

# Groundwater Conditions in Twin Cities Aquifers:

## Beyond the Prairie du Chien-Jordan Aquifer

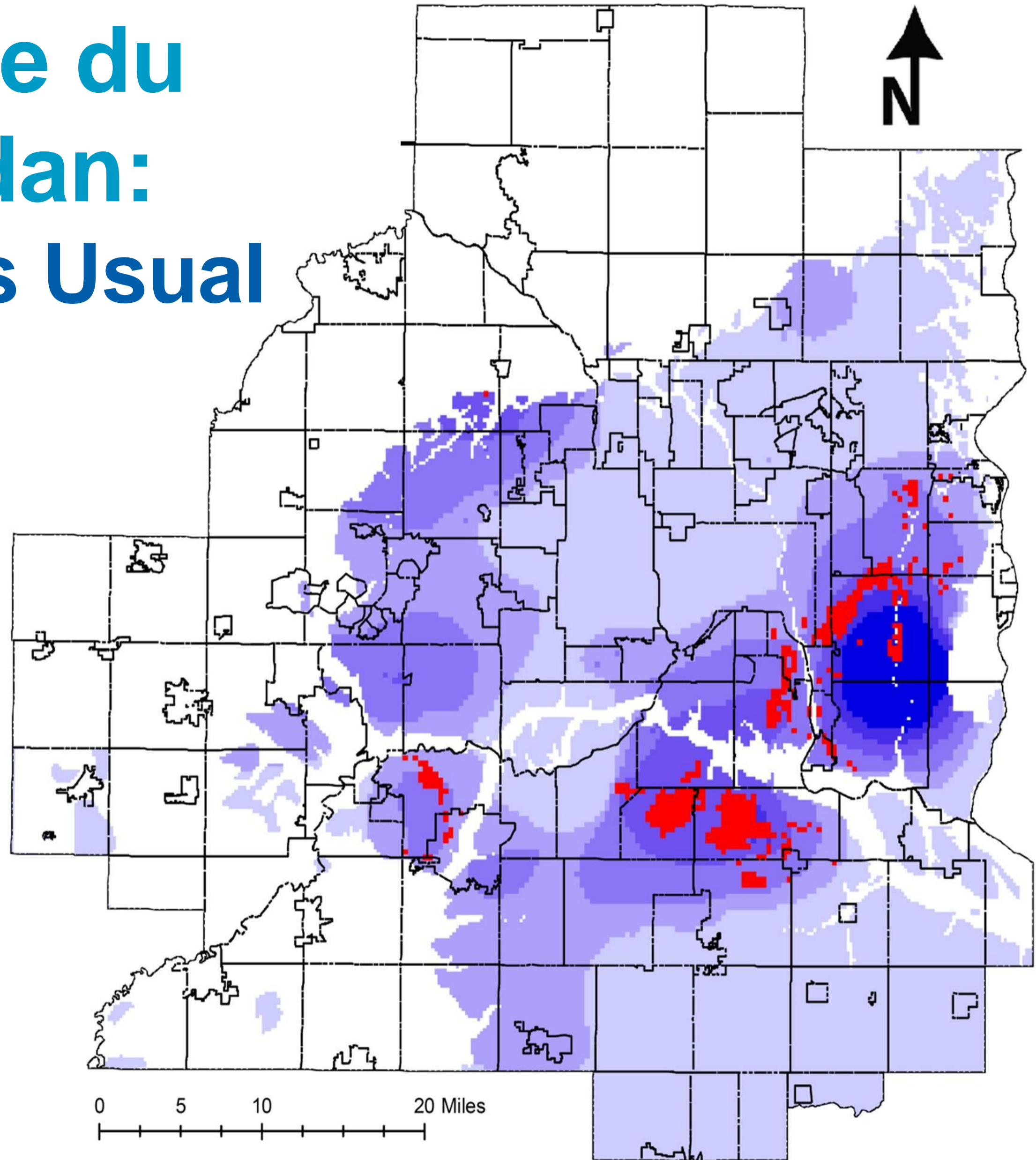
