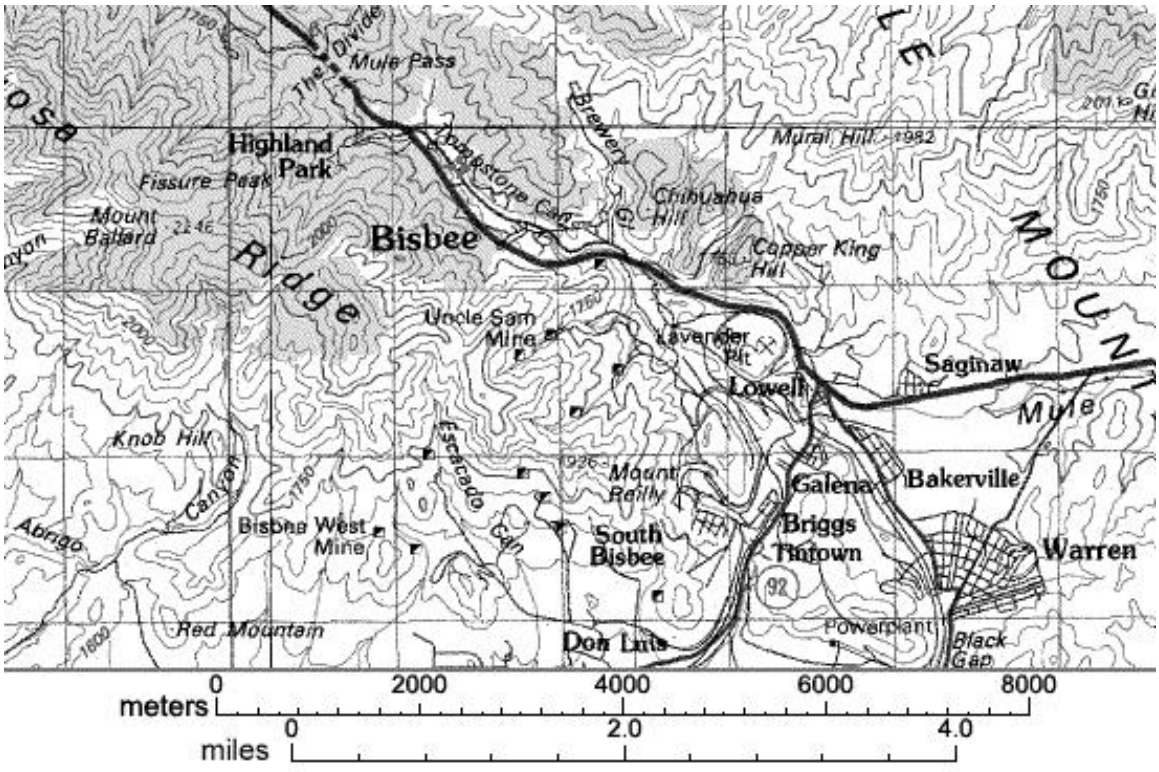
A topographic map shows a three-dimensional representation of a flat surface. It has contour lines joining points of equal elevation; the closer the lines are the steeper the elevation is. Topographical maps can be used for planning the best routes for hiking or travel when considering elevation climbs or planning the best building site for level construction.

This is an example from a U.S. Geological Survey topographic map of Bisbee, Arizona. Gray areas indicate trees. Courtesy of U.S. Geological Survey.



ARIZONA GEOGRAPHIC ALLIANCE

Road maps show how people can travel between these locations.

This map of SkyHarbor Airport New Expressway is to help travelers understand how they can get into and out of the Phoenix airport.

This map is courtesy of Arizona Department of Transportation.
Source: <www.dot.state.az.us/ROADS/airport.htm>

An Aerial Photograph shows physical features on the earth's surface such as mountains, plains, and rivers in addition to human geography features such as houses and roads. These aerial photographs are courtesy of the CAP-LTER program at Arizona State University

This is an aerial photograph of the area around Arizona State University in Tempe, Arizona. The large football stadium is Sun Devil Stadium, and the water to the north is Town Lake, an artificial lake.

