

# *Madison In Motion*

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## *Issues and Opportunities*

*Transportation Master Plan Oversight Committee*

*June 18, 2015*



**MADISON IN MOTION**  
*Sustainable Transportation Master Plan*

## *Madison In Motion*

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- *Commuter Mode Split Patterns*
- *Economic Patterns and Transportation Options*
- *Potential Park and Ride Locations*



# Mode Split - Citywide

## B08301: MEANS OF TRANSPORTATION TO WORK

Universe: Workers 16 years and over

ACS 1 Year Estimates

	Drove alone	Carpooled	Transit	Bike	Walked	Other	Work at Home	
<b>2013</b>	87,023	10,387	13,596	6,707	15,087	1,108	4,980	138,888
<b>2010</b>	80,904	11,224	10,935	7,692	11,469	1,211	4,131	127,566
<b>2006</b>	78,174	11,198	10,501	4,379	11,702	877	3,282	120,113

	Drove alone	Carpooled	Transit	Bike	Walked	Other	Work at Home	
<b>2013</b>	62.7%	7.5%	9.8%	4.8%	10.9%	0.8%	3.6%	100%
<b>2010</b>	63.4%	8.8%	8.6%	6.0%	9.0%	0.9%	3.2%	100%
<b>2006</b>	65.1%	9.3%	8.7%	3.6%	9.7%	0.7%	2.7%	100%

### Change 2013-2006

<b>-2.4%</b>	<b>-1.8%</b>	1.0%	1.2%	1.1%	0.1%	0.9%
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## P030 and P049: MEANS OF TRANSPORTATION TO WORK

Universe: Workers 16 years and over

2000 and 1990 Decennial Census

	Drove alone	Carpooled	Transit	Bike	Walked	Other	Work at Home	
<b>2000</b>	78,700	11,477	8,340	3,814	12,755	946	3,675	119,707
<b>1990</b>	64,787	12,275	7,920	3,547	13,447	1,067	2,844	105,887

	Drove alone	Carpooled	Transit	Bike	Walked	Other	Work at Home	
<b>2000</b>	65.7%	9.6%	7.0%	3.2%	10.7%	0.8%	3.1%	100%
<b>1990</b>	61.2%	11.6%	7.5%	3.3%	12.7%	1.0%	2.7%	100%

### Change 2000-1990

4.6%	<b>-2.0%</b>	<b>-0.5%</b>	<b>-0.2%</b>	<b>-2.0%</b>	<b>-0.2%</b>	0.4%
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# Mode Split - Citywide

## B08101: MEANS OF TRANSPORTATION TO WORK BY AGE

Universe: Workers 16 years and over

ACS 1 Year Estimates

2013	Drove alone	Carpool	Transit	Walk	Other	Home	
	87,023	10,387	13,596	15,087	7,815	4,980	138,888
16 to 19 years	2,829	97	738	1,603	536	191	5,994
20 to 24 years	11,130	1,771	3,576	6,876	2,070	499	25,922
25 to 44 years	42,546	5,435	6,301	4,427	3,337	2,584	64,630
45 to 54 years	14,744	1,850	1,539	732	775	707	20,347
55 to 59 years	6,551	829	739	643	611	180	9,553
60 to 64 years	5,227	320	431	484	236	227	6,925
65 years and over	3,996	85	272	322	250	592	5,517

16 to 19 years	47.2%	1.6%	12.3%	26.7%	8.9%	3.2%	100.0%
20 to 24 years	42.9%	6.8%	13.8%	26.5%	8.0%	1.9%	100.0%
25 to 44 years	65.8%	8.4%	9.7%	6.8%	5.2%	4.0%	100.0%
45 to 54 years	72.5%	9.1%	7.6%	3.6%	3.8%	3.5%	100.0%
55 to 59 years	68.6%	8.7%	7.7%	6.7%	6.4%	1.9%	100.0%
60 to 64 years	75.5%	4.6%	6.2%	7.0%	3.4%	3.3%	100.0%
65 years and over	72.4%	1.5%	4.9%	5.8%	4.5%	10.7%	100.0%

Change: 2005-2013	Drove alone	Carpool	Transit	Walk	Other	Home	
	7,345	1,174	5,312	6,174	2,202	981	
16 to 19 years	-12.3%	-7.8%	-1.4%	13.4%	6.3%	1.7%	2,034
20 to 24 years	-16.7%	1.9%	3.5%	7.0%	3.6%	0.7%	6,109
25 to 44 years	-5.8%	0.1%	4.5%	1.2%	-0.6%	0.6%	9,685
45 to 54 years	3.2%	-0.6%	-1.5%	-1.2%	-0.7%	0.7%	-2,733
55 to 59 years	-1.6%	-1.5%	1.3%	5.8%	1.9%	-5.9%	1,895
60 to 64 years	-7.6%	2.7%	2.1%	-0.5%	1.5%	1.8%	3,582
65 years and over	3.6%	-6.1%	2.3%	5.8%	3.2%	-8.7%	2,616





# Mode Split - Citywide

B08105A-I: MEANS OF TRANSPORTATION TO WORK BY RACE  
 Universe: Workers 16 years and over in households  
 ACS 1 Year Estimates

<b>2013</b>	Drove alone	Carpooled	Transit	Walked	Other	Work at Home	
White	64.7%	6.4%	8.1%	10.9%	6.1%	3.9%	100%
Black	53.2%	18.2%	20.4%	3.1%	4.4%	0.7%	100%
Asian	55.5%	12.1%	19.5%	8.7%	0.4%	3.8%	100%
Other	-	-	-	-	-	-	
Two or More Races	41.3%	5.2%	9.2%	35.6%	6.2%	2.5%	100%
White Not Hispanic	65.4%	5.6%	8.0%	10.8%	6.2%	4.0%	100%
Hispanic	50.2%	19.3%	12.6%	12.4%	4.7%	0.8%	100%

<b>Change 2013-2005</b>	Drove alone	Carpooled	Transit	Walked	Other	Work at Home	
White	-4.2%	-0.8%	1.3%	2.7%	1.0%	0.0%	
Black	-15.9%	0.3%	13.0%	2.0%	0.8%	-0.2%	
Asian	-9.8%	-0.5%	8.5%	5.2%	-4.7%	1.2%	
Two or More Races	-	-	-	-	-	-	
White Not Hispanic	-3.6%	-1.7%	1.5%	2.6%	1.0%	0.2%	
Hispanic	-19.9%	12.4%	-0.1%	4.9%	2.9%	-0.2%	



# Mode Split - Citywide

B08122: MEANS OF TRANSPORTATION TO WORK BY POVERTY STATUS IN THE PAST 12 MONTHS  
 Universe: Workers 16 years and over for whom poverty status is determined  
 ACS 1 Year Estimates

**2013**

% of Poverty Level	Drove alone	Carpooled	Transit	Walked	Other	Work at Home	
Below 100%	6,851	1,376	2,444	5,519	1,873	582	18,645
100-149%	5,256	1,314	1,684	1,365	656	202	10,477
At or above 150%	74,324	7,644	9,268	6,643	5,238	4,028	107,145

% of Poverty Level	Drove alone	Carpooled	Transit	Walked	Other	Work at Home	
Below 100%	36.7%	7.4%	13.1%	29.6%	10.0%	3.1%	100%
100-149%	50.2%	12.5%	16.1%	13.0%	6.3%	1.9%	100%
At or above 150%	69.4%	7.1%	8.6%	6.2%	4.9%	3.8%	100%

**Change 2013-2005**

% of Poverty Level	Drove alone	Carpooled	Transit	Walked	Other	Work at Home
Below 100%	-12.5%	5.3%	0.1%	-0.4%	5.9%	1.6%
100-149%	-9.9%	7.7%	8.1%	1.4%	-5.5%	-1.9%
At or above 150%	-3.1%	-1.9%	2.4%	2.1%	0.4%	0.0%



# Mode Split - Citywide

B08201: HOUSEHOLD SIZE BY VEHICLES AVAILABLE

Universe: Households

ACS 1 Year Estimates 2013, 2010 2005

2013		Household Size			
		1	2	3	4+
Total Households		41,690	37,988	12,779	14,967
Vehicles Available	0	8,894	3,792	707	1,009
	1	30,147	12,190	2,594	3,562
	2	2,457	19,058	6,738	7,732
	3	118	2,415	2,216	1,411
	4+	74	533	524	1,253

2013		Household Size			
		1	2	3	4+
Vehicles Available	0	21.3%	10.0%	5.5%	6.7%
	1	72.3%	32.1%	20.3%	23.8%
	2	5.9%	50.2%	52.7%	51.7%
	3	0.3%	6.4%	17.3%	9.4%
	4+	0.2%	1.4%	4.1%	8.4%

Change 2013-2005

		Household Size			
		1	2	3	4+
Vehicles Available	0	-1.4%	4.2%	2.9%	1.9%
	1	4.2%	7.0%	-5.6%	6.9%
	2	-0.1%	-11.0%	4.2%	-2.1%
	3	-1.4%	-0.5%	-2.1%	-5.4%
	4+	-1.4%	0.3%	0.7%	-1.3%

B25044: TENURE BY VEHICLES AVAILABLE

Universe: Occupied housing units

ACS 1 Year Estimates 2013, 2010 2005

2013		Owner Occupied	Renter Occupied
Total Households		50,518	56,906
Vehicles Available	0	998	13,404
	1	19,415	29,078
	2	23,979	12,006
	3	4,150	2,010
	4+	1,976	408

2013		Owner Occupied	Renter Occupied
Vehicles Available	0	2.0%	23.6%
	1	38.4%	51.1%
	2	47.5%	21.1%
	3	8.2%	3.5%
	4+	3.9%	0.7%

Change 2013-2005

		Owner Occupied	Renter Occupied
Vehicles Available	0	-0.1%	3.6%
	1	8.3%	2.7%
	2	-5.3%	-3.5%
	3	-3.1%	-1.4%
	4+	0.2%	-1.3%



## *Mode Split – Geographic Patterns*

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- *Census/ACS 5 year data at block group level*

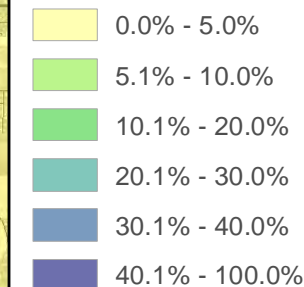




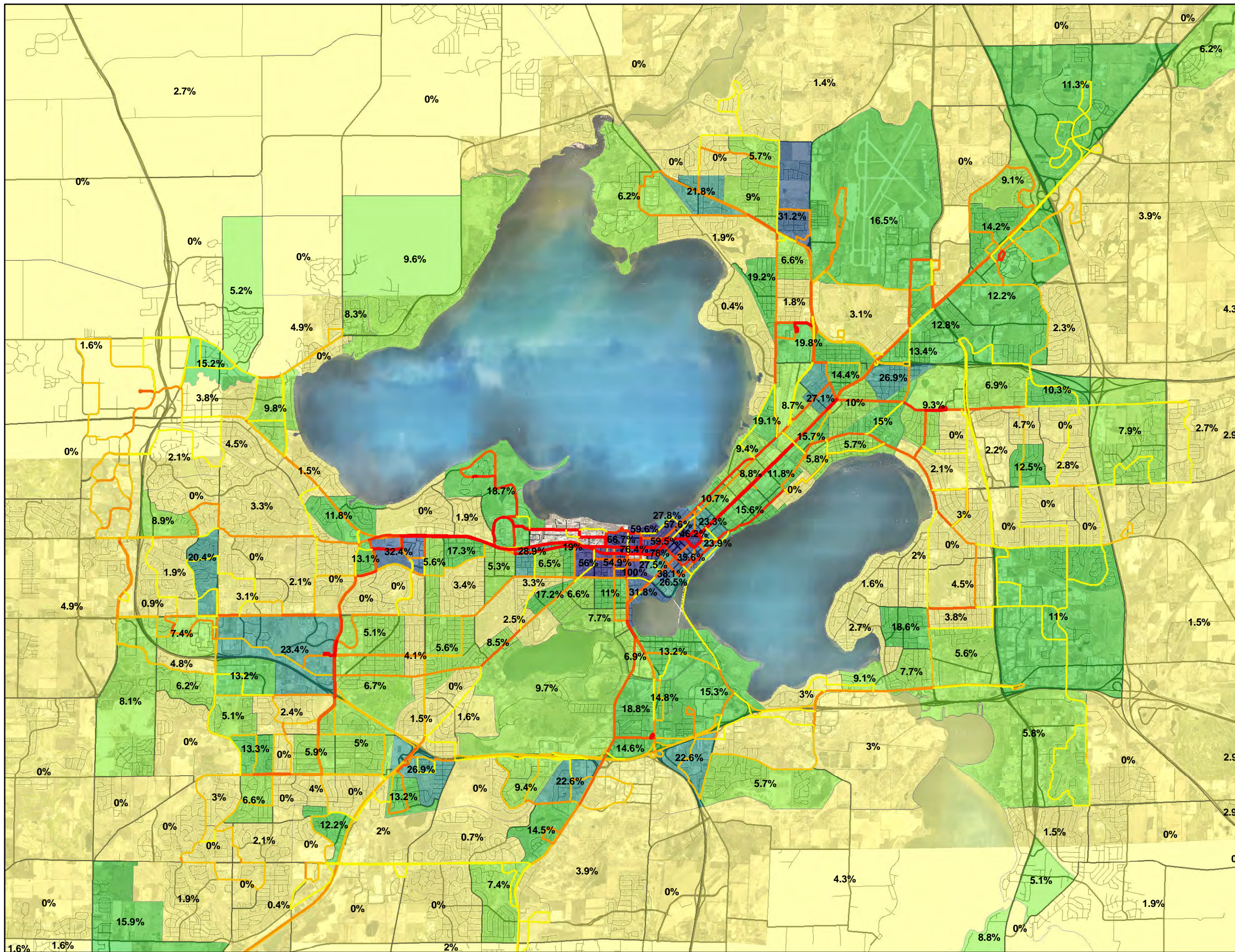
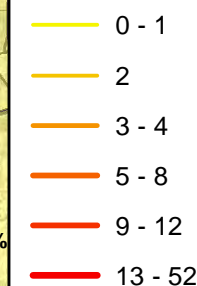


