



# Connecticut Envirothon

## 2023 Annual Report

### THE NATURAL CHALLENGE



### ADAPTING TO A CHANGING CLIMATE

## **Mission:**

The mission of CT Envirothon is to promote environmental awareness and stewardship among high school students through educational workshops and team-building competitions and to offer professional development for educators. The Connecticut Envirothon program began in 1992 as part of the North American Envirothon program. The 2022-2023 period marked the 30th year of offering the program to Connecticut high school students attending public, private, agricultural/technical, and home school programs.



*Advisors, steering members, and workshop facilitators engage in conversation and network.*

## **Steering Committee and Station Leaders:**

The Connecticut Envirothon Program is guided by a volunteer steering committee comprising natural resource professionals from various federal, state, and local agencies, private environmental groups, and active and retired educators. Monthly committee meetings are held virtually to reduce greenhouse gas emissions released when members travel to meeting locations. The annual meeting is held in person as a picnic get-together, which gets the committee members to reflect and begin planning for the next competition season.

The Steering Committee members includes Station Leaders for each core topic: Soils, Forestry, Aquatics, Wildlife, and a rotating Current Issue (*Adapting to a Changing Climate* in 2022-2023). These station experts plan each main subject area's curriculum and training workshops. They also prepare and administer the station exams during the Field Day competition in May.

**A major reason for the success of the Connecticut Envirothon Program is due to the time and dedicated efforts of the following members of the 2022-2023 Connecticut Envirothon Steering Committee:**

Karen Griswold Nelson, Chair	Northwest Conservation District
Sandy Weiss, Vice Chair	CT River Coastal Conservation District
Pam Huntley, Treasurer	USDA Forest Service (Retired)
Karen Griswold Nelson, Interim Secretary	Northwest Conservation District
Mindy Gosselin, Program Coordinator (out-going)	CT Department of Energy and Environmental Protection (CT DEEP)
Ginny Patsun, Program Coordinator (incoming)	North Central Conservation District
Chris Sullivan, National Representative	Southwest Conservation District
Frank Cervo, Forestry Station Leader	CT DEEP
Jacob Isleib, Soils Station Leader	USDA NRCS
Peter Picone, Wildlife Station Leader	CT DEEP
Susan Quincy, Current Issue Leader	CT DEEP
Kelsey Sudol, Aquatics Station Leader	Northwest Conservation District
Candace Bartholomew	UConn Cooperative Extension Service
Paul Benjunas	CT DEEP
Lindsay Beutler	Eastern Connecticut Conservation District
Cameron Covill	North Central Conservation District
Courtney Gilligan	Southwest Conservation District
Ann Hadley	Manchester Community College
Eric Hansen	Private Forester
Fred Johnson	GEI Consultants
Lisa Krall	Retired, USDA Natural Resource Conservation Service (NRCS)
Jean Laughman	Envirothon Advisor/ Educator, UConn
Melissa Mostowy	CT DEEP
Joan Nichols	Private Forester
Jean Pillo	Eastern Connecticut Conservation District
Charlotte Pyle	Retired USDA-NRCS
Denise Savageau	CT River Coastal Conservation District
Jane Seymour	CT DEEP
Joanna Shapiro	North Central CT Conservation District
Sarah Smith	Envirothon Advisor/Retired Educator



*Long-time CT Envirothon steering committee members Jean Laughman and Joanna Shapiro*

## Treasurer's Report Financial Report:

A proposed budget for 2022-2023 was developed and approved by the Steering Committee at the beginning of the academic year. Both the proposed budget and actual expenditures are included.