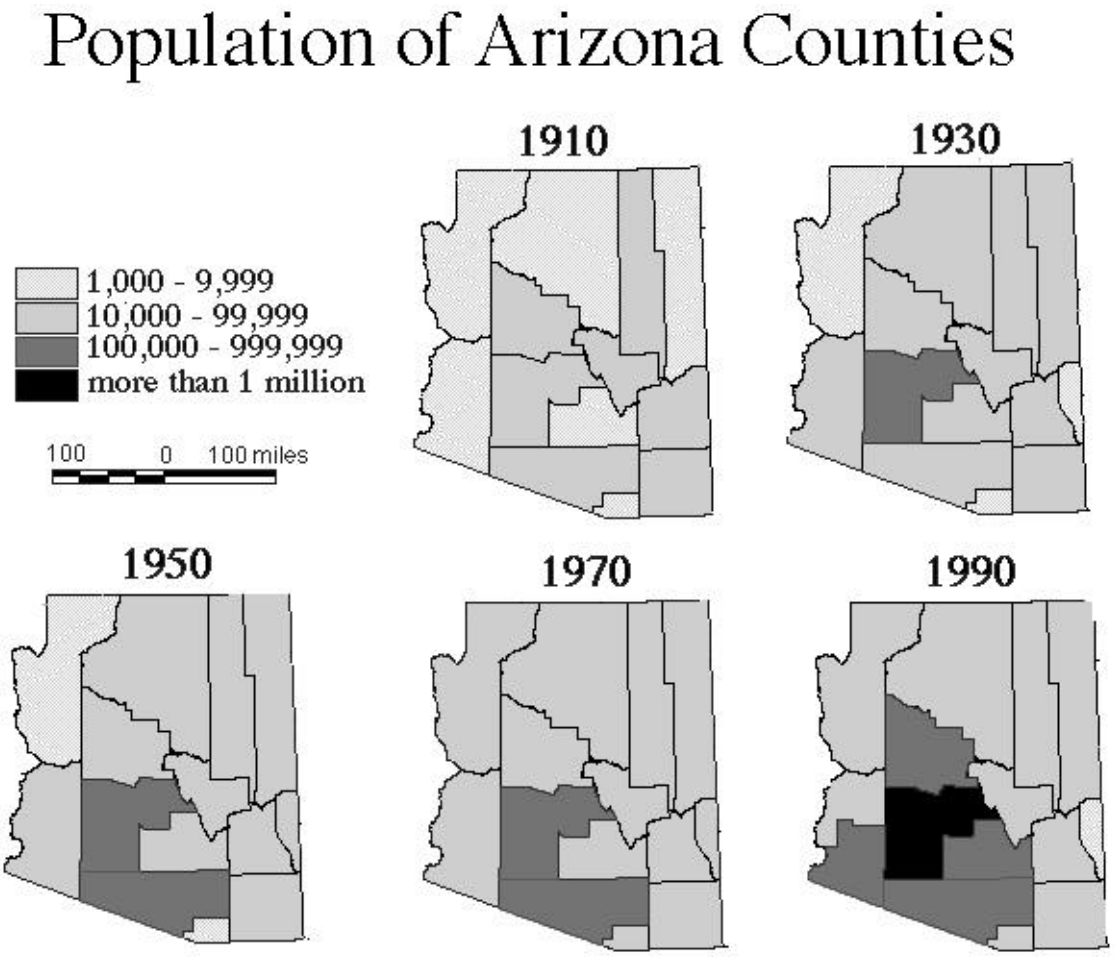
This is an aerial photograph of the area around downtown Phoenix, showing America West Area and Bank One Ball Park.

Perspective maps shows what places look like from a particular perspective, such as standing on top of a mountain or from an airplane. .

These two perspective maps show Bird's eye views of Phoenix, Maricopa Co., Arizona. Sketched by C. J. Dyer in 1885. This perspective map is not drawn to scale. The "View looking north-east." Map courtesy of the Library of Congress American Memory project. Source: <memory.loc.gov/ammem/gmdhtml/citymapSubjects10.html>

A population map shows the distribution of people on the earth's surface. Population maps can be used to understand the shifts in population and how to plan for political representations, civic and economic needs.

