What does the future hold?
Looking through the window of forecast modeling

Overview of presentation
- Why the Council forecasts
- How the Council forecasts
- What we’ve learned…

Why the Metropolitan Council forecasts
Why Met Council forecasts

- State law mandates Metropolitan Council policy plans include regional and local forecasts*
- Regional systems are scaled and staged to accommodate forecasts
- Local plans accommodate the same growth forecasts

Forecast, Discuss, Revise

- Draft forecasts distributed for community review and comment
- Submitted for Council adoption
- Further opportunities for revisions

* (Minn. Stat. 473.146)
How the Council forecasts

Forecast models

Regional Model - total population, households, and employment
Local Forecasts Model - allocates growth to cities and townships
Transportation Model - travel behavior

What will 2040 look like?
Regional forecast: methods

- REMI PI, a regional economic model, forecasts employment, economic migration and population
- National GDP and employment projections from the long-term forecast used by Minnesota’s State Economist

The region will continue to add jobs:

![Chart showing percentage growth over the next three decades]

- 32 percent growth over the next three decades
- Source: 2010 data on population from Census Bureau; 2040 forecasts from the Metropolitan Council (July 2015 release)

Regional model: population

- Natural growth
- Birth rates
- Life expectancy
- Death rates
- Migration
- Who moves here?
- Who moves away?
- Future population and households
The region will continue to add people:

28 percent growth over the next three decades

<table>
<thead>
<tr>
<th>Year</th>
<th>1990</th>
<th>2000</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.29</td>
<td>2.64</td>
<td>2.86</td>
<td>3.13</td>
<td>3.39</td>
<td>3.63</td>
</tr>
</tbody>
</table>

Source: 2010 data on population from Census Bureau; 2040 forecasts from the Metropolitan Council (July 2015 release)

75% growth from natural increase; 25% international migration

<table>
<thead>
<tr>
<th>Year</th>
<th>2001-2010</th>
<th>2011-2020</th>
<th>2021-2030</th>
<th>2031-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural increase</td>
<td>221,000</td>
<td>189,000</td>
<td>166,000</td>
<td>147,000</td>
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<tr>
<td>International migration</td>
<td>108,000</td>
<td>99,000</td>
<td>124,000</td>
<td>139,000</td>
</tr>
<tr>
<td>Domestic migration</td>
<td>131,000</td>
<td>86,000</td>
<td>124,000</td>
<td>139,000</td>
</tr>
</tbody>
</table>

More people of color!

9 percent people of color in 1990

<table>
<thead>
<tr>
<th>Year</th>
<th>1990</th>
<th>2000</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latino</td>
<td>-132,000</td>
<td>-46,000</td>
<td>-60,000</td>
<td>-70,000</td>
<td>-79,000</td>
<td></td>
</tr>
<tr>
<td>Asian and other</td>
<td>108,000</td>
<td>99,000</td>
<td>124,000</td>
<td>139,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black or African-American</td>
<td>231,000</td>
<td>219,000</td>
<td>196,000</td>
<td>171,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>2001-2010</td>
<td>2011-2020</td>
<td>2021-2030</td>
<td>2031-2040</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: 1990-2010 data on population from Census Bureau; 2040 forecasts from the Metropolitan Council (March 2015 release)
One in ten in 1990
One in nine in 2010
One in five people in 2040

Growth among older adults driving household growth

One in six households in 2010
One in three households in 2040

The new market demand is old

Three-quarters of household growth among 65+

Source: 1990-2010 data on age distribution from Census Bureau; 2000-2010 data from Metropolitan Council (March 2015 release).
The new market demand *is old*

Less than one in five net new households will have children.

Under 65: 2 person household 5%
Under 65: 3+ person household 12%
Age 65+: 2 person household 12%
Age 65+: 1 person alone 39%

One in three net new households will be individuals living alone.

Under 65: 2 person household 5%
Under 65: 3+ person household 12%
Age 65+: 2 person household 12%
Age 65+: 1 person alone 39%

How demographics matter

Net household growth 1990-2010

- Under 35
- 35-65
- 65+

Net household growth 2010-2030

- Under 35
- 35-65
- 65+

Households growth: smaller, older

- Age 65+: 2+ person household
- Age 65+: 1 person household
- Under 65: 3+ person household
- Under 65: 2 person household
- Under 65: 1 person household

Source: 2010 data on population and households from Census Bureau; 2020-2040 forecasts from Metropolitan Council (March 2015)

People of color keep us young

- White, non-Latino
- People of color

Looking ahead:
- Where will we add 500,000 jobs and 370,000 households?
  - Where will households choose to locate, balancing preferences and prices?
  - Where will employers choose to locate, balancing preferences and prices?
  - Where will developers choose to build real estate, balancing construction costs and profits?

