

So what are the opportunities in the Western Desert?

The Las Vegas region is home to 2 million people, and Phoenix has 4.5 million residents. Urban residents can always find work in retailing and service industries. In the less populated, more inhospitable areas of the Western Desert, people earn their living from farming, mineral extraction, energy and tourism industries.

Farming

High temperatures and sunlight are generally favourable for agriculture, provided water can be found for irrigation. Two important sources of irrigation water are:

- **Aquifers:** large stores of water lie beneath some hot desert regions. Sometimes a layer of permeable rock lies on top of impermeable rock. Rainwater and groundwater seep into the permeable layer and become trapped. This water can be brought to the surface by digging a well. Despite being part of the Sonoran desert, aquifer-based farming in California's Coachella Valley produces lush crops of vegetables, lemons, peppers and grapes (and in turn- a wine industry.)
- **Canals:** most canals are used for large-scale industrialised agriculture. Farmers are allocated 80% of Colorado water, even though they make up just 10% of the economy.



Irrigated agriculture in the Coachella Valley

Mineral Extraction

The Western Desert states are rich in minerals, including copper, uranium, lead, zinc and coal. Not all these opportunities have been exploited, due to possible conflicts with other land uses, like tourism and farming. A plan for uranium mining near the Grand Canyon, Arizona was halted due to a campaign by the Havasupai people. As uranium is used in nuclear power plants, they were concerned about the risk to wildlife and endangered species, and the contamination of water supplies.

Copper mining has taken place for centuries in the Sonoran Desert near Ajo, Arizona. The lack of water discouraged large-scale mining and settlement until underground water was found in an ancient lava flow north of Ajo. Today, opencast mining is carried out on a large scale.



The Ajo Copper Mine,
Arizona

Energy

The strong insolation in desert regions provides a fantastic opportunity for solar power. The entire Western Desert region is predicted to benefit from the construction of new solar power plants. The Sonoran Solar project in Arizona is a new solar power plant project that will ultimately produce energy for 100,000 homes and requires 360 workers to help build it.

Hydroelectric power (HEP) plants also supply Western Desert communities with some of their electricity. These are powered by water leaving Lake Mead. At the peak of its construction in the mid-1930s, the Hoover Dam employed 5000 people.

Fossil fuels bring opportunities to the Western Desert too. People have been drilling oil in Arizona since 1905. Today there are 25 active oil production sites, all of which are on land owned by the Navajos people. Since 1998, the Navajo Nation Oil and Gas Company (NNOGC) has exploited this economic opportunity for the benefit of local Navajo people. More than 100 employees work to produce oil worth US\$50 million.



The Hoover Dam,
Colorado River.

Tourism

As US society has grown to have more money and leisure time, tourism has become the Western Desert's most important source of income:

- The national park offer visitors a chance to experience a wilderness area. Important areas include the grand canyon and California's Joshua tree national park (names after its dominant plant type)
- The heritage and culture of native Americans are celebrated at the Colorado Museum in Parker, Arizona.
- The entire economy of Las Vegas is built around entertainment, attracting 37 million visitors per year.
- Two major lakes have been created as part of water management projects: Lake Mead and Lake Powell. Combined, they attract two million visitors a year and offer sailing, power boating, water skiing and fishing.



The Grand Canyon, Arizona.