



# How could Madison Regulate Data Centers?

CITY OF MADISON SPECIAL PLAN COMMISSION MEETING

JUNE 11, 2026

# Meeting Agenda



- ▶ Overview Presentation
  - ▶ City Zoning Moratorium
  - ▶ Data Center Basics
  - ▶ Regulatory Tools
  - ▶ Zoning Regulation Options
- ▶ Discussion



# Why Now?

Madison passed 12-month moratorium on new data centers more than 10,000 square feet as the primary use.

Time needed to define “data center” as a use in City code and establish appropriate parameters for it.

<http://www.cityofmadison.com/datacenters>

# Code development process

## Research & Planning

- June 3 Public Information Meeting
- First Plan Commission discussion on June 11
- Future Commission meetings to shape policy



## Draft Code Proposed

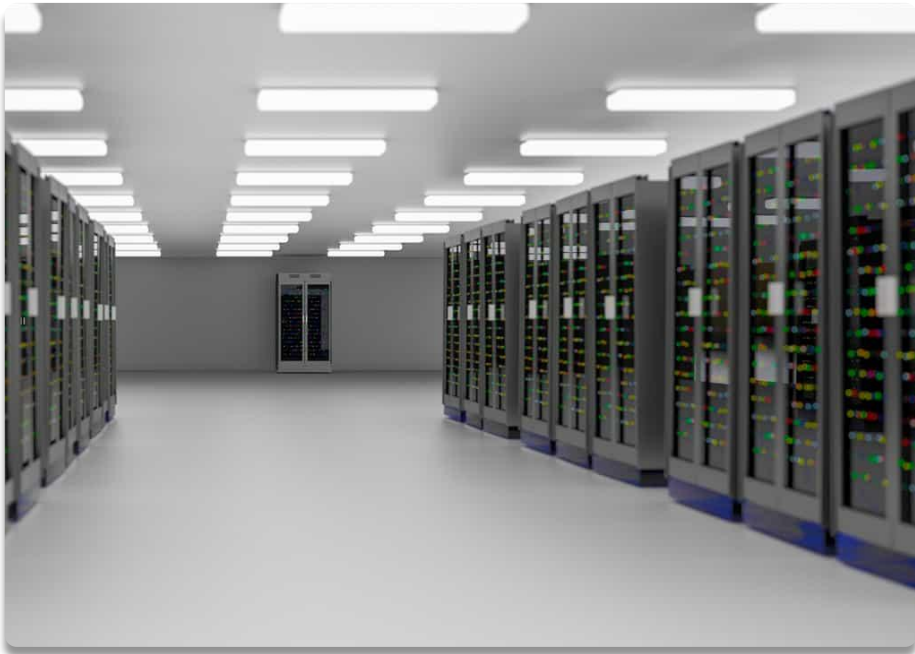
- Expected in September
- Future public input on draft



## Legislative Process to Adoption

- Introduced Sept/Oct
- Committee & commission discussions
- Final decision in Nov/Dec