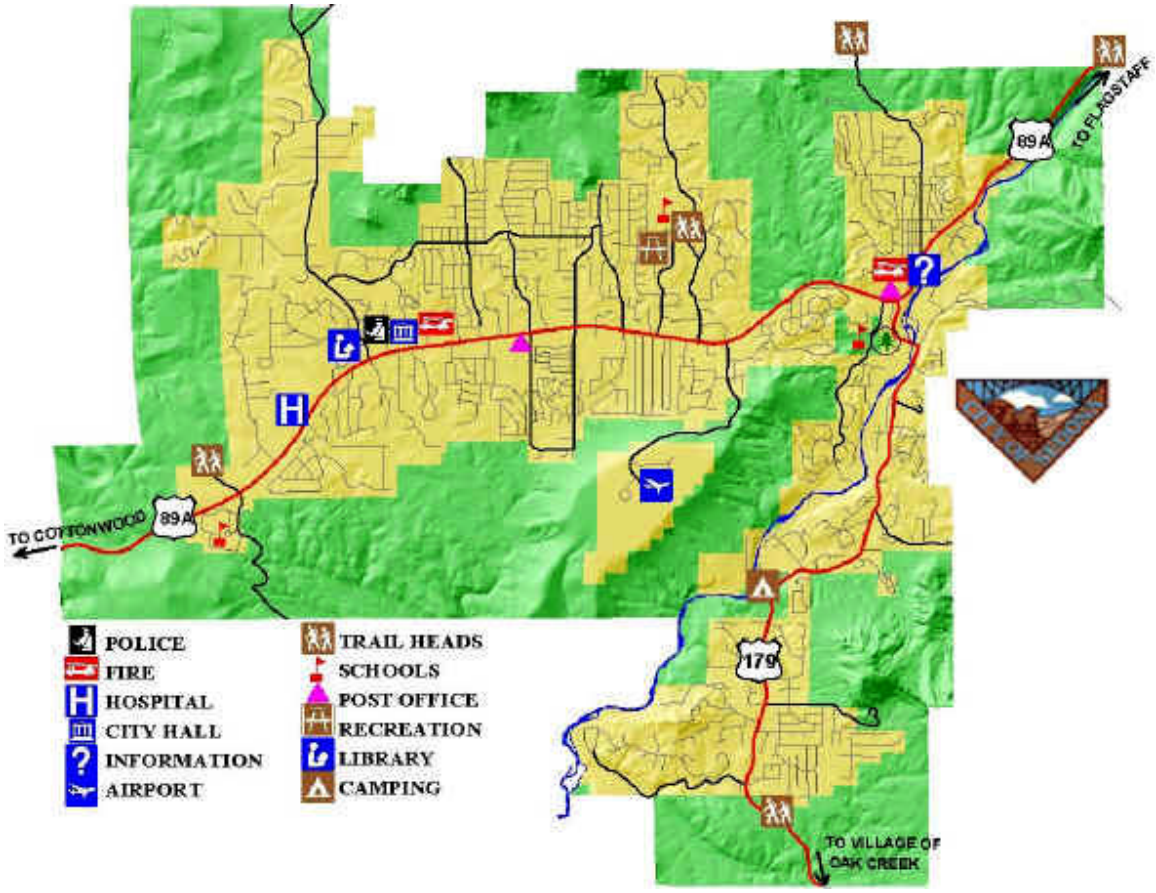
This map represents population by different shades and counts the population of different counties



ARIZONA GEOGRAPHIC ALLIANCE

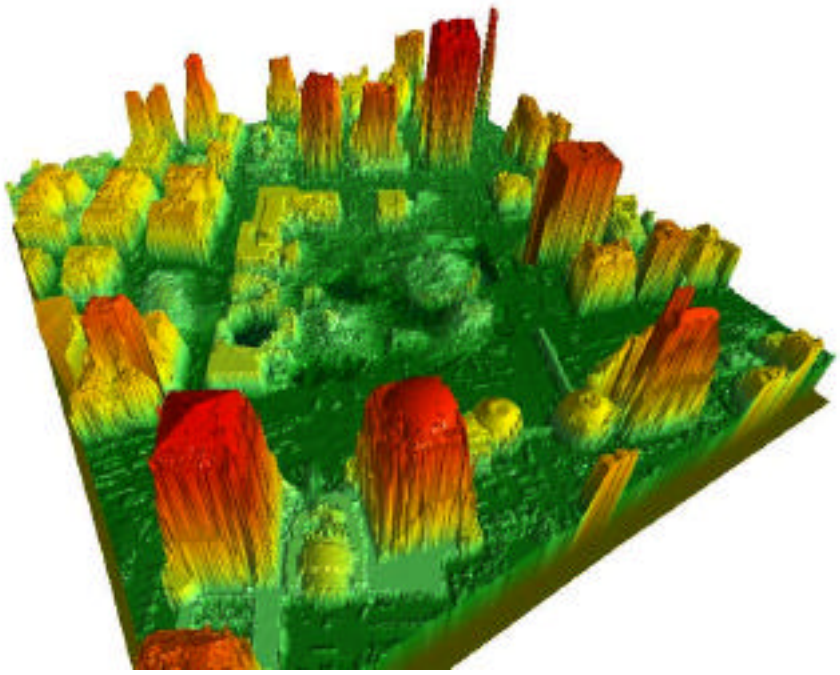
A city map shows the physical, political and road features of a city as well as major attractions such as shopping malls, medical centers, civic buildings, airports etc. City maps are useful for finding your way around a city.

