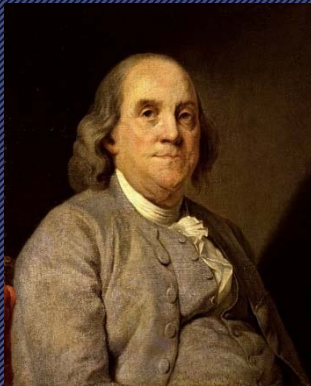


“When the well is dry we
know the value of water”



Benjamin Franklin

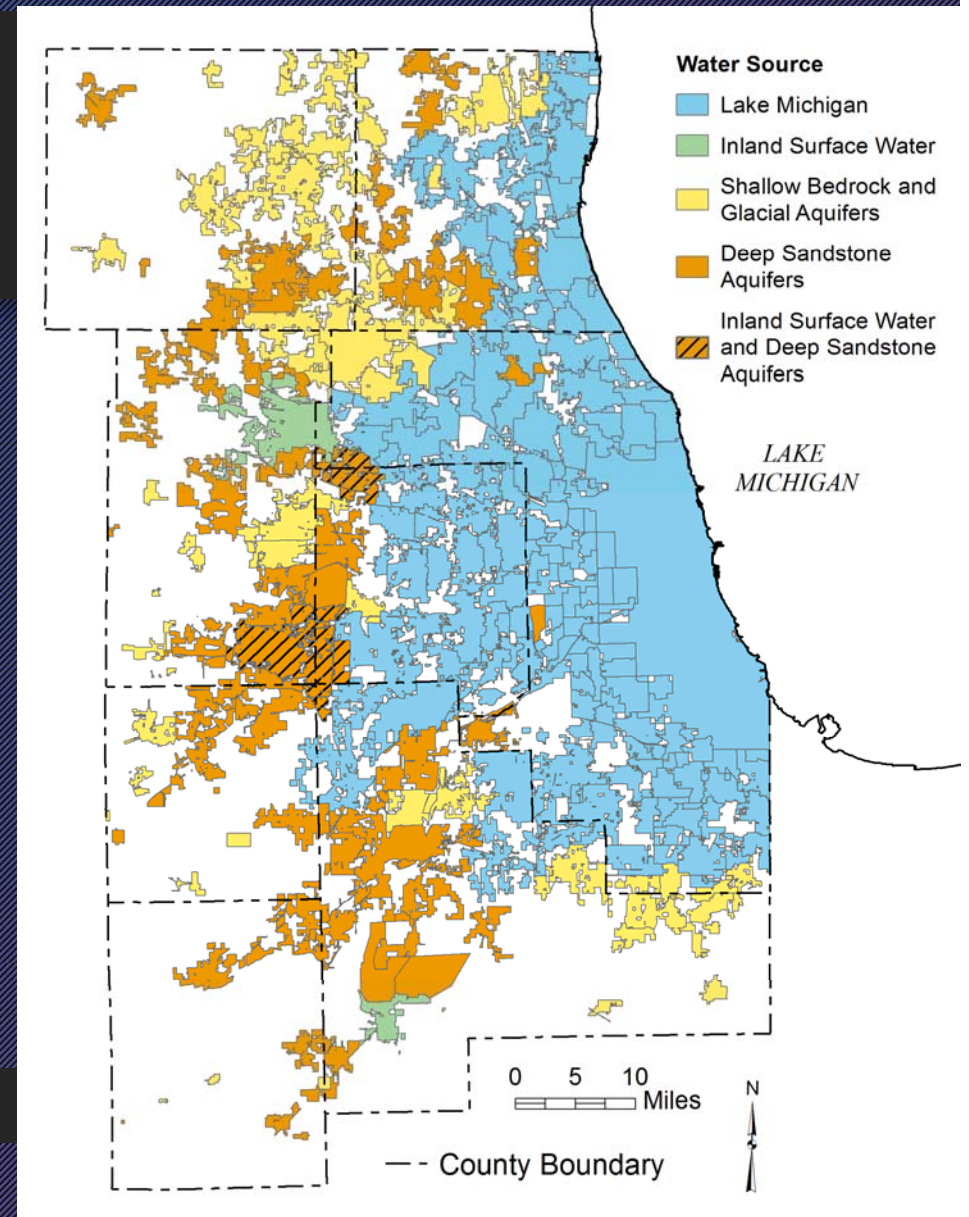


Bottom Line

1. Deep sandstone aquifers are being depleted unsustainably
2. Effects are already being felt; high-capacity wells could go dry in as little as 15 years
3. Regional problem requiring regional solutions

