



Inside the Rainforest Biome

Mission

To serve as a center of research, outreach, teaching and life long learning about Earth, it's living systems and it's place in the Universe.

About

Biosphere 2 is a 3.14 acre structure built to be an artificial ecological system in Oracle, Arizona by a company called Space Biosphere Ventures.

Built between 1987 and 1991, the name Biosphere 2 comes from the fact that Earth is biosphere 1. The facility explores interactions within life systems in a structure with 5 areas based on Earth's biomes and an agricultural area and human living and working space. The facility studies the impact of humans and technology with nature.

It also explored the use of biospheres in space colonisation and allows the study of an Earth like biome and can be manipulated without harming the Earth.

Directions



From Central Tucson

From central Tucson, go north to River Road and turn left (heading west).
Continue on River Road and turn right (north) on Oracle Road (Arizona Highway 77).

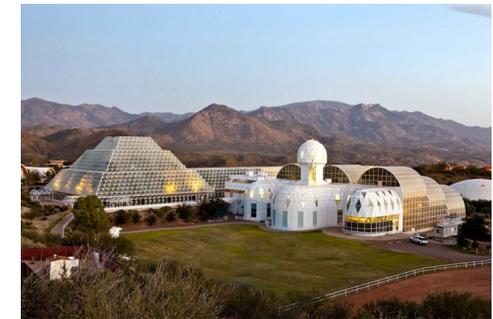
From Tucson International Airport

Head southeast on S. Airport Drive
Take slight left at E. Airport Drive and continue onto S. Tucson Blvd approximately 2.7 miles (make a slight left to stay on S Tucson Blvd.)
Continue onto I-10 BUS W approximately 1.8 miles and make slight right at S. Park Avenue
Merge onto I-10 W via the ramp to Phoenix and drive 6.5 miles to exit 255 towards AZ-77 N/Miracle Mile
Merge onto N Casa Grande Hwy then turn right at W. Miracle Mile and drive 1.4 miles
Turn left at AZ-77 N/N Oracle Rd and continue to follow AZ-77 N for approximately 26.9 miles
Turn right at Biosphere Rd at Mile Post 96.5



Where Science Lives.

Biosphere 2



Biosphere 2

Biosphere 2 is an Earth systems research facility owned by the University of Arizona since 2011. The Facility cost \$200 million between 1985 to 2007. The 3.14 acre facility houses 5 areas that are based on Earth biomes, these are a 1,900 square metre rainforest, 850 square metre ocean and coral reef, 1,300 square metre savannah grassland, 1,400 square metre fog desert, 2,500 square metre agricultural system, human habitat, and below ground infrastructure and 450 square metre mangrove wetlands (trees of medium height growing in salty water).

Missions

Two missions were conducted at biosphere 2 where humans were placed inside the facility living under the conditions of the biomes with no thing from the outside world getting in. The first mission lasted from 26th September 1991 to 1993, the crew consisted of 8 members. The agricultural system produced 83% of the total diet, which consisted of bananas, papaya, sweet potatoes, rice and wheat, beets, peanuts, cowpea beans and lablab beans . The mission didn't go without its problems, as the levels of carbon dioxide "fluctuated wildly" and as a result most of the species introduced into the system alongside the crew died. Another problem was with the oxygen levels. Starting at 20.9% they fell steadily to 14.5% in 16 months– equivalent to being at an altitude of 13,400 ft.

The Second Biosphere 2 mission involved 7 crew members and was active from 6th March 1994 and was ended prematurely on 6th September the same year due to an administrative decision to change the direction of the mission.

Timeline

After the second mission Columbia University took over management from 1996 to 2003

The site was sold in January 2005 with houses and a hotel planned for construction.

The University of Arizona announced in June 2007 that it took over management due to fears that the biomes would be demolished.

The University of Arizona then announced in June 2011 that it would assume full ownership of Biosphere 2.

Fun Facts!

Biosphere 2 is the equivalent of two and a half football pitches and remains the largest closed system created.

It is located 1200m above sea level at the base of the Santa Catalina Mountains– 30 minutes outside Tucson.

The Biosphere has 7,200,000 cubic feet of sealed glass and 6,500 windows!

The facility is sealed from the Earth below by a 500 ton welded stainless steel liner!

