FY24 Completed Action Grant Summaries



Municipal Vulnerability Preparedness Program MA Executive Office of Energy and Environmental Affairs

Fort River Watershed Improvements for Flood & Water Quality Resilience

Amherst FY24



Learn More:

- Amherst Project Website

AWARD \$169,250 MATCH \$56,838	\$56,838
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- **PROJECT TYPE** Design & Permitting
- CORE PRINCIPLES
DEMONSTRATEDFurthering a community identified action to address
climate change; Conducting robust community
engagement.
 - **DESCRIPTION** This project involved the data collection, design and permitting for the replacement of three culverts throughout the Fort River Watershed. The design incorporates predicted 2070 storm flows and provides wildlife passage by meeting the Massachusetts Stream Crossing Standards.





Climate Resilient Shawsheen



Andover FY24 – FY25



Project Website

https://experience.arcgis.com/experience/7f84651bc78f 461680c5dd2990f306d0/page/2021-MVP-Project-Home/

AWARD	\$81,900	MATCH	\$27,300

PROJECT TYPE Type 1 (Assessment)

CORE PRINCIPLES DEMONSTRATED

Employing nature-based solutions; Achieving broad and multiple community benefits

DESCRIPTION

The third phase of the Climate Ready Shawsheen project focuses on delivering a preliminary engineering design of a floodable field and enhancing the prior hydrologic and hydraulic (H&H) models to evaluate the existing and projected future flooding conditions. The work also expands upon prior community engagement work by coordinating outreach events with Andover seniors and foodinsecurity organizers.





Resilient D.W. Field Park



Avon FY24



Learn more: Town of Avon - Project Website

Wildlands Trust - The D.W. Field Park Initiative

AWARD	\$1,095,850	MATCH \$366,025
PROJECT TYPE	Land Acquisition, Plar	ning, and Assessments
CORE PRINCIPLES	Increase equitable outo Conduct robust commu	comes for EJ populations; unity engagement &

DEMONSTRATED Conduct robust community engagement & partnerships

• Purchased 30 acres to improve park resilience and provide equitable recreation opportunities.

- Assessed habitat, drainage, trail resilience opportunities.
- Advanced park parking with EJ community, developing new multi-town and community partnerships.





Hyannis Harbor Master Plan



Barnstable FY24



Learn More

roject Website

Story Map Link

- **AWARD**
 - \$199,000

MATCH \$66,887

- **PROJECT TYPE** Type 1: Planning
- CORE PRINCIPLES Utilizing climate change data for a proactive solution, achieving broad and multiple community DEMONSTRATED benefits
 - The purpose of this project is to create a Hyannis DESCRIPTION Harbor Master Plan to better understand the current and future challenges and opportunities of this working and recreational waterfront. The goal is to create a cohesive strategy for the mix of land uses that activate the harbor and to better align the current zoning to make the area more resilient to the threats of climate change.



Future Resilient Field at Derby

Bolton FY24



Learn more:

Future Resilient Field Website

Α	WARD	\$22,300	MATCH	\$30,987

PROJECT TYPE Design

CORE PRINCIPLES **Employing Nature-Based Solutions; Achieving** DEMONSTRATED **Broad and Multiple Community Benefits**

DESCRIPTION

- Worked with a interdisciplinary team made of municipal staff partnered with community representatives.
- Included taking back resource area encroachment from field, re-establishing a vegetated buffer and design native edible garden area to educate and encourage the concept of local sustainable harvest. .
- Design Derby Field area to improve soil health, focusing on species choice to reduce overall IPM strategies to maintain field.





Resilient Bennington Street & Fredericks Park Project 🄙



Boston and Revere FY24



CC

D

This coastal resilience project spans East Boston and Revere and aims to reduce coastal flooding that enters both communities via three flood pathways originating in the Belle Isle Marsh. Learn more <u>here</u>!

AWARD	\$330,500	MATCH	~\$111,964
PROJECT TYPE	Design and Permitting		
RE PRINCIPLES	Using hybrid/nature-bas coastal flooding and ach benefits.	ed solutio ieve multi	ns to reduce ple community
DESCRIPTION	The project involved a robu evaluated multiple strategic recreational improvements East Boston and Fredericks pathways associated with e project will provide coastal (most of whom fall within e populations), a public schoo significant infrastructure, in an evacuation corridor. The potential marsh migration of Marsh, which is one of the Harbor that is under threat	st alternatives spanning B Park in Reve ach. Once c flood protec nvironment ol, a VFW fac cluding the project also opportunitie last salt mar from sea le	ves analysis that al resilience and ennington Street in ere, and permitting onstructed, the ction to residents cal justice cility, and regionally- MBTA Blue Line and o evaluated es for the Belle Isle rshes in Boston vel rise.



