How to Use the Population Growth, Housing Demand & Commercial Demand Forecast Report with user guidance for Governments, Planners, Developers, Lenders, Utility Providers & Home Builders
MFM Forecasting Methods

Accuracy is our #1 Objective
– Industry standard is Linear Extrapolation
– MFM uses Non-Linear forecasting methods (highly accurate)
MFM is Better

Examples of our Forecast Effectiveness

Northport, FL

- 1980 Population – 6,350
- 1982 Metro Forecast Model Used to forecast population in 2007
- Metro Forecast Model predicted 2007 population of 57,452
- Actual population per 2010 census – 57,350
- Model proved 99.82% accurate

Cape Coral, FL

- 2000 Population – 102,286
- 2002 Metro Forecast Model predicted 2010 population of 155,179
- Actual 2010 population – 154,305
- Model proved 99.44% accurate
Nationally Recognized

“….the sigmoid [Metro Forecast] model is a Complex variation of an extrapolation model And is more accurate than other methods forecasting Short- and long-term growth…..”

“The City of Auburn….will receive the “Outstanding Planning Award for a Comprehensive Plan” for its CompPlan 2030…..Auburn Planning Department Employs advanced modeling, via its Auburn Interactive Growth Model [Metro Forecast] formally put in place in 2008….” (City of Auburn Website – January 2012)

“The nationwide and state recognition of the Interactive Growth Model™ [Metro Forecast] is indicative of a planning product that is only offered by one planning consultant in the United States. The product offered by [Metro Forecast] and the services they offer are both unique and proprietary. They are justifiably the single source for providing these products and services.”

Presentation by Collier County Community Planning Manager Michael Bosi, AICP before the Collier County Board of Commissioners, September 26, 2006
Population Forecasting

Our Primary Objective:
Accurate Population Forecasting!

Population drives demand for the things we need:
– Housing
– Retail
– Restaurants
– Professional Services
– Healthcare
– Schools
– Government Services

Inaccurate Population Forecasts cannot correctly anticipate demand
How to Use MFM Population Forecasts

Table 1: MSA Population Forecast

<table>
<thead>
<tr>
<th>Year</th>
<th>Composite</th>
<th>Expanding</th>
<th>Contracting</th>
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<tr>
<td>1970</td>
<td>61,049</td>
<td>62,517</td>
<td>59,612</td>
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<td>1975</td>
<td>68,037</td>
<td>69,658</td>
<td>66,451</td>
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<td>1980</td>
<td>75,743</td>
<td>77,527</td>
<td>73,995</td>
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<td>1985</td>
<td>84,219</td>
<td>86,179</td>
<td>82,298</td>
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<tr>
<td>1990</td>
<td>93,520</td>
<td>95,668</td>
<td>91,415</td>
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<td>1995</td>
<td>103,698</td>
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<td>2000</td>
<td>114,800</td>
<td>117,354</td>
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<td>2005</td>
<td>126,872</td>
<td>129,643</td>
<td>124,149</td>
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<td>2010</td>
<td>139,950</td>
<td>142,945</td>
<td>137,005</td>
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<tr>
<td>2015</td>
<td>154,064</td>
<td>157,288</td>
<td>150,890</td>
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<tr>
<td>2020</td>
<td>169,230</td>
<td>172,685</td>
<td>165,826</td>
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<td>2025</td>
<td>185,455</td>
<td>189,140</td>
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<td>221,021</td>
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<td>260,473</td>
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<td>2065</td>
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<td>394,793</td>
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<td>441,233</td>
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<td>464,059</td>
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<td>2095</td>
<td>486,423</td>
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<td>2100</td>
<td>508,186</td>
<td>512,850</td>
<td>503,488</td>
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Source: Metro Forecasting Models, LLC

Table 1 Provides the Population Forecast

- Population growth from 2015-2020 is 15,167 residents
- Population growth from 2015-2025 is 31,391 residents

An accurate population forecast means we can plan for the future with confidence and make wise capital investments.

MFM Aggregate report

What will these new residents need?
- Housing
- Commercial Goods and Services (retail and office space)
- Government Services (building officials, law enforcement, teachers, planners, etc.)
- Infrastructure (roads, schools, fire stations, etc.)
How to Use MFM Population Forecasts

Figure 7 Population Analysis

Provides growth guides (the red and green boundaries) to measure against the actual population growth trend.