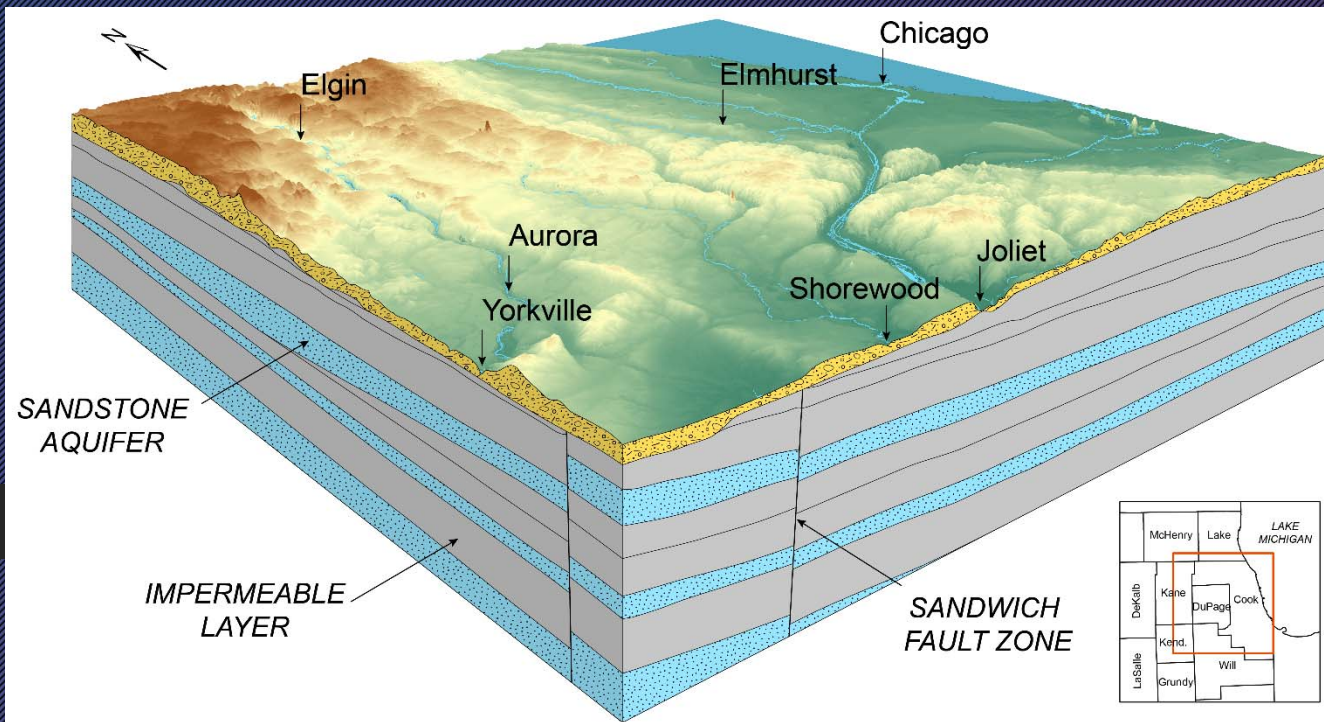
Sources of Water in Chicago Region

- Most outer suburbs rely on groundwater
- About 90 million gallons per day being withdrawn from the deep sandstone aquifers
- Current withdrawals are at least twice the amount we estimate to be sustainable



