

GETTING STARTED
WITH
CALIFORNIA ENVIROTHON:

A GUIDEBOOK
FOR TEACHERS

REVISION
JANUARY 2021



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CALIFORNIA ENVIROTHON STEERING COMMITTEE

Jovita Pajarillo
Chair
U.S. Environmental Protection Agency (retired)
jovita@schenkerdesign.com

Erin Snyder
Vice Chair
Resource Educator
Riverside-Corona Resource Conservation District
snyder@rcrcd.org

Nancy Helsley
Secretary
RCD of the Santa Monica Mountains
helsleyn@gmail.com

Cheryl Casdorff
Treasurer
Tehachapi Resource Conservation District
cherylcasdorff@sbcglobal.net

Marianne Maki
Science Teacher
Los Angeles Unified School District
mim9861@lausd.net

Jasmine Orozco Clark
Education Coordinator
Inland Empire Resource Conservation District
jclark@iercd.org

USDA-Natural Resources Conservation Service Advisor

Philip Smith
Area Resource Soil Scientist
USDA Natural Resources Conservation Service
Salinas Field Office
philip.smith@usda.gov

INTRODUCTION: THE CALIFORNIA ENVIROTHON

The purpose of this Guidebook is to introduce high school teachers, advisors and nonprofit organizers to the California Envirothon (CAE) annual competition. It is intended to provide information to help plan, guide, and organize student teams to participate in the event. Moreover, we recommend teachers review and familiarize themselves with the CAE Operating Rules and Regulations by which the competition is conducted. It provides more details about team eligibility requirements, competition rules and regulations, scoring, and codes of conduct. It is a companion document to this Guidebook. You will find this on the CAE website: caenvirothon.com. We encourage you to explore our website for more information and for updates regarding CAE and the event.

What

The California Envirothon is an annual competitive natural resources education program for high school students, grades 9-12. In the field, student teams work to answer science-related questions covering soils, forestry, aquatic ecology, and wildlife. In addition, teams prepare an oral presentation on the nationally designated theme (e.g., groundwater, watersheds, biodiversity, renewable energy, invasive species, etc.). Working collaboratively as a five member team, students learn skills such as critical thinking and problem solving to identify strategies and tangible solutions to specific real world environmental problems. CAE promotes stewardship, leadership, and empowers youth to take responsibility for the conservation of natural resources for future generations.

Why

The Envirothon encourages, motivates, and inspires students to become more competent, proficient, and aware of the environment and natural resources conservation. The Envirothon was begun over 40 years ago by a group of Pennsylvania Soil and Water Conservation Districts and parents who were concerned about the lack of natural resources education in their schools. The national Envirothon was added in 1988. CAE was established in 1992 and is a special project of the California Association of Resource Conservation Districts.

How

High school team sponsorship is provided by a local Resource Conservation District (RCD). Where there is no RCD coverage for sponsorship, the CAE Steering Committee will seek an alternate RCD in the area to agree to sponsor. CAE encourages participation from other youth/student organizations such as FFA and 4-H, or intertribal youth ag councils, given their commitment to educational resources, hands-on learning, focus on agricultural education, and an emphasis on career and technical study. Sponsorship may be from a nonprofit organization, community group, or RCD.

When

The CAE competition is usually held in the spring to allow students to have much of the school year to prepare. The winning team advances to the National Conservation Foundation-Envirothon International Competition which is usually held in July. Teams from participating states and provinces in Canada and China compete each year for recognition and scholarships.

OVERVIEW OF STATION TESTING

Teams will be tested, scored, and evaluated in five subject areas: soil, forestry, aquatics, wildlife, and the current environmental theme (scenario).

- Each station's testing is comprehensive. Stations will be 30-45 minutes in duration, including a brief orientation at each station. A resources professional(s) shall be present to brief teams and proctor the test. Individual student teams will rotate to from station to another to perform the test.
- The current scenario testing station will include a preliminary orals component in which each team will present before a panel of judges. Teams will bring orals presentation materials with them on the day of the event. The three top ranking teams overall will advance to perform a finals oral presentation to a panel of judges.
- The following list includes examples of study topics teams may be tested on at each station. The CAE website posts study links on each subject area for further research. For more information, please visit the station-specific pages on caenvirothon.com

Aquatics/Hydrology

- water chemistry
- ecosystems and function: plants, aquatic life (e.g., macroinvertebrates), and fish and wildlife living in, or around, water, riparian habitat, wetlands, lakes, streams and rivers, vernal pools, bays and estuaries
- water quantity and quality
- state and federal water laws, programs, and policies
- groundwater
- conservation
- water delivery and storage

Soils and Land Use

- classification
- profiles
- soil characteristics
- soil surveys
- site suitability/current issues
- erosion/sedimentation
- conservation/best management practices
- soil health

Wildlife

- identification
- taxonomy: domain, kingdom, division, class, order, family, genus, species
- behavior
- habitat characteristics
- food/diet
- diseases

- state and federal species protection laws, regulations, and programs
- management and restoration

