

JEH QUIZ

FEATURED ARTICLE QUIZ #1

Occurrence of Nitrate and Indicators of Agricultural and Septic System Contamination in a West Central Wisconsin Sand Aquifer

Available to those with an active National Environmental Health Association (NEHA) membership, the *JEH* Quiz is offered six times per calendar year and is an easily accessible way to earn continuing education (CE) contact hours toward maintaining a NEHA credential. Each quiz is worth 1.0 CE.

Completing quizzes is now based on the honor system and should be self-reported by the credential holder. Quizzes published only during your current credential cycle are eligible for CE credit. Please keep a copy of each completed quiz for your records. CE credit will post to your account within three business days.

Paper or electronic quiz submissions will no longer be collected by NEHA staff.

INSTRUCTIONS TO SELF-REPORT A *JEH* QUIZ FOR CE CREDIT

1. Read the featured article and select the correct answer to each *JEH* Quiz question.
2. Log in to your MyNEHA account at <https://neha.users.membersuite.com/home>.
3. Click on Credentials located at the top of the page.
4. Select Report CEs from the drop-down menu.
5. Enter the date you finished the quiz in the Date Attended field.
6. Enter 1.0 in the Length of Course in Hours field.
7. In the Description field, enter the activity as "*JEH* Quiz #, Month Year" (e.g., *JEH* Quiz 1, July/August 2022).
8. Click the Create button.

JEH Quiz #5 Answers March 2022

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|------|------|------|-------|
| 1. d | 4. c | 7. b | 10. d |
| 2. d | 5. a | 8. d | 11. a |
| 3. b | 6. b | 9. e | 12. c |

→ Quiz effective date: July 1, 2022 | Quiz deadline: October 1, 2022

1. Potential sources of nitrate contamination in groundwater include
 - a. septic systems.
 - b. animal feedlots and barnyards.
 - c. agricultural or lawn fertilizer application.
 - d. all of the above.
 - e. none of the above.
2. The U.S. Environmental Protection Agency (U.S. EPA) preventive action limit for nitrate is
 - a. 2 mg/L.
 - b. 4 mg/L.
 - c. 5 mg/L.
 - d. 10 mg/L.
3. The Wisconsin Department of Natural Resources has estimated that ___ of nitrate in Wisconsin groundwater is from agricultural activities.
 - a. 60%
 - b. 70%
 - c. 80%
 - d. 90%
4. Approximately ___ wells sampled in Eau Claire County have nitrate levels that exceed naturally occurring concentrations.
 - a. 1 in 2
 - b. 1 in 3
 - c. 1 in 4
 - d. 1 in 5
5. Private well owners with a septic system and past water test containing nitrate levels ___ in the Eau Claire County Health Department Certified Public Health Laboratory water quality database were invited to participate.
 - a. ≥ 2 mg/L
 - b. ≥ 4 mg/L
 - c. ≥ 5 mg/L
 - d. ≥ 10 mg/L
6. A total of ___ households fully participated in this study by completing the questionnaire and submitting water samples.
 - a. 108
 - b. 110
 - c. 130
 - d. 399
7. Agricultural indicators were identified in ___ of samples and septic system indicators were found in ___ of samples.
 - a. 5%; 10%
 - b. 5%; 15%
 - c. 15%; 5%
 - d. 15%; 10%
8. Of the 108 samples, ___ were positive for atrazine and/or an atrazine metabolite.
 - a. 14%
 - b. 15%
 - c. 16%
 - d. 17%
9. Caffeine was the most frequent septic system indicator.
 - a. True.
 - b. False.
10. The U.S. EPA maximum contaminant level for nitrate of 10 mg/L was exceeded in ___ of the samples.
 - a. 16%
 - b. 18%
 - c. 20%
 - d. 22%
11. Among the homeowners who did take action in this study population, the most common solutions were purchasing bottled water and installing a point-of-use nitrate treatment system.
 - a. True.
 - b. False.
12. In this study, ___ was the only risk factor associated with elevated nitrate.
 - a. well depth
 - b. casing depth
 - c. drillhole depth
 - d. well age