

Chapter 16

Running Water



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The hydrologic cycle

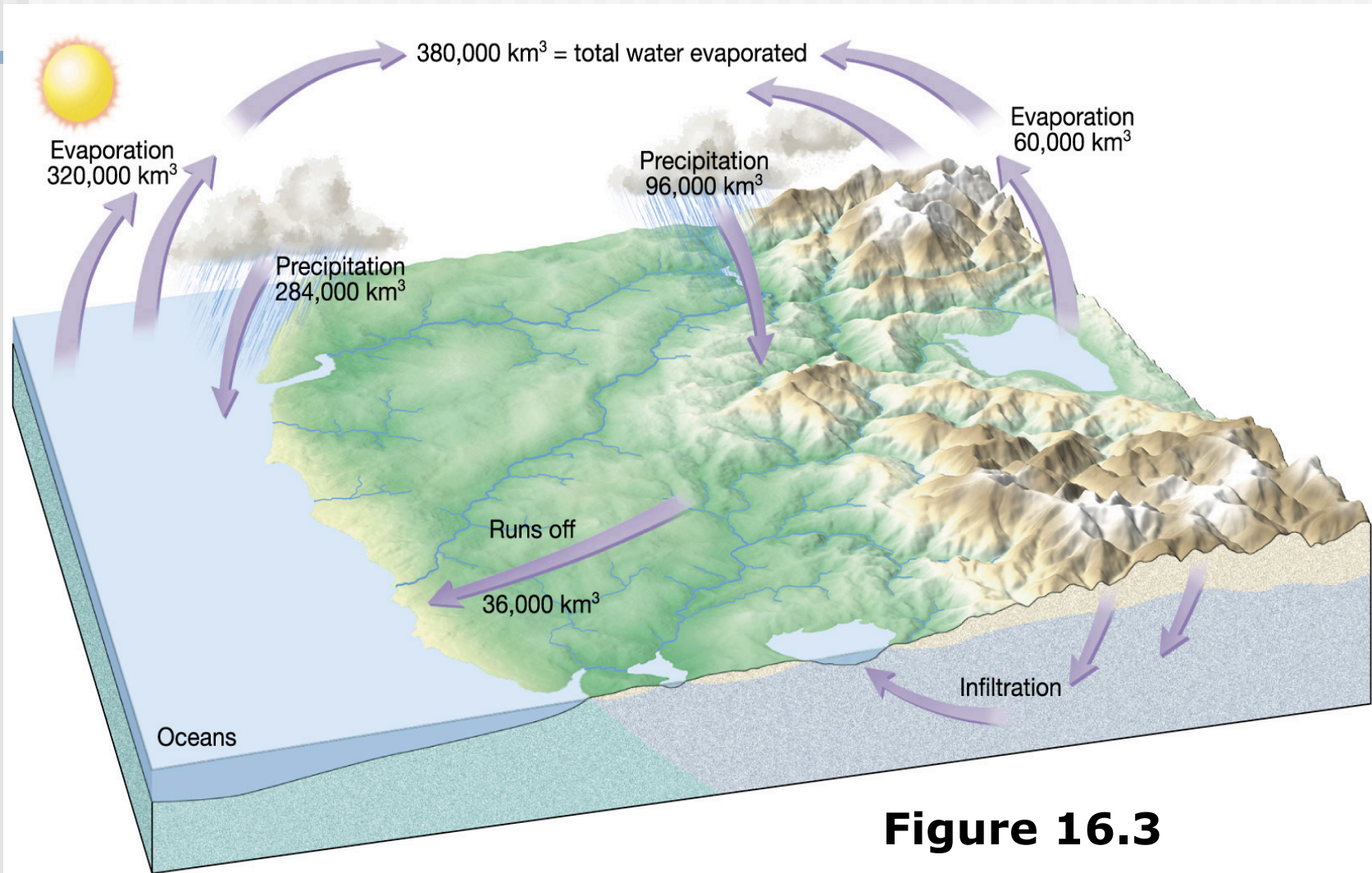


Figure 16.3

Sources of Earth's water

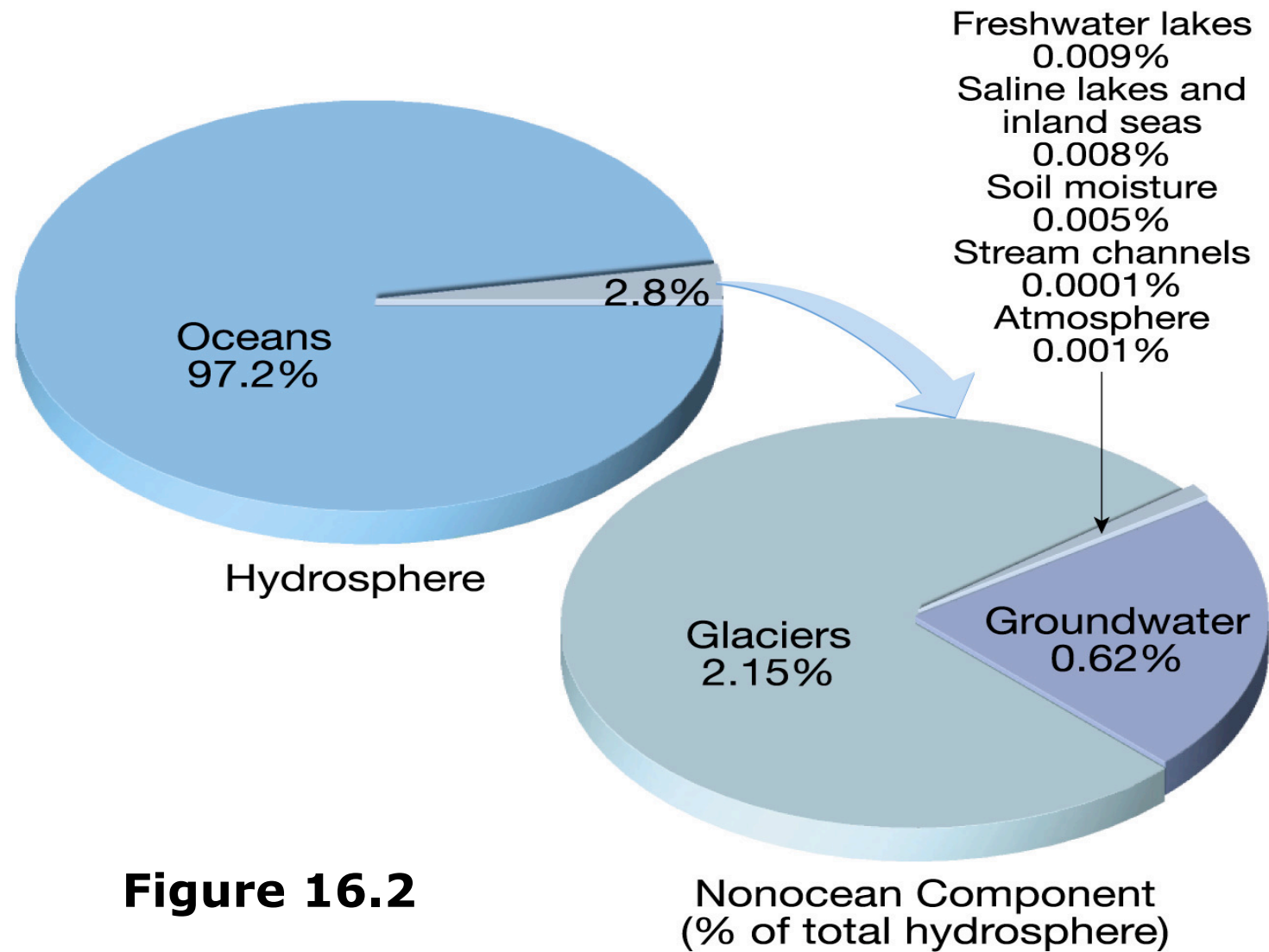


Figure 16.2

Profile and Gradient of a stream

