

Natural Resources Conservation Academy

Connecting STEM with Conservation

The Natural Resources Conservation Academy (NRCA) is a group of three linked projects (see back cover) that focuses on connecting STEM education for high school students and adult learners with natural resource conservation at the local level. With over 130 land trusts in the state and each of its 169 municipalities having a conservation commission, Connecticut has a long history of local conservation. NRCA provides an assist to these efforts, while educating teens, adult volunteers and teachers about the science and issues surrounding natural resource protection.

A Unique Partnership

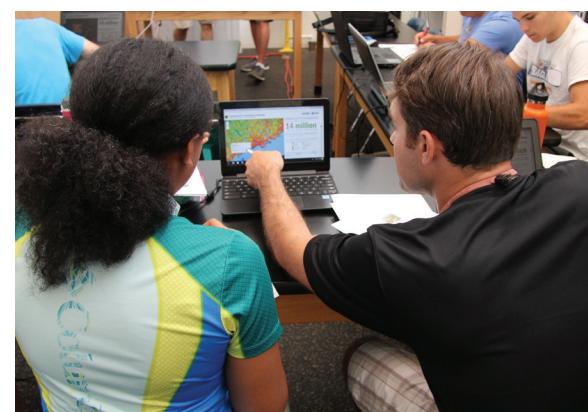
NRCA is a cross-campus partnership between UConn's Department of Natural Resources and the Environment, Center for Land Use Education and Research, Center for Environmental Sciences and Engineering, Institute of the Environment, and Neag School of Education.

The Broad Reach of NRCA

NRCA programs are making an impact in communities and schools throughout Connecticut and nearby states.



405 participants
from 123 high schools
and 138 local organizations
located in 125 towns
resulting in 232 community projects.



NRCA Projects Around the State

NRCA conservation projects span an incredibly wide range of topics and involve students and adults representing the breadth and diversity of Connecticut. The project examples from CAP and CTP shown here are just a small sampling of what happens when STEM meets local natural resource conservation. The dots on the Connecticut state map (right) represent all projects from the three NRCA programs (CAP, CTP, and TPL). Details for all projects can be viewed using the online interactive map at nrca.uconn.edu.

Project Examples

Invasive Species

- Dispersal of Invasive Aquatic Plants by Public Boat Launches
- Invasive Management at Tankerhoosen Wildlife Management Area

Mapping

- Street Tree Inventory
- Digitizing the Windsor Locks Canal Trail

Soils & Agriculture

- Public Perception of Locally-Grown Food and Buying Habits
- Developing School Composting Systems

Wildlife & Fisheries

- Connecticut Bat House Citizen Science Monitoring Program
- Positive Impact of Fishways on Local Fish Populations

Public Outreach

- Climate Change Mitigation Efforts in CT Municipalities
- Avon Bear Aware

Restoration

- Providing Habitat for Shrubland Species on the CT Coast
- Culvert Restoration to Improve Fish Passage

Water Quality

- Exploring Volunteer Accuracy in the Riffle Bioassessment Volunteer Program Using Macroinvertebrate Samples
- Assessing Health of Filley Pond Using Biotic and Chemical Indicators

Green Infrastructure

- Can Bioswales Effectively Manage Stormwater Runoff in New Haven?
- Identifying Opportunity for Green Stormwater Infrastructure

Projects Highlighted

See more project examples on the map.