Briggsville Water District Land Acquisition for Flood and Drought Resilience





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Learn MoreL

Clarksburg Town Website

AWARD	\$48,150	MATCH	\$16,038.20
PROJECT TYPE	Planning & Land Acquis	sition	
CORE PRINCIPLES	Employing Nature-Base	ed Solutio	ns

DESCRIPTION With funding from MVP, Briggsville Water District was able to acquire land to 60 ft. upland of the current pump station which is currently in the floodplain of the North Branch Hoosic River. This parcel allows the District to relocate and upsize the water tank so that it is both flood and drought resilient.







The Facilities Project: Flood proofing facilities that host or serve priority population

Burlington FY24 on behalf of Resilient Mystic Collaborative's Upper Mystic Working Group



- Learn More:
- Project Website

AWARD	\$90,600	MATCH	\$32,700
PROJECT TYPE	Planning, Assessme	nts, Capacity Buil	ding, and Regulatory Updates
			a ta sa bha a sa Cuir a tha ta s

CORE PRINCIPLESUtilizing regional solutions toward regional benefit; utilizingDEMONSTRATEDclimate change data for a pro-active solution

DESCRIPTION The goal of the project is to 1) identify flood-prone sites that serve priority populations in the upper Mystic watershed; 2) establish criteria with the Upper Mystic Working Group to prioritize these sites; 3) groundtruth these findings with municipal stakeholders; and 4) identify opportunities and constraints for the top identified sites in each municipality.





Conway Center Flood Mitigation



Conway FY24



Learn More: <u>Project Website</u> <u>Virtual Watershed Tour</u>

AWARD

\$ 279,000

MATCH \$35,319.80

PROJECT TYPE Type 1: Planning, Assessments, Capacity Building, and Regulatory Updates

CORE PRINCIPLESUtilizing climate change data for a proactive solution andDEMONSTRATEDBuilding community capacity for climate resilience

DESCRIPTION The primary goal of this project was to gather data for the final development of a flood model for the South River (including the Pumpkin Hollow Brook tributary), to evaluate flood impacts within the Center of Conway, develop and evaluate potential flood mitigation strategies to minimize the risk of flooding for Conway residents, and conduct public education and outreach about the need for flood mitigation strategies.



Town of Dartmouth/Nature-Based Solutions Retrofit to Critical Infrastructure within Coastal Flood-Prone Areas



Dartmouth FY24



Learn More:

Project Website

AWARD	\$84,375.00	MATCH	\$32,398.90
PROJECT TYPE	Type 2: Design and Peri	mitting	

CORE PRINCIPLES DEMONSTRATED

- Employing Nature-Based Solutions; Achieving Broad and Multiple Community Benefits
- DESCRIPTION
- Completed a municipal infrastructure vulnerability assessment at areas with known flooding that will be negatively impacted by climate change; and completed 90% design plans at two high priority sites.
- Conducted a comprehensive public education program with local partners to educate the Dartmouth community and visitors about the MVP program and its core principles.



Short- and Long-Term Flood Resilience Strategies for Dedham's Manor Neighborhood: Phase 2



Dedham FY24



Learn More:

Dedham Manor Neighborhood Project

AWARD	\$93,750	MATCH	\$31,250
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PROJECT TYPE Design and Permitting

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

Utilizing climate change data for a proactive solution; Employing nature-based solutions; Pursuing innovative, transferrable approaches.

- Educated residents on nature-based solutions to manage stormwater on private property.
- Reviewed regulatory considerations for flood mitigation including management of runoff from private property, creation of an overlay district, and managed retreat/buyout programs.
- Developed nature-based flood mitigation concepts. Advanced outfall daylighting to 25% design.



