FY22 Completed Action Grant Summaries



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

Climate Action Plan and Electrification Roadmap

Acton, Acton-Boxborough RSD FY22



Learn more:

- <u>Climate Action Plan</u>
- Electrification Road Map

AWARD	\$157,940	MATCH \$55,080
PROJECT TYPE	Climate Action Plar	+ Electrification Roadmap

CORE PRINCIPLES DEMONSTRATED Conducting robust community engagement; Pursuing innovative, transferable approaches

DESCRIPTION

- Organized over 20 events to solicit broad and diverse public input on the Climate Action Plan.
 Partnered with Acton-Boxborough RHS students to
 - Partnered with Acton-Boxborough RHS students to engage youth; translated material to reach Englishisolated population in Acton.
- Electrification Roadmap: analysis and electrification planning for seven key municipal/school buildings, including effective strategies and cost analysis (capital, operational). Final product transferable for other communities and municipalities pursuing electrification.





Shawsheen River Watershed Land Conservation Planning and Prioritization for Climate Resilience and Environmental Justice



Andover FY22



Learn More:

Shawsheen River MVP Project Experience

AWARD \$131,700

PROJECT TYPE

CORE PRINCIPLES DEMONSTRATED Planning, Assessments, Capacity Building, and **Regulatory Updates**

Employing Nature-Based Solutions; Innovative approach to parcel assessment; Conducting robust community engagement; Achieving broad and multiple community benefits

DESCRIPTION

- Developed climate adaptation goals through climate data analysis and community stakeholder engagement; Identified gaps between current planning goals and climate adaptation goals
- Reviewed existing protected parcels and private parcels through a desktop site screening process and in-person field assessments to determine opportunities for flood resilient restoration solutions, and potential land acquisition
- Prioritized parcels for land acquisition and restoration potential, in accordance with the climate adaptation goals





Photo credit: Joyce Losick-Yang

Baptist Corner Road Stream Crossing Ecological Improvements



Ashfield FY22



AWARD	\$548,600	MATCH	\$178,800
OJECT TYPE	Construction		

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

PR

Achieving Broad and Multiple Community Benefits; Building Community Capacity for Climate Resilience

- Replaced a deteriorated, perched and severely undersized 5-foot diameter CMP culvert with a 19foot span by 4-foot rise precast concrete culvert.
 - Greatly increased flood capacity, climate resilience, and aquatic / terrestrial wildlife passage.
 - Organized numerous project partners to complete project





Greening Lord Pond Plaza, Phase 2



Athol FY22-23



Learn More:

Greening Lord Pond Plaza Project Website

AWARD

\$189,030

PROJECT TYPE

Design and Permitting

CORE PRINCIPLES DEMONSTRATED Employing Nature-Based Solutions; Achieving broad and multiple community benefits; and Furthering a community identified priority action to address climate change impacts.

DESCRIPTION

Applies nature-based solutions to daylight a culverted brook, create wetlands, add greenspace, and increase flood storage in downtown Athol. Additional co-benefits: significant reduction of impervious surface at the plaza, increased tree canopy cover, improved vehicular and pedestrian safety, and additional opportunities for public gathering spaces as well as new fish and wildlife habitat and improved stream connectivity.





Belchertown Land Conservation and Restoration of the Scarborough Brook Headwaters for Climate Resilience



Belchertown FY22



Learn More:

Belchertown Climate Change Vulnerability and Resilience Website

AWARD	\$480,025	MATCH	\$183,500
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PROJECT TYPE Construction and On-the-Ground Implementation

CORE PRINCIPLES
DEMONSTRATEDEmploying Nature-Based Solutions; Supporting
strong partnerships with Climate Vulnerable
Populations

- DESCRIPTION
- Populations
 Multi-pronged approach to watershed resilience included land acquisition, right-sizing culverts,
 - and dam removal/restoration.
 - Project will ultimately result in removal of two dams within the Scarborough Brook Conservation Area, and replacement of downstream culverts for improved flood resilience and restored habitat value.



Stormwater Flood Reduction and Climate Resilience Capital Improvement Plan

Belmont FY22



Learn more:

Belmont Flood Reduction and Climate Resilience Website

AWARD

\$195,000

MATCH \$63,600

Planning, Assessments, Capacity Building, and **PROJECT TYPE Regulatory Updates**

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

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

- Update and use a revised hydraulic model to document current and future flooding problems
- Identify site-specific green infrastructure/ nature-based controls for implementation
- Create a capital improvement plan to equitably implement the identified projects





A Community Meeting fo a More Resilient Relmon

区 会 iv 夏积水或水患。欢迎参加于6月23日举行的线上公开会 了解已经完成的项目 听取计划中的工作 并就您 的问题提问。到会者还将有机会抽取价值\$25的





Nashua River Communities Resilient Lands Management Project

Bolton & Clinton FY22



Learn More

- Nashua River Communities Resilient Lands Website
- <u>Story Map</u>

Planning Project

AWARD

\$308,691

MATCH \$77,800

PROJECT TYPE

CORE PRINCIPLES Act DEMONSTRATED ber

DESCRIPTION

Achieving broad and multiple community benefits; Pursuing innovative, transferable approaches

- Strengthen the health of these lands so that they remain resilient in providing ecosystem services, so that the communities can, in turn, build strength and resilience.
 - Promote management practices that improve forest and wetland health
 - Transform how existing maintenance time and resources are spent through the use of curated land management guides.
 - Create Wetland bylaws and regulations that establish carbon storage/ sequestration and climate resilience interests for Clinton and Bolton wetlands bylaws and regulations and associated performance standards.