### Transit Dependent Populations

#### 2013 Percent of HH without a car

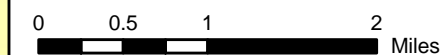


#### Metro Busses/Hour: 2013 AM Peak



Source:  
 2013 ACS 5 Year Estimates Table B25044  
 2000 Census Table H044  
 Tenure By Vehicles Available  
 Block Group Level  
 Madison Area MPO (GTFS data --Metro  
 Transit, 8/2013)

April 7, 2015

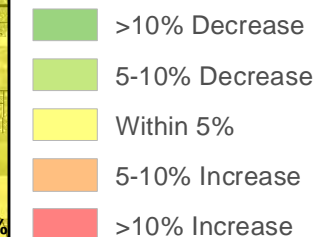






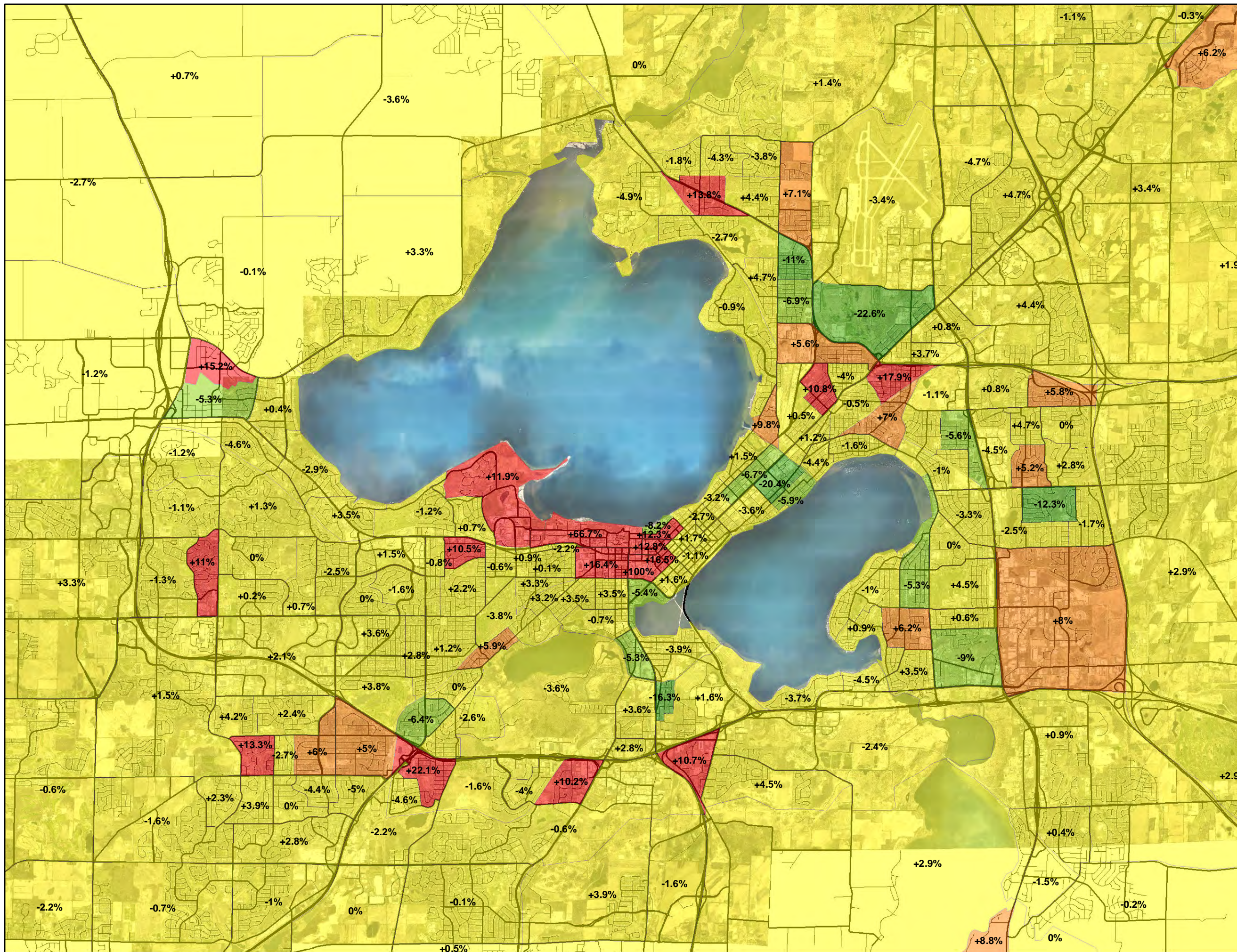
### Transit Dependent Populations

#### 2013-2000 Change in HH without a vehicle



Change refers to the percentage point change between rates in Census 2000 and ACS 2013 5 year estimates (ex. a rate of 20% in 2000 and 15% in 2013 data will be reflected as a 5% decrease).

Note: Certain census block group geography was reconfigured between 2000 and 2010, resulting in the area bound by Wright, Anderson, East Washington and Hwy 51 transitioning between two block groups. Value changes in the block groups containing the airport and one along East Washington reflect the change in geography.



Source:  
2013 ACS 5 Year Estimates Table B25044  
2000 Census Table H044  
Tenure By Vehicles Available  
Block Group Level

April 7, 2015

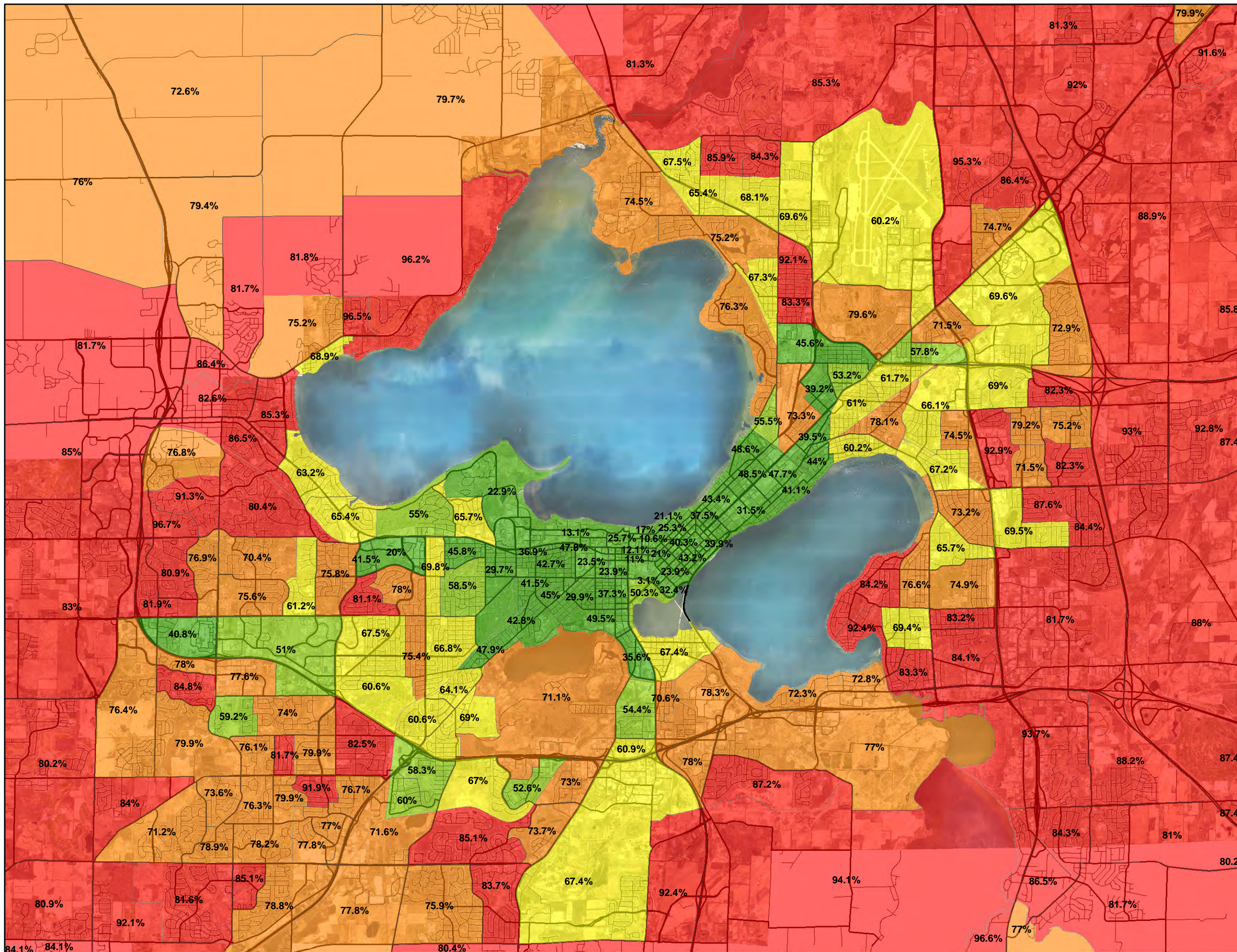
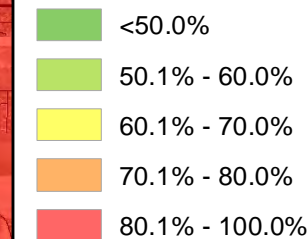






**Mode Split - Journey to Work**

**2013 Percent Drove to Work**



Source:  
2013 ACS 5 Year Estimates Table B08301  
2000 Census Table P030  
Means Of Transportation To Work For  
Workers 16 Years And Over  
Block Group Level

April 7, 2015

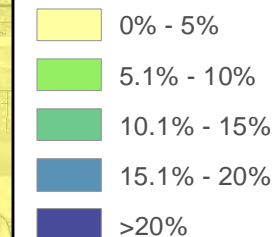




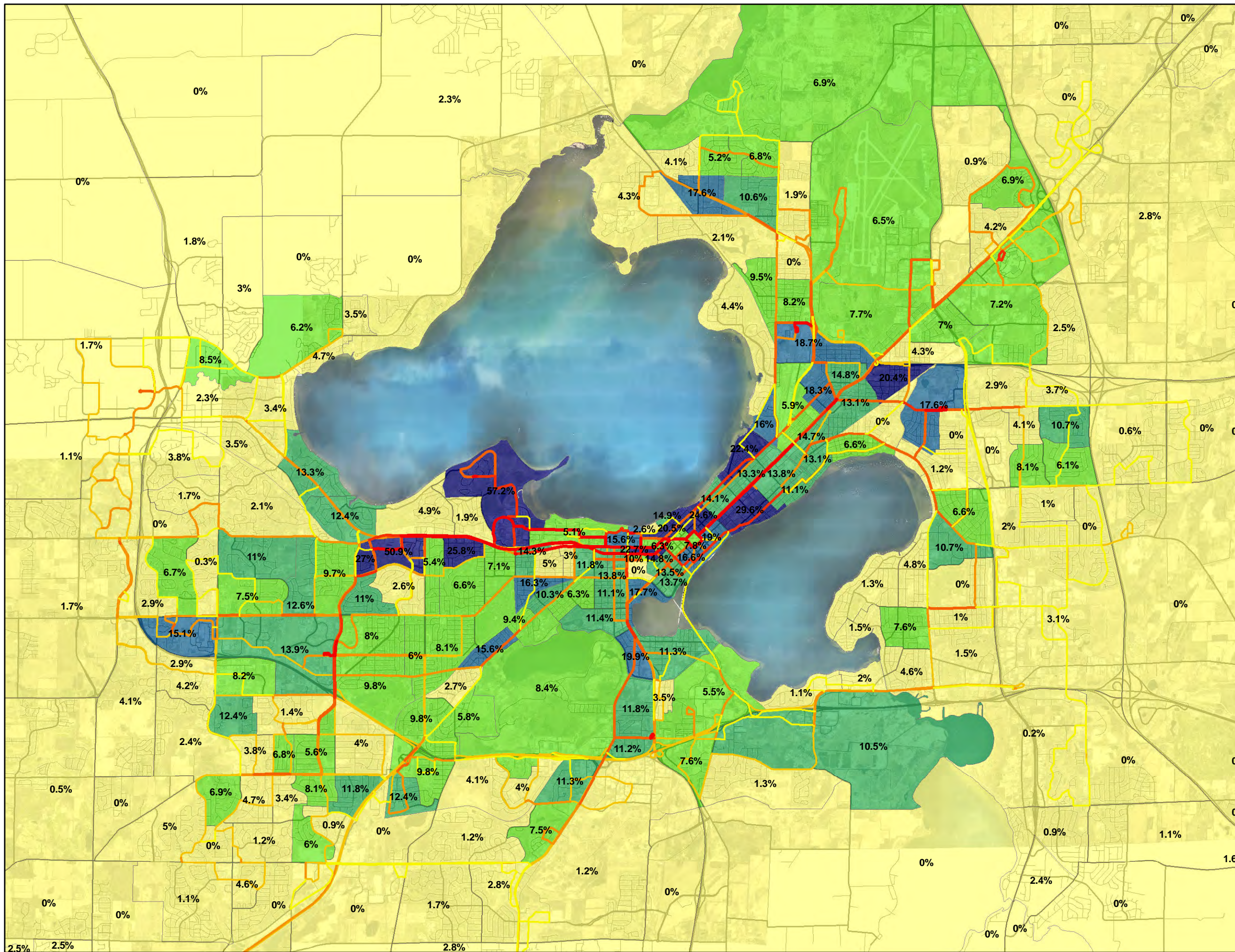
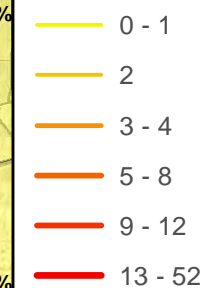


