Charles River Watershed Association

January 11, 2022

Via Email

Purvi Patel
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Executive Office of Energy and Environmental Affairs
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Re: Environmental Notification Form for 206 Mechanic Street, Bellingham (Proposed Warehouse Distribution Facility), EEA No. 16493

Dear Purvi:

Charles River Watershed Association ("CRWA") submits the following comments on the Environmental Notification Form ("ENF") and Supplemental Information for the proposed warehouse distribution project at 206 Mechanic Street in Bellingham, Massachusetts filed with the MEPA Office on December 13, 2021. The proponent is proposing to build a new approximately 124,200 square foot warehouse distribution facility that will include an estimated 117 parking spaces and 72 trailer spaces.

Creating nearly 6 new acres of impervious surface will increase stormwater runoff, decrease groundwater recharge, and exacerbate heat island effects. Loss of trees and wetlands negatively impacts wildlife habitat, hydrology, and natural flood storage. Trees, vegetation, and wetlands are also critical to maintaining air and water quality and providing cooling—loss of these resources has a direct impact on human and environmental health. And all of these impacts will only be exacerbated as climate change brings increased heavy rainfalls, more drought, and hotter temperatures. At the same time, minimizing impervious surfaces, maximizing the functioning of natural ecosystems, and employing green infrastructure can help to mitigate the effects of climate change. An Environmental Impact Report ("EIR") should be required to fully evaluate the environmental impacts of and alternatives to this project, as well as provide information about how the project will comply with the applicable Total Maximum Daily Loads.

Impervious Surface and Stormwater Management

This project will increase impervious cover on the project site by 5.7 acres, for a total impervious area of 6.2 acres. Impervious surfaces exacerbate stormwater pollution and runoff quantity and contribute to heat island effects. Creation of new impervious surfaces should therefore be avoided wherever possible. Where impossible due to necessary uses, impervious cover impacts should be mitigated through modern stormwater management.

The ENF notes that the project will meet MassDEP's stormwater management regulations but does not specifically demonstrate how compliance will be achieved. MassDEP is about to release an updated stormwater handbook and regulations; it is not clear from the ENF whether the project will comply with the updated requirements. Importantly, the changes MassDEP is proposing more accurately reflect current and future precipitation conditions, which this project's stormwater systems should be designed to handle. This should be addressed in an EIR.

The ENF notes that the project is expected to manage stormwater runoff volumes and peak flows through implementation of Best Management Practice (BMPs), specifically an infiltration system prior to discharge to the existing stormwater basin. The ENF explains that the existing stormwater basin accepts runoff from both this site and another development. No information on type of basin (detention? infiltration? etc.), sizing, date constructed, maintenance, or ownership is provided in the ENF. This should be clarified in an EIR.

In addition, the ENF notes that "[t]he proposed stormwater management system will provide water quality treatment, recharge of stormwater in excess of what is required, and will result in a reduction in the peak rates of runoff from the subject site when compared to pre-development conditions for the 2-, 10-, 25- and 100-year, 24-hour storm frequencies in accordance with State and Local regulations." The ENF does not document the precipitation values for these storm events or the pre- and post-construction volumes and peak flows. This should be provided in an EIR. In addition, according to the National Climate Assessment, the amount of precipitation falling in very heavy events increased by 71% in New England from 1958 to 2012. The ability of the stormwater management system to handle predicted future rainfall amounts should be assessed and documented in an EIR. If design changes to accommodate those storms are needed, we would expect the project proponents to modify the approach accordingly.

In addition, the proposed project is partially located within a Zone II and effectively consists of a transportation and industrial type use. Because of this, the Town and the MEPA Office should be concerned about potential contamination from accidental leaks (diesel, gas, grease/lubricants, hydraulic fluids, etc.) from vehicles on the site in transit or parking. The project proponent should incorporate designs that allow for shutdown and containment where appropriate to isolate the system in the event of an emergency spill or other unexpected event.

The ENF does not mention the use of green infrastructure to manage stormwater on the site. Green infrastructure should be extensively incorporated into the building, parking lots, and other paved areas to treat stormwater generated by impervious surfaces and provide cooling benefits for the community. The ENF does not say whether the proponent has considered alternatives to impervious surfaces such as porous pavement for walkways or green roofs or cisterns to reduce the volume of runoff generated by the project. The proponent should investigate the feasibility of, and maximize use of, these alternatives and incorporate some below-grade off-street parking, which is far preferable to surface parking. Green infrastructure alternatives should be analyzed in an EIR so that the public can fully understand the environmental impacts of impervious surfaces on this site and mitigation alternatives.

In sum, an EIR should provide more detail on the existing and proposed stormwater management, including how the project will address the Massachusetts Stormwater Management Standards, how the project will manage current and future anticipated precipitation events, how the project is planning for contamination of the Town's aquifers, and how the project has been innovative in its approach to managing creation of almost 6 acres of impervious cover.

