

V. Opportunities to Integrate and Advance NBS Programs

Section 12(a) of [P.A. 25-125](#) requires DEEP to evaluate how to integrate and advance NBS in Connecticut to help our state meet the massive challenges of climate change, biodiversity loss, and restoring ecosystem resilience. This Chapter is dedicated to identifying programs and approaches that will advance NBS going forward.

Recent swings in federal policy and related funding mechanisms related to programs associated with climate- and nature-based solutions are good reminders that future funding for current priorities may never fully be “secure.” The abrupt shift in priorities from the Biden Administration to the Trump Administration – in particular the funding reductions to programs of the Inflation Reduction Act and Bipartisan Infrastructure Law – may result in some NBS programs listed in this report only being short-term funding opportunities.

In addition to continuing current NBS programs/investments discussed in [Chapter III](#) and [Chapter IV](#) and perhaps restoring federal funding in the future for some of these priorities, we also include opportunities for advancement of efforts that either have been supported through recent legislation or may truly be new opportunities for consideration in future budget cycles.

A. Review and Integrate Existing Resilience Funding and Financing Mechanisms

Given the cross-sector and growing scale of impact of climate change on our state, the type of financing needed to help Connecticut better prepare for, respond to, recover from, and mitigate against disasters while ensuring economic stability and safeguarding public welfare will need to be diverse, distributed, and deliberate. One of the critical success factors would be the integration of climate change projections alongside the identification of the appropriate conditions, siting, and design of nature-based solutions as an adaptation tool.

B. Develop a Community of Practice within State Agencies for NBS

There is an opportunity to consider integrating NBS across state agency operations. Certain common functions across state agencies might be good places to start and the 10 NBS best practices used in this program evaluation can be a helpful guide for different agencies to think through the connections as they:

- Review permitting requirements
- Review financing mechanisms
- Determine appropriateness and feasibility frameworks
- Deliver technical assistance
- Incorporate NBS considerations into agency practices and plans

C. Pilot Resilience Improvement Districts

[Public Act 25-33](#) authorized new powers for municipalities to fund resilience infrastructure. These financing arrangements are built on top of the existing tax incremental financing vehicles in state statute with a focus on resilience. These Resilience Improvements Districts (RIDs) support cross-

boundary arrangements, prioritize nature-based solutions and ecosystem services, protect existing housing, and require demonstrable resilience and economic benefits. The CT Green Bank is working with the Resilient Cities Catalyst of pilot RIDs in Connecticut to identify opportunities and constraints for the establishment and administration of such financing mechanisms.

D. Restore Support to Discontinued NBS Programs

As noted earlier, several NBS-related programs had funding for grants and/or staff support that was discontinued as part of a shift in priorities and cutbacks to the federal Inflation Reduction Act and/or Bipartisan Infrastructure Law. In addition, there are other efforts that were explored as pilots for which future funding sources may not yet be identified.

Below we identify the NBS programs in this report for which federal funding has either been eliminated, or may have additional opportunities for bonding investment:

CT DEEP NBS Programs	Funding Source
Outdoor Recreation Legacy Partnership	Federal: Land and Water Conservation Fund/National Park Service
Urban Forest Equity Grant/Trees for Communities	Federal: Inflation Reduction Act/USDA Forest Service
Urban Forested Natural Areas and Riparian Corridor Restoration Grant	Federal: Bipartisan Infrastructure Law & Inflation Reduction Act/USDA Forest Service

CT Department of Agriculture NBS Programs	Funding Source
Climate Smart Agriculture & Forestry Grant	State special allocation

E. Expand Natural and Working Lands Modeling in GHG Inventory

In 2025, DEEP included “natural and working lands” (NWL) as part of the Greenhouse Gas Inventory report for the first time.⁶⁰ “Natural and working lands” are a nationally recognized inventory category that has some overlap with, but is separate and distinct from, nature-based solutions. The GHG Inventory report included that the measurable sequestration from NWL – primarily based upon forests and soils using available “Land Use, Land Use Change, and Forestry” (LULUCF⁶¹) models – sequestered approximately net 4.9 MMTCO₂e in 2023.

Over the past decade, models for accurately representing the significance of working and natural lands to the sequestration of greenhouse gases have been improving. Access to new data, AI

⁶⁰ [Connecticut Greenhouse Gas Emissions Inventory \(1990 – 2023\), August 2025.](#)

⁶¹ NWL/LULUCF models are defined by the Intergovernmental Panel on Climate Change (IPCC) guidelines for greenhouse gas inventories.

simulations, and other advances may enable DEEP to continue refining the accuracy of analyses of NWL sequestration that can be included in future GHG inventory reports.

The 2024 CT GHG NWL Inventory largely relies upon the U.S. EPA's State Inventory Tool (SIT) to create a "preliminary estimate" of emissions and sinks in the NWL sector. Estimates for forests and urban forests are provided in SIT with some limitations, and these estimates comprise 95% of net sequestration. As such, future updates to the CT NWL GHG Inventory should consider adding spatial and temporal resolution of GHGs from forestlands, related land use change, and biological carbon stocks in urbanized areas.

