



2017 Wisconsin Envirothon

Current Issue Team Presentation Scenario

Agricultural Soil and Water Conservation Stewardship

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

You are members of a local concerned citizen group known as "Save Our Water". Your group is made up of citizens mainly in the Town of Washington in Franklin County. Franklin County is in an area of Karst topography. In the last few years, many private wells have been experiencing contamination, including high nitrates and sometimes even "brown water" that seems to be caused by manure. For the last 15 years there has been voluntary well testing in your county, mainly for nitrates, coliform bacteria and E. coli bacteria. Since 2002, 32.4% of the wells have tested unsafe due to nitrates >10.0 ppm and/or bacteria present. A general trend has also shown the increase in nitrates. Many families are using bottled water for drinking and cooking. Only in the last two years has there been water testing that includes "tracers" to try to track the source of the bacteria and viruses, but no definitive results are yet available. There is no publicly available information to prove, or disprove, if the brown water is caused by manure. Your group's goal is to make sure there is safe drinking water coming from your local private wells. Your group has also recently learned about an initiative to promote the use of cover crops and how these can help protect both surface and ground water resources, and increase soil health. Your group believes increased use of cover crops can help with some of the problems occurring in your area, but there needs to be more done.

Franklin County is in the heart of an area of many small and large dairy farms. Most of the small farms are family owned and often are farmed by older farmers. Over the years as these farmers retire, they typically do one of two things. One is that they stop milking cows, but will continue to farm and raise young stock for a larger dairy. The other is they will have no livestock, and then rent their cropland to a larger dairy farm.

Some of the large farms have over 5,000 cows. These large dairy farms are classified as Confined Animal Feeding Operations (CAFO) and are regulated by the Wisconsin Department of Natural Resources (WDNR). The WDNR requires CAFOs to follow many environmental standards, which include developing and

following a Nutrient Management Plan. Some of the CAFO farms are family owned by your neighbors, and some are owned by outside investors. Most of these farms crop rotation consist of raising alfalfa and corn silage as the primary feed for the dairy cows, but do not use cover crops. Many of the CAFO farms are in, or around the Town of Washington.

The State is currently accepting proposals to fund up to \$20 million for Integrated Anaerobic Digester systems that meet Focus on Energy eligibility requirements to treat manure from dairy farms. A recent study in 2016 was completed on the feasibility of a community- based approach to manure management and methane recapture. In the study was a proposal for a county wide community multi-digester and biogas project that would handle 300 million gallons of cow manure with an estimated cost of \$150 million.

The Franklin County Board is holding an open meeting to gather community input on building and funding such a system within the county, but the estimated total cost of the project is based on many of the digesters and the biogas facility being located within the Town of Washington, the center of the large dairy farms. This proposed site is also being considered because the central location will decrease road traffic for hauling and piping manure to the facilities, and is along an existing natural gas transmission line. The estimated total cost goes up substantially as the project is moved further from this location. The County Board is also open to other ideas or projects to help address water quality.

Your group sees the digester system project as only one piece of a much larger puzzle to address your local water concerns. You feel the need of the community to strongly support soil and water conservation practices like cover crops and nutrient management and the importance of soil health.

Your Task

The “Save Our Water” group has requested, and now has been invited by the Franklin County Board to do a presentation at the open meeting. Other groups, such as Wisconsin Farm Bureau, Alliance Energy (a large state-wide electric utility company), Franklin County Electric Cooperative (a small local electric utility cooperative), will also be presenting at this meeting. The electric utility companies have openly been supportive of the digester project. The “Save Our Water” group does not know the position of any other groups, such as the Wisconsin Farm Bureau.

Your task is to persuade the Franklin County Board to begin a project to require dairy farmers to use cover crops to naturally address water quality.

Talking points to convey include:

- *The benefits of cover crops in relation to:*
 - *soil erosion and soil health*
 - *nutrient cycling and nutrient management*
 - *weed and pest management*
 - *economics of cover crops*
- *Describe ways to incorporate cover crops into a dairy farm’s crop rotation, taking into account the timing and methods of manure applications to cropland.*

- *Make the case for uniform adoption of cover crops in areas of Karst Topography, even though additional regulations may not be viewed favorably.*

In addition to the websites Agricultural Soil and Water Conservation Stewardship provided in the 2017 Envirothon guidance documents, the following websites provide guidance specific to the environmental questions asked in this scenario:

Natural Resources Conservation Service – Conservation Practice Standard Cover Crop (Code 340):
https://efotg.sc.egov.usda.gov/references/public/WI/340_Standard.pdf

NRCS Cover Crop Termination Guidelines Wisconsin:
https://efotg.sc.egov.usda.gov/references/public/WI/Cover_Crop_Termination_Guidelines.pdf

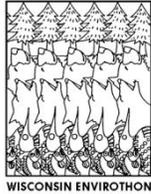
Natural Resources Conservation Service – Conservation Practice Standard Conservation Crop Rotation (Code 328) https://efotg.sc.egov.usda.gov/references/public/WI/328_Standard.pdf

Wisconsin Geological & Natural History Survey: <http://wgnhs.uwex.edu/water-environment/karst-sinkholes/>

SARE – Learning Center: <http://www.sare.org/Learning-Center/Topic-Rooms/Cover-Crops>

Cover Crops in Wisconsin – The Wisconsin Cover Crop Team: <http://fyi.uwex.edu/covercrop/>

Midwest Cover Crops Council: <http://mccc.msu.edu/>



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Team Presentation Evaluation Rubric

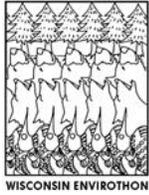
		5=excellent	4=very good	3=good	2=adequate	1=inadequate
Application of Data	Understanding of environmental and resource management challenge	The team clearly, concisely and thoroughly conveyed a solid understanding of all of the learning objectives outlined in the advisor handbook relevant to the environmental 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.
	Understanding of technical issues related to topic	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.
	Understanding of the planning process affecting stakeholders and 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 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.
	Conclusion & recommendation support, definition and conviction	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.
	Ability to respond to questions	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.

		5=excellent	4=very good	3=good	2=adequate	1=inadequate
Quality of Presentation	Organization	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.
	Participant enhancement of presentation	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.
	Visuals	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.
Timing and Participation	Team participation	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.
	Use of time	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 _____



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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): _____