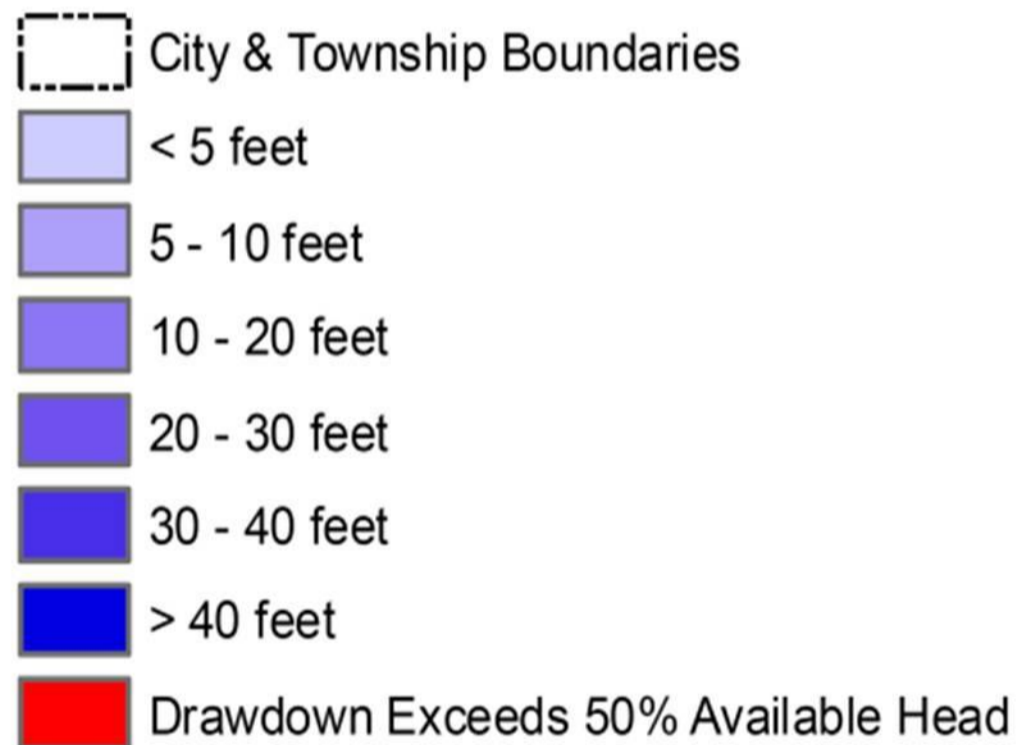
**Lanya Ross, Principal Environmental Scientist**  
**July 24, 2013**

