1999 Missouri Envirothon
Aquatic Station

Aquatics

A1. Using the *Pond Area Extimator*, determine the surfacae acreage of this pond.

C. 3.1 Acres

A2. Identify the (1) site of point source pollution that may effect this pond.

Drain tile entering upper end of pond

A3. Name two effects of eliminating aquatic vegetation in this pond.

Reduced oxygen production
Reduced habitat
Reduced food supply

A4. Of the following species, which are least desirable in a pond of this size?

B. Bullhead Catfish, Crappie

A5. Describe the phases of the Water Cycle, relating to this pond.

Transpiration (plants)
Evaporation
Condensation (fog)
Precipitation

A6. Name two benefits of the rip-rap (rock) on the dam.

Habitat
Protects dam from muskrats
Protects dam from wind erosion

A7. A healthy population of what fish species will keep all other species in balance?

C. Largemouth Bass

A8. Dissolved Oxygen levels are lowest in this pond at what time of Day?

A. 3:00 a.m. to 6:00 a.m.

A9. Crayfishes are common inhabitatns of ponds. How are they primarily identified in a food chain?

D. As detritivores

A10. Using the dichotomous key provided, determine this species of sish.

Forestry

F1. Name two ways that forests can protect water quality.

Stabilize soil
Filter soil and nutrients
Shade reduces water temperature

F2. How can livestock overgrazing of this forested area effect the stream water quality below?

Add excess nutrients
Compact soil increasing runoff

F3. If they burned off this forested area to increase farmable land, what effects would you not expect to see in the stream below?

B. Increased fish production

F4. As trees die and fall into the stream they provide habitats for invertebrates. Which invertebrates would suggest poor water quality?

C. Left-handed snails, blackfly larvae and aquatic worms

F5. High levels of turbidity in the water affect organisms in all of the following, except.

D. Oxygen

Soils

S1. By volume or weight, soil is the _____ source of pollution affecting our streams and lakes.

#1

S2. Define a watershed

The area of land that drains into a stream or body of water

S3. What is a secci disk used to measure?

Turbidity

S4. Excess soil in a stream causes all the following except.

C. Salinity

S5. Water from this watershed drains into:

D. Gulf of Mexico

Wildlife

W1. How might the use of excessive herbicides on this prairie effect the stream that it drains into?

Killing plants will cause increased runoff
Herbicides that reach the stream will kill plants there also

W2. The following species can be found in most prairies. Which does not have a development stage that requires a pond or stream,?

A. Prairie Kingsnake

W3. Benthic Invertebrates can be a very informative group to study because they are sensitive to _____ and _____ changes.

B. Chemical and physical

W4. What is an example of nonpoint source pollution?

A. Farm runoff

W5. Which is likely to cause more ground water pollution?

B. A typical yard