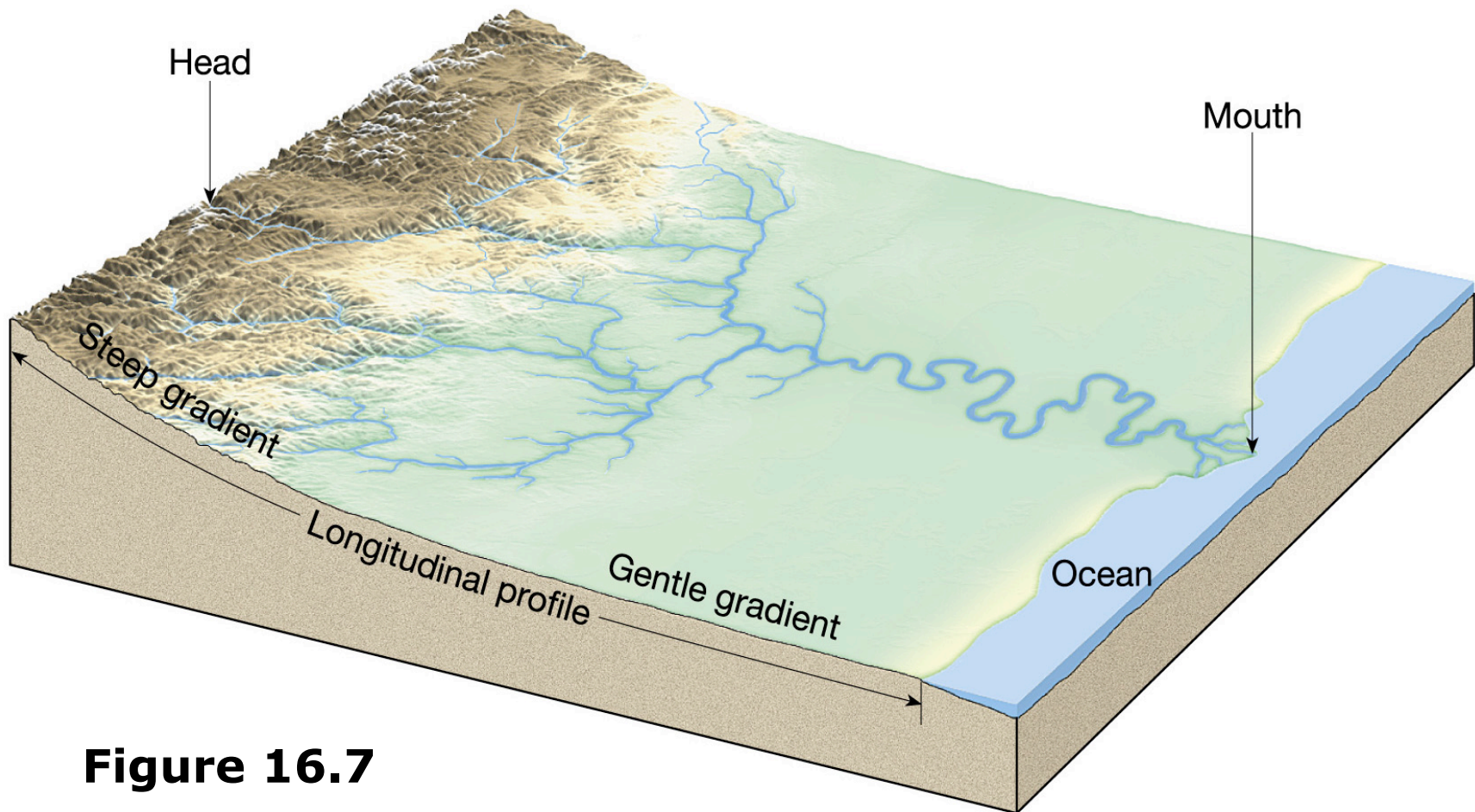


Figure 16.7

Braided vs Meandering Streams....E,T, D



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Meandering Streams



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Erosion and deposition along a meandering stream