**Mode Split - Journey to Work**

**2013 Percent Transit**

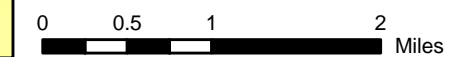


**Metro Busses/Hour: 2013 AM Peak**



Source:  
 2013 ACS 5 Year Estimates Table B08301  
 Means Of Transportation To Work For  
 Workers 16 Years And Over  
 Block Group Level  
 Madison Area MPO (GTFS data --Metro  
 Transit, 8/2013)

April 7, 2015





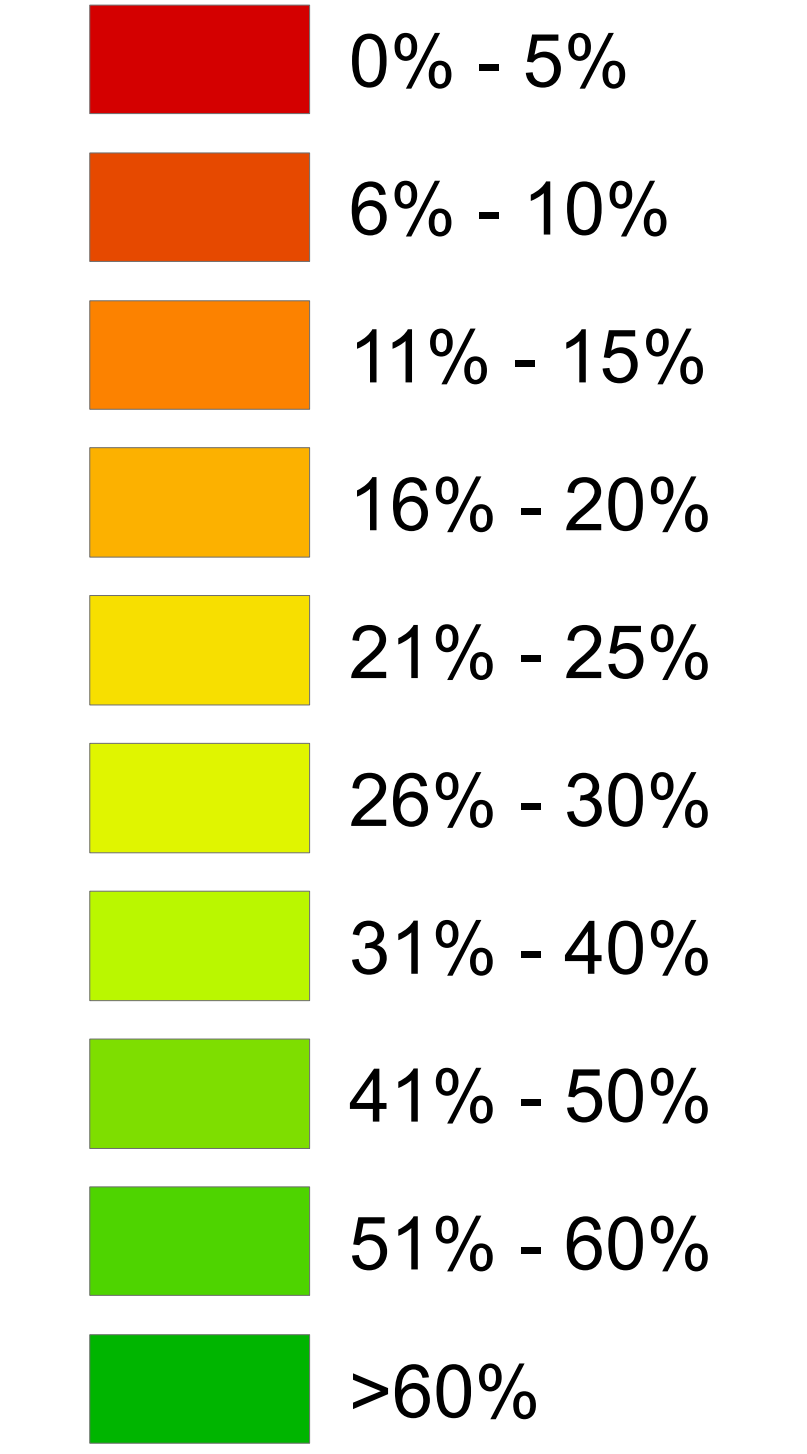




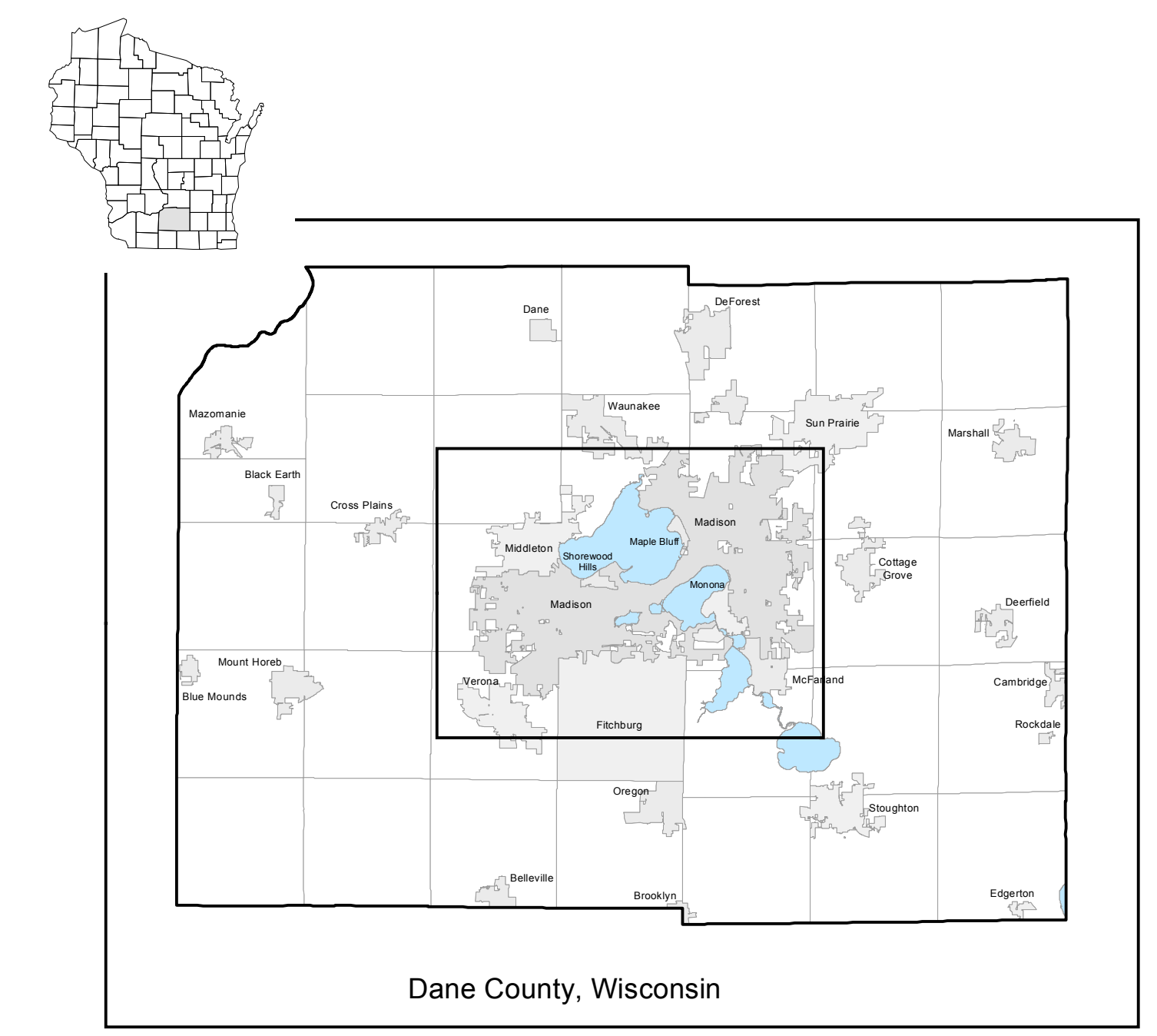
# Percent of Jobs (2010) Accessible by Walking and Transit

## Madison Area, Dane County, Wisconsin

### Jobs within 30 Minutes



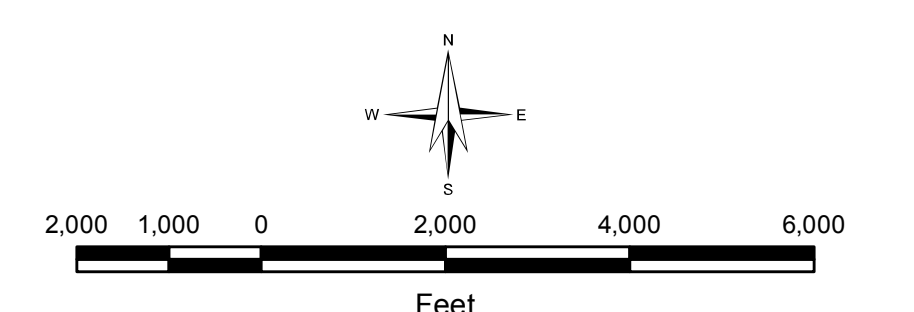
Transit times calculated using 3/2015 Metro Transit Routes and Schedule at 7:00 a.m., weekday.



Prepared by staff to the:

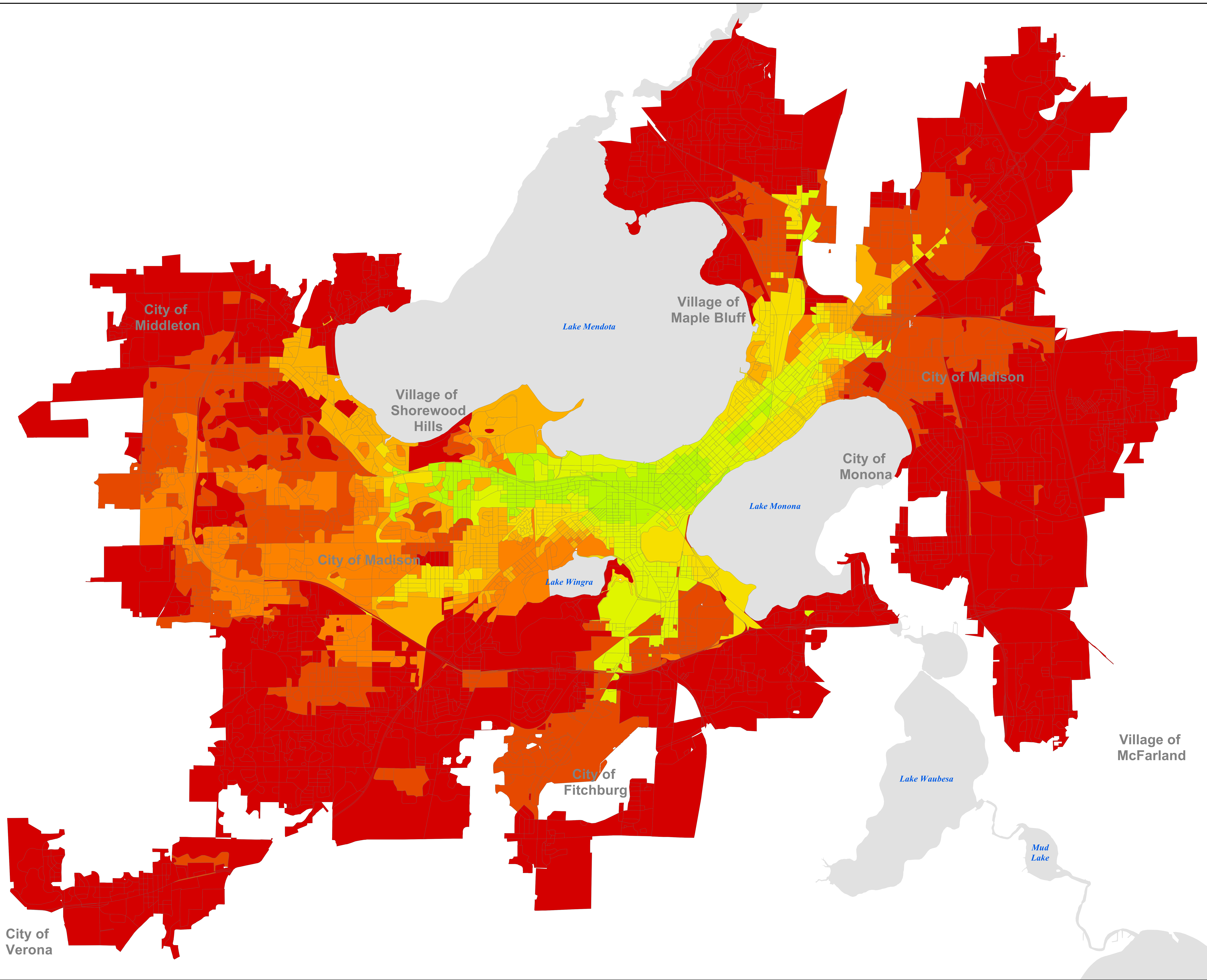


Date Revised: 6/16/2015



1:25,000  
1 Inch = 2000 feet  
Coordinate System: NAD 1983 HARN WISCRS Dane County Feet  
Projection: Lambert Conformal Conic