Figure 7 is showing population growth lagged from 2000-2010 in a contracting economy.

Population growth from 2010-2014 is approaching two standard deviations from the mean forecast (blue line) thereby compensating for the slower growth of the previous 10 years.

Figure 7 compares the growth forecast with the estimated population by year.

Provides an early indicator of future growth intensity.

Allows for timely adjustment to capital investments.

 Warns of potential over increase or decrease in growth rate.
Forecasting Housing Demand

MFM Housing Demand is based on our Population Forecast

The MFM Housing Demand Forecast uses 3 variables with highly accurate non-linear growth curves
- Our competitors use 1 or 2 variables and inaccurate linear extrapolation

Accurate Housing Demand Forecasting with local building permit data can indirectly predict:
- Vacancy Rates (too much housing VR↑, not enough housing VR↓)
- Pricing Sensitivity
- Changes in Household Size

Inaccurate Population Forecasts cannot correctly anticipate demand
Using MFM Housing Demand Forecasts

MFM Housing Demand Forecast is derived from:
- Accurate MFM population forecasts
- Household size
- Vacancy rate

Table 2 Provides the Housing Demand Forecast
- New housing demand from 2015-2020 is 6,878
- New housing demand from 2015-2025 is 14,236

What about Housing Supply?
MFM tracks the number of housing units *by year* and provides a comparative analysis of supply vs demand.

Table 2 narrative provides a comparison of existing housing units to housing demand:

“Our forecast demand of 69,870 units in 2015 compared to our calculated supply of 66,692 housing units implies the housing market should remain healthy for the foreseeable future.”
Using MFM Housing Demand Forecasts

Figure 6 Building Permits vs Population Analysis

Figure 6 shows building permitting for housing (red dots) grew faster than population from 2001-2007 and much slower than the population growth beyond 2007.

Annual building permits have recovered and stabilized compared to population growth (black triangles).

Permits that are statistically out of range signal a pending potential economic correction.

Permitting should be sought and issued within the range of the forecasted population growth.

Source: Metro Forecasting Models, LLC
Forecasting Commercial Space Demand

Commercial Space Demand Forecast Combines:
– MFM signature Population Forecast
– AND a 2\textsuperscript{nd} highly accurate non-linear curve matched to the specific City or MSA!

Our competitors...

...well they don’t have a Commercial Space forecast

MFM Commercial Forecasting data:
– Population based “real” demand for Commercial Space growth in 5-year increments – we don’t use “rooftops” in our forecasts
– Can be used to demonstrate need in the market area for
  • Zoning Cases
  • Commercial Construction
  • Commercial Lending
Using MFM Commercial Demand Forecasts

Forecasts Commercial Space Demand based on real Population Growth
  – Can determine “net” commercial space demand for market area
  – Know before you finance, build or buy if market is over supplied or under supplied
MFM Forecast Reports Help Governments!

Before you plan future capital improvements or approve annexations, use MFM Aggregate Reports to provide answers you need.

Population Forecast

– Is the present city/MSA population growing and by how much?
– Is the current growth rate sustainable?
– How will the tax base grow?

Housing Demand Forecast

– Is there a demand for new housing projects in the city/MSA?
– What is the demand compared to supply of existing housing units?
– Are building permits getting ahead of demand?

Commercial Space Demand Forecast

– Is there a need for new or existing commercial space in the next 5 years?
– Does the city/MSA want to supply commercial space for neighboring communities?
MFM Forecast Reports Help Planners!

MFM Aggregate Reports provide data you need.

Population Forecast
- Is the city/MSA population growing and by how much?
- Use MFM population forecasts to demonstrate need for your project.
- Is the city/MSA growing at an increasing rate or a decreasing rate?

Housing Demand Forecast
- Help to show need for density when demand is much greater than supply.
- Develop a long-term view of housing market and provide guidance to clients.
- Show the municipality how growth will drive demand for your project.

