

MEDCs have the money and resources to transfer large quantities of water to long distances which has enabled them to develop areas with water shortages, for example, in the South West of USA. Southern California has developed enormously and it could not have done this without transferring water from the north of the state to the south with the development of the **California State Water Project**. The northern third of California has 70 per cent of the state's water but 80 per cent of the demand for water is from the southern two thirds of the state. The demand is mainly from agriculture, which uses 80 per cent of the state's water, but the expansion of Los Angeles and San Diego, has further increased demand so that the state has looked further away for its water – to the Colorado River.

The Colorado runs through seven states after starting at the state of Colorado, in the Rocky Mountains, and finishing in California before it crosses into Mexico. In 1922, the water in the river was divided between the states, which were divided into an upper and a lower group, as part of the **Colorado River Compact**. Each group was allocated 9.25 trillion litres of water a year and later, a treaty in 1944 brought Mexico into the agreement by guaranteeing it 1.85 trillion litres a year.

Since that time though, water demands have increased enormously. Firstly, although it has been committed to deliver 20.35 million litres annually, the annual flow of the Colorado River has only averaged 17.25 trillion litres since 1930!

Added to this, **evaporation** from the many reservoirs created by dams built along its course has meant that there is a further loss of 2.45 trillion litres annually. Periodic droughts in the South West of the US have also meant that it has fallen well below its average flow from its previous years. Since the compact was drawn up, demand has also increased enormously, both through an increasing population (from 1970–1990, the population of the seven states increased from 23 to 36 million) and an increase in the area of irrigated farm land (now 820 000 hectares in the US and Mexico).

The increase in demand has also been due to the **Central Arizona Project (CAP)**, costing \$4 billion. This was completed in 1992 and involved diverting water away to central Arizona including two of the fastest growing cities in USA, Phoenix and Tucson. 1.85 trillion litres of water is now delivered annually to farms, cities and native American Indian reservations over a distance of 570 kms.

In the past, Arizona never took up its full allocation from the Colorado and it was used by the other states, especially California. Now that Arizona is taking more water, California has to find a way to make up for the shortfall between what it is now allowed – 5 427 million cubic metres and what it was taking in the past – 6 416 million cubic metres.