

July 30, 2021

*Via email to cc@boston.gov*

Michael Parker  
Chair, City of Boston Conservation Commission  
City Hall Room 709  
Boston, MA 02201

**Re: City of Boston Local Wetlands Ordinance Implementation, Phase II Regulations (Isolated Vegetated Wetlands, Vernal Pools, Lands Subject to Coastal Storm Flowage)**

Dear Chair Parker and Conservation Commissioners:

On behalf of Charles River Watershed Association (CRWA), Conservation Law Foundation (CLF), Charles River Conservancy (CRC), GreenRoots, and the Mystic River Watershed Association (MyRWA), we write to provide comments on the “Phase II” regulations implementing the Ordinance Protecting Local Wetlands and Promoting Climate Change Adaptation in the City of Boston (“the Ordinance”). These regulations are focused on performance standards and other provisions governing isolated vegetated wetlands (IVWs), vernal pools (VPs), and land subject to coastal storm flowage (LSCSF).

It is critically important that the Conservation Commission moves forward with implementing this Ordinance and its associated regulations. Although the Phase II regulations begin to implement important aspects of the Ordinance, we urge the Commission to make timely progress in promulgating the forthcoming and long overdue “Phase III” regulations addressing climate resilience and environmental justice.

CRWA and CLF previously submitted initial comments on the draft Phase II regulations on May 19, 2021. The comments below expand upon our initial letter and address some of the concerns raised at the Conservation Commission’s June 10 special hearing. We appreciate this opportunity to provide comments on the Phase II regulations and look forward to continuing to coordinate with the Conservation Commission and other stakeholders throughout this and future rulemaking processes under the Ordinance.

**I. Climate Change Demands Urgent Action from the Commission**

The implementation process for the Boston Wetlands Ordinance began four years ago in 2017. Originally, the Commission planned for all phases of the regulations to be promulgated and

completed by March 2021, including the “Phase III” regulations addressing climate resilience and environmental justice.<sup>1</sup> The Commission’s rulemaking process has fallen significantly behind schedule, which we understand is due at least in part to unforeseeable delays caused by the COVID-19 pandemic.

When passed, this Ordinance was heralded as an example of successfully incorporating the consideration of climate change impacts into local planning and review processes.<sup>2</sup> However, in the intervening year and a half, projects have continued to be approved by the Conservation Commission without robust analysis of climate impacts, including assessment of actual current and future flooding risks and adequate mitigation measures. Although the Commission has made some progress in implementing the Ordinance, this process is not keeping pace with climate change impacts throughout the city. In the four years since 2017, sea level rise has increased and its pace is expected to continue to accelerate in the near-future.<sup>3</sup> We are seeing more “sunny day” flooding, more frequent and intense heavy downpours, more stormwater flooding, and more severe heat impacts.<sup>4</sup> Continuing the old patterns of development without taking these threats into account and mitigating them undermines the intent and purpose of the Ordinance.

Given that it will still be some time before the Phase III regulations that address climate resilience and climate equity are promulgated—possibly as long as another year or more—the Conservation Commission must take steps now to incorporate consideration of climate change impacts into its review and approval processes. We note that the Commission has fallen behind other departments within the city; the City of Boston already incorporates new flooding information, as opposed to outdated FEMA maps, in the Boston Planning and Development Agency’s (BPDA) design requirements.

We are not aware of any provision under either the Massachusetts Wetlands Protection Act or the Boston Wetlands Ordinance which would prohibit the Commission from incorporating climate change projections into the current Phase II regulations for LSCSF. However, as discussed below, the draft regulations rely on FEMA maps based on historical data to determine flooding risks. The Commission has indicated that the Coastal Flood Resilience Zone, which will be developed as part of the Phase III regulations, will address current and future inundation projections as a result of climate change. We cannot wait that long to address climate impacts; we strongly urge the Commission to incorporate climate change projections, using data and information the City already has, during this phase of rulemaking.