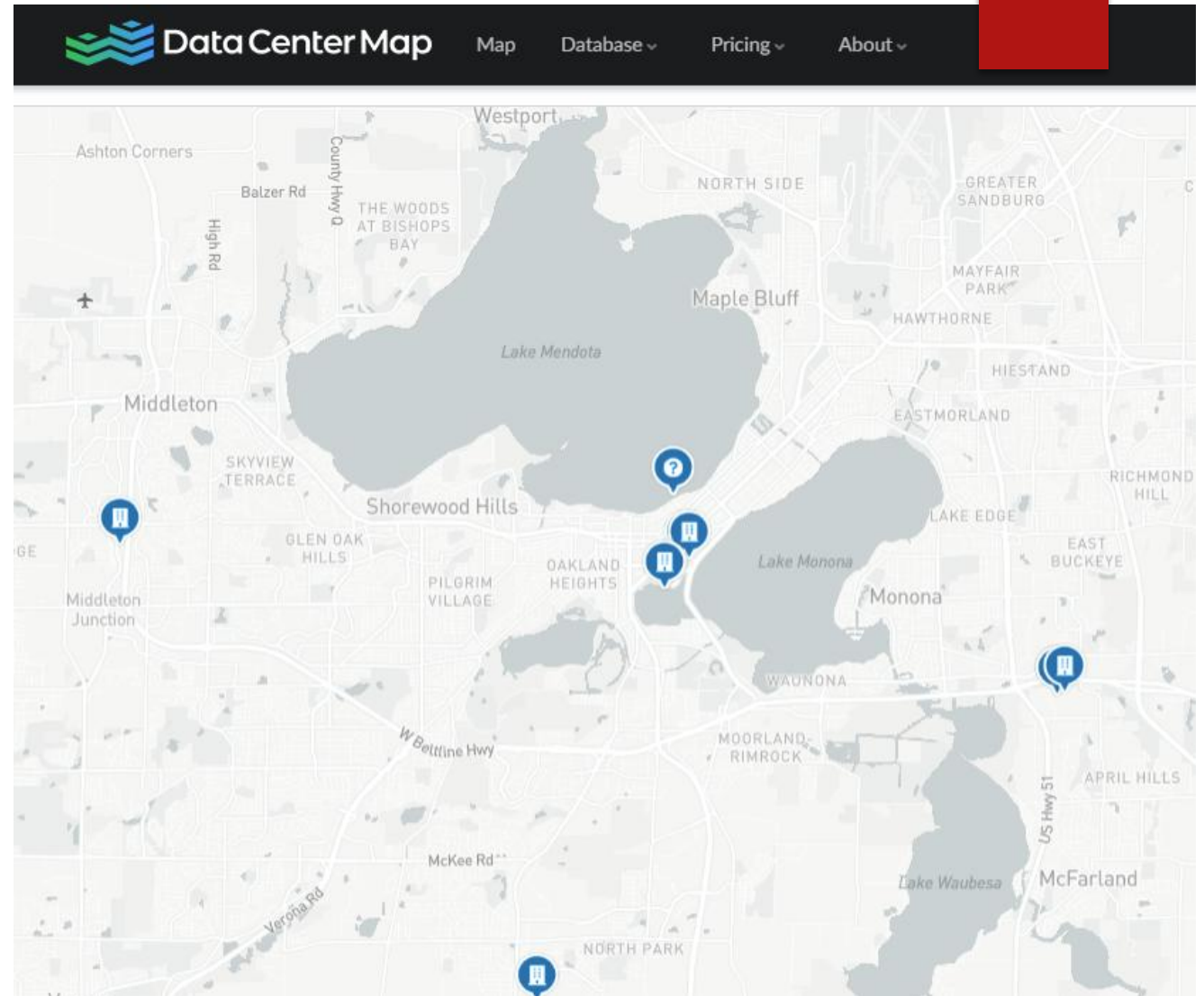
# What do we mean by data centers?



- ▶ Building or part of a building that contains a large number of computers that process and store digital data
- ▶ This use exists in Madison but is not defined in the Zoning Code

# Local Context

- ▶ ~ 6+ stand-alone data centers in Madison area
- ▶ Numerous smaller data center spaces in larger buildings to serve that entity's needs
- ▶ Located throughout the city



# Types of Data Centers: Integrated



**Land area**

NA

**Building size**

1,000 sq ft – 40,000 sq ft

**Land use comparable**

Office tenant

**Energy demand**

40 kw – 3 MW

**Energy use comparable**

40 – 2,880 WI  
homes daily energy

# Types of Data Centers: **Medium**



Data Center, 4916 East Broadway, Madison WI

**Land area**

0.5-5 acres

**Building size**

5,000 sq ft – 40,000 sq ft

**Land use comparable**

Office or light industrial

**Energy demand**

500 kw – 3 MW

**Energy use comparable**

480 – 2,880 WI homes daily energy

# Types of Data Centers: Large



H5 Data Center, Ashburn VA (via Google Street View)

**Land area**

10-30 acres

**Building size**

40,000 sq ft – 100,000 sq ft

**Land use comparable**

Heavy or general industrial

**Energy demand**

3 MW- 50 MW

**Energy use comparable**

2,880 – 48,000 WI homes daily energy

# Types of Data Centers: Hyperscale



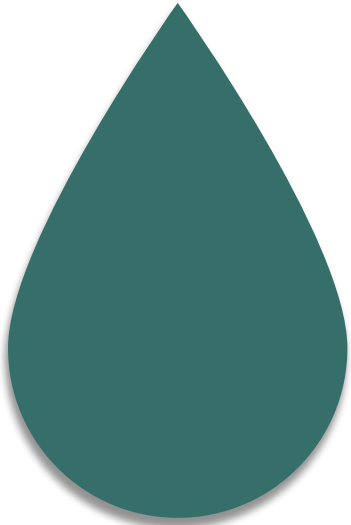
Google Data Center, Council Bluffs IA ([datacenters.google](http://datacenters.google))

