

2001 Massachusetts Envirothon Current Issue Problem

Stormwater Management

Introduction

Earlier this year you received 10 pages of "Questions and Resources for Team Preparation" to help you prepare for this problem.

Your team will need to do some community investigation in order to respond to this problem. You will need to talk to local officials and make some observations of your own in the field as well as study print and web-based materials.

Getting an early start on your investigations will help you in a couple ways. First, stormwater issues are more dramatic and easy to spot early in the spring. Water flow is high because of snowmelt and accumulated pollutants are more obvious. Second, local officials are busy. Starting early allows you to get on the schedule for one of their meetings so you can meet them in person and get their full attention for at least a few minutes of their official time, rather than trying to reach them haphazardly for a phone conversation.

If you have questions about how to prepare, contact Will Snyder at UMass Extension (413/545-3876 or wsnyder@umext.umass.edu).

The Problem

Your team has been charged with identifying a top priority stormwater issue in your town and making recommendations for how it should be addressed.

Your presentation should be aimed at a town meeting audience; that is, a group of concerned citizens of your town who are in a position to make decisions.

Your stormwater management priority may be town-wide in scope, or it may be a particular site of critical concern to the town. Whether you choose to focus on a broad geographic scope, or a particular site, you should ground your investigation and presentation in the actual physical effects of the stormwater and the mitigation you hope to achieve.

Some Tips for Your Presentation

Start by telling your panel of judges who you are and what town and watershed you are from. Show that you understand what effect your location has on stormwater management issues.

Use maps of appropriate scales to illustrate your points. Depending on the nature and geographic scope of the problem you choose, the land use map provided by MassGIS may be helpful. You are not required to use it.

Show that you understand that effective stormwater management involves broad land use planning- not just site-by- site technical solutions.

You will have 15 minutes for your presentation, followed by a 10 minute question period.

In your presentation, you should

Provide an overview of stormwater issues in your town and watershed:

Describe the physical features of your watershed (including water bodies) that affect runoff water quantity and quality in your watershed.

Describe the land uses, particularly the amount of developed land, that affect runoff water quantity and quality. Note the kinds and pace of new development and how this is affecting stormwater.

Note any surface waters associated with land use in your town that have been designated "impaired waters" (303d waters) under the federal Clean Water Act.

Present the perspectives of town officials (e.g. Department of Public Works, Conservation Commission, Planning Board, Board of Health), your EOEAs watershed team, and other interested parties on stormwater management issues.

Present your own general field observations of stormwater issues in your town.

Describe the particular problem you have chosen, and why you selected it as highest priority. Include

the geographic scope of the problem.

the specific nature of the problem in terms of water quantity and quality.

opinions of local officials, watershed advocates, and state and federal agencies regarding the significance of this problem (including status as "impaired waters")

the status of any plans to address the problem, and additional information that would be helpful in planning.

Propose a set of recommendations to address this stormwater issue. Your recommendations should include

A description of *structural* (e.g. site engineering) best management practices (BMPs) that could be used to mitigate the problem, including information on cost, who would be responsible for implementation, and a realistic schedule for implementation that recognizes needs for additional information.

A description of *nonstructural* (e.g. public education, new bylaws) best management practices (BMPs) that could be used to mitigate the problem, including information on cost, who would be responsible for implementation, and a realistic schedule for implementation that recognizes needs for additional information.

Your team's proposed mix of best management practices to be implemented, including recommendations for additional data collection and/or ongoing monitoring.

Ideas for how to prevent stormwater problems like this from arising in the future.