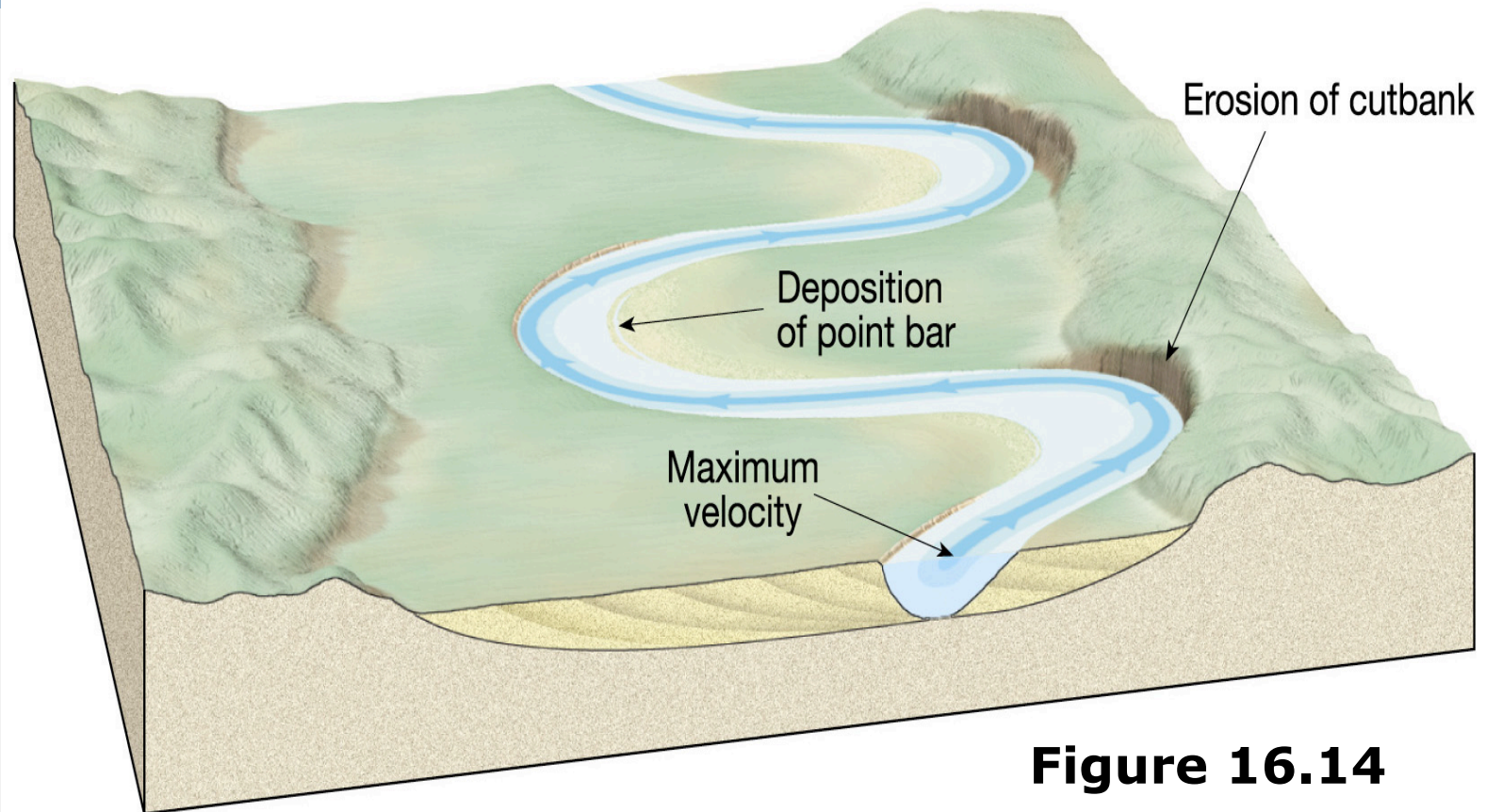


Figure 16.14

Base level

Lowest Point a Stream can Erode

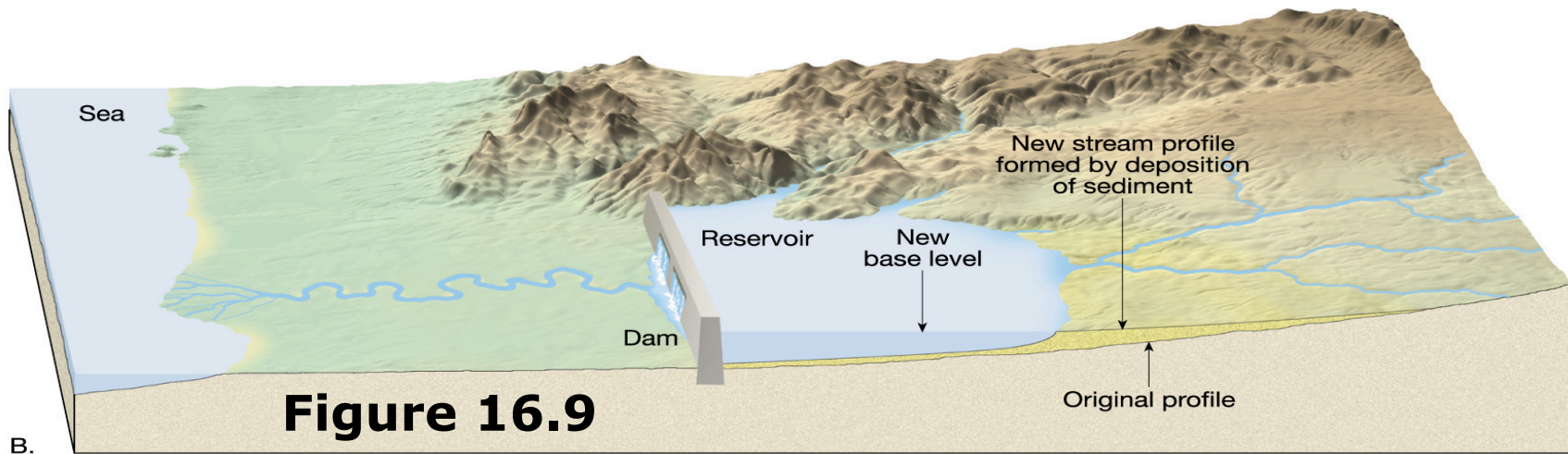
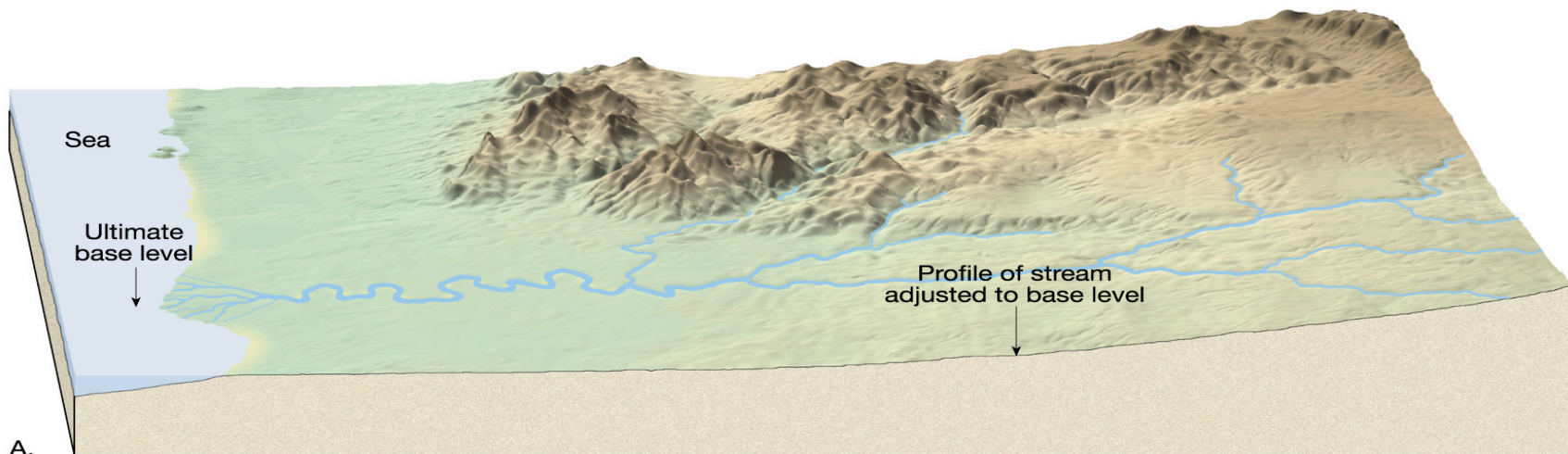


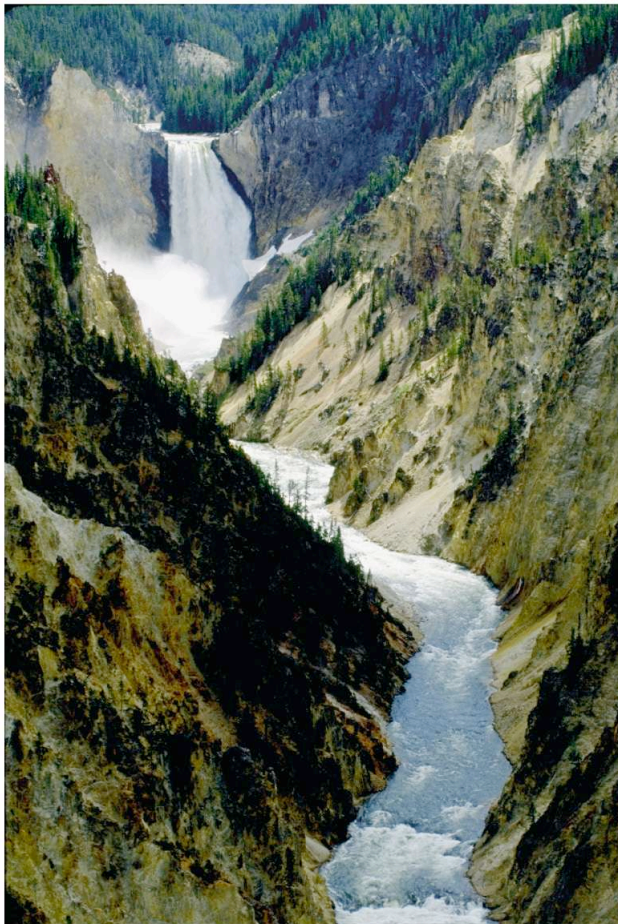
Figure 16.9

***A waterfall is an example
of a local base level***



Stream Load

■ **Transport of sediment by streams**



- **Transported material is called the stream's load**
- **Types of load**
 - **Dissolved load**
 - **Suspended load**
 - **Bed load**
- **Capacity** – the maximum load a stream can transport

