



Charles River Watershed Association

December 22, 2020

*Via Email*

Linda Hutchins  
Environmental Protection Specialist  
Federal Emergency Management Agency  
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**Re: Improve the Flood Carrying Capacity of Godfrey Brook**

Dear Linda:

Charles River Watershed Association ("CRWA") submits the following comments on the proposed project to improve the flood carrying capacity of Godfrey Brook in Milford, MA, a tributary of the Charles River. CRWA's mission is to protect, preserve, and enhance the Charles River and its watershed through science, advocacy, and the law.

CRWA previously submitted comments on September 1, 2009 on the Environmental Notification Form ("ENF") filed in association with this project. At that time, we recommended using natural channel restoration, bank stabilization, bioengineering, and green stormwater infrastructure to achieve the required flood carrying capacity, rather than the precast concrete channel that is currently being considered. We understand that space is limited and that a full stream channel restoration may not be possible in some locations within the project area. However, we urge the Town to consider at least partial stream restoration in this project.

Stream restoration in this location has several advantages over the proposed precast concrete channel, which will benefit both Godfrey Brook and the Town.

1. **Enhanced water quality.** Restoring and stabilizing the banks of Godfrey Brook with native plantings and vegetation will improve the water quality of the Brook, and therefore the Charles River, since plants and soil naturally filter pollutants out of stormwater runoff. The Town is required to comply with the MS4 municipal stormwater permit to reduce the amount of phosphorus entering the Charles River, and restoration efforts in this project can help the Town meet that goal.
2. **Enhanced groundwater infiltration.** The Upper Charles River Watershed, and specifically the Town of Milford, have had issues with low streamflow and groundwater during periods of drought. Much of the public water supply in Milford comes from groundwater and surface water wells, which are threatened by low groundwater levels. If a precast concrete channel is laid in this location, the connection between surface water and groundwater is cut off, offering no opportunity for groundwater infiltration. As climate changes, extended periods of drought (such as conditions experienced in the

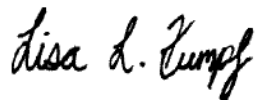
Summer of 2020) will become more common. If the current depleted groundwater levels are maintained, the source of drinking water to many Town residents will be threatened.

3. **Enhanced habitat.** CRWA sampling shows fewer species living in Godfrey Brook than would typically be seen, indicating that its habitat for aquatic species is degraded. This is the effect of both poor water quality (low dissolved oxygen, high nutrient loads) and a lack of habitat space, as much of the Brook's banks are currently stone masonry walls. Restoring the banks and the bed of the channel to a more natural condition would partially restore this habitat.
4. **Resilience to future increased flooding.** Replacing the existing stone-lined channel with a precast concrete channel and box culvert may reduce flooding issues in the short-term, but will need to be maintained, replaced, and upsized with climate change. Climate change is already bringing more precipitation to Massachusetts and is intensifying rainfall into short, concentrated storms, which will cause more stormwater flooding. Building to the 25-year recurrence interval is better than current conditions, but this interval is increasingly a moving target. Reestablishing a connection to groundwater will reduce some of the flooding often caused by culvert backups, which in turn will reduce surrounding damage.

For these reasons, we urge the Town to consider using 'soft' stream restoration strategies rather than the 'hard' ones currently proposed. As noted in the ENF Certificate, a combination of stabilizing the existing channel in place and restoring the natural stream channel can be achieved. The ENF Certificate notes that "the system could be designed to incorporate characteristics that would provide habitat enhancement, such as a natural bottom substrate and permeability to allow for groundwater exchange." CRWA strongly urges the Town to consider a modified design that incorporates at least partial stream restoration.

Thank you for considering these comments.

Sincerely,



Lisa Kumpf  
Aquatic Scientist

cc: Milford Town Engineer