

# **Critical Thinking Questions – Introduction to Solid Waste Management**

## **I. Solid Waste Composition and Generation**

1. What is the definition of solid waste? What are sources of solid waste?
2. Name and describe the legislation governing solid waste management in the US.
3. Describe the trends in per capita and total waste generation in the US over the past 40 years.
4. How has the composition of waste changed over time? What is the primary component of MSW today?

## **II. Municipal Solid Waste Recycling**

1. Describe how recyclables are separated at a MRF
2. What are the advantages and disadvantages of MSW recycling?

## **III. Composting and Combustion**

1. Compare and contrast composting, combustion and landfilling for MSW.
2. List the advantages and disadvantages of MSW combustion

## **IV. Municipal Solid Waste Landfills**

1. Define the following and describe the regulatory requirements for each at an MSW landfill: composite liner, leachate collection system, gas collection system, final cover,
2. Name several concerns that must be addressed when siting an MSW landfill? What infrastructure requirements are required for a potential landfill site?
3. Describe how leachate quality changes as solid waste becomes more decomposed.
4. What are the main biodegradable components of MSW? What factors influence gas production in landfills?
5. What is post-closure care monitoring? What are some final uses for landfills?