

Saint Paul Rec. Centers:

A Spatial Analysis of the Distribution and Accessibility of Student-Centered Programs and Services

**Prepared by Students enrolled in the
GIS: Concepts and Applications course
In partnership with Saint Paul Parks & Rec and Saint Paul
Public Schools**

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Fall 2008
Macalester College
Department of Geography
Saint Paul, Minnesota

Project Background

- In 2007, Macalester College Geography Department GIS partnered with on a similar project:
 - Saint Paul Parks and Recreation
 - Saint Paul Public Schools
 - Mayor's office
- This project continues our relationship with these partners to address a different set of issues.

Project Task

To provide city demographic information and identify service gaps within Saint Paul Parks and Recreation programming by mapping public school students in relation to current and planned programming and other available resources.

Data Sources

- Saint Paul Public School Data
- Saint Paul Parks and Recreation
- SPPR Master Reserve Database
- Geolytics
- U.S. Census (Summary File 3, 2000)
- Metropolitan Council
- Environmental Systems Research Institute (ESRI)

Project Organization

- Our project is split into four sections:

1) Demographic and Reference Information

What are the demographic characteristics of Saint Paul and the students attending public school?

2) Student Access to SPPR Resources

How accessible are recreation centers based on physical distance?

What are the types, ages, and cost of available programs?

Project Organization

3) SPPR Summer Meal Programming

Which areas are over/under saturated in terms of meal programs?

Which meals are offered at each location?

Is there a relationship between food-insecurity and free meal programs?

4) SPPR Mobile Recreation Program

Where are the students participating in Mobile Rec. coming from?

Are programs reaching targeted groups?

Where are roaming recreation programs by neighborhood in relation to demographic characteristics of each neighborhood?

Our Presentation Today

Each group will provide their own set of conclusions and policy recommendations.

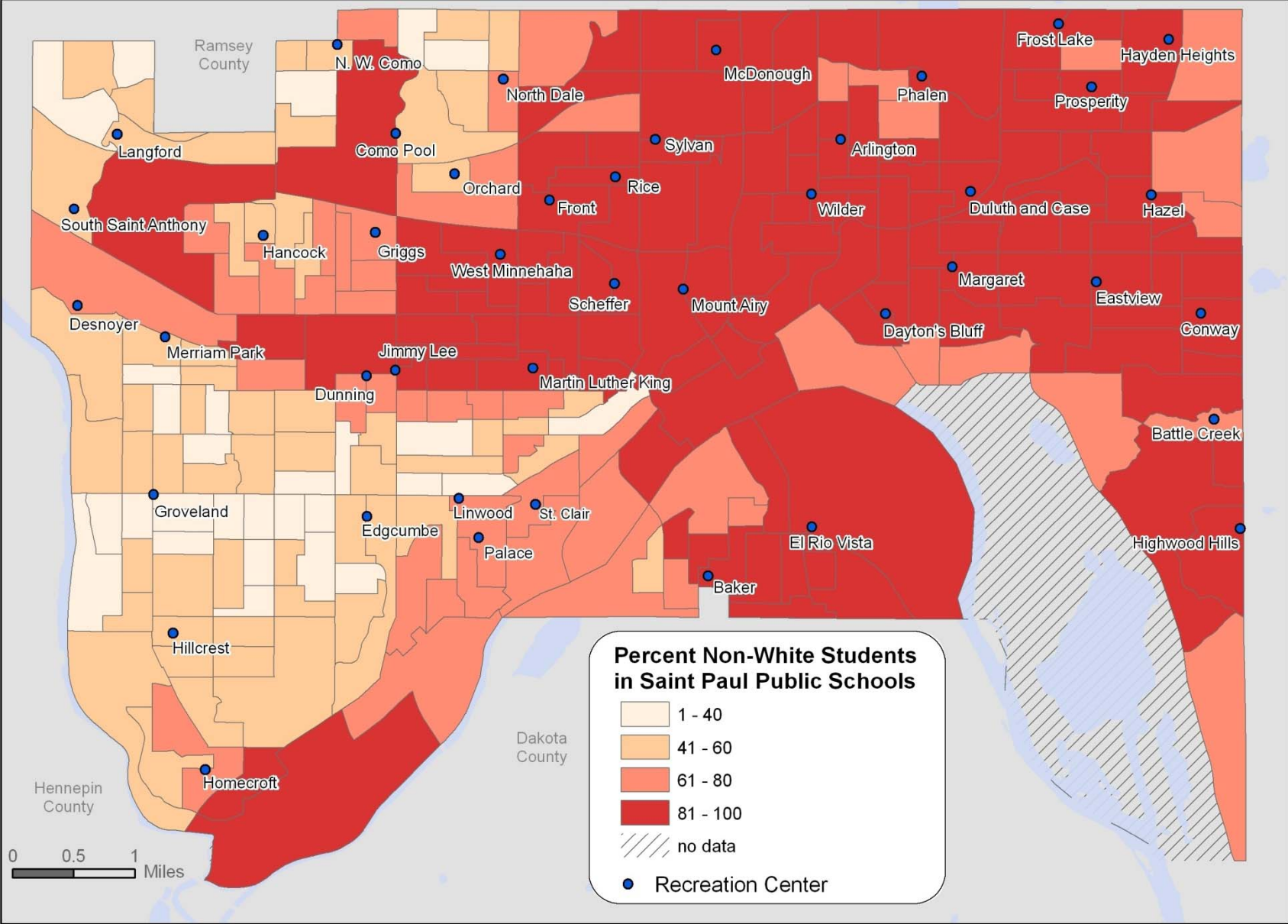
- 1) Access Information Group
- 2) Summer Meal Program and Food Insecurity Group
- 3) Mobile Recreation Group
- 4) Questions

Use and Accessibility of Saint Paul Recreation Centers

Overview

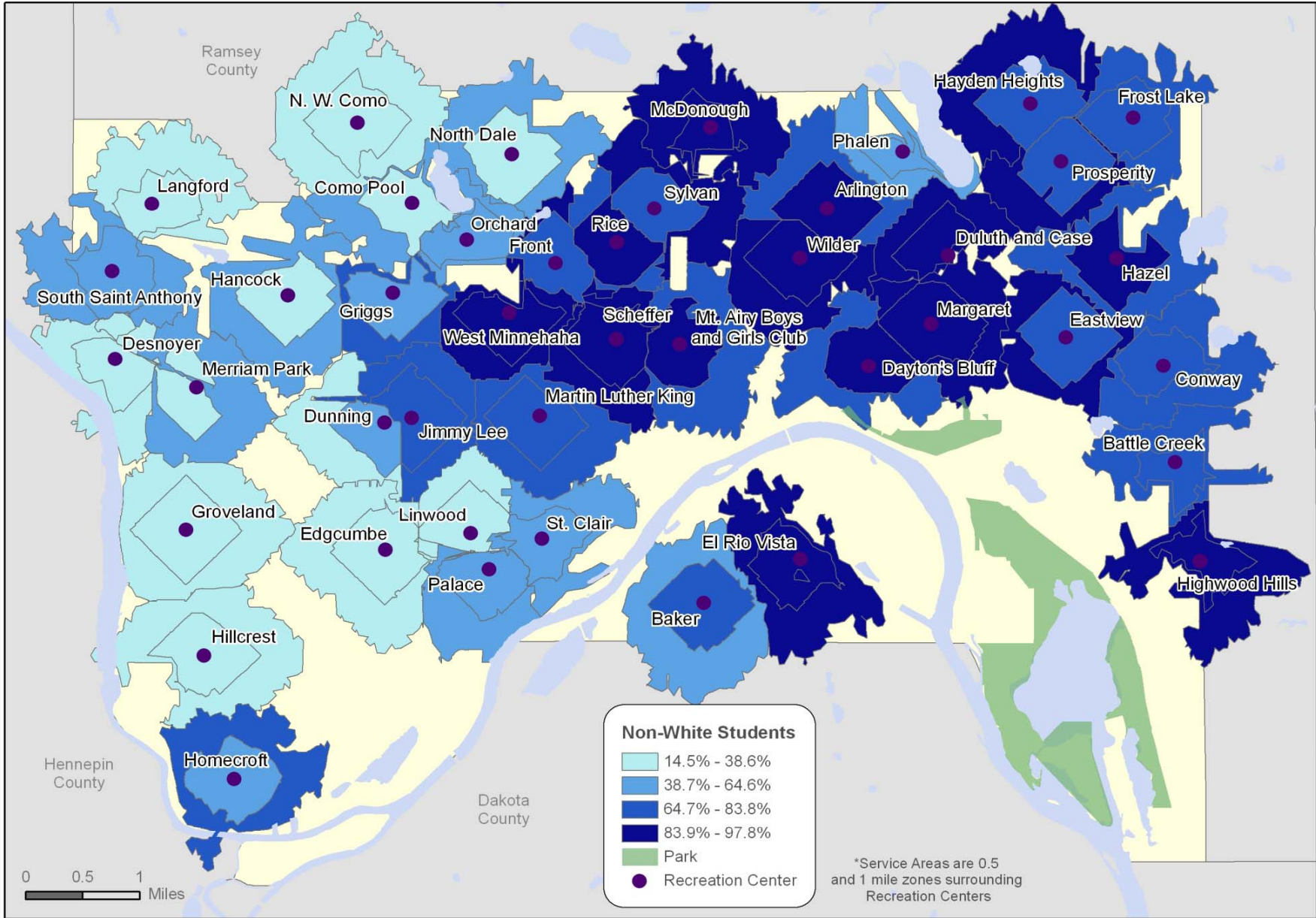
- How well are Rec Centers located to benefit the largest and most diverse population?
 - Defined as ability for a child to walk or bike to a Center - .5 and 1 mile walking distance service area for each Center
 - Distribution of student characteristics- language, income, race, age
 - SPPS data
- What services are available, and who is currently using them?
 - Reserve Master Summer 2008 program rosters (no drop-ins, field trips, adult programs, or programs with enrollment of less than 5)
 - 0.5, 1, 2, and 3 mile walking distance service areas for 12 case study Centers

Non-White Students in Saint Paul Public Schools



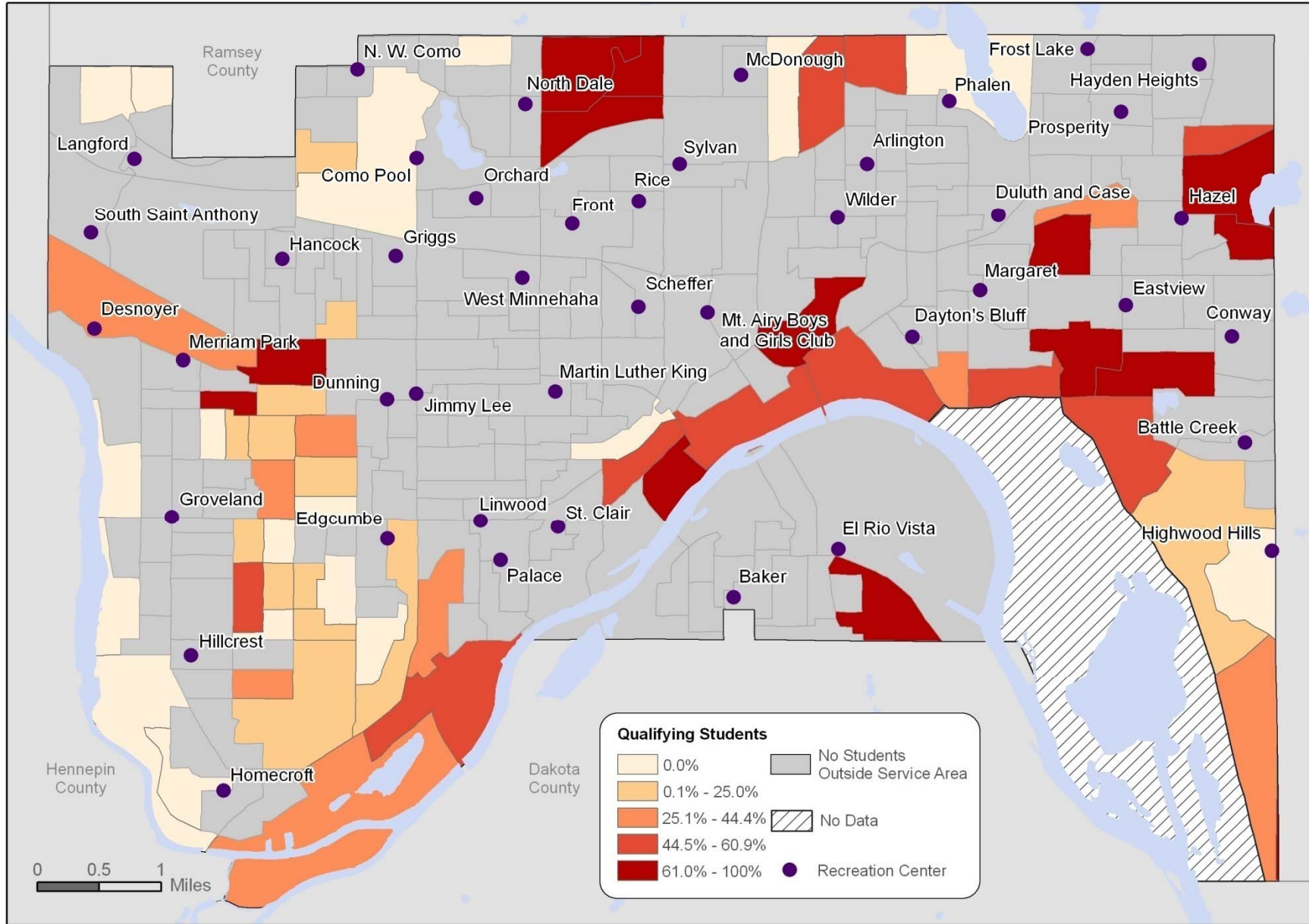
Cartographer: Emily Dunn; Data Sources: Saint Paul Public Schools, ESRI, Saint Paul Parks and Recreation, US Census Block Groups 2000; December 2008

