

## **Municipal Vulnerability Preparedness Program Action Grant Case Study**

**Municipality:** City of Framingham, MA

**Project Title:** Walnut Street Neighborhood Flood Mitigation – Permits & Easements

**Award Year (FY):**23

**Grant Award:** \$ 155,000

**Match:** \$ 62,000

**Match Source:** In-kind

**One or Two Year Project:** one

**Municipal Department Leading Project:** DPW

**Project Website URL:** [www.framinghamma.gov/walnut](http://www.framinghamma.gov/walnut)

### **Community Overview:**

#### **What is the population size of your community and where is it located?**

The current population estimate for Framingham is about 72,000. The City of Framingham is in the MetroWest region of the Greater Boston metropolitan area, bordering Sudbury and Wayland to the north, Natick to the east, Sherborn and Ashland to the south, and Southborough and Marlborough to the west.

#### **Do you have any Environmental Justice or other Climate Vulnerable communities? (Think about both those who live and work in your town.)**

There are multiple Environmental Justice (EJ) communities and neighborhoods in the City, including the Walnut Street neighborhood, where this project is focused. As the EJ designation encompasses both social and economic factors, it speaks to a community's climate vulnerability. Racist systems and institutions have concentrated climate risks in communities of color, and both linguistic isolation and income affect individuals' ability to avoid and/or adapt to climate impacts.<sup>1</sup>

The project area spans two EJ populations. The area on the west meets the EJ minority criteria, meaning that people of color comprise at least 25 percent of the population. The area to the east meets both minority and income criteria. In addition to distinct EJ communities, over 30% of Framingham's population is considered Climate Vulnerable by the American Public Health Association (APHA) due to age. Children and older adults (adults 65 and older) of all races and income levels are considered particularly vulnerable to climate change impacts such as extreme heat, air pollution, flooding, and water contamination.

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<sup>1</sup> Metro West Climate Equity Project Climate Equity Memorandum, prepared by the Metropolitan Area Planning Council, January 2022, funded by MVP grant.

**Other unique traits of your municipality like who the top employers are, geography, history, etc.**

Framingham was incorporated as a town in 1700, and changed to a city form of government on January 1, 2018. City limits encompass 26.4 square miles, of which 1.3 square miles are water. Different industries have played significant roles in the City's economy—from grist mills in the 1700s and larger manufacturing companies in the 1800s. Framingham is home to Framingham State University, which was founded in 1839. The Bose Corporation, Staples, and TJX currently have their corporate headquarters in Framingham and are among the City's largest employers. Framingham today is known for its population and neighborhood diversity, good schools, and numerous recreational opportunities.

**Project Description and Goals:**

**Where was the project located?**

The project is centrally located in Framingham in the "Walnut Street neighborhood." Due to the presence of the Sudbury River and large wetland areas, much of the neighborhood is located within the 100-year and 500-year flood zones. The City's Multiple Hazard Mitigation Plan (2017, updated 2022) identified three repetitive flood loss properties and one severe repetitive loss property are located on Walnut Street. Several important public facilities are located within the project area including MEMA headquarters, State Police Barracks, Massachusetts National Guard, Middlesex County Courthouse, MassBay Community College, Fuller Middle School, McCarthy Elementary School, the Framingham public schools administration offices, the City's Bowditch Field Athletic & Cultural Complex, the Callahan Senior Center, the City's Parks, Recreation, & Cultural Affairs headquarters, and sewer pump stations.

**What climate change impacts did the project address?**

This project addresses flooding concerns resulting from changing weather and precipitation patterns. The City will need to be able to accommodate the anticipated increase in extreme storms and yearly precipitation, which will only exacerbate flooding impacts. Therefore, the designs incorporated projected climate adaptation models for year 2070. The project advanced permitting and easement efforts to continue to build on the Walnut Street Area Flood Mitigation Study funded through the FY20/21 MVP Action Grant, and design efforts funded through the FY22 MVP Action Grant.

**What were the specific goals and tasks of the project as stated in your application?**

- Advance permitting efforts, submit complete permit applications for all necessary permits.
- Acquire temporary construction access agreements with neighboring or affected private properties.

- Conduct robust public engagement including climate leadership training for teens, youth programs, and targeted outreach to various segments of the community.