Source: 2010 data on population from Census Bureau; 2040 forecasts from the Metropolitan Council (March 2015 release)
Top growing cities by decade

• Top ten 1970s

Top growing cities by decade

• Top ten 1980s

Top growing cities by decade

• Top ten 1990s
Top growing cities by decade

• Top ten 1980s

Top growing cities by decade

• Top ten 1990s

Top growing cities by decade

• Top ten 2000s
Top growing cities, post-2010

- Top ten 2010 - 2015

Latest planning cycle forecasts
Switched from more historic trend-based approach to a real estate model

Reasons for using a real estate model to forecast local growth
- Demographic changes – future might not look like the past
- Model transportation/land use connection
- Platform for forecasting using local policies and data
Local Model – Cube Land Model

- Demand Model
  - What locations and building types do different types of households and employers value most?
- Rent Model
  - What are the rents for buildings at different locations?
- Supply Model
  - What gets developed and where based on rents vs. development costs?

Uses local data, land use plans

- Base year land supply
- Employment levels
- Socio-economic characteristics
- Housing stock
- Building costs, land prices
- Average rents
- Land consumption rates
- Regional systems
- Planned land use as a constraint
- Car, transit accessibility to jobs, households

Model how transportation influences growth

Forecasted 2030 Travel Time to State Fair Grounds
- Over 60 minutes
- 45 to 60 minutes
- 30 to 45 minutes
- Under 30 minutes

Travel times, accessibility might increase or decrease based upon:
- Location of people and jobs
- Changes in transportation infrastructure
What We Learned

Insights from local data
We used the data described in the previous section to identify what influenced household and employer location choice.

Where households want to be

Real Estate Characteristics
- Built square footage
- Lot size
- Type

Neighborhood Characteristics
- Sewer service
- Proximity to water
- Proximity to parks
- Neighborhood demographics

Accessibility
- Number of jobs within 20 minutes by car
- Number of jobs within 20 minutes by transit
- Number of high frequency bus stops
- Within station area buffer zone
Where employers want to be

Real Estate Characteristics
- Lot size

Neighborhood Characteristics
- Surrounding housing density
- Average household income
- Proximity to parks
- Employment density

Accessibility
- Number of households within 20 minutes by car
- Number of jobs within 20 minutes by car
- Number of high frequency bus stops

Using the forecasts to talk with communities

- Released forecasts for community review
- Used community comments to re-evaluate our data, forecast results
- Made revisions throughout the forecast cycle

Initial Responses

Most communities comfortable with forecasts, but some patterns to communities that did comment

Central Cities
- Comfortable with higher forecasts (in some cases, felt more growth possible)

Urban Cities and Older Suburbs
- Concerned land could not accommodate forecasted growth

Suburban and Emerging Edge
- Commented that lower forecasts did not capture post-Recession rebound
Final forecasts – combination of modeling, community input

- Household and employment growth pivoting back into central cities
- Continued growth in large suburbs and emerging suburban edge
- Growth urban cities and older suburbs constrained by land availability, but opportunities and demand exist for some growth

Households Growth, 2010-2040

- The region will gain 370,000 households over 30 years
- Expect growth in all parts of the metro urban services area

Top growing cities by decade

- Top ten 2010-2040
Employment Growth, 2010-2040

- The region will gain 489,000 jobs over 30 years
- Expect growth around transportation corridors across region

Top growing cities by decade

- Top ten 2010-2040

Community Designations
Closing thoughts
We think household forecasts consistent with anticipated regional changes...
• Changing household structures will pivot growth back into urban center as some households look for smaller housing and greater proximity to amenities and services
• Steady regional household growth continues demand for new housing in suburban areas, especially large communities with ample developable land

Closing thoughts
…and consistent with emerging employment trends
• Employment continues to follow residential development into suburban areas, but this growth will concentrates around transportation corridors
• Renewed interest in urban centers and proximity to transit corridors will drive employment growth into central cities
Closing thoughts
Demand exists for new development in smaller urban cities
- Some communities concerned about land constraints and obstacles to redevelopment
- Importance of using forecasts to talk with communities about opportunities and challenges for growth
- Collect new data, monitor recent development
- Local review
- Revise

Future development through the window of forecast modeling
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June 9, 2016