

The Activity- Graphing CFS

Remember that streamflow measurements are typically in cubic meters per second (cms) or cubic feet per second (cfs). Think about a basketball for size reference. If a river discharges 300 cubic meters or cubic feet per second, that means that 300 “basketballs of water” pass by a certain point of the river within one second!

Directions:

1. Look at the Streamflow Discharge Data. This shows the measure of the quantity of river water flowing past a certain point within a certain timeframe.
2. On the provided graph paper, plot the monthly averages for one year from a five-year span of data from the attached *Streamflow Discharge Data* to make your own hydrograph. Once complete, hang your graph up in correct spot with the rest of the graphs.

Reflection:

1. Which section of data did your group graph? Write the letter number here: _____ and list the years: _____. What year did you graph? _____
2. Looking at all 40 years of data, answer the following questions:
 - a. During which month(s) does the greatest amount of water flow in the river?
 - b. In which month(s) is the streamflow lowest?
 - c. Locate months when the streamflow exceeds 3,000 units. This is when river discharge is at flood stage. How many years are there between floods?
 - d. Indicate time periods when discharge is less than 600 units in June or July; these may be times of critical water shortage.
 - e. Draw a representation of what the whole 40-year hydrograph looks like:



Hydrograph/ Streamflow Analysis

Answer in complete sentences and answers.

- i. What is stream flow?
- ii. What is a hydrograph?
 1. Independent variable:
 2. Dependent variable:
- iii. What are the independent and dependent variables on a hydrograph?
 1. Independent variable:
 2. Dependent variable:
- iv. What does a the following type of flood mean:
 1. 10-year flood?
 2. 100-year flood?
 3. 500-year flood?
- v. What effects can climate change have on stream flows?
- vi. What effects can variation in stream flows have on people, property, and the ecosystems?