



## **2022 NCF-Envirothon/ Virginia Dominion Energy Envirothon Current Environmental Issue Study Resources**

### **Key Topic 1: Landfills and Hazardous Materials**

1. Describe different types of landfills and explain how they are regulated.
2. Identify examples of hazardous materials and toxic substances and describe their proper disposal and handling.

### **Key Topic 2: Reuse, Recycling and Waste Diversion**

1. Explain how the practices of reusing or recycling products conserves natural resources.
2. Describe how recycled materials can be repurposed and further diverted from landfills.
3. Explain how waste can be repurposed.

### **Key Topic 3: Composting and Food Waste**

1. Describe composting processes and identify how composting supports waste diversion efforts.
2. Explain how composting improves soil health and provide evidence for how composting supports water conservation efforts.
3. Describe the problem of food waste and explain how it impacts the sustainability of the global food supply.

### **Key Topic 4: Combustion with Energy Recovery (Waste-to-Energy)**

1. Identify examples of closed loop energy systems and facilities.
2. Compare methods of carbon sequestration and describe their potential as an energy source.

### **Key Topic 5: Human and Animal Waste Treatment**

1. Evaluate the differences between municipal waste treatment and home sewage treatment systems.
2. Compare and contrast the methods of waste treatment for human waste versus animal waste.
3. Describe the impacts to ground and surface waters when fecal waste is not effectively managed.
4. Identify innovative methods for managing fecal waste to lessen the impact to natural resources.

### **Key Topic 6: Brownfields and the Restoration of Degraded Lands**

1. Define a brownfield and identify the impacts of brownfield materials on soil and water quality.
2. Explain methods for removing brownfield toxins and the role of federal and state entities in restoration.
3. Compare “green” approaches to re-using degraded lands and identify the benefits these methods provide to local communities.