Source Info:  
Census Blocks: 2010 (U.S. Census Bureau)  
Employment: 2010 (POUSA.MATPB)  
Metro Transit Routes: 2014 (CTTS)



City of Verona

City of Middleton

Village of Shorewood Hills

Village of Maple Bluff

City of Madison

City of Monona

City of Madison

Lake Wingra

Lake Mendota

Lake Monona

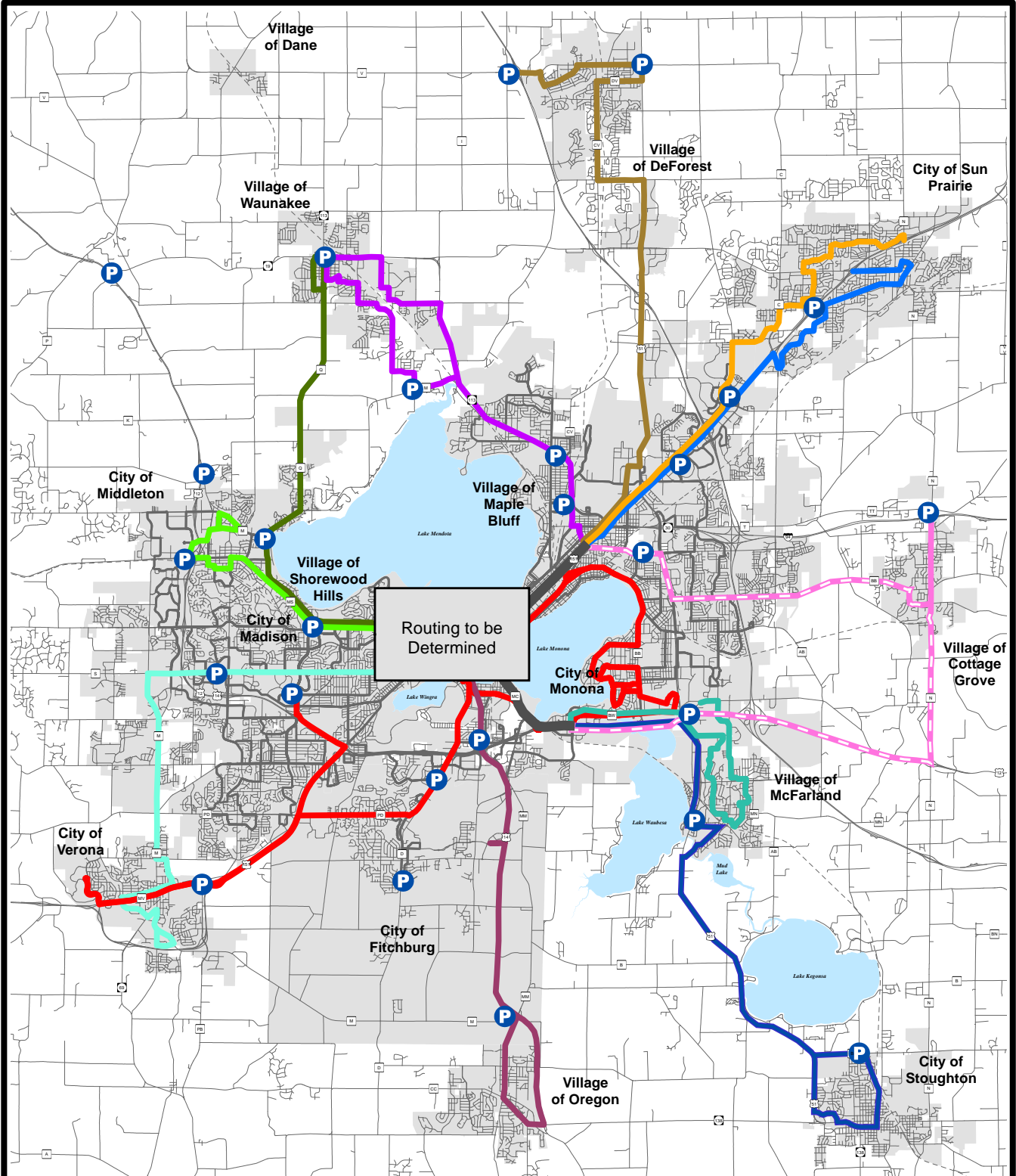
City of Fitchburg

Lake Waubesa

Mud Lake

Village of McFarland

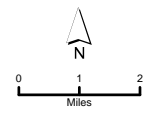




**Express Bus Routes  
Madison Urban Area  
Dane County, Wisconsin**

- P** Existing or Planned Park and Ride
- Existing Metro Bus Route (2012)
- Existing Express Route\*
- \* all other colors are Planned Routes

Prepared by staff to the:



Date: 1/23/2013



# MADISON IN MOTION

Sustainable Transportation Master Plan

## Park and Rides



Potential Park and Ride location



DOT Potential Park and Rides



DOT Park and Rides

## Bus Rapid Transit



Routes



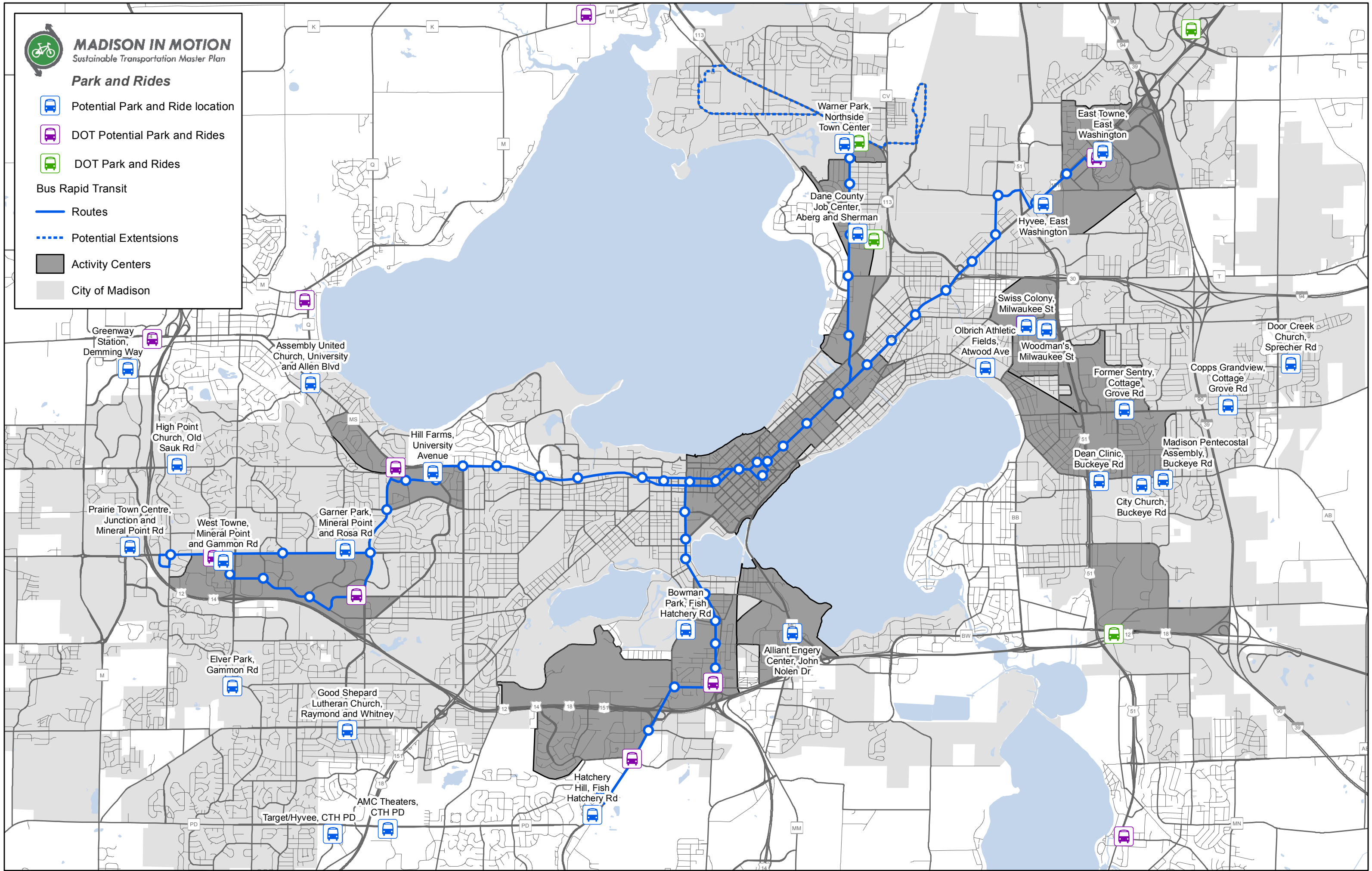
Potential Extensions



Activity Centers



City of Madison

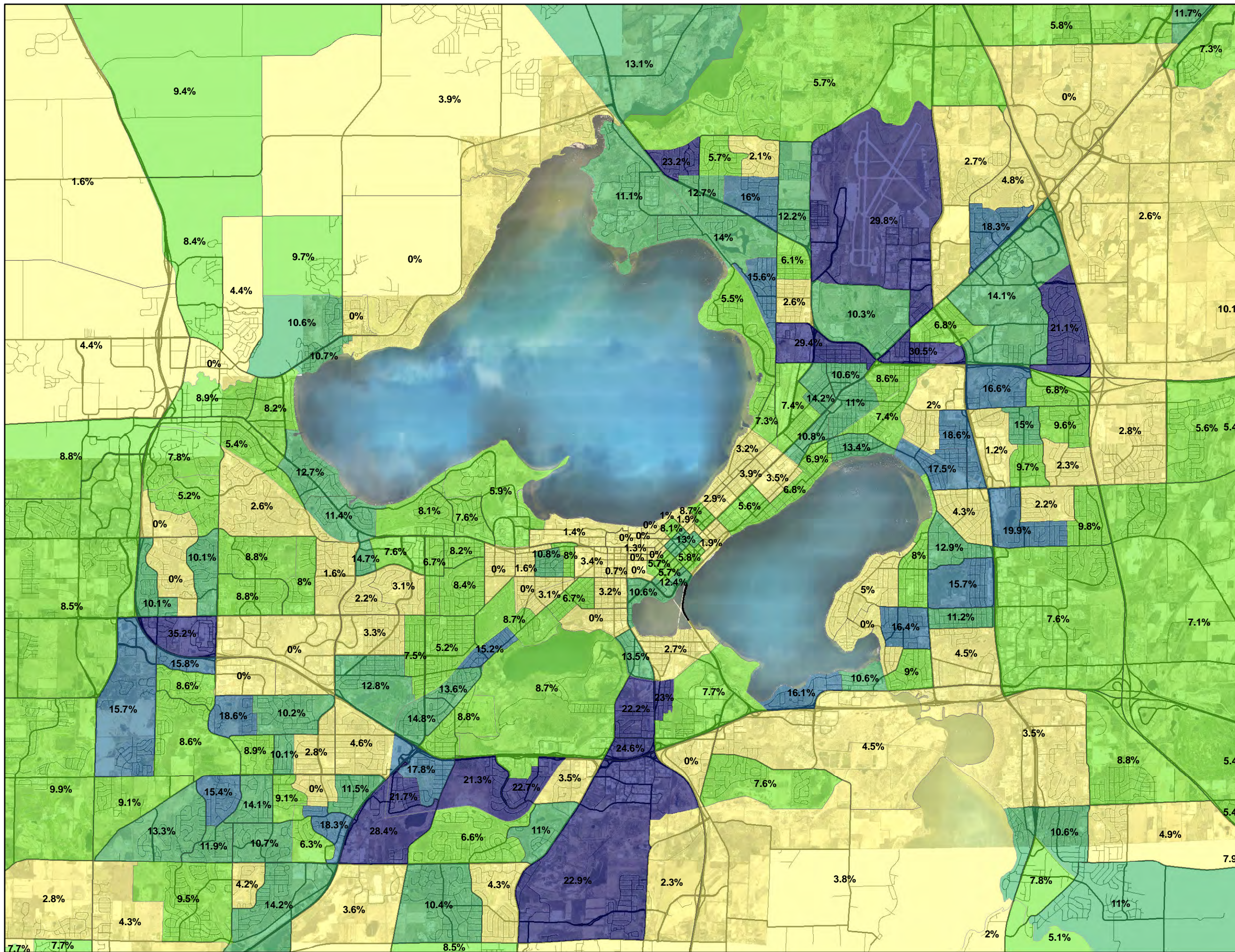
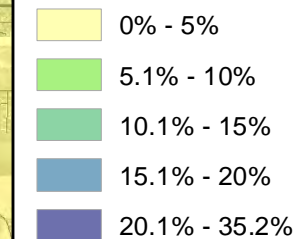






