Needs to Know

Chapter 1: Why Are We Here?—Type A

1A-1 Explain the reasons for and which farms require certified operators for animal waste management systems.

1A-1 Define surface water, groundwater, and hydrologic cycle.

1A-2 Describe what an aquifer is and how groundwater flows.

1A-3 Give examples of point source and nonpoint source pollution.

1A-4 Define the eutrophication process and problems it causes in surface waters.

1A-6 Explain why animal waste is a resource.

1A-6 List several nonproducer concerns (such as community and environmental) of livestock, egg, and milk production.

Chapter 2: Regulations Governing Animal Waste Management Systems—Type A

2A-1 Describe the rules and laws that apply to animal waste management.

2A-2 List the threshold number of animals that require an operation to have an animal waste management permit.

2A-3 Explain what a waste system permit is and describe its general conditions.

2A-3 Define "discharge" of animal waste.

2A-4 Define a 25-year, 24-hour storm.

2A-7 Describe the violations that require mandatory reporting by the owner.

2A-8 Describe the various types of regulatory action that can result from mismanagement.

2A-10 Define Operator in Charge and identify whose responsibility it is to designate an Operator in Charge for an animal operation.

2A-10 Know which commission is responsible for animal waste management system operator certification.

2A-11 Describe the necessary steps required to renew your animal waste management system operator certification.

2A-12 Describe the duties and requirements of an Operator in Charge of an animal waste management system.

2A-12 Describe what enforcement actions can be taken against an operator by the WPCSOCC.

Chapter 3: Components of a Certified Animal Waste Management Plan

3A-1 Explain the difference between a waste management plan and a general permit.

3A-2 Describe the primary goal of the waste utilization plan.

3A-3 List the components in a waste utilization plan.

3A-3 Understand how the amount of animal waste produced on a farm annually is calculated.

3A-6 Define agronomic rate.

3A-6 Describe the role of vegetation in waste management.

3A-6 List factors to consider in crop selection.

3A-7 Define realistic yield expectation (RYE).

3A-8 Describe why timing of waste applications is important.

3A-9 List ways in which best management practices protect water quality.

3A-9 Describe the importance of BMP maintenance and describe what to do if a BMP fails.

3A-12 Describe which facilities must perform a phosphorus loss assessment.

Chapter 4: Tools for the Plan—Type A

- 4A-1 Describe why the proper collection of waste samples is important.
- 4A-1 Explain how often waste samples must be taken.
- 4A-1 Describe how to take a waste sample of a lagoon, waste slurry, or dry waste and submit it for nutrient analysis.
- 4A-5 Describe information available on a Waste Analysis Report.
- 4A-6 Interpret the waste analysis report and know if lab results are reasonable.
- 4A-9 Describe how to take a soil sample and submit for analysis.
- 4A-10 Describe information available on a Soil Test Report.
- 4A-13 Describe how soil test information can help select a site and determine the sustainability of long-term waste applications.
- 4A-16 Describe the role of plant tissue and forage analysis in managing and monitoring crop and forage quality.

Chapter 5: System Components and Operation—Type A

- 5A-1 Describe the purpose and components of a Type A animal waste management system.
- 5A-1 Describe the function of an animal waste lagoon.
- 5A-2 Describe the six specific volumes for an anaerobic lagoon.
- 5A-2 Explain the need for and use of a liquid level gauging device.
- 5A-3 Explain the need for proper pipe design, and installation.
- 5A-7 Define wettable acres.
- 5A-8 Describe possible causes of lagoon failure.
- 5A-9 Explain the proper operation of an animal waste lagoon.
- 5A-10 Explain why water reuse is important.
- 5A-10 Describe the purpose of surface water diversions.
- 5A-11 Describe proper lagoon and dam maintenance.
- 5A-12 Describe the proper operation and maintenance of pumps and pipes.
- 5A-13 Explain methods to minimize crystal buildup in recycle pipes.
- 5A-14 Explain how to monitor lagoon sludge levels and develop a sludge Plan of Action.
- 5A-14 Describe the proper methods of sludge removal.
- 5A-16 Describe some methods that could be used to enhance waste treatment.

Chapter 6: Proper Application of Waste Products—Type A

- 6A-1 List the necessary setbacks for waste application.
- 6A-3 Describe why wind speed and direction should be considered when irrigating.
- 6A-3 List the four factors that must be addressed before irrigating animal waste.
- 6A-7 Explain how to determine how much water to irrigate.
- 6A-7 Explain how/why irrigation amounts need to be adjusted seasonally.
- 6A-7 Define discharge rate, precipitation rate, and application volume.
- 6A-7 Explain how to obtain sprinkler discharge rates.
- 6A-8 Explain what effect changing nozzle diameter can have on discharge rate and wetted diameter.

6A-10 Explain the importance of sprinkler overlap.

6A-10 Compute the precipitation rate for a stationary sprinkler irrigation system.

6A-11 Compute the application volume for a stationary sprinkler irrigation system.

6A-11 Determine the operational time necessary to apply a desired application volume and associated nitrogen application amount.

6A-12 Determine application volume and effective coverage from manufacturer's literature for a traveling gun sprinkler.

6A-13 Compute the required travel speed for a traveling gun sprinkler to apply the desired application volume.

6A-13 Explain the effects of changing pressure on droplet size, drift, precipitation rate, and wetted sprinkler diameter.

6A-14 Describe the procedures for field calibration of waste application equipment and why it is important.

Chapter 7: Record Keeping—Type A

7A-1 Describe the importance of records maintenance.

7A-1 Describe what records need to be maintained to show compliance with environmental regulations.

7A-1 Describe proper record keeping procedures and maintenance.

7A-3 Calculate and verify application rates through the use of waste application records.

Chapter 8: Safety—Type A

8A-2 Describe the health effects of gases associated with livestock buildings and manure storage.

8A-4 Explain the safety precautions for manure storage.

8A-4 Describe several safety precautions that apply to vehicle operation, heavy equipment, PTOs, and hydraulic systems.

8A-6 Describe the lockout/tagout procedure of electrical safety.

8A-8 Give examples of personal protective equipment.

8A-9 Describe the correct way to lift and carry objects.

8A-10 Describe the responsibilities of the site supervisor.

8A-10 List the items that a safety program should include.

8A-10 List the topics that first aid training should include.

8A-11 Describe the responsibilities of the owner or employer.

8A-11 Describe the responsibilities of the employee.

8A-12 Define permit-required confined space entry.

8A-12 Describe the safety actions that must be taken when working in a space that does not require a confined space permit.

8A-12 Describe the components of a basic fire emergency plan.

Chapter 9: Emergencies and Catastrophes—Type A

9A-3 Describe the course of action that should be pursued should an emergency situation develop.

9A-3 Describe the main components of an emergency action plan and why each is necessary.

9A-4 List what information should be gathered when assessing the impact of a waste discharge.

9A-4 Explain who to contact and when should problems develop with the waste management system.

9A-5 Describe where the emergency action plan should be located and who should be aware of it.

9A-6 Describe the violations that require mandatory reporting by government agencies.

9A-7 Which agency is responsible for laws and regulations relating to animal mortality?