

***Building Resiliency on Northwest
Connecticut Farmland***
Climate-Smart Agriculture Grant Program



**Northwest Connecticut
Land Conservancy**

PROTECTING LAND AND WATER FOR PEOPLE, FOR WILDLIFE, FOREVER.

An aerial photograph of a mountain valley at dawn or dusk. A river winds through the center of the valley, surrounded by dense green forests. In the foreground, there are rolling hills with patches of green fields and brown, tilled soil. A white rectangular box with a thin black border is centered over the image, containing the agenda text.

AGENDA

Introduction

Climate-Smart Agriculture

Building Resiliency Program

Climate-Smart Agricultural Assessment

Implementation Grant

Q&A

Presenters



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Northwest Connecticut Land Conservancy

Northwest Connecticut Land Conservancy (NCLC) is a regional land trust serving Litchfield County and northern Fairfield county. Our 13,300 acres of conserved lands serve 200,000 residents and include:

- 3,000 acres of habitat for rare species,
- 45 miles of rivers, lakes, and streams,
- 22 public nature preserves (and growing),
- 48 working farms.



Climate Change Impacts on Farmland

Loss of Land, Production, and Ecosystems

Including, but not limited to:

- Erosion
- Flooding
- Drought
- Disease Pressure
- Weed Pressure
- Pest Pressure
- Diminishing Biodiversity

The untimely frost in May 2023 impacted 1,077 acres of crops and \$8.45 million in losses for producers.

Then in July, CT producers were hit with flooding that resulted in estimated losses of more than 1,500 acres and nearly \$21 million in sales revenue.

What is Climate-Smart Agriculture?

Climate-smart agriculture is an approach to managing working land to help adapt agricultural methods to the effects of climate change and, where possible, counteract it by reducing greenhouse gas emissions.

The emphasis is on both sustainable agriculture and improving agricultural productivity.

Activities largely fall into two types:

Mitigation – activities that can result in reduction or removal of greenhouse gas emissions or increase carbon sequestration

Adaptation – activities to reduce risks and vulnerabilities to a changing climate, build resilience, and help to maintain productivity



Climate-Smart Agriculture and Forestry (CSAF) Grant Program

- Connecticut Department of Agriculture (DOAG) received 78 applications for \$55M
- Awarded \$7M to 12 applicants
- 5 Subgrant programs based on the mission of the facilitating organization
- Natural Resources Conservation Service (NRCS) [Climate-Smart Agriculture and Forestry Mitigation Activities](#)





NCLC's *Building Resiliency* Program

- \$750,000 award from the Connecticut Department of Agriculture (DOAG)
- **\$517,500** distributed to farms through assessments and implementation grants
- Supports NCLC's Agricultural Program Manager and other costs of administering the program

An aerial photograph of a rural farmstead. In the center, there is a large white house with a dark roof, a smaller outbuilding, and a tall white silo. The farm is surrounded by green fields and dense forests with trees showing autumn colors. Long shadows are cast across the fields, suggesting early morning or late afternoon light.

Building Resiliency Program

- Climate-Smart Agricultural Assessment
- Implementation Grant



Climate-Smart Agricultural Assessment

- Partnering with Berkshire Agricultural Ventures (BAV)
- Includes site visit + climate risk management plan
- Accepting applications on a **rolling basis**
- Currently **9** assessments remaining as of 4/2/24



Implementation Grant

Accepting applications in
two rounds per year:

- **April 1-May 31**
- **October 1-November 30**



How to Apply

ctland.org/climate-smart-grant/

1. Complete the [application form](#)
2. Complete the [budget worksheet](#)
3. Attach all required and supplemental documentation





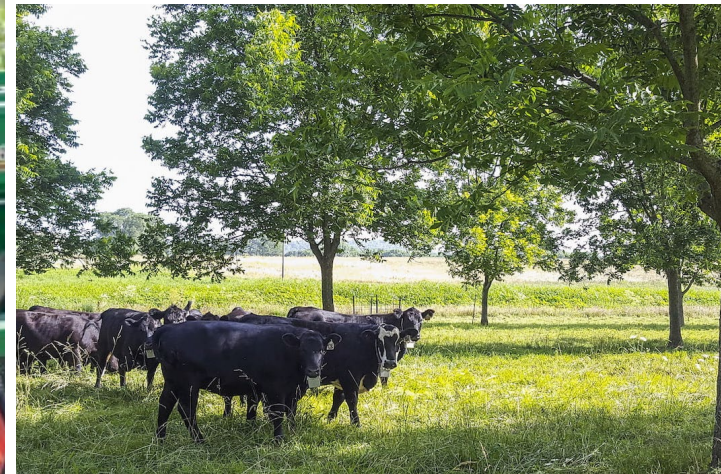
Eligibility

- Own or operate working farmland
- Definition of Agriculture, Conn. Gen. Stat. § 1-1(q)
- NCLC's service area
 - All of Litchfield County
 - Fairfield County: Sherman, Brookfield, Newtown
- Have not received a climate-smart award from CT Resource Conservation & Development (RC&D), Connecticut Land Conservation Council (CLCC), New CT Farmer Alliance (NCFTA), UConn Extension
- Prioritizing applications from [historically underserved producers](#)

