Charles River Watershed Association

March 31, 2021

Via email

Director Tori Kim
MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114
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Re: MEPA Interim Protocol on Climate Change Adaptation and Resiliency & MEPA Interim Protocol for Environmental Justice Outreach

Dear Director Kim:

Charles River Watershed Association ("CRWA") provides the following comments on the Massachusetts Environmental Policy Act ("MEPA") Interim Protocol on Climate Change Adaptation and Resiliency and the MEPA Interim Protocol for Environmental Justice Outreach. CRWA strongly supports the implementation of these interim policies—meaningful consideration of both climate adaptation/resilience and environmental justice are essential elements of environmental review. Explicitly addressing these impacts is critical and long overdue. CRWA comments on nearly every project within the Charles River watershed undergoing MEPA review and we routinely highlight the lack of information provided on these topics. The vast majority of project proponents either ignore climate adaptation/resilience and environmental justice entirely, or include brief, conclusory statements that these issues have been considered and addressed without providing any data, analyses, or detailed explanations that would allow for actual public review.

CRWA is particularly encouraged that the MEPA office is planning to broaden the application of the Resilient Massachusetts Action Team ("RMAT") framework in the interim adaptation/resilience policy. Incorporation of the RMAT work into MEPA policy, and eventually regulation, will ensure greater consistency in how both public and private projects are reviewed from a climate resilience perspective. Since the RMAT framework is still being finalized, we assume there will be a phasing in process in terms of its use for review of private projects. The MEPA office should require that all projects use the RMAT checklist once it is finalized to ensure that there are not conflicting or less strenuous standards between RMAT and this policy.

Additionally, CRWA echoes the comments made by Conservation Law Foundation ("CLF") regarding improved access to online documents. It is currently exceedingly difficult to find MEPA documents associated with a particular project unless one knows which version of the Environmental Monitor the documents were published in. An easily searchable system that includes both current and archived documents would enhance public participation in the MEPA process. Many other agencies have online systems where one can search using various criteria, including project name, location, key words, etc. that could be used as a template for the MEPA program.

MEPA Interim Protocol on Climate Change Adaptation and Resiliency

General Comments

Overall, the framework laid out in the interim policy is logical in terms of walking project proponents through the necessary steps of the resilience analysis. However, the content of each section of the framework needs substantial building-out and incorporation of additional considerations in order to accurately capture all of the elements of climate resilience.

We also recommend creating or expanding MEPA "thresholds" based on future flood mapping and other climate-related impacts. The current thresholds that trigger the various levels of MEPA review do not adequately capture the full range of impacts that should be considered in connection with climate change and adaptation/resilience.

While we agree that it makes sense for proponents to submit information related to climate resilience at the environmental notification form ("ENF") stage, the MEPA office should make it clear that those considerations must also be carried through the rest of the environmental review process; the analysis of climate resilience cannot end with the ENF and in fact should become more detailed and robust as a project moves through the MEPA process.

This policy is focused on three climate impacts: precipitation, sea level rise, and heat. We recommend expanding the range of climate impacts to better reflect future conditions—for example, extreme weather (storms, wind, etc.) and drought should also be included in this interim policy. We also encourage EEA, to the extent the Commonwealth cannot provide a statewide dataset on a particular impact, to provide external resources or other guidance for project proponents.

Finally, the review process should prioritize adaptation measures that promote the preservation, protection, restoration, and enhancement of natural systems through nature-based solutions. Adaptation measures that include the use of hard-engineered, hardscape, or gray infrastructure features should be allowed only where they are supported by evidence that the measures will not cause or exacerbate negative environmental impacts and should always include some level of green and gray hybrid solutions at a minimum.

Evaluating project vulnerabilities ("climate risks based on project location")

<u>Site Cover: Natural vs Unnatural</u>

We agree that it is important to understand how much impervious area is being created or removed by the project, as well as the overall amount of impervious area on the site. Impervious area is not currently defined in the MEPA regulations at 301 CMR 11.00; it would be helpful to include a definition in the interim policy (and regulatory updates). It is particularly important to ensure that gravel and compacted soil are considered impervious; for example, "impervious surface is any surface that prevents or significantly impedes the infiltration of water into the underlying soil. This can include but is not limited to: roads, driveways, parking areas and other areas created using nonporous material; buildings, rooftops, structures, artificial turf and compacted gravel or soil."