Emerald Place Resiliency Improvements



Easthampton FY24



Learn More:

Project Website

- AWARD \$304,800
- **PROJECT TYPE** Design and Permitting

CORE PRINCIPLES

DEMONSTRATED

- Employing Nature-Based Solutions; Increasing Equitable Outcomes for EJ Populations; Achieving Broad and Multiple Community Benefits; Robust Community Engagement
- DESCRIPTION
- Emerald Place is at the top of slope along Lower Mill Pond and suffers from erosion and slope failure driven by drainage from increasingly heavy storm events in a dense, highly impervious neighborhood.
- The project advanced design for green infrastructure and naturebased slope stabilization along Emerald Place to 90% design and completed permitting for the project.
- Community outreach included hands-on design activities with Easthampton's 4th graders and a 7th grade field trip, as well as project-specific gatherings, and development of a public art project.



Bringing Climate Action Home to Egremont

Egremont FY24



- Learn More:
 - **Project Website**

AWARD	\$81,500	MATCH	\$9,250
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- Planning, Assessment, Capacity-building & **PROJECT TYPE Regulatory Updates**
- CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

- baseline climate change data to inform residents. Review, revise and adopt climate-friendly Town Policies & Bylaws
 - Gather baseline data on surface and ground water resources, supplying public water system. Complete Hydrologic/hydraulic modeling, geophysical explorations and well-siting analysis at Karner Brook watershed
 - Conduct multiple public interactive workshops to educate, engage and build capacity/political will to adopt new **Climate-friendly Town Policies & Zoning Bylaws**



Generating & Measuring Resiliency Downtown with Nature-Based Solutions



Fitchburg FY24



Learn More:

Fitchburg Downtown Nature-Based Solution Designs Story Map

AWARD	\$293,800	MATCH	\$97 <i>,</i> 400
	Decian & Canadity Duile	1:	

PROJECT TYPE Design & Capacity Building

CORE PRINCIPLES DEMONSTRATED

Utilizing climate change data for a proactive solution Employing Nature-Based Solutions (NBS) Committing to monitoring project success and maintaining the project into the future

DESCRIPTION

Focusing within the ongoing combined sewer overflow (CSO) separation drainage area in downtown Fitchburg, this project utilized future climate data to identify opportunities for Nature-Based Solutions (NBS) to help mitigate urban flooding and heat. Twelve projects that represented significant improvements to flooding as well as providing numerous co-benefits were prioritized and progressed further through concept design with the intention of implementing them as part of the CSO construction. Given Fitchburg's continued investment into NBS and green infrastructure (GI), this project included the development of Monitoring and Maintenance Guidelines for NBS, staff field training for NBS maintenance, and student & community monitoring days. NBS projects designed with FY23 MVP funding were used as pilot projects for monitoring events.



Gloucester Low-Lying Roads Project



Gloucester FY24

DESCRIPTION



Learn More: Project Website

AWARD	\$58,506.00	MATCH	\$19,697.00
PROJECT TYPE	Concept Design for Floo	od Mitigat	tion
ORE PRINCIPLES DEMONSTRATED	Identified 2 roadways of flood risk mitigation	of high im	portance for

- Conducted field trips with project partners and members of the public to discuss vulnerable roadways and solutions
 - Generated maps and project costs for deploying infrastructure to mitigate the worst effects of flooding on these roadways



Johnson Creek Watershed Flood Resiliency Project (Phase 2)

Groveland FY24



- Learn More:
 - Project Website

AWARD	\$143,666	MATCH	\$47,890
PROJECT TYPE	Design and Permitting		

CORE PRINCIPLESEmploying Nature-Based Solutions, AchievingDEMONSTRATEDBroad and Multiple Community Benefits

DESCRIPTION During Phase 1, a detailed watershed-wide vulnerability study relative to current and future climate conditions was performed and a list of prioritized recommendations (i.e., Action Plan) to increase resiliency to climate change throughout the watershed was developed. The purpose of this Phase 2 was to begin implementing high priority projects based on recommendations in the Action Plan. Implemented recommendations included design and permitting of stream crossing improvements at Lower Center Street and design and construction of green infrastructure at Groveland Park.