This map of Sedona is courtesy of that city's planning department.



ARIZONA GEOGRAPHIC ALLIANCE

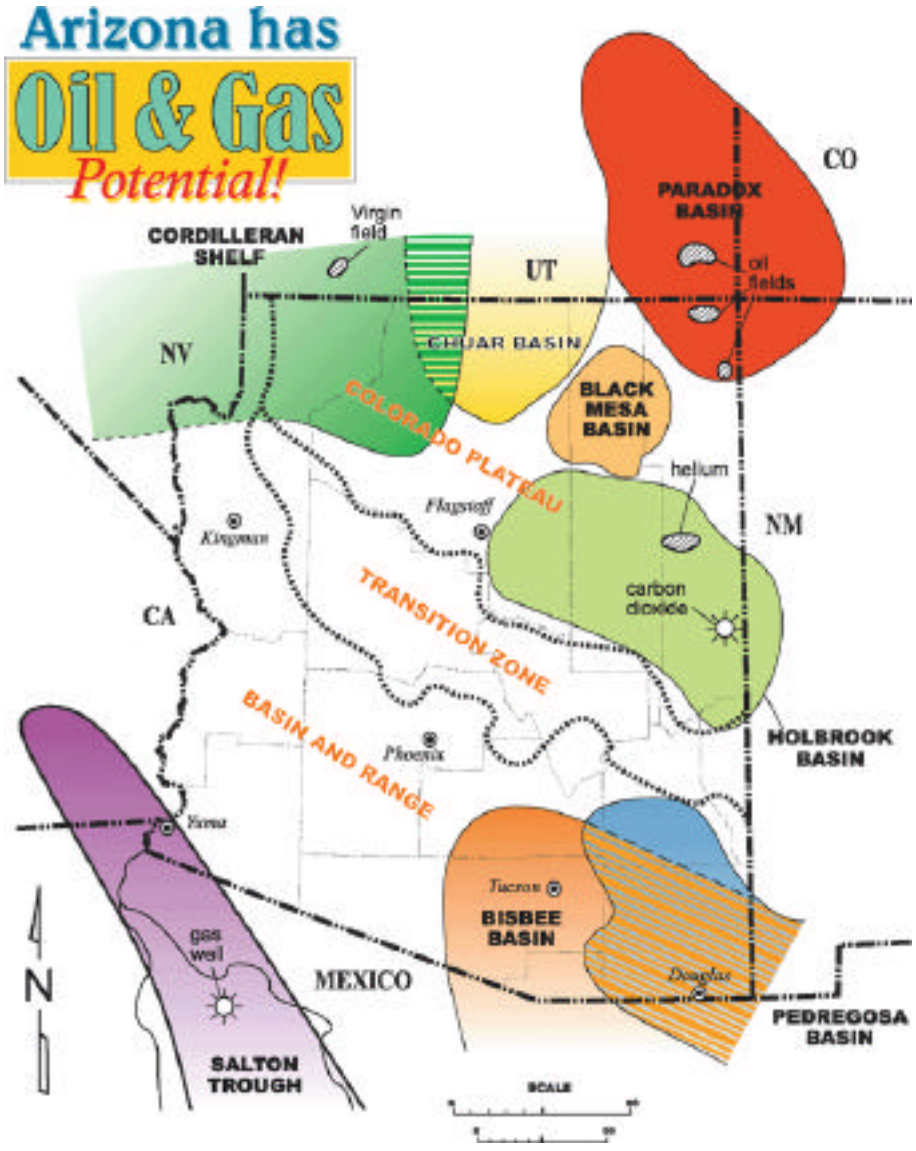
Digital elevation maps show the elevation from a perspective, as generated from a computer. Most digital elevation maps show the earth's surface, but this map shows the World Trade Center, made by NOAA soon after 9/11/01 (National Oceanic Atmospheric Administration).