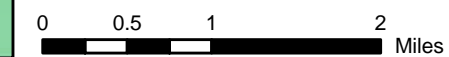
**Mode Split - Journey to Work**

**2013 Percent Carpool**



Source:  
2013 ACS 5 Year Estimates Table B08301  
2000 Census Table P030  
Means Of Transportation To Work For  
Workers 16 Years And Over  
Block Group Level

April 7, 2015





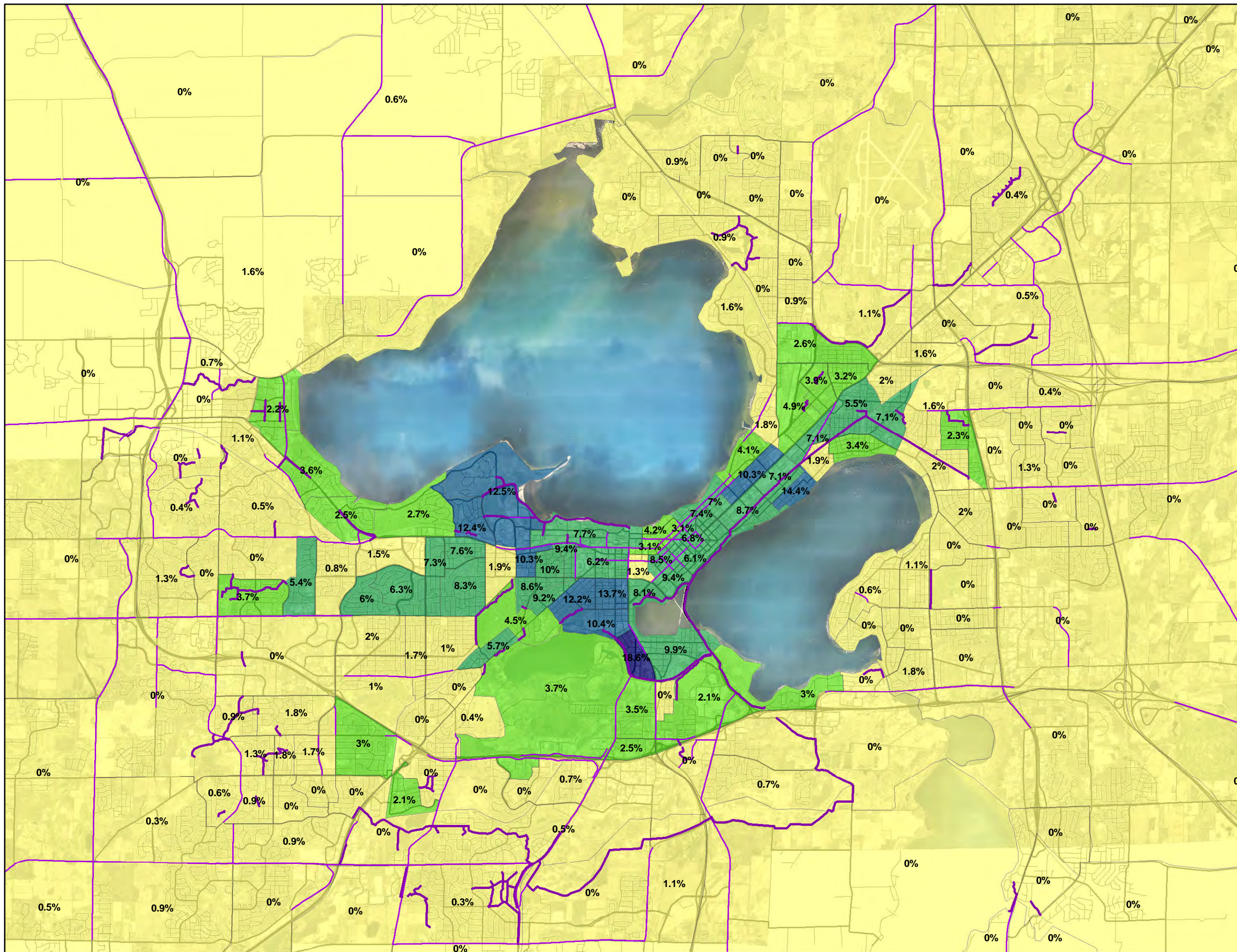


### Mode Split - Journey to Work

- Off-street Bike Paths (2000)
- On Street Lanes (2000)

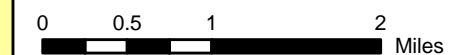
### 2000 Percent Bike to Work

- 0.0% - 2.0%
- 2.1% - 5.0%
- 5.1% - 10.0%
- 10.1% - 15.0%
- >15%



Source:  
2000 Census Table P030  
Means Of Transportation To Work For  
Workers 16 Years And Over  
Block Group Level

April 7, 2015










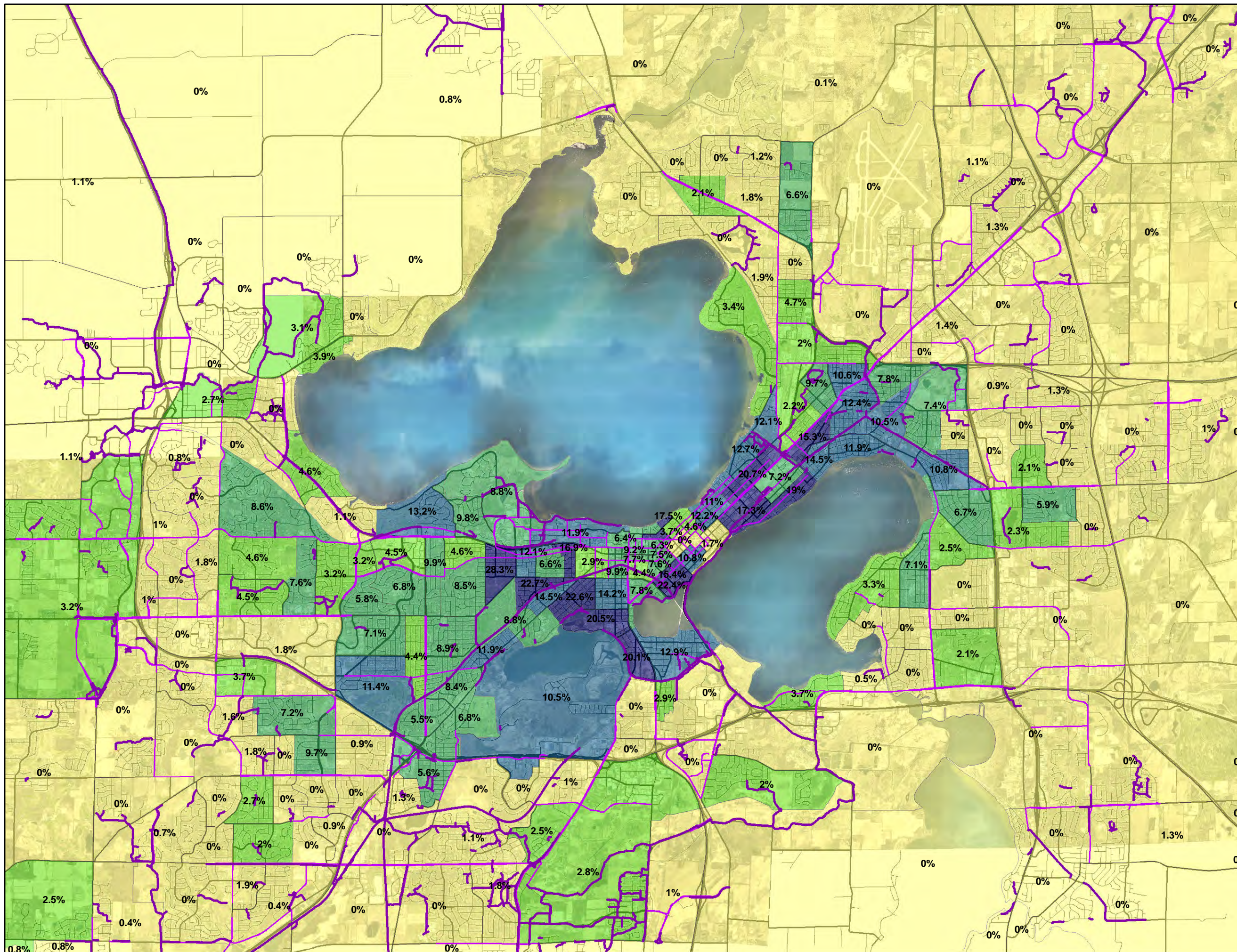


### Mode Split - Journey to Work

-  Bike Paths (off-street)
-  On Street Lanes

### 2013 Percent Bike to Work

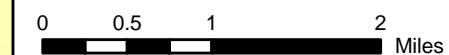
-  0-2%
-  2.1-5%
-  5.1-10%
-  10.1-15%
-  >15%



Source:  
2013 ACS 5 Year Estimates Table B08301  
Means Of Transportation To Work For  
Workers 16 Years And Over

Block Group Level

April 7, 2015





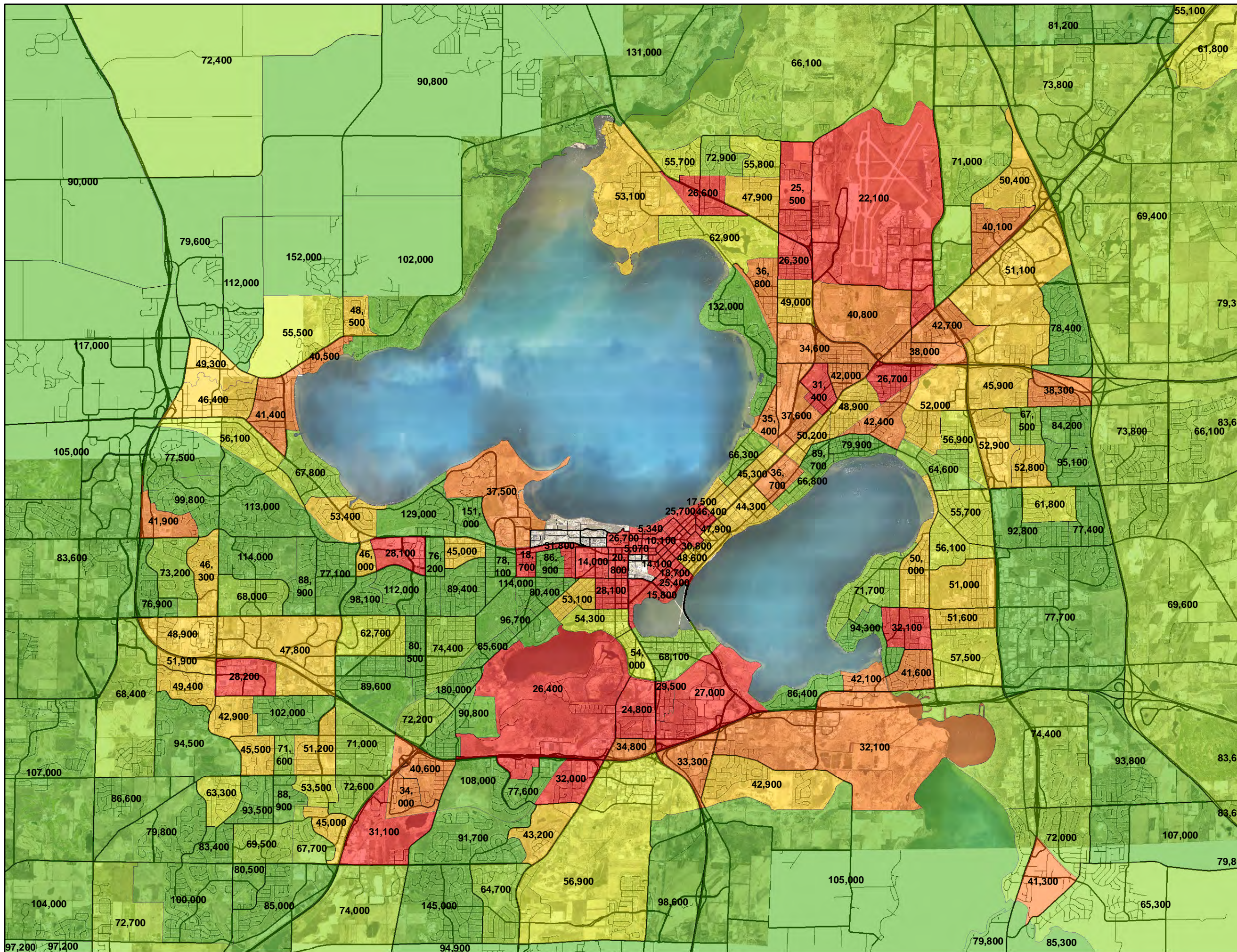


### Income

#### Median Income - 2013 ACS 5 Year Data

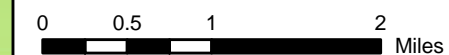
- <60% of County Median
- 61% - 80% of County Median
- 81% - 100% of County Median
- 101% - 120% of County Median
- 121% - 140% of County Median
- >140% of County Median

Note: Median household income of the block groups is displayed as a percentage of the county median income. The median household incomes for block groups are shown as the label.