### CONNECTICUT ENVIROTHON FISCAL YEAR SEPT 2022 TO AUG 2023

	BEGINNING	\$58,281.65
	ENDING	\$52,019.10
	<u>PROJECTED 23</u>	<u>YEAR TO DATE</u>
<b>RECEIPTS</b>		
Interest	\$5.00	\$57.33
Team Registration \$75 per team	\$1,875.00	\$1,725.00
Team Registration Late	\$0.00	\$0.00
Extra Team Materials	\$0.00	\$0.00
T-Shirt Sales	\$0.00	\$0.00
Misc. Payments	\$0.00	\$0.00
Council on Soil and Water Conservation	\$20,000.00	\$20,000.00
Sponsors/Donations	\$14,005.00	\$2,550.00
<b>TOTALS</b>	<b>\$35,885.00</b>	<b>\$24,332.33</b>
	<u>BUDGETED 23</u>	<u>YEAR TO DATE</u>
<b>EXPENSES</b>		
<b>Supplies/Educational Materials</b>	<b>\$5,500.00</b>	<b>\$1,741.58</b>
General Supplies (binders, paper, etc)	\$250.00	\$438.00
Soils	\$150.00	\$0.00
Aquatics	\$150.00	\$0.00
Forestry	\$150.00	\$0.00
Wildlife	\$150.00	\$0.00
Current Issue	\$150.00	\$0.00
Teacher Orientation	\$500.00	\$156.82
Innovation & Technology	\$4,000.00	\$1,146.76
T Shirts & other merchandizing	\$3,500.00	\$3,253.00
Outreach Materials (Brochure, Social Media)	\$500.00	\$0.00
Storage Space	\$0.00	\$0.00
Postage	\$200.00	\$0.00
Petty Cash	\$0.00	\$0.00
Awards	\$1,500.00	\$390.00
National Dues	\$450.00	\$450.00
National Meeting Travel Expenses	\$2,400.00	\$400.00
Registration for National Event	\$1,800.00	\$1,800.00
Team Travel to National	\$5,000.00	\$3,957.53
<b>Event</b>	<b>\$6,950.00</b>	<b>\$4,317.24</b>
Lunch	\$5,100.00	\$3,500.00
Breakfast, snacks	\$500.00	\$392.24
Tables, chairs, tent, sound system	\$1,050.00	\$425.00
Site rental	\$250.00	\$0.00
Miscellaneous	\$50.00	\$0.00
<b>Workshops</b>	<b>\$1,680.00</b>	<b>\$972.41</b>
Soils	\$240.00	\$132.88
Aquatics	\$240.00	\$54.88
Forestry	\$240.00	\$54.88
Wildlife	\$240.00	\$628.27
Current Issue	\$240.00	\$101.50
Map Reading	\$240.00	\$0.00
Judge's Training	\$240.00	\$0.00
Program Assistant	\$4,800.00	\$10,682.41
Program Director	\$0.00	\$0.00
Web Site/Internet Service	\$905.00	\$1,192.70
Mileage	\$200.00	\$443.71
Instate Meetings	\$500.00	\$179.57
<b>TOTALS</b>	<b>\$35,885.00</b>	<b>\$29,780.15</b>

## **Study Materials**

All essential curriculum materials are posted on the CT Envirothon website ([www.ctenvirothon.org](http://www.ctenvirothon.org)), with each station team maintaining and updating a materials list through the webmaster. Materials provided by the stations range from journal articles to fact sheets, from web links to PowerPoint files, examples of previous exam questions, and other study guides.