NOAA's efforts in New York began on the ground on Sept. 15th as NGS field survey personnel provided the necessary ground support and calibration expertise for the airborne imaging sensors—high resolution cameras and laser ranging devices. These airborne and ground-based systems will produce very accurate map products at ground zero and the surrounding area affected by the terrorist attack. Both private industry and government agencies benefited from these activities. This digital surface model, courtesy of NOAA, provides an accurate 3-dimensional positioning of building structures around the destroyed WorldTrade Center in New York City. The model was created by Laser Radar, in a joint partnership between NOAA, the Army Joint Precision Strike Demonstration, Optech Inc. of Toronto, Canada, and the University of Florida.

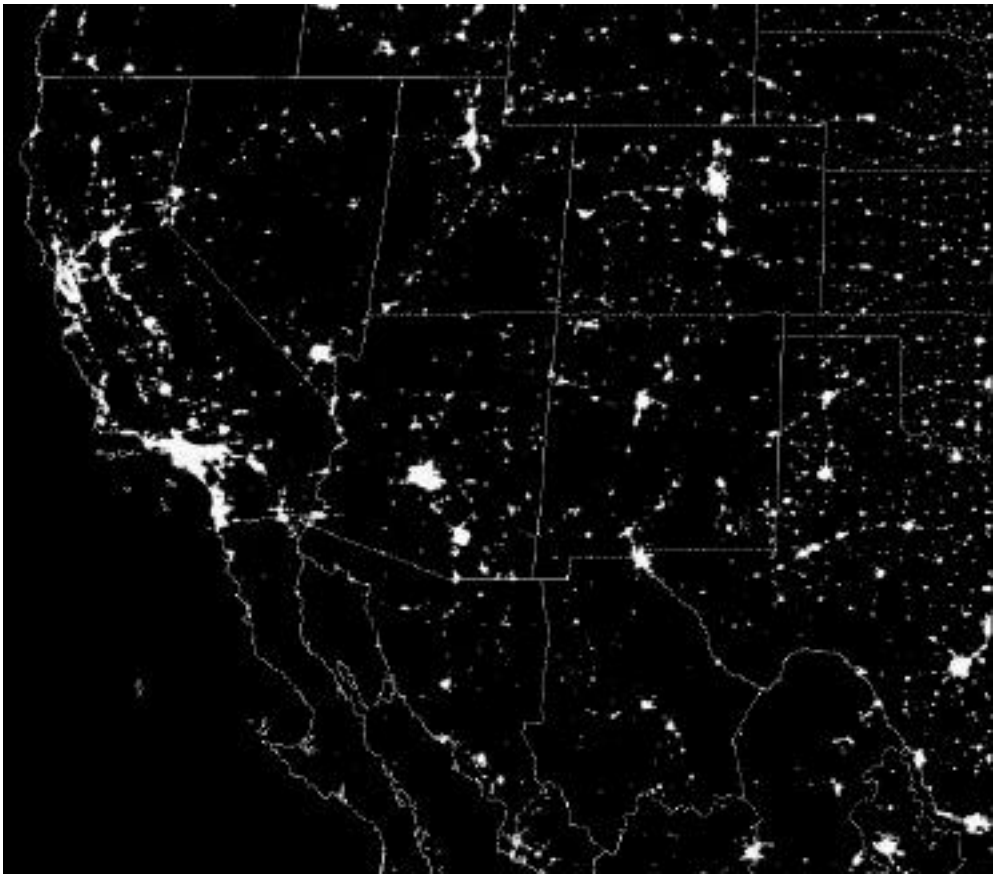
A resource map shows spatial distribution of natural resources. Resource maps help conservation experts and land managers plan for the future and protect natural reserves. Developers, miners and energy departments use these maps to locate resources and plan for their use.

This map shows areas with oil and gas potential in Arizona. Source: <www.azgs.state.az.us/Summer2001.htm> This map is used with permission of Larry D. Fellows, Director of Arizona Geological Survey and State Geologist.



ARIZONA GEOGRAPHIC ALLIANCE

A satellite image shows spatial distribution of features as seen by satellites. There are many different types of satellites that image many different types of the earth, including water, vegetation, the atmosphere. This satellite image shows the nightlights of the southwestern United States.



Land in the Southwest is being rapidly transformed through the process of urbanization. This process has been particularly rapid due to the very high population growth rates in this region since WWII. Between 1950 and 1990, the population of the Southwest has tripled. Nighttime images of the earth provide a dramatic picture of the extent and location of urbanized areas on the earth's surface. This figure shows the light produced by towns, cities, and industrial facilities throughout the Southwest as seen by U.S. Air Force DMSP satellites at night. /> Used with permission of the U.S. Geological Survey. Source:
<geochange.er.usgs.gov/sw/changes/anthropogenic/city_lights