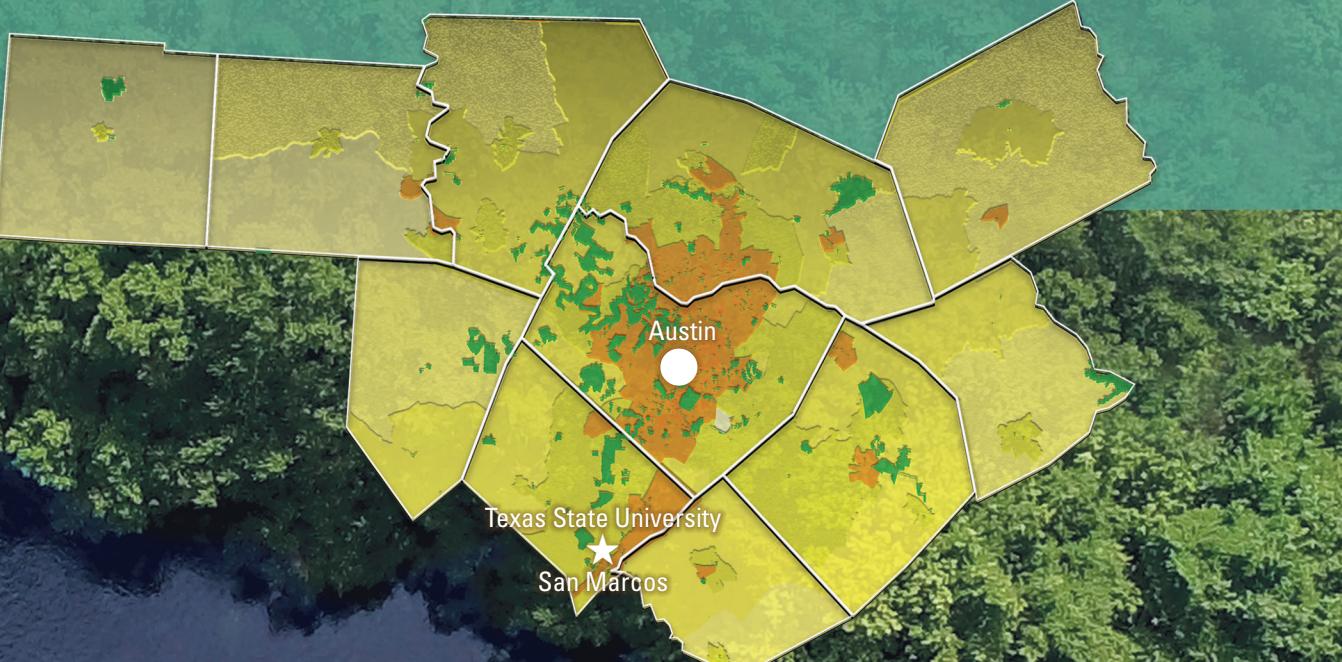


This map covers the 11 counties that make up the Austin economic analysis area. Parks and protected areas are shown in green. Shades of yellow (low) and orange (high) show population density.



ADVANCING RESEARCH

DATA-DRIVEN SOLUTIONS FOR NATURAL SPACES

Year round, Texans visit parks to enjoy nature. Understanding usage patterns can help preserve these areas for years to come.

Jason Julian, professor in the Department of Geography at Texas State University, uses an innovative mix of geographic tools and human behavior analysis to conduct research on natural areas, particularly those surrounding rivers. He gathers data to inform land-management solutions that serve all river users, both human and natural.

Resources such as the crystal-clear San Marcos River in Central Texas are in high demand and short supply. To understand the supply side of the equation, Julian uses geographic data about Texas' parks and protected spaces: location, size, type of environment. He then collects human-focused data — demographic information, visiting times, needs, and values — to quantify the demand for parks.

His findings show that while people value nature, they define that value in different ways. For instance, river characteristics such as water clarity have greater impact on locals' usage than on tourists'. People who are used to living near a clear river will stop spending as much time there if the river gets cloudy and crowded. For tourists, however, "clarity doesn't have as much of an effect on how they use the river," Julian reports; a day on the river is still enjoyable for this group even if the water is not pristine.

Research like Julian's, quantifying our desires and our actions' impact on nature, can help develop parks that keep natural resources protected while also providing space for people to reflect and play. As Julian says: "I would like to see us make better decisions for managing protected places that are based on data. We're asking the questions with long-term solutions in mind."

PARKS AND PROTECTED AREAS MAKE UP

4.7%

of the state (12,643 square miles)

Source: U.S. Geological Survey Protected Areas Database

TEXAS' POPULATION IS PROJECTED TO INCREASE BY

41% - 52%

from 2018 to 2048

Source: Texas Demographic Center

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