EPA's SIT is a downloadable Excel-based program that includes sector-specific modules, with similar (though more simplistic) methods and sectoral coverage to the National GHG Inventory. It provides default data, though users can also upload their own. It also includes a projection tool that extrapolates based on past trends.

The SIT has several key limitations:

- Low spatial resolution (statewide only)
- Low temporal resolution (Most data can be 5-20 years old. For example, wood products data is from 1997.)
- Uncertainty is not quantified but is likely very large, especially for smaller states due to smaller plot sample size
- SIT analysis excludes wetlands

For forests, the SIT uses Forest Inventory Analysis (FIA) data from the USDA Forest Service, which is based on a small number of plots that are remeasured every 5-7 years. As a result, data is averaged across a long timeframe, obscuring annual changes. The SIT allows for analysis of forest carbon at a statewide scale and comparison to other sectors and states but does not allow for tracking policy implementation (e.g., progress on tree planting) or assessing trends in forest carbon on a timescale that is meaningful for climate policymaking or a more regular reporting regime. Finer spatial and temporal resolution is required for this.

In addition to SIT excluding wetlands from its analysis, it is likely that other NBS factors (such as the carbon sequestered by soils) are under-represented because accurate figures are difficult to calculate on a statewide basis. These are a few examples of modeling and data gaps that DEEP will need to address over time to more accurately inventory NWL sequestration as models improve and data becomes more readily available. In the future, DEEP expects to have access to higher-resolution, digitized geospatial data from statewide remote sensing efforts that would resolve some of these current data and model deficiencies.

F. Develop Statewide NBS Implementation Roadmap and Soil Health Plan

A significant number of public comments on the Draft NBS Initiative Program Evaluation identified two statewide action plans as top priorities –a Statewide NBS Implementation Roadmap and a Soil Health Plan for Connecticut. Both are resource-intensive and important efforts that would involve many partners and funding beyond existing resources to implement.

Statewide NBS Implementation Roadmap: A structured statewide NBS implementation roadmap outlining short-term (3-5 years) and long-term (20+ years) priorities, timelines, responsibilities for agencies and key partners, and measurable outcome-based performance metrics is essential to facilitate the advancement of nature-based solutions at a scale that would be meaningful for Connecticut’s climate, biodiversity, and resilience goals, and especially to accelerate related priorities such as various policy and funding recommendations associated with Natural and Working Lands identified by the Governor’s Council on Climate Change (GC3).

A recent example of this kind of roadmap for nature-based solutions may be the effort launched in Massachusetts by Governor Maura T. Healey focused on biodiversity conservation through [Executive Order 618](#). Under the terms of that order, the Massachusetts Department of Fish and Game is conducting a comprehensive review of the existing efforts of all executive department offices and agencies to support biodiversity conservation in Massachusetts and is recommending biodiversity conservation goals for 2030, 2040, and 2050 along with strategies to meet those goals “which may include policy and conservation investment targets related to land protection and connectivity, habitat and species status, anticipated shifts in distribution and abundance, and critical restoration activities.”⁶²

Soil Health Plan for CT: A group of unfunded volunteers has been working on a Soil Health Plan for Connecticut led by the CT Council on Soil and Water Conservation (Council). The Council is Connecticut's statutory coordinating body for soil and water conservation. Its membership includes the five soil and water conservation districts, DEEP, DoAg, UConn Extension, USDA Natural Resources Conservation Service, USDA Farm Service Agency, the Connecticut Agricultural Experiment Station, and the Connecticut Resource Conservation and Development Council. This group needs support and funding to build on its existing work with a wider range of stakeholders, particularly farmers, land care professionals, foresters, and others who manage land and soils in Connecticut.

Specific examples that might be emulated come from New York and Massachusetts and would also build on the work of the Agriculture/Soils working group of the GC3:

In 2019, New York funded a [New York Soil Health Roadmap](#) drawing on farmers and farming organizations as well as state and federal agencies. This was followed by the [NY State Soil Health and Climate Resiliency Act](#), leading to a strong program of implementation of soil health practices in agriculture, as well as continuing funding, coordination, technical assistance, and research. The [NY State Benchmarks for Soil Health](#) provide a model for evaluating the success of agricultural management practices for building measurable characteristics of healthy soils.

While New York focused primarily on agricultural land, the [Massachusetts Healthy Soils Action Plan](#) addressed soil health across forests, wetlands, developed land, recreational and ornamental landscapes, and impervious landscapes, as well as agricultural land. The Massachusetts plan includes a strong priority for protecting forests, wetlands, and farmlands, minimizing sprawl from development as an aspect of protecting the healthy soil resource. Like New York, Massachusetts has followed up its action plan with funding for training and implementation in its [Healthy Soils](#)

⁶² [Biodiversity Conservation Goals for the Commonwealth](#): A whole-of-government approach to conserve biodiversity in Massachusetts for 2030, 2040, and 2050.

[Initiative](#), including funding for management of soils in wetlands, pollinator habitat, urban food forests, and even in design and construction of built environments, as well as in agriculture.