we will experience as climate change events increase in frequency and severity.
- *What can we learn from cities who have already done this work successfully?*

Fortunately, there was a study on just that! We can reference the key takeaways from *Seven Lessons for Planning Nature-Based Solutions in Cities* by Niki Frantzeskaki:

 1. NBS should be aesthetically appealing for citizens to appreciate and protect them. The design characteristics of NBS need to be inviting, engaging, and well integrated into infrastructure to get citizen buy in.
 2. NBS create new green urban commons. Transforming abandoned spaces, to welcoming, community spaces that also create small, new ecosystems in the city.
 3. NBS experiments require and build trust between the city and its citizens both for the aim of the experimenting process itself. Having community input in creating new NBS for the city is really important for building a sustaining partnership between the city and its citizens.
 4. Different forums are needed for co-creating NBS are needed that include and learn from urban social innovation. Co-creation with partnership in local organizations and citizen groups will increase capacity and creativity in creating and managing NBS for the city.
 5. NBS require a collaborative governance approach. They are initiated by local governments and require multiple actors to be designed, implemented and linked to urban life. Having multiple stakeholders and to embed NBS into urban life through community networks and civil society organizations, the solutions will be sustainable.
 6. An inclusive narrative of mission for NBS can bring knowledge and agendas across different departments of the city and tackle with departmental disputes. It is just as important to include citizen voices as it is to include voices across city departments so as to create a common inclusive narrative of mission across departments, inspire colleagues, and get more buy in internally.

7. NBS need to be designed in such a way and scale that lessons for their effectiveness can be easily harvested and as thus, to be easily replicated into other locations. The work should be well documented and reported on so that it can be repeated and learned from.

- *What specific areas can Burlington focus on?* This section will provide general descriptions of these focus areas.
 - Parkland access, connectivity and trails
 - Green infrastructure in the city
 - Urban agriculture (let’s give Patrick a chance to shape this early on if there is emergent things that aren’t captured in the 2014 OSPP or if there is a twist on this piece that acknowledges Urban Ag role in Climate adaption)
 - Conservation education
 - Natural areas

IV. **Section III: Goals & Objectives**

- Acknowledge the Climate Action Plan, the Urban Forestry Master Plan, Comprehensive Plan, and Parks Master Plan.
- Identify measurable action items and identify responsible parties
- Anticipate comprehensive update in 2025

Goal Areas	Objective	Action Items
Parkland access, connectivity, trails	Ongoing trails mapping and management	Discuss City trail program and acknowledge trail networks, and the various investments, consider future structures and alignments, provide narrative on process of formalizing networks (arms process as standard). protecting areas through intentional and directed access for humans.
	Burlington Wildways	special attention here to coalition model and how that relates to addressing climate adaptation
	Address obstacles to connectivity such as private land that blocks access for people & wildlife.	Contemplate opportunity for private landowners to participate (Rock Point etc...) Affirmative framework as opposed to focusing on

		obstacles - creating habitat connectivity across land blocks
Green Infrastructure	Green Infrastructure buildout methodology and story (specifically line up with waste water management standards)	how are bump outs and installments prioritized and funded? How much area do they serve, what is their role and function?
		What is the big picture and vision of the stormwater program in regard to climate adaptation
Urban agriculture	Community based metrics - how much of Burlington's produce is grown in Intervale	
	Community gardens - adaptive models - communal plots vs individual plots, trend toward no-till vs. tilled (we have numbers on these trends to report on)	
	Creating Bee habitat	
	Re-wilding lawns	
	Neighborhood orchards	
Education	Old growth forest	
	Natural History of Burlington	
	Raising voices of underserved populations in the city	
	Continue programing	Master naturalist ½ yard Civic engagement with trained staff and new trail stewards program
Recommend a summit of naturalist and ecologist to support a conversation about concepts of functional		

		ecosystems in the face of climate adaptation
Natural areas	Biodiversity and its role in the urban setting	
	Mapping of the natural areas	How many parcels over 10 acres have natural cover?
		Identify those in need of management plans
		Reference “I-naturalist” as a community-based resource
		Connectivity mapping
	Better signage in the natural areas	
	Identify and protect ecosystem service	Define this broadly - urban cooling, carbon sequestration, biodiversity, human health.
	Identify and prioritize conservation opportunities	
	Urban wilds	Need to define/rebrand? Explain new program
		Functions-and-values based rather than simply city owned (i.e. urban wilds can be non-city lands). Emphasize wildlife and natural areas as first priority. Identify heavy use areas and “wild” areas.

*Just a note on this, I am not sure what the specific and measurable action items will be for each of these, but I based some of them off the previous document.