

Data & Mapping Monthly Report

September 2018

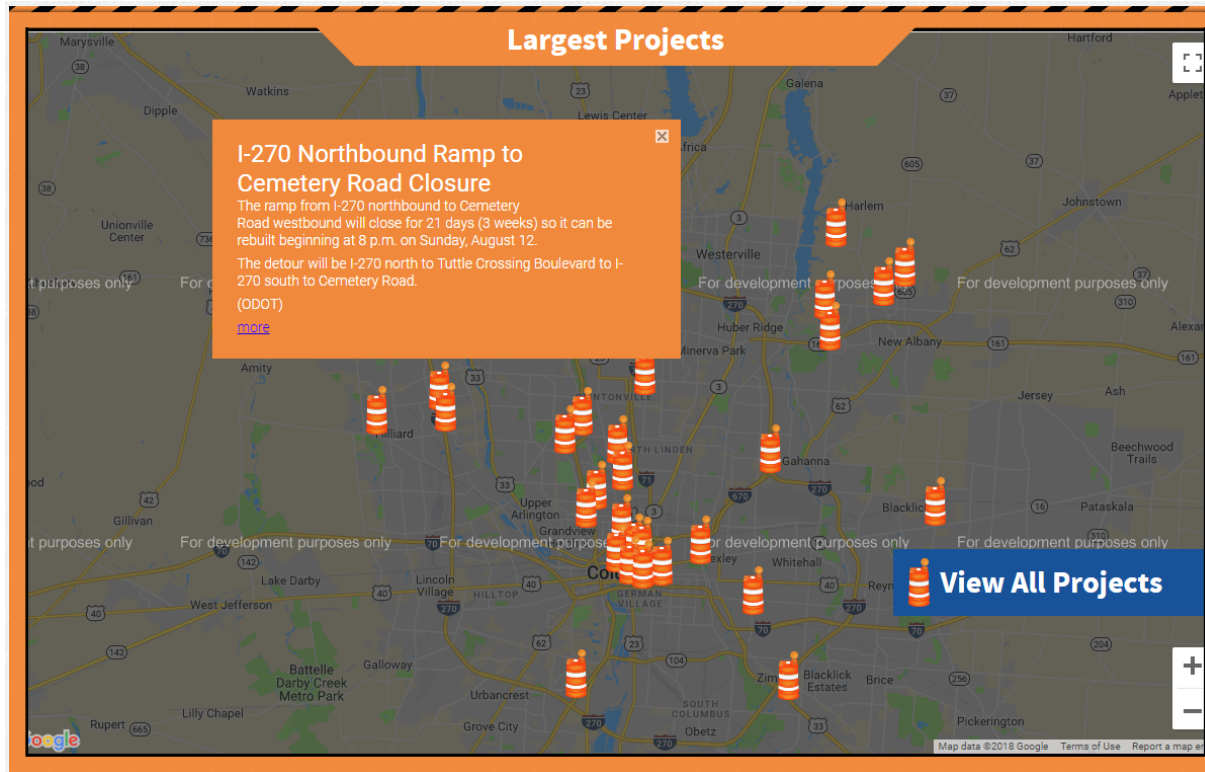


Mid-Ohio Regional
Planning Commission



PAVING THE WAY

Central Ohio Road Construction Information





Paving the Way System Redesign

- MORPC took over operations of the Paving the Way program in 2017
- Current system has limited functionality and is time intensive to maintain
- JMT Technologies selected to redesign the system
- Project timeline: September 2018 – February 2019
- New system to include:
 - New Paving the Way website with improved user interface
 - Data input capabilities for local governments and contractors
 - Improved mapping capabilities
 - Broader regional participation
 - More . . .
- User experience research and design occurring this fall, stay tuned!

