### Metropolitan Council's local forecasts to 2050

**Todd Graham, Principal Forecaster** 

Todd.Graham@metc.state.mn.us





#### Agenda

- 1. Why and how we forecast
- 2. How we forecast: local allocation
- 3. Preliminary local forecasts, version 1
- 4. Proposed local forecasts, version 2
- 5. Input from cities and the public



## Why and how we forecast



#### Why we forecast



#### Long-range forecasts of population, jobs

Provide a shared foundation for coordinated planning, systems and services

- Regional systems and services are scaled to meet forecasted demand
- Local plans, infrastructure, services respond to the same forecasts
- Coordination with partner agencies

Maintained, updated to inform planning

Authorized by MN Statutes 473.146 and 473.859

## Metropolitan Council

#### How we forecast: models



#### Models are an attempt to represent realworld systems in a simplified way

- Economic and employment growth
- Real estate market dynamics
- Interactions of land and transportation

We're representing through mathematical representations

• Formulas, parameter settings, time- and place-specific variables

#### Forecast models toolkit



Regional economic model for macro-level employment and population

Land use model for location of future land use, local households and employment

Travel demand model accounting for connection of places; projects travel patterns and loads

#### Updated regional forecast to 2050

|                   | 2010      | 2020      | 2023      | 2030      | 2040      | 2050      |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Employment        | 1,541,000 | 1,581,000 | 1,754,000 | 1,802,000 | 1,895,000 | 2,074,000 |
| Households        | 1,118,000 | 1,240,000 | 1,274,000 | 1,350,000 | 1,450,000 | 1,564,000 |
| Average HH size   | 2.50      | 2.50      | 2.47      | 2.44      | 2.40      | 2.39      |
| Population        | 2,850,000 | 3,163,000 | 3,207,000 | 3,364,000 | 3,555,000 | 3,820,000 |
| Population Growth | 207,000   | 313,000   | _         | 201,000   | 191,000   | 265,000   |

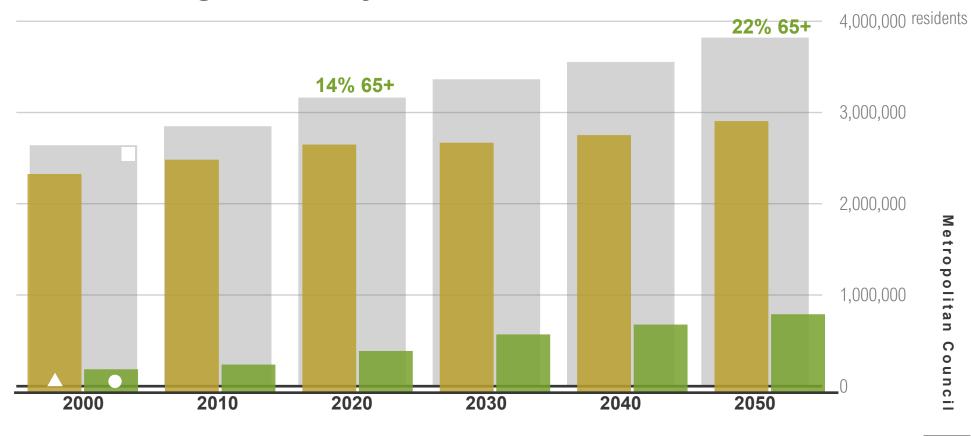
#### Aging of the Population

#### Share of population over age 65 nearly doubles in 2050

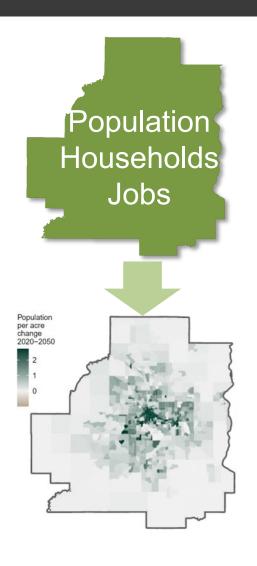


 $\triangle$  Under age 65

Age 65 and older



#### From macro-level to local



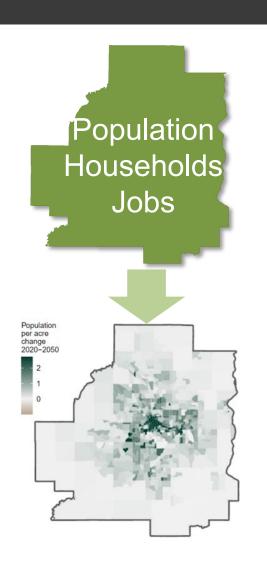
#### Regional totals from the macro model are allocated to specific places

- The local forecasts serve to accommodate the growth expected by the larger region
- All jobs, households and people are situated somewhere

