# FLUVIAL DEPOSITIONAL LANDFORMS

**Depositional Landscapes** - Fluvial landscapes dominated by depositional processes.

> Depositional landscapes develop as rivers and streams deposit sediment as they approach base level (can be sea level or a local base level)

## Depositional Landforms

**Deltas** - Fan shaped deposits of fine grained sediment where rivers and streams empty into lakes, reservoirs, or the ocean. There are four basic delta types: Braided (Ganges River of India and Bangladesh); Arcuate (Nile River of Egypt); Estuarine (Tiber River in Italy); Bird-foot (Mississippi River at New Orleans).

**Alluvial Fans** — Fan shaped deposits of coarse grained sediment at the mouths of steep canyons in arid and semi-arid climates. As periodic floods, laden with sediment, exit from steeply sloped canyons into more gently sloped basins, the water velocity decreases where the slope angle changes and the coarse grained sediment deposits along the upper basin margin. Alluvial Fans are common features of the Basin and Range Province of western North America.

Flood plain - flat, low-lying area a long a stream channel that's subjected to recurrent flooding. A *natural levee* is a product of sediment deposition.

## Floods

A flood occurs when a river or stream overflows its natural banks.

*Flood Rating System* - a statistical rating for the expected time interval between floods of similar magnitude.

Examples: A "10 year food" has a probability of occurring once every 10 years, or the flood risk for any given year is 10%.

Floods are measured by looking at stream discharge which is the total volume of water flowing through a given channel over a given time. Stream discharge is usually recorded in cubic meters per second (cms) or cubic feet per second (cfs).

*Stream discharge* = width x depth x velocity.

*Hydrographs* are used to plot stream discharge data over time.