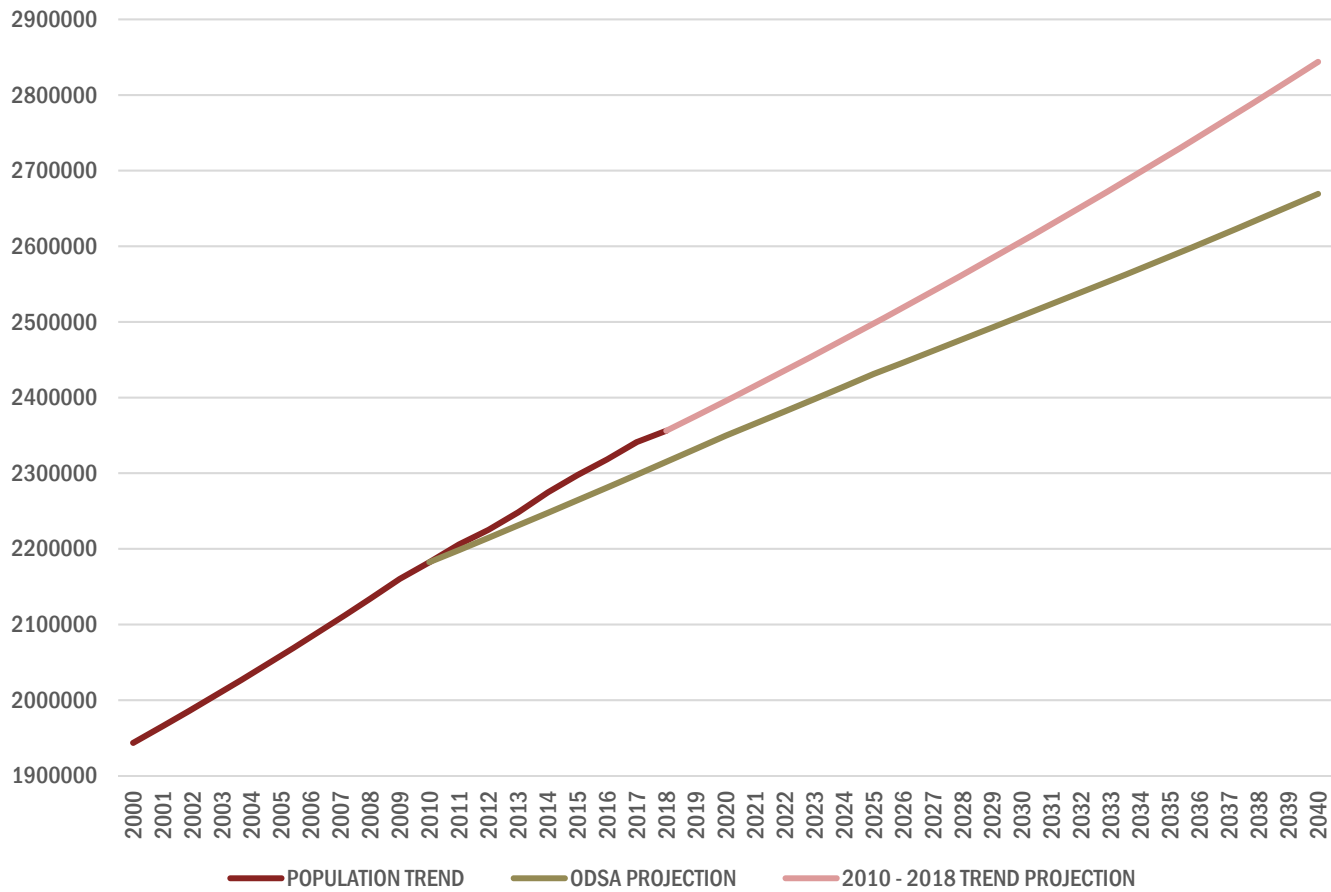


MORPC Draft Regional Population Projections 2020-2050



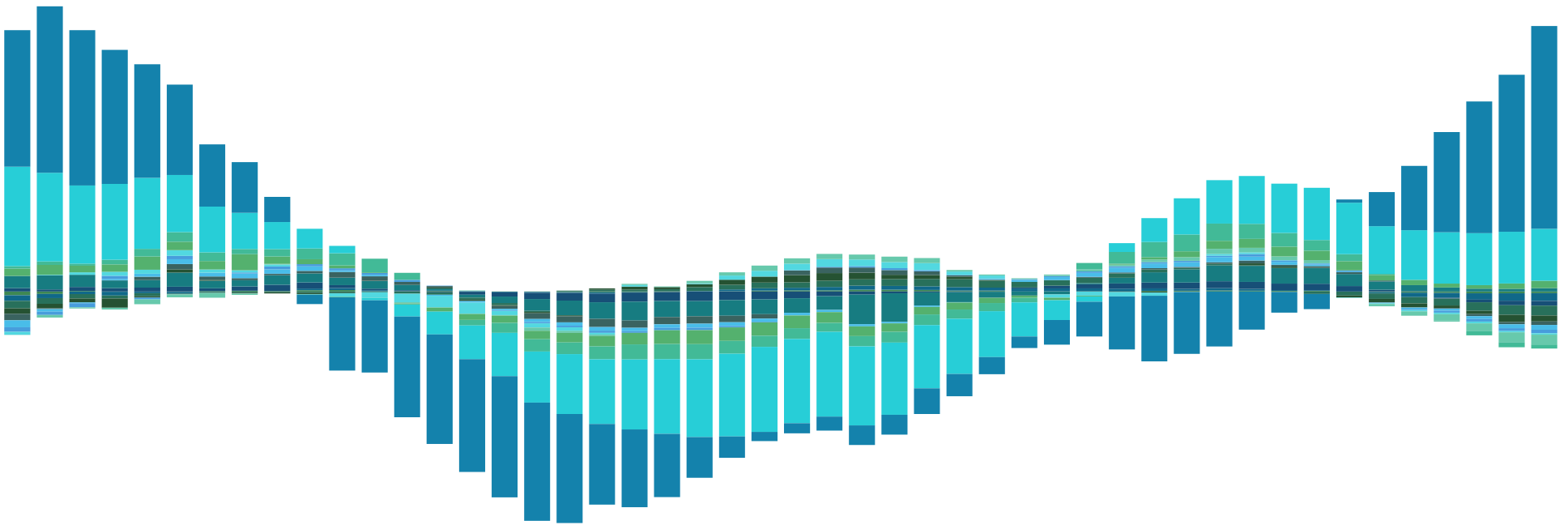
MORPC 2016-2040 Population Projections

MORPC 15-County Region



Recipe for Population Growth

- **Fertility Rates (pretty easy and reliable to predict)**
- **Life Expectancy (also, follows a pattern that isn't too hard to predict)**
- **Net Migration (not so easy to predict)**