<b>Land area</b>	200 – 1,000 acres
<b>Building size</b>	100,000 – 2,000,000 sq ft
<b>Land use comparable</b>	Depends / TBD
<b>Energy demand</b>	220 MW to >1.8 GW
<b>Energy use comparable</b>	100 MW can power 75,000-100,000 homes

# Types of Data Centers: **Hyperscale**

- ▶ 24-30 feet per story
- ▶ Can be 2 to 3 stories
- ▶ Multiple buildings on one site
- ▶ On-site substations (5-30 acres)
- ▶ Back-up generators (diesel or natural gas)
- ▶ Rooftop or ground mounted mechanical equipment
  - ▶ Ground mounted equipment can be 60 feet tall

# Water-Related Impacts



- ▶ Water use associated with the cooling needs of data centers
- ▶ Trends are toward closed loop systems that minimize direct on-site water draws.
  - ▶ Can require about 1,000,000 gallons of water to fill initially
  - ▶ Daily water consumption for WI data centers that use closed loop systems is 3,000-20,000 gallons per day of on-site water usage.
- ▶ Offsite water use for electricity generation can have a larger water impact at power plant locations
- ▶ Madison Water Utility must connect a new user and cannot regulate amount of water used

# Local Context & Comparisons

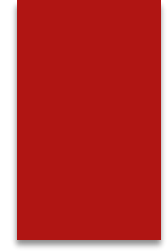


Image credit: LJB Engineering

**FedEx Distribution Center:**  
~ 385,000 sq ft building



Image credit: GoogleMaps

**Mendota Mental Health Institute:**  
~ 350 acres



Image credit: Isthmus

**Former Oscar Mayer site:**  
~62 acres.



# What does the City regulate in Zoning?

Allowed uses

Building design and form

Building size

Building height

Minimum stories

Lot size

Lot coverage

Setbacks

Landscaping

Screening

Parking

# What else does the City regulate?

Noise

Lighting

State building  
code  
compliance

Tax assessments

Construction  
traffic  
management

Stormwater  
management

Sewer  
discharge  
quality (not  
quantity)

# What CAN'T the City regulate?

Water usage

Energy use or  
sources

Community  
benefits as  
condition of  
approval

Jobs unless via  
incentives

# Other regulations in Wisconsin

- ▶ State of Wisconsin
  - ▶ Data Center Sales and Use Tax exemption
  - ▶ More regulation under discussion in State Legislature last session
- ▶ Public Service Commission of WI
  - ▶ Individual utility decisions – required special tariffs to ensure data centers cover own costs
- ▶ Dane County
  - ▶ Considering temporary moratorium.
  - ▶ Would apply outside our city limits. Our zoning applies inside city limits.

