Module 12: Water Quality Considerations and Regulations
SELF-STUDY EXAMINATION—Rocky Mountain CCA

4449-12 QUIZ

Directions

1. Clearly mark an "X" next to the best answer to each question. Complete evaluation form and registration form.
2. Tear out this page and place in envelope along with a $20 check (processing fee) payable to the American Society of Agronomy (or fill out credit card information). Payment in U.S. funds only.
3. Mail self-study exam and fee to: ASA c/o CCA Self-Study Exam, 677 S. Segoe Road, Madison, WI 53711.

A passing exam score (70%) is worth 2.0 Rocky Mountain CEU in **nutrient management**.

Questions

1. Which of the following is an effect of decaying algal blooms?
   [ ] a. Increased dissolved oxygen
   [ ] b. Increased biodiversity
   [ ] c. Increased anaerobic bacteria
   [ ] d. Increased recreational use

2. Which of the following poses a human health risk?
   [ ] a. Phosphorus [ ] b. Cyanobacteria [ ] c. Diatoms [ ] d. Green algae

3. If a water body's N:P ratio is 8:1 by concentration, which nutrient is limiting algal growth?
   [ ] a. Nitrogen [ ] b. Potassium [ ] c. Potentially either nutrient [ ] d. Neither nutrient

4. As eutrophication progresses, what happens to total P, chl a, and water clarity?
   [ ] a. All of them decrease
   [ ] b. All of them increase
   [ ] c. Total P increases, chl a decreases, and water clarity increases
   [ ] d. Total P increases, chl a increases, and water clarity decreases

5. Which of the following can directly kill fish?
   [ ] a. Nitrate [ ] b. Phosphate [ ] c. Ammonia [ ] d. Total N

6. Nitrate leaching is less of a concern in which of the following?
   [ ] a. Permeable soils [ ] b. Confined aquifers [ ] c. Shallow water tables [ ] d. Agricultural areas

7. What land use causes the highest P loss in lb/ac-yr in the United States?
   [ ] a. Agriculture [ ] b. Urban [ ] c. Range [ ] d. Forest

8. How frequently do municipal water suppliers have to test for nutrients?
   [ ] a. Once a month [ ] b. Every five years [ ] c. Frequency varies [ ] d. Once every six months

9. What percentage of assessed Montana streams and rivers were impaired in 2002?
   [ ] a. About 50% [ ] b. Less than 25% [ ] c. About 95% [ ] d. More than 75%

10. What types of pollutants are included in developments of TMDLs?
    [ ] a. Nonpoint, point, and natural inputs
    [ ] b. Future inputs
    [ ] c. Nonpoint pollutants only
    [ ] d. Point source pollutants only

11. What is the EPA drinking water standard for NO_3-N?
    [ ] a. 10 ppm [ ] b. 1 ppm [ ] c. 5 ppb [ ] d. 100 ppm

12. What type of water quality permit does a CAFO need?
    [ ] a. NPDES permit
    [ ] b. No permit needed
    [ ] c. TMDL permit
    [ ] d. Non-point source permit

13. Who is responsible for updating TMDL lists every two years?
    [ ] a. States, territories, and authorized tribes
    [ ] b. Individual land owners
    [ ] c. Conservation groups
    [ ] d. EPA

14. Which of the following is a benefit of conservation tillage?
    [ ] a. Decreased wildlife habitat
    [ ] b. Protection from wind erosion
    [ ] c. Increased runoff
    [ ] d. Decreased soil organic matter

15. An 80 foot buffer decreases runoff total P loss of swine manure and poultry litter by approximately
[ ] a. 0% [ ] b. 25% [ ] c. 50% [ ] d. greater than 75%

16. Why is P leaching relatively low in Montana and Wyoming?
[ ] a. Because they both primarily have dryland systems
[ ] b. Because precipitation is higher than evapotranspiration
[ ] c. Because there is so much P in the region that it erodes with soil
[ ] d. P leaching never occurs anywhere

17. Which of the following is a benefit of constructed wetlands?
[ ] a. Denitrification loss of N [ ] b. Increased erosion [ ] c. Nutrient desorption [ ] d. Increased flooding

18. Which of the following is a primary cause of nonpoint source pollution?
[ ] a. Fish decomposition [ ] b. Plant growth [ ] c. Forest runoff [ ] d. Agricultural runoff

19. What is the difference between numeric and narrative standards?
[ ] a. They're essentially the same
[ ] b. Numeric standards are flexible, narrative standards are not
[ ] c. Narrative apply just to groundwater
[ ] d. Narrative standards lack sufficient information to become numeric

20. What happens during the IWP part of the TMDL process?
[ ] a. BMPs are outlined
[ ] b. Loading capacity is created
[ ] c. Monitoring is stopped
[ ] d. Landowners no longer participate

SELF STUDY EVALUATION FORM: Nutrient Management Module 12

Rating Scale: 1 = Strongly Disagree 5 = Strongly Agree

Information presented will be useful in my daily crop advising activities:	1	2	3	4	5
Information was organized and logical:	1	2	3	4	5
Graphics/tables were appropriate and enhanced my learning:	1	2	3	4	5
I was stimulated to think how to use and apply the information presented:	1	2	3	4	5
The article addressed the stated competency area and performance objective(s)	1	2	3	4	5

What suggestions (general and specific) do you have to improve future modules?

Topics you would like to see addressed in future self-study materials:

Self-Study Exam Registration Form-For Rocky Mountain CCA Credit

Name: _____

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Credit Card #: _____ Type of Card: Visa __ Mastercard __ Discovery __ Am Express __

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A $2.00 Processing Fee will be added to all credit card charges.

I certify that I alone completed this self-study course and recognize that an ethics violation may revoke my CCA status.

_____ _____

Signature of Registrant as it appears on Code of Ethics Date