

Using LED Data in Mapping Applications

**LED Annual Workshop
Washington DC
January 28, 2005**

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Minnesota Dept. of Employment and Econ. Development*

Common and Important Questions

- Where do workers in an area live?
 - Where do residents of an area work?
 - How many workers in an area come from some other area?
 - What are the characteristics of workers in an area?
 - What are the characteristics of residents of an area?
-

Questions have a spatial component

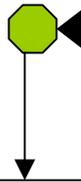
- Depend on specific geographic area ...
 - ... or on linkages (commutes) from one area to another
 - Answers require appropriate data and a useful presentation
 - The solution = LEDs Mapping Application
-

LED Origin-Destination Database

**Residence
(Origin Block)**

**Workplace
(Destination Block)**

of Workers (primary job)



- Residence Characteristics (block group)
 - # of employed residents
 - by age range (3)
 - by earnings range (3)
 - Mean wages earned
 - Industries (2-digit NAICS) of workers

- Workplace Characteristics (block group)
 - # of establishments
 - Industries (2-digit NAICS)
 - # of workers
 - by age range (3)
 - by earnings range (3)
 - Mean wages paid
 - Demand/growth indicators
 - Job creation/destruction
 - Hires/separations
 - Earnings hires/separations

Place Name Lookup

Map Navigation

Save & Exit

 Place Names

Place Name Lookup

Enter a State, County or City:

Examples

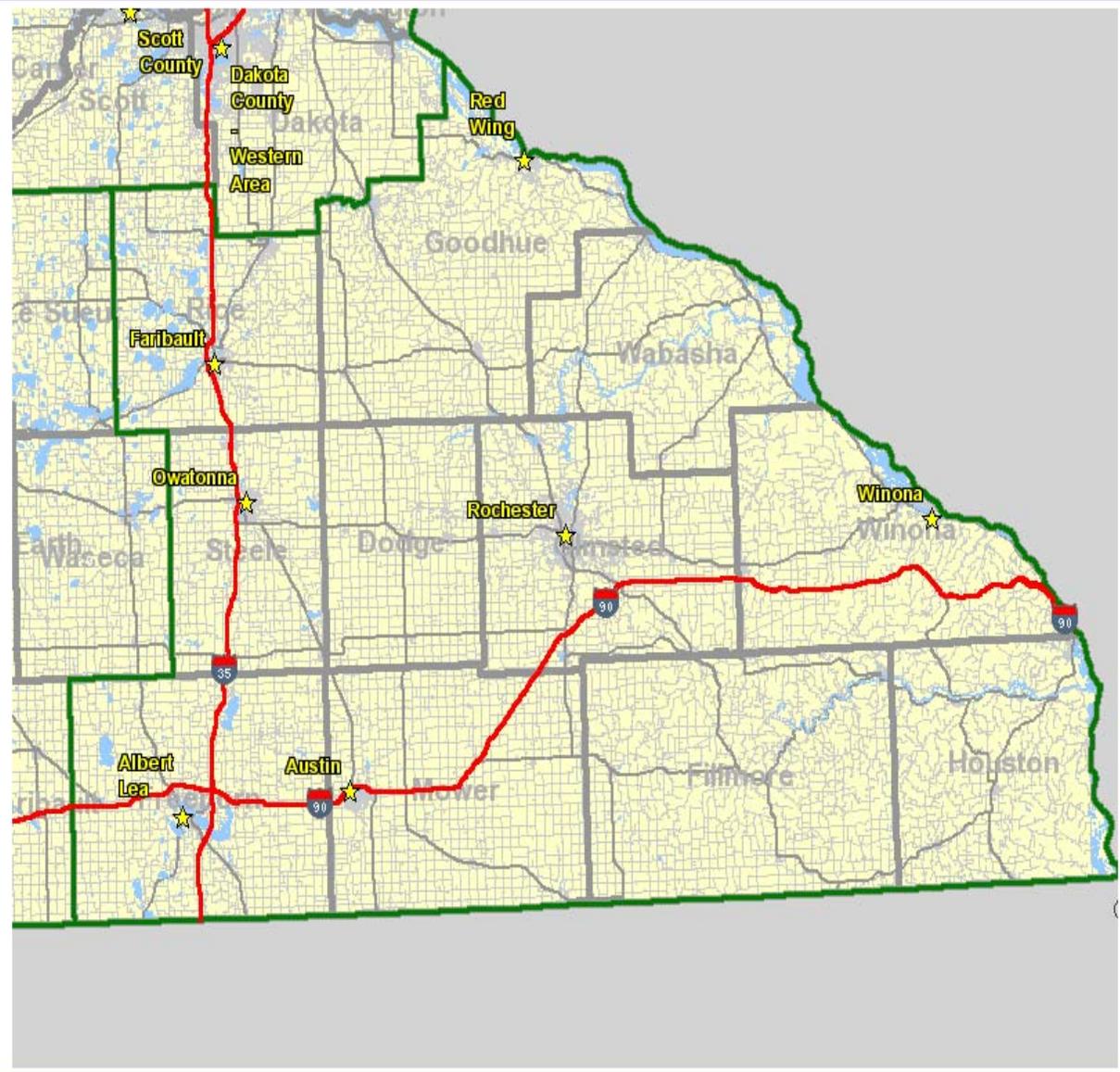
Enter any place name in Minnesota and the map viewer will display a detailed map of that place. If you prefer, you can click on the **"Map Navigation"** tab (next on the row of tabs) and use the map viewer's navigation tools to locate a place directly on the map.

A few place names to try if you are unfamiliar with Minnesota:

- ◆ **"Hennepin"** - large urban county
- ◆ **"Aitkin"** - rural county (Note that the City of Aitkin also displays as an option.)
- ◆ **"Lakeville"** - a suburban Twin Cities city
- ◆ **"Morris"** - rural college community in northwest Minnesota. (Note that other options with the same root word are also displayed.)

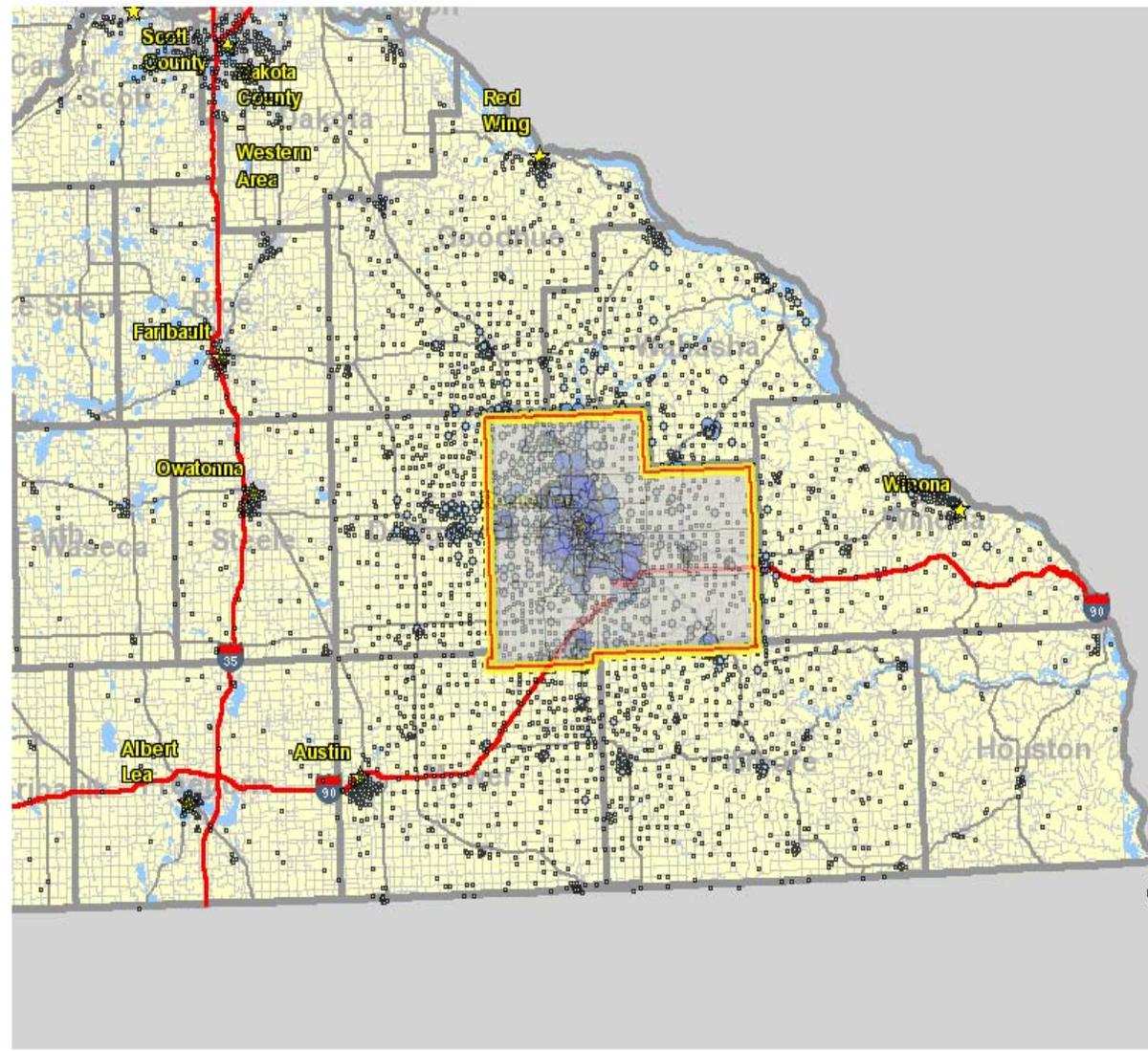
When the application is fully developed, you will be able to type in any US place name and the map viewer will display that location for you.





