

Name: \_\_\_\_\_

Date: \_\_\_\_\_



### Physical Stream Characteristics

Measurements about the size and speed of the stream allow you to compare it objectively to other streams or rivers. Record the width, depth, and speed of the stream at cross-sections A, B, and C in the columns below. Remember, a cross-section is a “slice of the river.”

	A:	B:	C:
<b>Stream Width:</b>			
<b>Stream Depth:</b> 1			
2			
3			
4			
5			
<b>Timed Object (sec):</b>			

1. Do you think the speed will be the same at each cross-section? Why or why not?
2. Do you think more water passes by A than C in one second? Why or why not?
3. Why do you think scientists record this type of data?

### Finding the Rate of Stream Flow

1. Find the average stream depth for each cross-section. Add the stream depths in that column and divide by the number of readings you took there.

**Average Depths:**      A: \_\_\_ ft.                      B: \_\_\_ ft.                      C: \_\_\_ ft.

2. Now multiply each cross-section’s average depth by its stream width. This gives you the area of each “slice of river”.

**Area:**                      A: \_\_\_ ft<sup>2</sup>                      B: \_\_\_ ft<sup>2</sup>                      C: \_\_\_ ft<sup>2</sup>

3. To record stream speed, take the distance an object floated (10 feet) and divide by the time it took (# of seconds). For example, 10 feet / 5 seconds = 2 feet per second. This is your stream speed.

**Area:**                      A: \_\_\_ ft/sec.                      B: \_\_\_ ft/sec.                      C: \_\_\_ ft/sec.

4. Finally, we need to calculate the rate of flow. Multiply each cross-section’s area by stream speed. This gives you the number of cubic feet of water that pass that point each second! This is also called cubic feet per second (*cfs*).

**Rate of Flow:**              A: \_\_\_ *cfs*                      B: \_\_\_ *cfs*                      C: \_\_\_ *cfs*

5. Give two reasons a land manager or fish biologist would want to know about stream flow.