# How we forecast: local allocation



## From macro-level to local: Our local land use model



#### Regional totals from the macro model are allocated to specific places

UrbanSim model

- Analyzes, represents, and projects where growth will happen
- This future projection involves extrapolation of behaviors, trends, patterns
- Accounts for the competition between places

Specifically, UrbanSim simulates real estate dynamics, with submodels that handle the projection of

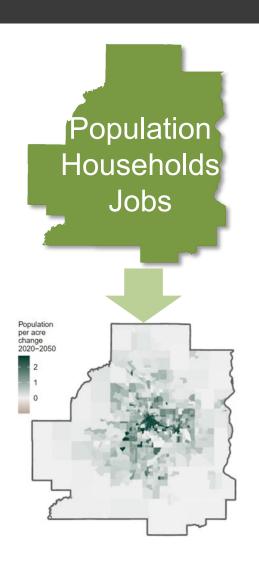
- Real estate supply (new development)
- Location choice behavior

### Location choice: We value place options, and places, to varying degree



- Location choice probabilities derived from observed data on choices
- Factors that go into those choices
  - If one group especially values place characteristics, more likely to locate accordingly → differentiation
  - If all groups value a cumulative package of characteristics, then rents or prices rise in locations which have that → market valuation
- What matters in location choice
  - Place value and amenities
  - Access to destinations: everyone values this
  - Employment presence in neighborhood: differentiation in who values

## Where will the metro's next 324,000 households choose to live?



#### Local forecast results determined by both predictive modeling and policies

UrbanSim is allocating with behavior-based, utility-maximizing logic It does so bounded or limited by policies within the model Policies establish an envelope of what's possible

- From local governments: Allowed land uses, allowed densities these determine the capacity of places
- From Met Council: 2050 wastewater service area (MUSA), 2050 high-frequency transit, future highways and arterials network
- In version 2 model, do we assert development limits related to policies?

Preliminary local forecasts, version 1



## Metropolitan Council

## Preliminary local forecasts set (version 1), January 2024



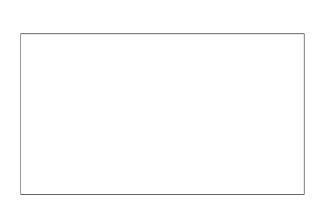
#### **About the product set**

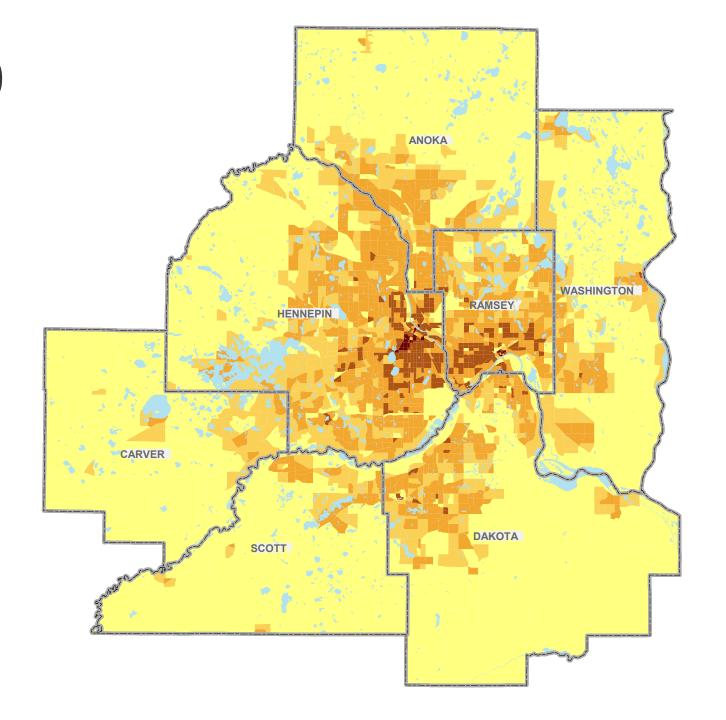
- City- and township-level results
  - Subcity, zonal results come later
- Excel workbook format
- Also an interactive webmap

Visit <a href="https://metrocouncil.org/forecasts">https://metrocouncil.org/forecasts</a>

#### Households in 2020

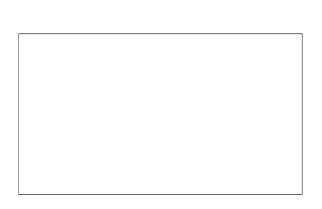
- 1,239,500 households in 2020
- 3,163,100 population
- A full range of community types
- More suburban in composition than most peer major metros