The specific tasks for the Walnut Street Neighborhood Flood Mitigation Permits & Easements project were as follows:

- Task 1. Permitting
- Task 2. Easements & Engineering Support
- Task 3. Public Engagement
- Task 4. Grant and Project Management/Reporting

**Did your project meet the goals set forth in your application in terms of:**

- Employing nature-based solutions
- Improving equitable outcomes for and fostering strong partnerships with EJ and other Climate Vulnerable Populations
- Providing regional benefits
- Implementing the public involvement and community engagement plan set forth in your application
- Finishing the project on time

The permits and easements project met the goals of the application. Permitting efforts were advanced to agency review or approved status. All required permit applications have been completed and submitted to the appropriate reviewing agency. Specifically, approval/authorization has been provided under Section 106 Mass Historical Commission, as well as issuance of MEPA EENF and EIR certificates. Due to agency review times (nine months to greater than one year), and proper order of submissions, the following complete applications have been submitted, but are awaiting final approval: Army Corps of Engineers, Chapter 91 Waterways License, 401 Water Quality Certification and Framingham Conservation Notice of Intent. Public engagement reached numerous populations within Framingham and their feedback was incorporated in the design.

**Results and Deliverables:**

Objective	Metrics
Improved walkability	Walking trips to school – Design includes improving approximately 360 ft of the “school path” with an elevated boardwalk
Restore wetlands and stream	Acres/linear feet – Design includes restoring approximately 4,500 SF of degraded wetlands, restoring 13,600 CF of flood storage volume; and restoring approximately 1,300 LF of stream. A detailed summary of the wetland impacts, both temporary and permanent are included on the attached Wetlands Impact Summary Table.

Improved water quality	Total Suspended Solids and Nutrient measurements – Design includes a proposed stormwater BMP for a 8.3 acre drainage area
Flood mitigation	Reduction of repetitive loss sites & property damage
Increase awareness about climate change	<p>Approximately 40 Framingham High School Students participated in an overnight field trip with 4 advisors</p> <p>Approximately 15 children and 5 adults participated in a stormwater demonstration for a local Girl Scout Troop.</p> <p>Over 100 professionals participated in the Massachusetts Association for Floodplain Management Conference and Annual Meeting where we presented on the project.</p> <p>School Committee, Disability Commission, and Conservation Commission were engaged during the public meetings where City staff presented and or discussed the project.</p> <p>50 people have signed up for our project specific email group.</p>

The following deliverables were developed and submitted:

- Task 0. Kickoff
  - Meeting Invite,
  - Agenda,
  - Meeting Notes
- Task 1. Permitting
  - 1.1 - Notice of Intent application, associated legal/public notices, meeting agenda
  - 1.2 -MEPA EENF Certificate, EIR Certificate, Environmental Monitor Publications, Response to DEP comments Memo
  - 1.3/1.4 - Combined Ch. 91 Permit & 401 Water Quality Application, associated legal/public notices, agency correspondence
  - 1.5 – MassHistorical Project Notification Form, certified mail slips, agency approval
  - 1.6 – Army Corps of Engineers Pre-Construction Notification submission, agency communication
- Task 2. Easements & Engineering support
  - 2.1- nine (9) executed temporary construction access agreements
  - 2.2- updated design documents
- Task 3. Public Engagement
  - 3.1 – Photos from FHS field trip May 2023
  - 3.2 – Photos from DPW Open House Event
  - 3.2 – Photos from Girl Scout Programming
  - 3.2 – Program materials

- Floodplain simulation model & protective case
    - Promotional items to support climate change & flooding messaging
  - 3.3 – Presentation at Massachusetts Floodplain Managers Annual Conference
  - 3.3 – Disability Commission Agenda
  - 3.3 – School Committee Agenda
- Task 4. Grant and Project Management/Reporting
  - 4.1 – Monthly progress reports
  - 4.2 – Project case study report & PowerPoint slide

### **Lessons Learned:**

- What lessons were learned as a result of the project? Focus on both the technical matter of the project and process-oriented lessons learned.
- What is the best way for other communities to learn from your project/process?

The City of Framingham learned the following lessons from this project:

- Youth involvement
  - Involve local youth environmental leaders in your projects. By far the most rewarding subtask of this project was working with the Framingham High School students. These future climate leaders are inspiring. They brought so many great ideas to the table and were amazing ambassadors in the community. This investment and benefit is not as easy to quantify as other more technical aspects of this project (as compared to acres of wetlands restoration), but I think it will be one of the most beneficial aspects of the project. It is clear that if we want these projects to be successful, engaging youth now so that they are inspired to take over these projects in the (near) future will be critical.
- Schedule & procurement
  - By far the most challenging part of this project was the 1-year schedule, especially due to contracting, procurement, and legal review constraints. For the school field trips, identifying vendors that did not require a deposit as well as procurement for the selected vendor was extremely challenging. Planning and administrative tasks associated with the field trip were much more labor and time intensive than anticipated. We lost about 4-6 months of an already aggressive schedule to administrative tasks. On the technical side, permitting for this project is elaborate and extensive. Certain authorizations must be acquired in a specific order. For example, MEPA EENF and EIR certificates were required prior to others and new MEPA requirements include specific time allowances to verify sufficient time for public engagement. It is extremely important to meet the goals of MEPA and make sure we are providing appropriate outreach, especially to our EJ communities. The nature of the required permits are highly technical. Our consultant worked to ensure the most complete applications were provided to reduce potential clarifications or questions from the reviewing agencies which would extend review/approval time. Another challenge was obtaining temporary construction access agreements. The access agreements

are necessary and required to be included as part of permitting applications, however, it is challenging to ask property owners to allow access when we do not yet have funding to commit to a construction schedule. We recommend either awarding contracts earlier or extending the schedules to 2-year projects.