Lower Center Street Stream Crossings





Groveland Park Green Infrastructure



Town of Hadley Watershed-Wide Flood Resilience Improvements



Hadley FY24



- Learn More:
- Project Website

AWARD	\$157,641	MATCH	\$52 <i>,</i> 680

PROJECT TYPE Design and Permitting

CORE PRINCIPLESEmploying Nature-Based Solutions, AchievingDEMONSTRATEDBroad and Multiple Community Benefits

DESCRIPTION

The purpose of this project was to perform a detailed watershed-wide vulnerability study relative to current and future climate conditions, develop a list of prioritized recommendations (i.e., Action Plan) to increase resiliency to climate change throughout the watershed, and begin implementing high priority projects based on recommendations in the previously developed Action Plan. Implemented recommendations included design and permitting of stream crossing improvements at East Street and design and construction of green infrastructure at the DPW Facility.

East Street Stream Crossings

DPW Facility Green Infrastructure



Hampden Main Street Bridge Replacement and Green Solutions MVP Action Grant Project



Hampden FY24



Learn More:

Project Story Map

AWARD	\$247,740.00	MATCH	\$82,837.00
PROJECT TYPE	Design and Permitting		

CORE PRINCIPLES DEMONSTRATED Improvements of Town Stormwater Infrastructure and Identification of Nature Based Solutions

DESCRIPTION Design for the Replacement of Main Street Bridge over East Brook in conformance with the Massachusetts Stream Crossing Standards.

Conceptual design of bio-retention areas or other nature-based solutions at up to 3 locations within the East Brook watershed.



Route 124 Culvert Replacement



Harwich FY24



Learn More:

Harwich Municipal Vulnerability Preparedness Plan

Harwich Select Board Meeting – Public Presentation

AWARD	\$ 89,913	MATCH	\$ 29,971
PROJECT TYPE	Existing Condition	Assessment, Alt	ernative Analysis

CORE PRINCIPLES DEMONSTRATED Furthering a community identified priority action to address climate change impacts; Utilizing climate change data for a proactive solution; Employing Nature-Based Solutions (NBS);

DESCRIPTION

- An existing conditions assessment was completed that included land & geomorphic survey, wetland flagging, and subsurface exploration.
- Hydrologic and Hydraulic Analysis was completed on the existing condition and the preferred alternative.
- The project team developed an Alternatives Analysis Memorandum for the culvert replacement and open channel design to improve fish passage, roadway safety, and hydraulic resiliency.
- Engagement with the local community and project stakeholders.





Day Brook Watershed



Holyoke FY24



AWARD

PROJECT TYPE

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

MATCH

Hull Climate Adaptation Roadmap: Phase 2



Hull FY24



Learn more:

Hull Climate Adaptation Roadmap: Hampton Circle Area | Hull MA

Story Map: <u>Hull Climate Adaptation Roadmap (arcgis.com)</u>

AWARD	\$200,000	MATCH	\$ 70,000
PROJECT TYPE	Planning, Assessment,	and Desig	ŗn
CORE PRINCIPLES	Employing Nature-Based Sc	olutions;	

DEMONSTRATED Developing more Robust Community Engagement;

Pursuing innovative, transferable approaches

DESCRIPTION This area has historically been vulnerable to high tide flooding which has become more frequent. This year (2024) this neighborhood has seen impassible roads during at least 5 different flooding events. The roadmap has identified immediate and intermediate steps to alleviate flooding which include wetlands restoration, improved drainage, low cost retrofits, and actions that area residents may take (home elevations, potential buyout). Intermediate actions include road elevation and an automated tide gate to control flood water levels to the interior. This, coupled with low cost retrofits, will provide flood protection for the more frequent less severe flood events. Please visit our story map for more information.

Near-Term		Mid-1	erm		Long-Term	
Repair Existing Flood Wall Construct Tie-in Expansion						
Stormwater Assess Improvements	ment and Resilient to Drainage	Redesign Abandone Stormwater Sy	d Portion of ystem			
Design of Ecological Restoration Wetland/NBS in Park		Expand Fo Wet	ootprint of and	Fu	II Restoration of HCA	
	Promote Home Elevat	ion Program		Potent	tial E	Buyouts
Design and Construct Elevated Portion of Roadway with Culvert and Tide Gate			Construct a road	n elevated <i>w</i> ay		
2024	2025	2026	2030	2050	1	2070



Upper Castle Neck Salt Marsh Restoration



Ipswich FY24



Learn More:

- <u>Castle Neck River Restoration</u> Web Page
- <u>Reclaiming the Great Marsh</u> Blog Post