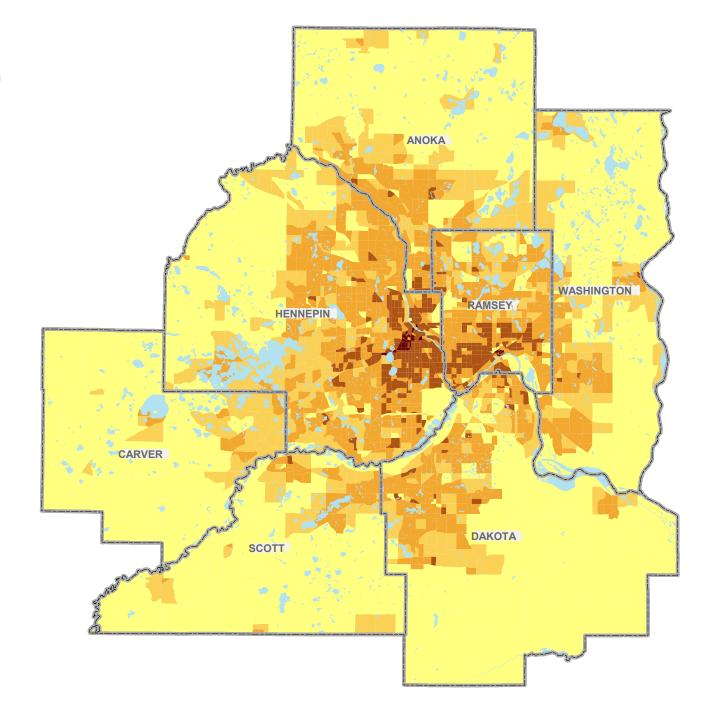




#### Households in 2050

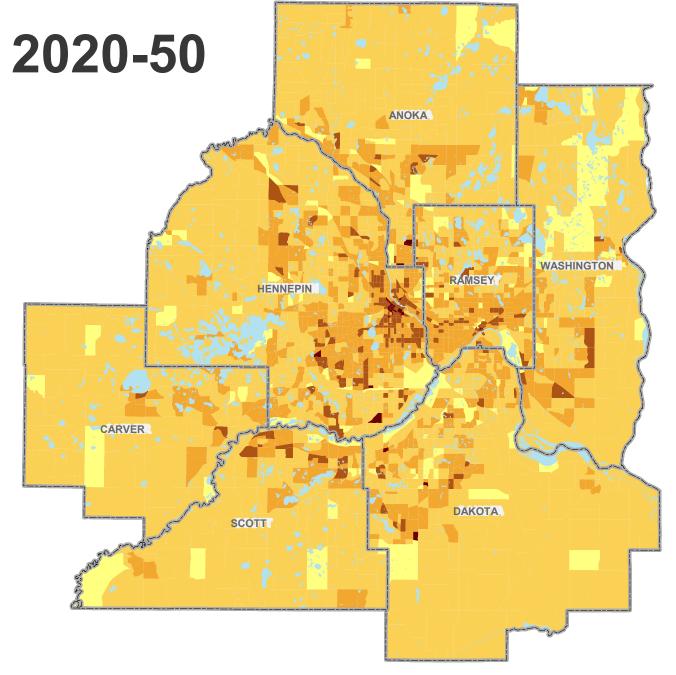
- Metro region to add +324,000 households by 2050
- Outward growth around the suburban edges
- Existing suburbs are filling in
- Substantial intensification and redevelopment in urban centers
  - Map graphic from v1





Households growth, 2020-50

- Metro region to add +324,000 households by 2050
- Outward growth around the suburban edges
- Existing suburbs are filling in
- Substantial intensification and redevelopment in urban centers
  - Map graphic from v1



#### Local forecast summary: households



#### Growth happens in local, specific places

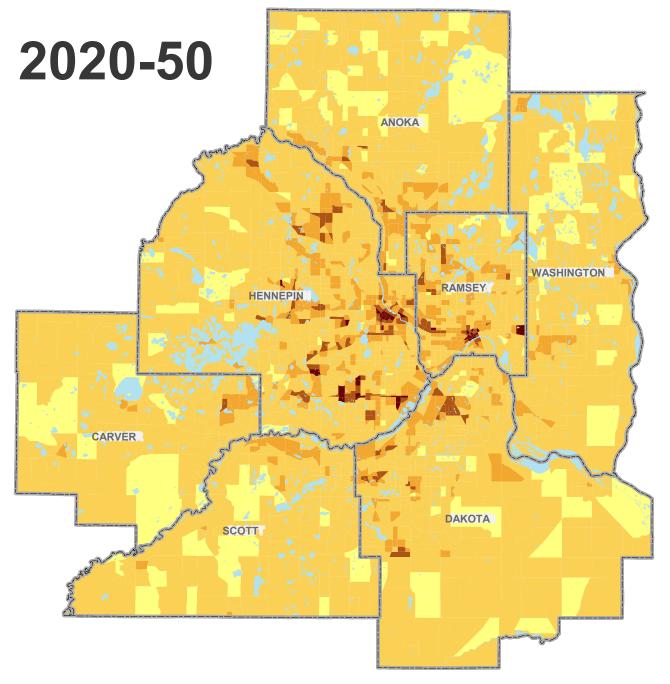
Adding 324,000 households over 30 years – where?

