

# Hagerty Consulting

## Nature-Based Solutions



**Nature-based solutions (NBS)** are sustainable planning, design, environmental management, and engineering practices that weave natural features or processes into the built environment to promote climate adaptation and resilience. They can help reduce the loss of life and property from some of our nation's most common hazards.

For the past two years, the Building Resilient Infrastructure and Communities (BRIC) and Flood Mitigation Assistance (FMA) programs have prioritized incorporating NBS in mitigation projects. For the BRIC Fiscal Year (FY) 2021 funding, 21 of the 53 selected competitive projects included a nature-based or a green infrastructure solution, as reported by the Federal Emergency Management Agency (FEMA). Below are three examples of communities incorporating NBS into mitigation projects.



### [Municipal Infrastructure Mitigation | Madison, WI](#)

**Mitigation measures:** Various green infrastructure interventions to mitigate flood risks

**Project benefits:** Reduce flood risk to the city, increase stormwater storage, and recreational opportunities



### [Inland Coastal Flood Resiliency Project | New Haven, CT](#)

**Mitigation measures:** Increase storm sewer capacities, nature-based coastline protection, and drainage solutions

**Project benefits:** Reduce flood risk to critical transportation infrastructure; increase protection of coastal environment; benefits to underserved communities



### [Nature-Based and Wildfire Retrofitting for Climate Resiliency | Nevada County, CA](#)

**Mitigation measures:** Retrofitting residential homes, establishing defensible space, and vegetation management using habitat appropriate methods

**Project benefits:** Protection of homes and critical infrastructure in a high fire risk area, community education of fire risk


## WHO IS HAGERTY?

Hagerty Consulting, Inc. (Hagerty) is a full-service consulting firm that helps clients prepare for, respond to, and recover from disasters.

Hagerty has supported local, tribal, state, government and private sector clients through every major disaster since 2001.

We blend exceptional management consulting skills with the industry's deepest programmatic expertise to produce innovative strategies and results for our clients.

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## Selecting an NBS Project

Would you like to incorporate green solutions into your community's mitigation strategy but do not know where to start? Hagerty recommends that subapplicants engage key stakeholders, including local agencies, non-profits, private partners, and community organizations, in project scoping to identify a community's critical hazard vulnerabilities and begin to design innovative solutions incorporating nature-based approaches in reducing hazard risk. Project scoping funds provide communities with seed funding to collect data and conduct feasible, technical, and environmental studies, to develop competitive and viable mitigation projects. The criticality of project scoping funds is gaining traction across the country. For communities with limited staff and monetary resources, project scoping provides a path to identify hazard risks, design innovative green solutions, and ultimately develop competitive and cost-effective mitigation solutions.

### TIPS FOR NBS PROJECT SCOPING

- Define hazard to be mitigated
- Screen for options that fit site characteristics and local needs
- Prioritize solutions that offer the greatest benefits to the community and are eligible, feasible, and cost-effective
- Engage private, public, and community partners
- Consider FEMA HMA funding priorities

## Types of NBS

NBS can help reduce the loss of life, property, and disruption to critical lifelines resulting from some of our nation's most severe natural hazards, including flooding, storm surge, extreme heat, wildfire, and drought. As climate change and rising sea-levels amplify these hazards, NBS helps communities adapt and can provide more value than a single-purpose gray infrastructure project. FEMA published a [website](#) to discuss the varied benefits and types of NBS, some of which are listed below.

- Land Conservation
- Green Roofs
- Greenways
- Green Streets
- Stormwater Parks
- Living Shorelines
- Rain Gardens

## HAGERTY CAN HELP

Hazard Mitigation Program Support May Include:

- ✓ Project scoping
- ✓ Plan review for project development
- ✓ Eligibility and feasibility reviews
- ✓ Benefit-Cost Analysis (BCA) technical support
- ✓ BRIC and FMA webinars or workshops
- ✓ Technical and qualitative scoring rubric support
- ✓ Request for Information (RFI) development and support
- ✓ Personalized technical assistance to applicants and subapplicants
- ✓ Sub-application development and review
- ✓ FEMA Grant Outcomes (FEMA GO) system support

To learn more about the innovative and customized solutions Hagerty can provide to your organization, contact:



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