Metropolitan Area Water Supply  
Advisory Committee



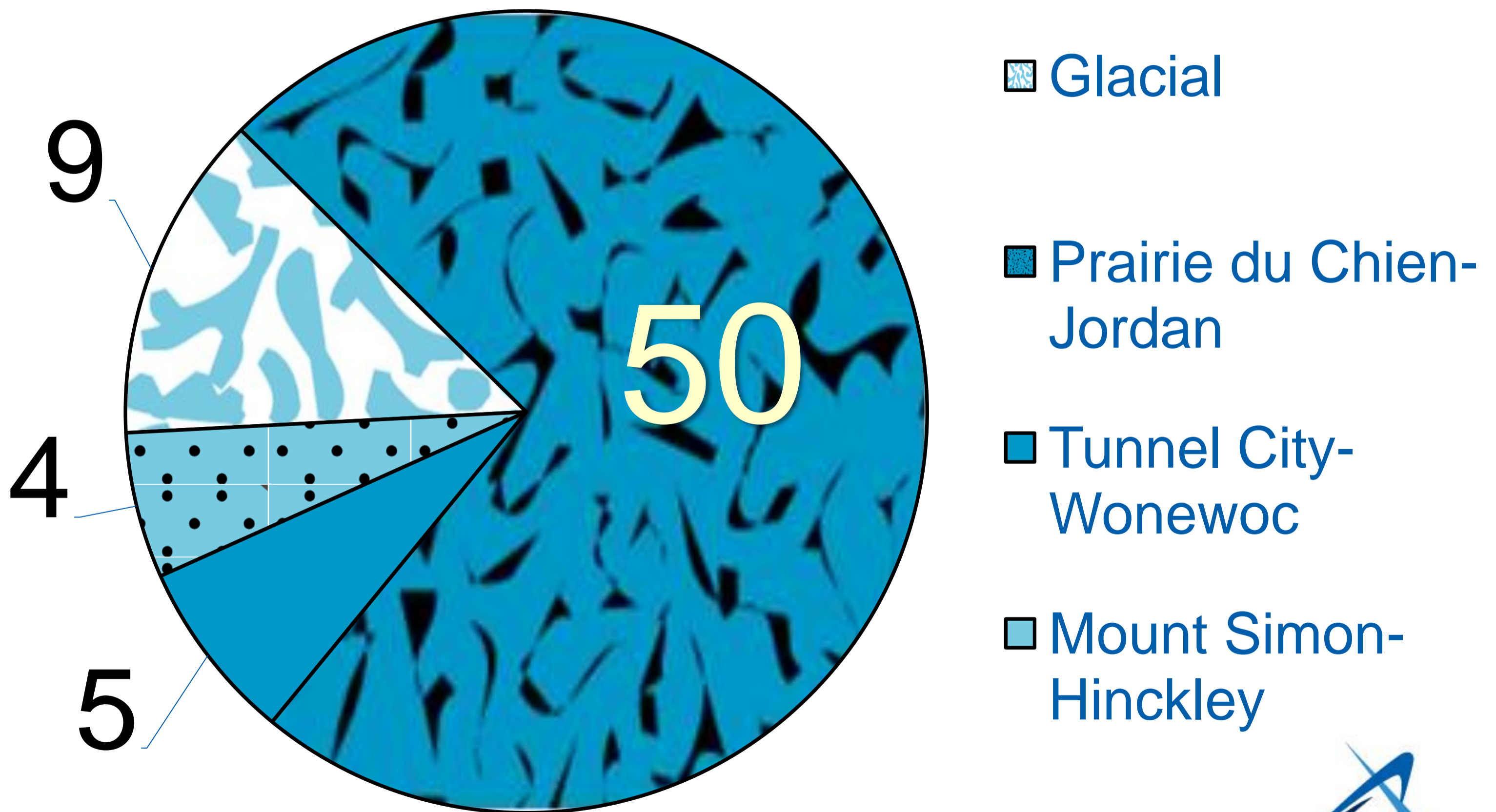
# 2030 Prairie du Chien-Jordan: Business as Usual