Placename Lookup Map Navigation Selection Tools Advanced Selection Show Report Save & Exit

[Commute Labor] [Thermal Points Both] Go Opacity: Free Layer 2nd Last



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Worker Origins and Workplace Characteristics

Selected Area: "OLMSTED COUNTY"

Selected Workforce Segments: All

Selected Area Characteristics - In-Area Employment

	2003		2002	
	Count	Share	Count	Share
Number of Employers	2559		2559	
Workers (Based on Location of Primary Job)	83495	100%	83495	100%
Workers by Age				
* Under age 30	26810	32%	26810	32%
* Age 30 to 54	46659	55%	46659	55%
* Age 55 or older	10026	12%	10026	12%
Workers by Earnings Paid				
* Under \$15K	25620	30%	25620	30%
* \$15K to \$39K	32172	38%	32172	38%
* \$40K or more	25703	30%	25703	30%
Workers by Primary Industry (2-digit NAICS)				
* Health Care and Social Assistance	29753	35%	29753	35%
* Manufacturing	11158	13%	11158	13%
* Retail Trade	8139	9%	8139	9%
* Accommodation and Food Services	6451	7%	6451	7%
* Construction	4853	5%	4853	5%
* Educational Services	4566	5%	4566	5%
* Professional, Scientific, and Technical Services	2515	3%	2515	3%
* Public Administration	2448	2%	2448	2%
* Other Services (excl. Public Admin.)	2400	2%	2400	2%
* Information	2135	2%	2135	2%
* All other industries (click for full list)	9077	10	9077	10
Quarterly Workforce Indicators (2nd Qtr)				
* Total number of QWI jobs	46288	100%	46288	100%
* Number of jobs created	4139	5%	4139	5%
* Number of jobs eliminated	2418	2%	2418	2%
* Number of worker separations	4337	5%	4337	5%
- Avg. earnings of separated workers	\$1236		\$1236	
* Number of new hires	4695	5%	4695	5%
- Avg. earnings of new Hires	\$2110		\$2110	

Labor Shed Characteristics - Where Workers Come From

Workers (Based on Location of Primary Job)	2003		2002	
	Count	Share	Count	Share
Workers (Based on Location of Primary Job)	83495	100%	83495	100%
Cities/Townships Where Workers Originate				
(Rank ordered listing)				
* Rochester City	37315	44	37315	44
* Out-of-State	7838	9	7838	9
* Marion Township	2803	3	2803	3
* Stewartville City	2362	2	2362	2
* Byron City	1666	2	1666	2
* Cascade Township	1551	1	1551	1
* All other cities or townships (click for full list)	29960	35	29960	35

Definitions and Disclaimers

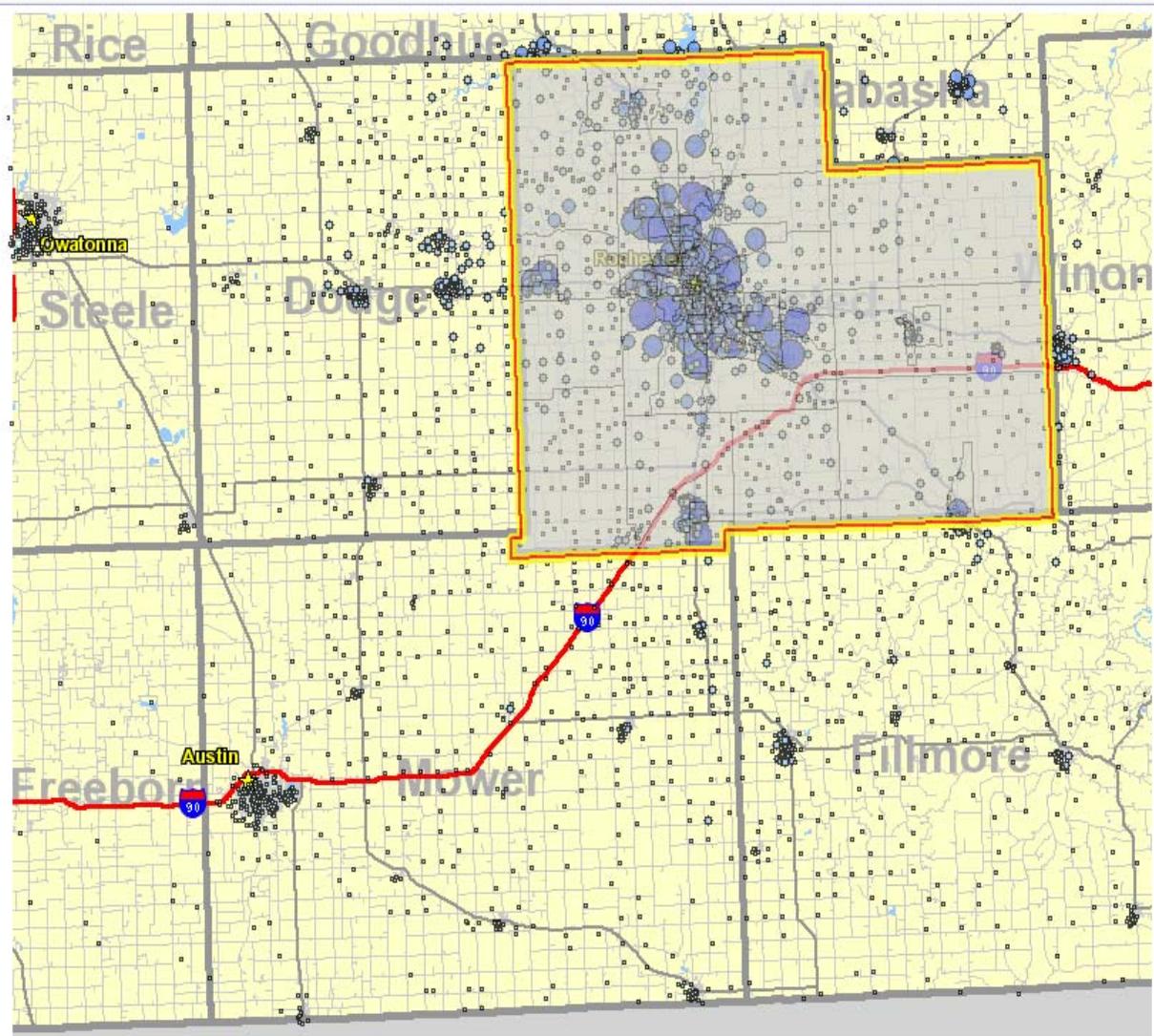
Source:

LED Worker Origin/Destination Minnesota Database (Employed Workers in 2nd Quarter -- 2002-2003)
LED Quarterly Workforce Index (QWI Full 2nd Quarter Jobs -- 2002 & 2003)



[Placename Lookup](#) [Map Navigation](#) [Selection Tools](#) [Advanced Selection](#) [Show Report](#) [Save & Exit](#)

[Commute Labor] [Thermal Points Both] Opacity: 2nd



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Labor Shed Interdependencies Report

Worker Origins and Workplace Characteristics

Selected Area: "1106752234738"

Selected Home and Work Area Correspondence

	2003		2002	
	Count	Share	Count	Share
All Workers Employed in Workplace Area	83495	100%	83495	100%
Workers in Selected Home Area	560	0%	560	0%
(Area components -- city/township)				
* Austin City	499	0%	499	0%
* Austin Township	36	0%	36	0%
* Lansing Township	16	0%	16	0%
* Windom Township	4	0%	4	0%
* Red Rock Township	3	0%	3	0%
* Mapleview City	2	0%	2	0%

Definitions and Disclaimers

Sources:

LED Worker Origin/Destination Minnesota Database (Employed Workers in 2nd Quarter - 2002-2003)

Place Name Lookup

Map Navigation

Save & Exit

 Place Names

Place Name Lookup

Enter a State, County or City:

Examples

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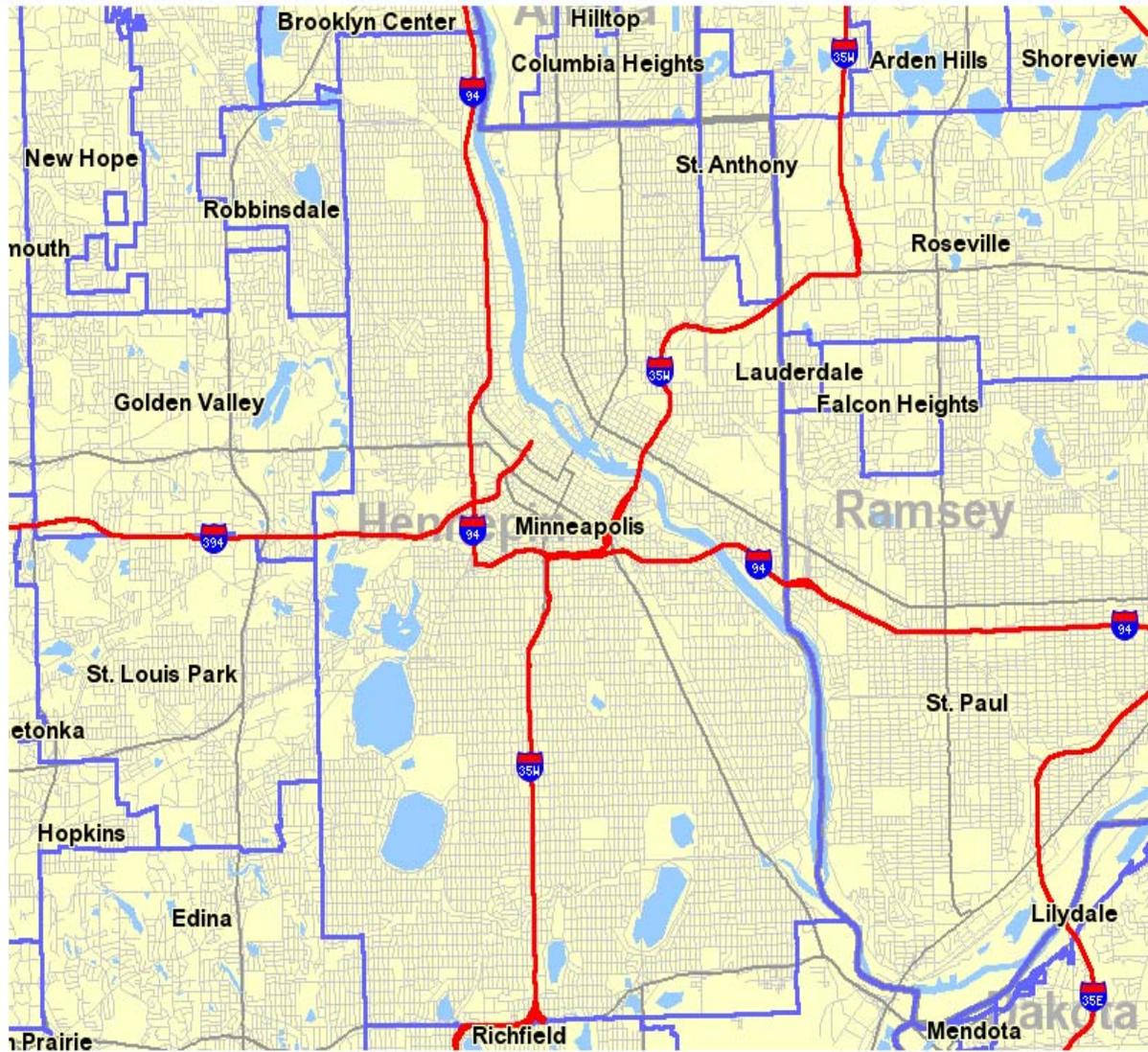
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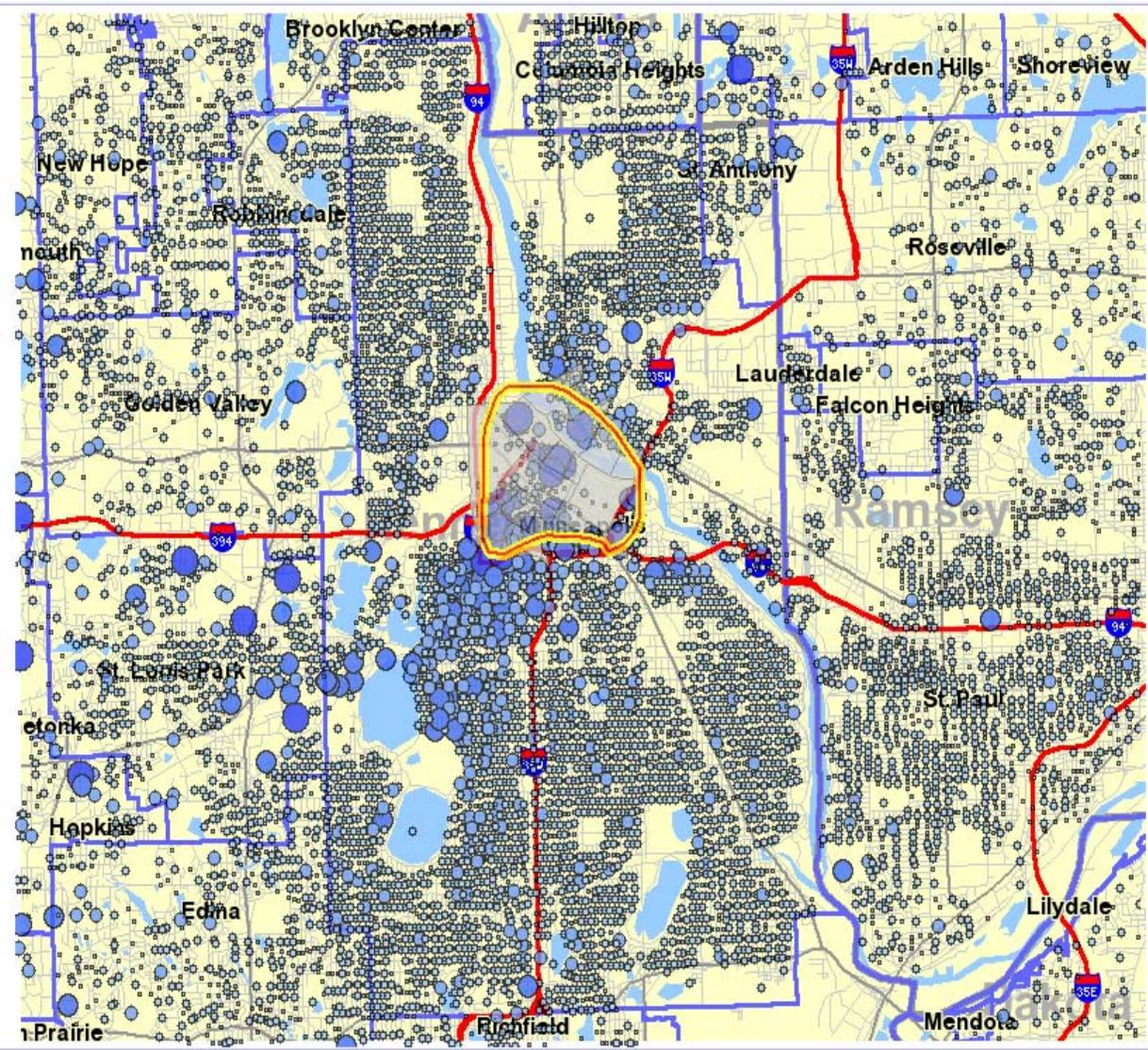
[Placename Lookup](#) [Map Navigation](#) [Selection Tools](#) [Advanced Selection](#) [Show Report](#) [Save & Exit](#)

[Commute Labor] [Thermal Points Both] Opacity: Free 2nd



Placename Lookup Map Navigation Selection Tools Advanced Selection Show Report Save & Exit

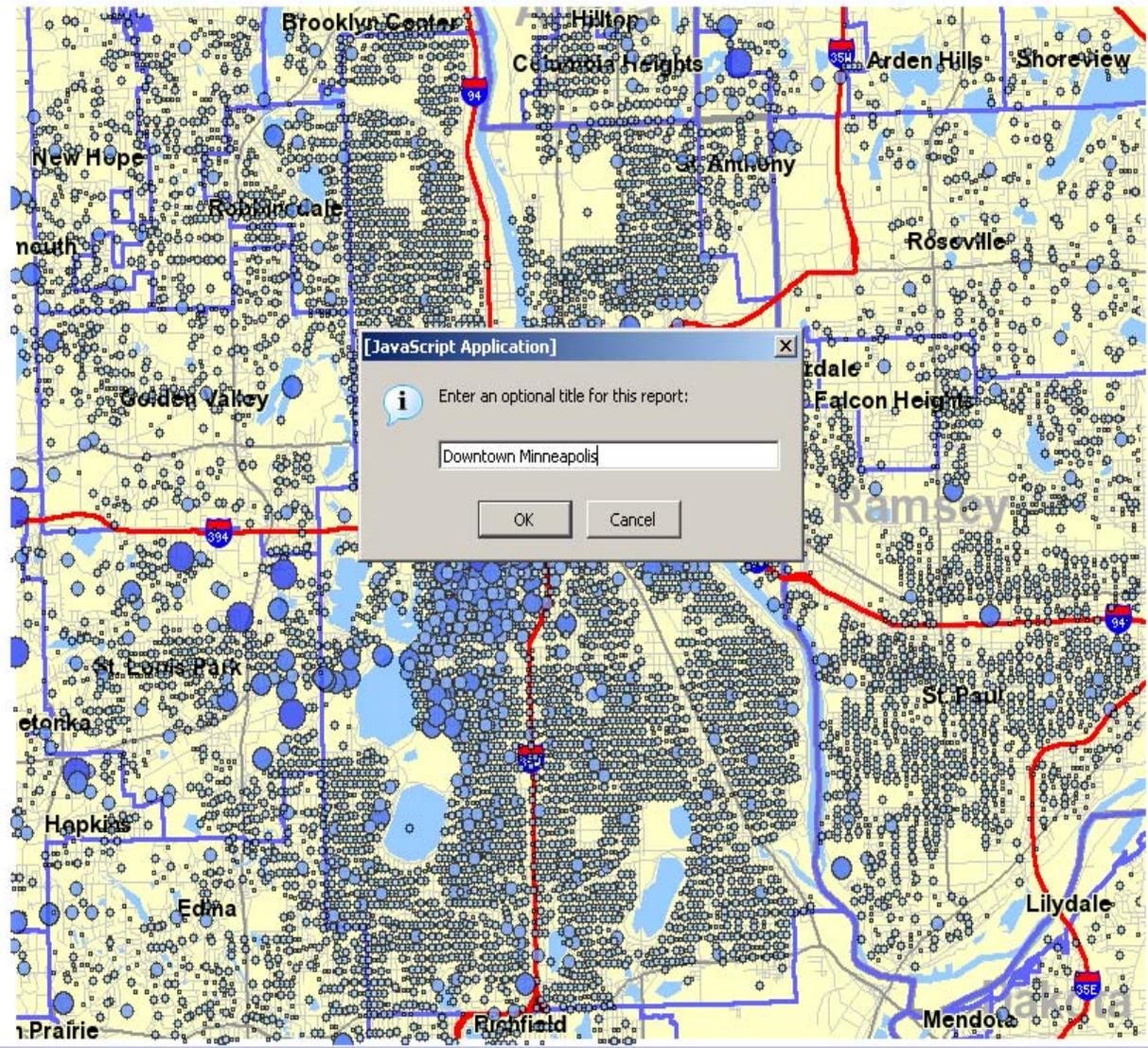
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Placename Lookup Map Navigation Selection Tools Advanced Selection Show Report Save & Exit

[Commute Labor] [Thermal Points Both] Go Opacity: Free Layer 2nd Last



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Worker Origins and Workplace Characteristics

Selected Area: "DOWNTOWN MINNEAPOLIS"

Selected Workforce Segments: All

Selected Area Characteristics - In-Area Employment

	2003		2002	
	Count	Share	Count	Share
Number of Employers	2412		2412	
Workers (Based on Location of Primary Job)	166110	100%	166110	100%
Workers by Age				
* Under age 30	49839	30%	49839	30%
* Age 30 to 54	99346	59%	99346	59%
* Age 55 or older	16925	10%	16925	10%
Workers by Earnings Paid				
* Under \$15K	42001	25%	42001	25%
* \$15K to \$39K	50852	30%	50852	30%
* \$40K or more	73257	44%	73257	44%
Workers by Primary Industry (2-digit NAICS)				
* Professional, Scientific, and Technical Services	26156	15%	26156	15%
* Finance and Insurance	25796	15%	25796	15%
* Public Administration	20452	12%	20452	12%
* Admin. & Support, Waste Mgmt and Remediation	14827	8%	14827	8%
* Information	12826	7%	12826	7%
* Accommodation and Food Services	10244	6%	10244	6%
* Mgmt of Companies and Enterprises	9601	5%	9601	5%
* Retail Trade	8107	4%	8107	4%
* Other Services (excl. Public Admin.)	8018	4%	8018	4%
* Utilities	4909	3%	4909	3%
* All other industries (click for full list)	25174	15	25174	15
Quarterly Workforce Indicators (2nd Qtr)				
* Total number of QWI jobs	54445	100%	54445	100%
* Number of jobs created	3224	1%	3224	1%
* Number of jobs eliminated	2264	1%	2264	1%
* Number of worker separations	5172	3%	5172	3%
- Avg. earnings of separated workers	\$1286		\$1286	
* Number of new hires	5283	3%	5283	3%
- Avg. earnings of new Hires	\$2576		\$2576	

Labor Shed Characteristics - Where Workers Come From

Workers (Based on Location of Primary Job)	2003		2002	
	Count	Share	Count	Share
Cities/Townships Where Workers Originate	166110	100%	166110	100%
(Rank ordered listing)				
* Minneapolis City	38077	22	38077	22
* Out-of-State	16246	9	16246	9
* St. Paul City	10522	6	10522	6
* Brooklyn Park City	4391	2	4391	2
* Plymouth City	4264	2	4264	2
* St. Louis Park City	3662	2	3662	2
* All other cities or townships (click for full list)	88948	53	88948	53