Smith's Beach Stormwater BMP Design

MVP Municipal Vulnerability Preparedness

Braintree FY22



Learn more:

- Braintree Stormwater Division
- <u>Stormwater Grants Page</u>

AWARD	\$47,500	MATCH	\$16,340
PROJECT TYPE	Design & Permitting		

CORE PRINCIPLESEmploying Nature-Based Solutions; UtilizingDEMONSTRATEDClimate Data Proactively

DESCRIPTION The project redesigned a typical grayinfrastructure parking lot to include permeable pavement, landscaped islands, and subsurface infiltration suitable for treating stormwater flows from the upland residential neighborhood. The new resilient parking lot would mitigate stormwater flows as well as heat island effects.



Clesson Brook Watershed Based Assessment & Climate Resiliency Plan

Buckland FY22-23



Learn More:

- ArcGIS Map Viewer
 Username: Clesson Brook
 - Password: Clesson Brook22!
- Project StoryMap

AWARD	\$ 100,117	MATCH	\$ 41,650
PROJECT TYPE	Planning and assessment		

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

Conducting robust community engagement; Employing Nature-Based Solutions (NBS)

- Build partnerships and Public outreach focused on landowners and stakeholders in the Clesson Brook watershed.
 - Identify the causes and locations of channel instability that will then be used to identify, prioritize, design, permit, and implement projects.
 - Prepare a Watershed-Based Assessment and Climate Resiliency Plan.





Vine Brook Watershed Flood and Urban Heat Island Assessment

Burlington FY22



Learn More:

See project videos, StoryMap, and reports here

AWARD	\$108,500	MATCH \$37,245	
PROJECT TYPE	Planning, Assessments, C Regulatory Updates	apacity Building, and	
ORE PRINCIPLES	I Itilizing Climate Change I	Data for a Proactive Solu	.+

CORE PRINCIPLESUtilizing Climate Change Data for a Proactive Solution;DEMONSTRATEDEmploying Nature-Based Solutions

DESCRIPTION

A multi-pronged stakeholder assessment and field-data collection effort were utilized to identify a set of overarching resilience actions to address flooding, urban heat, and provide additional co-benefits using Nature-based Solutions (NbS). Detailed recommendations were developed at six representative locations throughout the project study areas as well as an opportunities matrix which scores value and feasibility of various NbS at commercial, residential, and municipal locations across the watershed. NbS recommendation memos can be used to by public and private entities to scope implementation projects.





Healthy Soils, Green Infrastructure Policy and Climate Resiliency Public Engagement in Deerfield



Deerfield FY22



Learn More:

Deerfield Climate Resiliency Project Website

AWARD \$40,951 MATCH \$23	,572
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PROJECT TYPE Action Grant

CORE PRINCIPLES
DEMONSTRATEDDeerfield has important MVP Plan goals to reduce
the town's carbon footprint and engage citizens in
climate action and resiliency

DESCRIPTION

This project included:

- A regional Climate Forum with 32 speakers in 9 workshops
- Creation of a Healthy Soils initiative, with strategies for protection of carbon sequestering soils
- Implementation of a Green Infrastructure Policy
- Establishing a climate change curriculum at Frontier Regional School with student engagement activities





Pound Pond Flood Mitigation & Storm Drainage Improvements



Dennis FY22



AWARD	\$120,000	MATCH	\$40,000
PROJECT TYPE	Design and Permitting	B	
CORE PRINCIPLES DEMONSTRATED	Employing Nature Base monitoring project suc project into the future	ed Solutions cess and ma	; Committing to aintaining the
DESCRIPTION	The project goal is to restore Pounc water quality, habitat and flood pla	l Pond at Seaview in improvements.	Park in Dennis to provide The tasks included:
	 Completing hydrologic and hy topographic and wetlands sur 	vdrologic modeling vey	g using climate change dat
	Ongoing public ongogoment y	with El community	and local stakeholders

- ange data,
- Ongoing public engagement with EJ community and local stakeholders
- Preparing permit level design and opinion of preliminary construction costs (OPCC)
- Preparing and submitting relevant local, state and federal permits
- Completing a Wetland Monitoring and Site Maintenance Plan



Cherry Street Green Infrastructure & Slope Restoration Construction

Easthampton FY22



Learn More:

Project Website

AWARD

\$2,997,551.00

PROJECT TYPE Nature-Based Solutions for Ecological and Public Health

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

Utilizing Climate Change Data for a Proactive Solution; Employing Nature-Based Solutions; Increasing Equitable Outcomes for EJ Populations; Achieving Broad and Multiple Community Benefits; Robust Community Engagement

- Installed Green Infrastructure along the length of Cherry Street
 - Completed slope restoration and outfall repair at Brickyard Brook
 - Conducted community outreach through neighborhood meetings, an on-site field trip, and information booths at community events







Island End River (IER) Flood Resilience Project



Everett FY22



Learn More:

- State Awards \$716,500 for Flood Resilience Project Everett Independent
- North Suffolk Office of Resilience and Sustainability | City of Chelsea MA
- Planning Studies and Reports | City of Chelsea MA
- Planning & Development Everett, MA Official Website

AWARD	\$716,500	MATCH	\$241,388
PROJECT TYPE	Design and Permitting		
CORE PRINCIPLES DEMONSTRATED	Utilizing Climate Change Proactive Solution, Utiliz Toward Regional Benefit	Data for a zing Regio	nal Solutions

DESCRIPTION

- Worked closely with industrial stakeholders to develop project design and long-term O&M
- Facilitated and funded community advisory group to provide input on public benefits for project
- Modeled storm events against proposed flood provisions and existing site conditions
- Developed design from alternatives analysis to conceptual design to permit-ready plans





Conceptual Design of Flood-Resiliency Improvements for Sewer Infrastructure – Town of Falmouth, MA



Falmouth FY22



Learn More:

- Falmouth Wastewater Division Website
- <u>Resilient Woods Hole News and Events</u>

AWARD \$104

\$104,040

MATCH \$35,780

PROJECT TYPE Planning, Assessment, Capacity Building, and Regulatory Upgrades

CORE PRINCIPLES DEMONSTRATED

Utilizing climate change data for a proactive solution; Assessing Nature-Based Solutions

DESCRIPTION

- Established design flood elevations for four vulnerable lift stations and a force main with consideration for future sea level rise.
- Evaluated alternatives to protect vulnerable sewer infrastructure from design floods and developed conceptual drawings for recommended alternatives.
- Community engagement included public informational meetings and participation in the Resilient Woods Hole Public Forums to discuss this project.