## Aquifer Drawdown





# Multiple Aquifers Supply Billions of Gallons of Water to Public Water Suppliers





# Aquifers of the Twin Cities Metro Area

## WEST

**Wright County**

Pop: 126,000

**Hennepin County**

Pop: 1,168,000

## ST. PAUL

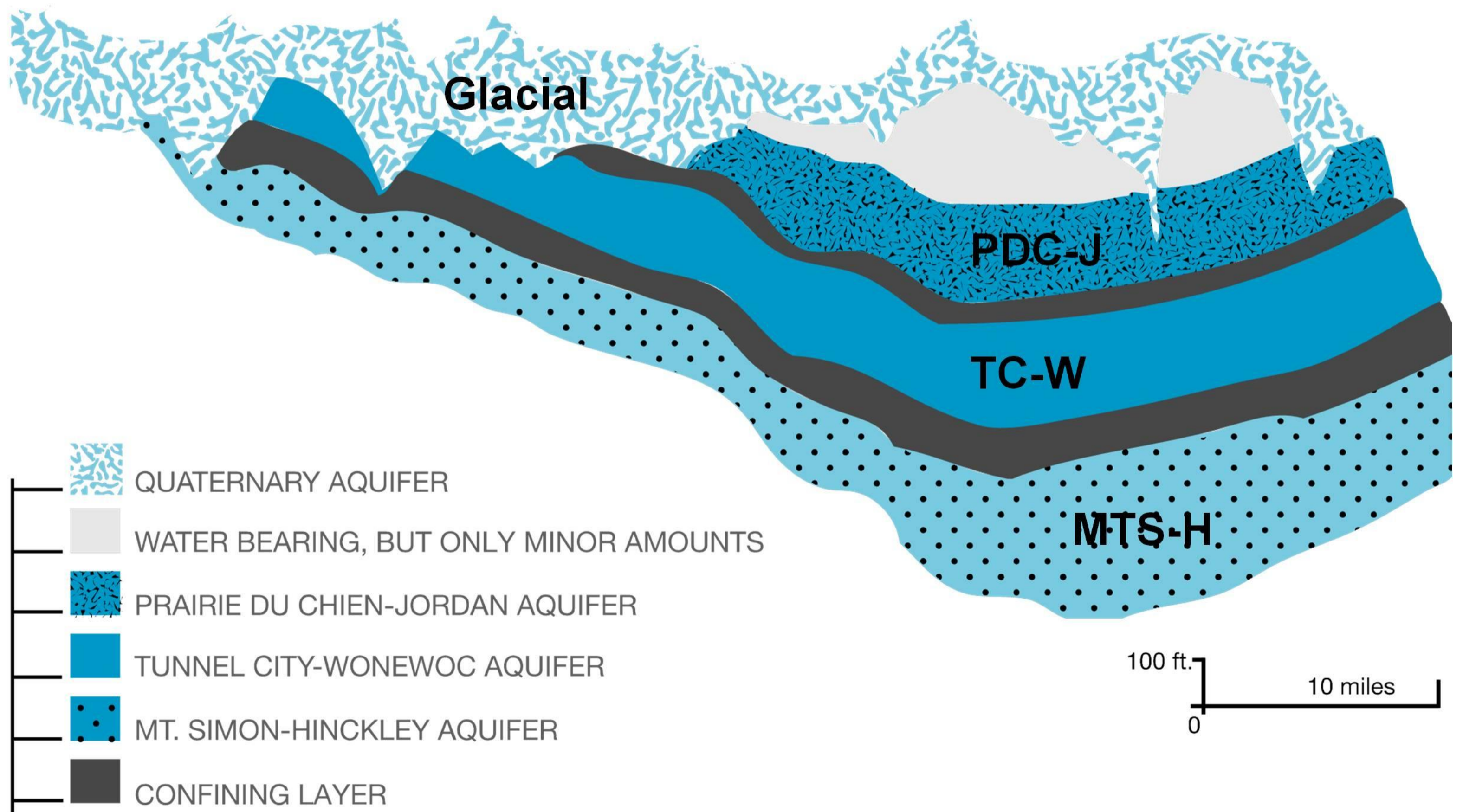
**Ramsey County**

Pop: 515,000

## EAST

**Washington County**

Pop: 241,000



# 24 Communities rely on Glacial sands and gravels

- 4 communities use this as their only source
- 9 billion gallons of water pumped in 2010