How to Model Migration Uncertainty?

ARIMA: Auto-Regressive Integrated Moving Average

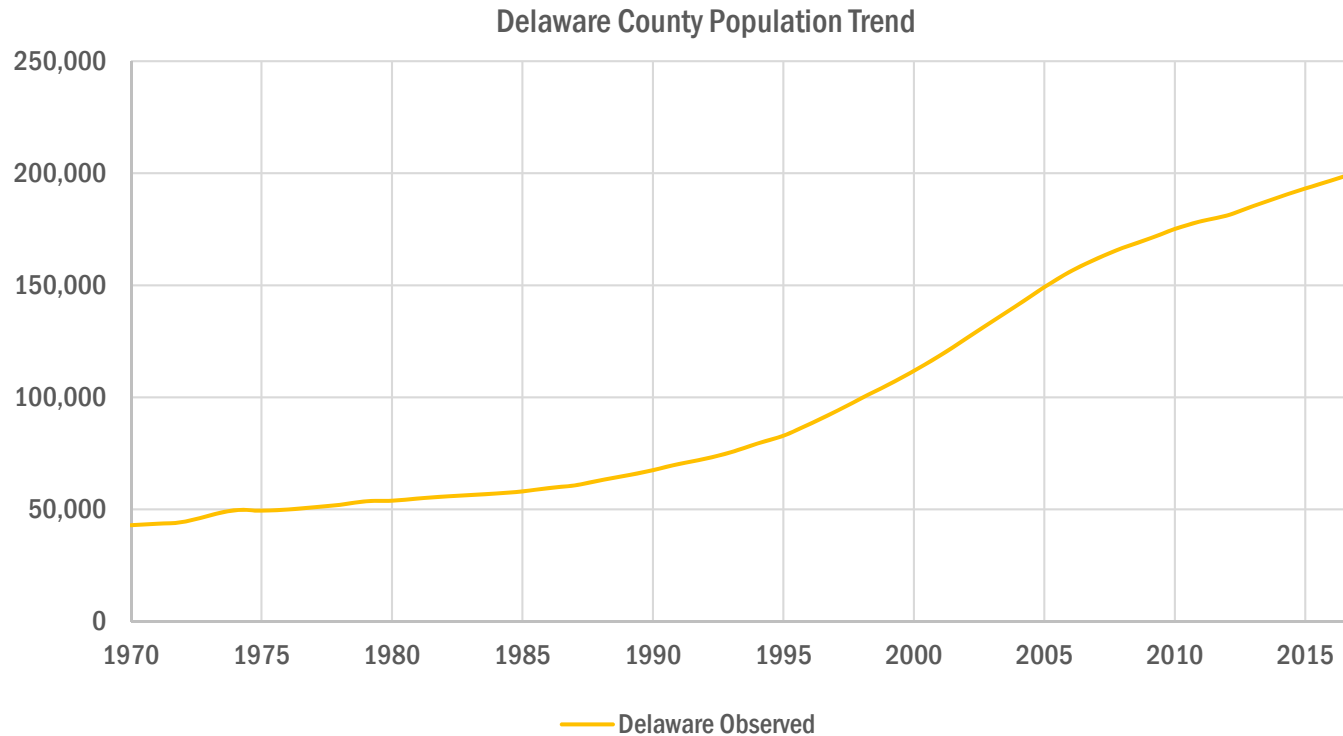
- A family of statistical 'time-series' models
- Work best for data that have some kind of trend, and some kind of random wave pattern about the trend
- With caution, fairly efficient to run tests and implement using statistical software
- Efficient to calculate ranges of uncertainty using statistical software



