Appendix Q
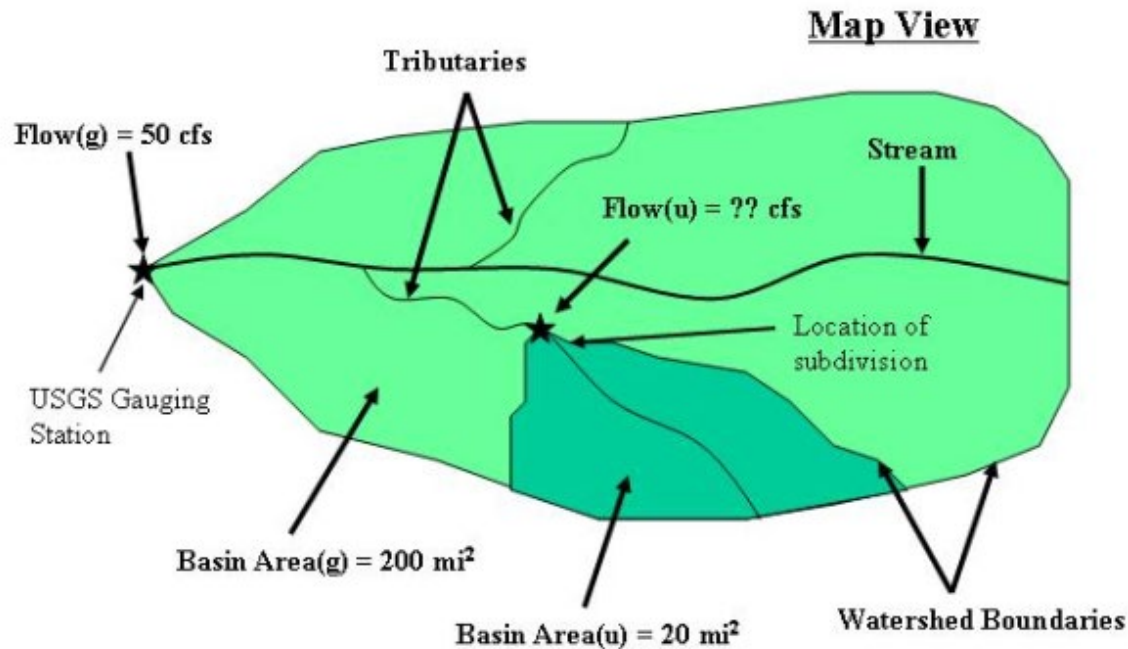# Estimating 14Q5 on an Ungauged Stream

The equation to calculate the flow at the ungauged site [Flow(u)] is:

Flow(g) / Basin Area(g) = Flow(u) / Basin Area (u)
50 cfs / 200 mi^2 = Flow(u) / 20 mi^2

Re-arranging above equation and solving for "Flow(u)"
Flow(u) = (50 cfs / 200 mi^2) x (20 mi^2)
Flow(u) = 0.25 x 20
Flow(u) = 5 cfs

Therefore, the 14Q5 value to use in the trigger value analysis would be 5 cfs.

NOTES:

- The values for Flow(g) and Basin Area(g) are available from the USGS: http://pubs.usgs.gov/sir/2004/5266/ . The values for Basin Area(u) are available from the USGS Streamstats program: http://water.usgs.gov/osw/streamstats/montana.html
- Cannot use a dam influenced gauge station to determine low flow on an ungauged site that is not influenced by the same dam.