SPPS Minority Students by Service Area



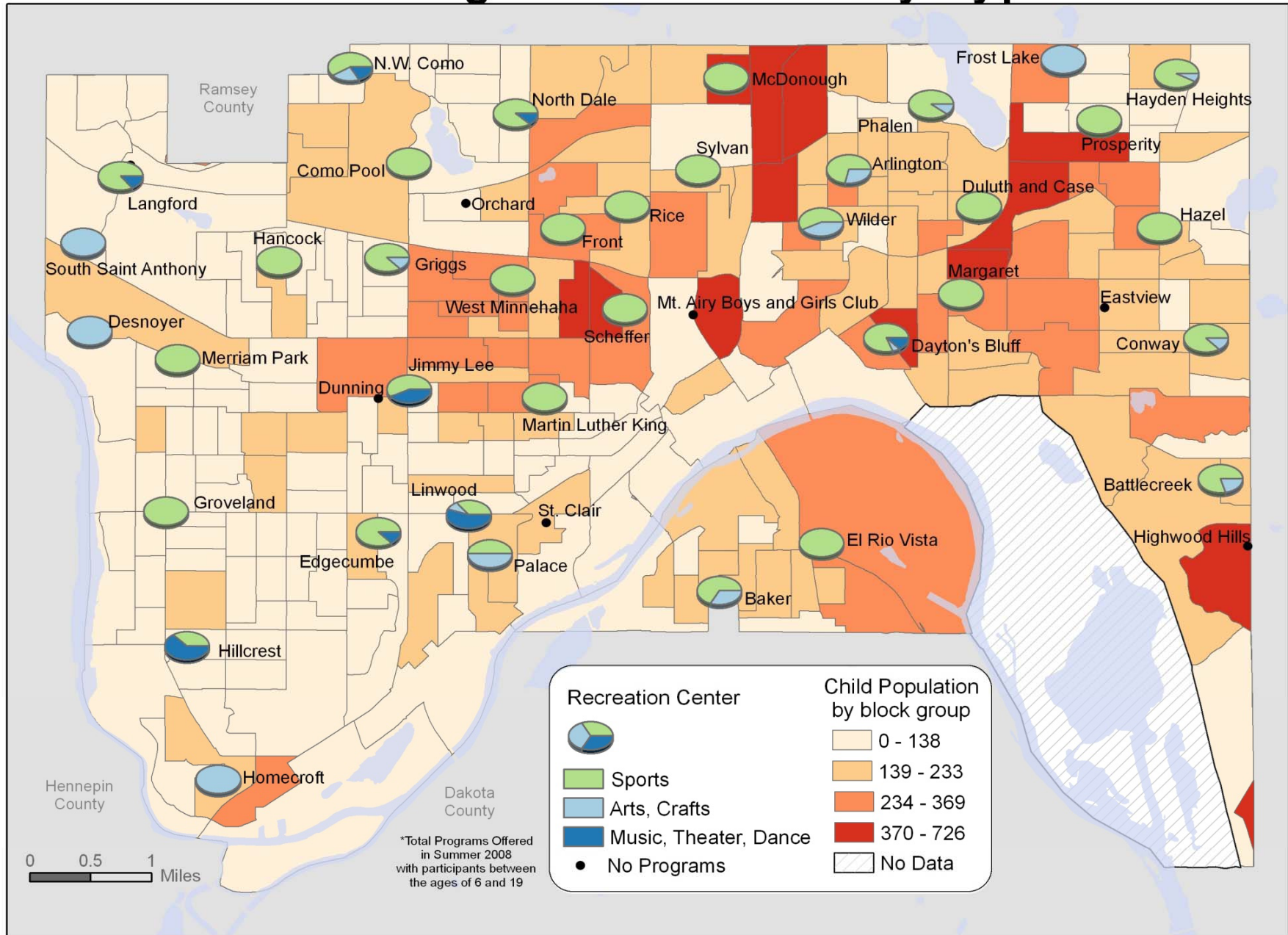
Cartographer: Laura Cullenward, Data Sources: Saint Paul Public Schools, ESRI, Saint Paul Parks and Recreation, December 2008

SPPS Students Living Outside Service Areas Qualifying for Free and Reduced Lunch

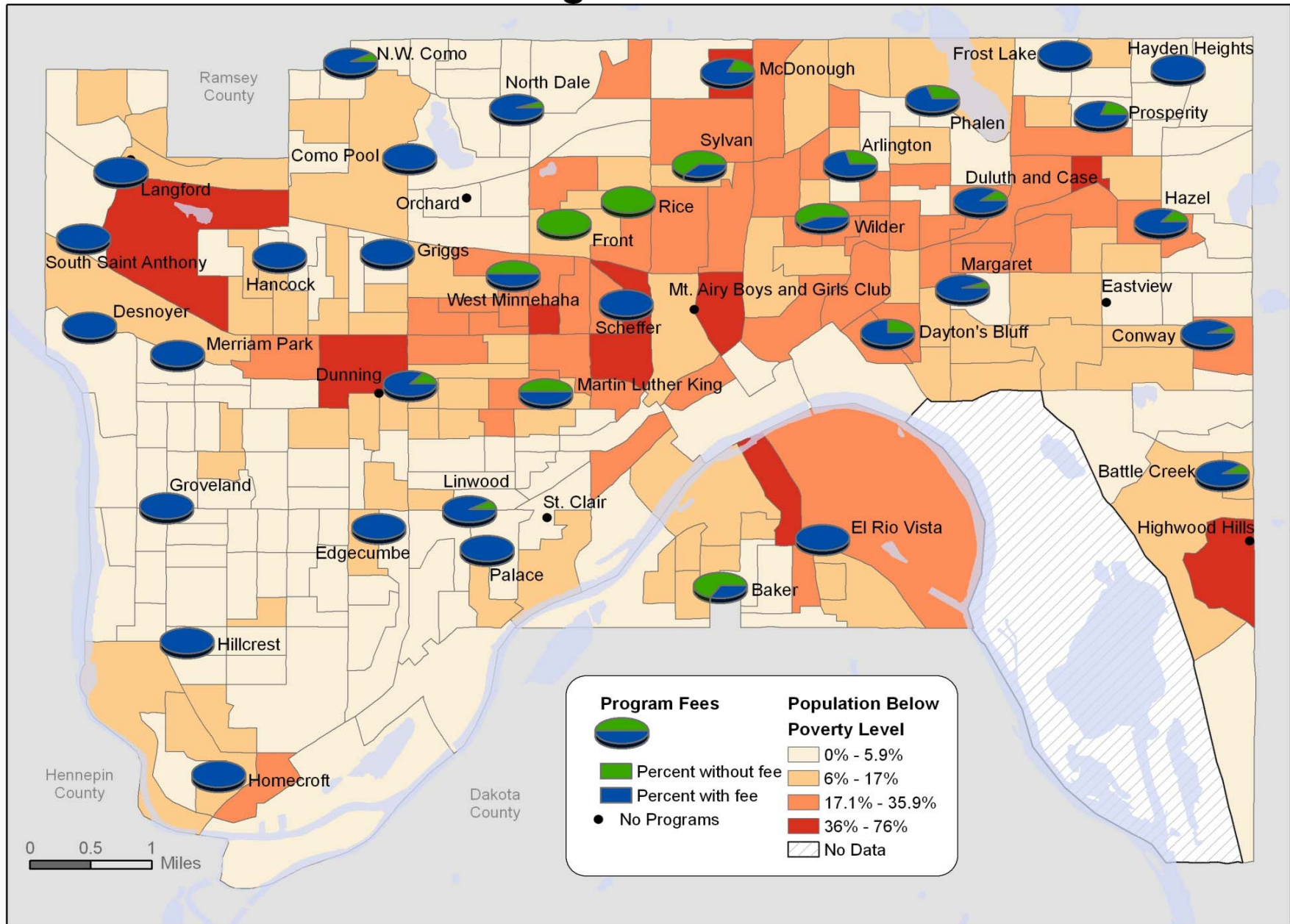


Cartographer Laura Cullenward; Data Sources: Saint Paul Public Schools, ESRI, Saint Paul Parks and Recreation, US Census Block Groups; December 2008

Total Programs Offered* By Type

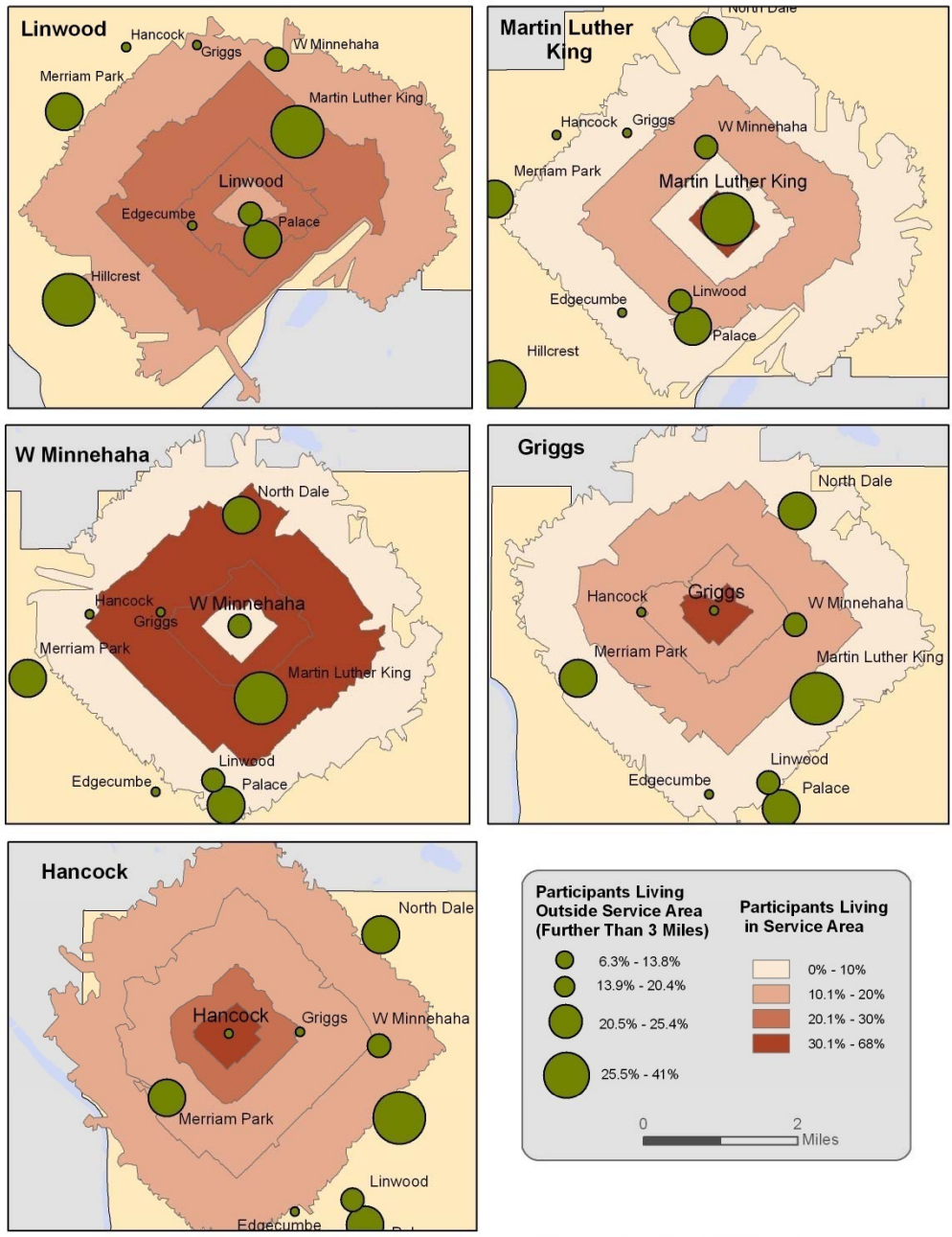


Recreation Center Programs With and Without Fees



Cartographer: Elizabeth Diaz; Data Sources: Saint Paul Public Schools, ESRI, Saint Paul Parks and Recreation, GeoLytics; October 2008

