

Connecticut Envirothon 2012 Annual Report



**The 21st Connecticut
Natural Challenge!!**

Mission:

The mission of the Envirothon is to promote environmental awareness, knowledge, and active personal stewardship among high school students through educational workshops and team competition. As part of the North American Envirothon program, the Connecticut Envirothon program began in 1992. The 2011-2012 year marked the 21st year of offering the program to Connecticut high school students.

Steering Committee:

The Connecticut Envirothon Program is guided by a volunteer Steering Committee. This group consists of natural resource professionals from various federal, state and local agencies, and private environmental groups. There are monthly committee meetings and some of these meetings are held via conference call in an effort to reduce greenhouse gas emissions released due to member travel to meeting locations.

Teams are formed amongst the members of the Steering Committee for each of the Envirothon stations, which are: Soils, Forestry, Aquatics, Wildlife, and a rotating Current Issue. These station experts plan the curriculum and training workshops for each of the main subject areas. The station teams also prepare and administer the station exams on the day of the competition in May.

In addition to the main steering committee, there is an advisory committee that provides support and guidance to the program primarily through correspondence, financial support, and working at the competitive event and workshops. The advisory group can also take on new tasks at the request of the steering committee group. Members of the advisory group have been working on standardizing fundraising materials and also offer assistance to station teams and volunteer at the competitive event.

Registration:

Registration announcements are sent out to all CT schools by the end of August. Schools were encouraged to submit the registration form and entry fee of \$50.00. There are need based scholarships available for registration.

For the 2012 program year 37 schools registered to receive study materials, participate in the workshops and attend the field event. This list of schools included 6 new school registrations that participated at various levels throughout the academic year.

Study Materials:

All essential curriculum materials have been posted on the CT Envirothon website www.ctenvirothon.org, with each station team maintaining and updating their materials list through the webmaster. Materials provided from the stations range from journal articles to fact sheets, from weblinks to powerpoint files, and of course examples of previous exam questions and other study guides. Envirothon programs from other states

have linked their station pages to the Connecticut webpage resources to assist their own teams in preparation. This fact alone is testament to the strength of the materials and training provided by the CT Envirothon Steering Committee members.

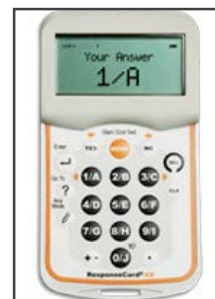
Investigating new Testing Technology:

Connecticut Envirothon has been researching the use of student paced “clicker” technology for use at the competitive event. These devices allow the end-user to enter exam answers into a handheld device at each testing station. Steering committee members



pilot tested devices from numerous companies and final decisions on a package will be made in the near future. Once implemented, the use of these devices will allow for quicker scoring and tallying of results and a reduction of paper copies of exams. The intent of the introduction is a gradual phase in so that all students, graders, and station leaders are comfortable with the devices and their use. This is a great step for the Envirothon program towards utilizing new technology and will

additionally prepare the students for something they are likely to encounter in college courses.



Workshops:

The 2012 program included a comprehensive series of educational workshops for students and teachers of the Connecticut Envirothon. Five Saturday workshops covering the topic areas and teacher orientation were held during the academic year to supplement the study materials provided online. Offering these workshops to the participants is a unique component for the CT program as many other State programs offer no formal training schedules. The benefit of these workshops is reflected in the usually high finishes for the CT State Champion at the National event each year. These workshops are a great opportunity for the high school students to interact with the environmental professionals and learn not only the program materials but discuss career and college opportunities.

Teacher Workshop, MDC Training Facility, Hartford: (9/22/2011) This session is an evening workshop that presented a program overview for each of the participating school advisors. Each of the station teams gave a presentation of their materials and highlighted any new information distributed for the 2011-2012 academic year. Upcoming workshop dates and locations were also highlighted for attendees. An additional brief presentation showing some preliminary data connecting stormwater and impervious surface percentages with benthic community diversity was given as part of the preparation for understanding impacts of LID on surface water. All of the attending teachers enjoyed a buffet dinner and new advisors connected with veterans for assistance and pointers on running a successful Envirothon team.

