

**ENVIROTHON / ENVIRONMENTAL  
AND NATURAL RESOURCES  
*CAREER DEVELOPMENT EVENT***

*RULES AND REGULATIONS*

*TEAM COMPETITION*



*ALABAMA FFA ASSOCIATION*

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Alabama State Department of Education, Dr. Eric G. Mackey State Superintendent of Education

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# **ENVIROTHON / ENVIRONMENTAL AND NATURAL RESOURCES CAREER DEVELOPMENT EVENT**

## **PURPOSE**

Envirothon is an outdoor (weather permitting), problem-solving competition for high school students based on natural resources and the environment. The Envirothon program develops students' knowledge of natural resources in five environmental areas: aquatic ecology, forestry, soil/land use, wildlife and a current environmental issue (CEI) which changes annually and is chosen by the state or provincial hosts of the national competition. The program emphasizes the importance of environmental sensitivity while addressing the need to achieve a social, ecological and economic balance.

The Envirothon provides students with the motivation, knowledge and skills to actively take part in environmental and natural resource problem solving. Natural resource professionals/educators act as role models and sources of information. The commitment of Alabama Envirothon is to teach practical solutions to current environmental concerns. Our goals encompass the protection of our natural resources and an understanding of their effective utilization.

## **MISSION OF ENVIROTHON**

The mission of Envirothon is to develop knowledgeable, skilled and dedicated citizens who are willing and prepared to work towards achieving and maintaining a natural balance between the quality of life and the quality of the environment.

The Envirothon mission is accomplished by developing in young people an understanding of the principles of natural resource management and ecology and through practice dealing with complex resource management decisions.

## **ELIGIBILITY AND REGULATIONS**

Envirothon is a team-based program of conservation education which involves local, state and national contests. The emphasis is on practical, hands-on conservation. The contests are based on the five environmental areas above. An oral presentation on the complex environmental problem (CEP) requires application of the knowledge gained of the environment. The Alabama Envirothon is a three-day event, usually Thursday through Saturday.

Envirothon teams consist of 5 members and can have up to two alternates. All members must attend the same school and be in grades 7-12. Schools may enter more than one team space permitting. Although Alabama allows middle school students to participate in the state event, winning teams will have to defer to national guidelines on age/grade restrictions and other contest regulations for NCF Envirothon ([envirothon.org](http://envirothon.org)) and/or the National FFA Environmental and Natural Resources CDE ([ffa.org](http://ffa.org)).

## **DISCLAIMER**

In the event that contests (CDE, LDE, TDE's) cannot be held in person, a virtual option may be conducted. Contest rules and guidelines are subject to change to meet the needs of a virtual experience.

## **DRESS CODE**

Participants must wear closed toed shoes/boots (no sandals, crocs or slides) and long pants (jeans with no holes/ khakis/dress pants) or skirts that cover the knees if not in official dress. Leggings,

jogging pants, yoga, lycra, are not permitted. Shirts should be long enough to be tucked in (no crop tops or midriff showing) and not contain vulgar or suggestive material or language. Contest where oral reasons are given should respect the professionalism of the event, and dress aligning with the profession is preferred. Official FFA Dress is an allowable form of dress for all events. **Consequences for not being in dress code will be a 25 % deduction in scores**

## **STATE AWARDS/SPONSOR(S)**

Refer to Alabama FFA Contests and Awards Booklet at:  
<http://www.alabamaffa.org/> on the Forms and Applications page

Alabama Envirothon is co-sponsored by Legacy, Inc.; Alabama Association of Conservation Districts; Alabama Department of Environmental Management; Alabama Association of Resource Conservation and Development Councils; Natural Resources Conservation Service; Alabama Cooperative Extension System; Alabama Department of Conservation and Natural Resources; and the Alabama Forestry Commission