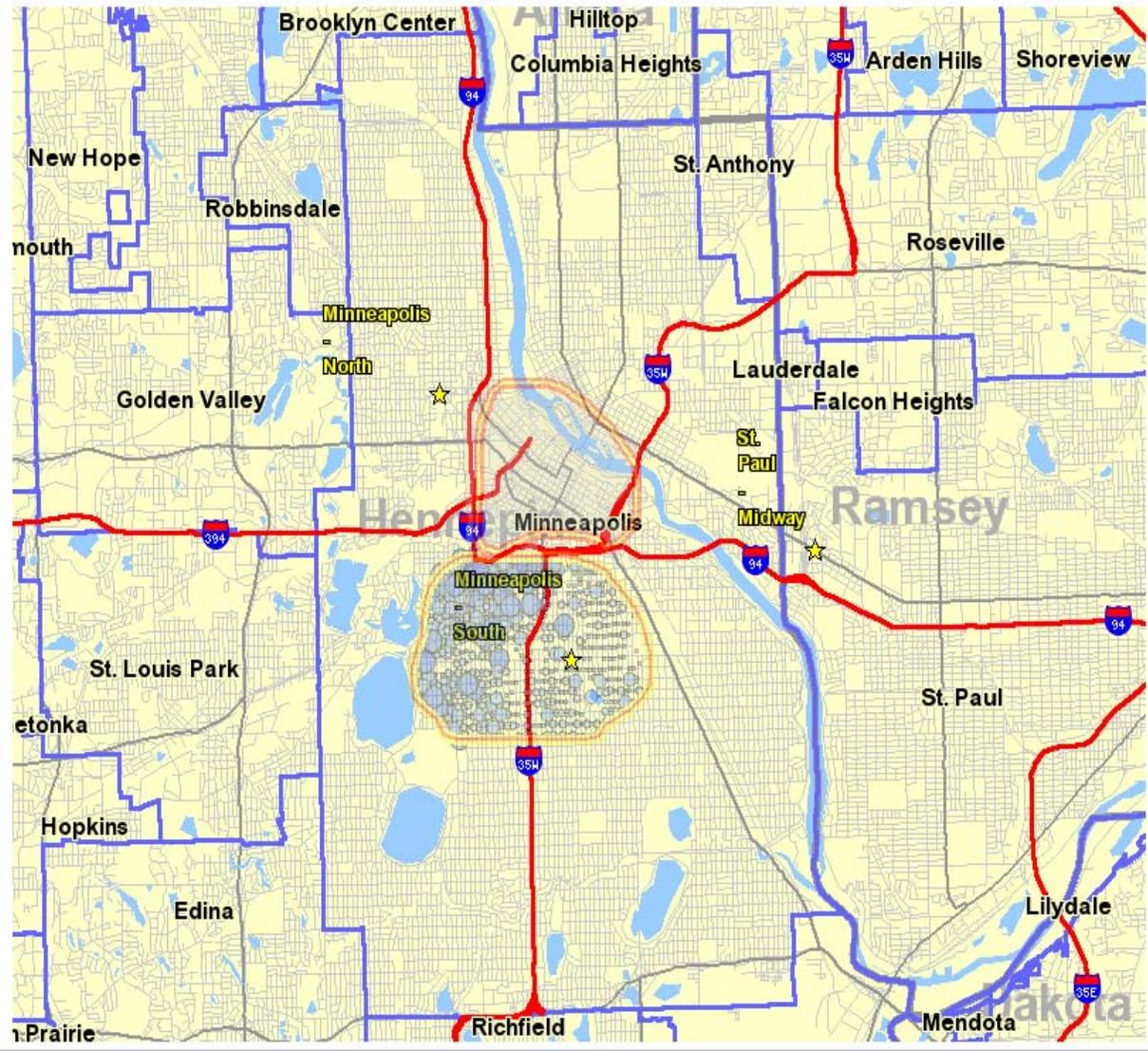
Definitions and Disclaimers

Source:

LED Worker Origin/Destination Minnesota Database (Employed Workers in 2nd Quarter -- 2002-2003)
LED Quarterly Workforce Index (QWI Full 2nd Quarter Jobs -- 2002 & 2003)

Placename Lookup Map Navigation Selection Tools Advanced Selection Show Report Save & Exit

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Labor Shed Interdependencies Report

Worker Origins and Workplace Characteristics

Selected Area: "MPLS SOUTH WORKERS EMPLOYED IN DTWN MPLS"

Selected Home and Work Area Correspondence

	2003		2002	
	Count	Share	Count	Share
All Workers Employed in Workplace Area	166110	100%	166110	100%
Workers in Selected Home Area	7728	4%	7728	4%
(Area components -- city/township)				
* Minneapolis City	7728	4%	7728	4%

Definitions and Disclaimers

Sources:

LED Worker Origin/Destination Minnesota Database (Employed Workers in 2nd Quarter - 2002-2003)

Commute Shed Profile Report

Residential Labor force Characteristics and Place of Work

Selected Area: "MPLS SOUTH WFC - PRIMARY SERVICE AREA"

Selected Workforce Segments: All

Selected Area Characteristics - Workers Living In-Area

	2003		2002	
	Count	Share	Count	Share
Workers (Based on Place of Residence)	33264	100%	33264	100%
Workers by Age				
* Under age 30	14535	43%	14535	43%
* Age 30 to 54	16767	50%	16767	50%
* Age 55 or older	1962	5%	1962	5%
Workers by Earnings Paid (All Jobs)				
* Under \$15K	13503	40%	13503	40%
* \$15K to \$39K	14372	43%	14372	43%
* \$40K or more	5389	16%	5389	16%
Workers by Primary Industry (2-digit NAICS)				
* Admin. & Support, Waste Mgmt and Remediation	4250	12%	4250	12%
* Health Care and Social Assistance	4022	12%	4022	12%
* Accommodation and Food Services	3495	10%	3495	10%
* Retail Trade	3464	10%	3464	10%
* Educational Services	2605	7%	2605	7%
* Manufacturing	2412	7%	2412	7%
* Professional, Scientific, and Technical Services	2054	6%	2054	6%
* Finance and Insurance	1712	5%	1712	5%
* Other Services (excl. Public Admin.)	1451	4%	1451	4%
* Mgmt of Companies and Enterprises	1272	3%	1272	3%
* All other industries (click for full list)	6527	19	6527	19

Commuter Shed Characteristics - Workplace Destinations

	2003		2002	
	Count	Share	Count	Share
Workers (Based on Place of Residence)	33264	100%	33264	100%
Destination Cities/Townships Where Workers are Employed				
(Rank ordered listing)				
* Minneapolis City	14996	45%	14996	45%
* St. Paul City	2864	8%	2864	8%
* Bloomington City	2149	6%	2149	6%
* Edina City	1689	5%	1689	5%
* St. Louis Park City	1064	3%	1064	3%
* Minnetonka City	711	2%	711	2%
* All other cities or townships (click for full list)	9791	29	9791	29

Definitions and Disclaimers

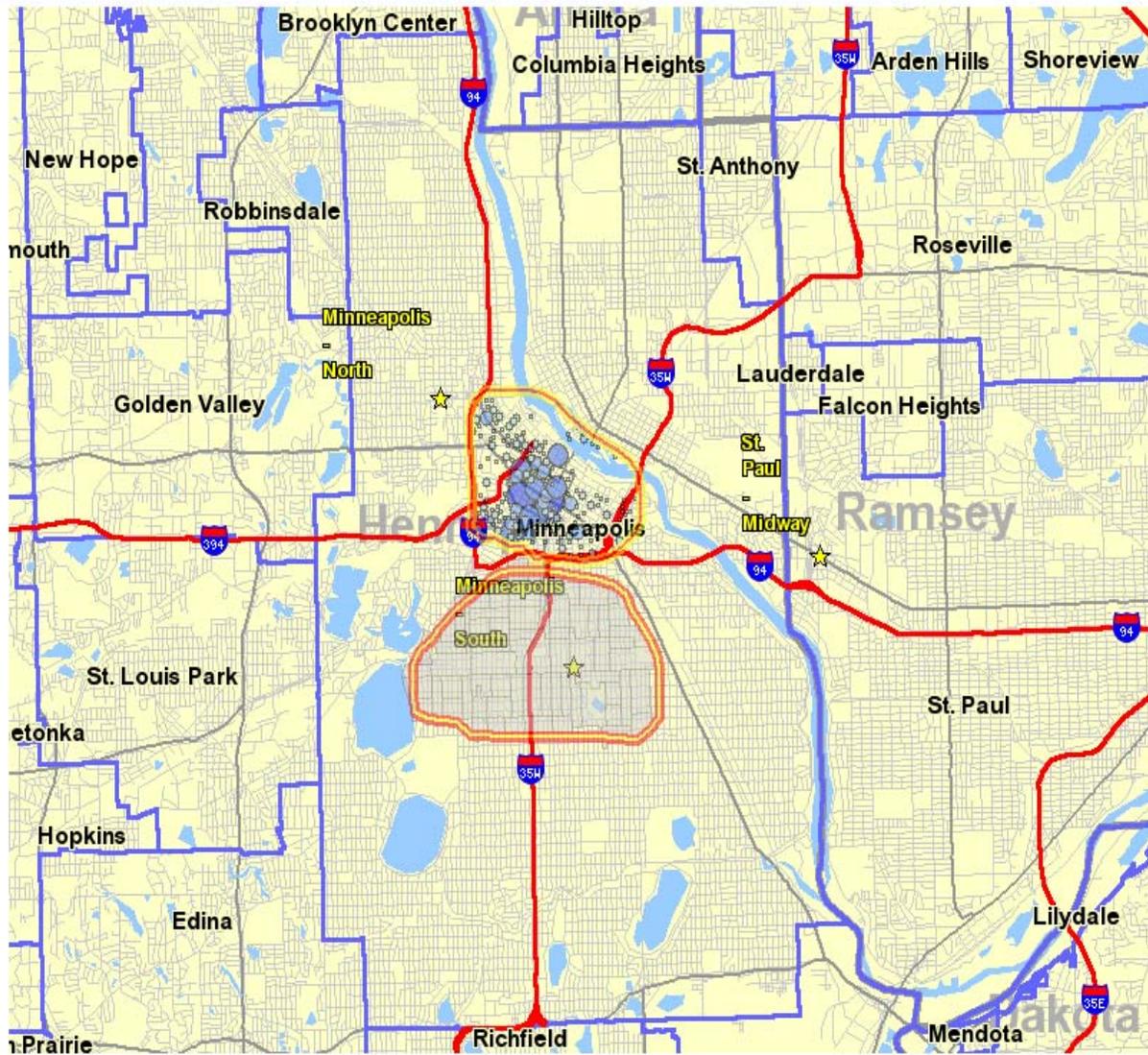
Source:

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 LED Quarterly Workforce Index (Full 2nd Quarter Jobs -- 2002 & 2003)



Placename Lookup Map Navigation Selection Tools Advanced Selection Show Report Save & Exit

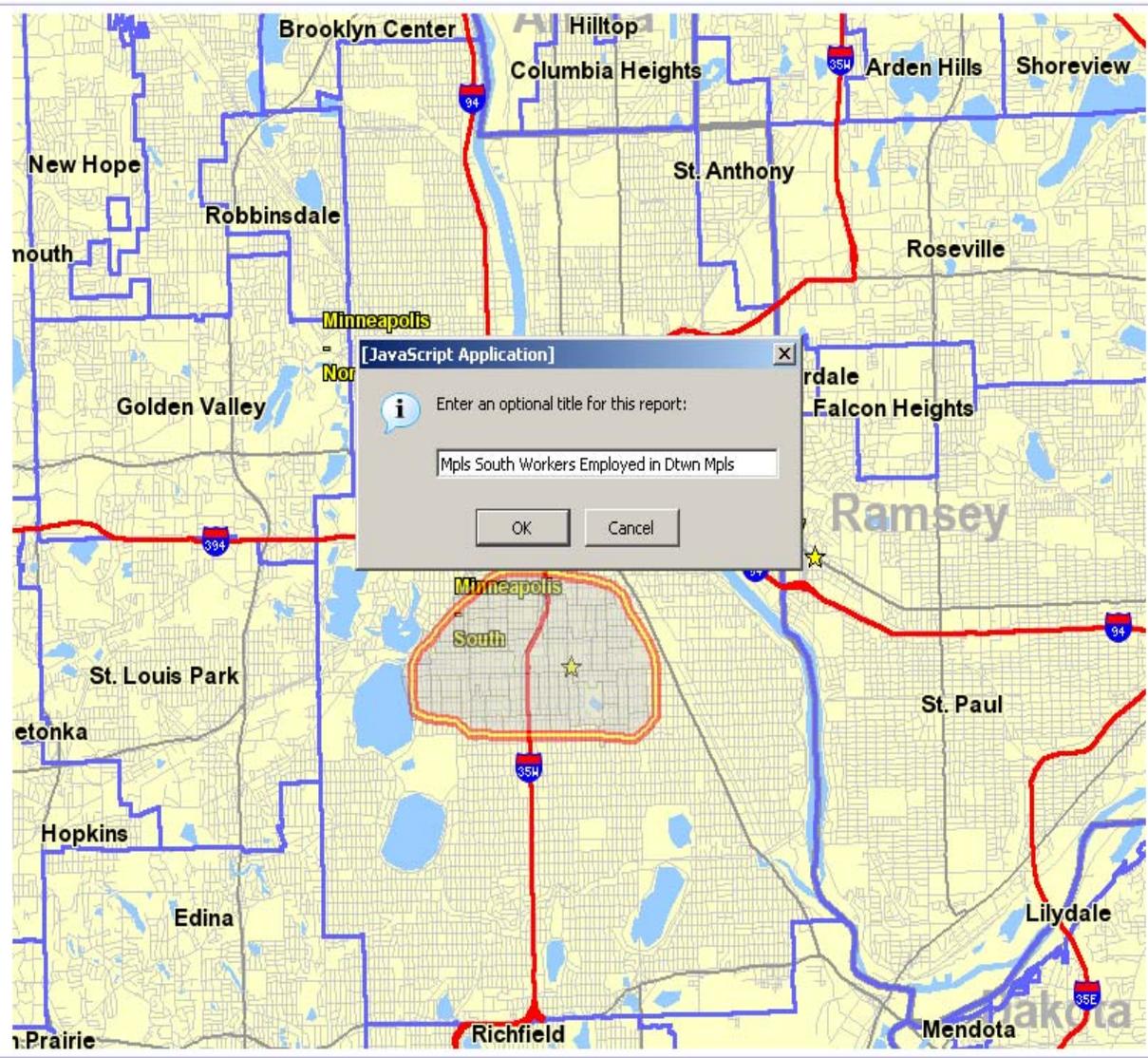
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[Commute Shed Interdependencies Report](#)

Residential Labor force Characteristics and Place of Work

Selected Area: "MPLS SOUTH WORKERS EMPLOYED IN DTWN MPLS"

[Selected Home and Work Area Correspondence](#)

	2003		2002	
	Count	Share	Count	Share
All Workers Living in Home Area	33264	100%	33264	100%
Workers in Selected Workplace Area	6173	18%	6173	18%
(Area components -- city/township)				
* Minneapolis City	6173	18%	6173	18%

[Definitions and Disclaimers](#)

Sources:

LED Worker Origin/Destination Minnesota Database (Employed Workers in 2nd Quarter - 2002-2003)

Workers by Age - Choose one.

- Under age 30
- Age 30 to 54
- Age 55 or older

Workers by Earnings Paid - Choose one.

- Under \$15K
- \$15K to \$39K
- \$40K or more

Workers by Primary Industry (2-digit NAICS) - Choose one.

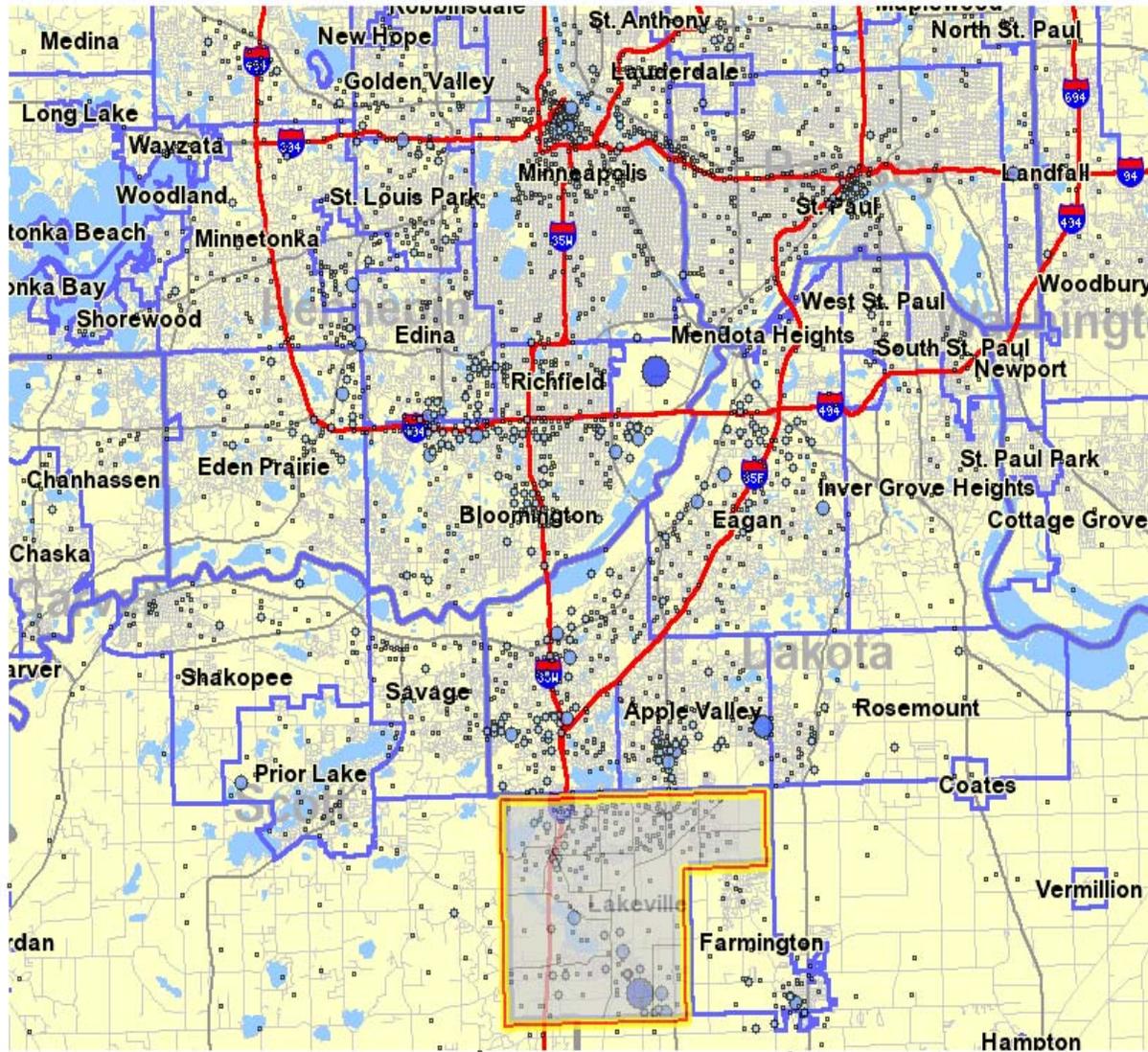
- Agric., Forestry, Fishing and Hunting (NAICS 11)
- Mining (NAICS 21)
- Utilities (NAICS 22)
- Construction (NAICS 23)
- Manufacturing (NAICS 31-33)
- Wholesale Trade (NAICS 42)
- Retail Trade (NAICS 44-45)
- Transportation and Warehousing (NAICS 48-49)
- Information (NAICS 51)
- Finance and Insurance (NAICS 52)
- Real Estate and Rental and Leasing (NAICS 53)
- Professional, Scientific, and Technical Services (NAICS 54)
- Mgmt of Companies and Enterprises (NAICS 55)
- Admin. & Support, Waste Mgmt and Remediation (NAICS 56)
- Educational Services (NAICS 61)
- Health Care and Social Assistance (NAICS 62)
- Arts, Entertainment, and Recreation (NAICS 71)
- Accommodation and Food Services (NAICS 72)
- Other Services (excl. Public Admin.) (NAICS 81)
- Public Administration (NAICS 92)

Submit Request

Clear Form

Placename Lookup Map Navigation Selection Tools Advanced Selection Show Report Save & Exit

