

Case Study Name:	Water problems in SW USA		Key Terms: water reservoir aqueduct aquifers - water stony rocks CAP - central Arizona Project	
Section of the Specification:	Economic Development			
Location: SW USA Colorado, California, Arizona, Utah, Phoenix	Town/City/Region: Colorado, California, Arizona, Utah, Phoenix, Tucson = South-west USA		Country: USA	Continent: America
Key Information:			Causes/Theory:	
What? Colorado river was used for multiple water use Water shortage due to a lack of supply water supply became the USA's key to economic development	When? 1919 Santa Barbara constructed a \$37.4 mil. desalination plant for urban use In 1902 there was a Reclamation Act which allowed many states to build canals, dams and hydro-electric power systems In 1922 the Colorado river was split into Upper and Lower Basin by the CAP In 1936 the Hoover Dam and Lake Mead were completed			
Why? rise in population Not enough water in the supply the area is desert or semi-desert in climate too much water is used for agriculture	Facts and Figures: SW is desert / semi-desert (California) Agriculture uses more than 80% of the USA's water supply (The 2333 km Colorado river supplies 30 mil people with water) The western US states account for 40% of the US' population and 60% of its land area but only receive 25% of the country's annual precipitation. 70% of water runoff is in the northern 1/3 of California but 80% of the demand is in the southern 2/3			
Effects:			Solutions:	
Political Political tension between states over water usage Political problems/difficulties as the states have to sign negotiations for water use and take care that these negotiations are held but provide enough water	Economic future big difficulties could result in population decline and a stagnation in economic development lack of work force difficulties in growing agriculture as there are more urgent uses for water	What has/could be done? By whom? CAP - a \$1 billion CENTRAL ARIZONA PROJECT to divert water from the Colorado to needy states measures to reduce water loss by evaporation recycling water in industries introducing more efficient toilet systems getting less water-dependent crops charging more realistic prices for irrigation water extending use of efficient irrigation systems	Are they Sustainable? Why/Why not? Yes, since CAP started, 1.85 trillion L of water have been distributed to farms, industries and fast-growing towns, between Lake Havasu and Tucson	
Environmental The Water levels of the Colorado sink many solutions for water shortage involve environmental harms, e.g. through transportation or weather modification much of the land deserted (turned into deserts) or changed into agricultural land.	Social people have to plan their daily consumption of water and live restricted people have to walk far distance to get fresh water much of the water carries disease and therefore makes the people sick			
Possible Exam Question:	Describe an area in which water supply is unbalanced over a larger area. → new groundwater resources development → weather modification → taxing off an iceberg → politically unacceptable → environmental problems → water loss + political problems			