Central Corridor Rec. Center Program Participants by Service Area



Cartographer: Louise Sharrow; Data Sources: Saint Paul Rec Reserve Master, ESRI; December 2008

Conclusions and Recommendations

- Current Rec. Center locations do not provide access to the entire population of Saint Paul.
 - Block groups in the southeast and along the north-central city border contain many students who live farther than a mile from the closest Rec. Center.
 - These areas also contain the highest percentage of students qualifying for free and reduced meals.
 - These areas would benefit the most from a Mobile Rec or circulator bus service, as well as provisions of free meals.
- In general, the area in the NE corner and North side of St. Paul has the most ethnic and language diversity, as well as high levels of qualification for free meal. Centers in these areas should consider providing alternate languages in their programs, and providing free meals.

Conclusions and Recommendations

Cont'd

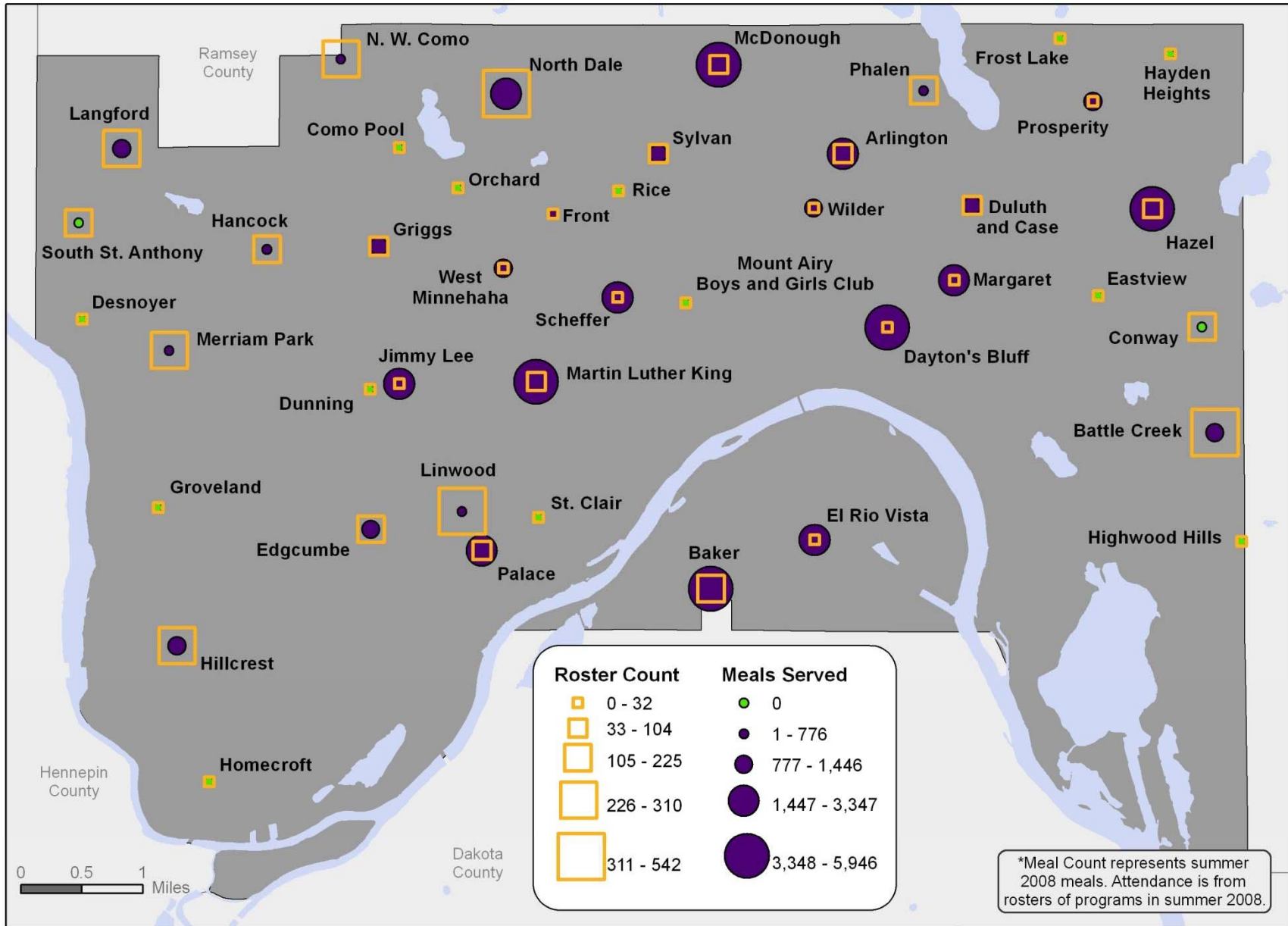
- Most Rec Centers seem to be well located in relation to the population densities, but the West Side of St Paul appears to have a very high population yet only 2 Rec. Centers. The Northwest and Southwest also have high student populations, so they are important areas in which to increase programming.
- It would be beneficial to provide more diverse selection of free programming such as in the arts at each Recreation Center, so as not to deter interest or participation.

Summer Food Program Effectiveness in Saint Paul

Overview

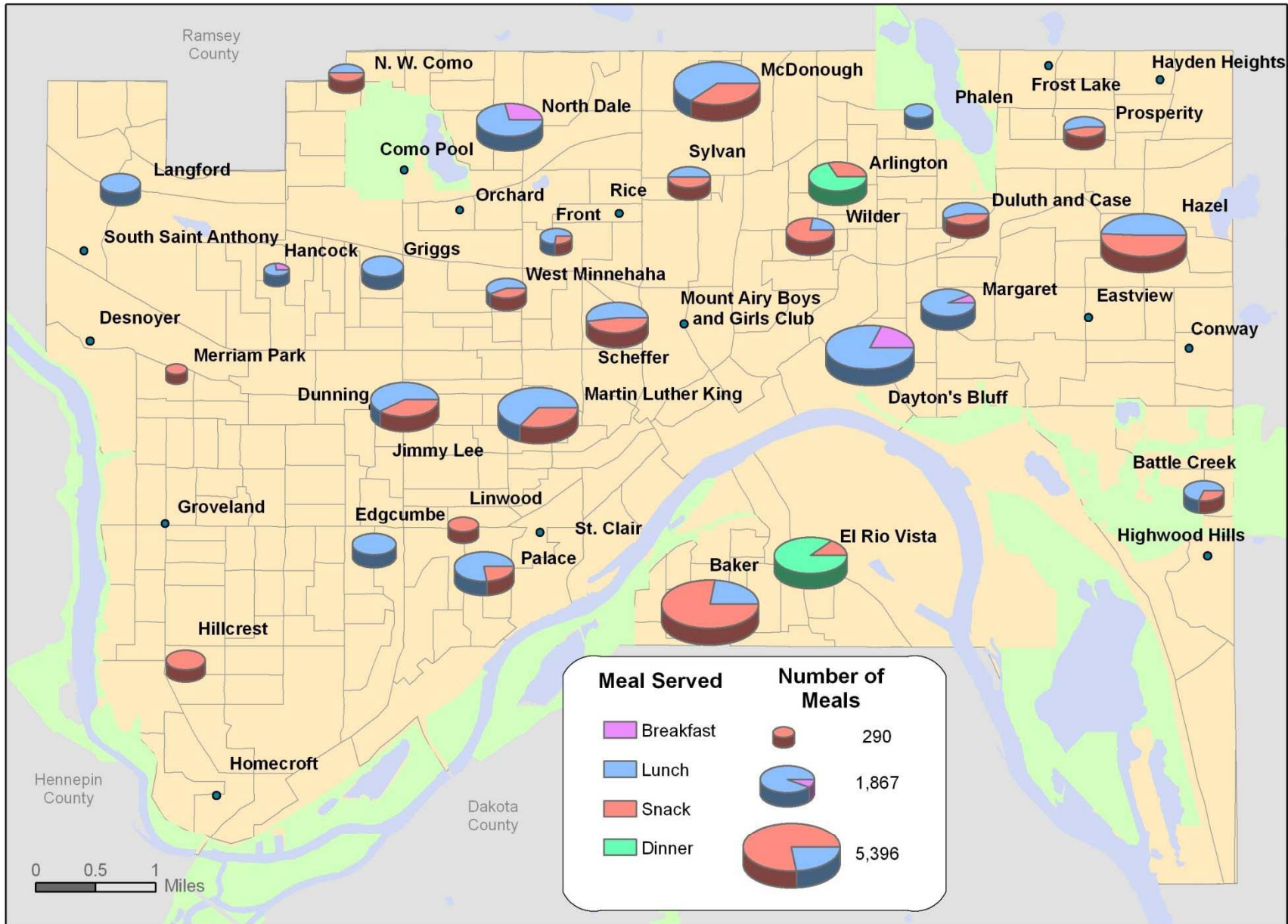
- Three areas we looked at:
 - Food Security
 - Gaps in Service
 - Compare with other programs offered
- Data from Reserve Masters list, SPPS data, U.S. Census Data.