Our model is designed to produce a probable, middle-of-the-road answer

- 31% of the net growth in urban centers and urban communities
- 43% in suburban and suburban edge
- 19% in emerging suburban edge
- 7% in rural communities
- This pattern is +3 points more urban and -3 points less rural than current (Thrive MSP 2040) forecast

Employment growth, 2020-50

- 1,581,000 jobs in 2020
- 1,754,000 jobs in 2023
- 2,074,000 jobs forecasted, 2050
- Concentrates in places that have been employment centers
- And along transportation corridors
- Where office/ commercial/ industrial uses are allowed



#### Local forecast summary: employment



#### Growth happens in local, specific places

1,581,000 jobs in 2020, at the pandemic low-point

1,754,000 jobs in 2023

2,074,000 jobs forecasted, 2050

UrbanSim model results are very different from Council's previous model

- 40% of the net growth in urban centers and urban communities
- 45% in suburban and suburban edge
- 11% in emerging suburban edge
- 4% in rural communities
- This pattern is -8 points *less* urban than current forecast

# Proposed local forecasts, version 2



## Metropolitan Council

## Forecast timeline parallels the *Imagine 2050* timeline

#### Preliminary local forecasts:

Internal review and public review (Winter 2023-2024) Proposed /
Public hearing
local forecasts
(Summer 2024)

System statements forecast (Summer 2025)













Regional forecast update (April 2023)

Refresh and re-run of local forecasts (Spring 2024) Approved local forecasts (Winter 2024-2025)

#### Why versions 1, 2, 3...?



#### We want to get this right

**Preliminary Local Forecasts** (version 1) does not yet reflect known/ proposed developments; transportation model results; water supply analysis; nor any new regional policies.

 Published January 2024. Local governments can comment, Jan.— Feb. 29

Proposed Local Forecasts (version 2) will introduce new regional system characteristics, including a refresh of planned transportation and transit networks. It will further introduce new regional policies and implications for spatial planning. Council staff are asking direction on new policies from Council Members.

Expected Summer 2024. Public hearing, Aug. 15 – Oct. 7, 2024

## Objectives for proposed local forecasts (version 2)



#### **Needed adjustments**

- Reflect known developments, in the right places, thru 2023
- Update certain predictor data inputs: land values, local planned land use capacities
- Update regional system characteristics: 2050 MUSA, current high frequency transit geography, future accessibility skims
- Also reprogramming of population per household
- Any new policy implications for spatial planning. Council staff are asking direction on new policies. Do we assert development limits for:
  - prime agricultural lands?
  - significant ecological areas?
  - groundwater supply capacity limits?

## Input from cities and the public



## Multiple opportunities for stakeholders to review and comment

| Jan. – Feb. 29, 2024   | <ul> <li>Review and comment on Preliminary Local Forecasts v. 1</li> <li>Includes population, households, employment for counties, cities, townships</li> </ul>   |  |
|------------------------|---|--|
| Aug. 15 – Oct. 7, 2024 | <ul> <li>Review and comment on Proposed Local Forecasts v. 2</li> <li>Includes population, households, employment for counties, cities, townships, subcity sewer-serviced and policy areas, and Transportation Analysis Zones</li> <li>Part of public comment period for <i>Imagine 2050</i></li> </ul> |  |
| Sept. – Dec. 2025      | <ul> <li>Review and comment on System Statement Local Forecasts</li> <li>Includes population, households, employment for counties, cities, townships, subcity sewer-serviced and policy areas</li> <li>Part of appeals period for System Statements</li> </ul>  |  |
| 2026 – 2028            | <ul> <li>Preparation and review of Comprehensive Plan Updates</li> <li>Met Council and local governments can agree to local forecast revisas expectations and plans evolve</li> </ul>   |  |
| 2026 – 2034            | Preparation and review of Plan Amendments  Met Council and local governments can agree to local forecast revision as expectations and plans evolve  |  |







#### Validation and improvement



#### Input that will be most useful to us

comments on the reasonableness of metrowide patterns comments on the reasonableness of local results validation or substitution of our data inputs and assumptions, including:

- inventories of major proposed developments
- inventories of proposed removals of buildings and housing stock
- local land use plan maps for 2050
- local land policies not otherwise apparent in land use plan data

Visit <a href="https://metrocouncil.org/forecasts">https://metrocouncil.org/forecasts</a>

### Metropolitan Council's local forecasts to 2050

**Todd Graham, Principal Forecaster** 

Todd.Graham@metc.state.mn.us