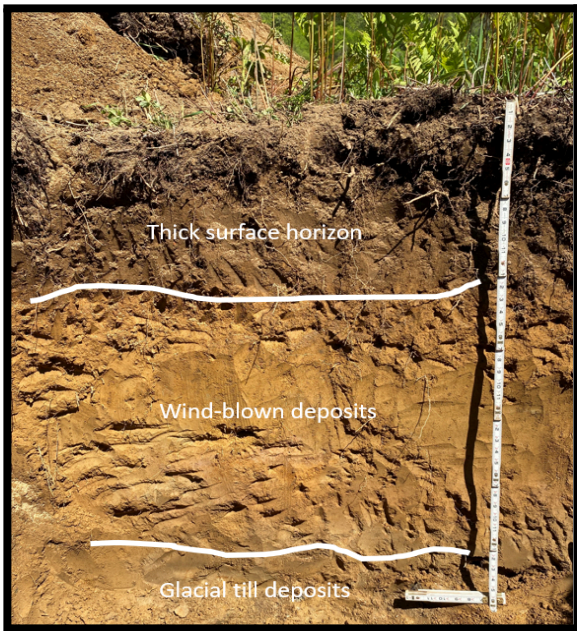
## **Workshops**

Each of the five Station Leaders organized and facilitated remote, in-person, or hybrid workshops throughout the school year leading up to the competition. The workshops are an integral part of the CT Envirothon. The workshops help the students not only prepare but also become well-informed in the five topics by implementing hands-on experiences and using online tools. The Station Leaders and their assistants are professionals in their field working for various agencies, including the CT Department of Energy and Environmental Protection (CT DEEP) and the US Department of Agriculture - Natural Resource Conservation Service (USDA-NRCS).

## **Soils Station**

Soils staff from the USDA-NRCS Connecticut office served as the leads for the Envirothon's Soils Station. Their ongoing goal is for the soil workshops to be an exciting, interactive experience – allowing students and teachers to learn, collaborate, and create. The soil station at the 2023 Envirothon competition featured an expertly dug soil pit (courtesy of Connecticut DEEP staff) in an interesting soil formed in wind-blown sediments over glacial till deposits. The pit location is managed as an herbaceous meadow with mown walking paths. NRCS-Connecticut Resource Soil Scientist Morgan McKee and former Resource Soil Scientist Lisa Krall proctored the soil pit. NRCS-Connecticut Soil Conservationist Lexi Hovan and State Soil Scientist Jacob Isleib graded the soil station exams.

Students were asked to estimate soil textures, color, and other properties at the pit. The exam also featured questions referencing a custom soil survey report that included land use interpretations relating to this year's theme of *Adapting to a Changing Climate*. The soil station staff enjoyed seeing the students enjoy being outside in the field together, competing and getting their hands dirty.



*2023 Envirothon Soil Pit,  
Kellogg Environmental Center, Derby, Connecticut*



*2023 Soil Workshop,  
Kellogg Environmental Center, Derby, Connecticut*

## **Forestry Station**

The forestry workshop - a co-workshop with the aquatics station - focused on tree measurements and identification. The workshop was held in October 2022 at the Field Forest in Middlefield, with staging at Caginchaug High School's parking lot. Frank Cervo and Larry Rousseau were the instructors.

The field day competition, led by station leader Frank Cervo, was held on a frosty morning at Kellogg Environmental Center in Derby. Competing students tested their skills in tree identification and measurements, forest pests and pathogens, silviculture, and forest management in the park's woodland. With a score of 73.5, Northwestern Regional High School No. 7 won the forestry station.



*Students at Fall 2022 Forestry Workshop*

## **Aquatics Station**

This year, we held our first in-person workshop since January 2020 on a beautiful fall day at Coginchaug High School, thanks to the help from partner organizations and individuals, including the Conservation Districts, CT DEEP, and a former CT-based field hydrogeologist. The co-workshop with Forestry consisted of 3 stations that allowed the students hands-on learning on groundwater and surface water interface, benthic invertebrate sampling and identification, and Tree ID. Specific to the Aquatics component, the students learned about the interaction between surface water and groundwater and viewed a demonstration of how groundwater is sampled and measured for physical parameters. The students also learned about the importance of macroinvertebrates as bioindicators and how they can be used to track water quality in surface waters. In addition, students could attempt a sampling round and ID what was found.

We expanded the virtual selections on our YouTube channel to complement the fall in-person workshop. This year, we asynchronously released an additional video entitled “Chloride Pollution in Surface Waters,” courtesy of Heather Geist at the Farmington River Watershed Association. As in previous years, all videos are found under the [Aquatics Station YouTube playlist found here](#). There are currently 14 videos on this playlist. The goal for next year is to release three additional videos, for a total of 17. While we plan on returning to in-person workshops, we will continue to develop our virtual library as an essential resource. We also aim to record a few of our in-person presentations next year.