## GENERAL EVENT RULES

1. The state FFA Envirothon/Environmental and Natural Resources CDE will follow all official rules of the Alabama State Envirothon, as well as any additional rules listed below.
2. Competitors must be enrolled in grade levels 7-12 during the current school year and be dues paying FFA members. Although Alabama allows middle school students to participate in the state event, winning teams will have to defer to nation guidelines on age/grade restrictions for National Envirothon ([envirothon.org](http://envirothon.org)) and/or the National FFA Environmental and Natural Resources CDE ([ffa.org](http://ffa.org)).
3. Each team will consist of five members from the same school and/or organization. FFA teams must declare their status as an FFA team to the event officials before the event begins.
4. Alternates may attend if they are properly registered at the competition and are the responsibility of advisors of the team. Attendance is determined by space available.
5. Each team must be accompanied by adult team advisor(s). Advisors are permitted to attend training sessions but please refrain from asking questions other than for clarification. It is the responsibility of the students to take notes. Advisors are not permitted to attend testing.
6. Transportation and meals in route to and from state event are the responsibility of each team.
7. Team members and advisors must use the lodging and meal service provided. Teams and advisors will be housed in the same buildings.
8. No electronic, battery-powered or solar powered equipment may be used by team members during training, testing, oral presentation preparation, or oral presentations unless such equipment is provided by the Envirothon committee for use during the competition.
9. Team members are not to be in possession of cell phones and walki-talkies or any other communication devices during testing or while working on oral presentation. This can lead to disqualification.
10. Team members may not use cameras during training and testing.
11. All reference materials to be used during the competition will be supplied by the envirothon committee or the resource person responsible for an individual station.
12. Oral Presentations:
  - a. Team oral presentations will be 20 minutes maximum length, followed by 10 minutes of questions to team members by the judges.
  - b. All 5 team members MUST participate orally in the presentation.
  - c. During the oral presentations all team members must wear the AL Envirothon T shirt.
  - d. Visual aids must be prepared on –site by team members.
  - e. Oral presentation scores will be based on the Alabama Envirothon Judges Scoring Sheet.
  - f. During the preliminary presentation rounds team advisors/ parents may observe and /or record only their own team.
  - g. During the final presentation round all advisors and students no longer competing may observe.
13. Tobacco, drugs and all alcohol are prohibited during the entire stay.
14. Advisors will be responsible to assure that teams display proper conduct during the competition and at the host facility.
15. Stealing of, or vandalism to, personal, private or public property will not be tolerated. Possible actions may include, but are not limited to, the following: an Envirothon team may be disqualified, a school may be barred from competition for a period of time, depending on the nature and severity of the incident. Damages will be billed to the parents of the students involved.
16. Team members and advisors are not allowed to leave the host site without notifying the AL coordinator.

17. Judges decisions are final on all events. Tiebreaker procedures will be determined and announced prior to the beginning of the event. The winning team will be the team with the highest cumulative point total at the end of the competition. Possible points for the 5 stations scores is 500, the oral presentation possible score of 200 for a possible total score of 700 points.
18. The highest scoring team will represent Alabama at the NCF Envirothon. If a FFA team wins the state Envirothon competition, they will represent Alabama at the NCF Envirothon as well as the National FFA Environmental and Natural Resources CDE.
19. The top placing FFA team at the Alabama Envirothon state competition will represent Alabama in the Environmental and Natural Resources CDE at the National FFA Convention. Any FFA member winning the state Envirothon and/or registering for the national FFA Environmental and Natural Resources CDE will not be eligible to compete in the state event in the future. The winning team's advisor will have to refer to the contest guidelines posted on [www.ffa.org](http://www.ffa.org) regarding the FFA Environmental and Natural Resources CDE since they vary from the rules/regulations for the state Envirothon.
20. In the event the winning team cannot represent the state at NCF competition the team with the next highest score will be eligible to compete.
21. Rules and regulations are subject to change. Any and all changes will be explained to all teams and advisors at an affected Envirothon competition.

## EVENT FORMAT

Teams will be divided among four groups and trained on the five topic areas: **(refer to draft schedule on P. 15)**

1. **Soil and Land Use:** Professional soil scientist's help students learn about soil structure, interpret maps, and evaluate land forms, and soil characteristics that affect agriculture and development issues.
2. **Aquatic Ecology:** Students work with marine and freshwater biologists to assess the quality of delicate aquatic ecosystems. They also learn to identify aquatic organisms, manage watersheds, and determine non-point source pollution.
3. **Forestry:** Students develop an understanding of the practices for maintaining healthy forest ecosystems through the help of professional foresters. They learn the basics of species identification, forest structure and dynamics as well as management approaches.
4. **Wildlife:** A favorite for many Envirothon participants, students learn firsthand from wildlife experts about animal populations, their dynamics, and the importance of habitat conservation.
5. **Environmental Issues:** Challenged by field professionals, students work as a team to explore the facets of the current environmental issues and illustrate the complexity of real-life environmental decisions.

Teams will be tested in and will rotate through the five topic areas. Teams have 45 minutes to take each exam. (500 points possible)

Teams will then prepare and deliver an oral presentation, challenging them to work together and communicate their solution to a Complex Environmental Problem (CEP) in front of a panel of judges. (200 points possible) 17-20 minutes:

## SCORING

Teams take a written test at each of the 5 stations. The students test as a team; not individually. Each of the station (topic) scores is worth a max of 100 points for a total of 500. The oral presentation is worth a max of 200 points for an overall possible team total of 700 points.

## RESOURCES/INFORMATION

A lot of information (study guides, etc.) pertaining to this event can be found on the following Web sites:

[www.alabamaenvirothon.org](http://www.alabamaenvirothon.org)

[www.envirothon.org](http://www.envirothon.org)

Groups in your area that could assist with expertise in training your team:

County Forestry Planning Committee

Alabama Forestry Commission

Alabama Water Watch

Alabama Department of Conservation & Nat Res

Alabama Cooperative Extension System

Alabama Department of Environmental Management

## CURRENT TOPIC

Information regarding the current topic can be found at the two Web sites listed above under Resources/Information.

## LEARNING OBJECTIVES

The following objectives can be used as a guide in working with your teams.

SOME **SOILS/LAND USE** KEY POINTS—students should be able to:

- Recognize soil as an important and dynamic resource.
- Recognize and understand the features of a soil profile.
- Describe basic soil properties and soil formation factors.
- Understand the origin of soil parent materials.
- Identify soil constituents (clay, organic matter, sand and silt)
- Identify and list soil characteristics (e.g. texture, structure, etc.) and their relation properties.
- Determine basic soil properties and limitations (e.g. mottling and permeability) by observing a soil pit or a soil profile.
- Understand the nature of plant nutrients and how they are held by soil.
- Recognize the characteristics of wetland (hydric) soils.
- Understand soil drainage classes and know how wetlands are defined.
- Understand soil water, its' movement, storage and uptake by plants.
- Understand the effects of land use on soils.
- In land use planning discussions, discuss how soil is a factor in or is impacted by non-point source pollution.
- Identify types of soil erosion and discuss methods for reducing erosion.
- Utilize soil information, including a soil survey
- Describe the hydrologic, carbon, and nutrient cycles and how soil management relates to those processes.

SOME **AQUATIC ECOLOGY** KEY POINTS—Students should be able to:

- Identify the processes and phases for each part of the water cycle.
- Describe the chemical and physical properties of water and explain their implications for freshwater and saltwater ecosystems.
- Analyze the interaction of competing uses of water for water supply, hydropower, navigation, wildlife, recreation, water assimilation, irrigation, industry and others.
- Discuss methods of conserving water and reducing point and non-point source pollution.
- Identify common aquatic organisms through the use of a key.

- Delineate the watershed boundary for a small water body.
- Explain the different types of aquifers and how each type relates to water quantity and quality.
- Briefly describe the benefits of wetlands, including both function and value.
- Describe the benefits of riparian areas, including both function and value.
- Describe the changes to the aquatic ecosystem based on alteration to the aquatic habitat.
- Know methods used to assess and manage aquatic environments and be able to utilize water quality information to assess the general water quality of a specific body of water. This includes sampling, technique, and water quality parameters used to monitor point and non-point source pollution.
- Be familiar with major wetlands and laws used to protect water quality (i.e. both surface and ground water) and utilize this information to make management decisions to improve the quality of water in a given situation.
- Determine pH, alkalinity and dissolved oxygen percent saturation of a water sample with given information and explain how each property influences a particular aquatic organism.
- Explain how water flow, water temperature, water turbidity and surface tension influence a particular aquatic organism.
- Identify three specific parts of the water cycle and describe their influence on the aquatic ecosystem.
- Identify the stream order of three or more given watercourses in a particular watershed and compare or contrast the habitats and aquatic animals that are found in each of those ordered watercourses.

SOME **FORESTRY** KEY POINTS—students should be able to:

- Identify common trees without a key and identify specific or unusual species of trees and shrubs through the use of a key.
- Understand forest ecology concepts and factors affecting them including the relationship between soil and forest types, tree communities, regeneration, competition and succession.
- Understand the cause and effect relationship of factors affecting tree growth and forest development (climate, insects, microorganisms, wildlife, etc.).
- Understand how wildlife habitat relates to forest communities, forest species, forest age and structure, snags and den trees, availability of food and riparian zones.
- Understand how the following issues are affected by forest health and management: biological diversity, forest fragmentation, air quality, aesthetics, fire, global warming, and recreation.
- Understand basic forest management concepts and tools such as how various silvicultural practices are utilized, the use of tree measuring devices, and the best use of management practices.
- Apply silvicultural concepts and methods to develop general management recommendations and goals for a particular situation.
- Identify the complex factors that influence forest management decisions (e.g. economic, social and ecological).
- Understand the value of trees in urban/suburban settings and the factors affecting their health and survival.
- Describe specific adaptations of wildlife to their environment and their roles in the ecosystem.
- Explain typical forest structure (canopy, under story and ground layers) and crown classes.



- Explain the cause and effect relationships between environmental factors (light, soil and moisture) and tree growth. Be able to interpret these effects in the growth rings of a sample of wood (either a “tree cookie” or core taken with an increment borer.)
- Explain the role of fire in forest ecosystems. Describe basic principles of wildfire prevention and control. Explain the use of prescribed fire.
- Identify and describe the life cycle and impacts of common forest pests and invasive plants. Research integrated pest management strategies for selected pests.

SOME **WILDLIFE** KEY POINTS—student should be able to:

- Identify common wildlife species and wildlife signs.
- Identify basic wildlife survival needs.
- Describe specific adaptations of wildlife to their environment and their role in the ecosystem.
- Describe predator/prey relationships and identify examples.
- Describe food chains and food webs and cite examples.
- Describe factors that limit or enhance population growth.
- Evaluate a given habitat and its suitability for a designated species when given a description of its habitat needs.
- Describe ways a habitat can be improved for specific species through knowledge of its specific requirements.
- Discuss the concept of carrying capacity and limiting factors.
- Discuss various ways the public and wildlife managers can help in the protection, conservation, management and enhancement of wildlife populations.
- Describe the potential impact of the introduction of non-native species.
- Describe major factors affecting threatened and endangered species and methods used to improve the populations of these species.
- Explain the terms used in endangered and threatened species, for example: extinct, extirpated, endangered, threatened, candidate species and reintroduction.
- White Nose Syndrome—what it is; how it is affecting bats; and what measures are being taken to discover outbreaks and to prevent spread.
- Define biodiversity and provide examples of how biodiversity is important to people and wildlife.
- Describe major causes of habitat loss in Alabama and how habitat loss affects wildlife.
- Explain the role of the Endangered Species Act in helping to conserve endangered and threatened species.

### **SAMPLE TEST QUESTIONS:**

#### **Forestry** Sample Test Questions

1. Identify the following points on the tree cookie/cross section. Provide the correct name of the part and its function.
2. Forests are comprised of coniferous and deciduous trees. Please define each term and give two examples of these tree types/classifications.
3. List 5 environmental benefits from trees.
4. Wood constitutes an important part of the lives of people worldwide. In the United States alone, each individual (man, woman or child) uses over 2.000 lbs. of wood products per year. Please list 4 products derived from each of the following tree components. A. Paper/Pulp, B. Cellulose, C. Bark, D. Gums and Resins

5. Trees are also important in providing for humans and wildlife. Please list 5 foods that are produced in forests.
6. Ecological succession is the gradual change in plant and animal communities over time. Primary and Secondary succession are apparent in Alabama forests. In what state of succession is this forest? Explain how you made that assessment.
7. In a Secondary Succession, identify the plant/tree species in each stage (list 2 examples) and offer wildlife examples that are dependent upon the stage (list 2 examples).
8. Tree species have a complex set of habitat requirements that foresters often call the "four factors of site" (i.e., climate, location, soil composition, and animal interactions). Please list these requirements for three of the 5 marked species.
9. The evolution of a forest ecosystem is affected by human and natural factors. Please identify which of the following are natural factors affecting succession. Lightning, Wind, Logging, Road Building, Farming, Disease/Blight, Volcanic Eruption, Arson.
10. The forest habitat can be symbiotic or competitive. Symbiotic-forming a relationship in which one organism or both can benefit from the actions or characteristics of the other. Competitive-where one organism thrives at the expense of another. Offer 2 examples of each as they relate to the forest ecosystem.
11. Forest ecology is the study of the complex interactions between the organic and inorganic elements of a forest ecosystem. Define/explain organic and inorganic and provide 2 examples of each as they relate to the forest ecosystem.
12. What role does the nutrient cycle play in the forest ecosystem?
13. Explain photosynthesis as it relates to the lifecycle of a tree? (Use a diagram and language to complete your answer)
14. Identify the 4 life zones in forest stratification. Define them and offer wildlife examples.
15. Using the information provided in the Forest Resources documents, what would provide a greater financial return to the landowner if this area were harvested? Explain your answer.

#### **SOILS SAMPLE TEST QUESTIONS:**

1. What color is Hydric soil under the surface layer? A. red, B. Gray, C. yellow, D Brown.
2. Prismatic, blocky and platy are terms to describe soil. A. texture, b. structure, c. consistency d. parent material
3. Which of the following influence soil wetness? A. climate b. slope, c. landscape position d. all of the above
4. Which of these soil characteristics would least likely affect the proper functioning of a septic tank system? A. permeability b. depth to rock c. color, d. depth to water table e. slope
5. A vertical section of the soil extending through all its horizons and into the parent material is? A. soils series b. soil drainage c. soil profile, d. soil color.
6. What is the function of a septic system? To dispose of a. waste disposal b. water disposal c. solid disposal d. all of the above
7. What is the function of the septic tank field lines? A. solid waste disposal b. waste water disposal, c. animal disposal d. all the above.
8. If improperly applied, which of the following may be washed away form agricultural fields and lawns during heavy rains? A. pesticides b. fertilizer, c. herbicides d. all the above
9. Which of the following influences soil wetness: a. climate b. slope c. landscape position d. all of the above

10. Which soil type would you expect to retain large amounts of water, but low availability to plant:  
a. sand, b. loam, c. gravelly, d. clay
11. Soil erosion is the process of taking chemicals out of the soil. True—False\_\_
12. To determine what soils are in a particle field, one should consult: a. Farmers Almanac b. USGA topographic maps, c. Soil survey of a county d. local newspaper.
13. Most chemical reactions in the soil occur on which type of particle: a. silt b. muck c. clay d. gravel
14. Usually9 the A horizon has the highest amount of a. organic matter b. clay c. roots d. a&c D. none of the above

## **AQUATICS SAMPLE TEST QUESTIONS**

1. What biological component is enhanced by the presence of riffles in a stream? A. food B. water vapor C. oxygen d. zinc
2. What impact would clearcutting have on stream if there were no designated buffer zones between the stream and the area of land that was disturbed? A. turbidity would increase B. dissolved oxygen would increase c. temperature would increase D. both a and c E. all of the above
3. Which of the following is not considered a major watershed in Alabama? A. Tennessee Valley B. Alabama-Tombigbee C. Catoma D. Cahaba
4. What effect does Alkalinity have on the pH of a stream? A. Lower the alkalinity provides a "buffer" against rapid changes in pH B Higher alkalinity provides a "buffer" against rapid changes in pH C. Alkalinity has little or no effect against rapid changes in pH.
5. Which of the following water samples would most likely have the highest dissolved oxygen levels? A. a water sample collected on a winter day (air temp is 35 degrees F) B. A water sample collected on a summer day (temp is 82 degrees F) C. A water sample collected and left sitting in the sun for 2 hours.
6. Which of the following is NOT influenced by the temperature of an aquatic ecosystem? A. Dissolved oxygen levels B. The rate at which photosynthesis takes place C. The metabolic rate of aquatic organisms D how organisms are affected by pollutants, parasites and pathogens E. pH
7. True or False: "Supersaturation" of dissolved oxygen in the water is caused when aquatic plants produce oxygen through photosynthesis at a faster rate than the oxygen can diffuse from the water to the air.
8. Pollution from sewage leaks can cause which of the following? A. an increase in dissolved oxygen B. A decrease in nutrients C. increase in bacteria D answers a and c.

## **WILDLIFE SAMPLE TEST QUESTIONS**

1. Name an ovoviviparous mammal that is common all over Alabama.
2. The Eastern coral snake uses what to warn predators to stay away?
3. We have a wide diversity of plant and animal species in Alabama due to: a. our large number of rivers and streams B. the wide diversity of habitat types we have C. The type of soil found in the state.
4. What factor does not affect population size? A. immigration and emigration B. Crepuscular behavior C. survival of individuals D. reproduction
5. What act passed in 1990 decreased the traffic wildlife products, especially plumes and feathers used in millinery trade?
6. What bird that once numbered in the billions, became extinct due to overhunting?
7. What state agency administers wildlife programs in Alabama?
8. What is bag limit?

## **COMPLEX ENVIRONMENTAL PROBLEM (CEP):**

What is a CEP?

This leads to the oral component of the competition which offers Envirothon teams the opportunity to address real-life environmental problems testing their ability to consider an issue, discuss ramifications and effects, and develop possible solutions while taking into consideration social, financial and political aspects. The team presents their findings to a panel of judges. The presentations are a max of 20 minutes followed by 10 minute period for judges' questions. The presentation offers students the opportunity to hone public speaking skills, problem solving and presentation skills. The following scenario was used in our state competition and will provide an example of the types of issues you might be asked to address at any given Envirothon competition. In addition, your teams can view the top five presentations from the 2013 North American Envirothon competition by visiting the North American Envirothon website's Media Center Video Gallery at:

[http://www.envirothon.org/index.php?option=com\\_ttvideo&task=videolist&cid=76&Itemid=201](http://www.envirothon.org/index.php?option=com_ttvideo&task=videolist&cid=76&Itemid=201).

Example of a CEP:

Urban development has become a common issue in many areas across the USA. Urban sprawl can create many complex issues such as decreased soil and water quality, flooding during storm events, loss of wildlife habitat and the depletion of local water sources. As communities continue to grow they need to become ever more aware of the natural resources around them and what they can do to help protect them.

The city of Valley is located along the Chattahoochee River in Eastern Alabama in close proximity to the kayaking and ecotourism sites of the river. Valley is a relatively small city consisting of only 20,138 people. Historically, much of the land surrounding Valley has been designated for agricultural use such as growing corn and small grain crops. However, tourism has continued to increase across Chambers County due to the proximity of the river and recreational opportunities that are present in the surrounding area.

The Moores Creek flows along the West side of the town of Valley. The creek has been identified by the State of Alabama as an impaired water body due the high concentration of sediment, nutrients, increased water temperatures, and low levels of Dissolved Oxygen (DO). According to the Total Maximum Daily Load (TMDL) that was developed for the Moores Creek the main sources of these pollutants are stream bank and overland erosion. Much of the erosion that is encountered in this area is the result of intense storm events and spring runoff. The TMDL also identifies storm water as other possible sources of these pollutants.

The area surrounding Valley supports a variety of wildlife. Several threatened or protected species are found in the riparian corridor of the Moores Creek and Chattahoochee River adjacent to the town. These species include the Bald Eagle, Eastern Hellbender and the Shoal Bass. Many of these species rely on the habitat provided by the river and creek as it flows through the valley.

Over the past decade the population of Valley has increased by 30%. This may be a result of its proximity to the new Kia Automotive Plant located 7 miles across the Georgia line. It has also been announced that an additional plant that will provide parts for Kia will be constructed in the Moores Creek watershed and will employ several hundred people. It appears as though future growth in the city of Valley is inevitable. As the population continues to increase, urban planners will need to consider how this growth will impact the natural resources and what can be done to protect them.

## Your Objective:

Your team is the newly-hired staff for the Valley City Planning and Zoning committee. Construction on a new phase of the city has been proposed to take place on the West side of town in the coming year, along the creek corridor. You have been asked to develop a storm water management plan that will incorporate Low Impact Development (LID) techniques in the design of this new phase. You must now present your plan to the City Council for approval. Your presentation needs to address the topics listed below:

- Explain to the City Council what nonpoint source pollution is and how it is linked to urbanization.
- Why does storm water need to be addressed in Valley?
- Explain to the City Council what a Low Impact Development practice is.
- What benefits do LID practices have over traditional storm water treatment practices?
- How could installation of LID's affect the following?
  - flooding, wildlife habitat, water quality, esthetics, ground water, soil quality, water conservation and property values.
- What kind of LID infrastructure would you recommend installing in Valley and why?
- How will you motivate local citizens to install and maintain these LID structures?
- Compare the costs of traditional storm water practices vs. LID management practices.

## CONTACTS

Your local Alabama Soil and Water Conservation District personnel

(or)

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## SAMPLE STATE ENVIROTHON SCHEDULE

### Thursday.....

10:00 - 11:45 AM	Registration (4-H Center Lodge Lobby)
Noon--- 12:45 PM	Lunch (Dining Room)
1:00 ---- 2:00 PM	Station Training (Session 1): <u>Team members divided across 5 topics</u>
2:15 ---- 3:15 PM	Station Training (Session 2): <u>Team members divided across 5 topics</u>
3:30 ---- 4:30 PM	Station Training (Session 3): <u>Team members divided across 5 topics</u>
4:45 ---- 5:45 PM	Station Training (Session 4): <u>Team members divided across 5 topics</u>
6:00 ---- 6:45 PM	Dinner (Dining Room)
7:00 ---- 7:30 PM	Advisor & Student update for Friday & Saturday (Theatre)
7:30 ---- 10:30 PM	Free Time/Study Time
10:45 PM	Everyone inside dorms, no wandering around grounds
Midnight	Lights out - "Friday will be a long day"

### Friday.....

7:30 ---- 8:00 AM	Breakfast (Dining Room)
8:15 ---- Noon	Station Testing -students only- "Advisor Free Time"
Noon--- 12:45 PM	Lunch (Dining Room)
1:00 ---- 3:30 PM	Free Time Activities
3:45 ---- 4:45 PM	Presentation of Complex Environmental Problem (CEP) -students only- (Theatre)
5:00 ---- 5:30 PM	Begin work on presentation
5:30 ---- 6:15 PM	Dinner (Dining Room)
6:15 ---- 10:45 PM	Work on presentation
6:30 ---- 7:30 PM	Advisor Meeting (Theatre)
10:45 PM	Bring presentation materials to lock up (Lodge)
11:00 PM	Everyone inside dorms, no wandering around grounds
Midnight	Lights out – "Get rest for your presentation"

### Saturday.....

7:30 ---- 8:00 AM	Breakfast (Dining Room)
8:15 ---- 11:30 AM	Presentations (Theatre & Board Room) "Teams Wear State T-Shirts"
11:30 -- Noon	Lunch (Dining Room)
12:30 -- 2:00 PM	Top 3 Presentations (Theatre)

**ALABAMA ENVIROTHON**  
**ALABAMA FFA ENVIRONMENTAL AND NATURAL RESOURCES**  
**CAREER DEVELOPMENT EVENT**

SCHOOL/CHAPTER: \_\_\_\_\_

JUDGE: \_\_\_\_\_

(\*\*use only choices of 0, 2, 4, 6, 8, or 10; except for Part IV\*\*)

Scoring Description (How well do they address the standard)	0: Not at All	2: Major misconceptions or gaps; ineffective, inadequate, inappropriate	4: Some misconceptions and flaws; minimally effective, somewhat appropriate	6: Complete and accurate; effective, adequate, and appropriate	8: Complete, very detailed, logical, ideas well supported and well organized; highly effective, all details appropriate	10: Profound, in-depth, done in an insightful manner; extremely organized, points to a most effective strategy	Total Points	Total Possible
<b>Part I: Preparation and Presentation Plan</b>								
I A1: Interrelationships between: environmental & natural resources and management strategies								10
I A2: Players/interest groups and their positions								10
I A3: Addresses Natural Resource Areas: Check off (aquatics, soils, forestry, wildlife, other)								10
I A4: Addresses the Current Topic								10
I A5: Addresses the Oral Presentation Problem								10
I B: References and Resources: Count of citations:	0	1-2 sources	Several with gaps	4-5 appropriate sources	Adequate, <u>different points</u> of view	In depth, all supported		10
<b>Part II: Application of Data</b>							<b>Total Part I:</b>	<b>60</b>
II A: Understanding of Political Aspects of the Problem								10
II B: Environmental Aspects of the Problem								10
II C: Economic Aspects of the Problem								10
II D: Social/Cultural Aspects of the Problem								10
II E: One Viable Solution Presented								10
II F: Parts Clearly Stated and Supported								10
II G: Solution that can be Implemented with Long Term Sustainability								10
II H: Addressing Concerns of Players and Issues Involved								10
<b>Part III: Presentation Quality</b>							<b>Total Part II:</b>	<b>80</b>
III A: Well Organized, Clear Introduction & Strong Conclusion								10
III B: Good Presentation Skills (Eye contact, inflection, originality, professional, etc.)		Majority show limited skills	Several have limited skills	All do an adequate job	All show effective skills	Extremely effective, variety of ways; creative		10
III C: Visual Aids: (correct, eye appealing, legible, neat)		Major flaws	Minor flaws	Correct, adequate, convey major point	All mentioned before and eye- catching	Creative, very effective, greatly enhance presentation		10
III D: Questions and Answer Section								10
<b>Part IV: Required</b>							<b>Total Part III:</b>	<b>40</b>



IV A: Team Participation (Per student: 0-none; 1-limited; 2-adequate)		Student #1	Student #2	Student #3	Student #4	Student #5		10
IV B: Time: _____ minutes (Based only on time)	>9 min	1 point = 9-10 minutes	2 points = 11-12 minutes	3 points = 13-14 minutes	4 points = 15-16 minutes	5 points = 17-20 minutes		5
IV C: Presents a Plan		1 point	2 points	3 points	4 points	5 points		5
<b>Political:</b> regulations, mandates, impact on political systems/community, etc.						<b>Total Part IV:</b>		<b>20</b>
<b>Economic:</b> costs and benefits, cost of implementation, economic impact on local resources, cost of doing nothing, future costs, hidden costs, funding source(s), etc.								
<b>Social &amp; Cultural:</b> ability to meet basic needs, private property rights, traditions, clean and healthy environment, right to farm, urban issues, cultural issues, environmental justice.						<b>Grand Total:</b>		<b>200</b>

## ALABAMA ENVIROTHON

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### ALABAMA FFA ENVIRONMENTAL AND NATURAL RESOURCES CAREER DEVELOPMENT EVENT

SCHOOL/CHAPTER \_\_\_\_\_

Team Participants	Event Phase	Possible Score	Team Score
Name of Participant # 1	Soil and Land Use Written Exam	100	
	Aquatic Ecology Written Exam	100	
Name of Participant # 2	Forestry Written Exam	100	
	Wildlife Written Exam	100	
Name of Participant # 3	Environmental Issues Written Exam	100	
	Oral Presentation	200	
Name of Participant # 4			
	<b>Team Total=</b>	<b>700</b>	
Name of Participant # 5			
Name of Alternate # 1			
Name of Alternate #2			
		<b>Team Total</b> (Maximum score possible is 700 points.)	

<b>TEAM RANKING</b>	
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