County Population Forecasts

GOAL :

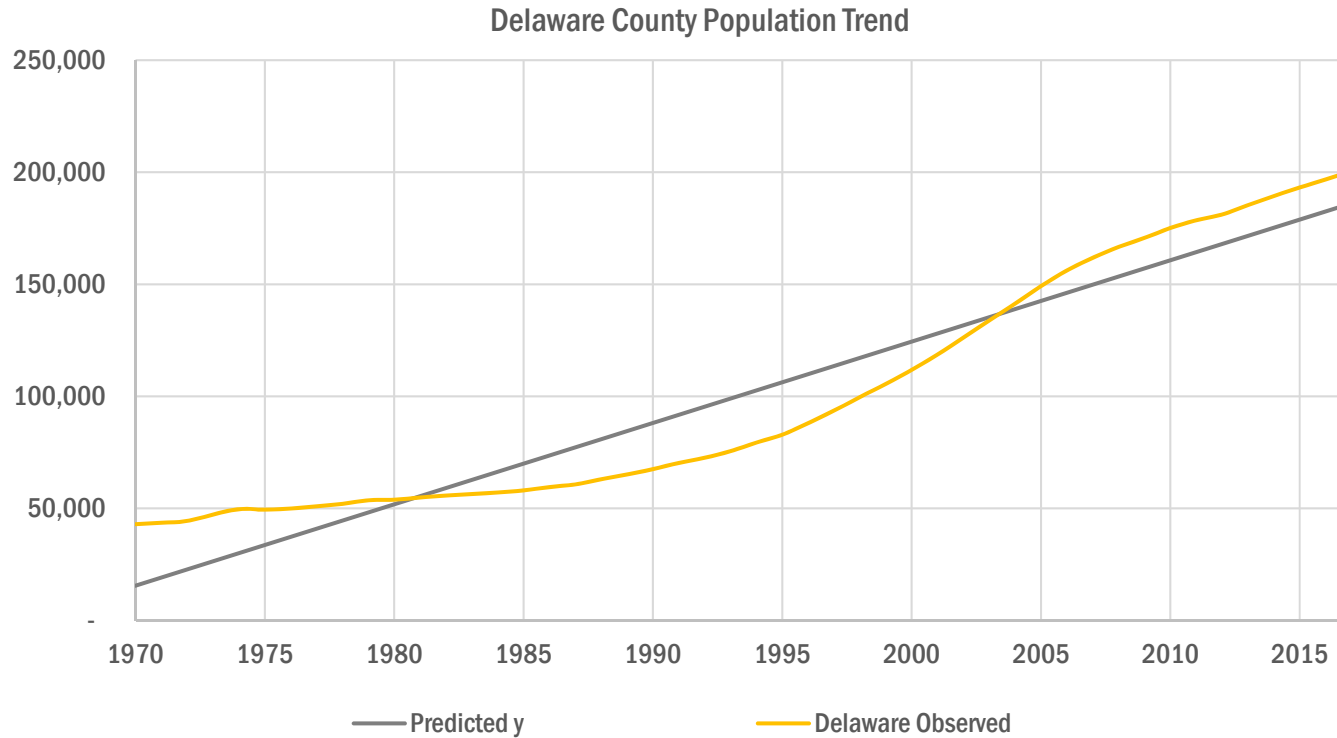
Choose a model for the future, informed by the patterns of the past.