The in-person competition was successful and included several hands-on components from partner organizations, as in previous years. The Peabody Museum of Natural History (Yale University) provided amphibian and fish specimens that students used for identification questions. Several questions referenced a watershed tabletop simulator to explore non-point source pollution and watershed science. The simulator was provided by the CT DEEP’s Kellogg Environmental Center. The Lake Waramaug Task Force provided two pieces of lake monitoring equipment for the test. A new resource offered to students this year was a study guide on the Aquatics website that provided a list of resources and 15 GooseChase questions on which the test was based. These questions focused on the new Chloride video, specific online resources, and in-person water-focused trivia for the students to find.

After the competition, the aquatics station aided the 2023 winning team from Nonnewaug High School in preparing for the National Competition in New Brunswick. Four of the five competing students and their advisor, Audra Leach, accompanied station lead Kelsey Sudol from the Northwest Conservation District and Lake Waramaug Task Force on the Task Force’s research boat on Lake Waramaug. Students aided Sudol in dropping a temperature sensor in the Lake and in a sampling round, learning about lake science and sampling methods outlined in their National study guide. Feedback from the advisor and

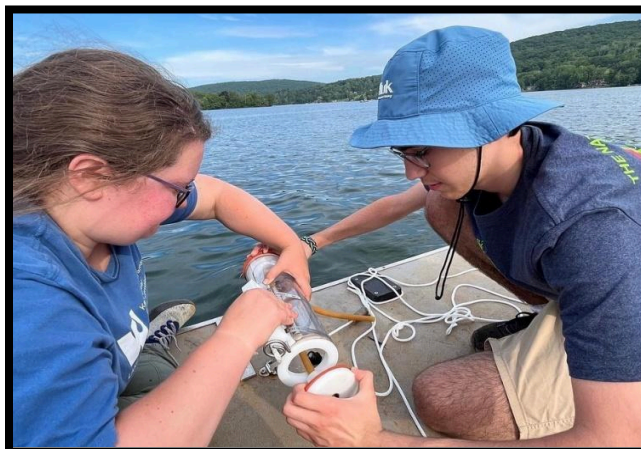
students encouraged more hands-on learning experiences like this for advisors and students alike.



*Surface water and groundwater interface simulation at the fall workshop*



*Students identifying specimens at the 2023 Competition*



*Sudol teaching one of the Nonnewaug students on the research boat of the Lake Waramaug Task Force*



## Wildlife Station 2023 Annual Report

CT DEEP Wildlife Biologist Peter Picone leads the Connecticut Envirothon's Wildlife Station. This year's wildlife training for student teams occurred at DEEP's Sessions Woods Wildlife Management Area in Burlington, CT, on March 18, 2023. There were five concurrent sessions available for the students to pick from. The following educational sessions were available for students to attend:

- *“Black bears in Connecticut: Biology, ecology, and behavior; how food conditioning and habituation affect their movements”* by Melissa Rusczyk, DEEP Wildlife Biologist
- *“CT Birds of Prey/Rehab and Falconry”* by Christine and Betsy Peyreigne of Christine's Critters
- *“Learn about the natural history of Connecticut's snakes and turtles”* by Michael Ravesi, DEEP Wildlife Biologist, and Paul Benjunas, DEEP Outreach Biologist
- *“CT Furbearers; identifying pelts”* by Art Potvin, DEEP Master Wildlife Conservationist
- *“Songbird Capture/Banding Station and Techniques”* by Andy Rzenikiewicz, CT Audubon
- *“Songbird Capture/Banding Station and Techniques”* by Frank Gallo, New Canaan Nature Center.
- *“Phenology of Climate Change”* by Susan Quincy, DEEP Educator Kellogg Nature Center
- *“Increasing Wildlife Habitat Using Habitat Management Practices”* by Jane Seymour, DEEP Wildlife Biologist
- *“Beavers”* by Brian Saccardi, CT Envirothon Alum and PhD student.
- *“Observing interesting wildlife behaviors and connection to habitat”* by Peter Picone, DEEP Wildlife Biologist, Sessions Woods WMA
- *“Conservation of amphibians and reptiles”* by Dennis Quinn, Herpetologist

