UrbanFootprint Growth Scenario Modeling

The City is using a growth scenario modeling tool called UrbanFootprint (designed by Calthorpe Analytics and customized for use in Madison and Dane County) to help estimate what the future impacts of our land use and transportation decisions will be across seven major modules:

Energy Use

Water Use

Fiscal (municipal and household)

Transportation

Emissions

Health

Land Consumption

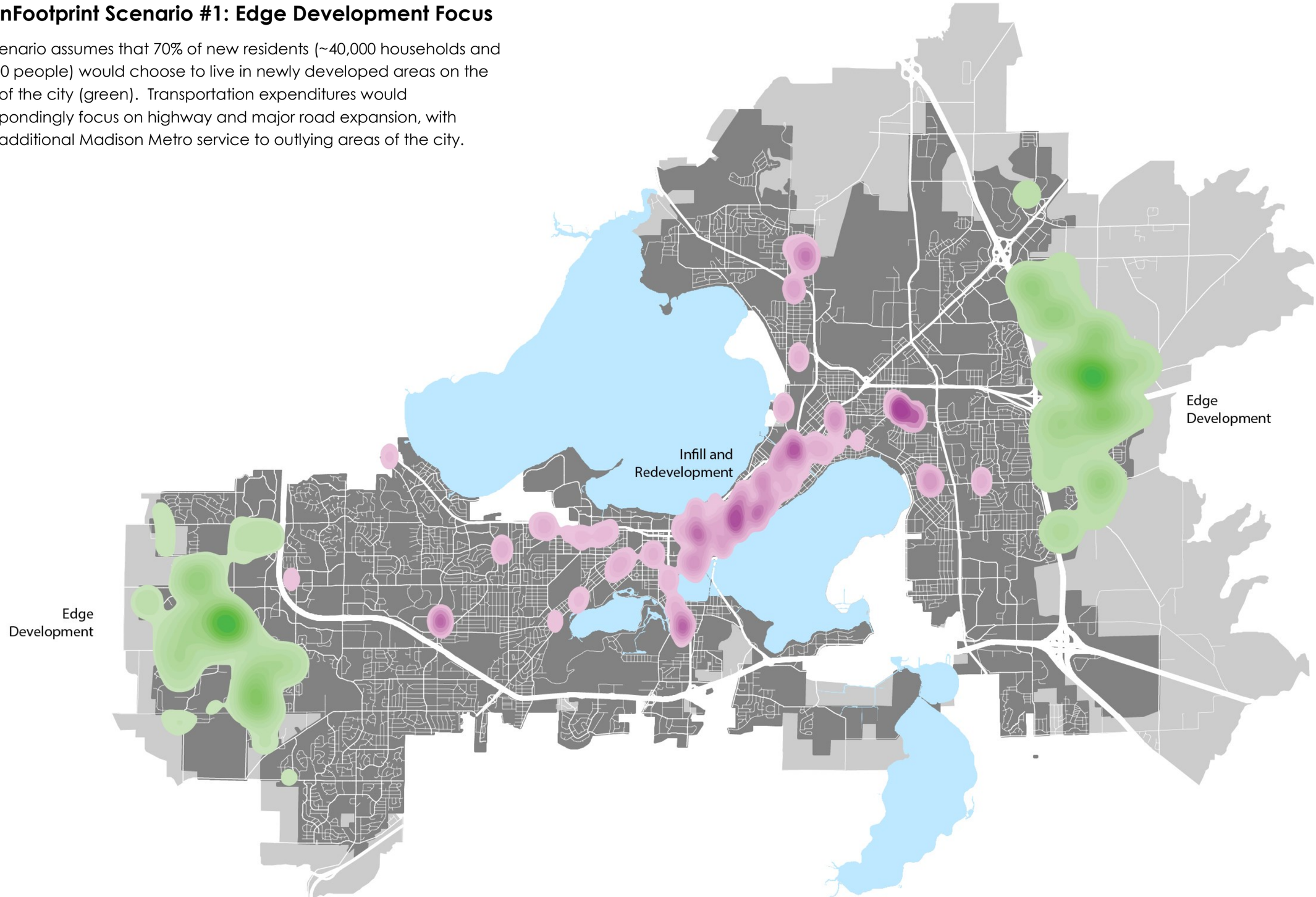
Growth scenario modeling works by creating a map of existing transportation, land use, employment, development density, and other statistics. Changes to land use and transportation are then made to existing conditions to create a future scenario. The impacts of future scenarios across the seven metrics can then be compared to existing conditions or to other alternative scenarios.

The chart at right compares three citywide growth scenarios. All three scenarios accommodate the city's projected growth of 37,000 employees and 40,000 new households with 70,000 new residents through 2040. Scenarios were developed by city staff and follow the updated draft Future Land Use map - the difference is where the growth occurs.