Source:  
2013 ACS 5 Year Estimates Table B19013  
Median Household Income  
Block Group and County Level

April 7, 2015

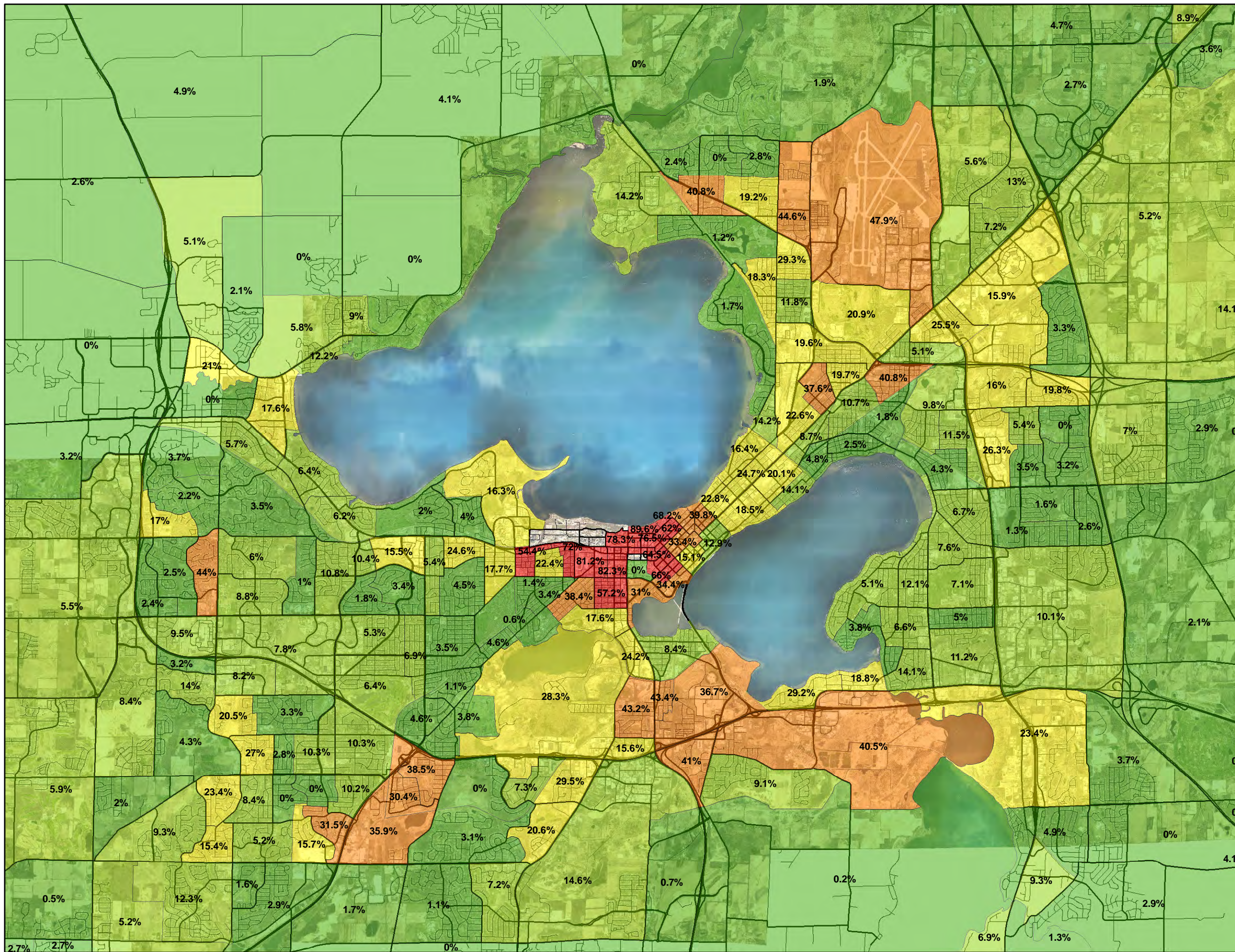
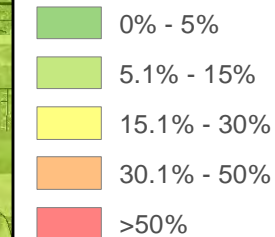






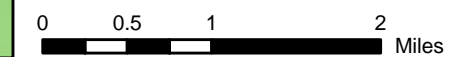
**Income**

**2013 Pop. below 100% of poverty level**



Source:  
2013 ACS 5 Year Estimates Table C17002  
Ratio Of Income To Poverty Level  
Block Group Level

April 7, 2015

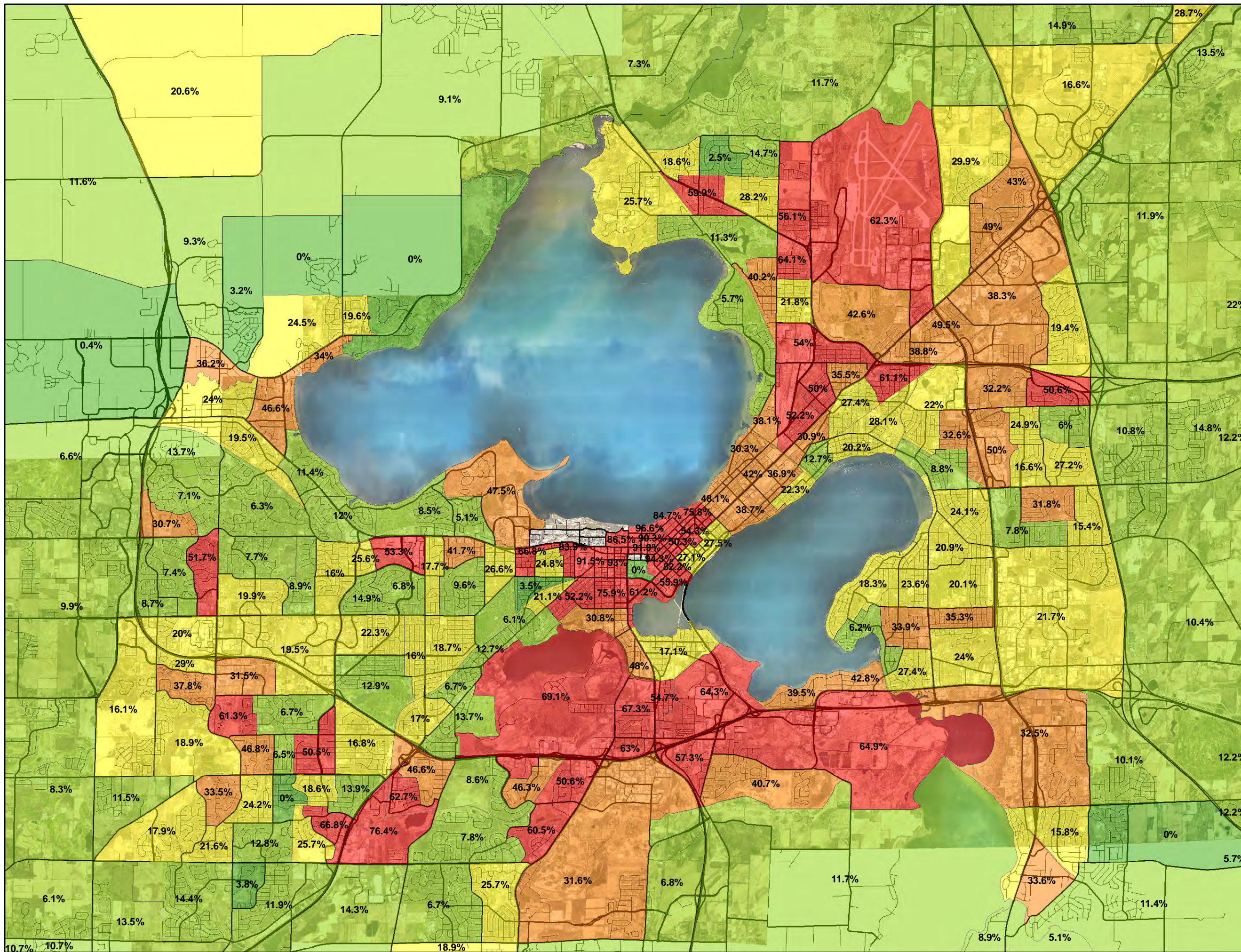
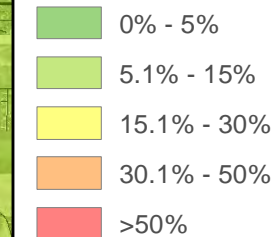






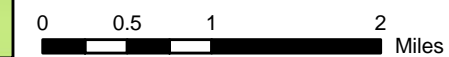
**Income**

2013 Pop. below 200% of poverty level



Source:  
2013 ACS 5 Year Estimates Table C17002  
Ratio Of Income To Poverty Level  
Block Group Level

April 7, 2015

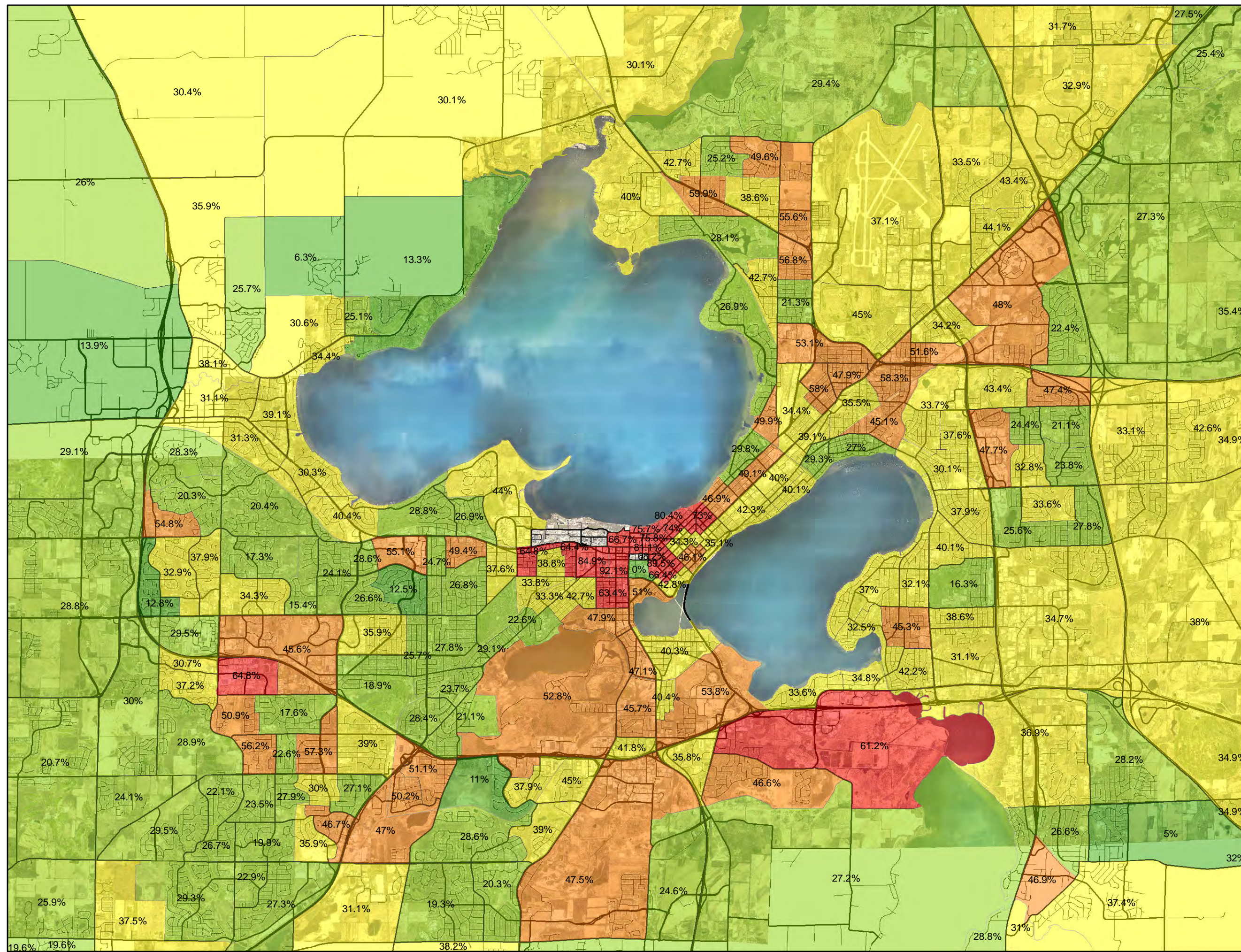
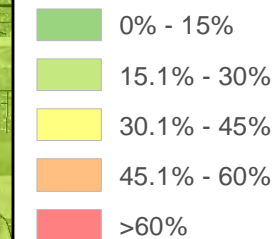






