



# Welcome to Arizona!

## Warm, Dry, and Sometimes Even Wet!

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**T**he “Five C’s” represent what have historically been important to the economy and the people of Arizona, many of which are still important today: Copper, Cattle, Cotton, Citrus, and Climate. The last “C”, representing climate, is one of Arizona’s most famous features. Arizona boasts a warm and sunny climate that is unrivaled in the continental United States for tourism and recreation opportunities and as a comfortable refuge from the cold winters in northern states. Arizona’s climate is more complicated than simply warm and sunny, though. Winter precipitation can bring snow to the highest elevations, that is important for water resources and rainfall to low desert areas that supports unique desert wildlife and vegetation. Summer thunderstorms bring much-needed rainfall to the warm season grasses of Arizona’s rangelands. The intervening warm and dry periods provide ample sunshine to drive diverse agricultural production across the state, including crops ranging from winter lettuce to cotton.

The key to adapting to Arizona’s climate is accepting and expecting variability. Arizona’s climate is anything but constant and varies dramatically through time and across the state’s mountains and valleys. Getting used to two distinctly different wet seasons (one in summer and one in winter) is the first step toward becoming acclimated to Arizona. The second step is getting used to sometimes not seeing precipitation at all during those seasons. Remember that Arizona is a dry place and that lack of precipitation over periods of seasons to years is not uncommon.

Arizona’s two “wet” seasons are illustrated in Figure 1. This is a distinctive feature of Arizona climate. Figure 1 shows the monthly average precipitation and monthly average temperature for the state (these data

represent a broad statewide average and not just one station). Note the peaks in monthly precipitation during the summer months of July, August and September and again in December, January, February, and March. Precipitation during the summer months is the result of a circulation pattern called the North American Monsoon System, more commonly referred to as simply “the monsoon.” Moist air from the Gulf of Mexico and the Gulf of California flows into Arizona, creating an ideal environment for thunderstorm development.

Winter precipitation comes in the form of broad frontal storms associated with low pressure systems that originate over the Pacific Ocean. Winter storms typically bring light precipitation to the region and accumulating snows to the highest mountain areas. Winter precipitation is especially important for maintaining Arizona’s water resources. Soaking winter rains and upper elevation snowfall are critical for maintaining stream flow and groundwater levels.

Arizona precipitation is highly variable over space and time, which is characteristic of a dry climate. Extended periods of below-average precipitation are not uncommon given this variability. Expecting average conditions from month to month or year to year is unrealistic with the inherent climatic variability of the region. This variability makes Arizona an interesting and exciting place to experience.

### Tracking Arizona Climate Online

Here are some web resources that provide up to date information on Arizona’s weather and climate:

- NOAA National Weather Service (<http://www.weather.gov>): Click on your county to access local forecasts, weather observations, and climate information.
- Arizona Department of Water Resources Statewide Drought Program (<http://www.azwater.gov/dwr/drought/DroughtHome.html>): Find information on current drought conditions across Arizona and tips on preparing for drought.
- University of Arizona Climate Science Applications Program (<http://cals.arizona.edu/climate>): Access climate-related extension bulletins and climate summaries for Arizona.
- University of Arizona Climate Assessment for the Southwest (<http://www.ispe.arizona.edu/climas>): Access climate-related reports, links, and the Southwest Climate Outlook, a monthly assessment of current and forecasted conditions.
- Rainlog (<http://www.rainlog.org>): Volunteer to help track precipitation patterns across Arizona and view other volunteer's historic observations.

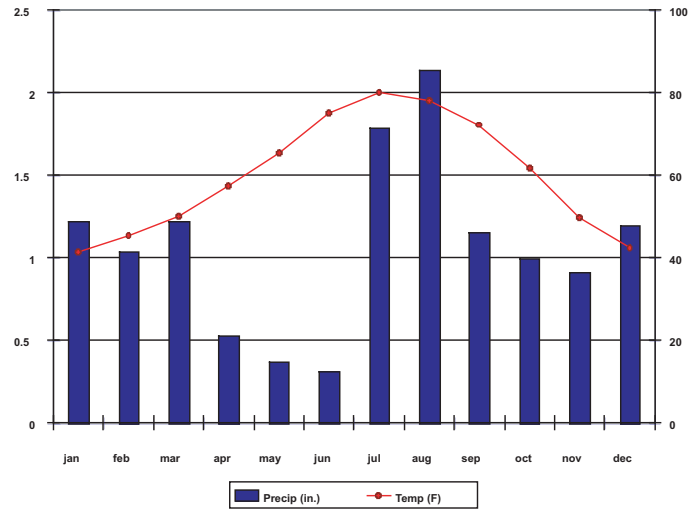


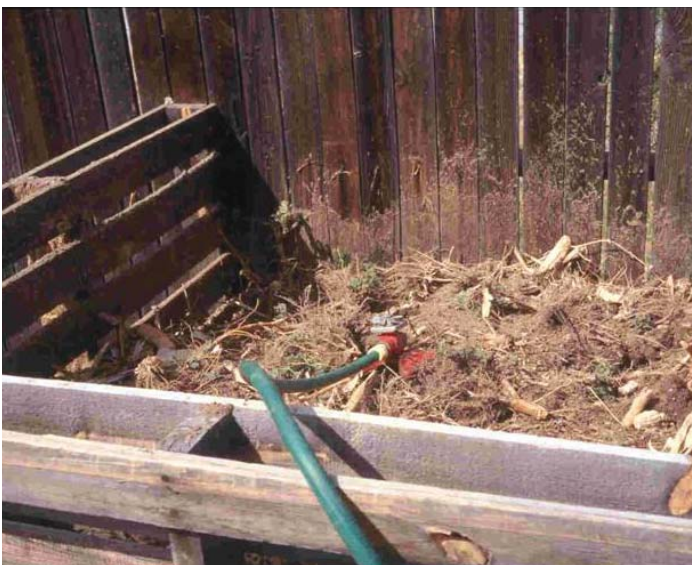
Figure 1: Monthly average precipitation and temperature for Arizona.

# Composting

# “Black Gold”

## for the Soil

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Rob Call

Keeping the compost pile moist, but not wet is a key to success in the southwest.

If you want to grow a great vegetable garden or some beautiful annual flowers, you would do well to get some “black gold” soil. Compost, the secret behind the most successful gardens, increases soil organic matter that act like little sponges in the soil by holding water and nutrients. Natural composting, or biological decomposition, began with the first plants on earth and has been going on ever since. As vegetation falls to the ground, it slowly decays and provides the minerals and nutrients needed for plants, animals, and microorganism growth. Composting is a way to produce organic matter. Compost contains humus, the loose, crumbly matter that results from the decay of organic matter. It is dark brown or black and has a soil-like, earthy smell. It is created by combining nitrogen containing “green” organic wastes (e.g., grass and plant trimmings, kitchen scraps, manure) in proper ratios with carbon containing “brown” materials (e.g., dry leaves, straw, sawdust, dried manure) into piles, rows, or vessels. Both are essential to create compost. Mature compost has experienced high temperatures, above