

Tips for success at the IRL Envirothon:

Aquatics



Written Test Station –

The written test may include matching, fill in the blanks, short answer, true false and multiple choice questions. Tie breakers will be included in this test section. Think on a watershed level. What are some of the major impacts to water quality? Keep in mind the hydrologic cycle.

Be familiar with:

- How groundwater affects surface water bodies
- What are some specific major pollutants and their sources?
- Be ready to provide both physical and biological effects of these pollutants
- Identify aquatic and wetland environments based on their physical, chemical, and biological characteristics.
- Know the characteristics of various types of aquifers, and understand threats to groundwater quantity and quality.
- Understand benefits and ecological functions of wetlands.
- Understand the functions and values of riparian zones and be able to identify riparian zone areas.



Demonstration Test Station –

This is a “hands-on” station.

Be familiar with:

- How water quality is measured (instruments, techniques, measurements, units)
- How is water quality tracked and evaluated?
- What parameters of water quality are typically measured and monitored?
- What are some specific effects of poor water quality on organisms and habitats?
- How does climate, temperature, and rainfall affect water quality in a water body?
- Be able to give examples of data-gathering methods used to evaluate health in aquatic ecosystems



Poster Test Station–

At this station there will be a poster that must be analyzed or interpreted. The poster often is associated with the current issue.

Be familiar with:

- Give specific examples of native vegetation (submerged, emergent, floodplain/riparian) found in aquatic ecosystems and summarize the benefits of these plants to the system
- Give specific examples of invasive, undesirable vegetation and explain how invasives degrade natural systems.
- Describe what is being done to manage invasives and combat their spread.
- Describe some major Best Management Practices used to manage stormwater runoff and water quality
- Which BMPs are most effective for use with specific pollutants?



Oral Question –

At this station, an examiner will ask a question that must be answered orally. Students will have several minutes to discuss the question and frame an answer. The question is usually associated with the current issue, so as you study, be sure to relate how elements of the current issue might relate to aquatics.



Be familiar with:

- Principles of Low Impact Development (LID)
- Be able to explain how LID addresses water quality issues
- Give examples of LID techniques used in both large developments and individual house lots.
- Be able to describe various land uses and the types and concentrations of pollutants that may be generated from them.