- Go to where the people are
  - We continue to see increased participation by going to meetings, events, and organizations where our residents already congregate. For this project, instead of having stand-alone public meetings, we asked to be added to agendas for public meetings already planned by various City commissions (Conservation, Disability, and School Committee). Not only did this increase attendance, it also increased the variety of perspectives heard. Another successful outreach effort was providing programming with local Girl Scouts and as part of a Department of Public Works Open House event. We hope to continue to build our community partners with the public library, Girl Scouts/Scouts of America, neighborhood elementary schools and other local organizations.
- Engage the public early in the design process to incorporate their feedback and develop partnerships
  - Too often the public is not engaged until the project has been fully designed at which point it's difficult to make changes. We engaged the public at the preliminary design and got great feedback about what they want included in climate resiliency & recreation projects. For example, we got great feedback about how to increase accessibility and ways to improve the design to meet multi-generational needs (e.g. benches that accommodate wheelchairs & stroller parking, and QR codes on signage to expand messages to more audiences).
  - The biggest challenge of engaging the public early is keeping public engagement momentum. We often hear "You asked for our opinion, but then you never did anything with it." Part of the challenge is the big lag between beginning design and completing construction. It is hard to keep the public engaged when we cannot commit to a construction date since we do not have reliable, predictable funding for climate resiliency projects yet. We continue to try to find the best way to keep the public involved throughout the project from conception to construction.
- Impacts of COVID pandemic
  - FY22 had particular challenges resulting from the COVID pandemic. While there were significant improvements in FY23, lingering effects were still felt. Some of the post-COVID impacts still plaguing our operations were the bus and staff shortages. Bus driver shortages made some options infeasible. We were lucky to have found a vendor who went above and beyond to help us make the field trip a reality. At the very last minute (past the agreed upon confirmation date) the vendor was able to secure transportation.
- Impacts of labor shortages
  - The labor shortages and personnel impacts from COVID continue to affect our schedule. Due to staff shortages and turnover, procurement for services took much longer than pre-COVID. Due to staffing capacity, some administrative

tasks were assigned to employees who had not done those tasks before and more time was required to understand and complete the tasks.

### **Partners and Other Support:**

- Include a list of all project partners and describe their role in supporting/assisting in the project.
- Framingham Public Schools was an amazing partner for this project. Funding from this grant allowed the Framingham High School Environmental Awareness Club to participate in environmental leadership training through field trips and programming. Then the students took what they learned and became ambassadors to the community and advocated to the school administration and fellow students. The club's faculty advisors, Rebecca Maynard and Emily Rathmell, were absolutely amazing. The success of this program was due to their commitment of time and effort and because they cared so much about the students. A few students said this program and their teachers' mentorship has inspired them to pursue environmental studies in college.
- Hoops and Homework, an after-school program serving youth ages 5-14 in Environmental Justice communities in Southeast Framingham, was another great partner. After providing funding and establishing a relationship between Mass Audubon and Hoops and Homework in FY22, the two entities found other funding to continue educational programming about climate change for the students. The students loved getting outside and interacting with nature. The perspective and feedback from youth and family in our most urbanized areas was very helpful in understanding how our residents are being affected by climate change. This often unheard perspective was incorporated into the design and engineering process for the project.
- This project was a collaborative effort amongst the City's Department of Public Works, Conservation Commission, Disability Coordinator, Parks and Recreation Department, School Department, and Sustainability Coordinator. This inter-departmental team is key for the future success of this project and other climate resilient efforts.
- The City worked with the engineering consulting firm, Weston & Sampson and SSV Engineering, to produce the deliverables discussed above.

### **Project Photos:**

- In your electronic submission of this report, please attach (as .jpg or .png) a few high-resolution (at least 300 pixels per inch) representative photos of the project. Photos should not show persons who can be easily identified, and avoid inclusion of any copyrighted, trademarked, or branded logos in the images. MVP may use these images on its website or other promotional purposes, so please also let us know if there is someone who should receive credit for taking the photo.