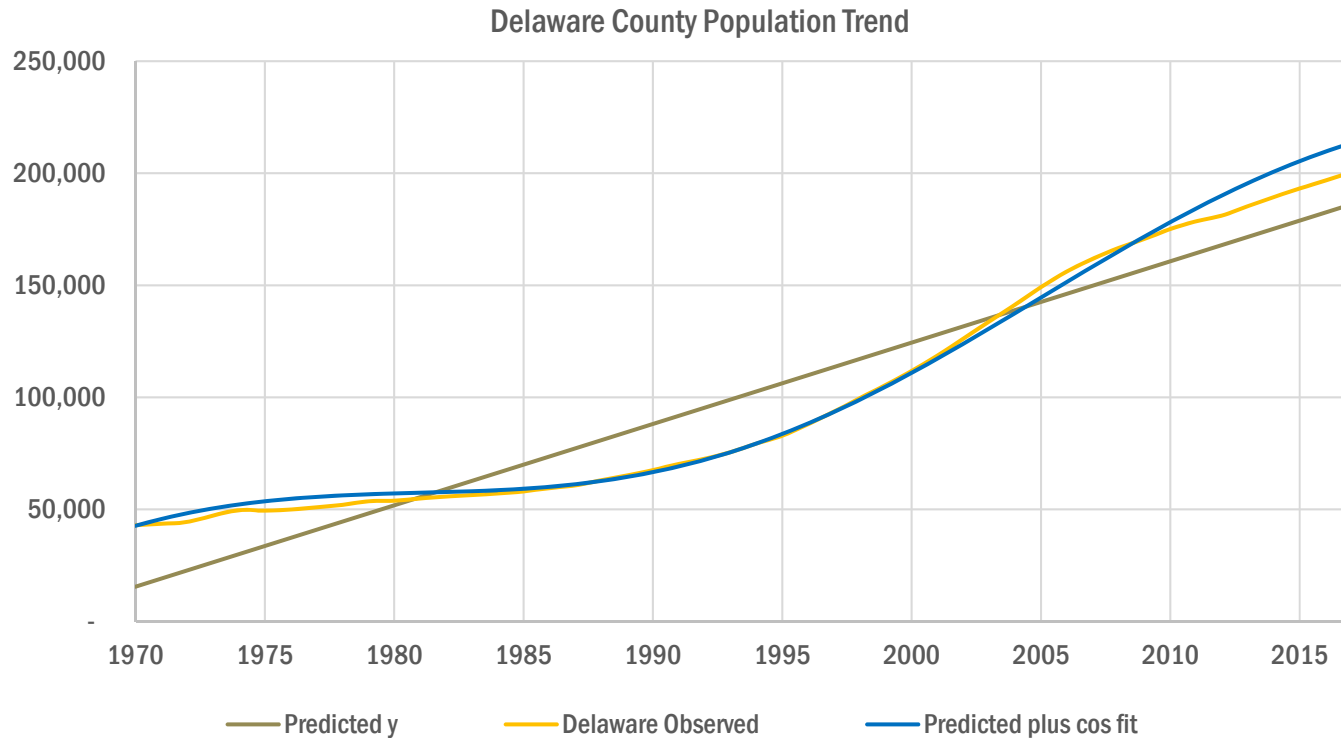
County Population Forecasts

Population rarely grows in a straight line...



County Population Forecasts

...it's pretty consistently a 'wave' pattern showing periods of faster or slower growth.