Wildlife Workshop, Session Woods WMA, Burlington: (3/17/2012) The wildlife workshop involved several concurrent activities for the student teams. Session topics



ranged from identifying wildlife animals to bird banding to learning about the range of migratory songbirds. Another session focused on enforcing Connecticut wildlife laws and featured Ellie the Environmental Conservation Officer dog. After the workshop sessions there was a quiz of exhibits that were spaced around the education center. After a 40 minute walkthrough, the group reassembled to go over the answers to the specimens included in the quiz. Over 110 people were in attendance and approximately 50 birds were banded in this wildly successful workshop!

Aquatics Workshop, Sacred Heart University, Fairfield (2/11/2012) The Aquatics workshop was set up with multiple sessions occurring concurrently in separate breakout rooms. The event began in a large auditorium where Dr. Barbara Pierce of Sacred Heart gave a brief introduction to the programs available at the University and spoke about ecology in general while the teams enjoyed a continental breakfast. Sacred Heart also had members from their Office of Admissions to answer questions about the school available for the start of the program. Freshwater and marine invertebrates, non-point source pollution, and development impacts were highlighted in some of the breakout sessions. Students had opportunities to handle living organisms and also work with preserved specimens from the Yale collections, where there are actually CT Envirothon specific specimens for use at the workshop and the aquatics exam at the competitive event. Presenters were from CT DEEP, CAES, Yale, UCONN, Project O, Save the Sound, and NMFS. Over 120 people attended the event in Fairfield.





Forestry Workshop, Tolland Ag Center, Vernon(10/15/2011) Welcome & Introductions were made by David Mikus, from the USDA Forest Service. During the indoor portion of the workshop there were several presentations given to the participating students. Dr. Paul Barten, Professor of Forest Resources, University of Massachusetts Amherst and Executive Director of the Great Mountain Forest presented “Trees, Forests, Water ...and Low Impact Development”. Thomas Worthley, Assistant Extension Professor at the University of Connecticut then gave a very informative presentation titled

“Introduction to Tree Measurements”. After the presentations the students and advisors moved outdoors to participate in hands-on forestry activities. This part of the workshop focused practice with Pacing, Tree Measurements, Tree Identification and Forest Management. This year the teachers/advisors participated with their teams. At the end of the workshop foresters were available to answer additional questions and provide guidance for students and teachers who wanted to practice and improve their forestry skills. Over 165 students and advisors attended the workshop.

Soils Workshop, Tolland Ag Center, Vernon (10/29/2011) Students who came listened to an Intro to Soils presentation, examined two soil pits (one a wetland soil with monitoring wells), participated in a soil texture exercise, had a tour of low impact development demonstrations at the TAC, and used the rain garden soil and site assessment tool. The students were prepared for a mock environthon with practice soils exam but snowflakes had started to fall and the decision was made to send the teams (and their buses) back home before conditions degraded to unsafe levels. Approximately 110 students and advisors braved the trip even with the impending snow storm.



Current Issue Workshop (Low Impact Development),



UConn Main Campus, Storrs (1/7/2011) The six hour workshop began with a welcome and introduction from Professor John Volin, Head of UConn's Department of Natural Resources and the Environment. Professor Volin spoke about the Natural Resources Conservation Academy, a UConn-sponsored program targeted to educate Connecticut high school students within the fields of environmental conservation and land use planning. Shortly after this introduction, Envirothon students

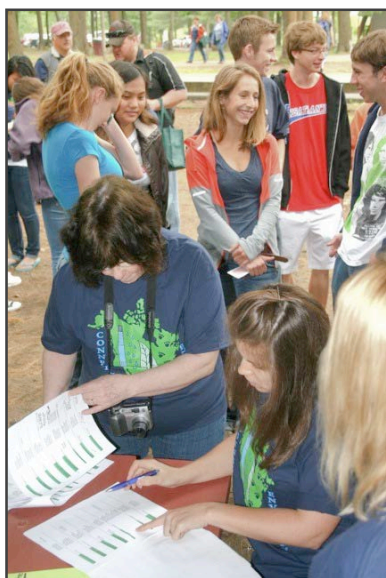
were divided into groups for "breakout sessions." The sessions included three rotations with lectures from Michael Dietz: *Understanding One of the Cornerstones of LID*, Chester Arnold: *How Do LID Measures Work to Protect Water Quality on UConn Campus*, and Steve Trinkaus: *Why LID is Important, Problems and Solutions*. The workshop concluded with guided site visits to six locations on UConn's campus where LID measures have been implemented. UConn's LID efforts incorporate porous concrete and asphalt, manufactured soils, bioretention swales, rain gardens and two green roofs. The end goal of the workshop was to prepare the students with the expertise in LID techniques so they could apply the new knowledge to their design projects and presentations at the competitive event. 135 students and advisors attended the event on an unseasonably warm day at UConn.