Roster Count and Meals Served by Rec. Center*



Cartographer: Michael Samuelson; Data Sources: Saint Paul Public Schools, ESRI, Saint Paul Parks and Recreation; November 2008

Saint Paul Summer Meal Program

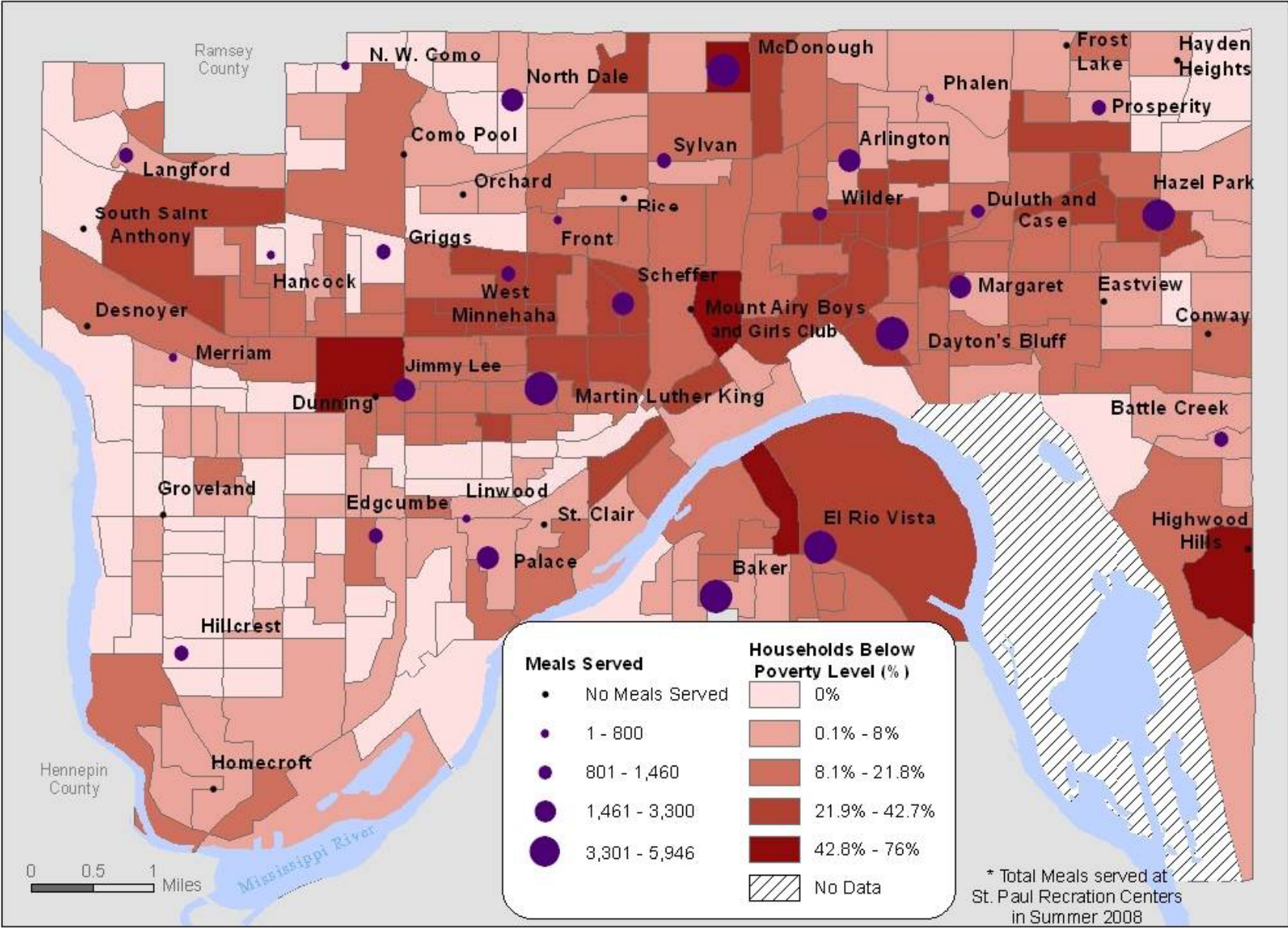


Cartographer: Carson Gorecki; Saint Paul Public Schools, ESRI, US Census Block Groups, Saint Paul Parks and Recreation; November 2008

Food Security Index

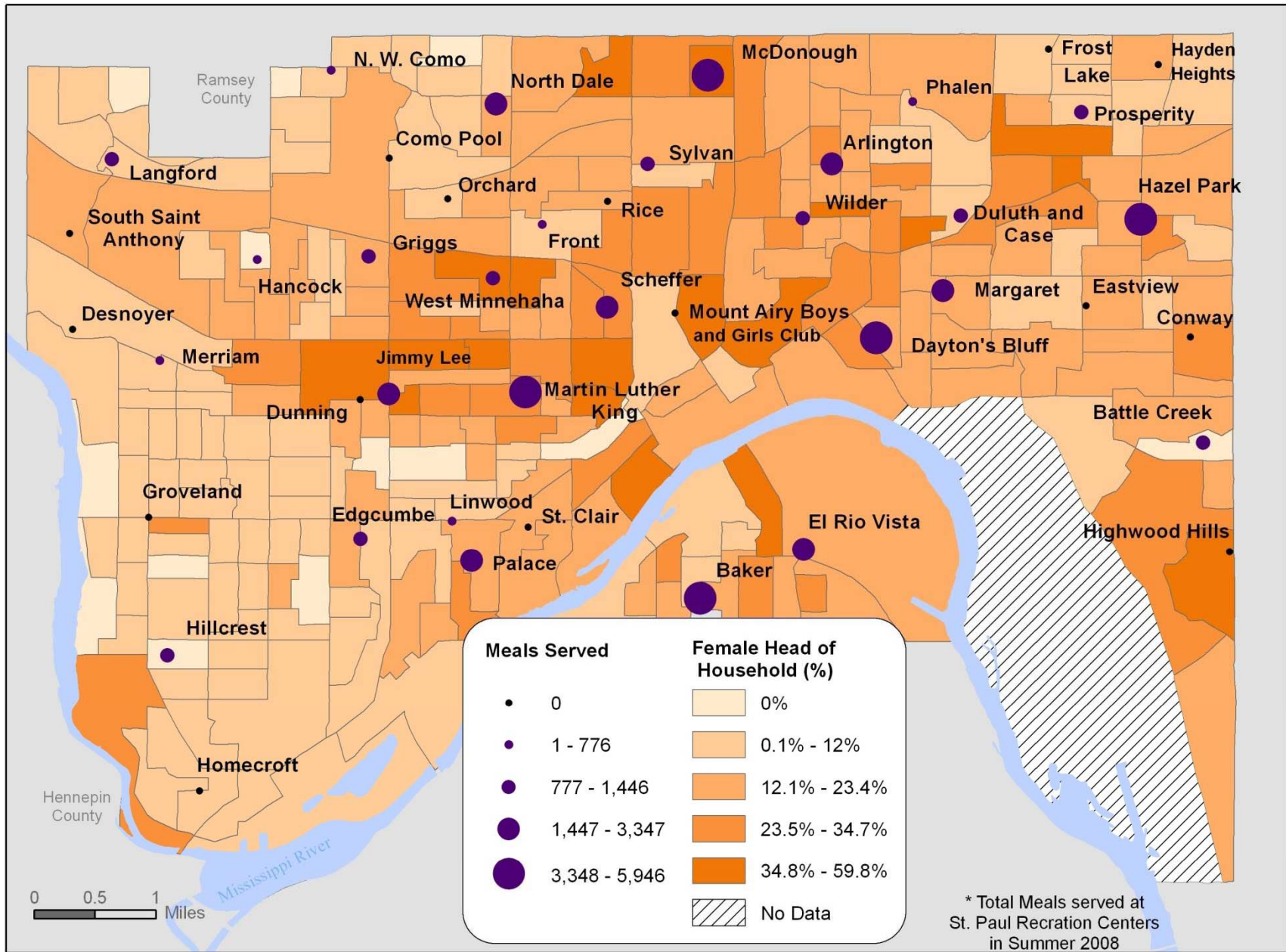
- 10.9% of all households are food insecure according to the USDA.
- 36.3% of households below the poverty line are food insecure.
- 30.4% of households with single women are food insecure.
- 21.8% of black households, and 19.5% of Hispanic households are food insecure.

Meal Count* & Households Below Poverty Level



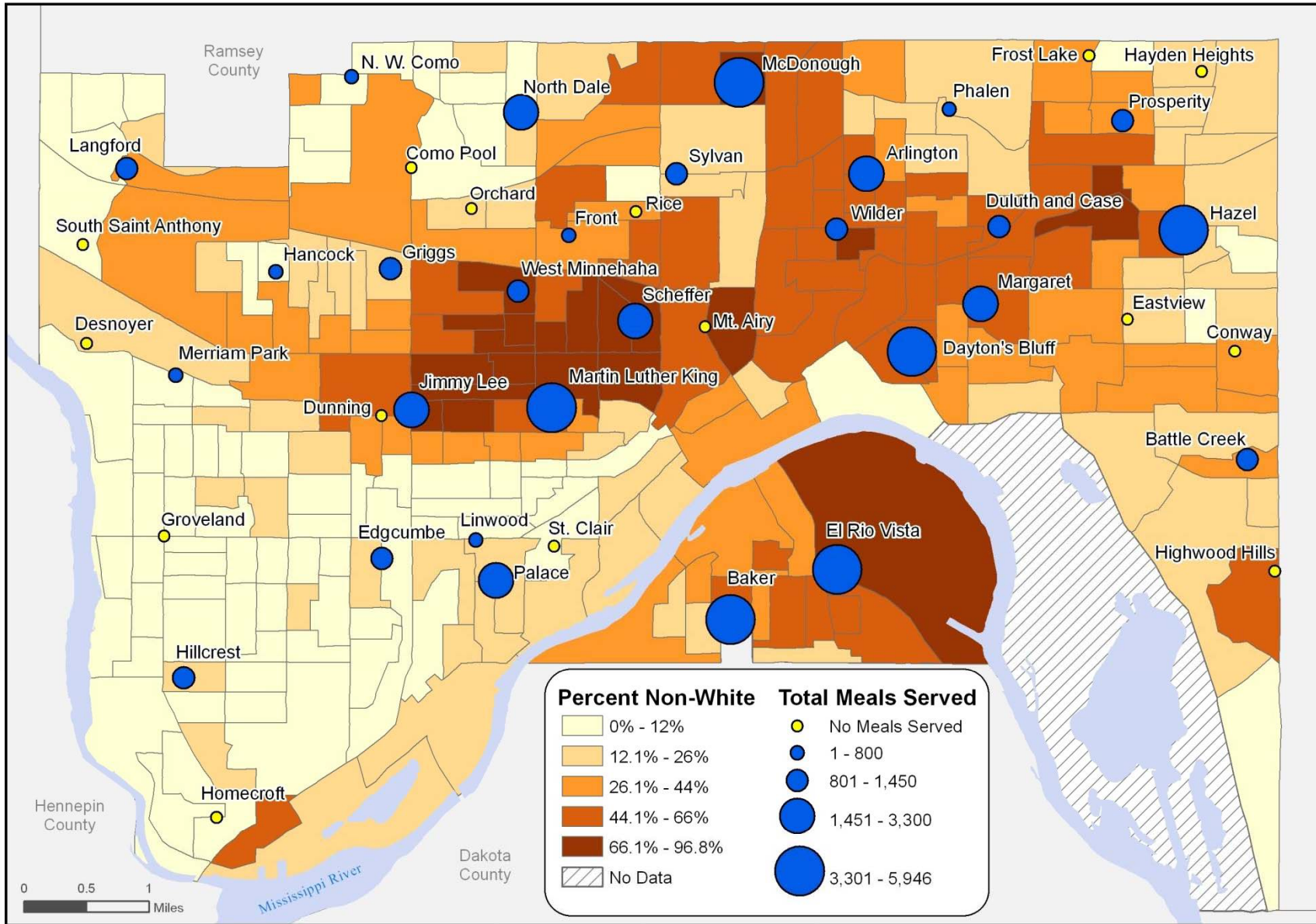
Cartographer: Rebecca Orrick; Data Sources: US Census by Block Groups (2000), ESRI, Saint Paul Parks and Recreation; December 2008