Bolstering Public and Private Action to Improve Flood Resiliency in Baker Brook



Fitchburg FY22



Learn More:

Fitchburg Baker Brook Flood Resiliency Website

AWARD	\$173,000	MATCH	\$58,800
PROJECT TYPE	Planning, Assessments, Capa	city Building,	and Regulatory Updates

CORE PRINCIPLESEmploying Nature Based SolutionsDEMONSTRATEDAchieving Broad and Multiple Community Benefits

DESCRIPTION

The project team revised and enhanced the existing stormwater model to further evaluate potential flood prone areas and naturebased solutions. The improvements were scored and prioritized for the benefits to environmental justice populations, reduction of urban heat island, and other co-benefits to the community. The final products were several preliminary designs (both private and public), a targeted plan to identify and develop public properties and specific private properties for future development, and the development of a feasibility assessment to finance this program through a stormwater and climate resilience utility.





Walnut Street Flood Mitigation – Design & Permitting



Framingham FY22



Learn more:

Walnut Street Neighborhood Flood Mitigation Project Website

AWARD	\$250,394	MATCH	\$81,321
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PROJECT TYPE Design & Permitting

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

Furthering a community identified priority action to address climate change impacts; Employing Nature-Based Solutions (NBS); Conducting robust community engagement; Achieving broad and multiple community benefits.

- Restoring and creating flood storage within existing wetlands
- Installing an elevated boardwalk to restore habitat and stream connectivity
- Stream restoration to reestablish flow patterns and restore flood storage





Advancing Green Infrastructure in Foxborough for Enhancing Climate Resilience through Planning and Design



Foxborough FY22



Learn More:

Foxborough Green Infrastructure Project Website

AWARD	\$ 166,543	MATCH	\$ 54 <i>,</i> 326.00

PROJECT TYPE Design and Permitting

CORE PRINCIPLES DEMONSTRATED Employing Nature-Based Solutions (NBS); Conducting robust community engagement

- **DESCRIPTION** Gathered and incorporated meaningful project input from residents
 - Designed 9 green infrastructure concept plans
 - Devised 3 green infrastructure solutions to the flooding at the Cocasset St. railway underpass





Gloucester Climate Action and Resilience Plan (CARP)

Gloucester FY22

and the second s	Learn More: Gloucester Climate Action Project Website	Goals	 Access to trans All residential r transportation Gloucester and regional transp The City leads I 	it, walkability, and connectiv neighborhoods, commercial o systems that are also afforda I neighboring communities a sortation systems. by example with transitionin	ity are prioritized in all mu centers, and community sp able, reliable, and climate re serviced with affordable g all municipal fleets to low	unicipal and developmen paces are interconnected resilient. e, reliable, and accessible w- or zero emissions.	t planning. I by multimodal e carbon-free	
AWARD	\$63,396 MATCH \$28,253		Strategies	M7 - Advocate for electrifica (ex: CATA busses, trolleys, w M8 - Advocate for communit transit needs, route expansio	tion of regional public and pr ater shuttles) y transit upgrades including ons, bus stop upgrades, and b	ivate transit systems supporting regional ous rapid transit.	State/Federal/Regional State/Federal/Regional	
PROJECT TYPE	Planning			M9 - Promote neighbor-to-n car shares, and volunteer rid M10 - Ensure that the cost o considered to allow for payn	eighbor transit options inclue e request for those with limi f electricity usage and financ nent of EV charging use now	ding carpool options, ted mobility access. ing mechanisms are or in the future.	Residents/Businesses City	
ORE PRINCIPLES	Achieving broad and multiple community benefits.			M11 - Promote adoption of f family, and rental developme	EV charging stations at local bants.	businesses, multi-	Residents/Businesses	
DEMONSTRATED	Involving Environmental Justice Populations in meaningful decision making			Implemntation Blueprints	Sphere of Influence Key Next Steps	City Continue research and di with the School Departm Scope the scale of install of investment in EV chars	scussions with potential EV school bus ve ent. adoption, including considering the upfrc ring and piloting of EV busses.	ndors ont level
DESCRIPTION	Gloucester has long been committed to addressing clima The creation of a Climate Action and Resilience Plan (CA	ate change. RP) provides			Improving Equity Potential Co-benefits	Ensure that initial adopti Environmental Justice co Map out potential compl charging station incentive Improved air quality.	ion of EV in a pilot includes benefits to mmunities. ementary funding sources – i.e. combine es and grants with grants for electric buss	EV ies.
	a broader, public facing strategy and identifies clear goa the community forward.	ls to move			Implementation Partners	 Educational benefits for s Government and Munici Commission, Gloucester City Departments: School 	students. pal Bodies: School Board, Clean Energy Youth Council, Mayor's Office I Department, Planning, Community Deve	elopment
	The completed CARP includes both community-wide and goals, an inventory of GHG emissions in Gloucester, and and integrated actions to achieve the City's goals.	d municipal individual			Funding Sources Measures of Success	CDBG ARPA EPA National Grid All Gloucester's school bu	uses are electric.	