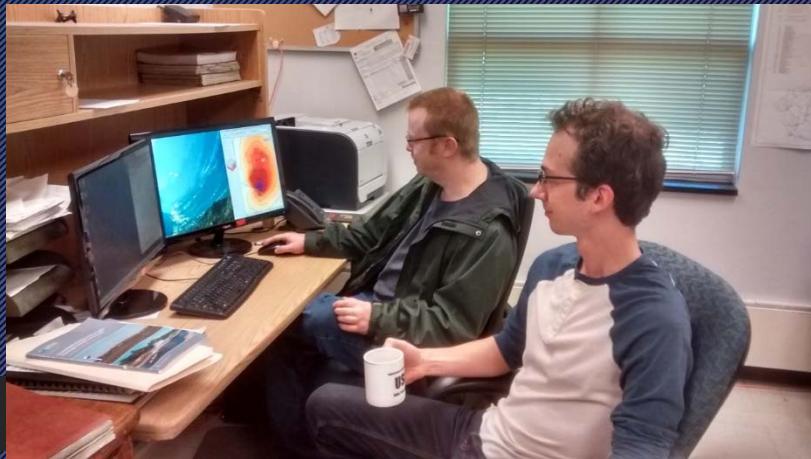
Deep Sandstone Aquifers

- 600 or more feet below land surface in this region
- Covered by thick impermeable layers
- Recharge water coming from the west, 100 or more miles away
- It takes a long time to replenish the water we are pumping



How do we know Sandstone Aquifers are being Drained Unsustainably?

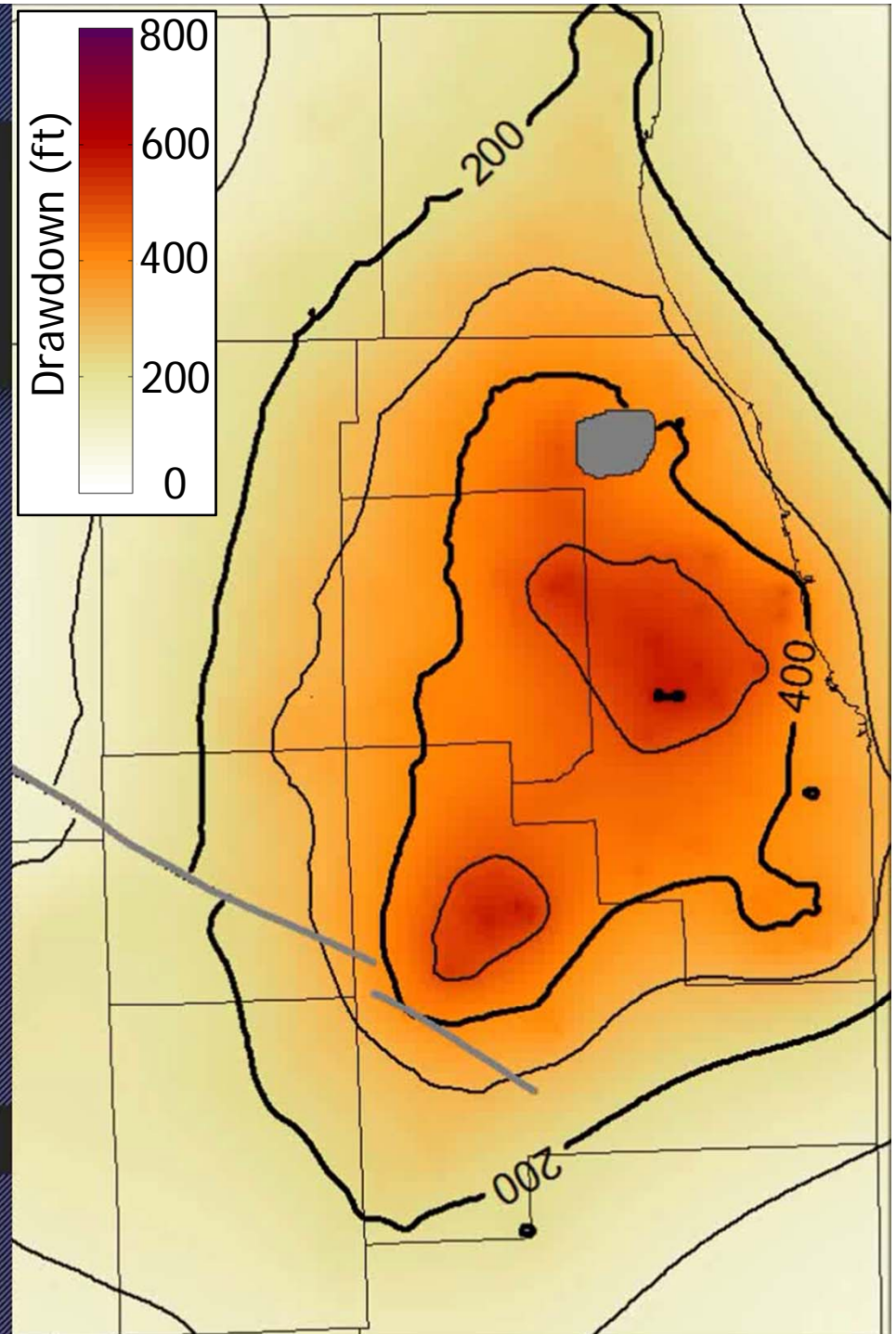
- Data: water level measurements
 - Groundwater levels have been falling for a long time
- Groundwater Flow Model