# Zoning Regulations in other communities

Create data center use in conventional zoning districts

- Not Permitted
- Permitted Use
- Conditional Use

Regulate data centers based on size

Create use specific regulations

- Supplemental Regulations in the City's Zoning Code

# Zoning Regulations in other communities

## Planned Development District

- City is shifting away from Planned Development Districts

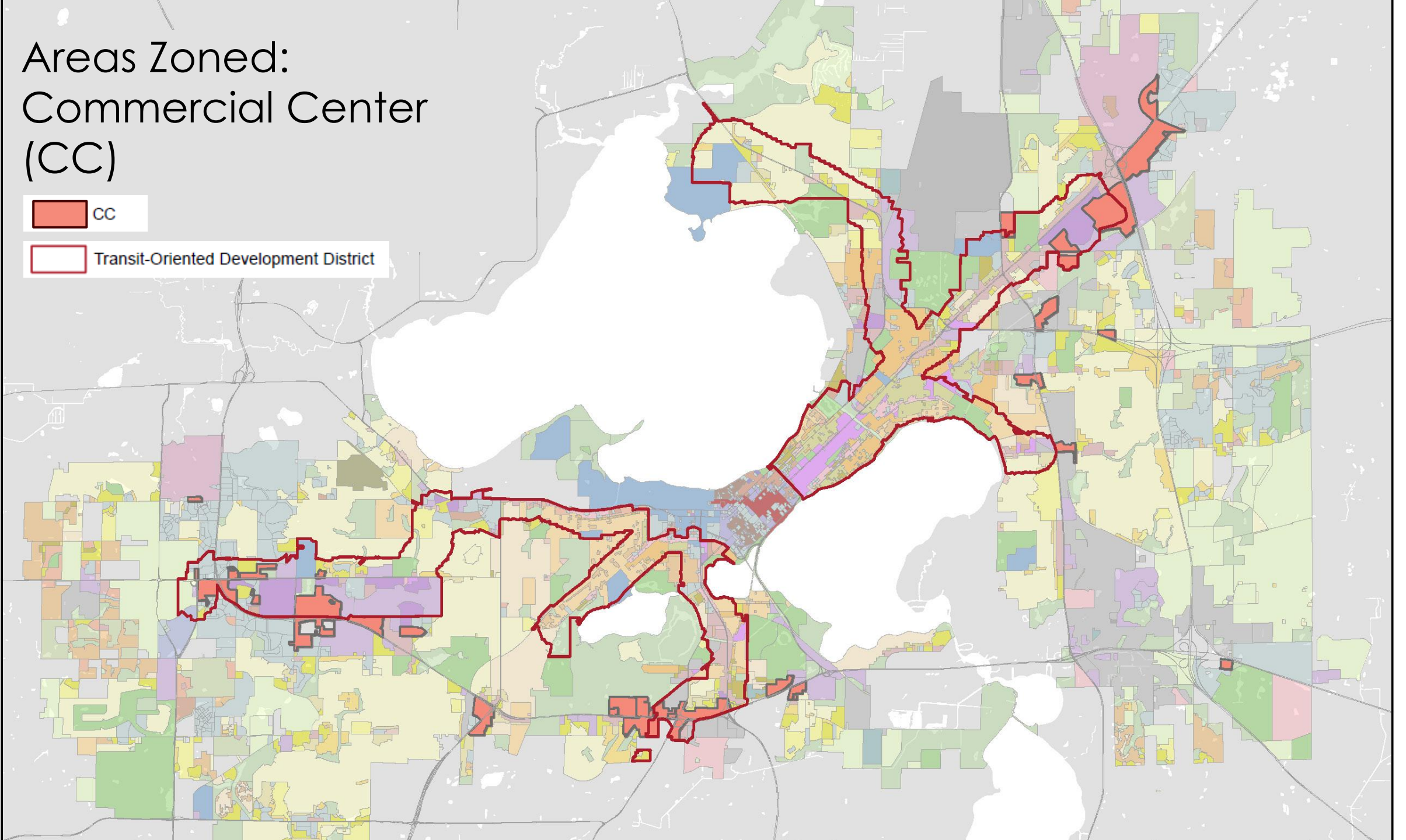
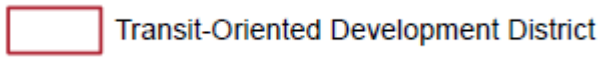
## Data Center Zoning District

- City has a few of these (Mission Camp District, Nonmetallic Mineral Extraction District)

# Where are data centers located in other communities?

- ▶ Integrated data centers are in mixed-use, office, commercial and industrial buildings.
- ▶ Medium data centers are in business parks and light industrial areas.
- ▶ Large data centers are in business parks, light industrial and heavy industrial areas.
- ▶ Hyperscale data centers are in light industrial and heavy industrial areas.
  - ▶ Sometimes industrial areas border residential areas.
  - ▶ Generally located near transmission lines

