

Nature-Based Solutions *for* Three Municipalities in Apple Country

PROJECT SUMMARY

The [Apple Country Natural Climate Solutions Project](#) (ACNCSP) encompasses three municipalities - the Town of Bolton (Bolton), the Devens Regional Enterprise Zone (Devens), and the Town of Harvard (Harvard) - regionally known as Apple Country. The collaboration serves to enhance Apple Country's climate resilience by identifying healthy ecosystems to conserve in the region, and identifying locations that are ripe for ecological services restoration and management.

Rendering of potential Nature-based solutions in the vicinity of Harvard Town Center (page 174-175 of ACNCSP Report, where you can also see the picture without the rendering)



LOCATION

Bolton, Harvard, Devens, MA

CLIMATE HAZARD ADDRESSED

- Change in precipitation
- Rising temperatures

ACTIONS/TECHNIQUES

- Community engagement
- Regional planning

CO BENEFITS

- Habitat creation
- Local climate regulation
- Air and water cleansing
- And many other ecological services

PROJECT STATUS

Report suggesting local project opportunities complete. Implementation is left at the discretion of individual towns.

SCALE/SIZE

Regional planning study; three communities working together

COSTS

Cost of implementation varies by project. see [Report Appendix](#) for specific cost projections

FUNDING

\$250,000 MA Municipal Vulnerability Preparedness Grant
\$92,000 local in-kind match

PROJECT PARTNERS

Town of Bolton, Town of Harvard, Devens Enterprise Commission, BSC Group, Regenerative Design Group, Linnean Solutions, Woodwell Climate Research Center

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Nature-Based Solutions Spectrum

Nature-based solutions can be used at any scale, and include conservation of existing natural areas such as forests or wetlands; restoration of destroyed or degraded ecosystems; and incorporating nature into the built environment.