Students also took a 25-question wildlife quiz that required them to hike through the conservation education areas and answer practical questions listed on various exhibits. Wildlife-related talks were also available to students on the Connecticut Envirothon's YouTube channel under the Wildlife Station playlist. Refreshments for the wildlife workshop were made possible by a donation from the Friends of Sessions Woods.

At the May 2023 field day competition, Mr. Picone administered the wildlife test of 50 questions. A practical component of the wildlife test included identifying life-size taxidermy mounts of animals or the skin or skull of an animal. Teams also needed to identify pictures of an animal, sketches or photos of habitat types, or match an animal to its habitat requirements. Other sections of the test required teams to identify parts of an animal or be a “detective” to determine what disturbance an animal caused by piecing together the evidence presented and picking an appropriate answer/solution.



*Students at the Wildlife Station during the competition (right) and at the wildlife workshop (left).*

### **Current Issue and Oral Presentations :**

This year, the Current Issue challenge, *Adapting to a Changing Climate*, had students begin with a global perspective and bring things to local solutions. Students were asked to research the impacts of climate change, starting with global issues and challenges, using the Climate Action Simulator to identify how actions collectively address the united goal of stabilizing global temperature. This goal is applied to every state in the U.S. and every other country to incorporate carbon emissions reduction efforts and implement adaptations to meet existing and predicted impacts.

Students learned how climate change affected local areas and systems, including economic, environmental, and human systems. Using local resources and tools, they identified what systems were impacted and how they could be addressed to improve their resiliency.

Workshops focused on students researching the impacts of climate change, starting with global issues using the Climate Action Simulator. Through webinars and local resources, they researched the impacts and effects seen here in Connecticut. Then, they identified how to help communities adapt to the changes we are seeing and reduce escalating problems in the future. The final scenario again reflected local focus by having students represent community organizations seeking funds from the Climate Resiliency Fund to address sustainability issues and to implement actions. By giving an oral presentation, students requested and defended their project based on real-world guidelines, demonstrating an understanding of the issues and the needs to be addressed. This was a vast topic, and they all did a great job of taking on the challenge.

On competition day, students were tasked with role-playing as a group of community stakeholders presenting a funding request to the state and other entities. The goal for the students was to explain the validity of the project and its scale and impact. The teams had to include project size and associated costs because funding requests can vary in scale from regional to municipal or neighborhood. Requirements for these proposals included 40% of the funding resources targeted to areas where vulnerable populations reside, and funding for green and gray infrastructure, flood protection, and non-structural project solutions.

### **Connecticut Envirothon Field Day Event:**

The 2023 competition was held on May 18<sup>th</sup> at the Kellogg Environmental Center in Derby, CT. Fortunately, the weather was cooperative since most activities were outdoors. Lunch was provided by The Country Butcher from Tolland, CT.

Twenty-two teams, including two wild card teams, participated in the competition. CT DEEP's Acting Deputy Commissioner Tracy Babbidge also attended and gave a speech about teaching natural resources at this level to prepare the students to be future environmental leaders.

First Place was awarded to Nonnewaug High School, Second Place to Lyman Hall High School, and Third Place to Housatonic Valley High School Team 1. Team medals and engraved plaques were awarded to the top three teams, and all participants received certificates. Engraved plaques were also awarded to teams with high scores on each station test.