Goals

Johnson Creek Watershed Flood Resiliency Project





Learn More:

Groveland Flood Resiliency Project Website

AWARD	\$82,186	MATCH	\$27 <i>,</i> 843
PROJECT TYPE	Planning		

CORE PRINCIPLESEmploying Nature Based Solutions, AchievingDEMONSTRATEDBroad and Multiple Community Benefits

DESCRIPTION There are several areas in the Johnson Creek Watershed that have potential flood risk. The purpose of this project was to develop a prioritized action plan to increase resiliency to climate change throughout watershed.



Little River Dam Removal and River Restoration

Haverhill FY22-23



Learn More:

Little River Dam Project Information

AWARD \$475,000

PROJECT TYPE Design and Permitting

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

Employing Nature-Based Solutions; Supporting strong partnerships with Environmental Justice Populations; Conducting robust community engagement; Achieving broad and multiple community benefits

- Completed design and permitting for removal of Little River Dam, including restoration of 2,000+ linear feet of river, contaminated sediment management, and public river access improvements
- Developed concept graphics and photo renderings for the proposed dam removal and river restoration
- Utilized a Community Liaison model for successful engagement with the EJ community and hosted bi-lingual public forums and on-site open house with dozens of attendees



Ipswich River Sewer Interceptor and Siphon Risk Mitigation and Resiliency Improvements Project – Bank Biostabilization Construction



Ipswich FY22



Learn More:

Ipswich River Bank Biostabilization Project Website

AWARD \$117.8k MATCH \$54.7k

PROJECT TYPE Construction and On-the-Ground Implementation

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

Employing Nature-Based Solutions; Achieving Broad and Multiple Community Benefits

- Biostabilization plan implemented nature-based solutions to improve natural systems for community and ecosystem adaptation sources to make a broad impact in the community and protect sewer.
- Native plantings and toe stone create new habitat
- Community feedback and participation helped shape project: design coordination, plantings selection, Council on Aging Site Walk, Multi-lingual Project handouts, project poster designed by H.S. Environmental club.





Housatonic Stream Restoration for Regional Flood Resilience



Lenox (regional lead) FY 22-23



Learn More:

Regional Culverts Project StoryMap

AWARD	\$295,190	MATCH	\$99 <i>,</i> 720
PROJECT TYPE	Planning, Assessments, Ca Regulatory Updates	pacity-Buil	ding, and

CORE PRINCIPLESConducting robust community engagement & UtilizingDEMONSTRATEDregional solutions toward regional benefit

DESCRIPTION

Project provided Road-Stream Crossing management plans for four communities - Lenox, Pittsfield, Stockbridge, and New Marlborough. This included community-wide culvert assessments completed by locally trained and employed youth, designs for replacement of three priority culverts, and nature-based solutions analysis for flood resilience. In addition, partnerships with community-based organizations resulted in a series of engaging public events and classroom education around climate change.







Shutesbury Road Culvert Enhancement



Leverett FY22-23 (extension)



AWARD	\$258,750	MATCH	\$66,890
OJECT TYPE	Construction and On-the-	Ground Im	plementation
PRINCIPLES	Nature Based solution;	Protect a	rea from

CORE PRINCIPLES DEMONSTRATED

P

D flooding; Promotes biodiversity

DESCRIPTION

The project's primary goal was to enhance the resiliency of the whole ecosystem of the area surrounding the culvert by replacing the 60 year old, asphalt coated deteriorated corrugated steel culvert with a new embedded concrete culvert with a natural substrate. In addition, this project will help keep Shutesbury Road open. Failure of this culvert and subsequent closure of the two-lane road would cause significant economic impact to Leverett and surrounding towns. Shutesbury Rd is a vital corridor that connects larger employment centers with smaller towns. Many students and staff commute using this road to and from the schools within the Five College system. Shutesbury Rd also provides an important connection to the Amherst area and Routes 202 and 2.



Barry Park Green Infrastructure Project



Lynn FY22-23



Learn More:

Lynn Green Inrastructure Project Website

AWARD	\$476,242.00	MATCH \$172,830	.00
PROJECT TYPE	Construction & On-	the-ground Implementa	ation

CORE PRINCIPLES Fuint DEMONSTRATED OU PO

Furthering a community identified priority action to address climate change impacts, Employing Nature-Based Solutions (NBS), and Increasing equitable outcomes for and supporting strong partnerships with Environmental Justice (EJ) Populations and Climate Vulnerable Populations

DESCRIPTION Construction of Low Impact Design solutions in and adjacent to Barry Park. The project mitigates neighborhood flooding and improves stormwater quality.

LID elements included the construction of:

- pervious parking with sub-surface storage & infiltration
- bioswale along the perimeter to the parking area
- four bio-swales at the intersection of Batchelders Court and Ainsworth Place.





Richardson Green Conservation Acquisition



Lynnfield FY22



Learn More

Lynnfield Conservation Acquisition Project Website

AWARD	\$1,638,750	MATCH \$758,950
ROIECT TYPE	Richardson Green Cor	nservation Acquisition – Action Grant

CORE PRINCIPLES DEMONSTRATED Employing Nature-Based Solutions; Utilizing Regional Solutions Toward Regional Benefits

DESCRIPTION

Perpetual CR protection of 21 acres of undeveloped forest in Ipswich River watershed; 1) promotion of biodiversity through habitat protection and restoration, 2) reduction of development in climate vulnerable areas, 3) protection of water quality and groundwater recharge, 4) improved air quality 5) climate mitigation through extensive carbon sequestration, and 6) mitigation of inland flooding risks.