Meal Count* & Female Head of Household



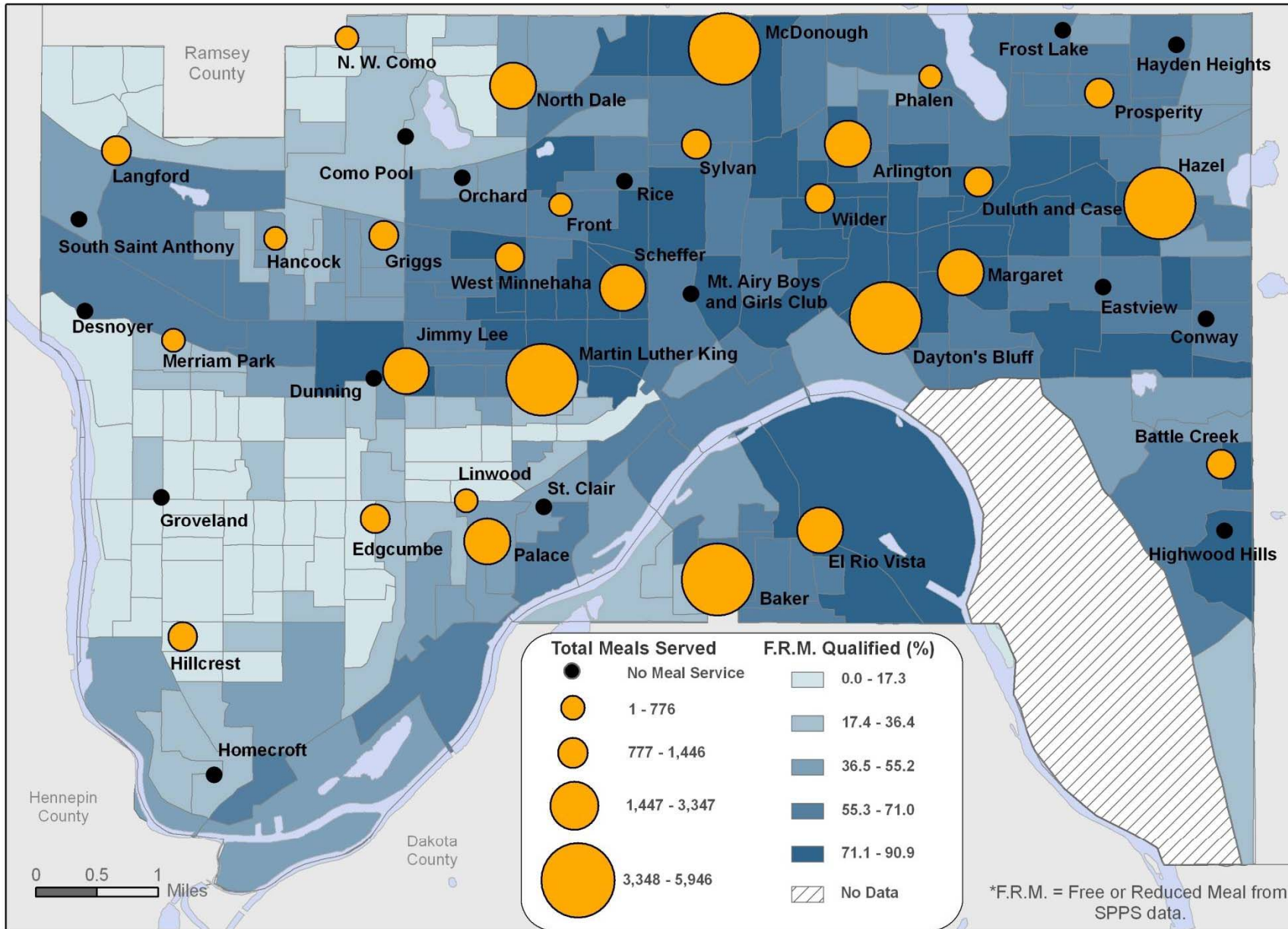
Cartographer: Rebecca Orrick; Data Sources: US Census by Block Group (2000), ESRI, Saint Paul Parks and Recreation; December 2008

Percent Non-White Residents and Total Rec. Center Meals Served



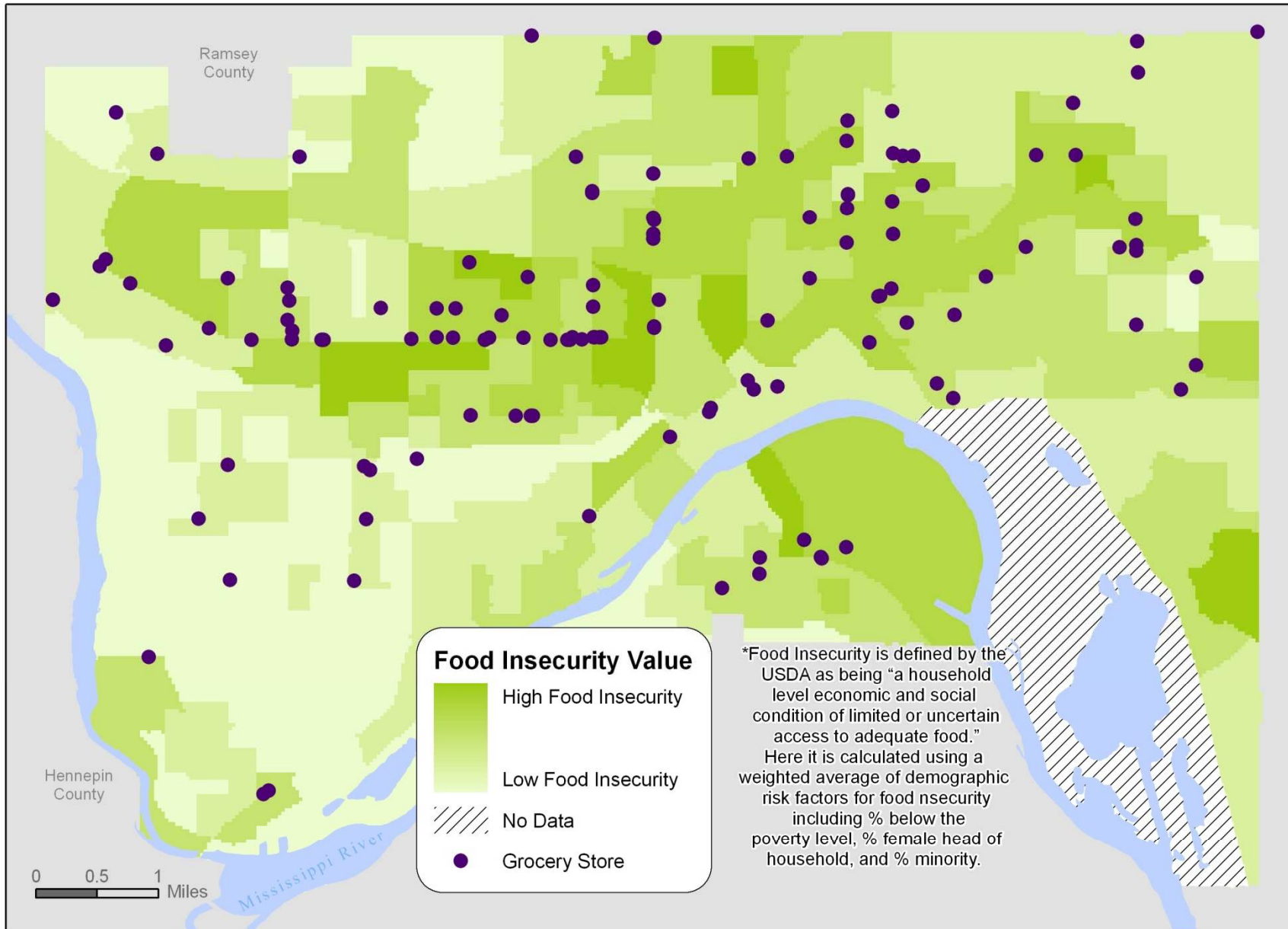
Cartographer: Eli Popuch; Data Sources: Saint Paul Public Schools, Saint Paul Parks and Rec, Metropolitan Council, ESRI, Us Census Block Group; November 2008

Summer Meal Program with Students F.R.M.* Qualified

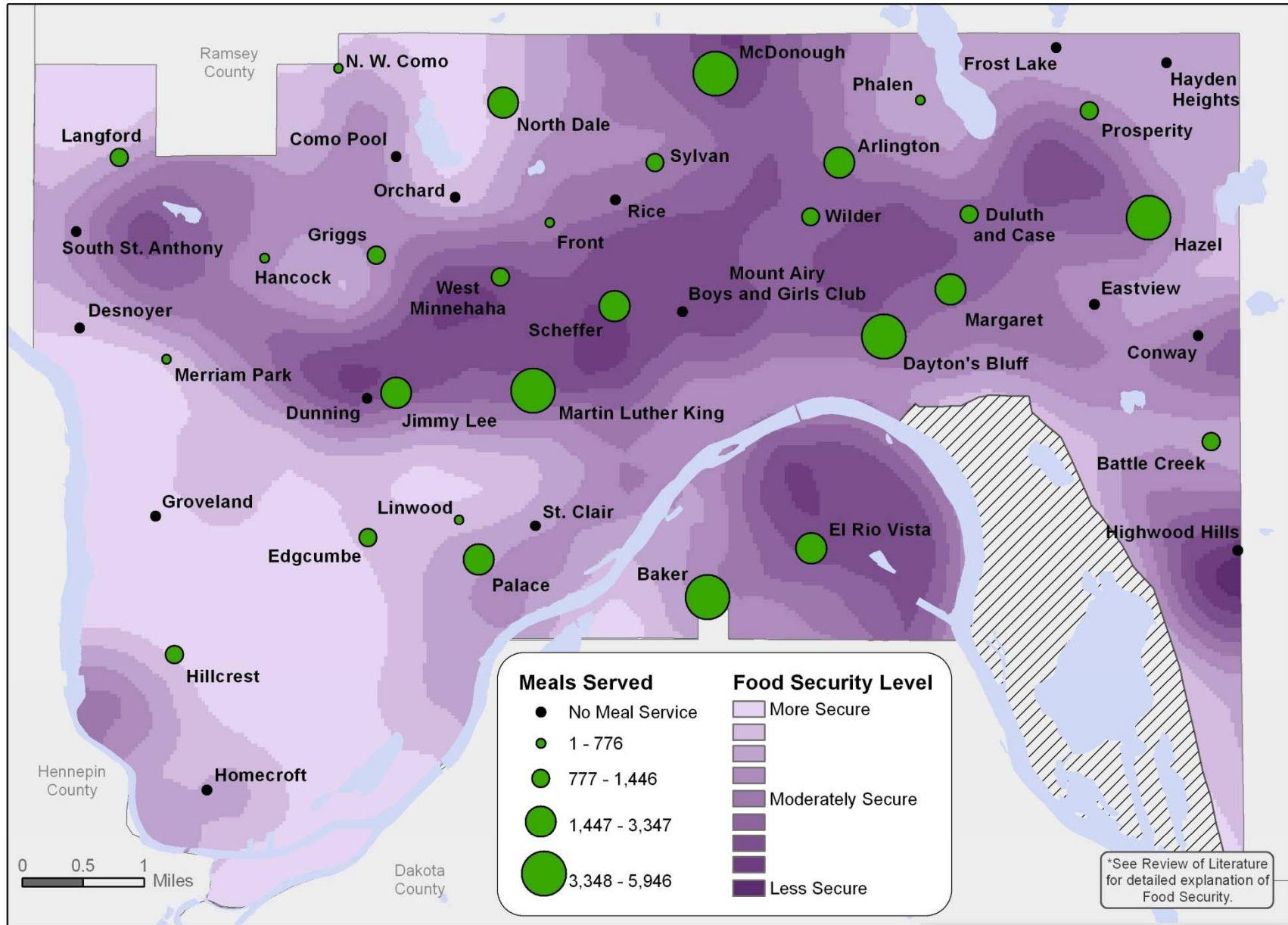


Cartographer: Carson Gorecki; Data Sources: Saint Paul Public Schools, ESRI, US Census Block Groups, Saint Paul Parks and Recreation; November 2008

