

# Color Me a Watershed: Part 3

## How does land coverage affect the hydrology of a watershed?

1. Assume an unusual storm dropped 5 cm (0.05 m) of rain evenly across the entire watershed shown on the map. Use the data from the 'Area of Land Coverage' table to calculate the amount of water in cubic meters ( $m^3$ ) that fell on each watershed land use area in each time period. Record in the chart below.
2. Each land use sheds water at a different rate. Use the hypothetical estimates of runoff to calculate the amount of water in cubic meters ( $m^3$ ) that will runoff into the stream. Record in the chart below.

Chart for Option 3:  
Volume of Rain and Volume of Runoff

	Map A 100 years ago		Map B 50 years ago		Map C Present	
	volume $m^3$	runoff $m^3$	volume $m^3$	runoff $m^3$	volume $m^3$	runoff $m^3$
Forest 20% runoff						
Grasslands 10% runoff						
Wetlands 5% runoff						
Residential 90% runoff						
Agricultural 30% runoff						
<b>Total runoff</b>						
Total runoff plus stream discharge (5,550,000 $m^3$ )						

**= Please complete question on the other side =**