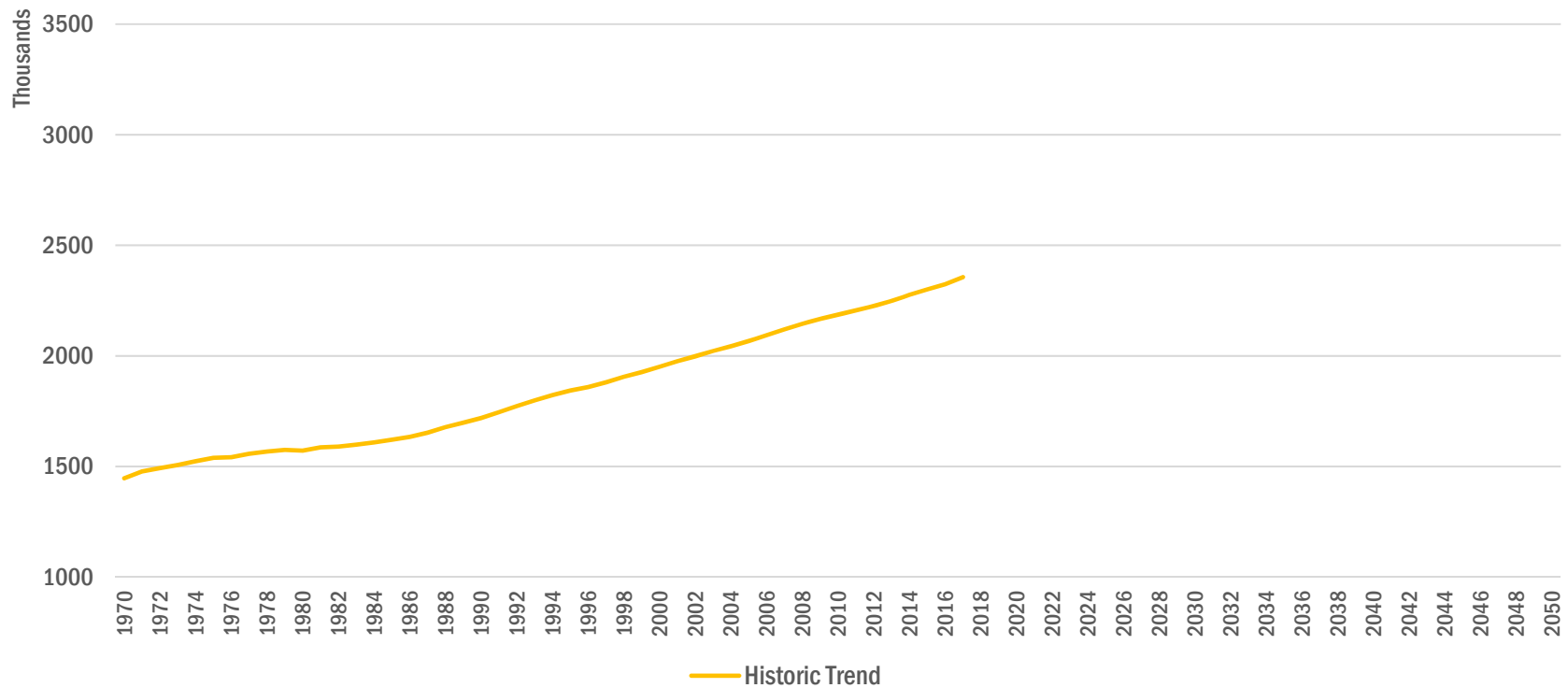


The Model

ARIMA (1,1,2)

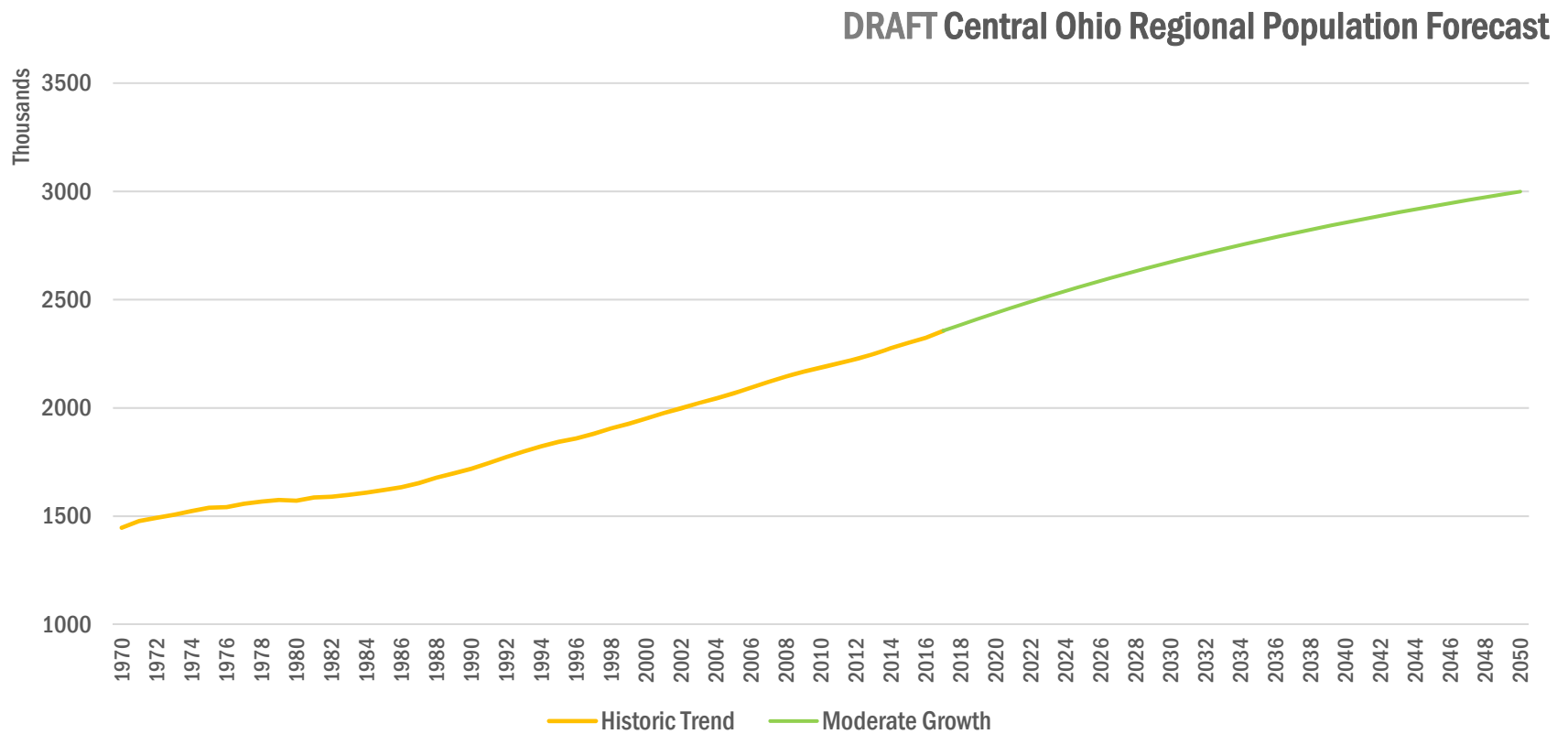
aka Holt's Linear Exponential Smoothing with Damped Trend