Field Event:

(May 24, 2012) The full-day field event was held at Winding Trails Recreation Facility in Farmington. Working with property staff and station leaders the five station exam areas were spaced out around the primarily forested property featuring Walton Pond. Twenty-six schools assembled 41 teams and over 205 students participated in the competition at Winding Trails. There were nine "wild card teams" comprised of alternates from participating schools which allows more students to be exposed to the process of the event and show their knowledge. Advisors from the participating teams learned about habitat management in Connecticut to assist with preparation for the 2013 current issue. Peter Picone led the first section of the workshop and Laura Rogers Castro



conducted the remainder of the session. All participating advisors were eligible to collect CEUs for their time learning about the upcoming current issue.



Weather conditions were perfect in the morning of the event and were predicted to remain that way throughout the day. Student teams arrived in buses and vans and were guided to the registration table to get their t-shirts, information packet and oral presentation numbers. Soon everyone moved to the outdoor amphitheater for the opening ceremonies and distribution into exam groups.

Each of the stations featured a written exam for the student teams to complete in a collaborative manner. Each station included some hands-on component to their exam questions, ranging from fish identification to measuring board feet of a tree, these tasks challenged the teams on many levels.

Additionally, a written scenario covering hypothetical water quality issues at Winding Trails was given to each school a month prior to the field event. The teams were to represent a consulting firm and make recommendations for the most appropriate LID installations for the facility to reduce volumes and improve water quality of surface runoff leaving the site. Each team was required to devise an oral presentation to deliver to a panel of judges during the rotation through the testing stations. The current issue oral scenario allowed for a fifteen-minute presentation and a ten-minute question and answer period.

After the competition, all participants and volunteers enjoyed a BBQ luncheon in at the picnic facilities. Teams relaxed on the grass and at tables while enjoying the weather. This allowed time for decompressing after a mentally taxing morning. Kristen Ponak and Kim Bradley conducted a raffle of several donated items for the students while the exam scores were being tabulated for final tallies.





Once team totals were finalized by the grading volunteers, the teams reassembled at the amphitheater to await their scores and accompanying awards. First place was awarded to Housatonic Valley Agri-science High School. Second place went to Litchfield High School. Finally, third place was awarded to the team from Housatonic Valley High School. Housatonic Valley Agri-Sci went on to represent Connecticut at the National Canon Envirothon in Selinsgrove, Pennsylvania in July. All Connecticut event scores are posted below.