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<sup>1</sup> See Conservation Commission Work Plan for Implementation of Wetlands Ordinance Regulations.

<sup>2</sup> Barbara Moran, WGBH, *Wash Signs Wetlands Ordinance for Boston* (Dec. 23, 2019), <https://www.wbur.org/earthwhile/2019/12/23/boston-wetlands-ordinance>.

<sup>3</sup> City of Boston, *Climate Ready Boston Final Report* at 7 (Dec. 2016).

<sup>4</sup> See Martin Finucane, Boston Globe, *Boston could see a rash of flooding in the coming years from climate change* (July 15, 2021), <https://www.bostonglobe.com/2021/07/15/nation/noaa-boston-could-see-many-18-high-tide-flooding-days-this-year/?event=event25>; Miriam Wasser, WBUR, *As Sea Levels Rise in Boston, Stormwater May Have Nowhere to Go* (June 17, 2021), <https://www.wbur.org/news/2021/06/17/boston-stormwater-sewer-sea-level-climate-change>; Angela Fritz, CBS Boston, *Boston on List of Cities With Worst Urban Heat, Where Temperatures Can Spike 15-20 Degrees in A Matter of Blocks* (July 15, 2021), <https://boston.cbslocal.com/2021/07/15/urban-heat-islands-cities-list-boston-climate-central/>.

## II. Land Subject to Coastal Storm Flowage (LSCSF)

The Ordinance provides the following definition for Coastal Storm Flowage: “Land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record, or storm of record, whichever is greater.” City of Boston Code, Ordinances, Chapter 7, §1.4(b) (2019). The proposed Phase II regulations would define this region as the Area of Special Flood Hazard under FEMA’s Flood Insurance Rate Maps (“FIRM” or referred to collectively as “FEMA maps”). As noted in our previous comment letter and CRWA’s public testimony during the June special hearing, we strongly object to the usage of FEMA maps in defining LSCSF.

FEMA maps are based solely on historical inundation data and do not account for increased inundation as a result of climate change. FEMA maps are also widely regarded as outdated and inaccurate because they do not take dynamic considerations like erosion or wave height and velocity into account. We understand that the Conservation Commission intends to address climate change inundation projections through the Coastal Flood Resilience Zone within the Phase III regulations and therefore believes that FEMA maps can be used to appropriately define the boundaries of the LSCSF resource area.<sup>5</sup> As discussed below, we believe this approach is severely inadequate for several reasons and instead urge the Commission to incorporate the City’s own Climate Ready Boston data into the definition of LSCSF.

Recent studies indicate that FEMA maps are “badly out-of-date” and do not accurately portray *current* flood risk throughout many flood prone portions of the nation.<sup>6</sup> According to First Street Foundation, 8.7% more properties are currently at risk of flooding than portrayed by FEMA’s projections.<sup>7</sup> In addition to their inability to accurately portray current flooding risk, FEMA maps are unlikely to be timely updated. Although required by law to periodically update flooding risk projections, FEMA often falls “woefully short” of this goal.<sup>8</sup> As the rate of coastal inundation increases due to climate change, FEMA’s data will become even more inaccurate and eventually obsolete.

The Ordinance does not require the usage of FEMA maps to define the boundaries of the LSCSF resource area. In fact, the Ordinance requires the use of “best available data” with respect to flooding and storm damage risks:

Flood Control. The prevention or reduction of flooding and flood damage, both as currently expected to occur and as projected to occur based on the *best available data* regarding the impacts of climate change.

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<sup>5</sup> As stated by Executive Director Nicholas Moreno during the special hearing on June 10, 2021.

<sup>6</sup> R.J. Lehmann, *Do No Harm: Managing Retreat by Ending New Subsidies*, R Street Policy Study at 4 (Feb. 2020).

