

Needs to Know

Chapter 1: Why Are We Here?—Type B

- 1B-1 Explain the reasons for and which farms require certified operators for animal waste management systems.
- 1B-1 Define surface water, groundwater, and hydrologic cycle.
- 1B-3 Describe what an aquifer is and how groundwater flows.
- 1B-3 Give examples of point source and nonpoint source pollution.
- 1B-4 Define the eutrophication process and problems it causes in surface waters.
- 1B-6 Explain why animal waste is a resource.
- 1B-7 List several nonproducer concerns (such as community and environmental) of livestock, egg, and milk production.

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

- 2B-1 Describe the rules and laws that apply to animal waste management.
- 2B-2 List the threshold number of animals that require an operation to have an animal waste management permit.
- 2B-3 Explain what a waste system permit is and describe its general conditions.
- 2B-3 Define “discharge” of animal waste.
- 2B-4 Define a 25-year, 24-hour storm.
- 2B-7 Describe the violations that require mandatory reporting by the owner.
- 2B-8 Describe the various types of regulatory action that can result from mismanagement.
- 2B-9 Define Operator in Charge and identify whose responsibility it is to designate an Operator in Charge for an animal operation.
- 2B-10 Know which commission is responsible for animal waste management system operator certification.
- 2B-11 Describe the necessary steps required to renew your animal waste management system operator certification.
- 2B-11 Describe the duties and requirements of an Operator in Charge of an animal waste management system.
- 2B-12 Describe why the WPCSOCC may take an enforcement action against an operator.

Chapter 3: Components of a Certified Animal Waste Management Plan—Type B

- 3B-1 Explain the difference between a waste management plan and a general permit.
- 3B-2 Describe the primary goal of the waste utilization plan.
- 3B-3 List the components in a waste utilization plan.
- 3B-3 Understand how the amount of animal waste produced on a farm annually is calculated.
- 3B-6 Define agronomic rate.
- 3B-6 Describe the priority nutrient concept.
- 3B-6 Describe the role of vegetation in waste management.
- 3B-6 List factors to consider in crop selection.
- 3B-7 Define realistic yield expectation (R.Y.E.).
- 3B-8 Describe why timing of waste applications is important.

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

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

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

Chapter 4: Tools for the Plan—Type B

4B-1 Describe why the proper collection of waste samples is important.

4B-1 Explain how often waste samples must be taken.

4B-1 Describe how to take a waste sample of a lagoon, waste slurry, or dry waste and submit it for nutrient analysis.

4B-5 Describe information available on a Waste Analysis Report.

4B-5 Interpret the waste analysis report and know if lab results are reasonable.

4B-9 Describe how to take a soil sample and submit for analysis.

4B-10 Describe information available on a Soil Test Report.

4B-13 Describe how soil test information can help select a site and determine the sustainability of long-term waste applications.

4B-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 B

5B-1 Describe the purpose and components of a Type B animal waste management system.

5B-1 Describe the need to manage lot/roof runoff and the appropriate runoff control measures.

5B-2 Describe the purpose of the flush system.

5B-3 Describe the advantages and disadvantages of dry stack storage systems.

5B-4 Describe the function and importance of an animal waste storage pond.

5B-5 Describe how to properly mix and empty a slurry storage structure.

5B-6 Explain the difference between slurry storage systems and anaerobic lagoons.

5B-6 Describe the function of an animal waste anaerobic lagoon.

5B-6 Describe the six specific volumes for an anaerobic lagoon.

5B-7 Explain the need and use of a liquid level gauging device.

5B-8 Explain the need for proper pipe design and installation.

5B-12 Define wettable acres.

5B-13 Describe possible causes of lagoon or storage pond failure.

5B-14 Explain why water reuse is important.

5B-15 Describe the purpose of surface water diversions.

5B-15 Explain the proper operation of an animal waste lagoon or waste storage pond.

5B-17 Describe the proper operation and maintenance of pumps and pipes.

