

Endnotes

- ¹ Orfield, Myron, *American Metropolitcs: The New Suburban Reality*, Brookings Institution, Washington D.C. 2002.
- ² Metropolitan Council, news release, July 19, 2005.
- ³ Consistent urbanization data were not available over the full time period for the 17-county region.
- ⁴ See Yuan, Fei, Kali E. Sawaya, Brian C. Loeffelholz and Marvin E. Bauer, “Land Cover Classification and Change Analysis of the Twin Cities (Minnesota) Metropolitan Area by Multitemporal Landsat Remote Sensing,” *Remote Sensing and the Environment* 98 (2005), 317-328 for a complete description of the methods used to classify land uses.
- ⁵ The Census Transportation Planning Package was used to find the job centers and analyze commuting patterns.
- ⁶ Inner suburbs are defined as municipalities bordering one of the central cities. Middle suburbs are municipalities bordering an inner suburb. Outer suburbs are the remainder.
- ⁷ The commuter-sheds were generated from Census Transportation Planning Package journey to work data shown by Traffic Analysis Zones (TAZ). TAZ’s are usually slightly smaller than census tracts. The commuter-sheds were derived by finding the circumference of TAZ’s around the job center with the relevant median travel time and smoothing the contour using Inverse Distance Weighting (IDW) interpolation. IDW estimates values for areas by averaging from surrounding values of point samples, giving greater weight to nearby points. The commuter-shed boundaries were interpolated from TAZ commuting times, using the TAZ centroids as the point samples. IDW was used with the Geostatistical Analyst extension to ESRI’s ArcMap.
- ⁸ Minnesota Department of Administration, Office of the State Demographer; “Projected Population to 2030 for Cities and Townships Outside the Twin Cities Area”; <http://server.admin.state.mn.us/resource.html?Id=7376>
- ⁹ See <http://www.dnr.state.mn.us/rsea/map.html>.
- ¹⁰ See “Voters being asked to raise taxes for parks,” Star Tribune, November 2, 2005, p. B1.
- ¹¹ Grouping was accomplished using the K-means clustering procedure in SPSS. For more on cluster analysis in general, and K-means clustering in particular, see *StatSoft, Inc. Electronic Statistics Textbook* (Tulsa, OK: StatSoft, 2002) at www.statsoft.com/textbook/stathome.html.
- ¹² All variables were standardized—expressed as the number of standard deviations from the mean—to minimize scale effects.
- ¹³ Densities and land consumption were calculated separately for each municipality. Density was estimated as 2002 households divided by 2002 land classified as urbanized. Land consumption was estimated by this density times the number of projected new households for the municipality. Total land consumption for a community type is the sum of estimated land consumption for each of the municipalities in the group.
- ¹⁴ Municipalities with 97 percent or more of their land inside the MUSA were treated as completely within the MUSA for these calculations.
- ¹⁵ The Metropolitan Council currently plans to expand the MUSA by significantly less—by 121,637 acres in 2020 or about 21 percent of current area inside the MUSA. (This was calculated with GIS data from the Metropolitan Council at <http://www.datafinder.org>.) However, since the planned MUSA expansion does not follow municipality boundaries while the population projections do, it is not possible to match population changes and MUSA changes acre by acre.
- ¹⁶ See Burchell, Robert W., Anthony Downs and Sahan Mukherji, *Sprawl Costs: Economic Impacts of Unchecked Development*, Island Press, Washington D.C. 2005 and Orfield, Myron, *American Metropolitcs: The New Suburban Reality*, Brookings Institution, Washington D.C. 2002.
- ¹⁷ The findings for the current program and the expansion to the collar counties were calculated from work performed by Steve Hinze of the Research Department of the Minnesota House of Representatives.



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