<sup>7</sup> Chris Gloninger and Asher Klein, NBC Boston, *Interactive Maps: Where in Mass. Climate Change May Increase Flood Risk* (July 2, 2020), <https://www.nbcboston.com/news/local/higher-flood-risk-in-mass-maps/2152797/>

<sup>8</sup> Lehmann at 5.

Land Subject to Flooding or Inundation. ... The Commission shall give special consideration to the *best available data* provided by the City of Boston and the Commonwealth on expected conditions due to climate change.

Storm Damage Prevention. The prevention of damage caused by water from storms, as currently occurs and is predicted by *best available data* to occur from the impacts of climate change, including but not limited to erosion and sedimentation, damage to vegetation, property or buildings or damage caused by flooding, waterborne debris or waterborne ice.

City of Boston Code, Ordinances, Chapter 7, §1.4(b) (2019) (all emphasis added). Thus, in order to follow the intentions of the Ordinance, the Commission must not rely on FEMA’s outdated and inaccurate projections.

The proposed Phase II regulations do provide a “fail-safe” option to incorporate alternative data “[i]f [FEMA’s] data is unavailable or deemed by the Commission to be outdated, inaccurate, or not reflective of current or reasonably anticipated conditions.” Part II, Section XVII(C). Under these circumstances, the proposed regulations would allow the Conservation Commission to instead “[determine] the boundary of LSCSF [...] from other evidence, including the best available data provided by the City or the Commonwealth of Massachusetts on expected conditions due to climate change.” *Id.* However, this should be the standard, not the exception. We strongly urge the Conservation Commission to remove the proposed Phase II regulation’s presumption in favor of FEMA’s maps entirely; FEMA maps simply cannot define the boundaries of the LSCSF resource area, as it is intended to function under the Ordinance, with suitable accuracy.

Rather than codify a single source of flooding projection data within the proposed Phase II regulations, we urge the Commission to rely on the “best available data” at any given time. We believe the City’s 100-year storm maps provided by Climate Ready Boston studies currently meet this standard.<sup>9</sup> Climate Ready Boston’s data—which goes out as far as 2070—should be used to determine the 100-year storm inundation boundaries in the near term.

As climate science evolves, so too will “the best available data.” Our understanding of flood risk has changed considerably in just the last few years. Flooding projections that were once labeled as extreme scenarios are now understood to in fact be of “moderate” probability.<sup>10</sup> In addition, there is no indication in the scientific literature that this scaling up of impacts is going to stop.<sup>11</sup> In fact, many *conservative* projections estimate that this rate may grow exponentially.

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<sup>9</sup> The City of Boston regularly updates the Climate Ready Boston webpage with published reports. *See generally* City of Boston, *Preparing for Climate Change*, <https://www.boston.gov/departments/environment/preparing-climate-change> (last visited May 19, 2021).

<sup>10</sup> Rebecca Hersher, NPR, *There’s Not A Cloud In The Sky, But Your House Could Still Be Underwater* (July 15, 2021), <https://www.npr.org/2021/07/15/1015977873/theres-not-a-cloud-in-the-sky-but-your-house-could-still-be-underwater>.

<sup>11</sup> The Brussel Times, *Amidst disasters, a new report from UN climate experts* (July 23, 2021), <https://www.brusselstimes.com/news/world-all-news/178705/amidst-disasters-a-new-report-from-un-climate-experts/>.

Therefore, should the Massachusetts Coastal Flood Risk Model data, once it becomes publicly available, supplant the City's Climate Ready projections as the "best available data," the Commission should update the boundaries of the LSCSF resource area accordingly. Most projects that are constructed in the City have an expected life span of at least fifty years. Many existing buildings in Boston are hundreds of years old. Near- and long-term future flooding due to climate change and its associated effects, such as storm surge, will impact new areas of the City. Projects in these areas should be required to undergo the same review as projects in areas that historically flooded.