Food Insecurity* and Grocery Store Location

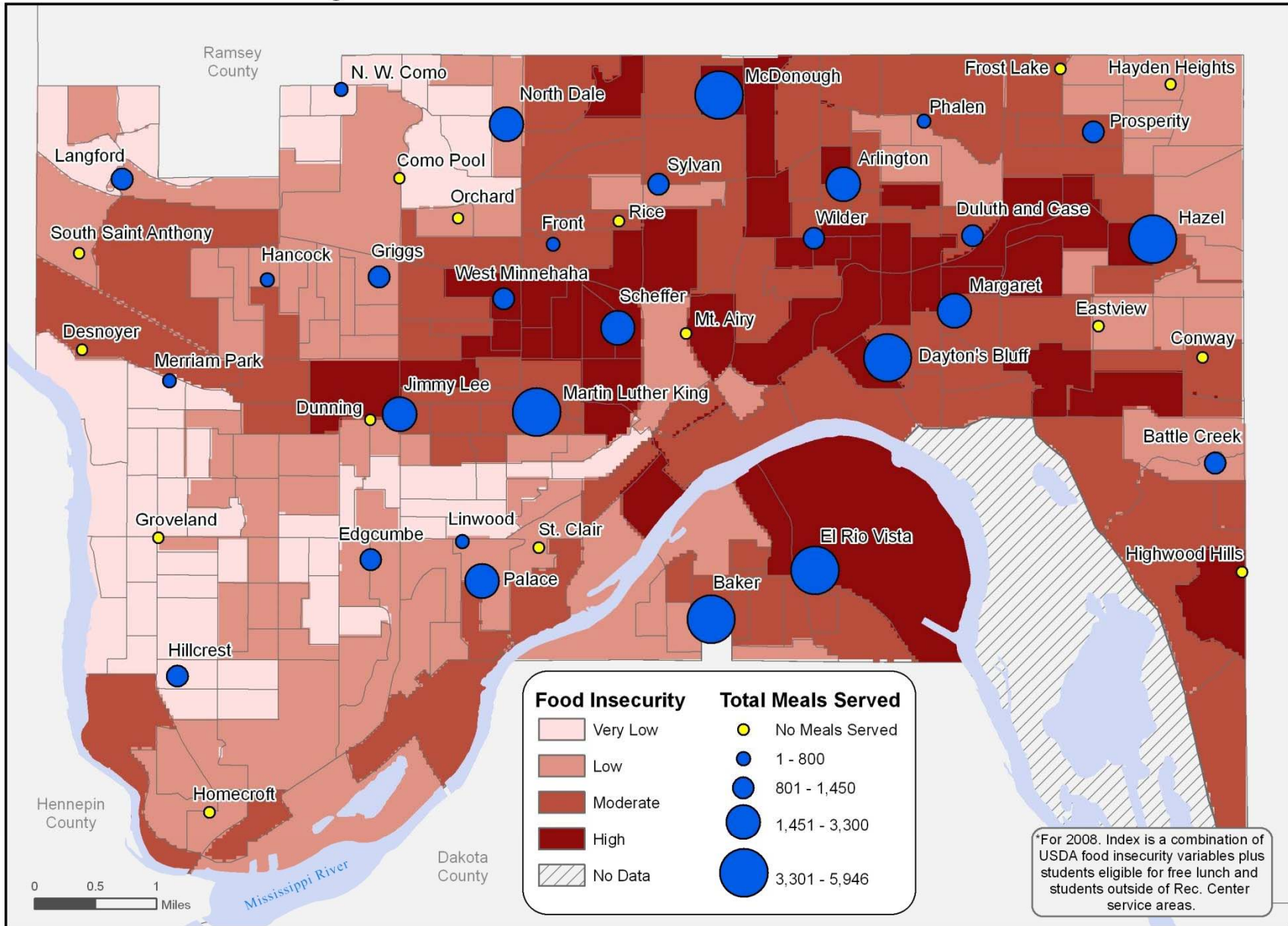


Food Security and Meals Served by Rec. Center*



Cartographer: Michael Samuelson; Data Sources: Saint Paul Public Schools, ESRI, Saint Paul Parks and Recreation; November 2008

Food Insecurity Index and Total Rec. Center Meals Served*



Cartographer: Eli Popuch; Data Sources: Saint Paul Public Schools, Saint Paul Parks and Rec, US Census Block Group, Metropolitan Council, ESRI; November 2008

Conclusions and Recommendations

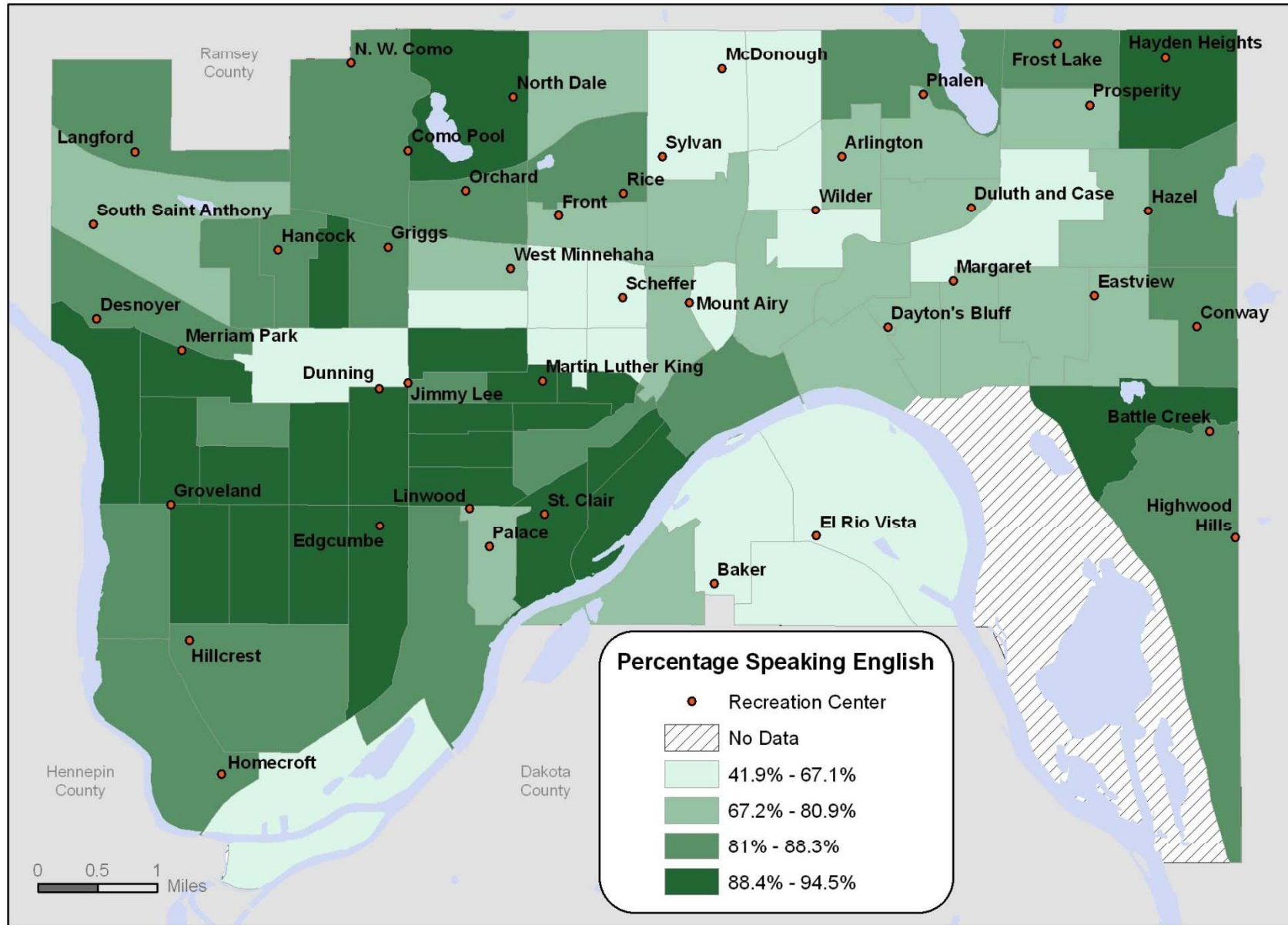
- Several rec. centers should offer meals, based on their neighborhoods food needs, that currently offer no meal service.
- Several rec. centers appear to be under-serving their neighborhoods and should look to increase the promotion of their food service in order to attract more children.
- Rec. centers should coordinate with each other to serve a greater variety of meals where possible, in order to allow children to receive more than one free meal per day.

Mobile Recreation

Overview

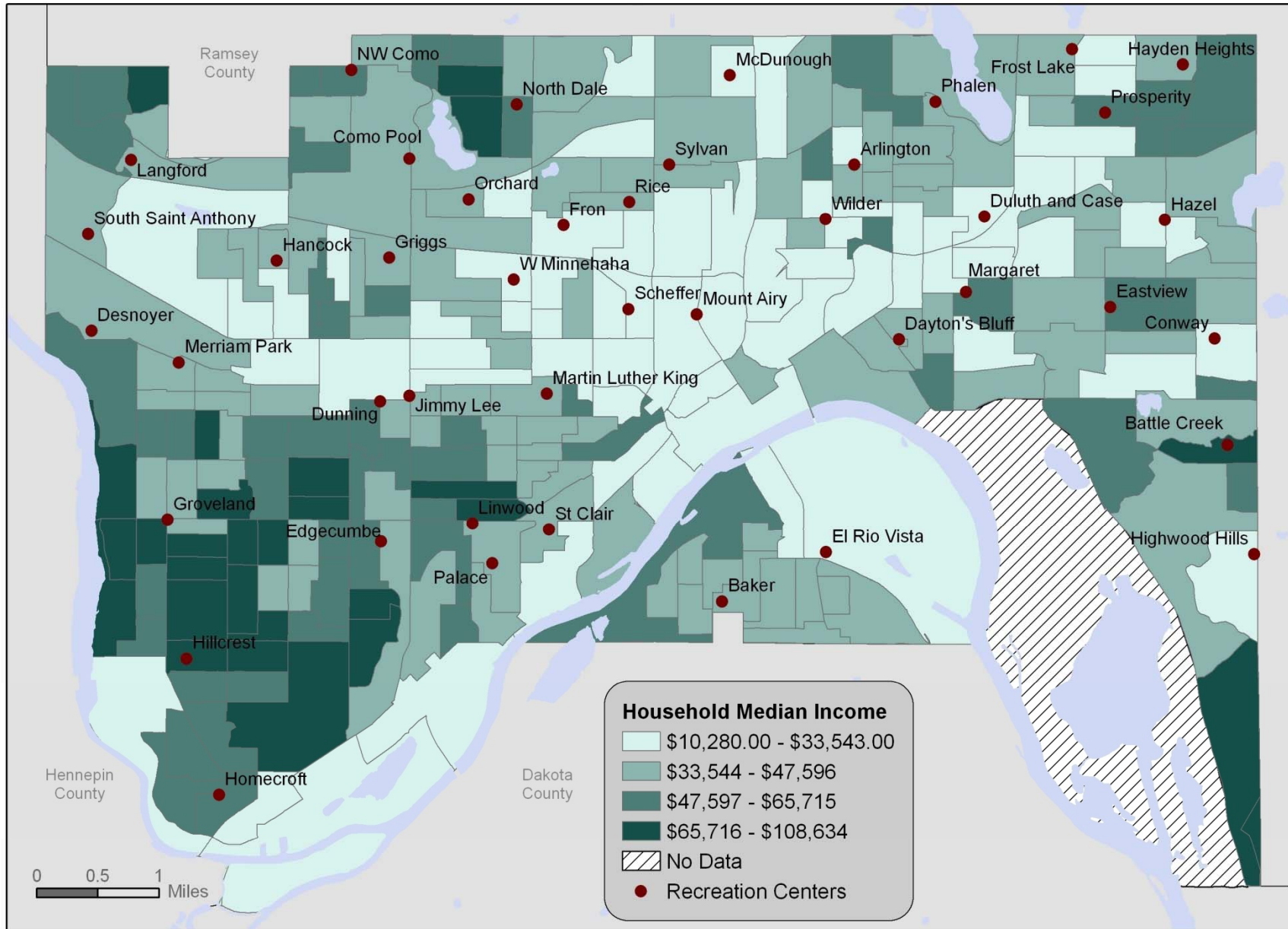
- Our group looked at the Mobile Recreation program, which “specializes in providing recreation for people in the community who normally wouldn’t have access to recreation”.
- Analysis involved creating service areas, amenities, and demographic information both for the entire city and for case studies.