Commercial Space Demand Forecast
- Know when there is a need for new commercial space in the next 5 years.
- Does the city/MSA supply commercial space for neighboring communities?
- Support for adding commercial uses to re-zone applications when demand exists.
MFM Forecast Reports Help Developers!

MFM Aggregate Reports provide data you need.

Population Forecast
- Is the city/MSA population growing and by how much?
- Use MFM population forecasts to demonstrate need for your project.
- Is the city/MSA growing at an increasing rate or a decreasing rate?

Housing Demand Forecast
- Help to show need for density when demand is much greater than supply.
- Develop a long-term view of housing market.
- Show the municipality how growth is/will drive demand for your project.

Commercial Space Demand Forecast
- Know when there is a need for new commercial space in the next 5 years.
- Does the city/MSA supply commercial space for neighboring communities?
- Support for adding commercial uses to re-zone applications when demand exists.
MFM Forecast Reports Help Lenders!

Before you commit to a new loan or refinance an existing loan use MFM Aggregate Reports to provide answers you need.

Population Forecast
- Is the city/MSA population growing and by how much?
- Is the current growth rate sustainable?
- Is the growth within two standard deviations of the mean forecast?

Housing Demand Forecast
- Is there a demand for new housing in the city/MSA?
- What is the demand compared to supply of existing housing units?
- Are building permits getting ahead of demand?

Commercial Space Demand Forecast
- Is there a need for new or existing commercial space in the next 5 years?
- Does the city/MSA supply commercial space for neighboring communities?
MFM Forecast Reports Help Utility Providers!

Before you commit to capital improvements or increase franchise area, use MFM Aggregate Reports to provide answers you need.

Population Forecast
- Is the city/MSA population growing and by how much?
- Is the growth rate sustainable?
- Is the growth within two standard deviations of the mean forecast?

Domestic Water and Waste Water Utilities
- When will the city/MSA reach a given population?
- Use population forecast to estimate future water and sewer needs.
- Make long-range plans for future treatment plants and expansions.

Electric, Cable and Gas Utilities
- Determine overall demand for service by year.
- Plan for future sub-stations to serve growing population.
MFM Forecast Reports Help Home Builders!

MFM Aggregate Reports provide data you need.

Population Forecast
- Is the city/MSA population growing and by how much?
- Use MFM population forecasts to measure need for your project.
- Is the city/MSA growing at an increasing rate or a decreasing rate?
- Where to expand or buy other builders.

Housing Demand Forecast
- Help to show need for density when demand is much greater than supply.
- Use the 5-year demand forecast and your land/lot inventory to determine potential market share.
- Know if homes sales will grow at an increasing rate or a decreasing rate

Commercial Space Demand Forecast
- Support for adding commercial uses to re-zone applications when demand exists or is forecasted.
# Economic Savings

- **Typical Residential Developer Economic Savings** – 250 Unit Project

<table>
<thead>
<tr>
<th>Definition</th>
<th>Cost/Unit</th>
<th>Total Cost</th>
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<tbody>
<tr>
<td>Builder Ready Price</td>
<td>$20,000</td>
<td>$5,000,000</td>
</tr>
<tr>
<td>Acquire within 1 Year of Need</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undeveloped but Entitled Price</td>
<td>$10,000</td>
<td>$2,500,000</td>
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<tr>
<td>Option or Acquire 2 Years Prior to Need</td>
<td></td>
<td></td>
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<tr>
<td>5 Year Prior to Need Price</td>
<td>$5,000</td>
<td>$1,250,000</td>
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<tr>
<td>Option Land 5+ Years Prior to Need</td>
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<tr>
<td>Total Savings Range</td>
<td>$10k – 15k</td>
<td>$2,500,000 - $3,750,000</td>
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- With knowledge of future or existing demand, builder can use option money to tie up land & significantly reduce cost
Why You Should Use MFM Data

- Lower your RISK exposure with MFM Reports
- The MFM City/MSA report forecasts:
  - Population Growth
  - Housing Demand
  - Commercial Space Demand
- Sound forecasting methodology
- Documented Highly Accurate Projections
  - Give user assurance that investments made based on data are sound and will maximize Internal Rate of Return
  - Following projections gives user significant competitive advantage in marketplace.
  - Maximize capital investment value by leveraging competitive advantage.