Forestry

- forest ecology
- tree identification
- taxonomy: domain, kingdom, phylum, class, order, family, genus, species, and common names
- insects
- diseases
- forestry management, restoration, and conservation
- forest and multiple-use management
- fire prevention and fuel load management
- climate impacts

Current Environmental Issue

The state hosting the annual NCF-Envirothon competition determines the following year's environmental theme for the current issue. Examples of topics which have been chosen in the past in preparing the testing scenario include:

- Nonpoint Source Pollution/Watersheds
- Endangered Species
- Rangelands Management
- Air Pollution
- Wetlands
- Agricultural Soils and Water Conservation Stewardship
- Stormwater
- Loss of Farmland Due to Urban Encroachment

All themes reflect contemporary, complex, and often controversial environmental issues. Current issues commonly link natural resources and agriculture for study and problem solving in an orals presentation by student teams before a panel of judges from the natural resources, education, and environmental fields.

The CAE Steering Committee provides pertinent information on the study concepts which are linked to state educational standards. It also provides additional resource materials to assist the teams preparation and study on the CAE website.

The CAE has an established network of partnering natural resources and environmental agencies, academia, RCDs, nonprofit organizations, and the private sector with expertise and knowledge to assist, prepare, and/or help inform the testing scenario, station tests, and plan and organize webinars/workshops on the subject areas. Many volunteer as orals judges and station test proctors.

BUILDING A TEAM

Professionals and Resource Specialists

Resource Conservation Districts are encouraged to support local teams in a variety of ways: organize learning resource workshops or webinars, mentor teams, and identify key resource professionals, agencies, and organizations who may provide technical and/or financial assistance. Of important note, any RCD can support any team; they do not have to be local teams within their district boundaries.

We recommend contact with local resource professionals to elicit their support and willingness to meet with your team to share knowledge, experience, and provide training. A copy of the NCF-Envirothon study concepts and learning objectives should be provided to them to familiarize them with the requirements for testing including the current issue, station tests, and oral presentations (see www.envirothon.org or caenvirothon.com).

Resource Conservation Districts

Resource Conservation Districts (RCDs) are special districts in California that have been set up under law to act as locally governing agencies with the purpose of implementing projects on public and private lands, and educating others about resource conservation. (www.carcd.org)

RCDs are responsible for providing additional materials on the five disciplines. Study concepts are found online at the CAE website (caenvirothon.com). Member RCDs must have a contact person in its office or district and be included on CAE Steering Committee's list. The Steering Committee must be notified of any changes.

The first step for a RCD to pursue team sponsorship is to contact the high schools within their district to make an appointment with the science, agriculture, or Advanced Placement (AP) advisors. It is ideal to promote visibility of your RCD's participation in the CAE via public awareness outlets such as newsletters, local press releases, or website announcements. Moreover, the CAE website may stimulate interest and promote efforts.

Team Advisors

All competing teams pay a registration fee for the annual CAE competition as determined by the Steering Committee. It is the responsibility of the RCD to help its teams raise funds to attend the competition. The RCD must coordinate with the advisors on this financial commitment. It is important for member RCDs and advisors to be knowledgeable of the Rules and Regulations of Envirothon and any other policies or directives of the CAE Steering Committee.

Each team must consist of five students and one adult advisor. Up to two alternates are allowed. If the team is coed, a male and female advisor must attend. The students must be enrolled in grades 9-12 and be no older than 19 years of age. If at any time of the event, teams are reduced to less than five (e.g., illness), the team may continue to participate, but not allowed to place. The advisors may be teachers, resource professionals, parents, or anyone teaching a team, to attend the event.

Advisors are responsible for the team's conduct at the event, and transportation to and from the event's location. Also applicable are any additional instructions or requirements set forth by the CAE Steering Committee to ensure effective coordination, communication, and orderly implementation of the event. Advisors will be kept apprised in a timely manner.

BUILDING A TEAM: CHECKLIST

1. Choose team members and advisors. Coed teams must have male and female advisors.
2. Locate your local Resource Conservation District to request any information needed to compete in the annual CAE. Check the California Association of Resource Conservation Districts website for locating your RCD (www.carcd.org)
3. Complete and submit pre-registration form online before the designated deadline as set by the CAE Steering Committee. One pre-registration form per school (listing its team(s) and members) and can be found at caenvirothon.com. After 60 days (approximately), the Steering Committee will require a final registration form with the final list of team members, alternates, advisors and payment of fees due at a set deadline.
4. Campaign for support from your school, local businesses, and/or RCDs
5. Research study concepts, study links and other state envirothon resources on caenvirothon.com
6. Contact natural resource professionals in your area willing to conduct workshops for teams related to topics covered in the study concepts
7. Submit final registration forms, including waivers and registration fees, for each team (five team members and any alternates) online before the deadline
8. Each team member must bring proof of health insurance waiver and media release form to the annual event
9. Check CAE website often for updates, announcements and other information regarding the event.
10. Work hard and have fun at the competition!