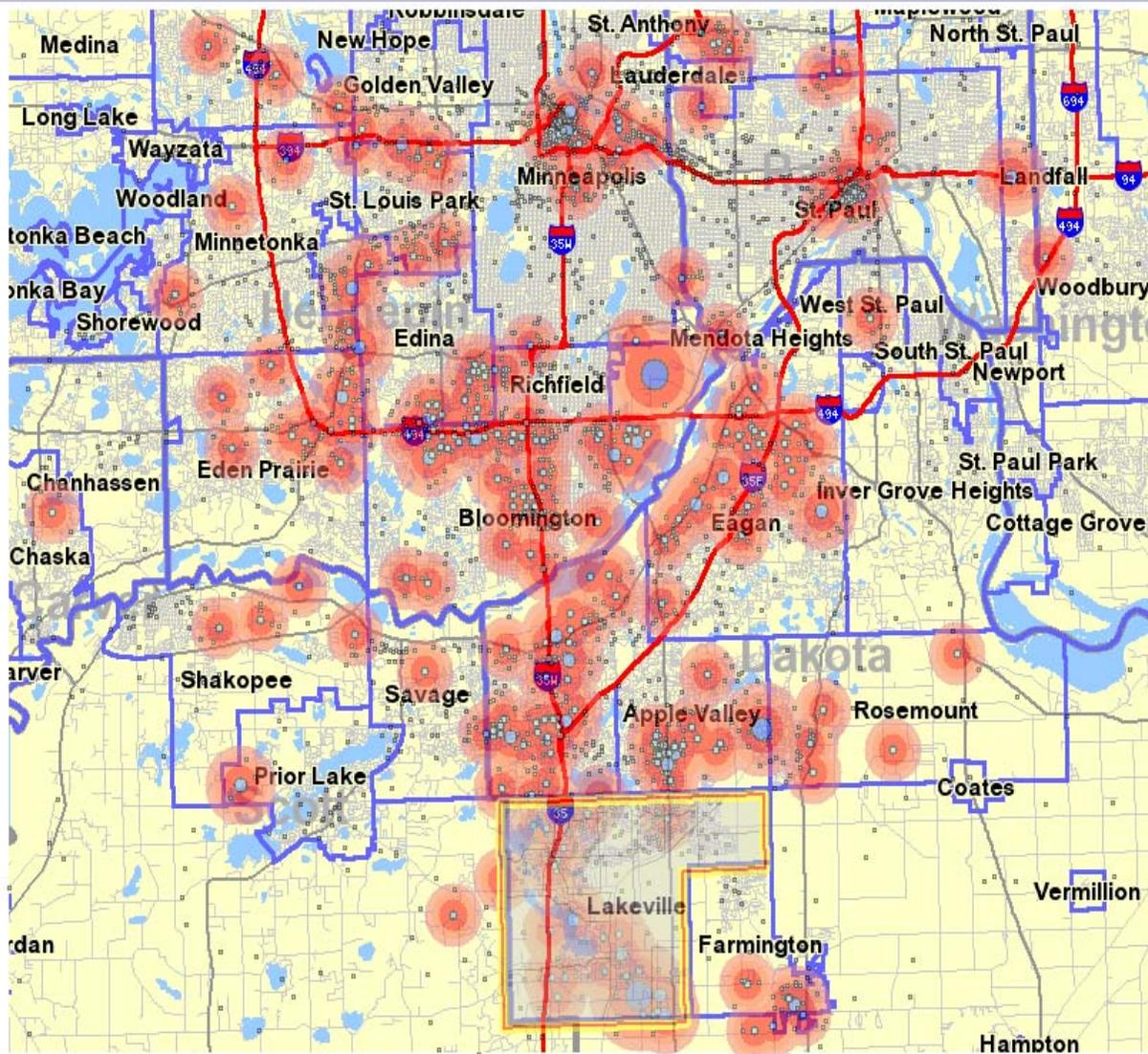
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Placename Lookup Map Navigation Selection Tools Advanced Selection Show Report Save & Exit

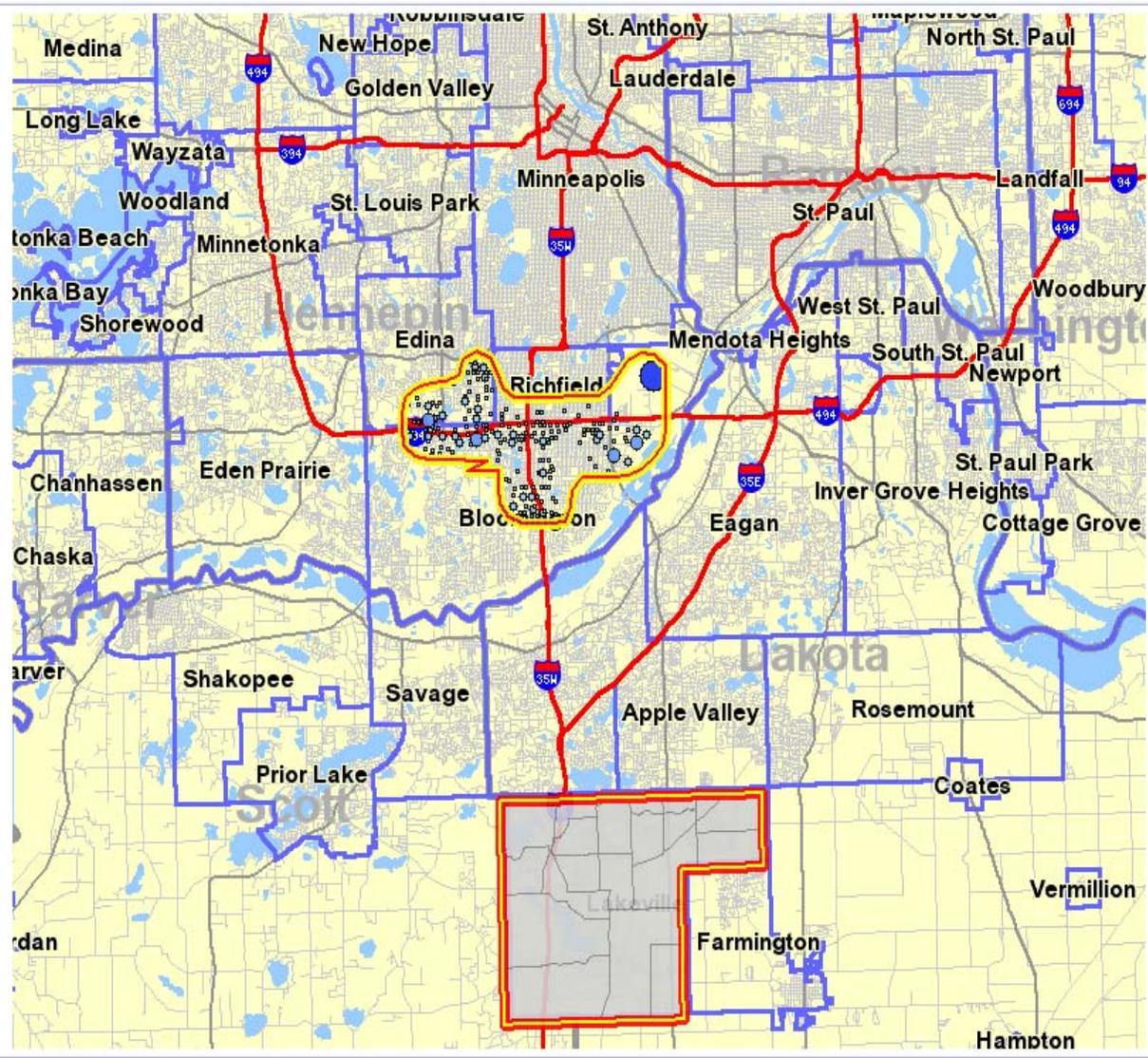
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[Commuter Shed Interdependencies Report](#)

Residential Labor force Characteristics and Place of Work

Selected Area: "LAKEVILLE WORKERS EMPLOYED ALONG THE I-494 CORRIDOR "

[Selected Home and Work Area Correspondence](#)

	2003		2002	
	Count	Share	Count	Share
All Workers Living in Home Area	26350	100%	26350	100%
Workers in Selected Workplace Area	4238	16%	4238	16%
(Area components -- city/township)				
* Bloomington City	2095	8%	2095	8%
* Fort Snelling Unorganized	1131	4%	1131	4%
* Edina City	882	3%	882	3%
* Richfield City	130	0%	130	0%

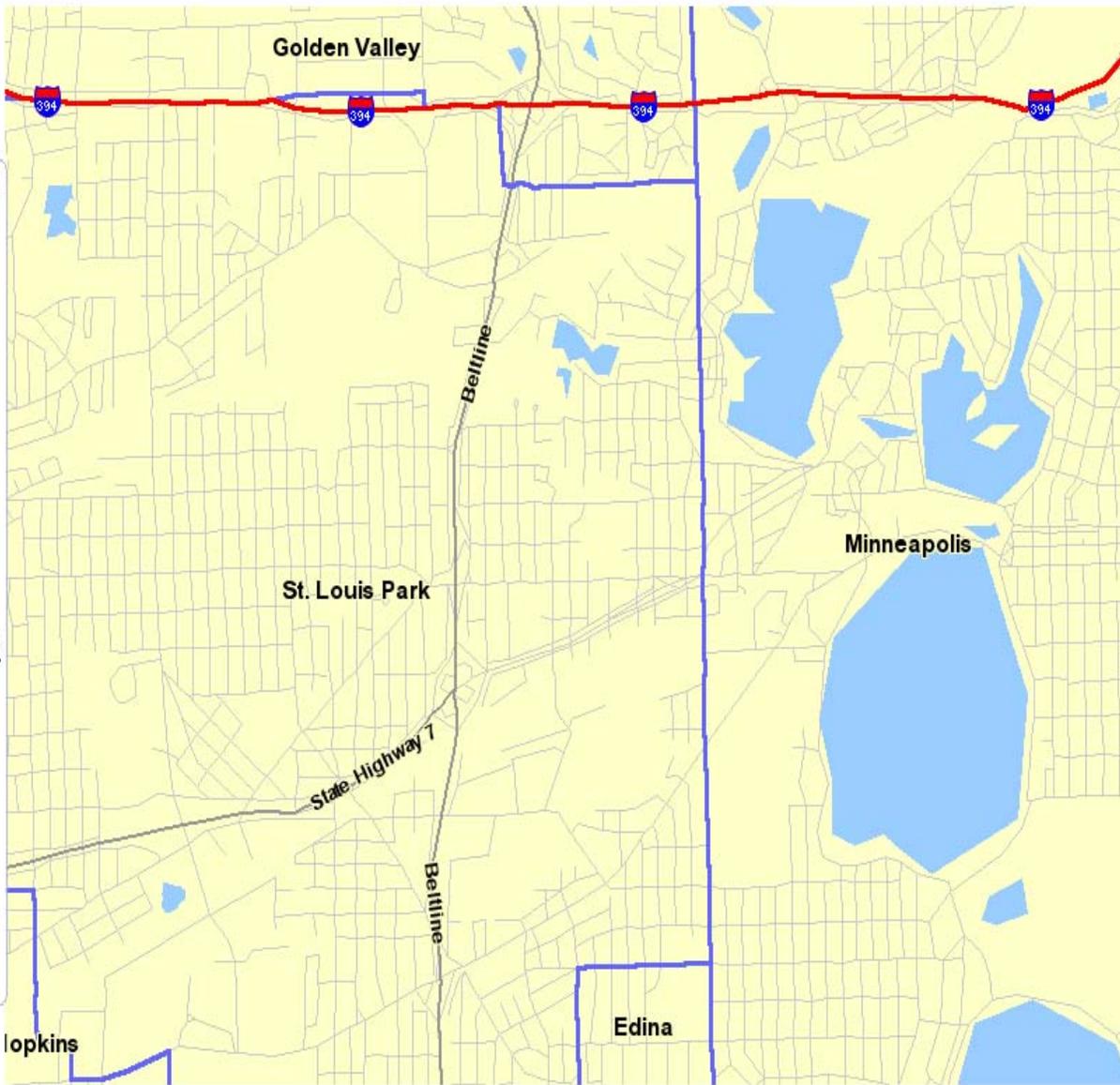
[Definitions and Disclaimers](#)