2012 ENVIROTHON							
SCHOOL	AQUATICS	FORESTRY	SOILS	WILDLIFE	ORALS	ISSUE	TOTAL
Bacon Academy	61.0	42.5	56.0	56.0	73.0	31.0	319.5
Bloomfield High School	60.0	48.5	76.0	62.0	80.3	37.0	363.8
Bolton High School	64.0	41.5	68.5	54.0	62.3	37.0	327.3
Chase Collegiate School - Team 1	79.0	49.0	72.0	50.0	72.0	37.0	359.0
Chase Collegiate School - Team 2	64.0	62.0	51.0	54.0	72.3	40.0	343.3
Coginchaug Regional High School	73.0	53.5	72.0	70.0	84.3	36.0	388.8
Common Ground High School - Team 1	55.0	48.0	42.0	68.0	80.7	39.0	332.7
Common Ground High School - Team 2	55.0	46.5	35.0	56.0	62.3	28.0	282.8
Crosby High School - Team 1	63.0	29.0	44.0	54.0	57.0	21.0	268.0
Crosby High School - Team 2	52.0	23.5	57.5	46.0	63.3	18.0	260.3
East Catholic High School	43.0	40.5	28.0	44.0	51.2	24.0	230.7
Fitch High School	61.0	39.5	43.5	52.0	79.0	38.0	313.0
Glastonbury High School	58.0	36.5	70.0	56.0	53.7	26.0	300.2
Haddam-Killingworth High School	64.0	66.0	59.0	68.0	52.3	34.0	343.3
Hartford Magnet Trinity College Academy	64.0	45.5	52.5	58.0	71.7	30.0	321.7
Hotchkiss School	58.0	76.5	74.5	74.0	74.3	35.0	392.3
Housatonic Valley Regional Agriscience	82.0	87.5	95.5	80.0	89.7	36.0	470.7
Housatonic Valley Regional High School	82.0	78.0	83.0	66.0	77.6	38.0	424.6
Litchfield High School	73.0	72.5	94.5	82.0	85.3	40.0	447.3
Lyman Memorial High School	55.0	43.5	54.5	60.0	65.3	26.0	304.3
Marvelwood School - Team 1	67.0	37.5	47.5	32.0	79.0	31.0	294.0
Marvelwood School - Team 2	67.0	19.5	30.0	38.0	59.3	19.0	232.8
Middletown Agricultural Science Center	70.0	57.5	77.0	66.0	83.3	35.0	388.8
Nonnewaug HS (RSD #14) - Team 1	58.0	48.0	87.0	78.0	76.3	34.0	381.3
Nonnewaug HS (RSD #14) - Team 2	61.0	42.0	35.5	54.0	52.7	31.0	276.2
RHAM	70.0	72.0	73.0	72.0	92.3	37.0	416.3
Rockville High School	73.0	65.5	82.0	72.0	79.0	39.0	410.5
Suffield Regional Agriscience Center	49.0	40.5	40.0	80.0	0.0	26.0	235.5
Wamogo High School FFA	73.0	50.0	58.0	68.0	59.7	35.0	343.7
Waterford High School	73.0	53.0	73.0	52.0	58.3	31.0	340.3
Woodstock Academy	64.0	62.0	59.0	78.0	73.0	38.0	374.0
Xavier High School	61.0	62.5	91.0	48.0	90.3	37.0	389.8
Wild Card #1	46.0	28.0	28.0	48.0	0.0	25.0	175.0
Wild Card #2	67.0	24.0	53.5	64.0	0.0	26.0	234.5
Wild Card #3	64.0	47.0	89.5	54.0	0.0	38.0	292.5
Wild Card #4	55.0	41.0	18.0	50.0	0.0	14.0	178.0
Wild Card #5	70.0	48.5	80.5	70.0	0.0	35.0	304.0
Wild Card #6	70.0	42.0	70.0	66.0	0.0	29.0	277.0
Wild Card #7	46.0	21.5	26.0	46.0	0.0	22.0	161.5
High Scores	82.0	87.5	95.5	82.0	92.3	40.0	470.7
	<u>AQUATICS</u>	<u>FORESTRY</u>	<u>SOILS</u>	<u>WILDLIFE</u>	<u>ORALS</u>	<u>ISSUE</u>	<u>TOTAL</u>

National Event and National Steering Committee:

The twenty-fifth anniversary edition of the National Envirothon was held at Susquehanna University in Selinsgrove, Pennsylvania. Fifty-four student teams participated in the event from 45 states, eight Canadian provinces, and one territory. The Connecticut team from Housatonic Valley Agri-Sci High School ably represented the state in the five-day competition that included five-written station tests, and an oral presentation based on an environmental problem solving exercise. The CT team finished in sixth place and received \$7000 in scholarship monies for the participating students. The first National Envirothon competition was held in Pennsylvania in 1988.

Financial Report:

The Connecticut Envirothon program was financed through donations from private corporations and public organizations. Donations were used to purchase materials for study notebooks and workshops; T-shirts for the field day; food and refreshments for the field day and workshops; membership and registration to the National Envirothon; team travel to the national competition and annual national meeting.