Stream Deposition

- **Deposition of sediment by a stream**
 - **Floodplain deposits-Silt and Clay**
 - **Sandbars, Point Bars**
 - **Oxbows**
 - **Deltas**
 - **Alluvial Fans**

Formation of Floodplains

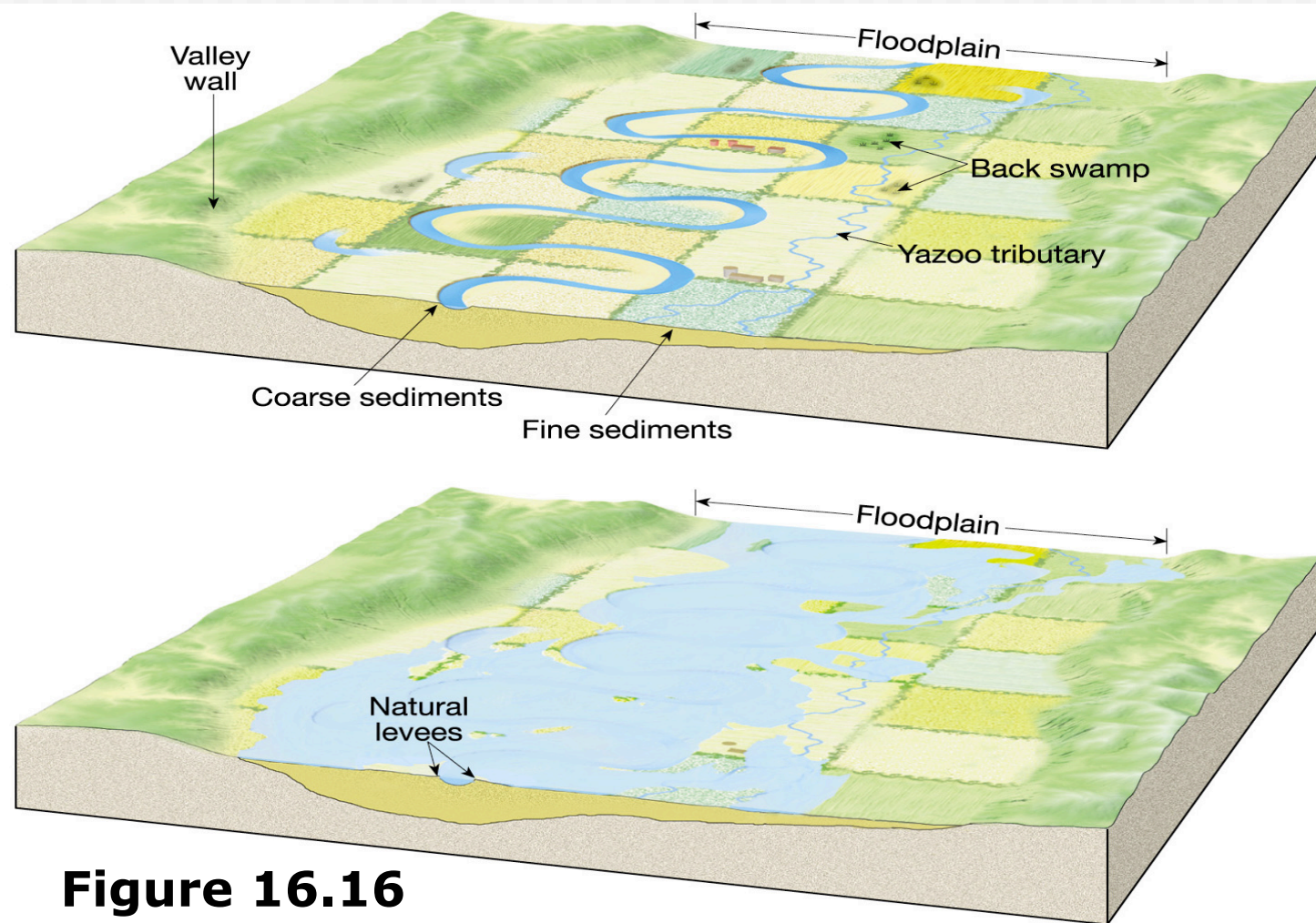


Figure 16.16

Deltas & Alluvial Fans

- **Deposition of sediment by a stream**
 - **Deltas-Water**
 - **Alluvial Fans-Deserts**