AWARD	\$104,848	MATCH	\$42,946
PROJECT TYPE	Design and Permitting		

CORE PRINCIPLESEmploying Nature-Based Solutions; UtilizingDEMONSTRATEDclimate change data for a proactive solution

DESCRIPTION Developed permit-level designs and an H&H analysis for road abandonment over a stream and the Great Marsh

Developed a marsh restoration plan

Developed an alternatives analysis for addressing an upstream crossing



Ipswich Town Wharf Pump Station Relocation and Coastal Resiliency Improvement Project



Ipswich FY24



DESCRIPTION

Learn More:

Project Video

AWARD	\$235,000.00	MATCH	\$41,130.00
PROJECT TYPE	Type 2 – Design and Pe	rmitting	

CORE PRINCIPLES
DEMONSTRATEDThis project furthers a community identified priority
action to address climate change impacts;
Employing Nature-Based Solutions

- This project supported preliminary and 30% design for the relocation of the Town Wharf Pump Station out of the local flood zone
 - Funding empowered partnerships between Ipswich Utilities and the Ipswich Housing Authority and Ipswich High School
 - Outreach included infrastructure education, digital and print material creation, and an exploration of ecosystem restoration options for the Wharf





Resilient Stormwater and Urban Heat Island Assessment



Ludlow FY24



Town's website: <u>https://www.ludlow.ma.us/227/Municipal-</u> Vulnerability-Program-MVP-Comm

YouTube recording of Urban Heat Webinar: <u>https://youtu.be/VMv7q-Zo38w</u>

	A١	N	AR	D
PROJE	СТ	Т	YF	ΡE

\$135,000

MATCH \$45,000 (25%)

Planning, Assessments, Capacity Building, and Regulatory Updates

CORE PRINCIPLES DEMONSTRATED Employing Nature-Based Solutions (NBS); Furthering a community identified priority action to address climate change impacts

- DESCRIPTION
- Complete a town-wide culvert inventory and assessment
- Evaluate locations for Nature-Based Solutions to reduce flooding and prepare concepts and costs for top actions.
- Complete an Urban Heat Island Assessment with overlays of EJ neighborhoods, community facilities, and vulnerable populations.
- HS students made urban heat PSAs, Town hosted a regional webinar on urban heat



G.E.A.A. Field: Flooding Now, Floodable in the Future

Lynn FY24



Learn More:

Project Website

AWARD	\$190,000	MATCH	\$65,000

- **PROJECT TYPE** Design and Permitting
- CORE PRINCIPLESEmploying Nature-based solutionsDEMONSTRATEDAchieving broad and multiple community benefits

DESCRIPTIONOne of Lynn's few recreational field areas is
impacted by both coastal and inland flooding.Design for floodable playing space through 2050.Addition of stormwater management and urban
heat island reduction features.

Strong community input on features & amenities.







Mashpee FY24

DESCRIPTION



- Learn More:
 - Project Website

AWARD \$223	8,000 M	ATCH \$86,379
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PROJECT TYPE Design and Permitting

CORE PRINCIPLES
DEMONSTRATEDEmploying Nature-Based Solutions; Supporting Strong
Partnerships with Climate Vulnerable Populations; Achieving
Broad and Multiple Community Benefits

- Completed design and permitting for green stormwater infrastructure and other resilience & water quality improvements at the Town Landing site adjacent to Santuit Pond
 - Continued partnership between the Town of Mashpee and the Mashpee Wampanoag Tribe, including ongoing community engagement centered around Santuit Pond

Town Landing - Proposed Concept Design Mashpee, MA

MOSTIPUEC, MA The Town Landing els serves as a public access boat launch and fishing area on Santul Pond. The Town of Mashpee was awarded two Municipal Vulnerability Prograndense S(W) Action Farste during FY23 and FY21 badferss atomized sontuit Pond. WPO Action Farste during FY23 and FY21 badferss atomized Santul Pond. WPO Action Farste during FY23 and FY21 badferss atomized Santul Pond. WPO action Area to evaluate a design concept for Town Landing that incorporates climate resilience and water quality measures. *Nota Super Santu Pond. WPO action at the santu Po

Oiven the importance of the Town Landing sile to the Town, recreational users, Friends of Sanith Dong and the Mashipee Wampaneag Time, a community visioning workshop, public sile visit, and stakeholder meetings were held to gather imput and opinions about its redesign. The proposed concept for this sile reflects the diverse linterests of the key stakeholders and users of the sile and advances the Town's water quality and climate resilience goals. Key elements of the proposed concept for the sile include:

Improved Stormwater Management – permeable surfaces, bioretention, and water quality swales and rain gardens to capture, treat, and inititate road runtef and reduce leadings of sediment and nutrients to the pond. Other Water Quality and Ecological Improvements – enhanced shoreline vegetated buffers and restoration of a degraded, low-quality wetland along Sile Berconfermion – channes to the Journal and wetland the set to allow for

and refered had impacted at a stor of the spon stirtup to all lance for the store well as dedicated which and relative parking in the upper portion of the site Site Repurpoing – dedicate facilities and a revel of the site control is more than the store of the site of the site of the site of the relative site of the for the Mashpee Wampanag Tribe.

(IRA BREA WITH FERMEABLE PAVEMENT 5. BOAT LOADING AREA & VEHICLE TURN. AROUND 9. KAYAK/CANGE LAUNCH ESTRIAN PARTI TO BOAT FAMP/PARINIG 6. FAINI BARDEN WITH POLLINATOR PLANTINGS 110. SEASONAL FISHING PLATFORM LI PLAZA WITH EDUCATIONAL SIGNAGE 7. INTERMITTEN TRABIBLE STORK WILL ARBREF 1. TI NAULI WITH RENHE FASTING & VERWS OF WATER T RAMP 8. CENTRAL PLAZA WITH PICNIC AREA & SEATING 12. RESTORED & ENHANCED WETLAND FEATURE 9. CENTRAL PLAZA WITH PICNIC AREA & SEATING 12. RESTORED & ENHANCED WETLAND FEATURE

Estimated Co

99% (832 lbs

96% (13.1 lbs/

13. RESILIENCE TRAIL SYSTEM 14. BIOSWALE 15. GATE FOR RESTRICTED ACCESS 16. ENHANCED VEGETATIVE BUFFER





Bunyan Road Relocation and Floodplain Restoration



Monson FY24



AWARD	

\$291,500.00

MATCH \$97,300.00

PROJECT TYPE Design and Permitting

CORE PRINCIPLES DEMONSTRATED

- Employing nature-based solutions; climate-resilient design; community outreach and visioning
- DESCRIPTION
- Assessed restoration potential and wetland delineation to mitigate construction
- Initiated community engagement projects along Chicopee Brook to gather environmental health data and enlist public involvement
- Designed 25% plan for relocation and construction of Bunyan Road, including travel, ecological, and ownership considerations



Enhancing Flood Resiliency Through the Evaluation and Redesign of Critical Infrastructure Along the Konkapot River - Phase II Final Design & Permitting

Monterey FY23-FY24



Learn More:

Project Website

AWARD

\$124,071

MATCH \$20,052

PROJECT TYPE Permitting and Final Design

CORE PRINCIPLES DEMONSTRATED • Employing Nature-Based Solutions (NBS)

 Furthering a community identified priority action to address climate change impacts

DESCRIPTION The project prioritized completing final designs and securing permits for the Route 23 culvert replacement to enhance flood resilience. It also included nature-based solutions such as riverbank erosion control, extensive community engagement, and educational initiatives for stormwater management. Additionally, two demonstration projects provided residents with a "living project" showcasing nature-based solutions and climate resiliency efforts.





Kempton Street Corridor Green Infrastructure



New Bedford FY24



Kempton Street Project and Green Infrastructure Information

AWARD	\$350,750	MATCH \$117,800

PROJECT TYPE Design and Permitting

CORE PRINCIPLESFurthering a community-identified priority actionDEMONSTRATEDto address climate change impacts

DESCRIPTION Originally planned as implementation of one project element in a single year, combined funding provided for a greatly expanded scope that will continue over a two-year period. FY24 MVP funding provided for procurement and contracting to fully implement nature-based solutions to better manage stormwater in the Buttonwood Brook Watershed.



Flood Resilience and Water Quality Protection Through Better Causeway and Green Infrastructure Design

MUNICIPAL VULNERABILIT Preparedness

Northbridge FY24



- Learn More:
- Project Website

AWARD	\$ 402,627	MATCH	\$ 137,831
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PROJECT TYPE Design and Permitting

CORE PRINCIPLESEmploying Nature-Based Solutions; AchievingDEMONSTRATEDBroad and Multiple Community Benefits

DESCRIPTION This project focused on addressing near term stormwater-related challenges and enhancing long-term climate resilience for the Town of Northbridge.