We would like to thank the following organizations and individuals who contributed donations to the 2012 Connecticut Envirothon program:

- Hamilton Sundstrand
- Connecticut Council on Soil and Water Conservation
- Canon USA
- GEI Consultants
- Ruth Wyllys Chapter of DAR
- Ann Hadley

The following organizations contributed in-kind services, time and materials to the Connecticut Envirothon Program:

- Connecticut's Five Soil and Water Conservation Districts
- Connecticut Department of Energy and Environmental Protection
- Connecticut Association of Conservation Districts
- Connecticut Council on Soil and Water Conservation
- USDA Forest Service
- USDA Natural Resources Conservation Service
- UConn Cooperative Extension System
- University of Connecticut
- Connecticut Sea Grant
- The Connecticut Agricultural Experiment Station
- The Metropolitan District Commission

Kings Mark Resource Conservation and Development
National Marine Fisheries Service
Project Oceanology
Sacred Heart University
The Southern New England Society of Soil Scientists
Society of American Foresters
Sessions Woods Wildlife Management Area
Tolland County Agri-science Center
The Country Butcher
Connecticut Water Co.
Manchester Community College
Town of Greenwich
Town of South Windsor
Yale Peabody Museum

A proposed budget for 2012 was developed and approved by the Steering Committee at the beginning of the academic year. Both the proposed budget and actual expenditures are included on the following pages.

2011-2012 Connecticut Envirothon Steering Committee

Al Levere		CT DEEP
Jean Cronauer		Northwest CT Cons. District
Pam Huntley	Treasurer	USDA-Forest Service
Candace Bartholomew		UConn Coop Extension
Margie Faber		USDA-NRCS
Ann Hadley		MCC
Pete Picone	Vice Chair	CT DEEP
Denise Savageau		Southwest Cons. District
Chris Sullivan	Chair	CT DEEP
Rob Rocks		CT DEEP
Sean Hayden	Secretary	Northwest CT Cons District
Jeff Folger		North Central Cons. District
Barb Kelly	Program Coord	North Central Cons. District
Carol Youell		MDC
Laura Rogers-Castro		CT DEEP
Lisa Krall		USDA-NRCS
Kelly Starr		CT River Coastal Cons. District
Jean Pillo		Eastern CT Cons. District
Greg Watkins-Colwell		Yale Peabody Museum
Pat Young		National Park Service
Chris Craig		Educator
Scot Frost		Hamilton Sundstrand
Kim Bradley		GEI Consultants
Kristen Ponak		GEI Consultants
Cindy Guadino		CT Water Co.
Joanna Winkler		North Central Cons District
Tony Mitchell		Envirothon Advisor -Retired
Jillian Baker		CT DEEP

