

The Water Budget

Name _____

Partners _____

Define the following terms.

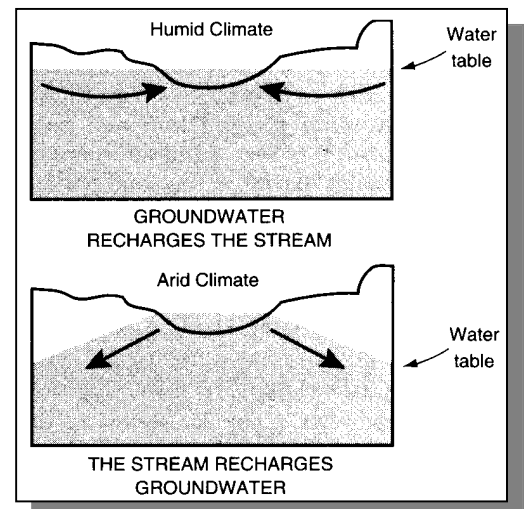
precipitation (P) -	potential evapotranspiration E_p -	actual evapotranspiration -
moisture storage (St) -	moisture usage ($-\Delta St$) -	moisture recharge ($+\Delta St$) -
moisture deficit (D) -	moisture surplus (S) -	stream discharge -
base flow -	arid -	humid -

Directions: give the best answer to the following questions.

1. A *water budget* is a monthly account of _____.
2. The primary moisture source for the local water budget is _____.
3. The primary source of energy for evapotranspiration is _____, so E_p peaks during the _____.

4. Forests give off MORE / LESS evapotranspiration than deserts because they have _____.
5. Subtracting the potential evapotranspiration (E_p) from the precipitation (P) tells you _____
_____.
6. The amount of moisture which can be stored in the soil depends on _____.
7. Ground water is lost from storage ($-\Delta ST$) whenever _____.
8. Groundwater storage will be *recharged* ($+\Delta St$) whenever _____.
9. The difference between *potential* and *actual* evapotranspiration is _____
_____.
10. A *drought* occurs when the water budget shows a moisture _____.
11. High stream water levels and flooding occur when the water budget shows a moisture _____.

12. When there's a moisture surplus (S), stream discharge INCREASES / DECREASES.
13. During deficit periods, streams can actually lower the water table because _____.

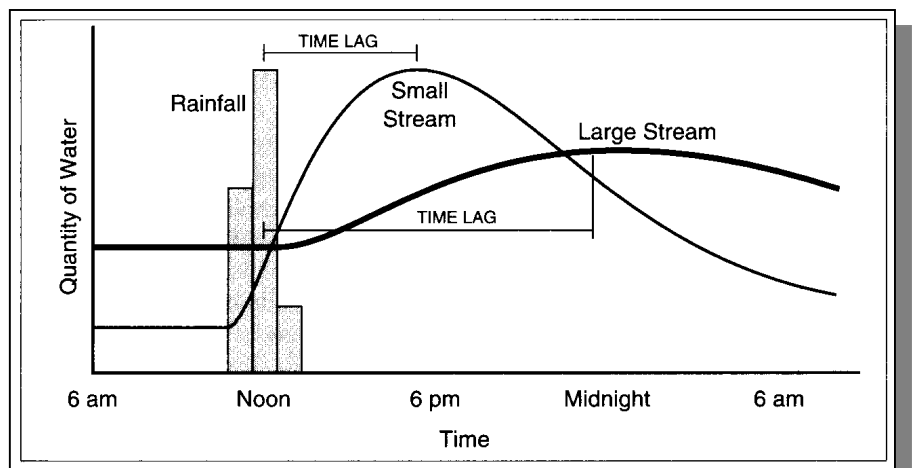


14. The flow of water in a stream bed when it's taking water from the ground is called _____. According to the diagram at right, this happens mostly in HUMID / ARID climates.

15. In arid climates, streams usually _____ the ground water.
16. Define a *humid* climate in terms of P / E_p . _____
17. Define an *arid* climate in terms of P / E_p . _____

18. The diagram at right depicts rainfall and stream discharges over a 24-hour period. Does precipitation have an instantaneous effect on discharge?

_____ Explain why:



19. SMALL / LARGE streams tend to rise

quicker in response to a precipitation event.

20. Why do you think there's a greater time lag in large streams? _____