In addition to impervious cover, it is important for proponents to describe tree cover on the site—both existing tree cover and future tree cover. To that end, while it is important to ask whether trees will be removed as part of the project, the inquiry should not stop there. Proponents should disclose how many trees are being removed and what species and size (in terms of diameter at breast height ("DBH") and also height). Preserving existing trees and vegetation, particularly large, mature trees, provides much greater benefits than planting smaller, younger trees.

A description of wetland resources on the site should also be provided by the project proponent. We agree that proponents should describe impacts to Land Subject to Coastal Storm Flowage ("LSCSF") and Bordering Land Subject to Flooding ("BLSF") and how/whether proposed changes to the site's topography (including the addition of fill) will result in changes to floodwater flow paths and/or velocities that could impact adjacent properties or the functioning of the floodplain. Proponents should explain whether any other wetland resource areas will be altered by the project and how/whether altering these wetland resource areas will affect the site's stormwater infiltration and flood storage capacity and what impact this would have on adjacent properties. Finally, proponents should explain whether vegetation or natural ground cover in floodplains and buffers is being removed. Such vegetation provides important resiliency functions, including slowing and reducing the extent of flood waters, reducing erosion, reducing flood-related pollution, and increasing the capacity of land to infiltrate water better than barren or paved lands.

Flooding

Flooding, whether precipitation-based, riverine, or coastal, is a significant concern for many projects and will only become worse as climate change impacts increase. It is therefore critical that project proponents provide complete information about past flooding on the site, existing flooding risks, and future flooding risks.

In terms of the history of flooding on the site, it is important to define what "history" means—is it the past ten years? The past twenty years? Based on a specific historic storm of record? How will project proponents determine whether there is a history of flooding, given that they would not necessarily have information about flooding on site before they bought the property? Clarity should be added here by either providing instructions to project proponents or developing a checklist of things they should do to find out about a site's history of flooding—e.g., talk with the municipal public works and relevant planning staff, talk with abutters, direct experience (if a long-time property owner), physical assessment, use of stormwater flood model, etc. If a proponent indicates that the site does not have a history of flooding, they should be required to explain how they know that. The proponent should also describe whether there is a history of flooding in areas within the drainage system both "downstream" and "upstream" of the project.

In terms of flood risk, the proponent should describe whether the project is currently located within the velocity zone (V, VE, etc.) as depicted on the Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Map(s) ("FIRM") for the site. However, because FEMA maps are based on historical precipitation and flooding, they often underrepresent the true extent of current and future flooding impacts. While FEMA maps may serve as an initial starting point, the best available forward-looking data should always be used to accurately assess current and future flood risks.

With respect to the sea level rise "table" in the policy, for Option 1, once MC-FRM is available, projects in Boston should be required to review both maps (MC-FRM and BPDA) and describe possible impacts to the site. For Option 2, proponents should disclose what project components specifically will be impacted by sea level rise. The condition of upstream dams should also be disclosed to evaluate current and future flood risk. Given that other municipalities may have high-quality forward-looking data available, in those cases, the policy should specify that forward-looking data should be used as it is available.

Finally, "extreme precipitation event" should be defined to ensure clarity and consistency.

Heat

Although heat is identified in the interim policy as one of the three critical areas for which information is being solicited, there are no heat-specific questions in the interim policy, and only a few of the questions indirectly consider heat. Considerations around heat—particularly extreme heat—need to be explicitly incorporated into the policy. For example, proponents should describe local heat conditions and existing heat-related concerns, as well as how the creation or reduction of impervious surface and/or removal or preservation of trees on site may exacerbate or mitigate extreme heat impacts. Local heat conditions can typically be found in municipal planning reports prepared through the Municipal Vulnerability Preparedness ("MVP") program.[1]

Anticipated 'Useful Life' of Project

In order to evaluate a project's climate vulnerability, it is helpful to understand what the anticipated useful life of the project is. Different components of the project (e.g., water, wastewater, and stormwater, including gravity, pressure, and pumping systems; transportation; energy; coastal structures; flood protection components; etc.) may have a different useful life and/or ability to adapt, so this analysis should be provided for each project component. Consistent with the RMAT approach, a project that has a useful life of 100 years should consider climate projections in 2100 to ensure that the project will be able to withstand future climate conditions.