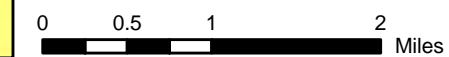
### Cost Burdened Households

HH spending >30% of income on housing



Source:  
2013 ACS 5 Year Estimates Table B25070  
2013 ACS 5 Year Estimates Table B25091  
Housing Costs to Household Income  
Block Group Level

April 7, 2015

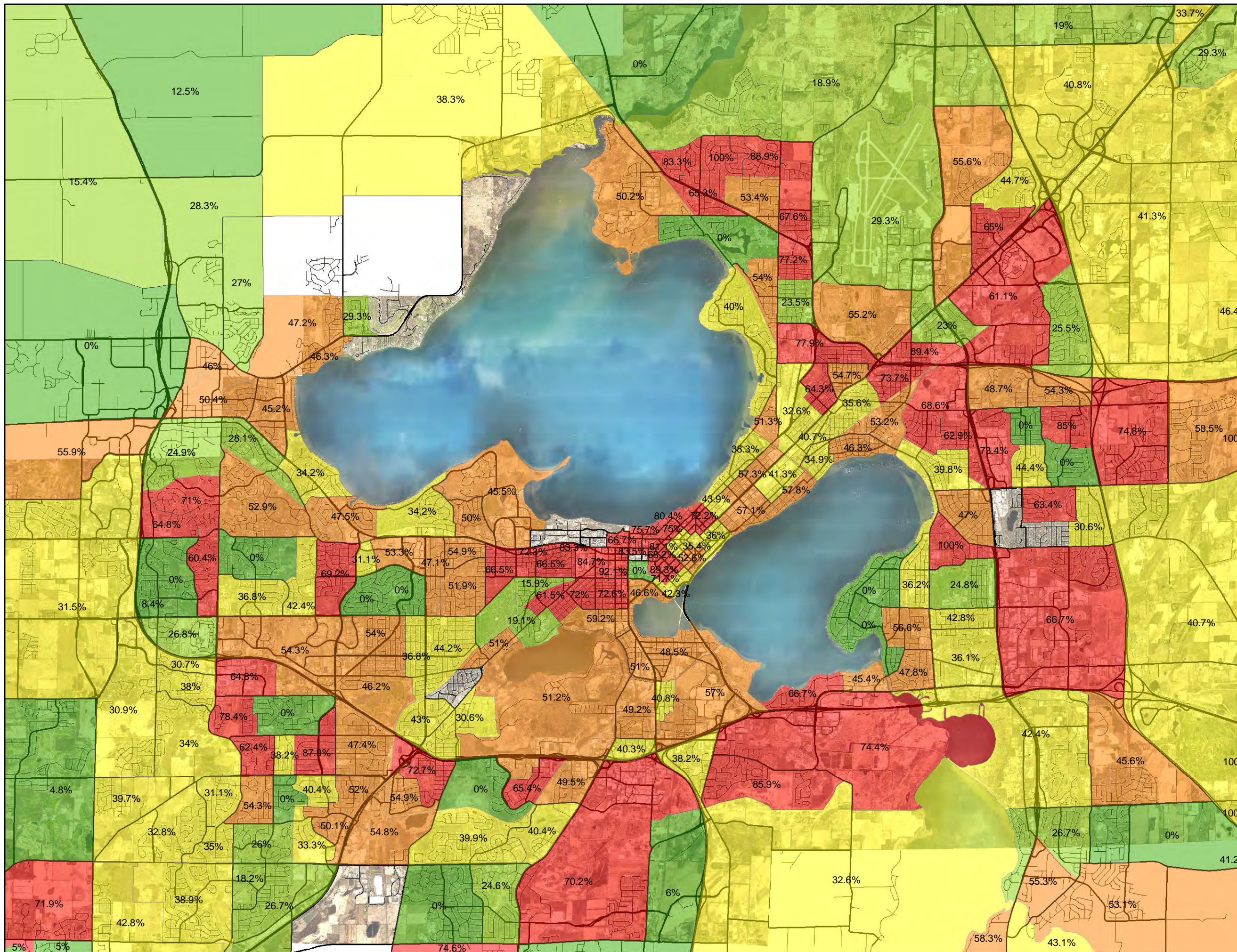
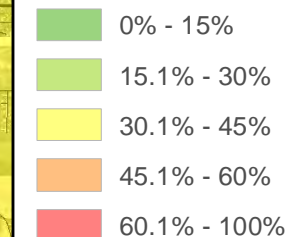






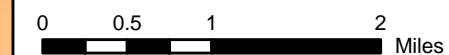
**Cost Burdened Households**

HH spending >30% of income on rent



Source:  
2013 ACS 5 Year Estimates Table B25070  
2013 ACS 5 Year Estimates Table B25091  
Housing Costs to Household Income  
Block Group Level

April 7, 2015

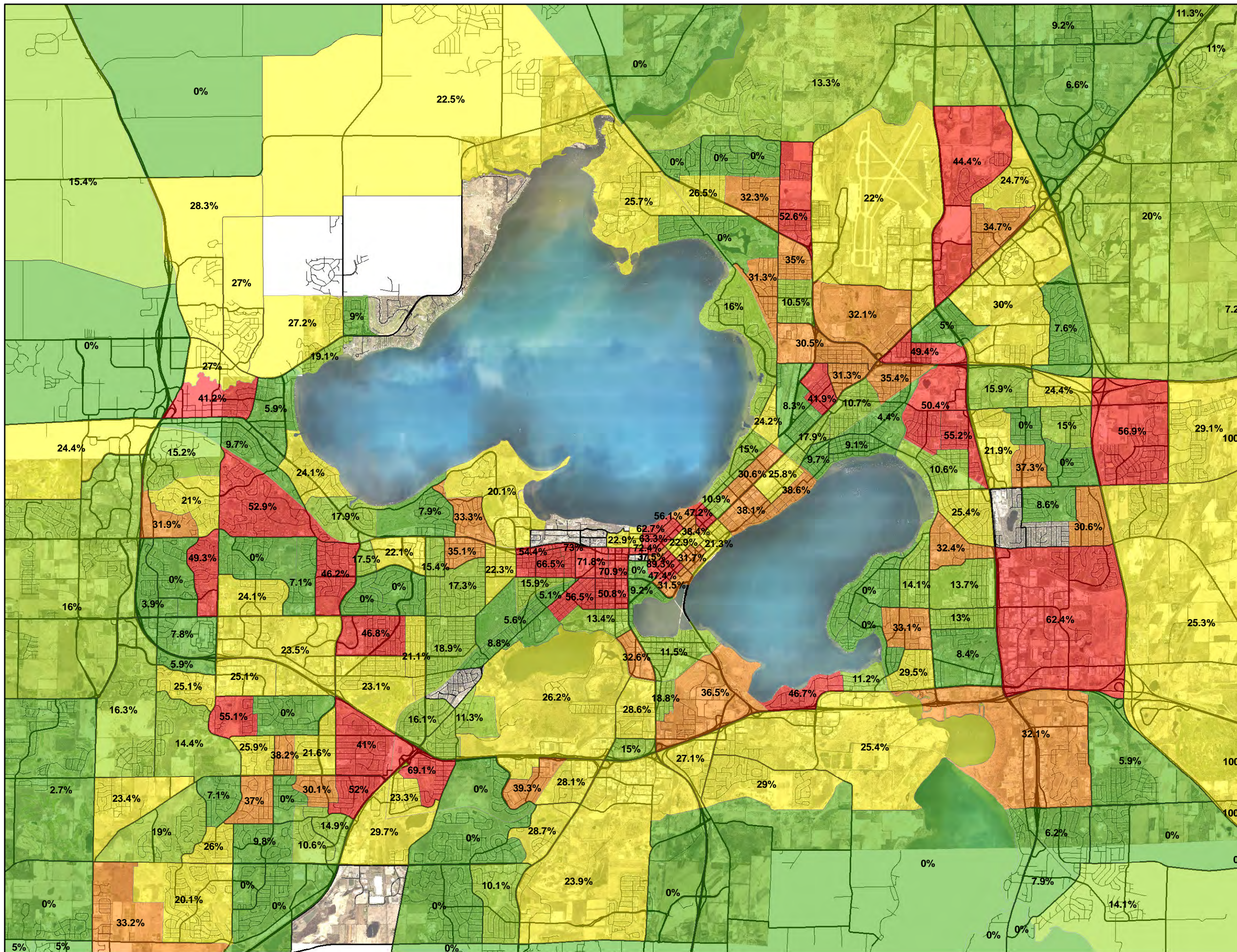
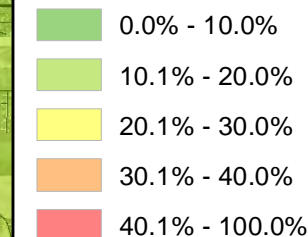






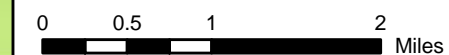
### Cost Burdened Households

HH spending >50% of income on rent



Source:  
2013 ACS 5 Year Estimates Table B25070  
2013 ACS 5 Year Estimates Table B25091  
Housing Costs to Household Income  
Block Group Level