DRAFT Central Ohio Regional Population Forecast



The Model

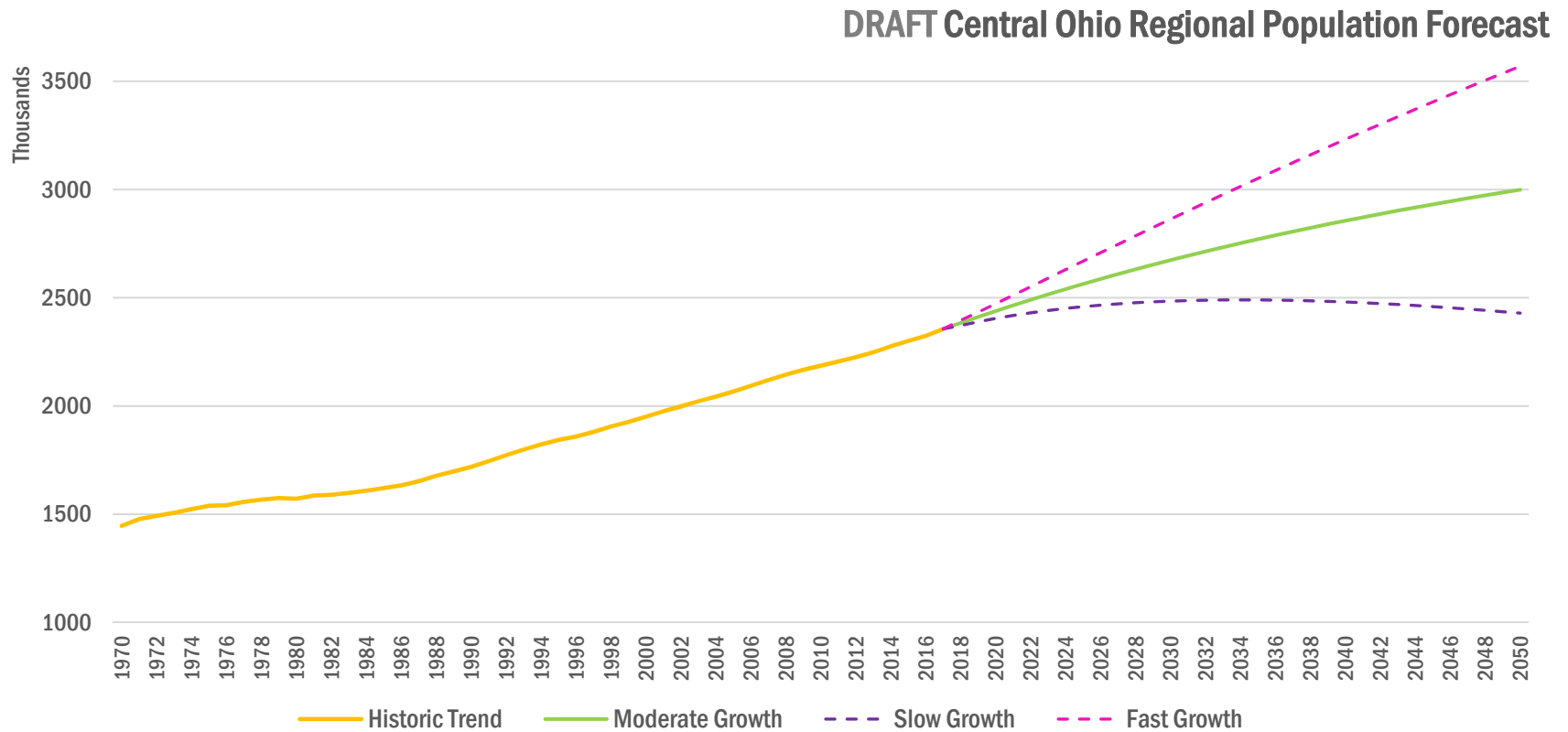
ARIMA (1,1,2) conservatively models the random 'wave'...





