

Abstract

The City of Irvine is one of the largest and earliest planned communities in the United States. It began in the 1960s after the University of California agreed to put their newest campus on land in the Irvine Ranch. The Irvine Company developed a General Plan for a small city of 10,000 people around the university but eventually expanded that plan to include the entire 100,000-acre Irvine Ranch. Many New Towns movement principles were followed. When the city incorporated, the new city council did not start from scratch but built upon the Irvine Company's master plan. This area was unique for a planned community in that it was huge, mostly undeveloped, and mostly under one landowner.

GIS is used in this study to digitize and compare the 1973 General Plan of the Irvine Company with the 2017 land use database to determine if and where land use changes have taken place. Current parcel data was compared with the 1973 Irvine Company General Plan map to enable the tracking of changes for each parcel, if any. Extract Values to Points was used to pull values from the historical map into the current land use database. A pivot table was used to build a matrix of land use change pairs. The first research objective was to compare these two maps and locate changes. The second research objective is to see whether there are any trends in land use changes. This study found an increase in the amount of land dedicated to Open Space and a surprising decrease in residential density in a few parts of Irvine. Also found was a new trend in land use where residential units are being built inside the Irvine Business Complex. The resulting database could be used for future studies concerning one of the biggest and oldest planned communities in the United States.