### **III. Protection of Resource Areas vs Replication (IVWs and VPs)**

IVWs and VPs are critical to biodiversity and overall climate resilience. In an already densely-developed city like Boston, these natural areas should be fully protected without exception. Alteration should not be allowed *even with* replacement, replication, or mitigation. Several years ago, the New England Center for Investigative Reporting found that in many cases, wetlands replication projects either 1) were never built; 2) ultimately failed due to reasons like the of lack of suitable hydrology or prevalence of invasive species; 3) were much smaller than initially proposed/required; or 4) became polluted and degraded by their surroundings.<sup>12</sup>

In order to ensure the success of wetlands replication projects, the Commission should be prepared to commit to ongoing monitoring and oversight, including site visits to observe conditions and confirm that replication requirements have been met. Given the Commission's limited resources, this seems like it would be a significant challenge; however, without such oversight, it would not be possible to ensure success of replication projects. Lack of robust oversight would likely lead to an overall net loss of critical wetland resource areas throughout the City, which would undermine the intent of the Ordinance. Due to the fact that these "replications fail to produce the range of values – in quantity and quality – of the wetlands they ostensibly replace," the Sudbury Conservation Commission places a heavy presumption against plans which require wetlands replication.<sup>13</sup> We strongly urge Boston's Conservation Commission to follow suit and to firmly protect these invaluable natural resources.

#### Allowing Work in IVWs Without Replication or Restoration

We believe that the resource areas should be fully protected and replication/restoration should not be allowed as a way to gain approval for altering an IVW. In the event replication/restoration is allowed as a substitute measure, there should not be any circumstances in which work in IVWs is allowed *without* replication or restoration. Allowing alteration of small portions of IVWs without any corresponding compensation to the local environment could result in "death by a thousand cuts"—whereby many small alterations might cumulatively have a significant negative impact.

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<sup>12</sup> Beth Daley and Jess Aloe, WGBH, *Failed projects and weak oversight lead to loss of state's wetlands* (Dec. 21, 2014), <https://www.wgbh.org/news/2014/12/21/failed-projects-and-weak-oversight-lead-to-loss-of-states-wetlands>.

<sup>13</sup> Sudbury Wetlands Administration Bylaw Regulations §7.8 (Sep. 25, 2017).

### Exceptions Where Replication is not Feasible (IVWs and VPs)

Again, we believe that the resource areas should be fully protected and replication should not be allowed as a way to gain approval for altering the resource area. That being said, we are particularly concerned about the language in the draft regulations that would allow applicants to demonstrate, and the Conservation Commission to determine, that replication is not feasible and therefore the applicant may restore or improve “those portions of the affected resource area that are not affected by the proposed activity or work.” Part II, Section XIV(D)(4).

This standard is far too ambiguous. There will be sites where no portion of the affected resource area is “not affected by the proposed activity or work;” in other words, a site’s entire respective resource area will be affected by the proposed activity. And at these locations, this ambiguity in the regulations could allow for the destruction of valuable resource areas without consequences. Similarly, if the resource area is already in good condition and does not require restoration or improvement, this provision would potentially let applicants off the hook entirely without providing any corresponding compensation to the local environment.

#### **IV. Climate Change Analysis (IVWs, VPs, and LSCSF)**

It is unclear from the current language whether applicants are required to also take into account the overall effect loss or alteration of the resource would have on climate resilience. The applicant should be required to provide that analysis (e.g., how will loss or alteration of the resource affect precipitation-based flooding, heat island, drought resilience, etc. onsite and in surrounding areas).

#### **V. Criteria for Allowing Work in Resource Areas (VPs and LSCSF)**

The criteria listed in the draft regulations for when work will be allowed in resource areas are highly technical (e.g., not impair the capacity of the VP to provide wildlife habitat; not result in flood damage due to filling that causes lateral displacement of water; not result in any adverse effect on public/private water supply or groundwater supply; etc). The regulations should require that these determinations be made by a qualified expert; an assertion by the project proponent that the criteria will be met is not sufficient.

