

The Basics of Base Flow

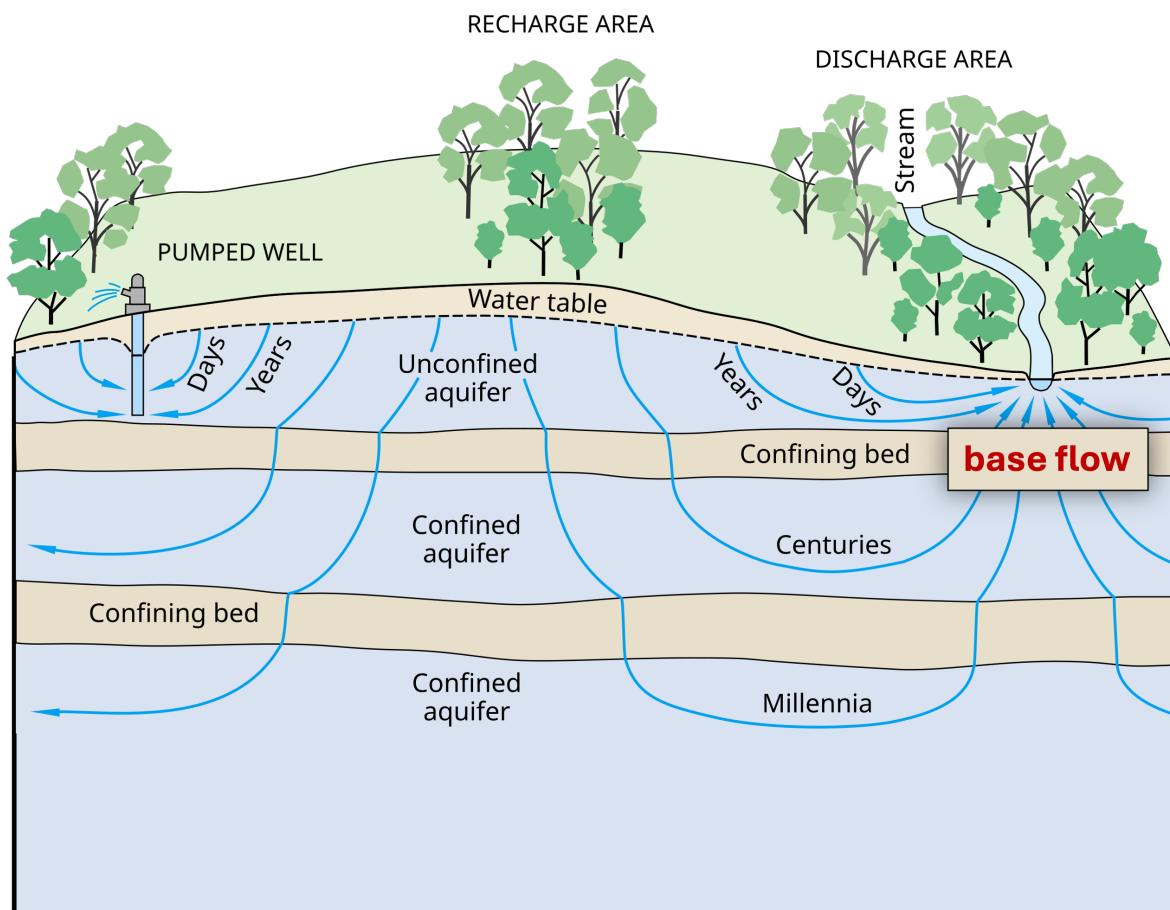


Figure 1: Conceptual figure of regional groundwater flow discharging into streams (base flow).
Adapted from Barlow & Leake (2012).

Base flow is the

Base-flow Index

Base-flow index (BFI) is a normalized measure of the contribution of base flow to total streamflow in a river. Its values depend on the time period considered, and allows for the comparison of base-flow contribution in rivers of varying size and discharge.

To calculate a representative value for BFI, it is best to consider the longest time period viable for the desired analysis. That is, BFI can vary if calculated monthly vs. annually vs. long-term (multi-year).

$$\mathbf{BFI} = \frac{\text{long-term base flow}}{\text{long-term streamflow}}$$