Climate-Smart Projects

- Soil Health
- Nitrogen Management
- Grazing & Pasture
- Agroforestry
- Energy Use

[Climate-Smart Agriculture and Forestry \(CSAF\) Mitigation Activities List for FY2024](#)



Measuring Impacts of Climate-Smart Activities

Environmental Impacts –

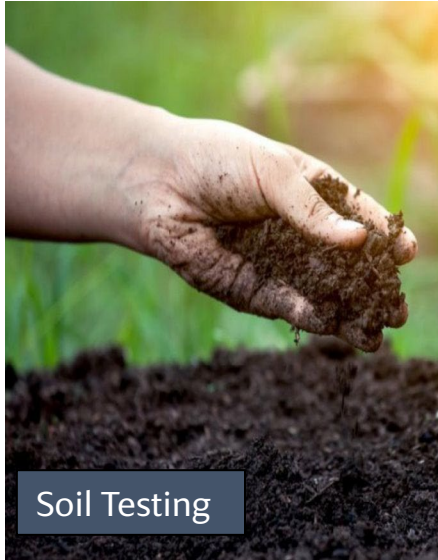
Anticipated, quantifiable outcomes related to climate mitigation and adaptation, and assessed through selected metrics

Must identify and report on **at least 2 different types** of metrics through baseline data and post-implementation data collection

Metrics must be **economically feasible** and **measurable** within the timeframe of the grant



Mitigation Metrics



CORNELL SOIL HEALTH TEST REPORT					
PLOW TILL			SAMPLE ID:	DATE: 4/18/2008	
			E-MAIL:	PHONE:	
CORN GRAIN/POTATO ROTATION			AGENT:	SLOPE: 0.2%	
			DRAINAGE: FAIR	SOIL SERIES:	
SILT TEXTURED SOIL			SOIL TEXTURE:		
	INDICATORS	VALUE	RATING	CONSTRAINT	PERCENTILE RATING
PHYSICAL	Aggregate Stability (%)	6.0	1	aeration, infiltration, rooting	<div><div></div></div>
	Available Water Capacity (mm)	0.19	4		<div><div></div></div>
	Surface Hardness (psi)	162	5		<div><div></div></div>
	Subsurface Hardness (psi)	313	1	Subsurface Pan/Deep Compaction	<div><div></div></div>
	Organic Matter (%)	1.5	1	energy storage, carbon sequestration, water retention	<div><div></div></div>
BIOLOGICAL	Active Carbon (ppm)	284	1	soil biological activity	<div><div></div></div>
	Potentially Mineralizable Nitrogen (ugN/gsoil/week)	1.7	3	N supply capacity, N leaching potential	<div><div></div></div>
	Root Health Rating (1-9)	2.0	9		<div><div></div></div>
	pH (see chemical test report)	6.0	6		<div><div></div></div>
CHEMICAL	Extractable Phosphorus (see chemical test report)	21.8	10		<div><div></div></div>
	Extractable Potassium (see chemical test report)	115	10		<div><div></div></div>
	Minor Elements (see chemical test report)		10		<div><div></div></div>
	OVERALL QUALITY SCORE (OUT OF 100)			LOW	49.2
Ratings on this report are based on generated crop production standards for New York. For crop specific minimum interpretation and recommendations, see the attached detailed test report.					

Ratings on this report are based on generalized crop production standards for New York. For crop specific nutrient interpretation and recommendation, see the attached chemical test report.

Soil Testing

COMET-Planner
USDA Natural Resources Conservation Service U.S. DEPARTMENT OF AGRICULTURE
COLORADO STATE UNIVERSITY

Evaluate Potential Carbon Sequestration and Greenhouse Gas Reductions from Adopting NRCS Conservation Practices

NRCS Conservation Practices included in COMET-Planner are only those that have been identified as having greenhouse gas mitigation and/or carbon sequestration benefits on farms and ranches. This list of conservation practices is based on the qualitative greenhouse benefits ranking of practices prepared by [NRCS](#).

INTRODUCTION VIDEO

Step 1: Begin by naming your project and selecting your state and county

Project Name: State: Please Select a State

Enter Project Name - SELECT STATE -

Step 2: Select the class of conservation practices that best describes the practice you would like to evaluate

Please Select a County

Step 3: Select a NRCS Conservation Practice Standard and a Practice Implementation that best describes your system. You may add multiple practices. If you would like to add a practice under a different class of practices, return to Step 2.