Additionally, the regulations should include a simple, streamlined process for the approval of projects that are undertaken for the purpose of restoration and/or improving climate resilience, including activities like wetlands restoration/construction, invasive species management, and nature-based solutions to flooding.

#### **VI. Removal of Trees (IVWs and VPs)**

There should be stronger standards for maintaining mature trees that have six-inch or larger diameters at breast height; replacement of trees should be a last resort option available only when

preservation of existing mature trees is not possible. If trees of any size are removed, replacement at the same or greater total diameters at breast height should be mandatory, not at the Commission's discretion.

## **VII. Restoration Provisions**

This section of the regulations should include language giving the Commission authority to require tree planting specifically.

## **VIII. Public Engagement Concerns**

We are concerned and disappointed by the Conservation Commission's inadequate public engagement efforts for the Phase II comment period. In direct violation of their own procedural and administrative "Phase I" regulations, the Conservation Commission failed to appropriately notify interested parties of this formal rulemaking comment period. The Conservation Commission's procedural regulations, adopted last August, state the following:

For all proposed regulations, amendments, or reference maps delineating resource areas, the Commission shall conduct a public rule-making process, including but not limited to posting notice of a hearing on the proposed regulations, amendments, or reference map or maps, posting of the proposed regulations, amendments, or reference maps, *providing written notice of posting to parties requesting such notice*, providing a minimum 30-day comment period.

Part I, Section IV (C) (emphasis added). Despite these clear obligations, stakeholders were not given timely notice of the formal Phase II comment period. In fact, we were only informed of the public comment period after directly requesting information from Conservation Commission staff via email. At that point, six days had passed since the comment period began on June 30. Through informal conversations, we are aware that many other stakeholders, including local community-based organizations, were similarly left in the dark.

This is particularly concerning given our continued and thorough interest and participation in this process. Several of the groups signed onto this letter have provided multiple public comment letters, given testimony at public hearings, and regularly inquired about the status of the rulemaking process through email communication with Conservation Commission staff. Furthermore, several of us are recipients of the Conservation Commission's email newsletters which are advertised as an avenue "to receive Boston Conservation Commission updates."<sup>14</sup>

Although the Conservation Commission eventually sent notice of the rulemaking through their email newsletter listserv, this notice was significantly delayed and therefore effectively cut

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<sup>14</sup> See generally City of Boston, *Developing Wetlands Regulations*, <https://www.boston.gov/departments/environment/boston-conservation-commission/developing-wetlands-regulations> (last visited July 22, 2021).

short the required 30-day comment period.<sup>15</sup> Newsletter recipients received “notice” of the Phase II comment period seven days after public notice was posted on the Conservation Commission’s website. When CRWA inquired about the concerning absence of public notice, Conservation Commission staff indicated that interested individuals should “monitor the website” for continued updates. Requiring interested parties to monitor the website for updates does not meet the Commission’s affirmative obligation to provide written notice to parties requesting such notice.

As we hope the Conservation Commission is aware, public participation is a critical aspect of this rulemaking process. We urge the Conservation Commission to address these concerns prior to the promulgation of the climate resilience and environmental justice “Phase III” regulations. Any stakeholder who has previously submitted comments throughout the promulgation process for either the Ordinance or any of its associated regulations should receive written notice at the start of each public comment period. Furthermore, public notice should always be issued in a timely and prompt manner to all members of the Conservation Commission’s email listserv. Failure to perform these actions runs contrast to both the Commission’s own Phase I regulations as well as common practice at the municipal and state level.

Thank you for your consideration of our comments. Please do not hesitate to reach out with any questions.

Sincerely,

Heather Miller, Esq.  
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Charles River Watershed Association

Deanna Moran  
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<sup>15</sup> The Conservation Commission’s newsletter email was sent on July 7 while public notice of the comment period was published eight days earlier on June 29.