Sources:

LED Worker Origin/Destination Minnesota Database (Employed Workers in 2nd Quarter - 2002-2003)

Place Name Lookup Map Navigation Selection Tools Advanced Selection Map History Save & Exit

Legend   

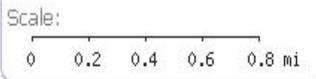


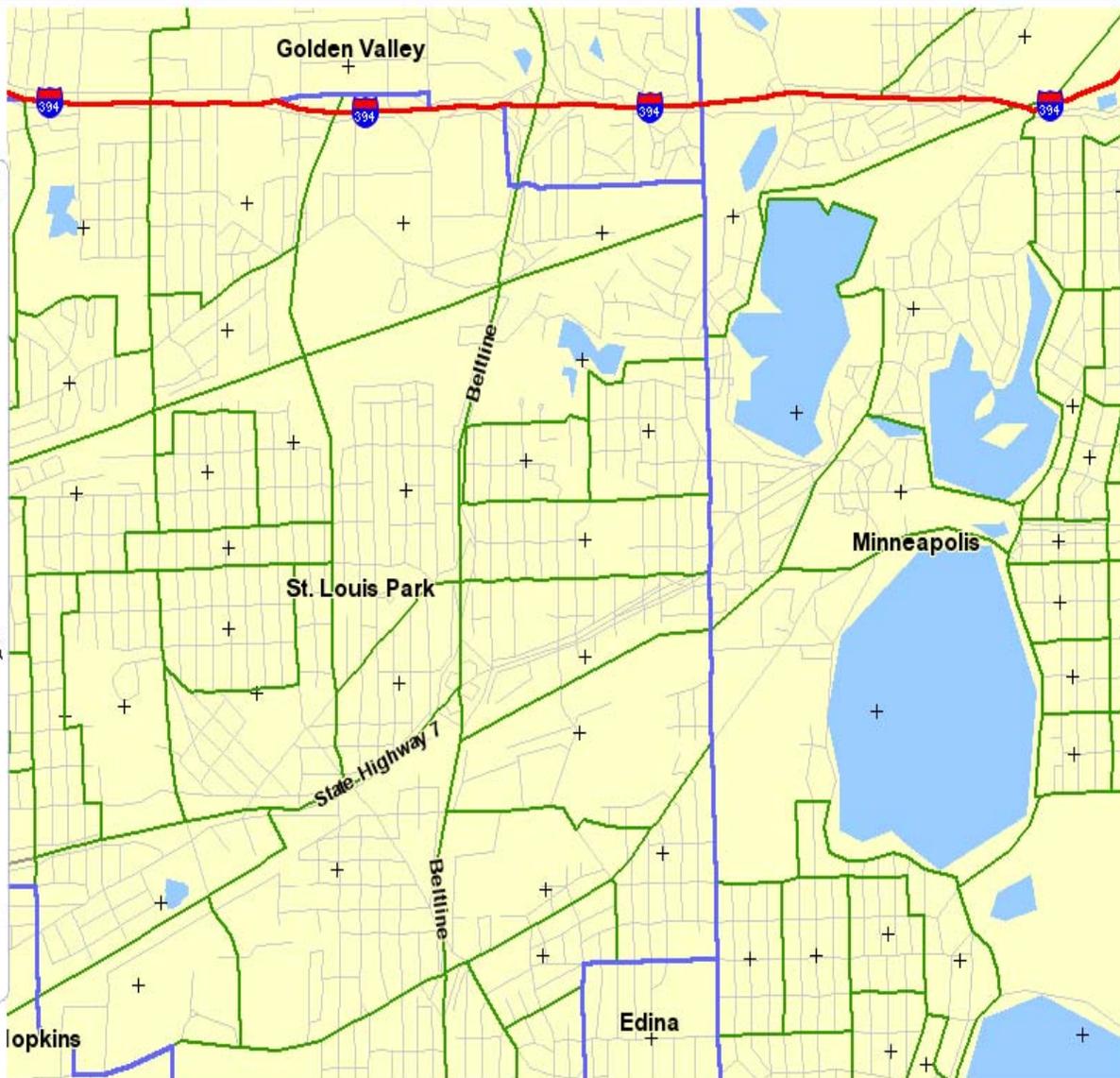
Legend

-  MN WorkForce Centers
-  Community & Technical Colleges
-  Colleges & Universities
-  Other Schools & Training Centers
-  US Interstate Hwys
-  Workforce Service Areas
-  Economic Development
- Regions
-  Cities & Towns
-  Minor Civil Divisions
-  Zipcodes
-  Census Block Groups
-  Counties
-  Lakes & Rivers
-  US & State Highways
-  Local Roads
-  Metropolitan Statistical Area (MSA)
-  States



Update Layers



[Place Name Lookup](#)[Map Navigation](#)[Selection Tools](#)[Advanced Selection](#)[Map History](#)[Save & Exit](#)[Legend](#)

Legend

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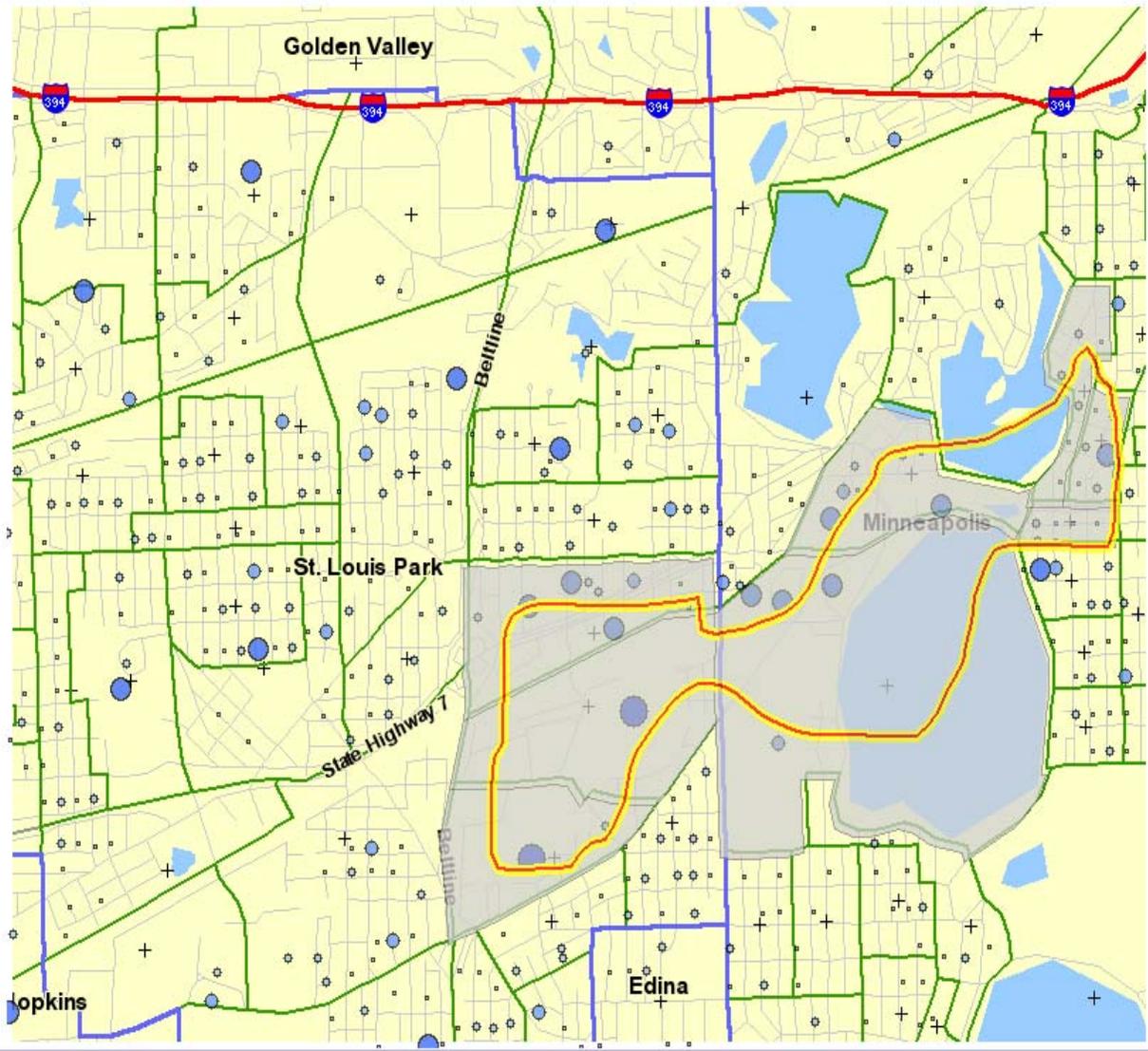
[Update Layers](#)

Scale:

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Placename Lookup | Map Navigation | Selection Tools | Advanced Selection | Show Report | Save & Exit