	Scenario #1	Scenario #2	Scenario #3
Development Scenario	**30** % Infill and Redevelopment **70** % Edge Development	**50** % Infill and Redevelopment **50** % Edge Development	**70** % Infill and Redevelopment **30** % Edge Development
Land Consumption	**3,070** total acres	**2,510** total acres	**1,820** total acres
Household Vehicle Miles Traveled	**17,140** miles per year	**16,270** miles per year	**14,440** miles per year
Walking (per person)	**8.2** min per day	**8.4** min per day	**8.6** min per day
Household Water Use	**49,100** gallons per year	**48,750** gallons per year	**44,630** gallons per year

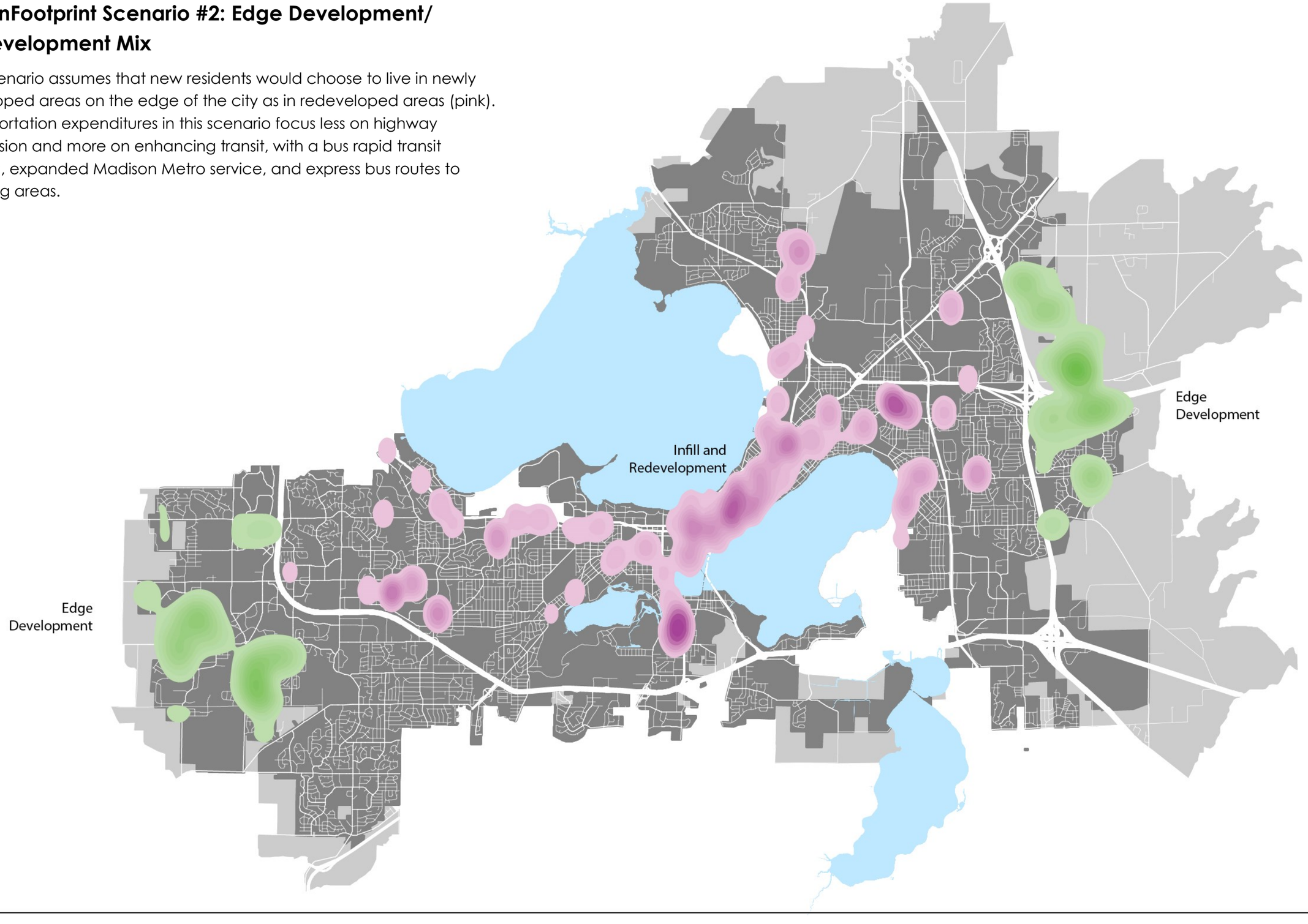
UrbanFootprint Scenario #1: Edge Development Focus

This scenario assumes that 70% of new residents (~40,000 households and ~70,000 people) would choose to live in newly developed areas on the edge of the city (green). Transportation expenditures would correspondingly focus on highway and major road expansion, with some additional Madison Metro service to outlying areas of the city.



UrbanFootprint Scenario #2: Edge Development/ Redevelopment Mix

This scenario assumes that new residents would choose to live in newly developed areas on the edge of the city as in redeveloped areas (pink). Transportation expenditures in this scenario focus less on highway expansion and more on enhancing transit, with a bus rapid transit system, expanded Madison Metro service, and express bus routes to outlying areas.



UrbanFootprint Scenario #3: Redevelopment Focus

This scenario assumes that 70% of new residents would choose to live in redeveloped and infill areas of the city (pink). Transportation expenditures are the same as in Scenario #2, with a focus on enhancing transit service.