Property is one component/phase of a larger project known as "A Vision for Willis Woods" - a regional effort led by Lynnfield to create a vision/work plan for ~700 acres of open space that are adjacent to this Richardson Green parcel.

Significant project success stemming from public-private collaboration of seven partners; Greenbelt | Essex County's Land Trust, Ipswich River Watershed Association, Lynnfield Center Water District, the Towns of Lynnfield, Middleton, North Reading, and the City of Peabody. A planned future outcome is the development of an extensive recreational trails network with connections to abutting partner communities, and beyond.



Malden River Works for Waterfront Equity and Resilience

Malden FY22-23



Learn more:

- Project webpage
- Project budget and timeline

AWARD	\$554,650.00	MATCH	\$310,661.20
PROJECT TYPE	Design/Permitting		

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

- Conducting robust community engagement and supporting strong partnerships with EJ and other priority populations; pursuing innovative, transferable approaches.
- Project is led by a majority-BIPOC Steering Committee with decision making power
 - The park will both provide new green space on the Malden River and make the Malden DPW more resilient to storm and tidal flooding





Marshfield Long-term Coastal Resiliency Plan

Marshfield FY22



Learn more:

Marshfield Coastal Resiliency Project Website

AWARD	\$78,030	MATCH	\$26,010
PROJECT TYPE	Planning, Assessments,	and Regu	latory Updates

CORE PRINCIPLES
DEMONSTRATEDFurthering a community identified priority action to address
climate change impacts; Utilizing climate change data for a
proactive solution; Conducting robust community engagement

- DESCRIPTION
- Evaluated risk factors and collected asset inventory
- Drafted Zoning Recommendations
- Conducted a Benefit Cost Analysis
- Conducted Public engagement and outreach







Watershed-based Solutions to Increase Resilience to Harmful Algal Blooms in Santuit Pond in a Warmer and Wetter Climate

Mashpee FY22



Learn More:

Mashpee Santiut Pond Algal Bloom Project Website

AWARD \$131,691 MATCH \$52,452

PROJECT TYPE Design and Permitting

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

- Employing Nature-Based Solutions; Supporting Strong Partnerships with Climate Vulnerable Populations; Achieving Broad and Multiple Community Benefits
- Developed concept designs for nutrient pollution reduction at key wet weather input locations around Santuit Pond and carried one design forward to permitting
 - Provided recommended changes to municipal bylaws to reduce nutrient impacts to all surface waters in Mashpee
 - Robust public education and outreach program that incorporates the knowledge and perspective of the Wampanoag, installation of signage focused on key themes of the project, and collaboration with Mashpee TV





Mendon Town Hall Campus Green Stormwater Infrastructure: Design, Permitting and Implementation



Mendon FY22



Learn More

Mendon Stormwater Infrastructure Project Website

AWARD	\$169,905	MATCH	\$61,072+
PROJECT TYPE	Nature-based Solutions for	Ecological a	nd Public Health

CORE PRINCIPLESEmploying Nature-Based SolutionsDEMONSTRATEDPursuing innovative, transferable approaches

DESCRIPTION

The Mendon Town Hall campus includes the new police station building and the historic Town Hall and old Taft Public Library buildings with minimal landscaping and mostly asphalt. This grant funded the first year of a two-year project. Year one included the design and permitting of green stormwater infrastructure (GSI) using a suite of nature-based solutions to manage, treat, and infiltrate stormwater runoff using practices such as rooftop runoff capturing planters, bioretention, pervious pavers, infiltration systems and depaving a portion of the parking lot. The second year was the construction phase, and this was funded by the Town of Mendon.

The project will showcase the Low Impact Development (LID)/GSI techniques used and educate local businesses, residents and area towns through workshops, signage, brochure/QR code tour and a website.



Searles Pond/Bloody Brook Corridor Resilience Plan



Methuen FY22



Learn More:

<u>StoryMap</u>

AWARD	\$80,250	MATCH	\$27,002

PROJECT TYPE Assessment & Capacity Building

CORE PRINCIPLES
DEMONSTRATEDUtilizing regional solutions toward regional benefit
and achieving broad and multiple community
benefits

DESCRIPTION Joint planning effort of Gateway cities Methuen and Lawrence with Merrimack River Watershed Council & Groundwork Lawrence to set implementation agenda for mitigating flooding impacts of climate change in environmental justice corridor.





Millis Flood Resiliency Plan

Millis FY22

Learn More:

- Millis Flood Resiliency Plan Downtown Project Area
- Millis Flood Resiliency Video

AWARD	\$170,000.00	MATCH	\$57,000
PROJECT TYPE	Planning		

CORE PRINCIPLES Achieving broad and multiple community benefit

DEMONSTRATED Furthering a community identified priority action to address climate change impacts

DESCRIPTION Millis originally set out to look at the threat of storm water flooding on a town-wide basis. During the investigation, two issues came to the forefront: 40A/3A required rezoning would create greater density in the Town's center and the effect of beaver dams on the built environment. The project was amended to shift the project's emphasis to address these issues. The project also complements the Charles River Watershed Assn.'s river flood study, which Millis is also currently participating in.

Building Resilience Across the Charles River Watershed

Natick FY22

Learn More:

Natick Watershead Resilience Project Website

AWARD	\$233,085.00	MATCH	\$84,037.00
PROJECT TYPE	Planning project		

CORE PRINCIPLES DEMONSTRATED

Employing Nature-Based Solutions; Utilizing regional solutions toward regional benefit

Twenty communities in the Charles River DESCRIPTION watershed partnered to develop initial flood reduction recommendations and plans, based on the results of future flooding simulations from the Charles River Flood Model. Additionally, over 50 flood mitigation project sites were identified across the watershed and 3 were designed and modeled.

