

MAIN STREETS REGIONAL POCKET FORESTS PILOT PROJECT
FY22 Municipal Vulnerabilities Preparedness (MVP) Program Action Grant

DETAILED PROJECT DESCRIPTION

INTRODUCTION

The purpose of this project is to implement a Nature-based Solution (pocket forests) through a robust community engagement process that focuses equitable outcomes for Environmental Justice (EJ) and Climate Vulnerable (CV) populations, connecting more people with the benefits of natural systems. This project implements community-identified MVP Climate Resilience priority actions for the Town of Ayer and the Devens Regional Enterprise Zone (Devens), consistent with MVP Program Core Principles and referencing appropriate climate change data, by planning for and designing community pocket forests and then pilot planting a single location. This process structure allows the communities to pilot workforce training and training in project monitoring before moving to a larger scale set of pocket forest implementations. Participation by, and benefits for, EJ communities is integral, and discussions with EJ organizations, such as PACE (People of Ayer Concerned about the Environment) are underway. The project will identify key EJ leaders who will actively contribute to project planning, decision-making and outreach to the broader EJ community.

These communities are in an area of the State where development pressure is high, and also in an area where historical land uses and land use practices have shaped the communities in distinctive ways. For example, Devens carries the stamp of a midcentury army base in which strict control extends to landscapes. New industrial developments persist in that style - which includes select ornamental trees, vast lawns, and heavily sheared ornamentals. In a different way, Ayer embodies the legacy of a freight rail town, including strip mall development and tenement housing, where any landscape which is allowed to persist is dominated by pioneer and often invasive growth. These communities are exceptional but not unique.

Through this project, these communities have the ability to change both internal and external expectations of, and visions for, development patterns, moving toward an Eco-City model that will bring wide benefits. Often, the place for this to occur is in the byways and margins of the community, showing the value these spaces could be providing.

POCKET FOREST DESIGN

During the 2022-2023 fiscal year this project team proposes to plan and design pocket forests in Ayer and Devens through extensive EJ and CV community involvement, including an education and engagement effort that incorporates implementation of a pilot pocket forest. During the 2023-2025 fiscal years, we anticipate applying for MVP funds for a two-year grant that would allow full implementation of pocket forest construction and planting plans in multiple locations and with sites in both communities.

This regional Nature-based Solution project will help integrate nature into the built environment to achieve a wide range of co-benefits, such as increasing ecosystem carbon sequestration; increasing public mental and physical health and access to green spaces; increasing biodiversity and soil health,

reducing air and water pollution, improving stormwater management, in addition to providing localized cooling (reduced urban heat island impacts), absorbing stormwater and flooding, and reducing storm damage and drought impacts. Pocket forests mimic the processes and structure of natural forests and are much more than a tree planting. Well place forests are strategically located on ecologically degraded sites where they will enhance habitat connectivity and benefit EJ and climate vulnerable communities, thus enhancing ecological, social and spiritual restoration and resilience for these communities. The proposed 2022-2023 pocket forest planning project would entail a series of community meetings, site walks and a community planting day at the pilot pocket forest site. A process of training local community members in both forest planting and maintenance will be developed as part of this project, with attention to Climate Vulnerable community members and youth. As noted above, it is anticipated that a follow-on MVP proposal would be submitted for full implementation of multiple pocket forest plantings in Ayer and Devens in the 2023-2024 fiscal year.

Site Assessment

The consulting team would conduct desktop analysis and field assessments of existing conditions for each of the community-identified pocket forest locations and their surrounding areas. Existing condition assessments would include evaluation of existing vegetative species, presence and extent of invasive species, ecosystem structure, soil type, soil profile, and soil testing. Nearby healthy forests would be evaluated as reference sites and as potential sources for small extractions of soil to “inoculate” pocket forest soils with native soil microbes and invertebrates.

Design

The consulting team would work with community members to design pocket forest plans and prepare planting lists of climate-resilient and native species for each site, including the pilot pocket forest site, and would conduct a permit assessment to determine whether any permits were required. Any necessary permits would be prepared and submitted during the 2022-2023 year, within a timeline to obtain the necessary permit(s) prior to submission of the FY2023 construction MVP grant application. It is anticipated that pocket forest sites would be chosen to avoid or minimize permitting to the greatest extent possible.

Pilot Project Construction

One pilot project site would be selected. The site for the pilot project site would be one where no permit applications are required, and one that is relevant and accessible to EJ/CV community members. As part of the community involvement, education and engagement for the project, the pilot project would be constructed in the spring of 2023 with significant participation by community members. The pilot project would be an opportunity to test and assess means and methods for constructing pocket forests in these two communities, so that the construction and monitoring of the full suite of pocket forests in the 2023-2025 fiscal years would be enhanced.

Monitoring

Working with community members, the consulting team will develop a long-term monitoring and maintenance plan, along with training and mechanisms for implementation over a five-year period following completion of the pocket forests.

Guide to Pocket-Forest and Nature-based planting design in Massachusetts

Through development and implementation, we will advance and document current best practices for these representative pocket forest sites. At the end of the project, our team will provide advanced guidelines to support successful development of pocket forests and Nature-based plantings on similar landscapes throughout the state.

EJ & CV CENTERED PUBLIC INVOLVEMENT, EDUCATION AND COMMUNITY ENGAGEMENT

Both Ayer and Devens include people classified as “EJ populations”. The combined legacy of industrialization and economic marginalization has resulted in intense concentrations of environmental degradation including polluted land, air, and waterways around and within the neighborhoods where people of color and other low-income families are most concentrated. This project aims to restore degraded environments where these environmental injustices exist by planting carefully crafted pocket forests in community-identified locations. These pocket forests have many co-benefits besides enhancing resilience and storing carbon, including improving air quality, reducing soil contamination over time, providing community green space, and creating opportunities for participation and agency. Project organizers have been in touch with People of Ayer Concerned about the Environment (PACE), United Native American Cultural Center (UNACC) and representatives of local Indigenous Peoples. Their participation will help ensure that EJ and Indigenous community members and their concerns/viewpoints are integral to the project.

Community members will be invited to participate in site selection, forest design, training in planting and maintenance, and ongoing monitoring of impacts of the pilot pocket forest. This level of participation prepares the municipalities and resident participants for the larger pocket forest implementation that would occur as a subsequent MVP project.

This approach is innovative and transferable, and the project will include development of education and outreach materials and activities, including a project website with a data viewer, educational material, and StoryMaps linked to QR codes at the pocket forest sites, as well as training modules for planting and care of pocket forests and monitoring their ongoing health. Integration of Native American history, traditional knowledge, and stories will be sought through collaboration with local and/or regional Native Americans (such as with the United Native American Cultural Center).