Problem Developing for a Long Time

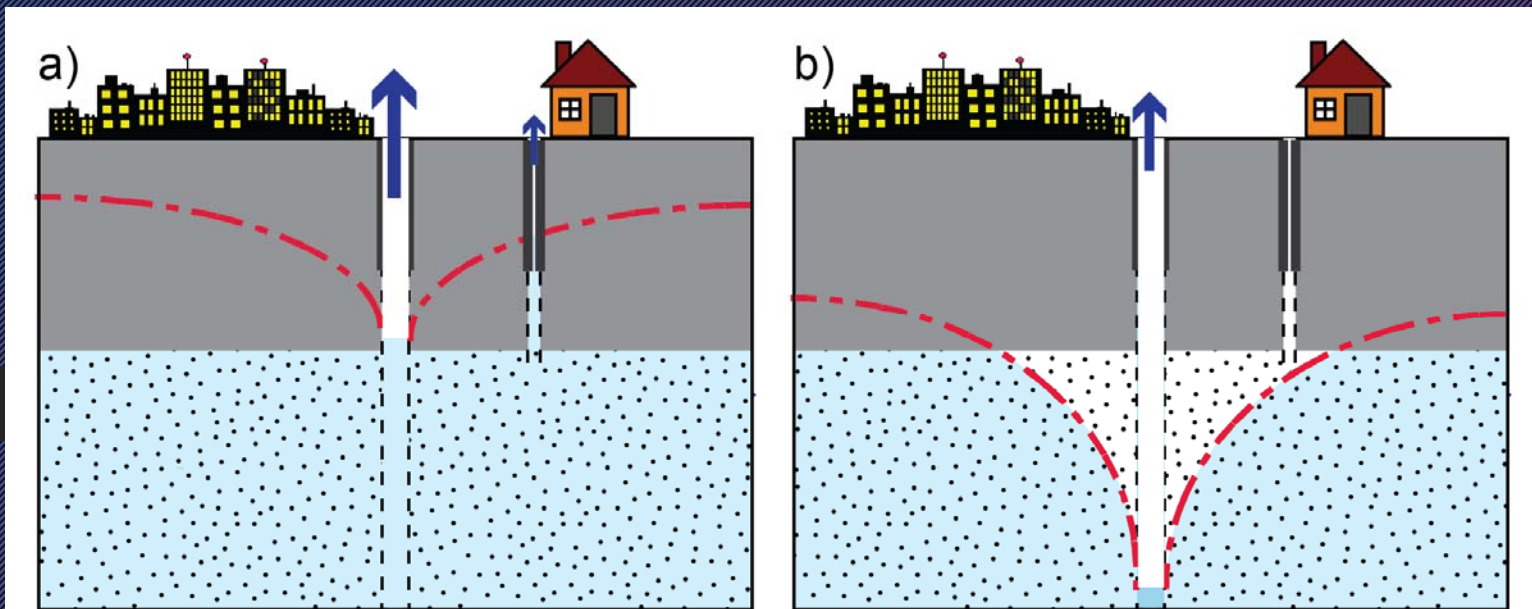
- Major cone of depression centered around Elmhurst and Joliet by 1950s
- Cook and DuPage municipalities convert to Lake Michigan in 1980s and 1990s
- Partial recovery of sandstone aquifers into early 2000s
- Continued pumping in southern/western suburbs causing expansion of cone of depression

