



To: Burlington City Council  
From: Rebecca Roman and Zoe Richards on behalf of the Burlington Conservation Board  
Re: Climate Change Addendum to Open Space Plan  
Date: August 20, 2020

**We propose that conservation should be elevated as a central element in the city’s strategy and efforts to fight climate change.** To support this critical work, we would like to write a Climate Change Adaptation Addendum to the Open Space Plan. We have gained unanimous support from the members of the Planning Commission and the Parks Commission. We welcome your support, suggestions, and participation.

Our proposal is based on the following observations:

- Climate change is the defining challenge of our time—and a cultural and ecological emergency that needs vigorous and urgent attention.
- The city’s Open Space Plan was written in 2000, with an update completed in 2014, and does not address climate change. The next scheduled rewrite of the whole plan is slated for 2025. Developing a climate change addendum now gives our city an opportunity to work more intentionally on climate change efforts today—and will serve as a blueprint and test-bed for a climate-change-informed rewrite in 2025.
- Burlington has made nation-leading commitments to addressing climate change—including our ambitious net zero electricity production goal, our achievement of 100% renewable power and other built-environment infrastructure investments. Our city’s focus and investment in climate-change adaptation and mitigation has largely centered on the work and priorities of the Burlington Electric Department.
- Our city has also made notable investments in conservation through its Conservation Legacy Fund, conservation program in the Parks Department, and other land-protection efforts—but these investments have not been viewed or highlighted as climate change efforts.
- Why? Because a huge and growing body of scientific evidence makes it clear that nature protection is not just good for stabilizing the climate—but is the most cost-effective, important, and inescapable requirement for successfully slowing the heating of our city and planet. There is no technological fix for climate change without extensive tree cover.
- Most simply, trees take carbon from the air and turn it into tree mass, which forestalls climate change. Urban forests create significant cooling islands that drop city temperatures and avoid carbon emissions. More generally, healthy, functional ecosystems provide clean water, flood mitigation, wildlife habitat, and biodiversity protection—all of which are the “machinery” of carbon sequestration.

- The term “nature-based climate solutions” is increasingly used by major organizations—like the United Nations, The Nature Conservancy, World Wildlife Fund, and the Trust for Public Land—to describe the essential contribution natural systems have in addressing the climate emergency.
- The UN estimates that 33% of climate action will need to come from nature-based solutions—if humanity is to successfully and cost-effectively mitigate the risks and damage from the rising temperatures of the planet. However, the UN data shows that, globally, these nature-based efforts only receive 3% of climate-action funding.
- It would be worth investigating what the balance of climate-change investment in Burlington looks like—and considering what would be required to increase our city’s investments in nature-based solutions to climate change.
- All nature-based climate action projects within the city (projects that sequester carbon, reduce emissions and create resilience) need to be recognized and supported. The addendum aims to do this as well as give guidance, direction and encouragement to nature-based climate solution related projects already being undertaken by the city and within the city as well as encouraging future efforts.
- Our city’s current Climate Action Plan (written in 2000 and updated in 2008) suggests a role for urban trees but does not fully contemplate the role that functional urban ecosystems play in climate mitigation.
- The broad recognition of the critical role these ecosystems play in effective climate action has emerged recently; this explains the lack of attention to nature-based approaches and solutions in both the 2014 Open Space Plan update as well as the 2008 Climate Action Plan.
- Can we quantify, in some useful form, some of the impacts of current and future nature-based solutions? The answer to that is yes!—and other US cities are moving quickly toward developing robust tools to do this.
- There are a number of approaches we could consider. For example, there are published numbers about the drawdown capacity (i.e., ability to convert airborne carbon to plant matter) of specific habitats. Several user-friendly tools for measuring drawdown capacity and avoided emissions are being developed right now for US cities by ICLEI, a pioneer in the local government sustainability movement. ICLEI has a number of US cities enrolled in their pilot process and they will have a protocol in place soon.
- A well-considered addendum to our Open Space Plan will provide a useful starting point and rationale for developing quantified and robust approaches to using natural areas as a key tool in fighting climate change in Burlington.

### **Our Goals:**

- To guide city staff and leaders, local organizations, and citizens in a collaborative approach that can support nature-based solutions.
- To empower community members to participate and lead nature-based solutions through education, volunteerism, and community input.
- To start the framework for the next Open Space Protection update in 2025.

## **Budget**

- We anticipate using up to \$25,000 of the Legacy Fund to write the addendum.
  - 2014 required \$18,000 to write the update.
- Currently the Legacy Fund has a balance of approximately \$437,000.

## **Nature-based projects already underway in Burlington**

- Tree planting
  - City of Burlington Street Tree Program
  - Tree plantings that grow the urban forest (e.g. shared plantings at Oakledge by Audubon and BPRW; Winooski River Buffer Restoration, BPRW, UVM & Intervale Center; Derway Cove Restoration, WVPD; Tree planting at 311 North Ave, BPRW & UVM)
- Restoration of riparian areas
  - Derway Cove Restoration, WVPD; Intervale floodplain restoration work, WVPD, Intervale Center, BPRW
- Improved trail marking, accessibility and reductions of social trails from ecologically sensitive areas
  - Burlington Wildway Trail, Burlington Wildways; extensive improvement in trails, and markings at Intervale Center, Rock Point, BPRW
- Conservation of land with the City of Burlington Legacy Fund
  - Arms Forest
  - 311 North Ave
  - Rock Point easement
  - Derway Cove
  - Robear tract added to Derway Island
  - Pomerleau Forest
- Conversion to native plantings
  - BPRW moving to low mow and native
  - Rock Point pollinator habitat improvement
  - Bee City status
  - Pilot project and education for citizens on private property native plantings coined “half-yard project”, BRPW, Rock Point, Burlington Wildways
- Pilot invasive species removal in 600 acres of the Intervale
  - Identify and plan for invasive species removal in 600 acres of Intervale, Burlington Wildways partners, Chittenden County Forester, VLT
- City-wide trail stewards program
  - City-wide pilot trail stewards program for citizens to help monitor, protect and care of our natural areas, Burlington Wildways
- Increased wildlife monitoring
  - Via cameras and iNaturalist app we have more data on wildlife (a bellwether for diverse functional ecosystems) movement through our natural areas.

- Burlington Seasons Clock, tracking climate change through changes in natural history (e.g. arrival date of migratory birds, leaf out), Burlington Wildway & UVM.