Household Language by Census Tract



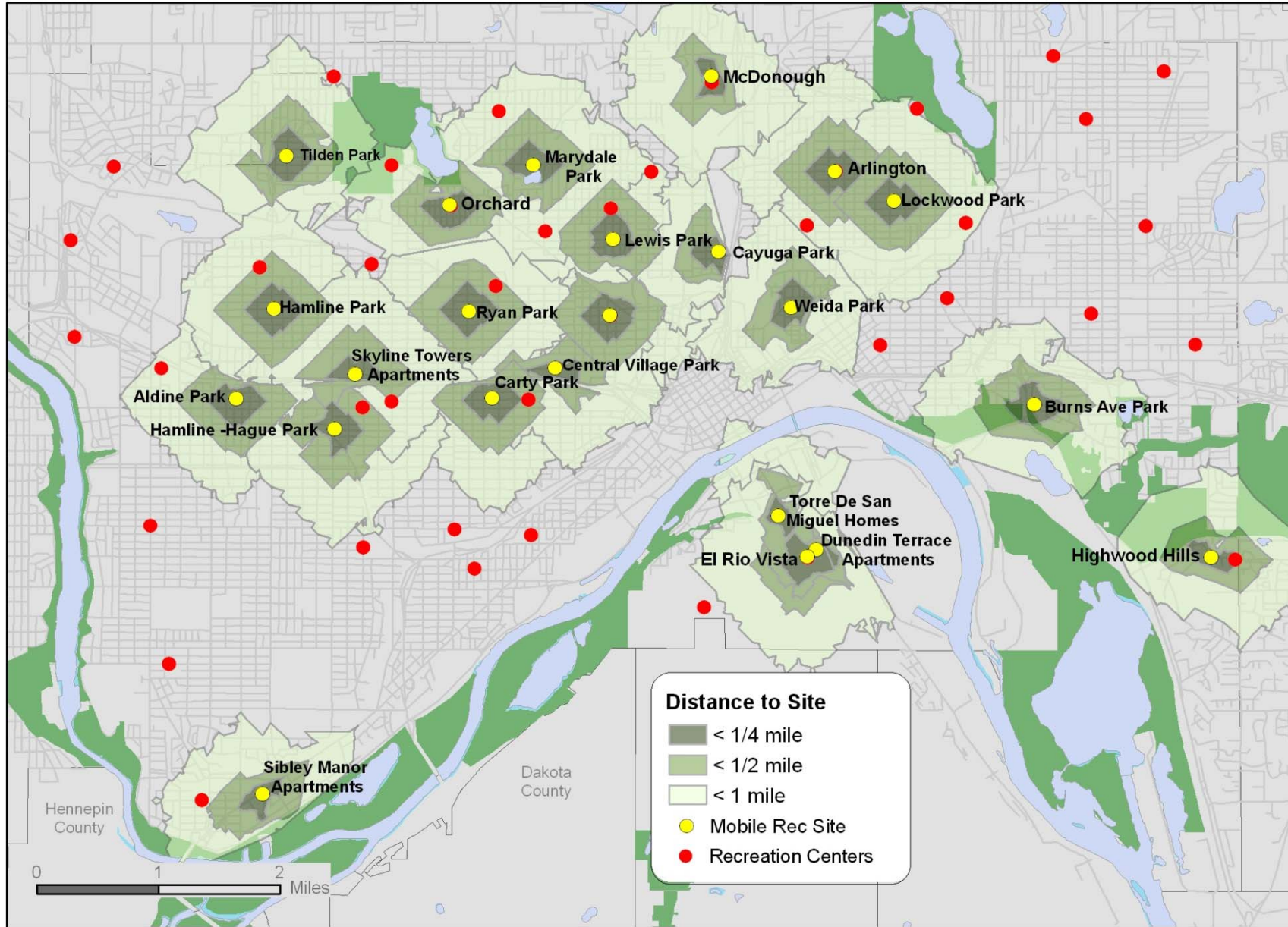
Cartographer: Dillon Teske; Data Sources: Saint Paul Public Schools, ESRI, Saint Paul Parks and Recreation, US Census 2000; December 2008

Estimated Median Household Income, 2006



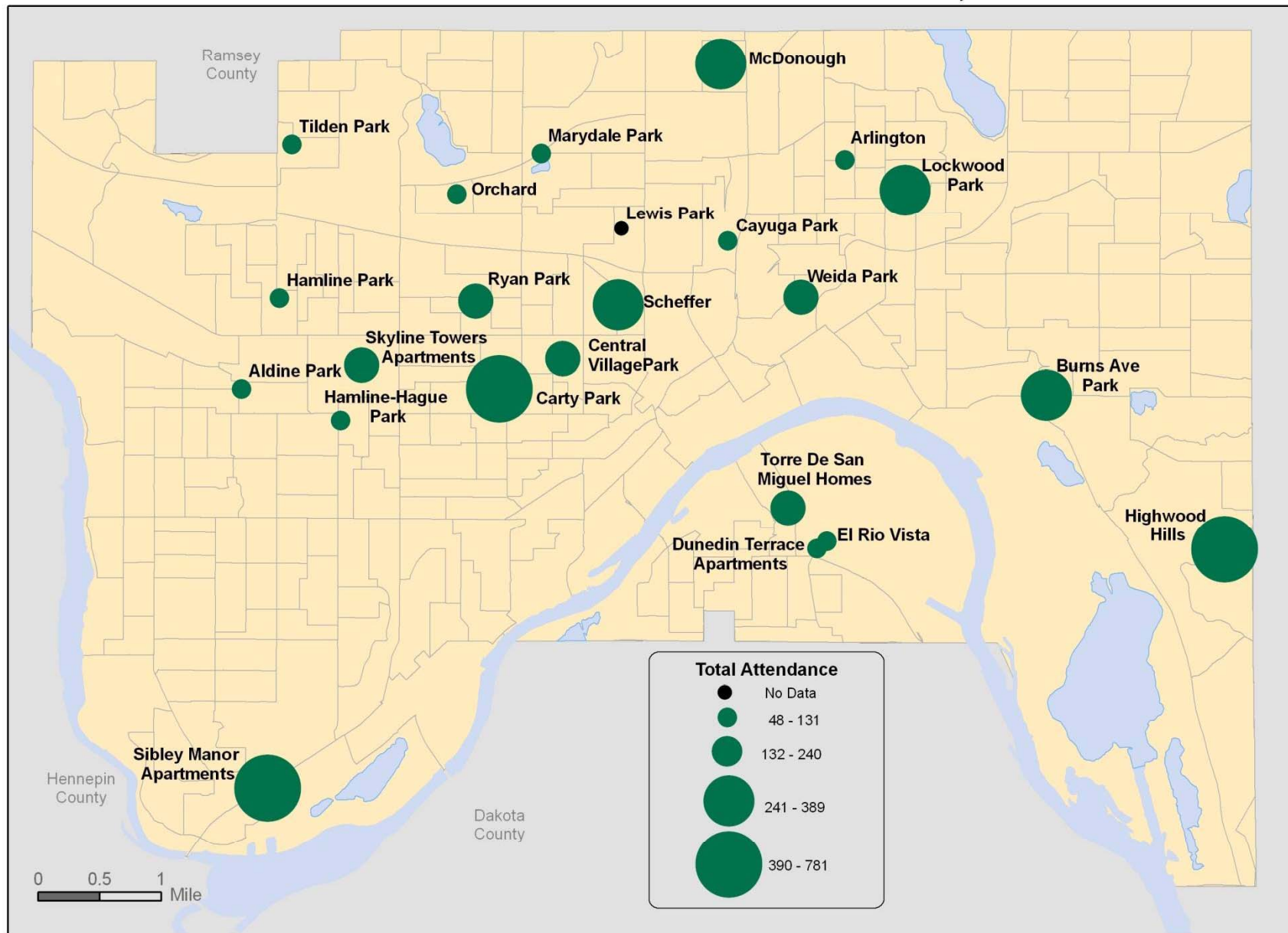
Cartographer: Louise Sharrow; Data Sources: Geolytics 2006, Met Council, ESRI; December 2008

Mobile Recreation Service Areas



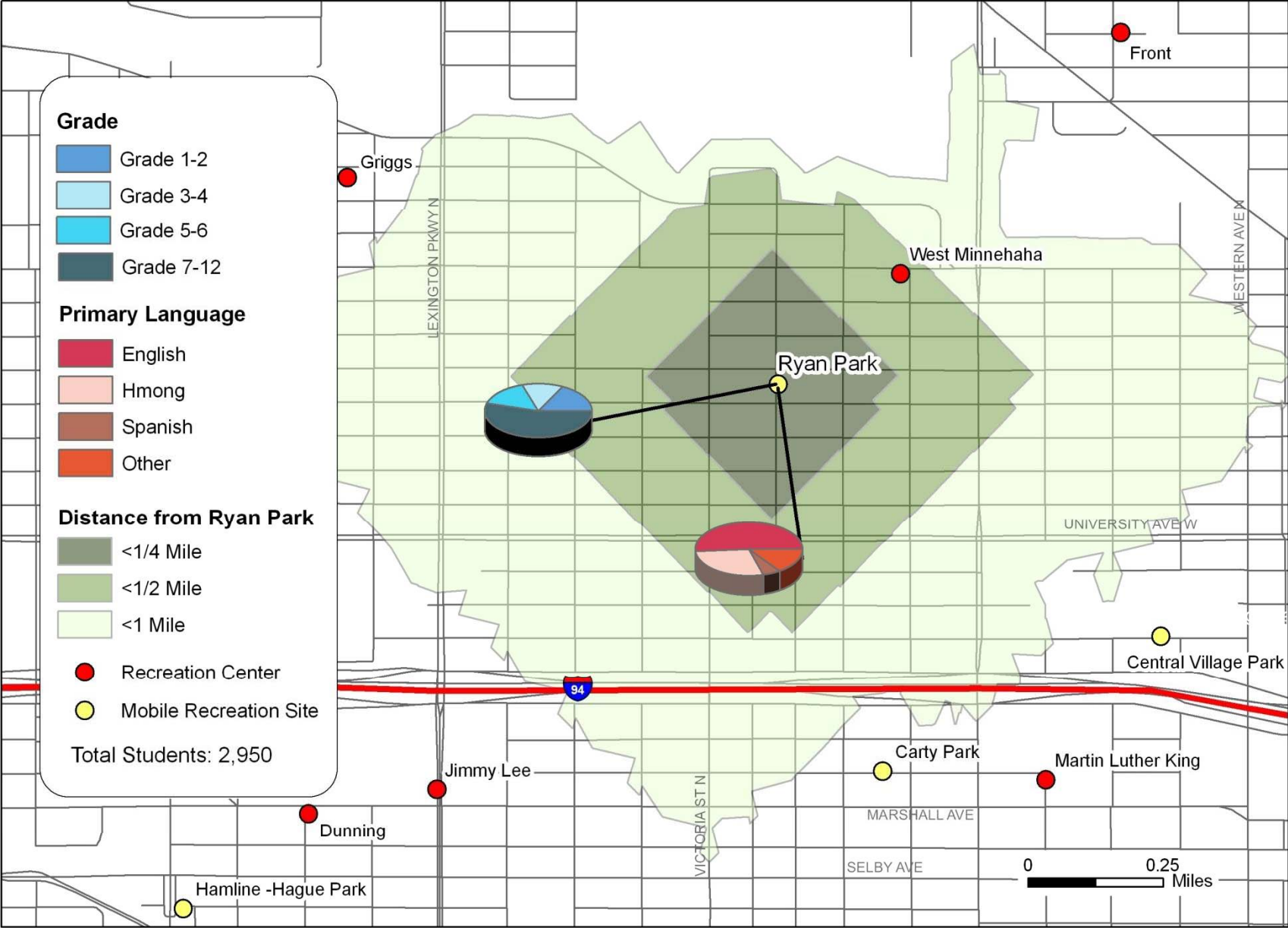
Cartographer: Caroline Rendon; Data Sources: Saint Paul Public Schools, ESRI, Saint Paul Parks and Recreation; December 2008