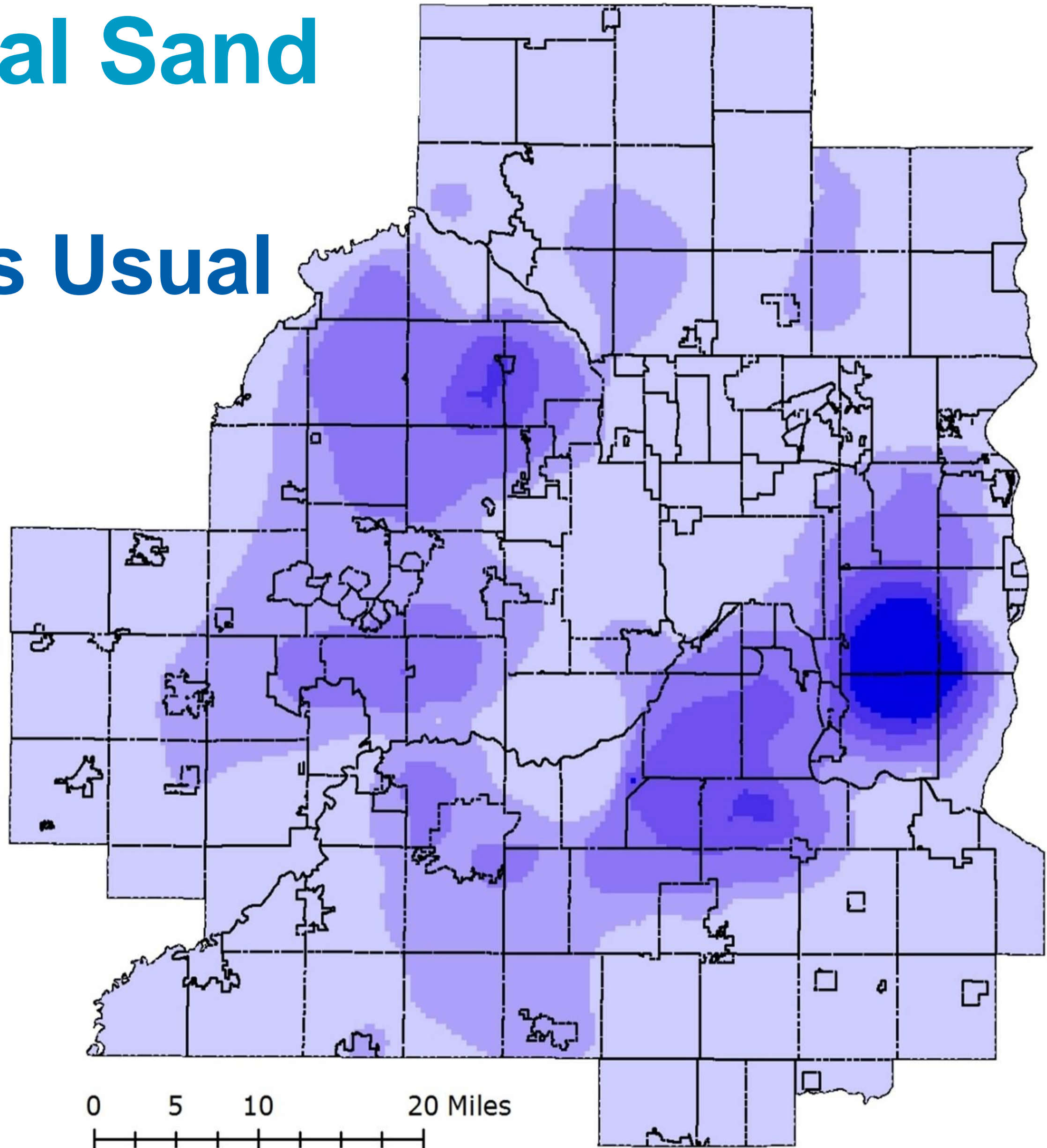
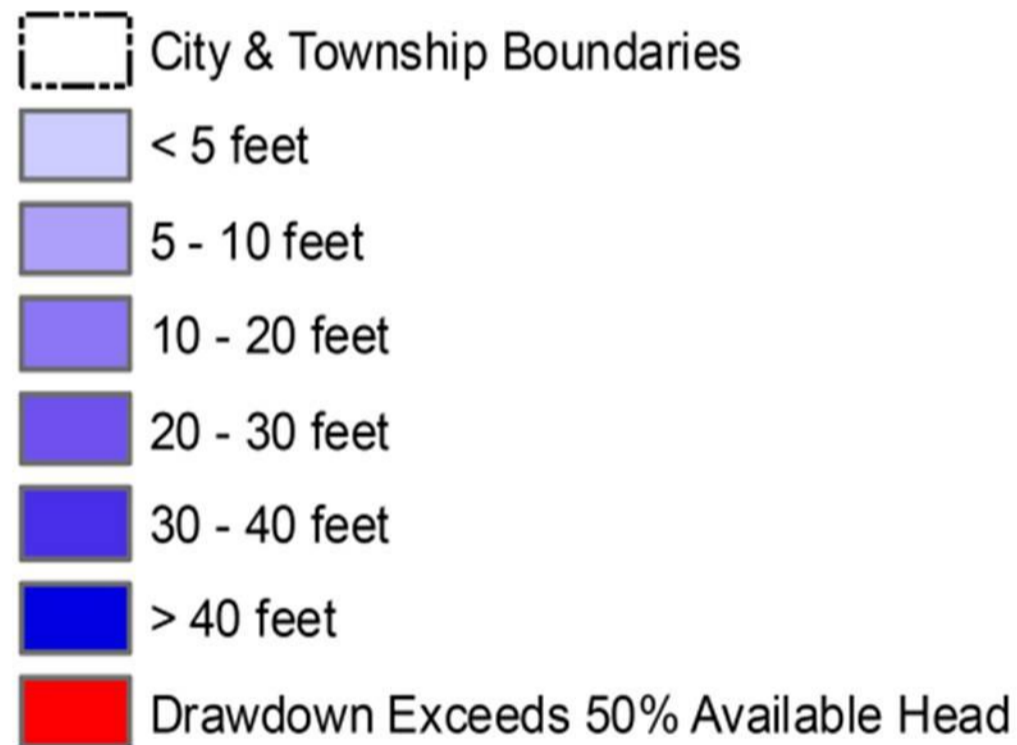
## Management Concerns