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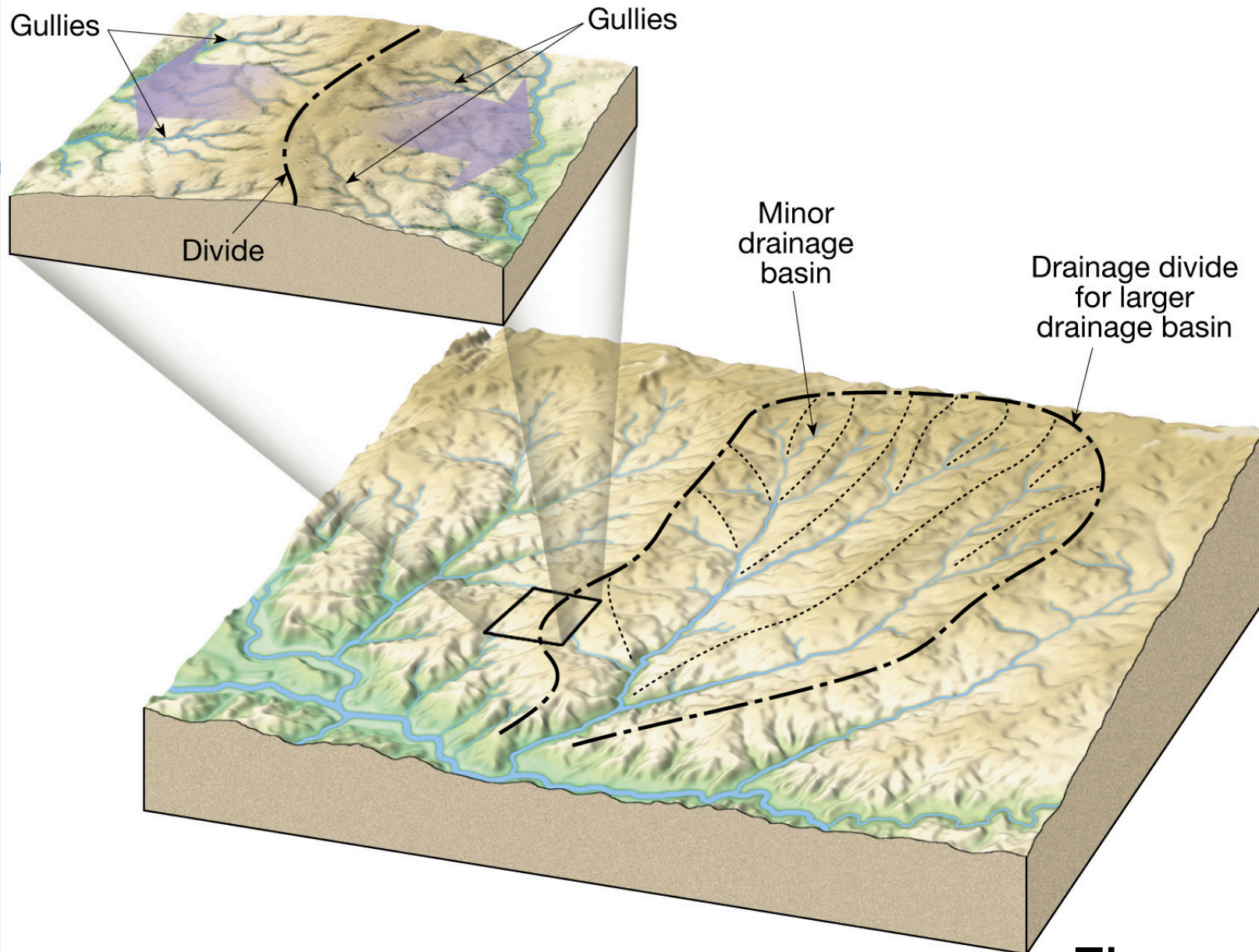
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Running water

■ **Drainage networks**

- Land area that contributes water to the stream is the **drainage basin**
- Imaginary line separating one basin from another is called a **divide**