The table provided in this section only addresses sea level rise, but precipitation and heat impacts will also become more severe over the project's useful life. These considerations should be added to the table and project proponents should be required to review local climate plans, stormwater models, and resilient Massachusetts temperature predictions to determine and disclose likely impacts over the useful life of the project.

Evaluating project criticality

CRWA echoes many of the comments submitted by CLF regarding evaluation of a project's criticality. Under the interim policy, proponents are required to describe the criticality of individual projects on a qualitative scale of low, medium, or high based on a list of criteria. It is unclear whether it is mandatory that each individual criterion be included in a criticality rating, making it likely that information reported by project proponents for this evaluation component will

[1] *See* https://www.mass.gov/info-details/municipal-vulnerability-preparedness-mvp-program-planning-reports.

vary considerably. There are clearer questions outlined in RMAT's Draft Project Inputs and Climate Risk Screening Output that we assume will be included in the final RMAT web tool, and should be adopted here.

Specifically, the following changes to the policy would clarify requirements around the criticality analysis:

- *Provide guidance as to what constitutes a low, medium, or high level of criticality*. These are qualitative descriptors, and there are no thresholds, defining matrix, or list of criteria for each level included in the draft interim policy. The protocol should also clarify how these levels of criticality relate to the criticality thresholds within the state building code.

- *Clarify the definitions of environmental justice and/or climate vulnerable populations*. While the Commonwealth has a codified definition of environmental justice populations (which we recommend updating to be consistent with the "Roadmap" bill discussed below), the interim policy includes the term "climate vulnerable population." The interim policy notes that climate vulnerable populations are "those who have lower adaptive capacity or higher exposure and sensitivity to climate hazards like flooding or heat stress due to factors such as access to transportation, income level, disability, racial inequity, health status, or age." The interim policy should provide a more specific definition of the included populations. The RMAT should also update its mapping tool, which currently only includes a layer for environmental justice populations, to include climate vulnerable populations.

- *Include a review of unintended consequences of asset failure or emergency conditions*. While the interim policy asks project proponents to describe "the nature and severity of impacts resulting from loss or inoperability," it does not ask proponents to describe any potential unintended consequences of the loss of the asset, or potential dangerous or hazardous emergency scenarios that may emerge under extreme weather conditions. For example, this might include a description of any industrial sites or pollution sources located near the project site.

Evaluating climate change adaptation and resilience strategies

Overall, this section of the interim policy is too broad and open-ended to solicit the necessary information to determine if a project is adequately addressing climate impacts. We recommend considering a more specific line of questioning more in concert with the RMAT line of questioning in order to fully assess a project's climate adaptation and resilience strategies. We also recommend that the question asking whether the proponent has considered alternative locations for the project in light of climate change risks require a thorough alternatives analysis in response in order to evaluate whether climate resilience opportunities are being maximized.

<u>Site Cover: Natural vs Unnatural</u>

Project proponents should describe whether and how impervious area has been minimized to the maximum extent practicable, including whether sites with existing impervious cover have been considered/are being utilized for the project rather than sites where significant new

impervious cover would be added. Project proponents should consider an option which includes no impervious cover in flood-prone areas.

If trees are proposed to be removed, proponents should explain whether there is a plan to replace trees on site or otherwise mitigate the loss of tree canopy and the benefits it provides. Proponents should also explain what trees and vegetation will be added to the site, for example, in landscaped areas. Any local and/or state requirements that apply to the project related to tree removal (e.g., tree ordinance, bylaw, or regulations) should be cited by project proponents. Project proponents should consider a no tree loss option.

Currently, in the project criticality section, the interim policy requires project proponents to "[d]escribe the benefits and impacts to ecosystem functions provided by the project" for any natural resource components, including parks, open space, ecological restoration, including dam removals and other projects to restore natural ecology. We recommend also requiring project proponents to describe benefits to species provided by the project as part of the evaluation of adaptation and resilience strategies.

Finally, proponents should describe the carbon sequestration potential from natural systems on site. Trees, wetlands, and soils store significant amounts of carbon. According to the Massachusetts 2050 Decarbonization Roadmap (Dec. 2020), "[n]atural lands and ecosystems play a critical role in regulating the amount of CO_2 in the atmosphere," while "[r]emoval, disturbance, or loss of the forest ecosystem both releases the stock into the atmosphere and halts its ability to store carbon through continued growth."[2] Alteration of these natural features may release carbon into the atmosphere and reduce future on site carbon sequestration, all of which should be documented in MEPA filings.

