

Graph It!—Student Copy Page (1 of 2)

A **hydrograph** records the streamflow at one spot on the river over a period of time in **cubic feet per second (cfs)**.

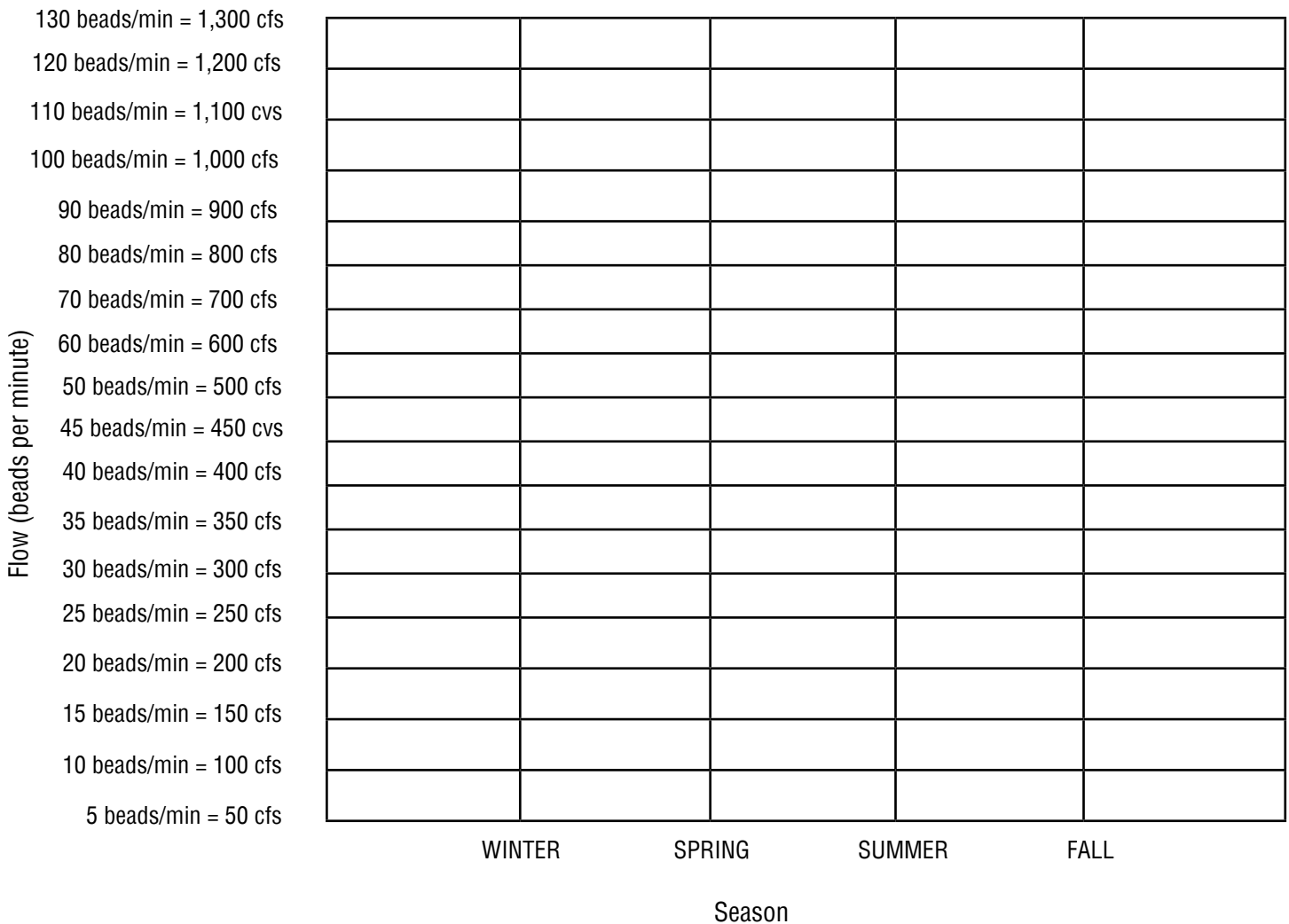
Hydrographs can show streamflow averages, including daily, weekly, monthly or yearly calculations, depending on the data collected and the period of time over which it was obtained.

Directions

In the table below, record the class simulation streamflow data for each season. Then use the data in the table in class to create your own hydrograph where one bead equals 10 cubic feet of water per second (1 bead = 10 cfs). Calculate the cfs for each season and put a point on the graph below that represent the proper cfs. Connect the lines between points to create your hydrograph.

Season	# of beads
Winter	
Spring	
Summer	
Fall	

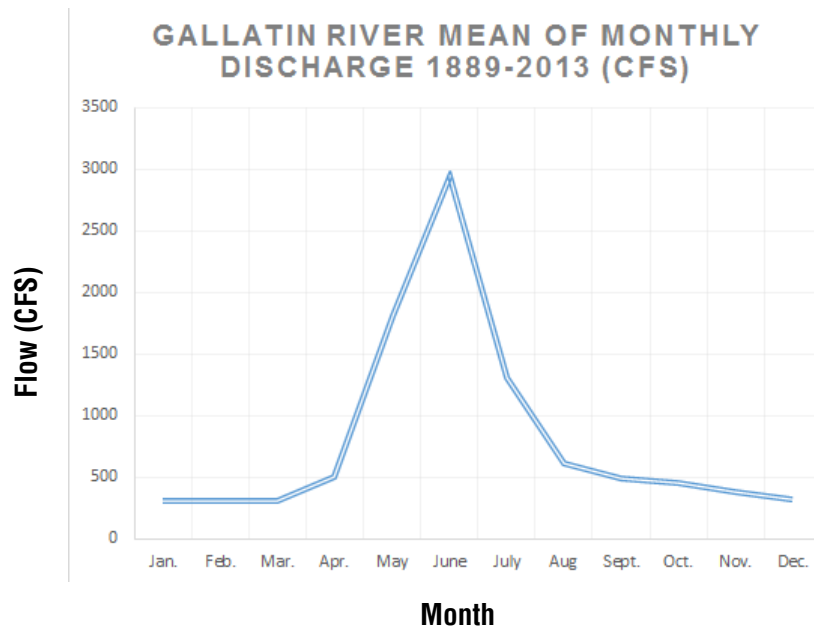
Hydrograph for Class Simulation of Gallatin River Yearly Flow



Graph It!—Student Copy Page (2 of 2)

The following chart contains real data from a gaging station on the Gallatin River. In the simulation you used the number of beads per minute to represent flow. This flow data is the number of cubic feet of water that passes by per second (cfs) at a certain point along the Gallatin River. This data was also used to create the hydrograph below.

Gallatin River: Mean of Monthly Discharge 1889-2013												
	Winter			Spring			Summer			Fall		
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Avg. Monthly Discharge (cfs)	303	300	309	499	1,800	2,940	1,300	605	485	449	377	316



How does the hydrograph for the Gallatin River compare to the hydrograph made from your simulation data?

In which season is the greatest streamflow on the Gallatin River? Why?

In which season is the least streamflow on the Gallatin River? Why?

If you created a hydrograph for Bozeman Creek or Hyalite Creek, would it look similar? Why?

Think about a Bozeman waterway near your school. For each season, describe the flow in the waterway and how it affects the land or other structures nearby.

Winter:

Spring:

Summer:

Fall:

Recall the statement, “You can never step in the same river twice...” Explain what that means to you.