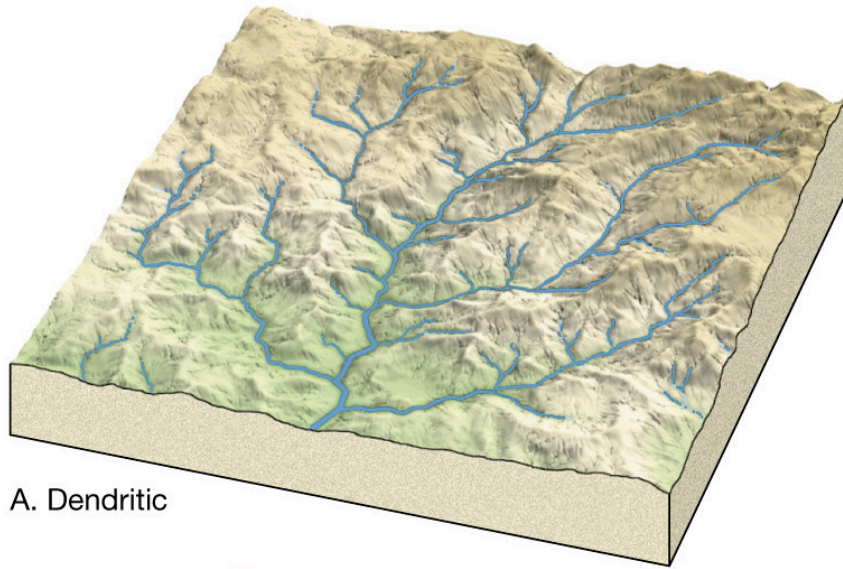
Drainage basin



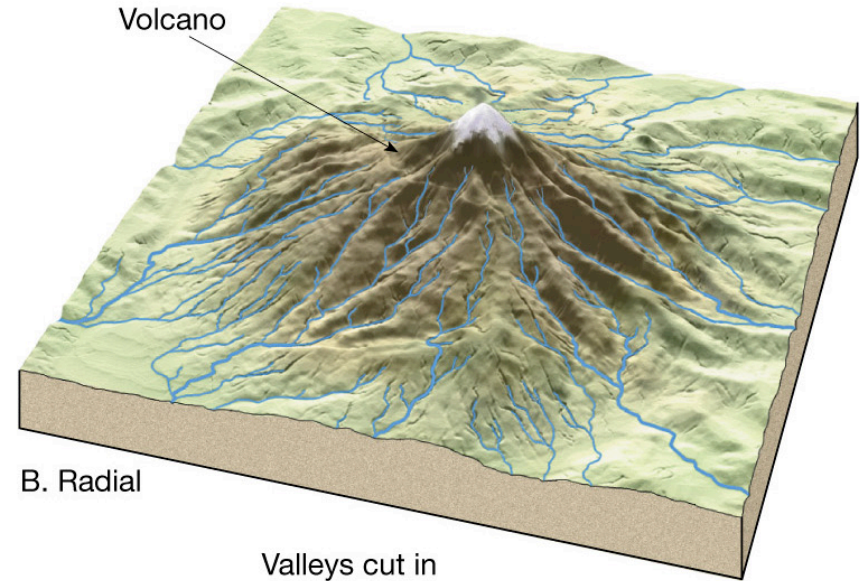
Drainage basin of the Mississippi River



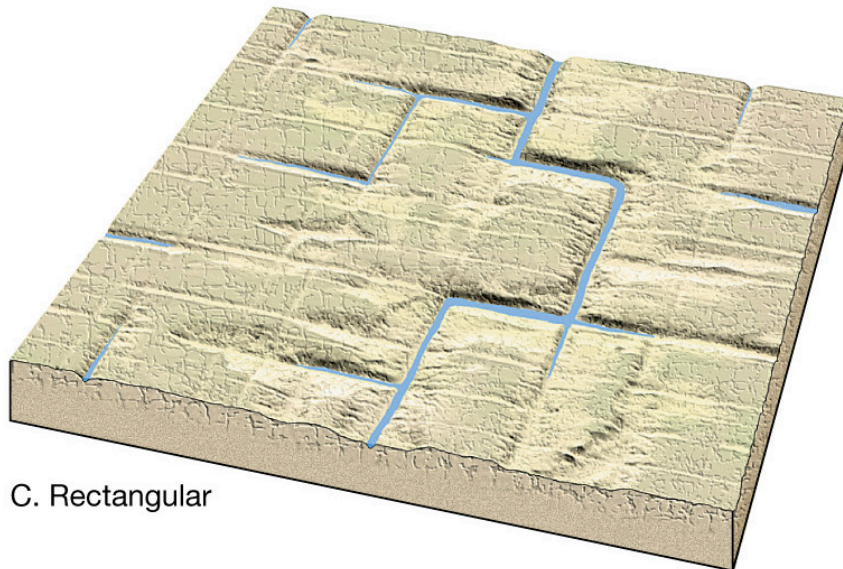
Drainage patterns



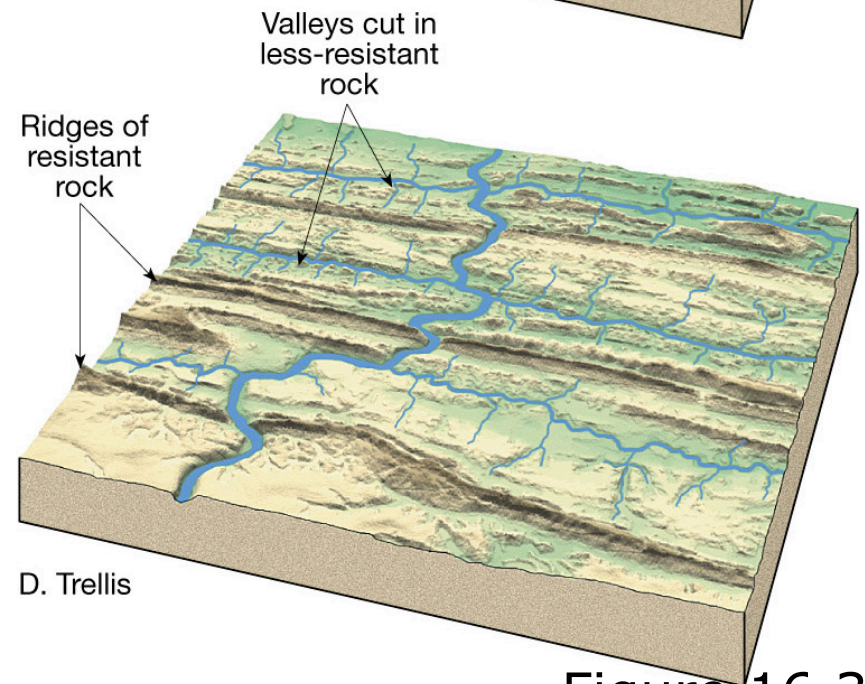
A. Dendritic



B. Radial



C. Rectangular

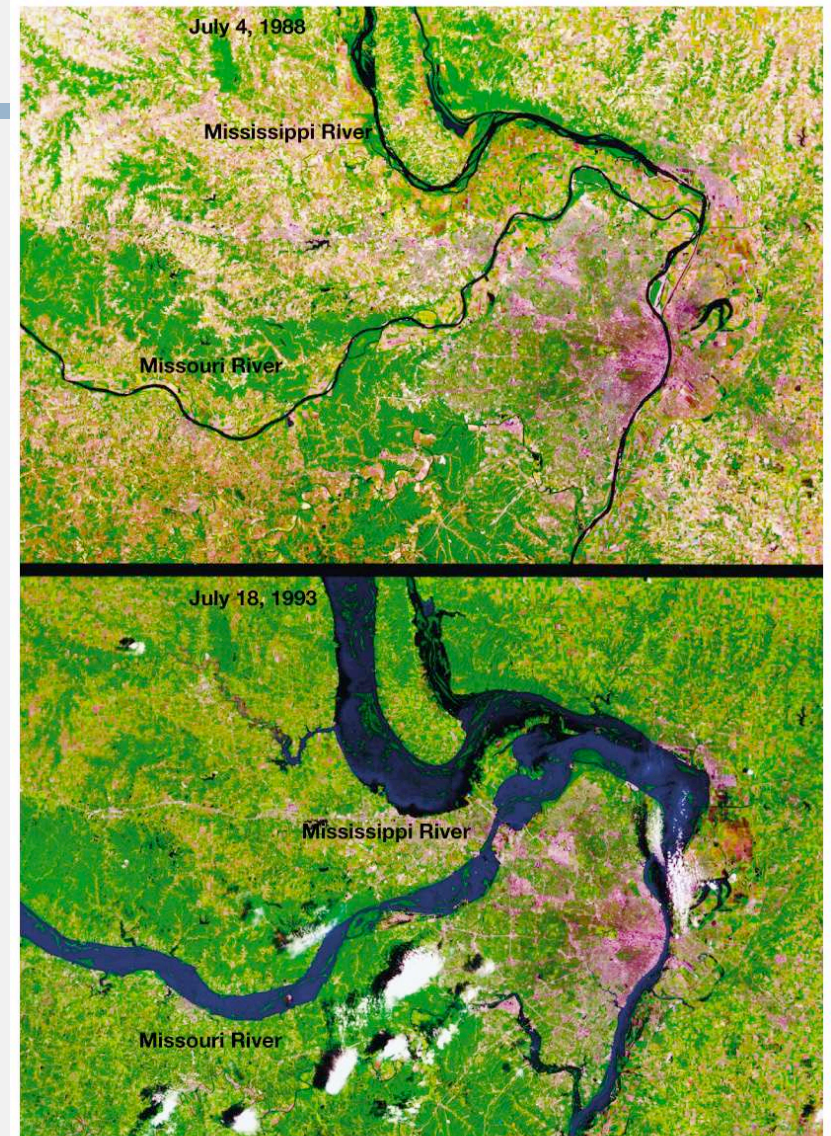


D. Trellis

Rivers & Flood Control