# Areas Zoned: Commercial Center (CC)



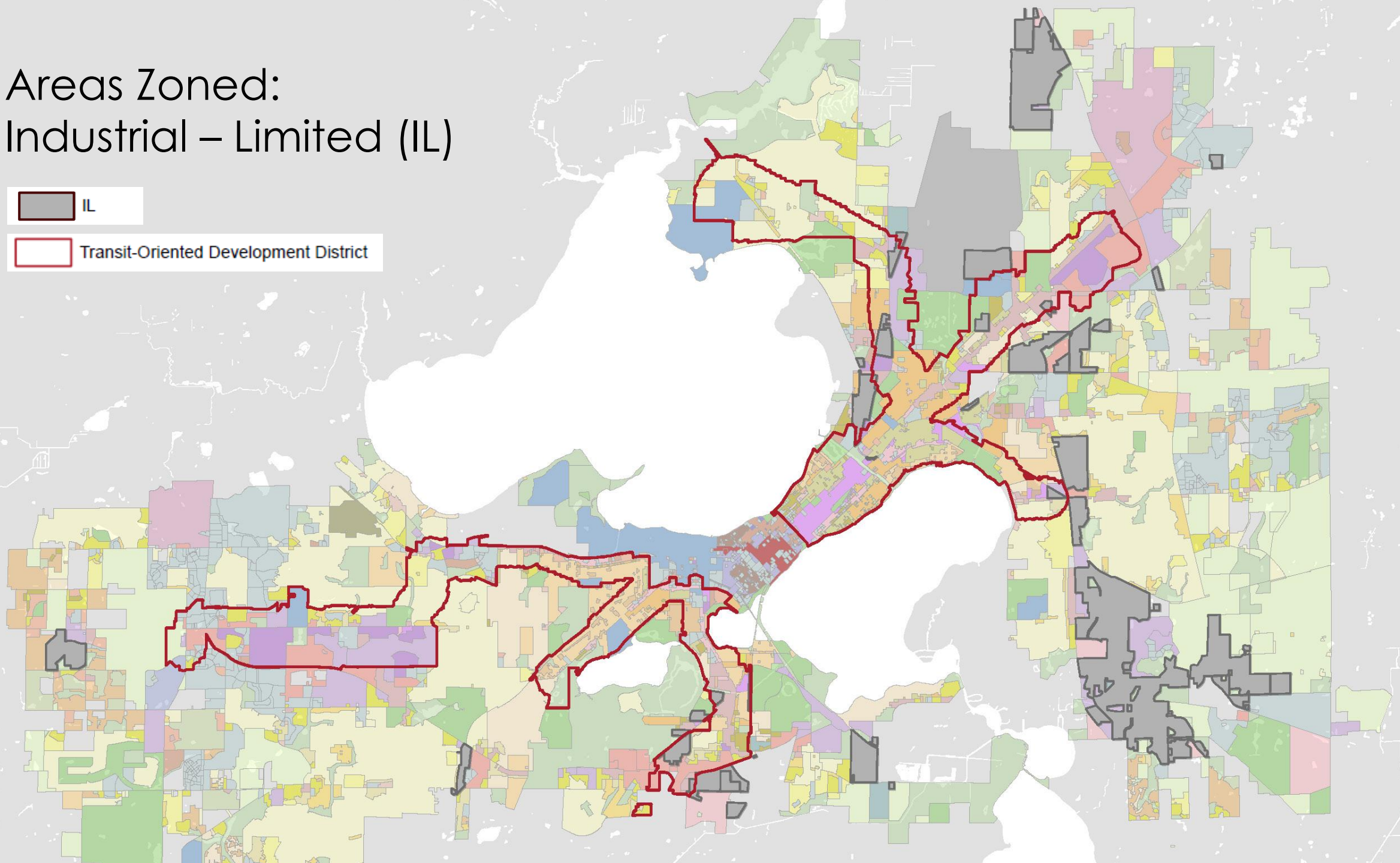
# Areas Zoned: Industrial – Limited (IL)