Water Quality

Stormwater runoff from the project site will ultimately reach segment MA72-04 of the Charles River which is an impaired waterbody according to the Massachusetts Year 2016 Integrated List of Waters. Two Total Maximum Daily Loads (TMDLs) apply to this segment of the river: the TMDL for nutrients in the Upper/Middle Charles River (2011) and the final pathogen TMDL for the Charles River (2007). There is no discussion in the ENF about how the project will comply with these TMDLs.

Under the nutrient TMDL, significant reductions in phosphorus loading are required in order to meet water quality standards—there is no "room" for any additional phosphorus loading to the Charles River. Accordingly, the TMDL specifically states that "[n]ew development will need to minimize or offset phosphorus loads." The pre- and post-development annual phosphorus load from the site should be provided. Along with the additional stormwater management plans detailing system sizing, type, and location mentioned in the previous section, calculations showing that the project complies with the phosphorus TMDL should be provided.

As a reminder, the Town of Bellingham is regulated by the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) (MS4GP). The MS4GP requires Bellingham to reduce its phosphorus load and achieve a total allowable load of 549 kg/yr (Town-wide in Charles River watershed), or 449 kg/year (Urbanized Area only in Charles River watershed) to comply with the TMDL for nutrients in the Upper/Middle Charles River. Rather than being a target or a goal, achieving the total allowable load is a legally-binding requirement under the MS4GP, with which failure to comply would be a violation of the permit and the Clean Water Act. Reduction requirements contained within Appendix F of the MS4 General Permit are based on the TMDL; the baseline phosphorus load, load reduction requirement, and allowable phosphorus load follow the assumptions that (1) commercial, industrial, high density residential, and medium density residential land uses will achieve or exceed an average annual phosphorus load reduction of 65%, (2) low density residential land uses will achieve 45% load reduction, (3) agriculture and open land will achieve 35% load reduction, and (4) forest/undeveloped areas will not increase the load. The Town's requirements of project proponents should match these reductions in order to not only achieve the allowable phosphorus load under the MS4 General Permit but also to spread the burden of compliance to private new and redevelopment projects in the community. It is much more efficient and cost-effective to accomplish phosphorus reductions at the time projects are constructed, rather than going back and retrofitting projects later on. It is not clear that Bellingham's local code and requirements are requiring reductions consistent with the TMDL.

CRWA requests that the project proponent provide calculations in an EIR that show how the project will comply with the MS4GP and address the Charles River Nutrient TMDL.

The project must also address the discharge of bacteria to the Charles River. Inflow and Infiltration (I&I) mitigation work to address aging sewer infrastructure is one important way to limit the migration of bacteria into our local water bodies; illicit discharge detection and elimination (IDDE) is another. Under Stormwater Handbook Standard 10 – Prohibition of Illicit Discharges, for any sewer and storm drain infrastructure remaining on site, we would expect the proponent to confirm the condition and separation of stormwater utilities, and that there are no illicit connections. Bacteria can also come from soils and decomposition of natural materials. Catch basins and water quality units collect much of this material, and some of it may enter the infiltration systems. Frequent cleaning as part of a long-term operation and maintenance program is a critical way to keep these materials from entering the piped network and subsurface systems.

Trees & Vegetation

Trees and other vegetation improve air and water quality, help control stormwater runoff and flooding, and provide natural cooling. The ENF says only that the undeveloped portion of the site contains woodland areas, it does not specify the species, density, and age of trees and vegetation on the site. It is unclear how many trees and of what size will be cut down. Based on the creation of extensive new impervious area, it seems fair to assume that there will be extensive clearing of forested areas in order to construct the project (the project map provided also shows tree cover over much of the site). There is no analysis of the impacts of clearing trees and vegetation on the site. These impacts, as well as mitigation options for preserving the benefits provided by mature trees, should be evaluated in an EIR. This assessment is critical to understanding the impacts of this project on the environment and the overall climate resilience of both the project and the surrounding area.

Native trees and shrubs should be planted within proposed landscaped areas and along proposed roadways wherever possible. The proponent should also avoid cutting down as many trees (especially mature trees) as possible. By preserving more wooded area and the ecosystem processes it provides, the area will be more climate resilient and better able to withstand extreme precipitation, heat, and drought. For trees that are removed, mitigation should be required on-site that results in no net loss of trees, and mature trees should be replaced on a 2 to 1 basis. While the benefits of new young trees will not be the same as any mature trees removed, it will be a start.

Climate Resilience

An analysis using the RMAT Climate Resilience Design Standards Tool demonstrates that this project is at “high risk” for extreme precipitation/urban flooding and extreme heat. The proponent has committed to taking some measures to address these impacts, but minimizing impervious surface and preserving trees would further reduce the risks posed by both flooding and extreme heat. As discussed above, creation of new impervious area should be avoided and trees should be preserved to the maximum extent possible. Stormwater management systems should be designed to not only accommodate current storms, but future storms as well. Progressive approaches, including green roofs and rainwater harvesting or greywater reuse, should be considered.

Thank you for considering these comments.

Sincerely,

Heather Miller, Esq.
General Counsel and Policy Director