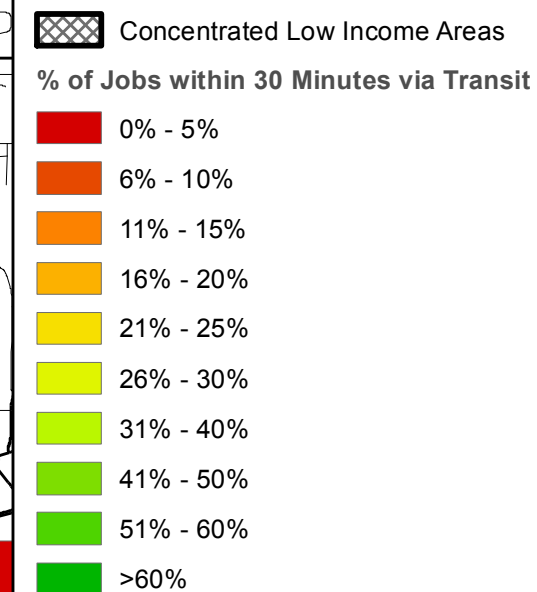
April 7, 2015







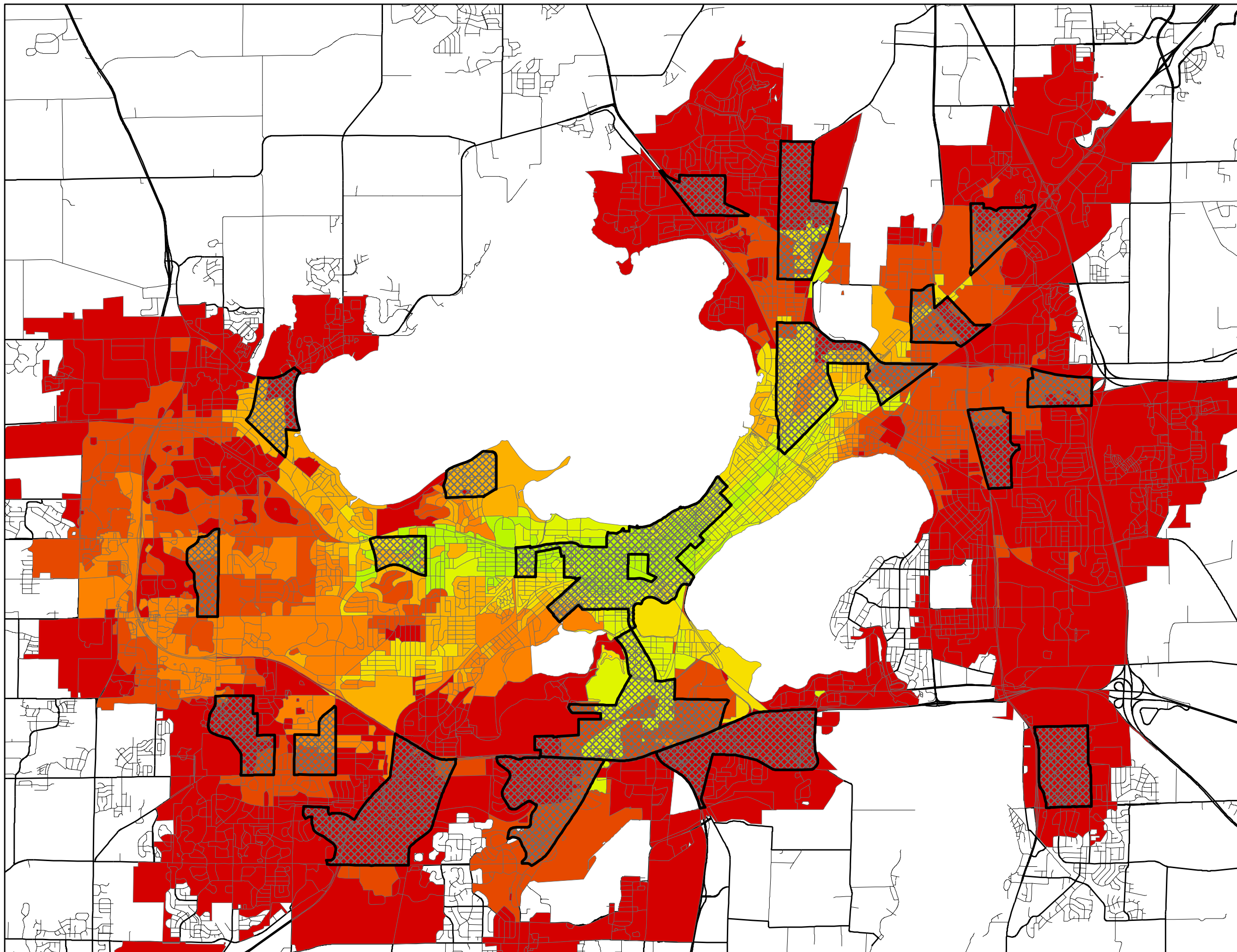
**Access to Opportunity**



Concentrated low income areas are generally comprised of census block groups having greater than 50% of the population in a household with an income less than 200% of the poverty level. Certain areas below this threshold have been added based on staffs judgement. Large non-residential areas have been removed from certain block groups to improve focus of diagram (airport, arboretum, etc.). Concentrated low income areas located in areas generally well served by transit (ie Square/Central Madison) were not included in this analysis.

Source:  
Madison Area Transportation Planning Board (MPO)  
2013 ACS 5 Year Estimates Table C17002  
Ratio Of Income To Poverty Level  
Block Group Level

June 11, 2015





Routes are color coded to service level

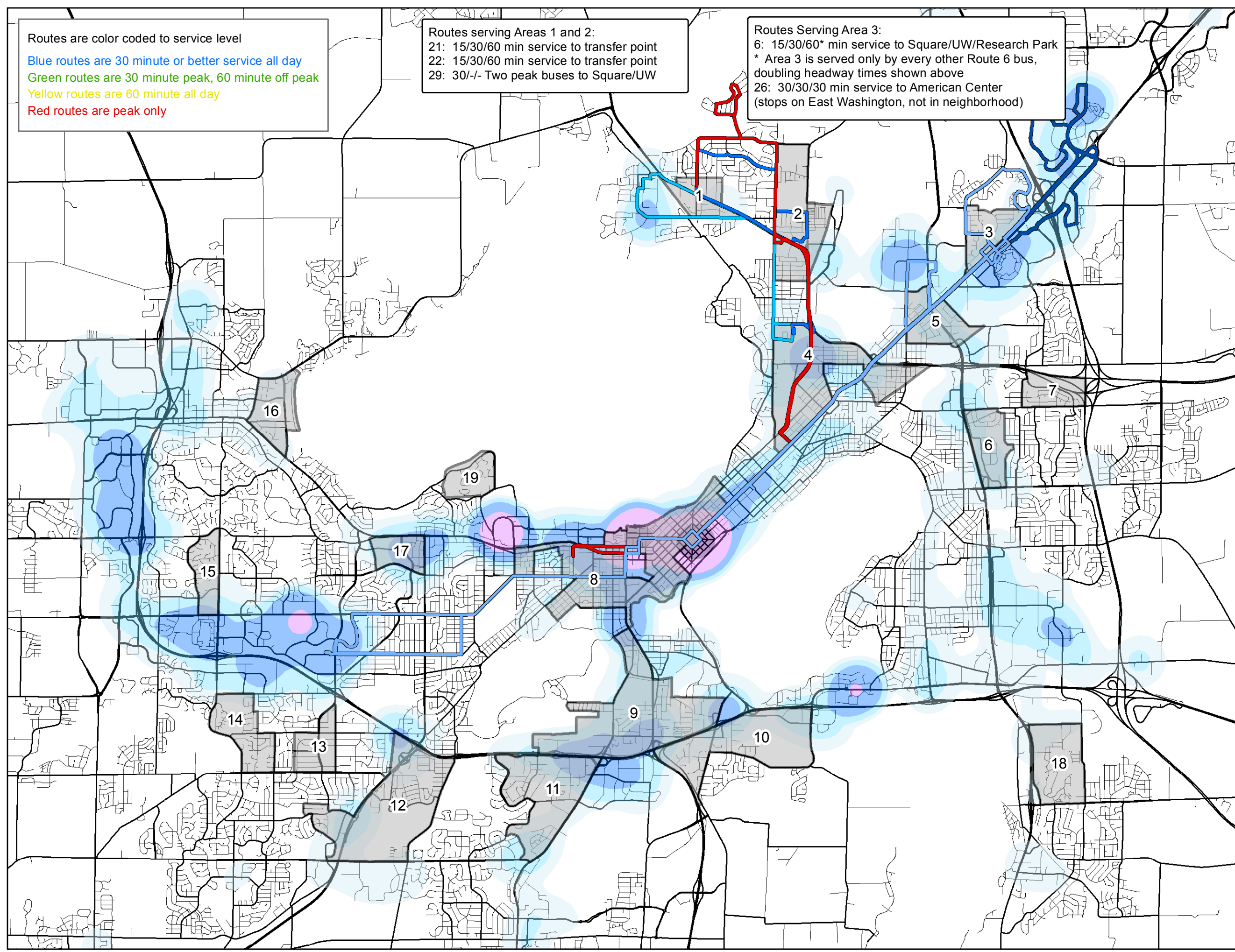
- Blue routes are 30 minute or better service all day
- Green routes are 30 minute peak, 60 minute off peak
- Yellow routes are 60 minute all day
- Red routes are peak only

Routes serving Areas 1 and 2:

- 21: 15/30/60 min service to transfer point
- 22: 15/30/60 min service to transfer point
- 29: 30/-/- Two peak buses to Square/UW

Routes Serving Area 3:

- 6: 15/30/60\* min service to Square/UW/Research Park
- \* Area 3 is served only by every other Route 6 bus, doubling headway times shown above
- 26: 30/30/30 min service to American Center (stops on East Washington, not in neighborhood)



**Access to Opportunity**

**Metro Routes**

- 6
- 21
- 22
- 26
- 29

**Concentrated Low Income Areas**

**Employment Density (Jobs/Ac)**

- 75.1 or Greater
- 25.1 to 75.0
- 10.1 to 25
- 5.1 to 10.0
- 2.1 to 5.0
- 0 to 2.0

Concentrated low income areas are generally comprised of census block groups having greater than 50% of the population in a household with an income less than 200% of the poverty level. Certain areas below this threshold have been added based on staffs judgement. Large non-residential areas have been removed from certain block groups to improve focus of diagram (airport, arboretum, etc.). Concentrated low income areas located in areas generally well served by transit (ie Square/Central Madison) were not included in this analysis.

Source:  
 Madison Area Transportation Planning Board (MPO)  
 2013 ACS 5 Year Estimates Table C17002  
 Ratio Of Income To Poverty Level  
 Block Group Level

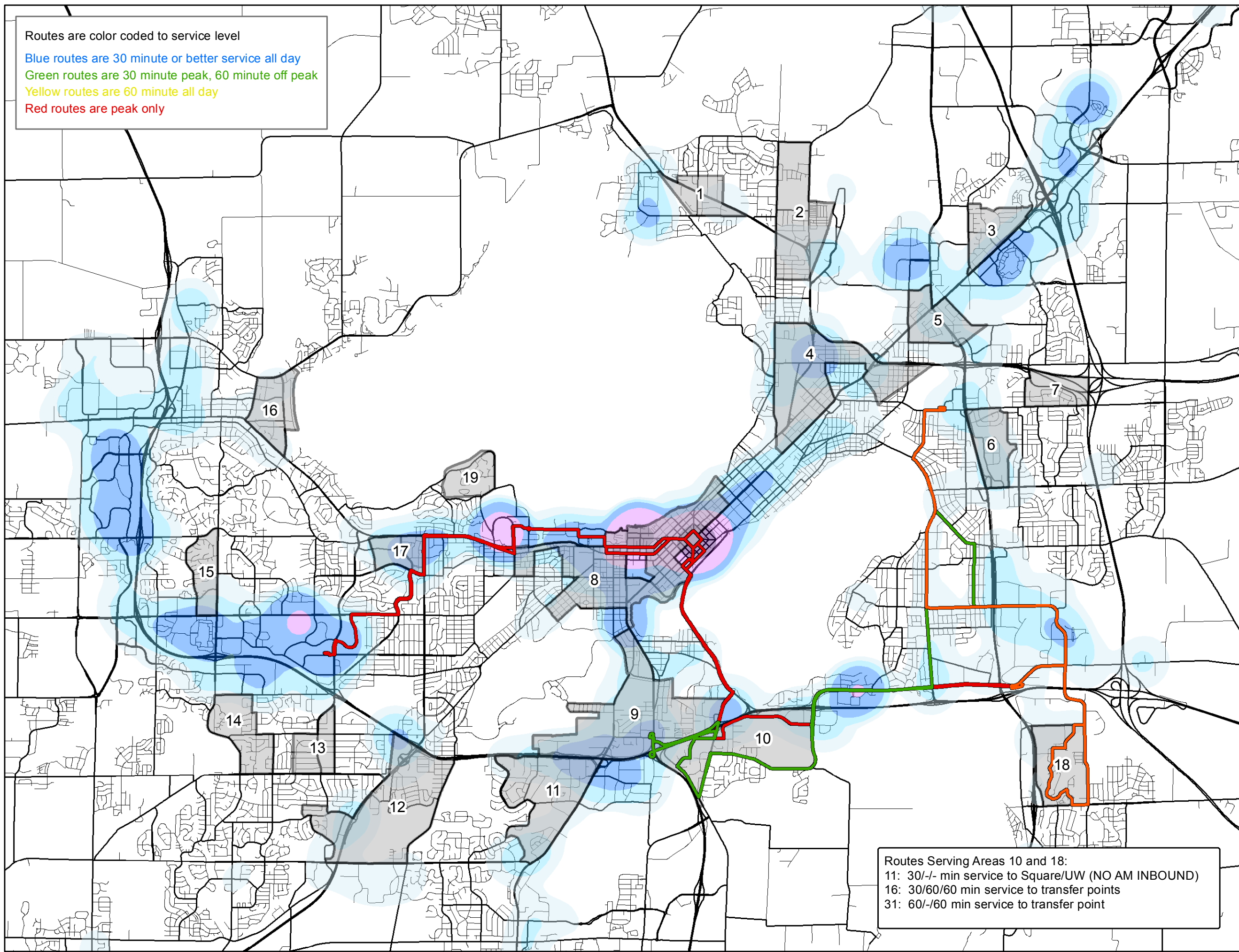
June 11, 2015

Routes are color coded to service level  
 Blue routes are 30 minute or better service all day  
 Green routes are 30 minute peak, 60 minute off peak  
 Yellow routes are 60 minute all day  
 Red routes are peak only

**Access to Opportunity**

**Metro Routes**

- 11
- 16
- 31
- Concentrated Low Income Areas
- Employment Density (Jobs/Ac)**
- 75.1 or Greater
- 25.1 to 75.0
- 10.1 to 25
- 5.1 to 10.0
- 2.1 to 5.0
- 0 to 2.0



Concentrated low income areas are generally comprised of census block groups having greater than 50% of the population in a household with an income less than 200% of the poverty level. Certain areas below this threshold have been added based on staffs judgement. Large non-residential areas have been removed from certain block groups to improve focus of diagram (airport, arboretum, etc.). Concentrated low income areas located in areas generally well served by transit (ie Square/Central Madison) were not included in this analysis.

Routes Serving Areas 10 and 18:  
 11: 30/- min service to Square/UW (NO AM INBOUND)  
 16: 30/60/60 min service to transfer points  
 31: 60/-/60 min service to transfer point

Source:  
 Madison Area Transportation Planning Board (MPO)  
 2013 ACS 5 Year Estimates Table C17002  
 Ratio Of Income To Poverty Level  
 Block Group Level

June 11, 2015