MetroWest Climate Equity Project

Natick, Framingham and Ashland FY22-23

Learn more:

MetroWest Climate Equity Project Website

AWARD	\$127,150	MATCH	\$45,600
PROJECT TYPE	Planning		

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

- Conducting robust community engagement and supporting strong partnerships with EJ populations
- Built lasting relationships with EJ neighborhoods in collaboration with Community Climate Liaisons
- Co-designed data collection with Community Liaisons to identify EJ climate priorities
- Held trainings and developed tools to increase municipal staff's knowledge of climate equity and improve capacity to engage EJ residents

NEWS

What's needed to fight climate change? Equity project liaisons aim to find out

MetroWest Daily News

Published 4:56 a.m. ET May 20, 2022 Updated 12:23 p.m. ET May 20, 2022

For Roxanna de la Rosa, talking to local residents about climate change is really exciting and she does it whenever she has a chance in both English and Spanish, the latter of which is her first language.

One might see her volunteering for, or talking about the so-called MetroWest Climate Equity Project at the grocery store, laundromat or even as she gets her nails done.

Green Infrastructure Master Strategy and Implementation Roadmap

MUNICIPAL VULNERABILITY Preparedness

New Bedford FY22

AWARD

Learn More:

- Public Presentation May 2022
- <u>NB Green Infrastructure Project Website</u>

\$432,440 MATCH \$156,830

PROJECT TYPE

Planning, Assessments, Capacity-Building, and Regulatory Updates

CORE PRINCIPLESAssessing the feasibility of a specific climateDEMONSTRATEDadaptation strategy

DESCRIPTION Evaluated city-wide G.I. opportunities and developed recommendations and BMPs to:

- Reduce volume of stormwater discharge;
- Improve stormwater quality; and
- Equitably reduce urban heat island impacts

Northbridge Carpenter Road Causeway Alternatives Analysis and Source Water Green Infrastructure Protection Plan

Northbridge FY22

Learn More

Northbridge Green Infrastrucutre Project Website

AWARD	\$ 145,100	MATCH	\$ 50,933
PROJECT TYPE	Planning, Assessments,	and Regu	ulatory Updates

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

Employing Nature-Based Solutions (NBS); Conducting robust community engagement

- Gathered and incorporated meaningful project input from residents
 - Designed 5 green infrastructure concept plans
 - Devised 3 alternatives to the Carpenter Causeway

Traphole Brook Flood Prevention and Stream Restoration Project

Norwood FY22-23

Learn More:

Norwood Traphole Brook Project Website

AWARD	\$991,967	MATCH \$335,781
PROJECT TYPE	Construction and On-th	e-Ground Implementatior

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

DESCRIPTION Worked with landowners and the Division of Ecological Restoration to remove an at-risk dam, removed 5000 tons of sediment which threatened downstream apartments in the event of dam failure.

Restored nearly 500 feet of stream channel, removing a physical, thermal, and habitat barrier to fish passage. Connected 2 distinct Brook Trout populations

Community engagement included education on biodiversity and opportunities for green infrastructure.

Peabody – Salem Resilient North River Corridor & Riverwalk Project

City of Peabody FY22

Learn More

Peabody Resilient North River Project Website

AWARD \$150,000 MATCH \$58,100

PROJECT TYPE Design and Permitting

CORE PRINCIPLES DEMONSTRATED Furthering a community identified priority action to address climate change; utilizing climate change data for proactive solution; employing nature-based solutions (NBS); utilizing regional solutions toward a regional benefit; pursuing innovative solutions, transferable approaches.

- DESCRIPTION
- Collaboration between two communities, City of Peabody and City of Salem, to increase resilience in both communities against climate change by addressing riverine and coastal flooding.
- Assessed potential streambank/slope restoration and stabilization alternatives, including NBS, along North River in the project area to accommodate flood and storm waters, and provide protection against further riverbank erosion and critical infrastructure in the target area.
- Advanced greenway development of a "trail gap" in the region's greenway network, Border to Boston Trail, to create a 1.6-mile pedestrian/bicycle alternative mode of transportation connection between Peabody Square and Salem MBTA Train Depot.

Sucker Brook Continuity Restoration Project

Pepperell FY22-23

Learn More:

- Sucker Brook Continuity Restoration Project
- Project Photos

AWARD	\$840,142	MATCH	\$206,238
PROJECT TYPE	Construction and On-th	e-Ground Ir	mplementatior

CORE PRINCIPLES DEMONSTRATED Employing Nature-Based Solutions; Utilizing climate change data for a proactive solution

- DESCRIPTION
- On-the-ground construction phase to remove a dam and replace 2 undersized, failing culverts on Sucker Brook, a cold-water fishery of high ecological value
- Will improve ecological conditions and water quality/quantity, remove public safety hazards, eliminate flooding risks, enhance climate resiliency
- Aiming to restore stream continuity & mimic the natural stream processes with larger culverts and restore free-flowing conditions

Subterranean Resiliency: Predicting, Assessing and Mitigating Saltwater Intrusion

Plymouth FY 22-23

AWARD

- Learn More:
- <u>Pine Barrens Alliance</u>
- One Water Living Observatory
- Project Facebook Page

MATCH \$169,127.25

PROJECT TYPE Planning and Capacity Building

\$304,915

CORE PRINCIPLESPursuing Innovative, Transferable ProcessesDEMONSTRATEDBuilding Community Capacity for Climate Resilience

DESCRIPTION

Subterranean Resilience: Predicting, Assessing and Mitigating Saltwater Intrusion is a first-of-its-kind evaluation of the community's susceptibility to saltwater intrusion. Researchers from the UMass-Amherst School of Earth and Sustainability, and a dozen local non-profit environmental and civic organizations undertook a parallel program to raise awareness of climate resiliency issues regarding the water quality of Plymouth's sole source aquifer. The grant also allowed for the creation of two legacy elements: the establishment of a community water testing station providing low or no cost testing to residents, and the creation of 'OneWater,' an ongoing digital chronicle of local water-related projects and programs. (https://onewater.livingobservatory.org/projects)

READ UP A STORM!