1959



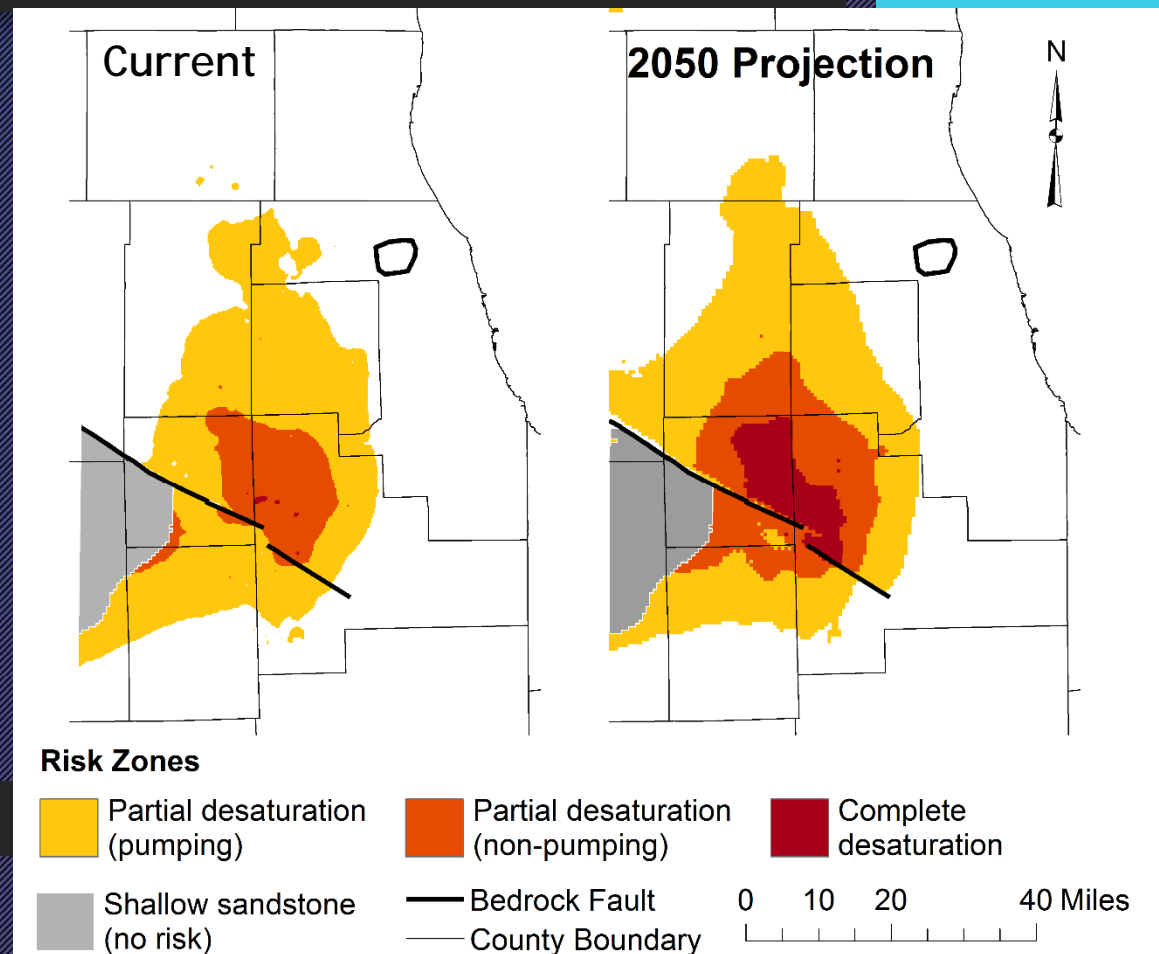
Time Frame

- If current practices continue, some community and industrial wells will begin going dry within 15 years
- Some shallower private wells are already going dry



Risk of Desaturation

- Areas already experiencing desaturation
- Using current trends, we expect a large area to be at risk by 2050



Potential Options

- Shallow aquifers
- Sandstone aquifers south of fault zone
- Rivers (Fox and Kankakee)
- Lake Michigan allocation



The Prairie Research Institute is Here to Help You

- We have been involved in water supply research and assistance for decades
- We have developed computer models which can be used to test numerous demand scenarios
- Getting more data and information from municipalities and industries will greatly help us make useful forecasts



Bottom Line Encore

1. Deep sandstone aquifers are being depleted unsustainably
2. Effects are already being felt; high-capacity wells could go dry in as little as 15 years
3. Regional problem requiring regional solutions