Projects Highlighted



Plants and Large Woody Debris on the Banks of the Salmon Kill *(photo of Grace H)*



Grazing Management Plan for Woodchuck Lane

(photo of Tianna F)



Urban Tree Reuse

(photo of Naeem K & Herb V)



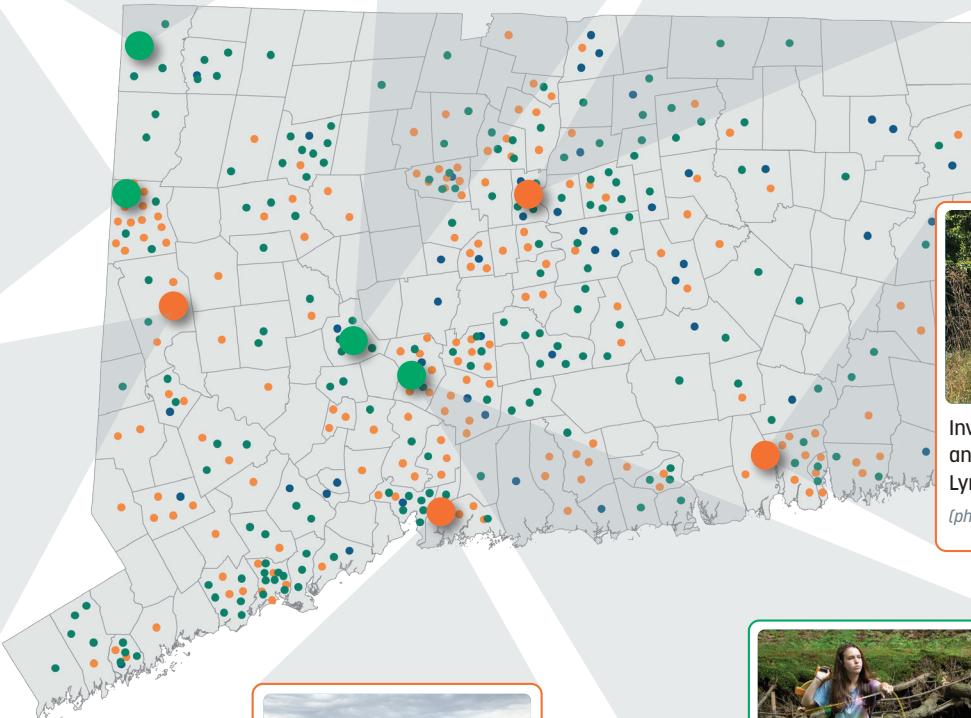
Interpretive Trail System to Highlight Bird Habitat

(photo of Fred L and Marvelwood School students)



Water Quality Along the Still River

(photo of Christopher E & Justin M)



Invasive Species Inventory and Mapping to Support East Lyme's Sustainable CT Efforts

(photo of En-Ming H & Tom K)



Monitoring Salt Marsh Birds in Guilford CT

(photo of Anna H, Genevieve N & Glen S)



Citizen Opinions of Green Infrastructure in CT

(photo of Natalie R)

Legend: Program Projects by Color

- Conservation Ambassador Program (CAP)
- Conservation Training Partnerships (CTP)
- Teacher Professional Learning (TPL)



Conservation Ambassador Program

The foundational NRCA project, the Conservation Ambassador Program (CAP), brings high school students from around the state to the UConn main campus for a week-long intensive field experience. Topics include soils, water, forest, wildlife, and geospatial technology. They then return home to partner with a community organization on a collaborative conservation project. Students present their work at the Connecticut Conference on Natural Resources.

Conservation Training Partnerships

The Conservation Training Partnerships (CTP) is a mini, mobile version of the CAP. CTP moves around the state for two-day trainings of adult-student teams drawn from local conservation groups and nearby high schools. In an intensive two days, CTP teaches them about smart phone mapping applications and their use in conservation. The teams then return home and implement a local conservation project. CTP project teams also present their work at statewide conferences.

Teacher Professional Learning

The Teacher Professional Learning (TPL) Program is a three-day workshop for secondary science teachers. The workshop is built on the framework of the Next Generation Science Standards (NGSS), an ambitious new approach to teaching science that has been adopted by Connecticut and 18 other states. The workshop explores the relationship of land use to water resource health using the UConn campus and surrounding watershed. Participants leave with a host of resources, including our Water Sustainability Curriculum.

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