Population Forecaster

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Paul Van Buskirk accurately forecasted the 2010 population of Cape Coral 10 years ago.

In 2002, Paul Van Buskirk forecasted that the 2010 population of Cape Coral would hit 155,179 permanent residents.

Cape Coral city officials who had hired Van Buskirk to run the numbers for planning purposes were somewhat skeptical. After all, it had taken Cape Coral three decades to reach the 100,000 population mark.

But when the U.S. Census published population figures in 2010, Van Buskirk had scored the equivalent of a demographic bull's eye.

Cape Coral's population was 154,305 in 2010 and Van Buskirk was off by just 874 people, or 0.56%, U.S. Census figures showed.

Everyone was surprised, except for Van Buskirk. As president of the firm Van Buskirk, Ryffel and Associates, he spent decades as an engineer and urban planner developing a population-forecast model based on the mathematical formula of 19th Century Belgian mathematician Pierre-François Verhulst. While doing research, Van Buskirk found Verhulst's formula and discovered that the mathematician had accurately forecast the 1940 U.S. population 100 years earlier (he was off by just 1%).

Van Buskirk has been a longtime observer of Florida's population boom. He moved to Florida in the late 1970s, when Florida legislators started requiring developers to account for the impact of their residential projects. For example, he worked for General Development Corp., one of the state's largest developers of communities such as North Port and Port Charlotte.

While the mathematical formula is complex, Van Buskirk explains his forecast model this way: Imagine you have a jar with yeast growing inside it. The yeast grows exponentially until it fills the jar. Van Buskirk says Florida's population grows much the same biological way.

By contrast, many forecasters — including those at the U.S. Census — use a less-accurate method that doesn't take into account the changes in demographics, Van Buskirk says. For example, retirees were the bulk of the population of Cape Coral when the city was born some 40 years ago, but that changed over time as more young people and families moved to the area.

Using decades of historic data, Van Buskirk's models also take into account the ups and downs of the economy. For communities that don't have long histories, Van Buskirk uses models of longer-lived cities with similar characteristics. He also accounts for existing developments, proximity to major traffic corridors and utilities.

Van Buskirk breaks up large areas into smaller zones that he then aggregates forecasts for each zone to form a complete picture. For example, he broke up Collier County into 200 zones ranging in size from more-densely populated half-mile areas to ones measuring five square miles, an effort that took him a year to complete.

The results of his research are obvious for municipalities planning for future growth and developers scouting for opportunities. "You can find which zones are most promising for development," Van Buskirk says. "It makes for the more efficient use of public and private money."

For example, Van Buskirk lives in south Lee County near two newly built super regional malls. He accurately forecasted that both would thrive. "They're not making a 40-year investment based on what they felt," he quips.

In Cape Coral, city officials used Van Buskirk's forecasts to determine where new fire department facilities would be needed in the future. "They went and acquired those sites," he says.

Van Buskirk cautions that his model is better suited for long-range forecasts of five to 10 years or longer. That's because his model cannot forecast economic downturns or booms, something no one can predict with certainty. However, Van Buskirk says his simulation can model worst- and best-case scenarios, information that developers can plug into their business plans. "We're mitigating the risks," he says.

Lee county
Population forecast
Lee County will continue to be one of the fastest-growing counties in the Gulf Coast region, according to population forecasts by Van Buskirk, Ryffel and Associates. The forecasts were made in 2000 using historic data up to that year. In 2010, Lee's population was 618,754.

Year Lee population forecast
2020   734,694
2025   803,298

2030 869,395
2035 932,467
2040 992,143
2045 1,048,182
2050 1,100,455

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