2011 PARTICIPATING SCHOOLS

Bacon Academy

Bolton High School

Bloomfield High School

Central High School

Chase Collegiate High School 1&2

Common Ground High School 1&2

Coginchaug Regional High School

Crosby High School 1&2

Darien HS

E.O. Smith High School

East Catholic High School

East Lyme High School

Fitch High School

Forum Homeschool Team

Glastonbury High School

Haddam-Killingworth High School 1&2

Hotchkiss School

Housatonic Valley Agri-Sci High School

Housatonic Valley Regional HS

Litchfield High School

Lyman Memorial HS

Marianapolis Prep School

Marvelwood School

Middletown HS Vo-Ag

Montville High School

Nonnewaug High School 1&2

Northwestern Regional #7

RHAM HS 1&2

Rockville HS

Suffield Regional Agriscience

Trinity College Academy

Wamogo High School

Waterford HS

Woodstock Academy

Xavier High School



2011-2012 Projected Budget

FISCAL YEAR SEPT 2011 TO AUG 2012

	PROJECTED 12
RECEIPTS	
Interest	\$75.00
Team Registration \$50 per team	\$1,500.00
Team Registration Late	\$0.00
Extra Team Materials	\$0.00
T-Shirt Sales	\$0.00
Misc. Payments	\$0.00
Council on Soil and Water Conservation	\$20,000.00
Canon Envirothon - Diversity Grant (2008, 2010)	\$4,847.50
20 for 20 Campaign	\$0.00
Sponsors	\$3,130.00
TOTALS	\$29,552.50
EXPENSES	
Supplies/Educational Materials	\$1,325.00
General Supplies (binders, paper, etc)	\$500.00
Soils	\$165.00
Aquatics	\$165.00
Forestry	\$165.00
Wildlife	\$165.00
Current Issue	\$165.00
T Shirts & other merchandizing	\$4,000.00
Outreach Materials (Brochure, etc.)	\$500.00
Storage Space	\$0.00
Postage	\$350.00
Petty Cash	\$0.00
Awards	\$700.00
National Dues	\$300.00
National Meeting Travel Expenses	\$1,800.00
Registration for National Event	\$800.00
Team Travel to National	\$2,200.00
Event	\$5,900.00
Lunch	\$4,600.00
Breakfast, snacks	\$500.00
Tables, chairs, tent	\$250.00
Sound system	\$50.00
Toilets	\$200.00
Site rental	\$250.00
Miscellaneous	\$50.00
Workshops	\$1,725.00
Soils	\$240.00
Aquatics	\$240.00
Forestry	\$240.00
Wildlife	\$240.00
Current Issue	\$240.00
Map Reading	\$0.00
Teacher Orientation	\$350.00
Judge's Training	\$175.00
Program Assistant	\$3,500.00
Program Director	\$0.00
Web Site/Internet Service	\$905.00
Mileage	\$200.00
Instate Meetings	\$500.00
20 for 20 Campaign (open PayPal account)	\$0.00
Canon Diversity Grant	\$4,847.50
TOTALS	\$29,552.50



Actual 2011-2012 Financial Report

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ENVIROTHON

FISCAL YEAR SEPT 2011 TO AUG 2012

	BEGINNING	\$35,334.39	1-Sep-2011
	ENDING	\$35,375.43	9-Aug-2012
		YEAR TO DATE	
RECEIPTS			
Interest		\$63.01	
Team Registration \$50 per team		\$1,850.00	
Team Registration Late		\$90.00	
Extra Team Materials		\$0.00	
T-Shirt Sales		\$0.00	
Misc. Payments		\$0.00	
Council on Soil and Water Conservation		\$20,000.00	
Canon Envirothon - Diversity Grant (2008, 2010)		\$0.00	
20 for 20 Campaign		\$0.00	
Sponsors		\$1,250.00	
	TOTALS	\$23,253.01	
		YEAR TO DATE	
EXPENSES			
Supplies/Educational Materials		\$1,196.62	
General Supplies (binders, paper, etc)		\$618.18	
Soils		\$0.00	
Aquatics		\$0.00	
Forestry (plus \$750 Canon mini-grant 2010)		\$0.00	
Wildlife		\$0.00	
Current Issue		\$578.44	
T Shirts & other merchandizing		\$4,122.00	
Outreach Materials (Brochure, etc.)		\$0.00	
Storage Space		\$0.00	
Postage		\$410.75	
Petty Cash		\$0.00	
Awards		\$1,007.93	
National Dues		\$300.00	
National Meeting Travel Expenses		\$1,212.14	
Registration for National Event		\$900.00	
Team Travel to National		\$1,688.56	
Event		\$5,547.63	
Lunch		\$4,782.50	
Breakfast, snacks		\$515.13	
Tables, chairs, tent		\$0.00	
Sound system		\$0.00	
Toilets		\$0.00	
Site rental		\$250.00	
Miscellaneous		\$0.00	
Workshops		\$1,893.13	
Soils		\$136.45	
Aquatics		\$616.50	
Forestry		\$161.48	
Wildlife		\$234.97	
Current Issue		\$195.36	
Map Reading		\$0.00	
Teacher Orientation		\$548.37	
Judge's Training		\$0.00	
Program Assistant		\$3,514.81	
Program Director		\$0.00	
Web Site/Internet Service		\$549.53	

Mileage	\$3.33
Instate Meetings	\$0.00
20 for 20 Campaign	\$0.00
Canon Diversity Grant	\$847.39

TOTALS	<u>\$23,193.82</u>
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Sponsors/Grants	
Ann Hadley	\$200
Ruth Wyllys Chapter of DAR	\$50
Hamilton Sundstrand	\$1,000