IL



Transit-Oriented Development District



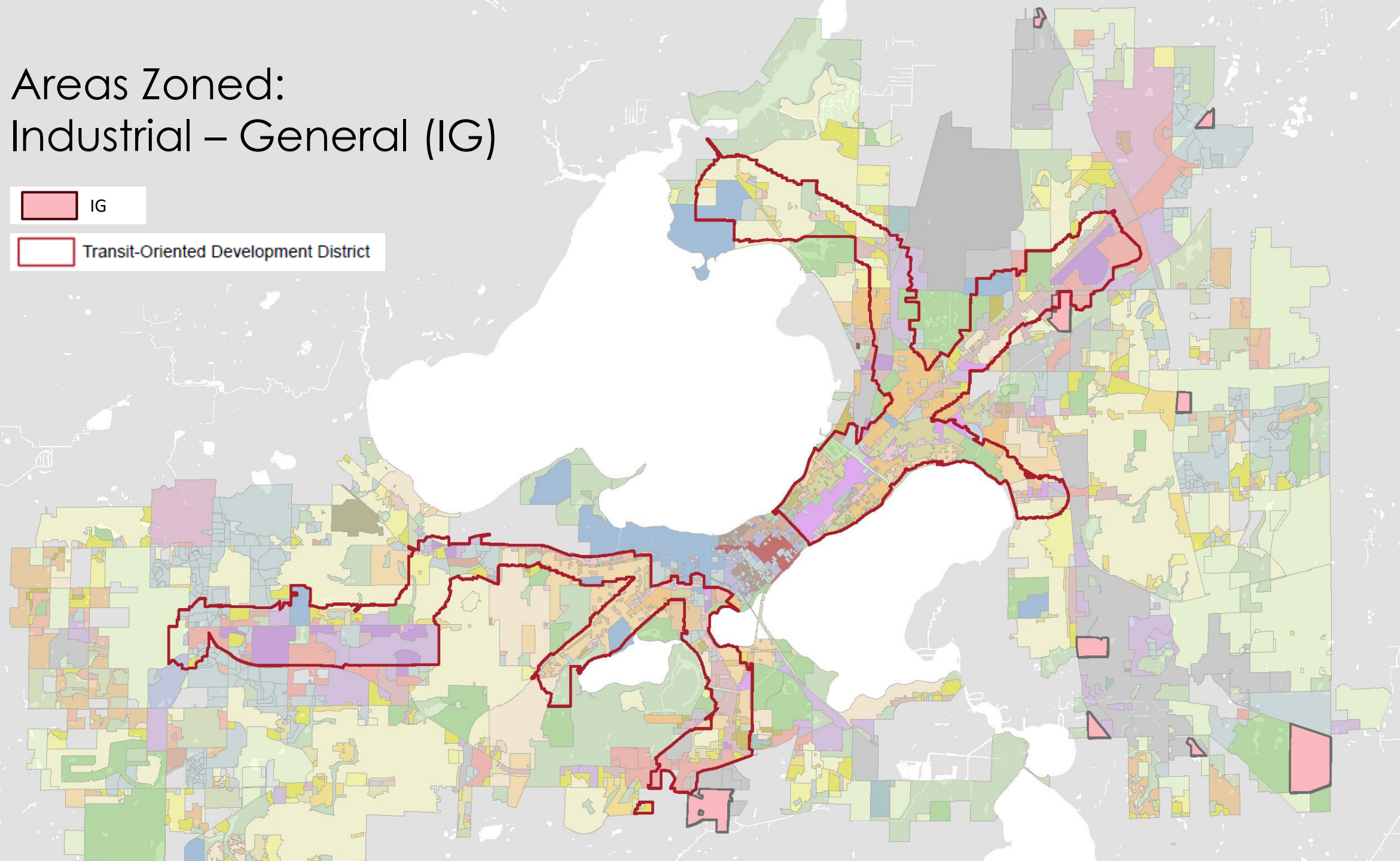
# Areas Zoned: Industrial – General (IG)