5B-18 Explain methods to minimize crystal buildup in recycle pipes.

5B-18 Explain how to monitor lagoon sludge levels and develop a sludge Plan of Action.

5B-19 Describe the proper methods of sludge removal.

5B-20 Explain the benefits of soil incorporation of animal waste.

- 5B-21 Explain BMPs typically used for holding lots, pastures, and loafing areas.
- 5B-24 Describe some methods that could be used to enhance waste treatment.

Chapter 6: Proper Application of Waste Products—Type B

- 6B-2 List the four factors that must be addressed before irrigating animal waste.
- 6B-5 Explain how to determine how much water to irrigate.
- 6B-6 Explain how/why irrigation amounts need to be adjusted seasonally.
- 6B-6 Define discharge rate, precipitation rate, and application volume.
- 6B-7 Explain how to obtain sprinkler discharge rates.
- 6B-7 Explain what effect changing nozzle diameter can have on discharge rate and wetted diameter.
- 6B-8 Explain the importance of sprinkler overlap.
- 6B-9 Compute the precipitation rate for a stationary sprinkler irrigation system.
- 6B-9 Formula 1
- 6B-10 Compute the application volume for a stationary sprinkler irrigation system.
- 6B-10 Formula 2
- 6B-10 Determine the operational time necessary to apply a desired application volume and associated nitrogen application amount.
- 6B-10 Formula 3
- 6B-11 Formula 4
- 6B-11 Compute the required travel speed for a traveling gun sprinkler to apply the desired application volume.
- 6B-12 Explain the effects of changing pressure on droplet size, drift, precipitation rate, and wetted sprinkler diameter.
- 6B-13 Describe the procedures for field calibration of waste application equipment and why it is important.
- 6B-16 Formula 5
- 6B-16 Formula 6
- 6B-18 Formula 7
- 6B-18 Formula 8
- 6B-19 Formula 9
- 6B-19 Formula 10

Chapter 7: Record Keeping—Type B

- 7B-1 Describe the importance of record maintenance.
- 7B-1 Describe what records need to be maintained to show compliance with environmental regulations.
- 7B-2 Describe proper record keeping procedures and maintenance.
- 7B-3 Calculate and verify application rates through the use of waste application records.

Chapter 8: Safety—Type B

- 8B-1 Describe the health effects of gases associated with livestock buildings and manure storage.
- 8B-3 Describe the steps for first aid to victims of asphyxiation.
- 8B-4 Explain the safety precautions for manure storage.
- 8B-5 Describe several safety precautions in regards to vehicle operation, heavy equipment, PTOs, and hydraulic systems.
- 8B-6 Describe the lockout/tagout procedure of electrical safety.
- 8B-8 Give examples of personal protective equipment.
- 8B-9 Describe the correct way to lift and carry objects.
- 8B-10 Describe the responsibilities of the site supervisor.
- 8B-10 List the items that a safety program should include.
- 8B-10 List the topics that first aid training should include.
- 8B-11 Describe the responsibilities of the owner or employer.
- 8B-11 Describe the responsibilities of the employee.
- 8B-11 Define permit-required confined space entry.
- 8B-12 Describe the safety actions that must be taken when working in a space that does not require a confined space permit.
- 8B-12 Describe the components of a basic fire emergency plan.

Chapter 9: Emergencies and Catastrophes—Type B

- 9B-2 Define Plan of Action for high lagoon levels.
- 9B-4 Describe the main components of an emergency action plan and why each is necessary.
- 9B-4 Describe the course of action that should be pursued should an emergency situation develop.
- 9B-5 List what information should be gathered when assessing the impact of a waste discharge.
- 9B-5 Explain who to contact and when should problems develop with the waste management system.
- 9B-6 Describe where the emergency action plan should be located and who should be aware of it.
- 9B-7 Describe the violations that require mandatory reporting by government agencies.
- 9B-7 Which agency is responsible for laws and regulations relating to animal mortality.
- 9B-8 Be familiar with mortality disposal requirements.