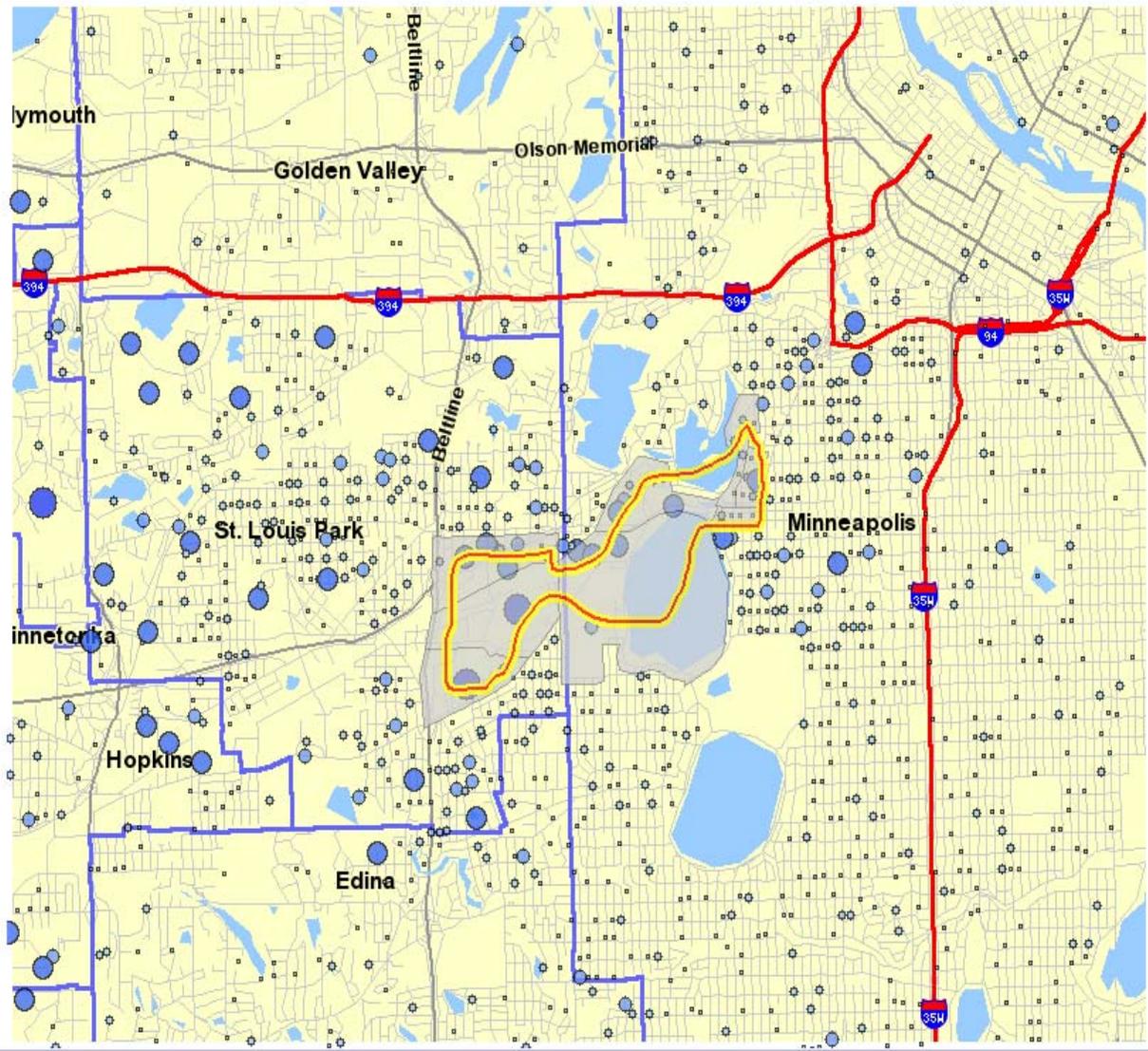
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Worker Origins and Workplace Characteristics

Selected Area: "MINNEAPOLIS LAKES EMPLOYMENT AREA"

Selected Workforce Segments: All

Selected Area Characteristics - In-Area Employment

	2003		2002	
	Count	Share	Count	Share
Number of Employers	400		400	
Workers (Based on Location of Primary Job)	12642	100%	12642	100%
Workers by Age				
* Under age 30	4265	33%	4265	33%
* Age 30 to 54	6750	53%	6750	53%
* Age 55 or older	1627	12%	1627	12%
Workers by Earnings Paid				
* Under \$15K	4437	35%	4437	35%
* \$15K to \$39K	4730	37%	4730	37%
* \$40K or more	3475	27%	3475	27%
Workers by Primary Industry (2-digit NAICS)				
* Health Care and Social Assistance	3041	24%	3041	24%
* Admin. & Support, Waste Mgmt and Remediation	2718	21%	2718	21%
* Retail Trade	1471	11%	1471	11%
* Accommodation and Food Services	978	7%	978	7%
* Professional, Scientific, and Technical Services	931	7%	931	7%
* Real Estate and Rental and Leasing	714	5%	714	5%
* Public Administration	564	4%	564	4%
* Wholesale Trade	418	3%	418	3%
* Construction	393	3%	393	3%
* Arts, Entertainment, and Recreation	369	2%	369	2%
* All other industries (click for full list)	1045	8	1045	8
Quarterly Workforce Indicators (2nd Qtr)				
* Total number of QWI jobs	6125	100%	6125	100%
* Number of jobs created	911	7%	911	7%
* Number of jobs eliminated	219	1%	219	1%
* Number of worker separations	560	4%	560	4%
- Avg. earnings of separated workers	\$959		\$959	
* Number of new hires	898	7%	898	7%
- Avg. earnings of new Hires	\$1158		\$1158	

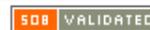
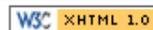
Labor Shed Characteristics - Where Workers Come From

	2003		2002	
	Count	Share	Count	Share
Workers (Based on Location of Primary Job)	12642	100%	12642	100%
Cities/Townships Where Workers Originate				
(Rank ordered listing)				
* Minneapolis City	1997	15	1997	15
* Out-of-State	1257	9	1257	9
* St. Louis Park City	1068	8	1068	8
* Plymouth City	474	3	474	3
* St. Paul City	455	3	455	3
* Minnetonka City	443	3	443	3
* All other cities or townships (click for full list)	6948	55	6948	55

Definitions and Disclaimers

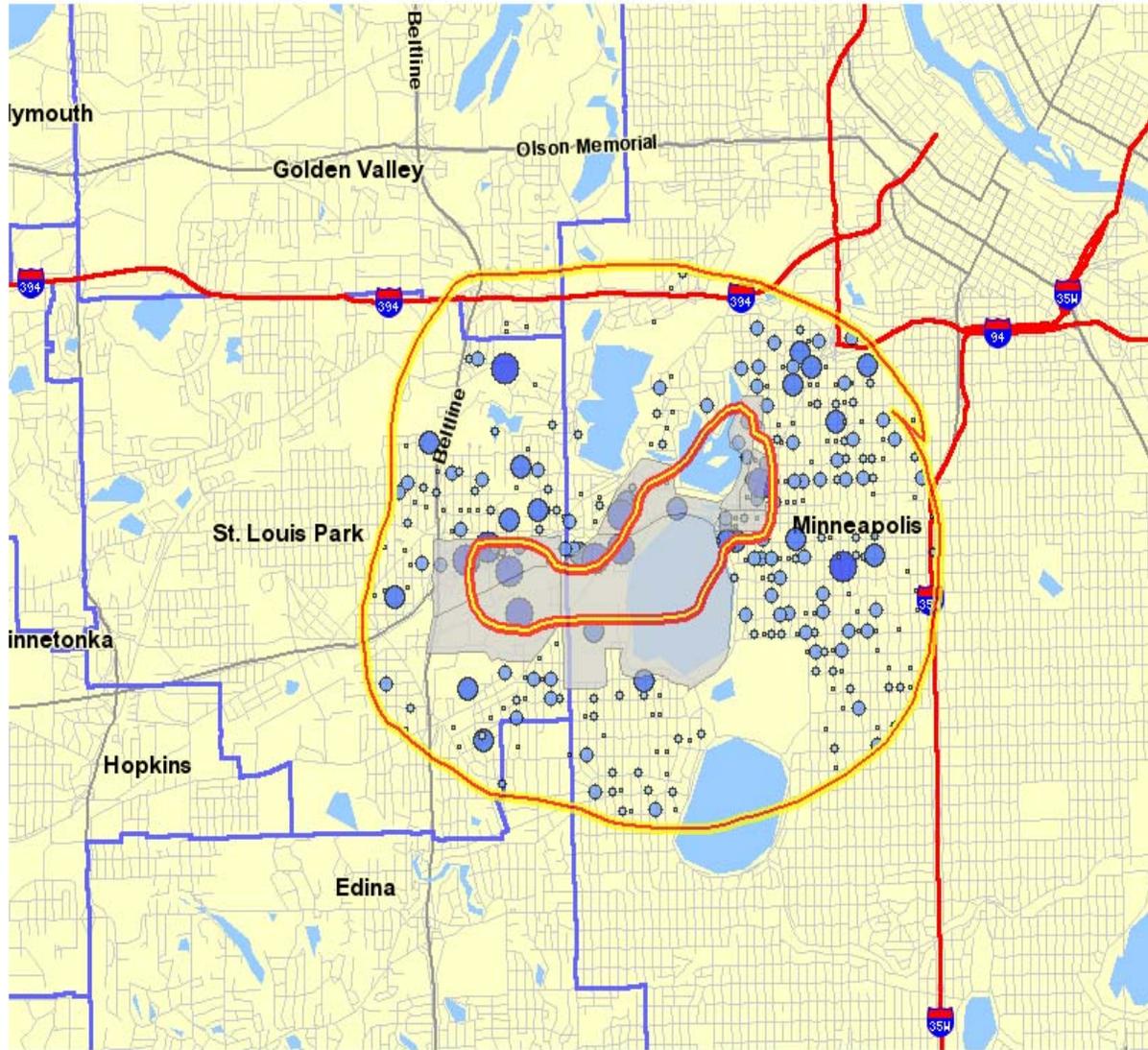
Source:

LED Worker Origin/Destination Minnesota Database (Employed Workers in 2nd Quarter -- 2002-2003)
 LED Quarterly Workforce Index (QWI Full 2nd Quarter Jobs -- 2002 & 2003)



[Placename Lookup](#) [Map Navigation](#) [Selection Tools](#) [Advanced Selection](#) [Show Report](#) [Save & Exit](#)

[Commute Labor] [Thermal Points Both] Opacity: Free 2nd



http://lehddev.excensisonline.com/selection_02/perl/selector.pl?mode=THERMAL&blockgroup=true&qlayer=&QID=1

[Labor Shed Interdependencies Report](#)

Worker Origins and Workplace Characteristics

Selected Area: "WORKERS LIVING WITHIN 3 MILES OF MINNEAPOLIS LAKES AREA"

[Selected Home and Work Area Correspondence](#)

	2003		2002	
	Count	Share	Count	Share
All Workers Employed in Workplace Area	8365	100%	8365	100%
Workers in Selected Home Area	773	9%	773	9%
(Area components -- city/township)				
* Minneapolis City	546	6%	546	6%
* St. Louis Park City	221	2%	221	2%
* Golden Valley City	3	0%	3	0%
* Edina City	3	0%	3	0%

[Definitions and Disclaimers](#)

Sources:

LED Worker Origin/Destination Minnesota Database (Employed Workers in 2nd Quarter - 2002-2003)