A community read on climate disruption and water

Add your voice to the conversation

https://tinyurl.com/stormreadup

Gibson Park Resiliency and Recreation

Revere FY22

Learn More:

Revere Gibson Park Project Website

AWARD	\$153,955.72	MATCH	\$51,318.57
PROJECT TYPE	Design + Permitting		

CORE PRINCIPLESUtilizing climate change data for a proactiveDEMONSTRATEDsolution; Employing nature-based solutions

DESCRIPTION The project combines resiliency with recreational assets to design an open space that will create stronger resiliency introducing bioswales, rain gardens, marsh restoration, and a living shoreline with 500K gal of sub surface storm water storage while increasing the practical recreational use of the space with a multipurpose field, tennis courts and raised walkways.

Resilient Design Solutions for Historic Sandwich Village

Sandwich FY22

Learn More:

• <u>StoryMap</u>

\$79,789

- Important Spots Map
- Adaptation Map

MATCH \$51,275

Flooding Map

PROJECT TYPE Planning, Assessments, Capacity Building, and Regulatory Updates

CORE PRINCIPLES DEMONSTRATED Utilizing climate change data for a proactive solution

DESCRIPTION

AWARD

- Community-wide vulnerability assessment
- Dynamic adaptation pathways planning
- Business resilience guide
- Concept plans and renderings for municipal demonstration projects, including road realignment, salt marsh migration, and protective landscape berm

Saugus Climate Adaption and Resilience Plan

Saugus FY22

Learn more:

Saugus Climate Adaption and Resilience Plan

AWARD	\$75,000	MATCH	\$25,000

PROJECT TYPE MVP Action Grant

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

Climate Adaption-understanding climate change impacts; Climate Resiliency-preparing for identified impacts through nature based solutions

- Assess risk and vulnerability due to Saugus' top hazards identified in the planning process (flood, heat, severe storms, and drought)
- Examine and communicate how the impacts of these hazards can be reduced through investment in adaptation
- Recommend next steps to reduce risk and build resilience in Saugus

Regulatory Update of Parking Requirements

Shrewsbury FY22

Learn More:

Project Website

AWARD	\$82,501.60	MATCH	\$26,870.37
PROJECT TYPE	Review and Draft o	f Shrewsbury	Zoning Bylaw

CORE PRINCIPLESAchieving broad and multiple community benefitsDEMONSTRATEDPursuing innovative, transferable approaches

DESCRIPTION Comprehensive regulatory parking update employing innovative approaches to reduce overall impervious area, and minimize impacts from pavement

Planimetric Impervious Surfaces Mapping Project

DESCRIPTION

Learn More:

Southborough Impervious Surfaces Mapping Project Website

AWARD	\$22,875.00	MATCH	\$7 <i>,</i> 625
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- PROJECT TYPE Planning, Assessments, Capacity-Building, and Regulatory Updates
- **CORE PRINCIPLES DEMONSTRATED** Utilizing Climate Change Data for a Proactive Solution; Pursuing Innovative, Transferable Approaches
 - Creation of GIS data layer for all impervious surfaces
 - Understand the amount of impervious per parcel and compare to different use types
 - Analyze impacts of impervious surfaces in relation to stormwater discharges to wetland resources

Queensville Dam Removal Feasibility Study & Buttery Brook Watershed Enhancement

South Hadley FY22

Learn More:

Watershead Enhancement Project Website

AWARD	\$125,000	MATCH	\$40,750
PROJECT TYPE	Planning, Assessments, Cap Updates	acity Buildi	ng, and Regulatory
ORE PRINCIPLES	Employing Nature-Based monitoring project succ project into the future	d Solutions ess and ma	, Committing to aintaining the

DESCRIPTION

• Eliminate the jurisdictional status and hazard threat associated with Queensville Dam by reducing the impounded area below jurisdictional thresholds

• Address water quality issues in the existing impoundment

• Create an improved Conservation Area with benefit to local residents, including the adjacent school, which is utilizing the area as a living laboratory, as well as adjacent neighborhood residents

• Facilitate management of stormwater in the restored impoundment through the use of nature-based solutions (e.g., wetland step pools) and thereby reduce downstream flooding risk and erosion problems along Buttery Brook

Springfield "Trees and People"

Springfield FY22

Springfield MVP Initiative | (regreenspringfield.org)

Community Organization Database

AWARD \$3,587,953

PROJECT TYPE

Community Outreach and Education, Construction and Implementation, Nature-based Solutions

CORE PRINCIPLES DEMONSTRATED

DESCRIPTION

- Employing Nature-Based Solutions; Improving Community Understanding of Housing Issues
- Constructed sate-of-the art Forestry Operations Center.
 - Increase neighborhood council awareness and participation
 - Create a database of grassroots and community organizations
 - Rental insurance increasing public awareness.

Stormwater Analysis for Nature-Based Solutions and Community Co-Benefits

MVP Municipal Vulne Preparedness

Tewksbury FY22

Learn More:

- Tewksbury Stormwater Nature-Based Solutions Project
 Website
- Project ArcGIS Story Map

AWARD

\$193,935

MATCH \$64,646

PROJECT TYPE Planning, Assessments, Capacity Building, and Regulatory Updates

CORE PRINCIPLES DEMONSTRATED

- Employing Nature-Based Solutions; Achieving Broad and Multiple Community Benefits
- DESCRIPTION
- Five sites across four parcels were identified as sites where nature-based solutions to respond to flooding could be implemented.
- The sites identified as possible candidates for naturebased solution climate resiliency planning are ones that serve some of our most climate vulnerable populations.
- As a result of this project, far more people in Tewksbury are engaged in the ideas of flooding, the causes, and how we can respond as a municipality.