Along Main Street, we designed green infrastructure and pedestrian enhancement to treat stormwater runoff and enhance public safety along the causeway.

On Carpenter Road, we designed a replacement causeway bridge structure that would be more resilient to flooding events, incorporate nature-based solutions, and enhance hydraulic exchange in the Carpenter Reservoir, and provide a safer crossing for vehicular traffic.



Dukes County Avenue Pump Station Resiliency Improvements



Oak Bluffs FY24



- Learn more:
 - Project Website

A	W	Α	R	D

\$146,658.00

MATCH \$49,052.42

PROJECT TYPE

Design

CORE PRINCIPLES DEMONSTRATED Utilizing climate change data for a proactive solution

DESCRIPTION

- Provides an opportunity to address multiple infrastructure challenges through one project.
- Provides flood resiliency to critical infrastructure that conveys approximately 90% of the Town's wastewater to the treatment facility.
- Includes cost-effective flood resiliency strategies to increase the flood resilience of infrastructure while the Town continues its planning effort to adapt to climate change.





Bartlett Road Resiliency: Bartlett Road Dam Removal, Culvert Resiliency and Stormwater Improvements



Plymouth FY24



AWARD	\$1,975,959.00 (75%)	MATCH	\$1,317,306.00 (25%
IECT TYPE	Construction & On the Grou	ind Implen	nentation

CORE PRINCIPLES DEMONSTRATED

PRO

Building community capacity for climate resilience; Employing Nature Based Solutions (NBS)

- DESCRIPTION
- Improves river herring passage in the unnamed tributary to Beaver Dam Brook from the downstream Tidmarsh Wildlife Sanctuary to upstream Fresh Pond for spawning.
 - Designed according to the Massachusetts Stream Crossing Standards to improve climate readiness and protect water quality by accommodating larger storm flows and incorporating green infrastructure
 - Benefits public safety by providing a wider road and sidewalk for safe pedestrian crossing, improved vehicular sight lines, and a higher load rating to accommodate public vehicles like school buses and fire trucks.





SPRARR-Regional Project



Revere FY24



Learn More:

Saugus River Watershed Regional Adaptation Plan Story Map

AWARD	\$154,717	MATCH	In-kind \$38,679.25
PROJECT TYPE	Type 2: Design and Per	mitting	
	Conducting robust comp		acomont and

CORE PRINCIPLES
DEMONSTRATEDConducting robust community engagement and
supporting strong partnerships with EJ and other
priority populations

DESCRIPTION The overarching goal was to identify the most vulnerable locations and prioritize needed adaptations that may reduce flood risk for more jurisdiction that could be approached as a region as opposed to in silos. Community engagement included a multilingual survey and Public Information Sessions.





Rockport Coastal Resilience Planning Project



Rockport FY24



- Learn More:
- Project Website

AWARD	\$242,067.00	MATCH	\$58 <i>,</i> 875.70
PROJECT TYPE	Planning, Assessments,	, Capacity	Building
ORE PRINCIPLES	Addressed Community	Climate R	lesilience

- DEMONSTRATED
- Addressed Community Climate Resilience Priorities
- DESCRIPTION •
- Identified Nature-based Solutions (NbS) for vulnerable coastal locations
 - Centered community priorities, EJ & vulnerable populations
 - Provided multi-modal education & outreach



549 Main Street Acquisition

Water Supply District of Acton FY24



Learn more:

Project Website

AWARD	\$1,505,414	MATCH	\$2,566,500
PROJECT TYPE	Construction and On-the	e-Ground I	mplementatior
ORE PRINCIPLES	Employing Nature-Based	Solutions	; Furthering a

CORE PRINCIPLESEmploying Nature-Based Solutions; Furthering a
community identified priority action to address
climate change impacts

- DESCRIPTION
 Leveraged open space preservation to support sustainable and resilient water management for the community through water supply diversification via deep bedrock wells
 - Provides for 57 acres of diverse open space and connectivity to alternative transportation corridor in a densely populated area







Resilient Streams of the Wachusett Reservoir

West Boylston FY24

AWARD



Information provided on Town website: <u>https://www.westboylston-ma.gov/public-</u> works/pages/resilient-streams-wachusett-reservoir

