

2012 New Hampshire Envirothon Aquatics Cover Letter

Dear Participants:

This letter will help prepare you for the aquatics section of this year's New Hampshire Envirothon competition. Previous aquatics tests have included the following concepts:

- ✓ Assessing water quality and stream flow data using tables and graphs;
- ✓ Map interpretation, especially topographic maps (be able to figure out which way the water flows and the basic map symbols and characteristics);
- ✓ Macroinvertebrate identification – this is a basic ID, we don't ask for the names but you should have a general knowledge and understanding of the organisms and biodiversity; and
- ✓ Sources of nutrients and other pollutants, pressures of development, and how to remediate pollution problems (a.k.a. Best Management Practices).

Questions often refer to on-site visual aids (such as trays of insects), topographic maps, tabular and graphical data, etc. Be sure to answer each question thoroughly and provide an explanation for your answer when applicable. It is to your advantage to answer each question to the best of your ability, as we give partial credit for acceptable answers. Our test is designed to see how well you apply your knowledge to support your conclusions. We recommend that teams involve all team members to complete the entire exam in the time given.

Nonpoint Source Pollution and Low-impact Development

What is Nonpoint source pollution?

Nonpoint source pollution occurs when water runs over land or through the ground, picks up pollutants and deposits them into rivers, lakes and coastal waters or introduces them into the groundwater. These pollutants can include oil and sand from roadways; agricultural chemicals from farmland; sediments from construction sites, crop and forest lands, and eroding streambanks; and nutrients and toxic materials from urban and suburban areas. The effects of nonpoint source pollutants on specific waters vary and may not always be fully assessed. However, we know that these pollutants have harmful effects on drinking water supplies, recreation, fisheries and wildlife.

We can all work together to reduce and prevent nonpoint source pollution. Some activities are federal responsibilities, such as ensuring that federal lands are properly managed to reduce soil erosion. Some are state responsibilities, for example, developing legislation to govern mining and logging, and to protect groundwater. Others are best handled locally, such as by zoning or erosion control ordinances. And each individual can play an important role by practicing conservation and by changing certain everyday habits.

What is Low-impact development?

Low-impact development is a stormwater management and land development strategy used at the lot and subdivision scale. This strategy uses thoughtful land use planning and on-site natural features with small-scale stormwater controls to try to match how stormwater traveled over and through the landscape prior to development.

We will tell you more about the test structure at the training day. We hope to see you all there! Good luck to you all. -- *The New Hampshire Envirothon Aquatics Team*

