

Stream Functions Pyramid

A Guide for Assessing & Restoring Stream Functions » OVERVIEW

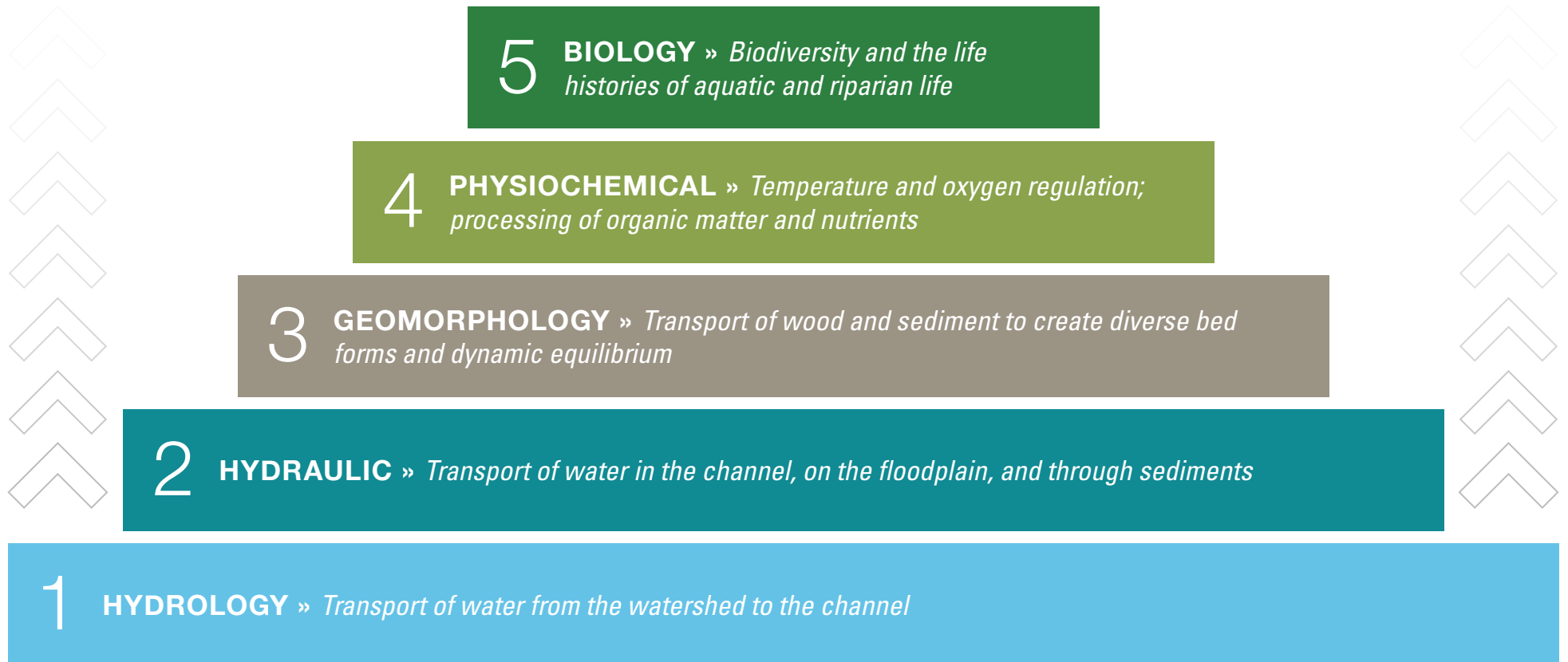


FIGURE 1

Stream Functions Pyramid

A Guide for Assessing & Restoring Stream Functions » FUNCTIONS & PARAMETERS

5

BIOLOGY »

FUNCTION: *Biodiversity and the life histories of aquatic and riparian life*

PARAMETERS: **Primary and Secondary Production**,
*Macroinvertebrate Communities, Fish Communities, Riparian
Communities, Landscape Pathways*

4

PHYSIOCHEMICAL »

FUNCTION: *Temperature and oxygen regulation; processing of organic matter and nutrients*

PARAMETERS: *Dissolved Oxygen*, **Temperature Regulation**, *pH, Conductivity*,
Nutrient Processing, Organic Processing, *Turbidity*

3

GEOMORPHOLOGY »

FUNCTION: *Transport of wood and sediment to create diverse bed forms and dynamic equilibrium*

PARAMETERS: **Sediment Transport Capacity** and *Competency, Channel Evolution*, **Streambank Erosion Rates**, *Percent Riffle and Pool, Depth Variability, Substrate Distributions*, **Large Woody Debris Transport and Storage**, *Riparian Vegetation density and composition*

2

HYDRAULIC »

FUNCTION: *Transport of water in the channel, on the floodplain, and through sediments*

PARAMETERS: *Velocity, Shear Stress, Stream Power, Bank Height Ratio, Entrenchment Ratio, Rating Curves (discharge vs. stage)*, **Groundwater/Surface Water Exchange**

1

HYDROLOGY »

FUNCTION: *Transport of water from the watershed to the channel*

PARAMETERS: *Precipitation/runoff relationship, Channel Forming Discharge, Flood Frequency*, **Flow Duration**

FIGURE 2

Parameters in bold are also functions