- Challenging to find most productive glacial layers
- First aquifer to be recharged
- Vulnerable to contamination
- Water quantity and quality varies
- Connected to surface waters



# 2030 Glacial Sand & Gravel: Business as Usual

## Aquifer Drawdown



# 83 Communities rely on Prairie du Chien-Jordan aquifer

- 37 communities use this as their only source
- 50 billion gallons of water pumped in 2010

## Management Concerns

- Not available to some communities
- As the most heavily used aquifer in parts of the region, greater likelihood of water use conflict
- Connected to surface waters
- Vulnerable to contamination

# 30 Communities rely on Tunnel City-Wonewoc aquifer

- 7 communities use this as their only source
- 5 billion gallons of water pumped in 2010

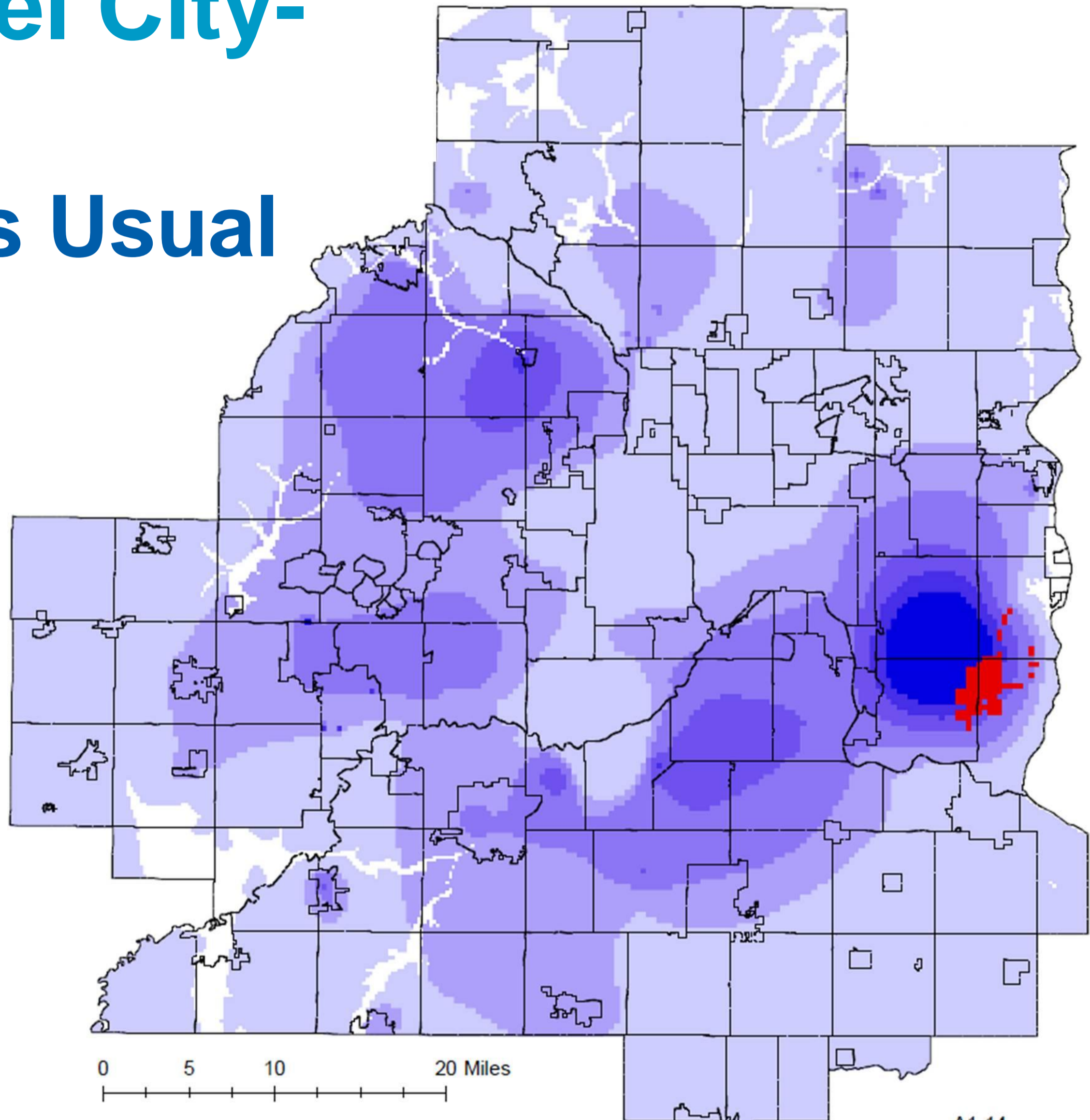
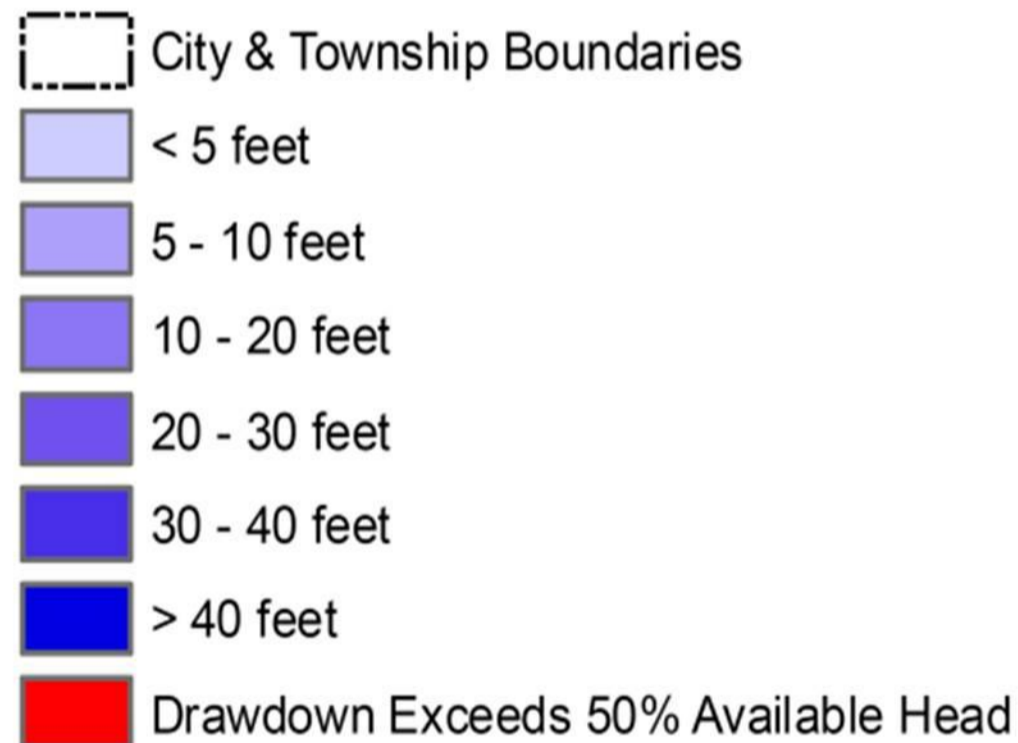
## Management Concerns

- Productivity varies greatly
- Connected to surface waters
- Vulnerable to contamination



# 2030 Tunnel City- Wonewoc: Business as Usual

## Aquifer Drawdown



# 35 Communities rely on Mount Simon-Hinckley aquifer

- 3 communities use this as their only source
- 4 billion gallons of water pumped in 2010

## Management Concerns

- Use restricted by Minnesota law
- Very slow recharge rate
- Significant groundwater mining has occurred historically
- Relatively low vulnerability to manmade contamination, but natural contamination exists



# 2030 Mt. Simon-Hinckley: Business as Usual

## Aquifer Drawdown