*Competition day at Kellogg Environmental Center, Derby*

## **Neil Picone Memorial Fund**

At the 2023 Envirothon Field Day Competition, the first Neil Picone Memorial Award was awarded to the Wildlife Station winning team, Housatonic Valley Regional Agriscience, aka “Housie.” Neil Picone, son of long-time Envirothon steering committee member and CT DEEP Wildlife Biologist Peter Picone, was an avid outdoorsman and enjoyed creating and turning Connecticut-grown hardwood products on a wood lathe. The award, a hand-carved native black bear, *Ursus americana*, created by a local woodcarver, sits proudly in its glass display case in team leader Dave Moran’s classroom at Housie in Falls Village.



*The 2022-2023 Wildlife Station Winners, Housatonic Valley Regional High School Team 1*

## **National Envirothon Competition**

The student team from Nonnewaug High School, Woodbury, CT, attended the North American Envirothon at Mt. Allison University, New Brunswick, Canada, as Connecticut’s representative. They and students from 49 states, six Canadian provinces, China, and Singapore competed in the 35th International Event. The Connecticut team was accompanied by their advisor, Audra Leach, Connecticut Envirothon Steering Committee member, and our National Representative, Chris Sullivan.

Congratulations to Nonnewaug High School and their advisor, Audra Leach! Connecticut Envirothon thanks all students and their advisors for their dedication and effort, and we continue to support the NCF Envirothon program.

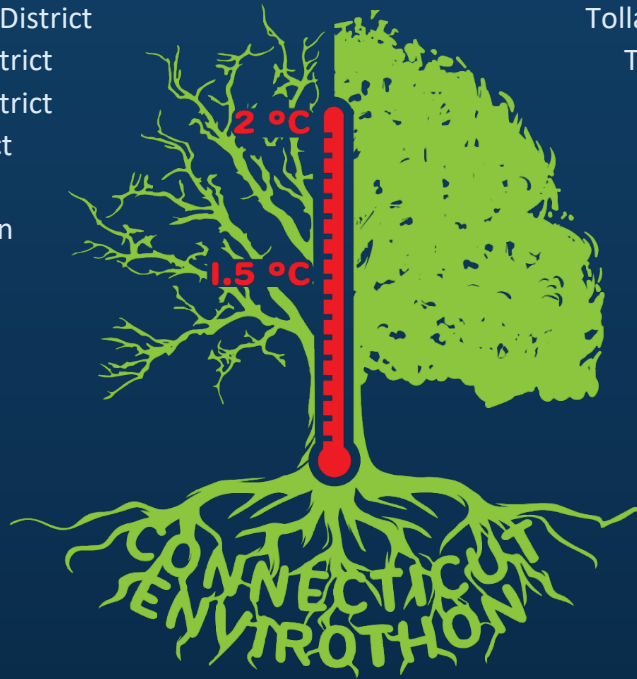


*The 2022-2023 CT Envirothon Champion Team, Nonnewaug High School*



*The 2022-2023 CT Envirothon Champion Team, Nonnewaug High School, at the North American Envirothon at Mt. Allison University, New Brunswick*

Connecticut Council on Soil and Water Conservation   Yale University - Peabody Museum of Natural History  
 Connecticut Association of Soil & Water Conservation Districts   UConn Cooperative Extension System  
 Connecticut River Coastal Conservation District   GEI Employees, Glastonbury Offices  
 North Central Conservation District   Tolland County Agricultural Center  
 Northwest Conservation District   Touch of Wood Laser Engraving  
 Southwest Conservation District   Stamford Portable Restrooms  
 Eastern Conservation District   Kellogg Environmental Center  
 CT Department of Energy   Friends of Sessions Woods  
 & Environmental Protection   The Country Butcher  
 USDA Natural Resources   USDA Forest Service  
 Conservation Service   Rainbow Graphics  
 Society of Soil Scientists of   GEI Consultants  
 Southern New England



# Thank you for your support!

We thank the following organizations and individuals who contributed cash, in-kind, or material donations to the Connecticut Envirothon program throughout the past several years:

