



# 2019 Wisconsin Envirothon

## Current Issue Team Presentation Scenario

### Agriculture and the Environment: Knowledge & Technology to Feed the World

#### **The Team Presentation Competition**

The team presentation segment contains twice as many points as the individual testing stations. Maps and other visuals shall be no larger than 22" x 28" on poster or tag board or equivalent material. There is no access to electronic media. The team will be provided two basic standing easels to present. All members of the team must verbally participate in the oral presentation. Your team will have ten minutes to present accompanied by three to five minutes of judges' questions. Presentations may be conducted in an indoor setting. You may cite outside reference materials and sources. The score sheet and rubric to be used by the judges are attached.

#### **The Scenario**

### Bluegreen Algae: A Serious Surface Water Challenge

You own and operate a medium-sized dairy farm (400 head including dry cows) and 1,000 acres of land in a sub-watershed of the Wisconsin River. To provide adequate feed for your dairy herd you grow 400 acres hay, 200 acres corn silage, 200 acres corn for grain, and 200 acres of soybeans. You use conventional tillage practices, consisting of one fall chisel pass and two spring tillage passes prior to planting. You do not graze or pasture any of the animals. The manure storage system provides for 6 months of storage for just the dairy barn. The rest of the manure and bedded pack must be spread when buildings are cleaned. Your nutrient management plan has a corn yield goal of 180 bushels per acre and the custom hauler surface applies manure to meet that plan.

A sizeable percentage of the cropland in this watershed is converted or drained wetland. Thus, many tilled/farmed acres are marginal for feed and manure application. Land slope ranges from 0 to 6%, with most being 0 to 2%. Soils are classified as somewhat poorly drained silt loams to sandy loams. The soils are highly erosive, creating challenges to keep the soil and nutrients in place on your farm. Adding insult to injury, recent trends towards more frequent heavy rainfall events of one inch or more in a short period of time have led to more flashy streams and flooding events. Of your 1,000 acres, 280 fall into this converted or drained cropland and 48 cropped acres are also mapped as hydric soils. All of this leads to the farm frequently receiving crop damage payments from the flooded fields.

The Creek running through your land has been listed by the U.S. Environmental Protection Agency as degraded 303(d) waters due to lack of dissolved oxygen for extended periods. The watershed includes 165 square miles and is 47 miles long from its mouth at the Wisconsin River to its headwaters. Biotic index sampling by the DNR classifies the water quality of the Creek as poor to very poor. The watershed is listed by the DNR as being severely affected by nonpoint source (NPS) pollution. Watershed rankings calculated by the DNR list it as a high priority for surface water and groundwater. A high surface water ranking indicates nonpoint sources of pollution are present that impact water quality and can be controlled or corrected with Best Management Practices. A high groundwater ranking indicates the watershed has susceptibility to groundwater contamination. Nonpoint Source controls have the potential to improve groundwater quality.

Downstream is a 23,000 acre lake used for boating, fishing, and swimming. In recent years the lake has been experiencing serious blue-green algae blooms in the summer, thus decreasing property values on the lake and affecting tourism in the area.

## **Your Task**

- Develop a whole farm approach to water management that reduces soil and nutrient losses while preserving or repairing “working” wetlands features on the farm.
- Use the latest technologies and conservation practices to feed your herd and provide food worldwide while maintaining a sustainable farm.
- Show how the previous two tasks will benefit the lake downstream.

## **Your Objective**

You will present to the DNR and the downstream lake association your farms approach to sustainability, how it is working to help remove the watershed from the 303d list, and continue to provide adequate food supplies locally, nationally, and internationally.

## **Additional resources located at:**

<https://www.envirothon.org/the-competition/current-competition>

<https://www.envirothon.org/media/attachments/2018/11/02/2019-ncf-envirothon-ci-resources-11-02-2018.pdf>

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

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

<https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/climatechange/?cid=stelprdb1077238>

<https://fyi.extension.wisc.edu/sustag/2013/02/19/building-a-better-system-with-no-till-and-cover-crops/>

<https://dairyforage.ars.wisc.edu/>

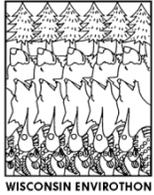
<https://fyi.extension.wisc.edu/dairy/>

<https://fyi.extension.wisc.edu/dairy/>

<https://ipcm.wisc.edu/downloads/nutrient-managment/>

<https://fyi.extension.wisc.edu/covercrop/>

<http://mccc.msu.edu/>



# 2019 Wisconsin Envirothon

## Team Presentation Evaluation Rubric

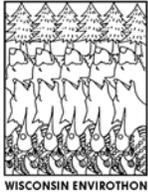
		<b>5=excellent</b>	<b>4=very good</b>	<b>3=good</b>	<b>2=adequate</b>	<b>1=inadequate</b>
<b>Application of Data</b>	<b>Understanding of environmental and resource management challenge</b>	The team clearly, concisely and thoroughly conveyed a solid understanding of all of the learning objectives outlined in the advisor handbook relevant to the environmental and resource management aspects of this scenario.	The team clearly and concisely conveyed a thorough understanding of all relevant learning objectives.	The team clearly, concisely and thoroughly conveyed a thorough understanding of most of the relevant learning objectives.	The team clearly, concisely and thoroughly conveyed only some of the relevant learning objectives.	The team's presentation was missing many relevant learning objectives.
	<b>Understanding of technical issues related to topic</b>	The team clearly, concisely and thoroughly conveyed a solid understanding of the technical issues related to the problem. Benefits of solution presented for the farmer/producer and the natural resources were covered and well understood.	The team clearly, concisely and thoroughly conveyed an understanding of the issues related to the problem and an appropriate solution was provided.	The team clearly, concisely and thoroughly conveyed an understanding of the issues related to the problem and attempted to provide a solution.	The team clearly, concisely and thoroughly conveyed only some understanding of the issues related to the problem.	The team's presentation lacked an understanding of the issues related to the problem.
	<b>Understanding of the planning process affecting stakeholders and relevant parties</b>	The team clearly, concisely and thoroughly conveyed an understanding of the planning process, stakeholders and relevant political issues related to the problem. The team identified parties affected in the scenario and considered the concerns of all these parties.	The team clearly, concisely and thoroughly conveyed an understanding of the planning process, stakeholders and relevant political issues related to the problem. The team attempted to identify and consider the concerns of all relevant parties.	The team clearly, concisely and thoroughly conveyed an understanding of the planning process, stakeholders and relevant political issues related to the problem. The team identified and considered some of the concerns of relevant parties.	The team conveyed only a basic understanding of planning, stakeholders and relevant political issues related to the problem.	The team's presentation did not convey an understanding of planning, stakeholders and relevant political issues related to the problem.
	<b>Conclusion &amp; recommendation support, definition and conviction</b>	Ideas, statements, predictions, conclusions and recommendations were clear and logical, supported by data, were convincing to the audience, and expected results were comprehensible.	Conclusions and recommendations were supported by data, clearly defined and were convincing to the audience.	Conclusions and recommendations were supported by data and clearly defined.	Conclusions and recommendations were supported by data.	No data was used or data was presented in an unclear fashion.
	<b>Ability to respond to questions</b>	Audience questions after the presentation were answered logically and fully. The team demonstrated a collaborative effort to answer questions when possible.	Audience questions after the presentation were answered sufficiently, but not always fully, and the team attempted to use a collaborative effort to answer.	Audience questions after the presentation were answered sufficiently, but not always fully, OR some team members tended to dominate the response.	Audience questions after presentation were answered, but not always correctly, logically or fully, OR some team members clearly dominated the response.	Audience questions after presentation were answered inadequately, OR some team members clearly dominated the response.

		<b>5=excellent</b>	<b>4=very good</b>	<b>3=good</b>	<b>2=adequate</b>	<b>1=inadequate</b>
<b>Quality of Presentation</b>	<b>Organization</b>	The team demonstrated an understanding of the level of complexity of the scenario and successfully reduced the complexity for the audience by structuring the presentation in a way that facilitated the audience's understanding of concepts. Questions from panel resulted from a thought provoking presentation and did not result from a need to clarify components of the presentation.	The presentation was logically organized so that only a few minor clarifications were necessary after the presentation OR the audience comprehension could have been aided by slight reorganization.	Most of the presentation was logically organized, but some key clarifications were necessary after the presentation.	Only some of the presentation was logically organized, and so many key clarifications were necessary after the presentation.	The presentation was not logically organized and did not facilitate the audience's comprehension.
	<b>Participant enhancement of presentation</b>	The presentation mechanics allowed the team's points to be very effectively conveyed because they satisfied these key criteria: the rate, flow and clarity of delivery by each speaker was appropriate; each speaker's voice was loud enough to be heard by all judges; each speaker spoke to the audience in a narrative style, avoiding distracting mannerisms; transitions between speakers were smooth and helped audience follow the presentation.	The presentation mechanics satisfied all but one or two of the key criteria.	The presentation mechanics satisfied most of the key criteria.	The presentation mechanics satisfied only some of the key criteria.	The presentation mechanics satisfied very few of the key criteria.
	<b>Visuals</b>	The visuals accompanying the oral narrative were necessary and very effectively conveyed the research because they satisfied these criteria: 1. Content was relevant; 2. Overall appearance was pleasing to the eye but did not distract from the content; 3. Font and figure sizes were adequate; 4. Visuals were filled with just enough information to be informative without looking overcrowded; 5. Figures were clearly labeled, had titles.	The visuals used satisfied all but one of the key criteria.	The visuals used satisfied most of the key criteria.	The visuals used satisfied only some of the key criteria.	The visuals used were unnecessary or satisfied very few of the key criteria.
<b>Timing and Participation</b>	<b>Team participation</b>	Effective teamwork contributed to the success of the presentation because it met these criteria: 1. Each team member's contribution to the presentation was equivalent; 2. Each team member contributed answers to questions asked after the presentation to the best of their ability; 3. Teammates were respectful of each speaker and did not interrupt them.	Teamwork was largely effective; 2 of the 3 criteria were fully met.	Teamwork was somewhat effective; 1 of the 3 criteria was fully met.	Teamwork was not effective because none of the three criteria was fully met.	No teamwork was evident.
	<b>Use of time</b>	Team made effective use of time throughout the presentation. Presentation took 9-10 minutes.	The team mostly made effective use of time during the presentation. Presentation took 8-10 minutes.	The team made effective use of time during the presentation. Presentation took less than 8 minutes or had to be stopped by the moderator at 10 minutes.	The team made fairly effective use of time during the presentation. Presentation took less than 7 minutes or had to be stopped by the moderator at 10 minutes.	The team did not make effective use of time during the presentation or overall.

Team Name \_\_\_\_\_

Start time \_\_\_\_\_

End time \_\_\_\_\_



# 2019 Wisconsin Envirothon

## Team Presentation Evaluation Form

Judges – Please provide brief written evaluation to supplement your scoring.

(Scale for scoring: high score = outstanding; low score = poor)

### PART 1 – APPLICATION OF DATA

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. Team demonstrated a solid understanding of the environmental and resource management challenge.                           | 5 | 4 | 3 | 2 | 1 |
| 2. Team demonstrated a solid understanding of the technical issues related to the topic.                                     | 5 | 4 | 3 | 2 | 1 |
| 3. Team demonstrated a solid understanding of the planning process, affected stakeholders and relevant parties to the topic. | 5 | 4 | 3 | 2 | 1 |
| 4. Conclusions drawn and recommendations given were supported by data and clearly defined and convincing to the audience.    | 5 | 4 | 3 | 2 | 1 |
| 5. Team responded to questions about the content of its presentation in an accurate, concise, and logical manner.            | 5 | 4 | 3 | 2 | 1 |

### PART 2 – QUALITY OF PRESENTATION

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. Presentation was well organized. Main points were clearly stated and supported. Presentation included a clear introduction and strong conclusion.  | 5 | 4 | 3 | 2 | 1 |
| 2. Participants used appropriate volume, eye contact, gestures, voice inflection, and pace. Participants also avoided distracting mannerisms and exhibited originality and professionalism during the presentation and question period. | 5 | 4 | 3 | 2 | 1 |
| 3. Team made a good use of visual aids to present information in support of the presentation. Visual aids met standards and were appealing, concise, and appropriate to support the presentation.                                       | 5 | 4 | 3 | 2 | 1 |

### PART 3 – TIMING AND PARTICIPATION

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. All team members participated orally in the presentation with smooth transitions. (Each team member gets 1 point for equal participation). | 5 | 4 | 3 | 2 | 1 |
| 2. Team made effective use of the allotted time.  | 5 | 4 | 3 | 2 | 1 |

JUDGE'S COMMENTS: \_\_\_\_\_

FINAL SCORE: \_\_\_\_\_ out of 50 points.

JUDGE'S NUMBER (1-4): \_\_\_\_\_