IG








Transit-Oriented Development District




















# Electric Transmission Lines and GFLU Map

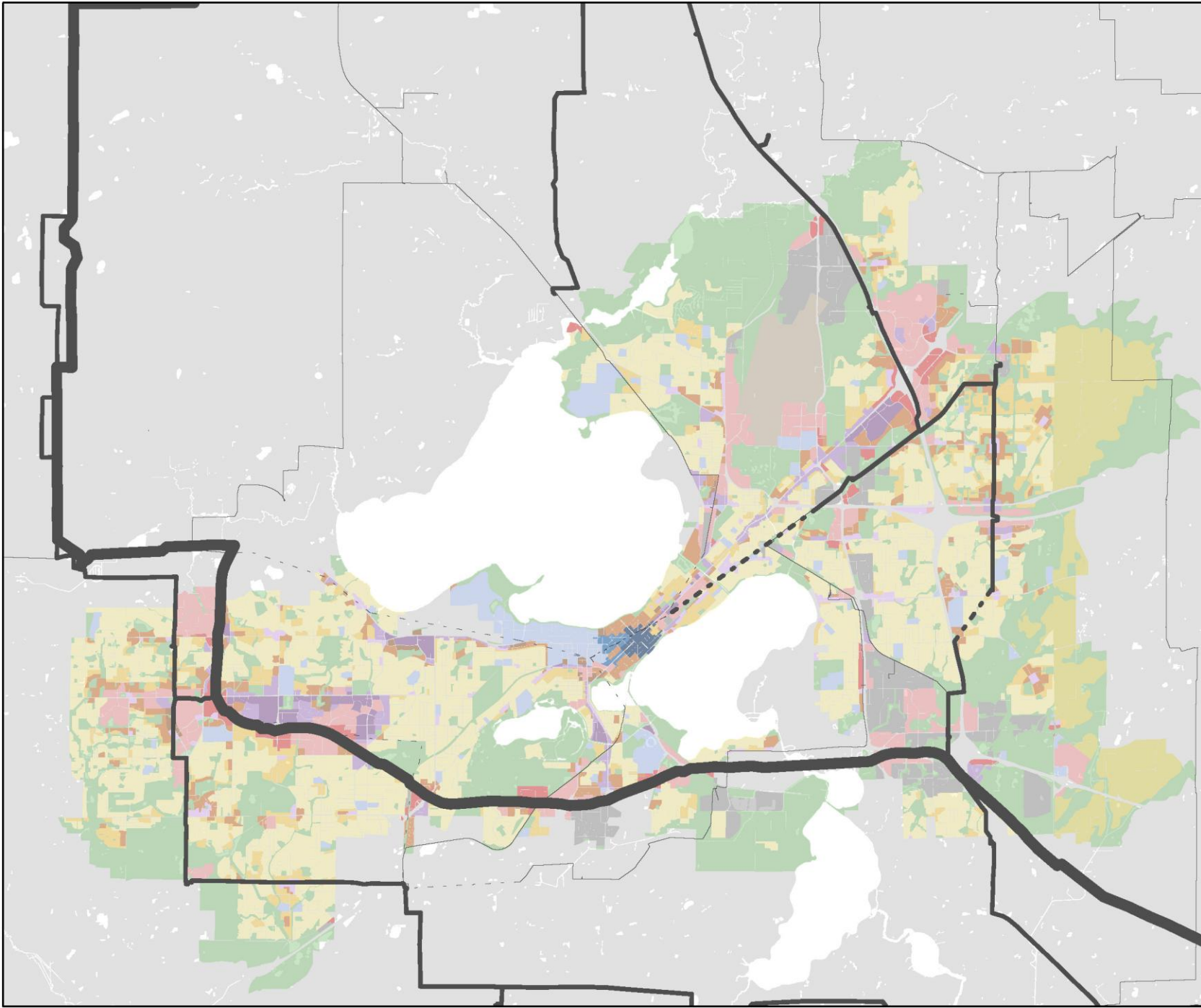
## Electric Transmission Lines

Aboveground	Underground	
		<100 kV
		+/- 138 kV
		345 kV

## Generalized Future Land Use

-  Low Residential (LR)
-  Low-Medium Residential (LMR)
-  Medium Residential (MR)
-  High Residential (HR)
-  Neighborhood Mixed Use (NMU)
-  Community Mixed Use (CMU)
-  Regional Mixed Use (RMU)
-  Downtown Mixed Use (DMU)
-  Downtown Core (DC)
-  General Commercial (GC)
-  Employment (E)
-  Industrial (I)
-  Parks and Open Space (P)
-  Special Institutional (SI)
-  Airport (A)
-  Neighborhood Planning Area (NPA)

0 0.7 1.4 2.1 2.8 3.5 Miles



# Questions and Discussion

- ▶ What questions do you have about data centers?
- ▶ What types of data centers should Madison allow?
- ▶ What aspects of data centers are most important for the City to manage?
- ▶ What land use considerations are important to focus on (both to capture opportunities and/or mitigate conflicts)?

# Questions and Discussion

- ▶ How should the City regulate data centers in the Zoning Code?
  - ▶ Should the City establish data center types based on size?
  - ▶ Should data center types be permitted or conditional ?
  - ▶ Should the City establish supplemental regulations for data centers ?