

2022 Massachusetts Envirothon Current Issue Problem

Achieving a Zero Waste Future for Massachusetts

Background (For more extensive background see <https://massenvirothon.org/areas-of-learning/current-issue/2022-current-issue/>)

Many building blocks for a zero waste future are in our hands today, but major changes in how we produce, distribute, sell, and use products and services as a society will be required.

Moving toward the goal of zero waste also offers the opportunity to move toward climate solutions, conserve energy, and promote social and environmental justice.

While a big picture vision or goal like zero waste is important, incremental changes, as suggested by waste management hierarchy triangles, can add up and make a significant difference as well.

Achieving zero waste is particularly important because some of our communities bear more than their fair share of the negative consequences of past and current waste management practices. Major health and economic costs for the people of these communities can result. Addressing these wrongs will be an important part of a zero waste future.

The “circular economy” is a key concept for envisioning a zero waste future. Barry Commoner’s Second Law of Ecology states that: “Everything must go somewhere”, and ecological science tells us that there is no “waste” in Nature’s economy. Envirothon teams’ understanding of ecosystems, and how we can conserve natural resources, will be important to imagining and engineering zero waste solutions.

Waste management is a priority for slowing climate change because good waste management conserves energy. All the “things” in our lives – from food, to homes, to clothing, to electronics, etc. – represent embedded energy in the materials they are made of and the manufacturing and transportation required to get them to us. When we discard them, we waste that embedded energy.

The problems can be complex and controversial. For example, most plastics, which make up an increasing element of our waste stream, are made from fossil carbons through energy-intensive processes, but are lightweight and thus save transportation energy. In some cases they can be recycled. Should we eliminate them? Waste-to-energy plants that burn trash to generate electric power look like they are solving both energy and waste problems at once, but they require a continuous stream of our trash to operate economically, and generate both air pollution and ash which must be landfilled. How does this fit into the zero waste future?

Like all environmental issues, waste management solutions require a mix of individual AND collective action to achieve necessary change. It is important to consider what can be done in our individual lives and households to reduce waste. But there is a limit to what individual action can accomplish. Government initiatives – including requirements with incentives and penalties – will be necessary to create a more circular economy and move our society toward zero waste goals.

Under a democratic system of government, *we the people* decide together on our goals and how we will get there. What are the most effective ways to persuade others in our neighborhoods and schools to take on the zero waste challenge? What laws will help us move our towns and our Commonwealth toward an environmentally just, zero waste future?

The Problem

The key question your team should answer in your presentation is:

How can our community contribute to a Zero Waste future for all?

Your audience is the general public: your neighbors, town or city officials, business people, voters, activists, school students and teachers, other residents – anyone who participates in generating waste!

Beyond introducing the issue, **your presentation must PROPOSE TWO TOP RECOMMENDATIONS for action now.**

Note that “community” is an imprecise term. Your team should define the scope of your community(ies) for your presentation. The scope may be larger or smaller than your municipality (your town or city). However you define the term, be clear on the level(s) of government that will be involved in your recommendations.

Advice and questions to help you prepare your presentation

Introduce your community

- Who lives in your town or city? Are there Environmental Justice populations within its boundaries?
- What is your community's contribution to waste problems? How much waste do you produce? What's in it? How is it managed now? What people and ecosystems are affected by it, within and beyond the town?

Introduce key people and ideas for a zero waste future

- What are the most important ideas and concepts you think people should understand in order to address waste issues effectively (e.g. zero waste, circular economy, life cycle design, waste management hierarchy, etc.)
- What inspiring possibilities for reducing waste have you encountered? What might zero waste look like?
- Introduce at least three people you interviewed who are engaged in waste issues and questions:
 - Compare their perspectives on the key changes needed and the most effective ways to accomplish them
 - Does their work contribute toward a zero waste future? If so, how?

Propose your top two recommendations for action, and why you recommend them

- Based on your research, what are your two top recommendations for moving toward zero waste, and why?
- Describe the changes you propose so that your audience understands what needs to happen and why these changes are important. What will the changes look like?
 - Are these recommendations on an individual, municipality, regional, state, or wider scale?
 - Will they involve voluntary action? Required participation?
 - What current systems will remain? What new systems will be required? Will there be new costs?
 - What is the process for implementation? Who will be involved?
- Are your recommendations in line with Massachusetts' 2030 Solid Waste Management Plan? With any current legislative initiatives?
- How will these recommendations: Move us toward zero waste? Create a healthier environment for ALL – in your community and elsewhere? Slow climate change?

Remember your audience! Will they need to be inspired? Persuaded? What specific things are you asking them to do?

In preparation for the judges' questions, reflect on why you chose to make these particular recommendations. What do your choices say about YOUR theory of change (your understanding of how this kind of societal change happens)?

Some tips for your presentation

How it works:

- Every team makes a Current Issue presentation. Everyone on your team must be involved in making the presentation.
- Teams from the same school can research and prepare their presentation(s) together or separately.
- The Current Issue presentation score is 20% of your team's total Envirothon score.
- You will make your presentation to a panel of six to ten judges. The judges' job is to listen, ask good questions, assess your work, and give you feedback on your research, your recommendations, and your presentation.
- Your coach will be able to observe but not participate.
- You have 15 minutes for your presentation, followed by a 10 minute period when the judges can ask questions.
- Six of the judges will be designated to give your team a number score. The average of their scores will be your Current Issue score for the competition. All the judges are asked to give you helpful comments. Copies of their score and review sheets are sent to your coach.

For the most effective presentation:

- Show the judges how you know what you know, and how you came to your conclusions.
- Include information on where you visited, who you talked to, what sources you used, what activities you participated in. You may have encountered surprising stories about waste management. Share them!
- Use visual aids and examples. Photographs, charts and graphs, samples, and quotes can help you make your points and distinguish your presentation from others. A map can be a good way to orient the judges to your community.
- Practice your presentation. Practice makes it easier for you to be poised and at ease in your presentation, including being able to make good eye contact and speak naturally with the judges.
- Be Prepared! You will be presenting in a tent, outdoors. The day of the Envirothon is often surprisingly windy and cold, and sometimes wet. Mount your visual aids on sturdy boards in case of wind.
- Relax and enjoy the question session with the judges. You have learned more than you think, and this is where it will show. If you don't know an answer, don't bluff! Instead, say how you might go about finding the answer.