Bringing Climate Resilience to Beaver Brook

Waltham FY22

CC

Learn More:

Waltham MVP Grant Program

AWARD	\$273,562.50	MATCH	\$120,980.63
PROJECT TYPE	Design and Permitting		
RE PRINCIPLES	Furthering a community	identified	priority action t

'n address climate change impacts; Utilizing climate change data for a proactive solutions DEMONSTRATED

This two-year project designed and initiated DESCRIPTION permitting for a suite of flood mitigation actions:

- Stream restoration and habitat creation
- Reconnection of floodplain
- Sediment and organic debris removal

Figures visualize the 2D model results for the 2-year 24-hour rain event in present day (left) and 2070 (right) under a no-action scenario.

Equity-Based Community Greening Program

Watertown FY22

Learn More:

Watertown Equity-Based Community Greening Project Website

AWARD \$	94,240	MATCH	\$47,378.19
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PROJECT TYPE Planning and Design

CORE PRINCIPLES DEMONSTRATED

- Employing nature-based solutions and Increasing equitable outcomes for climate-vulnerable communities
- DESCRIPTION
- Utilized data to develop map of climate-vulnerable areas of Watertown
- Identified 3 potential Green Streets and other streets suitable for tree trenches; 75% designs
- Conducted general and targeted engagement with public and abutters on benefits of GSI and solicited input on Green Streets designs

Herring River Restoration Project, Phase 1 Final Construction Plans and Bid Specifications

Wellfleet FY22

Learn more:

- <u>Town of Wellfleet Project Website</u>
- Friends of Herring River

AWARD	\$589,960	MATCH	\$237,171.51
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PROJECT TYPE Design and Permitting

DESCRIPTION innovative, transferable approaches; Achieving Broad and Multiple Community Benefits

CORE PRINCIPLES DEMONSTRATED

- Phase 1 includes construction of all infrastructure and mitigation measures needed for full tidal restoration of over 1,000 acres of degraded marsh
 - Completed final (100%) design for 5 Project elements (*incl.* Chequessett Neck Road Bridge water control structure) and developed Project Manuals (*incl.* construction-level design plans, specifications, and contract/bid documents)

Resilient Westhampton Master Plan and Open Space and Recreation Plan

Westhampton FY22-23

Learn More at:

Westhampton Open Space and Recreation Project Website

AWARD	\$237,516.00	MATCH	\$77 <i>,</i> 550

- **PROJECT TYPE** Planning, and Assessments
- **CORE PRINCIPLES** Conduct robust community engagement

DEMONSTRATED Furthering a community identified priority action to address climate change impacts

DESCRIPTION Community visioning and resilience planning project included preparation of a resilience-focused Master Plan and Open Space/Recreation Plan; diversity, equity, and inclusion training workshops for staff, boards, and residents; youth climate education projects at Hampshire Regional High School with student climate resilience project exhibits at the annual Westhampton Fall Festival.

Belle Isle Marsh: Evaluating Nature Based Solutions to Protect Abutting Communities and Critical Shorebird Habitat from Coastal Inundation

Winthrop FY22-23

Learn More:

Winthrop Coastal Inundation Project Website

AWARD

\$145,307

PROJECT TYPE

Planning, Assessments, Capacity Building, and Regulatory Updates

Community Advisory Group meets with consultant Woods Hold Group to discuss Belle Isle Marsh, habitat diversity, environmental and anthropogenic stressors, and opportunities for restoration.

CORE PRINCIPLES DEMONSTRATED

Utilizing regional solutions toward regional benefit; Utilizing climate change data for a pro-active solution; Increasing equitable outcomes for and supporting strong partnerships with Environmental Justice (EJ) Populations and Climate Vulnerable Populations; Employing Nature-Based Solutions (NBS)

MATCH \$54,500

DESCRIPTION

Belle Isle Marsh is the largest remaining salt marsh in Boston Harbor, designated an Area of Critical Ecological Concern (ACEC). The marsh is surrounded by the low-lying, densely developed communities of East Boston, Revere, and Winthrop. Past flooding has damaged both public and private infrastructure, and has impaired critical services, such as public transportation and evacuation routes. All the while, the marsh is suffering increasing environmental stressors, negatively impacting marsh health and longevity. Climate change threatens to exacerbate such risks to both community and marsh. This project emerged from a recognition by stakeholders of the necessity for addressing near-term climate vulnerabilities through regional collaboration.

This Climate Vulnerability Assessment investigates community risk to sea level rise and storm flooding and opportunity for nature-based strategies to minimize coastal flood damage to Winthrop, East Boston, and Revere and, where possible, maximize the habitat value of Belle Isle Marsh Reservation.

Wrentham Low Impact Development Regulatory Integration and Green Infrastructure Master Plan

Wrentham FY22

Learn More:

Wremtham Green Infrastructure Project Website

AWARD	\$ 113,344	MATCH	\$ 36 <i>,</i> 895	
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PROJECT TYPE Planning, Assessments, and Regulatory Updates

CORE PRINCIPLES DEMONSTRATED Employing Nature-Based Solutions (NBS); Conducting robust community engagement

- DESCRIPTION •
- Gathered and incorporated meaningful project input from residents
 - Designed 11 green infrastructure concept plans
 - Drafted a new Stormwater Bylaw and Regulations