COMET-Planner



Energy Audit



Environmental Topics ▾ Laws & Regulations ▾ Report a Violation ▾ About EPA ▾

Energy and the Environment

Greenhouse Gas Equivalencies Calculator

Convert emissions or energy data into concrete terms you can understand — such as the annual CO₂ emissions of cars, households, and power plants.

The Greenhouse Gas Equivalencies calculator allows you to **convert emissions or energy data to the equivalent amount of carbon dioxide (CO₂) emissions from using that amount.** The calculator helps you translate abstract measurements into concrete terms you can understand, such as the annual emissions from cars, households, or power plants. This calculator may be useful in communicating your greenhouse gas reduction strategy, reduction targets, or other initiatives aimed at reducing greenhouse gas emissions.

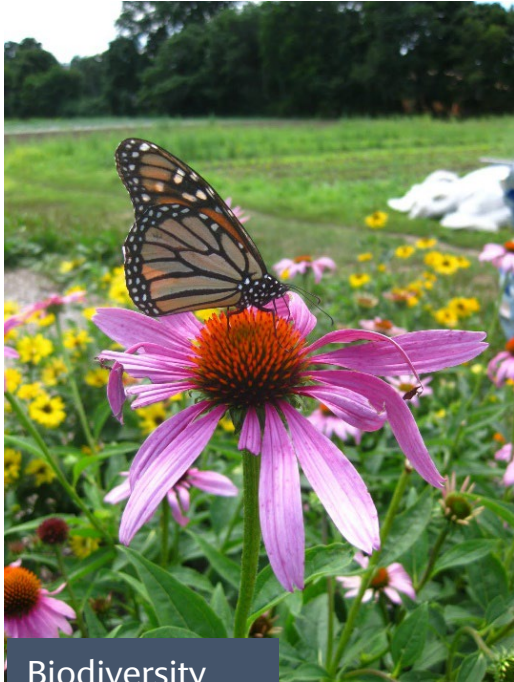
Updated January 2024

i These estimates are approximate and should not be used for emission inventories or formal carbon emissions analysis. See [Calculations & References](#) for equations and sources used.



Greenhouse Gas Equivalencies Calculator

Adaptation & Resiliency Metrics



Biodiversity



Fuel Use



Water Use



Cost Savings



Agrochemical Use

Eligible Use of Funding

Eligible Expenses	Ineligible Expenses
Materials & supplies	Disposable supplies unrelated to project
Equipment purchases/rentals	Land acquisition/mortgages, cost of borrowing (points and other fees)
Consultants and contract labor	Salaries and wages, tuition reimbursement or career-related/scholarship funds
State/local/federal permits	Expenses related to establishing a new organization/business, legal expenses related to litigation
	Any expense incurred prior to contract execution

Award Information

Maximum award: **\$50,000**

Minimum award: **\$1,000**

Prioritized award range:
\$5,000-\$20,000



Grant Payment

Typically, awardees will receive up to a **50%** advance of award funds

Remaining funds will be reimbursed upon favorable review of final report



Contractual Requirements



Provide certificate of insurance holding NCLC & DOAG harmless



Obtain all necessary permits



Record baseline and post-implementation data



Describe project updates & reflections



Submit initial & final report



NCLC/DOAG staff site visit

Example Timeline

Activity	Anticipated Completion
Applicant receives award notification	2 months after the round closes
Awardee and NCLC execute contract	Within 2 months of award notification
Awardee submits initial report	Within 3 months of contract signing
NCLC disburses initial funds	Within 1 month of Initial Report submission
Awardee completes project	1-2 years after contract signing
Awardee submits final report	Within 3 months of project completion
NCLC conducts site visit	Within 6 months of project completion
NCLC disburses final funds	Within 1 month of Final Report submission

Review Team



Kip Kolesinskas

Consulting Conservation Scientist



UConn
COLLEGE OF AGRICULTURE,
HEALTH AND NATURAL
RESOURCES

EXTENSION

Evaluation Criteria

Criteria for initial screening

- Applicant is eligible
- Applicant provides all required and applicable documentation
- Funding request is within minimum and maximum funding range

Criteria for strong applications

- Project falls within at least one climate-smart mitigation practice category
- Project impacts can be measured by multiple metrics from provided or approved metric categories
- Applicant demonstrates the capacity to deliver project requirements
- Project expenses are eligible and justified

A scenic photograph of a sunset over a field of tall, green and yellow grasses. The sun is low on the horizon, creating a bright orange glow and long, dark shadows across the landscape. The text is overlaid on the right side of the image.

Q&A

Office hours
Wednesday, May 1
12-1pm
[Register now](#)