Total Attendance at Mobile Recreation Sites, Summer 2008



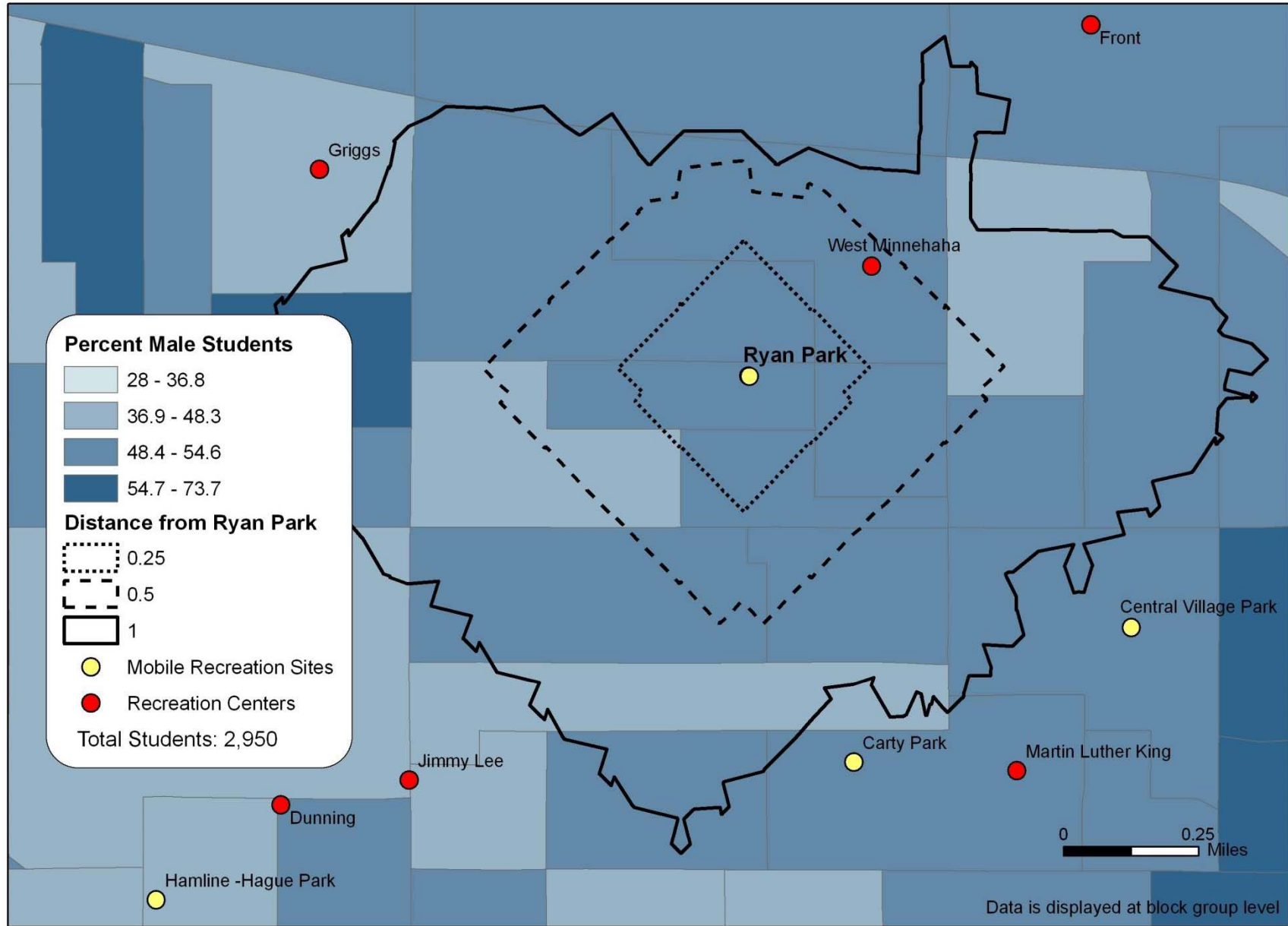
Cartographer: Anna Popinchalk; Data Sources: Saint Paul Public Schools, ESRI, Saint Paul Parks and Recreation, U.S. Census Block Groups; December 2008

Ages and Languages of Students Within One Mile of Ryan Park



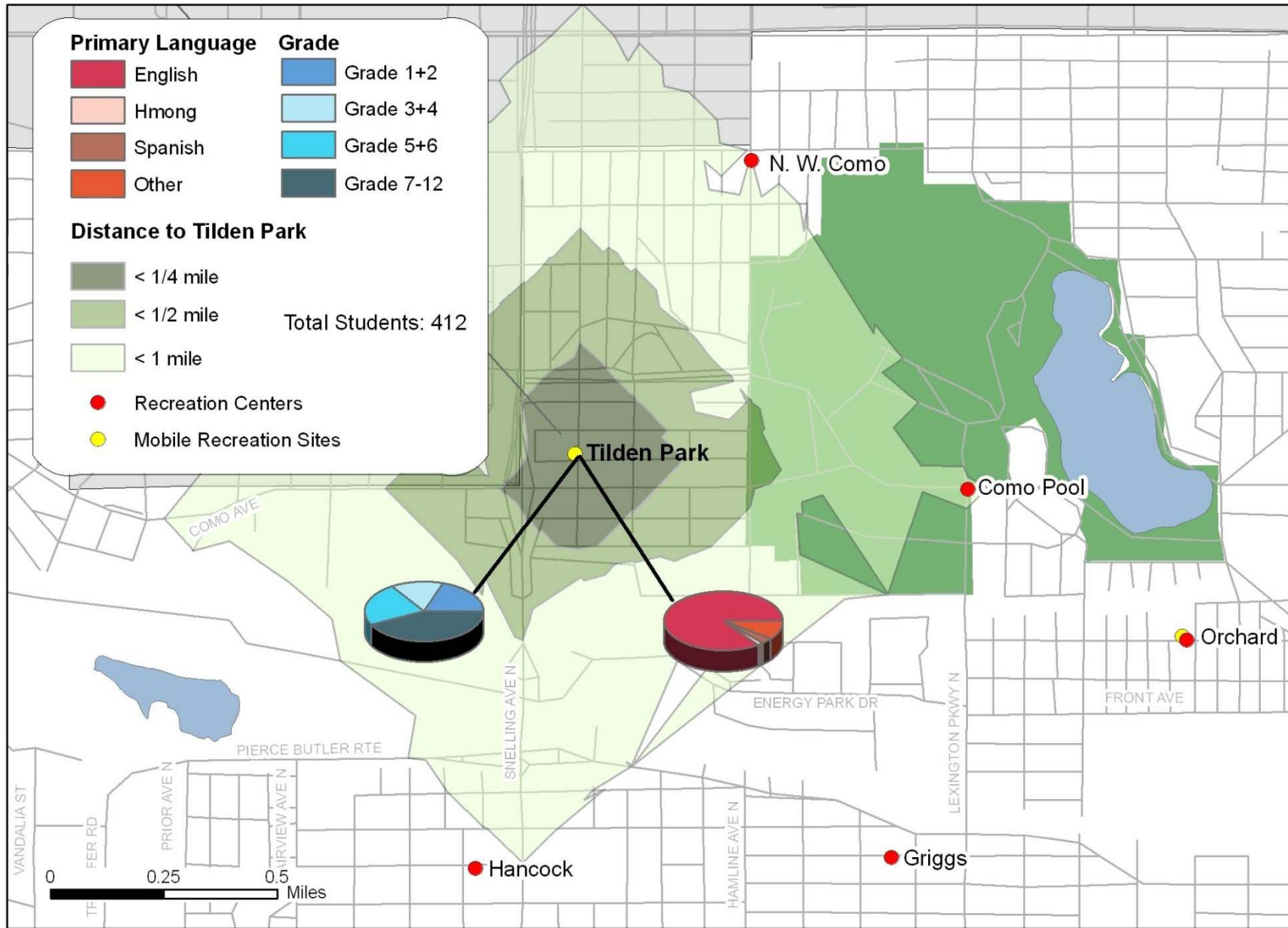
Cartographer: Luke Benson; Data Sources: Saint Paul Public Schools, ESRI, Saint Paul Parks and Recreation; December 2008

Male Students in Ryan Park Service Area



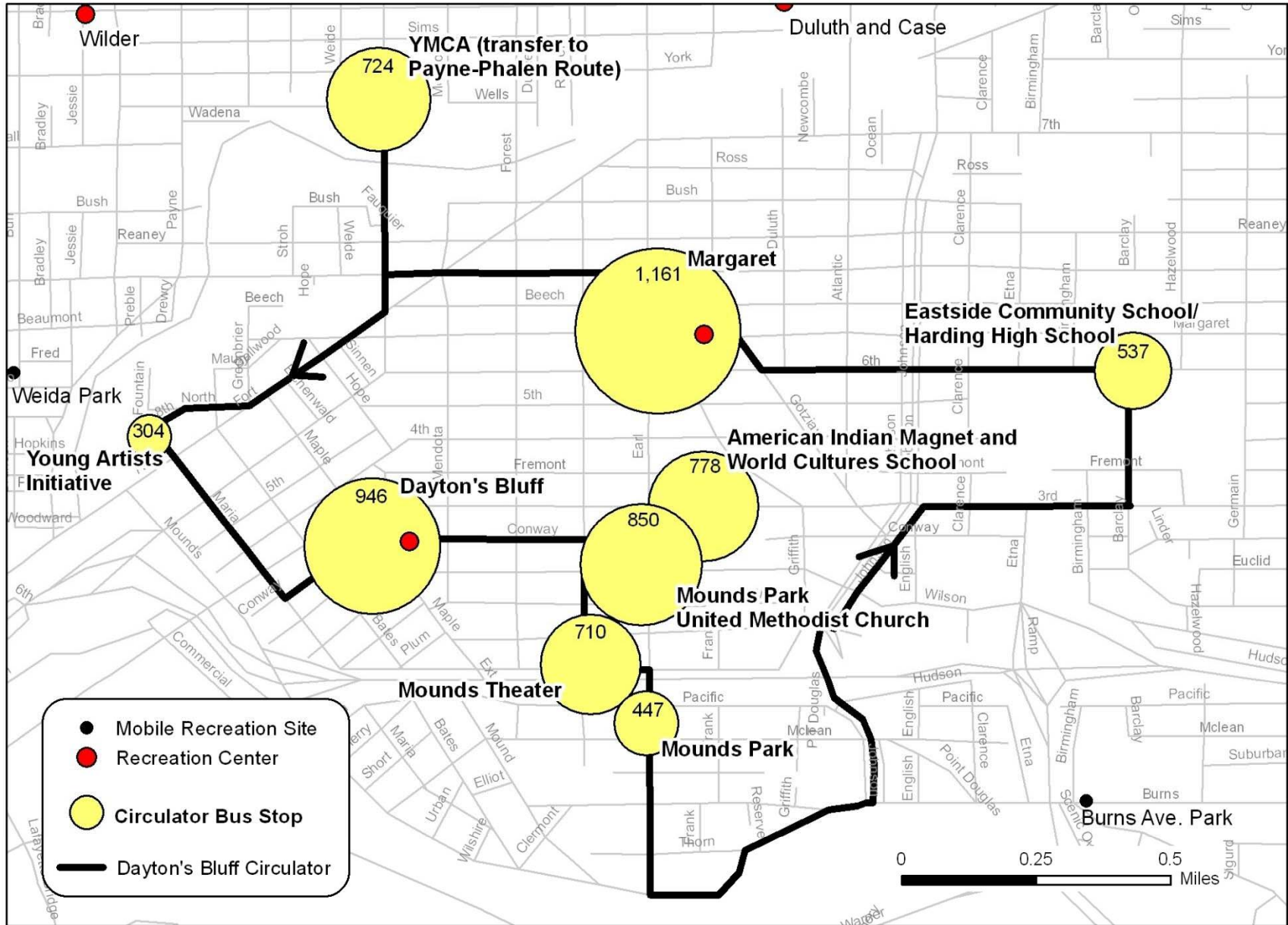
Cartographer: Luke Benson; Data Sources: Saint Paul Public Schools, ESRI, Saint Paul Parks and Recreation, US Census Bureau; December 2008

Ages and Languages of Students Within One Mile of Tilden Park



Cartographer: Caroline Rendon; Data Sources: Saint Paul Public Schools, ESRI, Saint Paul Parks and Recreation; December 2008

Dayton's Bluff Circulator - Students within 1/2 mile of each stop



Cartographer: Dillon Teske; Data Sources: Saint Paul Public Schools, ESRI, Saint Paul Parks and Recreation; December 2008

Conclusions and Policy Recommendations

- The Mobile Recreation program offers good coverage of most of Saint Paul's lower income and minority neighborhoods, but is lacking in the city's northeast and southwest corners.
- The circulator bus program could potentially offer many additional benefits if it were to be expanded to other areas of the city, connecting children of varied backgrounds to many exciting programs.

Authors

- Andrew Yokom
- Luke Benson
- Laura Cullenward
- Cathleen Parisian
- Louise Sharrow
- Elizabeth Diaz
- Dillon Teske
- Elias Diaz Popuch
- Emily Dunn
- Carson Gorecki
- Michael Samuelson
- Rebecca Orrick
- Caroline Rendon
- Anna Popinchalk
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Questions?

In early January the full report will be available at:
<http://www.macalester.edu/geography/civic/>