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## WV Save Our Streams Volunteer Monitor's Certification

This exam can be completed on-line. It must be completed in one setting; the text entered cannot be saved unless the user possesses the necessary software. If you take the test on-line, click the **Submit by E-mail** button at the bottom of page three after completing all portions of the exam. The macroinvertebrate portion of the test begins on page four.

Volunteer Monitor's name \_\_\_\_\_

Affiliation \_\_\_\_\_

Mailing Address \_\_\_\_\_

Phone number \_\_\_\_\_ E-mail \_\_\_\_\_

Workshop Date(s) \_\_\_\_\_

Volunteer Monitor's Signature \_\_\_\_\_

Re-Certification Date \_\_\_\_\_

- 1 Safety is of critical importance to volunteer stream monitors. Provide five safety recommendations that monitor's should follow.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

- 2 **Macroinvertebrate collection procedures:** Arrange the collection tasks below in their appropriate order (i.e. 1, 2, 3 etc.).

Tasks	Order
A Select your sample site	_____
B Remove the net so that the sample is not lost	_____
C Sort, count and identify your collections	_____
D Disturb the sample area (rock rubs, kicks, jabs, scraps etc.)	_____
E Anchor your net and determine the sample size	_____
F Repeat tasks (A, B, D and E) as needed	_____
G Consolidate your samples into one composite for the entire reach	_____
H Evaluate the biological integrity	_____

- 3 How large is each of your macroinvertebrate sample areas? \_\_\_\_\_

Use the standard two-pole kick net for your answer

What factor determines the sample size? \_\_\_\_\_

- 4 How much of the stream's length should your assessment cover? \_\_\_\_\_

- 5 What is a riparian buffer zone?

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Provide three reasons why riparian buffers are so important to streams.

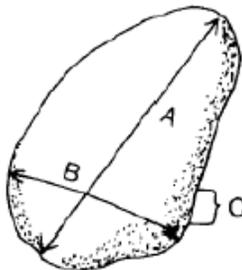
1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

6 Name a collection process used to characterize the surface sediments of a stream channel.

\_\_\_\_\_

7 The process named above uses a measurement to categorize the particle size. Which of the (axis) below determines the category? \_\_\_\_\_

Figure 1. Axes of a pebble



- A. (**Long axis**) length
- B. (**Intermediate axis**) width
- C. (**Short axis**) height

8 The condition of the biological components (also known as **biological integrity**) is often determined in rivers and streams by the collection and assessment of what community of aquatic organisms?

\_\_\_\_\_

9 Provide three reasons why this community is most often chosen?

10 The most sensitive **order** of macroinvertebrates of many rocky-bottom wadeable streams and rivers is \_\_\_\_\_ The **order** that is described as having three or two tails and gills on the lower portion of the body is \_\_\_\_\_

The **order** that is often found in cases made of stream bottom materials such as sticks, leaves, gravel or sand grains is \_\_\_\_\_

11 The original concept of Save Our Streams was developed in 1969 by a Maryland chapter of what national organization? \_\_\_\_\_

12 Describe the “**embeddedness**” habitat condition and discuss one example of a monitoring and/or assessment procedure related to the condition.

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- 13 Define non-point source pollution and provide two examples.

- 14 Various kinds of watercolors and odors are often indicators of certain conditions in rivers and streams. Provide one example of a watercolor and one example of a water odor, and describe the condition that each represents.

- 15 Various physiochemical conditions (e.g., temperature, dissolved oxygen, pH, conductivity etc.) should be analyzed as part of your stream assessment. List two and briefly describe the importance of each condition.

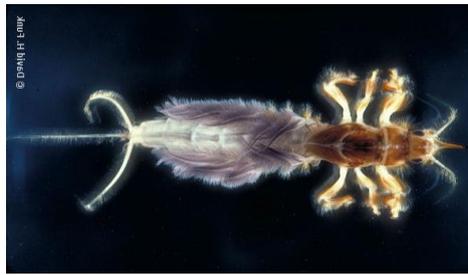
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Continue your exam by identifying the [benthic macroinvertebrates](#) provided to the lowest possible taxonomic level, which is usually order or family. You can use the accepted common names or scientific names as your answers. Upon completion mail your exam to the address provided below.

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Save Our Streams Program  
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Charleston, WV 25304

E-mail: [Glenn.R.Nelson@wv.gov](mailto:Glenn.R.Nelson@wv.gov)

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