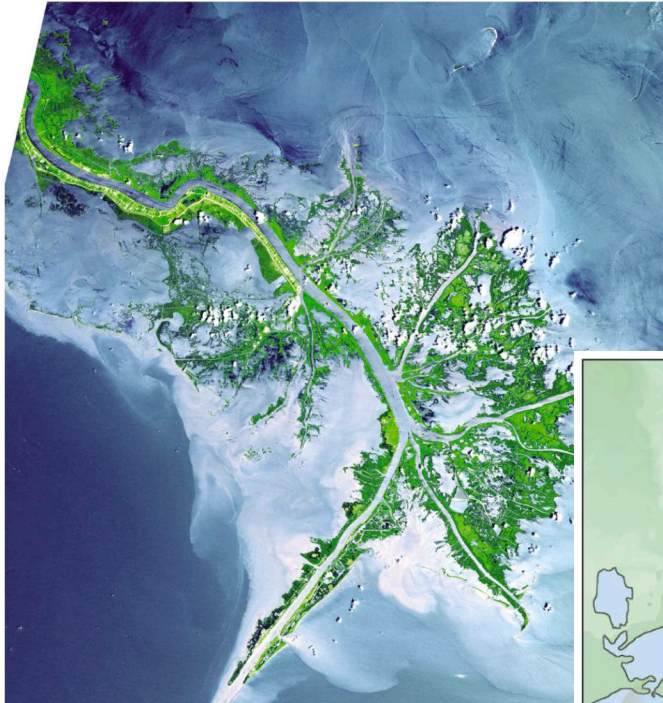


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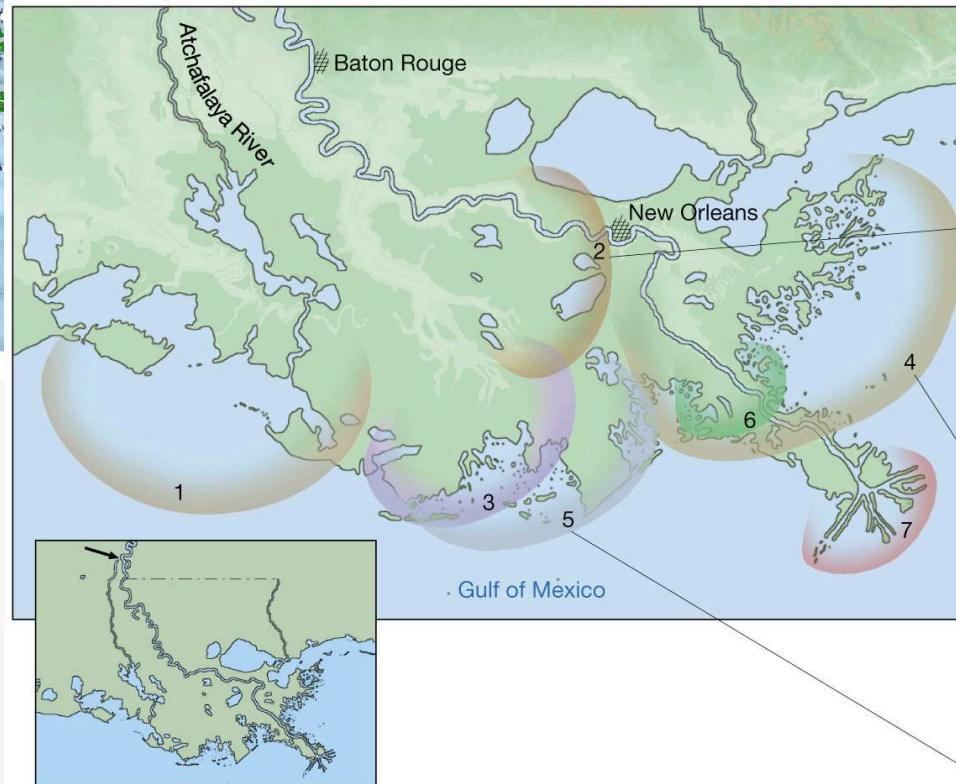
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Mississippi Delta



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- 21,000 Box cars per day
- Army Corps of Engineers
- Future



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The Colorado River