Flooding

Much more detail should be required from proponents about stormwater management on site, including: plans to manage stormwater on site; how much stormwater storage and infiltration will be accomplished through proposed stormwater management measures; whether green infrastructure measures like rain gardens and bioswales have been considered/will be implemented for stormwater management on site and why or why not; what design storm event can be completely contained/stored on site; what the peak flow attenuation is; how runoff from the site will impact the municipal stormwater drainage system; and whether runoff from the site will cause flooding in other areas. Proponents should also explain what rainfall projections they are using to size stormwater management measures and determine potential impacts of flooding on the property and on adjacent properties as a result of the project. We recommend that proponents be required to use RMAT rainfall projections once they are available, or utilize the 90th percentile of NOAA rainfall (i.e., NOAA++).

For projects where there is a history of flooding in areas within the drainage system "downstream" of the project, proponents should describe what the project is doing to prevent additional flooding and if feasible, mitigate flooding. For projects where there is a history of flooding in areas within the drainage system "upstream" from the project or there is an undersized

[2] https://www.mass.gov/doc/ma-2050-decarbonization-roadmap/download.

historical dam, proponents should describe what the project is doing to mitigate flooding. Proponents should also describe how they have addressed sea level rise specifically.

Heat

Project proponents should describe how the project is addressing extreme heat, including any steps being taken to mitigate the heat impacts of impervious cover (all impervious cover, not just new impervious cover). Information should be provided about whether shading and landscape design will be used to address heat impacts. Proponents should also describe whether they have considered the use of white roofs, blue roofs, and locating solar panels on existing impervious surfaces.

MEPA Interim Protocol for Environmental Justice Outreach

CRWA supports the comments submitted by the Massachusetts Environmental Justice Table and CLF regarding the interim environmental justice policy. There is an opportunity to improve the MEPA process to deepen EEA's commitment to environmental justice by looking at a community holistically to determine whether a project can improve environmental, energy, climate, and public health conditions.

We urge the MEPA office to take into account several overarching considerations. First, the definition of environmental justice should be updated to be consistent with Section 56 of An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy (the "Roadmap bill"). There should also be more clarity provided about similarities and/or distinctions between environmental justice and climate vulnerable populations. As noted previously, a more thorough definition of climate vulnerable populations should be provided. Finally, the interim policy should not be limited to certain types of projects. Projects that involve land development/redevelopment, changes to open space, and exacerbation of heat impacts affect environmental justice populations just like projects involving traditional air and water pollution concerns.

We also echo recommendations about improving the process itself. Proponents should conduct early outreach and engagement prior to filing with MEPA when environmental justice populations are potentially impacted. The currently-required 10 days of advanced consultation with the MEPA office is not sufficient time for the MEPA office to provide the proponent with ideas for public engagement and for the proponent to then conduct that engagement prior to filing. A longer advance notice period would allow time for proponents and the MEPA office to develop an outreach strategy and conduct outreach prior to filing with the MEPA office. If the project will potentially impact an environmental justice population that is designated as limited English proficiency, the MEPA office should provide guidance to the proponent about the language(s) that should be used in outreach efforts.

EEA and the proponent should engage with potentially-impacted communities during MEPA review, including during the MEPA site visit. The MEPA office and project proponent should work together to ensure residents of potentially-impacted environmental justice populations know about site visits and the proponent should provide simultaneous language interpretation if the project will potentially impact an environmental justice population that is designated as a limited English proficient neighborhood. During site visits, proponents should review the MEPA

filing, answer questions, and listen to attendee concerns and ideas. If site visit attendees raise concerns and/or recommended project changes, the MEPA office should ensure that they understand the information and address those concerns in the Secretary's Certificate. Consideration should also be given to extending comment periods beyond the standard 20 or 30 days when a project potentially impacts environmental justice populations.

Finally, MEPA Certificates should include mitigation measures that are tailored to environmental justice populations. To the extent environmental justice population residents express concerns or ideas about a project, the MEPA office should consider how to require project changes and mitigation options consistent with those concerns or ideas. Specific mitigation requirements should be included in the Secretary's Certificate that are tailored to the potentially-impacted environmental justice population needs and requests and that reflect community ideas.

Thank you for considering these comments. Please do not hesitate to reach out with any questions.

Sincerely,

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