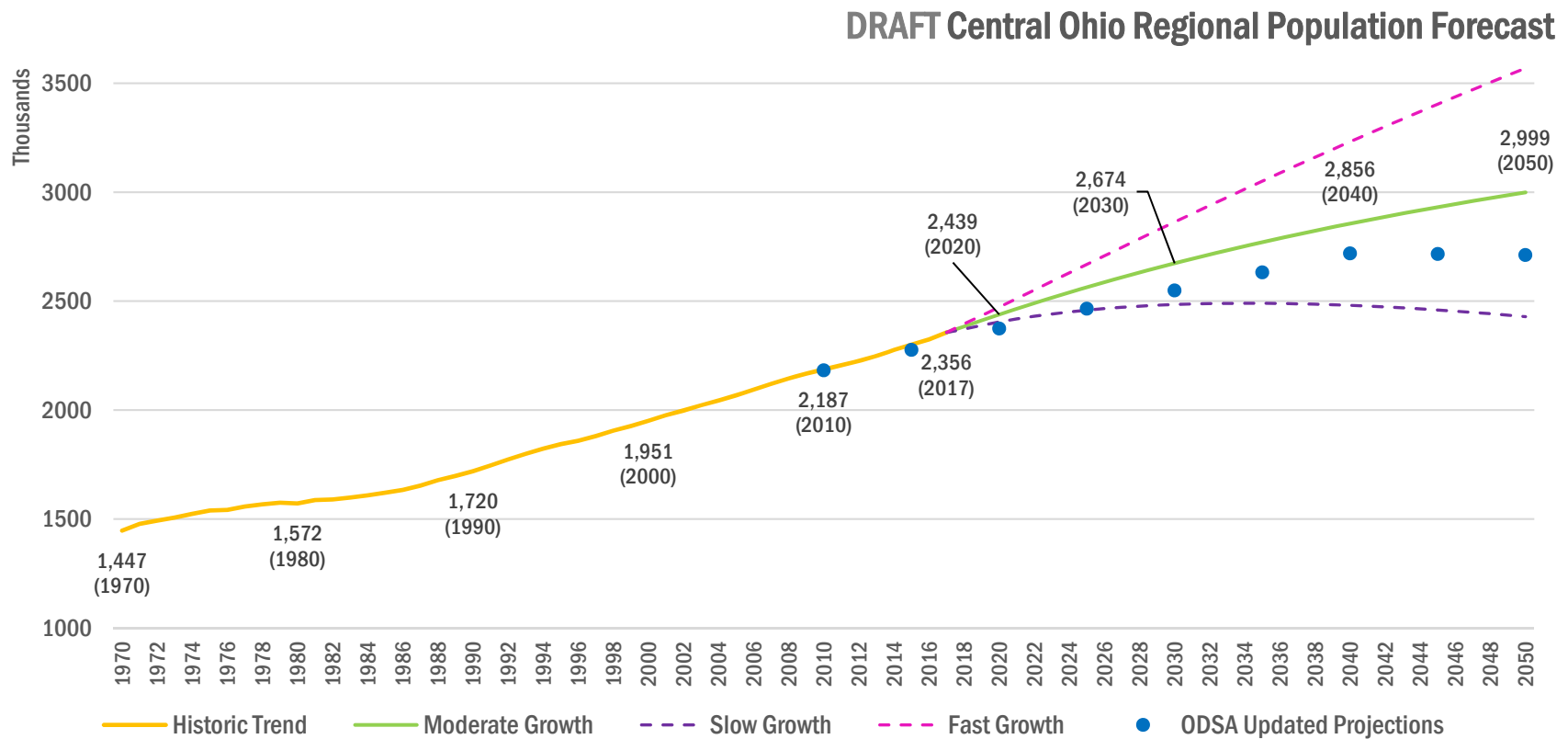
The Model

...and uncertainty around the 'wave'.



The Model

Compared to the State of Ohio's projections for validation





Regional Data Advisory Committee



Draft Regional Data Agenda

- **Goal 1:** In its role as a convener and facilitator, MORPC will **FOSTER COLLABORATION** among local governments, partners, and stakeholders to enhance the use of data in Central Ohio.
- **Goal 2:** MORPC will support and provide opportunities for data **CAPACITY BUILDING & EDUCATION** that increase both the human and technological capabilities of the Region.
- **Goal 3:** MORPC will promote good data **GOVERNANCE & PRACTICES** that protect local governments and their citizens, and adapt to the evolving data and technology landscape.
- **Goal 4:** MORPC will continually innovate in its role as a data creator, user, and provider through ongoing **DATA PROCUREMENT AND DEVELOPMENT**.
- **Goal 5:** MORPC will serve as a model for **DATA ACCESS, INCLUSIVITY, & EQUITY**, ensuring the benefits and opportunities data can create are extended to all Central Ohio residents.



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