



# Certification Boulevard

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## Test Your Knowledge of Stormwater Management & other Wastewater Topics

- Given the following data, what is the volume of this stormwater retention pond?
  - > 100 feet long
  - > 25 feet wide
  - > 2.5 feet deep

A. 21,600 gals                      B. 0.161568 mg  
C. 180,144 gpd                      D. 0.04675 mg
- Which of the following items can be considered stormwater?
  - A. Storm runoff
  - B. Snow-melt runoff
  - C. Drainage
  - D. All of the above
- A well constructed and maintained stormwater management program consists of a pollution prevention plan, periodic inspections, employee training, and which other component?
  - A. Sludge judge testing
  - B. Sampling program
  - C. Alkalinity and acidity testing
  - D. Submerged aquatic vegetation
- What is created when chlorine reacts with ammonia in an effluent stream?
  - A. Chloramines
  - B. Free residual
  - C. Mono residual
  - D. Combined residual
  - E. Both A and D
- What type of chlorine comes in solid or dry form?
  - A. Sodium hypochlorite
  - B. Ferric chloride
  - C. Calcium hypochlorite
  - D. Aluminum sulfate
- True or False:** Best Management Practices (BMPs) are those practices oriented toward common industrial activities to reduce and/or eliminate stormwater pollutants.
- True or False:** One important component of an effective stormwater management program is ensuring that each facility employee understands the on-site stormwater drainage system.

# Looking for Answers?

## Check the Archives

Are you new to the water and wastewater field? Want to boost your knowledge about topics you'll face each day as a water/wastewater professional?

All past editions of Certification Boulevard back through the year 2000 are available on the Florida Water Environment Association's Web site at [www.fwea.org](http://www.fwea.org). Click the "Site Map" button on the home page, then scroll down to the Certification Boulevard Archives, located below the Operations Research Committee.

- Why are flow measurements important?
  - A. They help to determine D.O.
  - B. They help to determine loading rates.
  - C. They help to determine nitrate levels.
  - D. They help to determine suspended solids removal.
- What action should never be performed with chlorine?
  - A. Spray water on a leaking container of chlorine.
  - B. Feed 1 atmosphere gas through PVC pipes.
  - C. Change chlorine containers using SCBA.
  - D. Handle chlorinated effluent with gloves.
- What is the term that describes the legal right to use the property of others for a specific purpose, such as installing or maintaining a sewer line?
  - A. Domain                      B. Easement
  - C. Force main                      D. Confined space

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## SEND US YOUR QUESTIONS

Readers are welcome to submit questions or exercises on water or wastewater treatment plant operations for publication in Certification Boulevard. Send your question (with the answer) or your exercise (with the solution) by e-mail to [roy.pelletier@cityoforlando.net](mailto:roy.pelletier@cityoforlando.net), or by mail to:

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## Certification Boulevard Answer Key

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- D. 0.04675 mg**  
 $100 \text{ ft} \times 25 \text{ ft} \times 2.5 \text{ ft}$   
 $= 6,250 \text{ ft}^3 \times 7.48 \text{ gal/ft}^3$   
 $= 46,750 \text{ gals} \div 1,000,000$   
 $= 0.04675 \text{ mg}$
- D. All of the above**
- B. Sampling Program**
- E. Both A and D**
- C. Calcium hypochlorite**  
*HTH is High Test Hypochlorite and is a solid, dry powder. Calcium hypochlorite is also used in solid tablet form (like the "hockey pucks" used in a swimming pool chlorinator).*
- True**
- True**  
*Understanding the onsite drainage system allows employees to participate with development, implementation, and continual improvement of the program.*
- B. They help to determine loading rates**  
*Loading rates require knowledge of the particular flow rate entering the facility or a process unit. An accurate flow meter is an integral component in the calculation of plant and process loading rates. Flow measurement typically is also required in many facility operating permits.*
- A. Spray water on a leaking container of chlorine**  
*Spraying water on a leaking container of chlorine typically will only worsen the leak. The only time water should be applied to a chlorine container is if the container is in a fire area and you are trying to keep it cool; however, if water is applied to a container that is already leaking, the application of water will typically compound the leaking condition.*
- B. Easement**  
*An easement gives one party the right to go onto another party's property. Utilities often get easements that allow them to run pipes or phone lines beneath private property.*