CONSERVE EXISTING NATURAL AREAS

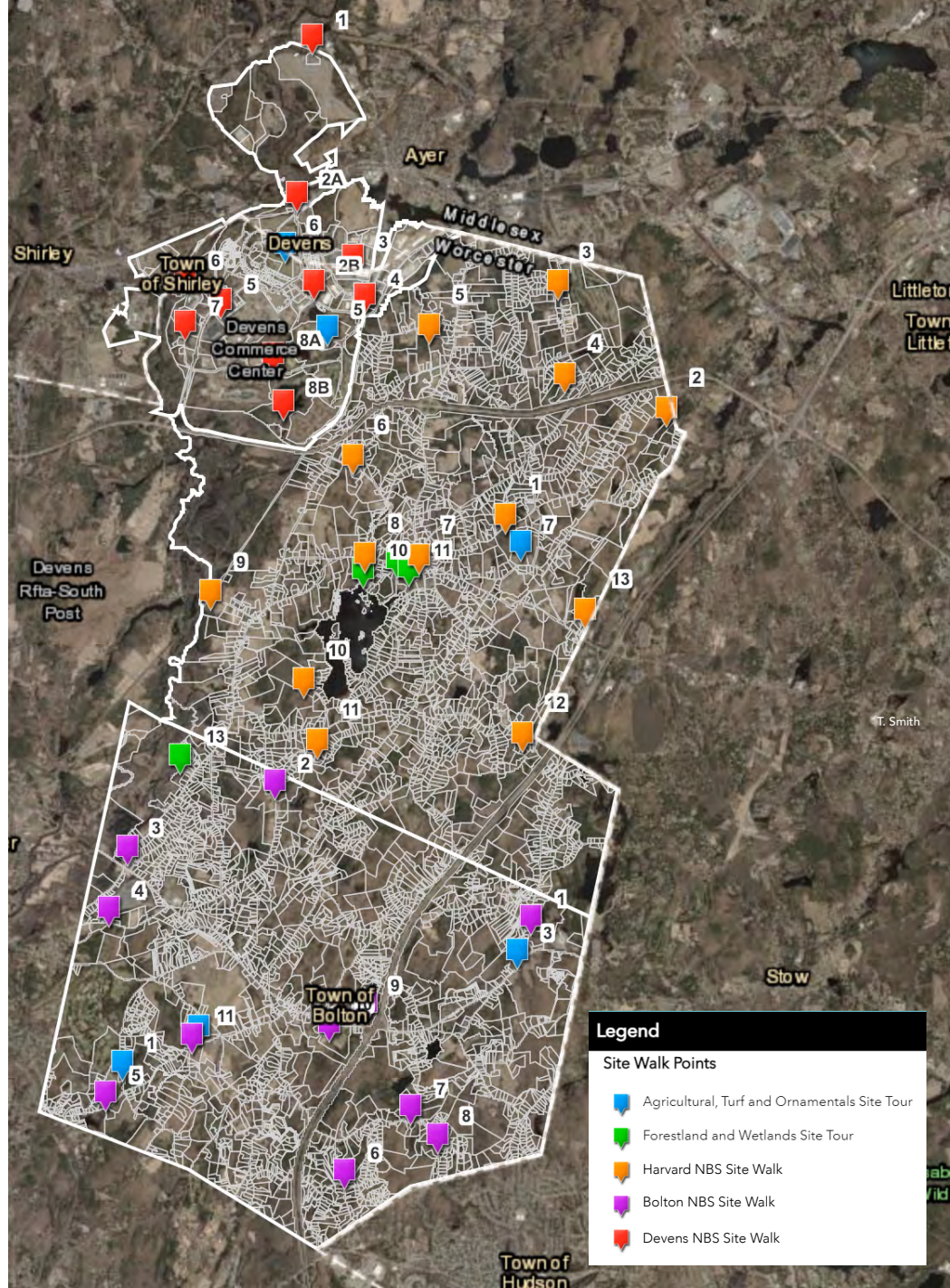
RESTORE OR ENHANCE ECOSYSTEMS

INCREASE NATURAL ELEMENTS IN THE BUILT ENVIRONMENT

The three towns are working to “deliver nature-based solutions that will increase the resilience of our communities and ecosystems” (ACNCSP Report, 2021, p.5). They identified and evaluated locations in the region that could benefit from nature-based solutions and recommended a set of nature-based solutions projects. They also used Geographic Information Systems (GIS) to map the Apple Country region to understand the locations that are most susceptible to climate hazards. The three towns devised a set of recommendations for the Apple Country region, including town-specific suggestions for project scopes and considerations.

The recommendations were classified into four categories: Protect, Restore, Manage Better, and Develop Better. Examples of regional recommendations included using green infrastructure, planting trees in impervious areas to reduce the urban heat island effect and improve water drainage, work with farmers to encourage agroforestry practices, and update wetlands regulations and bylaws to support nature-based solutions moving forward.

Regional collaboration is essential for building climate resilience because climate change impacts, such as flooding, do not follow municipal boundaries. This approach can be especially helpful for smaller towns to leverage resources and share funding.



The project team explored every corner of the communities to identify a wide range of opportunities to protect and restore ecosystems, as well as better manage and develop the landscape.

This resource was developed in collaboration with the Mass ECAN-affiliated Nature-Based Solutions work group, written by P. Sheinbaum and edited by E. Gildesgame, H. King, M. Ocana, and G. Rabinikin. ©February 2023.

REFERENCES

- Appendix 1: Report on Public Involvement, Community Engagement and Outreach for this Project. (2021). https://3673b23c-7171-47f0-b91c-8baa749785c4.filesusr.com/ugd/29afe1_109bfbe9d8834b979d603cd2a58fd16.pdf
- Appendix 9: Apple Country Project Survey Results. (2021). https://3673b23c-7171-47f0-b91c-8baa749785c4.filesusr.com/ugd/29afe1_f1b3d7e89991413cb20e92a4027b0d03.pdf
- Apple Country Natural Climate Solutions Project Report. (2021). https://3673b23c-7171-47f0-b91c-8baa749785c4.filesusr.com/ugd/29afe1_fc7e8fb579b84313bfb74d4469564e06.pdf

ADDITIONAL RESOURCES

- [See our other Nature-Based Solutions case studies](#)
- [Mass ECAN Nature Based Solutions Resource](#)
- [Municipal Vulnerability Preparedness Program Nature Based Solutions Toolkit](#)