PROJECT	TYPE

\$105,000

MATCH \$35,000

Planning, Assessments, Capacity Building, and Regulatory Updates

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

Employing Nature-Based Solutions (NBS); Furthering a community identified priority action to address climate change impacts

- Complete a town-wide culvert inventory and assessment
 - Evaluate locations for Nature-Based Solutions to reduce flooding and prepare concepts and costs for top actions.
 - Town engaged with Senior Center and individual stakeholders abutting streams for input and recommendations



----- OVERLAND FLOW . PROPOSED TREE



Evaluating Vulnerabilities & Options for Resiliency: River Road & Environs

West Newbury FY24



Learn More--Climate Change Resiliency Committee Webpages:

- FY24 MVP Action Grant
- Videos & Resources
- Citizens Science Program

AWARD

\$150,000

MATCH \$50,000

PROJECT TYPE Planning, Assessments, Capacity Building & Regulatory Updates

CORE PRINCIPLES DEMONSTRATED

Utilizing Climate Change Data to Assess Risk & Resiliency Opportunities, Developing Community Awareness

DESCRIPTION This project analyzed vulnerabilities and potential solutions to flood risk from the tidal Merrimack River at River Road and environs. It included public activities; an existing conditions survey; a study of stormwater infrastructure; a report of vulnerabilities in 2030, 2050, and 2070; and options for shoreline stabilization as well as other solutions for longer timeframes.







Establishment of a Tree Nursery and Development of a Tree Planting Program

West Springfield FY24



More Information:

Project Website

AWARD	\$59,000	MATCH	\$20,000
PROJECT TYPE	Construction and On-Tl	he-Ground	Implementation

CORE PRINCIPLES DEMONSTRATED

- Employing Nature Based Solutions (NBS)
- DESCRIPTION
- Prioritize the Planting and Protection of Trees
- Creation of a sustainable tree nursery and development of a long-term plan to ensure the continued growth and health of the town's urban forest.
- Educate Residents on the Importance of Tree in Mitigating the Effects of Climate Change





Culvert Asset Management and Bank Stabilization



DESCRIPTION



Learn more:

Wilbraham's Storm Water Resources Page

AWARD	\$60,000	MATCH	\$20,000

PROJECT TYPE Data Collection and Summary Report

CORE PRINCIPLES DEMONSTRATED Furthering a community identified priority action to address climate change impacts; Building community capacity for climate resilience

- Develop a prioritized culvert inventory consisting of GIS data and a 5-year capital improvement plan (CIP) to prioritize repairs, replacement and maintenance.
 - Assess 5 stream channels for bank stabilization and conceptual restoration plans with preference to natural channel design and nature-based solutions.







Belle Isle Marsh as a Nature Based Solution to Coastal Flooding: Regional Collaboration and Morton Street Neighborhood Design and Permitting



Winthrop FY24



Learn More:

- Mystic River Belle Isle Marsh Website
- <u>Winthrop Project Website</u>

AWARD

\$291,076

MATCH \$103,844

PROJECT TYPE Type 2: Design and Permitting

CORE PRINCIPLESUtilizing regional solutions toward regional benefit;DEMONSTRATEDutilizing climate change data for a pro-active solution

DESCRIPTION The goal of the project is to 1) continue regional coordination to protect communities abutting Belle Isle Marsh while preserving the health of the marsh; and also 2) moving the top priority sites into design and permitting, including Morton Street in Winthrop, the focus of this phase of work.





Resilient Community Place-Making and Miyawaki Forests

Worcester FY24



Learn More:

- Worcester Miyawaki Forests Story Map
- Worcester CoolPockets Story Map
- <u>CoolPockets Resilience Summit Slideshow</u>

AWARD	\$409,461	MATCH	\$136,600
PROJECT TYPE	Implementation		
	Employing Nature-Base	d Solutio	ns; Achieving

- **DEMONSTRATED** Broad and Multiple Community Benefits
 - **DESCRIPTION** The project's main goal was to promote climate resilience to extreme heat of our community's most vulnerable populations.

We designed and planted 2 Miyawaki Forests in the EJ heat-prone areas with deep community engagement; and designed 2 CoolPockets, allowing us to be grant-proposal ready for the implementation phase.





