

Part I: *Streamflow Discharge Data* – California Scenario

Ask students to locate months when streamflow exceeds 37,000 cfs, which is when the river is at flood stage. Flood stage for Location 1 is 39,000 cfs and 46,000 cfs for Location 2.

Ask students to locate months when streamflow data is less than 6,000 cfs – these may be times of critical water shortage based on current estimates of water use for the proposed communities.

Part II, Step II: California Scenario

All proposed sites are on flat ground which makes it much easier to build houses. The land in the floodplain is flat and fertile, providing great opportunities for farming. Because the area is known to become inundated, land values in the floodplain are lower than land away from it. In addition, various industries want to build factories in the area to have access to river water for manufacturing, which will potentially result in a larger population due to more job opportunities.

Location 1 is on ground 10-15 feet higher than the surrounding area, within the 100-year floodplain and has an existing levee between the site and the river. The site has only flooded once in recorded history. The location has very fertile soils, deep aquifers and a high-water table. There are floodplain management program funds or subsidies available for structural and non-structural flood management measures.

Location 2 is on higher ground than Location 1 within the 5-year floodplain zone. It is 10 miles away from the river. The site still has fertile soils for farming and a deep aquifer. There are floodplain management program funds or subsidies available for non-structural flood management measures in this location.

Location 3 is on the highest ground, well outside the 500-year floodplain. It is 20 miles away from the river. The site still has good soils for farming and a large aquifer, though will require drilling much deeper to reach it. There are no floodplain management program funds available for this location, but funds are available for water use and energy efficiency projects.